

Components
exploded view

- 1. Stator - Armature Assembly
- 2. Stator
- 3. Armature Plate
- 4. Torque Adjustment Ring
- 5. Compression Spring
- 6. Compression Parts
- 7. Rotor
- 8. Hub
- 9. Adjustment Tube
- 10. A/B, Mounting Bolt & Washer
- 11. Friction Plate (Optional)
- 12. Rubber Seal
- 13. Mounting Flange
- 14. A-H Hand Release Assembly

'a' Air Gap

Mounting

Switching

Brake coils are operated with DC voltage. Generally when braking time is not critical AC side switching is done. This method is often used with brake motors, where brake is switched with motor contacts. Due to the inductance of the brake coil, engagement time can be 3 to 6 times longer than with DC switching. Therefore this arrangement is not suitable for hoist applications.

For falling loads such as hoist, lifts and cranes, also the high inertia loads, a brake motor to some extent regenerate the supply and hold off the brake. Here it is essential to switch on the DC side of the rectifier. DC side switching requires provision of universal spark suppressor and capacitor to protect the coil and switches against inductive voltages.

For normal rectifier converting AC to DC you can use separate universal spark suppressor and capacitor across the switch. Rectifier supplied by us are designed to include suppressor and capacitor suitable for DC switching.

For optimum performance we suggest the following Rectifiers (Power supply).

Brake Coil Voltage	AC Input Voltage	Current Rating	Rectifier Type
190 VDC	415 VAC	1.5 Amp	EH 720 HHD
	230 VAC	1.5 Amp	EH 720 AD
96 VDC	230 VAC	1.5 Amp	EH 720 CD
	110 VAC	1.5 Amp	EH 720 BD

All rectifiers offered by us are with inbuilt DC switching protection circuit. Use of inferior quality and cheap rectifiers may damage your costly brake coils.

Rectifiers made by Usha Medisales

Working

In the "power off" state the compression springs (5) press the armature disc (3) and rotor (7) against attachment surface.

Hub (8) is firmly locked on the shaft and rotor slides over the hub.

On applying rated direct current voltage to the stator (2) the magnetic field produced will pull the armature disc (3) over air-gap 'a' towards stator against spring force. Thus the rotor is released allowing shaft to rotate.

In the event of continuous power failure, rotor (7) can be freed by pulling the hand release (14) - the hand release of "deadman type". The hand release goes back automatically to its original position and brake will immediately revert to its safe action.

Dimensions

F for size :
06 to 14 = 410
16 to 25 = 610

a = Airgap

Brake shown with Mounting Flange / Friction Plate and Rubber Seal

Parameters

All dimensions are in mm

Size	06	08	10	12	14	16	18	20	25
Torque M RAT. (Nm)	4	8	16	32	60	80	150	260	400
Max Speed rpm (min ⁻¹)	3000	3000	3000	3000	3000	3000	1500	1500	1500
Input Power P20 [w]	20	25	30	40	50	55	85	100	110

Brake shown with Manual Hand Release

** Standard bores
** max.bores

Parameter	06	08	10	12	14	16	18	20	25
ØA	87	105	130	150	165	190	217	254	302
ØB	82	101.5	127	147	163.5	188.5	-	-	-
B0	36.3	42.8	48.4	54.9	66.3	72.5	83.1	97.6	106.7
B1 Max.	41.5	48.5	56	64.5	77	82.5	98	114	124
B1 Min.	39.5	47	52.5	59	71.5	77.5	89	104.6	115.7
ØC	72	90	112	132	145	170	196	230	278
ØD	3 x M4	3 x M5	3 x M6	3 x M6	3 x M8	3 x M8	6 x M8	6 x M10	6 x M10
ØF	3 x 4.5	3 x 5.5	3 x 6.6	3 x 6.6	3 x 9	3 x 9	4 x 9	6 x 11	6 x 11
ØG	30#	45#	56	62	74	84	100	120	150
ØH	3 x 4.5	3 x 5.5	3 x 6.6	3 x 6.6	3 x 9	3 x 9	6 x 9	6 x 9	6 x 11
ØJ3	20/31#	30/41#	40	45	55	65	75	90	120
L	18	20	20	25	30	30	35	40	50
ØM	24	26	33	40	48	56	64	73.1	95.1
ØN	52	60	68	82	92	102	116	135	180
P	12	14	15	18	20	25	28	35	35
R	6	7	9	9	11	11	11	11	12.5
R1	1.5	1.5	1.5	1.5	1.5	1.5	-	-	-
z	1	1.5	2	2	2	2.25	2.75	3.5	4.5
a	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5
U	1	1	1	1	1	1.5	1.5	1.5	2
Ø3"	25	32	42	50	60	68	75	85	115
d4	4 x M4	4 x M5	4 x M5	4 x M5	4 x M6	4 x M6	4 x M8	4 x M10	4 x M10
d5	37.7	49	54	64	75	85	95	110	140
e	10	12	15	15	15	15	15	20	20
ØJ"	** 10,11 12,14 15 15	** 11,12 14,15 19,20 24*	** 11,12 14,15 19,20 24*	** 20,24 25 -	** 20,24 25,28 30,32 34*	** 25,28 30,32 34,35 38*	** 30,35 38,40 42 45	** 35,40 42,45 48 50	** 45,48 50,52 55,60,65 70*
Inertia J(kg cm ²)	0.15	0.61	2.0	4.5	6.3	15	29	73	200
Weight kg	1.300	2.200	3.750	5.750	8.250	11.720	18.150	27.580	42.560

Specifications are subject to change without notice.