



Tanker 400XP Series

Tanker 400 to 400 HS



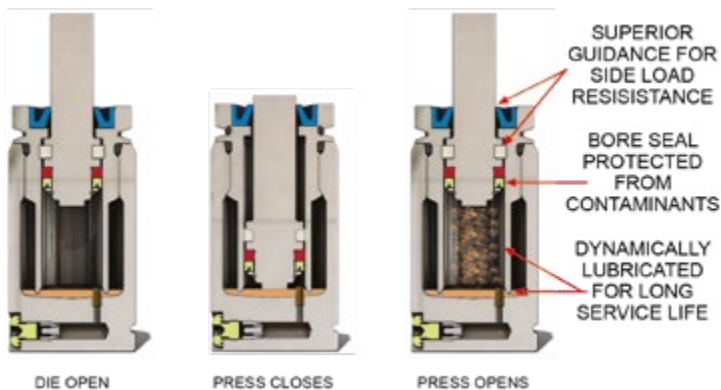
Product Value

The ideal Gas Spring for maximum life, the TNK 400 XP Series is designed for use in applications where long service life is important. The TNK 400 offers superior guidance for side load resistance, a bore seal for contamination resistance, and dynamic lubrication for long service life. The TNK 400 HS has all the features of the TNK 400 with the added benefit of being designed for high speed production environments.

Product 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.
- Preloaded by gas pressure. Does not require compression in the die to preload.
- Available as self-contained or in a hoses system.
- Variety of mounting options provides flexibility in die design.

Dynamic Lubrication Extends Gas Spring Life



The patented dynamic lubrication system coats the Gas Spring wall, piston and seal with oil on every stroke of the press to reduce heat build-up and lower operating temperature, which in turn, reduces wear on die components and extends performance life.

Product Specifications

Pressure Medium	Nitrogen
Force increase by temperature (%/°C)	0.3
Max. charging pressure (bar at 20°C)	150
Min. operating temperature (°C)	0
Max. operating temperature (°C)	80
Max. piston rod velocity (m/s)	1.6

Ordering Options

TNK 400	x	.25		HS
Model		STROKE (in)		
TNK-400		See Dimensional Information Charts		
TNK 400	x	.25		HS
Model		STROKE (in)		
TNK-400 HS		See Dimensional Information Charts		

All Gas Springs shipped at maximum charge pressure unless otherwise specified.

Repair Kits

Post Series	Order Number*
TNK 400 Series	56-072-7000
TNK 400 HS Series	56-072-7000-HS

*Replacement Gas Spring sold separately.

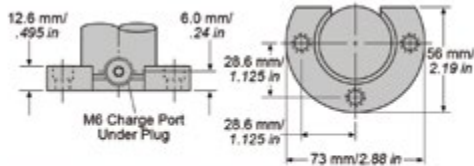
Recommended Hose System

Micro24TM Hose & Tube System

- See catalog for full details.

TNK 400 Flange Mount

- To order Cylinder with Flange, specify “-FI” (for top counterbore) or “-FH” (for bottom counterbore) after the Order Number. Example: TNK 400X1.00-FH.
- To order Flanges only - **56-072-2002**
- To order locking wire only - **56-072-2004**



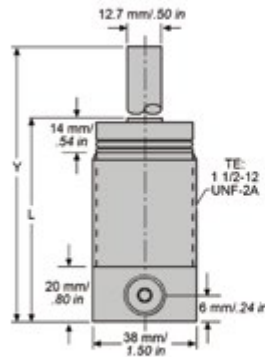
NOTES:

- 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

- To order Cylinder with lock nut, specify “-TE” after the Order Number. Example: TNK 400X1.00-TE.
- To order lock nut only - **56-072-2013**



NOTES:

- One lock nut is included with each threaded body spring.
- The TNK 400-TE can be threaded into the die Gas Spring port from the piston rod end only.

Gas Spring Model	Page
TNK 400	218
TNK 400 HS	220

Available in forces between 6,655 N (1,496 lbf) and 6,730 N (1,513 lbf). TNK 400 are ideal for high performance.

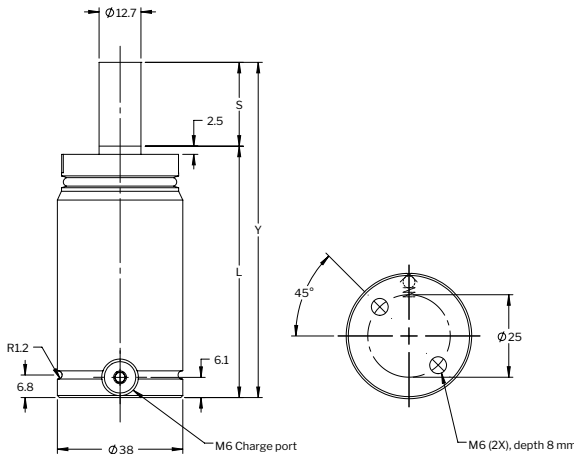
A variety of mounting options provides flexibility in die design. TNK 400 are available as self-contained or in a hoses system.



Basic Information

For general information see “About Gas Springs”.

