

FEATURES:

- Honed tubing
- Heavy duty, high strength tie-rods
- Induction hardened piston rods plated with RoyalPlate Plus® (piston rods on 2" bore not hardened)
- Ductile iron piston, butt, gland & clevis
- Urethane u-cup & metal encased wiper 2 1/2" bore & larger models
- Crown seal on piston
- Pins & cotter pins (Hardened pins on 4", 4 1/2" & 5" models)
- Standard color is gloss black
- Stroke control may be installed on 8" strokes (2" - 3.5" bore, A models only)
- Side ports available on request
- Nylon bearing ring on 4", 4 1/2" & 5" bore models
- 3000 PSI continuous operating pressure

2 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 2 Inch Bore Cylinders	
B200040ABAAA07B	none /SAE-32004	\$ 147.10	4"	17	9425 lbs	14 1/4	3 1/2	* 1 1/8" rod diameter	
B200060ABAAA07B	none /SAE-32006	\$ 149.50	6"	19	9425 lbs	16 1/4	3 1/2	A 3/16" cylinder tube wall thickness	
A200080ABAAA07B	none /SAE-32008	\$ 152.80	8"	21	9425 lbs	20 1/4	5 1/2	B, C SAE 3/4 -16 extend & retract ports	
B200100ABAAA07B	none /SAE-32010	\$ 153.40	10"	22	9425 lbs	20 1/4	3 1/2	D 1.015" clevis pin hole size	
B200120ABAAA07B	SAE-9012 /SAE-32012	\$ 155.30	12"	23	9425 lbs	22 1/4	3 1/2	E, F 1 1/8" base clevis throat depth with 2 1/8" from pin center to port center	
B200140ABAAA07B	SAE-9014 /SAE-32014	\$ 158.50	14"	25	9425 lbs	24 1/4	3 1/2	G 1 13/16" rod clevis throat depth	
A200160ABAAA07B	SAE-9016 /SAE-32016	\$ 165.60	16"	28	7630 lbs	31 1/2	8 3/4	J 1.06" min. distance between ears at pin center line	
B200180ABAAA07B	SAE-9018 /SAE-32018	\$ 170.00	18"	28	9200 lbs	28 1/4	3 1/2	K 1 1/8" base clevis ear radius	
B200200ABAAA07B	SAE-9020 /SAE-32020	\$ 175.70	20"	30	7760 lbs	30 1/4	3 1/2	L 1 1/8" rod clevis ear radius	
B200240ABAAA07B	SAE-9024 /SAE-32024	\$ 187.20	24"	33	5730 lbs	34 1/4	3 1/2	M 1 1/8" - 12 UNF-3 piston rod clevis thread size	
B200300ABAAA07B	SAE-9030 /SAE-32030	\$ 204.30	30"	37	3910 lbs	40 1/4	3 1/2	N 7/8" piston width	
								O 2 3/16" gland width	

2.5 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 2.5 Inch Bore Cylinders	
B250060ABAAA07B	none /SAE-32506	\$ 152.10	6"	22	14730 lbs	16 1/4	3 3/16	* 1 1/4" rod diameter	
A250080ABAAA07B	SAE-9108 /SAE-32508	\$ 155.40	8"	25	14730 lbs	20 1/4	5 1/16	A 3/16" cylinder tube wall thickness	
B250100ABAAA07B	SAE-9110 /SAE-32510	\$ 161.40	10"	26	14730 lbs	20 1/4	3 3/16	B, C SAE 3/4 -16 extend & retract ports	
B250120ABAAA07B	SAE-9112 /SAE-32512	\$ 168.50	12"	28	14730 lbs	22 1/4	3 3/16	D 1.015" clevis pin hole size	
B250140ABAAA07B	SAE-9114 /SAE-32514	\$ 175.70	14"	30	14730 lbs	24 1/4	3 3/16	E, F 1 1/8" base clevis throat depth with 2 1/8" from pin center to port center	
A250160ABAAA07B	SAE-9116 /SAE-32516	\$ 184.10	16"	34	11520 lbs	31 1/2	8 3/16	G 1 13/16" rod clevis throat depth	
B250180ABAAA07B	SAE-9118 /SAE-32518	\$ 190.00	18"	34	13880 lbs	28 1/4	3 3/16	J 1.06" min. distance between ears at pin center line	
B250200ABAAA07B	SAE-9120 /SAE-32520	\$ 197.20	20"	36	11720 lbs	30 1/4	3 3/16	K 1 1/8" base clevis ear radius	
B250240ABAAA07B	SAE-9124 /SAE-32524	\$ 211.70	24"	41	8670 lbs	34 1/4	3 3/16	L 1 1/8" rod clevis ear radius	
B250300ABAAA07B	SAE-9130 /SAE-32530	\$ 233.10	30"	47	5930 lbs	40 1/4	3 3/16	M 1 1/8" - 12 UNF-3 piston rod clevis thread size	
								N 1" piston width	
								O 2 3/16" gland width	

3 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 3 Inch Bore Cylinders	
B300060ABAAA07B	none /SAE-33006	\$ 161.70	6"	26	21210 lbs	16 1/4	3 3/4	* 1 3/8" rod diameter	
A300080ABAAA07B	SAE-9208 /SAE-33008	\$ 170.40	8"	29	21210 lbs	20 1/4	5 1/4	A 3/16" cylinder tube wall thickness	
B300100ABAAA07B	SAE-9210 /SAE-33010	\$ 177.80	10"	30	21210 lbs	20 1/4	3 3/4	B, C SAE 3/4 -16 extend & retract ports	
B300120ABAAA07B	SAE-9212 /SAE-33012	\$ 186.50	12"	33	21210 lbs	22 1/4	3 3/4	D 1.015" clevis pin hole size	
B300140ABAAA07B	SAE-9214 /SAE-33014	\$ 195.10	14"	35	21210 lbs	24 1/4	3 3/4	E, F 1 1/8" base clevis throat depth with 2 1/8" from pin center to port center	
A300160ABAAA07B	SAE-9216 /SAE-33016	\$ 205.10	16"	40	16730 lbs	31 1/2	9	G 1 13/16" rod clevis throat depth	
B300180ABAAA07B	SAE-9218 /SAE-33018	\$ 212.40	18"	40	20120 lbs	28 1/4	3 3/4	J 1.06" min. distance between ears at pin center line	
B300200ABAAA07B	SAE-9220 /SAE-33020	\$ 221.20	20"	42	17010 lbs	30 1/4	3 3/4	K 1 1/8" base clevis ear radius	
B300240ABAAA07B	SAE-9224 /SAE-33024	\$ 242.60	24"	47	12620 lbs	34 1/4	3 3/4	L 1 1/8" rod clevis ear radius	
B300300ABAAA07B	SAE-9230 /SAE-33030	\$ 280.80	30"	54	8640 lbs	40 1/4	3 3/4	M 1 1/8" - 12 UNF-3 piston rod clevis thread size	
B300360ABAAA07B	SAE-9236 /SAE-33036	\$ 319.00	36"	61	6290 lbs	46 1/4	3 3/4	N 1" piston width	
B300480ABAAA07B	SAE-9248 /SAE-33048	\$ 395.40	48"	75	3760 lbs	58 1/4	3 3/4	O 1 13/16" gland width	

3.5 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 3.5 Inch Bore Cylinders	
A350080ABAAA07B	SAE-9308A /SAE-33508	\$ 184.80	8"	35	28860 lbs	20 1/4	5 3/4	* 1 3/8" rod diameter	
B350100ABAAA07B	SAE-9310A /SAE-33510	\$ 193.90	10"	37	28860 lbs	20 1/4	3 3/4	A 3/16" cylinder tube wall thickness	
B350120ABAAA07B	SAE-9312A /SAE-33512	\$ 205.00	12"	39	28860 lbs	22 1/4	3 3/4	B, C SAE 3/4 -16 extend & retract ports	
B350140ABAAA07B	SAE-9314A /SAE-33514	\$ 216.00	14"	42	28860 lbs	24 1/4	3 3/4	D 1.015" clevis pin hole size	
A350160ABAAA07B	SAE-9316A /SAE-33516	\$ 228.90	16"	46	16900 lbs	31 1/2	9	E, F 1 1/8" base clevis throat depth with 2 1/8" from pin center to port center	
B350180ABAAA07B	SAE-9318A /SAE-33518	\$ 237.90	18"	47	20400 lbs	28 1/4	3 3/4	G 1 13/16" rod clevis throat depth	
B350200ABAAA07B	SAE-9320A /SAE-33520	\$ 248.90	20"	49	17240 lbs	30 1/4	3 3/4	J 1.06" min. distance between ears at pin center line	
B350240ABAAA07B	SAE-9324A /SAE-33524	\$ 271.00	24"	54	12780 lbs	34 1/4	3 3/4	K 1 1/8" base clevis ear radius	
B350300ABAAA07B	SAE-9330A /SAE-33530	\$ 311.80	30"	62	8760 lbs	40 1/4	3 3/4	L 1 1/8" rod clevis ear radius	
B350360ABAAA07B	SAE-9336A /SAE-33536	\$ 352.50	36"	69	6370 lbs	46 1/4	3 3/4	M 1 1/8" - 12 UNF-3 piston rod clevis thread size	
B350480ABAAA07B	SAE-9348A /SAE-33548	\$ 434.10	48"	85	3800 lbs	58 1/4	3 3/4	N 1" piston width	
								O 1 13/16" gland width	

