

Compact Height Nitrogen Gas Springs

T2 B Series



- Life in excess of 100,000 stroke meters.
- Cartridge design for easy maintenance.
- Oil pipe prevents oil leaving the springs in a hosed system and helps maintain the life of the springs.
- Secondary piston retaining ring offers extra protection.
- Compact height reduces die costs.

HYSON
METAL FORMING SOLUTIONS™



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Product Specifications

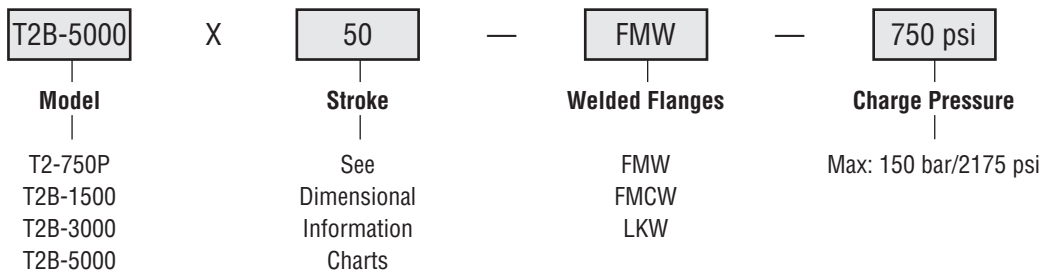
Pressure Medium	Nitrogen Gas
Max. Charging Pressure	150 bar/2175 psi
Min. Charging Pressure	25 bar/360 psi
Operating Temperature	0°-80°C/32°-176°F
Force Increase by Temperature	±0.3% per °C/±0.009% per °F
Maximum Piston Rod Velocity	96m/min / 315 ft/min
Recommended Maximum Strokes/Min	~15-40
Maximum Utilized Stroke	100%
Inlet Valve	56-072-5500
Charge Fitting	T2-770-4
Control Panel	CP-N2 LG, CP-N2 LG OR

Repair Kits

T2-750P	T2SK-750P
T2B-1500	T2SK-1500
T2B-3000	T2SK-3000
T2B-5000	T2SK-5000

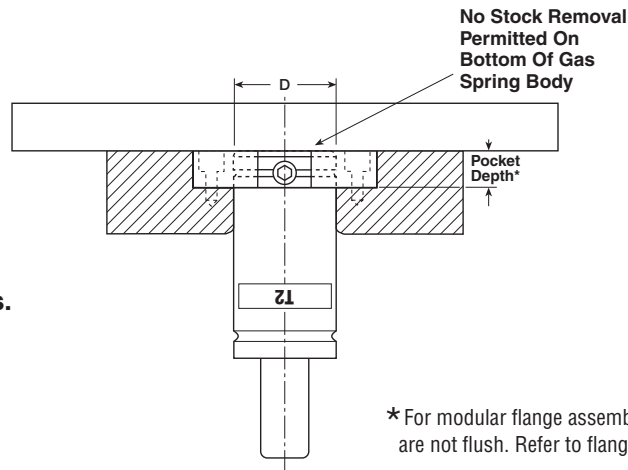
Contact Hyson Customer Service for Repair Kits and other information on the T2-7500 gas spring.

Ordering Options



Note: All T2B gas springs shipped at maximum charge pressure unless otherwise specified.

T2 nitrogen gas springs should be backed up at all times.



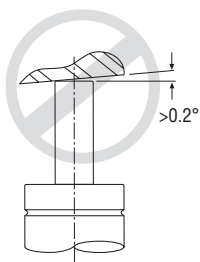
* For modular flange assembly SF, the bottom of gas spring & flange are not flush. Refer to flange dimension pages for dimension of gap.

Flange Pocket Dimensions					
Spring Model	Minimum Diameter D	SF Flange Pocket Depth* A	FMCW Flange Pocket Depth A	FMW Flange Pocket Depth A	LMW Flange Pocket Flange A
T2-750P	51 mm/2.00 in.	Min. 26 mm/1.02 in.	Min. 19 mm/.75 in.	Min. 19 mm/.75 in.	Min. 19 mm/.75 in.
		Max. 26.4 mm/1.04 in.	Max. 19.4 mm/.77 in.	Max. 19.4 mm/.77 in.	Max. 19.4 mm/.77 in.
T2B-1500	76 mm/3.00 in.	Min. 26 mm/1.02 in.	Min. 19 mm/.75 in.	Min. 19 mm/.75 in.	Min. 19 mm/.75 in.
		Max. 26.4 mm/1.04 in.	Max. 19.4 mm/.77 in.	Max. 19.4 mm/.77 in.	Max. 19.4 mm/.77 in.
T2B-3000	96 mm/3.78 in.	Min. 26 mm/1.02 in.	Min. 25 mm/.98 in.	Min. 25 mm/.98 in.	Min. 19 mm/.75 in.
		Max. 26.4 mm/1.04 in.	Max. 25.4 mm/1.00 in.	Max. 25.4 mm/1.00 in.	Max. 19.4 mm/.77 in.
T2B-5000	121 mm/4.76 in.	Min. 26 mm/1.02 in.	Min. 25 mm/.98 in.	Min. 25 mm/.98 in.	Min. 19 mm/.75 in.
		Max. 26.4 mm/1.04 in.	Max. 25.4 mm/1.00 in.	Max. 25.4 mm/1.00 in.	Max. 19.4 mm/.77 in.

NOTE: Oversized or undersized pockets can cause insufficient spring backing and can result in flange or spring failure.

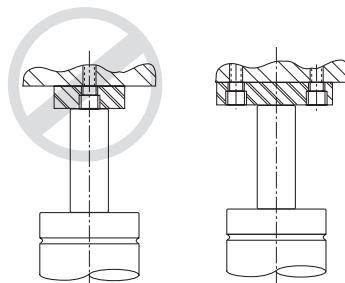
Avoid Side Loading

Side loading resulting from press or die construction causes increased wear on the bearings, seal and piston rod.



