



## T3F Series

T3F-750 to T3F-2400

Compact, High Force Gas Springs



### Product Value

- The highest force nitrogen Gas Spring in the smallest space.
- Meets FCA Global Die Engineering Standards.

### Product Features

- 750 model: G 1/8 Port with M6 Charge port.
- 1000, 1500 and 2400 models: G 1/8 Charging ports.
- Deeper bottom threads when compared to T3 Series.
- 10mm height difference when compared to T3 Series.
- Powerful contact forces ranging from 7400 to 24000 N (1665-5395 lbf).



## Product Specifications

Pressure medium .....	Nitrogen
Max. charging pressure .....	150 bar (at 20° C)
Min. charging pressure .....	150 bar
Operating temperature .....	0° to 80°C
Force increase by temperature .....	±0.3% per °C
Recommended max strokes/min .....	~30-100 @20 °C
Max piston rod velocity .....	1.6 m/s

## Ordering Options

T3F-Model size	X	Stroke Length
T3F-750	X	See
T3F-1000		Dimensional
T3F-1500		Information
T3F-2400		Charts

## Ordering Options for FCA

Model	X	Stroke	X	Charge Pressure
T3F-750	X	See	X	See note
T3F-1000		Dimensional		
T3F-1500		Information		
T3F-2400		Charts		

**Note!** FCA Global Die Engineering standards require 120 bar/1750 psi charge pressure. All orders shipped at full charge pressure (150 bar/2175 psi) unless otherwise noted on purchase order.

## T3F Charge Fittings

Gas Springs	X	Order Number
T3F-750	X	T2-770-T3
T3F-1000		
T3F-1500		T2-770-G 1/8-P
T3F-2400		

## Repair Kits

Gas Spring	Order Number
T3F-750	T3SK-750
T3F-1000	T3SK-1000
T3F-1500	T3SK-1500
T3F-2400	T3SK-2400

Gas Spring Model	Page
T3F-750	112
T3F-1000	114
T3F-1500	116
T3F-2400	118

T3F-750 provides full stroke force between 11,700 N (2,655 lbf) and 12,100 N (2,720 lbf) and is available in 13 stroke lengths.

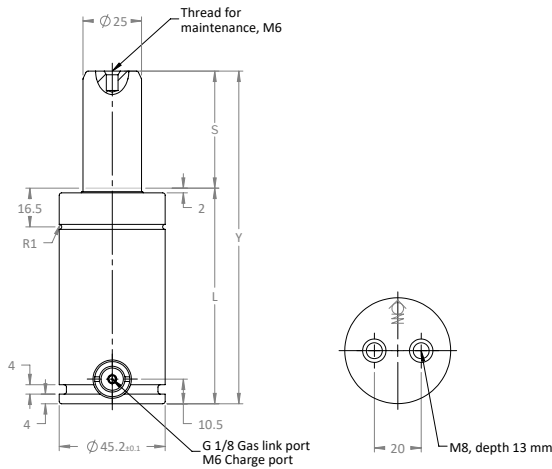
Strokes 50, 80, and 100 are offered as a part of the Hyson Preferred Program which provides optimal delivery.



### 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)	7400
Contact Force at max. pressure (lbf)	1665
Recommended max strokes/min (at 20°C)	~ 50-100
Cylinder diameter (mm)	45
Charge port	G 1/8"
Repair kit	T3SK-750
Min operating temperature	0°C
Max operating temperature	80°C
Max piston rod velocity	1.6 m/s
Force increase by temperature	±0.3%/°C
Pressure medium	Nitrogen



