

7" & 8" Bore High Pressure Hydraulic Cylinders

Series 3H



Heavy Duty Service —
Industrial Tie-Rod Construction

- Nominal Pressure — 3000 PSI
- Fifteen Standard Mounting Styles

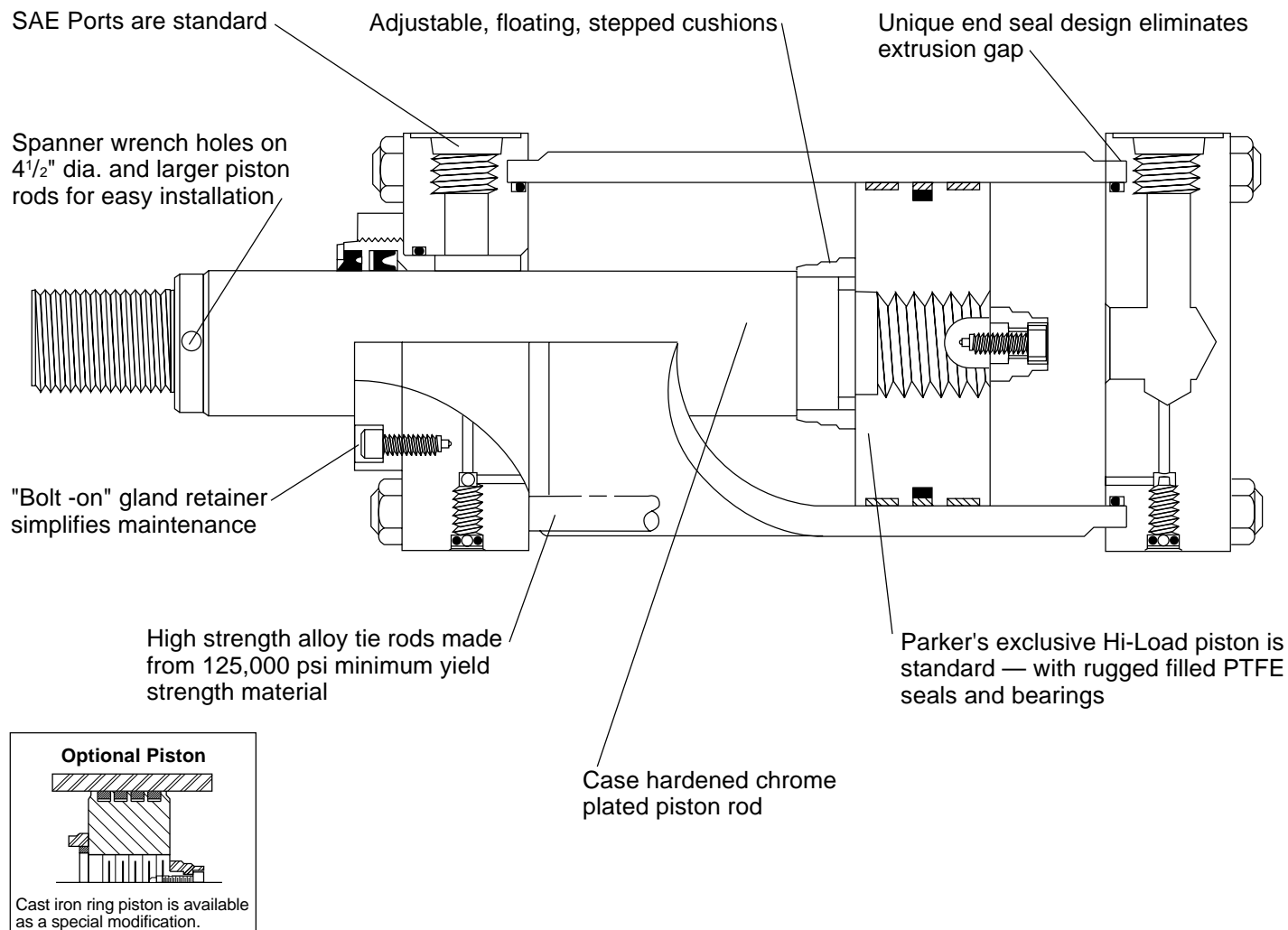
For Cylinder Division Plant Locations – See Page II.

Introducing... Parker Series 3H 7" and 8" Bore Heavy Duty High Pressure Hydraulic Cylinders

- New bolt-on gland retainer for ease of maintenance.
- New Parker exclusive Hi-Load piston is standard.
- Newly designed cylinder body seal grooves and high-strength tie rods ensure trouble-free performance even in severe applications.
- Floating cushions with float-check action and positive metal-to-metal seal.

Every Parker cylinder is *individually* tested before it leaves our plant. Parker meets all of your heavy-duty hydraulic cylinder needs:

- 1½" – 6" bores Series 2H
- 7" – 14" bores Series 3H



For additional information – call your local Parker Cylinder Distributor.

Series 3H 7" & 8" Bore High Pressure Hydraulic Cylinders

Specifications/ Mountings

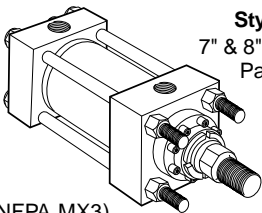
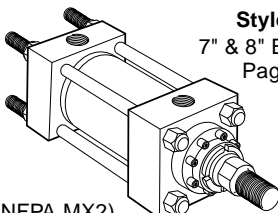
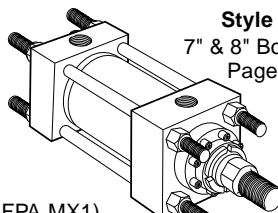
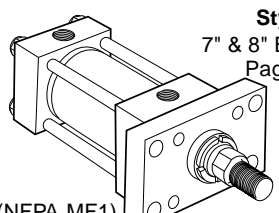
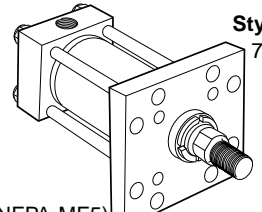
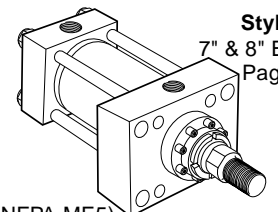
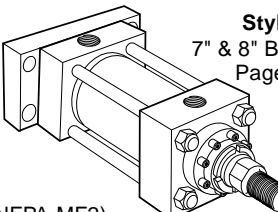
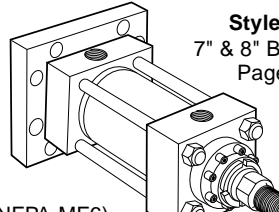
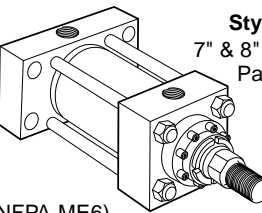
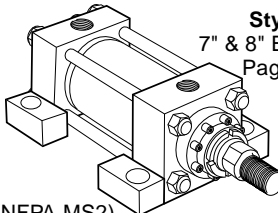
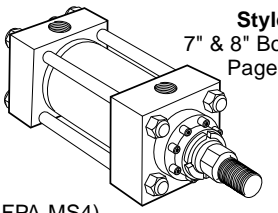
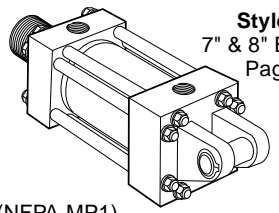
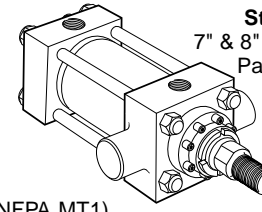
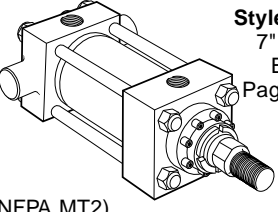
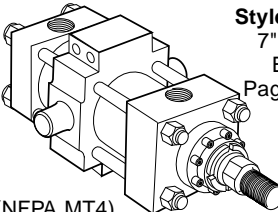
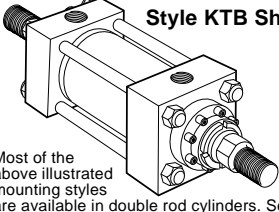
Standard Specifications

- Heavy Duty Service — ANSI/(NFPA) T3.6.7R2 - 1996 Specifications and Mounting Dimension Standards
- Standard Construction — Square Head – Tie Rod Design
- Nominal Pressure — 3000 PSI*
- Standard Fluid — Hydraulic Oil
- Standard Temperature — -10°F. to +165°F.
- Piston Rod Diameter — 3" through 5½"
- Mounting Styles — 16 standard styles at various application ratings
- Strokes — Available in any practical stroke length
- Cushions — Optional at either end or both ends of stroke
- Rod Ends — Three Standard Choices — specials to order

*If hydraulic operating pressure exceeds 3000 PSI, send application data for engineering evaluation and recommendation.

In line with our policy of continuing product improvement, specifications in this catalog are subject to change.

Available Mounting Styles

<p>Tie Rods Extended Head End</p>  <p>Style TB 7" & 8" Bore, Page 68</p> <p>(NFPA MX3)</p>	<p>Tie Rods Extended Cap End</p>  <p>Style TC 7" & 8" Bore, Page 68</p> <p>(NFPA MX2)</p>	<p>Tie Rods Extended Both Ends</p>  <p>Style TD 7" & 8" Bore, Page 68</p> <p>(NFPA MX1)</p>	<p>Head Rectangular Flange</p>  <p>Style J 7" & 8" Bore, Page 72</p> <p>(NFPA MF1)</p>
<p>Head Square Flange</p>  <p>Style JB 7" & 8" Bore, Page 72</p> <p>(NFPA MF5)</p>	<p>Head Rectangular</p>  <p>Style JJ 7" & 8" Bore, Page 72</p> <p>(NFPA ME5)</p>	<p>Cap Rectangular Flange</p>  <p>Style H 7" & 8" Bore, Page 70</p> <p>(NFPA MF2)</p>	<p>Cap Square Flange</p>  <p>Style HB 7" & 8" Bore, Page 70</p> <p>(NFPA MF6)</p>
<p>Cap Rectangular</p>  <p>Style HH 7" & 8" Bore, Page 70</p> <p>(NFPA ME6)</p>	<p>Side Lug</p>  <p>Style C 7" & 8" Bore, Page 74</p> <p>(NFPA MS2)</p>	<p>Side Tapped</p>  <p>Style F 7" & 8" Bore, Page 74</p> <p>(NFPA MS4)</p>	<p>Cap Fixed Clevis</p>  <p>Style BB 7" & 8" Bore, Page 76</p> <p>(NFPA MP1)</p>
<p>Head Trunnion</p>  <p>Style D 7" & 8" Bore, Page 78</p> <p>(NFPA MT1)</p>	<p>Cap Trunnion</p>  <p>Style DB 7" & 8" Bore, Page 78</p> <p>(NFPA MT2)</p>	<p>Intermediate Fixed Trunnion</p>  <p>Style DD 7" & 8" Bore, Page 78</p> <p>(NFPA MT4)</p>	<p>Double Rod Cylinders</p>  <p>Style KTB Shown</p> <p>Most of the above illustrated mounting styles are available in double rod cylinders. See Catalog Page 80.</p>

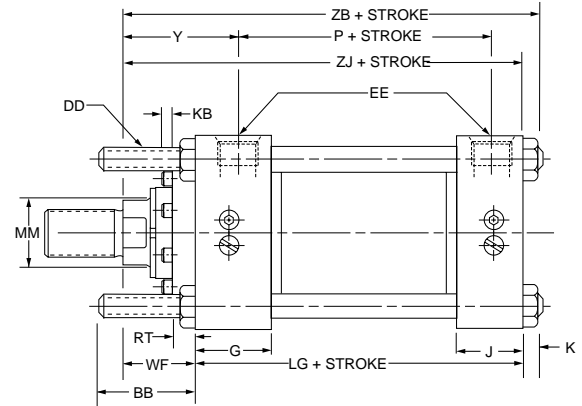
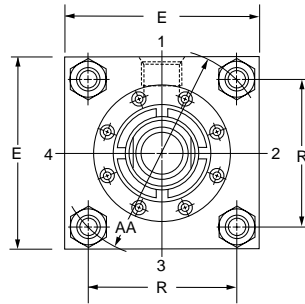
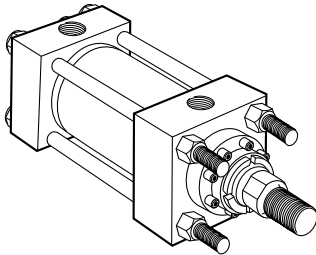
NOTE: Series 3H Hydraulic Cylinders fully meet ANSI/(NFPA) T3.6.7R2 - 1996 Specifications and Mounting Dimension Standards for Square Head Industrial Fluidpower Cylinders.

For Cylinder Division Plant Locations – See Page II.

