GRAPHALLOY®

USED IN MICROWAVE EQUIPMENT • SERVO SYSTEMS • SYNCHROS • INVERTERS • THERMOCOUPLE and STRAIN GAGE CIRCUITS • PULSE SYSTEMS • COMPUTER GROUNDING CONTACTS • TORQUE INDICATORS • MEDICAL EQUIPMENT • PACKING MACHINERY

GRAPHALLOY® BRUSHES

GRAPHALLOY Brushes are used in rotating equipment to conduct currents ranging from minute instrument or signal values to power ratings. Applications run the gamut of exacting equipment such as transducers (strain gages, thermocouples), synchros, guided missiles, fire control apparatus, servomechanisms, selsyns, azimuth measurement, dynamotors, radar, sonar and avionic equipment.

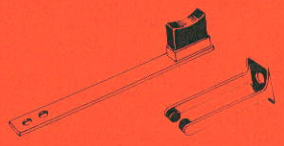
Graphalloy brush materials include Silver-Graphalloy and Copper Graphalloy as general types . . . with specialized high altitude grades available as required. Each grade is engineered for the particular application.

Silver-Graphalloy Brushes have been widely used because of ***low and constant* contact drop, extremely low electrical noise, and long life.**

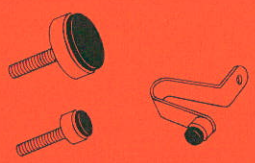
Over 100 grades are now serving in a wide variety of applications. Silver-Graphalloy Brushes on ½-inch-diameter coin silver slip rings have operated successfully in highly critical electrical circuits at speeds up to 100,000 r.p.m.

Standard sizes from ⅛"-square to ¾"-square. Many sizes in stock.

Our Engineering Department will assist you in determining the exact grade of GRAPHALLOY for your needs. *Ask for our Brush Inquiry Form 109.*



LEAF SPRINGS



CUP CONTACTS

We design special brush and slip-ring assemblies to meet special requirements.

STANDARD BRUSH HOLDERS

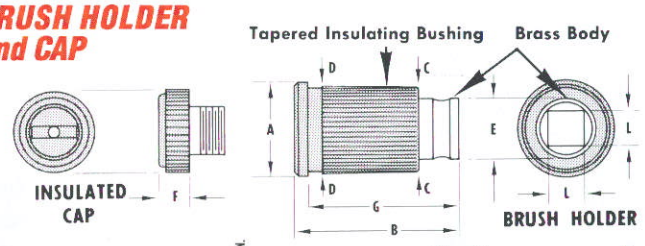
(1/8" x 1/8" and larger, using helical spring)

Standard Brush Holders (250 volts) are provided with a cylindrical insulating bushing. The brush holder is pressed into a mounting hole. The internal cross section is square or rectangular, a design feature that prevents the brush from shifting its contact area on the commutator or slip ring and thereby changing the brush contact resistance. Friction of the helical spring and of the brush within the brush holder tends to damp the natural frequency of the brush assembly in operation, hence avoids chattering and reduces noise.

Standard brush holders for instrument, thermocouple and strain gage circuits have a hole in the cap. When the brush shunt is threaded through the cap, the shunt completes an unbroken circuit from brush face to the external circuit, resulting in a very low noise level. The shunt is normally connected to a spring binding post. For such circuits, three brushes per slip ring, spaced 120° apart, are recommended, along with coin-sliver slip rings.

Dimensions of standard brush holders are shown here. *Other sizes are also manufactured!*

BRUSH HOLDER and CAP



BRUSH HOLDER & CAP NO.	BRUSH SIZE	SUGGESTED MIN. SLIP-RING WIDTH	**MOUNTING HOLE DIAMETER	BRUSH HOLDER TO SLIP RING—MIN.	A	B (Overall Length)	F	C	D	E	G	L (Broached Hole)
14326	1/8" sq.	3/16"	13/32"	1/16"	.437"	7/8"	3/16"	.404"	.418"	.281"	25/32"	.129"
11509	5/32" sq.	1/4"	13/32"	1/16"	.437"	7/8"	3/16"	.404"	.418"	.281"	25/32"	.160"
11570	3/16" sq.	1/4"	7/16"	1/16"	.484"	7/8"	3/16"	.441"	.451"	.313"	25/32"	.193"
19011	1/4" x 3/16"	5/16"	9/16"	1/8"	.616"	1 5/16"	3/16"	.561"	.573"	.438"	1 3/16"	.256 x .193"
11527	1/4" sq.	5/16"	9/16"	1/8"	.616"	1 5/16"	3/16"	.561"	.573"	.438"	1 3/16"	.256"
14292	3/8" x 1/4"	7/16"	43/64"	1/8"	.718"	1 7/16"	1/4"	.672"	.682"	.533"	1 5/16"	.382 x .256"
12166	3/8" sq.	7/16"	13/16"	1/8"	.921"	1 13/16"	1/4"	.813"	.828"	.628"	1 5/8"	.382"
31392	1/2" sq.	9/16"	1 1/8"	1/8"	1.237"	1 13/16"	1/4"	1.126"	1.141"	.878"	1 9/16"	.503"
35439	3/4" x 1/2"	7/8"	1 33/64"	1/8"	1.661"	2 1/32"	5/16"	1.508"	1.528"	1.253"	1 25/32"	.753"
35440	3/4" sq.	7/8"	1 33/64"	1/8"	1.661"	2 1/32"	5/16"	1.508"	1.528"	1.253"	1 25/32"	.753"

Other Sizes Available

**Mounting hole diameter for brush holder dimension D.

Request and fill in BRUSH INQUIRY SHEET, Form 109, so that we can supply the proper grade of brush material.

MINIATURE BRUSH HOLDERS (Smaller than 1/8" x 1/8", using helical spring). It has been impracticable to design a line of standard miniature brush holders because the space requirements for such special applications are extremely critical. Miniature brush holders are designed on an individual basis.

BRUSH-HOLDER CONNECTOR SPRINGS

A silver-plated connector spring (garter spring) makes a positive electrical connection to the brass body of the brush holder when the spring is snapped into the circumferential groove on the bare metal portion of the brush holder. The connecting lead may be pre-soldered to the connector spring.

GARTER SPRING CONNECTORS	BRUSH SIZE	BRUSH HOLDER NO.
127-9	1/8" sq.	14326
127-9	5/32" sq.	11509
127-10	3/16" sq.	11570
127-14	1/4" x 3/16"	19011
127-14	1/4" sq.	11527
127-18	3/8" x 1/4"	14292
127-20	3/8" sq.	12166
127-24	1/2" sq.	31392
127-32	3/4" x 1/2"	35439
127-32	3/4" sq.	35440