

Itahydraulic

Power Technology



*Standard 2500 PSI Tie - rod
Cylinders*

2,500 PSI HEAVY-DUTY TIE ROD HYDRAULIC CYLINDER


Description

- Double-acting application
- 2,500PSI (166BAR) model is designed to withstand shock loads of up to 5,000PSI(332BAR)
- Durable ductile iron cast components
- Ideal for agricultural and industrial application
- Customized Tie-Rod cylinder can be made by request.

ASAE Standard Cylinder

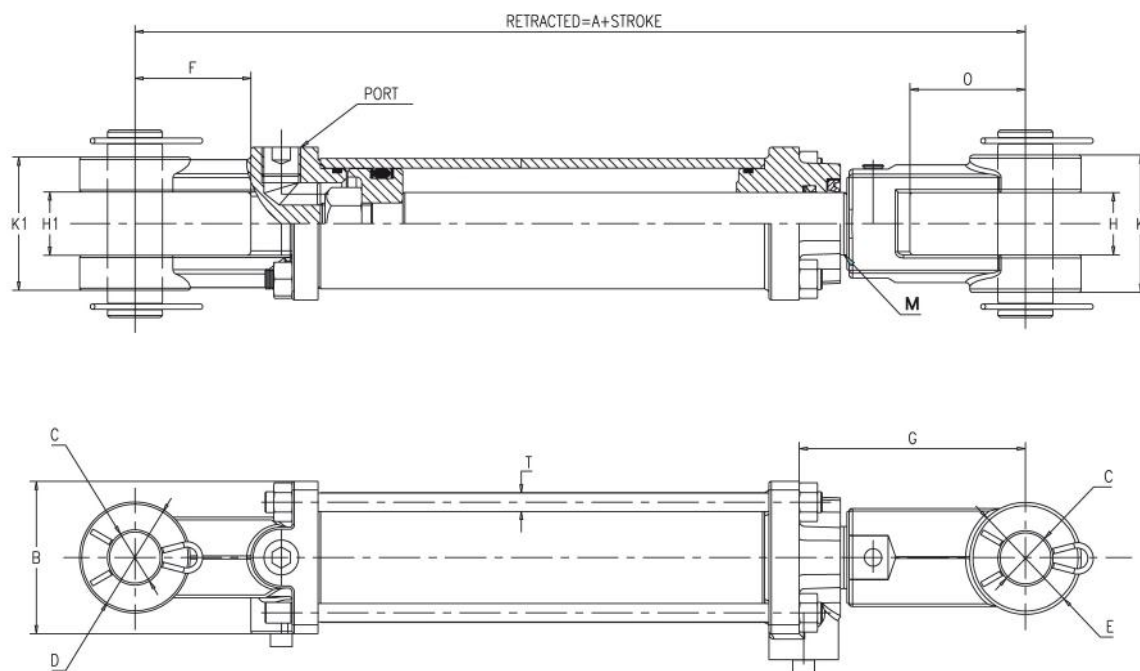
ASAE Standard Cylinder						
Bore inch(cm)	Stroke inch(cm)	Shaft inch(cm)	Retracted Length inch(cm)	Ports	Pin Dia inch(cm)	Weight lbs(kgs)
2" (5.08)	8" (20.32)	1-1/8" (2.86)	20-1/4" (51.44)	3/8"	1" (2.54)	20.0 (8.9)
2-1/2" (6.35)	8" (20.32)	1-1/8" (2.86)	20-1/4" (51.44)	3/8"	1" (2.54)	22.0 (9.8)
3" (7.62)	8" (20.32)	1-1/4" (3.18)	20-1/4" (51.44)	1/2"	1" (2.54)	28.0 (12.4)
3" (7.62)	16" (40.64)	1-1/2" (3.81)	31-1/2" (80.01)	1/2"	1-1/4" (3.18)	38.0 (16.9)
3-1/2" (8.89)	8" (20.32)	1-1/4" (3.18)	20-1/4" (51.44)	1/2"	1" (2.54)	36.0 (16.0)
3-1/2" (8.89)	16" (40.64)	1-1/2" (3.81)	31-1/2" (80.01)	1/2"	1-1/4" (3.18)	51.0 (22.7)
4" (10.16)	8" (20.32)	1-1/4" (3.18)	20-1/4" (51.44)	1/2"	1" (2.54)	43.0 (19.1)
4" (10.16)	16" (40.64)	1-3/4" (4.45)	31-1/2" (80.01)	1/2"	1-1/4" (3.18)	59.0 (26.1)
5" (12.70)	8" (20.32)	1-1/2" (3.81)	20-1/4" (51.44)	1/2"	1" (2.54)	71.0 (31.6)
5" (12.70)	16" (40.64)	2" (5.08)	31-1/2" (80.01)	1/2"	1-1/4" (3.18)	100.0 (44.4)