Order Number Model X Stroke	Stroke		Contact Force*		Full Stroke Force*		Cylinder Height		Body Height		Gas vol. ℓ	Weight	
	S		N	lbf.	N	lbf.	Y ±0.25		L			kg	lb
	mm	in					mm	in	mm	in			
<b>Preferred Stroke Lengths (optimal delivery)</b>													
T3F-750x50	50	1.97	7400	1665	11800	2655	142	5.59	92	3.62	0.07	0.71	1.565
T3F-750x80	80	3.15			11900	2675	202	7.95	122	4.80	0.11	0.90	1.984
T3F-750x100	100	3.94			11900	2675	242	9.53	142	5.59	0.13	1.03	2.271
<b>Alternative Stroke Lengths</b>													
T3F-750x10	10	0.39	7400	1665	12100	2720	62	2.44	52	2.05	0.02	0.47	1.036
T3F-750x13	13	0.51			12100	2720	68	2.68	55	2.17	0.02	0.49	1.080
T3F-750x16	16	0.63			12100	2720	74	2.91	58	2.28	0.03	0.51	1.124
T3F-750x19	19	0.75			11700	2630	80	3.15	61	2.40	0.03	0.51	1.124
T3F-750x25	25	0.98			11800	2655	92	3.62	67	2.64	0.04	0.55	1.213
T3F-750x32	32	1.26			11800	2655	106	4.17	74	2.91	0.05	0.60	1.323
T3F-750x38	38	1.50			11800	2655	118	4.65	80	3.15	0.05	0.64	1.411
T3F-750x63	63	2.48			11800	2655	168	6.61	105	4.13	0.09	0.79	1.742
T3F-750x75	75	2.95			11900	2675	192	7.56	117	4.61	0.10	0.87	1.918
T3F-750x125	125	4.92			11900	2675	292	11.50	167	6.57	0.17	1.19	2.624

\* At full charge



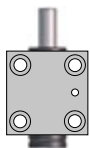
## Mounting Possibilities



Body  $\varnothing_{\pm 0.05}^{+0.05}$   
Top mount  
FC, FCS, FCSC



Foot mount  
FFC, LM-lug, L



Body mount  
HMF

## Recommended Flanges



FC-500



235



FCS-500



238



FFC-500



240



HMF-500



243

## Additional Flanges



FCSC-500



239



LM-LUG-500



242



L-500



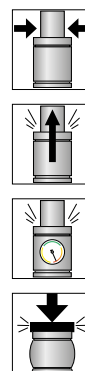
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### Note!

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

**T3F-1000 provides full stroke force between 13,800 N (3,100 lbf) and 14,800 N (3,330 lbf) and is available in 12 stroke lengths.**

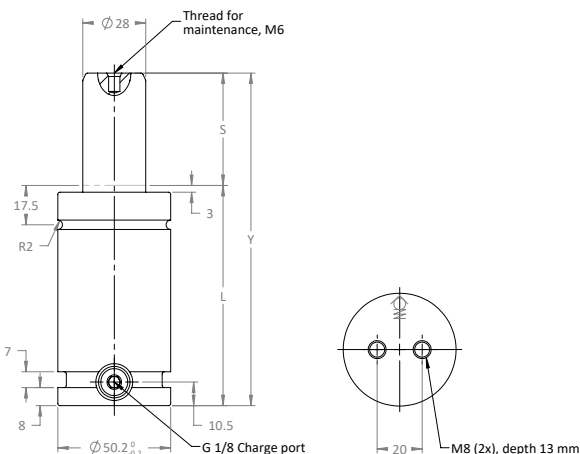
Strokes 50, 80, 100 and 125 are offered as a part of the Hyson Preferred Program which provides optimal delivery.



### 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) .....	9200
Contact Force at max. pressure (lbf) .....	2068
Recommended max strokes/min (at 20°C) .....	~ 50-100
Cylinder diameter (mm) .....	50
Charge port .....	G 1/8”
Repair kit .....	T3SK-1000
Min operating temperature .....	0°C
Max operating temperature .....	80°C
Max piston rod velocity .....	1.6 m/s
Force increase by temperature .....	±0.3%/°C
Pressure medium .....	Nitrogen



Order Number Model X Stroke	Stroke		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			
<b>Preferred Stroke Lengths (optimal delivery)</b>													
T3F-1000x50	50	1.97	9200	2070	146000	3280	148	5.83	98	3.86	0.09	0.98	2.161
T3F-1000x80	80	3.15			148000	3325	208	8.19	128	5.04	0.14	1.22	2.690
T3F-1000x100	100	3.94			148000	3325	248	9.76	148	5.83	0.17	1.41	3.109
T3F-1000x125	125	4.92			148000	3325	298	11.73	173	6.81	0.21	1.60	3.527
<b>Alternative Stroke Lengths</b>													
T3F-1000x13	13	0.51	9200	2070	138000	3105	74	2.91	61	2.40	0.03	0.70	1.543
T3F-1000x16	16	0.63			138000	3105	80	3.15	64	2.52	0.04	0.72	1.587
T3F-1000x19	19	0.75			140000	3145	86	3.39	67	2.64	0.04	0.74	1.631
T3F-1000x25	25	0.98			142000	3190	98	3.86	73	2.87	0.05	0.79	1.742
T3F-1000x32	32	1.26			143000	3215	112	4.41	80	3.15	0.06	0.84	1.852
T3F-1000x38	38	1.50			145000	3260	124	4.88	86	3.39	0.07	0.89	1.962
T3F-1000x63	63	2.48			147000	3305	174	6.85	111	4.37	0.11	1.09	2.403
T3F-1000x75	75	2.95			147000	3305	198	7.80	123	4.84	0.13	1.18	2.601

