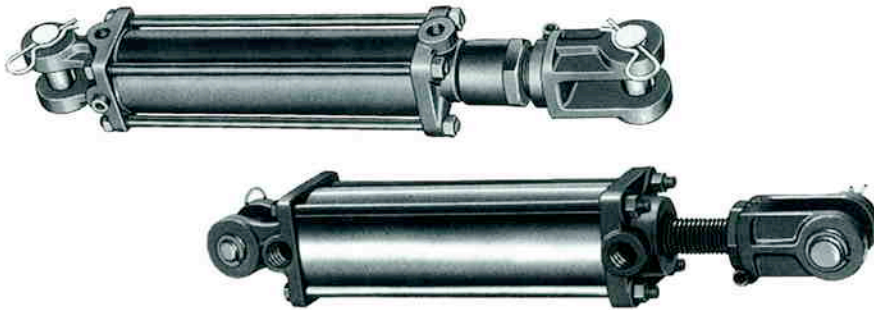
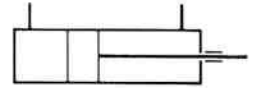




# HYDRAULIC CYLINDERS

with Mechanical Depth Stop Option

TIE ROD CYLINDERS  
DE-ASAE, DU SERIES  
Specification Sheet



The CROSS series DE and DU tie rod cylinders have been designed for use where an 8" stroke ASAE mechanical depth stop cylinder may be required. The DE-ASAE incorporates the depth control collar. The DU cylinder features a threaded rod extension so that a mechanical depth control collar may be added if desired. For requirements not needing the depth control, refer to the CROSS DB series.

## GENERAL SPECIFICATIONS

Rated working pressure (Max. relief valve setting at full flow) . . . . .2500 psi (172 bar)\*  
 Maximum shock and surge pressure . . . . .4000 psi (276 bar)  
 Bore diameters . . . . .

2.00	2.50	3.00	3.50	4.00	inches
51	64	76	89	102	mm

\*See pin recommendations on reverse.

## MATERIAL SPECIFICATIONS

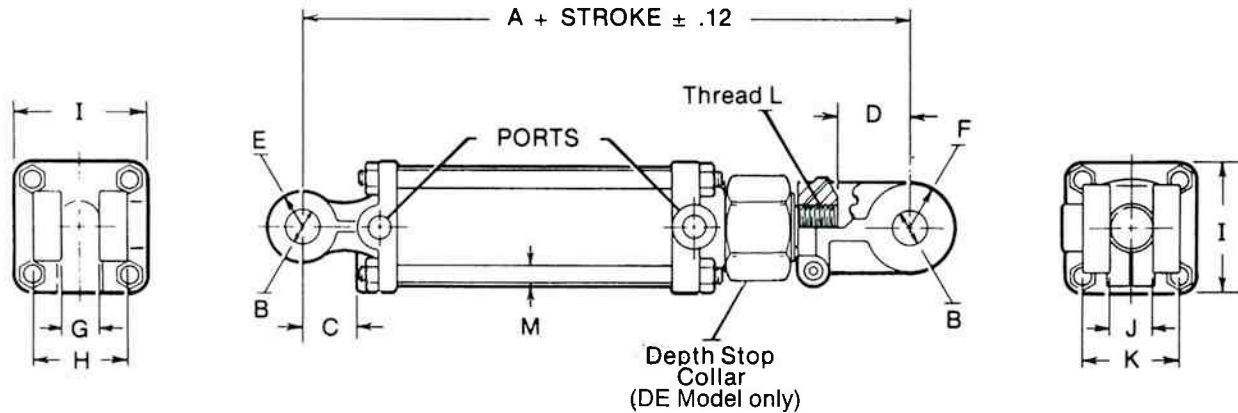
Cylinder barrels . . . . .C1025 steel alloy  
 Pistons . . . . .High strength aluminum alloy  
 Rods . . . . .Induction hardened C1045 steel alloy  
 Base castings and rod clevises . . . . .Ductile iron  
 Cylinder heads . . . . .High tensile strength gray iron  
 Seals . . . . .70 durometer Buna N piston o-rings with Polyurethane back-ups  
 Double lipped Polyurethane u-cup seal

