

E-FORCE

TOOL CATALOGUE

Tip Tools and Special Tools

<https://www.eiko-eforce.jp>

TOOL CATALOGUE

E-FORCE[®]

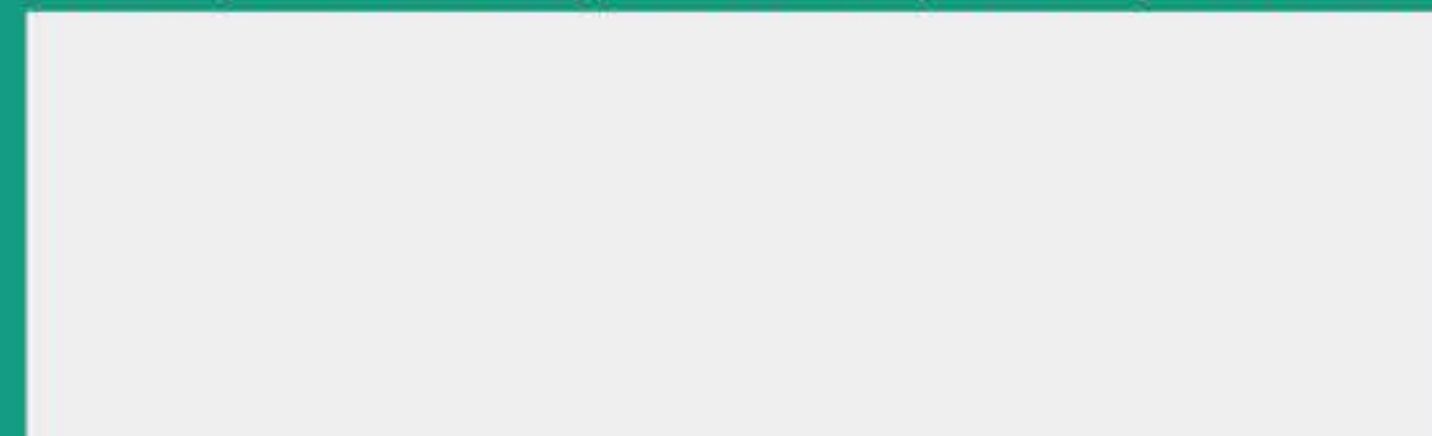
Tip Tools and Special Tools

Collection of more than 3000 items

3000

 **EIKO** EIKO ELECTRIC INDUSTRIAL CO.,LTD.
SALES SECTION, POWER TOOL GROUP
3-41-1 Soubudai Zama-City Kanagawa, 252-0011, JAPAN

Technical specifications and appearance are subject to change without notice.



DTC02 Vol.1 2021.01

 **EIKO** VOL.1

 **EIKO** EIKO ELECTRIC INDUSTRIAL CO.,LTD.

How to use **E-FORCE**® tool catalogue

How to use this catalogue

Shank Size (mm)

Order Code

Maximum Allowable Rotation Speed

Packing Unit

Total Tool Length (mm)

Grit Size

※Dimensions in this catalogue are all shown in millimeters.

Grinding Stones

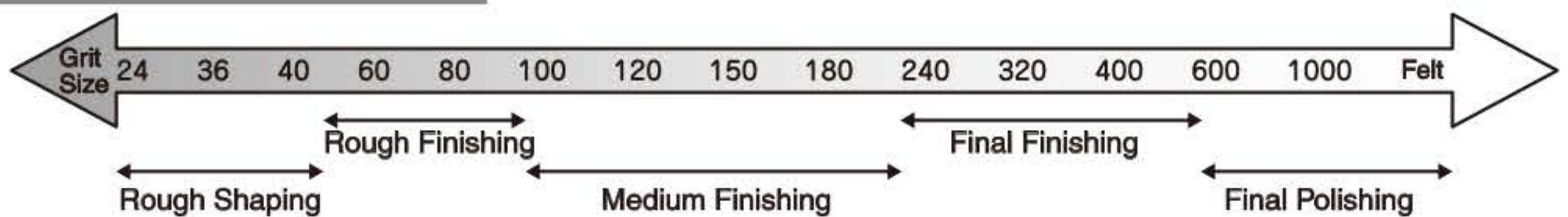
Shank Size	WA Grain	GC Grain
φ3.0	3A12019	3A12028
φ3	3A12020	3A12029
φ4	3A12021	3A12030
φ5	3A12022	3A12031
φ6	3A12023	3A12032
φ8	3A12024	3A12033

※ Dear Customers,
Please note that specifications are subject to change without notice.
Printed images in this catalogue may be different from actual color and shape.

Glossary

Shank Size	Shank diameter is shown for each tool. Use the appropriate collet corresponding to the shank size of tool. Variety of collets are available for E-FORCE system.
Packing Unit	Shipping unit is per pack. Sold by the packing unit indicated. Packing units are indicated for individual items.
Maximum Allowable Rotation Speed	Use the tool below the maximum allowable rotation speed. Never operate the tool exceeding the maximum allowable rotation speed. Maximum allowable rotation speed is on condition with 13mm overhang. Decrease rotation speed in case of more than 13mm overhang. Refer to SAFETY PRECAUTIONS on page 2 for details.
Grit Size	Grit size shows roughness of grain of abrasive agent or grain which consist of abrasive. The larger the number is, the smaller (finer) the grains are. The smaller the number is, the larger (rougher) the grains are. Grit size greatly affects surface finish.

Grit Size Reference



PRECAUTIONS FOR USING **E-FORCE**® ELECTRIC MICRO GRINDERS AND TOOLS.

Safety Precautions

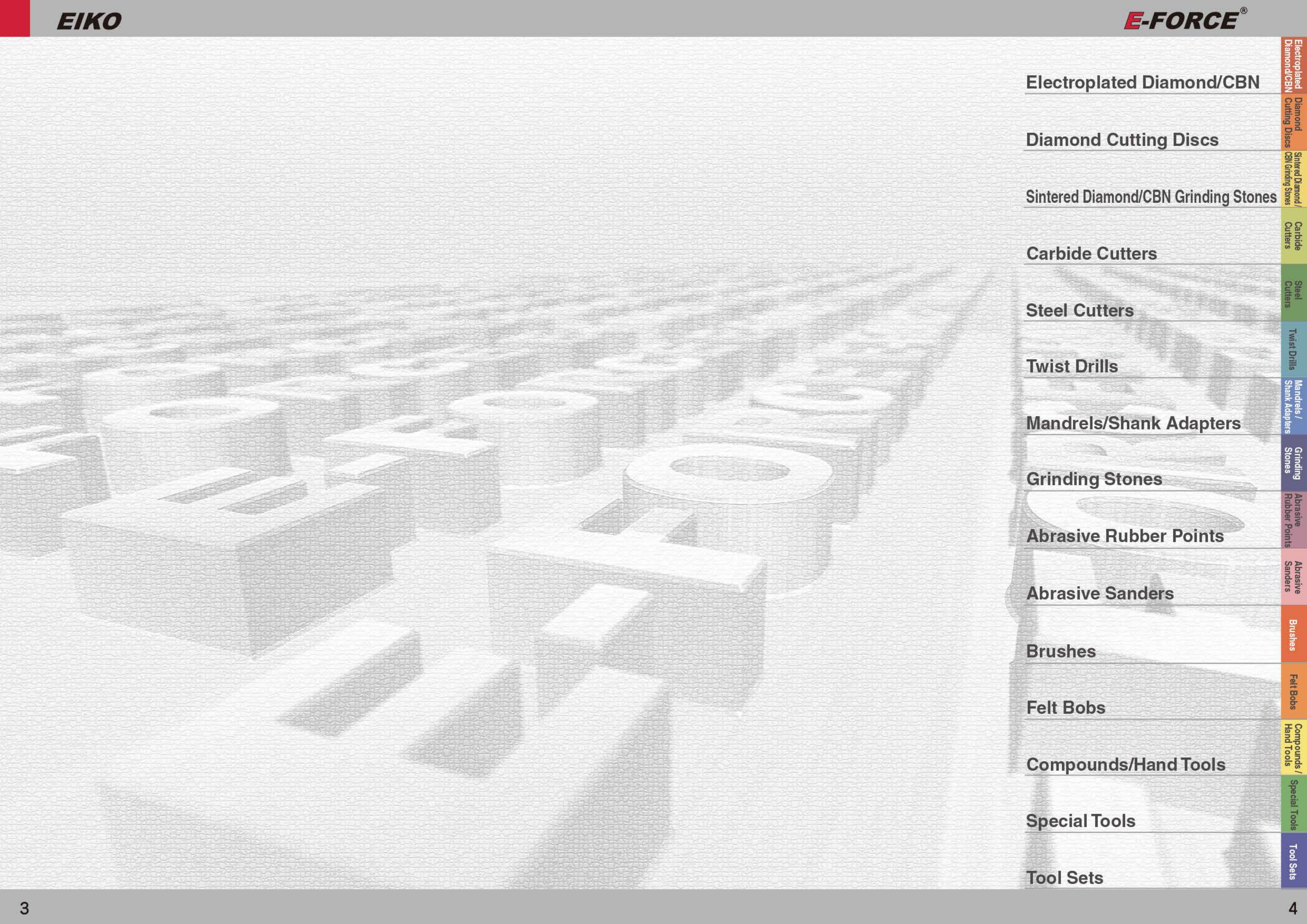
- Please read **OPERATION MANUAL** and **SAFETY PRECAUTIONS** carefully before using any tools, and use tools properly.
- The instructions are provided to use tools safely, and to prevent damages to the life body and property. Always follow the **SAFETY PRECAUTIONS** in this manual.

Symbols for Securing Safety

	WARNING Incorrect use of the tools could cause fatal or serious bodily injury.
	CAUTION Incorrect use of the tools could cause serious bodily injury, or damage to property.
	Symbol to prohibit one's doings in handling the product.
	Symbol to compel one's doings in handling the product.

WARNING SAFETY PRECAUTIONS FOR MICRO GRINDERS

	<ul style="list-style-type: none"> ■ This tool is designed and made to function as a handheld grinder. Read carefully and completely this operation manual before using. Ignoring this instruction may result in accident, injury, and trouble of the tool. 		<ul style="list-style-type: none"> ■ Install the tool so that installing length (overhang) becomes 13mm or less. (Fig.1) If longer overhang is used, decrease the speed. (Table-1) The tool may be damaged and result in accident and/or injury. 								
	<ul style="list-style-type: none"> ■ NEVER use the tool to human body. Keep children away. Incorrect use of the tool may result in serious accident and/or injury. 		<ul style="list-style-type: none"> ■ Use proper power outlet to fit plug of tool, and DO NOT remodel plug. Risk of electric shock is reduced by using original plug and corresponding power outlet. 								
	<ul style="list-style-type: none"> ■ Use safety protections. Always use safety glasses when operating the tool, and use dust protection mask in dusty working condition. 		<ul style="list-style-type: none"> ■ DO NOT use the tool under excessive electric noise. It may cause malfunction and trouble of the tool, which may result in accident and/or injury. 								
	<ul style="list-style-type: none"> ■ Wear suitable clothing. Groves, hair, and clothing may be caught in rotating part, resulting in accident and/or injury. 		<ul style="list-style-type: none"> ■ NEVER use the tool in damp or wet conditions. Water may enter the tool and there is risk of getting electric shock. 								
	<ul style="list-style-type: none"> ■ Keep work area well lit and neat. Inadequately lit work area and untidy work bench may result in accident and/or injury. 		<ul style="list-style-type: none"> ■ DO NOT abuse the power cord by pulling it. The cord may be damaged and there is risk of fire and electric shock. 								
	<ul style="list-style-type: none"> ■ DO NOT operate the tool in the presence of flammable liquids, gases, or dust. Grinding sparks may cause fire or explosion. 		<ul style="list-style-type: none"> ■ DO NOT touch the power plug with wet hands. There is risk of getting electric shock. 								
	<ul style="list-style-type: none"> ■ DO NOT use the tool at excessively high/low ambient temperature. (Use at ambient temperature of 0°C~40°C without condensation.) Condensation may cause short circuit and so on and there is risk of fire. 		<ul style="list-style-type: none"> ■ DO NOT use air blow tools to clean the tool. Use brush or cloth to remove dust and stain. Using air blow tools may cause dirt entering bearing and other rotating parts, which may result in trouble of the tool. 								
	<ul style="list-style-type: none"> ■ Keep bystanders away whilst operating the tool. It may result in unexpected accidents and/or injury when people other than the operator touch the motor cord or the power cord. 		<ul style="list-style-type: none"> ■ Carry out trial run of the tool. Using the tool without trial run may result in unexpected accident and/or injury. At the beginning of work of the day : 1 minute or more. When the tool is exchanged : 3 minutes or more. After long absence of use : 5 minutes or more. 								
	<ul style="list-style-type: none"> ■ Keep hands, face and so on away from rotating tool. Fingers or hand may be caught, or scattered objects may result in accident and/or injury. 		<ul style="list-style-type: none"> ■ Carry out dairy maintenance. Inadequate maintenance and checking of the tool may result in accident and/or injury. Inspect cord and parts for any damages. Inspect the tool and holder for any damage or wear. Always maintain the grip dry and check for oil/grease or water on it. 								
	<ul style="list-style-type: none"> ■ DO NOT force the tool. Excessive pressure may cause abnormal wear or damage of the tool, and result in accident and/or injury. 		<ul style="list-style-type: none"> ■ DO NOT lubricate bearings. Excessive grease may cause increased heat and vibration, which may result in accident and/or injury. 								
	<ul style="list-style-type: none"> ■ DO NOT use water or grinding liquid, and DO NOT operate the tool by wet hand. There is a risk of getting electric shock. The tool is designed to use in dry condition. 		<ul style="list-style-type: none"> ■ DO NOT remodel or disassemble the tool. It seriously effects the safety and performance of the tool, which may result in fire, electric shock, trouble of the tool, accident and/or injury. 								
	<ul style="list-style-type: none"> ■ Keep holding the tool until the tool stops rotating completely. The machinery itself rotates, which may result in accident and/or injury. 		<ul style="list-style-type: none"> ■ For repairs, always ask dealers or Eiko Electric Co., Ltd. Repairs must be carried out by qualified person with knowledge and skills, otherwise not only the tools do not perform sufficiently, but also it may result in accident, injury, and trouble of the tool. 								
	<ul style="list-style-type: none"> ■ Secure the workpiece well. Loose workpiece may force excessive load to the tool that may damage the tool, resulting in accident and/or injury. 		<ul style="list-style-type: none"> ■ Immediately stop operating and turn off the tool, whenever unusual noise, heat, smoke, or smell from the tool is noticed. Using the tool in such condition may result in accident and/or injury such as smoke, flame and electric shock. 								
	<ul style="list-style-type: none"> ■ DO NOT clamp the machinery with vice and so on. There is a risk of accident and/or injury when the tool is damaged. 	<p>Fig.1 About Overhang</p>									
	<ul style="list-style-type: none"> ■ Keep the motor cord away from the tool when in use. The cord may be caught in the tool, which may result in accident and/or injury. 	<p>Table-1. Relation of overhang and speed.</p> <table border="1"> <thead> <tr> <th>Overhang (mm)</th> <th>Maximum Allowable Speed (min⁻¹)</th> </tr> </thead> <tbody> <tr> <td>20</td> <td>N x 0.5</td> </tr> <tr> <td>25</td> <td>N x 0.3</td> </tr> <tr> <td>50</td> <td>N x 0.1</td> </tr> </tbody> </table> <p>[N] is Maximum Allowable Speed at 13mm overhang.</p>		Overhang (mm)	Maximum Allowable Speed (min ⁻¹)	20	N x 0.5	25	N x 0.3	50	N x 0.1
Overhang (mm)	Maximum Allowable Speed (min ⁻¹)										
20	N x 0.5										
25	N x 0.3										
50	N x 0.1										
	<ul style="list-style-type: none"> ■ Confirm that spanners and wrenches are detached from the tool before using. Spanners or wrenches will be blown away when the tool is turned on, which may result in accident and/or injury. 										
	<ul style="list-style-type: none"> ■ Only use the tools listed on the catalogue of Eiko Electric Co., Ltd. Do not use the tools which are not listed on our catalogue. It may result in accident and/or injury. 										
	<ul style="list-style-type: none"> ■ Use the tool below the rotating speed specified by manufacturer. The tool may be damaged and result in accident and/or injury. 										
	<ul style="list-style-type: none"> ■ Select proper tools for your work. Selecting proper tools will achieve smooth operation and increase efficiency of work. 										
	<ul style="list-style-type: none"> ■ DO NOT use damaged tools. Using tools with cracks, splits, bent shank and so on may cause breakage of tool and result in accident and/or injury. 										
	<ul style="list-style-type: none"> ■ Use tool of which diameter of shaft is within tolerance of 0 to -0.01mm against nominal diameter of collet chuck. Lack of gripping force may cause unintended detachment of the tool and result in accident and/or injury. 										
	<ul style="list-style-type: none"> ■ Use mounted points of φ15mm or less when operating at maximum allowable speed. The tool may be damaged and result in accident and/or injury. 										



Electroplated Diamond/CBN

Electroplated
Diamond/CBN

Diamond Cutting Discs

Diamond
Cutting Discs

Sintered Diamond/CBN Grinding Stones

Sintered Diamond/
CBN Grinding Stones

Carbide Cutters

Carbide
Cutters

Steel Cutters

Steel
Cutters

Twist Drills

Twist Drills

Mandrels/Shank Adapters

Mandrels/
Shank Adapters

Grinding Stones

Grinding
Stones

Abrasive Rubber Points

Abrasive
Rubber Points

Abrasive Sanders

Abrasive
Sanders

Brushes

Brushes

Felt Bobs

Felt Bobs

Compounds/Hand Tools

Compounds/
Hand Tools

Special Tools

Special Tools

Tool Sets

Tool Sets

Electroplated Diamond/CBN



Electroplated Diamond Burs	Shank Size	φ1.6	P7 ~
Electroplated Diamond Burs	Shank Size	φ2.34	P8 ~
Electroplated Diamond/CBN Burs	Shank Size	φ3.0	P11 ~
Electroplated Diamond Burs	Shank Size	φ6.0	P16 ~
Electroplated Diamond/CBN Burs	Shank Size	φ6.0	P18 ~

Diamond Cutting Discs



Diamond Cutting Discs	M1.7 Fixing Screw Type	P19 ~
Diamond Cutting Discs	M3 Fixing Screw Type	P22 ~
Polishing Film Diamond Discs		P23 ~
Resinoid Bonded Diamond Discs		P24 ~
Metal Bonded Diamond Discs		P24 ~

Sintered Diamond/CBN Grinding Stones



Sintered Diamond Grinding Stones	Shank Size	φ3.0	P25 ~
Sintered Diamond & CBN Hand Lappers			P25 ~
Vitrified Bonded CBN Tools	Shank Size	φ3.0 ~ φ10	P26 ~
Diamond Stone Sticks (Sintered)			P26 ~

Carbide Cutters



Carbide Cutters	Shank Size	φ2.34	P27 ~
Carbide Cutters	Shank Size	φ3.0	P33 ~
PCB Cutters	Shank Size	φ3.175	P39 ~
Carbide Cutters	Shank Size	φ6.0	P41 ~
Long Shank Carbide Cutters	Shank Size	φ3.0	P45 ~
Long Shank Carbide Cutters	Shank Size	φ6.0	P46 ~

Steel Cutters



Steel Cutters	Shank Size	φ2.34	P47 ~
High Speed Steel Cutters	Shank Size	φ3.0	P48 ~
Saw Blades	M1.7 Fixing Screw Type		P48 ~
Steel Cutters (for non-metallic material)	Shank Size	φ3.0	P49 ~

Twist Drills



Steel Twist Drills	Shank Size	φ2.34	P51 ~
High Speed Steel Twist Drills	Shank Size	φ2.34	P51 ~
Carbide Twist Drills	Shank Size	φ2.34	P51 ~
Carbide Twist Drills	Shank Size	φ3.0	P52 ~
Carbide Magnum Drills	Shank Size	φ1.0 ~ φ3.0	P52 ~

Mandrels/Shank Adapters



Steel Mandrels	M1.7 Fixing Screw Type	P53 ~
Stainless Mandrels	M1.7/M3 Fixing Screw Type	P53 ~
Stainless Mandrels	M6 Fixing Screw Type	P54 ~
Shank Adapters	For φ2.34 mm Shank	P55 ~
Shank Adapters	For φ3.0 mm Shank	P55 ~
Shank Adapters	For φ6.0 mm Shank	P56 ~
Sleeve Collets	For φ0.4~φ2.34 mm Shank	P57 ~

Grinding Stones



Grinding Stones	Shank Size	φ2.34	P59 ~
Grinding Stones	Shank Size	φ3.0	P60 ~
Grinding Stones (Long Shank)	Shank Size	φ3.0	P66 ~
Grinding Stones	Shank Size	φ6.0	P67 ~
Grinding Stone Wheels	M1.7 Fixing Screw Type	P69 ~	
Resinoid Bonded			
Glass Fiber Grinding Discs	M1.7 Fixing Screw Type	P70 ~	
Cutting Stone Discs	M1.7 Fixing Screw Type	P70 ~	

Abrasive Rubber Points



Abrasive Rubber Points	Shank Size	φ2.34	P71 ~
Diamond Abrasive Rubber Points	Shank Size	φ2.34	P72 ~
Abrasive Rubber Points	Shank Size	φ3.0	P73 ~
Super Abrasive Rubber Points	Shank Size	φ3.0	P74 ~
Abrasive Rubber Points	Shank Size	φ6.0	P75 ~
Abrasive Rubber Points (Long Shank)	Shank Size	φ3.0	P76 ~
Abrasive Rubber Wheels	M1.7 Fixing Screw Type		P77 ~

Abrasive Sanders



Flap Wheels	Shank Size	φ3.0	P79 ~
Polygon Flap Wheels	Shank Size	φ3.0	P80 ~
Abrasive Fiber Sanders	Shank Size	φ2.34 φ3.0	P80 ~
Abrasive Sponge Points	Shank Size	φ3.0	P82 ~
Disc Polishers	Shank Size	φ3.0	P83 ~
Flap Wheels	Shank Size	φ6.0	P83 ~
Cap Sanders/Abrasive Rolls	Shank Size	φ2.34 ~ φ6	P86 ~
Abrasive Nylon Fiber Discs	Shank Size	φ6.0	P88 ~

Brushes



Brushes (Animal Hair)	Shank Size	φ2.34 φ3.0	P89 ~
Brushes (Chemical Fiber)	Shank Size	φ2.34 φ3.0	P91 ~
Brushes (Metal Wire)	Shank Size	φ2.34 φ3.0	P96 ~
Brushes	Shank Size	φ6.0	P99 ~
Ceramic Fiber Brushes	Shank Size	φ3.0	P104 ~
Single Knot End Brushes/Wire Lap Tools	Shank Size	φ3.0	P106 ~
Spiral Brushes	Shank Size	φ3.0	P107 ~
Twisted Wire Lap Tools	Shank Size	φ3.0 φ6.0	P109 ~

Felt Bobs



Felt Bobs	Shank Size	φ2.34	P111 ~
Felt Bobs	Shank Size	φ3.0	P113 ~
Compound Felt Bobs/Mops	Shank Size	φ3.0	P116 ~
Long Shank Felt Bobs	Shank Size	φ3.0 φ6.0	P117 ~
Felt Bobs	Shank Size	φ6.0	P118 ~
Felt Wheels	M1.7 Fixing Screw Type		P119 ~
Buff Wheels			P121 ~

Compounds/Hand Tools



Diamond Compounds/Diamond Gel		P123 ~
Diamond Sheets/Films/Cloths		P125 ~
Lapping Film Sheets/Felt Sticks/Bamboo Holders		P126 ~
Ruby Stone Sticks		P127 ~
Fiber Stone Sticks		P128 ~
Abrasive Stone Sticks		P130 ~
Hand Holders		P134 ~
Hand Brushes		P136 ~
Electroplated Diamond Files		P137 ~
Electroplated Diamond Dressers		P140 ~
Precision Files		P141 ~
Rubber Polishers/Polishing Rubber Sheets		P142 ~

Special Tools



Special Tools for Angle 90/60		P143 ~
Special Tools for Belt Sander		P147 ~
Special Tools for Mini Recipro		P149 ~

Tool Sets



Tool Sets		P153 ~
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Electroplated Diamond Burs

Feature

- Stainless Shanks are equipped to all E-FORCE Electroplated Diamond burs.
- Carefully selected quality grit are electroplated to provide superior cutting ability and durability.
- Widely works well for precision grinding and micro deburring.

Main Application

Best suits for non-ferrous materials and non-metal materials.
Main Work Materials: Carbide, Ceramics, Glass, Ferrite, Silicon, Stone, Chinaware, Jewelry, Plastic, and Rubber.

Sleeve Collets

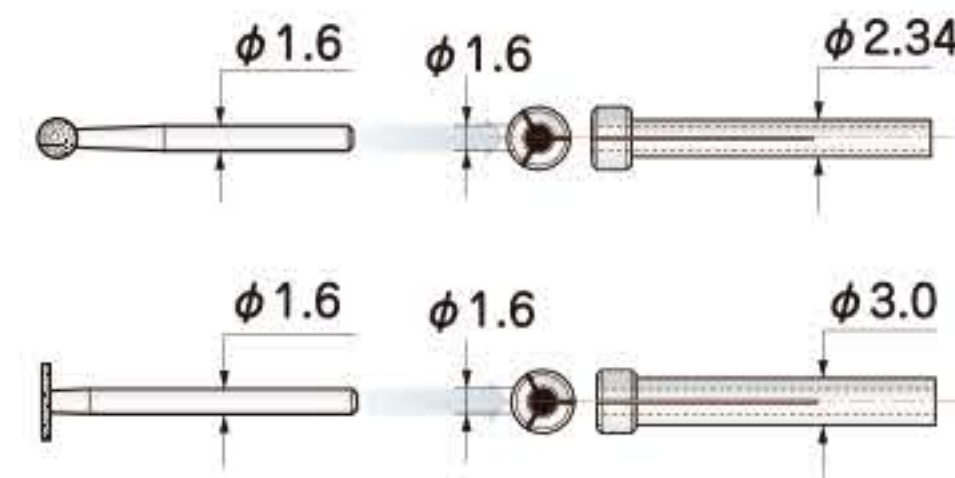
A handy adapter which converts $\phi 1.6$ mm shank to fit your $\phi 2.34$ mm/ $\phi 3.0$ mm collets.

Some industry grinders are equipped with $\phi 3.0$ mm collets only. By installing a sleeve collet, $\phi 1.6$ mm tools can be quickly converted to $\phi 2.34$ mm/ $\phi 3.0$ mm. Enjoy using wider variety of tools without wasting time in replacing collet.

* For more details of sleeve collet, see page 57.

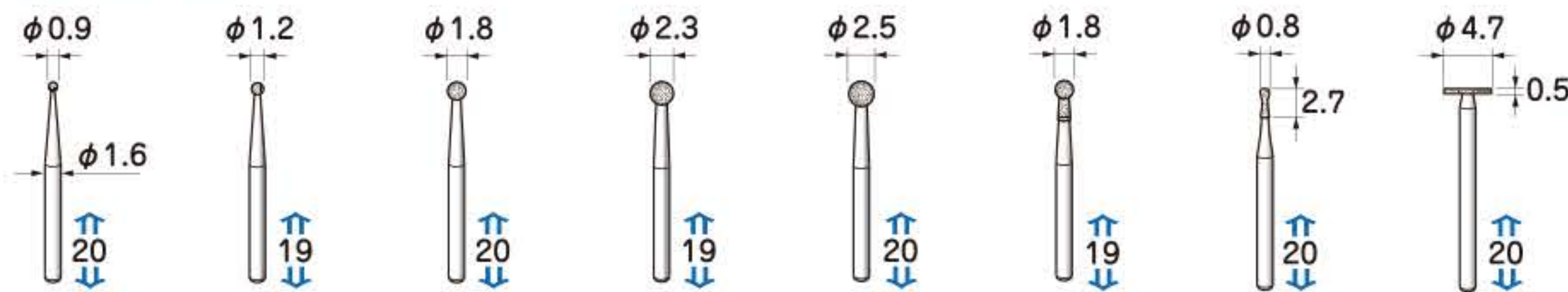
Shank Size $\phi 2.34$
1 pc./pack
9A21001

Shank Size $\phi 3.0$
1 pc./pack
9A22013



Electroplated Diamond Burs

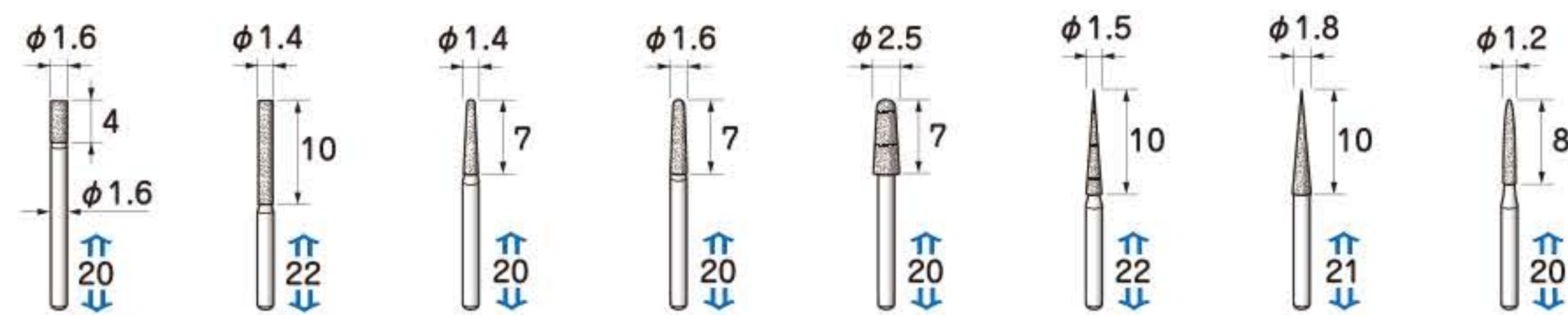
Shank Size $\phi 1.6$
5 pcs./pack
320,000min⁻¹



Grit Size	#140	#140	#140	#140	#140	#140	#140	#140
Diamond	1A10001	1A10002	1A10003	1A10004	1A10005	1A10006	1A10007	1A10008

Electroplated Diamond Burs

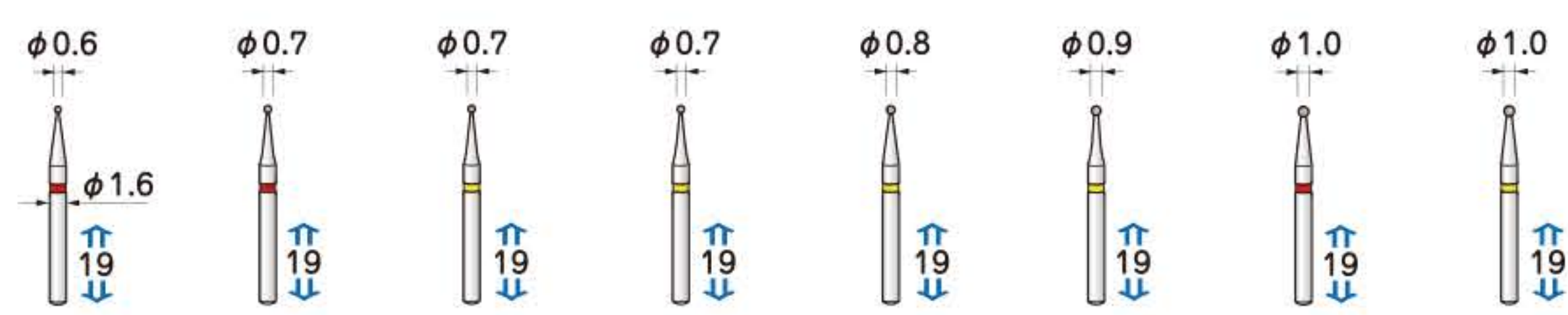
Shank Size $\phi 1.6$
5 pcs./pack
320,000min⁻¹



Grit Size	#140	#140	#140	#140	#140	#140	#140	#140
Diamond	1A10009	1A10010	1A10011	1A10012	1A10013	1A10014	1A10015	1A10016

