KAKKU MILL DUTY DC ELECTRO-MAGNETIC DISC BRAKES
SERIES KLD

SPECIAL FEATURES

- Well proven performance and hence reliability is ensured.
- Provided with class 'F' insulated epoxy encapsulated coil ensuring longer life and suitability to work efficiently in hazardous environment.
- Ease of adjustment of torque quickly by just turning the adjustment nut.
- Accurate manufacturing and strict adherence to engineering standards for longer working life.
- All the parts are easily accessible and hence ensures quick maintenance.

SALIENT FEATURES

SIMPLICITY

KAKKU Brakes Series KLD are robust in construction and simple in design having minimum number of parts and thus reducing maintenance problems and down time.

RELIABLE BRAKING ACTION

The design of KAKKU brakes ensures efficient transmission of braking force. Also the braking action is spread evenly over both the shoes providing maximum stopping power with minimum wear of shoe lining. Because of the large bearing area and close tolerances, minimum wear of supporting pins is ensured.

MAGNET SYSTEM & COIL

KAKKU brakes are provided with powerful short stroke Electro-magnets. Holding the end lock nut and turning the tail end of the tie rod can conveniently adjust the Electro-magnetic gap. The magnet is effectively protected against ingress of dust. KAKKU brakes are provided with epoxy-encapsulated coil with class 'F insulation. The design of the brakes ensures convenient replacement of coil. The coils are liberally designed for high ambient.

LINING

Shoe linings are made from asbestos based woven material, which has a high co-efficient of friction and low rate of wear. The linings are normally riveted to the shoe. Liner of composite material is also available on request.

SHOE ADJUSTMENT

Uniform receding of both the shoes can be adjusted by just turning one shoe adjuster bolt, provided on the lever arm under the magnet assembly. This adjustment can be locked with the help of a check nut.

TORQUE SETTING

Torque can be simply adjusted by turning the torque adjustment bolt (13).

FAIL SAFE DESIGN

KAKKU DC Electro-magnetic brakes series KLD are electrically released and spring set. When the coil is energised the armature is attracted to compress the torque spring and move the shoes away from the drum thus releasing the brake. De-energising the coil allows the torque spring to separate the armature and press the shoes against the drum, thus setting brake. This makes the brake fail safe in the event of power failure.

SIZES (Table –1)

Available in three sizes with torque rating as follows:

TYPE	MAX. TORQUE (Kgm.)
KLD-03	20
KLD-04	30
KLD-05	75

SHUNT BRAKES

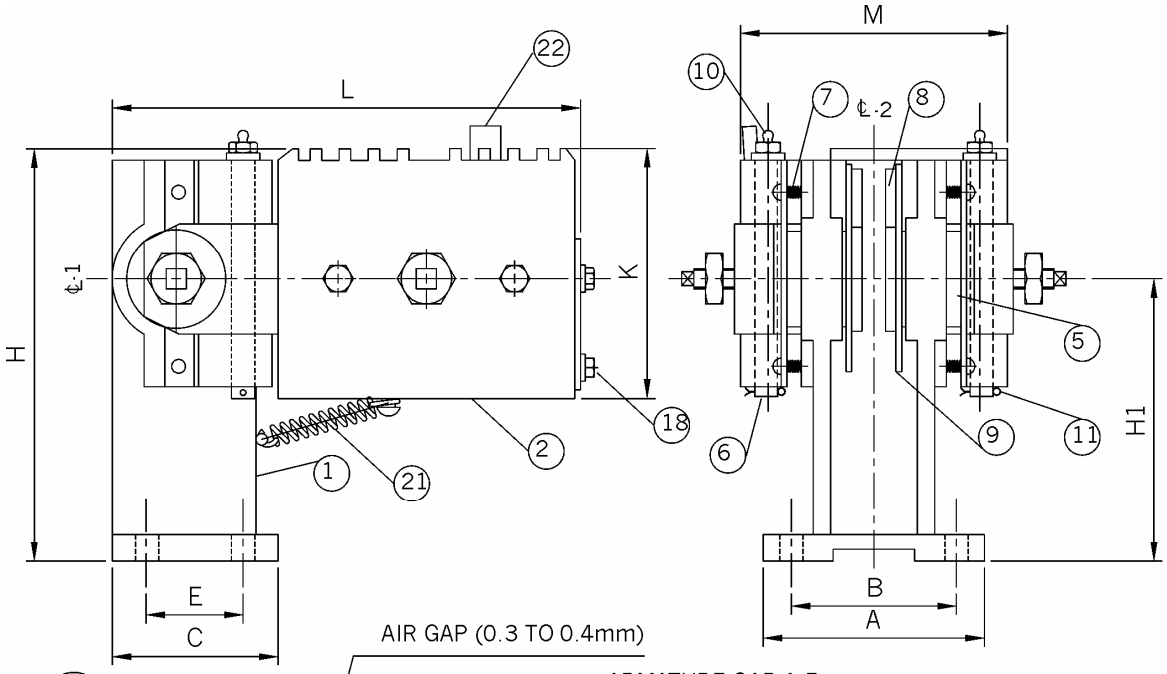
Shunt Brakes have their coils separately energized from a DC source or AC source when used with rectifier panel. These brakes are rated for different cycle of duty factor when used directly with DC supply. When these brakes are used with rectifier panel for AC operation, the torque rated for 25% CDF (i.e. maximum torque) can be obtained even if the brakes are used for continuous duty. This advantage is achieved because of the forcing circuit in the rectifier panel.

