

MODEL 5027-S SPRING APPLIED BRAKE CALIPER

The Model 5027 brake caliper is equipped with an actuator utilizing fluid pressure to release and internal springs to apply the brake. The more pressure that is accumulated in the actuator, the lower is the torque, and vice versa.

The actuator itself is extremely responsive and will give infinite control over brake torque. Adjustments are provided at the actuator to compensate for lining wear. The smaller the clearance is kept between the brake shoe and disc, the higher the maximum torque will be. In applications where constant drag is required, the large shoe area will reduce the frequency of lining replacement.

All castings are made from die-cast silicon bronze and most hardware such as pins and bolts are made from stainless steel. Even in the harshest environment, this caliper will give years of trouble-free service because of its fine engineering and selection of materials.

ORDERING INFORMATION

5027-S Spring Applied Brake Caliper
5027-SR Spring Applied Brake Caliper with manual release screw

This caliper is also available in a side mount version

When ordering brake caliper for disc thickness smaller than the standard value, add the last four digits of the appropriate shim kit to the model number.

Example: 5027-S1000 is for the 5027-S caliper set for 1" thick disc.

A variety of custom made discs are available. For thinner non standard discs, shims are required. Refer to shim kit table below.

Max Disc thickness	Part no.	Total shim size
1.5 in. (38.1 mm)	5027-1500	0.5 in (12.7 mm) 1 shim (¼) per side
1.0 in. (25.4 mm)	5027-1000	1.0 in. (25.4 mm) 1 shim (½") per side
0.5 in. (12.7 mm)	5027-0500	1.5 in. (38.1 mm) 2 shims (¼" & ½") per side

SPECIFICATIONS

Clamping force	48000 lbf	(213.5 kN)
Max. disc thickness	2 in.	(51 mm)
Req. disc face	4 in.	(102 mm)
Total lining area	114 sq. in.	(735 sq. cm)
Lining thickness	0.625 in.	(15.8 mm)
Max. allowable lining wear	0.42 in.	(10.6 mm)
Average wear rate	0.005 cu. in./HP-hr	(0.082 cu. cm/HP-hr)
Coefficient of friction	0.45 – 0.49	At 20° - 260°C
Max. release pressure	120 psi	(827 kPa)
Max. pressure	250 psi	(1724 kPa)
Actuator volume	96 cu. in.	(1573 cu. cm)
Weight	186 lb.	(84 kg)
Material	Die cast silicon bronze with stainless steel hardware and alloy steel studs	

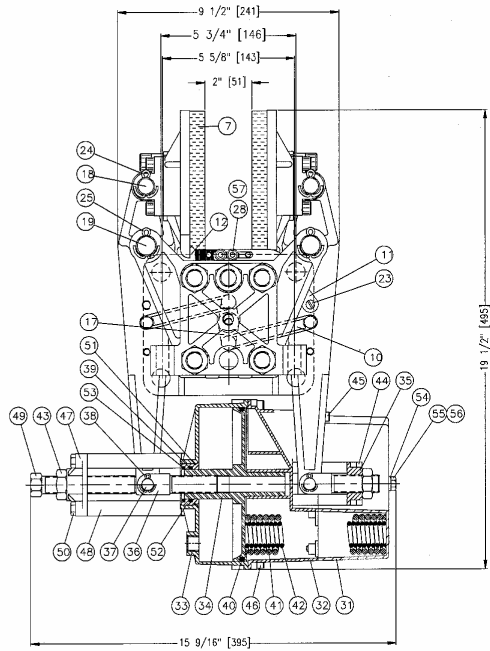
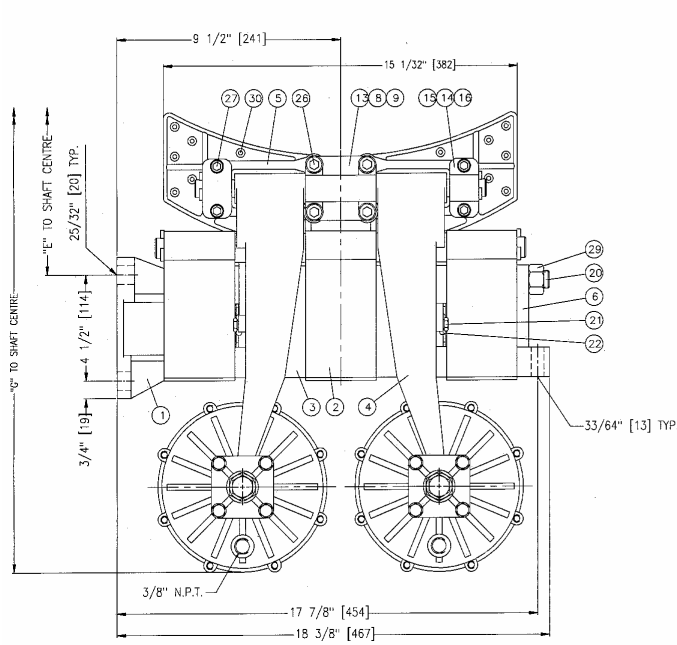
Important: Use only hydraulic fluid or air. Standard seals are not compatible with brake fluid.

