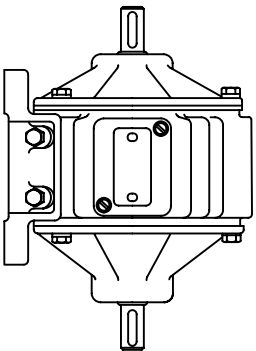
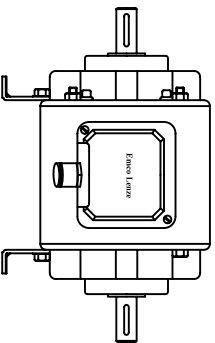


# Emco - Simplatroll

**14.125**



**14.800**



## Fitting and Operating Instructions

### Electromagnetic Clutch Brake Combination (Normally Off & Encased).

Type 14.125/800.    .

#### MOST IMPORTANT :

We thank you for purchasing EMCO D.C.Clutch - Brake unit  
May we suggest that you carefully read this manual before  
fitting & operating the Unit. A few minutes invested in this will  
ensure proper & satisfactory performance of our products.

NO. 125/800

## INDEX

Components & Product Code	2, 3
Description	4
Working	5
Mounting	5
Important Tables	5,6,7
Maintenance	8,9,10
Electrical Connections	10,11
Repair	12

### **Emco Dynatorq Pvt. Ltd.**

(Formerly Emco Lenze Pvt. Ltd.)

Rege Off. : 1 st Floor, Sita Mauli, above bank of Maharashtra,

Madanlal Dhingra Road Panch Pakhadi, Thane (W), 400 602. INDIA.

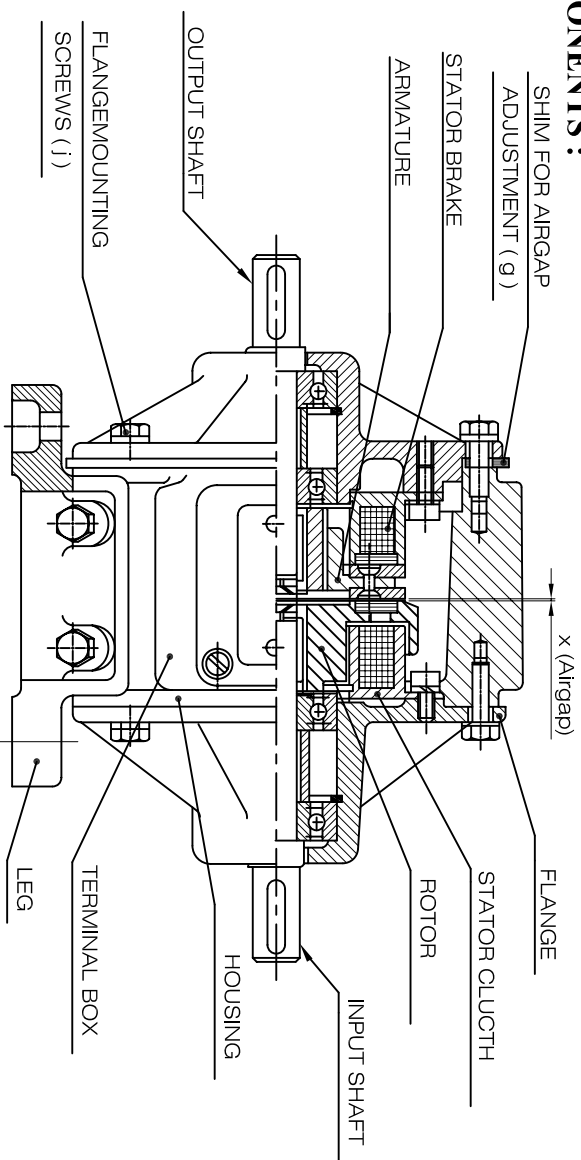
Tel : + 91 (0) 22 2540 5490 / 2545 2244 / 2541 5913 Fax : 022-25452233

Internet : [www.emco-dynatorq.in](http://www.emco-dynatorq.in), E-mail : [mktg@emco-dynatorq.com](mailto:mktg@emco-dynatorq.com)



