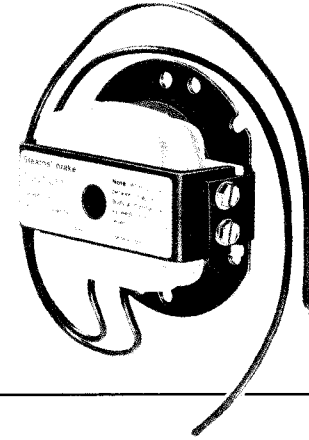


# Installation and Service Instructions for Series 001

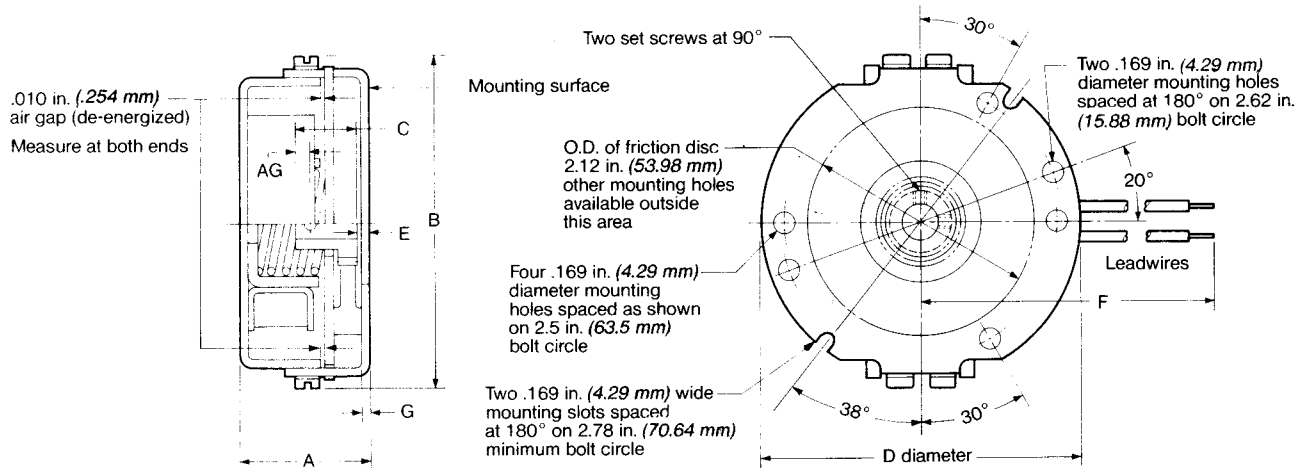
## Models 1-001-009, 1-001-011, and 1-001-015



### Important

Please read these instructions carefully before installing, operating, or servicing your Stearns Brake. Failure to comply with these instructions could cause injury to personnel and/or damage to property if the brake is installed or operated incorrectly. For definition of limited warranty/liability, contact Rexnord Corporation, Stearns Division, 120 North Broadway, Milwaukee, Wisconsin 53202, (414) 272-1100.

Dimensions for estimating only. For installation purposes, request certified prints.



Nominal Static Torque (oz-in) (Nm)	Model Number	Dimensions in Inches Dimensions in Millimeters							
		A	AG	B	C	D	E	F	G
20 .14	1-001-009-00								
34 .24	1-001-011-00	1.20 30.56	.12 3.18	3.06 77.79	.56 14.29	3.00 76.20	.11 2.78	9.00 228.60	.06 1.59
60 .42	1-001-015-00								

### Caution

1. Installation must be made in compliance with all local safety codes including Occupational Safety and Health Act (OSHA). All wiring and electrical connections must comply with the National Electric Code (NEC) and local electric codes in effect.
2. Do not install the brake in atmospheres containing explosive gases or dusts, corrosive substances, water, oil, or dust.
3. To prevent an electrical hazard, disconnect power source before working on the brake. If power disconnect point is out of sight, lock disconnect in the *off* position and tag to prevent accidental application of power.
4. Make certain power source conforms to the requirements specified on the brake nameplate.
5. Be careful when touching the exterior of an operating brake. Allow sufficient time

for brake to cool before disassembly. Surfaces may be hot enough to be painful or cause injury.

6. Installation and maintenance should be performed only by qualified personnel familiar with the construction and operation of the brake.
7. For proper performance and operation only genuine Stearns parts should be used for repairs and replacements.

### General Description

This is a spring-set, electrically released brake containing one friction disc driven by a hub which is mounted on the motor shaft.

