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AP RACING

Introduction

WELCOME TO THE AP RACING 2015 PRODUCT CATALOGUE.

This catalogue has been designed to provide the user from whatever level of motorsport, OE / High performance and motorcycle industry with a guide to the most popular AP Racing products. However not all products are listed so if your requirements differ from those in the catalogue please contact us for more help, we aim to be flexible. A pdf version of this catalogue is also available to download from www.apracing.com/aboutus.

ABOUT US

THE COMPANY

For over 50 years AP Racing has been the leading manufacturer of performance brake and clutch systems for motorsport, OEM, aftermarket road, armoured and motorcycle applications. Based in Coventry AP Racing has achieved more national and international sporting success than any of its rivals.

In 2014 alone, AP Racing supplied either brakes, clutches or both to over 30 champions across the entire spectrum of the motorsport world.

AP Racing core product ranges includes, brake calipers, clutches, discs, pads, master cylinders, pedal boxes and air jacks as well as road and competition brake systems for motorcycles.

2014 also saw AP Racing once again achieve accreditation to ISO:9001:2008 and registration to the TS 16949 quality approval standards and are still only one of a small number of European automotive component manufacturers to do so.

This certification underlines AP Racing's commitment to provide the highest quality products and services to meet the exacting requirements of its customers.



HISTORY

Ever since AP Racing's creation over 50 years ago it has been at the forefront of the motorsport industry, creating winners on the track and the roads, from Iron brakes to today's Carbon/Carbon, from large based clutches to compact Ø97mm, F1 multi-plate units that transmit 1000bhp at 18,000rpm, AP Racing has shown the way.

In Motorsport and F1 respectively our successes started with the incredible Auto Unions and have continued uninterrupted up to the 2014 Championship winning Mercedes. At the end of the 2014 Season AP Racing had notched up an incredible 746 Grand Prix wins with either our brake calipers or clutches since 1967.

This longevity of success has seen AP Racing repeating these achievements in other branches of motorsport from WRC, Touring Cars, Nascar, Indycar, GT and Motorcycles and many others in more than 50 countries around the world.



ENGINEERING & TECHNOLOGY

It isn't easy being at the pinnacle of motorsport or performance road brake and clutch design but the resources available to AP Racing ensure the best is always on hand for all its customers, from state of the art three dimensional solid modelling/design and FEA CAD Facilites to sophisticated research, development, testing and quality departments that constantly probe the boundaries of technology.

In 2007 AP Racing introduced its first Radi-CAL[™] designed brake caliper to the world. This revolution in brake calipers technology features a design concept that improve efficiency, cooling and driver control. This proven race winning technology is available in all major race series around the world from F1, GT, Touring Car, WRC to F3 and Nascar to name a few and AP Racing are continuing with further developments of Radi-CAL[™] technology for additional motorsport applications but also including OEM Road and Aftermarket calipers. To date AP Racing has produced some 80 first and second generation variants with the company continuing to refine the Radi-CAL[™] design processes to further enhance its position as a world leader in brake caliper design.



ROAD CAR

Competition is the best of test-beds and AP Racing's years of experience in motor sport also brings benefits for the latest OEM road cars. The emphasis may be different, qualified by the everyday demands of the modern road conditions but the essential requirements remain the same. Supporting both low and high volume OE customers, AP Racing has the resources, technology and knowledge to bring its racing history and performance to the road.



For many years, AP Racing has been supplying some of the top marques in the high performance vehicle market with brake and clutch systems to suit specific applications.

Through a proven design and development program, along with engineering support to the customer, AP Racing is able to provide high performing, reliable brake and clutch solutions to a variety of perforMance cars marques .



ARMOURED AND SPECIFIC VEHICLES.

AP Racing can provide unique solutions for various Armoured or Defence, Hybrid, Electic, Land Speed and even Aerospace applications, to a customers own specific criteria and requirements.

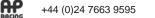
With various heavy duty brake systems available, solutions can be designed and developed based on our specific vehicle testing procedures.

AP Racing develops brake or clutch systems to effectively function in the environments and scenarios experienced by these vehicles. With over 50 years experience and a wealth of talent in all area's of our business AP Racing is perfectly placed to offer the innovation required in this exciting sector.

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New for 2015

This page has been included for 2015 to highlight new products that have been added to the product catalogue.

Brake Calipers

PRO 5000 *(* - Available from early 2015

These are a new entry level option of Radi-CAL[™] brake calipers, designed as the next generation of our popular Pro 5000 branded ranges, bringing the latest level of brake performance well within the price range of the discerning team on a moderate budget.

The new range has been developed from our experience in all areas of motorsport and the new forged design features the latest innovations from of our pioneering asymmetric design concept.

Manufactured with the same ideology as Pro 5000+ this entry level motorsport range offers the same costing benefits but will not directly replace Pro 5000+. It should be noted that there are dimensional differences between + and R ranges and all installations require checking before specifying.

Part Details in Brief:

- CP9665 - 6 Piston, forged two piece Aluminium Radi-CAL[™], 210mm x 42.0mm centres, using CP6230D54 pad.

Suitable for a Ø390.0 x 36.0mm or Ø378 x 32.0mm thick cast iron discs. - See page 6 for further details.

- CP9660 - 6 Piston, forged two piece Aluminium Radi-CAL[™], 180mm x 42.0mm centres, using CP3905D54 pad.

Suitable for a Ø378.0 x 36.0mm or Ø356.0 x 32.0mm thick cast iron discs.

- See page 6 for further details.

- CP9440 - 4 Piston, forged two piece Aluminium Radi-CAL[™], 152.0mm x 44.0mm centres, using CP3215D50 pad. Suitable for a Ø330.0 to Ø315.0mm x 28mm thick cast iron discs. - See page 5 for further details.

Factory Big Brake Kit A new Kit has been added to the Factory Big Brake kits listings. Below are brief details on these applications and full details can be found on page 66 or on the website.

PEUGEOT 208 GTi - FRONT - CP7645-1002.

- This is a 4 piston front brake kit. The CP7645 radial mounted brake calipers are available in either gloss Black or Red paint finishes and are designed to accept a Ø315 x 22mm two piece disc and bell assembly to fit inside a 17" OE wheel. - See page 66 for further details.

Brake Fluid

AP Racing's established range of brake & clutch fluids have been refreshed and re-branded to embrace our Radi-CAL™ philosophy. Following last years successful launch of Radi-CAL™ R4 racing fluid, AP Racing has chosen to re-align its full range of fluids by re-naming PRF660, 600, 551 and Formula Dot 5.1 and changing the bottle and caps (see details below). NO alterations have been made to the actual brake and clutch fluids themselves.

- Radi-CAL[™] R3 Silver Bottle with Yellow Cap Formerly PRF660.
- Radi-CAL[™] R2 Silver Bottle with Blue Cap Formerly 600.
- Radi-CAL[™] R1 Silver Bottle with Black Cap Formerly 551.
- Factory R Dot 5.1 Yellow Bottle with Yellow Cap Formerly, Formula R Dot 5.1. - See page 89 for further details.











BRAKE CALIPERS



■ GENERAL INFORMATION.
■ PRO 5000 / .
■ FORMULA CAR.
■ GT.
■ RALLY.
■ TOURING CAR.
■ 2 PISTON.
■ HISTORIC RACE.
■ ROADCAR.
■ TECHNICAL INFORMATION.
■ REPLACING CALIPER SEALS.
■ SPARE PARTS.

BRAKE CALIPERS - General Information

INTRODUCTION.

For over 50 years AP Racing has been a world leader in the technology and manufacture of motorsport and high performance brake calipers.

During this period many of the world's premier races and championships have been won using AP Racing braking systems. With one of the most comprehensive ranges

available, AP Racing can offer a brake caliper suitable for every category of motorsport supplemented with a wide range of brake calipers to suit high performance road car applications for both OE and upgrade brake conversion kits. The AP Racing caliper range has been separated into the following groups to aid selection: PRO 5000 <, Formula cars, GT, Rally, Touring Cars, 2 Piston, Historic and Road Car.

The calipers shown from pages 5 to 30 are the most popular calipers selected from the extensive AP Racing range and will provide the solution to most if not all applications. The standard calipers benefit from a more competitive price structure coupled with preferential delivery times.

Specialist caliper ranges such as those used in Formula One are not shown in this catalogue. The complete range however includes many other options and the majority can be found on www.apracing.com, so if you require a caliper not illustrated please contact AP Racing for information on availability, price and delivery.

ROAD OR RACE ?

It is important to choose the correct type of brake caliper for the intended application. The design requirements for a brake caliper to be used on the public highway (Road) and for competition use are significantly different. A road caliper often has to go for long periods without servicing or maintenance therefore corrosion protection and durability are primary considerations.

A brake caliper designed for competition use must be lightweight yet capable of operating reliably at high temperatures, however it is normally cleaned and serviced very frequently. AP Racing produce brake calipers optimised for these two very different applications. Although generally derived from our racing calipers all AP Racing road calipers have a protective paint finish, wiper (dirt) seals or boot Seals to prevent dirt ingress and are of a heavier construction than calipers intended solely for competition use. We strongly recommend that only purpose designed 'Road' calipers are used on vehicles intended for regular use on the public highways.

DESIGN & DEVELOPMENT.



The whole process of design and development is carried out at our headquarters in Coventry. With our two brake dynomometers we are able to reproduce the most demanding test environments. AP Racing designers use the latest technologies to produce some of the most aesthetic and effective brake calipers at the affordable prices the markets request.

Radi-CAL™

Developed in 2007, this break from traditional design concepts has allowed AP Racing to lead the way in brake caliper design and manufacture, producing over 80 different variants for a cross selection of motorsport categories. Radi-CAL[™] enabled AP Racing to take a fresh look at how the design envelope could be used and based it's qualities around making calipers lighter, stiffer and run cooler, therefore making them more aesthetic to the eye.

STANDARD CALIPER FEATURES.

 Differential Bores and/or piston positioning are used on all AP Racing multi-piston calipers to combat pad taper.

■ High Temperature Seals are standard on all AP Racing race (competition) calipers.

Hard Anodised Surface Treatment is standard on all AP Racing competition calipers for optimum durability. (Except iron calipers and where indicated).

Boad Calipers have a high performance paint finish applied on top of the hard anodising for maximum durability and protection against road salts.

Radial Mount fixings are standard unless indicated otherwise.

All AP Racing Road calipers have piston dirt seals to protect against ingress of harmful debris.

Where fitted all Bridge Pipes on AP Racing calipers are stainless Steel.
 Most AP Racing calipers are fitted with replaceable Steel Wear Plates to protect pad and caliper body.

CALIPER, SEALS & TEMPERATURE.

Because race Brake Calipers are sometimes subjected to very high and unpredictable operating temperatures, they must be examined and seals must be replaced on a regular basis to maintain efficiency and safety. Seal life is governed by time at temperature which should therefore be kept as low as possible by provision of cooling airflow. For guidance only AP Racing offer the following recommendations (temperatures measured on outside of Caliper adjacent to logo):

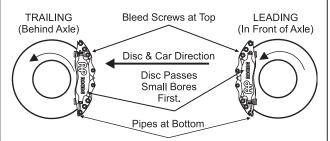
Calipers that regularly run at up to 200°C – Re-seal every other event.
 Calipers that run intermittently from 200°C to 220°C and above – Re-seal as soon as possible.

n Reduce "soak" temperatures after the car has come to rest where possible (e.g. do not leave foot on brake pedal when stationary with hot brakes) as this can cause excessive caliper temperatures.

CALIPER HANDING.

- Calipers are available to suit installation in front (Leading) or behind (Trailing) the axle.

- The following abbreviations are used in this publication:-
- RHT = Right Hand Trailing. LHT = Left Hand Trailing.
- RHL = Right Hand Leading. LHL = Left Hand Leading.
- Bleed screws must always be positioned at the top.
- Discs must always pass the small piston first on differential bore calipers.
 Cross over pipes must always be positioned at the bottom.



PART NUMBERING SYSTEM.

An explanation of a Brake Caliper part number;

$\begin{array}{c} 1. \\ \hline \mathbf{CP6160} - 2 \\ \underline{2} \\ \underline{2} \\ \underline{2} \\ \underline{3} \\ \underline{4} \\ \underline{5} \\ \underline{7} \\ \underline{1} \\$

No.	Explanation	Description
1.	Caliper Family No.	Base Caliper No.
2.	Stroke No.	Even No. = Right hand caliper. Odd No. = Left hand caliper.
3.	Position of inlet Adaptor.	S = Sidefeed. / E = Endfeed.
4.	Anti-knockback Spring.	0 = No spring. / 4 = 4lbs. / 7 = 7lbs / 9 = 9lbs.
5.	Piston Material.	No character = Aluminium Alloy. L = Stainless Steel. & M = Titanium.
6&7	Options.	C = Pistons fitted with caps. P = Pistons can accept caps. D = Cooling duct supplied.

SERVICING AND RECONDITIONING.

Regular examination and maintenance of brake calipers is essential to maintain safety and efficiency of operation.

AP Racing recommend that brake calipers should be cleaned with soapy water only, as this will not damage any of the seals.

A complete reconditioning service is available.

Seal repair kits and other spare parts e.g. pistons, bleed screws etc, are also available and can be identified by referring to the individual caliper information or the tables on pages 34 to 39.

Other spare parts e.g. pistons, bleed screws, pad retainers are also available by referring to individual caliper details

Replacement seals should be soaked in brake fluid for 30 minutes prior to fitment.

For more information please contact AP Racing.

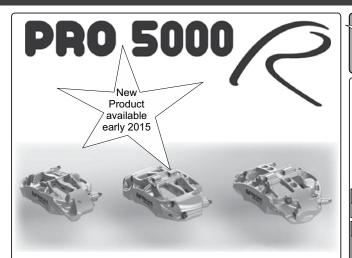
DRY BLEED SYSTEMS (DRY BREAKS).

A Dry Bleed System has been designed for use with any AP Racing calipers suitable for 'O' Ring sealed bleed screws. The male dry bleed valve is fitted in place of the bleed screw, once fitted there should be no need to loosen or remove the coupling unless it is being replaced. For detailed information please go to page 91.

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AP RACING



INTRODUCTION.

Pro 5000 ← is a new entry level option of Radi-CAL[™] brake calipers, designed as the next generation of our popular Pro 5000 branded ranges.

Pro 5000 ∕⊂ has been developed from our experience in all areas of motorsport, the new forged designs feature the latest innovations from of our pioneering asymmetric design concept.

Manufactured with the same ideology as Pro 5000+ this entry level motorsport range offers the same costing benefits but will not directly replace Pro 5000+. It should be noted that there are dimensional differences between + and R ranges and all installations require checking before specifying.

The range consists of Four caliper variants and 7 different discs, which cover 6 & 4 piston calipers and ventilated discs from Ø390mm to Ø330mm and 36mm down to 28mm thickness.

The three caliper variants are based on radially mounted two piece forged aluminium calipers and are fitted with 4lb anti-knockback springs (where applicable) with stainless steel pistons on all.

All calipers run full depth pads.

The discs are available with a curved grooved face configuration only.

■ The main objective of the range is to provide a high quality "off the shelf" Radi-CAL[™] brake system at a competitive price. The range will be kept to the part numbers listed in this catalogue and no variations are available.

Alternative strength anti-knockback springs are available, please refer to AP Racing for details.

This section provides the basic installation dimensions for both the calipers and the discs, if further information is required please contact AP Racing Technical Section.

NOTE. All dimensions in (mm) unless otherwise stated.

PRODUCT COMBINATIONS.

The information below offers brief details / dimensions on the range of calipers, discs, and brake pad families.

Caliper	Caliper Dim'n (mm)		Pad	Disc Options (mm)					
Part Numbers.	Mtg Centers	Offset	PL	Part No.	ø	Thick	Example Part No.		
4 Piston Calipers									
CP9440-			57.8	57.8 CP3215D50	330	28	CP5000-210/-211CG8		
2/3S4L & CP9441-	152.0	44.0			330	28	CP3580-2898/-2899CG8		
2/3S4L					315	28	CP5000-220/-221CG8		
6 Piston Calipers									
CP9660-	1800 420 635	42.0	62 E	CP3905D54	378	36	CP5772-1032/-1033CG8		
2/3S4L		03.5	05.5 075505054	356	32	CP5000-218/-219CG8			
CP9665-	210.0	210.0 42.0	63.5	CP6230D54	390	36	CP4284-135/-135CG8		
2/3S7L	210.0	210.0 42.0		CF0230D34	378	32	CP5772-1030/-1031CG8		

BRAKE CALIPERS - PRO 5000 R

Piston Sizes

Piston Area

Weight - No Pads

Hydraulic Thread

Mounting Type

'PL' Dimension

SPARE PARTS

Mtg centres

Mtg offset

Mtg hole Ø

Ø36 Piston

Ø41.3 Piston

Seal Repair Kit

Tub Pad Retainer

RH - Wear Plate

LH - Wear Plate

Bleed Screw Kit

Pad Family

Pad Volume

Pad Thickness

Pad Area

PAD INFORMATION

132.27 (5.20"

New CP9440 valiable arty 2015 4 Piston, Radi-CAL™

TECHNICAL SPECIFICATION

Ø36.0mm x 2

Ø41.3mm x 2

47.12cm²

2.16Kg

Radial

M10x1.0

152.0mm

44.0mm

57.8mm

12.15mm

CP9440-107

CP9440-106

CP8518-HK

CP9440-110

CP9440-108

CP9440-109

CP3215D50 57.4cm²

70.44cm³

16.8mm

CP3880-1



TYPICAL APPLICATION Budget general competition use.

FEATURES

- Radial mount, 152 x 44mm ctrs.
 Benefits from a radical asym-
- metric design concept.
- Superior dynamic performance.
- Increased stiffness.
- Forged, two piece Aluminium alloy body.
- Suits Ø330 / Ø315mm x 28mm
- discs.
- Stainless Steel pistons fitted.
- Stainless Steel wear plates.Smaller bore version for rear

applications available - CP9441 Family - See Website for details.

- PART NUMBERS
- RH, CP9440-2S4L.
- LH, CP9440-3S4L.

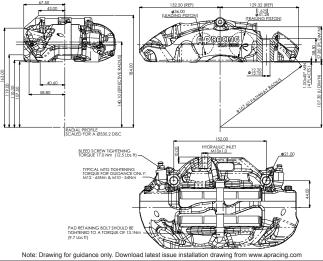
CALIPER HANDING

For handing information check Installation drawing at: www.apracing.com

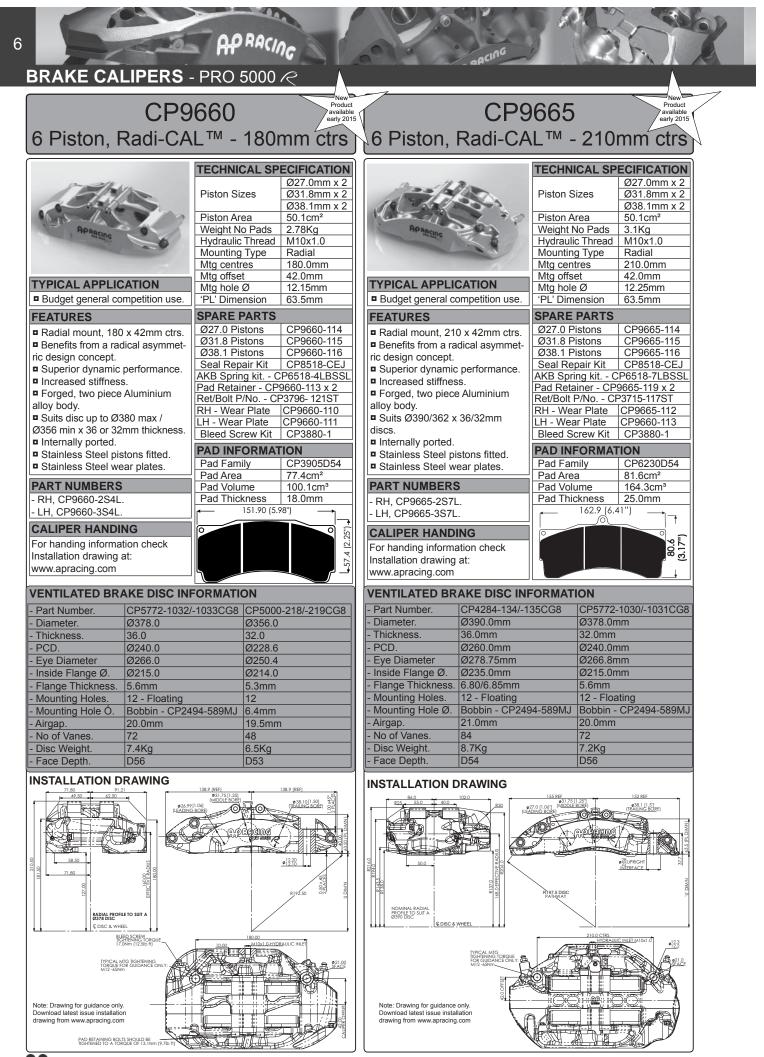
BRAKE DISC INFORMATION

BRARE DISC IN ORMANON							
CP5000-210/1CG8	CP3580-2898/9CG8	CP5000-220/1CG8					
Ø330.0	Ø330.0	Ø315.0					
28.0	28.0	28.0					
Ø203.2mm	Ø203.2mm	Ø177.8mm					
Ø227.4mm	Ø230.0mm	Ø210.3mm					
Ø185.0mm	Ø190.0mm	Ø164.3mm					
5.1mm	5.6mm	5.95/6.10mm					
12	12	12					
6.4mm	6.4mm	6.4mm					
15.25mm	14.0mm	14.0mm					
36	48	36					
4.94Kg	5.94Kg	5.6Kg					
D50	D50	D52					
	CP5000-210/1CG8 Ø330.0 28.0 Ø203.2mm Ø227.4mm Ø185.0mm 5.1mm 12 6.4mm 15.25mm 36 4.94Kg	CP5000-210/1CG8 CP3580-2898/9CG8 Ø330.0 Ø330.0 28.0 28.0 Ø203.2mm Ø203.2mm Ø227.4mm Ø230.0mm Ø185.0mm Ø190.0mm 5.1mm 5.6mm 12 12 6.4mm 6.4mm 15.25mm 14.0mm 36 48 4.94Kg 5.94Kg					

INSTALLATION DRAWING



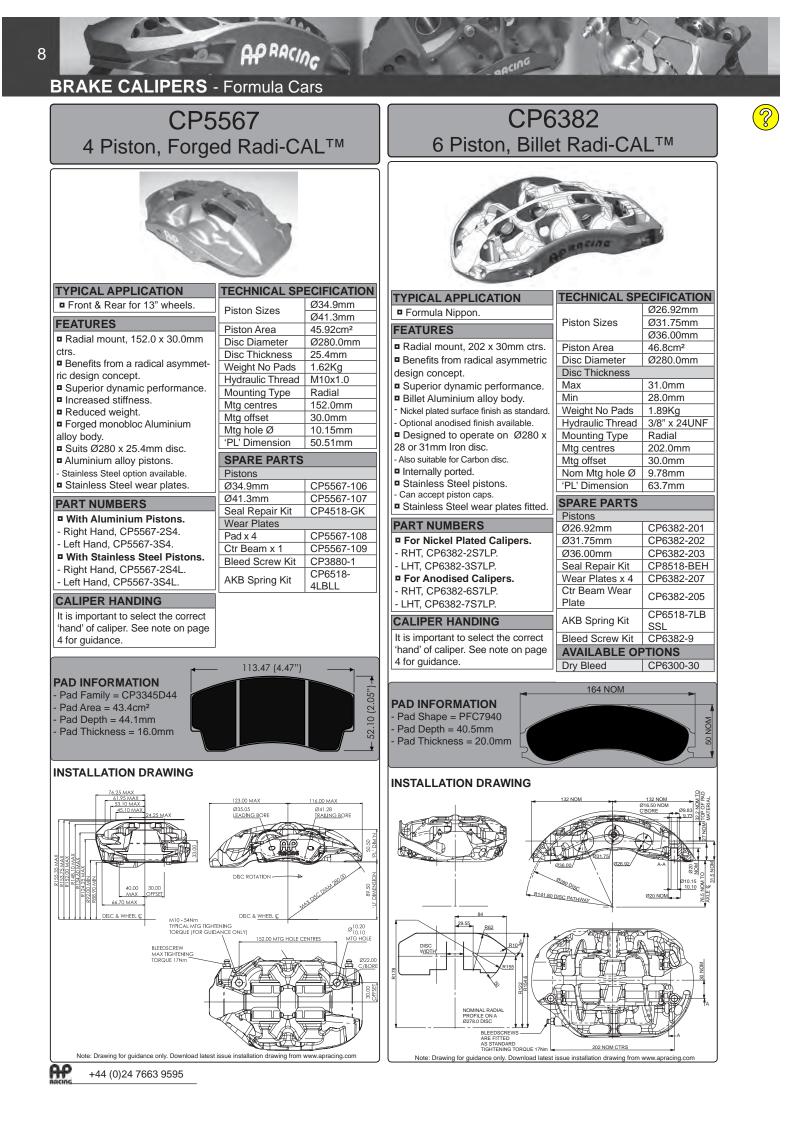
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	RACING	The second second	BRAKE CAL	IPERS - Fo	rmula Ca
CP/	567			5219	
4 Piston, Cas	st two pie	ece	4 Piston, Bill	et i wo pie	ece
Reading			RP RACING		
TYPICAL APPLICATION	TECHNICAL SP	1	~		
Front & Rear for 13" wheels.	Piston Sizes	Ø34.9mm Ø41.3mm	TYPICAL APPLICATION	TECHNICAL SP	FCIEICATI
FEATURES	Piston Area	45.92cm ²			Ø34.9mm
Radial mount, 152mm Mtg ctrs.	Disc Diameter Disc Thickness	Ø280.0mm	Front & Rear for 13" wheels.	Piston Sizes	Ø41.3mm
 Radial mount, 152mm Mig ctrs. Choice of three disc options. 	-2 /-3 /-4/ -5	25.4mm	FEATURES	Piston Area Disc Diameter	45.92cm ² Ø280.0mm
- Suits Ø280mm x 25.4 or 20.0mm	-8 /-9 / -10 /-11 Weight No Pads	20.0mm 1.6Kg	Radial mount, 152 x 42.78mm	Disc Diameter	25.4mm
discs.	Hydraulic Thread		Mtg ctrs.	Weight No Pads	1.98Kg
 Aluminium alloy body. Aluminium pistons. 	Mounting Type	Radial	Suits Ø280.0 x 25.4mm	Hydraulic Thread	M10x1.0
 Single bolt pad retainer. 	Mtg centres	152.0mm	ventilated Iron disc.	Mounting Type	Radial
	Mtg offset	30.0mm	 High grade Aluminium alloy body. CNC machined from billet. 	Mtg centres Mtg offset	152.0mm 42.78mm
PART NUMBERS	-8 /-9 / -10 /-11	27.3mm	□ Lightweight.	Mtg hole Ø	10.27mm
To suit disc Ø280 x 25.4mm	Mtg hole Ø	10.2mm	Superior dynamic performance	'PL' Dimension	56.81mm
- RHT, CP4567-2S4	'PL' Dimension	50.5mm	than that of CP4219	SPARE PARTS	
- LHT, CP4567-3S4 - RHL, CP4567-4S4	SPARE PARTS		Aluminium pistons.	Pistons	
- LHL, CP4567-5S4	Pistons Ø34.9mm	CP3567-114	Stainless Steel wear plates.	Ø34.9mm	CP2876-10
, 	Ø41.3mm	CP3567-114 CP4270-3	PART NUMBERS	Ø41.3mm	CP2270-92
To suit disc Ø280 x 20mm - RHT, CP4567-8S4	Seal Repair Kit	CP4518-GK	- RHT, CP5219-16S0.	Seal Repair Kit	CP4518-Gł
- LHT, CP4567-9S4	Pad Retainer	Bolt	- LHT, CP5219-17S0.	Pad Retainer Retainer P/No.	Bolt CP4219-12
- RHL, CP4567-10S4	Retainer P/No. Ret / Bolt P/No.	See page 35.	- RHL, CP5219-18S0.	Ret / Bolt P/No.	CP5100-12
- LHL, CP4567-11S4	Wear Plates	for details	- LHL, CP5219-19S0.	Wear Plates	CP4219-10
CALIPER HANDING	AKB Spring Kit	CP6518-	CALIPER HANDING	Bleed Screw	CP3880-1
It is important to select the correct		4LBLL	It is important to select the correct	Fluid Pipe	CP5219-6
'hand' of caliper. See note on page	Bleed Screw Fluid Pipe	CP3720-173	'hand' of caliper. See note on		
4 for guidance.	<u>-2 /-3 /-4/ -5</u> -8 /-9 / -10 /-11	CP4567-6 CP4567-7	page 4 for guidance.		
PAD INFORMATION - Pad Family = CP3345D44 - Pad Area = 43.4cm ² - Pad Depth = 44.1mm - Pad Thickness = 16.0mm	113.47 (4.47"	-52.10 (2.05")	PAD INFORMATION - Pad Family = CP3215D42 - Pad Area = 51.17cm ² - Pad Depth = 42.0mm - Pad Thickness = 16.75mm INSTALLATION DRAWING	- 132.27 (5.20")	
INSTALLATION DRAWING	SUCH THAT	12.5 TOP OF DISC & PAD DISC	42.30 MAX 42.30 MAX 43.30 MAX	235.04 LEADING BORE	12.00 MAX 041.39 TRAILING BORE 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5
			019.00		DIRS BLEEDSCREW M TIGHTENING TO 17Nm
Disc W1 W2 W3	W4 W5 W	6 W7			

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			BRAKE CAL	IPERS - For	mula Ca
CP7030			CP7031		
- 4 Piston, Tw	o Piece B	illet	4 Piston, Bille	et Radi-CA	Гти
RPRACING 000					
TYPICAL APPLICATION	TECHNICAL SP		TYPICAL APPLICATION	TECHNICAL SP	
F3 Front & Rear.	Piston Sizes	Ø34.9mm Ø41.3mm	Formula 3 Front & Rear.	Piston Sizes	Ø25.4mm Ø31.8mm
FEATURES	Piston Area	45.92cm ²	FEATURES	Piston Area	25.97cm ²
 Radial mount, 120 x 40mm ctrs. Suits Ø278 x 17.0 / 16.0mm disc. 	Disc Diameter Disc Thickness	Ø278.0mm	Radial mount, 120 x 40mm ctrs.	Disc Diameter Disc Thickness	Ø278.0mm
Aluminium alloy body,	Max	17.0mm	Benefits from a radical asymmetric design concept.	Max	18.0mm
CNC machined from billet.	Min	16.0mm	Superior dynamic performance.	Min	16.0mm
Lightweight.Aluminium pistons.	Weight No Pads	1.5Kg	 Increased stiffness. Reduced weight. 	Weight No Pads Hydraulic Thread	1.2Kg M10x1.0
Complete system (calipers, discs	Hydraulic Thread Mounting Type	M10x1.0 Radial	 Reduced weight. Monobloc Aluminium alloy body. 	Mounting Type	Radial
and bells) available.	Mtg centres	120.0mm	Suits Ø278 x 18mm disc.	Mtg centres	120.0mm
Stainless Steel wear plates.	Mtg offset Mtg hole Ø	40.0mm 10.2mm	 Stainless Steel pistons. Stainless Steel wear plates. 	Mtg offset Mtg hole Ø	40.0mm 10.15mm
PART NUMBERS	'PL' Dimension	50.3mm	Complete system (calipers,	'PL' Dimension	50.30mm
- RHT, CP7030-2S0.	SPARE PARTS		discs bells and pads) available,	SPARE PARTS	
- LHT, CP7030-3S0. - RHL, CP7030-4S0.	Pistons		overall corner weight 4.37kg.	Pistons	
- LHL, CP7030-5S0.	Ø34.9mm	CP7030-108	PART NUMBERS	Ø26.0mm	CP7031-11: CP7031-10
CALIPER HANDING	Ø41.3mm Seal Repair Kit	CP7030-107 CP4518-GK	- RH, CP7031-4S0LP.	Ø31.8mm Seal Repair Kit	CP7031-10 CP4518-AE
It is important to select the correct	Wear Plates	CP7030-106	- LH, CP7031-5S0LP.	Wear Plates	
'hand' of caliper. See note on page	Bleed Screw Fluid Pipe	CP3720-173 CP7030-6		Pad x 4 Ctr Beam x 1	CP3307-22 CP7031-10
4 for guidance.				Bleed Screw Kit	CP3880-1
PAD INFORMATION - Pad Family = CP3345D38 - Pad Area = 38.7cm ² - Pad Depth = 38.0mm - Pad Thickness = 16.0mm	- 113.47 (4.47")	52.10 (2.05°)	PAD INFORMATION - Pad Family = CP7031D32 - Pad Area = 30.35cm ² - Pad Depth = 32.0mm - Pad Thickness = 15.75mm	98.80 (3	3.88")
INSTALLATION DRAWING				103.0	117.50
52-40 MAX 45.00 MAX	105.6 21.8 22.8 MOLINITING DIRECTION OF DISC ROTATION 0227.2 DISC & WHEELC	1000 III O III O IIII O III O III O III O III O III O III O III O III O III O IIIIII O IIII O IIII O IIII O IIII O IIII IIII IIII IIII IIII IIII IIII IIII	VWIGF STILL VWIGF		VI175 TRAILING BORE
		OLE CENTRES PIO 2040.05 MIG HOLE SUBURDOP SUBURDOP	HYDRAULC INLET Mixtura 1000 FULL THREAD		MAX TIGHT TOROUGE 17 010.20 10.10

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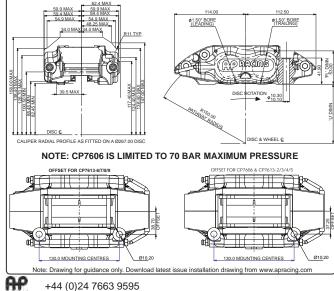
BRAKE CALIPERS - Formula Cars

CP7606 & CP7613 - 4 Piston

AP RACING

TECHNICAL SPECIFICATION Piston Sizes CP7606 Ø38.1mm x 4 CP7613 Ø31.8mm x 4 Piston Area 45.6cm² CP7606 CP7613 31.6cm² **Disc Diameter** Ø295.0mm Max Min Ø267.0mm **TYPICAL APPLICATION Disc Thickness** Budget Formula Cars. CP7606 & 18.0mm CP7613-4 & -5 **FEATURES** CP7613-6/7/8/9 20.7mm Radial mount, 130.0mm ctrs Weight No Pads 1.7Kg Suits Ø295 / 267mm x 20.7 / Hydraulic Thread M10x1.0 18mm thick disc. Mounting Type Radial Cast Aluminium alloy body. Mtg centres 130.0mm Aluminium alloy pistons. Mtg offset Pin pad retainer. CP7606 & Stainless Steel wear plates. 37.25mm CP7613-4 & -5 38.70mm PART NUMBERS CP7613-6/7/8/9 Mtg hole Ø 10.2mm with Ø38.1mm bores. 'PL' Dimension 53.0mm - RHT, CP7606-12S0 - LHT, CP7606-13S0 SPARE PARTS - RHL, CP7606-14S0 Pistons - LHL, CP7606-15S0 CP7605-109 CP7606 CP7613 CP7613-106 With Ø31.8mm bores. Seal Repair Kit - To Suit 18.0mm disc CP7606 CP4518-JJ - RHL CP7613-4S0 / CP7613 CP4518-EE - LHL CP7613-5S0 Pad Retainer Pin Retainer P/No. - To Suit 20.7mm disc CP7606 & - RHT, CP7613-6S0 CP7605-108 CP7613-4 & -5 - LHT, CP7613-7S0 CP7613-6/7/8/9 CP7613-112 - RHL, CP7613-8S0 Wear Plates CP7605-116 - LHL, CP7613-9S0 Bleed Screw Kit CP3880-1 CALIPER HANDING Fluid Pipe CP7606 & It is important to select the correct CP7606-10 CP7613-4 & -5 'hand' of caliper. See note on page CP7613-6/7/8/9 CP7613-10 4 for guidance. 113.48 (4.46") **PAD INFORMATION** - Pad Family = CP7600D46 Pad Area = 43.5cm² 58.37 (2.29") Pad Depth = 46.2mm Pad Thickness = 16.0mm

INSTALLATION DRAWING



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CUSTOMER NOTES

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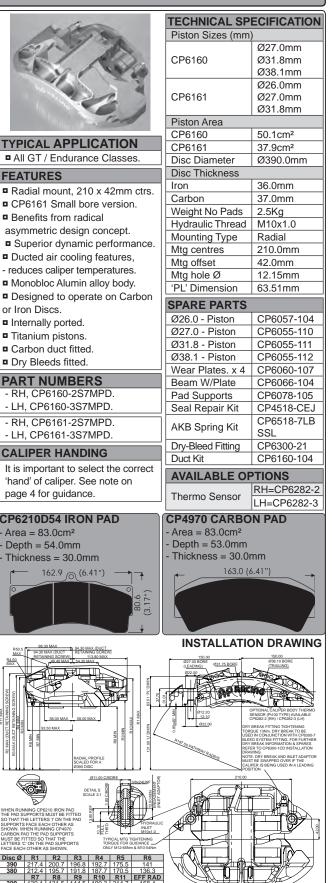


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CP6160 & CP6161 6 Piston, Billet Radi-CAL[™]

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QUICK RELEASE PAD RETAINER MECH MAX TIGHTENING TORQUE 25Nm (18.5

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AP RACING PACING

TECHNICAL SPECIFICATION

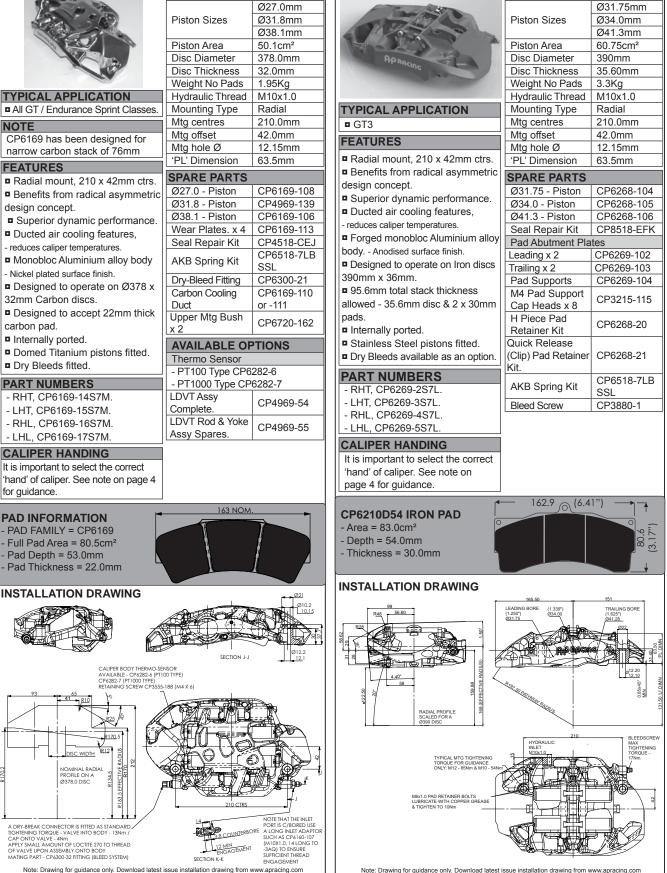
CP6169

6 Piston, Slimmed Radi-CAL™

BRAKE CALIPERS - GT / Endurance

CP6269 6 Piston, Forged Radi-CAL™

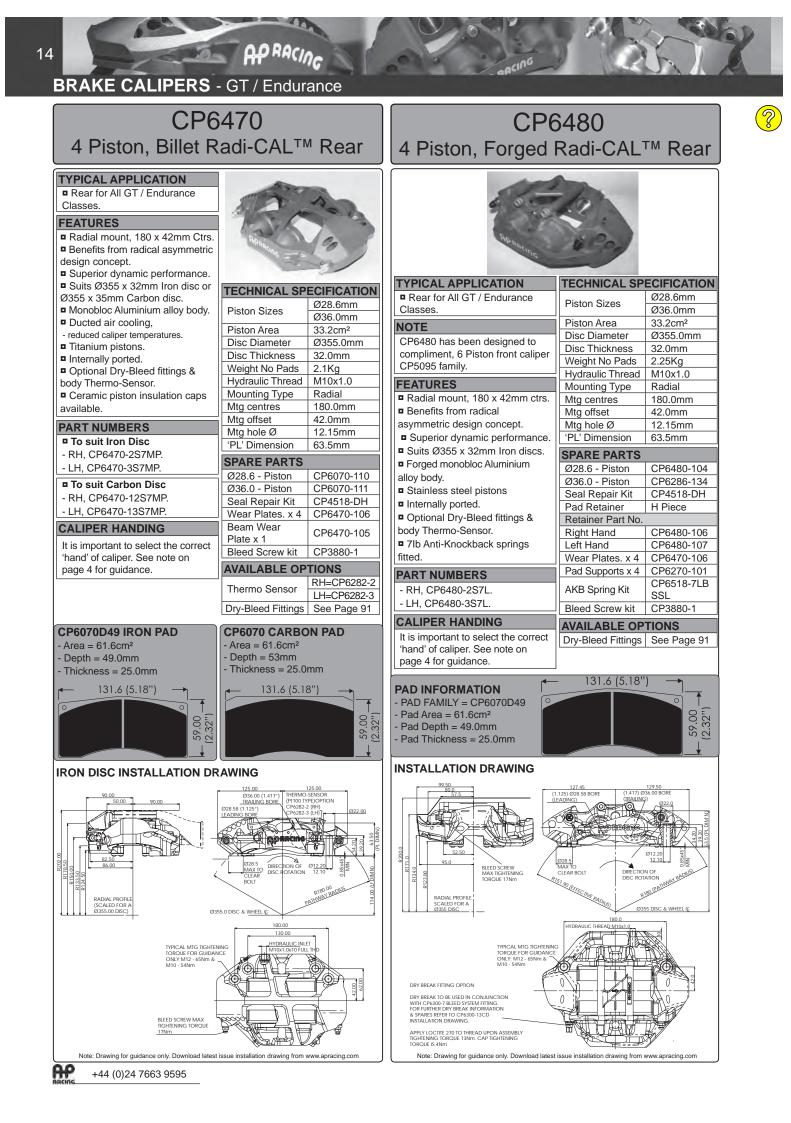
TECHNICAL SPECIFICATION Ø31.75mm



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CP6720 & CP6730 4 Piston, Front or Rear

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	TECHNICAL SP	
ACT		ECIFICATION
ABLE	Piston Sizes CP6720	Ø34.9mm
APRACING	CF0720	Ø41.3mm
ARCING	CP6730	Ø31.8mm x 4
a 08	Piston Area	
the second se	CP6720	45.93cm ²
	CP6730	31.66cm ²
TYPICAL APPLICATIONS	Disc Diameter	
	Мах	Ø355.0mm
■ Super 1600.	Min	Ø285.0mm
S2000 Rally.	Disc Thickness	28.0mm
Rally Raid.	Weight No Pads	
FEATURES	CP6720	2.5Kg
	CP6730	2.6Kg
Radial mount, 180 x 35mm ctrs.	Hydraulic Thread	M10x1.0
Suits Ø355 / 285mm x 28mm	Mounting Type	Radial
disc.	Mtg centres	180.0mm
Aluminium alloy body.	Mtg offset	35.0mm
Internally ported.	Mtg hole Ø	12.15mm
- No external bridge pipes.	'PL' Dimension	57.8mm
Protected bleed screws.		57.000
 Aluminium pistons standard, 	SPARE PARTS	
- Stainless Steel optional.	Pistons	
- Stainless Steel Optional.	Ø34.9mm	CP3567-108
PART NUMBERS	Ø41.3mm	CP3344-109
	Ø31.8mm	CP3349-103
■ CP6720 Type.	Seal Repair Kit	
- RHT, CP6720-6S4.	CP6720	CP4518-GK
- LHT, CP6720-7S4 .	CP6730	CP4518-EE
- RHL, CP6720-8S4.	Pad Retainer	H/Piece
- LHL, CP6720-9S4.	Retainer P/No.	CP6720-101
	Ret / Bolt P/No.	CP3345-118
■ CP6730 Type.	Wear Plates	CP5200-306
- RH, CP6730-2S4.	AKB Spring Kits	01 3200-300
- LH, CP6730-3S4.	AND Spring Kits	CP6518-
CALIPER HANDING	CP6720	4LBLL
It is important to select the correct		CP6518-
'hand' of caliper. See note on	CP6730	4LBSS
	Bleed Screw Kit	CP3880-1
page 4 for guidance.	Dieed Ocrew Rit	01 3000-1
CP3215D46 PAD	CP3215D50 PAD	1
Pad Area = 54.6cm ²	- Pad Area = 57.4c	
Pad Depth = 45.6mm	- Pad Depth = 50.3	
Pad Thickness = 16.8mm	- Pad Thickness =	16.8mm
	→ 132.27 (5.20	")
	152.27 (5.20	
55.75 (2.19")	ŕ .	75
2.1		55.75
INSTALLATION DRAWING		
r	273.00	n
	75 C	ZõN
00 10 10 10 10 10 10 10 10 10 10 10 10 1	- AORACIA	
	Live	
DISC ©		7
MAXTIGHTENING / TORQUE FOR INLET	DIRECTION OF DISC ROTATION	IAY
M6 PAD RETAINER POPT		C PATHING
SCREWS = 10Nm M10x1.0 S COPPER SLIP ON THREAD D		B.W. MSC PATHWAY
SSES RECOMMENDED	RA	Ø22.00 C/BORE
l	DISC & WHEEL G	C/DURE
		Ø ^{12.20}

For Radial Profile information.

Section.

Please contact **AP Racing Technical** DISC

Note: Drawing for guidance only. Download latest issue installation drawing from

BRAKE CALIPERS - Rally

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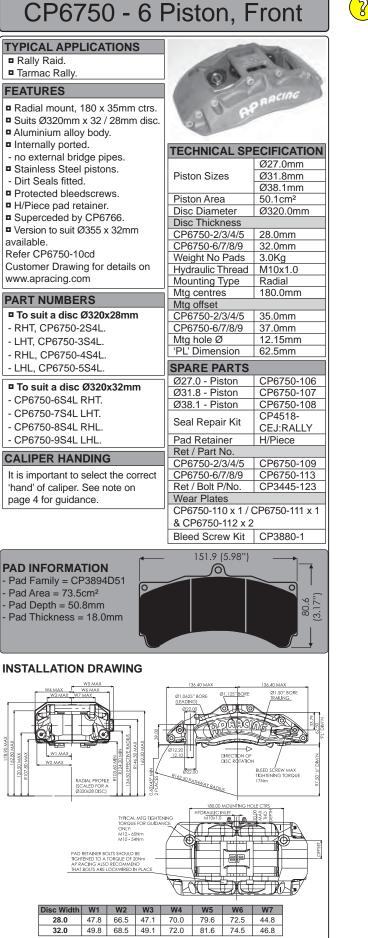
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55.75 [2.19"]

MTG HOLES

42

3mm .8mm x 4



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OP RACING **BRAKE CALIPERS** - Rally CP6760 - 4 Piston **CP6768** 6 Piston, Liquid Cooled Radi-CAL™ **TECHNICAL SPECIFICATION** Ø27.0mm Piston Sizes Ø31.8mm Ø38.1mm Piston Area 50.1cm² Disc Diameter Ø320.0mm Disc Thickness 32.0mm Weight No Pads 2.9Kg Hydraulic Thread M10x1.0 **TYPICAL APPLICATION** Mounting Type Radial Rally Raid. Mtg centres 200.0mm **TYPICAL APPLICATIONS TECHNICAL SPECIFICATION** Mtg offset 43.0mm **FEATURES** ■ S2000 Rear. Ø27.0mm Mtg hole Ø 12.15mm Piston Sizes Radial mount, 200 x 43mm ctrs. Ø34.0mm Grp 'N' Rear. 'PL' Dimension 74.43mm Re-circulating Liquid Cooling Piston Area 29.60cm² **Coolant Connections FEATURES** System. **Disc Diameter** Ø300.0mm Inlet & Outlet 9/16" x18 JIC - Controls caliper temperatures. Disc Thickness Radial mount, 180 x 35mm ctrs. 28.0mm Monobloc Aluminium alloy body. SPARE PARTS Suits Ø300mm x 28mm disc. Weight No Pads 2.1Kg Benefits from radical asymmetric Pistons Aluminium alloy body. M10x1.0 Hydraulic Thread design concept. Ø27.0mm CP6560-126 Internally ported. Mounting Type Radial Superior dynamic performance. Ø31.8mm CP6560-127 - No external bridge pipes. Mtg centres 180.0mm Ducted air cooling features. Single protected bleedscrew. Ø38.1mm CP6560-128 Mtg offset 35.0mm Designed to operate on Ø320 x Wear Plates. x 4 CP6766-108 Stainless Steel pistons. Mtg hole Ø 10.15mm 32mm Iron discs. H/Piece pad retainer. CP6766-107 Beam W/Plate 'PL' Dimension 57.8mm Internally ported. Pad Supports CP6078-105 Temperature Sensor Port. PART NUMBERS SPARE PARTS CP4518-Stainless Steel pistons. Seal Repair Kit Pistons CEJ:RAID - RHT. CP6760-2S4L. Dirt (wiper) seals fitted. Ø27.0mm CP4907-106 CP6518-7LB - LHT, CP6760-3S4L. Non Liquid-Cooled option also AKB Spring Kit Ø34.0mm CP6760-118 SSL - RHL, CP6760-4S4L. available - CP6766 Family. Seal Repair Kit CP4518-CF Bleed Screw Kit CP3880-1 - LHL, CP6760-5S4L Pad Retainer H/Piece PART NUMBERS JIC Adaptor CP6768-107 CP4144-101 Retainer P/No. **CALIPER HANDING** - RHT, CP6768-2S7L. Ret / Bolt P/No. CP3344-165 - LHT, CP6768-3S7L. It is important to select the correct Wear Plates CP6561-106 'hand' of caliper. See note on Bleed Screw Kit CP3880-1 **CALIPER HANDING** page 4 for guidance. It is important to select the correct 'hand' of caliper. See note on page 4 for guidance. 113.47 (4.47") 163.85 PAD INFORMATION PAD INFORMATION 52.10 (2.05" - Pad Family = CP3345D44 Pad Area = 43.4cm² Pad Family = CP6766D50 Pad Area = 81.9cm² Pad Depth = 44.1mm Pad Depth = 50.5mm Pad Thickness = 16.0mm Pad Thickness = 18.0mm INSTALLATION DRAWING 74.15 MAX R32.50 INSTALLATION DRAWING Ø38.1 ''NG <u>BORE</u> R11.50 34.0 (1.339* PR D R27.50 33.50 MIN BLEED SCREW MAX PATHWAY RAD TIGHTENING TORQUE = 17Nm Ø319.75 ADIAL PROFILE SCALED FOR A TYPICAL MTG TIGHTENING TORQUES FOR GUIDANCE ONLY: M12 - 65Nm MAX MAX TEMPERATUR PORT M8x1.0 REWS = 10Nm BOLTS

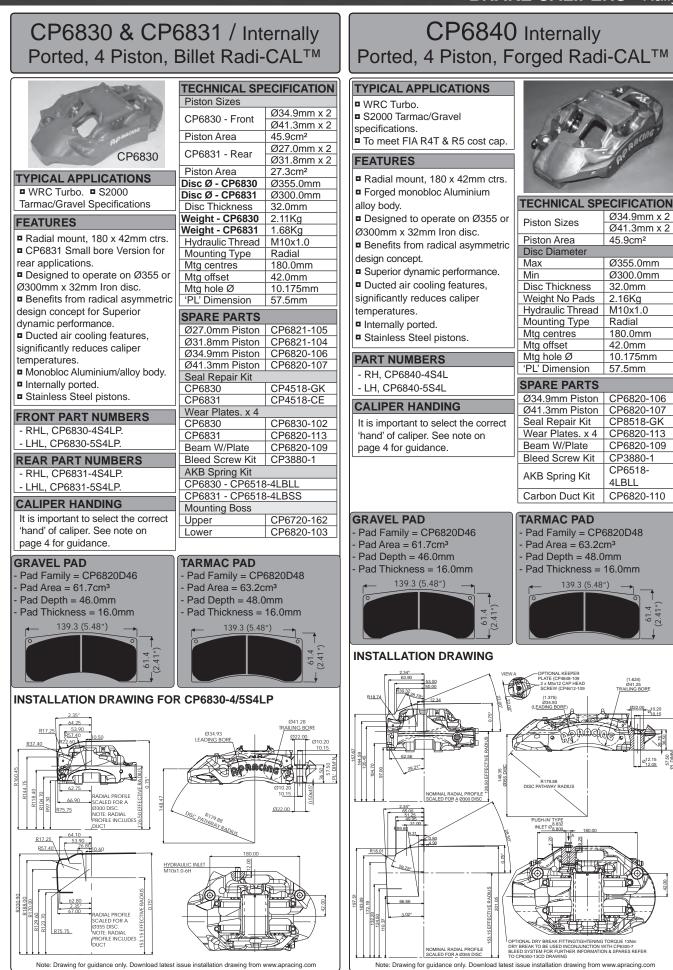
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BRAKE CALIPERS - Rally



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BRAKE CALIPERS - Rally

CP8350 4 Piston, Two Piece Forged Body

AP RACING



TYPICAL ADDU CATIONS	TEOLINIIOAL OD	
TYPICAL APPLICATIONS	TECHNICAL SP	Ø38.1mm x 2
R2 or Similar Series.	Piston Sizes	Ø41.3mm x 2
FEATURES	Piston Area	45.56cm ²
Small bore version of CP8351 &	Disc Diameter	
CP8352	Max	Ø310.0mm
Radial mount, 152 x 39.8mm ctrs.	Min	Ø285.0mm
Suits Ø285 or Ø310mm x 26mm	Disc Thickness	26.0mm
thick disc.	Weight No Pads	2.08Kg
Aluminium alloy body.	Hydraulic Thread Mounting Type	M10x1.0 Radial
Lightweight forged Aluminium	Mtg centres	152.0mm
alloy construction.	Mtg offset	39.8mm
High temperature, low drag seals fitted as standard.	Mtg hole Ø	10.2mm
Aluminium alloy pistons.	'PL' Dimension	51.0mm
 Manufactured with bleedscrew 	SPARE PARTS	
and pipe protection.	Pistons	
Stainless Steel pad abutments	Ø38.1mm	CP3215-113
and wear plates fitted.	Ø41.3mm	CP4270-3
	Seal Repair Kit	CP4518-JK
PART NUMBERS	Pad Retainer	Bolt
- RHT, CP8350-12S4.	Retainer Part No.	CP8350-108
- LHT, CP8350-13S4.	Ret / Bolt P/No.	CP3439-111
- RHL, CP8350-14S4.	Wear Plates	CD9250 400
- LHL, CP8350-15S4.	Right Hand x 2 Left Hand x 2	CP8250-108 CP8250-109
CALIPER HANDING	Bleed Screw Kit	CP3880-1
It is important to select the correct	Fluid Pipe	CP8350-6
'hand' of caliper. See note on	· ·	CP6518-
page 4 for guidance.	AKB Spring Kit	4LBLL
GRAVEL PAD	TARMAC PAD	
 Pad Family = CP8250D41 Pad Area = 50.67cm³ Pad Depth = 41.0mm Pad Thickness = 20.2mm 132.2 (5.20") 	- Pad Family = CP4 - Pad Area = 61.0c - Pad Depth = 50.0 - Pad Thickness = 132.2 (5.20	m³ Imm 20.2mm
INSTALLATION DRAWING	113.00 MAX Ø1.50") LEADING BORE	113.00 MAX Ø1.625") TRAILING BORE
10 ROUE 12 SB/FT 12 S		R136.17 R136.17 R136.00 PATHWAY RADUIS 'N'
ADDAL PROFILE ADDAL	TORQUE 111	ING BOLT MAX TIGHTENING two (8.5b/T)

CP8351 & CP8352 4 Piston, Two Piece Forged Body

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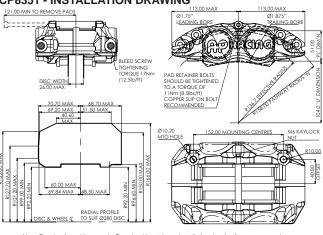
TYPICAL APPLICATIONS R2 or Similar Series.

FEATURES
CP8352 designed with alternative
bore positions.
Radial mount, 152 x 40.8mm ctrs.
Suits Ø285 or Ø310mm x 26mm
thick disc.
Lightweight forged Aluminium
alloy body construction.High temperature, low drag seals
fitted as standard.
 Stainless Steel pistons.
Manufactured with bleedscrew
and pipe protection.
Stainless Steel pad abutments
and wear plates fitted.
PART NUMBERS
With Ø44.5 / 47.6mm Bores.
- RHL, CP8351-4S0L.
- LHL, CP8351-5S0L.
With Ø41.3/44.5mm Bores.
- RHL, CP8352-4S0L. - LHL, CP8352-5S0L.
CALIPER HANDING
It is important to select the correct
'hand' of caliper. See note on
page 4 for guidance.
GRAVEL PAD
- Pad Family = CP8250D41
- Pad Area = 50.67cm ³
- Pad Depth = 41.0mm
- Pad Thickness = 20.2mm
← 132.2 (5.20'') →
61.3

TECHNICAL SPECIFICATION Piston Sizes Ø44.5mm x 2 CP8351 Ø47.6mm x 2 Ø41.3mm x 2 CP8352 Ø44.5mm x 2 Piston Area CP8351 66.67cm² 49.56cm² CP8352 Disc Diameter Ø310.0mm Max Min Ø285.0mm Disc Thickness 26.0mm Weight No Pads 2.08Kg Hydraulic Thread M10x1.0 Mounting Type Radial Mtg centres 152.0mm 40.8mm Mtg offset Mtg hole Ø 'PL' Dimension 10.2mm 51.0mm SPARE PARTS Pistons CP5771-131 Ø41.3mm Ø44.5mm CP5751-145 Ø47.6mm CP5751-147 Seal Repair Kit CP8351 CP4518-LM CP8352 CP4518-KL Pad Retainer Bolt CP8350-108 Retainer Part No. CP3439-111 Ret / Bolt P/No. Wear Plates Right Hand x 2 CP8250-108 Left Hand x 2 CP8250-109 Bleed Screw Kit CP3880-1 Fluid Pipe CP8350-6 Stainless Steel CP8350-116 Mtg Boss x 2 TARMAC PAD Pad Family = CP8250D50 Pad Area = 61.0cm³ Pad Depth = 50.0mm Pad Thickness = 20.2mm 132.2 (5.20") 70.4 (2.77")

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CP8351 - INSTALLATION DRAWING



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	5785 et Radi-CA	Гтм	4 Piston, For			.™ Rea
TYPICAL APPLICATION Vorld Touring Car Front. FEATURES Radial mount, 180 x 42mm ctrs. Benefits from a second generation radical asymmetric design concept. Superior dynamic performance. Increased stiffness.	TECHNICAL SP				AP RACING	P
 Reduced weight. Monobloc Alum-alloy body. Suits Ø380 x 34mm Iron disc. Titanium pistons standard. Stainless Steel option available. Carbon duct fitted. Stainless Steel wear plates. Dry Bleeds fitted. Supercedes CP5780 Caliper family. 	Piston Sizes Piston Area Disc Diameter Disc Thickness Weight No Pads S/Steel Pistons Titanium Pistons Hydraulic Thread Mounting Type	Ø36.00mm Ø44.45mm 51.39cm ² 380.0mm 34.0mm 2.13Kg 1.98Kg M10x1.0 Radial	TYPICAL APPLICATION Touring Car. GT. Formula Competition Brak	ke Kits.	TECHNICAL SP Piston Sizes Piston Area Disc Diameter Disc Thickness	PECIFICATI Ø28.6mm Ø34.9mm 31.9cm ² 355.0mm 32.0mm
PART NUMBERS Duderslung Mounted Caliper with Titanium Pistons. RHT, CP5785-2S0MPD. LHT, CP5785-3S0MPD. RHL, CP5785-4S0MPD. LHL, CP5785-5S0MPD. Note: CP5785 also available in conventional mounting/handing	Mtg centres Mtg offset Mtg hole Ø 'PL' Dimension SPARE PARTS Titanium Pistons Ø36.00mm Ø44.45mm Stainless Steel Pis Ø36.00mm Ø44.45mm	180.0mm 42.0mm 12.15mm 61.9mm CP5785-106 CP5785-107 stons CP5785-108 CP5785-109	 Radial mount, 180 x 35m Benefits from a radical asy ric design concept. Superior dynamic perform Increased stiffness. Forged monobloc Alumini alloy body. Suits Ø355 x 32mm Iron of Stainless Steel pistons. Stainless Steel wear plate Optional Carbon Duct kit. 	ymmet- nance. ium discs. es.	Weight No Pads Hydraulic Thread Mounting Type Mtg centres Mtg offset Mtg hole Ø 'PL' Dimension SPARE PARTS S/Steel Pistons Ø28.6mm Ø34.9mm Seal Repair Kit	Radial 180.0mm 35.0mm 12.15mm 55.0mm
leading and trailing configuration. Please contact AP Racing technical section for more information. CALIPER HANDING It is important to select the correct 'hand' of caliper. See note on page 4 for guidance.	Carbon Duct Kits RH CP5785-104/L	H CP5785-125 CP6300-21 CP5785-6	PART NUMBERS - RHT = CP6267-6S0L. - LHT = CP6267-7S0L. CALIPER HANDING It is important to select the of 'hand' of caliper. See note of page 4 for guidance.		Wear Plates x 4 Pad Retainer Wear Plate Pad Supports x 4 Bleed Screw Kit	CP5760-10 CP6266-10
PAD INFORMATION - Pad Family = CP5788D54 (D48 available for lighter bake package)). - Pad Area = 77.3cm ² - Pad Depth = 54.0mm - Pad Thickness = 20.0mm	139.3 (5.48")	61.4 (2.41")	PAD INFORMATION - Pad Family = CP6267D50 - Pad Area = 60.4cm ² - Pad Depth = 50.0mm - Pad Thickness = 25.0mm		132.28 (5.20"	
	135.9	126.8		NG	134.63	134 45
ACHIEVE OPTIMUM BLEED -3	CONJUCTION CONJUCTIONE CONJUC	Add Add TRUME LOOSE TRUME LOOSE TRUME LOOSE TRUME LOOSE TRUME LOOSE ADD ADD ADD ADD ADD ADD ADD ADD ADD ADD	10 00 00 00 00 00 00 00 00 00 00 00 00 0	12222	CRASS (1.25) LEADING BORE	034.93 (1.375) TRALING EDRE 012.00
A GUIE GUIE	CAL MYC TENNO CAL MYC TENNO CAL CONT CAL CONT CA		TORQUE F	ITG TIGHTENING OR GUIDANCE 2 - 65Nm & M10 - : -	M10X1.0X9 FULL	

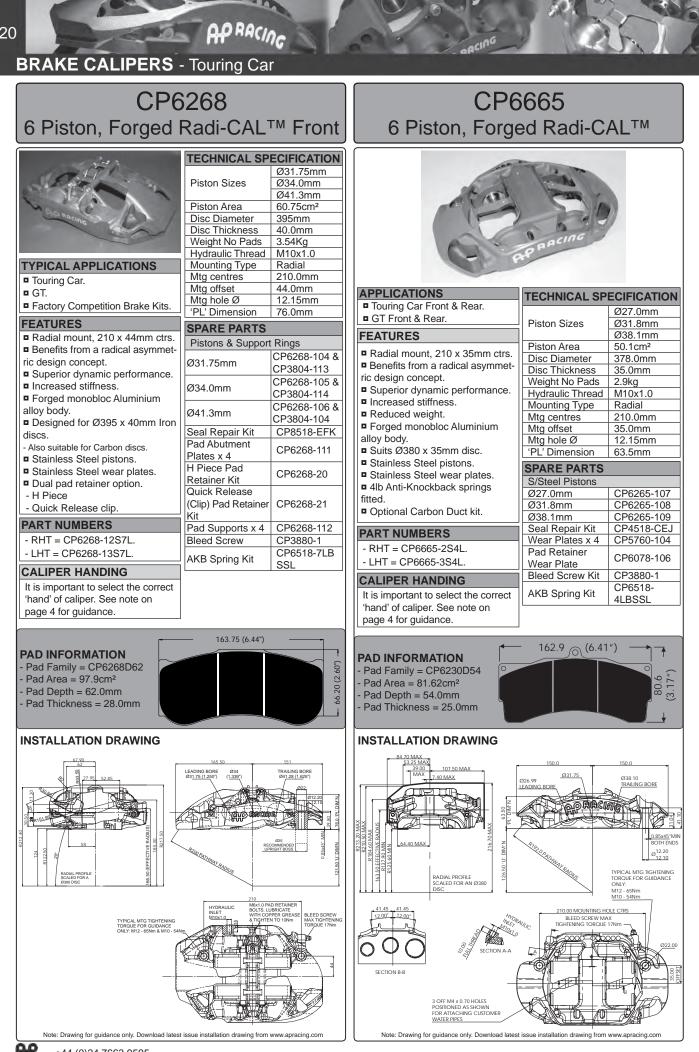
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Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

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O.D RACIN ageing BRAKE CALIPERS - 2 Piston CP2576, CP2577, CP3176, CP2505 - Cast Iron Body CP3177 & CP3178 - Lug Mount **TECHNICAL SPECIFICATION** Piston Size / Piston Area Ø41.3mm / CP2576-3E0 26.76cm² Ø44.5mm / CP2577-3/-14E0 31.04cm² Ø38 1mm / CP3176-2E0 22.8cm² Ø36.0mm / CP3177-2E0 20.35cm² Ø31.8mm / CP3178-2E0 TYPICAL APPLICATIONS 15.83cm² **TYPICAL APPLICATION TECHNICAL SPECIFICATION** Disc Diameter Ø267mm Rally / Circuit Rear. Ø41.3mm Formula Ford. Piston Size CP2577-14E0 Formula Ford **Disc Thickness** 9.7mm **Piston Area** 26.8cm² **FEATURES** Front & Rear. (Interchangeable Weight No Pads 1.1Kg Disc Dia. Ø254.0mm 3/8"x24UNF with CP2485-8/9S0) Lug mount, 89 x 19.1mm ctrs. Hydraulic Thread **Disc Thickness** 7.1mm Cast iron body with a bright pas-Mounting Type Lug **FEATURES Disc Pathway** sivated zinc surface treatment. Mtg centres 89.0mm 128.0mm Lug mount, 89mm ctrs. Radius Suits Ø254mm x 7.1mm solid Mtg offset 24.6mm Aluminium alloy body. Iron disc. Weight No CP2577-14E0 20.6mm 2.0Kg Non handed. Non handed. Pads Mtg hole Ø 9.6mm Suits Ø267 x 9.7mm solid disc. Steel pistons. 'PL' Dimension 49.9mm Hvdraulic 3/8"x24UNF Piston dirt seals fitted. Versions are available for upto CP2577-14E0 48.5mm Thread Ø300mm disc. Split pin pad retainer. Mounting Type Lug SPARE PARTS Interchangeable with CP3696-Aluminium pistons. 89.0mm Mtg centres Pistons 6F0 Quick release 'R' Clip pad CP2576-3E0 CP2576-105 Mtg offset 19.1mm retainer. PART NUMBER Mtg hole Ø CP2577-3/-14E0 CP2577-102 9.8mm PART NUMBERS CP3176-102 CP3176-2E0 - CP2505-3S0L 'PL' Dimension 43.7mm - CP2576-3E0. CP3177-102 CP3177-2E0 INSTALLATION SPARE PARTS - CP2577-3E0. CP3178-2E0 CP3178-102 Pistons CP2195-14 Seal Repair Kit Install with bleed screws at the - CP2577-14E0 top (swap with blanking plug as Seal Repair Kit CP4508-K - CP3176-2E0. CP2576-3E0 CP4518-K required) to enable a good bleed. CP2577-3/-14E0 CP4518-L - CP3177-2F0 Pad Retainer Split Pin CP4518-J - CP3178-2E0. CP3176-2E0 CP2696-160 Retainer P/No. CP3177-2E0 CP4518-H CP3720-182 **Bleed Screw** INSTALLATION CP3178-2E0 CP4518-E Install with bleed screws at the Pad Retainer R Clip 59.3 (2.34") top (swap with blanking plug as Retainer P/No. CP2213-17 required) to enable a good bleed. CP3720-182 Bleed Screw 0 0 PAD INFORMATION 70.15 (2.76") - Pad Family = CP2195D38 (2.02") Pad Area = 22.4 cm² \bigcirc \bigcirc **PAD INFORMATION** Pad Depth = 38.4mm 51.1 - Pad Family = CP2399D43 - Pad Thickness = 10.5mm (2.28") Pad Area = 27.4cm² Pad Depth = 42.9mm 58.1 Pad Thickness = 14.4mm INSTALLATION DRAWING **INSTALLATION DRAWING FOR CP2577** R11.18 NOM 88.95 Ŗ PAD PROFILI 14.7 MIN 34.23 MAX Ø<u>9.7/9.6</u> 41.73 MAX 55.04 MAX 61.6 MA 51.5 MAX 27.97 MAX SIDE DIAMETER 13.8° MAS 11° MIN FECTIVE RADIUS 104.8 16° MIN NIM 47.22 MAX 7 MAX 32.16 RADIAL PROFILE ON A Ø254.0MM DISC

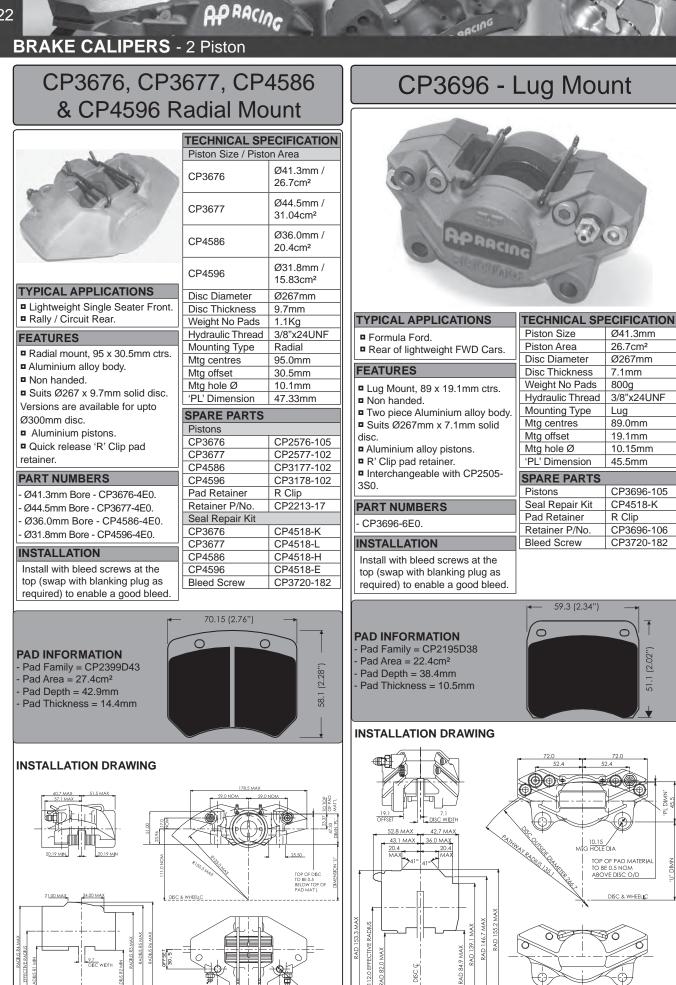
Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

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89.0 MTG HOLE CENTRES

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SC & WHEE

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CP6120 & CP6121 - Solid Disc CP6126 - Ventilated Disc

AP RACIN

TYPICAL APPLICATIONS

Formula Ford.

Rally Rear.

• CP6126 Suitable for Lightweight Sportscars.

FEATURES

Radial mount, 130 x 20.9mm ctrs.
 Two piece cast Aluminium alloy body.
 CP6120 & CP6121 suitable for

solid disc up to Ø282 x 12.7mm, max thickness. CP6126 suitable for ventilated

discs upto Ø280mm x 17.8mm, max thickness.

Aluminium pistons.

High temperature / low drag seals fitted as standard.

Version with pipe protection

available for CP6120 family only.

PART NUMBERS

 Caliper with Ø44.5mm pistons for Solid Disc:
 CP6120-2S0 RHT / LHL.

- CP6120-3S0 LHT / RHL.

Calipers with Ø38.1mm pistons for Solid Disc:

- CP6121-2S0 RHT / LHL.

- CP6121-3S0 LHT / RHL.

Calipers with Ø44.5mm pistons

for Vented Disc: - CP6126-2S4 RHT / LHL.

- CP6126-3S4 LHT / RHL.

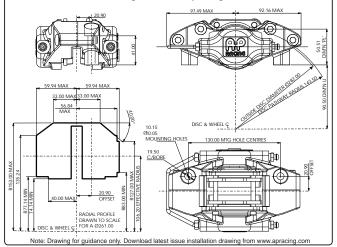
CALIPER HANDING

It is important to select the correct 'hand' of caliper. See note on page 4 for guidance.

PAD INFORMATION

- Pad Family = CP5119D50
- Pad Area = 33.7cm²
- Pad Depth = 50.0mm
- Pad Thickness = 14.3mm

INSTALLATION DRAWING - CP6120-2/3S0 For CP6121 & CP6126 drawings visit www.apracing.com





TECHNICAL SPECIFICATION

TECHNICAL SP	ECIFICATION
Piston Size / Pisto	n Area
CP6120 &	Ø44.5mm /
CP6126	31.04cm ²
CP6121	Ø38.1mm /
CP0121	22.8cm ²
Disc Diameter	Upto Ø282mm
Disc Thickness	
CP6120 / CP6121	12.7mm
CP6126	17.8mm
Weight No Pads	1.5Kg
Hydraulic Thread	M10x1.0
Mounting Type	Radial
Mtg centres	130.0mm
Mtg offset	
CP6120 / CP6121	20.9mm
CP6126	23.86mm
Mtg hole Ø	10.1mm
'PL' Dimension	50.51mm
SPARE PARTS	
Pistons	
CP6120	CP5235-108
CP6121	CP6121-104
CP6126	CP5119-104
Pin Pad Retainer	Part No
CP6120 / CP6121	CP6120-103
CP6126	CP5119-107
Seal Repair Kit	
CP6120 / CP6126	CP4518-L
CP6121	CP4518-J
Bleed Screw	CP3880-1
Fluid Pipe	
CP6120 / CP6121	CP6120-6
CP6126	CP5119-123

77.3 (3.04⁻) 77.3 (3.04⁻)

BRAKE CALIPERS - 2 Piston

TECHNICAL SPECIFICATION

Ø36.0mm

20.4cm²

Ø300mm

16.0mm

M10 x 1.0

1.1Kg

Radial

95.0mm

33.65mm

10.20mm

46.73mm

CP5569-111

CP4140-110

CP5586-104

CP5166-108

CP3880-1

CP4518-H

R Clip

CP5928 - Billet Body



Piston Size

Piston Area

Disc Diameter

Disc Thickness

Weight No Pads

Hydraulic Thread

Mounting Type

'PL' Dimension

SPARE PARTS

Seal Repair Kit

Pad Retainer

Retainer P/No.

Bleed Screw

Wear Plates x 4

Wear Plate Bolt

Mtg centres

Mtg offset

Mtg hole Ø

Pistons

x 4

TYPICAL APPLICATIONS

acing

- Touring Car Rear.
 Rally Rear.
- Lightweight Single Seater Front.

FEATURES

- Radial mount, 95 x 33.65mm ctrs.Billet two piece Aluminium alloy
- body.
- Non handed.
- Suits Ø300.0 x 16.0mm
- ventilated Iron disc.
- Aluminium pistons.
- Quick release 'R' Clip pad retainer.
- Stainless steel wear plates fitted.
- M10 to 3/8" fitting included.
- PART NUMBERS
- CP5928-5E0.

INSTALLATION

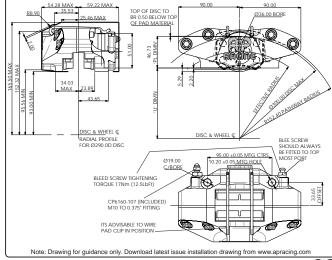
Install with bleed screws at the top (swap with blanking plug as required) to enable a good bleed.

PAD INFORMATION

- Pad Family = CP2399D43
 Pad Area = 27.4cm²
 Pad Depth = 42.9mm
 Pad Thickness = 14.4mm
- 58.1 (2.28°)

70.15 (2.76")

INSTALLATION DRAWING





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BRAKE CALIPERS - Historic Race

O.D RACINO



AP Racing's "Historic" Range of calipers are detailed below. These "Classic" items, such as CP2383 and CP2561 and have been reintroduced due to the popularity of various historic racing categories. The "Historic" Range of calipers are usually made to order, however some calipers are stock items, please check availability with AP Racing first. Spare part details for the calipers detailed can be found on page 34 to 39.

CP2561

CP2382 and CP2383 2 Piston Calipers. TECHNICAL SPECIFICATION Ø50.8mm Piston Sizes x 2 Disc Dia Ø266.7mm Max APPLICATIONS Min Ø254.0mm Disc Thicknes CP2382, Escort CP2382 20.7mm Rear, Grp 4 Rally CP2383 Vented Disc. 11.2mm Max Min CP2383, Escort 9.7mm Weight 1.8Kg Rear, Grp 4 rally (No Pads) Solid Disc. 3/8"x24 Hvdraulic Thread UNF FEATURES Mounting Lug Type Lug mount. Mounting 88.9mm Cast Aluminium centres alloy body. Mounting offset CP2382 CP2383 Aluminium alloy 29.7mm 24.9mm pistons. Mtg hole Ø 11.27mm Hard anodised 'PL' Dim'n 54.1mm surface treatment. Seal CP4518-N Repair Kit PART NUMBERS Pad Family - CP2372D52 Vented Disc. Pad Thickness = 15.9mm - CP2382-12E4, RH & -13E4, LH 6.0 (2.60") Solid Disc. - CP2383-12E4. RH & -13E4, LH

2 Piston Caliper.					
and the	TECHNICAL				
2 /11	SPECIFICA				
0 -2	Piston	Ø38.1mm			
5.0	Sizes Disc Dia.	x 2 Ø278.0mm			
	Disc Thickne				
APPLICATIONS	Max	25.4mm			
Historic Formula	Min	22.8mm			
One. Balanced	Weight	1.17Kg			
Braking from	(No Pads)				
1977 - 1985.	Hydraulic Thread	M10x1.0			
1911 - 1905.	Mounting				
FEATURES	Туре	Radial			
	Mounting	88.9mm			
Lug mount.	centres				
Balanced braking	Mounting offset	50.0mm			
(2 Calipers per disc).	Mtg hole Ø	9.6mm			
 Cast Aluminium 	'PL'	26.0mm			
	Dim'n	20.011111			
alloy body. Hard anodised	Seal Densis Kit	CP4518-J			
Hard anodised surface treatment.	Repair Kit				
R Clip pad	Pad Family - CP2554				
retainer.	Pad Thickness = 16.8mm ← 70.15 (2.76") →				
 High temperature 					
seals.					
50uio.		28"1			
PART NUMBER		1 12			
		8			
- CP2561-3S4.					
	2279				
4 Pisto	n Calipei	r. 🔰			
A	TECHNICA	L			
A TAK	SPECIFICA				
Str. C	Piston	Ø44.5mm			
	Sizes Disc Dia.	x 4			
	Max	Ø330.0mm			
	Min	Ø260.0mm			
	Disc	28.0mm			
	Thickness	20.011111			
APPLICATIONS	Weight	3.4Kg			
Sports GT.	(No Pads) Hydraulic	3/8"x24			
	Thread	UNF			
FEATURES	Mtg Type	Blank Lug			
	Mounting cer	r			
Closed back	Max	88.9mm 80.3mm			
Aluminium Alloy					
body	Min Mounting off				
body.	Mounting off	set			
Blank lug mount.					
 Blank lug mount. Ø44.5mm 	Mounting off Max	set 50.0mm			
Blank lug mount.	Mounting offs Max Min	set 50.0mm			

Max

Min

Seal

Repair Kit

'PL' Dimension

Hard anodised

surface treatment.

PART NUMBER

- Non Handed

CP2279-400S4BP

86.4mm

70.6mm

CP4518-

11

Pad Family - CP2279D50

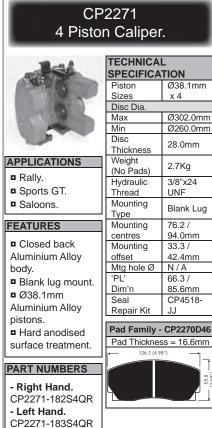
Pad Thickness = 20.4mm

er.		2270 n Calipe	r.
AL ATION Ø38.1mm x 2 Ø278.0mm iess 25.4mm 22.8mm 1.17Kg M10x1.0	APPLICATIONS Rally. Sports GT. Saloons.	TECHNICA SPECIFICA Piston Sizes Disc Dia. Max Min Disc Thickness Weight (No Pads) Hydraulic	Ø41.3mm Ø41.3mm x 4 Ø302.0mm Ø260.0mm 28.0mm 2.7Kg 3/8"x24
Radial	FEATURES	Thread Mounting	UNF
88.9mm 50.0mm 9.6mm 26.0mm CP4518-J - CP2554 ess = 16.8mm 7 ^{26"}	 Closed back aluminium alloy body. Blank lug mount. Ø41.3mm Aluminium alloy pistons. High temperature seals. Hard anodised surface treatment. 		Blank Lug 76.2 / 94.0mm 33.3 / 42.4mm N / A 66.3 / 85.6mm CP4518- KK - CP2270D46 ss = 16.6mm
		2361	
er.	4 Pisto	n Calipe	r.

er Call

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TECHNICAL	
SPECIFICATION	
Piston Ø38.1	mm
Sizes x 4	
Disc Dia.	
Max Ø267.	Dmm
Min Ø248.	Dmm
Disc 20.7m	m
Thickness 20.711	
APPLICATIONS Weight 2.0Kg	
(No Pads)	
Rally. Hydraulic 3/8"x2	4
Sports GT. Thread UNF	
Mounting Blank	Lua
IVPE	Lug
Mounting 76.27	
Closed back centres 94.0m	m
Aluminium Alloy Mounting 28.7 /	
body. offset 31.2m	m
Blank lug mount	
FL 55.17	
Differsion 01.2m	
■Ø38.1mm Seal CP451	8-
Aluminium Alloy Repair Kit JJ	
pistons. Pad Family	
Hard anodised CP2340D43 or D51	
surface treatment. Pad Thickness = 15.9	9mm
113.5 (4.47")	- 1
PART NUMBERS	
	-6
- Right Hand.	52.1 [2.05"
CP2361-96S4QR	
- Left Hand.	
CP2361-97S4QR	



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RP

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INTRODUCTION.

Competition is the best of test-beds, and AP Racing's years of close involvement with motorsport also bring benefits for the latest high performance road cars, aftermarket and armoured vehicles. The emphasis may be different, qualified by the everyday demands of modern road conditions, but the essential requirements remain the same. With a dedicated Road Car and Armoured team of engineers and designers AP Racing helps to bring extraordinary capability to extraordinary cars like, Ascari, Aston Martin, Bugatti, Caterham, Ford, HSV, Koenigsegg, Noble, Morgan, Lotus, PSV, Seat and TVR, to name a few.



In both brake and clutch requirements AP Racing takes pride in dealing with such prestigious companies and have the systems in place to offer our customers the best possible service available from a proven OE, Aftermarket & Armoured brake system supplier.

ARMOURED VEHICLES

AP Racing can now engineer unique solutions for various Armoured or Defence applications, to a customers own specific criteria and requirements. With various heavy duty brake systems available, solutions can be designed and developed based on our specific Armoured Car / Heavy Duty Vehicle testing procedures. With careful consideration of the specific levels of armouring and weight increases, AP Racing can develop a brake system to effectively function in the environments and scenarios experienced by these vehicles.

AP RACING

AP Racings motorsport and OEM experiences breeds excellence which leads to exciting designed tried and tested brake and clutch packages for a selection of vehicles including:

Land Cruiser 76. / - Land Cruiser 200. / - Hilux.



Matthew Dodd for further details and technical information: Tel: +44 (0)24 7688 3339 E-Mail: matthew.dodd@apracing.co.uk

THE RANGE

The calipers detailed on pages 25 to 30 are the most popular from within the range but not all are listed. If your requirements differ form those listed then please contact AP Racing Road Car Technical Section, page 169.

DESIGN & DEVELOPMENT.

The whole process of design and development is carried out at our headquarters in Coventry. With two brake dynomometers we are able to reproduce the most demanding test environments. AP Racing designers use the latest computer technology to produce aesthetic and effective brake calipers at the affordable prices the markets demands.

MANUFACTURING.

The purpose built manufacturing facilities for AP Racing Road Car and Armoured Vehicle products benefit from manufacturing tech-



niques and systems that enable AP Racing the ability to produce brake calipers for models in production at up to 10,000 vehicles per annum.

IMPORTANT SAFETY NOTE FOR CUSTOMERS.

All AP Racing brake calipers are designed and exhaustively tested to ensure they meet a set of specified parameters for both strength and durability. It is important when selecting a brake caliper to ensure that the relevant operating parameters are not exceeded on the application on which the product is to be installed. Technical Data Sheets for Road calipers can be found on our website **www.apracing.com/bctds**.

It is the responsibility of the person specifying these products for a given application to ensure that the design parameters of the product are not exceeded.

TECHNICAL DATA SHEETS - BRAKE CALIPERS

Each Technical Data Sheet is specific to a caliper or family of calipers and details the maximum working pressure and maximum brake torque for each caliper. In addition they also include a guide to the typical gross vehicle weight to which this relates. These guides assume the application to be a standard passenger vehicle fitted with road tyres and therefore deceleration rates above 13m/s² (1.3g) will not be achievable.

TYPICAL APPLICATION **TECHNICAL SPECIFICATION** Road Lightweight Front or Rear. **Piston Sizes** Ø44.5 x 2 Piston Area 31.11cm² **FEATURES Disc Diameter** Ø282.0 Radial mount, 130 x 33.75mm **Disc Thickness** 10.0mm ctrs. Weight No Pads 1.6Kg Suits Ø282mm x 10mm solid Hydraulic Thread M10x1.0 disc. Mounting Type Radial Aluminium alloy body. Mtg centres 130.0mm Aluminium alloy pistons. 33.75mm Mtg offset Piston dirt seals fitted. Mtg hole Ø 10.2mm Advanced paint finish, protects 'PL' Dimension 50.51mm against corrosion. SPARE PARTS Pad supports / retained on pins. Pistons CP5119-104 PART NUMBERS Seal Repair Kit CP4519-L RHT - CP5119-12S4BK. Pad Retainer Pin CP5119-144 Retainer P/No LHT - CP5119-13S4BK. Bleed Screw CP3720-173 **INSTALLATION** Fluid Pipe CP5111-12 It is important to select the correct 'hand' of caliper so that the bridge pipe is below the caliper and bleed screws are at the top to enable a good hydraulic bleed. 77.3 (3.04") PAD INFORMATION - Pad Family = CP5119D50 50.3 (2.37") Pad Area = 33.7cm² - Pad Depth = 50.0mm Pad Thickness = 14.3mm INSTALLATION DRAWING 97.50 MAX 93.00 MAX 91.00 MAX 38.80 NOM Ø44.50 (1.75*) 38.00 NOM 89.95 MAX 36.50 MAX 69.00 MAX .85 MA) R6.00 WHEEL @ 130.0 / 129.95 MTG HOLE CENTRES IPER ø10.25 CALIPER RADIAL PROFILE TO SUIT Ø282.0 DISC MTG HO Ø19.50 C<u>/BORE</u>

BLEED SCREW TIGHTENING

Note: Drawing for guidance only. Download latest issue installation drawing from www.apr

2UE17.0Nm (12.5lbs/ft

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CP5119

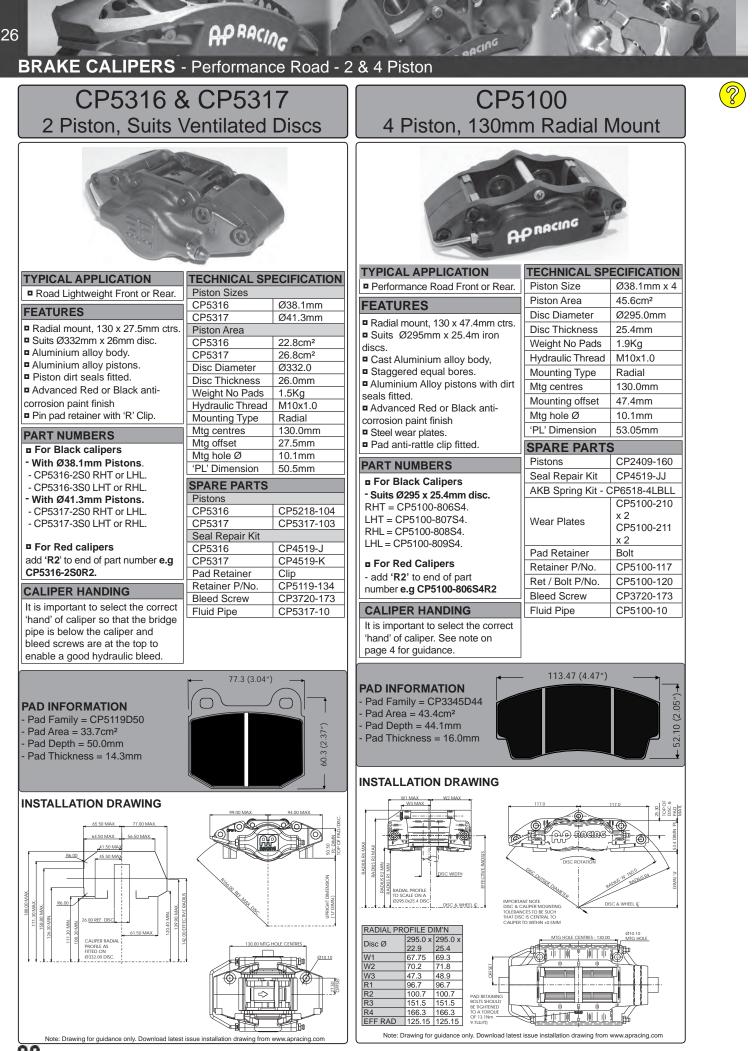
2 Piston, Suits Solid Discs

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33.75 OFFSET

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AP	RACING	E CALIPERS - Perfor	mance Road - 4 Piston
	5200 m Radial Mount	CP7	7600 295x24mm Discs
Typical Application Performance Road Front.	Mathematical and a construction Ø38.1mm Piston Size Ø38.1mm Ø41.3mm Ø41.3mm Piston Area 49.56cm² Disc Diameter Max Max Ø330.0mm Min Ø304.0mm Disc Thickness -802/3/4/5S4 -802/7/8/9S4 28.0mm -810/1/2/3S4 32.0mm		AP MACING
FEATURES Radial mount, 152mm ctrs. To suit Ø330 / 304mm x 32 / 28mm iron disc. Cast Aluminium alloy body. Aluminium Alloy pistons with dirt seals fitted. Advanced Red or Black anticorrosion paint finish Steel wear plates. Pad anti-rattle clip fitted. FART NUMBERS FOR Black Calipers Suits Ø330 x 32mm disc. CP5200-802S4 RHT /-803S4 LHT /-804S4 RHL /-805S4 LHL Suits Ø330 x 28mm disc. CP5200-806S4 RHT /-807S4 LHT /-808S4 RHL /-809S4 LHL Suits Ø304 x 32mm disc. CP5200-810S4 RHT /-811S4 LHT /-812S4 RHL /-813S4 LHL FOR Red Calipers - add 'R2' to end of part number, e.g CP5200-806S4R2. CALIPER HANDING It is important to select the correct	Weight No Pads 2.4Kg Hydraulic Thread M10x1.0 Mounting Type Radial Mtg centres 152.0mm -802/3/4/5S4 50.93mm -802/3/4/5S4 50.93mm -802/3/4/5S4 50.93mm -806/7/8/9S4 46.86mm -810/1/2/3S4 50.93mm Mtg hole Ø 10.1mm 'PL' Dimension 60.36mm SPARE PARTS Pistons Ø38.1mm See Page 37 Ø41.3mm for Part Nos. Seal Repair Kit CP6518-4LBLL Wear Plates CP5200-306 x 2 / -307 x 2 Pad Retainer Polt Retainer Part No. -802/3/4/5S4 CP5200-110 -802/3/4/5S4 CP5200-110 -802/3/4/5S4 CP3894-139 Bed Screw CP3720-173 Fluid Pipes -802/3/4/5S4 -802/3/4/5S4 CP5200-6 -802/3/4/5S4 CP5200-16	TYPICAL APPLICATION Performance Road Front. FEATURES • Radial mount, 130 x 47mm ctrs. • Suits Ø295mm x 24mm iron disc. • Cast Aluminium alloy body. • Aluminium alloy pistons. • Boot type dirt seals fitted. • Advanced Red or Black anticorrosion paint finish • Steel wear plates. • Pad anti-rattle clip fitted. PART NUMBERS • For Black Calipers • CP7600-2S0 RHT. • CP7600-3S0 LHT. • CP7600-4S0 RHL. • CP7600-5S0 LHL. • For Red Calipers • add 'R2' to end of part number e.g CP7600-2S0R2. CALIPER HANDING It is important to select the correct 'hand' of caliper. See note on page 4 for guidance.	TECHNICAL SPECIFICATION Piston Sizes Ø38.1mm Piston Area 45.6cm² Disc Diameter Ø295.0 Disc Thickness 24.0mm Weight No Pads 2.6Kg Hydraulic Thread M10x1.0 Mounting Type Radial Mtg centres 130.0mm Mtg offset 47.4mm Mtg hole Ø 10.1mm 'PL' Dimension 53.0mm SPARE PARTS Pistons Ø38.1mm CP6200-104 Seal Repair Kit CP4525-JJ Pad Retainer Pin Retainer P/No. CP7600-109 Wear Plates x 4 Bleed Screw Kit CP3880-1 Fluid Pipe CP7601-11
 'hand' of caliper. See note on page 4 for guidance. PAD INFORMATION Pad Family = CP3215D50 Pad Area = 57.4cm² Pad Depth = 50.3mm Pad Thickness = 16.8mm 	-810/1/2/3S4 CP5200-6	PAD INFORMATION - Pad Family = CP7600D46 - Pad Area = 43.5cm ² - Pad Depth = 46.2mm - Pad Thickness = 16.0mm	
INSTALLATION DRAWING	135.50 135.50 135.50 135.50 135.50 135.50 135.50 135.50 100000 100000 100000 100000 100000 100000 100000 100000	INSTALLATION DRAWING	228.00 MAX
RADIAL PROFILE DIM'N Image: Constraint of the state of t	BE TIGHTEND TO A TOROUE OF I JONN (9 7 Lbrt) MIG HOLE CTRS 152.00 MIG HOLE CTRS 152.00 I JONN (9 7 Lbrt) I JONN (9 7 Lbrt)	CALIPER RADIAL PROFILE AS FITTED ON 0295 00 DISC	t issue installation drawing from www.apracing.com

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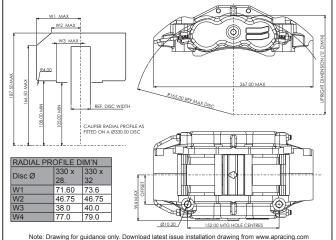
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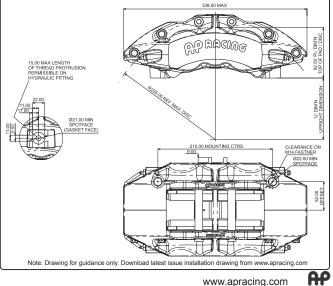


INSTALLATION DRAWING

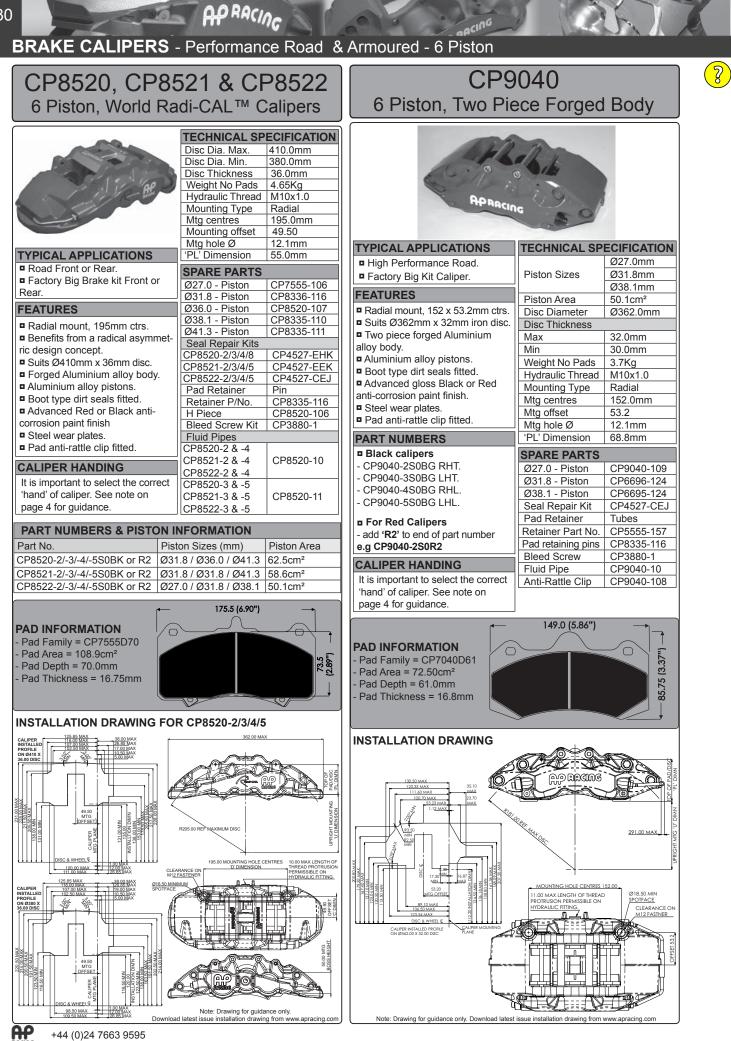
disc.



INSTALLATION DRAWING



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BRAKE CALIPERS - Technical Information & Replacement Caliper Seals

RECOMMENDED TIGHTENING TORQUES.

- AP Racing recommended tightening torques: M6 & ¼ UNF Pad Retaining Bolts: - 18Nm
- M4 Pad abutment cap head screws: (use loctite 242) 3.5Nm
- M4 wear sensor clamp screw: (use loctite 243) 3.0Nm
- Cross pipe tube nuts: (Use loctite 648 inside tube nuts, with 7649
- activator) 24Nm
- 3/8"UNF Adaptors and Banjo bolts:
- With one copper gasket: 13Nm + 45°
- With two copper gaskets: 13Nm + 90°
- Resulting maximum torque must not exceed: 30Nm CP6300 Dry Break Connector into caliper: - 13Nm
- (Loctite 270 can be used)
- Dry Break connector cap: 4Nm
- Bleed Screws: 17Nm

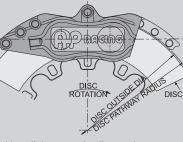
BASIC DIMENSIONS.

The drawing below offers a brief explanation of basic AP Racing Drawing dimensions.

Dim'n	Descriptions	
PL	Top of the pad material to mounting hole boss face, (hole centre-line on lug type calipers).	
с	Offset - Disc centre line to centre of mounting hole (mounting face on lug type calipers)	
D	Mounting hole centres.	
н	Mounting hole diameters.	
E	Disc width.	
U	Wheel centre to caliper mounting hole boss. (disc diameter / 2 - 'Pl' dimension).	

DISC PATHWAY CLEARANCE.

Disc diameter clearance should be 2.5mm nominal from disc outside diameter to caliper pathway. The clearance can be reduced to 1.8mm minimum for smaller diameter discs (Ø280mm and lower). It is recommended that the



tighter clearance is only used with radial mounted calipers where some degree of adjustment by using shims can be achieved if required.

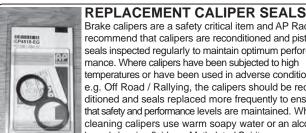
ANTI-KNOCKBACK SPRINGS.

A range of anti-knockback springs are available for use with AP Racing calipers. The spring is located behind the piston in the caliper bore and is designed to counteract pad knock off. The springs are available in four loads indicated in lbs/f (force) with 2 sizes dependant upon piston diameter.