4 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 4 Inch Bore Cylinders	
A400080ABACA07B	SAE-9408 /SAE-34008	\$ 244.40	8"	48	37700 lbs	20 1/4	5 1/4	* 1 3/4" rod diameter	
B400100ABACA07B	SAE-9410 /SAE-34010	\$ 255.00	10"	50	37700 lbs	20 1/4	3 3/4	A 3/16" cylinder tube wall thickness	
B400120ABACA07B	SAE-9412 /SAE-34012	\$ 268.20	12"	54	37700 lbs	22 1/4	3 3/4	B, C SAE 3/4 -16 extend & retract ports	
B400140ABACA07B	SAE-9414 /SAE-34014	\$ 281.30	14"	57	37700 lbs	24 1/4	3 3/4	D 1.015" clevis pin hole size	
A400160ABACA07B	SAE-9416 /SAE-34016	\$ 296.70	16"	64	37700 lbs	31 1/2	8 1/2	E, F 1 1/8" base clevis throat depth with 2 1/8" from pin center to port center	
B400180ABACA07B	SAE-9418 /SAE-34018	\$ 307.50	18"	64	37700 lbs	28 1/4	3 3/4	G 1 13/16" rod clevis throat depth	
B400200ABACA07B	SAE-9420 /SAE-34020	\$ 320.50	20"	68	37700 lbs	30 1/2	3 3/4	J 1.06" min. distance between ears at pin center line	
B400240ABACA07B	SAE-9424 /SAE-34024	\$ 339.00	24"	75	33710 lbs	34 1/4	3 3/4	K 1 1/8" base clevis ear radius	
B400300ABACA07B	SAE-9430 /SAE-34030	\$ 378.20	30"	85	22990 lbs	40 1/4	3 3/4	L 1 1/8" rod clevis ear radius	
B400360ABACA07B	SAE-9436 /SAE-34036	\$ 417.50	36"	95	16680 lbs	46 1/4	3 3/4	M 1 1/2" - 12 UNF-3 piston rod clevis thread size	
B400480ABACA07B	SAE-9448 /SAE-34048	\$ 496.00	48"	116	9920 lbs	58 1/4	3 3/4	N 1 1/4" piston width	
								O 1 13/16" gland width	

4.5 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 4.5 Inch Bore Cylinders	
B450080ACDDA07B	none /SAE-34508	\$ 322.70	8"	60	47710 lbs	20 1/4	4	* 2" rod diameter	
B450120ACDDA07B	none /SAE-34512	\$ 353.00	12"	69	47710 lbs	24 1/4	4	A 1/4" cylinder tube wall thickness	
B450140ACDDA07B	none /SAE-34514	\$ 368.10	14"	74	47710 lbs	26 1/4	4	B, C SAE 7/8 -14 extend & retract ports	
A450160ACDDA07B	none /SAE-34516	\$ 385.60	16"	81	47710 lbs	31 1/2	7 1/4	D 1.265" clevis pin hole size	
B450180ACDDA07B	none /SAE-34518	\$ 398.40	18"	83	47710 lbs	30 1/4	4	E, F 2 1/4" base clevis throat depth with 2 1/8" from pin center to port center	
B450200ACDDA07B	none /SAE-34520	\$ 413.60	20"	87	47710 lbs	32 1/4	4	G 2" rod clevis throat depth	
B450240ACDDA07B	none /SAE-34524	\$ 443.80	24"	97	44710 lbs	36 1/4	4	J 1.13" min. distance between ears at pin center line	
B450300ACDDA07B	none /SAE-34530	\$ 489.40	30"	110	37530 lbs	42 1/4	4	K 1 15/16" base clevis ear radius	
B450360ACDDA07B	none /SAE-34536	\$ 534.90	36"	124	27430 lbs	48 1/4	4	L 1 1/4" rod clevis ear radius	
B450480ACDDA07B	none /SAE-34548	\$ 646.70	48"	152	16470 lbs	60 1/4	4	M 1 1/2" - 12 UNF-3 piston rod clevis thread size	
								N 1 7/8" piston width	
								O 1 15/16" gland width	

5 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 5 Inch Bore Cylinders	
B500080ACDDA07B	SAE-9508 /SAE-35008	\$ 350.80	8"	72	58900 lbs	20 1/4	4	* 2" rod diameter	
B500120ACDDA07B	SAE-9512 /SAE-35012	\$ 381.50	12"	83	58900 lbs	24 1/4	4	A 1/4" cylinder tube wall thickness	
B500140ACDDA07B	SAE-9514 /SAE-35014	\$ 396.90	14"	88	58900 lbs	26 1/4	4	B, C SAE 7/8 -14 extend & retract ports	
A500160ACDDA07B	SAE-9516 /SAE-35016	\$ 417.40	16"	96	58900 lbs	31 1/2	7 1/4	D 1.265" clevis pin hole size	
B500180ACDDA07B	SAE-9518 /SAE-35018	\$ 427.70	18"	98	58900 lbs	30 1/4	4	E, F 1 3/4" base clevis throat depth with 2 1/8" from pin center to port center	
B500200ACDDA07B	SAE-9520 /SAE-35020	\$ 443.10	20"	103	58900 lbs	32 1/4	4	G 2" rod clevis throat depth	
B500240ACDDA07B	SAE-9524 /SAE-35024	\$ 464.10	24"	113	54510 lbs	36 1/4	4	J 1.13" min. distance between ears at pin center line	
B500300ACDDA07B	SAE-9530 /SAE-35030	\$ 512.50	30"	129	37620 lbs	42 1/4	4	K 1 3/8" base clevis ear radius	
B500360ACDDA07B	SAE-9536 /SAE-35036	\$ 563.90	36"	144	27520 lbs	48 1/4	4	L 1 1/4" rod clevis ear radius	
B500480ACDDA07B	SAE-9548 /SAE-35048	\$ 678.80	48"	175	16550 lbs	60 1/4	4	M 1 1/2" - 12 UNF-3 piston rod clevis thread size	
								N 1 7/8" piston width	
								O 2 1/2" gland width	

Standard Tie-Rod Options

Model Code Identification Matrix

MODEL CODE SYSTEM B 350 160 ABAAA07B

MODELS:
B=B SERIES-3000 PSI
A=ASAE VERSION OF B SERIES
(8" & 16" Strokes only,
8" stroke not available
in 4.5" & 5" bore size.)

BORE SIZE:
200=2.00" Bore 400=4.00" Bore
250=2.50" Bore 450=4.50" Bore
300=3.00" Bore 500=5.00" Bore
350=3.50" Bore

STROKE: (Inches)
First two digits are in inches
Third digit is 0-7 representing
1/8's of an inch for custom strokes.
Consult Prince for over 48"

GLAND PORT LOCATIONS: (See Pictorial Below)

A=(Top Port, STD)
B=(R. Side Port)
C=(Bottom Port)
D=(L. Side Port)

CARTON & DECAL CODE
A=No carton-Std decals, Installed
B=Carton-Std decals, Installed (STD)
C=No carton-Std decals, Loose
D=Carton-Std decals, Loose
E=No carton-Std decals, customer I.D. decal, Installed
F=Carton-Std decals, customer I.D. decal, Installed
G=No carton-Std decals, customer I.D. decal, Loose
H=Carton-Std decals, customer I.D. decal, Loose
J=No carton-Customer I.D. decal, Installed
K=Carton-Customer I.D. decal, Installed
L=No carton-Customer I.D. decal, Loose
M=Carton-Customer I.D. decal, Loose
N=No carton-Warning decals, Installed
P=Carton-Warning decals, Installed
Q=No carton-Warning decal, Loose
R=Carton-Warning decals, Loose
S=No carton-Warning, Customer I.D. decal, Installed
T=Carton-Warning, Customer I.D. decal Installed
U=No carton-Warning, Customer I.D. decal, Loose
V=Carton-Warning, Customer I.D. decal, Loose

PAINT:
00=No Paint
01=Gloss Red
03=Highway Yellow (STD)
04=Canary Yellow
05=Green
06=Blue
07=Gloss Black
14=Gloss White
20=Red Primer
30=Black Primer
35=Naval Gray
50=Yellow Primer
53=Gray Primer
55=Silver Gray
58=Gray