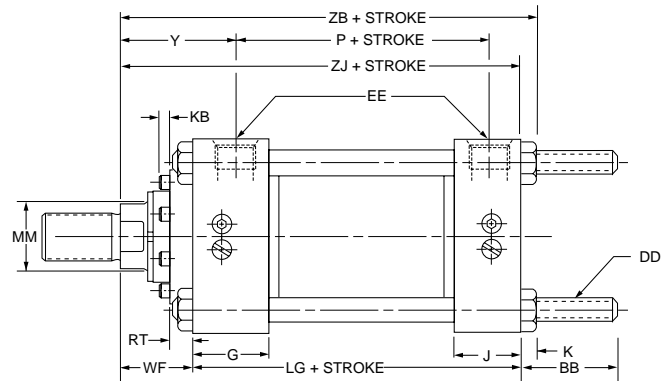
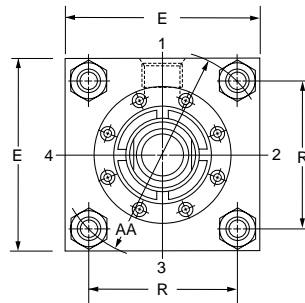
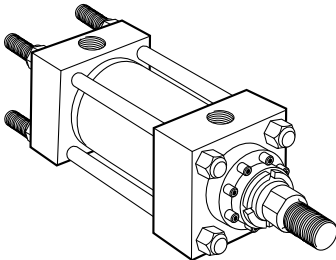
Tie Rod Mountings 7" and 8" Bore Sizes

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

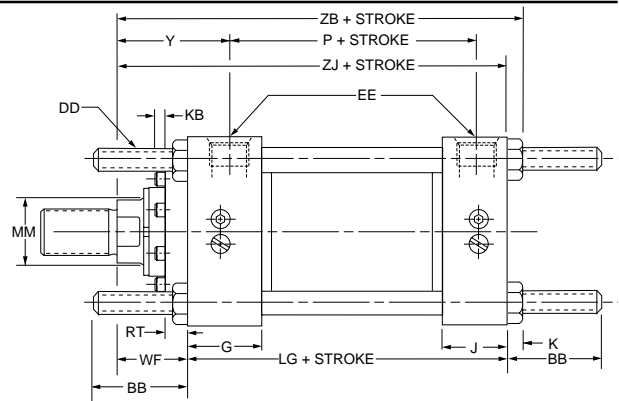
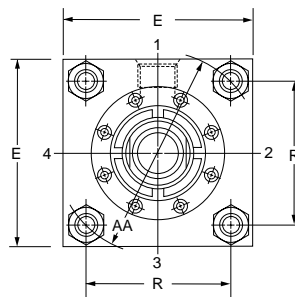
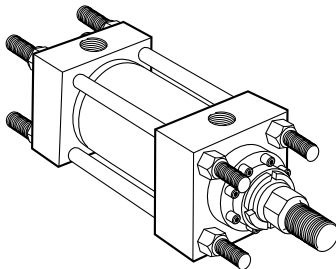
Tie Rods Extended Head End Style TB (NFPA Style MX3)



Tie Rods Extended Cap End Style TC (NFPA Style MX2)



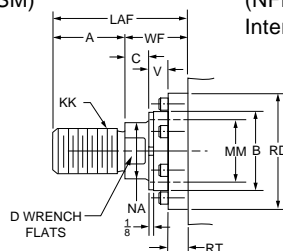
Tie Rods Extended Both Ends Style TD (NFPA Style MX1)



Basic Mounting (T) — NFPA MXO — Not shown is no tie rod extended and can be supplied upon request.

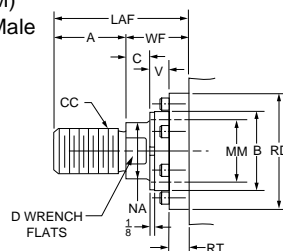
Rod End Dimensions — see table 2

Thread Style 4 (NFPA Style SM) Small Male

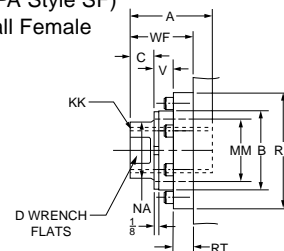


A high strength rod end stud is supplied on thread style 4 through 2" diameter rods and on thread style 8 through 1 3/8" diameter rods. Larger sizes or special rod ends are cut threads. Style 4 rod ends are recommended where the workpiece is secured against the rod shoulder. When the workpiece is not shouldered, style 4 rod ends are recommended through 2" piston rod diameters.

Thread Style 8 (NFPA Style IM) Intermediate Male



Thread Style 9 (NFPA Style SF) Small Female



and style 8 rod ends are recommended on larger diameters. Use style 9 for applications where female rod end threads are required. If rod end is not specified, style 4 will be supplied. On 4 1/2" rods and above, 4 .515 dia. spanner wrench holes will be provided instead of wrench flats.

"Special" Thread Style 3

Special thread, extension, rod eye, blank, etc., are also available.

To order, specify "Style 3" and give desired dimensions for CC or KK, A and LAF. If otherwise special, furnish dimensional sketch.

For additional information — call your local Parker Cylinder Distributor.

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

Tie Rod Mountings
7" and 8" Bore Sizes

Table 1—Envelope and Mounting Dimensions

Bore	AA	BB	DD	E	EE		G	J	K	R	Add Stroke	
					NPTF⊖	SAE★					LG	P
7	9.3	4 1/8	1 1/8-12	8 1/2	1 1/4	20	2 3/4	2 3/4	1 1/4	6.58	8 1/2	5 1/2
8	10.6	4 1/2	1 1/4-12	9 1/2	1 1/2	24	3	3	1 1/2	7.50	9 1/2	6 1/4

★ SAE straight thread ports are standard and are indicated by port number.
⊖ NPTF ports are available at no extra charge.

Table 2—Rod Dimensions

Bore	Rod No.	Rod Dia. MM	Thread		Rod Extensions and Pilot Dimensions											Add Stroke		
			Style 8 CC	Style 4 & 9 KK	A	+0.000 -0.002 B	C	D	KB	LAF	NA	V	Max. RD	RT	WF	Y	ZB	ZJ
7	1(Std.)	3	2 3/4-12	2 1/4-12	3 1/2	3.749	1	2 5/8	1/4	5 3/4	2 7/8	5/8	5 1/4	5/8	2 1/4	3 3/4	12	10 3/4
	2	5	4 3/4-12	3 1/2-12	5	5.749	1	—	0	7 1/4	4 7/8	1/4	7 1/4	1	2 1/4	3 3/4	12	10 3/4
	3	3 1/2	3 1/4-12	2 1/2-12	3 1/2	4.249	1	3	1/4	5 3/4	3 3/8	5/8	5 3/4	5/8	2 1/4	3 3/4	12	10 3/4
	4	4	3 3/4-12	3-12	4	4.749	1	3 3/8	1/4	6 1/4	3 7/8	1/2	6 1/2	3/4	2 1/4	3 3/4	12	10 3/4
	5	4 1/2	4 1/4-12	3 1/4-12	4 1/2	5.249	1	—	1/4	6 3/4	4 3/8	1/2	7	3/4	2 1/4	3 3/4	12	10 3/4
8	1(Std.)	3 1/2	3 1/4-12	2 1/2-12	3 1/2	4.249	1	3	1/4	5 3/4	3 3/8	5/8	5 3/4	5/8	2 1/4	3 7/8	13 1/4	11 3/4
	2	5 1/2	5 1/4-12	4-12	5 1/2	6.249	1	—	0	7 3/4	5 3/8	1/4	8 1/4	1	2 1/4	3 7/8	13 1/4	11 3/4
	3	4	3 3/4-12	3-12	4	4.749	1	3 3/8	1/4	6 1/4	3 7/8	1/2	6 1/2	3/4	2 1/4	3 7/8	13 1/4	11 3/4
	4	4 1/2	4 1/4-12	3 1/4-12	4 1/2	5.249	1	—	1/4	6 3/4	4 3/8	1/2	7	3/4	2 1/4	3 7/8	13 1/4	11 3/4
	5	5	4 3/4-12	3 1/2-12	5	5.749	1	—	0	7 1/4	4 7/8	1/4	7 1/4	1	2 1/4	3 7/8	13 1/4	11 3/4

Table 3 —
Envelope and
Mounting
Dimensions

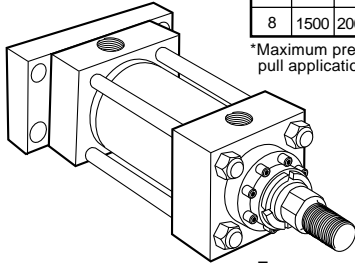
B

For Cylinder Division Plant Locations – See Page II.

Rectangular Flange and Cap Mountings 7" and 8" Bore Sizes

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

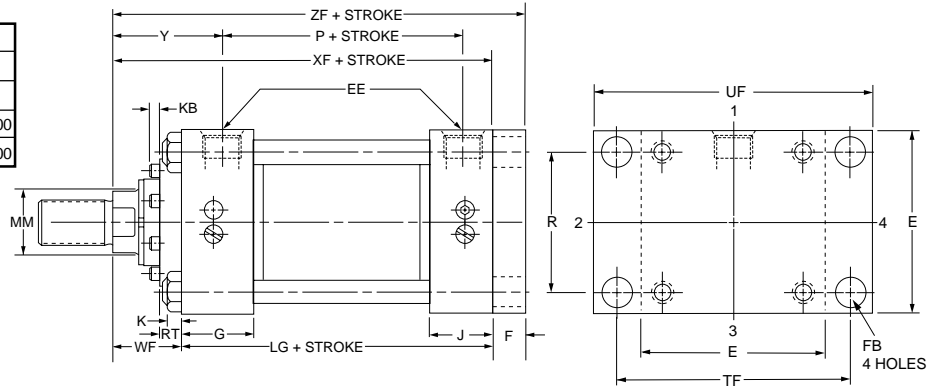
Cap Rectangular Flange Mounting Style H (NFA Style MF2)



For Style "H" Mount

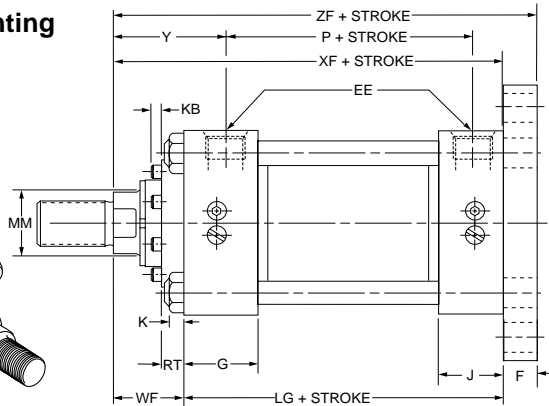
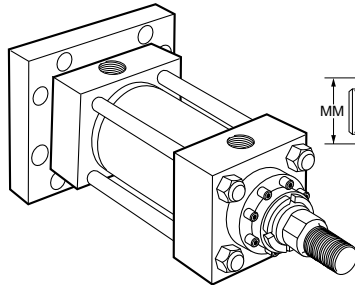
Bore Size	Max. PSI — Pull*				
	Rod Code				
7	1	2	3	4	5
7	1500	2000	1700	1800	1900
8	1500	2000	1700	1800	1900

*Maximum pressure rating — pull application.

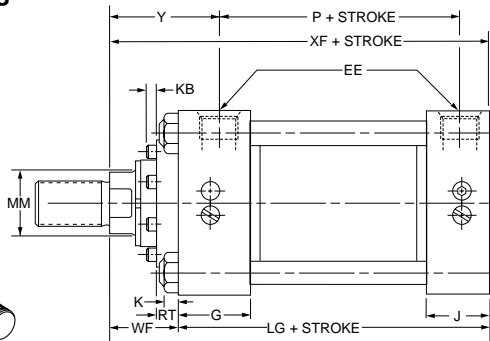
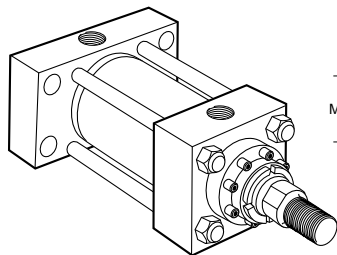


For pressures exceeding those shown use mounting styles HB or HH.