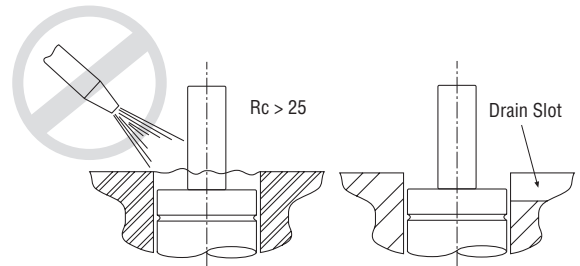
Provide a Smooth Piston Rod Contact Surface

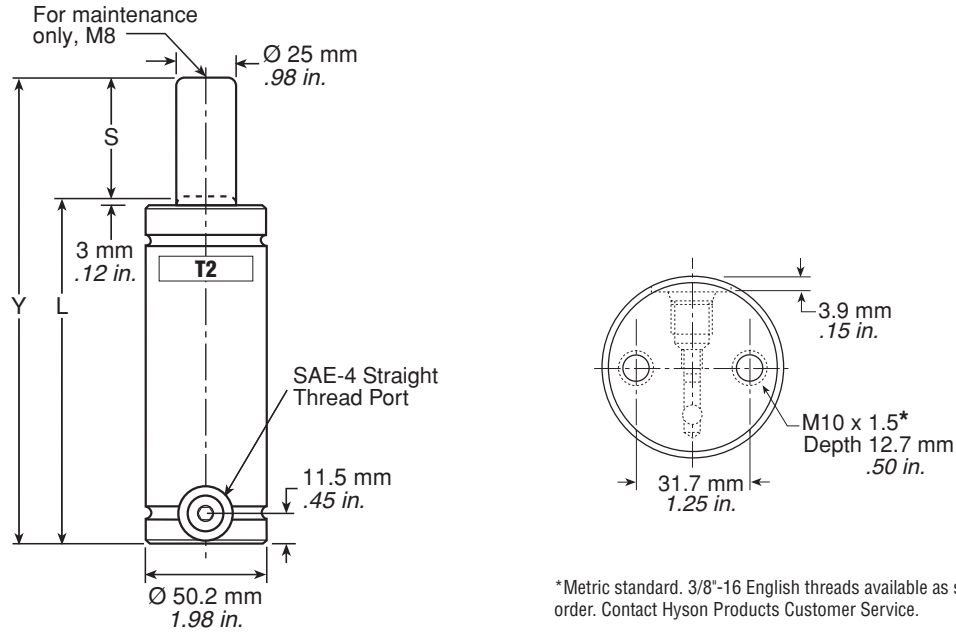
When the piston rod contacts bolt heads or other irregular surfaces, uneven wear patterns develop which may lead to side loading. Kiss blocks should be hardened to Rockwell C 25 minimum.



Protect from Fluids

Avoid prolonged contact with die lubricants and cleaners. Provide adequate drainage for the gas spring pockets.





*Metric standard. 3/8"-16 English threads available as special order. Contact Hyson Products Customer Service.

NOTE: The T2-750P has the same external dimensions as the earlier version, the T2-750. The T2-750P uses a different seal kit (T2SK-750P) because of internal changes.

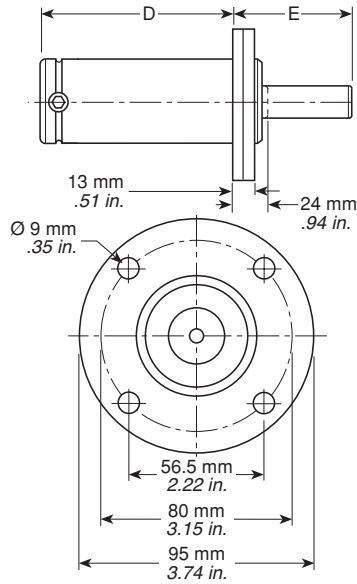
T2-750P Dimensional Information

Order Number	Stroke Length		Contact Force		Full Stroke Force		Y		L		D		E	
	mm	in.	N	lbs.	N	lbs.	mm	in.	mm	in.	mm	in.	mm	in.
T2-750PX0.5	12.7	0.50	7300 @150 bar	1640 @2175 psi	12,432	2,789	120.4	4.74	107.7	4.24	83.6	3.29	36.8	1.45
T2-750PX25	25.0	0.98			12,284	2,756	145.0	5.71	120.0	4.72	96.0	3.78	49.0	1.93
T2-750PX1	25.4	1.00			12,284	2,756	145.8	5.74	120.4	4.74	96.4	3.80	49.4	1.95
T2-750PX1.5	38.1	1.50			12,210	2,739	171.2	6.74	133.1	5.24	109.0	4.29	62.2	2.45
T2-750PX50	50.0	1.97			12,580	2,822	195.0	7.68	145.0	5.71	121.0	4.76	74.0	2.91
T2-750PX2	50.8	2.00			12,580	2,822	196.6	7.74	145.8	5.74	121.8	4.80	74.8	2.95
T2-750PX2.5	63.5	2.50			12,432	2,789	222.0	8.74	158.5	6.24	134.4	5.29	87.6	3.45
T2-750PX75	75.0	2.95			12,432	2,789	245.0	9.65	170.0	6.69	146.0	5.75	99.0	3.90
T2-750PX3	76.2	3.00			12,432	2,789	247.4	9.74	171.2	6.74	147.2	5.80	100.2	3.95
T2-750PX80	80.0	3.15			12,358	2,772	255.0	10.04	175.0	6.89	151.0	5.94	104.0	4.09
T2-750PX3.5	88.9	3.50			12,358	2,772	272.8	10.71	183.9	7.24	159.8	6.29	113.0	4.45
T2-750PX100	100.0	3.94			12,358	2,772	295.0	11.61	195.0	7.68	171.0	6.73	124.0	4.88
T2-750PX4	101.6	4.00			12,358	2,772	298.2	11.74	196.6	7.74	172.6	6.80	125.6	4.95
T2-750PX4.5	114.3	4.50			12,284	2,756	323.6	12.74	209.3	8.24	185.2	7.29	138.4	5.45
T2-750PX125	125.0	4.92			12,284	2,756	345.0	13.58	220.0	8.66	196.0	7.72	149.0	5.87
T2-750PX5	127.0	5.00			12,284	2,756	349.0	13.74	222.0	8.74	198.0	7.80	151.0	5.95
T2-750PX5.5	139.7	5.50			12,284	2,756	374.4	14.74	234.7	9.24	210.6	8.29	163.8	6.45
T2-750PX150	150.0	5.91			12,284	2,756	395.0	15.55	245.0	9.65	221.0	8.70	174.0	6.85
T2-750PX6	152.4	6.00			12,284	2,756	399.8	15.74	247.4	9.74	223.3	8.79	176.5	6.95
T2-750PX160	160.0	6.30			12,284	2,756	415.0	16.34	255.0	10.04	231.0	9.09	184.0	7.24
T2-750PX6.5	165.1	6.50			12,284	2,756	425.2	16.74	260.1	10.24	236.0	9.29	189.2	7.45
T2-750PX175	175.0	6.89			12,284	2,756	445.0	17.52	270.0	10.63	246.0	9.69	199.0	7.83
T2-750PX7	177.8	7.00			12,284	2,756	450.6	17.74	272.8	10.74	248.7	9.79	201.9	7.95
T2-750PX7.5	190.5	7.50			12,210	2,739	476.0	18.74	285.5	11.24	261.4	10.29	214.6	8.45
T2-750PX200	200.0	7.87			12,210	2,739	495.0	19.49	295.0	11.61	271.0	10.67	224.0	8.82
T2-750PX8	203.2	8.00			12,210	2,739	501.4	19.74	298.2	11.74	274.1	10.79	227.3	8.95
T2-750PX250	250.0	9.84			12,210	2,739	595.0	23.43	345.0	13.58	321.0	12.64	274.0	10.79
T2-750PX10	254.0	10.00			12,210	2,739	603.0	23.74	349.0	13.74	324.9	12.79	278.1	10.95