\* At full charge



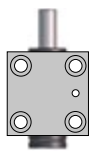
## Mounting Possibilities



Body  $\varnothing_{+0.5}^{-2.0}$   
Top mount  
FC, FCS,  
FCSC



Foot mount  
FFC, SF, LM-lug, L



Body mount  
HM, HMF, S



Base mount  
MP, RM

## Recommended Flanges



FC-750



235



FCS-750



238



FFC-750



240



HMF-750



243



MP-750



246



S-750



248

## Additional Flanges



FCSC-750



239



SF-750



249



HM-750



242



LM-LUG-750



242



L-750



244



RM-750



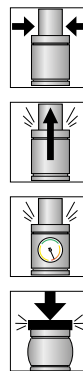
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### Note!

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

**T3F-1500 provides full stroke force between 23,800 N (5,350 lbf) and 24,300 N (5,460 lbf) and is available in 12 stroke lengths.**

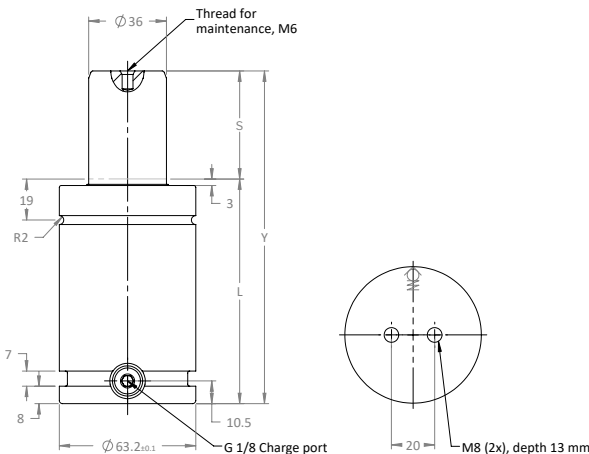
Strokes 50, 80, 100 and 125 are offered as a part of the Hyson Preferred Program which provides optimal delivery.



### 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) .....	15000
Contact Force at max. pressure (lbf) .....	3370
Recommended max strokes/min (at 20°C) .....	~ 50-100
Cylinder diameter (mm) .....	63
Charge port .....	G 1/8"
Repair kit .....	T3SK-1500
Min operating temperature .....	0°C
Max operating temperature .....	80°C
Max piston rod velocity .....	1.6 m/s
Force increase by temperature .....	±0.3%/°C
Pressure medium .....	Nitrogen



Order Number Model X Stroke	Stroke		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			
<b>Preferred Stroke Lengths (optimal delivery)</b>													
T3F-1500x50	50	1.97	9200	2070	24000	5395	154	6.06	104	4.09	0.15	1.39	3.064
T3F-1500x80	80	3.15			24200	5440	214	8.43	134	5.28	0.24	1.49	3.285
T3F-1500x100	100	3.94			24300	5465	254	10.00	154	6.06	0.29	2.12	4.674
T3F-1500x125	125	4.92			24300	5465	304	11.97	179	7.05	0.36	2.39	5.269
<b>Alternative Stroke Lengths</b>													
T3F-1500x13	13	0.51	9200	2070	24000	5395	80	3.15	67	2.64	0.05	1.14	2.513
T3F-1500x16	16	0.63			24100	5420	86	3.39	70	2.76	0.06	1.27	2.800
T3F-1500x19	19	0.75			24200	5440	92	3.62	73	2.87	0.07	1.28	2.822
T3F-1500x25	25	0.98			24300	5365	104	4.09	79	3.11	0.08	1.28	2.822
T3F-1500x32	32	1.26			23800	5355	118	4.65	86	3.39	0.11	1.33	2.932
T3F-1500x38	38	1.50			23900	5375	130	5.12	92	3.62	0.12	1.35	2.976
T3F-1500x63	63	2.48			24100	5420	180	7.09	117	4.61	0.19	1.43	3.153
T3F-1500x75	75	2.95			24200	5440	204	8.03	129	5.08	0.22	1.48	3.263

\* At full charge



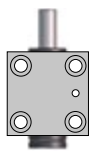
## Mounting Possibilities



Body  $\varnothing_{+0.5}^{-2.0}$   
Top mount  
FCS, FCSC



Foot mount  
FFC, SF,  
LM-lug, L



Body mount  
HMF



Base mount  
MP

## Recommended Flanges



FCSX-1500



238



FFX-1500



240



HMF-1500



243



MPX-1500



246

## Additional Flanges



FCSCX-1500



239



SFX-1500



249



LMX-1500



242



L-T3-1500



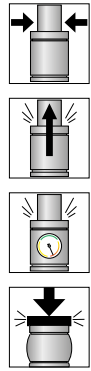
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### Note!

