

Tanker® XP Series

TNK 400

TNK 400 Features

- Engineered for high performance, long service life.
- Dynamic lubrication circulates oil onto seal surfaces with every stroke.
- Improved service life compared to coil springs.
- Bore seal design for superior contamination resistance.
- Fully adjustable charge pressure.
- Preloaded by gas pressure. Does not require compression in the die to preload.
- Available as self-contained or in a hosed system.
- Variety of mounting options provides flexibility in die design.

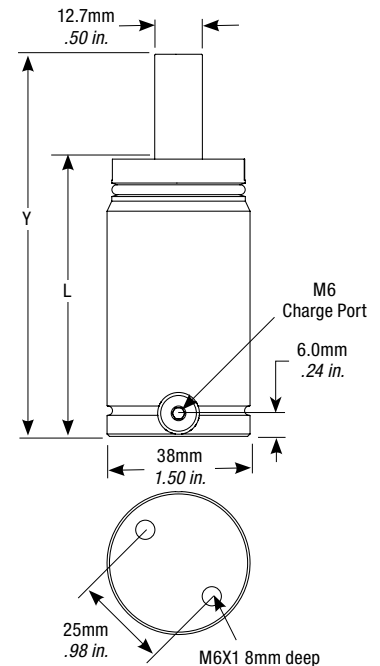
TNK 400 Specifications

Pressure Medium	Nitrogen
Maximum Charging Pressure	150 bar/2175 psi
Maximum Operating Temperature	80°C/176°F
Maximum Utilized Stroke	100%
Maximum Piston Rod Velocity	35 m/min 115 ft/min
Seal Kit	Part No. 56-072-7000
Charge Fitting	Part No. T2-770-T3

TNK 400 Dimensional Information

Part Number Model x Stroke	Stroke S		Contact Force		Y		L	
	mm	in	N	lbs	mm*	in**	mm	in
TNK 400 x 0.25	6.3	0.25	3940	885	63.5	2.5	57.2	2.25
TNK 400 x 0.5	12.7	0.50			76.2	3.0	63.5	2.50
TNK 400 x 0.75	19.0	0.75			88.9	3.5	69.9	2.75
TNK 400 x 1	25.4	1.00			101.6	4.0	76.2	3.00
TNK 400 x 1.5	38.1	1.50			127.0	5.0	88.9	3.50
TNK 400 x 2	50.8	2.00			152.4	6.0	101.6	4.00
TNK 400 x 2.5	63.5	2.50			177.8	7.0	114.3	4.50
TNK 400 x 3	76.2	3.00			203.2	8.0	127.0	5.00

*±0.25mm **± 0.010 in.

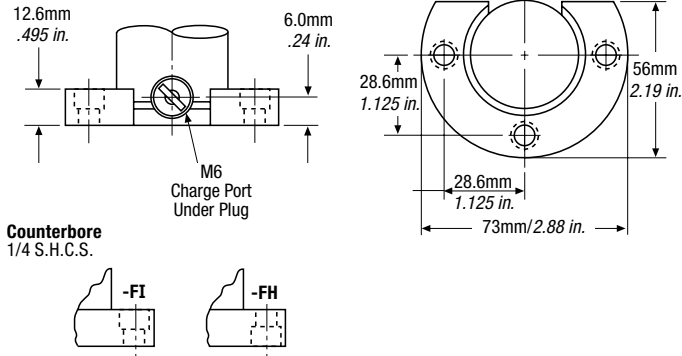


NOTE: Bottom mounting threads available in metric only.



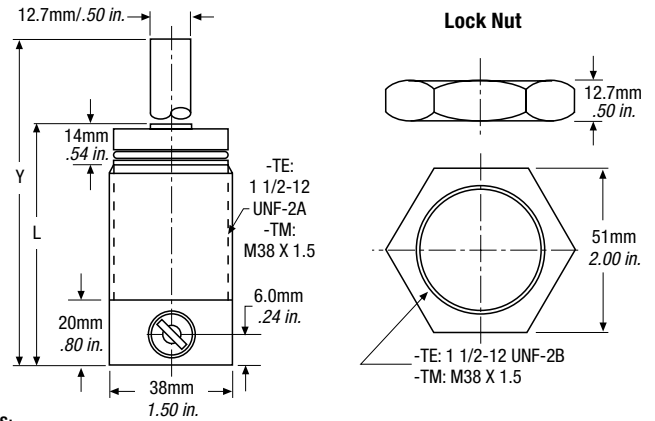
Tanker® XP Series

TNK 400 Flange Mount -FI or -FH



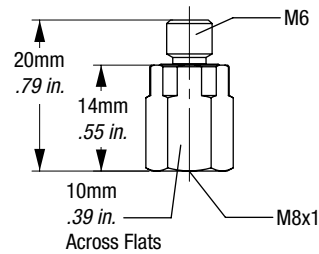
NOTES:
 To order, specify -FI or -FH after the drop-in part number.
 To order the flange separately: Flange Part No. 56-072-2002
 Locking Wire Part No. 56-072-2004
 The base of the spring extends past the bottom of the flange when assembled.
 The gas spring will sit flush once it is bolted down. **DO NOT GRIND THE GAS SPRING!**