Cap Square Flange Mounting Style HB (NFA Style MF6)

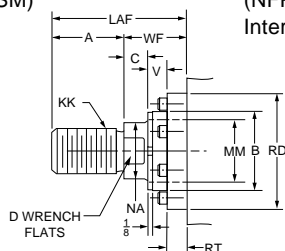


Cap Rectangular Mounting Style HH (NFA Style ME6)



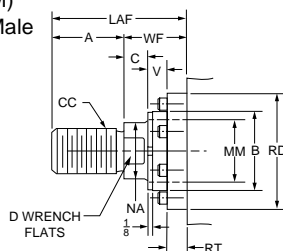
Rod End Dimensions — see table 2

Thread Style 4 (NFA Style SM) Small Male



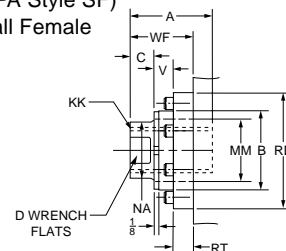
A high strength rod end stud is supplied on thread style 4 through 2" diameter rods and on thread style 8 through 1 3/8" diameter rods. Larger sizes or special rod ends are cut threads. Style 4 rod ends are recommended where the workpiece is secured against the rod shoulder. When the workpiece is not shouldered, style 4 rod ends are recommended through 2" piston rod diameters.

Thread Style 8 (NFA Style IM) Intermediate Male



and style 8 rod ends are recommended on larger diameters. Use style 9 for applications where female rod end threads are required. If rod end is not specified, style 4 will be supplied. On 4 1/2" rods and above, 4 .515 dia. spanner wrench holes will be provided instead of wrench flats.

Thread Style 9 (NFA Style SF) Small Female



"Special" Thread Style 3

Special thread, extension, rod eye, blank, etc., are also available.

To order, specify "Style 3" and give desired dimensions for CC or KK, A and LAF. If otherwise special, furnish dimensional sketch.

For additional information — call your local Parker Cylinder Distributor.

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

Rectangular Flange
and Cap Mountings
7" and 8" Bore Sizes

Table 1—Envelope and Mounting Dimensions

Bore	E	EE		F	FB	G	J	K	R	TF	UF	Add Stroke	
		NPTF⊖	SAE★									LG	P
7	8½	1¼	20	1	1⅜	2¾	2¾	1¼	6.58	10⅝	12⅝	8½	5½
8	9½	1½	24	1	1⅝	3	3	1½	7.50	11⅜	14	9½	6¼

★ SAE straight thread ports are standard and are indicated by port number.

⊖ NPTF ports are available at no extra charge.

Table 2—Rod Dimensions

Bore	Rod No.	Rod Dia. MM	Thread		Rod Extensions and Pilot Dimensions											Add Stroke		
			Style 8 CC	Style 4 & 9 KK	A	+0.000 -0.002 B	C	D	KB	LAF	NA	V	Max. RD	RT	WF	Y	XF	ZF
7	1(Std.)	3	2¾-12	2¼-12	3½	3.749	1	2⅝	¼	5¾	2⅞	⅝	5¼	⅝	2¼	3¾	10¾	11¾
	2	5	4¾-12	3½-12	5	5.749	1	—	0	7¼	4⅞	¼	7¼	1	2¼	3¾	10¾	11¾
	3	3½	3¼-12	2½-12	3½	4.249	1	3	¼	5¾	3⅞	⅝	5¾	⅝	2¼	3¾	10¾	11¾
	4	4	3¾-12	3-12	4	4.749	1	3⅜	¼	6¼	3⅞	½	6½	¾	2¼	3¾	10¾	11¾
	5	4½	4¼-12	3¼-12	4½	5.249	1	—	¼	6¾	4⅞	½	7	¾	2¼	3¾	10¾	11¾
8	1(Std.)	3½	3¼-12	2½-12	3½	4.249	1	3	¼	5¾	3⅞	⅝	5¾	⅝	2¼	3⅞	11¾	12¾
	2	5½	5¼-12	4-12	5½	6.249	1	—	0	7¾	5⅞	¼	8¼	1	2¼	3⅞	11¾	12¾
	3	4	3¾-12	3-12	4	4.749	1	3⅜	¼	6¼	3⅞	½	6½	¾	2¼	3⅞	11¾	12¾
	4	4½	4¼-12	3¼-12	4½	5.249	1	—	¼	6¾	4⅞	½	7	¾	2¼	3⅞	11¾	12¾
	5	5	4¾-12	3½-12	5	5.749	1	—	0	7¼	4⅞	¼	7¼	1	2¼	3⅞	11¾	12¾

Table 3 —
Envelope and
Mounting
Dimensions

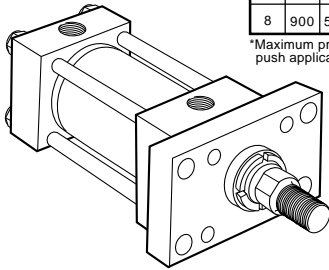
B

For Cylinder Division Plant Locations – See Page II.

Rectangular Flange and Head Mountings 7" and 8" Bore Sizes

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

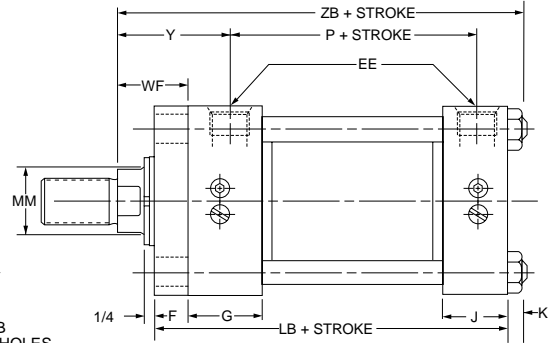
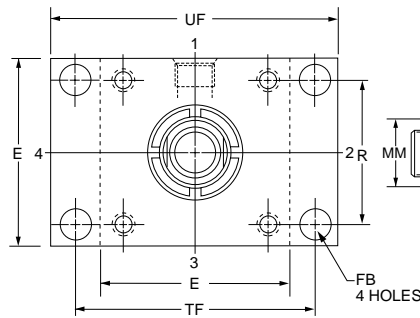
Head Rectangular Flange Mounting Style J (NFA Style MF1)



For Style "J" Mount

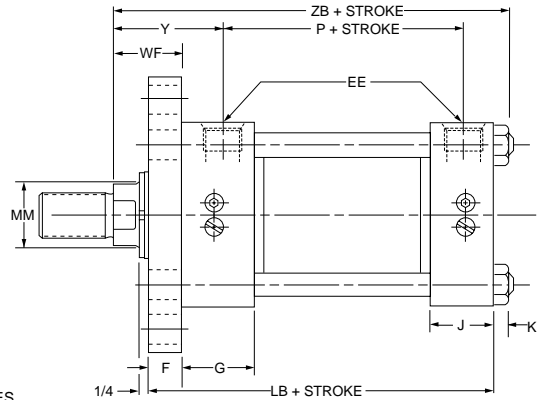
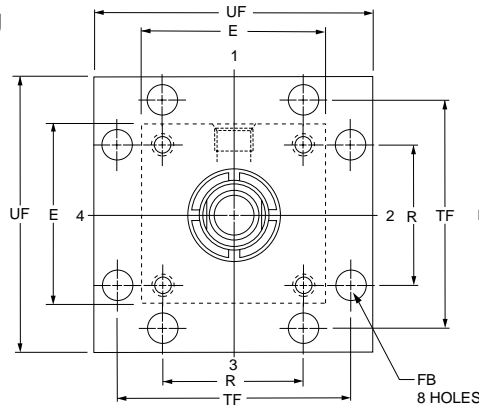
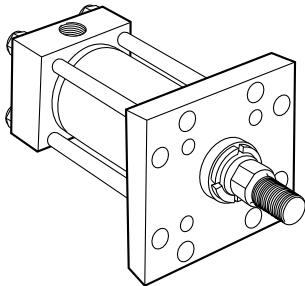
Bore Size	Max. PSI — Push*				
	1	2	3	4	5
7	1500	500	1250	1000	800
8	900	500	800	700	600

*Maximum pressure rating — push application.

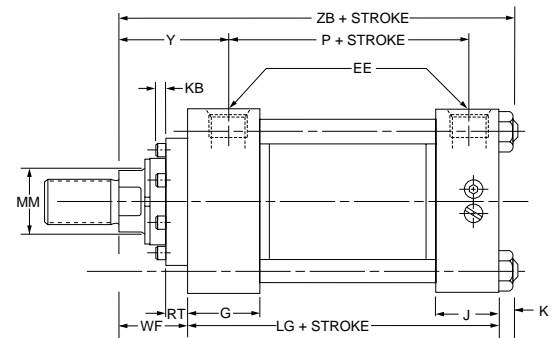
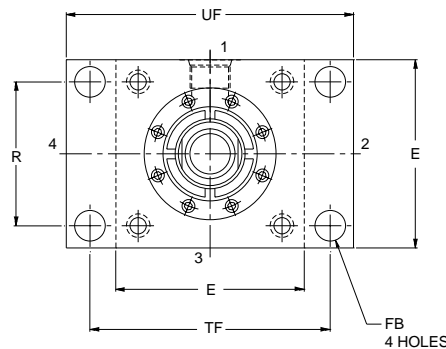
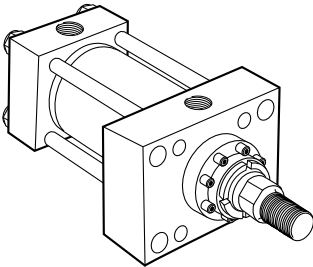


For pressures exceeding those shown use mounting styles JB or JJ.

Head Square Flange Mounting Style JB (NFA Style MF5)

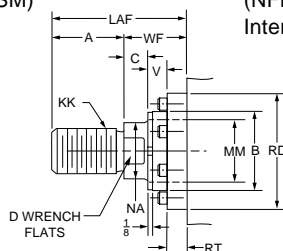


Head Rectangular Mounting Style JJ (NFA Style ME5)

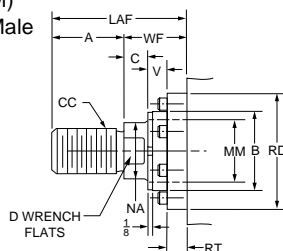


Rod End Dimensions — see table 2

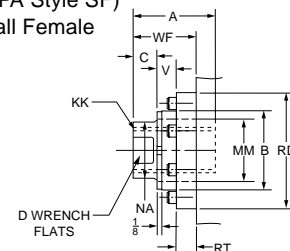
Thread Style 4 (NFA Style SM) Small Male



Thread Style 8 (NFA Style IM) Intermediate Male



Thread Style 9 (NFA Style SF) Small Female



A high strength rod end stud is supplied on thread style 4 through 2" diameter rods and on thread style 8 through 1 3/8" diameter rods. Larger sizes or special rod ends are cut threads. Style 4 rod ends are recommended where the workpiece is secured against the rod shoulder. When the workpiece is not shouldered, style 4 rod ends are recommended through 2" piston rod diameters

and style 8 rod ends are recommended on larger diameters. Use style 9 for applications where female rod end threads are required. If rod end is not specified, style 4 will be supplied. On 4 1/2" rods and above, 4 .515 dia. spanner wrench holes will be provided instead of wrench flats.

"Special" Thread Style 3

Special thread, extension, rod eye, blank, etc., are also available.

To order, specify "Style 3" and give desired dimensions for CC or KK, A and LAF. If otherwise special, furnish dimensional sketch.

For additional information — call your local Parker Cylinder Distributor.

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

Rectangular Flange
and Head Mountings
7" and 8" Bore Sizes

Table 1—Envelope and Mounting Dimensions

Bore	E	EE		F	FB	G	J	K	R	TF	UF	Add Stroke		
		NPTF⊖	SAE★									LB	LG	P
7	8½	1¼	20	1	1⅜	2¾	2¾	1¼	6.58	10⅝	12⅝	9½	8½	5½
8	9½	1½	24	1	1⅝	3	3	1½	7.50	11⅜	14	10½	9½	6¼

★ SAE straight thread ports are standard and are indicated by port number.

⊖ NPTF ports are available at no extra charge.

