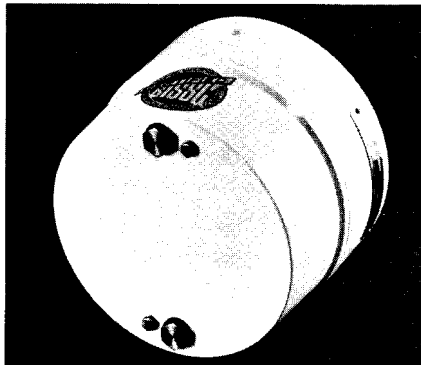




**DYNAMICS GROUP**

# WashDown Standard End-mount 70 Series Brake Instructions

Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.



## DESCRIPTION

These magnetic disc brakes mount directly onto NEMA 182TC, 184TC, 213TC, 215TC, 254TC and 256TC frame motors, on the end opposite the drive shaft.

This bulletin covers four models. Models 6-70000-91 and 6-70000-93 are a two-post design. (Item 3 on the exploded view, Fig. 9.)

Models 6-70000-92 and 6-70000-94 are a four-post design. (Item 3 on the exploded view, Fig. 10.)

Models 6-70000-91 and 6-70000-92 are for motors where a gasket (31) will prevent liquid media from entering the brake through the hub (1) area.

Models 6-70000-93 and 6-70000-94 are for motors where a gasket (31) will not prevent liquid media from entering the brake through the hub (1) area, such as TEFC motors where liquid media may enter the brake through the fan cover.

**WARNING: Do not install or use these brakes in an explosive atmosphere.**

## DIMENSIONS Figure 1

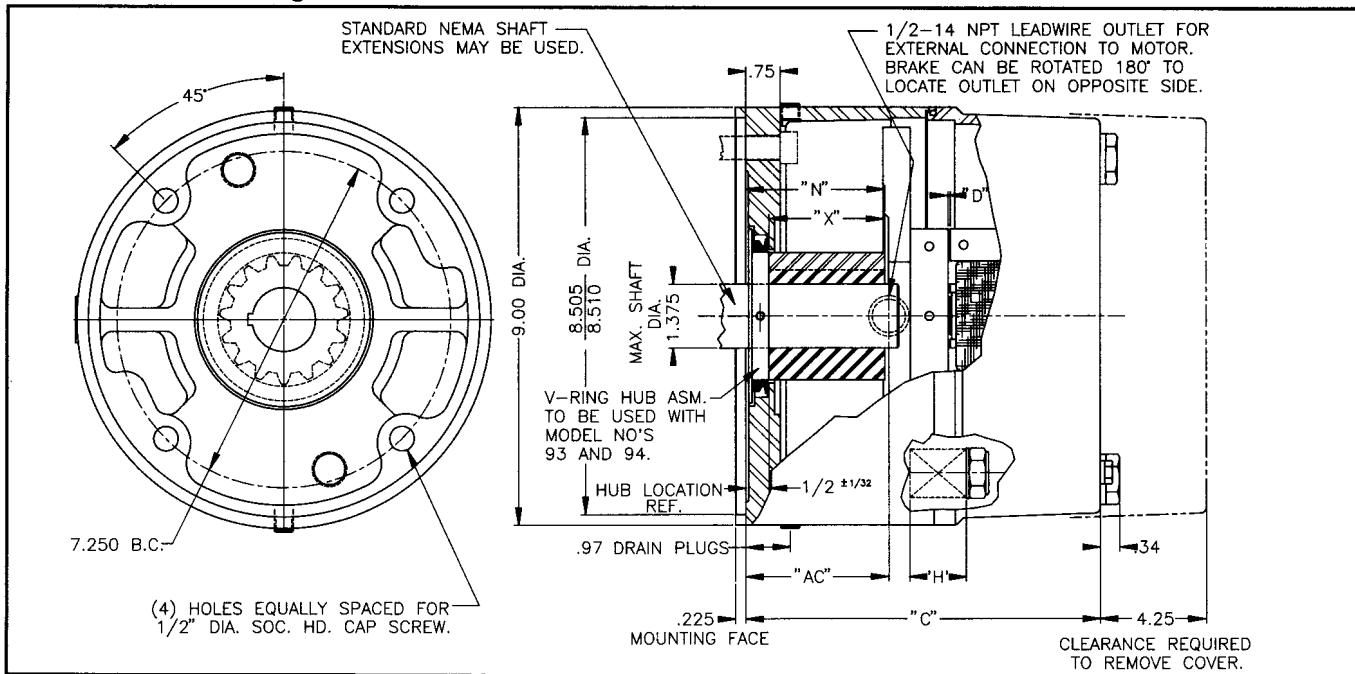


Figure 2

| Model<br>**2 post: -91 & -93<br>4 post: -92 & -94 | Torque<br>Lb. Ft. | * Thermal<br>Capacity<br>HPS/MIN. | Inertia<br>WK <sup>2</sup><br>Lb. Ft. <sup>2</sup> |          | Wt.<br>Lbs. |            | Dimensions |       |     |             | Magnet Gap<br>"D" ± .005 |                     | Spring Length<br>"H" |          |
|---|-------------------|-----------------------------------|--|----------|-------------|------------|------------|-------|-----|-------------|--------------------------|---------------------|----------------------|----------|
|   |                   |                                   | -91, -92   | -93, -94 | -91<br>-93  | -92<br>-94 | C          | AC    | X   | N<br>± 1/32 | Max.                     | Original<br>Setting | -91, -93             | -92, -94 |
| 6-71010-**  | 10                | 10                                | .028   | .036     | 40          | 42         | 5.75       | 1.250 | 1.0 | 1.5         | .060                     | .035                | 1.31                 | 1.31     |
| 6-71015-**  | 15                | 10                                | .028   | .036     | 40          | 42         | 5.75       | 1.250 | 1.0 | 1.5         | .060                     | .035                | 1.31                 | 1.38     |
| 6-72025-**  | 25                | 11                                | .051   | .059     | 45          | 47         | 6.37       | 1.875 | 1.5 | 2.0         | .060                     | .035                | 1.31                 | 1.34     |
| 6-72035-**  | 35                | 11                                | .051   | .059     | 45          | 47         | 6.37       | 1.875 | 1.5 | 2.0         | .065                     | .035                | 1.22                 | 1.28     |
| 6-73050-**  | 50                | 12                                | .075   | .083     | 50          | 52         | 7.00       | 2.700 | 2.0 | 2.5         | .065                     | .040                | 1.25                 | 1.31     |
| 6-74070-**  | 70                | 13                                | .099   | .107     | 55          | 57         | 7.62       | 3.125 | 2.5 | 3.0         | .065                     | .045                | 1.22                 | 1.28     |
| 6-74075-**  | 75                | 13                                | .099   | .107     | 55          | 57         | 7.62       | 3.125 | 2.5 | 3.0         | .065                     | .045                | 1.20                 | 1.26     |

