

# Optimum Solution of Carbon Brushes

**Omega** **CARBON**

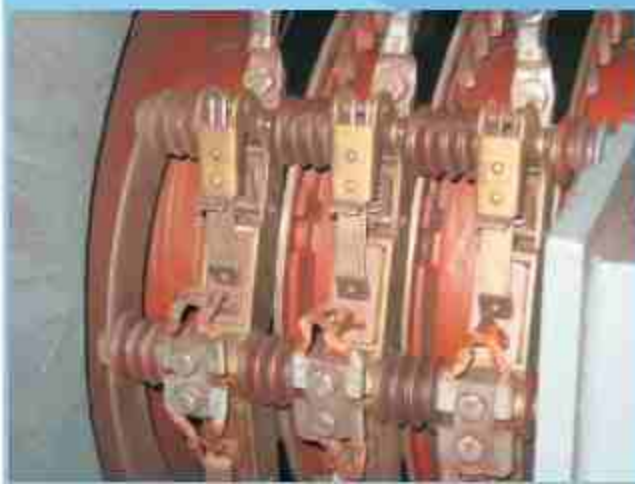


## Application sections

- Sugar Centrifugal Motor
- Mill Drive
- Cane Unloader



- Chopper Motor
- Fibrizer
- Leveller
- Spry pound
- ID Fan
- FD Fan
- Alternator
- Exciter
- Tacho Motor
- Turbo Generator
- Crane Current Collector





# OMEGA CARBON brush for 'DC' Motors

OMEGA is manufacturing carbon brushes in wide range for various make of motors. Siemens, Jyoti, ABB, BHEL, AEI, GEC, Alstom, Marathon, KEC, IEC, CGL and also imported makes motors.

## Some Standard motor's Brush Sizes

### For IEC Make 'DC' Motor

Brush Size in mm	Grade
12.5 X 32 X 38	EG-224
2 ( 8 ) X 32 X 50	EG-224
2 ( 10 ) X 32 X 50	EG-224
2 ( 12.5 ) X 32 X 50	EG-224
2 ( 16 ) X 32 X 50	EG-224



### For KEC Make 'DC' Motor

Brush Size in mm	Grade
2 ( 10 ) X 40 X 50	EG-224
2 ( 12.5 ) X 40 X 50	EG-224
2 ( 8 ) X 32 X 40	EG-224
12.5 X 25 X 32	EG-224
13 X 19 X 25	EG-224

### For CGL Make 'DC' Motor

Brush Size in mm	Grade
10 X 16 X 30	EG-236S
10 X 20 X 30	EG-236S
12.5 X 25 X 40	EG-236S
16 X 25 X 40	EG-236S
2 ( 8 ) X 25 X 40	EG-236S
2 ( 10 ) X 25 X 40	EG-236S
2 ( 8 ) X 32 X 45	EG-236S
2 ( 10 ) X 32 X 45	EG-236S
2 ( 12.5 ) X 32 X 50	EG-236S



OMEGA CARBON



# **OMEGA CARBON** brush for Slipping Motor

## For CGL Make Slipping Motor

Brush Size in mm	Grade
10 X 16 X 25	M-15E/M-16E
8 X 20 x 20	M-15E/M-16E
16 x 20 X 25	M-15E/M-16E
20 X 40 X 38	M-15E/M-16E



## For KEC Make Slipping Motor

Brush Size in mm	Grade
16 X 32 X 38	M145E / M15E
22 X 32 X 38	M145E / M15E
8 X 16 X 20	M145E / M15E
25 X 50 x 65	M145E / M15E
32 X 40 X 60	M145E / M15E



## For Alstom/Marthon Slipping Motor

Brush Size in mm	Grade
9.5 X 19 X 25.5	M16E
9.5 X 25.4 X 31.8	M16E
9.5 X 25 X 32	M16E
16 x 20 X 20	M16E
20 x 25 X 20	M16E
15.9 x 31.8 X 31.8	M16E
20 x 32 X 35	M16E
22.2 X 31.8 X 35.6	M16E
31.8 X 31.8 X 44.5	M16E

# **OMEGA CARBON** brush for Tacho Motor



Brush Size in mm	Grade
3 X 3.5 X 14	ASG-6
Dia 3.5 X 14	ASG-6
4 X 3 X 14	ASG-6
5 X 4 X 14	ASG-6





### BRUSH HOLDERS

Manufacturing are Various Types of Brush Holders are molded & Sheet metal fabricated.