TNK 400 Threaded Body -TE or -TM

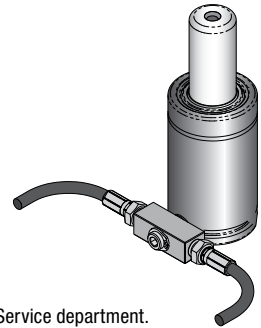
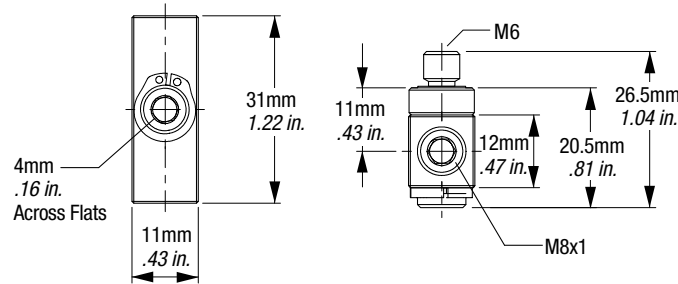


NOTES:
 To order, specify suffix -TE for English assembly and -TM for metric assembly.
 One lock nut is included with each threaded body spring.
 To order lock nut separately: English Part No. 56-072-2013; Metric Part No. 56-072-2013M
 The TNK 400-TE or -TM can be threaded into the die gas spring port **from the piston rod end only.**

Straight Fitting EZ-503763



90° Two-Way Adapter EZ-503769



NOTE: Other fittings available. Contact the Customer Service department.

TNK 400 Force Chart (at 150 bar/2175 psi)

in mm	0.00 0.0	0.25 6.4	0.50 12.7	0.75 19.1	1.00 25.4	1.50 38.1	2.00 50.8	2.50 63.5	3.00 76.2
	lbs kN	lbs kN	lbs kN	lbs kN	lbs kN	lbs kN	lbs kN	lbs kN	lbs kN
0.25 in 6.4 mm	885 3.94	1496 6.65							
0.50 in 12.7 mm	885 3.94	1114 4.96	1506 6.70						
0.75 in 19.1 mm	885 3.94	1024 4.55	1220 5.43	1508 6.71					
1.00 in 25.4 mm	885 3.94	986 4.39	1114 4.96	1282 5.70	1510 6.72				
1.50 in 38.1 mm	885 3.94	948 4.22	1025 4.56	1114 4.96	1221 5.43	1512 6.73			
2.00 in 50.8 mm	885 3.94	932 4.15	986 4.39	1046 4.65	1115 4.96	1284 5.71	1513 6.73		
2.50 in 63.5 mm	885 3.94	921 4.10	963 4.28	1009 4.49	1060 4.72	1177 5.24	1324 5.89	1513 6.73	
3.00 in 76.2 mm	885 3.94	915 4.07	949 4.22	986 4.39	1025 4.56	1115 4.96	1222 5.44	1352 6.01	1513 6.73

NOTE: All dimensions are nominal. Data shown are typical. Actual data for any particular unit may vary.



10367 Brecksville Road
 Brecksville, OH 44141 USA
 Tel: 1-800-876-4976, 440-526-5900
 Fax: 440-526-6807
 Email: hyson@asbg.com
 www.hysonproducts.com

3100 Mainway
 Burlington, ONT L7M 1A3 Canada
 Tel: 905-331-1311
 Fax: 905-331-1342

Bldv. Rogelio Gonzalez Caballero #500
 Parque Industrial STIVA Aeropuerto
 Apodaca, NL CP 66600 Mexico
 Tel: 5281 8145-0570
 Fax: 5281 8145-0571