\*Thermal capacity (HPS/MIN.) was determined under the following test conditions: a) Room temperature 72°F. b) Stopping time of one second or less. c) Brake mounted in a horizontal position. d) Equal on and off times. e) 1800 RPM. f) Coil energized with 100% of rated voltage

G070714

**WARNING:**

**Brake performance and features must be carefully matched to the requirements of the application.**

**Consideration must be given to torque requirements, especially where an overhauling condition exists, as well as thermal capacity, ambient temperature, atmospheric explosion hazards, type of enclosure and any other unusual conditions.**

**Improper selection and installation of a brake and/or lack of maintenance may cause brake failure which could result in damage to property and/or injury to personnel.**

**If injury to personnel could be caused by brake failure, additional means must be provided to insure safety of personnel.**

**UNPACKING**

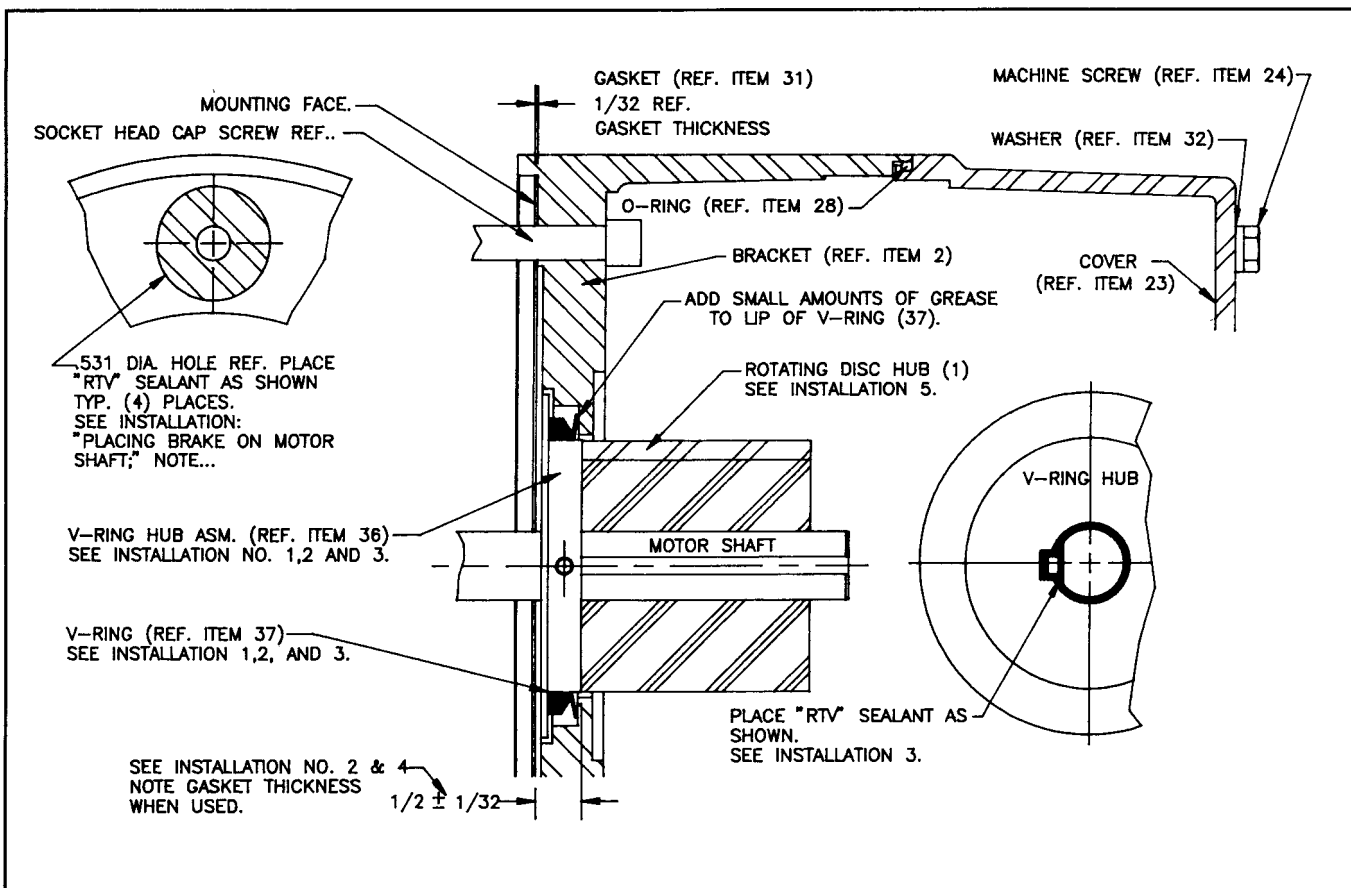
When unpacking the brake, inspect it carefully for damage that may have occurred during transit.

**GENERAL SAFETY INFORMATION**

NOTE: These brakes are not intended for accurate positioning applications. They are designed for applications that require rapid stopping and holding power, such as on conveyors, door openers, etc.

1. For applications with high inertia-type loads or rapid cycling, the thermal capacity of the brake must be considered.

2. Observe all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
3. Brake motors and brake gearmotors must be securely and adequately grounded. This can be accomplished by wiring with a grounded metal-clad raceway system, by using a separate ground wire connected to the bare metal of the motor frame, or other suitable means. Refer to NEC Article 250 (Grounding) for additional information. All wiring should be done by a qualified electrician.
4. Always disconnect power before working on or near a brake motor, a brake gearmotor, or its connected load. If the power disconnect point is out of sight, lock it in the open position and tag it to prevent unexpected application of power.
5. When working on the brake, be sure the load is completely removed, secured or blocked to prevent injury or property damage.
6. Provide guarding for all moving parts.
7. Be careful when touching the exterior of an operating motor, gearmotor or brake. It may be hot enough to cause injury or to be painful. This condition is normal for modern motors, which operate at higher temperatures when running at rated load and voltage.
8. Protect all electrical lead wires and power cables against contact with sharp objects or moving parts.
9. Do not kink electrical lead wires and power cables, and never allow them to touch oil, grease, hot surfaces, or chemicals.



