

The Eaton logo, consisting of the word "EATON" in a bold, white, sans-serif font with a vertical line separating the "E" and "A".

EATON

The Airflex logo, consisting of the word "Airflex" in a white, sans-serif font.

Airflex

Airflex® DBB & DBA Brakes

These spring-applied, pressure released, disc style brakes develop equal torque in either direction of rotation. Their torque and thermal capacities allow them to be used in the most demanding applications.



DBA Description

Model DBA brakes are spring applied, pressure released, disc style brakes. They develop equal torque in either direction of rotation. Their torque and thermal capacities allow them to be used in the most demanding applications.

Brake construction and operation is shown in the figure. Pressurizing the brake compresses the brake springs and withdraws the clamping plates from the brake discs. Standard brakes are furnished with either one or two discs, which are free to move axially.

Model DBA uses a rubber diaphragm to form the releasing pressure chamber and to serve as the releasing piston. Brake friction material is attached to stationary components. Brake discs are either solid or ventilated. The disc type is indicated by an S for solid, or V, for ventilated, in the brake model designation. Solid discs are used in applications requiring a heat sink and/or where engagement is infrequent. Ventilated discs are recommended for cyclic application.

Torque ratings listed are for brakes with a standard compliment of springs. The quantity of springs can be varied to customize the torque of the brake to suit a particular application. Consult the factory for brake torque of units with non-standard spring configurations.

Brake sizes are indicated by the number of brake discs and the disc diameter in inches. For instance, size 229DBA has two discs 29 inches in diameter.



Features

Large friction area

Allows brakes to absorb and dissipate high energy loads associated with high cyclic and high inertia stops.

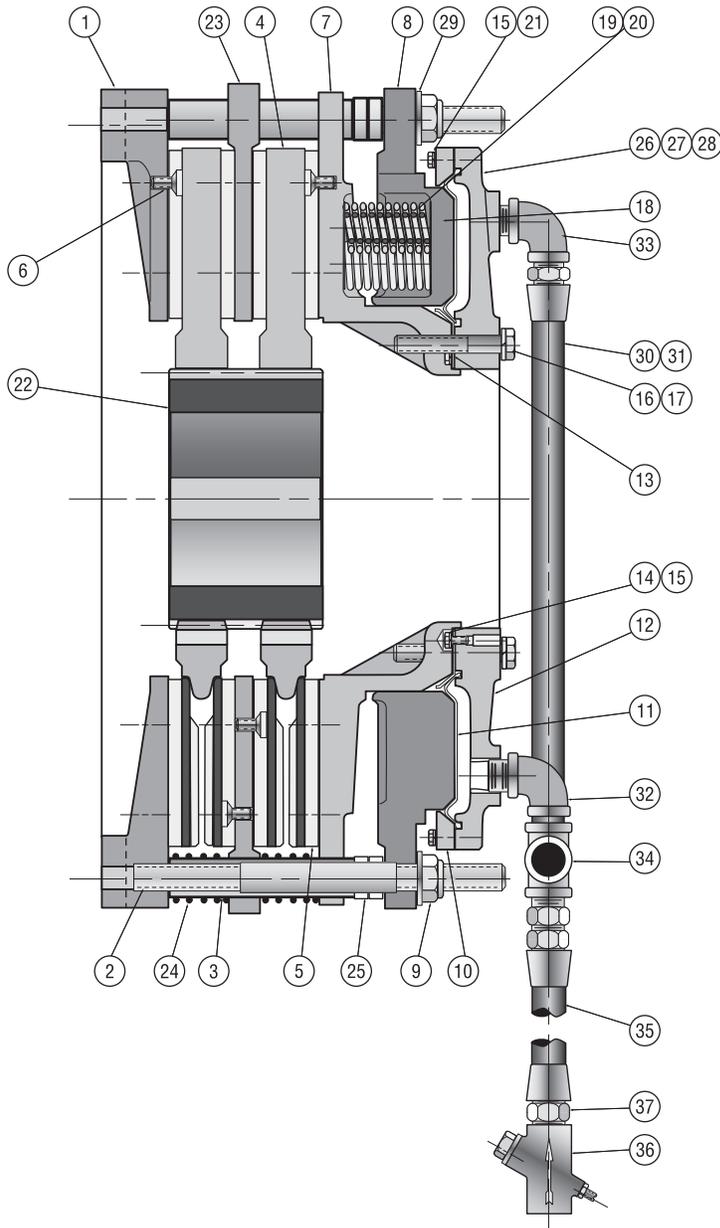
Minimal adjustment required for lining wear

Single disc units require no wear adjustment and dual disc units require only one wear adjustment during the long life of the friction material.

Where Used:

- Can making machines
- Draglines
- Power shovels
- Conveyors
- Power presses

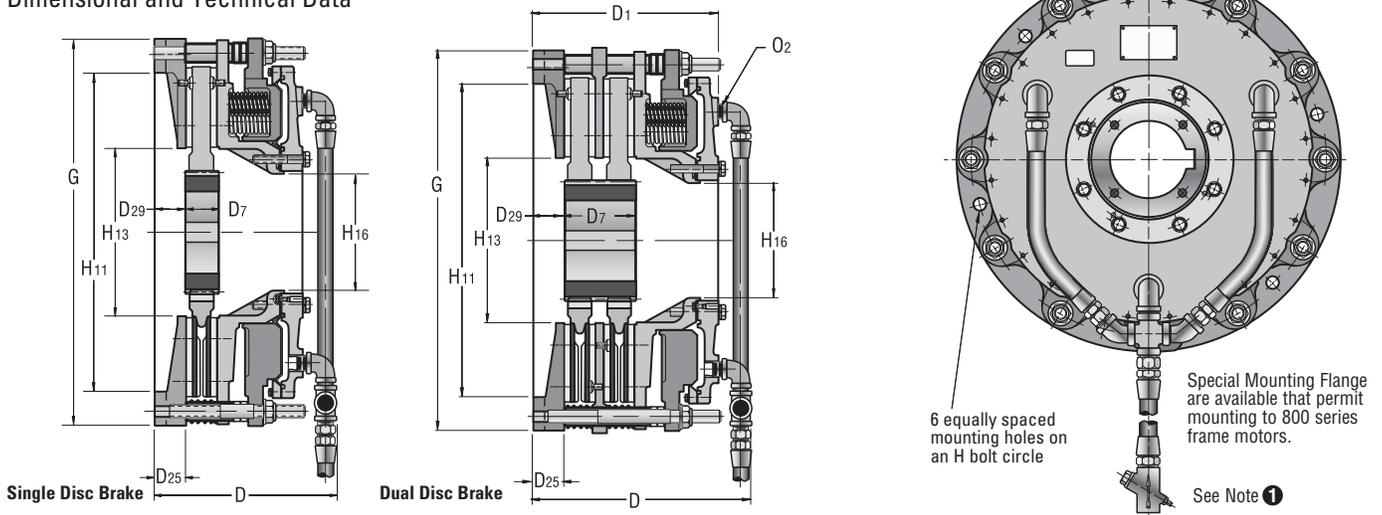
DBA Component Parts



Item No.	Description
1	Mounting Flange
2	Stud
3	Clamp Tube
4	Disc
5	Friction Disc
6	Flat Head Screw
7	Pressure Plate
8	Spring Housing
9	Locknut
10	Outer Clamp Ring
11	Diaphragm
12	End Plate
13	Inner Clamp Ring
14	Hex Head Screw
15	Lockwasher
16	Hex Head Screw
17	Lockwasher
18	Spring Retainer Plate
19	Inner Spring
20	Outer Spring
21	Hex Head Screw
22	Gear
23	Reaction Plate
24	Release Spring
25	Wear Spacer
26	Name Plate
27	Self Tapping Screw
28	Warning Decal
29	Washer
30	Air Tube
31	Air Tube
32	90 Deg. Street Elbow
33	90 Deg. Male Elbow
34	Cross
35	Hose Assembly
36	Flow Control Valve
37	Bushing

DBA Elements

Dimensional and Technical Data



English	Dimensions in inches							
29DBA	2.75	31.000	28.00	14.75	10.25	33.998	1.06	1-11 1/2
Basic Size	D ₂₅	H	H ₁₁	H ₁₃	H ₁₆	G 2	L	O ₂ 3
29DBA	70	787	711	375	260	863,5	27	1-11 1/2
SI	Dimensions in millimeters							

English	Dimensions in inches								
129DBA	3.88	7.13	15.51	13.75	3.50	2.25	15.06	5.88	2.38
229DBA	4.88	7.19	19.13	17.38	7.12	2.25	18.06	7.00	3.12
329DBA	5.63	6.88	22.93		10.63	2.34			
Size	Min.	Max.	D	D ₁	D ₇	D ₂₉	D	D ₇	D ₂₉
	4 Bore Range 5		Ventilated Disc Types				Solid Disc Types		
	Min.	Max.	D	D ₁	D ₇	D ₂₉	D	D ₇	D ₂₉
129DBA	99	181	394	349	89	57	383	149	60
229DBA	124	182	486	441	181	59	459	178	79
329DBA	143	175	582		270	59			
SI	Dimensions in millimeters								

English			lb•in	psi	in ³	in ²	lb•ft ²	lb	rpm	
129DBAS	146162	413801	176700	100	310	890	152	325	1500	
229DBAS	146163	414126	336200	100	310	1780	292	520	1500	
129DBAV	146162	413683	113000	60	310	890	97	185	900	
229DBAV	146163	413585	216000	60	310	1780	191	340	900	
329DBAV	146210	415080	339000	60	310	2670	285	495	900	
Size	Part Number	Gear Part Number	6 7 8 M _r Torque Rating	Minimum Releasing Pressure	Releasing Volume	Friction Area	Wk ²	Weight		Maximum Speed
							Disc & Gear	Disc & Gear	Housing	
							J	Mass		
129DBAS	146162	413801	20000	6,9	5,08	5741	6,38	147	430	1500
229DBAS	146163	414126	38000	6,9	5,08	11481	12,26	236	521	1500
129DBAV	146162	413683	12800	–	5,08	5741	4,07	84	439	900
229DBAV	146163	413585	24400	–	5,08	11481	8,02	154	521	900
329DBAV	146210	415080	38400	–	5,08	17223	11,97	224	703	900
SI			N•m	bar	dm ³	cm ²	kg•m ²	kg	rpm	

Notes:

1 Basic part number only. Does not include gear. Gear must be ordered separately with the bore and keyway requirements. All ventilated disc brakes are furnished with an approximate 15.5 inch (394 mm) length of flexible hose and a flow control valve having a 1-11 1/2 American National Pipe Thread port.

2 Tolerance +0.000/-0,003 in (+0.00/-0,08 mm)

3 American National Pipe Thread.

4 Minimum bore based on catalog rated torque and standard spring configuration.

5 Maximum bore based on catalog rated torque and flat key.

6 Dynamic torque shown. Static torque approximately 1.15 greater. Torque values are for new linings. Torque decreases with lining wear. At the worn out condition, torque is approximately 0.66 of value shown.

7 Torque ratings are for units with a standard complement of springs. Consult factory for torque ratings of units with non-standard spring configurations.

8 Maximum allowable cylinder pressure is 120 psi (8,3 bar).