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

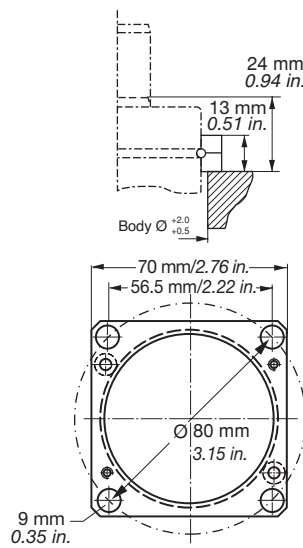
FC - Circular Flange

Part No.: T2-750-FC



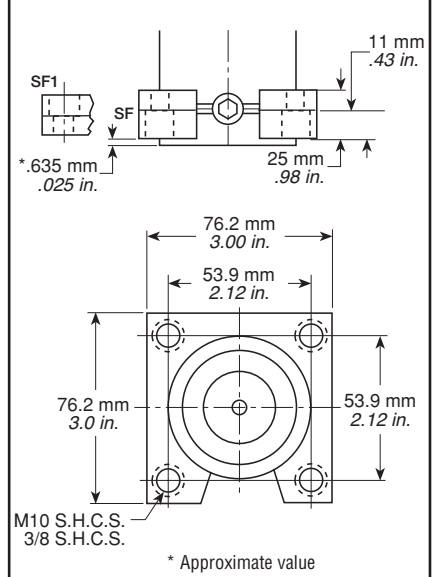
FCS - Upper Square Flange

Part No.: T2-750-FCS

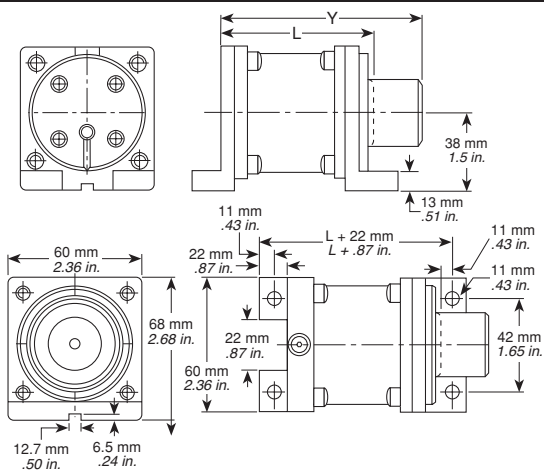


SF - Square Mount

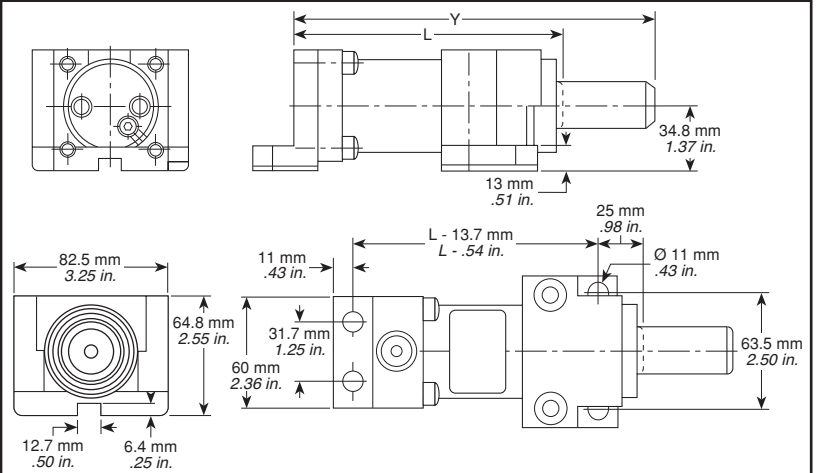
Part No.: T2-750-SF



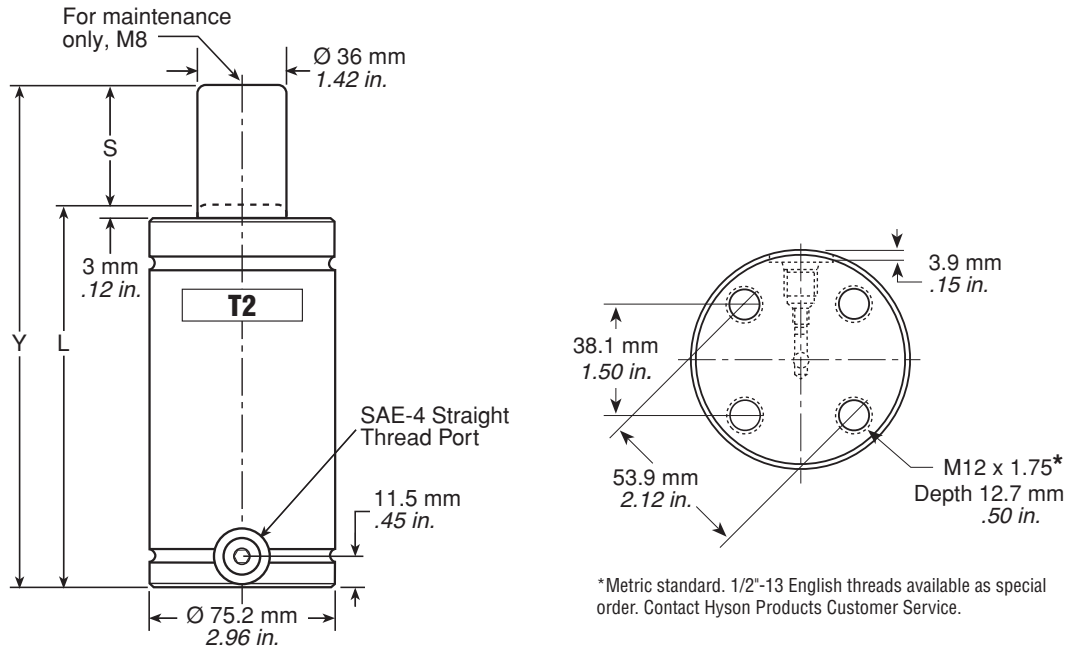
SM - Cam Mount - Part No.: T2-750-SM



SMG - Cam Mount - Part No.: T2-750-SMG



NOTE: All flanges, except welded, are ordered separately.

