



# WP 10000

## WELDED REPHASING CYLINDER SERIES

PREMIUM 21ST CENTURY SEALING TECHNOLOGY

CHECK BALL REPHASING PORT DESIGN FOR SUPERIOR PERFORMANCE

STANDARD LION1000 INDUCTION HARDENED RODS FOR PREMIUM CORROSION PROTECTION

PREMIUM ADI ROD CLEVIS FOR MAXIMUM DURABILITY UNDER CONTINUOUS ROTATIONAL LOADS

30 MONTH LIMITED WARRANTY

**TOLL-FREE:** 1-800-665-0247

**EMAIL:** [ORDERS@MONARCHINDUSTRIES.COM](mailto:ORDERS@MONARCHINDUSTRIES.COM)

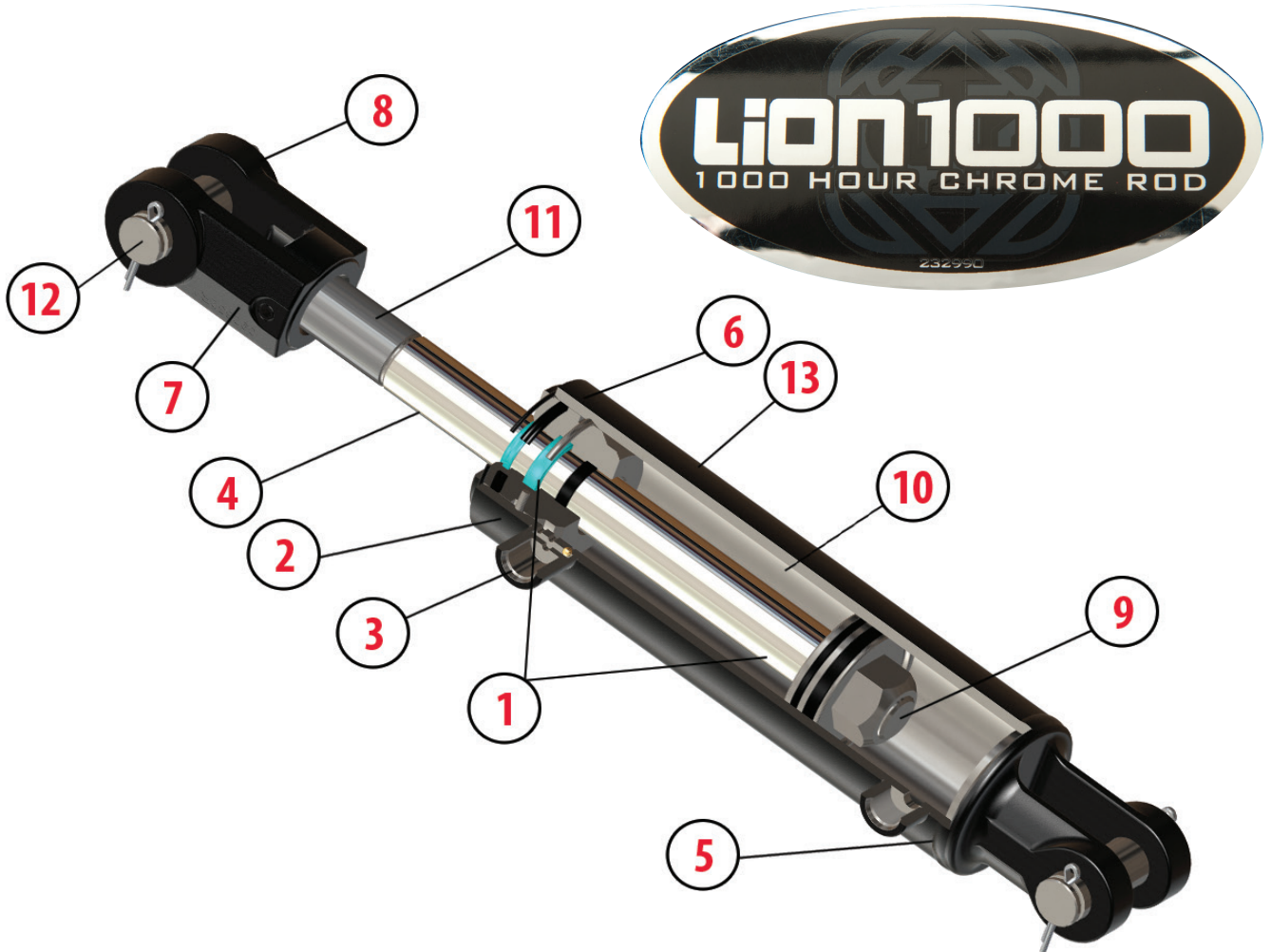


[WWW.LIONHYDRAULICS.COM](http://WWW.LIONHYDRAULICS.COM)