Electroplated Diamond Burs

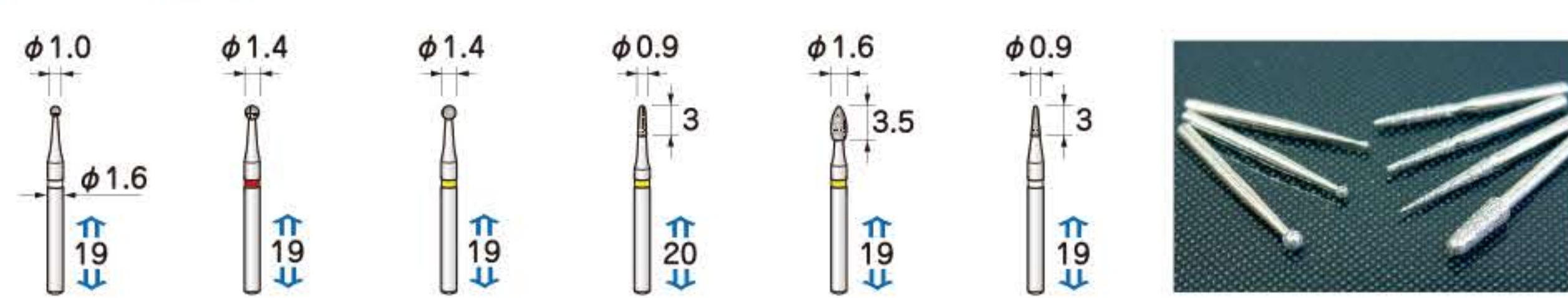
Shank Size $\phi 1.6$
5 pcs./pack
320,000min⁻¹



Grit Size/Dia.	#320/50 μ	#320/50 μ	#800/22 μ	#1000/15 μ	#600/30 μ	#800/22 μ	#320/50 μ	#600/30 μ
Diamond	1A10017	1A10018	1A10019	1A10020	1A10021	1A10022	1A10023	1A10024

Electroplated Diamond Burs

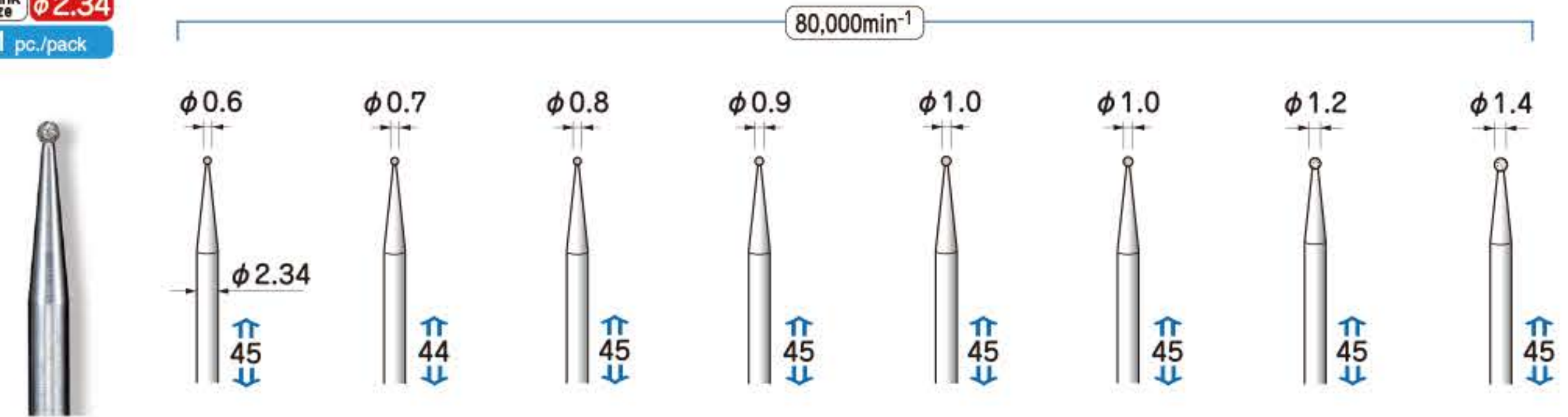
Shank Size $\phi 1.6$
5 pcs./pack
320,000min⁻¹



Grit Size/Dia.	#1500/12 μ	#320/50 μ	#1000/15 μ	#1000/15 μ	#1000/15 μ	#1500/12 μ
Diamond	1A10025	1A10026	1A10027	1A10028	1A10029	1A10030

Electroplated Diamond Burs

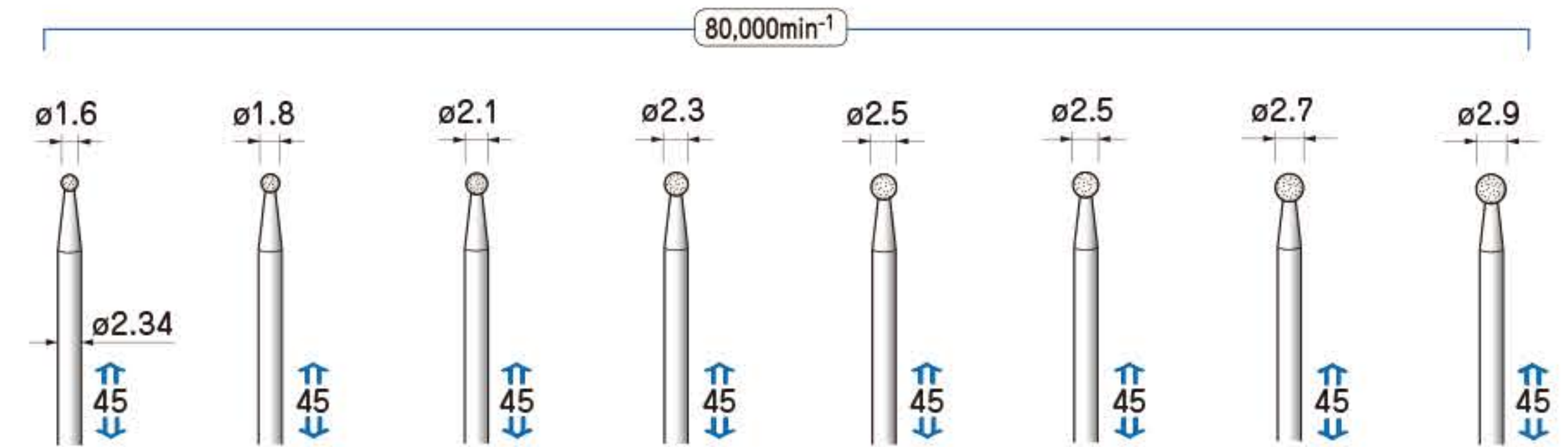
Shank Size $\phi 2.34$
1 pc./pack



Grit Size	#320	#320	#320	#140	#140	#170	#140	#140
Diamond	1011100	1A11001	1011101	1A11002	1A11003	1011102	1011103	1011104

Electroplated Diamond Burs

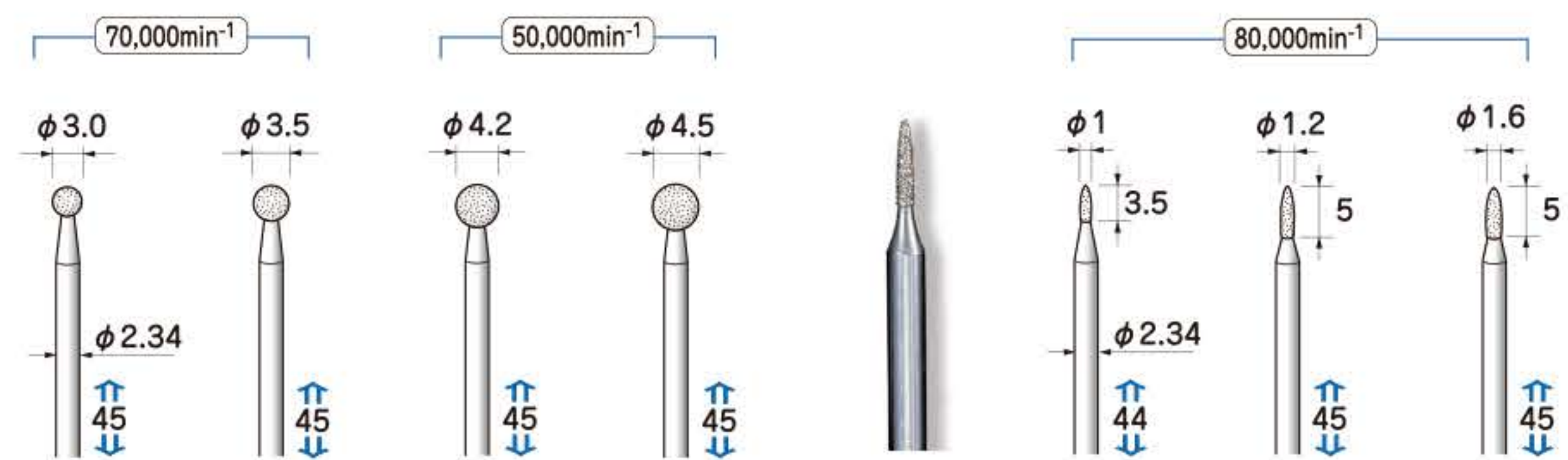
Shank Size $\phi 2.34$
1 pc./pack



Grit Size	#140	#140	#140	#140	#120	#140	#120	#140
Diamond	1011105	1011106	1011107	1A11004	1011108	1A11005	1011109	1A11006

Electroplated Diamond Burs

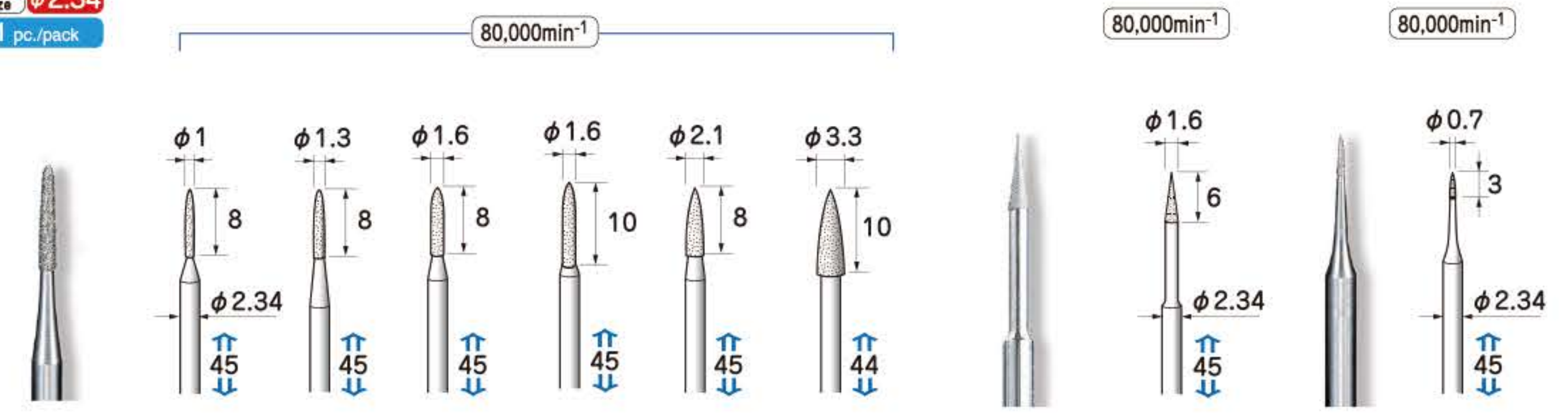
Shank Size $\phi 2.34$
1 pc./pack



Grit Size	#120	#140	#140	#120	#140	#140	#140
Diamond	1011110	1A11007	1A11008	1011111	1A11009	1A11010	1A11011

Electroplated Diamond Burs

Shank Size $\phi 2.34$
1 pc./pack

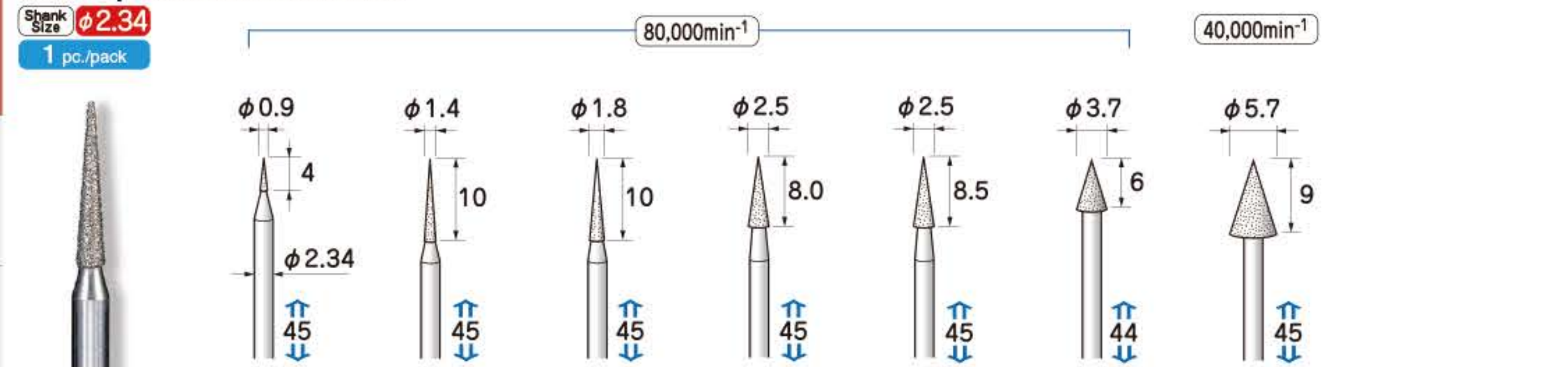


Grit Size	#140	#140	#140	#140	#140	#140	#600	#600
Diamond	1011113	1A11012	1A11013	1011114	1A11014	1A11015	1A11016	1011112

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

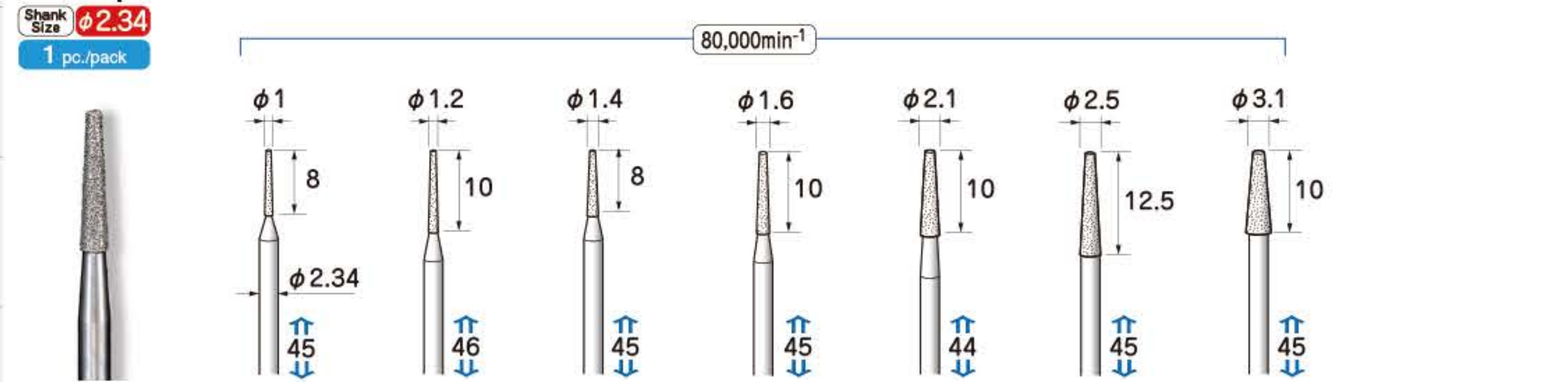
Electroplated Diamond/CBN Cutting Discs
Shank Adapters / Mandrels / Shank Adapters
Steel Cutters
Twist Drills
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Electroplated Diamond Burs



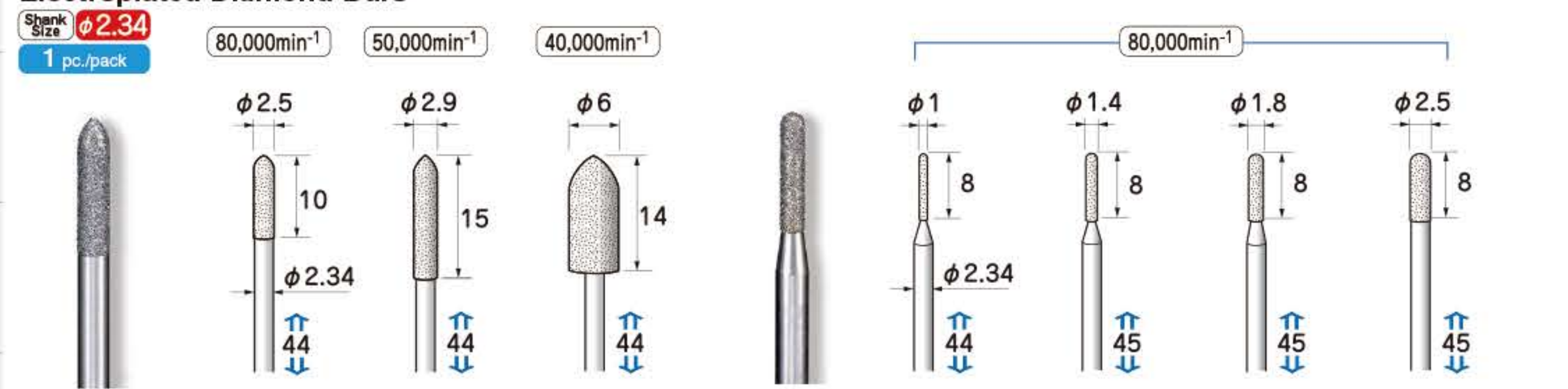
Grit Size	#140	#140	#140	#140	#140	#140	#140
Diamond	1A11017	1A11018	1A11019	1011116	1A11020	1A11021	1A11022

Electroplated Diamond Burs



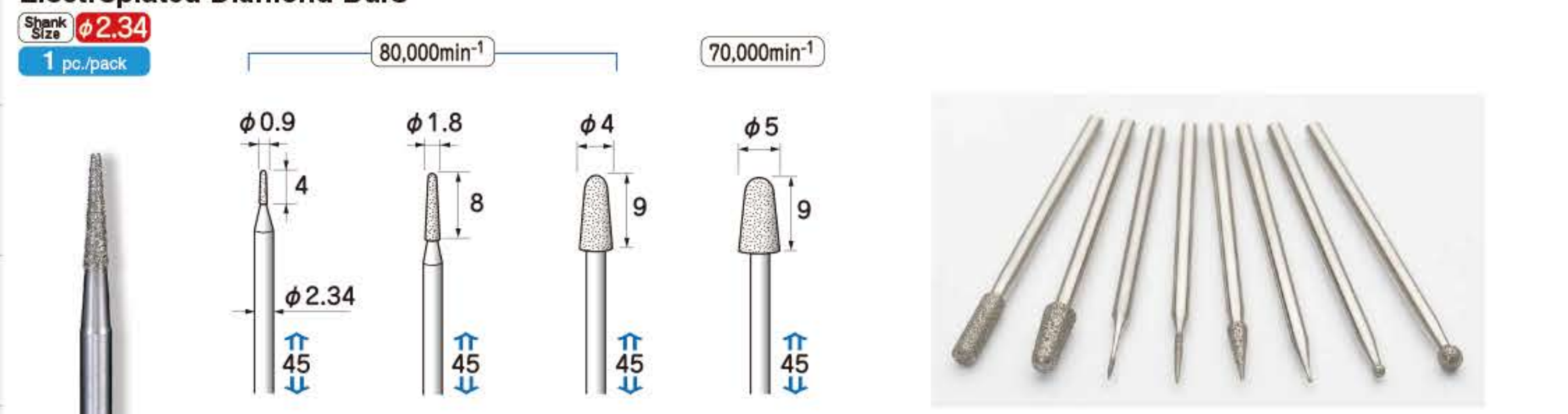
Grit Size	#140	#140	#140	#140	#140	#140	#140
Diamond	1A11023	1A11024	1A11025	1A11026	1A11027	1A11028	1A11029

Electroplated Diamond Burs



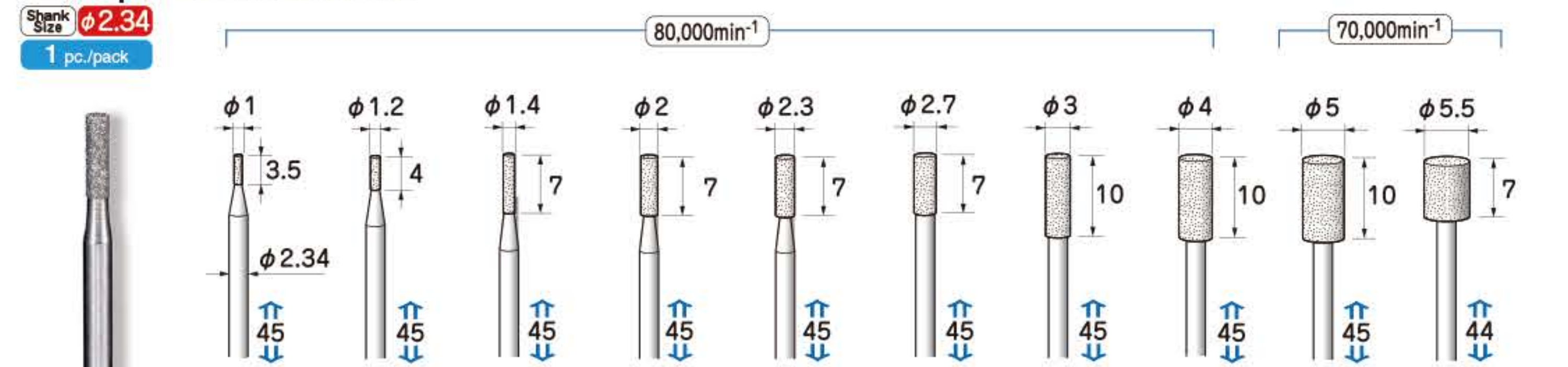
Grit Size	#140	#140	#140	#140	#140	#140	#140
Diamond	1A11030	1A11031	1A11032	1A11033	1A11034	1A11035	1A11036

Electroplated Diamond Burs



Grit Size	#140	#140	#120	#140
Diamond	1A11037	1A11038	1011117	1A11039

Electroplated Diamond Burs



Grit Size	#140	#140	#140	#140	#140	#140	#140	#140	#140	#140
Diamond	1A11040	1A11041	1A11042	1A11043	1A11044	1A11045	1011115	1A11046	1A11047	1A11048

Electroplated Diamond Burs



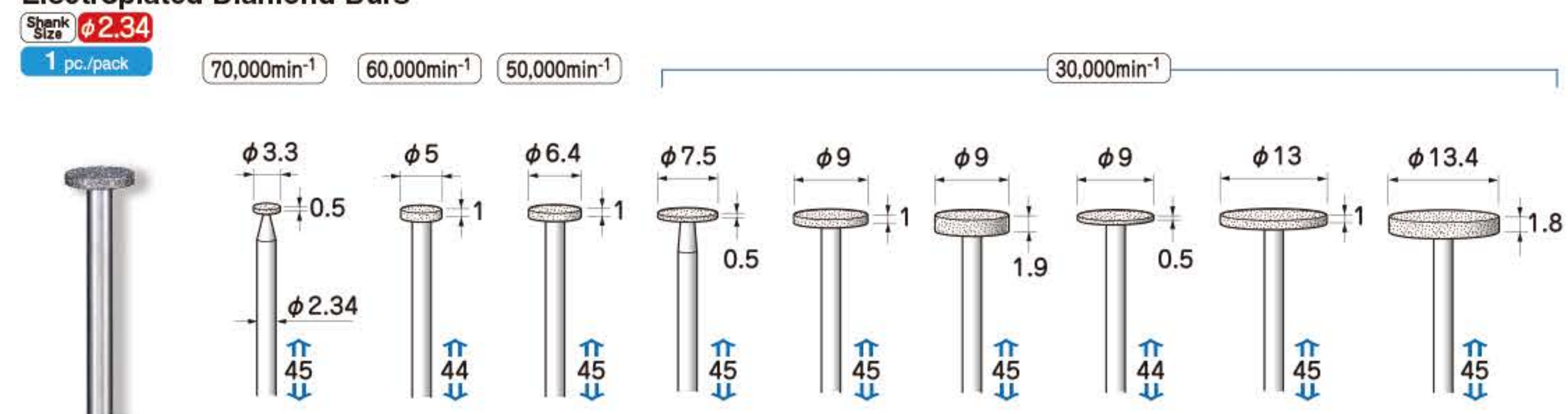
Grit Size	#140	#140	#140	#120
Diamond	1A11049	1A11050	1A11051	1A11052

Electroplated Diamond Burs



Grit Size	#120	#120	#140	#120	#120
Diamond	1A11053	1A11054	1A11055	1A11056	1A11057

Electroplated Diamond Burs



Grit Size	#140	#140	#140	#140	#140	#140	#230	#140	#140
Diamond	1A11058	1A11059	1A11060	1A11061	1A11062	1A11063	1A11064	1A11065	1A11066

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Diamond Cutters Steel Cutters Twist Drills Mandrels/Shank Adapters Grinding Stones Abrasive Rubber Points Abrasive Sanders Brushes Felt Bobs Compounds/Hand Tools Special Tools Tool Sets

Electroplated CBN Burs

Feature

- Cubic Boron Nitride (CBN) is a diamond structure material consisting of boron and nitrogen, which is the second hardest to diamond. With 1400°C heat stability, it is more chemically stable than diamond.
- Widely used to work for ferrous materials because of no chemical reaction against iron.

Main Application

Best suits for ferrous metal materials.
Main Work Materials:
Carbon Tool Steel (SK), High Speed Tool Steel (SKH), Alloy Tool Steel (SKS), Heat Resistance Steel (SUH), Stainless Steel (SUS), Bearing Steel (SUJ)



Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#325	#200	#140	#140	#170	#120	#140	#120
Diamond	1012111	1012112	1A12001	1A12002	1012113	1A12003	1012114	1A12004
CBN	1022111	1022112	1A22001	1A22002	1022113	1A22003	1022114	1A22004

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#120	#120	#120	#120	#600	#600	#325
Diamond	1012115	1012116	1012117	1012118	1012000	1012001	1012002
CBN	1022115	1022116	1022117	1022118	1022000	1022001	1022002

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#325	#325	#230	#270	#170	#230	#270	#170
Diamond	1A12005	1012003	1012004	-	1A12006	1012005	-	1A12007
CBN	1A22005	1022003	-	1022004	1A22006	-	1022005	1A22007

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#170	#200	#170	#140	#170	#170	#170	#140
Diamond	1012006	-	1A12008	1012100	-	1A12009	1A12010	1A12011
CBN	-	1022006	1A22008	-	1022100	1A22009	1A22010	1A22011

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#140	#170	#140	#140	#120	#140	#140	#120
Diamond	1012101	-	1A12012	1A12013	1012102	-	1A12014	1012103
CBN	-	1022101	1A22012	1A22013	-	1022102	1A22014	-

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#140	#140	#120	#140	#140	#140	#120	#140
Diamond	-	1A12015	1012104	-	1A12016	1A12017	1012105	-
CBN	1022103	1A22015	-	1022104	1A22016	1A22017	-	1022105

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#140	#120	#140	#140	#120	#140	#140	#120
Diamond	1A12018	1012106	-	1A12019	1012107	-	1A12020	1012108
CBN	1A22018	-	1022106	1A22019	-	1022107	1A22020	-

Always use safety glasses and protective tools for your safety.
Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN
Diamond Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#140	#140	#120	#140	#120	#140	#140
Diamond	-	1A12021	1012109	-	1012110	-	1A12022
CBN	1022108	1A22021	-	1022109	-	1022110	1A22022

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#140	#140	#140	#120	#140	#140	#140	#120
Diamond	1A12040	1A12041	1012119	1012120	1A12042	1A12043	1A12044	1012121
CBN	1A22040	1A22041	1022119	1022120	1A22042	-	1A22043	1022121

High Rigidity Electroplated Diamond/CBN

Feature

- Electroplated on high rigidity stainless spring steel (SUS304-WPB), it is resistant to the radial load which causes bending and breakage.
- The long neck design extends electroplated area and remarkably improves efficiency in grinding performance in deep holes and grooves.

**High Rigidity Type,
Resistant to Bending and Breakage.**

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack
High Rigidity Type

Grit Size	#600	#325	#325
Diamond	1A12023	1A12024	1A12025
CBN	1A22023	1A22024	1A22025

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack
High Rigidity Type

Grit Size	#230	#230	#170	#140	#140	#140	#140
Diamond	1A12026	1A12027	1A12028	1A12029	1A12030	1A12031	1A12032
CBN	1A22026	1A22027	1A22028	1A22029	1A22030	1A22031	1A22032

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#140	#120	#140	#140	#120	#140	#140	#100
Diamond	1A12045	1012122	1012124	1A12046	1012125	1A12047	1A12048	1012126
CBN	1A22044	1022122	1022124	-	1022125	-	-	1022126

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#140	#120	#140	#120	#100	#120
Diamond	1012133	1012134	1012135	1012136	1012137	1A12049
CBN	1022133	1022134	1022135	1022136	1022137	-

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#140	#140	#140	#140	#140	#140	#140
Diamond	1A12033	1A12034	1A12035	1A12036	1A12037	1A12038	1A12039
CBN	1A22033	1A22034	1A22035	1A22036	1A22037	1A22038	1A22039

Electroplated Diamond Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#120	#120	#120	#120	#120
Diamond	1A12050	1A12051	1A12052	1A12053	1A12054

Always use safety glasses and protective tools for your safety.
Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#140	#140	#120	#140	#120
Diamond	1012123	1A12055	1012128	1A12056	1012127
CBN	1022123	1A22045	1022128	1A22046	1022127

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#120	#120	#120	#120	#120	#120	#120
Diamond	1A12057	1012129	1A12058	1A12059	1012130	1A12060	1A12061
CBN	-	1022129	-	-	1022130	-	-

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#120	#120	#120	#120	#120	#120	#120
Diamond	1A12062	1A12063	1A12064	1A12065	1A12066	1012131	1012132
CBN	-	-	-	-	-	1022131	1022132

Electroplated Diamond/CBN Burs

Shank Size $\phi 3.0$
1 pc./pack

Grit Size	#140	#100	#100	#140	#140	#140	#100	#140
Diamond	1A12067	1012138	1012139	1A12068	1A12069	1A12070	1012140	1A12071
CBN	-	1022138	1022139	-	-	-	1022140	-

Shank Adapters

- Feature**
- An extension bar for working easily in deep holes unreachable with standard tools.
 - A handy adapter saving time and money to order custom made tools.

*For more details of shank adapters, see page 55.

