

STEEL CONSTRUCTION (PC)
STAINLESS STEEL CONSTRUCTION (PS)

SERIES **PC** **PS**

HEAVY DUTY PNEUMATIC CYLINDERS
BORE SIZE: 1 1/2" - 14" • RATING: 250 PSIG (1700 kPa)



CONTRÔLE

SERIES PC

STEEL CONSTRUCTION

CONSTRUCTION

THE MATERIALS USED TO MANUFACTURE RDC CONTROL CYLINDERS ARE SELECTED FROM THE BEST QUALITY AVAILABLE. EACH MANUFACTURED COMPONENT IS MADE WITH THE LATEST SOPHISTICATED PRECISION EQUIPMENT. EACH CYLINDER IS ASSEMBLED AND INDIVIDUALLY TESTED UNDER STRICT QUALITY CONDITIONS.

PISTON PACKINGS

Pressure sensitive double lip seals for better sealing and durability.

CYLINDER BARREL

D.O.M. heavy wall steel tubing with a polished chrome plated interior for better durability.

TIE RODS AND NUTS

High strength steel barstock along with zinc plated steel nuts (Grade 5).

HEAD & CAP

Numerically controlled machined, from hot rolled steel plates ASTM A36 or better.

CUSHION PLUNGER

Free floating to allow for proper centering. Made from mild steel.

GLAND BUSHING

Cartridge type, made from Bronze SAE 660. Seals can be replaced without dismantling the cylinder.

BARREL SEAL

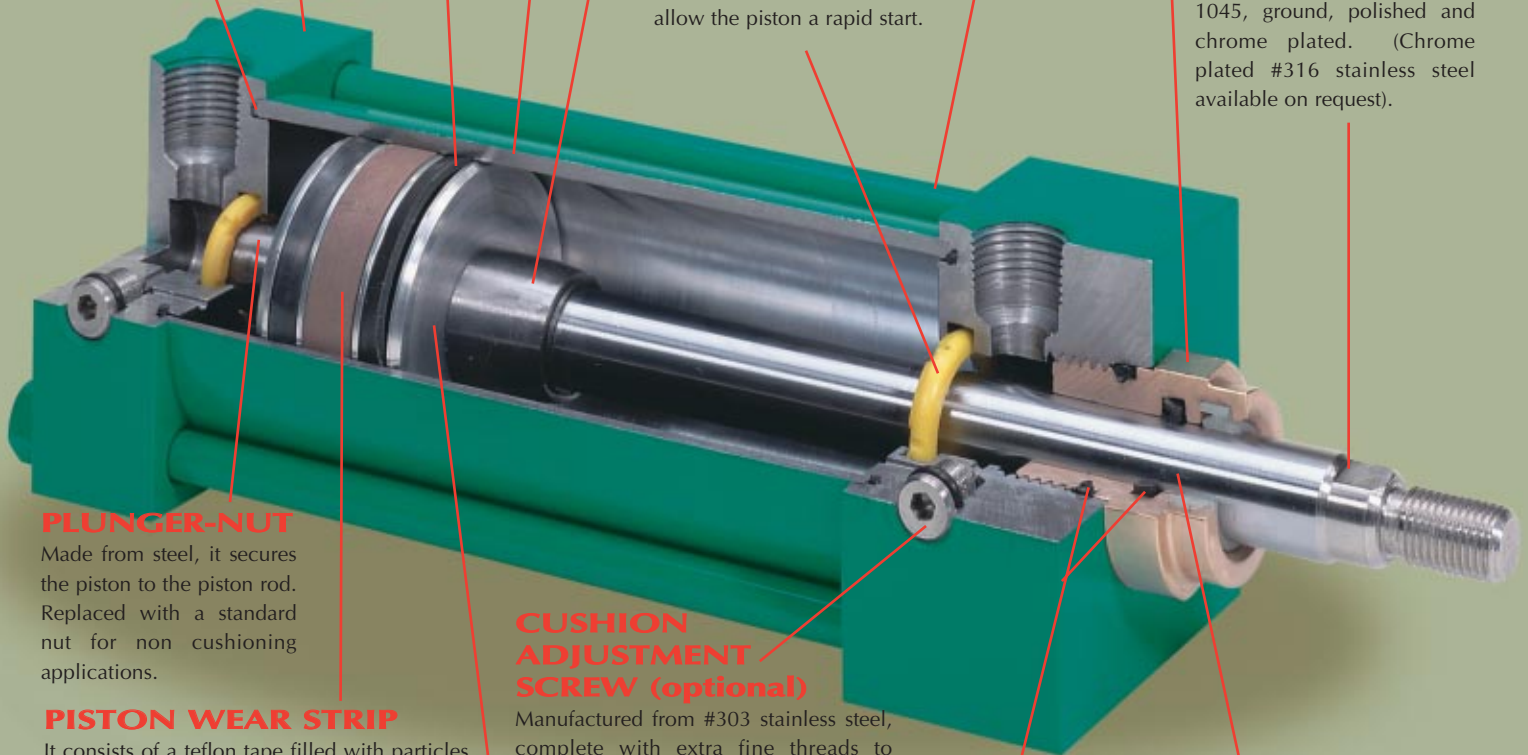
A nitrile "O" RING.

CUSHION SEAL (optional)

A floating urethane seal that also serves as a check valve, to allow the piston a rapid start.

PISTON ROD

High carbon content steel SAE 1045, ground, polished and chrome plated. (Chrome plated #316 stainless steel available on request).



PLUNGER-NUT

Made from steel, it secures the piston to the piston rod. Replaced with a standard nut for non cushioning applications.

PISTON WEAR STRIP

It consists of a teflon tape filled with particles of glass and bronze, for smoother piston operation.

PISTON

Bore size from 3 1/4 to 8": Numerically controlled machined, from high strength aluminum barstock (6061-T6).

Bore size from 10" to 14": Made from high quality steel.

CUSHION ADJUSTMENT SCREW (optional)

Manufactured from #303 stainless steel, complete with extra fine threads to obtain precise adjustment.

SEALS AND PACKING

"U" CUP and "O" RING used for added security. A high durometer nitrile material is offered as a standard for a temperature rating from -34°C to 80°C (-30°F to 180°F). For temperature ranges of up to 250°C (450°F), fluorocarbon (viton) seals and packings are available.

ROD WIPER

Stops dust and other particles from entering into the cylinder. Standard material is polyurethane. It can be replaced by fluorocarbon (viton) for higher temperature applications.

SERIES PS

STAINLESS STEEL CONSTRUCTION

CONSTRUCTION

THE PS SERIES CYLINDER IS MANUFACTURED UNDER THE SAME CONDITIONS AS THE PC SERIES. THE STAINLESS STEEL CONSTRUCTION AIDS IN RESISTING CHEMICAL CORROSION.

CYLINDER BARREL

Heavy walled 316 stainless steel tube that has a polished chromed interior.

HEAD AND CAP

Numerically controlled machined, from hot rolled 316L stainless steel plates.

PLUNGER-NUT

Made from steel, it secures the piston to the piston rod. Replaced with a standard nut for non-cushioning applications.

TIE RODS AND NUTS

High strength 303 stainless steel along with stainless steel nuts.

BARREL SEAL

A nitrile "O" ring

CUSHION SEAL

A floating urethane seal that also serves as a check valve, to allow the piston for a rapid start.

PISTON PACKINGS

Pressure sensitive double lip seals for better sealing and durability.

GLAND BUSHING

Cartridge type made from delrin. Seals can be replaced without dismantling the cylinder.

PISTON ROD

Made from polished chrome plated stainless steel #316.

ROD WIPER

Stops dust and other particles from entering into the cylinder. Standard material is polyurethane. It can be replaced by fluorocarbon (viton) for higher temperature applications.

CUSHION ADJUSTMENT SCREW

Manufactured from #303 stainless steel, complete with extra fine threads to obtain precise adjustment.

SEALS AND PACKING

"U" CUP and "O" RING used for added security. A high durometer nitrile material is offered as a standard for a temperature rating from -34°C to 80°C (-30°F to 180°F). For temperature ranges of up to 250°C (450°F), fluorocarbon (viton) seals and packings are available.

PISTON WEAR STRIP

It consists of a teflon tape filled with particles of glass and bronze, for smoother piston operation.

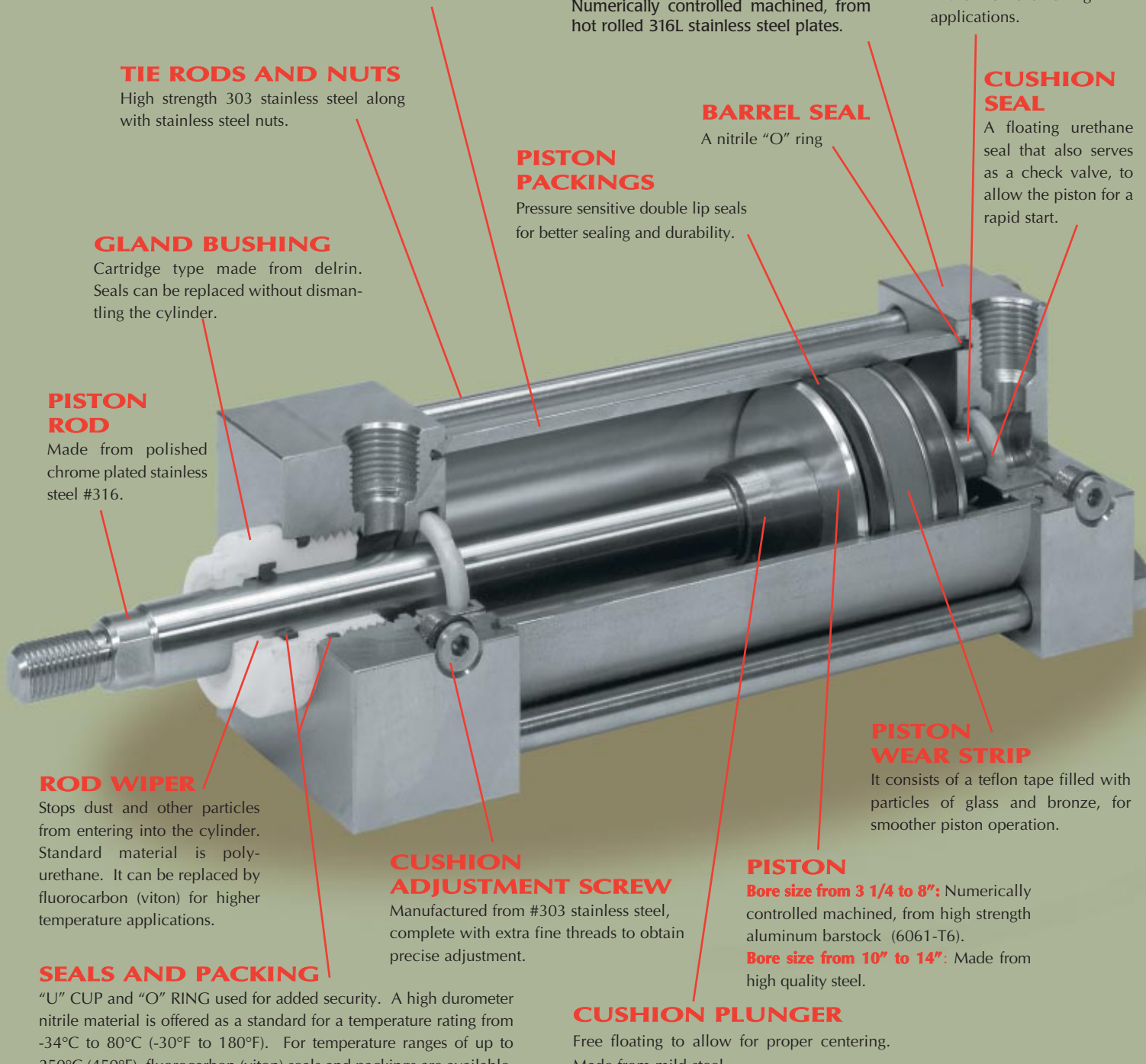
PISTON

Bore size from 3 1/4 to 8": Numerically controlled machined, from high strength aluminum barstock (6061-T6).