Spring Load.	Piston ØF. Up to 34mm.	Free Length & Wire Ø. (mm)	Piston ØG. 34.9mm & above.	Free Length & Wire Ø. (mm)
4lbs	CP2632-113	38.43 & 0.91	CP2667-105	39.88 & 1.22
7lbs	CP4100-121	39.88 & 1.02	CP2667-113	39.88 & 1.29
9lbs	CP3432-134	49.02 & 1.02	CP2667-125	70.36 & 1.29
12lbs	CP2632-129	58.50 & 1.29	CP2667-154	70.36 & 1.49

Anti-Knockback Spring Kits

Caliper Type	Part Number	Contents	66
	CP6518-4LBSS	4 x CP2632-113	
4 Distan	CP6518-4LBLL	4 x CP2667-105	
4 Piston	CP6518-7LBLL	4 x CP2667-113	
	CP6518-9LBLL	4 x CP2667-125	\sim
	CP6518-4LBSSL	4 x CP2632-113 8	2 x CP2667-105
6 Piston	CP6518-7LBSSL	4 x CP4100-121 8	& 2 x CP2667-113
	CP6518-9LBSSL	4 x CP3432-134 8	& 2 x CP2667-125



Brake calipers are a safety critical item and AP Racing recommend that calipers are reconditioned and piston seals inspected regularly to maintain optimum performance. Where calipers have been subjected to high temperatures or have been used in adverse conditions e.g. Off Road / Rallying, the calipers should be reconditioned and seals replaced more frequently to ensure that safety and performance levels are maintained. When cleaning calipers use warm soapy water or an alcohol based cleaning fluid e.g. Methylated Spirits.

DO NOT USE PETROL, GASOLINE OR MINERAL OIL CLEANER / LUBRICATE as this will damage the seals. Replacement seal kits are available for all AP Racing brake calipers. Depending on the seal type being replaced the following recommended procedures should be followed. To find correct seal kit see pages 33 to 39.

CP4509 (SEAL ON PISTON)

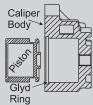
1) Soak new seals in brake fluid for minimum of 30 minutes.

2) Clean brake caliper with warm soapy water and dry off.

3) With the pads removed insert a brake disc or block into the centre of the caliper. Using either hydraulic pressure or compressed air carefully extend

all pistons against the disc or block. Remove block and remove pistons. Keep all body parts away from escaping air and caliper pistons.

CAUTION: Your caliper is fitted with a Glyd Ring just inside the opening of each caliper bore. This ring should be examined and replaced if caliper has been subjected to high temperatures or used in adverse conditions e.g. off Road / Rallying or not changed for a year.



4) Carefully remove old seals from piston with a narrow blunt edged tool. 5) Ensure that caliper bores, seal grooves and pistons are clean and free from debris and moisture. Use only Alcohol based cleaning fluid, not Mineral oil.

6) Carefully fit replacement seal into groove on piston ensuring that it seats correctly in the groove. Check seals are free from damage and correctly seated in groove not twisted or kinked.

7) Carefully engage piston into caliper bore and using a suitable rigid flat bar to apply even pressure, push pistons fully into body. N.B. Excessive force should not be necessary. If piston does not slide smoothly into bore remove & check seal has been fitted correctly.

CP4518 & CP8518 (SEAL IN BORE)

1) Soak new seals in brake fluid for minimum of 30 minutes.

2) Clean brake caliper with warm soapy water and dry off.

3) With the pads removed insert a brake disc or block into the centre of the caliper. Using either hydraulic pressure or compressed air carefully extend all pistons against the disc or block. Remove block and remove pistons. Keep all body parts away from escaping

air and caliper pistons.

4) Carefully remove old seals with a narrow blunt edged tool.

5) Ensure that caliper bores, seal grooves and pistons are clean and free from debris and moisture. Use only Alcohol based cleaning fluid,



6) Carefully fit replacement seal into groove in caliper body ensuring that it seats correctly in the groove. Check seals are free from damage and correctly seated in groove not twisted or kinked.

7) Carefully engage piston into caliper bore and using a suitable rigid flat bar to apply even pressure, push pistons fully into body.

N.B. Excessive force should not be necessary. If piston does not slide smoothly into bore remove & check seal has been fitted correctly.

CP4519 (SEAL IN BORE WITH DIRT SEAL)

1) Soak new pressure seals in brake fluid for minimum of 30 minutes. Do not soak dirt seals (double lip).

2) Clean brake caliper with warm soapy water and dry off.

3) With the pads removed insert a brake disc or block into the centre of the caliper. Using either hydraulic pressure

or compressed air carefully extend all pistons against the disc or block. Remove block and Body

remove pistons. Keep all body parts away from escaping air and caliper pistons.

4) Carefully remove both old seals with a narrow blunt edged tool.



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Caliper

Body

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BRAKE CALIPERS - Replacement Caliper Seals

CP4519 (SEAL IN BORE WITH DIRT SEAL) CON'T. 5) Ensure that caliper bores, seal grooves and pistons are clean and free

from debris and moisture. Use only Alcohol based cleaning fluid, not Mineral oil.6) Carefully fit both replacement seals into groove in caliper body ensuring

that they seat correctly in the grooves. Check seals are free from damage and correctly seated in grooves not twisted or kinked.

7) Carefully engage piston into caliper bore and using a suitable rigid flat bar to apply even pressure, push pistons fully into body. N.B. Excessive force should not be necessary. If piston does not slide smoothly into bore remove & check seals has been fitted correctly.

CP4525 & CP4527 (BOOT TYPE WITH DIRT SEAL)

<u>Removal</u>: Before removal procedure begins the brake caliper should be thoroughly cleaned using warm soapy water only. Ensure that all hydraulic ports are sealed before cleaning and dry caliper thoroughly before work begins.

<u>Do not use chemical cleaners of any kind or petrol/gasoline or mineral oil based, as these will cause permanent damage to the new seals.</u>
1) Use a reaction block selected to fill the full width of the caliper pathway as shown in fig.1. This block must span the length of the caliper opening and be well supported between the brake pad abutments at either end of

the caliper.2) Loosely insert a hydraulic fitting (M10x1.0) into the caliper feed port as shown in fig.2 (a spare Bleed Screw loosely fitted will suffice). Do not tighten to form a seal.

3) Press a hand held air gun against the fitting as shown in fig.3 and allow a short, high pressure burst of air to enter the caliper (a perfect seal between the air gun and fitting is neither necessary or advisable). Keep all body parts away from escaping air and caliper pistons.

4) A single burst of air should be sufficient to extend all pistons at once as shown in fig.4. If one or more pistons remain jammed in the caliper body after repeating this step then the caliper may need to be returned to AP Racing for assessment. Please contact AP Racing Technical for assistance.

5) Remove reaction block. It is possible that the dirt seals may become detached from the caliper body at this point. If so the pistons can be carefully pulled from the caliper body with dirt seals attached. It is also possible that the dirt seal may become detached from the piston in which case the piston should be pulled through the dirt seal to remove. Where dirt seal remains attached to both piston and caliper body a small blunt instrument (such as a rounded off screwdriver, see fig.10) should be used to carefully release the dirt seal from the piston, as shown in fig.5.

6) Fig.6 shows pistons removed with dirt seals remaining attached to caliper body.

7) The dirt seal can now be removed by carefully inserting a narrow, blunt blade (such as a medium sized screwdriver) through the seal opening and between the outer ring of the seal and the back wall of the dirt seal recess as shown in fig.7. By gently turning the screwdriver the seal should work free. Only very light force is required to perform this operation. Never use excessive force as damage to caliper body may result.

8) Once dirt seal is removed the pressure seal will be exposed, located in the groove in the caliper body as shown in fig.8.

9) Using the small blunt instrument from step 5 (see fig.10), carefully remove the pressure seal from the caliper body as shown in fig.9.

10) All dirt and pressure seals should be removed from the caliper by following the above procedure. Before new seals are fitted all pistons and the caliper body should be inspected for damage. If damage of any kind is present on either the caliper bores or piston outer diameters the caliper should be considered unfit for use and either replaced of returned to AP Racing for assessment. If in doubt regarding any aspect of caliper safety please contact AP Racing Technical for assistance.

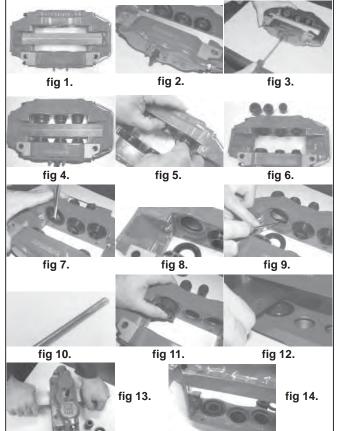
Refitting:

11) Before re-assembly ensure that all parts are perfectly clean and free from debris or moisture. Replacement pressure seals should be soaked in AP Racing brake fluid for 30 minutes prior to fitment. Do not remove excess brake fluid as the excess will aid fitment of pistons. Do not soak dirt seals.
12) Carefully fit pressure seal into groove in caliper body ensuring that it seats correctly in the groove. Seal should be free from damage and not be twisted or kinked. Pre-assemble dirt seal on piston (seal locates in groove on piston end). Carefully slide piston into caliper bore (pressure seal must already have been installed as shown in fig.11. Only light pressure applied by hand is required. If piston does not slide easily into place remove and inspect parts. If difficulty is experienced when installing pistons please contact AP Racing Technical for assistance.

13) The dirt seals can now be pressed into caliper body. Carefully locate seal in caliper body using finger pressure only. Then select a suitable rigid, flat bar or similar as shown in fig.12. and position to cover dirt seal.

14) Apply slow and even pressure to dirt seal using bar as shown in fig.13. Care must be taken to ensure that dirt seal is inserted square to the caliper body.

15) On correct installation the dirt seal should sit flush with the caliper body as shown in fig.14. Repeat steps 12 to 15 to fit all remaining pistons and seals. Once calipers are refitted to vehicle a pressure test should be carried out to check for leaks. With the engine running press the brake pedal and hold at a constant load for 60 seconds. No 'sinking' of the brake pedal should occur. If the pedal does 'sink' (travel further when under constant/steady load) it should be considered that a leak in the brake system is present. If a leak is suspected check all hydraulic joints and inspect re-conditioned calipers. If cause of leak cannot be identified contact AP Racing Technical for assistance before vehicle is used. The repair kit may also contain 2 off small 'O'Rings for replacement of Bleed Screw seals where fitted. There may also be replacement Bleed Screw dust caps included. Where included these parts should be fitted to the brake caliper. Replacement seal kit details for all piston configurations used in AP Racing brake calipers "seal in bore", "seal on piston" and "seal in bore with dirt seals" are given in the table on page 33.



ORDERING

To determine the correct seal kit proceed as follows:-

 If you know the part number of your caliper then determine the correct part number of the kit required by referring to the table on pages 34 to 39.
 If you do not know the part number of your caliper then proceed as follows:-

a) measure the nominal piston diameters.

b) determine the type by comparison with the drawings on pages 31/32.c) Look at the column (caliper bore in mm) identify your sizes. The relevant kit number can be found on the right.

d) When ordering please quote the seal kit part no, given on the right hand side from the relevant table, then contact your nearest AP Racing stockist for availability.

3) Each kit contains seals to repair one caliper:-

a) One letter after Kit Nos = 2 seals. e.g. -J

b) Two letters after Kit Nos= 4 seals, e.g. -JJ

c) Three letters after Kit Nos = 6 seals, e.g. -CEJ

d) Four letters after kit Nos = 8 seals, e.g. -AEAE

NB. Kits are priced more competitively compared to purchasing individual seals.

NB. With CP4519, CP4525 and CP4527 seal kits, the appropriate number of dirt seals and or boot seals are also included.

NB. Kits contain one caliper set of seals e.g. 2, 4, 6, or 8.

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BRAKE CALIPERS - Replacement Caliper Seals

					-	_	PER SEA					
A = 25.4		C = 27.0	D = 28.6	E = 31.8	1	G = 34	and Size Refe	J = 38.1	K = 41.3	L = 44.5	M = 47.6	N = 50.8
(1.00")	8 = 26.0	(1.06")	(1.125")	(1.25")	F = 3	4.0 (1.375")		(1.50")	(1.625")	(1.75")	(1.875")	(2.00")
CP4518 & CP85			placement se ard high ter			bers for Race CP4518	Calipers CP8518 - Ve	ry high Te	mperature	seals.	CP8518	
Caliper Bore	Indivi	idual Part N	•			Seal Kits	Individual P				Seal Kits	Caliper
25.4 31.8	CP4900 CP4900)-168				CP4518-A CP4518-E						
36.0 38.1	CP4900 CP4900					CP4518-H CP4518-J						2 Piston
41.3 44.5	CP4900 CP4900)-163				CP4518-K CP4518-L						
50.8	CP4900)-160				CP4518-N						_
25.4 25.4 / 31.8)-172 / CP4900				CP4518-AA CP4518-AE						
27.0 / 28.6 27.0 / 31.8)-170 / CP4900)-170 / CP4900				CP4518-CD CP4518-CE	CP4900-290 / CF	P4900-288			CP8518-CE	
27.0 / 34.0 27.0 / 34.9)-170 / CP4900)-170 / CP4900				CP4518-CF CP4518-CG						_
28.6 28.6 / 31.8	CP4900					CP4518-DD CP4518-DE						_
28.6 / 34.9	CP4900)-169 / CP4900	-166			CP4518-DG	CP4900-289 / CF	P4900-286			CP8518-DG	_
28.6 / 36.0 31.8	CP4900					CP4518-DH CP4518-EE						
31.8 / 34.9 31.8 / 36.0		0-168 / CP4900 0-168 / CP4900				CP4518-EG CP4518-EH						4 Piston
34.9 34.9 / 41.3	CP4900 CP4900)-166)-166 / CP4900	-163			CP4518-GG CP4518-GK	CP4900-286 / CF	24900-283			CP8518-GK	-
36.0 36.0 / 44.5	CP4900					CP4518-HH CP4518-HL						
36.0 / 38.1	CP4900	0-165 / CP4900				CP4518-HJ CP4518-JJ						
38.1 38.1 / 41.3)-164 / CP4900				CP4518-JK	CP4900-284 / CF	4900-283			CP8518-JK	
38.1 / 44.5 41.3	CP4900					CP4518-JL CP4518-KK						
41.3 / 44.5 44.5	CP4900 CP4900)-163 / CP4900)-162	-162			CP4518-KL CP4518-LL						_
44.5 / 47.6 25.4)-162 / CP4900	-161			CP4518-LM CP4518-AAA						
25.4 / 27.0 / 28.6	CP4900)-172 / CP4900	-170 / CP4900-			CP4518-ACD	CP4900-292 / CF	P4900-290 / CI	P4900-289		CP8518-ACD	
25.4 / 27.0 / 31.8 25.4 / 28.6	CP4900)-172 / CP4900				CP4518-ACE CP4518-ADD						_
26.0 / 27.0 / 31.8 26.0 / 31.8 / 36.0			-170 / CP4900-1 -168 / CP4900-1			CP4518-BCE CP4518-BEH	CP4900-291 / CP4900-290 / CP4900-288 CP4900-291 / CP4900-288 / CP4900-285			CP8518-BCE CP8518-BEH		
27.0 / 31.8 / 38.1 28.6 / 31.8 / 41.3			-168 / CP4900- -168 / CP4900-			CP4518-CEJ CP4518-DEK	CP4900-290 / CF	P4900-288 / CI	P4900-284		CP8518-CEJ	
31.8 31.8 / 34.0 / 41.3	CP4900)-168	-167 / CP4900-			CP4518-EEE CP4518-EFK	CP4900-288 / CF	24000 297 / 01	24000 282		CP8518-EFK	
31.8 / 34.9 / 44.5	CP4900)-168 / CP4900	-166 / CP4900-			CP4518-EGL		4300-207 / 01	4300-203			9 Diston
25.4 CP4519 - Seal Ir		0-172 / CP4900 Replacement		irt Seal Part	Numbe	CP4518-AEAE rs.						8 Piston
41.3 44.5			/ 113094 Retain / 3662-298 Reta								CP4508-K CP4508-L	_
31.8 36.0	CP4949	9-110 (CP3477- 9-113 (3853-742	105)								CP4519-E CP4519-H	2 Piston
38.1 41.3	CP4949	9-114 (3865-742 9-115 (112854)									CP4519-J CP4519-K	
44.5	CP4949	9-116 (119990)									CP4519-L	
27.0 27.0 / 31.8	CP4949		-106) / CP4949-								CP4519-CC CP4519-CE	
28.6 / 36.0 31.8		4-118 (4477-108 9-110 (CP3477-	3) / CP4949-113 105)	(CP4477-108))						CP4519-DH CP4519-EE	-
36.0 / 38.1 38.1		9-113 (3853-74) 9-114 (3865-74)	2) / CP4949-114 2)	(3865-742)							CP4519-HJ CP4519-JJ	4 Piston
38.1 / 41.3 41.3 / 44.5	CP4949	9-114 (3865-742	-/ 2) / CP4949-115 / CP4949-116 (1								CP4519-JK CP4519-KL	
25.4 / 28.6	CP4900)-172 (CP4477-	109) / CP4900-	169 (CP4477-1	108)		((0)				CP4519-ADD	6 Piston
27.0 / 31.8 / 38.1 CP4509 - Seal o	n Pisto	n Replaceme	ent Seals and			949-114 (CP3477 ers.	-110)				CP4519-CEJ	
28.6 / 34.9 31.8	CP3724	4-138 CP3724- 4-137	135								CP4509-DG CP4509-EE	
31.8 / 36.0 31.8 / 38.1	CP3724	4-137 / CP3724 4-137 / CP3724 4-137 / CP3724									CP4509-EH CP4509-EJ	
34.9 / 41.3	CP3724	4-135 / CP3724									CP4509-GK	4 Piston
38.1 38.1 / 41.3		1-133 / CP3724									CP4509-JJ CP4509-JK	
38.1 / 44.5 41.3 / 44.5	CP3724	4-133 / CP3724 4-132 / CP3724	4-131								CP4509-JL CP4509-KL	
27.0 / 31.8 / 38.1 28.6 / 31.8 / 41.3			-137 / CP3724- -137 / CP3724-								CP4509-CEJ CP4509-DEK	6 Piston
CP4525 & CP45	27- Sea	l in Bore - B	oot type Seal	- Replacem	ent Sea			dividual C				
Caliper Bore		25 - Individ Numbers	lual Seal &	5000		CP4525 Seal Kit	CP4527 - Inc Part Numbe		al & Boot		CP4527 Seal Kit	
27.0 28.6	CP4949	9-108 (CP7040- 7-109 (CP7040-				CP4525-CC CP4525-DD	CP4949-108 (CP				CP4527-CC	
28.6 / 31.8							CP4949-109 (CP	6691-101) / C	P4949-110 (CP	6016-107)	CP4527-DE	4 Piston
31.8 38.1	CP4949	9-110 (CP6200- 9-114 (CP6200-	114)			CP4525-EE CP4525-JJ						
38.1 / 41.3 27.0 / 31.8 / 38.1	CP4949	9-108 (CP7040-	114) / CP4949- 106) / CP4949-			CP4525-JK CP4525-CEJ	CP4949-114 (CP CP4949-108 (CP	8420-110) / Cl			CP4527-JK CP4527-CEJ	
31.8 / 31.8 / 38.1		19-114 (CP6200				0F4020-0EJ	/ CP4949-114 (C CP4949-110 (CP	P7516-108)			CP4527-CEJ CP4527-EEK	-
31.8 / 36.0 / 38.1		9-110 (CP6200- 9-114 (CP6200-	112) / CP4949-	113 /		CP4525-EHJ				/		6 Piston
36.0 / 38.1 / 41.3	CP4949	9-113 / CP4949	-114 (CP6200-1	14 x 4) /		CP4525-HJK						
31.8 / 36.0 / 41.3	CP4949	9-115 (CP6200-	115)				CP4949-110 (CP		P4949-113 (CP	6696-109)	CP4527-EHK	-
0.107 00.07 41.0							/ CP4949-115 (C	P7516-109)			OI TOLI LINA	

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BRAKE CALIPERS - Spare Parts

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REPLACEMENT PARTS.

Replacement parts listing on pages 34 to 39 are for all brake caliper manufactured by AP Racing except. F1 and Customer specific calipers. These parts are available for sale individually, however some may be obsolete and are listed as a guide only. Please contact AP Racing for further information.

IMPORTANT NOTE.

Whilst every care has been taken to ensure the information contained in the tables on pages 34 to 39 in this publication is correct at the time of printing, the company however cannot accept any responsibility for any errors which may occur

Caliper Assemblies	Seal Repair Kit Part No.	Bleed Screw or Kit Part No.	Piston 1 - Part No.	Piston 2 - Part No.	Piston 3 - Part No.	Pad Retainer Part No.	Fluid Pipe Part No.	Wear Plates Part No x Quantity
2195-1002/1003E0 2270-144/145S4QR	CP4518-K CP4518-KK	CP3720-182 CP3720-182	CP2195-9 CP2270-92	CP2055				
271-182/183S4QR	CP4518-JJ	CP3720-182	CP2260-66					
279-400S4BP 361-96/97S4QR	CP4518-LL CP4518-JJ	CP3720-182 CP3720-182	CP2279-6 CP2260-66					
382-12/13E4	CP4518-N	CP3720-182	CP2383-52					
2383-12E0	CP4518-N	CP3720-182	CP2383-52					
2383-12/13E4 2485-2/3S0L	CP4518-N CP4508-L	CP3720-182 CP3720-182	CP2383-52 CP2195-157			CP2696-160		
2485-8/9S0L	CP4508-L	CP3720-182	CP2195-157			CP2696-160		
2505-34/35S0L 2505-3S0L	CP4508-K CP4508-K	CP3720-182 CP3720-182	CP2195-14 CP2195-14	_		CP2696-160 CP2696-160		
2561-3S4	CP4508-K CP4518-J	CP3720-182 CP3720-173	CP2195-14 CP2260-66		-	CP2554-106		
2576-12E0	CP4518-K	CP3720-182	CP2576-105					
2576-3E0 2577-12E0	CP4518-K CP4518-L	CP3720-182 CP3720-182	CP2576-105 CP2577-102	_				
2577-14E0	CP4518-L	CP3720-182	CP2577-102		-			
2577-15E0	CP4518-L	CP3720-182	CP2577-102					
2577-3E0 2696-38E0	CP4518-L CP4518-K	CP3720-182 CP3720-182	CP2577-102 CP2195-9	CP2055				
3176-2E0	CP4518-J	CP3720-182	CP3176-102					
3177-2E0 3177-4E0	CP4518-H CP4518-H	CP3720-182 CP3720-182	CP3177-102 CP3177-102					
3177-4E0 3178-2E0	CP4518-H CP4518-E	CP3720-182 CP3720-182	CP3177-102 CP3178-102					
228-10/11S4	CP4518-JJ	CP3720-182	CP3228-103				CP3228-4	
228-26/27S4 228-28/29S4	CP4518-JJ CP4518-JJ	CP3720-182 CP3720-182	CP3228-103 CP2361-4				CP3228-4 CP3228-4	
228-28/2954 228-38/3954	CP4518-JJ CP4518-JJ	CP3720-182 CP3720-182	CP3228-103				CP3228-4 CP3228-4	
228-44/45\$4	CP4518-JJ	CP3720-182	CP3228-103				CP3228-4	
228-6/7S4 307-1004/1005S0	CP4518-JJ CP4518-JK	CP3720-182 CP3720-182	CP2361-4 CP2260-66	CP2270-92	-	CP3307-246	CP3228-4 CP3216-29	CP3307-222 x 4
3307-1016/1017S0	CP4518-JK	CP3720-182	CP2260-66	CP2270-92		CP3307-248	CP3307-264	CP3307-222 x 4
3307-1028/29S4	CP4518-JK	CP3720-182	CP2260-66	CP2270-92		CP3307-246	CP3216-29	CP3307-222 x 4
3307-1034/1035S4 3307-1038/1039S4	CP4518-JK CP4518-JK	CP3720-182 CP3720-182	CP2260-66 CP2260-66	CP2270-92 CP2270-92		CP3307-246 CP3307-246	CP3216-29 CP3216-29	CP3307-222 x 4 CP3307-222 x 4
3307-1046/47/48/49S0	CP4518-JK	CP3720-182	CP2260-66	CP2270-92		CP3307-246	CP3216-29	CP3307-222 x 4
3307-1052/53/54/55S4 3307-1058/1059S4	CP4518-JK CP4518-JK	CP3720-182 CP3720-182	CP2260-66 CP2260-66	CP2270-92 CP2270-92		CP3307-246 CP3307-246	CP3216-29 CP3216-29	CP3307-222 x 4 CP3307-222 x 4
3307-1058/105954 3307-1064/65/66/67S0	CP4518-JK CP4518-JK	CP3720-182 CP3720-182	CP2260-66	CP2270-92 CP2270-92		CP3307-246 CP3307-246	CP3216-29 CP3216-29	CP3307-222 x 4 CP3307-222 x 4
3307-14/15S4	CP4518-JK	CP3720-182	CP2260-66	CP2270-92		CP3307-246	CP3216-29	CP3307-222 x 4
3307-262/263S0 3307-58/59/60/61S4	CP4518-JK CP4518-JK	CP3720-182 CP3720-182	CP2260-66 CP2260-66	CP2270-92 CP2270-92		CP3307-246 CP3307-246	CP3216-29 CP3216-29	CP3307-222 x 4 CP3307-222 x 4
3307-64/65S4	CP4518-JK	CP3720-182	CP2260-66	CP2270-92	-	CP3307-246	CP3216-29	CP3307-222 x 4 CP3307-222 x 4
3307-68/69S0	CP4518-JK	CP3720-182	CP2260-66	CP2270-92		CP3307-246	CP3216-29	CP3307-222 x 4
3307-72/73S0 3307-74/75/76/77S4	CP4518-JK CP4518-JK	CP3720-182 CP3720-182	CP2260-66 CP2260-66	CP2270-92 CP2270-92		CP3307-248 CP3307-246	CP3216-29 CP3216-29	CP3307-222 x 4 CP3307-222 x 4
3307-84/85S0	CP4518-JK	CP3720-182	CP2260-66	CP2270-92		CP3307-246	CP3216-29	CP3307-222 x 4
3307-92/93S4	CP4518-JK	CP3720-182	CP2260-66	CP2270-92		CP3307-246	CP3216-29	CP3307-222 x 4
3307-96/97S4 3344-1000/1/2/3S4	CP4518-JK CP4518-JK	CP3720-182 CP3720-182	CP2260-66 CP3228-103	CP2270-92 CP3344-109		CP3307-246 CP3344-122	CP3216-29 CP3344-113	CP3307-222 x 4 CP3567-109 x 4
3344-12/13S4	CP4518-JK	CP3720-182	CP3228-103	CP3344-109		CP3344-108	CP3344-110	CP3567-109 x 4
3344-36/37S4	CP4518-JK	CP3720-182	CP3228-103	CP3344-109		CP3344-122	CP3344-113	CP3567-109 x 4
3344-48/49/50/51S4 3344-60/61S4	CP4518-JK CP4518-JK	CP3720-182 CP3720-182	CP3228-103 CP3228-103	CP3344-109 CP3344-109		CP3344-127 CP3344-161	CP3344-140 CP3344-164	CP3567-109 x 4 CP3567-109 x 4
3345-10/11/12/13S4	CP4518-JK	CP3720-182	CP3228-103	CP3344-109		CP3344-122	CP3344-113	CP3567-109 x 4
3345-14/15/16/17S4 3345-2/3S4	CP4518-JK CP4518-JK	CP3720-182 CP3720-182	CP3228-103 CP3228-103	CP3344-109 CP3344-109		CP3345-117 CP3344-108	CP3345-116 CP3344-110	CP3567-109 x 4 CP3567-109 x 4
3345-40/41S4	CP4518-JK	CP3720-182	CP3228-103	CP3344-109		CP3344-108	CP3344-113	CP3567-109 x 4
3345-4/5/6/7S4	CP4518-JK	CP3720-182	CP3228-103	CP3344-109		CP3344-108	CP3344-110	CP3567-109 x 4
3345-88/89/90/91S4 3345-94/95S4	CP4518-JK CP4518-JK	CP3720-182 CP3720-182	CP3228-103 CP3228-103	CP3344-109 CP3344-109		CP3344-122 CP3345-162	CP3344-113 CP3345-96	CP3567-109 x 4 CP3567-109 x 4
3369-2/3E0	CP4518-DG	3486-229	CP3086-115	CP3369-114		01 00 40 102	01 0040 00	01 0001 100 X 4
3395-1050/51/52/53S7	CP4519-HJ		CP3636-107	CP3394-109		CP3788-112	CP3395-1054	CP3846-101 x 4
3395-2/3/4/5S4 3395-2/3/4/5S4M	CP4519-KL CP4518-KL	CP3720-182 CP3720-182	CP3394-109 CP3395-110	CP3394-110 CP3395-109	-	CP3394-113 CP3394-113	CP3394-111 CP3394-111	CP3394-140 x 4 CP3394-140 x 4
3395-82/83U9L	CP4518-KL	CP4100-113	CP2667-153	CP3395-149		CP3395-145	CP3395-135	CP3394-118 x 2 / CP3394-140 x 2
3434-1000/1/2/3S4	CP4519-HJ	CP3720-182	CP3434-116	CP3434-117		CP4890-101	CP3434-15	
3470-38/39S7 3470-42/43S7	CP4509-JK CP4509-JK	CP3720-182 CP3720-182	CP3257-108 CP3257-108	CP3257-109 CP3257-109	-	CP4890-101 CP4890-101	CP3434-14 CP3434-14	
3552-14S0	CP4509-JK	3486-268	CP3552-132			3662-345		
3552-18/19S0 3552-8/9S0	NOT AVAILABLE NOT AVAILABLE	3486-268 3486-268	3278-203 3278-203			3662-345 3662-345		
3552-8/9S0 3556-2/3S4	NOT AVAILABLE NOT AVAILABLE	3486-268 CP3720-182	3278-203 CP3577-103			3662-345 CP3344-122	CP3344-113	CP3567-109 x 4
567-16/17/18/19S4	CP4518-GK	CP3720-182	CP3567-108	CP3344-109		CP3344-161	CP3344-164	CP3567-109 x 4
567-8/9S7 577-6/7S4	CP4518-GK CP4509-EE	CP3720-182 CP3720-182	CP3567-108 CP3577-103	CP3344-109		CP3345-117 CP4069-108	CP3345-116 CP3344-113	CP3567-109 x 4 CP3567-109 x 4
3577-6/754 3620-12/13S4M	CP4509-EE CP4509-EE	CP3720-182 CP3720-173	CP4910-115			CP4069-108 CP4890-101	CP3344-113 CP3620-8	CP3567-109 X 4 CP3720-106 X 4
3620-2/3S0M	CP4518-EE	CP3720-173	CP3620-103			CP4890-101	CP3620-8	CP3720-106 x 4
3620-2/3S4 3620-2/3S7M	CP4509-EE CP4509-EE	CP3720-173 CP3720-173	CP3760-110 CP3620-103			CP4890-101 CP3434-118	CP3620-8 CP3620-8	CP3720-106 x 4 CP3720-106 x 4
3676-4E0	CP4518-K	CP3720-182	CP2576-105			21 010 7 110		
3677-4E0	CP4518-L	CP3720-182	CP2577-102		-			
3696-6E0 3697-2E0	CP4518-K CP4518-L	CP3720-182 3486-229	CP3696-105 CP3697-104					
720-10/11S4	CP4518-L	CP3720-173	CP3720-126	CP3720-125		CP4890-101	CP3720-35	CP3720-106 x 4
720-12/13/14/15S4	CP4509-JL	CP3720-173	CP3720-126	CP3720-125		CP3440-118	CP3720-36	CP3720-106 x 4 CP3720-106 x 4
720-16/17S0M 720-16/17S4	CP4509-JL CP4509-JL	CP3720-173 CP3720-173	CP3720-115 CP3720-126	CP3720-114 CP3720-125		CP4890-101 CP3434-118	CP3720-34 CP3720-34	CP3720-106 x 4 CP3720-106 x 4
720-16/17S4M	CP4509-JL	CP3720-173	CP3720-115	CP3720-114		CP3434-118	CP3720-34	CP3720-106 x 4
720-18/19S4M	CP4509-JL	CP3720-173	CP3720-115	CP3720-114		CP4890-101	CP3720-34	CP3720-106 x 4
3720-30/31/32/33S4 3720-30/31S4M	CP4509-JL CP4509-JL	CP3720-173 CP3720-107	CP3720-126 CP3720-115	CP3720-125 CP3720-114		CP3679-117 CP3679-117	CP3720-38 CP3720-38	CP3720-106 x 4 CP3720-106 x 4
3720-42/43/44/45S4	CP4509-JL	CP3720-173	CP3720-126	CP3720-125		CP4890-101	CP3720-34	CP3720-106 x 4
3720-42/43/44/45S4M	CP4509-JL	CP3720-173	CP3720-115	CP3720-114		CP4890-101	CP3720-34	CP3720-106 x 4
3720-76/77/78/79S4M 3720-78/79S4	CP4518-JL CP4518-JL	CP3720-173 CP3720-173	CP4910-114 CP3344-192	CP3720-177 CP5000-209		CP4890-101 CP4890-101	CP3720-34 CP3720-34	CP3720-106 x 4 CP3720-106 x 4
3720-84/85\$4M	CP4509-JL	CP3720-173	CP3720-115	CP3720-114		CP4890-101	CP3720-34	
3720-88/89S4M	CP4509-JL	CP3720-173	CP3720-115	CP3720-114		CP4890-101	CP3720-35	CP3720-106 x 4
8720-8/9S4 8735-2/3S4	CP4509-JL CP4509-EH	CP3720-173 CP3720-182	CP3720-126 CP3577-103	CP3720-125 CP3735-107		CP4890-101 CP3344-122	CP3720-35 CP3344-113	CP3720-106 x 4
3735-6/7S4	CP4509-EH	CP3720-182	CP3577-103	CP3735-107		CP3344-122	CP3344-113	
3788-16/17/18/19S7	CP4518-JL	CP3720-173	CP3636-107	CP3394-110		CP3795-101	CP3799-6	CP3799-110 x 1 & -111 x 1 / CP3846-101 x 2

8.1

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Caliper Assemblies	Seal Repair	Bleed Screw	Piston 1	Piston 2	Piston 3	Pad Retainer	Fluid Pipe	Wear Plates Part No x Qty.
CP3788-2/3/4/5S7 CP3788-6/7/8/9S4	Kit Part No. CP4518-JL CP4518-JL	or Kit Part No. CP3720-173 CP3720-173	Part No. CP3636-107 CP3636-107	Part No. CP3394-110 CP3394-110	Part No.	Part No. CP3799-109 CP3788-112	Part No. CP3799-6 CP3788-10	CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1 CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1
CP3789-2/3/4/5S7 CP3789-6/7/8/9S4	CP4518-DG CP4518-DG	CP3720-173 CP3720-173	CP3789-106 CP3789-106	CP3394-109 CP3394-109		CP3799-109 CP3788-112	CP3799-6 CP3788-10	CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1 CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1
CP3790-2/3/4/5S7 CP3790-6/7/8/9S4	CP4518-HL CP4518-HL	CP3720-173 CP3720-173	CP3394-110 CP3394-110	CP3483-101 CP3483-101		CP3799-109 CP3788-112	CP3799-6 CP3788-10	CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1 CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1
CP3796-20/21/22/23S4 CP3796-24/25/26/27S4	CP4509-CEJ CP4509-CEJ	CP3720-182 CP3720-182	CP3760-111 CP3760-111	CP3760-110 CP3760-110	CP3720-126 CP3720-126	CP3796-134 CP3796-134	CP3796-136 CP3796-138	CP3596-108 x 4 CP3596-159 x 4
CP3796-24/25/26/27S4M CP3796-30/31/32/33S4	CP4509-CEJ CP4509-CEJ	CP3720-182 CP3720-182	CP3596-130 CP3760-111	CP3620-103 CP3760-110	CP3720-115 CP3720-126	CP3796-134 CP3796-135	CP3796-138 CP3796-137	CP3596-159 x 4 CP3596-159 x 4
CP3798-2/3/4/5S0M CP3799-2/3/4/5S0	CP4518-CE CP4815-DG	CP3720-173 CP3720-173	CP3798-107 CP3799-112	CP4296-113 CP3789-106		CP3798-106 CP3799-109	CP3798-6 CP3799-6	CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1 CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1
CP3799-2/3/4/5S0L CP3801-2/3/4/5S7	CP4518-DG CP4518-GK	CP3720-173 CP3720-173	CP3799-113 CP3789-106	CP3799-114 CP3394-109		CP3799-109 CP3795-101	CP3799-6 CP3799-6	CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1 CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1
CP3801-4/5S4 CP3808-4/5S4M	CP4518-GK CP4518-CE x 2	CP3720-173 CP3880-1	CP3789-106 CP3808-108	CP3394-109 CP3808-107		CP3795-101	CP3799-6 CP3808-7	CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1 CP3808-109 x 4
CP3809-2/3/4/5S0 CP3809-2/3/4/5S0M	CP4509-DG CP4509-DG	CP3720-173 CP3720-173	CP3846-109 CP3809-106	CP3846-108 CP3809-107		CP3799-109 CP3799-109	CP3799-6 CP3799-6	CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1 CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1
CP3894-12/13/14/15S4 CP3894-14/15S4M	CP4509-CEJ CP4509-CEJ	CP3720-173 CP3720-173	CP3894-120 CP3894-108	CP3894-121 CP3894-109	CP3894-122 CP3894-110	CP3895-109 CP3895-109	CP3894-17 CP3894-17	CP3895-107 x 1 / CP3895-117 x 2 / CP3895-106 x 1 CP3895-107 x 1 / CP3895-117 x 2 / CP3895-106 x 1
CP3894-2/4S4 CP3894-2/4S4M	CP4509-CEJ CP4509-CEJ	CP3720-182 CP3720-182	CP3894-120 CP3894-108	CP3894-121 CP3894-109	CP3894-122 CP3894-110	CP3895-109 CP3895-109	CP3895-8 CP3895-8	CP3895-107 x 1 / CP3895-117 x 2 / CP3895-106 x 1 CP3895-107 x 1 / CP3895-117 x 2 / CP3895-106 x 1
CP3894-52/53S4 CP3894-52/53S4M	CP4509-CEJ CP4509-CEJ	CP3720-182 CP3720-182	CP3760-111 CP3596-130	CP3894-120 CP3894-108	CP3760-110 CP3620-103	CP3894-144 CP3894-144	CP3894-48 CP3894-48	CP3894-129 x 1 / CP3894-128 x 1 / CP3894-130 x 2 CP3894-129 x 1 / CP3894-128 x 1 / CP3894-130 x 2
CP4066-12/13/14/15S4M CP4090-2/3/4/5S4	CP4518-EH CP4518-CEJ	CP3720-182 CP3720-182	CP4066-106 CP4090-114	CP4066-107 CP4090-113	CP4090-112	CP3344-122 CP3895-109	CP4066-6 CP3895-8	CP3567-109 x 4 CP3895-107 x 1 / CP3895-117 x 2 / CP3895-106 x 1
CP4090-2/3/4/5S4M CP4098-34/35S4VG CP4100-14/15T7L	CP4518-CEJ CP4519-CEJ	CP3720-182 CP3720-182 CP4100-113	CP4090-108 CP4090-114 CP4100-114	CP6294-121 CP4090-113	CP4090-107 CP4090-112	CP3895-109 CP4100-115	CP3895-8 CP4098-30 CP4100-6	CP3895-107 x 1 / CP3895-117 x 2 / CP3895-106 x 1 CP4098-122 x 1 & -126 x 1 / CP3895-107 x 1 & -117 x 1
CP4110-2/3T7	CP4519-E CP4519-KK CP4518-AE	CP3720-173	CP2290-50 CP2296-110	CP4296-111		CP4100-115 CP4110-112	CP4110-111	CP3720-106 x 4
CP4131-16/17S0 CP4131-4/5S0 CP4132-2/3S0	CP4518-AE CP4518-AE CP4518-CG	CP3720-173 CP3720-173 CP3720-173	CP4296-110 CP4296-110 CP4145-101	CP4296-111 CP4296-111 CP3789-106			CP4131-20 CP4131-7 CP4131-20	CP4130-109 x 4 CP4130-109 x 4 CP4130-109 x 4
CP4140-2/3/4/5S0 CP4140-2/3/4/5S0M	CP4518-AE CP4518-AE	CP3720-173 CP3720-173 CP3720-173	CP4140-107 CP4140-112	CP4140-106 CP4140-111			CP4140-6 CP4140-6	
CP4140-2/3/4/550M CP4144-10/11S7 CP4144-2/3S7	CP4519-EH CP4519-EH	CP3720-173 CP3720-182 CP3720-182	CP3636-107 CP3636-107	CP3483-101 CP3483-101		CP4144-101 CP4144-101	CP4140-6 CP4144-6 CP4144-6	CP3645-104 x 2 / CP3645-105 x 2 CP3645-104 x 2 / CP3645-105 x 2
CP4144-2/357 CP4145-2/3S7 CP4145-8/9S7	CP4519-EH CP4519-CE CP4519-CE	CP3720-182 CP3720-182 CP3720-182	CP3636-107 CP4145-101 CP4145-101	CP3483-101 CP4844-106 CP4844-106		CP4144-101 CP4145-106 CP4144-101	CP4144-6 CP4145-6 CP4145-7	CP3645-104 x 2 / CP3645-105 x 2 CP3645-104 x 2 / CP3645-105 x 2 CP3645-104 x 2 / CP3645-105 x 2
CP4145-8/957 CP4152-2/3S4 CP4169-2E0	CP4519-CE CP4518-GK CP4519-ADD	CP3720-182 CP3720-182 CP4469-101	CP3567-108 CP4466-151	CP3344-106 CP3344-109 CP4466-152		CP3344-101 CP3344-122 CP4466-108	CP4145-7 CP4152-6	CP3645-104 X 2 / CP3645-105 X 2 CP3567-109 X 4
CP4176-3S0 CP4218-2/3/4/5S4	CP4518-ADD CP4509-DEK	CP4469-101 CP4469-101 CP3720-182	CP4466-151 CP4466-151 CP4218-130	CP4466-152 CP4466-152 CP4218-129	CP4218-128	CP4466-108 CP4466-108 CP3555-112	CP3555-28	
CP4218-2/3/4/5S4M CP4219-8/9/10/11S0	CP4509-DEK CP4518-GK	CP3720-182 CP3880-1	CP3555-215 CP2270-92	CP3555-214 CP2876-101	CP3555-213	CP3555-112 CP5200-124	CP3555-28 CP4219-6	CP4218-108 x 1 & -109 x 2 & -111 x 1 CP4219-107 x 4
CP4226-2S0 CP4227-2S0	CP4518-A CP4518-AA	CP4469-101 CP4469-101	CP4226-103 CP4226-103					
CP4227-6S0 CP4228-10/11S4	CP4518-AA CP4518-JJ	CP4469-101 CP3720-173	CP4226-103 CP3215-113			CP4228-107	CP4228-6	CP5100-210 x 4
CP4228-2/3/4/5S0 CP4228-8/9S4	CP4518-JJ CP4518-JJ	CP3720-173 CP3720-173	CP3215-113 CP3215-113			CP4228-106 CP4228-107	CP4228-6 CP4228-6	CP5100-210 x 4 CP5100-210 x 4
CP4229-2/3/4/5S4 CP4230-2/3S4L	CP4518-EE CP4509-DEK	CP3720-173 CP3720-182	CP4229-106 CP4230-128	CP4230-127	CP4230-126	CP4228-107 CP4230-109	CP4228-6 CP4230-6	CP5100-210 x 4 CP4230112 x 1 & 113 x 1 & -114 x 2
CP4230-2/3S4M CP4240-28/29S7M	CP4509-DEK CP4518-CEJ	CP3720-182 CP3880-1	CP4230-108 CP4960-104	CP4230-107 CP4960-105	CP4230-106 CP4960-106	CP4230-109 CP4240-112	CP4230-6 CP4240-6	CP4230112 x 1 & 113 x 1 & -114 x 2 CP4240-132 x 1 & -133 x 1 & -144 x 1 & -145 x 1
CP4240-2/3/4/5S7M CP4240-30/31/32/33S7M	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP4240-111 CP4960-104	CP4240-110 CP4960-105	CP4240-109 CP4960-106	CP4240-112 CP4240-112	CP4240-6 CP4240-6	CP4240-132 x 1 & -133 x 1 & -144 x 1 & -145 x 1 CP4240-132 x 1 & -133 x 1 & -144 x 1 & -145 x 1
CP4240-34/35/36/37S7M CP4240-38/39S7M	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP4960-104 CP4970-113	CP4960-105 CP4970-112	CP4960-106 CP4970-111	CP4240-112 CP4260-108	CP4240-6 CP4240-40	CP4240-132 x 1 & -133 x 1 & -144 x 1 & -145 x 1 CP4240-132 x 1 & -133 x 1 & -144 x 1 & -145 x 1
CP4240-42/43/44/45S7M CP4259-2/3/4/5S0M	CP4518-CEJ CP4509-CEJ	CP3880-1 CP3720-173	CP4970-113 CP4259-114	CP4970-112 CP4259-112	CP4970-111 CP4259-108	CP4240-152 CP4260-105	CP4240-41 CP4260-6	CP4240-132 x 1 & -133 x 1 & -144 x 1 & -145 x 1 CP4240-145 x 2 / CP4240-144 x 2
CP4259-2/3/4/5S7M CP4260-20/2/1/22/23S7M	CP4509-CEJ CP4518-CEJ	CP3720-173 CP3880-1	CP4259-114 CP4240-111	CP4259-112 CP4240-110	CP4259-108 CP4240-109	CP4260-105 CP4260-115	CP4260-6 CP4260-24	CP4240-145 x 2 / CP4240-144 x 2 CP4240-145 x 2 / CP4240-144 x 2
CP4260-26/27/28/29S7M CP4260-30/31/32/33S7M	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP4240-111 CP4960-104	CP4240-110 CP4960-105	CP4240-109 CP4960-106	CP4240-112 CP4240-112	CP4240-40 CP4260-7	CP4240-145 x 2 / CP4240-144 x 2 CP4240-145 x 2 / CP4240-144 x 2
CP4340-2/3/4/5S7L CP4360-10/11S7L	CP4518-CEJ CP4518-DEK	CP3880-1 CP3880-1	CP4340-106 CP4360-104	CP4340-107 CP5820-109	CP5015-107 CP5820-107	CP4578-101 CP4360-14	CP4340-10 CP4360-6	CP4218-125 x 2 & -126 x 1 & -127 x 1 CP4970-104 x 4
CP4360-20/21S7L CP4360-2/3/4/5S7L	CP4518-DEK CP4518-DEK	CP3880-1 CP3880-1	CP4360-126 CP4360-126	CP4360-127 CP4360-127	CP4360-128 CP4360-128	CP4370-104	CP4360-17 CP4360-17	CP4970-104 x 4 CP4970-104 x 4
CP4360-8/9S7L CP4370-2/3/4/5S7L	CP4518-DEK CP4509-DEK	CP3880-1	CP4360-104 CP4370-105	CP5820-109 CP4370-106	CP5820-107 CP4370-107	CP4360-14 CP4370-104	CP4360-6 CP4360-17	CP4970-104 x 4 CP4970-104 x 4
	CP4518-ACE NOT AVAILABLE	CP3880-1 3486-268	CP4380-101 CP4398-113	CP4340-106	CP4340-107	CP4578-101 CP4398-111	CP4340-10	CP4218-125 x 2 & -126 x 1 & -127 x 1
CP4398-2/3S4S CP4466-12/13E0	NOT AVAILABLE CP4518-ADD	3486-268 CP4469-101	CP4398-113 CP3666-106	CP3485-106		CP4398-111 CP4466-108		
CP4469-2E0 CP4477-2/3E0	CP4518-ADD CP4518-ADD	CP4469-101 CP4469-101	CP3666-106 CP3666-106	CP3485-106 CP3485-106		CP4466-108 CP4466-108		
CP4484-4S0 CP4488-12/13E0	CP4518-HH CP4518-EH	CP4469-101 CP4469-101	CP3769-106 CP4488-107	CP4484-101 CP4488-106				
CP4488-12/13E0M CP4488-8E0	CP4518-EH CP4518-EH	CP4469-101 CP4469-101	CP4488-113 CP4488-107	CP4488-112 CP4488-106		0.5.4.00.400		
CP4490-2/3E0 CP4498-2/3E0	CP4518-ADD CP4518-ADD	CP4469-101 CP4469-101	CP4466-151 CP3666-106	CP4466-152 CP3485-106	00007444440	CP4466-108 CP4466-108	000554.0	
CP4554-2/3S4 CP4556-14/15/16/17S4	CP4518-DEK CP4509-EE	CP3720-182 CP3720-173	CP4554-116 CP3577-103	CP4554-115	CP3714-110	CP3554-108 CP3344-122	CP3554-6 CP4556-7	CP3555-192 x 4 CP3567-109 x 4
CP4557-2/3S0M CP4558-2/3S0M	CP4518-DG CP4509-DG	CP3720-173 CP3720-173	CP4994-118 CP4558-107	CP4995-117 CP4558-106		CP3344-122 CP3344-122	CP4556-6 CP4556-6	CP3567-109 x 4 CP3567-109 x 4
CP4567-8/9/10/11S4 CP4567-12/13/14/15S4	CP4518-GK CP4518-GK	CP3720-173 CP3720-173	CP3567-114 CP3567-114	CP4270-3 CP4270-3		CP4567-110 CP5100-117	CP4567-7 CP4567-16	CP4567-120 x 4 / Pad Retainer Bolt CP5100-126 CP4567-120 x 4 / Pad Retainer Bolt CP5100-139 CP4567-120 x 4 / Pad Retainer Bolt CP5689-109
CP4567-18/19/20/21S4 CP4567-2/3/4/5S4 CP4568-6/7S01	CP4518-GK CP4518-GK CP4518-EG	CP3720-173 CP3720-173 CP3720-173	CP3567-114 CP3567-114 CP4568-105	CP4270-3 CP4270-3 CP4568-104		CP4567-125 CP5100-116 CP5100-116	CP4567-17 CP4567-6 CP4567-6	CP4567-120 x 4 / Pad Retainer Bolt CP5689-109 CP4567-120 x 4 / Pad Retainer Bolt CP5100-210 CP4567-120 x 4
CP4568-6/7S0L CP4586-4E0 CP4586-5E7	CP4518-EG CP4518-H CP4518-H	CP3720-173 CP3720-182 CP3720-182	CP3177-102 CP3177-102	01 4000-104		0-0100-110	01-0	01-007-120 X 4
CP4586-5E7 CP4595-6/7S0L CP4596-4E0	CP4518-H CP4518-EJL CP4518-E	92598	CP3177-102 CP4595-133 CP3178-102	CP4595-132	CP4595-134	CP4595-120	CP4595-14	CP4595-114 x 4
CP4596-4E0 CP4638-2E0 CP4649-2E0	CP4518-E CP4518-H CP4518-L	CP3720-182 3486-229 3486-229	CP3178-102 CP4638-104 CP3697-104					
CP4680-3S0 CP4680-9S0	CP4518-EH CP4518-EH CP4518-EH	CP4469-101 CP4469-101	CP3697-104 CP4485-112 CP4485-112	CP4485-113 CP4485-113				
CP4680-950 CP4720-12/15S4M CP4720-13/14S4M	CP4518-CEJ CP4518-CEJ CP4518-CEJ	CP3720-173 CP3720-173	CP4485-112 CP4720-110 CP4720-110	CP4485-113 CP4720-111 CP4720-111	CP4720-112 CP4720-112		CP4720-6 CP4720-7	CP4720-117 x 4 CP4720-117 x 4
CP4720-13/1434M CP4751-10/11S0L CP4751-8/9S0L	CP4518-GG CP4518-GG	CP3720-173 CP3720-182 CP3720-182	CP4751-129 CP4751-129	5	51 1120 112	CP5751-109 CP4751-104	CP4751-13 CP4751-12	CP6751-111 x 2 / CP6751-110 x 2 CP6751-111 x 2 / CP6751-110 x 2
CP4760-8/9S0M CP4761-10/11S0L	CP4518-CEJ CP4518-EE	CP3720-182 CP3720-173 CP3720-182	CP4760-108 CP4761-111	CP4760-107	CP4760-106	CP4760-115 CP5751-109	CP4760-7 CP4751-13	CP4760-113 x 1 / CP4760-112 x 1 / CP4720-108 x 2 CP6751-111 x 2 / CP6751-110 x 2
CP4761-8/9S0L CP4771-8/9S0L	CP4518-EE CP4518-EE CP4518-DD	CP3720-182 CP3720-182 CP3720-182	CP4761-111 CP4761-111 CP4771-110			CP4751-109 CP4751-104 CP4751-104	CP4751-12 CP4751-12	CP6751-111 x 2 / CP6751-110 x 2 CP6751-111 x 2 / CP6751-110 x 2 CP6751-111 x 2 / CP6751-110 x 2
OD 4704 40/44 001	CP4518-AA CP4509-CEK	CP3720-182 CP3720-182 CP3720-182	CP4781-104 CP4795-108	CP4695-111	CP4795-107	CP5751-109 CP4695-101	CP4751-12 CP4751-13 CP4795-6	CP6751-111 x 2 / CP6751-110 x 2 CP6751-111 x 2 / CP6751-110 x 2 CP4575-108 x 2 / CP4695-107 x 2
CP4781-10/11S0L CP4795-2/3/4/5S7		CP3880-1	CP4848-104	CP4848-105			CP4848-6	CP4848-107 x 2 / CP4848-108 x 4
CP4795-2/3/4/5S7 CP4848-2S0MC	CP4518-AEAE CP4518-AEAE			CP4848-105			CP4848-7	CP4848-107 x 2 / CP4848-108 x 4
CP4795-2/3/4/5S7	CP4518-AEAE CP4518-AEAE CP4518-AEAE CP4518-AEAE	CP3880-1 CP3880-1 CP3880-1 CP3880-1	CP4848-104 CP4848-104 CP4848-104	CP4848-105 CP4848-105 CP4848-105			CP4848-7 CP4848-8 CP4848-9	CP4848-107 x 2 / CP4848-108 x 4 CP4848-107 x 2 / CP4848-108 x 4 CP4848-107 x 2 / CP4848-108 x 4

BRAKE CALIPERS - Spare Parts

Caliper Assemblies	Seal Repair Kit Part No. CP4518-AEAE	Bleed Screw or Kit Part No. CP3880-1	Piston 1 Part No. CP4848-104	Piston 2 Part No. CP4848-105 CP4849-105	Piston 3 Part No.	Pad Retainer Part No.	Fluid Pipe Part No. CP4848-6	Wear Plates Part No x Qty. CP4848-107 x 2 / CP4848-108 x 4 CP4040-407 x 2 / CP4040-408 x 4
P4849-3R0L P4849-3S0MC P4849-4R0L	CP4518-AEAE CP4518-AEAE CP4518-AEAE	CP3880-1	CP4849-104 CP4848-104 CP4849-106	CP4849-105 CP4848-105 CP4849-107			CP4849-7 CP4848-7 CP4849-8	CP4848-107 x 2 / CP4848-108 x 4 CP4848-107 x 2 / CP4848-108 x 4 CP4848-107 x 2 / CP4848-108 x 4
24849-4S0MC 24849-5R0L	CP4518-AEAE CP4518-AEAE	CP3880-1	CP4848-104 CP4849-106	CP4848-105 CP4849-107	_		CP4848-8 CP4849-9	CP4848-107 x 2 / CP4848-108 x 4 CP4848-107 x 2 / CP4848-108 x 4
24849-5S0MC 24907-2/3/4/5S0M	CP4518-AEAE CP4518-CEJ	CP3880-1 CP3720-173	CP4848-104 CP4910-116	CP4848-105 CP4910-115	CP4910-114	CP3796-134	CP4848-9 CP4907-6	CP4848-107 x 2 / CP4848-108 x 4 CP4907-111 x 1 / CP4907-109 x 2 / CP4907-110 x 1
24907-2/3/4/5S4 24907-2/3/4/5S4L	CP4518-CEJ CP4518-CEJ	CP3720-173 CP3720-173	CP4910-141 CP4907-106	CP4910-140 CP4907-107	CP3344-192 CP4907-108	CP3796-134 CP3796-134	CP4907-6 CP4907-6	CP4907-111 x 1 / CP4907-109 x 2 / CP4907-110 x 1 CP4907-111 x 1 / CP4907-109 x 2 / CP4907-110 x 1
P4909-10/11S0M P4909-10/11S4	CP4518-CEJ CP4518-CEJ	CP3720-173 CP3720-173	CP4910-116 CP4910-141	CP4910-115 CP4910-140	CP4910-114 CP3344-192	CP3796-134 CP3796-134	CP4909-7 CP4909-7	CP4910-119 x 1 / CP4096-126 x 2 / CP4910-118 x 1 CP4910-119 x 1 / CP4096-126 x 2 / CP4910-118 x 1
P4909-4/5S0M P4910-10/11/12/13S0	CP4518-CEJ CP4518-CEJ	CP3720-173 CP3720-173 CP3720-173	CP4910-116 CP4910-141	CP4910-115 CP4910-140	CP4910-114 CP3344-192	CP3796-135 CP3796-135	CP4909-6 CP4910-14	CP4910-119 x 1 / CP4096-126 x 2 / CP4910-118 x 1 CP4910-119 x 1 / CP4096-126 x 2 / CP4910-118 x 1 CP4910-119 x 1 / CP3894-130 x 2 / CP4910-118 x 1
P4910-10/11/12/13S0M P4910-16/17/18/19S0M	CP4518-CEJ CP4518-CEJ	CP3720-173 CP3720-173	CP4910-116 CP4910-116	CP4910-115 CP4910-115	CP4910-114 CP4910-114	CP3796-135 CP3796-134	CP4910-14 CP4910-15	CP4910-119 x 1 / CP3894-130 x 2 / CP4910-118 x 1 CP4910-119 x 1 / CP3894-130 x 2 / CP4910-118 x 1
P4910-18/19S4 P4910-26/27/28/29S0	CP4518-CEJ CP4518-CEJ	CP3720-173 CP3720-173	CP4910-141 CP4910-156	CP4910-140 CP4910-155	CP3344-192 CP4910-154	CP3796-134 CP3796-134	CP4910-15 CP4910-25	CP4910-119 x 1 / CP3894-130 x 2 / CP4910-118 x 1 CP4910-159 x 1 / CP3894-130 x 2 / CP4910-118 x 1 CP4910-159 x 1 / CP4910-158 x 1 / CP3894-130 x 2
P4910-30/31S4M P4910-32/33/34/35S0	CP4518-CEJ CP4518-CEJ CP4518-CEJ	CP3720-173 CP3720-173 CP3720-173	CP4910-116 CP4910-156	CP4910-115 CP4910-115 CP4910-155	CP4910-114 CP4910-114 CP4910-154	CP3796-134 CP3796-134 CP3796-135	CP4910-24 CP4910-36	CP4910-139 x 1 / CP3894-130 x 2 / CP4910-118 x 1 CP4910-119 x 1 / CP3894-130 x 2 / CP4910-118 x 1 CP4910-163 x 1 / CP4910-162 x 1 / CP3894-130 x 2
P4910-6/7/8/9S0M	CP4518-CEJ	CP3720-173	CP4910-116	CP4910-115	CP4910-114	CP3796-135	CP4910-36 CP4910-14 CP4910-14	CP4910-119 x 1 / CP3894-130 x 2 / CP4910-118 x 1
P4915-4/5S4M P4920-10/11S0M P4920-10/11/12/13S4	CP4518-ACE CP4518-CEJ	CP3720-173 CP3720-182	CP4915-106 CP4910-122	CP4910-116 CP4910-121	CP4910-115 CP4910-120 CP4920-114	CP3796-135 CP3895-109 CP3895-109	CP4894-50 CP4894-50	CP4910-119 x 1 / CP3894-130 x 2 / CP4910-118 x 1 CP4894-157 x 1 / CP3894-130 x 2 / CP4894-156 x 2
P4920-12/13S4M	CP4518-CEJ CP4518-CEJ	CP3720-182 CP3720-182	CP4920-116 CP4910-122	CP4920-115 CP4910-121	CP4910-120	CP3895-109	CP4894-50	CP4894-157 x 1 / CP3894-130 x 2 / CP4894-156 x CP4894-157 x 1 / CP3894-130 x 2 / CP4894-156 x
24920-14/15/16/17S0M 24920-8/9S0M	CP4518-CEJ CP4518-CEJ	CP3720-182 CP3720-182	CP4910-122 CP4910-122	CP4910-121 CP4910-121	CP4910-120 CP4910-120	CP4894-142 CP3895-109	CP4894-31 CP4894-54	CP4894-157 x 1 / CP3894-130 x 2 / CP4894-156 x CP4894-157 x 1 / CP3894-130 x 2 / CP4894-156 x
24921-4/5S4M 24922-2/3/4/5S4M	CP4518-ACE CP4518-BEG	CP3720-182 CP3720-182	CP4921-106 CP4910-121	CP4910-122 CP4922-109	CP4910-121 CP4922-108	CP3895-109 CP3895-109	CP4894-50 CP4894-50	CP4894-157 x 1 / CP3894-130 x 2 / CP4894-156 x CP4894-157 x 1 / CP3894-130 x 2 / CP4894-156 x
24922-8/9S4M 24960-10/11S0M	CP4518-BEG CP4518-CEJ	CP3720-182 CP3720-182	CP4910-121 CP4960-110	CP4922-109 CP4960-111	CP4922-108 CP4960-112	CP3894-131 CP4240-112	CP4894-50 CP4960-6	CP4894-157 x 1 / CP3894-130 x 2 / CP4894-156 x
24960-2/3/4/5S0M 24960-8/9S0M	CP4518-CEJ CP4518-CEJ	CP3720-182 CP3720-182	CP4960-104 CP4960-110	CP4960-105 CP4960-111	CP4960-106 CP4960-112	CP4240-112 CP4240-112	CP4960-6 CP4960-6	
24970-22/23S0M 24970-2/3S0M	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP4970-113 CP4970-113	CP4970-112 CP4970-112	CP4970-111 CP4970-111	CP4979-107 CP4979-107	CP4970-11 CP4970-11	CP4970-104 x 4 CP4970-104 x 4
P5000-10/11/12/13S4 P5000-20/21/22/23S4	CP4518-JL CP4518-JL	CP3720-182 CP3720-182	CP5000-109 CP3344-192	CP3714-111 CP5000-209		CP3714-190 CP4890-101	CP3714-2 CP5000-25	CP3714-153 x 4
25000-56/57/58/59S4 25006-2/3S4	CP4518-JK CP4518-JL	CP3720-173 CP3720-173	CP3584-101 CP3344-192	CP3434-116 CP5000-209		CP5200-110 CP4890-101	CP5000-49 CP3720-34	CP5200-306 x 2 / CP5200-307 x 2 CP5006-106 x 4
P5015-2/3/4/5S4 P5016-2/3/4/5S4	CP4518-KL CP4518-HJ	CP3880-1 CP3880-1	CP5015-108 CP5015-107	CP5015-110 CP5015-109		CP5015-106 CP5015-106	CP5015-6 CP5015-6	CP5300-113 x 4 CP5300-113 x 4
P5017-2/3/4/5S4 P5018-2/3/4/5S4	CP4518-JK CP4518-KL	CP3880-1 CP3880-1	CP5015-107 CP5015-108	CP5015-108 CP5015-110		CP5015-106 CP5015-106	CP5015-6 CP5015-6	CP5300-113 x 4 CP5300-113 x 4
P5020-20/21S0 P5030-10S0	CP4518-H CP4518-GK	CP3720-173 CP3720-173	CP3177-102 CP5030-108	CP5030-107			CP5310-21 CP5030-7	CP5310-103 x 4
P5030-11S0 P5030-12/15S0	CP4518-GK CP4518-GK	CP3720-173 CP3720-173	CP5030-108 CP5030-108	CP5030-107 CP5030-107			CP5030-6 CP5030-16	
P5030-13/14S0 P5030-8S0	CP4518-GK CP4518-GK	CP3720-173 CP3720-173	CP5030-108 CP5030-108	CP5030-107 CP5030-107			CP5030-17 CP5030-6	
P5030-9S0 P5040-10/11/12/13S4	CP4518-GK CP4518-JJ	CP3720-173 CP3720-173	CP5030-108 CP3215-113	CP5030-107		CP5100-116	CP5030-7 CP5000-54	CP5100-210 x 2 / CP5100-211 x 2
25040-20/21/22/23S4 25040-2/3/4/5S4	CP4518-JL CP4518-JK	CP3720-182 CP3720-173	CP5000-109 CP3584-101	CP3714-111 CP3434-116		CP3714-190 CP5200-124	CP3714-2 CP5000-44	CP3714-153 x 4 CP5200-306 x 2 / CP5200-307 x 2
P5040-30/31/32/33S4 P5040-38/39S4	CP4518-JL CP4518-JK	CP3720-173 CP3720-173	CP3636-107 CP3584-101	CP3394-110 CP3434-116		CP3795-101 CP5200-124	CP5040-7 CP5000-44	CP3799-111 x 1 / CP3846-101 x 2 / CP3799-110 x 1 CP5200-306 x 2 / CP5200-307 x 2
P5045-10/11S7L P5045-2/3S7L	CP4518-JL CP4518-JL	CP3880-2 CP3880-2	CP5045-110 CP5045-106	CP5045-111 CP5045-107			CP5045-7 CP5045-7	CP3714-153 x 4 CP3714-153 x 4
P5045-8/9S7L P5048-2/3/4/5S0M	CP4518-JL CP4518-AEAE	CP3880-2 CP3720-182	CP5045-110 CP5048-508	CP5045-111 CP6294-121			CP5045-7 CP5048-6	CP3714-153 x 4 CP5048-507 x 4
P5055-2/3/4/5S7 P5060-10/11/12/13S4	CP4519-AEAE CP4519-AEAE CP4518-CEJ	CP3880-1 CP3880-1	CP5055-107 CP4910-156	CP4920-115 CP4910-155	CP4910-154	CP5555-126	CP5055-10 CP5560-6	CP5055-109 x 2 / CP5055-108 x 2 CP5555-120 x 4
25060-2/3/4/5S4 25066-2/3/4/5S0	CP4518-CEJ CP4518-CEJ CP4518-EEE	CP3880-1 CP3880-1 CP3720-182	CP4910-156 CP3650-107	CP4910-155	CP4910-154	CP5555-109	CP5560-12 CP5066-6	CP5555-120 x 4
P5066-2/3/4/5S0M P5070-6/8S7	CP4518-EEE CP4519-CEJ	CP3720-182 CP3720-182 CP3720-182	CP6294-121 CP5070-107	CP5070-106	CP5070-105	CP5070-104	CP5066-6 CP5070-10	CP5070-115 x 2 / CP4098-122 x 2
P5070-7/9S7 P5090-2/3/4/5S4	CP4519-CEJ CP4519-CEJ CP4518-JL	CP3720-182 CP3720-182 CP3880-1	CP5070-107 CP5070-107 CP3636-107	CP5070-106 CP5070-106 CP3394-110	CP5070-105	CP5070-104 CP5070-104 CP3795-101	CP5070-10 CP5070-11 CP5080-109	CP5070-115 x 2 / CP4036-122 x 2 CP5070-115 x 2 / CP4098-122 x 2 CP5080-108 x 4
25090-2/3/4/534 25099-8/9S4S 25095-2/3/4/5S7L	CP4519-KL CP4518-CEJ	3486-268 CP3880-1	CP5099-108 CP5260-109	CP5099-109	CP5260-111	3662-290 RH = CP5095-11		CP5060-106 x 4
25100-26/27/28/29S4 25100-32/33/34/35S4	CP4519-JJ CP4519-JJ	CP3720-173	CP2409-160	CP5260-110	CP5260-111	CP5100-117	CP5100-11	CP5100-210 x 2 / CP5100-211 x 2
P5100-802/803/804/805S4	CP4519-JJ	CP3720-173 CP3720-173	CP2409-160 CP2409-160			CP5100-116 CP5100-117	CP5100-10 CP5100-11	CP5100-210 x 2 / CP5100-211 x 2 CP5100-210 x 2 / CP5100-211 x 2 CP5400-240 x 2 / CP5100-211 x 2
P5100-806/807/808/809S4 P5100-806/807S4R2	CP4519-JJ CP4519-JJ	CP3720-173 CP3720-173	CP2409-160 CP2409-160			CP5100-116 CP5100-116	CP5100-10 CP5100-10	CP5100-210 x 2 / CP5100-211 x 2 CP5100-210 x 2 / CP5100-211 x 2
25100-810/811/812/813S4 25104-2/3S4	CP4519-JJ CP4519-JJ	CP3720-173 CP3720-173	CP2409-160 CP2409-160			CP5100-177 CP5100-116	CP5100-40 CP5100-10	CP5100-210 x 2 / CP5100-211 x 2 CP5100-210 x 2 / CP5100-211 x 2
25104-802/803/804/805S4 25105-10/11/12/13S4	CP4519-JJ CP4519-JJ	CP3720-173 CP3720-173	CP2409-160 CP2409-160			CP5100-116 CP5100-116	CP5104-10 CP5100-10	CP5100-210 x 2 / CP5100-211 x 2 CP5100-210 x 2 / CP5100-211 x 2
P5105-6/7/8/9S4 P5106-2/3/4/5S4	CP4519-JJ CP4518-JJ	CP3720-173 CP3720-173	CP3228-103 CP3228-103			CP5100-149 CP5106-114	CP5100-18 CP5106-6	CP5100-210 x 2 / CP5100-211 x 2 CP5100-210 x 4
P5108-4/5S4 P5108-4/5S4SV	CP4519-CE CP4519-CE	CP3720-173 CP3720-173	CP5108-106 CP5108-106	CP4296-111 CP4296-111		CP5100-117 CP5100-117	CP5100-11 CP5100-11	CP5100-210 x 2 / CP5100-211 x 2 CP5100-210 x 2 / CP5100-211 x 2
25108-802/803/804/805S4 25108-802/803/804/805S4R2	CP4519-CE CP4519-CE	CP3720-173 CP3720-173	CP5108-106 CP5108-106	CP4296-111 CP4296-111		CP5100-117 CP5100-117	CP5100-11 CP5100-11	CP5100-210 x 2 / CP5100-211 x 2 CP5100-210 x 2 / CP5100-211 x 2
25108-802/803S4VG 25108-806/807/808/809S4	CP4519-CE CP4519-CE	CP3720-173 CP3720-173	CP5108-106 CP5108-106	CP4296-111 CP4296-111		CP5100-117 CP5100-116	CP5100-11 CP5100-10	CP5100-210 x 2 / CP5100-211 x 2 CP5100-210 x 2 / CP5100-211 x 2
P5116-2/3/4/5S0 P5118-2/3S0RD	CP4518-CG CP4519-J	CP3720-182 CP3880-1	CP5555-108 CP5118-103(6026)	CP2877-101		CP5119-107	CP5116-6 CP5118-10	CP5234-117 x 4
P5119-12/13S4 P5119-22/23T0	CP4519-L CP4519-L	CP3720-173 CP3720-173	CP5119-104 CP5235-108	CP5119-111		CP5119-144 CP5119-144	CP5111-12 CP5111-10	
P5119-36/37T0 P5119-4/5T4	CP4519-L CP4519-L	CP3720-173 CP3720-173	CP5235-108 CP5119-104				CP5111-10 CP5111-10	
P5119-50/51T0 P5119-8/9T0	CP4519-L CP4519-L	CP3720-173 CP3720-173	CP5235-108 CP5235-108			CP5119-144 CP5119-107	CP5111-10 CP5119-106	
P5119-48/49TO P5119-50/51T0	CP4519-L CP4519-L	CP3720-173 CP3720-173	CP5235-108 CP5235-108			CP5119-144 CP5119-144	CP5111-10 CP5111-10	
25119-8/9T0 25126-2/3T0	CP4519-L CP4519-K	CP3720-173 CP3720-173	CP5235-108 CP5126-106(6026)			CP5119-107 CP5119-144	CP5119-106 CP5126-10	
P5128-2/3T0 P5129-2/3/4/5S0	CP4519-J CP4518-CG	CP3880-1 CP3880-2	CP5128-104(6026) CP6235-110	CP5129-106		CP5119-144	CP5128-10 CP5129-6	CP5234-117 x 4
25138-2/3/4/5S0 25139-2/3S0	CP4518-CG CP4518-CG	CP3880-2 CP3880-2	CP6235-110 CP6235-110	CP5129-106 CP5129-106		CP5138-106	CP5129-6	CP5234-117 x 4 CP5139-107 x 2 / CP5139-106 x 2
25144-18/19S4 & R2 25144-802/803S4 / R2 & VG	CP4519-CC CP4519-CC CP4519-CC	CP3720-173 CP3720-173	CP5108-106 CP5108-106			CP5144-114 CP5144-114	CP5144-14 CP5144-14	CP5100-210 x2 / CP5100-211 x 2 CP5100-210 x2 / CP5100-211 x 2
P5145-2/3S7	CP4519-EE	CP3720-173	CP5145-103			CP5145-104	CP5145-10	CP3720-106 x 4
P5147-802/803/804/805S4&VG P5148-12/14S0	CP4519-CC CP4518-AEAE	CP3720-173 CP3880-1	CP5108-106 CP5148-116	CP3178-102		CP5100-116	CP5100-10 CP5148-10	CP5100-210 x2 / CP5100-211 x 2 CP5148-110 x 4
P5148-13/15S0 P5148-16/18S0	CP4518-AEAE CP4518-AEAE	CP3880-1 CP3880-1	CP5148-116 CP5148-116	CP3178-102 CP3178-102			CP5148-11 CP5148-20	CP5148-110 x 4 CP5148-110 x 4
P5148-17/19S0 P5148-2/4S0	CP4518-AEAE CP4518-AEAE	CP3880-1 CP3880-1	CP5148-116 CP5148-116	CP3178-102 CP3178-102			CP5148-21 CP5148-10	CP5148-110 x 4 CP5148-110 x 4
P5148-2/4S0M P5148-3/5S0	CP4518-AEAE CP4518-AEAE	CP3880-1 CP3880-1	CP5148-118 CP5148-116	CP4760-107 CP3178-102			CP5148-10 CP5148-11	CP5148-110 x 4 CP5148-110 x 4
P5148-3/5S0M	CP4518-AEAE	CP3880-1 CP3720-173	CP5148-118	CP4760-107		CP5119-144	CP5148-11 CP5111-10	CP5148-110 x 4

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Caliper Assemblies	Seal Repair Kit Part No. CP4519-E	Bleed Screw or Kit Part No. CP3720-173	Piston 1 Part No. CP5157-104	Piston 2 Part No.	Piston 3 Part No.	Pad Retainer Part No. CP5119-144	Fluid Pipe Part No. CP5111-10	Wear Plates Part No x Qty.
5200-12/14S4 5200-32/33/34/35S4	CP4519-JK CP4519-JK	CP3720-173 CP3720-173	CP2889-105 CP2889-105	CP3357-111 CP3357-111		CP5200-124 CP5200-124	CP5200-16 CP5200-16	CP5200-306 x 2 / CP5200-307 x 2 CP5200-306 x 2 / CP5200-307 x 2
5200-40/41/42/43S4 5200-74/75/76/77S4	CP4519-JK CP4519-JK	CP3720-173 CP3720-173	CP2889-105 CP2889-105	CP3357-111 CP3357-111		CP5200-162 CP5200-124	CP5200-31 CP5200-16	CP5200-306 x 2 / CP5200-307 x 2 CP5200-306 x 2 / CP5200-307 x 2
5200-802/803/804/805S4	CP4519-JK	CP3720-173	CP2409-124	CP2290-50		CP5200-110	CP5200-6	CP5200-306 x 2 / CP5200-307 x 2
5200-806/7/8/9S4 / R2 / S2 & VG 5200-810/811/812/813S4	CP4519-JK CP4519-JK	CP3720-173 CP3720-173	CP2889-105 CP2409-124	CP3357-111 CP2290-50		CP5200-124 CP5200-110	CP5200-16 CP5200-6	CP5200-306 x 2 / CP5200-307 x 2 CP5200-306 x 2 / CP5200-307 x 2
5200-814/815S4 5200-824/825/826/827S4	CP4519-JK CP4519-JK	CP3720-173 CP3720-173	CP2889-105 CP2889-105	CP3357-111 CP3357-111		CP5200-313 CP5200-162	CP5200-57 CP5200-31	CP5200-306 x 2 / CP5200-307 x 2 CP5200-306 x 2 / CP5200-307 x 2
5200-828/829/830/831S4 & R2	CP4519-JK	CP3720-173	CP2889-105	CP3357-111		CP5200-124	CP5200-16	CP5200-306 x 2 / CP5200-307 x 2
5200-828/829S4VG 5200-832/833S4	CP4519-JK CP4519-JK	CP3720-173 CP3720-173	CP2889-105 CP2889-105	CP3357-111 CP3357-111		CP5200-124 CP5200-124	CP5200-16 CP5200-16	CP5200-306 x 2 / CP5200-307 x 2 CP5200-306 x 2 / CP5200-307 x 2
5200-836/837S4 & R2	CP4519-JK	CP3720-173	CP2889-105	CP3357-111		CP5200-191	CP5200-190	CP5200-306 x 2 / CP5200-307 x 2
5200-90/91S4 5205-14/15/16/17S4	CP4519-JK CP4519-JK	CP3720-173 CP3720-173	CP2889-105 CP4090-112	CP3357-111 CP5205-101		CP5200-124 CP5200-110	CP5200-16 CP5200-6	CP5200-306 x 2 / CP5200-307 x 2 CP5200-306 x 2 / CP5200-307 x 2
5205-18/19/20/21S4 5206-4/5S4	CP4519-JK CP4519-HH	CP3720-173 CP3720-173	CP2889-105 CP5206-106	CP3357-111		CP5200-124 CP5200-124	CP5200-16 CP5200-16	CP5200-306 x 2 / CP5200-307 x 2 CP5200-306 x 2 / CP5200-307 x 2
5207-4/5/6/7S4	CP4519-DE	CP3720-173	CP3650-107			CP5207-105	CP5207-104	CP5200-306 x 2 / CP5200-307 x 2
5207-8/9S4 5208-12/13/14/15S4	CP4519-DE CP4519-HJ	CP3720-173 CP3720-173	CP3650-107 CP2409-124	CP3639-107		CP5207-105 CP5208-208	CP5207-104 CP5208-8	CP5200-306 x 2 / CP5200-307 x 2 CP5200-306 x 2 / CP5200-307 x 2
5210-2/3/4/5S0M	CP4518-CEJ	CP3720-182	CP5210-106	CP5210-105	CP5210-104	CP4612-110	CP5611-6	
5211-12/13S4 / RD / SV & YW 5211-22/23S0	CP4519-J CP4519-J	CP3720-173 CP3720-173	CP2260-66 CP2260-66				CP5211-10 CP5211-10	
5211-24/25S0 5211-2/3S4	CP4519-J CP4519-J	CP3720-173 CP3720-173	CP2260-66 CP2260-66				CP5211-17 CP5211-10	
5211-2/3S4RD	CP4519-J	CP3720-173	CP2260-66				CP5211-10	
5219-16/17/18/19S0 5260-2/3/4/5S7L	CP4518-GK CP4518-CEJ	CP3880-1 CP3880-1	CP2876-101 CP5260-109	CP2270-92 CP5260-110	CP5260-111	CP4219-122 CP5260-108	CP5219-6 CP5260-6	CP4219-127 x 4 / Pad Retainer Bolt No. CP5100-12 CP5260-106 x 4
5260-8/9/10/11S7L	CP4518-CEJ	CP3880-1	CP5260-109	CP5260-110	CP5260-111	CP4578-101	CP5260-12	CP5260-106 x 4
5266-2/3/4/5S0M 5270-2/3/4/5S7L	CP4518-GGG CP4518-CEJ	CP3720-182 CP3880-1	CP5166-106 CP5260-109	CP5260-110	CP5260-111	CP4578-101	CP5266-6 CP5260-12	CP5260-106 x 2 / CP5270-104 x 1 / CP5270-105 x
5300-14/15S4	CP4519-KL	CP3720-173	CP5300-108	CP5300-109		CP5300-115	CP5300-10	CP5300-113 x 4
5300-4/5/6/7S4 5300-8/9S4	CP4519-KL CP4519-KL	CP3720-173 CP3720-173	CP5300-108 CP5300-108	CP5300-109 CP5300-109		CP5300-115 CP5300-115	CP5300-10 CP5300-10	CP5300-113 x 4 CP5300-113 x 4
5309-2/3S0	CP4519-EH	CP3880-1	CP6609-106(6026)	CP6609-107(6026)			CP5309-10	CP5309-106 x 1 / CP5309-107 x 1 / CP5320-107 x
5310-4/5S0 5311-22/23S0	CP4518-H CP4519-H	CP3720-173 CP3720-173	CP3177-102 CP5311-103				CP5310-22 CP5211-10	CP5310-103 x 4
5311-24/25S0 5315-2/3S0	CP4519-H CP4519-H	CP3720-173 CP3880-1	CP5311-103 CP5315-103(6026)				CP5211-10 CP5315-10	
5316-2/3S0	CP4519-J	CP3880-1	CP5128-104(6026)			CP5119-144	CP5317-10	
5316-2/3S0RD 5317-2/3S0	CP4519-J CP4519-K	CP3880-1 CP3880-1	CP5128-104(6026) CP5317-103(6026)			CP5119-144 CP5119-144	CP5317-10 CP5317-10	
5317-6/7S0 & R2	CP4519-K	CP3880-1	CP5317-103(6026)				CP5317-10	
5317-8/9S0 5319-2/3S0	CP4519-K CP4519-DE	CP3880-1 CP3880-1	CP5317-103(6026) CP6606-109(6026)	CP6609-106(6026)		CP5119-144	CP5317-10 CP5309-10	CP5309-106 x 1 / CP5309-107 x 1 / CP5320-107 x 3
5320-2/3S4 & S7	CP4519-KK	CP3720-173	CP5320-106			005440.444		CP5320-107 x 4
5325-2/3S0 5410-2/3/4/5S0L	CP4519-K CP4518-ED	CP3880-1 CP3880-2	CP5317-103(6026) CP5410-106	CP5410-107		CP5119-144 CP4751-104	CP5317-10 CP5610-6	CP5610-106 x 4
5420-4/5S0L 5421-4/5S0L	CP4518-DE CP4518-CD	CP3880-2 CP3880-2	CP5825-109 CP6260-107	CP6261-107 CP6261-107				CP5420-106 x 1, Ctr Beam / CP5880-107 x 4 CP5420-106 x 1, Ctr Beam / CP5880-107 x 4
5510-14/15S0L	CP4518-DC	CP3880-2	CP5510-116	CP5410-106		CP5510-106	CP5510-6	CP5610-106 x 4
5510-2/3/4/5S0L 5515-4/5S0	CP4518-DC CP4518-DC	CP3880-2 CP3880-2	CP5510-116 CP5515-110	CP5410-106 CP5515-111		CP4751-104 CP4751-104	CP5610-6 CP5610-6	CP5610-106 x 4 CP5610-106 x 4
5515-8/9S0	CP4518-DC	CP3880-2	CP5515-110	CP5515-111		CP5510-106	CP5510-6	CP5610-106 x 4
5555-12/13/14/15S4 5555-2/3S4	CP4519-CEJ CP4519-CEJ	CP3720-173 CP3720-173	CP5555-108 CP5555-108	CP3650-107 CP3650-107	CP2409-124 CP2409-124	CP5555-126 CP5555-109	CP5555-11 CP5555-10	CP5555-120 x 4 CP5555-120 x 4
5555-4/5S7	CP4519-CEJ	CP3720-173	CP5555-108	CP3650-107	CP2409-124	CP5555-109	CP5555-10	CP5555-120 x 4
5555-66/67/68/69S4 5555-802/3/4/5S4 / R2 & VG	CP4519-CEJ CP4519-CEJ	CP3720-173 CP3720-173	CP5555-108 CP5555-108	CP3650-107 CP3650-107	CP2409-124 CP2409-124	CP5555-126 CP5555-109	CP5555-70 CP5555-10	CP5555-120 x 4 CP5555-120 x 4
5555-806/807/808/809S4 5555-808/809/810/811S4R2&VG	CP4519-CEJ	CP3720-173 CP3720-173	CP5555-108	CP3650-107	CP2409-124	CP5555-126 CP5555-126	CP5555-70	CP5555-120 x 4
5555-808/809/810/81154R2&VG	CP4519-CEJ CP4519-CEJ	CP3720-173 CP3720-173	CP5555-108 CP5555-108	CP3650-107 CP3650-107	CP2409-124 CP2409-124	CP5555-126 CP5555-126	CP5555-70 CP5555-11	CP5555-120 x 4 CP5555-120 x 4
5555-814/5/6/7S4 / R2 & VG 5555-818/819S4	CP4519-CEJ CP4519-CEJ	CP3720-173 CP3720-173	CP5555-108 CP5555-108	CP3650-107 CP3650-107	CP2409-124 CP2409-124	CP5555-126 CP5555-126	CP5555-11 CP5555-11	CP5555-120 x 4 CP5555-120 x 4
5555-824/825S4	CP4519-CEJ	CP3720-173	CP5555-108	CP3650-107	CP2409-124	CP5555-126	CP5555-70	CP5555-120 x 4
5555-826/827/828/829S4 5555-830/831S4 & R2	CP4519-CEJ CP4519-CEJ	CP3720-173 CP3720-173	CP5555-108 CP5555-108	CP3650-107 CP3650-107	CP2409-124 CP2409-124	CP5555-126 CP5555-109	CP5555-11 CP5555-10	CP5555-120 x 4 CP5555-120 x 4
5555-838/839S4	CP4519-CEJ	CP3720-173	CP5555-108	CP3650-107	CP2409-124	CP6136-109	CP5555-10	CP55555-120 x 4
5555-84/85S4 5560-32/33/34/35S0L	CP4519-CEJ CP4518-CEJ	CP3720-173 CP3880-1	CP5555-108 CP5560-108	CP3650-107 CP5560-109	CP2409-124 CP5560-110	CP5555-155 CP5555-126	CP5555-46 CP5560-26	CP5555-174 x 4 CP5555-120 x 4
5567-2/3S4	CP4518-GK	CP3880-1	CP5567-106	CP5567-107				CP5567-108 x 4 + CP5567-109 x 1 CTR BEAM
5570-802/3/4/5S4 / R2 & VG 5570-806/807S4 & R2	CP4519-CEJ CP4519-CEJ	CP2889-105 CP2889-105	CP4689-108 CP4689-108	CP5145-103 CP5145-103	CP2889-105 CP2889-105	CP5200-124 CP5200-124	CP5555-56 CP5555-56	CP5555-174 x 4 CP5555-174 x 4
5570-810/811/812/813S4	CP4519-CEJ	CP2889-105	CP4689-108	CP5145-103	CP2889-105	CP5555-157	CP5555-71	CP5555-174 x 4
5570-814/815/816/817S4 5575-802/3/4/5S4 / R2 & VG	CP4519-CEJ CP4519-CEJ	CP2889-105 CP2889-105	CP4689-108 CP4689-108	CP5145-103 CP5145-103	CP2889-105 CP2889-105	CP5200-124 CP55555-157	CP5555-56 CP5555-71	CP5555-174 x 4 CP5575-106 x 4
5589-2/3/4/5S4 5610-2/3/4/5S0L	CP4518-CEJ CP4518-EG	CP3720-182 CP3880-2	CP4689-108 CP5410-107	CP3645-111 CP5610-108	CP4689-106	CP5589-106 CP4751-104	CP5589-6 CP5610-6	CP5200-306 x 4 CP5610-106 x 4
5620-2/3S4	CP4509-DD	CP3720-173	CP3579-108			CP4751-104 CP4890-101	CP3620-8	CP3720-106 x 4
5687-2/3/4/5S4L 5710-2/3/4/5S0L	CP4518-ACE CP4518-EE	CP3880-1 CP3880-2	CP4380-101 CP5410-107	CP4340-106	CP4340-107	CP4751-104	CP5870-6 CP5610-6	CP6230-111 x 4 CP5610-106 x 4
5751-14/15/16/17S0L	CP4518-HL	CP3720-182	CP5751-145	CP5751-147		CP4751-104	CP5751-28	CP6751-111 x 2 / CP6751-110 x 2
5751-18/19/20//21S0L 5755-4/5S0L	CP4518-HL CP4518-KL	CP3720-182 CP3720-182	CP5751-145 CP5755-111	CP5751-147 CP5755-110		CP5751-109 CP5755-108	CP5751-29	CP6751-111 x 2 / CP6751-110 x 2 CP5755-107 x 4
5756-2S0L	CP4518-GG	CP3720-182	CP5756-106			CP5755-108		CP5755-107 x 4
5756-4S0L 5757-2S0L	CP4518-GG CP4518-GG	CP3720-182 CP3720-182	CP5756-106 CP5755-110			CP5756-112 CP5755-108		CP5755-107 x 4 CP5755-107 x 4
5761-10/11S0L 5761-8/9S0L	CP4518-LL CP4518-LL	CP3720-182 CP3720-182	CP5751-145 CP5751-145			CP5751-109 CP4751-104	CP5751-29 CP5751-28	CP6751-111 x 2 / CP6751-110 x 2 CP6751-111 x 2 / CP6751-110 x 2
5771-10/11/12/13S0L	CP4518-LK	CP3720-182	CP5771-131	CP5751-145		CP4751-104	CP5751-28	CP6751-111 x 2 / CP6751-110 x 2
5771-14/15/16/17S0L 5780-6/7/8/9S0LP	CP4518-LK CP4518-JL	CP3720-182 CP6300-21	CP5771-131 CP5990-106	CP5751-145 CP5990-107		CP5751-109	CP5751-29	CP6751-111 x 2 / CP6751-110 x 2 CP5780-104 x 4 / CP5780-105 x 1 Ctr Beam
5785-2/3/4/5S0LPD	CP4528-HL	CP5785-106	CP5785-107					CP5785-113 x 4
5788-2/3/4/5S0L 5789-2/3/4/5/S0LP	CP4518-JL CP4518-JL	CP3880-1 CP3880-1	CP4090-111 CP5990-107	CP5830-115 CP5990-106			CP5788-6 CP5789-6	CP5788-106 x 4 CP5789-105 x 4
5789-2/3/4/5S0MP	CP4518-JL	CP3880-1	CP5789-107	CP5789-106			CP5789-6	CP5789-105 x 4
5800-12/13S0L 5800-2/3/4/5S0L	CP4518-DEK CP4518-DEK	CP3720-182 CP3720-182	CP5810-113 CP5810-113	CP5810-114 CP5810-114	CP5810-115 CP5810-115	CP5800-107 CP5800-107	CP5800-6 CP5800-6	CP5800-109 x 4 CP5800-109 x 4
5805-2/3/4/5S0L	CP4518-EGL	CP3720-182	CP4761-111	CP4751-129	CP5751-145	CP4751-104	CP5805-6	CP6751-111 x 2 / CP6751-110 x 2
5806-2/3S0L 5810-2/3/4/5S0L	CP4518-EGL CP4518-DEK	CP3720-182 CP3880-2	CP4761-111 CP5810-113	CP4751-129 CP5810-114	CP5751-145 CP5810-115	CP4751-104	CP5805-6 CP5810-6	CP6751-111 x 2 / CP6751-110 x 2 CP5810-105 x 1 / CP5810-104 x 4
5810-2/3/4/5S0M	CP4518-DEK	CP3880-2	CP5810-110	CP5810-111	CP5810-112		CP5810-6	CP5810-105 x 1 / CP5810-104 x 4
5820-2/3/4/5S0L 5820-2/3/4/5S0M	CP4518-EFK CP4518-EFK	CP3880-2 CP3880-2	CP5820-109 CP5820-117	CP5820-107 CP5820-119	CP5820-108 CP5820-118		CP5820-6 CP5820-6	CP5820-112 x 1 / CP5820-111 x 4 CP5820-112 x 1 / CP5820-111 x 4
5825-4S0M 5828-2/3/4/5S7L	CP4518-EFK CP4518-EFK	CP3880-2 CP3880-2	CP5820-117 CP5828-107	CP5820-119 CP5828-109	CP5820-118 CP5828-108		CP5825-6 CP5828-6	CP5828-106 x 1 / CP5828-105 x 4
5830-12/13/14/15S0L	CP4518-DE	CP3880-2	CP5830-124	CP5830-123	GF 3020-108	CP5830-109	CP5830-6	CP5830-108 x 4
5835-4/5S0 5840-2/3S0	CP4518-LM CP4518-GK	CP3880-2 CP3880-2	CP5835-106 CP5840-112	CP5835-107 CP5840-111		CP5830-109	CP5830-6 CP5840-6	CP5830-108 x 4 CP5840-106 x 4
5840-4S0	CP4518-GK	CP3880-2	CP5840-112	CP5840-111			CP5840-7	CP5840-106 x 4
5841-2/3/4/5S0 5842-2/3/4/5S0M	CP4518-CD CP4518-EFK	CP3880-2 CP3880-2	CP5841-106 CP5842-106	CP5841-107 CP5842-104	CP5842-105		CP5841-6 CP5842-6	CP5840-106 x 4 CP5842-107 x 1 / CP5820-111 x 4
5842-4/5S0MC	CP4518-EFK	CP3880-2	CP5842-9	CP5842-8	CP5842-7		CP5842-6	CP5842-107 x 1 / CP5820-111 x 4
P5845-4/5S0MC OR P	CP4518-EFK	CP3880-2	CP5845-106	CP4845-4107	CP5845-108			CP5845-111 x 4 / CP5845-114 x 1