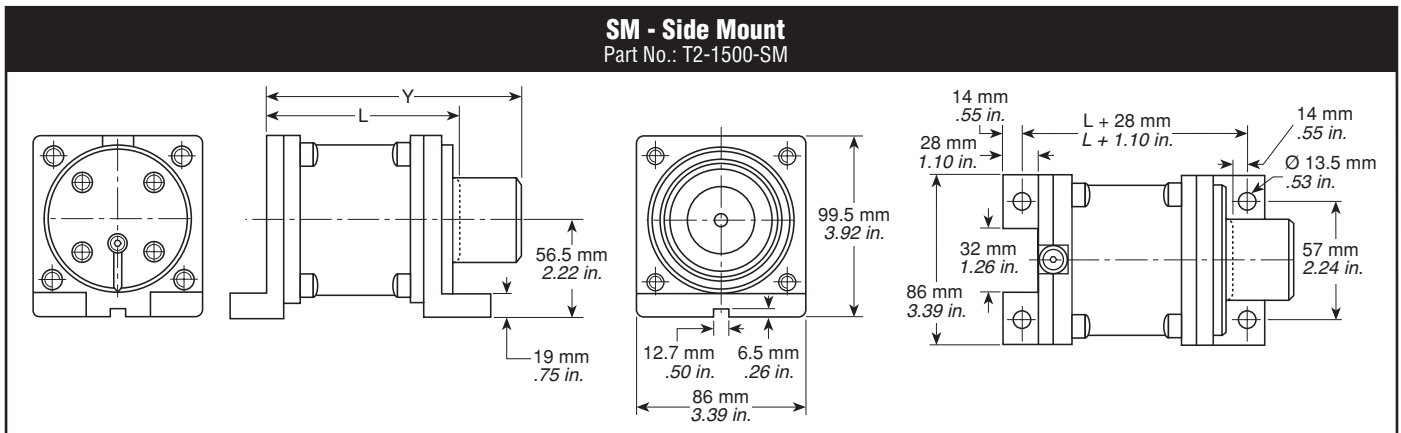
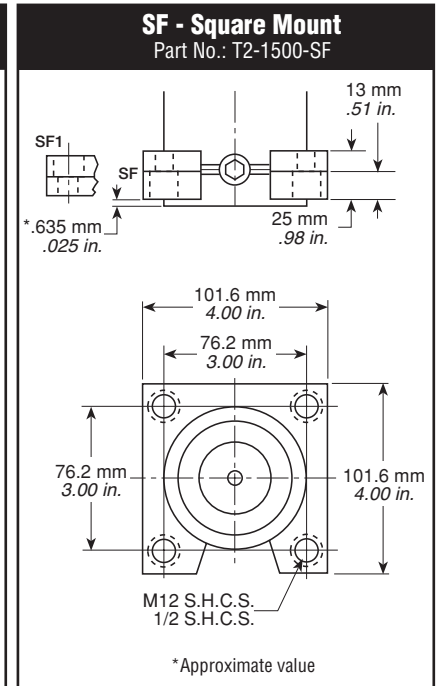
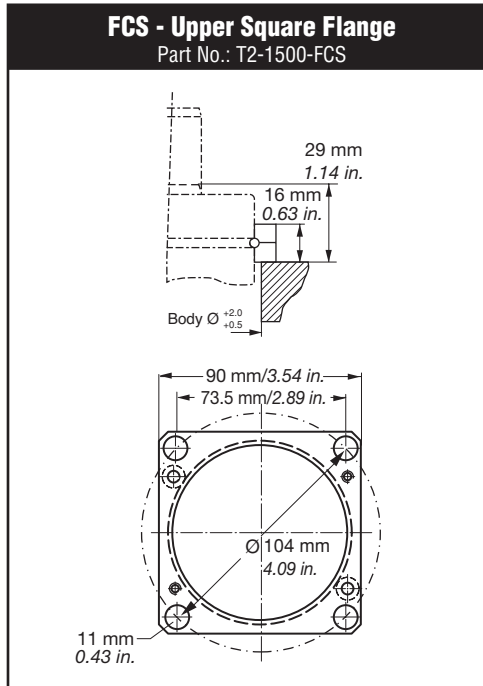
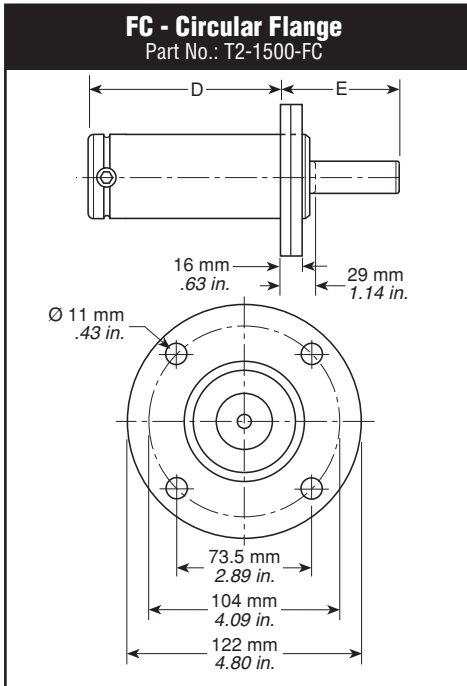


