Primary Brake Pin Drive Armature PB-825, PB-1000, PB-1225, PB-1525 Motor Brake and Spline Drive MB-825, MB-1000, MB-1225 Pin Drive

Installation Instructions

P-208
819-0367

Warner® Electric

An Altra Industrial Motion Company

Contents

⚠WARNING Failure to follow these instructions may result in product damage, equipment damage, and serious or fatal injury to personnel.

Primary Brake Normal Duty
Pin Drive Armature
PB-825, PB-1000, PB-1225, PB-1525

A. Installing the Conduit Box

Install the conduit box on the magnet. Instructions for this procedure can be found with conduit box.

B. Mounting the Magnet

The brake magnet is mounted to a stationary machine member by a flange. Extreme care must be taken in selecting the location for the mounting of the magnet. Proper positioning is very important for the unit to function correctly.

1. A pilot diameter on the mounting surface is essential to hold the magnet within the required tolerances (see Figure 1).

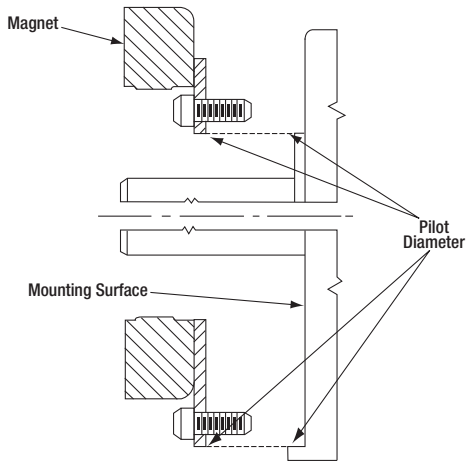


Figure 1

2. A machined pilot diameter is provided on the magnet mounting flange (refer to illustration drawings) to aid in the proper positioning of the magnet.

3. Once the mounting surface has been prepared, the magnet is bolted in place with capscrews and lockwashers. (See Figure 2.)

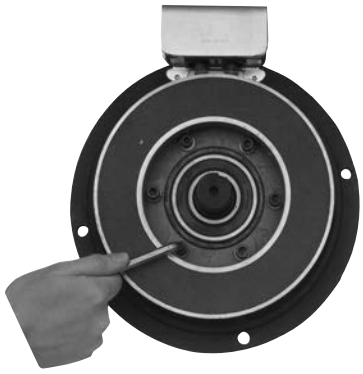


Figure 2

4. After assembly, the magnet must be concentric and square within the required tolerances listed on the illustration drawing. (See Figure 3.)

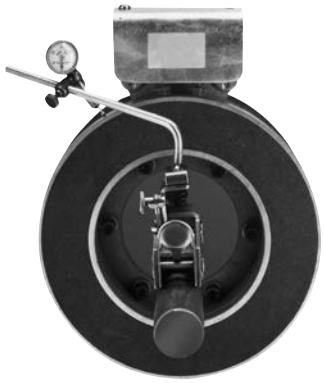


Figure 3

C. Assembling the Armature and Hub

Assemble the armature to the armature hub with the autogap mounting accessory. Refer to Figure 4. The hub is reversible. The side on which the armature is mounted will depend on the direction in which the taperlock bushing must enter.

The autogap assembly is a double spring device which allows for automatic armature clearance and adjustment for wear. The smaller or conical spring pushes the armature from the magnet face, leaving a gap of about 1/32-inch, while the straight spring automatically follows up for wear. This combination maintains maximum efficiency throughout the life of the unit.

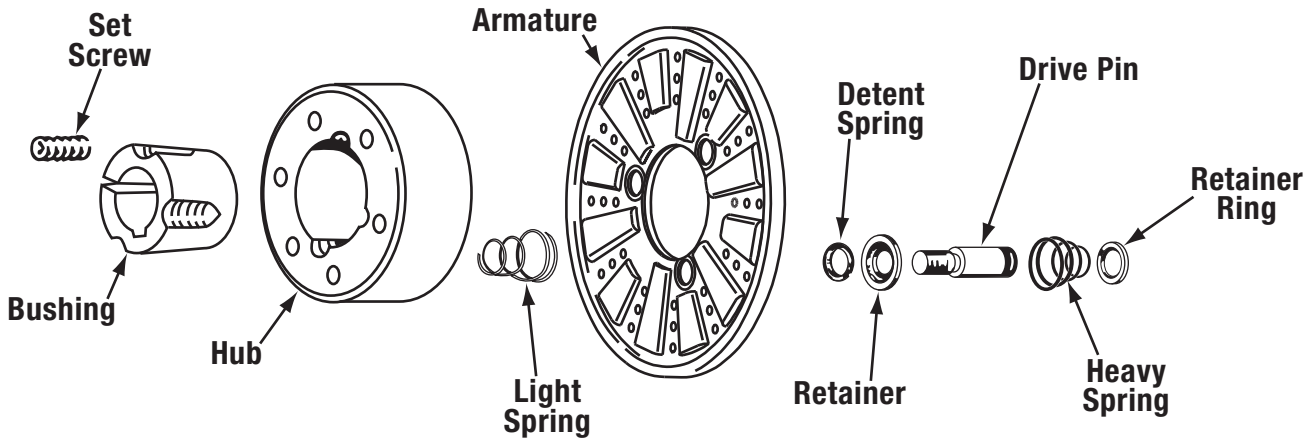


Figure 4

The assembly procedure for the autogap accessory is as follows:

Step 1
Place the straight springs (white) over the armature bosses on the back side of the armature (Figure 5).

Figure 5

Step 2
Compress the heavy (red) spring on each drive pin by sliding the detent spring towards the head of the pin (Figure 6).

Figure 6

Step 3
Insert the assembled drive pins through the armature (entering from segmented side), through the straight (white) springs, and into the armature hub. **Note: Apply Grade "AA" Loctite® Sealant on the pin threads (Figure 7).**

Figure 7

Step 4
Tighten the pins until the shoulders of the pins are against the face of the hub. Since the threads are class No. 3 fit, the pins may seem to bind.

⚠CAUTION The straight springs must not get caught under the shoulders of the drive pins.

Step 5
Check to see that the armature is completely compressed against the face of the hub.

Step 6

To set the autogap, slide the detent spring retainers against the armature face. **Note: This position must not be disturbed during completion of the assembly (Figure 8).**

Figure 8

D. Mounting the Armature Assembly

The armature and armature hub are mounted on the shaft with a taperlock bushing. All parts must be clean and free from burrs and chips before assembling.

1. Place the bushing into the hub and insert the key. The key is a side-to-side fit and should not contact the top of the keyway.

2. Insert the locking setscrews into the bushing and slide the assembly onto the shaft.

3. Place the face of the armature approximately 1/32-inch from the face of the magnet. Once this gap is set, it will be automatically maintained throughout the life of the unit. (See Figure 9.)

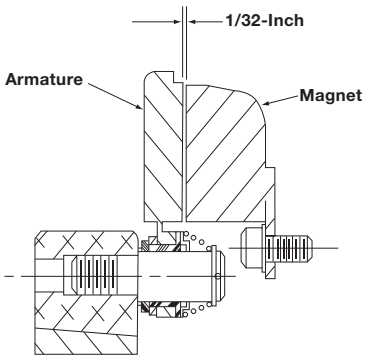


Figure 9

4. Securely fasten the armature assembly to the shaft by alternately tightening each setscrew. During the tightening process, the bushing should be tapped lightly to make certain it seats-in properly.

Motor Brake Spline Drive Armature MB-825, MB-1000, MB-1225

The motor brakes will mount on a NEMA "C" face motors frame size 213C, 215C 254UC and 256UC.

A. Mounting the Splined Armature Hub

1. Insert the bushing into the splined armature hub. Insert the two capscrews loosely into the bushing.

2. Insert the key in the motor shaft.

3. Holding the hub so that the capscrew heads are facing the NEMA motor, slide the hub on to the motor shaft. (Figure 1)

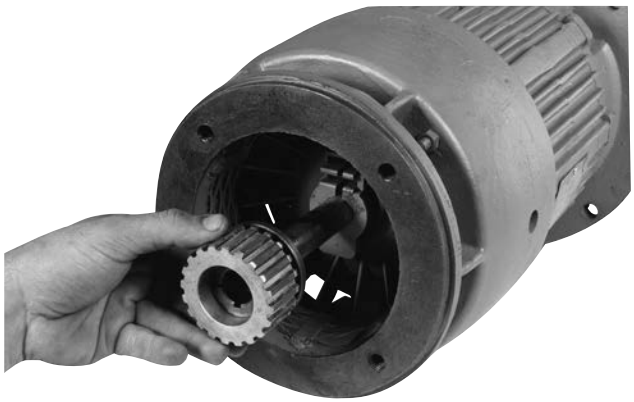


Figure 1

4. Position the armature hub in the location specified by dimensions on the illustration drawings.

5. Secure the hub in this position by alternately tightening the two capscrews in the bushing.

6. After tightening the capscrews, recheck the positioning dimension of the splined armature hub. Reposition if necessary.

B. Mounting the Adapter

1. Mount the adapter to the C-flange end bell of the motor using capscrews and lockwashers. The flat side of the O.D. of the adapter should be mounted towards the bottom of the motor. (Figure 2)

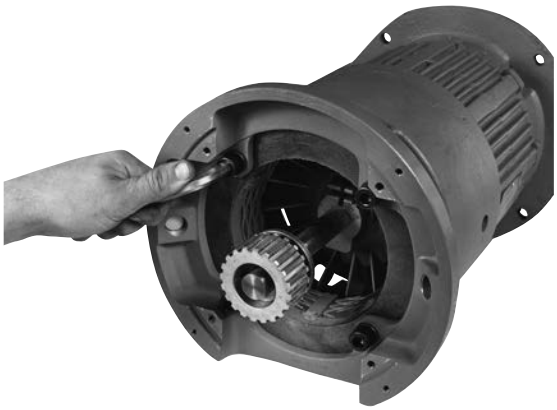


Figure 2

2. Mount the magnet to the adapter with capscrews and lockwashers. Be sure both surfaces are clean and free of burrs and chips. Position the magnet so that the lead wires are in position with the desired conduit entrance. (Figure 3)

Figure 3

C. Assembling the Armature and Hub

These units contain spline drive armatures. The armatures are shipped with a built-in spring accessory. This device automatically maintains a gap of about 1/32-inch between the armature and magnet faces for the life of the unit.

These units are shipped with the armature, splined armature adapter, and autogap already assembled.

1. Slide the spline drive armature onto the splined hub. The segmented side of the armature faces toward the magnet. (Figure 4)

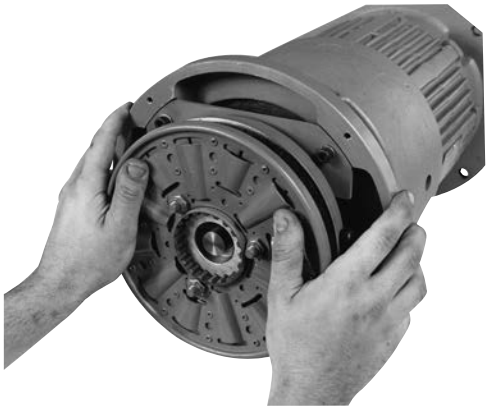


Figure 4

2. Press on the splined armature adapter, and slide the armature forward until it is in full contact with the magnet face. **Note: The autogap detent ring in the splined adapter grips the hub very tightly, and requires considerable force to slide onto the hub. When the armature is released, it will spring back about 1/32-inch. This gap will be automatically maintained for the life of the unit.**

3. Bolt the cover to the adapter using capscrews and lockwashers. (Figure 5)

Figure 5

Motor Brake
Pin Drive Armature
MB-825, MB-1000, MB-1225

The motor brakes will mount on a NEMA "C" face motors frame size 213C, 215C, 254UC and 256UC.

A. Mounting the Adapter and Magnet

1. Mount the adapter to the C-flange end bell of the motor. Secure the adapter with capscrews and lockwashers.

2. Mount the magnet to the adapter with capscrews and lockwashers. Be sure both surfaces are clean and free of burrs and chips. A machined pilot diameter on the O.D. of the magnet mounting flange corresponds with a pilot diameter on the adapter.

B. Assembling the Armature and Hub

Assemble the armature to the armature hub with the autogap mounting accessory.

Follow these instructions to assemble the armature and hub:

Step 1
Insert the drive pin into the hub and tighten until the shoulder of the pin is against the hub. (See Figure 1.)

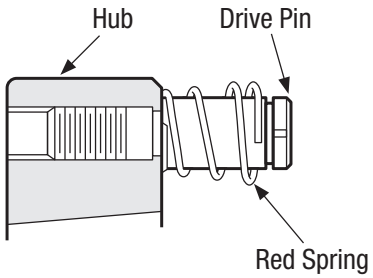


Figure 1

Step 2
Assemble the red spring over the drive pin. The smaller diameter of the spring should be against the hub (Figure 1).

Step 3
Place the detent retainer over the pin. The cupped-out portion should be against the spring. (See Figure 2.)

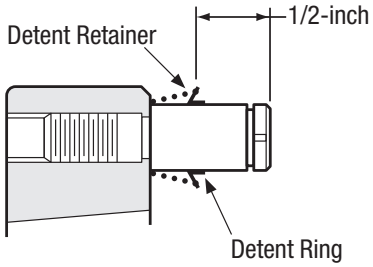


Figure 2

Step 4

Place the detent ring on the pin and press it into the recessed portion of the detent retainer (Figure 2).

Step 5
Slide the detent ring towards the hub to allow about 1/2" between the ring and the head of the pin (Figure 2).

Step 6
Slide the armature onto the pins. The face of the armature should be towards the hub. (Figure 3)

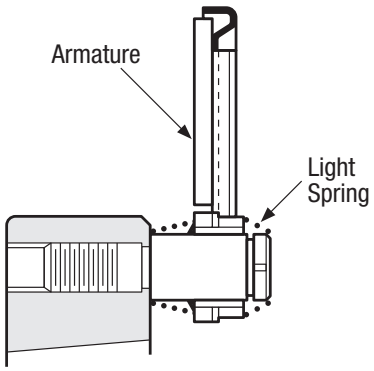


Figure 3

Step 7
Assemble the light spring over the pin. The large diameter of the spring should be against the armature.

Step 8
Compress the spring to allow the retainer ring to be snapped into the groove at the head of the pin (Figure 4).

C. Mounting the Armature-Hub Assembly

1. Insert the taperlock bushing into the bore of the hub.

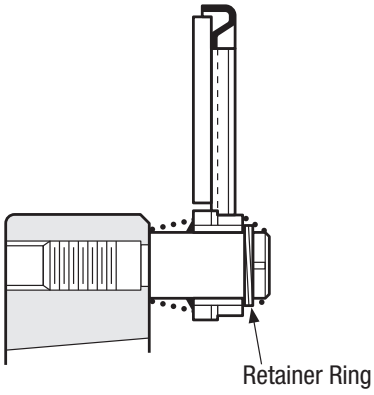


Figure 4

2. Loosely insert the locking setscrews and slide the assembly onto the shaft.

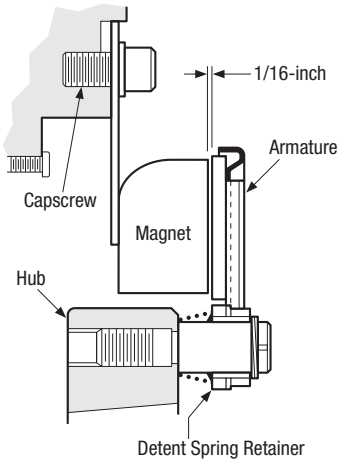


Figure 5

3. Position the assembly to allow a gap of 1/16-inch between the faces of the armature and magnet (Figure 5)

4. Secure the assembly in this position by alternately tightening the locking setscrews. The bushing should be tapped lightly from time-to-time to make sure it seats-in properly.

