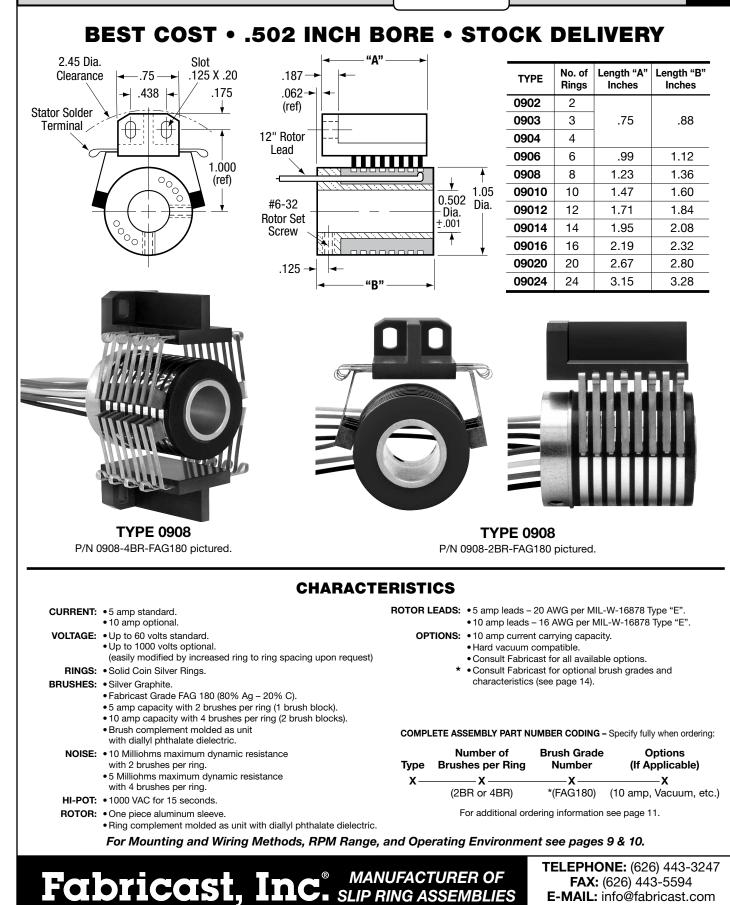
	STOCK SLIP RING ASSEMBLIES
BEST COST & DELIVERY	SEPARATE ROTOR & BRUSH BLOCK ASSEMBLIES
& DELIVERT	0.50 Inch Diameter Thru Bore1
	1.00 Inch Diameter Thru Bore2
	1.50 Inch Diameter Thru Bore
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BEST COST	SELF-CONTAINED ASSEMBLIES
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	How to Specify a Slip Ring
	Slip Ring Specification Form
	Designed and Manufactured By:
	Fabricast, Inc.
	MANUFACTURER OF SLIP RING ASSEMBLIES
	P.O. BOX 3176, 2511 SEAMAN AVENUE, SOUTH EL MONTE, CALIFORNIA 91733

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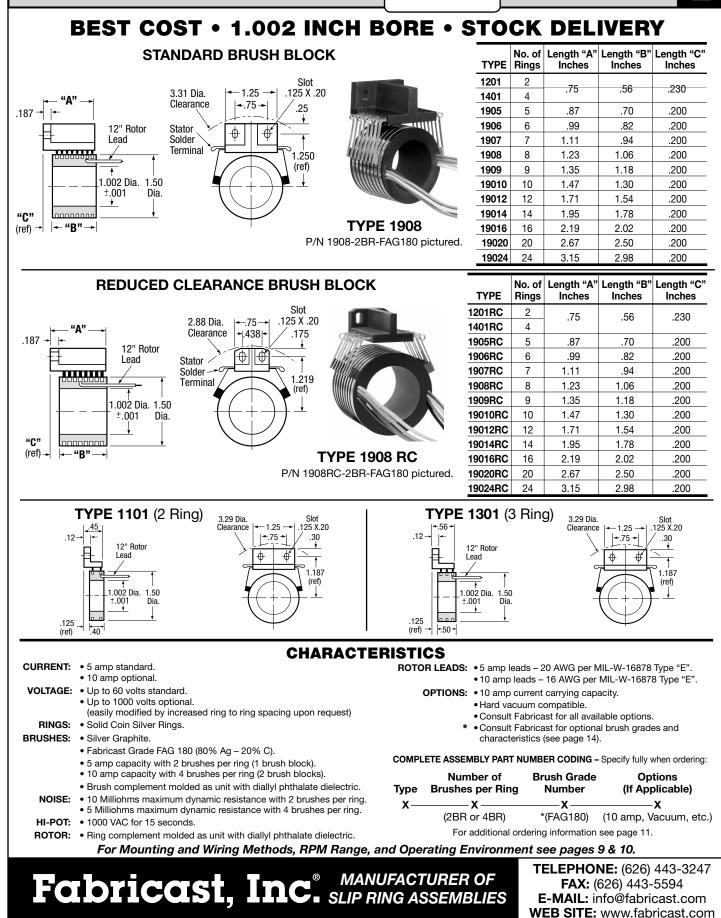
BEST COST & DELIVERY PAGE



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BEST COST & DELIVERY

SEPARATE ROTOR & BRUSH BLOCK ASSY PAGE



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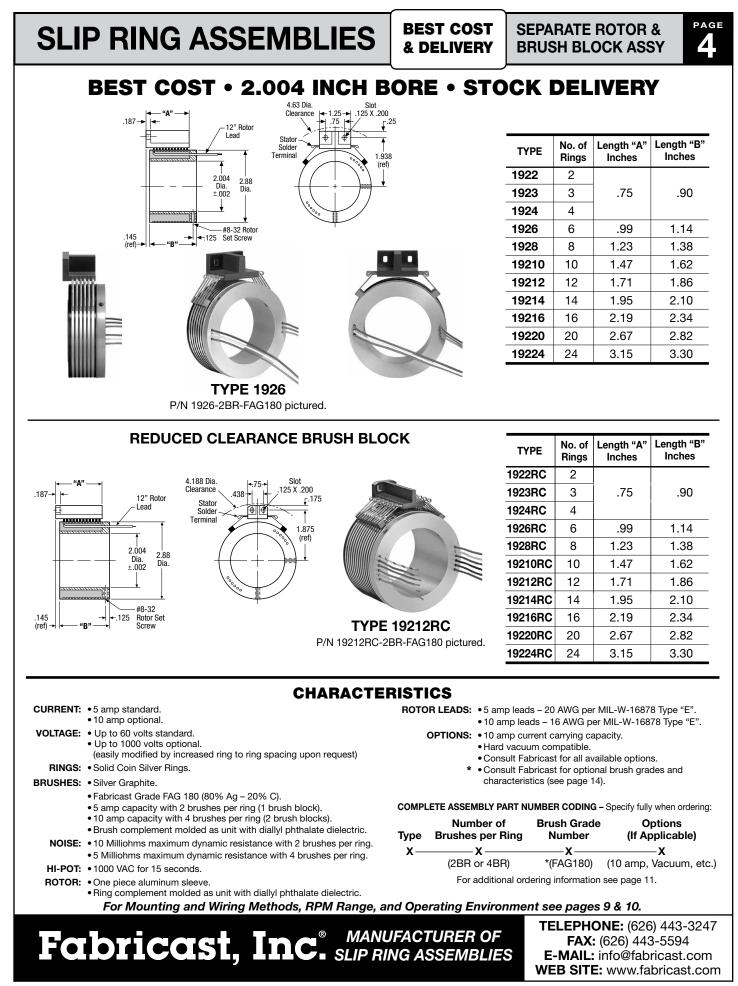
BEST COST & DELIVERY PAGE

