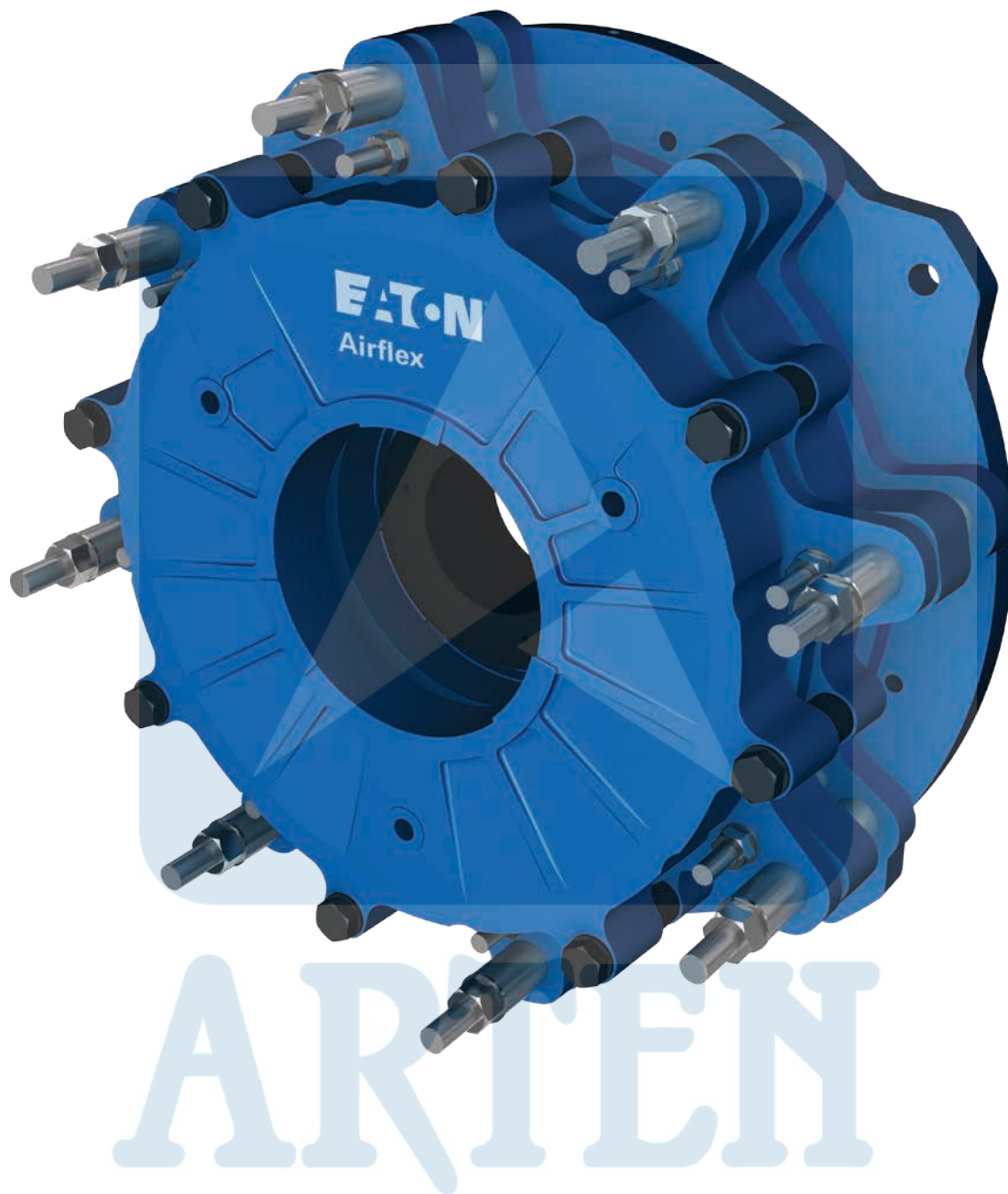


Eaton Floating Housing Brake
Airflex product line



EATON

Powering Business Worldwide

Airflex FHB brake elements

These spring-applied, pressure released, disc style brakes develop equal torque in either direction of rotation. The revolutionary floating housing concept helps provide quick change friction capability with longer friction life than traditional caliper brakes.

Overview

Eaton Airflex® has introduced a revolutionary new design in disc brake technology called the Floating Housing Brake (FHB). The spring applied (power off), air-cooled disc brake is well suited for applications in Surface Mining, Oilfield and other heavy-duty industrial machinery designs.