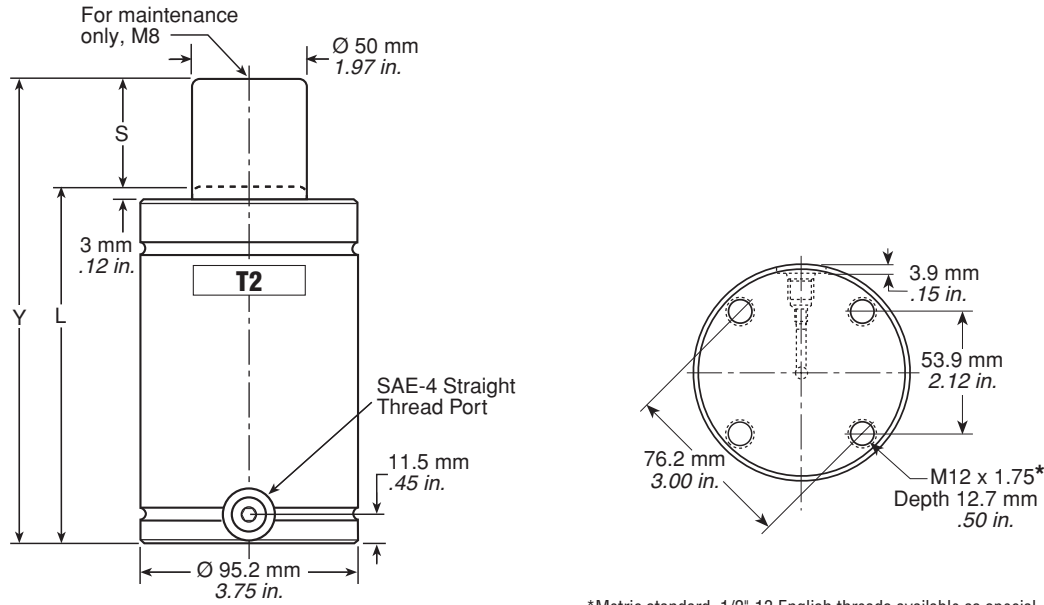
*Metric standard. 1/2"-13 English threads available as special order. Contact Hyson Products Customer Service.

T2B-1500 Dimensional Information

Order Number	Stroke Length		Contact Force		Full Stroke Force		Y		L		D		E	
	mm	in.	N	lbs.	N	lbs.	mm	in.	mm	in.	mm	in.	mm	in.
T2B-1500X0.5	12.7	0.50	15,300 @150 bar	3400 @2175 psi	22,338	5,008	127.0	5.00	114.3	4.50	85.3	3.36	41.7	1.64
T2B-1500X25	25.0	0.98			22,491	5,042	151.6	5.97	126.6	4.98	97.6	3.84	54.0	2.13
T2B-1500X1	25.4	1.00			22,491	5,042	152.4	6.00	127.0	5.00	98.0	3.86	54.4	2.14
T2B-1500X1.5	38.1	1.50			22,491	5,042	177.8	7.00	139.7	5.50	110.7	4.36	67.1	2.64
T2B-1500X50	50.0	1.97			22,644	5,076	201.6	7.94	151.6	5.97	122.6	4.83	79.0	3.11
T2B-1500X2	50.8	2.00			22,644	5,076	203.2	8.00	152.4	6.00	123.4	4.86	79.8	3.14
T2B-1500X2.5	63.5	2.50			22,644	5,076	228.6	9.00	165.1	6.50	136.1	5.36	92.5	3.64
T2B-1500X75	75.0	2.95			22,644	5,076	251.6	9.91	176.6	6.95	147.6	5.81	104.0	4.09
T2B-1500X3	76.2	3.00			22,644	5,076	254.0	10.00	177.8	7.00	148.9	5.86	105.2	4.14
T2B-1500X80	80.0	3.15			22,644	5,076	261.6	10.30	181.6	7.15	152.6	6.01	109.0	4.29
T2B-1500X3.5	88.9	3.50			22,644	5,076	279.4	11.00	190.5	7.50	161.5	6.36	117.9	4.64
T2B-1500X100	100.0	3.94			23,256	5,214	301.6	11.87	201.6	7.94	172.6	6.80	129.0	5.08
T2B-1500X4	101.6	4.00			23,256	5,214	304.8	12.00	203.2	8.00	174.2	6.86	130.6	5.14
T2B-1500X4.5	114.3	4.50			23,103	5,179	330.2	13.00	215.9	8.50	186.9	7.36	143.3	5.64
T2B-1500X125	125.0	4.92			23,103	5,179	351.6	13.84	226.6	8.92	197.6	7.78	154.0	6.06
T2B-1500X5	127.0	5.00			23,103	5,179	355.6	14.00	228.6	9.00	199.6	7.86	156.0	6.14
T2B-1500X5.5	139.7	5.50			23,103	5,179	381.0	15.00	241.3	9.50	212.3	8.36	168.7	6.64
T2B-1500X150	150.0	5.91			23,103	5,179	401.6	15.81	251.6	9.91	222.6	8.76	179.0	7.05
T2B-1500X6	152.4	6.00			23,103	5,179	406.4	16.00	254.0	10.00	225.0	8.86	181.4	7.14
T2B-1500X160	160.0	6.30			22,950	5,145	421.6	16.60	261.6	10.30	232.6	9.16	189.0	7.44
T2B-1500X6.5	165.1	6.50			22,950	5,145	431.8	17.00	266.7	10.50	237.7	9.36	194.1	7.64
T2B-1500X175	175.0	6.89			22,950	5,145	451.6	17.78	276.6	10.89	247.6	9.75	204.0	8.03
T2B-1500X7	177.8	7.00			22,950	5,145	457.2	18.00	279.4	11.00	250.4	9.86	206.8	8.14
T2B-1500X7.5	190.5	7.50			22,950	5,145	482.6	19.00	292.1	11.50	263.1	10.36	219.5	8.64
T2B-1500X200	200.0	7.87			22,950	5,145	501.6	19.75	301.6	11.87	272.6	10.73	229.0	9.02
T2B-1500X8	203.2	8.00			22,950	5,145	508.0	20.00	304.8	12.00	275.8	10.86	232.2	9.14
T2B-1500X9	228.6	9.00			22,950	5,145	558.8	22.00	330.2	13.00	301.2	11.86	257.6	10.14
T2B-1500X10	254.0	10.00			22,950	5,145	609.6	24.00	355.6	14.00	326.6	12.86	283.0	11.14
T2B-1500X10.5	266.7	10.50			22,950	5,145	635.0	25.00	368.3	14.50	339.3	13.36	295.7	11.64
T2B-1500X12	304.8	12.00			22,950	5,145	711.2	28.00	406.4	16.00	377.4	14.86	333.8	13.14