Bore size from 10" to 14": Made from high quality steel.

CUSHION PLUNGER

Free floating to allow for proper centering. Made from mild steel.



SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS

FEATURES

Integrated check cushion seal

The optional cushion seals provided with the PC and PS Series cylinders are one piece units which allow both radial and axial floating, to eliminate alignment problems. Their double action feature also eliminates the need for a check valve which requires constant maintenance.

At the end of a stroke, this cushion seal permits air to exit through the needle valve orifice only (fig.1).

On the return stroke, the cushion seal allows air to pass behind the piston thus obtaining a much more rapid return. (fig. 2)

The RDC Control needle valve is designed with extra fine threads (UNEF) to obtain an easy and precise adjustment. These needle valves are normally situated on side no. 2 of the cylinder. In the case of trunion mounting (T1, T2 and T3), the needle valve is positioned on side no. 3 of the cylinder.

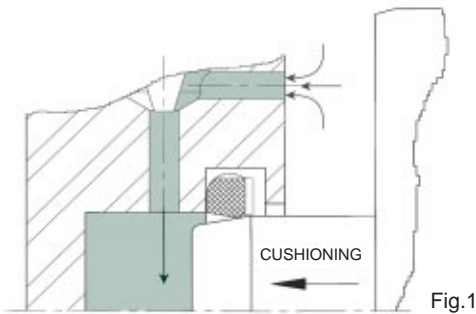


Fig.1

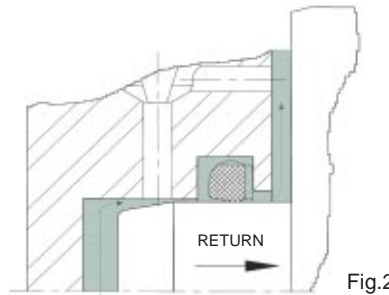


Fig.2

BORE	ROD DIA.	HEAD	CAP
1 1/2	5/8 STD.	11/16	3/4
	1	11/16	3/4
2	5/8 STD.	11/16	3/4
	1	11/16	3/4
2 1/2	5/8 STD.	11/16	3/4
	1	11/16	3/4
3 1/4	1" STD.	15/16	15/16
	1 3/8	15/16	15/16
4	1" STD.	15/16	15/16
	1 3/8	15/16	15/16
5	1" STD.	15/16	15/16
	1 3/8	15/16	15/16
6	1 3/8 STD.	1 3/16	1 1/8
	1 3/4	1 3/16	1 1/8
7	1 3/8 STD.	1 3/16	1 1/8
	1 3/4	1 3/16	1 1/8
8	1 3/8 STD.	1 3/16	1 1/8
	1 3/4	1 3/16	1 1/8
10	1 3/4 STD.	1 1/4	1 1/2
	2 1/2	1 1/4	1 1/2
12	2" STD.	1 1/4	1 1/2
	3	1 1/4	1 1/2
14	2 1/2 STD.	1 1/2	1 3/4
	3 1/2	1 1/2	1 3/4

Standard piston wear strip

All standard pistons on PC and PS Series pneumatic cylinders are equipped with a bronze and glass impregnated teflon wear band. In addition to giving the piston a more secure fit, the self lubricating feature protects the interior surface and adds to the life of the cylinder.

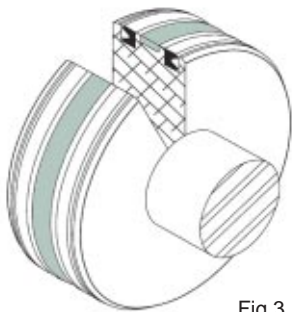


Fig.3

Cartridge type gland bushing

The gland bushing of the PC and PS Series cylinders is designed for easy removal, thus allowing easy seal maintenance without dismantling the entire cylinder. For piston rod diameters less than or equal to 1 3/4", a simple wrench may be used. (fig. 4)

For piston rod diameters greater than 1 3/4", the non-threaded glandbushing is held in place with a removable bolted-on plate. (fig. 5)

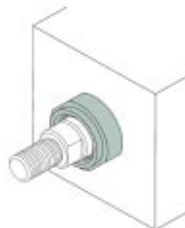


Fig.4

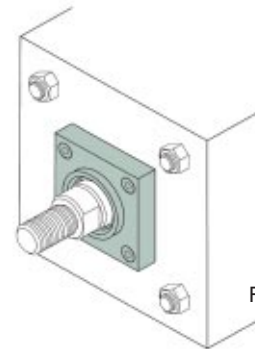


Fig.5

Other options available

The PC and PS Series of pneumatic cylinders can be adapted to a wide range of options and accessories to meet your specific needs. Consult our factory to find out about the options and accessories mentioned below, or about other special applications.

Options

- Multi stage cylinder (Duplex, Tandem)
- Double rod cylinder
- Spring return cylinder
- Water operated cylinder
- Stroke adjustment device
- Protective rod boot
- Piston rod scraper
- High temperature seals
- SAE "O" RING ports
- Fiberglass body

Accessories

- Mounting accessories (see p. 13)
- Self-alignment rod coupler
- Manual control valve
- Solenoid valve
- Flow control
- Proximity switches
- Limit switches
- Pneumatic or electro-pneumatic positioner
- Position transducers

SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS

FEATURES

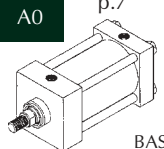
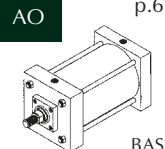
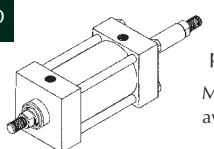
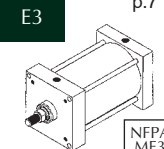
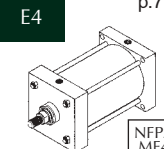
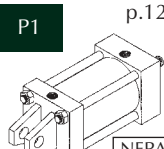
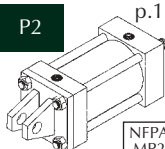
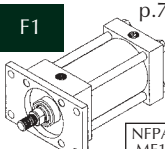
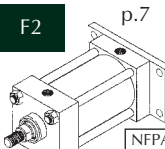
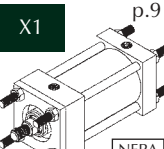
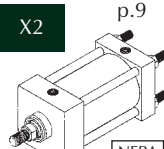
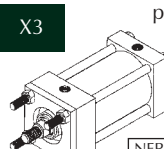
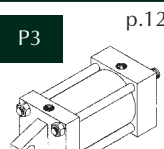
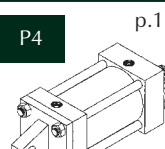
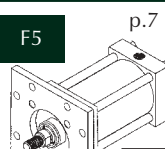
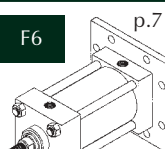
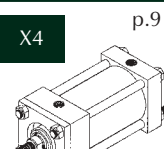
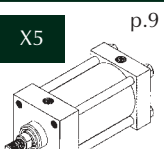
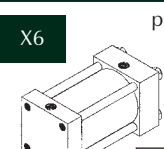
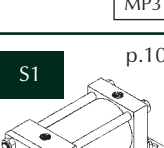
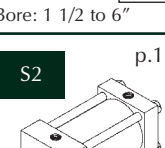
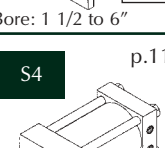
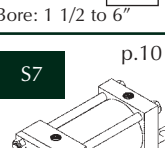
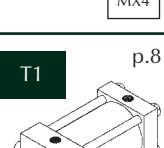
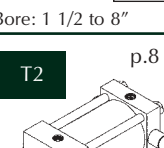
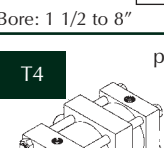
S Standard

O Optional

	PC Serie	PS Serie
Heavy duty type cylinder conforms to N.F.P.A. and ANSI B93.15 - 1981 specifications	S	S
Rated pressure	1700kPa (250 psi)	1350kPa (200 psi)
Fluid: filtered and lubricated air	S	S
Construction: square head and tie rod design	Steel	Stainless steel
Gland bushing : cartridge type	Bronze	Delrin
Packings and seals: polyurethane/nitrile (for temperatures from -34°C to 80°C (-18°F to 180°F))	S	S
Packings and seals: fluorocarbon (viton) (for temperatures from -20°C to 250°C (-10°F to 450°F))	O	O
Wear strip: glass/bronze reinforced teflon	S	S
Bore sizes*	1 1/2 to 14"	1 1/2 to 14"
Piston rod diameters*	5/8 to 3 1/2"	5/8 to 3 1/2"
Stroke length up to 3000 mm (120")	S	S
Rod end types *	3	3
Adjustable cushions with built in check **	O	O
Mounting styles +	20	20

* Other sizes available on request + Special types also available on request **Non available head end 1 1/2 bore x 1" rod

