

MODEL 5019-S SPRING APPLIED BRAKE CALIPER

This spring applied brake caliper is basically the same as the air applied configuration, but uses a different actuator which requires fluid pressure to release the brake. The fluid pressure is absolutely proportional to the brake force. Increasing the pressure will decrease the brake torque and vice versa.

All 5019 brake caliper models can be used in either hydraulic or pneumatic applications, since its 'O' ring and piston construction will not be damaged by hydraulic fluid. The spring applied actuator is available with many spring combinations, including adjustable springs, for various brake torques.

The standard brake lining supplied by Kobelt is asbestos free, and was engineered to provide a coefficient of friction of approximately 0.45 to 0.55. The lining remains fairly stable up to 750°F (400°C).

The brake shoe bearings are detachable from the brake shoe itself. This design allows for the installation of shims between the bearing and the brake shoes. Installation shims between these two items will reduce the clearance between the brake shoes. The brake caliper for this reason can be adapted to various sizes of thickness. Maximum disc thickness however, is 3/4". The 5019 is available foot mount or side mount.

Options Available

- R Manual Release
- T Adjustable Springs
- W Side Mount

Example: 5019-SR is for Spring Applied caliper with manual release.

When ordering brake calipers for discs smaller than the standard thickness, add the last four digits of the appropriate shim kit. Example: 5019-S0625 is for 5019-S caliper set for 5/8" thick disc.

A variety of custom made discs are available. For discs thinner than the standard thickness refer to the shim kit table below.

Max disc thickness	Part Number	Total shim size
.625 in. (16 mm)	5019-0625	0.200 in. (5 mm) 1 shim per side
.375 in. (10 mm)	5019-0375	0.400 in. (10 mm) 2 shims per side

Specifications

Clamping force	5250 lbs	(2381 kg)
Max. disc thickness	0.75 in.	(20 mm)
Req. disc face	2 in.	(51 mm)
Total lining area	18 sq. in.	(116 sq. cm)
Lining thickness	0.312 in.	(8 mm)
Max. allowable lining wear	0.14 in.	(3.5 mm)
Average wear rate	0.005 cu. in./HP-hr	(0.082 c.c./HP-hr)
Coefficient of friction	0.45 at 68°F	(0.45 at 20°C)
Coefficient of friction	0.55 at 500°F	(0.55 at 260°C)
Maximum release pressure	120 psi	(8.3 bar)
Maximum pressure	250 psi	(17 bar)
Actuator volume	9 cu. In.	(147 cu. cm)
Weight	17 lb.	(7.7 kg)
Material	Die cast silicon bronze with stainless steel hardware	

IMPORTANT: Use only hydraulic fluid or air. Standard seals are NOT compatible with brake fluid.

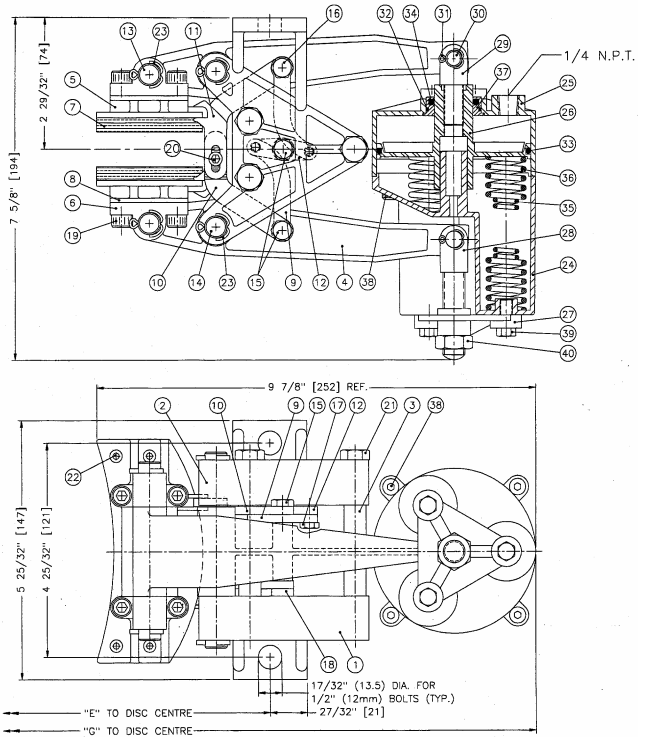
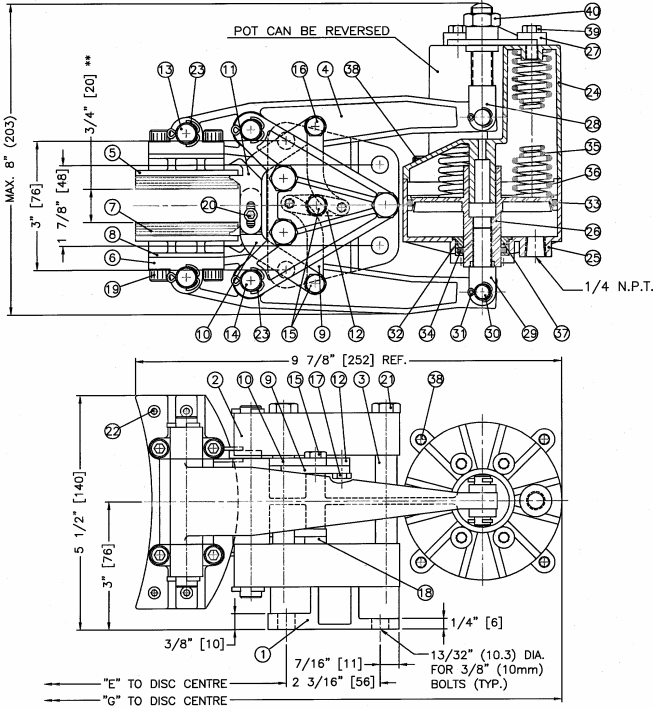
STANDARD VENTILATED KOBELT DISCS: 0.75 in. (19 mm)

