

3000 P.S.I. Rated Tie-Rod

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 and will outperform powder coating for the life of the cylinder.



TIE-ROD 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:

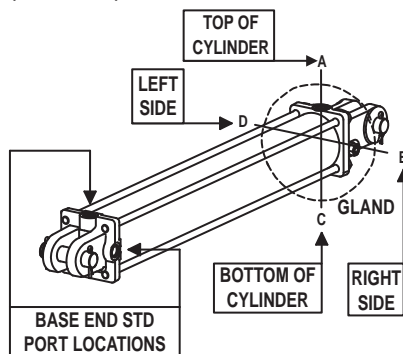
200=2.00" Bore 400=4.00" Bore
250=2.50" Bore 450=4.50" Bore
300=3.00" Bore 500=5.00" Bore
350=3.50" Bore

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)



PORT LOCATION DETERMINED FROM VIEWING
CYLINDER FROM BASE END.

(See Table Below) **PORT STYLE & SIZE:**

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	O	O
C	#10 SAE ORB (7/8-14)						S	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 0-OPTIONAL BLANK-NOT AVAILABLE

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	14=Gloss White
01=Gloss Red	20=Red Primer
03=Highway Yellow	30=Black Primer
04=Canary Yellow	35=Naval Gray
05=Green	50=Yellow Primer
06=Blue	53=Gray Primer
07=Gloss Black (STD)	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

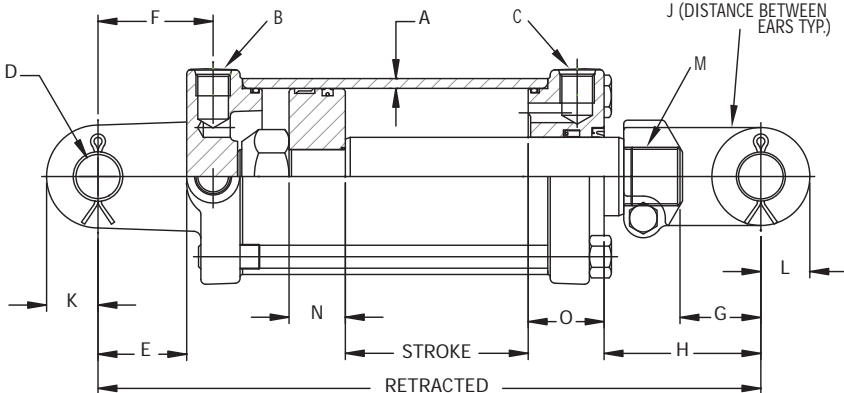
AVAILABLE CLEVIS PIN OPTIONS	CYLINDER BORE SIZE (Inch)						
	2.00	2.50	3.00	3.50	4.00	4.50	5.00
1.00" Ø PIN	S	S	S	S			
1.00" Ø HARDENED PIN	O	O	O	O	S		
1.25" Ø HARDENED PIN					O	S	S

CLEVIS PIN OPTIONS & AVAILABILITY: (See Table Above)

A=2-1.00" Ø Pins	E=1-1.00" Ø Pin
B=Reserved	F=Reserved
C=2-1.00" Ø Hardened Pins	G=1-1.00" Ø Hardened Pin
D=2-1.25" Ø Hardened Pins	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
*(ASAE Version 2.0-3.5" Bore with 8" stroke only)