KOBELT STANDARD VENTILATED 2 in. (51 mm) DISCS:

Disc diam.	30	35	40	45	50
in.	30	35	40	45	50
mm	762	889	1016	1143	1270
Acting rad.	1.08	1.29	1.50	1.71	1.92
ft	1.08	1.29	1.50	1.71	1.92
m	0.33	0.39	0.46	0.52	0.58
Torque ‡	20874	25274	29674	34074	38474
ft-lb	20874	25274	29674	34074	38474
kg-m	2886	3494	4103	4711	5319
Max. RPM	1800	1550	1350	1200	1070

‡ Brake torques are theoretical values only

DIMENSIONS AND PARTS LIST MODEL 5027-S/SR



All dimensions in inches (mm)

Item	Qty	Part No.	Description
1	1	5024-0001	Foot
2	3	5024-0002	Saddle
3	2	5024-0003	Spacer
4	4	5026-0004	Lever
5	2	5027-0005	Shoe
6	1	5027-0100	Top Support
7	2	5027-0007	Lining
8	*	5026-0008	Shim 1/4" (Centre Hinge)
9	*	5026-0009	Shim 1/2" (Centre Hinge)
10	4	5024-0010	Connecting Link
11	2	5024-0011	Balancing Link No. 1
12	2	5024-0012	Balancing Link No. 2
13	2	5026-0013	Centre Hinge Block
14	4	5026-0014	Outer Hinge Block
15	*	5026-0015	Shim 1/4" (Outer Hinge)
16	*	5026-0016	Shim 1/2" (Outer Hinge)
17	2	5024-0019	Centre Pivot Link
18	2	5027-0021	Shoe Pin
19	2	5027-0022	Saddle Pin
20	5	5027-0023	Tie Rod
21	8	5024-0024	Shoulder Bolt
22	2	5024-0025	Shoulder Bolt
23	2	5024-0026	Link Pin
24	4	1026-0820	Cotter Pin
25	4	1026-1024	Cotter Pin
26	8*	1002-1420	Socket Hd. Cap Screw (standard)
26	*	1002-1424	Socket Hd. Cap Screw (-1500 Shim kit)
26	*	1002-1428	Socket Hd. Cap Screw (-1000/0750 Shim kit)
26	*	1002-1432	Socket Hd. Cap Screw (-0750/0500 Shim kit)
27	8*	1002-1220	Socket Hd. Cap Screw (standard)
27	*	1002-1224	Socket Hd. Cap Screw (-1500 Shim kit)
27	*	1002-1228	Socket Hd. Cap Screw (-1000/0750 Shim kit)
27	*	1002-1232	Socket Hd. Cap Screw (-0750/0500 Shim kit)
28	4	1002-1010	Socket Hd. Cap Screw
29	5	1022-0117	Hex Nut
30	58	1033-1007	Rivet
57	4	1023-0232	Flat Washer

Disc Dia.	30	35	40	45	50
inches	30	35	40	45	50
mm	762	889	1016	1143	1270
Dim. "E"					
inches	15.75	18.25	20.75	23.25	25.75
mm	400	464	527	591	654
Dim. "G"					
inches	29.25	31.75	34.25	36.75	39.25
mm	743	806	870	933	997

6230 Spring Applied Pot

31	2	6230-0001	Spring Housing No. 1
32	2	6230-0101	Spring Housing No. 2
33	2	6230-0002	Piston Housing
34	2	6230-0003	Piston
35	2	6230-0004	Bracket
36	4	6230-0005	Clevis
37	4	6230-0010	Pin
38	8	1026-0516	Cotter Pin
39	2	1102-3026	"U" Cup
40	2	1101-1361	"O" Ring
41	14	1201-0158	Outer Spring
42	14	1201-0159	Inner Spring
44	8	1002-1028	Socket Hd Cap Screw
45	16	1002-1012	Socket Hd Cap Screw
46	16	1002-1116	Socket Hd Cap Screw
51	2	1101-0030	"O" Ring
52	2	6230-PHB	Bushing
53	2	6230-94013	Wiper
54	4	1023-0311	Lock Washer
55	4	1001-1116	Hex Hd Cap Screw
56	4	6230-0012	3/4" Spring Guide

Manual Release Option

47	2	6230-0006	Manual Release Bracket
48	8	6230-0007	Spacer
49	2	6230-0008	Release Screw
50	8	1001-1180	Hex Hd Bolt
43	2	1022-0217	Hex Jam Nut

* Quantity may vary with options