5. Set the autogap by pressing the armature into contact with the friction face and then releasing the armature. The armature should spring back approximately 1/32-inch. Once this gap is set it will be automatically maintained throughout the life of the unit.

6. Bolt the cover to the adapter using capscrews and lockwashers (Figure 6).

Figure 6

Coil Data

Unit Size	PB & MB-825			PB & MB-1000			PB & MB-1225			PB & MB-1525		
Voltage — DC	6	24	90	6	24	90	6	24	90	6	24	90
Resistance @ 20°C — Ohms	1.27	20.4	223.3	1.23	19.7	248.7	1.33	22.3	261.7	1.45	19.8	258.4
Current — Amperes	4.74	1.18	.4	4.87	1.22	.36	4.5	1.08	.34	4.13	1.21	.35
Watts	28	28	36	29	29	33	27	26	31	25	29	31
Coil Build-up — Milliseconds	170	170	170	205	220	235	300	320	350	470	490	512
Coil Decay — Milliseconds	70	75	80	70	75	80	190	190	190	200	170	140

Notes: Build-up time equals current to approximately* 90% of steady state value and flux to 90%.
Decay time equals current to approximately* 10% of steady state value and flux to 10%.
*Approximately because current leads or lags flux by a small amount.

Burnishing and Maintenance

Burnishing

Intimate metal to metal contact is essential between the armature and the metal rings (poles) of the magnet or rotor. Warner Electric clutches and brakes leave the factory with the friction material slightly undercut to assure good initial contact.

Normally, the desired wearing-in process occurs naturally as the surfaces slip upon engagement.

The time for wear-in, which is necessary to obtain the ultimate torque of the unit, will vary depending on speed, load, or cycle duty.

If maximum torque is required immediately after installation, the unit should be burnished by slipping the friction surfaces together at reduced voltage. It is recommended that the burnishings be done right on the application, if at all possible.

Burnishing at high speed will result in a smoother wear-in pattern and reduce the time for burnishing. The voltage should be set at approximately 30% or 50% of the rated value.

The unit should be cycled on and off to allow sufficient time between slip cycles to prevent overheating.

When a Warner Electric brake or clutch is properly assembled and installed, no further servicing, lubrication, or maintenance should be required throughout the life of the unit.

Maintenance

Wear Pattern: Wear grooves appear on the armature and magnet surfaces. This is a normal wear condition, and does not impair functioning of the unit. Normally, the magnet and armature, as a mating pair, will wear at the same rate. It is the usual recommendation that both components be replaced at the same time.

Remachining the face of a worn armature is not recommended. If a replacement armature is to be used with a used magnet, it is necessary to remachine the worn magnet face. In refacing a magnet: (1) machine only enough material to clean up the complete face of the magnet; (2) hold the face within .005" of parallel with the mounting plate; and (3) undercut the molded facing material .001" - .003" below the metal poles.

Heat: Excessive heat and high operating temperatures are causes of rapid wear. Units, therefore, should be ventilated as efficiently as possible, especially if the application requires fast, repetitive cycle operation.

Foreign Materials: If units are used on machinery where fine, abrasive dust, chips or grit are dispelled into the atmosphere, shielding of the brake may be necessary if maximum life is to be obtained.

Where units are used near gear boxes or transmissions requiring frequent lubrication, means should be provided to protect the friction surfaces from oil and grease to prevent serious loss of torque.

Oil and grease accidentally reaching the friction surfaces may be removed by wiping with a rag dampened with a suitable cleaner, which leaves no residue. In performing this operation, do not drench the friction material.

If the friction materials have been saturated with oil or grease, no amount of cleaning will be completely effective. Once such a unit has been placed back in service, heat will cause the oil to boil to the surface, resulting in further torque loss.

Torque Loss: If a brake or clutch slips or loses torque completely, the initial check should be the input voltage to the magnet as follows:

90-Volt Series: Connect a DC voltmeter with a range of 0-100 or more directly across the magnet terminals. With the power on and the potentiometer turned up, a normal reading is 90 volts, although 85 to 95 is satisfactory. The reading should drop as the potentiometer control is adjusted counterclockwise.

24-Volt Series: Use a DC voltmeter with a range of 0-30 volts or more. A normal reading is approximately 22-26 volts.

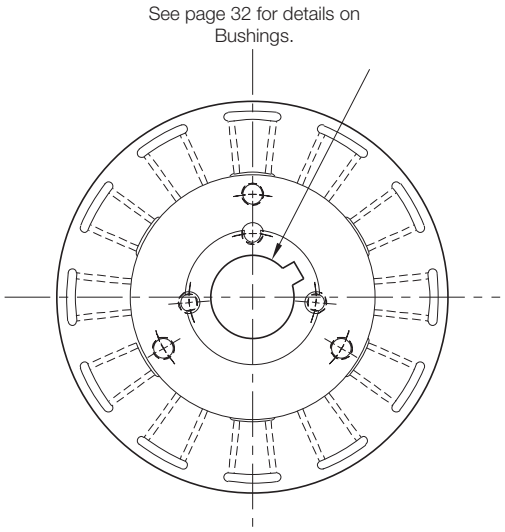
6-Volt Series: Use a DC voltmeter of approximately 0-15 volt range. A normal reading is from 5.5 to 6.5 volts.

The above checks normally are sufficient. Further checks may be made as follows: a low range ammeter, when connected in series with one magnet lead, will normally indicate approximately .40 amperes for the 90 volt units, 1.0 ampere for the 24 volt, and 3.5 amperes for the 6 volt series. These readings are with the power on and the potentiometer control in the maximum position.

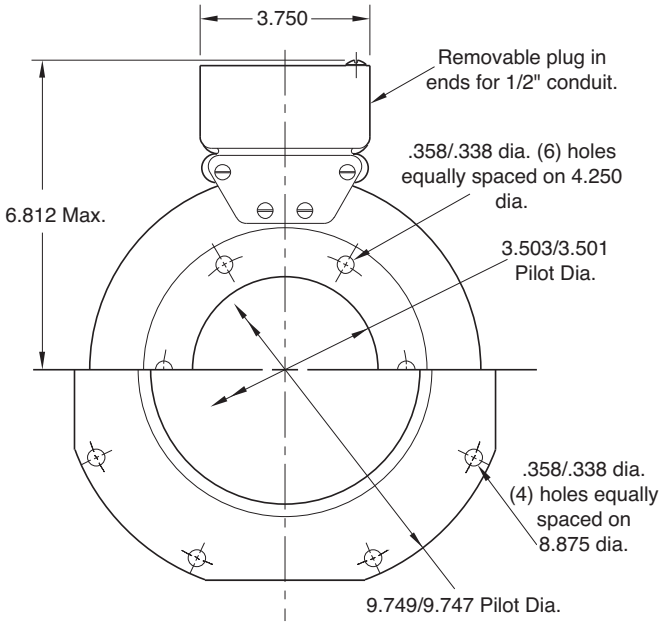
Ohmmeter checks should be made with the power off and the circuit open (to be certain, disconnect one lead to the magnet). Average resistance for the 90 volt series is 220 ohms; for the 24 volt, 20 ohms; and for the 6 volt series, 1.5 ohms. A very high or infinite resistance reading would indicate an open coil.

If the above checks indicate that the proper voltage and current is being supplied to the magnet, mechanical parts should be checked to assure that they are in good operating condition and properly installed.

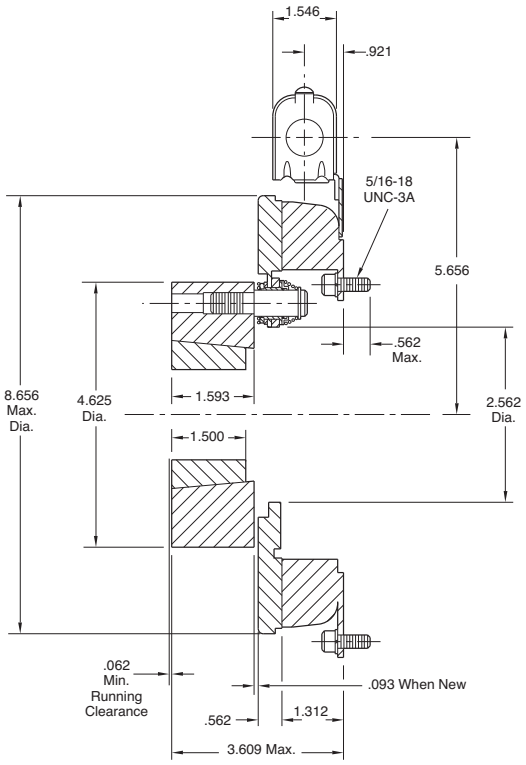
PB-825 Brake–Normal Duty



Armature View



Magnet View
(Inside & Outside Mounted)



* Mounting holes are within .010 of true positioning relative to pilot diameter.

Shaft Size	.500 – 1.625
Static Torque	125 lb. ft.
Maximum Speed	4,000 rpm
Standard Voltage	D.C. 6, 24, 90

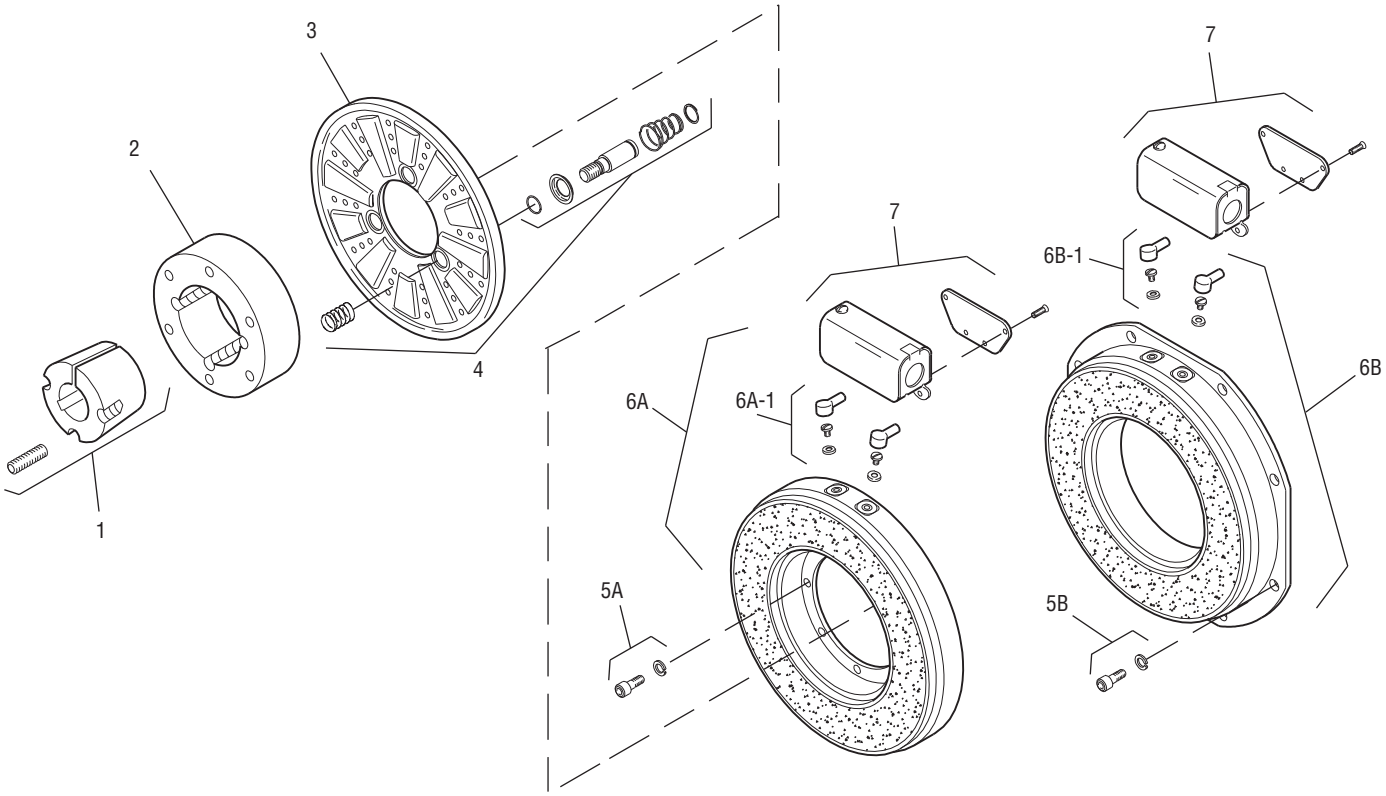
All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

1. Squareness of magnet mounting face with armature shaft within .006 T.I.R.
2. Concentricity of magnet mounting pilot diameter with armature shaft within .010 T.I.R.

PB-825 Brake –Normal Duty

Drawing I-25566



Item	Description	Part Number	Qty.
1	Bushing		1
	1/2" to 1-5/8" Bore	180-0131 to 180-0149	
2	Armature Hub	540-0394	1
3	Armature	5301-111-018	1
4	Autogap Accessory	5201-101-008	3
5A	Mounting Accessory - I.M.	5321-101-001	1
5B	Mounting Accessory - O.M.	5321-101-002	1
6A	Magnet - Inside Mounted		1
	6 Volt	5311-631-002	
	24 Volt	5311-631-003	
	90 Volt	5311-631-004	
	†90 Volt LK Facing	5311-631-011	
6A-1	Terminal Accessory	5311-101-001	1
6B	Magnet, Outside Mounted		1
	6 Volt	5311-631-007	
	24 Volt	5311-631-009	
	90 Volt	5311-631-008	
	†90 Volt LK Facing	5311-631-012	
6B-1	Terminal Accessory	5311-101-001	1
7	Conduit Box	5200-101-011	1

*See page 32 for specific part numbers. †Optional LK facing available.

How to Order:

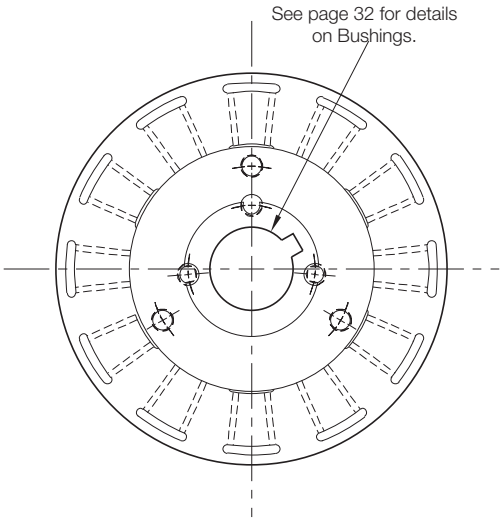
1. Specify Bore Size for Item 1.
2. Specify Inside Mounted for Items 5A and 6A or Outside Mounted for Items 5B and 6B.
3. Specify Voltage for Item 6A or 6B.