Disc Diameter	Disc Diameter					
	inches	9	12	15	18	20
mm	229	305	381	457	508	
	Acting Radius	ft	.291	.416	.541	.666
meter		.089	.127	.165	.203	.229
Torque	ft-lb	764	1092	1420	1748	1969
	kg-m	106	151	197	242	272
Maximum RPM		6150	4550	3600	3000	2680

FOOT MOUNT

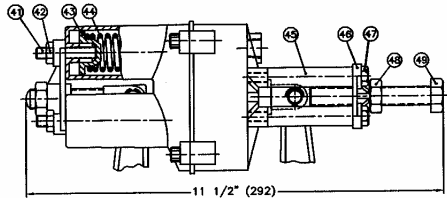
5019-S

SIDE MOUNT



All dimensions in inches (mm)

Adjustable springs and manual release screw option



Disc diam.(inches)	9	12	15	20
(mm)	229	305	381	508
Dim. "E" (inches)	5.6	7.1	8.6	11.1
(mm)	141	179	217	281
Dim. "G" (inches)	12.1	13.5	15.1	17.6
(mm)	306	344	383	446
Dim. "H" (inches)	6	7.5	9	11.5
(mm)	152	191	229	292

CAUTION: When dismantling the actuator, it is important that it is retained in a press before the assembly screws are removed.

Item	Qty	Part No.	Description	Item	Qty	Part No.	Description
1	1	5019-0001	Foot	6207 Spring Applied Pot			
1	1*	5019-0102L	L.H. Saddle (Sidemount)	24	1	6207-0001	Spring Housing
2	2*	5019-0002	Saddle	25	1	6207-0002	Piston Housing
2	1*	5019-0102R	R.H. Saddle (Sidemount)	26	1	6207-0003	Piston
3	3	5019-0003	Spacer	27	1	6207-0004	Mounting Bracket
4	2	5019-0004	Lever	28	1	6207-0005L	Clevis
5	2	5019-0005	Shoe	29	1	6207-0005S	Clevis
6	4	5019-0006	Bearing	30	2	6207-0010S	Pin
7	2	5019-0007	Lining	31	4	1026-0312	Cotter Pin
8	*	5019-0008	Shim	32	1	1101-0024	"O" Ring
9	2	5019-0010	Connecting Link	33	1	1101-0236	"O" Ring
10	2	5019-0011	Balancing Link No. 1	34	1	1101-0212	"O" Ring
11	2	5019-0012	Balancing Link No. 2	35	3	1201-0151	Spring
12	1	5019-0019	Centre Pivot Link	36	3	1201-0152	Spring
13	2	5019-0021	Shoe Pin	37	1	6207-0011	Bushing
14	2	5019-0022	Saddle Pin	38	4	1002-1116	Socket Hd Screw
15	3	5019-0024	Shoulder Bolt	39	3	1001-1110	Hex Hd Bolt
16	1	5019-0025	Shoulder Bolt	40	1	1022-0214	Jam Nut
17	2	5019-0026	Shoulder Bolt	Adjustable Spring Option (-T)			
18	1	5019-0027	Spacer	41	3	1016-1124	Set Screw
19	8*	1002-1112	Skt Hd. Cap Screw (standard)	42	3	1022-0211	Jam Nut
19	8*	1002-1116	Skt Hd. Cap Screw (-0625/0375 shim kit)	43	3	6207-0009	Spring Retainer
20	2	1002-0808	Skt Hd Cap Screw	44	3	1201-0156	Spring
21	3*	1001-1280	Hex Hd Bolt	Manual Release Option (-R)			
21	3*	1001-1264	Hex Hd Bolt (Sidemount)	45	4	6207-0007	Spacer
22	12	1033-0806	Rivet	46	1	6207-0006	Manual Release Bracket
23	8	1026-0516	Cotter Pin	47	4	1001-1044	Hex Hd Screw
				48	1	1022-0214	Jam Nut
				49	1	6207-0008	Release Screw

* Quantity may vary with options