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	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 2 Inch Bore Cylinders
B200040ABAAA07B	none /SAE-32004	4"	17	9425 lbs	14 1/4	3 1/2	* 1 1/8" rod diameter
B200060ABAAA07B	none /SAE-32006	6"	19	9425 lbs	16 1/4	3 1/2	A 3/16" cylinder tube wall thickness
A200080ABAAA07B	none /SAE-32008	8"	21	9425 lbs	20 1/4	5 1/2	B, C SAE 3/4 -16 extend & retract ports
B200100ABAAA07B	none /SAE-32010	10"	22	9425 lbs	20 1/4	3 1/2	D 1.015" clevis pin hole size
B200120ABAAA07B	SAE-9012 /SAE-32012	12"	23	9425 lbs	22 1/4	3 1/2	E, F 1 13/16" base clevis throat depth w h 2 3/8" from pin center to port center
B200140ABAAA07B	SAE-9014 /SAE-32014	14"	25	9425 lbs	24 1/4	3 1/2	G 1 13/16" rod clevis throat dep h
A200160ABAAA07B	SAE-9016 /SAE-32016	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	18"	28	9200 lbs	28 1/4	3 1/2	K 15/16" base clevis ear radius
B200200ABAAA07B	SAE-9020 /SAE-32020	20"	30	7760 lbs	30 1/4	3 1/2	L 1 1/8" rod clevis ear radius
B200240ABAAA07B	SAE-9024 /SAE-32024	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	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	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 2.5 Inch Bore Cylinders
B250060ABAAA07B	none /SAE-32506	6"	22	14730 lbs	16 1/4	3 5/16	* 1 1/4" rod diameter
A250080ABAAA07B	SAE-9108 /SAE-32508	8"	25	14730 lbs	20 1/4	5 5/16	A 3/16" cylinder tube wall thickness
B250100ABAAA07B	SAE-9110 /SAE-32510	10"	26	14730 lbs	20 1/4	3 5/16	B, C SAE 3/4 -16 extend & retract ports
B250120ABAAA07B	SAE-9112 /SAE-32512	12"	28	14730 lbs	22 1/4	3 5/16	D 1.015" clevis pin hole size
B250140ABAAA07B	SAE-9114 /SAE-32514	14"	30	14730 lbs	24 1/4	3 5/16	E, F 1 7/8" base clevis throat depth w h 2 13/16" from pin center to port center
A250160ABAAA07B	SAE-9116 /SAE-32516	16"	34	11520 lbs	31 1/2	8 9/16	G 1 13/16" rod clevis throat dep h
B250180ABAAA07B	SAE-9118 /SAE-32518	18"	34	13880 lbs	28 1/4	3 5/16	J 1.06" min. distance between ears at pin center line
B250200ABAAA07B	SAE-9120 /SAE-32520	20"	36	11720 lbs	30 1/4	3 5/16	K 15/16" base clevis ear radius
B250240ABAAA07B	SAE-9124 /SAE-32524	24"	41	8670 lbs	34 1/4	3 5/16	L 1 1/8" rod clevis ear radius
B250300ABAAA07B	SAE-9130 /SAE-32530	30"	47	5930 lbs	40 1/4	3 5/16	M 1 1/8" - 12 UNF-3 piston rod clevis thread size N 1" piston wid h O 2 3/8" gland width

3 INCH BORE CYLINDERS

New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 3 Inch Bore Cylinders
B300060ABAAA07B	none /SAE-33006	6"	26	21210 lbs	16 1/4	3 3/4	* 1 3/8" rod diameter
A300080ABAAA07B	SAE-9208 /SAE-33008	8"	29	21210 lbs	20 1/4	5 3/4	A 3/16" cylinder tube wall thickness
B300100ABAAA07B	SAE-9210 /SAE-33010	10"	30	21210 lbs	20 1/4	3 3/4	B, C SAE 3/4 -16 extend & retract ports
B300120ABAAA07B	SAE-9212 /SAE-33012	12"	33	21210 lbs	22 1/4	3 3/4	D 1.015" clevis pin hole size
B300140ABAAA07B	SAE-9214 /SAE-33014	14"	35	21210 lbs	24 1/4	3 3/4	E, F 1 7/8" base clevis throat depth w h 2 13/16" from pin center to port center
A300160ABAAA07B	SAE-9216 /SAE-33016	16"	40	16730 lbs	31 1/2	9	G 1 13/16" rod clevis throat depth
B300180ABAAA07B	SAE-9218 /SAE-33018	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	20"	42	17010 lbs	30 1/4	3 3/4	K 1 1/16" base clevis ear radius
B300240ABAAA07B	SAE-9224 /SAE-33024	24"	47	12620 lbs	34 1/4	3 3/4	L 1 1/8" rod clevis ear radius
B300300ABAAA07B	SAE-9230 /SAE-33030	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	36"	61	6290 lbs	46 1/4	3 3/4	N 1" piston wid h
B300480ABAAA07B	SAE-9248 /SAE-33048	48"	75	3760 lbs	58 1/4	3 7/8	O 1 15/16" gland wid h