The FHB is an air cooled spring applied brake with exceptional friction life and rapid friction replacement capability. It is supplied with long wearing, organic friction material and a rugged solid cast, rotating disc that provides lower inertia than typical caliper brakes.



Features

- Rated for over 430,000 lb-in of torque
- Patented braking concept uses a floating housing instead of a floating rotor
- Multiple brake installation designs exist for industry leading motors
- Fixed hub and rotor design

Benefits

- Ability to quickly change the friction pads reduces down time on dragline from 3 hours to 1 hour
- Reduced maintenance cost with elimination of spline tooth or gear wear
- Longer friction pad wear life due to a full 360° annular disc
- Faster and safer installation with exclusive shaft lock assembly for ease of mounting and removal
- Virtually no wear during free wheeling, allows high product life

ARTEN

Airflex FHB brake elements

Technical introduction

The FHB brake is offered for applications with non-cyclic brake engagement that require higher speed operation or precise balance of the rotating components is required. It uses a solid rotor and stationary friction material to develop equal torque in either direction of rotation. The disc is mounted on the shaft which is to be stopped while the brake assembly is attached to the machine frame.

Pressurizing the brake compresses the brake springs and withdraws the clamping force from the brake disc so the shaft can rotate freely. As air pressure is exhausted, the springs force the pressure plate towards the mounting flange and the spring housing which in turn forces the floating plate away from the mounting flange, clamping the disc and the friction pad assembly.

Size	No. of spring sets	Dynamic Torque*		Max. RPM	Length Engaged		Length released	
		lb-in	N-m		in	mm	in	mm
130FHB	32	288,000	32,540	960	17.55	455.8	17.79	451.90
138FHB	36	432,900	48,918	950	18.24	463.3	18.48	469.39

*Dynamic torque calculated based on 36 sets of springs, static torque is approximately 15% more. Torque in each application is dependent on number of spring sets.