Example:

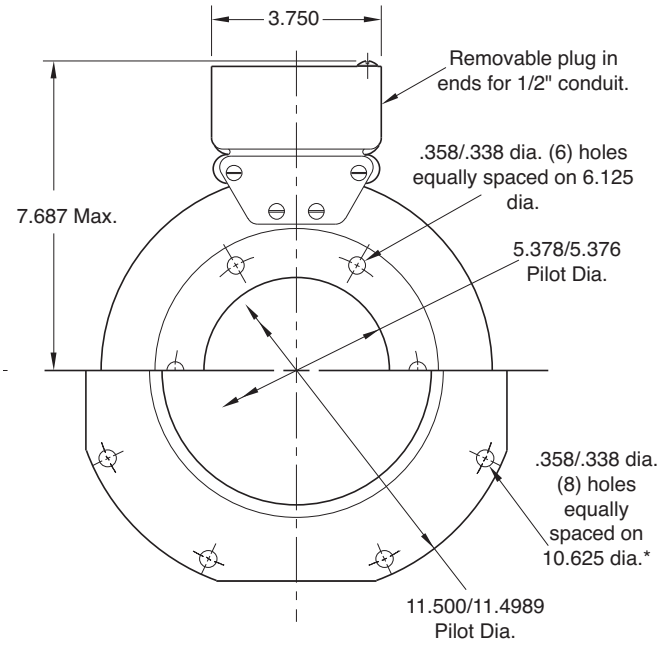
PB-825 Brake per I-25566 -
90 Volt, Inside Mounted, 1" Bore

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

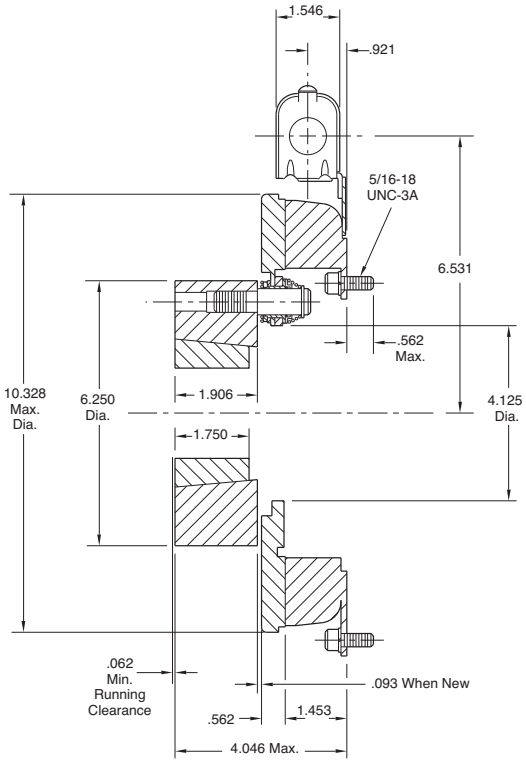
PB-1000 Brake–Normal Duty



Armature View



Magnet View
(Inside & Outside Mounted)



* Mounting holes are within .010 of true position relative to pilot diameter.

Shaft Size	.500 – 2.500
Static Torque	240 lb. ft.
Maximum Speed	3,600 rpm
Standard Voltage	D.C. 6, 24, 90

Customer Shall Maintain:

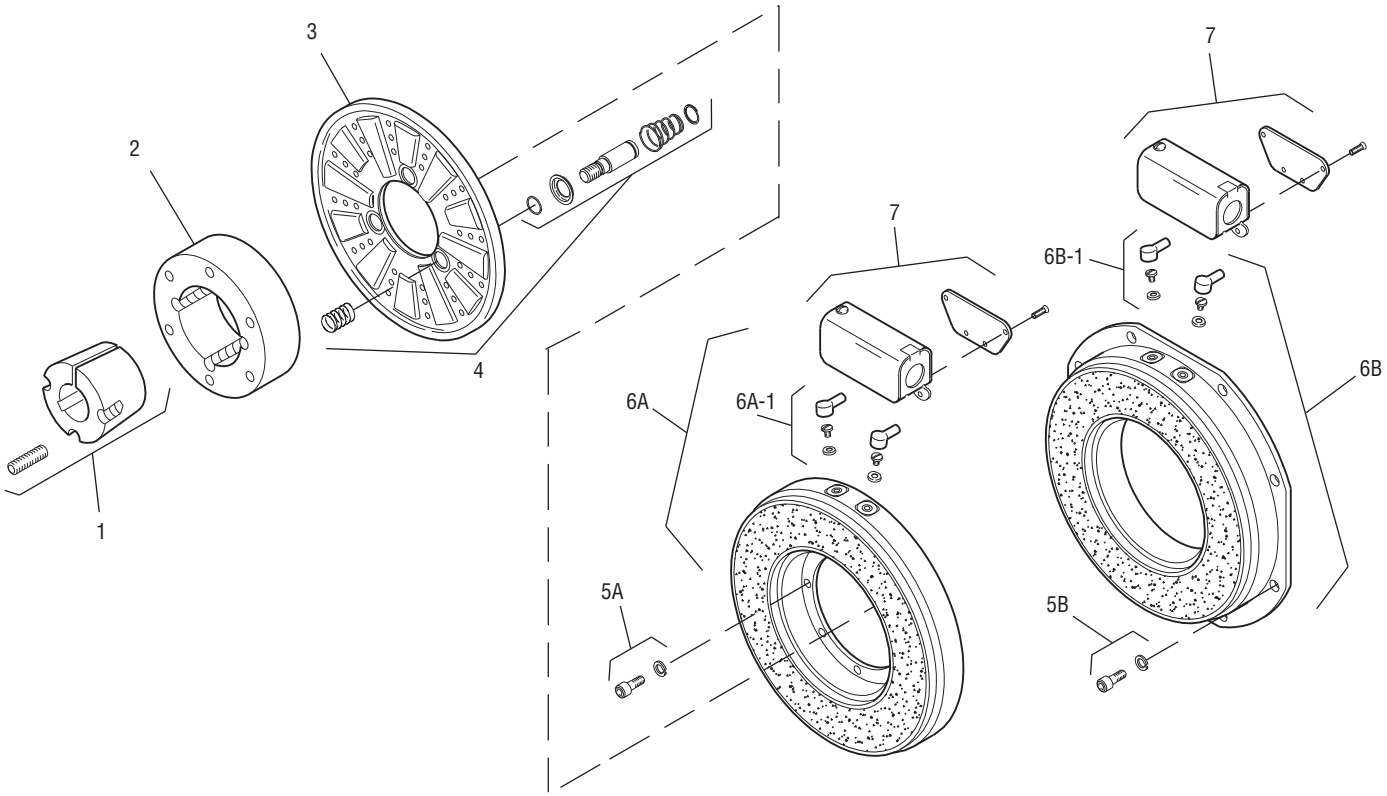
1. Squareness of magnet mounting face with armature shaft within .006 T.I.R.
2. Concentricity of magnet mounting pilot diameter with armature shaft within .010 T.I.R.

All dimensions are nominal unless otherwise noted.

Send Quote Requests to info@automatedpt.com
Call +1(800)985-6929 To Order or Order Online At Warnerelectricparts.com

PB-1000 Brake–Normal Duty

Drawing I-25586



Item	Description	Part Number	Qty.
1	Bushing*		1
	1/2" to 2-1/2" Bore	180-0185 to 180-0217	
2	Armature Hub	540-0313	1
3	Armature	5302-111-013	1
4	Autogap Accessory	5201-101-008	3
5A	Mounting Accessory - I.M.	5321-101-001	1
5B	Mounting Accessory - O.M.	5321-101-002	2
6A	Magnet - Inside Mounted		1
	6 Volt	5312-631-004	
	24 Volt	5312-631-005	
	90 Volt	5312-631-006	
	†90 Volt LK Facing	5312-631-001	
6A-1	Terminal Accessory	5311-101-001	1
6B	Magnet, Outside Mounted		1
	6 Volt	5312-631-011	
	24 Volt	5312-631-013	
	90 Volt	5312-631-012	
	†90 Volt LK Facing	5312-631-002	
6B-1	Terminal Accessory	5311-101-001	1
7	Conduit Box	5200-101-011	1

*See page 32 for specific part numbers. †Optional LK facing available.

How to Order:

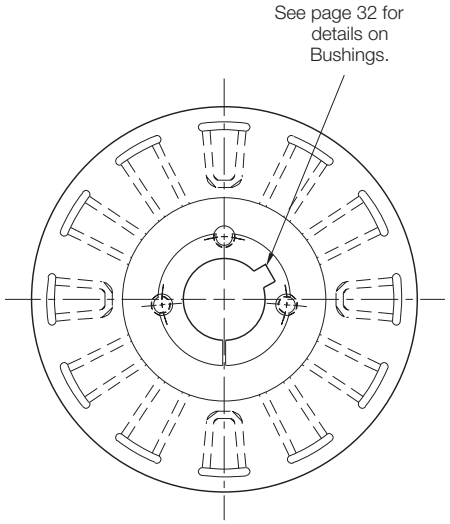
1. Specify Bore Size for Item 1.
2. Specify Inside Mounted for Items 5A and 6A or Outside Mounted for Items 5B and 6B.
3. Specify Voltage for Item 6A or 6B.

Example:

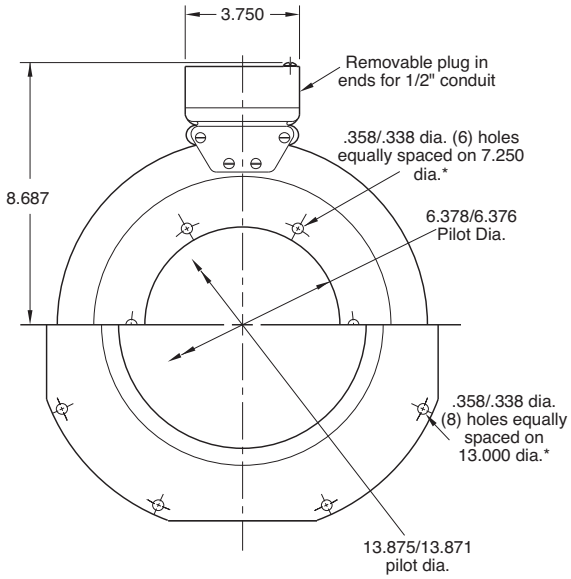
PB-1000 Brake per I-25586 -
90 Volt, Inside Mounted, 1" Bore

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

PB-1225 Brake–Normal Duty

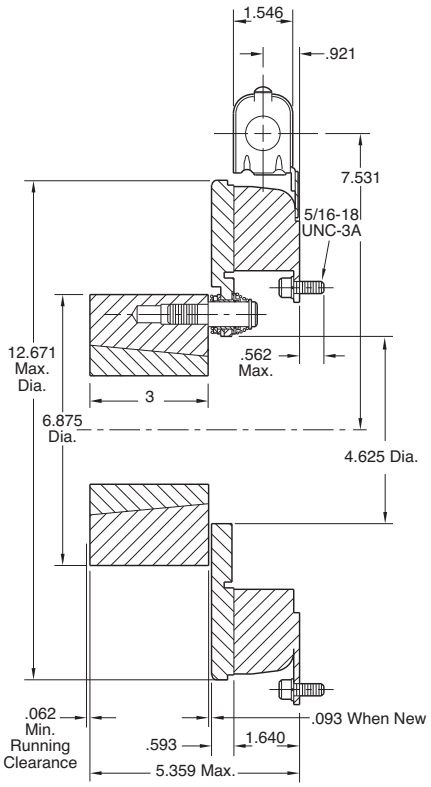


Armature View



Magnet View
(Inside & Outside Mounted)

* Mounting holes are within .010 of true position relative to pilot diameter.



Shaft Size	.937 – 3.000
Static Torque	465 lb. ft.
Maximum Speed	3,000 rpm
Standard Voltage	D.C. 6, 24, 90

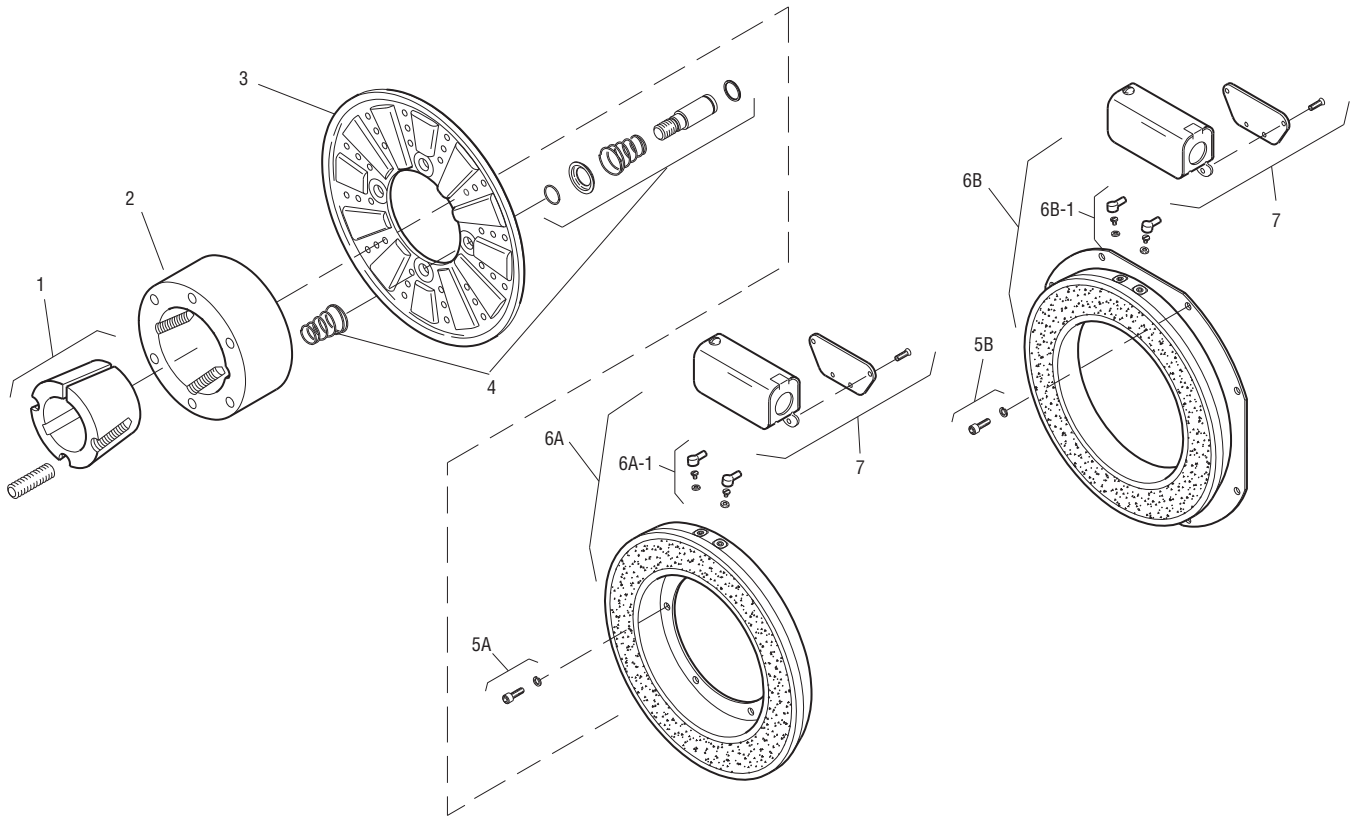
All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

1. Squareness of magnet mounting face with armature shaft within .006 T.I.R.
2. Concentricity of magnet mounting pilot diameter with armature shaft within .010 T.I.R.

PB-1225 Brake–Normal Duty

Drawing I-25606



Item	Description	Part Number	Qty.
1	Bushing*		1
	15/16" to 3" Bore	180-0262 to 180-0295	
2	Armature Hub	540-0015	1
3	Armature	5303-111-009	1
4	Autogap Accessory	5201-101-008	4
5A	Mounting Accessory - I.M.	5321-101-001	1
5B	Mounting Accessory - O.M.	5321-101-002	2
6A	Magnet - Inside Mounted		1
	6 Volt	5313-631-005	
	24 Volt	5313-631-006	
	90 Volt	5313-631-007	
	†90 Volt	5313-631-001	
6A-1	Terminal Accessory	5311-101-001	1
6B	Magnet - Outside Mounted		1
	6 Volt	5313-631-010	
	24 Volt	5313-631-012	
	90 Volt	5313-631-011	
	†90 Volt	5313-631-002	
6B-1	Terminal Accessory	5311-101-001	1
7	Conduit Box	5200-101-011	1

*See page 32 for specific part numbers. †Optional LK facing available.

