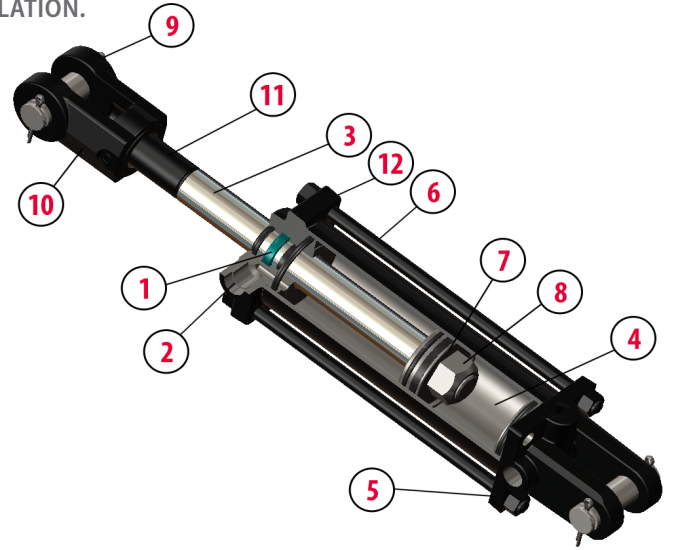


# TH3000

LION HYDRAULICS IS PLEASED TO ANNOUNCE THE IMPROVED LION TH3000 TIE ROD CYLINDER - DESIGNED WITH PREMIUM 21ST CENTURY SEALING TECHNOLOGY FOR DURABILITY AND LONG LIFE AND IS PERFECT FOR BOTH SINGLE ACTING AND DOUBLE ACTING APPLICATIONS. WITH 3000 PSI WORKING PRESSURE AND 6000 PSI PROOF LOAD, THE TH IS EQUIPPED TO HANDLE TODAY'S HIGHER PRESSURE AGRICULTURAL TRACTOR AND TILLAGE APPLICATIONS AS WELL AS DEMANDING INDUSTRIAL APPLICATIONS. PINS AND COTTERS ARE INCLUDED FOR EASY INSTALLATION.

- 1** Premium 3000 PSI sealing kits for extended service and leak free performance. Improvements include:
  - Piston and rod wear rings on every cylinder with upgraded 3000 PSI premium piston and rod seals.
  - 1 piece static gland seals for improved shock load performance and ease of service
  - Easy to install and maintain snap in wipers
- 2** Customizable port options: available with inline ORB or 90 degree ORB ports. Double ported ORB ports provide greater assembly flexibility with configurable porting options. Leak free ORB o-ring ports provide a simple connection.
- 3** High strength, hard chrome-plated shaft provides extended cylinder life in harsh applications and promotes dry sealing
- 4** Precision-finished skived and burnished heavy wall steel tubing for extended seal and cylinder life
- 5** High Grade Ductile iron caps come with drilled oil passages and increased bearing surface for high shock and side load applications
- 6** High-tensile steel tie rods prevent failure at high pressure and provide a long service life
- 7** Precision-machined, ductile iron piston provides a forgiving bearing surface for extended life
- 8** Heavy-duty steel, torqued, self-locking piston nut holds piston firm under high-cycle loading



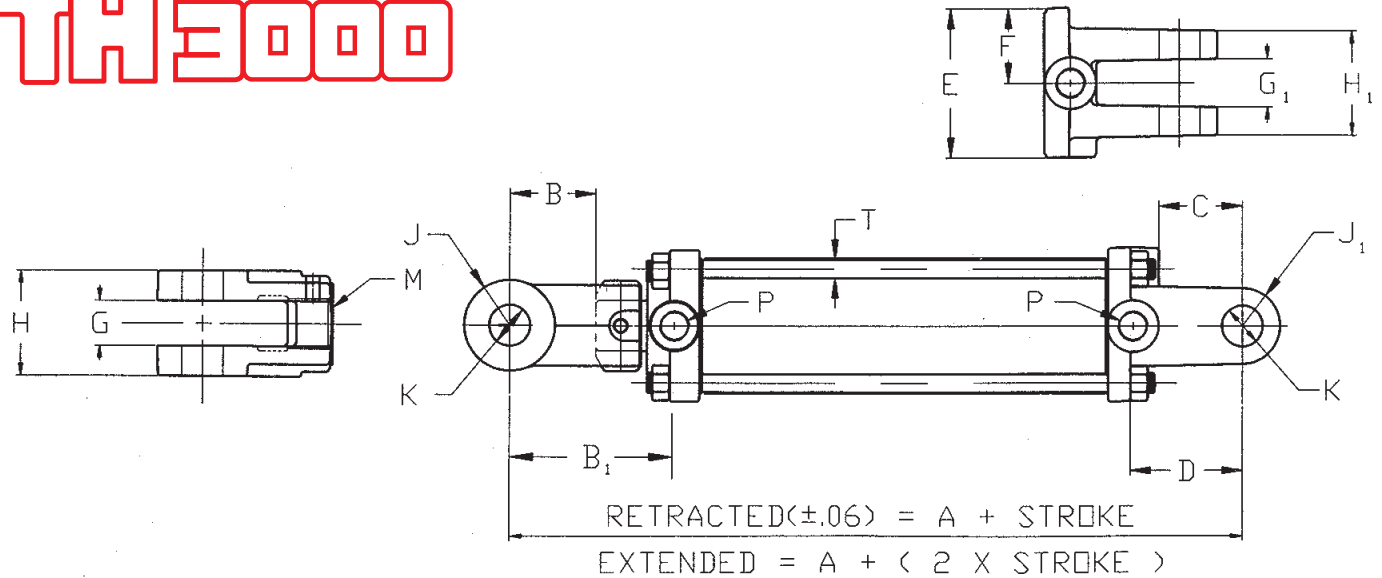
- 9** High-tensile steel, zinc plated pins & cotter pin retainers provide long lasting protection against corrosion wear
- 10** Heavy Duty Ductile Iron Rod Clevis with 360° thread contact area and positive set screw locking device, able to withstand continuous high loads
- 11** Threaded Shaft (on ASAE Cylinders) to accept optional mechanical stroke control on 8in. stroke ASAE cylinders only
- 12** State of the art paint application of epoxy primer and two component black topcoats. Provides excellent chip resistance, adhesion, color and gloss retention for a long lasting durable finish