**Emco  
DYNATORQ**

**COMPONENTS :**



**Product Code :**

**14.125.**    .   .

Type \_\_\_\_\_ Design \_\_\_\_\_  
Size \_\_\_\_\_

Size	06	08	10	12	16	20	25
Design	1.1	2.1	3.1	4.1	5.1	6.1	7.1

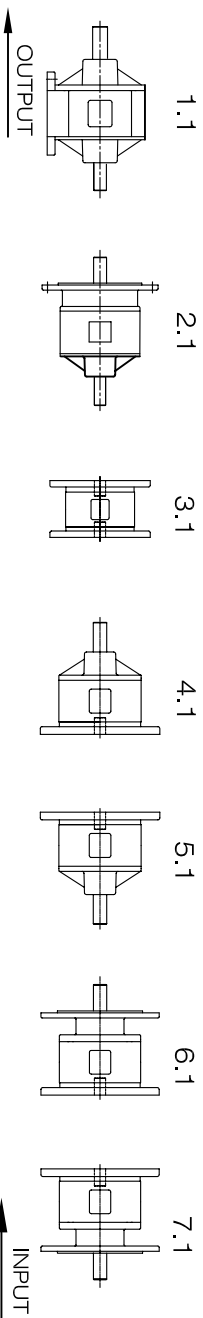


**DESCRIPTION :**

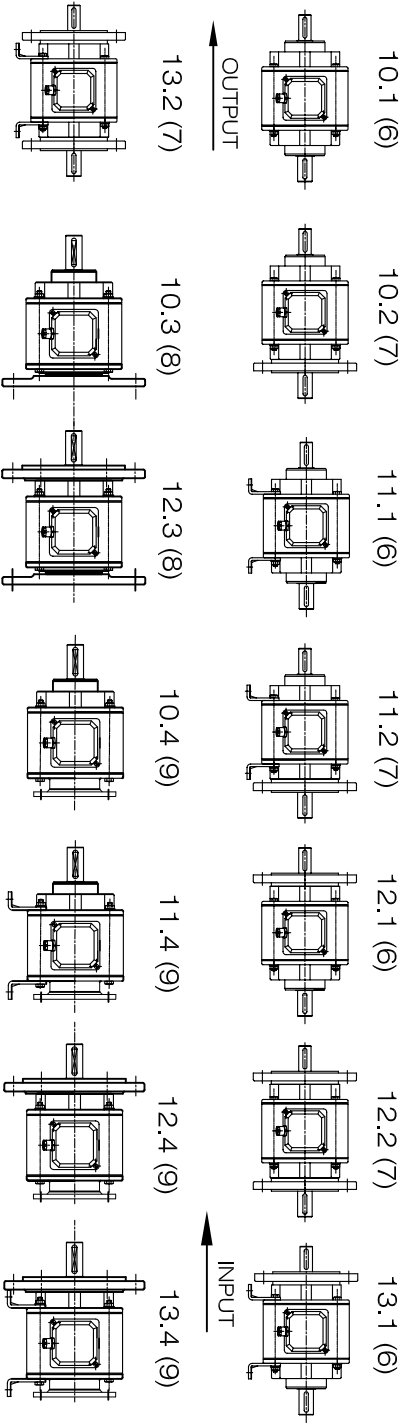
Type 14.125 / 800 is a complete ready to fit magnet actuated dry run electromagnetic clutch brake unit with split shaft and foot mounting arrangement.

(Different input and output mounting arrangements are possible.)

**14.125**



**14.800**



## **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 : 14.125 / 800**

- 1) Firmly bolt the unit ensuring proper alignment.
- 2) Couple the shafts with the help of flexible couplings, pulleys or sprockets etc.
- 3) Check Name plate voltage and connect suitable direct current power supply.