Table 2—Rod Dimensions

Bore	Rod No.	Rod Dia. MM	Thread		Rod Extensions and Pilot Dimensions											Add Stroke	
			Style 8 CC	Style 4 & 9 KK	A	+0.000 -0.002 B	C	D	KB	LAF	NA	V	Max. RD	RT	WF	Y	ZB
7	1(Std.)	3	2¾-12	2¼-12	3½	3.749	1	2⅝	¼	5¾	2⅞	⅝	5¼	⅝	2¼	3¾	12
	2	5	4¾-12	3½-12	5	5.749	1	—	0	7¼	4⅞	¼	7¼	1	2¼	3¾	12
	3	3½	3¼-12	2½-12	3½	4.249	1	3	¼	5¾	3⅞	⅝	5¾	⅝	2¼	3¾	12
	4	4	3¾-12	3-12	4	4.749	1	3⅜	¼	6¼	3⅞	½	6½	¾	2¼	3¾	12
	5	4½	4¼-12	3¼-12	4½	5.249	1	—	¼	6¾	4⅞	½	7	¾	2¼	3¾	12
8	1(Std.)	3½	3¼-12	2½-12	3½	4.249	1	3	¼	5¾	3⅞	⅝	5¾	⅝	2¼	3⅞	13¼
	2	5½	5¼-12	4-12	5½	6.249	1	—	0	7¾	5⅞	¼	8¼	1	2¼	3⅞	13¼
	3	4	3¾-12	3-12	4	4.749	1	3⅜	¼	6¼	3⅞	½	6½	¾	2¼	3⅞	13¼
	4	4½	4¼-12	3¼-12	4½	5.249	1	—	¼	6¾	4⅞	½	7	¾	2¼	3⅞	13¼
	5	5	4¾-12	3½-12	5	5.749	1	—	0	7¼	4⅞	¼	7¼	1	2¼	3⅞	13¼

Table 3 —
Envelope and
Mounting
Dimensions

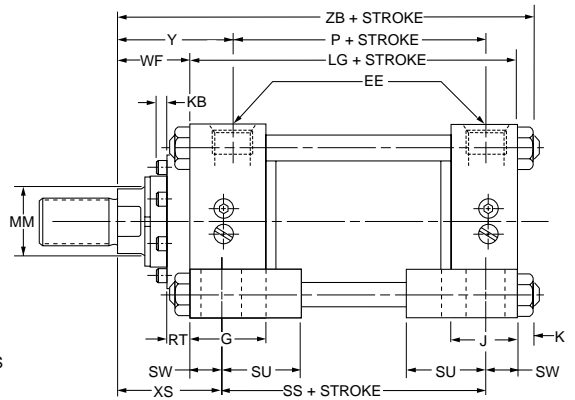
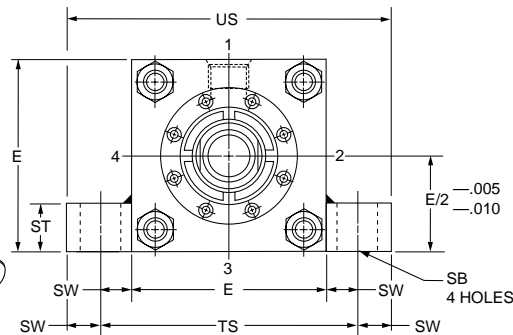
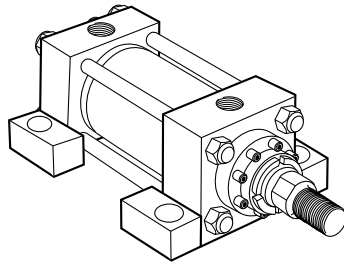
B

For Cylinder Division Plant Locations – See Page II.

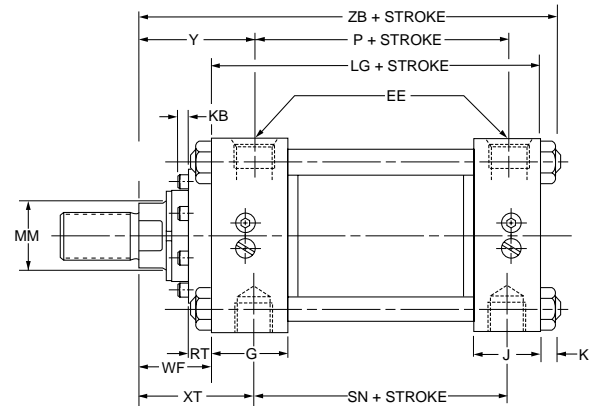
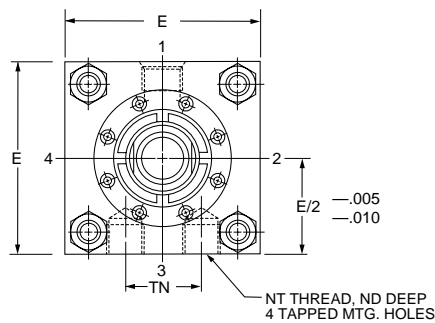
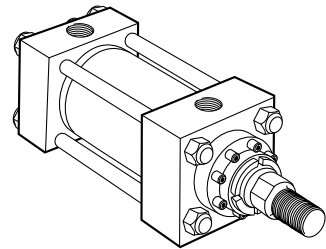
Side Lugs and Side Tapped Mountings 7" and 8" Bore Sizes

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

Side Lug Mountings Style C (NFPA Style MS2)

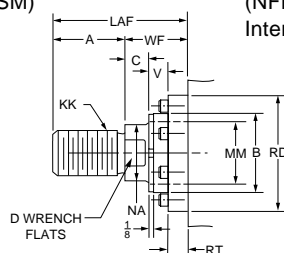


Side Tapped Mounting Style F (NFPA Style MS4)



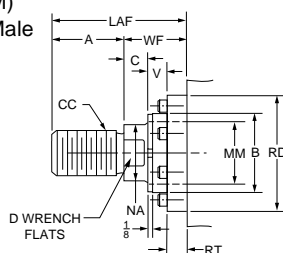
Rod End Dimensions — see table 2

Thread Style 4 (NFPA Style SM) Small Male



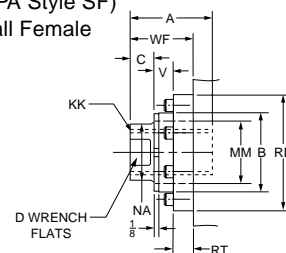
A high strength rod end stud is supplied on thread style 4 through 2" diameter rods and on thread style 8 through 1 3/8" diameter rods. Larger sizes or special rod ends are cut threads. Style 4 rod ends are recommended where the workpiece is secured against the rod shoulder. When the workpiece is not shouldered, style 4 rod ends are recommended through 2" piston rod diameters.

Thread Style 8 (NFPA Style IM) Intermediate Male



and style 8 rod ends are recommended on larger diameters. Use style 9 for applications where female rod end threads are required. If rod end is not specified, style 4 will be supplied. On 4 1/2" rods and above, 4 .515 dia. spanner wrench holes will be provided instead of wrench flats.

Thread Style 9 (NFPA Style SF) Small Female



"Special" Thread Style 3

Special thread, extension, rod eye, blank, etc., are also available.

To order, specify "Style 3" and give desired dimensions for CC or KK, A and LAF. If otherwise special, furnish dimensional sketch.

For additional information – call your local Parker Cylinder Distributor.

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

Side Lugs and
Side Tapped Mountings
7" and 8" Bore Sizes

Table 1—Envelope and Mounting Dimensions

Bore	E	EE		G	J	K	NT	SB*	ST	SU	SW	TN	TS	US	Add Stroke			
		NPTF⊖	SAE★												LG	P	SN	SS
7	8½	1¼	20	2¾	2¾	1¼	1½-6	1⁹⁄₁₆	1¾	27⁄₈	1¾	3¾	11¼	14	8½	5½	57⁄₈	5¾
8	9½	1½	24	3	3	1½	1½-6	1⁹⁄₁₆	1¾	27⁄₈	1¾	4¼	12¼	15	9½	6¼	65⁄₈	6¾

★ SAE straight thread ports are standard and are indicated by port number.

⊖ NPTF ports are available at no extra charge.

* Upper surface spotfaced for socket head screws.

Table 2—Rod Dimensions

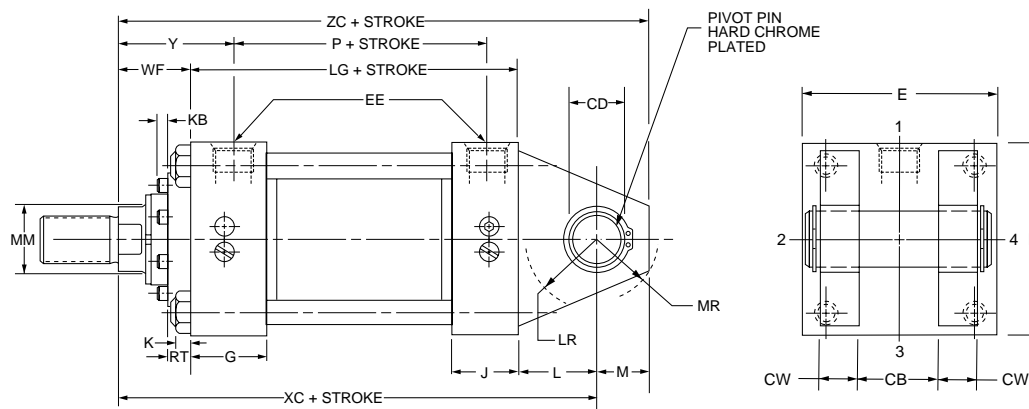
Bore	Rod No.	Rod Dia. MM	Thread		Rod Extensions and Pilot Dimensions											ND	XS	XT	Y	ZB	Add Stroke
			Style 8 CC	Style 4 & 9 KK	A	+0.000 -.002 B	C	D	KB	LAF	NA	V	Max. RD	RT	WF						
7	1(Std.)	3	23/4-12	21/4-12	31/2	3.749	1	25/8	1/4	53/4	27/8	5/8	51/4	5/8	21/4	11/8	35/8	313/16	33/4	12	
	2	5	43/4-12	31/2-12	5	5.749	1	—	0	71/4	47/8	1/4	71/4	1	21/4	11/8	35/8	313/16	33/4	12	
	3	31/2	31/4-12	21/2-12	31/2	4.249	1	3	1/4	53/4	33/8	5/8	53/4	5/8	21/4	11/8	35/8	313/16	33/4	12	
	4	4	33/4-12	3-12	4	4.749	1	33/8	1/4	61/4	37/8	1/2	61/2	3/4	21/4	11/8	35/8	313/16	33/4	12	
	5	41/2	41/4-12	31/4-12	41/2	5.249	1	—	1/4	63/4	43/8	1/2	7	3/4	21/4	11/8	35/8	313/16	33/4	12	
8	1(Std.)	31/2	31/4-12	21/2-12	31/2	4.249	1	3	1/4	53/4	33/8	5/8	53/4	5/8	21/4	11/2	35/8	315/16	37/8	131/4	
	2	51/2	51/4-12	4-12	51/2	6.249	1	—	0	73/4	53/8	1/4	81/4	1	21/4	11/2	35/8	315/16	37/8	131/4	
	3	4	33/4-12	3-12	4	4.749	1	33/8	1/4	61/4	37/8	1/2	61/2	3/4	21/4	11/2	35/8	315/16	37/8	131/4	
	4	41/2	41/4-12	31/4-12	41/2	5.249	1	—	1/4	63/4	43/8	1/2	7	3/4	21/4	11/2	35/8	315/16	37/8	131/4	
	5	5	43/4-12	31/2-12	5	5.749	1	—	0	71/4	47/8	1/4	71/4	1	21/4	11/2	35/8	315/16	37/8	131/4	

**Table 3 —
Envelope and
Mounting
Dimensions**

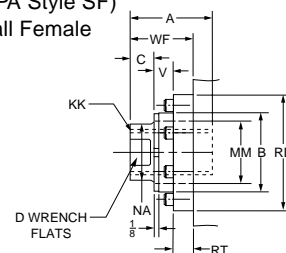
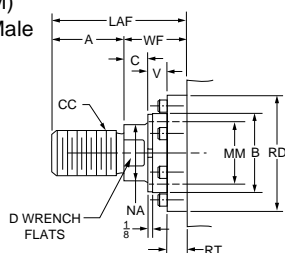
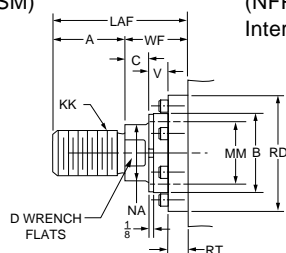
B

For Cylinder Division Plant Locations – See Page II.

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders



To order, specify "Style 3" and give desired dimensions for CC or KK, A and LAF. If otherwise special, furnish dimensional sketch.



and style 8 rod ends are recommended on larger diameters. Use style 9 for applications where female rod end threads are required. If rod end is not specified, style 4 will be supplied. On 4 1/2" rods and above, 4.515 dia. spanner wrench holes will be provided instead of wrench flats.

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Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

Cap Fixed Clevis Mountings
7" and 8" Bore Sizes

Table 1—Envelope and Mounting Dimensions

Bore	CB	+.000 -.002 CD*	CW	E	EE		F	G	J	K	L	LR	M	MR	Add Stroke	
					NPTF⊖	SAE★									LG	P
7	3	2.501	1½	8½	1¼	20	1	2¾	2¾	1¼	3	2¾	2½	27/8	8½	5½
8	3	3.001	1½	9½	1½	24	1	3	3	1½	3¼	3¼	2¾	3½	9½	6¼

★ SAE straight thread ports are standard and are indicated by port number.

⊖ NPTF ports are available at no extra charge.

* Dimension CD is pin diameter.