NONE-ASAE Standard Cylinder						
Bore inch(cm)	Stroke inch(cm)	Shaft inch(cm)	Retracted Length inch(cm)	Ports	Pin Dia inch(cm)	Weight lbs(kgs)
2" (5.08)	6" (15.24)	1-1/8" (2.86)	16-1/4" (41.28)	3/8"	1" (2.54)	18.0 (8.0)
2" (5.08)	8" (20.32)	1-1/8" (2.86)	18-1/4" (46.36)	3/8"	1" (2.54)	19.5 (8.7)
2" (5.08)	10" (25.40)	1-1/8" (2.86)	20-1/4" (51.44)	3/8"	1" (2.54)	21.0 (9.3)
2" (5.08)	12" (30.48)	1-1/8" (2.86)	22-1/4" (56.52)	3/8"	1" (2.54)	22.5 (10.0)
2" (5.08)	14" (35.56)	1-1/8" (2.86)	24-1/4" (61.60)	3/8"	1" (2.54)	24.0 (10.7)
2" (5.08)	16" (40.64)	1-1/8" (2.86)	26-1/4" (66.68)	3/8"	1" (2.54)	25.5 (11.3)
2" (5.08)	18" (45.72)	1-1/8" (2.86)	28-1/4" (71.76)	3/8"	1" (2.54)	27.0 (12.0)
2" (5.08)	20" (50.80)	1-1/8" (2.86)	30-1/4" (76.84)	3/8"	1" (2.54)	28.5 (12.7)
2" (5.08)	24" (60.96)	1-1/8" (2.86)	34-1/4" (87.00)	3/8"	1" (2.54)	31.5 (14.0)
2" (5.08)	30" (76.20)	1-1/8" (2.86)	40-1/4" (102.24)	3/8"	1" (2.54)	35.8 (15.9)
2" (5.08)	36" (91.44)	1-1/8" (2.86)	46-1/4" (117.48)	3/8"	1" (2.54)	40.0 (17.8)
2" (5.08)	48" (121.90)	1-1/8" (2.86)	58-1/4" (147.96)	3/8"	1" (2.54)	59.0 (26.2)
2" (5.08)	60" (152.40)	1-1/8" (2.86)	70-1/4" (178.43)	3/8"	1" (2.54)	70.0 (31.5)
2-1/2" (6.35)	6" (15.24)	1-1/8" (2.86)	16-1/4" (41.28)	3/8"	1" (2.54)	20.0 (8.9)
2-1/2" (6.35)	8" (20.32)	1-1/8" (2.86)	18-1/4" (46.36)	3/8"	1" (2.54)	22.0 (9.8)
2-1/2" (6.35)	10" (25.40)	1-1/8" (2.86)	20-1/4" (51.44)	3/8"	1" (2.54)	24.0 (10.7)
2-1/2" (6.35)	12" (30.48)	1-1/8" (2.86)	22-1/4" (56.52)	3/8"	1" (2.54)	26.0 (11.6)
2-1/2" (6.35)	14" (35.56)	1-1/8" (2.86)	24-1/4" (61.60)	3/8"	1" (2.54)	28.0 (12.4)
2-1/2" (6.35)	16" (40.64)	1-1/8" (2.86)	26-1/4" (66.68)	3/8"	1" (2.54)	30.0 (13.3)
2-1/2" (6.35)	18" (45.72)	1-1/4" (3.18)	28-1/4" (71.76)	3/8"	1" (2.54)	32.0 (14.2)
2-1/2" (6.35)	20" (50.80)	1-1/4" (3.18)	30-1/4" (76.84)	3/8"	1" (2.54)	34.0 (15.1)
2-1/2" (6.35)	24" (60.96)	1-1/4" (3.18)	34-1/4" (87.00)	3/8"	1" (2.54)	39.0 (17.3)
2-1/2" (6.35)	30" (76.20)	1-1/4" (3.18)	40-1/4" (102.24)	3/8"	1" (2.54)	46.0 (20.4)
2-1/2" (6.35)	36" (91.44)	1-1/4" (3.18)	46-1/4" (117.48)	3/8"	1" (2.54)	53.0 (23.6)
2-1/2" (6.35)	48" (121.90)	1-1/4" (3.18)	58-1/4" (147.96)	3/8"	1" (2.54)	61.0 (27.2)
2-1/2" (6.35)	60" (152.40)	1-1/4" (3.18)	70-1/4" (178.43)	3/8"	1" (2.54)	73.0 (32.7)

