

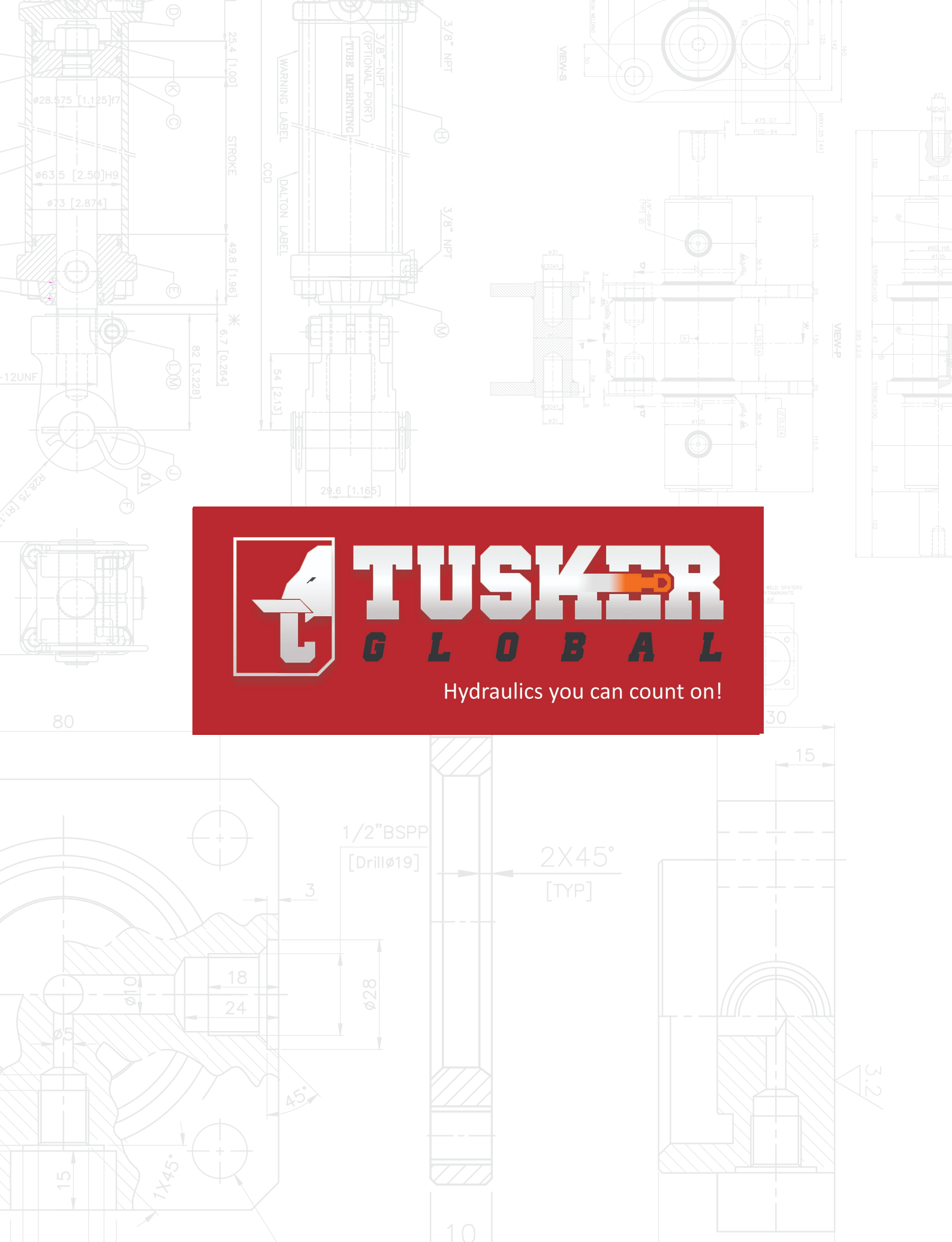


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Cylinders you can count on!



Hydraulic Cylinder Catalogue



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Tie-Rod Cylinders

1



Tie-Rod Cylinders - 3000PSI

5



Welded Clevis Cylinders

9



Welded Cross Tubes Cylinders

13



Pin Eye Cylinders

17



Welded Swivel End Cylinders

20



Top Link

23



Neutral Ends Cylinders

24



Single Acting Snowplow Welded Cylinders

26



Parts And Accessories

27



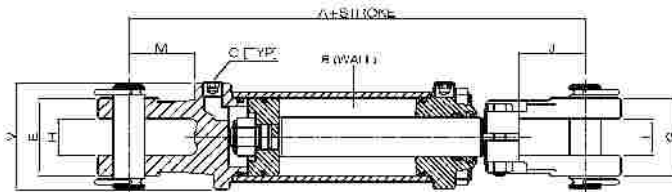
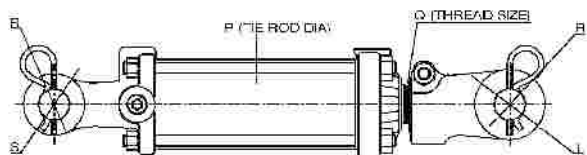
European Standard Cylinders

40



DESCRIPTION

INTENDED USE	: DOUBLE ACTING APPLICATIONS.
PISTON	: Ductile iron ASTM A536 65-45-12 for excellent life.
PISTON LOCK NUT	: Grade 8 , high tensile zinc-plated.
GLAND	: Ductile iron ASTM A536 65-45-12.
TUBE	: High tensile cold drawn tube, precision honed for extended seal life.
TUBE SEAL	: O-ring
ROD	: High tensile ground & polished hard chrome plated rod
ROD SEAL	: Std PolyPak with B lip design (Polyurethane U-cup with nitrite O-ring expander)
WIPER	: Polyurethane
END MOUNTS	: Ductile iron female clevises with pins and clips included
CLEVIS CLAMP BOLT	: Grade 8.8
CLEVIS CLAMP NUT	: Grade 8
PIN & PIN CLIP	: High tensile zinc-plated steel
PISTON ID SEAL	: O-ring
PISTON OD SEAL	: Hallite 755 Piston seal
TIE ROD	: ASTM 5140, high tensile, rolled threads for durability
TIE ROD NUT	: Grade 8
CAP	: Ductile iron ASTM A536 65-45-12
PORTS	: NPT
PORT PIUG	: Plastic (Shipping)
PAINT	: Black



Dimensional Data in Inches (mm)

2500 PSI

BORE	A*	B	C	E	G	H	I	J	M	P	Q[UNF]	R**	S	T	V
2.000 (50.8)	10.250 (260.4)	0.189 (4.80)	3/8"NPT	2.500 (63.5)	2.500 (63.5)	1.165 (29.6)	1.165 (29.6)	2.125 (54.0)	2.000 (50.8)	0.394 (10)	1 1/8-12	1.000 (25.4)	2.000 (50.8)	2.000 (50.8)	2.875 (73.0)
2.500 (63.5)	10.250 (260.4)	0.189 (4.80)	3/8"NPT	2.500 (63.5)	2.500 (63.5)	1.165 (29.6)	1.165 (29.6)	2.125 (54.0)	2.000 (50.8)	0.394 (10)	1 1/8-12	1.000 (25.4)	2.000 (50.8)	2.000 (50.8)	3.385 (85.9)
3.000 (76.2)	10.250 (260.4)	0.189 (4.80)	1/2"NPT	2.560 (65.0)	2.720 (69.1)	1.165 (29.6)	1.165 (29.6)	2.125 (54.0)	2.000 (50.8)	0.472 (12)	1 1/4-12	1.000 (25.4)	2.000 (50.8)	2.27 (57.7)	4.020 (102.1)
3.500 (88.9)	10.250 (260.4)	0.218 (5.53)	1/2"NPT	2.560 (65.0)	2.720 (69.1)	1.165 (29.6)	1.165 (29.6)	2.125 (54.0)	2.000 (50.8)	0.551 (14)	1 1/4-12	1.000 (25.4)	2.27 (57.7)	2.27 (57.7)	4.5 (114.3)
4.000 (101.6)	10.250 (260.4)	0.244 (6.20)	1/2"NPT	2.760 (70.1)	2.720 (69.1)	1.165 (29.6)	1.165 (29.6)	2.125 (54.0)	2.000 (50.8)	0.630 (16)	1 1/4-12	1.000 (25.4)	2.27 (57.7)	2.27 (57.7)	5.08 (129.0)

A* 12.25"(311.2) for 8"(203.2) stroke ASAE cylinders and 15.50"(393.7) for 16"(406.4) stroke ASAE cylinders. ** (Pin diameter): 1.25(31.75) for 16"(406.4) stroke ASAE cylinders from 3" to 4" bore.

2" BORE CYLINDERS**2500 PSI**

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
2004-2	2"	1 1/8"	4"	14 1/4"	18 1/4"	7850 lbs.	3/8" NPT	1"	16
2006-2	2"	1 1/8"	6"	16 1/4"	22 1/4"	7850 lbs.	3/8" NPT	1"	17
2008-2	2"	1 1/8"	8"	18 1/4"	26 1/4"	7850 lbs.	3/8" NPT	1"	18
2008-2A	2"	1 1/8"	8" ASAE	20 1/4"	28 1/4"	7850 lbs.	3/8" NPT	1"	19
2010-2	2"	1 1/8"	10"	20 1/4"	30 1/4"	7850 lbs.	3/8" NPT	1"	20
2012-2	2"	1 1/8"	12"	22 1/4"	34 1/4"	7850 lbs.	3/8" NPT	1"	22
2014-2	2"	1 1/8"	14"	24 1/4"	38 1/4"	7850 lbs.	3/8" NPT	1"	23
2016-2	2"	1 1/8"	16"	26 1/4"	42 1/4"	7850 lbs.	3/8" NPT	1"	25
2018-2	2"	1 1/8"	18"	28 1/4"	46 1/4"	7850 lbs.	3/8" NPT	1"	26
2020-2	2"	1 1/8"	20"	30 1/4"	50 1/4"	6950 lbs.	3/8" NPT	1"	28
2024-2	2"	1 1/8"	24"	34 1/4"	58 1/4"	5180 lbs.	3/8" NPT	1"	31
2030-2	2"	1 1/8"	30"	40 1/4"	70 1/4"	3570 lbs.	3/8" NPT	1"	35
2036-2	2"	1 1/8"	36"	46 1/4"	82 1/4"	2610 lbs.	3/8" NPT	1"	41
2048-2	2"	1 1/8"	48"	58 1/4"	106 1/4"	1570 lbs.	3/8" NPT	1"	50

2.5" BORE CYLINDERS**2500 PSI**

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
2504-2	2.5"	1 1/8"	4"	14 1/4"	18 1/4"	12270 lbs.	3/8" NPT	1"	18
2506-2	2.5"	1 1/8"	6"	16 1/4"	22 1/4"	12270 lbs.	3/8" NPT	1"	19
2508-2	2.5"	1 1/8"	8"	18 1/4"	26 1/4"	12270 lbs.	3/8" NPT	1"	20
2508-2A	2.5"	1 1/8"	8" ASAE	20 1/4"	28 1/4"	12270 lbs.	3/8" NPT	1"	21
2510-2	2.5"	1 1/8"	10"	20 1/4"	30 1/4"	12270 lbs.	3/8" NPT	1"	22
2512-2	2.5"	1 1/8"	12"	22 1/4"	34 1/4"	12270 lbs.	3/8" NPT	1"	24
2514-2	2.5"	1 1/8"	14"	24 1/4"	38 1/4"	12270 lbs.	3/8" NPT	1"	26
2516-2	2.5"	1 1/8"	16"	26 1/4"	42 1/4"	10000 lbs.	3/8" NPT	1"	28
2518-2	2.5"	1 1/8"	18"	28 1/4"	46 1/4"	8370 lbs.	3/8" NPT	1"	30
2520-2	2.5"	1 1/8"	20"	30 1/4"	50 1/4"	7100 lbs.	3/8" NPT	1"	31
2524-2	2.5"	1 1/8"	24"	34 1/4"	58 1/4"	5300 lbs.	3/8" NPT	1"	34
2530-2	2.5"	1 1/4"	30"	40 1/4"	70 1/4"	5500 lbs.	3/8" NPT	1"	46
2536-2	2.5"	1 1/4"	36"	46 1/4"	82 1/4"	4020 lbs.	3/8" NPT	1"	51
2548-2	2.5"	1 1/4"	48"	58 1/4"	106 1/4"	2410 lbs.	3/8" NPT	1"	62

3" BORE CYLINDERS

2500 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
3004-2	3"	1 1/4"	4"	14 1/4"	18 1/4"	17670 lbs.	1/2" NPT	1"	22
3006-2	3"	1 1/4"	6"	16 1/4"	22 1/4"	17670 lbs.	1/2" NPT	1"	24
3008-2	3"	1 1/4"	8"	18 1/4"	26 1/4"	17670 lbs.	1/2" NPT	1"	26
3008-2A	3"	1 1/4"	8" ASAE	20 1/4"	28 1/4"	17670 lbs.	1/2" NPT	1"	27
3010-2	3"	1 1/4"	10"	20 1/4"	30 1/4"	17670 lbs.	1/2" NPT	1"	28
3012-2	3"	1 1/4"	12"	22 1/4"	34 1/4"	17670 lbs.	1/2" NPT	1"	31
3014-2	3"	1 1/4"	14"	24 1/4"	38 1/4"	17670 lbs.	1/2" NPT	1"	33
3016-2	3"	1 1/4"	16"	26 1/4"	42 1/4"	17670 lbs.	1/2" NPT	1"	35
3016-2A	3"	1 1/4"	16" ASAE	31 1/2"	47 1/2"	17670 lbs.	1/2" NPT	1 1/4"	37
3018-2	3"	1 1/4"	18"	28 1/4"	46 1/4"	12690 lbs.	1/2" NPT	1"	37
3020-2	3"	1 1/4"	20"	30 1/4"	50 1/4"	10780 lbs.	1/2" NPT	1"	39
3024-2	3"	1 1/4"	24"	34 1/4"	58 1/4"	8050 lbs.	1/2" NPT	1"	44
3030-2	3"	1 1/2"	30"	40 1/4"	70 1/4"	11240 lbs.	1/2" NPT	1"	61
3036-2	3"	1 1/2"	36"	46 1/4"	82 1/4"	8220 lbs.	1/2" NPT	1"	67
3048-2	3"	1 1/2"	48"	58 1/4"	106 1/4"	4950 lbs.	1/2" NPT	1"	81

3.5" BORE CYLINDERS

2500 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
3504-2	3.5"	1 1/4"	4"	14 1/4"	18 1/4"	24050 lbs.	1/2" NPT	1"	29
3506-2	3.5"	1 1/4"	6"	16 1/4"	22 1/4"	24050 lbs.	1/2" NPT	1"	31
3508-2	3.5"	1 1/4"	8"	18 1/4"	26 1/4"	24050 lbs.	1/2" NPT	1"	32
3508-2A	3.5"	1 1/4"	8" ASAE	20 1/4"	28 1/4"	24050 lbs.	1/2" NPT	1"	33
3510-2	3.5"	1 1/4"	10"	20 1/4"	30 1/4"	24050 lbs.	1/2" NPT	1"	35
3512-2	3.5"	1 1/4"	12"	22 1/4"	34 1/4"	24050 lbs.	1/2" NPT	1"	37
3514-2	3.5"	1 1/4"	14"	24 1/4"	38 1/4"	18730 lbs.	1/2" NPT	1"	39
3516-2	3.5"	1 1/4"	16"	26 1/4"	42 1/4"	15390 lbs.	1/2" NPT	1"	41
3516-2A	3.5"	1 1/2"	16" ASAE	31 1/2"	47 1/2"	22050 lbs.	1/2" NPT	1 1/4"	52
3518-2	3.5"	1 1/4"	18"	28 1/4"	46 1/4"	12870 lbs.	1/2" NPT	1"	44
3520-2	3.5"	1 1/4"	20"	30 1/4"	50 1/4"	10920 lbs.	1/2" NPT	1"	47
3524-2	3.5"	1 1/2"	24"	34 1/4"	58 1/4"	16650 lbs.	1/2" NPT	1"	62
3530-2	3.5"	1 1/2"	30"	40 1/4"	70 1/4"	11480 lbs.	1/2" NPT	1"	70
3536-2	3.5"	1 1/2"	36"	46 1/4"	82 1/4"	8390 lbs.	1/2" NPT	1"	76
3548-2	3.5"	1 1/2"	48"	58 1/4"	106 1/4"	5040 lbs.	1/2" NPT	1"	93