Table 2—Rod Dimensions

Bore	Rod No.	Rod Dia. MM	Thread		Rod Extensions and Pilot Dimensions												Y	Add Stroke	
			Style 8 CC	Style 4 & 9 KK	A	+.000 -.002 B	C	D	KB	LAF	NA	V	Max. RD	RT	WF	XC		ZC	
7	1(Std.)	3	23/4-12	21/4-12	31/2	3.749	1	25/8	1/4	53/4	27/8	5/8	51/4	5/8	21/4	33/4	133/4	161/4	
	2	5	43/4-12	31/2-12	5	5.749	1	—	0	71/4	47/8	1/4	71/4	1	21/4	33/4	133/4	161/4	
	3	31/2	31/4-12	21/2-12	31/2	4.249	1	3	1/4	53/4	33/8	5/8	53/4	5/8	21/4	33/4	133/4	161/4	
	4	4	33/4-12	3-12	4	4.749	1	33/8	1/4	61/4	37/8	1/2	61/2	3/4	21/4	33/4	133/4	161/4	
	5	41/2	41/4-12	31/4-12	41/2	5.249	1	—	1/4	63/4	43/8	1/2	7	3/4	21/4	33/4	133/4	161/4	
8	1(Std.)	31/2	31/4-12	21/2-12	31/2	4.249	1	3	1/4	53/4	33/8	5/8	53/4	5/8	21/4	37/8	15	173/4	
	2	51/2	51/4-12	4-12	51/2	6.249	1	—	0	73/4	53/8	1/4	81/4	1	21/4	37/8	15	173/4	
	3	4	33/4-12	3-12	4	4.749	1	33/8	1/4	61/4	37/8	1/2	61/2	3/4	21/4	37/8	15	173/4	
	4	41/2	41/4-12	31/4-12	41/2	5.249	1	—	1/4	63/4	43/8	1/2	7	3/4	21/4	37/8	15	173/4	
	5	5	43/4-12	31/2-12	5	5.749	1	—	0	71/4	47/8	1/4	71/4	1	21/4	37/8	15	173/4	

Table 3 —
Envelope and
Mounting
Dimensions

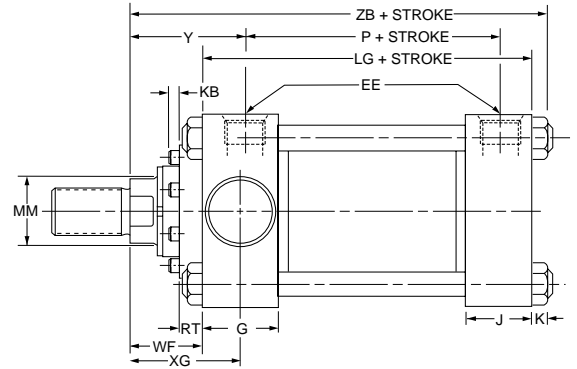
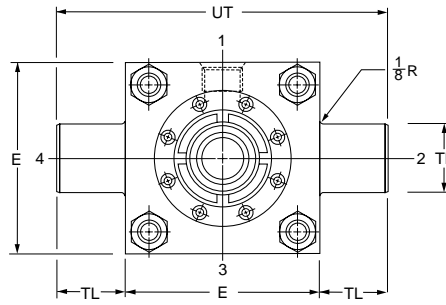
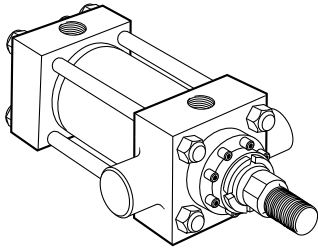
B

For Cylinder Division Plant Locations – See Page II.

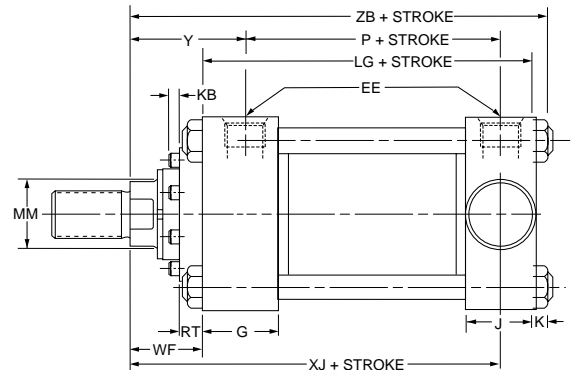
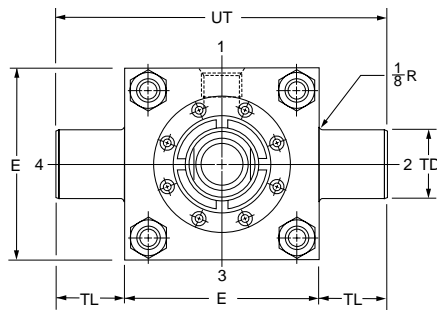
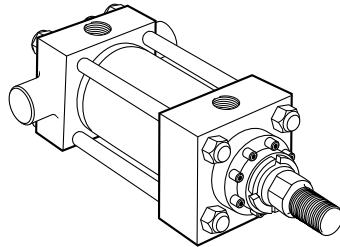
Trunnion Mountings 7" and 8" Bore Sizes

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

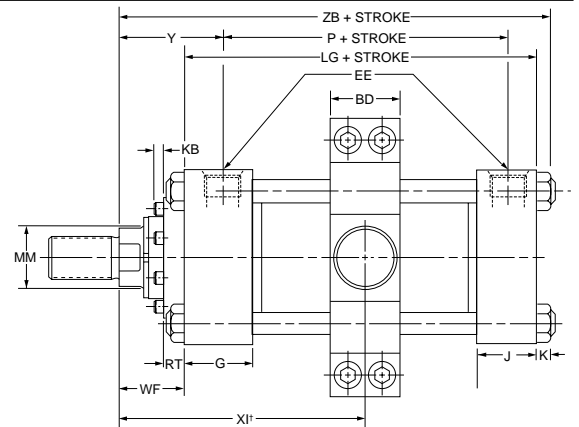
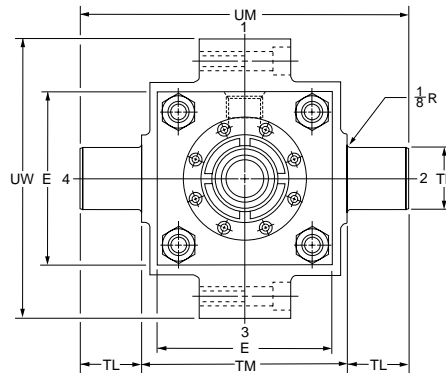
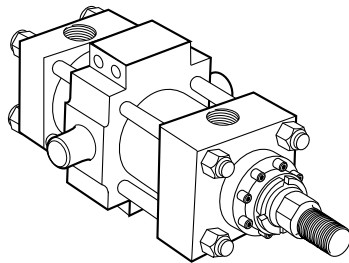
Head Trunnion Mounting Style D (NFPA Style MT1)



Cap Trunnion Mounting Style DB (NFPA Style MT2)

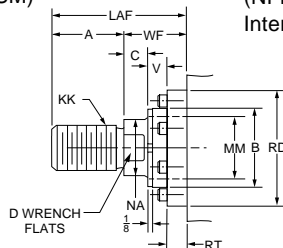


Intermediate Fixed Trunnion Mounting Style DD (NFPA Style MT4)



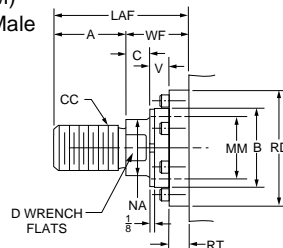
Rod End Dimensions — see table 2

Thread Style 4 (NFPA Style SM) Small Male



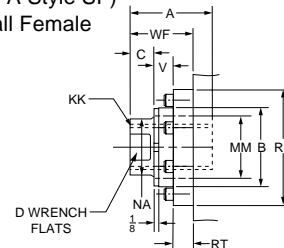
A high strength rod end stud is supplied on thread style 4 through 2" diameter rods and on thread style 8 through 1 3/8" diameter rods. Larger sizes or special rod ends are cut threads. Style 4 rod ends are recommended where the workpiece is secured against the rod shoulder. When the workpiece is not shouldered, style 4 rod ends are recommended through 2" piston rod diameters.

Thread Style 8 (NFPA Style IM) Intermediate Male



and style 8 rod ends are recommended on larger diameters. Use style 9 for applications where female rod end threads are required. If rod end is not specified, style 4 will be supplied. On 4 1/2" rods and above, 4 .515 dia. spanner wrench holes will be provided instead of wrench flats.

Thread Style 9 (NFPA Style SF) Small Female



"Special" Thread Style 3

Special thread, extension, rod eye, blank, etc., are also available.

To order, specify "Style 3" and give desired dimensions for CC or KK, A and LAF. If otherwise special, furnish dimensional sketch.

For additional information – call your local Parker Cylinder Distributor.

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

Trunnion Mountings
7" and 8" Bore Sizes

Table 1—Envelope and Mounting Dimensions

Bore	BD	E	EE		F	G	J	K	+0.000 -0.002 TD	TL	TM	UM	UT	UW	Add Stroke		Style DD Minimum Stroke
			NPTF \ominus	SAE \star											LG	P	
7	3	8 $\frac{1}{2}$	1 $\frac{1}{4}$	20	1	2 $\frac{3}{4}$	2 $\frac{3}{4}$	1 $\frac{1}{4}$	2.500	2 $\frac{1}{2}$	9 $\frac{3}{4}$	14 $\frac{3}{4}$	13 $\frac{1}{2}$	11 $\frac{1}{2}$	8 $\frac{1}{2}$	5 $\frac{1}{2}$	1/8"
8	3 $\frac{1}{2}$	9 $\frac{1}{2}$	1 $\frac{1}{2}$	24	1	3	3	1 $\frac{1}{2}$	3.000	3	11	17	15 $\frac{1}{2}$	13 $\frac{3}{8}$	9 $\frac{1}{2}$	6 $\frac{1}{4}$	1/8"

\star SAE straight thread ports are standard and are indicated by port number.

\ominus NPTF ports are available at no extra charge.

Table 2—Rod Dimensions

Bore	Rod No.	Rod Dia. MM	Thread		Rod Extensions and Pilot Dimensions											XG	Min. \dagger XI	Y	Add Stroke	
			Style 8 CC	Style 4 & 9 KK	A	+0.000 -0.002 B	C	D	KB	LAF	NA	V	Max. RD	RT	WF				XJ	ZB
7	1(Std.)	3	2 $\frac{3}{4}$ -12	2 $\frac{1}{4}$ -12	3 $\frac{1}{2}$	3.749	1	2 $\frac{5}{8}$	1/4	5 $\frac{3}{4}$	2 $\frac{7}{8}$	5/8	5 $\frac{1}{4}$	5/8	2 $\frac{1}{4}$	3 $\frac{5}{8}$	6 $\frac{9}{16}$	3 $\frac{3}{4}$	9 $\frac{3}{8}$	12
	2	5	4 $\frac{3}{4}$ -12	3 $\frac{1}{2}$ -12	5	5.749	1	—	0	7 $\frac{1}{4}$	4 $\frac{7}{8}$	1/4	7 $\frac{1}{4}$	1	2 $\frac{1}{4}$	3 $\frac{5}{8}$	6 $\frac{9}{16}$	3 $\frac{3}{4}$	9 $\frac{3}{8}$	12
	3	3 $\frac{1}{2}$	3 $\frac{1}{4}$ -12	2 $\frac{1}{2}$ -12	3 $\frac{1}{2}$	4.249	1	3	1/4	5 $\frac{3}{4}$	3 $\frac{3}{8}$	5/8	5 $\frac{3}{4}$	5/8	2 $\frac{1}{4}$	3 $\frac{5}{8}$	6 $\frac{9}{16}$	3 $\frac{3}{4}$	9 $\frac{3}{8}$	12
	4	4	3 $\frac{3}{4}$ -12	3-12	4	4.749	1	3 $\frac{3}{8}$	1/4	6 $\frac{1}{4}$	3 $\frac{7}{8}$	1/2	6 $\frac{1}{2}$	3/4	2 $\frac{1}{4}$	3 $\frac{5}{8}$	6 $\frac{9}{16}$	3 $\frac{3}{4}$	9 $\frac{3}{8}$	12
	5	4 $\frac{1}{2}$	4 $\frac{1}{4}$ -12	3 $\frac{1}{4}$ -12	4 $\frac{1}{2}$	5.249	1	—	1/4	6 $\frac{3}{4}$	4 $\frac{3}{8}$	1/2	7	3/4	2 $\frac{1}{4}$	3 $\frac{5}{8}$	6 $\frac{9}{16}$	3 $\frac{3}{4}$	9 $\frac{3}{8}$	12
8	1(Std.)	3 $\frac{1}{2}$	3 $\frac{1}{4}$ -12	2 $\frac{1}{2}$ -12	3 $\frac{1}{2}$	4.249	1	3	1/4	5 $\frac{3}{4}$	3 $\frac{3}{8}$	5/8	5 $\frac{3}{4}$	5/8	2 $\frac{1}{4}$	3 $\frac{3}{4}$	7 $\frac{1}{16}$	3 $\frac{7}{8}$	10 $\frac{1}{4}$	13 $\frac{1}{4}$
	2	5 $\frac{1}{2}$	5 $\frac{1}{4}$ -12	4-12	5 $\frac{1}{2}$	6.249	1	—	0	7 $\frac{3}{4}$	5 $\frac{3}{8}$	1/4	8 $\frac{1}{4}$	1	2 $\frac{1}{4}$	3 $\frac{3}{4}$	7 $\frac{1}{16}$	3 $\frac{7}{8}$	10 $\frac{1}{4}$	13 $\frac{1}{4}$
	3	4	3 $\frac{3}{4}$ -12	3-12	4	4.749	1	3 $\frac{3}{8}$	1/4	6 $\frac{1}{4}$	3 $\frac{7}{8}$	1/2	6 $\frac{1}{2}$	3/4	2 $\frac{1}{4}$	3 $\frac{3}{4}$	7 $\frac{1}{16}$	3 $\frac{7}{8}$	10 $\frac{1}{4}$	13 $\frac{1}{4}$
	4	4 $\frac{1}{2}$	4 $\frac{1}{4}$ -12	3 $\frac{1}{4}$ -12	4 $\frac{1}{2}$	5.249	1	—	1/4	6 $\frac{3}{4}$	4 $\frac{3}{8}$	1/2	7	3/4	2 $\frac{1}{4}$	3 $\frac{3}{4}$	7 $\frac{1}{16}$	3 $\frac{7}{8}$	10 $\frac{1}{4}$	13 $\frac{1}{4}$
	5	5	4 $\frac{3}{4}$ -12	3 $\frac{1}{2}$ -12	5	5.749	1	—	0	7 $\frac{1}{4}$	4 $\frac{7}{8}$	1/4	7 $\frac{1}{4}$	1	2 $\frac{1}{4}$	3 $\frac{3}{4}$	7 $\frac{1}{16}$	3 $\frac{7}{8}$	10 $\frac{1}{4}$	13 $\frac{1}{4}$