BRAKE CALIPERS - Spare	Parts
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Caliper Assemblies CP5846-4/5S0MC OR P	Seal Repair Kit Part No. CP4518-EG	Bleed Screw or Kit Part No. CP3880-2	Piston 1 Part No. CP5846-105	Piston 2 Part No. CP5846-106	Piston 3 Part No.	Pad Retainer Part No.	Fluid Pipe Part No.	Wear Plates Part No x Qty. CP6070-107 x 4 / CP5846-104 x 1
CP5850-2/3S0M CP5865-2/3/4/5S7M	CP4518-JL CP4518-CEJ	CP3880-2 CP3880-1	CP5850-107 CP5870-106	CP5850-108 CP5870-104	CP5870-105		CP5850-6 CP5870-6	CP5850-106 x 2 / CP5820-111 x 4 CP6230-111 x 4
CP5866-2/3/4/5S7M	CP4518-CEJ	CP3880-1	CP5870-106	CP5870-104	CP5870-105	CP5866-104	CP5870-6	CP6230-111 x 4
CP5870-2/3/4/5S7M CP5880-2/3S0L	CP4518-CEJ CP4518-DE	CP3880-1 CP3880-2	CP5870-106 CP5880-104	CP5870-104 CP5880-105	CP5870-105		CP5870-6 CP5880-6	CP6230-111 x 4 CP5880-106 x 1 / CP5880-107 x 4
CP5880-4/5S0M CP5890-2/3S0L	CP4518-DE CP4518-DEK	CP3880-2 CP3880-2	CP5880-109 CP5890-105	CP5880-108 CP5890-108	CP5890-109		CP5880-6 CP5890-6	CP5880-106 x 1 / CP5880-107 x 4 CP5890-104 x 1 / CP5890-106 x 4
CP5890-2/3/4/5S0M	CP4518-DEK	CP3880-2	CP5890-111	CP5890-112	CP5890-113		CP5890-6	CP5890-104 x 1 / CP5890-106 x 4
CP5895-4/5S0M CP5928-5E0	CP4518-DEK CP4518-H	CP3880-2 CP3880-1	CP5890-111 CP5569-111	CP5890-112	CP5890-113	CP4140-110		CP5895-111 x 4 / CP5895-112 x 1 Ctr Beam CP5586-104
CP5971-2/3S7M CP5971-4/5S7M	CP4518-BCE CP4518-BCE	CP3880-1 CP3880-1	CP5961-105 CP5961-105	CP5961-104 CP5961-104	CP5970-114 CP5970-114	CP5970-104 CP5970-104	CP5970-7 CP5970-8	CP4970-104 x 4 CP4970-104 x 4
CP6016-2/3S0	CP6016-51	CP3880-1	CP6016-106		01 3370 114		CP6016-10	
CP6030-20/21S0 CP6030-2/3S0	CP4518-GK CP4518-GK	CP3720-173 CP3720-173	CP6030-107 CP6030-107	CP6030-108 CP6030-108		CP6030-110 CP6030-109	CP6030-35 CP6030-6	CP5100-210 x 4 CP5100-210 x 4
CP6040-2/3S7MP CP6044-2/3S7M	CP4518-CEJ CP4518-BDH	CP3880-1 CP3880-1	CP6040-108	CP6040-109	CP6040-110 CP6290-131	CP5970-104 CP5970-104	CP6040-6	CP4970-104 x 4 CP4970-104 x 4
CP6050-2/3/4/5S0M	CP4518-AEAE	CP3720-182	CP5962-105 CP6050-105	CP5961-104 CP6050-106	CP6290-131	CP5970-104	CP6040-6 CP6050-6	CP6050-108 x 2 / CP6050-109 x 2
P6050-2/3/4/5S7M P6051-2/3/4/5S0L	CP4518-AEAE CP4518-AEAE	CP3720-182 CP3720-173	CP6050-105 CP6051-105	CP6050-106 CP6051-106			CP6050-6 CP6051-6	CP6050-108 x 2 / CP6050-109 x 2 CP6050-108 x 2 / CP6050-109 x 2
P6055-2/4S7MP	CP4518-CEJ	CP3880-1	CP6055-110	CP6055-111	CP6055-112		CP6055-6	CP6055-108 x 1 / CP6055-107 x 4
CP6055-3/5S7MP CP6056-2/3/4/5S7MP	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP6055-110 CP6055-110	CP6055-111 CP6055-111	CP6055-112 CP6055-112		CP6055-7 CP6056-7	CP6055-108 x 1 / CP6055-107 x 4 CP6056-104 x 1 / CP6055-107 x 4
P6057-2/3/4/5S7MP P6058-2/3/4/5S7MP	CP4518-CEJ CP4518-BEH	CP3880-1 CP3880-1	CP6055-110 CP6057-105	CP6055-111 CP6055-111	CP6057-104 CP6057-104		CP6056-7 CP6056-7	CP6056-104 x 1 / CP6055-107 x 4 CP6056-104 x 1 / CP6055-107 x 4
P6060-2/3S7MP	CP4518-CEJ	CP3880-1	CP6060-122	CP6060-120	CP6060-121		CP6060-6	CP6060-106 x 1 / CP6060-107 x 4
P6060-4/5S7MP P6061-4/5S7MP	CP4518-CEJ CP4518-BCE	CP3880-1 CP3880-1	CP6060-122 CP4960-110	CP6060-120 CP4960-111	CP6060-121 CP6061-104		CP6060-7 CP6060-6	CP6060-106 x 1 / CP6060-107 x 4 CP6060-107 x 4
P6064-2/3S7MP	CP4518-CEJ	CP3880-1	CP6060-122	CP6060-120	CP6060-121		CP6064-6	CP6060-106 x 1 / CP6060-107 x 4
P6064-4/5S7MP P6065-10/11S7MP	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP6060-122 CP6040-108	CP6060-120 CP6065-110	CP6060-121 CP6040-110		CP6064-8 CP6065-7	CP6060-106 x 1 / CP6060-107 x 4 CP6065-104 x 1 / CP6060-107 x 4
P6065-2/3S7MP P6065-4/5S7MP	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP6040-108 CP6040-108	CP6040-109 CP6065-110	CP6040-110 CP6040-110		CP6065-6 CP6065-7	CP6065-104 x 1 / CP6060-107 x 4 CP6065-104 x 1 / CP6060-107 x 4
P6065-8/9S7MP	CP4518-CEJ	CP3880-1	CP6040-108	CP6040-109	CP6040-110		CP6065-6	CP6065-104 x 1 / CP6060-107 x 4
P6066-4/5S7MP P6070-12/13S7L	CP4518-BCE CP4518-DH	CP3880-1 CP3880-1	CP6040-108 CP6070-120	CP6040-109 CP5015-109	CP6060-123		CP6065-7 CP6070-6	CP6065-104 x 1 / CP6060-107 x 4 CP6070-106 x 1 / CP6070-107 x 4
P6070-14/15S7L	CP4518-DH	CP3880-1	CP6070-120	CP5015-109			CP6070-7	CP6070-106 x 1 / CP6070-107 x 4
P6070-2/3/4/5S7MC P6070-2/3/4/5S7MP	CP4518-DH CP4518-DH	CP3880-1 CP3880-1	CP6070-110 CP6070-110	CP6070-111 CP6070-111			CP6070-6 CP6070-6	CP6070-106 x 1 / CP6070-107 x 4 CP6070-106 x 1 / CP6070-107 x 4
P6071-2/3/4/5S7MP	CP4518-DH	CP3880-1	CP6070-110	CP6070-111	OBSOFF 440		CP6071-6	CP6070-106 x 1 / CP6070-107 x 4
P6075-2/3S7MC P6075-4/5S7MC	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP6055-110 CP6055-110	CP6055-111 CP6055-111	CP6055-112 CP6055-112		CP6075-6 CP6075-7	CP6075-106 x 1 / CP6075-105 x 4 CP6075-106 x 1 / CP6075-105 x 4
P6077-4/5S7MP P6078-4/5S7MP	CP4518-BCE CP4518-CEJ	CP3880-1 CP3880-1	CP6055-110 CP6055-110	CP6055-111 CP6055-111	CP6057-104 CP6055-112			CP6075-105 x 4 / CP6078-104 x 1 Ctr Beam CP6075-105 x 4 / CP6078-104 x 1 Ctr Beam
P6080-2/3S7MP	CP4518-CEJ	CP3880-1	CP6060-122	CP6060-120	CP6060-121	CP6460-105	CP6060-6	CP6060-107 x 4
P6080-4/5S7MP P6083-2/3S7M	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP6060-122 CP6083-108	CP6060-120 CP6083-107	CP6060-121 CP6083-106	CP6460-105 CP6083-7	CP6060-7	CP6060-107 x 4 CP5856-120 x 4 / CP6066-104 x 1 Ctr Beam
P6085-2/3S7MC	CP4518-CEJ	CP3880-1	CP6055-110	CP6055-111	CP6055-112		CP6075-6	CP6075-106 x 1 / CP6075-105 x 4
P6085-4/5S7MC P6086-2/3S7MC	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP6055-110 CP6055-110	CP6055-111 CP6055-111	CP6055-112 CP6055-112		CP6075-7	CP6075-106 x 1 / CP6075-105 x 4 CP6060-107 x 4 / CP6086-104 x 1
P6087-2/3S7MP P6088-2/3S7MP	CP4518-BCE CP4518-CEJ	CP3880-1 CP3880-1	CP6057-104 CP6057-110	CP6055-110 CP6055-111	CP6055-111 CP6055-112			CP6055-107 x 4 / CP6087-104 x 2 CP6060-107 x 4 / CP6086-104 x 1
P6096-2/3S7MP	CP4518-CEJ	CP3880-1	CP6060-122	CP6060-120	CP6060-121		CP6096-6	CP6060-107 x 4 / CP6086-104 x 1
P6096-4/5S7MP P6114-10/11/12/13S0	CP4518-CEJ CP4518-L	CP3880-1 CP3880-1	CP6060-122 CP6114-106	CP6060-120	CP6060-121	CP5119-144	CP6096-7 CP6114-105	CP6060-107 x 4 / CP6086-104 x 1
P6120-2/3S0	CP4518-L	CP3880-1	CP5235-108			CP6120-103	CP6120-6	
P6121-2/3S0 P6136-4/5S0L	CP4518-J CP4518-CDH	CP3880-1 CP3880-1	CP6121-104 CP6136-114	CP6136-116	CP6136-110	CP6120-103 CP6136-107	CP6120-6 CP6136-10	CP6508-102 x 4
P6136-8/9S0L P6138-2/3S0L	CP4518-CDH CP4518-DEDE	CP3880-1 CP3880-1	CP6136-114 CP6136-114	CP6136-116 CP6136-115	CP6136-110 CP6136-111	CP6136-107 CP6138-106	CP6136-10 CP6138-10	CP5555-120 x 4 CP6508-102 x 4
P6148-2/5R0M	CP4518-AEAE	01 0000 1	CP6148-108	CP6148-109	010100111		CP6148-6	CP6148-107 x 2 / CP6148-106 x 2
P6148-3/4R0M P6160-2/3S7MP	CP4518-AEAE CP4518-CEJ	CP3880-1	CP6148-108 CP6055-110	CP6148-109 CP6055-111	CP6055-112		CP6148-7	CP6148-107 x 2 / CP6148-106 x 2 CP6060-107 x 4 / CP6086-104 x 1 Ctr Beam
P6161-2/3S7MP P6165-2/3S7M	CP4518-BCE CP8518-CEJ	CP3880-1 CP3880-1	CP6055-110 CP6165-108	CP6055-111 CP6165-107	CP6057-104 CP6165-106			CP6060-107 x 4 / CP6086-104 x 1 Ctr Beam CP5856-120 x 4 / CP6165-104 x 1 Ctr Beam
P6169-2/3S7MP	CP4518-CEJ	CP3880-1	CP6169-108	CP4969-139	CP6169-106			CP6169-113 x 4
P6215-10/11/12/13S7L P6215-2/3/4/5S0L	CP4518-CF CP4518-DG	CP3880-1 CP3880-1	CP6260-107 CP6215-106	CP5828-108 CP6215-105			CP5760-6 CP5760-6	CP6215-104 x 1 / CP5760-105 x 4 CP6215-104 x 1 / CP5760-105 x 4
P6215-6/7/8/9S0L	CP4518-DG	CP3880-1	CP6215-109	CP6215-110			CP5760-6	CP6215-107 x 2 / CP6215-108 x 2 / CP6215-104 x 1
P6220-2/3/4/5S0 P6230-2/3/4/5S7M	CP4518-CEJ CP4518-CEJ	CP3720-182 CP3720-173	CP5070-107 CP4970-113	CP5070-106 CP4970-112	CP5070-105 CP4970-111	CP6220-113 CP6230-112	CP6220-21 CP6230-21	CP6220-110 x 4 CP6230-111 x 4
P6238-2/3S0L P6240-2/3/4/5S7M	CP4518-DEDE CP4518-CEJ	CP3880-1 CP3720-173	CP6136-114 CP4970-113	CP6136-115 CP4970-112	CP6136-111 CP4970-111	CP6238-106 CP6230-112	CP6238-10 CP6240-6	CP6238-110 x 4 CP6230-111 x 4
P6270-2/4S7MP OR C	CP4518-DH	CP3880-1	CP6070-110	CP6070-111	CP4970-111	CP6230-112	CP6240-6 CP6070-7	CP6070-107 x 4 / CP6270-104 x 1
P6267-6/7S0L P6268-12/-13S7L	CP8518-DG CP8518-EFK	CP3880-1 CP3880-1	CP6266-105 CP6268-104	CP6266-106 CP6268-105	CP6268-106			CP5760-105 x 4 / CP6266-104 CP6268-111 x 4
P6269	CP8518-EFK	CP3880-1	CP6268-104	CP6268-105	CP6268-106	CP6268-20 / -21	000077-7	Pad Abutment Plates, L = CP6269-102 / T = CP6269-1
P6270-3/5S7MP OR C P6271-2/3/4/5S7MP	CP4518-DH CP4518-DH	CP3880-1 CP3880-1	CP6070-110 CP6070-110	CP6070-111 CP6070-111			CP6070-6 CP6070-6	CP6070-107 x 4 / CP6270-104 x 1 CP6070-107 x 4 / CP6270-104 x 1
P6320-12/13/14/15R4M	CP4518-HL		CP3720-177 CP2879-103	CP6320-107 CP2279-6		CP6320-111		CP6320-106 x 4
P6320-14/15R4 P6320-22/23/24/25S4M	CP4518-HL CP4518-HL	CP3880-1	CP3720-177	CP6320-107		CP6320-111 CP6320-111		CP6320-106 x 4 CP6320-106 x 4
P6320-32/33/34/35S4M P6340-12/13/14/15R4M	CP4518-HL CP4518-DH	CP3880-1	CP3720-177 CP6320-108	CP6320-107 CP6320-107		CP6320-111 CP6320-110		CP6320-106 x 4 CP6320-106 x 4
P6340-24/25/26/27R4M	CP4518-DH	CP3880-1	CP6320-108	CP6320-107		CP6320-110		CP6320-106 x 4
P6340-26/27/28/29S4M P6340-28/29R4M	CP4518-DH CP4518-DH	CP3880-1 CP3880-1	CP6320-108 CP6320-108	CP6320-107 CP6320-107		CP6320-110 CP6320-110		CP6320-106 x 4 CP6320-106 x 4
P6340-2/3/4/5S4M	CP4518-DH CP4518-CEJ	3486-229	CP6320-108 CP6350-120	CP6320-107	CR6250 440	CP6320-110 CP6350-109	CD6250.40	CP6320-106 x 4
P6350-14/15S7M P6350-18/19S7M	CP4518-CEJ	CP3880-1 CP3880-1	CP6350-120	CP6350-119 CP6350-119	CP6350-118 CP6350-118	CP6350-109	CP6350-12 CP6350-12	CP6350-110 x 4 CP6350-110 x 4
P6350-2/5S7M P6350-3/4S7M	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP6350-108 CP6350-108	CP6350-107 CP6350-107	CP6350-106 CP6350-106	CP6350-109 CP6350-109	CP6350-12 CP6350-13	CP6350-110 x 4 CP6350-110 x 4
P6350-8/9S7M	CP4518-CEJ	CP3880-1	CP6350-120	CP6350-119	CP6350-118	CP6350-109	CP6350-12	CP6350-110 x 4
P6360-2/3S7L P6360-4/5S7L	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP6360-104 CP6360-104	CP4360-127 CP4360-127	CP6360-105 CP6360-105	CP6360-110 CP6360-110	CP6360-7 CP6360-6	CP6360-106 x 4 CP6360-106 x 4
P6361-2/3S7L	CP4518-CEJ	CP3880-1	CP6360-104	CP4360-127	CP6360-105	CP6360-110	CP6360-7	CP6360-106 x 4
P6361-4/5S7L P6382-2/-3S7LP	CP4518-CEJ CP8518-BEH	CP3880-1 CP6300-30	CP6360-104 CP6382-201	CP4360-127 CP6382-202	CP6360-105 CP6382-203	CP6360-110	CP6360-6	CP6360-106 x 4 CP6382-207 x 4
P6420-2/3/4/5R4M P6470-2S7MP	CP4518-HL CP4581-DH	CP3880-1	CP3720-177 CP6070-110	CP6320-107 CP6070-111		CP6320-110		CP6320-106 x 4 CP6470-106 x 4 / CP6470-104 x 1 Ctr Beam
P6470-3S7MP	CP4581-DH	CP3880-1	CP6070-110	CP6070-111				CP6470-106 x 4 / CP6470-105 x 1 Ctr Beam
P6480-2S7L P6480-3S7L	CP4518-DH CP4518-DH	CP3880-1 CP3880-1	CP6480-104 CP6480-104	CP6286-134 CP6286-134		CP6480-106 CP6480-107	N/A N/A	CP6470-106 x 4 CP6470-106 x 4
P6520-2/3/4/5R4M	CP4518-HL	CP3880-1	CP3720-177	CP6320-107	0.000	CP6480-107 CP6320-111		CP6320-106
P6560-18/19R4L P6560-2/3/4/5S4MP	CP4518-CEJ CP4518-CEJ	CP3880-1 CP3880-1	CP6560-129 CP6560-107	CP6560-130 CP6560-108	CP6560-131 CP6560-109			CP6560-106 x 1 / CP6560-110 x 4 CP6560-106 x 1 / CP6560-110 x 4
P6561-2/3/4/5S4MP	CP4518-CF	CP3880-1	CP6561-107	CP6561-108				CP6560-106 x 1 / CP6560-110 x 4
P6564-2/3R4L P6600-26/27/28/29S0	CP4518-DH CP4525-JK	CP3880-1 CP3880-1	CP6564-108 CP6200-105(6026)	CP6564-109 CP6200-104			CP6609-11	CP6560-106 x 1 / CP6560-110 x 4 CP6200-103 x 4
P6600-2/3/4/5S0	CP4525-JK	CP3880-1	CP6200-105(6026)	CP6200-104			CP6600-10	CP6200-103 x 4
P6600-2/3/4/5S0R2 P6600-2/3S0S2	CP4525-JK CP4525-JK	CP3880-1 CP3880-1	CP6200-105(6026) CP6200-105(6026)	CP6200-104 CP6200-104			CP6600-10 CP6600-10	CP6200-103 x 4 CP6200-103 x 4
	CP4525-JK	CP3880-1	CP6200-105(6026)	CP6200-104			CP6600-10	CP6200-103 x 4
P6600-6/7/8/9S0 P6602-2/3/4/5S0	CP4525-DD	CP3880-1	CP6606-109(6026)				CP6609-11	CP7040-110 x 4

ICING

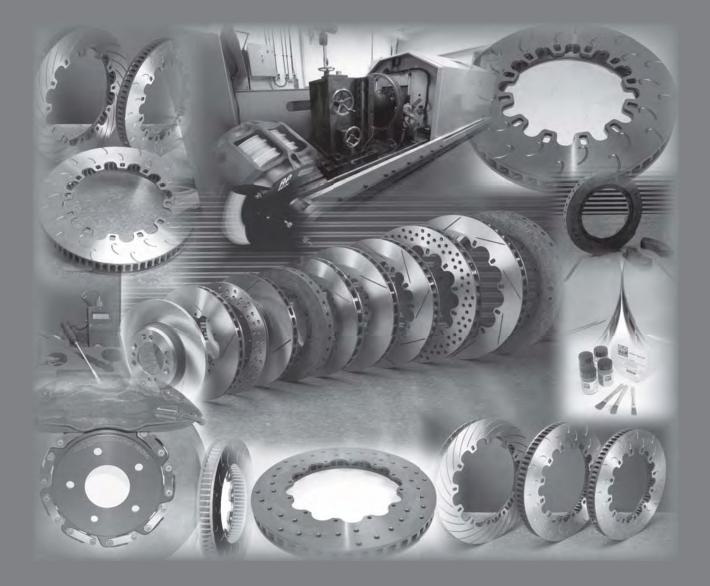
100



Caliper Assemblies	Seal Repair Kit Part No.	Bleed Screw or Kit Part No.	Piston 1 Part No.	Piston 2 Part No.	Piston 3 Part No.	Pad Retainer Part No.	Fluid Pipe Part No.	Wear Plates Part No x Qty.
CP6605-12/13S0 CP6608-4/5S0	CP4525-JK CP4525-HJ	CP3880-1	CP6200-105(6026) CP6609-107(6026)	CP6200-104 CP6200-104			CP6600-10 CP6600-10	CP6200-103 x 4 CP6200-103 x 4
CP6609-2/3/4/5S0	CP4525-EH	CP3880-1	CP6609-106(6026)	CP6609-107(6026)			CP6609-10	CP6200-103 x 4
CP6609-6/7/8/9S0 & R2 CP6611-4/5S0	CP4525-EH CP4525-JJ	CP3880-1 CP3880-1	CP6609-106(6026) CP6200-104	CP6609-107(6026)			CP6609-11 CP6609-11	CP6200-103 x 4 CP6200-103 x 4
CP6611-8/9S0 CP6617-4/5S0	CP4525-JJ CP4525-DD	CP3880-1 CP3880-1	CP6200-104 CP6606-109(6026)			CP5200-124	CP6609-11 CP6609-11	CP6200-103 x 4 CP7040-110 x 4
CP6624-2/3/4/5S0 CP6625-2/3/4/5S0	CP4525-DE CP4525-EE	CP3880-1 CP3880-1	CP6606-109(6026) CP6609-106(6026)	CP6609-106(6026)			CP6609-11 CP6609-11	
CP6625-6/7S0	CP4525-EE	CP3880-1	CP6609-106(6026)	000000.404			CP6609-11	
CP6626-2/3S0 CP6627-2/3S0 / CL & R2	CP4525-JK CP4525-JJ	CP3880-1 CP3880-1	CP6200-105(6026) CP5118-103(6026)	CP6200-104			CP6626-10 CP6622-10	CP6200-103 x 4 CP6622-106 x 4
CP6628-4/5S0B4 CP6628-6/7S0R2	CP4525-JK CP4525-JK	CP3880-1 CP3880-1	CP5118-103 CP5118-103	CP6628-107 CP6628-107			CP6628-10 CP6600-10	CP6622-106 x 4 CP6622-106 x 4
CP6631-2/3S0 CP6634-2/3S0R2	CP4525-JK CP4525-JJ	CP3880-1 CP3880-1	CP6200-105(6026) CP5118-103(6026)	CP6200-104			CP6618-10 CP6622-10	CP6200-103 x 4 CP6622-106 x 4
CP6650-2/3/4/5S7L CP6665-2/3S4L	CP4518-CF CP4518-CEJ	CP3880-1 CP3880-1	CP6260-107 CP6265-109	CP5828-108 CP6265-108	CP6265-107	CP6261-108	CP6261-6	CP5760-105 x 4 / Pad Retainer Plate CP6078-106 x 1
CP6688-4/5E0M	CP4518-FF	CP4469-101	CP6688-113		CF 0203-107			
CP6720-18/19S4 CP6720-22/23/24/25S4L	CP4518-GK CP4518-GK	CP3880-1 CP3880-1	CP3567-108 CP3567-116	CP3344-109 CP3567-117		CP6720-143 CP3394-113		CP5200-306 x 4 CP5200-306 x 4
CP6720-6/7/8/9S4 CP6720-6/7/8/9S4L	CP4518-GK CP4518-GK		CP3567-108 CP3567-116	CP3344-109 CP3567-117		CP6720-101 CP6720-101		CP5200-306 x 4 CP5200-306 x 4
CP6730-2/3S4 CP6740-2/3S4	CP4518-EE CP4518-	CP3880-1 CP3880-1	CP3349-103 CP6740-109			CP6720-101 CP6720-101		CP5200-306 x 4 CP5200-306 x 4
CP6740-2/3S4L	EE:RALLY	CP3880-1	CP6740-110	000500.407	000000000000	CP6720-101		CP5200-306 x 4
CP6750-10/11/12/13S4L CP6750-14/15/16/17S4L	CP4518-		CP6560-126 CP6560-126	CP6560-127 CP6560-127	CP6560-128 CP6560-128	CP6750-113 CP6750-113		CP6750-111 x 1 / CP6750-112 x 2 / CP6750-110 x 1 CP6750-111 x 1 / CP6750-112 x 2 / CP6750-110 x 1
CP6750-2/3/4/5S4L CP6750-6/7/8/9S4L	CEJ:RALLY	CP3880-1 CP3880-1	CP6750-106 CP6750-106	CP6750-107 CP6750-107	CP6750-108 CP6750-108	CP6750-109 CP6750-113		CP6750-111 x 1 / CP6750-112 x 2 / CP6750-110 x 1 CP6750-111 x 1 / CP6750-112 x 2 / CP6750-110 x 1
CP6751-10/11S0L CP6751-30/31S0L	CP4518-GG CP4518-GG		CP4751-129 CP4751-126			CP5751-109 CP4751-104	CP7751-7 CP7751-6	CP6751-111 x 2 / CP6751-110 x 2 CP6751-111 x 2 / CP6751-110 x 2
CP6751-8/9S0L	CP4518-GG	CP3720-182	CP4751-129	006760.440		CP4751-104	CP7751-6	CP6751-111 x 2 / CP6751-110 x 2
CP6760-2/3/4/5S4L CP6761-10/11S0L	CP4518-CF CP4518-EE	CP3880-1 CP3720-182	CP4907-106 CP4761-111	CP6760-118		CP4144-101 CP5751-109	CP7751-7	CP6561-106 x 4 CP6751-111 x 2 / CP6751-110 x 2
CP6761-8/9S0L CP6766-2/3S7L	CP4518-EE CP4518-CEJ:RAID	CP3720-182 CP3880-1	CP4761-111 CP6560-126	CP6560-127	CP6560-128	CP4751-104	CP7751-6	CP6751-111 x 2 / CP6751-110 x 2 CP6766-108 x 4 / CP6766-107 x 1 Ctr Beam
CP6768-23/S7L CP6789-2S0	CP4518-CEJ:RAID CP4518-H		CP6560-126 CP3177-102	CP6560-127	CP6560-128		CP5310-21	CP6766-108 x 4 / CP6766-107 x 1 Ctr Beam CP6789-104 x 4
CP6789-3S4	CP4518-JJ	CP3720-173	CP3215-113	000000 107		CP5100-116	CP5000-54	CP5100-210 x 2 / CP5100-211 x 2
CP6830-4/5S4LP CP6831-4/5S4LP	CP4518-GK CP4518-CE	CP3880-1 CP3880-1	CP6820-106 CP6821-104	CP6820-107 CP6821-105				CP6820-113 x 4 / CP6820-109 x 1 Ctr Beam CP6820-113 x 4 / CP6820-109 x 1 Ctr Beam
CP6840-4/5S4L CP7003-2S0	CP8518-GK CP4518-A	CP3880-1 CP4469-101	CP6820-106 CP7003-105	CP6820-107		K19865		CP6820-113 x 4 / CP6820-109x 1 Ctr Beam
CP7030-2/3S0 CP7030-4/5S0	CP4518-GK CP4518-GK	CP3720-173 CP3720-173	CP7030-108 CP7030-108	CP7030-107 CP7030-107			CP7030-6 CP7030-7	CP7030-106 x 4 CP7030-106 x 4
CP7031-4/5S0LP	CP4518-AE	CP3880-1	CP7031-113	CP7031-108				CP3307-222 x 4 / CP7031-106 x 1
CP7040-16/17/18/19S0 CP7040-2/3/4/5S0	CP4525-CEJ CP4525-CEJ	CP3880-1 CP3880-1	CP7040-118(6026) CP7040-118(6026)	CP6609-106(6026) CP6609-106(6026)	CP6200-104 CP6200-104		CP7040-10 CP7040-10	CP7040-110 x 4 CP7040-110 x 4
CP7040-2/3/4/5S0R2 CP7041-12/13S0	CP4525-CEJ CP4525-CEJ	CP3880-1 CP3880-1	CP7040-118(6026) CP7040-118(6026)	CP6609-106(6026) CP6609-106(6026)	CP6200-104 CP6200-104		CP7040-10 CP7040-10	CP7040-110 x 4 CP7040-110 x 4
CP7041-12/13S0R2 CP7060-2/3S0RD	CP4525-CEJ CP4525-CEJ	CP3880-1 CP3880-1	CP7040-118(6026) CP4910-141	CP6609-106(6026) CP4910-140	CP6200-104 CP3344-192		CP7040-10 CP7060-10	CP7040-110 x 4 CP7040-110 x 4
CP7060-2/3S4 & RD	CP4525-CEJ	CP3880-1	CP4910-141	CP4910-140	CP3344-192 CP3344-192		CP7060-10	CP7040-110 x 4
CP7206-4/5S4 CP7300-2/3/4/5S0L	CP4525-JK CP4518-EEE	CP3880-1 CP3880-1	CP4090-112 CP7300-101	CP5205-101		CP5138-106	CP7206-101	CP6200-103 x 4
CP7600-14/15S4 CP7600-2/3/4/5S0	CP4525-JJ CP4525-JJ	CP3880-1 CP3880-1	CP2409-124 CP6200-104				CP7610-11 CP7601-11	CP7605-117 x 4 CP7605-117 x 4
CP7600-4/5S0R2 CP7600-6/7/8/9S0	CP4525-JJ CP4525-JJ	CP3880-1 CP3880-1	CP6200-104 CP6200-104				CP7601-11 CP7601-11	CP7605-117 x 4 CP7605-117 x 4
CP7601-26/27S0B3	CP4525-EE	CP3880-1	CP6609-106(6026)				CP7601-11	CP7605-117 x 4
CP7602-2/3S0 CP7602-6/7S0	CP4525-EH CP4525-EH	CP3880-1	CP6609-106(6026) CP6609-106(6026)	CP6609-107(6026) CP6609-107(6026)			CP7601-11 CP7601-11	CP7605-117 x 4 CP7605-117 x 4
CP7605-6/7S0 CP7606-12/13/14/15S0	CP4525-JJ CP4518-JJ	CP3880-1 CP3880-1	CP7605-109 CP7605-109				CP7605-10 CP7606-10	CP7605-116 x 4 CP7605-116 x 4
CP7606-18/19S0 CP7607-12/13S0	CP4518-JJ CP4525-CC		CP7605-109 CP7040-118(6026)				CP7606-16 CP7610-11	CP7605-116 x 4 CP7605-117 x 4
CP7607-22/23/24/25S0&S2	CP4525-CC	CP3880-1	CP7040-118(6026)				CP7607-11	CP7605-117 x 4
CP7607-24/25S0R2 CP7607-2/3/4/5S0 / S2 & R2	CP4525-CC CP4525-CC	CP3880-1	CP7040-118(6026) CP7040-118(6026)				CP7601-11	CP7605-117 x 4 CP7605-117 x 4
CP7609-2/3/4/5S0 CP7609-2/3/4/5S0R2 & RD	CP4525-EE CP4525-EE		CP6609-106(6026) CP6609-106(6026)				CP7601-11 CP7601-11	CP7605-117 x 4 CP7605-117 x 4
CP7610-2/3S0 CP7611-4/5S0CL	CP4525-CD CP4525-EE	CP3880-1 CP3880-1	CP7040-118(6026) CP6609-106(6026)	CP6606-109(6026)			CP7610-11 CP7601-11	CP7605-117 x 4 CP7605-117 x 4
CP7611-4/5/6/7S0R2	CP4525-EE	CP3880-1	CP6609-106(6026)				CP7601-11	CP7605-117 x 4
CP7613-2/3/4/5S0 CP7613-6/7/8/9S0	CP4518-EE CP4518-EE	CP3880-1 CP3880-1	CP7613-106 CP7613-106				CP7606-10 CP7613-10	CP7605-116 x 4 CP7605-116 x 4
CP7614-4/5S0 CP7615-2/3/4/5S0 & R2	CP4525-EE CP4525-CC	CP3880-1 CP3880-1	CP7613-106 CP7040-118(6026)				CP7614-6 CP7601-11	CP7605-117 x 4 CP7605-117 x 4
CP7618-4/5S0 / R2 & VG CP7619-2/3S0R2	CP4525-CC CP4525-DD	CP3880-1	CP7040-118(6026) CP6606-109(6026)				CP7601-11 CP7601-11	CP7605-117 x 4 CP7605-117 x 4
CP7621-2/3S0 & R2	CP4525-EE	CP3880-1	CP6609-106(6026)				CP7610-11	CP7605-117 x 4
CP7622-4/5S0 CP7624-2/3S0	CP4525-EE CP4525-EH	CP3880-1	CP6609-106(6026) CP6609-106(6026)	CP6609-107(6026)			CP7622-10 CP7610-11	CP7605-117 x 4 CP7605-117 x 4
CP7624-6/7S0R2 CP7625-2/3S0 & R2	CP4525-EH CP4525-CC	CP3880-1 CP3880-1	CP6609-106(6026) CP7040-118(6026)	CP6609-107(6026)			CP7601-11 CP7601-11	CP7605-117 x 4 CP7605-117 x 4
CP7626-2/3S0R2 CP7633-4/5S0	CP4525-CC CP4525-CC	CP3880-1	CP7626-107 CP7040-118(6026)				CP7626-10 CP7601-11	CP7605-117 x 4 CP7605-117 x 4
CP7751-14/15S0L	CP4518-LM	CP3720-182	CP5751-145	CP5751-147		CP4751-104	CP7751-6	CP6751-111 x 2 / CP6751-110 x 2
CP7751-30/31S0L CP7853-2/3E0	CP4518-LM CP4518-EH	CP4469-101	CP5751-131 CP4488-107	CP5751-130 CP4488-106		CP4751-104	CP7751-6	CP6751-111 x 2 / CP6751-110 x 2
CP8240-2/3S0L CP8240-4/5S0L	CP4518-GG CP4518-GG	CP3720-182 CP3720-182	CP4751-129 CP4751-129			CP5830-109 CP5830-109	CP7751-6 CP7751-7	CP8250-108 x 2 / -109 x 2 CP8250-108 x 2 / -109 x 2
CP8241-2/3S0L CP8241-4/5S0L	CP4518-EE CP4518-EE	CP3720-182 CP3720-182	CP4761-111 CP4761-111			CP5830-109 CP5830-109	CP7751-6 CP7751-7	CP8250-108 x 2 / -109 x 2 CP8250-108 x 2 / -109 x 2
CP8250-2/3S0L CP8310-2/3/4/5S0BK	CP4518-LM CP4525-CEJ	CP3720-182 CP3880-1	CP5751-145 CP7040-118	CP5751-147 CP6609-106	CP6200-104	CP5830-109 CP8310-110	CP7751-6 CP8310-10	CP5820-108 x 2 / -109 x 2 CP8310-114 x 2 / -115 x 2
CP8315-2/3/4/5S0BK	CP4518-CEJ	CP3880-1	CP7040-118ST	CP6609-106ST	CP6200-104 CP6200-104ST	CP8310-116	CP8310-11	CP8310-115 x 2 / CP8310-114 x 2
CP8316-2/3/4/5S0R2 CP8317-2/3/4/5S0R2	CP4525-HJK CP4525-EHJ		CP6200-104 CP6609-106	CP6200-105 CP6200-104	CP6609-107 CP6609-107	CP8310-110 CP8310-110	CP8310-10 CP8310-10	CP8310-115 x 2 / CP8310-114 x 2 CP8310-115 x 2 / CP8310-114 x 2
CP8350-12/13/14/15S4 CP8351-2/3/4/5S0L	CP4518-JK CP4518-LM	CP3880-1	CP3215-113 CP5751-145	CP4270-3 CP5751-147		CP8350-108 CP8350-108	CP8350-6 CP8350-6	CP8250-108 x 2 / CP8250-109 x 2 CP8250-108 x 2 / CP8250-109 x 2
CP8352-4/5S0L	CP4518-KL	CP3880-1	CP5751-131	CP5751-145	ODease 411	CP8350-108	CP8350-6	CP8250-108 x 2 / CP8250-109 x 2
CP8520-2/3/4/5S0BK & R2 CP8521-2/3/4/5S0BK & R2	CP4527-EHK CP4527-EEK	CP3880-1	CP8336-116 CP8336-116 x 4	CP8520-107 CP8335-111	CP8335-111	CP8335-116 CP8335-116	CP8520-2 & -4 =	CP8520-10 / CP8520-3 & -5 = CP8520-11 CP8520-10 / CP8520-3 & -5 = CP8520-11 CP8520-10 / CP8520-3 & -5 = CP8520-11 CP8520-10 / CP8520-3 & -5 = CP8520-11
CP8522-2/3/4/5S0BK & R2 CP8530-2/3/4/5S0BK & R2	CP4527-CEJ CP4527-JK	CP3880-1	CP7555-106 CP8335-110	CP8336-116 CP8335-111	CP8335-110	CP8335-116 CP8335-116		CP8520-10 / CP8520-3 & -5 = CP8520-11 CP8540-10 / CP8530-3 & -5 = CP8540-11
CP8540-2/3/4/5S0BK & R2 CP8540-6/7/8/9S0BK & R2	CP4527-DE CP4527-DE	CP3880-1	CP8336-111 CP8336-111	CP8336-116 CP8336-116		CP8335-116 CP8335-116	CP8540-2 & -4 = 0	CP8540-10 / CP8540-3 & -5 = CP8540-11 CP8540-10 / CP8540-7 & -9 = CP8540-11
CP8560-2/3/4/5S0BK & R2	CP4527-CC	CP3880-1	CP7555-106 x 4		CR6605 404		CP8560-2 & -4 =	CP8540-10 / CP8540-7 & 3 = CP8540-11 CP8540-10 / CP8560-3 & -5 = CP8540-11
CP9040-2/3/4/5S0BG & R2 CP9440-2/3S4L	CP4527-CEJ CP8518-HK	CP3880-1	CP9040-109 CP9440-106	CP6696-124 CP9440-107	CP6695-124	CP5555-157 CP9440-110	CP9040-10	CP9440-108 (RH) / CP9440-109 (LH)
CP9660-2/3S4L CP9665-2/3S7L	CP8518-CEJ CP8518-CEJ	CP3880-1 CP3880-1	CP9660-114 CP9660-114	CP9660-115 CP9660-115	CP9660-116 CP9660-116	CP9660-113 CP9660-113		CP9660-110 (RH) / CP9660-111 (LH) CP9660-110 (RH) / CP9660-111 (LH)

AP

BRAKE DISCS



GENERAL INFORMATION.
 VENTILATED DISCS.
 SOLID DISCS.
 VENTILATED DISCS WITH INTEGRAL MOUNTING BELL.
 VENTILATED DISC, BELL AND PAD KITS.
 SOLID DISCS WITH INTEGRAL MOUNTING BELL.
 TEMPERATURE MEASUREMENT TOOLS.
 CARBON/CARBON DISCS.

INTRODUCTION.

The AP Racing range of Ventilated and Solid Brake Discs have been developed with the benefit of unparalleled experience in brake technology, to meet the severe demands encountered under Race, Rally and Road conditions.

RACE: Our extensive range includes discs to suit all of the most demanding series in the world. Teams competing in F3, WRC, GT and Sports Prototypes, Nascar and Touring Car Championships use AP Racing discs.

ROAD: As well as our successes on the circuits and stages of the world, AP Racing develop Disc Braking systems for many leading volume and specialist High Performance vehicle manufacturers including Aston Martin, Bugatti, Caterham, Ford, HSV, Koenigsegg, Noble, Morgan, Lotus, Seat and TVR, to name a few.

DESIGN.

AP Racing share innovations in the R&D processes between Race and Road projects, the basic function is the same for both although each has different service requirements.

■ Race Discs are submitted to high braking and thermal loads. These loads are repeated frequently over many laps or stages.

The service life is short and noise and comfort are not really an issue. Race Discs normally employ a separate disc and bell assembly which are generally available in two types:

- Light Duty - 2 piece bolted assemblies.

- Heavy Duty - 2 piece floating assemblies.

A given disc has to fit many different customer cars, so they require custom mounting bells.

Road Discs however have relatively low and infrequent loads, although mass increases compared to race cars which generates high braking torques. Road Discs have comfort and long service life requirements. Costs of each item also have to remain low for the OEM and the end user when replacement time arrives. For road cars, many applications use 1 piece disc and bell assemblies, this is due to high volume production requirements. High performance vehicles and Big Brake Kits usually use 2 piece bolted assemblies, enabling to fit a heavy duty closer to race than road disc.
 Light Duty - 1 piece disc and bell assembly.

- Heavy Duty - 2 piece bolted assemblies.

RESEARCH AND DEVELOPMENT.

Over the last eight years AP Racing has placed increased emphasis on advanced research and simulation to complement the existing technology, test and manufacturing processes of our competition and road Discs. Product improvement is continuous, using feedback from our state of the art dynamometer and track testing AP Racing are able to offer brake discs with optimum performance and cooling characteristics for any application.

- DEVELOPMENT TOOLS.

AP Racing is equipped with state of the art design tools which have enabled us to study disc performance to a level not hitherto possible.

FEA: CFD AND THERMAL STRESS ANALYSIS.

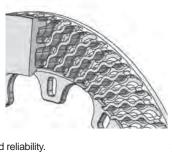
Thermal simulation enables assessment of brake disc cooling without having to build costly prototypes. AP Racing has reached a high degree of confidence using these methods and has adopted FEA as the base of our design process, this enables AP Racing to tailor disc design to a given application.

- R&D EXAMPLES.

The latest example of how our disc development department has benefited the AP Racing disc range.

- SINUSOIDAL ('S' VANE) DISC

CASTING A Sinusoidal Vane cast iron disc has been developed for Nascar, with others due to follow in Touring Car, GT and Rally Car applications. Utilising the development tools available our R&D department were able to design a new casting to run between 70-100°C cooler than the old designs, the new 'S' Vane disc provides a significant improvement in brake performance, wear rate and reliability.



BRAKE DISCS - General Information

- DYNOMOMETER TESTING.

Not everything can be modelled yet, so validation testing is essential. Our proven dynamometer, has been supplemented by a second, more powerful machine equipped with state of the art features. Two fully operational dyno's give us even more significant test capabilities and help us demonstrate that AP Racing Brake Discs are the best.

AP Racing dynamometer plots provide data examples such as temperature and Friction Co-efficient comparison.

NUMERICAL SIMULATION.



AP Racing has continued to develope a unique thermal simulation software, in order to predict overall brake system temperatures on a real life cycle. This simulation is particularly useful for selection of brake specifications, and wear predictions for endurance races. It is able to calculate bulk temperatures and compare different brake system solutions for various vehicles and race tracks.

DISC CHOICE.

The choice of a particular size and type of disc will depend on the characteristics of the vehicle. Experience with the type of installation or racing format is very important. AP Racing has a wealth of experience of all types of racing and our Technical Section will be pleased to advise on disc choice. Some of the main considerations in this choice are:

HOMOLOGATION AND REGULATION.

In Group A and certain other classes of racing, brake equipment is restricted to that Homologated by the manufacturer with the FIA. Where applicable you must therefore choose a disc size / type which has been Homologated. E.g. only 4 grooves are allowed in Formula 3.

DISC DIAMETER AND THICKNESS.

Disc diameter and thickness are major factors in basic stopping power. Usually the largest diameter disc that can be installed in a particular wheel profile is chosen to maximise braking power unless low weight, poor tyre adhesion or required brake balance dictate otherwise. Disc thicknesses normally increase with disc diameter and in proportion to vehicle weight and hence work done and cooling required. Standard disc sizes should be used wherever possible as this improves availability.

DISC RUBBING DEPTHS (SWEPT DEPTH).

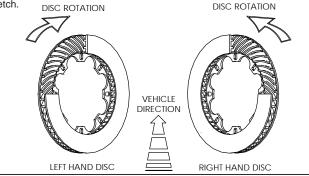
It is important to match the swept area of the disc to the Pad / Caliper combination that is intended to be used, to avoid any large cold areas which could lead to disc distortion. To make this easier the radial depth of all AP Racing brake pads is incorporated into the part number (the "D" Number e.g. D46, D50 & D54).

Normally the Pad / Caliper is positioned so that the top edge of the pad is level with the nominal disc outside diameter. However it is normal to make the eye diameter on the inboard face (Non mounting side) slightly smaller in diameter than the mounting side to match the thermal characteristics of the two disc faces and avoid distortion in use. The amount of this under-hang will vary according to the installation and is part of the disc designers art, but analysis carried out by AP Racing shows that 2mm radius (4mm on diameter) is sufficient in most cases.

N.B. THE PAD SHOULD NEVER OVERHANG THE DISC AS THIS WILL LEAD TO A NUMBER OF BRAKING DIFFICULTIES.

DISC HANDING. RIGHT / LEFT HAND IDENTIFICATION

Most AP Racing brake discs feature curved vanes and are handed. They should be installed with the cooling vanes running back from the inside to outside diameters in the direction of rotation as indicated in the sketch. DISC ROTATION



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BRAKE DISCS - Ventilated Discs - Ø254mm to Ø295mm

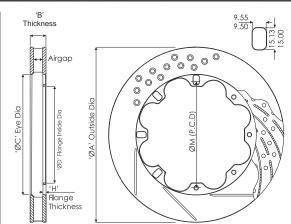
DISC LISTINGS.

The variety of disc options available provide the solution for virtually every Racing and High Performance Road application. The discs illustrated in these sections are a selection of discs from the range and have been listed by Diameter, Thickness and Mounting Details for convenience. If you are unable to satisfy your requirements from the Discs listed then please contact AP Racing Technical Section for guidance.

VENTILATED BRAKE DISCS.

This section on Ventilated Brake Discs provides dimensional details, as well as information on face types and the weight of the most popular discs from the AP Racing disc range. Not all discs are listed, should you require a disc with particular dimensions which is not listed please contact the AP Racing Technical Section for assistance.

Discs which are highlighted are from the preferred disc range, which offers improved availability and pricing. Please contact AP Racing if you require more information.



	I Dimen	sions in						1							
		Mount	ing D	etails			'D'		Max	No.			Face		
A' Outside Dia.	' B' Thick- ness	" M' P.C.D.	No.	Fixing Type. S/Bobbin = Standard CP2494. H/Bobbin = Heavy Duty CP4135 or CP7016	Ø.	" C " (Eye) Ø.	Inside Flange Ø.	'H' Mtg. Flange	Pad Depth.	of Vanes.	Air Gap.	Weight Kg.	Types Available.	Comments.	Part Numbers.
254.0	21.0	139.7	6	Bolted	6.4	154.9	125.8	5.6	D46	36	9.3	3.2	G4		CP4136-568
257.0	21.0	139.7	6	Bolted	6.4	154.9	125.8	5.6	D51	36	9.3	3.6	G4		CP4136-86
260.0	25.4	139.7	6	Bolted	6.4	154.9	125.8	4.8	D51	48	10.5		G4	Mtg flange stepped in 1.2mm	CP4448-226/7
262.0	20.7	145.0	8	Bolted	6.4	158.0	130.0	5.3	D51	36	9.3	3.5	G4		CP4136-888
	17.0	152.0	8	S/Bobbin	/	174.6	128.0	4.325	D43	47	8.0	2.44	CG4	Bobbin CP2494-595MA	CP3947-110/1
263.0	18.0	152.0	8	Bolted	6.4	174.6	136.0	4.3	D43	47	8.0	2.6	CG4	Mtg flange stepped out 0.1mm	CP3947-108/9
264.0	21.0	139.7	6	Bolted	6.4	154.9	125.8	5.6	D51	36	9.3	3.7	G4		CP4136-208
65.0	17.0	139.7	8	Bolted	6.4	162.7	123.0	4.82	D51	24	6.5	3.0	G8		CP3770-1026/7
	16.0	162.0	8	Bolted	6.4	180.7	145.0	4.35	D43	24	6.5		CG4		CP3770-1016/7
	18.0	158.0	8	Bolted	6.4	172.6	140.0	5.375	D46	24	6.5	3.1	CG4		CP3770-1030/1
	20.0	152.0	8	Bolted	6.4	172.6	138.0	4.82	D46	36	9.3	3.2	G4		CP4136-924/5
267.0	21.0	139.7	6	Bolted	6.4	155.0	125.8	5.6	D54	36	9.3	4.4	G4		CP4136-48
	25.4	139.7	6	Bolted	6.4	180.2	123.0	5.02	D42	48	11.0	3.6	G8		CP4448-318/9
	28.0	139.7	6	Bolted	6.4	156.43	123.0	5.58	D54	48	10.5	5.1	G4	Mtg flange stepped in 2.54mm	CP4448-81/2
277.0	25.4	158.8	8	Bolted	6.4	174.1	141.0	4.82	D50	48	10.5	4.2	G4		CP4448-410/1
	16.0	176.1	8	Bolted	8.45	187.4	156.0	4.5	D44	24	6.5	2.5	G4 / P		CP3770-1002/3
70.0	16.0	181.5	8	S/Bobbin	/	194.0	158.0	4.42	D38	24	6.5	2.4	CG4		CP3770-1014/5
278.0	16.0	193.5	8	S/Bobbin	/	210.9	170.0	4.425	D32	47	8.0	1.86	CG4	Bobbin CP2494-595MA	CP3947-112/3
	18.0	193.5	8	S/Bobbin	/	210.9	170.0	4.42	D32	47	8.0	2.2	CG4		CP3947-102/3
	17.0	171.4	8	S/Bobbin	/	191.4	146.5	4.42	D43	24	6.5	2.9	CG8	Bobbin	CP3770-1018/9
Ľ	17.0	176.8	8	Bolted	6.5	193.5	159.0	4.7	D43	24	6.5	2.5	G8	CP2494-595MA	CP3770-1012/3
										-		2.0			
	18.0	190.5	8	Bolted	6.4	203.0	176.0	5.5	D38	28	8.8		G8		CP4541-102/3
	20.0	176.8	8	S/Bobbin	/	192.0	154.0	5.0	D44	48	9.0		D / G4 /G8	Bobbin CP2494-592MC Mtg slange stepped out	CP4348-862/3
	21.0	176.8	8	Bolted	6.4	192.0	159.3	4.8	D44	48	10.5		G4	1.2mm	CP4448-746/7
	22.2	165.1	8	Bolted	6.4	180.3	152.0	4.6	D51	48	10.5		G4		CP4448-752/3
280.0	22.9	158.8	8	Bolted	6.4	173.6	141.0	4.82	D51	00	10.5		G4		CP4448-158/9
	23.0	176.8	8	Bolted	6.4	192.0	159.3	4.8	D44	48	10.5		G4		CP4448-744/5
	25.4	158.8	8	Bolted	6.4	174.0	141.0	4.8	D51	48	10.5		G4	Mtg flange stepped in 1.2mm	CP4448-160/1
	25.4	176.8	8	Bolted	6.4	192.0	159.3	4.9	D44	30	12.9	4.0	CG8	Pro 5000+ Disc	CP5000-312/3
	25.4	176.8	8	S/Bobbin	/	192.0	154.0	5.0	D44	48	14.0	3.5	G4 / G8		CP3580-814/5
	25.4	177.8	12	Bolted	6.4	197.0	164.0	5.8	D41	48	10.5		G4		CP4448-856/7
	25.4	177.8	12	Bolted	6.4	197.0	164.0	4.9	D41	24	15.5	2.7	G8		CP3047-288/9
	25.4	158.8	8	Bolted	6.4	190.0	141.0	4.6	D51	48	10.5		G4	Mtg flange stepped in 1.27mm	CP4448-506/7
	25.4	177.8	12	Bolted	6.4	197.0	164.0	4.9	D44	24	15.5	3.1	G8		CP3047-276/7
005 0	27.0	179.0	10	S/Bobbin	/	194.5	154.0	5.02	D44	54	16.0	3.7	GA	Bobbin CP2494-592MC	CP5254-104/5
285.0	28.0	158.8	8	Bolted	6.4	182.5	141.0	6.3	D51	48	10.5	-	G8		CP4448-268/9
	28.0	177.8	12	Bolted	6.4	190.4	164.0	5.8	D46	36	15.25	4.0	CR8 / G8		CP3837-1002/3
	32.0	175.0	10	S/Bobbin	/	190.5	150.0	5.02	D46	54	20.5	4.0	GA		CP5154-110/1
	20.7	177.8	12	Bolted	6.4	195.4	164.3	5.47	D46	48	9.0	3.6	G4		CP4348-896/7
					6.4	180.0	152.9	5.32	D54	48	9.0	5.2	CG8		CP4348-2636/7
		165.1	8	Bolted	6.4	180.0	152.9	5.32	D54	48	14.0	4.5	G4	Interchangeable	CP3580-2636/7
290.0	25.4					180.0	153.0	5.8	D54	30	15.2	5.1	G4		CP4448-680/1
290.0	25.4 28.0	165.1	8	Bolted	6.0	100.0	10010								
290.0				Bolted Bolted	6.0 6.4	193.0	164.0	5.9	D51	48	9.0		RD / G4		CP4348-894/5
290.0	28.0 25.4 25.4	165.1 177.8 177.8	12 12	Bolted Bolted	6.4 6.4	193.0 193.0	164.0 164.3	5.8	D51	48	14.0	4.3	G4 / RD / P		CP3580-2894/5
290.0	28.0 25.4	165.1 177.8	12	Bolted	6.4	193.0	164.0	5.8 5.6		48 48	14.0 9.3	4.3 5.4	G4 / RD / P CG8	Pro 5000+ Disc	CP3580-2894/5 CP5000-510/1
	28.0 25.4 25.4	165.1 177.8 177.8	12 12	Bolted Bolted	6.4 6.4	193.0 193.0	164.0 164.3	5.8	D51	48 48 36 24	14.0		G4 / RD / P CG8 G4 G8	Pro 5000+ Disc Interchangeable	CP3580-2894/5
	28.0 25.4 25.4 25.4 25.4 28.0	165.1 177.8 177.8 177.8 177.8	12 12 12 12	Bolted Bolted Bolted Bolted	6.4 6.4 6.4	193.0 193.0 204.0 193.0	164.0 164.3 164.0 164.0	5.8 5.6 5.9 5.6 6.6	D51 D44 D51	48 48 36 24 48	14.0 9.3 14.5 15.5 14.0	5.4 4.1 5.0	G4 / RD / P CG8 G4 G8 G8 / RD	Interchangeable	CP3580-2894/5 CP5000-510/1 CP3837-102/3 CP3047-256/7 CP3580-102/3
290.0	28.0 25.4 25.4 25.4	165.1 177.8 177.8 177.8	12 12 12	Bolted Bolted Bolted	6.4 6.4 6.4	193.0 193.0 204.0	164.0 164.3 164.0	5.8 5.6 5.9 5.6	D51 D44	48 48 36 24	14.0 9.3 14.5 15.5	5.4 4.1	G4 / RD / P CG8 G4 G8		CP3580-2894/5 CP5000-510/1 CP3837-102/3 CP3047-256/7



						B	RA	KE D	ISCS	S - Ve	entila	ated [Discs -	Ø300mm t	o Ø35
Nomina	l Dimer														
'A'	'B'	Mount	ing D	Fixing Type.		'C'	'D' Inside	'H'	Max Pad	No. of	Air	Weight	Face Types	Comments.	Part
Outside Dia.	Thick- ness	" M " P.C.D.	No.	S/Bobbin = Standard CP2494. H/Bobbin = Heavy Duty	Ø.	(Eye) Ø.	Flange Ø.	Mtg. Flange	Depth.	Vanes.	Gap.	Kg.	Available.	Comments.	Numbers
	24.0	189.0	8	CP4135 or CP7016 Bolted	6.4	204.4	172.0	5.02	D47	48	9.0	4.5	G4		CP4348-
	25.4 25.4	190.0	8 12	Bolted Bolted	6.4 6.4	205.4 213.3	173.5 181.5	4.6	D46 D42	24 48	15.5 9.0	3.3 4.6	G8 P		CP3047- CP4348-
300.0	28.0 28.0	177.8 177.8	12	S/Bobbin Bolted	/ 6.4	197.2 203.2	154.0 164.0	5.62 5.6	D50 D46	48 36	14.0	5.0 4.65	RA G8		CP3580 CP3837
	28.0	181.0	8	S/Bobbin	/	195.0	160.0	5.42	D51	48	14.0	5.3	CG5	Brembo mounting	CP3580
	34.0	179.0	12	Bolted	6.4 6.4	200.0	161.5	6.5 5.6	D48	48	9.0	5.6	G8 G4	1	CP3581 CP4348
	24.0	190.5	12	Bolted	6.4	209.3	172.0	5.6	D46	48	9.0	4.65	CG8 / CG12		CP4348-
	25.4	177.8	12	S/Bobbin	/	195.0	152.4 164.0	4.825 4.9	D53	24 24	15.5 15.5	3.65	G8 G8	Bobbin CP2494-593MB	CP3047- CP3047-
	05.4	177.8	12	Bolted	6.4	203.2	164.3	6.6	D50	48	9.0		G4	Interchangeable	CP4348
	25.4	L					164.5 164.0	4.9 4.9		48 36	14.0	4.4	G8 G8	1	CP3580- CP3837-
		191.0 177.8	12 12	Bolted Bolted	6.4 6.4	205.8 201.4	177.6 161.0	4.92 6.6	D47 D48	48 48	14.0	4.3 4.9	GA / G4 G8		CP3580 CP3580
304.0	28.0	177.8	12	Bolted	6.4	203.2	164.0	5.6	D48	24	15.5	4.5	G8	Interchangeable	CP3047
	20.0	177.8	12 12	Bolted Bolted	6.4 6.4	203.2 203.2	164.0 161.0	5.6 5.6	D48 D50	48 54	14.0	5.2 4.6	G4 GA/P		CP3580 CP5254
	28.0	177.8	12	S/Bobbin	/	203.2	152.6	5.6	D50	24	15.5	4.6	G8		CP3047
	28.0 28.0	188.0 190.5	12 12	Bolted Bolted	6.4 6.4	203.2 210.6	170.0 174.0	6.57 5.6	D50 D47	48 48	14.0	5.2	G8 G8 / RD		CP3580 CP3580
	28.0	191.0	12	Bolted	6.4	209.3	174.0	5.6	D47	48	14.0	4.9	G4		CP3580
	30.0 32.0	172.0 177.8	12 12	Bolted Bolted	6.4 6.4	191.0 191.0	158.0 164.3	5.6 6.6	D54 D51	54 48	16.0 14.0	5.6	G4 G4		CP5254 CP3580
	28.0	190.5	12	Bolted	6.4	210.0	176.0	5.6	D50	24	15.5		G8		CP3047
310.0	28.0 28.0	190.5	12	Bolted Bolted	6.4 6.4	211.3 220.0	174.0 190.0	6.6 5.6	D48 D46	48	14.0	5.2 4.9	G8 G8		CP3580 CP3580
	32.0	177.8	8	Bolted	6.4	206.9	163.1	6.3	D51	48	16.5		G8		CP3784
	22.0 25.4	200.0	12	Bolted Bolted	6.4 6.4	220.22 195.0	180.0 164.5	5.6 5.3	D46 D59	48	9.0	5.3	G4 G4		CP4348 CP3580
	25.4	190.5	12	Bolted	6.4	210.3	172.13	5.5	D51	48	14.0	4.77	G8		CP3580
	25.4 28.0	203.2	12 12	Bolted Bolted	6.4 6.4	220.0 195.1	190.0 164.3	5.8 5.8	D46 D60	24 48	15.5	3.8 5.9	G8 D/G4		CP3047 CP3580
315.0	28.0	177.8	12	Bolted	6.4	195.0	164.5	6.6	D60	48	14.0	6.2	G8	Pro 5000+ & /? Disc	CP3580
	28.0 28.0	177.8	12	Bolted Bolted	6.4 6.4	210.3 210.3	164.3 174.0	5.9/6.1 6.57	D52 D51	48 48	14.0	5.6 5.56	CG8 G8	Pro 5000+ & R Disc	CP5000 CP3580
	28.0	203.2	12	Bolted	6.4	220.0	190.0	5.6	D46	24 48	15.5	4.4 5.4	G8 G8	Interchangeable	CP3047 CP3580
	32.0	177.8	12	Bolted	6.4	210.0	164.0	6.6	D51	24	15.5	6.0	G8		CP3047
	28.0	191.0	12	Bolted	6.4	217.3	177.6	5.92	D50	24 54	15.5	4.68	CG4 G8		CP3047
320.0	28.0 32.0	203.2	12 10	Bolted S/Bobbin	<u>6.4</u> /	217.3 215.3	190.0 173.5	5.57 5.62	D51 D51	61	16.0 20.0	4.8 5.3	CG8	Mtg flange stepped out	CP5254 CP4661
	32.0	203.2	12	Bolted	6.4	217.3	190.0	5.57	D51	48	16.0	6.1	G8	0.1mm	CP3784
325.0	28.0	203.2	12	Bolted	6.4	222.0	187.0	6.6	D51	48	14.0	5.8	G4/G8/RD		CP3580
328.0	28.0 28.0	203.2	12 12	Bolted Bolted	6.4 6.4	222.0 221.8	190.0 190.0	5.57 5.6	D52 D51	24 24	15.5	5.0 5.2	G4 G4		CP3047 CP3047
520.0	32.0	217.0	8	S/Bobbin	/	233.1	192.0	6.3	D46	72	20.0	5.2	CG8	Bobbin CP2494-504MP	CP5772
	25.4	212.0	12	Bolted	6.4	228.0	196.0	5.3	D51	48	14.0	5.2	P		CP3580
	25.4 26.0	220.5	12 12	Bolted Bolted	6.4 6.4	239.2 227.0	206.0 183.0	5.3 5.52	D45 D50	48 48	14.0	5.2	G8 G8		CP3580 CP3580
	26.0 28.0	203.2 178.0	12 12	Bolted Bolted	6.4 6.43	225.2 217.25	184.0 215.45	5.5 7.01	D51 D55	48 48	14.0 13.5	5.1 6.1	CG8/GA CG8		CP3580 CP6565
	28.0	203.2	12	Bolted	6.4	220.0	190.0	5.6	D54	24	15.5	5.1	G8		CP3047
	28.0 28.0	203.2	12	S/Bobbin Bolted	6.4	227.2 227.4	178.0 185.0	6.32 5.1	D50 D51	48 36	14.0	5.8 4.94	CG8 CG8	Pro 5000+ & <> Disc	CP3580 CP5000
005 -	28.0	203.2	12	S/Bobbin	/	230.0	178.0	6.3	D50	48	14.0	5.6	G8	Interchangeable.	CP3580
330.0	28.0 28.0	203.2	12	Bolted Bolted	6.4 6.4	230.0 230.0	190.0 190.0	5.6 5.6	D50 D50	48	16.5 14.0	5.2 5.94	G8 CG8/G8/RD	CP5772-1030/1 is a Pro 5000 <> Disc	CP3781 CP3580
	30.0	190.5	12	Bolted	6.4	217.2	172.0	5.575	D56	48	14.0	6.8	CR8		CP3580
	32.0 32.0	203.2 203.2	12 12	Bolted S/Bobbin	6.4 /	220.0 227.0	190.0 178.0	6.6 5.6	D54 D50	48 70	19.5 16.5	5.8 6.5	G8 CG8/GA	Bobbin CP2494-589MJ	CP3581 CP3870
	32.0 32.0	203.2	12 12	Bolted S/Bobbin	6.4	227.4 227.0	190.0 178.0	6.6 5.6	D51 D51	30 48	15.5 19.5	6.7 5.8	CG8 CG8/GA	Pro 5000+ Disc Bobbin	CP5000 CP3581
	32.0	203.2	12	S/Bobbin	/	226.0	179.0	5.6	D51	48	19.5	5.8	G8	CP2494-589MJ	CP3581
	36.0	203.2	12	S/Bobbin Bolted	/ 6.4	226.2	176.0	6.3 6.6	D50 D54	48	19.5 19.5	6.9 7.2	G8 CG8	Bobbin CP2494-504MP Pro 5000+ Disc	CP3581 CP5000
	32.0	203.2	12	Bolted	6.4	216.8	190.0	5.6	D58	48	19.5	6.2	G8		CP3581
332.0	32.0 32.0	214.0 214.0	12 12	S/Bobbin S/Bobbin	/	232.8 233.1	188.0 188.0	5.6 5.6	D47 D48	48 70	19.5 16.5	6.3	D/GA D/GA	Bobbin CP2494-589MJ	CP3581 CP3870
	28.0	209.55		Bolted	6.43	229.5	227.7	7.01	D40	48	13.5	6.4	CG8		CP6565
	28.0	215.9	12	Bolted	6.4	237.5	198.0	6.5	D51	48	13.5		CG8		CP6565
	28.0 28.0	228.6 228.6	12 12	Bolted S/Bobbin	6.4 /	240.0 246.0	212.0 208.0	5.3 5.4	D50 D51	48 48	16.5 16.5	5.0 5.2	G8 G8	Bobbin CP2494-591MH	CP3781 CP3781
343.0	32.0	215.9	12	Bolted	6.4	230.0	201.3	5.6	D54	48	19.5	6.1	CG8/G8 CG24/P/RD		CP3581
	32.0	215.9	12	S/Bobbin	/	236.0	190.5	5.6	D51	48	19.5	6.0	G8 / CG8	Interchangoable	CP3581
	32.0 32.0	215.9 215.9	12 12	S/Bobbin S/Bobbin	/	236.0 236.0	190.5 190.5	5.6 5.6	D51 D	48 72	16.5		CG8 CG8	Interchangeable, Bobbin CP2494-589MJ	CP3781 CP5772
	36.0	215.9	12	Bolted	6.4	233.0	190.5	7.5	D54	48	19.5	7.7	G8		CP3581
	28.0	222.5	12	Bolted	6.4	241.0	239.2	7.01	D55	48	13.5	6.7	CG8	Mtg flange stepped out 0.75mm	CP6565
	28.0	247.6	12	Bolted	6.4	261.6	233.0	5.3	D46	48	16.5	5.1	G8	S1600 Disc	CP3781
355.0	32.0 32.0	210.0 233.0	10 10	S/Bobbin S/Bobbin	/	226.8 248.0	187.0 217.0	8.0 8.0	D62 D51	48 36	16.0 19.5	8.4 5.8	CG5 G8	Mtg flange stepped out 2.5mm, Brembo Mtg	CP3784 CP3836
	32.0	233.0	12	Bolted	6.4	246.0	195.0	6.4	D51	48	17.5	7.3	CG12		CP3636 CP4542
	32.0	236.5	12	S/Bobbin	/	252.0	211.5	5.6	D51	72	20.0	6.3	GA	Bobbin CP2494-589MJ	CP5772

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BRAKE DISCS - Ventilated Discs - Ø356mm to Ø410mm

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Nomina	l Dimer														
'A'	'B'	Mounti	Ing D	Fixing Type.			'D'	'H'	Max	No.	Air	Weight	Face		Part
Outside	Thick-	'M'		S/Bobbin = Standard		"C"	Inside	Mtg.	Pad	of	Gap.	Kg.	Types	Comments.	Numbers.
Dia.	ness	P.C.D.	No.	CP2494. H/Bobbin = Heavy Duty	Ø.	(Eye) Ø.	Flange Ø.	Flange	Depth.	Vanes.		Ŭ	Available.		
		000.0	10	CP4135 or CP7016	0.1			5.0	DEA	10	10.5	5.0	0010		000704 0400 7
	28.0	228.6	12	Bolted	6.4 6.4	238.6	212.0	5.3 5.4	D54 D46	48 48	16.5 16.5	5.8 5.5	CG12 G8		CP3781-2126-7 CP3781-2008/9
	28.0 28.0	228.6 228.6	12 12	Bolted S/Bobbin	0.4	261.6 251.6	241.0 202.6	5.4 5.0	D46 D51	48	16.5	5.5	CG8	Bobbin CP2494-592MC	CP3781-2008/9 CP3781-2024/5
					/								CG8/GA	200011012434 032100	
	28.0	240.0	12	Bolted	6.4	252.6	220.0	5.0	D51	48	16.5	5.3	/ RA		CP3781-2142/3
	32.0	228.6	12	S/Bobbin	/	254.5	203.0	5.6	D49	36	19.5	5.7	CG8/RA		CP3836-2048/9
										72	19.5	6.6	CG8 / GA	Bobbin CP2494-589MJ	CP5772-1150/1
	32.0	228.6	12	S/Bobbin	/	244.6	202.8	5.6	D54				/ G4	'S' Vane Disc	
										72 'S'	20.0	6.82	GA	Bobbin CP2494-589MJ	CP6972-1150/1
	22.0	220.0	10	Dalkad		245.0	214.0	5.6	D54	48	19.5	6.7	CG24 / GA / G8 / P		CP3581-536/7
	32.0	228.6	12	Bolted	6.4	244.8	211.5	6.5	D51	72	17.0		G87P G8		CP7177-110/1
	32.0	228.6	12	Bolted	6.4	251.0	214.0	5.3	D51	48	19.5		CG8	Pro 5000+ & C Disc	CP5000-218/9
	32.0	228.6	12	S/Bobbin	1	251.6	202.6	5.6	D51	48	19.5	6.6	G8 / CG8	Bobbin CP2494-589MJ	CP3581-1080/1
356.0	32.0	240.0	12	Bolted	6.4	261.6	225.5	5.6	D46	48	19.5	5.7	G8 / P		CP3581-1038/9
000.0						258.0				48	19.5		CG8	Interchangeable,	CP3581-1128/9
	32.0	240.0	12	S/Bobbin	/	258.6	215.0	5.6	D46	72	19.5	5.94	CG8 / CG12	Bobbin CP2494-589MJ	CP5772-1128/9
										48		5.8	/ GA G8		CP3581-1042/3
	32.0	240.0	12	S/Bobbin	/	261.6	215.0	5.6	D46		19.5		GA/CG8	Interchangeable,	
			L							36		5.3	/ D	Bobbin CP2494-589MJ	CP3836-2000/1
	36.0	228.6	12	Bolted	6.4	244.6	214.0	6.6	D54	48	19.5	7.7	CG8	Pro 5000+ Disc	CP5000-110/1
	36.0	228.6	12	Bolted	6.4	245.0	208.0	6.4	D54	48	19.5	8.3	G8/GD		CP3581-1096/7
			<u> </u>							-	19.5	8.2	/ T2 G8		CP3581-516/7
	36.0	228.6	12	Bolted	6.4	245.0	214.0	6.6	D54	48	19.5	9.4	G8 G8	Interchangeable	CP3581-516/7 CP3781-516/7
										48	19.5	7.6	G8		CP3581-1136/7
	36.0	228.6	12	S/Bobbin	,	244.6	202.8	5.6	D54	72	19.5	7.8	RA	Interchangeable, Bobbin CP2494-589MJ	CP5772-1136/7
	50.0	220.0	12	0,000011	ľ	244.0	202.0	0.0	004	72 'S'	20.0	8.0	RA	'S' Vane Disc	CP6972-1136/7
	36.0	228.6	12	S/Bobbin	1	251.6	202.6	6.3	D51	48	19.5	8.0	G8	Bobbin CP2494-504MP	CP3581-1078/9
360.0		208.0	10	S/Bobbin	/	227.2	182.6	5.6	D65	48		9.5	CG8 / CR8		CP3784-128/9
300.0	34.0	-			/				1		16.0			Bobbin CP2494-589MJ	
	32.0	215.9	12	Bolted	6.43	238.0	195.0	6.42	D61	48	17.5		G8 / CG12		CP4542-142/3
362.0	32.0	215.9	12	Bolted	6.4	251.0	195.0	6.43	D54	48	17.5	7.3	CG12		CP4542-112/3
302.0	32.0	228.6	12	Bolted	6.4	247.2	208.0	5.95	D55	72	19.5	6.99	GA G8 / RD		CP5772-168/9
	32.0	228.6	12	Bolted	6.4	251.4	208.0	6.5	D54	48	17.5	7.8	/ T2		CP3718-1068/9
366.0	32.0	240.0	12	Bolted	6.4	268.0	224.0	6.4	D48	48	17.5	6.5	G8 / GA		CP3718-1088/9
	1	1	12	Bolted	6.4	252.0	I	1 T	D54	72	1	T T	P/RA		
370.0	36.0	241.3		Dolled	0.4	252.0	224.0	6.6	D54	12	19.5	8.56	P / KA		CP5772-6072/3
	35.0	245.0	10	BREMBO MTG.		261.0	221.0	8.0	D54	72	19.5	8.52	P/RA	Mtg flange stepped out 1.0mm	CP5772-104/5
275.0	36.0	241.3	12	Bolted	6.4	257.0	225.0	6.6	D54	72	19.5	8.72	CG8/P		CP5772-6076/7
375.0		247.6	12		-	257.0			D54	72	19.5		/ RA / RC P / RA /RC		CP5772-1076/7
	36.0 36.0	247.6	12	Bolted Bolted	6.4 6.4	269.7	231.0 245.0	6.6 6.6	D54 D46	72	19.5	8.63 7.92	P/RA/RC P/RA		CP5772-1076/7 CP5772-2072/3
	1	1		1	0.4	r	1	1	1	1	1	T T			
376.0	28.0	260.0	12	S/Bobbin	/	277.6	235.4	5.6	D47	48	17.5	5.1	G8	Bobbin CP2494-589MJ	CP3718-1000/1
		260.3						6.07	D46			6.1	G12	Mtg flange stepped out	CP5914-116/7
	28.0	260.3	12	S/Bobbin	/	282.0	235.3	5.62	D46	48	13.5	6.28	G8	1.0mm,	CP5914.110/1
	32.0 32.0	235.8 235.8	10	Bolted Bolted	8.4 8.4	250.0 250.0	218.0 220.0	7.0 7.0	D64 D64	48 48	16.0 17.5		CR8 G8	Interchangeable	CP3784-2098/9 CP3718-2020/1
	52.0	233.0	10	Dolled	0.4	267.0	214.5	5.6	D54	36	19.5	6.6	CG8/GA	Interchangeable,	CP3836-1030/1
						201.0	211.0	0.0	201	48	17.5	7.2	CG8 / G8	Bobbin CP2494-589MJ	CP3718-1030/1
	32.0	240.0	12	S/Bobbin	/	268.0	215.0	5.6	D54	72	19.5	7.16	CG8 / GA / P	CP5772-1030/1 is a Pro 5000 ∕⊂ Disc	CP5772-1030/1
										72 'S'	20.0	7.46	CG8 / GA	'S' Vane Disc Bobbin CP2494-589MJ	CP6972-1030/1
	32.0	260.4	12	Bolted	6.4	282.6	243.8	5.8	D48	36	19.5	5.8	GA	2300iii 01 2494-309iVl3	CP3836-2002/3
378.0	32.0	260.4	12	S/Bobbin	/	282.7	235.0	5.625	D46	36	19.5	5.87	CG8/GA	Bobbin CP2494-589MJ	CP3836-1010/1
	20.0	260.4	10	C/Dobbin	,	202.2	235.5	5.6	D46	72	19.5	6.2	D/GA		CP5772-1010/1
	32.0	260.4	12	S/Bobbin	/	282.0	235.35	5.6	D46	72 'S'	20.0	6.4	GA	S' Vane Disc Bobbin CP2494-589MJ	CP6972-1010/1
	36.0	240.0	12	S/Bobbin	/	264.9	216.0	5.6	D54	48	17.5	8.9	CG8/GA		CP3718-2068/9
						266.8	214.5	5.6	D54	36	19.5	8.0	RA	Bobbin CP2494-589MJ	CP3836-2068/9
	36.0	240.0	12	S/Bobbin	/	264.0	214.5	5.6	D54	72	19.5	8.9	CG8 / CR24	CP5772-1032/3 is a Pro 5000 / Disc	CP5772-2068/9
	00.0	0.40.0	10	O/Datata	1							0.0	/ RA	FIG SUGDIC DISC	
	36.0	240.0	12	S/Bobbin	/	266.0	215.0	5.6	D54	72	19.5	0.0	G8	'S' Vane Disc	CP5772-1032/3
	36.0	240.0	12	S/Bobbin	/	266.8	214.5	5.6	D54	72 'S'	20.0	8.9	RA	Bobbin CP2494-589MJ	CP6972-2068/9
	36.0	247.6	12	H/Bobbin	/	266.8	221.0	7.5	D54	72	20.0	8.7	CG8 / GA	Wide Bobbin Disc CP7016-139MS	CP5772-2084/5
	32.0	228.6	10	S/Bobbin	/	247.0	202.2	5.6	D66	72	19.5	8.4	CG8	Bobbin CP2494-589MJ	CP5772-118/9
380.0	40.0	240.0	12	S/Bobbin	/	266.0	216.0	5.4	D54	72	25.5	8.8	CR24 / RA		CP6072-102/3
	32.0	260.0	12	Bolted	6.4	268.8	243.0	6.30	D54	54	19.0	7.68	CG24		CP4095-110/1
	34.0	260.0	12	Bolted	6.4	268.8	243.0	6.14	D54	84	21.0	8.4	CG24 CG24		CP4095-110/1 CP4284-102/3
390.0	34.0	260.0	12	Bolted	6.4	278.8	243.0	6.14	D54	84	21.0	8.0	CG24		CP4284-112/3
	36.0	260.0	12	Bolted	6.4	268.8	243.0	6.3	D54	54	19.0	9.3	CG24		CP4095-100/1
	36.0	260.0	12	Floating	/	278.75	235.0	6.8	D54	84	21.0	8.7	CG8	Pro 5000 C Disc	CP4284-134/5
400.0	36.0	270.0	12	Bolted	6.4	288.7	253.2	7.0	D66	73	19.0	9.3	CG12		CP4095-104/5
410.0	36.0	245.5	12	Bolted	8.25	266.0	225.5	8.10	D70	73	19.0		CG8/G8	Heavy Duty	CP4095-102/3
410.0	30.0	∠40.0	12	Duited	0.20	200.0	220.0	0.10	טוט	13	19.0	1	000/00	neavy Duty	UF4030-102/3



BRAKE DISCS - Ventilated Disc / Bell Kits and Ventilated with Integral Bell

VENTILATED DISC AND OR BELL KITS.

AP Racing now produce disc and bell kits as aftermarket alternatives for OE discs. These kits are designed to replace the standard single piece disc and retaining the vehicles production brake caliper.

The kits include either strap drive, bolted or floating discs and/or bell assemblies (see tables below & opposite) and for the kits with pads a set of Ferodo DS2500 material.



Note:-

On the Strap Drive kits for Subaru and Mitsubishi Evo installations the AP Racing kit requires a shallower pad than the original pad to enable them to clear the strap drive system.

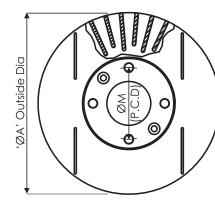
Strap Drive Replacement OE Disc Kits											
Application	Disc & Bell Kits.	Disc, Bell & Pad Kits.									
Audi											
S3 (8P) 2006-2012	CP6890-001MNP.G8										
Mitsubishi	•										
Evo 7 / 8 / 9. Fitted with Brembo 4 pots. Grooved disc	CP6890-009MNP.T2	CP6890-009M.T2									
Subaru											
Impreza 01 on & Including N14 models. Fitted with Brembo 4 Pot.	CP6890-007MNP.CG8	CP6890-007M.CG8									
vw											
Golf MKV R32. 2005 on.	CP6890-001MNP.G8										

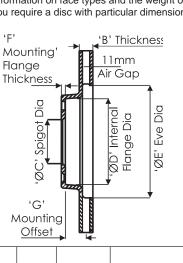
need to be purchased separately, Bobbin Kits are
- RH = CP8080Z14SD
-LH = CP8080Z15SD
- Mounting Bell = $CP8080Z140$.
- RH = CP8080Z14SD
- LH = CP8080Z15SD
- Mounting Bell = CP8080Z141.
- RH = CP8080Z24CG12
-LH = CP8080Z25CG12
- Mounting Bell = CP8080Z240.
- RH = CP8080Z26CG12
- LH = CP8080Z27CG12 - Mounting Bell = CP8080Z260.
- RH = CP8080Z48SD
-LH = CP8080Z49SD
- Mounting Bell = CP8080Z480.
- RH = CP8080Z50SD
- LH = CP8080Z51SD
- Mounting Bell = CP8080Z500.
- RH = CP8080Y18CG8
- LH = CP8080Y19CG8
- Mounting Bell = CP8080Y180
- RH = CP8080Y10CG12
- LH = CP8080Y11CG12
- Mounting Bell = CP8080Y100
- Grooved Part No =
CP4590-033YNP.CG12.
- Grooved Part No =
CP4590-034YNP.CG12.
- Plain Part No =
CP4590-032YNP.P
ement Kits
CP4590-002BNP
CP4590-007BNP.CG8
CP4590-011BNP.CG8
CP4590-010BNP.CG8
CP4590-030BNP.CG12

VENTILATED BRAKE DISCS WITH INTEGRAL MOUNTING BELL.

This section on ventilated brake discs with integral mounting bell provides dimensional details, as well as information on face types and the weight of the most popular discs from within the ventilated integral disc range. **Not all discs are listed**, should you require a disc with particular dimensions which is not listed please contact the AP Racing Technical Section for assistance.







Nominal	Dimensions	in (mm)											
'A'	I I'B'	Mounting Details			1 °C'	'D' Internal	'E'	'F'	'G'	Max Pad	Weight	Face	Part
Outside Dia.	Thickness	Thickness 'M' P.C.D. No. Dia. Spigot Dia. Flange Eye Dia. Mg Flar Dia. Flange Dia. Eye Dia. Mg Flar Dia.	Mtg Flange Thickness.	Mtg Offset.	Depth.	Kg.	Types.	Number.					
254.0	20.7	100.0	4	14.7	62.0	121.3	170.0	8.2	38.2	D41	4.3	G4	CP2589-120
262.0	20.1	108.0	4	12.9	66.1	131.0	156.0	6.0	31.0	D50	4.2	G4	CP2589-115
270.0	22.0	108.0	4	12.4	65.26	129.1	165.0	6.0	30.7	D52	4.8	G4 / G8	CP2589-138
273.0	20.5	108.0	4	12.9	66.1	129.0	169.0	6.0	30.2	D50	4.5	G4	CP2589-135
300.0	24.0	100.0	4	12.2	64.2	180.0	200.0	7.5	26.0	D44		G8	CP7080-108/9
304.0	24.0	100.0	4	12.2	64.2	180.0	200.0	7.5	26.0	D46		SD / P / G8	CP7080-104
328.0	20.0	120.0	5	14.6	75.0	185.08	234.0	7.17	44.05	D48		G8	CP4475-122/3

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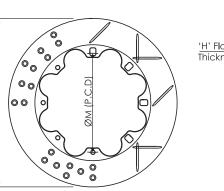
BRAKE DISCS - Solid and Solid with Integral Bell

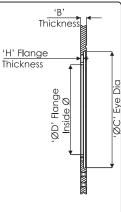
SOLID BRAKE DISCS.

This section on solid brake discs provides dimensional details, as well as information on face types and the weight of the most popular discs from within the solid disc range. **Note:**

Not all solid discs are listed, should you require a disc with particular dimensions which is not listed please contact AP Racing Technical Section for assistance.





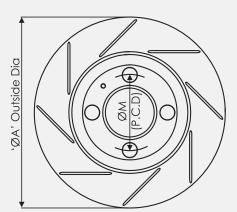


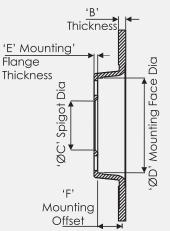
Nominal	l Dimensi	ions in (r	nm)										
'A'	'B'	Mount	ing De	etails		'C'	'D'	'H'	Max Pad	Weight	Face Types	Comments.	Part
Outside Dia.	Thick- ness	" M " P.C.D.	No.	Fixing Type.	Ø.	Eye Ø.	Inside Flange Ø.	Mtg. Flange.	Depth.	Kg.	Available.	Comments.	Numbers.
	8.0	146.0	8	Bolted	8.45	165.0	131.0	6.0	D44	1	G4	Mtg Flange Stepped out 2.0mm	CP2866-215
254.0	8.0	146.0		Bolted	8.45	165.0	131.0	6.0	D44		G4	Mtg Flange Stepped out 0.75mm	CP2866-218
	9.7	151.0	8	Bolted	6.4	166.0	134.0	4.8	D44		G4		CP2866-204
260.0	9.5	139.7	6	Bolted	7.95	172.7	123.2	5.1	D44		G4		CP2866-229
	7.1	158.8	8	Bolted	6.4	177.0	141.0	4.8	D44		D/G4		CP2866-195
265.0	8.0	158.8	8	Bolted	6.4	189.0	141.0	4.8	D38	1	G8		CP2866-214
205.0	9.6	158.8	8	Bolted	6.4	177.0	141.0	4.8	D44	2.0	D/G4/G8/P		CP2866-179
	9.6	158.8	8	Floating	/	177.0	135.7	4.8	D44	2.1	D/G4/G8/P	Bobbin CP2494-593MB	CP2866-193
	9.6	176.8		Bolted	6.4	192.0	159.0	4.8	D43	2.4	G4 / G8		CP2866-178
277.0	9.6	176.8		Floating	/	192.0	154.0	4.8	D43	2.3	D / G4 / G8	Bobbin CP2494-593MB	CP2866-192
	9.6	181.5	8	Floating	/	197.6	159.3	4.8	D40	2.2	G4	Bobbin CP2494-593MB	CP2866-203
	7.0	172.5	5	Floating	/	192.0	190.2	4.47	D44	1.76	G4	Bobbin CP2494-595MA	CP2866-239
	7.0	169.3	6	Floating	/	192.0	190.2	4.47	D44	1.8	G4	Bobbin CP2494-595MA	CP2866-238
	9.6	169.8	8	Floating	/	192.0	149.3	4.8	D44	2.4	G4	Bobbin CP2494-593MB	CP2866-194
280.0	9.6	175.0	8	Bolted	6.4	191.5	158.0	4.8	D44		D/G8		CP2866-223
	9.6	176.8	8	Bolted	6.4	192.0	159.0	4.8	D44	2.5	D / G4 / G8		CP2866-177
	9.6	176.8		Bolted	6.4	192.0	159.0	4.8	D44	2.5	CG4	Pro 5000+ Disc	CP5000-177
	10.0	172.5	5	Floating	/	192.0	190.2	4.47	D43	2.47	G4	Bobbin CP2494-595MA	CP2866-240
290.0	10.0	180.0	8	Floating	/	201.7	155.0	5.8	D44	2.6	G8	Bobbin CP2494-589MJ	CP2866-237
295.0	10.0	176.8	8	Bolted	6.4	192.0	159.0	4.8	D48		G8		CP2866-200
300.0	9.6	189.0	8	Bolted	6.4	206.5	171.0	4.6	D46	2.5	D/P		CP2866-196

SOLID BRAKE DISCS WITH INTEGRAL MOUNTING BELL.

This section on solid brake discs with integral mounting bell provides dimensional details, as well as information on face types and the weight of the most popular discs from within the solid integral disc range. **Not all discs are listed**, should you require a disc with particular dimensions which is not listed please contact the AP Racing Technical Section for assistance.



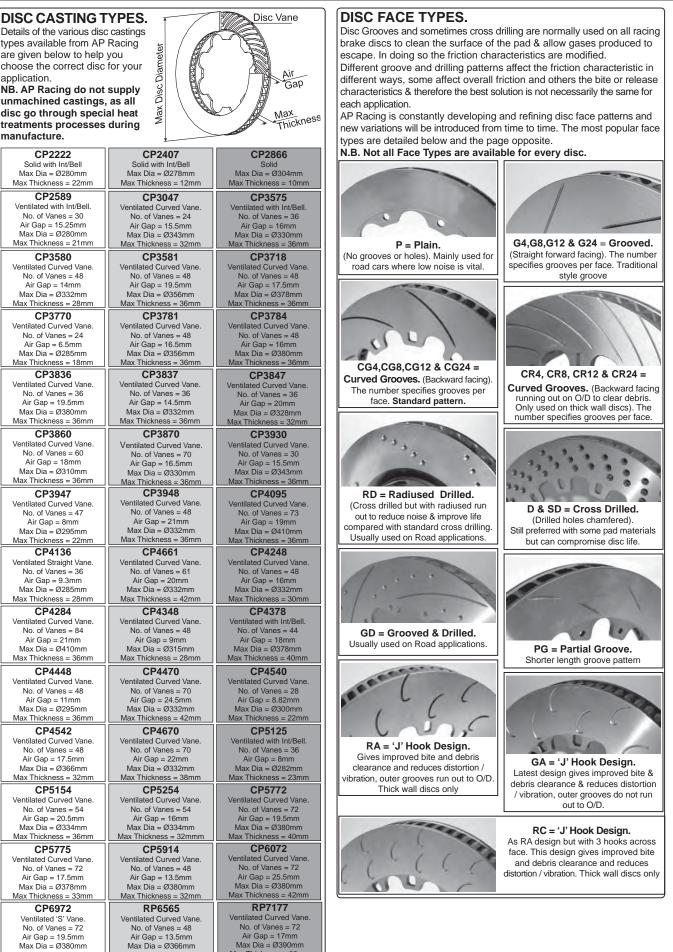




Nominal	Dimensions	in (mm)		Max								
'A'	'B' Thickness	Mounting Details			'C'	'D'	'E'	'F'	Pad	Weight	Face	Part
Outside Dia.		" M " P.C.D.	No.	Dia.	Spigot Dia.	Mtg Face Dia.	Mtg Flange Thicness.	Mtg Offset.	Depth.	Kg.	Types.	Number.
248.0	7.1	7.1 95.25 4		9.5	76.2 128.0		5.1	32.5	D46	2.4	Р	CP2222-9 CP2222-10 CP2222-262 CP2222-273
	9.7	95.25	4	9.5	76.2	128.0	5.1	31.5	D46	3.3	P	CP2222-10
254.0	9.7	95.25	4	9.7	76.2	129.5	5.1	31.5	D50	3.3	Р	CP2222-262
	9.7	100.0	4	12.5	72.6	127.7	5.1	31.5	D43	2.8	G4	CP2222-273
264.0	11.1	107.95	4	11.6	86.36	133.35	7.87	16.8	D52	3.8	Р	CP2407-129

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BRAKE DISCS - Castings and Face Types



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Details of the various disc castings types available from AP Racing are given below to help you choose the correct disc for your application

NB. AP Racing do not supply unmachined castings, as all disc go through special heat treatments processes during manufacture.

CP2222 Solid with Int/Bell Max Dia = Ø280mm

Air Gap = 15.25mm Max Dia = Ø280mm Max Thickness = 21mm CP3580 Ventilated Curved Vane. No. of Vanes = 48 Air Gap = 14mm Max Dia = Ø332mm Max Thickness = 28mm CP3770 Ventilated Curved Vane No. of Vanes = 24 Air Gap = 6.5mm Max Dia = Ø285mm Max Thickness = 18mm

CP3836 Ventilated Curved Vane. No. of Vanes = 36 Air Gap = 19.5mm Max Dia = Ø380mm Max Thickness = 36mm CP3860 Ventilated Curved Vane.

No. of Vanes = 60 Air Gap = 18mm Max Dia = Ø310mm Max Thickness = 36mm CP3947

Ventilated Curved Vane. No. of Vanes = 47 Air Gap = 8mm

Max Dia = Ø295mm lax Thicknes CP4136 Ventilated Straight Vane No. of Vanes = 36 Air Gap = 9.3mm Max Dia = Ø285mm

Max Thickness = 28mm CP4284 Ventilated Curved Vane No. of Vanes = 84

Air Gap = 21mm Max Dia = Ø410mm Max Thickness = 36mm

CP4448 Ventilated Curved Vane No. of Vanes = 48 Air Gap = 11mm Max Dia = Ø295mm

CP4542 Ventilated Curved Vane. No. of Vanes = 48

Air Gap = 17.5mm . Max Dia = Ø366mm Max Thickr CP5154 Ventilated Curved Vane.

No. of Vanes = 54 Air Gap = 20.5mm Max Dia = Ø334mm Max Thickness

CP5775 Ventilated Curved Vane. No. of Vanes = 72 Air Gap = 17.5mm

Max Dia = Ø378mm Max Thickness = 33mm CP6972

/entilated 'S' Vane No. of Vanes = 72 Air Gap = 19.5mm Max Dia = Ø380mm Max Thickness = 40mm

Max Thickness = 32mm

ntilated Curved Vane No. of Vanes = 72 Air Gap = 17mm Max Dia = Ø390mm Max Thickness = 36mm

BRAKE DISCS - Mounting

DISC MOUNTING.

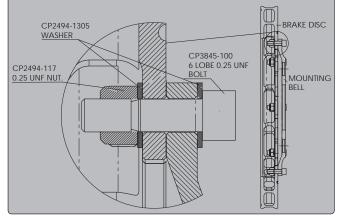
Most racing and many high performance road brake discs are designed to be mounted on to the hub or stub axle by means of a mounting bell. Mounting bells are usually made from high grade Aluminium alloy although other materials can be used.

This arrangement is much lighter than a one piece disc and bell, but more importantly allows some compliance to reduce the risk of distortion due to heat expansion of the disc. This becomes more important the larger the disc and is considered essential above Ø330mm diameter. There are essentially two methods of attaching the disc to the bell, 'Bolted' and 'Floating'. The method to be used will depend on the particular application.

BOLTED.

For lower duty applications and on smaller discs a bolted mounting is sometimes preferred for strength and simplicity especially for off-road application (e.g. Rallies) where debris may clog a floating mechanism leading to run-out and disc vibration. Stiff flat bells should be avoided with a bolted mounting.

Standard AP Racing disc mounting hole size is 6.40 / 6.45mm diameter. AP Racing offer a range of bolts, nuts and washers to suit. These are also available in wheel set kits, see below for details.



BOLTS AND BOLT KITS.

E8 - 6 Lobe Headed Bolt kits available for AP Racing discs are given in the table below. The 6 Lobe bolt offers the following advantages over a cap head:

- More positive drive.
- More consistent clamping loads.
- Liahter.
- Better corrosion resistance
- Less prone to damage.
- Improved airflow.

CP3845-100 22.2

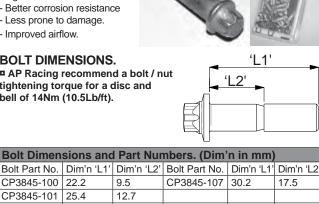
CP3845-101 25.4

CP3845-102 27.0

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BOLT DIMENSIONS.

AP Racing recommend a bolt / nut tightening torque for a disc and bell of 14Nm (10.5Lb/ft).



E8, 6-LOBE HEAD BOLT KITS (All Bolts 1/4" UNF)

9.5

12.7

14.3

Kit Part No.	No. of Bolts in kit.	Bolt Part No.								
CP3845-100K08	8	CP3845-100875" long.								
CP3845-102K10	10	CP3845-102 - 1.062" long.								
CP3845-100K12	12	CP3845-100875" long.								
CP3845-101K12 12 CP3845-101 - 1.0" long.										
CP3845-102K12 12 CP3845-102 - 1.062" long.										
Each of the above kits contain the required number of CP2494-117 Nut &										
CP2494-1305 washer.										
Note: 3/8" E8, 6	6-Lobe Socket - (CP2494-153 is available								

NOTE: Bolts, nuts and washers are not available separately, but can be purchased in boxes of 100 The Cap Head bolt will continue to be available as a loose part in kits of 100.

Individual Bolt, Nuts and Washer Components in boxes of 100.											
Component. E8 - 6-Lobe Head Type Part Nos. Alternative Cap Head Type Part Nos.											
.875" Long Bolt. CP3845-100K100 CP2494-116K100											
1.00" Long Bolt.	CP3845-101K100	CP2494-718K100									
1.062" Long Bolt.	CP3845-102K100	CP2494-331K100									
Nut. CP2494-117K100											
Washer. CP2494-1305K100											
N.B. BOLTS, NUTS AND WASHERS NOT SOLD INDIVIDUALLY											

FLOATING.

Discs for heavy duty applications, especially larger discs, should be mounted to allow some axial & radial float between disc & bell. This may be achieved by the following methods:-

'Float in the bell',

'Float in the disc' or 'Strap Drive'.

Radial float allows differential expansion of disc and bell thus reducing stresses in the disc and minimising disc cracking and distortion. The idea of axial float is to compensate for a certain amount of stub axle / upright flex by allowing the disc to take up its ideal position within the range of float thus avoiding 'Knockback' of the caliper pistons. However the float should not be excessive as disc gyroscopic loads can cause the same effect that the float is meant to alleviate.

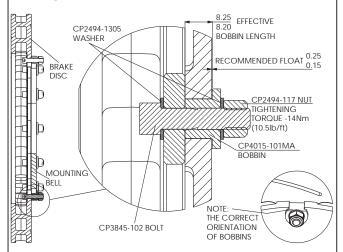
The amount of axial float will depend somewhat on the application. In a 'perfect' system with minimal disc movement relative to the Caliper the amount of float need only be around 0.15 - 0.25mm.

FLOAT IN THE BELL'.

The AP Racing 'Float in the Bell' system has the advantage of being used with standard bolted discs, float is controlled by bell thickness. During use some wear of the bell inevitably occurs which tends to increase float and requires more frequent Bell replacement than the Float in the Disc system.

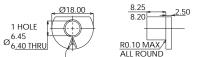
NOTE.

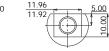
Recommended bell flange thickness for use with this bobbin is 8.00 / 8.05 to give 0.15 / 0.25mm float.



CP4015 Float in the bell Bobbins.

The bobbin for use with 'float in the bell' mounting is CP4015-101MA





IDENTIFICATION LETTER TO BE CLEARLY MARKED WHERE SHOWN AS LARGE AS POSSIBLE

Bobbin kit CP4015-101K12

CP4015-101MA bobbin can be bought separately or in a kit which contains the bobbins, bolts, nuts & washers.

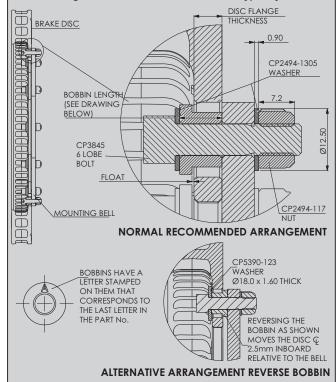




STANDARD 'FLOAT IN THE DISC' BOBBIN.

The AP Racing 'Float in the Disc' system uses a disc with an elongated flat sided mounting hole. The harder disc is less prone to wear than the bell but regular maintenance / cleaning is required if float is to be maintained at the original level.

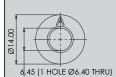
N.B. Mounting bell thickness 8.00mm Max but is typically 6.5mm

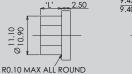


Float in the disc bobbins.

The float in the disc bobbins available for AP Racing floating discs are given in the table below.

- All bobbin kits comprise either, CP3845-100, CP3845-101 bolts, CP2494-117 nut and CP2494-1305 washer and the specified bobbin.





Tightening torque for bolts is 14Nm (10.5lb/ft).

	& kit Part N in Disc' Mo		mensio	ns in mm)								
Flange Thick- ness.	Bobbin Part No. CP2494	Dim'n 'L'.	Nom Float.	Kit Part No. CP2494	Bolt. Part No. CP3845							
4.35/4.30	-595MA	4.70/4.75	0.4	-595K08(S)	-100							
4.33/4.30	-3931VIA	4.70/4.75	0.4	-595K12	-101							
4.85/4.80	-593MB	5.20/5.25	0.4	-593K10	-101							
-593K12												
5.05/5.00 -592MC 5.40/5.45 0.4 -592K10 -101												
5.05/5.00	-5921010	5.40/5.45	0.4	-592K12	1-101							
5.55/5.50	-591MH	5.90/5.95	0.4	-591K12	-101							
5.65/5.60	-1341MD	5.80/5.85	0.2	-1341K12	-101							
				-589K08	-101							
5.65/5.60	-589MJ	6.00/6.05	0.4	-589K12	-101							
				-589K12L	-102							
5.65/5.60	5.65/5.60 -626ML 6.30/6.35 0.7 -626K12 -101											
6.35/6.30	-1342MM	6.50/6.55	0.2	-1342K12	-101							
				-504K10	-101							
6.35/6.30	-504MP	6.70/6.75	0.4	-504K12	-101							
				-504K12L	-102							
Note: bobb	oin kit with 'L'	suffix denot	es longe	r CP3845-102	bolt in kit							

BRAKE DISCS - Mounting

HEAVY DUTY 'WIDE' BOBBINS.

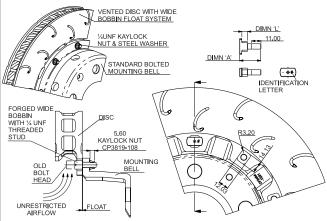
AP Racing offer two options of wide bobbins for heavy duty disc arrangements offering improved stability in high torque applications.

- **CP4135** a forged one piece bobbin & stud providing improved and unrestricted airflow. (Replaces CP4015 bobbins).

- **CP7016** a two piece alternative for thicker mounting bell flanges, using separate bolt. The drawings and tables below provide all information required to aid the user.

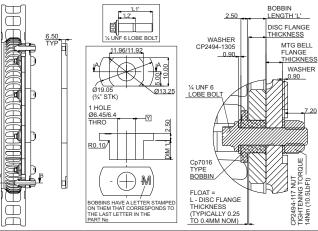
Note: Special tool available, CP4015-137 to assist bobbin orientation whilst assembling both CP4135 and CP7016 bobbins.

CP4135 - Forged One Piece Bobbin & Stud.



CP4135	Bobbin a	& Stud Part	Numbers.	(Dim'r	n in mm)							
Dim'n	Dim'n	Disc Flange	Nominal	Ident	Bobbin / Stud							
'A'	ʻĽ	Thickness	Disc Float	Letter	Part No.							
21.8/21.2	5.5/5.4	5.05/5.00	0.4	С	CP4135-102FC							
22.0/21.4 5.7/5.6 5.25/5.20 0.4 E CP4135-103FE												
22.2/21.6 5.9/5.8 5.45/5.40 0.4 D CP4135-104FD												
22.9/22.3	22.9/22.3 6.6/6.5 6.15/6.10 0.4 M CP4135-105FM											
23.1/22.5 6.8/6.7 6.35/6.30 0.4 P CP4135-106FP												
23.6/23.0 7.3/7.2 6.85/6.80 0.4 R CP4135-107FR												
24.3/23.7	24.3/23.7 8.0/7.9 7.55/7.50 0.4 S CP4135-108FS											
Bobbin ki	ts availal	ole. Please co	ntact AP R	acing fo	or details							

CP7016 - Two Piece Bobbin/Bolt Alternative.



CP7016 Bol	bbin & Bo	olt Part	Numbers	s. (Din	n'n in mr	n)
Dim'n 'L'		Flange	Nominal	Nominal Ident		/ Stud
	Thick	iness	Disc Float	Letter	· Part No	-
6.55/6.50	6.15/	6.10	0.4	М	CP7016	6-120MM
7.10/7.05	6.70/	6.65	0.4	V	CP7016	6-126MV
7.80/7.75	7.40/	7.35	0.4	Х	CP7016	6-132MX
7.95/7.90	7.55/	7.50	0.4	S	CP7016	6-139MS
Bobbin kits a	available. I	Please c	ontact AP	Racing	g for deta	ils
Bolt dimens	sions and	l Part N	lumbers.	(Dim'	n in mm))
Bolt Part No.	Dim'n 'L1'	Dim'n 'L	2' Bolt Pa	rt No.	Dim'n 'L1'	Dim'n 'L2'
CP3845-100	22.2	9.5	CP3845	5-107	30.2	17.5
CP3845-101	25.4	12.7	CP3845	5-108	17.9	9.5
CP3845-102	27.0	14.3				

BRAKE DISCS - Operating Advice & Part Numbering

DISC OPERATING ADVICE.

This section on operating advice has been produced as a guide only, as many formula or racing series may have different requirements.

DISC TEMPERATURES.

In order to achieve optimum racing brake performance and prolong disc life it is essential that the brakes operate at the correct temperature. In general discs should run at similar temperatures front and rear and from side to side, dissimilar temperatures will lead to varying brake balance. Temperature balance can be checked as soon as the car stops in the pit lane using a Pyrometer such as AP Racing Pyrometer kit CP2640-24 (see below). However a pyrometer reading is not a good indicator of disc operating temperature which decays rapidly with time when the brakes are not being applied. Under racing conditions disc bulk temperatures should normally be maintained in the range 400°C to 600°C for best performance. Disc face peak temperatures may be higher but should not exceed the maximum recommended for the pad material being used. An effective method of checking maximum disc operating temperature is by using temperature paints applied to the disc. A suitable paint kit can be obtained under AP Racing Part No.CP2649-1, this kit contains three paints, Green (430°C), Orange (560°C) and Red (610°C) plus thinners and brushes. When assessing brake temperatures it is important to complete several successive laps (5 or preferably 10) at race speeds and vehicle weight to allow temperatures to stabilise at a representative level. Typically when running within the correct temperature range the Green paint (430°C) will turn throughout, the Orange paint (560°C) 50% to 100% throughout and the Red paint (610°C) turned up to 5mm from each brake face. If the Red paint (610°C) turns throughout, the discs are running too hot. Circumferential disc face ridges are also an indication of running too hot. Circuits and drivers vary enormously in the amount of work they demand from the brakes and therefore the brake system has to be tuned for each circuit by adjustment of the cooling airflow. The temptation to over cool the disc should be resisted. The aim is to keep the temperature as stable as possible within the working temperature range. High maximum to low minimum temperature cycles are the enemy of disc life and cause performance variations.

TEMPERATURE MEASUREMENT. DIGITAL READ-OUT PYROMETER

CP2640-24 Digital pyrometer for brake, disc and tyre temperatures. High accuracy display reads in centigrade. The unit comes complete with probes for both brake discs and tyres in a heavy duty carrv case.



D THERMAL PAINT KITS

CP2649-1 kit comprises of three paints for monitoring peak Brake Disc temperatures. The three paints are:-

- Green changes colour to White at 430°C.
- Orange changes colour to Buff at 560°C.
- Red changes colour to White at 610°C. The kit also comprises, one bottle of thinners and three brushes.

BRAKE CALIPER TEMPERATURE STRIPS

CP2650-11 Temperature indicator strips for monitoring caliper temperatures. Temperature range 149°C to 260°C Each packet contains 10 strips.



D TEMPERATURE **RECORDING PAD**

CP2640-25 Allows the user to record temperature data for Brake Discs and Brake Calipers.

DISC COOLING.

A good source of cooling air should be supplied preferably through the upright to the disc throat. A typical venting cross section of 100cm² (16in²) is usually sufficient. The pick up should preferably be in an area of clean high pressure air flow and the ducting should be arranged to avoid sharp bends or changes in section which may choke the air flow. Careful design of the Mounting Bell is important in achieving effective disc cooling and avoiding problems. Typically 80% of the airflow should be directed up the disc vents and 10% up each face of the disc. This ratio can vary considerably in practice but it is important that both disc faces are cooled equally by adjusting the air gaps. Unequal face temperatures can lead to disc distortion and a long pedal. Lightening holes in the bells should be avoided as available cooling air can be lost without cooling the disc.

DISC BEDDING.

for the latest advice.

All cast iron brake discs need to be bedded-in to ensure heat stabilisation and improve resistance to cracking. Cracks or even disc failure can occur during the first few heavy stops if careful bedding is not carried out. AP Racing recommend the following procedures or visit www.apracing.com

RACE CAR INSTALLATIONS:

1) If ducts are fitted they should be 3/4 blanked off. 2) Use previously bedded pads. 3) For a minimum of 15Km use brakes gently at first from initially low speeds - Progressively raise speed to normal racing speed but still using gentle applications. **4)** For the final 2 or 3 applications brakes can be used quite heavily. **5)** If AP Racing thermal paints are used then only the Green paint (430°C) should have fully turned to white and maybe also just the Orange paint (560°C) on the outside edges of the discs during the bedding procedure. 6) Allow to cool. 7) AP Racing offer a pre-bedding service at nominal extra charge. This ensures that discs are bedded consistently assuring better performance & life. Contact AP Racing for details.

ROAD CAR INSTALLATIONS:

1) For the first 10 miles, light braking from 50/60 mph down to 30 mph if possible in blocks of 5. Do not attempt any high-speed stops down to zero at this point, as only the faces will heat up with the mass remaining cool along with the mounting area. 2) For the next 100 miles increase the braking pressures similar to stopping in traffic, again avoiding if possible full stops from above 70 mph. By now the area around the mounting bolts should be a light blue temper colour. This is a good indication that the correct heat soak has been achieved. 3) For the next 100 miles gradually increase the braking effort after this full power stops can be used. The disc should now be an even dark to light blue temper colour, depending on the pad type and the braking effort being used during the process.

This process must be completed before any race circuit use.

Track Day Use: For the latest Track Day Bedding Instructions visit our website: http://www.apracing.com/Info.aspx?InfoID=73&ProductID=30

PART NUMBERING.