How to Order:

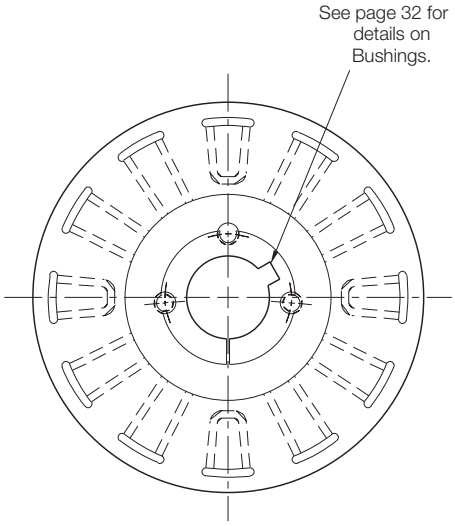
1. Specify Bore Size for Item 1.
2. Specify Inside Mounted for Items 5A and 6A or Outside Mounted for Items 5B and 6B.
3. Specify Voltage for Item 6A or 6B.

Example:

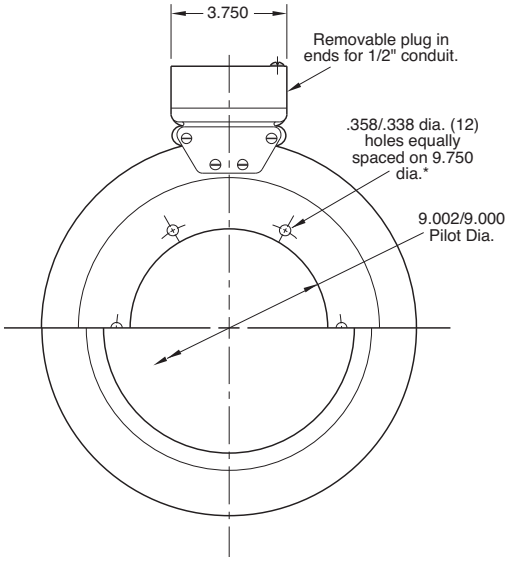
PB-1225 Brake per I-25606 - 90 Volt,
1" Bore, Inside Mounted

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

PB-1525 Brake–Normal Duty

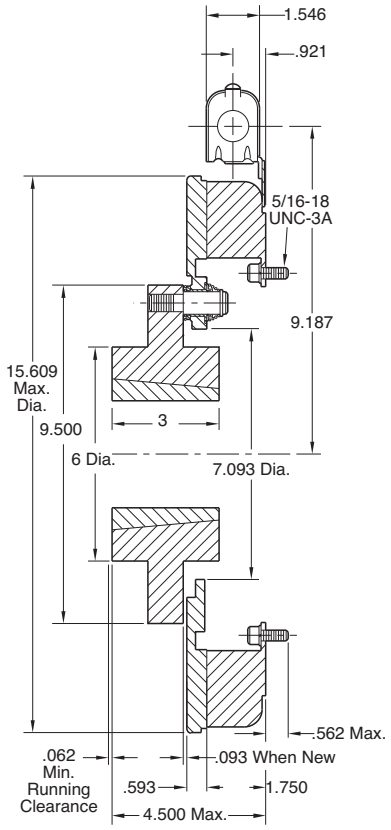


Armature View



Magnet View
(Inside & Outside Mounted)

* Mounting holes are within .010 of true position relative to pilot diameter.



Shaft Size	.937 – 3.000
Static Torque	700 lb. ft.
Maximum Speed	2,000 rpm
Standard Voltage	D.C. 6, 24, 90

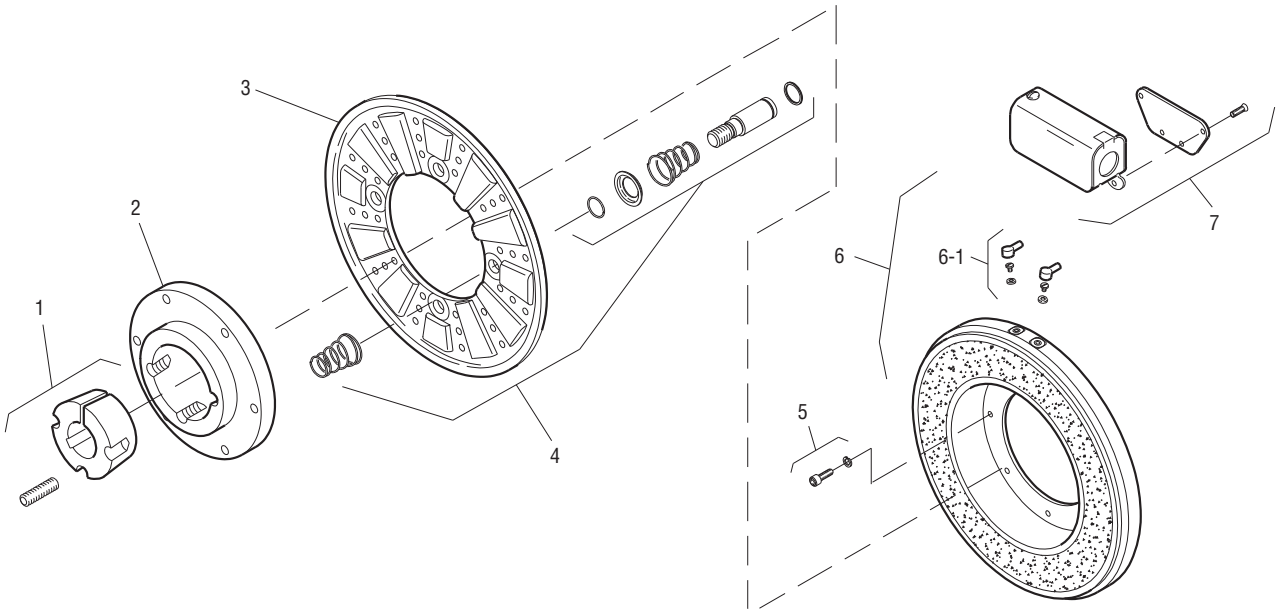
All dimensions are nominal unless otherwise noted.

Customer Shall Maintain:

1. Squareness of magnet mounting face with armature shaft within .006 T.I.R.
2. Concentricity of magnet mounting pilot diameter with armature shaft within .010 T.I.R.

PB-1525 Brake–Normal Duty

Drawing I-25633



Item	Description	Part Number	Qty.
1	Bushing*		1
	15/16" to 3" Bore	180-0262 to 180-0295	
2	Armature Hub	540-0314	1
3	Armature	5304-111-004	1
4	Autogap Accessory	5201-101-008	4
5	Mounting Accessory - I.M.	5321-101-001	2
6	Magnet - Inside Mounted		1
	6 Volt	5314-631-004	
	24 Volt	5314-631-006	
	90 Volt	5314-631-005	
	†90 Volt	5314-631-001	
6-1	Terminal Accessory	5311-101-001	1
7	Conduit Box	5200-101-011	1

*See page 32 for specific part numbers. †Optional LK facing available.

How to Order:

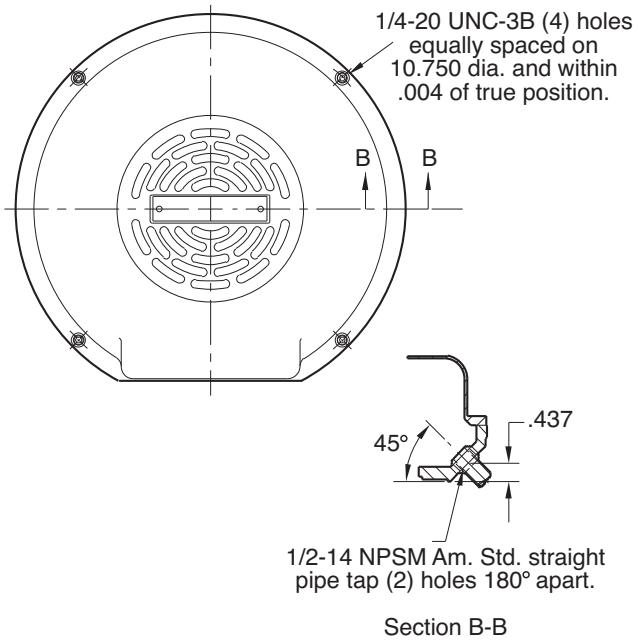
1. Specify Bore Size for Item 1.
2. Specify Inside Mounted for Items 5 and 6.
3. Specify Voltage for Item 6.

Example:

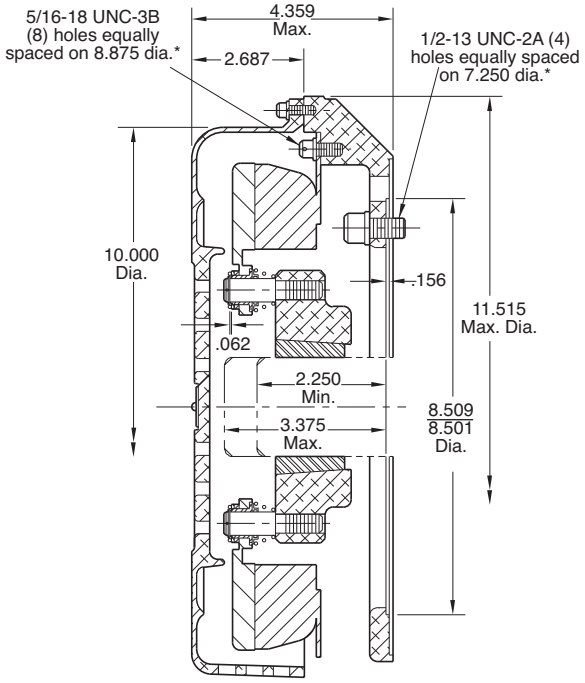
PB-1525 Brake per I-25633 - 90 Volt, 1-1/2" Bore, Inside Mounted

These units, when used in conjunction with the correct Warner Electric conduit box, meet the standards of UL508 and are listed under guide card #NMTR, file #59164.

MB-825 Motor Brake–Heavy Duty Flange Mounted

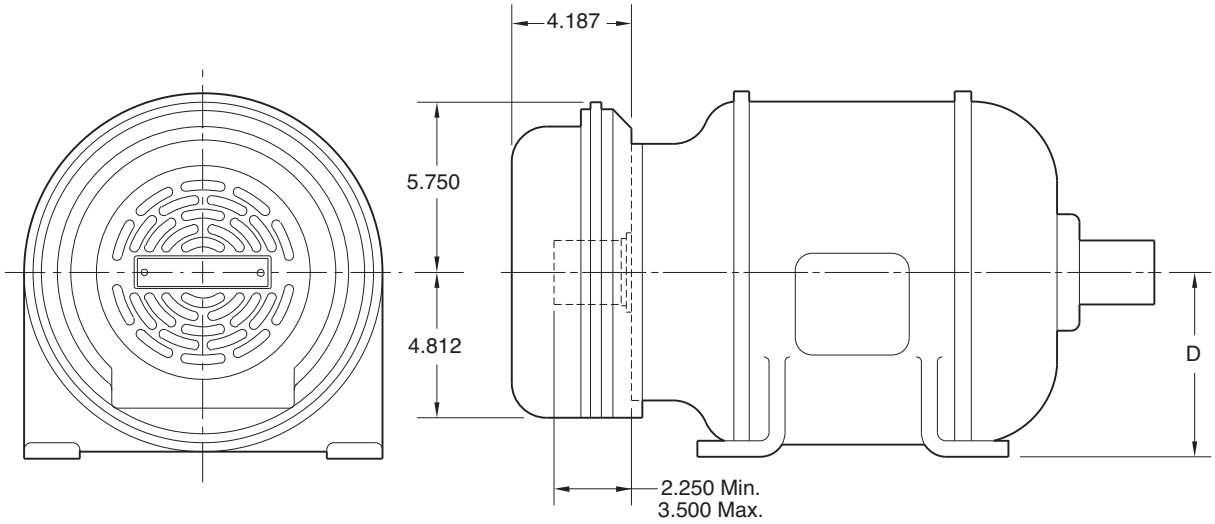


Section B-B



* Mounting holes are within .006 of true position.

Installation



NEMA Frame Sizes	Dim. D
213C & 215C	5.250
254UC & 256UC	6.250

Shaft Size	.500 – 1.500
Static Torque	80 lb. ft.
Maximum Speed	4,000 rpm
Standard Voltage	D.C. 90

All dimensions are nominal unless otherwise noted.

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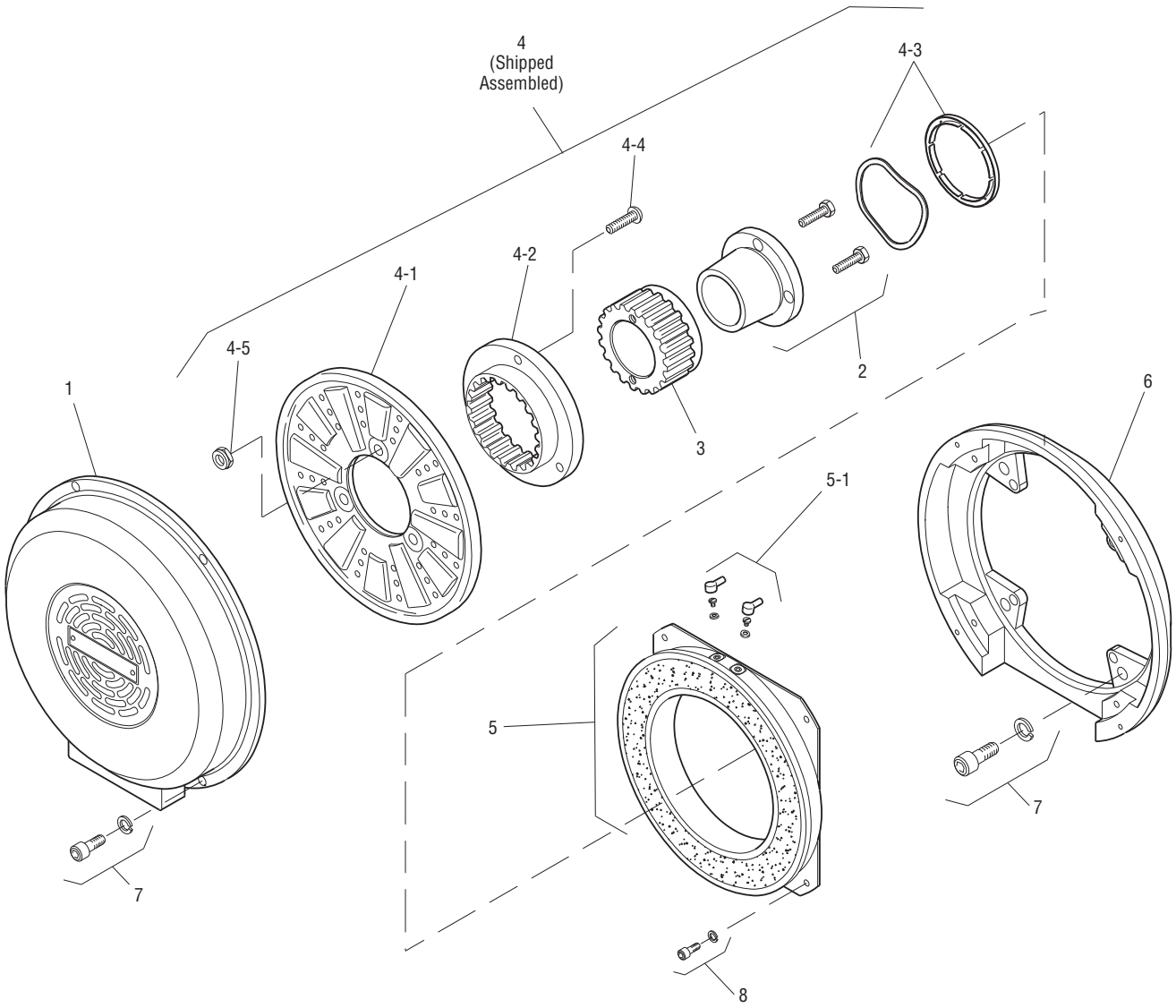
MB-825 Motor Brake–Heavy Duty Flange Mounted

Drawing I-25576



Item	Description	Part Number	Qty.
1	Cover	5351-288-001	1
2	Bushing*		1
	1/2" to 1-1/2" Bore	180-0002 to 180-0018	
3	Armature Hub	540-0057	1
4	Armature Assembly	5321-111-001	1
4-1	Armature	5321-111-022	1
4-2	Splined Adapter	104-0008	1
4-3	Autogap Accessory	5321-101-006	1
4-4	Screw	797-0272	3
4-5	Locknut	661-0004	3
5	Magnet	5351-631-001	1
5-1	Terminal Accessory	5311-101-001	1
6	Adapter	5351-105-001	1
7	Mounting Accessory	5351-101-003	1
8	Mounting Accessory	5321-101-002	1

*See page 32 for specific part numbers.