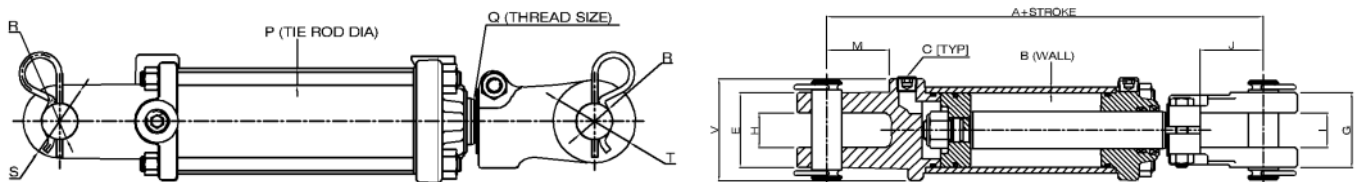
4" BORE CYLINDERS

2500 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
4008-2	4"	1 1/2"	8"	18 1/4"	26 1/4"	31410 lbs.	1/2" NPT	1"	39
4008-2A	4"	1 1/2"	8" ASAE	20 1/4"	28 1/4"	31410 lbs.	1/2" NPT	1"	40
4010-2	4"	1 1/2"	10"	20 1/4"	30 1/4"	31410 lbs.	1/2" NPT	1"	42
4012-2	4"	1 1/2"	12"	22 1/4"	34 1/4"	31410 lbs.	1/2" NPT	1"	44
4014-2	4"	1 1/2"	14"	24 1/4"	38 1/4"	31410 lbs.	1/2" NPT	1"	47
4016-2	4"	1 1/2"	16"	26 1/4"	42 1/4"	31410 lbs.	1/2" NPT	1"	50
4016-2A	4"	2"	16" ASAE	31 1/2"	47 1/2"	31410 lbs.	1/2" NPT	1 1/4"	67
4018-2	4"	1 1/2"	18"	28 1/4"	46 1/4"	31410 lbs.	1/2" NPT	1"	60
4020-2	4"	1 1/2"	20"	30 1/4"	50 1/4"	22600 lbs.	1/2" NPT	1"	62
4024-2	4"	1 1/2"	24"	34 1/4"	58 1/4"	16870 lbs.	1/2" NPT	1"	68
4030-2	4"	2"	30"	40 1/4"	70 1/4"	31410 lbs.	1/2" NPT	1"	91
4036-2	4"	2"	36"	46 1/4"	82 1/4"	25890 lbs.	1/2" NPT	1"	103
4040-2	4"	2"	40"	50 1/4"	90 1/4"	21530 lbs.	1/2" NPT	1"	111
4048-2	4"	2"	48"	58 1/4"	106 1/4"	15560 lbs.	1/2" NPT	1"	127

DESCRIPTION

INTENDED USE	: DOUBLE ACTING APPLICATIONS.
PISTON	: Ductile iron with wear ring.
GLAND	: Ductile iron, drilled oil passages.
TUBE	: Precision honed steel.
TUBE SEAL	: Nitrile rubber O-ring with back-up ring.
ROD	: hard chrome plated rod.
ROD SEAL	: Polyurethane seal with back-up ring.
ROD WIPER	: D style prevents contamination.
END MOUNTS	: High strength, Ductile iron female clevises with swaged pins and R-clips included.
ALL SEALS	: Manufactured to US specifications.
PORTS	: NPT or SAE O-ring.
PAINT	: Black, unless otherwise indicated. Custom colors are available.



Dimensional Data in Inches (mm)

3000 PSI

BORE	A*	B	C	E	G	H	I	J	M	P	Q[UNF]	R**	S	T	V
2.000 (50.8)	10.250 (260.4)	0.188 (4.78)	SAE 8	2.441 (62.0)	2.756 (70.0)	1.142 (29.0)	1.181 (30.0)	2.126 (54.0)	2.000 (50.8)	0.331 (8.4)	1 1/8-12	1.015 (25.8)	0.886 (22.5)	1.142 (29.0)	2.874 (73.0)
2.500 (63.5)	10.250 (260.4)	0.188 (4.78)	SAE 8	2.441 (62.0)	2.756 (70.0)	1.142 (29.0)	1.181 (30.0)	2.126 (54.0)	2.000 (50.8)	0.331 (8.4)	1 1/8-12	1.015 (25.8)	0.984 (25.0)	1.142 (29.0)	3.228 (82.0)
3.000 (76.2)	10.250 (260.4)	0.188 (4.78)	SAE 8	2.756 (70.0)	2.913 (74.0)	1.181 (30.0)	1.220 (31.0)	2.126 (54.0)	2.000 (50.8)	0.445 (11.3)	1 1/4-12	1.015 (25.8)	1.016 (25.8)	1.142 (29.0)	3.740 (95.0)
3.500 (88.9)	10.250 (260.4)	0.188 (4.78)	SAE 8	2.756 (70.0)	2.913 (74.0)	1.181 (30.0)	1.220 (31.0)	2.126 (54.0)	2.000 (50.8)	0.524 (13.3)	1 1/4-12	1.015 (25.8)	1.134 (28.8)	1.142 (29.0)	4.173 (106.0)
4.000 (101.6)	10.250 (260.4)	0.250 (6.35)	SAE 8	2.874 (73.0)	2.913 (74.0)	1.240 (31.5)	1.220 (31.0)	2.126 (54.0)	2.000 (50.8)	0.583 (14.8)	1 1/4-12	1.015 (25.8)	1.280 (32.5)	1.142 (29.0)	5.000 (127.0)
5.000 (127.0)	12.250 (311.15)	0.250 (6.35)	SAE 12	2.875 (73.02)	2.953 (75.01)	1.2 (30.48)	1.2 (30.48)	2.125 (53.97)	2.118 (53.8)	0.583 (14.8)	1 1/4-12	1.265 (32.13)	1.378 (35.0)	1.378 (35.0)	6.500 (165.10)

*Retracted length is 12.250 (311.2) for 8.000 (203.2) stroke ASAE cylinders and 15.500 (393.7) for 16.000 (406.4) stroke ASAE cylinders.

2" BORE CYLINDERS**3000 PSI**

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
2004-3	2"	1 1/8"	4"	14 1/4"	18 1/4"	9420 lbs.	SAE 8	1"	14
2006-3	2"	1 1/8"	6"	16 1/4"	22 1/4"	9420 lbs.	SAE 8	1"	15
2008-3	2"	1 1/8"	8"	18 1/4"	26 1/4"	9420 lbs.	SAE 8	1"	17
2008-3A	2"	1 1/8"	8" ASAE	20 1/4"	28 1/4"	9420 lbs.	SAE 8	1"	19
2010-3	2"	1 1/8"	10"	20 1/4"	30 1/4"	9420 lbs.	SAE 8	1"	19
2012-3	2"	1 1/8"	12"	22 1/4"	34 1/4"	9420 lbs.	SAE 8	1"	22
2014-3	2"	1 1/8"	14"	24 1/4"	38 1/4"	9420 lbs.	SAE 8	1"	22
2016-3	2"	1 1/8"	16"	26 1/4"	42 1/4"	9420 lbs.	SAE 8	1"	22
2018-3	2"	1 1/8"	18"	28 1/4"	46 1/4"	8310 lbs.	SAE 8	1"	25
2020-3	2"	1 1/8"	20"	30 1/4"	50 1/4"	7050 lbs.	SAE 8	1"	24
2024-3	2"	1 1/8"	24"	34 1/4"	58 1/4"	5250 lbs.	SAE 8	1"	30
2030-3	2"	1 1/8"	30"	40 1/4"	70 1/4"	3610 lbs.	SAE 8	1"	35
2036-3	2"	1 1/8"	36"	46 1/4"	82 1/4"	2630 lbs.	SAE 8	1"	35

2.5" BORE CYLINDERS**3000 PSI**

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
2504-3	2.5"	1 1/8"	4"	14 1/4"	18 1/4"	14720 lbs.	SAE 8	1"	17
2506-3	2.5"	1 1/8"	6"	16 1/4"	22 1/4"	14720 lbs.	SAE 8	1"	19
2508-3	2.5"	1 1/8"	8"	18 1/4"	26 1/4"	14720 lbs.	SAE 8	1"	21
2508-3A	2.5"	1 1/8"	8" ASAE	20 1/4"	28 1/4"	14720 lbs.	SAE 8	1"	22
2510-3	2.5"	1 1/8"	10"	20 1/4"	30 1/4"	14720 lbs.	SAE 8	1"	22
2512-3	2.5"	1 1/8"	12"	22 1/4"	34 1/4"	14720 lbs.	SAE 8	1"	24
2514-3	2.5"	1 1/4"	14"	24 1/4"	38 1/4"	14720 lbs.	SAE 8	1"	27
2516-3	2.5"	1 1/4"	16"	26 1/4"	42 1/4"	14720 lbs.	SAE 8	1"	29
2518-3	2.5"	1 1/4"	18"	28 1/4"	46 1/4"	12790 lbs.	SAE 8	1"	30
2520-3	2.5"	1 1/4"	20"	30 1/4"	50 1/4"	10840 lbs.	SAE 8	1"	32
2524-3	2.5"	1 1/4"	24"	34 1/4"	58 1/4"	8070 lbs.	SAE 8	1"	37
2530-3	2.5"	1 1/4"	30"	40 1/4"	70 1/4"	5550 lbs.	SAE 8	1"	41
2536-3	2.5"	1 1/4"	36"	46 1/4"	82 1/4"	4050 lbs.	SAE 8	1"	48
2548-3	2.5"	1 1/4"	48"	58 1/4"	106 1/4"	2430 lbs.	SAE 8	1"	59

3" BORE CYLINDERS**3000 PSI**

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
3004-3	3"	1 1/4"	4"	14 1/4"	18 1/4"	21200 lbs.	SAE 8	1"	21
3006-3	3"	1 1/4"	6"	16 1/4"	22 1/4"	21200 lbs.	SAE 8	1"	23
3008-3	3"	1 1/4"	8"	18 1/4"	26 1/4"	21200 lbs.	SAE 8	1"	27
3008-3A	3"	1 1/4"	8" ASAE	20 1/4"	28 1/4"	21200 lbs.	SAE 8	1"	28
3010-3	3"	1 1/4"	10"	20 1/4"	30 1/4"	21200 lbs.	SAE 8	1"	28
3012-3	3"	1 1/4"	12"	22 1/4"	34 1/4"	21200 lbs.	SAE 8	1"	32
3014-3	3"	1 1/2"	14"	24 1/4"	38 1/4"	21200 lbs.	SAE 8	1"	35
3016-3	3"	1 1/2"	16"	26 1/4"	42 1/4"	21200 lbs.	SAE 8	1"	37
3018-3	3"	1 1/2"	18"	28 1/4"	46 1/4"	21200 lbs.	SAE 8	1"	40
3020-3	3"	1 1/2"	20"	30 1/4"	50 1/4"	21200 lbs.	SAE 8	1"	30
3024-3	3"	1 1/2"	24"	34 1/4"	58 1/4"	16580 lbs.	SAE 8	1"	52
3030-3	3"	1 1/2"	30"	40 1/4"	70 1/4"	11410 lbs.	SAE 8	1"	54
3036-3	3"	1 1/2"	36"	46 1/4"	82 1/4"	8330 lbs.	SAE 8	1"	61
3048-3	3"	1 1/2"	48"	58 1/4"	106 1/4"	4990 lbs.	SAE 8	1"	75

3.5" BORE CYLINDERS**3000 PSI**

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
3508-3	3.5"	1 1/2"	8"	18 1/4"	26 1/4"	28860 lbs.	SAE 8	1"	32
3508-3A	3.5"	1 1/2"	8" ASAE	20 1/4"	28 1/4"	28860 lbs.	SAE 8	1"	29
3510-3	3.5"	1 1/2"	10"	20 1/4"	30 1/4"	28860 lbs.	SAE 8	1"	35
3512-3	3.5"	1 1/2"	12"	22 1/4"	34 1/4"	28860 lbs.	SAE 8	1"	37
3514-3	3.5"	1 1/2"	14"	24 1/4"	38 1/4"	28860 lbs.	SAE 8	1"	40
3516-3	3.5"	1 1/2"	16"	26 1/4"	42 1/4"	28860 lbs.	SAE 8	1"	50
3518-3	3.5"	1 1/2"	18"	28 1/4"	46 1/4"	26730 lbs.	SAE 8	1"	45
3520-3	3.5"	1 1/2"	20"	30 1/4"	50 1/4"	22660 lbs.	SAE 8	1"	46
3524-3	3.5"	1 1/2"	24"	34 1/4"	58 1/4"	16880 lbs.	SAE 8	1"	53
3530-3	3.5"	1 1/2"	30"	40 1/4"	70 1/4"	11610 lbs.	SAE 8	1"	61
3536-3	3.5"	1 1/2"	36"	46 1/4"	82 1/4"	8480 lbs.	SAE 8	1"	70

4" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
4006-3	4"	1 1/2"	6"	16 1/4"	22 1/4"	37690 lbs.	SAE 8	1"	38
4008-3	4"	1 1/2"	8"	18 1/4"	26 1/4"	37690 lbs.	SAE 8	1"	42
4008-3A	4"	1 1/2"	8" ASAE	20 1/4"	28 1/4"	37690 lbs.	SAE 8	1"	33
4010-3	4"	1 1/2"	10"	20 1/4"	30 1/4"	37690 lbs.	SAE 8	1"	45
4012-3	4"	1 1/2"	12"	22 1/4"	34 1/4"	37690 lbs.	SAE 8	1"	45
4016-3	4"	1 3/4"	16"	26 1/4"	42 1/4"	37690 lbs.	SAE 8	1"	62
4018-3	4"	1 3/4"	18"	28 1/4"	46 1/4"	37690 lbs.	SAE 8	1"	49
4020-3	4"	1 3/4"	20"	30 1/4"	50 1/4"	37690 lbs.	SAE 8	1"	53
4024-3	4"	2"	24"	34 1/4"	58 1/4"	37690 lbs.	SAE 8	1"	79
4030-3	4"	2"	30"	40 1/4"	70 1/4"	36070 lbs.	SAE 8	1"	92
4036-3	4"	2"	36"	46 1/4"	82 1/4"	26340 lbs.	SAE 8	1"	98
4048-3	4"	2"	48"	58 1/4"	106 1/4"	15790 lbs.	SAE 8	1"	130