Typical applications

130FHB



138FHB



Draglines

- Hoist
- Drag
- Swing
- Propel/Walk

Motor frame compatible

- GE820/822
- P&H 8412D

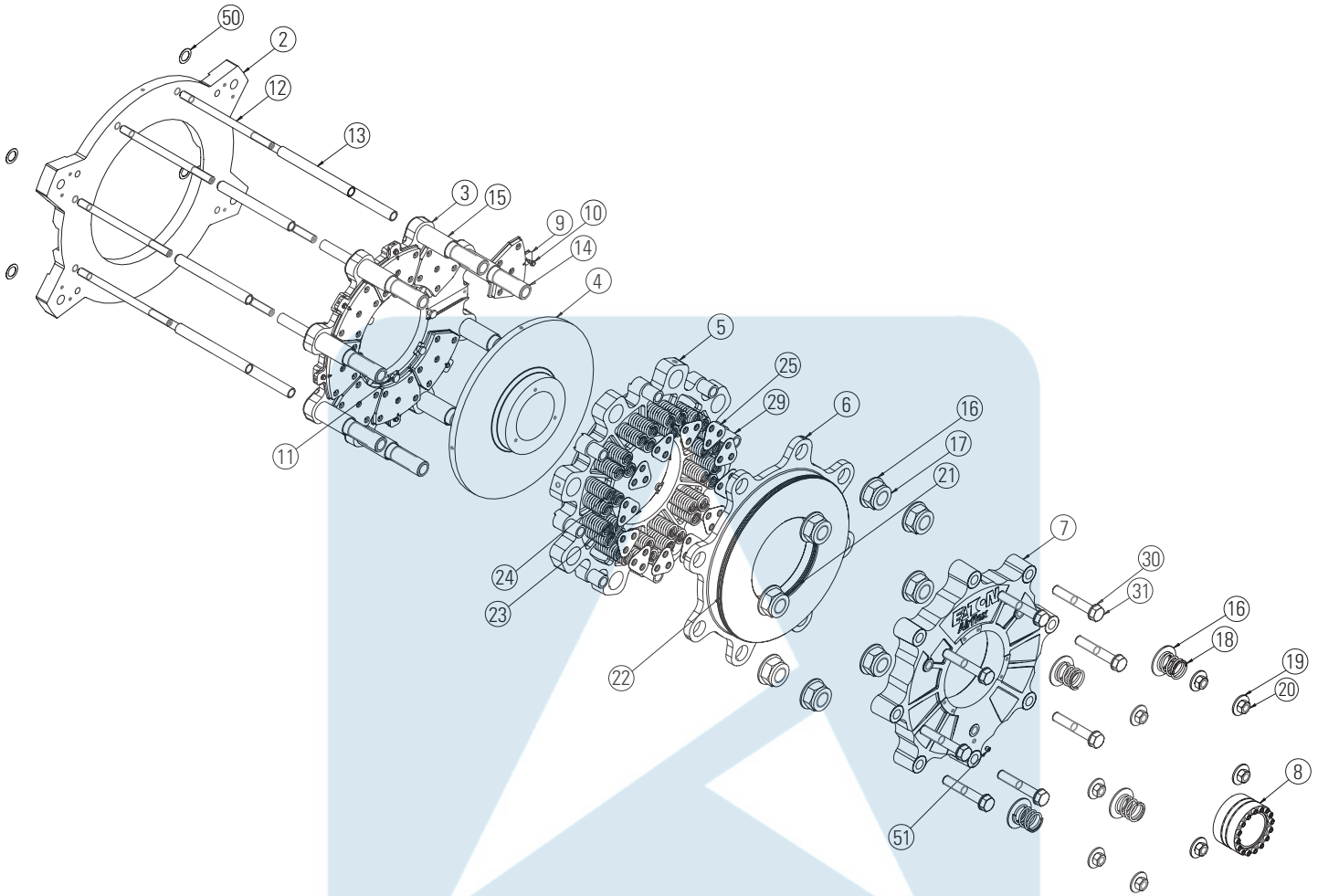
Draglines

- Hoist
- Drag
- Swing
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Motor frame compatible