**Figure 3**

## INSTALLATION

**CAUTION: To preserve pre-alignment of rotating discs for ease of installation, do not operate manual release or energize brake coil before installation.**

NOTE: The brakes are designed for horizontal mounting. Modification is required for vertical mounting. Brakes that are modified will have a prefix on the model number of VO (Vertical Over) or VU (Vertical Under). No modifications required for one-disc VO models.

Numbers in parentheses refer to parts illustrated in Figs. 3, 5, 9 and 10.

### Mounting Hub on Motor Shaft

#### For models 6-70000-91 and -92:

1. Place rotating disc hub (1), with key, onto motor shaft with part number facing away from motor to dimension shown in Fig. 5 ( $1/2 \pm 1/32$ ). Tighten both set screws to 10 - 12 lbs. ft. torque.

#### For models 6-70000-93 and -94

(Refer to Fig. 3):

1. Remove V-ring (37) from V-ring hub assembly (36).
2. Place V-ring hub assembly (36) onto motor shaft with part number facing away from motor to dimension shown in Fig. 3 ( $1/2 \pm 1/32$ ). Measure from brake mounting face as shown.

NOTE: If motor shaft keyway extends into V-ring area, install a key long enough to engage V-ring hub assembly (36) and rotating disc hub (1). See Step 3 before tightening set screws. Tighten both set screws to 6 lbs. ft. torque.

3. Place RTV sealant as shown (small amount to fill crevice areas only) around crevices between V-ring hub assembly (.040" x 45° chamfer), motor shaft, hub keyway and motor shaft keyway.

**CAUTION: If this procedure is bypassed, liquid media may seep into the brakes.**

4. Replace V-ring (37) onto V-ring hub assembly as shown in Fig. 3. Apply a small amount of grease to lip of V-ring.
5. Place rotating disc hub (1) with key if not already in place, onto motor shaft with part number facing away from motor to dimension shown in Fig. 3 ( $1/2 \pm 1/32$ ). Rotating disc hub will butt against the V-ring hub as shown.

Tighten both set screws to 10 - 12 lbs. ft. torque.

### Placing Brake on Motor Shaft

1. Remove machine screws (24), washers (32), and cover (23). Place brake on motor mounting face with gasket (31) in place.

NOTE for model 6-70000-93 and -94 only: If gasket (31) does not make contact around mounting face totally (360°), exclude gasket (31) and place RTV sealant around mounting bolt holes to approximately 2" diam. as shown in Fig. 3.

If tapped holes in motor for mounting bolts are not totally enclosed, place RTV sealant around threads before bolting brake to motor.

2. Tighten mounting bolts to 55 lbs. ft. torque.
3. Connect coil leads as outlined under "Connection of Coil Leads" and Fig. 4.
4. Replace cover (23) and fasten with machine screws (24) and washers (32). Tighten with 5 lbs. ft. torque.

## Wiring Diagrams

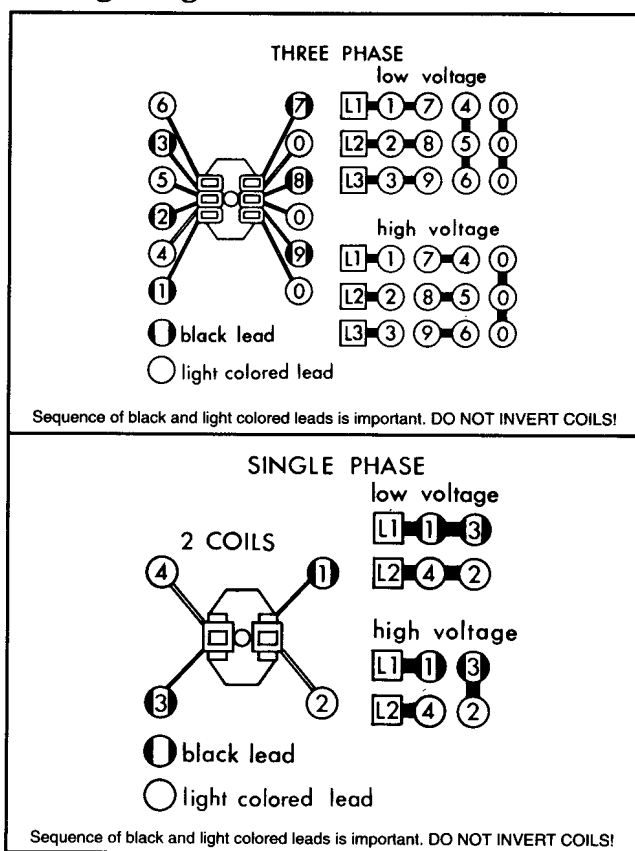


Figure 4

### Connection of Coil Leads

(Refer to Fig. 4)

**CAUTION: The voltage supplied to the coil must match the voltage that the coils are connected for, or the coils will burn out.**

## OPERATION

These brakes are spring set devices with an electrical (magnet) release. They contain a rotating friction disc which is driven by a hub mounted on the motor shaft. When energized, the magnet compresses the torque springs, removing the force pressing the stationary disc and friction disc together. This permits free rotation of the shaft.

**WARNING: High start-stop rates may damage motor. Consult motor manufacturer if high cycling rates are expected.**

If brake torque rating is higher than motor full-load torque rating, use brake rating rather than motor rating when selecting other drive components.

Take the following precautions when operating the brake:

1. Do not operate the brake at higher than nominal static torque capacity.
2. For applications with high inertia-type loads or rapid cycling, the thermal capacity of the brake must be considered.
3. Observe proper safety precautions when an application involves a holding or overhauling load operation; keep personnel away from load area.
4. Be sure power supply conforms to electrical rating of brake.

## Manual Release Operation

Refer to Fig. 5.

Remove release caps (29) and gaskets (34). To manually release the brake, rotate two rods (10) clockwise until stop screw (14) hits pin. Brake will remain in released position until rods or lever are manually returned to original position, or until electrical power is restored which automatically resets the brake. Replace release caps and gaskets. Release cap to be hand-tightened plus  $\frac{1}{4}$  turn.

## MAINTENANCE

**CAUTION: Before attempting to service or remove any components, make certain that the power is disconnected and that the load is completely removed, secured or blocked to prevent injury or property damage.**

## Wear Adjustment

Refer to Figs. 2 and 5.

Magnet gap "D" increases as the rotating friction discs wear. When the gap approaches "D" max., adjust the gap to the "original setting," listed under "D," by turning nuts (21) and (22). The "original setting" is also the minimum allowed.

Too small a gap will not provide the proper running clearance, and will cause excessive wear and overheating of the rotating friction disc. The magnet gap can vary from "original setting"  $\pm .005$  between corners. After setting the gap, readjust torque spring length per dimension "H."