Shank Adapters Order Code : 9A12002

Shank Size $\phi 3.0$
1 pc./pack
For $\phi 3.0$ mm Shank

Shank Adapters Order Code : 9A13002

Shank Size $\phi 6.0$
1 pc./pack
For $\phi 3.0$ mm Shank

Electroplated Diamond Burs

Shank Size $\phi 6.0$
1 pc./pack

Grit Size	#120	#120	#120	#120	#120
Diamond	1A13001	1A13002	1A13003	1A13004	1A13005

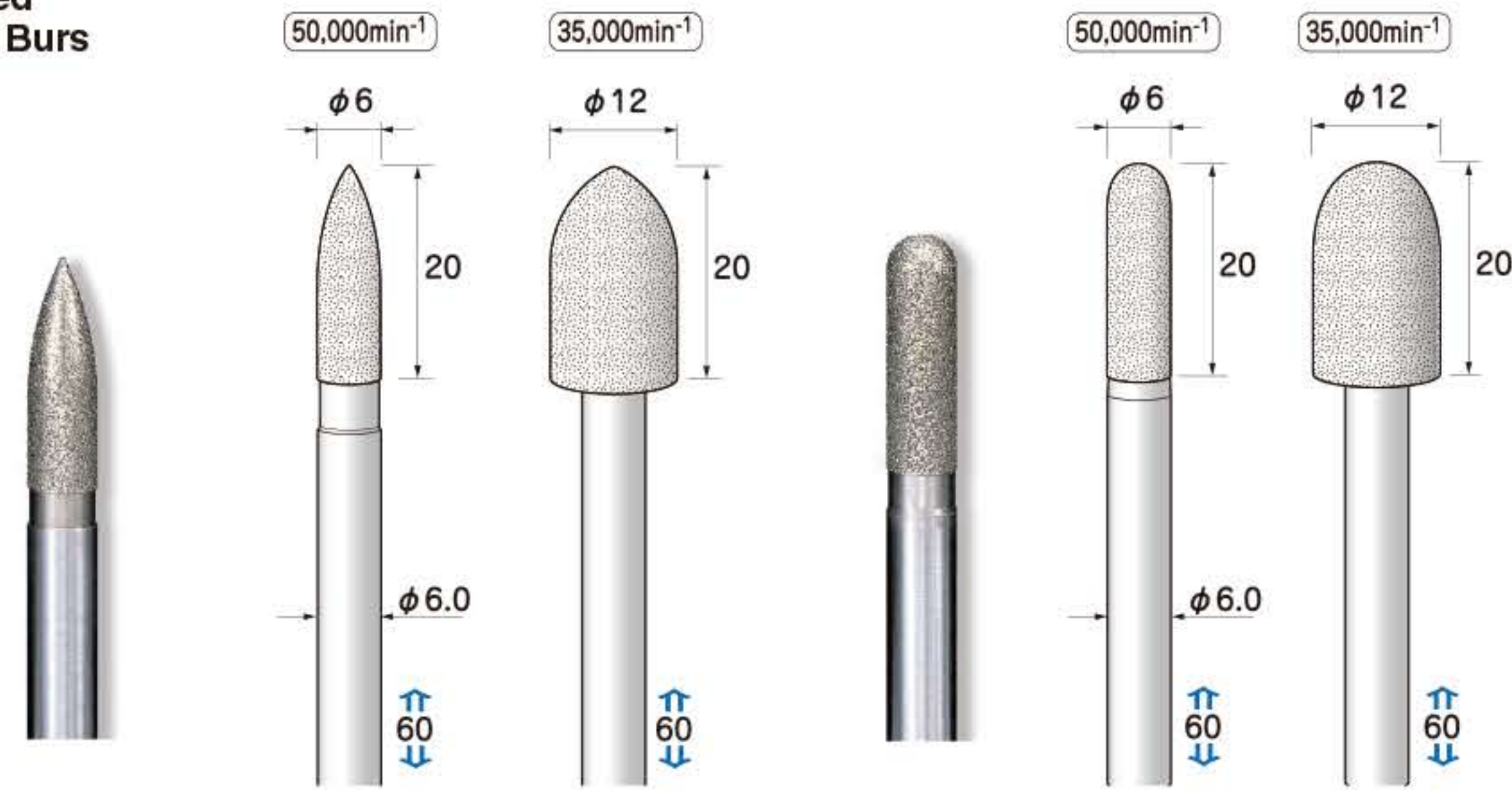
Electroplated Diamond Burs

Shank Size $\phi 6.0$
1 pc./pack

Grit Size	#120	#120	#120	#120	#120	#120
Diamond	1A13006	1A13007	1A13008	1A13009	1A13010	1A13011

Electroplated Diamond Burs

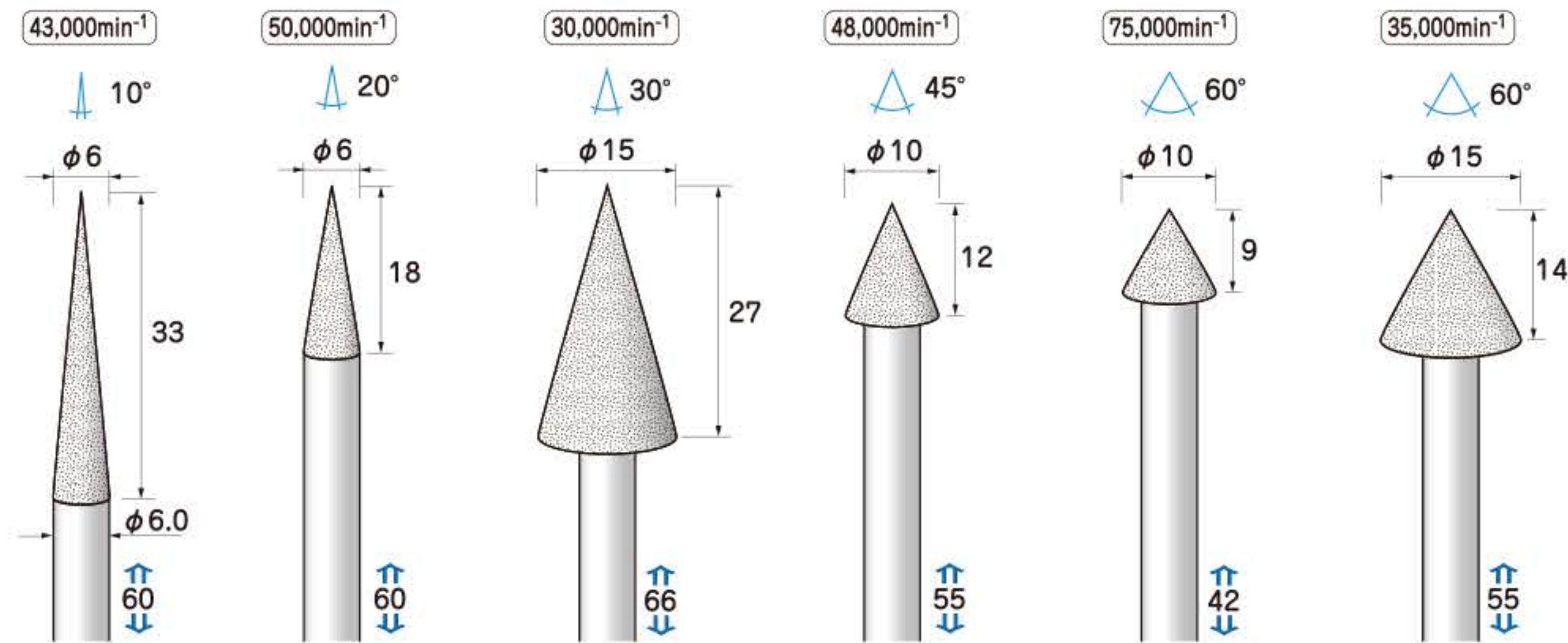
Shank Size $\phi 6.0$
1 pc./pack



Grit Size	#120	#120	#120	#120
Diamond	1A13012	1A13013	1A13014	1A13015

Electroplated Diamond Burs

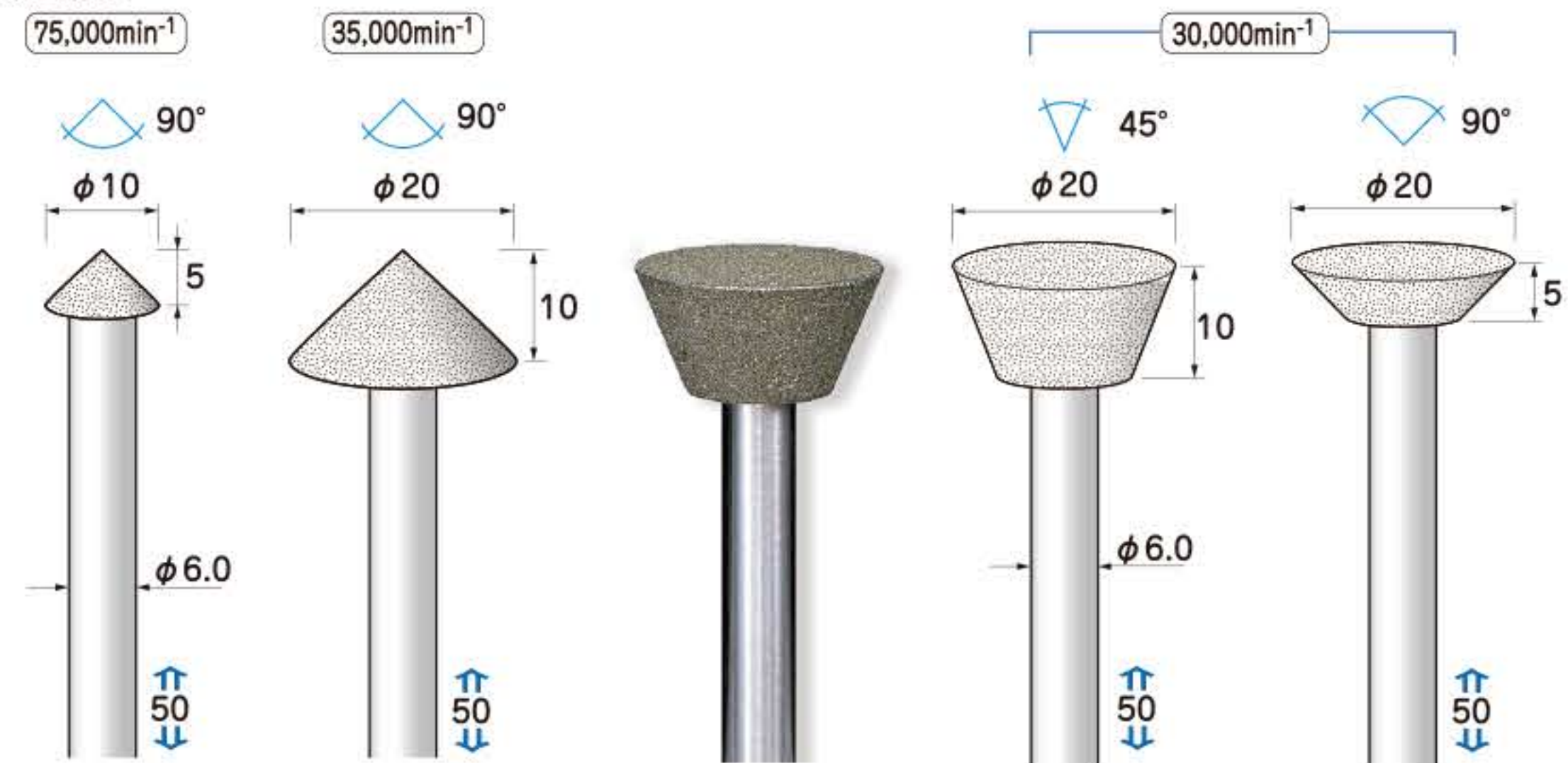
Shank Size $\phi 6.0$
1 pc./pack



Grit Size	#120	#120	#120	#120	#120	#120
Diamond	1A13016	1A13017	1A13018	1A13019	1A13020	1A13021

Electroplated Diamond Burs

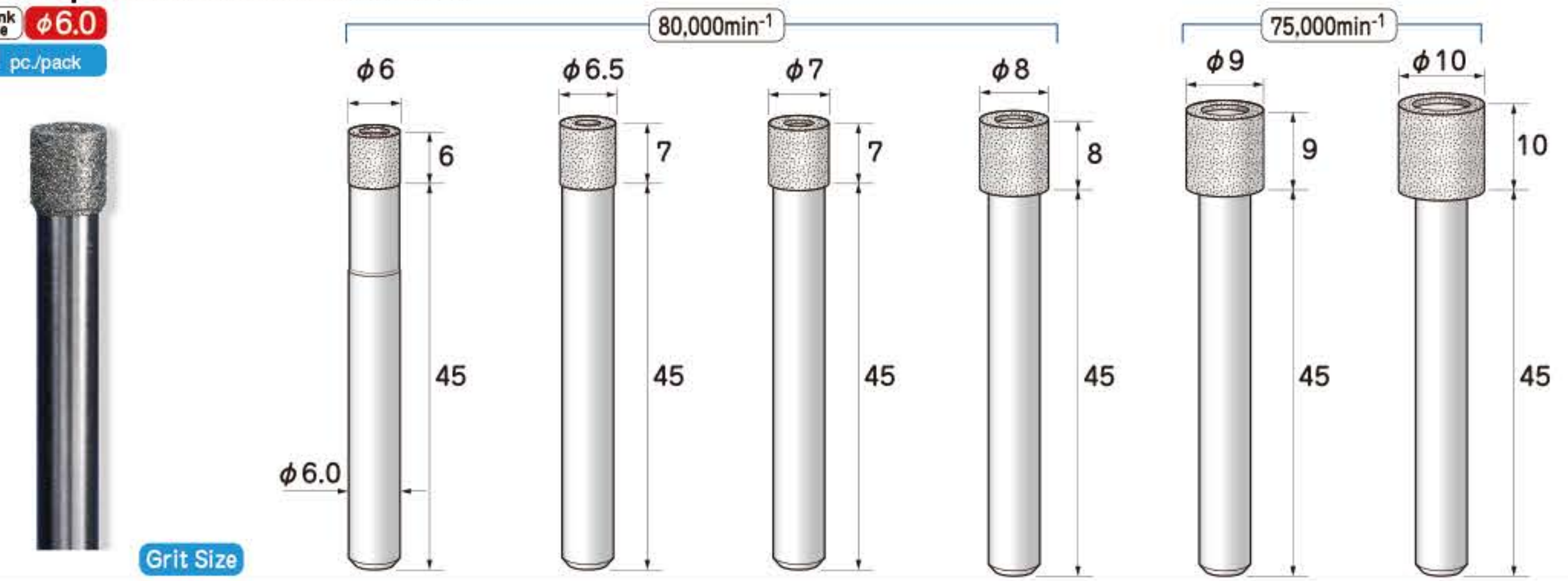
Shank Size $\phi 6.0$
1 pc./pack



Grit Size	#120	#120	#120	#120
Diamond	1A13022	1A13023	1A13024	1A13025

Electroplated Diamond/CBN Burs

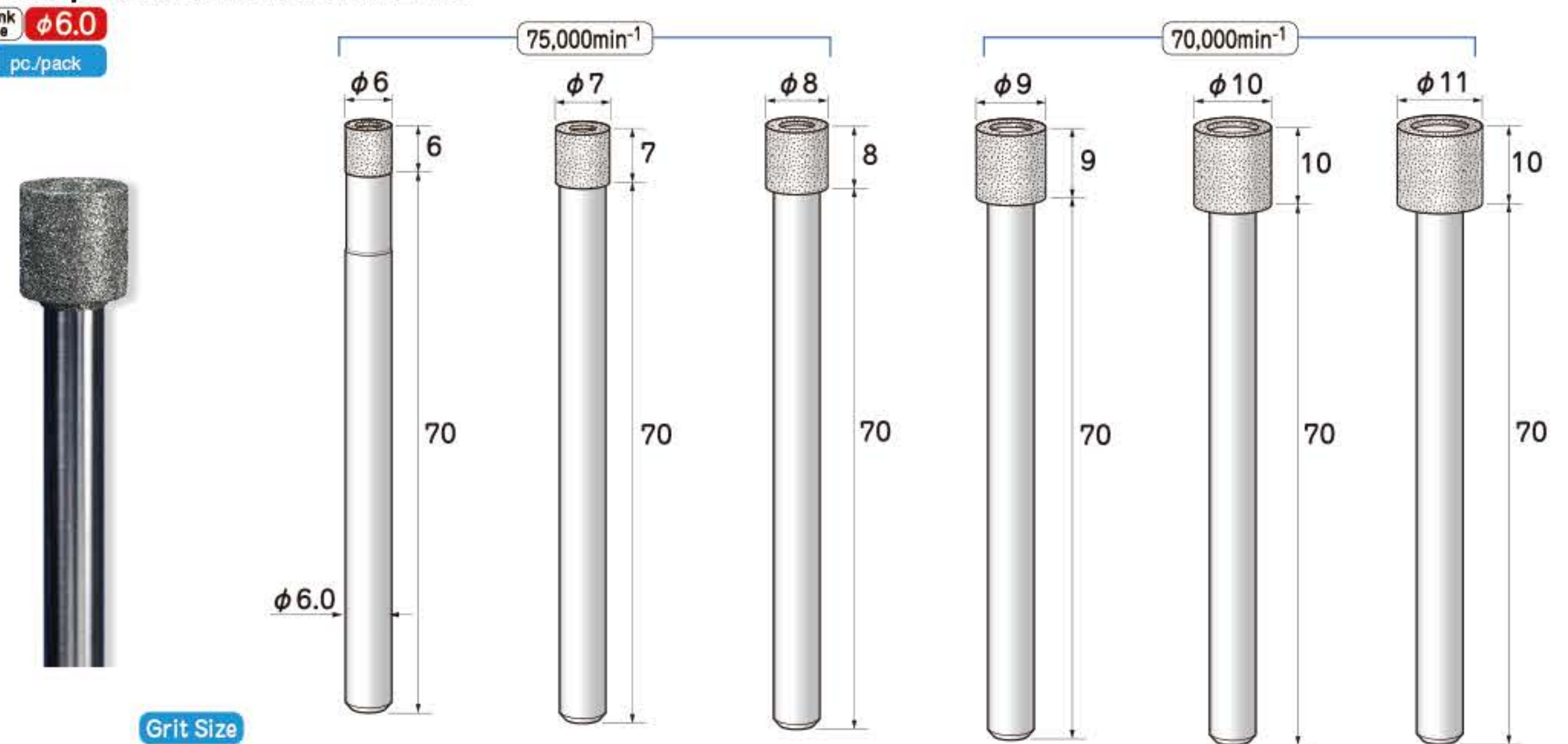
Shank Size $\phi 6.0$
1 pc./pack



Diamond #100	1A13026	1A13027	1A13028	1A13029	1A13030	1A13031
CBN #120	1A23001	1A23002	1A23003	1A23004	1A23005	1A23006

Electroplated Diamond/CBN Burs

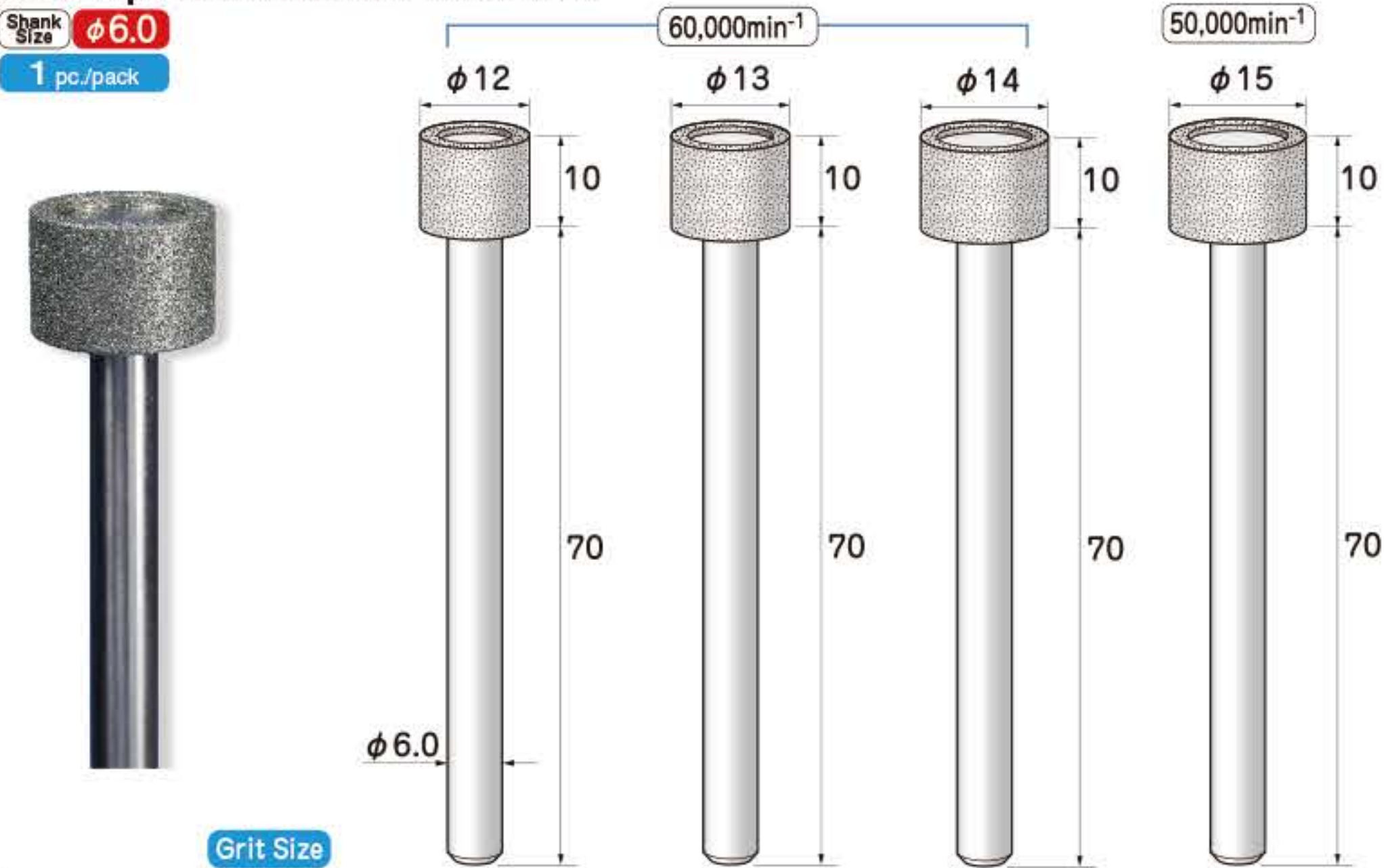
Shank Size $\phi 6.0$
1 pc./pack



Diamond #100	1A13032	1A13033	1A13034	1A13035	1A13036	1A13037
CBN #120	1A23007	1A23008	1A23009	1A23010	1A23011	1A23012

Electroplated Diamond/CBN Burs

Shank Size $\phi 6.0$
1 pc./pack



Diamond #100	1A13038	1A13039	1A13040	1A13041
CBN #120	1A23013	1A23014	1A23015	1A23016

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Diamond Cutting Discs

Feature

- E-FORCE diamond cutting discs are rigidly electroplated with carefully selected grains peripherally on stainless discs.
- Flat circumference edge provides less chippings and smooth cutting.
- Best suits for cutting and grooving.

Main Application

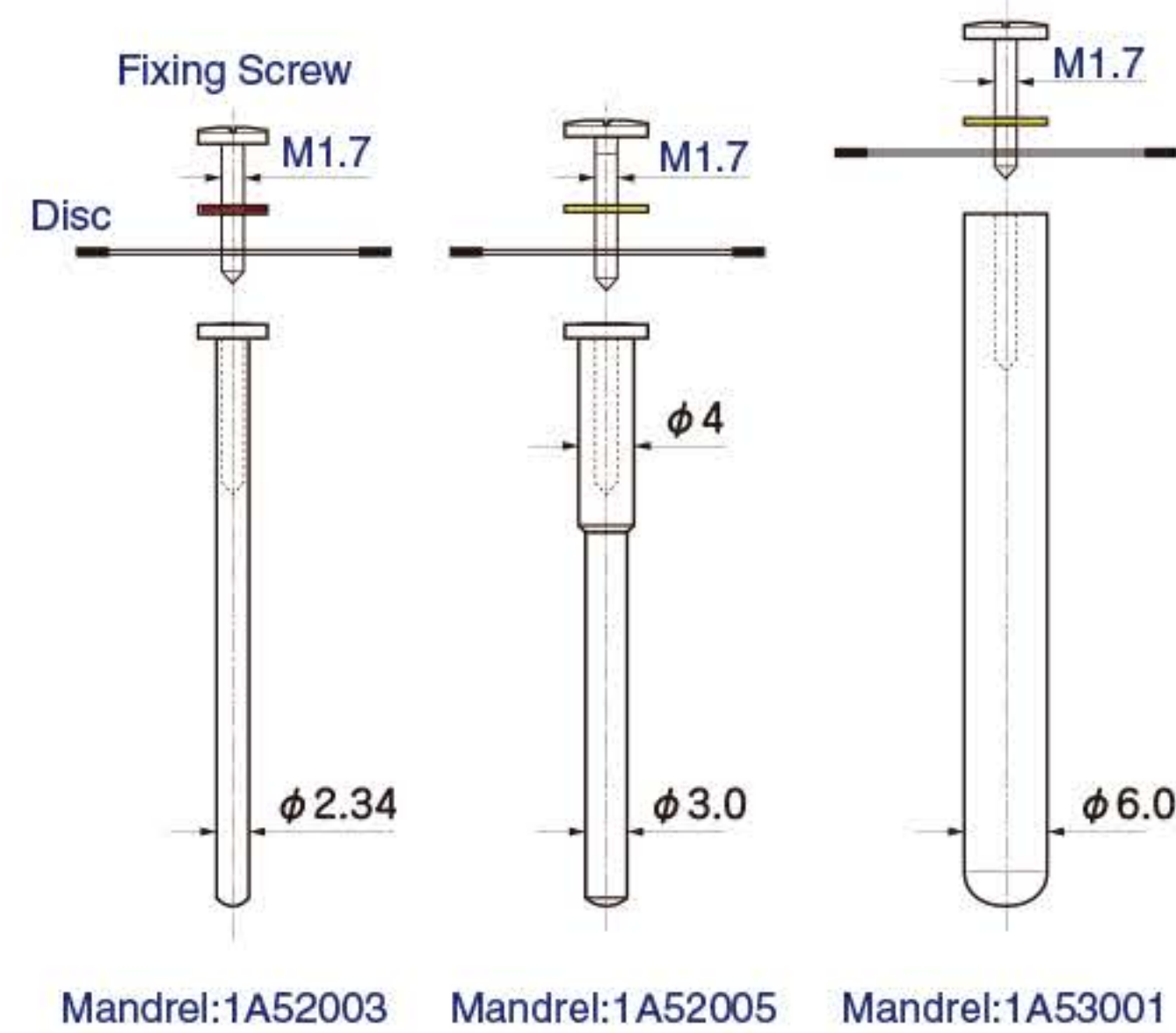
Best suits for non-ferrous materials and non-metal materials.
Main Work Materials:
Ceramics, Glass, Stone, Semiconductor materials, FRP

Mandrels

Available in $\phi 2.34\text{mm}$, $\phi 3.0\text{mm}$, $\phi 6.0\text{mm}$ shank sizes.
Mandrels with M1.7 fixing screw are the most popular.
M3 screw type is recommended for work with high load.
Select the one to suite your purpose.

Select "Disc only" if you already have a mandrel.

M1.7 Fixing Screw Type Mandrels



Mandrel:1A52003 Mandrel:1A52005 Mandrel:1A53001

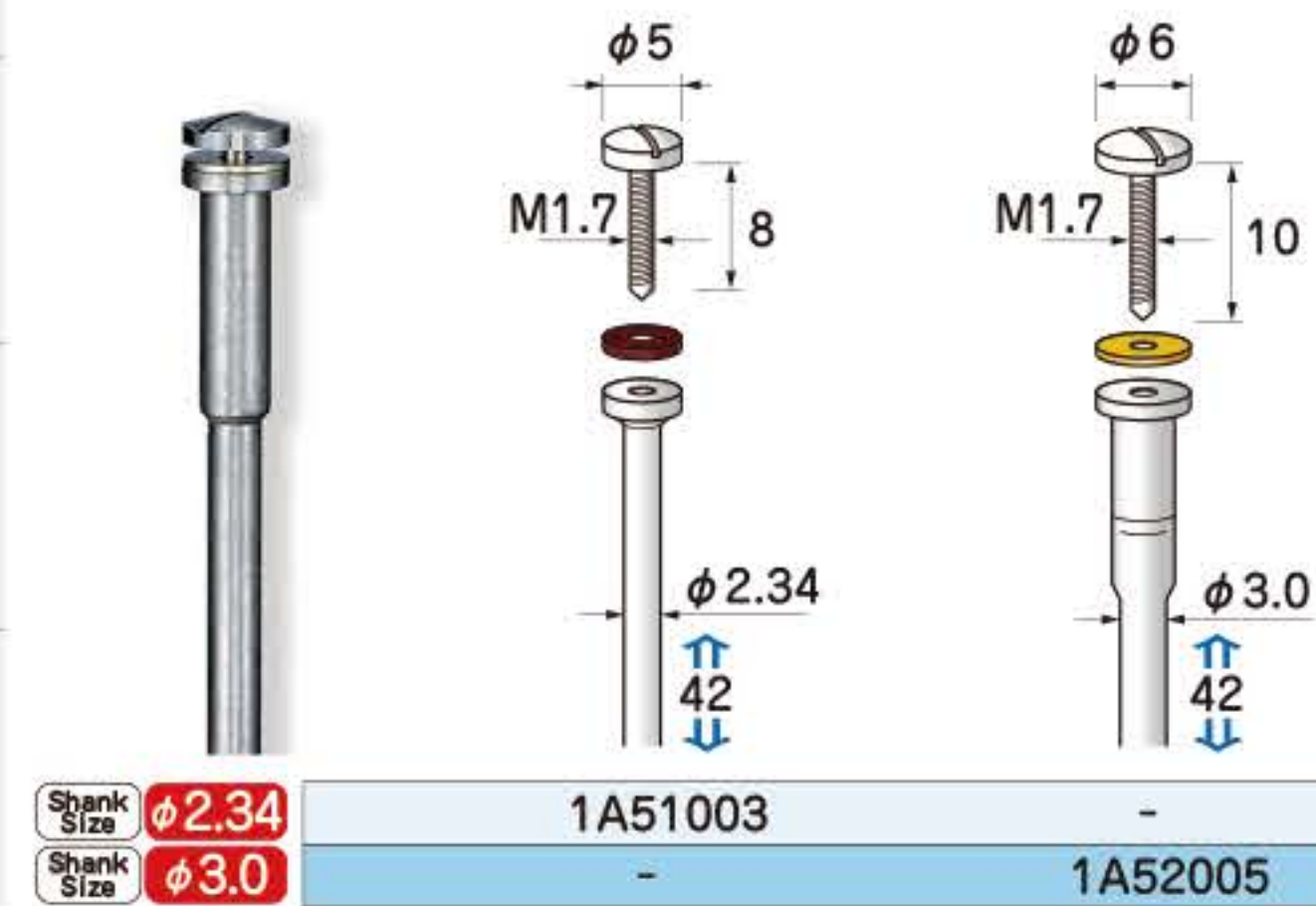
* For more details of mandrels, see page 53.

WARNING Using mandrels in counterclockwise rotation may loosen the fixing screw to result in scattering the tool. Tool must be installed firmly with a screwdriver and be used in clockwise rotation only.

Stainless Mandrels

M1.7 Fixing Screw Type

5 pcs./pack

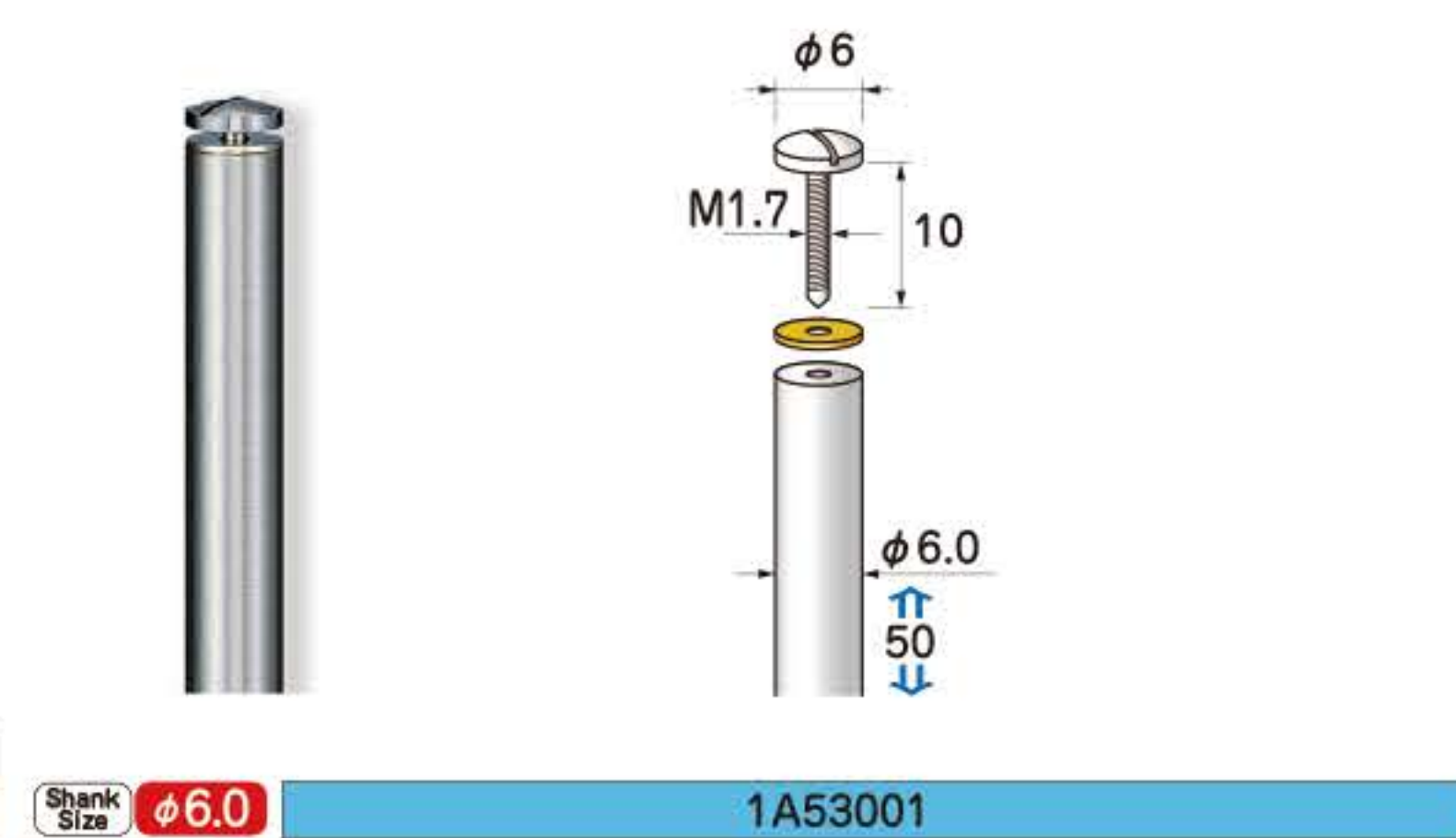


Shank Size $\phi 2.34$ 1A51003 -
Shank Size $\phi 3.0$ - 1A52005

Stainless Mandrels

M1.7 Fixing Screw Type

1 pc./pack



Shank Size $\phi 6.0$ 1A53001

Electroplated Diamond Cutting Discs

M1.7 Fixing Screw Type

1 pc./pack



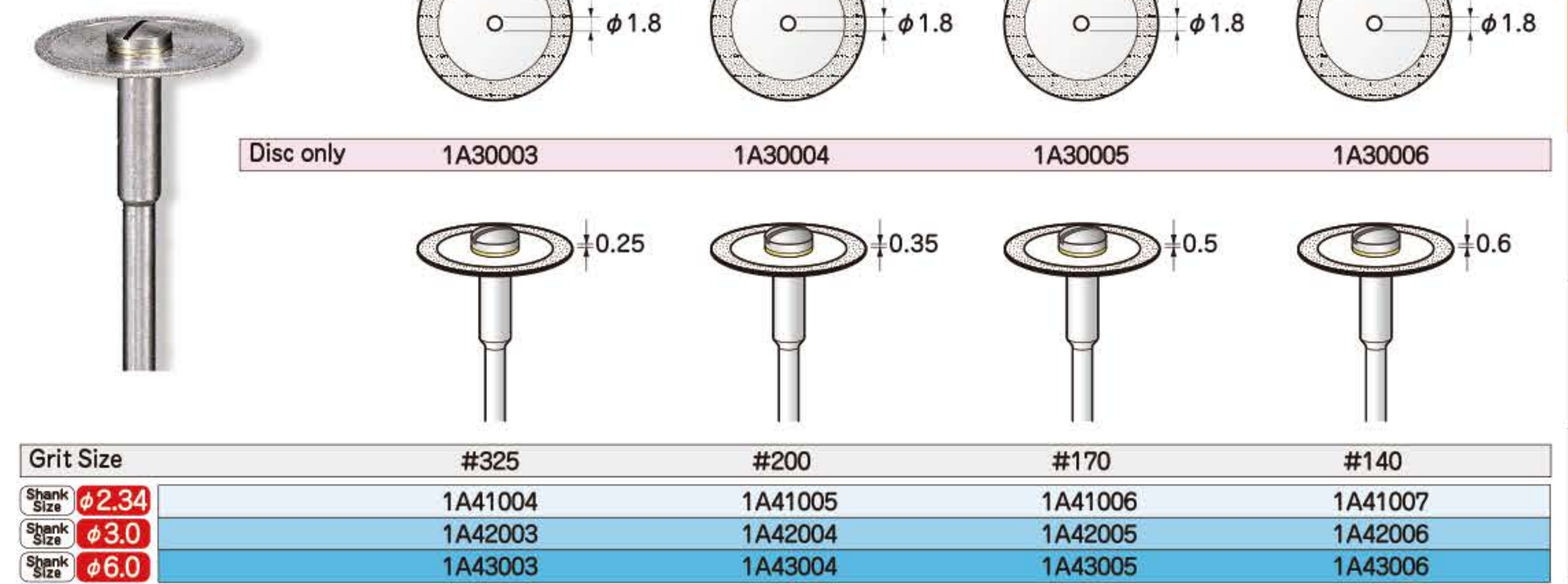
Grit Size	#400	#400	#200
Shank Size $\phi 2.34$	1A41001	1A41002	1A41003
Shank Size $\phi 3.0$	-	1A42001	1A42002
Shank Size $\phi 6.0$	-	1A43001	1A43002

⚠ Disc of 1A41001 is not detachable.