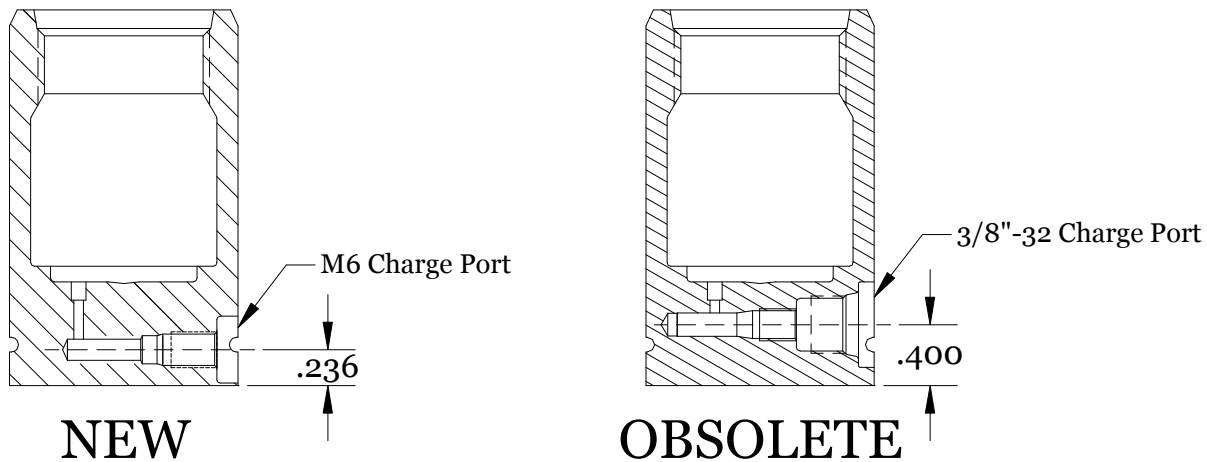
©Hyson Products 2009
 TNK4001M0909

Technical Bulletin

**Subject: TNK 400 Charge Port Change
From 3/8"-32 to M6**

**Issue: 07-08
Date: 09/24/07
Page(s): 1 of 2
Issued by: M. Snyder**

The latest generation of TNK 400 springs is now available. We have replaced the 3/8"-32 charge port with the M6 charge port. All future orders will be shipped with the M6 charge port, detailed in the cross sections that follow.



The port modification will not affect the performance of the cylinder and will allow customers to use equipment common to other industry standard products. All features of the spring will remain the same including dimensions, charge pressure, and force. The equipment changes are summarized in the chart below.

	Charge Port	Port Height (in)	Charge Fitting	Hose/Fittings
New	M6	0.236	T2-770-T3	Micro EZ Hose*
Obsolete	3/8"-32	0.400	11-770-0705 MTY	ORH-4 Hose and ORF-400 or SF-400 fittings

* It is not possible to use the ORH-4 hose with the new TNK 400 port. To retrofit an old system that will allow the use of both new and old springs, see the attached hose assemblies.

Hyson® Products

A Business of Barnes Group Inc.