**CAUTION: Magnet gap must not exceed "D" maximum.**

## Torque Adjustment

**Caution: Load to be removed or blocked. Brake will be inoperative during this procedure.**

Refer to Fig. 5.

Brake is factory set for rated torque. To increase stopping time and lower torque, turn two locknuts (9) counterclockwise. Each full turn decreases torque approximately 10%.

**Do not adjust brake for higher torque, as this will cause premature coil burnout.**

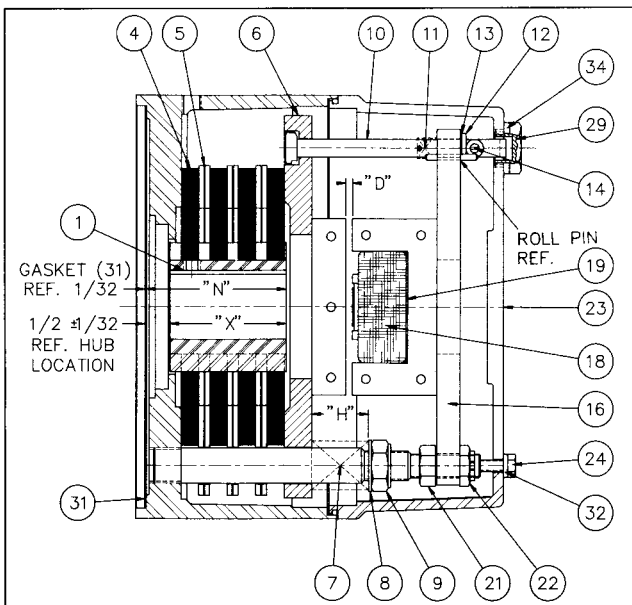


Figure 5

## Friction Disc Replacement

**CAUTION: Load to be removed or blocked. Brake will be inoperative during this procedure.**

If brake model number has a prefix VO or VU, see page 5.

Refer to Figs. 2 and 5.

When rotating friction disc (4) wears down to thickness of  $\frac{7}{32}$ , replace disc:

1. Remove cover screws (24), washers (32) and cover (23).
2. Unhook loop of torsion springs (11) from pins at rear of magnet plate (16). Remove release stop screws (14), washers (12) and shims (13). Count the number of shim washers removed from each release rod so that you can replace the same quantity during reassembly.
3. Remove adjusting lock nuts (22), magnet assembly (16), adjusting nuts (21), torque nuts (9), washers (8), torque spring (7) and pressure plate (6).
4. Remove friction disc (4) and stationary disc (5). Replace worn friction discs.
5. Reassemble all parts in reverse order. Set spring length "H" and magnet gap "D."

## Manual Release Assembly

Refer to Fig. 5.

Replace the same quantity of shim/washers on each release rod that was there prior to disc assembly. If this is not known, proceed as follows:

When assembling manual release mechanism (Fig. 5), add only enough shim washers (13) to obtain proper release action. Too many shim washers will prevent automatic reset when electrical power is applied. Too few washers will prevent the motor shaft from turning freely. Replace stop screws (14). Wind each torsion spring (11) approximately  $\frac{1}{4}$  turn and hook spring loop over pin.

## Magnet Coil Replacement

Refer to Figs. 5, 6, 9 and 10.

Remove magnet assembly as outlined under FRICTION DISC REPLACEMENT.

Coils (18) are held in place with epoxy cement. Force coil off magnet mounting plate and remove excess epoxy from all surfaces.

Replacement coils should be held in place with new epoxy cement. The epoxy cement should be heat resistant and shock resistant. Place an insulating washer (19 or 19A) below the coils. Order insulating washers when ordering coils. An insulating washer can be cut to suit when replacing only one coil on a multiple coil assembly.

When installing coils, it is very important to follow EXACTLY the sequence of black and light colored leads as shown in wiring diagram (Fig. 4). The brake will not operate properly unless coils are all in the correct position.

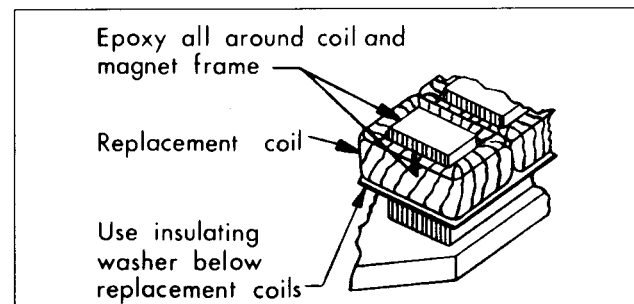


Figure 6. Fastening of Replacement Magnet Coils

# VERTICAL MOUNTING

Installation and adjustment of the vertically mounted brake is the same as on the standard model.

## Friction Disc Replacement

When replacing friction discs, follow the procedure outlined on page 4 with this addition: Care must be taken to insure

proper insertion of disc separating springs. Springs are color coded for easy identification, and reference is made to the spring color, (see Figs. 7 and 8). Since the installation order of the disc springs is dependent on brake mounting position, (above or below motor), it is important to consult the correct diagram for spring location.