How to Order:

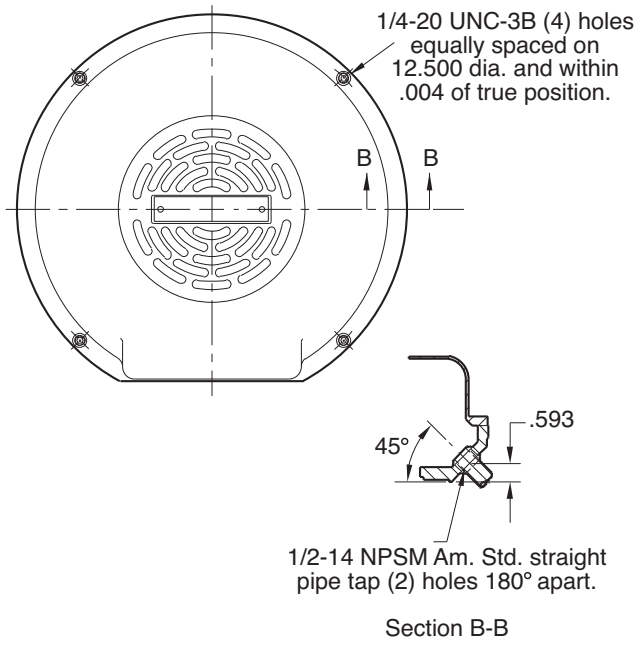
1. MB-825 Adapts to NEMA C Face, Double Shaft Motors, Frame Sizes 213 C, 215 C, 254 UC and 256 UC.
2. Specify Bore Size for Item 4. (Frame size determines bore.)

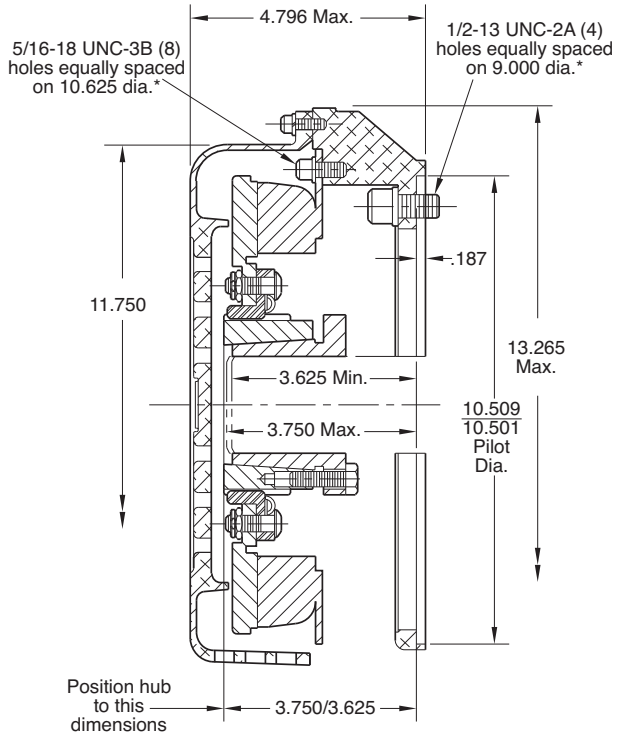
Example:

MB-825 Motor Brake per I-25576 - 90 Volt, 7/8" Bore

These units meet the standards of UL508 and are listed under guide card #NMTR2, file #59164.

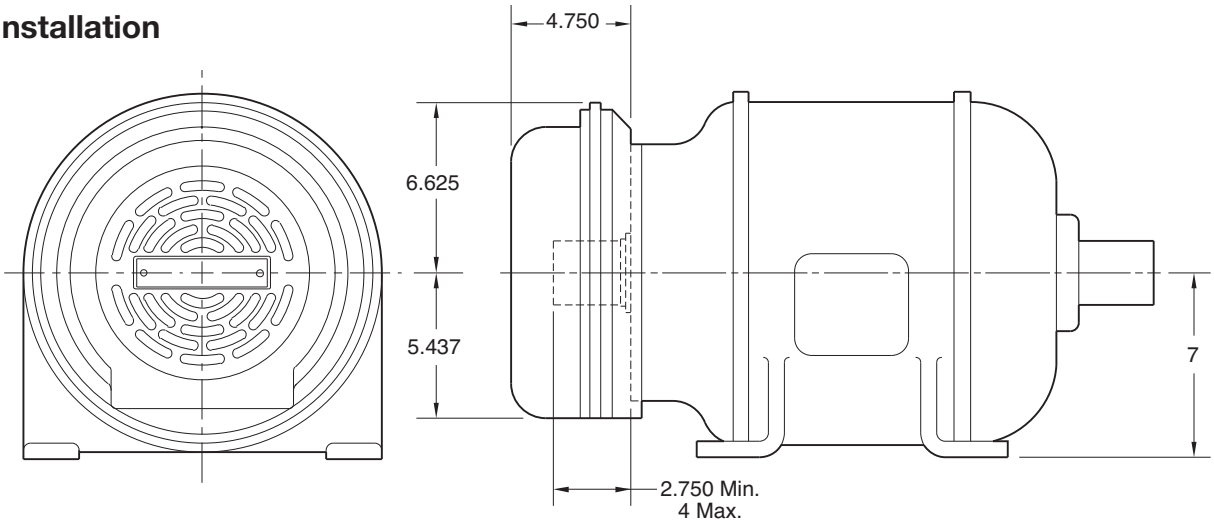
MB-1000 Motor Brake–Heavy Duty Flange Mounted





*Mounting holes are within .006 of true position.

Installation



NEMA Frame Sizes	Dim. D
284UC & 286UC	7

Shaft Size	.750 – 2.687
Static Torque	160 lb. ft.
Maximum Speed	3,600 rpm
Standard Voltage	D.C. 90

All dimensions are nominal unless otherwise noted.

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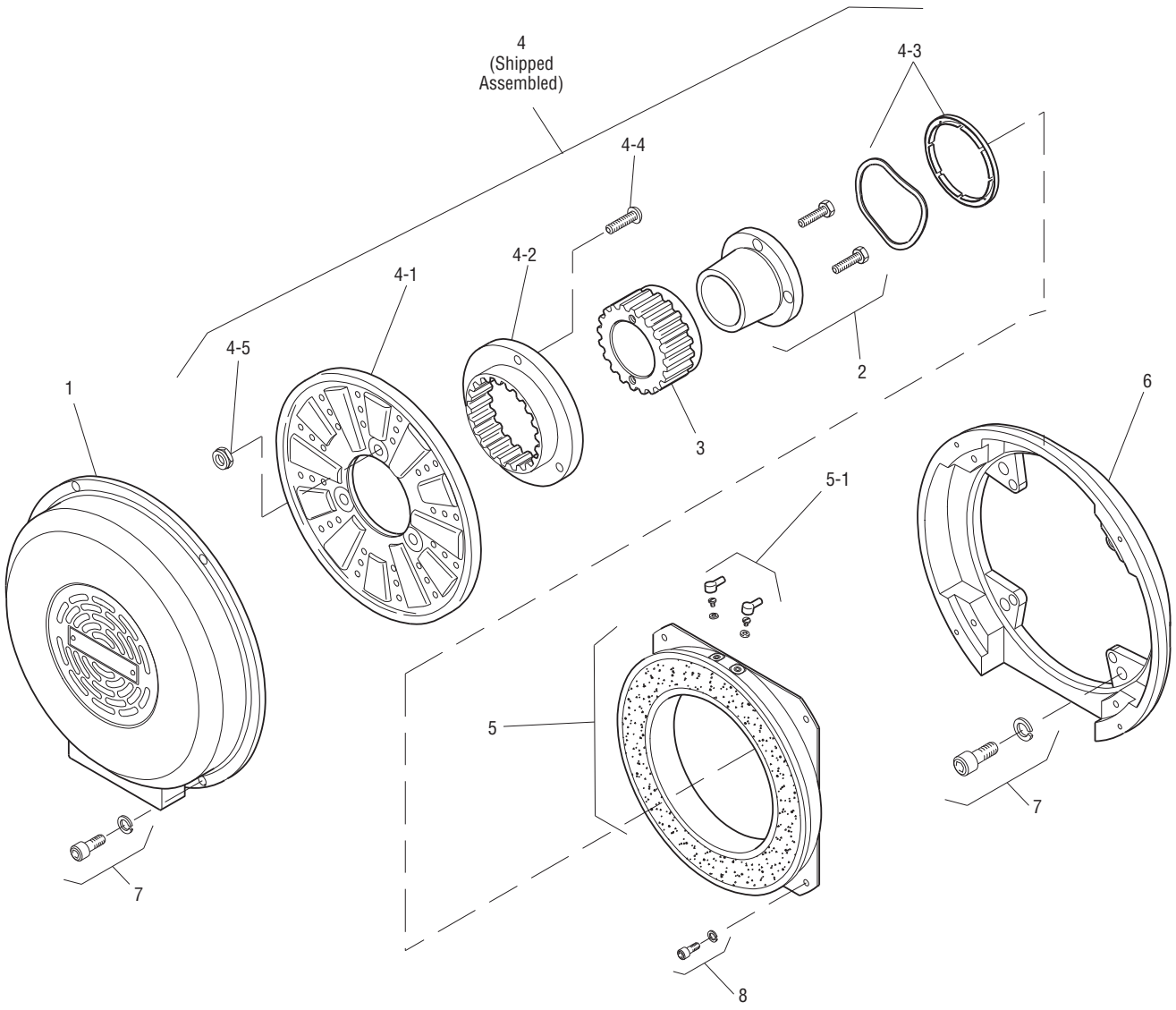
MB-1000 Motor Brake–Heavy Duty Flange Mounted

Drawing I-25595



Item	Description	Part Number	Qty.
1	Cover	5352-288-001	1
2	Bushing*		1
	3/4" to 2-11/16" Bore	180-0026 to 180-0057	
3	Armature Hub	540-0062	1
4	Armature Assembly	5322-111-002	1
4-1	Armature	5322-111-036	1
4-2	Splined Adapter	104-0009	1
4-3	Autogap Accessory	5322-101-004	1
4-4	Screw	797-0272	3
4-5	Locknut	661-0004	3
5	Magnet	5352-631-001	1
5-1	Terminal Accessory	5311-101-001	1
6	Adapter	5352-105-001	1
7	Mounting Accessory	5351-101-003	2
8	Mounting Accessory	5321-101-002	1

*See page 32 for specific part numbers.

How to Order:

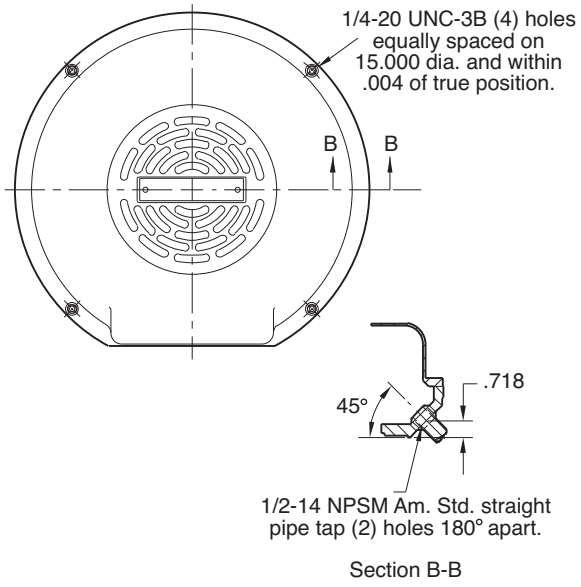
1. MB-1000 Adapts to NEMA C Face, Double Shaft Motors, Frame Sizes 284 UC and 286 UC.
2. Specify Bore Size for Item 4. (Frame size determines bore.)

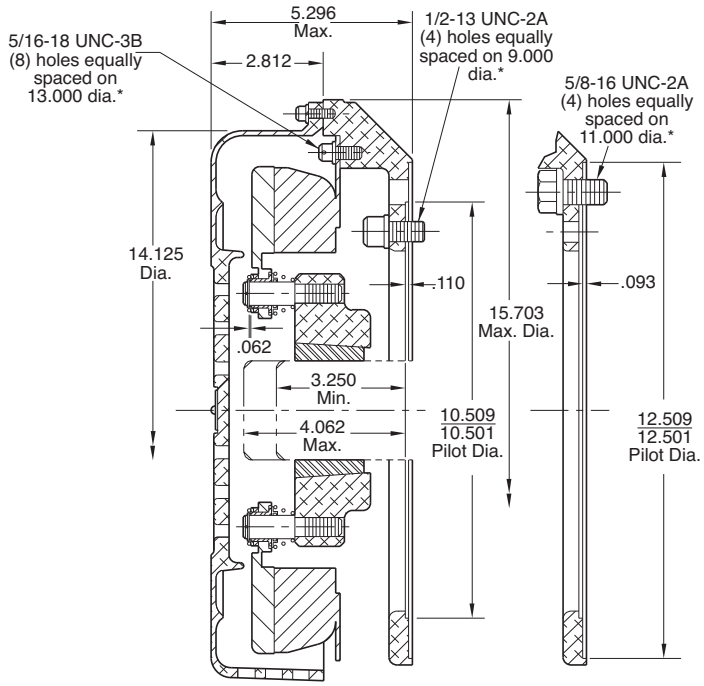
Example:

MB-1000 Motor Brake per I-25595 - 90 Volt, 1-3/8" Bore

These units meet the standards of UL508 and are listed under guide card #NMTR2, file #59164.

