

5027-A

FLUID APPLIED BRAKE CALIPER



The **5027** Brake Caliper is the flag ship of the Kobelt die-cast brake caliper series. It combines all the latest technology in design and manufacture. Like all the foregoing calipers, it has patented features such as balancing links, adjustment shims to fit between the shoe and the shoe bearing and patented actuators. Again, its compact design makes it a very powerful brake caliper for its size.

This brake caliper shares all its components parts, except for shoe and lever, with our Model 5024. As before, the air applied actuators have two supply ports per actuator. In most cases only one of these ports is needed to be connected to the control line. The diaphragm actuator is virtually friction free and is therefore extremely quick in response. In fact, even a 1/10 psi change in air pressure will make a noticeable difference to the braking torque. The maximum supply pressure to the caliper should not exceed 100 psi (6.9 bar). Our standard 2 x 4 series brake disc from 30 to 50 inches range can be used with this caliper.

SPECIFICATIONS

Clamping force	48000 lbf	(213.5 kN)
Maximum 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	0.48 – 0.49	at 20° - 260°C
Maximum pressure	100 psi	(6.9 bar)
Actuator volume	180 cu. in.	(2950 cu. cm)
Weight	172 lbs.	(78 kg)
Materials	Die cast silicon bronze with stainless steel hardware and alloy steel studs	

Ordering number: 5027-A
option: **5027-AW** for side mount

When ordering brake calipers for discs smaller than the standard thickness, shim kits are to be used. Add the last four digits of the appropriate shim kit to the part number. Example 5027-A caliper set for 1” thick disc, the order number is

5027-A1000

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

For the use of shim kits on discs thinner than standard thickness of 2”, refer to the table below:

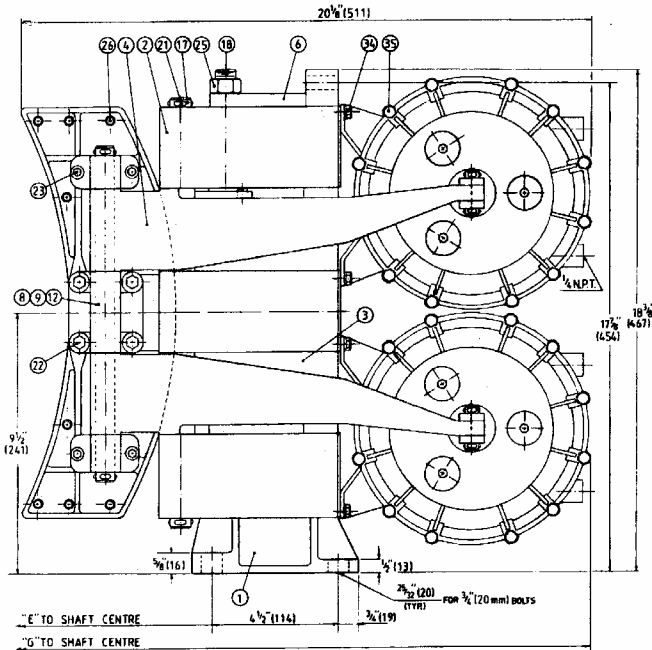
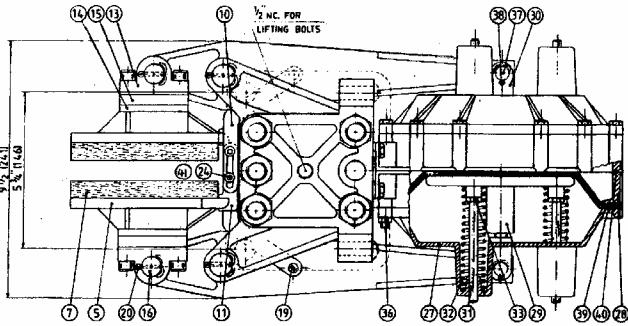
STANDARD VENTILATED KOBELT DISCS: 2.0 in. (51 mm)

Disc diam. inches. mm.	30 762	35 889	40 1016	45 1143	50 1270
Acting rad. feet meters	1.08 0.33	1.29 0.39	1.50 0.46	1.71 0.52	1.92 0.58
Torque ‡ ft-lb kg-m	26000 3594	31000 4285	36000 4976	41000 5668	46000 6359
Max. RPM	1800	1550	1350	1200	1070

‡ Brake torques are theoretical values only

Max disc thickness	Shim kit	
	Part Number	Total Shim Size
1.5 in. (38.1 mm)	5027-1500	0.5 in. (12.7 mm) one (1/4”) shim per side
1.0 in. (25.4 mm)	5027-1000	1.0 in. (25.4 mm) one (1/2”) shim per side
0.5 in. (12.7 mm)	5027-0500	1.5 in. (38.1 mm) two (1/2”&1/4”) shims per side

MODEL 5027-A



All dimensions in inches (mm)

Disc dia.		30	35	40	45	50
inches		30	35	40	45	50
mm		762	889	1016	1143	1270
Dimension "E"						
inches		16.0	18.5	21.0	23.5	26.0
mm		406	470	533	597	660
Dimension "G"						
inches		29.5	32.0	34.5	37.0	39.5
mm		749	813	876	940	1003

Item	Qty	Part No.	Description
1	1	5024-0001	Foot
1*	2	5027-0200	Foot (side mount)
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	2	5024-0011	Balancing Link No. 1
11	2	5024-0012	Balancing Link No. 2
12	2	5026-0013	Centre Hinge Block
13	4	5026-0014	Outer Hinge Block
14	*	5026-0015	Shim 1/4" (Outer Hinge)
15	*	5026-0016	Shim 1/2" (Outer Hinge)
16	2	5027-0021	Shoe Pin
17	2	5027-0022	Saddle Pin
18	5	5027-0023	Tie Rod
19	2	5024-0026	Link Pin
20	4	1026-0820	Cotter Pin
21	4	1026-1024	Cotter Pin
22	8*	1002-1420	Skt Hd Screw (standard model)
22	*	1002-1424	Skt Hd Screw (-1500 Shim kit)
22	*	1002-1428	Skt Hd Screw (-1000 Shim kit)
22	*	1002-1432	Skt Hd Screw (-0500 Shim kit)
23	8*	1002-1220	Skt Hd Screw (standard model)
23	*	1002-1224	Skt Hd Screw (-1500 Shim kit)
23	*	1002-1228	Skt Hd Screw (-1000 Shim kit)
23	*	1002-1232	Skt Hd Screw (-0500 Shim kit)
24	4	1002-1010	Skt Hd Screw
25	5	1022-0117	Hex Nut
26	58	1033-1007	Rivet
41	4	1023-0232	Flat Washer
42	*	1501-0301	Grease Nipple
6130 Fluid Applied Pot			
27	4	6130-0001	End Cap
28	4	6130-0002	Centre Housing
29	4	6130-0003	Diaphragm Washer
30	4	6130-0005	Clevis
31	12	6130-0007	Guide Pin
32	12	1201-0162	Spring
33	12	1022-0211	Jam Nut
34	8	1001-1008	Hex Head Screw
35	24	1001-1064	Hex Head Screw
36	24	1022-0410	Hex Nut
37	4	6230-0010	Pin
38	8	1026-0516	Cotter Pin
39	4	1105-0030	Diaphragm
40	2	1101-1265	"O" Ring 200 mm x 3.5 mm

* Quantity may vary with options