3

BEST COST • 1.502 INCH B	BORE • STO		DEI	.IVEF	RY
$\begin{array}{c c} 187 \rightarrow & \leftarrow & 12" \\ \hline H & & Rotor \\ \hline \end{array}$	Slot .125 X .20	ТҮРЕ	No. of Rings	Length "A" Inches	Length "B" Inches
		1972	2	moneo	
Terminal	1.50 (ref)	1973	3	.75	.58
1.502 Dia. 2.00		1914	4		
±.001 Dia.	7-	1915	5	.87	.70
	/	1916	6	.99	.82
.200 Innnnnnn <u>+</u> (ref) → ( <b>← "B"</b> →		1917	7	1.11	.94
((ei) - (ei) - (		1918	8	1.23	1.06
		1919	9	1.35	1.18
	T T	19110	10	1.47	1.30
		19112	12 14	1.71 1.95	<u>1.54</u> 1.78
		<u>19114</u> 19116	14	2.19	2.02
		19110	20	2.19	2.02
		19120	20	3.15	2.98
		13124	24	0.10	2.30
<b>TYPE 1918</b> P/N 1918-2BR-FAG180 pictured.					
REDUCED CLEARANCE BRUSH BLO	СК			Length "A"	Length "B"
		TYPE	Rings	Inches	Inches
		1972RC	2		
		1973RC	3	.75	.58
.187   12" .175		1914RC	4		
Rotor		1915RC	5	.87	.70
		1916RC	6	.99	.82
Solder 1.469		1917RC	7	1.11	.94
1.502 2.00		1918RC	8	1.23	1.06
$\downarrow$ — — Dia. Dia. $\downarrow$ — $\downarrow$ — $\downarrow$ — $\downarrow$ — $\downarrow$ — $\downarrow$		1919RC	9	1.35	1.18
±.001		19110RC	10 12	1.47 1.71	<u>1.30</u> 1.54
		19112RC 19114RC	12	1.71	1.54
(rof) - "P"	PE 1918 RC	19114RC	14	2.19	2.02
		19110RC		2.19	2.50
P/N 1918RC	C-2BR-FAG180 pictured.	19120NC	20	3.15	2.98
		1912-110	24	0.10	2.90
CHARACTE	RISTICS				
CURRENT: •5 amp standard. •10 amp optional.	ROTOR LEADS: •5 amp				
			•	er MIL-W-168	78 Type "E".
<b>VOLTAGE:</b> • Up to 60 volts standard.	OPTIONS: • 10 am	acuum com	, ,	раситу.	
VOLTAGE: • Up to 60 volts standard. • Up to 1000 volts optional.	<ul> <li>Hard y</li> </ul>		•	ailable option	s.
<ul> <li>Up to 1000 volts optional. (easily modified by increased ring to ring spacing upon request)</li> </ul>			for all av		
<ul> <li>Up to 1000 volts optional. (easily modified by increased ring to ring spacing upon request)</li> <li>RINGS: • Solid Coin Silver Rings.</li> </ul>	● Consu * ● Consu	lt Fabricast It Fabricast	for optio	nal brush gra	des and
Up to 1000 volts optional. (easily modified by increased ring to ring spacing upon request) RINGS: • Solid Coin Silver Rings. BRUSHES: • Silver Graphite.	● Consu * ● Consu	It Fabricast	for optio		des and
<ul> <li>Up to 1000 volts optional. (easily modified by increased ring to ring spacing upon request)</li> <li>RINGS: Solid Coin Silver Rings.</li> </ul>	● Consu * ● Consu	It Fabricast It Fabricast steristics (se	for optio e page 1	4).	
<ul> <li>Up to 1000 volts optional. (easily modified by increased ring to ring spacing upon request)</li> <li>RINGS: Solid Coin Silver Rings.</li> <li>BRUSHES: Silver Graphite.</li> <li>Fabricast Grade FAG 180 (80% Ag - 20% C).</li> <li>5 amp capacity with 2 brushes per ring (1 brush block).</li> <li>10 amp capacity with 4 brushes per ring (2 brush blocks).</li> </ul>	• Consu * • Consu charac COMPLETE ASSEMBLY PAR Number of	It Fabricast It Fabricast steristics (se RT NUMBER Brus	for optio e page 1 CODINC	4). a – Specify fully e O	/ when ordering: <b>ptions</b>
<ul> <li>Up to 1000 volts optional. (easily modified by increased ring to ring spacing upon request)</li> <li>RINGS: Solid Coin Silver Rings.</li> <li>BRUSHES: Silver Graphite.</li> <li>Fabricast Grade FAG 180 (80% Ag - 20% C).</li> <li>5 amp capacity with 2 brushes per ring (1 brush block).</li> <li>10 amp capacity with 4 brushes per ring (2 brush blocks).</li> <li>Brush complement molded as unit with diallyl phthalate dielectric.</li> </ul>	• Consu * • Consu charace COMPLETE ASSEMBLY PAR Number of Type Brushes per Ri	It Fabricast It Fabricast steristics (se RT NUMBER Brus ng Nu	for optio e page 1 CODINC h Grad umber	4). a – Specify fully e O	/ when ordering: ptions oplicable)
<ul> <li>Up to 1000 volts optional. (easily modified by increased ring to ring spacing upon request)</li> <li>RINGS: Solid Coin Silver Rings.</li> <li>BRUSHES: Silver Graphite.</li> <li>Fabricast Grade FAG 180 (80% Ag – 20% C).</li> <li>5 amp capacity with 2 brushes per ring (1 brush block).</li> <li>10 amp capacity with 4 brushes per ring (2 brush blocks).</li> </ul>	Consu Consu charace COMPLETE ASSEMBLY PAF Number of Type Brushes per Ri X X	It Fabricast It Fabricast Steristics (se RT NUMBER Brus ng Nu	for optio e page 1 CODING th Grad umber - X	4). a – Specify fully e O (If Aj	/ when ordering: ptions oplicable) —X
<ul> <li>Up to 1000 volts optional. (easily modified by increased ring to ring spacing upon request)</li> <li>RINGS: Solid Coin Silver Rings.</li> <li>BRUSHES: Silver Graphite.</li> <li>Fabricast Grade FAG 180 (80% Ag – 20% C).</li> <li>5 amp capacity with 2 brushes per ring (1 brush block).</li> <li>10 amp capacity with 4 brushes per ring (2 brush blocks).</li> <li>Brush complement molded as unit with diallyl phthalate dielectric.</li> <li>NOISE: 10 Milliohms maximum dynamic resistance with 2 brushes per ring.</li> </ul>	• Consu * • Consu- charace COMPLETE ASSEMBLY PAP Number of Type Brushes per Ri XX (2BR or 4BR)	It Fabricast It Fabricast Steristics (se RT NUMBER Brus ng Nu *(F/	for optio e page 1 CODINC th Grad umber - X	4). <b>a</b> – Specify fully <b>e O</b> (If A <sub>I</sub> (10 amp,	y when ordering: ptions oplicable) – X Vacuum, etc.
<ul> <li>Up to 1000 volts optional. (easily modified by increased ring to ring spacing upon request)</li> <li>RINGS: Solid Coin Silver Rings.</li> <li>BRUSHES: Silver Graphite.</li> <li>Fabricast Grade FAG 180 (80% Ag – 20% C).</li> <li>5 amp capacity with 2 brushes per ring (1 brush block).</li> <li>10 amp capacity with 4 brushes per ring (2 brush blocks).</li> <li>Brush complement molded as unit with diallyl phthalate dielectric.</li> <li>NOISE: 10 Milliohms maximum dynamic resistance with 2 brushes per ring.</li> <li>5 Milliohms maximum dynamic resistance with 4 brushes per ring.</li> </ul>	Consu Consu charace COMPLETE ASSEMBLY PAF Number of Type Brushes per Ri X X	It Fabricast It Fabricast Steristics (se RT NUMBER Brus ng Nu *(F/	for optio e page 1 CODINC th Grad umber - X	4). <b>a</b> – Specify fully <b>e O</b> (If A <sub>I</sub> (10 amp,	y when ordering: <b>ptions</b> o <b>plicable)</b> — <b>X</b> Vacuum, etc.
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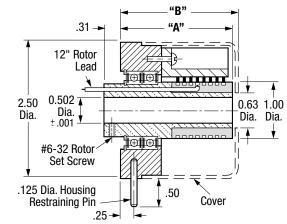
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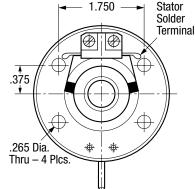
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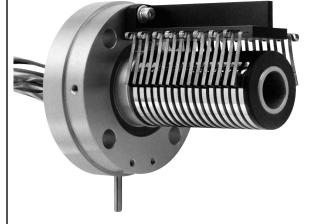
## **BEST COST • .502 INCH BORE • STOCK DELIVERY**





