

# 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 = 920mm<sup>2</sup> (1.426in<sup>2</sup>). - Max Pressure = 8.6N/mm<sup>2</sup> (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).

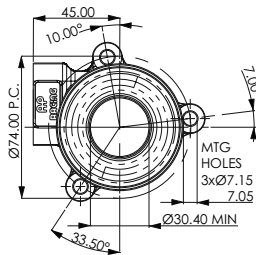


### TECHNICAL SPECIFICATION.

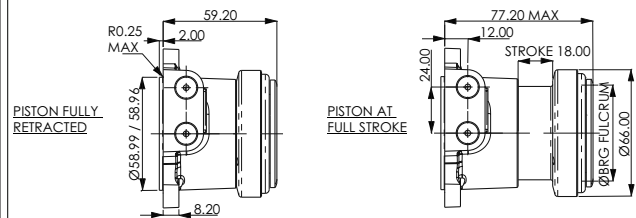
- Weight. - 425g
- Hydraulic threads.- M12x1.0
- Replacement seal kit. CP3759-3
- Hydraulic fitting kits available for -3 or -4 aeroquip:
  - 7/16" (Aluminium adaptor) for - 4 aeroquip - CP3859-15
  - 3/8" (Steel adaptor) for -3 aeroquip - CP3859-16

### PART NUMBERS

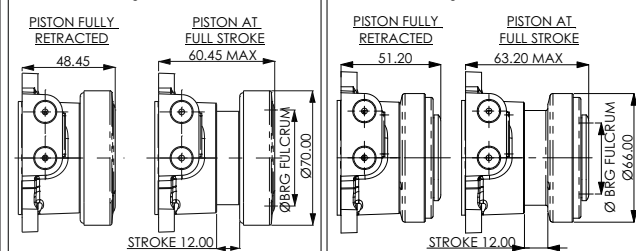
Slave Part Number.	Fulcrum Ø.	Max Stroke.	Bearing.	Bearing Config.
CP3959-38	38.0mm	18.0mm	CP3457-16	1
CP3959-50	50.0mm	18.0mm	CP3457-11	1
CP3959-54	54.0mm	18.0mm	CP3457-6	1
CP3959-1250	50.0mm	12.0mm	CP3457-9	2
CP3959-1254	54.0mm	12.0mm	CP3457-10	2
CP3959-1238-IN	38.0mm	12.0mm	CP3457-16	3



**BEARING CONFIGURATION 1:** The bearing is housed in the piston via the outer race with the inner race rotating. This is more suitable for high speed applications.



**BEARING CONFIGURATION 2:** The bearing is housed on the piston via the inner race with the outer race rotating. The stroke has been shortened so as to reduce the overall length.



Note: Drawing for guidance only. Download latest issue installation drawing from [www.apracing.com](http://www.apracing.com)

## 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.

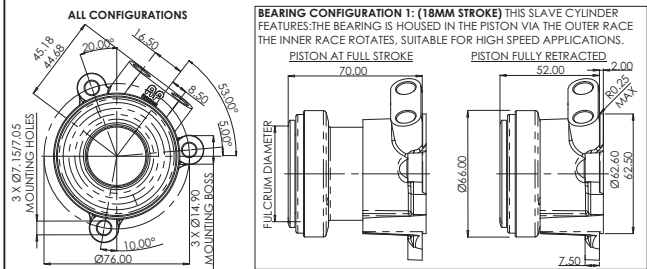


### TECHNICAL SPECIFICATION.

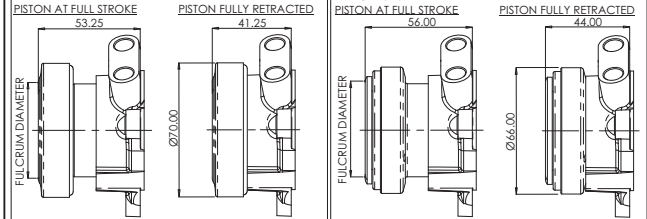
- Weights - CP6859-XX - 361g / -12XX - 257g / -12XX-IN - 346g
- Hydraulic threads.- M10x1.0
- Replacement seal kit. CP3759-3
- Hydraulic fitting kits available for -3 or -4 aeroquip:
  - Hydraulic fitting kit (Steel adaptor 7/16" '-4') CP3759-6.
  - Hydraulic fitting kit (Steel adaptor 3/8" '-3') CP3759-5.