NONE-ASAE Standard Cylinder						
Bore inch(cm)	Stroke inch(cm)	Shaft inch(cm)	Retracted Length inch(cm)	Ports	Pin Dia inch(cm)	Weight lbs(kgs)
3" (7.62)	6" (15.24)	1-1/4" (3.18)	16-1/4" (41.28)	1/2"	1" (2.54)	24.0 (10.7)
3" (7.62)	8" (20.32)	1-1/4" (3.18)	18-1/4" (46.36)	1/2"	1" (2.54)	26.2 (11.6)
3" (7.62)	10" (25.40)	1-1/4" (3.18)	20-1/4" (51.44)	1/2"	1" (2.54)	28.4 (12.6)
3" (7.62)	12" (30.48)	1-1/4" (3.18)	22-1/4" (56.52)	1/2"	1" (2.54)	30.6 (13.6)
3" (7.62)	14" (35.56)	1-1/4" (3.18)	24-1/4" (61.60)	1/2"	1" (2.54)	32.8 (14.6)
3" (7.62)	16" (40.64)	1-1/4" (3.18)	26-1/4" (66.68)	1/2"	1" (2.54)	35.0 (15.6)
3" (7.62)	18" (45.72)	1-1/4" (3.18)	28-1/4" (71.76)	1/2"	1" (2.54)	37.2 (16.5)
3" (7.62)	20" (50.80)	1-1/2" (3.81)	30-1/4" (76.84)	1/2"	1" (2.54)	39.4 (17.5)
3" (7.62)	24" (60.96)	1-1/2" (3.81)	34-1/4" (87.00)	1/2"	1" (2.54)	45.0 (20.0)
3" (7.62)	30" (76.20)	1-1/2" (3.81)	40-1/4" (102.24)	1/2"	1" (2.54)	53.8 (23.9)
3" (7.62)	36" (91.44)	1-1/2" (3.81)	46-1/4" (117.48)	1/2"	1" (2.54)	62.2 (27.6)
3" (7.62)	48" (121.90)	1-1/2" (3.81)	58-1/4" (147.96)	1/2"	1" (2.54)	68.0 (153.0)
3" (7.62)	60" (152.40)	1-1/2" (3.81)	70-1/4" (178.43)	1/2"	1" (2.54)	83.0 (182.3)
3-1/2" (8.89)	6" (15.24)	1-1/4" (3.18)	16-1/4" (41.28)	1/2"	1" (2.54)	30.0 (13.3)
3-1/2" (8.89)	8" (20.32)	1-1/4" (3.18)	18-1/4" (46.36)	1/2"	1" (2.54)	33.0 (14.7)
3-1/2" (8.89)	10" (25.40)	1-1/4" (3.18)	20-1/4" (51.44)	1/2"	1" (2.54)	36.0 (16.0)
3-1/2" (8.89)	12" (30.48)	1-1/4" (3.18)	22-1/4" (56.52)	1/2"	1" (2.54)	39.0 (17.3)
3-1/2" (8.89)	14" (35.56)	1-1/4" (3.18)	24-1/4" (61.60)	1/2"	1" (2.54)	42.0 (18.7)
3-1/2" (8.89)	16" (40.64)	1-1/4" (3.18)	26-1/4" (66.68)	1/2"	1" (2.54)	45.0 (20.0)
3-1/2" (8.89)	18" (45.72)	1-1/4" (3.18)	28-1/4" (71.76)	1/2"	1" (2.54)	48.0 (21.3)
3-1/2" (8.89)	20" (50.80)	1-1/4" (3.18)	30-1/4" (76.84)	1/2"	1" (2.54)	51.0 (22.7)
3-1/2" (8.89)	24" (60.96)	1-1/2" (3.81)	34-1/4" (87.00)	1/2"	1" (2.54)	57.0 (25.3)
3-1/2" (8.89)	30" (76.20)	1-1/2" (3.81)	40-1/4" (102.24)	1/2"	1" (2.54)	66.0 (29.3)
3-1/2" (8.89)	36" (91.44)	1-1/2" (3.81)	46-1/4" (117.48)	1/2"	1" (2.54)	75.0 (33.3)