TYPE	No. of Rings	Length "A" Inches	Length "B" Inches
0982	2		
0983	3	1.54	1.62
0984	4		
0986	6	1.78	1.87
0988	8	2.02	2.12
09810	10	2.26	2.37
09812	12	2.50	2.62
09814	14	2.74	2.87
09816	16	2.98	3.06
09820	20	3.46	3.56
09824	24	3.94	4.06

PAGE







TYPE 09816 P/N 09816-2BR-FAG180 pictured without cover.

#### **TYPE 0984**

P/N 0984-4BR-FAG180 pictured with and without cover.

### **CHARACTERISTICS**

CURRENT: •5 amp standard.

- 10 amp optional.VOLTAGE: Up to 60 volts standard.
  - Up to 1000 volts standard.

(easily modified by increased ring to ring spacing upon request)

#### **RINGS:** • Solid Coin Silver Rings.

- BRUSHES: Silver Graphite.
  - Fabricast Grade FAG 180 (80% Ag 20% C).
  - •5 amp capacity with 2 brushes per ring (1 brush block).
  - 10 amp capacity with 4 brushes per ring (2 brush blocks).
  - Brush complement molded as unit with diallyl phthalate dielectric.
  - **NOISE:** •10 Milliohms maximum dynamic resistance with 2 brushes per ring.
    - 5 Milliohms maximum dynamic resistance with 4 brushes per ring.
  - **HI-POT:** 1000 VAC for 15 seconds.
  - **ROTOR:** One piece aluminum sleeve.
    - Ring complement molded as unit with diallyl phthalate dielectric.

- ROTOR LEADS: •5 amp leads 20 AWG per MIL-W-16878 Type "E".
  - 10 amp leads 16 AWG per MIL-W-16878 Type "E".
  - **HOUSING:** One piece aluminum structure.
    - COVER: Aluminum.
  - **OPTIONS:** 10 amp current carrying capacity.
    - Hard vacuum compatible.
    - Consult Fabricast for all available options.
    - \* Consult Fabricast for optional brush grades and
      - characteristics (see page 14).

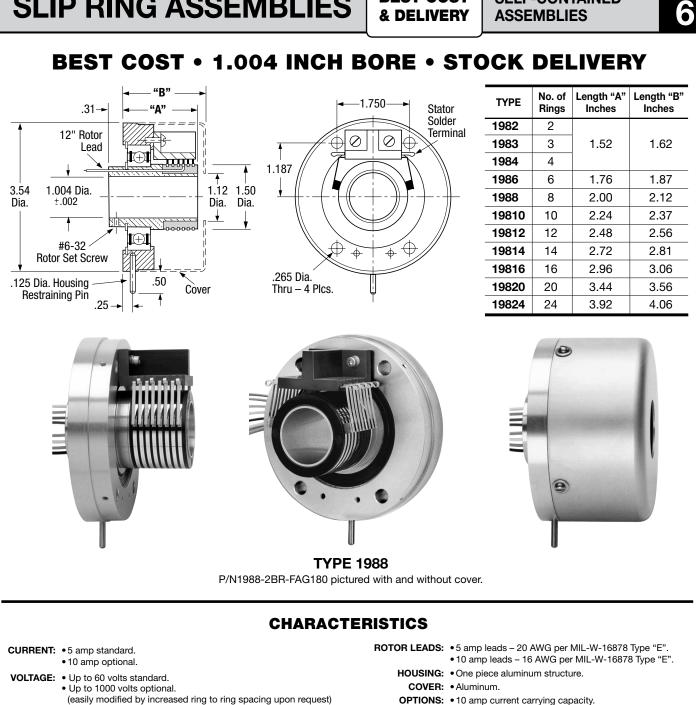
COMPLETE ASSEMBLY PART NUMBER CODING - Specify fully when ordering:

Туре	Number of Brushes per Ring	Brush Grade Number	Options (If Applicable)
х—	X	X	X
	(2BR or 4BR)	*(FAG180)	(10 amp, Vacuum, etc.)
	For additional ord	lering information	see page 11.