- Single Arm, Double Arm, Clamping, Box, Tandem types of brush holders in spiral, Constant Force, Extensions types springs.

Brush Holders For "DC" Motors, Slipring Motors,

Kirloskar, Alstom, Marathon, GEC, Crompton.

Current Collector Holder For Crane, Advant Orlikon Welding Generator.

### SLIPRING UNITS

For Better Efficiency and life of Slipring material are used. As per application of Motor. Open Type & Epoxy Molded.

In Bronze, Phosphor Bronze, Copper nickel, - Used in Corrosive atmospheres.

Cast Iron, Steel - Used In Lower Surface Speed.

Alloyed Steel - Used In High Speed.



## Carbon Brush Holder & Brush.

Manufacturing are Various types of Brush Holders and Carbon Brush for Turbo Generator, Excitor, Alternators, and also for Earthing.



### Some Standard Brush sizes

Brush Size in mm	Grade
16 X 32 X 40	EGO
25 X 32 X 60	HM6R / NCC634
30 X 30 X 40	EGO
30 X 32 X 40	EGO
25 X 37 X 50	EGO
25 X 32 X 100	HM6R
32 X 38 X 65	HM6R / NCC634
20 X 30 X 40	EGO
15 X 30 X 40	EGO
20 X 40 X 40	EGO / EGOR





Some Standard following Grades mostly used for slipping, DC Motors, Alternator, Excitors and Turbo Generators.



## Carbon Bush Grades specification

Grade	Resistivity Micro - ohm-cm	Contact Drop Volt / brush	Current Density Ams / Cm <sup>2</sup>	Coefficient Of friction	Max. operating speed Mtr/sec	Pressure gf/ cm <sup>2</sup>
EG-224	4800	1.00	10	0.10	50	180-360
EG-236S	5253	1.05	12	0.10	50	210
EGO	1200	0.95	11.5	0.11	20	180
EGOR	1200	0.95	10	0.11	20	180
EG14	4900	0.92	10	0.16	45	210
HM6R	2200	1.66	10	0.14	80	142-180
M15E	13.5	0.40	15	0.17	30	210
M145E	11.0	0.40	18.5	0.17	30	175
M16E	68.0	0.40	11.5	0.13	30	210
M18E	80.0	0.40	11.5	0.17	30	175

## For long - term operation of motor

- Keep Motor relatively Clean both sides.
- Provide Good Quantity & Quality of Ventilating air.
- Provide Good Quality Power.
- Keep Minimum Vibration.
- Maintain good commutator Conditions.
- Maintain Brush Quantity & Grade Of Brushes
- Brushes Must Bedded in fit on cummutator surface in line contact.
- Check That Brushes are free to move in their boxes. ( don't maintain loose )
- The pressure on all brushes of a set should be the same.
- Check the neutral point setting



## Surface Appearance of Brushes



### SMOOTH POLISHED SURFACE

This indicates good performance. However, if the polish is mirror-like (glazed), high frequency chatter due to low current may be the cause. Check the side-faces of the brush for signs of vibration.



### OPEN TEXTURED SURFACE

This, again, indicates that brush performance is satisfactory. Actual appearance will depend on the type of grade.



### FINELY LINED SURFACE

Another satisfactory condition. Fine lines indicate the presence of dust in the atmosphere. This may be overcome by the use of filters or ducting the machine's air supply from another area.



### FINELY SERRATED SURFACE

This is a further development of (S3) above. The causes are normally atmospheric contamination or lack of load current.