STANDARD MOUNTING STYLES

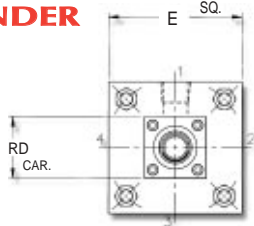
 <p>A0 p.7</p> <p>BASE *Rod dia. 5/8 to 1 3/4</p>	 <p>AO p.6</p> <p>BASE Rod dia. 2" and up</p>	 <p>AOD p.12</p> <p>Most of the mounting styles are available in double rod cylinders</p>	 <p>E3 p.7</p> <p>NFPA ME3 Bore: 7" and up</p>	 <p>E4 p.7</p> <p>NFPA ME4 Bore: 7" and up</p>		
 <p>P1 p.12</p> <p>NFPA MP1</p>	 <p>P2 p.12</p> <p>NFPA MP2 Bore: 1 1/2 to 6"</p>	 <p>F1 p.7</p> <p>NFPA MF1 Bore: 1 1/2 to 6"</p>	 <p>F2 p.7</p> <p>NFPA MF2 Bore: 1 1/2 to 6"</p>	 <p>X1 p.9</p> <p>NFPA MX1</p>	 <p>X2 p.9</p> <p>NFPA MX2</p>	 <p>X3 p.9</p> <p>NFPA MX3</p>
 <p>P3 p.12</p> <p>NFPA MP3</p>	 <p>P4 p.12</p> <p>NFPA MP4 Bore: 1 1/2 to 6"</p>	 <p>F5 p.7</p> <p>NFPA MF5 Bore: 1 1/2 to 6"</p>	 <p>F6 p.7</p> <p>NFPA MF6 Bore: 1 1/2 to 6"</p>	 <p>X4 p.9</p> <p>NFPA MX4</p>	 <p>X5 p.9</p> <p>NFPA MX5 Bore: 1 1/2 to 8"</p>	 <p>X6 p.9</p> <p>NFPA MX6 Bore: 1 1/2 to 8"</p>
 <p>S1 p.10</p> <p>NFPA MS1</p>	 <p>S2 p.11</p> <p>NFPA MS2</p>	 <p>S4 p.11</p> <p>NFPA MS4</p>	 <p>S7 p.10</p> <p>NFPA MS7</p>	 <p>T1 p.8</p> <p>NFPA MT1</p>	 <p>T2 p.8</p> <p>NFPA MT2</p>	 <p>T4 p.8</p> <p>NFPA MT4</p>

SERIES PC PS

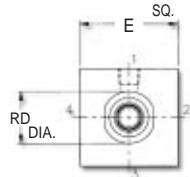
HEAVY DUTY PNEUMATIC CYLINDERS

BASIC CYLINDER

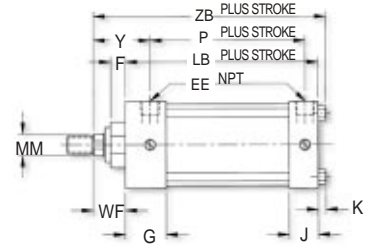
AO



ROD DIA. 2" AND UP

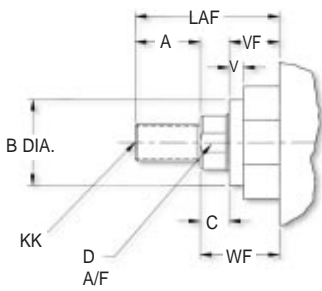


ROD DIA.: 5/8" TO 1 3/4"

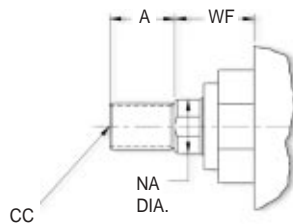


BORE SIZE	MM ROD DIA.	E	EE	F	G	J	K	LB	P	RD	WF	Y	ZB	MM ROD DIA.	BORE SIZE
1 1/2	5/8 STD. 1	2	1/4*	3/8	1 1/2	1	1/4	3 5/8	2 1/4	1 3/8	1	1 15/16	4 7/8	5/8 STD.	1 1/2
	1 3/4									1 3/8	2 5/16	5 1/4	1		
2	5/8 STD. 1	2 1/2	3/8	3/8	1 1/2	1	5/16	3 5/8	2 1/4	1 3/8	1	1 15/16	4 15/16	5/8 STD.	2
	1 3/4									1 3/8	2 5/16	5 5/16	1		
2 1/2	5/8 STD. 1	3	3/8	3/8	1 1/2	1	5/16	3 3/4	2 3/8	1 3/8	1	1 15/16	5 1/16	5/8 STD.	2 1/2
	1 3/4									1 3/8	2 5/16	5 7/16	1		
3 1/4	1" STD. 1 3/8	3 3/4	1/2	5/8	1 3/4	1 1/4	3/8	4 1/4	2 5/8	1 3/4	1 3/8	2 7/16	6	1" STD.	3 1/4
	2 7/16									1 5/8	2 11/16	6 1/4	1 3/8		
4	1" STD. 1 3/8	4 1/2	1/2	5/8	1 3/4	1 1/4	3/8	4 1/4	2 5/8	1 3/4	1 3/8	2 7/16	6	1" STD.	4
	2 7/16									1 5/8	2 11/16	6 1/4	1 3/8		
5	1" STD. 1 3/8	5 1/2	1/2	5/8	1 3/4	1 1/4	1/2	4 1/2	2 7/8	1 3/4	1 3/8	2 7/16	6 3/8	1" STD.	5
	2 7/16									1 5/8	2 11/16	6 5/8	1 3/8		
6	1 3/8 STD. 1 3/4	6 1/2	3/4	3/4	2	1 1/2	1/2	5	3 1/8	2 7/16	1 5/8	2 13/16	7 1/8	1 3/8 STD.	6
	2 13/16									1 7/8	3 1/16	7 3/8	1 3/4		
7	1 3/8 STD. 1 3/4	7 1/2	3/4	3/4	2	1 1/2	5/8	5 1/8	3 1/4	2 7/16	1 5/8	2 13/16	7 3/8	1 3/8 STD.	7
	2 13/16									1 7/8	3 1/16	7 5/8	1 3/4		
8	1 3/8 STD. 1 3/4	8 1/2	3/4	3/4	2	1 1/2	5/8	5 1/8	3 1/4	2 7/16	1 5/8	2 13/16	7 3/8	1 3/8 STD.	8
	2 13/16									1 7/8	3 1/16	7 5/8	1 3/4		
10	1 3/4 STD. 2 1/2	10 5/8	1	3/4	2 1/4	2	3/4	6 3/8	4 1/8	2 13/16	1 7/8	3 1/8	9	1 3/4 STD.	10
	4									2 1/4	3 1/2	9 3/8	2 1/2		
12	2" STD. 3"	12 3/4	1	3/4	2 1/4	2	3/4	6 7/8	4 5/8	4	2	3 1/4	9 5/8	2" STD.	12
	5									2 1/4	3 1/2	9 7/8	3"		
14	2 1/2 STD. 3 1/2	14 3/4	1 1/4	3/4	2 3/4	2 1/4	7/8	8 1/8	5 1/2	4	2 1/4	3 13/16	11 1/4	2 1/2 STD.	14
	5									2 1/4	3 13/16	11 1/4	3 1/2		

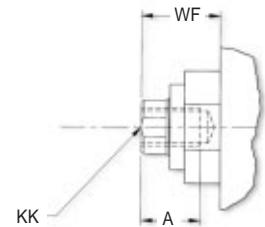
* NFPA standards should be 3/8



STYLE #1 SMALL MALE



STYLE #2 INTERM. MALE

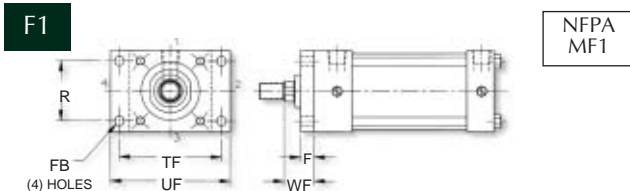


STYLE #4 FEMALE

BORE SIZE	MM ROD DIA.	KK UNF	CC UNF	A	B	C	D	NA	LAF	V	VF	WF
1 1/2 - 2 - 2 1/2	5/8 STD.	7/16 - 20	1/2 - 20	3/4	1.124	3/8	1/2	9/16	1 3/4	1/4	5/8	1
	1	3/4 - 16	7/8 - 14	11/8	1.499	1/2	7/8	15/16	2 1/2	1/2	7/8	1 3/8
3 1/4 - 4 - 5	1" STD.	3/4 - 16	7/8 - 14	11/8	1.499	1/2	7/8	15/16	2 1/2	1/4	7/8	1 3/8
	1 3/8	1 - 14	1 1/4 - 12	15/8	1.999	5/8	1 1/8	1 5/16	3 1/4	3/8	1	1 5/8
6 - 7 - 8	1 3/8 STD.	1 - 14	1 1/4 - 12	15/8	1.999	5/8	1 1/8	1 5/16	3 1/4	1/4	1	1 5/8
	1 3/4	1 1/4 - 12	1 1/2 - 12	2	2.374	3/4	1 1/2	1 11/16	3 7/8	3/8	1 1/8	1 7/8
10	1 3/4 STD.	1 1/4 - 12	1 1/2 - 12	2	2.374	3/4	1 1/2	1 11/16	3 7/8	3/8	1 1/8	1 7/8
	2 1/2	1 7/8 - 12	2 1/4 - 12	3	3.124	1	2 1/16	2 3/8	5 1/4	1/2	1 1/4	2 1/4
12	2" STD.	1 1/2 - 12	1 3/4 - 12	2 1/4	2.624	7/8	1 11/16	1 15/16	4 1/4	3/8	1 1/8	2
	3	2 1/4 - 12	2 3/4 - 12	3 1/2	3.749	1	2 5/8	2 7/8	5 3/4	1/2	1 1/4	2 1/4
14	2 1/2 STD.	1 7/8 - 12	2 1/4 - 12	3	3.124	1	2 1/16	2 3/8	5 1/4	1/2	1 1/4	2 1/4
	3 1/2	2 1/2 - 12	3 1/4 - 12	3 1/2	4.249	1	3	3 3/8	5 3/4	1/2	1 1/4	2 1/4

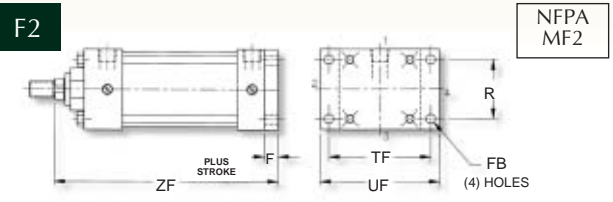
SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS FLANGE MOUNTINGS