For Mounting and Wiring Methods, RPM Range, and Operating Environment see pages 9 & 10.

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PAGE



- RINGS: Solid Coin Silver Rings.
- BRUSHES: Silver Graphite.
  - Fabricast Grade FAG 180 (80% Ag 20% C).
  - 5 amp capacity with 2 brushes per ring (1 brush block).
  - 10 amp capacity with 4 brushes per ring (2 brush blocks).
  - Brush complement molded as unit with diallyl phthalate dielectric.
  - NOISE: 10 Milliohms maximum dynamic resistance with 2 brushes per ring. • 5 Milliohms maximum dynamic resistance with 4 brushes per ring.

#### HI-POT: • 1000 VAC for 15 seconds.

- ROTOR: One piece aluminum sleeve.
  - Ring complement molded as unit with diallyl phthalate dielectric.

- **OPTIONS:** 10 amp current carrying capacity.
  - Hard vacuum compatible.
  - Consult Fabricast for all available options.
  - \* Consult Fabricast for optional brush grades and characteristics (see page 14)

#### COMPLETE ASSEMBLY PART NUMBER CODING - Specify fully when ordering:

Туре	Number of Brushes per Ring	Brush Grade Number	Options (If Applicable)
х—	X	X	X
	(2BR or 4BR)	*(FAG180)	(10 amp, Vacuum, etc.)
	For additional ord	lering information	see page 11.

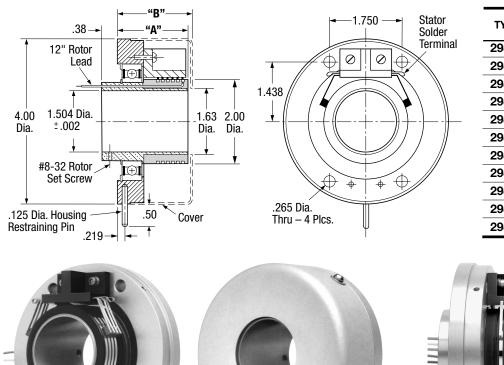
For Mounting and Wiring Methods, RPM Range, and Operating Environment see pages 9 & 10.

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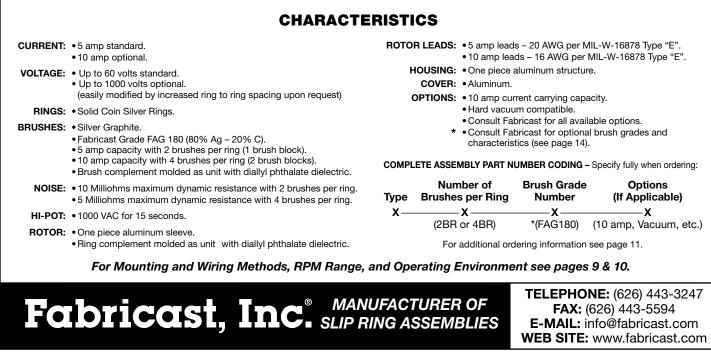
## **BEST COST • 1.504 INCH BORE • STOCK DELIVERY**



TYPE	No. of Rings	Length "A" Inches	Length "B" Inches
2982	2		
2983	3	1.48	1.56
2984	4		
2986	6	1.72	1.81
2988	8	1.96	2.06
29810	10	2.20	2.31
29812	12	2.44	2.56
29814	14	2.68	2.81
29816	16	2.92	3.00
29820	20	3.40	3.50
29824	24	3.88	4.00