## AVAILABLE STANDARD CONFIGURATIONS

MODEL	BORE	STROKE	ROD DIA	SHIP WT.	RETRACTED PIN TO PIN LENGTH	PINS	ALLOWABLE PRESSURE (PSI) (*Maximum column load pressure at full extension)	3/4-16 ORB IN LINE ORDER NUMBER (Standard Stocked)	3/4-16 ORB 90 ORDER NUMBER (Available at lead time)
<b>ASAE - 3000 psi 8" Stroke cylinders</b>									
20TH08-112 ASAE	2.0	8.0	1.125	15.9	20.25	1.00	3000	662364	662446
25TH08-112 ASAE	2.5	8.0	1.125	18.8	20.25	1.00	3000	662365	662447
30TH08-125 ASAE	3.0	8.0	1.250	26.1	20.25	1.00	3000	662366	662448
35TH08-125 ASAE	3.5	8.0	1.250	33.4	20.25	1.00	3000	662367	662449
40TH08-150 ASAE	4.0	8.0	1.500	41.4	20.25	1.00	3000	662368	662450
50TH08-200 ASAE	5.0	8.0	2.000	73.2	20.25	1.25	3000	662369	662451
<b>ASAE - 3000 psi 16" Stroke cylinders</b>									
30TH16-150 ASAE	3.0	16.0	1.500	38.4	31.50	1.25	3000	662370	662452
35TH16-150 ASAE	3.5	16.0	1.500	47.7	31.50	1.25	3000	662371	662453
40TH16-175 ASAE	4.0	16.0	1.750	58.3	31.50	1.25	3000	662372	662454
50TH16-200 ASAE	5.0	16.0	2.000	96.0	31.50	1.25	3000	662373	662455
<b>2in Bore 3000 psi cylinders</b>									
20TH06-112	2.0	6.0	1.125	13.9	16.25	1.00	3000	662374	662456
20TH08-112	2.0	8.0	1.125	15.4	18.25	1.00	3000	662375	662457
20TH10-112	2.0	10.0	1.125	16.9	20.25	1.00	3000	662376	662458
20TH12-112	2.0	12.0	1.125	18.3	22.25	1.00	3000	662377	662459
20TH14-112	2.0	14.0	1.125	19.8	24.25	1.00	3000	662378	662460
20TH16-112	2.0	16.0	1.125	21.3	26.25	1.00	3000	662379	662461
20TH18-112	2.0	18.0	1.125	22.7	28.25	1.00	3000	662380	662462
20TH20-112	2.0	20.0	1.125	24.3	30.25	1.00	2930*	662381	662463
20TH24-112	2.0	24.0	1.125	27.3	34.25	1.00	2180*	662382	662464
20TH30-112	2.0	30.0	1.125	31.8	40.25	1.00	1499*	662383	662465
20TH36-112	2.0	36.0	1.125	36.2	46.25	1.00	1093*	662384	662466
20TH48-112	2.0	48.0	1.125	45.2	58.25	1.00	655*	662385	662467