**VALUE ENGINEERED HYDRAULIC SOLUTIONS**

# WP3000

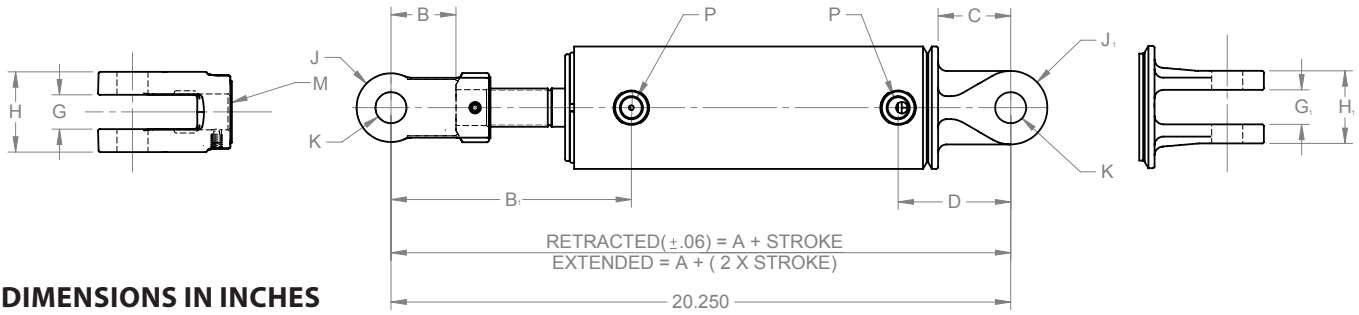
THE LION WP3000 WELDED REPHASING CYLINDER SERIES IS DESIGNED TO WITHSTAND THE MOST DEMANDING APPLICATIONS ON THE MARKET TODAY. LION'S EXTENSIVE DESIGN EXPERIENCE HAS RESULTED IN A PREMIUM REPHASING CYLINDER WITH THE LATEST IN SEALING AND REPHASING TECHNOLOGY AND STANDARD LION1000 INDUCTION HARDENED RODS FOR THE ULTIMATE IN CORROSION PROTECTION AND DURABILITY.



- 1** The ultimate in sealing technology with 3000 psi seal kits for extended service life, reduced downtime, reduced friction, and leak free performance.
- 2** Premium rephasing technology provides extended cylinder life, simplifies set-up, and provides reliable performance
  - Check ball rephasing port prevents stalling, provides leak free performance, and higher flow rates. Results in reduced set-up times and a reliable, extremely durable, high performance system.
- 3** Available with inline or 90 degree ORB ports, providing greater assembly flexibility with configurable porting options. Double ported ORB ports provide leak free performance and a simple connection.
- 4** Standard Lion1000 chrome induction hardened rods provide superior corrosion resistance, dent resistance, and durability. Standard seven year limited rod corrosion warranty.
- 5** Multi pass welds offer superior leakage control and extended service life
- 6** Wire ring head design extends cylinder life with the ultimate in sealing technology and reduces downtime in the field with an easy to service design.
- 7** Premium ADI rod clevis provides high strength and wear resistance under the most demanding conditions.
- 8** ASAE double lug design
- 9** Heavy-duty, torqued and self-locking piston nut holds piston firmly in position under high-cycle loading.
- 10** Precision finished skived and burnished steel tubing for extended seal and cylinder life.
- 11** Threaded shaft (on ASAE cylinders) to accept optional mechanical stroke control on 8 inch stroke ASAE cylinders only.
- 12** Hardened pins and cotter pin retainers provide long lasting protection against corrosion
- 13** Premium 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.

