

DATE: _____

BASIC INFORMATION (Customer name): _____

Application (Description) _____

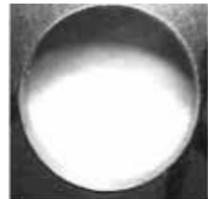
INDUSTRY (Check One):

Aerospace-Engine	Aerospace-Structure	Auto Body	Auto Chassis	Auto Engine
Auto Transmission	Construction	Electronics	Firearms	Food
Processing	Freight Transport	Glass	Housewares	Janitorial
Material Handling	Medical	Paper	Petroleum	Plumbing
Primary Metals	Recreation	Ship Building	Textile	Timber/Wood
Tire	Tooling	Welding	Other (Explain) _____	

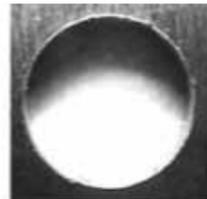
PART DESCRIPTION/NAME: _____

PART MATERIAL: _____

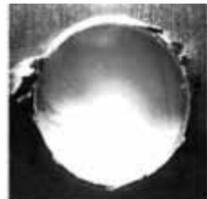
CLASS OF BURR (Check One):



CLASS ONE
Micro Burrs can only be seen with magnification.



CLASS TWO
Feather Burrs can be seen without magnification. They can be removed with your fingernail.



CLASS THREE
Burrs are small in nature, but require a lot of force to be removed.



CLASS FOUR
Burrs are large in nature and larger than CLASS THREE burr.



CLASS FIVE
Very large burrs that extrude from the base material. These burrs need to be preconditioned before brushing.

ADDITIONAL INFORMATION:

Method currently being used: _____ What does the customer currently not like? _____

By hand or machine? _____ Maximum brush size available (diameter, length, etc)? _____

Type of equipment: _____

Horsepower: _____ Maximum RPM: _____ Minimum RPM: _____ Variable? YES NO

Method preferred: _____

Volume of parts per year: _____ Cycle time desired: _____

Sample part quantity: _____ Current brush' s brand: _____ Current brush life: _____

Cost of current brush _____ Reason for improvement _____

Current brush specification (Drawing)



Takashimasangyo Co.,Ltd

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 Tel. 81-3-3943-2751 Fax. 81-3-3946-1734 URL ; http://www.ts-brush.co.jp

Pioneer of Industrial Brush and Grinding machine





Since our establishment in 1912, Takashima Sangyo Co.,Ltd. has been manufacturing and selling brushes for industrial use and special machine for brushes.

“Brushes” vary widely in their intended purpose and are used in various fields including deburring, surface processing, grinding and cleaning. Brushes are indispensable tools for “Japanese manufacturing.”

For every brushes, we utilize our expertise, experience and knowledge accumulated over 100 years, as well as the latest advanced technologies and passion, in order to create products that can satisfy all of all customer.

Breathing Life into Brushes...

Our wish is to provide you with the best brushes created with such passion and technologies, and be of benefit to our customers.

Hajime Takashima President and CEO

The company policy of Takashima Sangyo Co.,Ltd. consists of three Chinese characters: “ 正 (Sei), 速 (Soku), 美 (Bi). ”

“ 正 (Sei), ” or sincerity, expresses the spirit of having humility and modesty and honest attitude in all processes of manufacturing and sales.

“ 速 (Soku), ” or speed, refers to the spirit of more promptly creating high-quality products and more quickly delivering them to customers.

“ 美 (Bi), ” or beauty, means to always have the spirit of creating each products with affection and diligence, as well as beautiful mind to value the relationships between our staff and customers with “kindness, dedication and pleasure.”

New technologies and expertise will enhance the future.

- Takashima Sangyo Co.,Ltd will continue to grow with new technologies, ideas, the technologies that we have developed, and the three spirits of our company policy.

Standard Bristle Property List of TS Brushes

Materials	Major applications	Features	Chemical resistance and heat resistance	Standard dimensions (φ mm)		
Metallic wire	Steel wire (SW)	<ul style="list-style-type: none"> Removing rust from steel plates Separating paint from painted surfaces Polishing bases before plating Finishing welded parts Removing pressing and blanking burrs Removing cutting and grinding burrs Removing burrs from formed rubber Removing burrs from various formed parts Cleaning molds 	<ul style="list-style-type: none"> Hardness is increased by cold rolling. Hardness, collapse resistance, and abrasion resistance differ with carbon content. 	0.1 to 0.8 <Carbon content> 40C 60C 70C 80C		
	Brass plated wires (BG)	• Same as hard steel wire.	<ul style="list-style-type: none"> Hard steel wires plated with brass. High grinding performance and low ratio of breakage. 	0.12 to 0.5		
	Galvanized wires (AG)	• Metal film peeling of parts light electrical	<ul style="list-style-type: none"> Steel wires plated with zinc. High grinding performance and low ratio of breakage. 	0.12		
	Roped BG or AG wires	<ul style="list-style-type: none"> Removing welding beads Removing stubborn burrs 	<ul style="list-style-type: none"> Several brass- or zinc-plated steel wires stranded. High grinding performance and superior resistance. breakage. 	BBR ... 0.175/0.25/0.38 BRH ... 0.3		
	Stainless steel wire ropes (SUS304), (SUS316), (SUS304) Rope	<ul style="list-style-type: none"> Same as steel wire. Polishing of aluminum and stainless steel products Polishing in wet conditions and acid or alkali solution Polishing at high temperature 	<ul style="list-style-type: none"> Superior acid and alkali resistances. Superior heat resistance Has slightly magnetism. 	<ul style="list-style-type: none"> Superior acid, alkali and heat resistances SUS316 has superior acid resistance and corrosion resistance to SUS304. 	304 ... 0.08 to 0.8 316 ... 0.05/0.06/0.08/0.3 Rope ... 0.1/0.25/0.3/0.4	
	Brass wires (BSW)	<ul style="list-style-type: none"> polishing of alloy products Gigging woolen fabric Bringing out the grain of wood products 	• Soft	0.08 to 0.5		
	Iron wires	<ul style="list-style-type: none"> Deburring hard products Polishing hard products 	• Non-elastic and soft	0.1/0.15		
	Phosphor bronze wires	• For Electrical products	<ul style="list-style-type: none"> Tensile strength (1/2H): 65 to 80 kgf/mm2 Conductive 	0.1		
	Tungsten wires	• For special applications requiring heat resistance	<ul style="list-style-type: none"> Highest fusing point among metals and superior heat resistance Superior corrosion resistance and not affected by seawater Large specific gravity <Specific gravity: 19.24> 	0.05 to 0.5		
	Titanium wires	<ul style="list-style-type: none"> Atomic energy products Food and medical products For gitation 	<ul style="list-style-type: none"> Superior corrosion resistance in non-organic acids,alkalis, chlorides, seawater, gases, and corrosive environments. Small specific gravity <Specific gravity: 4.5> 	0.08 to 0.5		
Animal fibers	Horsehair		<ul style="list-style-type: none"> Softer than chemical fibers Good chemical resistance 			
	Ikatsu	<ul style="list-style-type: none"> Polishing plated products Polishing wooden and plastic products For spinning machines 	<ul style="list-style-type: none"> Softer than horse and pig hair. 	Fiber diameters is irregular and the length is limited because they are animal fibers.		
	Pig hair	<ul style="list-style-type: none"> Various types of cleaning Painting brushes Dyeing 	<ul style="list-style-type: none"> More sturdy than horsehair. 			
	White sheep hair		<ul style="list-style-type: none"> Softer than horse, ikatsu, and pig hairs. Softer contact. 			
Chemical fibers	Nylon		<ul style="list-style-type: none"> Especially high abrasion resistance among chemical fibers. Adequate bristle strength and bend recovery characteristics. Withstands continuous use for long periods. Contains no toxic substances and does not rot. Hygienic. Inferior heat resistance. Cannot be used at high temperatures. 		<ul style="list-style-type: none"> Inferior heat resistance. Cannot be used at high temperatures. Type ... Fusing point / limit use temperature 6 ... 215°C 80°C or less 66 ... 255°C 80°C or less 610 ... 215°C 80°C or less 612 ... 215°C 80°C or less High alkali resistance. Gasoline-, oil-, and detergent-resistant. Dissolves in concentrated hydrochloric acid, concentrated sulfuric acid, formic acid, and phenolic acid. Swells in glacial acetic acid. 	0.1 to 2.2 Linear/waved
		<type 6>	<ul style="list-style-type: none"> Cleaning floors Cleaning steel plates, metal meshes, non-ferrous metals, bottles, etc. Cleaning belts Finishing surfaces of wooden products For paper making For printers For spinning For road cleaning 	<Water absorption> Specific gravity 6 ... 10.7% <1.14> "Rigidity is low though tensile strength is high." 66 ... 4% to 4.5%<1.14> "Fusing point is high." 610 ... 2.5% <1.06> "Low water absorption and withstands wet conditions." 612 ... 2.5% <1.06> "Low water absorption and good at wet conditions."		
		<type 66>				
		<type 610>				
		<type 612>				
		TORAYGRIT (Japan)	<ul style="list-style-type: none"> Polishing, cleaning, and weak acid washing of steel plate surfaces Deburring various parts processed of machine parts Finishing edges after punching Surface treatment of metallic and non-ferrous metallic products TYNEX* (USA) TYNEX* (USA) Pre-processing of painting Surface processing of printed circuit boards Deburring gears, pinions, etc. Cleaning floors 	<ul style="list-style-type: none"> About 20% to 30% abrasive grains (AL103 Sic Dia) are mixed in nylon base to improve abrasion performance. Abrasion resistance, bend recovery performance, and chemical resistance are equivalent to those of nylon. 	• Same as nylon.	#1,000 to #36 0.3 to 3.0
		<TG-A>				
		<TG-C>				
		<TG-CH>				
		<DIA>				
<TX-A>						
<TX-C>						
SUNGRIT (Japan)						
<SG-A>						
Others	Polypropylene (PP)	<ul style="list-style-type: none"> Cleaning floors Cleaning cars Cleaning belts 	<ul style="list-style-type: none"> Lighter, harder and stronger than nylon. Bristle tip is likely to tear while bending recovery performance and elasticity are superior. Water absorption ... 0.3% <Specific gravity: 0.91> 	0.1 to 2.0		
			<ul style="list-style-type: none"> High acid and alkali resistance Fusing point ... 165°C Limit use temperature ... 60°C or less 			