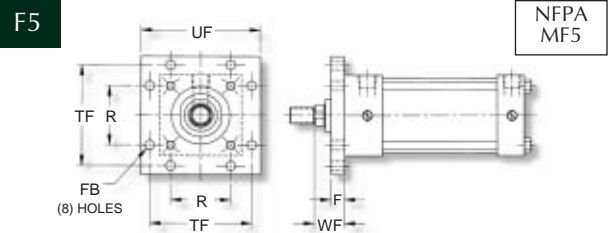


F1 - Head end rectangular flange

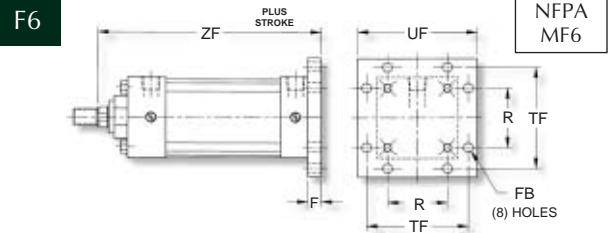
BORE SIZE	MM ROD DIA.	ZF	F	FB	R	TF	UF
1 1/2	5/8 STD.	5	3/8	5/16	1.43	2 3/4	3 3/8
	1	5 3/8					
2	5/8 STD.	5	3/8	3/8	1.84	3 3/8	4 1/8
	1	5 3/8					
2 1/2	5/8 STD.	5 1/8	3/8	3/8	2.19	3 7/8	4 5/8
	1	5 1/2					
3 1/4	1" STD.	6 1/4	5/8	7/16	2.76	4 11/16	5 1/2
	1 3/8	6 1/2					
4	1" STD.	6 1/4	5/8	7/16	3.32	5 7/16	6 1/4
	1 3/8	6 1/2					
5	1" STD.	6 1/2	5/8	9/16	4.10	6 5/8	7 5/8
	1 3/8	6 3/4					
6	1 3/8 STD.	7 3/8	3/4	9/16	4.88	7 5/8	8 5/8
	1 3/4	7 5/8					



F2 - Cap end rectangular flange

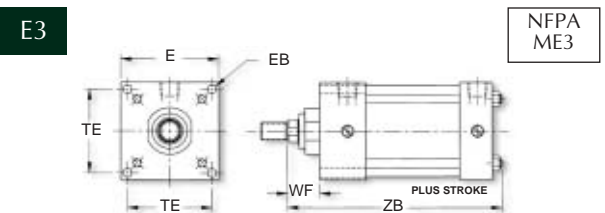


F5 - Head and square flange

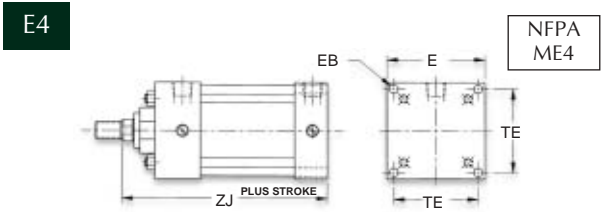


F6 - Cap end square flange

INTEGRAL SQUARE HEAD OR CAP MOUNTING

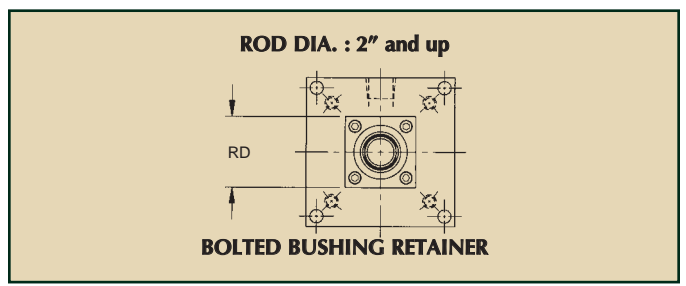


E3 - Integral square head mount



E4 - Integral square cap mount

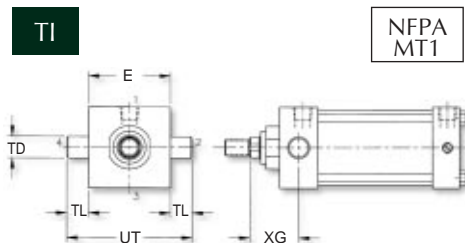
BORE SIZE	MM ROD DIA.	ZB	ZJ	E	EB	TE	WF
7	1 3/8 STD.	7 3/8	6 3/4	7 1/2	9/16	6.75	15/8
	1 3/4	7 5/8	7				17/8
8	1 3/8 STD.	7 3/8	6 3/4	8 1/2	11/16	7.57	15/8
	1 3/4	7 5/8	7				17/8
10	1 3/4 STD.	9	8 1/4	10 5/8	13/16	9.40	17/8
	2 1/2	9 3/8	8 5/8				2 1/4
12	2" STD.	9 5/8	8 7/8	12 3/4	13/16	11.10	2
	3	9 7/8	9 1/8				2 1/4
14	2 1/2 STD.	11 1/4	10 3/8	14 3/4	15/16	12.87	2 1/4
	3 1/2	11 1/4	10 3/8				2 1/4



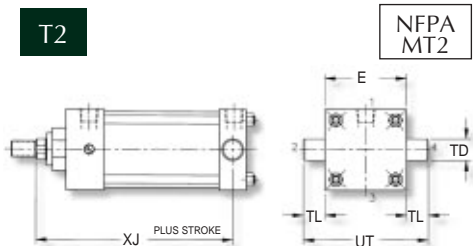
SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS

TRUNNION MOUNTINGS



T1 - Head end trunnion mount

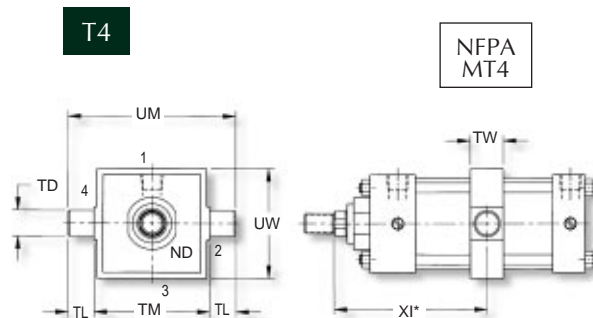


T2 - Cap end trunnion mount

BORE SIZE	MM ROD DIA.	XG	XJ	E	TD +.002	TL	UT
1 1/2	5/8 STD.	13/4	4 1/8	2	1.000	1	4
	1	2 1/8	4 1/2				
2	5/8 STD.	13/4	4 1/8	2 1/2	1.000	1	4 1/2
	1	2 1/8	4 1/2				
2 1/2	5/8 STD.	13/4	4 1/4	3	1.000	1	5
	1	2 1/8	4 5/8				
3 1/4	1" STD.	2 1/4	5	3 3/4	1.000	1	5 3/4
	1 3/8	2 1/2	5 1/4				
4	1" STD.	2 1/4	5	4 1/2	1.000	1	6 1/2
	1 3/8	2 1/2	5 1/4				
5	1" STD.	2 1/4	5 1/4	5 1/2	1.000	1	7 1/2
	1 3/8	2 1/2	5 1/2				
6	1 3/8 STD.	2 5/8	5 7/8	6 1/2	1.375	1 3/8	9 1/4
	1 3/4	2 7/8	6 1/8				
7	1 3/8 STD.	2 5/8	6	7 1/2	1.375	1 3/8	10 1/4
	1 3/4	2 7/8	6 1/4				
8	1 3/8 STD.	2 5/8	6	8 1/2	1.375	1 3/8	11 1/4
	1 3/4	2 7/8	6 1/4				
10	1 3/4 STD.	3	7 1/4	10 5/8	1.750	1 3/4	14 1/8
	2 1/2	3 3/8	7 5/8				
12	2" STD.	3 1/8	7 7/8	12 3/4	1.750	1 3/4	16 1/4
	3	3 3/8	8 1/8				
14	2 1/2 STD.	3 5/8	9 1/4	14 3/4	2.000	2	18 3/4
	3 1/2	3 5/8	9 1/4				

TRUNNION MOUNTINGS

BORE SIZE	MM ROD DIA.	XI* MIN.	TD	TL	TM	TW	UW	UM
1 1/2	5/8 STD.	3 1/8	1.000	1	2 1/2	1 1/4	2 1/2	4 1/2
	1	3 1/2						
2	5/8 STD.	3 1/8	1.000	1	3	1 1/4	3	5
	1	3 1/2						
2 1/2	5/8 STD.	3 1/8	1.000	1	3 1/2	1 1/4	3 1/2	5 1/2
	1	3 1/2						
3 1/4	1" STD.	3 7/8	1.000	1	4 1/2	1 1/2	4 1/4	6 1/2
	1 3/8	4 1/8						
4	1" STD.	3 7/8	1.000	1	5 1/4	1 1/2	5	7 1/4
	1 3/8	4 1/8						
5	1" STD.	3 7/8	1.000	1	6 1/4	1 1/2	6	8 1/4
	1 3/8	4 1/8						
6	1 3/8 STD.	4 1/2	1.375	1 3/8	7 5/8	1 3/4	7	10 3/8
	1 3/4	4 3/4						
7	1 3/8 STD.	4 1/2	1.375	1 3/8	8 3/4	1 3/4	8 1/2	11 1/2
	1 3/4	4 3/4						
8	1 3/8 STD.	4 1/2	1.375	1 3/8	9 3/4	1 3/4	9 1/2	12 1/2
	1 3/4	4 3/4						
10	1 3/4 STD.	5 1/4	1.750	1 3/4	12	2 1/4	11 3/4	15 1/2
	2 1/2	5 5/8						
12	2" STD.	5 3/8	1.750	1 3/4	14	2 1/4	13 3/4	17 1/2
	3	5 5/8						
14	2 1/2 STD.	6 1/2	2.000	2	16 1/4	3	16	20 1/4
	3 1/2	6 1/2						



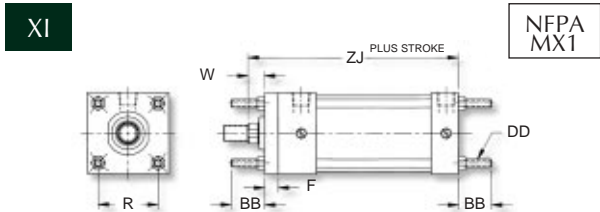
T4 - Intermediate trunnion mount

* Customer to specify dimension XI with order

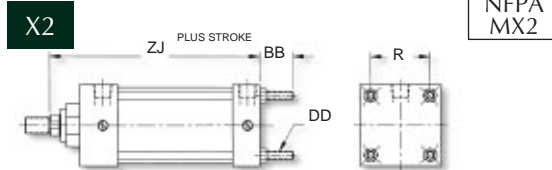
SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS

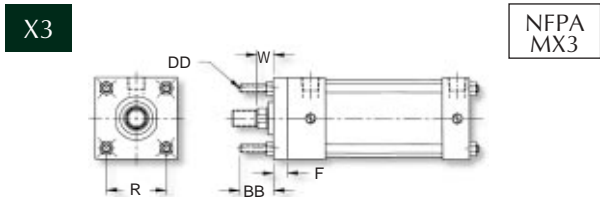
EXTENDED TIE RODS MOUNTINGS



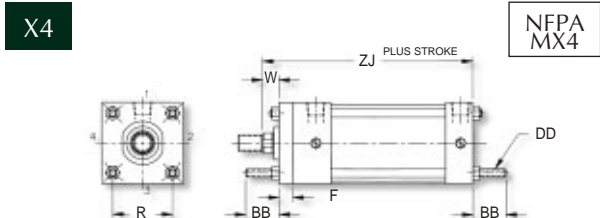
X1 - Both end extended tie rods



X2 - Cap end extended tie rods



X3 - Head end extended tie rods



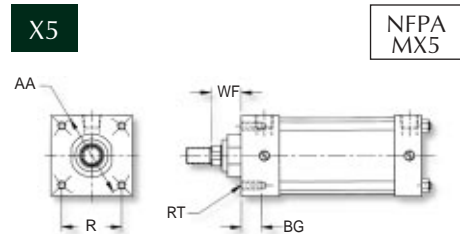
X4 - 2 tie rods extended each end

* Front flange: BB measured from head

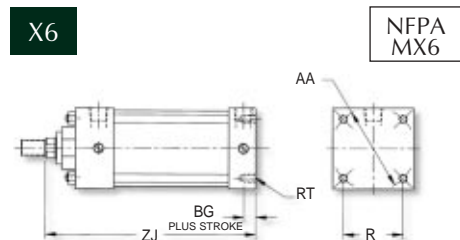
BORE SIZE	MM ROD DIA.	W	ZJ	BB	DD UNF	F	R
1 1/2	5/8 STD.	5/8	4 5/8	1	1/4 - 28	3/8	1.43
	1	1	5				
2	5/8 STD.	5/8	4 5/8	1 1/8	5/16 - 24	3/8	1.84
	1	1	5				
2 1/2	5/8 STD.	5/8	4 3/4	1 1/8	5/16 - 24	3/8	2.19
	1	1	5 1/8				
3 1/4	1" STD.	3/4	5 5/8	1 3/8	3/8 - 24	5/8	2.76
	1 3/8	1	5 7/8				
4	1" STD.	3/4	5 5/8	1 3/8	3/8 - 24	5/8	3.32
	1 3/8	1	5 7/8				
5	1" STD.	3/4	5 7/8	1 13/16	1/2 - 20	5/8	4.10
	1 3/8	1	6 1/8				
6	1 3/8 STD.	7/8	6 5/8	1 13/16	1/2 - 20	3/4	4.88
	1 3/4	1 1/8	6 7/8				
7*	1 3/8 STD.	1 5/8	6 3/4	25/16	5/8 - 18	-	5.73
	1 3/4	1 7/8	7				
8*	1 3/8 STD.	1 5/8	6 3/4	25/16	5/8 - 18	-	6.44
	1 3/4	1 7/8	7				
10*	1 3/4 STD.	1 7/8	8 1/4	2 11/16	3/4 - 16	-	7.92
	2 1/2	2 1/4	8 5/8				
12*	2" STD.	2	8 7/8	2 11/16	3/4 - 16	-	9.40
	3	2 1/4	9 1/8				
14*	2 1/2 STD.	2 1/4	10 3/8	3 3/16	7/8 - 14	-	10.90
	3 1/2	2 1/4	10 3/8				

TAPPED HOLES ON END

BORE SIZE	MM ROD DIA.	ZJ	WF	AA	BG	R	RT UNF
1 1/2	5/8 STD.	4 5/8	1	2.02	1 1/16	1.43	1/4 - 28
	1	5	1 3/8				
2	5/8 STD.	4 5/8	1	2.60	5/8	1.84	5/16 - 24
	1	5	1 3/8				
2 1/2	5/8 STD.	4 3/4	1	3.10	5/8	2.19	5/16 - 24
	1	5 1/8	1 3/8				
3 1/4	1" STD.	5 5/8	1 3/8	3.90	3/4	2.76	3/8 - 24
	1 3/8	5 7/8	1 5/8				
4	1" STD.	5 5/8	1 3/8	4.70	3/4	3.32	3/8 - 24
	1 3/8	5 7/8	1 5/8				
5	1" STD.	5 7/8	1 3/8	5.80	1 1/16	4.10	1/2 - 20
	1 3/8	6 1/8	1 5/8				
6	1 3/8 STD.	6 5/8	1 5/8	6.90	15/16	4.88	1/2 - 20
	1 3/4	6 7/8	1 7/8				
7	1 3/8 STD.	6 3/4	1 5/8	8.10	13/16	5.73	5/8 - 18
	1 3/4	7	1 7/8				
8	1 3/8 STD.	6 3/4	1 5/8	9.10	13/16	6.44	5/8 - 18
	1 3/4	7	1 7/8				



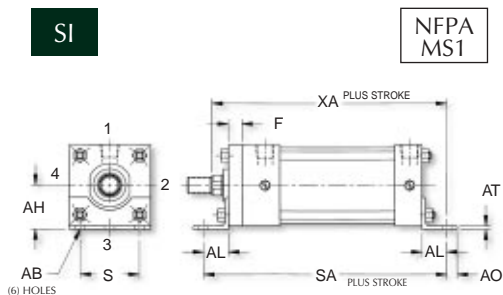
X5 - Head end tapped holes



X6 - Cap end tapped holes

SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS SIDE BASE MOUNTINGS



S1 - Parallel base mount

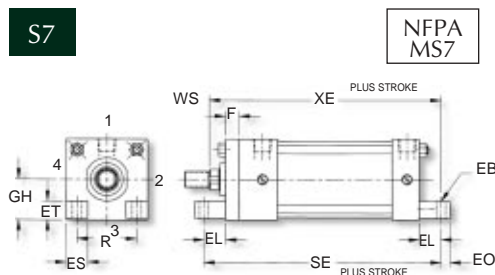
NFPA MS1

PERCÉE	MM DIA.TIGE	XA	AB	AH	AL	AO	AT	F	S	SA
1 1/2	5/8 STD.	5 5/8	7/16	1 3/16	1	1/2	1/8	3/8	1 1/4	6
	1	-	-	-	-	-	-	-	-	-
2	5/8 STD.	5 5/8	7/16	1 7/16	1	1/2	1/8	3/8	1 3/4	6
	1	6	-	-	-	-	-	-	-	-
2 1/2	5/8 STD.	5 3/4	7/16	1 5/8	1	1/2	1/8	3/8	2 1/4	6 1/8
	1	6 1/8	-	-	-	-	-	-	-	-
3 1/4	1" STD.	6 7/8	9/16	1 15/16	1 1/4	1/2	1/8	5/8	2 3/4	7 3/8
	1 3/8	7 1/8	-	-	-	-	-	-	-	-
4	1" STD.	6 7/8	9/16	2 1/4	1 1/4	1/2	1/8	5/8	3 1/2	7 3/8
	1 3/8	7 1/8	-	-	-	-	-	-	-	-
5	1" STD.	7 1/4	1 1/16	2 3/4	1 3/8	5/8	3/16	5/8	4 1/4	7 7/8
	1 3/8	7 1/2	-	-	-	-	-	-	-	-
6	1 3/8 STD.	8	1 3/16	3 1/4	1 3/8	5/8	3/16	3/4	5 1/4	8 1/2
	1 3/4	8 1/4	-	-	-	-	-	-	-	-
7*	1 3/8 STD.	8 9/16	1 3/16	3 3/4	1 13/16*	1 1/16	1/4	-	6 1/8	8 3/4
	1 3/4	8 13/16	-	-	-	-	-	-	-	-
8*	1 3/8 STD.	8 9/16	1 3/16	4 1/4	1 13/16*	1 1/16	1/4	-	7 1/8	8 3/4
	1 3/4	8 13/16	-	-	-	-	-	-	-	-
10*	1 3/4 STD.	10 3/8	1 1/8	5 5/16	2 1/8*	7/8	3/8	-	8 7/8	10 5/8
	2 1/2	10 3/4	-	-	-	-	-	-	-	-
12*	2" STD.	11	1 1/8	6 3/8	2 1/8*	7/8	3/8	-	11	11 1/8
	3	11	-	-	-	-	-	-	-	-
14*	2 1/2 STD.	12 13/16	1 3/8	7 3/8	2 7/16*	1 1/16	3/8	-	12 5/8	13
	2 1/2	12 13/16	-	-	-	-	-	-	-	-

* No front flange: "AL" measured from head

BORE SIZE	MM ROD DIA.	XE	GH	BOLTS EB	EL	EO	ET	ES	R	SE
1 1/2	5/8 STD.	5 3/8	1	1/4	3/4	1/4	9/16	9/16	1.43	5 1/2
	1	-	-	-	-	-	-	-	-	-
2	5/8 STD.	5 9/16	1 1/4	5/16	1 5/16	5/16	5/8	5/8	1.84	5 7/8
	1	-	-	-	-	-	-	-	-	-
2 1/2	5/8 STD.	5 13/16	1 1/2	5/16	1 1/16	5/16	3/4	3/4	2.19	6 1/4
	1	6 3/16	-	-	-	-	-	-	-	-
3 1/4	1" STD.	6 1/2	1 7/8	3/8	7/8	3/8	1	1 5/16	2.76	6 5/8
	1 3/8	6 3/4	-	-	-	-	-	-	-	-
4	1" STD.	6 5/8	2 1/4	3/8	1	3/8	1 3/16	1 1/8	3.32	6 7/8
	1 3/8	6 7/8	-	-	-	-	-	-	-	-
5	1" STD.	6 15/16	2 3/4	1/2	1 1/16	1/2	1 3/8	1 3/8	4.10	7 1/4
	1 3/8	7 3/16	-	-	-	-	-	-	-	-
6	1 3/8 STD.	7 5/8	3 1/4	1/2	1	1/2	1 5/8	1 9/16	4.88	7 3/4
	1 3/4	7 7/8	-	-	-	-	-	-	-	-
7*	1 3/8 STD.	7 7/8	3 3/4	5/8	1 1/8*	5/8	1 3/4	1 3/4	5.73	7 3/8
	1 3/4	8 1/8	-	-	-	-	-	-	-	-
8*	1 3/8 STD.	7 7/8	4 1/4	5/8	1 1/8*	5/8	2 1/16	2	6.44	7 3/8
	1 3/4	8 1/8	-	-	-	-	-	-	-	-
10*	1 3/4 STD.	9 9/16	5 5/16	3/4	1 5/16*	1 1/16	2 11/16	2 5/8	7.92	9
	2 1/2	9 13/16	-	-	-	-	-	-	-	-
12*	2" STD.	10 3/16	6 3/8	3/4	1 5/16*	1 1/16	3 5/16	3 5/16	9.40	9 1/2
	3	10 7/16	-	-	-	-	-	-	-	-
14*	2 1/2 STD.	11 7/8	7 3/8	7/8	1 1/2*	3/4	3 13/16	3 13/16	10.90	11 1/2
	3 1/2	11 7/8	-	-	-	-	-	-	-	-

