

# T2 SC Series



**Featuring:**

- Now with nine models and additional stroke lengths.
- A 1-inch diameter spring with 4250 N/955 lb. contact force.
- Stroke lengths to 50 mm/1.97 in.
- Ideal for heavy gauge blanking, piercing, stripping, shallow depth drawing, embossing and knock-out applications.
- Bore seal design delivers high forces in small areas.

**Hyson™ Products**  
Associated Spring 

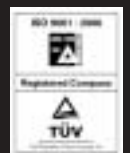




Table of Contents	Page
Product Specifications.....	3
Ordering Information.....	3
T2SC-420.....	4
T2SC-740.....	5
T2SC-1000 & 1800.....	6
T2SC-2900.....	8
T2SC-4700 & 7500.....	10
T2SC-11800 & 18300.....	12
Hosed System Mode.....	14
Accessories.....	15

## Product Specifications

Pressure Medium.....	Nitrogen Gas
Charging Pressure Range.....	Max. 150 bar/2175 psi Min. 25 bar/360 psi
Maximum Operating Temperature.....	80° C/176° F
Maximum Operating Speed.....	80-100 spm (model and stroke dependent)
Maximum Piston Rod Velocity.....	30 m/min./98 ft/min.
Maximum Utilized Stroke.....	100%
Mode of Operation .....	T2SC-420 and T2SC-740 self-contained only. T2SC-1000 through T2SC-18300 self-contained or hosed system.
All models except T2SC-420 and T2SC-740 are field repairable.	

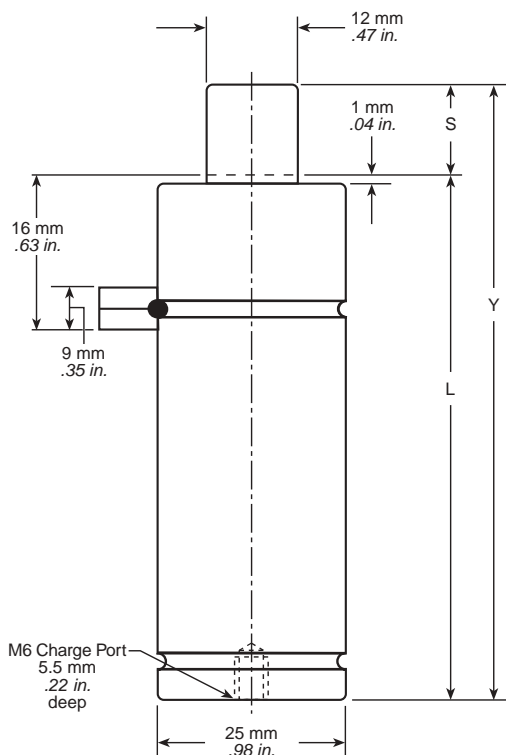
## T2SC Ordering Options

T2SC-4700 X 25 - FC - 2175

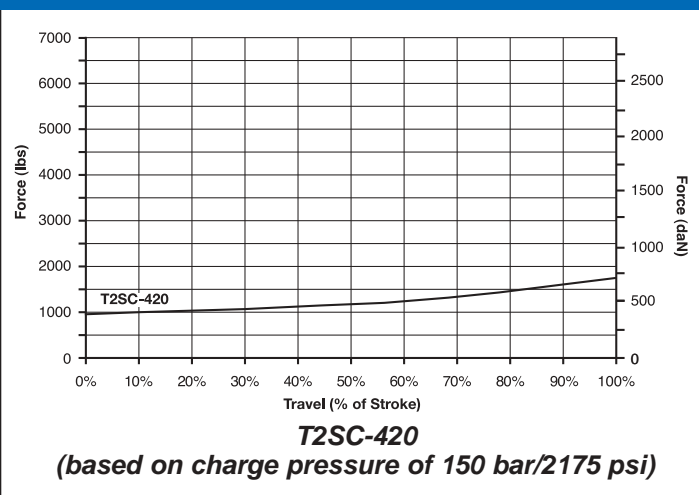
Model X Stroke (See Dimensional Charts)	Mount	Charge Pressure*
	FC	
	FCS	
	FK	
	BF	
	BFP	
	SP	

\*All gas springs shipped at maximum charge pressure unless otherwise specified.

# T2SC-420



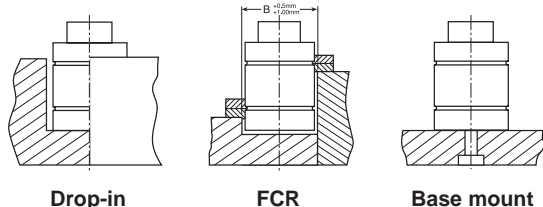
T2SC-420 Force Chart



## T2SC-420 Dimensional Information

Order No.	Stroke S		Contact Force		Full Stroke Force		Y		L	
	mm	in.	N	lbs.	N	lbs.	mm	in.	mm	in.
T2SC-420X6	6	0.24	4250	955	7000	1575	56	2.20	50	1.97
T2SC-420X10	10	0.39			6900	1550	70	2.76	60	2.36
T2SC-420X16	16	0.63			6900	1550	91	3.58	75	2.95
T2SC-420X25	25	0.98			6900	1550	120	4.72	95	3.74
T2SC-420X32	32	1.26			7600	1700	140	5.51	108	4.25
T2SC-420X40	40	1.57			7600	1700	165	6.50	125	4.92
T2SC-420X50	50	1.97			7600	1700	195	7.68	145	5.71

