



## **BOYO CARBON**

**FULFILL YOUR REQUEST IS OUR FIRST THING**

**“HIGH QUALITY,BEST PRICE, PERFECT SERVICE ”  
IS OUR PROMISE**



**INDUSTRIAL BRUSH**

Our composite grade brushes have been very effective on lightly loaded industrial equipment and elevator applications. Brushes can be purchased with special features like the Boyo Quick Disconnect (BQD) terminals and mounts or the Boyo Interrupter Devise (BID).

WHAT'S YOUR WANT? JUST IN BOYO



#### INDUSTRIAL BRUSH

Our Press-to-size capabilities allow us to offer cost effective alternatives on high volume applications. Complete in-house motor testing, material analysis and development allow us to help you find the right grade for your application.

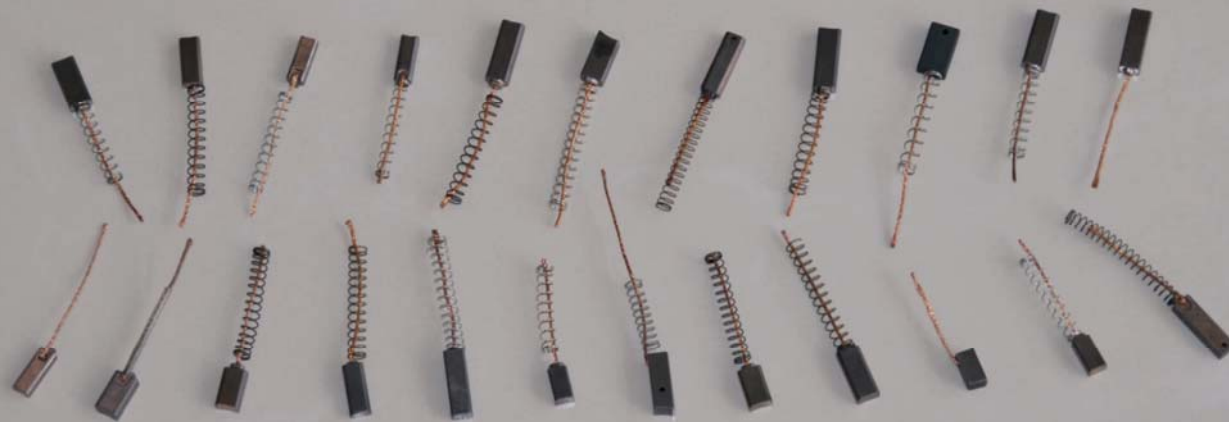
## BOYO CARBON-SEA OF CARBON



### AUTOMOTIVE STARTER BRUSH

Our starter carbon brushes are used under severe conditions of high electric current density, high contact pressure and high sliding velocity. We manufacture the best quality carbon brushes for Bosch, Buick, Chrysler, Delco-remy, Ducellier, Femsa, Fiat, Ford, Hitachi, Honda, Iskra, Lucas, Marelli, Mitsubishi, NIPPON-denso, Noris, Paris-rhone, Peugeot, Toyota, etc.

## BOYO CARBON-YOUR BEST CHOICE



### AUTOMOTIVE ALTERNATOR BRUSH

Boyo new automotive alternator and starter carbon brushes are produced by pressing the wire into the brush body which can raise the output power of your motor, solve the problem of loud noise, short life time and big sparkers and improve the quality of your motor.

## BOYO CARBON- ECONOMIZE ON ENERGY



### POWERTOOL & HOME APPLIANCE CARBON BRUSHES

We manufacture the best quality power-tool carbon brushes for AEG, Atlas Copco, Black & Decker, Bosch, Dewalt, Electric water pump, LG, Hitachi, Japson, KeYang, Kaiser, Kosoku, Makita, Metabo, Milwaukee, Mikasa, Mitachi, Mitsubishi, Peugeot, Porter & Cable, Skil, Ryobi, Toshiba, Washing Machine, Wolf, etc.

## BOYO CARBON- THE MOST REASONABLE PRICE



### POWERTOOL & HOME APPLIANCE CARBON BRUSHES

Boyo Carbon designs and manufactures many types and styles of brushes to ensure the best suited brush is available to meet the requirements of your particular application. The correct brush grade and design are very important to meet the unique operating requirements of such diverse applications. Our special auto-cut-off electric power-tool carbon brushes can obviously improve the safety of the power tools.