Electroplated Diamond Cutting Discs

M1.7 Fixing Screw Type

1 pc./pack

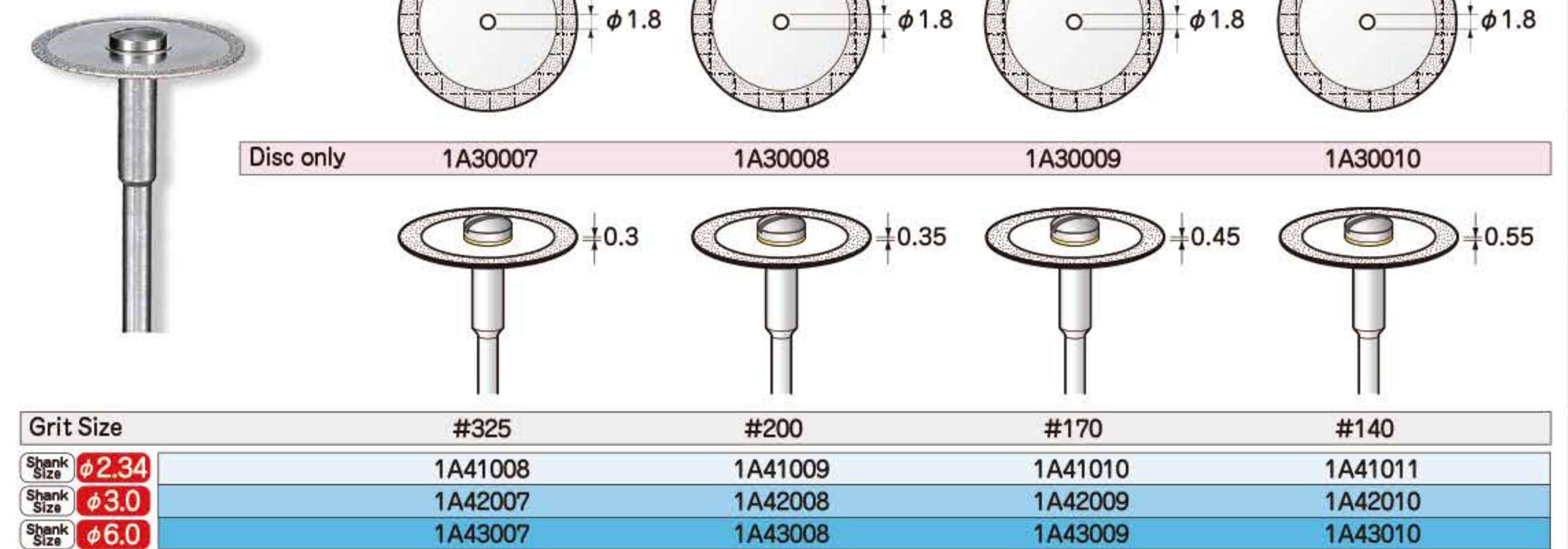


Grit Size	#325	#200	#170	#140
Shank Size $\phi 2.34$	1A41004	1A41005	1A41006	1A41007
Shank Size $\phi 3.0$	1A42003	1A42004	1A42005	1A42006
Shank Size $\phi 6.0$	1A43003	1A43004	1A43005	1A43006

Electroplated Diamond Cutting Discs

M1.7 Fixing Screw Type

1 pc./pack

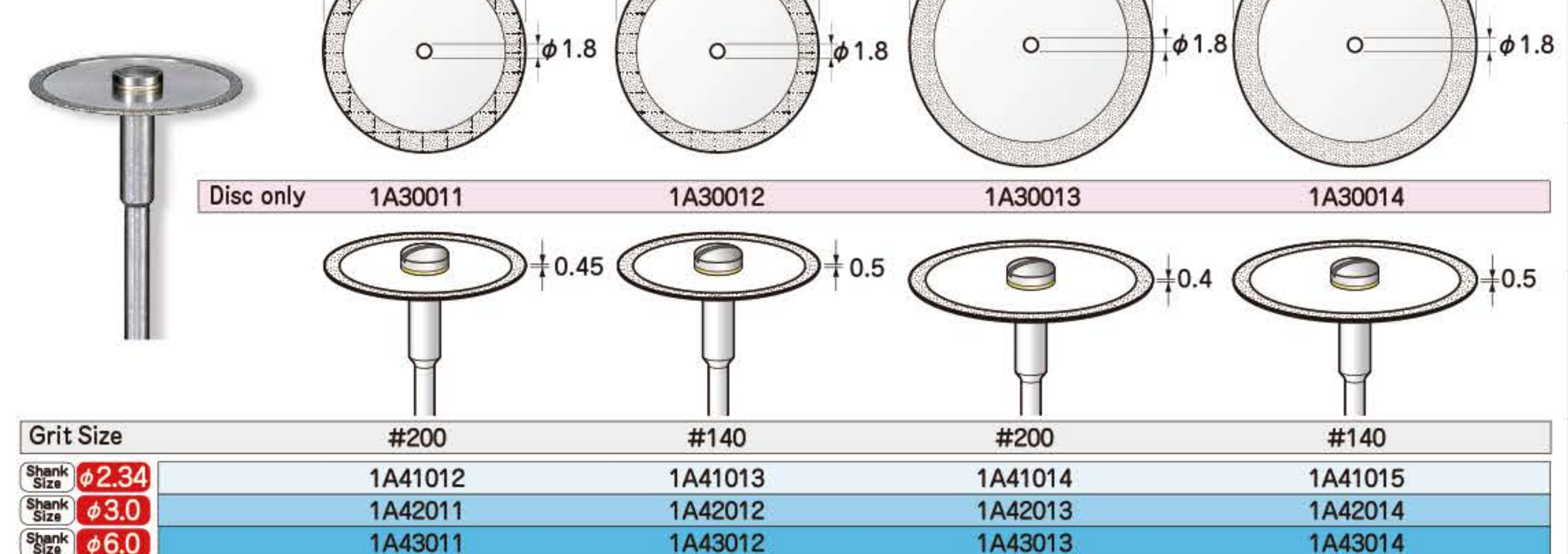


Grit Size	#325	#200	#170	#140
Shank Size $\phi 2.34$	1A41008	1A41009	1A41010	1A41011
Shank Size $\phi 3.0$	1A42007	1A42008	1A42009	1A42010
Shank Size $\phi 6.0$	1A43007	1A43008	1A43009	1A43010

Electroplated Diamond Cutting Discs

M1.7 Fixing Screw Type

1 pc./pack



Grit Size	#200	#140	#200	#140
Shank Size $\phi 2.34$	1A41012	1A41013	1A41014	1A41015
Shank Size $\phi 3.0$	1A42011	1A42012	1A42013	1A42014
Shank Size $\phi 6.0$	1A43011	1A43012	1A43013	1A43014

⚠ Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

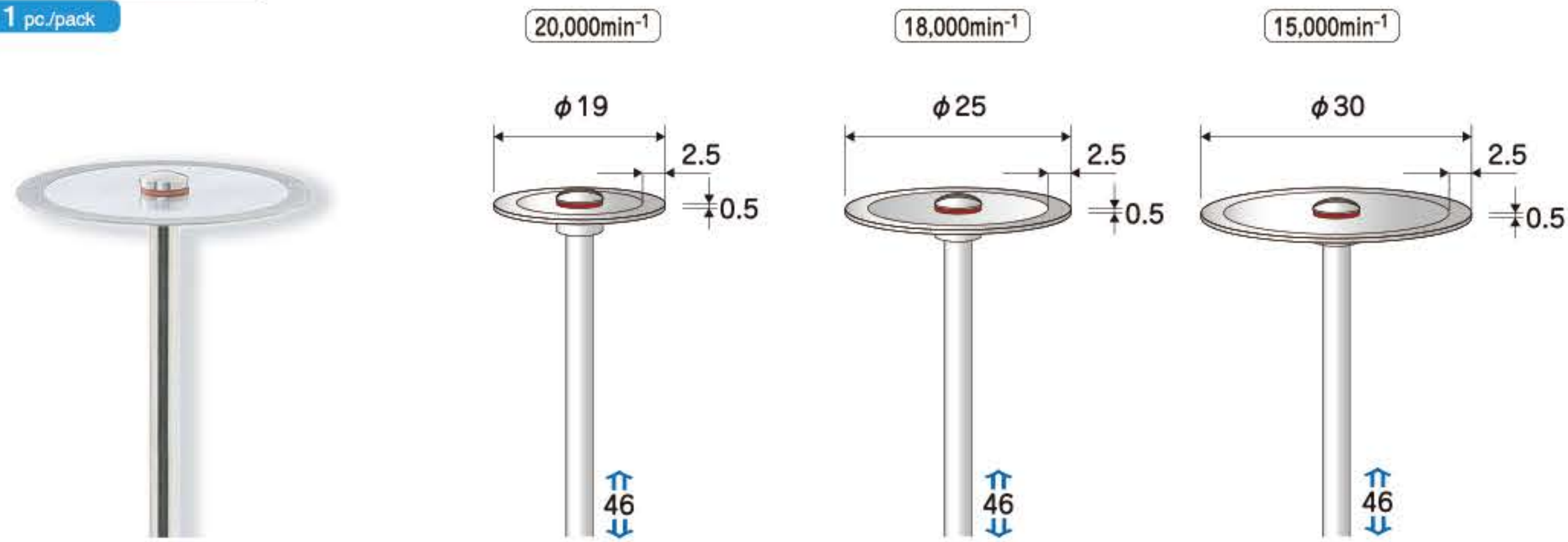
Diamond Cutting Discs

EIKO

Electroplated Diamond Cutting Discs

M1.7 Fixing Screw Type

1 pc./pack



Grit Size	#200	#200	#200
Shank Size $\phi 2.34$	1011200	1011201	1011202
Shank Size $\phi 3.0$	1012200	1012201	1012202

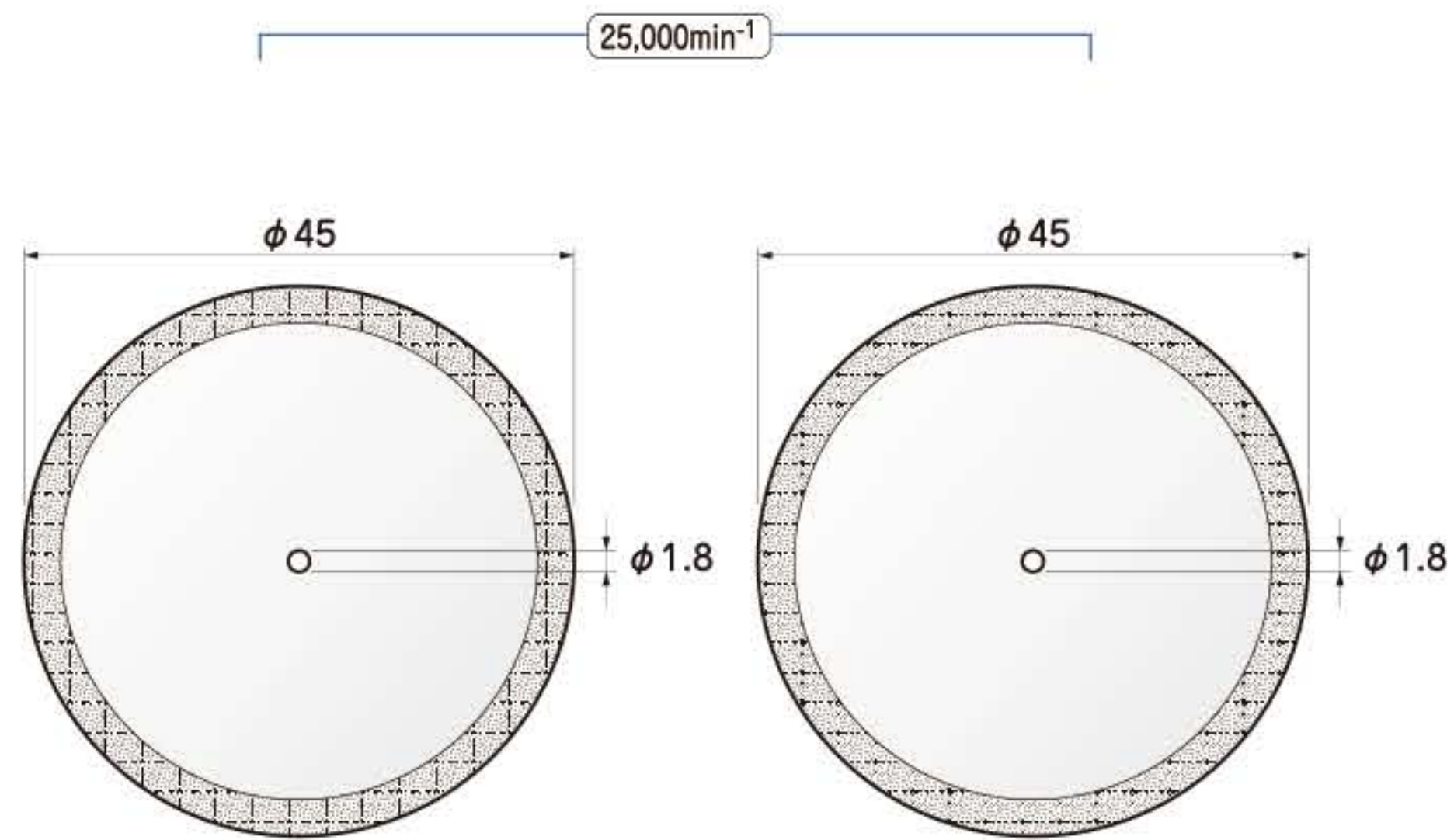
Electroplated Diamond Cutting Discs

M1.7 Fixing Screw Type

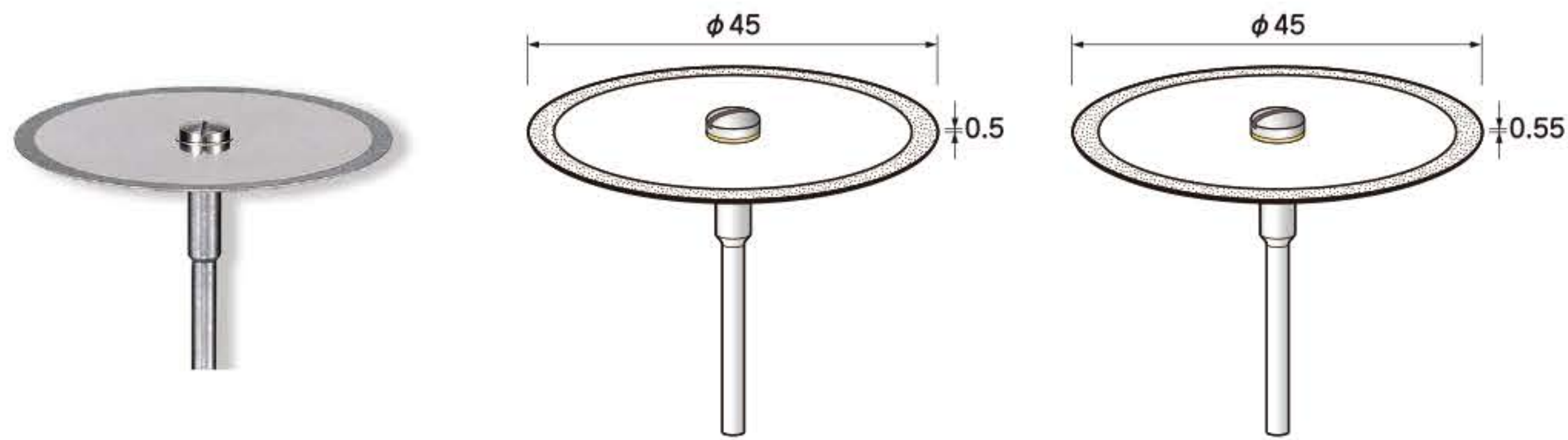
1 pc./pack

Choose M1.7 Screw Type mandrels to install these discs.

Mandrels equipped with M1.7 fixing screw is the most popular choice. With thinner shank and spacious neck area compared with M3 fixing screw type mandrels suit for minute processing.



Disc only 1A30015 1A30016



Grit Size	#170	#140
Shank Size $\phi 2.34$	1A41016	1A41017
Shank Size $\phi 3.0$	1A42015	1A42016
Shank Size $\phi 6.0$	1A43015	1A43016

Diamond Cutting Discs

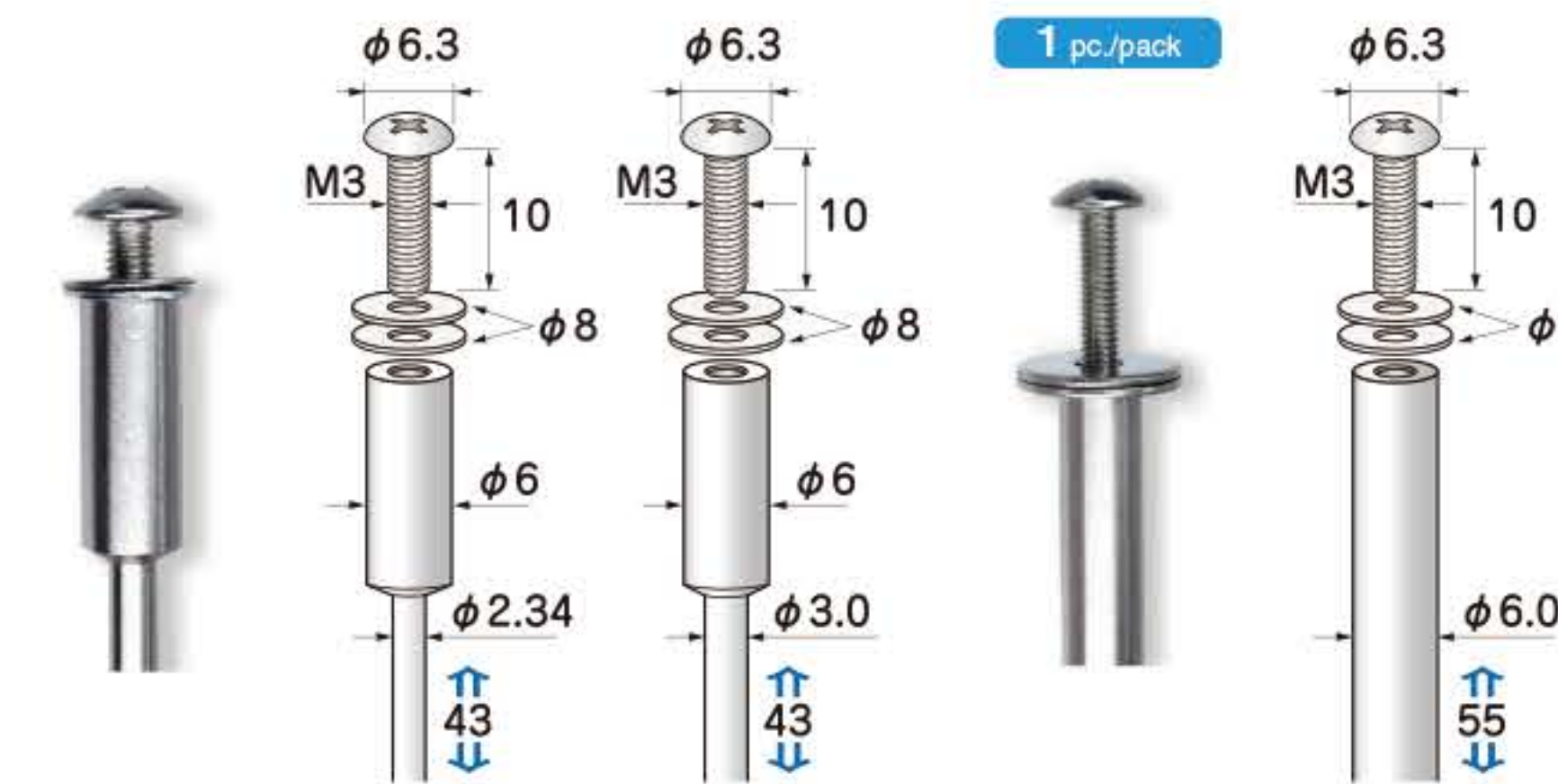
E-FORCE®

Stainless Mandrels

M3 Fixing Screw Type

5 pcs./pack

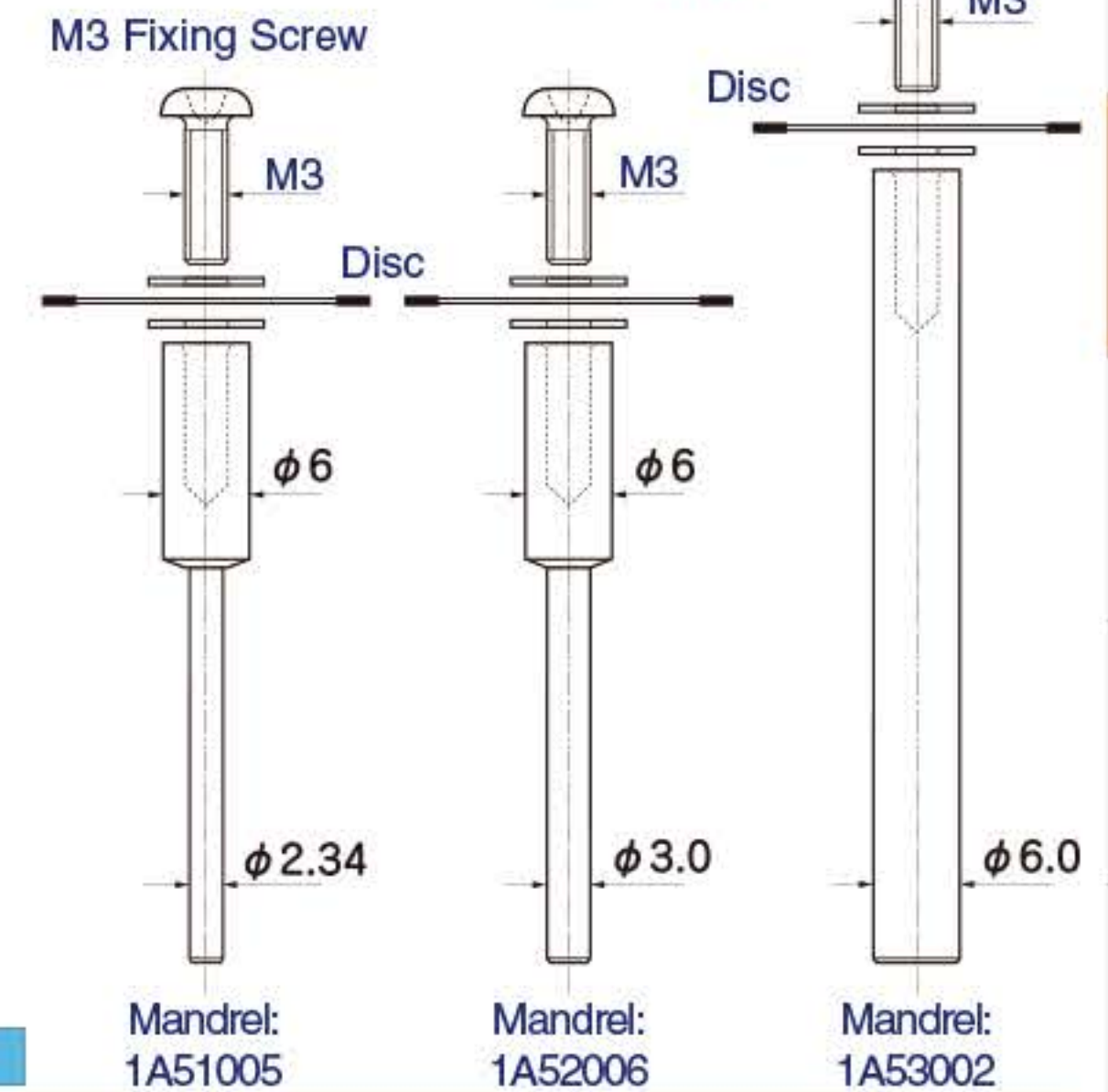
Mandrels with a thick M3 fixing screw provides less breakage of screw. Suit for work with high load.



Shank Size $\phi 2.34$	1A51005	-	Shank Size $\phi 6.0$	1A53002
Shank Size $\phi 3.0$	-	1A52006		

M3 Fixing Screw Type Mandrels

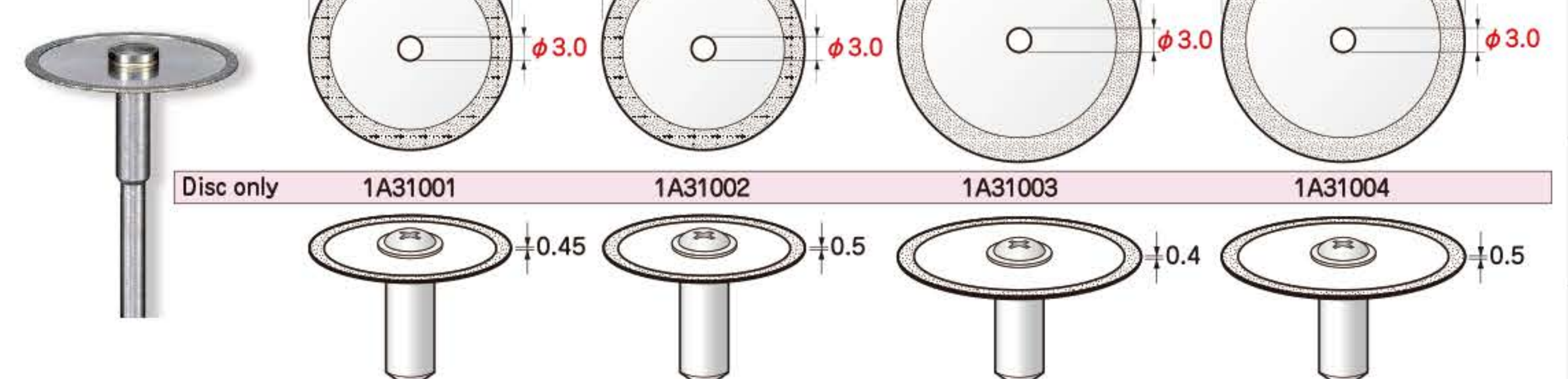
* For more details of mandrels, see page 53.



Electroplated Diamond Cutting Discs

M3 Fixing Screw Type

1 pc./pack



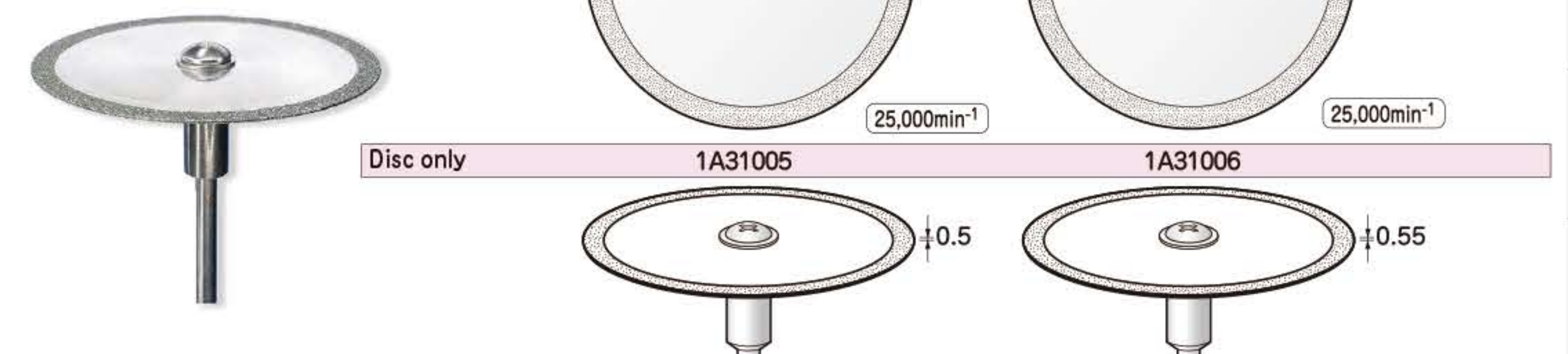
Grit Size	#200	#140	#200	#140
Shank Size $\phi 2.34$	1A41018	1A41019	1A41020	1A41021
Shank Size $\phi 3.0$	1A42017	1A42018	1A42019	1A42020
Shank Size $\phi 6.0$	1A43017	1A43018	1A43019	1A43020

Electroplated Diamond Cutting Discs

M3 Fixing Screw Type

1 pc./pack

Choose M3 Screw Type mandrels to install these discs.



Grit Size	#170	#140
Shank Size $\phi 2.34$	1A41022	1A41023
Shank Size $\phi 3.0$	1A42021	1A42022
Shank Size $\phi 6.0$	1A43021	1A43022

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Diamond Cutting Discs

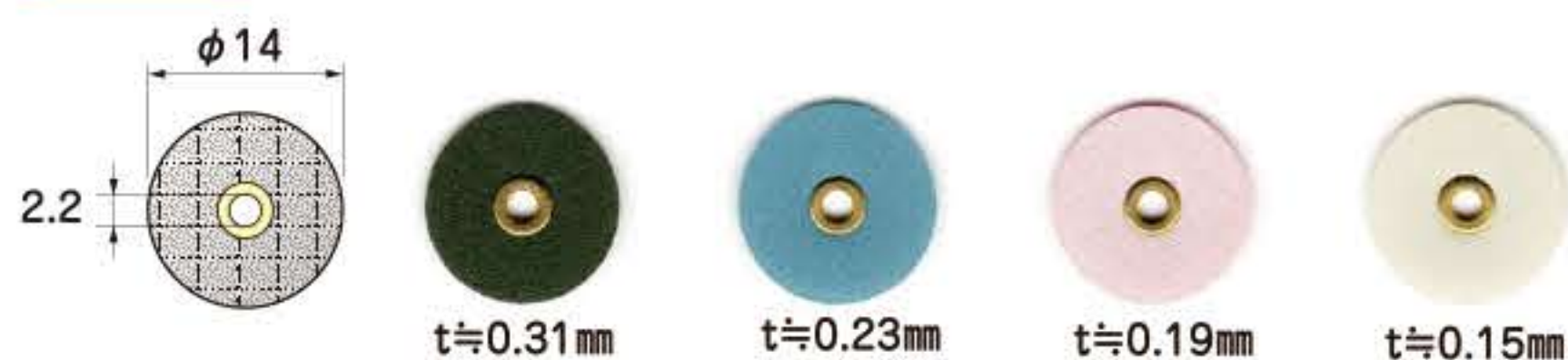
EIKO

Polishing Film Diamond Discs (Single-Side Coated)

- Feature**
- Abrasive discs for polishing coated with diamond grains on the single side of the flexible thin film.
 - Convenient for polishing abutting area and narrow slit area etc.
 - The edge of disc is not coated to avoid excessive grinding in slits.
 - One-touch disc installation to the special mandrel without a screw.
 - With the screw-less installation, the disc does not get loosened in counterclockwise (CCW) rotation.
 - However the adaptive operating speed is 7,000 ~ 10,000 min⁻¹, operation in lower speed is recommended for working on soft materials such as precious metal.