When ordering discs please use the correct part number wherever possible. An example part number is explained below:- All AP Racing brake discs are individually marked with the following information:



Basic Disc (casting) Type

Disc Face Suffix (see below)

CP3581 - 1042 CG8 Stroke Number

Bedding (if applicable)

HANDING

- Even Stroke Numbers are Right Hand
- Odd Stroke Numbers are Left Hand

D FACE TYPES

- P = Plain / - D = Drilled Face / - G = Straight Grooves G3 = When G appears with a digit, this denotes the number of grooves per face on the disc. e.g. G4/G6/CG8/CR12 etc. / - CG = Curved Grooves - GD = Grooved & Drilled / - CR = Curved Grooved backward facing running out to O/D. / - PG = Partial Groove. / - RD = Radius Drilled - SD = Similar to RD but with smaller holes. / - RA = J Hook Design, grooves run-out. / - GA = J Hook Design, grooves do not run-out. - RC = J Hook as GA but with 3 hooks across face. / - B1 = A "B" and a Number added to the end of the part number i.e.CP3581-1042DB? means the disc has been pre-bedded with a particular pad material.

SAFETY AND CARE OF DISCS.

Cast iron brake discs should not normally be operated at bulk temperatures in excess of 610°C and above rotational speeds of 3000 revolutions per minute. Discs must be regularly and frequently inspected for excessive heat crazing and cracking. After heavy and prolonged use some surface crazing will often be evident, if this turns into distinct surface cracks which are radiating towards the inside or outside diameter the disc should be changed. Discs with cracks emanating from mounting holes / slots, inside diameter, scallops, or outside diameter should be changed immediately.

IF IN DOUBT REPLACE.



BRAKE DISCS - Carbon / Carbon - General Information

INTRODUCTION.

Carbon/Carbon brake discs & pads offer very lightweight construction together with excellent braking performance. Carbon/Carbon is also expensive but if managed correctly, mainly a question of temperature control, then wear rates and hence

running costs can be surprisingly low. AP Racing has more than 20 years of experience with Carbon/ Carbon brakes in F1 and Sportscar racing.



We recommend and supply a number of Hitco Carbon/Carbon materials which we consider to offer the best performance and braking

characteristics together with low wear of any material currently available. This section on Carbon discs is designed as a users guide for reference only and we recommend you contact AP Racing technical section for more detailed information before finalising installation details.

COOLING REQUIREMENTS.

The uprights should be designed to provide a cooling air pathway of at least 140cm² area. Hitco Carbon/Carbon requires good face cooling. It is worth monitoring airflow / temperature on both inside and outside disc faces during testing.

It may be found that a larger face-cooling gap is required for the inside face to equalize the face temperatures. This is due to the tendency of the airflow to bypass this outlet when exiting the upright and flowing mainly up the outside face. The resultant temperature differential can lead to uneven wear, especially if temperature / wear is high.

BEDDING DISC AND PADS PRIOR TO RACE

Because AP Racing Carbon/Carbon brake materials have lower operating temperatures compared to other carbon brake materials, it is easy to achieve running temperatures without the problem of glazing the rubbing faces. Blanking the brake ducts is not required in dry conditions. When bedding the driver should apply hard brake pressure in short

applications. Take care not to drag the brakes under lighter loads as this may result in glazing. If this occurs and the driver reports there is inadequate retardation, then the pads should be removed from the calipers and both these and the discs should have the rubbing faces de-glazed with coarse emery paper and dust thoroughly removed.

MONITORING TEMPERATURES.

The most reliable way of monitoring the disc temperature is by the application of indicating paints. Use of pit lane thermocouple temperatures is useful for achieving a front / rear balance. The green (430°C) and red (610°C) paints must only be used. The Orange paint in most kits should **not** be used as this will damage the disc. If the disc O/D is painted with either brown or grey antioxidant paint, this and the grey CVD coating must be completely removed from the section of the disc before the paints are applied. Failure to do this could result in the indicating paint not changing colour, regardless of the operating temperature.

The temperature paint colour change is not instantaneous, but is accelerated by higher temperature and the time at temperature is cumulative. It is therefore advisable that at least 5 consecutive laps at representative speed are completed before reference to the temperature paint. Turning the green paint 75% across disc width is adequate. Turning the red paint just on the disc edges (2-3mm) is acceptable.

Running the material at higher temperatures will only result in increased wear rate. If the red paint has changed across the entire disc width, extra cooling must be applied. Continued running at this level of temperature may result in excessively high wear rates, and can lead to weakening of the disc structure.

DISC CONDITION.

Experience has shown that if normal operating guidelines are adhered to, Hitco Carbon/Carbon discs can safely be used down to their minimum thickness.

However if for any reason discs are used at very high temperatures it is possible for oxidation to occur throughout the material, this will severely weaken the Carbon structure. Therefore avoid running the disc with the red paint fully blown.

RECONDITIONING.

The Carbon Discs may exhibit uneven surfaces when worn. AP Racing offer a reconditioning service to re-machine disc faces.

MAINTENANCE.

If the discs and pad surfaces are worn unevenly they can be machined flat and parallel again. A fixture should be made to mount the disc on its mounting flange, and both sides should be machined at the same setting. Failure to do this may result in thick / thin which will cause pedal "pulsing" and vibration. For H13.5 discs only brown antioxidant paint is available from AP Racing (CP2872-145) and should be "touched-up" as required.

NOTE: Do not attempt to degrease the material with any solvents. If a Carbon disc is contaminated with oil or other please contact AP Racing for advice

WEAR PREDICTION.

If high brake wear is anticipated in the race, it is important to complete as many laps as possible in "race trim" (using a measured set of carbon) during practice.

A race wear prediction can then be made using a similar system to that detailed on the AP Racing "Carbon Brake Life Evaluation" sheet which can be obtained from AP Racing or from our website. All laps (including "in" and "out" laps) are included and a 1.5 x safety factor applied.

WEAR GUIDE.

AP Racing carbon discs have disc wear indictors in the brake face and vary depending on the new thickness.

- **37.00mm Thick** discs which have angles vents have a 16mm diameter indicator 1.00mm deep a 12.00 diameter indicator 3.50mm deep and there is a triangle wear indicator that is 6.00mm deep. This indicator shows the direction of rotation of the disc and is the last wear indicator.

All these indicators are on both sides of the disc. These are there to give the user a guide as to the disc wear and when the triangle indictors are no longer showing the disc is at or below 25mm its minimum thickness.

- **35.00mm Thick** discs that use angles vents have a 12.00mm indicator 2.50m deep and there is a triangle wear indicator that is 5.00mm deep. This indicator shows the direction of rotation of the disc and is the last wear indicator.

All these indicators are on both sides of the disc. These are there to give the user a guide as to the disc wear and when the triangle indictors are no longer showing the disc is at or below 25mm its minimum thickness.

- **35.00mm Discs** which run non handed vents have a 12.00mm diameter indicator 2.50mm deep and an 8.00mm diameter indicator 5.00mm deep. When the 8.00mm diameter indicator is no longer visible on both sides this will show the disc at or below its 25.00mm minimum thickness.

NOTE:- In some circumstances one disc face may wear more than the other. If the disc shows signs of this you must make sure you keep a minimum disc thickness of 5.00mm between the outer disc braking face and the inner cooling vent hole in the centre of the discs.

TECHNICAL CONTACTS.

AP Racing offer several different Carbon materials for different applications and operating conditions. The choice of the best material for given application is complex. Please contact AP Racing Technical Section (racetech@apracing.co.uk) or one of the following engineers directly.

Note: See page 52 for Part Numbering.

- Nic Olson	Race Engineer, GT / ALMS. - Office Tel: +44 (0)24 7688 3314 - Mobile: +44 (0)7768 270 883 - E-mail: nic.olson@apracing.co.uk
- Peter Harris	Race Engineer, GT / WTC. - Office Tel:+44 (0) 24 7688 3305 - Mobile: +44 (0) 7881 782 561 - E-mail: peter.harris@apracing.co.uk
- Bill Condon	Race Technical Sales Executive / DTM. - Office Tel: +44 (0)24 7688 3316 - Mobile: +44 (0) 7785 222 762 - E-mail: bill.condon@apracing.co.uk



BRAKE DISCS - Carbon / Carbon - Installation Details & Part Numbers

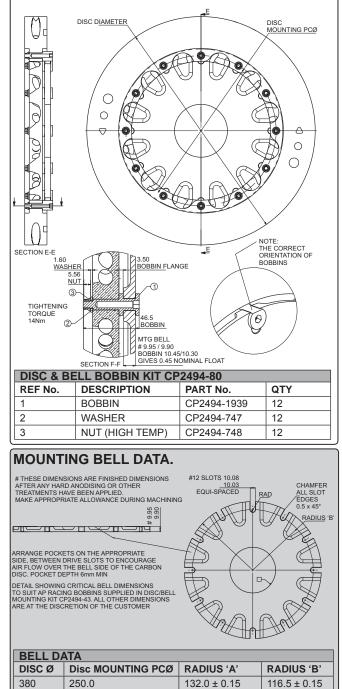
CARBON DISC INSTALLATION DETAILS.

AP Racing offer the following advice as a guide only for mounting and installing a Carbon/Carbon Disc.

The preferred mounting method for carbon discs is " float in the bell" as this allows for axial and radial float between disc and bell. Radial float allows differential expansion of disc and bell thus reducing stresses in the disc

The idea of axial float is to compensate for a certain amount of stub axle / upright flex by allowing the disc to take up its ideal position within the range of float thus avoiding 'Knockback' of the caliper pistons. However the float should not be excessive as disc gyroscopic loads can cause the same effect that the float is meant to alleviate. The amount of axial float will depend somewhat on the application.

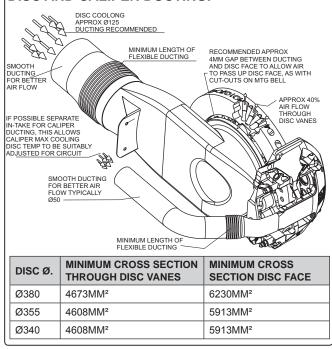
In a 'perfect' system with minimal disc movement relative to the Caliper the amount of float need only be around 0.45mm nominal float. The drawings opposite provide information on disc and bell mounting, typical mounting bell data and an example of disc and caliper ducting.



 119.5 ± 0.15

 104.0 ± 0.15

DISC AND CALIPER DUCTING.



PART NUMBERS.

Below are part number examples for guidance only. Please confirm correct requirements before placing an order with one of the Engineers detailed on page 51 or contact AP Racing's technical department.

- Discs:

AP Racing offer a range of disc from Ø380 or Ø355 x 37mm or 35mm. Listed are some typical GT sized discs

Pads are available in various thicknesses and

- Ø380mm x 37mm Ø355mm x 37mm

Ø355mm x 35mm

Pads:

RH = CP2872-400H17I. LH = CP2872-401H17I. RH = CP2872-402H17I. LH = CP2872-403H17I. RH = CP2872-404H17I. LH = CP2872-405H17I.



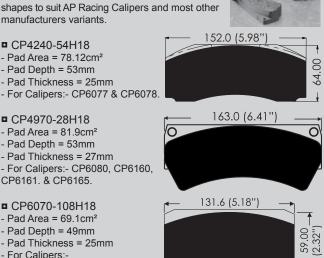
- CP4240-54H18 - Pad Area = 78.12cm²
- Pad Depth = 53mm

manufacturers variants.

- Pad Thickness = 25mm
- For Calipers:- CP6077 & CP6078.

CP4970-28H18

- Pad Area = 81.9cm²
- Pad Depth = 53mm
- Pad Thickness = 27mm - For Calipers:- CP6080, CP6160, CP6161. & CP6165.
- CP6070-108H18
- Pad Area = 69.1cm²
- Pad Depth = 49mm
- Pad Thickness = 25mm
- For Calipers:-
- CP6470, CP6270 & CP6271



225.0

355

340

AP





GENERAL INFORMATION.
 AP RACING PAD MATERIALS.
 BRAKE PAD CHARACTERISTICS.
 BRAKE PAD PROFILES.

BRAKE PADS - General Information

INTRODUCTION.

As the foremost manufacturer of brake systems for competition and high performance vehicles, AP Racing are continually developing and improving our product ranges.

The friction material used in a brake system is a vital factor in the overall performance of that system and it is therefore important to choose the correct pad for the particular application,

which is why AP Racing has now developed its own (APF) branded range of brake pads to suit AP Racing Calipers for both Road and Competition applications, thus **ensuring full system integrity**.

The range currently comprises 5 Material Grades across 24 Pad Shapes. (See page 55 for more technical details)

AP Racing's unparalleled experience in racing brake technology puts us in a unique position to evaluate friction materials and brake pad performance both on our dynamometer test beds and through rigorous vehicle track testing.

Note: AP Racing policy is to offer a range of the best friction materials currently available from whatever source.

GENERAL INFORMATION.

Pages 56 to 61 provide details on a range of pads and friction materials, including our own new APF range for competition and road use with AP Racing brake calipers. This section also includes information to assist in the selection of the most suitable pad for a given application and other useful information on choosing the correct brake pad.

AP Racing Technical Section will be pleased to advise on the most suitable equipment for any particular application and can provide more detailed technical information if required.

BRAKE PAD TEMPERATURES.

An important factor in consistent brake performance is maintaining the operating temperatures within the effective range of the pad material being used by controlling the flow of cooling air from the brake ducts. There are several different methods of monitoring the brake system temperatures:-

1. THERMAL PAINTS

2. BRAKE TEMPERATURE PYROMETER

3. TEMPERATURE STRIPS

For more detailed information of these methods please go to page 50.

'BEDDING IN' PROCEDURES.

■ RACE FRICTION MATERIALS:

AP Racing offer a large variety of the best friction materials currently available from various sources to suit every racing condition. It is therefore very difficult to recommend a common 'Bedding in' procedures suitable for all friction materials. Please refer to the manufacturers own 'Bedding' information for guidance.

D ROAD FRICTION MATERIALS:

For Pads for AP Racing brake calipers or kits use the following procedure:-Bed the pad and disc contact areas by using moderate brake applications for 80Km (50 miles), avoiding excessive speeds, building the stopping power and vehicle speed gradually over the next 80Km (50 miles). This will ensure maximum pad performance and disc life.

FOR OE APPLICATIONS PLEASE REFER TO THE MANUFACTURERS OWN INSTRUCTIONS.

BRAKE NOISE.

Brake noise or squeal is a vehicle system problem since the severity, regularity and tone is a function of the brake and suspension components in combination. This does not represent a problem on competition vehicles where performance is the primary objective but is generally unacceptable for road use. Some vehicles are particularly susceptible to the problem. The contact between the pad and disc during braking creates the raw energy to produce the noise but the actual squeal can be primarily or a combination of the disc, caliper and pad.

Elimination of squeal under all brake operating conditions is difficult to achieve when specifying a brake package whose purpose is to safely absorb very high energy inputs. A number of methods are available to reduce the noise factor of a brake system but assuming the base vehicle suspension system is settled, the reduction or elimination of noise is usually achieved by a process of trial and error. The first and easiest solution to try is the addition of high temperature grease to the back of the pad to provide a damping medium between the piston and pad. Typically Copper Slip is applied although care must be taken to avoid any grease coming into contact with the pad face. The use of high friction brake pads such as Pagid RS4-2 / M1177 creates high energy at the friction interface which can characteristically lead to more brake squeal but some pads are typical for their lower noise rating. These pads are characterised by their lower friction coefficient and reduced initial 'bite'. Examples of such a materials is Ferodo 3432F.

There are a number of disc variants available from AP Racing & the type chosen can have an effect on brake noise, depending again on the pad choice. Generally it is found the multi drilled or grooved discs used in conjunction with competition pads will give unacceptable noise levels for road use, Plain face discs can cause higher levels of squeal, as the pad is not cleaned by the actions of holes or grooves.

For the AP Racing Formula Big Brake kit conversions, we have found a reduced drill pattern with a radiused edge and using APF405 pads give little or no pad noise and still have good performance. Where the noise is a function of the brake pad temperature, characterised by the noise reducing (possibly to zero) as the brakes are used more severely. The pad may also respond to the addition of pad chamfers which reduce the effective pad area and change the pad shape / centre of pressure. These chamfers (10,0mm x 30 degrees) can be added to the leading edge first and their effect assessed prior to the addition of a chamfer on the trailing edge. Please contact AP Racing technical section for more details.

ANTI-SQUEAL SHIMS.

Anti squeal shims are very effective and CP5070 pad family have them fitted as standard. Anti squeal shims are also available for other pad families, but if you experience noise using other pad families please contact the road car technical section for further advice

MATERIAL AVAILABILITY.

In order to get the best performance from your AP Racing Brake System, it is important to choose the friction material which best suits the particular application. AP Racing offer a large variety of the best friction materials currently available from various sources to suit every racing condition. The Individual pad profiles on pages 57 to 61 gives information on all the friction materials available for that pad in the current range.

Note:

Should you wish for a pad profile in another material please contact AP Racing Technical Section for more information.

PAD ORDERING.

1. Refer to caliper listing on page 62 to obtain the correct pad shape for a given caliper and check this against the pad shape illustrations on pages 57 to 61.

2. Consult individual pad profile and select the material from those available referring to the information on pages 62 to 64 if necessary.

3. Example part number below: CP3894D54-APF403. This part number comprises 4 pads (1 axle set).

4. Construct part number as in the example below by adding the material suffix to the basic pad shape family number.

All pads with the following exceptions are sold in sets of 4.
- CP4226, CP3086, CP4484, CP3386, CP2372, CP3666, CP4466 are in pairs (2 pads).

NB. For Carbon / Carbon Pad Material see page 52 for more details

NB. Materials with the blackout segments are on phase out mode and once stocks have been exhausted will be made inactive.

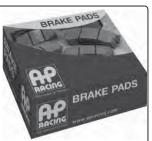
EXAMPLE PAD PART NUMBER.

Pad Family Part Number

- Defines Pad Shape & Thickness18.00mm
- (0.71")

Pad Radial Depth 54.0mm APF403

+44 (0)24 7663 9595



BRAKE PADS - APF Pad Range

APRACING BRAKE PADS

This section provides more detailed information on our own APF Branded brake pads, developed for both Road and Competition applications. The graphs below and adjacent announce the 5 material grades currently available and provide visual details of some pad characteristics.

PAD PROFILES:

Not all materials are available in all pads shapes. Here is a list of the shapes currently available:

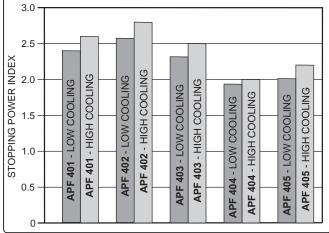
CP2195 / CP2270 / CP2279 / CP2340 / CP2372 / CP2399 / CP3215 / CP3345 / CP3558 / CP3894 / CP5070 / CP5119 / CP5788 / CP6210 / CP6268 / CP6600 / CP6627 / CP6820 / CP7031 / CP7040 / CP7555 / CP7600 / CP7635 / CP8250 / CP8310. (See pages 57 to 61, to check material availability)

NOTE: All the information on this page is offered for guidance only. AP Racing has gathered this information by incorporating the experiences of our engineers and our special dynomometer evaluations carried out in-house.

STOPPING POWER INDEX.

AP Racing have created our own Stopping Power Index. This is related to friction but is also influenced by energy absorption and the change of friction both with temperature and during the braking event. It is based on the total stopping time over a series of constant pressure stops for a range of speed differentials over a complete dynomometer test cycle, this index creates a very good overall measure to compare different friction materials. Higher numbers = more stopping power

N.B. The stopping power is influenced by level of cooling.



MATERIAL GRAPHS.

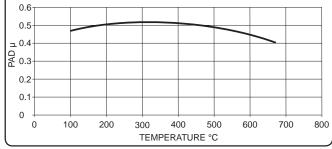
The traditional friction vs temperature graphs exhibited below are derived from our dynomometer test cycle carried out on our 2 in house dynomometers which we use for all pad evaluations.

These graphs are for guidance only. Numbers are not absolute - results can vary according to the test cycle used (load, pressure, speed, cooling etc) but we believe the results shown fairly represent the performance that will be experienced by the user under normal conditions.

APF 401

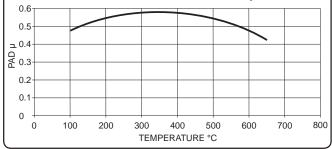
Competition Pad suitable for Circuit & Rally use. Good bite and stable friction give excellent modulation & release characteristics

Should be considered where PFC# 01, Ferodo DS1.11 and Mintex F2R are currently used.



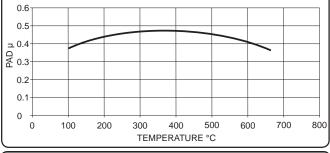
APF 402

Competition Pad for Circuit & Rally use. Not suitable for road use. Higher friction than 401, rising torque, good release, little or no fade. Should be considered where Project Mu H19, PFC # 05, Raybestos ST43, Ferodo DS2.11, Mintex F6R or F4R are currently used.



APF 403

General Competition Pad. Not suitable for road use. Easy to bed, predictable and repeatable performance with good bite & friction. Consider where Raybestos ST41/ST43, Ferodo DS3000 or 4003 are currently used.

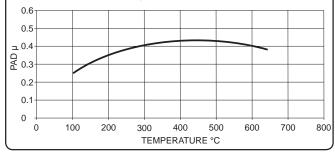


APF 404

Excellent High Performance Road and Track pad.

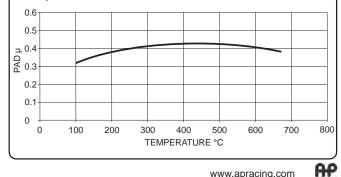
Consistent performance, low wear, disc friendly, low noise, low dust, low fade, good feel.

Consider where Ferodo DS2500, Pagid Blue (RS4-2), Pagid RS421 or Carbo-TechXP10 are currently used.



APF 405

Suitable for High Performance Road, Track and Lightweight circuit cars. Consistent performance, disc friendly, low noise, good feel. Consider where Pagid (Blue) RS4-2, RS4-4, Ferodo DS2500 are currently used.



www.apracing.com

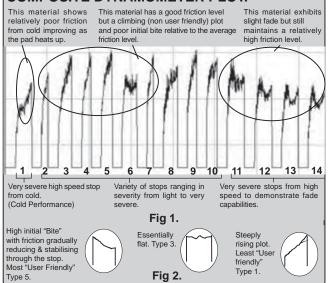
BRAKE PADS - Pad Characteristics

PAD CHARACTERISTICS.

There are numerous characteristics associated with friction materials, few of which are absolute, for example the friction Coefficient (μ) varies depending on temperature, speed, pressure and energy level and no two dynomometer programmes will ever produce quite the same results. Choosing the most suitable pad for your application is a complex problem requiring careful evaluation of all the available information.

To help you with this AP Racing have developed a rating system for the principal pad characteristics incorporating both the experience gathered by our engineers over many years and our special dynomometer evaluation carried out in-house on our state of the art facility. The AP Racing dynomometer brake pad evaluation is based around a series of stops which represent the full range of conditions likely to be experienced in use. A composite dynomometer plot and an explanation of the AP Racing evaluation and rating systems is given below & opposite.

COMPOSITE DYNAMOMETER PLOT.



 AVERAGE FRICTION: Overall mean friction coefficient calculated over the complete test cycle. (Fig 1.)

"BITE": Initial friction at the start of the stop. Rating 1 to 5. (5 = Good, 1 = Poor) (Fig 1.)

FADE: Drop off in friction coefficient from stop to stop when used for very hard braking. Calculated from last 4 stops on test plot on a scale of 1 to 5. (5 = No significant fade). (Fig 1.)

AVERAGE PAD WEAR: A comparative rating of pad wear across all conditions. Rated on a scale of 1 to 5 (1 = best).

PLOT SHAPE: The shape of the friction plot during a brake application. High initial "bite" with friction gradually decreasing through the stop as speed drops off is considered to be the easiest to control (most "user friendly"). A climbing friction level through the stop is considered the most difficult to control (least "user friendly") although some pads with this characteristic are extremely popular due to their overall high friction level and fade resistance. Assessed types 5 to 1. (Fig 2.)

COMFORT / NOISE: Does the pad promote judder or brake squeal ? Important on road car applications but not usually a consideration for racing use.

DISC LIFE: Does the pad promote high disc wear or cracking?. Especially important on road car applications. Rated on a scale of 1 to 5 (5 = best).

■ EFFECTIVE TEMPERATURE RANGE: The temperature range within which the pad material can be considered effective should be used as a comparative guide only as temperature measurement techniques vary significantly and the true picture must include the energy level (quantity of heat). Pad temperatures are affected by disc mass and cooling. Rated 1 to 5 (1 = 200°C / 2 = 350°C / 3 = 500°C / 4 = 650°C and 5 = 800°C).

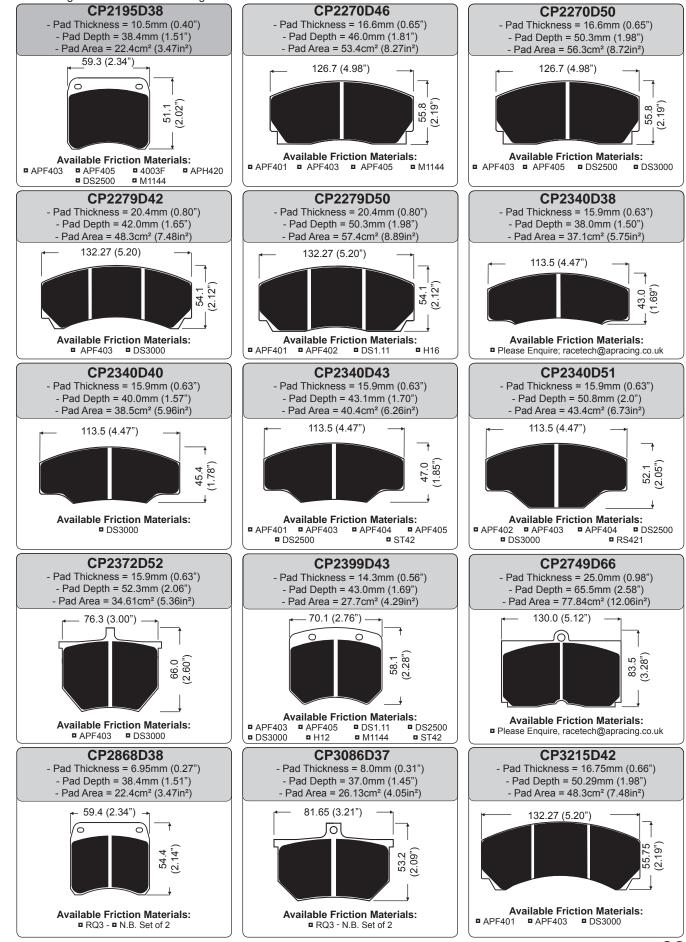
SUITABLE AREA OF USE: The areas for which the pad material is considered most suitable. This is a subjective assessment relying on the pooled experience of AP Racing engineers over many years. Contact AP Racing Technical Section for guidance.

■ PAD MATERIAL PERFORMANCE: The table below provides the ratings given for the characteristics described on the this page. The table results are AP Racing's own, determined from our dynomometer testing and may differ from manufacturers own specifications.

Pad	Perform	nance	!	Characte	eristics.	i.	Wear.	Temp Range.	Suita	ble For							
Material.	Average Friction Mu.		Fade.	Plot Shape.	Disc Life.	Stopping Power	Average Wear.	Temperature Rating.	Road.	Light Comp.	F3 / (T.Car Rear).	Touring Car Front.	Sports Car.	Rally.	Grp 'N'	Hill Climb.	Motor Cycle.
AP Racing P	ad Mater	ials.															
APF401	0.44	4	3	2	3	2.6	4	4				Х	X	X	Х		
APF402	0.47	4	4	2	3	2.8	4	4				Х	X	X	Х		
APF403	0.40	3	3	4	3	2.5	3	4		Х		Х	Х	Х	Х	Х	
APF404	0.35	3	3	4	4	2.0	3	3	Х								
APF405	0.36	3	3	4	4	2.2	3	3	Х	Х	Х					X	
Ferodo Pad M	aterials.																
4003F	0.43	3	3	4	2	N/A	3	2		X	X					X	
DS2500	0.34	3	3	4	4	2.1	3	2	Х								
DS3000	0.42	2	2	4	3	2.5	3	4				Х	Х	X	Х		
DS3000+	0.41	3	3	3	4	2.5	2	4		X	Х			X			
DS1.11	0.43	2	3	1	4	2.5	4	4				Х	Х	Х	Х		
DS2-11	0.47	2	4	2	3	2.7	4	4				Х	Х	X	X		
Mintex Pad Ma	terials.																
F1R	0.46	4	4	3	4	2.7	4	4				Х	Х	Х			
F2R	0.42	4	4	3	4	2.6	4	4				Х	X	X			
F4R	0.47	4	4	3	4	2.5	4	3			X		Х	X	1		
F6R	0.44	3	4	3	4	2.5	3	3			Х		X	X			
M1166	0.38	3	3	3	3	N/A	3	3		Х				X	Х		
Pagid Pad Mat	erials.																
RS14	0.39	3	4	3	5	N/A	4	3				Х	Х	X		Х	
RS4-2	0.35	4	2	4	4	N/A	4	3		X	Х			X		X	
RS4-4	0.34	4	3	4	4	N/A	4	3			Х			X			
Raybestos Pa	d Materials	5.							·								
ST39	0.40	2	2	2	3	N/A	3	2		Х	Х			Х		Х	
ST41	0.42	5	3	4	4	2.6	4	4				Х	X	X	Х		
ST42	0.37	5	4	4	3	2.3	4	4				Х	Х		Х		
ST43	0.39	5	3	5	3	2.5	4	4				Х	X	X			
ST45	0.38	5	3	4	3	2.4	4	4				Х	Х	X			
ST47	No Data Cu	urrently	Available	e, Contact AF	Racing								1				
Other Friction																	
H16	No Data Cu	urrently	Available	e, Contact AF	P Racing						X	Х	X				
H19	No Data Cu	urrently	Available	e, Contact AF	P Racing							Х	Х				
H21				e, Contact AF								х	X				
RQ3	0.41	3	5	3	4	N/A	3	2							1		Х
APH420	0.39	3	5	3	4	N/A	4	2	1								Х
SRR	0.46	5	4	5	4	N/A	1	3							1		Х

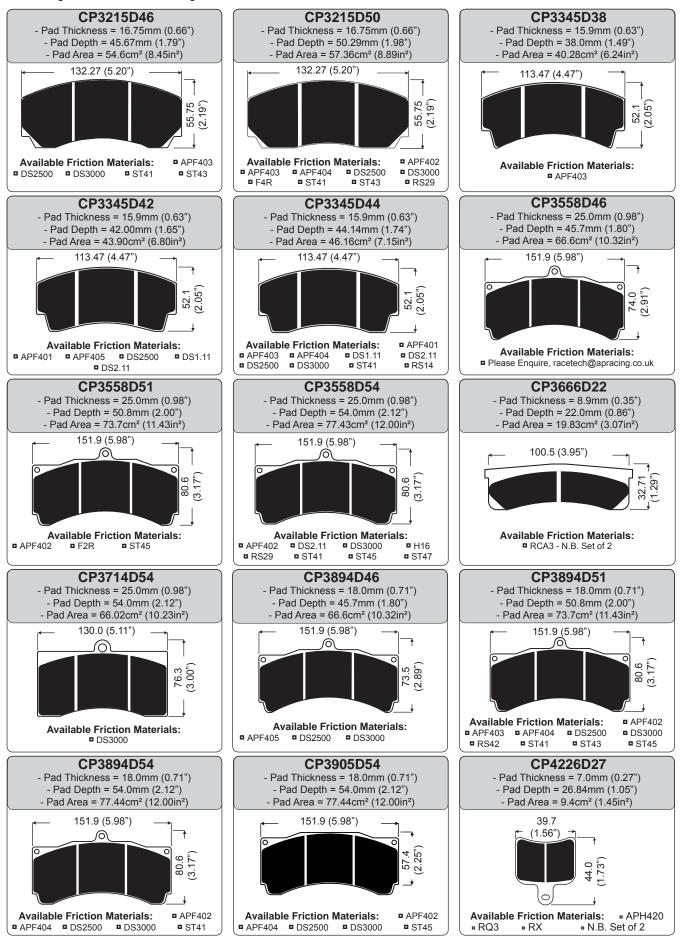
57 BRAKE PADS - Pad Profiles For AP Racing Calipers

The following details provide basic information for each of the pad shapes in the range of brake pads currently available from AP Racing. Please note that drawings are not to scale.



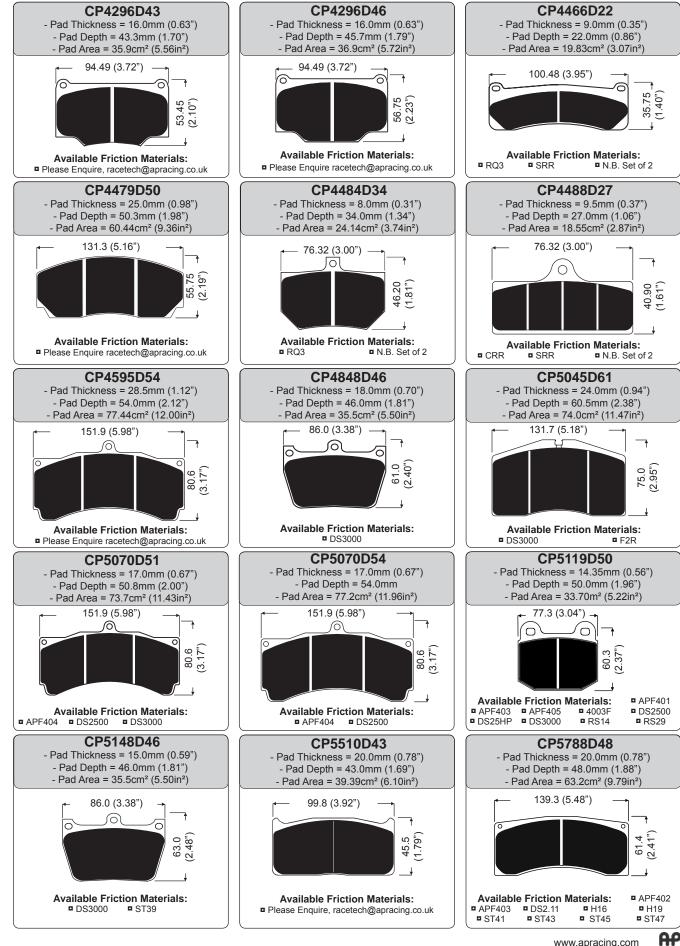
BRAKE PADS - Pad Profiles For AP Racing Calipers

The following details provide basic information for each of the pad shapes in the range of brake pads currently available from AP Racing. Please note that drawings are not to scale.



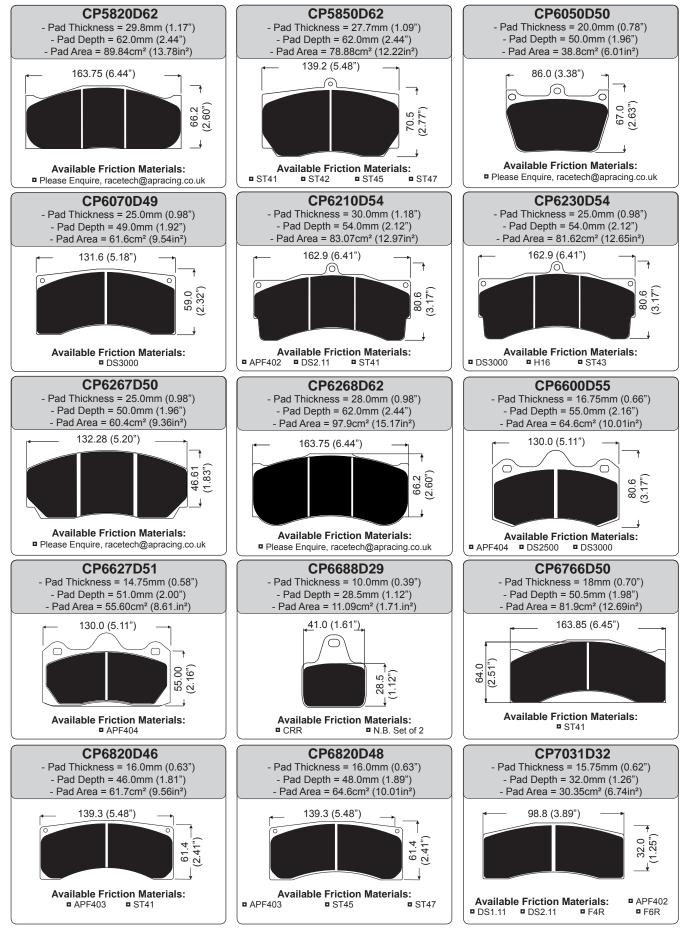


The following details provide basic information for each of the pad shapes in the range of brake pads currently available from AP Racing. Please note that drawings are not to scale.



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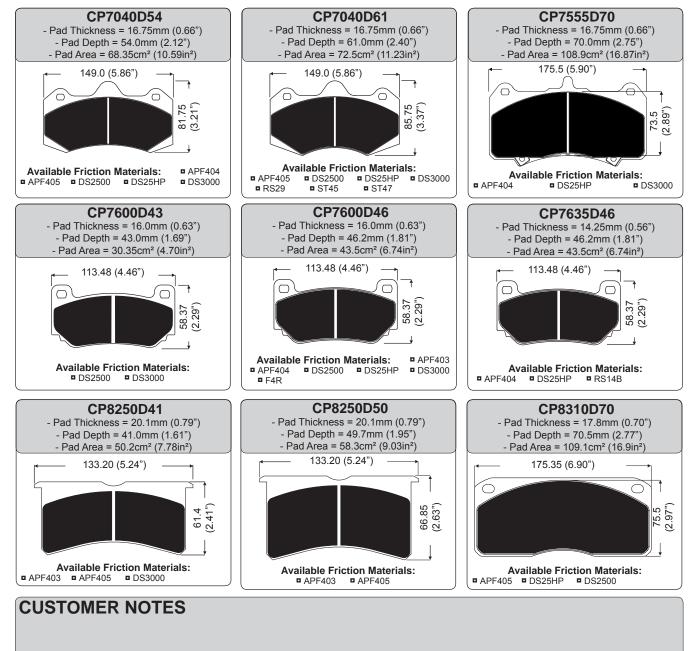
The following details provide basic information for each of the pad shapes in the range of brake pads currently available from AP Racing. Please note that drawings are not to scale.



60



The following details provide basic information for each of the pad shapes in the range of brake pads currently available from AP Racing. Please note that drawings are not to scale.



BRAKE PADS - Pad To Suit AP Racing Calipers

BRAKE PADS TO SUIT AP RACING BRAKE CALIPERS.

The tables below provide details of the complete range of AP Racing brake calipers and the correct pad shape to suit each caliper in the range. As well as providing information on current calipers, the table also includes all the obsolete AP Racing calipers.

(Calipers no longer in production or no longer available from AP Racing), and gives the correct pad family number where still available. Please refer to the individual pad profiles on pages 57 to 61 to ensure that the pad shape is still available. When using the chart the following points should be noted: **1.** Some installations require the use of a 'Scalloped' version of the given pad family. In these cases the full area pad cannot be used.

2. In most cases a thinner version of the original pad can be used as an alternative.

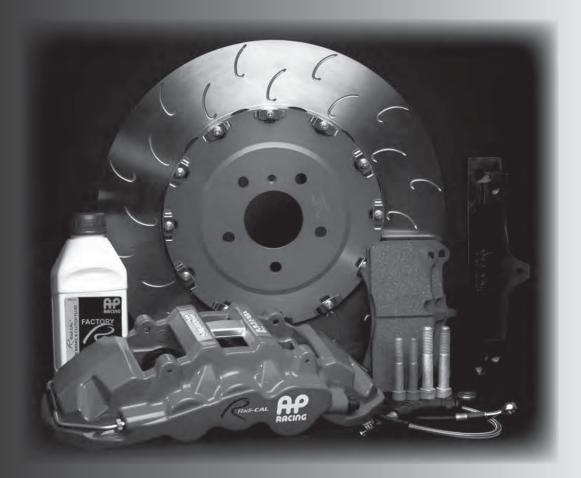
3. A 'Scalloped' pad (smaller radial depth) can usually be used in place of the full area pad but may affect ultimate performance.

NB Inclusion of a caliper in this list does not indicate availability.

OPERAL OPERAL<	Caliper No.	Pad No.	Caliper No.	Pad No.	Caliper No.	Pad No.	Caliper No.	Pad No.	Caliper No.	Pad No.	Caliper No.	Pad No.	Caliper No.	Pad No.	Caliper No.	Pad No.
OPERATION OPERATION <t< th=""><th>CP2195</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>CP7040</th></t<>	CP2195															CP7040
0*220 0*220 0*280 <td< td=""><td>CP2270 CP2271</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>CP4554 CP4556</td><td></td><td></td><td></td><td></td><td></td><td></td><td>CP7040 CP7040</td></td<>	CP2270 CP2271								CP4554 CP4556							CP7040 CP7040
CP3200 CP3200 <thcp3200< th=""> <thcp3200< th=""> <thcp3200< td="" th<=""><td>CP2279</td><td>CP2279</td><td>CP3088</td><td>CP3086</td><td>CP3477</td><td>CP2340</td><td>CP3736</td><td>CP2279</td><td>CP4558</td><td>CP2340</td><td>CP5095</td><td>CP3558</td><td>CP5971</td><td>CP4970</td><td>CP7600</td><td>CP7600</td></thcp3200<></thcp3200<></thcp3200<>	CP2279	CP2279	CP3088	CP3086	CP3477	CP2340	CP3736	CP2279	CP4558	CP2340	CP5095	CP3558	CP5971	CP4970	CP7600	CP7600
CP280 CP280 <th< td=""><td>CP2290</td><td></td><td>CP3089</td><td></td><td></td><td>CP2340</td><td></td><td>CP2340</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>CP7600 CP7600</td></th<>	CP2290		CP3089			CP2340		CP2340								CP7600 CP7600
CP2207 CP2307 CP3307 CP2307 CP3307 CP3307<	CP2361						CP3736 CP3746	CP2279 CP2702								CP7600 CP7600
CP2300 CP2300<	CP2372	CP2372	CP3094	CP2279	CP3482	CP2340	CP3750	CP3215	CP4577	CP3558	CP5111	CP5111	CP6041		CP7605	CP7600
CP2300 CP2300<	CP2373							CP3554				CP5234		CP4970		CP7600 CP7600
CP2860 CP2100 CP2200 CP2400 CP2200 CP4400 CP2100 CP2200 CP2200 <thcp2200< th=""> <thcp2200< th=""> <thcp2200< td="" th<=""><td>CP2383</td><td></td><td></td><td></td><td></td><td></td><td></td><td>CP3086</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>CP7600</td></thcp2200<></thcp2200<></thcp2200<>	CP2383							CP3086								CP7600
CP280 CP281 CP2810 CP280 CP280 <t< td=""><td>CP2384</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>CP7600</td></t<>	CP2384															CP7600
CP2400 CP2171 CP3446 CP2201 CP3460 CP2101 CP3460 CP3114 CP3414 CP3414<																CP7635 CPF751
CP2486 CP2387 CP2378 CP2374 CP2384 CP2378 CP2374 CP2384 CP2378 CP2374 CP2384 CP2378 CP2377 CP2384 CP2384 CP2384 CP2384 CP2384 CP2384 CP2386 CP2371 CP2386 CP2371 CP2384 CP2386 CP2371 CP2384 CP2386 CP2371 CP2384 CP3885 CP3885 CP3885 CP3885 CP3886 CP3886 <thcp3886< th=""> <thcp3886< th=""> <thcp3886< td="" th<=""><td>CP2409</td><td>CP2279</td><td>CP3148</td><td>CP2340</td><td>CP3495</td><td>CP2279</td><td>CP3790</td><td>CP2279</td><td>CP4604</td><td>CP3714</td><td>CP5147</td><td>CP2340</td><td>CP6060</td><td>CP6210</td><td>CP7853</td><td>CP4488</td></thcp3886<></thcp3886<></thcp3886<>	CP2409	CP2279	CP3148	CP2340	CP3495	CP2279	CP3790	CP2279	CP4604	CP3714	CP5147	CP2340	CP6060	CP6210	CP7853	CP4488
CP2505 CP2185 CP2180 CP2180 CP2800 CP2800<	CP2425															#7751 #7751
CP2582 CP3146 CP3146 CP3141 CP3141<	CP2465 CP2505											CP3215 CP3215				#7751
CPC2864 CP1714 CP0107 CP2107 CP2207 CP2107 CP2207 CP2307 CP3308 CP4400 CP4307 CP3308 CP4400 CP4307 CP3307	CP2561					CP2340		CP2279			CP5209	CP3215		CP6230		CP8310
CP2370 CP3772 CP170 CP2375 CP2375 CP2375 CP3275 CP3276 CP3276 CP3275 CP3276 CP3275 CP3276 CP3276 </td <td></td> <td>CP8310 CP8310</td>																CP8310 CP8310
CP2575 CP2270 CP172 CP2285 CP2275 CP2275 CP2285 CP2275 CP2285 CP2885 CP2885 </td <td>CP2570</td> <td>CP2372</td> <td>CP3170</td> <td>CP2279</td> <td>CP3548</td> <td>CP3548</td> <td>CP3809</td> <td>CP2279</td> <td>CP4620</td> <td>CP3215</td> <td>CP5218</td> <td>CP2399</td> <td>CP6080</td> <td>CP4970</td> <td>CP8317</td> <td>CP8310</td>	CP2570	CP2372	CP3170	CP2279	CP3548	CP3548	CP3809	CP2279	CP4620	CP3215	CP5218	CP2399	CP6080	CP4970	CP8317	CP8310
CP2287 CP2389 CP3377 CP2380 CP2378 CP4838 CP3865 CP234 CP234 CP3241 CP3241 <td>CP2575</td> <td>CP2270</td> <td></td> <td></td> <td></td> <td>CP3549</td> <td></td> <td>CP3714</td> <td></td> <td></td> <td>CP5219</td> <td>CP3215</td> <td>CP6083</td> <td></td> <td></td> <td>CP8250</td>	CP2575	CP2270				CP3549		CP3714			CP5219	CP3215	CP6083			CP8250
CPE2378 CPE3376 CPE3377 CPE3377 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>CP6086</td><td></td><td></td><td>CP8250 CP8250</td></t<>													CP6086			CP8250 CP8250
C P2300 C P2300 <t< td=""><td>CP2578</td><td>CP2372</td><td>CP3178</td><td>CP2399</td><td>CP3554</td><td>CP3555</td><td>CP3825</td><td>CP3800</td><td>CP4648</td><td>CP2195</td><td>CP5235</td><td>CP5119</td><td>CP6087</td><td>CP3558</td><td>CP8520</td><td>CP7555</td></t<>	CP2578	CP2372	CP3178	CP2399	CP3554	CP3555	CP3825	CP3800	CP4648	CP2195	CP5235	CP5119	CP6087	CP3558	CP8520	CP7555
CP2800 CP2185 CP3007 CP3837 CP3836 CP2300 CP2301 CP2301 CP2301 CP3305 CP2301 CP3305 CP2301 CP3305 CP2301 CP3305 CP2301 CP3305 CP2301 CP3305 CP2305 CP3305 CP2305 CP3305 CP2305 CP3305 CP2305 CP3305 CP2305 CP3305 CP3305 CP3305 CP3305 CP3305 CP3305 CP3305 <thcp3305< th=""> <thcp3305< th=""> <thcp3305< td="" th<=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>CP7555 CP7555</td></thcp3305<></thcp3305<></thcp3305<>																CP7555 CP7555
CP2832 CP2837 CP2836 CP2336 CP2336 CP2336 CP2336 CP2336 CP2336 CP2336 CP2337 CP3337 CP2337 CP3337 CP2339 CP2330 CP2330 CP2330 CP2330 CP2330 CP2330 CP2330 CP3337 CP3346 CP3335 CP3346 CP3335 CP3346 CP3336 CP3346 CP3336 CP3346 CP3336 CP3346 CP3346 CP3346 CP3346 CP3346 CP3346 CP3346 CP3346 CP3440 CP4440<	CP2600	CP2195	CP3207	CP3207	CP3557	CP2279	CP3846	CP2340	CP4680	CP4860	CP5270	CP3558		CP4240	CP8530	CP6600
CP2386 CP2277 CP2387 CP2386 CP3886 CP4888 CP4888 CP4889 CP4880 CP4880<	CP2601	CP2195				CP2340		CP3554				CP2564				CP6600
CP2283 CP2275 CP2284 CP2284 CP2384 CP3894 CP3894 CP4898 CP4810 CP5810 CP6866 C CP2867 CP2840 CP2847 CP3840 CP3848 CP4706 CP3714 CP4810 CP5810 CP68143 CP68143 CP68143 CP68143 CP68144 CP4810 CP68144																CP6600 CP7040
CP2861 CP2340 CP2370 CP2370 CP2340 CP3886 CP3714 CP6410 CP6126 CP6126<	CP2639	CP2279	CP3228	CP2340	CP3567	CP2340	CP3894	CP3894	CP4698	CP4595	CP5311	CP2399	CP6120	CP5119	CP9440	CP3215
CP2867 CP238 CP2346 CP2446 CP2446 CP2446 CP4746 CP4714 CP4466 CP4230 CP4467 CP4751 CP4567 CP5670 CP4466 </td <td></td> <td>CP3905 CP6230</td>																CP3905 CP6230
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CP2809 CP2372 CP3257 CP3257 CP4370 CP4370 CP4370 CP4325 CP3315 CP46169 CP2712 CP2326 CP3216 CP3366 CP3366 CP3377 CP4370 CP4325 CP3356 CP4630 CP6230	CP2696	CP2195	CP3248	CP3248		CP2279		CP2279			CP5510	CP5510				
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FACTORY BRAKE KITS



FACTORY BIG BRAKE KITS.
 - INTRODUCTION.
 - APPLICATION LISTING.

■ FACTORY COMPETITION BRAKE KITS.

FACTORY BIG BRAKE KITS - Introduction

FACTOR

AP Racing, the world's premier brake specialists continue to put their unrivalled experience into producing up-rated brake kits for a range of models. The Factory Big Brake Kits are compatible with standard suspension on all applications, but in the majority of cases will require an aftermarket wheel. AP Racing continually improve



their brake kits by carrying out extensive testing programs to replicate the conditions encountered by performance brake systems in everyday use. Information on the equipment used in Factory Big Brake Kits, together with performance data obtained from an independent test on a typical high performance vehicle and a current application lists are given on pages 65 and 66.

FACTORY BIG BRAKE KITS HAVE:-

INCREASED STOPPING POWER - Bigger discs and multi piston calipers mean more power.

REDUCED FADE - Greater tolerance to heat build up means consistent stops.

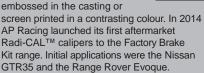
RACING PEDIGREE - Built with the same care and by the same technicians as our racing brakes.

FULLY ADAPTED FOR ROAD USE - Adapted specifically for the road with dust seals and a durable anti corrosion finish.

FACTORY BIG BRAKE KITS ARE:

9 4 OR 6 PISTON DIFFERENTIAL BORE CALIPERS. Calipers are made to AP Racing's exacting standards and use two or

three pairs of opposing pistons, depending on the application, in each caliper. Trailing edge pistons often have a slightly larger diameter than the leading ones, to compensate for mechanical end load and protect the pads from tapered wear. On road cars with thin spoke alloy wheels the visual effect of the brakes is important. The calipers are hard anodised and then finished with a tough Red or Black protective paint finish with the AP Racing logo

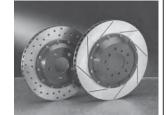




LARGE DIAMETER DISCS.

Ventilated discs have 24, 30, 36, 48 or 72 cooling vanes, depending on the application, to draw air through the centres of the discs.

They are handed left and right, and are cross drilled or grooved, again, depending on the application, to allow gasses that build up on the pad surface to escape.



Where cross drilling is used it is more restrained than on our full face race discs, as pad longevity is more important on a road car than weight saving. The discs are wider and of a larger diameter than standard. The extra material controls heat buildup and the larger diameter means that the calipers can be mounted further away from the centre increasing the leverage effect, which increases braking torque while decreasing effort required on the pedal.

HEAVY DUTY DISC APPLICATIONS.

Some heavy duty applications will use AP Racing's latest disc mounting technology.

Either Bobbin Float or Strap Drive Systems are used. The strap drive option uses a series of stainless steel straps to locate the disc to the mounting bell, producing a flexible coupling between the hub and the disc faces, this allows the disc to run true in the caliper under all conditions and also permits the disc to expand and contract without being restricted.

PERFORMANCE BRAKE PADS.

Almost all AP Racing Factory Big Brake Kits come complete with AP Racing APF404 pads. These are ideally suited for all round performance road use. We can advise on, or specify and supply alternative pads specifically for track days.



QO RACING



■ FACTORY *<* DOT 5.1 BRAKE FLUID.

Factory C DOT 5.1 meets the performance criteria of DOT 5.1 and as such is one of the most advanced brake fluids on the market, suitable for all conditions likely to be encountered in modern driving conditions.



STAINLESS STEEL BRAIDED HOSES & GUARDS.

Not only do braided hoses offer extra protection against damage, they also resist expansion when fluid within them is under pressure. Standard hoses can 'give' under pressure resulting in a spongy feel.

ALUMINIUM BELLS.

To prevent heat distortion and stress cracking, the special cast iron discs are mounted on aluminium bells. (Except BMW Mini & some rear kits.) This allows for the tiny amount of flexing required to avoid distortion.



DISCRET STATE OF CONTINUE BRACKETS. Machined from aluminium or steel billet for

maximum strength. The brackets ensure accurate relocation of the

calipers making installation straight forward.



BOLTS, WASHERS AND FIXINGS.

AP Racing Brake Kits are complete conversions containing everything you need. Disc and bells are already assembled, mounting nuts and bolts are of high tensile steel.

VENTILATED DISC AND BELL KITS AP Racing now produce disc and bell kits as aftermarket direct replacements for OE discs. These kits are designed to replace the standard

single piece disc retaining the vehicles production caliper. The kits includes either bobbin float, strap drive or rigid (Bolted) disc and bell assemblies and for the kit with pads a set of AP Racing APF404 or Ferodo DS2500 pads. For applications and part number details see page 45.









FACTORY BIG BRAKE KITS - Application listings - Audi to Maserati

	A1 UR Quattro,10V/20V.	81 - 90	CP5200-1014					
	AD 4 0T			4 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404	8Jx17" TSW Hockenheim R.
	A3 1.8T.	96 - 03	CP5200-1025BK.G8 CP5570-1003BK.G8	4 Pot 6 Pot	Ø330x28 / 48V Ø330x28 / 48V	CP3580-2898G8 (RH) / -2899G8 (LH) CP3580-2898G8 (RH) / -2899G8 (LH)	CP3215D50-APF404 CP5070D51-APF404	8Jx17" TSW Hockenheim R.
	A4.	94 - 02	CP5200-1007	4 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404	8Jx17" TSW Hockenheim R.
	A4 (B8)	2008 on	CP55555M1048BK. CG12	6 Pot	Ø355x32 / 48V	CP6895-03M.CG12 (RH) & (LH) Disc Kit.	CP3894D54-APF404	18" or 19" OE
	A5 or S5	2008 on	CP5555M1048BK.	6 Pot	Ø355x32 / 48V	CP6895-03M.CG12 (RH) & (LH)	CP3894D54-APF404	18" or 19" OE
	A6.	97 - 04	CG12 CP5200-1007	4 Pot	Ø330x28 / 48V	Disc Kit. CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404	8Jx17" TSW Hockenheim R.
AUD	RS4 Front.	00 - 01	CP55555M1034	6 Pot	Ø362x36 / 48V	CP5772-6090CG12 RH/-6091CG12 LH	CP3894D54-DS2500	8.5Jx18", ET20 Standard 9 Spoke
믿	RS4 Rear.	00 - 01	CP6602-1000	4 Pot	Ø343x26 / 36V	CP6950-104T2 (RH) / -105T2 (LH)	CP6606D51-DS2500	Standard Wheel - Kit includes mechanical park brake caliper.
	TT.	98 - 06	CP5200-1046	4 Pot	Ø330x28 / 48V	CP3580-2898CG8 (RH) / -2899CG8 (LH)	CP3215D50-APF404	7.5Jx17" ET32 Standard Ronal.
	S2 Turbo Coupe, 5 Stud.	90 - 96	CP5570-1009 CP5200-1008	6 Pot 4 Pot	Ø330x28 / 48V Ø330x28 / 48V	CP3580-2898CG8 (RH) / -2899CG8 (LH) CP3580-2898RD (RH) / -2899RD (LH)	CP5070D51-APF404 CP3215D50-APF404	8Jx17" TSW Hockenheim R.
		99 - 03	CP5200-1046	4 Pot	Ø330x28 / 48V	CP3580-2898CG8 (RH) / -2899CG8 (LH)	CP3215D50-APF404	7.5Jx17" ET32 Standard Ronal.
	S3.	2003 -	CP5570-1009 CP5575M1011BK.	6 Pot	Ø330x28 / 48V	CP3580-2898CG8 (RH) / -2899CG8 (LH) CP6895-03M.CG12 (RH) & (LH)	CP5070D51-APF404	
		2012	CG12	6 Pot	Ø355x32 / 48V	Disc Kit.	CP5070D54-APF404	18" OE Requires 3mm Spacer.
	S4 Quattro Front.	98 - 01	CP5570-1005	6 Pot	Ø330x28 / 48V	CP3580-2898CG8 (RH) / -2899CG8 (LH)	CP5070D51-APF404	7.5Jx17" ET32 Standard Ronal.
	318i & 325i, Compact	91 - 98	CP5200-1019	4 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404	8Jx17" BBS.
	E36.	00 00	CP5570-1010 CP5200-1048.G8	6 Pot 4 Pot	Ø330x28 / 48V Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH) CP3580-2898G8 (RH) / -2899G8 (LH)	CP5070D51-APF404 CP3215D50-APF404	01.478 000
	3 Series E46.	98 - 06	CP5570-1011.G8	6 Pot	Ø330x28 / 48V	CP3580-2898G8 (RH) / -2899G8 (LH)	CP5070D51-APF404	8Jx17" BBS.
	330i E46. 335i E92. Front	98 - 06	CP5570-1011.G8 CP5575-1009.G8	6 Pot 6 Pot	Ø330x28 / 48V Ø355x32 / 48V	CP3580-2898G8 (RH) / -2899G8 (LH) CP3581-536G8 (RH) / -537G8 (LH)	CP5070D51-APF404 CP5070D54-APF404	8Jx18" Standard.
	335i E92. Rear	2006 on	CP6625-1000BK	4 Pot	Standar	d BMW Disc. Not Included in kit.	CP6600D50-APF404	18" Standard Wheel.
	535i E60. F10 - 5 Series	03 - 2010 2010	CP5555-1043R2.T2 CP8521Z1002.GA	6 Pot 6 Pot	Ø362x36 / 48V Ø370x35 / 48V	CP4914-126T2 (RH) / -127T2 (LH) CP8080Z32GA (RH) / -33GA (LH)	CP3894D54-APF404 CP7555X70-DS25HP	Standard Wheel. 19" Aftermarket Wheel.
	840i Front.		CP7041-1000.G8	6 Pot	Ø343x32 / 48V	CP3581-542G8 (RH) / -543G8 (LH)	CP7040D54-APF404	
	840i Rear.	92 - 99	CP7607-1003R2. G8	4 Pot	Ø328x24 Int.	CP4475-124G8 (RH) / 125G8 (LH)	CP7600D46-APF404	9Jx18", Alpina KBA42255.
			CP5555-1009	6 Pot	Ø343x32 / 48V	CP3581-542G8 (RH) / -543G8 (LH)	CP3894D54-APF404	18" Aftermarket.
	M3, E36 Front.	93 - 2001	CP5200-1036 CP5200-1036.G8	4 Pot 4 Pot	Ø330x28 / 48V Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH) CP3580-2898CG8 (RH) / -2899CG8 (LH)	CP3215D50-APF404 CP3215D50-APF404	8J x 17" M Sport
	M3, E36 Rear.	2001	CP5200-1036.G8 CP5144-1002	4 Pot		d BMW Disc. Not Included in kit.	CP3215D50-APF404 CP2340D43-APF404	8Jx17", M Sport
	M3, E46 Front.	01 - 06	CP5555-1037	6 Pot	Ø356x32 / 48V Ø356x32 / 48V	CP7177-110CG8 (RH) / -111CG8 (LH)	CP3894D54-APF404	18", Aftermarket. 18" / 19" BMW Standard.
		04 00	CP5575-1004 CP5144-1003	6 Pot 4 Pot		CP7177-110CG8 (RH) / -111CG8 (LH) d BMW Disc. Not Included in kit.	CP5070D54-APF404 CP2340D51-APF404	
	M3, E46, Rear.	01 - 06	CP5144-1004.G8	4 Pot	Ø328x20 / 48V	CP4475-122G8 (RH) / -123G8 (LH)	CP2340D51-APF404	18" / 19" BMW Standard.
	M3, E92 Front, 18" wheel	2006 on	CP55555M1050BG. G8	6 Pot	Ø368x36 / 72V	CP6895-02M.G8 kit	CP3894D54-APF404	18" OE.
	M3, E92 Front, 19"	2006.00	CP55555M1049BG.	6 Pot	Ø378x36 / 72V	CP6895-01M.G8 Kit	CP3894D54-APF404	407 05
	wheel M3, E92 Rear	2006 on	G8 CP6602-1001BG.G8	4 Pot	Ø352x26 / 48V	CP6565-172G8 (RH) / -173G8 (LH)	CP6606D51-DS2500	19" OE.
	M5, E34.	88 - 95	CP5555-1001	6 Pot 6 Pot	Ø343x32 / 48V	CP3581-542G8 (RH) / -543G8 (LH)	CP3894D54-APF404 CP3894D54-APF404	8Jx17", 5 Spoke Standard. 18" BMW Aftermarket.
	M5, / 5 Series, E39.	97 - 03	CP5555-1036.G8 CP5555-1038.G8	6 Pot	Ø343x32 / 48V Ø356x32 / 48V	CP3581-542G8 (RH) / -543G8 (LH) CP7177-110CG8 (RH) / -111CG8 (LH)	CP3894D54-APF404 CP3894D54-APF404	18", Aftermarket / Grooved Disc.
	M5, E60.	05 - 10	CP55555M1051.T2	6 Pot	Ø378x36 / 48V	CP6895-01M.T2	CP3894D54-APF404	Standard Wheel.
	M5, E60 Rear. 5 Series, E39.	05 - 10 95 - 03	CP6635-1000.T2 CP55555-1025	4 Pot 6 Pot	Ø366x26 / 48V Ø356x32 / 48V	CP6565-122T2 (RH) / -123T2 (LH) CP7177-110CG8 (RH) / -110CG8 (LH)	CP6600D55-APF404 CP3894D51-APF404	8Jx18", Aftermarket.
	M6, E63/64	05 - 10	CP55555M1051.T2	6 Pot	Ø378x36 / 48V	CP6895-01M.T2	CP3894D54-APF404	
	M6, E63/64 Rear. Mini One, Cooper & S.	05 - 10 2000 on	CP6635-1000.T2 CP7611-1000	4 Pot 4 Pot	Ø366x26 / 48V Ø304x24	CP6565-122T2 (RH) / -123T2 (LH) CP7080-104SD x 2	CP6600D55-APF404 CP7600D46-APF404	16"/17" Aftermarket Rim.
	Mini R53 & R56	2000 on	CP6638-1000.CG8 CP7645-1001BG.G4	4 Pot	Ø330x26 / 40V Ø315x22 / 48V	CP5175-144.CG8 (RH) / -145.CG8 (LH) CP4348-942G4 (RH) / -943.G4 (LH)	CP6627D51-DS500 CP7635D46-APF404	17" Aftermarket 17" JCW Wheels
	Mini Countryman &	2000 on 2010 on	CP7645-1001BG.G4	4 Pot 4 Pot	Ø330x26 / 48V	CP3580-1162G8 (RH) / -1163G8 (Lh)	CP7635D46-APF404 CP3215D50-APF404	17" Aftermarket
	Crossfire.	2010 00	CP5555-1009	6 Pot	Ø343x32 / 48V	CP3580-1162G8 (RH) / -1163G8 (LH) CP3581-542G8 (RH) / -543G8 (LH)	CP3215D50-APF404 CP3894D54-APF404	8Jx17", M Sport
	Z3M Coupe Front.	98-02	CP5505-1009 CP5200-1036.G8	4 Pot	Ø330x28 / 48V		CP3894D54-APF404 CP3215D50-APF404	8Jx17", M Sport / Grooved Disc.
	Z3M Coupe Rear.	98-02	CP5144-1002	4 Pot		d BMW Disc. Not Included in kit.	CP2340D43-APF404	8Jx17", M Sport
	Z4M Coupe (Only) Front. Z4M Coupe (Only) Rear.	06 - 08	CP5575-1010BK.G8 CP5144-1004.G8	6 Pot 4 Pot	Ø355x32 / 48V Ø328x20 / 48V	CP7177-110CG8 (RH) / -111CG8 (LH) CP4475-122G8 (RH) / -123G8 (LH)	CP5070D54-APF404 CP2340D51-APF404	18" Standard Wheel. Z4M (only) Kits do not fit Alpina models.
	-		CP5570-1001	6 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP5070D51-APF404	
	Escort Cosworth.	91 - 96	CP5200-1000	4 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404	8Jx17", TSW Hockenheim.
	Fiesta ST Mk5	05 - 08	CP6637-1001. CG12	4 Pot	Ø315x24 / 48V	CP4348-940.CG12 (RH) / -941.CG12 (LH)	CP6627D51-APF404	17" Standard Wheel
	Fiesta ST MK7	2013	CP6637-1004CG12	4 Pot	Ø315x24 / 48V	CP4348-940.CG12 (RH) / -941.CG12 (LH)	CP6627D51-APF404	17" Aftermarket Wheel
	Focus ST170 (SVT). Focus RS.	02 - 04 02 - 03	CP5200-1063R2.SD CP7040-1006	4 Pot 6 Pot	Ø330x26 / 48V Ø355x32 / 48V	CP3580-1164RD (RH) / -117RD (LH) CP4542-106CG12 (RH) / -107CG12 (LH)	CP3215D50-APF404 CP7040D54-APF404	Standard 17". Standard 02/18".
Θ	Focus RS Mk2	09 / 10	CP5575-1012BG.	6 Pot	Ø355x32 / 48V	CP4542-106.PG10 (RH) /	CP5070D54-APF404	19" OE
I F	Focus ST MK2	05 - 10	PG10 CP6628-1004BK	4 Pot	Ø343x28 / 48V	CP4542-107.PG10 (LH) / CP4914-160CG8 (RH) / -161CG8 (LH)	CP6627D51-DS2500	18" Aftermarket Wheel
	Mondeo ST220	02 - 06	CP5200-1065R2.SD	4 Pot	Ø330x26 / 48V	CP3580-1164:SD (RH) / -1165:SD (LH)	CP3215D50-APF404	Standard 18" Wheel. 7.5Jx17". ATP Torsion.
	Sapphire Cosworth 4x4 Sierra Cosworth 2WD.	90 - 92 87 - 89	CP5200-1000 CP5200-1011	4 Pot 4 Pot	Ø330x28 / 48V Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH) CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404 CP3215D50-APF404	8Jx17", TSW Hockenheim R.
			CP5200-1057	4 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404	
	Civic Type R. EP3	02 - 05	CP5570-1012	6 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP5070D51-APF404	17", Aftermarket Wheel.
	Civic Type R. FN2 Integra R, 5 Stud	2007 on 98 - 01	CP6637-1002.CG8 CP5200-1043	4 Pot 4 Pot	Ø330x26 / 48V Ø330x28 / 48V	CP3580-1180CG8 (RH) / -1181CG8 (LH) CP3580-2898RD (RH) / -2899RD (LH)	CP6627D51-DS2500 CP3215D50-APF404	7.5Jx17"
DA	Integra R, 4 Stud	98 - 01	CP5200-1042	4 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404	7.5Jx17"
	S2000, Black Caliper. S2000, Red Caliper.	99 - 09	CP6637-1000.CG8 CP6637-1000R2.CG8	4 Pot	Ø330x26 / 48V	CP3580-1180CG8 (RH) / -1181CG8 (LH)	CP6627D51-DS2500	17", Aftermarket.
		96 96		6 Pot	Ø356v25 / 401/	CD3581-1006T2 (DU) / 4007T2 (LU)		8 y19" Afformation
JA	XK8 / XKR Front. XJR8 Front.	96 - 06 97 - 03	CP5555-1013 CP5555-1004	6 Pot 6 Pot	Ø356x35 / 48V Ø356x35 / 48V	CP3581-1096T2 (RH) / -1097T2 (LH) CP3581-1096T2 (RH) / -1097T2 (LH)	CP3894D51-APF404 CP3894D51-APF404	8Jx18", Aftermarket. 8Jx18", Aftermarket.
6	XJR8 Rear.	97 - 03	CP5108-1004	4 Pot	Ø306x23 Integ	CP4450-130T2 x 2	CP3894D31-APF404 CP2340D43-APF404	8Jx18", Aftermarket.
AR	XJS.	84 - 91	CP5200-1026	4 Pot	Ø304x32 / 30V	CP3580-2604G4 (RH) / -2605G4 (LH)	CP3215D50-APF404	8Jx16", Speedline SL243/A.
	ZDA. MX5, MK1/2, 4 Stud. ZDA. RX7.	85 - 06 92 - 00	CP7611-1001R2.SD CP5570-1016R2.G8	4 Pot 6 Pot	Ø276x24 / 36V Ø330x28 / 48V	CP4136-923SD (Non Handed) CP3580-2898CG8 (RH) / -2899CG8 (LH)	CP7600D46-APF404 CP5070D51-APF404	16", Aftermarket. 17", Aftermarket.
MA								
MA MA	SERATI Gransport Fr.	01 - 07	CP5575Y1013R2.SD	6 Pot	Ø362x32 / 48V	CP6565Y178SD (RH) / -179SD (LH)	CP5070D54-APF404	18"Standard Wheels

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AP RACING

đ FACTORY BIG BRAKE KITS - Application listings - Mitsubishi to VW

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A	PPLICATION.	YEAR.	BRAKE KIT PART No.	CALIPER TYPE.	DISC SIZE / No VANES.	BRAKE DISC PART NUMBERS.	BRAKE PADS.	WHEEL & NOTES.
	Evo 3.	95 - 96	CP5200-1066	4 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404	17", Aftermarket Wheel.
	Evo 4, 5 and 6 Front.	96 - 01	CP5200-1024 CP5570-1004	4 Pot 6 Pot	Ø330x28 / 48V Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH) CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404 CP5070D51-APF404	7.5Jx17", OZ Super Turismo.
	Evo 5 and 6 Rear.	96 - 01	CP5108-1002	4 Pot		rd Evo Disc. Not included in kit.	CP2340D43-APF404	7.5Jx17", OZ Super Turismo.
M			CP5555-1032		Ø332x32 / 48V	CP3581-766G8 (RH) / -767G8 (LH)	CP3894D51-APF404	8Jx17", ET38 Standard.
TSL	Fue 7 0 8 0 Freet	01 00	CP5555-1035 CP7040-1008R2.	C Det	Ø362x32 / 48V	CP3718-1068RD (RH) / -1069RD (LH)	CP3894D54-APF404	8Jx18", Compomotive.
MITSUBISH	Evo 7, 8 & 9 Front.	01 - 08	CG12	6 Pot	Ø362x32 / 48V	CP4542-112CG12 (RH) / -113CG12 (LH)	CP7040D54-APF404	19", Aftermarket.
ΪH			CP7040-1009R2. CG12		Ø355x32 / 48V	CP4542-106CG12 (RH) / -107CG12 (LH)	CP7040D54-APF404	18", Aftermarket.
	Evo 7, 8 & 9 Rear.	01 - 08	CP5108-1003	4 Pot	Standa	rd Evo Disc. Not included in kit.	CP2340D43-APF404	8Jx17", ET38 Standard.
	Evo 10 Front.	2008 on	CP7040M1014BK. CG12	6 Pot Ø355x32 / 48V CI		CP6895-03M.CG12 (RH) & (LH) Disc Kit.	CP7040D54-APF404	18" OE.
	Evo 10 Rr	2008 on	CP7615-1003BK	4 Pot	Standa	rd Evo Disc. Not included in kit.	CP7600D46-APF404	10 02.
	Skyline GTR32 Front.	89 - 95	CP5200-1003BK.G8	4 Pot	Ø315x28 / 48V	CP3580-1034G8 (RH) / -1035G8 (LH)	CP3215D50-APF404	8Jx16", Standard Wheel.
	Skyline GTR33 Front.	95 - 98	CP5555-1000BG.G8	6 Pot	Ø343x32 / 48V	CP3581-542G8 (RH) / -543G8 (LH)	CP3894D54-APF404	8Jx17", Standard Wheel.
	Skyline GTR34 Front.	99 - 02	CP5555Y1026BG.CG12	6 Pot	Ø356x32 / 48V	CP4542T114G8 (RH) / T115G8 (LH)	CP3894D54-APF404	18", Aftermarket Wheel.
Z	Skyline GTR33 & GTR34 Rear.	95 - 02	CP7618-1000 CP7618-1000BG.CG12	4 Pot 4 Pot	Ø330x24 / 36V	CP4475-118G8 (RH) / -119G8 (LH)	CP7600D43-DS2500	8Jx17", Standard Wheel.
NISSAN	Skyline GTR35	2008 on	CP8521Z1000BG.	6 Pot	Ø410x36 / 73V	CP8080Z28CG12 (RH) /	CP7555X70BX-	
AN	Radi-CAL [™] Front Skyline GTR35	0000	CG12 CP8540Z1000BG.	1.5.1	G 400, 00 (70) (CP8080Z29CG12 (LH) CP8080Z30CG12 (RH) /	DS25HP CP6600X55BX-	20" GTR Wheel. Note CG & GA Disc face types available.
	Radi-CAL [™] Rear	2008 on	CG12	4 Pot	Ø400x32 / 73V	CP8080Z31CG12 (LH)	DS25HP	
	300 ZX. 350Z Front.	89 - 96 03 - 09	CP5555-1000BG.G8 CP7040-1011.CG12	6 Pot 6 Pot	Ø343x32 / 48V Ø362x32 / 48V	CP3581-542G8 (RH) / -543G8 (LH) CP4542-142CG12 (RH) / -143CG12 (LH)	CP3894D51-APF404 CP7040D61-DS2500	8Jx17", Wheel. Standard Wheel.
	350Z Rear.	03 - 09	CP7633-1000:CG12	4 Pot	Ø330x24 / 48V	CP4475-118CG12 (RH) / -119CG12 (LH)	CP7600D43-DS2500	Standard Wheel.
P	EUGEOT 106.	91 - 04	CP5100-1004	4 Pot	Ø285x25 / 30V	CP4448-916RD (RH) / -917RD (LH)	CP2340D43-APF404	6.5Jx15", Speedline
	EUGEOT 106. EUGEOT 206 GTi & Si.	91 - 04 98 - 10	CP5100-1004 CP5100-1034	4 Pot	Ø304x25 / 24V	CP4348-528G4 (RH) / -529G4 (LH)	CP2340D43-APF404 CP2340D51-APF404	(212/P1655S1) 16",Standard Alloy.
-	EUGEOT 206 GTT& SI.	2012 on	CP5100-1034 CP7645-1002BG.G4	4 Pot 4 Pot	Ø304x25 / 24V Ø315x22 / 48V	CP4348-528G4 (RH) / -529G4 (LH) CP4348-942G4 (RH) / -943G4 (LH)	CP2340D51-APF404 CP7635D46-APF404	17" Standard Alloy
_		2012 011	017040 100200.04	4100	DOTOREE / 40V	01 4040 04204 (101)/ 04004 (E1)		17 Oldriddid 7 lloy
	ANGE ROVER HD Brd Generation)	2010 on	CP8316-1000R2.T2	6 Pot	Ø378x36 / 48V	CP3784-162T2 (RH) / -163T2 (LH)	CP7318X70BX- DS25HP	Standard Wheel
R		2012 on	CP9040Z1000BG. CG12	6 Pot	Ø362x32 / 48V	CP8080Y22.CG12 (RH) / CP8080Y23.CG12 (LH)	CP7040D61- APH405	19" Aftermarket.
R	ANGE ROVER VOQUE Radi-CAL™	2012 on	CP8522Z1002BG. CG12	6 Pot	Ø390x36 / 73V	CP8080Z34CG12 (LH) / CP8080Z35CG12 (LH)	CP7555X70BX- DS25HP	20" Aftermarket Wheel. Note CG & GA Disc face types available
_			005570 4000					
			CP5570-1000 CP5570-1000.G8	6 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH) CP3580-2898CG8 (RH) / -2899CG8 (LH)	CP5070D51-APF404	8Jx17".
	Impreza.	94 - 01	CP5200-1023	4 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP3215D50-APF404	8Jx17".
	"Classic Shape"		CP5200-1023.G8 CP5200-1035			CP3580-2898CG8 (RH) / -2899CG8 (LH) CP3580-1080RD (RH) / -1081RD (LH)		
			CP5200-1035.G8	4 Pot	Ø304x28 / 48V	CP3580-1080CG8 (RH) / -1081CG8 (LH)	CP3215D46-DS2500	7Jx16".
	Impreza. "New Age Shape" & N14 Front	2001 on	CP9040Y1003R2. CG12	6 Pot	Ø355x32 / 48V	CP8080Y38.CG12 (RH) / CP8080Y39.CG12 (LH)	CP7040D54-APF404	18", Speedline.
	N14 Front	2008 on	CP5200-1071.G8	4 Pot	Ø330x28 / 48V	CP3580-2898CG8 (RH) / -2899CG8 (LH)	CP3215D50-APF404	17" wheel.
SUBARU			CP5570-1017.G8	6 Pot	Ø356x32 / 48V		CP5070D51-APF404	
ÅF	Impreza Impreza Rear.	03 -		5-1052.G8 6 Pot		CP7177-110CG8 (RH) / -111CG8 (LH)	CP5070D54-APF404	18" Wheel.
ĉ	"Classic Shape"	2000	CP7615-1002.G8	4 Pot	Ø310x24 / 36V	CP4450-448P (RH) / -449P (LH)	CP7600D43-DS2500	Replace Subaru, 2 Pot Caliper.
	Impreza Rear. "New Age Shape"	01 - 07	CP7625-1000R2. CG12	4 Pot	Ø335x24 / 36V	CP6950-110CG12 (RH) / CP6950-111CG12 (LH)	CP7600D46-APF404	 Standard. Replaces 2 Pot Brembo/Subaru Calipers.
	N14 Rear	08 on	CP7615-1004BK.	4 Pot	Ø335x24 / 36V	CP6950-110CG12 (RH) /	CP7600D46-APF404	18" Standard, replaces Brembo 2
			CG12 CP9040Y1001BG.			CP6950-111CG12 (LH) CP8080Y20.CG12 (RH) /		Pot Calipers. 18" Aftermarket.
	BRZ - Front 6 Piston Kit		CG12	6 Pot	Ø350x32 / 48V	CP8080Y21.CG12 (LH)	CP7040D54-APF404	GA (J Hook) Disc option available.
	BRZ - Front 4 Piston Kit	2012	CP6628-1005BG. CG12	4 Pot	Ø332x26 / 48V	CP6565-188CG12 (RH) / CP6565-189CG12 (LH)	CP6627D51-APF404	Standard 17" Wheel. GA (J Hook) Disc option available.
	BRZ - Rear		CP7615-1005BG.	4 Pot	Ø335x24 / 36V	CP6950-110CG12 (RH) /	CP7600D46-APF404	GA (J Hook) Disc option available.
			CG12			CP6950-111CG12 (LH)		
_	UZUKI. Swift Sport	04 - 10	CP7645-1000R2.G4	4 Pot	Ø315x22 / 48V	CP4348-942G4 (RH) / -943G4 (LH)	CP7635D46-APF404	7.5J x 17, E43 Grams lights wheel
	OYOTA Supra Mk4 Turbo	93 - 02	CP5555-1008	6 Pot	Ø356x36 / 48V	CP3581-1096G8 (RH) / -1097G8 (LH)	CP3894D54-APF404 CP5070D51-APF404	9Jx18", ET45 Gewalt Mackin. 17" Aftermarket
	OYOTA Celica. OYOTA GT86	93 - 99	CP5570-1018.G8 CP9040Y1001BG.	6 Pot	Ø330x32 / 48V	CP3581-222G8 (RH) / -223G8 (LH) CP8080Y20.CG12 (RH) /		17" Aftermarket 18" Aftermarket.
-	Front 6 Piston Kit		CG12	6 Pot	Ø350x32 / 48V	CP8080Y21.CG12 (LH)	CP7040D54-APF404	GA (J Hook) Disc option available.
-	OYOTA GT86 Front 4 Piston Kit	2012	CP6628-1005BG. CG12 CP7615-1005BG.	4 Pot	Ø332x26 / 48V	CP6565-188CG12 (RH) / CP6565-189CG12 (LH) CP6950-110CG12 (RH) /	CP6627D51-APF404	Standard 17" Wheel. GA (J Hook) Disc option available.
Т	OYOTA GT86 - Rear		CG12	4 Pot	Ø335x24 / 36V	CP6950-110CG12 (RH) / CP6950-111CG12 (LH)	CP7600D46-APF404	GA (J Hook) Disc option available.
V	AUXHALL. VX220.	02 - 05	CP7621-1001.CG8	4 Pot	Ø308x26 / 48V	CP3580-1174CG8 (RH) / -1175CG8 (LH)	CP7600D46-APF404	16", Standard Wheel.
	OLVO. 850 T5R & S70 OLVO. S60 & S80	92 - 02 98 - 06	CP5200-1005 CP5575-1001	4 Pot 6 Pot	Ø325x28 / 48V Ø356x32 / 48V	CP3580-294RD (RH) / -295RD (LH) CP7177-110CG8 (RH) / -111CG8 (LH)	CP3215D50-APF404 CP5070D54-APF404	17", Standard, 5 Spoke. 18" Aftermarket.
	Golf G60.	90 - 92	CP5200-1015	4 Pot	Ø295x28 / 48V	CP3580-102G8 (RH) / -103G8 (LH)	CP3215D50-APF404	7.5Jx16", Zender Trophy.
	Golf Mk4 GTi.	99 - 06	CP5570-1003	6 Pot	Ø330x28 / 48V	CP3580-2898RD (RH) / -2899RD (LH)	CP5070D51-APF404	8Jx17", TSW Hockenheim R
	Golf Mk5 & MK6 GTi/TDi.	05 - 08	CP5200-1025BK.G8 CP5200-1056	4 Pot 4 Pot	Ø330x28 / 48V Ø330x28 / 48V	CP3580-2898G8 (RH) / -2899G8 (LH) CP3580-2898G8 (RH) / -2899G8 (LH)	CP3215D50-APF404 CP3215D50-APF404	8Jx17", Zender Trophy.
-	Scirocco Mk3, GTi/TDi	08 on	CP5570-1015.G8	6 Pot	Ø330x28 / 48V	CP3580-2898G8 (RH) / -2899G8 (LH)	CP5070D51-APF404	18" & 19", Standard Wheels.
V			CP5575M1011BK.	6 Pot	Ø355x32 / 48V	CP6895-03M.CG12 Disc Kit	CP5070D54-APF404	18" Aftermarket Wheel
V	Golf Mk5, R32	05 - 08	CG12	6 POL	0333732/400			

IMPORTANT NOTE: BRAKE PROFILE DRAWINGS.

To help with the correct wheel choice to suit our Factory Big Brake Kits please log on to: www.apracing.com to check the wheel profile drawing which can be downloaded for your given model. If the information is not available for your model please contact AP Racing directly.



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AP Racing, the world's premier racing Brake specialists, are able to apply their unrivalled experience into producing upgraded Brake Kits for a range of models for competition use. The Brake Kits listed below are compatible with standard suspension on all applications. But in the majority of cases will require an aftermarket wheel. AP Racing carry out extensive testing programs which replicate the conditions of use and operate a policy of continuous product development.



COMPETITION BRAKE KITS HAVE:-INCREASED STOPPING POWER

- Larger ventilated discs and multi piston calipers mean more power and superior cooling.

SUPERIOR FADE RESISTANCE

- Greater tolerance to heat build up means consistent stops.

RACE WINNING PEDIGREE

- AP Racing products have won thousands of races including over 700 GP Victories, stopping many World Champions in Championships across the globe.

FACTORY COMPETITION BRAKE KITS

COMPETITION BRAKE KITS ARE:-• 4 OR 6 PISTON CALIPERS

 Calipers are made to AP Racing's exacting standards and use two or three pairs of opposed pistons in each caliper, the most efficient design.
 Trailing edge pistons have a slightly larger diameter than the leading ones, to protect the pads from tapered wear.

LARGE DIAMETER DISCS

- Ventilated discs have 24, 30, 36, 48 or 72 cooling vanes depending on the application, to draw air through the centres of the discs. They are handed left and right, and are cross drilled or grooved, again, depending on the application, to allow gasses that build up on the pad surface to escape.

COMPETITION BRAKE PADS

- AP Racing brake kits come complete with appropriate pads for all round performance for the individual application. We can specify and supply more specialised pads.

N.B. Kits with an NP suffix in the Part Number do not contain pads.

ALUMINIUM BELLS

- To prevent heat distortion and stress cracking, the cast iron discs are mounted on Aluminium bells. This allows for the tiny amount of flexing required to avoid distortion.

ALUMINIUM MOUNTING BRACKETS

 Machined from Aluminium billet for maximum strength and weight saving.
 The brackets ensure accurate relocation of the calipers making installation simpler.

N.B. Some competition brake kits use lug type calipers and therefore do not contain brackets.

BOLTS, WASHERS AND FIXINGS

- AP Racing Brake Kits are complete conversions with everything you need. Disc and bells are already assembled, mounting nuts and bolts are of high tensile steel.

Application.	Year.	Brake Kit Part Number.	Caliper.	Disc Size. (in mm)	Brake Disc Part Number.	Brake Pads Part Number	Wheels & Notes.
BMW							
335i E93	2006 on	CP5040-1002NP	CP5040-30/31, 4 Pot	Ø330x32 / 48V	CP3581-40CG8 (RH) / -41CG8 (LH)	CP2279D50	18"
M3 E36	92 - 99	CP5005-3	CP5040-2/3, 4 pot	Ø330x28 / 48V	CP3580-2898G8 (RH) / -2899G8 (LH)	CP3215D50-DS3000	8J x 17" BMW Motorsport.
M3 E46 - Front	00 - 06	CP5260-1003NP	CP5260-8/9, 6 Pot	Ø368x36 / 72V	CP5772-164G8 (RH) / -165G8 (LH)	CP3558D54	18"
M3 E46 - Rear	00-06	CP5144-1005NP	CP6602-20/21, 4 Pot	Ø328x20 / Int	CP4475-22G8 (RH) / -23G8 (LH)	CP3345D44	18"
M3 E92 - Front	2006 on	CP5260-1001NP	CP5260-8/9, 6 Pot	Ø368x36 / 72V	CP5772-164G8 (RH) / -165G8 (LH)	CP3558D54	18"
M3 E92 - Rear	2006 on	CP6602-1003NP	CP6602-20/-21, 4 Pot	Ø352x26 / 48V	CP6565-48G8 (RH) / -49G8 (LH)	CP6606D51	18"
Ford							
Escort RS2000.	91 - 95	CP5005-8	CP5040-12/13, 4 pot	Ø295x25 / 24V	CP5000-510CG8 (RH) / -511CG8 (LH)	CP2340D51-DS3000	6J x 15" Compomotive Motorsport.
Escort Cosworth.	91 - 96	CP5005-2	CP5040-2/3, 4 pot	Ø330x28 / 48V	CP3580-2898G8 (RH) / -2899G8 (LH)	CP3215D50-DS3000	8J x 17" ATS / TSW Hockenheim.
Honda							
Civic Type R - EP3	01 - 05	CP7600-1000.G4	CP7600, 4 pot	Ø295x25 / 48V	CP3580-2894G4 (RH) / -2895G4 (LH)	CP7600D46-DS3000	15" Compomotive.
Mazda							
MX5	2006 on	CP5040-1001NP	CP5040-2/3, 4 Pot	Ø315x28 / 36V	CP5000-220CG8 (RH) / -221CG8 (LH)	CP3215D50	17" Aftermarket.
Mitsubishi	1				1		1
Lancer Evo 4 Front.	96 - 97	CP3720-41	CP3720, 4 Pot	Ø310x28 / 24V	CP3047-212G8 (RH) / -213G8 (LH)	CP3215D50-DS3000	7J x 16",
Lancer Evo 5 & 6 Rear.	97 - 01	CP4556-1000NP	CP4556,4 pot	Ø304x25 / 48V	CP3580-230G8 (RH) / -231G8 (LH)	CP2340D43-	Compomotive MS.
		CP5060-1002NP	CP5060-12/13,	Ø355x32 / 48V	CP3581-1150CG12 (RH) / -1151CG12 (LH)	CP3894D54	18" motorsport Wheel
Lancer Evo 7/8/9 Front	01 to 07	CP5060-1003NP	6 POT	Ø332x32 / 48V	CP3581-36G8 (RH) / - CP3581-37G8 (LH)		17" Standard Wheel
Lancer Evo 7/8/9 Rear	-	CP4556-1001	CP4556, 4 Pot	Ø304x25 / 36V	CP3837-230GA (RH) / -231GA (LH)	CP2340D51-APF402	17" Aftermarket.
Lancer Evo X Front		CP5060-1000NP	CP5060-12/13, 6 Pot	Ø355x32 / 48V	CP3581-1150CG12 / -1151CG12 (LH)	CP3894D54	18" Motorsport Wheel.
2008 on	CP7636-1000NP	CP7636, 4 Pot	Ø330x24 / 36V	CP7035-14CG12 (RH) / -15CG12 (LH)	CP7600D46	Brake Pads not included in kits	
Peugeot	1						
206.	98 - 10	CP5100-1033NP	CP5100,4 pot	Ø295x25 / 24V	CP3580-2894G4 (RH) / -2895G4 (LH)	CP3345D44-	7J x 15" Speedline 2108.
306.	93 - 02	CP5200-1016	CP5200,4 pot	Ø315x28 / 24V	CP5000-220CG8 (RH) / -221CG8 (LH)	CP3215D50-	7J x 16", Speedline 645 / OZ.
Renault							
Clio 16V.	90 - 98	CP5005-9NP	CP5000-22/23, 4 pot	Ø315x28 / 24V	CP3047-178G8 (RH) / -179G8 (LH)	CP3215D50-	8J x 16" ET35 Speedline SL1213.
Vauxhall / Opel		,					·
Astra Front.	91 - 98	CP5005-6NP	CP5000-22/23, 4 pot	Ø295x28 / 30V	CP3580-102G4 (RH) / -103G4 (LH)	CP3215D50-	7J x 16", Compomotive.
Subaru							
Impreza Front	1993 on	CP5060-1006NP	CP5060-12/13, 6 Pot	Ø356x32 / 48V	CP3581-536G8 (RH) / -537G8 (LH)	CP3894D54	18" Aftermarket.
Impreza Rear	1993 on	CP7625-1001NP	CP7625-10/11, 4 Pot	Ø335x24 / 48V	CP6565-200G8 (RH) / -201G8 (LH)	CP7600D46	18" Aftermarket.
VW							
Golf MK5, GTi & TDi	05 to 08	CP5060-1001NP	CP5060-12/13, 6 Pot	Ø362x32 / 48V	CP4542-112CG12 (RH) / -113CG12 (LH)	CP3894D54	18" Motorsport Wheel
Scirocco	2008 on	CP5060-1001NP	CP5060-12/13, 6 Pot	Ø362x32 / 48V	CP4542-112CG12 (RH) / -113CG12 (LH)	CP3894D54	Brake Pads not included in kits

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ACTUATION

It is now widely understood that the actuation system is a major factor in the overall performance of the brake system. AP Racing R&D is focused on this area and a number of new and or improved products have been added to the range which now includes not only Master Cylinders, Brake Fluid, Reservoirs, Proportioning Valves but also Floor Mounted and Underslung Pedal Boxes, Balance Bars, and accessories. This Section provides technical information regarding each product, if you require further details please contact AP Racing Technical Section.



MASTER CYLINDERS.
FLUID RESERVOIRS.
PEDAL BOXES.
PEDAL BOXES.
HAND BRAKES.
BALANCE BARS.
BRAKE FLUID.
HYDRAULIC FITTINGS.
DRY BLEED SYSTEM (DRY BREAKS).
PROPORTIONING VALVES.
FLY-BY-WIRE CLUTCH ACTUATION.

MASTER CYLINDERS - General Information

DIFFERENTIAL BORE CYLINDERS CP5898 & CP8854

A pull & Push type differential bore master cylinder has been designed to reduce unwanted low pressure pedal travel (dead band).

This is achieved by having two bores that are connected by the same piston with an external valve that controls the changeover between the two bores. The initial brake travel is controlled by the larger of the two bores (the primary chamber). This bore supplies



a larger volume of fluid at lower pressure to accommodate for the inherent losses in any brake system (piston retraction, seal retraction, trapped air compression, knock back etc). Once the losses in the system have been removed the pressure in the system will rise. At predetermined pressure the external valve will open actuating the smaller of the two bores (the secondary chamber) and allow the high pressure side of the master cylinder to operate for the remainder of the brake actuation. The large bore will be vented back to the reservoir so that the system is only operating on the high pressure bore. The cylinder is mounted via the needle roller bearing clevis at the rear of the cylinder and suits the AP Racing high efficiency and low hysteresis balance bar.

CP7854

A high efficiency single circuit, short push type master cylinder. Fixed through a trunnion system

running in needle roller bearings and with a one piece piston / push rod it offers a significant improvement in efficiency over traditional master cylinder designs. Full range of 10 bore sizes available. Imperial threads.



CP7855

A high efficiency single circuit, short push type master cylinder. Fixed

through a spherical bearing and with a one piece piston / push rod it offers a significant improvement in efficiency over traditional master cylinder designs. Full range of 10 bore sizes. Imperial threads.

CP6465

This cylinder operates on the Pull rather than Push principle of other cylinders. It has a built in trunnion mounted in needle roller bearings for direct mounting to the balance bar. The ultimate in master cylinder efficiency. Metric threads.

CP5540

This lightweight double ended (tandem) master cylinder with two separate hydraulic chambers which, when compressed by pedal effort, creates two output pressures.

one each for front & rear brake circuits only. Version also available for hand brake applications.



IMPORTANT NOTE:-

AP Racing push type master cylinders are individually shimmed during assembly to minimise lost travel therefore push rods, pistons and other internal components must never be switched between individual master cylinders.

Note:

This is to differentiate between push and pull type cylinders, pull type cylinders are not shimmed.

MASTER CYLINDERS.

AP Racing Master Cylinders have been developed with the benefit of our unparalleled experience in racing brake technology to respond to the severe demands encountered under competition conditions and are used in all forms of motorsport.

The current range of lightweight aluminium alloy master cylinders comprises 11 designs suitable for all forms of competition use.

Each master cylinder is individually shimmed during manufacture to give a shorter cut off and less lost travel than equivalent production cylinders. Most designs are available in 10 bore sizes from 14.0mm to 25.4 (1.00") diameter. Below and opposite offers a brief description of each master cylinder within the range.

MASTER CYLINDER RANGE.

CP2623

A compact forged bodied flange mounted Master Cylinder suitable for

all brake and clutch applications especially where space is restricted. Short travel to cut off is standard. 10 available bore sizes from 14.0mm to 25.4mm Hydraulic threads are Imperial.



CP4623

A compact cast bodied Master Cylinder similar to CP2623 but with a 60°

mounting flange offset to give improved access to mounting bolts. Short travel to cut-off is standard. 9 available bore sizes from 14.0mm to 15/16". All threads on this master cylinder are metric.



D CP5623

A compact Master Cylinder based on CP2623 but with metric hydraulic ports. 9 available bore sizes from 14.0mm to 25.4mm.

CP6093

A Master Cylinder suitable for most brake and clutch applications where

space restrictions are not a primary consideration. The longer available stroke makes it particularly suitable for some clutch installations. Long thread portion allows the push rod length to be cut to suit. 7 bore sizes available from 15.9mm to 25.4mm.



CP4400

A compact Master Cylinder which has been specially designed with a 'centre lock' bulkhead fixing (10mm Min. / 22mm Max. thick) to meet

the installation requirements of composite structure racing cars. The inlet and the outlet ports are positioned at the end of the master cylinder away from the bulkhead, to provide clearance for steering racks etc., where required.

Extra short travel to cut off, reducing the amount of lost



pedal travel, is standard on this cylinder with short cut-off available to order where rapid fluid return is required.

8 bore sizes available from 14.0mm to 15/16". Hydraulic threads are imperial.

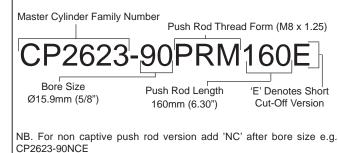




MASTER CYLINDERS - General Information

ORDERING.

When ordering please quote the full part number whenever possible. Part numbers are given in the individual master cylinder pages. An explanation of the part numbers is given below.



NON CAPTIVE PUSH RODS.

Special versions of some master cylinders are available with 'non captive' push rods for use where rapid master cylinder changes may be required during an event (e.g. rally stages). Push rods to suit these master cylinders must be ordered separately under the following part numbers.

Length					
•	Length of Thread				
(

I				
	Push Rod Part No.	Length.	Thread Form.	Thread Length.
	CP2142-45	112.0mm	5/16" UNF	60.0mm
	CP2142-47	157.0mm	5/16" UNF	105.0mm
	CP2142-48	157.0mm	M8x1.25	105.0mm
l				

IDENTIFICATION OF BORE SIZES.

All AP Racing master cylinders have their part number nominal bore size laser marked on the body together with batch codes, this allows full manufacturing traceability. All master cylinders also have a coloured tie wrapped around the body for quick visual identification of bore size.



Push Type Master Cy	linders
14.0mm (0.551")	Black & Orange.
15.0mm (0.590")	Black & Red.
15.9mm (0.625") 5/8"	Black.
16.8mm (0.661")	Black & Yellow.
17.8mm (0.70")	Blue.
19.1mm (0.75") 3/4"	Green.
20.6mm (0.812") 13/16"	Orange.
22.2mm (0.875") 7/8"	Red.
23.8mm (0.937") 15/16"	White.
25.4mm (1.00")	Yellow.
Pull Type Master Cyl	inders
14.9mm (0.587")	Black & Red.
16.2mm (0.638")	Black.
17.3mm (0.681")	Blue.
18.8mm (0.740")	Green.
20.2mm (0.795")	Orange.
21.2mm (0.834")	Orange & red
21.8mm (0.858")	Red.
23.7mm (0.933")	White.
25.4mm (1.00") 1"	Yellow.

ABS ADVISORY NOTICE WHEN USING AP RACING MASTER CYLINDERS

AP Racing master cylinders use small cut-off ports to ensure that pressure is relieved from the brake system when no travel is applied to the brake pedal. As the brakes are applied the seal travels over this cut-off port. In normal operation the seal has travelled past this port before high pressure has built up in the system. However when used in conjunction with ABS depending on how the ABS operates pressure can be built up earlier in the travel or during the return stroke. This can then result in heel nibble where the seal is partially extruded up the cut-off port. The pulsing nature of ABS can also make this effect worse.

It is possible to run AP Racing cylinders with ABS by allowing sufficient travel before pressure is built up and limiting the pressure during return, but as AP Racing do not control the ABS we cannot guarantee successful operation.

Typically 6mm of travel will allow all seal sizes to be past the port and the maximum pressure up to this travel should be approximately 10 bar maximum. If this is exceeded the life of the seal will be compromised and re-sealing should be carried out more frequently

CUSTOMER NOTES



MASTER CYLINDERS - CP2623 and CP4623 Types

CP2623 Flange Mounted

Weight.

- Short

- Outlet.

- Inlet.

- PRM

- PRT

Full Stroke.

Travel To Cut-Off.

Hydraulic Thread.

Push Rod Threads.

Mounting Flange.

PRM/PRT115

PRM/PRT160

Push Rod Length From

TECHNICAL DETAILS.

0.26kg (0.7lbs)

25.4mm (1.00")

0.68 to 1.09mm

(.027" to .043")

3/8" x 24UNF

7/16" x 20UNF

115mm (4.53")

160mm (6.30")

M8 x 1.25

5/16" UNF



GENERAL INFORMATION

A compact master cylinder suitable for all brake and clutch applications especially where space is restricted.

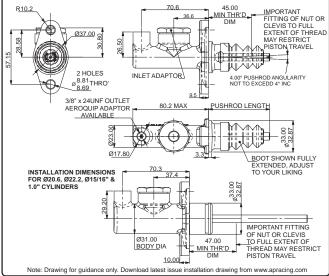
- Short travel to cut-off.
- New forged aluminium alloy body. - 50g weight saving over cast version
- Flange mounting.
- Short travel to cut-off only.
- Non captive cylinders available.