PAGE



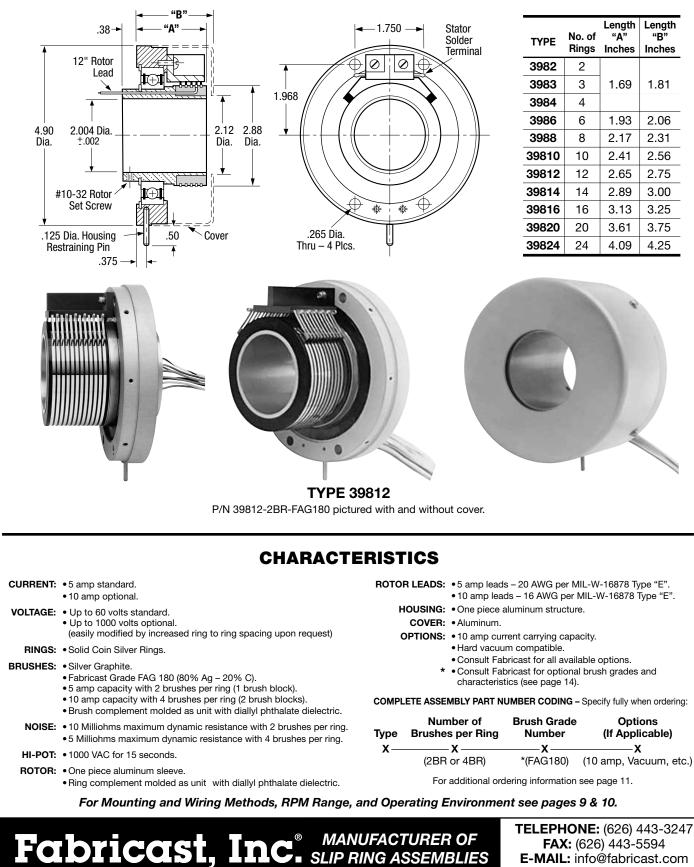


**BEST COST** & DELIVERY

SELF-CONTAINED ASSEMBLIES



## BEST COST • 2.004 INCH BORE • STOCK DELIVERY



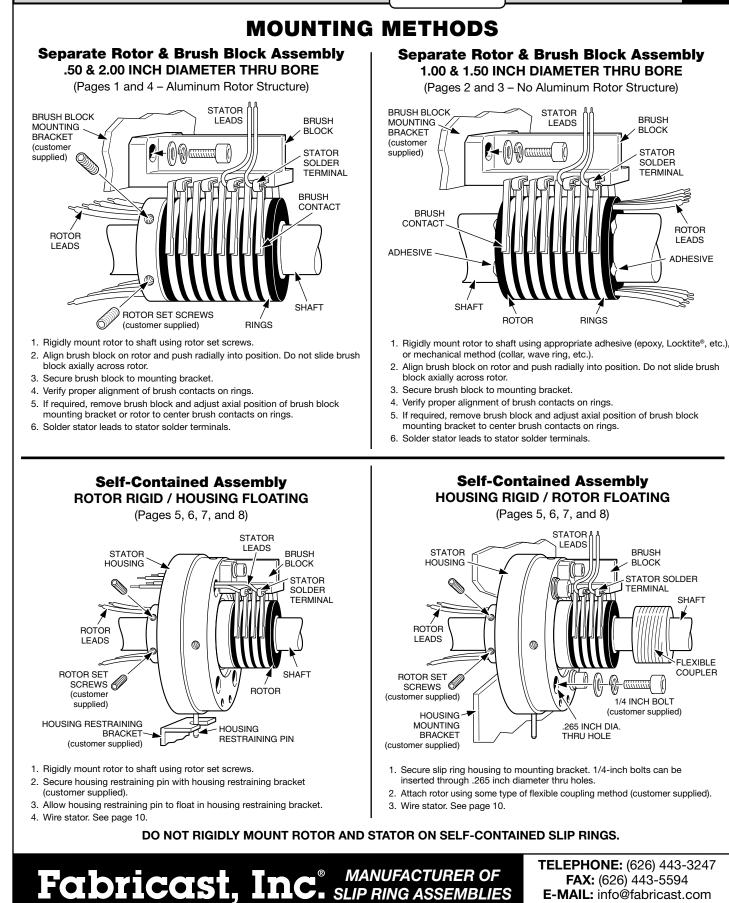
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**BEST COST** & DELIVERY

MOUNTING **INFORMATION**  PAGE 9



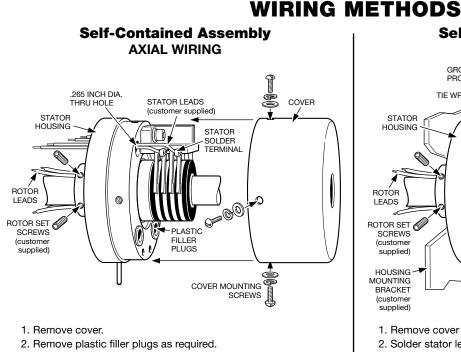
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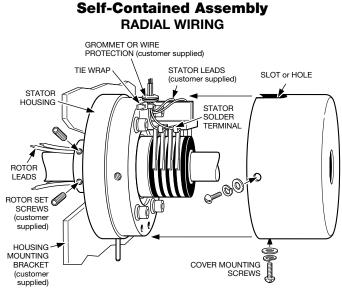
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BEST COST & DELIVERY

WIRING & TECHNICAL INFORMATION PAGE



- 3. Insert stator leads through .265 inch diameter hole(s).
- 4. Solder stator leads to stator solder terminals.
- 5. Reinstall cover.



- 1. Remove cover and machine slot or hole for stator leads.
- 2. Solder stator leads to stator solder terminals.
- 3. Tie stator leads together with tie wrap.
- 4. Stator leads can be secured to slip ring by utilizing one of the brush block mounting bolds to attach a restraining bracket.
- 5. Reinstall cover.

### **RPM RANGE**

Fabricast BEST COST & DELIVERY slip rings provide a reliable method of transmitting power and data, from a stationary to a rotating component, with consistently low electrical noise over a wide range of operating speeds. Fabricast BEST COST & DELIVERY slip rings work very well while stationary or rotating either in a single direction or bi-directionally.

Fabricast slip rings, utilizing solid coin silver rings and silver graphite brushes, work well at high speeds of rotation. In general, the maximum RPM for Fabricast BEST COST & DELIVERY slip rings is defined by the maximum surface feet per minute the brush contact material can travel. See Fabricast Catalog page 14, for different brush contact materials and respective maximum surface feet per minute ratings.

Use the following formula to calculate surface feet per minute:

Surface Feet Per Minute = (Ring Diameter in Inches x 3.141 x RPM) 12

Please note that this is only a guideline. Maximum operating speeds may be limited by noise (dynamic resistance) requirements, brush life requirements, bearings, and various environmental conditions. For high speed applications please contact Fabricast for help in selecting the appropriate brush material, bearings, and number of brushes per ring to best meet the mechanical, electrical, and environmental specifications of your application.

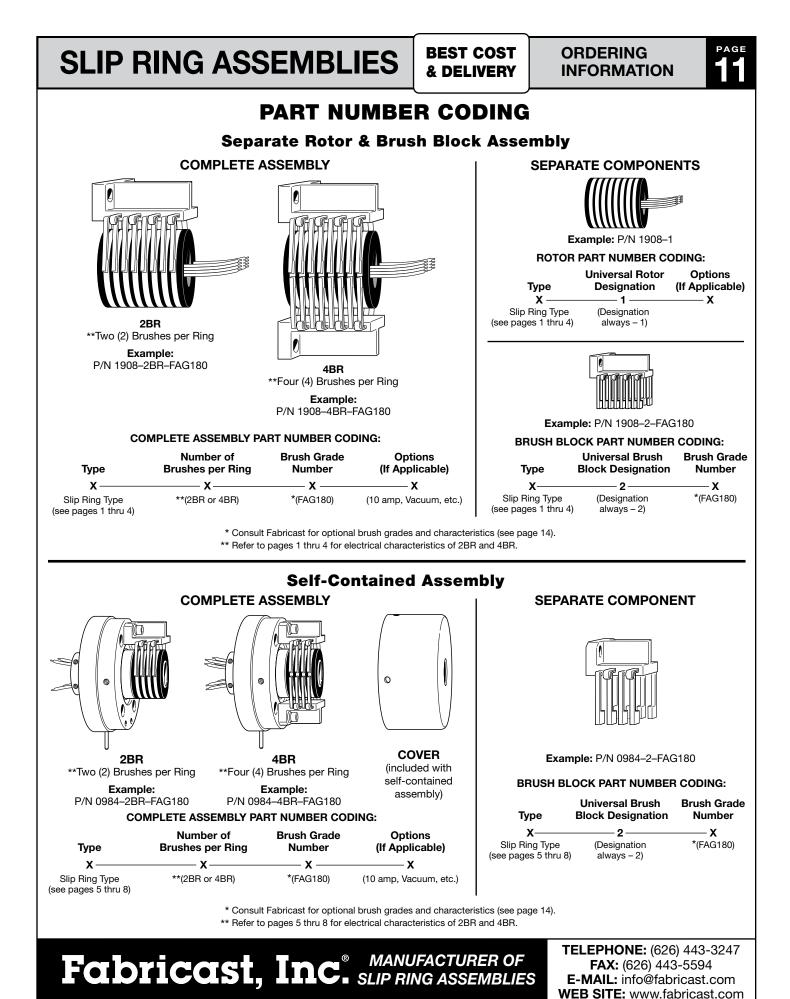
### **OPERATING ENVIRONMENT**

Fabricast BEST COST & DELIVERY slip rings can operate in temperatures from -65°F to 250°F. Please note that this is only a guideline. Operating temperature range can be reduced by high RPM and high current specifications.

