

◀ **SPRING ENGAGED BRAKES**

“Air Champ”

TAPERED BORE SPRING ENGAGED BRAKES MODELS TSE-450, TSE-600 & TSE-800

- ▶ Static Torque capacity up to:
TSE-450/450 In. Lbs.
TSE-600/985 In. Lbs.
TSE-800/2500 In. Lbs.
- ▶ Maximum Operating Speed up to 1800 rpm
- ▶ Thermal Horsepower rating of:
TSE-450/0.515 @ 1800 rpm
TSE-600/1.300 @ 1800 rpm
TSE-800/2.230 @ 1800 rpm
- ▶ Heat Sink capacity of:
TSE-450/30,000 Ft. Lbs.
TSE-600/60,000 Ft. Lbs.
TSE-800/125,000 Ft. Lbs.

These spring engaged, air disengaged brakes mount easily and come with:

- ▶ Open spring sockets that allow you to add or remove springs to fit your torque needs
- ▶ Tapered bore to accept QD Bushings for mounting flexibility
- ▶ Single plate finned friction discs provide high heat dissipation
- ▶ High dynamic torque capacity ensures fast load response
- ▶ Split friction facing for easy replacement without brake removal or disassembly
- ▶ Flow restrictor valve controls disengagement air to prevent shock load on brake components

Options and Accessories include:

- ▶ Torque Pin Bracket allows you to anchor the housing
- ▶ Brake Safety Guard for protection
- ▶ **Tapered Bore** accepts **standard QD Bushings;**
TSE-450/Size JA, TSE-600/Size SH & TSE-800/Size SK
–NOT SUITABLE FOR FLANGE MOUNTING

▶ **TSE-450, TSE-600 & TSE-800 MODEL TAPERED BORE SPRING ENGAGED BRAKES**

Model	Component	Product Number	Number of Springs	Inertia In (Lb.In ²)	Torque Rating (In Lb ± -10%)	MIN	Shipping Wt. (Lbs)
						Disengagement Air Pressure ± 10%	
TSE-450	Brake	818862	6	4.74	240	50 PSI	13
TSE-450	Brake	818800	8	4.74	360	72 PSI	13
TSE-450	Brake	818861	10	4.74	450	90 PSI	13
TSE-600	Brake	820362	6	20.16	520	50 PSI	19
TSE-600	Brake	820300	8	20.16	785	72 PSI	19
TSE-600	Brake	820361	10	20.16	985	90 PSI	19
TSE-800	Brake	822495	6	114.48	1300	50 PSI	31
TSE-800	Brake	822494	8	114.48	2000	72 PSI	31
TSE-800	Brake	822496	10	114.48	2500	90 PSI	31

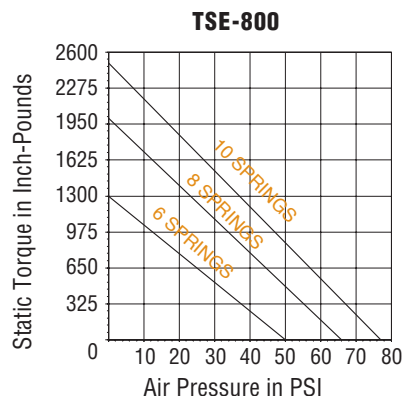
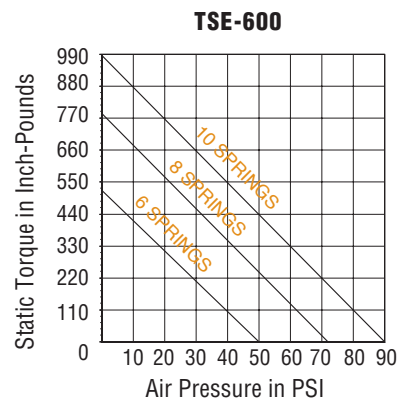
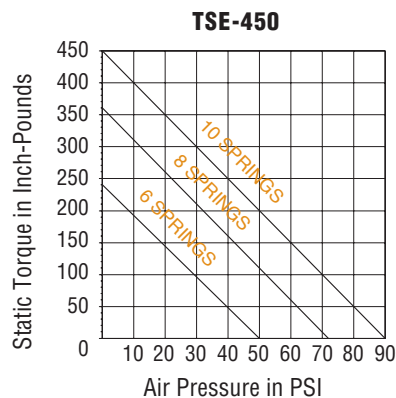
▶ **QD MOUNTING BUSHINGS**