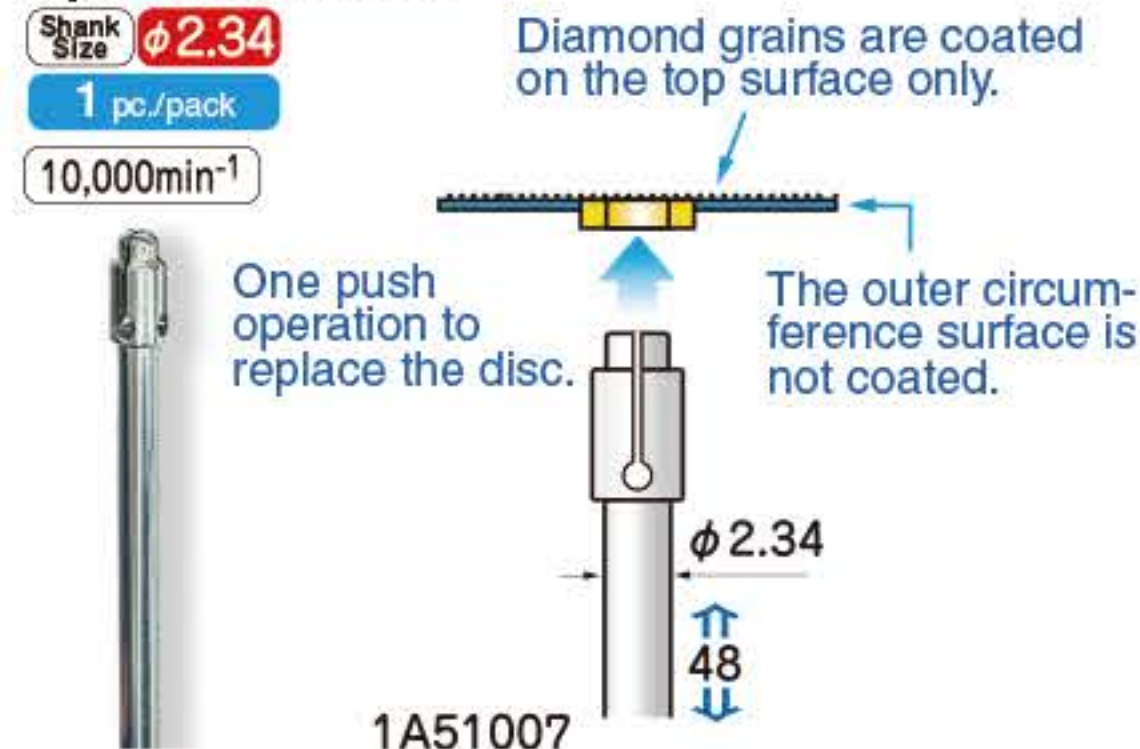
Polishing Film Diamond Discs

10 pcs./pack Use with Special Mandrel



Grit Size	#140	#325	#600	#3000
Disc only	1A32001	1A32002	1A32003	1A32004
Trial Kit (2 each of 4 sizes, Set of 8)	1A32000			

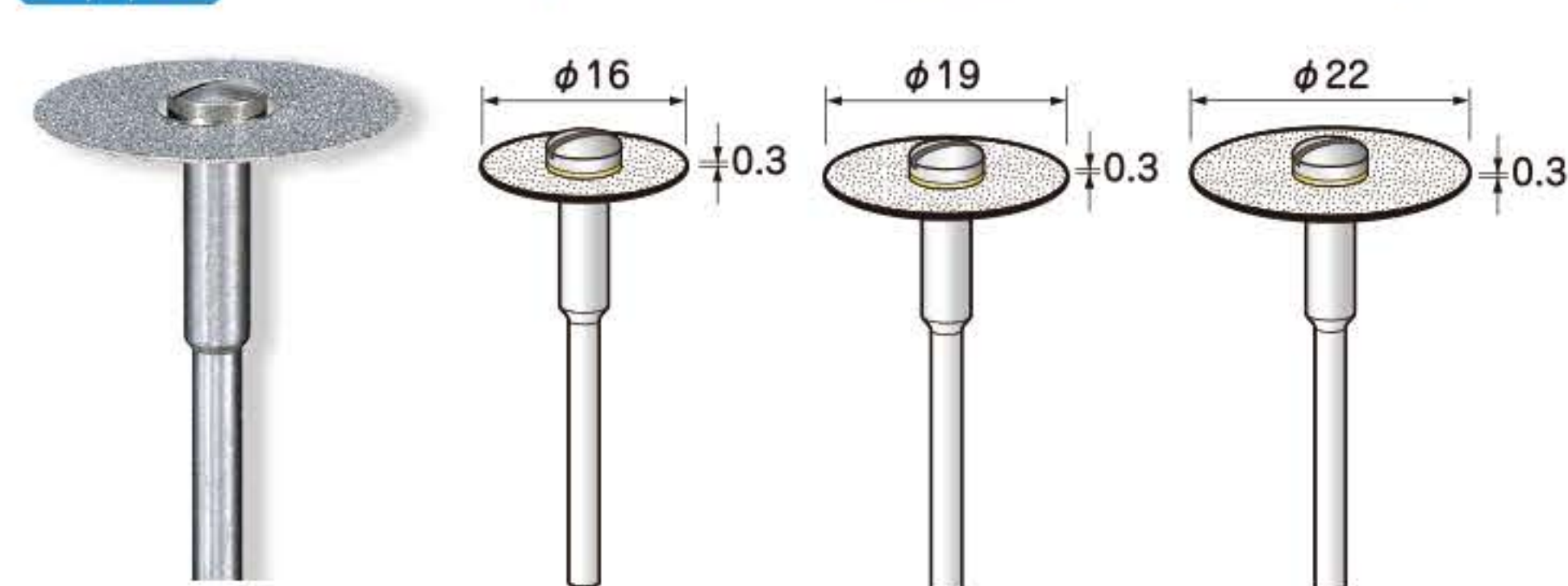
Special Mandrel



Electroplated Diamond Cutting Discs (All Coated)

M1.7 Fixing Screw Type

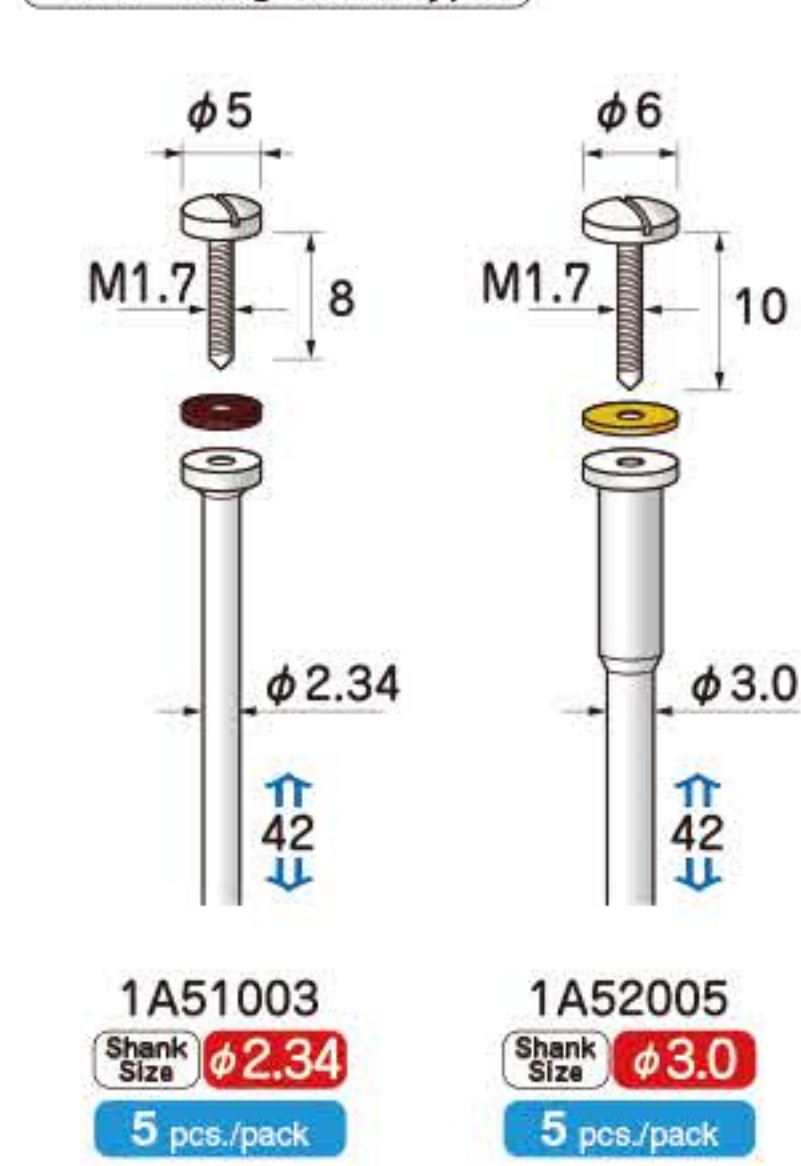
1 pc./pack



Grit Size	#200	#200	#200
Disc only	1A30017	1A30018	1A30019
Shank Size $\phi 2.34$	1A41024	1A41025	1A41026
Shank Size $\phi 3.0$	1A42023	1A42024	1A42025
Shank Size $\phi 6.0$	1A43023	1A43024	1A43025

Stainless Mandrels

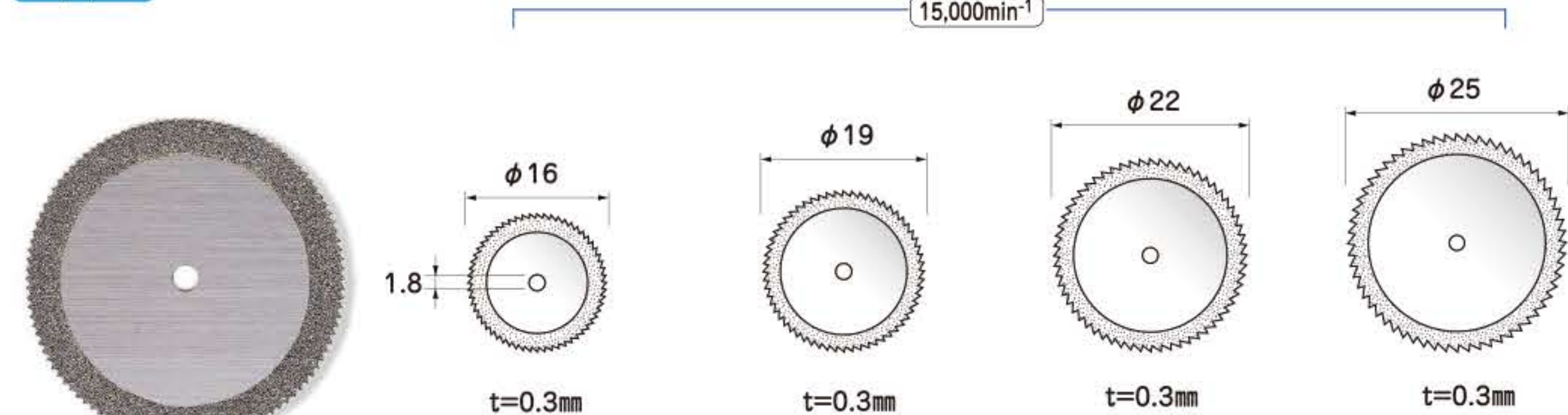
M1.7 Fixing Screw Type



Electroplated Diamond Cutting Disc (Saw)

M1.7 Fixing Screw Type

1 pc./pack



Grit Size	#325	#325	#325	#325
Disc only	1A30020	1A30021	1A30022	1A30023
Shank Size $\phi 2.34$	1A41027	1A41028	1A41029	1A41030
Shank Size $\phi 3.0$	1A42026	1A42027	1A42028	1A42029
Shank Size $\phi 6.0$	1A43026	1A43027	1A43028	1A43029

Diamond Cutting Discs

E-FORCE

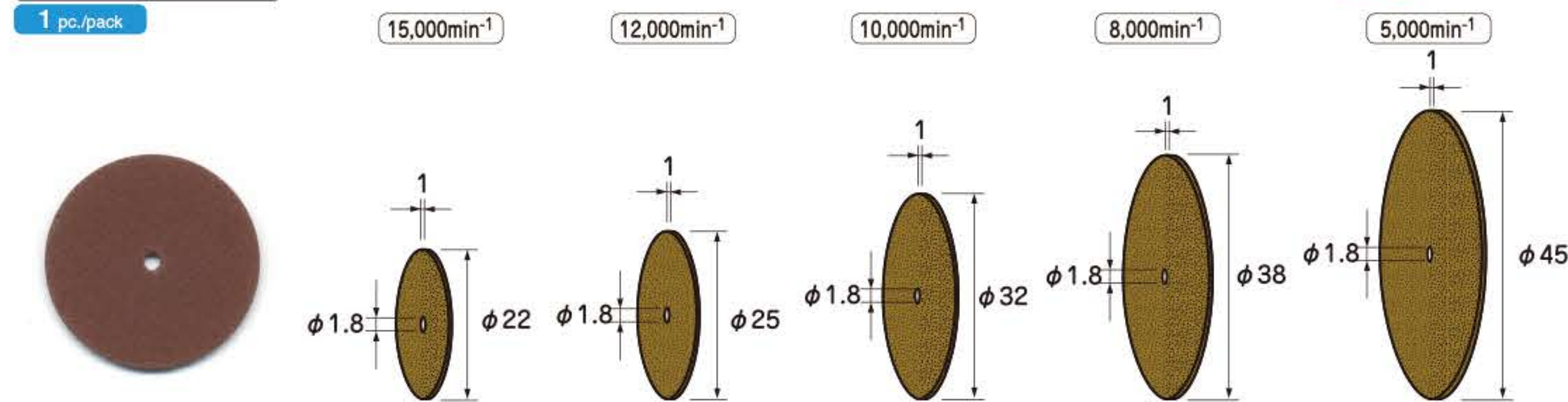
Resinoid Bonded Diamond Discs

- Feature**
- Sharp cutting discs with diamond grains sintered with resinoid bonded.
 - Less clogging than electroplated diamond discs and the sharpness lasts longer.

Resinoid Bonded Diamond Discs

M1.7 Fixing Screw Type

1 pc./pack



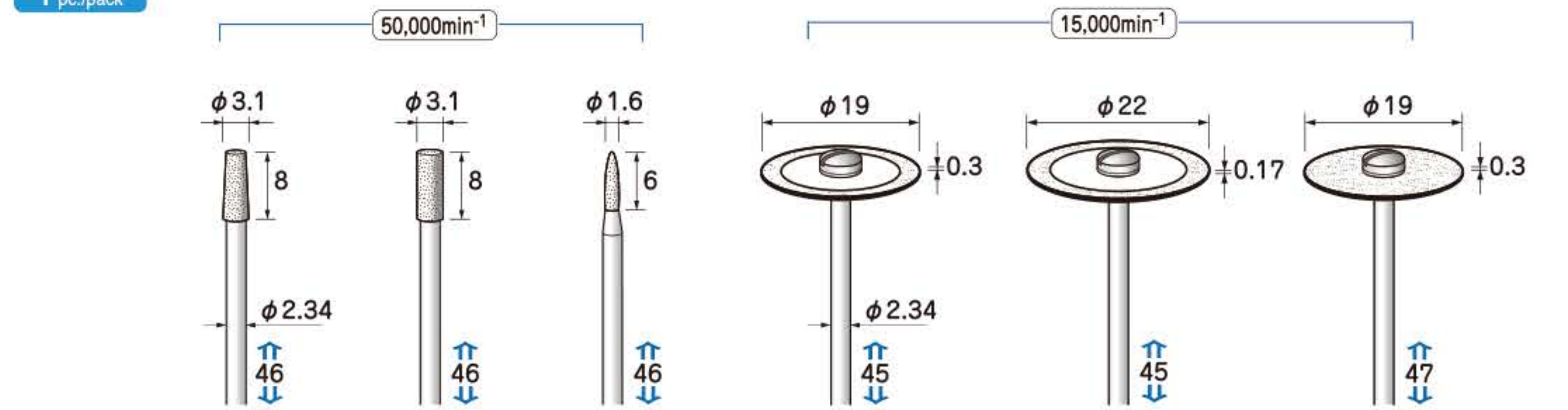
Grit Size	#120	#120	#120	#120	#120
Disc only	1A30024	1A30025	1A30026	1A30027	1A30028
Shank Size $\phi 2.34$	1A41031	1A41032	1A41033	1A41034	1A41035
Shank Size $\phi 3.0$	1A42030	1A42031	1A42032	1A42033	1A42034
Shank Size $\phi 6.0$	1A43030	1A43031	1A43032	1A43033	1A43034

Metal Bonded Diamond Discs

- Feature**
- Excellent durability is gained by baking diamond grains with powder metallurgy.
 - Not as sharp as the electroplated, but lasts longer.

Metal Bonded Diamond Discs

1 pc./pack



Grit Size	#90	#90	#140	#120	#320	#120
Disc only	1A11067	1A11068	1A11069	1A41036	1A41037	1A41038
Shank Size $\phi 2.34$						



Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Sintered Diamond Grinding Stones (Vitrified)

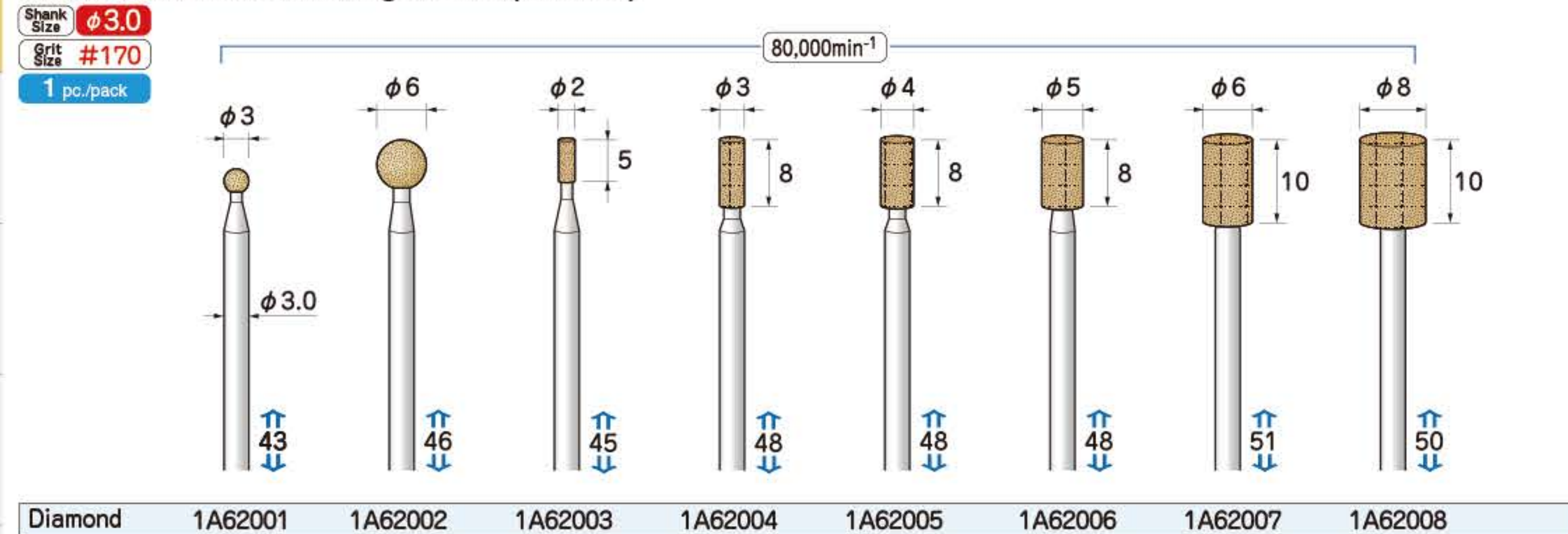
Feature

- Sintered diamond grinding stones that combines characteristics of grinding stones and sharpness of diamonds.
- Semi-porous type. The special baking method provides less clogging and heat generation. Sharpness lasts long with moderate self-dressing action.
- Less burning even in dry operation. Features a soft feeling of use.
- High speed compatible grinding stone ($80,000 \text{ min}^{-1}$) which conforms to electric-powered grinders as well as air grinders.

Main Application

Best suits for Carbide, Hardened Steel, High-hardness Alloy, Ceramics, Glass.

Sintered Diamond Grinding Stones (Vitrified)



Sintered Diamond & CBN Hand Lappers

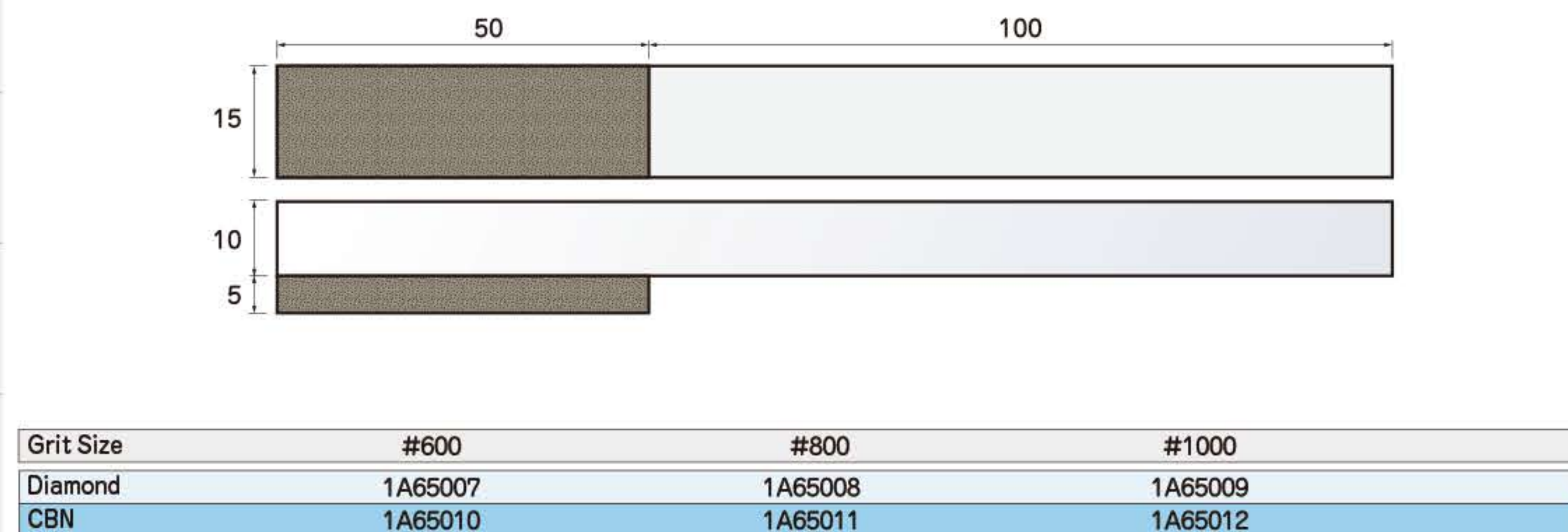
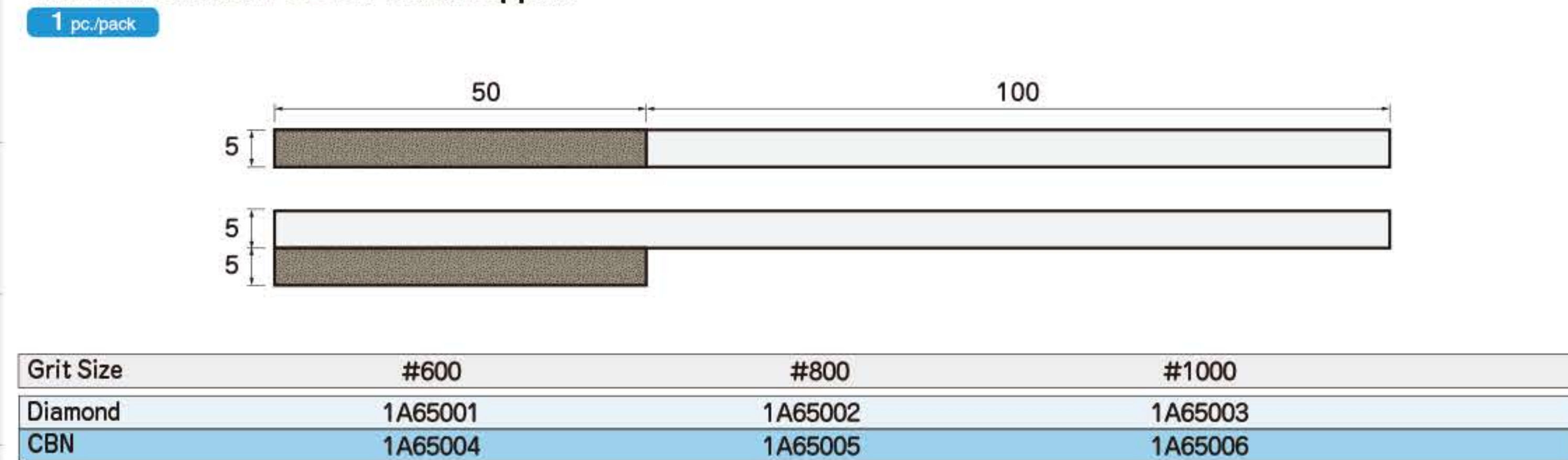
Feature

- Superior durability and grinding ability is achieved with Sintered Diamond blocks.
- High rigidity aluminum handle for sturdy grip.

Main Application

Restoring scratches, deburring cemented carbide, die steel, high speed steel, hardened steel, and other metals. Suitable for polishing dies and precision parts.

Sintered Diamond & CBN Hand Lappers



Vitrified Bonded CBN Tools

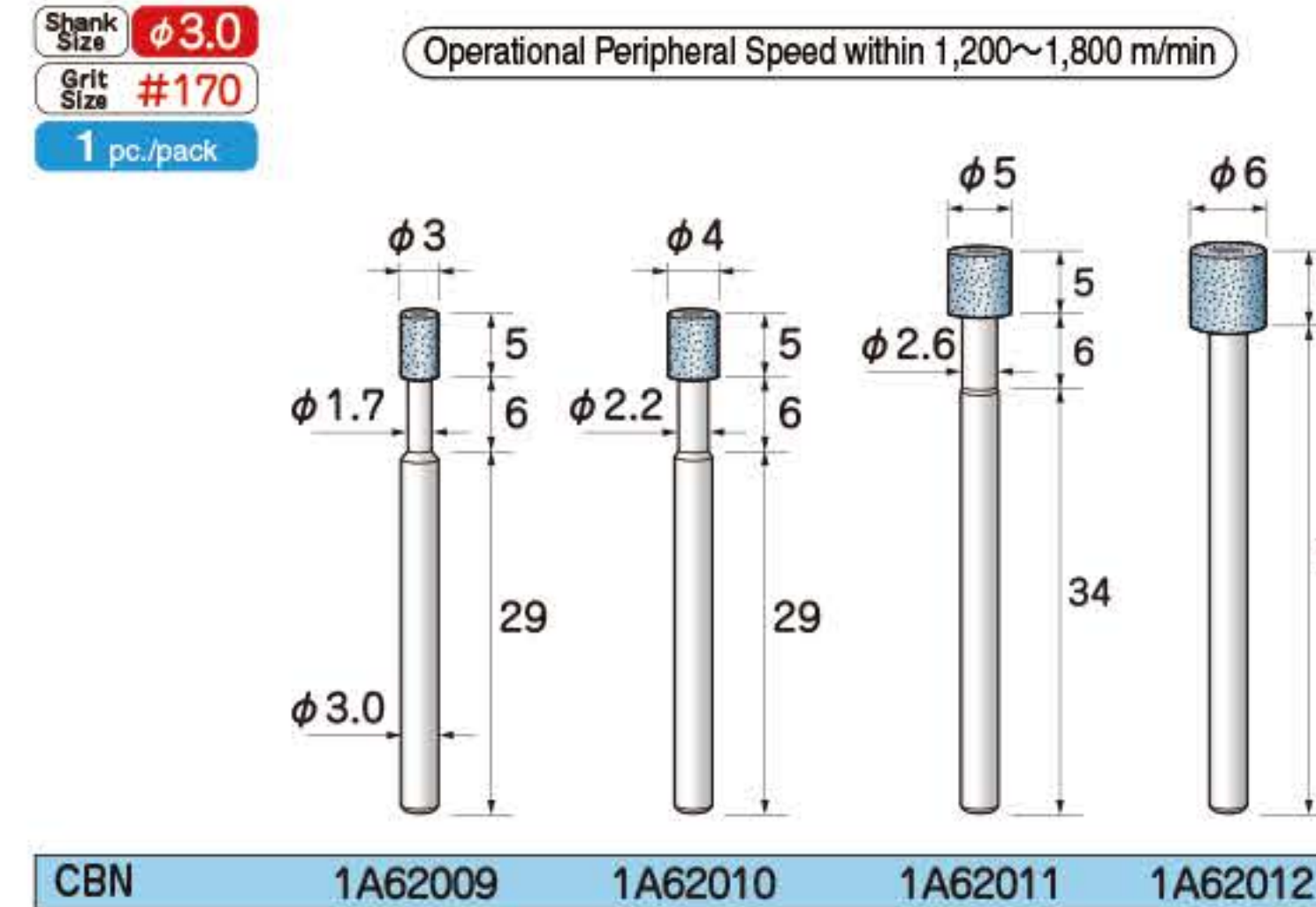
Feature

- Porous type grinding stone baked with vitrified bonded CBN.
- Strong, precision grinding stones for machining, which do not require dressing.

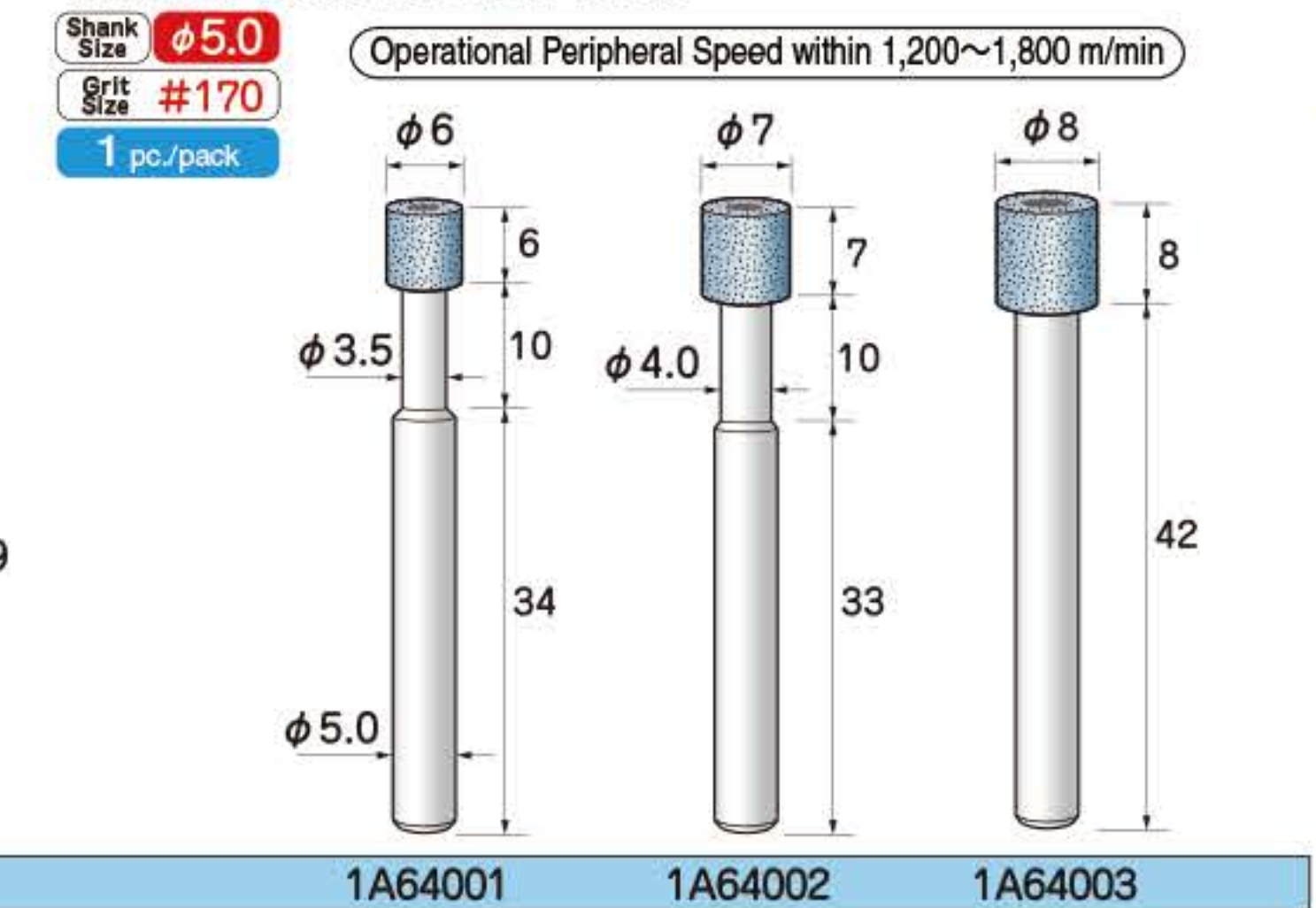
Use within $1,200 \sim 1,800 \text{ m/min}$ operational peripheral speed.