5" BORE CYLINDERS

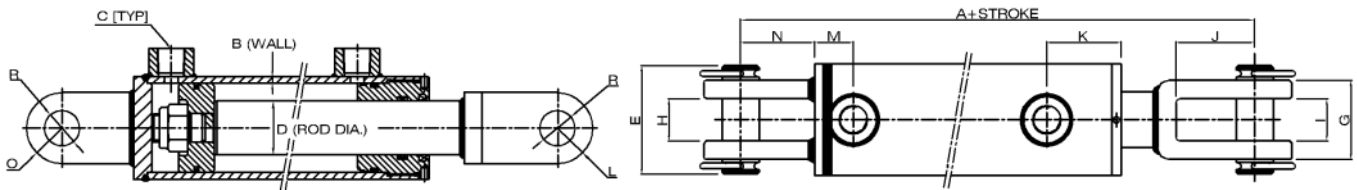
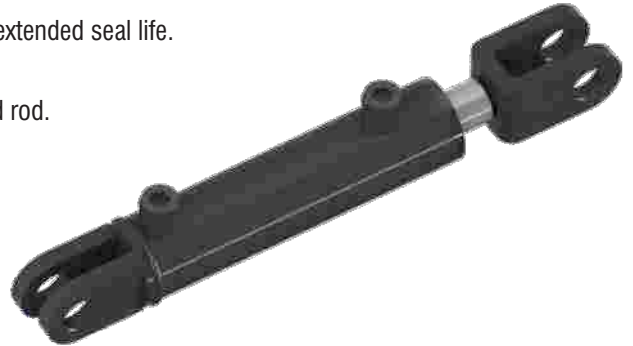
3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
5006-3	5"	2"	6"	18 1/4"	24 1/4"	58900 lbs.	SAE 12	1 1/4"	69
5008-3A	5"	2"	8" ASAE	20 1/4"	28 1/4"	58900 lbs.	SAE 12	1 1/4"	75
5010-3	5"	2"	10"	22 1/4"	32 1/4"	58900 lbs.	SAE 12	1 1/4"	80
5012-3	5"	2"	12"	24 1/4"	36 1/4"	58900 lbs.	SAE 12	1 1/4"	86
5014-3	5"	2"	14"	26 1/4"	40 1/4"	58900 lbs.	SAE 12	1 1/4"	92
5016-3	5"	2"	16"	28 1/4"	44 1/4"	58900 lbs.	SAE 12	1 1/4"	97
5016-3A	5"	2"	16" ASAE	31 1/4"	47 1/4"	58900 lbs.	SAE 12	1 1/4"	100
5018-3	5"	2"	18"	30 1/4"	48 1/4"	58900 lbs.	SAE 12	1 1/4"	105
5020-3	5"	2"	20"	32 1/4"	52 1/4"	58900 lbs.	SAE 12	1 1/4"	108
5024-3	5"	2 1/4"	24"	36 1/4"	60 1/4"	58900 lbs.	SAE 12	1 1/4"	127
5030-3	5"	2 1/4"	30"	42 1/4"	72 1/4"	56340 lbs.	SAE 12	1 1/4"	147
5036-3	5"	2 1/4"	36"	48 1/4"	84 1/4"	41380 lbs.	SAE 12	1 1/4"	163
5048-3	5"	2 1/4"	48"	60 1/4"	106 1/4"	25020 lbs.	SAE 12	1 1/4"	186



DESCRIPTION

INTENDED USE	: DOUBLE ACTING APPLICATIONS.
PISTON	: Ductile iron ASTM A536 65-45-12 for excellent life.
PISTON LOCK NUT	: Grade 8, high tensile zinc-plated.
GLAND	: Ductile iron ASTM A536 65-45-12.
TUBE	: High tensile cold drawn tube, precision honed for extended seal life.
TUBE SEAL	: Nitrile O-ring with Polytemp hytrel back-up.
ROD	: High tensile ground & polished hard chrome plated rod.
ROD SEAL	: Std polypak with B lip design (polyurethane U-cup with nitrile O-ring expander).
WIPER	: Polyurethane
END MOUNTS	: Cast female clevises with pins and clips included.
PIN & PIN CLIP	: High tensile zinc-plated steel polyurethane.
PISTON ID SEAL	: O-ring.
PISTON OD SEAL	: Hallite 755 piston seal.
PORTS	: SAE O-Rings.
PAINT	: Black



Dimensional Data in Inches (mm)

3000 PSI

BORE	A*	B	C	D	E	G	H	I	J	K	L	M	N	O	R
2.000 (50.8)	10.250 (260.4)	0.188 (4.78)	SAE 6	1.250 (31.8)	2.125 (53.9)	2.125 (53.9)	1.125 (28.6)	1.125 (28.6)	2.125 (53.9)	1.965 (49.9)	1.024 (26)	0.952 (24.18)	2.125 (53.9)	1.024 (26)	1.012 (25.7)
2.500 (63.5)	10.250 (260.4)	0.188 (4.78)	SAE 8	1.500 (38.1)	2.125 (53.9)	2.125 (53.9)	1.125 (28.6)	1.125 (28.6)	2.125 (53.9)	1.965 (49.9)	1.024 (26)	0.952 (24.18)	2.125 (53.9)	1.024 (26)	1.012 (25.7)
3.000 (76.2)	10.250 (260.4)	0.197 (5.00)	SAE 8	1.500 (38.1)	2.125 (53.9)	2.125 (53.9)	1.125 (28.6)	1.125 (28.6)	2.125 (53.9)	2.264 (57.5)	1.024 (26)	1.071 (27.20)	2.125 (53.9)	1.024 (26)	1.012 (25.7)
3.500 (88.9)	10.250 (260.4)	0.219 (5.563)	SAE 8	1.750 (44.5)	2.386 (60.6)	2.386 (60.6)	1.125 (28.6)	1.125 (28.6)	2.125 (53.9)	2.264 (57.5)	1.024 (26)	1.071 (27.20)	2.125 (53.9)	1.024 (26)	1.012 (25.7)
4.000 (101.6)	10.250 (260.4)	0.250 (6.350)	SAE 8	2.000 (50.8)	2.386 (60.6)	2.386 (60.6)	1.125 (28.6)	1.125 (28.6)	2.125 (53.9)	2.264 (57.5)	1.024 (26)	1.071 (27.20)	2.125 (53.9)	1.024 (26)	1.012 (25.7)

* Dimension "A" is 12.25" (311.2) for 8" (203.2) stroke ASAE cylinder.

2" BORE CYLINDERS
3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
2004-WC	2"	1 1/4"	4"	14 1/4"	18 1/4"	9420 lbs.	SAE 6	1"	15
2006-WC	2"	1 1/4"	6"	16 1/4"	22 1/4"	9420 lbs.	SAE 6	1"	17
2008-WCA	2"	1 1/4"	8" ASAE	20 1/4"	28 1/4"	9420 lbs.	SAE 6	1"	18
2008-WC	2"	1 1/4"	8"	18 1/4"	26 1/4"	9420 lbs.	SAE 6	1"	16
2010--WC	2"	1 1/4"	10"	20 1/4"	30 1/4"	9420 lbs.	SAE 6	1"	18
2012-WC	2"	1 1/4"	12"	22 1/4"	34 1/4"	9420 lbs.	SAE 6	1"	19
2014-WC	2"	1 1/4"	14"	24 1/4"	38 1/4"	9420 lbs.	SAE 6	1"	20
2016-WC	2"	1 1/4"	16"	26 1/4"	42 1/4"	9420 lbs.	SAE 6	1"	22
2018-WC	2"	1 1/4"	18"	28 1/4"	46 1/4"	9420 lbs.	SAE 6	1"	24
2020-WC	2"	1 1/4"	20"	30 1/4"	50 1/4"	9420 lbs.	SAE 6	1"	27
2024-WC	2"	1 1/4"	24"	34 1/4"	58 1/4"	7730 lbs.	SAE 6	1"	30
2030-WC	2"	1 1/4"	30"	40 1/4"	70 1/4"	5330 lbs.	SAE 6	1"	37
2036-WC	2"	1 1/4"	36"	46 1/4"	82 1/4"	3890 lbs.	SAE 6	1"	41

2.5" BORE CYLINDERS
3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
2504-WC	2.5"	1 1/2"	4"	14 1/4"	18 1/4"	14720 lbs.	SAE 8	1"	19
2506-WC	2.5"	1 1/2"	6"	16 1/4"	22 1/4"	14720 lbs.	SAE 8	1"	22
2508-WCA	2.5"	1 1/2"	8" ASAE	20 1/4"	28 1/4"	14720 lbs.	SAE 8	1"	24
2508-WC	2.5"	1 1/2"	8"	18 1/4"	26 1/4"	14720 lbs.	SAE 8	1"	23
2510-WC	2.5"	1 1/2"	10"	20 1/4"	30 1/4"	14720 lbs.	SAE 8	1"	24
2512-WC	2.5"	1 1/2"	12"	22 1/4"	34 1/4"	14720 lbs.	SAE 8	1"	26
2514-WC	2.5"	1 1/2"	14"	24 1/4"	38 1/4"	14720 lbs.	SAE 8	1"	29
2516-WC	2.5"	1 1/2"	16"	26 1/4"	42 1/4"	14720 lbs.	SAE 8	1"	32
2518-WC	2.5"	1 1/2"	18"	28 1/4"	46 1/4"	14720 lbs.	SAE 8	1"	32
2520-WC	2.5"	1 1/2"	20"	30 1/4"	50 1/4"	14720 lbs.	SAE 8	1"	35
2524-WC	2.5"	1 1/2"	24"	34 1/4"	58 1/4"	14720 lbs.	SAE 8	1"	39
2530-WC	2.5"	1 1/2"	30"	40 1/4"	70 1/4"	10960 lbs.	SAE 8	1"	46

3" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
3004-WC	3"	1 1/2"	4"	14 1/4"	18 1/4"	21200 lbs.	SAE 8	1"	24
3006-WC	3"	1 1/2"	6"	16 1/4"	22 1/4"	21200 lbs.	SAE 8	1"	27
3008-WCA	3"	1 1/2"	8" ASAE	20 1/4"	28 1/4"	21200 lbs.	SAE 8	1"	30
3008-WC	3"	1 1/2"	8"	18 1/4"	26 1/4"	21200 lbs.	SAE 8	1"	29
3010-WC	3"	1 1/2"	10"	20 1/4"	30 1/4"	21200 lbs.	SAE 8	1"	31
3012-WC	3"	1 1/2"	12"	22 1/4"	34 1/4"	21200 lbs.	SAE 8	1"	31
3014-WC	3"	1 1/2"	14"	24 1/4"	38 1/4"	21200 lbs.	SAE 8	1"	33
3016-WC	3"	1 1/2"	16"	26 1/4"	42 1/4"	21200 lbs.	SAE 8	1"	37
3018-WC	3"	1 1/2"	18"	28 1/4"	46 1/4"	21200 lbs.	SAE 8	1"	41
3020-WC	3"	1 1/2"	20"	30 1/4"	50 1/4"	21200 lbs.	SAE 8	1"	43
3024-WC	3"	1 1/2"	24"	34 1/4"	58 1/4"	16760 lbs.	SAE 8	1"	48
3030-WC	3"	1 1/2"	30"	40 1/4"	70 1/4"	11510 lbs.	SAE 8	1"	56
3036-WC	3"	1 1/2"	36"	46 1/4"	82 1/4"	8390 lbs.	SAE 8	1"	62

3.5" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
3504-WC	3.5"	1 3/4"	4"	14 1/4"	18 1/4"	28860 lbs.	SAE 8	1"	27
3506-WC	3.5"	1 3/4"	6"	16 1/4"	22 1/4"	28860 lbs.	SAE 8	1"	30
3508-WCA	3.5"	1 3/4"	8" ASAE	20 1/4"	28 1/4"	28860 lbs.	SAE 8	1"	35
3508-WC	3.5"	1 3/4"	8"	18 1/4"	26 1/4"	28860 lbs.	SAE 8	1"	34
3510-WC	3.5"	1 3/4"	10"	20 1/4"	30 1/4"	28860 lbs.	SAE 8	1"	37
3512-WC	3.5"	1 3/4"	12"	22 1/4"	34 1/4"	28860 lbs.	SAE 8	1"	41
3514-WC	3.5"	1 3/4"	14"	24 1/4"	38 1/4"	28860 lbs.	SAE 8	1"	42
3516-WC	3.5"	1 3/4"	16"	26 1/4"	42 1/4"	28860 lbs.	SAE 8	1"	46
3518-WC	3.5"	1 3/4"	18"	28 1/4"	46 1/4"	28860 lbs.	SAE 8	1"	50
3520-WC	3.5"	1 3/4"	20"	30 1/4"	50 1/4"	28860 lbs.	SAE 8	1"	54
3524-WC	3.5"	1 3/4"	24"	34 1/4"	58 1/4"	28860 lbs.	SAE 8	1"	57
3530-WC	3.5"	1 3/4"	30"	40 1/4"	70 1/4"	21350 lbs.	SAE 8	1"	67
3536-WC	3.5"	1 3/4"	36"	46 1/4"	82 1/4"	15560 lbs.	SAE 8	1"	78

4" BORE CYLINDERS

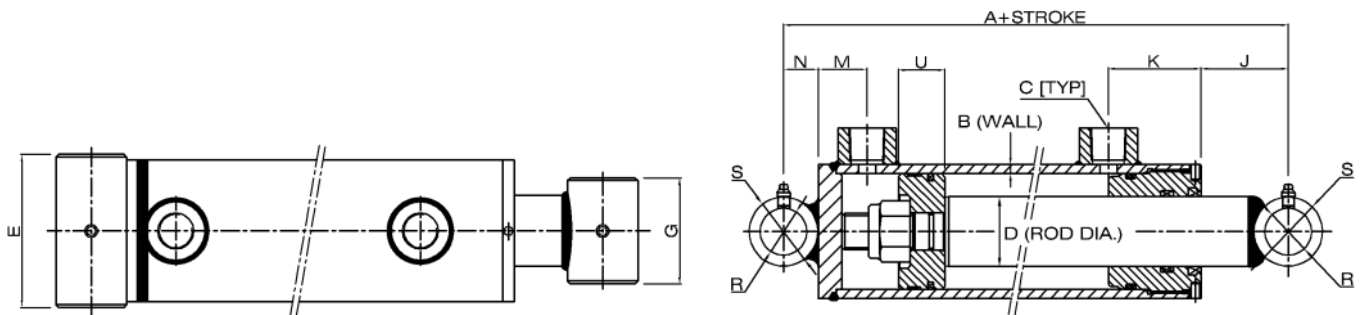
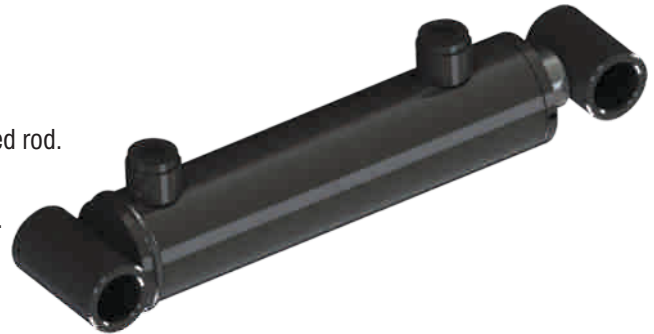
3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
4004-WC	4"	2"	4"	14 1/4"	18 1/4"	37690 lbs.	SAE 8	1"	33
4006-WC	4"	2"	6"	16 1/4"	22 1/4"	37690 lbs.	SAE 8	1"	38
4008-WCA	4"	2"	8" ASAE	20 1/4"	28 1/4"	37690 lbs.	SAE 8	1"	43
4008-WC	4"	2"	8"	18 1/4"	26 1/4"	37690 lbs.	SAE 8	1"	43
4010-WC	4"	2"	10"	20 1/4"	30 1/4"	37690 lbs.	SAE 8	1"	47
4012-WC	4"	2"	12"	22 1/4"	34 1/4"	37690 lbs.	SAE 8	1"	48
4014-WC	4"	2"	14"	24 1/4"	38 1/4"	37690 lbs.	SAE 8	1"	52
4016-WC	4"	2"	16"	26 1/4"	42 1/4"	37690 lbs.	SAE 8	1"	54
4018-WC	4"	2"	18"	28 1/4"	46 1/4"	37690 lbs.	SAE 8	1"	58
4020-WC	4"	2"	20"	30 1/4"	50 1/4"	37690 lbs.	SAE 8	1"	62
4024-WC	4"	2"	24"	34 1/4"	58 1/4"	37690 lbs.	SAE 8	1"	67
4030-WC	4"	2"	30"	40 1/4"	70 1/4"	36430 lbs.	SAE 8	1"	83
4036-WC	4"	2"	36"	46 1/4"	82 1/4"	26560 lbs.	SAE 8	1"	95