3-1/2" (8.89)	48" (121.90)	1-1/2" (3.81)	58-1/4" (147.96)	1/2"	1" (2.54)	84.0 (189.0)
3-1/2" (8.89)	60" (152.40)	1-1/2" (3.81)	70-1/4" (178.43)	1/2"	1" (2.54)	115.0 (258.8)
4" (10.16)	6" (15.24)	1-1/4" (3.18)	16-1/4" (41.28)	1/2"	1" (2.54)	36.0 (16.0)
4" (10.16)	8" (20.32)	1-1/4" (3.18)	18-1/4" (46.36)	1/2"	1" (2.54)	39.5 (17.6)
4" (10.16)	10" (25.40)	1-1/4" (3.18)	20-1/4" (51.44)	1/2"	1" (2.54)	43.0 (19.1)
4" (10.16)	12" (30.48)	1-1/4" (3.18)	22-1/4" (56.52)	1/2"	1" (2.54)	46.5 (20.7)
4" (10.16)	14" (35.56)	1-1/4" (3.18)	24-1/4" (61.60)	1/2"	1" (2.54)	50.0 (22.2)
4" (10.16)	16" (40.64)	1-1/4" (3.18)	26-1/4" (66.68)	1/2"	1" (2.54)	53.5 (23.8)
4" (10.16)	18" (45.72)	1-1/4" (3.18)	28-1/4" (71.76)	1/2"	1" (2.54)	57.5 (25.6)
4" (10.16)	20" (50.80)	1-1/2" (3.81)	30-1/4" (76.84)	1/2"	1" (2.54)	61.3 (27.2)
4" (10.16)	24" (60.96)	1-1/2" (3.81)	34-1/4" (87.00)	1/2"	1" (2.54)	69.3 (30.8)
4" (10.16)	30" (76.20)	2" (5.08)	40-1/4" (102.24)	1/2"	1" (2.54)	81.3 (36.1)
4" (10.16)	36" (91.44)	2" (5.08)	46-1/4" (117.48)	1/2"	1" (2.54)	93.3 (41.5)
4" (10.16)	48" (121.90)	2" (5.08)	58-1/4" (147.96)	1/2"	1" (2.54)	123.0 (276.8)
4" (10.16)	60" (152.40)	2" (5.08)	70-1/4" (178.43)	1/2"	1" (2.54)	143.0 (321.8)
5" (12.70)	6" (15.24)	1-1/2" (3.81)	18-1/4" (46.36)	1/2"	1" (2.54)	55.0 (24.4)
5" (12.70)	8" (20.32)	1-1/2" (3.81)	20-1/4" (51.44)	1/2"	1" (2.54)	60.0 (26.7)
5" (12.70)	10" (25.40)	1-1/2" (3.81)	22-1/4" (56.52)	1/2"	1" (2.54)	68.0 (30.2)
5" (12.70)	12" (30.48)	2" (5.08)	24-1/4" (61.60)	1/2"	1" (2.54)	73.0 (32.4)
5" (12.70)	14" (35.56)	2" (5.08)	26-1/4" (66.68)	1/2"	1" (2.54)	78.0 (34.7)
5" (12.70)	16" (40.64)	2" (5.08)	28-1/4" (71.76)	1/2"	1" (2.54)	83.0 (36.9)
5" (12.70)	18" (45.72)	2" (5.08)	30-1/4" (76.84)	1/2"	1" (2.54)	88.0 (39.1)
5" (12.70)	20" (50.80)	2" (5.08)	32-1/4" (81.92)	1/2"	1" (2.54)	93.0 (41.3)
5" (12.70)	24" (60.96)	2" (5.08)	36-1/4" (92.08)	1/2"	1" (2.54)	103.0 (45.8)
5" (12.70)	30" (76.20)	2" (5.08)	42-1/4" (107.32)	1/2"	1" (2.54)	118.0 (52.4)
5" (12.70)	36" (91.44)	2" (5.08)	48-1/4" (122.56)	1/2"	1" (2.54)	133.0 (59.1)