CP2623 PART NUMBERS

Available	Short Cut-off Cylin	Non Captive	
Bore Sizes.	PRM Pushrod.	PRT Pushrod.	Cylinders.
14.0mm.	CP2623-88PRM115 CP2623-88PRM160	CP2623-88PRT115 CP2623-88PRT160	CP2623-88NC
15.0mm.	CP2623-89PRM115 CP2623-89PRM160	CP2623-89PRT115 CP2623-89PRT160	CP2623-89NC
15.9mm	CP2623-90PRM115	CP2623-90PRT115	CP2623-90NC
(.625") 5/8".	CP2623-90PRM160	CP2623-90PRT160	
16.8mm.	CP2623-905PRM115 CP2623-905PRM160	CP2623-905PRT115 CP2623-905PRT160	CP2623-905NC
17.8mm	CP2623-91PRM115	CP2623-91PRT115	CP2623-91NC
(.70").	CP2623-91PRM160	CP2623-91PRT160	
19.1mm	CP2623-92PRM115	CP2623-92PRT115	CP2623-92NC
(.75") 3/4".	CP2623-92PRM160	CP2623-92PRT160	
20.6mm	CP2623-93PRM115	CP2623-93PRT115	CP2623-93NC
(.812") 13/16".	CP2623-93PRM160	CP2623-93PRT160	
22.2mm	CP2623-94PRM115	CP2623-94PRT115	CP2623-94NC
(.875") 7/8".	CP2623-94PRM160	CP2623-94PRT160	
23.8mm	CP2623-95PRM115	CP2623-95PRT115	CP2623-95NC
(.937") 15/16".	CP2623-95PRM160	CP2623-95PRT160	
25.4mm	CP2623-96PRM115	CP2623-96PRT115	CP2623-96NC
(1.00").	CP2623-96PRM160	CP2623-96PRT160	
- Ordering - Select the required cylinder from the part numbers above.			

E.G. CP2623-94PRM115.

INSTALLATION DRAWING



CP4623 Flange Mounted

Weight.

- Short

- Outlet.

- Inlet.

- PRM

- PRT

Full Stroke.

Travel To Cut-Off.

Hydraulic Thread.

Push Rod Threads.

Mounting Flange.

PRM/PRT115

PRM/PRT160

Push Rod Length From

TECHNICAL DETAILS.

0.31kg (0.7lbs)

25.4mm (1.00")

0.68 to 1.09mm

(.027" to .043")

M10 x 1.0

M12 x 1.0

M8 x 1.25

5/16" UNF

115mm (4.53")

160mm (6.30")



GENERAL **INFORMATION**

A compact Master Cylinder similar to CP2623 but with a 60° mounting flange offset to give improved access to mounting bolts.

- Short travel to cut off standard. Cast aluminium Alloy body.
- 60° Flange mounting.
- Non captive cylinders
- available.

All threads on this master cylinder are metric.

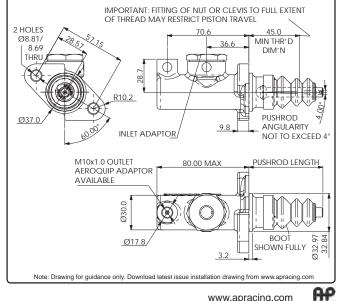
CP4623 PART NUMBERS

Available	Short Cut-off Cylin	Non Captive			
Bore Sizes.	PRM Pushrod.	PRT Pushrod.	Cylinders.		
14.0mm.	CP4623-88PRM115 CP4623-88PRM160	CP4623-88PRT115 CP4623-88PRT160	CP4623-88NC		
15.0mm.	CP4623-89PRM115 CP4623-89PRM160	CP4623-89PRT115 CP4623-89PRT160	CP4623-89NC		
15.9mm	CP4623-90PRM115	CP4623-90PRT115	CP4623-90NC		
(.625") 5/8".	CP4623-90PRM160	CP4623-90PRT160			
16.8mm.	CP4623-905PRM115 CP4623-905PRM160	CP4623-905PRT115 CP4623-905PRT160	CP4623-905NC		
17.8mm	CP4623-91PRM115	CP4623-91PRT115	CP4623-91NC		
(.70").	CP4623-91PRM160	CP4623-91PRT160			
19.1mm	CP4623-92PRM115	CP4623-92PRT115	CP4623-92NC		
(.75") 3/4".	CP4623-92PRM160	CP4623-92PRT160			
20.6mm	CP4623-93PRM115	CP4623-93PRT115	CP4623-93NC		
(.812") 13/16".	CP4623-93PRM160	CP4623-93PRT160			
22.2mm	CP4623-94PRM115	CP4623-94PRT115	CP4623-94NC		
(.875")7/8".	CP4623-94PRM160	CP4623-94PRT160			
23.8mm	CP4623-95PRM115	CP4623-95PRT115	CP4623-95NC		
(.937")15/16".	CP4623-95PRM160	CP4623-95PRT160			

- Ordering -

Select the required cylinder from the part numbers above. E.G. CP4623-94PRM115.

INSTALLATION DRAWING



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MASTER CYLINDERS - CP5623 and CP6093 Types

CP5623 Flange Mounted



GENERAL INFORMATION

A compact Master Cylinder identical to CP2623 but has metric hydraulic threads.

- Suitable for all brake and clutch applications especially where space is restricted.
- Short travel to cut off standard.
- Hard anodised body.
- Aluminium Alloy body.
- Flange mounting.
- Non captive cylinders available.

TECHNICAL DETAILS.					
Weight.	Weight. 0.3kg (0.66lbs)				
Full Stroke.	25.4mm (1.00")				
Travel To Cut-	Travel To Cut-Off.				
- Short 0.68 to 1.09mm (.027" to .043")					
Hydraulic Thre	Hydraulic Thread.				
- Outlet.	- Outlet. M10 x 1.0				
- Inlet.	- Inlet. M12 x 1.0				
Push Rod Thr	Push Rod Threads.				
- PRM	- PRM M8 x 1.25				
Push Rod Length From Mounting Flange.					
PRM115 115mm (4.53")					

CP6093 Flange Mounted



GENERAL

 INFORMATION
 Flange mounted.
 Full 31.75mm (1.25") stroke across all bore sizes.
 Replaces CP2293, more compact design with reduction in overall length.
 Suitable for most brake and particularly clutch applications.

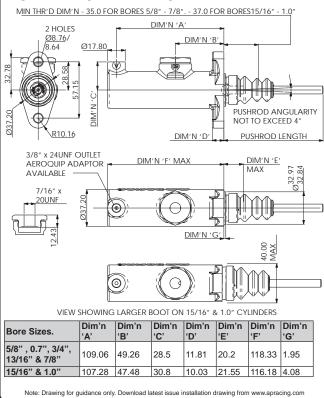
Short Travel to cut-off standard.

Aluminium Alloy body.

TECHNICAL DETAILS.					
Weight.	Weight. 0.4kg (0.88lbs)				
Full Stroke.	31.75mm (1.25")				
Travel To Cut-0	Off.				
- Short	0.68 to 1.09mm (.027" to .043")				
Hydraulic Thre	Hydraulic Thread.				
- Outlet.	utlet. 3/8" x 24UNF				
- Inlet.	7/16" x 20UNF				
Push Rod Thre	eads.				
- PRT	5/16" UNF				
Push Rod Length From Mounting Flange.					
PRT110	110mm (4.33")				
PRT155	155mm (6.10")				

CP6093 PART N	CP6093 PART NUMBERS			
Augilable Dave Olean	Short Cut-off Cylinders.			
Available Bore Sizes.	PRT110 Pushrod.	PRT155 Pushrod.		
15.9mm (.625") 5/8".	CP6093-90PRT110	CP6093-90PRT155		
17.8mm (.70").	CP6093-91PRT110	CP6093-91PRT155		
19.1mm (.75") 3/4"	CP6093-92PRT110	CP6093-92PRT155		
20.6mm (.812") 13/16".	CP6093-93PRT110	CP6093-93PRT155		
22.2mm (.875") 7/8".	CP6093-94PRT110	CP6093-94PRT155		
23.8mm (.937") 15/16".	CP6093-95PRT110	CP6093-95PRT155		
25.4mm (1.00").	CP6093-96PRT110 CP6093-96PRT155			
- Ordering - Select the required bore size from the table above. E.G. CP6093-94PRT110.				

INSTALLATION DRAWING

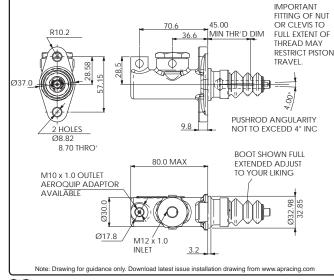


CP5623 PART NUMBERS Short Cut-off Cylinders. Available Non Captive Bore Sizes. Cylinders. PRM Pushrod. 14.0mm. CP5623-88PRM115 CP5623-88NC 15.0mm. CP5623-89PRM115 CP5623-89NC 15.9mm (.625") CP5623-90PRM115 CP5623-90NC 5/8" CP5623-905PRM115 CP5623-905NC 16.8mm 17.8 CP5623-91PRM115 CP5623-91NC (.70") 19.1mm (.75") CP5623-92PRM115 CP5623-92NC 3/4" 20.6mm (.812") CP5623-93PRM115 CP5623-93NC 13/16" 22.2mm (.875") CP5623-94PRM115 CP5623-94NC 7/8" 23.8mm (.937") CP5623-95PRM115 CP5623-95NC 15/16". 25.4mm CP5623-96PRM115 CP5623-96NC (1.00").

- Ordering -

Select the required cylinder from the part numbers above. E.G. CP5623-94PRM115.

INSTALLATION DRAWING



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MASTER CYLINDERS - CP4400 and Differential Bore Types

CP4400 Bulkhead Mounted

Weight.

Full Stroke.

- Extra Short

- Outlet.

- Inlet.

- PRT

PRT135

PRT180

Travel To Cut-Off.

Hydraulic Thread.

Push Rod Threads.

Mounting Flange.

Push Rod Length From

TECHNICAL DETAILS.

0.29kg (0.64lbs)

25.4mm (1.00")

0.48 to 0.63mm

(.019" to .025")

3/8" x 24UNF

7/16" x 20UNF

135mm (5.31")

180mm (7.08")

5/16" UNF



GENERAL INFORMATION

Bulkhead mount.A compact Master Cylinder which

has been designed with a 'centre lock' bulkhead fixing (10mm to 22mm Max) to meet the installation requirements of composite structure racing cars. The inlet and the outlet ports are positioned at the end of the master cylinder away from the

bulkhead to provide clearance for steering racks etc, where required. Aluminium Alloy body.

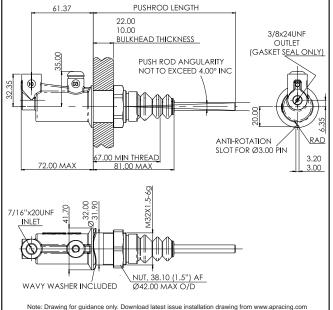
Extra short travel to cut-off standard.

CP4400 PART NUMBERS

Available	Extra Short Cut-off Cylinders.		
Bore Sizes.	PRT Pushrod.		
14.0mm.	CP4400-88PRT135E or CP4400-88PRT180E		
15.0mm.	CP4400-89PRT135E or CP4400-89PRT180E		
15.9mm (.625") 5/8".	CP4400-90PRT135E or CP4400-90PRT180E		
16.8mm.	CP4400-905PRT135E or CP4400-905PRT180E		
17.8mm (.70")	CP4400-91PRT135E or CP4400-91PRT180E		
19.1mm (.75") 3/4".	CP4400-92PRT135E or CP4400-92PRT180E		
20.6mm (.812") 13/16".	CP4400-93PRT135E or CP4400-93PRT180E		
22.2mm (.875") 7/8".	CP4400-94PRT135E or CP4400-94PRT180E		
23.8mm (.937") 15/16".	CP4400-95PRT135E or CP4400-95PRT180E		
- Ordering - Select the required cylinder from the part numbers above. E.G. CP4400-94PRT135E.			

Note: (1.00") Bore size is not available in this cylinder series.

INSTALLATION DRAWING



Differential Bore Cylinders

GENERAL INFORMATION

 CP5898 (Pull) and CP8854 (Push) are both high efficiency pull or push type cylinders, with twin bores that are connected by the same piston. This reduces unwanted low pressure pedal travel.
 Once the initial phase is over the pressure in the primary chamber is exhausted removing those losses.
 When the relief valve opens it mechanically closes the non-return

valve eliminating variable changeover losses.



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• The valve is external allowing adjustment of the change over pressure for varying conditions.

Billet aluminium alloy bodies with hard anodised surface treatment.
 Built in trunnion mounted in needle roller bearing for direct mounting to the balance bar.

CP5898 is interchangeable with CP6465 with addition of mounting bracket, CP5898-111.

CP5898, uses with the following pull type pedal boxes only.

- Underslung - CP5517-1 / - Floor Mounting - CP5716.

Note: For Installation Drawings visit www.apracing.com

TECHNICAL DETAILS.				
Cylinder P/Nos.	CP5898 Pull Type. CP8854 Push type.			
Weight. (Estimated)	500g (1.10bs)	330g-370g depending on bore size		
Full Stroke.	25.4mm (1.00")	30.0mm (1.18")		
Travel To Cut-Off.				
- Short	0.68 to 1.09mm (.027" to .043")			
Hydraulic Thread.				
- Outlet.	M10 x 1.00	3/8"x24 UNF		
- Reservoir	7/16"x20UNF			
Inlet, Special Fittings	š.			
75° type.	CP6465-10			
Straight type.	CP6465-11			
90° type.	CP6465-12			
Push Rod Threads.	PRME - M8 x 1.25 PRT - 5/16"x24UNF			

PULL TYPE - CP5898 PART NUMBERS

AP Racing	Corrected Secondary	Reference Dimn's		
Part Number.	Chamber Bore Size for Calculations.	Small Bore Ø	Piston Ø	Area
CP5898-202PRME	Ø20.2mm (0.795").	25.4	15.60	318.26
CP5898-212PRME	Ø21.2mm (0.835").	25.4	14.00	355.52
CP5898-218PRME	Ø21.8mm (0.858").	25.4 13.00 376.		376.68
CP5898-237PRME	Ø23.7mm (0.933").	25.4	9.25	442.00
- Ordering: Select the required bore size from the table above.				

PUSH TYPE - CP8854 PART NUMBERS				
AP Racing Part Number.	Large Bore Ø.	Small Bore Ø	Repair Kit	
CP8854-88PRT	19.1mm (0.75").	14.0mm (0.55")	CP8854-88RK	
CP8854-89PRT	19.1mm (0.75").	15.0mm (0.59")	CP8854-89RK	
CP8854-90PRT	22.9mm (0.90").	15.9mm (0.62")	CP8854-90RK	
CP8854-905PRT	22.9mm (0.90").	16.8mm (0.66")	CP8854-905RK	
CP8854-91PRT	23.8mm (15/16")	17.8mm (0.70")	CP8854-91RK	
CP8854-92PRT	25.4mm (1.00")	19.1mm (0.75")	CP8854-92RK	
CP8854-93PRT	25.4mm (1.00")	20.6mm (13/16")	CP8854-93RK	
CP8854-94PRT	27.1mm (1.06")	22.2mm (0.87")	CP8854-94RK	
CP8854-95PRT	27.1mm (1.06")	23.8mm (15/16")	CP8854-95RK	
CP8854-96PRT	27.1mm (1.06")	25.4mm (1.00")	CP8854-96RK	
- Ordering: Select the required bore size from the table above. E.G. CP8854-90PRT.				

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MASTER CYLINDERS - CP7854 and CP7855 Types

CP7854 Trunnion Mounted

GENERAL

- INFORMATION
- Aluminium alloy body.
- Compact design. Hard anodised.
- High efficiency push type design.
- One piece piston and push rod.
- Has a built in trunnion mounted in needle roller bearing for direct
- mounting to the balance bar.
- Use with CP5520-3,-4 or -25LC
- trunnion type balance bar or purpose designed pedal box.
- Full range of 10 bore sizes.
- Extra short travel to cut-off.
- Rubber boot fitted.

Available

14.0mm.

15.0mm.

16.8mm.

5/8".

3/4' 20.6mm (.812")

7/8"

13/16' 22.2mm (.875")

15/16"

Bore Sizes.

15.9mm (.625")

17.8mm (.70")

19.1mm (.75")

23.8mm (.937")

25.4mm (1.00").

- Version with spherical bearing available Part Number CP7855.
- Replaces CP5854 Family.
- **NOTE:** Repair kits are still available for CP5854 type cylinder, contact AP Racing Technical Department for details.

CP7854 PART NUMBERS

Extra Short

Cut-off Cylinders.

CP7854-88PRTF

CP7854-89PRTE

CP7854-90PRTF

CP7854-905PRTE

CP7854-91PRTE

CP7854-92PRTF

CP7854-93PRTE

CP7854-94PRTE

CP7854-95PRTE

CP7854-96PRTF



TECHNICAL DETAILS.			
Weight.	0.28 to 0.293kg (0.61 to 0.64lbs)		
Full Stroke.			
14mm to 7/8" Bores	30.0mm (1.18")		
15/16" to 1.00" Bores	28.0mm (1.10")		
Travel To Cut-Off.			
- Extra Short	0.48 to 0.63mm (.019" to .025")		
Hydraulic Thread.			
- Outlet. 3/8" x 24UNF			

7/16" x 20UNF

5/16" x 24 UNF

'B' mm

> 25.1 27.0

Dimn Dimn

30.0

C.

Ø 'A

22.92

29.25 28.1

- Inlet.

- PRTE

Repair Kit

. Part Number.

CP7855-88RK

CP7855-89RK

CP7855-90RK

CP7855-905RK

CP7855-91RK

CP7855-92RK

CP7855-93RK

CP7855-94RK

CP7855-95RK

CP7855-96RK

Push Rod Threads.

CP7855 Bearing Mounted

14mm to 7/8

Bores

15/16" to

1.00" Bores

- Extra Short

- Outlet.

Inlet.

- PRTE

Travel To Cut-Off.

Hydraulic Thread.

Push Rod Threads.



GENERAL

- INFORMATION
- Aluminium alloy body. Compact design.
- Hard anodised.
- High efficiency push type design.
- Mounted through a spherical
- bearing.
- One piece piston and push rod.
- Full range of 10 bore sizes.
- Extra short travel to cut-off.
- Rubber boots fitted.
- Version with built in trunnion

mounting available under Part No. CP7854 Family.

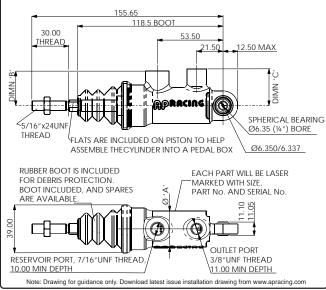
Replaces CP5855, CP5511 and CP4411 families.

NOTE: Repair kits are still available for CP5855 type cylinder, contact AP Racing Technical Department for details.

CP7855 PART NUMBERS					
Available Bore Sizes.	Extra Short Cut-off Cylinders.	Repair Kit Part Number.	ØʻA' mm	Dimn 'B'	Dimn 'C'
14.0mm.	CP7855-88PRTE	CP7855-88RK			
15.0mm.	CP7855-89PRTE	CP7855-89RK	- 22.92	25.1	27.0
15.9mm (.625") 5/8".	CP7855-90PRTE	CP7855-90RK			
16.8mm.	CP7855-905PRTE	CP7855-905RK			
17.8mm (.70").	CP7855-91PRTE	CP7855-91RK			
19.1mm (.75") 3/4".	CP7855-92PRTE	CP7855-92RK			
20.6mm (.812") 13/16".	CP7855-93PRTE	CP7855-93RK			
22.2mm (.875") 7/8".	CP7855-94PRTE	CP7855-94RK	29.25	28.1	30.0
23.8mm (.937") 15/16".	CP7855-95PRTE	CP7855-95RK			
25.4mm (1.00").	CP7855-96PRTE	CP7855-96RK			
- Ordering: Select the required bore size from the table above.					

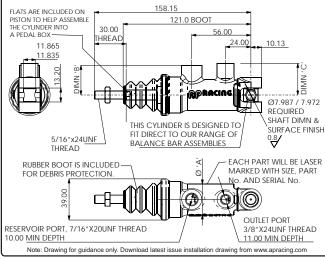
E.G. CP7855-94PRTE

INSTALLATION DRAWING



- Ordering: Select the required bore size from the table above. E.G. CP7854-94PRTE.

INSTALLATION DRAWING



0.28 to 0.293kg

(0.61 to 0.64lbs)

30.0mm (1.18")

28.0mm (1.10")

0.48 to 0.63mm

(.019" to .025")

3/8" x 24UNF

7/16" x 20UNF

5/16" x 24 UNF

MASTER CYLINDERS - CP6465 & CP5540 Types

CP6465 **Pull Type Trunnion Mounted**



GENERAL INFORMATION

A pull type design, more efficient than conventional type master cylinders.

Aluminium Alloy Body.

Has a built in trunnion mounted in needle roller bearing for direct mounting to the balance bar.

Low profile inlet and outlet.

Special "plug in" inlet connection can be swaged directly to dash 4 hose.

Use with CP5520-3, -4 or -25L trunnion type balance bars

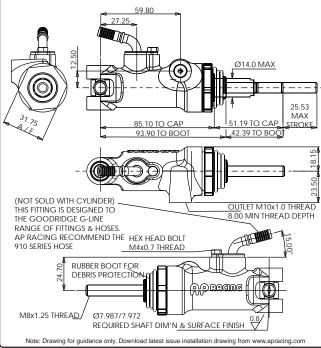
Choice of 9 bore sizes.

Extra short travel to cut-off standard.

CP6465 PART NUMBERS

Available	Extra Short Cut-off Cylinders.	Repair Kits.	
Bore Sizes.	PRME Pushrod.	Repair Rits.	
14.9mm (.587").	CP6465-149PRME	CP6465-149RK	
16.2mm (.638").	CP6465-162PRME	CP6465-162RK	
17.3mm (.681").	CP6465-173PRME	CP6465-173RK	
18.8mm (.740").	CP6465-188PRME	CP6465-188RK	
20.2mm (.795").	CP6465-202PRME	CP6465-202RK	
21.2mm (.834")	CP6465-212PRME	CP6465-212RK	
21.8mm (.858")	CP6465-218PRME	CP6465-218RK	
23.7mm (.933").	CP6465-237PRME	CP6465-237RK	
25.4mm (1.00").	4mm (1.00"). CP6465-254PRME CP6465-254		
- Ordering - Select the required bore size from the table above. E.G. CP6465-237PRME.			

INSTALLATION DRAWING



TECHNICAL DETAILS. 0.23 to 0.27kg Weight. (0.51 to 0.59lbs) Full Stroke. 25.4mm (1.00") Hydraulic Thread. M10 x 1.0 - Outlet. Inlet, Special Fittings. CP6465-10 75° type. CP6465-11 Straight type. 90° type. CP6465-12 All inlet fittings are sold separately.

Push Rod Threads. - PRME M8 x 1.25

ype salance sale.	is uniockeu pi	10
	PART NUM	1E
	Available Bo	re
	Small Para	1

CP5540 Double Ended

TECHNICAL DETAILS.

0.40Kg

0.30Kg

(0.66lbs)

2 x 22.5mm

0.48 to 0.63mm

(.019" to .025")

M10x1.00

M10x1.00

(0.88ilbs)

Weight. (without spring)

With Rod Ends

Without Rod

Full Stroke.

- Extra Short

Outlet.

- Inlet

Travel To Cut-Off.

Hydraulic Thread.

Ends



GENERAL INFORMATION

Lightweight double ended

(Tandem) cylinder with two separate hydraulic chambers, to create two output pressures, for either front & rear brake circuits or a hand brake and differential release assembly.

- Aluminium alloy body.
- Hard anodised.
- High efficiency push type design.
- Mounted through a spherical bearing.

Rubber boots fitted.

Hand brake version available with additional spring fitted to delay the increase of pressure to that bore. This is required to ensure the differential nlocked prior to the rear brakes coming on.

PART NUMBERS FOR USE WITH CP5540 PEDAL BOX					
Available Bo	ore Sizes.	Master Cylinder Part	Repair Kit Part Number.		
Small Bore	Large Bore	Numbers.			
5/8" (.625")	0.70"	CP5540-9091PRME	CP5540-9091RK		
5/8" (.625")	3/4" (0.75")	CP5540-9092PRME	CP5540-9092RK		
0.70"	0.70"	CP5540-9191PRME	CP5540-9191RK		
0.70"	3/4" (0.75")	CP5540-9192PRME	CP5540-9192RK		
- Orderina: S	Select the rea	uired bore size from the	table above.		

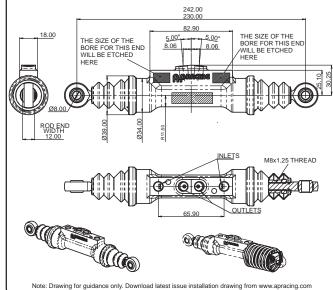
E.G. CP5540-9091PRME

PART NUMBERS TO SUIT CP4780-4 HAND BRAKES & DIFFERENTIAL RELEASE ASSY.

Available Bore Sizes.		Master Cylinder Part Numbers.	
Small Bore	Large Bore		
5/8" (.625")	0.70"	CP5540-9091EHB(#)	
5/8" (.625")	3/4" (0.75")	CP5540-9092EHB (#)	
0.70"	0.70"	CP5540-9191EHB	
0.70"	3/4" (0.75")	CP5540-9192EHB(#)	

Note: - The(#) is an option as to which end the you want the spring to be fitted. If you required the spring to be fitted to the small bore end, replace the (#) with an 'S'. If fitted to the large bore replace (#) with an 'L' e.g. CP5540-9192EHS - A hand brake cylinder with a 0.7" & 0.75" bores with the spring fitted to the 0.7" end.

INSTALLATION DRAWING



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MASTER CYLINDER - Repair Kits

MASTER CYLINDER REPAIR KITS.

Repair kits are available for AP Racing Master Cylinders detailed in this catalogue. Repair kit Part Nos can be found in the table below. IMPORTANT NOTE: The changing of internal components of the master cylinder in rare cases, may alter the distance to cut-off. If you are unable to bleed the cylinder after a seal change, please consult AP Racing. Also ensure that any parts that have been dis-assembled are kept with the original cylinder and are not mixed.

CP2623, CP4400, CP4623, CP5623 & CP6093.

Repair kit information for CP2623, CP4400, CP4623, CP5623 and CP6093 are tabled below for all Master Cylinders sizes. Please follow the instructions below

INSTRUCTIONS

4) Check bore is free from c 5) Lubricate bore with Brak 6) Reassemble internal com

7) Use new circlip (10) to se internal components and n to protect from debris (11).

into body.

1) Remove rubber boot (11) and circlip (10).

2) Carefully remove internal components.

3) Replace the following. (Making sure all seals have been lubricated with Brake Fluid). Primary seal (4), Piston Washer (5) and the Secondary seal (7). (Care must be taken when assembling seals as damage maybe caused)

debris.	Ref.	Description.	Included in Repair Kit.	Bore Size.	Repair Kit Part No.
	1.	Body.		14.00mm	CP2623-88RK
ke Fluid.	2.	Spring Guide Pin.		15.00mm	CP2623-89RK
ite i fuid.	3.	MCyl Return spring.		15.9mm (0.625") 5/8"	CP2623-90RK
	4.	Primary Seal.	Yes.	16.8mm	CP2623-905RK
nponents	5.	Piston Washer.	Yes.	17.8mm (0.70")	CP2623-91RK
	6.	Piston		19.1mm (0.75") 3/4"	CP2623-92RK
	7.	Secondary Seal.	Yes.	20.6mm (0.812") 13/16"	*CP2623-930RK*
	1.	Secondary Seal.	ies.	20.01111 (0.812) 13/10	* new piston maybe required. see www.apracing.com
secure	8.	Push Rod.		22.2mm (0.875") 7/8"	CP2623-94RK
new boot	9.	Piston Stop Washer.		23.8mm (0.937") 15/16"	CP2623-95RK
	10.	Circlip.	Yes.	25.4mm (1.00")	CP2623-96RK
•	11.	Boot.	Yes.	25.41111 (1.00)	GF2023-90RR

CP7854 and CP7855 REPAIR KITS.

Repair kit information for CP7854 and CP7855 are tabled below for all Master Cylinders bore sizes. Please follow the instructions given.

INSTRUCTIONS

1) Remove rubber boot (11) and circlip (13).

2) Carefully remove internal components.

3) Replace the following. (Making sure all seals have been lubricated with Brake Fluid). Primary seal (1), Slydring Bearing (2), Piston Washer (4), D-Ring Piston Seal (5) & O-Ring End Cap Seal (9).

Ref

10 11

12

14

1.

10. 11. 12.

(Care must be taken when assembling seals as damage may be caused).

4) Check bore is free from debris.

5) Lubricate bore with Brake Fluid.

6) Reassemble internal components into body.

7) Use new circlip (13) to secure internal components and new boot to protect from debris (11).

CP6465 REPAIR KITS.

Repair kit information for CP6465 are tabled below for all Master Cylinders bore sizes. Please follow the instructions given.

INSTRUCTIONS

1) Remove rubber boot (12) and unscrew end cap (9).

2) Carefully remove internal components.

3) Replace the following. (Making sure all seals have been lubricated with Brake Fluid). Primary seal (1), Slydring Bearing (2), Piston Washer (4), D-Section Piston Seal (5) & O-Ring End Cap Seal (8). (Care must be taken when assembling seals as damage maybe caused) Ref

4) Check bore is free from debris.

5) Lubricate bore with Brake Fluid.

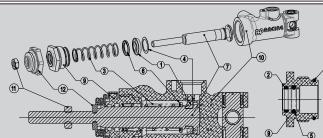
6) Reassemble internal components into body.

7) Use original end cap (9) to secure internal components. Tighten to 24Nm (18lbf-ft) and use loctite threadlocker 242 or 243).

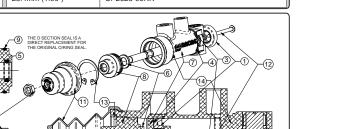
8) Fit new boot (12) to protect from debris.

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f. Description.	Included in Repair Kit.	Bore Size.	Repair Kit Part No.
Primary Seal.	Yes.	14.00mm	CP7855-88RK
Slydring Bearing.	Yes.	15.00mm	CP7855-89RK
MCyl Return Spring.		15.9mm (0.625") 5/8"	CP7855-90RK
Piston Washer.	Yes.	16.8mm	CP7855-905RK
D-Ring Piston Seal.	Yes.	17.8mm (0.70")	CP7855-91RK
Cut-off Shim.		19.1mm (0.75") 3/4"	CP7855-92RK
Piston.		19.1mm (0.75) 3/4	CP7855-92RK
End Cap.		20.6mm (0.812") 13/16"	CP7855-93RK
O-Ring Cap Seal.	Yes.	20.011111 (0.012) 13/16	CF7055-95KK
Lock Nut 5/16" UNF.		22.2mm (0.875") 7/8"	CP7855-94RK
Boot.	Yes.	22.2000 (0.875) 7/8	CF7655-94KK
Spring Guide Pin.		23.8mm (0.937") 15/16"	CP7855-95RK
Circlip.	Yes.	25.4mm (1.00")	CP7855-96RK
Body.		25.4000 (1.00)	CF7055-90KK



			A A A A A A A A A A A A A A A A A A A	
ef.	Description.	Included in Repair Kit.	Bore Size.	Repair Kit Part No.
	Primary Cup Seal.	Yes.	14.9mm	CP6465-149RK
	Slydring Bearing.	Yes.	16.2mm	CP6465-162RK
	MCyl Return spring.		17.3mm	CP6465-173RK
	Piston Washer.	Yes.	18.8mm	CP6465-188RK
	D-Section Piston Seal.	Yes.	20.2mm	CP6465-202RK
	Piston Stop.		21.2mm	CP6465-212RK
	Piston.		21.8mm	CP6465-218RK
	O-Ring Cap Seal.	Yes.	23.7mm	CP6465-237RK
	End Cap.		25.4mm	CP6465-254RK
	Body.			
	Locknut M8x1.25			
	Boot.			





INTRODUCTION.

AP Racing offer a comprehensive range of plastic reservoirs. The reservoir detailed on pages 77 & 78 to complement not only our own Master Cylinders but other manufacturers also. Full installations drawings can be downloaded from: www.apracing.com

CP4709 TYPE.

A small diameter plastic reservoir with central outlet which can be screwed directly into a master cylinder.

- Features

Available in a choice of 3 volumes.'O' Ring seal supplied.

CP2709-156 Bellows available.

Push on & threaded connector for

remote cylinder available - CP4709-107.

- Part Numbers

CP4709-10,-11 & -12 Will screw directly onto, CP2623, CP4623, CP5623 and CP6093 cylinders by removing inlet adaptor.

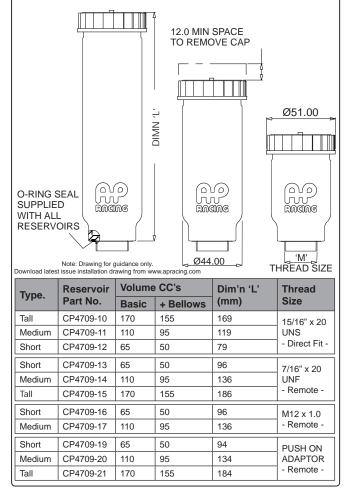
Note: For fitting instructions refer to leaflet P14.073 or see website.

CP4709-13,-14 & -15 are for remote use but will fit directly to CP4400 master cylinders.

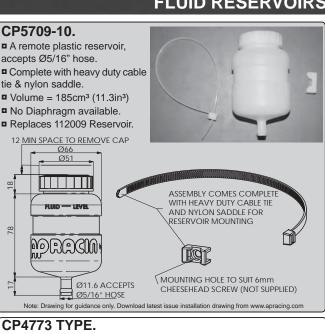
CP4709- 16 & -17 are for remote use only.

CP4709-19,-20 & -21 reservoir with push on outlet, for remote use only.

IMPORTANT NOTE: CP4709-12 /-13 /-16 & -19 small reservoir have no bellows to suit please use CP4709-25 Catch Tank Kit.





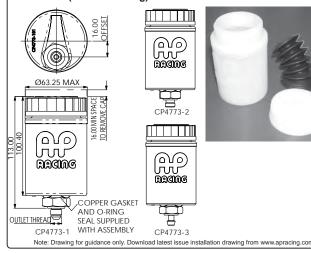


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CP4773 reservoir capacity is midway between, CP4709 and CP2293-141/3 types. Both assemblies have an offset outlet and are fitted with bellows (CP4773-102).

■ Volume = 195cm³.

- Part Numbers:
- CP4773-1 (7/16UNF outlet).
- CP4773-2 (M12 outlet).
- CP4773-3 (Push on Fitting).



CP4709-25 - CATCH TANK KIT.

CP4709-25 catch tank is an alternative fluid surge system to traditional bellows without compromising reservoir capacity. CP4709-25 is suitable for all AP Racing reservoirs and can be used in all

competition formulae.

The kit comprises of:

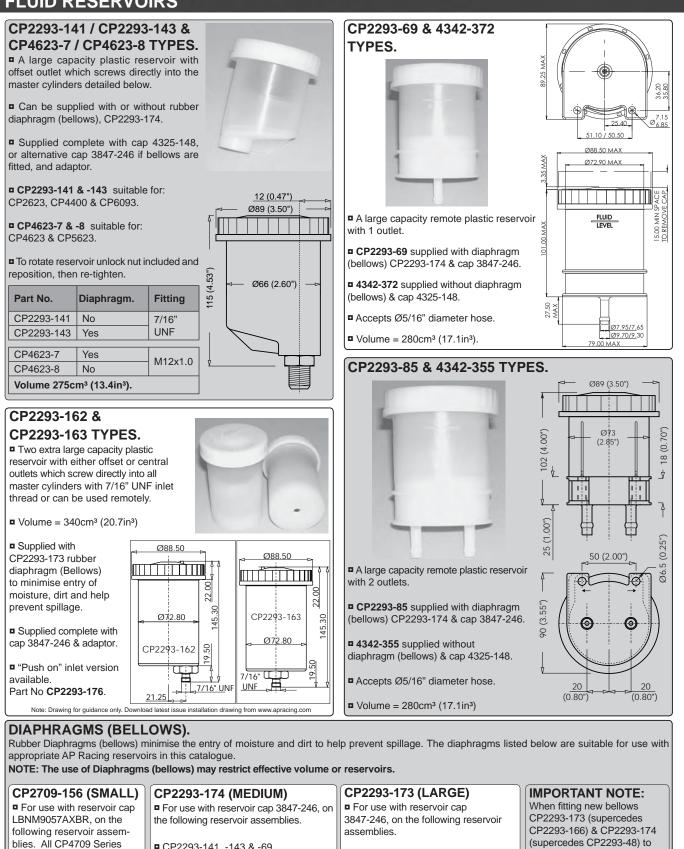
- 1 x catch tank.
 75cm of silicone tube.
- 3 x nipples with washers &
- nuts.
- 1 x T-Connector.
- 2 x Cable ties.
- 4 x Mounting blocks.



NOTE: For installation & fitting details refer to, http://www.apracing.com/drawings/cp4709-25cd-iss1.pdf

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FLUID RESERVOIRS



CP2293-162

Replaces

CP2293-166.

& -163.

old 4325-148 cap assembly

the plastic insert and rubber

seal must be removed from

New cap 3847-246.

the cap.

except -12/ -13/ 16 & -19.

CP2293-141, -143 & -69

CP2293-85

CP4623-7/ -8/-9 & -10.

Replaces CP2293-48.

/ 4342-355.



INTRODUCTION.

AP Racing's range of pedal boxes are proving to be masterpieces of functional design. Our pedal boxes represent a major step forward in chassis control, giving driver better feel, greater dexterity, quicker laps.

All pedal boxes are lightweight, flexible and ergonomically efficient, these multi-ratio pedal boxes are designed to harmonise with the complete range of master cylinders available from AP Racing.

CP5500 - FLOOR MOUNTED PUSH TYPES.

CP5500 family is a generic racing pedal box design. Designed for comfort and control. The 3 pedal assembly CP5500-605 has been updated to include a new contact less rotary throttle sensor with dual input/output for redundacy.

This family of pedal boxes benefits from optimised machined billet base plate and pedals with adjustable footpads to alter pedal ratio's. The throttle pedal includes travel stops and additional features to aid connection to bell cranks and cables.

All pedal pivots feature ball bearings. The base plate and pedals together with low friction treatments and a high quality spherical balance bar bearing set high standards in pedal box efficiency. The CP5500 range is also available in 3, 2 and 1 pedal configurations.

PART NUMBERS.

Brake, Clutch & Throttle Assembly:

- With throttle sensor.
- CP5500- 605MTS or CP5500-605UTS.
- Without throttle sensor.
- CP5500- 605M or CP5500-605U.
- Brake & Clutch Assembly.
- CP5500- 515MET or CP5500-515UNF.
- Brake Pedal Assembly.
- CP5500- 535MET or CP5500-535UNF.

Note: UNF & UTS Assemblies

The only threads that are imperial are the three clevis's that attach to the master cylinder pushrods.

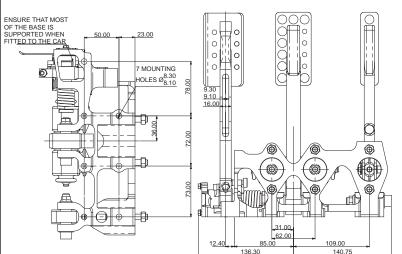
FEATURES.

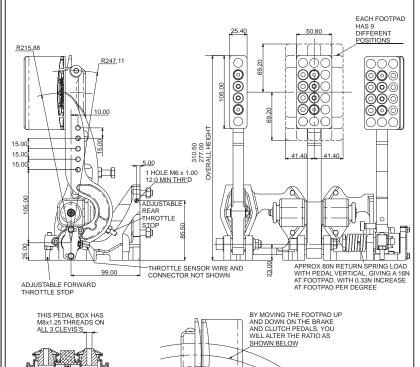
Optimised, lightweight Aluminium alloy base plate, machined from Billet.

 Optimised, lightweight billet clutch and brake pedal, with improved twist resistance.

- Forged throttle pedal with additional features.
- Adjustable forward & rear stops.
- Return spring.
- 9 Different footpad positions.
- Side Plate.
- Optional throttle linkage kit CP5500-43.
- Brake and clutch pedal ratio 4.85:1.
- All pedals pivot on ball bearings.
- Suitable master cylinder ranges CP2623
- Recommended push rod length
- brake 88.0mm. / clutch 65.0mm.
- Adjuster cable CP2905-18 included.
- **1** 10mm balance bar fitted with rubber boots to prevent dirt ingress.
- Supercedes CP5500-505.







0.50 MINIMUM CLEARANCE BETWEEN CLEVIS AND WASHER

THIS PEDAL BOX HAS

BEEN DESIGNED TO TAKE CP2623 MASTER CYINDERS

52.00 MIN

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180.00 MAX

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6

R201.73 RATIO 4.48:1

R45.00

R218.40

RATIO 4.85:

R235.07 RATIO 5.22:1 ?

PEDAL BOXES - CP5509 Type



This is a general purpose floor mounted pedal box which utilises the latest high efficiency CP7854 push type master cylinders. Minimum hysteresis and balance variation are assured by the use of needle roller bearings in the centre trunnion and ball bearing pedal pivots.

PART NUMBERS.

Brake and clutch assembly. - CP5509-1

FEATURES. Lightweight billet base, machined from Aluminium.

Includes billet aluminium alloy Pedals and Balance Bar.

Adjustable foot pads for optimum driver comfort.

Adjustable clutch stop.

Brake and clutch pedal ratio 4.8:1.

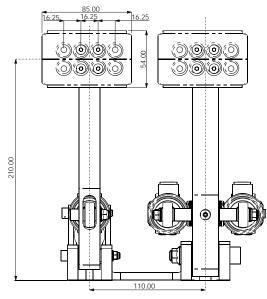
Brake and clutch pedal are pivoted on ball bearings for increased efficiency and smoothness.

Designed for use with master cylinder. - CP7854 see page 74.

Travel sensor kit CP5854-10 available for the master cylinders used with this pedal box.

Weight. - without cylinders 1.75kg

Adjuster cable CP2905-18 included with assembly.



NOTE: A TRAVEL SENSOR KIT TO SUIT

ONTO THE CYLINDER. FOR INSTALLATION DATA SEE DRAWING CP5854-10CD

7.00 TYP I OFF MTG HOLES)

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THE MASTER CYLINDERS USED WITH THIS PEDAL BOX IS AVAILABLE UNDER THE PART No CP5854-10 THE TRAVEL SENSOR MOUNTS

SETTING UP THE BALANCE BAR ADJUST THE PUSHRODS SO THAT THE BALANCE BAR ISPERPENDICULAR TO THE PUSHRODS UNDER MAXIMUM LOAD. THE SYSTEM IS THEN SQUARE. IT IS NOT IMPORTANT THAT THE SYSTEM IS SQUARE WHEN RELEASED, BUT IT HAS TO BE UNDER LOAD.

FOR MAXIMUM EFFICIENCY, IT IS RECOMMENDED THAT THE PEDAL IS AT RIGHT ANGLE WITH THE PUSHRODS UNDER MAXIMUM BRAKING LOAD; AND ALSO KEEPING THE BALANCE BAR CENTRAL WITH BETTER SELECTION OF MASTER CYLINDER SIZES HELPS REDUCE INEFFICIENCIES.

ALSO MAKE SURE THAT THE MASTER-CYLINDER PISTONS FULLY RETURN BEFORE USE. THIS CAN BE CHECKED BY FEELING THE PUSHRODS FOR SLIGHT MOVEMENTS THERE SHOULD NOT BE ANY EXCESSIVE LOOSE MOVEMENT.

MAX ANGLE ADJUSTMENT AT SETUP THIS IS SET BY ADJUSTING THE THREAD ENGAGEMENT OF THE ROD END BAR AND MASTER CYLINDER PISTON.

THIS RELATES TO 8.0mm OF DIFFERENCE IN TRAVEL OF FRONT TO REAR CYLINDERS. REMEMBER THE BALANCE BAR SHOULD BE PERPENDICULAR WHEN AT MAX BRAKE PRESSURE

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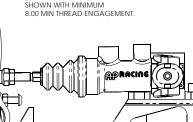
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6.6° MAX

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THREAD ENGAGEMENT (ALL DRAWING VIEWS SHOWN WITH MINIMUM 8.00 MIN THREAD ENGAGEMENT.



148.50

* IMPORTANT NOTE: BRAKE PIPES MUST NOT RESTRICT THE OPERATION OR ADJUSTMENT OF THE

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BALANCE BAR.

RECOMMENDED ADJUSTMENT 5.00 MAX. THE MORE ADJUSTMENT YOU HAVE THE MORE INEFFICIENT THE BALANCE BAR BECOMES

4 OFF MTG

HOLES TO SUIT M8 CAP SCREWS

8.20

8

6

6.50

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Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

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85.00 CP5509-1 IS DESIGNED TO USE 3-OFF CP7854 TYPE HIGH EFFICIENCY MASTER CYLINDERS SEE PAGE 80

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CP5516 FLOOR MOUNTED REVERSED PULL TYPE.



This unique pull type design allows the pushrod to remain in line eliminating all side loads making it the most efficient pedal box on the market.

The cylinders are mounted under the drivers feet for optimum space utilisation and access.

Minimum hysteresis and balance variation are assured by the use of needle roller bearings in the centre trunnion.

PART NUMBERS.

■ For Fly-By-Wire throttle sensor applications. - CP5516-88TS.

Throttle Cable Applications.

- CP5516-7.

NOTE: CP5516-7 cannot except a throttle sensor

CP5516-88TS BENEFITS.

- CP5516-88TS is fitted with a throttle sensor..
- Benefits over CP5516-7 are:
- Faster responding electronics.
- Reduces the number of moving parts.
- Minimum adjustment & maintenance.Greater accuracy of data.

STANDARD FEATURES.

Lightweight aluminium base, machined from high quality casting.

- Extra Strengthening rib.

All pedals are machined from aluminium billet.

Brake pedal is pivoted by ball bearings to increased smoothness.

Designed for use with master cylinder.CP6465 see page 75.

Adjustable foot pads for extra driver comfort.

Throttle pedal has foot pad.

Adjustable throttle pedal position, linkage with a torsion spring for positive pedal return.

Adjustable pedal stops on clutch and throttle.

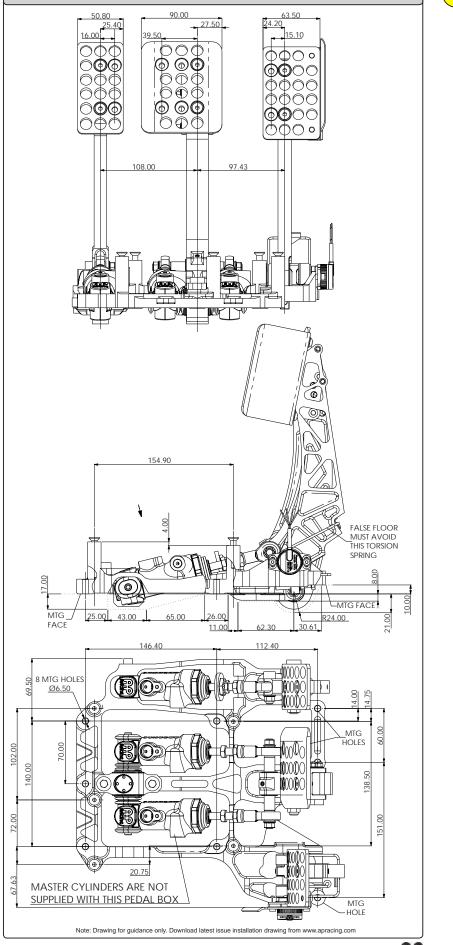
Weight = 3.4kg, without cylinders.

Brake and clutch pedal ratio 4.8:1

All threads are metric.

Adjuster cable CP2905-18 included with assembly.

CP5516-88TS INSTALLATION DRAWING



www.apracing.com

PEDAL BOXES - CP5507 Type

CP5507 UNDERSLUNG BULKHEAD MOUNT TYPE.



The bulkhead mounted type with master cylinders being located in the engine or front compartments. A lightweight aluminium base, and ergonomic steel and alloy pedals offer the user the ultimate control in this critical area. Uses conventional Master Cylinders e.g. CP2623.

PART NUMBERS.

Brake, clutch & throttle assembly.CP5507-19

Brake & clutch assembly.CP5507-18

FEATURES.

Lightweight aluminium base, machined from high quality casting.

Fabricated steel brake pedal.

Machined aluminium alloy clutch and throttle pedals.

Adjustable foot pads.

Adjustable throttle pedal position & linkage.

Adjustable pedal stops.

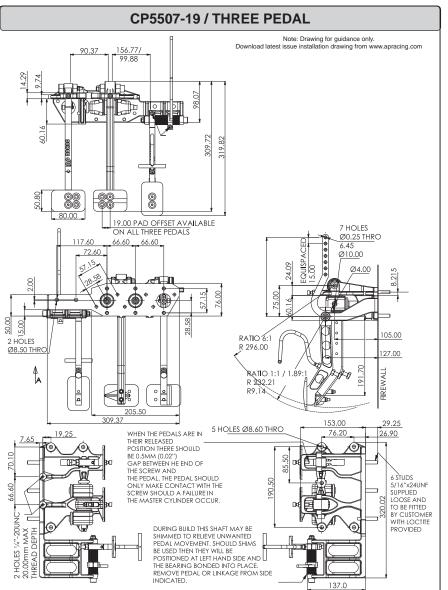
 Heavy Duty 12.7mm balance bar fitted with rubber boots and High quality spherical bearing.

Adjustable cable CP2905-18 included with assembly.

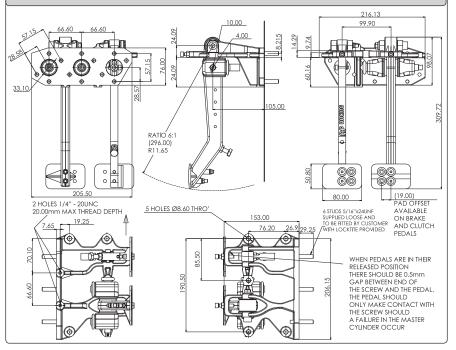
Brake and clutch pedal ratio 6:1.

Suitable master cylinder ranges,

- CP6093 see page 72.
- CP2623 see page 71.
- CP4623 see page 71.
- All threads are imperial.



CP5507-18 / TWO PEDAL





CP5508 UNDERSLUNG MULTI RATIO PUSH TYPE.



This multi ratio push type pedal box allows the pushrod to remain straight, eliminating all side loads therefore making it very efficient. The master cylinders connect directly to a high efficiency balance bar. 24.00

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A lightweight aluminium base, and ergonomic steel and alloy pedals offer the user the ultimate control in this critical area. Uses CP7854 Master Cylinders.

PART NUMBERS.

Brake and clutch assembly
 CP5508-1

FEATURES.

Lightweight aluminium base, machined from solid.

Clutch pedal is machined from aluminium billet.

Brake pedal is machined from steel.

Brake pedal has multi ratios mounting bracket allowing three different ratio to be used.

Brake pedal has a return spring fitted.

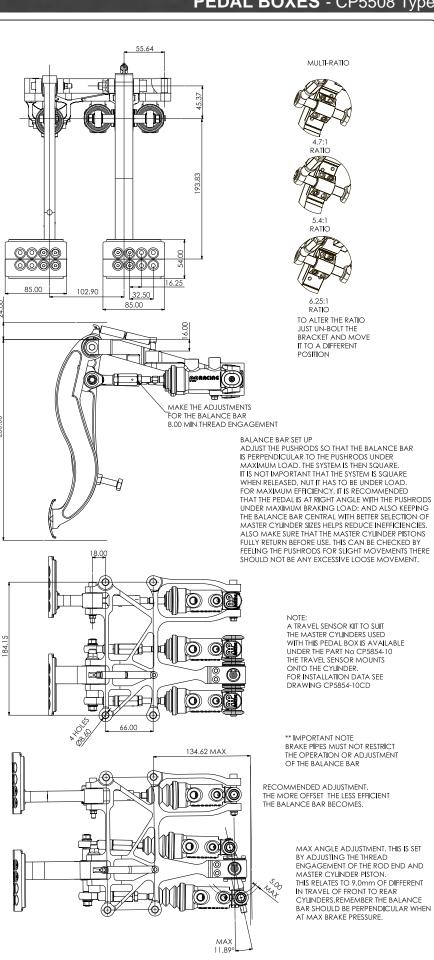
Both pedals are pivoted on ball bearings to increase smoothness of feel for the driver.

Adjustable stop on clutch pedal.

Designed for use with CP7854 master cylinder see page 74.

D Travel sensor kit CP5854-10 available for the master cylinders used with this pedal box.

Weight.
 without cylinders 2.12kg
 with cylinders 2.72kg



Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

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PEDAL BOX - CP5517 Type

CP5517 UNDERSLUNG BULKHEAD PULL TYPE.



This unique pull type bulkhead mount design with master cylinders being located in the engine or front compartments allows the pushrod to remain in line eliminating all side loads making it one of the most efficient pedal box on the market. It's lightweight aluminium base, and ergonomic steel and alloy pedals offer the user the ultimate control in this critical area.

PART NUMBERS.

Brake and clutch assembly.
 CP5517-1

FEATURES.

Lightweight aluminium base, machined from high quality casting.

Fabricated steel brake pedal.

Machined aluminium alloy clutch and throttle pedals.

Designed for use with master cylinder.CP6465 see page 75.

- CP5898 with CP5517-111 bracket, see page 73.

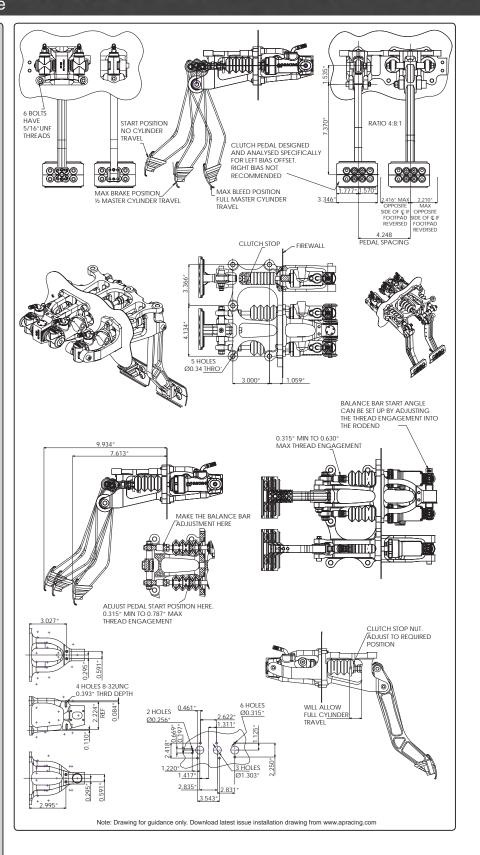
Bellows to seal the fire wall. Made from fire retardant material.

Adjustable foot pads for extra driver comfort.

Adjustable pedal stops.

Brake and clutch pedal ratio 4.8:1

Adjuster cable CP2905-18 included with assembly.



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te: Drawing for guidance only.

Download latest issue installation drawing from www.apracing.com



CP5540-50 is a floor mounted push type racing pedal box, incorporating a tandem master cylinder CP5540 family for brake application only and a standard cylinder is required for clutch actuation.

The tandem master cylinder removes the ability to adjust the brake balance during an event, therefore brake balance should be set by selecting an appropriate bore within the master cylinder range.

PART NUMBERS.

Brake, clutch and throttle assembly
 - CP5540-50

FEATURES.

A double ended master cylinder with two separate hydraulic chambers which, when compressed by pedal effort, creates two output pressures, one each for front & rear brake circuits.

Brake pedal has multi ratios mounting bracket allowing three different ratio to be used. Therefore overall braking effort (to achieve a certain retardation) can be varied by switching to an alternative pedal ratio.

The system eliminates several components that are used in a typical pedal box because there is no need for a balance bar. For example the number of bearings is reduced from 6 to 3.

- Brake ratios: 2.1:1 / 2.5:1 & 2.9:1

- Clutch ratio: 4:1

Deptimised, lightweight Aluminium alloy base plate.

Throttle pedal has a return spring fitted.

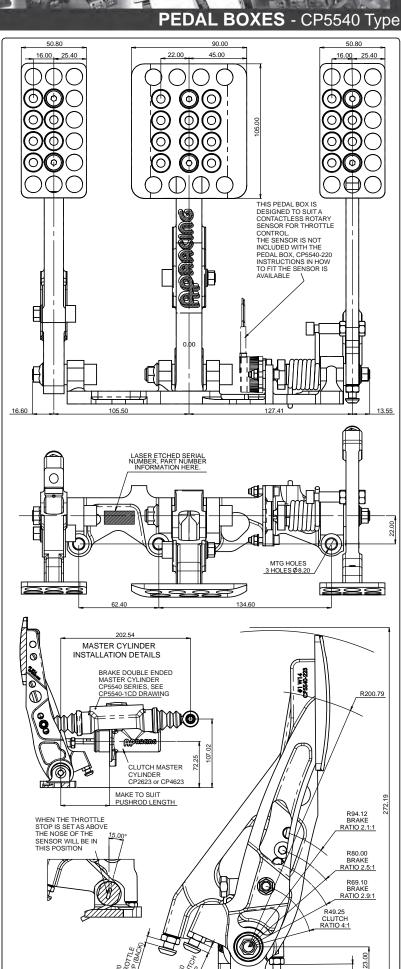
Both pedals are pivoted on ball bearings to increase smoothness of feel for the driver.

Adjustable stop on clutch pedal.

Designed for use with master cylinder types:
Brake - CP5540 see page 75.
Clutch - CP2623 or CP4623 see page 71.

 Designed to suit accept a contact less rotary throttle potentiometer. This sensor in not included with pedal box order seperately.
 Part number - CP5540-220.

Weight.Without cylinders 1.64kg



www.apracing.com

5.00 THROTTLE STOP FRONT P



CP4780, Hand Brakes.

GENERAL INFORMATION.

- Lightweight fabricated base and lever assembly
- Ratchet locking & fly off mechanism incorporated.
- Lever ratio 7:1
- Mounted using spherical bearing.
- Three options available for single or dual circuits and differential release

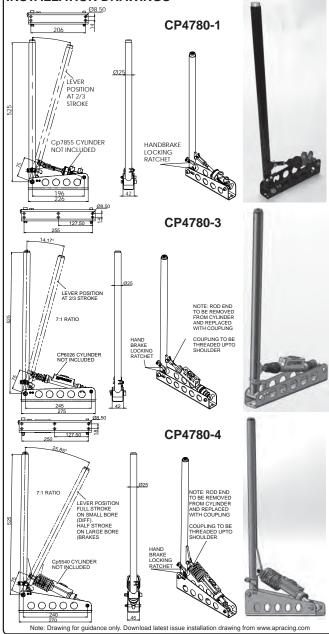
APPLICATION.

General Rally use.

PART NUMBERS AND USAGE GUIDANCE.

Hand Brake Assy Part Numbers.	Hand Brake Single Circuit	Hand Brake Dual Circuit	Hand Brake Single circuit & Differential Release	Master Cylinder Families to be used:	
CP4780-1	•			CP7855 Family. (See Page 74)	
CP4780-3		•		CP6026-91	
CP4780-4			•	CP5540 Family (See Page 75.)	

INSTALLATION DRAWINGS



CP6026-91, Hand Brake Cylinder.

GENERAL INFORMATION

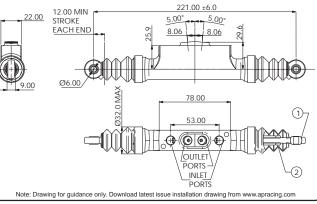
- Double ended hand brake Master Cylinder.
- For use with dual circuits where
- diagonal brake split is mandatory.
- Forged Aluminium alloy body.
- Lightweight compact design.
- Hard anodised.
- High efficiency push type design.Mounted using rod end spherical
- bearings.
- One piece piston & push rod.Rubber boots fitted as standard.
- Alternative bore sizes available please contact AP Racing Technical Department for more information.



TECHNICAL DETAILS Weight. 0.25kg (0.55lbs) Full Stroke 2 x 12mm Bore Dia. 0.70" (17.8mm) Travel To Cut-Off. 0.69 to 1.09mm - Short (.027" to .043") Hydraulic Thread. - Outlet. M10 x 1.0 - Inlet. M10 x 1.0 Dual Circuit **⊺ypical** hand brake Application. systems.

CP6026-91 SPARES LIST QTY /CYL REF: DESCRIPTION PART No. CP6026-101 Rod End 2 1 M6 Nut ME21001 2 2 **ADDITIONAL SPARE PARTS** Seal Repair Kit (2 off each part) Boits, CP6025-91RK Seals, Piston Washers & Circlips

INSTALLATION DRAWING



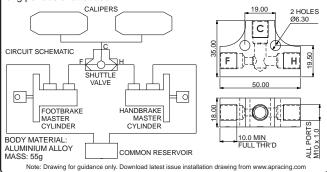
CP5088-1 SHUTTLE VALV

The AP Racing shuttle valve is a means of feeding two input hydraulic systems into one output. The output pressure will be as the largest input. A typical usage to separate a hydraulic hand brake from the foot brake system is illustrated opposite.



IMPORTANT: Foot brake and hand brake master

cylinders must be fed from a common reservoir as indicted. When brake is operated from one source, this valve will decay at a rate of about 6 Bars over 10 minutes. As such it should not be used to park the car for long periods unattended.



BALANCE BARS

INTRODUCTION.

AP Racing Balance Bar Assemblies are designed to offer the user improved levels of efficiency and control. The range consists of three families. CP5500, CP5507, CP5520. AP Racing also offers a choice of cable adjusters, information can be found on page 88.

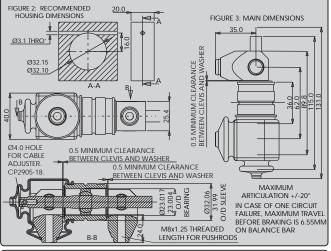
CP5500-9 & CP5500-9UNF / STANDARD DUTY

A lightweight and durable conventional Balance Bar manufactured from a high grade alloy steel treated with a low friction coating for extra smoothness of adjustment. It incorporates a spherical bearing for improved efficiency, an outer tube to ease installation and rubber boots



to prevent ingress of dirt & grit. Not suitable for heavy duty applications or high pedal ratios. A similar assembly is also available without the rubber boot CP5500-4. NB. Select CP5500-9 for use with M8 Master Cylinder pushrods & CP5500-9UNF for use with 5/16"UNF Master Cylinder pushrods.

NOTE: For the latest Installation drawing and advice for installation of sleeve and balance bar visit our website: www.apracing.com



CP5507-2 / HEAVY DUTY

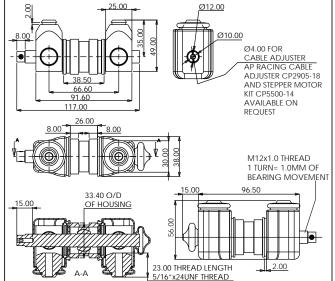
Similar in concept to CP5500-9 but with a heavy duty 12mm balance bar for applications where a high pedal ratio and / or heavy pedal loads are used. Features include low friction coatings, spherical bearing and rubber boots to prevent dirt ingress.

NB. Suitable for use with 5/16"UNF Master Cylinder pushrods

Note: CP5500-9 & CP5507-2. If used with conventional master cylinders with articulated push rods e.g. CP2623, CP4623 etc. The push rod angularity must be limited to 4° from straight to avoid unacceptable side loads on the pistons.



NOTE: For the latest Installation drawing and advice for installation of sleeve and balance bar visit our website: www.apracing.com

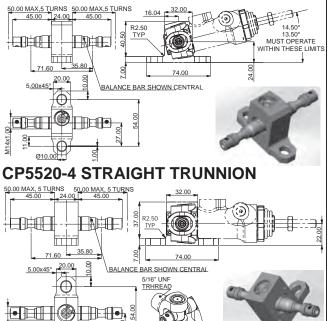


HIGH EFFICIENCY TRUNNION TYPES.

These small and compact balance bars use needle roller bearings, to provide low hysteresis and high efficiency. These versions are designed to fit at the fixed end of master cylinders fitted with integral trunnions such as CP6465 (Pull Type) and CP7854.

NOTE: For the latest Installation drawing and advice for installation of sleeve and balance bar visit our website: www.apracing.com

CP5520-3 ANGLED TRUNNION



CP5520-25 TRUNNION STYLE.

A new concept in balance bars where the central pivot is a trunnion rather than a spherical bearing. This has the advantage of preventing balance bar movement in the vertical plane thus removing the largest cause of unwanted balance variation. The centre trunnion and clevises employ needle roller bearings to reduce friction and hysteresis to a minimum, improving modulation. CP5520-25 can be attached to the pedal or to the fixed end of the pedal box. This specific version is designed to fit CP7855 type cylinder.

Le A VERSION OF CP5520-4 IS

AVAILABLE WITH CLEVIS'S PART No. CP5520-4C

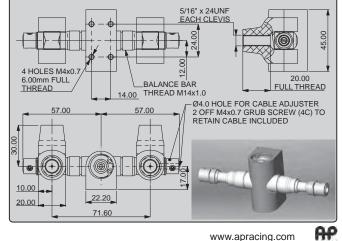
This balance bar is available with or without clevis's, Part Numbers: - CP5520-25L without Clevis's.

CP5520-25LC with Clevis's.

Ø10.00

Supercession: CP5520-25L replaces CP5520-2 and CP5520-25LC replaces CP5520-13.

NOTE: For the latest Installation drawing and advice for installation of sleeve and balance bar visit our website: www.apracing.com



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BALANCE BAR CABLE ADJUSTERS

CABLE ADJUSTER. CP2905-8 (WITH END CONNECTOR). CP2905-18 (NO END CONNECTOR).

Is a high quality balance bar cable adjuster ideal for any competition vehicle Anodised aluminium alloy body with ¼ turn click stops for positive vibration proof positioning. The Ø3.8mm inner steel cable



has a polyethylene 'FR' self extinguishing outer tube and is generally stiffer than most adjuster cables on the market to resist 'wind up'.

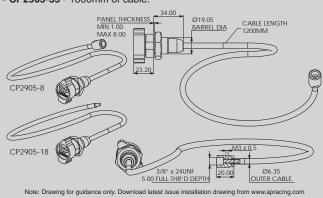
The adjuster body can easily be fitted through a Ø19mm hole in the dashboard. CP2905-8 or -18in 1200mm lengths with an adjustable end fitting allowing the cable to be cut to the required length, the kit includes cable clips and two directional stickers.

Note:

Adjusters available with the following cable lengths without end connector:

- CP2905-29 - 900mm of cable.

- CP2905-33 - 1800mm of cable.



CP5500-66 RIGHT ANGLED DRIVE ASSEMBLY.

This device connects the balance bar cable adjuster CP2905-8 directly to all AP Racing Balance bars as well as others on the market. CP5500-66 improves the installation and keeps the cable out of the way of the clutch / throttle pedals.

Specification:

- Type - 90° Bevel Gearbox. / - Ratio - 1:1 / - Max Torque - 0.68Nm / - Weight - 33g / - Backlah - 2° / - Max Temp - 80°C.

CP2905-15 - CABLE ADJUSTER WITH DIGITAL READ-OUT. Incorporates the CP2905-8 Balance

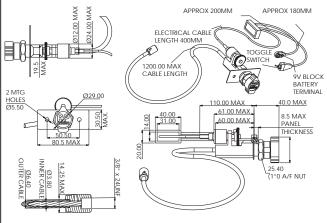
Bar Cable Adjuster. The balance bar digital read-outprovides the user with an accurate indication of exact position of the balance bar to the right or the left of centre.

The illuminated display is mounted in a plastic housing with two fixing points for mounting to the dash-



Ø 4.000 / 3.988 Ø 12.7 / 12.6

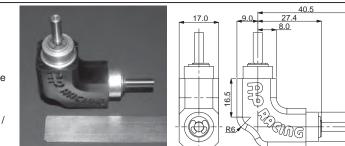
board and is supplied with approximately 18" of cable to the transducer. The adjuster body can be fitted through a Ø19mm hole in the dashboard or bulkhead also using the mounting plate for increased security.



Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

INSTALLATION OF ADJUSTER CABLES.

Ensure that the balance bar is correctly installed and turns freely (see above). The cable should not be installed with any bends of less than 50mm (2") radius otherwise wind-up may occur. For maximum stiffness the outer cable should be securely fastened in place along its complete length using the clips provided. Cut the cable to the required length preferably using an elastic grinding wheel, secure end fitting to balance bar, insert cable and lock in place with grub screw.



CUSTOMER NOTES

Radi-CAL[™] BRAKE FLUIDS

AP Racing's established range of brake & clutch fluids have been refreshed and re-branded to embrace our Radi-CAL[™] philosophy. Following last years successful launch of Radi-CAL[™] R4 racing fluid, AP Racing has chosen to re-align its full range of fluids by re-naming PRF660, 600, 551 and Formula Dot 5.1 and changing the bottle and caps (see details below). **NO alterations have been made to the actual brake and clutch fluids themselves.** All AP Racing brake fluids have been developed for use under arduous conditions encountered at all levels of motorsport and performance road environments and are compatible with all AP Racing products, plus conventional hydraulic brake systems designed to conform to S.A.E J1703 & J1704 requirements. Each brake and clutch fluid are supplied in heat sealed 500ml bottles.

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Radi-CAL[™] R4 BRAKE FLUID.

Part Number.

- CP6005-20 (Case of 20x500ml bottles)

'Typical' Boiling Points.

- New Dry 340°C - 'Wet' E.R. 195°C

Radi-CAL[™] **R4** has been designed to perform better than any other product at the extremes of heavy duty braking performance in the top levels of racing. With the highest dry boiling point of any racing brake fluid currently available, at 340°C (644°F), R4 stands alone. With outstanding

resistance to vapour lock / pedal fade under the most exacting conditions. A higher vapour lock point means a firmer brake pedal at the extremes of brake temperature. Enhanced lubricity, means this fluid is an even better lubricant than R3 itself a market leader. This helps the life of the metal moving parts of the brake system and increases system efficiency.

Carling Branks

Note: R4 can be mixed with DOT3 and DOT4 racing brake fluids but for maximum product performance the brake system should be thoroughly purged with R4 fluid.

Radi-CAL[™] R3 BRAKE FLUID.

■ PRF660, Re-branded as - Radi-CAL[™] R3 - Silver Bottle with Yellow Cap.

Part Number.
CP4660-20 (Case of 20x500ml bottles)

• **'Typical' Boiling Points**. - New Dry 325°C

- New Dry 325°C - 'Wet' E.R. 195°C

AP Racing's R3 has a dry boiling point of 320°C (608°F) and has been developed for racing use

only. R3 has advanced moisture resistance properties, low levels of viscosity (for ease of bleeding), low levels of compressibility and meets DOT4 specifications. R3 is suitable for all top levels of motorsport where abnormal temperatures are experienced and with the introduction of an inhibitor can now be used with magnesium components

Note: R3 can be mixed with other DOT4 racing brake fluids but for maximum product performance the brake system should be thoroughly purged with R3 fluid.

Radi-CAL[™] R2 BRAKE FLUID.

■ 600, Re-branded as - Radi-CAL[™] R2 - Silver Bottle with Blue Cap.

Part Number.

- CP3600-20 (Case of 20x500ml bottles)

'Typical' Boiling Points.

- New Dry 312°C - 'Wet' E.R. 195°C

AP Racing's R2 fluid has a dry boiling point of

312°C and has been specially developed to

provide outstanding performance for racing applications where braking systems operate at high temperatures. R2 fluid also conforms to and exceeds DOT4 specifications, but **should not be** used with components made from magnesium.

Note: R2 can be mixed with DOT4 racing brake fluids but for maximum product performance the brake system should be thoroughly purged with R2 fluid.

Radi-CAL[™] R1 BRAKE FLUID.

□ 551, Re-branded as - Radi-CALTM R1 - Silver Bottle with Black Cap.

Part Number.CP7551-20 (Case of 20x500ml bottles)

• **'Typical' Boiling Points.** - New Dry 269°C

- 'Wet' E.R. 140°C

R1 is a brake and clutch fluid suitable for all forms of motorsport and conforms to FMVSS 116 DOT3 specification. R1 is magnesium compatible and has a higher boiling point than normal brake fluids intended for road use.

FACTORY R DOT 5.1 BRAKE FLUID.

Formula Dot 5.1, Re-branded as - Factory R Dot 5.1 - Yellow Bottle with Yellow Cap.

Part Number.
CP4510-20 (Case of 20x500ml bottles)

'Typical' Boiling Points.
 New Dry 269°C
 'Wet' E.R. 180°C

Factory R DOT 5.1 is AP Racing's high performance non silicone based brake and clutch fluid. Factory R DOT 5.1 is recommended for use in the hydraulic brake and clutch systems of all cars, for which a non- petroleum based fluid is specified. Suitable for high performance applications including vehicles fitted with ABS and ESP, is suitable for road and track day use.

ANSWERS TO FREQUENT QUESTIONS.

All AP Racing Brake Fluids are Polyalkalene Glycol Ether based, not a silicone based fluid. AP Racing do not sell and do not recommend using a silicone based brake fluid with any of its products.

R1, R2, R3 and R4 brake fluids are intended for competition use only

AP Racing recommend Factory R Dot 5.1 for road use.
 Colour variations may occur in brake fluid due to its manufacturing process. This has no effect on the quality and performance of the product.

WARNINGS.

Whilst AP Racing race brake fluids are compatible with DOT3 and DOT4 Polyalkalene Glycol Ether based racing fluids it is recommended that only one type of fluid is used in a system. When changing over from one of these fluids types to another a thorough flush through with new fluid is sufficient.

DO NOT USE R4 and R3 fluid in contact with any type of magnesium components (e.g. Gearbox / Clutch components) as a chemical reaction is caused resulting in gases being generated. This will prevent the clutch hydraulics from working efficiently and may damage the magnesium components.

Note: For high temperature brake applications using magnesium AP Racing recommends R3

recommends R3

To obtain the best performance from racing brake systems, bleed the system thoroughly, immediately prior to each event using AP Racing brake fluid from a new sealed bottle. This is particularly important in wet or humid conditions or when the brakes are excessively hot. Always use fresh fluid and replace bottle cap when not in use. Never re-use brake fluid. The use of a high temperature fluid should not be used as a substitute for proper brake cooling. Brake temperatures can be determined using AP Racing temperature stickers (CP2650-11) and thermal paints (kit Number, CP2649-5).

AP Racing brake fluid contains Polyalkalene Glycol Ethers. Keep out of reach of children.

Never transfer to unmarked jars or bottles.Harmful if swallowed.

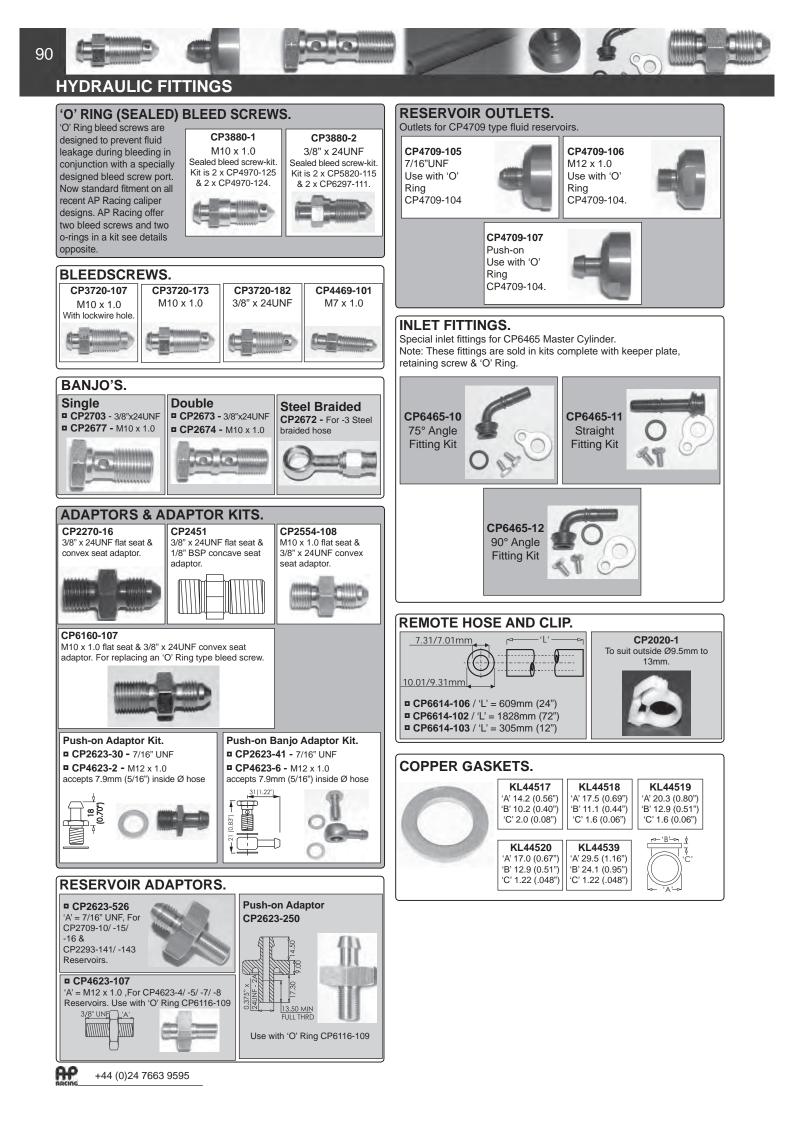
 Avoid excessive skin contact. Flush affected eyes with water and seek medical aid.

Brake fluids will damage vehicle paint work if spilled.



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DRY BLEED SYSTEM

DRY BLEED SYSTEM (DRY BREAKS).



An affordable Dry Bleed System has been designed for use with any AP Racing caliper suitable for sealed 'O' Ring or Non 'O' Ring bleedscrews

The male dry bleed valve is fitted in place of the bleed screw, and once fitted there should be no need to loosen or remove the coupling unless it is being replaced. The male dry bleeder is basically a valve that is opened when the female bleed valve coupling (CP6300-31 or CP6300-32) are connected to it.

The female coupling is connected to a bleed pipe and container allowing brake fluid to be pushed through the system to bleed it. The CP6300-32 bleed coupling are designed for use with standard plastic bleed tubes and incorporates a non return valve for one man bleeding.

Another advantage of the dry bleed system is that it removes the possibility of introducing air into the system via bleed screws when vacuum bleeding. The dry bleed caliper fittings are available with M10 x 1.0mm (CP6300-21) or 3/8" UNF (CP6300-27 or -30) threads. When fitting the dry bleed valve in to the caliper a small amount of Loctite 270 should be applied to the thread and the coupling tightened to a torque of 13Nm. Seal kits are available for the male dry bleed valves. See table below for part numbers.

Important Note:

Fitting the dry bleed system may affect the radial profile of the caliper. It is therefore essential that the clearance between the caliper assembly and wheel is checked carefully prior to running the car.

PART NUMBERS.

Dry Blood	Dry Bleed Repair Replaced							
Dry Bleed Valves.	Thread.	Material.	Weight.	Kepali Kit.	Replaced Bleedscrews.			
CP6300-21	M10x1.0	S/Steel.	16g	CP6300- 21RK	CP4970-125 CP4970-140 CP4970-136			
CP6300-27		S/Steel.	16g	CP6300-	005000 445			
CP6300-30	3/8" UNF	Titanium	8g	30RK	CP5820-115 CP6297-112			
CP6300-39		Aluminium	8g		01 0201 112			
CP6300-28 (Non 'O' Ring version)	M10x1.0	S/Steel	17g	CP6300- 28RK	3846-268 CP3720-173 CP3720-183 CP3720-107 CP3894-138			
CP6300-37 (Non 'O' Ring version)	3/8" UNF	S/Steel	17g		3846-227 CP3720-182			
Bleed Coup	ling.							
NB: These coupling are only designed for bleeding the calipers and not for use at high pressure.								
CP6300-31	CP6300-31 Threaded for connection to braided brake hose.							
CP6300-32	CP6300-32 For connection to plastic bleed pipe. Incorporates non return valve.							
CP6300-36	Short 150° valve fitted.		ig with non th	nreaded out	let and one way			

INSTALLATION DRAWINGS.

- For latest installation drawing please visit www.apracing.com.

Drawing For CP6300-21 / CP6300-27 & CP6300-30. 69.60 13.25APPLY A SMALL 3/8″ x 2 AMOUNT OF LOCTITE 270 TO UNF-3A TIGHTENING TORQUES THREAD WHEN FITTING - MALE VALVES - CP6300-21/27/30 = 13Nm - VALVE CAPS - CP6300-228/328 = 4Nm CP6300-21 M10x1.0 CP6300-27 & -30 3/8"UNF (MALE) DRY-BLEED VALVES (INCLÚDING DUST CAP) CP6300-36 SHORT 150° BLEED COUPLING WITH NON-SEATLO. 10THD THREADED OUTLET & 1 WAY VALVE FITTED 13.90 MIN 15.90 FULL THR'D 19.10 3.90 CP6300-32 BLEED COUPLING WITH NON-THREADED OUTLET & 1 WAY VALVE FITTED C/BORE THREA 3/8″A/F 5 DRY BLEED VALVE SHOWN FITTED IN A ΠD TYPICAL FLUID PORT WITH DUST CAP FITTED CP6300-31 - BLEED COUPLING THREAD C/BORE M10 x 1.0 Ø11.05/10.95 3/8" x 24 UNF Ø10.5/9.95 NOTE: THIS COUPLING IS ONLY DESIGNED FOR BLEEDING THE CALIPERS AND NOT FOR USE AT HIGH PRESSURE Drawing For CP6300-28 & CP6300-37. 69.60 13.25 CALIPER WILL REQUIRE A MINIMUM Ø16 SPOTFACE AROUND FLUID PORT TO D ALLOW GASKET TO SEAL 3/8" x 24 4.00 Alf SEAT LLO. 10 THD UNF-3A 12.70 MIN FULL THR'D TIGHTENING TOROUES 21.13 MALE VALVES CP6300-28 & -37 = 13Nm VALVE CAPS CP6300-228 = 4Nm 10.00A/F 000.05 THREAD CP6300-28, M10x1.0 CP6300-37, 3/8"UNF APPLY A SMALL AMOUNT OF (MALE) DRY-BLEED VALVES (INCLÚDING DUST CAP

INSTRUCTIONS FOR ASSEMBLY OF CP6300-21, -27, -28, 30 & -37 DRY BLEED VALVES.

- For latest installation drawing please visit www.apracing.com.

Note - Lubricate 'O' Ring Seals with clean new brake fluid.

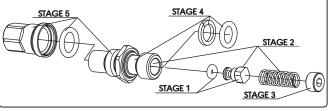
- Stage 1 Fit 'O' Ring seal to plunger.
- Stage 2 Slide plunger and spring into bore.

Stage 3 - Apply a small amount of loctite 270 to the spring retainer threads & screw until flush with end of bore. Should screw up flush to the end of body. When tightening spring it should push plunger near to flush at the other end of the body.

- **Stage 4** Fit anti-extrusion ring & 'O' Ring seal to outside of body.
- Stage 5 Fit 'O' Ring seal and cap to outside of body.

NOTE:

- For CP6300-21 The 'O' Rings in stage 4 & stage 5 are the same.
- For CP6300-27 & -30. The 'O' Ring for stage 4 is different to stage 5.



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GENERAL DESCRIPTION.

These valves have been specially designed for use in competition vehicles where it is desired to reduce the hydraulic line pressure and therefore braking effort of the rear brakes to compensate for varying road / track conditions or vehicle handling characteristics.

GENERAL INFORMATION.

INSTALLATION

To obtain the best performance using these valves, the brake balance should be biased towards the rear so that with the valve piped into the rear line and set in position 7 or the cap screwed right in (clockwise) where virtually no reduction occurs, the balance is as much to the rear as will ever be needed. Placing the control lever in positions either 6 to 1 (or screwing the cap outwards) will progressively reduce the rear line pressure giving more bias to the front.

WARNING

Due to internal adjustments set by AP Racing, do not strip these assemblies.

- DO NOT attempt any modification of these valves.

- Strictly for competition use only.

NOTE

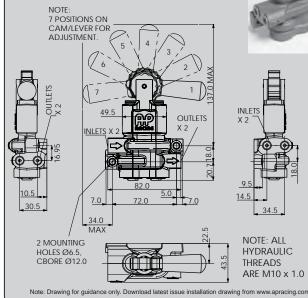
These proportioning valves are suitable for use with any brake fluid that conforms to DOT 3, DOT 4 or DOT 5.1 standards, but best all round performance will be achieved with either AP Racing R4,R3 or R2 brake fluids.

CP4550-1 - TWIN BORE

LEVER TYPE.

This twin bore lever type, is a 2 in and 2 out valve. This valve enables the user to utilise original fluid pipe runs on Grp 'N' or similar applications where a tandem master cylinder (diagonal split system) is specified. This provides the driver, with seven distinct settings from which to select the most suitable braking ratio.

Basic Installations



5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

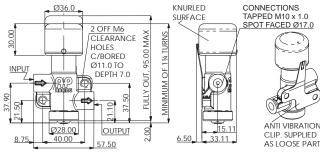
Input Pressure (bar)

CP3550-14 SCREW TYPE.

This screw type offers infinite adjustment within the limits of normal brake operation. With the cap screwed fully in no reduction in output pressure occurs, with the cap screwed fully out output pressure is reduced to approximately 1/3rd of input pressure.

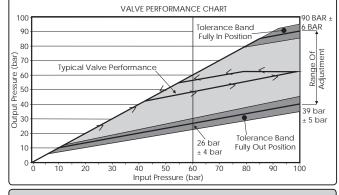
Basic Installations

Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com



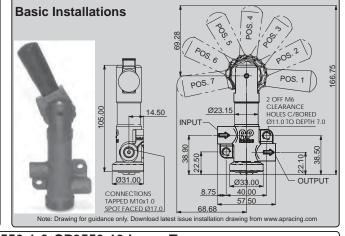
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Performance Details.

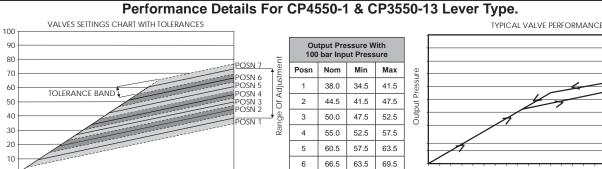


CP3550-13 - 7 POSITION LEVER TYPE. This lever type valve provides the driver, or the co-driver with seven distinct

settings from which to select the most suitable braking ratio.



Input Pressure



7

73.0

69.5

76.5

(bar)

Output Pressure

0

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INTRODUCTION.

AP Racing, the leading manufacturer of performance braking and clutch systems for race and road use, has introduced a new Pneumatic Fly by Wire clutch control unit.

The Fly by Wire clutch control unit (CP9800 Series) allows for steering wheel mounted paddle clutch control for any vehicle in which a hydraulic slave cylinder is utilised.

Developed in conjunction with Shiftec for use in 2010 inaugural season of the FIA F2 championship, the race proven technology is easily adaptable to any car type. Available as either a stand alone unit or fully integrated system with optional semi-automatic gear shift module, the lightweight and affordable Fly by Wire clutch control unit offers the driver both a high accuracy of control as well as faster response times.

The clutch position demand and paddle demand have also been calibrated to give the driver optimal bite point control.

The unit also offers low current and air consumption as well as featuring a sophisticated fail safe and diagnostic system. The paddle clutch unit is fully compatible with AP Racing's CP4623 type master cylinders with no modifications required for either the clutch or the hydraulic clutch slave cylinder. It has been specifically designed with non contact paddles, which can easily be mounted to most steering wheels.

PART NUMBER.

CP9800-3 - Optimised for Sintered Clutch Assy - CP6003.
 CP9800-5 - Optimised for Sintered Clutch Assy - CP7813.
 CP9800-6 - Optimised for Carbon Clutch Assy - CP8662.

FEATURES.

Enables full closed loop pneumatic fly by wire clutch follow

control from steering wheel mounted paddle inputs.

 Specially developed non-contact paddles which mount easily to most steering wheels.

- Compatible with AP Racing CP4623 type master cylinder.
- Stand-alone or can interface available.

 Clutch position demand to paddle demand calibration to enable bite point optimisation.

No modification to clutch or hydraulic clutch slave cylinder required.

Fully featured, sophisticated fail safe and diagnostics.

Available in a stand alone format through to a full integrated system with optional semi automatic gear shift module.

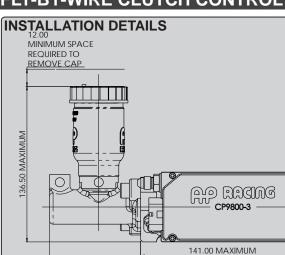
Specified part on current F2 and IRL cars.

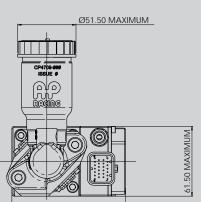
- Total assembly weight including master cylinder and reservoir = 1365g.
- Paddle weight = 49g.
- Low current consumption.
- Low air consumption.
- High accuracy of control.
- Fast response.
- Complements Shiftec's pneumatic gear shifter package.

Please contact Ian Nash for more details:

ian.nash@apracing.co.uk.

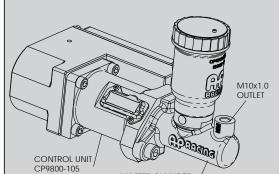
FLY-BY-WIRE CLUTCH CONTROL UNIT



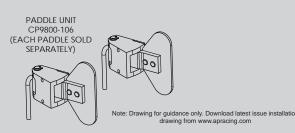


99.50 MAXIMUM

79.80 MAXIMUM



MASTER CYLINDER CP4623-90-SHIFTEC (INCLUDING RESERVOIR)



CP9800 FAMILY OF FLY-BY-WIRE UNITS.

ASSEMBLY OPTIMISED FOR PART No. CLUTCH ASSY.		CONTROL UNIT.				
CP6003-OH90-SF	0.0.4000.00	CP9800-105				
CP7813-BS90-SF		CP9800-113				
CP8662-NE01-SP		CP9800-114				
RESERVOIR ASSEMBLY IS CP4709-12						
PADDLE	UNIT					
	CLUTCH ASSY. CP6003-OH90-SF CP7813-BS90-SF CP8662-NE01-SP RESERVOIR ASSEMI	CLUTCH ASSY.CYLINDER.CP6003-OH90-SFCP4623-90-CP7813-BS90-SFCP4623-90-CP8662-NE01-SPSHIFTECH				

CP9800-106 (EACH PADDLE SOLD SEPARATELY)

www.apracing.com

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CLUTCHES

For many years, AP Racing has been the world leader in the design and manufacture of Race and Performance Road clutch systems, extending the boundaries of clutch technology further each year winning many championships worldwide.

The AP Racing clutch ranges consists of four types, Carbon/Carbon, Metallic (Sintered & Cerametallic) Race, High Performance Road and Formula Kits. Accessories such as Slave Cylinders Release Bearings and Mounting Studs are also available.

Each Section provides relevant technical information regarding each product range as well as individual components, if you require further details please contact AP Racing Technical Section.



CARBON / CARBON CLUTCHES.
 METALLIC (SINTERED & CERAMETALLIC) RACE CLUTCHES.
 HIGH PERFORMANCE CLUTCHES.
 FORMULA CLUTCH KITS.
 HYDRAULIC SLAVE CYLINDERS.
 RELEASE BEARINGS.
 CLUTCH MOUNTING STUDS.



INTRODUCTION.

AP Racing is the world leader in the design and manufacture of competition clutch systems, and for many years have been extending the boundaries of clutch design further each year.

SUCCESSES.

At the 2014 Abu Dhabi Grand Prix, AP Racing celebrated its 746th Grand Prix Clutch win. It has taken over 40 years for AP Racing to achieve this amazing success. In 2014 AP Racing supplied 10 of the 11 teams, equipping all 19 Grand Prix winners with clutches.

THE RANGE.

The current range of carbon /carbon clutches from AP Racing has been developed to enable every form

of motorsport to benefit from the advantages of carbon / carbon clutch technology. The carbon / carbon clutch range encompasses 'push' and 'pull' type designs with single, twin, triple and four plate units in Ø87mm, Ø97mm, Ø115mm, Ø138mm, Ø140mm, Ø184mm and 200mm diameters available, all benefiting from the latest Formula One technology. The carbon / carbon clutches detailed in this catalogue are selected from the extensive range produced by AP Racing, however not all of the above diameters are included, should you require more information regarding other sizes or any new carbon / carbon clutch requirements please contact AP Racing Technical Department for advice.

This section of the catalogue also provides information on, operating instructions for carbon clutches, an explanation of the part numbering system and an explanation of a typical clutch plot.

STANDARD CARBON CLUTCH FEATURES.

Depiece cover and lug design. - machined from solid billet.- for rigidity and strength.

Long life.

Durable and abuse resistant. - if maintained correctly life expectancy can be 10 times that of a sintered race clutch.

Factory reconditioning service available.

CARBON / CARBON CLUTCH RANGE - Note: For smaller diameter clutches please contact AP Racing.

Clutch Dia.	Clutch Actuation	Carbon/Carbon Clutch Part No.	No. of Carbon Driven Plates.	Flywheel Details.	Main Pressure Plate Ratio.	Typical Application.	Comments.	
Push	Push	CP8153-SE02-SN	3	10 Bolt fixing.	EHR	- Single Seater.	- Standard Ø115mm Push Type. - Interchangeable with CP6074 Sintered Race Clutch.	
115mm	Pull	CP8273-DE03-SP	3	Stepped Flywheel	EHR	-Single Seater	 Pull type lug drive clutches. Offer increased efficiency over conventional push type designs. Optional Slave Cylinder assembly. 	
138mm	Push	CP8662-NH01-SP	2	8 Bolt fixing. Stepped Flywheel.	HiR	- F3. - Single Seater.	- High temperature diaphragm spring version of CP7142. Cushion pressure plate fitted.	
		CP7142-CM01-SN	2	8 Bolt fixing.	MHR	- F3. - Touring Car.	- Standard Ø140mm lug drive clutches.	
	Push.	CP7143-CM01-SN	3	Stepped Flywheel.	MHR	 Single Seater. Touring Car. 	- Standard height. - CP7142 & CP7143 are not suitable for GT	
	Pusn.	CP7143-CM01-FN	3	8 Bolt fixing. Flat Flywheel.	MHR	 Normal Duty. Touring Car. 	applications due to a restricted "Wear In".	
140mm		CP7543-OE02-SN	3	8 Bolt fixing. Stepped Flywheel	EHR	- Touring Car. - GT	- Interchangeable with CP6003 & CP6013 / 4, Race Clutches.	
14011111	Pull.	CP7223-OH02-FC	3	10 Bolt fixing. Flat Flywheel.	HiR	- Endurance Racing. - GT.	 Pull type lug drive clutches. Offer increased efficiency over conventional push type designs. Optional Slave Cylinder assembly. 	
		CP7923-GH03-FN	3		HiR	- Endurance. - GT. & WRC.	- Heavy duty version of CP7223 & CP7224.	
	Push.	CP6913-OH02-FN	3	10 Bolt fixing.	HiR	- Endurance.	- Push Type versions of CP7223.	
	Fush.	CP6914-OH02-FN	4	Flat Flywheel.	HiR	- GT.	- Fush Type versions of CF7223.	
		CP8792-OV22-SP	2	6 Bolt fixing. Stepped Flywheel	VHR	- World Touring Car.	- Cushion Pressure Plate system fitted.	
184mm	Push	CP8039-OV02-SP	2	12 Bolt fixing.	VHR	- WRC.	- CP8039 has replaced CP8032.	
		CP8033-CV02-SP	3	Stepped Flywheel.	VHR	Australian T/Car	- Cushion Pressure Plate system fitted.	
		CP7213-CL01-FN	3		LoR	0 (11 D "	High torque clutch. 1.00mm "Wear In". Steel	
200mm	Push.	CP7212-CH01-FN	2	12 Bolt fixing. Flat Flywheel.	HiR	- Grp 'A' Rally. - GT Race.	pressure plate fitted as standard. CP7213 (4WD) applications. CP7212 (2WD)	
		CP7213-CH01-FN	3	. lat i ly whool.	HiR	0111000	applications. CP7212 (2000)	

PART NUMBERING EXPLANATION.

The table below provides an explanation for the make-up of a Carbon/Carbon Clutch part number. However not all variants are listed.

Clutch Family Part Number

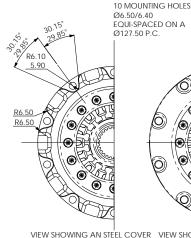
P7143-CE01-SN

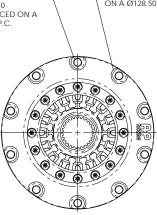
Diaphragm Spring Type.	Ratio.	Material Code.	Flywheel Type.
C = CRV. (Double Grey).	M = MHR. (Mega High Ratio).	01 = Aluminium Cover / Steel Pressure Plate / Carbon Type = S1.	FN = Standard Flat.
O = ORA. (Orange).	E = EHR. (Extra High Ratio).	02 = Aluminium Cover / Steel Pressure Plate / Carbon Type = S3.	SN = Standard Stepped.
N = GRN. (Green).	L = LoR. (Low Ratio).	03 = Steel Cover / Steel Pressure Plate / Carbon Type = S3.	FC = Flat with CFS.
G - GRY. (Grey).	V = VHR. (Very High Ratio).	06 = Titanium Cover / Titanium Pressure Plate / Carbon Type = S3.	SC = Stepped with CFS.
T = TGY. (Triple Grey).	S = SHR. (Super High Ratio).	22 = Aluminium Cover / Steel Pressure Plate / Carbon Type = S6.	FP = Flat with Cushion P/Pate.
S = SLV. (Silver).	U = UHR. (Ultra High Ratio).		SP = Stepped with Cushion P/Pate.
D = GLD. (Gold).	H = HiR. (High Ratio).		

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CARBON / CARBON C	LUTCH - Ø115mm	- CP8153		
CP815			NICAL SPECIF CP8153-SE02-	ICATIONS FOR SN ONLY.
Ø115mm, Heavy Duty, Push Type.		Torque Capacity.		
TYPICAL APPLICATION.	COLOC -	"Wear In" between P/Plate char		0.50mm
FEATURES.		Total allowable carbo	on stack wear.	4.0mm
 10 Bolt, One piece cover and lugs. Heavy duty carbon. Clutch ratio 		Release Loads.	Max peak new	4950N
- EHR (Extra High) Push type.			Max peak worn	4050N
Stepped flywheel fixing.	Cor Office	Set-up Height. (New)	39.74mm
 inner diameter location. Interchangeable with CP6074 	Steel Cover Pictured	Set-up Height. (Worr	1)	42.09mm
Sintered Race Clutch.	Family	Weight.		1.59Kg
Heavy duty option available CP8253	ramiy	Complete Assy Inertia.		0.00365Kgm ²
AVAILABLE OPTIONS.		Driven Plate & Hub Inertia.		0.000691Kgm ²
 Two diaphragm spring variants:- S (SLV) . 		MAIN PRESSURE PLATES.		
- D (GLD).	rianta	Ratio. EHR		
Two cover & pressure plate material va - (02) Aluminium & Steel.	mants:-	Material.	Stainless Steel	
 (03) Steel & Steel. Two Carbon/Carbon duty materials:- Standard Heavy. 		Pressure Plate Kits.	.5mm to 3.5mm (0.5mm Steps) = CP8153-9SS .25mm to 3.25mm (0.5mm Steps) = CP8153-10SS	
SAMPLE PART NUMBER.		HUB OPTIONS.		
Barrier Stepped Flywheel CP8153-SE02-SN		Material.	Steel	
- CP8153-SE02-SN		1.16" x 26T	CP5323-110S	
- Other part numbers available please drawing or contact AP Racing Technica		More hubs are availa	able with other spli	ne sizes, contact AP Racing.
	a Section.	RELEASE BEARI	NG OPTIONS.	
		Outer Race Rotates.		CP3457-1 or CP3457-24
		Inner Race Rotates.		CP3457-11
10 MOUNTING HOL Ø6.50/6.40 EQUI-SPACED ON A 0127.50 P.C.	ON A Ø128.50 P.C.	4	DIM. 'F'	52.05 <u>MAXIMUM</u> 48.30 46.23 (DIM. 'C') - R1.75 MAX ALUMINIUM COVERS - R0.60 MAX <u>STEEL COVERS</u>





R0.25

MAXIMUM

2.54

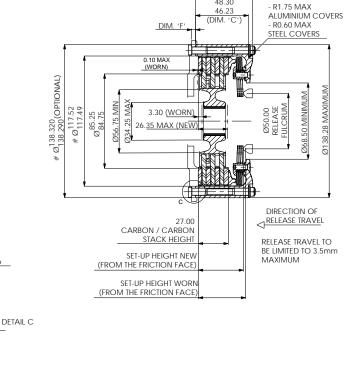
2.46

VIEW SHOWING AN STEEL COVER VIEW SHOWING AN ALUMINIUM COVER

RECOMMENDED CLUTCH MOUNTING: (FOR ALL TYPES OF ASSEMBLY) ¼" UNF, Cp4703 FAMILY STUD AND K-LOCK NUT. TIGHTENING TORQUE: 10Nm (7.5 ft.lb)

LENGTH OF STUD REQUIRED TO BE CALCULATED THUS: STUD LENGTH = DIMN'S 'C' + 'F' + NUT

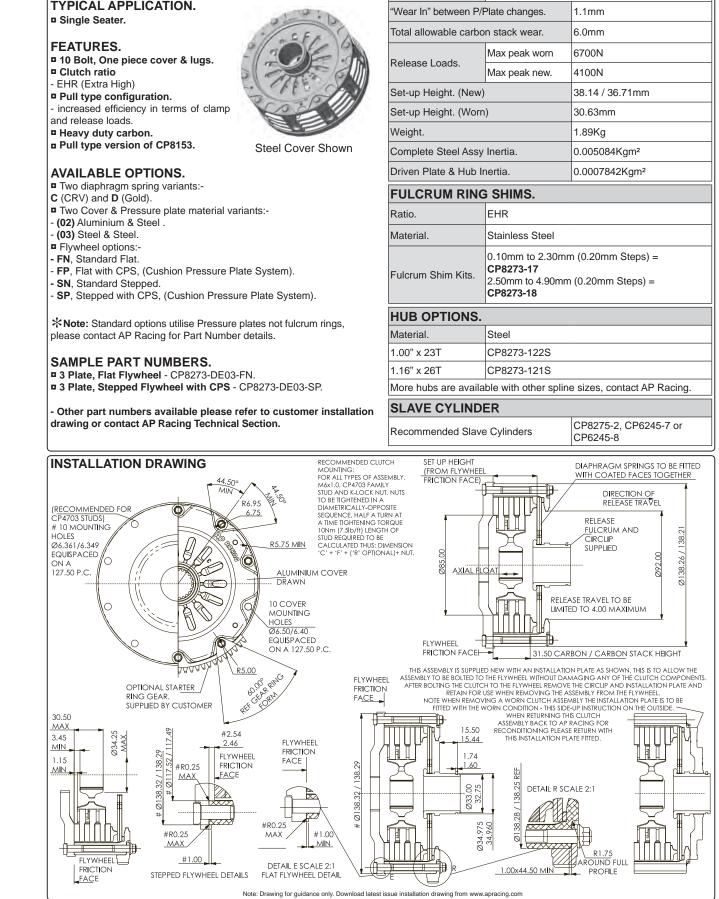
THIS CALCULATED LENGTH TO BE ROUNDED UP TO THE NEXT AVAILABLE STANDARD STUD LENGTH



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Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

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CP8273. Ø115mm, 3 Plate, Pull Type.