Materials	Major applications	Features	Chemical resistance and heat resistance	Standard dimensions (φ mm)		
Chemical fibers	Others	Polyester(PE)	<ul style="list-style-type: none"> Polishing, cleaning, and weak acid washing of steel plate surfaces Brushing to cleaning grass bottles Cleaning belts 	<ul style="list-style-type: none"> Highest bristle strength among synthetic fibers Abrasion-resistance <Specific gravity: 1.38> Clean grass bottles. 	<ul style="list-style-type: none"> Easily affected by heat, acid and alkali while good at acid and alkali. Fusing point ... 260°C Limit use temperature ... 100°C or less 	0.3
		Polyphenylene sulfide (PPS)	<ul style="list-style-type: none"> Polishing at high temperatures Car industry field 	<ul style="list-style-type: none"> Bristles made of resin with superior chemical resistance and heat resistance High rigidity and dimensional stability even in high temperatures. Superior chemical resistance 	<ul style="list-style-type: none"> Good at strong acid, strong alkali, organic solvent, oil, fat, etc., even at high temperatures. <No solvent below 200°C to dissolve PPS> 	0.3/0.5
		MONOEIGHT	<ul style="list-style-type: none"> Various papermaking, printing, film making, and food machines Eliminating static electricity from conveyors, home electric appliances, and OA equipment Preventing disasters and troubles caused by static electricity 	<ul style="list-style-type: none"> Highly conductive. Conductive parts hardly come off. Has high conductivity. Made of ... Durability of electric conductive. 	<ul style="list-style-type: none"> Fusing point ... 257°C Limit use temperature ... 100°C or less 	0.15/0.3
		KONEBRIGHT KONEBRIGHT DIA	<ul style="list-style-type: none"> Deburring Descaling Cleaning 	<ul style="list-style-type: none"> Superior heat resistance. Usable in dry conditions. Stable against alkali and diluted acid. Superior chemical resistance. Meta-aramid bristles with superior repellency and abrasion-resistance. 	<ul style="list-style-type: none"> Fusing point ... 430°C Softening point ... 275°C 	0.3 to 0.7
Plant of fibers	Pakin (Tampico)	<ul style="list-style-type: none"> For cleaning Cleaning non-ferrous metallic products Polishing wooden and non-ferrous metallic products For textile printing machines and drying machines 	<ul style="list-style-type: none"> High water absorption and superior cleaning effects Low tensile strength. So easy to be broken and worn out. 	<ul style="list-style-type: none"> Easily affected by acid and alkali. Remarkably wear over 80°C. Moisture contents ... 9% to 14% Limit use temperature ... 80°C or less 		
		Palm	<ul style="list-style-type: none"> For cleaning Scrubbing 	<ul style="list-style-type: none"> Good water absorption. Superior cleaning effects. Low tensile strength. Collapses and wears remarkably. 	<ul style="list-style-type: none"> Easily affected by acid. Has some alkali resistance but Moisture contents ... 9% to 14% Limit use temperature ... 80°C or less 	
		Fern	<ul style="list-style-type: none"> Polisher brushes Cleaning floors 	<ul style="list-style-type: none"> Thick and hard Good water absorption. Superior cleaning effects. Low tensile strength. So easy to be broken and worn out. 	<ul style="list-style-type: none"> Easily affected by acid. some alkali resistance but is subject to deterioration. Moisture content ... 9% to 14% Limit use temperature ... 80°C or less 	

Bristle example	Remarks	Diameter (mm)
Hard steel wire (SW)	Single wave/ double waves	0.1 to 0.8
Brass plated wires (BG)		0.12 to 0.5
Galvanized wires (AG)		0.12
Roped BG wires		0.175/0.25/0.38
Roped AG wires		0.3
Stainless steel wires (304)		0.08 to 0.8
Stainless steel wires (316)		0.05/0.06/0.08/0.2/0.3/0.6
Stainless rope wires (304)		0.1/0.25/0.27/0.3/0.4/1.0/1.2
Brass wire BSW		0.08 to 0.5
Iron wires		0.1/0.15
Phosphor bronze wires	0.1	
Tungsten wires	0.05	
Horsehair/white sheep hair		
Nylon (N)	Linear	0.064 to 2.2
Nylon (N)	Double waves	0.2/0.3/0.4/0.5
Polypropylene (PP)	Linear	0.1 to 2.0
Polypropylene (PP)	Double waves	0.2/0.3/0.4/0.5/0.6/0.7
Polyester (PE)	Double waves	0.5
Polyphenylene sulfide (PPS)	Linear	0.3/0.5
Polybutylene telephthalate (PBT)	Double waves	0.5
Polyvinyl chloride (PVC)	Linear/waved	0.3
Teflon	Linear	0.889
KONEBRIGHT	Linear	0.15 to 0.7
MONOEIGHT	Linear	0.15/0.3
Pakin	Linear	

Commodity code	Grit type	Grit size	Diameter(mm)	
Abrasive nylon	TG-A	Aluminum oxide	80	1.0
			100	0.9
			180	0.55/0.7/0.9
			240	0.55
			320	0.55
		500	0.45	
		Silicon carbide	36	3.0
			46	1.8/2.0
			80	1.3
			100	1.0
180	0.7/0.9			
TG-C	Silicon carbide	240	0.55/0.8	
		320	0.55/0.7	
		500	0.45	

Commodity code	Grit type	Grit size	Diameter (mm)
TG-CH	Silicon carbide	80	1.1/2.0/3.0
		100	1.0/1.25
		180	0.9/1.0
		240	0.6/0.9/□1.0
		320	0.6
TG-D	diamond	500	0.45/0.6
		400	0.3/0.45/0.55/0.7/0.8
		600	0.25/0.45
TX-A	Aluminum oxide	800	0.25/0.45/0.7
		1100	0.25
		80	1.0
		180	0.875
		240	0.75
TX-C	Silicon carbide	320	0.55
		500	0.45
		600	0.3/0.45
		46	1.5
		60	1.125
SG-A	Aluminum oxide	80	1.0/1.25
		120	0.55/1.0
		180	0.875
		240	0.75
		320	0.55
KONEBRIGHT	Silicon carbide	500	0.45
		1,000	0.45
		500	0.2/0.3/0.5
		1,000	0.7
		1,000	0.7
KONEBRIGHT	Diamond	100	0.55
		120	0.7
		500	0.5/0.7
		800	0.3/0.5/0.6
		1,000	0.3/0.5

Wheel Brushes



1. Wire Wheel Brush

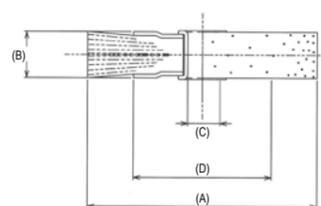
These are all-round brushes that remove burrs in short time.

Features

- These brushes may be used alone or by laminating several brushes.
- Strictly selected bristles offer superior abrasion resistance and wear resistance.

Applications

- Removing slush from rubber and plastic products.
- Finishing surfaces of aluminum, copper, brass, and stainless products
- Separating paint and cleaning concrete refuses.
- Removing rust and burrs from inside and outside of pipes and threads and cleaning them.
- Removing burrs from gears, cast iron parts, cut faces of pipes, etc.
- Cleaning before/after welding.
- Bringing out the grain of plywood and decorative wood.
- Roughing skin surfaces.