\dagger Dimension XI to be specified by customer.

Table 3 —
Envelope and
Mounting
Dimensions

B

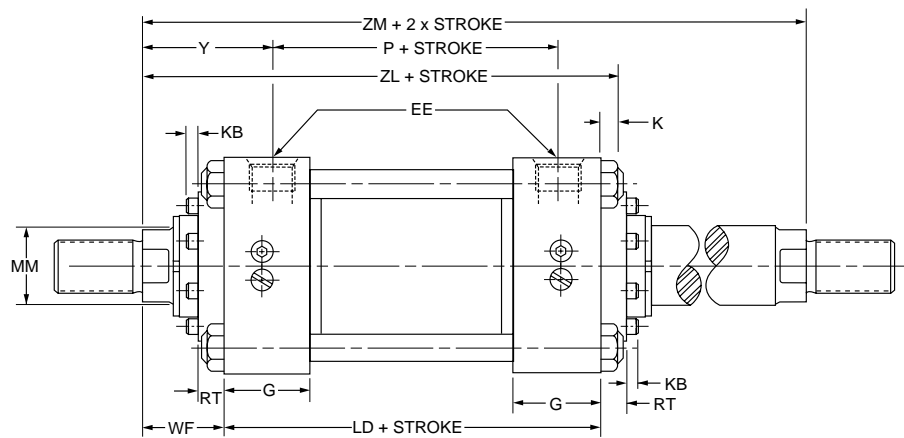
For Cylinder Division Plant Locations – See Page II.



K Type Double Rod
7" and 8" Bore Sizes

Series 3H 7" & 8" Bore
Heavy Duty Hydraulic Cylinders

Double Rod Cylinder
Style K



All dimensions are shown in inches and apply to Code 1 rod sizes only. For alternate rod sizes, determine all envelope dimensions (within LD dim.) as described above and then use appropriate rod end dimensions for proper rod size from single rod cylinder.

Bore	Rod No.	Rod Dia. MM	Add Stroke				Add 2X Stroke
			LD	ZL	SN _K	SS _K	
7	1	3	8 1/2	11 3/4	5 3/8	5 3/4	13
8	1	3 1/2	9 1/2	12 13/16	6 1/8	6 3/4	14
Replaces: On single rod mounting styles:			LG	ZB	SN	SS	—
			All Mtg. Styles		F	C	All Mtgs.

For additional information – call your local Parker Cylinder Distributor.

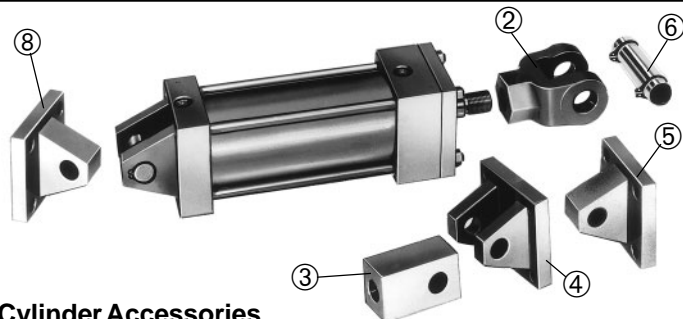
Notes

B

For Cylinder Division Plant Locations – See Page II.

Cylinder Accessories 7" and 8" Bore Sizes

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders



Cylinder Accessories

Parker offers a complete range of cylinder accessories to assure you of greatest versatility in present or future cylinder applications.

Rod End Accessories

Accessories offered for the rod end of the cylinder include Rod Clevis, Eye Bracket, Knuckle, Clevis Bracket and Pivot Pin. To select the proper part number for any desired accessory, refer to Chart A below and look opposite the thread size of the rod end as indicated in the first column. The Pivot Pins, Eye Brackets and Clevis Brackets are listed opposite the thread size which their mating Knuckles or Clevises fit.

Chart A

Thread Size	Mating Parts			Mating Parts			Alignment Coupler
	Rod Clevis	Eye Bracket	Pin	Knuckle	Clevis Bracket	Pin	
5/16-24	51221	74077	—	74075	74076	74078	134757 0031
7/16-20	50940	69195	68368	69089	69205	68368	134757 0044
1/2-20	50941	69195	68368	69090	69205	68368	134757 0050
3/4-16	50942	69196	68369	69091	69206	68369	134757 0075
3/4-16	133284	69196	68369	69091	69206	68369	134757 0075
7/8-14	50943	*85361	68370	69092	69207	68370	134757 0088
1-14	50944	*85361	68370	69093	69207	68370	134757 0100
1-14	133285	*85361	68370	69093	69207	68370	134757 0100
1 1/4-12	50945	69198	68371	69094	69208	68371	134757 0125
1 1/4-12	133286	69198	68371	69094	69208	68371	134757 0125
1 1/2-12	50946	*85362	68372	69095	69209	68372	133739 0150
1 3/4-12	50947	*85363	68373	69096	69210	69215	133739 0175
1 7/8-12	50948	*85363	68373	69097	69210	69215	133739 0188
2 1/4-12	50949	*85364	68374	69098	69211	68374	Consult Factory
2 1/2-12	50950	*85365	68375	69099	69212	68375	
2 3/4-12	50951	*85365	68375	69100	69213	69216	
3 1/4-12	50952	73538	73545	73536	73542	73545	
3 1/2-12	50953	73539	73547	73437	73542	73545	
4-12	50954	73539	73547	73438	73543	82181	
4 1/2-12	—	—	—	73439	73544	73547	

*Cylinder accessory dimensions conform to NFPA recommended standard NFPA/T3.6.8 R1-1984, NFPA recommended standard fluid power systems — cylinder — dimensions for accessories for cataloged square head industrial types. Parker adopted this standard in April, 1985. Eye Brackets or Mounting Plates shipped before this date may have different dimensions and will not necessarily interchange with the NFPA standard. For dimensional information on older style Eye Brackets or Mounting Plates consult Drawing #144805 or previous issues of this catalog.

Accessory Load Capacity

The various accessories have been load rated for your convenience. The load capacity in lbs. is the recommended maximum load for that accessory based on a 4:1 design factor in tensions. (Pivot Pin is rated in shear.) Before specifying, compare the actual load or the tension (pull) force at maximum operating pressure of the cylinder with the load capacity of the accessory you plan to use. If load or pull force of cylinder exceeds load capacity of accessory, consult factory.

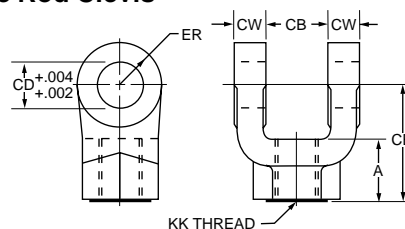
Mounting Plates

Mounting Plates for Style BB (Clevis mounted) cylinders are offered. To select proper part number for your application, refer to Chart B, above right.

Chart B

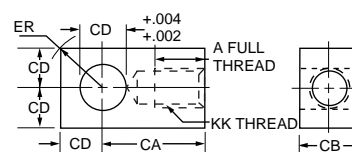
Mtg. Plate Part No.	Series 2H Bore Size
69195	1 1/2"
69196	2", 2 1/2"
*85361	3 1/4"
69198	4"
*85362	5"
*85363	6"
*85364	7"
*85365	8"

② Female Rod Clevis



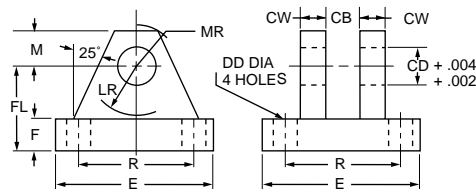
Order to fit thread size.

③ Knuckle (Female Rod Eye)



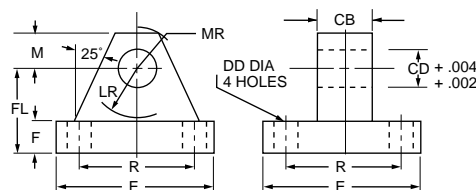
Order to fit thread size.

④ Clevis Bracket for Knuckle



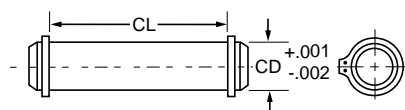
Order to fit Knuckle.

⑧ Mounting Plate or ⑤ Eye Bracket



- When used to mate with the Rod Clevis, select from Chart A.
- When used to mount the Style BB cylinders, select from the Mounting Plate Selection Table. See Chart B at lower left.

⑥ Pivot Pin



- Pivot Pins are furnished with Clevis Mounted Cylinders as standard.
- Pivot Pins are furnished with (2) Retainer Rings.
- Pivot Pins must be ordered as separate item if to be used with Knuckles, Rod Clevises, or Clevis Brackets.

For additional information — call your local Parker Cylinder Distributor.

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

Cylinder
Accessories
7" and 8" Bore Sizes

	Female Rod Clevis Part Number																		
	51221 [†]	50940	50941	50942	133284	50943	50944	133285	50945	133286	50946	50947	50948	50949	50950	50951	50952	50953	50954
A	13/16	3/4	3/4	1 1/8	1 1/8	1 5/8	1 5/8	1 5/8	1 7/8	2	2 1/4	3	3	3 1/2	3 1/2	3 1/2	3 1/2 [‡]	4 [‡]	4 [‡]
CB	1 1/32	3/4	3/4	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	2	2	2 1/2	2 1/2	2 1/2	3	3	3	4	4 1/2	4 1/2
CD	5/16	1/2	1/2	3/4	3/4	1	1	1	1 3/8	1 3/8	1 3/4	2	2	2 1/2	3	3	3 1/2	4	4
CE	2 1/4	1 1/2	1 1/2	2 1/8	2 3/8	2 15/16	2 15/16	3 1/8	3 3/4	4 1/8	4 1/2	5 1/2	5 1/2	6 1/2	6 3/4	6 3/4	7 3/4	8 13/16	8 13/16
CW	13/64	1/2	1/2	5/8	5/8	3/4	3/4	3/4	1	1	1 1/4	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	2	2 1/4	2 1/4
ER	19/64	1/2	1/2	3/4	3/4	1	1	1	1 3/8	1 3/8	1 3/4	2	2	2 1/2	2 3/4	2 3/4	3 1/2	4	4
KK	5/16-24	7/16-20	1/2-20	3/4-16	3/4-16	7/8-14	1-14	1-14	1 1/4-12	1 1/4-12	1 1/2-12	1 3/4-12	1 7/8-12	2 1/4-12	2 1/2-12	2 3/4-12	3 1/4-12	3 1/2-12	4-12
Load Capacity Lbs.⊖	2600	4250	4900	11200	11200	18800	19500	19500	33500	33500	45600	65600	65600	98200	98200	98200	156700	193200	221200