* No front flange: "EL" measured from head



S7 - End lugs mount

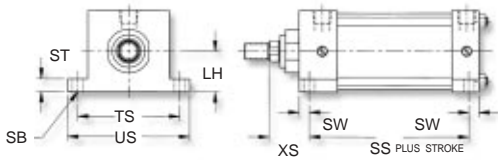
NFPA MS7

SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS SIDE BASE MOUNTINGS

S2

NFPA
MS2



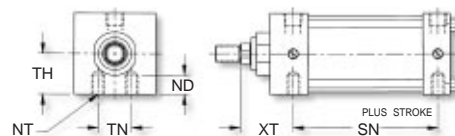
S2 - Side lugs mount

BORE SIZE	MM ROD DIA.	XS	LH	SB BOLTS	SS	ST	SW	TS	US
1 1/2	5/8 STD.	13/8	1	3/8	27/8	1/2	3/8	23/4	31/2
	1	13/4							
2	5/8 STD.	13/8	1 1/4	3/8	27/8	1/2	3/8	3 1/4	4
	1	13/4							
2 1/2	5/8 STD.	13/8	1 1/2	3/8	3	1/2	3/8	3 3/4	4 1/2
	1	13/4							
3 1/4	1" STD.	17/8	1 7/8	1/2	3 1/4	3/4	1/2	4 3/4	5 3/4
	1 3/8	2 1/8							
4	1" STD.	17/8	2 1/4	1/2	3 1/4	3/4	1/2	5 1/2	6 1/2
	1 3/8	2 1/8							
5	1" STD.	2 1/16	2 3/4	3/4	3 1/8	1	11/16	6 7/8	8 1/4
	1 3/8	2 5/16							
6	1 3/8 STD.	2 5/16	3 1/4	3/4	3 5/8	1	11/16	7 7/8	9 1/4
	1 3/4	2 9/16							
7*	1 3/8 STD.	2 5/16	3 3/4	3/4	3 3/4	1	11/16	8 7/8	10 1/4
	1 3/4	2 9/16							
8*	1 3/8 STD.	2 5/16	4 1/4	3/4	3 3/4	1	11/16	9 7/8	11 1/4
	1 3/4	2 9/16							
10*	1 3/4 STD.	2 3/8	5 5/16	1	4 5/8	1 1/4	7/8	12 3/8	14 1/8
	2 1/2	3 1/8							
12*	2" STD.	2 7/8	6 3/8	1	5 1/8	1 1/4	7/8	14 1/2	16 1/4
	3	3 1/8							
14*	2 1/2 STD.	3 7/8	7 3/8	1 1/4	5 7/8	1 1/2	1 1/8	17	19 1/4
	3 1/2	3 3/8							

BORE SIZE	MM ROD DIA.	XT	ND	TH	NT UNC	TN	SN
1 1/2	5/8 STD.	1 15/16	3/8	1	1/4 - 20	5/8	2 1/4
	1	2 5/16					
2	5/8 STD.	1 15/16	1/2	1 1/4	5/16 - 18	7/8	2 1/4
	1	2 5/16					
2 1/2	5/8 STD.	1 15/16	3/4	1 1/2	3/8 - 16	1 1/4	2 3/8
	1	2 5/16					
3 1/4	1" STD.	2 7/16	7/8	1 7/8	1/2 - 13	1 1/2	2 5/8
	1 3/8	2 11/16					
4	1" STD.	2 7/16	7/8	2 1/4	1/2 - 13	2 1/16	2 5/8
	1 3/8	2 11/16					
5	1" STD.	2 7/16	1	2 3/4	5/8 - 11	2 11/16	2 7/8
	1 3/8	2 11/16					
6	1 3/8 STD.	2 13/16	1 1/8	3 1/4	3/4 - 10	3 1/4	3 1/8
	1 3/4	3 1/16					
7	1 3/8 STD.	2 13/16	1 1/8	3 3/4	3/4 - 10	3 1/2	3 1/4
	1 3/4	3 1/16					
8	1 3/8 STD.	2 13/16	1 1/8	4 1/4	3/4 - 10	4 1/2	3 1/4
	1 3/4	3 1/16					
10	1 3/4 STD.	3 1/8	1 1/2	5 5/16	1 - 8	5 1/2	4 1/8
	2 1/2	3 1/2					
12	2" STD.	3 1/4	1 1/2	6 3/8	1 - 8	7 1/4	4 5/8
	3	3 1/2					
14	2 1/2 STD.	3 13/16	1 3/4	7 3/8	1 1/4 - 7	8 3/8	5 1/2
	3 1/2	3 13/16					

S4

NFPA
MS4

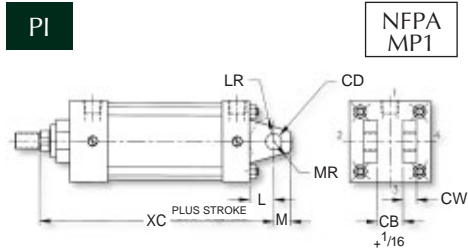


S4 - Side tapped holes mount

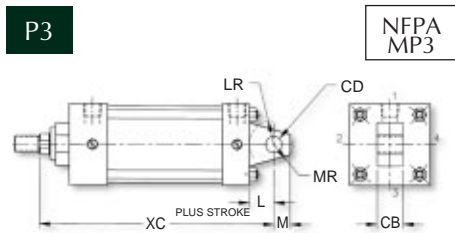
SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS

CLEVIS MOUNTINGS



P1 - Fixed clevis mount



P3 - Fixed eye mount

Detachable clevis mount MP2 and MP4 also available up to 6" bore.

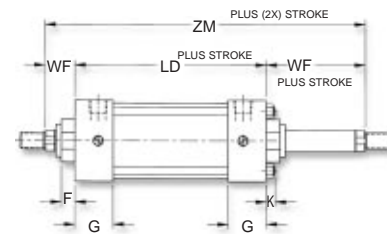
All mounting dimensions remain the same as MP1 and MP3 except for XC which becomes XD; $XD = XC + F$. (see mounting AØ on page 6 for dimension F)

BORE SIZE	MM ROD DIA.	XC	CB	CD +.003	CW	L	LR	M	MR
1 1/2	5/8 STD.	5 3/8	3/4	.500	1/2	3/4	3/4	1/2	5/8
	1	5 3/4							
2	5/8 STD.	5 3/8	3/4	.500	1/2	3/4	3/4	1/2	5/8
	1	5 3/4							
2 1/2	5/8 STD.	5 1/2	3/4	.500	1/2	3/4	3/4	1/2	5/8
	1	5 7/8							
3 1/4	1" STD.	6 7/8	1 1/4	.750	5/8	1 1/4	1	3/4	15/16
	1 3/8	7 1/8							
4	1" STD.	6 7/8	1 1/4	.750	5/8	1 1/4	1	3/4	15/16
	1 3/8	7 1/8							
5	1" STD.	7 1/8	1 1/4	.750	5/8	1 1/4	1	3/4	15/16
	1 3/8	7 3/8							
6	1 3/8 STD.	8 1/8	1 1/2	1.000	3/4	1 1/2	1 1/4	1	1 3/16
	1 3/4	8 3/8							
7	1 3/8 STD.	8 1/4	1 1/2	1.000	3/4	1 1/2	1 1/4	1	1 3/16
	1 3/4	8 1/2							
8	1 3/8 STD.	8 1/4	1 1/2	1.000	3/4	1 1/2	1 1/4	1	1 3/16
	1 3/4	8 1/2							
10	1 3/4 STD.	10 3/8	2	1.375	1	2 1/8	1 7/8	1 3/8	1 5/8
	2 1/2	10 3/4							
12	2" STD.	11 1/8	2 1/2	1.750	1 1/4	2 1/4	2 1/8	1 3/4	2 1/8
	3	11 3/8							
14	2 1/2 STD.	12 7/8	2 1/2	2.000	1 1/4	2 1/2	2 3/8	2	2 3/8
	3 1/2	12 7/8							

DOUBLE ROD CYLINDERS

MONTAGE		TOUS	S1		S7		S4	S2	TOUS
PERCÉE	MM DIA.TIGE	+ COURSE LD	+ COURSE SA	+ COURSE XA	+ COURSE SE	+ COURSE XE	+ COURSE SN	+ COURSE SS	+ COURSE ZM FOIS 2
1 1/2	5/8 STD.	4 1/8	6 7/8	6 1/2	-	-	2 1/4	3 3/8	6 1/8
	1			-					-
2	5/8 STD.	4 1/8	6 7/8	6 1/2	6 3/4	6 7/16	2 1/4	3 3/8	6 1/8
	1			6 7/8		-			6 7/8
2 1/2	5/8 STD.	4 1/4	7	6 5/8	7 1/8	6 11/16	2 3/8	3 1/2	6 1/4
	1			7		7 1/16			7
3 1/4	1" STD.	4 3/4	8 1/2	8	7 3/4	7 5/8	2 5/8	3 3/4	7 1/2
	1 3/8			8 1/4		7 7/8			8
4	1" STD.	4 3/4	8 1/2	8	8	7 3/4	2 5/8	3 3/4	7 1/2
	1 3/8			8 1/4		8			8
5	1" STD.	5	9	8 3/8	8 3/8	8 1/16	2 7/8	3 5/8	7 3/4
	1 3/8			8 5/8		8 5/16			8 1/4
6	1 3/8 STD.	5 1/2	9 3/4	9 1/4	9	8 7/8	3 1/8	4 1/8	8 3/4
	1 3/4			9 1/2		9 1/8			9 1/4
7	1 3/8 STD.	5 5/8	9 1/4	9 1/16	7 7/8	8 3/8	3 1/4	4 1/4	8 7/8
	1 3/4			9 5/16		8 5/8			9 3/8
8	1 3/8 STD.	5 5/8	9 1/4	9 1/16	7 7/8	8 3/8	3 1/4	4 1/4	8 7/8
	1 3/4			9 5/16		8 5/8			9 3/8
10	1 3/4 STD.	6 5/8	10 7/8	10 5/8	9 1/4	9 13/16	4 1/8	4 7/8	10 3/8
	2 1/2			11		10 3/16			11 1/8
12	2" STD.	7 1/8	11 3/8	11 1/4	9 3/4	10 7/16	4 5/8	5 3/8	11 1/8
	3			11 1/2		10 11/16			11 5/8
14	2 1/2 STD.	8 5/8	13 1/2	13 5/16	11 5/8	12 3/8	5 1/2	6 3/8	13 1/8
	3 1/2			13 5/16		12 3/8			13 1/8