Standard Dimensions of Wire Wheel Brushes

Dia(A) (φ mm)	Thickness from top to bottom face plates(B)(φ mm)	Arbor Hole(C) (φ mm)	Diameter at Face Plates(D) (φ mm)	Steel wire SW φ 0.3(mm)	Stainless steel wire SUS φ 0.3(mm)	Brass wire BSW φ 0.15(mm)
				Commodity code	Commodity code	Commodity code
75	12	10	45	WH-0751	WHS-0751	WHB-0751
75	12	12.7	45	WH-0753	WHS-0753	WHB-0753
100	13	10	50	WH-1001	WHS-1001	WHB-1001
100	13	12.7	50	WH-1003	WHS-1003	WHB-1003
100	13	16	50	WH-1006	WHS-1006	WHB-1006
125	15	10	65	WH-1251	WHS-1251	WHB-1251
125	15	12.7	65	WH-1253	WHS-1253	WHB-1253
125	15	16	65	WH-1256	WHS-1256	WHB-1256
125	15	25.4	65	WH-1250	WHS-1250	WHB-1250
150	16	12.7	75	WH-1503	WHS-1503	WHB-1503
150	16	16	75	WH-1506	WHS-1506	WHB-1506
150	16	25.4	75	WH-1500	WHS-1500	WHB-1500
200	18	16	90	WH-2006	WHS-2006	WHB-2006
200	18	25.4	90	WH-2000	WHS-2000	WHB-2000
250	18	25.4	100	WH-2500	WHS-2500	WHB-2500
300	19	25.4	125	WH-3000	WHS-3000	WHB-3000

*Brass wire brushes would be different thickness.

1)Brushes of thicknesses,hole diameters,outer plate diameters and bristle heights not shown in the standard dimension list above may be made to order.

2)Other bristles not shown in the standard dimension list above may be made to order.

2. Wheel Brush (Abrasive nylon)

Offers superior workability and delicate finishing.

Enables safe work with minimized collapse of bristles, different from metallic wire brushes.

Usable in hot water and wet environments.

Features

- Twenty to thirty percent of abrasive grains are added to nylon base material to improve the polishing ability of bristles.
- Abrasion resistance, bend recovering performance, chemical resistance, and other features are equivalent to the nylon brushes.
- Abrasive grains mixed all over the bristles offer stable performance for long periods even if the bristles are worn.

Applications

- Roughing surfaces of FRP, rubber, leather and synthetic resin products before gluing.
- Pre-processing of iron or non-ferrous parts before plating or painting.
- Finishing surfaces of aluminum or copper plates.
- Removing slight rust and oxide film.
- Removing burrs from gears and metallic parts and finishing them.
- Polishing turbines and blades.
- Bringing out the grain of plywood and decorative wood.



Standard dimensions of Abrasive Nylon wheel Brushes(TX-C)

Dia(A) (φ mm)	Thickness from top to bottom face plates(B)(φ mm)	Arbor Hole(C) (φ mm)	Diameter at Face Plates(D)(φ mm)	Coarse (#120) φ 1.0(mm)	Middle (#240) φ 0.75(mm)	Fine (#320) φ 0.55(mm)
				Commodity code	Commodity code	Commodity code
100	13	12.7	65	WHX-1003K	WHX-1003M	WHX-1003A
200	18	25.4	100	WHX-2000K	WHX-2000M	WHX-2000A
300	19	25.4	150	WHX-3000K	WHX-3000M	WHX-3000A

1)Brushes of thicknesses,hole diameters,outer plate diameters and bristle heights not shown in the standard dimension list above may be made to order.

2)Other bristles not shown in the standard dimension list above may be made to order.

3. Twist Wheel Brush

Heavy-duty brushes (for heavy grinding) suitable for removing welding beads and stubborn burrs.

Features

- Single bristles are bundled and stranded to obtain high bristle strength and powerful polishing ability.
- Brushes may be used alone or by laminating several brushes.
- Strictly selected hard steel wires offer powerful polishing ability and long service life.

Applications

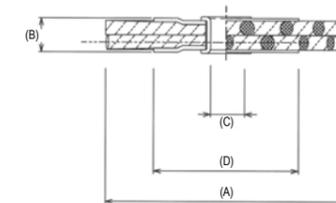
- Removing slush from rubber products.
- Cleaning pipelines and others before/after welding.
- Removing burrs from inside and outside of pipes and threads and cleaning them.
- Separating paint and cleaning concrete frameworks.
- Rough-finishing outside of high-quality bricks.

Standard Dimensions of Twist Wheel Brushes

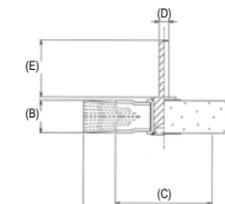
Dia(A) (φ mm)	Thickness from top to bottom face plates(B)(φ mm)	Arbor Hole(C) (φ mm)	Diameter at Face Plates(D) (φ mm)	Steel wire SW φ 0.5(mm)
				Commodity code
100	11	12.7	60	WHT-1003
150	11	25.4	75	WHT-1500
200	12	25.4	100	WHT-2000
250	12	25.4	150	WHT-2500
300	13	25.4	200	WHT-3000

1)Brushes of thicknesses,hole diameters,outer plate diameters and bristle heights not shown in the standard dimension list above may be made to order.

2)Other bristles not shown in the standard dimension list above may be made to order.



4. Wheel Brush with shank



Standard size

Dia (A)	Thickness from top to bottom face plates(B)(φ mm)	Diameter at Face Plates(C)(φ mm)	Shank(D) × (E) (φ mm)	Steel wire SW0.3	Stainless steel wire SUS0.3	Brass wire BSW0.15
				Commodity code	Commodity code	Commodity code
25	6	---	6 × 35	WS-025	WSS-025	WSB-025
30	6	---	6 × 35	WS-030	WSS-030	WSB-030
40	10	20	6 × 35	WS-040	WSS-040	WSB-040
50	11	25	6 × 35	WS-050	WSS-050	WSB-050
65	11	25	6 × 35	WS-065	WSS-065	WSB-065
75	11	25	6 × 35	WS-075	WSS-075	WSB-075
100	12	38	6 × 35	NWS-100	NWSS-100	NWSB-100

1)Brushes of thicknesses,hole diameters,outer plate diameters and bristle heights not shown in the standard dimension list above may be made to order.

2)Other bristles not shown in the standard dimension list above may be made to order.

How to order wheel brushes

Specify the commodity codes to order the standard type. See the following and place an order for other types

Type	Outer diameter	Thickness	Hole diameter	Outer plate	Bristle material	Wire diameter(Gauge)	Qty
Wire							
Abrasive Nylon							
Twist							

Cup Brushes



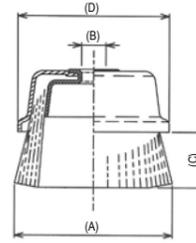
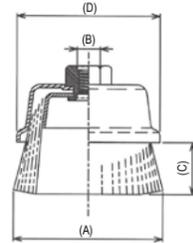
1. Waved-Wire Cup Brush

Features

- Has an anti-collapse bracket, which does not damage the root of spreading wires.
- Bristle density, waves, and trim are made to the best balance.
- Products made to meet high balance standard apply low vibrations to arms and are suitable for work at high revolutions.

Applications

- Removing rust and stains from various metallic products
- Cleaning before/after welding
- Polishing tanks and drums of ships, bridges, etc.
- Separating paint



Standard Dimensions of Waved-Wire Cup

Dia (A) (φ mm)	Arbor Hole (B) (φ mm)	Trim length (C) (mm)	Cup diameter (D) (φ mm)	Steel wire		Stainless steel wire		Brass wire
				SW φ 0.25(mm)	SW φ 0.3(mm)	SUS φ 0.25(mm)	SUS φ 0.3(mm)	BSW φ 0.15(mm)
30	M10 P=1.5	-	17	CML-030 (BBR0.25 Plated stranded wires)				
75	M10 P=1.5	-	25	CMR-075 (BBR0.25 Plated stranded wires)				
40	M10 P=1.5	-	20	CM-040		CMS-040		CMB-040
50	M10 P=1.5	-	20	CM-050		CMS-050		CMB-050
60	M10 P=1.5	-	27		CM-060		CMS-060	CMB-060
75	M10 P=1.5	-	25		CM-075		CMS-075	CMB-075
90	M16 P=2.0	-	25		CM-090		CMS-090	CMB-090
120	M16 P=2.0	-	38		CM-120		CMS-120	CMB-120
75	-	16	25	CHR-0756 (BBR0.25 Plated stranded wires)				
75	-	16	25		CH-0756		CHS-0756	CHB-0756
90	-	16	25		CH-0906		CHS-0906	CHB-0906
90	-	22	25		CH-0902		CHS-0902	CHB-0902
120	-	22	38		CH-1202		CHS-1202	CHB-1202

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

2. OR Cup Brush

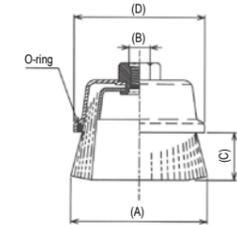
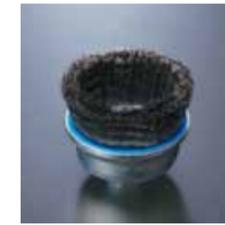
Use More and Enjoy High Performance! O-Ring Effects
Features a Service Life Three Times as Long as Traditional Brushes!

Features

- Elastic ring protects the wire root softly. No wires will scatter and safe work is ensured even if brushes are used under harsh conditions.
- Has superior elasticity compared to traditional products and fits corners and uneven surfaces well.
- Products made to meet high balance standard apply low vibrations to arms and are suitable for work at high revolutions.
- Strictly selected bristle material and elastic ring effects increase the service life three times as long as those of the traditional products.