## Mounting Styles

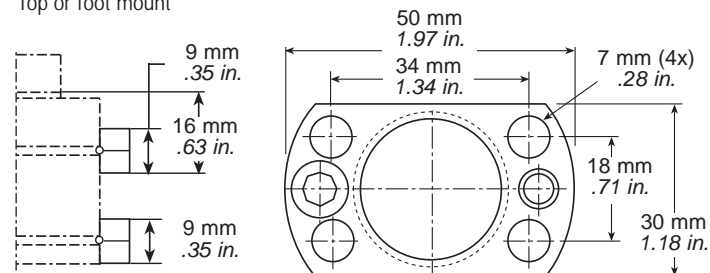


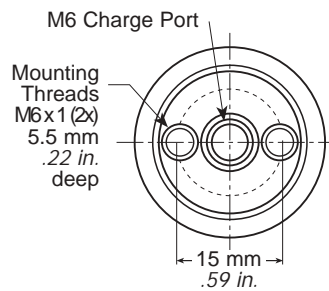
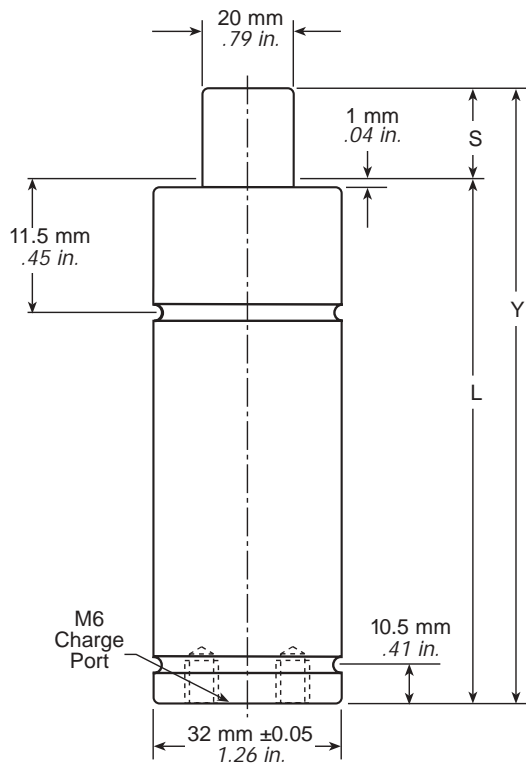
**Note:** Hyson Products recommends that T2 gas springs are backed up at all times. Stroke lengths of 25 mm/0.98 in. or greater should be base or flange mounted.

## Mount

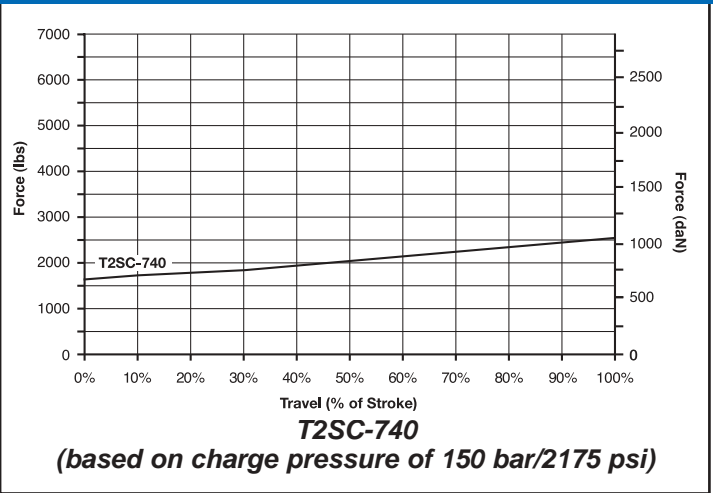
### FCR

Top or foot mount





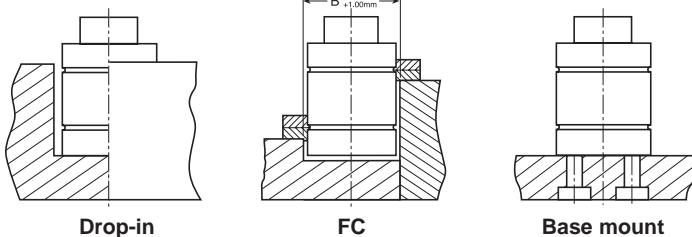
T2SC-740 Force Chart



T2SC-740 Dimensional Information

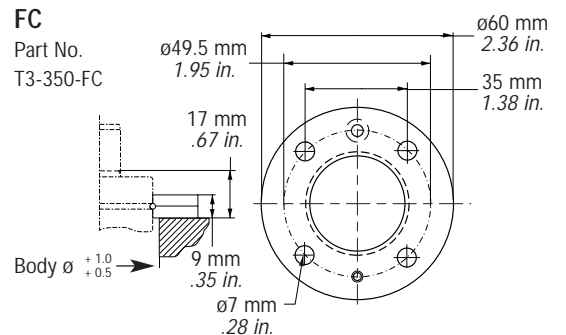
Order No.	Stroke S		Contact Force		Full Stroke Force		Y		L	
	mm	in.	N	lbs.	N	lbs.	mm	in.	mm	in.
T2SC-740X6	6	0.24	7400	1665	9800	2205	63	2.48	57	2.24
T2SC-740X10	10	0.39			10000	2250	75	2.95	65	2.56
T2SC-740X16	16	0.63			11000	2475	93	3.66	77	3.03
T2SC-740X25	25	0.98			12000	2700	120	4.72	95	3.74
T2SC-740X32	32	1.26			12000	2700	140	5.51	108	4.25
T2SC-740X40	40	1.57			12000	2700	165	6.50	125	4.92
T2SC-740X50	50	1.97			12000	2700	195	7.68	145	5.71

Mounting Styles

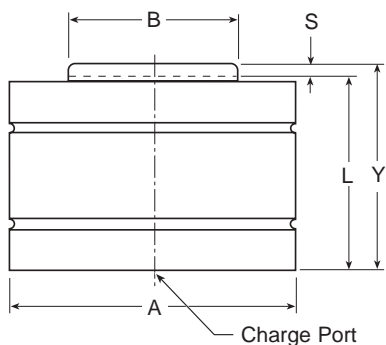


Note: Hyson Products recommends that T2 gas springs are backed up at all times. Stroke lengths of 25 mm/0.98 in. or greater should be base or flange mounted.