Figure 7

### 2 POST MODELS 6-70000-91 & 6-70000-93

| Item No. | Description                                  | Part No.     | Qty. Req'd |    |        |    |        |    |        |   |   |  |  |
|----------|--|--------------|------------|----|--------|----|--------|----|--------|---|---|--|--|
|          |  |              | 1 Disc     |    | 2 Disc |    | 3 Disc |    | 4 Disc |   |   |  |  |
|          |  |              | VU*        | VO | VU     | VO | VU     | VO | VU     |   |   |  |  |
| 0        | Bracket, 1 disc model 6-70000-93 (Not shown) | L070321-021  | 1          |    |        |    |        |    |        |   |   |  |  |
| 1        | Bracket, 2 disc model 6-70000-91             | L070321-011  |            | 1  | 1      |    |        |    |        |   |   |  |  |
| 1        | Bracket, 2 disc model 6-70000-93             | L070321-012  |            | 1  |        |    |        |    |        |   |   |  |  |
| 1        | Bracket, 2 disc model 6-70000-93             | L070321-022  |            |    | 1      |    |        |    |        |   |   |  |  |
| 2        | Bracket, 3 disc model 6-70000-91             | L070321-013  |            |    |        | 1  | 1      |    |        |   |   |  |  |
| 2        | Bracket, 3 disc model 6-70000-93             | L070321-013  |            |    |        | 1  |        |    |        |   |   |  |  |
| 2        | Bracket, 3 disc model 6-70000-93             | L070321-023  |            |    |        |    | 1      |    |        |   |   |  |  |
| 3        | Bracket, 4 disc model 6-70000-91             | L070321-014  |            |    |        |    |        | 1  | 1      |   |   |  |  |
| 3        | Bracket, 4 disc model 6-70000-93             | L070321-014  |            |    |        |    |        |    |        | 1 |   |  |  |
| 3        | Bracket, 4 disc model 6-70000-93             | L070321-024  |            |    |        |    |        |    |        |   | 1 |  |  |
| 4        | Stationary disc                              | K070001-007  |            | 1  | 1      | 2  | 2      | 3  | 3      |   |   |  |  |
| 5        | Pressure plate asm.                          | K070045-003  |            | 1  | 1      | 1  | 1      | 1  | 1      |   |   |  |  |
| 6        | Stud, 2 disc                                 | G070020-001  |            | 2  | 2      |    |        |    |        |   |   |  |  |
| 7        | Stud, 3 disc                                 | G070021-001  |            |    |        | 2  | 2      |    |        |   |   |  |  |
| 8        | Stud, 4 disc                                 | G070022-001  |            |    |        |    |        |    |        | 2 | 2 |  |  |
| 9        | Spring (black)                               | G070023-001  |            | 2  | 2      | 2  | 2      | 2  | 2      |   |   |  |  |
| 10       | Spring (blue)                                | G070024-001  |            |    |        | 2  | 2      | 2  | 2      |   |   |  |  |
| 11       | Spring (dark green)                          | G070025-001  |            |    |        |    |        |    |        | 2 | 2 |  |  |
| 12       | Washer, flat plain                           | W004004-013D |            | 2  | 4      | 6  | 8      | 10 | 12     |   |   |  |  |
| 13       | Cover w/condensation drain plug (not shown)  | K070441-002  | 1          |    | 1      |    | 1      |    | 1      |   |   |  |  |
| 13a      | Pipe plug 1/8 - 27 (not shown)               | W010002-001A | 1          |    | 1      |    | 1      |    | 1      |   |   |  |  |

\* One-disc "VO" models require no modification.

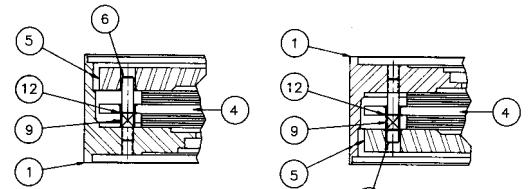
Figure 8

### 4 POST MODELS 6-70000-92 & 6-70000-94

| Item No. | Description                                  | Part No.     | Qty. Req'd |    |        |    |        |    |        |   |   |  |  |
|----------|--|--------------|------------|----|--------|----|--------|----|--------|---|---|--|--|
|          |  |              | 1 Disc     |    | 2 Disc |    | 3 Disc |    | 4 Disc |   |   |  |  |
|          |  |              | VU*        | VO | VU     | VO | VU     | VO | VU     |   |   |  |  |
| 0        | Bracket, 1 disc model 6-70000-94 (Not shown) | L070323-021  | 1          |    |        |    |        |    |        |   |   |  |  |
| 1        | Bracket, 2 disc model 6-70000-92             | L070323-012  |            | 1  | 1      |    |        |    |        |   |   |  |  |
| 1        | Bracket, 2 disc model 6-70000-94             | L070323-012  |            | 1  |        |    |        |    |        |   |   |  |  |
| 1        | Bracket, 2 disc model 6-70000-94             | L070323-022  |            |    | 1      |    |        |    |        |   |   |  |  |
| 2        | Bracket, 3 disc model 6-70000-92             | L070323-013  |            |    |        | 1  | 1      |    |        |   |   |  |  |
| 2        | Bracket, 3 disc model 6-70000-94             | L070323-013  |            |    |        | 1  |        |    |        |   |   |  |  |
| 2        | Bracket, 3 disc model 6-70000-94             | L070323-023  |            |    |        |    | 1      |    |        |   |   |  |  |
| 3        | Bracket, 4 disc model 6-70000-92             | L070323-014  |            |    |        |    |        | 1  | 1      |   |   |  |  |
| 3        | Bracket, 4 disc model 6-70000-94             | L070323-014  |            |    |        |    |        |    |        | 1 |   |  |  |
| 3        | Bracket, 4 disc model 6-70000-94             | L070323-024  |            |    |        |    |        |    |        |   | 1 |  |  |
| 4        | Pressure plate                               | K070307-002  |            | 1  | 1      | 1  | 1      | 1  | 1      |   |   |  |  |
| 5        | Stud, 2 disc                                 | G070020-001  |            | 4  | 4      |    |        |    |        |   |   |  |  |
| 6        | Stud, 3 disc                                 | G070021-001  |            |    |        | 4  | 4      |    |        |   |   |  |  |
| 7        | Stud, 4 disc                                 | G070022-001  |            |    |        |    |        | 4  | 4      |   |   |  |  |
| 8        | Spring (red)                                 | G070523-001  |            | 4  | 4      | 4  | 4      | 4  | 4      |   |   |  |  |
| 9        | Spring (black)                               | G080171-001  |            |    |        | 4  | 4      | 4  | 4      |   |   |  |  |
| 10       | Spring (blue)                                | G080172-001  |            |    |        |    |        |    |        | 4 | 4 |  |  |
| 11       | Washer, flat plain                           | W004004-013D |            | 8  | 8      | 16 | 16     | 24 | 24     |   |   |  |  |
| 12       | Cover w/condensation drain plug (not shown)  | K070442-002  | 1          |    | 1      |    | 1      |    | 1      |   |   |  |  |
| 12a      | Pipe plug 1/8 - 27 (not shown)               | W010002-001A | 1          |    | 1      |    | 1      |    | 1      |   |   |  |  |

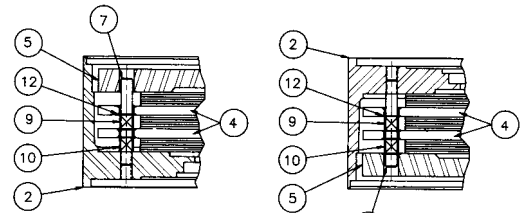
VO = mounted vertical over; VU = mounted vertical under.