CLEVIS PIN INSTALLATION & RETAINER OPTIONS:
A=Cotter Pins & Clevis Pin(s) Shipped Loose (STD)
B=Cotter Pins & Clevis Pin(s) Installed
C=No Retainers, Clevis Pin(s) Shipped Loose if Selected

AVAILABLE CLEVIS PIN OPTIONS	CYLINDER BORE SIZE (Inch)						
	2.00	2.50	3.00	3.50	4.00	4.50	5.00
1.00"ø PIN	S	S	S	S			
1.00"ø HARDENED PIN	O	O	O	O	S		
1.25"ø HARDENED PIN					O	S	S

CLEVIS PIN OPTIONS & AVAILABILITY: (See Table Above)
A=2-1.00"ø Pins
B=Reserved
C=2-1.00"ø Hardened Pins
D=2-1.25"ø Hardened Pins
E=1-1.00"ø Pin
F=Reserved
G=1-1.00"ø Hardened Pin
H=1-1.25"ø Hardened Pin
J= No Pins

END FITTING OPTIONS: (See Table Above)
A=ø1.00" Pin Holes, Both Ends
B=ø1.00" Base End Pin Hole, No Rod Clevis
C=ø1.00" Pin Holes, Both Ends, Stroke Control Assy *
D=ø1.25" Pin Holes, Both Ends
E=ø1.25" Base End Pin Hole, No Rod Clevis
F=ASAE Version 2.0-3.5" Bore with 8" stroke only)

PORT LOCATION DETERMINED FROM VIEWING CYLINDER FROM BASE END.

PORT STYLE & SIZE: (See Table Below)

CODE	PORT TYPE & SIZE	CYLINDER BORE SIZE (Inch)						
		2.00	2.50	3.00	3.50	4.00	4.50	5.00
A	#6 SAE ORB (9/16-18)	O	O	O	O	O	O	O
B	#8 SAE ORB (3/4-16)	S	S	S	S	S	S	O
C	#10 SAE ORB (7/8-14)							S
D	NPTF 3/8	O	O	O	O	O	O	O
E	NPTF 1/2	O	O	O	O	O	O	O
F	NPTF 3/4							O

Table Identifiers: (For Tables Above)
S-STANDARD O-OPTIONAL BLANK-NOT AVAILABLE

ITEMS IN GREEN SIGNIFY STANDARD OPTIONS.

3000 PSI BASE LIST PRICE

Model	2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
*A	\$ 122.70	\$ 124.60	\$133.60	\$137.30	\$ 179.40	\$ 231.50	\$255.50
B	\$ 121.40	\$ 123.40	\$132.30	\$135.40	\$ 177.10	\$ 229.10	\$250.40

*8" & 16" stroke only

STROKE OPTIONS

Model	2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
2 - 4"	\$ 3.40	\$ 4.30	\$ 4.90	\$ 7.30	\$ 11.50	\$ 16.10	\$ 19.80
4 1/8 - 6"	\$ 5.80	\$ 6.40	\$ 7.10	\$ 9.70	\$ 16.00	\$ 21.30	\$ 25.40
6 1/8 - 8"	\$ 7.80	\$ 8.50	\$ 14.50	\$ 18.00	\$ 25.30	\$ 31.70	\$ 38.50
8 1/8 - 10"	\$ 9.70	\$ 15.70	\$ 23.20	\$ 29.00	\$ 38.20	\$ 46.80	\$ 53.80
10 1/8 - 12"	\$ 11.60	\$ 22.80	\$ 31.90	\$ 40.10	\$ 51.40	\$ 62.00	\$ 69.20
12 1/8 - 14"	\$ 14.80	\$ 30.00	\$ 40.50	\$ 51.10	\$ 64.50	\$ 77.10	\$ 84.60
14 1/8 - 16"	\$ 20.60	\$ 37.20	\$ 49.20	\$ 62.10	\$ 77.60	\$ 92.20	\$ 100.00
16 1/8 - 18"	\$ 26.30	\$ 44.30	\$ 57.80	\$ 73.00	\$ 90.70	\$ 107.40	\$ 115.40
18 1/8 - 20"	\$ 32.00	\$ 51.50	\$ 66.60	\$ 84.00	\$ 103.70	\$ 122.60	\$ 130.80
20 1/8 - 22"	\$ 37.70	\$ 58.80	\$ 75.30	\$ 95.10	\$ 116.80	\$ 137.80	\$ 146.10
22 1/8 - 24"	\$ 43.50	\$ 66.00	\$ 88.00	\$ 106.10	\$ 122.20	\$ 152.80	\$ 151.80
24 1/8 - 26"	\$ 49.20	\$ 73.00	\$ 100.70	\$ 119.70	\$ 135.40	\$ 168.00	\$ 167.40
26 1/8 - 28"	\$ 54.90	\$ 80.20	\$ 113.50	\$ 133.30	\$ 148.40	\$ 183.20	\$ 183.10
28 1/8 - 30"	\$ 60.60	\$ 87.40	\$ 126.20	\$ 146.90	\$ 161.40	\$ 198.40	\$ 200.20
30 1/8 - 32"	\$ 66.40	\$ 94.60	\$ 138.80	\$ 160.40	\$ 174.60	\$ 213.50	\$ 217.40
32 1/8 - 34"	\$ 72.20	\$ 101.80	\$ 151.70	\$ 174.00	\$ 187.60	\$ 228.70	\$ 234.50
34 1/8 - 36"	\$ 77.80	\$ 109.00	\$ 164.40	\$ 187.60	\$ 200.70	\$ 243.90	\$ 251.60
36 1/8 - 38"	\$ 83.60	\$ 116.10	\$ 177.00	\$ 201.20	\$ 213.80	\$ 262.50	\$ 270.80
38 1/8 - 40"	\$ 89.30	\$ 123.20	\$ 189.90	\$ 214.80	\$ 226.80	\$ 281.10	\$ 289.90
40 1/8 - 42"	\$ 95.10	\$ 130.40	\$ 202.60	\$ 228.40	\$ 239.90	\$ 299.80	\$ 309.10
42 1/8 - 44"	\$ 100.70	\$ 137.70	\$ 215.20	\$ 242.00	\$ 253.00	\$ 318.40	\$ 328.30
44 1/8 - 46"	\$ 106.50	\$ 144.80	\$ 228.10	\$ 255.60	\$ 266.10	\$ 337.00	\$ 347.40
46 1/8 - 48"	\$ 112.20	\$ 152.00	\$ 240.80	\$ 269.20	\$ 279.20	\$ 355.70	\$ 366.50

PORT LOCATION OPTION

Model	2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
A	N/C	N/C	N/C	N/C	N/C	N/C	N/C
*B	N/C	N/C	N/C	N/C	N/C	N/C	N/C
*C	\$ 4.90	\$ 4.90	\$ 4.90	\$ 4.90	\$ 4.90	\$ 4.90	\$ 4.90
*D	\$ 4.90	\$ 4.90	\$ 4.90	\$ 4.90	\$ 4.90	\$ 4.90	\$ 4.90

*Rotate Ports From Stock \$15.00 Net

PORT STYLE & SIZE OPTION

Model	2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
A	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50
B	N/C	N/C	N/C	N/C	N/C	\$ 6.50	\$ 6.50
C	NA	NA	NA	NA	NA	N/C	N/C
D	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50
E	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50	\$ 6.50
F	NA	NA	NA	NA	NA	NA	\$ 6.50

ITEMS IN GREEN SIGNIFY STANDARD OPTIONS.

END FITTINGS OPTIONS

	2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
A	\$ 9.50	\$ 9.50	\$ 9.50	\$ 16.70	\$ 16.70	NA	NA
*B	N/C	N/C	N/C	N/C	N/C	N/C	N/C
*C	\$ 73.70	\$ 73.70	\$ 73.70	\$ 80.90	NA	NA	NA
*D	NA	NA	NA	NA	\$ 16.70	\$ 29.90	\$ 29.90
E	NA	NA	NA	NA	N/C	N/C	N/C

*Remove Clevis From Stock \$7.50

CLEVIS PIN OPTIONS

	2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
A	\$ 3.90	\$ 3.90	\$ 3.90	\$ 3.90	NA	NA	NA
B	NA	NA	NA	NA	NA	NA	NA
C	\$ 10.60	\$ 10.60	\$ 10.60	\$ 10.60	\$ 10.60	NA	NA
D	NA	NA	NA	NA	\$ 19.60	\$ 19.60	\$ 19.60
E	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	NA	NA	NA
F	NA	NA	NA	NA	NA	NA	NA
G	\$ 5.40	\$ 5.40	\$ 5.40	\$ 5.40	\$ 5.40	NA	NA
H	NA	NA	NA	NA	\$ 9.90	\$ 9.90	\$ 9.90
J	N/C	N/C	N/C	N/C	N/C	N/C	N/C