TYPICAL APPLICATION.

CARBON / CARBON CLUTCH - Ø115mm - CP8273

1092Nm (805lb/ft)

Torque Capacity.

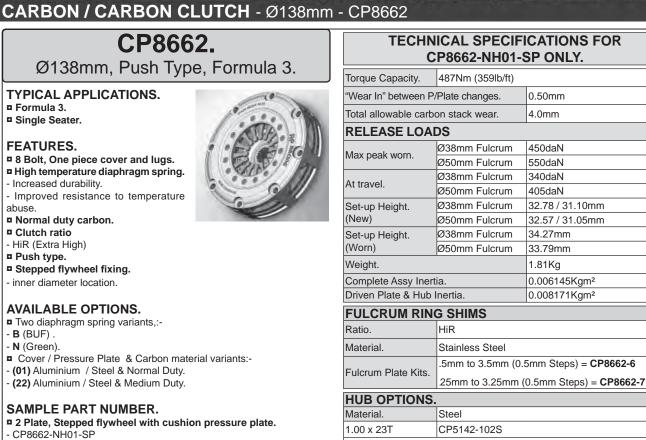
TECHNICAL SPECIFICATIONS FOR

CP8273-DE03-SP ONLY.



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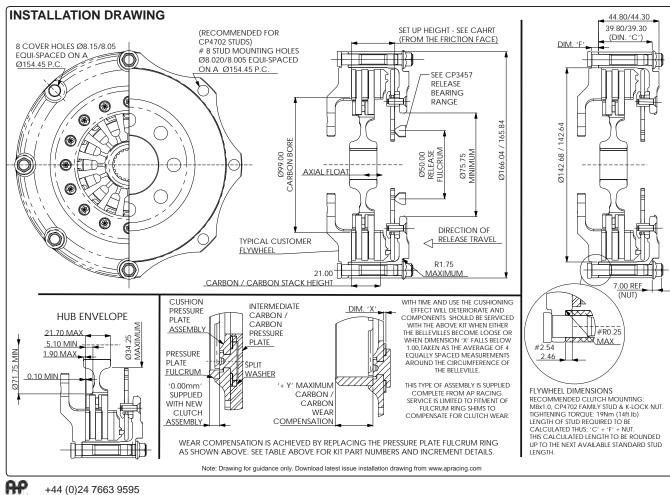


- Other part numbers available please refer to customer installation drawing or contact AP Racing Technical Section.

More hubs are available with other spline sizes, contact AP Racing. Ø50MM FULCRUM RELEASE BEARING OPTIONS. CP3457-1 or CP3457-9 Outer Race Rotates.

CP3457-11

Inner Race Rotates.



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 Heavy duty carbon. High (HiR) only. Push type version of CP7223 family. AVAILABLE OPTIONS. Two diaphragm spring variants:- G (GRY) and O (ORA). Cover material variants:- - CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	Clutch Part No. Torque Capacity. "Wear In" between P/ Plate changes. Total allowable carbon stack wear. RELEASE LOAD Max peak worn Max peak new Set-up Height. (New) Set-up Height. (Worn) Weight. Complete Assy Inertia. Driven Plate & Hub Inertia. MAIN PRESSUR Ratio.	1.25mm 6.0mm 780daN 580daN 40.75 / 39.80mm 44.45mm 2.25Kg 0.00756Kgm ² 0.001214Kgm ²	CP6914-OH02-FN 1523Nm (1123lb/ft) 1.25mm 6.0mm 815daN At Travel - 500daN 45.25 / 44.25mm 48.99mm 2.4Kg 0.00796Kgm²
 GT. Endurance racing. FEATURES. 10 Bolt, One piece cover and lugs. 3 or 4 Plate. Push type. Standard flat flywheel fixing. Heavy duty carbon. High (HiR) only. Push type version of CP7223 family. AVAILABLE OPTIONS. Two diaphragm spring variants:- G (GRY) and O (ORA). Cover material variants:- CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	"Wear In" between P/ Plate changes. Total allowable carbon stack wear. RELEASE LOAD Max peak worn Max peak new Set-up Height. (New) Set-up Height. (Worn) Weight. Complete Assy Inertia. Driven Plate & Hub Inertia.	1.25mm 6.0mm DS. 780daN 580daN 40.75 / 39.80mm 44.45mm 2.25Kg 0.00756Kgm ² 0.001214Kgm ²	1.25mm 6.0mm 815daN At Travel - 500daN 45.25 / 44.25mm 48.99mm 2.4Kg 0.00796Kgm²
 Endurance racing. Endurance racing. FEATURES. 10 Bolt, One piece cover and lugs. 3 or 4 Plate. Push type. Standard flat flywheel fixing. Heavy duty carbon. High (HiR) only. Push type version of CP7223 family. AVAILABLE OPTIONS. Two diaphragm spring variants:- G (GRY) and O (ORA). Cover material variants:- CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. a Plate, Flat flywheel & Aluminium cover. 	Plate changes. Total allowable carbon stack wear. RELEASE LOAD Max peak worn Max peak new Set-up Height. (New) Set-up Height. (Worn) Weight. Complete Assy Inertia. Driven Plate & Hub Inertia. MAIN PRESSUR	1.25mm 6.0mm 780daN 580daN 40.75 / 39.80mm 44.45mm 2.25Kg 0.00756Kgm ² 0.001214Kgm ²	6.0mm 815daN At Travel - 500daN 45.25 / 44.25mm 48.99mm 2.4Kg 0.00796Kgm ²
 10 Bolt, One piece cover and lugs. 3 or 4 Plate. Push type. Standard flat flywheel fixing. Heavy duty carbon. High (HiR) only. Push type version of CP7223 family. AVAILABLE OPTIONS. Two diaphragm spring variants:- G (GRY) and O (ORA). Cover material variants:- CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	carbon stack wear. RELEASE LOAD Max peak worn Max peak new Set-up Height. (New) Set-up Height. (Worn) Weight. Complete Assy Inertia. Driven Plate & Hub Inertia. MAIN PRESSUR	780daN 580daN 40.75 / 39.80mm 44.45mm 2.25Kg 0.00756Kgm² 0.001214Kgm²	815daN At Travel - 500daN 45.25 / 44.25mm 48.99mm 2.4Kg 0.00796Kgm ²
 3 or 4 Plate. Push type. Standard flat flywheel fixing. Heavy duty carbon. High (HiR) only. Push type version of CP7223 family. AVAILABLE OPTIONS. Two diaphragm spring variants:- G (GRY) and O (ORA). Cover material variants:- CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	Max peak worn Max peak new Set-up Height. (New) Set-up Height. (Worn) Weight. Complete Assy Inertia. Driven Plate & Hub Inertia. MAIN PRESSUR	780daN 580daN 40.75 / 39.80mm 44.45mm 2.25Kg 0.00756Kgm ² 0.001214Kgm ²	At Travel - 500daN 45.25 / 44.25mm 48.99mm 2.4Kg 0.00796Kgm ²
 Standard flat flywheel fixing. Heavy duty carbon. High (HiR) only. Push type version of CP7223 family. AVAILABLE OPTIONS. Two diaphragm spring variants:- G (GRY) and O (ORA). Cover material variants:- CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	Max peak new Set-up Height. (New) Set-up Height. (Worn) Weight. Complete Assy Inertia. Driven Plate & Hub Inertia. MAIN PRESSUR	580daN 40.75 / 39.80mm 44.45mm 2.25Kg 0.00756Kgm ² 0.001214Kgm ²	At Travel - 500daN 45.25 / 44.25mm 48.99mm 2.4Kg 0.00796Kgm ²
 Heavy duty carbon. High (HiR) only. Push type version of CP7223 family. AVAILABLE OPTIONS. Two diaphragm spring variants:- G (GRY) and O (ORA). Cover material variants:- CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	Set-up Height. (New) Set-up Height. (Worn) Weight. Complete Assy Inertia. Driven Plate & Hub Inertia. MAIN PRESSUR	40.75 / 39.80mm 44.45mm 2.25Kg 0.00756Kgm ² 0.001214Kgm ²	45.25 / 44.25mm 48.99mm 2.4Kg 0.00796Kgm ²
 High (HiR) only. Push type version of CP7223 family. AVAILABLE OPTIONS. Two diaphragm spring variants:- G (GRY) and O (ORA). Cover material variants:- - CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	Set-up Height. (Worn) Weight. Complete Assy Inertia. Driven Plate & Hub Inertia. MAIN PRESSUR) 44.45mm 2.25Kg 0.00756Kgm ² 0.001214Kgm ²	48.99mm 2.4Kg 0.00796Kgm ²
 Two diaphragm spring variants:- G (GRY) and O (ORA). Cover material variants:- - CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	Weight. Complete Assy Inertia. Driven Plate & Hub Inertia. MAIN PRESSUR	2.25Kg 0.00756Kgm ² 0.001214Kgm ²	2.4Kg 0.00796Kgm ²
 Two diaphragm spring variants:- G (GRY) and O (ORA). Cover material variants:- - CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	Complete Assy Inertia. Driven Plate & Hub Inertia. MAIN PRESSUR	0.00756Kgm ² 0.001214Kgm ²	0.00796Kgm ²
 G (GRY) and O (ORA). Cover material variants:- CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	Assy Inertia. Driven Plate & Hub Inertia. MAIN PRESSUR	0.001214Kgm ²	
 Cover material variants:- CP6913 - Aluminium, Steel or Titanium. CP6914 is only available in Aluminium. CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	Driven Plate & Hub Inertia. MAIN PRESSUR	0.001214Kgm ²	
 CP6913 has Cushion Pressure Plate System (CPS) option. SAMPLE PART NUMBERS. 3 Plate, Flat flywheel & Aluminium cover. 	MAIN PRESSUR		0.00145Kgm ²
SAMPLE PART NUMBERS. a 3 Plate, Flat flywheel & Aluminium cover.		E DI ATES	
S Plate, Flat flywheel & Aluminium cover.	naliu.	HiR	
	Material.	Stainless Steel	
CDC042 OLIO2 EN	Pressure Plate		n Steps) = CP6514-4S
- CP6913-OH02-FN 3 Plate, Flat flywheel & Steel cover.	Kits.	1.25mm to 4.25mm (0.5n	nm Steps) = CP6514-55
- CP6913-OH03-FN	HUB OPTIONS.	Steel	Stool
4 Plate, Flat flywheel & Aluminium cover.	Material. Spline	Steel	Steel 1.16" x 26
- CP6914-OH02-FN	Part No.	CP5143-104S	CP6904-112S
- Other part numbers available please refer to customer installation		vith other spline sizes, co	
drawing or contact AP Racing Technical Section.		RINGS OPTIONS.	<u> </u>
	Inner Race Rotates	CP3457-16	CP3457-16
50 R6.90 6.80	RELEASE TRAVEL TRAVEL NOTE CON SEE NOTE CON SEE NOTE CON	28.48 MAX HUB FLOAT 26.23 MAX HUB FLOAT 2.90 MIN HUB FLOAT 2.90 MIN HUB FLOAT	0092.96 P.C.
	CARBON STACK HEIGHT S.U.H. NEW	63.70 MAX 51.80	56.90 MAX 56.90 MAX 56.90 MAX CP691
RECOMMENDED CLU MOUNTING M6 x 1.0. CP4703 FAN STUD AND KAYLOCK NUT. TIGHTENING TORQUE 10Nm (7. Sib/ft) NOTE 'B' INSTALLATION WIRE FOR USE WHE INSTALLATION TO ENSU FLYWHEEL SIDE CARBON PLATE IS LOCATED ON THE COVER LUGS.	VIILY UILY		SEE NOTE 'B'

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CARBON / CARBON CLUTCH - Ø140mm - CP7142 & CP7143

CP7142. / CP7143.

Ø140mm, Standard, Push Type.

TYPICAL APPLICATIONS.

- Single Seater.
- Touring Car.

FEATURES.

- 8 Bolt, One piece cover and lugs.Push type.
- Stepped or Flat flywheel fixing.
- Heavy duty option available with low
- height and inertia, CP7322 Family.

AVAILABLE OPTIONS.

Two diaphragm spring variants:-

- C (CRV) and G (GRY).
- Three ratio variants:-
- **E** = (EHR) Extra High / **H** = (HiR) High / **M** = (MHR) Mega **D** Cover & Pressure plate material variants:-
- CP7142 (01) Aluminium & Steel.
- CP7143 (01) Aluminium & Steel / (08) Aluminium & Titanium.
- Two Carbon/Carbon duty materials:
- Standard or Heavy.
- Flywheel options:-
- FN, Standard flat. SN, Standard stepped.
- FC, Flat with CFS, (Cushion flywheel system).
- SC, Stepped with CFS, (Cushion flywheel system).

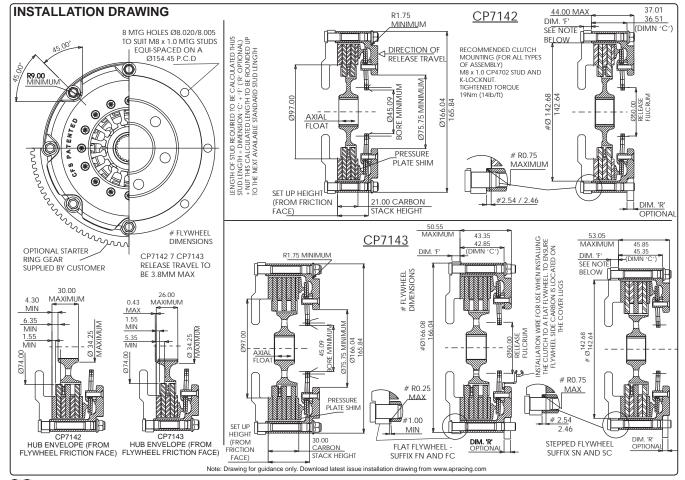
SAMPLE PART NUMBERS.

- 2 Plate, Stepped flywheel CP7142-CM01-SN
- 3 Plate, Stepped flywheel CP7143-CM01-SN
- Selection 3 Plate, Flat flywheel CP7143-CM01-FN

- Other part numbers available please refer to customer installation drawing or contact AP Racing Technical Section.

CP7142-CM01-SN & CP7143-CM01-SN ONLY.					
Clutch Part No.	CP7142-CM01-SN	CP7143-CM01-SN			
Torque Capacity.	741Nm (547lb/ft)	1112Nm (851lb/ft)			
"Wear In" between P/Plate changes.	0.5mm	0.5mm			
Total allowable carbon stack wear.	4.0mm	6.0mm			
RELEASE LOADS.					
Max Peak worn	450daN	450daN			
At Travel	300daN	300daN			
Set-up Height. (New)	31.54mm	40.54mm			
Set-up Height. (Worn)	34.58mm	43.58mm			
Weight.	1.4Kg	2.2Kg			
Complete Assy Inertia.	0.0064Kgm²	0.0076Kgm²			
Driven Plate & Hub Inertia.	0.00089Kgm²	0.00095Kgm²			
MAIN PRESSURE PLATES.					
Ratio. MHR					
Material.	al. Steel				
Pressure Plate Kits.	.5mm to 3.5mm (0.5mm Steps) = CP4502-13 .25mm to 3.25mm (0.5mm Steps) = CP4502-14	5mm to 5.5mm (0.5mm Steps) = CP4502-9 .25mm to 5.25mm (0.5mm Steps) = CP4502-10			
HUB OPTIONS.					
Material.	Steel	Steel			
Spline	1.00" x 23	1.00" x 23			
Part No.	CP5142-102S	CP5143-102S			
More hubs available w	ith other spline sizes, cont	act AP Racing.			
RELEASE BEARING	S OPTIONS.				
Outer Race Rotates	CP3457-1 or CP3457-9				
Inner race Rotates CP3457-11					

TECHNICAL SPECIFICATIONS FOR





CARBO	N / CARBON	CLUTCH	0140mm - CP7223
CP7223. Ø140mm, Pull Type.		IICAL SPECIF P7223-OH02- 1142Nm (842lb/ft)	
TYPICAL APPLICATIONS.	"Wear In" between P	/Plate changes.	1.50mm 6.0mm
Endurance racing. FEATURES. 10 Bolt. One piece cover and lugs	Release Loads.	Max peak worn. At travel.	540daN 250daN

10 Bolt, One piece cover and lugs. Pull type configuration. increased efficiency in terms of clamp and release loads. Flat flywheel fixing. Heavy duty carbon material. Heavy duty option available, CP7923 See page ???.

AVAILABLE OPTIONS.

Three diaphragm spring variants:-**B** (BUF), **G** (GRY) & **O** (ORA). Two ratio variants:-- E = (EHR) Extra High - H = (HiR) High. Four Cover & Pressure plate material variants:-- (02) Aluminium & Steel . - (03) Steel & Steel. - (05) Titanium & Steel. - (08) Aluminium & Titanium. Flywheel options:-- FN, Standard flat. - FC, Flat with CFS, (Cushion Flywheel System).

SAMPLE PART NUMBERS.

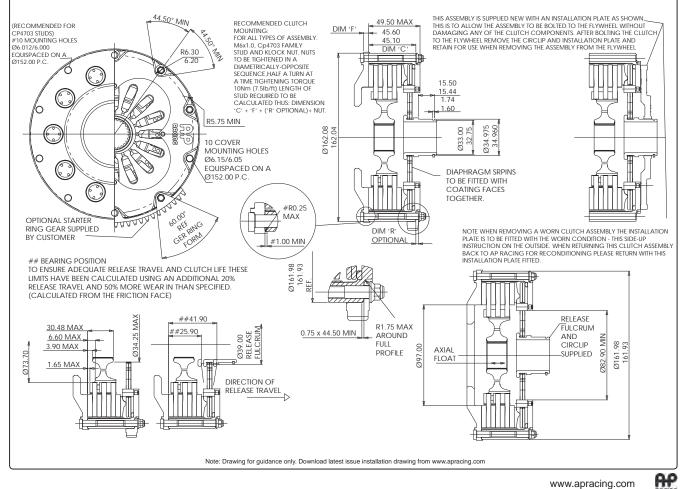
INSTALLATION DRAWING

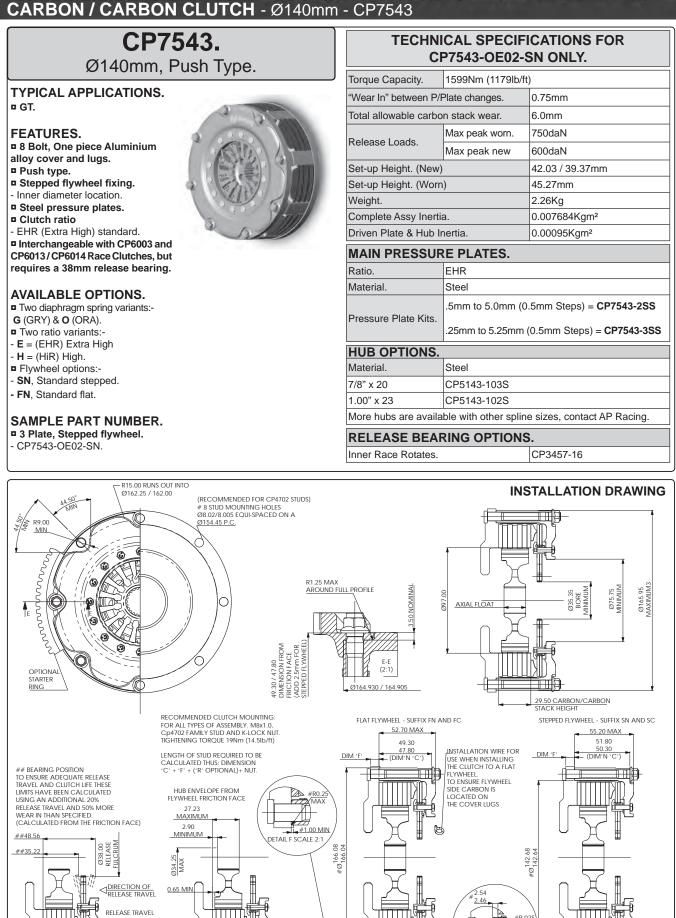
3 Plate, Flat flywheel - CP7223-OH02-FN.

3 Plate, Flat flywheel with CFS - CP7223-OH02-FC.

- Other part numbers available please refer to customer installation drawing or contact AP Racing Technical Section.

Set-up Height. (New) 37.57 / 36.33mm Set-up Height. (Worn) 29.72mm Weight. 1.89Kg Complete Assy Inertia. 0.006438Kgm² Driven Plate & Hub Inertia. 0.001219Kgm² MAIN PRESSURE PLATES. HiR Ratio. Material. Stainless Steel 5mm to 4.5mm (0.5mm Steps) = CP6504-7SS Pressure Plate Kits. 25mm to 4.25mm (0.5mm Steps) = CP6504-8SS HUB OPTIONS. Material. Steel 1.16" x 26 CP5143-104S 1.00" x 23 CP5143-102S More hubs are available with other spline sizes, contact AP Racing. SLAVE CYLINDER CP6245-7 or CP6245-8 Recommended Slave Cylinders

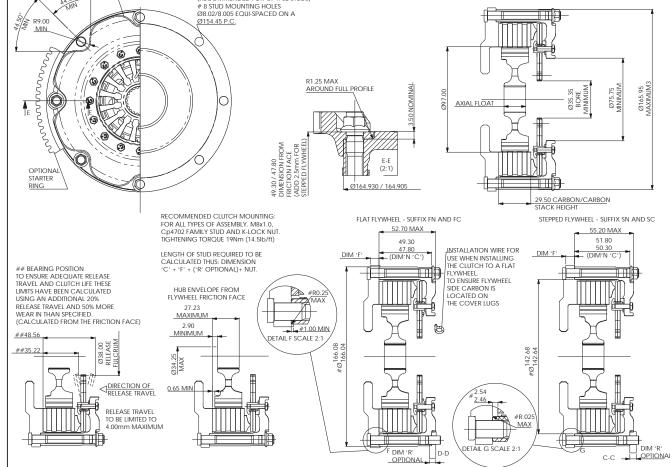




CARBON / CARBON CLUTCH - Ø140mm - CP7543

Torque Capacity.	1599Nm (1179lb/ft)			
"Wear In" between P/Plate changes.		0.75mm		
Total allowable carbon stack wear.		6.0mm		
Release Loads.	Max peak worn.	750daN		
Release Loads.	Max peak new	600daN		
Set-up Height. (New)		42.03 / 39.37mm		
Set-up Height. (Worn	ı)	45.27mm		
		2.26Kg		
Complete Assy Inertia.		0.007684Kgm ²		
Driven Plate & Hub Inertia.		0.00095Kgm ²		
MAIN PRESSURE PLATES.				
Ratio.	EHR			
Material.	Steel			
Pressure Plate Kits.	.5mm to 5.0mm (0.5mm Steps) = CP7543-2SS			
	.25mm to 5.25mm (0.5mm Steps) = CP7543-3SS			
HUB OPTIONS.				
Material.	Steel			
7/8" x 20	CP5143-103S			
1.00" x 23	CP5143-102S			
More hubs are available with other spline sizes, contact AP Racing.				
RELEASE BEARING OPTIONS.				
In a ser De se De teter		000457.40		

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Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

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103 CARBON / CARBON CLUTCH - Ø140mm - CP7923 CP7923. **TECHNICAL SPECIFICATIONS FOR** CP7923-GH03-FN ONLY. Ø140mm, 3 Plate, Heavy Duty Pull Type.

TYPICAL APPLICATIONS.

Torque Capacity.

1333Nm (982lb/ft)

□ GT.	"Wear In" between P/Plate changes. 1.50mm			
Endurance racing.	Total allowable carbon stack wear.		6.0mm	
FEATURES. ■ 10 Bolt, One piece cover and lugs.	Release Loads.	Max peak worn.	565daN	
Pull type configuration.		At travel.	370daN	
- increased efficiency in terms of clamp and release loads.	Set-up Height. (New)		46.00 / 44.70mm	
 High ratio option only. Heavy duty carbon material. 	Set-up Height. (Worn)		38.10mm	
Extra carbon plate, acts as heat shield to heavy duty diaphragm spring.	Weight.		2.75Kg	
Heavy Duty version of CP7223 Clutch.	Complete Assy Inerti	a.	0.0102Kgm ²	
AVAILABLE OPTIONS.	Driven Plate & Hub I	nertia.	0.001348Kgm ²	
 Two diaphragm spring variants:- C (CRV). 	MAIN PRESSURE PLATES.			
- G (GRY). Two Cover & Pressure plate material variants:-	Ratio.	HiR		
- (02) Aluminium & Steel . - (03) Steel & Steel.	Material.	Stainless Steel		
Flywheel options:-	.5mm to 4.5mm		(0.5mm Steps) = CP6504-7SS	
 - FN, Standard flat. - SN, Standard stepped. - SC, Stepped with CFS, (Cushion Flywheel System). 	Pressure Plate Kits.	.25mm to 4.25mm (0.5mm Steps) = CP6504-8SS		
SAMPLE PART NUMBERS.	HUB OPTIONS.			
• 3 Plate, Flat flywheel - CP7923-GH03-FN.	Material.	Steel		
3 Plate, Stepped flywheel with CFS - CP7923-GH03-SC.	1.16" x 26	CP7803-108S		
- Other part numbers available please refer to customer installation drawing or contact AP Racing Technical Section.	More hubs are available with other spline sizes, contact AP Racing.			
drawing of contact AP Racing fectimical Section.	SLAVE CYLINDER			
	Recommended Slav	e Cylinders	CP6245-7 or CP6245-8	
RECOMMENDED FOR		IN	ISTALLATION DRAWING	
# 10 MOUNTING HOLES Ø6.012/6.000 EQUISPACED ON A 152.00 P.C. R6.30 R6.30 R6.20				

Ø6. ON ЦЩ RECOMMENDED CLUTCH MOUNTING: FOR ALL TYPES OF ASSEMBLY. M6x1.0, CP4703 FAMILY STUD AND RLOCK NUT. NUTS TO BE TIGHTENED IN A DIAMETRICALY-OPPOSITE SEQUENCE.HALF A TURN AT A TIME TIGHTENING TOROUE 10Nm (7.5lb/ft) LENGTH OF STUD REQUIRED TO BE CALCULATED THUS: DIMENSION 'C' + 'F' + ('R' OPTIONAL)+ NUT. RECOMMENDED CLUTCH RELEASE <u>R5.75 MI</u>N FULCRUM AND CIRCLIP ∄ Ó Ø162.06 161.86 Ø86.01 Ø97.00 SUPPLIED AXIAL FLOA 10 COVER MOUNTING HOLES Ø6.15/6.05 EQUISPACED ON A 152.00 P.C. \bigcirc Ē 1 H THIS ASSEMBLY IS SUPPLIED NEW WITH AN INSTALLATION PLATE AS SHOWN, THIS ASSEMBLY IS SUPPLIED NEW WITH AN INSTALLATION PLATE AS SHOWN, THIS IS TO ALLOW THE ASSEMBLY TO BE BOLIED TO THEFLYWHEL WITHOUT DAMAGING ANY OF THE CLUTCH COMPONENTS. AFTER BOLITING THE CLUTCH TO THE FLYWHELE REMOVE THE CIRCLP AND INSTALLATION PLATE AND RETAIN FOR USE WHEN REMOVING THE ASSEMBLY FROM THE FLYWHEL NOTE WHEN REMOVING A WORN CLUTCH ASSEMBLY FROM THE FLYWHEL NOTE WHEN REMOVING THIS COLOR ON THE OUTSIDE. WHEN RETURNING THIS CLUTCH ASSEMBLY BACK TO AP RACING FOR RECONDITIONING PLEASE RETURN WITH THIS INSTALLATION PLATE FITTED. 6 FUTT GEAR OPTIONAL STARTER 57.90 RING GEAR. SUPPLIED BY CUSTOMER 57.20 54 65 5.00 53.95 MAX 30.50 MAX ##50.80 Ø34.25 N 6.40 MIN ##34.79 RELEASE FULCRUM 3.40 MIN 15.46 1.60 1.65 MIN Ħ Ø34.975 34.960 #162.08 162.04 Ø33.00 32.75 93 Ø161 #R0.25 Ð R1.50 DIRECTION OF RELEASE TRAVEL ¥1.00 0.75x44.50 MIN 2.50 Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

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CARBON / CARBON CLUTCH - Ø184mm - CP8039

CP8039.

Ø184mm, 12 Bolt, Push Type.

TYPICAL APPLICATIONS. Touring Car.

FEATURES.

■ 12 Bolt, One piece Aluminium cover and lugs.

- Steel pressure plate.
- Push type.
- Heavy & Normal Duty carbon stack options.
- Very high ratio (VHR) option only.
- Stepped flywheel fixing.
- inner diameter location.
- Cushion pressure plate fitted.
- Supercedes CP8032 Family.

AVAILABLE OPTIONS.

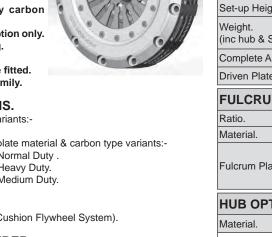
- Two diaphragm spring variants:-
- C (CRV). or O (ORA).
- Three Cover / Pressure plate material & carbon type variants:-
- (01) Aluminium / Steel & Normal Duty .
- (02) Aluminium / Steel & Heavy Duty.
- (22) Aluminium / Steel & Medium Duty.
- Flywheel Options:-
- SN, Standard stepped.
- SP, Stepped with CFS, (Cushion Flywheel System).

SAMPLE PART NUMBER.

- **D** Twin Plate, Stepped flywheel with cushion pressure plate.
- CP8039-OV02-SP
- 'P' Suffix denotes cushion pressure plate using fulcrum ring type pressure plate.

Other part numbers available please refer to customer installation drawing or contact AP Racing Technical Section.

RELEASE Ø50.00 R8.25 RPA 1 æ ŝ 1 ۲ SERIAL No. X0000 8 Ø142. ╤╤╤╤╋ SECTION B-B SCALE 1 : 1 1 24 45 1 20 ۲ MAX MA ŝ



TECHNICAL SPECIFICATIONS FOR CP8039-OV02-SP ONLY.

Torque Capacity.	629Nm (463lb/ft)		
"Wear In" between P/	Plate changes.	1.25mm	
Total allowable carbon stack wear.		4.0mm	
Release Loads.	Max peak worn.	415daN	
Release Loads.	At travel.	295daN	
Set-up Height. (New))	33.24 / 31.81mm	
Set-up Height. (Worr	ו)	37.91mm	
Weight. (inc hub & Steel Main P/Plate)		2.97Kg	
Complete Assy Inertia.		0.017689Kgm ²	
Driven Plate & Hub Inertia.		0.00253Kgm ²	
FULCRUM RING SHIMS.			
Ratio.	VHR		
Material.	Stainless Steel		
Fulcrum Plate Kits.		.5mm Steps) = CP8032-8 (0.5mm Steps) = CP8032-9	

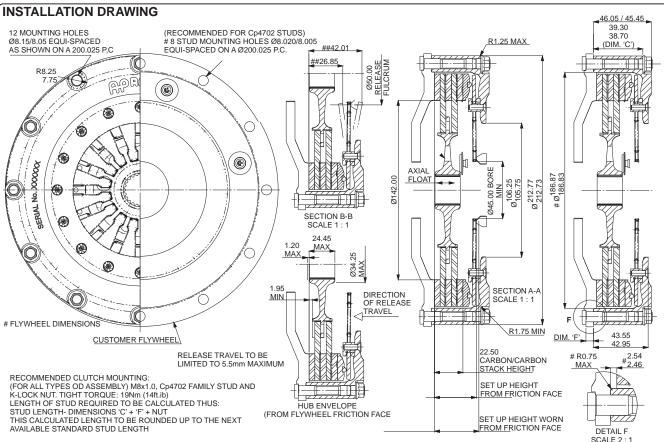
HUB OPTIONS.

Steel			
1.00" x 23 CP7832-120S			
CP7382-121S			
More hubs are available with other spline sizes, contact AP Racing.			

RELEASE BEARING OPTIONS.

Outer Race Rotates.

CP3457-19



Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com



CARBON / CARBON CLUTCH - Ø184mm - CP8792

CP8792.

Ø184mm, 6 Bolt, Push Type.

TYPICAL APPLICATIONS. • World Touring Car.

FEATURES.

6 Bolt, One piece Aluminium cover and lugs.
Steel pressure plate.
Push type.
Very High Ratio (VHR) option only.

- Stepped flywheel fixing.
- inner diameter location.
- Cushion pressure plate fitted.

AVAILABLE OPTIONS.

Two diaphragm spring variants:-

- **O** (ORA) / **C** (CRV).
- Two Cover / Pressure plate material & carbon type variants:-
- (01) Aluminium / Steel & Normal Duty .
- (22) Aluminium / Steel & Medium Duty.
- Flywheel options.
- SN, Standard stepped.
- SP, Stepped with CFS, (Cushion Flywheel System).

SAMPLE PART NUMBER.

Single Plate, Stepped flywheel with cushion pressure plate.
 CP8792-OV22-SP.

- 'P' Suffix denotes cushion pressure plate using fulcrum ring type pressure plate.

 Other part numbers available please refer to customer installation drawing or contact AP Racing Technical Section.



TECHNICAL SPECIFICATIONS FOR CP8792-OV22-SP ONLY.

105

S

Torque Capacity. 741Nm (546lb/ft)					
"Wear In" between P/F	Plate changes.	1.25mm			
Total allowable carbo	n stack wear.	4.0mm			
Release Loads.	Max peak worn.	445daN			
Release Loads.	Max peak new.	375daN			
Set-up Height. (New)		31.57 / 30.04mm			
Set-up Height. (Worn)	36.24mm			
Weight. (inc hub & Steel Mair	n P/Plate)	2.4Kg			
Complete Assy Inertia	a.	0.01384Kgm ²			
Driven Plate & Hub Ir	nertia.	0.002215Kgm ²			
FULCRUM RING SHIMS.					
Ratio.	VHR				
Material.	Stainless Steel				
Fulcrum Plate Kits.	.5mm to 2.5mm (0	.5mm Steps) = CP8032-8			

.25mm to 2.75mm	(0.5mm Ste	ps) = CP8032-9

CP3457-19

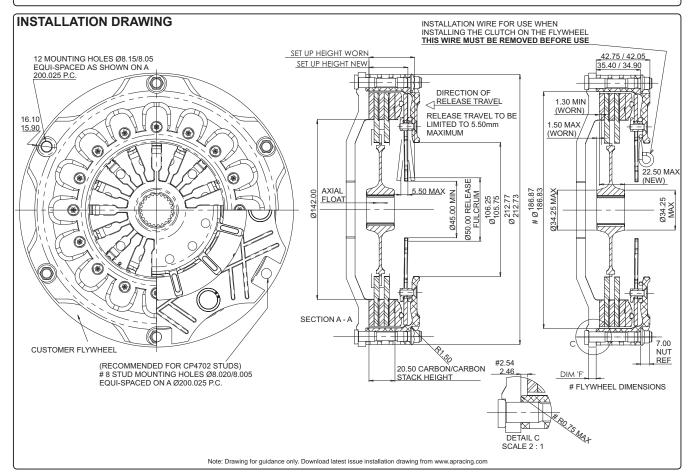
HUB OPTIONS.

Material.	Steel		
1.00" x 23	CP8972-105S		
25.5mm x 24 CP8792-106S			
More hubs are available with other spline sizes, contact AP Racing.			

RELEASE BEARING OPTIONS.

Outer Race Rotates.

Race Rolales.





CARBON / CARBON CLUTCH - Ø184mm - CP8033

CP8033.

Ø184mm, 3 Plate, Push Type.

TYPICAL APPLICATIONS. CP8033 Touring Car.

FEATURES.

I2 Bolt, One piece cover and lugs. Steel pressure plate.

- Push type.
- Heavy duty carbon material.

AVAILABLE OPTIONS.

- Diaphragm spring variants:-
- C (CRV)
- 0 (ORA)
- Ratio variants:-
- E = (EHR) Extra High
- V = (VHR) Very High.
- Cover / Pressure plate & carbon material variants:-- (02) Aluminium / Steel & heavy duty.
- (03) Steel / Steel & heavy duty.
- Flywheel options:-
- SN, Standard stepped.
- SP, Stepped with CPS, (Cushion Pressure Plate System)

SAMPLE PART NUMBERS.

- Stepped flywheel with CPS
- CP8033-CV02-SP.

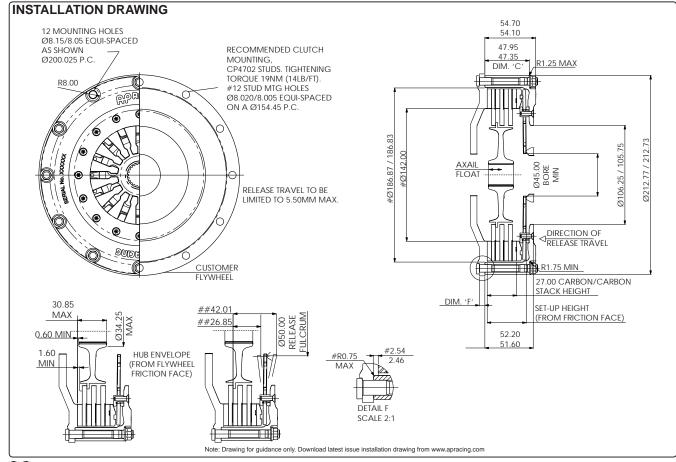
- 'P' Suffix denotes cushion pressure plate using fulcrum ring type pressure plate.

- Other part numbers available please refer to customer installation drawing or contact AP Racing Technical Section.

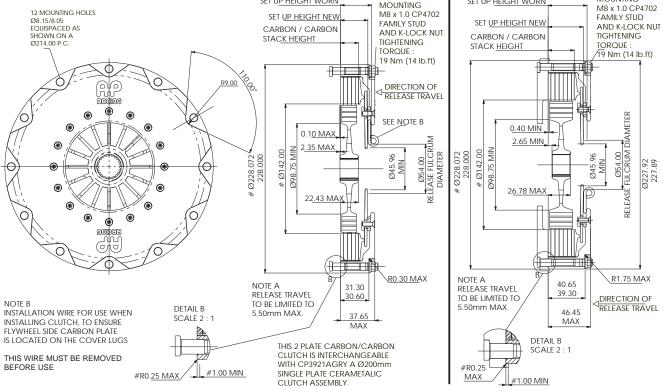
TECHNICAL SPECIFICATIONS FOR CP8033-CV02-SP ONLY

Torque Capacity. 1113Nm (820lb/ft)				
"Wear In" between P/Plate changes.		1.25mm		
Total allowable carbon stack wear.		6.0mm		
Release Loads.	Max peak worn.	445daN		
	At travel.	375daN		
Set-up Height. (New)		42.50 / 41.01mm		
Set-up Height. (Worn)		47.47mm		
Weight. Aluminium cover (inc hub & Steel Main P/Plate)		3.39Kg		
Complete Assy Inertia - Aluminium Cover		0.02021Kgm ²		
Driven Plate & Hub Ine	0.003717Kgm ²			
FULCRUM RING SHIMS.				
Ratio.	VHR			
Material.	Stainless Steel			
Euleman Dista Kita	.5mm to 4.5mm (0.5mm Steps) = CP8033-6S			
Fulcrum Plate Kits25mm to 4.2		nm (0.5mm Steps) = CP8033-7S		
HUB OPTIONS.				
Material.	Steel			
1.00" x 23	CP3653-105s			
More hubs are available with other spline sizes, contact AP Racing.				
RELEASE BEARING OPTIONS.				

Outer Race Rotates.	CP3457-1 or CP3457-9
Inner Race Rotates.	CP3457-11



CP7212. / C Ø200mm, 2 & 3 Plate			ICAL SPECIFICA 01-FN & CP7213-	
	, i don typeo.	Clutch Part No.	CP7212-CH01-FN	CP7213-CH01-FN
TYPICAL APPLICATIONS.	AFTER	Torque Capacity.	700Nm (522lb/ft)	1050Nm (783lb/ft)
■ WRC. FEATURES.		"Wear In" between P/Plate changes.	1.50mm	1.50mm
I 12 Bolt, One piece Aluminium cover and lugs.		Total allowable carbon stack wear.	6.0mm	6.0mm
Steel pressure plate.	1. 971. 62	Release Loads.		
 Push type. Normal duty carbon material. 	····	Max Peak worn	375daN	375daN
 (FN) Flat flywheel fixing. 	00 000	At Travel	250daN	250daN
		Set-up Height. (New)		38.52mm
AVAILABLE OPTIONS.	CP7212	Set-up Height. (Worn)	·	42.59mm
 Diaphragm spring variants:- CP7212 	1.0	Weight.	2.86Kg	3.48Kg
C (CRV) or O (ORA). - CP7213		Complete Assy Inertia. Driven Plate & Hub	0.01860Kgm ²	0.02255Kgm ²
C (CRV), O (ORA) or T (Triple GRY).	·	Inertia.	0.003126Kgm ²	0.00472Kgm ²
Ratio variants:-	el for a start	MAIN PRESSUR	E PLATES.	
- CP7212		Ratio.	HiR	HiR
$\mathbf{E} = (EHR) Extra High$ $\mathbf{H} = (HiR) High.$		Material.	Steel	4.0 4.50 (4.0
- CP7213 H = (HiR) High.		Pressure Plate Kits.	1.0mm to 5.0mm (1.0mm Steps) = CP4212-4S	1.0mm to 5.0mm (1.0r Steps) = CP4212-4S
$\mathbf{L} = (LoR) Low.$	CP7213	1113.	.5mm to 4.5mm (1.0mm Steps) = CP4212-5S	.5mm to 4.5mm (1.0mr Steps) = CP4212-5S
SAMPLE PART NUMBERS.	GF7213	HUB OPTIONS.		
■ 2 Plate, Flat flywheel - CP7212-CH01-	FN	Material.	Steel	Steel
3 Plate, Flat flywheel - CP7213-CH01-	FN	Spline	1.00" x 23	1.00" x 23
- Other part numbers available please r	efer to customer installation	Part No.	CP4202-122S	CP4203-102S
drawing or contact AP Racing Technical		INDIE HUDS available w	vith other spline sizes, cor	ntact AP Racing.
		RELEASE BEAR		
		Outer Race Rotates	CP3457-2 or CP3457-1 CP3457-6	0
		Inner race Rotates	CP3457-6	
INSTALLATION DRAWING				
12 MOUNTING HOLES Ø8.15/8.05 EQUISPACED AS	CP721 SET U <u>P HEIGHT W</u> SET U <u>P HEIGHT</u> CARBON / CAR	ORN CLUTCH MOUNTING NEW MAX 1.0 CP4	SET UP <u>HEIGHT WOF</u>	RN MOUNTING M8 x 1.0 C
SHOWN ON A Ø214.00 P.C.	STAC <u>K HEIGHT</u>	AND K-LOCK TIGHTENING	NUT. CARBON / CARBO STACK HEIGHT	



Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

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CARBON / CARBON CLUTCH - Operating Instructions

CLUTCH FUNCTIONALITY / TERMINOLOGY.

- **PUSH:-** The most popular type of diaphragm spring clutch where the release bearing is pushed against the diaphragm spring fingers (i.e. towards the flywheel) to release the clutch.

- PULL:- This type of clutch has the release bearing fulcrum inside the clutch and requires the diaphragm spring fingers to be pulled (i.e. away from the flywheel) in order to release the clutch. Although generally more complex in terms of release mechanism, pull types are more efficient in terms of clamp and release loads.

OVERHEATING AND ABUSE.

Carbon / Carbon clutches are very durable but not indestructible. The Carbon / Carbon material itself will not be harmed by the heat which can be generated by excessive slipping of the clutch, but aluminium alloy components, which are completely satisfactory under normal conditions, can soften and fail if overheated. For particularly arduous applications special versions can be supplied using alternative materials for covers, baskets, hubs and main pressure plates, but this will result in an increase in the weight and the cost of the unit. Please contact AP Racing for more details.

RELEASE MECHANISM.

As the spring rate and clamp load of the clutch increases so does the release bearing load required to release the clutch. The release bearing used should be a high quality steel caged radius contact ball bearing either 50mm (for Ø140mm and lower) or 54mm (for Ø184mm & Ø200mm). The release mechanism should be arranged so that the bearing is free of the spring fingers when the clutch is fully engaged. The release travel should be limited by means of an external stop to avoid damage to the diaphragm spring. Suitable release bearings are available from AP Racing. See page 146

CLUTCH MOUNTING.

The recommended method of mounting the clutch to the flywheel is with a mounting stud and K-Lock nut. Recommended tightening torques 10Nm (7.5lb/ft) for M6 and 22Nm (16lb/ft) for M8 & 5/16" UNF. AP Racing offer a range of studs for mounting clutches to flywheels. See page 147.

RECONDITIONING AND REPAIR.

User servicing is limited to replacing the main pressure plates when required. Other replacements require the use of specialised computerised test equipment to set up the clutch and the units should be returned to AP Racing to be reconditioned.

CARBON / CARBON CLUTCH OPERATING INSTRUCTIONS.

- GENERAL NOTES.

All carbon clutches are capable of achieving a very long life.

AP Racing carbon clutches are bedded during manufacture, this process continues for approximately the first 0.5 mm of wear, after which the wear rate should settle to a consistent and low level. The "Total Allowable Wear" figure quoted on the pressure plate fitment sheet gives total clutch life provided that the clutch remains in good condition and that the axial float of the hub is maintained, this is normally the case provided the wear is evenly distributed across all the carbon rubbing surfaces.

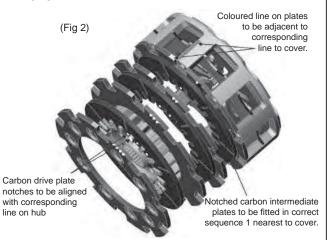
To achieve the full life potential several interventions to compensate for wear are required with most carbon clutch designs. The "Wear In" of a clutch denotes the amount of incremental wear on the carbon faces that can occur before the clamp load and hence torque capacity of the clutch drops below its minimum specified value. Wear compensation then becomes necessary to restore the original characteristics.

ASSEMBLING AND INSTALLING A PUSH TYPE CARBON / CARBON CLUTCH.

This is the traditional type of diaphragm spring clutch where the release bearing is pushed against the diaphragm spring fingers (towards the flywheel) to release the clutch. (Fig 1.) Before installing the clutch onto the flywheel ensure that the plates are correctly assembled into the clutch in their original positions. First install the main pressure plate into the clutch housing, (see pressure



plate service sheet) with the raised fulcrum against the diaphragm spring and the identification mark adjacent to the similar mark on one of the clutch housing lugs.



NEXT INSTALL THE CARBON PLATES IN THEIR ORIGINAL POSITIONS AS FOLLOWS:

The carbon Intermediate plates are identified with notches on the outside edge (fig. 2). The plates are not all identical and must be installed in the correct sequence and the correct way up. Install number 1 Intermediate plate (1 notch) next to the Main Pressure Plate with the marking facing away from the Main Pressure Plate and the highest numbered plate (this depends whether it is a 2, 3, or 4 plate) last, against the flywheel.

The intermediate plates also have a paint line marked on the external edge and this should be adjacent to the corresponding line marked on one of the lugs on the Clutch Cover.

The Driven Plates are similarly numbered with dots or notches on the drive lug surfaces (fig. 2). These must be fitted in sequence in the same way as the Intermediates with the number

1 Driven Plate next to the number 1 Intermediate Plate with the marking towards the flywheel. Continue fitting the remaining Carbon Intermediate and Driven Plates in sequence. The Hub must be fitted prior to fitting the last Driven plate and Intermediate with the flywheel bolt relief and the flange / web towards the flywheel (see fig



2a). Ensure the marked Hub drive tooth is engaged with the outlined drive slot(s) in the Carbon plates.

Complete the assembly by fitting the last Intermediate and Driven Plates N.B. Carbon Clutches always have a Carbon Intermediate plate next to the flywheel. Some clutches are supplied with an installation clip fitted between the spring and clutch cover (fig 3).

This clip maintains the clutch in partially released condition to assist the

installation and removal of the clutch from the flywheel. It should be used whenever the clutch is installed or removed, failure to use the clip can result in the carbon plate nearest to the



flywheel being trapped under the clutch cover lugs, resulting in damage to the carbon plate and other clutch components.

Ensure that the bottom carbon intermediate plate is located correctly and install the clutch onto the flywheel, tighten the retaining nuts down $% \left({{{\rm{D}}_{\rm{B}}}} \right)$

progressively in a diagonally opposite pattern to the recommended torque. When the clutch is tightened down the installation clip will become loose, remove the clip before use.

NB The installation clip should be retained for future clutch removal.



CARBON / CARBON CLUTCH - Operating Instructions

- BASKET TYPE CLUTCHES

"Basket" type clutches have the clutch drive lugs built into the "flywheel" (basket) and the cover is bolted to the top of the lugs. On this type of clutch the assembly sequence is reversed, starting with the highest numbered intermediate plate at the flywheel (basket) end and fitting the main pressure plate last, just before the cover.

- CLUTCH REMOVAL.

Refit the clutch installation clip. Progressively release clutch cover retaining nuts and remove clutch from flywheel.

- HUBS.

Do not grease the splines in the hub: the grease can be dispersed by centrifugal force outwards towards the Carbon friction faces causing contamination and clutch slip.

ASSEMBLING AND INSTALLING - A PULL TYPE CARBON/CARBON CLUTCH.

This type of clutch has the releasebearing fulcrum inside the clutch and requires the diaphragm spring fingers to be pulled (away from the flywheel) in order to release the clutch (fig 4).Many pull type clutches are supplied with an installation plate fitted onto the spring (fig 5). This plate maintains the clutch in a partially released condition to assist the installation and removal of the clutch from the flywheel.



It should be used whenever the (Fig 4) clutch is installed or removed, failure to use the plate can result in the bottom carbon plate being trapped under the clutch cover lugs, resulting in damage to the carbon plate and other clutch components.

Before installing the clutch onto the flywheel ensure that the plates are correctly assembled into the clutch in their original positions.

First install the diaphragm spring into the clutch cover / housing with the convex side towards the flywheel and fit the release fulcrum through the centre of the diaphragm so that the "Mushroom" head sits on the core formed by the tips of the diaphragm spring fingers. N.B. If an installation



plate is fitted this will retain the diaphragm and release fulcrum and this step is omitted. Then install the main pressure plate into the clutch housing, (see pressure plate service sheet) with the raised fulcrum against the diaphragm spring and the identification mark adjacent to the similar mark on one of the clutch lugs.

Next install the carbon plates in their original positions as follows:

The carbon Intermediate plates are identified with notches on the outside edge (fig. 2). The plates are not all identical and must be installed in the correct sequence and the correct way up. Install number 1 Intermediate plate (1 notch) next to the Main Pressure Plate with the marking facing away from the Main Pressure Plate and the highest numbered plate (this depends whether it is a 2, 3, or 4 plate) last, against the flywheel. The intermediate plates also have a paint line marked on the external edge and this should be adjacent to the corresponding line marked on one of the lugs on the Clutch Cover (sometimes called the Basket). The Driven Plates are similarly numbered with dots or notches on the drive lug surfaces (fig. 2). These must be fitted in sequence in the same way as the Intermediate mates with the number 1 Driven Plate next to the number 1 Intermediate Plate with the marking towards the flywheel. Continue fitting the remaining carbon Intermediate and Driven Plates in sequence. The Hub must be fitted prior to fitting the last Driven plate and Intermediate with the flywheel bolt relief and the flange towards the flywheel (see fig 2a). Ensure the marked Hub drive tooth is engaged with the outlined drive slot(s) in the carbon plates. Complete the assembly by fitting the last Intermediate and Driven Plates N.B. Carbon Clutches always have a Carbon Intermediate plate next to the flywheel. Ensure that the bottom carbon intermediate plate is located correctly and install the clutch onto the flywheel.

Tighten the retaining nuts down progressively in a diagonally opposite

pattern to the recommended torque. When the clutch is tightened down the installation plate will become loose, remove the retaining circlip, and remove the installation plate from the release fulcrum.

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NB:

The installation plate should be retained for future clutch removal. Prior to fitting the slave cylinder, the piston in the slave cylinder should be pushed out to maximum travel towards the clutch. Ensure that the release fulcrum in the clutch is fitted into slave cylinder piston. With the slave cylinder in place, the release fulcrum should be pulled into contact with the spring fingers, and the circlip refitted into the groove on the release fulcrum.

- BASKET TYPE CLUTCHES.

"Basket" type clutches have the clutch drive lugs built into the "flywheel" (basket) and the cover is bolted to the top of the lugs. On this type of clutch the assembly sequence is reversed, starting with the highest numbered intermediate plate at the flywheel (basket) end and fitting the main pressure plate last, just before the cover.

- CLUTCH REMOVAL.

Remove circlip from release fulcrum, remove slave cylinder, refit the clutch installation plate and circlip.

NB.

The installation plate is machined differently on either face, to accommodate "new / re-shimmed", or "worn" clutches. Progressively release clutch cover retaining nuts and remove clutch from flywheel.

HUBS.

Do not grease the splines in the hub; the grease can be dispersed by centrifugal force outwards, towards the carbon friction faces causing contamination and clutch slip.

CUSTOMER NOTES

CARBON / CARBON CLUTCH - Wear Compensation & Maintenance

WEAR COMPENSATION & MAINTENANCE. - WEAR COMPENSATION.

AP Racing Carbon-Carbon clutch covers are machined to suit the new carbon stack height and spring characteristics of that particular clutch. The clutch is then given its own unique serial number.

NB The Carbon plates must not be switched between clutches and the mating carbon faces must be kept in their original relationship to each other. Never switch complete carbon stacks from cover to cover.

The serial number, and the original combined thickness of all the carbon plates when new, called the "Stack Height", are etched onto the cover. (See Fig 6) Each carbon plate is identified with notches to identify the intermediate plate number (Fig 1) and dots or notches to identify the drive plate number (fig 1).



(Fig 6)

INTERMEDIATE PLATES

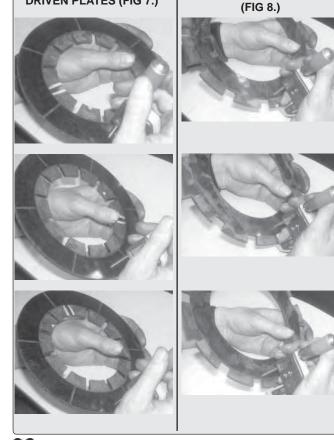
- CARBON MEASUREMENTS.

For accuracy when measuring the carbon plates, each individual plate is measured in the centre of the worn surface in 3 positions (approx. every 120° - see fig 7 & 8.) and the mean thickness is then calculated (The measurements can be recorded on the carbon clutch measurement sheet provided). The mean thickness from all plates is added together to obtain the "Present Stack Height" and this is subtracted from the "New Stack Height" etched on the cover (fig 6.). The correct pressure plate should then be selected from the "Pressure plate fitment sheet" which will restore the "Wear In" to approximately its original value. Measurement of the carbon should only be made with a proper micrometer with flat anvils, not a sliding vernier or micrometer with a sharp point.

NB The maximum total wear allowed on the carbon stack is indicated on the pressure plate fitment sheet. Under no circumstances should this figure be exceeded. Wear over the total allowed could cause carbon plate failure and no hub axial float.

- PLATE MEASUREMENTS.

DRIVEN PLATES (FIG 7.)



CARBON DRIVE FACES.

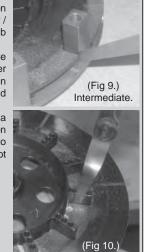
The wear on drive faces (backlash) between the Intermediate Plates and Clutch Cover / Basket and between Driven Plates and Hub should also be monitored.

This is done by placing the intermediate plate into the cover/basket and using feeler (slip) gauges to measure the gap between the drive faces of the carbon plates and cover lug as shown in fig 9.

The drive plate can also be measured in a similar manner by placing the drive plate on to the hub and using feeler (slip) gauges to measure the gap between carbon drive slot and hub tooth. (see fig. 10)

Tolerances as follows:

- Clutches up to Ø115mm = 0.75mm
- Clutches Above Ø115mm = 1.00mm



Driven Pla

RELEASE LOADS / DIAPHRAGM SPRING.

All clutches have a set maximum release travel (see clamp/release graph on page 111). **Exceeding this travel will damage the diaphragm spring,** and result in a decrease in clamp load and change the spring characteristics. Wear on the diaphragm spring fingers can indicate release bearing problems, misalignment, or just normal wear over an extended period. If excessive wear is present, or it is known the spring has been over stroked it is advisable to return the unit to AP Racing for fitment of new springs. Carbon clutches are very durable but not indestructible. Although the carbon material will not be significantly harmed by extreme heat generated by excessive slipping of the clutch, aluminium alloy can soften and distort. The diaphragm springs will also lose clamp load if subjected to prolonged or excessive heat. Excessive slipping is therefore best avoided. Any clutches that have been subjected to excessive heat should be returned to AP Racing for inspection.

MAINTENANCE & SERVICING.

All clutch components should be examined frequently for signs of damage or abnormal wear. Remove dust with a brush or vacuum cleaner, and any light deposits of oil or grease with a non-oil based solvent. Heavier deposits of oil on the carbon plates are best cleaned in an ultrasonic wash. After cleaning the carbon plates with any fluid, it is recommended that any remaining traces of oil or solvent be removed by baking them for an hour at 300°C minimum in a suitable oven.

WARNING:

NEVER USE BRAKE CLEANER TO CLEAN CARBON. A FILM OF CLEANER WILL REMAIN ON THE CARBON CAUSING THE CLUTCH TO SLIP ON INITIAL USE EVEN IF THE CARBON IS BAKED.

User servicing is limited to replacing the main pressure plate and hubs when required. Other replacements require the use of specialised test equipment to set up the clutch and the unit should be returned to AP Racing for reconditioning.

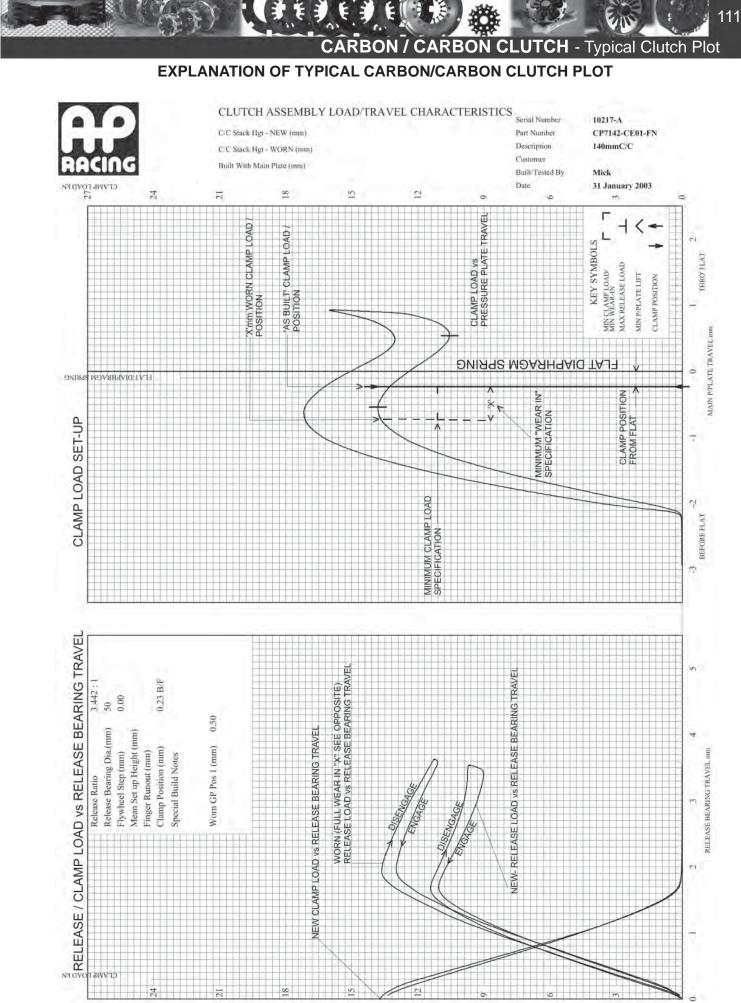
CUSHIONING SYSTEMS (CFS & CPS).

The cushioning systems available in AP Racing's carbon clutch range either "Cushion Flywheel" CFS or "Cushion Pressure Plate" CPS are designed to give more clutch controllability during engagement and is achieved by a secondary lower spring rate from precise bellville springs inserted into the flywheel or main pressure plate faces.

Although the bellvilles fitted have a high temperature capability excessive clutch temperature can result in loss of cushion when the bellvilles collapse.

If bellville height above flywheel or pressure plate falls below 75% of its original figure, it is recommended that the clutch be returned to AP Racing for reconditioning and replacement of bellvilles.

The split rings in intermediate p/plate #1 or main pressure plates are designed as bearings for the bellville springs and transfer the load into the c/c plates, if these overheat they can loose their retention and fall out when the clutch is disassembled. These can also be replaced during reconditioning.



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RELEASE LOAD KN

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METALLIC RACE CLUTCH - General Information

INTRODUCTION.

For many years AP Racing has been the world leader in the design and manufacture of competition clutch systems. This section combines all sizes of Sintered and Cerametallic Race Clutches.

The clutches in this section are designated Sintered or



Cerametallic, sometimes called "Paddle" clutches, this refers to the type of driven plate that is used in the clutch. Both types of driven plate are available with a comprehensive range of spline sizes to suit a wide range of popular applications. A list of standard spline sizes can be found on page 143. Other splines can also be accommodated, please refer to AP Racing for details. This section also provides guidance & general information on clutch selection, types of driven plate and friction materials, plus basic technical information and installation details for each clutch.

RACE CLUTCH RANGE DETAILS.

The table below provides quick reference information on the range of Race Clutches available from AP Racing. If your clutch requirements fall outside these examples, please contact AP Racing Technical Section who will be pleased to discuss your specific application.

			Clutc	h Descripti	on.		
Clutch Series No.	Clutch Ø (mm)	No. of Driven Plates	Clutch Actuation Type.	Sintered / Cerametallic.	Drive Type.	No. Of Fixing Bolts.	Press/ Plate Ratio.
CP6073	115	3	Push	Sintered	Lug	10	EHR
CP6074	115	4	Push	Sintered	Lug	10	EHR
CP6001	140	1	Push	Sintered	Lug	8	HiR
CP6002	140	2	Push	Sintered	Lug	8	HiR
CP6003	140	3	Push	Sintered	Lug	8	HiR
CP6092	140	2	Push	Bonded	Lug	8	HiR
CP6013	140	3	Push	Sintered	Lug	8	HiR
CP6014	140	4	Push	Sintered	Lug	8	HiR
CP8773	140 (I Drive)	3	Push	Sintered	Lug	12	EHR or HiR
CP8804	140 (I Drive)	4	Pull	Sintered	Lug	12	HiR
CP2116	184	1	Push	Sintered	A Ring	6	HiR
CP7371	184	1	Push	Sintered	Lug	6	EHR
CP7381	184	1	Push	Cerametallic	Lug	6	EHR
CP2125	184	2	Push	Sintered	A Ring	6	HiR
CP2606	184	2	Push	Cerametallic	A Ring	6	HiR
CP7372	184	2	Push	Sintered	Lug	6	EHR
CP7382	184	2	Push	Cerametallic	Lug	6	HiR
CP7392	184	2	Push	Cerametallic	Lug	6	HiR
CP7972	184	2	Push	Cerametallic	Lug	6	HiR
CP2817	184	3	Push	Sintered	A Ring	12	HiR
CP7373	184	3	Push	Sintered	Lug	6	EHR
CP8022	184 (I Drive)	2	Push	Sintered	Lug	6	EHR
CP3745	200	1	Push	Cerametallic	Lug	6	HiR
CP3871	200	1	Push	Cerametallic	Lug	6	HiR
CP4560	200	1	Push	Cerametallic	Lug	6	HiR
CP5241	215	1	Push	Cerametallic	Lug	6	LoR
CP5242	215	2	Push	Cerametallic	Lug	6	LoR

'I' Drive Clutch System

AP Racing has developed a new design of clutch. Whilst conventional clutch designs typically feature external 'jaws' around the outer edges of the steel intermediate and main pressure plates, which can distort trapping the legs of the aluminium cover and cause the clutch to drag.



The new 'I' **Drive** design features drive tenons, which locate into internal jaws in the lightweight aluminium clutch cover, eradicating the onset of clutch drag.

The '**I' Drive** design has been proven via a program of extensive dyno tests which assessed durability in challenging conditions. During the test the '**I'** Drive clutch maintained optimum performance under arduous

operating conditions for significantly longer than the conventional clutch design. Our research shows the new clutch design to be five times more durable when subjected to the same test parameters.

With up to 10% less mass than conventional clutches, and with 15% less rotational momentum, **'I' Drive** design also features an innovative 'wear plate', to combat wear on the drive legs of the lightweight aluminium clutch cover, where they interact with the steel plates. This problem, common to all sintered clutches with aluminium covers, is reduced by the use of thick wear 'pads' held captive on the drive faces of each of the aluminium cover drive-legs, which provide robust wear surfaces.

'I' Drive is already in competitive use, with Ø184mm (7¼") units running in WRC and Ø140mm (5½") units running in endurance and touring car applications. This is part of a programme of continuous improvement for the **'I' Drive** design with the aim of introducing different variations throughout 2015.

SINTERED OR CERAMETALLIC ?.

This information will aid the selection process in deciding whether a Sintered or Cerametallic Clutch assembly should be used.

SINTERED: - Primary used in race applications. / - Compact installation. / - Low inertia. / - Lightweight.

CERAMETALLIC: - Primarily used in rally / off road applications. / -Resistant to high energy input (i.e. long slip) / - Smoother engagement. / - Less prone to judder.

Note: Whilst it is recommended that Sintered Clutches are suitable for Race applications and Cerametallic Clutches for Rally or Off Road applications, both types are often used successfully in other area's. DIAMETER:- There are five diameters to choose from :- Ø115mm (41/2"), Ø140mm (51/2"), Ø184mm (71/4"), Ø200mm and Ø215mm (81/2"). A larger diameter increases torque capacity & reduces wear but increases inertia. MOMENT OF INERTIA:- Rotating mass around the axis of clutch. Lower moment of inertia will result in faster engine response and gear changes. **CLUTCH CONFIGURATION:** - There are two basic designs for both the Sintered and Cerametallic clutches, the traditional A-Ring type with an adaptor ring and separate cover or a cover with integral legs (Lug type). The lug drive design allows friction dust to escape and reduces heat build up particularly when used with cerametallic drive plates. Sintered clutches are available in 1, 2, 3 and 4 plate versions, Cerametallics are available in both 1 and 2 plate versions. The dynamic torque capacity of each clutch depends upon the type of friction material, the number of driven plates, which diaphragm spring is fitted and the pressure plate ratio. A choice of springs is available, suitable for engine torques ranging from 148Nm (109lbs/ft) to 1272Nm (938lbs/ft) and for breakaway torque up to 1610Nm (1187lbs/ft).

COVERS

- LUG TYPE:- The Lug Drive Sintered Clutch range utilises a one piece Aluminium Alloy cover and lug design which has a , low moment of inertia and runs cooler. All Ø115mm, Ø140mm and Ø200mm clutch covers are machined from billet. Ø184mm Clutch covers are machined form a high quality aluminium alloy casting.

'A' RING TYPE:- The 'A' Ring Clutch type is only available in Ø184mm diameter. Push types are available with either a steel or aluminium alloy cover (functionally there is no difference between the steel and aluminium alloy cover) however, the aluminium alloy cover assembly gives a weight saving of approximately 300g over the steel version and has lower inertia.
NUMBER OF DRIVEN PLATES:- The number of plates required for an application will depend on engine torque, clutch diameter and clamp load. Generally a smaller diameter clutch will require more plates than a larger diameter unit. A Comprehensive range of splines is available to suit most transmission input shafts. Details on page 149. If the spline required is not in this table please contact AP Racing Technical Section.

METALLIC RACE CLUTCH - General Information

CLUTCH FUNCTIONALITY / TERMINOLOGY

CLAMP LOAD:- Force applied by the diaphragm spring, on driven plates via main and intermediate pressure plates. Clamp load will vary depending on the diaphragm spring and pressure plate ratio used.

RELEASE LOAD:- Force required on the diaphragm spring fingers to disengage the clutch.

PRESSURE PLATES:- The main pressure plate provides the fulcrum point at which clamp load is transmitted, through its own friction face into the clutch. The pressure plates positioned between drive plates are known as intermediate pressure plates.

PUSH TYPE:-The conventional and most popular type of diaphragm spring clutch where the release bearing is pushed against the diaphragm spring fingers (i.e. towards the flywheel) to release the clutch.

■ PULL TYPE:-This type of clutch has the release bearing fulcrum inside the clutch and requires the diaphragm spring fingers to be pulled (i.e. away from the flywheel) in order to release the clutch. Although generally more complex in terms of release mechanism, pull types are more efficient in terms of clamp and release loads.

DIAPHRAGM SPRING:- Belleville (or disc) spring with a series of integral release fingers on the inside diameter.

TECHNICAL SPECIFICATIONS

• TORQUE CAPACITY:- The torque capacity of the clutch is dependent upon the clutch diameter, the number and type of driven plates used, the load rating of the diaphragm spring and the pressure plate ratio (normally predetermined by AP Racing during the design process). The table below gives the recommended maximum engine torque capacity for all the available combinations of these factors for both conventional push type clutches and pull type clutches. The number of driven plates used in the clutch will to a large extent be determined by the torque capacity the clutch will be required to accommodate, but operational requirements must be taken into consideration. Increasing the number of driven plates will require replacing, but will also increase the overall height, weight and the moment of inertia of the clutch package.

			Diaphr	agm Spi	ing Loa	d Rating	y Nm (lb/ft)				
Clutch Type.		GLD (Gold).	SLV (Silver).	CRV (Double Grey.	ORA (Orange).	GRN (Green).	GRY (Grey).				
		Ø115mm 3 Plate									
		Ø115mm 4 Plate	1014 (747)	882 (651)	676 (498)	588 (434)					
		Ø140mm Single Plate			210 (155)	157 (116)					
		Ø140mm 2 Plate			420 (310)	314 (232)					
	s	Ø140mm 3 Plate			630 (465)	471 (348)					
с	I N	Ø140mm 4 Plate			840 (620)	628 (464)					
O N	T E R	Ø184mm Single Plate A-Ring			424 (313)	266 (196)	164 (121)				
V E	E D	Ø184mm Single Plate			424 (313)	266 (196)	164 (121)				
N T		Ø184mm 2 Plate A-Ring			848 (625)	532 (392)	327 (241)				
O N		Ø184mm 2 Plate			848 (625)	532 (392)	327 (241)				
AL		Ø184mm 3 Plate A-Ring			978 (721)	631 (465)	394 (291)				
Р		Ø184mm 3 Plate			1272 (938)	798 (588)	491 (362)				
U S	с	Ø140mm 2 Plate			398 (294	298 (220)					
н	E R	Ø184mm Single Plate			413 (305)	259 (191)	160 (118)				
	A M	Ø184mm 2 Plate A-Ring			636 (469)	421 (310)	263 (194)				
	E T	Ø184mm 2 Plate			636 (469)	421 (310)	263 (194)				
	AL	Ø200mm Single Plate			343 (253)			301 (222)			
	L	Ø215mm Single Plate			580 (427)			425 (314)			
	С	Ø215mm 2 Plate			842 (621)			564 (416)			
P U L L	S I N T	Ø184mm 2 Plate			1020 (750)						

MAINTENANCE

Regular inspection and maintenance is essential to maintain optimum clutch performance. Excessive heat generation (often witnessed by discolouration of steel pressure plates) due to prolonged or repeated slip can result in loss of diaphragm spring load as well as driven plate damage. In such cases the clutch should be replaced or reconditioned. Pressure plate working faces should be checked for flatness using a straight edge and feeler gauge. 'Out of flat' pressure plates or driven plates can result in difficulties releasing the clutch and consequently drag. Pressure plates should be replaced when worn, or more than 0.10mm (0.004") out of flat. Replace driven plates if there are signs of damage or when thickness has been reduced to the figures given in the technical information for each individual clutch.

PART NUMBERS

A new part numbering system has been introduced on some of the clutch series in this catalogue. The table below provides a brief explanation of the make up of the numbers.

Clutch series No.

CP7372 - O E 90 - SF							
Diaphragm Spring.	Ratio.	Driven Plate Type.	Flywheel Type.				
D = (gold).							
S = (Silver).	E = EHR (Extra High	80 = Cerametallic	SF = Stepped				
C = CRV (Double grey).	Ratio).	Style Assemblies 7.11mm Thick.	Flywheel.				
O = ORA (Orange).		90 =					
N = GRN (Green).	H = HiR (High Ratio).	Sintered Style Assemblies	FF = Flat Flywheel.				
G = GRY (Grey).		2.63mm Thick.					

ORDERING

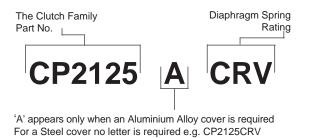
When ordering an AP Racing Clutch please quote the correct part number for the assembly required wherever possible.

The driven plate(s) must be ordered separately under their own part number. The types of driven plate design suitable for that particular race clutch assembly are detailed on pages 114 to 140.

However not all popular spline variations are listed in these sections, please refer to page 143. where a more comprehensive list of driven plate spline sizes can be found.

If the spline size you require does not appear in this list please contact AP Racing for information.

Examples & Explanation of Part Numbers:-



RΡ

CP6073.	TECHNICAL SPECIFICATIONS			
	Terrue	CP6073-DS90-SF	878Nm (647lb/ft)	
Ø115mm, 3 Plate, Sintered.	Torque Capacity.	CP6073-SE90-SF	664Nm (490lb/ft)	
	Сарасну.	CP6073-CE90-SF	499Nm (368lb/ft)	
	Release Loads.	Max peak worn.	At travel.	
	CP6073-DS90-SF	550daN	400daN	
	CP6073-SE90-SF	470daN	340daN	
	CP6073-CE90-SF	367daN	268daN	
	Set-up Height. (New)			
	CP6073-DS90-SF	33.52mm / 32.38mm		
BORN OP	CP6073-SE90-SF	33.69mm / 32.11mm		
24 6 PA 129 6 19	CP6073-CE90-SF	31.87mm / 30.63mm	1	
	Set-up Height. (Wo	-up Height. (Worn)		
000	CP6073-DS90-SF	36.08mm		
APPLICATIONS.	CP6073-SE90-SF	35.93mm		
	CP6073-CE90-SF	34.50mm		
	Clutch "Wear In".	0.50mm		
Indycar Series.	Weight. (including driven plates)		2.62Kg	
¤ IRL.	Complete Assy Inertia.		0.0055Kgm ²	
	Driven Plate & Hub Inertia.		0.0001Kgm ²	
FEATURES.	Release Bearing. CP3457-11			
 3 Plate. Push type. 	DRIVEN PLATE	S.		
Stepped flywheel fixing inner diameter location, with optional	Thickness.	New = 2.63mm	Worn = 2.38mm	
external spigot location.	D/Plate Types.	Part Number.	Spline Details.	
• One piece cover and lugs machined from billet. Provides rigidity and		CP5004-6FM4 x 3	7/8" x 20	
strength and cooler running, allows dust and debris to escape.	Back to Back.	CP5004-8FM4 x 3	1.16" x 26	
 Heavy duty suitable for very high rpm engines. Lightweight and durable. 		CP6074-18 FM4 x 2		
Lightweight and durable.	Nested	(offset hub).	4.40% 00	
Individually tested match machined, balanced and clutch load and	(Longer spline	CP6074-19 FM4 x 1	- 1.16" x 26	
function.	length)	(Flywheel side hub).		
CP4703 mounting studs available.	Other splines availa	able see page 143.	·	
Interchangeable with CP8153 Carbon/Carbon Clutch	•	ed less driven plates. Or	der Separately.	
	SPARE PARTS.			
PART NUMBERS.	Wear Clips.		CP5303-102	
- CP6073-CE90-SF.	Main Prossure Plate		CP6074-125	

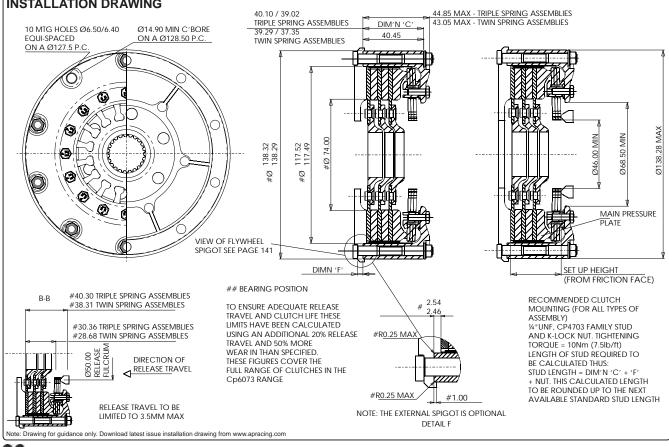
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- CP6073-CE90-SF.

- CP6073-DS90-SF.

- CP6073-SE90-SF.

INSTALLATION DRAWING



Main Pressure Plate.

Intermediate Pressure Plates.

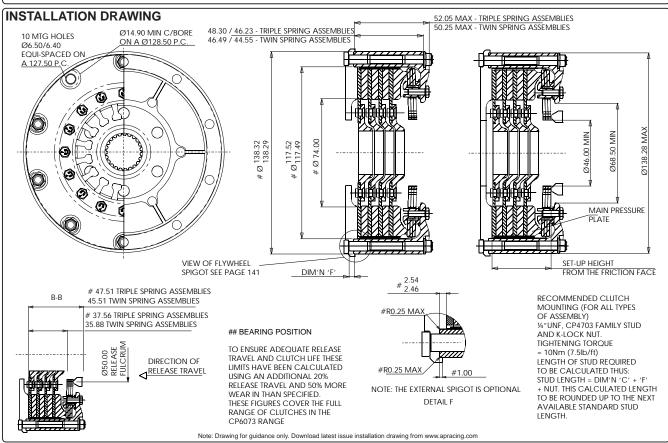
CP6074-125

CP6074-124

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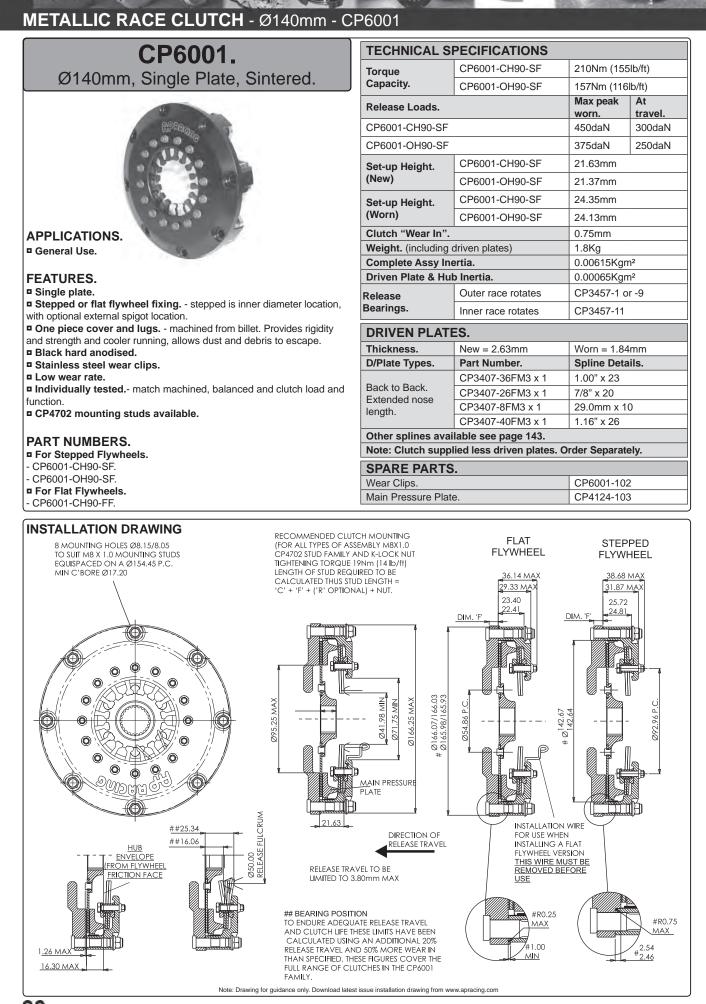


CP6074.	TECHNICAL SP	ECIFICATIONS		
	Torque	CP6074-DE90-SF	1014Nm (747lb/ft)	
Ø115mm, 4 Plate, Sintered.	Capacity.	CP6074-SE90-SF	882Nm (651lb/ft)	
	Сарасну.	CP6074-CE90-SF	676Nm (498lb/ft)	
	Release Loads.	Max peak worn.	At travel.	
	CP6074-DE90-SF	550daN	400daN	
	CP6074-SE90-SF	470daN	340daN	
	CP6074-CE90-SF	367daN	268daN	
	Set-up Height. (New			
	CP6074-DE90-SF 40.94mm / 39.56mm			
	CP6074-SE90-SF			
	CP6074-CE90-SF	,		
	Set-up Height. (Worn)			
	CP6074-DE90-SF	43.54mm		
230	CP6074-SE90-SF	43.25mm		
	CP6074-CE90-SF	41.72mm	0.50	
	Clutch "Wear In".		0.50mm	
APPLICATIONS.	Weight. (including driven plates)		2.75Kg	
 Indycar Series. 	Complete Assy Iner	0.0065Kgm ²		
IRL.	Driven Plate & Hub	0.00013Kgm ²		
	Release Bearing. CP3457-11			
FEATURES.	DRIVEN PLATES.			
• 4 Plate.	Thickness.	New = 2.63mm	Worn = 2.44mm	
 Push Type. Stepped flywheel fixing inner diameter location, with optional 	D/Plate Types.	Part Number.	Spline Details.	
external spigot location.	Deals to Deals	CP5004-6FM4 x 4	7/8" x 20	
One piece cover and lugs machined from billet. Provides rigidity	Back to Back.	CP5004-8FM4 x 4	1.16" x 26	
and strength and cooler running, allows dust and debris to escape.		CP6074-18 FM4 x 3		
Heavy Duty suitable for very high rpm engines.	Nested	(offset hub).		
Lightweight and durable.	(Longer spline	CP6074-19 FM4 x 1	- 1.16" x 26	
Low wear rate.	length)	(Flywheel side hub).		
Individually tested match machined, balanced and clutch load and	Other splines availa		1	
function.	· ·	ed less driven plates. Or	der Separately.	
CP4703 mounting studs available.	SPARE PARTS			
CP4703 mounting studs available.	SPARE PARTS. Wear Clips.		CP5304-104	
 CP4703 mounting studs available. PART NUMBERS. 	Wear Clips.		CP5304-104	
 CP4703 mounting studs available. PART NUMBERS. - CP6074-CE90-SF. 	Wear Clips. Main Pressure Plate.		CP6074-125	
CP4703 mounting studs available. PART NUMBERS. CP6074-CE90-SF. CP6074-DE90-SF.	Wear Clips.			
CP4703 mounting studs available. PART NUMBERS. - CP6074-CE90-SF. - CP6074-DE90-SF. - CP6074-SE90-SF. - CP6074-SE90-SF.	Wear Clips. Main Pressure Plate.		CP6074-125	
CP4703 mounting studs available. PART NUMBERS. - CP6074-CE90-SF. - CP6074-DE90-SF.	Wear Clips. Main Pressure Plate. Intermediate Pressur	e Plates.	CP6074-125 CP6074-124 MBLIES	
CP4703 mounting studs available. PART NUMBERS. • CP6074-CE90-SF. • CP6074-DE90-SF. • CP6074-SE90-SF. • CP6074-SE90-SF.	Wear Clips. Main Pressure Plate. Intermediate Pressur	e Plates.	CP6074-125 CP6074-124 MBLIES	



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METALI		UTCHES - Ø	140mm - CP600	
CDC000	TECHNICAL SPECIFICATIONS			
CP6002.	Torque	CP6002-CH90-SF	420Nm (310lb/ft)	
Ø140mm, 2 Plate, Sintered.	Capacity.	CP6002-OH90-SF CP6002-BH90-SF	314Nm (232lb/ft) 218Nm (161lb/ft)	
	Release Loads.	Max peak worn.	At travel.	
19 million and the second seco	CP6002-CH90-SF	450daN	300daN	
COD COLOR OF COLOR	CP6002-OH90-SF CP6002-BH90-SF	375daN 210daN	250daN 140daN	
1	Set-up Height. (New)		riodali	
	CP6002-CH90-SF	28.83mm		
1 as 14 and 10 and 10	CP6002-OH90-SF CP6002-BH90-SF	28.57mm 26.80mm		
Sara S	Set-up Height. (Worr			
1 20 mm	CP6002-CH90-SF	31.58mm		
APPLICATIONS.	CP6002-OH90-SF CP6002-BH90-SF	31.32mm 29.56mm		
□ General Use.	Clutch "Wear In".	23.001111	0.75mm	
	Weight. (including dri	ven plates)	2.50Kg	
FEATURES.	Complete Assy Inert		0.0086Kgm ²	
2 Plate.	Driven Plate & Hub I		0.00013Kgm ²	
 Push type. Stepped or flat flywheel fixing stepped is inner diameter location. 	Release Bearings.	Outer race rotates	CP3457-1 or -9 CP3457-11	
with optional external spigot location.			CP3457-11	
• One piece cover and lugs machined from billet. Provides rigidity and strength and cooler running, allows dust and debris to escape.	DRIVEN PLATES	-	More 2.24mm	
 Black hard anodised. 	Thickness. D/Plate Types.	New = 2.63mm Part Number.	Worn = 2.21mm Spline Details.	
Stainless steel wear clips.		CP3414-18FM3 x 2	7/8" x 20	
 Low wear rate. Individually tested match machined, balanced and clutch load and 	Back to Back.	CP3414-10FM3 x 2	1.00" x 23	
function.	Back to Back	CP3407-26FM3 x 2	7/8" x 20	
CP4702 mounting studs available.	(Extended nose length)	CP3407-36FM3 x 2	1.00" x 23	
	Other splines availa	ble see page 143.		
PART NUMBERS.	Note: Clutch supplied less driven plates. Order Separately.			
- CP6002-CH90-SF.	SPARE PARTS.			
- CP6002-OH90-SF. - CP6002-BH90-SF.	Wear Clips.		CP6002-102	
■ For Flat Flywheels.	Main Pressure Plate.		CP4124-103	
- CP6002-CH90-FF.	Intermediate Pressure	e Plates.	CP4124-102	
INSTALLATION DRAWING THE CLUTCH SPIGOT HAS F	BEEN DESIGNED	FLAT FLYWHEEL	STEPPED FLYWHEEL	
8 MOUNTING HOLES TO BE THIS DIAMETER WHE Ø8.15/8.05 TO SUIT M8 x 1.0 FLYWHEELBEFORE FITTING		42.99 MAX 36.68 MAX	45.45 MAX	
MOUNTING STUDS EQUISPACED ON A INSTALLATION WIRE IN PLA	ACE)	30.61	32.99	
0154.45 P.C. WIN C/BORE 017.20		M. 'F'		
AINAL FLOAT NOTE: EACH HUB VERSION CAN BE		USTALLATION WIR USE WHEN INSTALL		
	RECOMMENDED CLUTCH MOUNTING (FOR ALL TYPES OF ASSEMBLY M8X1.0 CP4702 STUD FAMILY AND K-LOCK NUT TIGHTENING TORQUE 19Nm (14 lb/ft) LENGTH OF STUD REQUIRED TO BE CALCULATED THUS STUD LENGTH = (° + + +	BEFORE USE #R0.25 #R0.25 #INO	ISION. EEL SIDE TED ON	

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CP6003. **TECHNICAL SPECIFICATIONS** CP6003-CH90-SF 630Nm (465lb/ft) Torque Ø140mm, 3 Plate, Sintered. Capacity. CP6003-OH90-SF 471Nm (348lb/ft) Release Loads. At travel. Max peak worn. CP6003-CH90-SF 450daN 300daN CP6003-OH90-SF 375daN 250daN CP6003-CH90-SF 36.04mm Set-up Height. (New) CP6003-OH90-SF 35.78mm CP6003-CH90-SF 38.85mm Set-up Height. (Worn) CP6003-OH90-SF 38.59mm Clutch "Wear In". 0.75mm Weight. (including driven plates) 3.3Kg **APPLICATIONS.** Complete Assy Inertia. 0.0102Kgm² General Use. Driven Plate & Hub Inertia. 0.00196Kgm² FEATURES. Outer race rotates CP3457-1 or -9 Release Bearings. 3 Plate. CP3457-11 Inner race rotates Push type. **DRIVEN PLATES** Stepped or flat flywheel fixing. - stepped is inner diameter location, with optional external spigot location. New = 2.63mm Worn = 2.34mm Thickness. Done piece cover and lugs. - machined from billet. Provides rigidity D/Plate Types. Part Number. Spline Details. and strength and cooler running, allows dust and debris to escape. CP3414-10FM3 x 3 1.00" x 23 Black hard anodised. Stainless steel wear clips. CP3414-18FM3 x 3 7/8" x 20 Back to Back Low wear rate. CP3414-19FM3 x 3 1.16" x 26 Individually tested. - match machined, balanced and clutch load and CP3414-37FM3 x 3 1.25" x 10 function. CP4702 mounting studs available. Other splines available see page 143. Note: Clutch supplied less driven plates. Order Separately. PART NUMBERS. SPARE PARTS. For Stepped Flywheels. - CP6003-CH90-SF. Wear Clips. CP4073-123 - CP6003-OH90-SE Main Pressure Plate CP4124-103 For Flat Flywheels. Intermediate Pressure Plates CP4124-102 - CP6003-CH90-FF. **INSTALLATION DRAWING** FLAT FLYWHEEL SUFFIX - FF STEPPED FLYWHEEL SUFFIX - SF 52.72 MAX 8 MOUNTING HOLES Ø8.15/8.05 THE CLUTCH SPIGOT HAS BEEN DESIGNED TO BE 50.26 MAX TO SUIT M8 x 1.0 MOUNTING STUDS EQUISPACED ON A THIS DIAMETER WHEN BOI TED TO THE FLYWHEEL 44.45 MAX 46.91 MAX BEFORE FITTING (WITH THE INSTALLATION WIRE IN PLACE) 37.80 36.52 DIM. '0 40. Ø154.45 P.C.MIN C/BORE Ø17.20 THIS DIAMTER MAY BE SLIGHTLY REDUCED DIM. 'F DIM. 'F 39.0 ΠШ -R1.75 MIN 66.03 Ø166.25 MAX 1.98 MIN Ø95.25 MAX 96 P.C. ⋚ Ø54.86 P.C 07/1 × Ø^{142.68} AXIAL 66. 65. 262 Ø41 50 66 MAIN PRESSURE PLATE RELEASE TRAVEL TO BE INSALLATION WIRE FOR HUB ENVELOPE SET LIP HEIGHT LIMITED TO 3.80mm USE WHEN INSTALLING A (FROM FLYWHEEL FRICTION FACE) (FROM THE FRICTION FACE FLAT FLYWHEEL VERSION MAXIMUM TO ENSURE FLYWHEEL SIDE 39.84 CARBON IS LOCATED ON THE COVER LUGS THIS WIRE MUST BE REMOVED BEFORE USE RECOMMENDED CLUTCH MOUNTING (FOR ALL TYPES OF ASSEMBLY M8X1.0 Cp4702 STUD FAMILY AND K-LOCK NUT TIGHTENING TORQUE #R0.25 MAX R0.75 MAXIMUN 19Nm (14 lb/ft) LENGTH OF STUD REQUIRED TO BE CALCULATED THUS STUD LENGTH = #1.00 'C' + 'F' + ('R' OPTIONAL) + NUT MIN .34 MA)

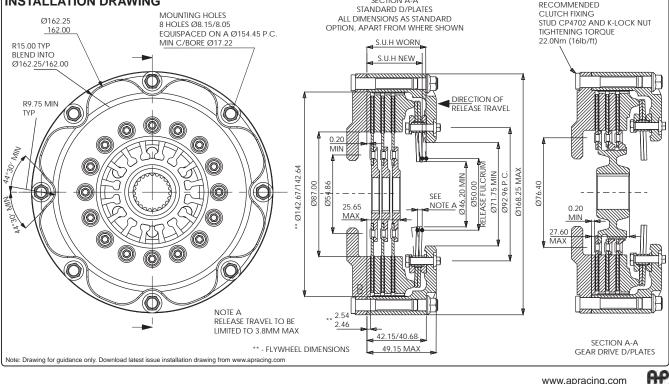
Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

+44 (0)24 7663 9595

23.29 MAX

METALLIC RACE CLUTCH - Ø140mm - CP6003

METALLIC RACE CLUTCHES - Ø140mm - CP6013 **CP6013. TECHNICAL SPECIFICATIONS** CP6013-CH90-SF 603Nm (444b/ft) Torque Ø140mm, 3 Plate, Sintered. Capacity. CP6013-OH90-SF 450Nm (322lb/ft) Release Loads. Max peak worn. At travel. CP6013-CH90-SF 540daN 300daN CP6013-OH90-SF 400daN 250daN Set-up Height. CP6013-CH90-SF 39.37 / 37.70mm (New) CP6013-OH90-SF 39.11 / 37.44mm Set-up Height. CP6013-CH90-SF 42.01mm (Worn) CP6013-OH90-SF 41.75mm Clutch "Wear In" - CP6013-CH 1.00mm Clutch "Wear In" - CP6013-OH 0.75mm Weight. (including Back to Back 3.63Kg driven plates) Gear Driven 3.78Kg 0.01264Kgm² Back to Back **Complete Assy** Inertia. Gear Driven 0.01287Kgm² APPLICATIONS. **Driven Plate & Hub** Back to Back 0.0020Kgm² Endurance. Inertia. 0.0022Kgm² Gear Driven Outer race rotates CP3457-1 Release Bearings. FEATURES. Inner race rotates CP3457-11 3 Plate. **DRIVEN PLATES** Push type. Thickness - For Stepped flywheel fixing. - inner diameter location, with optional New = 2.63mm Worn = 2.29mm 1mm 'Wear In' external spigot location. Part Number. Spline Details. Heavy duty. - large area facings. D/Plate Types. Depiece cover and lugs. - machined from billet. Provides rigidity CP3683-3FM3 x 3 1.00" x 23 Back to Back. and strength and cooler running, allows dust and debris to escape. (Large area) CP3683-4FM3 x 3 7/8" x 20 Black hard anodised. CP6014-9 FM3 x 2 Back to Back. Stainless steel wear clips. (offset hub). (Longer spline 1.16" x 26 Low wear rate. CP6014-10 FM3 x 1 length) Individually tested. - match machined, balanced and clutch load and (Flywheel side hub). function CP4073-4FM3 x 1 CP4702 mounting studs available. 1.00" x 23 (hub) Gear Driven. Supercedes CP4123 & CP4073 clutch families. CP4074-6FM3 x 2 Slider plates. Other splines available see page 143. Note - 'I' Drive option available as a direct replacement for CP6013 Note: Clutch supplied less driven plates. Order Separately. under CP8333 part number family. SPARE PARTS PART NUMBERS. Wear Clips. CP4073-123 3 Plate Clutch Stepped flywheel. Main Pressure Plate. CP4074-104 - CP6013-CH90-SF. Intermediate Pressure Plates. CP4074-103 - CP6013-OH90-SF. INSTALLATION DRAWING SECTION A-A RECOMMENDED STANDARD D/PLATES



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METALLIC RACE CLUTCHES - Ø140mm			
CP6014.		SPECIFICATION CP6014-CH90-SF	804Nm (592lb/ft)
Ø140mm, 4 Plate, Sintered.	Torque Capacity.	CP6014-CH90-SP	600Nm (442lb/ft)
	Release Loads.	Max peak worn.	At travel.
	CP6014-CH90-SF	540daN	300daN
	CP6014-OH90-SF	400daN	250daN
	Set-up Height.	CP6014-CH90-SF	46.64 / 44.84mm
	(New)	CP6014-OH90-SF	46.38 / 44.58mm
	Set-up Height.	CP6014-CH90-SF	49.28mm
	(Worn)	CP6014-OH90-SF	49.02mm
	Clutch "Wear In" - C	P6014-CH	1.00mm
1 0 0 Ht 200 t	Clutch "Wear In" - C	P6014-OH	0.75mm
Sol Friday	Weight. (including	Back to Back	4.4Kg
10 110	driven plates)	Gear Driven	4.7Kg
DO DO CAL	Complete Assy	Back to Back	0.015112Kgm ²
A CO	Inertia.	Gear Driven	0.015745Kgm ²
APPLICATIONS.	Driven Plate & Hub	Back to Back	0.002615Kgm ²
Endurance.	Inertia.	Gear Driven	0.002930Kgm ²
FEATURES.		Outer race rotates	CP3457-1 or -9
a 4 Plate.	Release Bearings.	Inner race rotates	CP3457-11
□ Push type.	DRIVEN PLATES		
Stepped flywheel fixing.	Thickness - For	.	
- inner diameter location, with optional external spigot location.	1mm 'Wear In'	New = 2.63mm	Worn = 2.38mm
 Heavy duty. large area facings. 	D/Plate Types.	Part Number.	Spline Details.
One piece cover and lugs.	Back to Back.	CP3683-3FM3 x 4	1.00" x 23
- machined from billet. Provides rigidity and strength and cooler running,	(Large area)	CP3683-4FM3 x 4	7/8" x 20
allows dust and debris to escape.		CP6014-9 FM3 x 3	
 Black hard anodised. Stainless steel wear clips. 	Back to Back. (Longer spline	(offset hub).	- 1.16" x 26
 Low wear rate. 	length)	CP6014-10 FM3 x 1	1.10 x 20
Individually tested.		(Flywheel side hub). CP4074-2FM3 x 1	
- match machined, balanced and clutch load and function.	Gear Driven.	(hub)	1.00" x 23
CP4702 mounting studs available.	ocui Diivon.	. ,	er plates.
0		I UP4074-6FIVI3 X 3 SIIO	
0	Other splines availab	CP4074-6FM3 x 3 Slid	
Supercedes CP4124 & CP4074 clutch families.	Other splines availal	ble see page 143.	der Separately.
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. 	Note: Clutch supplie		der Separately.
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. - CP6014-CH90-SF. 	Note: Clutch supplie	ble see page 143.	
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. 	Note: Clutch supplie SPARE PARTS. Wear Clips.	ble see page 143.	CP4074-129
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. - CP6014-CH90-SF. 	Note: Clutch supplie	ble see page 143. d less driven plates. Or	CP4074-129 CP4074-104
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. - CP6014-CH90-SF. - CP6014-OH90-SF. 	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure	ble see page 143. d less driven plates. Or Plates.	CP4074-129 CP4074-104 CP4074-103
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. - CP6014-CH90-SF. - CP6014-OH90-SF. 	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate.	ble see page 143. d less driven plates. Or Plates.	CP4074-129 CP4074-104
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING MOUNTING HOLES 	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure	e Plates.	CP4074-129 CP4074-104 CP4074-103 COMMENDED LUTCH FIXING UD CP4702 AND K-LOCK
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING Ø162.25 162.00 MOUNTING HOLES 8 HOLES Ø8.15/8.05 FOURS Ø4.5 P.C 	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES	ble see page 143. d less driven plates. Or Plates. Rt C ST	CP4074-129 CP4074-104 CP4074-103
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING 	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES	ble see page 143. d less driven plates. Or Plates. Rt C ST	CP4074-129 CP4074-104 CP4074-103 COMMENDED LUTCH FIXING UD CP4702 AND K-LOCK SHTENING TORQUE
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING MOUNTING HOLES 8 HOLES Ø8.15/8.05 EQUISPACED ON A Ø154.45 P.C. MIN CORDE Ø154.25 P.C. MIN CORDE Ø12 22	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES	ble see page 143. d less driven plates. Or Plates. Rt C ST	CP4074-129 CP4074-104 CP4074-103 COMMENDED LUTCH FIXING UD CP4702 AND K-LOCK SHTENING TORQUE
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION DRAWI	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES	ble see page 143. d less driven plates. Or Plates. Rt C ST	CP4074-129 CP4074-104 CP4074-103 COMMENDED LUTCH FIXING UD CP4702 AND K-LOCK SHTENING TORQUE
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING MOUNTING HOLES 8 HOLES Ø8.15/8.05 EOUISPACED ON A Ø154.45 P.C. MIN C/BORE Ø17.22 	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES	ble see page 143. d less driven plates. Or Plates. Rt C ST	CP4074-129 CP4074-104 CP4074-103 COMMENDED LUTCH FIXING UD CP4702 AND K-LOCK SHTENING TORQUE
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION OP A MODELS B HOLES OB 15/8.05 EQUISPACED ON A Ø154.45 P.C. MIN C/BORE Ø17.22 INSTALLATION OP A MODELS B HOLES OB 15/8.05 EQUISPACED ON A Ø154.45 P.C. MIN C/BORE Ø17.22	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES	ble see page 143. d less driven plates. Or Plates. Rt C ST	CP4074-129 CP4074-104 CP4074-103 COMMENDED LUTCH FIXING UD CP4702 AND K-LOCK SHTENING TORQUE
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION DRAWI	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure BACK TO BACK D/PLATES S.U.H WORN S.U.H NEW	e Plates.	CP4074-129 CP4074-104 CP4074-103 COMMENDED LUTCH FIXING UD CP4702 AND K-LOCK SHTENING TORQUE 2.0Nm (16lb/ft)
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION DRAWI	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure BACK TO BACK D/PLATES S.U.H WORN S.U.H NEW	Plates.	CP4074-129 CP4074-104 CP4074-103 CCOMMENDED LUTCH FIXING UD CP4702 AND K-LOCK GHTENING TORQUE ONM (16lb/ft)
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION OP A Cluster of the second state of the s	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure BACK TO BACK D/PLATES S.U.H WORN S.U.H NEW	Plates.	CP4074-129 CP4074-104 CP4074-103 CCOMMENDED LUTCH FIXING UD CP4702 AND K-LOCK GHTENING TORQUE ONM (16lb/ft)
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION OP A Cluster of the second state of the s	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES S.U.H WORN S.U.H NEW S.U.H NEW	Plates.	CP4074-129 CP4074-104 CP4074-103 CP4074-103 CP4072 AND K-LOCK GHTENING TORQUE COMM (16lb/ft)
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION DRAWING INSTALLATION OP A (152,00) INSTALLATION OP A (1	Note: Clutch supplie	Plates.	CP4074-129 CP4074-104 CP4074-103 CP4074-103 CCOMMENDED LUTCH FIXING UD CP4702 AND K-LOCK GHTENING TORQUE LONM (16ib/ft)
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING 0162.25 162.00 9162.25/162.00	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES S.U.H WORN S.U.H NEW 33.00 MAX 2.41	Plates.	CP4074-129 CP4074-104 CP4074-103 CP4074-103 COMMENDED LUTCH FIXING UD CP4702 AND K-LOCK SHTENING TORQUE 2.0Nm (16lb/ft)
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING 0162.25 162.00 0162.25/162.00 0162.25/162.00 Win C/BORE Ø17.22 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.00 0162.25/162.00 0162.00 0162.00 0162.00 0162.00 0162.00 0162.00	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES S.U.H WORN S.U.H NEW 33.00 MAX 2.41	ble see page 143. d less driven plates. Or Plates. Ri C ST TH C C C C ST TH C C C C ST TH C C C C C ST TH C C C C C C C C C C C C C C C C C C	CP4074-129 CP4074-104 CP4074-103 CP4074-103 CCOMMENDED LUTCH FIXING UD CP4702 AND K-LOCK GHTENING TORQUE LONM (16ib/ft)
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING 0162.25 162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.00 <td>Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES S.U.H WORN S.U.H NEW 33.00 MAX 2.41</td> <td>Plates.</td> <td>CP4074-129 CP4074-104 CP4074-103 CP4074-103 CCOMMENDED LUTCH FIXING UD CP4702 AND K-LOCK GHTENING TORQUE LONM (16ib/ft)</td>	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES S.U.H WORN S.U.H NEW 33.00 MAX 2.41	Plates.	CP4074-129 CP4074-104 CP4074-103 CP4074-103 CCOMMENDED LUTCH FIXING UD CP4702 AND K-LOCK GHTENING TORQUE LONM (16ib/ft)
 Supercedes CP4124 & CP4074 clutch families. PART NUMBERS. 3 Plate Clutch Stepped flywheel. CP6014-CH90-SF. CP6014-OH90-SF. INSTALLATION DRAWING INSTALLATION DRAWING 0162.25 162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0162.25/162.00 0160 <td< td=""><td>Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES S.U.H WORN S.U.H NEW 33.00 MAX 2.41</td><td>Plates.</td><td>CP4074-129 CP4074-104 CP4074-103 CP4074-103 CCOMMENDED LUTCH FIXING UD CP4702 AND K-LOCK GHTENING TORQUE LONM (16ib/ft)</td></td<>	Note: Clutch supplie SPARE PARTS. Wear Clips. Main Pressure Plate. Intermediate Pressure SECTION X-X BACK TO BACK D/PLATES S.U.H WORN S.U.H NEW 33.00 MAX 2.41	Plates.	CP4074-129 CP4074-104 CP4074-103 CP4074-103 CCOMMENDED LUTCH FIXING UD CP4702 AND K-LOCK GHTENING TORQUE LONM (16ib/ft)

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CIRECTION OF RELEASE TRAVEL

49.42/47.79 56.42 MAX

60.00MAX

** 2.54 EZ 2.46

** - FLYWHEEL DIMENSIONS

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SECTION X-X GEAR DRIVE D/PLATES (DIM'S AS BACK TO BACK EXCEPT WHERE SHOWN)

Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

Note a Release travel to be Limited to 3.8MM Max

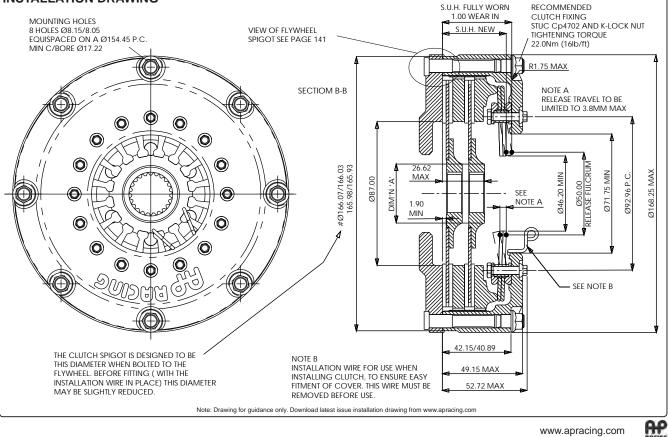
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CP6092.)	CLUTCH - Ø	140mm - CP
	Torque	CP6092ACRV	398Nm (294lb/ft)
Ø140mm, 2 Plate, Cerametallic Paddle.	Capacity.	CP6092AORA	298Nm (220lb/ft)
	Release Loads.	Max peak worn.	At travel.
10 30	CP6092ACRV	450daN	300daN
	CP6092AORA	375daN	250daN
	Set-up Height. (Nev	v)	
	CP6092ACRV	39.37mm / 37.91mm	
	CP6092AORA	39.11mm / 37.65mm	
	Set-up Height. (Worn)		
	CP6092ACRV	42.01mm	
APPLICATIONS.	CP6092AORA	41.75mm	
PPLICATIONS.	Clutch "Wear In".	1	1.00mm
- runy.	Weight. (including driven plates)		3.3Kg
FEATURES.	Complete Assy Inertia.		0.01155Kgm ²
□ 2 Plate.	Driven Plate & Hub Inertia.		0.00180Kgm ²
 Push type. Flat flywheel fixing. 		Outer race rotates	CP3457-1 or -9
- outer diameter location.	Release Bearings.	Inner race rotates	CP3457-11
One piece cover and lugs.	DRIVEN PLATE		
- machined from billet. Provides rigidity and strength and cooler run- ning, allows dust and debris to escape.	Thickness.	New = 6.25mm	Worn = 5.71mm
Heavy duty.	D/Plate Types.	Part Number.	Spline Details.
- 3 paddle sintered driven plates, 6.25mm thick.	Diriate Types.	CP4581-4 x 2	1.00" x 23
 Black hard anodised. Stainless steel wear clips. 		CP4581-5 x 2	7/8" x 20
□ Low wear rate.	Back to Back.	CP4581-3 x 2	1.16" x 20
Individually tested.		CP4581-3 x 2 CP4581-6 x 2	29.0mm x 10
 match machined, balanced and clutch load and function. CP4702 mounting studs available. 	Other onlines suci		29.0000 X 10
 Replaces CP5682 series. 	Other splines avail		and an Comparately
Note: Step flywheel fixing option available under Part Number,		ed less driven plates. O	order Separately.
CP6092-CH83-SF.	SPARE PARTS.		