Applications

- Removing rust and stains from various metallic products
- Cleaning before/after welding
- Polishing tanks and drums of ships, bridges, etc.
- Separating paint



Standard size

Dia (A) (φ mm)	Arbor Hole (B) (φ mm)	Trim length (C) (mm)	Cup diameter (D) (φ mm)	Steel wire SW φ 0.3(mm)		Stainless steel wire SUS φ 0.3(mm)	
				Commodity code	Commodity code	Commodity code	Commodity code
75	M10 P=1.5	-	25	68	CMOR-075	CMSOR-075	
90	M16 P=2.0	-	25	89	CMOR-090	CMSOR-090	
120	M16 P=2.0	-	38	114	CMOR-120	CMSOR-120	
75	-	16	25	68	CHOR-0756	CHSOR-0756	
90	-	16	25	89	CHOR-0906	CHSOR-0906	
90	-	22	25	89	CHOR-0902	CHSOR-0902	
120	-	22	38	114	CHOR-1202	CHSOR-1202	

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

3. Twist cup brush

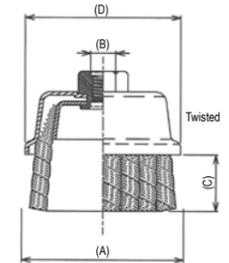
Yori Line Effect / By bundling and twisting single bristles, it yields tough hair and dramatically improves grinding power..

Features

- Stable flocking and stiffening are given.
- We are commercializing with high balance standards, so vibration to the arm is less and work fatigue is reduced.
- It fits perfectly for any power tool.

Applications

- Eliminate stubborn rust and dirt of various metal products
- Beat removal and cleaning before and after welding process
- Polishing of tanks and drums such as shipbuilding and bridges
- Paint peeling off

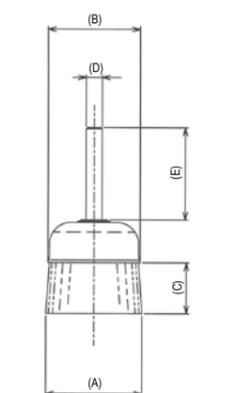


Standard size

Dia (A) (φ mm)	Screw and pitch (B) (mm)	Arbor Hole (B) (φ mm)	Trim length (C) (mm)	Cup diameter (D) (φ mm)	Steel wire SW φ 0.5	
					Commodity code	Commodity code
60	M10 P=1.5	-	27	60	CMT-060	
75	M10 P=1.5	-	25	68	CMT-075	
90	M16 P=2.0	-	30	80	CMT-090	
120	M16 P=2.0	-	30	110	CMT-120	
75	-	16	25	68	CHT-0756	
90	-	16	30	80	CHT-0906	
90	-	22	30	80	CHT-0902	
120	-	22	30	110	CHT-1202	

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

4. Cup Brush with Shank



Standard size

Dia (A) (φ mm)	Cup diameter (B) (φ mm)	Trim length (C) (mm)	Shank (D) × (E) (φ mm)	Steel wire SW0.25		Stainless steel wire SUS0.25		Brass wire BSW0.15	
				Commodity code	Commodity code	Commodity code	Commodity code		
40	35	25	6 × 35	CS-040	CSS-040	CSB-040			
50	46	25	6 × 35	CS-050	CSS-040	CSB-050			

1)Brushes of thicknesses, hole diameters, outer plate diameters and bristle heights not shown in the standard dimension list above may be made to order.
2)Other bristles not shown in the standard dimension list above may be made to order.

Bevel Brushes



1. Waved-wire bevel brush

Superior workability

•Flat-disc-shape outer bracket and spread bristles offer superior workability.

Lightweight

•As small and light a bracket as possible reduces fatigue even in long-time work.

Flattening effects

•Spreading bristles facilitate work in the corners.

Features

- Used when the bevel type is more effective, depending on the work positions and work shapes, though it may be used in the same manner as the cup type.
- Products made to meet high balance standard apply low vibrations to arms and are suitable for work at high revolutions.
- Fits well to any motor-driven tools.

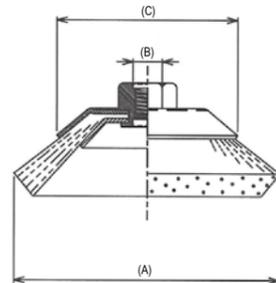
Applications

- Removing stubborn rust and stains from various metallic parts
- Cleaning before and after welding
- Cleaning tanks and drums of ships, bridges, etc., and separating paint



Standard Dimensions of Bevel Type Brushes

Dia (A) (φ mm)	Arbor Hole (B) (φ mm)	Cup diameter (C) (φ mm)	Steel wire SW φ 0.3(mm)	Stainless steel wire SUS φ 0.3(mm)	Brass wire BSW φ 0.15(mm)
			Commodity code	Commodity code	Commodity code
85	M10 P=1.5	-	BMR-085 (BBR0.25 Plated stranded wires)		
85	M10 P=1.5	-	BM-085	BMS-085	BMB-085
100	M10 P=1.5	-	BM-100	BMS-100	BMB-100
125	M16 P=2.0	-	BM-125	BMS-125	BMB-125
175	M16 P=2.0	-	BM-175	BMS-175	BMB-175
100	-	16	BHR-1006 (BBR0.25 Plated stranded wires)		
100	-	16	BH-1006	BHS-1006	BHB-1006
125	-	16	BH-1256	BHS-1256	BHB-1256
125	-	22	BH-1252	BHS-1252	BHB-1252
175	-	22	BH-1752	BHS-1752	BHB-1752



2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

2. OR bevel brush

Ability to understand enough to wipe out! "O ring effect" Longevity lasts three times longer than conventional products!

Features

- Because of the shape of the dish, there are features with less shape change even if it rotates.
- Because the brush's lowness is low, it is excellent in operability.
- Since the elastic ring protects the base of the wire like the cup type, it is possible to work securely with less wire scattering.

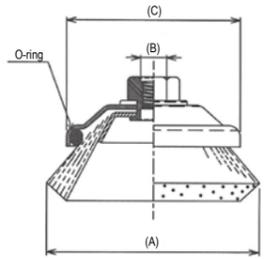
Applications

- Rust and dirt removal of various metal products
- Cleaning before and after welding
- Ship and bridge etc. tank and drum polish
- Paint peeling off



Dia (A) (φ mm)	Arbor Hole (B) (φ mm)	Cup diameter (C) (φ mm)	Steel wire SW φ 0.3(mm)	
			Commodity code	
90	M10 P=1.5	-	73	BMOR-090
110	M16 P=2.0	-	78	BMOR-110
90	-	16	73	BHOR-0906
110	-	16	78	BHOR-1106
110	-	22	78	BHOR-1102

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.



3. Twisted Bevel Brush

Strong Hammer Effects for Heavy Polishing

•Impacts (hammer effects) produced when the brush bristles rotating at high speed hit products remove burrs, rust, stains, and foreign matter from work in a short time.

Standard Wire Effects

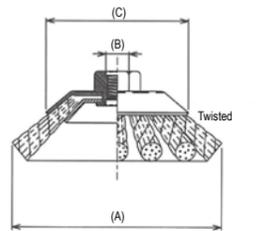
•Each brush bristle is bundled and stranded to increase the bristle strength and produce remarkably high polishing performance.

Features

- Automatic implanting machine offers highly stable implanting and stranding.
- Products made to meet high balance standard apply low vibrations to arms and reduce fatigue in the work.
- Fits well to any motor-driven tools.

Applications

- Removing stubborn rust and stains from various metallic parts
- Removing beads and cleaning before/after welding
- Polishing tanks and drums of ships, bridges, etc.
- Separating paint



Standard Dimensions of Twisted Bevel Brushes

Dia (A) (φ mm)	Arbor Hole (B) (φ mm)	Cup diameter (C) (φ mm)	Steel wire SW φ 0.5(mm)	
			Commodity code	
100	M10 P=1.5	-	68	BMT-100
100	-	16	68	BHT-1006

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

How to order bevel or cup type brushes

Specify the commodity codes to order the standard type. See the following and place an order for other types.

	Type	Outer diameter	Method (screw, hole)	Trim Length	Cup diameter	Bristle material	Bristle diameter	Qty
	Waved-wire							
	Twist							

CAUTION

The brush user and other persons in the brushing area must put on protectors.



End Brushes



Three brushes shapes are available according to the application.

- For inner bottoms of parts and dead-end holes [Straight]
- For inner surfaces and bottoms of cylinders [Umbrella]
- For inner side walls in pipes [Flat]

Most suitable for polishing of narrow parts.

- Most suitable for narrow parts that can not be polished with the wheel, cup, and bevel types.
- Used to remove rust and post-welding scales from corners and L-shape positions.