### **Please note sleeve coding.**

**Black Sleeve :** Brake

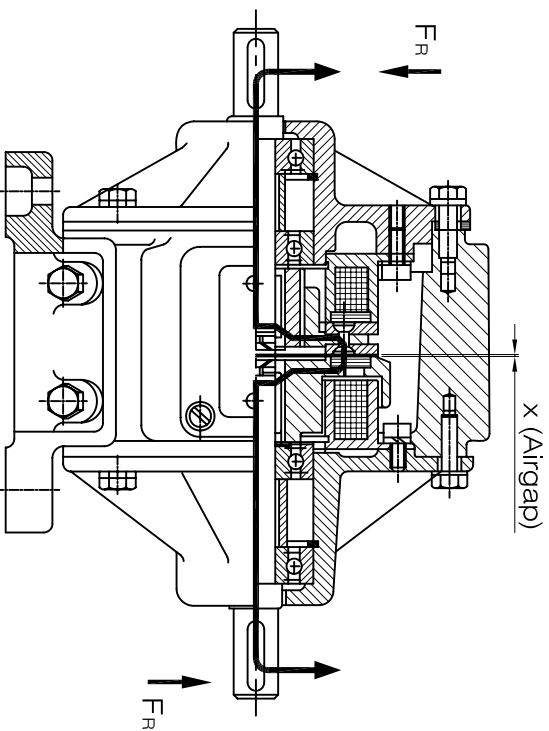
**Red Sleeve :** Clutch

Please refer to "DO NOT" notes on Page No. 10

### **MOST IMPORTANT :**

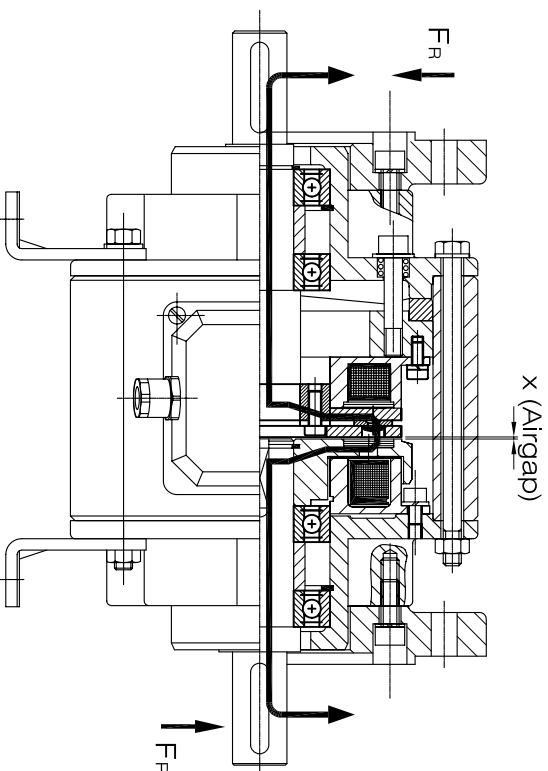
The friction surface must be kept completely free from all lubricants, otherwise performance will be impaired.

## 14.125



SIZE	06	08	10	12	16	20	25	31	40	50
Torque (Nm)	7.5	15	30	60	120	240	480	630	1250	2500
Nominal Airgap 'X'(mm)	0.2	0.2	0.2	0.3	0.3	0.5	0.5	1	1	1
Adjust When Airgap 'X'(mm)	0.4	0.4	0.4	0.5	0.5	0.7	0.7	1.5	1.5	1.5
Radial Load 'FR' (N)	250	400	650	710	1400	1800	2200	-	-	-
Maximum Speed	8000	6000	5000	4000	3000	3000	2000	1500	1500	1500

**14.800**



SIZE	06	08	10	12	16
Torque (Nm)	7.5	15	30	60	120
Nominal Airgap 'X'(mm)	0.15	0.15	0.2	0.2	0.3
Adjust When Airgap 'X'(mm)	0.4	0.4	0.4	0.5	0.5
Radial Load 'FR' (N)	600	900	1300	1900	2300
Maximum Speed	8000	6000	5000	4000	3000



## **MAINTENANCE :- 14.125**

These clutch brake unit require virtually no maintenance. Only when large inertias, 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.

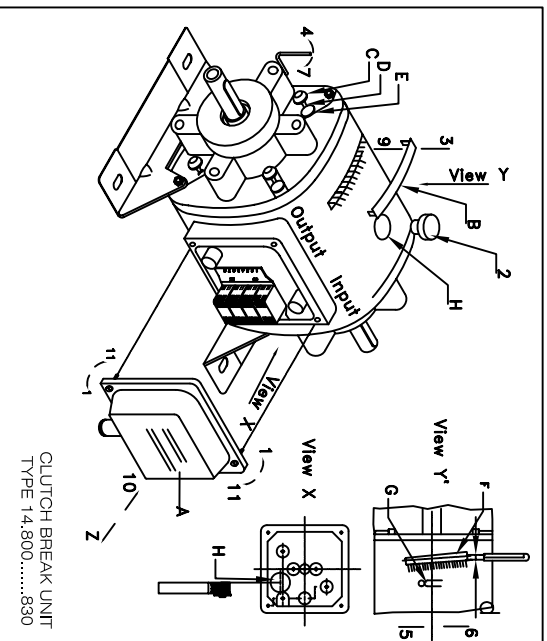
### **The adjustment can be performed without disassembling the unit as under.**

- 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. (j)
- 7) Remove enough shims (g) to reduce the airgap to nominal. ( please see Table )  
(The number of shims that require removal can easily be found by subtracting the nominal air gap from the measured airgap. Each shim is 0.2 mm thick.)
- 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 places by rotating input shaft with hand.
- 10) Replace the two housing plugs and reconnect the unit to your control Circuits.