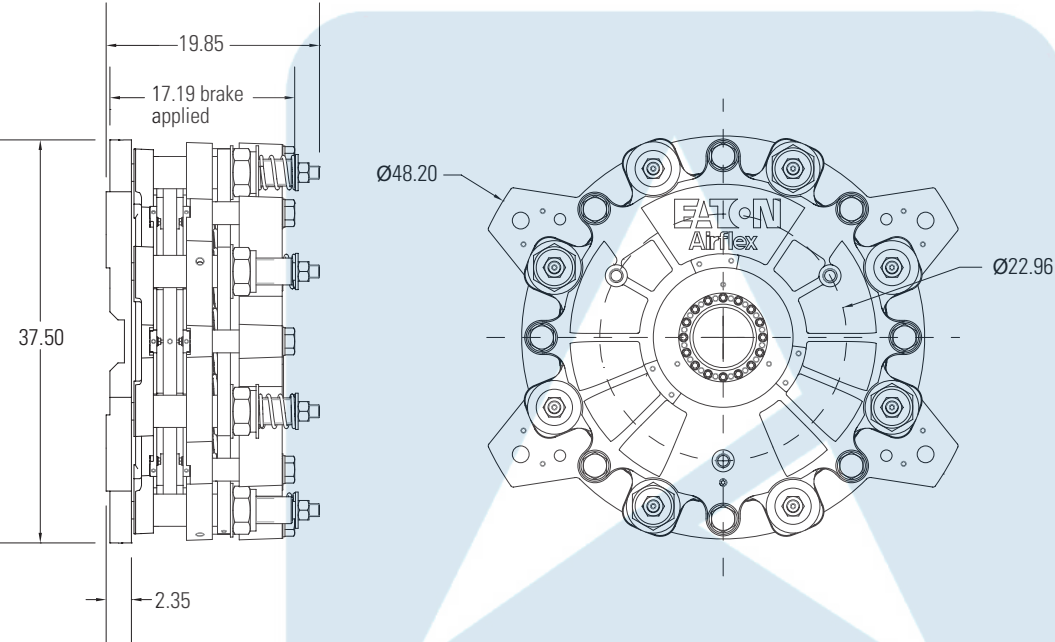
- GE824/826
- Siemens BI348

130FHB component parts



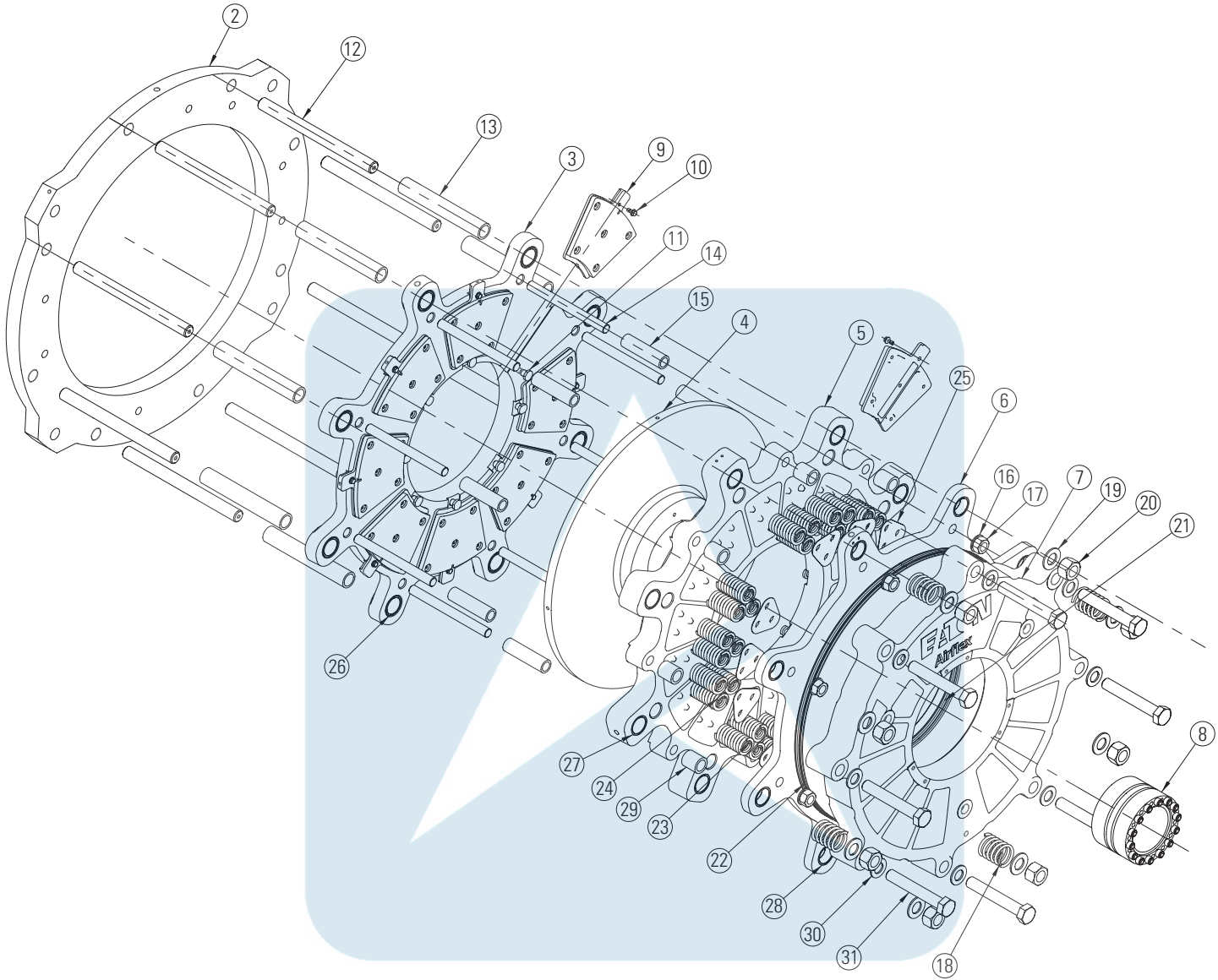
Item	Qty.	Description	Part number	Item	Qty.	Description	Part number
2	1	Mounting flange	515771	17	8	Self locking nut	000110X0094
3	1	Floating plate	515773	18	4	Release spring	416751-15
4	1	Disc	515775	19	8	Custom washer (release)	204243
5	1	Pressure plate	515777	20	8	Self locking nut	000414X0013
6	1	Spring housing	515779	21	2	Inner lip seal	000402X0091
7	1	Cylinder	515781	22	2	Outer lip seal	000402X0092
8	1	TSL	417385-04	23	24	Inner spring	416751-08
9	16	Friction pad S/A	308644	24	24	Outer spring	416751-07
10	16	Special flanged screw	308602	25	12	Spring retainer	415635
11	16	Shoulder screw (metric)	308593	29	8	Power head spacer	308599-02
12	8	Main stud	308635-01	30	8	Power head washer	000067X0064
13	8	Large clamp tube	308636-01	31	8	Power head screw	000391X3605
14	8	Hollow stud	308637	50	40	Shims	000153X1020
15	8	Spacer (small clamp tube)	308638-01	51	1	Drain plug	000077X0021
16	12	Flat washer	000067X0023				