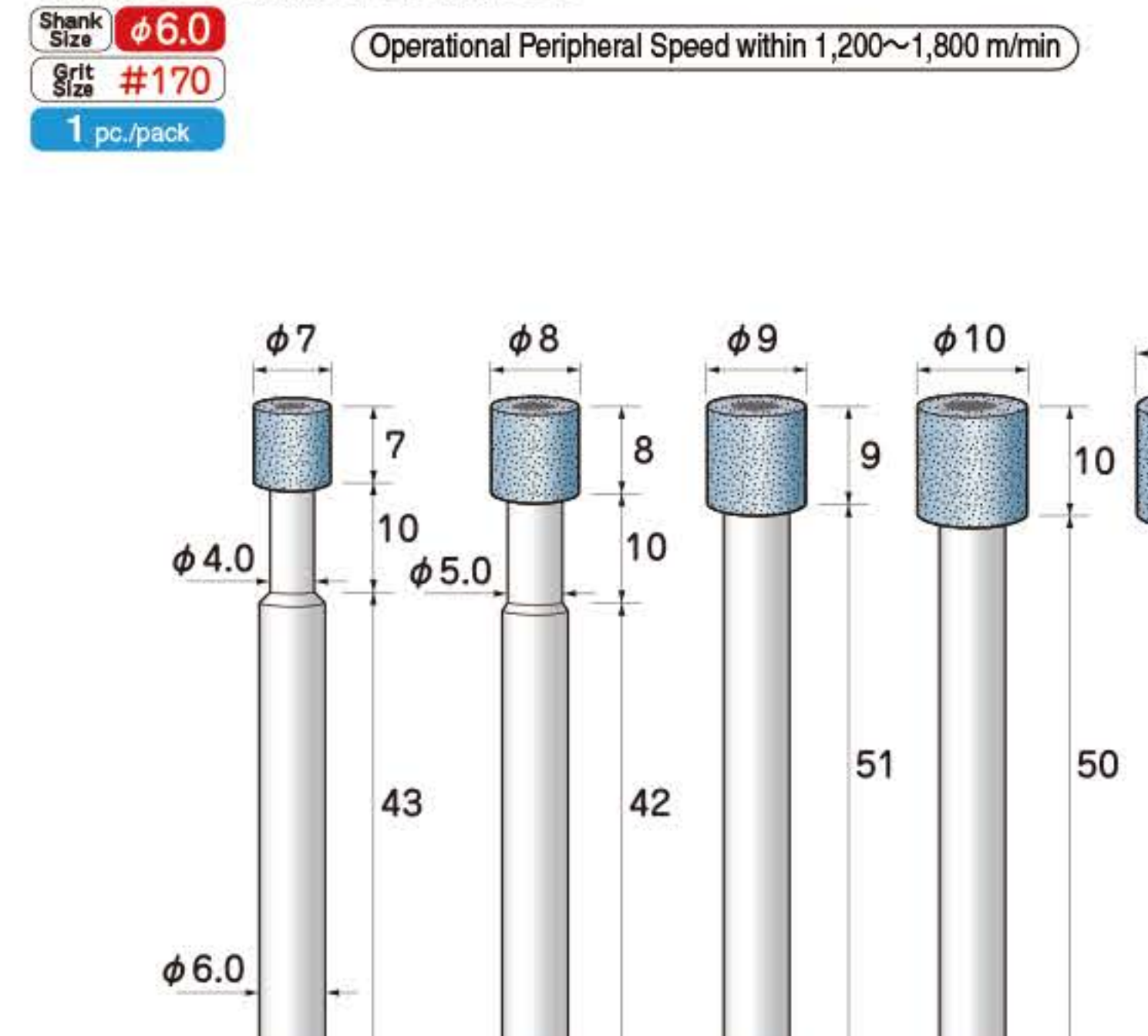
Vitrified Bonded CBN Tools



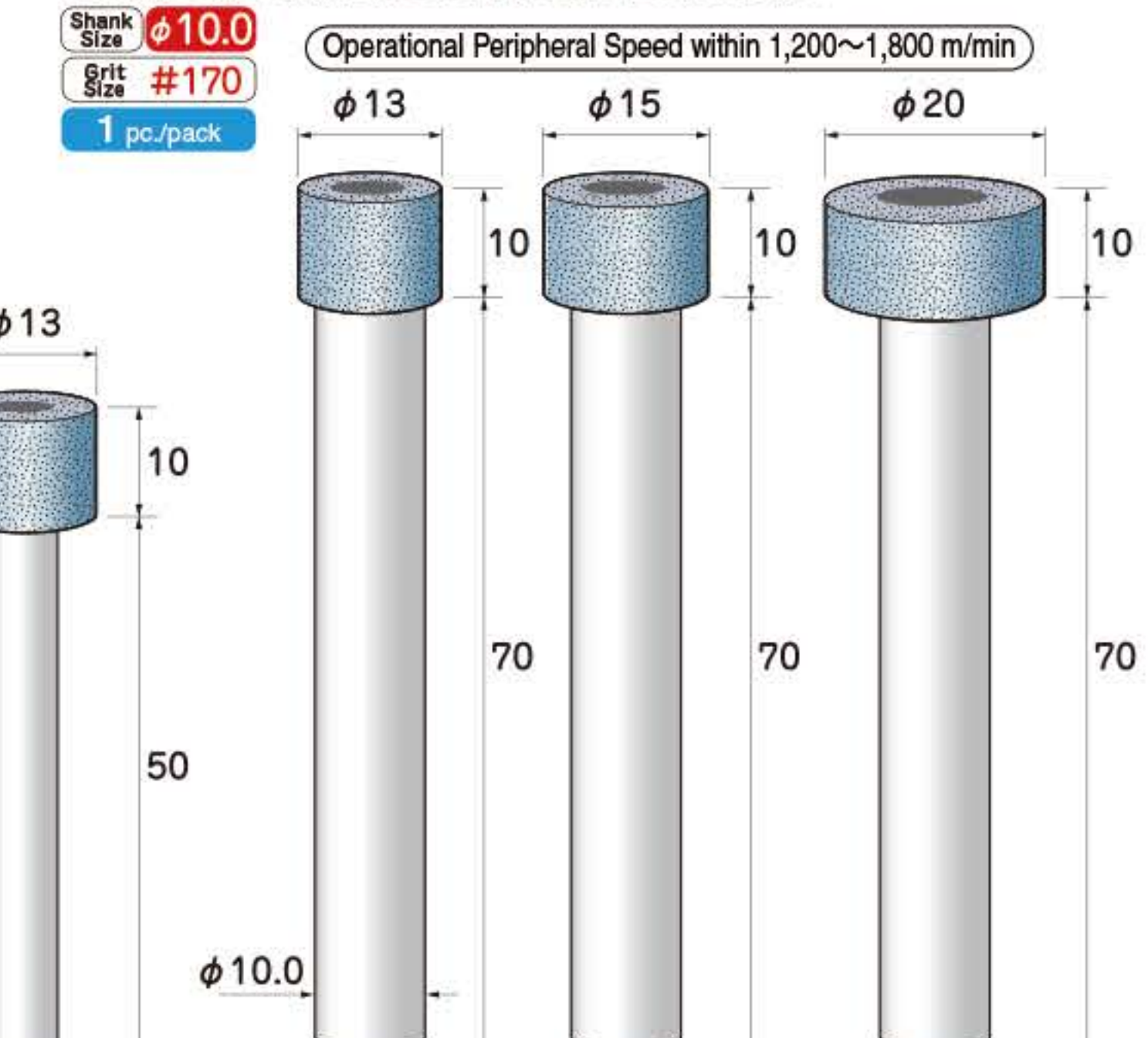
Vitrified Bonded CBN Tools



Vitrified Bonded CBN Tools



Vitrified Bonded CBN Tools Borazone



Diamond Stone Sticks (Sintered)



* For more details of diamond stone sticks, see page 132.

1 pc./pack

Grit Size	#400	#600	#800	#1000	#2000	#3000
1.5	1A65013	1A65014	1A65015	1A65016	1A65017	1A65018
3	1A65019	1A65020	1A65021	1A65022	1A65023	1A65024

Electroplated Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Carbide Cutters

Feature

- Suitable for cutting metals.
- Best suits for deburring, boring, and also chamfering, pattern-cutting the printed circuit boards, and sculpting.

Main Application

Can be applied to variety of materials such as standard steel, resin, and wood.
Main Work Materials:
Carbon Tool Steel (SK), High Speed Tool Steel (SKH), Alloy Tool Steel (SKS), Heat Resistance Steel (SUH), Stainless Steel (SUS)

Blade Patterns

Spiral Cut



Medium Coarse

Deep helical single flute with excellent cutting ability provides smoother finish than cross cut.
Cutting performance is a little less than cross cut type.

Cross Cut



Fine Medium Coarse

Chip breakers are added to the spiral cut, forming double cut shape. Easy and versatile to use with gentle cutting like a working feel of fines. Cutting ability is better than spiral cut.

Aluminum Cut



Best suits for non-ferrous likely to clog metals such as Aluminum, Brass, and Copper, and also for resin, hard rubber, plaster etc. Good cutting ability with sharp deep flutes is also suitable for rough finishing of various materials as well.

Micro Cut

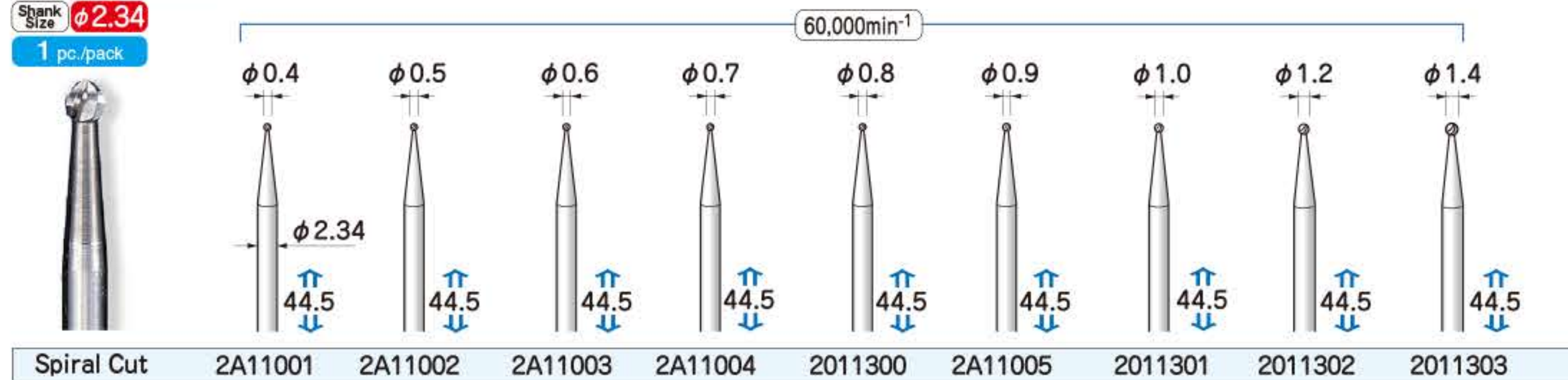


Finishing carbide cutter flute pattern with specially baked quality ultrafine carbide powder. Doubled number of flutes to standard cross cut types provide a unique smooth and less resistant cutting feel.

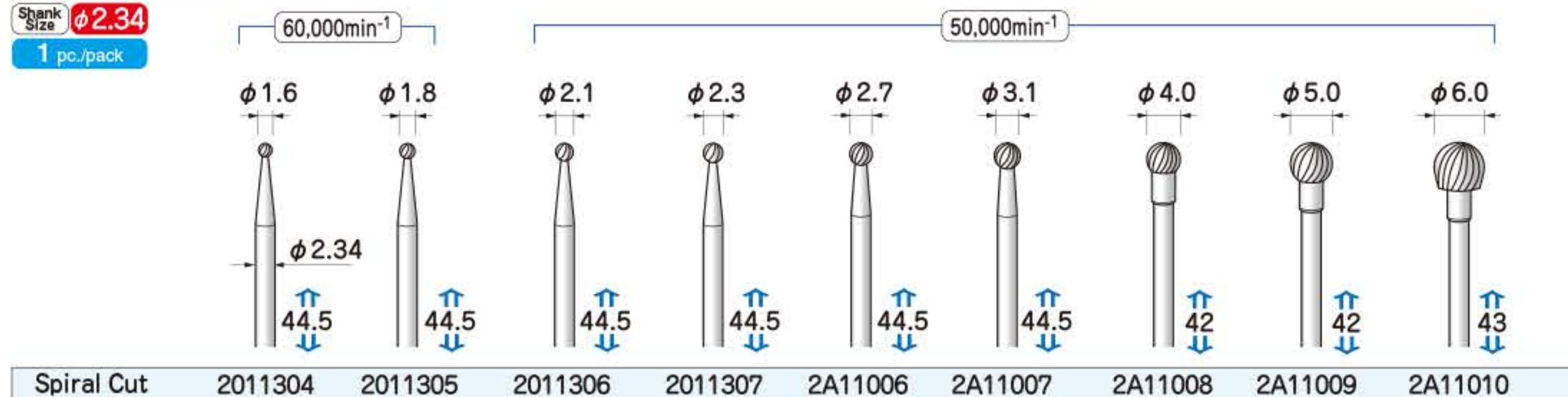
Tool Shapes



Carbide Cutters

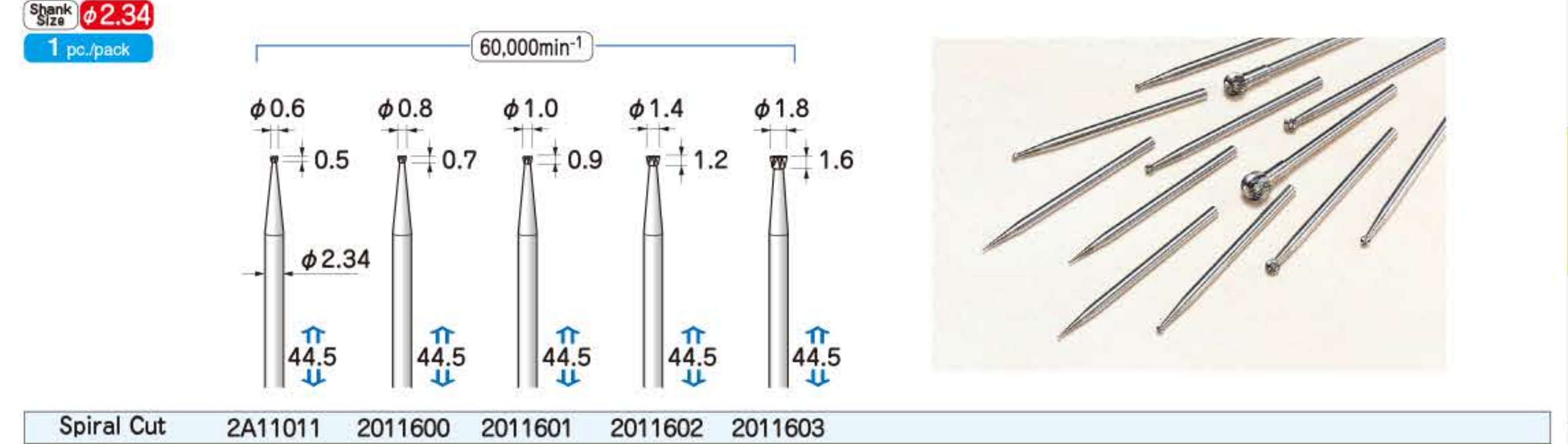


Carbide Cutters

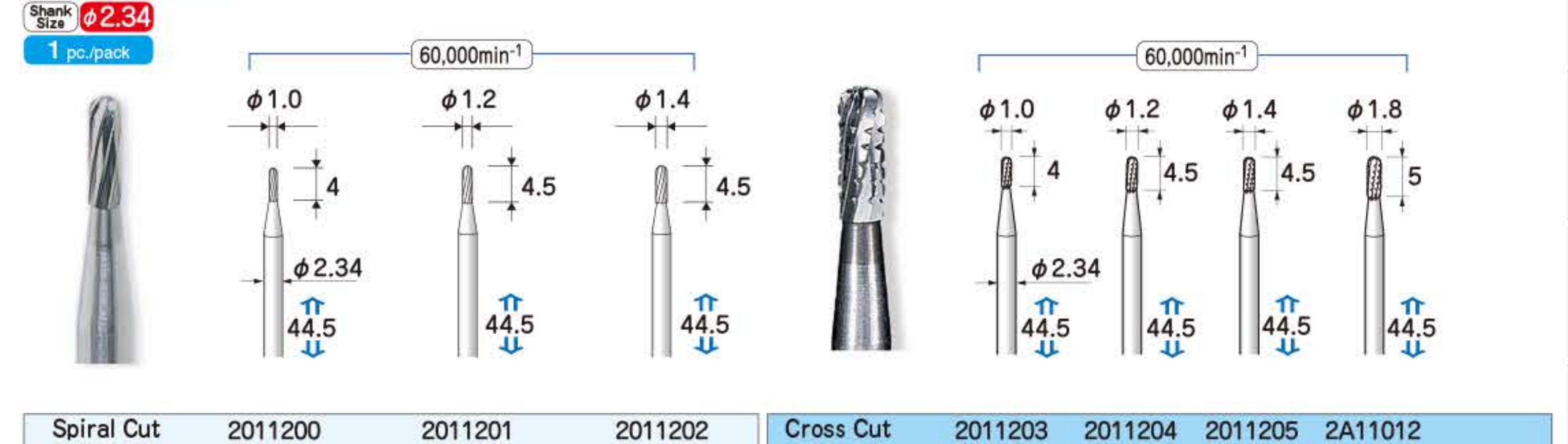


- * Illustrations on this catalogue are designed to show dimensions and general shapes of products with simplified images.
- * Illustrations may differ from actual products, especially flutes of carbide cutters, steel cutters, and twist drills etc.
- * For shapes of flutes, see the photos attached.
- * Photos may be enlarged or shrunk.
- * Dimensions may vary slightly either by production lots or measuring points.
- * Product specification is subject to change without notice.

Carbide Cutters



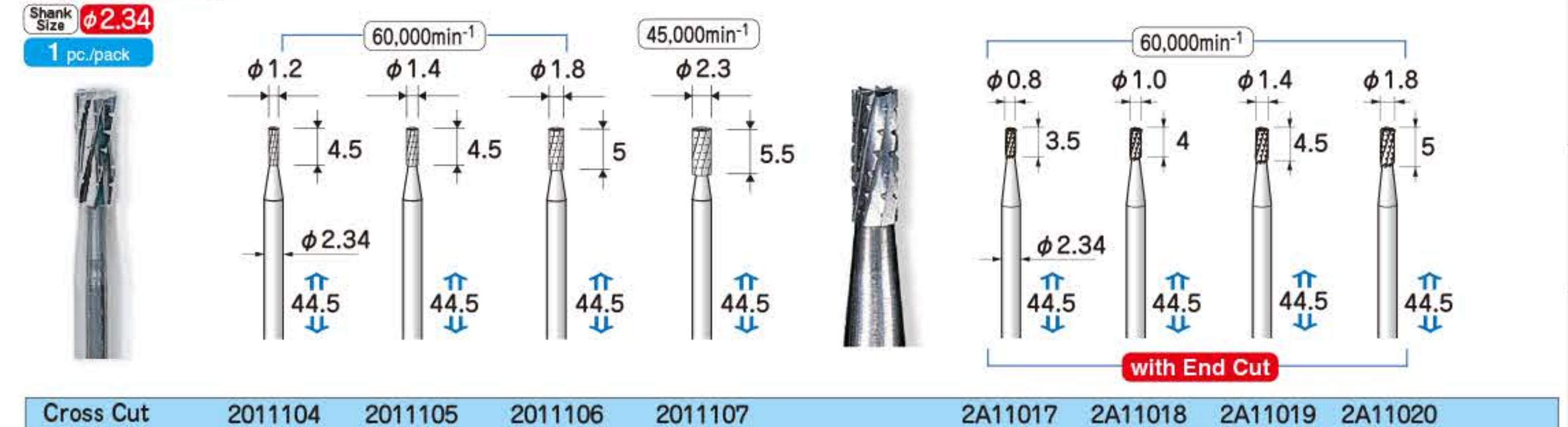
Carbide Cutters



Carbide Cutters



Carbide Cutters



Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Carbide Cutters

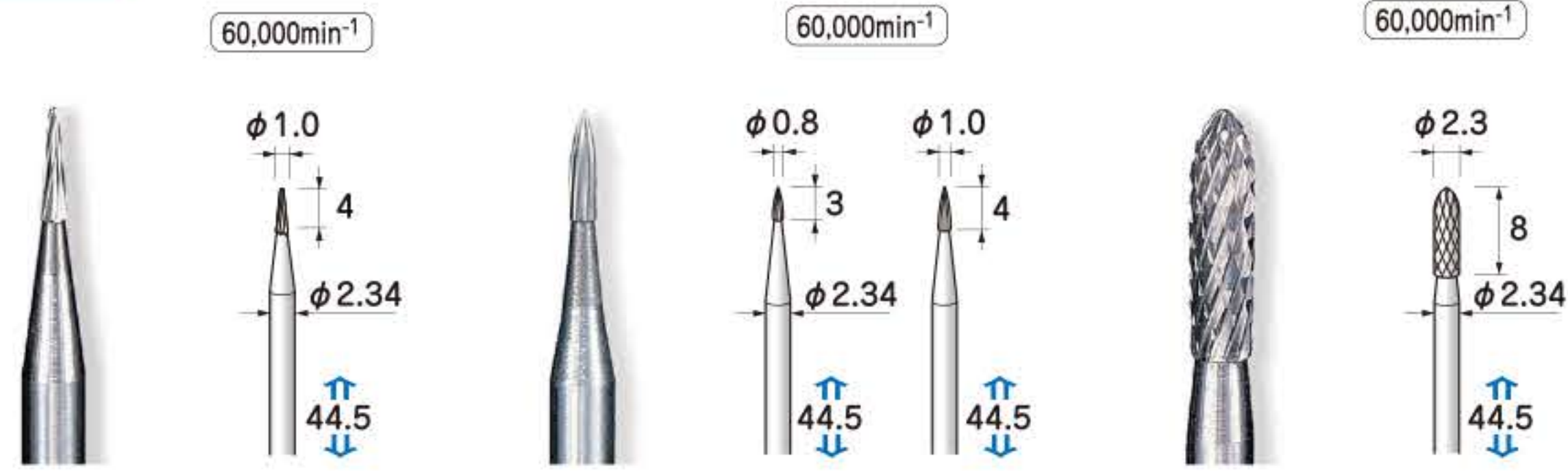
EIKO

Carbide Cutters

E-FORCE®

Carbide Cutters

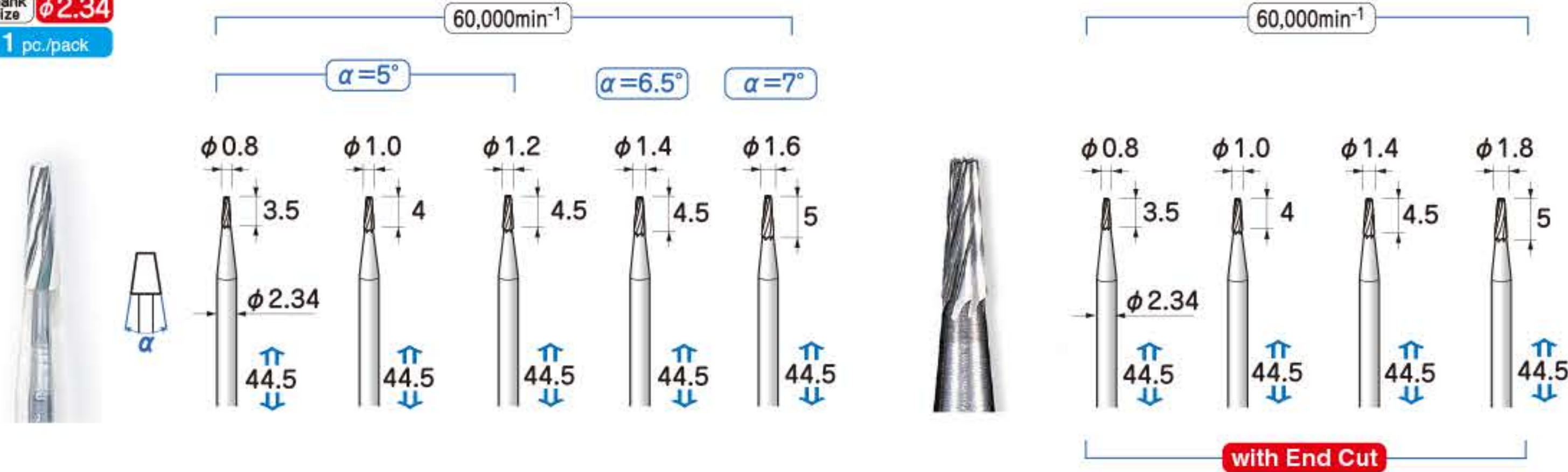
Shank Size $\phi 2.34$
1 pc./pack



Spiral Cut	2A11021	2A11022	2A11023	Cross Cut	2A11024
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Carbide Cutters

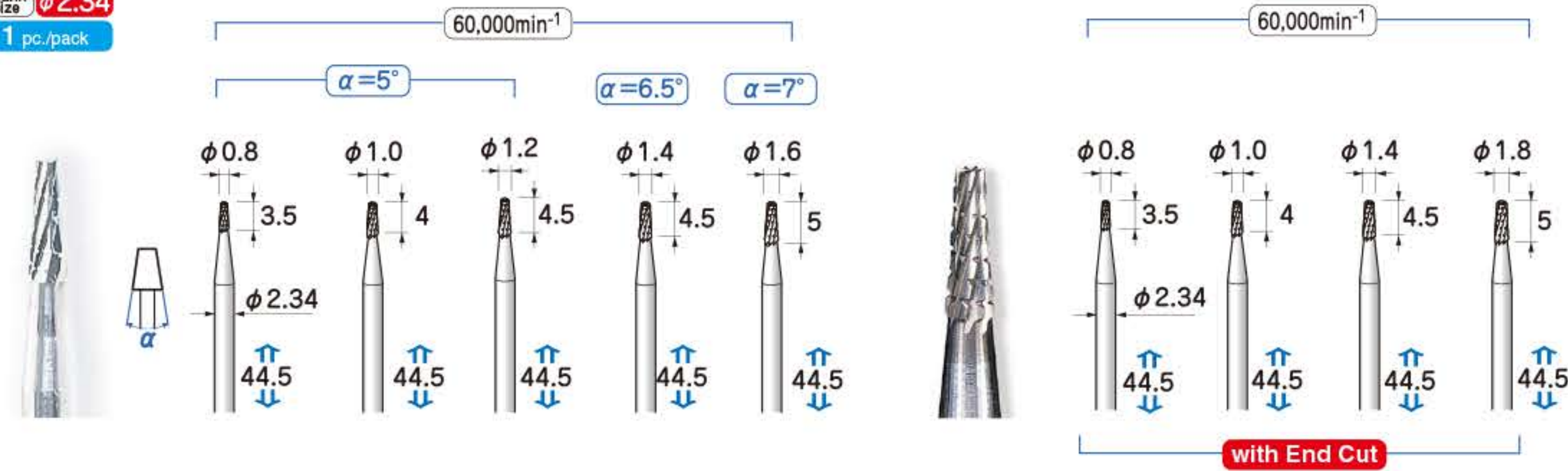
Shank Size $\phi 2.34$
1 pc./pack



Spiral Cut	2011400	2011401	2011402	2011403	2011404	2A11025	2A11026	2A11027	2A11028
------------	---------	---------	---------	---------	---------	---------	---------	---------	---------

Carbide Cutters

Shank Size $\phi 2.34$
1 pc./pack



Cross Cut	2011500	2011501	2011502	2011503	2011504	2A11029	2A11030	2A11031	2A11032
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Carbide Cutters

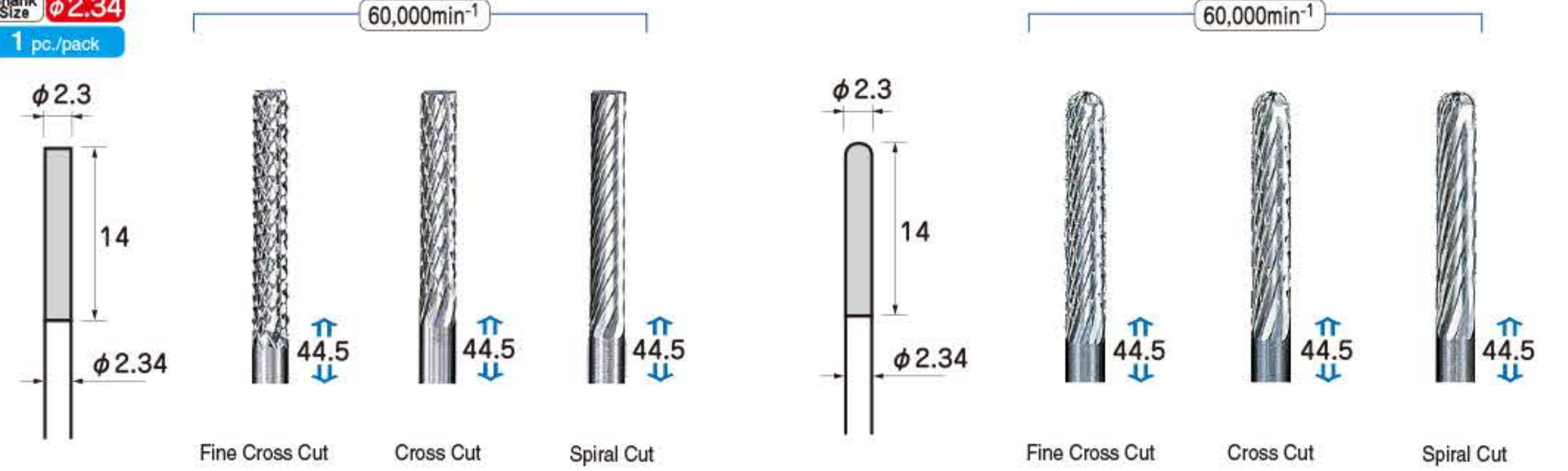
Shank Size $\phi 2.34$
1 pc./pack



Cross Cut	2A11033	2A11034	2A11035	2A11036
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Carbide Cutters

