



INTRODUCTION

A.C drum brakes are suitable for three phase A.C supply up to 440V and are available for drum diameters of 150mm to 600mm and braking torque up to 200 kg-m.

CONSTRUCTIONAL & WORKING

The shoes and the base of the brakes are of graded cast iron. Other components are fabricated steel. The lever is hinged on the main arm, which is connected to the side arm through a tie rod and is stressed by a pre-loaded compression spring. The compression of the spring can be adjusted to set the braking torque to the desired value. The brake liner of selected quality material and are riveted to the shoes by aluminium rivets.

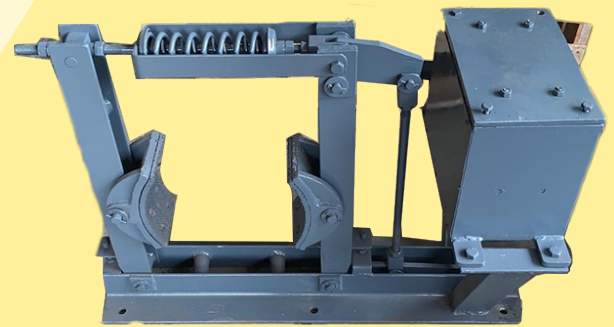
A.C. **solenoids** with laminated magnetic sheet metal house a copper magnetizing coil that is impregnated with Class F materials. The plunger which is connected to the lever, is drawn into the coil, when it is energised with A.C source. This loads the spring and releases the brakes shoes from the brake drum. When the supply is cut off, the plunger is pulled out of the coil, and the spring force clamps the brake shoes on the brake drum and the brake are applied.

FEATURES

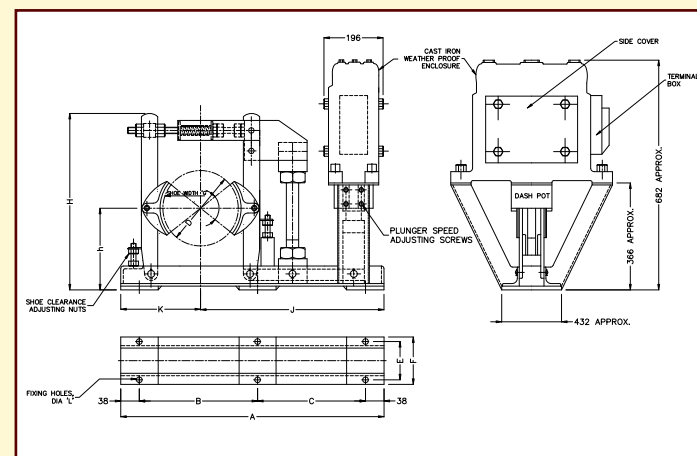
1. The brake is fail-to-safety. The brake is applied in absence of A.C. current and is released when the supply is restored.
2. High-quality brake lining material ensures consistent braking torque and reliable operation.
3. Clean environmental working, less noise.
4. Braking torque can be adjusted easily and quickly.
5. Ease of maintenance.

DIMENSION DETAILS

DRUM DIA.		BRAKING TORQUE		A	B	C	E	F	G	h	H	J	K	L
INCH	MM	kg.m	lb.ft											
6	150	16	116	710	330	304	100	140	70	240	500	522	190	13
8	200	21.25	154	762	355	331	127	178	89	264	520	546	216	13
10	250	26.60	192	838	431	331	156	130	108	276	543	594	244	16
12	300	58.25	421	890	407	407	165	230	127	292	645	610	280	16
15	380	72.80	526	965	431	458	165	242	152	314	682	647	318	16
16	400	80	580	985	441	468	180	236	180	314	682	657	328	20
18	460	125	900	1030	484	484	190	254	162	340	720	669	356	21
20	500	150	1100	1104	524	504	215	302	200	360	720	689	415	25
24	600	50% OF COIL RATING		1385	710	575	310	405	230	485	990	955	430	26