Mount

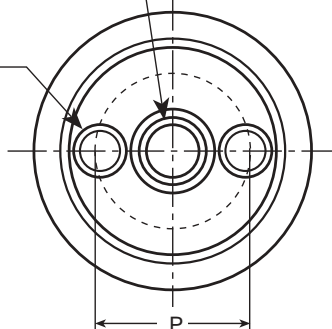


# T2SC-1000 & 1800

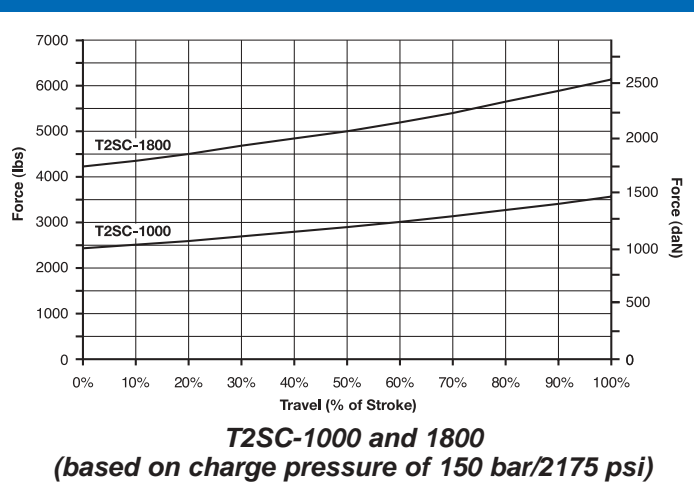


T2SC 1000: M6 Charge Port  
T2SC 1800: G1/8 Charge Port

Mounting  
Threads  
M6 x 1 (2x)  
6.5 mm deep  
.26 in.



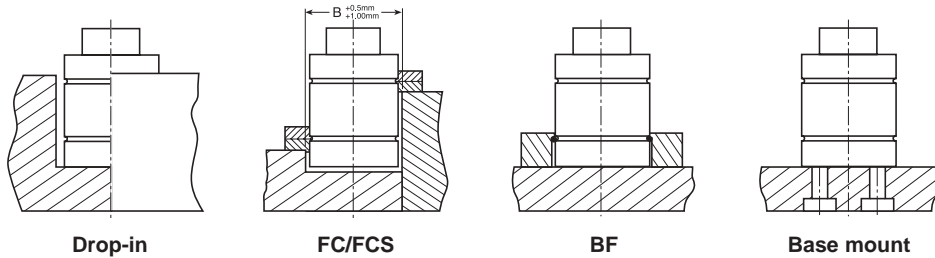
T2SC-1000 & 1800 Force Chart



T2SC-1000 & 1800 Dimensional Information

Order No.	Stroke S		Contact Force		Full Stroke Force		A		B		Y		L		P	
	mm	in.	N	lbs.	N	lbs.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
T2SC-1000X6	6	0.24	10580	2380	15980	3595	38	1.50	20	0.79	61	2.40	55	2.17	17	0.67
T2SC-1000X10	10	0.39									78	3.07	68	2.68		
T2SC-1000X16	16	0.63									100	3.94	84	3.31		
T2SC-1000X25	25	0.98									135	5.31	110	4.33		
T2SC-1000X32	32	1.26									167	6.57	135	5.31		
T2SC-1000X40	40	1.57									195	7.68	155	6.10		
T2SC-1000X50	50	1.97									230	9.08	180	7.09		
T2SC-1800X6	6	0.24	17980	4045	24980	5620	50.1	1.97	30	1.18	66	2.60	60	2.36	26	1.02
T2SC-1800X10	10	0.39			25980	5845					80	3.15	70	2.76		
T2SC-1800X16	16	0.63			25980	5845					106	4.17	90	3.54		
T2SC-1800X25	25	0.98			26980	6070					135	5.31	110	4.33		
T2SC-1800X32	32	1.26			26980	6070					162	6.38	130	5.12		
T2SC-1800X40	40	1.57			27980	6295					190	7.48	150	5.91		
T2SC-1800X50	50	1.97			28980	6520					220	8.66	170	6.69		

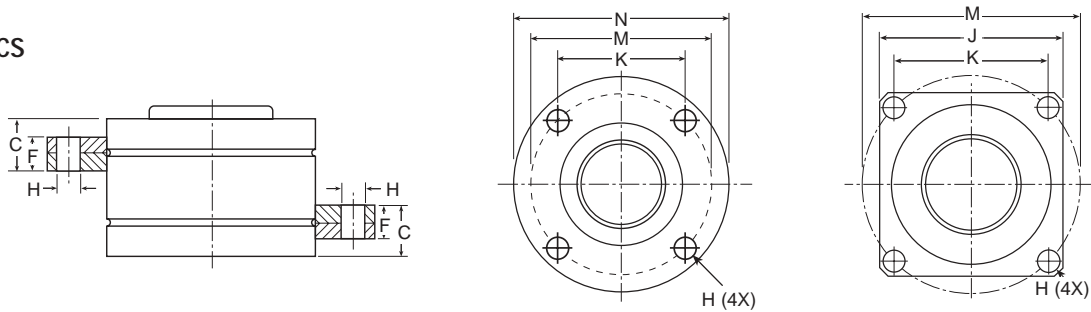
## Mounting Styles



**Note:** Hyson Products recommends that T2 gas springs be backed up at all times. Stroke lengths of 25 mm/0.98 in. or greater should be base or flange mounted.