## MAINTENANCE :- 14,800

In applications with high friction work, the air gap should be checked and readjusted from time to time.

Re-adjustment in case of wear



- 1) Loosen screws from the terminal box cover(A)
- 2) Remove terminal box cover(A).
- 3) Remove cover (B) and take allen key.
- 4) Loosen allen screws (C) using allen key (see table) until the springs (E) under the washers (D) are released.
- 5) Turn adjustment ring(F) with pin (d see table) in the indicated direction(G), until there is a resistance against turning.
- 6) Turn back the adjustment ring(G) with the pin by about two graduations against the indicated direction(G).
- 7) Tighten allen screw(C) (for torques see table)
- 8) Check air gap (see table) with feeler gauge by checking bore (H) in the terminal box or by removing Dust plug (2)on top. If necessary, repeat steps 4 to 8.
- 9) Insert cover (B) & dust plug (2)
- 10) Place cover of the terminal box(A) in the proper position.
- 11) Tighten screws in the terminal box cover.

**DO NOT :**

- 1) Oil sealed bearings.
- 2) Pour oil through plug holes.
- 3) Allow oil or grease etc to get onto clutch or brake friction surfaces.
- 4) Allow excessive radial loads on unit caused by overtensioned belts etc. (Refer Table On Page 6 & 7 )
- 5) Extend pulley drive beyond shaft length.
- 6) Allow the unit to be driven without disengagement of brake.
- 7) Drive through rigid couplings or badly misaligned belts chains etc.
- 8) Exceed maximum speeds (Refer Table On Page 6 & 7 ).

**ELECTRICAL CONNECTIONS**

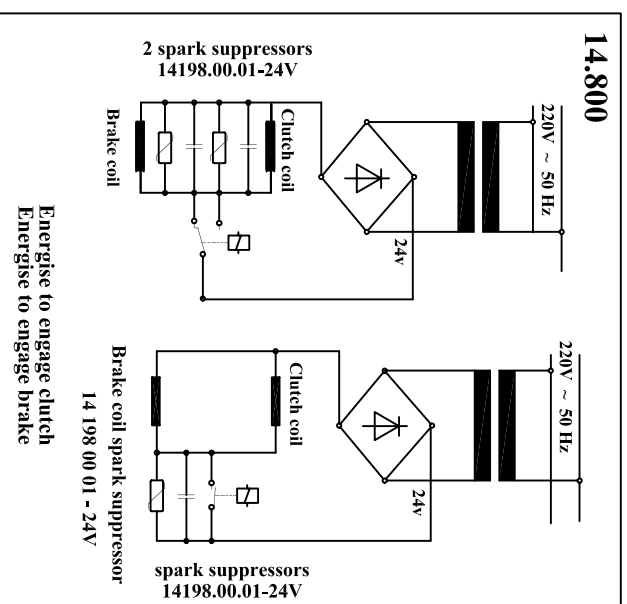
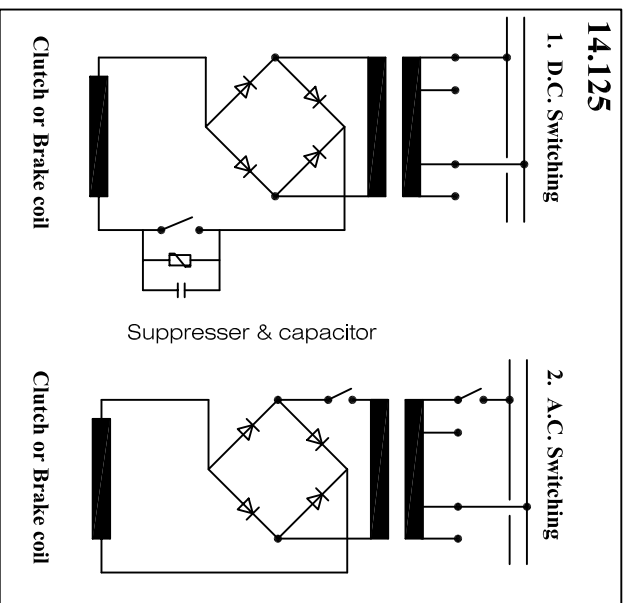
EMCO-Simplatroll clutches and brakes require d.c. power supply and the operating coil voltage is stamped on body of the unit. If no suitable d.c. voltage is available then you can use any of the following rectifiers.