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



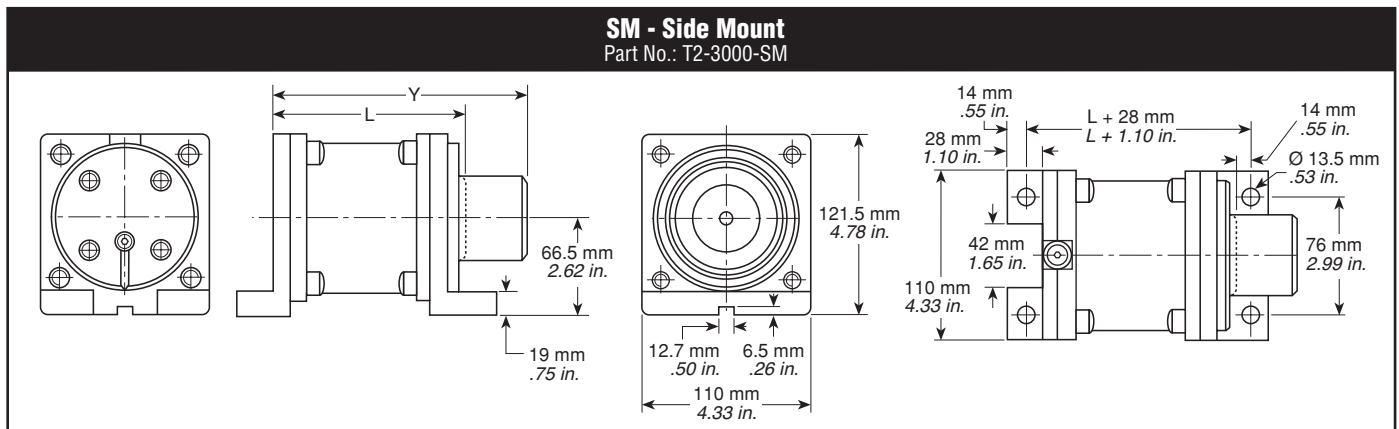
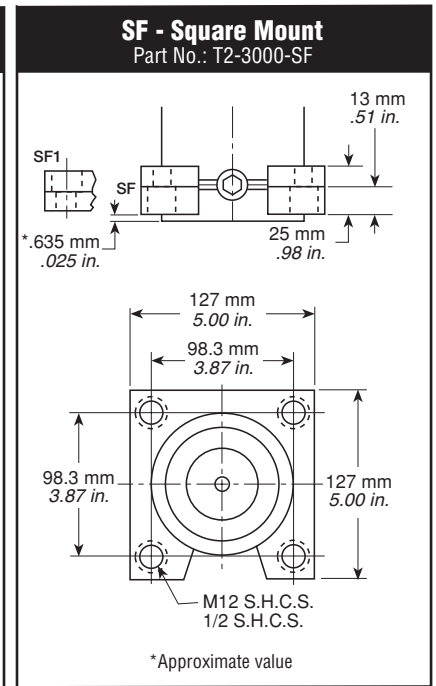
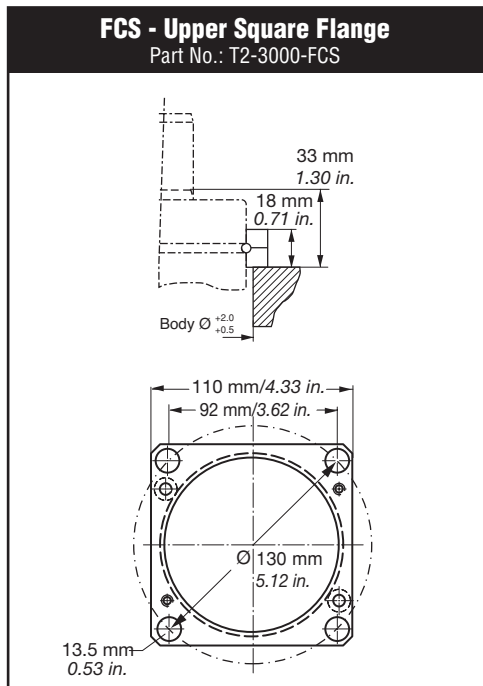
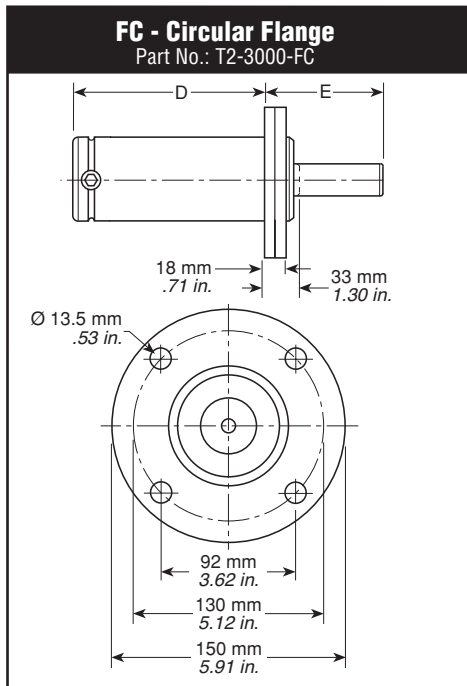


*Metric standard. 1/2"-13 English threads available as special order. Contact Hyson Products Customer Service.

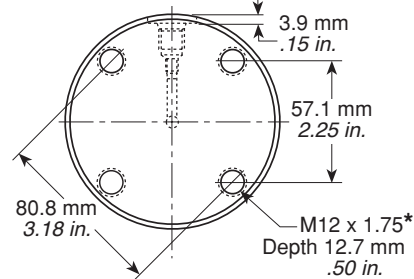
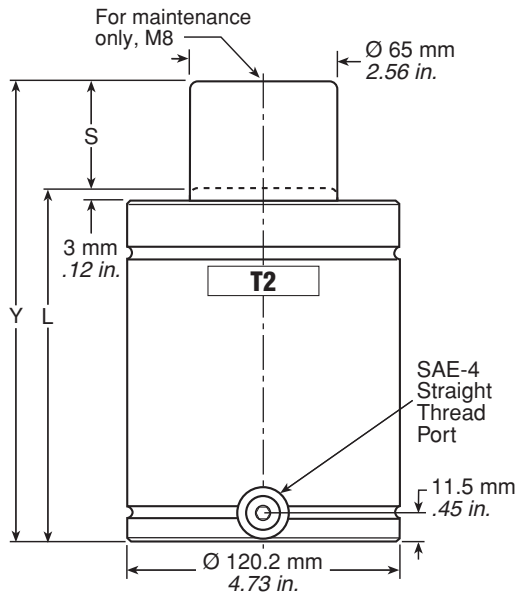
T2B-3000 Dimensional Information