## Mounts

### FC, FCS

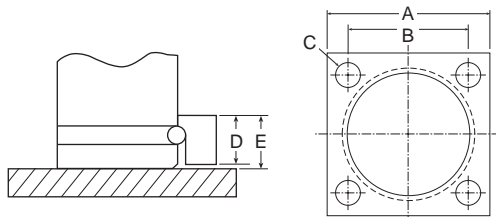


**Note:** These flange mounts are attached to the top groove unless otherwise specified.

### FC, FCS Dimensions

Model	Order No.	C		F		H		J		K		M		N	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
T2SC-1000	T2-250-FC, T2-250-FCS	15	0.59	9	0.35	7	0.28	52	2.05	40	1.57	56.5	2.22	68	2.68
T2SC-1800	T2-750-FC, T2-750-FCS	21	0.83	13	0.51	9	0.35	70	2.76	56.5	2.22	80	3.15	95	3.74

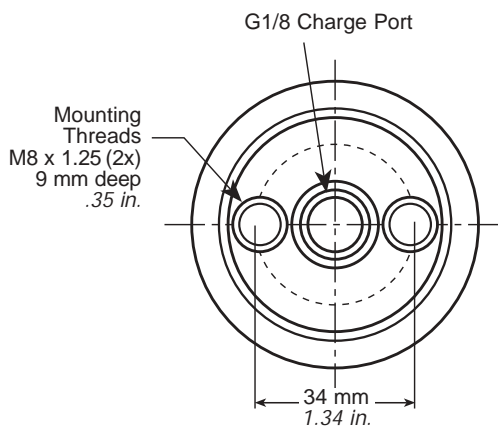
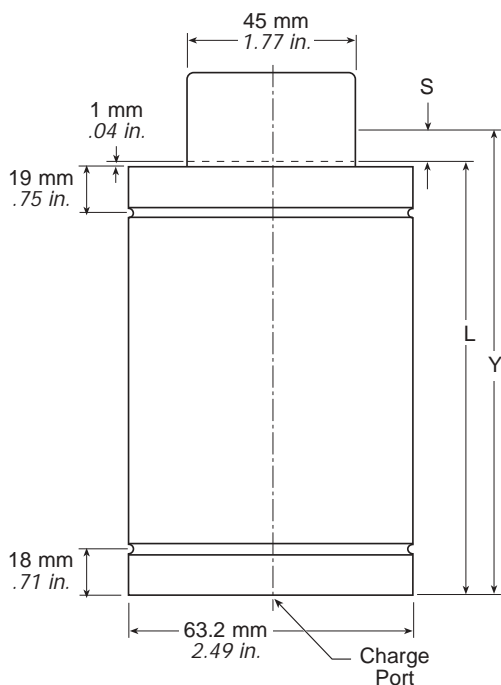
### BF



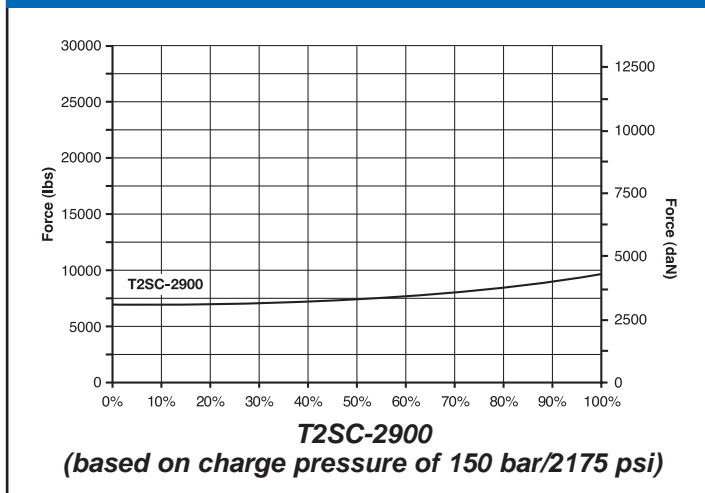
### BF Dimensions

Model	Order No.	A		B		C		D		E	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
T2SC-1000	T2SC-1000-BF	52	2.05	40	1.57	7	0.28	14.5	0.57	15	0.59
T2SC-1800	T2SC-1800-BF	70	2.76	56.5	2.22	9	0.35	19.5	0.77	20	0.79

# T2SC-2900



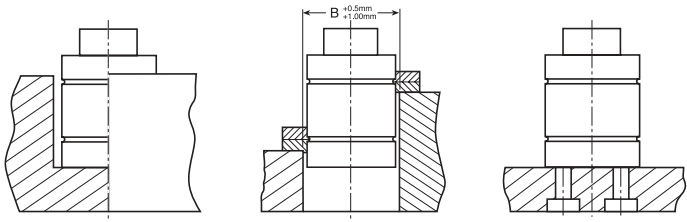
T2SC-2900 Force Chart



T2SC-2900 Dimensional Information

Order No.	Stroke S		Contact Force		Full Stroke Force		Y		L	
	mm	in.	N	lbs.	N	lbs.	mm	in.	mm	in.
T2SC-2900X10	10	0.39	29500	6640	38500	8660	85	3.35	75	2.95
T2SC-2900X16	16	0.63			41000	9225	103	4.06	87	3.43
T2SC-2900X25	25	0.98			43000	9675	130	5.12	105	4.13
T2SC-2900X32	32	1.26			44200	9945	150	5.91	118	4.65
T2SC-2900X40	40	1.57			45200	10170	175	6.89	135	5.31
T2SC-2900X50	50	1.97			45800	10300	205	8.07	155	6.10