PIN INSTALLATION & RETAINER OPTIONS

	2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
A	\$ 0.90	\$ 0.90	\$ 0.90	\$ 0.90	\$ 0.90	\$ 0.90	\$ 0.90
B	\$ 0.90	\$ 0.90	\$ 0.90	\$ 0.90	\$ 0.90	\$ 0.90	\$ 0.90
C	N/C	N/C	N/C	N/C	N/C	N/C	N/C

PAINT OPTIONS

00

2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
N/C	N/C	N/C	N/C	N/C	N/C	N/C

PAINT OPTIONS

01, 03, 04, 05, 06, 07, 14, 20, 30, 35, 50, 53, 55, 58

2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
\$3.60	\$3.60	\$ 3.60	\$3.60	\$6.10	\$6.10	\$6.10

BOX OPTIONS

A, C, E, G, J, L, N, Q, S, U

2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
N/C	N/C	N/C	N/C	N/C	N/C	N/C

BOX OPTIONS

B, D, F, H, K, M, P, R, T, V

2" Bore	2.5" Bore	3" Bore	3.5" Bore	4" Bore	4.5" Bore	5" Bore
\$4.40	\$4.40	\$ 4.40	\$4.40	\$5.40	\$5.40	\$5.40

CONFIGURED TIE-ROD CYLINDER APPLICATION DATA

CYLINDER RETRACT LENGTH

Retract length is measured from pin center to pin center. Cylinders configured without a rod clevis shall have a retract length measured from base clevis pin center to end of piston rod.

RETRACT LENGTH FORMULA ("B" Models only)

Stroke (inches) + Cylinder Model Constant + Rod Clevis Constant
(see table below) (see table below)

"B" MODEL RETRACT LENGTH

Bore Size	Cylinder Model Constant	Rod Clevis Constant
2 - 3.5"	8.437"	1.813"
4"	8.375"	1.875"
4.5 - 5"	10.250"	2.000"

"A" MODEL RETRACT LENGTH

Bore Size	8" Stroke	16" Stroke
2 - 3.5"*	20.25"	31.50"
4"*	20.25"	31.50"
4.5"-5"***	-	31.50"

* Subtract 1.813 For Cylinders Without Rod Clevis

** Subtract 2" For Cylinders Without Rod Clevis

CYLINDER DIMENSIONAL FEATURES

For dimensional data of configured cylinders please refer to the Standard Dimensions column of the standard cylinder tables on the opposite page. For outside cylinder dimensions and clevis widths for both A & B models see table below.

Bore Size	Outside Sq. Dim.		Clevis Width	
	Butt	Gland	Butt	Rod
2"	2.875"	2.875"	2.375"	2.500"
2.5"	3.375"	3.375"	2.344"	2.500"
3"	3.875"	3.875"	2.375"	2.500"
3.5"	4.313"	4.313"	2.625"	2.875"
4"	5.063"	5.063"	2.750"	2.875"
4.5"	5.500"	5.500"	2.938"	2.875"
5"	5.875"	5.875"	2.938"	2.875"

CYLINDER PISTON ROD THREAD DATA

Cylinder Model Code/Bore Size	Piston Rod Thread Size	Piston Rod Thread Length (inches)	Piston Rod Turndown Length (inches)
A20016, B200's	1 1/8-12 UNF-3A	1.250	1.250
A25016, B250's	1 1/8-12 UNF-3A	1.063	1.250
A30016, B300's	1 1/8-12 UNF-3A	1.188	1.375
A35016, B350's	1 5/16-12 UNS-3A	1.188	1.375
A40016, B400's, C400's	1 1/2-12 UNF-3A	.938	1.125
B450's, B500's	1 1/2-12 UNF-3A	1.250	1.438
A20008	1 1/8-12 UNF-3A	1.750	1.750
A25008 - A30008	1 1/8-12 UNF-3A	1.563	1.750
A35008	1 5/16-12 UNS-3A	1.563	1.750

Cylinder Column Load Rating

Column load is the maximum recommended load for a specific cylinder stroke when the cylinder is in full extended position and has pin-pin mounting conditions. Rods are sized for a maximum safe push load (2:1 safety factor) given in the tables. This is based on the pin configuration shown with no center support. Operating pressures shown for equivalent column loads.

COLUMN LOAD DATA FOR "B" MODELS

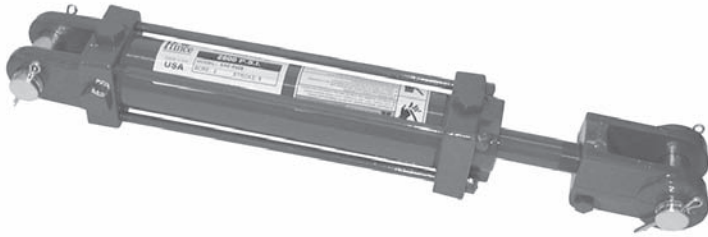
Stroke (in)	2 inch
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THE MAJESTIC LINE

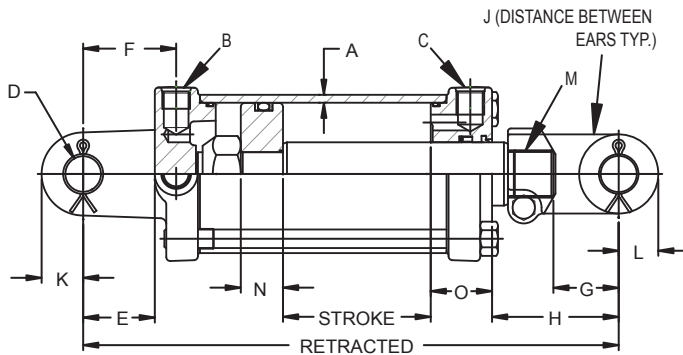
2500 PSI TIE ROD DOUBLE ACTING

THE "MAJESTIC LINE" Tie Rod-DA-Medium Duty Rods



FEATURES:

- Honed tubing
- Chromed, ground & polished piston rod will operate at full pressure through 16" stroke
- Ductile iron piston, butt, gland & clevis
- Urethane u-cup & urethane wiper in gland
- Pins, clips & cotters included
- Standard color is red
- Stroke control may be installed on 8" strokes
- Side ports available on request at no additional cost



Rods are sized for a maximum safe push load (2:1 safety factor) given in the table. This is based on the pin configuration shown with no center support.