### PART NUMBERS

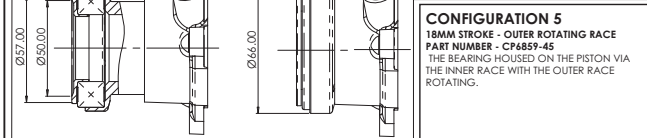
Slave Part Numbers.	Fulcrum Ø.	Max Stroke.	Bearing.	Bearing Config.
CP6859-14	Flat	18.0mm	CP3457-22	4
CP6859-38	38.0mm	18.0mm	CP3457-16	1
CP6859-45-IN	45.0mm	18.0mm	CP3457-19	1
CP6859-50	50.0mm	18.0mm	CP3457-11	1
CP6859-54	54.0mm	18.0mm	CP3457-6	1
CP6859-1245	45.0mm	12.0mm	CP3457-19	2
CP6859-1250	50.0mm	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
CP6859-45	45.0mm	18.0mm	CP3457-19	5



**REDUCED LENGTH- OUTER RACE ROTATING BEARING CONFIGURATION 2 (12MM STROKE)** - THIS SLAVE CYLINDER FEATURES: A SHORTENED STROKE SO AS TO REDUCE THE OVERALL LENGTH. THE BEARING HOUSED ON THE PISTON VIA THE INNER RACE WITH THE OUTER RACE ROTATING.



**REDUCED LENGTH - INNER ROTATING RACE BEARING CONFIGURATION 3 (12MM STROKE)** - THIS SLAVE CYLINDER FEATURES: A SHORTENED STROKE SO AS TO REDUCE THE OVERALL LENGTH. THE BEARING HOUSED IN THE PISTON VIA THE OUTER RACE. THE INNER RACE ROTATES, SUITABLE FOR HIGH SPEED APPLICATIONS.

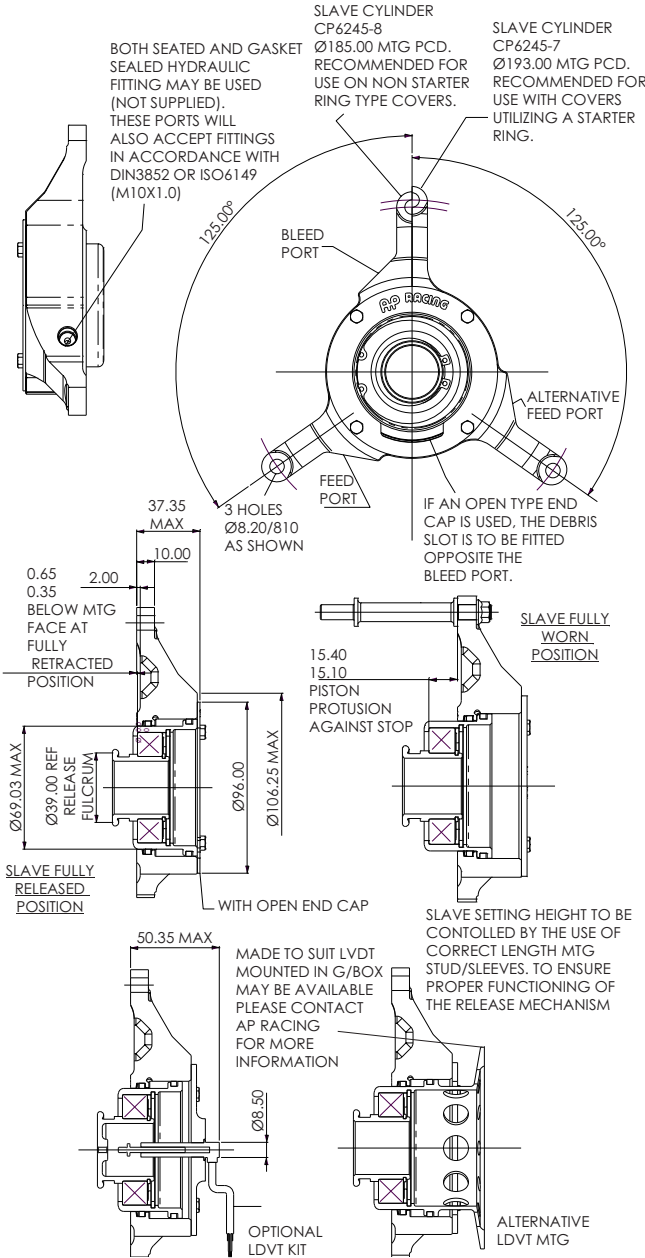


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CLUTCH SLAVE CYLINDERS - Pull Type & Power Actuator