**Mounting Styles**

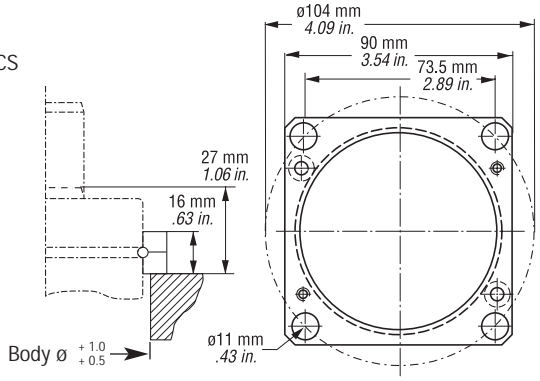


**Drop-in**      **FCS**      **Base mount**

**Note:** Hyson Products recommends that T2 gas springs are backed up at all times. Stroke lengths of 25 mm/0.98 in. or greater should be base or flange mounted.

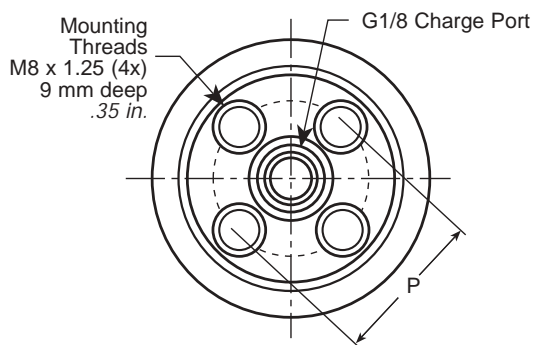
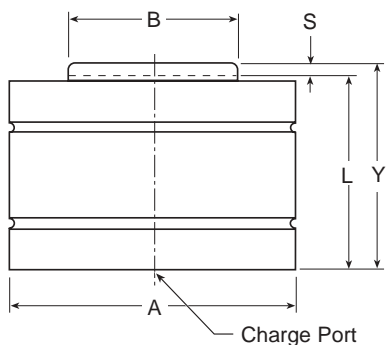
**Mount**

**FCS**  
 Part No.  
 T3-1500-FCS

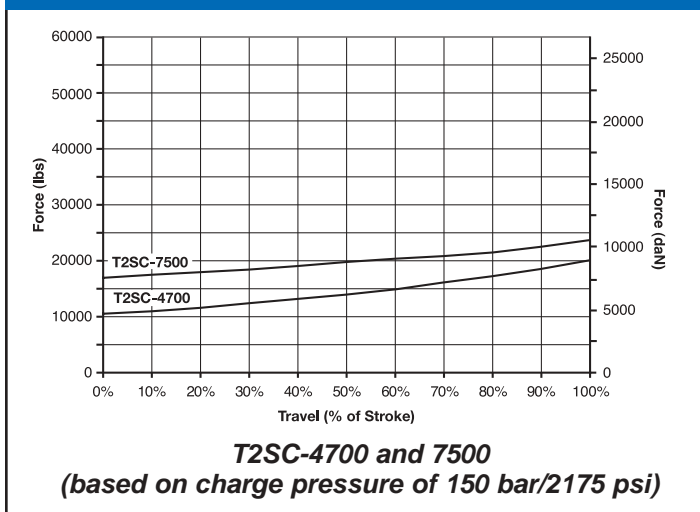


Body  $\varnothing$   $\begin{matrix} +1.0 \\ +0.5 \end{matrix}$

# T2SC-4700 & 7500



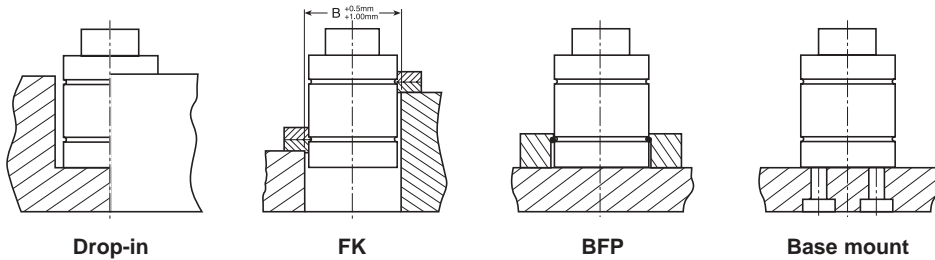
T2SC-4700 & 7500 Force Chart



T2SC-4700 & 7500 Dimensional Information

Order No.	Stroke S		Contact Force		Full Stroke Force		A		B		Y		L		P	
	mm	in.	N	lbs.	N	lbs.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
T2SC-4700X10	10	0.39	46980	10570	67120	15100	75.1	2.96	50	1.97	80	3.15	70	2.76	40	1.57
T2SC-4700X16	16	0.63			65790	14800					106	4.17	90	3.54		
T2SC-4700X25	25	0.98			68010	15300					135	5.31	110	4.33		
T2SC-4700X32	32	1.26			67120	15100					167	6.57	135	5.31		
T2SC-4700X40	40	1.57			67120	15100					200	7.87	160	6.30		
T2SC-4700X50	50	1.97			67120	15100					240	9.45	190	7.48		
T2SC-7500X10	10	0.39	74940	16860	104015	23400	95.1	3.74	55	2.17	90	3.54	80	3.15	52	2.05
T2SC-7500X16	16	0.63			104015	23400					116	4.57	100	3.94		
T2SC-7500X25	25	0.98			108900	24500					145	5.71	120	4.72		
T2SC-7500X32	32	1.26			104900	23600					182	7.17	150	5.91		
T2SC-7500X40	40	1.57			106680	24000					210	8.27	170	6.69		
T2SC-7500X50	50	1.97			105790	23800					255	10.24	205	8.07		