Order Number	Stroke Length		Contact Force		Full Stroke Force		Y		L		D		E	
	mm	in.	N	lbs.	N	lbs.	mm	in.	mm	in.	mm	in.	mm	in.
T2B-3000X0.5	12.7	0.50	29,500 @150 bar	6630 @2175 psi	45,135	10,129	127.0	5.00	114.3	4.50	81.3	3.20	45.7	1.80
T2B-3000X25	25.0	0.98			46,610	10,460	151.6	5.97	126.6	4.98	93.6	3.69	58.0	2.28
T2B-3000X1	25.4	1.00			46,610	10,460	152.4	6.00	127.0	5.00	94.0	3.70	58.4	2.30
T2B-3000X1.5	38.1	1.50			46,610	10,460	177.8	7.00	139.7	5.50	106.7	4.20	71.1	2.80
T2B-3000X50	50.0	1.97			46,610	10,460	201.6	7.94	151.6	5.97	118.6	4.67	83.0	3.27
T2B-3000X2	50.8	2.00			46,610	10,460	203.2	8.00	152.4	6.00	119.4	4.70	83.8	3.30
T2B-3000X2.5	63.5	2.50			46,610	10,460	228.6	9.00	165.1	6.50	132.1	5.20	96.5	3.80
T2B-3000X75	75.0	2.95			46,610	10,460	251.6	9.91	176.6	6.95	143.6	5.65	108.0	4.25
T2B-3000X3	76.2	3.00			46,610	10,460	254.0	10.00	177.8	7.00	144.8	5.70	109.2	4.30
T2B-3000X80	80.0	3.15			46,610	10,460	261.6	10.30	181.6	7.15	148.6	5.85	113.0	4.45
T2B-3000X3.5	88.9	3.50			46,610	10,460	279.4	11.00	190.5	7.50	157.5	6.20	121.9	4.80
T2B-3000X100	100.0	3.94			47,200	10,592	301.6	11.87	201.6	7.94	168.6	6.64	133.0	5.24
T2B-3000X4	101.6	4.00			47,200	10,592	304.8	12.00	203.2	8.00	170.2	6.70	134.6	5.30
T2B-3000X4.5	114.3	4.50			47,200	10,592	330.2	13.00	215.9	8.50	182.9	7.20	147.3	5.80
T2B-3000X125	125.0	4.92			47,200	10,592	351.6	13.84	226.6	8.92	193.6	7.62	158.0	6.22
T2B-3000X5	127.0	5.00			47,200	10,592	355.6	14.00	228.6	9.00	195.6	7.70	160.0	6.30
T2B-3000X5.5	139.7	5.50			46,905	10,526	381.0	15.00	241.3	9.50	208.3	8.20	172.7	6.80
T2B-3000X150	150.0	5.91			46,905	10,526	401.6	15.81	251.6	9.91	218.6	8.61	183.0	7.20
T2B-3000X6	152.4	6.00			46,905	10,526	406.4	16.00	254.0	10.00	221.0	8.70	185.4	7.30
T2B-3000X160	160.0	6.30			46,905	10,526	421.6	16.60	261.6	10.30	228.6	9.00	193.0	7.60
T2B-3000X6.5	165.1	6.50			46,905	10,526	431.8	17.00	266.7	10.50	233.7	9.20	198.1	7.80
T2B-3000X7	177.8	7.00			46,905	10,526	457.2	18.00	279.4	11.00	246.4	9.70	210.8	8.30
T2B-3000X7.5	190.5	7.50			46,905	10,526	482.6	19.00	292.1	11.50	259.1	10.20	223.5	8.80
T2B-3000X200	200.0	7.87			46,905	10,526	501.6	19.75	301.6	11.87	268.6	10.57	233.0	9.17
T2B-3000X8	203.2	8.00			46,905	10,526	508.0	20.00	304.8	12.00	271.8	10.70	236.2	9.30
T2B-3000X8.5	215.9	8.50			46,905	10,526	533.4	21.00	317.5	12.50	284.5	11.20	248.9	9.80
T2B-3000X9	228.6	9.00			46,905	10,526	558.8	22.00	330.2	13.00	297.2	11.70	261.6	10.30
T2B-3000X10	254.0	10.00			47,200	10,592	609.6	24.00	355.6	14.00	322.6	12.70	287.0	11.30
T2B-3000X12	304.8	12.00			47,200	10,592	711.2	28.00	406.4	16.00	373.4	14.70	337.8	13.30

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



NOTE: All flanges, except welded, are ordered separately.

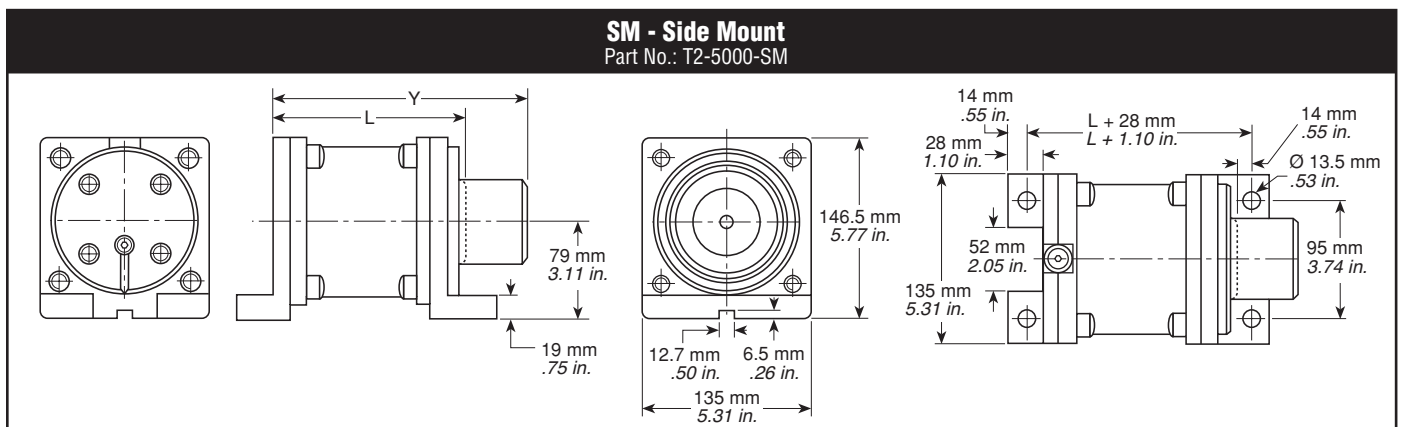
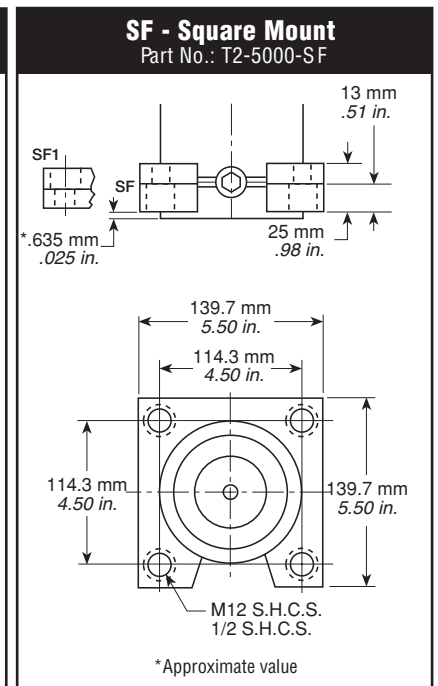
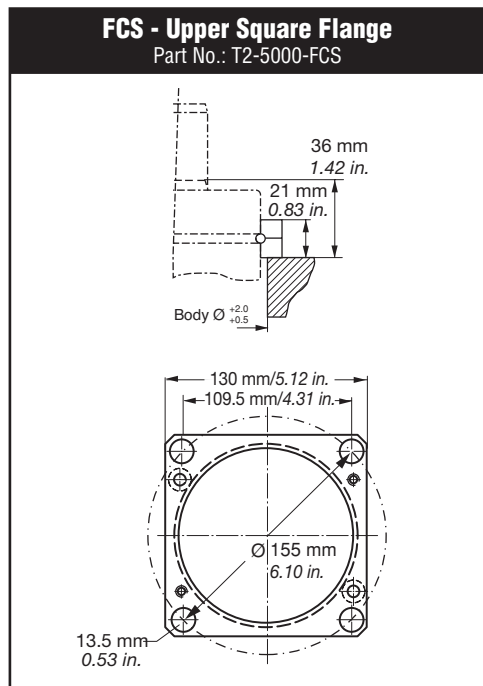
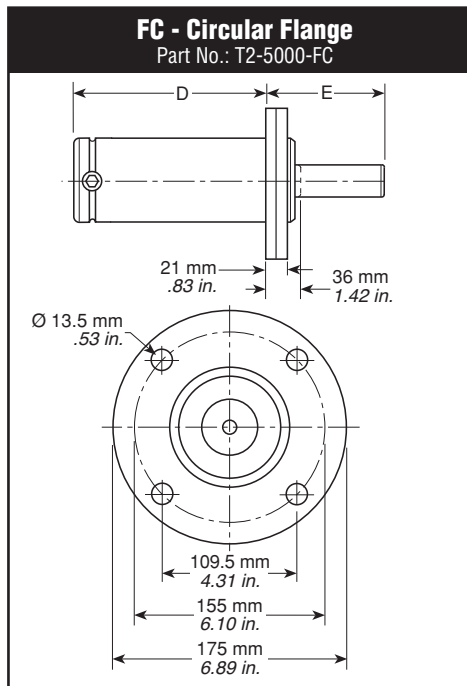