MODEL	BORE	STROKE	ROD DIA	SHIP WT.	RETRACTED PIN TO PIN LENGTH	PINS	ALLOWABLE PRESSURE (PSI) (*Maximum column load pressure at full extension)	3/4-16 ORB IN LINE ORDER NUMBER (Standard Stocked)	3/4-16 ORB 90 ORDER NUMBER (Available at lead time)
<b>2.5in Bore 3000 psi cylinders</b>									
25TH06-112	2.5	6.0	1.125	16.3	16.25	1.00	3000	662386	662468
25TH08-112	2.5	8.0	1.125	18.1	18.25	1.00	3000	662387	662469
25TH10-112	2.5	10.0	1.125	19.9	20.25	1.00	3000	662388	662470
25TH12-112	2.5	12.0	1.125	21.6	22.25	1.00	3000	662389	662471
25TH14-112	2.5	14.0	1.125	23.4	24.25	1.00	3000	662390	662472
25TH16-125	2.5	16.0	1.250	25.2	26.25	1.00	3000	662391	662473
25TH18-125	2.5	18.0	1.250	27.0	28.25	1.00	3000	662392	662474
25TH20-125	2.5	20.0	1.250	28.8	30.25	1.00	2858*	662393	662475
25TH24-125	2.5	24.0	1.250	32.3	34.25	1.00	2127*	662394	662476
25TH30-125	2.5	30.0	1.250	37.7	40.25	1.00	1462*	662395	662477
25TH36-125	2.5	36.0	1.250	43.0	46.25	1.00	1067*	662396	662478
25TH48-125	2.5	48.0	1.250	53.7	58.25	1.00	639*	662397	662479
<b>3in Bore 3000 psi cylinders</b>									
30TH06-125	3.0	6.0	1.250	23.3	16.25	1.00	3000	662398	662480
30TH08-125	3.0	8.0	1.250	25.4	18.25	1.00	3000	662399	662481
30TH10-125	3.0	10.0	1.250	27.6	20.25	1.00	3000	662400	662482
30TH12-125	3.0	12.0	1.250	29.7	22.25	1.00	3000	662401	662483
30TH14-125	3.0	14.0	1.250	31.9	24.25	1.00	3000	662402	662484
30TH16-150	3.0	16.0	1.500	36.4	26.25	1.00	3000	662403	662485
30TH18-150	3.0	18.0	1.500	38.9	28.25	1.00	3000	662404	662486
30TH20-150	3.0	20.0	1.500	41.3	30.25	1.00	3000	662405	662487
30TH24-150	3.0	24.0	1.500	46.2	34.25	1.00	3000	662406	662488
30TH30-150	3.0	30.0	1.500	53.5	40.25	1.00	2106*	662407	662489
30TH36-150	3.0	36.0	1.500	60.9	46.25	1.00	1536*	662408	662490
30TH48-150	3.0	48.0	1.500	75.5	58.25	1.00	920*	662409	662491
<b>3.5in Bore 3000 psi cylinders</b>									
35TH06-125	3.5	6.0	1.250	29.8	16.25	1.00	3000	662410	662492
35TH08-125	3.5	8.0	1.250	32.5	18.25	1.00	3000	662411	662493
35TH10-125	3.5	10.0	1.250	35.1	20.25	1.00	3000	662412	662494
35TH12-125	3.5	12.0	1.250	37.8	22.25	1.00	3000	662413	662495
35TH14-150	3.5	14.0	1.500	42.6	24.25	1.00	3000	662414	662496
35TH16-150	3.5	16.0	1.500	45.6	26.25	1.00	3000	662415	662497
35TH18-150	3.5	18.0	1.500	48.6	28.25	1.00	3000	662416	662498
35TH20-150	3.5	20.0	1.500	51.5	30.25	1.00	3000	662417	662499
35TH24-150	3.5	24.0	1.500	57.5	34.25	1.00	2250*	662418	662500
35TH30-150	3.5	30.0	1.500	66.4	40.25	1.00	1547*	662419	662501
35TH36-150	3.5	36.0	1.500	75.3	46.25	1.00	1128*	662420	662502
35TH48-150	3.5	48.0	1.500	93.2	58.25	1.00	676*	662421	662503
<b>4in Bore 3000 psi cylinders</b>									
40TH06-150	4.0	6.0	1.500	37.1	16.25	1.00	3000	662422	662504
40TH08-150	4.0	8.0	1.500	40.4	18.25	1.00	3000	662423	662505
40TH10-150	4.0	10.0	1.500	43.7	20.25	1.00	3000	662424	662506
40TH12-150	4.0	12.0	1.500	47.0	22.25	1.00	3000	662425	662507
40TH14-150	4.0	14.0	1.500	50.2	24.25	1.00	3000	662426	662508
40TH16-175	4.0	16.0	1.750	56.4	26.25	1.00	3000	662427	662509
40TH18-175	4.0	18.0	1.750	60.1	28.25	1.00	3000	662428	662510
40TH20-175	4.0	20.0	1.750	63.7	30.25	1.00	3000	662429	662511
40TH24-150	4.0	24.0	1.500	66.6	34.25	1.00	1723*	662430	662512
40TH24-175	4.0	24.0	1.750	71.0	34.25	1.00	3000	662431	662513
40TH24-200	4.0	24.0	2.000	76.0	34.25	1.00	3000	662432	662514
40TH30-200	4.0	30.0	2.000	88.1	40.25	1.00	3000	662433	662515
40TH36-200	4.0	36.0	2.000	100.3	46.25	1.00	2731*	662434	662516
40TH48-200	4.0	48.0	2.000	124.5	58.25	1.00	1636*	662435	662517
<b>5in Bore 3000 psi cylinders</b>									
50TH10-200	5.0	10.0	2.000	77.0	22.25	1.25	3000	662436	662518
50TH12-200	5.0	12.0	2.000	78.4	24.25	1.25	3000	662437	662519
50TH14-200	5.0	14.0	2.000	87.0	26.25	1.25	3000	662438	662520
50TH16-200	5.0	16.0	2.000	92.0	28.25	1.25	3000	662439	662521
50TH18-200	5.0	18.0	2.000	97.0	30.25	1.25	3000	662440	662522
50TH20-200	5.0	20.0	2.000	102.0	32.25	1.25	3000	662441	662523
50TH24-200	5.0	24.0	2.000	111.9	36.25	1.25	3000	662442	662524
50TH30-200	5.0	30.0	2.000	126.8	42.25	1.25	2265*	662443	662525
50TH36-200	5.0	36.0	2.000	124.7	48.25	1.25	1666*	662444	662526
50TH48-200	5.0	48.0	2.000	136.8	60.25	1.25	1009*	662445	662527