PART NUMBERS.

- CP6092ACRV. - CP6092AORA.

INSTALLATION DRAWING



Wear Clips.

Main Pressure Plate.

Intermediate Pressure Plates.

CP4073-123

CP4074-104

CP6092-102

METALLIC RACE CLUTCH - Ø140mm 'l' Drive - CP8773

CP8773.

Ø140mm, 'l' Drive, 12 Bolt, Push Type.

APPLICATIONS. Endurance

FEATURES.

Asymmetric designed cover.

- offers 10% reduction in weight and increased stiffness compared to the more conventional cover designs. Benefits from a drive system, featuring drive tenons, which locate into internal jaws of the luas.

- five times more durable than conventional clutch design when

subjected to the same test parameters.

- eradicates distorting of pressure plates trapping on lugs.

- Push type.
- Stepped flywheel fixing.
- Inner diameter location.
- **D**12 bolt, one piece forged cover and lugs.
- machined from Aluminium alloy. Allows dust and debris to escape.
- Black hard anodised.
- Innovative wear plate design fitted.
- combats wear on the drive lugs.
- Very low wear rate.
- Individually tested
- Match machined, balanced and clutch load recorded
- Mounting studs available, CP4703.

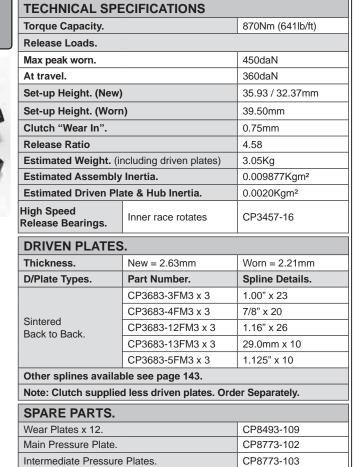
Note: Alternative 'I' Drive Clutch.

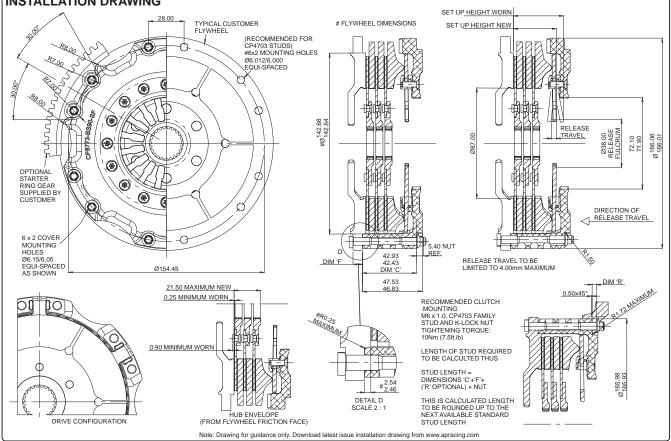
Non preferred 6 bolt 'l' Drive clutch available CP8333 family. Interchangeable with CP6013 standard lug type clutch.

PART NUMBERS.

- CP8773-BS90-SF

INSTALLATION DRAWING





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METALLIC RACE CLUTCH - Ø140mm 'l' Drive - CP8804

Estimated Weight. (including driven plates)

New = 2.63mm

Part Number.

CP3683-3FM3 x 4

CP3683-4FM3 x 4

CP3683-12FM3 x 4

CP3683-13FM3 x 4

CP3683-5FM3 x 4

Note: Clutch supplied less driven plates. Order Separately.

Estimated Driven Plate & Hub Inertia.

Other splines available see page 143.

Torque Capacity.

Set-up Height. (New)

Set-up Height. (Worn)

Estimated Assembly Inertia.

Optional Slave Cylinder.

DRIVEN PLATES

Thickness.

Sintered

Back to Back.

SPARE PARTS.

Main Pressure Plate

Intermediate Pressure Plates.

D/Plate Types.

Clutch "Wear In".

Release Ratio

Release Loads. Max peak worn.

At travel.

CP8804.

Ø140mm, 'l' Drive, 12 Bolt, Pull Type.

APPLICATIONS. Endurance

FEATURES.

4 Plate.

Asymmetric designed cover. - offers 10% reduction in weight and increased stiffness compared to the more conventional cover designs. Benefits from a drive system, featuring drive tenons, which locate into internal jaws of the luas.



- five times more durable than conventional clutch design when subjected to the same test parameters.

- eradicates distorting of pressure plates trapping on lugs.
- Pull type configuration.

- Increased efficiency in terms of clamp and release loads.

Flat flywheel fixing.

outer diameter location.

- P12 bolt, one piece cover and lugs.
- machined from Steel. Allows dust and debris to escape.

Black hard anodised.

Innovative wear plate design fitted.

combats wear on the drive lugs.

Very low wear rate.

Individually tested

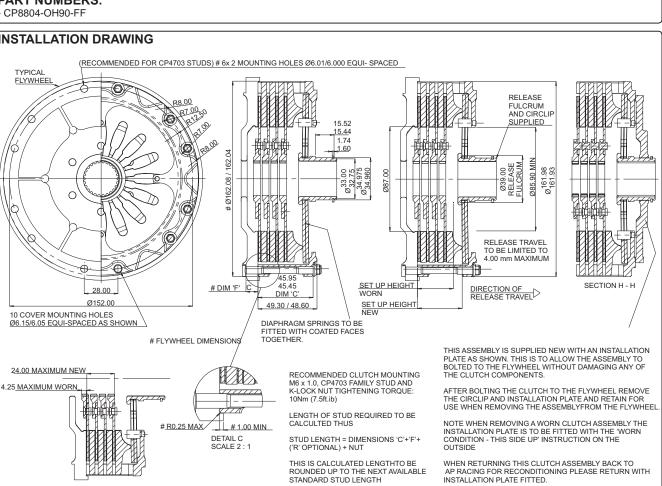
Match machined, balanced and clutch load recorded

- Mounting studs available, CP4703.

a 3 Plate assembly available under part number family CP8803.

PART NUMBERS.

INSTALLATION DRAWING



Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com

AP

1410Nm (1039lb/ft)

39.19 / 35.95mm

0.0013353Kgm²

0.0024175Kgm²

Worn = 2.26mm

Spline Details.

1.00" x 23

7/8" x 20

1.16" x 26

29.0mm x 10

1.125" x 10

CP8803-102

CP8773-103

CP6245-44

570daN

400daN

29.33mm

1.50mm

4.00Kg

4.41

?

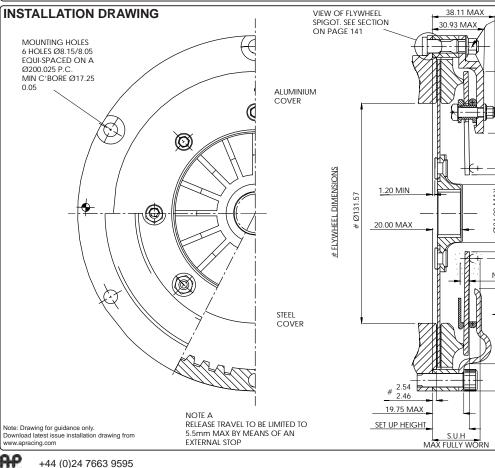


124 METALLIC RACE CLUTCH - Ø184mm - CP2116 CP2116. **TECHNICAL SPECIFICATIONS** CP2116ACRV Ø184mm, Single Plate, A-Ring Sintered. APPLICATIONS. Rally. FEATURES. Single Plate. Push type. Adaptor ring clutch. Stepped flywheel fixing. - inner diameter location. ■ 6 bolt cover. - Steel or Aluminium alloy options. **D** For high torque applications use CP4429 sintered plate. ■ for other applications use CP2012 sintered plate. Normal duty. Durable. Low wear rate. Individually tested. - match machined, balanced and clutch load and function. Suitable for engine speeds of 14000 rpm. CP4702 mounting studs available.

PART NUMBERS.

- Aluminium alloy cover.
- CP2116ACRV.
- CP2116AORA.
- CP2116AGRN.
- Steel cover.
- CP2116CRV. - CP2116ORA.
- CP2116GRN.

INSTALLATION DRAWING



T	CP2116ACRV	424Nm (313lb/ft)			
Torque Capacity.	CP2116AORA	266Nm (196lb/ft)			
Capacity.	CP2116AGRN	164Nm (121lb/ft)			
Release Loads.	Max peak new.	Max peak worn.			
CP2116ACRV	350daN	440daN			
CP2116AORA	240daN	330daN			
CP2116AGRN	160daN	220daN			
Ont you Uninder	CP2116ACRV	23.82 / 21.60mm			
Set-up Height. (New)	CP2116AORA	24.09 / 21.87mm			
(new)	CP2116AGRN	25.16 / 22.98mm			
Ont any Unindet	CP2116ACRV	26.30mm			
Set-up Height. (Worn)	CP2116AORA	26.57mm			
(Wolli)	CP2116AGRN	27.65mm			
Clutch "Wear In".		1.00mm			
Weight. (including	Aluminium cover	2.77Kg			
driven plates)	Steel cover	3.07Kg			
Complete Assy	Aluminium cover	0.016Kgm ²			
Inertia.	Steel cover	0.018Kgm ²			
Driven Plate & Hub I	nertia.	0.0018Kgm ²			
Release Bearings.	Outer race rotates	CP3457-2 or -10			
Release Dearings.	Inner race rotates	CP3457-6			
DRIVEN PLATES).				
Thickness.	New = 2.63mm	Worn = 1.88mm			
D/Plate Types.	Part Number.	Spline Details.			
Sintered.	CP2012-165FM3 x 1	1.00" x 23			
Sinterea.	CP2012-166FM3 x 1	7/8" x 20			
Sintered Paddle	CP4429-4FM3 x 1	1.00" x 23			
Sintered Paddle	CP4429-3FM3 x 1	7/8" x 20			
Other splines availal	ole see page 143.				
Note: Clutch supplie	d less driven plates. Ord	er Separately.			
SPARE PARTS					

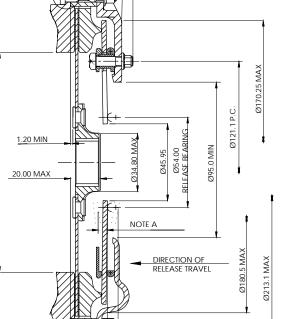
SPARE PARTS.

J



CP2011-62

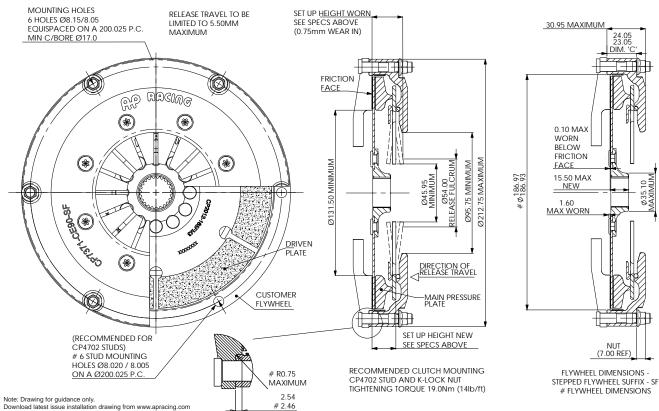
424Nm (313lb/ft)





007074	TECHNICAL SP	TECHNICAL SPECIFICATIONS			
CP7371.		CP7371-CE90-SF	424Nm (313lb/ft)		
Ø184mm, Single Plate, Sintered.	Torque	CP7371-OE90-SF	266Nm (196lb/ft)		
	Capacity.	CP7371-NE90-SF	164Nm (121lb/ft)		
	Release Loads.	Max peak new.	Max peak worn.		
er (0)	CP7371-CE90-SF	350daN	440daN		
	CP7371-OE90-SF	240daN	330daN		
City o	CP7371-NE90-SF	160daN	220daN		
	Set-up Height. (New)				
	CP7371-CE90-SF	21.30mm / 19.05mm			
	CP7371-OE90-SF	22.10mm / 19.81mm			
1.6 2.	CP7371-NE90-SF	21.28mm / 19.01mm			
	Set-up Height. (Worn)				
APPLICATIONS.	CP7371-CE90-SF	24.52mm			
	CP7371-OE90-SF	25.31mm			
0 0	CP7371-NE90-SF	24.50mm			
FEATURES.	Clutch "Wear In". 0.75mm				
 Single Plate. Push type. 	Weight. (excluding driven plates) 2.16Kg				
 Stepped flywheel fixing. 	Assembly Inertia.(excl. driven plates) 0.0135Kgm ²				
- inner diameter location.	CP2012 Type - Drive	en Plate & Hub Inertia.	0.0018Kgm ²		
 One piece cover and lugs. machined from Aluminium alloy. 	Delesse Dessines	Outer race rotates	CP3457-2 or -10		
 For high torgue applications use CP4429 sintered plate. 	Release Bearings.	Inner race rotates	CP3457-6		
for other applications use CP2012 sintered plate.	DRIVEN PLATE	S.			
Black hard anodised cover.	Thickness.	New = 2.63mm	Worn = 1.88mm		
 Stainless steel wear clips. Low wear rate. 	D/Plate Types.	Part Number.	Spline Details.		
Individually tested.		CP2012-165FM3 x 1	1.00" x 23		
- match machined, balanced and clutch load and function.	Sintered.	CP2012-166FM3 x 1	7/8" x 20		
Suitable for engine speeds of 10000 rpm.	Ointenad Daddla	CP4429-4FM3 x 1	1.00" x 23		
CP4702 mounting studs available.	Sintered Paddle.	CP4429-3FM3 x 1	7/8" x 20		
PART NUMBERS.	Other splines availa	ble see page 143.			
- CP7371-CE90-SF.	Note: Clutch supplie	ed less driven plates. Or	der Separately.		
- CP7371-OE90-SF.	SPARE PARTS.				
- CP7371-NE90-SF.	Wear Clips.		CP3911-102		
	Main Pressure Plate.		CP3021-101		

INSTALLATION DRAWING



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Ø35.10 MAXIMUM

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METALLIC RACE CLUTCH - Ø184mm - CP7381

CP7381. Ø184mm, Single Plate, Cerametallic Paddle or Organic.



APPLICATIONS.

Race.

Hillclimb.

FEATURES.

Single Plate.

- Push type.
- Stepped flywheel fixing.
- inner diameter location.
- One piece cover and lugs.
- machined from Aluminium alloy.
- Black hard anodised cover.
- Stainless steel wear clips.
- Low wear rate.
- Individually tested.
- match machined, balanced and clutch load and function.
- Suitable for engine speeds of 10000 rpm.
 CP4702 mounting studs available.
- CP4702 mounting studs available.
 Organic Driven Plate option available CP5386 Family.

PART NUMBERS.

- CP7381-CE80-SF.
- CP7381-OE80-SF.
- CP7381-NE80-SF.

TEQUINICAL OD		
TECHNICAL SP		
Torque Capacity.	CP7381-CE80-SF	413Nm (305lb/ft)
	CP7381-OE80-SF	259Nm (191lb/ft)
	CP7381-NE80-SF	160Nm (118lb/ft)
Release Loads.	Max peak new.	Max peak worn.
CP7381-CE80-SF	350daN	440daN
CP7381-OE80-SF	240daN	330daN
CP7381-NE80-SF	160daN	220daN
	CP7381-CE80-SF	27.43 / 25.14mm
Set-up Height. (New)	CP7381-OE80-SF	28.23 / 25.90mm
(1011)	CP7381-NE80-SF	27.41 / 25.10mm
	CP7381-CE80-SF	30.65mm
Set-up Height. (Worn)	CP7381-OE80-SF	31.44mm
	CP7381-NE80-SF	30.62mm
Clutch "Wear In".		0.75mm
Weight. (Excluding driven plates)		2.24Kg
Assembly Inertia. (Excluding driven plates)		0.014Kgm ²
CP8300 Type - Drive	en Plate & Hub Inertia.	0.0016Kgm ²
Release	Outer race rotates	CP3457-2 or -10
Bearing. Inner race rotates		CP3457-6
DRIVEN PLATE	S.	
Thickness.	New = 7.08mm	Worn = 6.29mm
D/Plate Types.	Part Number.	Spline Details.
3 Paddle.	CP8300-A036H x 1	1.00" x 23
4 Paddle.	CP8400-A026H x 1	7/8" x 20
6 Paddle.	CP8600A036 x 1	1.00" x 23
Organic Faced	CP5386-10 x 1	1.00" x 23
Other splines availa	ble see page 143.	·
Note: Clutch supplie	ed less driven plates. Or	der Separately.
SPARE PARTS.		
Main Pressure Plate.		CP3108-103

CP4111-102

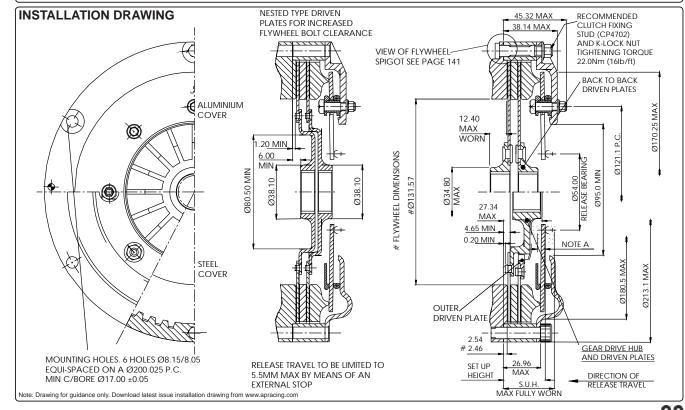
INSTALLATION DRAWING 37.25 MAXIMUM SET UP HEIGHT RELEASE TRAVEL TO BE LIMITED TO 5.50MM 30.32 29.32 DIM 'C RECOMMENDED CLUTCH MOUNTING CP4702 STUD AND K-LOCK NUTTIGHTENING TORQUE 19.0Nm (14lb/ft) WORN MAXIMUM (SEE SPECS ABOVE) MAXIMUM (\bigcirc) FRICTION FACE ଇଇଡାଉନ୍ R DIRECTION OF RELEASE TRAVEL (*) (* Ø * * Ø212.75 MAXIMUM Ø131.50 MINIMUM 0.20 MINIMUM Ø95.75 MINIMUN EASE FULCRUN WORN # \$\$186.87 Ø45.95 MINIMUM Ø54.00 Ø 35.10 Carser CEBO-SF X00#1200000 띥 18.00 MAXIMUM NEW * MAIN PRESSURE CUSTOMER FLYWHEEL PLATE Cp8400 TYPE ÍN DRIVEN PLATE SHOWN عدر SET UP HEIGHT NEW (SEE SPECS ABOVE) (7.00 REF.) FLYWHEEL DIMENSIONS (RECOMMENDED FOR CP4702 STUDS) # 6 STUD MOUNTING HOLES Ø8.020 / 8.005 ON A Ø200.025 P.C. DETAIL F STEPPED FLYWHEEL SUFFIC - SF # FLYWHEEL DIMENSIONS SCALE 2:1 Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com #<u>2.54</u> 2.46 # R0.75 MAXIMUM

Wear Clips.





TECHNICAL SPECIFICATIONS CP2125. 848Nm (625lb/ft) CP2125ACR\ Torque CP2125AORA 532Nm (392lb/ft) Ø184mm, 2 Plate, A-Ring Sintered Capacity. CP2125AGRN 327Nm (241lb/ft) Release Loads. Max peak new. Max peak worn. CP2125ACRV 350daN 440daN CP2125AORA 240daN 330daN CP2125AGRN 160daN 220daN Set-up Height. (New) (Worn) CP2125ACRV 31.31 / 28.64mm 33.80mm CP2125AORA 31.59 / 28.91mm 34.07mm CP2125AGRN 32.66 / 30.02mm 35.14mm Clutch "Wear In". 0.75mm Weight. (including Aluminium Cover Steel Cover driven plates) 3.85Kg Back to Back 4.15Kg APPLICATIONS. Nested 3.92Kg 4.22Kg Race. Rally. 4.40Kg 4.70Kg Gear driven **Complete Assy** Aluminium Cover Steel Cover FEATURES. Inertia. 2 Plate. 0.023Kgm² 0.025Kgm² B to B & Nested Push type. Gear driven 0.024Kgm² 0.026Kgm² Adaptor ring clutch. Back to Back 0.0037Kgm² Stepped flywheel fixing. Driven Plate & Hub 0.0038Kgm² Nested - inner diameter location. Inertia. 0.0040Kgm² 6 bolt cover. Gear driven - Steel or Aluminium alloy options CP3457-2 or -10 Outer race rotates Release Bearings. Normal duty. Inner race rotates CP3457-6 Durable. **DRIVEN PLATES** Low wear rate. Individually tested. Thickness. New = 2.63mm Worn = 2.25mm - match machined, balanced and clutch load and function. D/Plate Types. Part Number. Spline Details. Suitable for engine speeds of 14000 rpm. Back to Back. CP2012-165FM3 x 2 1.00" x 23 CP4702 mounting studs available. Nested. (Offset) CP2567-7FM3 x 1 7/8" x 20 Nested. (Flywheel) CP2567-8FM3 x 1 PART NUMBERS. CP3822-10FM3 x 1 1.00" x 23 Gear Driven. Aluminium alloy cover. CP2822-31FM3 x 1 slider plate Other splines available see page 143. - CP2125ACRV. - CP2125AORA Note: Clutch supplied less driven plates. Order Separately. - CP2125AGRN. SPARE PARTS Steel cover. A-Ring Assembly. CP2012-162 - CP2125CRV Main Pressure Plate CP2616-103 - CP2125GRN Intermediate Pressure Plate CP2613-103



CP2125ORA.

METALLIC RACE CLUTCH - Ø184mm - CP2606

CP2606. Ø184mm, 2 Plate, A-Ring Cerametallic Paddle or Organic.



APPLICATIONS.

- Race. Rally.

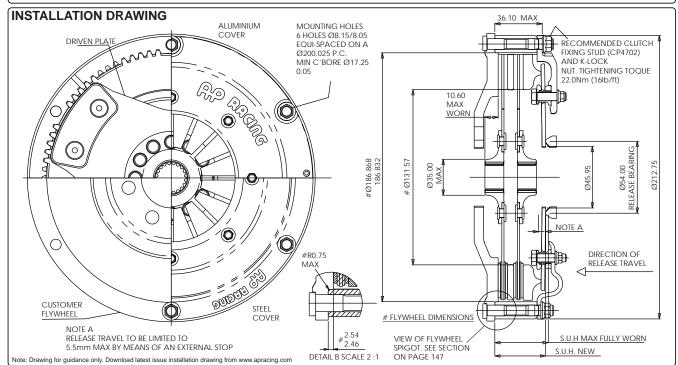
FEATURES.

- 2 Plate.
- Push type. Adaptor ring clutch.
- Stepped flywheel fixing.
- inner diameter location.
- 6 bolt cover.
- Steel or Aluminium alloy options.
- Normal duty.
- Durable.
- Low wear rate.
- Individually tested.
- match machined, balanced and clutch load and function.
 Suitable for engine speeds of 14000 rpm.
- **CP4702** mounting studs available.
- Organic Driven Plate option available CP5386 Family.

PART NUMBERS.

- Aluminium alloy cover.
- CP2606ACRV.
- CP2606AORA
- CP2606AGRN.
- Steel cover.
- CP2606CRV.
- CP2606GRN.
- CP2606ORA.

TECHNICAL SPECIFICATIONS		
-	CP2606ACRV	636Nm (469lb/ft)
Torque Capacity.	CP2606AORA	421Nm (310lb/ft)
Capacity.	CP2606AGRN	263Nm (194lb/ft)
Release Loads.	Max peak new.	Max peak worn.
CP2606ACRV	350daN	440daN
CP2606AORA	240daN	330daN
CP2606AGRN	160daN	220daN
Set-up Height.	(New)	(Worn)
CP2606ACRV	39.89 / 37.60mm	42.38mm
CP2606AORA	40.16 / 37.87mm	42.65mm
CP2606AGRN	41.24 / 38.98mm	43.72mm
Clutch "Wear In".		0.75mm
Weight. (including driven plates)	Aluminium Cover	Steel Cover
3 Paddle	4.036Kg	4.286Kg
4 Paddle	4.246Kg	4.496Kg
6 Paddle	4.588Kg	4.836Kg
Complete Assy Inertia.	Aluminium Cover	Steel Cover
3 Paddle	0.0246Kgm ²	0.0260Kgm ²
4 Paddle	0.0257Kgm ²	0.0271Kgm ²
6 Paddle	0.0279Kgm ²	0.0293Kgm ²
	3 Paddle	0.00364Kgm ²
Driven Plate & Hub Inertia.	4 Paddle	0.00474Kgm ²
mertia.	6 Paddle	0.00694Kgm ²
	Outer race rotates	CP3457-2 or -10
Release Bearings.		01 0401-2 01-10
	Inner race rotates	CP3457-6
DRIVEN PLATES	Inner race rotates	
DRIVEN PLATES Thickness.	Inner race rotates	
Thickness.	Inner race rotates	CP3457-6 Worn = 6.68mm Spline Details.
Thickness. D/Plate Types. 3 Paddle	Inner race rotates New = 7.08mm Part Number. CP8300-A036H x 2	CP3457-6 Worn = 6.68mm Spline Details. 1.00" x 23
Thickness. D/Plate Types. 3 Paddle 4 Paddle	Inner race rotates 	CP3457-6 Worn = 6.68mm Spline Details. 1.00" x 23 1.00" x 23
Thickness. D/Plate Types. 3 Paddle 4 Paddle 6 Paddle	Inner race rotates 	CP3457-6 Worn = 6.68mm Spline Details. 1.00" x 23 1.00" x 23 1.00" x 23
Thickness. D/Plate Types. 3 Paddle 4 Paddle 6 Paddle Organic Faced	Inner race rotates 	CP3457-6 Worn = 6.68mm Spline Details. 1.00" x 23 1.00" x 23
Thickness. D/Plate Types. 3 Paddle 4 Paddle 6 Paddle Organic Faced Other splines availab	Inner race rotates 	CP3457-6 Worn = 6.68mm Spline Details. 1.00" x 23 1.00" x 23 1.00" x 23 1.00" x 23
Thickness. D/Plate Types. 3 Paddle 4 Paddle 6 Paddle Organic Faced Other splines availab	Inner race rotates 	CP3457-6 Worn = 6.68mm Spline Details. 1.00" x 23 1.00" x 23 1.00" x 23 1.00" x 23
Thickness. D/Plate Types. 3 Paddle 4 Paddle 6 Paddle Organic Faced Other splines availal Note: Clutch supplie SPARE PARTS.	Inner race rotates 	CP3457-6 Worn = 6.68mm Spline Details. 1.00" x 23 1.00" x 23 1.00" x 23 1.00" x 23
Thickness. D/Plate Types. 3 Paddle 4 Paddle 6 Paddle Organic Faced Other splines availal Note: Clutch supplie	Inner race rotates 	CP3457-6 Worn = 6.68mm Spline Details. 1.00" x 23 1.00" x 23 1.00" x 23 1.00" x 23 1.00" x 23 der Separately.



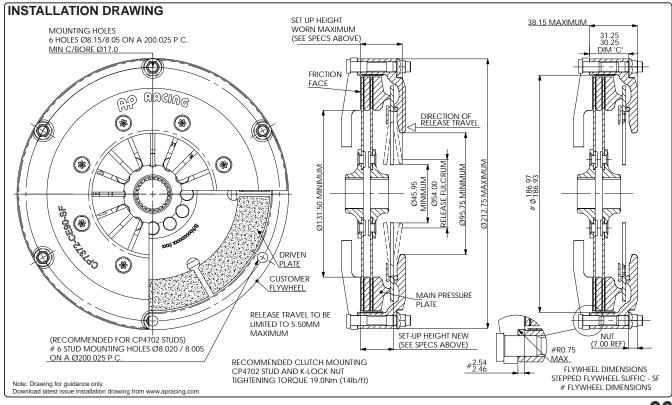




CP7372.	TECHNICAL SP	ECIFICATIONS	
	Torque	CP7372-CE90-SF	848Nm (625lb/ft)
Ø184mm, 2 Plate, Sintered.	Capacity.	CP7372-OE90-SF	532Nm (392lb/ft)
		CP7372-NE90-SF	327Nm (241lb/ft)
	Release Loads.	Max peak new.	Max peak worn.
(C) - A	CP7372-CE90-SF	350daN	440daN
	CP7372-OE90-SF	240daN	330daN
Curra C	CP7372-NE90-SF	160daN	220daN
	Set-up Height.	(New)	(Worn)
	CP7372-CE90-SF	28.76 / 26.00mm	31.97mm
	CP7372-OE90-SF	29.55 / 26.77mm	32.76mm
	CP7372-NE90-SF	28.73 / 25.97mm	31.95mm
	Clutch "Wear In".		0.75mm
	Weight. (Excluding of	Weight. (Excluding driven plates)	
ette o	Assembly Inertia. (Excluding driven plates).		0.0177Kgm ²
APPLICATIONS.	CP2012 Type - Drive	en Plate & Hub Inertia.	0.0024Kgm ²
FEATURES	Deleges Destings	Outer race rotates	CP3457-2 or -10
FEATURES.	Release Bearings.	Inner race rotates	CP3457-6
Push type.	DRIVEN PLATES.		
Stepped flywheel fixing. inner diameter location.	Thickness.	New = 2.63mm	Worn = 2.22mm
P One piece cover and lugs.	D/Plate Types.	Part Number.	Spline Details.
machined from Aluminium alloy.	Back to Back.	CP2012-165FM3 x 2	1.00" x 23
Black hard anodised cover.	Nested. (Offset)	CP2567-7FM3 x 1	
Stainless steel wear clips. Low wear rate.	Nested. (Flywheel)	CP2567-8FM3 x 1	- 7/8" x 20
Individually tested.		CP3822-10FM3 x 1	1.00" x 23
match machined, balanced and clutch load and function.	Gear Driven.	CP2822-31FM3 x 1 slic	
Suitable for engine speeds of 10000 rpm.	Other endines II		
CP4702 mounting studs available.	Other splines available see page 143.		
	Note: Clutch supplie	ed less driven plates. Or	der Separately.
PART NUMBERS. CP7372-CE90-SF.	SPARE PARTS.	SPARE PARTS.	
- CP7372-OE90-SF.	Wear Clips.		CP3912-102



- CP7372-NE90-SF.



Main Pressure Plate.

Intermediate Pressure Plate

CP3021-101

CP3592-106

AP

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METALLIC RACE CLUTCH - Ø184mm - CP7382

CP7382. Ø184mm, 2 Plate, Cerametallic Paddle or Organic. **APPLICATIONS.**

Race. Hillclimb.

FEATURES.

2 Plate.

- Push type.
- Stepped flywheel fixing.
- inner diameter location. One piece cover and lugs.
- machined from Aluminium alloy.
- Black hard anodised cover.
- Stainless steel wear clips.
- Low wear rate.
- Individually tested.
- match machined, balanced and clutch load and function.
 Suitable for engine speeds of 10000 rpm.
- CP4702 mounting studs available.
- Organic Driven Plate option available CP5386 Family.

Note: Alternative 'I' Drive Clutch.

Non preferred Heavy Duty 6 bolt 'l' Drive clutch available CP8642 Interchangeable with CP7382 standard lug type clutch.

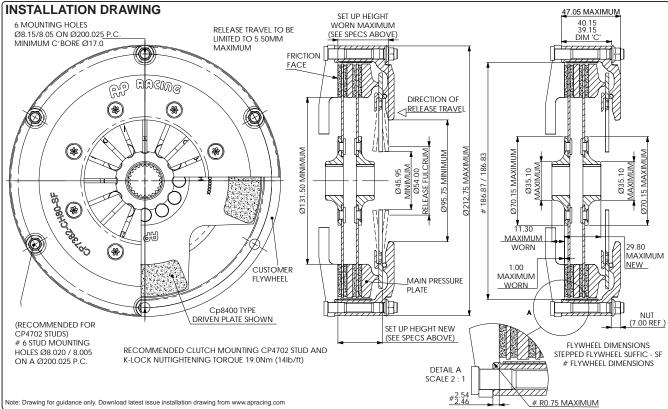
PART NUMBERS.

- CP7382-CH80-SF.
- CP7382-OH80-SF. - CP7382-NH80-SF

INSTALLATION DRAWING

	TECHNICAL SPECIFICATIONS				
	_	CP7382-CH80-SF	636Nm (469lb/ft)		
	Torque Capacity.	CP7382-OH80-SF	421Nm (310lb/ft)		
oupuolty.		CP7382-NH80-SF	263Nm (194lb/ft)		
	Release Loads.	Max peak new.	Max peak worn.		
	CP7382-CH80-SF	350daN	440daN		
	CP7382-OH80-SF	240daN	330daN		
	CP7382-NH80-SF	160daN	220daN		
		CP7382-CH80-SF	37.01 / 34.64mm		
<u> </u>	Set-up Height. (New)	CP7382-OH80-SF	37.66 / 35.29mm		
	(New)	CP7382-NH80-SF	36.92 / 34.55mm		
		CP7382-CH80-SF	39.68mm		
	Set-up Height. (Worn)	CP7382-OH80-SF	40.34mm		
	(Wolli)	CP7382-NH80-SF	39.59mm		
	Clutch "Wear In".		0.75mm		
	Weight. (Excluding dr	iven plates)	2.80Kg		
	Assembly Inertia. (E:	cluding driven plates).	0.0182Kgm ²		
	CP8300 Type - Driven Plate & Hub Inertia.		0.0032Kgm ²		
	Release Bearings.	Outer race rotates	CP3457-2 or -10		
	Release bearings.	Inner race rotates	CP3457-6		
	DRIVEN PLATES	.			
	Thickness.	New = 7.08mm	Worn = 6.67mm		
	D/Plate Types.	Part Number.	Spline Details.		
	3 Paddle.	CP8300-A036H x 2	1.00" x 23		
	4 Paddle.	CP8400-A026H x 2	7/8" x 20		
	6 Paddle.	CP8600-A036 x 2	1.00" x 23		
	Organic Faced	CP5386-10 x 2	1.00" x 23		
2 family.	Other splines available see page 143.				
	Note: Clutch supplied less driven plates. Order Separately.				
	SPARE PARTS.				
	Wear Clips.		CP4112-102		
	Main Pressure Plate.	CP3021-102			

CP3592-106



Intermediate Pressure Plate

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METALLIC RACE CLUTCH - Ø184mm - CP7392 CP7392.

for Large Bore Flywheels.

Ø184mm, 2 Plate, Cerametallic Paddle

APPLICATIONS. Race.

Hillclimb.

FEATURES.

- 2 Plate.
- Push type.
- Extra pressure plate.
- for small internal diameter flywheels.
- Stepped flywheel fixing.
- inner diameter location.
- One piece cover and lugs.
- machined from Aluminium alloy.
- Black hard anodised cover.
- Stainless steel wear clips. Low maintenance.
- Individually tested.
- match machined, balanced and clutch load and function. Suitable for engine speeds of 10000 rpm.
- CP4702 mounting studs available.

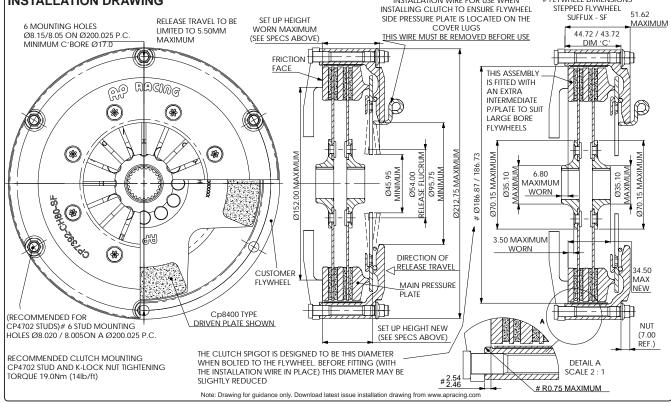
PART NUMBERS.

- CP7392-CH80-SF.
- CP7392-OH80-SF.
- CP7392-NH80-SF.

INSTALLATION DRAWING

TECHNICAL SP	ECIFICATIONS	
_	CP7392-CH80-SF	644Nm (475lb/ft)
Torque Capacity.	CP7392-OH80-SF	426Nm (314lb/ft)
	CP7392-NH80-SF	266Nm (196lb/ft)
Release Loads.	Max peak new.	Max peak worn.
CP7392-CH80-SF	350daN	440daN
CP7392-OH80-SF	240daN	330daN
CP7392-NH80-SF	160daN	220daN
.	CP7392-CH80-SF	41.65 / 39.11mm
Set-up Height. (New)	CP7392-OH80-SF	42.30 / 39.76mm
(11011)	CP7392-NH80-SF	41.56 / 39.02mm
	CP7392-CH80-SF	44.32mm
Set-up Height. (Worn)	CP7392-OH80-SF	44.98mm
(monn)	CP7392-NH80-SF	44.23mm
Clutch "Wear In".		0.75mm
Weight. (Excluding driven plates)		3.37Kg
Assembly Inertia. (8	Excluding driven plates).	0.0222Kgm ²
CP8300 Type - Drive	en Plate & Hub Inertia.	0.0032Kgm ²
Release Bearings.	Outer race rotates	CP3457-2 or -10
Velease Dearings.	Inner race rotates	CP3457-6
DRIVEN PLATE	S.	
Thickness.	New = 7.08mm	Worn = 6.67mm
D/Plate Types.	Part Number.	Spline Details.
3 Paddle.	CP8300-A036H x 2	1.00" x 23
4 Paddle.	CP8400-A026H x 2	7/8" x 20
6 Paddle.	CP8600-A036 x 2	1.00" x 23
Other splines availa	able see page 143.	
Note: Clutch supplie	ed less driven plates. Ord	ler Separately.
SPARE PARTS.		
Wear Clips.		CP4242-102
Wear Clips. Main Pressure Plate.		CP4242-102 CP3021-102

Intermediate Pressure Plate CP3592-106 # FLYWHEEL DIMENSIONS INSTALLATION WIRE FOR LISE WHEN INSTALLING CLUTCH TO ENSURE FLYWHEEL 51.62



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METALLIC RACE CLUTCH - Ø184mm - CP7972 CP7972. Ø184mm, 2 Plate, Cerametallic Paddle. Low Height. Verifying CP7972 Release Loads. Max peator CP7972.CH81-FF 350daN CP7972.OH81-FF 240daN CP7972.OH81-FF 160daN CP7972.OH81-FF 160daN CP7972.OH81-FF 160daN CP7972.OH81-FF 160daN CP7972.OH81-FF 200a CP7972.OH81-FF 200a CP7972.OH81-FF 200a CP7972.OH81-FF 160daN CP7972.OH81-FF 200a CP7972.OH81-FF 200a

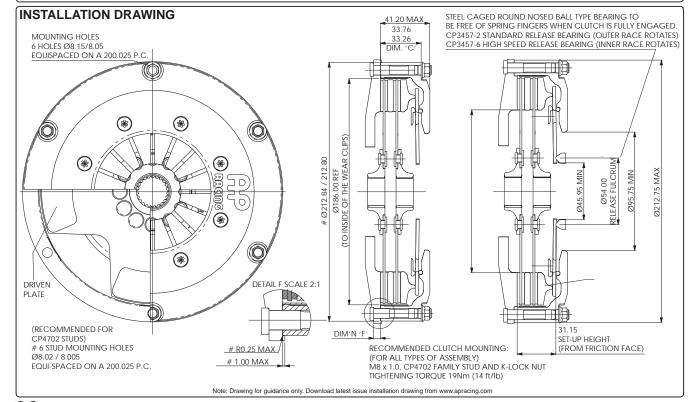
FEATURES.

- 2 Plate.
- Push type.
- Low height
- Uses 6mm driven plates.
- Flat flywheel fixing.
- outer diameter location.
- One piece cover and lugs. machined from Aluminium alloy.
- Black hard anodised cover.
- Stainless steel wear clips.
- Low maintenance.
- Individually tested.
- match machined, balanced and clutch load and function. **a** 12 Bolt version available for S2000+ for Turbo charged engine.
- Part Number CP8372 family.
- CP4702 mounting studs available.

PART NUMBERS.

- Flat Flywheels.
- CP7972-CH81-FF.
- CP7972-OH81-FF.
- CP7972-NH81-FF.
- Stepped Flywheel option also available.

TECHNICAL SPE	ECIFICATIONS.	
T	CP7972-CH81-FF	636Nm (469lb/ft)
Torque Capacity.	CP7972-OH81-FF	421Nm (310lb/ft)
Capacity.	CP7972-NH81-FF	263Nm (194lb/ft)
Release Loads.	Max peak new.	Max peak worn.
CP7972-CH81-FF	350daN	440daN
CP7972-OH81-FF	240daN	330daN
CP7972-NH81-FF	160daN	220daN
	CP7972-CH81-FF	32.27 / 30.52mm
Set-up Height.	CP7972-OH81-FF	32.80 / 30.91mm
(New)	CP7972-NH81-FF	32.39 / 30.53mm
o	CP7972-CH81-FF	34.78mm
Set-up Height. (Worn)	CP7972-OH81-FF	35.31mm
(won)	CP7972-NH81-FF	34.90mm
Clutch "Wear In".	·	0.75mm
Weight. (including driven plates)	4 Paddle	3.55Kg
Complete Assy Inertia.	4 Paddle	0.02009Kgm ²
Driven Plate & Hub Inertia.	4 Paddle	0.003567Kgm ²
Deleges Desrings	Outer race rotates	CP3457-2 or -10
Release Bearings.	Inner race rotates	CP3457-6
DRIVEN PLATES) .	
Thickness.	New = 6.00mm	Worn = 5.63mm
D/Plate Types.	Part Number.	Spline Details.
4 Paddle.	CP8401-A036H x 2	1.00" x 23
Back to back	CP8401-A029H x 2	7/8" x 20
4 Paddlle Nested	CP7972-A036H x 2	1.00" x 23
6 Paddle. Back to back	CP8601-A036H x 2	1.00" x 23
Other splines availal	ble see page 143.	
Note: Clutch supplie	d less driven plates. Or	der Separately.
SPARE PARTS.		
SPARE PARTS. Wear Clips.		CP7972-104
		CP7972-104 CP7972-105



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METALLIC RACE CLUTCH - Ø184mm 'l' Drive - CP8022

TEOLINIOAL

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CP8022.

Ø184mm, 'l' Drive, 2 Plate, Paddle.

APPLICATIONS. WRC.

Touring Car.

FEATURES

Asymmetric designed cover.

- offers 10% reduction in weight and increased stiffness compared to the more conventional cover designs.

Benefits from a new drive system, featuring drive tenons, which locate into internal jaws of the lugs.

- five times more durable than conventional clutch design when subjected to the same test parameters.

- eradicates distorting of pressure plates trapping on lugs.

Push Type.

Stepped flywheel fixing.

- Inner diameter location.
- I 12 bolt, one piece forged cover and lugs.
- machined from Aluminium alloy. Allows dust and debris to escape. Black hard anodised.
- New innovative wear plate design fitted.
- combats wear on the drive lugs.
- Very low wear rate.
- Individually tested.
- Match machined, balanced and clutch load recorded
- Mounting studs available, CP4703.

Note: Alternative 'I' Drive Clutch.

Non preferred Heavy duty 6 bolt 'I' Drive clutch available CP8642 family. Interchangeable with CP7382 standard lug type clutch.

PART NUMBERS.

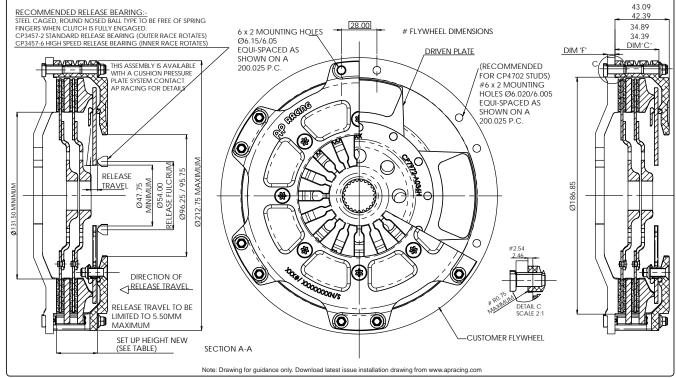
- CP8022-CH81-SF.
- CP8022-TH81-SF.

INSTALLATION DRAWING



TECHNICAL SPE	ECIFICATIONS.	
Torque	CP8022-CH81-SF	636Nm (469lb/ft)
Capacity.	CP8022-TH81-SF	636Nm (469lb/ft)
Release Loads.	Max peak new.	Max peak worn.
CP8022-CH81-SF	350daN	440daN
CP8022-TH81-SF	400daN	510daN
Set-up Height.	CP8022-CH81-SF	32.27 / 30.52mm
(New)	CP8022-TH81-SF	32.47 / 30.72mm
Set-up Height.	CP8022-CH81-SF	34.78mm
(Worn)	CP8022-TH81-SF	34.98mm
Clutch "Wear In".		0.75mm
Weight. (including driven plates)	4 Paddle	3.31Kg
Complete Assy Inertia.	4 Paddle	0.01802Kgm ²
Driven Plate & Hub Inertia.	4 Paddle	0.003567Kgm ²
Delesse Dessines	Outer race rotates	CP3457-2 or -10
Release Bearings.	Inner race rotates	CP3457-6
DRIVEN PLATES	.	
Thickness.	New = 6.00mm	Worn = 5.63mm
D/Plate Types.	Part Number.	Spline Details.
Bonded 3 Paddle,	CP8301-A036H x 2	1.00" x 23
Back to back	CP8301-A029H x 2	7/8" x 20
Bonded 4 Paddle,	CP8401-A036H x 2	1.00" x 23
Back to back	CP8401-A029H x 2	7/8" x 20
Bonded 6 Paddle, Back to back	CP8601-A036H x 2	1.00" x 23
4 Paddle Nested	CP7972-A036H x 2	1.00" x 23
Alternative Nested,	CP8172-10FM4 Flywheel side	4.00"
4 Paddle	CP8172-11FM4 Cover side	1.00" x 23
Other splines availa	ble see page 143.	
Note: Clutch supplie	d less driven plates. Or	der Separately.
SPARE PARTS.		

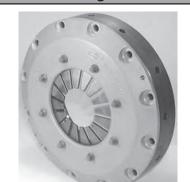
Main Pressure Plate.	CP8022-105
Intermediate Pressure Plate	CP8022-102



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METALLIC RACE CLUTCH - Ø184mm - CP2817

CP2817. Ø184mm, 3 Plate, A-Ring Sintered.



APPLICATIONS.

- Hillclimb
- Race.
- Saloons.

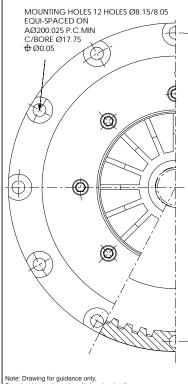
FEATURES.

- 3 Plate.
- Push type.
- Adaptor ring clutch.
- ring machined from Aluminium alloy.
- Stepped flywheel fixing.
- inner diameter location.
- 12 bolt Aluminium alloy cover.
- Hard anodised.
- Low wear rate.
- Individually tested.
- match machined, balanced and clutch load and function.
- Suitable for engine speeds of 14000 rpm.
- CP4702 mounting studs available.
- 6 Bolt cover version also available: Part number CP2572 Family.

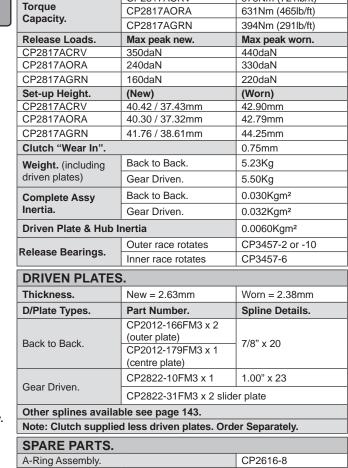
PART NUMBERS.

- CP2817ACRV.
- CP2817AORA.
- CP2817AGRN.

INSTALLATION DRAWING



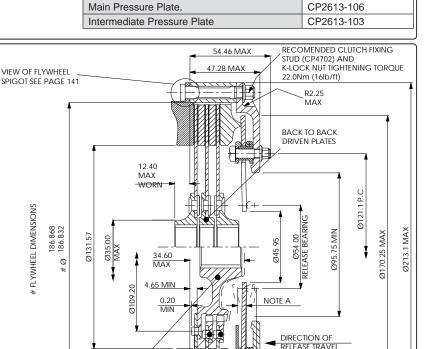
Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.com



978Nm (721lb/ft)

TECHNICAL SPECIFICATIONS

CP2817ACRV



36 10

MAX

GEAR DRIVE HUB AND DRIVEN PLATES

OUTER DRIVEN PLATE X 2

2.54 # 2.46

SET UP

HEIGH1

NOTE A RELEASE TRAVEL TO BE LIMITED TO 5.5MM MAX BY MEANS OF AN EXTERNAL STOP S.U.H MAX FULLY WORN

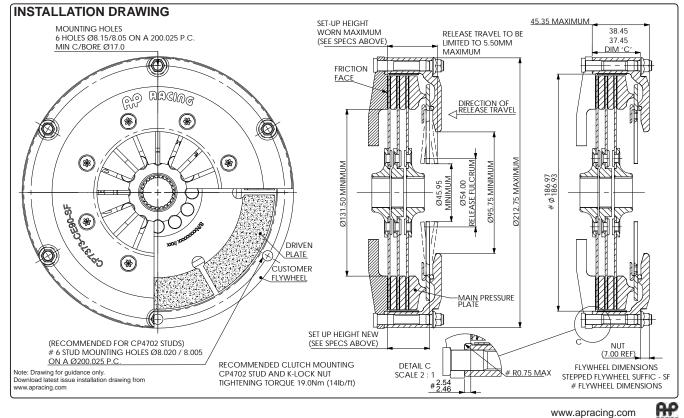
+44 (0)24 7663 9595

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1Ċ 135 METALLIC RACE CLUTCH - Ø184mm - CP7373

CP7373.	TECHNICAL SPI	ECIFICATIONS	
	_	CP7373-CE90-SF	1272Nm (938lb/ft)
Ø184mm, 3 Plate, Sintered.	Torque Capacity.	CP7373-OE90-SF	798Nm (588lb/ft)
	Capacity.	CP7373-NE90-SF	491Nm (362lb/ft)
60-91	Release Loads.	Max peak new.	Max peak worn.
	CP7373-CE90-SF	350daN	440daN
est of the second se	CP7373-OE90-SF	240daN	330daN
	CP7373-NE90-SF	160daN	220daN
	Set-up Height.	(New)	(Worn)
	CP7373-CE90-SF	36.18 / 32.94mm	39.39mm
	CP7373-OE90-SF	36.97 / 33.70mm	40.19mm
	CP7373-NE90-SF	36.16 / 32.90mm	39.37mm
CRE O	Clutch "Wear In".		0.75mm
	Weight. (Excluding driven plates)		3.34Kg
	Assembly Inertia. (Excluding driven plates).		0.0218Kgm ²
	CP2012 Type - Driven Plate & Hub Inertia.		0.0054Kgm ²
APPLICATIONS.	Release Bearings.	Outer race rotates	CP3457-2 or -10
High Powered Engines.	Release Dearings.	Inner race rotates	CP3457-6
FEATURES.	DRIVEN PLATES.		
□ 3 Plate.	Thickness.	New = 2.63mm	Worn = 2.22mm
Push type.	D/Plate Types.	Part Number.	Spline Details.
 Stepped flywheel fixing. inner diameter location. One piece cover and lugs. 	Daalu (a Daalu	CP2012-166FM3 x 2 (outer plate)	7/0" 00
 - machined from Aluminium alloy. Black hard anodised cover. 	Back to Back.	CP2012-179FM3 x 1 (centre plate)	- 7/8" x 20
Stainless steel wear clips.	O a an Driver	CP2822-10FM3 x 1	1.00" x 23
Low wear rate.	Gear Driven.	CP2822-31FM3 x 2 slide	er plate
 Individually tested. match machined, balanced and clutch load and function. 	Other splines available see page 143.		
Suitable for engine speeds of 10000 rpm.	Note: Clutch supplied less driven plates. Order Separately.		
CP4702 mounting studs available.	SPARE PARTS.		
PART NUMBERS.	Wear Clips.		CP3913-103

CP3913-103
CP3021-101
CP3592-106



- CP7373-CE90-SF. - CP7373-OE90-SF. - CP7373-NE90-SF.

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METALLIC RACE CLUTCH - Ø200mm - CP3745

CP3745. Ø200mm, Single Plate, Cerametallic.



APPLICATIONS.

- Rally.
- Off Road.

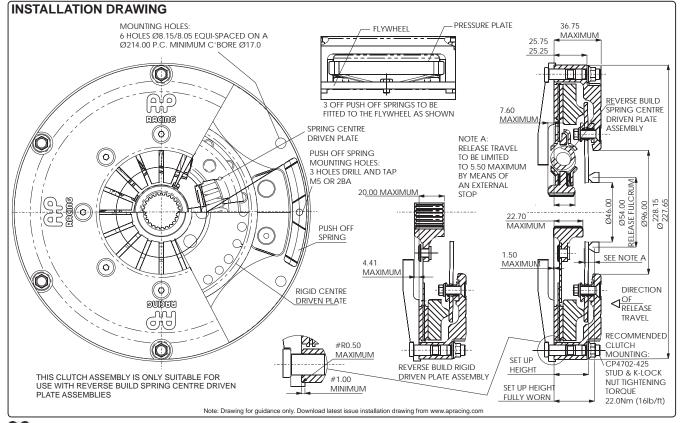
FEATURES.

- Single Plate.
- Push type.
- Flat flywheel fixing.
- outer diameter location.
- One piece cover and lugs.
- machined from billet.
- provides rigidity and strength and cooler running.
 allows dust and debris to escape.
- Durable.
- Low wear rate.
- Individually tested.
- match machined, balanced and clutch load and function.
- CP4702 mounting studs available.
 Interchangeable with CP7212 Carbon Clutch.

PART NUMBERS.

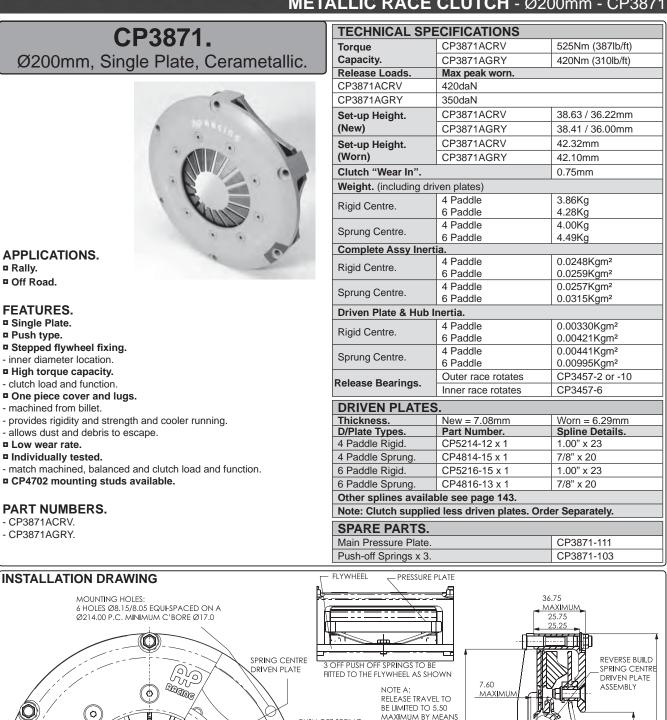
- CP3745ACRV.
- CP3745AGRY.

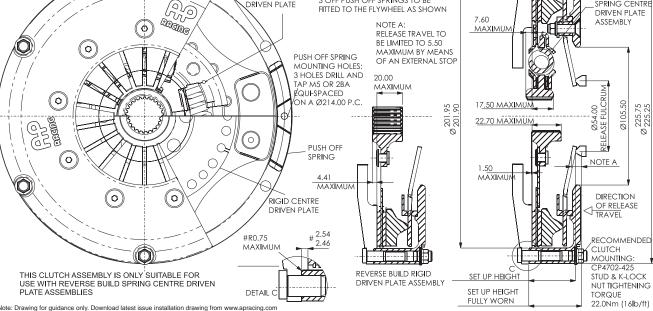
TECHNICAL SP	ECIFICATIONS		
Torque	CP3745ACRV	343Nm (253lb/ft)	
Capacity.	CP3745AGRY	301Nm (222lb/ft)	
Release Loads.	Max peak worn.		
CP3745ACRV	347daN		
CP3745AGRY	289daN		
Set-up Height.	CP3745ACRV	28.23 / 26.95mm	
(New)	CP3745AGRY	28.36 / 27.07mm	
Set-up Height.	CP3745ACRV	30.71mm	
(Worn) Clutch "Wear In".	CP3745AGRY	30.85mm 0.75mm	
Weight. (including dr		0.75000	
weight. (including di	4 Paddle	3.90Kg	
Rigid Centre.	6 Paddle	4.28Ka	
	4 Paddle	4.04Kg	
Sprung Centre.	6 Paddle	4.53Kg	
Complete Assy Iner	tia.		
Rigid Centre.	4 Paddle	0.0253Kgm ²	
Rigid Centre.	6 Paddle	0.0262Kgm ²	
Sprung Centre.	4 Paddle	0.0264Kgm ²	
	6 Paddle	0.0320Kgm ²	
Driven Plate & Hub	inertia.		
Rigid Centre.	4 Paddle	0.00330Kgm ²	
	6 Paddle	0.00421Kgm ²	
Sprung Centre.	4 Paddle	0.00441Kgm ²	
Sprung Centre.	6 Paddle	0.00995Kgm ²	
Release Bearings.	Outer race rotates	CP3457-2 or -10	
Release Dearings.	Inner race rotates	CP3457-6	
DRIVEN PLATES	6.		
Thickness.	New = 7.08mm	Worn = 6.29mm	
D/Plate Types.	Part Number.	Spline Details.	
4 Paddle Rigid.	CP5214-12 x 1	1.00" x 23	
4 Paddle Sprung.	CP4814-15 x 1	7/8" x 20	
6 Paddle Rigid.	CP5216-15 x 1	1.00" x 23	
6 Paddle Sprung.	CP4816-13 x 1	7/8" x 20	
Other splines availa	ble see page 143.		
Note: Clutch supplie	d less driven plates. Or	der Separately.	
SPARE PARTS.			
Main Pressure Plate.		CP4560-101	
Push-off Springs x 3.		CP3871-103	
ge x er			











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METALLIC RACE CLUTCH - Ø200mm - CP4560

CP4560.

Ø200mm, Single Plate, Cerametallic.



APPLICATIONS.

- Rally.Off Road.
- Diff Road

FEATURES.

- Single Plate.
- Push type.
- Stepped flywheel fixing.
- inner diameter location.
- One piece cover and lugs.
- machined from billet.
- Provides rigidity and strength and cooler running.
- allows dust and debris to escape.
- Steel main pressure plate.
- for applications where clutch speeds exceeds 8000rpm.
- Durable.
- Low wear rate.
- Individually tested.
- match machined, balanced and clutch load and function.
- CP4702 mounting studs available.

PART NUMBERS.

- CP4560ACRV.
- CP4560AGRY.

Release Loads Max peak worn. CP4560ACRV 347daN CP4560AGRY 289daN CP4560ACRV 31.11 / 29.16mm Set-up Height. (New) CP4560AGRY 31.44 / 29.49mm Set-up Height. CP4560ACRV 33.60mm (Worn) CP4560AGRY 33.93mm Clutch "Wear In". 0.75mm Weight. (including driven plates) 4 Paddle 3.86Kg Rigid Centre. 6 Paddle 4.28Kg 4.00Kg 4 Paddle Sprung Centre. 6 Paddle 4.49Kg Complete Assy Inertia. 4 Paddle 0.0248Kgm² Rigid Centre. 6 Paddle 0.0259Kgm² 4 Paddle 0.0257Kgm² Sprung Centre. 6 Paddle 0.0315Kgm² Driven Plate & Hub Inertia. 0.00330Kgm² 4 Paddle Rigid Centre. 6 Paddle 0.00421Kgm² 4 Paddle 0.00441Kgm² Sprung Centre. 6 Paddle 0.00995Kgm² Release Outer race rotates CP3457-2 or -10 Bearing. CP3457-6 Inner race rotates **DRIVEN PLATES** Thickness. New = 7.08mm Worn = 6.29mmD/Plate Types. Part Number. Spline Details. 4 Paddle Rigid. CP5214-12 x 1 1.00" x 23 4 Paddle Sprung CP4814-15 x 1 7/8" x 20 CP5216-15 x 1 6 Paddle Rigid. 1.00" x 23 7/8" x 20 6 Paddle Sprung. CP4816-13 x 1 Other splines available see page 143. Note: Clutch supplied less driven plates. Order Separately. SPARE PARTS. CP4560ACRV CP4560-1CRV Cover CP4560AGRY CP4560-1GRY Assemblies. Main Pressure Plate CP4560-101

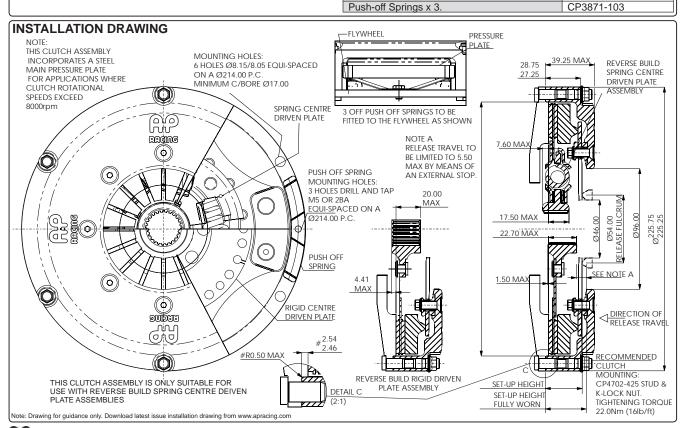
TECHNICAL SPECIFICATIONS

Torque Capacity. CP4560ACRV

CP4560AGRY

343Nm (253lb/ft)

301Nm (222lb/ft)





TECHNICAL SPECIFICATIONS

CP5241. Ø215mm, Single Plate, Cerametallic Paddle.



APPLICATIONS. Race.

Rally.

FEATURES.

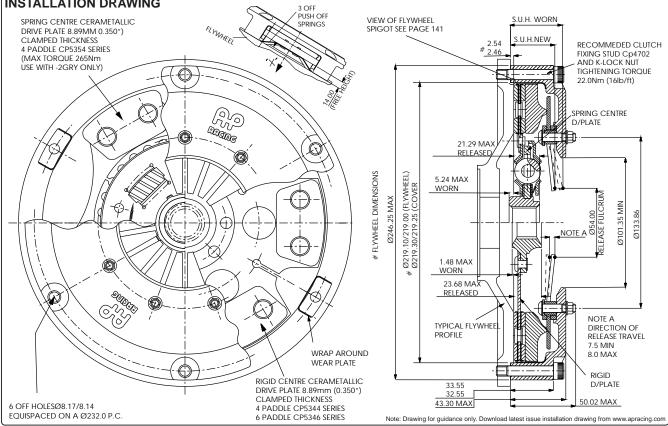
- Single Plate.
- Push type.
- Stepped flywheel fixing.
- inner diameter location.
- One piece cover and lugs.
- machined from billet.
- Provides rigidity and strength and cooler running.
- allows dust and debris to escape.
- Low maintenance.
- Low wear rate.
- Individually tested.
- match machined, balanced and clutch load and function. CP4702 mounting studs available.
- Supercedes CP2861 Clutch series.

PART NUMBERS.

- CP5241-3CRV.
- CP5241-3GRY.

INSTALLATION DRAWING

Nm (427lb/ft) Nm (314lb/ft)
Nm (314lb/ft)
)9 / 38.23mm
35 / 37.39mm
36mm
12mm
ōmm
)Kg
)Kg
)Kg
3457-2 or -10
3457-6
rn = 8.10mm
ine Details.
nm x 10
)" x 22
)" x 23
′ x 20
)" x 23
nm x 10
parately.
5241-104
5241-104 5241-5
-



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METALLIC RACE CLUTCH - Ø215mm - CP5242

CP5242. Ø215mm, 2 Plate, Cerametallic Paddle.



APPLICATIONS.

- Race.
- Rally.

FEATURES.

2 Plate.

Push type.

- Stepped flywheel fixing.
- inner diameter location.
- One piece cover and lugs.
- machined from billet.
- provides rigidity and strength and cooler running.
 allows dust and debris to escape.
- Heavy duty.

Low maintenance

- Individually tested.
- match machined, balanced and clutch load and function.

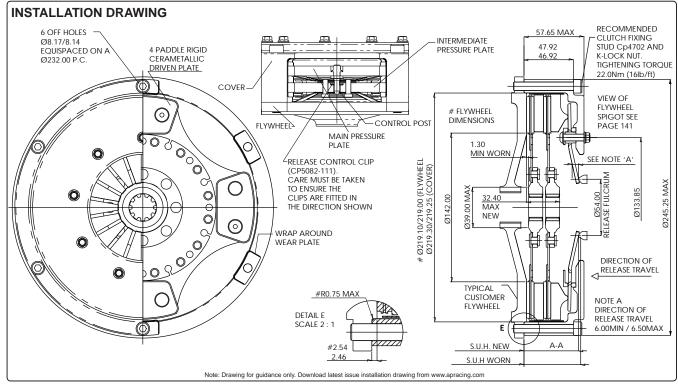
PART NUMBERS.

- CP5242-2CRV.

TECHNICAL SPE					
Torque Capacity.	842Nm (621lb/ft)				
Release Loads.	Max peak worn.				
	420daN				
Set-up Height. (New)	53.84 / 51.91mm				
Set-up Height. (Worn)	57.65mm				
Clutch "Wear In".		1.00mm			
Weight. (including driv	ven plates)	7.74Kg			
Complete Assembly Inertia	4 Paddle	0.063358Kgm ²			
Driven Plate & Hub Inertia	4 Paddle	0.005833Kgm ²			
	Outer race rotates	CP3457-2			
Release Bearings.	Inner race rotates	CP3457-6			
DRIVEN PLATES.					
Thickness.	New = 7.08mm	Worn = 6.58mm			
D/Plate Types.	Part Number.	Spline Details.			
	CP6180-1 x 2	1.06" x 10			
	CP6180-2 x 2	1.00" x 23			
4 Paddle Rigid.	CP6180-3 x 2	1.00" x 24			
	CP6180-4 x 2	1.16" x 26			
	CP6180-5 x 2	1.12" x 10			
Other splines availab	ble see page 143.				
Note: Clutch supplied	d less driven plates. O	rder Separately.			
SPARE PARTS.					
SPARE PARTS.					
SPARE PARTS. Wear Clips.		CP4462-104			

CP5242-11

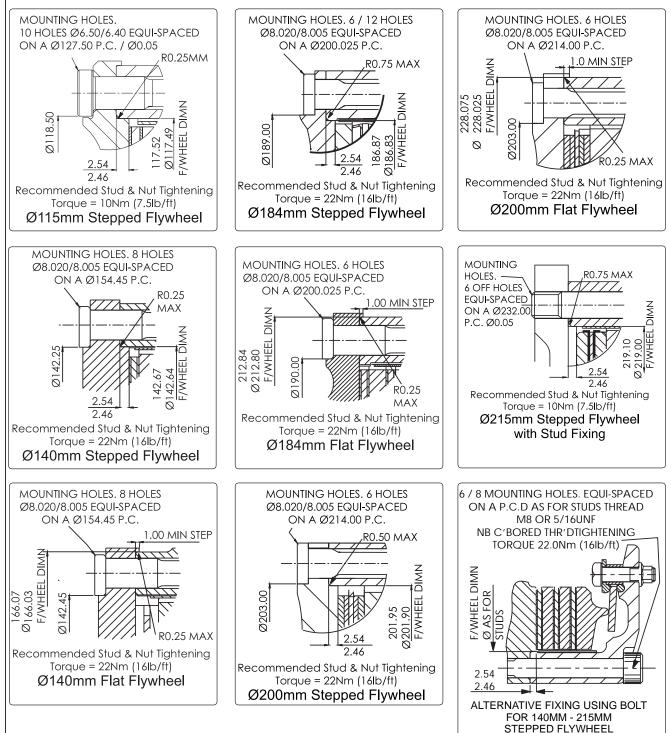
Main Pressure Plate. Intermediate Pressure Plate.



METALLIC RACE CLUTCH - Mounting Information

MOUNTING.

The drawings below provide detailed information for all flywheel spigots / mounting for every size of race clutch in the publication. AP Racing recommend that all their race clutches are mounted to the flywheel by using either CP4703 / CP4702 studs. Mounting hole, P.C.D. and tightening torque details are given for all drawings below.



FIXING / MOUNTING STUDS.

The recommended method of mounting the clutch to the flywheel is with a mounting stud and K-Lock nut.

Recommended tightening torque 22Nm (16lb/ft) for M8 & 5/16" UNF. AP Racing offer a range of studs for mounting clutches to flywheels (see page 147). These high quality steel mounting studs are available in either M6, M8, 1/4" & 5/16" UNF to suit clutches of Ø115mm and above. All studs have rolled threads for improved fatigue resistance. The stud design incorporates offset head flats for location, necked down shanks and precision ground location diameters.

All kits come complete with relevant K-lock nuts. See above for flywheel mounting details.

FLYWHEELS.

A purpose machined flywheel is required. The friction face should be a good quality close grained cast iron or steel (0.35 / 0.45 % carbon, hardness 200Hb minimum), with a surface finish of 75µm RA (30 CLA) maximum. Run out when assembled to the crankshaft must not exceed 0.08mm (0.003") maximum at 76mm (3.0") radius. Fixing holes and location spigot to be machined as shown above.

N.B. Cast Iron flywheels should not be used above 10000rpm.

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METALLIC RACE CLUTCH - Driven Plates

DRIVEN PLATE RANGE.

The table below provides a quick reference on the range of driven plates relevant to there clutch assemblies.

	Available Driven Plate Types.										
Clutch		Sinte	red.		Bonded / Cerametallic / Paddle.						
Series No.	Back To Back	Back to Back Extended hub nose	Nested Types	Gear Driven	3 Paddle	4 Paddle	6 Paddle	6 Paddle Sprung	6 Paddle Rigid	6 Paddle Sprung	
CP2116	CP4429 CP2012										
CP2125	CP2012		CP2567	CP3822							
CP2606					CP8300	CP8400	CP8600				
CP2817				CP2822							
CP3745								CP5216	CP4814	CP4816	
CP3871								CP5216	CP4814	CP4816	
CP4560								CP5216	CP4814	CP4816	
CP5241								CP5346	CP5354		
CP5242						CP6180					
CP6001		CP3407									
CP6002	CP3414	CP3407		CP4122							
CP6003	CP3414			CP4123							
CP6013	CP3683	CP6014		CP4074							
CP6014	CP3683	CP6014		CP4074							
CP6073	CP5004		CP6074	CP6174							
CP6074	CP5004		CP6074	CP6174							
CP6092					CP4581						
CP7371	CP4429 CP2012										
CP7372	CP2012		CP2567	CP3822							
CP7373	CP2012			CP2822							
CP7381					CP8300	CP8400	CP8600				
CP7382					CP8300	CP8400	CP8600				
CP7392					CP8300	CP8400	CP8600				
CP7972			CP7972			CP8401	CP8601				
CP8022			CP7972 CP8172		CP8031	CP8401	CP8601				
CP8773	CP3683										
CP8804	CP3683										

DRIVEN PLATE MATERIAL TYPES.

SINTERED:- A thin layer of metallic friction material which is sintered directly onto a steel disc. Normally for circuit use only.





CERAMETALLIC PADDLE:- Cerametallic buttons riveted to a steel disc giving improved heat dissipation. Used mainly for Rally applications where more clutch slip is required in order to modulate the drive.

BONDED PADDLE:- Direct sintered material offering increased friction surface area.

DRIVEN PLATE DESIGNS.



SINTERED SOLID BACK TO BACK:-Available in sizes Ø115, Ø140 and Ø184mm. - Ø140mm has a large area plate available CP3683.

BACK TO BACK EXTENDED HUB NOSE:-Available in sizes Ø140mm Single or twin plate clutches. Extended nose to increase spline engagement to reduce wear.





GEAR DRIVEN:-

Designed to provide increased flywheel / crankshaft fixing bolt clearance and maximum spline length. Available in Ø140 and Ø184mm in either 2,3 or 4 plate versions. Recommended where a high level of engine vibration or input shaft runout can be expected.

Interpretation (NESTED) TYPE:-Allows for extra flywheel / crankshaft fixing bolt clearance. Available on Ø115mm & Ø184mm clutches only.



RIGID SINTERED PADDLE

- 4 Paddle Sintered CP4429 available for CP2116 and CP7371 single plate clutches.

- CP8300,

Ø184mm. 3 Paddle.

7.08mm Thick

- CP5214,

Ø200mm, 4 paddle,

7.08mm Thick.

- CP5346,

Ø215mm. 6 paddle.

8.89mm Thick.

RIGID PADDLE OR CERAMETALLIC



- CP4581, Ø140mm. 3 paddle. 6.25mm Thick



- CP8600, or CP8601 Ø184mm. 6 Paddle. 7.08mm/6.0mm Thick.



CP5344 / CP6180, Ø215mm. 4 paddle. 8.89mm Thick.

SPRING CENTRE

CERAMETALLIC:-These plates are available in 4 or 6 paddle configurations but use a sprung centre hub with damper springs to reduce the torsional vibrations in the driveline. For Ø200mm and 215mm clutches.

CP4814 / CP5354 7 08mm Thick

CP4816 7 08mm Thick

BONDED CERAMETALLIC DRIVEN PLATE PART NUMBERING EXPLANATION.

The table below explains the new part numbering system for the new range of Driven Plates. See table overleaf for driven plates.

CP8300 - A 036 H

			L	
Family Part Number.	Hub Profile.		oline tails.	Hub Treatment.
CP8300	A =	0	01	H =
3 Paddle, 7.11mm Thick.	Standard	0.87	" x 10	Hardened.
CP8301		0	26	
3 Paddle, 6.00mm Thick.		0.87	‴ x 20	
CP8400		0	36	
4 Paddle, 7.11mm Thick.		1.00)" x 23	
CP8401		0	40	
4 Paddle, 6.0mm Thick.		1.16	5" x 26	
CP8600		0	04	
6 Paddle, 7.11mm Thick.		1.12	5" x 10	
CP8601		0)36	
6 Paddle, 6.0mm Thick.		1.00)" x 23	
CP8601		C)36	

DRIVEN PLATE THICKNESS & WEAR IN.

The total allowable driven plate wear will vary according to the "wear in" and the number of driven plates for each particular clutch. e.g for a 3 plate clutch with 0.75mm "wear in" each plate can wear 0.75mm / 3 = 0.25mm from new. The minimum worn driven plate thickness given in this catalogue assume even wear across all plates. However it is permissible to run individual plates below this thickness provided the total wear does not exceed the "wear in" figure.





7.08mm/6.00mm Thick



- CP5216, Ø200mm.6 paddle 7.08mm Thick.



METALLIC RACE CLUTCH - Driven Plate Chart

DRIVEN PLATE CHART.

The table below provides information on the most popular of splines available for the race clutch driven plates detailed in this section. AP Racing offer many more driven plates with different thicknesses, so should you require a driven plate or a different spline not given below please contact AP Racing Technical Section for assistance.

No. of		eeth. Shaft O.D (in mm)	10	10	10	10	10	10	17	18	20	21	21	21	21	22	23	24	24	26	26	Gear drive
		stated.	.875"	1"	1.062"	1.125"	1.25"	29	20	21.1	.875"	18.3	.92"	24	29	1"	1"	.8"	1"	22	1.16"	sliders
1		CP5004, back to back.				-10 FM3		-7 FM3			-6 FM4						-5 FM4		-16 FM4		-8 FM4	
15		CP6074, Nested.															-22/ -23 FM4				-18/ -19 FM4	
s -		CP3407, Ext hub.	-37 FM3	-57 FM3		-4 FM3		-8 FM3		-53 FM3	-26 FM3			-63 FM3	-61 FM3		-36 FM3	-51 FM3			-40 FM3	
N T		CP3414, back to back.	-30 FM3			-20 FM3	-37 FM3	-25 FM3	-43 FM3	-36 FM3	-18 FM3		-45 FM3	-21 FM3	-27 FM3	-40 FM3	-10 FM3		-32 FM3	-50 FM3	-19 FM3	
2		CP4122, Gear driven.				-7 FM3		-6 FM3		-12 FM3	-4 FM3			-11 FM3			-2 FM3		-3 FM3		-5 FM3	CP4124
E 1		CP4123 gear driven.				-7 FM3				-9 FM3	-4 FM3				-10 FM3		-2 FM3		-3 FM3		-6 FM3	-9FM3
0		CP3683 - Large area back to back.				-5 FM3		-13 FM3			-4 FM3			-6 FM3			-3 FM3				-12 FM3	
2		CP6014, Ext hub.																			-9/ -10	
	ŀ	CP4073, Gear driven.				-10 FM3		-7 FM3			-6 FM3						-4 FM3		-5 FM3		FM3 -3 FM3	CP4074
:	ŀ	CP4074, Gear driven.				-14 FM3		-12 FM3			-10 FM3						-2 FM3		-9 FM3		-11 FM3	-6FM3
1 -	t	CP2012, Outer type.	-208 FM3	-164 FM3	-198 FM3	-117 FM3	-174 FM3	-199 FM3	-184 FM3	-205 FM3	-166 FM3	-204 FM3	-188 FM3	-161 FM3	-191 FM3	-192 FM3	-165 FM3	-167 FM3	-154 FM3	-216 FM3	-171 FM3	
	ŀ	CP2012, Centre type.	T IVIS	T IVIS	-181	-169	-172	-244	T IVIS	T IVIJ	-179	T IVIS	T IVIS	T IVIS	-240	-220	-178	T IVIS	-210	T IVIS	-173	
	ŀ	CP2567, Nested		-35	FM3	FM3 -15	FM3	FM3 -29			FM3 -7FM3			-33	FM3	FM3 -41	FM3 -23	-37	FM3		FM3 -11	
8	ł	F/Wheel side. CP2567, Nested		FM3 -36		FM3 -16		FM3 -30			-L -8FM3			FM3 -34		FM3 -42	FM3 -24	FM3 -38			FM3 -12	
S ⁴	-	P/Plate side. CP2822.		FM3	-39	FM3 -3	-27	FM3 -29			-L -20			FM3 -36		FM3	FM3 -23	FM3	-32		FM3 -6	
		3 Plate, gear driven. CP3822,			FM3	FM3	FM3	FM3			FM3			FM3			FM3	-13	FM3		FM3	CP2822 -31
1		2 Plate, gear driven.				FM3		FM3			FM3						FM3	FM3			FM3	FM3
3 0		CP4581, 3 Paddle.		-10				-6		-9	-5			-8			-4				-3	
		CP4429, 4 Paddle, 2.6mm thick.				-6 FM4		-5 FM4		-11 FM4	-3 FM4				-12 FM4	-10 FM4	-4 FM4		-8 FM4	-9 FM4	-14 FM4	
	ŀ	CP8300,	-A	-A 002	-A 003	-A		-A	-A 017	-A	-A	-A	-A	-A 030	-A	-A	-A0	-A	-A0	-A 043	-A	
)	ŀ	3 Paddle, 7.1mm thick. CP8400,	001 -A	-A	003	004 -A		008 -A	-A	019 -A	026 -A	028	029	-A	033	034 -A	36H -A0	037 -A	38H -A0	043	040 -A	
	ŀ	4 Paddle, 7.1mm thick. CP8401,	001	002		004		008	017	019	026			030		034	36H -A0	037	38H		040	
1 8 4	ł	4 Paddle, 6.0mm thick. CP8600,				-A		-A		-A	-A						36H -A0		-A0	-A	-A	
. .	+	6 Paddle, 7.1mm thick CP8601,				004		008		019	026						36H -A0		38H	043	040	
-	┝	6 Paddle, 6.0mm thick. CP7972, Nested															36H -A0					
		6 Paddle, 6.0mm thick. CP8172, Alt, Nested		ļ										ļ			36H F-10					
	e	5 Paddle, 6.0mm thick. F = Flywheel / C = Cover															C-11 FM4					
1		CP4946,					-17	-12		-2	-6						-7				-9	
4		6 Paddle rigid. CP5214,								-18	-14			-35	-16		-12	-15	-13			
;	┢	4 Paddle rigid, 7.1mm CP5214,								-10	-21			-20	-10		-27	-10	-10			
	┝	4 Paddle rigid, 7.6mm CP5214,									-21			-20			-21					
1	┝	4 Paddle rigid, 8.9mm CP5216,											-25									
		6 Paddle rigid, 7.1mm CP5216,				-22					-14					-11	-15		-13	-26	-23	
2		6 Paddle rigid, 7.6mm															-25					
- 0 - 0		CP5216, 6 Paddle rigid, 8.9mm									-20						-19				-21	
ľ		CP4814, 4 Paddle sprung, 7.1mm							-11	-14	-15			-38			-21		-13	-12		
	ľ	CP4814, 4 Paddle sprung, 7.6mm								-24					-26		-23			-25		
2	ŀ	CP4814, 4 Paddle																	-31			
,	ŀ	sprung, 8.9mm CP4816, 6 Paddle						-11			-13		-16				-12		-23	-26	-17	
	ŀ	sprung 7.1mm CP4816, 6 Paddle														-21	-20					
╘	+	sprung, 8.9mm CP6180, 4 Paddle rigid			-1	-5									-7	21	-20		-3		-4	
	$\left \right $	CP5344,			-33	-5			-26		-2			-37		-4	-2		-3	-32	-	
	}	4 Paddle rigid. 7.1mm CP5344,			-33	-14		10	-20		-2			-37			-5		-0	-32		
[2 [1	ŀ	4 Paddle rigid. 8.9mm CP5354, 4 Paddle,						-10								-30						
5 5		sprung, 7.1mm CP5354 , 4 Paddle,		-3			-52	-14	-15		-2					-10	-38		-40	-45		
		sprung, 8.9mm				-25		-18			-34						-17		-44			
		CP5346, 6 Paddle rigid. 8.9mm				-19			-11	-21	-6			-4	-2	-8	-12		-14		-15	



CLUTCH SLAVE CYLINDERS - Push Types

INTRODUCTION & GENERAL INFORMATION.

AP Racing offer a range concentric slave cylinders suitable for use with most push type racing clutches. These concentric slave cylinders are lightweight hydraulically self-contained units that mount on the transmission casing and operate the clutch directly. The Aluminium alloy bodies are lightweight and compact, the units feature an integral piston support tube, high temperature seals and scraper ring plus a special high tech, low friction coating. CP6859 & CP3959 are interchangeable with the Saab derived slave cylinders that are in widespread use, but are hydraulically self contained and independent of the gearbox and therefore do not require an oil seal over the input shaft. The slave cylinders are supplied complete with a release

bearing in a choice of three fulcrum diameters. Ensure that the unit is installed in the correct position, with the bleed port uppermost as shown in the installation drawings that follow. All fittings intended to seat at the bottom of the hydraulic ports must have an included angle of 90°.

Details below apply to all slave cylinders within the range:- Body& Piston Material are Aluminium Alloy. / - Effective Area = 920mm² (1.426in²). - Max Pressure = 8.6Nm² (1250psi). / - Fluid = Radi-CAL™ R4, R3, R2 or other high quality fluids.

CP3959 SLAVE CYLINDER.

The CP3959 series of concentric slave cylinders offer a lightweight die cast Aluminium body and are hydraulically self contained with high temperature seals. Interchangeable with SAAB cylinder part no, 4776308 (8729840).

SPECIFICATION.

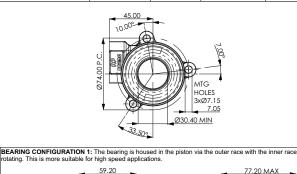
TECHNICAL

Weight. - 425g

- Hydraulic threads.- M12x1.0
- Replacement seal kit. CP3759-3
- Hydraulic fitting kits available for -3 or -4 aeroquip:
- 7/16" (Aluminium adaptor) for 4 aeroquip CP3859-15
- 3/8" (Steel adaptor) for -3 aeroquip CP3859-16

PART NUMBERS

Slave Part Number.	Fulcrum Ø.	Max Stroke.	Bearing.	Bearing Config.
CP3959-38	38.0mm	18.0mm	CP3457-16	1
CP3959-50	50.0mm	18.0mm	CP3457-11	1
CP3959-54	54.0mm	18.0mm	CP3457-6	1
CP3959-1250	50.0mm	12.0mm	CP3457-9	2
CP3959-1254	54.0mm	12.0mm	CP3457-10	2
CP3959-1238-IN	38.0mm	12.0mm	CP3457-16	3



R0.25 2.00 .12.00 STROKE 18.00 MAX 24.00 PISTON FULLY RETRACTED 58. PISTON AT FULL STROKE 8 Ø66. 6 8.20 BEARING CONFIGURATION 3: The bearing is hou in the piston via the outer race with the inner race rotating. The stroke has been shortened so as to BEARING CONFIGURATION 2: The bearing is hous on the piston via the inner race with the outer race rotating. The stroke has been shortened so as to rall le roll le PISTON FULLY PISTON FULLY PISTON AT FULL STROKE PISTON AT RETRACTED RETRACTED FULL STROKE 60.45 MAX 48.45 51.20 63.20 MAX 266.00 Ø STROKE 12.00 STROKE 12.00

Note: Drawing for guidance only. Download latest issue installation drawing from www.apracing.con

CP6859 SLAVE CYLINDER.

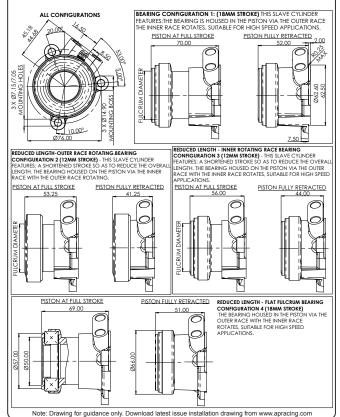
The CP6859 series of concentric slave cylinders offer a lightweight forged Aluminium body and are hydraulically self contained with high temperature seals.

TECHNICAL SPECIFICATION.

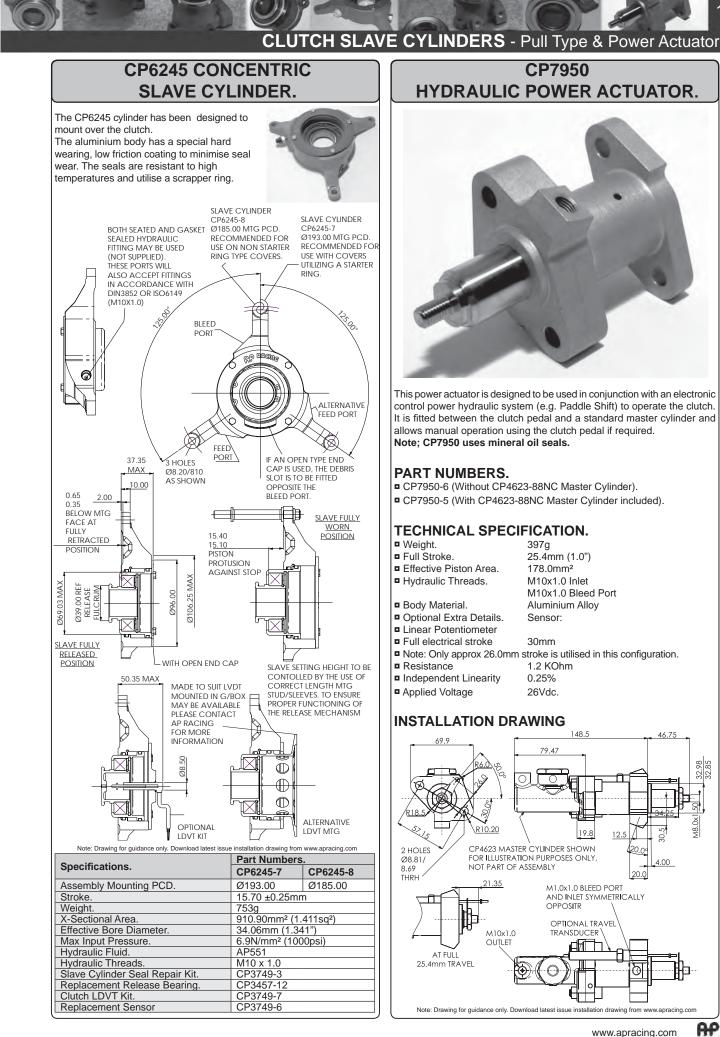
- Weights CP6859-XX 361g / -12XX
- 257g / -12XX-IN 346g
- Hydraulic threads.- M10x1.0
- Replacement seal kit. CP3759-3
- Hydraulic fitting kits available for -3 or
- -4 aeroquip:
- Hydraulic fitting kit (Steel adaptor 7/16" '-4') CP3759-6.
- Hydraulic fitting kit (Steel adaptor 3/8" '-3') CP3759-5.

PART NUMBERS

Slave Part Numbers.	Fulcrum Ø.	Max Stroke.	Bearing.	Bearing Config.
CP6859-14	Flat	18.0mm	CP3457-22	4
CP6859-38	38.0mm	18.0mm	CP3457-16	1
CP6859-45	45.0mm	18.0mm	CP3457-19	1
CP6859-50	50.0mm	18.0mm	CP3457-11	1
CP6859-54	54.0mm	18.0mm	CP3457-6	1
CP6859-1245	45.0MM	12.0mm	CP3457-19	2
CP6859-1250	50.0mm	12.0mm	CP3457-9	2
CP6859-1254	54.0mm	12.0mm	CP3457-10	2
CP6859-1238-IN	38.0mm	12.0mm	CP3457-16	3
CP6859-1245-IN	45.0MM	12.0mm	CP3457-26	3
CP6859-1250-IN	50.0mm	12.0mm	CP3457-11	3
CP6859-1254-IN	54.0mm	12.0mm	CP3457-6	3







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CLUTCH RELEASE BEARINGS - CP3457



RELEASE BEARINGS.

These high quality Release Bearings are designed for use with AP Racing Clutches and are suitable for high loads and continuous high speed high temperature operation. They offer a greater release load capability and superior performance under arduous racing conditions compared to standard production bearings.

The bearings have steel cages and hardened steel shells for durability and are filled with a special high temperature grease. Of the six bearings within the range, Three have a radiused release fulcrum and are suitable for all straight fingered diaphragm spring clutches and are available with either a 38mm, 45mm 50mm or 54mm diameter release fulcrum suitable for all AP Racing Sintered or Cerametallic Racing Clutches. Two have flat faces which are suitable for production type curly fingered diaphragm clutches.

RELEASE MECHANISM.)

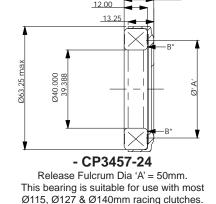
As the spring rate and clamp load of the clutch increases so does the release bearing load required to release the clutch. The release bearing used should be a highquality steel caged radius contact ball bearing either 38mm, 45mm or 50mm (for Ø115mm, Ø127mm, Ø138mm and Ø140mm carbon / race clutches) or 54mm for (Ø184mm, Ø200mm and Ø215mm carbon / race clutches). The release mechanism should be arranged so that

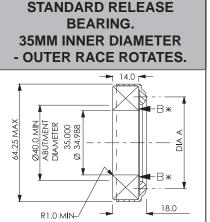
The release mechanism should be arranged so that the bearing is free of the spring fingers when the clutch is fully engaged. The release travel should be limited by means of an external stop to avoid damage to the diaphragm spring. Suitable release bearings are available from AP Racing see details opposite and below.