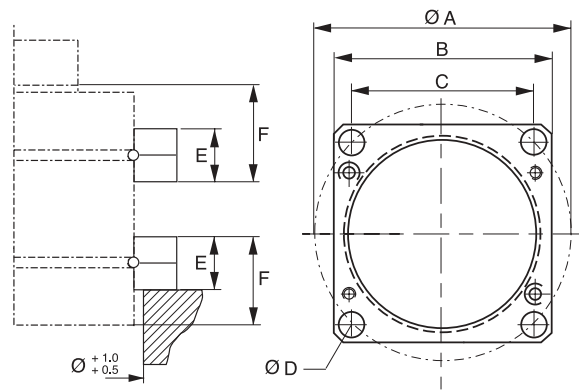
## Mounting Styles



Note: Hyson Products recommends that T2 gas springs are backed up at all times. Stroke lengths of 25 mm/0.98 in. or greater should be base or flange mounted.

## Mounts

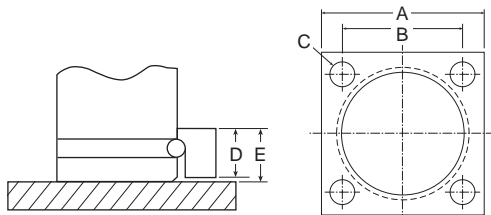
### FK



#### FK Dimensions

Model	Order No.	A		B		C		D		E		F	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
T2SC-4700	T2-1500-FK	104	4.09	90	3.54	73.5	2.89	11	0.43	16	0.63	26	1.02
T2SC-7500	T2-3000-FK	130	5.12	110	4.33	92	3.62	13.5	0.53	18	0.71	30	1.18

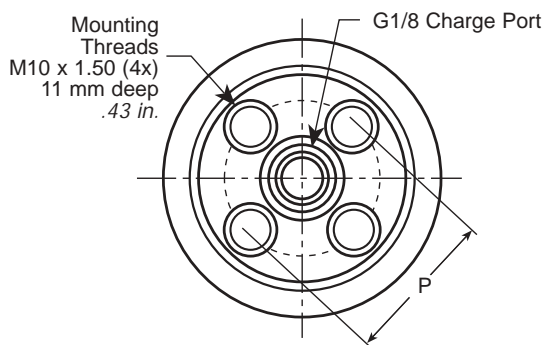
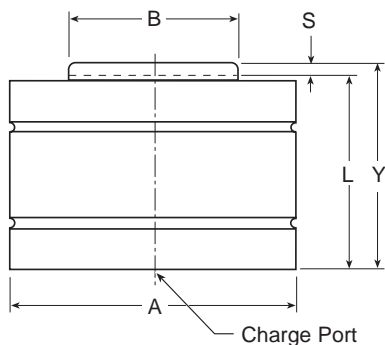
### BFP



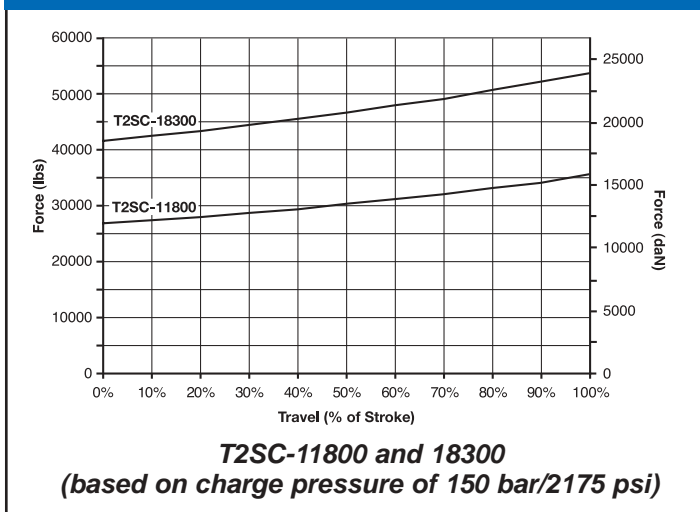
#### BFP Dimensions

Model	Order No.	A		B		C		D		E	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
T2SC-4700	T2SC-4700-BFP	90	3.54	73.5	2.89	11	0.43	24.5	0.96	25	0.98
T2SC-7500	T2SC-7500-BFP	110	4.33	92	3.62	13	0.51	27.5	1.08	28	1.10