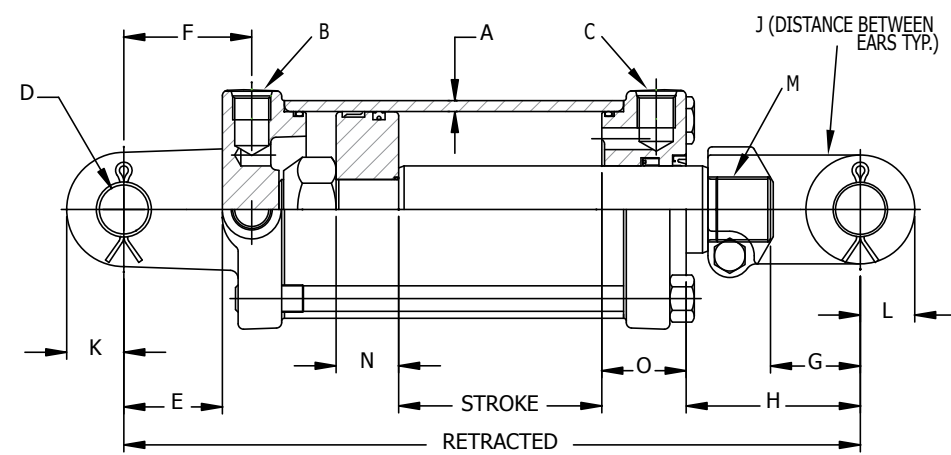
Model No.	Style	Wt.	PSI	Column Load (Lbs.)	Re-tract	Rod Dia.	A SAE	B SAE	C SAE	D	E	F	G	H	J	K	L	M	N	O
SAE-8404	2 x 4	18	2500	FULL PSI	14 1/4	1	1/8	3/4-16	3/4-16	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8	1-14	7/8	2 1/4
SAE-8406	2 x 6	19	2500	FULL PSI	16 1/4	1	1/8	3/4-16	3/4-16	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8	1-14	7/8	2 1/4
SAE-8408	2 x 8	20	2500	FULL PSI	20 1/4	1	1/8	3/4-16	3/4-16	1.015	1 13/16	2 3/8	1 13/16	5 1/2	1.06	15/16	1 1/8	1-14	7/8	2 1/4
SAE-8410	2 x 10	21	2500	FULL PSI	20 1/4	1	1/8	3/4-16	3/4-16	1.015	1 13/16	2 3/8	1 13/16	3 1/2	1.06	15/16	1 1/8	1-14	7/8	2 1/4
SAE-7006	2 1/2 x 6	22	2500	FULL PSI	16 1/4	1 1/8	1/8	3/4-16	3/4-16	1.015	1 7/8	2 13/32	1 13/16	3 1/2	1.06	15/16	1 1/8	1 1/8-12	1	2 3/8
SAE-7008	2 1/2 x 8	23	2500	FULL PSI	20 1/4	1 1/8	1/8	3/4-16	3/4-16	1.015	1 7/8	2 13/32	1 13/16	5 1/2	1.06	15/16	1 1/8	1 1/8-12	1	2 3/8
SAE-7106	3 x 6	24	2500	FULL PSI	16 1/4	1 1/8	3/16	3/4-16	3/4-16	1.015	1 7/8	2 7/16	1 3/16	3 3/4	1.06	15/16	1 1/8	1 1/8-12	1	1 15/16
SAE-7108	3 x 8	26	2500	FULL PSI	20 1/4	1 1/8	3/16	3/4-16	3/4-16	1.015	1 7/8	2 7/16	1 3/16	5 3/4	1.06	15/16	1 1/8	1 1/8-12	1	1 15/16
SAE-7208A	3 1/2 x 8	31	2500	FULL PSI	20 1/4	1 1/8	3/16	3/4-16	3/4-16	1.015	1 7/8	2 7/16	1 13/16	5 7/8	1.06	1 1/4	1 1/4	1 1/8-12	1	1 13/16
SAE-8608	4 x 8	42	2500	FULL PSI	20 1/4	1 1/2	3/16	3/4-16	3/4-16	1.015	1 3/4	2 7/16	1 7/8	5 1/4	1.06	1 1/4	1 1/4	1 1/2-12	1	1 13/16
SAE-8610	4 x 10	45	2500	FULL PSI	20 1/4	1 1/2	3/16	3/4-16	3/4-16	1.015	1 3/4	2 7/16	1 7/8	3 1/4	1.06	1 1/4	1 1/4	1 1/2-12	1	1 13/16
SAE-8208	5 x 8	64	2500	FULL PSI	20 1/4	1 3/4	1/4	7/8-14	7/8-14	1.265	1 3/4	2 5/8	2	4	1.06	1 1/4	1 1/4	1 1/2-12	1	2 1/2
SAE-8210	5 x 10	67	2500	FULL PSI	22 1/4	1 3/4	1/4	7/8-14	7/8-14	1.265	1 3/4	2 5/8	2	4	1.06	1 1/4	1 1/4	1 1/2-12	1	2 1/2

THE 3000 PSI Tie Rod-DA-Extra Heavy Duty Rods

Model No.	Style	Wt.	PSI	Column Load (Lbs.)	Re-tract	Rod Dia.	A	B SAE	C SAE	D	E	F	G	H	J	K, L	M	N	O
C400080ABDDA03B	4 x 8	50	3000PSI	Full PSI	20 1/4	2	3/16	3/4 - 16	3/4 - 16	1.265	1 3/4	2 7/16	1.875	5 1/4	1.06	1 1/4	1 1/2-12	1.25	1 13/16
C400160ABDDA03B	4 x 16	68	3000PSI	Full PSI	31 1/2	2	3/16	3/4 - 16	3/4 - 16	1.265	1 3/4	2 7/16	1.875	8 1/2	1.06	1 1/4	1 1/2-12	1.25	1 13/16
C400240ABDDA03B	4 x 24	81	3000PSI	Full PSI	36 1/4	2	3/16	3/4 - 16	3/4 - 16	1.265	1 3/4	2 7/16	1.875	5 1/4	1.06	1 1/4	1 1/2-12	1.25	1 13/16
C400260ABDDA03B	4 x 26	84	3000PSI	Full PSI	38 1/4	2	3/16	3/4 - 16	3/4 - 16	1.265	1 3/4	2 7/16	1.875	5 1/4	1.06	1 1/4	1 1/2-12	1.25	1 13/16

ALSO AVAILABLE FROM STOCK

A complete line of Hydraulic Directional Control Valves, Gear Pumps, LSHT Motors as well as Custom Designed Products to fit your needs.



FEATURES:

- Honed tubing
- Heavy duty, high strength tie-rods
- Induction hardened piston rods plated with RoyalPlate Plus® (piston rods on 2" bore not hardened)
- Ductile iron piston, butt, gland & clevis
- Urethane u-cup & metal encased wiper 2 1/2" bore & larger models
- Crown seal on piston
- Pins & cotter pins (Hardened pins on 4", 4 1/2" & 5" models)
- Standard color is safety yellow
- Stroke control may be installed on 8" strokes
- (2" - 3.5" bore, A models only)
- Side ports available on request
- Nylon bearing ring on 4", 4 1/2" & 5" bore models
- 3000 PSI continuous operating pressure

2 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 2 Inch Bore Cylinders	
B200040ABAAA03B	none /SAE-32004	\$ 147.10	4"	17	9425 lbs	14 1/4	3 1/2	* 1 1/8" rod diameter	
B200060ABAAA03B	none /SAE-32006	\$ 149.50	6"	19	9425 lbs	16 1/4	3 1/2	A 3/16" cylinder tube wall thickness	
A200080ABAAA03B	none /SAE-32008	\$ 152.80	8"	21	9425 lbs	20 1/4	5 1/2	B, C SAE 3/4 -16 extend & retract ports	
B200100ABAAA03B	none /SAE-32010	\$ 153.40	10"	22	9425 lbs	20 1/4	3 1/2	D 1.015" clevis pin hole size	
B200120ABAAA03B	SAE-9012 /SAE-32012	\$ 155.30	12"	23	9425 lbs	22 1/4	3 1/2	E, F 1 1/8" base clevis throat depth with 2 1/8" from pin center to port center	
B200140ABAAA03B	SAE-9014 /SAE-32014	\$ 158.50	14"	25	9425 lbs	24 1/4	3 1/2	G 1 13/16" rod clevis throat depth	
A200160ABAAA03B	SAE-9016 /SAE-32016	\$ 165.60	16"	28	7630 lbs	31 1/2	8 3/4	J 1.06" min. distance between ears at pin center line	
B200180ABAAA03B	SAE-9018 /SAE-32018	\$ 170.00	18"	28	9200 lbs	28 1/4	3 1/2	K 1 1/16" base clevis ear radius	
B200200ABAAA03B	SAE-9020 /SAE-32020	\$ 175.70	20"	30	7760 lbs	30 1/4	3 1/2	L 1 1/8" rod clevis ear radius	
B200240ABAAA03B	SAE-9024 /SAE-32024	\$ 187.20	24"	33	5730 lbs	34 1/4	3 1/2	M 1 1/8" - 12 UNF-3 piston rod clevis thread size	
B200300ABAAA03B	SAE-9030 /SAE-32030	\$ 204.30	30"	37	3910 lbs	40 1/4	3 1/2	N 1" piston width O 2 3/16" gland width	

2.5 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 2.5 Inch Bore Cylinders	
B250060ABAAA03B	none /SAE-32506	\$ 152.10	6"	22	14730 lbs	16 1/4	3 3/16	* 1 1/8" rod diameter	
A250080ABAAA03B	SAE-9108 /SAE-32508	\$ 155.40	8"	25	14730 lbs	20 1/4	5 1/16	A 3/16" cylinder tube wall thickness	
B250100ABAAA03B	SAE-9110 /SAE-32510	\$ 161.40	10"	26	14730 lbs	20 1/4	3 3/16	B, C SAE 3/4 -16 extend & retract ports	
B250120ABAAA03B	SAE-9112 /SAE-32512	\$ 168.50	12"	28	14730 lbs	22 1/4	3 3/16	D 1.015" clevis pin hole size	
B250140ABAAA03B	SAE-9114 /SAE-32514	\$ 175.70	14"	30	14730 lbs	24 1/4	3 3/16	E, F 1 1/8" base clevis throat depth with 2 1/8" from pin center to port center	
A250160ABAAA03B	SAE-9116 /SAE-32516	\$ 184.10	16"	34	11520 lbs	31 1/2	8 3/16	G 1 13/16" rod clevis throat depth	
B250180ABAAA03B	SAE-9118 /SAE-32518	\$ 190.00	18"	34	13880 lbs	28 1/4	3 3/16	J 1.06" min. distance between ears at pin center line	
B250200ABAAA03B	SAE-9120 /SAE-32520	\$ 197.20	20"	36	11720 lbs	30 1/4	3 3/16	K 1 1/16" base clevis ear radius	
B250240ABAAA03B	SAE-9124 /SAE-32524	\$ 211.70	24"	41	8670 lbs	34 1/4	3 3/16	L 1 1/8" rod clevis ear radius	
B250300ABAAA03B	SAE-9130 /SAE-32530	\$ 233.10	30"	47	5930 lbs	40 1/4	3 3/16	M 1 1/8" - 12 UNF-3 piston rod clevis thread size N 1" piston width O 2 3/16" gland width	