G.A.DRAWING



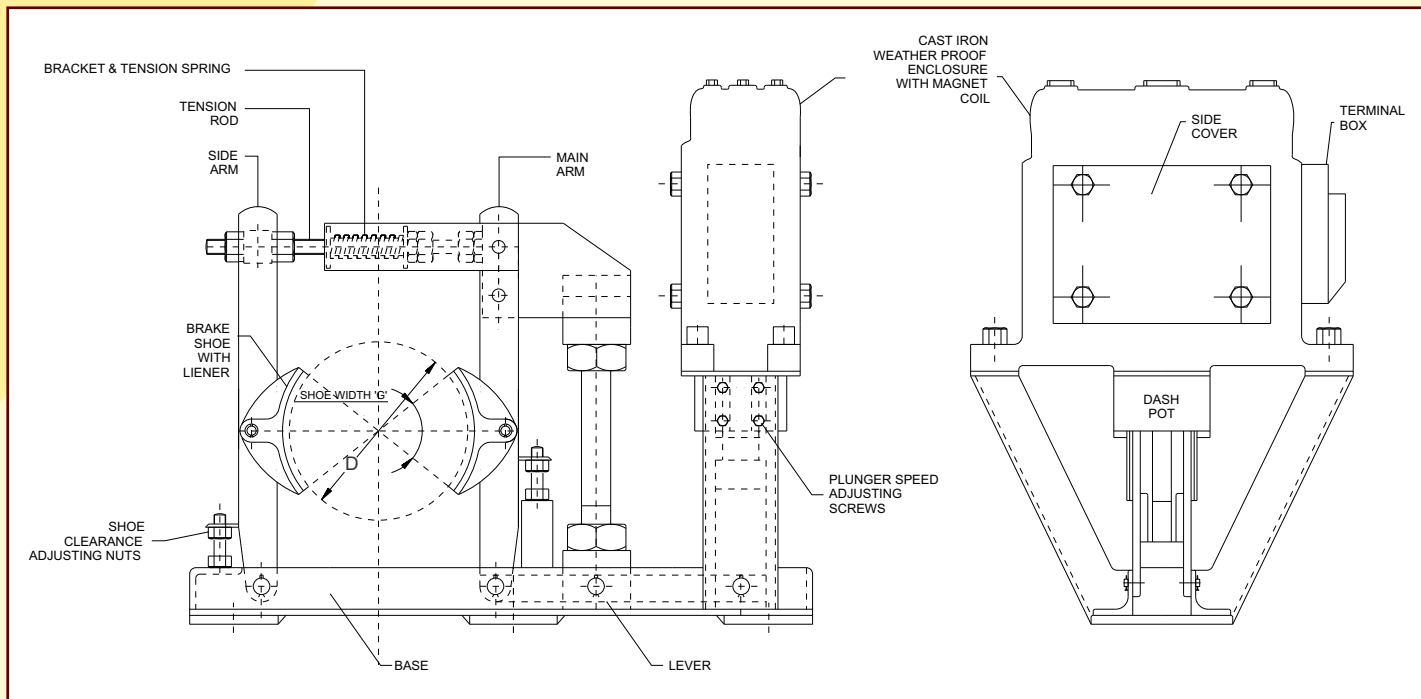
NOTES

1. Brake type 6 denotes A.C. three phase 6" drum diameter (inch series)
2. Brake type EMS 150 denotes A.C. three phase 150mm diameter (metric series)



For essential component of EMS Drum Brake please see Fig. 1 and find the following explanations :-

COMPONENT OF EMS DRUM BRAKE



BASE :

The Brake is mounted on a base construction.

BRAKE ARM :

Hinged with the brake shoe, they surround the brake drum and in connection with tension rod and dash pot they apply the braking force is generated by the spring.

TENSION SPRING :

Consists of rod, torque spring. The adjustable braking force is generated by the torque spring.

MAGNET COIL :

Is coil use to open the brake and is acting against the clamping force. The energy, required for release, is generated by Electro-Magnet.

TENSION ROD :

Its function is to transmit the braking force to the two brake arm, and therefore it is the most stressed component of the brake. In all brakes the tension rod is made of alloy steel with rolled threads.

BRACKET :

The bracket is the hinge between tension rod and the brake arm the bracket should be a pin junction as well.

LEVER :

Bracket, Tension Spring, Dash Pot are mounted to the lever. Here, the transformation from large stroke and small force into small stroke and high force is realized.



A.C ELECTRO MAGNET BRAKE

Brake are suitable for AC supply up to 415/440 V three phase, 50 Hz. and are available for 150mm to 600mm Dia.

These brake are the available with rated torque ranging from 130 Kg. Cm, for the smallest brake (150mm dia drum). up to 8500 Kg.cms. (500 mm drum dia).

These brake have a more rigid construction and better designed. and more efficient Solenoid, with damping provided to cushion lamination impact and thereby extend solenoid life and provide a smoother braking action.

These brakes have a better duty cycle then the single phase brakes.

CONSTRUCTION :-

Base & Brake Arm are cast iron high grade (FG-220) shoe are self-alignend, easy removable with fabric lining fixed with aluminum rivet, magnet solenoid type with laminated magnetic circuit having pole face to ensure quiet operation.

OPERATION :-

Compression spring provide the necessary working pressure to apply the brake, release being effected by a three phase electromagnet hand release lener is titled to the lock brake in the off position when required.Requires regular maintenance and periodical replacement of worn part and coils.

NOTE:-

- 1) Brake type EMS 6 denotes A.C. Three phase 6 inch Dia. (Inch series)
- 2) Brake type EMS 150 denotes A.C. Three phase 150mm Dia. (Metric series)
- 3) Brake are mode to suit either inch or metric drum size.
- 4) Coil are rated for operation 415 / 440 three phase A.C., 50 cycles.
- 5) Coils can be supplied with class 'B' insulation for operation at higher ambient temperature upto 60°
- 6) Tolerance ± 2 mm.