# T2SC-11800 & 18300



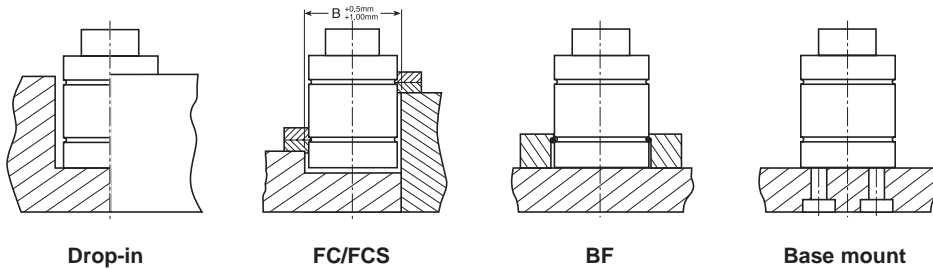
T2SC-11800 & 18300 Force Chart



T2SC-11800 & 18300 Dimensional Information

Order No.	Stroke S		Contact Force		Full Stroke Force		A		B		Y		L		P	
	mm	in.	N	lbs.	N	lbs.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
T2SC-11800X10	10	0.39	117925	26530	154685	34800	120.1	4.73	70	2.76	100	3.94	90	3.54	68	2.68
T2SC-11800X16	16	0.63			157800	35500					126	4.96	110	4.33		
T2SC-11800X25	25	0.98			169800	38200					155	6.10	130	5.12		
T2SC-11800X32	32	1.26			164020	36900					187	7.36	155	6.10		
T2SC-11800X40	40	1.57			164910	37100					220	8.66	180	7.09		
T2SC-11800X50	50	1.97			165800	37300					260	10.24	210	8.27		
T2SC-18300X10	10	0.39	182870	41140	234700	52800	150.1	5.91	90	3.54	110	4.33	100	3.94	90	3.54
T2SC-18300X16	16	0.63			251590	56600					136	5.35	120	4.72		
T2SC-18300X25	25	0.98			253810	57100					165	6.50	140	5.51		
T2SC-18300X32	32	1.26			250700	56400					197	7.76	165	6.50		
T2SC-18300X40	40	1.57			249810	56200					235	9.25	195	7.68		
T2SC-18300X50	50	1.97			254700	57300					270	10.63	220	8.66		

## Mounting Styles

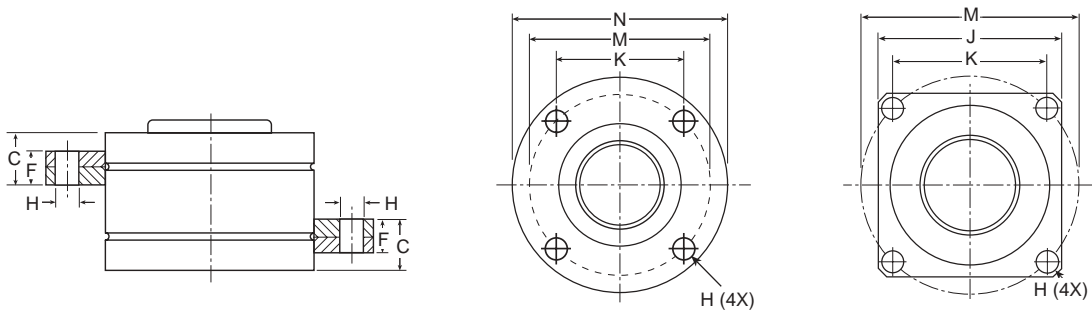


**Drop-in**                      **FC/FCS**                      **BF**                      **Base mount**

Note: Hyson Products recommends that T2 gas springs are backed up at all times. Stroke lengths of 25 mm/0.98 in. or greater should be base or flange mounted.

## Mounts

### FC, FCS

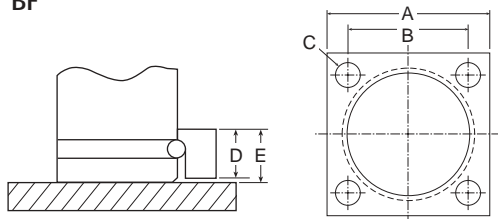


Note: These flange mounts are attached to the top groove unless otherwise specified.

### FC, FCS Dimensions

Model	Order No.	C		F		H		J		K		M		N	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
T2SC-11800	T2-5000-FC, T2-5000-FCS	33	1.30	21	0.83	13.5	0.53	130	5.12	109.5	4.31	155	6.10	175	6.89
T2SC-18300	T2-7500-FC, T2-7500-FCS	38	1.50	27	1.06	17.5	0.69	162	6.38	138	5.43	195	7.68	220	8.66

### BF



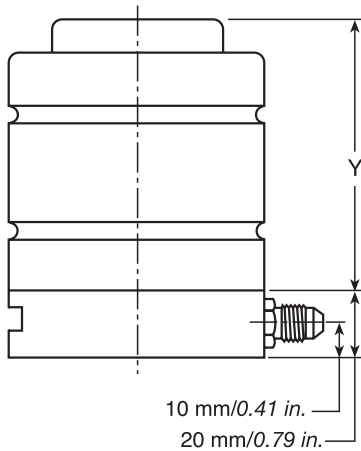
### BF Dimensions

Model	Order No.	A		B		C		D		E	
		mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
T2SC-11800	T2SC-11800-BF	130	5.12	109.5	4.31	13	0.51	29.5	1.16	30	1.18
T2SC-18300	T2SC-18300-BF	162	6.38	138	5.43	17.5	0.69	34.5	1.36	35	1.38

# Hosed System Mode

All T2SC gas springs, except the T2SC-420 and T2SC-740, can be used in a hosed system. A side port adapter plate is available for easy hose attachment. Prior to hosing, you must remove the inlet valve. These springs can operate in a hosed system without the adapter plate if the tool can accommodate hose fittings from the port in the base of the spring. When attaching the side port adapter plate, special flanges are available for additional mounting options.

## Hosed System Mount -SP



Model	Adapter Plate
T2SC-1000	T2SC-1000-SP
T2SC-1800	T2SC-1800-SP
T2SC-2900	T2SC-2900-SP
T2SC-4700	T2SC-4700-SP
T2SC-7500	T2SC-7500-SP
T2SC-11800	T2SC-11800-SP
T2SC-18300	T2SC-18300-SP

**NOTE:** When ordering the spring with the side port adapter plate, add the suffix -SP after the spring part number.

## Hose and Hose Fittings

To connect your T2SC gas spring in a hosed system mode, a G1/8 service fitting is required. Order NF-1000-4-G1/8 for JIC style or 9106252-F for o-ring face seal service fitting. Additional hose and hose fittings compatible with the service fittings mentioned are located in the T2 B Series catalog. A summary of all hose system accessory part numbers is listed below.