IMPORTANT NOTE / INSTALLATION OF BEARINGS.

To prevent internal damage to ball races when fitting bearings onto release mechanism, use only the minimum force necessary on the surfaces marked 'B' only. The following bearing assemblies are filled with Kluber Asonic HQ72-102 grease, CP3457-1, -2, -6, -11, -16.

REDUCED THICKNESS BEARING. - OUTER RACE ROTATES.

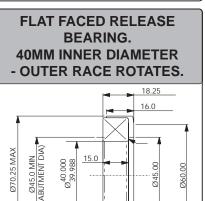


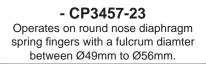


- CP3457-1 Release Fulcrum Dia 'A' = 50mm. This bearing is suitable for use with most Ø115, Ø127 & Ø140mm racing clutches.

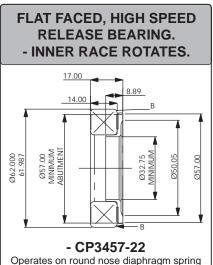
- CP3457-2

Release Fulcrum Dia 'A' = 54mm. This bearing is suitable for use with most Ø184, Ø200 & Ø215mm racing clutches





FI AT



fingers with a fulcrum diamter between. - CP3457-22 for Ø50mm to Ø56mm.

400MM INNER DIAMETER - OUTER RACE ROTATES.

STANDARD RELEASE

BEARING.

R1.0 MIN-

- CP3457-9

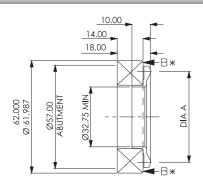
Release Fulcrum Dia 'A' = 50mm. This bearing is suitable for use with most \emptyset 115, \emptyset 127 & \emptyset 140mm racing clutches.

- CP3457-10

Release Fulcrum Dia 'A' = 54mm. This bearing is suitable for use with most Ø184, Ø200 & Ø215mm racing clutches.

- CP3457-19 Release Fulcrum Dia 'A' = 45mm. This bearing is suitable for use with most Ø115, Ø127 & Ø140mm racing clutches.

HIGH SPEED RELEASE BEARING - INNER RACE ROTATES.



- CP3457-11

Release Fulcrum Dia 'A' = 50mm. This bearing is suitable for use with most \emptyset 115, \emptyset 127 & \emptyset 140mm racing clutches.

- CP3457-6

Release Fulcrum Dia 'A' = 54mm. This bearing is suitable for use with most \emptyset 184, \emptyset 200 & \emptyset 215mm racing clutches.

- CP3457-16

Release Fulcrum Dia 'A' = 38mm. This bearing is suitable for some Ø115mm racing clutches, and clutches from other manufacturers.

- CP3457-26

Release Fulcrum Dia 'A' = 45mm. This bearing is suitable for use with most \emptyset 115, \emptyset 127 & \emptyset 140mm racing clutches.

Note: Drawings for guidance only. Download latest issue installation drawings from www.apracing.com

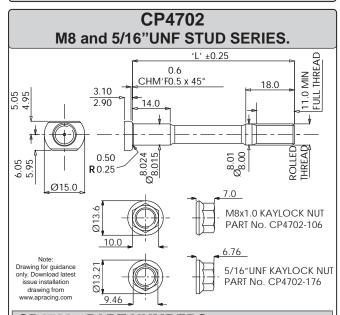


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CLUTCH MOUNTING STUD.

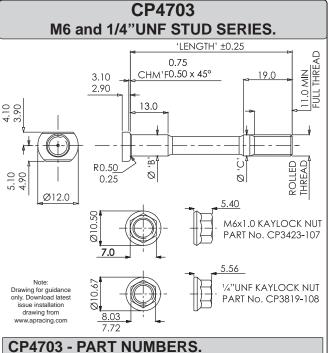
81

AP Racing offer a complete range of clutch mounting studs for all of the Carbon / Carbon and Sintered / Cerametallic Race Clutches. The stud design incorporates offset head flats for location, necked down shanks and precision ground location diameters. All kits come complete with relevant K-lock nuts.



CP4702 - PART NUMBERS. 5/16" UNF Stud Lenath. M8 x 1.0 (M Suffix). (U Suffix). (Dim'n 'L') CP4702-400M CP4702-400U 40.0mm 42.5mm CP4702-425M CP4702-425U CP4702-450M CP4702-450U 45.0mm CP4702-475M CP4702-475U 47.5mm 50.0mm CP4702-500M CP4702-500U 52.5mm CP4702-525M CP4702-525U CP4702-550M CP4702-550U 55.0mm 57.5mm CP4702-575M CP4702-575U CP4702-600M CP4702-600U 60.0mm CP4702-625U 62.5mm CP4702-625M CP4702-650M CP4702-650U 65.0mm CP4702-675U 67.5mm CP4702-675M 70.0mm CP4702-700M CP4702-700U CP4702-725M CP4702-725U 72.5mm CP4702-750M CP4702-750U 75.0mm 77.5mm CP4702-775M CP4702-775U The kits listed above are available containing 6,8 or 12 bolts, add the number of bolts required to the end of the part number. e.g. CP4702-400MK(12)

CLUTCH MOUNTING STUDS - CP4702 & CP4703



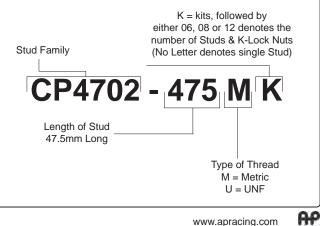
Stud Length. (Dim'n 'L')	M6 x 1.0 (M Suffix).	1/4" UNF (U Suffix).
Ø 'B'	6.016 / 6.008mm	6.365 / 6.357mm
Ø 'C'	5.98 / 5.95mm	6.33 / 6.30mm
40.0mm	CP4703-400M	CP4703-400U
42.5mm	CP4703-425M	CP4703-425U
45.0mm	CP4703-450M	CP4703-450U
47.5mm	CP4703-475M	CP4703-475U
50.0mm	CP4703-500M	CP4703-500U
52.5mm	CP4703-525M	CP4703-525U
55.0mm	CP4703-550M	CP4703-550U
57.5mm	CP4703-575M	CP4703-575U
60.0mm	CP4703-600M	CP4703-600U
62.5mm	CP4703-625M	CP4703-625U
65.0mm	CP4703-650M	CP4703-650U
67.5mm	CP4703-675M	CP4703-675U
70.0mm	CP4703-700M	CP4703-700U
72.5mm	CP4703-725M	CP4703-725U
75.0mm	CP4703-750M	CP4703-750U
	e are available containing uired to the end of the pa	g 6,8 or 12 bolts, add the art number.

equired to the end of the part number. number of bolts r e.g. CP4703-400MK(12)

ORDERING.

When ordering first calculate the required length of stud then by using the listing on the right find that length & quote the part number in either M6, M8, 1/4" UNF or 5/16"UNF.

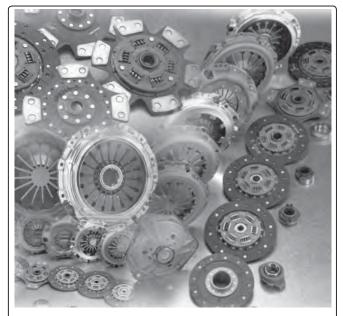
Example part number breakdown below.



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HIGH PERFORMANCE CLUTCH - General Information



INTRODUCTION.

The clutches in the AP Racing Special High Performance range are uprated units usually based on a standard production item. They are intended for special applications where a higher than standard level of performance is required, e.g. in competition use or when the engine / vehicle performance has been increased.

In most cases the clutches in this range can be fitted to the original flywheel without modification and the standard release mechanism is retained but there are exceptions. See notes in the application list.

The two main elements of a clutch are the Cover Assembly (sometimes referred to as Cover, Pressure Plate or Mechanism) and the Driven Plate which must be compatible with each other to provide satisfactory overall clutch performance.

Application Note:

In most cases the correct clutch part number can simply be looked up in the vehicle application list at http://www.apracing.com/products/ road_car_upgrades/special_tuning_clutches.aspx but there are a number of factors to be considered when choosing the most suitable clutch for a given application. The most significant are explained below.

OE SUPPLIER.

AP Racing has been for sometime now an original equipment supplier to many marques like, Ford, Aston Martin, HSV, TVR, Caterham and many more, should you wish to discuss your requirements in this area please contact AP Racing's Roadcar Technical Department.

MECHANICAL COMPATIBILITY.

The clutch must obviously physically fit the vehicle in question unless you are prepared to carry out sometimes extensive / expensive modifications. The principal factors that must be considered are.

- The cover assembly must bolt onto the flywheel.
- check fixing bolt positions and size.

The input shaft spline must fit the driven plate correctly.
check number of teeth and the outside diameter match the details given.

Setup height (SUH) must be compatible with the release mechanism (usually the same as the original equipment

Rotational speed (r.p.m.) capability of the clutch must be well above the (possibly increased from standard) maximum engine speed.

TORQUE CAPACITY.

Must be sufficient for the engine. The basic factors that control clutch torque capacity are size (diameter), the clamp load of the cover assembly, and the friction co-efficient of the facings.

CONDITIONS OF USE.

The type of use intended for the vehicle is a major factor in choosing a suitable clutch.

P For Road use a high level of "comfort" is desirable.

- choose a clutch with an organic type facing and preferably cushioned segments and a spring centre to give smooth engagement.

For Competition use performance is usually a more important consideration than "comfort" and harsh characteristics can be tolerated.

- choose a cerametallic type facing.

For Off Road use a lot of deliberate partial engagement (slipping) is often normal.

- choose a larger / higher capacity clutch, usually of the cerametallic type, to absorb the extra energy / temperature generated.

QUALITY.

All AP Racing clutches are made from new components manufactured to the highest standards developed over many years of experience as an OE and Competition clutch supplier.

AP Racing are an approved ISO 9002 and TS16949 accredited company.



MANUFACTURE.

All AP Racing High Performance Clutch Assemblies are either made or tested at our Coventry Factory.

Dedicated manufacturing areas have been created to provide a modern and efficient production facility.



HIGH PERFORMANCE CLUTCH -Cover Assemblies

'DST

TYPE

Identified by

to retain the

spring in the

RELEASE

FLYWHEEL

PI ATE

diaphragm

cover.

RELEASE

BEARING

LYWHEEL

PLATE

Α

GEARBOX

SPLINE

DRIVEN

PLATE

The 'DS' (Diaphragm Spring) type of clutch illustrated above is bolted to

the vehicle flywheel and is made up of the various components as shown.

The pressed steel covers drives the pressure plate via the drive straps, with

the diaphragm spring forcing the pressure plate towards the flywheel

clamping the driven plate between them. Thus the engine flywheel, cover

pressing, pressure plate and driven plate, all rotate together to transmit

the drive to the gearbox via the splined shaft. Depressing the clutch pedal

releases the driven plate by moving the release bearing in the direction of

arrow 'A' to bring it into contact with the release plate. (The clutch may not be

fitted with a release plate, in which case the release bearing will come into

direct contact with the diaphragm fingers). This in turn applies pressure to

the diaphragm spring fingers which move inwards and pivot on the fulcrum

rings to lift up the spring outside edge. The retractor clips keep the spring

in contact with the pressure plate which moves away from the flywheel (in

the direction of arrow 'B') releasing the driven plate allowing the clutch and

flywheel to rotate independently thus disconnecting the drive to the gearbox.

Releasing the clutch pedal reverses the operation and the driven plate is

once again clamped again against the flywheel to revolve the input shaft

and apply drive to the gearbox. The 'DST' (Diaphragm Spring Tabbed)

clutch works on the same principle as the 'DS' clutch except that the 'DST' clutch does not require retractor clips, and the diaphragm spring is located by tabs on the cover pressing rather than shouldered rivets.

The information contained in this section covers the relevant technical

Mounting Holes: Number of, diameter, pitch circle diameter and spacing.

Dowel Holes: Number of, diameter, pitch circle diameter and spacing.

INSTALLATION / TECHNICAL INFORMATION.

and installation details for the range of cover assemblies.

This information includes:

INPUT SHAFT

SPIGOT BEARING

PRESSURE

ENGAGED POSITION

RELEASED

POSITION

bent over tabs

HIGH PERFORMANCE

COVER ASSEMBLIES.

The difference is explained below.

An AP Racing cover assembly is designated

'DS TYPE'

rivets to retain

the diaphragm

spring in the

cover

PRINCIPLE OF OPERATION.

COVER PRESSING

PRESSURE PLATE

SHOULDERED

RIVET

RELEASE

RELEASE BEARING

DIAPHRAGM

RETRACTOR

DRIVE

STRAPS

SPRING

CLIP

PLATE

Identified by

either 'DS' or 'DST' for operation purposes.

Description: The angular dimension between any given mounting hole and a dowel hole, provided that they are both equi-spaced on their relevant P.C.D.

B Set-Up Height: The dimension from the flywheel face to the diaphragm spring fingers or to the top face of a release plate if fitted.

Diaphragm Spring: The colour identifies the spring strength whilst the 'design' details the finger form, straight or curved (curly).

Release Plate: Informs you if a release plate is fitted to the diaphragm spring fingers.

Clamp Load: The amount of clamping force exerted by the diaphragm spring (identified by colour on spring fingers). Given in Lbs and Nm Driven Plate Thickness: Two thicknesses are given, the 'new clamped'

thickness and the 'minimum worn' thickness. 'New clamped' is the thickness of the driven plate when first installed but

with the plate in the clamped position. The 'minimum worn' figure is derived from the clamp load characteristics of each individual cover assembly, and can be used as a guide to the life of the driven plate. Whilst the driven plate thickness is between these two figures the clamp load stated will be within specification. When the thickness of the driven plate drops below the minimum worn figure the clamp load will be reduced which may result in clutch 'slip'

Torque Capacity: The torque capacity for the clutch will vary depending upon which type of driven plate is to be used. The table gives the figure for all the various types of plate that can be run with the particular cover assembly. Given in Lbs / Ft and NM.

Maximum Rotational Speed: The maximum recommended rotational speed for each cover assembly. Given in rpm.

Maximum Release Travel: The maximum recommended travel for the release bearing to prevent the diaphragm spring being over stroked. Release Bearing Type: It is important that the correct type of release bearing is used for each cover assembly configuration. If a release plate is fitted a carbon thrust bearing should be used. If a release plate is not fitted and the diaphragm spring has straight fingers then a round nose ball type bearing should be used. If a release plate is not fitted and the diaphragm spring has curved fingers then a flat faced ball type bearing should be used.

SPECIAL NOTE: Ø220MM CLUTCH FITMENT TO FORD ESCORT RANGE 1986.

To improve clutch release on Ford escorts post 1995 models are fitted with an adjustable clutch pedal and improved (white) quadrant as standard (see photo's). When fitting CP3560-1, CP3560-2 cover assemblies or the clutch kits CP2000-8, -35 & CP2015-8, AP Racing recommends that the adjustable pedal, improved



quadrant and a new clutch cable are fitted to optimize clutch release in light of the higher release loads. The Ford Part Numbers for these parts as follows:

R55mm over the Pre 1995 guadrant (black) R40mm.

The following mods need to be carried out when fitting

the white quadrant, if not the pedal will sit to high. Count

Adjustable Pedal

1029012 Quadrant

a 1029013. If vehicle is already fitted with adjustable pedal and white quadrant then mods below will not be necessary.



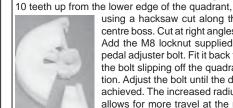


using a hacksaw cut along the line of the rib to the centre boss. Cut at right angles to remove this section. Add the M8 locknut supplied in the clutch kit to the pedal adjuster bolt. Fit it back to front, this will prevent the bolt slipping off the quadrant during clutch actuation. Adjust the bolt until the desired pedal position is achieved. The increased radius of the white quadrant allows for more travel at the release bearing, hence improving clutch release / gear selection.

IMPORTANT NOTE

AP Racing CP3560 Cover Assemblies should only be used in conjunction with our recommended driven plates (see below) and not with OE or alternative driven plates. CP3560-1 cover can be used with CP5351-16 organic driven plate or CP5354-15 cerametallic paddle driven plate. CP3560-2 cover should only be used with the CP5354-15 cerametallic paddle driven plate. Failure to comply with any of the above recommendations is likely to result in release problems with your clutch.





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HIGH PERFORMANCE CLUTCH - Cover Assemblies

Ø19	0mm D	iameter.	Cover A	ssemb	olies.								1.12
Cover Assy	Part	Mounting Hole.	Dowel Hole (mm).	Set-up Height	Diaphragm Spring Colour	Rel Plate	Clamp Load.	Driven Plat Thickness.	e		oacity. Using es Nm (lb/ft)	Bearing	1
Туре.	Number.	(mm)	& Position.	Nominal.	/ Finger Form.	Fitted.	N (lbs)	New Clamped	Min Worn	CP2642	CP2257	Туре.	121
DST	CP3748-6	6-off Ø9.12/8.89	3-off Ø6.36/6.34	36.17mm	Brown / Curly	No	5338	7.11mm	5.61mm	136 (100)	175 (129)	Flat Face.	19
DST	CP3764-4	Equispaced on a Ø222.2 P.C.D.	Equispaced on a Ø222.2 P.C.D. & 30°	35.17mm	Green / Straight	No	(1200)	(0.28")	(0.22")	136 (100)	175 (129)	Round Nose.	

Ø21	5mm D	iameter	. Cover /	Assen	nblies.										
Cover		Mtg	Dowel	Set up	Diaphragm Spring	Rel /	Max	Clamp	Driven Pla Thickness			Capacity. I Plates Nm			1 200
Assy Type.	Part Number.	Hole. (mm)	Hole (mm). & Position.	Height Nom.	Colour / Finger Form.	Plate Fitted.	Rel / Travel mm	Load. N (Ibs)	New Clamped mm	Min Worn mm	CP5351	CP5352	CP5354	Bearing Type.	
DST	CP2511-1	6-off Ø9.14/8.89 Equispaced on a Ø246.1 P.C.D.	3-off Ø6.36/6.34 Equispaced on a Ø246.1 P.C.D. & 30°	46.60 mm	Brown / Curly	No		7117 (1600)	7.44	5.04	276 (203)		Flat Face.	CP2511
DS	CP2246- 70	6-off	3-off	35.94 mm	White /	No	9.0		7.11 (0.28")	5.61 (0.22")	224 (165)	224 (165)		Round Nose.	Bi
DS	CP2246- 71	Ø9.14/8.89 Equispaced	Ø6.36/6.34 Equispaced	46.91 mm	Straight	Yes]	5338 (1200)			224 (165)	224 (165)	N/A	Flat	
DS	CP2647-1	on a Ø250.8 P.C.D.	on a Ø250.8 P.C.D. & 30°	39.62 mm	Blue / Curly	No]				192 (142)	192 (142)		Face.	
Maxim	um Rotatio	onal Speed =	8000rpm												CP2647

Ø22	0mm D	iameter	Cover A	Assen	nblies.										
Cover	Part	Mtg	Dowel	Set up	Diaphragm Spring	Rel /	Max Rel /	Clamp Load.	Driven Pla Thickness			Capacity Plates Nr		Bearing	and and
Assy Type.	Number.	Hole. (mm)	Hole (mm). & Position.	Height Nom.	Colour / Finger Form.	Plate Fitted.	Travel	N (lbs)	New Clamped mm	Min Worn mm	CP5351	CP5352	CP5354	Туре.	
DST	CP3560-1	6-off Ø9.14/8.89 Equispaced	3-off Ø6.36/6.34 Equispaced	30.5	Black /	No	9.0	5500 (1240)	7.11	5.61	230 (169)	230 (169)	230 (169)	Round	
	CP3560-2	on a Ø242.0 P.C.D.	on a Ø242.0 P.C.D. & 30°	mm	Straight.		0.0	7500 (1690)	(0.28")	(0.22")	N/A	N/A	310 (230)	Nose.	- Ch
Maxim	um Rotatio	onal Speed =	10000rpm												

Ø24	0mm D	iameter	. Cover /	Assen	nblies.										
Cover	Part	Mtg	Dowel	Set-up	Diaphragm Spring	Rel /	Max	Clamp	Driven Pla Thickness			Capacity. Iates Nm		Deering	27
Assy Type.	Number.	Hole. (mm)	Hole (mm). & Position.	Height Nom.	Colour / Finge Form.	Plate Fitted.	Rel / Travel mm	Load. N (Ibs)	New Clamped mm	Min Worn mm.	CP2346	CP2496	CP2583	Bearing Type.	
DST	CP3380-2	6-off Ø9.14/8.89 Equispaced on a Ø273.0 P.C.D.	3-off Ø6.36/6.34 Equispaced on a Ø273.0 P.C.D. & 30°	44.38 mm	Green/ Curly	No		8896 (2000)	8.38 (0.33")	6.88 (0.27")	476 (351)		N/A	Flat Face.	CP
	CP2345-4			40.72 mm	Brown / Straight	No	12.5	8452	8.38	6.88	N/A	366	NI/A	Round Nose.	1
	CP2345-8	6-off Ø9.14/8.89 Equispaced	3-off Ø6.36/6.34 Equispaced	51.59 mm	Brown	Yes	12.0	(1900)	(0.33")	(0.27")	N/A	(270)	N/A	Flat	500
DS	CP2394- 14	on a Ø269.88	on a Ø269.88	50.29 mm	Green	Yes		10676	8.38mm	6.88	460	462	460	Face.	R.
	CP2394- 60	P.C.D.	P.C.D. & 30°	45.29 mm	Green / Straight	No	1	(2400)	(0.33")	(0.27")	(339)	(341)	(339)	Round Nose.	100
Maxim	um Rotatio	onal Speeds	= CP2345-4 8	& -8 = 73	00rpm - CP3	329, CP	3380, CF	2394-, -	14, -46 & -6	60 = 9000	rpm				CP2

		Ø267mm	Diameter.	Cover	Assemblies
--	--	--------	-----------	-------	------------

~		lamoton	001017		1511001										1
Cover	Part	Mtg	Dowel	Set-up	Diaphragm Spring	Rel /	Max Rel /	Clamp Load.	Driven Pla Thickness		Torque (Driven P	Capacity. Plates Nm	(lb/ft)	Bearing	
Assy Type.	Number.	Hole. (mm)	Hole (mm). & Position.	Height Nom.	Colour / Finger Form.	Plate Fitted.	Travel	N (lbs)	New Clamped mm	Min Worn mm	CP2495	CP2790	CP3258	Type.	M.
	CP2789-1	6-off	3-off Ø7.95/7.92	57.15	Orange /	No		8452			397 (293)	397 (293)	N/A	Round	1 P.E
DS	CP2789-2	Ø11.4/10.16 Equispaced on a Ø306.4	Equispaced on a Ø306.4	mm	Straight.	Yes	10.5	(1900)	8.38 (0.33")	6.38 (0.25")	397 (293)	397 (293)	N/A	Nose.	0
	CP2789-5	P.C.D.	P.C.D. & 12.5°	46.18 mm	White / Curly	No]	12900 (2900)			606 (447)	440 (325)	440 (325)	Flat Face	
Maxim	um Rotati	onal Speed =	CP2789-1 = 1	6500rpm	/ CP2789-2	8 -5 = 80	00rpm								1

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HIGH PERFORMANCE DRIVEN PLATES.

Driven plates are available in four different configurations which can accommodate a wide range of race, rally and road applications.

SPRING CENTRE ORGANIC.

This driven plate design features an adaptor plate and retainer plate that are riveted together with shouldered stop pins. Located between them in slots in the hub flange are damper springs arranged radially around the hub centre. The



hub can rotate within specific limits to compress the springs thus smoothing out any torsional fluctuations in the drive line. Damping is provided by friction washers fitted between the hub, retainer and adaptor plate.

RIGID CENTRE ORGANIC.

The rigid type of driven plate is not fitted with any form of drive line cushioning. It is specially designed for arduous working conditions where the degree of refinement is secondary to strength and durability. It is less' comfortable' than a sprung centred plate and is suitable for low level competition and road use.

SPRING CENTRE CERAMETALLIC.

Designed for heavy duty or 'off road' applications the sprung centre cerametallic driven plate features a sprung, or rigid centre configuration and uses a rigid adaptor plate without cushion segments. The driven plate incorporates cerametallic pads, as illustrated, which are designed to withstand the high temperatures associated with high energy input competition applications. Not suitable for road use.



HIGH PERFORMANCE CLUTCH - Driven Plates

RIGID CENTRE CERAMETALLIC.

The rigid type of driven plate is not fitted with any form of drive line cushioning. It is designed for arduous working conditions where the degree of refinement is secondary to strength and durability and offers the heat resistance advantages of the cerametallic pad design. Not suitable for road use. This section provides information on the range of driven plates that can be used with the



cover assemblies detailed on pages 156 of this catalogue. This information includes the following :

DRIVEN PLATE 'FAMILY NUMBER'

OUTSIDE DIAMETER

20

THICKNESS: The thickness in the new condition and the minimum worn thickness are given.

■ FACING MATERIAL: Driven plates are available in three basic configurations, cerametallic, steel backed organic or non backed organic all organic material are asbestos free.

TYPE OF CENTRE: Driven plates can have either a sprung or rigid centre configuration.

COVER ASSEMBLIES: Details which cover assemblies the particular driven plate family can be used with.

SPLINE SIZE: Details the hub spline giving the number of teeth and the major diameter.

GENERAL COMMENTS: Particular applications, number of cerametallic pads per side of the plate (paddles), 'low crimp plate' etc.

Centered O	rganic D	riven P	lates								CP2084
Driven Plate Family	Driven Plate	Used With	20	23	24	24	26	26	32	Comments	
Part No.	Thickness	Cover.	.875"	1.0"	1.0"	25.2	22.0	1.16"	2.06"		Charles Port
CP2084 Steel Backed	7.1mm	CP2084							-41	Mini.	CP5341
CP5341	7.1mm	Standard	-13	-3		-12		-17		CP5341-3, has a reversed hub.	
Organic Backed	7.87mm		-14								
CP5342 Organic Backed	7.1mm	Standard		-2							
	Driven Plate Family Part No. CP2084 Steel Backed CP5341 Organic Backed CP5342	Driven Plate Family Part No. Driven Plate Thickness CP2084 Steel Backed 7.1mm CP5341 Organic Backed 7.1mm CP5342 7.1mm	Driven Plate Family Part No. Driven Plate Thickness Used With Cover. CP2084 Steel Backed 7.1mm CP2084 CP5341 Organic Backed 7.1mm Standard CP5342 7.1mm Standard	Driven Plate Part No. Driven Plate Thickness Used With Cover. No. of 20 Spline 875° CP2084 Steel Backed 7.1mm CP2084 -13 CP5341 Organic Backed 7.1mm Standard -13 CP5342 7.1mm Standard -14	Plate Family Part No. Plate Thickness With Cover. 20 23 CP2084 Steel Backed 7.1mm CP2084 5pline Shaft O. .875° 1.0° CP5341 Organic Backed 7.1mm Standard -13 -3 CP5342 7.1mm Standard -14 -23	Driven Plate Family Part No. Driven Plate Thickness Used With Cover. No. of Teeth 20 23 24 Spline Shaft O.D. Steel Backed 7.1mm CP2084 875° 1.0° 1.0° CP5341 Organic Backed 7.1mm Standard -13 -3 -14 CP5342 7.1mm Standard -2 -2 -2	Driven Plate Family Part No. Driven Plate Thickness Used With Cover. No. of Teeth 20 23 24 24 Spline Shaft O.D. CP2084 Steel Backed 7.1mm CP2084 1.0° 1.0° 25.2 CP5341 Organic Backed 7.1mm Standard -13 -3 -12 CP5342 7.1mm Standard -14	Driven Plate Family Part No. Driven Plate Thickness Used With Cover. No. of Teeth 20 23 24 24 26 Spline Shaft O.D.	Driven Plate Family Part No. Driven Plate Thickness Used With Cover. No. of Teeth Used 20 23 24 24 26 26 Spline Shaft O.D. 875° 1.0° 25.2 22.0 1.16° CP2084 Steel Backed 7.1mm CP2084 1.0° 25.2 22.0 1.16° CP5341 Organic Backed 7.1mm Standard -13 -3 -12 -17 CP5342 7.1mm Standard -14 -14 -17 -17	Driven Plate Family Part No. Driven Plate Thickness Used With Cover. No. of Teeth 20 23 24 24 26 26 32 Spline Shaft O.D.	Driven Plate Family Part No. Driven Plate Thickness Used With Cover. No. of Teeth 20 23 24 26 32 33 32 32 32 32 32 32 32 32 32 32 32 32 33 33 33 33 33 33 33 33 33 33 33 33 33 33 33 33 33 34 34 34 34 34 34 34 34 34 34 34 34 35 34 35 34

Rigid Centered Cerametallic Driven Plates

	Centered		1	-																					_	
Driven	Driven Plate	Driven	Used	-	of Teet																					
Plate Dia		Plate	With	10	10	10	10	10	14	18	20	20	21	21	21	21	22	23	24	24	24	24	26	26	28	32
	Part No.	Thickness.	Cover.	Spli	ne Sha	ft O.D.																				
,				1.0"	1.06"	1.12"	29	1.25"	25	21.1	22	.875"	.92"	24	24.5	29	1.0"	1.0"	24.2	1.0"	25.2	25.5	22	1.16"	22	2.0
	CP2599	7.1mm	CP2084														1									-11
180	Cerametallic 4 Paddle.	Comments																								
	4 Faudie.		1				1				-			-											_	
	CP5213	7.1mm	CP4560 CP3745							-18		-17 -16	-13 -15										-12		<u> </u>	<u> </u>
	Cerametallic 3 Paddle.	7.6mm Comments	CP3745	CDF	212 12	or -15	Coro	160	01/ 10	05 06				0 10	00 00	L	L									
	5 Faudie.	Comments		CP5	213-13	01-10	Coro	la 160	JV 19		/ CP5	213-13	Coro	ia is	188-89											
		7.1mm	CP4560							-18/ -31		-14		-35		-16		-17		-13	-32	-26				
	CP5214	7.6mm	CP4560 CP3745							-31			-20	-33				-27							-	-
	Cerametallic	8.9mm	CP3/45							21			-25	00		-									<u> </u>	1
200	4 Paddle.			CP5	214-18	is star	dard	build. F	Peuae	ot. / CF	, 5214	-31 is r	revers	e buil	d of -1	8. / C	P5214	-16 &	-20. To	ovota.	/ CP52	214-15	. Golf	TD. / (CP52	14-
		Comments				Mk4/5 2		, -	9-										,	.,			,			
		7.1mm	1	-	-	-22	1		1		1	-14	1		r	· · · ·	-11	-15	1	-13	1	-12	00	-23	-16	<u> </u>
	CP5216	7.1mm 7.6mm	CP4560			-22						-14					-11	-15		-13		-12	-26	-23	-16	
	Cerametallic	8.9mm	CP3745				-					-20						-25						-21	<u> </u>	-
	6 Paddle.				040.44	, Mitsu	hiahi I		1004	00.10	DEDA		 	- /		10.40	0-14							-21		
		Comments		CP5	210-14	, iviitsu	DISNI	Lancer	1994	-96.70	P521	0-13, 8	eat ib	iza. /	CP521	10-10,	, Goli	G-60	991-9	Ζ.						
	CP5343	7.1mm	CP2246															-3		-5				-6		
	Cerametallic	8.0mm	1							-4																1
	4 Paddle.	Comments		CP5	, 343-4,	Citroer	1/CP	5343-6	is rev	/ersed	build.															
		7.1mm	1	1	-33	-14	1	-1	-12		1	-2	1	-37	1	1	-4	-5		-8	-31		-32			1
		7.6mm	1		- 55	- 14			-38	-7		2		-28	-27			5			-01		52			
		7.9mm	CP2246																		-34	-6			-	
	CP5344 Cerametallic	8.0mm	CP2246 CP5241								-29											-				
215	4 Paddle.	8.4mm	1 01 02 11	-														-15							-	
215		8.9mm	1	-			-10										-30									
		Comments	1	CP5	3//-7	Peuge	<u> </u>						I				- 50		I				L		L	
		Comments		010	0- 14 -7,	i euge							_					_				_				
		7.1mm	005044															-20	-23							
	CP5346	8.0mm	CP5241 Standard								-9					-2						-25				
	Cerametallic	8.4mm	OE.				-10											-1								
	6 Paddle	8.9mm				-19	-11		-5			-6		-4			-8	-12	-29	-14		-7		-15	-22	
		Comments		CP5	346-1 (fillet ro	ot spl	ine). P	orsche	924 T	urbo.															

A٩

Plate Dia	Driven Plate Family	Jonanie	tallic D	_			es																				
Plate Dia mm)		Driven	Used	No.	of Tee 10	_		10			8 2	0 2	0 2	4 -	1 2 [.]	2	22		24	24		24 :	24	26 2	6 2	в ;	
		Plate	With		ine Sh	10		10	14	1	8 2	0 2	0 2	1 2	1 2	2'	22	23	24	24	1 2	24 2	24 2	26 2	6 2	8 3	
28	Part No.	Thickness.	Cover.	1.0	-	1.12		1.25	25	21	.1 2	2 .87	'5" .9 <u>/</u>	2" 2	4 24.	5 29	1.0	' 1.0'	24.2	2 1.0	" 25	5.2 2	5.5 2	2 1.1	6" 2	2 2.	
28		7.1mm		1.0	1.00	1.12	-12		2.5	21	.1 2	2 .01	3 .34	-2		5 23	1.0	1.0	24.2	1.0	2.	5.2 2.	5.5 2	.2 1.1	0 2	- 2.	
28	7.4mm]						-10			-2						-5										
.28	CP6444	7.6mm	Standard						_	_		_					_		-9	_			_	-26	;		
	Cerametallic 4 Paddle.	7.8mm 8.0mm	OE.			-	-	-	-	-		-3		-2	.4		-	-6	-19	+	-	-2	2	-		+	
		8.4mm	1						-11			-4							10				-		-8		
		8.9mm					-29																	-7			
	CP2496	8.4mm	CP2394	-4	-18	-14/	-24	-13	-29						-52			-16		-19				-26			
	Cerametallic	0.4000	CP3380	-4	-10	-36	-41	-13	-29						-52			-10		-19				-20	,		
240	4 Paddle.	Comments		CP	2496-3	6, Shc	ortened	d Hub.	/ CP2	496-2	24, Stra	aight s	ided sp	oline.	/ CP24	196-41	, Shoi	tened	Hub v	ersion	of -2	24 GRI	P N BI	WN			
F	CP4196	1	Standard	1		1			1	1				Т				1	1								
	Cerametallic 6 Paddle.	8.4mm	OE															-5	-4	-6							
CP25	1	5213	CP5214			5216		-	2534	_		P53			CP5				6444			P249			CP41		
h		re not lable			A second) " (14 m) " (いたかっ			access 1)	0	一日日		0000	1	Control of	
Sprinç	g Centered	Ceramet	allic Driv	ven	Plat	es																					
		D	lles 1	No.	of Teet	h																					
	Driven Plate	Driven Plate	Used With	10	10	10	10	14	14	17	18	18	20	21	21	22	23	24	24 2	4	24	24	24	26	26	28	
nm)	Family Part No.	Thickness	Cover.	<u> </u>	ne Sha																						
-				1.0"	1.12"	29	1.25"	18.7	25	20	20.6	21.1	.875"	24	24.5	1.0"	1.0"	.8"	24 2	4.2	25.2	1.0"	25.5	22	1.16"	22	
		7.1mm						-16		-11		-14 / -35	-15 /	-38			-21					-13	-33	-12 / -19			
	7.6mm		CP4560									-24	-20	-26				-23						-25		+	
		7.9mm	CP3745					-29																			
	CP4814 Cerametallic	8.0mm 8.9mm											-28							_		-31				_	
200		Comments	1	reve (Ger	814-16 rsed bu nini Tra ion of -	iild for insmis 14.	an Op	oel Cor	sa. / (CP48	14-24,	Peug	or a Cli	6/306,	8 valv	e / Cit	roen. / 314-19	CP48	14-26	Form	nula F	Renau	lt. / CF	94814- Pyrami	13, VW d build	/	
	CP4816	7.1mm	CP4560 CP3745			-11	_						-13				-12				_	-25		-26	-17	-24	
	Cerametallic 6 Paddle.	8.9mm	01 3743	0.0.0												-21	-20										
		Comments		CP4	816-16	, Ioyo	ta Grp	'A' Ra	lly 199	92.70	CP481	6-20, 1	mpreza	a / Le	gacy G	irp 'A'	/ CP2	816-2	5 is re	verse	build						
		7.1mm		-3		-14	-52		-7	-15			-2		-9	-29	-38				-28	-40		-45			
		7.4mm	-								-30								T					001			
	005354	7.6mm	CP2246									-27	-6	-53	-37		-1	-19			-20			-26/ -39			
	CP5354 Cerametallic	7.9mm	CP3745 CP2511		15		_						0.5					00			_		-47			T	
215	4 Paddle.	8.0mm 8.4mm			-12	-16							-22		-		-46	-33			_		-35	-		-	
215		8.9mm	1		-25	-18							-34				-17					-44				-5	
215		Comments		CP5	354-14	, BMV	V strai	ght spl	ne./(CP53	54-29,	Stren	gthene	d hub	. / CP	5354-4	0, rev	ersed	build.	CP5	354-2	26, Str	engthe	ened h	ub.		
215						-	-					-25			1					1		1		1	1	1	
215		6.5mm				<u> </u>										.	i										1
215		6.5mm 7.1mm							-12							<u> </u>											
	CP6454	7.1mm 7.4mm	Standard														20	1			-15						
	CP6454 Cerametallic 4 Paddle.	7.1mm 7.4mm 7.6mm	Standard OE.						-12 -13				-3	-24			-26 -6	-1			-15	-9					
	Cerametallic	7.1mm 7.4mm 7.6mm 8.0mm 8.4mm											-3 -5	-24			-26 -6 -7	-1		. 11	-15	-9				-1	
	Cerametallic	7.1mm 7.4mm 7.6mm 8.0mm				-17								-24			-6	-1	-		-15	-9				-1	
	Cerametallic 4 Paddle.	7.1mm 7.4mm 7.6mm 8.0mm 8.4mm 8.9mm 7.6mm	OE.			-17		-18						-24			-6	-1	-	32	-15	-9				-1	
	Cerametallic 4 Paddle. CP2583	7.1mm 7.4mm 7.6mm 8.0mm 8.4mm 8.9mm 7.6mm 8.0mm						-18 -13/									-6 -7 -33	-1	-	11	-15	-9				-1	
	Cerametallic 4 Paddle.	7.1mm 7.4mm 7.6mm 8.0mm 8.4mm 8.9mm 7.6mm 8.0mm 8.4mm	OE.	-37	-5	-11	-4	-13 / -18	-13				-5	-17	-15		-6 -7 -33 -3	-1	-	32	-15				-12	-1	
228	Cerametallic 4 Paddle. CP2583 Cerametallic	7.1mm 7.4mm 7.6mm 8.0mm 8.4mm 8.9mm 7.6mm 8.0mm	OE.		-5	-11		-13 / -18	-13	atsun	, / CP2		-5	-17		D to -3	-6 -7 -33 -3	-1	-	32	-15	-6/			-12	-1	
228	Cerametallic 4 Paddle. CP2583 Cerametallic	7.1mm 7.4mm 7.6mm 8.0mm 8.4mm 8.9mm 7.6mm 8.0mm 8.4mm	OE.			-11		-13 / -18	-13	atsun	, / CP2		-5	-17			-6 -7 -33 -3 1. -7	-1	-	32	-15	-6/			-12	-1	
228	Cerametallic 4 Paddle. CP2583 Cerametallic 4 Paddle. CP4216 Cerametallic	7.1mm 7.4mm 7.6mm 8.0mm 8.4mm 8.9mm 7.6mm 8.0mm 8.0mm 8.4mm Comments	OE. CP2394			-11		-13 / -18	-13	atsun	, / CP2		-5	-17		p to -3	-6 -7 -33 -3 1.		-	32	-15	-6/			-12 -10	-1	
228	Cerametallic 4 Paddle. CP2583 Cerametallic 4 Paddle. CP4216	7.1mm 7.4mm 7.6mm 8.0mm 8.4mm 8.9mm 7.6mm 8.4mm 8.4mm 8.4mm Comments 7.4mm	OE. CP2394 Standard	CP2		-11 , Citro -13	ien. / C	-13 / -18 2P2583	-13	atsun	, / CP2		-5	-17 differ		p to -3	-6 -7 -33 -3 1. -7 -3 /		-	32 35	-15	-6/ -31			-	-1	
28	Cerametallic 4 Paddle. CP2583 Cerametallic 4 Paddle. CP4216 Cerametallic	7.1mm 7.4mm 7.6mm 8.0mm 8.4mm 8.9mm 7.6mm 8.4mm 8.4mm Comments 7.4mm 8.4mm	OE. CP2394 Standard	CP2	583-15	-11 , Citro -13	ien. / C	-13 / -18 2P2583	-13	atsun	, / CP2		-5	-17 differ		b to -3	-6 -7 -33 -3 1. -7 -3 /		-	32 35	-15	-6/ -31			-		

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HIGH PERFORMANCE CLUTCH - Driven Plates

 CP4814
 CP4816
 CP5354
 CP6454
 CP2583
 CP4216
 CP3258

 Image: Comparison of the state of t



Sprir	ng Centere	d Organ	ic Drive	en P	late	es																				
Driven	Driven Plate Family Part No.	Driven	Used With Cover.																							
Plate		Plate		10	10	10	10	10	10	10	14	17	18	20	21	21	21	22	23	24	24	24	24	24	25	26
Dia.		Thick's		Splin		ft O.D.																				
(mm)				.875"	1.0"	1.06"	1.12"	29	1.25"	35	25	20	20.4	.875"	24	24.5	29	1.0"	1.0"	24.2	25	25.2	1.0"	25.5	28	1.16"
	CP2257 Organic Non Backed	7.1mm	CP3748 CP3764	-11	-13									-1					-9							
190	CP2642 Organic Non Backed	7.1mm	CP2642									-17		-12												
0	CP2811	7.1mm	CP2811									-16														
200	Organic Non	7.6mm																-77								
	Backed	Comments		CP28	CP2811-9, No crimp. / CP2811-26, Low crimp.																					
	CP5351 Organic Steel Backed.	7.1mm	CP2246 CP2511		-3		-7	-21	-6		-9	-16		-2	-8	-12	-35	-11	-1			-18			-4	
		7.9mm	CP2647 CP3560										-29									-22		-34		
215		Comments			CP5351-10, Opel. / CP5351-20, Saab. / CP5351-2 & -1, Ford. / CP5351-8, Lotus Europa. / CP5351-12, Citroen. / CP5351-11, Volvo. / CP5351-18, Maestro / Montego Turbo. / CP5351-4, Hillman GM.																					
	CP5352 Organic Non Backed.	7.1mm	CP2246 CP2511 CP2647		-1									-4	-6				-5					-10		
	Backed.	Comments			CP5352-5,standard driven plate suitable for CP2246/ CP2511 & CP2647 Cover Assemblies.																					
	CP6452	8.0mm	Standard																-7	-6						
228	Organic Non Backed.	8.6mm	OE																	-17						
		7.4mm						1							1		1		-65		Ì					-68
		8.0mm	CP2345						1	<u> </u>		1							-72		<u> </u>					
240	CP2346 Organic Steel	8.4mm	CP2394 CP3380		-8	-70	-10	-44 / -57	-11	-54	-41			-33	42 / -58	-16	-40		-4 / -45 / -9	-71			-56 / -62			-47
240	Backed.	Comments		44, Ir	volute	Steel ba Renau , Zetec	lt. / CP	2346-	54, XJ	S 6 Sp	peed,	Liste	r Jagu	ar 91 o	n. / C	P2346	i-41, Č	, Dpel. /	CP2340	46-42,	Rena	ault. / C	P2346			
	CP2790	8.4mm	CP2789				-10	1	1						-14				-5		1					
267	Organic Non Backed.	Comments		CP27	, '90-2,	has stif	fer dan	nper s	prings	than C	CP27	90-9 i	s now	obsole	te.											

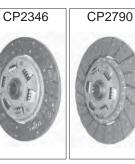














AP

FORMULA CLUTCH KITS - General Information & Application List



INTRODUCTION.

The AP Racing Formula Clutch Kit Range has been specifically designed to meet the demands of modified high performance vehicles, utilising the latest technology developed from our racing clutches.

AP Racing have equipped every Formula One Championship winner, driver and constructor since 1968.

The 'Formula' Clutch Kits comprise a Cover Assembly, Driven Plate, Release Bearing where applicable to ensure that all components required for a performance clutch are to the correct specification. The Formula Clutch Kit Range covers many applications from Ford Focus to Mitsubishi Evo. For more detailed information on Clutch Covers and Driven Plates visit http://www.apracing. com/products/road_car_upgrades/special_ tuning_clutches.aspx

PULL TYPE CLUTCHES.

AP Racing have added two pull type kits to its range for Subaru & Porsche applications (see details opposite). The new clutch kits comprise a heavy duty lug type cover, rigid organic driven plates and flywheel.

COVER ASSEMBLIES.

The Cover Assembly is designed to provide the increased torque capacity that is typically required from modified vehicles. These Cover Assemblies are based on the original equipment designs and can be bolted in place as a direct replacement for the standard cover assembly.

CP2000 SERIES KITS.

The Driven Plates supplied in the CP2000 series Clutch Kits have uprated organic friction facing which retain the progressive engagement characteristics and comfort of a conventional driven plate.

CP2015 SERIES KITS.

The CP2015 series Clutch Kits contain Driven Plates with cerametallic friction pads which are <u>not recommended for road use</u> but can handle the high temperature and energy input typically associated with competition use. Most Driven Plates included in the Formula Clutch Kit Range have a spring centre which contains damper springs to smooth out any torsional fluctuations in the drive line, but for certain applications

AP Racing have added 4 or 6 paddle rigid centre Driven Plates to its kits, these can be identified by the 'R' suffix after the part number and the shading in the table opposite.

RELEASE BEARINGS.

The Release Bearings included in most of the Clutch Kits play an important role in the efficient operation of the clutch and should be replaced whenever a new clutch assembly is fitted.

Application.	Date of Manufacture	Clutch Dia. (mm)	Torque Capacity. Nm (lb/ft)	3 in 1 Clutch Kit Part Number.
FERRARI	1	1	1	1
330 GT / GT 2+2 / GTC >5	65 - 69	-		
365 GT2+2/GTB 4/GTC/GTC + & GT5	72 - 78	240	494 (364)	CP2000-28NB
400 GT.	76 - 85			
FORD ESCORT	70 75	045	070 (000)	000000
Mk1 RS2000 (Pinto). MK2 Mexico (Pinto).	73 - 75 76 - 78	215 215	276 (203) 276 (203)	CP2000-5 CP2000-5
MK2 Mexico (Pinto). MK2 Mexico (Pinto) - 4 Paddle Rigid.	76 - 78	215	276 (203)	CP2000-5 CP2015-5R
MK2 RS1800 (Pinto).	75 - 77	215	276 (203)	CP2013-5K
MK2 RS2000 (Pinto).	75 - 80	215	276 (203)	CP2000-5
			. ,	CP2000-8 /
MK3/4 RS Turbo (See note 'A' below).	3/86 - 7/90 3/86 - 7/90	220	230 (169)	CP2015-8
MK3/4 RS Turbo (See note 'A' below). MK3/4 RS Turbo.	3/86 - 7/90	220 220	310 (230)	CP2000-35 CP2000-15
MK3/4 K3 TUBD. MK3/4 XR3i.	3/86 - 7/90	220	192 (142) 176 (130)	CP2000-15 CP2000-7
MK4 1.6, 16V Zetec.	8/92 - 2/95	220	176 (130)	CP2000-7 CP2000-7
MK4 1.6, 16V Zetec. (105PS).	11/91 - 2/95	220	192 (142)	CP2000-15
Mitt 1.0, 107 Zetec (1051 0).	11/31 - 2/33	220	132 (142)	
RS Cosworth. (CP2015-10 kit has 6 Paddle Sprung D/Plate) & -10R has a 6 Paddle Rigid Plate.	92 - 96	240	476 (351)	CP2000-10 / CP2015-10 / CP2015-10R
FORD FIESTA				
RS Turbo.	8/89 - 2/92	220	192 (142)	CP2000-15
1.6 XR2i.	89 - 2/92	220	176 (130)	CP2000-7
RS Turbo.	8/89 - 2/92	220	230 (169)	CP2000-8 / CP2015-8
XR2. OHC.	86 - 12/88	220	176 (130)	CP2000-7
1.6, 16V Zetec.	8/92 - 8/95	220	176 (130)	CP2000-7
1.8, 16V Zetec (105PS).	2/92 - 1/94	220	192 (142)	CP2000-15
FORD FOCUS				
RS Mk1 (2 in 1 kit only).	2003 -	240	373 (275)	CP2000-33NB / CP2015-33NB
RS Mk2 (2 in 1 Kit). Use with bespoke single mass flywheel available through kalmer union Tel:01494	09/2009 -	240	500 (369)	CP2000-39NB
785508. FORD SAPPHIRE	2011	240		
RS Cosworth and 4 x 4. (CP2015-10 kit has 6				CP2000-10 /
Paddle Sprung D/Plate) & -10R has a 6 Paddle Rigid Plate.	2/90 - 93	240	476 (351)	CP2015-10 / CP2015-10R
FORD SIERRA	1		1	
RS Cosworth and 500. (CP2015 kit has 6 Paddle	1			CP2000-9 /
Sprung D/Plate).	7/86 - 90	240	476 (351)	CP2015-9
HONDA Civic & CRX 1.6, V-Tec, VTi (B16A2Z)	91 - 95	220	245 (181)	CP2000-22NB
CIVIC & CRX 1.0, V-TeC, VTI (B10A22)	91-95	220	245 (161)	
Civic Type R (EP3) .(CP2015-30R kit has a 4 Paddle Rigid D/Plate).	01 - 2005	215	267 (197)	CP2000-30NB / CP2015-30NB / CP2015-30RNB
Integra Type R (DC2) .(CP2015-22R kit has a 4 Paddle Rigid D/Plate).	93 - 2001	220	245 (181	CP2000-22NB / CP2015-22NB /
	I			CP2015-22RNB
LOTUS	00.00	045	400 (110)	
Eclat / Elite 2.2, N.A. Toyota Gearbox.	80 - 82	215 215	192 (142)	CP2000-16NB CP2000-14
Elise.	96 -		240 (177)	
Excel MG	82 -	215	192 (142)	CP2000-16NB
MGB Tourer and GT.	62 - 81	215	224 (165)	CP2000-3NB
MGF 1.8, 1.8VVC.	8/95 - 05			
ZR 120 and 160 1.8VVC.	01 - 05	215	240 (177)	CP2000-14
MITSUBISHI				
Lancer Evo 4 / 5 and 6.	96 -	230	415 (306)	CP2000-19 / CP2015-19
Lancer Evo 7/8/9 and 10. Five & Six speed box.				CP2000-32 / CP2015-32
CP2015-22R kit has a 6 Paddle Rigid DPlate.	01 -	240	620 (457)	/ CP2015-32R
NISSAN	T	1		1
Sunny GTi 2.0, 16V.	92 - 94	215	255 (188)	CP2000-25
Almera GTi 2.0, 16V.	96 -	215	255 (188)	CP2000-25
Primera ZX / GT / SRi 2.0, 16V.	90 -	215	255 (188)	CP2000-25 / CP2015-25
Sunny Pulsar GTiR Turbo.	91 - 94	240	385 (284)	CP2000-23 / CP2015-23
200 SX. Skyline GTR33. (no release bearing in kit).	94 -	240	385 (284)	CP2000-24 / CP2015-24
PORSCHE	90 - 94	240	500 (369)	CP2000-21NB
Classic 911 - 915 Transmission - 6 Bolt flywheel.	73 - 77	215	433 (320)	CP3850-501
Classic 911 - 915 Transmission - 9 Bolt flywheel	78 - 86	215	433 (320)	CP3850-500
ROVER	70.04	0.40	000 (070)	050000 40
Rover V8 / Triumph TR8.	76 - 84	240	366 (270)	CP2000-13
SUBARU	02	220	420 (240)	00000 49 / 000045 40
Impreza Turbo / WRX. Impreza STi. CP2015-31R kit has a 6 Paddle Rigid	93 - 01 -	230 240	420 (310) 460 (339)	CP2000-18 / CP2015-18 CP2000-31 / CP2015-31 & CP2015-31P
D/Plate. Impreza STi Twin Plate. 5 and 6 Speed Gearbox. Interchangeable with CP2000-31 kit.	01 on	228	1000 (737)	& CP2015-31R CP9500-700-N 3 in 1 Kit.
Impreza 22B. (2 Plate Assembly)	99 -	215	480 (350)	CP6082-6GRY
· · ·		-		
NOTE 'A': When purchasing CP2000-8, CP2 fitment to Ford Escort range 1986 onwards			ee reference	

+44 (0)24 7663 9595



AIR JACKS



INTRODUCTION AND GENERAL INFORMATION.
 CP3985 AIR JACKS.
 AIR JACK LANCE AND CONNECTOR.
 AIR JACK SERVICING KITS.
 SAFETY PROPS.

AIR JACK - General Information & CP3985 Air Jacks



INTRODUCTION.

AP Racing Air Jacks are designed to be both lightweight and reliable. The CP3985 Fast Jacks are designed to provide the ultimate in speed and low weight.

Available with or without a built in exhaust valve which can be throttled to adjust speed of descent. A range of accessories including safety props, lances & connectors are also available.

Note:

- CP3985 family replaces CP2985 which is no longer available.

- Information on CP2985 & CP2995 will remain on our website as a guide only.
- CP2995 (79mm Diameter) remains available to special order only.

Do not exceed the recommended operating pressures.

- 30 Bars for CP3985 type.
- 20 Bars for CP2985, CP2995.

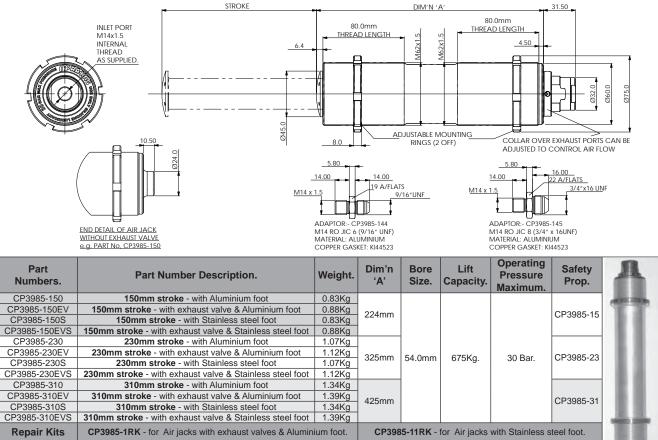
WARNING.

Explosive release of the energy stored in compressed air can be dangerous. Please read the notes below. Jacks & air connections should be examined regularly for signs of damage.

CP3985 SERIES - FAST AIR JACK.

CP3985 is an Aluminium Air Jack that has a compression spring rather than the conventional tension return spring system. This makes the Air Jack faster and more efficient in operation.

Available in 3 stroke lengths with a lift capacity of 675kg at 30 Bar operating pressure (See table below). CP3985 Air jacks are also available with either Aluminium or Stainless steel foots.



Spares Note: The mounting ring CP2820-110 are also available to order separately.

SAFETY, INSTALLATION & USE.

- Never work under a vehicle supported only by Air Jacks unless safety props are fitted.

- Do not use 'U' bolt type clamps as distortion of the body will cause the Air Jack to stick.

Do not loosen or remove adaptor. Jacks must be vertical during operation, Mounting brackets or clamps to be fitted to threaded section of body only.
 Do not use petrol or paraffin for cleaning the Air Jacks as this will damage the rubber seals.

- Use an alcohol based cleaning fluid e.g. Methylated spirit.

- Use only silicone spray or silicone grease when internal lubrication is necessary.

NOTE: CP3985 Air Jack have an M14 female inlet and connections

RECONDITIONING.

AP Racing have introduced two new tool kits to enable the user to recondition their Air Jacks.

CP4985-20 kit contains all tools necessary to recondition all CP3985 Air Jacks. See page 158 for information.

CP4985-10 kit contains all tools necessary to recondition all CP2985 style Jacks. See page 159 for information

AIR JACK - Accessories

CP6116 AIR JACK LANCE AND CONNECTORS.

To complement the range of Air Jacks, AP Racing offer a new lighter lance design (CP6116-15) used with Connector & Valve (CP6116-3) or Connector (CP6116-4). Designed to have high flow and positive operation. The Connector Valve CP6116-3 has a two position valve to release system pressure.

- Maximum operating pressure 40BAR .

N.B. Lance & Connectors are NOT interchangeable with previous CP6006 Series part.

Installation:

- 1. Attach the connector valve assembly to vehicle and link to Air Jacks.
- 2. Attach air line to the lance assembly.

Connecting:

3. With the valve in its open position, offer the lance assembly squarely on to the snap on connector of the valve assembly.

4. Push the lance into place until it latches onto the valve. The valve will close automatically.

Disconnection:

5. Pull the whole lance assembly off the valve. The valve will remain closed and the Air Jacks extended.

Venting The Air Jacks, with CP6116-3 Connector Valve:

6. Open the valve by pulling the operating sleeve fully out.

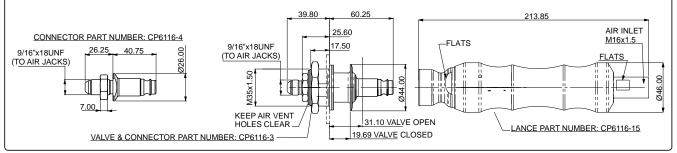
Venting The Air Jacks, with CP6116-4 Connector:

6. As there is no valve, the air will be released as soon as the lance is removed.



Maintenance:

To maintain the lance it is recommended to spray silicone separator. Spray down the nose of the lance and then engage the lance onto the connector for 3 or 4 times to work spray in.



CP3985 TYPE SAFETY PROPS.

These one piece machined from billet aluminium safety devices have been designed to be clipped around the ram of the air jack when fully extended to prevent accidental withdrawal of the ram.

The air jack safety prop has an integral billet handle (where specified) and an anodised surface finish for durability.

Handle fitted to all props except CP3985-15. (Safety Props must be ordered separately)

CP3985-31
 For use with
 CP3985-310 &
 CP3985-310EV

CP3985-23 For use with CP3985-230 & CP3985-230EV

CP3985-15 For use with CP3985-150 & CP3985-150EV



CP2985 TYPE SAFETY PROPS.

These one piece cast aluminium safety devices have been designed to be clipped around the ram of the air jack when fully extended to prevent accidental withdrawal of the ram. The air jack safety prop has an integral cast handle and an epoxy coating finish for durability. (Safety Props must be ordered separately).

P For use with CP2985 -1 & CP2995-1 = CP2985-14.

Property Series 20 For use with CP2985-15 & CP2985-29 = CP2985-17.



CP2985-7 EXHAUST VALVE.

This exhaust valve was designed for CP2985 and CP2995 Air Jacks types which are no longer available.

CP2985-7 Exhaust Valve is supplied in kit form which can be fitted by the customer and to other makes of Air jacks if required.

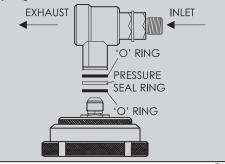
IMPORTANT:

Maximum operating limit = 20Bar

The kit is supplied as a single exhaust valve with two rubber seals and a pressure sealing ring for fitting to CP2985 & CP2995 Air Jack types only. CP3985 Air Jack types have built in exhaust valve

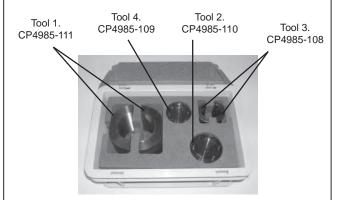
available as an option.

Care should be taken so that the rubber seals are located correctly in the pressure sealing ring when the exhaust valve is screwed down on the male adaptor on top of the Air Jack. The Exhaust Valve should be positioned so that the outlet face is not obstructed and also that the pressure flow of air does not damage anything within the car.



AIR JACK - CP3985 Servicing

CP3985 FAST AIR JACK SERVICING INSTRUCTIONS. CP4985-20 TOOL KIT FOR USE WITH CP3985-1RK & -11RK REPAIR KITS.



DIS-ASSEMBLY INSTRUCTIONS.

1. Hold the Air Jack in a vice using the pair of threaded Body Clamps (Tool 1). Do not over tighten. (See Fig 1.)

2. Locate Pin Tool (Tool 2) into the Bearing Housing holes and unscrew anti-clockwise out of the Air Jack Body using either a Torque spanner and a 21mm socket or using a Tommy bar (not supplied) through the hole in the Pin Tool. (See Fig 1.)

ia 2



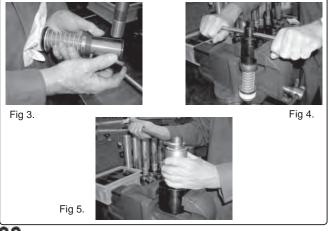
3. Once the Bearing housing is unscrewed completely from the Body, the Air Jack Piston Assembly can be withdrawn from the Body in one piece. (See Fig 2.)

4. If only cleaning and lubrication is to be carried out, then there is no need to dis-assemble the Air Jack further, but if the assembly is to be stripped down for replacement of all Bearings and Seals, then the following instructions apply.

5. Manually slide the Bearing Housing along the Air Jack Ram, compressing the Spring and slip the pair of Ram Clamps (Tool 3) around the Ram and between the Bearing Housing and the foot. Carefully release the Spring load to grip the Clamps. See Fig 3.)

SAFETY NOTICE:- THE PENT UP SPRING FORCE IS POTENTIALLY HAZARDOUS, SO THIS OPERATION SHOULD BE CARRIED OUT WITH GREAT CARE, TO AVOID ACCIDENTS.

6. Hold the assembly in a vice using the Ram Clamps. Do not over tighten.



7. Using Pin Tool (Tool 4) engaged in the holes in the foot, rotate anticlockwise to unscrew the foot from the Ram. (See Fig 4.)

8. Carefully slacken the vice grip to release the assembly, (bearing in mind the safety note above in instruction 5). The Bearing Housing, small Bearing, Spring and Spacer (If fitted) can now be removed from the Piston Assembly.

9. The End Cap can be removed from the Body if necessary, using the Body Clamps (Tool 1) and a spanner applied to the 30mm flats on the Cap. **(See Fig 5.)**

10. Likewise the Inlet Adaptor can be unscrewed from the Cap using standard spanners to access the Valve Seal.

11. The Air Jack is now sufficiently dis-assembled to clean, lubricate and fit replacement parts.

SERVICING AND RE-ASSEMBLY.

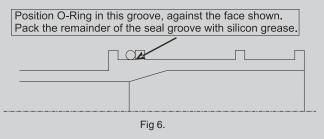
These notes assume that all metal components are in a re-usable condition. If any component is damaged beyond use, then the Air Jack should either be returned to AP Racing for full reconditioning, including replacement of the damaged components, or additional replacement parts will need to be ordered.

1. Remove all 3 O-Rings and the Valve Cup Seal from the Cap, Inlet Adaptor and Piston and remove both plastic Bearings and discard. Make note of the orientation of the Valve Cup Seal, in order to re-assemble correctly later. Thoroughly clean all other metal components. Use an alcohol based cleaning fluid i.e. Methylated Spirit or warm soapy water. **DO NOT USE ANY PETROLEUM BASED CLEANERS AS THESE WILL**

DAMAGE THE RUBBER SEALS.

2. Use the 3 O-rings, the Valve Seal and the two Bearings contained in Repair Kit CP3985-1RK to replace those parts discarded. In order to install the larger Bearing, it will be necessary to split it as shown in the instructions included in the repair kit. The smaller Bearing need not be split to install.

3. There is an O-Ring bonded into a groove in the foot to act as return stop, if this is missing or damaged, then it can be replaced with one from the repair kit. Use a small amount of Loctite 406 to fix the new O-Ring to the foot.



4. Apply Silicon Spray lubricant to the main Bore of the Body and pack the Main O-Ring groove of the piston with Silicon Grease as shown in **(fig 6.)**. Take care not to allow lubricant onto any of the threads that are to be bonded with Loctite.

5. Re-assembly is the exact reverse of the operations listed above.

6. The Foot is to be bonded to the Ram and the Cap is to be bonded into the Body using Loctite 270.

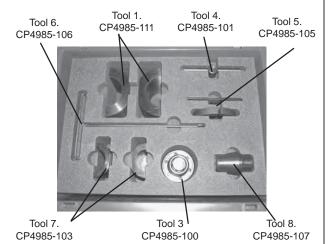
Ensure threads are clean, apply Loctite Activator 7649 and then apply one complete circumferential ring of Loctite to the first turn only of the Male thread. Do not apply excess Loctite.

With the Activator applied, the Loctite will set quickly, so apply the Loctite activator only just prior to threading any pair of parts together. Quickly screw parts together until fully seated, ensuring that any O-Rings are correctly positioned and are not cut. Using the same tools used for dis-assembly, tighten all parts securely. Use a compressed air supply of 5 Bar maximum to check for leaks.

+44 (0)24 7663 9595



CP2985 AIR JACK SERVICING INSTRUCTIONS. CP4985-10 TOOL KIT FOR USE WITH CP2985-1RK REPAIR KIT.



DIS-ASSEMBLY INSTRUCTIONS.

1. Hold the Air Jack in a vice using the pair of threaded Body Clamps (Tool 1). Do not over tighten. (See Fig 1.)

2. Using 2 standard 'C' spanners (Not supplied), lock together a pair of the Air Jacks Mounting Rings supplied with the Air jack. (See Fig 1.)



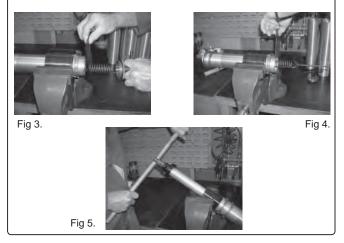
3. Remove from the vice and fit the Cap Clamp (Tool 2) to the knurled Air jack Cap. Locate the Air Jack and Cap Clamp vertically, clamping the Cap Clamp in the vice. (See Fig 2.)

4. Using a 'C' spanner, rotate the lower Mounting Ring anti-clockwise to unscrew the Body from the Cap.

Note:- Approximately every 1/2 turn of the Body, use Pin Tool (Tool 3), located in the Air jack Foot to rotate the Foot clockwise 1/2 turn. This is to prevent the internal Tension Spring being wound up and damaged. Continue for approximately 6 full turns until the Cap thread is fully out of

the Body. The internal Tension Spring will keep the 2 parts pulled together. (See Fig 2.)

5. Remove unit from the vice, take off the Cap Tool and re-locate the unit horizontally in the vice again using the Body Clamps (Tool 1). (See Fig 3.)



6. Screw the 'T' Bar (Tool 4) onto the Air Jack Inlet Adaptor thread. Pull on the 'T' Bar to expose approximately 8 coils of the internal Tension Spring and slide the Spring Trap Plate (Tool 5) over 1 spring coil and against the open end of the Body. (See Fig 3.)

7. Remove the 'T' Bar and unhook the Cap from the Tension Spring. Locate Spring Hook Tool (Tool 6) onto the Tension Spring hook, pull gently to take the spring load and remove the Spring Trap Plate. Carefully release the load to allow the spring fully back inside the Air Jack and remove the Hook Tool. (See Fig 4.)

8. Remove the unit from the vice and pull on the Foot to expose the Air Jack Ram. Fit the pair of Ram Clamps (Tool 7) to the Ram and tighten securely in the vice but do not over tighten. Then clean the Ram first if it is dirty. Fit Pin Tool (Tool 3) onto the Foot and unscrew the Foot anti-clockwise out of the Ram using either a Torque spanner and a 21mm Socket or using a 15mm diameter Tommy Bar (Not supplied) through the hole in the Pin Tool. Pull the Foot and spring out of the Ram. (See Fig 5.)

9. Remove the Inlet Adaptor from the Cap and discard the copper washers.

10. The Bearing Housing is still located in the Body, but no tool is supplied, as it is not necessary to remove it. The small Bearing in the Bearing housing can be replaced in situ.

11. The Air Jack is now sufficiently dis-assembled to clean, lubricate and fit replacement parts.

SERVICING AND RE-ASSEMBLY.

These notes assume that all metal components are in a re-usable condition. If any component is damaged beyond use, then the Air Jack should either be returned to AP Racing for full re-conditioning, including replacement of the damaged components, or additional replacement parts will need to be ordered.

Remove all 3 O-Rings from the Cap, the Piston and the Foot and both plastic Bearings and discard them. Thoroughly clean all other metal components. Use an alcohol based cleaning fluid. i.e. Methylated Spirit or warm soapy water. DO NOT USE ANY PETROLEUM BASED CLEAN-ERS AS THESE WILL DAMAGE THE RUBBER SEALS.

2. Use the 3 O-Rings, the 2 Bearings and the 2 Copper washers contained in Repair Kit CP2985-1RK to replace those parts discarded. In order to install both Bearings, they will need to be split as shown in the illustration included in the repair kit.

3. Apply Silicon Spray lubricant to the main Bore of the Body and pack the Main O-Ring groove of the Piston with Silicon Grease as shown in the illustration below. Take care not to allow lubricant onto any of the threads that are to be bonded with Loctite. (See fig 6.)

4. Re-Assembly is the exact reverse of the operations listed above. Assembly Bullet (Tool 8) is to be engaged in the end of the Ram to aid its re-insertion through the Body and Bearing Housing assembly.

Position O-Ring in this groove, against the face shown. Pack the remainder of the seal groove with silicon grease.
Fig.6

5. The Foot is to be bonded to the Ram and the Cap is to be bonded into the Body using Loctite 270. Ensure threads are clean, apply Loctite Activator 7649 and then apply 1 complete circumferential ring of Loctite to the first turn only of the Male thread.

Do not apply excess Loctite. With the Activator applied, the Loctite will set quickly, so follow the procedure above, only just prior to threading any pair of parts together. Quickly screw parts together until fully seated, ensuring that any O-Rings are correctly positioned and are not cut. Using the same tools used for dis-assembly, tighten all parts securely. Use a compressed air supply of 5 Bar maximum to check for leaks.

MOTORCYCLE PRODUCTS



BRAKE CALIPERS.
 BRAKE PADS.
 MASTER CYLINDERS.
 SIDECAR EQUIPMENT.
 CLASSIC EQUIPMENT SPARE PARTS.
 REPAIR KIT INFORMATION - For discontinued Brake calipers and Master cylinders.

AP RACING MOTORCYCLE PRODUCT

AP Racing currently manufacture a selective range of brake system products for competition and performance road motorcycle. Technical innovations were our hallmark, whether it be, brake caliper or master cylinders and since 1966 you would have found AP Racing pushing braking boundaries.

Here are a few of our achievements.

PURE PEDIGREE. BRAKES.

In 1966 AP Racing introduced the first commercially available racing disc brake system and this was used to great effect by the Tom Kirby Rickman Metisse Team.

■ In 1973 AP Racing disc brakes were used by MV Augusta to win the 500cc World Championship, the first time disc brakes had been used to win a World Championship series.

■ In 1983 AP Racing developed a rim mounted brake, which has only recently been copied by several manufacturers.

In 1988 AP Racing developed the first Carbon/Carbon brake system in conjunction with the Kenny Roberts Lucky Strike Yamaha Team, and in the hands of Wayne Rainey, won first time out at the British Grand Prix. Following this success Carbon Brakes became the standard for Grand Prix Racing.

■ In 1993 AP Racing used Advanced MMC Materials to produce the six piston calipers used by Kevin Schwantz to win the 500cc World Championship for Suzuki.

In 1995 AP Racing developed a lightweight iron brake system for Team Muzzy Kawasaki in the USA and this went on to win the AMA Superbike Championship 2 years in a row.

In 1999 the latest version of the AP Racing Superbike Brake system was used by Troy Bayliss and the GSE INS Ducati team to win the British Superbike Championship.

AP Racing radial brake systems have dominated the Spanish Superbike Championships in recent years, winning in 2002, 2003, 2005, 2006 2007 and 2008.

In 2008 AP Racing returned to the world superbike championship supplying Yamaha France with an all new Aluminium/ Lithium 4 Pad caliper.

 AP Racing continue to be used in many global motorcycle championships.
 Contact AP Racing or a distributor for more information.



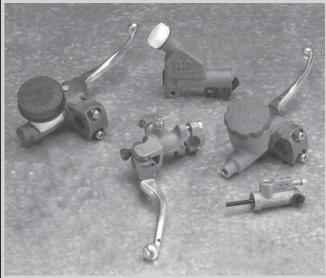


MOTORCYCLE - General Information

AP Racing pushed the boundaries of motorcycle brake system design to new limits with products currently being used in Moto 2, National Superbike and Sidecar Championships.

MASTER CYLINDER.

In 1985 AP Racing introduced the world patented variable ratio master cylinder. This award winning product has become an industry standard. In 2001 AP Racing continued to bring technical innovation to the market with a ground braking / award winning new product. The Dual Bore master cylinder, was developed to provide effective braking with a partially failed system.



PARTNERSHIPS.

Working with many leading manufacturers and teams is the best way to achieve class leading results.

Over many years AP Racing has built relationships with those companies and individuals helping them to succeed by devising bespoke specifications to satisfy their demands.

HELP ON HAND.

AP Racing's motorcycle engineers are on hand to offer practical help and assistance our customers. At our headquarters in Coventry we have a dedicated team of Customer Service personnel, ready to respond to any enquiry.



MOTORCYCLE - Brake Calipers



INTRODUCTION.

For many years AP Racing have been a world leader in the technology and manufacture of motorcycle brake calipers.

Many of the world's premier race series have been won using AP Racing braking systems. With one of the most comprehensive brake caliper ranges available, AP Racing can offer a caliper suitable for most motorcycle applications.

This section provides detailed information on all the brake calipers available in the range plus general information on basic dimensions, servicing and part numbers.

SERVICING & RECONDITIONING.

- Regular examinations and maintenance of brake calipers is essential to maintain safety and efficiency of operation.

- AP Racing recommend that brake calipers should be cleaned with soapy water <u>only</u> as this will not damage any of the rubber components.

- Seal repair kits can be identified by referring to the individual caliper technical specifications on pages 162 to 163. Individual seal part numbers can be found on page 33.

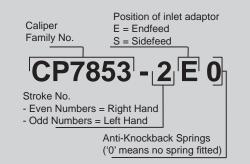
- Replacement seals should be soaked in brake fluid for 30 minutes prior to fitment.

- Other spare parts e.g. pistons and bleed screws are also available.

- AP Racing also offers a complete reconditioning service for its motorcycle calipers.

- For more information please contact AP Racing or your nearest Distributor. Check website for Distributor listing. www.apracing.com/info/stockists.asp

PART NUMBERING EXPLANATION.



CP2696-38E0 2 Piston, Classic Caliper.

TECHNICAL



APPLICATIONS

Solo machines.

Classic machines.

F2 Sidecar.

FEATURES

Classic design.

Aluminium alloy body.

- Machined from high quality die castings.
- Aluminium alloy pistons.
- Hard anodised surface

reatment.

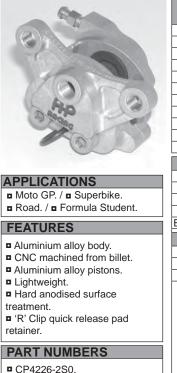
Split pin pad retainer.

PART NUMBERS

■ CP2696-38E0.

SPECIFICATION Piston Sizes x 2 Ø41.3mm Piston Area 26.8cm² **Disc Diameter** Ø304.0mm **Disc Thickness** 6.4mm Weight No Pads 900g 3/8" x 24UNF Hydraulic Thread Mounting Type Lug 89.0mm Mta centres Mtg offset 19.1mm Mtg hole Ø 10.2mm Seal Repair Kit CP4518-K **SPARE PARTS** CP2055 x 1 Piston CP2195-9 x 1 Pad Retainer Split Pin Retainer P/No CP2696-160 CP3720-182 Bleed Screw B/Screw Tightening Torque - 17Nm BRAKE PAD-CP2195D38 Pad Thickness 10.5mm Pad Depth 38.4mm Pad Area 10.5cm² 59.3 (2.34") 0 0 (2.02") 51.1

CP4226-2S0 2 Piston, Rear Caliper.



TECHNICAL					
SPECIFICATI	ON				
Piston Sizes x 2	Ø25.4mm				
Piston Area	10.1cm ²				
Disc Diameter	Ø220.0mm				
Disc Thickness	4.0mm				
Weight No Pads	240g				
Hydraulic Thread	M10x1.0				
Mounting Type	Lug				
Mtg centres	64.0mm				
Mtg offset	26.5mm				
Mtg Thread	M8x1.25				
Seal Repair Kit	CP4518-A				
SPARE PART	S				
Piston	CP4226-103				
Pad Retainer	R/Clip				
Retainer P/No.	CP4226-104				
Bleed Screw	CP4469-101				
B/Screw Tightening	Torque - 5.5Nm				
BRAKE PAD-	CP4226D27				
Pad Thickness	7.0mm				
Pad Depth	26.8mm				
Pad Area	9.4cm ²				
- 39.7 (1.56	") - •				
	<i>•</i>				
	.56				
	39.7 (1.56")				
	39.				
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163

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Calipers

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CP422	27-2S0	CP6	6688
2 x 2, Rea	ar Caliper.	4 Piston, Monobloc F	Radial Mount Calipe
APPLICATIONS  Grand Prix. Superbike. Road.  FEATURES	TECHNICAL         SPECIFICATION         Piston Sizes x 4       Ø25.4mm         Piston Area       20.2cm²         Disc Diameter       Ø220.0mm         Disc Thickness       4.0mm         Weight No Pads       500g         Hydraulic Thread       M10 x 1.0         Mounting Type       Lug         Mtg centres       96.0mm         Mtg offset       26.5mm         Mtg threads       M8 x 1.25         Seal Repair Kit       CP4518-AA         Share PARTS         Piston       CP4226-103         Pad Retainer       R Clip	Applications Moto GP. Moto 2. Superbikes. FEATURES Radial Mount. 4 Piston.	TECHNICAL         SPECIFICATION         Piston Sizes x 4       Ø34.0mm         Piston Area       36.3cm²         Disc Diameter       Ø320.0mm         Disc Thickness       6.0mm         Weight No Pads       650g         Hydraulic Thread       M10 x 1.0         Mounting Type       Radial         Mtg centres       108.0mm         Mtg hole Ø       10.1mm         SPARE PARTS         Piston       CP6688-11         Piston Seals - CP4900-167 x
<ul> <li>Dual circuit caliper designed to allow the use of both a foot and thumb master cylinder.</li> <li>Aluminium alloy body.</li> <li>CNC machined from billet.</li> <li>Low Deflection.</li> <li>Lightweight.</li> <li>Aluminium alloy pistons.</li> <li>Hard anodised surface treatment.</li> <li>rR' Clip quick release pad retainer.</li> </ul>	Pad Retainer     R Clip       Retainer P/No.     CP4226-107       Bleed Screw     CP4469-101       B/Screw Tightening Torque - 5.5Nm       BRAKE PAD-CP4226D27       Pad Thickness     7.0mm       Pad Depth     26.8mm       Pad Area     9.4cm²	<ul> <li>4 Pad.</li> <li>One piece Aluminium Lithium body.</li> <li>CNC machined from forging.</li> <li>Increased caliper stiffness.</li> <li>Low deflection.</li> <li>Designed for steel brake systems.</li> <li>Titanium pistons.</li> <li>Hard anodised surface treatment.</li> </ul> <b>PART NUMBERS</b> <ul> <li>CP6688-8E0M Right Hand.</li> <li>CP6688-9E0M Left Hand.</li> </ul>	Piston Seals - CP4900-167 x Bleed Screw CP4469-11 B/Screw Tightening Torque - 5.5 BRAKE PAD-CP6688D Pad Thickness 10.0mm Pad Depth 28.5mm Pad Area 11.09cm ² 41.00
CP7 4 Piston, 2 Piece, R <b>APPLICATIONS</b> Performance Road. Supermoto. FEATURES Radial mount. Two piece aluminium alloy body.			

**BRAKE PAD-CP4488D27** 

76.3 (3.00")

Ó

9.5mm

27.0mm

18.55cm²

t

40.90 (1.61")

Pad Thickness

Pad Depth

Pad Area

Pad anti-rattle clip fitted.Hard anodised surface

'R' Clip quick release pad

CP7853-2E0 Right Hand.

CP7853-3E0 Left Hand.

PART NUMBERS

treatment.

retainer.

APRACING



# **MOTORCYCLE** - Brake Pads

#### BRAKE PADS.

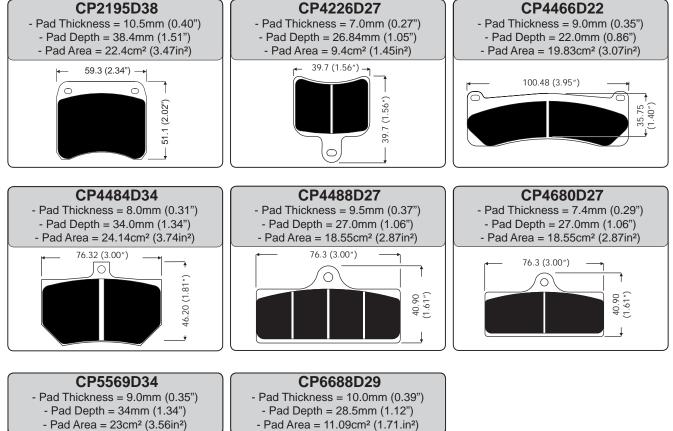
The table below provides information and guidance on the suitability of friction materials available for brake pad profiles from within the AP Racing range. See Brake Pad profiles listed below.

#### **GUIDANCE NOTE:**

Sintered pad materials are generally suitable for stainless steel discs on road applications.

Pad PartNumber.	Material.	Average Friction Mµ.	Thickness.	Caliper Family.	Application.	Typical Use.	
CP2195D38-APH420	SBS Organic	0.39	- 10.5mm	CP2195 / CP2696	Solo Machines Front & Rear	Road	
CP2195D38-M1144	Mintex Organic	0.32	10.500	CF2195/CF2090	F2 Sidecars	Race	
CP4226D27-APH420	CDC Ormania	0.39	7.0				
CP4226D27-RQ3	SBS Organic	0.41	7.0mm	CP4226 / CP4227 /	Solo Rear Brake.	Road / Race	
CP4226D27-RX	Carbon Lorraine Sintered	0.56	7.0mm	CP7003	formula student.	Road / Race	
CP4466D22-RQ3	SBS Organic	0.41	0.0	0.0.0.0	Only Markings Front	Road	
CP4466D22-SRR	SBS Sintered	0.55	9.0mm	CP4466	Solo Machines Front		
CP4484D34-SF	SBS Sintered	0.50			Solo Machines Front	Road	
CP4484D34-RQ3	SBS Organic	0.41	- 8.0	CP4484 / CP3369	Solo Machines Front	Kuau	
CP4488D27-SRR	SBS Sintered	0.55	- 9.5mm	CP4488 / CP7853	Superbike / Formula Extreme	Road / Race	
CP4488D27-CRR	SBS Organic	0.55	9.500	CF4400/CF7000	Superbike / Formula Extreme	Race	
CP4680D27-SRR	SBS Sintered	0.55	- 7.4mm	CP4680	Supermoto Sintered	Race	
CP4680D27-CRR	SBS Organic	0.59	7.4000	CF4000	Supermoto Carbon Ceramic	Race	
CP5569D34-APH420	SBS Organic	0.39	9.0mm	CP5569		Road	
CP6688D29-SRR	SBS Sintered	0.55	- 10.0mm	CP6688	Superbike	Raco	
CP6688D29-CRR	SBS Organic	0.59				Race	
CPFO105D44-APH420	SBS Organic	0.39	9.5mm	Norton Lockheed	Norton Commando	Road	

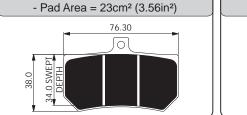
#### NOTE: PAD PROFILE DRAWINGS ARE NOT TO SCALE.

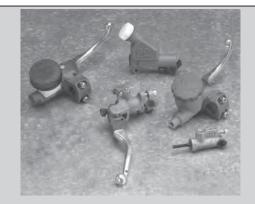


41.0

(1.61")

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#### INTRODUCTION.

The range of AP Racing master cylinders are patented, worldwide state of the art products that are a major advance in brake technology offering the ability to precisely set the braking performance of any motorcycle under all conditions.

CP4125 cylinder has a unique radial pull type design with variable lever ratio and span adjustment which can cater for all hand spans. All AP Racing master cylinders are meticulously manufactured and rigorously tested for the peace of mind of the rider.

#### MASTER CYLINDER RANGE. CP4125

This unique design of pull type handlebar master cylinder provides the user with the ability to adjust the ratio and the lever position as required. The single chamber configuration allows the compact design to weigh only 320grams, and is now non handed to allow it to be used as a clutch master cylinder. This master cylinder is typically used on Moto GP, Superbike as well as Road Applications. Use with remote fluid reservoir (not supplied)

#### CP3125

The original adjustable ratio master cylinder used by GP and Superbike teams in the 80's. Can be used to upgrade any brake system. Available with integral reservoir only.

#### CP3756

This uniquely developed single chamber, pull type rear master cylinder, has been designed for use on all solo motorcycle applications. The pull type configuration allows an exceptionally compact design for ease of installation. Weight 100grams.

#### CP2215

Due to demand CP2215-90 "Classic" master cylinder has been added to the range. The assembly is based on the original CP2215-20 cylinder, but using latest seal technology.

#### CP2232

Due to demand CP2232-90 "Classic" rear master cylinder has been added to the range. The assembly is based on the original CP2232-12 cylinder, but using latest seal technology.

# RECONDITIONING NOTES.

#### CP4325, CP4225.

User reconditioning is limited to replacing lever assemblies. However AP Racing offer a reconditioning service for seal and piston replacement where the use of specialist test equipment is necessary to set up the master cylinder.

#### CP6125, CP4125, CP3125, CP2215 & CP2232

User servicing of these master cylinders is possible and seal repair kits are available.

Obsolete Master Cylinders Seal repair kits are available for master cylinders which are no longer in the range.

#### **IMPORTANT NOTE:**

IF ANY IMPACT IS SUSTAINED ON THE LEVER OR CYLINDER BODY, THE COMPLETE MASTER CYLINDER ASSEMBLY MUST BE SENT BACK TO AP RACING FOR EXAMINATION OR BE REPLACED.

# **MOTORCYCLE** - Master Cylinders

CP4125-26

Adjustable Ratio Master Cylinder.

#### FEATURES.

 Single chamber configuration.
 This unique design of pull type handlebar master cylinder provides the user with the ability to adjust the lever ratio and the lever position in increments as required.

Reverse for use as clutch

master cylinder.

Use with remote fluid reservoir. (Not supplied)

Incremental ratio adjustments. Ratio is 6.88-14.45:1

#### **TYPICAL APPLICATIONS.**

- Grand Prix Machines
- Superbikes.
- Road.

## ASSEMBLY PART NUMBER.

CP4125-26 (17mm to 20mm effective bore)

#### **TECHNICAL SPECIFICATIONS.**

- Weight 304g
   Range Effective bore size 16mm -20mm.
   Actual bore size 22.0mm (0.86")
   Hydraulic Connections
   Outlet thread M10 x 1.0
   Bleed Screw Tightening Torque 5.5Nm (4lbs/ft)
- Bleed Screw rightening forque
   Repair Kit

5.5Nm (4lbs/ft) CP4125-26RK

#### RATIO ADJUSTMENTS GUIDE.

This variable ratio master cylinder has a knurled wheel to adjust the ratio. This adjuster is rotated to increase or decrease the lever ratio.

#### **TECHNICAL SPECIFICATIONS & NOTES.**

• Master Cylinder will be supplied with the wheel adjuster set at position 0 (i.e. with the fulcrum point at end of guide slot in lever, nearest to end of the handlebars, as drawn) at this setting piston travel is at its maximum, which will give best conditions for bleeding the brake system.

Typical working stroke is shown as a guide only, working stroke should be set to riders preference. After initial setting only small adjustments, typically ±1 turn should be necessary to suit differing conditions.

The ratio adjuster wheel has a detent mechanism allowing it to be moved ¼ turn per click. No locking of the mechanism is required. Lever travel will usually increase slightly in dynamic applications over static settings due to disc run-out etc. it is therefore advisable to set lever feel on the hard side for initial test.

• Master Cylinder will be supplied with the lever reach set at the nominal position as drawn. To obtain a longer reach the adjuster should be turned anti-clockwise using the reach adjuster wheel to suit riders preference. Conversely the adjuster can be turned clockwise to give a shorter reach. Adjustments should be made in ¼ turn increments, but should not be set between detents positions. The correct lever reach should be established prior to any adjustment to the lever ratio using the wheel adjuster.

 Outlet fitting is not supplied with assembly as standard, but Tecalamit or Aeroquip are available on request.

To remove lever sub-assembly, take the Master Cylinder off the handlebar, then set wheel adjuster in position 0. Knock out spring and remove the lever reach adjuster wheel. Turn the exposed pull rod clockwise using the 1mm slot in it's end until the lever assembly is disconnected from the pull rod lever sub-assembly will then slide out from the retaining flanges. To replace lever sub-assembly reverse the above procedure.

Important: If any impact is sustained on lever causing a high pressure input to brake system, whole system should be replaced.



_	P312	-		<b>CP3756-4</b>	TYPICAL APPLICA All Solo machines	TIONS.
	ginal Adj Master		r.	Pull Type Rear Master Cylinder.	TECHNICAL SPECIFICATIONS.	
FEATURES The original adjust atio brake mast ylinder can be o up grade any l ystem. Supplied with rral fluid reservot Incremental rat <b>TYPICAL A</b> Historic Grand Road. PART NUM CP3125-2 R/H	stable er used brake inte- bir. tio adjustments <b>PPLICATIO</b> Prix & Superbi	ONS. ike machines		FEATURES. Pull type configuration. - allows for a compact installation. Single chamber, single seal. Aluminium alloy body. Manufactured from high quality castings.	<ul> <li>Weight</li> <li>Effective bore size</li> <li>Actual bore size</li> <li>Stroke</li> <li>Hydraulic Connections         <ul> <li>Push-on inlet</li> <li>Outlet thread</li> </ul> </li> <li>RECONDITIONING SERVICING. For reconditioning / servicin needs to be returned to AP</li> </ul>	g the cylinder
<b>FECHNICA</b> Weight	L SPECIFI			CP2215-90 "Classic" Master Cylinder	TYPICAL APPLICA Classic Racing and Road	
Effective bore s Actual bore siz Hydraulic Conr Outlet thread Bleed Screw Fightening Torqu Repair Kit CP3125-2 CP3125-4 & -5 <b>RATIO ADJ</b> This variable rati adjust the ratio. T he handlebar wit	e 1 nections Je 5 USTMENT io master cylin 'his adjuster is r	iders has a sc moved to and a	") ) rew to away from		TECHNICAL SPECIFICATIONS. • Weight • Actual bore size • Stroke • Hydraulic Connections • Outlet thread • Fluid Reservoir Capacity • When re-filling reservoir re- bellows as flat as possible p	
	DE TO ADJU	1		<b>FEATURES.</b> The original "Classic" master cylinder.	SPARE PARTS Repair Kit	CP5678-1RK
Screw	Braking	Lever Travel Decreased	Lever Feel Harder	<ul> <li>Aluminium alloy body and cap.</li> <li>Suitable for single and twin disc applications.</li> </ul>	Lever Part No	CP2233-18
Adjuster In - Clockwise Out - Anti- Clockwise	Decreased Increased	Increased	Softer	<ul> <li>Integral fluid reservoir.</li> <li>manufactured from high quality castings.</li> <li>Replaces CP2215-20.</li> </ul>		
In - Clockwise Out - Anti- Clockwise	Increased			<ul> <li>Integral fluid reservoir.</li> <li>manufactured from high quality castings.</li> <li>Replaces CP2215-20.</li> </ul>	TYPICAL APPLICA	TIONS.
In - Clockwise Out - Anti- Clockwise <b>FECHNICA</b> <b>&amp; NOTES.</b> Master cylinde uster set at pos pocknut as drawn naximum, which he brake system Typical working poposite) only w preference. After ypically ±½ turn conditions.	Increased L SPECIFI er will be supp ition 0 (i.e. with n) at this settin n will give best n. stroke is show vorking stroke r initial setting of a should be new will usually increased static settings	ICATIONS blied with the shift the adjuster ing piston trave conditions for mas a guide of should be se only small adjucts cessary to suit ease slightly in due to disc run	screw ad- flush with el is at its r bleeding (see table t to riders ustments, it differing n dynamic nout etc.	<ul><li>Integral fluid reservoir.</li><li>manufactured from high quality castings.</li></ul>	<ul> <li>Classic Racing and Road</li> <li>TECHNICAL SPECIFICATIONS.</li> <li>Weight</li> <li>Actual bore size</li> <li>Stroke</li> <li>Hydraulic Connections         <ul> <li>Outlet thread</li> <li>Fluid Capacity</li> </ul> </li> <li>SPARE PART FOR</li> </ul>	Motorcycles. 300g. 15.875mm (0.625") 11.8mm (0.46") 3/8" x 24UNF 35cc
In - Clockwise Out - Anti- Clockwise <b>FECHNICA</b> <b>&amp; NOTES.</b> Master cylinde uster set at pos pocknut as drawn naximum, which he brake system Typical working poposite) only w preference. After ypically ±½ turn conditions.	Increased L SPECIFI ar will be supp ition 0 (i.e. with n) at this settinn n will give best n. stroke is show vorking stroke i initial setting of a should be need iill usually increa- static settings isable to set leve	ICATIONS blied with the shift the adjuster ng piston trave conditions for as a guide ( should be se only small adj cessary to suit ease slightly ir due to disc rur ver feel on the	screw ad- flush with al is at its r bleeding (see table t to riders ustments, it differing n dynamic nout etc. hard side	<ul> <li>Integral fluid reservoir.</li> <li>manufactured from high quality castings.</li> <li>Replaces CP2215-20.</li> <li>CP2232-90</li> <li>"Classic" Rear Master</li> </ul>	<ul> <li>Classic Racing and Road</li> <li>TECHNICAL</li> <li>SPECIFICATIONS.</li> <li>Weight</li> <li>Actual bore size</li> <li>Stroke</li> <li>Hydraulic Connections</li> <li>Outlet thread</li> <li>Fluid Capacity</li> </ul>	Motorcycles. 300g. 15.875mm (0.625") 11.8mm (0.46") 3/8" x 24UNF 35cc

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#### INTRODUCTION

The parts information detailed below is braking equipment for LCR or similar World Championship Sidecar outfits.

These components have been used by the majority of World champions in the last 30 years, including Steve Webster, 10 times World Champion. For further information please contact AP Racing motorcycle section



- Max - Min 1.5Kg Weight (Less Pads) Hydraulic Threads M10 x 1.0 Mounting Radial 120.0mm - centres - offset 40.0mm - hole Ø 10.2mm 'PL' Dimension 50.3mm Seal Repair Kit CP4518-GK Bleed Screw Tightening Torque 17Nm (12.5lbs/ft)

PAD FAMILY - CP3345D38

113.47 (4.47")	52.1 (2.05")
- Pad Area - Pad Depth - Pad Thickness	38.7cm² 38.0mm 16.0mm
SPARE PARTS. Pistons - Ø34.9mm - Ø41.3mm Wear Plates x 4 Bleed Screw	CP7030-108 CP7030-107 CP7030-106 CP3720-173

Fluid Pipe

,	- Max
	- Min
	Mounting
	- Centres
	- Offset
	- 'PL' Dimension
	Mounting Holes Ø
	Hydraulic Threads
	Seal Repair Kit
	Bleed Screw Tightening
	Torque
`	



Fluid Pipe

CP7030-6

#### Non Handed. One piece aluminium alloy body. Hard anodised surface treatment. **TECHNICAL SPECIFICATIONS.** Piston Diameter Disc Diameter

FEATURES.

Derates on solid disc.

Lug mount.



41.3mm x 2

280mm

22.8mm

20.7mm

130.0mm

40.6mm

50.5mm

9.6mm

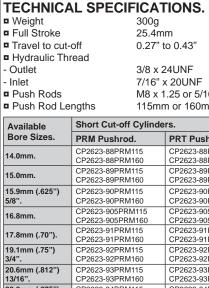
3/8" x

Radial

#### **TECHNICAL SPECIFICATIONS.** 38.1mm x 2

24UNF CP4518-JK 17Nm (12.5lbs/ft)

# PAD FAMILY - CP2340D43.



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	C.	13	E	5
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CP2577-3E0

2 Piston Brake Caliper.



# PAD FAMILY - CP2399D43.

Bleed Screw Tightening Torque

Pad Area	40.4cm ²
Pad Depth	43.1mm
Pad Thickness	15.9mm

#### SPARE PARTS.

Seal Repair Kit

- 1

Pistons R/Clip Pad Retainer Bleed Screw

CP2577-102 CP2213-17 CP3720-182

# **CP2623**

Compact Master Cylinder. This compact flange mounted cylinder is for all brake applications especially where space is restricted.

■ Full Stroke Travel to cut-off Hydraulic Thread - Outlet - Inlet

M8 x 1.25 or 5/16" UNF 115mm or 160mm

Available Bore Sizes.	Short Cut-off Cylinders.		
	PRM Pushrod.	PRT Pushrod.	
14.0mm.	CP2623-88PRM115 CP2623-88PRM160	CP2623-88PRT115 CP2623-88PRT160	
15.0mm.	CP2623-89PRM115 CP2623-89PRM160	CP2623-89PRT115 CP2623-89PRT160	
15.9mm (.625") 5/8".	CP2623-90PRM115 CP2623-90PRM160	CP2623-90PRT115 CP2623-90PRT160	
16.8mm.	CP2623-905PRM115 CP2623-905PRM160	CP2623-905PRT115 CP2623-905PRT160	
17.8mm (.70").	CP2623-91PRM115 CP2623-91PRM160	CP2623-91PRT115 CP2623-91PRT160	
19.1mm (.75") 3/4".	CP2623-92PRM115 CP2623-92PRM160	CP2623-92PRT115 CP2623-92PRT160	
20.6mm (.812") 13/16".	CP2623-93PRM115 CP2623-93PRM160	CP2623-93PRT115 CP2623-93PRT160	
22.2mm (.875") 7/8".	CP2623-94PRM115 CP2623-94PRM160	CP2623-94PRT115 CP2623-94PRT160	
23.8mm (.937") 15/16".	CP2623-95PRM115 CP2623-95PRM160	CP2623-95PRT115 CP2623-95PRT160	
25.4mm (1.00").	CP2623-96PRM115 CP2623-96PRM160	CP2623-96PRT115 CP2623-96PRT160	
Ordering: Select the required cylinder from the part numbers above.E.G. CP2623-94PRM115.			

**MOTORCYCLE** - Classic Equipment Spare Parts

# SPARE PARTS FOR CLASSIC EQUIPMENT ONLY.

# <u>IMPORTANT NOTE:-</u> - Assemblies not available.

# - Listed spares only.

- Available part numbers identified by bold and underlined text.



CP2410-10 - Bore Size 0.70". - Identified by two grooves <u>- Repair Kit CP2410-1RK</u> <u>- Lever CP2233-20</u> CP2215-20 - Bore Size 0.625" (5/8"). - Identified by single groove. <u>- Repair Kit CP2215-20RK</u> <u>- Lever CP2233-20</u>

CP2215-21. Left Hand Clutch Master Cylinders - Bore Size 0.625" (5/8").



<u>- Repair Kit - CP2215-20RK</u> <u>- Lever - CP2233-20</u>

# **REPAIR KIT AND SERVICE INFORMATION.**

Repair kit and service information for recently discontinued Brake Calipers and master cylinders.

#### Brake Calipers Part Numbers.

- CP2195-1002E0 / -1003E0 - CP3369-2E0 / -3E0 - CP4466-12E0 / -13E0 - CP4680-8S0 / -9S0 - CP7003-2S0

#### Master Cylinder Part Numbers.

- CP3125-4 / -5 - CP4125-27 - CP4125-29 - CP4225-2 - CP4325-6 - CP6125-2

- CP6125-4

Repair Kit. CP4518-K (Seal kit) CP4518-DG (Seal Kit) CP4519-ADD (Seal Kit) CP4518-EH (Seal Kit) CP4518-A (Seal Kit)

#### Repair Kit.

CP3125-4RK CP4125-27RK CP4125-29RK Return to AP Racing for overhaul. Return to AP Racing for overhaul. CP4125-26RK CP4125-29RK



CP3179-2 - Bore Size 0.625" - Identified by single groove <u>- Repair Kit CP3179RK</u> <u>- Lever - CP2233-18</u> CP3180-2 - Bore Size 0.70". - Identified by two grooves. - Repair Kit CP3180RK - Lever - CP2233-18

# TRIUMPH TRIDENT CLUTCH.



- Clutch Plate 53273 (CP2599-12) - Diaphragm Spring 75303/16 - (Parts also suitable for BSA Rocket 3)

+44 (0)24 7663 9595





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 AP Racing Technical Section will be pleased to advise on the most suitable equipment for any particular application and can provide more detailed information if required.
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