**BOYO CARBON- ISO14000 CERTIFIED COMPANY**

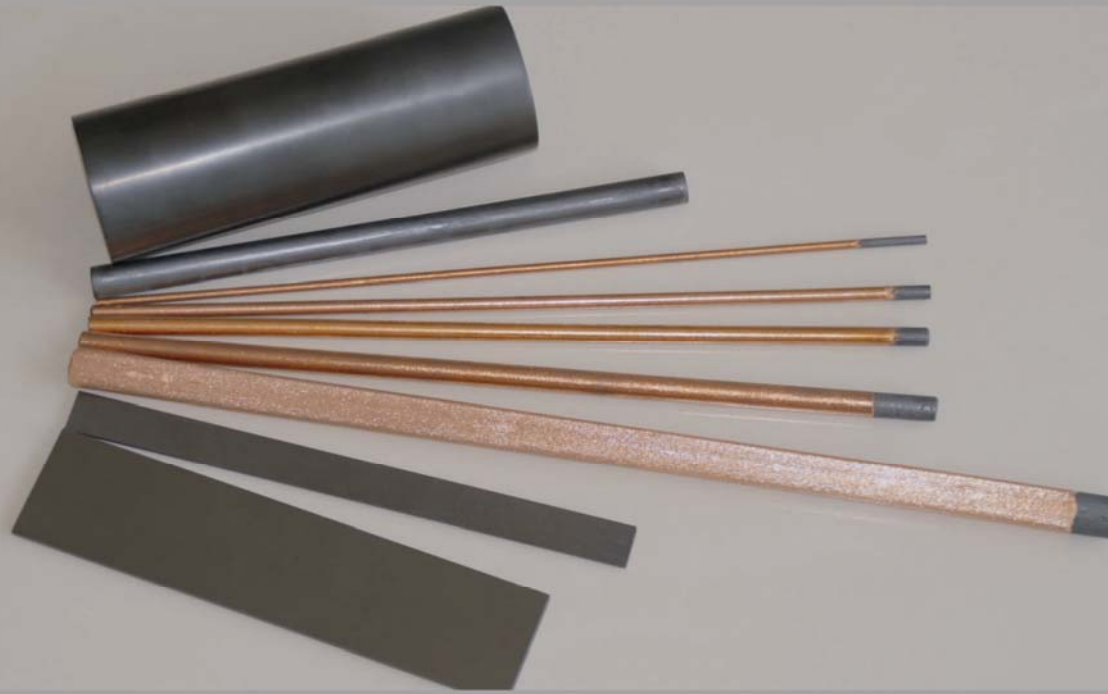


**GRAPHITE PRODUCTS(graphite bushings, rings, bearings, etc.)**

BOYOCARBON can manufacture mechanical carbon parts for a variety of applications including: trolley wheels, bearings, steam joints, rotary seals, throat liners, parts for pumps, graphite specialties used in the steel, aluminum, copper, glass and electronic industries. Mechanical carbon parts can be manufactured from samples, drawings or individual specifications and BOYOCARBON can match the correct carbon-graphite grade with the self-lubricating properties needed for all types of operating conditions.



**BOYO CARBON- ISO9001 CERTIFIED COMPANY**



**GRAPHITE PRODUCTS(graphite rod, graphite plate, etc.)**

Our customers are producers of compressors and vacuum pumps, sealing systems, pumps, sliding elements as well as machine shops for carbon graphite machining and injection molders. Unique Characteristics of Carbon-graphite Materials: self-lubrication; oxidation resistance; dimensional stability; chemically inert; thermal stability; low wear rate; low coefficient of thermal expansion; increased strength with increased temperature .