# TH 3000



## DIMENSIONS IN INCHES

BORE	2"	2 1/2"	3"	3 1/2"	4"	5"
A	10 1/4	10 1/4	10 1/4	10 1/4	10 1/4	12 1/4
B	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8
B <sub>1</sub>	4 3/16	4 3/16	3 15/16	3 15/16	3 7/8	4 11/16
C	2 1/16	2 1/16	2 1/16	2 1/16	2 1/16	2 1/4
D	2 7/8	2 7/8	2 3/4	2 3/4	2 3/4	2 7/8
E	2 3/4	3 1/8	3 3/4	4 1/2	5 1/8	6
F	1 3/8	1 9/16	1 7/8	2 1/4	2 9/16	3
G	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 3/16
G <sub>1</sub>	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 5/16
H	2 1/2	2 1/2	2 5/8	2 5/8	2 5/8	3
H <sub>1</sub>	2 3/8	2 1/2	2 9/16	2 9/16	2 5/8	3 1/2
J	1	1	1 1/8	1 1/8	1 1/8	1 5/16
J <sub>1</sub>	1	1	1	1 1/8	1 1/8	1 7/16
K	1 1/64	1 1/64	1 1/64	1 1/64	1 1/64	1 17/64
M	1 1/8 - 12	1 1/8 - 12	1 1/4 - 12	1 1/4 - 12	1 1/4 - 12	1 1/2 - 12
P	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16
T	3/8	3/8	1/2	5/8	5/8	3/4
<b>ASAE Cylinders</b>						
A <sub>ASAE-8</sub>	12 1/4	12 1/4	12 1/4	12 1/4	12 1/4	12 1/4
A <sub>ASAE-16</sub>	15 1/2	15 1/2	15 1/2	15 1/2	15 1/2	15 1/2
B <sub>1 ASAE-8</sub>	6 3/16	6 3/16	5 15/16	5 15/16	5 7/8	4 11/16
B <sub>1 ASAE-16</sub>	9 7/16	9 7/16	9 3/16	9 3/16	9 1/8	7 15/16
K <sub>ASAE-8</sub>	1 1/64	1 1/64	1 1/64	1 1/64	1 1/64	1 1/64
K <sub>ASAE-16</sub>	1 17/64	1 17/64	1 17/64	1 17/64	1 17/64	1 17/64

\* Cylinder Column Load - Column strength loading normally affects all types of longer stroke cylinders. Affected cylinders should not be operated beyond these limits as the cylinder rod may buckle or bend causing failure.. Stroke limitation applies to compressive loading only. Applications that fall outside the noted parameters, contact LION HYDRAULICS directly for further assistance.

## LION HYDRAULICS IS A DIVISION OF MONARCH INDUSTRIES INC

For placing orders or for further product information contact your local LION HYDRAULICS sales representative, or contact:

**CANADIAN CORPORATE OFFICE: LION HYDRAULICS**  
51 BURMAC ROAD, P.O. Box 429 WINNIPEG, MB, R3C 3E4

**PHONE: 1-204-786-7921 - TOLL FREE: 1-800-665-0247**

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