DESCRIPTION

INTENDED USE	: DOUBLE ACTING APPLICATIONS.
PISTON	: Ductile iron ASTM A536 65-45-12 for excellent life.
PISTON LOCK NUT	: Grade 8, high tensile zinc-plated.
GLAND	: Ductile iron ASTM A536 65-45-12.
TUBE	: Precision honed steel.
TUBE SEAL	: Nitrile O-ring with Polytemp hytrel back-up.
ROD	: High tensile ground & polished hard chrome plated rod.
ROD SEAL	: Std polypak with B lip design (polyurethane U-cup with nitrile O-ring expander).
WIPER	: Polyurethane.
END MOUNTS	: Cross-tubes.
PISTON ID SEAL	: O-ring.
PISTON OD SEAL	: Hallite 755 piston seal with wear ring.
PORTS	: SAE O-Rings.
PAINT	: Black



Dimensional Data in Inches (mm)

3000 PSI

BORE	A	B	C	D	E	G	J	K	M	N	R	S	U
1.500 (38.10)	8.000 (203.2)	0.188 (4.78)	SAE 4	1.000 (25.4)	2.250 (57.2)	2.000 (50.8)	2.831 (71.9)	2.129 (54.1)	0.929 (23.6)	0.625 (15.9)	0.764 (19.4)	1.250 (31.8)	0.945 (24)
2.000 (50.8)	8.000 (203.2)	0.188 (4.78)	SAE 6	1.25 (31.8)	2.750 (69.85)	2.250 (57.15)	2.654 (67.41)	1.937 (49.2)	0.894 (22.7)	0.750 (19.1)	1.015 (25.8)	1.500 (38.1)	1.000 (25.4)
2.500 (63.5)	8.000 (203.2)	0.188 (4.78)	SAE 8	1.500 (38.1)	3.250 (82.55)	2.250 (57.15)	2.654 (67.41)	1.925 (48.9)	0.894 (22.7)	0.750 (19.1)	1.015 (25.8)	1.500 (38.1)	1.000 (25.4)
3.000 (76.2)	8.000 (203.2)	0.197 (5.0)	SAE 8	1.500 (38.1)	3.750 (95.25)	2.250 (57.15)	2.216 (54)	2.244 (57)	1.012 (25.7)	0.750 (19.1)	1.015 (25.8)	1.500 (38.1)	1.000 (25.4)
3.500 (88.9)	10.000 (254)	0.219 (5.56)	SAE 8	1.750 (44.5)	4.250 (107.95)	2.250 (57.15)	3.874 (98.40)	2.248 (57.1)	1.012 (25.7)	1.000 (25.4)	1.265 (32.1)	2.000 (50.8)	1.000 (25.4)
4.000 (101.6)	10.000 (254)	0.250 (6.35)	SAE 8	2.000 (50.8)	4.750 (120.65)	2.500 (63.5)	3.748 (95.20)	2.244 (57)	1.012 (25.7)	1.126 (28.6)	1.515 (38.5)	2.252 (57.2)	1.000 (25.4)
5.000 (127)	11.000 (279.4)	0.250 (6.35)	3/4 NPT	2.500 (63.5)	5.750 (171.5)	4.000 (101.6)	2.750 (69.9)	2.272 (57.7)	1.500 (38.1)	1.250 (31.7)	1.515 (38.5)	2.500 (63.5)	1.626 (41.3)

1.5" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
1504-WT	1.5"	1"	4"	12"	16"	5300 lbs.	SAE 4	3/4"	10
1506-WT	1.5"	1"	6"	14"	20"	5300 lbs.	SAE 4	3/4"	11
1508-WT	1.5"	1"	8"	16"	24"	5300 lbs.	SAE 4	3/4"	12
1510-WT	1.5"	1"	10"	18"	28"	5300 lbs.	SAE 4	3/4"	14
1512-WT	1.5"	1"	12"	20"	32"	5300 lbs.	SAE 4	3/4"	16
1514-WT	1.5"	1"	14"	22"	36"	5300 lbs.	SAE 4	3/4"	17
1516-WT	1.5"	1"	16"	24"	40"	5300 lbs.	SAE 4	3/4"	18

2" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
2004-WT	2"	1 1/4"	4"	12"	16"	9420 lbs.	SAE 6	1"	11
2006-WT	2"	1 1/4"	6"	14"	20"	9420 lbs.	SAE 6	1"	13
2008-WT	2"	1 1/4"	8"	16"	24"	9420 lbs.	SAE 6	1"	15
2010-WT	2"	1 1/4"	10"	18"	28"	9420 lbs.	SAE 6	1"	16
2012-WT	2"	1 1/4"	12"	20"	32"	9420 lbs.	SAE 6	1"	18
2014-WT	2"	1 1/4"	14"	22"	36"	9420 lbs.	SAE 6	1"	20
2016-WT	2"	1 1/4"	16"	24"	40"	9420 lbs.	SAE 6	1"	21
2018-WT	2"	1 1/4"	18"	26"	44"	9420 lbs.	SAE 6	1"	23
2020-WT	2"	1 1/4"	20"	28"	48"	9420 lbs.	SAE 6	1"	25
2024-WT	2"	1 1/4"	24"	32"	56"	8370 lbs.	SAE 6	1"	29
2030-WT	2"	1 1/4"	30"	38"	68"	5690 lbs.	SAE 6	1"	34
2032-WT	2"	1 1/4"	32"	40"	72"	5080 lbs.	SAE 6	1"	36
2036-WT	2"	1 1/4"	36"	44"	80"	4120 lbs.	SAE 6	1"	40



2.5" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
2504-WT	2.5"	1 1/2"	4"	12"	16"	14720 lbs.	SAE 8	1"	17
2506-WT	2.5"	1 1/2"	6"	14"	20"	14720 lbs.	SAE 8	1"	19
2508-WT	2.5"	1 1/2"	8"	16"	24"	14720 lbs.	SAE 8	1"	21
2510-WT	2.5"	1 1/2"	10"	18"	28"	14720 lbs.	SAE 8	1"	23
2512-WT	2.5"	1 1/2"	12"	20"	32"	14720 lbs.	SAE 8	1"	25
2514-WT	2.5"	1 1/2"	14"	22"	36"	14720 lbs.	SAE 8	1"	27
2516-WT	2.5"	1 1/2"	16"	24"	40"	14720 lbs.	SAE 8	1"	29
2518-WT	2.5"	1 1/2"	18"	26"	44"	14720 lbs.	SAE 8	1"	31
2520-WT	2.5"	1.5"	20"	28"	48"	14720 lbs.	SAE 8	1"	33
2524-WT	2.5"	1.5"	24"	32"	56"	14720 lbs.	SAE 8	1"	38
2530-WT	2.5"	1.5"	30"	38"	68"	11710 lbs.	SAE 8	1"	44
2532-WT	2.5"	1.5"	32"	40"	72"	10450 lbs.	SAE 8	1"	47
2536-WT	2.5"	1.5"	36"	44"	80"	8470 lbs.	SAE 8	1"	51

3" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
3004-WT	3"	1 1/2"	4"	12"	16"	21200 lbs.	SAE 8	1"	23
3006-WT	3"	1 1/2"	6"	14"	20"	21200 lbs.	SAE 8	1"	25
3008-WT	3"	1 1/2"	8"	16"	24"	21200 lbs.	SAE 8	1"	26
3010-WT	3"	1 1/2"	10"	18"	28"	21200 lbs.	SAE 8	1"	29
3012-WT	3"	1 1/2"	12"	20"	32"	21200 lbs.	SAE 8	1"	31
3014-WT	3"	1 1/2"	14"	22"	36"	21200 lbs.	SAE 8	1"	33
3016-WT	3"	1 1/2"	16"	24"	40"	21200 lbs.	SAE 8	1"	36
3018-WT	3"	1 1/2"	18"	26"	44"	21200 lbs.	SAE 8	1"	38
3020-WT	3"	1 1/2"	20"	28"	48"	21200 lbs.	SAE 8	1"	41
3024-WT	3"	1 1/2"	24"	32"	56"	18070 lbs.	SAE 8	1"	46
3030-WT	3"	1 1/2"	30"	38"	68"	12250 lbs.	SAE 8	1"	53
3032-WT	3"	1 1/2"	32"	40"	72"	10930 lbs.	SAE 8	1"	55
3036-WT	3"	1 1/2"	36"	44"	80"	8850 lbs.	SAE 8	1"	60
3040-WT	3"	1 1/2"	40"	48"	88"	7310 lbs.	SAE 8	1"	65
3048-WT	3"	1 1/2"	48"	56"	104"	5230 lbs.	SAE 8	1"	75

3.5" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
3504-WT	3.5"	1 3/4"	4"	14"	18"	28860 lbs.	SAE 8	1 1/4"	28
3506-WT	3.5"	1 3/4"	6"	16"	22"	28860 lbs.	SAE 8	1 1/4"	31
3508-WT	3.5"	1 3/4"	8"	18"	26"	28860 lbs.	SAE 8	1 1/4"	34
3510-WT	3.5"	1 3/4"	10"	20"	30"	28860 lbs.	SAE 8	1 1/4"	38
3512-WT	3.5"	1 3/4"	12"	22"	34"	28860 lbs.	SAE 8	1 1/4"	40
3514-WT	3.5"	1 3/4"	14"	24"	38"	28860 lbs.	SAE 8	1 1/4"	43
3516-WT	3.5"	1 3/4"	16"	26"	42"	28860 lbs.	SAE 8	1 1/4"	46
3518-WT	3.5"	1 3/4"	18"	28"	46"	28860 lbs.	SAE 8	1 1/4"	49
3520-WT	3.5"	1 3/4"	20"	30"	50"	28860 lbs.	SAE 8	1 1/4"	53
3524-WT	3.5"	1 3/4"	24"	34"	58"	28860 lbs.	SAE 8	1 1/4"	59
3530-WT	3.5"	1 3/4"	30"	40"	70"	20980 lbs.	SAE 8	1 1/4"	67
3532-WT	3.5"	1 3/4"	32"	42"	74"	18790 lbs.	SAE 8	1 1/4"	71
3536-WT	3.5"	1 3/4"	36"	46"	82"	15330 lbs.	SAE 8	1 1/4"	77
3540-WT	3.5"	1 3/4"	40"	50"	90"	12740 lbs.	SAE 8	1 1/4"	83
3548-WT	3.5"	1 3/4"	48"	58"	106"	9210 lbs.	SAE 8	1 1/4"	95

4" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
4004-WT	4"	2"	4"	14"	18"	37690 lbs.	SAE 8	1 1/2"	35
4006-WT	4"	2"	6"	16"	22"	37690 lbs.	SAE 8	1 1/2"	39
4008-WT	4"	2"	8"	18"	26"	37690 lbs.	SAE 8	1 1/2"	42
4010-WT	4"	2"	10"	20"	30"	37690 lbs.	SAE 8	1 1/2"	46
4012-WT	4"	2"	12"	22"	34"	37690 lbs.	SAE 8	1 1/2"	49
4014-WT	4"	2"	14"	24"	38"	37690 lbs.	SAE 8	1 1/2"	53
4016-WT	4"	2"	16"	26"	42"	37690 lbs.	SAE 8	1 1/2"	57
4018-WT	4"	2"	18"	28"	46"	37690 lbs.	SAE 8	1 1/2"	61
4020-WT	4"	2"	20"	30"	50"	37690 lbs.	SAE 8	1 1/2"	64
4024-WT	4"	2"	24"	34"	58"	37690 lbs.	SAE 8	1 1/2"	72
4030-WT	4"	2"	30"	40"	70"	35730 lbs.	SAE 8	1 1/2"	83
4032-WT	4"	2"	32"	42"	74"	32010 lbs.	SAE 8	1 1/2"	86
4036-WT	4"	2"	36"	46"	82"	26120 lbs.	SAE 8	1 1/2"	93
4040-WT	4"	2"	40"	50"	90"	21720 lbs.	SAE 8	1 1/2"	101
4048-WT	4"	2"	48"	58"	106"	15700 lbs.	SAE 8	1 1/2"	116

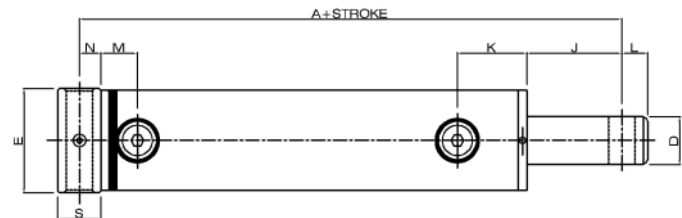
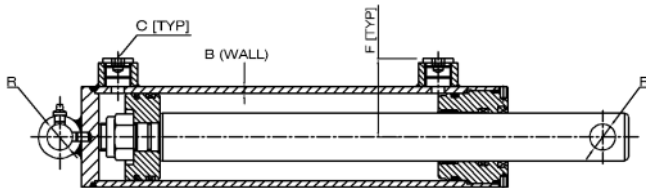
5" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
5008-WT	5"	2 1/2"	8"	19"	27"	58900 lbs.	3/4" NPT	1 1/2"	74
5010-WT	5"	2 1/2"	10"	21"	31"	58900 lbs.	3/4" NPT	1 1/2"	79
5012-WT	5"	2 1/2"	12"	23"	35"	58900 lbs.	3/4" NPT	1 1/2"	83
5016-WT	5"	2 1/2"	16"	27"	43"	58900 lbs.	3/4" NPT	1 1/2"	92
5024-WT	5"	2 1/2"	24"	35"	59"	58900 lbs.	3/4" NPT	1 1/2"	116
5036-WT	5"	2 1/2"	36"	47"	83"	58900 lbs.	3/4" NPT	1 1/2"	147

DESCRIPTION

INTENDED USE	: DOUBLE ACTING APPLICATIONS
PISTON	: Ductile iron with wear ring
GLAND	: Ductile iron, screw-in design with wear ring
TUBE	: Precision honed steel
TUBE SEALS	: Buna O-ring
ROD	: Hard chrome plated
ROD SEAL	: Deep polypak with B lip design
ROD WIPER	: Urethane, snap-in
ROD END MOUNTS	: Rod eye drilled
BASE END MOUNTS	: Steel cross-tube with grease zerk
PAINT	: Black, Custom color are available
ALL SEALS	: Manufactured to US specifications
PISTON OD SEAL	: Hallite 755 for prolonged wear resistance with wear ring
PORTS	: SAE O-rings



Dimensional Data in Inches (mm)