10367 Brecksville Road • Brecksville, OH 44141 • 1-800-876-4976 • Fax: 440-526-6807 • Email: hyson@asbg.com

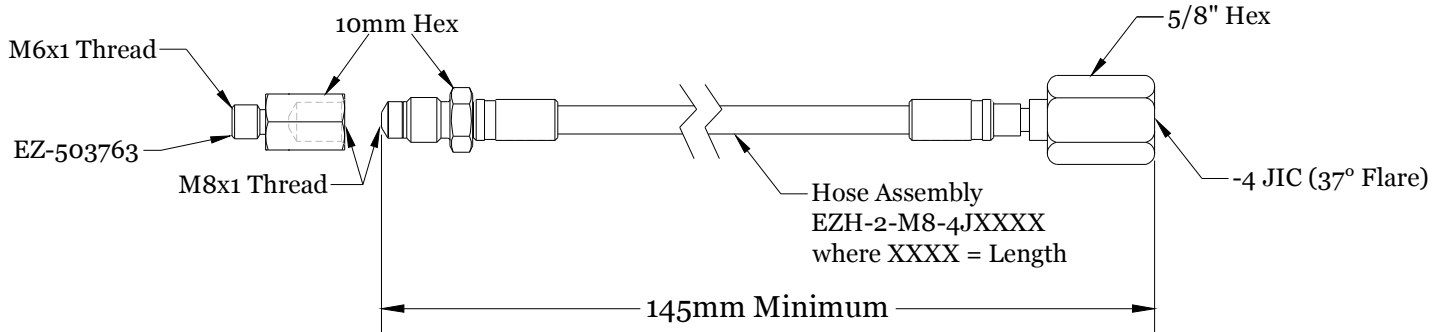
www.hysonproducts.com

**Subject: TNK 400 Charge Port Change
From 3/8"-32 to M6**

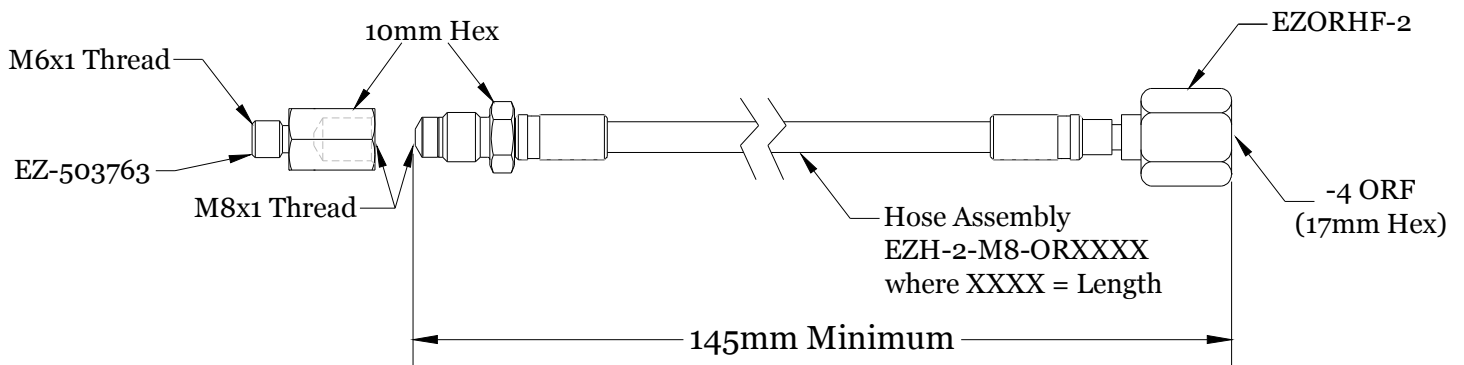
**Issue: 07-08
Date: 09/24/07
Page(s): 2 of 2
Issued by: M. Snyder**

Use the following hose assemblies to utilize new and obsolete springs in the same system:

To retrofit using -4 JIC (7/16"-20 thread) connectors, use:



To retrofit using -4 ORF (9/16-18 thread) connectors, use:



Hyson® Products

A Business of Barnes Group Inc.

10367 Brecksville Road • Brecksville, OH 44141 • 1-800-876-4976 • Fax: 440-526-6807 • Email: hyson@asbg.com

www.hysonproducts.com

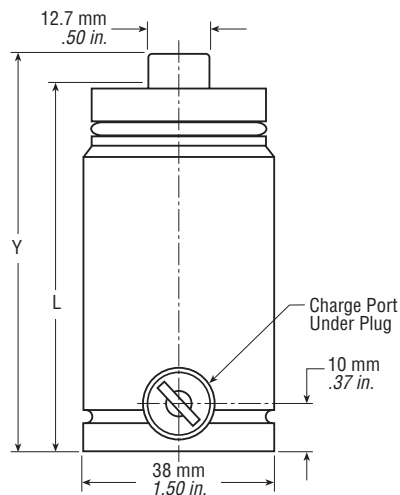
Nitrogen Gas Springs for High Speed Stamping

Tanker® XP Series

TNK-400HS

The TNK-400HS Features

- Long Service Life
Engineered for service life of 25 million cycles, without recharge.
- Preloaded by Gas Pressure
Does not require keeper assemblies or guides. Does not require compression in the die to preload.
- High Speed Capable
Life tested at speeds over 600 spm.
- Available as Hosed System
For equal force across the die. Can be recharged in the die.
- Adjustable
Force can be adjusted by reducing gas pressure. Pressure in hosed systems can be adjusted in the die.
- Variety of Mounting Options
Provides flexibility in die design. Offers potential shut height reduction.



TNK-400HS Dimensional Information										
Part Number	Effective Piston Area		Maximum Force at 150 bar/2175 psi		Maximum Stroke		Y		L	
	cm ²	in ²	kN	lbs.	mm	in	mm	in	mm	in
TNK-400x.25HS					6.35	0.25	82.5	3.25	76.2	3.00
TNK-400x.50HS	2.62	0.406	3.94	885	12.7	0.50	114.3	4.50	101.6	4.00
TNK-400x.75HS					19.05	0.75	146.1	5.75	127.0	5.00
TNK-400x1.00HS					25.4	1.00	152	6.00	127.0	5.00

Hyson™ Products
Associated Spring



10367 Brecksville Road, Brecksville, Ohio 44141
Toll Free 1-800-876-4976 • 440-526-5900
FAX: 440-838-7684 • www.hysonproducts.com