### 2 POST MODELS



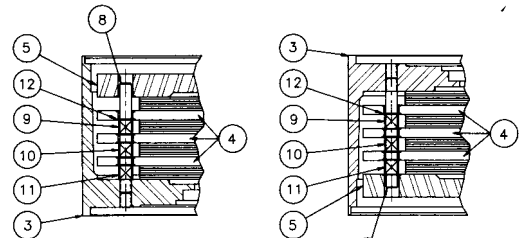
VO6-72025-91 & 93  
VO6-72035-91 & 93

VU6-72025-91 & 93  
VU6-72035-91 & 93



VO6-73050-91 & 93

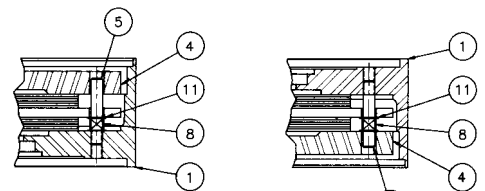
VU6-73050-91 & 93



VO6-74075-91 & 93

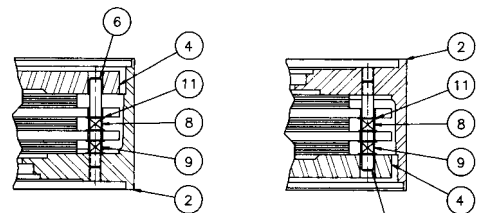
VU6-74075-91 & 93

### 4 POST MODELS



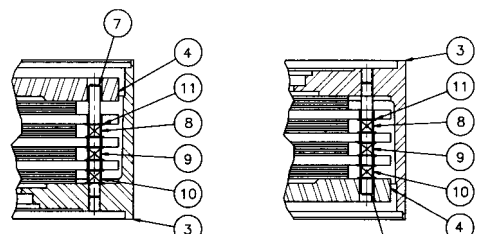
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VO6-72035-92 & 94