Fabricast BEST COST & DELIVERY slip rings can be modified to operate in high altitude, dry nitrogen and hard vacuum environments.



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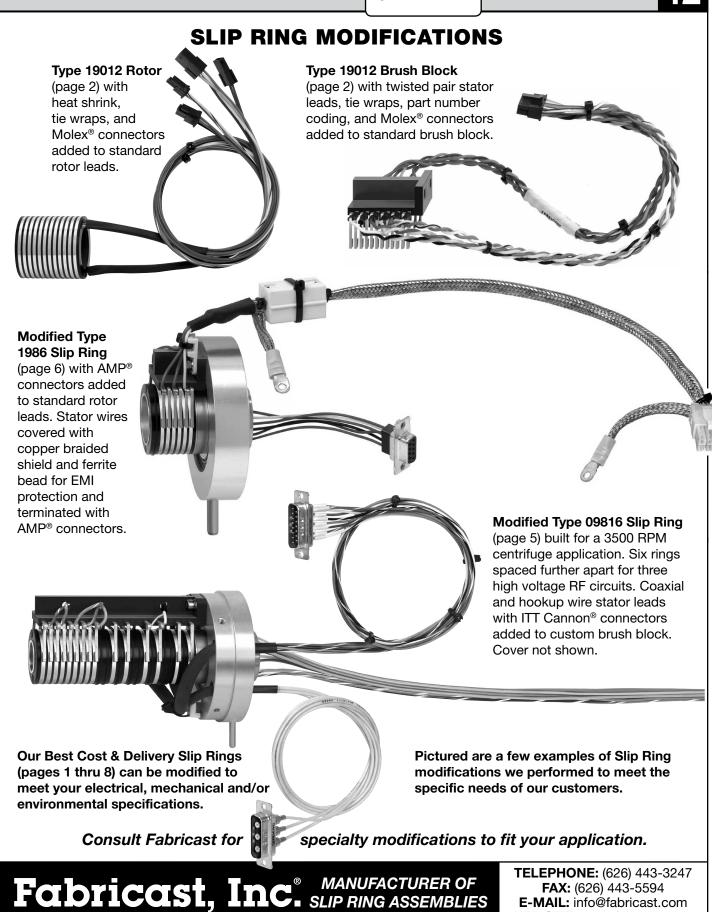


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BEST COST & DELIVERY

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# **CUSTOM ASSEMBLIES**

### GENERAL INFORMATION

PAGE 13

Although Fabricast places considerable emphasis on its line of standard slip rings, there have always been and will continue to be many applications which require custom slip ring assemblies.

Since Fabricast was founded in 1960, a portion of our business has always been the design and manufacture of high quality custom slip ring assemblies. The pictures on this page give an idea of some of the custom slip rings we manufacture. Please contact Fabricast with any custom slip ring application. Because many custom slip rings are designed around standard tooling you will find our cost and delivery extremely competitive. We can be contacted by phone, fax, E-mail or by using either of the two forms included in the website (**Request For More Information Form or Slip Ring Specification Form**).

WEB SITE: www.fabricast.com



## INTRODUCTION

The brush assemblies on pages 16,17,18 and 19 are the standard leaf and plunger brush assemblies used on Fabricast slip ring assemblies. These assemblies can be used to replace worn brushes on Fabricast slip rings or for other applications in which the customer feels they would be adaptable. Our engineers will specify the best brush grade for both Fabricast built slip rings and for customer applications. Custom brush assemblies can be designed and manufactured for your specific application.

## **BRUSH CONTACT MATERIAL**

All slip rings and brush assemblies illustrated in the catalog are specified with FAG 180, our most common brush contact material. The following chart gives some basic information on FAG 180 and the most common optional brush contact materials.

### **Brush Contact Material Chart:**

Brush Grade		Recommended	Carrying
Number	Composition	Surface Speed	Capacity
FAG 180	80% Silver 20% Graphite	Up to 3500 feet per minute	250 amps per square inch
FAG 180A	80% Silver 20% Graphite plus MoS <sub>2</sub>	Up to 3500 feet per minute	250 amps per square inch
FAG 150	50% Silver 50% Graphite	Up to 6000 feet per minute	100 amps per square inch
FAG 150A	50% Silver 50% Graphite plus MoS <sub>2</sub>	Up to 6000 feet per minute	100 amps per square inch
FAG 193	93% Silver 7% Graphite	Up to 250 feet per minute	300 amps per square inch

Fabricast grade FAG 180 is the low noise level grade used for all standard brush assemblies. In general, a noise level of approximately 1 microvolt for each milliamp of current flow can be accomplished depending on the speed of the unit and quantity of brushes per ring.

Fabricast grade FAG 150 is the highest surface speed grade; however, noise levels are slightly higher than FAG 180. Brush life is approximately twice that of FAG 180. It is recommended when brush life is critical and/or surface speed is high. Low noise can be achieved with multiple contacts per ring.

Fabricast grade FAG 193 has the highest current carrying capacity of any grade; however, it is limited to a surface speed of 250 ft. per minute.

Fabricast grades FAG 180A and FAG 150A contain molybdenum disulfide in addition to silver and graphite. This additive is required for operation in altitude, vacuum, and inert environments. Other characteristics remain the same.

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# **BRUSH ASSEMBLIES**

### LEAF TYPE (See pages 16 & 17)

Leaf springs for Fabricast leaf type brush assemblies are made of beryllium copper alloy #25. The leaf springs are heat treated and tin plated. The silver graphite brush contacts are soldered onto the leaf springs. All leaf type assemblies illustrated on pages 16 and 17 are specified with FAG 180 brush contact material.

For description of optional brush contact materials see page 14.

PART NUMBER CODING:	Туре	Angle "X" (degrees)	Brush Grade Number	*Options (if applicable)
(Specify fully when ordering)	X	X	X	X
Example:	1050006-2	36	FAG 180	Hardware
	P	/N: 1050006-2–36	6-FAG 180-Hardwa	are
*Options:		h Assembly is supplie n required washers, n	ed with mounting bolt s uts, and terminals.	oldered to leaf spring
	<ul> <li>Phantom: Brush on page17.</li> </ul>	Contact is soldered	to opposite side of lea	f spring as shown
	Consult Fabricas	st for additional option	ns you may require.	

### Determination of Angle "X":

Angle "X" will be supplied by our engineering department for all Fabricast slip ring replacement brushes. For other applications specify angle "X" so that in free state BeCu leaf spring (without brush contact material) would just touch ring surface. This method defines a good starting point for proper brush pressure in most applications.

NOTE: ANGLE "X" DOES NOT APPLY TO TYPES 1799, 1120051, AND 8115.

### PLUNGER TYPE (See pages 18 & 19)

Plunger type brush assemblies consist of a brass holder with cap, a copper or BeCu buss assembly, and a spring loaded silver graphite plunger brush. Both holder and buss are tin plated.