MODEL	BORE	STROKE	ROD DIA	SHIP WT.	RETRACTED LENGTH	PINS	ALLOWABLE PRESSURE (PSI)	3/4-16 ORB INLINE ORDER NUMBER (Available at lead time)	3/4-16 ORB 90 ORDER NUMBER (Available at lead time)
3000 psi 8" Stroke cylinders									
25WP08-112	2.5	8.0	1.125	15.5	20.25	1.00	3,000	647669	647713
27WP08-112	2.8	8.0	1.125	17.6	20.25	1.00	3,000	647670	647714
30WP08-125	3.0	8.0	1.250	23.5	20.25	1.00	3,000	647671	647715
32WP08-125	3.3	8.0	1.250	25.6	20.25	1.00	3,000	647672	647716
35WP08-125	3.5	8.0	1.250	28.0	20.25	1.00	3,000	647673	647717
37WP08-137	3.8	8.0	1.375	30.1	20.25	1.00	3,000	647674	647718
40WP08-137	4.0	8.0	1.375	32.0	20.25	1.00	3,000	647675	647719
42WP08-150	4.3	8.0	1.500	40.1	20.25	1.00	3,000	647676	647720
45WP08-150	4.5	8.0	1.500	42.8	20.25	1.00	3,000	647677	647721
47WP08-150	4.8	8.0	1.500	45.5	20.25	1.00	2,500	647678	647722
50WP08-150	5.0	8.0	1.500	54.2	20.25	1.00	2,500	647679	647723
3000 psi 10" Stroke cylinders									
25WP10-112	2.5	10.0	1.125	16.8	22.25	1.00	3,000	647680	647724
27WP10-112	2.8	10.0	1.125	19.1	22.25	1.00	3,000	647681	647725
30WP10-125	3.0	10.0	1.250	25.7	22.25	1.00	3,000	647682	647726
32WP10-125	3.3	10.0	1.250	27.9	22.25	1.00	3,000	647683	647727
35WP10-125	3.5	10.0	1.250	30.3	22.25	1.00	3,000	647684	647728
37WP10-137	3.8	10.0	1.375	32.8	22.25	1.00	3,000	647685	647729
40WP10-137	4.0	10.0	1.375	34.7	22.25	1.00	3,000	647686	647730
42WP10-150	4.3	10.0	1.500	43.1	22.25	1.00	3,000	647687	647731
45WP10-150	4.5	10.0	1.500	45.8	22.25	1.00	3,000	647688	647732
47WP10-150	4.8	10.0	1.500	48.7	22.25	1.00	2,500	647689	647733
50WP10-150	5.0	10.0	1.500	58.2	22.25	1.00	2,500	647690	647734
3000 psi 12" Stroke cylinders									
25WP12-112	2.5	12.0	1.125	18.2	24.25	1.00	3,000	647691	647735
27WP12-112	2.8	12.0	1.125	20.6	24.25	1.00	2,978	647692	647736
30WP12-125	3.0	12.0	1.250	27.8	24.25	1.00	3,000	647693	647737
32WP12-125	3.3	12.0	1.250	30.1	24.25	1.00	3,000	647694	647738
35WP12-125	3.5	12.0	1.250	32.7	24.25	1.00	2,802	647695	647739
37WP12-137	3.8	12.0	1.375	35.4	24.25	1.00	3,000	647696	647740
40WP12-137	4.0	12.0	1.375	37.4	24.25	1.00	3,000	647697	647741
42WP12-150	4.3	12.0	1.500	46.1	24.25	1.00	3,000	647698	647742
45WP12-150	4.5	12.0	1.500	48.9	24.25	1.00	3,000	647699	647743
47WP12-150	4.8	12.0	1.500	52.0	24.25	1.00	2,500	647700	647744
50WP12-150	5.0	12.0	1.500	62.2	24.25	1.00	2,500	647701	647745
3000 psi 16" Stroke cylinders									
25WP16-112	2.5	16.0	1.125	20.9	28.25	1.00	2,418	647702	647746
27WP16-112	2.8	16.0	1.125	23.6	28.25	1.00	1,998	647703	647747
30WP16-125	3.0	16.0	1.250	32.0	28.25	1.00	2,559	647704	647748
32WP16-125	3.3	16.0	1.250	34.6	28.25	1.00	2,181	647705	647749
35WP16-125	3.5	16.0	1.250	37.4	28.25	1.00	1,880	647706	647750
37WP16-137	3.8	16.0	1.375	40.6	28.25	1.00	2,398	647707	647751
40WP16-137	4.0	16.0	1.375	42.7	28.25	1.00	2,108	647708	647752
42WP16-150	4.3	16.0	1.500	52.1	28.25	1.00	2,644	647709	647753
45WP16-150	4.5	16.0	1.500	55.0	28.25	1.00	2,359	647710	647754
47WP16-150	4.8	16.0	1.500	58.4	28.25	1.00	2,117	647711	647755
50WP16-150	5.0	16.0	1.500	70.2	28.25	1.00	1,910	647712	647756