Quick detachable “QD” Bushings are customer furnished. The brake bore is easily adapted to many shaft sizes with use of QD Bushing and the proper key. Bushings fit into the bore of the brake, changing the bore to the size selected.

▶ **ACCESSORIES**

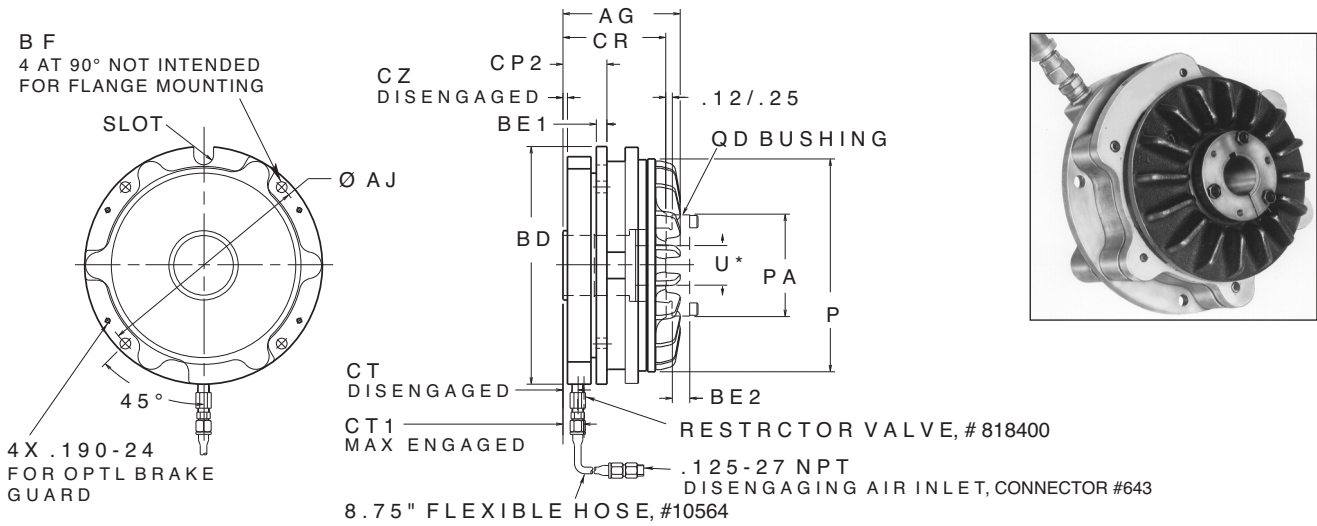
Model	Component	Product Number	Shipping Wt. (Lbs)
TSE-450	Torque Pin Bracket	819900	1
TSE-450	Brake Safety Guard	817700	2
TSE-600	Torque Pin Bracket	821400	2
TSE-600	Brake Safety Guard	818300	2
TSE-800	Torque Pin Bracket	823400	2
TSE-800	Brake Safety Guard	826300	3

▶ **TORQUE VS. AIR PRESSURE**



NOTE: Torque values for spring applied brakes will vary over the life of the brake as a function of spring force and the burnishing process of the lining. Over the life of the linings, torque values may exceed published values by up to 40%.