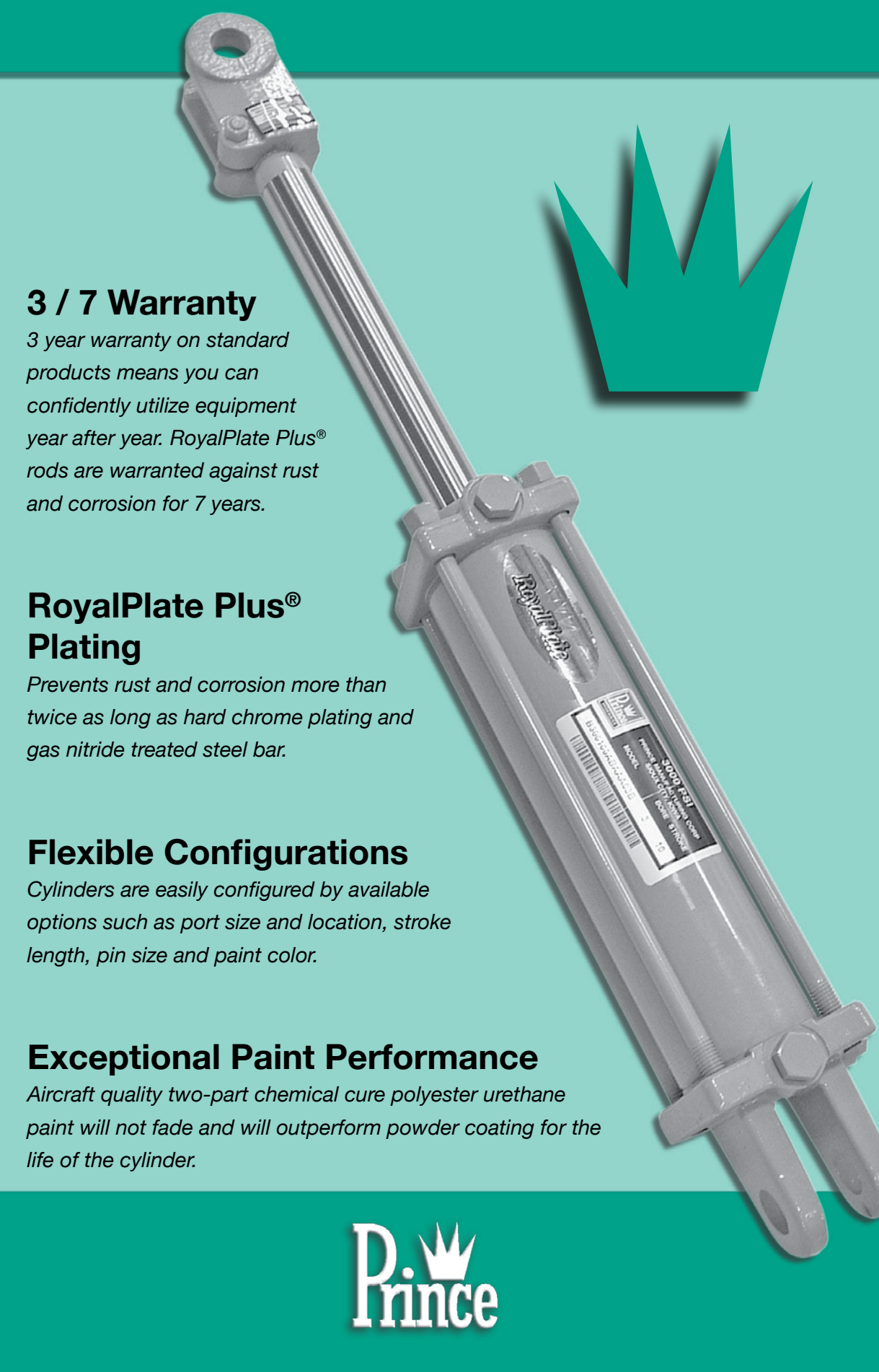
3 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 3 Inch Bore Cylinders	
B300060ABAAA03B	none /SAE-33006	\$ 161.70	6"	26	21210 lbs	16 1/4	3 3/4	* 1 1/8" rod diameter	
A300080ABAAA03B	SAE-9208 /SAE-33008	\$ 170.40	8"	29	21210 lbs	20 1/4	5 3/4	A 3/16" cylinder tube wall thickness	
B300100ABAAA03B	SAE-9210 /SAE-33010	\$ 177.80	10"	30	21210 lbs	20 1/4	3 3/4	B, C SAE 3/4 -16 extend & retract ports	
B300120ABAAA03B	SAE-9212 /SAE-33012	\$ 186.50	12"	33	21210 lbs	22 1/4	3 3/4	D 1.015" clevis pin hole size	
B300140ABAAA03B	SAE-9214 /SAE-33014	\$ 195.10	14"	35	21210 lbs	24 1/4	3 3/4	E, F 1 1/8" base clevis throat depth with 2 1/8" from pin center to port center	
A300160ABAAA03B	SAE-9216 /SAE-33016	\$ 205.10	16"	40	16730 lbs	31 1/2	9	G 1 13/16" rod clevis throat depth	
B300180ABAAA03B	SAE-9218 /SAE-33018	\$ 212.40	18"	40	20120 lbs	28 1/4	3 3/4	J 1.06" min. distance between ears at pin center line	
B300200ABAAA03B	SAE-9220 /SAE-33020	\$ 221.20	20"	42	17010 lbs	30 1/4	3 3/4	K 1 1/16" base clevis ear radius	
B300240ABAAA03B	SAE-9224 /SAE-33024	\$ 242.60	24"	47	12620 lbs	34 1/4	3 3/4	L 1 1/8" rod clevis ear radius	
B300300ABAAA03B	SAE-9230 /SAE-33030	\$ 280.80	30"	54	8640 lbs	40 1/4	3 3/4	M 1 1/8" - 12 UNF-3 piston rod clevis thread size	
B300360ABAAA03B	SAE-9236 /SAE-33036	\$ 319.00	36"	61	6290 lbs	46 1/4	3 3/4	N 1" piston width	
B300480ABAAA03B	SAE-9248 /SAE-33048	\$ 395.40	48"	75	3760 lbs	58 1/4	3 3/4	O 1 15/16" gland width	

3.5 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 3.5 Inch Bore Cylinders	
A350080ABAAA03B	SAE-9308A /SAE-33508	\$ 184.80	8"	35	28860 lbs	20 1/4	5 3/4	* 1 3/8" rod diameter	
B350100ABAAA03B	SAE-9310A /SAE-33510	\$ 193.90	10"	37	28860 lbs	20 1/4	3 3/4	A 3/16" cylinder tube wall thickness	
B350120ABAAA03B	SAE-9312A /SAE-33512	\$ 205.00	12"	39	28860 lbs	22 1/4	3 3/4	B, C SAE 3/4 -16 extend & retract ports	
B350140ABAAA03B	SAE-9314A /SAE-33514	\$ 216.00	14"	42	28860 lbs	24 1/4	3 3/4	D 1.015" clevis pin hole size	
A350160ABAAA03B	SAE-9316A /SAE-33516	\$ 228.90	16"	46	16900 lbs	31 1/2	9	E, F 1 1/8" base clevis throat depth with 2 1/8" from pin center to port center	
B350180ABAAA03B	SAE-9318A /SAE-33518	\$ 237.90	18"	47	20400 lbs	28 1/4	3 3/4	G 1 13/16" rod clevis throat depth	
B350200ABAAA03B	SAE-9320A /SAE-33520	\$ 248.90	20"	49	17240 lbs	30 1/4	3 3/4	J 1.06" min. distance between ears at pin center line	
B350240ABAAA03B	SAE-9324A /SAE-33524	\$ 271.00	24"	54	12780 lbs	34 1/4	3 3/4	K 1 1/16" base clevis ear radius	
B350300ABAAA03B	SAE-9330A /SAE-33530	\$ 311.80	30"	62	8760 lbs	40 1/4	3 3/4	L 1 1/8" rod clevis ear radius	
B350360ABAAA03B	SAE-9336A /SAE-33536	\$ 352.50	36"	69	6370 lbs	46 1/4	3 3/4	M 1 1/8" - 12 UNF-3 piston rod clevis thread size	
B350480ABAAA03B	SAE-9348A /SAE-33548	\$ 434.10	48"	85	3800 lbs	58 1/4	3 3/4	N 1" piston width O 1 15/16" gland width	