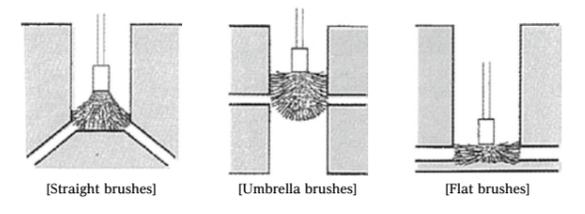
Features

- Bundling, resin processing and staggering may be done freely according to the processing points.
- Proper types of brushes are made according to the mounting methods of robots and NC machines.
- Fits well to any motor-driven tools.
- Pinpoint caulking prevents dislocation. (Pat. P)

Applications

- Removing rust and stains from various metallic parts.
- Cleaning before and after welding.
- Cleaning tanks and drums of ships, bridges, etc., and separating paint.
- Deburring, polishing, cleaning angle corners, hole bottoms and side walls.
- Cleaning screw holes

May be used properly according to points.



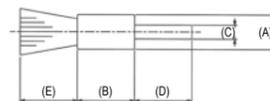
Select proper brushes according to the processing points

1. Straight type

Standard Dimensions of Straight Brushes

Tube diameter (A) (φ mm)	Tube length (B) (mm)	Shank(C) × (D) (φ mm)	Trim length(E) (mm)	Plated stranded wire BRH φ 0.3(mm) Commodity code	Stainless steel wire SUS φ 0.3(mm) Commodity code	Brass wire BSW φ 0.15(mm) Commodity code
6	20	6 × 25	25	E-006	ES-006	EB-006
8	20	6 × 25	25	E-008	ES-008	EB-008
10	20	6 × 25	25	E-010	ES-010	EB-010
13	20	6 × 25	25	E-013	ES-013	EB-013
15	25	6 × 25	25	E-015	ES-015	EB-015
20	25	6 × 35	30	E-020	ES-020	EB-020
25	30	6 × 35	30	E-025	ES-025	EB-025
30	30	6 × 35	30	E-030	ES-030	EB-030

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.



2. Flat type

Standard Dimensions of Flat Brushes

Dia (A) (φ mm)	Tube diameter (B) (φ mm)	Tubelength (C) (mm)	Shank(C) × (D) (φ mm)	Steel wire SW φ 0.3(mm)	Stainless steel wire SUS φ 0.3(mm)
				Commodity code	Commodity code
25	15	25	6 × 25	EH-025	EHS-025
30	15	25	6 × 25	EH-030	EHS-030
35	20	25	6 × 35	EH-035	EHS-035
40	20	25	6 × 35	EH-040	EHS-040
45	25	30	6 × 35	EH-045	EHS-045
50	25	30	6 × 35	EH-050	EHS-050

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.



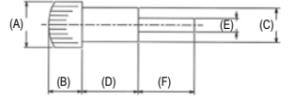
3. Umbrella type

Standard Dimensions of Umbrella (Square) Brushes

Colored brushes are made to order

Dia (A) (φ mm)	Trim Length (B) (mm)	Tube diameter (C) (φ mm)	Tube length (D) (mm)	Shank(E) × (F) (φ mm)	Steel wire SW φ 0.3(mm)	Stainless steel wire SUS φ 0.3(mm)
					Commodity code	Commodity code
20	15	15	25	6 × 25	EK-020	EKS-020
25	15	15	25	6 × 25	EK-025	EKS-025
30	25	20	25	6 × 35	EK-030	EKS-030
35	25	20	25	6 × 35	EK-035	EKS-035
40	30	25	30	6 × 35	EK-040	EKS-040
45	30	25	30	6 × 35	EK-045	EKS-045

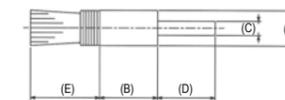
2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.



Spring type



[Straight spring type]



Straight bundled type



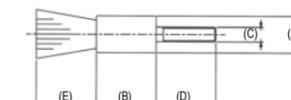
[Straight bundled type]



Male Screw type



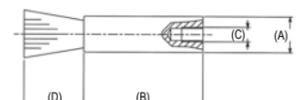
[Screw-in type, male threads]



Female thread type



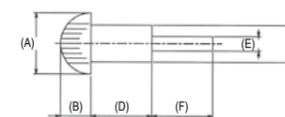
[Screw-in type, female threads]



Half-round type



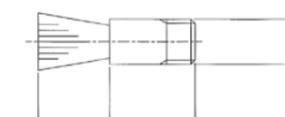
[Half-round type]



Point type



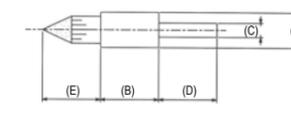
[Point type]



Pen type



[Pen type]



Wire rope brush

Strong wire ropes are loosened and made into brushes for improved polishing performance and higher durability



CAUTION

The brush user and other persons in the brushing area must put on protectors.



How to order end brushes

	Type	Outer diameter	Height	Tube diameter	Tube length	Shank diameter	Shank length	Bristle height	Bristle material	Wire diameter (Gauge)	Others
Straight type	-	-									
Umbrella type								-			Threaded(male screws and female screws), with springs, bundled, etc.
Flat type								-			

Dot Brushes



We provide the global environments with harmony and circulation.

- Only worn bristles may be replaced, resulting in reduced running costs.
- Implanting plates may be recycled as many times as needed. (The P type is not recyclable.)

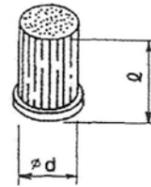
We provide comfortable work environments.

- Lightweight brushes reduce fatigue even in long-time work.
- Wear correction ability reduces the maintenance time. (The P type is not wear-correct label.)
- Hardly collapsing nylon bristles offer safe work.

Shapes of dot brush

Dimensions

Commodity code	Dot diameter (d)	Dot length(e)
DM 6	6	25mm- 110mm
DM 8	8	25mm- 110mm
DM 10	10	35mm- 110mm
DM 12	12	35mm- 110mm
DM 14	14	35mm- 110mm
DM 20	20	35mm- 110mm



Features

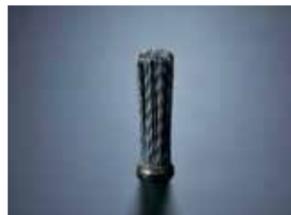
- Low-cost brushes of which only the worn bristles may be replaced.
- Selectable dot diameters: 6 to 20 mm.
- Special processing eliminates bristle falling and ensures safe work.
- Mixed bristles of different grain sizes offer effective finishing.
- TS mark is stamped at the top of the bristles.

Applications

- Removing stubborn rust and stains from various metallic parts
- Removing rust and cleaning the inside and outside of pipes
- Deburring and finishing the surfaces of car, hydraulics, and home electric appliance parts
- Separating paint
- Polishing and cleaning threads and holes



<Large-diameter single dot brushes>

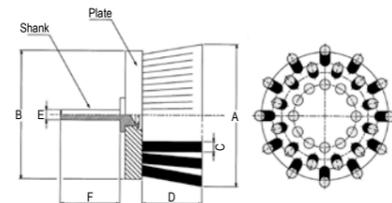


Variations

P type

Features

- Bristles implanted in resin plates provide fatigue-free work with light weight brushes.
- Selectable dot diameters and implanting pitches.
- Color-coded plates enable easy discrimination of bristle gauges.
- Specifications may be changed according to installation methods for existing machines.
- The P type is incapable of bristle replacement or wear correction.



Standard Dimensions

Dia (A) (φ mm)	Plate diameter (B) (φ mm)	Dot diameter (C) × Rows (The number of dots)	Trim length (D) (mm)	Shank dimensions (Shank dia × Shank length)	Coarse (#120) φ 1.0mm black Commodity code	Middle (#240) φ 0.75mm green Commodity code	Fine (#320) φ 0.55mm red Commodity code
70	66	φ 6 × 2(25)	35	φ 6 × 35L	P-70K	P-70M	P-70A
80	75	φ 6 × 3(36)	35	φ 6 × 35L	P-80K	P-80M	P-80A
105	100	φ 6 × 3(59)	35	φ 6 × 35L	P-105K	P-105M	P-105A
130	125	φ 8 × 3(72)	35	φ 6 × 35L	P-130K	P-130M	P-130A

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

LC type

Features

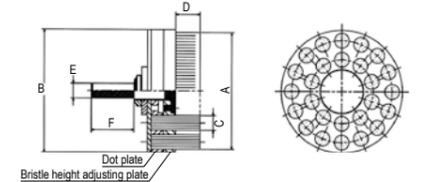
- Consumable costs may be reduced remarkably by replacing worn dot brushes.
- Appropriate plate diameters are selectable.
- Bristles of different grain sizes may be mixed and implanted.
- The implanting plates are processed especially to improve the abrasion resistance.
- The bristle height may be set in steps at 5/10 mm pitches.



(Optional)

<Others>

- Specifications may be changed according to installation methods for existing machines.
- Brushes of the plate diameters, dot diameters, pitches, and bristle angles appropriate to applications may be made to order.