## PART OF CARBON BRUSH DATA SHEET

Grade	Resistivity u OHM / m	Flexural strength Mpa	Hardness scleroscope	Density g/cm ^3	Contact Drop V	Coef.of Frication	Current Density A/cm²	Normal MaxSurface Speed m/s	Grade	Resistivity u OHM / m	Flexural strength Mpa	Hardness scleroscope	Density g/cm ^3	Contact Drop V	Coef.of Frication	Current Density A/cm²	Normal MaxSurface Speed m/s
HM5	10.2	10	12	2	0.77	0.14	11	HM5	TA45	66	11.7	54	1.53	2.5	0.29	10	51
NCC634	18	5.2	20	1.28	2.5	.29	10	81	TA50R	66	12	57	1.62	2.5	0.19	15.5	51
HM6R	20	9	13	1	1.71	0.19	10	80	N18	71	15.5	56	1.61	2.5	0.19	15.5	51
N39	20	31	47	1.77	2.4	0.19	15.5	51	N48	71	13.8	59	1.58	2.5	0.19	15	51
DE7000	48	38	83	1.71	2.5	0.19	15	51	SA50	71	6.9	50	1.49	2.5	0.29	15	51
AY	10	20.7	45	1.6	1.8	0.29	6-15	20	TA50	71	8.8	55	1.53	2.4	0.19	15.5	51
BO210	1.62	25	60	22	M	M	12	50	SA4542	73	10.5	57	1.51	2.5	0.29	15	41
BO214	1.64	28	65	25	M	M	12	50	TA4542	73	9.9	59	1.57	2.4	0.29	15	41
N2000	48	32	71	1.56	2.5	0.19	15	41	EGO	12	21	36	1.55	0.95	0.11	10	30
Z34	51	27.6	62	1.5	2.4	0.19	10	31	EGOR	12	21	36	1.55	0.97	0.09	10	50
DE3	51	31	70	1.62	2.4	0.19	15	41	EG260	12	17	37	1.55	0.84	0.17	10	40
DE8	51	34.5	85	1.68	2.4	0.19	15	41	EG6749N	21	23	67	1.65	0.83	0.11	10	40
N5000	51	34.5	85	1.6	2.4	0.19	10	41	EG12	23	18	63	1.6	0.9	0.1	10	40
AX5	53	17.2	54	1.56	2.4	0.19	15	41	EG6345	25	20	67	1.63	0.98	0.1	10	30
DE2	53	25.5	72	1.64	2.4	0.19	15	41	EG11	28	18	63	1.6	0.88	0.11	10	40
DE9000	53	33.1	85	1.68	2.5	0.19	15.5	51	EG225	36	14	42	1.62	0.91	0.12	12	40
SA35	53	16.5	61	1.54	2.5	0.19	15	41	EG14	42	24	61	1.6	0.92	0.16	12	40
TA35R	53	16.5	61	1.54	2.5	0.19	15	41	EG14D	45	36	67	1.63	1.1	0.1	12	40
TA35	55	15.5	57	1.55	2.4	0.19	15	41	EG16	45	19	57	1.6	1.05	0.1	12	50
N6000	60	13.8	66	1.55	2.5	0.19	15	41	EG105	48	22	65	1.62	1.1	0.1	12	50
TA45R	60.1	15.1	55	1.62	2.5	0.19	15.5	51	EG236S	48	19	57	1.6	1.05	0.1	12	50
DE5	61	27.6	88	1.65	2.4	0.19	15	51	IM26	120	46	44	1.76	1.65	0.04	7	30
DE7	61	30.3	92	1.67	2.4	0.19	15	51	CM3H	0.2	27	10	4.2	0.26	0.1	16	30
DE25	61	22.5	85	1.6	2.5	0.19	15.5	51	CM1S	0.32	68	9	5.5	0.12	0.11	23	30
N19	61	19.3	76	1.61	2.5	0.19	10	41	BJ222	0.35	23	15	3.9	0.43	0.1	14	30
SA40	61	10.3	53	1.5	2.5	0.19	15	51	CM5B	0.9	33	20	3.5	0.5	0.09	14	30
SA4548	64	10.3	50	1.5	2.5	0.29	15	41	SM3	2.05	26	29	2.5	0.45	0.15	15	20
SA45	66	10	50	1.49	2.5	0.19	15	41	BJ200	3	29	25	2.8	0.58	0.11	11	35