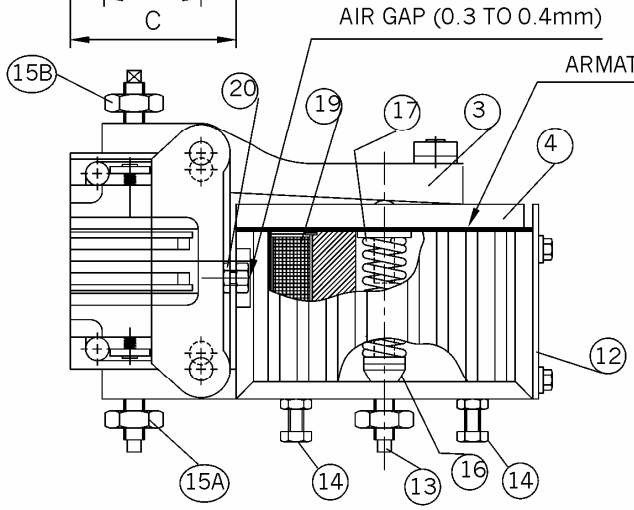
DIMENSIONS

As per relevant figures shown in the dimensional data sheet.

TECHNICAL DATA

Torque Characteristics	:	See Table I
Class of insulation of coil	:	Class 'F'.
Insulation Voltage	:	660V.
Brake release voltage (magnet pick-up) for shunt coils	:	80 % of rated voltage.
Brake release current for series coils	:	60% or 40% of the rated current as per details given on the table II for current and torque ratings.
Brake set voltage for shunt coil .	:	Below 50% of the rated voltage.
Brake set current for series coil	:	Below 10% of the rated current.
No. of operations per hour	:	720 (This is limited by the time required for brake to operate).
Mechanical life	:	20×10^6 operations.





ELECTRICALLY RELEASE THE BRAKE & ADJUST SCREWS 15A & 15B UNTIL THE LINING JUST FEATHERS ON THE DISC. TIGHTEN THE CHECK NUTS.

℄-1= CENTRE LINE OF BRAKE SHOES
℄-2 = CENTRE LINE OF BRAKE ASSLY.

TYPE	H	H1	K	L	M	A	B	C	E	MAX. TORQUE (Kgm.)
KLD-03	285	210	170	275	180	145	114	110	76	20
KLD-04	320	228	216	310	200	166	128	128	90	30
KLD-05	420	305	218	380	256	205	152	162	110	75

SL. NO.	DESCRIPTION
22	HANDLE FOR ARMATURE PLATE LEVER.
21	TENSION SPRING
20	BOLT FOR EQUAL SHOE RECEDING
19	COIL ASSEMBLY
18	HEX. BOLT M-6 X 15 WITH PLAIN WASHER
17	TORQUE SPRING
16	SPRING SUPPORT BLOCK
15 A & 15 B	SHOE GAP ADJUSTMENT BOLT WITH CHECK NUT
14	COIL EJECTION BOLTS
13	TORQUE ADJUSTMENT BOLT
12	STOPPER
11	SPLIT PIN
10	GREASE NIPPLE
9	SHOE
8	LINER
7	DISC RETAINING SPRING
6	PIN
5	SHOE PIN
4	ARMATURE PLATE
3	ARMATURE PLATE LEVER
2	MAGNET HOUSING
1	BODY

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