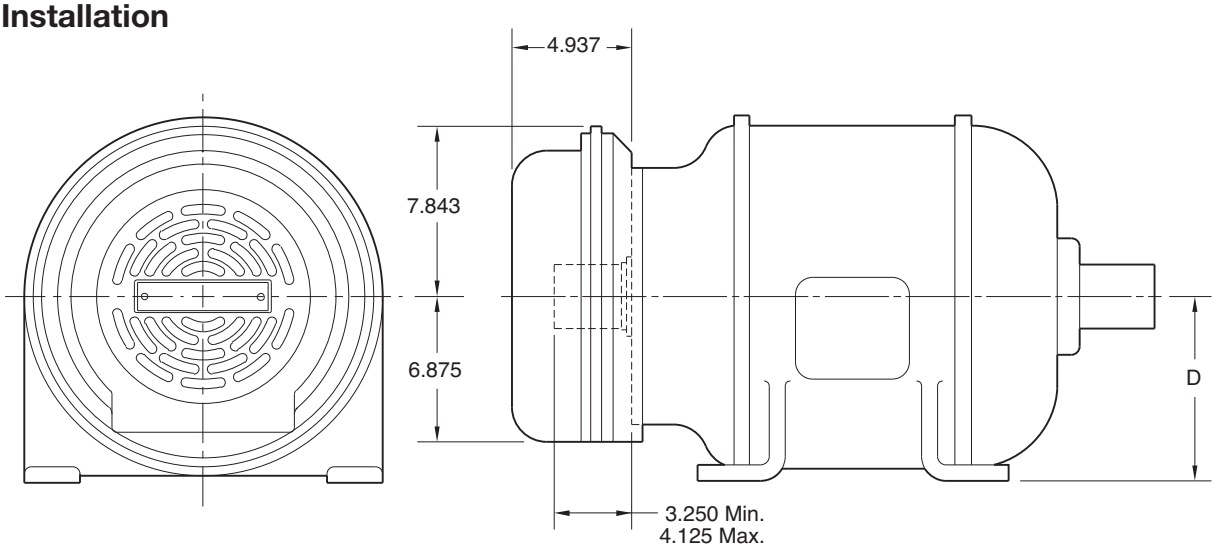
MB-1225 Motor Brake–Heavy Duty Flange Mounted





* Mounting holes are within .006 of true position.

Installation

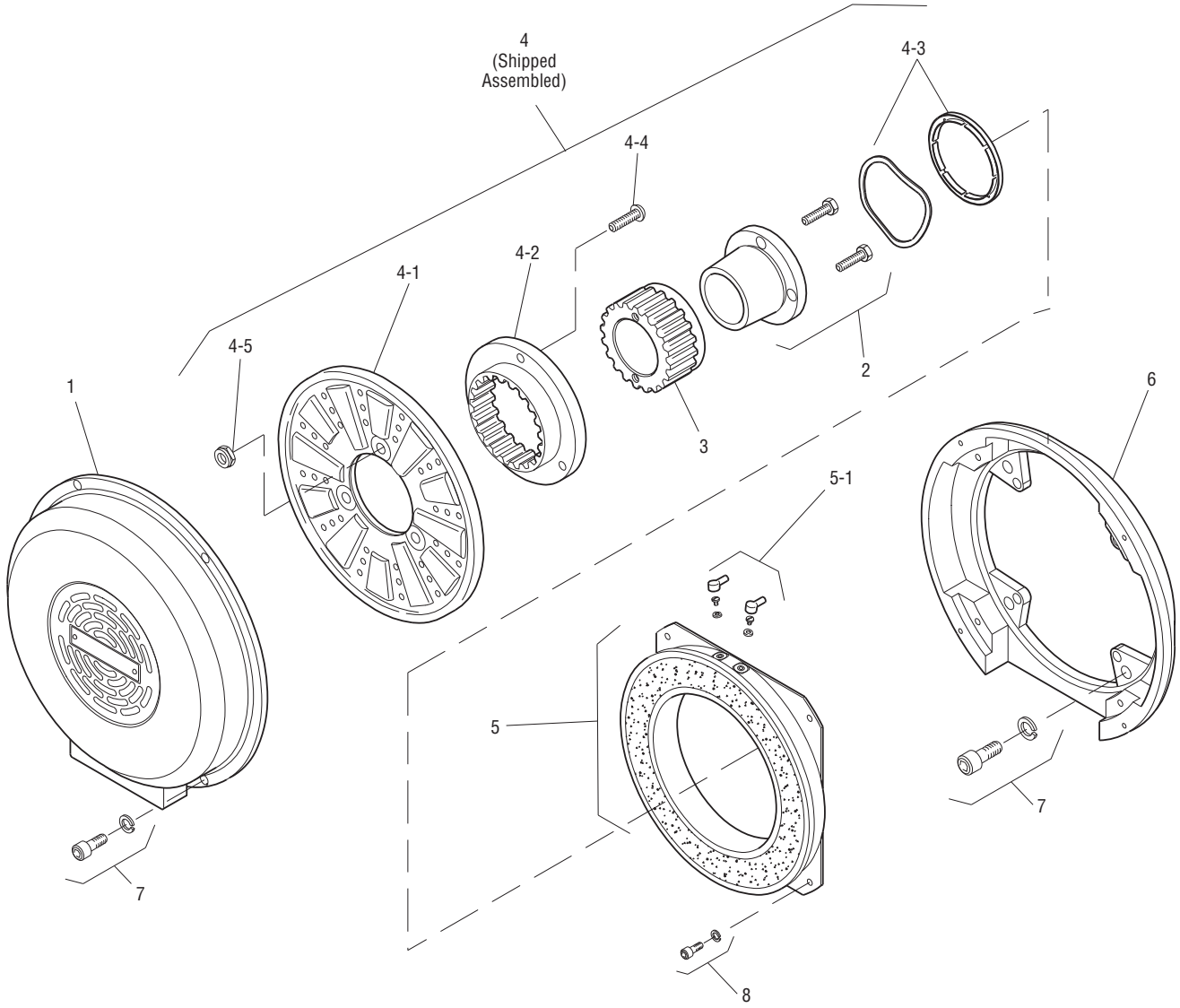


NEMA Frame Sizes	Dim. D
284UC & 286UC	7
324UC & 326UC	8
364UC & 365UC	9

Shaft Size	.750 – 2.687
Static Torque	260 lb. ft.
Maximum Speed	3,000 rpm
Standard Voltage	D.C. 90

All dimensions are nominal unless otherwise noted.

MB-1225 Motor Brake–Heavy Duty Flange Mounted Drawing I-25618



Item	Description	Part Number	Qty.
1	Cover	5353-288-001	1
2	Bushing*		1
	3/4" to 2-11/16" Bore	180-0026 to180-0057	
3	Armature Hub	540-0064	1
4	Armature Assembly	5323-111-001	1
4-1	Armature	5323-111-034	1
4-2	Splined Adapter	104-0010	1
4-3	Autogap Accessory	5323-101-002	1
4-4	Screw	797-0281	4
4-5	Locknut	661-0005	4
5	Magnet	5353-631-001	1
5-1	Terminal Accessory	5311-101-001	1
6	Adapter	5353-105-002	1
7	Mounting Accessory	5351-101-003	2
8	Mounting Accessory	5321-101-002	1

*See page 32 for specific part numbers.

How to Order:

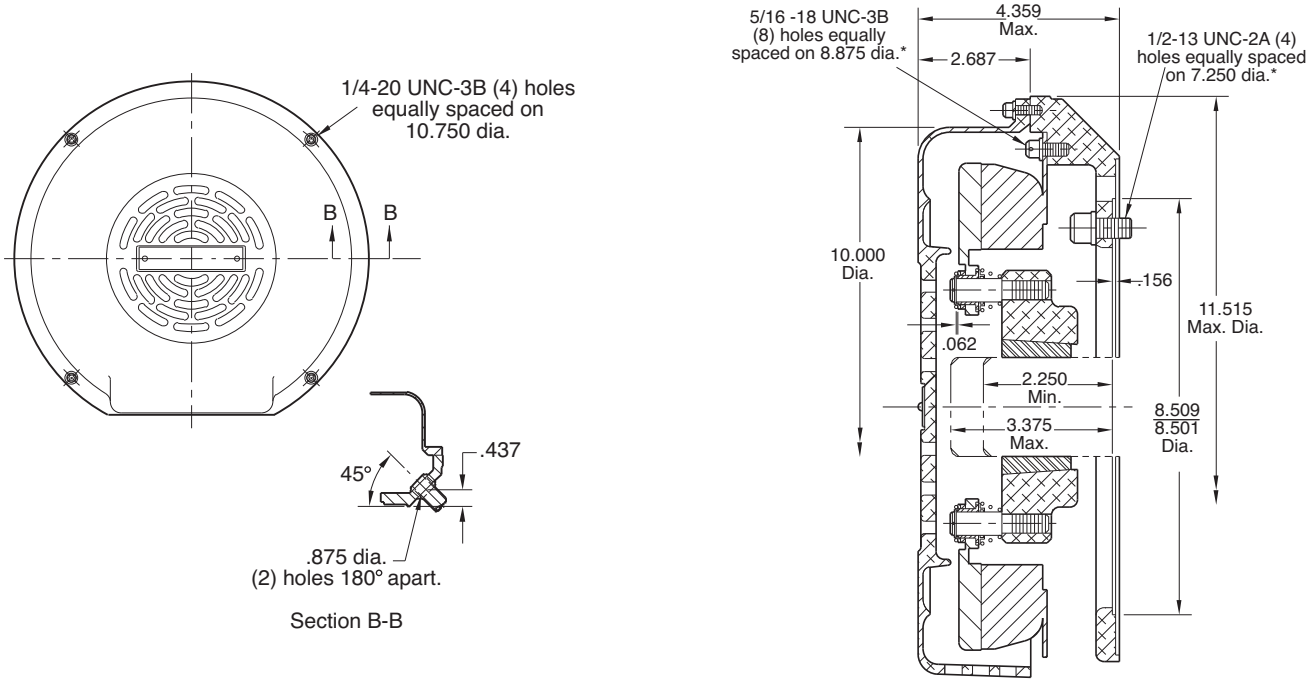
1. MB-1225 Adapts to NEMA C Face, Double Shaft Motors, Frame Sizes 284, 284 UC, 324 UC, 326 UC, 364 UC and 365 UC.
2. Specify Bore Size for Item 2. (Frame size determines bore.)

Example:

MB-1225 Motor Brake per I-25618 - 90 Volt, 1-5/8" Bore

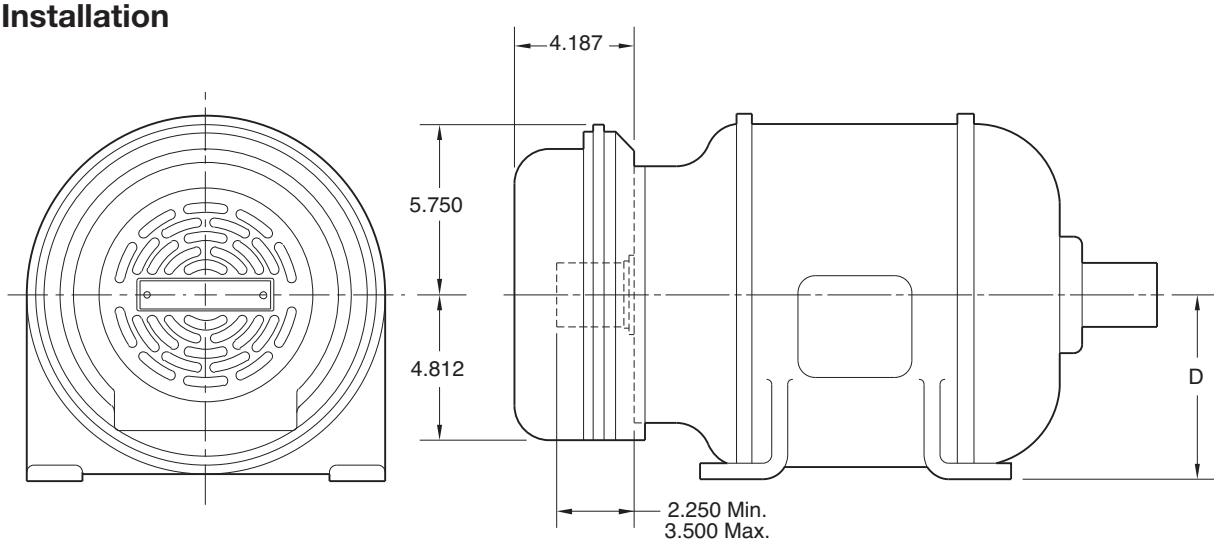
These units meet the standards of UL508 and are listed under guide card #NMTR2, file #59164.

MB-825 Motor Brake–Normal Duty Flange Mounted



* Mounting holes are within .006 of true position.

Installation

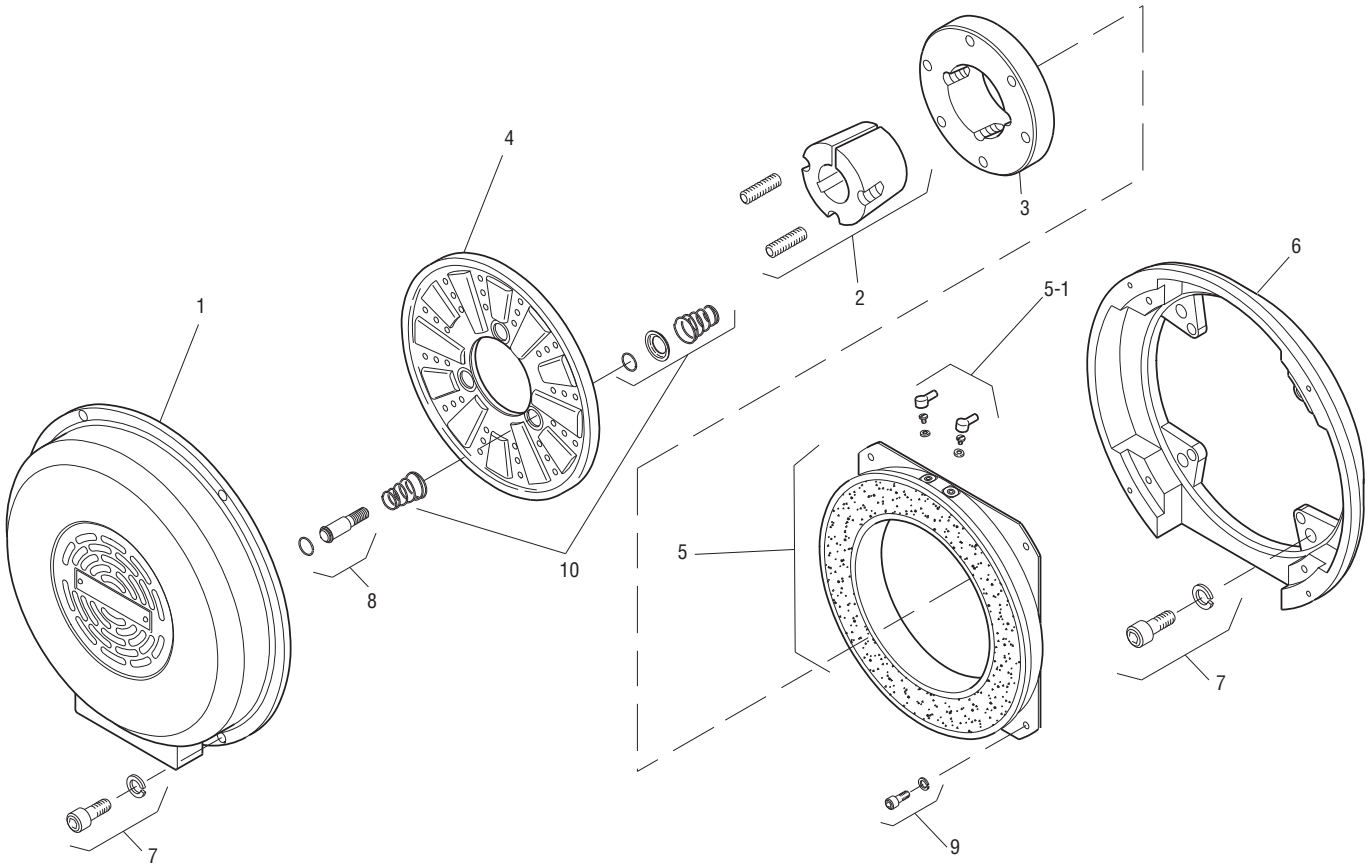


NEMA Frame Sizes	Dim. D
213C & 215C	5.250
254UC & 256UC	6.250

Shaft Size	.500 – 1.625
Static Torque	80 lb. ft.
Maximum Speed	4,000 rpm
Standard Voltage	D.C. 90

All dimensions are nominal unless otherwise noted.