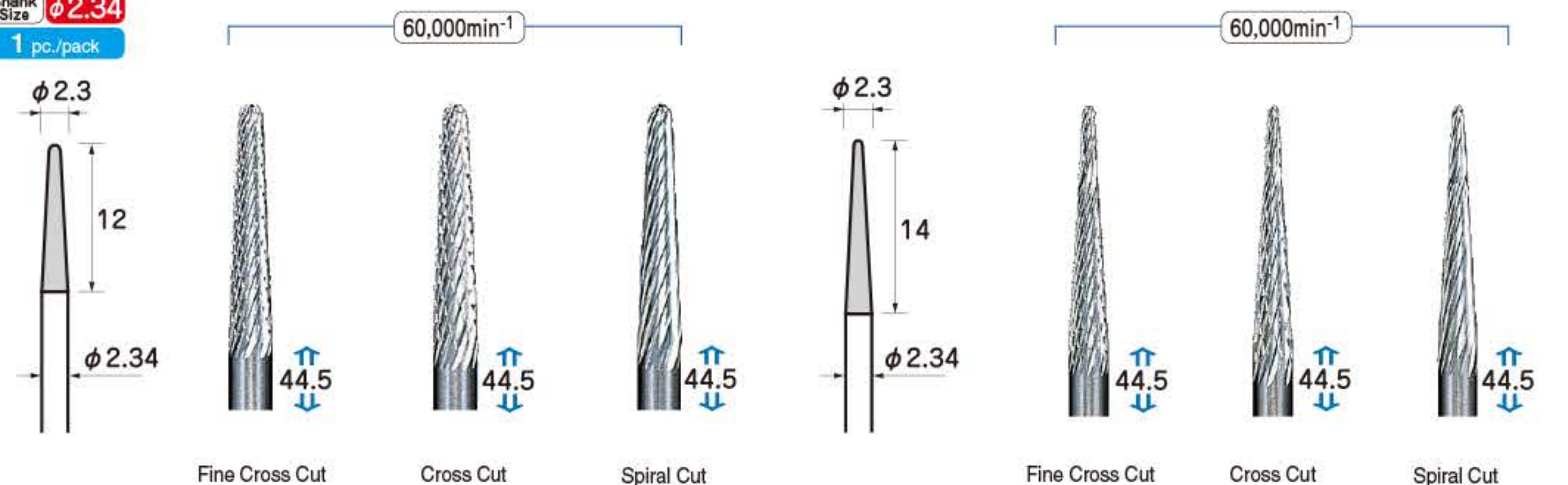
Shank Size $\phi 2.34$
1 pc./pack



Cylinder	2A11037	2A11038	2A11039	Cylinder (radius)	2A11040	2A11041	2A11042
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Carbide Cutters

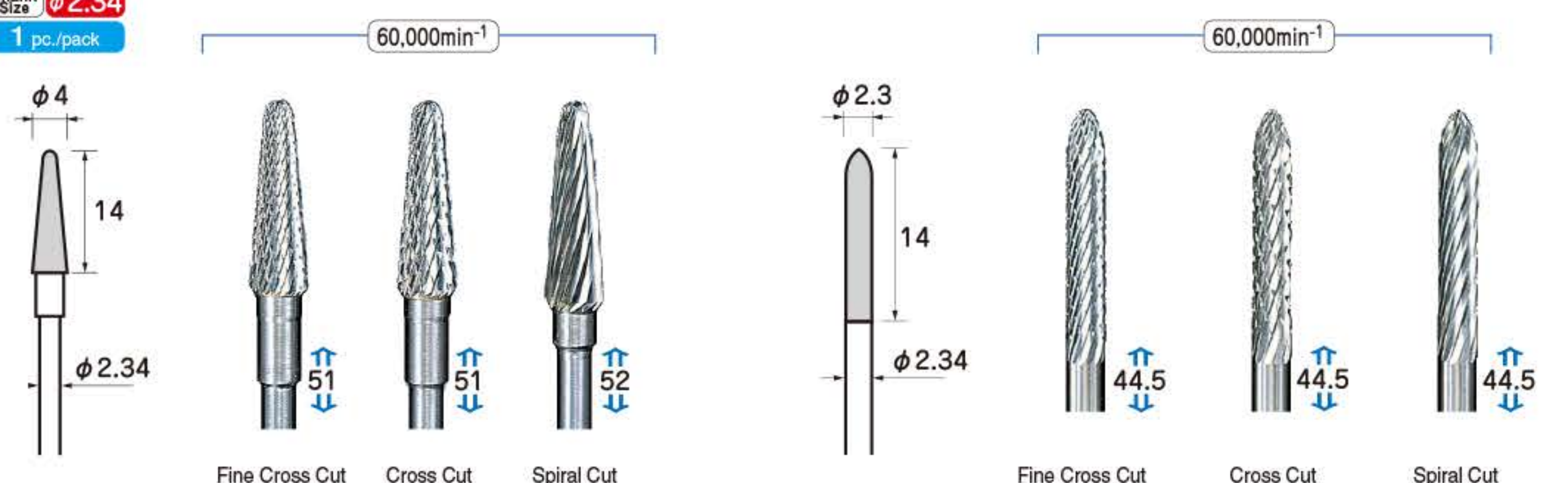
Shank Size $\phi 2.34$
1 pc./pack



Cone Radius	2A11043	2A11044	2A11045	2A11046	2A11047	2A11048
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Carbide Cutters

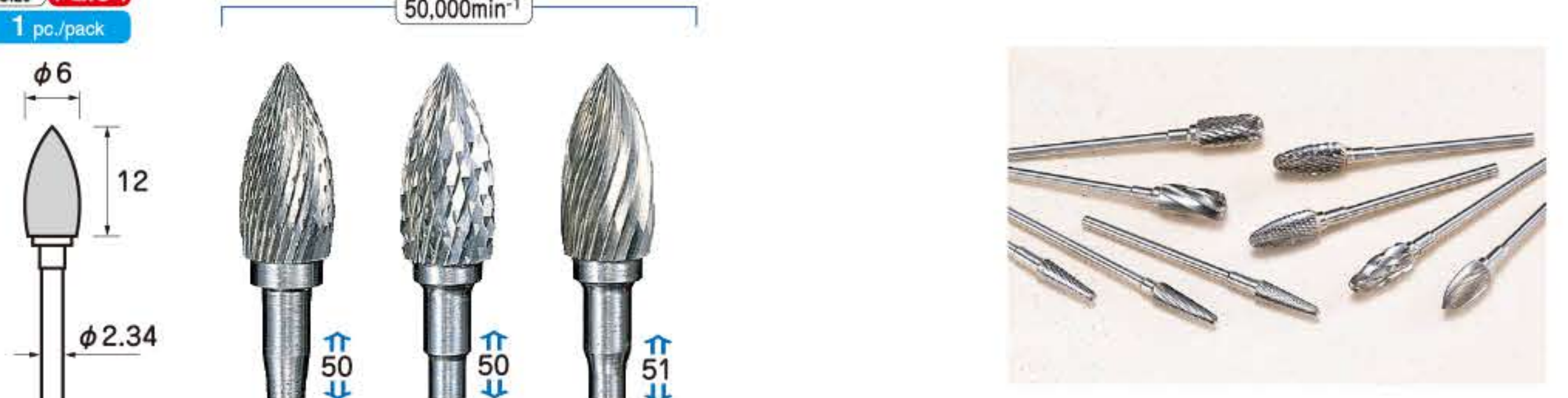
Shank Size $\phi 2.34$
1 pc./pack



Cone Radius	2A11049	2A11050	2A11051	Tree (radius)	2A11052	2A11053	2A11054
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Carbide Cutters

Shank Size $\phi 2.34$
1 pc./pack



Tree	2A11055	2A11056	2A11057
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! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Carbide Cutters

Shank Size $\phi 2.34$
1 pc./pack

	60,000min ⁻¹		60,000min ⁻¹		50,000min ⁻¹		50,000min ⁻¹	
	Cross Cut	Spiral Cut	Cross Cut	Spiral Cut	Cross Cut		Spiral Cut	
	with End Cut		with End Cut		with End Cut			
Cylinder	2A11058	2A11059	2A11060	2A11061	2A11062		2A11063	

Carbide Cutters Coarse cut consists of very rough flute patterns. Very sharp flutes provide strong cutting ability. Wide intervals of flutes provides efficient and swift processing of likely to clog metals such as aluminum and brass, also plaster, resins like acryl etc. with low heat generation.

Shank Size $\phi 2.34$
1 pc./pack

	50,000min ⁻¹				
	Fine Cross Cut	Cross Cut	Coarse Cross Cut	Spiral Cut	Coarse Spiral Cut
Tree (radius)	2A11064	2A11065	2A11066	2A11067	2A11068

Shank Size $\phi 2.34$
1 pc./pack

	50,000min ⁻¹				
	Fine Cross Cut	Cross Cut	Coarse Cross Cut	Spiral Cut	Coarse Spiral Cut
Cylinder (radius)	2A11069	2A11070	2A11071	2A11072	2A11073

Carbide Cutters (Fine Cross Cut) Fine Cross Cut consists of very tight and small flute patterns. Without cutting too deep into workpiece, smooth surface finish is obtained.

Shank Size $\phi 2.34$
1 pc./pack

	60,000min ⁻¹				
	5.5	5.6	4	5.5	5.5
	44.5	44.5	44.5	44.5	44.5
Fine Cross Cut	2A11074	2A11075	2A11076	2A11077	2A11078

Enhancing freedom of creativity of specialists.

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Carbide Cutters

EIKO

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack

60,000min⁻¹ 40,000min⁻¹ 32,000min⁻¹ 26,000min⁻¹

$\phi 2.4$ $\phi 2.8$ $\phi 3.0$ $\phi 4.8$ $\phi 6.4$

$\phi 3.0$

38 38 38 38 44

Cross Cut	2A12001	2A12002	2012700	2012701	2012702
-----------	---------	---------	---------	---------	---------

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack

60,000min⁻¹

$\phi 0.9$ $\phi 1.0$ $\phi 1.2$ $\phi 1.4$ $\phi 1.6$ $\phi 1.8$ $\phi 2.1$ $\phi 2.4$

$\phi 3.0$

44.5 44.5 44.5 44.5 44.5 44.5 44.5 38

Spiral Cut	2A12003	2A12004	2A12005	2A12006	2A12007	2A12008	2A12009	2A12010
------------	---------	---------	---------	---------	---------	---------	---------	---------

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack

40,000min⁻¹ 26,000min⁻¹

$\phi 2.8$ $\phi 3.0$ $\phi 4.0$ $\phi 5.0$ $\phi 6.0$ $\phi 6.4$

$\phi 3.0$

38 38 42 42.5 44 44

Spiral Cut	2A12011	2012703	2A12012	2A12013	2A12014	2012704
------------	---------	---------	---------	---------	---------	---------

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack

60,000min⁻¹ 45,000min⁻¹ 60,000min⁻¹ 45,000min⁻¹

$\phi 0.9$ $\phi 1.0$ $\phi 2.4$ $\phi 1.5$ $\phi 2.0$ $\phi 2.0$ $\phi 2.4$

3.6 3.9 11 9 10 10 11

$\phi 3.0$

44.5 44.5 38 40 40 40 38

with End Cut

Spiral Cut	2A12015	2A12016	2012005	Cross Cut	2A12017	2A12018	2A12019	2012000
------------	---------	---------	---------	-----------	---------	---------	---------	---------

Carbide Cutters

E-FORCE[®]

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack

45,000min⁻¹ 40,000min⁻¹ 35,000min⁻¹ 26,000min⁻¹

$\phi 2.4$ $\phi 3$ $\phi 4$ $\phi 6.4$

11 14 13 13

$\phi 3.0$

38 38 40 43

Spiral Cut	2012104	2012105	2A12020	2012106
------------	---------	---------	---------	---------

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack

45,000min⁻¹ 40,000min⁻¹ 35,000min⁻¹ 26,000min⁻¹

$\phi 2.4$ $\phi 3$ $\phi 4.0$ $\phi 4.0$ $\phi 4.8$ $\phi 6.4$

11 14 12.7 13 13 13

$\phi 3.0$

38 38 38 40 40 43

Cross Cut	2012100	2012101	2012102	2A12021	2A12022	2012103
-----------	---------	---------	---------	---------	---------	---------

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack

26,000min⁻¹ 35,000min⁻¹ 26,000min⁻¹

$\phi 6.4$ $\phi 6.4$ $\phi 4.0$ $\phi 4.0$ $\phi 4.8$ $\phi 6.0$ $\phi 6.4$

13 13 12.7 13 13 7 13

$\phi 3.0$

43 45 38 40 40 45 45 43

with End Cut

Spiral Cut	2012008	2A12023	Cross Cut	2012003	2A12024	2A12025	2A12026	2A12027	2012004
------------	---------	---------	-----------	---------	---------	---------	---------	---------	---------

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack

40,000min⁻¹ 40,000min⁻¹ 30,000min⁻¹

60° 90° 60° 90° 120°

38 38 50 50 50

$\phi 3.0$ $\phi 3.0$ $\phi 3.0$

Spiral Cut	2A12028	2012911	2A12029	2A12030	2A12031
------------	---------	---------	---------	---------	---------

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

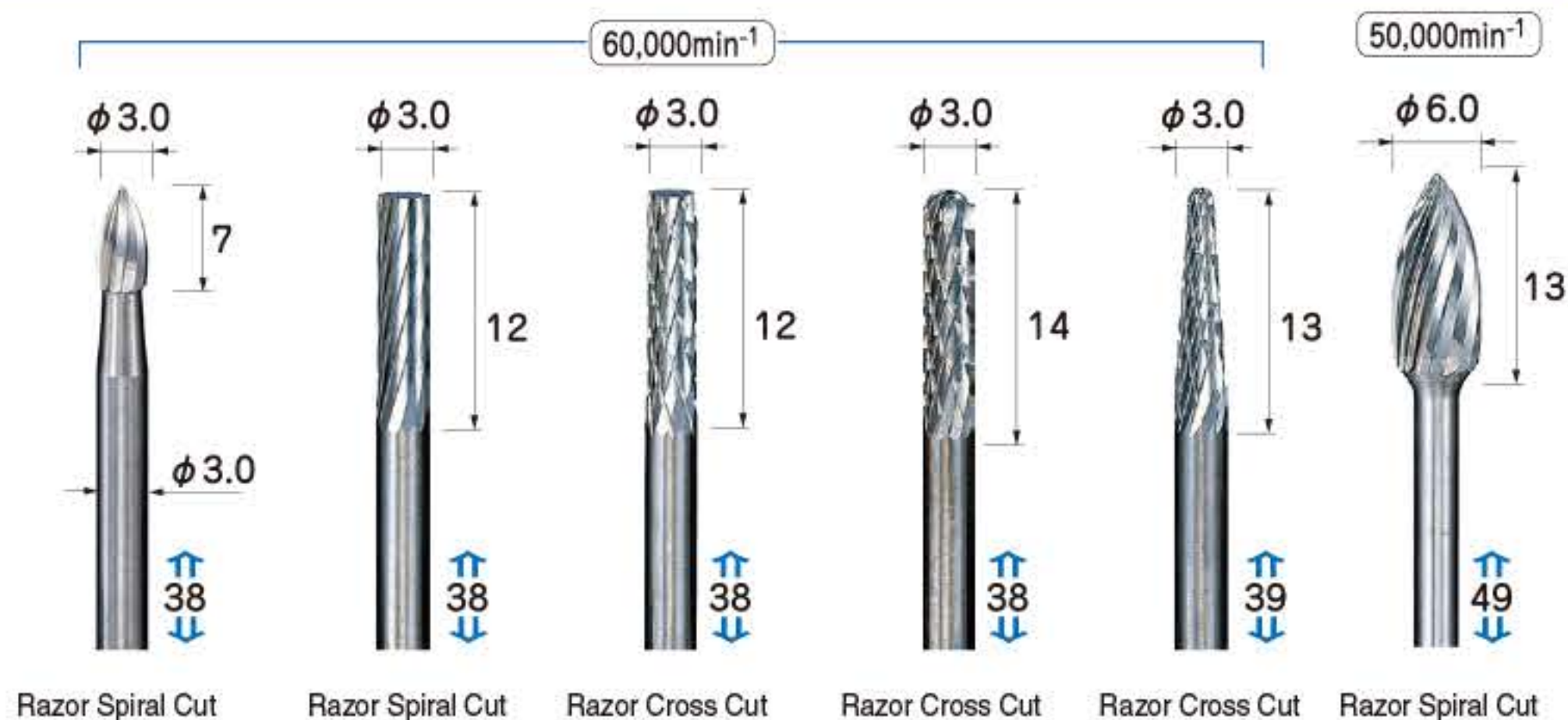
Carbide Cutters

Carbide Cutters (Razor Cut)

Shank Size $\phi 3.0$
1 pc./pack

Razor Cut

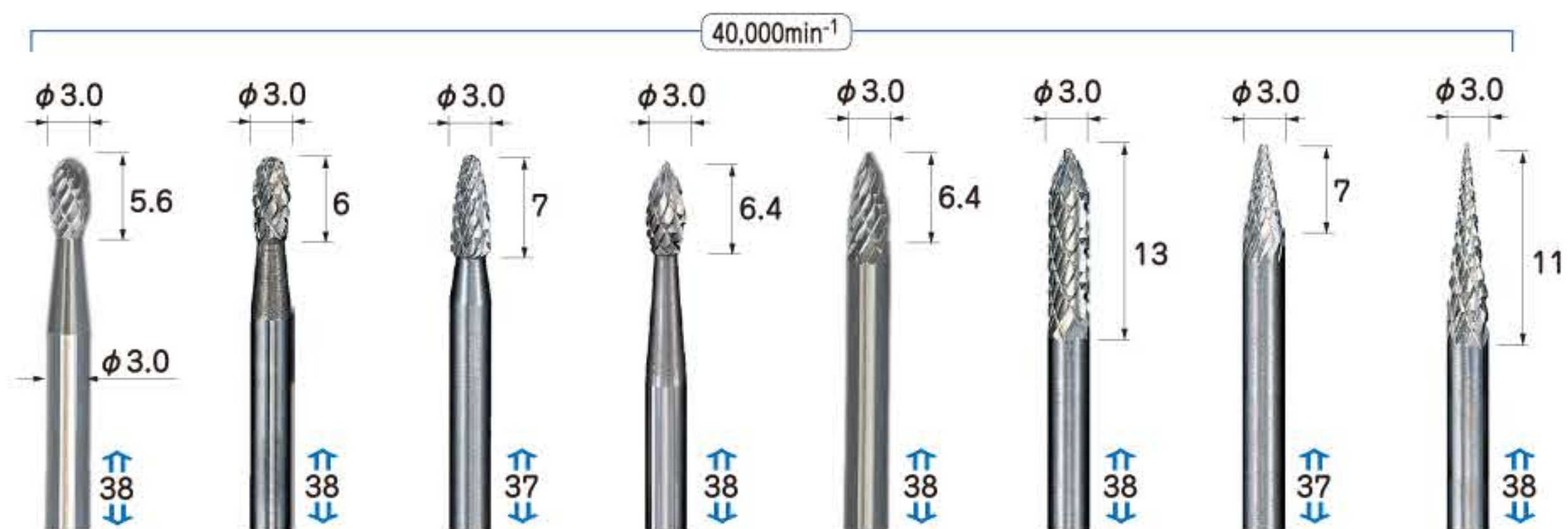
Flutes are less twisted and horned extremely sharp. Extraordinary cutting performance and very smooth surface finish is obtained.



Razor Spiral Cut 2A12032 2A12033 2A12034 2A12035 2A12036 2A12037

Carbide Cutters

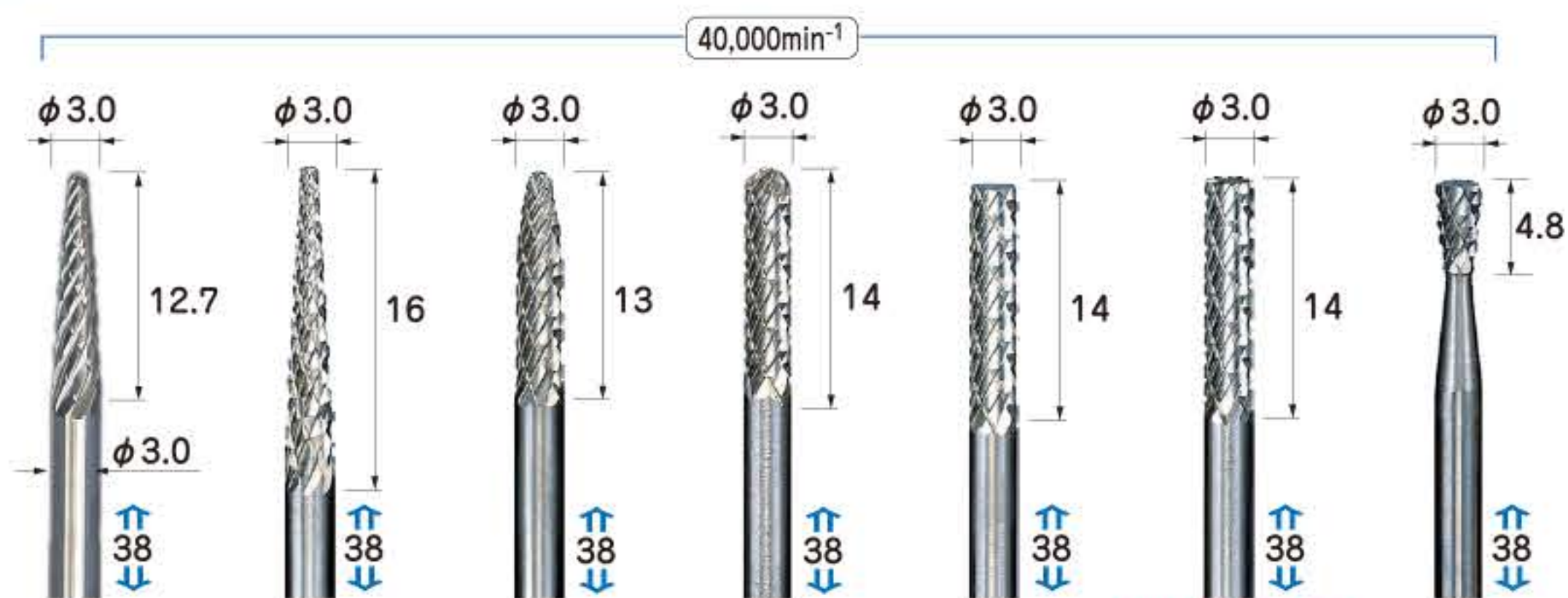
Shank Size $\phi 3.0$
1 pc./pack



Cross Cut 2012500 2A12038 2A12039 2012800 2012300 2A12040 2A12041 2A12042

Carbide Cutters

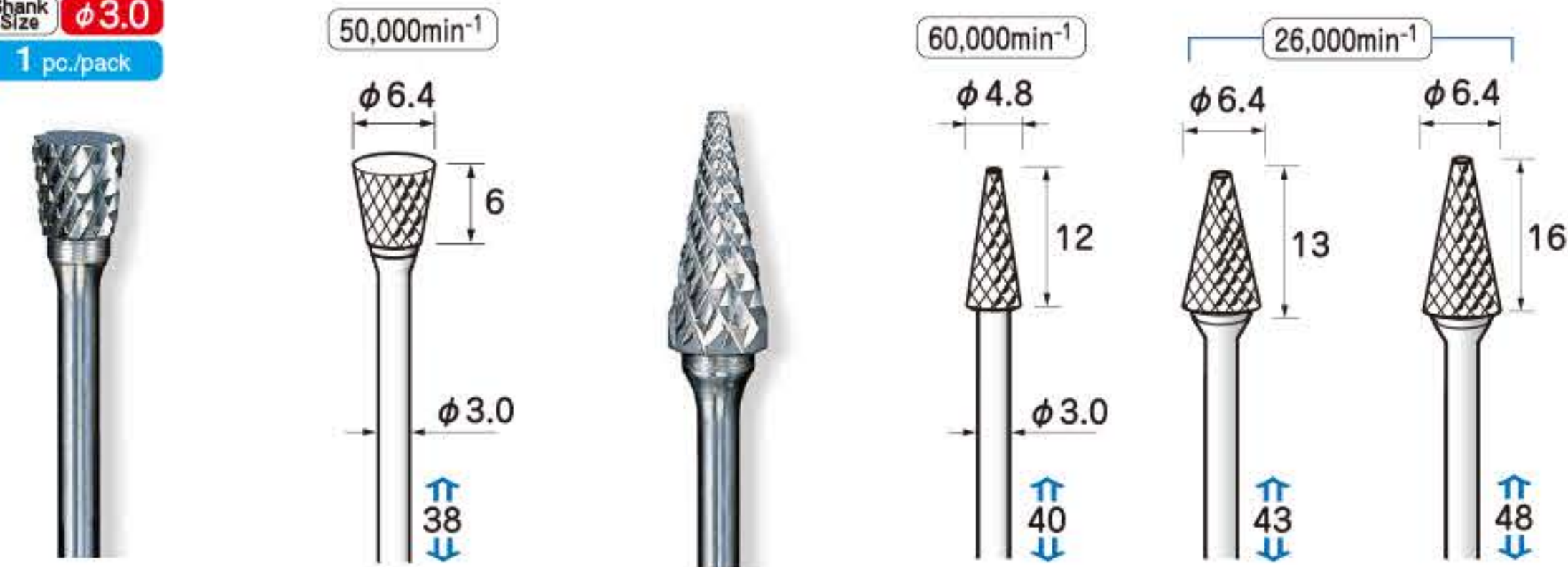
Shank Size $\phi 3.0$
1 pc./pack



Cross Cut 2012600 2012400 2012200 2012101 2012001 2012002 2012900

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack



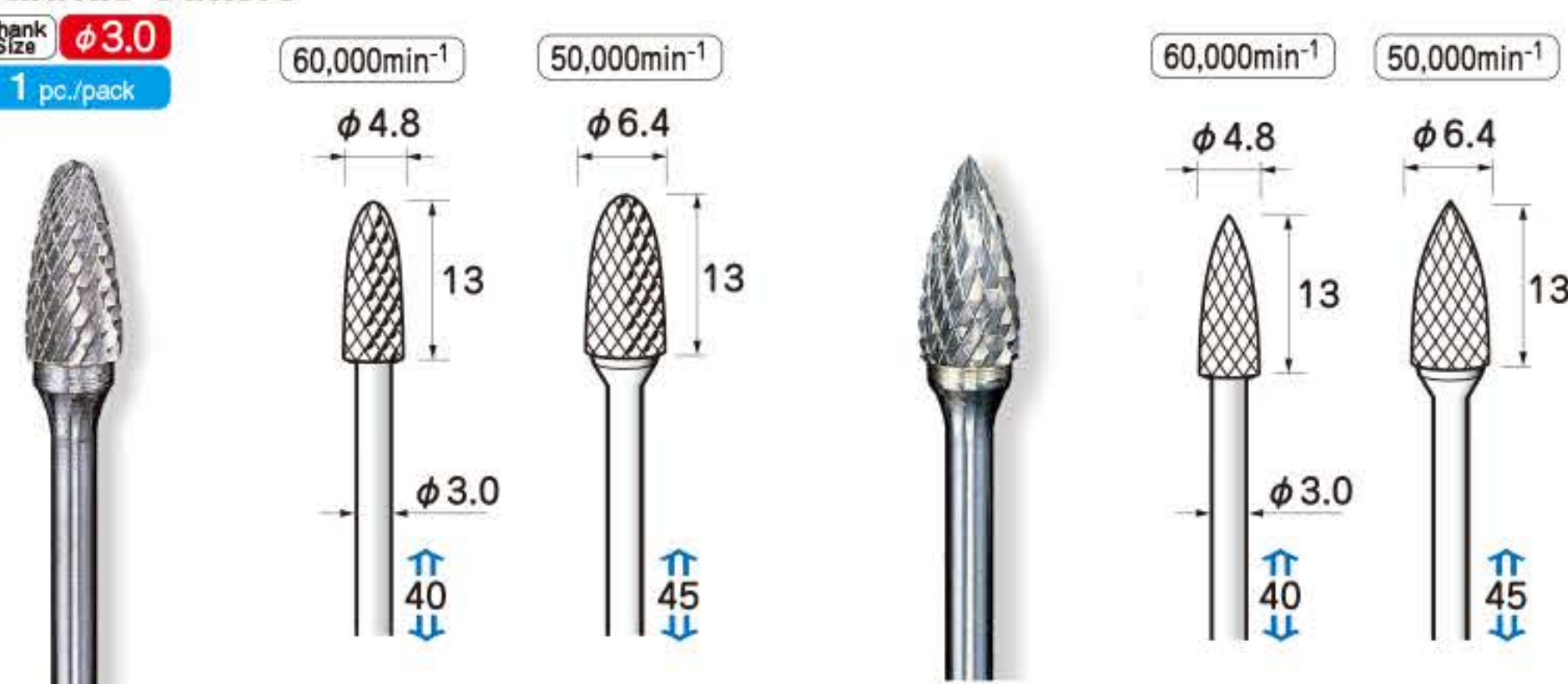
Cross Cut 2A12043 2A12044 2012401 2A12045

EIKO

Carbide Cutters

Carbide Cutters

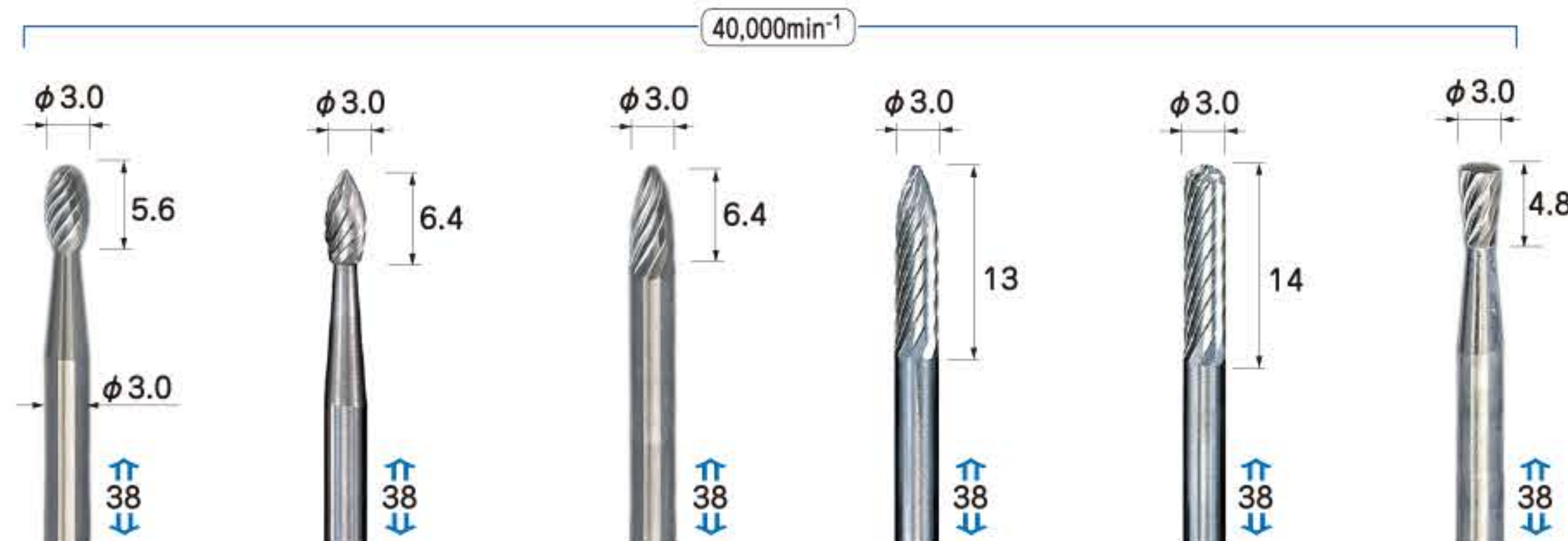
Shank Size $\phi 3.0$
1 pc./pack



Cross Cut 2A12046 2A12047 2A12048 2A12049

Carbide Cutters

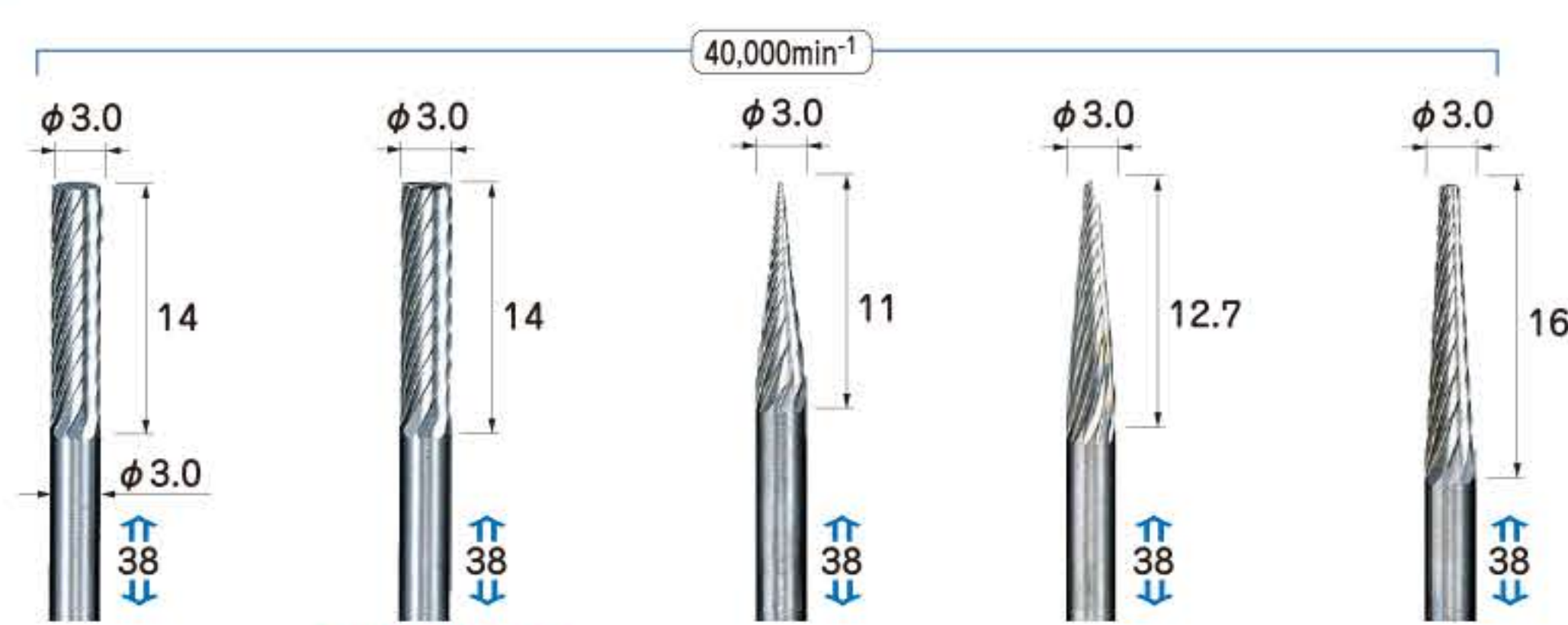
Shank Size $\phi 3.0$
1 pc./pack



Spiral Cut 2012501 2012801 2012301 2012201 2012105 2012901

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack



Spiral Cut 2012006 2012007 2A12050 2012601 2012402

Carbide Cutters

Shank Size $\phi 3.0$
1 pc./pack



Spiral Cut 2A12051 2012403 2A12052 2A12053 2A12054

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Electroplated Diamond/CBN Cutting Discs
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Abrasive Sanders
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Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Aluminum Cut



Feature

- Broad intervals of flutes are less likely to be clogged and low heat generating.
- Sharp and deep flutes provide rigid cutting ability. Suitable for rough finishing of various materials.