### HEAVY SERRATED SURFACE

As (4) above, but problem is more severe or has been allowed to continue for longer.



### GHOST MARKED SURFACE

This may be associated with difficult commutation and can arise from incorrect neutral position, interpole problems or other causes of poor commutation.



### BURNT EDGES

Normally occurs on the trailing edge of the brush. Caused by poor commutation and heavy sparking.



### PITTED SURFACE

Indicates heavy under-brush sparking as a result of current overload or brush instability



### LAMINATED SURFACE

This is an unusual condition caused by an armature winding fault giving rise to poor commutation.



### DOUBLE-BEDDED SURFACE

This occurs as a result of brush tilting on a reversing machine, i.e. the brush beds itself in both directions of rotation. In itself this does not give any cause for concern.



### COPPER PARTICLES

Copper pick-up from commutator surface can result from copper drag problems or heavy peak loads. Can cause further commutator wear.



### CHIPPED EDGES

Normally occurs on the leading (entering) edge of the brush. breakage can result from poor commutator profile, high micas and severe brush instability.





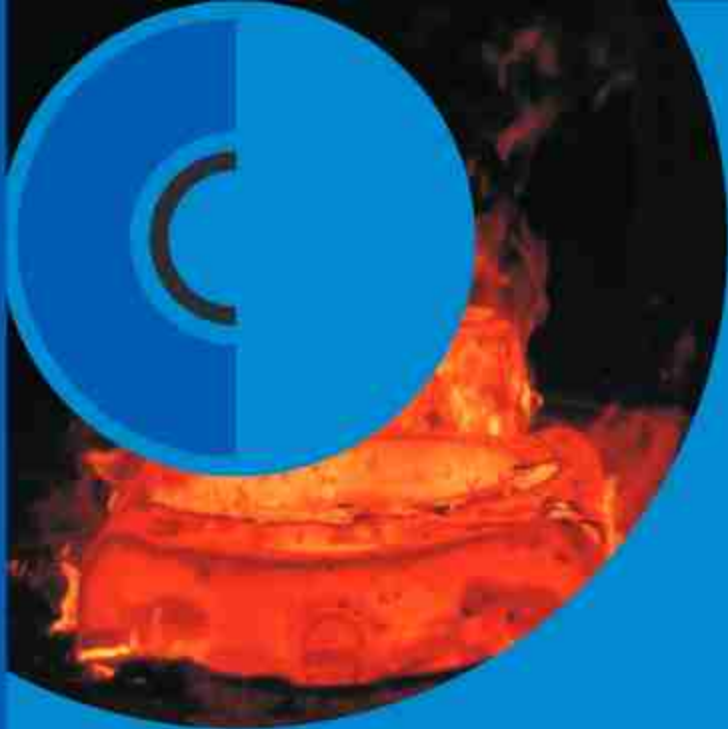
**O**ur experience and competence in this field we providing excellent quality and most secured carbon bush and carbon product range. For this we are maintain quality as per IS standard IS 13466: 1992 & raw material using for carbon brush which is source directly from manufacturer.

All of products strictly undergo stringent quality controls at various stages. mV drop test. Pullout strength.

We have advanced testing & calibration equipment lab for R&D and testing of material. Our technical and quality persons always working on quality and they are doing everything which is needed to make safe and reliable products.

The constant high quality of our products is an important component in our customer's success.

**OMEGA CARBON**



Manufacturer of all types of Carbon Brushes



Shahu Industrial Estate, Plot No.4, Shirol (Jaysingpur),  
Dattanagar - 416120, Dist.:Kolhapur, (M.S.) INDIA.

Tel. : +91 2322 221787 Fax : +91 2322 222068

E-mail : [omegacarbon@rediffmail.com](mailto:omegacarbon@rediffmail.com)

Visit us : [www.omegacarbon.tradeindia.com](http://www.omegacarbon.tradeindia.com), [www.omegacarbon.net](http://www.omegacarbon.net)