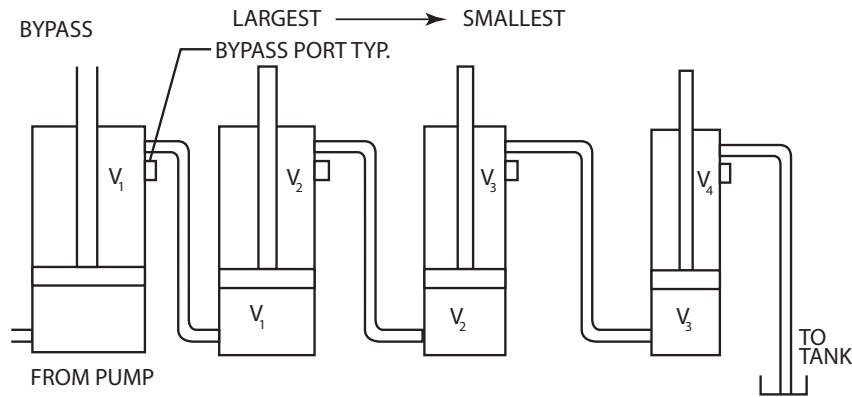
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## DIMENSIONS IN INCHES

BORE	2½"	2¾"	3"	3¼"	3½"	3¾"	4"	4¼"	4½"	4¾"	5"
<b>A</b>	12 ¼	12 ¼	12 ¼	12 ¼	12 ¼	12 ¼	12 ¼	12 ¼	12 ¼	12 ¼	12 ¼
<b>B</b>	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8
<b>B<sub>1</sub></b>	8 7/16	8 1/8	7 15/16	7 15/16	7 7/8	7 11/16	7 7/8	7 ½	7 7/16	7 7/16	7 ½
<b>C</b>	2	2 1/8	2 ¼	2 ¼	2 3/8	2 7/16	2 ¼	2 ¼	2 ¼	2 ¼	2 1/8
<b>D</b>	3 ¼	3 ½	3 9/16	3 9/16	3 11/16	3 11/16	3 9/16	3 15/16	3 15/16	3 15/16	3 15/16
<b>G</b>	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 3/16	1 3/16	1 3/16	1 3/16
<b>G<sub>1</sub></b>	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 ¼	1 ¼
<b>H</b>	2 ½	2 ½	2 5/8	2 5/8	2 5/8	2 ½	2 5/8	2 15/16	2 15/16	2 15/16	2 15/16
<b>H<sub>1</sub></b>	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8	2 5/8	2 5/8	2 5/8	2 ¾	3 ¼
<b>J</b>	2	2	2 ¼	2 ¼	2 ¼	2	2 ¼	2 5/8	2 5/8	2 5/8	2 5/8
<b>J<sub>1</sub></b>	1 7/8	2 1/8	2 3/16	2 3/16	2 3/8	2 9/16	2 9/16	2 ¾	2 15/16	2 15/16	3 1/16
<b>K</b>	1 1/64	1 1/64	1 1/64	1 1/64	1 1/64	1 1/64	1 1/64	1 1/64	1 1/64	1 1/64	1 1/64
<b>M</b>	1 1/8	1 1/8	1 ¼	1 ¼	1 ¼	1 ¼	1 ¼	1 ½	1 ½	1 ½	1 ½
<b>P - ORB</b>	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 16

\* 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.



## REPHASING CYLINDER SYSTEMS

Synchronized operation of two or more hydraulic cylinders in unbalanced load conditions can be attained by plumbing volumetrically matched cylinders adjacent to each other where the displaced fluid produces, equal, simultaneous, actuation of each cylinder in the system. As the volumes of each cylinder cannot economically, be identically matched, a bypass port is provided that upon full extension (or retraction) a metered amount of fluid bypasses the piston seal to the next adjacent cylinder in the system. This indexes all cylinders of the system to the same position, then upon retraction (extension) positive sealing is engaged and synchronized operation continues (to ensure optimum performance all entrapped air must be purged from these rephasing cylinder systems).

## 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:

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