



### DESCRIPTION

TUCB-E type of clutch brake combination are encased units with split shafts & foot or flange mounting arrangement. These can be easily fitted by bolting the unit firmly. These type of clutch brake consists of normally off type of clutch & Brakes with common or individual armature. In normal condition drive is isolated from driven load. Once rated DC current is supplied to the clutch coil, armature shifts from brake stator over the air gap towards the clutch coil & clamps with the clutch rotor, thus transmitting torque from drive to driven free from backlash. Similarly when power is withdrawn from clutch coil, thus disengaging load and power automatically diverts to Brake Coil when we use relay or contactor, then brake is actuated as armature slides towards brake, stopping output inertia.

### Typical Applications :

- Textile Machines
- Packaging Machinery
- Cut to length Machinery
- Coil Winding Machines
- Automatic Carton Folding Machines
- Auto Labeling Machines
- Material handling equipments
- Welding Machines
- Bag Making Machines
- Bottling Plant Machinery
- Copy Lathes
- Rubber Machinery
- Steel Plant Machinery
- Filling Machinery
- Special purpose Machines
- Machine Tools
- Indexing Machinery
- Printing Machines etc.



## WORKING:

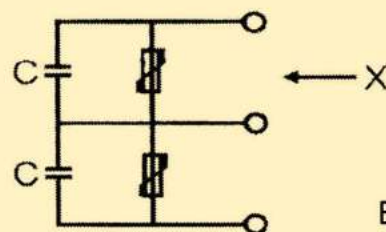
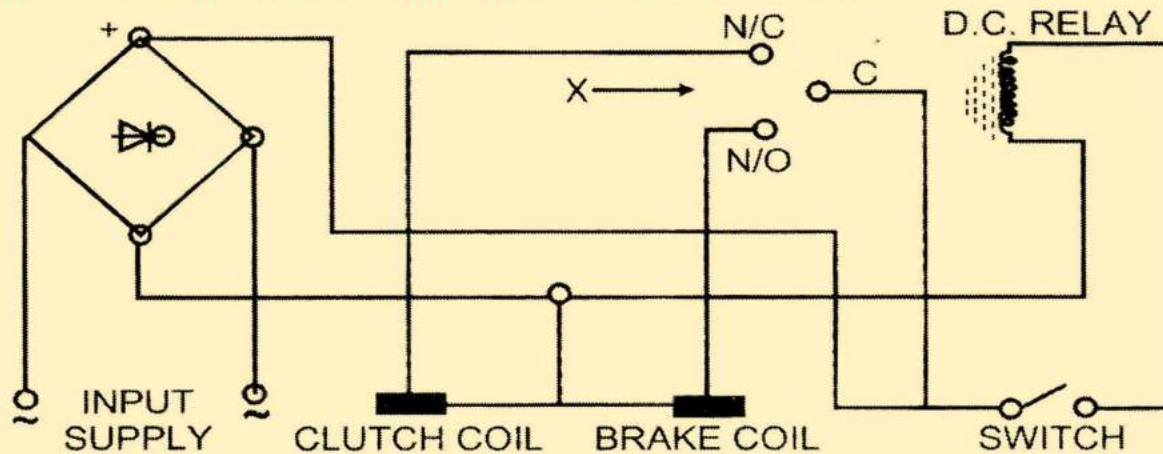
When D.C. Power is supplied to clutch coil, rotor attracts armature assembly, thus transmitting torque from drive - connected to input shaft via Clutch to Load connected through output shaft. On withdrawal of current from clutch, relay contactor when used automatically diverts the current to brake coil, thus instantaneously disengaging drive and simultaneously stopping output shaft connected to load via brake.

## MOUNTING : UCB-E

Please properly bolt foot unit base with proper alignment in design 800. In case of flange mounting designs (802 to 812), mount flanges properly to machine body. Shafts has to be coupled with the help of flexible couplings, pulleys or sprockets etc. Give proper voltage to Clutch - Brake combination as shown inside terminal box.

## ELECTRICAL CONNECTION & SWITCHING

Unit or clutch and brake combination must only be operated on DC voltage. The rated voltage is shown on the name plate of the unit. These units should be switched on the DC side to for shorter switching on and off times. The switching can be done with any standard 6 Amps contactor/ solid state relay. To restrict the high inductive voltage/back EMF a suitable suppressor and capacitor network has to be provided across the contactor coil.



ELECTRICAL CONNECTION & SWITCHING

## **MAINTENANCE :**

These clutch brake unit require virtually no maintenance. Only when large inertia, high speeds and a large degree of slip occurs it requires adjustment. In this case the air gap 'X' should be checked at regular intervals and adjusted if necessary.

The adjustment can be performed without disassembling the unit as under.

- 1) Disconnect unit from Drive and Driven.
- 2) Remove the two plastic plugs from the unit housing.
- 3) Apply power supply to Brake Coil only. (Black Wire)
- 4) Measure air gap 'X' with non magnetic feeler gauge.
- 5) Disconnect power supply to Brake Coil.
- 6) Loosen the 'Flange Mounting Screws.
- 7) Remove enough shims to reduce the airgap to minimum. ( please see Table) (The number of shims that require removal can be determined from the Table)
- 8) After ensuring that the remaining shims are correctly located in their original positions, re-tighten the flange screws. (J)
- 9) Once again apply supply to brake only and check the airgap 'X' with Non magnetic feeler gauge from both the plug holes in 3 positions.
- 10) Replace the two housing plugs and reconnect the unit to your control Circuits.