4 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 4 Inch Bore Cylinders	
A400080ABACA03B	SAE-9408 /SAE-34008	\$ 244.40	8"	48	37700 lbs	20 1/4	5 1/4	* 1 3/4" rod diameter	
B400100ABACA03B	SAE-9410 /SAE-34010	\$ 255.00	10"	50	37700 lbs	20 1/4	3 3/4	A 3/16" cylinder tube wall thickness	
B400120ABACA03B	SAE-9412 /SAE-34012	\$ 268.20	12"	54	37700 lbs	22 1/4	3 3/4	B, C SAE 3/4 -16 extend & retract ports	
B400140ABACA03B	SAE-9414 /SAE-34014	\$ 281.30	14"	57	37700 lbs	24 1/4	3 3/4	D 1.015" clevis pin hole size	
A400160ABACA03B	SAE-9416 /SAE-34016	\$ 296.70	16"	64	37700 lbs	31 1/2	8 1/2	E, F 1 1/8" base clevis throat depth with 2 1/8" from pin center to port center	
B400180ABACA03B	SAE-9418 /SAE-34018	\$ 307.50	18"	64	37700 lbs	28 1/4	3 3/4	G 1 7/8" rod clevis throat depth	
B400200ABACA03B	SAE-9420 /SAE-34020	\$ 320.50	20"	68	37700 lbs	30 1/2	3 3/4	J 1.06" min. distance between ears at pin center line	
B400240ABACA03B	SAE-9424 /SAE-34024	\$ 339.00	24"	75	33710 lbs	34 1/4	3 3/4	K 1 1/16" base clevis ear radius	
B400300ABACA03B	SAE-9430 /SAE-34030	\$ 378.20	30"	85	22990 lbs	40 1/4	3 3/4	L 1 1/8" rod clevis ear radius	
B400360ABACA03B	SAE-9436 /SAE-34036	\$ 417.50	36"	95	16680 lbs	46 1/4	3 3/4	M 1 1/2" - 12 UNF-3 piston rod clevis thread size	
B400480ABACA03B	SAE-9448 /SAE-34048	\$ 496.00	48"	116	9920 lbs	58 1/4	3 3/4	N 1 1/4" piston width O 1 13/16" gland width	

4.5 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 4.5 Inch Bore Cylinders	
B450080ACDDA03B	none /SAE-34508	\$ 322.70	8"	60	47710 lbs	20 1/4	4	* 2" rod diameter	
B450120ACDDA03B	none /SAE-34512	\$ 353.00	12"	69	47710 lbs	24 1/4	4	A 1/4" cylinder tube wall thickness	
B450140ACDDA03B	none /SAE-34514	\$ 368.10	14"	74	47710 lbs	26 1/4	4	B, C SAE 7/8 -14 extend & retract ports	
A450160ACDDA03B	none /SAE-34516	\$ 385.60	16"	81	47710 lbs	31 1/2	7 1/4	D 1.265" clevis pin hole size	
B450180ACDDA03B	none /SAE-34518	\$ 398.40	18"	83	47710 lbs	30 1/4	4	E, F 1 3/8" base clevis throat depth with 2 1/8" from pin center to port center	
B450200ACDDA03B	none /SAE-34520	\$ 413.60	20"	87	47710 lbs	32 1/4	4	G 2" rod clevis throat depth	
B450240ACDDA03B	none /SAE-34524	\$ 443.80	24"	97	44710 lbs	36 1/4	4	J 1.13" min. distance between ears at pin center line	
B450300ACDDA03B	none /SAE-34530	\$ 489.40	30"	110	37530 lbs	42 1/4	4	K 1 15/16" base clevis ear radius	
B450360ACDDA03B	none /SAE-34536	\$ 534.90	36"	124	27430 lbs	48 1/4	4	L 1 1/4" rod clevis ear radius	
B450480ACDDA03B	none /SAE-34548	\$ 646.70	48"	152	16470 lbs	60 1/4	4	M 1 1/2" - 12 UNF-3 piston rod clevis thread size N 1 7/16" piston width O 1 15/16" gland width	

5 INCH BORE CYLINDERS									
New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	List Price	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 5 Inch Bore Cylinders	
B500080ACDDA03B	SAE-9508 /SAE-35008	\$ 350.80	8"	72	58900 lbs	20 1/4	4	* 2" rod diameter	
B500120ACDDA03B	SAE-9512 /SAE-35012	\$ 381.50	12"	83	58900 lbs	24 1/4	4	A 1/4" cylinder tube wall thickness	
B500140ACDDA03B	SAE-9514 /SAE-35014	\$ 396.90	14"	88	58900 lbs	26 1/4	4	B, C SAE 7/8 -14 extend & retract ports	
A500160ACDDA03B	SAE-9516 /SAE-35016	\$ 417.40	16"	96	58900 lbs	31 1/2	7 1/4	D 1.265" clevis pin hole size	
B500180ACDDA03B	SAE-9518 /SAE-35018	\$ 427.70	18"	98	58900 lbs	30 1/4	4	E, F 1 3/8" base clevis throat depth with 2 1/8" from pin center to port center	
B500200ACDDA03B	SAE-9520 /SAE-35020	\$ 443.10	20"	103	58900 lbs	32 1/4	4	G 2" rod clevis throat depth	
B500240ACDDA03B	SAE-9524 /SAE-35024	\$ 464.10	24"	113	54510 lbs	36 1/4	4	J 1.13" min. distance between ears at pin center line	
B500300ACDDA03B	SAE-9530 /SAE-35030	\$ 512.50	30"	129	37620 lbs	42 1/4	4	K 1 3/8" base clevis ear radius	
B500360ACDDA03B	SAE-9536 /SAE-35036	\$ 563.90	36"	144	27520 lbs	48 1/4	4	L 1 1/4" rod clevis ear radius	
B500480ACDDA03B	SAE-9548 /SAE-35048	\$ 678.80	48"	175	16550 lbs	60 1/4	4	M 1 1/2" - 12 UNF-3 piston rod clevis thread size N 1 7/16" piston width O 2 1/2" gland width	



3 / 7 Warranty

3 year warranty on standard products means you can confidently utilize equipment year after year. RoyalPlate Plus® rods are warranted against rust and corrosion for 7 years.

RoyalPlate Plus® Plating

Prevents rust and corrosion more than twice as long as hard chrome plating and gas nitride treated steel bar.

Flexible Configurations

Cylinders are easily configured by available options such as port size and location, stroke length, pin size and paint color.

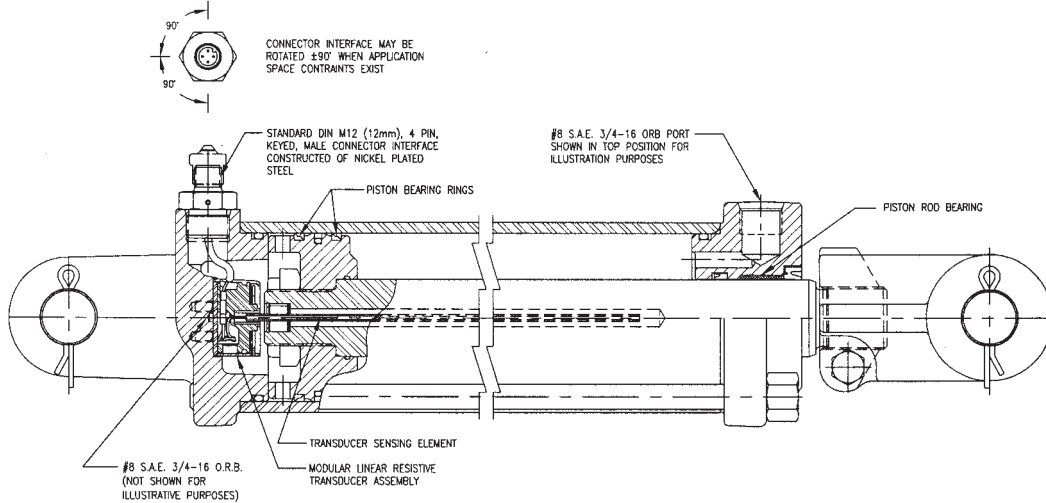
Exceptional Paint Performance

Aircraft quality two-part chemical cure polyester urethane paint will not fade



3000 PSI POSITION SENSING TIEROD CYLINDER

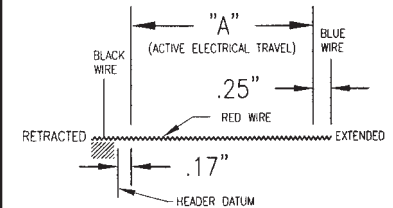
TIEROD STYLE CYLINDER WITH INTEGRATED POSITION SENSOR ASSEMBLY



INTEGRATED (LRT) POSITION SENSING TIEROD CYLINDER OPTIONS:

- AVAILABLE IN TIEROD CYLINDER BORE SIZES FROM 2 TO 5 INCHES.
- CYLINDER STROKE LENGTHS FROM 2 TO 24 INCHES (CONSULT ENGINEERING FOR OTHER STROKE LENGTHS).
- MOST (LRT) SENSING TIEROD CYLINDERS MEET ASAE RETRACT DIMENSIONS – CONVENIENT DROP IN REPLACEMENT FOR NON-SENSING CYLINDERS.
- INTEGRATED (LRT) SENSOR AVAILABLE IN STANDARD AND REPHASING TIEROD CYLINDER DESIGNS. REPHASING USED WITH SERIES CYLINDER SYSTEM.
- FLEXIBLE CYLINDER PORT LOCATIONS AND SIZES AVAILABLE.