Type	Input Voltage	Output (coil operating ) Voltage
EH 720 AD	230 VAC	190 VDC
EH 720 BD	110 VAC	96 VDC
EH 720 CD	230 VAC	96 VDC
EH 720 HHD	415 VAC	190 VDC

## IMPORTANT

Clutches and brakes are normally switched on the d.c. side as this causes short switching on and switching off times. When switching on the d.c. side please do not forget to make use of a universal spark suppressor (Varistor) and a capacitor of suitable values to protect the coil and contacts.

**For coil operating voltage of 24 VDC. Transformer rectifier can be procured from us.**

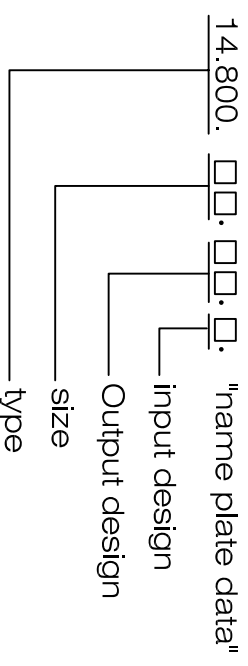
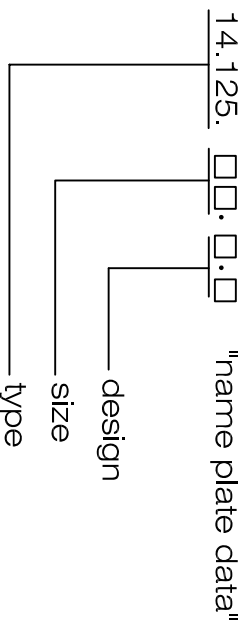


## REPAIR 14.125 / 800

If the re-adjustment margin of the EM clutch-brake unit is fully used, the wearing parts must be replaced. The wearing parts are rotor, armature and brake stator. The maximum readjustment margin is reached when the mark at the adjustment ring has reached the end of the cover slot.

When ordering, please indicate the name plate data such as type, voltage and bore diameter.

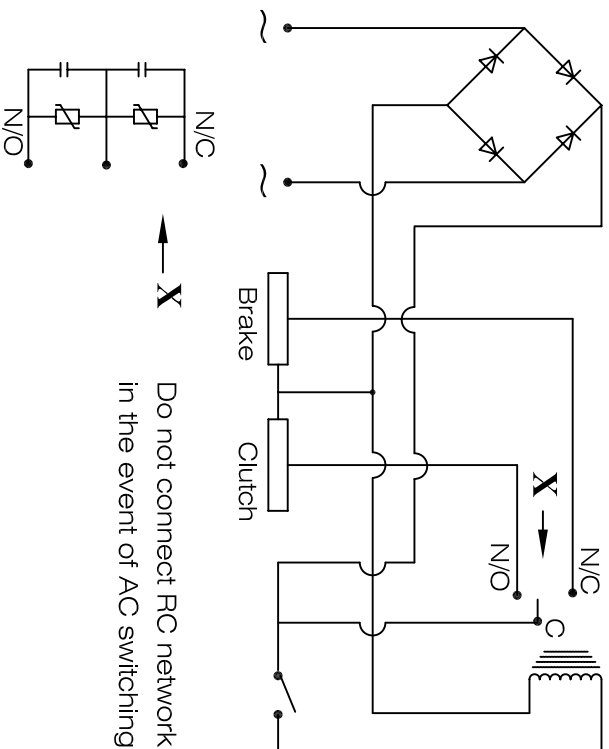
Order data :



Item 1.1 stator 24 Volt

Item 1.02 complete rotor d = 28 mm

**Schematic Electrical Connection : 14.125 / 800**



**X** Do not connect RC network  
in the event of AC switching