**CP6245 CONCENTRIC SLAVE CYLINDER.**

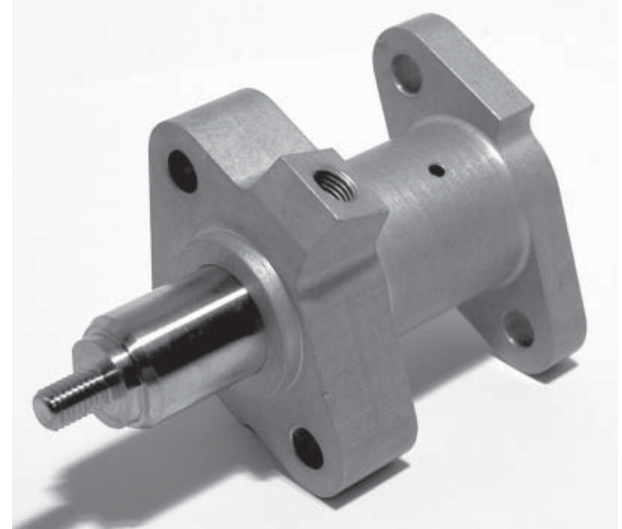
The CP6245 cylinder has been designed to mount over the clutch. The aluminium body has a special hard wearing, low friction coating to minimise seal wear. The seals are resistant to high temperatures and utilise a scrapper ring.



Note: Drawing for guidance only. Download latest issue installation drawing from [www.apracing.com](http://www.apracing.com)

Specifications.	Part Numbers.	
	CP6245-7	CP6245-8
Assembly Mounting PCD.	Ø193.00	Ø185.00
Stroke.	15.70 ±0.25mm	
Weight.	753g	
X-Sectional Area.	910.90mm <sup>2</sup> (1.411sq <sup>2</sup> )	
Effective Bore Diameter.	34.06mm (1.341")	
Max Input Pressure.	6.9N/mm <sup>2</sup> (1000psi)	
Hydraulic Fluid.	AP551	
Hydraulic Threads.	M10 x 1.0	
Slave Cylinder Seal Repair Kit.	CP3749-3	
Replacement Release Bearing.	CP3457-12	
Clutch LDVT Kit.	CP3749-7	
Replacement Sensor	CP3749-6	

**CP7950 HYDRAULIC POWER ACTUATOR.**



This power actuator is designed to be used in conjunction with an electronic control power hydraulic system (e.g. Paddle Shift) to operate the clutch. It is fitted between the clutch pedal and a standard master cylinder and allows manual operation using the clutch pedal if required.

**Note; CP7950 uses mineral oil seals.**

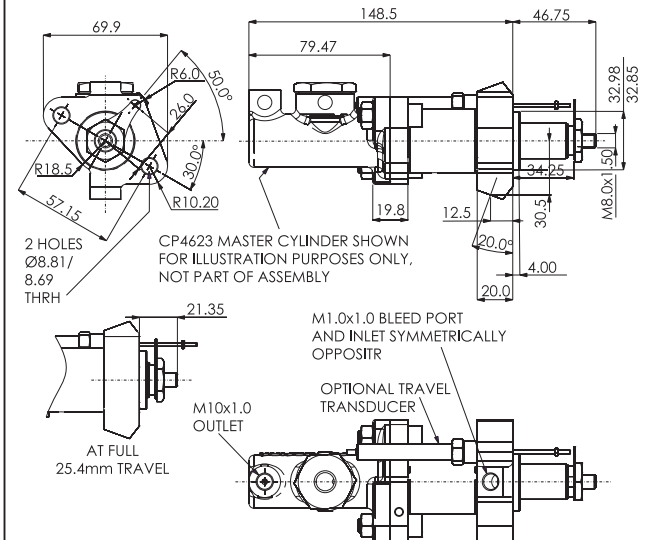
**PART NUMBERS.**

- CP7950-6 (Without CP4623-88NC Master Cylinder).
- CP7950-5 (With CP4623-88NC Master Cylinder included).

**TECHNICAL SPECIFICATION.**

- Weight. 397g
- Full Stroke. 25.4mm (1.0")
- Effective Piston Area. 178.0mm<sup>2</sup>
- Hydraulic Threads. M10x1.0 Inlet  
M10x1.0 Bleed Port
- Body Material. Aluminium Alloy
- Optional Extra Details. Sensor:
- Linear Potentiometer
- Full electrical stroke 30mm
- Note: Only approx 26.0mm stroke is utilised in this configuration.
- Resistance 1.2 KOhm
- Independent Linearity 0.25%
- Applied Voltage 26Vdc.

**INSTALLATION DRAWING**



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