Brush holders are usually press fit into a dielectric brush block or soldered/brazed to a buss which is bolted to the brush block. Proper brush pressure is achieved when brush holder is .040 to .050 inches from ring surface (see illustration).

.040" to .050"

All plunger type brush assemblies illustrated on pages 18 and 19 are specified with FAG 180. Refer to page 14 and following chart for optional brush grades and corresponding part numbers.

### Plunger Brush Part Number Chart:

		BRUSH GRADE				
		FAG 180	FAG 150	FAG 180A	FAG 150A	FAG 193
Щ	3/32" Square	1072-1	1072-5	1072-11	1072-10	1072-14
SIZE	1/8" Square	1072-2	1072-6	1072-13	1072-12	1072-15
	3/16" x 1/4"	1913-1	1913-2	1913-3	1913-4	1913-5
BRUSH	<sup>**</sup> 1/4" x 1/2"	1092003	1092003-31	1092003-29	1092003-27	1092003-25
8	<sup>***</sup> 1/4" x 1/2"	1991-1	1991-2	1991-3	1991-4	1991-5

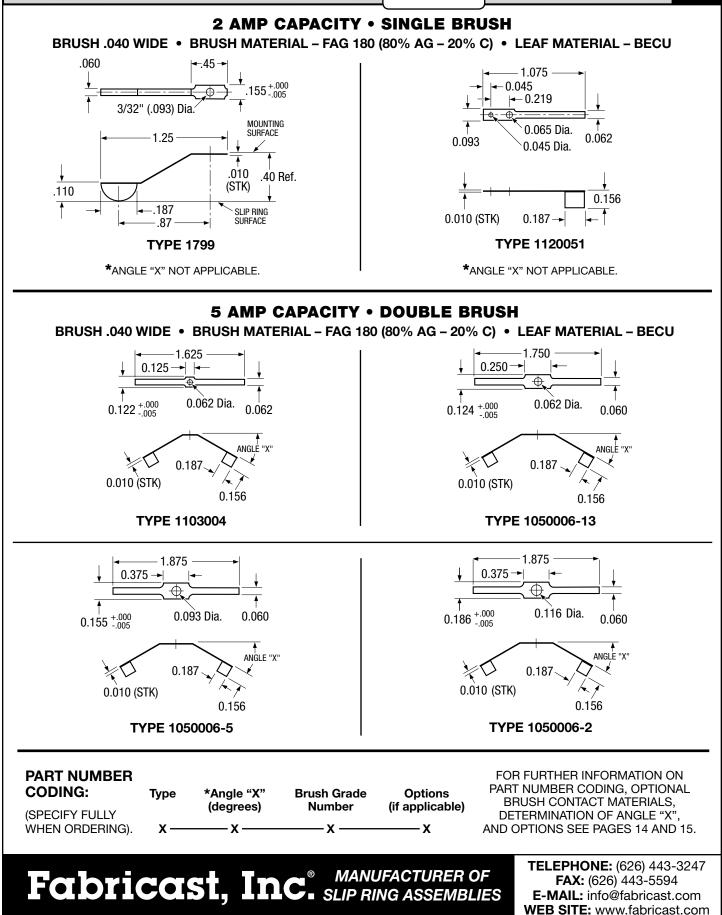
\*\* FOR USE WITH BRUSH HOLDER P/N 1092006 \*\*\* FOR USE WITH BRUSH HOLDER P/N 1092012