TSE-450, TSE-600 & TSE-800 MODEL TAPERED BORE SPRING ENGAGED BRAKES - APPROXIMATE DIMENSIONS (INCHES)

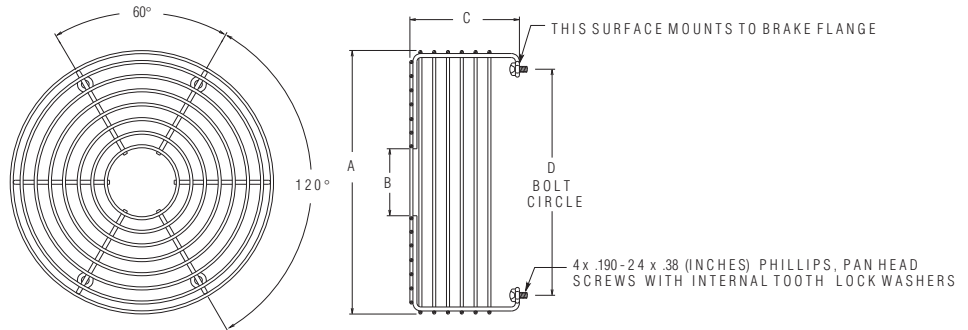


MODEL	PRODUCT NUMBER	AG	AJ	BD	BE1	BE2	BF	CP2	CR	CT	CT1	CZ	P	PA	U*	SLOT WD	QD DP	BUSHING
TSE-450	818862	3.57	5.312	5.94	0.27	0.31	0.281	1.32	3.12	0.35	0.49	0.01	4.56	2.00	1.000	0.375	0.66	JA
TSE-450	818880	3.57	5.312	5.94	0.27	0.31	0.281	1.32	3.12	0.35	0.49	0.01	4.56	2.00	1.000	0.375	0.66	JA
TSE-450	818861	3.57	5.312	5.94	0.27	0.31	0.281	1.32	3.12	0.35	0.49	0.01	4.56	2.00	1.000	0.375	0.66	JA
TSE-600	820362	4.06	6.500	7.19	0.40	0.44	0.359	1.45	3.47	0.33	0.47	-0.01	6.06	2.62	1.375	0.625	0.69	SH
TSE-600	820300	4.06	6.500	7.19	0.40	0.44	0.359	1.45	3.47	0.33	0.47	-0.01	6.06	2.62	1.375	0.625	0.69	SH
TSE-600	820361	4.06	6.500	7.19	0.40	0.44	0.359	1.45	3.47	0.33	0.47	-0.01	6.06	2.62	1.375	0.625	0.69	SH
TSE-800	822495	4.44	8.375	9.00	0.40	0.56	0.406	1.66	3.89	0.51	0.72	0.12	8.06	3.88	2.125	0.750	0.69	SK
TSE-800	822494	4.44	8.375	9.00	0.40	0.56	0.406	1.66	3.89	0.51	0.72	0.12	8.06	3.88	2.125	0.750	0.69	SK
TSE-800	822496	4.44	8.375	9.00	0.40	0.56	0.406	1.66	3.89	0.51	0.72	0.12	8.06	3.88	2.125	0.750	0.69	SK

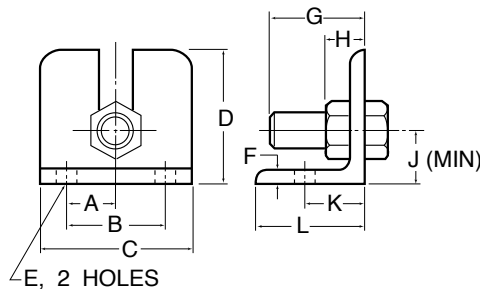
*Maximum Bushing bore with standard keyway.

▶ BRAKE SAFETY GUARD

MODEL	PRODUCT NUMBER	A	B	C	D
TSE-450	817700	6.56	1.62	2.69	5.25
TSE-600	818300	7.88	2.00	3.28	6.75
TSE-800	826300	9.69	2.75	3.66	8.38



▶ TORQUE PIN BRACKET



▶ NOTE

For alternate torque arms see page 155.

