MIKI PULLEY

MICRO ELECTROMAGNETIC CLUTCH & BRAKE "SIMPLATROLL"

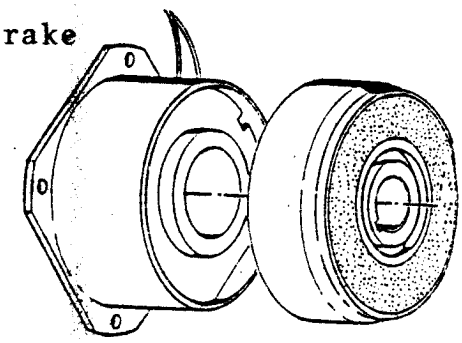
Types 102 . 112

Instruction Manual

* Structural Parts

Electromagnetic Clutch & Brake

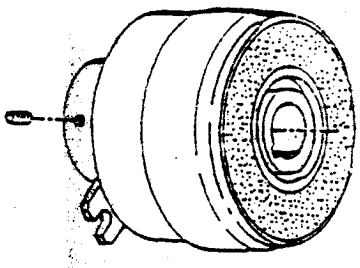
Clutch
102-□□-1□ ——
Size



Rotor

Clutch . Stator

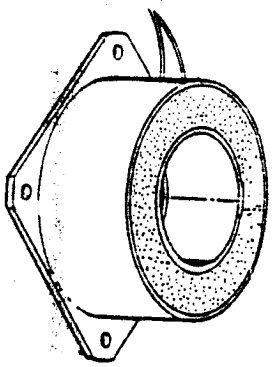
Clutch
102-□□-3□ ——
Size



Rotor

Clutch . Stator

Brake
112-□□-1□ ——
Size



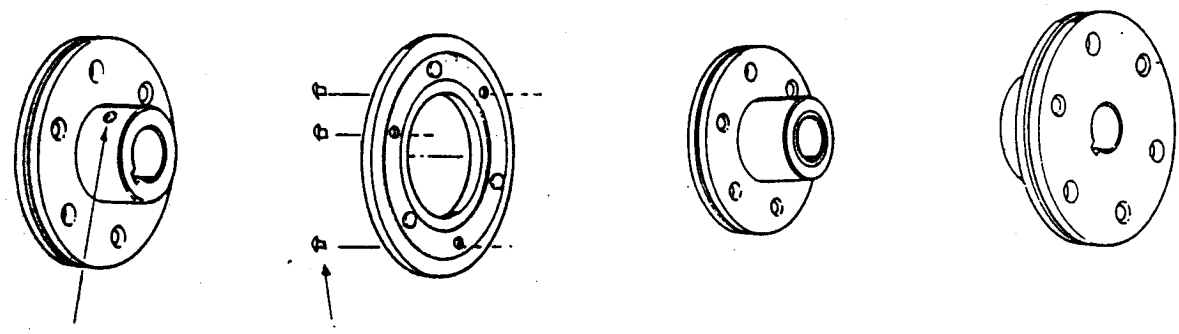
Brake . Stator

⇩

Armature Assembly Number

Armature Assembly

1	3	5	2
		(Clutch only)	(Brake only)
Type 1 Armature	Type 3 Armature	Type 5 Armature	Type 2 Armature



Set Screw

Pan head Machine Screw

* Attachment of the Parts

1. Attachment of the Stator

(1) The outer and inner peripheries of the stator of the flange attachment type are attached by dovetail.
If alignment of the centers with the shaft exceeds permissible tolerance, contact with the rotor may cause faulty rotation. (Fig. 1)

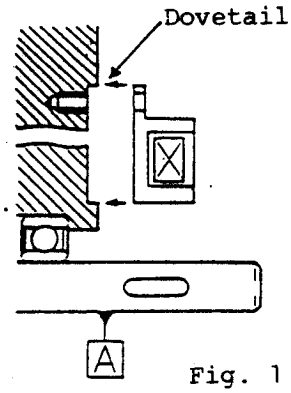


Fig. 1

(2) The wall or other surface to which the stator is to be attached should be finished to within tolerance values in perpendicularity as against the shaft.

(3) With regard to Type 102 - □□ - 3□
the locking arm should be supported lightly to prevent the stator from rotating.

2. Attachment of the Rotor

(1) It should be noted that as the rotor is made of soft material, if it is beaten with force or inserted with a bend, it will become deformed and make contact with the stator.

(2) Attachment should be made so that the gap between rotor and stator falls within permissible limits. (Fig. 2)

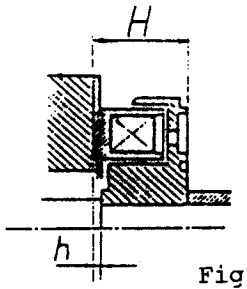


Fig. 2

3. Attachment of the Armature Assembly

(1) Use the screws provided as an accessory without fail, and tighten all screws gradually and uniformly.

(2) Do not chamfer the screw holes, but only remove the swarf.