3.5 INCH BORE CYLINDERS

New Standard Model No.	Old Standard Model No. 2500 PSI / 3000 PSI	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 3.5 Inch Bore Cylinders
A350080ABAAA07B	SAE-9308A /SAE-33508	8"	35	28860 lbs	20 ¼	5 ¾	* 1 ¾" rod diameter
B350100ABAAA07B	SAE-9310A /SAE-33510	10"	37	28860 lbs	20 ¼	3 ¾	A 3/16" cylinder tube wall thickness
B350120ABAAA07B	SAE-9312A /SAE-33512	12"	39	28860 lbs	22 ¼	3 ¾	B, C SAE ¾ -16 extend & retract ports
B350140ABAAA07B	SAE-9314A /SAE-33514	14"	42	28860 lbs	24 ¼	3 ¾	D 1.015" clevis pin hole size
A350160ABAAA07B	SAE-9316A /SAE-33516	16"	46	16900 lbs	31 ½	9	E, F 1 7/8" base clevis hroat dep h with 27/16" from pin center to port center
B350180ABAAA07B	SAE-9318A /SAE-33518	18"	47	20400 lbs	28 ¼	3 ¾	G 1 13/16" rod clevis hroat depth
B350200ABAAA07B	SAE-9320A /SAE-33520	20"	49	17240 lbs	30 ¼	3 ¾	J 1.06" min. distance between ears at pin center line
B350240ABAAA07B	SAE-9324A /SAE-33524	24"	54	12780 lbs	34 ¼	3 ¾	K 1 1/4" base clevis ear radius
B350300ABAAA07B	SAE-9330A /SAE-33530	30"	62	8760 lbs	40 ¼	3 ¾	L 1 1/4" rod clevis ear radius
B350360ABAAA07B	SAE-9336A /SAE-33536	36"	69	6370 lbs	46 ¼	3 ¾	M 1 5/8" - 12 UNF-3 piston rod clevis thread size
B350480ABAAA07B	SAE-9348A /SAE-33548	48"	85	3800 lbs	58 ¼	3 ¾	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	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 4 Inch Bore Cylinders
A400080ABACA07B	SAE-9408 /SAE-34008	8"	48	37700 lbs	20 ¼	5 ¾	* 1 ¾" rod diameter
B400100ABACA07B	SAE-9410 /SAE-34010	10"	50	37700 lbs	20 ¼	3 ¾	A 3/16" cylinder tube wall thickness
B400120ABACA07B	SAE-9412 /SAE-34012	12"	54	37700 lbs	22 ¼	3 ¾	B, C SAE ¾ -16 extend & retract ports
B400140ABACA07B	SAE-9414 /SAE-34014	14"	57	37700 lbs	24 ¼	3 ¾	D 1.015" clevis pin hole size
A400160ABACA07B	SAE-9416 /SAE-34016	16"	64	37700 lbs	31 ½	8 ½	E, F 1 ¾" base clevis throat depth with 27/16" from pin center to port center
B400180ABACA07B	SAE-9418 /SAE-34018	18"	64	37700 lbs	28 ¼	3 ¾	G 1 7/8" rod clevis throat depth
B400200ABACA07B	SAE-9420 /SAE-34020	20"	68	37700 lbs	30 ½	3 ¾	J 1.06" min. distance between ears at pin center line
B400240ABACA07B	SAE-9424 /SAE-34024	24"	75	33710 lbs	34 ¼	3 ¾	K 1 1/4" base clevis ear radius
B400300ABACA07B	SAE-9430 /SAE-34030	30"	85	22990 lbs	40 ¼	3 ¾	L 1 1/4" rod clevis ear radius
B400360ABACA07B	SAE-9436 /SAE-34036	36"	95	16680 lbs	46 ¼	3 ¾	M 1 1/2" - 12 UNF-3 piston rod clevis hread size