MODEL	PRODUCT NUMBER	A	B	C	D	E	F	G	H	J	K	L
TSE-450	819900	0.75	1.50	2.25	2.00	0.406	0.25	1.50	0.50	0.75	1.00	2.00
TSE-600	821400	1.00	2.00	3.00	2.50	0.406	0.25	1.625	0.625	1.125	1.00	2.00
TSE-800	823400	1.125	2.25	3.50	3.00	0.469	0.31	2.00	0.75	1.188	1.375	2.50

◀ **SPRING ENGAGED BRAKES**

“Air Champ”

TAPERED BORE SPRING ENGAGED BRAKES MODELS TSE-1000, TSE-1200 & TSE-1400

- ▶ Static Torque capacity up to:
 - TSE-1000/3700 In. Lbs.
 - TSE-1200/5500 In. Lbs.
 - TSE-1400/8000 In. Lbs.
- ▶ Maximum Operating Speed up to 1800 rpm
- ▶ Thermal Horsepower rating of:
 - TSE-1000/3.0 @ 1800 rpm
 - TSE-1200/6.3 @ 1800 rpm
 - TSE-1400/ 12.5 @ 1800 rpm
- ▶ Heat Sink capacity of:
 - TSE-1000/200,000 Ft. Lbs.
 - TSE-1200/ 555,000 Ft. Lbs.
 - TSE-1400/ 650,000 Ft. Lbs.

These spring engaged, air disengaged brakes mount easily and come with:

- ▶ Open spring sockets that allow you to add or remove springs to fit your torque needs
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- ▶ Single plate finned friction discs provide high heat dissipation
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- ▶ Split friction facing for easy replacement without brake removal or disassembly
- ▶ Flow restrictor valve controls disengagement air to prevent shock load on brake components

Options and Accessories include:

- ▶ Torque Pin Bracket allows you to anchor the housing
- ▶ Brake Safety Guard for protection
- ▶ **Tapered Bore** accepts **standard QD Bushings;**
TSE-1000/Size E, TSE-1200/Size E, & TSE-1400/Size F
 –NOT SUITABLE FOR FLANGE MOUNTING

▶ **TSE-1000, TSE-1200 & TSE-1400 MODEL TAPERED BORE SPRING ENGAGED BRAKES**

Model	Component	Product Number	Number of Springs	Inertia In (Lb.In ²)	MIN Torque Rating (In Lb ± -10%)	Disengagement Air Pressure ± 10%	Shipping Wt. (Lbs)
TSE-1000 Brake		822562	6	282.24	2200	50 PSI	68
TSE-1000 Brake		822500	8	282.24	3000	72 PSI	68
TSE-1000 Brake		822561	10	282.24	3700	90 PSI	68
TSE-1200 Brake		822713	12	478.40	3750	70 PSI	113
TSE-1200 Brake		822714	14	478.40	4375	80 PS	113
TSE-1200 Brake		822710	16	478.40	5000	90 PSI	113
TSE-1400 Brake		822723	12	991.00	6000	70 PSI	131
TSE-1400 Brake		822724	14	991.00	7000	80 PSI	131
TSE-1400 Brake		822720	16	991.00	8000	90 PSI	131

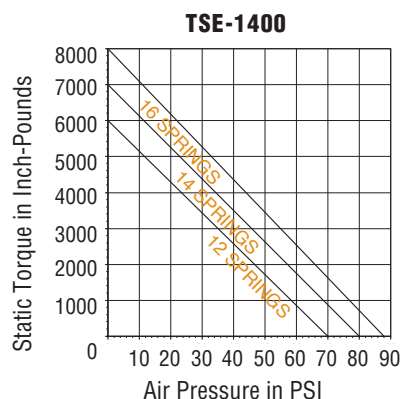
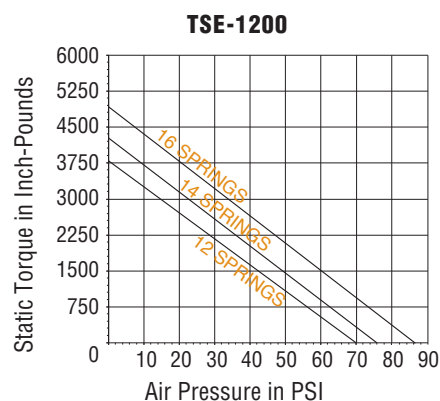
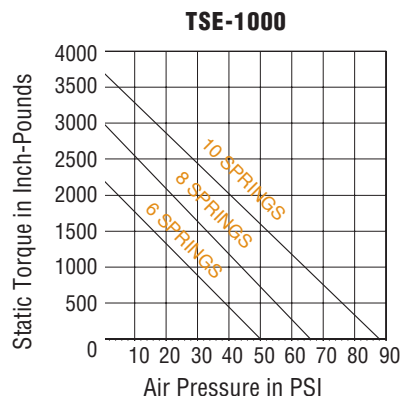
▶ **QD MOUNTING BUSHINGS**