### I. Installation Procedure

1. Remove hub from brake and slide onto motor shaft to 1/8" from motor mounting surface. Torque both set screws to 10 lb-in of torque or until the long arm of allen wrench flexes.

**Note:** Check motor mounting face to be sure NEMA dimensions of 0.004" T.I.R. on face run out is met. Shaft run out is to be within 0.002" T.I.R. Maximum shaft end float is 0.020".

2. Attach brake to mounting surface by aligning the splined friction disc onto hub engaging without force. Slide onto hub until brake is tight against mounting surface.
3. Mount the brake to the mounting surface with two screws (not furnished). Torque to screw manufacturer's recommendation based on materials being used. Brake mounting can be in any position.
4. Verify solenoid air gap is .010". Measure both sides with feeler gauge where shown in diagram above. Air gap measured with coil de-energized.
5. See *Electrical Connection* for coil connection.

## II. Torque Adjustment

The brake is factory set for nominal rated torque. No further adjustment to increase torque may be made.

## III. Electrical Connection

Coils are wound for DC. A full wave bridge rectifier integral to coil is provided when 115 or 230 Vac is specified.

Coil voltage is printed on the coil bobbin in the 5th, 6th and 7th space of part number. For example, a 61080240018U coil is 24 Vdc.

**Note:** Be sure lead wires to coil are not tight or pinched, and that leads will not be rubbed by friction disc.

### A. AC Coils

115 Vac coil part number 61081150018B and 230 Vac coil part number 61082300018F.

1. Connect the two coil leads to any two wires of single or three-phase power source, or, for operation with motor control, to any two motor leads of proper voltage.

### B. DC Coils

1. Connect the two coil leads to power source of proper voltage. Polarity is immaterial.

**Caution!** Never use a series resistor to drop power supply voltage to the coil as brake malfunction will result.

**Caution!** For electrical release of brake, apply full rated coil voltage instantly. Do not increase voltage slowly.

## IV. General Maintenance

**Warning!** Any mechanism or load held in position by the brake should be secured to prevent possible injury to personnel or damage to equipment before any disassembly of the brake is attempted or before the manual release knob is operated on the brake.

Observe all cautions listed at the beginning of this manual before attempting to service brake.

### A. Adjustment for Friction Disc Wear

1. As friction disc wears, the air gap will increase as well as stopping time. When air gap exceeds .025", reset to .010". Air gap measured on both sides of mag body bracket as shown on first page diagram.
2. Begin adjustment by loosening the (4) mag body bracket screws. Loosen two on each end.
3. Insert a .010" feeler gauge on one end then adjust the bracket onto the feeler gauge. Tighten the two screws on that end to maintain the adjustment.

4. Insert the .010" feeler gauge on the other end. Adjust same. Tighten the two screws to maintain the adjustment.
5. Recheck gap on both ends to verify .010" gap.

### B. Coil Replacement

Coil should not be replaced. Coil is factory installed into the mag body bracket. Contact distributor for new brake unit.

### C. Friction Disc Replacement

Friction disc original thickness is 1/4". Replace disc with 1/16" wear. Minimum disc thickness is 5/32" (.16).

1. Remove mag body bracket by removing the (4) adjustment screws.
2. Slide off the armature plate that acts as the top friction surface.
3. Remove worn friction disc and replace with new disc.
4. Reassembly in reverse order of disassembly
5. Readjust gap per Section A.

## V. Troubleshooting

If brake does not stop properly or overheats, check the following:

1. Are friction discs excessively worn, charred or broken?
2. Hub may become loose and shifted on shaft. Tighten set screws and position on shaft if necessary.
3. Does splined friction disc slide freely on hub?
4. Does the armature slide freely in the mounting bracket cutout?
5. Is solenoid air gap adjusted correctly?
6. Whether brake is AC or DC, a voltage drop may be occurring. If excessive drop in voltage is noted, check wire size of power source. Correct as needed.
7. Are controls which govern start of braking cycle operating properly?
8. Brake coil should be energized at same time or prior to energization of motor, and de-energized at same time or after de-energization of motor.
9. If stopping time is more than one second (rule of thumb) and/or application is more than five stops per minute, check thermal requirements of load versus thermal rating of brake.
10. Check mounting face to which brake is attached per *Installation Procedure*, Note after Item 1. Mounting screws tight?
11. Replace friction disc(s) when worn area is 3/16" or 5/32" minimum.