3000 PSI

BORE	A	B	C	D	E	F	J	K	L	M	N	R	S
1.500 (38.10)	7.000 (177.8)	0.188 (4.78)	SAE 6	1.000 (25.4)	2.000 (50.8)	1.625 (41.28)	2.507 (63.68)	2.125 (53.98)	0.625 (15.9)	0.851 (21.62)	0.625 (15.9)	0.640 (16.3)	1.250 (31.75)
2.000 (50.8)	8.000 (203.2)	0.188 (4.78)	SAE 8	1.250 (31.8)	2.500 (63.5)	1.874 (47.60)	3.444 (87.48)	1.875 (47.6)	0.750 (19.1)	0.974 (24.74)	0.625 (15.9)	0.765 (19.4)	1.250 (31.75)
2.500 (63.5)	8.000 (203.2)	0.188 (4.78)	SAE 8	1.375 (34.9)	3.000 (76.2)	2.125 (53.98)	3.125 (79.38)	2.000 (50.8)	0.750 (19.1)	1.044 (26.52)	0.625 (15.9)	0.765 (19.4)	1.250 (31.75)
3.000 (76.2)	8.000 (203.2)	0.188 (4.78)	SAE 8	1.500 (38.1)	3.500 (88.9)	2.375 (60.33)	2.629 (66.78)	2.187 (55.5)	1.000 (25.4)	1.245 (31.62)	0.750 (19.1)	1.015 (25.8)	1.500 (38.10)
3.500 (88.9)	8.000 (203.2)	0.188 (4.78)	SAE 8	1.750 (44.5)	4.000 (101.6)	2.624 (66.65)	2.438 (61.93)	2.312 (58.7)	1.000 (25.4)	1.312 (33.32)	0.750 (19.1)	1.015 (25.8)	1.500 (38.10)
4.000 (101.6)	9.000 (228.6)	0.250 (6.35)	SAE 8	2.000 (50.8)	4.625 (117.5)	2.937 (74.60)	3.002 (76.25)	2.185 (55.50)	1.250 (31.8)	1.613 (40.97)	1.000 (25.4)	1.265 (32.1)	2.000 (50.80)

1.5" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
1504-PE	1.5"	1"	4"	11"	15"	5300 lbs.	SAE 6	5/8"	8
1506-PE	1.5"	1"	6"	13"	19"	5300 lbs.	SAE 6	5/8"	8
1508-PE	1.5"	1"	8"	15"	23"	5300 lbs.	SAE 6	5/8"	8
1510-PE	1.5"	1"	10"	17"	27"	5300 lbs.	SAE 6	5/8"	9
1512-PE	1.5"	1"	12"	19"	31"	5300 lbs.	SAE 6	5/8"	10

2" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
2008-PE	2"	1 1/4"	8"	16"	24"	9420 lbs.	SAE 8	3/4"	14
2010-PE	2"	1 1/4"	10"	18"	28"	9420 lbs.	SAE 8	3/4"	16
2016-PE	2"	1 1/4"	16"	24"	40"	9420 lbs.	SAE 8	3/4"	18
2020-PE	2"	1 1/4"	20"	28"	48"	9420 lbs.	SAE 8	3/4"	21
2024-PE	2"	1 1/4"	24"	32"	56"	8180 lbs.	SAE 8	3/4"	24
2030-PE	2"	1 1/4"	30"	38"	68"	5580 lbs.	SAE 8	3/4"	28
2032-PE	2"	1 1/4"	32"	40"	72"	4990 lbs.	SAE 8	3/4"	30
2036-PE	2"	1 1/4"	36"	44"	80"	4050 lbs.	SAE 8	3/4"	34
2042-PE	2"	1 1/4"	42"	50"	92"	3070 lbs.	SAE 8	3/4"	35
2048-PE	2"	1 1/4"	48"	56"	104"	2410 lbs.	SAE 8	3/4"	40
2060-PE	2"	1 1/4"	60"	68"	128"	1590 lbs.	SAE 8	3/4"	49
2072-PE	2"	1 1/4"	72"	80"	152"	1130 lbs.	SAE 8	3/4"	58

2.5" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
2508-PE	2.5"	1 3/8"	8"	16"	24"	14720 lbs.	SAE 8	3/4"	14
2512-PE	2.5"	1 3/8"	12"	20"	32"	14720 lbs.	SAE 8	3/4"	20
2516-PE	2.5"	1 3/8"	16"	24"	40"	14720 lbs.	SAE 8	3/4"	23
2520-PE	2.5"	1 3/8"	20"	28"	48"	14720 lbs.	SAE 8	3/4"	27
2524-PE	2.5"	1 3/8"	24"	32"	56"	12250 lbs.	SAE 8	3/4"	30
2530-PE	2.5"	1 3/8"	30"	38"	68"	8350 lbs.	SAE 8	3/4"	33
2532-PE	2.5"	1 3/8"	32"	40"	72"	7460 lbs.	SAE 8	3/4"	37
2536-PE	2.5"	1 3/8"	36"	44"	80"	6050 lbs.	SAE 8	3/4"	41
2542-PE	2.5"	1 3/8"	42"	50"	92"	4590 lbs.	SAE 8	3/4"	46
2548-PE	2.5"	1 3/8"	48"	56"	104"	3600 lbs.	SAE 8	3/4"	51
2560-PE	2.5"	1 3/8"	60"	68"	128"	2380 lbs.	SAE 8	3/4"	62

3" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
3008-PE	2.5"	1.5"	8"	16"	24"	21200 lbs.	SAE 8	1"	21
3012-PE	2.5"	1.5"	12"	20"	32"	21200 lbs.	SAE 8	1"	25
3016-PE	2.5"	1.5"	16"	24"	40"	21200 lbs.	SAE 8	1"	29
3020-PE	2.5"	1.5"	20"	28"	48"	21200 lbs.	SAE 8	1"	33
3024-PE	2.5"	1.5"	24"	32"	56"	17840 lbs.	SAE 8	1"	37
3036-PE	2.5"	1.5"	30"	38"	68"	12120 lbs.	SAE 8	1"	43
3036-PE	2.5"	1.5"	36"	44"	80"	8770 lbs.	SAE 8	1"	50
3040-PE	2.5"	1.5"	40"	48"	88"	7250 lbs.	SAE 8	1"	55
3048-PE	2.5"	1.5"	48"	56"	104"	5200 lbs.	SAE 8	1"	63
3060-PE	2.5"	1.5"	60"	68"	128"	3430 lbs.	SAE 8	1"	76

3.5" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
3508-PE	3.5"	1 3/4"	8"	16"	24"	28860 lbs.	SAE 8	1"	27
3510-PE	3.5"	1 3/4"	10"	18"	28"	28860 lbs.	SAE 8	1"	29
3512-PE	3.5"	1 3/4"	12"	20"	32"	28860 lbs.	SAE 8	1"	31
3516-PE	3.5"	1 3/4"	16"	24"	40"	28860 lbs.	SAE 8	1"	39
3518-PE	3.5"	1 3/4"	18"	26"	44"	28860 lbs.	SAE 8	1"	43
3520-PE	3.5"	1 3/4"	20"	28"	48"	28860 lbs.	SAE 8	1"	46
3524-PE	3.5"	1 3/4"	24"	32"	56"	28860 lbs.	SAE 8	1"	48
3530-PE	3.5"	1 3/4"	30"	38"	68"	22290 lbs.	SAE 8	1"	52
3536-PE	3.5"	1 3/4"	36"	44"	80"	16120 lbs.	SAE 8	1"	64
3540-PE	3.5"	1 3/4"	40"	48"	88"	13330 lbs.	SAE 8	1"	69
3548-PE	3.5"	1 3/4"	48"	56"	104"	9550 lbs.	SAE 8	1"	79

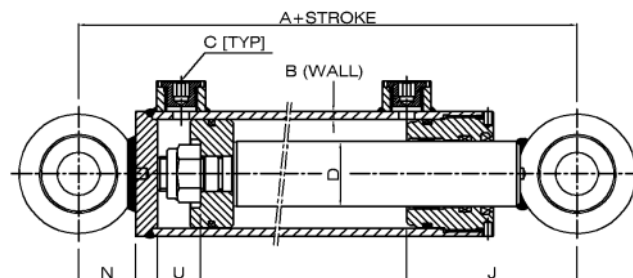
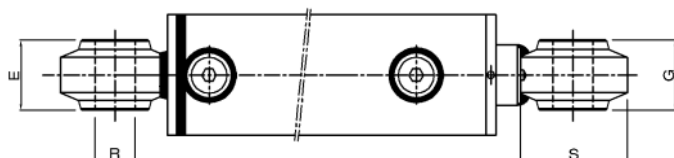
4" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	PIN DIA	SHIP WT.
4008-PE	4"	2"	8"	17"	25"	37690 lbs.	SAE 8	1 1/4"	40
4010-PE	4"	2"	10"	19"	29"	37690 lbs.	SAE 8	1 1/4"	47
4012-PE	4"	2"	12"	21"	33"	37690 lbs.	SAE 8	1 1/4"	49
4016-PE	4"	2"	16"	25"	41"	37690 lbs.	SAE 8	1 1/4"	56
4018-PE	4"	2"	18"	27"	45"	37690 lbs.	SAE 8	1 1/4"	59
4020-PE	4"	2"	20"	29"	49"	37690 lbs.	SAE 8	1 1/4"	64
4024-PE	4"	2"	24"	33"	57"	37690 lbs.	SAE 8	1 1/4"	70
4030-PE	4"	2"	30"	39"	69"	37690 lbs.	SAE 8	1 1/4"	80
4036-PE	4"	2"	36"	45"	81"	27380 lbs.	SAE 8	1 1/4"	93
4048-PE	4"	2"	48"	57"	105"	16280 lbs.	SAE 8	1 1/4"	118

DESCRIPTION

INTENDED USE	: DOUBLE ACTING APPLICATIONS.
PISTON	: Ductile iron.
PISTON LOCK NUT	: Nylock nut.
GLAND	: Ductile iron, screw-in design with wear ring
TUBE	: Steel tube honed or skived for extended seal life.
TUBE SEALS	: O-ring & backup.
ROD	: Hard chrome plated .
ROD SEAL	: U-cup.
WIPER	: Polyurethane.
END/ROD MOUNTS	: Spherical.
PAINT	: Black.
ALL SEALS	: Manufactured to US specifications.
PORTS	: O-rings Boss.



Dimensional Data in Inches (mm)

3000 PSI

BORE	A*	B	C	D	E	G	J	N	R	S	U
1.000 (25.4)	6.000 (152.4)	0.200 (5.08)	SAE 6	0.630 (16.0)	1.000 (25.4)	1.000 (25.4)	1.500 (38.1)	1.000 (25.4)	0.500 (12.7)	2.000 (50.8)	0.750 (19.05)
1.500 (38.10)	7.250 (184.1)	0.195 (4.95)	SAE 6	1.000 (25.4)	1.000 (25.4)	1.000 (25.4)	2.250 (57.15)	1.000 (25.4)	0.760 (19.30)	2.000 (50.8)	1.000 (25.4)
2.000 (50.8)	7.500 (190.5)	0.187 (4.74)	SAE 8	1.250 (31.75)	1.750 (44.45)	1.750 (44.45)	2.110 (53.59)	1.360 (34.54)	1.000 (25.4)	2.720 (69.08)	1.000 (25.4)
2.500 (63.5)	7.500 (190.5)	0.187 (4.74)	SAE 8	1.500 (38.1)	1.750 (44.45)	1.750 (44.45)	2.110 (53.59)	1.360 (34.54)	1.000 (25.4)	2.750 (69.85)	1.000 (25.4)
3.000 (76.2)	8.250 (209.5)	0.187 (4.74)	SAE 8	1.500 (38.1)	1.750 (44.45)	1.750 (44.45)	2.47** (62.73)	1.560 (39.62)	1.000 (25.4)	3.120 (79.24)	1.000 (25.4)

* For the 3"x36" cylinder the A dimension is 8.75", ** For the 3"x36" cylinder the J dimension is 2.97"

1" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	COLUMN LOAD	PORT SIZE	BALL END OD	BALL END WIDTH	PIN DIA	SHIP WT.
1004-WSE	1"	5/8"	4"	10"	2350 lbs.	SAE 6	2"	1"	1/2"	5
1006-WSE	1"	5/8"	6"	12"	2350 lbs.	SAE 6	2"	1"	1/2"	5
1008-WSE	1"	5/8"	8"	14"	2350 lbs.	SAE 6	2"	1"	1/2"	6
1010-WSE	1"	5/8"	10"	16"	2350 lbs.	SAE 6	2"	1"	1/2"	7
1012-WSE	1"	5/8"	12"	18"	2350 lbs.	SAE 6	2"	1"	1/2"	7

1.5" BORE CYLINDERS

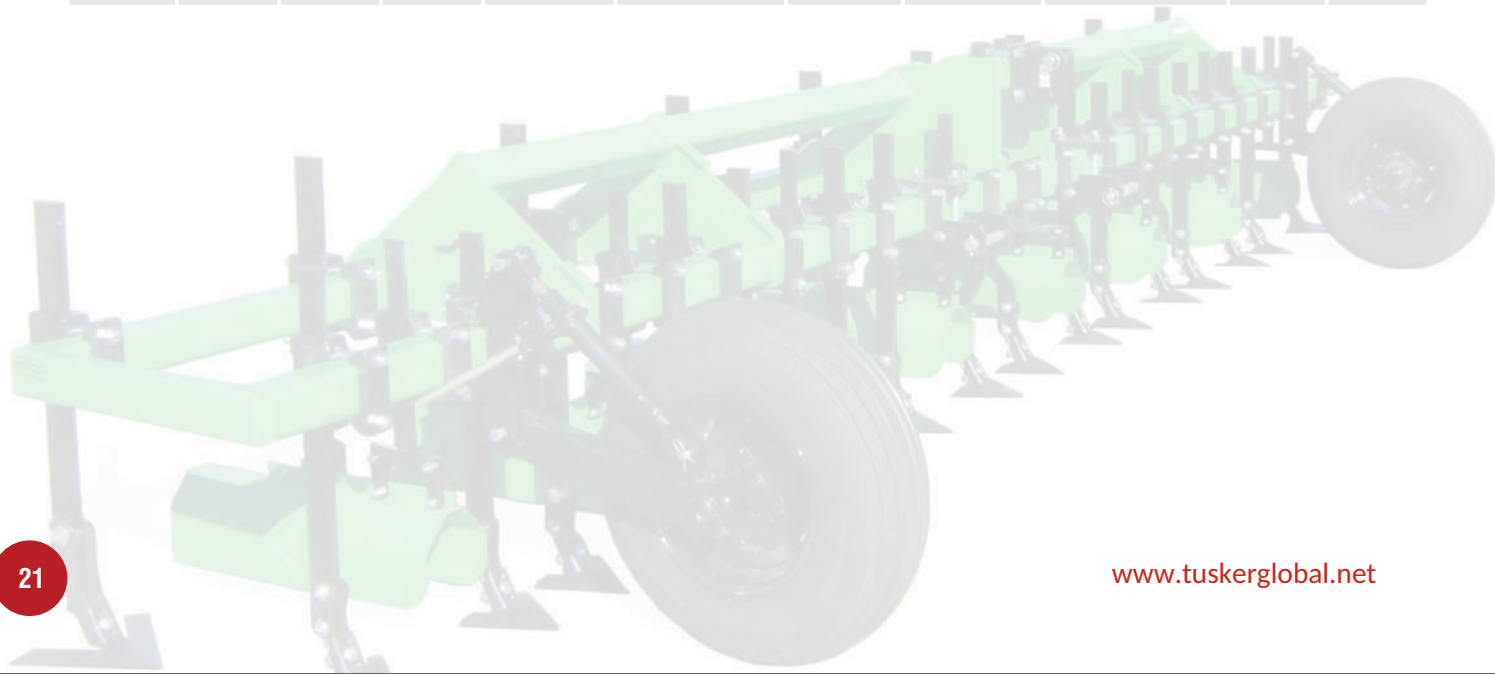
3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	COLUMN LOAD	PORT SIZE	BALL END OD	BALL END WIDTH	PIN DIA	SHIP WT.
1504-WSE	1.5"	1"	4"	11 1/4"	5300 lbs.	SAE 6	2"	1"	3/4"	6
1506-WSE	1.5"	1"	6"	13 1/4"	5300 lbs.	SAE 6	2"	1"	3/4"	7
1508-WSE	1.5"	1"	8"	15 1/4"	5300 lbs.	SAE 6	2"	1"	3/4"	9
1510-WSE	1.5"	1"	10"	17 1/4"	5300 lbs.	SAE 6	2"	1"	3/4"	10
1512-WSE	1.5"	1"	12"	19 1/4"	5300 lbs.	SAE 6	2"	1"	3/4"	11
1514-WSE	1.5"	1"	14"	19 1/4"	5300 lbs.	SAE 6	2"	1"	3/4"	12