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## **BRUSH ASSEMBLIES**



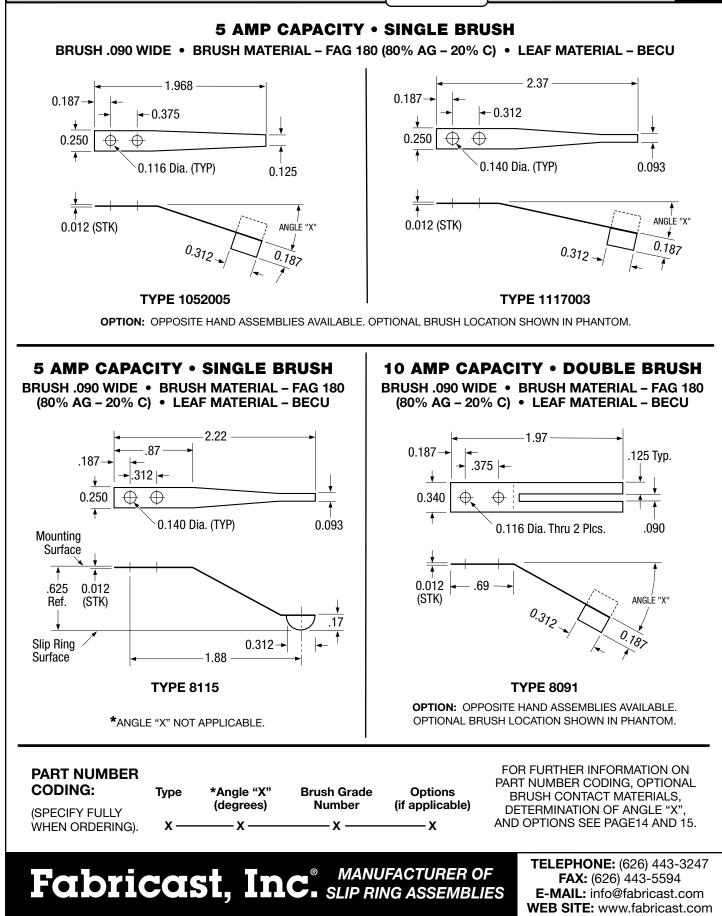




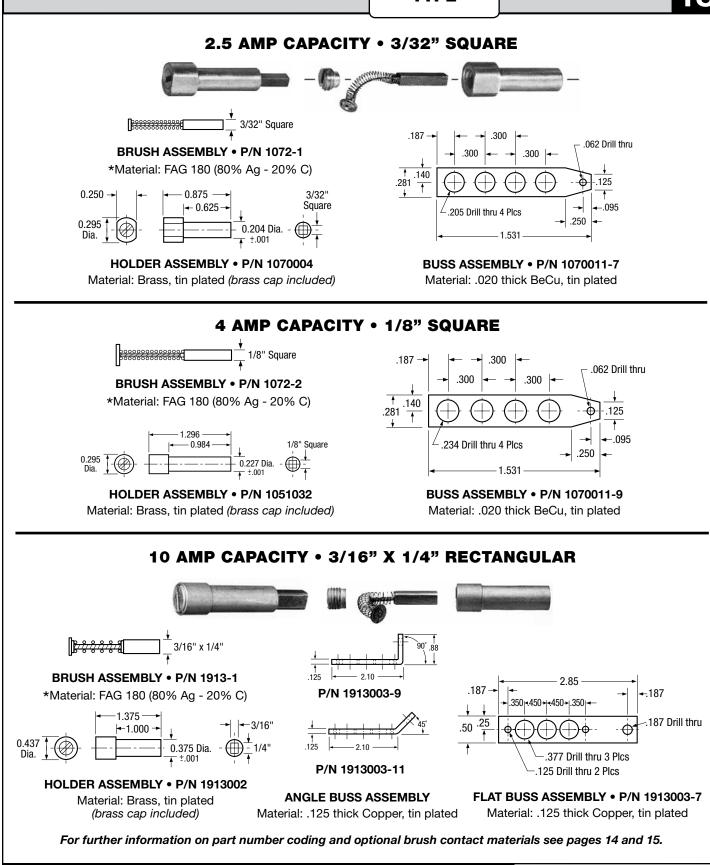






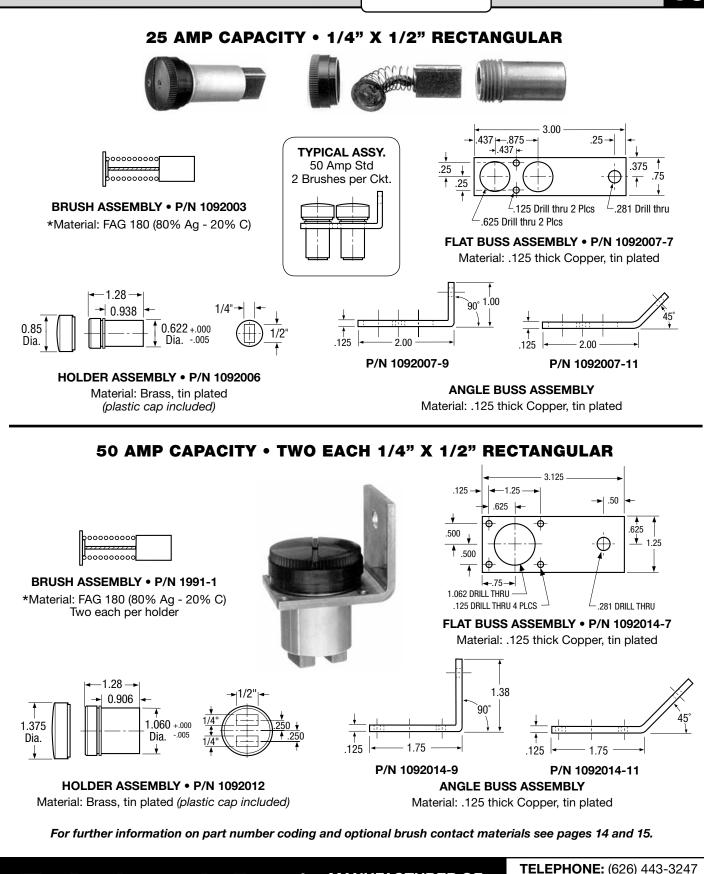






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## **BRUSH ASSEMBLIES**



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## HOW TO SPECIFY A SLIP RING

#### INTRODUCTION

It is very important for Fabricast's engineers to understand a customer's application in order to specify the best slip ring assembly for their application. Outlined below are the major considerations Fabricast's engineers will need to know about an application. Our **Slip Ring Specification Form** is provided on the following page to assist in defining your application.

#### **DEFINING SLIP RING APPLICATION**

What is the application the slip ring will be used in? By defining the basic type of application (automated medical equipment, semiconductor robot, stabilized camera system, radar pedestal, centrifuge, etc.), Fabricast will draw on prior experience and knowledge in specifying and designing your slip ring.

### **DEFINING BASIC SLIP RING DESIGN**

Fabricast manufactures both separate rotor & brush block and self-contained slip ring assemblies. Self-contained slip rings consist of a rotor, stator and integral ball bearings that maintain the alignment between the two. The self-contained slip ring, although larger and generally more expensive, offers the following benefits: 1) ease of integration into the customer's system, 2) the customer is not responsible for the correct brush pressure and alignment at the brush/ring interface, and 3) the brush/ring interface is not exposed. The separate rotor & brush block assemblies consist of two components, the rotor and the brush block. The separate rotor and brush block type slip ring is generally smaller and less expensive than a self-contained unit, but the customer is responsible for mounting the brush block and maintaining the correct brush block/rotor relationship.

### DEFINING ELECTRICAL REQUIREMENTS

The current carrying capacity and voltage of each ring should be specified. Fabricast will determine the number of brushes per ring and the lead wire size based on the current carrying capacity of each ring. Ring to ring spacing is determined by the specified voltage of each ring and the mechanical requirements of the assembly. To achieve the most cost effective solution and the smallest mechanical envelope, do not rate all rings at current and voltage of highest rated rings. The current and voltage of each ring or set of rings should be specified individually.

#### DEFINING MECHANICAL REQUIREMENTS

#### **Mechanical Considerations**

The specified RPM and duty cycle will be used to select appropriate brush contact material, bearings, and other slip ring components. Fabricast has extensive experience in high RPM slip ring assemblies.

#### Mechanical Envelope

The bore diameter will define which of Fabricast's standard assemblies will be used. The length and outside diameter of these assemblies are shown in the catalog. It is important to determine the maximum mechanical envelope so Fabricast can specify the most cost effective solution with optimum mechanical and electrical design characteristics if modifications or a custom assembly is required.

#### System Interface Requirements

How will the slip ring integrate into the system? Fabricast's standard slip rings are manufactured with unobstructed thru bores for shaft mounting. Mounting methods for our standard assemblies are shown in the catalog. Electrical connections to Fabricast slip rings are via unterminated flying leads on the rotor side and solder terminals on the stator side. Non standard rotor lead lengths and stator wiring are optional.

#### DEFINING OPERATING ENVIRONMENT

It is critical that Fabricast understand the environment the slip ring will operate in. If the slip ring operates in extremely high temperatures, altitude, hard vacuum, dry nitrogen, oil, or other special environments, Fabricast may need to incorporate special materials of construction or other design modifications.

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COMPANY			DATE	
ADDRESS			. ,	
			. ,	
2. TYPE OF UNIT ( ) Self-Contained ass	ombly			
( ) Separate rotor and	•	embly		
3. TOTAL NUMBER OF ASSEME		-		
<ol> <li>ELECTRICAL REQUIREMENT Number</li> </ol>		Voltage	Frequency /	Other
of Rings Description		(Volts)		
	······································			
5. MECHANICAL REQUIREMEN		Dut O		
Speed (RPM) Inside (Bore) Diameter				
Max. Length				
Mounting: () Sh			0 ,	
( ) Ve	rtical ( ) H	orizontal		
6. OPERATING ENVIRONMENT				
Temperature Range		Altitude		
Special Atmospheres				
Vibration/Shock			Pirty	
Other				
7. REMARKS				