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

**T3F-2400 provides full stroke force between 38,300 N (8,610 lbf) and 39,300 N (8,835 lbf) and is available in 11 stroke lengths.**

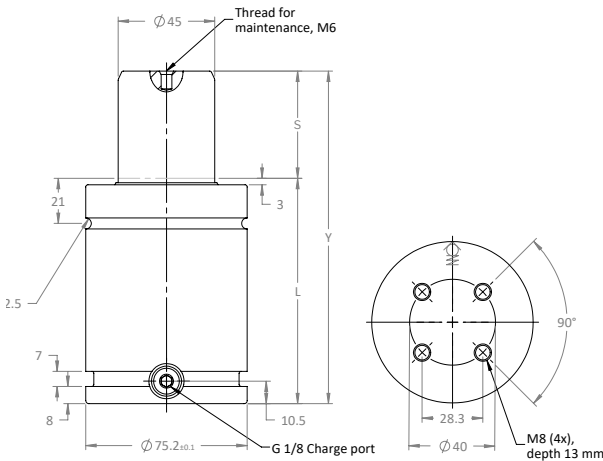
Strokes 50, 80, 100 and 125 are offered as a part of the Hyson Preferred Program which provides optimal delivery.



### 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) .....	24000
Contact Force at max. pressure (lbf) .....	5395
Recommended max strokes/min (at 20°C) .....	~ 40-100
Cylinder diameter (mm) .....	75
Charge port .....	G 1/8"
Repair kit .....	T3SK-2400
Min operating temperature .....	0°C
Max operating temperature .....	80°C
Max piston rod velocity .....	1.6 m/s
Force increase by temperature .....	±0.3%/°C
Pressure medium .....	Nitrogen



Order Number Model X Stroke	Stroke		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			
<b>Preferred Stroke Lengths (optimal delivery)</b>													
T3F-2400x50	50	1.97	9200	2070	39200	8815	155	6.10	105	4.13	0.23	2.23	4.916
T3F-2400x80	80	3.15			39200	8815	215	8.46	135	5.31	0.35	2.72	5.997
T3F-2400x100	100	3.94			39300	8835	255	10.04	155	6.10	0.43	3.05	6.724
T3F-2400x125	125	4.92			39300	8835	305	12.01	180	7.09	0.54	3.47	7.650
<b>Alternative Stroke Lengths</b>													
T3F-2400x16	16	0.63	9200	2070	38300	8610	87	3.43	71	2.80	0.09	1.66	3.660
T3F-2400x19	19	0.75			38500	8655	93	3.66	74	2.91	0.10	1.71	3.770
T3F-2400x25	25	0.98			38700	8700	105	4.13	80	3.15	0.13	1.81	3.990
T3F-2400x32	32	1.26			38600	8680	119	4.69	87	3.43	0.16	1.93	4.255
T3F-2400x38	38	1.50			38400	8635	131	5.16	93	3.66	0.18	2.03	4.475
T3F-2400x63	63	2.48			39200	8815	181	7.13	118	4.65	0.28	2.44	5.379
T3F-2400x75	75	2.95			39200	8815	205	8.07	130	5.12	0.33	2.64	5.820

\* At full charge



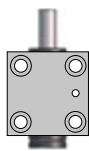
## Mounting Possibilities



Body  $\varnothing_{+0.5}^{-2.0}$   
Top mount  
FC, FCS,  
FCSC



Foot mount  
FFC, SC, LM-lug, L



Body mount  
HM, S



Base mount  
MP, RM

## Recommended Flanges



FC-1500

235



FCS-1500

238



FFC-1500

240



FFC-3000

243



MP-1500

246



S-1500

248

## Additional Flanges



FCSC-1500

239



SF-1500

249



HM-1500

242



LM-LUG-1500

242



L-1500

244



RM-1500

247

### Note!

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