## **IMPORTANT**

DO: For better life and best performance it is requested to check air gap regularly.

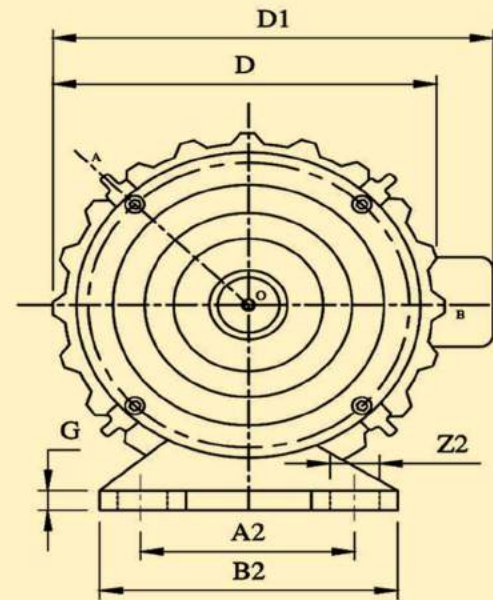
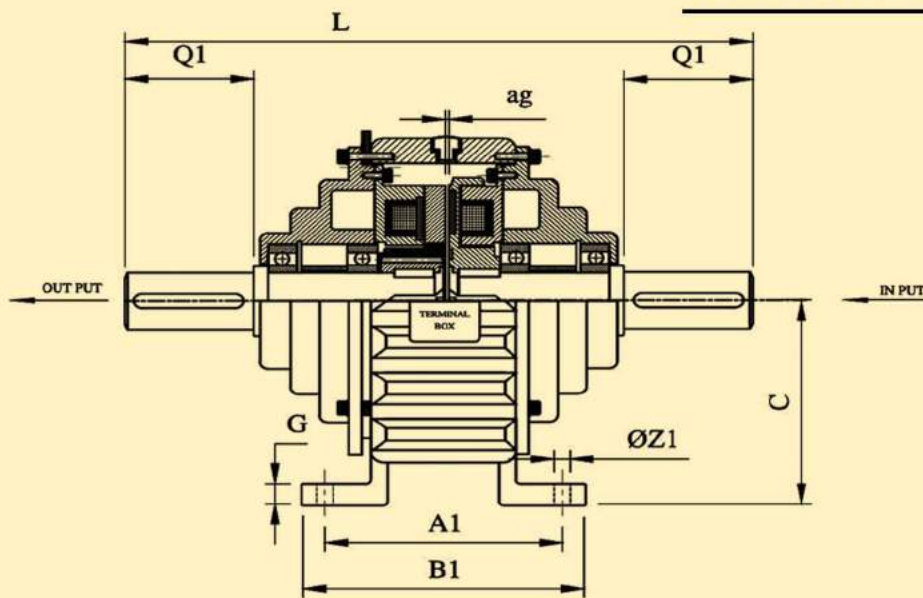
Also check supply voltage. It should be + 10% of rated voltage.

DO NOT -

- Pour oil, grease, water and lubricant on frictional surface.
- Allow dust and metal chips into brake unit.
- Give improper voltages.
- Extend pulley drive beyond shaft length.
- Pour oil through plug holes.
- Drive through rigid couplings or badly misaligned belts chains etc.

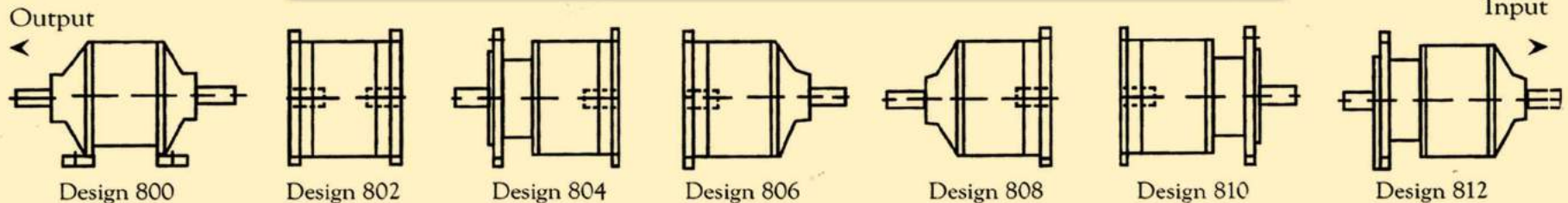


# DESIGN 800



## SECTION AOB

Clutch Brake Combinations are Available in following Designs



SIZE	08	15	30	60	125	250	500
TORQUE (NM)	08	15	30	60	125	250	500
MINIMUM AIRGAP 'X'(MM)	0.2	0.2	0.3	0.3	0.3	0.5	0.8
MAXIMUM AIRGAP 'X'(NIM)	0.4	0.4	0.5	0.7	0.8	1.0	1.2
RADIAL LOAD 'FR' (N)	250	400	650	710	1400	1800	2200
MAXIMUM SPEED	8000	6000	5000	4000	3000	3000	2000