2" BORE CYLINDERS

3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	COLUMN LOAD	PORT SIZE	BALL END OD	BALL END WIDTH	PIN DIA	SHIP WT.
2006-WSE	2"	1 1/4"	6"	13 1/2"	9420 lbs.	SAE 8	2 3/4"	1 3/4"	1"	15
2008-WSE	2"	1 1/4"	8"	13 1/2"	9420 lbs.	SAE 8	2 3/4"	1 3/4"	1"	16
2010-WSE	2"	1 1/4"	10"	17 1/2"	9420 lbs.	SAE 8	2 3/4"	1 3/4"	1"	17
2012-WSE	2"	1 1/4"	12"	19 1/2"	9420 lbs.	SAE 8	2 3/4"	1 3/4"	1"	19
2020-WSE	2"	1 1/4"	20"	27 1/2"	9420 lbs.	SAE 8	2 3/4"	1 3/4"	1"	24
2024-WSE	2"	1 1/4"	24"	31 1/2"	9420 lbs.	SAE 8	2 3/4"	1 3/4"	1"	27
2030-WSE	2"	1 1/4"	30"	37 1/2"	9420 lbs.	SAE 8	2 3/4"	1 3/4"	1"	32
2036-WSE	2"	1 1/4"	36"	44 1/4"	9420 lbs.	SAE 8	2 3/4"	1 3/4"	1"	43



2.5" BORE CYLINDERS

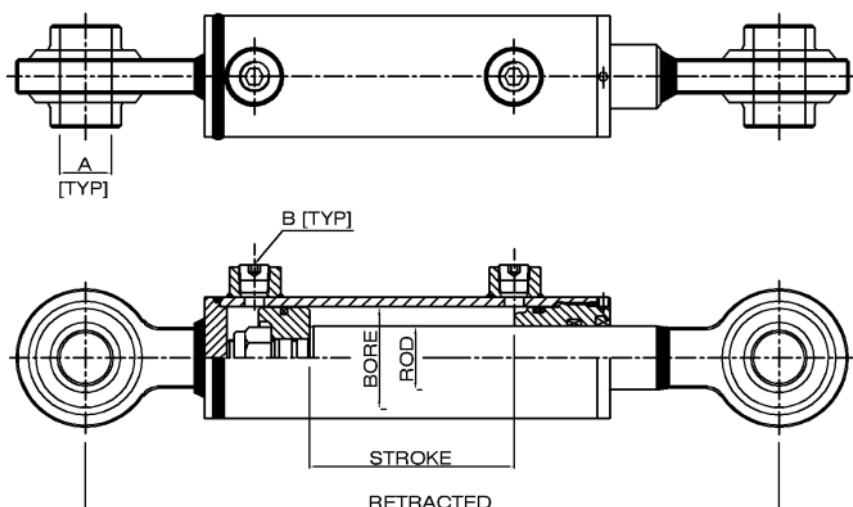
3000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	COLUMN LOAD	PORT SIZE	BALL END OD	BALL END WIDTH	PIN DIA	SHIP WT.
2506-WSE	2.5"	1 1/2"	6"	13 1/2"	14720 lbs.	SAE 8	2 3/4"	1 3/4"	1"	17
2508-WSE	2.5"	1 1/2"	8"	15 1/2"	14720 lbs.	SAE 8	2 3/4"	1 3/4"	1"	19
2510-WSE	2.5"	1 1/2"	10"	17 1/2"	14720 lbs.	SAE 8	2 3/4"	1 3/4"	1"	21
2512-WSE	2.5"	1 1/2"	12"	19 1/2"	14720 lbs.	SAE 8	2 3/4"	1 3/4"	1"	23
2520-WSE	2.5"	1 1/2"	20"	27 1/2"	14720 lbs.	SAE 8	2 3/4"	1 3/4"	1"	30
2524-WSE	2.5"	1 1/2"	24"	31 1/2"	14720 lbs.	SAE 8	2 3/4"	1 3/4"	1"	34
2530-WSE	2.5"	1 1/2"	30"	37 1/2"	14720 lbs.	SAE 8	2 3/4"	1 3/4"	1"	41
2536-WSE	2.5"	1 3/4"	36"	44"	14720 lbs.	SAE 8	2 3/4"	1 3/4"	1"	58

3" BORE CYLINDERS

3000 PSI

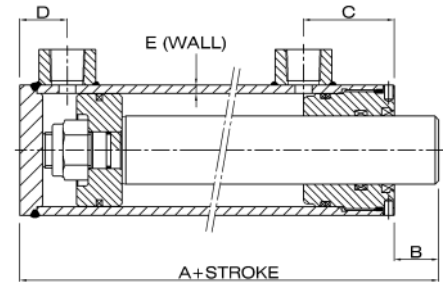
PART NO	BORE	ROD DIA	STROKE	RETRACTED	COLUMN LOAD	PORT SIZE	BALL END OD	BALL END WIDTH	PIN DIA	SHIP WT.
3008-WSE	3"	1 1/2"	8"	16 1/4"	21200 lbs.	SAE 8	3.13"	1 3/4"	1"	22
3010-WSE	3"	1 1/2"	10"	18 1/4"	21200 lbs.	SAE 8	3.13"	1 3/4"	1"	24
3012-WSE	3"	1 1/2"	12"	20 1/4"	21200 lbs.	SAE 8	3.13"	1 3/4"	1"	26
3020-WSE	3"	1 1/2"	20"	28 1/4"	21200 lbs.	SAE 8	3.13"	1 3/4"	1"	36
3024-WSE	3"	1 1/2"	24"	32 1/4"	21200 lbs.	SAE 8	3.13"	1 3/4"	1"	41
3030-WSE	3"	1 3/4"	30"	38 3/4"	21200 lbs.	SAE 8	3.13"	1 3/4"	1"	52
3036-WSE	3"	1 3/4"	36"	44 3/4"	21200 lbs.	SAE 8	3.13"	1 3/4"	1"	60



PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	PORT SIZE	PIN DIA
2008-TL	2"	1.25"	8"	20"	28"	1/2" NPT	3/4"
2510-TL	2.5"	1.25"	10"	21.5"	31.5"	SAE 8	3/4"
3010-TL	3.0"	1.375"	10"	20.875"	30.875"	1/2" NPT	1"

DESCRIPTION

PISTON	: High-grade ductile iron with 45000 yield
BASE PLATE	: C-1026 steel
GLAND SEAL	: Polyurethane U-cup
TUBE	: Precision honed DOM 1026 material
ROD WEARINGS	: Replaceable nylon glass filled
ROD	: Ground and polished chromed C-1045 steel 75000 PSI minimum yield
PISTON SEAL	: Hallite 755 with square section O-ring energizer elastomer
ROD WIPER	: Urethane
PAINT	: Black,
ALL SEALS	: Selected and designed for maximum life
PORTS	: C-1026 steel



Dimensional Data in Inches (mm)

4000 PSI

BORE	A	B	C	D	E
5.00 (127.0)	9.25 (235.0)	1.875 (47.6)	3.375 (85.7)	2 (50.8)	0.375 (9.5)
6.00 (152)	10.50 (267)	2.25 (57)	3.75 (95)	2.25 (57.15)	0.375 (9.5)
8.00 (203.2)	13.50 (342.9)	2.313 (58.75)	4.00 (101.6)	3.187 (80.95)	0.500 (12.7)

5" BORE CYLINDERS

4000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	SHIP WT.
5008-NE	5"	2 3/4"	8"	17 1/4"	25 1/4"	78530 lbs.	SAE 12	93
5012-NE	5"	2 3/4"	12"	21 1/4"	33 1/4"	78530 lbs.	SAE 12	107
5020-NE	5"	2 3/4"	20"	29 1/4"	49 1/4"	78530 lbs.	SAE 12	121
5024-NE	5"	2 3/4"	24"	33 1/4"	57 1/4"	78530 lbs.	SAE 12	121
5030-NE	5"	2 3/4"	30"	39 1/4"	69 1/4"	78530 lbs.	SAE 12	149
5036-NE	5"	2 3/4"	36"	45 1/4"	81 1/4"	78530 lbs.	SAE 12	169
5042-NE	5"	2 3/4"	42"	51 1/4"	93 1/4"	75000 lbs.	SAE 12	190
5048-NE	5"	2 3/4"	48"	57 1/4"	105 1/4"	60460 lbs.	SAE 12	211
5072-NE	5"	2 3/4"	72"	81 1/4"	153 1/4"	30890 lbs.	SAE 12	232

6" BORE CYLINDERS

4000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	SHIP WT.
6012-NE	6"	3"	12"	22 1/2"	34 1/2"	113090 lbs.	SAE 12	134
6016-NE	6"	3"	16"	26 1/2"	42 1/2"	113090 lbs.	SAE 12	153
6020-NE	6"	3"	20"	30 1/2"	50 1/2"	113090 lbs.	SAE 12	173
6024-NE	6"	3"	24"	34 1/2"	58 1/2"	113090 lbs.	SAE 12	193
6030-NE	6"	3"	30"	40 1/2"	70 1/2"	113090 lbs.	SAE 12	212
6036-NE	6"	3"	36"	46 1/2"	82 1/2"	113090 lbs.	SAE 12	241
6042-NE	6"	3"	42"	52 1/2"	94 1/2"	99834 lbs.	SAE 12	271
6048-NE	6"	3"	48"	58 1/2"	106 1/2"	81270 lbs.	SAE 12	300

8" BORE CYLINDERS

4000 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	COLUMN LOAD	PORT SIZE	SHIP WT.
8016-NE	8"	4"	16"	29 1/2"	45 1/2"	201060 lbs.	SAE 16	419
8036-NE	8"	4"	36"	49 1/2"	85 1/2"	201060 lbs.	SAE 16	607
8048-NE	8"	4"	48"	61 1/2"	109 1/2"	201060 lbs.	SAE 16	720



Double Ports 1.5" BORE CYLINDERS 2500 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	PORT SIZE	PIN DIA	SHIP WT.
1506-DS12	1.5"	1.5"	6"	12"	18"	1/4" NPT	5/8"	12
1510-DS16	1.5"	1.5"	10"	16 1/4"	26 1/4"	1/4" NPT	5/8"	13
1512-DS18	1.5"	1.5"	12"	18"	30"	1/4" NPT	5/8"	14
1508-DS15	1.5"	1.5"	8"	15 1/4"	23 1/4"	1/4" NPT	3/4"	13
1510-DS17	1.5"	1.5"	10"	17 1/4"	27 1/4"	1/4" NPT	3/4"	13
1512-DS19	1.5"	1.5"	12"	19 1/4"	31 3/8"	1/4" NPT	1"	14

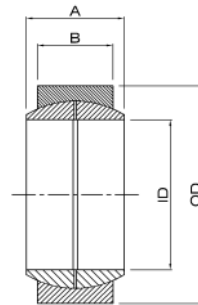
Single Port 1.5" BORE CYLINDERS 2500 PSI

PART NO	BORE	ROD DIA	STROKE	RETRACTED	EXTENDED	PORT SIZE	PIN DIA
1510-SS16	1.5"	1.5"	10"	16 1/4"	26 1/4"	1/4" NPT	5/8"
1510-SS17	1.5"	1.5"	10"	17 1/4"	27 1/4"	1/4" NPT	5/8"
1512-SS18	1.5"	1.5"	12"	18 1/4"	30 1/4"	1/4" NPT	5/8"
1512-SS19	1.5"	1.5"	12"	19 1/4"	31 1/4"	1/4" NPT	1"

Spherical Plain Bearings (Metric)

These widely-used steel on steel bushings are popular replacements in applications such as bull dozer cylinders, shovel-loaders, center pins, axial plunger pumps, tractor shovel cylinders, rock crushers, cranes and more.

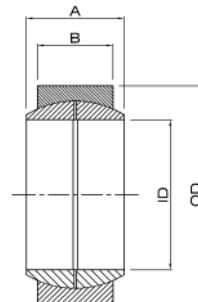
PART NO	BEARING NO.	I.D.	O.D.	A	B
SBM-01	GE25ES	25	42	20	16
SBM-02	GE35ES	35	55	25	20
SBM-03	GE35FO	35	62	35	22
SBM-04	GE40ES	40	62	28	22
SBM-05	GE45ES	45	68	32	25
SBM-06	GE50ES	50	75	35	28
SBM-07	GE50FO-2RS	50	90	56	36
SBM-08	GEG50ES	50	90	56	36
SBM-09	GE60ES	60	90	44	36
SBM-10	GE70FO	70	120	49	45
SBM-11	GE90ES	90	130	60	50
SBM-12	GE100ES-2RS	100	150	70	55
SBM-13	GE100ES	100	150	70	55
SBM-14	GE140ES	140	210	90	70
SBM-15	GE180ES	180	260	105	80



Spherical Bearings-High Misalignment series (Metric)

These widely-used steel on steel bushings are popular replacements in applications such as bull dozer cylinders, shovel-loaders, center pins, axial plunger pumps, tractor shovel cylinders, rock crushers, cranes and more.

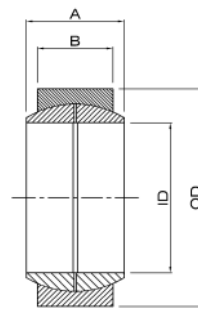
PART NO	BEARING NO.	I.D.	O.D.	A	B
SBM16	GEG25ES-2RS	25	47	28	18
SBM17	GEG30-ES-2RS	30	55	32	20
SBM18	GEG35-ES-2RS	35	62	35	22
SBM19	GEG40-ES-2RS	40	68	40	25
SBM20	GEG45-ES-2RS	45	75	43	28
SBM21	GEG350-ES-2RS	50	90	56	36
SBM22	GEG60-ES-2RS	60	105	63	40
SBM23	GEG80-ES-2RS	80	130	75	50
SBM24	GEG90-ES-2RS	90	150	85	55



Spherical Plain Bearings (Inches)

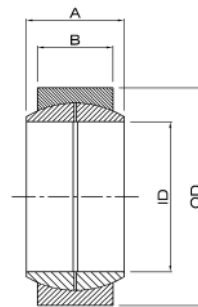
These widely-used steel on steel bushings are popular replacements in applications such as bull dozer cylinders, shovel-loaders, center pins, axial plunger pumps, tractor shovel cylinders, rock crushers, cranes and more.