130FHB specifications and dimensions illustrated



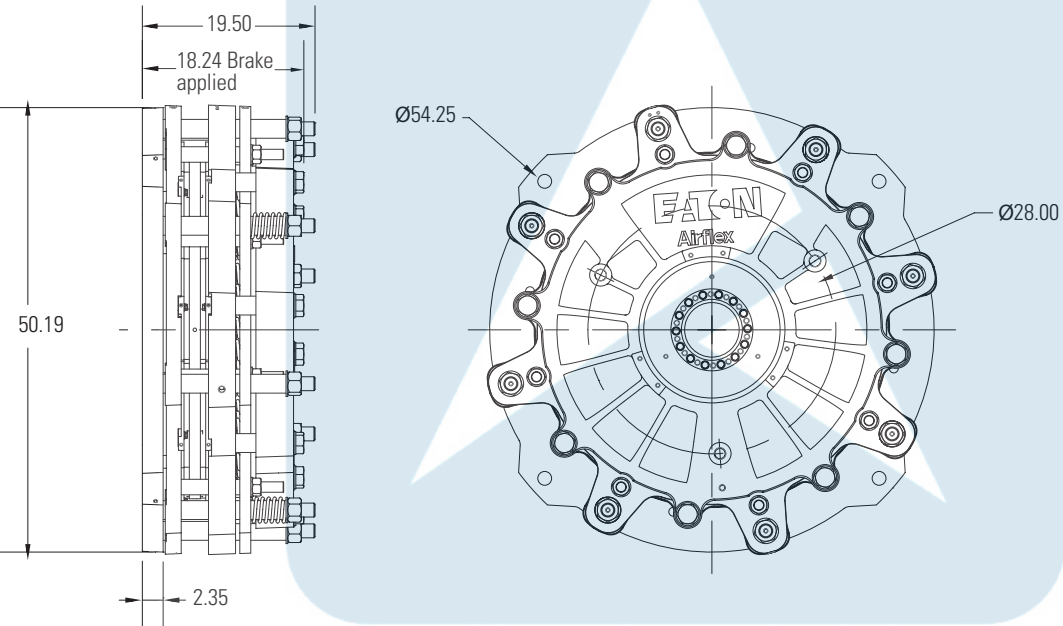
Part number	Item
146587A	130FHB assembly for GE-822
146587B	130FHB assembly for (P&H-HAF8412D)
146587C	130FHB assembly for GE-820
108168A	130FHB with shield and guard (GE-822)
108168B	130FHB with shield and guard (P&H-HAF8412D)
108168C	130FHB with shield and guard (GE-820)
108168D	130FHB with new shield and guard (GE-822)

138FHB component parts



Item	Qty.	Description	Part number	Item	Qty.	Description	Part number
2	1	Mounting flange	515532	17	8	Nut	000414X0013
3	1	Floating plate	515503	18	4	Return spring	416751-04
4	1	Disc	515536	19	8	Plain washer	000067X0065
5	1	Pressure plate	515505	20	8	Nut	000414X0004
6	1	Spring housing	515507	21	2	Lip seal	000402X0005
7	1	Cylinder	515509	22	2	Lip seal	000402X0006
8	1	B-LOC	417385-02	23	36	Inner apply spring	416751-08
9	16	Friction lining S/A	308589	24	36	Outer apply spring	416751-07
10	16	Flanged bolt	308602	25	12	Spring retainer	415635
11	16	Metric shoulder screw	308593	26	8	FP bush	204214-01
12	8	Main stud	308601-01	27	8	PP bush	204214-02
13	8	Clamp tube	308586-01	28	8	SH bush	204214-03
14	8	Support stud	308592-01	29	8	Power head spacer	308599-01
15	8	Spacer	308590-01	30	8	Plain washer	000067X0064
16	8	Plain washer	000067X0063	31	8	Screw	000391X3602

138FHB specifications and dimensions illustrated



Part number	Item
146562A	138FHB-GE-824
108154	138FHB-GE-824 w/ shield and guard
108154A	138FHB-GE-824 w/ shield, guard, and sensors
146562B	138FHB-GE-826
146562	138FHB_siemens
515531	Adapter plate for the BI-348 motor