B400480ABACA07B	SAE-9448 /SAE-34048	48"	116	9920 lbs	58 ¼	3 ¾	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	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 4.5 Inch Bore Cylinders
B450080ACDDA07B	none /SAE-34508	8"	60	47710 lbs	20 ¼	4	* 2" rod diameter
B450120ACDDA07B	none /SAE-34512	12"	69	47710 lbs	24 ¼	4	A 1/4" cylinder tube wall thickness
B450140ACDDA07B	none /SAE-34514	14"	74	47710 lbs	26 ¼	4	B, C SAE 7/8 -14 extend & retract ports
A450160ACDDA07B	none /SAE-34516	16"	81	47710 lbs	31 ½	7 ¼	D 1.265" clevis pin hole size
B450180ACDDA07B	none /SAE-34518	18"	83	47710 lbs	30 ¼	4	E, F 2 1/4" base clevis throat depth with 25/16" from pin center to port center
B450200ACDDA07B	none /SAE-34520	20"	87	47710 lbs	32 ¼	4	G 2" rod clevis throat depth
B450240ACDDA07B	none /SAE-34524	24"	97	44710 lbs	36 ¼	4	J 1.13" min. distance between ears at pin center line
B450300ACDDA07B	none /SAE-34530	30"	110	37530 lbs	42 ¼	4	K 1 15/16" base clevis ear radius
B450360ACDDA07B	none /SAE-34536	36"	124	27430 lbs	48 ¼	4	L 1 1/4" rod clevis ear radius
B450480ACDDA07B	none /SAE-34548	48"	152	16470 lbs	60 ¼	4	M 1 1/2" - 12 UNF-3 piston rod clevis hread 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	Stroke	Wt	Column Load (lbs)	Retract	Tare Dist. (H)	Standard Dimensions of 5 Inch Bore Cylinders
B500080ACDDA07B	SAE-9508 /SAE-35008	8"	72	58900 lbs	20 ¼	4	* 2" rod diameter
B500120ACDDA07B	SAE-9512 /SAE-35012	12"	83	58900 lbs	24 ¼	4	A 1/4" cylinder tube wall thickness
B500140ACDDA07B	SAE-9514 /SAE-35014	14"	88	58900 lbs	26 ¼	4	B, C SAE 7/8 -14 extend & retract ports
A500160ACDDA07B	SAE-9516 /SAE-35016	16"	96	58900 lbs	31 ½	7 ¼	D 1.265" clevis pin hole size
B500180ACDDA07B	SAE-9518 /SAE-35018	18"	98	58900 lbs	30 ¼	4	E, F 1 ¾" base clevis throat depth wi h 25/8" from pin center to port center
B500200ACDDA07B	SAE-9520 /SAE-35020	20"	103	58900 lbs	32 ¼	4	G 2" rod clevis throat depth
B500240ACDDA07B	SAE-9524 /SAE-35024	24"	113	54510 lbs	36 ¼	4	J 1.13" min. distance between ears at pin center line
B500300ACDDA07B	SAE-9530 /SAE-35030	30"	129	37620 lbs	42 ¼	4	K 1 3/8" base clevis ear radius
B500360ACDDA07B	SAE-9536 /SAE-35036	36"	144	27520 lbs	48 ¼	4	L 1 1/4" rod clevis ear radius
B500480ACDDA07B	SAE-9548 /SAE-35048	48"	175	16550 lbs	60 ¼	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