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▶ **ACCESSORIES**

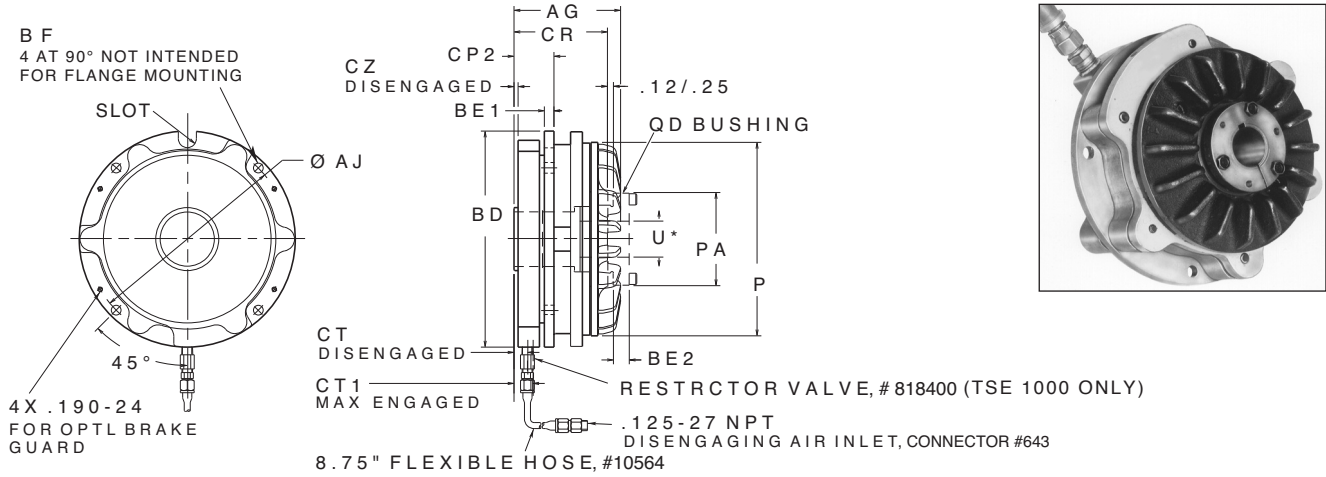
Model	Component	Product Number	Shipping Wt. (Lbs)
TSE-1000	Torque Pin Bracket	825500	4
TSE-1000	Brake Safety Guard	828200	4
TSE-1200	Torque Pin Bracket	822515	6
TSE-1200	Brake Safety Guard	822516	7
TSE-1400	Torque Pin Bracket	822525	6
TSE-1400	Brake Safety Guard	822526	7

▶ **TORQUE VS. AIR PRESSURE**



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TSE-1000, TSE-1200 & TSE-1400 MODEL TAPERED BORE SPRING ENGAGED BRAKES - APPROXIMATE DIMENSIONS (INCHES)