MB-825 Motor Brake–Normal Duty Flange Mounted Drawing I-25572



Item	Description	Part Number	Qty.
1	Cover	5351-288-001	1
2	Bushing*		1
	1/2" to 1-5/8" Bore	180-0131 to 180-0149	
3	Armature Hub	540-0394	1
4	Armature	5301-111-018	1
5	Magnet - 90 Volt	5351-631-001	1
5-1	Terminal Accessory	5311-101-001	1
6	Adapter	5351-105-001	1
7	Mounting Accessory	5351-101-003	1
8	Drive Pin and Retainer	5301-101-001	3
9	Mounting Accessory	5321-101-002	1
10	Spring Accessory	5301-101-014	3

*See page 32 for specific part numbers.

How to Order:

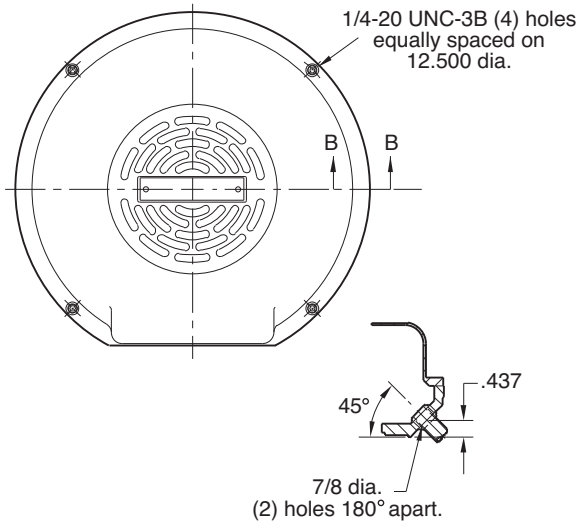
1. MB-825 Adapts to NEMA C Face, Double Shaft Motors, Frame Sizes 213 C, 215 C, 254 UC and 256 UC.
2. Specify Bore Size for Item 2. (Frame size determines bore.)

Example:

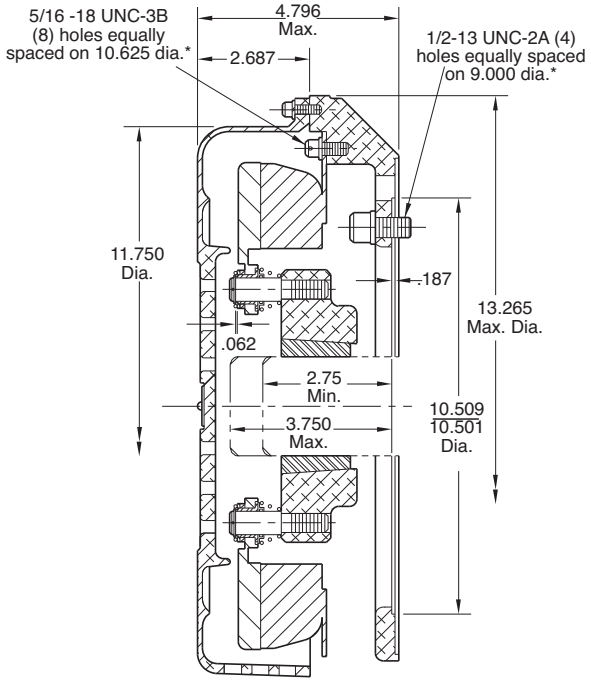
MB-825 Motor Brake per I-25572 - 90 Volt, 7/8" Bore

These units meet the standards of UL508 and are listed under guide card #NMTR2, file #59164.

MB-1000 Motor Brake–Normal Duty Flange Mounted

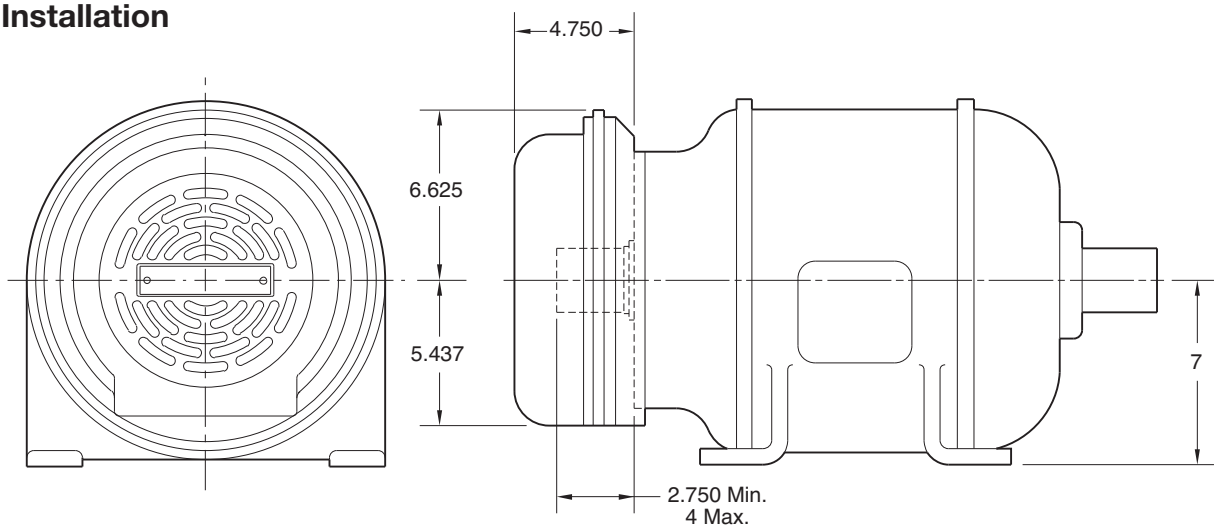


Section B-B



* Mounting holes are within .006 of true position.

Installation



NEMA Frame Sizes	Dim. D
284UC & 286UC	7

Shaft Size	.500 – 2.500
Static Torque	160 lb. ft.
Maximum Speed	3,600 rpm
Standard Voltage	D.C. 90

All dimensions are nominal unless otherwise noted.

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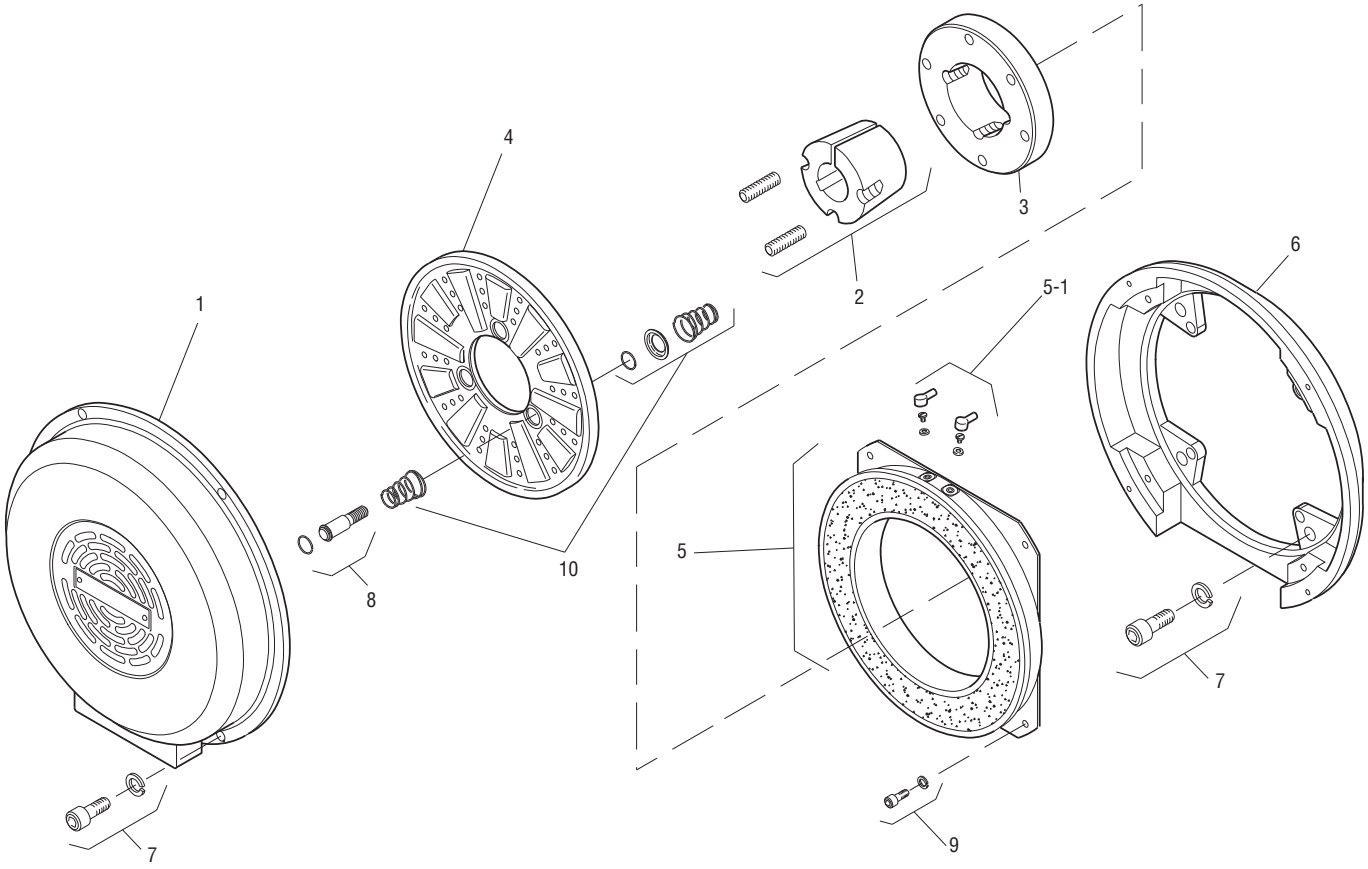
MB-1000 Motor Brake–Normal Duty Flange Mounted

Drawing I-25591



Item	Description	Part Number	Qty.
1	Cover	5352-288-001	1
2	Bushing*		1
	1/2" to 2-1/2" Bore	180-0185 to 180-0217	
3	Armature Hub	540-0313	1
4	Armature	5302-111-013	1
5	Magnet - 90 Volt	5352-631-001	1
5-1	Terminal Accessory	5311-101-001	1
6	Adapter	5352-105-001	1
7	Mounting Accessory	5351-101-003	1
8	Drive Pin and Retainer	5301-101-001	3
9	Mounting Accessory	5321-101-002	2
10	Spring Accessory	5301-101-014	3

*See page 32 for specific part numbers.

How to Order:

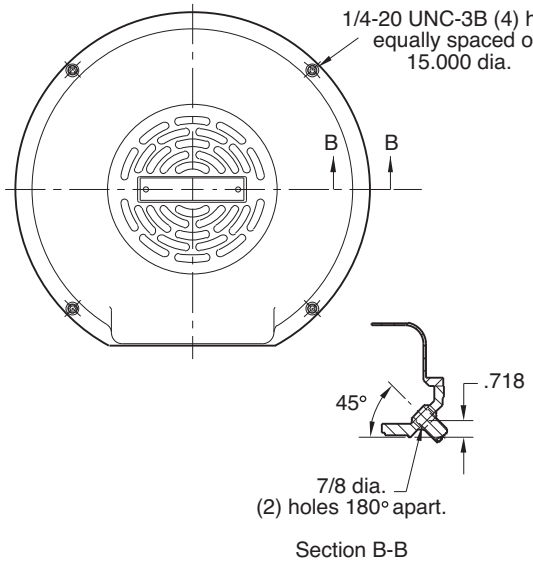
1. MB-1000 Adapts to NEMA C Face, Double Shaft Motors, Frame Sizes 284 UC and 286 UC.
2. Specify Bore Size for Item 2. (Frame size determines bore.)

Example:

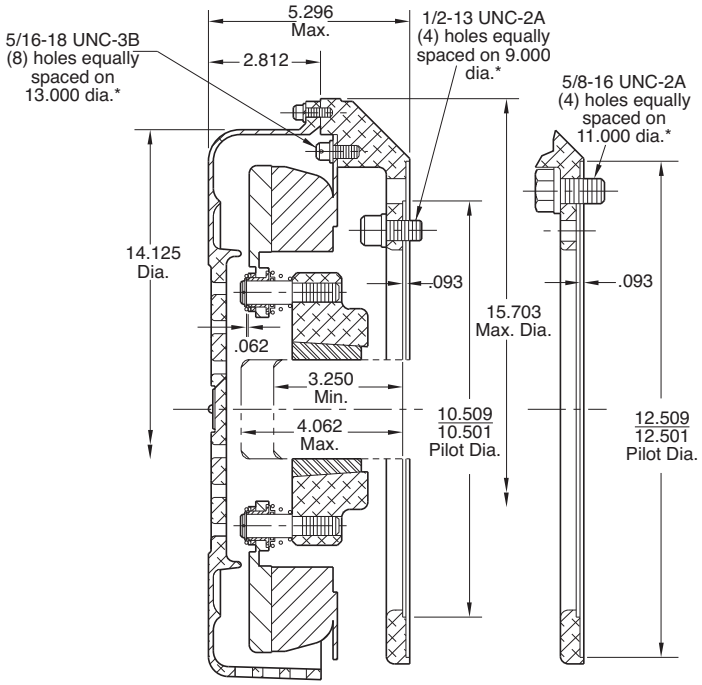
MB-1000 Motor Brake per I-25591 - 90 Volt, 1-3/8" Bore

These units meet the standards of UL508 and are listed under guide card #NMTR2, file #59164.

MB-1225 Motor Brake–Normal Duty Flange Mounted

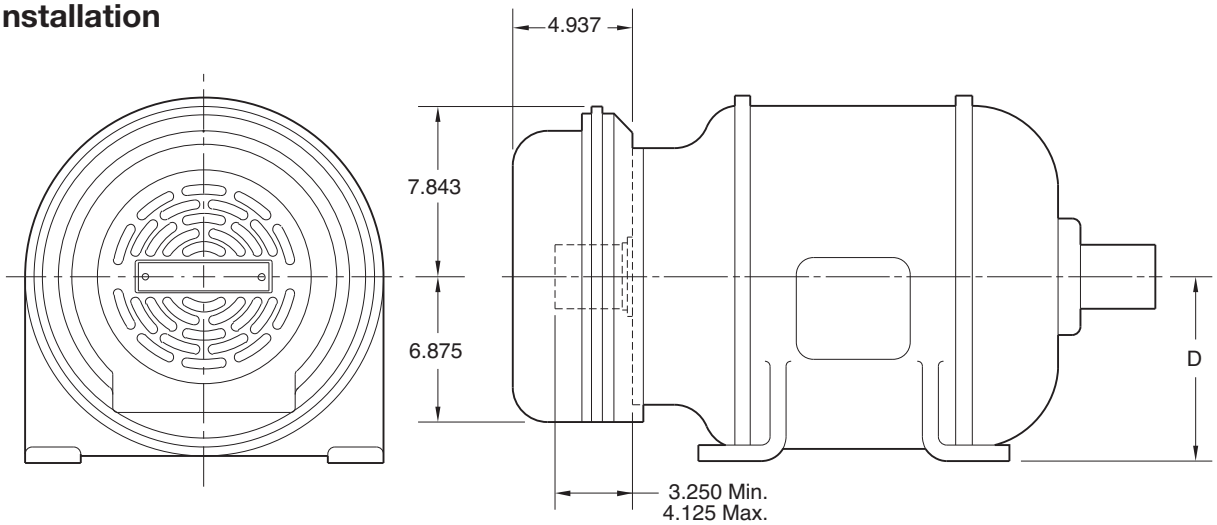


Section B-B



*Mounting holes are within .006 of true position.