## CHEMICAL CORROSION RESISTANCE OF MECHANICAL CARBON-GRAPHITE DATA SHEET

GRADE	Density g/cm <sup>3</sup>	Transverse strength Mpa	Compressiv e strength Mpa	Hardnes s shore	Coefficient of expansion				GRADE	Density g/cm <sup>3</sup>	Transverse strength Mpa	Compressiv e strength Mpa	Hardnes s shore	Coefficient of expansion			
					%	10-6/°C	°C	Max .suitable temperature						%	10-6/°C	°C	Max .suitable temperature
BM191T	1.80	100	250	92	1.2	5.5	600	BM181D	2.30	80	200	80	2.0	5.5	350		
BM200T	1.80	60	150	58	1.2	4.5	600	BM200D	2.40	45	120	40	2.0	5.0	350		
BM121	1.56	30	85	65	.5	4	350	BM251D	2.40	65	190	85	2.1	5.5	350		
BM238	1.70	35	75	40	15	3	450	BM208D	2.40	65	185	85	2.0	6.0	350		
BM272	1.75	40	95	60	8	3	450	BM180R	2.00	60	190	95	2.5	6.0	600		
BM164	1.55	38	90	70	16	3	400	BM200R	2.00	48	138	75	2.5	5.0	600		
BM165	1.60	40	100	80	12	3	400	BM181B	2.40	65	160	60	8.0	5.5	200		
BM106H	1.65	60	210	85	1.0	4.8	200	BM200B	2.40	35	65	35	8.0	5.0	200		
BM120H	1.70	55	200	85	1.0	4.8	200	BM120B	2.40	65	160	60	9.0	5.5	200		
BM238H	1.88	50	105	55	1.5	4.5	350	BM254B	2.40	35	65	30	8.0	5.2	200		
BM254H	1.82	40	90	50	1.0	4.5	350	BM181P	2.40	80	250	75	2.5	6.0	350		
BM255H	1.85	50	95	50	1.0	4.5	200	BM200P	2.60	45	120	35	2.5	5.5	350		
BM180K	1.80	80	240	90	1.2	5.5	210	BM106P	2.40	70	240	70	3.0	6.0	350		
BM200K	1.82	55	115	55	1.2	4.5	210	BM120P	2.60	75	250	75	3.0	6.2	350		
BM170K	1.80	70	220	85	1.5	5.5	210	BM262P	2.60	50	110	40	3.0	6.0	400		
BM106K	1.65	65	230	90	1.5	5.5	210	BM254P	2.60	45	120	35	3.0	6.0	400		
BM120K	1.70	60	220	95	1.5	6.5	200	BM256P	2.60	75	200	65	2.0	6.0	400		
BM230K	1.85	55	105	55	2.0	4.5	200	BM169G	3.00	70	200	70	2.0	-	900		
BM254K	1.82	45	100	55	2.0	6.0	200	BM178G	3.00	70	200	70	2.0	-	900		
BM255K	1.85	55	105	55	2.0	4.8	200	BM353	1.75	50	150	45	1.0	-	200		
BM158K	1.70	60	200	90	2.0	5.1	200	BM356	1.72	50	160	50	1.0	-	200		
BM113A	2.00	115	270	65	2.5	8.0	350	BM357	1.75	55	150	45	1.0	9.0	180		
BM262A	2.10	85	180	40	2.0	7.5	400	BM358	1.76	55	150	45	1.0	9.0	200		
BM120D	2.20	60	170	70	2.5	7.2	350	BM551	2.35	65	250	32	8.0	5.0	300		
BM254D	2.20	35	80	35	2.5	7.2	350	BT1056	1.79	65	150	65	2.0	4.0	500		
BM106D	2.20	65	190	75	2.5	7.2	350	BT1059	1.78	60	148	63	2.0	4.0	500		

### What is a Brush?

Although they differ in size, shape and technical composition carbon brushes and collectors all fulfil the same basic function, which is to transfer current from a moving device to a stationary point within an electric circuit.

### How a Brush is made?

There are two stages in our manufacturing.  
The processing of various raw materials to produce a range of grades of carbon.  
Machining and assembly to produce carbon brushes and other collectors for the processed grades.

### Who are we?

**BOYO CARBON** has a strong tradition and history in carbon and graphite manufacturing. It is founded in 1980. We have been making every effort to produce reliable products in superior quality. Our carbon brushes and holders are used on large industrial motors; both commutator and slipring, fractional horsepower motors, tachometers, synchronous motors, and permanent magnetic motors. We serve a wide range of industries including power generation, steel, paper, motor repair, elevator, railroad, transit, and OEM. Under the recent economical situation, the tendency of getting requirements of various type of products, reduction of production cost and more new grades with less quantities, is becoming accelerated. In order to cope with such tendency, we will continue to develop new technology and unique products, rationalization of production systems, and strengthening of enterprise constitution.

BOYO CARBON is committed to produce highly specialized carbon brushes and graphite products for customer's needing, and all BOYO manufacturing comply with ISO9001-2000 SYSTEM.

We sincerely ask for your unchanged support and very much appreciate your kind advice and guidance.



### Contact us:

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