### Hose System Components Summary

	JIC System	O-ring Face Seal System
Control panel	CP-N2 LG	CP-N2 LG OR
Service fitting (one per spring required)	NF-1000-4-G1/8	9106252-F
Hose	ORH-4	ORH-4
Hose end	SHF-4	ORHF-4
6 spring distribution block	TANKMAN-6	TANKMAN-6OR
12 spring distribution block	TANKMAN-12	TANKMAN-12OR

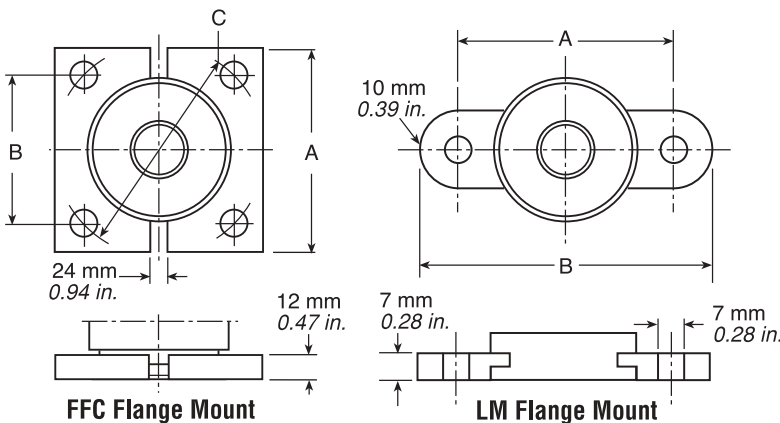
### Hose to hose connectors:

Union	NF-1100-4	ORF-1100-4
Union elbow	NF-2500-4	ORF-2500-4
Union tee	NF-3500-4	ORF-3500-4
Union cross	NF-5500-4	ORF-5500-4

### Hose to spring (service fitting) connectors:

Run tee	NF-3300-4	ORF-3300-4
45° elbow	NF-4500-4	---
90° elbow	NF-2000-4	ORF-2000-4
Branch tee	NF-3000-4	ORF-3000-4

## Bottom Flanges for use with side port adapter plate only



Spring Model	Flange Part Number	A		B		C	
		mm	in.	mm	in.	mm	in.
T2SC-1000	T2-250-LM	56.6	2.23	76.6	3.01	---	---
T2SC-1800	T2-750-FFC	75	2.95	56.4	2.22	80	3.15
T2SC-2900	T3-1500-FFC	100	3.94	73.5	2.89	104	4.09
T2SC-4700	T2-1500-FFC	100	3.94	73.5	2.89	104	4.09
T2SC-7500	T2-3000-FFC	120	4.72	92	3.62	130	5.12
T2SC-11800	T2-5000-FFC	140	5.51	109.5	4.31	155	6.10
T2SC-18300	T2-7500-FFC	190	7.48	138	5.43	195	7.68

**NOTE:** These flanges are sold separately and shipped unattached to the spring.

## Service Gauge Assembly

Charging and discharging T2SC gas springs is easy with the MGA-3000.

**Note:** The MGA-3000 does not include male quick disconnect charge fittings.



## Male Quick Disconnect Charge Fittings

There are three quick disconnect models for T2SC gas springs.

**Note:** Older model T2SC-1800, 4700, 7500, 11800 and 18300 springs have a 7/16"-20 port and require a T2-770-4 quick disconnect.

**Note:** for easy identification of all quick disconnects, contact Hyson Products for the Quick Disconnect Charge Fitting Selection Wall Chart.

Gas Spring	Quick Disconnect
T2SC-420	T2-770-T3
T2SC-740	T2-770-M6
T2SC-1000	
T2SC-1800	T2-770-G1/8
T2SC-2900	
T2SC-4700	
T2SC-7500	
T2SC-11800	
T2SC-18300	

## Nitrogen Charging Assembly

The NCA-2600 charging assembly is used to transfer nitrogen gas from a commercial bottle to T2 gas springs. The charging assembly includes a CGA-580 bottle fitting, regulator with bottle and system pressure gauges, shut-off valve, and 10 feet of high pressure hose with a fitting to the control panel or service gauge assembly.



## Seal Kits

Except for the T2SC-420 and T2SC-740, T2SC gas springs are field repairable. There is a seal kit for each size gas spring.

Gas Spring	Seal Kit
T2SC-1000	T2SCSK-1000
T2SC-1800	T2SCSK-1800
T2SC-2900	T2SCSK-2900
T2SC-4700	T2SCSK-4700
T2SC-7500	T2SCSK-7500
T2SC-11800	T2SCSK-11800
T2SC-18300	T2SCSK-18300

## Tool Kit

The T2SCTK includes all the tools necessary to disassemble and reassemble T2SC Series gas springs.

# Dynamic Solutions



Super Tanker® Gas Springs



Nitro-Dyne® XP Manifolds



Mini Manifolds



Force Manager™ Systems



T3 Gas Springs



Adaptive Cams



Mechanical Cams



T2 Standard Gas Springs



Controllable Systems



Lift Strut Gas Springs



Accessories



ISO Die Springs

# For a Global Market



**Hyson™ Products**  
Associated Spring 

10367 Brecksville Road, Brecksville, Ohio 44141 • [www.hysonproducts.com](http://www.hysonproducts.com)  
Toll Free: 1-800-876-4976 • FAX: 440/838-7684 • Email: [hyson@asbg.com](mailto:hyson@asbg.com)

© Hyson Products 2005  
T2SC5M0805