	Knuckle Part Number																
	74075	69089	69090	69091	69092	69093	69094	69095	69096	69097	69098	69099	69100	73536	73437	73438	73439
A	3/4	3/4	3/4	1 1/8	1 1/8	1 5/8	2	2 1/4	2 1/4	3	3 1/2	3 1/2	3 5/8	4 1/2	5	5 1/2	5 1/2
CA	1 1/2	1 1/2	1 1/2	2 1/16	2 3/8	2 13/16	3 7/16	4	4 3/8	5	5 13/16	6 1/8	6 1/2	7 5/8	7 5/8	9 1/8	9 1/8
CB	7/16	3/4	3/4	1 1/4	1 1/2	1 1/2	2	2 1/2	2 1/2	2 1/2	3	3	3 1/2	4	4	4 1/2	5
CD	7/16	1/2	1/2	3/4	1	1	1 3/8	1 3/4	2	2	2 1/2	3	3	3 1/2	3 1/2	4	4
ER	19/32	23/32	23/32	1 1/16	1 7/16	1 7/16	1 31/32	2 1/2	2 27/32	2 27/32	3 9/16	4 1/4	4 1/4	4 31/32	4 31/32	5 11/16	5 11/16
KK	5/16-24	7/16-20	1/2-20	3/4-16	7/8-14	1-14	1 1/4-12	1 1/2-12	1 3/4-12	1 7/8-12	2 1/4-12	2 1/2-12	2 3/4-12	3 1/4-12	3 1/2-12	4-12	4 1/2-12
Load Capacity Lbs.⊖	3300	5000	5700	12100	13000	21700	33500	45000	53500	75000	98700	110000	123300	161300	217300	273800	308500

	Clevis Bracket for Knuckle Part Number												
	74076	69205	69206	69207	69208	69209	69210	69211	69212	69213	73542	73543	73544
CB	15/32	3/4	1 1/4	1 1/2	2	2 1/2	2 1/2	3	3	3 1/2	4	4 1/2	5
CD	7/16	1/2	3/4	1	1 3/8	1 3/4	2	2 1/2	3	3	3 1/2	4	4
CW	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	1 1/2	1 1/2	1 1/2	2	2	2
DD	17/64	13/32	17/32	2 1/32	2 1/32	2 9/32	1 1/16	1 3/16	1 5/16	1 5/16	1 13/16	2 1/16	2 1/16
E	2 1/4	3 1/2	5	6 1/2	7 1/2	9 1/2	12 3/4	12 3/4	12 3/4	12 3/4	15 1/2	17 1/2	17 1/2
F	3/8	1/2	5/8	3/4	7/8	7/8	1	1	1	1	1 11/16	1 15/16	1 15/16
FL	1	1 1/2	1 7/8	2 1/4	3	3 5/8	4 1/4	4 1/2	6	6	6 11/16	7 11/16	7 11/16
LR	5/8	3/4	1 3/16	1 1/2	2	2 3/4	3 3/16	3 1/2	4 1/4	4 1/4	5	5 3/4	5 3/4
M	3/8	1/2	3/4	1	1 3/8	1 3/4	2 1/4	2 1/2	3	3	3 1/2	4	4
MR	1/2	5/8	2 9/32	1 1/4	1 21/32	2 7/32	2 25/32	3 1/8	3 19/32	3 19/32	4 1/8	4 7/8	4 7/8
R	1.75	2.55	3.82	4.95	5.73	7.50	9.40	9.40	9.40	9.40	12.00	13.75	13.75
Load Capacity Lbs.⊖	3600	7300	14000	19200	36900	34000	33000	34900	33800	36900	83500	102600	108400

	Eye Bracket and Mounting Plate Part Number										
	74077	69195	69196	85361*	69198	85362*	85363*	85364*	85365*	73538	73539
CB	5/16	3/4	1 1/4	1 1/2	2	2 1/2	2 1/2	3	3	4	4 1/2
CD	5/16	1/2	3/4	1	1 3/8	1 3/4	2	2 1/2	3	3 1/2	4
DD	17/64	13/32	17/32	2 1/32	2 1/32	2 9/32	1 1/16	1 3/16	1 5/16	1 13/16	2 1/16
E	2 1/4	2 1/2	3 1/2	4 1/2	5	6 1/2	7 1/2	8 1/2	9 1/2	12 5/8	14 7/8
F	3/8	3/8	5/8	7/8	7/8	1 1/8	1 1/2	1 3/4	2	1 11/16	1 15/16
FL	1	1 1/8	1 7/8	2 3/8	3	3 3/8	4	4 3/4	5 1/4	5 11/16	6 7/16
LR	5/8	3/4	1 1/4	1 1/2	2 1/8	2 1/4	2 1/2	3	3 1/4	4	4 1/2
M	3/8	1/2	3/4	1	1 3/8	1 3/4	2	2 1/2	2 3/4	3 1/2	4
MR	1/2	9/16	7/8	1 1/4	1 5/8	2 1/8	2 7/16	3	3 1/4	4 1/8	5 1/4
R	1.75	1.63	2.55	3.25	3.82	4.95	5.73	6.58	7.50	9.62	11.45
Load Capacity Lbs.⊖	1700	4100	10500	20400	21200	49480	70000	94200	121900	57400	75000

	Pivot Pin Part Number													
	74078	68368	68369	68370	68371	68372	68373	69215	68374	68375	69216	73545	82181	73547*
CD	7/16	1/2	3/4	1	1 3/8	1 3/4	2	2	2 1/2	3	3	3 1/2	4	4
CL	15/16	1 7/8	2 5/8	3 1/8	4 1/8	5 3/16	5 3/16	5 11/16	6 3/16	6 1/4	6 3/4	8 1/4	8 5/8	9
Shear Capacity Lbs.⊖	6600	8600	19300	34300	65000	105200	137400	137400	214700	309200	309200	420900	565800	565800

*Cylinder accessory dimensions conform to NFPA recommended standard NFPA/T3.6.8 R1-1984, NFPA recommended standard fluid power systems — cylinder — dimensions for accessories for cataloged square head industrial types. Parker adopted this standard in April, 1985. Eye Brackets or Mounting Plates shipped before this date may have different dimensions and will not necessarily interchange with the NFPA standard. For dimensional information on older style Eye Brackets or Mounting Plates consult Drawing #144805 or previous issues of this catalog.

⊖ See Accessory Load Capacity note on previous page.

*These sizes supplied with cotter pins.

†Includes Pivot Pin.

Consult appropriate cylinder rod end dimensions for compatibility.

For Cylinder Division Plant Locations – See Page II.



Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

How to Order

How to Order Series "3H" Cylinders

When ordering Series 3H cylinders, please review the following:

Note: Duplicate cylinders can be ordered by giving the SERIAL NUMBER from the nameplate of the original cylinder. Factory records supply a quick positive identification.

Piston Rods: Specify rod code number based on diameter. Give thread style number for a standard thread or specify dimensions. See "Style 3 Rod End" below.

Cushions: If cushions are required specify according to the model number on the next page. If the cylinder is to have a double rod and only one cushion is required, be sure to specify clearly which end of the cylinder is to be cushioned.

Special Modifications: Additional information is required on orders for cylinders with special modifications. This is best handled with descriptive notes. For further information, consult factory.

Additional Lipseal® Piston (if desired): Parker Lipseal® pistons are offered as an option at no extra cost in the Series 3H cylinders. With this feature, zero leakage under static holding conditions is attained. Call out "with Lipseal piston" if this type of piston is desired. If not specified, the Hi Load piston seals will be furnished.

Fluid Medium: Series 3H hydraulic cylinders are equipped with seals for use with hydraulic oil. If other than hydraulic oil will be used, specify class of fluid (See Catalog section C.)

Water Service Modifications

Standard – When requested, Parker can supply Series 3H cylinders with standard modifications that make the cylinders more nearly suitable for use with water as the fluid medium. The modifications include chrome-plated cylinder bore; electroless nickel-plated, non-wearing internal surfaces; Lipseal style piston, Buna N Seals and chrome-plated, stainless steel piston rod. On orders for water service cylinders, be sure to specify the maximum operating pressure.

(These factors must be taken into account because of the lower tensile strength of stainless steels available for use in piston rods.)

Warranty– Parker will warrant Series 3H cylinders modified for water service to be free of defects in materials or workmanship. On the other hand, Parker cannot accept responsibility for premature failure of cylinder function, where failure is caused by corrosion, electrolysis or mineral deposits within the cylinder.

Class 1 Seals

Class 1 seals are the seals provided as standard in a cylinder assembly unless otherwise specified. For further information on fluid compatibility or operating limitations of all components, see section C.

For the 3H series cylinders the following make-up Class 1 Seals:

Primary Piston Rod Seal – Enhanced Polyurethane

Piston Rod Wiper – Nitrile

Piston Seals – Hi-Load. Filled PTFE Seals with a nitrile expander

Options – Cast Iron Rings

O-Rings – Nitrile (nitrile back-up washer when used)

Combination Mountings

Single Rod End The first mounting is the one called out on the head end of the cylinder. The second or subsequent mountings are called out as they appear in the assembly moving away from the rod end. Exception: When tie rod mountings are part of a combination, the model number should contain an "S" (Special) in the model code and a note in the body of the order clarifying the mounting arrangement. The "P" is used to define a thrust key and is not considered to be a mounting. However, it is located at the primary end.

Example: 7.00 CCB3HLTS14AC x 10.000

Combination "C" mounting head only. "BB" mounting cap end

This cylinder is also cushioned at both ends.

Double Rod End In general, the model number is read left to right corresponding to the cylinder as viewed from left to right with the

primary end at rod end #1. See Double Rod Models information page in this section. For this option the piston rod number, piston rod end, and piston rod threads are to be specified for both ends. The simplest are for symmetric cylinders such as: TD, C, E, F, G, and CB mounts. All other mounting styles, the description of the first rod end will be at the mounting end. In the case of multiple mounts, the description of the first rod end will be at the primary mounting end. For "DD" mounts, the description of the first rod end will be the same location as the "XI" dimension.

Example: 7.00 KDD3HLT24A/18A x 10.000 XI=8

This is a center trunnion mounting cylinder with the XI dimension measured from the code 2 rod side of the cylinder which has the style 4 thread. The opposite end code 1 rod with the style 8 thread.

Style 3 Rod End

A style 3 rod end indicates a special rod end configuration. All special piston rod dimensions must have **all three:** KK; A; W/WF or LA/LAF specified with the rod fully retracted. A sketch or drawing should be submitted for rod ends requiring special machining such as snap ring grooves, keyways, tapers, multiple diameters, etc. It is good design practice to have this machining done on a diameter at least 0.065 inches smaller than the piston rod diameter. This allows the piston rod to have a chamfer preventing rod seal damage during assembly or

maintenance. Standard style 55 rod ends with a longer than standard WG dimension should call out a style 3 rod end and the note: **same as 55 except WG=_____**. A drawing should be submitted for special 55 rod ends that have specific tolerances or special radii. Special rod ends that have smaller than standard male threads, larger than standard female threads, or style 55 rod ends with smaller than standard AF or AE dimensions are to be reviewed by Engineering for proper strength at operating pressure.

Service Policy

On cylinders returned to the factory for repairs, it is standard policy for the Cylinder Division to make such part replacements as will put the cylinder in as good as new condition. Should the condition of the returned cylinder be such that expenses for repair would exceed the costs of a new one, you will be notified.

Address all correspondence and make shipments to, Service Department at your nearest regional plant listed in the pages of this catalog.

Certified Dimensions

Parker Cylinder Division guarantees that all cylinders ordered from this catalog will be built to dimensions shown. All dimensions are certified to be correct, and thus it is not necessary to request certified drawings.

For additional information – call your local Parker Cylinder Distributor.