Standard Dimensions

Dia (A) (φ mm)	Plate diameter (B) (φ mm)	Dot diameter (C) × Rows (The number of dots)	Trim length (D) (mm)	Shank dimensions (Shank dia × Shank length)	Coarse (#120) φ 1.0(mm) Commodity code	Middle (#240) φ 0.75(mm) Commodity code	Fine (#320) φ 0.55(mm) Commodity code
95	100	φ 12 × 2(26)	25	φ 12 × 35L	LC-100K	LC-100M	LC-100A
120	125	φ 12 × 2(35)	25	φ 12 × 35L	LC-125K	LC-125M	LC-125A
155	160	φ 12 × 2(50)	25	φ 12 × 35L	LC-160K	LC-160M	LC-160A

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

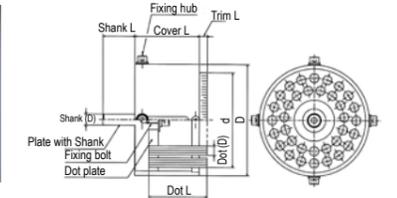
LA type

Features

- Consumable costs may be reduced remarkably by replacing worn dot brushes.
- The bristle length may be set freely.
- The long dot brushes (overall length: 63 mm) are available as the standard products, resulting in high cost advantages.
- The bristle height is adjusted by loosening four bolts on the side.

<Others>

- Specifications may be changed according to installation methods for existing machines.



Standard Dimensions

Dia (A) (φ mm)	Dot diameter (φ d mm)	Dot length (L) (mm)	The number of dots	Cover dimensions (B × C)	Shank dimensions (Shank dia × Shank length)	Coarse (#120) φ 1.0(mm) Commodity code	Middle (#240) φ 0.75(mm) Commodity code	Fine (#320) φ 0.55 (mm) Commodity code
70	8	70	24	φ 80 × 70L	φ 12 × 35L	LA-70K	LA-70M	LA-70A
90	10	63	26	φ 100 × 70L	φ 12 × 35L	LA-90K	LA-90M	LA-90A
110	10	63	35	φ 120 × 70L	φ 12 × 35L	LA-110K	LA-110M	LA-110A

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

Techno Star Series

TS-M Brush

Features

- It is the world's first new brush composed only of brush material.
- Structures that do not use metal fittings are lighter than channel type brushes.
- Since there is no flocked plate, there is no missing brush during rotation.
- Lifetime extension can be attained with 1.3 times higher density than conventional structure.
- It contributes to energy conservation with super lightweight brush with less motor load.
- Since it does not contain metal members, it is not necessary to sort and discard.

Applications

- Deburring of mechanical parts
- Surface treatment of various parts
- For cleaning · for food
- Cleaning of mold



TS-R Brush

Features

- It is a new brush composed of fusion of brush material and adhesive resin.
- It does not damage the target workpiece due to resinification of the flange.
- Since it does not contain metal members, it is not necessary to sort and discard.
- Partial transplantation is also possible with a brush structure without shape collapse.
- Since we do not use flocked plates, we do not have a knot at the time of rotation.
- The service life can be extended with 1.3 times higher density than the conventional structure.
- Shaft hole shape can be set arbitrarily, such as irregular shape, two way picking.
- It can also be manufactured with high density DOT type.

Applications

- Deburring of mechanical parts
- Surface treatment of various parts
- For cleaning · for food
- Cleaning of mold



Miniature Brushes



Superior durability

- Many implanted bristles offer superior durability.

Compact and superior operability

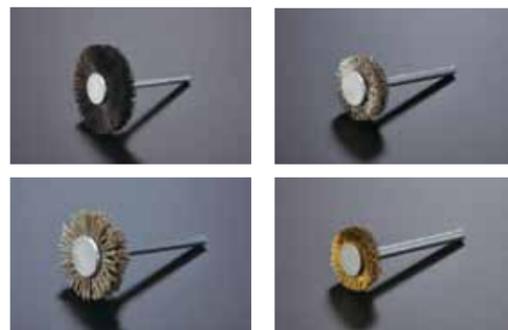
- Bristles reach the corners of narrow positions due to small diameters, resulting in superior work efficiency.
- Fits well and brushes uneven surfaces and curved surfaces evenly.

Features

- Lightweight and sturdy.
- Uniformly implanted bristles
- Available in various materials according to the application.

Applications

- Removing oxide film from mechanical parts
- Removing small burrs from various parts
- Intermediate finishing of dental technicians' work
- Cleaning molds



Miniature wheel brush with shank

Standard Dimensions of Miniature Wheel Brushes with Shanks

Dia (A) (φ mm)	Thickness from top to bottom face plates(B)	Diameter at Face Plates(C) (φ mm)	Shank (D) × (E) (φ mm)	Steel wire SW0.15 Commodity code	Stainless steel wire SUS0.15 Commodity code
18	6	10	3 × 30	WSM-018	WSSM-018
20	6	10	3 × 30	WSM-020	WSSM-020
22	6	10	3 × 30	WSM-022	WSSM-022
25	6	10	3 × 30	WSM-025	WSSM-025

2) Other bristles or dimensions not shown in the standard dimension list above may be made to order.



Polishing slits

Super MINI Wheel Brush with Shank

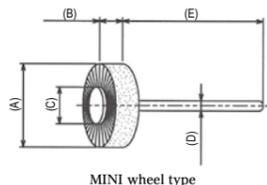
More compact super miniature brushes

Features

- Removing oxide film from mechanical parts
- Removing small burrs from various parts
- Intermediate finishing of dental technicians' work
- Cleaning molds

Applications

- Thinner bristles reach every corner of narrow positions.
- Fits well and brushes uneven surfaces and curved surfaces evenly.



MINI wheel type



Polishing slits

Standard Dimensions of Super MINI Wheel Brushes with Shank

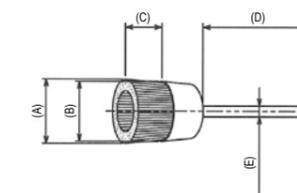
Dia (A) (φ mm)	Thickness from top to bottom face plates(B)	Diameter at Face Plates(C) (φ mm)	Shank (D) × (E) (φ mm)	Stainless steel wire φ 0.10(mm) Commodity code	Brass wire BSW φ 0.10(mm) Commodity code	Diamond abrasive nylon TG-D#400- φ 0.3(mm) Commodity code	Abrasive nylon SG-A#1000- φ 0.3(mm) Commodity code
8	2	6	3 × 30(40)	WSSM-008	WSBM-008	WSDM-008	WSGM-008
9	2	6	3 × 30(40)	WSSM-009	WSBM-009	WSDM-009	WSGM-009
10	2	6	3 × 30(40)	WSSM-010	WSBM-010	WSDM-010	WSGM-010
11	2	6	3 × 30(40)	WSSM-011	WSBM-011	WSDM-011	WSGM-011
12	3	8(6)	3 × 30(40)	WSSM-012	WSBM-012	WSDM-012	WSGM-012
13	3	8(6)	3 × 30(40)	WSSM-013	WSBM-013	WSDM-013	WSGM-013
14	3	8(6)	3 × 30(40)	WSSM-014	WSBM-014	WSDM-014	WSGM-014
15	3	8(6)	3 × 30(40)	WSSM-015	WSBM-015	WSDM-015	WSGM-015

2) Other bristles or dimensions not shown in the standard dimension list above may be made to order.



Deburring from formed resin parts

Standard Dimensions of Miniature Cup Brushes with Shank



Miniature Cup Brushes with Shank

Outer diameter (A)	Cup diameter(B)	Trim length (C)	Shank diameter (E)	Shank length (D)	Hardsteel wire SW φ 0.15	Stainless steel wire SUS φ 0.15
					Commodity code	Commodity code
20	16	10	3	30	CSM-020	CSSM-020
25	20	10	3	30	CSM-025	CSSM-025

2) Other bristles or dimensions not shown in the standard dimension list above may be made to order.

Super MINI Cup Brushes with Shank

Outer diameter (A)	Cup diameter (B)	Trim length (C)	Shank diameter (E)	Shank length (D)	Stainless steel wire φ 0.10(mm)	Diamond abrasive nylon TG-D#400- φ 0.3(mm)	Abrasive nylon SG-A#1000- φ 0.3(mm)
					Commodity code	Commodity code	Commodity code
13	10	6	3	30	CSSM-013	CSDM-013	CSGM-013
16	12	8	3	30	CSSM-016	CSDM-016	CSGM-016

2) Other bristles or dimensions not shown in the standard dimension list above may be made to order.

Wonder Lap Brush

Diamond electro deposition brush! Brush for "small diameter hole" "intersection hole" "irregular hole"

Features

- Even if the hole diameter is different, we can deal with burrs with a single brush as we will utilize the expansion and contraction action of the tip.
- It is a brush that realized high grindability by electrodeposition of diamond.
- Ideal for processing holes and intersecting holes with stepped bore.
- You can uniformly remove the outer peripheral burr of the molded product while tracing at a constant pressure.
- You can select the tip shape according to the application.