VU6-72025-92 & 94  
VU6-72035-92 & 94



VO6-73050-92 & 94

VU6-73050-92 & 94

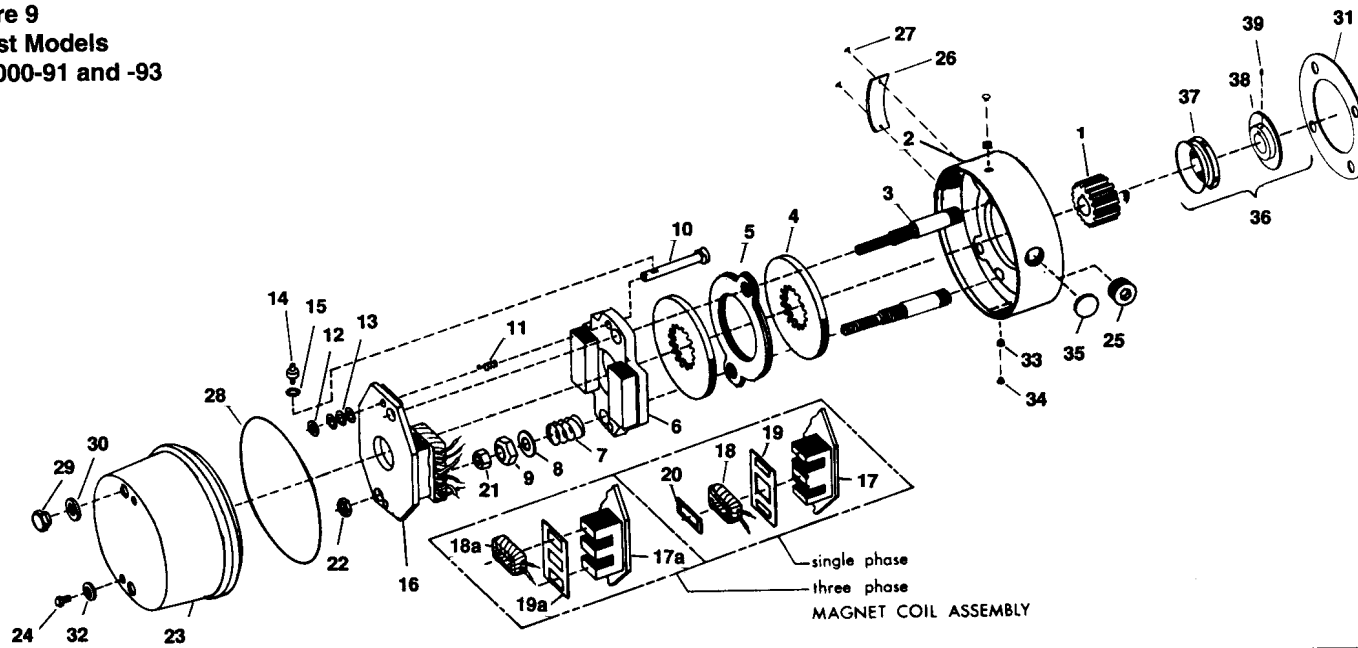


VO6-74075-92 & 94

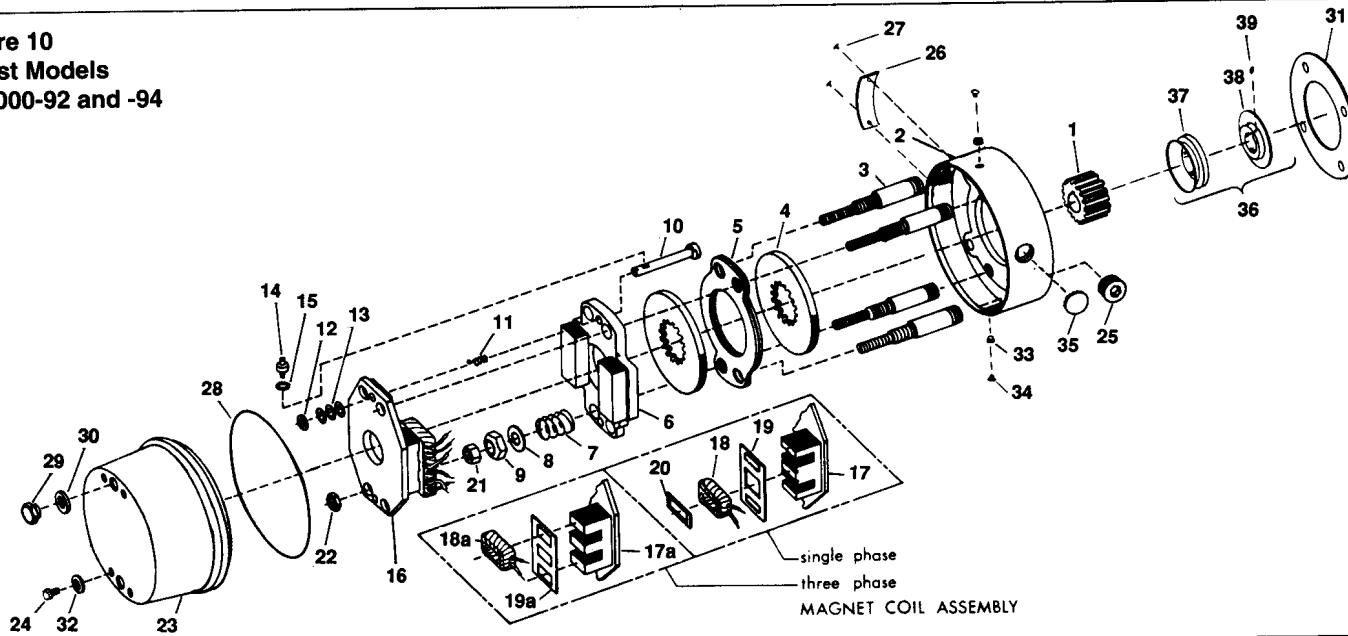
VU6-74075-92 & 94

# REPLACEMENT PARTS ILLUSTRATION

**Figure 9**  
2 Post Models  
6-70000-91 and -93



**Figure 10**  
4 Post Models  
6-70000-92 and -94



**Order replacement parts  
from your  
local distributor or:  
DINGS CO.  
DYNAMICS GROUP  
4740 W. Electric Ave.  
Milwaukee, WI 53219  
FAX: 414-672-5354  
Phone: 414-672-7830**

## ORDERING INFORMATION

The following data should be furnished with your order for:

### REPLACEMENT PARTS

- Brake model number
- Part number from tables
- Part description from tables

(On hub order furnish bore dia. & keyway dimensions. On electrical parts specify voltage, phase & frequency.)

### REPLACEMENT BRAKE

- Model number
- Voltage, phase & frequency
- Hub bore & keyway dimensions
- Mounting – horizontal or vertical. (If vertical, specify whether above or below motor. If brake includes foot mounting bracket or adapter, specify.)

## REPLACEMENT PARTS LIST

| Item No. | Description   | 2 Post Model -91 & -93           | Qty. | 4 Post Model -92 & -94           | Qty. |
|----------|---|----------------------------------|------|----------------------------------|------|
| 1        | Hub<br>Specify model, shaft size & key size                         |                                  | 1    |                                  | 1    |
| 2        | Bracket w/studs - 1 disc  | H070298-001                      | 1    | H070299-001                      | 1    |
| 2        | Bracket w/studs - 2 disc  | H070298-002                      | 1    | H070299-002                      | 1    |
| 2        | Bracket w/studs - 3 disc  | H070298-003                      | 1    | H070299-003                      | 1    |
| 2        | Bracket w/studs - 4 disc  | H070298-004                      | 1    | H070299-004                      | 1    |
| 2a       | Bracket w/high tensile stud - 1 disc                                | H070298-005                      | 1    | H070299-005                      | 1    |
| 2a       | Bracket w/high tensile stud - 2 disc                                | H070298-006                      | 1    | H070299-006                      | 1    |
| 2a       | Bracket w/high tensile stud - 3 disc                                | H070298-007                      | 1    | H070299-007                      | 1    |
| 2a       | Bracket w/high tensile stud - 4 disc                                | H070298-008                      | 1    | H070299-008                      | 1    |
| 3        | Stud - 1 disc   | G070213-001                      | 2    | G070213-001                      | 4    |
| 3        | Stud - 2 disc   | G070213-002                      | 2    | G070213-002                      | 4    |
| 3        | Stud - 3 disc   | G070213-003                      | 2    | G070213-003                      | 4    |
| 3        | Stud - 4 disc   | G070213-004                      | 2    | G070213-004                      | 4    |
| 3a       | High tensile stud - 1 disc  | G070219-001                      | 2    | G070219-001                      | 4    |
| 3a       | High tensile stud - 2 disc  | G070219-002                      | 2    | G070219-002                      | 4    |
| 3a       | High tensile stud - 3 disc  | G070219-003                      | 2    | G070219-003                      | 4    |
| 3a       | High tensile stud - 4 disc  | G070219-004                      | 2    | G070219-004                      | 4    |
| 4        | Rotating friction disc  | H070103-004                      | *    | H070103-004                      | *    |
| 4a       | H.D. rotating friction disc (Alt.)                                  | H070047-003                      | *    | H070047-003                      | *    |
| 5        | Stationary disc   | H070089-001                      | **   | H070305-001                      | **   |
| 6        | Pressure plate  | K070045-001P                     | 1    | K070307-001P                     | 1    |
| 7        | Torque spring 10 lb. ft.  | G070011-001                      | 2    | G070068-001                      | 4    |
| 7        | Torque spring 25 lb. ft.  | G070019-001                      | 2    | G070525-001                      | 4    |
| 7        | Torque spring all others  | G070012-001                      | 2    | G080192-001                      | 4    |
| 8        | Torque spring washer  | W004004-001D                     | 2    | W004004-001D                     | 4    |
| 9        | Torque adjusting nut  | W003001-022F                     | 2    | W003001-022F                     | 4    |
| 10       | Manual release rod  | G070001-002P                     | 2    | G070001-002P                     | 2    |
| 11       | Manual release spring   | G060010-001P                     | 2    | G060010-001P                     | 2    |
| 12       | Manual release washer   | W004004-003D                     | 2    | W004004-003D                     | 2    |
| 13       | Manual release shim   | W004004-004D                     | AR   | W004004-004D                     | AR   |
| 14       | Manual release stop screw   | G060029-001P                     | 2    | G060029-001P                     | 2    |
| 15       | Manual release lockwasher   | W004007-007D                     | 2    | W004007-007D                     | 2    |
| 16       | Magnet asm. single phase w/coils<br>Magnet asm. three phase w/coils | See ordering information on p. 6 |      | See ordering information on p. 6 |      |