Series 3H 7" & 8" Bore Heavy Duty Hydraulic Cylinders

Model Numbers
7" and 8" Bore Sizes

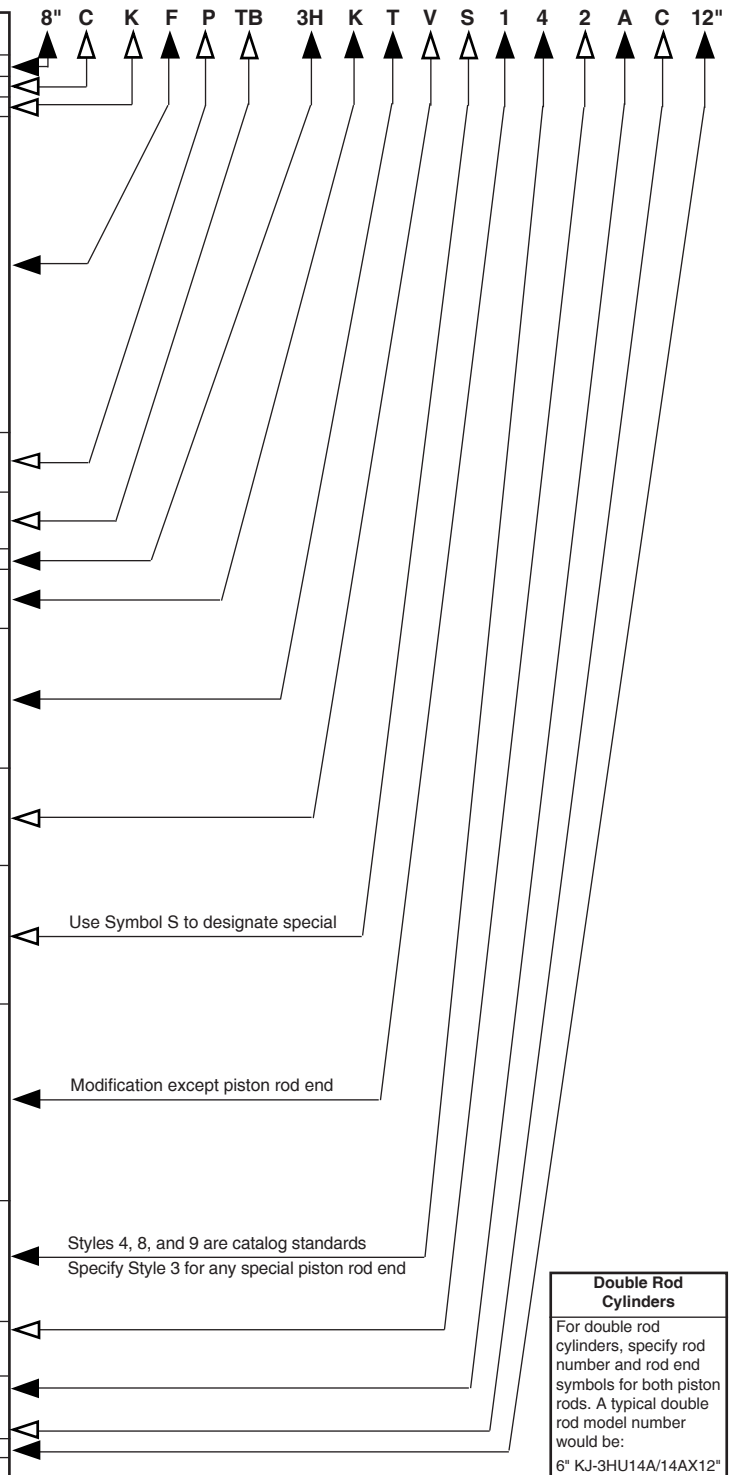
Series 3H Model Numbers – How to Develop Them – How to “Decode” Them

Parker Series 3H cylinders can be completely and accurately described by a model number consisting of coded symbols. For single rod cylinders a maximum of 17 places for digits and letters are used in a prescribed sequence to produce a model number. Only nine places are needed to completely describe a standard non-cushioned Series

3H cylinder. To develop a model number, select only those symbols that represent the cylinder required, and place them in the sequence indicated below.

Note: Page numbers with a letter prefix, ie: C77, are located in section C of this catalog.

Feature	Description	Page No.	Symbol
Bore*	Specify in inches		
Cushion-Head	Used only if cushion required	61, C94	C
Double-Rod	Used only if double-rod cylinder is required	80	K
Mounting Style*	Head Tie Rods Extended	68	TB
	Cap Tie Rods Extended	68	TC
	Both Tie Rods Extended	68	TD
	Head Rectangular Flange	72	J
	Head Square Flange	72	JB
	Head Rectangular	72	JJ
	Cap Rectangular Flange	70	H
	Cap Square Flange	70	HB
	Cap Rectangular	70	HH
	Side Lugs†	74	C†
	Side Tapped†	74	F†
	Cap Fixed Clevis	76	BB
	Head Trunnion	78	D
	Cap Trunnion	78	DB
	Intermediate Fixed Trunnion‡	78	DD
Mounting Modifications	Used only for Thrust Key (Styles C, F, G, & CB)	C93	P
	Used only for Manifold Port O-Ring Seal (Style C)	C91	M
Combination Mounting Style	Any Practical Mounting Style Listed Above	—	As listed above
		—	
Series*	Used in all 3H Model Numbers	—	3H
Piston	Hi-Load Piston standard	B63, C4	K
	Used only for Ring Packed Piston	B63	C
	Used only for Lipseal® Piston		L
Ports*	SAE Straight Thread O-Ring Port (Standard)	C89	T
	Used only for NPTF (Dry Seal Pipe Thread)	C89	U
	Used only for BSP (Parallel Thread ISO 228)	C89	R
	Used only for SAE Flange Ports (3000 psi)	C89	P
	Used only for BSPT (Taper Thread)	C89	B
	Used only for Metric Thread	C89	G
	Used only for Metric Thread per ISO 6149	C89	Y
Common Modifications	High Water Content Fluid	C83	J
	Nut Retained Piston	67	F
	Fluorocarbon Seals	C83	V
	Water Service	C83	W
	EPR Seals	C83	X
Special Modifications	Used only if special Modifications are required:		
	Oversize Ports	C91	
	Port Position Change	C89	
	Special Seals	C83	S
	Stop Tube††	C95	
	Stroke Adjuster	C93	
Piston Rod* Number	For Single Rod Cylinders, select one only. Refer to Rod number listing, Table 2, Pages 64 through 74	—	1
	See chart in Section C, page 83 for minimum piston rod diameter	—	2
		—	3
		—	4
		—	5
		—	6
		—	7
		—	8
		—	9
		—	0
Piston* Rod End	Select:		
	Style 4 Small Male	C92	4
	Style 8 Intermediate Male	C92	8
	Style 9 Short Female	C92	9
	Style 3 Special (Specify)	C92	3
Piston Rod Alternate Threads	Style 55 Rod End for Flange Coupling	C19	55
	Used only for male thread two times longer than standard.	C92	2
Piston Rod* Threads	UNF Standard	C92	A
	BSF (British Fine)	C92	W
	Metric	C92	M
Cushion-Cap	Used only if cushion required	67, C94	C
Stroke*††	Specify in inches	C93	—



†Cylinders with these mounting styles should have a stroke length equal to or greater than their bore diameters.

*Required for Basic Cylinder Model Number

▲ Dark Arrows Indicate Basic Minimum Model Number

††In case of stop tube, call out gross stroke length.

‡Specify XI dimension.

For Cylinder Division Plant Locations – See Page II.

Parker TS-2000 seal designed to eliminate cylinder rod seal leakage.

Parker Series 2H Heavy Duty and Series 3L Medium Duty Hydraulic Cylinders with the TS-2000 seal offers positive protection against cylinder rod leakage under the most demanding applications.

The TS-2000 seal is the product of countless hours of research, development and extensive field testing and is only available on Parker Cylinders.

Based on the popular Parker Serrated Lipseal rod design, the TS-2000 incorporates the pressure-compensated, uni-directional characteristics of a U-cup with the multiple edge sealing effectiveness of compression-type stacked-packings.

The goal for the Parker team was to design a rod seal suitable for all types of applications, regardless of pressure profile. It had to be composed of a



“Jewel” gland with wiperseal and TS-2000 cylinder rod seal.

material that would not react chemically with hydraulic fluids. And it had to produce better and more reliable “dry rod” performance than the standard serrated lip-seal design in a broad range of applications.

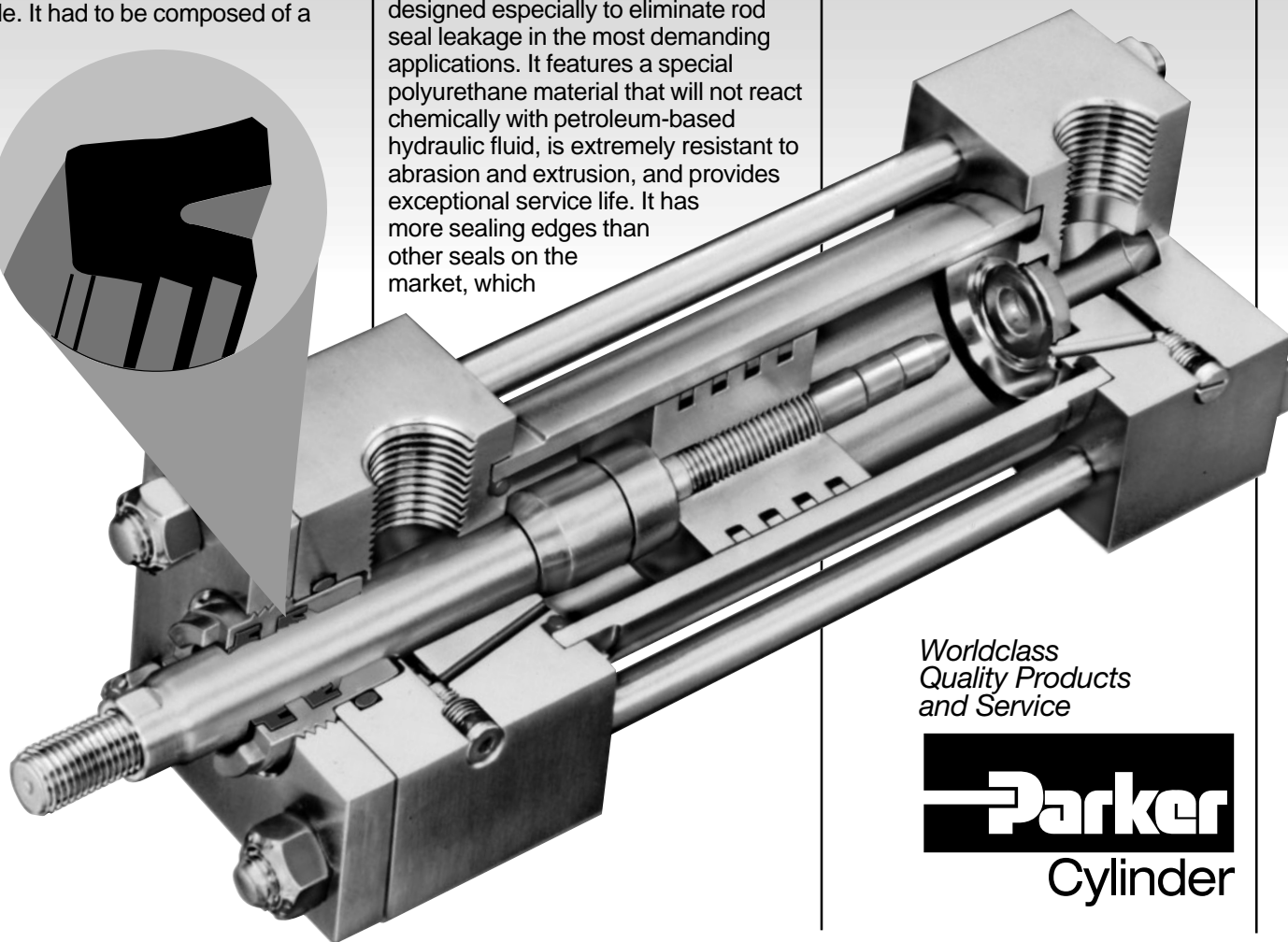
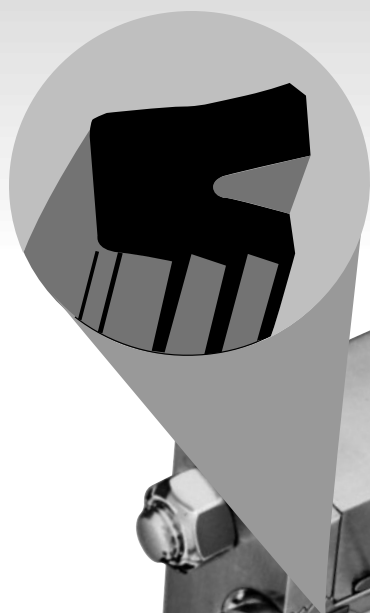
The result is the TS-2000 seal, designed especially to eliminate rod seal leakage in the most demanding applications. It features a special polyurethane material that will not react chemically with petroleum-based hydraulic fluid, is extremely resistant to abrasion and extrusion, and provides exceptional service life. It has more sealing edges than other seals on the market, which

in turn produces “dry rod” performance. The seal geometry was refined for maximum stability in the groove and has excellent performance characteristics throughout a broad range of pressures and piston rod velocities.

The Parker design team was successful!

TS-2000 rod seal has not failed in any of the test applications in the lab or on the job, no matter how tough or demanding.

For more information on the TS-2000 call or write your local Parker distributor or Parker Hannifin Corporation, Cylinder Division, 500 S. Wolf Road, Des Plaines, IL 60016, 847-298-2400.



*Worldclass
Quality Products
and Service*

Parker
Cylinder

For additional information – call your local Parker Cylinder Distributor.