## STANDARD FEATURES

- Mechanical depth stop collar (2 1/4" adjustment) (1 1/8" adjustment on 4" bore) on DE
- Cylinder barrels are skived burnished precision finished to provide long seal life
- Rods are hardened, chrome plated and polished for long wear life and for protection from external damage and corrosion
- Rod wipers clean dirt and foreign matter from rod, to insure long seal life
- High tensile strength tie rods with rolled threads for durability
- Double ported base allows connections to be made at 90° to pins
- NPTF dryseal pipe thread ports
- Standard ASAE 8" stroke



**DIMENSIONAL DATA** in inches and (millimeters)



ALL DIMENSIONS ARE NOMINAL AND ARE FOR STANDARD CONFIGURATIONS.

BORE DIA.	A	B	C	D	E	F	G	H	I	J	K	L	M
2.00 (51)	12.25 (311)	1.015 (25.8)	1.625 (41.3)	2.125 (53.9)	.875 (22.2)	1.000 (25.4)	1.125 (28.6)	2.500 (63.5)	2.875 (73.0)	1.125 (28.6)	2.625 (66.7)	1 <sup>1</sup> / <sub>16</sub> -12	.375 (9.5)
2.50 (64)	12.25 (311)	1.015 (25.8)	1.625 (41.3)	2.125 (53.9)	1.000 (25.4)	1.000 (25.4)	1.125 (28.6)	2.625 (66.7)	3.250 (82.6)	1.125 (28.6)	2.625 (66.7)	1 <sup>1</sup> / <sub>16</sub> -12	.375 (9.5)
3.00 (76)	12.25 (311)	1.015 (25.8)	1.625 (41.3)	2.125 (53.9)	1.000 (25.4)	1.000 (25.4)	1.125 (28.6)	2.625 (66.7)	3.750 (95.2)	1.125 (28.6)	2.625 (66.7)	1 <sup>1</sup> / <sub>4</sub> -12	.500 (12.7)
3.50 (89)	12.25 (311)	1.015 (25.8)	1.625 (41.3)	2.125 (53.9)	1.000 (25.4)	1.000 (25.4)	1.250 (31.8)	2.750 (69.8)	4.250 (107.9)	1.250 (31.8)	2.750 (69.8)	1 <sup>1</sup> / <sub>4</sub> -12	.562 (14.3)
4.00 (102)	12.25 (311)	1.015 (25.8)	2.000 (50.8)	2.125 (53.9)	1.125 (28.6)	1.000 (25.4)	1.250 (31.8)	2.875 (73.0)	5.000 (127)	1.250 (31.8)	2.750 (69.8)	1 <sup>1</sup> / <sub>4</sub> -12	.625 (15.9)

**PIN RECOMMENDATIONS:** For pressures above 2000 psi on 3 1/2" bore or 1500 psi on 4" bore, hardened pins and bushings are required.

**ORDERING INFORMATION**

Characteristics of the DE-ASAE and DU cylinders are shown for reference purposes. (Contact CROSS Sales Department for DE-ASAE or DU cylinders with SAE straight thread o-ring ports or hardened pins and bushings.)

MODEL NUMBER	BORE DIA. inches mm	ROD DIA. inches mm	PIN DIA. inches mm	PORT size type	WEIGHT lbs. Kg
208	2.00 (51)	1.062 (27.0)	1 (25.4)	3/8 NPTF	20 (9.07)
2508	2.50 (64)	1.062 (27.0)	1 (25.4)	3/8 NPTF	21 (9.5)
308	3.00 (76)	1.250 (31.8)	1 (25.4)	1/2 NPTF	25 (11.34)
3508	3.50 (89)	1.250 (31.8)	1 (25.4)	1/2 NPTF	33 (14.97)
408	4.00 (102)	1.250 (31.8)	1 (25.4)	1/2 NPTF	44 (19.96)



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