Note: Port is NPT, SAE or ORB port available.

Part List			
Item No.	Component	Material and Feature	Q'TY
1	Cylinder Tube	Honed tube provides better ductility	1
2	Clevis Base End	Ductile Iron provides excellent ductility and higher impact	1
3	Rod Cap		1
4	Clevis Rod End		1
5	Piston	Precision machined ductile iron providing a malleable bearing surface for extended cylinder life.	1
6	Piston Rod	C1045 high strength steel with hard chrome plated and precision ground & polished, 100hr salt spray tested	1
7	Piston Nut	Heavy duty and high tensile steel holds piston in place under high cycle loading	1
8	Tie-Rod	C1045 high tensile steel prevent failure under high pressure	4
9	Tie-Rod Nuts		8
10	Rod Wiper	Heavy duty metal encased Nitrile preventing contaminants from entering cylinder	1
11	Rod Seal	Polyurethane U-Cup double lip provides positive seal	1
12	Tube Seal	90 Durometer Polyurethane "O" Ring prevent leakage from cylinder	1
13	Piston Seal	90 Durometer Polyurethane "O" Ring provides excellent sealing under high pressure	1
14	Socket head Screw/bolt	High Tensile Steel	1
15	Plug	Metal Plug	3
16	Pins	High tensile steel with zinc plated finish	2
17	Pin Clips		4