AØ

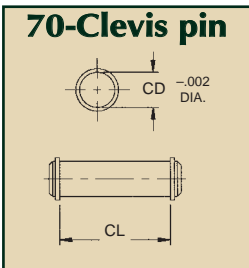


Refer to single rod mountings for more detail

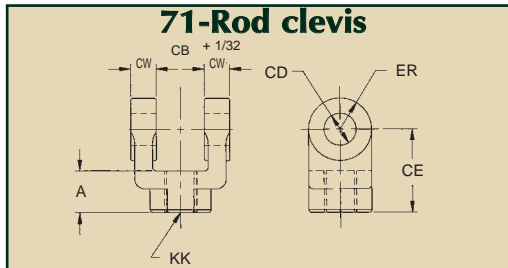
SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS ACCESSORIES

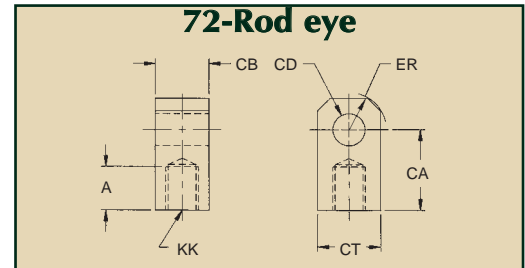
ROD DIA.	ROD END THREADS	ROD CLEVIS	ROD EYE	CLEVIS PIN	CLEVIS BRACKET	EYE BRACKET	BORE SIZE
5/8	7/16-20	71 - AAAD	72 - AAAD	70 - AAAD	75 - AAAD	76 - AAAD	1 1/2 - 2 - 2 1/2
1	3/4 - 16	71 - AAAE	72 - AAAE	70 - AAAE	75 - AAAE	76 - AAAE	3 1/4 - 4 - 5
1 3/8	1 - 14	71 - AAAG	72 - AAAG	70 - AAAG	75 - AAAG	76 - AAAG	6 - 7 - 8
1 3/4	1 1/4 - 12	71 - AAAH	72 - AAAH	70 - AAAH	75 - AAAH	76 - AAAH	10
2	1 1/2 - 12	71 - AAAJ	72 - AAAJ	70 - AAAJ	75 - AAAJ	76 - AAAJ	12
2 1/2	1 7/8 - 12	71 - AAAK	72 - AAAK	70 - AAAK	75 - AAAK	76 - AAAK	14
3	2 1/4 - 12	71 - AAAL	72 - AAAL	70 - AAAL	-	-	-
3 1/2	2 1/2 - 12	71 - AAAM	72 - AAAM	70 - AAAM	-	-	-



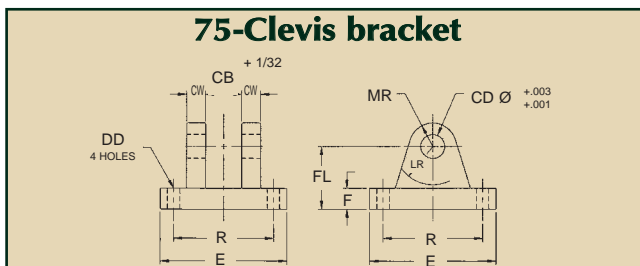
PART NO.	CD	CL
70 - AAAD	1/2	1 7/8
70 - AAAE	3/4	2 5/8
70 - AAAG	1	3 1/8
70 - AAAH	1 3/8	4 1/8
70 - AAAJ	1 3/4	5 1/8
70 - AAAK	2	5 1/2
70 - AAAL	2 1/2	6 3/16
70 - AAAM	3	6 1/4



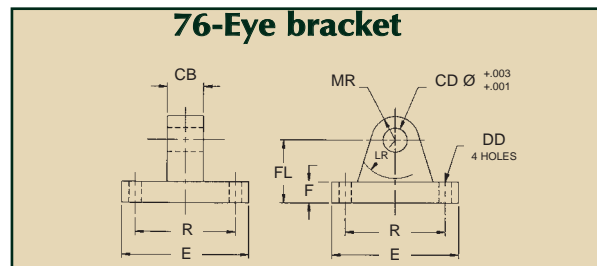
PART NO.	A	CB	CD	CE	CW	ER	KK
71 - AAAD	3/4	3/4	1/2	1 1/2	1/2	1/2	7/16-20
71 - AAAE	1 1/8	1 1/4	3/4	2 3/8	5/8	3/4	3/4-16
71 - AAAG	1 5/8	1 1/2	1	3 1/8	3/4	1	1-14
71 - AAAH	2	2	1 3/8	4 1/8	1	1 3/8	1 1/4-12
71 - AAAJ	2 1/4	2 1/2	1 3/4	4 1/2	1 1/4	1 3/4	1 1/2-12
71 - AAAK	3	2 1/2	2	5 1/2	1 1/4	2	1 7/8-12
71 - AAAL	3 1/2	3	2 1/2	6 1/2	1 1/2	2 1/2	2 1/4-12
71 - AAAM	3 1/2	3	3	6 3/4	1 1/2	2 3/4	2 1/2-12



PART NO.	A	CA	CB	CD	CT	ER	KK
72 - AAAD	3/4	1 1/2	3/4	1/2	1	5/8	7/16-20
72 - AAAE	1 1/8	2 1/16	1 1/4	3/4	1 1/2	7/8	3/4-16
72 - AAAG	1 5/8	2 13/16	1 1/2	1	2	1 3/16	1-14
72 - AAAH	2	3 7/16	2	1 3/8	2 3/4	1 9/16	1 1/4-12
72 - AAAJ	2 1/4	4	2 1/2	1 3/4	3 1/2	2	1 1/2-12
72 - AAAK	3 1/2	5	2 1/2	2	4	2 1/2	1 7/8-12
72 - AAAL	3 1/2	5 13/16	3	2 1/2	5	2 13/16	2 1/4-12
72 - AAAM	3 1/2	6 1/8	3	3	6	3 1/4	2 1/2-12



PART NO.	CB	CD	CW	DD	E	F	FL	LR	MR	R
75 - AAAD	3/4	1/2	1/2	3/8 - 24	2 1/2	3/8	1 1/8	1/2	9/16	1.63
75 - AAAE	1 1/4	3/4	5/8	1/2 - 20	3 1/2	5/8	1 7/8	1 1/16	1 1/16	2.55
75 - AAAG	1 1/2	1	3/4	5/8 - 18	4 1/2	3/4	2 1/4	1 1/4	1 1/8	3.25
75 - AAAH	2	1 3/8	1	5/8 - 18	5	7/8	3	1 7/8	1 3/4	3.82
75 - AAAJ	2 1/2	1 3/4	1 1/4	7/8 - 14	6 1/2	7/8	3 1/8	2	1 7/8	4.95
75 - AAAK	2 1/2	2	1 1/4	1 - 14	7 1/2	1	3 1/2	2 1/8	2 1/8	5.73



PART NO.	CB	CD	DD	E	F	FL	LR	MR	R
76 - AAAD	3/4	1/2	13/32	2 1/2	3/8	1 1/8	3/4	9/16	1.63
76 - AAAE	1 1/4	3/4	17/32	3 1/2	5/8	1 7/8	1 1/4	7/8	2.55
76 - AAAG	1 1/2	1	2 1/32	4 1/2	3/4	2 1/4	1 1/2	1 1/4	3.25
76 - AAAH	2	1 3/8	2 1/32	5	7/8	3	2 1/8	1 5/8	3.82
76 - AAAJ	2 1/2	1 3/4	2 9/32	6 1/2	7/8	3 1/8	2 1/4	2 1/8	4.95
76 - AAAK	2 1/2	2	1 1/16	7 1/2	1	3 1/2	2 1/2	2 7/16	5.73

SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS TECHNICAL DATA

FORCE AND VOLUME CHART

BORE SIZE	PISTON AREA	EXTENSION in lbs												Air consumption CU. FT.. per in. of stroke		
		PRESSURE IN PSI												PRESSURE (PSI)		
		40	50	60	70	80	100	125	150	175	200	250	ATM	80	100	
1 1/2	1.77	71	88	106	124	141	177	221	266	310	353	442	.00102	.00657	.00796	
2	3.14	126	157	189	220	251	314	393	471	549	628	786	.00184	.01185	.01436	
2 1/2	4.91	196	245	295	344	393	491	614	737	859	982	1227	.00289	.01863	.02255	
3 1/4	8.30	332	415	498	581	664	830	1038	1245	1452	1659	2074	.00481	.03100	.03753	
4	12.57	503	628	754	880	1005	1257	1571	1886	2200	2513	3141	.00726	.04675	.05665	
5	19.64	785	982	1178	1375	1571	1964	2455	2946	3437	3927	4909	.01137	.07320	.08872	
6	28.27	1130	1414	1696	1979	2262	2827	3534	4240	4947	5657	7071	.01638	.10560	.12781	
7	38.48	1539	1924	2309	2694	3079	3849	4810	5772	6734	7697	9621	.02230	.14350	.1740	
8	50.27	2010	2513	3016	3519	4021	5027	6284	7539	8795	10053	12566	.02910	.18730	.22706	
10	78.54	3142	3927	4712	5498	6283	7854	9818	11781	13745	15710	19635	.04545	.29280	.35463	
12	113.10	4524	5655	6786	7917	9048	11310	14138	16965	19793	22620	28275	.06560	.42260	.51186	
14	153.94	6158	7697	9236	10776	12315	15394	19243	23091	26940	30790	38485	.08910	.57400	.69522	