| Item No. | Description                             | 2 Post Model -91 & -93           | Qty. | 4 Post Model -92 & -94    | Qty. |
|----------|---|----------------------------------|------|---------------------------|------|
| 17       | Magnet plate asm. wo/coils, 1 phase     | K070027-001P                     | 1    | K070352-001P              | 1    |
| 17a      | Magnet plate asm. wo/coils, 3 phase     | K070024-001P                     | 1    | K070306-001P              | 1    |
| 18       | Magnet coil - 1 phase                   | See ordering information on p. 6 |      | ***                       | ***  |
| 18a      | Magnet coil - 3 phase                   | See ordering information on p. 6 |      | ***                       | ***  |
| 19       | Insulating washer - 1 phase             | G070029-001                      | 2    | G070029-001               | 2    |
| 19a      | Insulating washer - 3 phase             | G070037-001                      | 2    | G070037-001               | 2    |
| 20       | Shading coil - 1 phase                  | G070032-001                      | 2    | G070032-001               | 2    |
| 21       | Gap adjusting nut                       | W003003-023E                     | 2    | W003003-023E              | 4    |
| 22       | Gap adjusting nut                       | W003001-020F                     | 2    | W003001-020F              | 4    |
| 23       | Cover                                   | K070441-001                      | 1    | K070442-001               | 1    |
| 24       | Cover bolt                              | W001008-003C                     | 2    | W001008-003C              | 4    |
| 25       | Conduit pipe plug                       | W010002-004B                     | 1    | W010002-004B              | 1    |
| 26       | Name plate                              | K060467 -<br>specify data        | 1    | K060467 -<br>specify data | 1    |
| 27       | Drive screw                             | W001012-048A                     | 2    | W001012-048A              | 2    |
| 28       | "O" Ring                                | W006001-024                      | 1    | W006001-024               | 1    |
| 29       | Release cap - stainless steel           | G060170-004                      | 2    | G060170-004               | 2    |
| 30       | Release cap gasket                      | G070381-001                      | 2    | G070381-001               | 2    |
| 31       | Gasket mounting face                    | K070250-006                      | 1    | K070250-006               | 1    |
| 32       | Nylon seal washer                       | W004015-001                      | 2    | W004015-001               | 4    |
| 33       | Drain hole pipe plug                    | W010002-001B                     | 2    | W010002-001B              | 2    |
| 34       | Cap plug                                | W008006-001                      | 2    | W008006-001               | 2    |
| 35       | Cap plug                                | W008006-004                      | 1    | W008006-004               | 1    |
| †36      | V-ring hub asm. specify bore & key size | H070302-                         | 1    | H070302-                  | 1    |
| †37      | V-ring V-70 A                           | W011008-003                      | 1    | W011008-003               | 1    |
| †38      | V-ring hub; specify bore & key size     | H070301-                         | 1    | H070301-                  | 1    |
| †39      | Set screw                               | W002001-002                      | 2    | W002001-002               | 2    |

\* Number of rotating discs is shown as second digit of model no. Example: 72025.  
 \*\* Number of stationary discs is one less than number of rotating discs.  
 \*\*\* 3-phase brakes require 6 coils. 1-phase brakes require 2 coils. (See Fig. 4)  
 AR = as required.  
 † For TEFC applications only.

## TROUBLESHOOTING

A possible cause and corresponding corrective action is listed for each symptom.

### *Brake does not release.*

#### **Broken or damaged parts**

- Replace affected parts.

#### **Wrong voltage**

- Check for correct voltage. Voltage must correspond to that listed on brake nameplate. If the voltage is more than 10% below the nameplate voltage, the magnet may not pull in.

#### **Burned out coil**

- Replace coil or coils (18). (Refer to Fig. 6).

#### **Incorrect wiring connections or broken wires**

- Find the connection or wiring fault. Correct or repair as required.

### *Brake does not stop properly.*

#### **Broken or damaged parts**

- Replace affected parts.

#### **Worn friction disc**

- Replace disc if worn to  $\frac{7}{32}$ " thickness. If disc replacement is not required, adjust magnet gap. (Refer to "Wear Adjustment" section.)

#### **Hub positioned incorrectly**

- Replace hub (1) and key, if required. (Refer to "Installation" section.)

#### **Brake is manually released**

- Determine if manual release is in normal position.

### *Brake chatters or hums.*

#### **Dirty magnet faces**

- To remove dirt, insert a clean sheet of paper between faces and energize brake. Move paper around between faces to dislodge dirt, then remove paper.

#### **Magnet faces are not parallel in closed position**

- Readjust magnet gap to "D" original setting. (Refer to "Wear Adjustment" on p. 4.)

#### **Loose or broken shading coil (single phase only)**

- Replace shading coil.

#### **Wrong voltage supply**

- Check for low voltage.

### *Manual release does not work.*

#### **Broken or damaged parts**

- Replace. (Check return spring (11). Release will not reset automatically if spring is broken.)

#### **Improper setting**

- Check quantity of shim washers (13) under release stop screws (14). (Refer to "Manual Release Assembly" on p. 4.)

NOTE: When the release is turned clockwise, the brake should release. When in the released position, the release should return to its normal position automatically when power is applied.

## SPECIFICATIONS

**Torque:** 10 through 75 lb. ft.

**NEMA Motor Frame Sizes:** 182TC, 184TC, 213TC, 215TC, 254TC, 256TC.

**Enclosure:** Waterproof, cast iron.

**Voltage:** All NEMA voltages and frequencies are standard. Others optional.

**Duty:** Rated for continuous duty.

**Mounting:** Direct to NEMA C face. Horizontal or vertical position with slight modifications. (The one-disc VO model does not require modification.)

**Ambient Temperature:** 40°C.

**Maximum Input Speed:** 3600 RPM

**Conforms to the following specifications:**

CSA Enclosure 4

NEMA MG1-1.26.5

BISSC

3A Dairy

Wis. food & dairy regulations



**Dings**  
CO.

**DYNAMICS GROUP**

4740 W. ELECTRIC AVE. • MILWAUKEE, WI 53219  
414/672-7830 • FAX 414/672-5354

## LOCAL ASSISTANCE

The name of the Dings distributor or sales representative in your area is listed in the Yellow Pages under "Brakes, Mfrs. & Dists." or may be obtained by calling the Dings Co.

## WARRANTY

Seller warrants products manufactured by it and supplied hereunder to be free from defects in materials and workmanship under normal use and proper maintenance for a period of twelve months from date of shipment. If within such period any such products shall be proved to Seller's reasonable satisfaction to be defective, such products shall be repaired or replaced at Seller's option. Seller's obligation and Buyer's exclusive remedy hereunder shall be limited to such repair and replacement and shall be conditioned upon Seller's receiving written notice of any alleged defect no later than 10 days after its discovery within the warranty period and, at Seller's option, the return of such products to Seller, f.o.b. its factory, when such return is feasible. Seller reserves the right to satisfy its warranty obligation in full by reimbursing Buyer for all payments it makes hereunder, and Buyer shall thereupon return the products to Seller. Seller shall have the right to remedy such defects. Seller makes no warranty with respect to wear or use items, such as belts, chains, sprockets, discs and coils, all which are sold strictly AS IS.

The foregoing warranties are exclusive and in lieu of all other express and implied warranties (except of title) including but not limited to implied warranties of merchantability, fitness for a particular purpose, performance, or otherwise, and in no event shall the Seller be liable for claims (based upon breach of express or implied warranty, negligence, product liability, or otherwise) for any other damages, whether direct, immediate, incidental, foreseeable, consequential, or special.