Min. charging pressure (at 20°C)	25 bar
Max. charging pressure (at 20°C)	150 bar
Contact Force at max. pressure (N)	3940
Contact Force at max. pressure (lbf)	885
Recommended max strokes/min (at 20°C)	~ 80-100
Cylinder diameter (mm)	38
Charge port	M6
Repair kit	56-072-7000
Operating temperature	0 to +80°C
Max piston rod velocity	0.58 m/s
Force increase by temperature	±0.3%/°C
Pressure medium	Nitrogen



Order Number Model X Stroke	Stroke		Initial Contact Force*		Full Stroke Force		Cylinder Height		Body Height		Gas vol. ℓ	Weight	
	S		N	lbf.	N	lbf.	Y ±0.25	Y ±0.010	L			kg	lb
	mm	in					mm	in	mm	in			
Preferred Stroke Lengths (optimal delivery)													
TNK 400X.50	12.7	0.50	3940	885	6699	1506	76.2	3.0	63.5	2.50	0.008	0.411	0.91
TNK 400X.75	19.0	0.75			6708	1508	88.9	3.5	69.9	2.75	0.012	0.442	0.98
TNK 400X1.00	25.4	1.00			6717	1510	101.6	4.0	76.2	3.00	0.016	0.474	1.04
TNK 400X1.50	38.1	1.50			6726	1512	127.0	5.0	88.9	3.50	0.024	0.537	1.18
TNK 400X2.00	50.8	2.00	6730	1513	152.4	6.0	101.6	4.00	0.032	0.599	1.32		
Alternative Stroke Lengths													
TNK 400X.25	12.7	0.50	3940	885	6699	1506	76.2	3.0	63.5	2.50	0.008	0.411	0.84
TNK 400X.50	63.5	2.50			6730	1513	177.8	7.0	114.3	4.50	0.040	0.662	0.91
TNK 400X2.50	76.2	3.00			6730	1513	203.2	8.0	127.0	5.00	0.048	0.724	1.46
TNK 400X3.00	50	1.97			8,000	1,800	145	5.71	195	7.68	0.032	0.31	1.60

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



Mounting Possibilities



Top Mount



Base Mount



Foot Mount

Recommended Flanges

See page 217 for information about Flanges.

Note!

For dimensions on all mounting flanges, refer to “Flanges” in chapter 3.

TNK 400HS provides full stroke force between 4,391 N (1,150 lbf) and 4,5690 N (1,278 lbf) and is available in four stroke lengths.

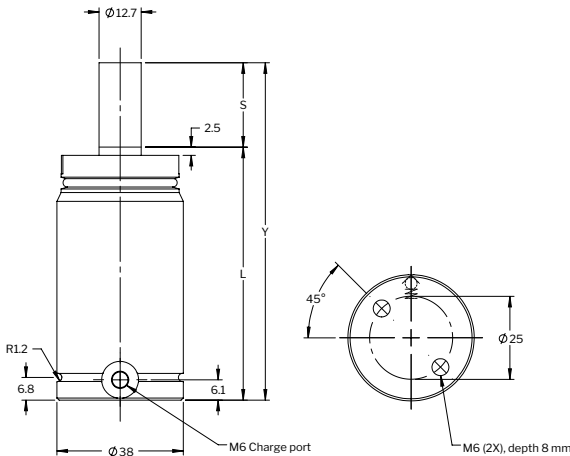
A variety of mounting options provides flexibility in die design. TNK 400HS are available as self-contained or in a hoses system.



Basic Information

For general information see “About Gas Springs”.

- Min. charging pressure (at 20°C) 25 bar
- Max. charging pressure (at 20°C) 150 bar
- Contact Force at max. pressure (N) 3940
- Contact Force at max. pressure (lbf) 885
- Recommended max strokes/min (at 20°C) 600 spm at .25" working stroke
- For alternative working strokes please consult with Hyson inside sales
- Cylinder diameter (mm) 38
- Charge port M6
- Repair kit 56-072-7000-HS
- Operating temperature 0 to +80°C
- Max piston rod velocity 0.58 m/s
- Force increase by temperature ±0.3%/°C
- Pressure medium Nitrogen



Order Number Model X Stroke	Stroke		Initial Contact Force*		Full Stroke Force		Cylinder Height		Body Height		Gas vol. ℓ	Weight	
	S		N	lbf.	N	lbf.	Y ± 0.25 Y ± 0.010		L			kg	lb
	mm	in					mm	in	mm	in			
TNK 400X.25 HS	6.3	0.25	3940	885	4391	1150	82.5	3.25	76.2	3.00	0.016	0.455	1.00
TNK 400X.50 HS	12.7	0.50			4392	1222	114.3	4.50	101.6	4.00	0.032	0.562	1.24
TNK 400X.75 HS	19.0	0.75			4392	1259	146.1	5.75	127.0	5.00	0.048	0.668	1.47
TNK 400X1.00 HS	25.4	1.00			4569	1278	152.0	6.00	127.0	5.00	0.048	0.674	1.49

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

Mounting Possibilities



Top Mount



Base Mount



Foot Mount

Recommended Flanges

See page 217 for information about Flanges.

Note!

For dimensions on all mounting flanges, refer to “Flanges” in chapter 3.