LRT SENSOR ELECTRICAL SCHEMATIC



INTEGRATED LINEAR RESISTIVE TRANSDUCER (LRT) SENSOR FEATURES:

- ACCURATE POSITIONING WITH INFINITE RESOLUTION
- VERY COMPACT AND ECONOMICAL
- PROTECTED AND SEALED INTERNALLY IN CYLINDER FROM ENVIRONMENT
- SERVICEABLE AND REPLACEABLE COMPONENTS
- CONNECTOR INTERFACE USES STANDARD DIN M12 (12 mm) KEYED, 4 PIN MALE ADAPTER
- CONNECTOR INTERFACE CAN BE ROTATED +/-90° FOR TIGHT FITTING APPLICATIONS
- INTERFACE ACCEPTS BOTH STRAIGHT AND 90° MATING CONNECTORS
- SIGNAL INPUTS: DC VOLTAGE AND CURRENT, NOT TO EXCEED 120mA IN SENSOR WIPER CIRCUIT

OTHER SENSOR TECHNOLOGIES (AVAILABLE FOR SPECIAL DESIGNS):

- LINEAR RESISTIVE TRANSDUCER (LRT) TECHNOLOGY (SHOWN ABOVE)
- MAGNETOSTRICTIVE TECHNOLOGY
- LINEAR VARIABLE DIFFERENTIAL TRANSDUCER (LVDT) TECHNOLOGY
- INDUCTIVE TRANSDUCER TECHNOLOGY (LIMIT OR POSITION SENSING)

PROGRAMMABLE LOGIC CONTROLLERS (PLC'S) AND CONTROLS AVAILABLE FROM OTHER CONTROLLER MANUFACTURERS

ACTIVE STROKE LENGTH "A"	RES. (KΩ)
2.00	4
4.00	8
6.00	12
8.00	16
10.00	20
12.00	24

ACTIVE STROKE LENGTH "A"	RES. (KΩ)
14.00	28
16.00	32
18.00	36
20.00	40
22.00	44
24.00	48

ELECTRICAL SPECIFICATIONS - LINEAR RESISTIVE TRANSDUCER (LRT)

- ELECTRICAL TRAVEL "A" + .50 (SEE TABLE)
- RESISTANCE SEE TABLE
- RESISTANCE TOLERANCE ± 20%
- ACCURACY (INDEPENDENT LINEARITY OVER 95% OF TOTAL ELECTRICAL LENGTH)
 - STD ± .025 +/- 1.000%
 - BEST ± .006
- POWER RATING
 - WATTS PER 2.0 INCHES OF ELECTRICAL TRAVEL
 - @ 158° DERATED TO 0 WATTS @ 257°F 0.5
 - OUTPUT SMOOTHNESS (% OF TOTAL APPLIED VOLTAGE) 0.1
 - RESOLUTION INFINITE
 - INSULATION RESISTANCE (MEGAOHMS @ 250 VDC) 50 MIN.
 - TEMPERATURE RANGE (°F) -40° TO + 257°
 - DIELECTRIC 250 VDC

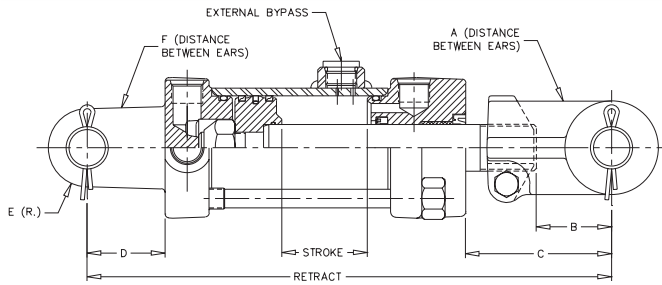
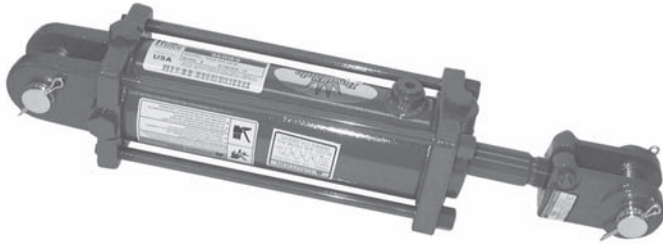
MECHANICAL SPECIFICATIONS

- ACTION FORCE (OUNCES) 2.0 MAX.
- REPEATABILITY WITHIN .0005 IN
- LIFE (INCHES OF CONTACT TRAVEL) 40,000,000



SERIES CYLINDER SYSTEMS

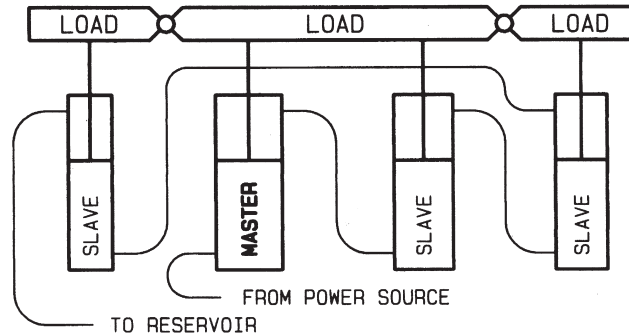
TIE ROD CONSTRUCTION - EXTERNAL STYLE BYPASS



FEATURES:

- Heavy duty tie-rod construction
- Induction hardened piston rods plated with RoyalPlate Plus®
- "DU" bushing
- #8 S.A.E.(3/4-16 ORB) ports
- For use with 1" pins
- Pins, clips & cotters included
- ORB to pipe adaptors are included
- Standard color is red
- Same high quality features found in all Prince Tie-rod Cylinders with the addition of an external bypass (rephase)

TO RAISE LOADS EQUALLY



NOTES:

- Master cylinder provides power for the entire system
- Each cylinder in series has less pressure in proportion to the load on it
- Designed for use in a series cylinder circuit at a maximum of 3000 PSI, cylinder not to be used at 3000 PSI in push or pull as a single cylinder
- Stroke control assemblies may be installed on 8" stroke models
- Can be used with remote stroke control valve PM-SC-10
- Can be used with holding valves HC-V-AA21 and HC-V-AA22
- Master cylinder equipped with series/rephase and stroke control are available. Contact Prince Sales Department.
- Custom designs in welded or tie-rod style for larger or smaller bore sizes
- Exact matched sets available
- Contact Prince Engineering Department for special applications

Bore	Rod Dia.	8" Stroke 20 1/4" Retract	10" Stroke 22 1/4" Retract	12" Stroke 24 1/4" Retract	16" Stroke 28 1/4" Retract	A	B	C	D	E	F
2 1/2	1 1/8	AM-2586	AM-2629	Consult Factory		1 13/16	5 9/32	1 7/8	15/16	1 1/16	
2 3/4	1 1/8	AM-2580	AM-2627	For Availability		1 13/16	5 23/32	1 7/8	15/16	1 1/16	
3	1 1/4	AM-2574	AM-2625	AM-2576	AM-2578	1 1/16	1 13/16	5 27/32	1 7/8	15/16	1 1/16
3 1/4	1 1/4	AM-2568	AM-2623	AM-2570	AM-2572	1 1/16	1 13/16	5 27/32	1 7/8	1 1/4	1 1/16
3 1/2	1 1/4	AM-2562	AM-2621	AM-2564	AM-2566	1 1/16	1 13/16	5 27/32	1 7/8	1 1/4	1 1/16
3 3/4	1 3/8	AM-2556A	AM-2619A	AM-2558A	AM-2560A	1 1/8	1 7/8	5 11/32	1 3/4	1 1/4	1 1/16
4	1 3/8	AM-2550A	AM-2617A	AM-2552A	AM-2554A	1 1/8	1 7/8	5 11/32	1 3/4	1 1/4	1 1/16
4 1/2	2	AM-2544	AM-2615	AM-2546	AM-2548	1 1/8	1 7/8	4 1/32	1 3/4	1 1/4	1 1/8
4 3/4	1 1/2	AM-2538	AM-2613	AM-2540	AM-2542	1 1/8	1 13/16	4 1/32	1 3/4	1 1/4	1 1/8
5	1 1/2	AM-2532	AM-2611	AM-2534	AM-2536	1 1/8	1 13/16	4 1/32	1 3/4	1 1/4	1 1/8