PART NO	BEARING NO.	I.D.	O.D.	A	B
SBI-01	GEZ19ES	3/4	1 1/4	0.66	0.56
SBI-02	GEZ25ES	1	1 5/8	0.88	0.75
SBI-03	GEZ31ES	1 1/4	2	1.09	0.94
SBI-04	GE34ES	1 3/8	2 1/5	1.19	1.03
SBI-05	GEZ38ES	1 1/2	2 4/9	1.31	1.13
SBI-06	GEZ38ES-2RS	1 1/2	2 4/9	1.31	1.13
SBI-07	GEZ44ES	1 3/4	2 4/5	1.53	1.31
SBI-08	GEZ50ES	2	3 1/5	1.75	1.5
SBI-09	GEZ57ES	2 1/4	3 4/7	1.97	1.69
SBI-10	GEZ57ES-2RS	2 1/4	3 4/7	1.97	1.68
SBI-11	GEZ63ES	2 1/2	4	2.19	1.88
SBI-12	GEA69ES-2RS	2 3/4	4 3/8	2.41	2.06
SBI-13	GEZ69ES	2 3/4	4 3/8	2.41	2.06
SBI-14	GEZ76ES	3	4 3/4	2.63	2.25
SBI-15	GEZ88ES	3 1/2	5 1/2	3.06	2.63
SBI-16	GEZ95ES	3 3/4	5 7/8	3.28	2.81
SBI-17	GEZ101ES	4	6 1/4	3.5	3
SBI-18	GEZ114ES	4 1/2	7	3.94	3.88



Spherical Bearings-Extended Inner Race-Unsealed (Inches)

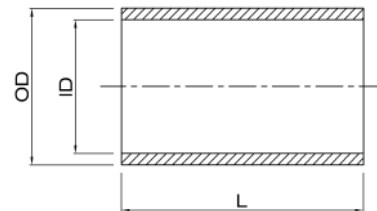
PART NO	BEARING NO.	I.D.	O.D.	A	B
SBI-19	GEWZ25ES	1	1 5/8	1.5	0.75
SBI-20	GEWZ31ES	1 1/4	2	1.875	0.937
SBI-21	GEWZ34ES	1 3/8	2 1/2	2.062	1.031
SBI-22	GEWZ38ES	1 1/2	2 4/9	2.25	1.12
SBI-23	GEWZ44ES	1 3/4	2 4/5	2.625	1.312
SBI-24	GEWZ50ES	2	3 1/5	3	1.5
SBI-25	GEWZ57ES	2 1/4	3 4/7	3.375	1.687
SBI-26	GEWZ63ES	2 1/2	3 3/4	3.75	1.875
SBI-27	GEWZ69ES	2 3/4	3 3/4	4.125	2.062
SBI-28	GEWZ76ES	3	4 3/4	4.5	2.25



Bronze Bushings (Straight)

These high quality bushings offer a wide variety of applications. Oil Filled. Self-lubricating.

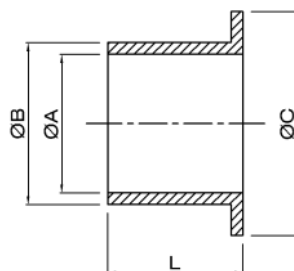
PART NO	I.D.	O.D.	LENGTH(L)
BBS-01	3/8	1/2	3/4
BBS-02	1/2	5/8	1
BBS-03	1/2	3/4	3/4
BBS-04	1/2	3/4	1 1/2
BBS-05	5/8	3/4	1
BBS-06	5/8	7/8	1
BBS-07	3/4	1	3/4
BBS-08	3/4	1	1
BBS-09	3/4	1	1 1/4
BBS-10	7/8	1	1
BBS-11	1	1 1/8	1 1/2
BBS-12	1	1 1/4	1
BBS-13	1	1 1/4	1 1/2
BBS-14	1	1 1/4	2
BBS-15	1 1/4	1 1/2	1
BBS-16	1 1/4	1 1/2	1 1/2
BBS-17	1 1/2	1 3/4	2
BBS-18	1 3/4	2	2
BBS-19	2	2 1/4	2



Bronze Bushings (Flanged)

These high quality bushings offer a wide variety of applications. Oil Filled. Self-lubricating.

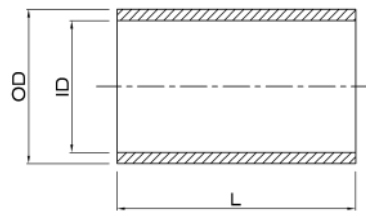
PART NO	I.D. (A)	O.D. (B)	FL O.D.(C)	LENGTH(L)
BBF-01	1/2	5/8	7/8	3/4
BBF-02	5/8	3/4	1	1 1/4
BBF-03	5/8	7/8	1	1
BBF-04	3/4	1	1.13	1
BBF-05	1	1 1/4	1.5	3/4



Split Bronze Bushings (NU Series)

Steel-backed , sintered bronze bushing containing an anti-friction matrix of PTFE and lead Oxide , enhancing product performance. Suited for dry environments where no oil is required. Interchanges with Garlock DU Series. Temperature ranges from -195° C to +280° C (-319°F to +536°F).

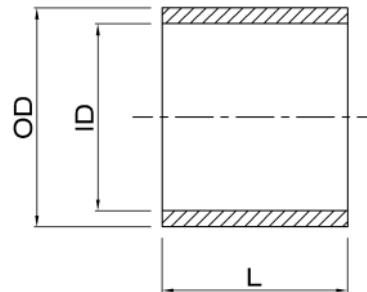
PART NO	I.D.	O.D.	LENGTH(L)
SBB-01	3/4	0.87	1
SBB-02	1	1.12	3/4
SBB-03	1	1.12	1
SBB-04	1	1.12	1
SBB-05	1 1/4	1.4	1 3/4
SBB-06	1 1/4	1.4	1 1/4
SBB-07	1 1/4	1.4	1 1/4
SBB-08	1 1/2	1.65	1 1/2
SBB-09	2	2.18	2
SBB-10	2	2.18	2 1/2



Split Hardened Bushings

High Quality spring steel. ASI 6150 material.

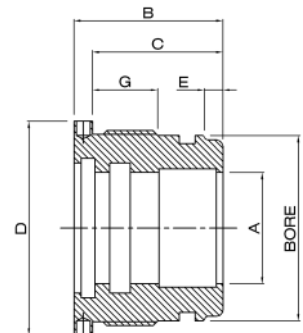
PART NO	I.D.	O.D.	LENGTH(L)
SHB-01	3/4	1	1 1/4
SHB-02	1	1 1/4	1/2
SHB-03	1	1 1/4	5/8
SHB-04	1	1 1/4	3/4
SHB-05	1	1 1/4	1
SHB-06	1	1 1/4	1 1/2
SHB-07	1	1 1/4	2
SHB-08	1 1/4	1 1/2	1 1/8
SHB-09	1 1/4	1 1/2	1/2
SHB-10	1 1/4	1 1/2	1
SHB-11	1 1/4	1 1/2	1 1/2
SHB-12	1 1/2	1 3/4	1
SHB-13	2	2 1/4	2
SHB-14	2	2 3/8	2
SHB-15	2	2 1/2	2



Screw -In Glands (4000 PSI)

Precisely machined with a radius on all corners. Designed to support wear bearings on 2" rod diameters and larger (bearings included in the packing kit). Material: 65-45-12 ductile iron. 4000 PSI

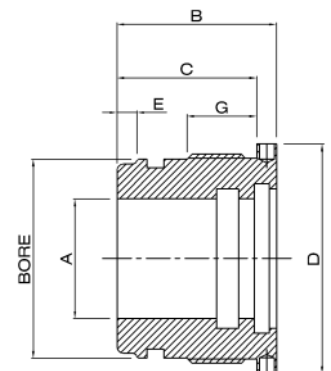
PART NO	BORE	A	B	C	D	E	G	THREAD SIZE
G4-01	5	3	3.375	2.875	5.75	0.38	1.375	5.250-14 UNF
G4-02	6	3	3.75	3.125	6.75	0.625	1.5	6.250-12 UNF
G4-03	8	4	4	3.375	8.75	0.625	1.75	8.250-12 UNF



Screw -In Glands (3000 PSI)

Precisely machined with a radius on all corners. Designed to support wear bearings on 2" rod diameters and larger (bearings included in the packing kit). Material: 65-45-12 ductile iron. 3000 PSI

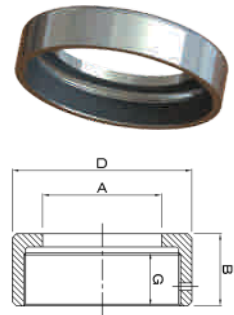
PART NO	BORE	A	B	C	D	E	G	THREAD SIZE
G3-01	1.5	0.75	2.125	1.625	1.875	0.25	0.57	1.660-14 UNF
G3-02	1.5	1	2.125	1.625	1.875	0.25	0.57	1.660-14 UNF
G3-03	2	1	1.875	1.625	2.375	0.25	0.57	2.160-14 UNF
G3-04	2	1.125	1.875	1.625	2.375	0.25	0.57	2.160-14 UNF
G3-05	2	1.25	1.875	1.625	2.375	0.25	0.57	2.160-14 UNF
G3-06	2.5	1.125	2	1.75	2.875	0.25	0.68	2.660-14 UNF
G3-07	2.5	1.25	2	1.75	2.875	0.25	0.68	2.660-14 UNF
G3-08	2.5	1.375	2	1.75	2.875	0.25	0.68	2.660-14 UNF
G3-09	2.5	1.5	2	1.75	2.875	0.25	0.68	2.660-14 UNF
G3-10	3	1.25	2.187	1.875	3.375	0.312	0.75	3.160-14 UNF
G3-11	3	1.5	2.187	1.875	3.375	0.312	0.75	3.160-14 UNF
G3-12	3	1.75	2.187	1.875	3.375	0.312	0.75	3.160-14 UNF
G3-13	3	2	2.187	1.875	3.375	0.312	0.75	3.160-14 UNF
G3-14	3.5	1.54	2.312	2	3.875	0.312	0.84	3.660-14 UNF
G3-15	3.5	1.75	2.312	2	3.875	0.312	0.84	3.660-14 UNF
G3-16	3.5	2	2.312	2	3.875	0.312	0.84	3.660-14 UNF
G3-17	4	2	2.185	1.875	4.5	0.312	0.76	4.160-14 UNF
G3-18	4	2.25	2.185	1.875	4.5	0.312	0.76	4.160-14 UNF
G3-19	4	2.5	2.185	1.875	4.5	0.312	0.76	4.160-14 UNF



Gland Retainer Rigs

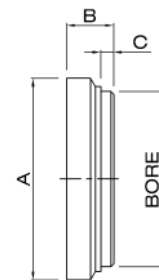
3/8" spanner holes (two at 180 deg. Apart on bores 2" through 5" four at 90°. On bores 6 through 8")

PART NO	BORE	SET SCREW	A	B	D	G	THREAD SIZE	MATERIAL
GR-01	3	1/4-20.0	2.13	1.38	3.38	0.75	2.875-16	DOM-1026
GR-02	3	1/4-20.0	2.63	1.38	3.88	0.75	3.375-16	DOM-1026
GR-03	4	1/4-20.0	3.63	1.63	5	0.75	4.5-12	DOM-1026
GR-04	5	1/4-20.0	4	1.63	6	0.75	5.5-12	DOM-1026
GR-05	6	1/4-20.0	5.25	1.75	7.25	0.88	6.5-12	DOM-1026
GR-06	8	1/4-20.0	7.06	2.25	9.91	1.5	8.75-12	DOM-1026



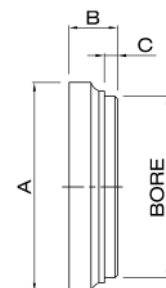
Base Plates (3000 PSI)

PART NO	A	B	C	ROLL PIN DIA.	MATERIAL
BP3-01	1.88	0.5	0.13	0.250"	AISI 1030
BP3-02	2.38	0.5	0.13	0.250"	AISI 1030
BP3-03	2.88	0.5	0.13	0.250"	AISI 1030
BP3-04	3.38	0.63	0.13	0.250"	AISI 1030
BP3-05	3.88	0.63	0.13	0.250"	AISI 1030
BP3-06	4.5	0.75	0.19	0.250"	AISI 1030



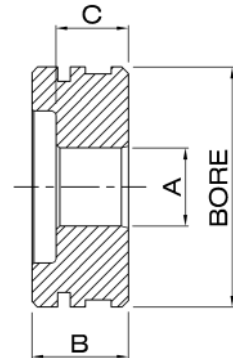
Base Plates (4000 PSI)

PART NO	A	B	C	MATERIAL
BP4-01	5.5	1	2.25	C-1026 Steel
BP4-02	6.5	1.13	2.25	C-1026 Steel
BP4-03	8.75	1.5	2.5	C-1026 Steel



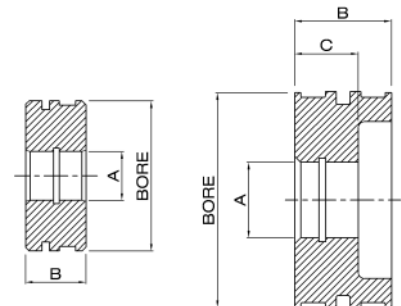
Pistons (3000 PSI)

PART NO	BORE	A	B	C
PI3-01	1.5"	0.5	0.75	0.73
PI3-02	2"	0.75	1	0.75
PI3-03	2.25"	0.811	1	0.75
PI3-04	2.5"	0.811	1	0.75
PI3-05	2.75"	1.062	1	0.75
PI3-06	3"	1.062	1	0.75
PI3-07	3.5"	1.187	1	0.75
PI3-08	4"	1.312	1	0.75



Pistons (4000 PSI)

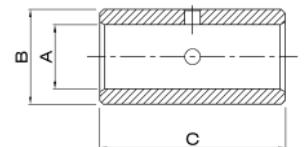
PART NO	BORE	A	B	C
PI4-01	3"	1.06	1.75	1.375
PI4-02	3.5"	1.31	1.75	1.375
PI4-03	4"	1.31	1.875	1.375
PI4-04	4.5"	1.56	1.875	1.375
PI4-05	5"	1.56	2	1.375
PI4-06	6"	2.062	2.25	1.5
PI4-07	8"	2.825	4	2.5



Cross-tubes

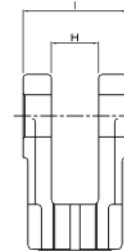
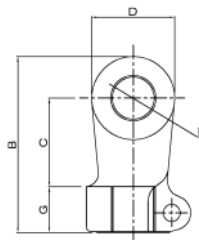
All feature grease zerk

PART NO	A	B	C	FOR PIN DIA	ROLL PIN DIA.	GREASE ZERK THREAD TYPE	MATERIAL
CT-01	1.015	1.5	3.625	1.000"	0.25	3/16 Drive	DOM Carbon
CT-02	1.265	2	4	1.250"	0.25	3/16 Drive	DOM Carbon
CT-03	1.265	2	4.75	1.250"	0.25	3/16 Drive	DOM Carbon
CT-04	1.515	2.5	4	1.500"	0.25	3/16 Drive	DOM Carbon
CT-05	1.515	2.5	6.75	1.500"	0.25	3/16 Drive	DOM Carbon
CT-06	2.515	4	5	2.500"	0.25	3/16 Drive	DOM Carbon



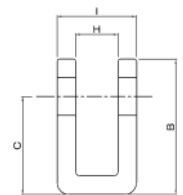
Rod End Clevis (TC2 & TC3)

PART NO	B	C	D	F	G	H	I	THREAD SIZE	MATERIAL
REC-01	4.22	2.125	2	1.015	1.1	1.165	2.5	1 1/8"- 12 UNF	80-55-6
REC-02	4.36	2.125	2.25	1.015	1.5	1.125	2.5	1 1/8"- 12 UNF	80-55-6
REC-03	4.36	2.125	2.25	1.015	1.1	1.165	2.717	1 1/4"- 12 UNF	80-55-6
REC-04	5	2.125	2.75	1.265	1.5	1.203	2.953	1 1/2"- 12 UNF	80-55-6



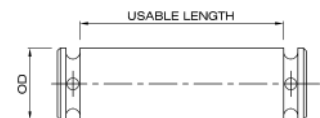
Formed Clevises

PART NO	B	C	D	F	H	I
FC-01	2.25	1.12	1.5	0.76	0.75	1.5
FC-02	2.75	1.38	1.875	0.99	1.25	2
FC-03	3.62	2.02	1.968	1.01	1.25	2.194
FC-04	2.01		1.25		0.53	1
FC-05	2.58		1.25		0.53	1
FC-06	3.38	1.5	2.48	1.01	1.12	2.38
FC-07	2.84	2.1	1.51	0.76	0.89	1.68
FC-08	3.46	2.1	1.73	0.9	0.787	1.73
FC-09	4	2.02	2.48	1.25	1.625	3.125