*Metric standard. 1/2"-13 English threads available as special order. Contact Hyson Products Customer Service.

T2B-5000 Dimensional Information

Order Number	Stroke Length		Contact Force		Full Stroke Force		Y		L		D		E	
	mm	in.	N	lbs.	N	lbs.	mm	in.	mm	in.	mm	in.	mm	in.
T2B-5000X0.5	12.7	0.50	49,800 @150 bar	11,200 @2175 psi	81,672	18,368	127.0	5.00	114.3	4.50	78.2	3.08	48.8	1.92
T2B-5000X25	25.0	0.98			81,174	18,256	151.6	5.97	126.6	4.98	90.6	3.57	61.0	2.40
T2B-5000X1	25.4	1.00			81,174	18,256	152.4	6.00	127.0	5.00	91.0	3.58	61.4	2.42
T2B-5000X1.5	38.1	1.50			81,174	18,256	177.8	7.00	139.7	5.50	103.6	4.08	74.2	2.92
T2B-5000X50	50.0	1.97			81,174	18,256	201.6	7.94	151.6	5.97	115.6	4.55	86.0	3.39
T2B-5000X2	50.8	2.00			81,174	18,256	203.2	8.00	152.4	6.00	116.4	4.58	86.8	3.42
T2B-5000X2.5	63.5	2.50			81,174	18,256	228.6	9.00	165.1	6.50	129.0	5.08	99.6	3.92
T2B-5000X75	75.0	2.95			82,668	18,592	251.6	9.91	176.6	6.95	140.6	5.54	111.0	4.37
T2B-5000X3	76.2	3.00			82,668	18,592	254.0	10.00	177.8	7.00	141.8	5.58	112.2	4.42
T2B-5000X80	80.0	3.15			82,668	18,592	261.6	10.30	181.6	7.15	145.6	5.73	116.0	4.57
T2B-5000X3.5	88.9	3.50			82,668	18,592	279.4	11.00	190.5	7.50	154.4	6.08	125.0	4.92
T2B-5000X100	100.0	3.94			82,668	18,592	301.6	11.87	201.6	7.94	165.6	6.52	136.0	5.35
T2B-5000X4	101.6	4.00			82,668	18,592	304.8	12.00	203.2	8.00	167.2	6.58	137.6	5.42
T2B-5000X4.5	114.3	4.50			82,170	18,480	330.2	13.00	215.9	8.50	179.8	7.08	150.4	5.92
T2B-5000X125	125.0	4.92			82,170	18,480	351.6	13.84	226.6	8.92	190.6	7.50	161.0	6.34
T2B-5000X5	127.0	5.00			82,170	18,480	355.6	14.00	228.6	9.00	192.6	7.58	163.0	6.42
T2B-5000X5.5	139.7	5.50			82,170	18,480	381.0	15.00	241.3	9.50	205.2	8.08	175.8	6.92
T2B-5000X150	150.0	5.91			82,170	18,480	401.6	15.81	251.6	9.91	215.6	8.49	186.0	7.32
T2B-5000X160	160.0	6.30			82,170	18,480	421.6	16.60	261.6	10.30	225.6	8.88	196.0	7.72
T2B-5000X6.5	165.1	6.50			82,170	18,480	431.8	17.00	266.7	10.50	230.6	9.08	201.2	7.92
T2B-5000X175	175.0	6.89			82,170	18,480	451.6	17.78	276.6	10.89	240.6	9.47	211.0	8.31
T2B-5000X7	177.8	7.00			82,170	18,480	457.2	18.00	279.4	11.00	243.3	9.58	213.9	8.42
T2B-5000X7.5	190.5	7.50			81,672	18,368	482.6	19.00	292.1	11.50	256.0	10.08	226.6	8.92
T2B-5000X200	200.0	7.87			81,672	18,368	501.6	19.75	301.6	11.87	265.6	10.46	236.0	9.29
T2B-5000X8	203.2	8.00			81,672	18,368	508.0	20.00	304.8	12.00	268.7	10.58	239.3	9.42
T2B-5000X8.5	215.9	8.50			81,672	18,368	533.4	21.00	317.5	12.50	281.5	11.08	251.9	9.92
T2B-5000X9	228.6	9.00			81,672	18,368	558.8	22.00	330.2	13.00	294.2	11.58	264.6	10.42
T2B-5000X10	254.0	10.00			82,668	18,592	609.6	24.00	355.6	14.00	319.5	12.58	290.1	11.42

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