NONE ASAE

Bore	2.00" (5.08)	2.50" (6.35)	3.00" (7.62)	3.50" (8.89)	4.00" (10.16)	4.50" (11.43)	5.00" (12.70)
A	10-1/4" (26.04)	10-1/4" (26.04)	10-1/4" (26.04)	10-1/4" (26.04)	10-1/4" (26.04)	10-1/4" (26.04)	12-1/4" (31.12)
O	2-1/8" (5.40)	2-1/8" (5.40)	2-1/8" (5.40)	2-1/8" (5.40)	2-1/8" (5.40)	2-1/8" (5.40)	2-1/8" (5.04)
G	4-3/16" (10.64)	4-3/16" (10.64)	3-15/16" (10.00)	3-15/16" (10.00)	3-7/8" (9.84)	3-7/8" (9.84)	4-11/16" (11.91)
F	2-1/16" (5.24)	2-1/16" (5.24)	2-1/16" (5.24)	2-1/16" (5.24)	2-1/16" (5.24)	2-1/16" (5.24)	2-1/4" (5.72)
B (2,500 PSI)	2-3/4" (6.99)	3-1/8" (7.94)	3-3/4" (9.53)	4-1/2" (11.43)	5-1/8" (13.02)	5-1/4" (13.34)	6" (15.24)
H	1-1/8" (2.86)	1-1/8" (2.86)	1-1/8" (2.86)	1-1/8" (2.86)	1-1/8" (2.86)	1-1/4" (3.18)	1-1/4" (3.18)
H1	1-1/8" (2.86)	1-1/8" (2.86)	1-1/8" (2.86)	1-1/8" (2.86)	1-1/8" (2.86)	1-1/4" (3.18)	1-1/4" (3.18)
K	2-1/2" (6.35)	2-1/2" (6.35)	2-5/8" (6.67)	2-5/8" (6.67)	2-5/8" (6.67)	3" (7.62)	3" (7.62)
K1	2-1/2" (6.35)	2-1/2" (6.35)	2-5/8" (6.67)	2-5/8" (6.67)	2-5/8" (6.67)	3-1/2" (8.89)	3-1/2" (8.89)
E	2" (5.08)	2" (5.08)	2" (5.08)	2" (5.08)	2-1/4" (5.72)	2-1/4" (5.72)	2-7/8" (7.30)
D	2" (5.08)	2" (5.08)	2" (5.08)	2-1/4" (5.72)	2-1/4" (5.72)	2-5/8" (6.67)	2-5/8" (6.67)
C (2,500 PSI)	1-1/64" (2.58)	1-1/64" (2.58)	1-1/64" (2.58)	1-1/64" (2.58)	1-1/64" (2.58)	1-1/64" (2.58)	1-1/64" (2.58)
Port	3/8" (0.95)	3/8" (0.95)	1/2" (1.27)	1/2" (1.27)	1/2" (1.27)	1/2" (1.27)	1/2" (1.27)
T	3/8" (0.95)	3/8" (0.95)	1/2" (1.27)	5/8" (1.59)	5/8" (1.59)	5/8" (1.59)	3/4" (1.91)
M	1-1/8-12 UNF	1-1/8-12UNF	1-1/4-12UNF	1-1/4-12UNF	1-1/4-12UNF	1-1/4-12UNF	1-1/4-12UNF

ASAE

Bore	2.00" (5.08)	2.50" (6.35)	3.00" (7.62)	3.50" (8.89)	4.00" (10.16)	4.50" (11.43)	5.00" (12.70)
A ASAE-8	12-1/4" (31.12)	12-1/4" (31.12)	12-1/4" (31.12)	12-1/4" (31.12)	12-1/4" (31.12)	12-1/4" (31.12)	12-1/4" (31.12)
A ASAE-16	15-1/2" (39.37)	15-1/2" (39.37)	15-1/2" (39.37)	15-1/2" (39.37)	15-1/2" (39.37)	15-1/2" (39.37)	15-1/2" (39.37)
G ASAE-8	6-3/16" (15.72)	6-3/16" (15.72)	5-15/16" (15.08)	5-15/16" (15.08)	5-7/8" (14.92)	5-5/8" (14.29)	4-11/16" (11.91)
G ASAE-16	9-7/16" (23.97)	9-7/16" (23.97)	9-3/16" (23.34)	9-3/16" (23.34)	9-1/8" (23.18)	8-7/8" (22.54)	7-15/16" (20.16)
C ASAE-8	1-1/64" (2.58)	1-1/64" (2.58)	1-1/64" (2.58)	1-1/64" (2.58)	1-1/64" (2.58)	1-1/64" (2.58)	1-1/64" (2.58)
C ASAE-16	1-17/64" (3.21)	1-17/64" (3.21)	1-17/64" (3.21)	1-17/64" (3.21)	1-17/64" (3.21)	1-17/64" (3.21)	1-17/64" (3.21)