Installation



NEMA Frame Sizes	Dim. D
284UC & 286UC	7
324UC & 326UC	8
364UC & 365UC	8

Shaft Size	.500 – 2.500
Static Torque	260 lb. ft.
Maximum Speed	3,000 rpm
Standard Voltage	D.C. 90

All dimensions are nominal unless otherwise noted.

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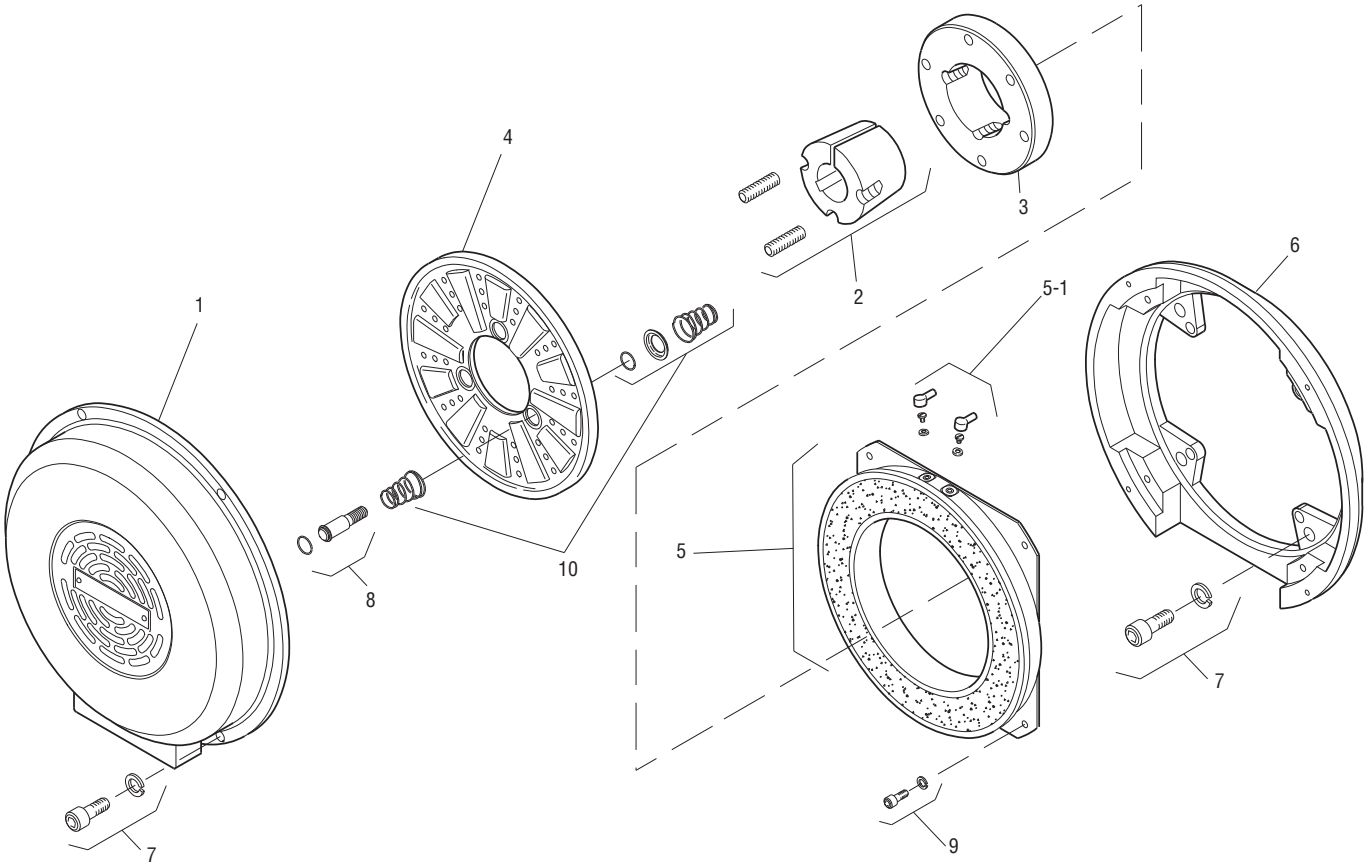
MB-1225 Motor Brake–Normal Duty Flange Mounted Drawing I-25614



Item	Description	Part Number	Qty.
1	Cover	5353-288-001	1
2	Bushing*		1
	1/2" to 2-1/2" Bore	180-0185 to 180-0217	
3	Armature Hub	540-0014	1
4	Armature	5303-111-009	1
5	Magnet - 90 Volt	5353-631-001	1
5-1	Terminal Accessory	5311-101-001	1
6	Adapter	5353-105-002	1
7	Mounting Accessory	5351-101-003	1
8	Drive Pin and Retainer	5301-101-001	4
9	Mounting Accessory	5321-101-002	2
10	Spring Accessory	5303-101-006	4

*See page 32 for specific part numbers.

How to Order:

1. MB-1225 Adapts to NEMA C Face, Double Shaft Motors, Frame Sizes 284, 284 UC, 324 UC, 326 UC, 364 UC and 365 UC.
2. Specify Bore Size for Item 2. (Frame size determines bore.)

Example:

MB-1225 Motor Brake per I-25614 - 90 Volt, 1-5/8" Bore

These units meet the standards of UL508 and are listed under guide card #NMTR2, file #59164.

Bushing Part Numbers
Dodge Bushing

Shaft Size	Keyway Size	Bushing Number	
		Warner Electric	Dodge
1/2	1/8 x 1/16	180-0101	1210
9/16	1/8 x 1/16	180-0102	
5/8	3/16 x 3/32	180-0103	
11/16	3/16 x 3/32	180-0104	
3/4	3/16 x 3/32	180-0105	
13/16	3/16 x 3/32	180-0106	
7/8	3/16 x 3/32	180-0107	
5/16	1/4 x 1/8	180-0108	
1	1/4 x 1/8	180-0109	
1-1/16	1/4 x 1/8	180-0110	
1-1/8	1/4 x 1/8	180-0111	
1-3/16	1/4 x 1/8	180-0112	
1-1/4	1/4 x 1/8	180-0113	
1/2	1/8 x 1/16	180-0116	1215
9/16	1/8 x 1/16	180-0117	
5/8	3/16 x 3/32	180-0118	
11/16	3/16 x 3/32	180-0119	
3/4	3/16 x 3/32	180-0120	
13/16	3/16 x 3/32	180-0121	
7/8	3/16 x 3/32	180-0122	
15/16	1/4 x 1/8	180-0123	
1	1/4 x 1/8	180-0124	
1-1/16	1/4 x 1/8	180-0125	
1-1/8	1/4 x 1/8	180-0126	
1-3/16	1/4 x 1/8	180-0127	
1-1/4	1/4 x 1/8	180-0128	
1/2	1/8 x 1/16	180-0131	1615
9/16	1/8 x 1/16	180-0132	
5/8	3/16 x 3/32	180-0133	
11/16	3/16 x 3/32	180-0134	
3/4	3/16 x 3/32	180-0135	
13/16	3/16 x 3/32	180-0136	
7/8	3/16 x 3/32	180-0137	
15/16	1/4 x 1/8	180-0138	
1	1/4 x 1/8	180-0139	
1-1/16	1/4 x 1/8	180-0140	
1-1/8	1/4 x 1/8	180-0141	
1-3/16	1/4 x 1/8	180-0142	
1-1/4	1/4 x 1/8	180-0143	
1-5/16	5/16 x 5/32	180-0144	
1-3/8	5/16 x 5/32	180-0145	
1-7/16	3/8 x 3/16	180-0146	
1-1/2	3/8 x 3/16	180-0147	
1-9/16	3/8 x 3/16	180-0148	
1-5/8	3/8 x 3/16	180-0149	
1/2	1/8 x 1/16	180-0155	2012
9/16	1/8 x 1/16	180-0156	
5/8	3/16 x 3/32	180-0157	
11/16	3/16 x 3/32	180-0158	
3/4	3/16 x 3/32	180-0159	
13/16	3/16 x 3/32	180-0160	
7/8	3/16 x 3/32	180-0161	
15/16	1/4 x 1/8	180-0162	
1	1/4 x 1/8	180-0163	
1-1/16	1/4 x 1/8	180-0164	
1-1/8	1/4 x 1/8	180-0165	
1-3/16	1/4 x 1/8	180-0166	
1-1/4	1/4 x 1/8	180-0167	

Shaft Size	Keyway Size	Bushing Number	
		Warner Electric	Dodge
1-5/16	5/16 x 5/32	180-0168	2012
1-3/8	5/16 x 5/32	180-0169	
1-7/16	3/8 x 3/16	180-0170	
1-1/12	3/8 x 3/16	180-0171	
1-9/16	3/8 x 3/16	180-0172	
1-5/8	3/8 x 3/16	180-0173	
1-11/16	3/8 x 3/16	180-0174	
1-3/4	3/8 x 3/16	180-0175	
1-13/16	1/2 x 1/4	180-0176	
1-7/8	1/2 x 1/4	180-0177	
1-15/16	1/2 x 1/4	180-0178	
2	1/2 x 1/4	180-0179	
1/2	1/8 x 1/16	180-0185	2517
9/16	1/8 x 1/16	180-0186	
5/8	3/16 x 3/32	180-0187	
11/16	3/16 x 3/32	180-0188	
3/4	3/16 x 3/32	180-0189	
13/16	3/16 x 3/32	180-0190	
7/8	3/16 x 3/32	180-0191	
15/16	1/4 x 1/8	180-0192	
1	1/4 x 1/8	180-0193	
1-1/16	1/4 x 1/8	180-0194	
1-1/8	1/4 x 1/8	180-0195	
1-3/16	1/4 x 1/8	180-0196	
1-1/4	1/4 x 1/8	180-0197	
1-5/16	5/16 x 5/32	180-0198	
1-3/8	5/16 x 5/32	180-0199	
1-7/16	3/8 x 3/16	180-0200	
1-1/2	3/8 x 3/16	180-0201	
1-9/16	3/8 x 3/16	180-0202	
1-5/8	3/8 x 3/16	180-0203	
1-11/16	3/8 x 3/16	180-0204	
1-3/4	3/8 x 3/16	180-0205	
1-13/16	1/2 x 1/4	180-0206	
1-7/8	1/2 x 1/4	180-0207	
1-15/16	1/2 x 1/4	180-0208	
2	1/2 x 1/4	180-0209	
2-1/16	1/2 x 1/4	180-0210	
2-1/8	1/2 x 1/4	180-0211	
2-3/16	1/2 x 1/4	180-0212	
2-1/4	1/2 x 1/4	180-0213	
2-5/16	5/8 x 5/16	180-0214	
2-3/8	5/8 x 5/16	180-0215	
2-7/16	5/8 x 5/16	180-0216	
2-1/2	5/8 x 5/16	180-0217	
15/16	1/4 x 1/8	180-0223	3020
1	1/4 x 1/8	180-0224	
1-1/16	1/4 x 1/8	180-0225	
1-1/8	1/4 x 1/8	180-0226	
1-3/16	1/4 x 1/8	180-0227	
1-1/4	1/4 x 1/8	180-0228	
1-5/16	5/16 x 5/32	180-0229	
1-3/8	5/16 x 5/32	180-0230	
1-7/16	3/8 x 3/16	180-0231	
1-1/2	3/8 x 3/16	180-0232	
1-9/16	3/8 x 3/16	180-0233	
1-5/8	3/8 x 3/16	180-0234	

Shaft Size	Keyway Size	Bushing Number	
		Warner Electric	Dodge
1-11/16	3/8 x 3/16	180-0235	3020
1-3/4	3/8 x 3/16	180-0236	
1-13/16	1/2 x 1/4	180-0237	
1-7/8	1/2 x 1/4	180-0238	
1-15/16	1/2 x 1/4	180-0239	
2	1/2 x 1/4	180-0240	
2-1/16	1/2 x 1/4	180-0241	
2-1/8	1/2 x 1/4	180-0242	
2-3/16	1/2 x 1/4	180-0243	
2-1/4	1/2 x 1/4	180-0244	
2-5/16	5/8 x 5/16	180-0245	
2-3/8	5/8 x 5/16	180-0246	
2-7/16	5/8 x 5/16	180-0247	
2-1/2	5/8 x 5/16	180-0248	
2-9/16	5/8 x 5/16	180-0249	
2-5/8	5/8 x 5/16	180-0250	
2-11/16	5/8 x 5/16	180-0251	
2-3/4	5/8 x 5/16	180-0252	
2-13/16	3/4 x 3/8	180-0253	
2-7/8	3/4 x 3/8	180-0254	
2-15/16	3/4 x 3/8	180-0255	
3	3/4 x 3/8	180-0256	
15/16	1/4 x 1/8	180-0262	3030
1	1/4 x 1/8	180-0263	
1-1/16	1/4 x 1/8	180-0264	
1-1/8	1/4 x 1/8	180-0265	
1-3/16	1/4 x 1/8	180-0266	
1-1/4	1/4 x 1/8	180-0267	
1-5/16	5/16 x 5/32	180-0268	
1-3/8	5/16 x 5/32	180-0269	
1-7/16	3/8 x 3/16	180-0270	
1-1/2	3/8 x 3/16	180-0271	
1-9/16	3/8 x 3/16	180-0272	
1-5/8	3/8 x 3/16	180-0273	
1-11/16	3/8 x 3/16	180-0274	
1-3/4	3/8 x 3/16	180-0275	
1-13/16	1/2 x 1/4	180-0276	
1-7/8	1/2 x 1/4	180-0277	
1-15/16	1/2 x 1/4	180-0278	
2	1/2 x 1/4	180-0279	
2-1/16	1/2 x 1/4	180-0280	
2-1/18	1/2 x 1/4	180-0281	
2-3/16	1/2 x 1/4	180-0282	
2-1/4	1/2 x 1/4	180-0283	
2-15/16	5/8 x 5/16	180-0284	
2-3/8	5/8 x 5/16	180-0285	
2-7/16	5/8 x 5/16	180-0286	
2-1/2	5/8 x 5/16	180-0287	
2-9/16	5/8 x 5/16	180-0288	
2-5/8	5/8 x 5/16	180-0289	
2-11/16	5/8 x 5/16	180-0290	
2-3/4	5/8 x 5/16	180-0291	
2-13/16	3/4 x 3/8	180-0292	
2-7/8	3/4 x 3/8	180-0293	
2-15/16	3/4 x 3/8	180-0294	
3	3/4 x 3/8	180-0295	

Warranty

Warner Electric LLC warrants that it will repair or replace (whichever it deems advisable) any product manufactured and sold by it which proves to be defective in material or workmanship within a period of one (1) year from the date of original purchase for consumer, commercial or industrial use.

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A purchase receipt or other proof of original purchase will be required before warranty service is rendered. If found defective under the terms of this warranty, repair or replacement will be made, without charge, together with a refund for transportation costs. If found not to be defective, you will be notified and, with your consent, the item will be repaired or replaced and returned to you at your expense.

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Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

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