(3) Adjust the air gap through the collar or shims so that it will be within permissible limits. (Fig.3)

(4) When assembling is shaft to shaft, attention should be paid that center misalignment of the 2 shafts is within permissible limits.

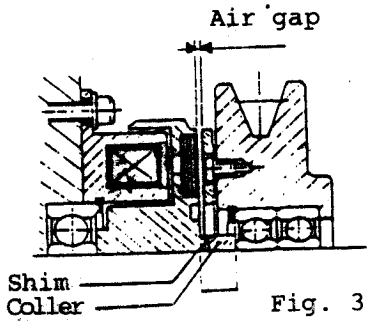


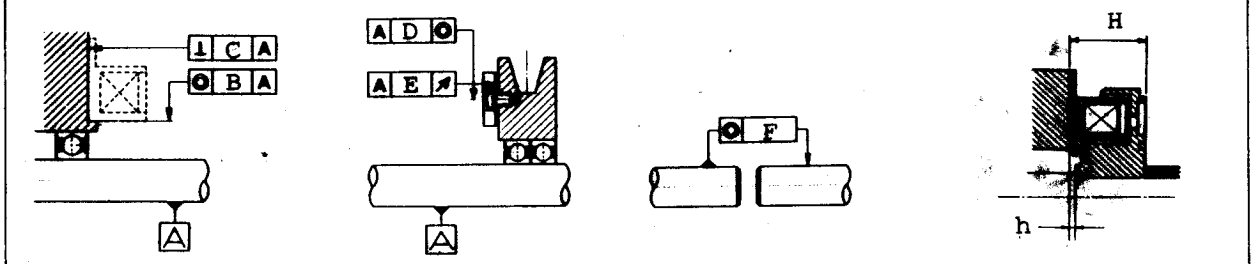
Fig. 3

4. Other Cautions

(1) The lead wires should be held in position without being stretched or damaged.

(2) Each part should be attached without chatter in the axial direction and should be fixed .

Table 1



Size	B(TIR)	C(TIR)	D(±)	E(TIR)	F(TIR)	H	h
02	0.05	0.03	0.05	0.02	0.07	18 ± 0.2	1.6
03	0.05	0.04	0.05	0.03	0.07	22.2 ± 0.2	2
04	0.05	0.04	0.05	0.04	0.07	25.4 ± 0.2	2
05	0.05	0.05	0.05	0.04	0.07	28.1 ± 0.2	2

* TIR is the full scale reading on the indicator

* Connections

(1) This electromagnetic clutch & brake should be used on DC24V. Voltage fluctuations should be kept within 10%.

(2) For ON-OFF operations, the installation of the switch on the DC side will result in a quicker response time for release than if the switch is placed on the AC side. (Fig. 4)

(3) The protective varistors for surge suppression, provided among the accessories, should be connected in parallel to all clutch & brakes. This element is without polarity. (Fig. 4)
'TNR9G820K' (for 24V) are provided as accessories to this unit.

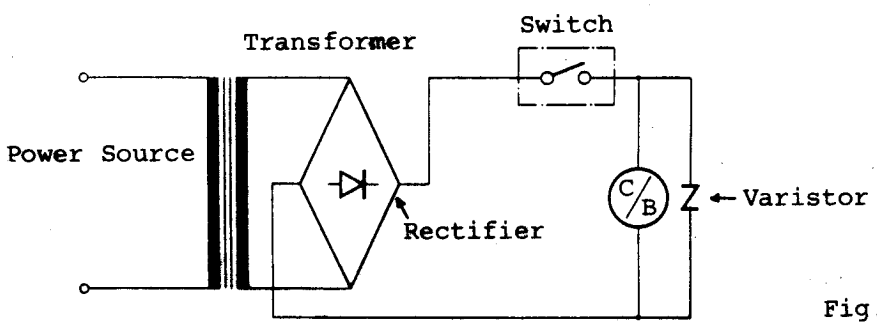


Fig. 4

* Handling and Maintenance

(1) Rust may generate if left unattended for long periods or if made wet. Light rust will not adversely affect operation, but preferably, it should be handled to prevent the generation of rust.

(2) Handling the friction surface with the bare hands or the adhesion of oil will decrease torque so that care should be taken on this point.

(3) On excessive temperature rise, ventilation should be carried out thoroughly.

(4) In the initial stages of operation, as the friction surface is not properly conditioned, the indicated value for torque may be on the low side. At such times carry out 'break-in' operations.

(5) If operated correctly, maintenance operations will almost be unnecessary but periodic inspections will enable the unit to operate efficiently for a longer period.

(6) After a long period of use, wear in the friction surface will increase the air gap. Re-adjust the air gap.

Specifications

Table 2

Size	Dynamic Friction Torque kg cm	Coil Resistance Ω	Current A	Excitation Voltage DC V	Capacity W	Air Gap mm
02	3	96	0.25	24	6	0.05 ∿ 0.15
03	6	96	0.25		6	0.1 ∿ 0.2
04	12	72	0.33		8	0.2 ∿ 0.2
05	24	58	0.42		10	0.15 ∿ 0.25