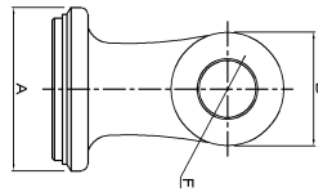
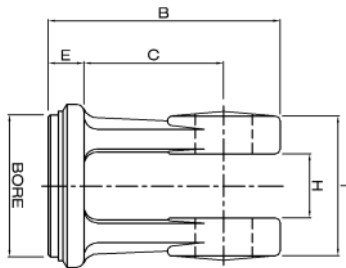
Steel Clevis Pins

PART NO	O.D.	L	CLIP STYLE	FINISH
CP-01	1"	3	A	Yellow Zinc
CP-02	1"	2 7/8	A	Yellow Zinc
CP-03	1"	3 1/4	A	Yellow Zinc
CP-04	1 1/4"	3 1/4	R	Yellow Zinc
CP-05	1"	2.937	Cir-Clip/ R-Clip	Yellow Zinc



Forged Base End Clevises

PART NO	BORE	A	B	C	D	E	F	H	I
BEC-01	2	2.375	3.62	2.125	2	0.5	1.01	1.13	2.5
BEC-02	2.5	2.875	3.62	2.125	2	0.5	1.01	1.13	2.5
BEC-03	3	3.375	3.5	1.87	2	0.62	1.01	1.13	2.5
BEC-04	3.5	3.875	3.5	1.87	2	0.62	1.01	1.13	2.5
BEC-05	4	4.5	4.2	1.75	2.5	0.75	1.01	1.13	2.756



Port Plugs (NPT)

PART NO	PART SIZE	C	D
PLNPT-01	1/4" 18-NPT	0.25	0.44
PLNPT-02	3/8" 18-NPT	0.312	0.44
PLNPT-03	1/2" 14-NPT	0.375	0.59
PLNPT-04	3/4" 14-NPT	0.562	0.63
PLNPT-05	1-11 1/2 NPT	0.625	0.77



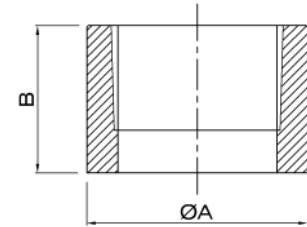
Port Plugs (SAE)

PART NO	PART SIZE	A	B	C
PLSAE-01	SAE 4	0.56	0.45	0.19
PLSAE-02	SAE 5	0.63	0.45	0.19
PLSAE-03	SAE 6	0.69	0.48	0.25
PLSAE-04	SAE 8	0.87	0.56	0.31
PLSAE-05	SAE 10	1	0.63	0.37
PLSAE-06	SAE 12	1.25	0.75	0.56
PLSAE-07	SAE 14	1.375	0.75	0.5
PLSAE-08	SAE 16	1.5	0.75	0.63

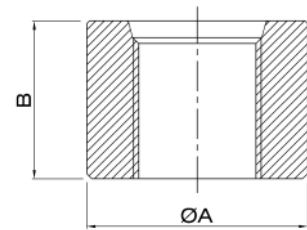


Weld - On Ports (NPT)

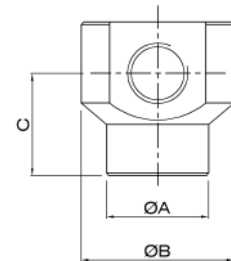
PART NO	PART SIZE	ØA	B
PNPT-01	1/4" 18-NPT	0.87	0.5
PNPT-02	3/8" 18-NPT	1	0.5
PNPT-03	1/2" 14-NPT	1.25	0.68
PNPT-04	3/4" 14-NPT	1.5	0.81
PNPT-05	1-11 1/2 NPT	1.75	1.18


Weld - On Ports (SAE)

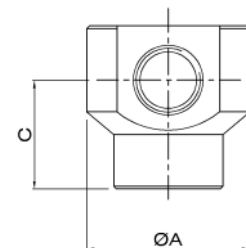
PART NO	PART SIZE	ØA	B
PSAE-01	SAE 4	0.75	0.62
PSAE-02	SAE 5	0.87	0.56
PSAE-03	SAE 6	0.87	0.68
PSAE-04	SAE 8	1.12	0.68
PSAE-05	SAE 10	1.25	0.87
PSAE-06	SAE 12	1.5	1
PSAE-07	SAE 16	1.75	1.25


Weld - On Ports (90°-NPT)

PART NO	PART SIZE	ØA	B
PNPT9-01	1/4" 18-NPT	1.25	1.25
PNPT9-02	3/8" 18-NPT	1.25	1.56
PNPT9-03	1/2" 14-NPT	1.62	1.75
PNPT9-04	3/4" 14-NPT	2	1.93

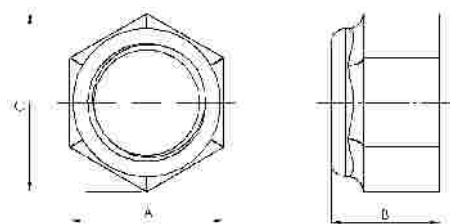

Weld - On Ports (90°-SAE)

PART NO	PART SIZE	ØA	ØB	C
PSAE9-01	SAE 4	0.75	1.12	0.75
PSAE9-02	SAE 8	1.25	1.62	1
PSAE9-03	SAE 10	1.25	1.75	1.12
PSAE9-04	SAE 12	1.5	2.12	1.19
PSAE9-05	SAE 16	1.5	2.25	1.25



Piston Nuts

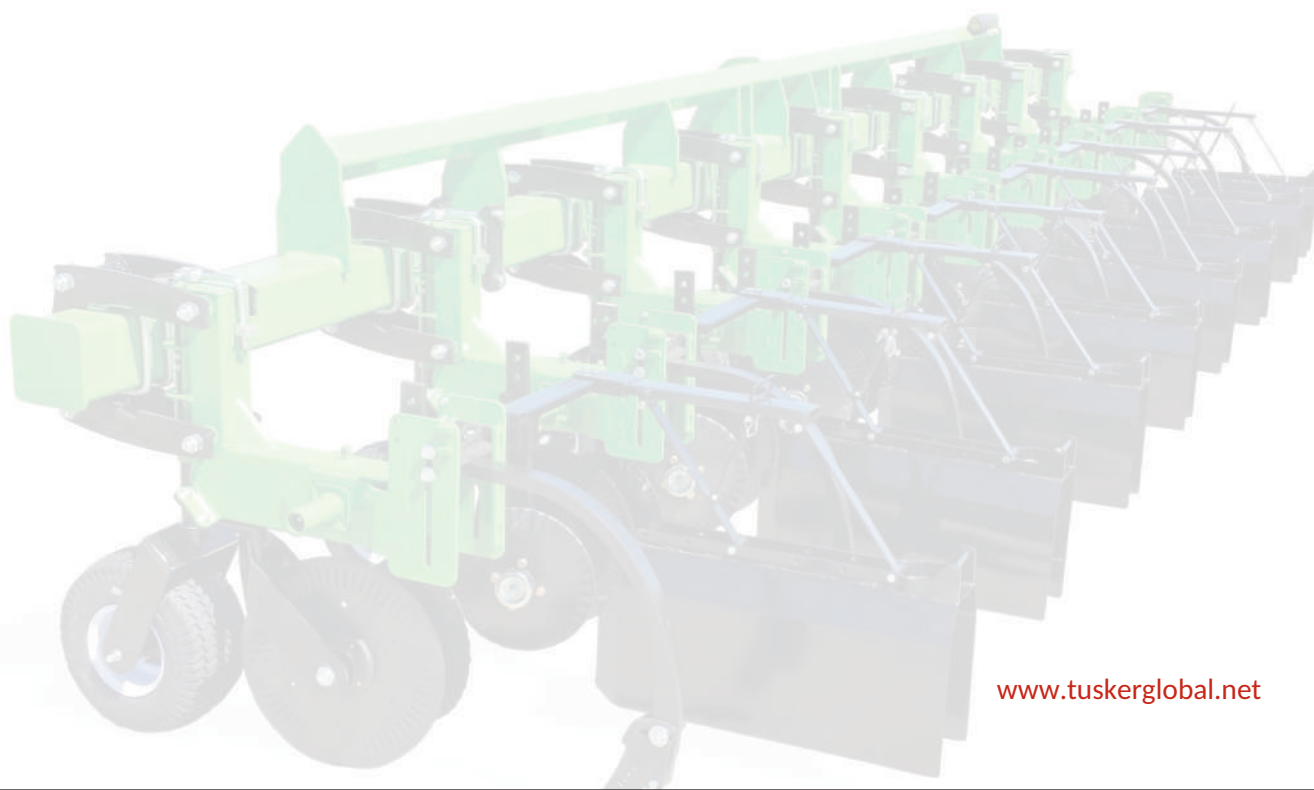
PART NO	A	B	C	THREAD SIZE
PN-01	0.75	1.22	0.47	M12X1.25
PN-02	0.94	1.06	0.62	M16X2.0
PN-03	1.15	1.33	0.78	M20X2.5
PN-04	1.61	1.85	1.06	M27X2.0
PN-05	1.81	2.08	1.18	M30X2.0
PN-06	2.36	2.63	1.54	M39X3.0
PN-07	2.91	3.34	1.89	M48X3.0



Carbon Tubing

Material: 1026 DOM # 16" minimum length.

PART NO	TOLERANCE	I.D.	WALL	SHIP WEIGHT
CAT-001	+.0/-0.005	0.77	1/4	2.67
CAT-002	+.0/-0.006	1.01	3/8	5.5
CAT-003	0.003/0	1.02	1/4	3.33
CAT-004	+.0/-0.006	1.01	1/2	8.01
CAT-005	+.0/-0.006	1.27	3/8	6.5
CAT-006	0.003/0	1.51	1/4	4.67
CAT-007	+.0/-0.008	1.51	1/2	10.68
CAT-008	0.003/0	2	1/2	13.35
CAT-009	+.0/-0.027	3.01	1/2	18.69



Honed Steel Tubing

#Material: ST52.3 #16" minimum length.

PART NO	TOLERANCE	I.D.	WALL	O.D.	SHIP WEIGHT
HOT-001	.+0.003/-0	1.5	0.1875	1.875	3.39
HOT-002	.+0.003/-0	1.5	0.25	2	4.673
HOT-003	.+0.003/-0	1.75	0.1875	2.125	3.889
HOT-004	.+0.003/-0	1.75	0.25	2.25	5.34
HOT-005	.+0.003/-0	2	0.1875	2.375	4.39
HOT-006	.+0.003/-0	2	0.25	2.5	6.008
HOT-007	.+0.003/-0	2.25	0.25	2.75	6.675
HOT-008	.+0.003/-0	2.5	0.1875	2.875	5.395
HOT-009	.+0.003/-0	2.5	0.25	3	7.343
HOT-010	.+0.003/-0	2.75	0.25	3.25	8.01
HOT-011	.+0.003/-0	3	0.25	3.5	8.678
HOT-012	.+0.003/-0	3	0.1875	3.375	6.399
HOT-013	.+0.003/-0	3	0.375	3.75	13.52
HOT-014	.+0.003/-0	3.25	0.375	4	14.52
HOT-015	.+0.003/-0	3.5	0.1875	3.875	7.403
HOT-016	.+0.003/-0	3.5	0.25	4	10.01
HOT-017	.+0.003/-0	3.75	0.25	4.25	10.68
HOT-018	.+0.003/-0	4	0.25	4.5	11.35
HOT-019	.+0.003/-0	4	0.375	4.75	17.52
HOT-020	.+0.003/-0	4	0.5	5	24.03
HOT-021	.+0.003/-0	4.25	0.375	5	18.52
HOT-022	.+0.003/-0	4.5	0.25	5	12.68
HOT-023	.+0.003/-0	4.5	0.375	5.25	19.52



Chrome Rod

Chrome thickness .0005" # Hardness: Surface - Rc 68-72; Core Rc 20-28

Material: C-1045 # PSI Yield: 75000 # 16" minimum length.

PART NO	TOLERANCE	O.D.	SHIP WEIGHT
PRC-001	0/-0.0015	1/2	0.669
PRC-002	0/-0.0015	5/8	1.04
PRC-003	0/-0.0015	3/4	1.5
PRC-004	0/-0.0015	7/8	2.04
PRC-005	0/-0.0015	1	2.67
PRC-006	0/-0.0015	1 1/8	3.38
PRC-007	0/-0.0015	1 1/4	4.17
PRC-008	0/-0.0015	1 3/8	5.05
PRC-009	0/-0.0015	1 1/2	6.03
PRC-010	0/-0.0015	1 3/4	8.18
PRC-011	0/-0.0015	2	10.68
PRC-012	0/-0.002	2 1/4	13.52
PRC-013	0/-0.002	2 1/2	16.69
PRC-014	0/-0.002	2 3/4	20.2
PRC-015	0/-0.002	3	24.03
PRC-016	0/-0.003	3 1/2	32.71
PRC-017	0/-0.005	4	42.75
PRC-018	0/-0.005	4 1/2	54.08

Induction Hardened Chrome Rod

Chrome thickness .0005" # Hardness: Surface - Rc 68-72; Core Rc 50-52

Material: C-1050 # PSI Yield: 100000 # 16" minimum length.

PART NO	TOLERANCE	O.D.	SHIP WEIGHT
PRI-001	0/-0.0015	1	2.67
PRI-002	0/-0.0015	1 1/4	4.17
PRI-003	0/-0.0015	1 1/2	6.01
PRI-004	0/-0.0015	1 3/4	8.18
PRI-005	0/-0.0015	2	10.68
PRI-006	0/-0.002	3	24.03

Double Acting Cylinder With Female Clevis & Flushed Port	
Double Acting Cylinder With Neutral Ends	
Double Acting Cylinder With Base Eye	
Double Acting Cylinder With Cross Tube Mounting	
Double Acting Cylinder With Swivel Ball Joints	
Double Acting Cylinder With Front Flange	
Double Acting Cylinder With Spherical Bearings	
Double Acting Cylinder With Both End Male Clevis	
Double Acting Cylinder With Male Clevis and Fork	
Single Acting Cylinder With Neutral Ends	
Single Acting Cylinder With Pin Eye	

ROD END VIEW COLUMN

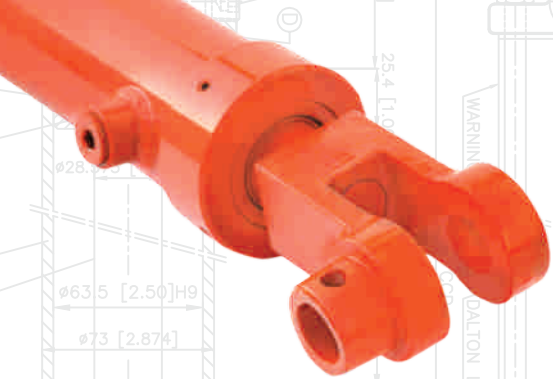
BASE END VIEW COLUMN

	CYLINDER APPLICATION SINGLE OR DOUBLE ACTING BORE DIAMETER..... ROD DIAMETER..... SYSTEM PRESSURE..... FLUID TYPE..... "A" RETRACTED LENGTH "B" STROKE..... "C" BARREL O.D..... "E" ROD MOUNT RADIUS "F" ROD PIN DIAMETER..... "G" ROD EXTENSION..... "H" BASE MOUNT RADIUS "I" BASE PIN DIAMETER..... "J" MOUNT LENGTH..... SPECIAL MOUNT EXTEND PORT TYPE & SIZERETRACTED PORT TYPE & SIZE..... CYLINDER QUOTE QUANTITYSPECIAL FEATURES..... COMPANY NAME..... YOUR NAME..... EMAIL PHONE.....	
Draw Special Mount		Draw Special Mount

Please send scanned copy of the completed sheet to sales@tuskerhydraulics.com

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TUSKER GLOBAL LLC

3232 Mckenney Avenue
Suite 500 Dallas, Texas 75204
sales@tuskerglobal.net
www.tuskerglobal.net