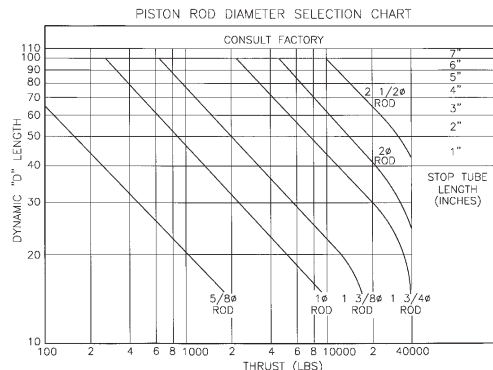
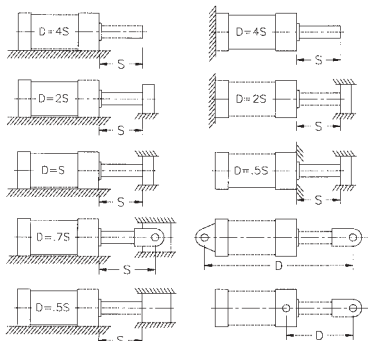
ROD DIA.	ROD AREA	RETRACTION Subtract corresponding value to obtain resulting pulling force												Air consumption CU. FT. per in. of stroke		
		PRESSURE IN PSI												PRESSURE (PSI)		
		40	50	60	70	80	100	125	150	175	200	250	ATM	80	100	
5/8	.307	12	15	18	21	25	31	38	46	54	61	77	.000178	.00115	.00139	
1	.785	31	39	47	55	63	79	98	118	137	157	196	.000454	.00293	.00354	
1 3/8	1.485	59	74	89	104	119	149	185	222	260	297	371	.00086	.00554	.00671	
1 3/4	2.404	95	120	144	168	192	240	300	360	420	480	600	.00139	.00897	.01085	
2	3.142	126	157	188	220	251	314	393	471	550	628	785	.00189	.01219	.01475	
2 1/2	4.909	196	245	295	344	393	491	614	736	859	982	1227	.00284	.0183	.02216	
3	7.069	283	353	424	495	565	707	884	1060	1237	1414	1767	.00409	.02638	.03191	
3 1/2	9.621	385	481	577	673	767	962	1203	1443	1684	1924	2405	.00556	.0358	.04338	

PISTON ROD DIMENSION AND STOP TUBE SELECTION

Applications that require long extended (push) strokes may require an oversize piston rod diameter and/or a stop tube to prevent buckling. Below is the procedure to choose a correct rod size and stop tube length.

- 1) Select the thrust of cylinder from above chart.
- 2) Determine the dynamic ("D") length from the diagram below.

- 3) Locate the intersection point on the chart below where the thrust and "D" length meet. The diameter of the piston rod required is indicated on the above piston rod diagonal line.
- 4) A stop-tube is recommended when the "D" length is longer than 40". This stop-tube gives lateral support to the piston at the head of the cylinder. One inch of stop-tube length is recommended for every 10" (or fraction thereof) of "D" length.
ex.: D = 50" S.T. = 1" D = 55" S.T. = 2"

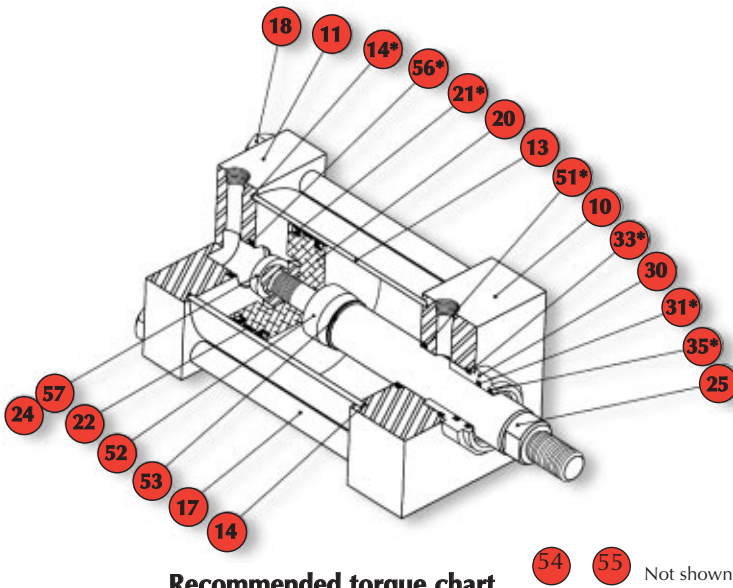


SERIES PC PS

HEAVY DUTY PNEUMATIC CYLINDERS REPLACEMENT PARTS

Spare parts and seal kits can be ordered, using part number prefix, followed by the cylinder model number
Ex.: 20 - PCHE1BP1 - 12 → Piston.

It is recommended to provide the cylinder serial number to facilitate inquiries for part replacement.



**Recommended torque chart
Tie rods**

BORE SIZE	TIE ROD DIA.	TORQUE (FT-LBS)	
		PC SERIES	PS SERIES
1 1/2	1/4	5	5
2 - 2 1/2	5/16	10	10
3 1/4 - 4	3/8	20	15
5 - 6	1/2	50	30
7	5/8	80	70
8	5/8	95	70
10	3/4	130	120
12	3/4	160	120
14	7/8	230	200

The threaded gland bushing should be torqued firmly at no more than 35 - 45 ft-lbs. The incorporated seal prevents the bushing from unfastening due to possible vibration.

Pieces	Description	Qty
10	Head	1
11	Cap	1
13	Barrel	1
14 *	Barrel seal	2
17	Tie rod	4
18	Tie rod nuts	4
20	Piston	1
21 *	Piston packing	2
22 *	Piston wear strip	1
24	Piston lock (if not cushioned)	1
25	Piston rod	1
30	Gland bushing	1
31 *	Gland packing	1
33 *	Gland seal	1
35 *	Rod wiper	1
51 *	Head end cushion seal	1
52	Head end cushion plunger	1
53	Head end plunger retainer	1
54	Cushion adjustment screen	2
55 *	Adjustment screw seal	2
56 *	Cap end cushion seal	1
57	Cushion plunger-nut	1

Repair kit

19	for barrel (piece #14)
29	for piston (pieces #21 and #22)
38	bushing & seals (pieces #30, #31, #33, #35)
39	for gland bushing (pieces #31, #33 and #35)
59	for cushion (pieces #51, #52 and #56)
99	complete (pieces marked with an *)

A maintenance and operation manual (#8-PCPS) is available for more detailed maintenance instructions for the PC and PS Series cylinders.

WARRANTY

RDC Control Ltd., hereinafter referred to as The Seller warrants products of its manufacture to be free from defects in material or workmanship under normal use for 12 months after the date of original shipment from the factory.

The liability of The Seller is limited to the repair or replacement of the defective component or product, at The Seller's option, during the warranty period only if factory inspection shows no external affects or customer repair has altered the functioning of the product. All transportation costs are for the buyer's account.

All defective parts must be returned to RDC Control Ltd. within the warranty period after shipment by RDC Control Ltd. Written permission for such return must first be obtained. A complete explanation is required of the defect and circumstances.

Any alteration or repair of the goods by a party not authorized by RDC Control Ltd. without specific written consent shall automatically terminate the warranty obligations.

In no event shall seller be liable for any incidental, consequential or special damages of any kind or nature whatsoever, including but not limited to lost profits arising from or in any way connected with this agreement or items sold hereunder, whether alleged to arise from breach of contract, express or implied warranty, or in tort, including without limitation, negligence, failure to warn or strict liability.

This warranty shall be rendered null and void when, in the judgement of RDC Control Ltd., the equipment has been subject to anormal or abusive use or lack of proper care and maintenance by the buyer, or when it has been determined that environmental or application conditions have exceeded those specified for normal use of a specific product.

Notwithstanding the foregoing, there are no warranties whatsoever on items built wholly or partially, to buyer's design or specifications.

Finished materials and accessories purchased from other manufacturers are warranted only to the extent of the manufacturers' warranty to the seller.

Seller makes no warranty of any kind whatsoever, expressed or implied, other than as specifically stated herein; and there are no warranties of merchantability and/or fitness for a particular purpose which exceed the obligations and warranties specifically stated herein.

Parts furnished without charge as replacements for original parts under warranty are warranted for the remainder of the original warranty period.

MODEL NUMBERS

Series	Bore size	Rod dia.	Rod end style	Cushions	Mounting	Option suffix	Stroke
PC PS	C - 1 1/2	D - 5/8	1 - Small male	B - Both ends	AO - Base	(Omit if none)	
	D - 2	E - 1	2 - Intern. male	C - Cap end	E3 - Square head	A - Stroke adjustment	
	E - 2 1/2	G - 1 3/8	3 - Full male	H - Head end	E4 - Square cap	B - Rod boot	
	G - 3 1/4	H - 1 3/4	4 - Female	N - None	F1 - Head end rectangular flange	C - Dimension changes	
	H - 4	J - 2	5 - Studded	Z - Special	F2 - Cap end rectangular flange	D - Double rod	
	K - 5	K - 2 1/2	6 - Metric		F5 - Head end square flange	E - Special exterior finish	
	L - 6	L - 3	8 - Female spl.		F6 - Cap end square flange	G - Fiberglass barrel	
	M - 7	M - 3 1/2	9 - Male spl.		P1 - Cap fixed clevis	J - Rod extension	
	N - 8	Z - OTHERS			P2 - Cap detach clevis	K - Material change	
	P - 10				P3 - Cap fixed eye	L - Permanent lubrication	
	R - 12				P4 - Cap detach eye	M - Magnetic piston	
	S - 14				S1 - Parallel base mount	N - SAE ("O" RING) ports	
	T - 16				S2 - Side lugs mount	P - Ports position change	
	V - 18				S4 - Side tapped holes	R - Rod scraper	
	W - 20				S7 - End lugs mount	S - Stainless steel piston rod	
	Z - OTHERS				T1 - Head trunnion	T - Stop tube	
					T2 - Cap trunnion	V - Viton seals for temp. up to 250°C (450°F)	
					T4 - Intermediate trunnion	W - Water operation AWWA specs C-540-93	
					X1 - Extended tie rods B/E	X - Spring to extend	
					X2 - Extended tie rods C/E	Y - Spring to retract	
				X3 - Extended tie rods H/E	Z - Other or more than 3 options		
				X4 - 2 tie rods extend. BE			
				X5 - Head end tapped holes			
				X6 - Cap end tapped holes			
				Z9 - Special mount			
PC	H	E	1	B	P1	V	12
PC Series	Bore: 4"	Rod dia.: 1"	Small male threads	Cushion Both ends	Fixed clevis mount (NFPA MP1)	Viton seals	Stroke 12"



C O N T R Ô L E

**MANUFACTURER
THERMOCOUPLES - RTD'S
CYLINDERS**

1100 Michele-Bohec , Blainville (Quebec) J7C 5N5
Tel.: (450) 434-0216 - Fax: (450) 434-0219 - Watts: 1-800-363-2264
Internet: www.rdccontrol.com