Applications

- Deburring inside and outside of various parts
- Deburring of small diameter modified hole / crossing hole
- Deburring of the inner hole of hydraulic parts
- Roughing and finishing treatment of inner diameter part



Standard size

Diameter of one line (mm)	Dimension of shank Shank diameter × Shank length	Trim length (mm)	Coarse diamond (#180)	Middle (#320)	Fine (#500)	RPM recommended
			Commodity code	Commodity code	Commodity code	
φ 0.5x7pcs	φ 6 × 70L	55	WD-050K	WD-050M	WD-050A	2,500 ~ 8,000
φ 0.8x6pcs	φ 6 × 70L	55	WD-100K	WD-100M	WD-100A	2,500 ~ 8,000
Flat line × 13pcs	φ 13 × 6 × 25L	40	WD-130K	WD-130M	WD-130A	2,500 ~ 8,000
Roughness			6.3S ~	6.3S ~ 3.0S	3.0S ~	

1) Brushes of thicknesses, hole diameters, outer plate diameters and bristle heights not shown in the standard dimension list above may be made to order.

2) Other bristles not shown in the standard dimension list above may be made to order.

Spiral Brushes



Brushes for cleaning screw holes and inside of small-diameter pipes

•Fits well and brushes uneven surfaces evenly. Most suitable for cleaning inner surfaces of screw holes and pipes.

Capable of deep processing.

•Long core shank may be made. Suitable for deburring and cleaning of deep positions.

Spiral Brush

Features

- Bristles are fixed in spiral to the core.
- Brushes with shanks are also available.
- Note that the spiral brushes are usable in limited rotational directions.

Applications

- Removing oxide film from inside of holes in mechanical parts, etc.
- Cleaning screw threads
- Cleaning inner surfaces of chimneys and various pipes
- Cleaning inside of bottles

Available in the most suitable sizes according to the application.

 Single Stem/Single Spiral (S/S) Filament is twisted between two stem wires with a single layer of filament.

 Double Stem/Single Spiral (W/S/S) Filament is twisted between four stem wires, with two stem wires on each side density fill for additional strength and higher.

 Double Stem/Double Spiral (W/S) Filament is twisted between four stem wires with two layers of bristles. Each layer is perpendicular to the other with a single stem wire in each quadrant Highese density.



Standard Dimensions of Spiral Brushes (Double spiral type with brass pipes)

Dia (A) (φ mm)	Brush Part Length (B) (mm)	Shank diameter(C) (φ mm)	Shank length (D)(mm)	Stainless steel φ 0.1 / φ 0.15(mm)	Nylon φ 0.3(mm)	Abrasive nylon TG-A#180 φ 0.7(mm)
				Commodity code	Commodity code	Commodity code
10	50	6	70	0.1 SPS-10	SPN-10	SPG-10
15	50	6	70	0.15 SPS-15	SPN-15	SPG-15
20	50	6	70	0.15 SPS-20	SPN-20	SPG-20
25	50	6	70	0.15 SPS-25	SPN-25	SPG-25

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

Miniture Brush: Stainless steel

Standard size

Product No.	Applicable ID (φ mm)	Wire diameter (φ mm)	Stem diameter (φ mm)	Brush Part Length (mm)	Overall length (mm)
81-A-1.0	1	0.051	0.4	15.8	76
81-A-1.5	1.5	0.051	0.66	15.8	76
81-A-2.0	2	0.076	0.86	19	76
81-A-2.5	2.5	0.076	1.09	19	76
81-A-3.0	3	0.076	1.39	25.4	76
81-A-3.5	3.5	0.076	1.39	25.4	76
81-A-4.0	4	0.076	1.83	25.4	76
81-A-4.5	4.5	0.076	2.1	25.4	76
81-A-5.0	5	0.076	2.1	25.4	76
81-A-5.5	5.5	0.076	2.8	25.4	76
81-A-6.0	6	0.076	2.8	25.4	76
81-A-6.5	6.5	0.076	2.8	25.4	76

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

Brushes exclusive for cross holes under 6.5mm diameters

As rich product lineup as twelve types

•Available in twelve sizes from 1 mm (min.) to 6.5 mm (max.) at 0.5 mm stepping interval.

Features

- Three bristle materials are selectable: Stainless steel, nylon, and nylon with abrasive grains.
- Stainless steel wires are twisted around cores. Usable in limited rotational directions.

Applications

- Removing small burrs from cross holes in mechanical parts, etc.
- Removing plastic and other small burrs

Miniture Brush: Abrasive nylon

Standard size

Product No.	Applicable ID(φ mm)	Dia (φ mm)	Abrasive nylon diameter (φ mm)	Stem diameter (φ mm)	Brush Part Length (mm)	Overall length (mm)
81-AY-1.0	1	1.1	0.2	0.4	16	76
81-AY-1.5	1.5	1.65	0.2	0.66	16	76
81-AY-2.0	2	2.2	0.3	0.66	19	76
81-AY-2.5	2.5	2.75	0.3	1.09	19	76
81-AY-3.0	3	3.3	0.3	1.4	25	76
81-AY-3.5	3.5	3.85	0.3	1.4	25	76
81-AY-4.0	4	4.4	0.3	1.4	25	76
81-AY-4.5	4.5	4.95	0.3	1.83	25	76
81-AY-5.0	5	5.5	0.3	1.83	25	76
81-AY-5.5	5.5	6.05	0.3	2.79	25	76
81-AY-6.0	6	6.6	0.3	2.79	25	76
81-AY-6.5	6.5	7.15	0.3	2.79	25	76

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.

Kensakumar (KSM)

Type	Applicable ID (φ mm)	Dia (φ mm)	Stem diameter (φ mm)	Brush Part Length (mm)	Overall length (mm)
KSM-4	3.8 ~ 4.0	4.5	1.4	19	152
KSM-4.5	4.0 ~ 4.5	5	1.4	19	152
KSM-5	4.5 ~ 5.0	5.5	2.1	38	203
KSM-5.5	5.0 ~ 5.5	6	2.1	38	203
KSM-6.4	5.5 ~ 6.5	7	2.8	38	203
KSM-7	6.5 ~ 7.5	8	3.3	50	203
KSM-8	7.5 ~ 8.5	9	3.7	50	203
KSM-9	8.5 ~ 9.5	10	3.7	50	203
KSM-10	9.5 ~ 10.5	11	3.7	50	203
KSM-11	10.5 ~ 11.5	12	3.7	50	203
KSM-12	11.5 ~ 12.5	14	4.3	63	203
KSM-12.7	12 ~ 13.5	15	4.3	63	203
KSM-14	13 ~ 15	16	4.8	63	203
KSM-16	15 ~ 17	18	4.8	63	203
KSM-18	17 ~ 19	20	4.8	63	203
KSM-19	18 ~ 20	21	4.8	63	203
KSM-20	19 ~ 21	22	4.8	63	203
KSM-22	21 ~ 23	25	5.6	76	203
KSM-23.8	23 ~ 25	27	5.6	76	203
KSM-25.4	24 ~ 27	28	5.6	76	203
KSM-29	27 ~ 30	32	6.3	76	203
KSM-31.8	30 ~ 33	34	6.3	76	203
KSM-35	33 ~ 36	38	6.3	76	203
KSM-38	36 ~ 40	41	6.3	76	203
KSM-41	38 ~ 43	44	6.3	76	203
KSM-45	42 ~ 46	47	6.3	76	203
KSM-48	45 ~ 49	51	6.3	76	203
KSM-51	48 ~ 52	54	6.3	76	203
KSM-54	52 ~ 55	57	6.3	76	203
KSM-57	53 ~ 58	60	6.3	76	203
KSM-60	58 ~ 61	63	6.3	76	203
KSM-64	61 ~ 65	67	6.3	76	203
KSM-67	64 ~ 68	70	6.3	76	203
KSM-70	66 ~ 71	73	6.3	76	203
KSM-73	70 ~ 75	76	6.3	76	203
KSM-76	72 ~ 78	79	6.3	76	203

2)Other bristles or dimensions not shown in the standard dimension list above may be made to order.



Instructions For Use

The KSM Tool should be securely held in a collet, chuck, or similar holding device. It is best to use the shortest shank possible for your application. Always wear eye protection. The KSM Tool should be well coated with a good quality cutting oil or honing fluid and rotating prior to entry and should continue rotating until fully removed from the part. RPM from 60 to 1200 depending on diameter. Never exceed 1200 RPM. Start with a spindle speed between 350-800 RPM. You may need to experiment to find the optimum speed for your application. The KSM Tool should have a continuous stroke rate between 120 to 180 inches per minute. Final stroking may be accelerated to develop a 45 ° crosshatch finish. Use the minimum honing time needed to achieve the required finish. Average honing time is 10-45 seconds, (5-60 strokes). DO NOT over hone. Clean the cylinder after honing using hot, soapy water and brush the cylinder walls with a cleaning brush. Dry the cylinder and continue to clean with a lint free cloth coated with a light oil or mineral spirits. Continue to clean until the lint free cloth remains clean.

Kinds of abrasive grain	Grain size	
Silicon carbide (SC) <For work piece that's relatively hard>	#60, #120, #180 * Basically to deburr	#240, #320, #600 * Basically to deburr
Aluminium oxide (AO) <For work piece that's relatively soft>	#60, #120, #180 * Basically to deburr	#240, #320, #600 * Basically to deburr
Alumina for polish	For mirror finish (#1000)	

How to order spiral type brushes

Specify the commodity codes to order the standard type. See the following and place an order for other types.