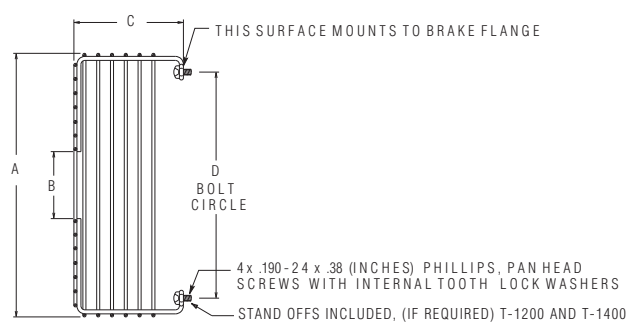
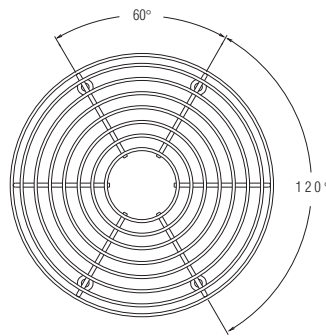


MODEL	PRODUCT NUMBER	AG	AJ	BD	BE1	BE2	BF	CP2	CR	CT	CT1	CZ	P	PA	U*	SLOT		QD BUSHING
																WD	DP	
TSE-1000	822562	5.42	10.937	11.88	0.52	0.88	.531	1.71	4.61	0.39	0.60	-0.18	10.06	6.00	2.875	0.88	0.91	E
TSE-1000	822500	5.42	10.937	11.88	0.52	0.88	.531	1.71	4.61	0.39	0.60	-0.18	10.06	6.00	2.875	0.88	0.91	E
TSE-1000	822561	5.42	10.937	11.88	0.52	0.88	.531	1.71	4.61	0.39	0.60	-0.18	10.06	6.00	2.875	0.88	0.91	E
TSE-1200	822710	6.04	12.500	13.76	0.70	0.88	.562	2.54	5.44	1.71	2.02	-0.99	11.55	6.00	2.875	1.00	1.10	E
TSE-1200	822713	6.04	12.500	13.76	0.70	0.88	.562	2.54	5.44	1.71	2.02	-0.99	11.55	6.00	2.875	1.00	1.10	E
TSE-1200	822714	6.04	12.500	13.76	0.70	0.88	.562	2.54	5.44	1.71	2.02	-0.99	11.55	6.00	2.875	1.00	1.10	E
TSE-1400	822720	6.93	15.000	16.48	0.82	1.00	.656	2.94	6.15	1.71	2.02	-1.01	13.55	6.63	3.25	1.125	1.31	F
TSE-1400	822723	6.93	15.000	16.48	0.82	1.00	.656	2.94	6.15	1.71	2.02	-1.01	13.55	6.63	3.25	1.125	1.31	F
TSE-1400	822724	6.93	15.000	16.48	0.82	1.00	.656	2.94	6.15	1.71	2.02	-1.01	13.55	6.63	3.25	1.125	1.31	F

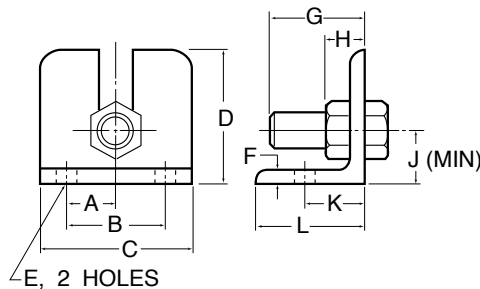
*Maximum Bushing bore with standard keyway.

▶ BRAKE SAFETY GUARD

MODEL	PRODUCT NUMBER	A	B	C	D
TSE-1000	828200	12.44	3.75	5.09	11.12
TSE-1200	822516	14.18	3.75	4.73	12.75
TSE-1400	822526	16.77	4.30	4.77	15.00



▶ TORQUE PIN BRACKET



MODEL	PRODUCT NUMBER	A	B	C	D	E	F	G	H	J	K	L
TSE-1000	825500	1.25	2.50	4.00	4.00	0.53	0.375	2.50	.875	1.375	1.625	3.00
TSE-1200	822515	1.50	3.00	4.50	4.60	0.67	0.375	3.84	.920	1.750	1.910	3.45
TSE-1400	822525	1.50	3.00	4.50	4.60	0.67	0.375	3.84	.980	1.750	1.910	3.45