Type	Outer diameter	Brush width	Shank diameter	Shank length	Bristle material	Bristle diameter	Qty
Double							
Double-single							
Single							

CAUTION

The brush user and other persons in the brushing area must put on protectors.



Channel Brushes

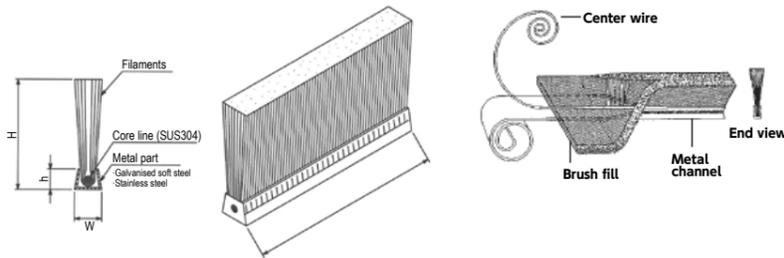


Channel Brush

METAL CHANNEL STRIP BRUSHES consist of natural, synthetic or wire bristles, held securely in place by a U-shaped metal channel and center wire, as illustrated. All CHANNEL brushes are first manufactured into a straight strip brush. The strip can then be coiled into cylinder brushes, or other shapes such as discs and cups. There are a variety of brush fills and virtually an infinite number of brush specifications within each metal channel size. All strip brushes are manufactured to our customers' individual requirements. This provides the proper filament stiffness, and allows for customers' unique modification of length and trim, enabling us to provide the ideal brush for the application.

Applications

- Spreading powdered materials
- Dusting tires, tile, paper, etc.
- Splash guard on grinders and machine tools
- Conveyor belt cleaning - assembled on hubs to form rotary brushes
- Lag brushes
- Eliminating static electricity
- Curtains to prevent chips from flying



Standard Dimensions of Channel Brushes

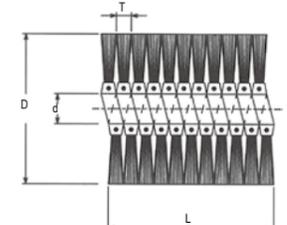
No.	W × H (mm)	Thickness of metal channel (mm)	Minimum inner diameter of coil type (φ mm)	Minimum inner diameter of ring type (φ mm)	Material of Metal channel
#3	3 × 4	0.6	6	30	Galvanised soft steel .Stainless steel .Steel
#5	5 × 5	0.8	10	40	
#6	6 × 7	1	20	65	
#8	8 × 9	1	38	80	
#10	10 × 11	1.2	90	100	
#13	13 × 14	1.4	200	-	

2) Other bristles or dimensions not shown in the standard dimension list above may be made to order.

Straight type



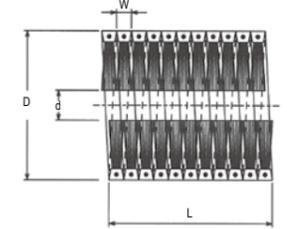
Inner winding type



Ring type

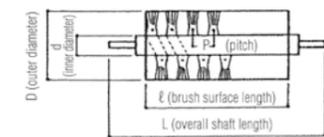
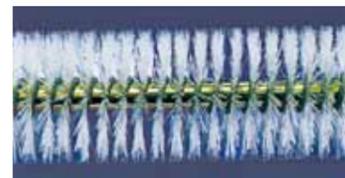


Coil type



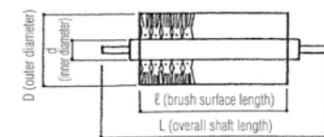
Pitch winding

- Bristles are wound at constant pitches.
- Suitable for cleaning and sweeping.



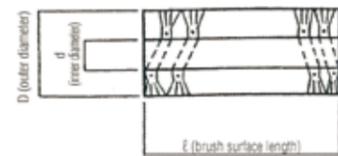
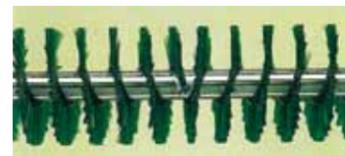
Close winding

- Density is increased by close winding.
- Suitable for cleaning and deburring.



Double-helical winding (distributed from center line)

- This is a variation of the constant-pitch winding. Bristles are wound so that they are concentrated at the center.
- Suitable for removing scales from steel plates.



Easy-to-use handy type

- Channel brushes are fixed to holders.
- Effective for cleaning and maintenance of machines and tools

No. 5-A-1 with holder



No. 5-A-2 with holder



No. 5-J-1 with holder



No. 5-J-2 with holder



Standard Dimensions of Channel Brushes

Product name	Length(mm)	Height(mm)	Width(mm)	Steel wire SW φ 0.18(mm)	Stainless steel wire SUS φ 0.18(mm)	Brass wire BSW φ 0.15(mm)
				Commodity code	Commodity code	Commodity code
No.5-A-1 with holder	210	20	5	HA-1	HAS-1	HAB-1
No.5-A-2 with holder	210	20	10	HA-2	HAS-2	HAB-2
No.5-J-1 with holder	240	20	5	HJ-1	HJS-1	HJB-1
No.5-J-2 with holder	240	20	10	HJ-2	HJS-2	HJB-2

2) Other bristles or dimensions not shown in the standard dimension list above may be made to order.

TS high cup Brushes



Implant Brushes

Extremely Long Life

- Lower piece cost for the deburring process
- High safety
- reduced set-up cost

Flexible Long Life

- Dimensionally stable, also with longer trim lengths and high rotational speeds

High-tech filaments

- High density of abrasive grit for powerful deburring
- Can be used with coolants

Extremely high fill density with even surface

Shorter operating times and very even edge blending. Particularly suitable for deburring of:

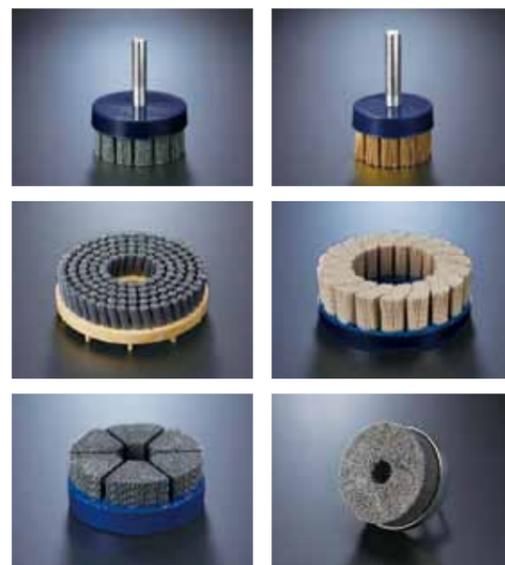
- machined surfaces
- sintered products
- stampings and mouldings
- diecasted parts
- cylinder heads
- motor units
- hydraulic parts
- pneumatic parts

of different geometries and materials



How to order TS/TSR high Cup type brushes

Cup Diameter (A)	Side Width(B)	Trim Length (C)	Arbor Hole (D)	Filaments(E)



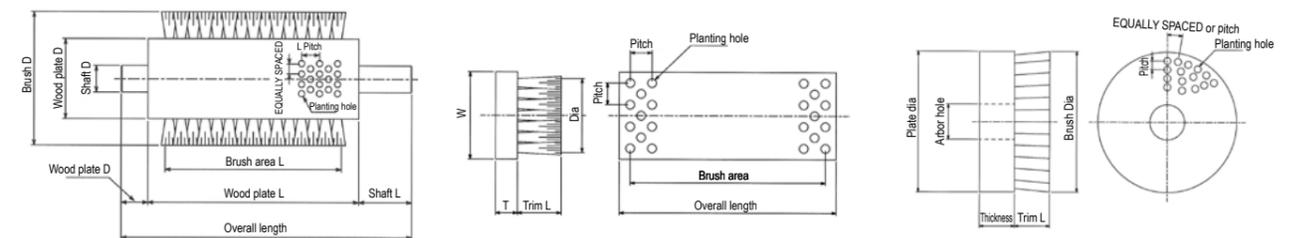
Stapled brushes consist of a series of individual tufts of fill material inserted into a bored hole in a solid block of wood or plastic. The tufts of fill material are secured to the block by a wire staple. Stapled set brushes are made with a variety of hole or tuft patterns to obtain the desired brush density and brushing effect. Hole patterns can be made with virtually any brush pattern. See the pictures

Below illustrating the different brush densities and hole patterns. The function of the brush application and fill material size determines the density and size of the tuft holes.

Stapled set circular brushes are brushes up to 4" in length. Stapled set brushes longer than 4" are considered a stapled set cylinder brush.

As with coil wound cylinder brushes, stapled set brushes can be made with similar core constructions. The plastic or wood core can be press fit to a shaft, made with collars to accept customer's shaft, made with stub ends or ends can be machined and inserted into ends of core. Steel or aluminum tubing can be press fit into the inside diameter of the tube for mounting collars and added support. Bearings can be press fit into circular brushes.

Block materials are used for practically any brush application and requirement. Core material is generally made of a hard wood or plastic. Most common types of plastics used are PVC, delrin, high-density polyethylene, UHMW, ABS or polypropylene



STANDARD TUFT PATTERNS