Main Application

Best suits for processing non-ferrous metals likely to clog.
Aluminum, Brass, Copper, Plastic, Hard Rubber, Plaster etc.

Carbide Cutters

Shank Size $\phi 3.0$
Aluminum Cut
1 pc./pack



Aluminum Cut 2012705 2A12055

Carbide Cutters

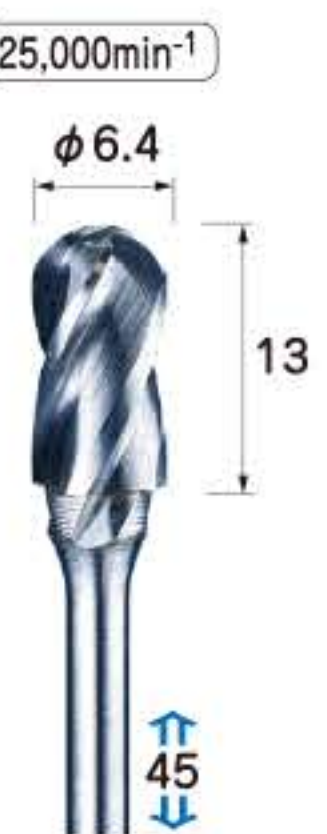
Shank Size $\phi 3.0$
Aluminum Cut
1 pc./pack



Aluminum Cut 2012202 2A12056 2012302 2012203 2012502 2A12057

Carbide Cutters

Shank Size $\phi 3.0$
Aluminum Cut
1 pc./pack



Aluminum Cut 2012107 2012108 2A12058 2012602 2012404 2A12059

Carbide Cutters

Shank Size $\phi 3.0$
Aluminum Cut
1 pc./pack



Aluminum Cut 2012009 2012010 2A12060

Micro Cut

Feature

- Finishing carbide cutters with specially baked quality ultrafine carbide powder.
- Less breakage of flutes.
- Hard enough to endure continuous grinding of hard-to-cut materials.
- Doubled number of blades of standard cross cut feature smooth and less resistant unique cutting feel.
- Free from uneven wear and troublesome dressing job of grindstones, a good smooth finished surface is obtained.

Main Application

Best suits for finish grinding of hard-to-cut materials such as nickel alloy, cobalt alloy etc.

- Repairing/finishing turbine blades.
- Satisfactory finish surface with less biting.
- Finish grinding hard-to-cut materials.
- Modifying dies etc.

Carbide Cutters

Shank Size $\phi 3.0$
Micro Cut
1 pc./pack



Micro Cut 2A12061 2A12062 2A12063 2A12064 2A12065 2A12066 2A12067 2A12068

Titanium Cut

Feature

- Carbide Cutters baked with specially prepared fine carbide powder. Suitable for cutting hard-to-cut materials such as titanium alloy and nickel alloy etc.
- Newly designed special flute improves cutting performance by 50% and more than conventional cross cut type, and minimize clogging, vibration, and noise, also releasing the heat efficiently.
- Works well for cutting likely to clog workpiece such as stainless or aluminum.

Main Application

Best suits for cutting hard-to-cut materials such as Titanium alloy, Nickel alloy etc.

- Repairing/finishing aircraft parts.
- Reducing chattering and noise while cutting titanium alloy.
- Best suits for cutting Titanium alloy of tensile strength > N/mm²
- Specially designed flutes provide superior long life and cutting performance.

Carbide Cutters

Shank Size $\phi 3.0$
Titanium Cut
1 pc./pack



Titanium Cut 2A12069 2A12070 2A12071 2A12072 2A12073 2A12074 2A12075 2A12076

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

PCB Cutters

Feature

- Cutters for processing printed chip boards (PCB).
- The diamond shape flute pattern is designed focusing on discharging chips.

Main Application

Standard glass epoxy substrate (PCB)

The maximum operational speed shown is on the assumption of processing glass epoxy substrates. The maximum operational speed is calculated on appropriate peripheral speed limit. (approx. 200m/min)



RCM Cut

Right hand helix pattern purging chips upwards. Good finished surface. Suitable for NC machineries equipped with vacuum devices.



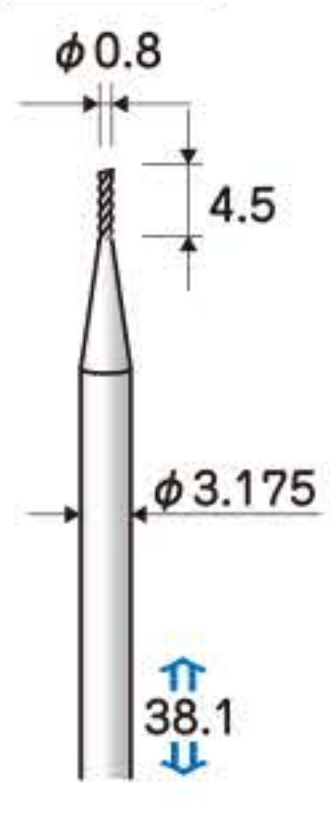
RHM Cut

Left hand helix pattern purging chips downwards. Downward force generated onto PCB in operation results in less burrs on surface. Slippage of PCB is restrained. Suitable for manually operated machineries.

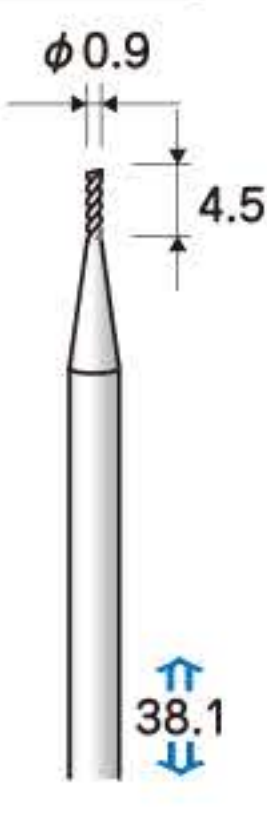
PCB Cutters

Shank Size $\phi 3.175$
RCM Cut
1 pc./pack

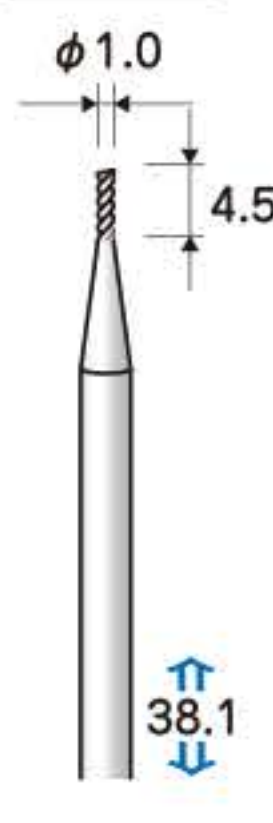
79,000min⁻¹



70,000min⁻¹



63,000min⁻¹



57,000min⁻¹

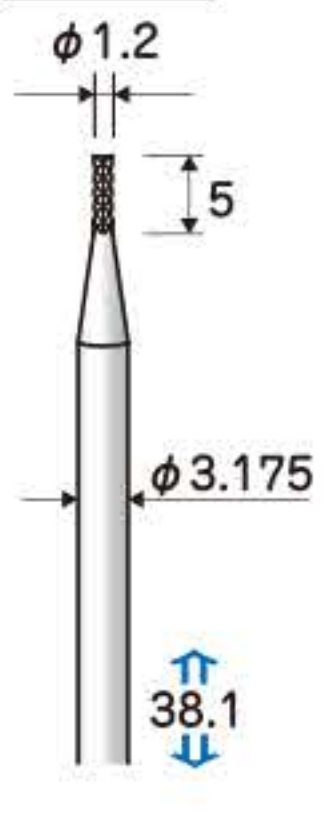


RCM Cut 2023100 2023101 2023102 2023103

PCB Cutters

Shank Size $\phi 3.175$
RCM Cut
1 pc./pack

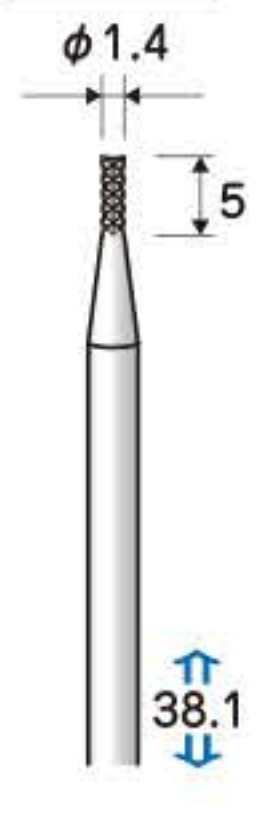
53,000min⁻¹



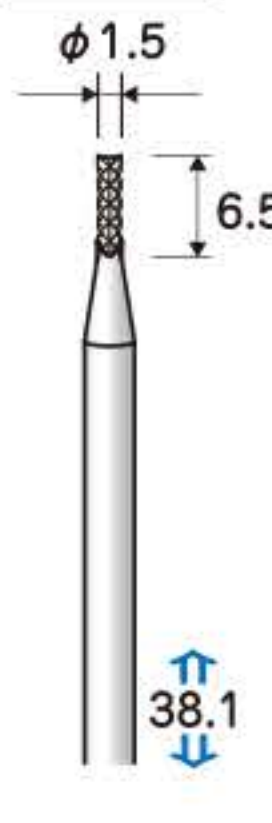
48,000min⁻¹



45,000min⁻¹



42,000min⁻¹

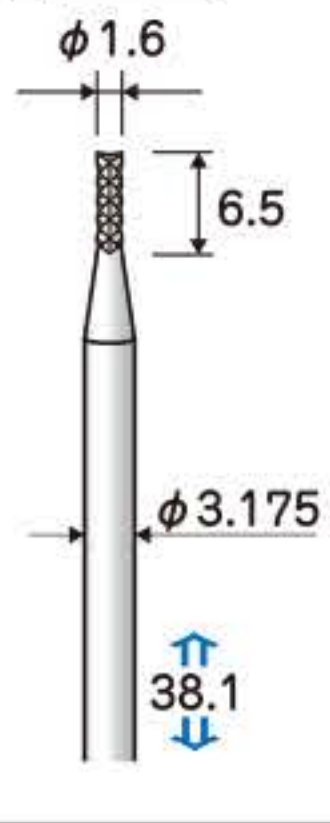


RCM Cut 2023104 2023105 2023106 2023107

PCB Cutters

Shank Size $\phi 3.175$
RCM Cut
1 pc./pack

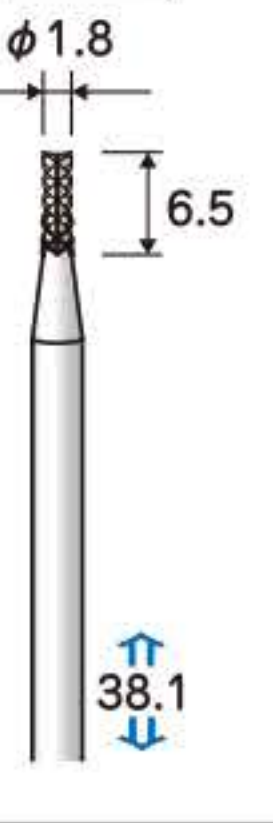
39,000min⁻¹



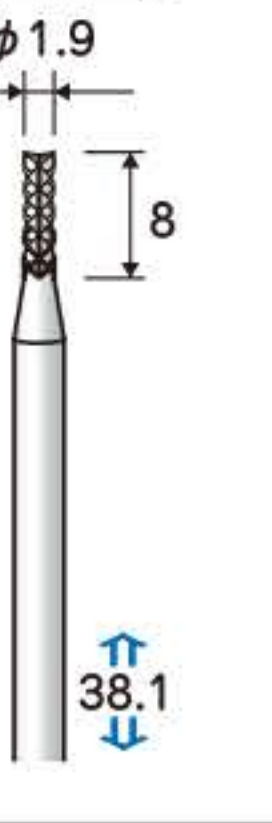
37,000min⁻¹



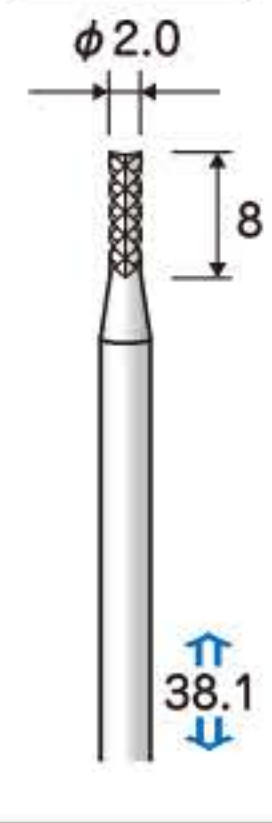
35,000min⁻¹



33,000min⁻¹



31,000min⁻¹

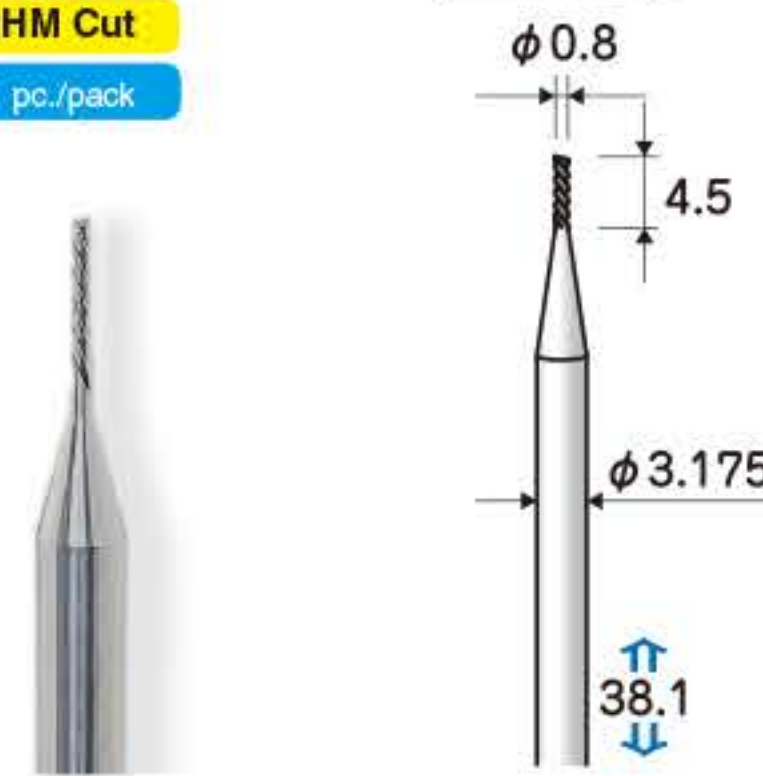


RCM Cut 2023108 2023109 2023110 2023111 2023112

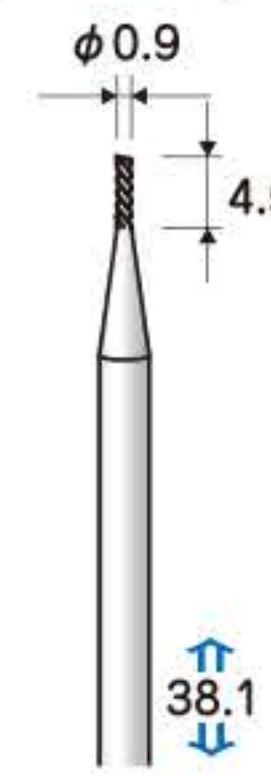
PCB Cutters

Shank Size $\phi 3.175$
RHM Cut
1 pc./pack

79,000min⁻¹



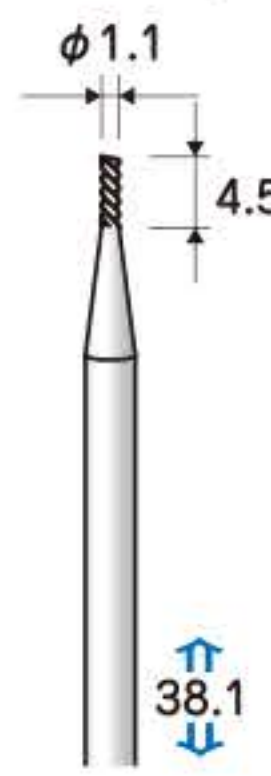
70,000min⁻¹



63,000min⁻¹



57,000min⁻¹

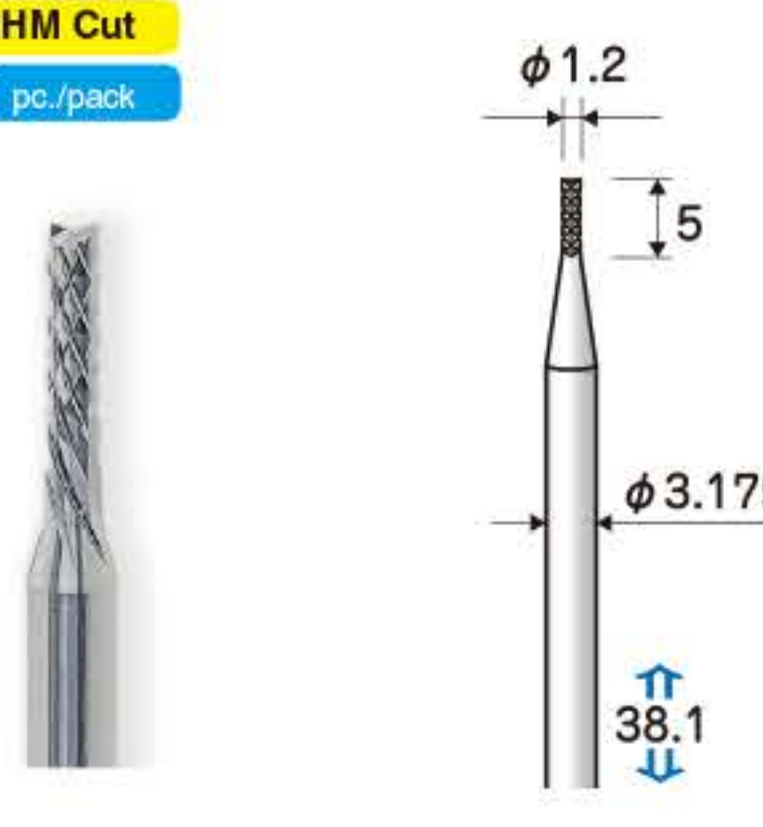


RHM Cut 2023200 2023201 2023202 2023203

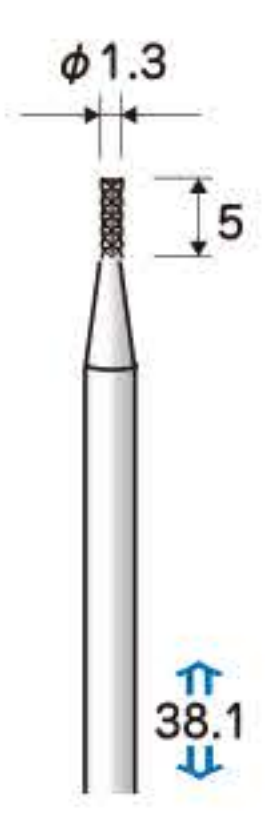
PCB Cutters

Shank Size $\phi 3.175$
RHM Cut
1 pc./pack

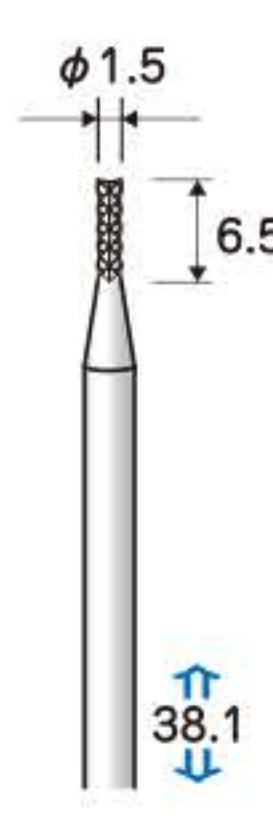
53,000min⁻¹



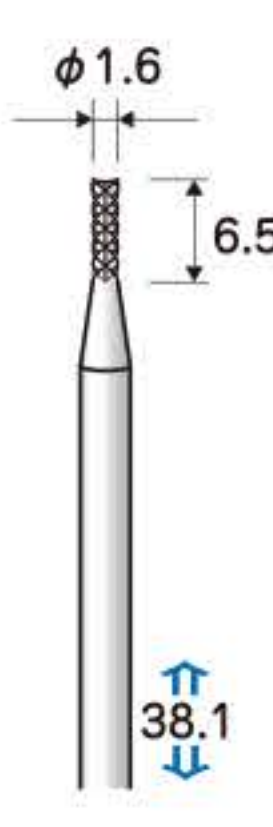
48,000min⁻¹



42,000min⁻¹



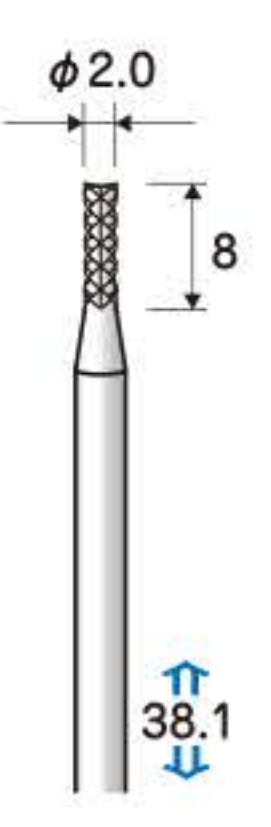
39,000min⁻¹



37,000min⁻¹



31,000min⁻¹



RHM Cut 2023204 2023205 2023206 2023207 2023208 2023209

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Carbide Cutters

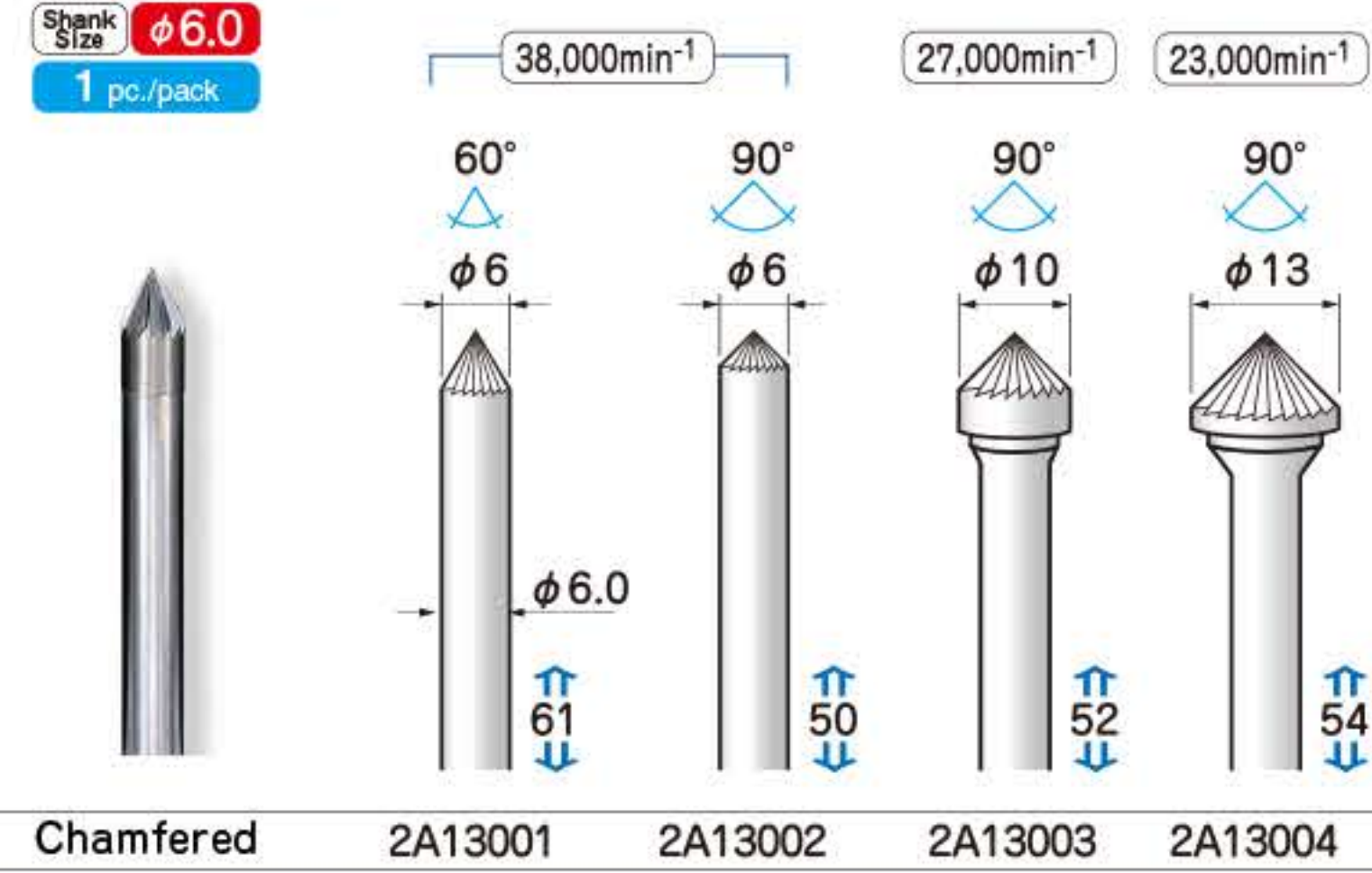
EIKO

Carbide Cutters (Shank Size $\phi 6.0$ mm)

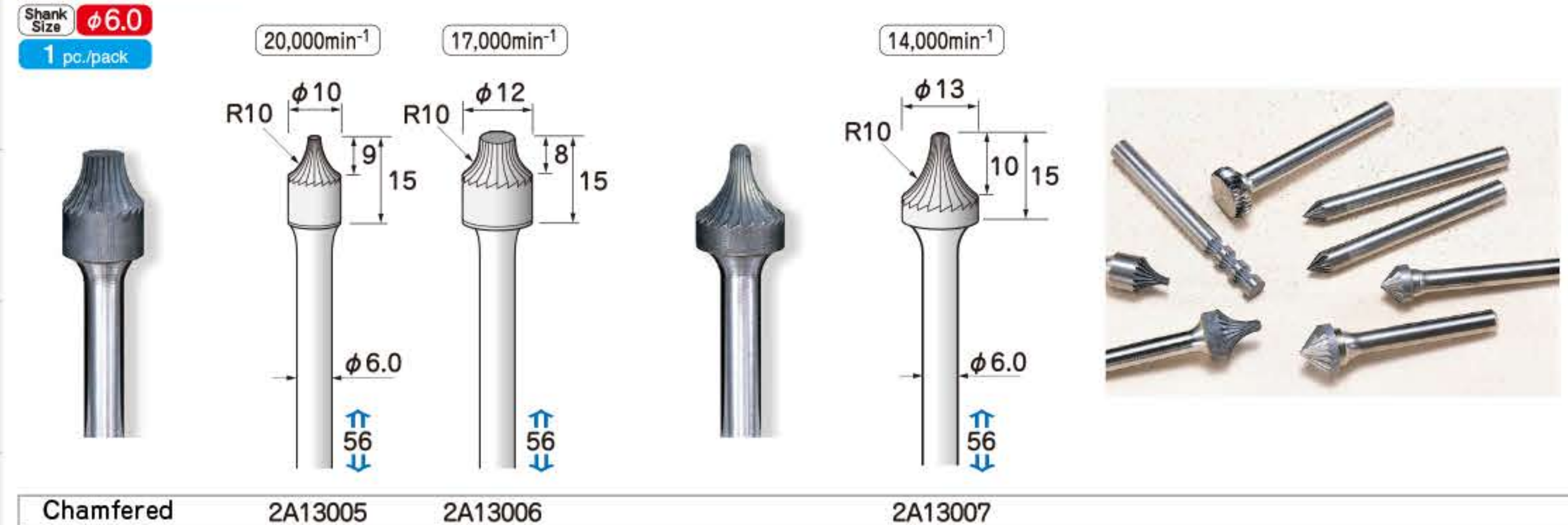
Feature

- The strong $\phi 6.0$ mm shank endures tough cutting works with high load.
- The wide blade area and superior cutting ability improve efficiency of cutting works.
- Suitable for deburring and chamfering of general steel materials, cast iron, stainless steel and various alloys, and removing welding beads.

Carbide Cutters



Carbide Cutters



Carbide Cutters



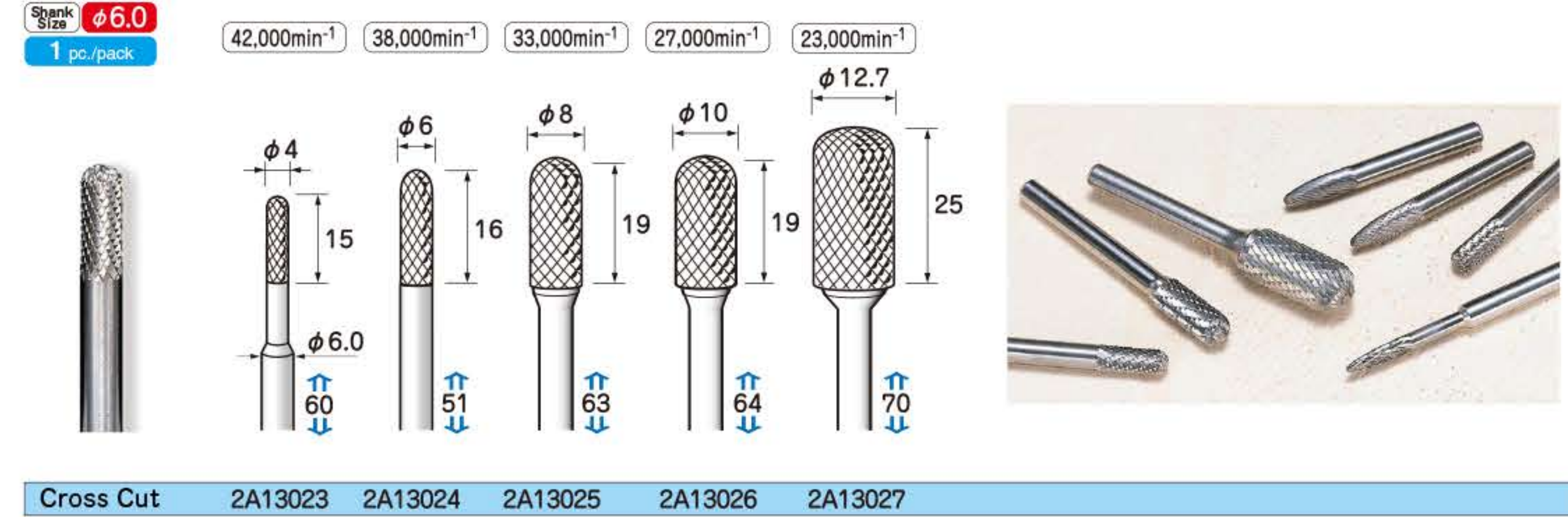
Carbide Cutters



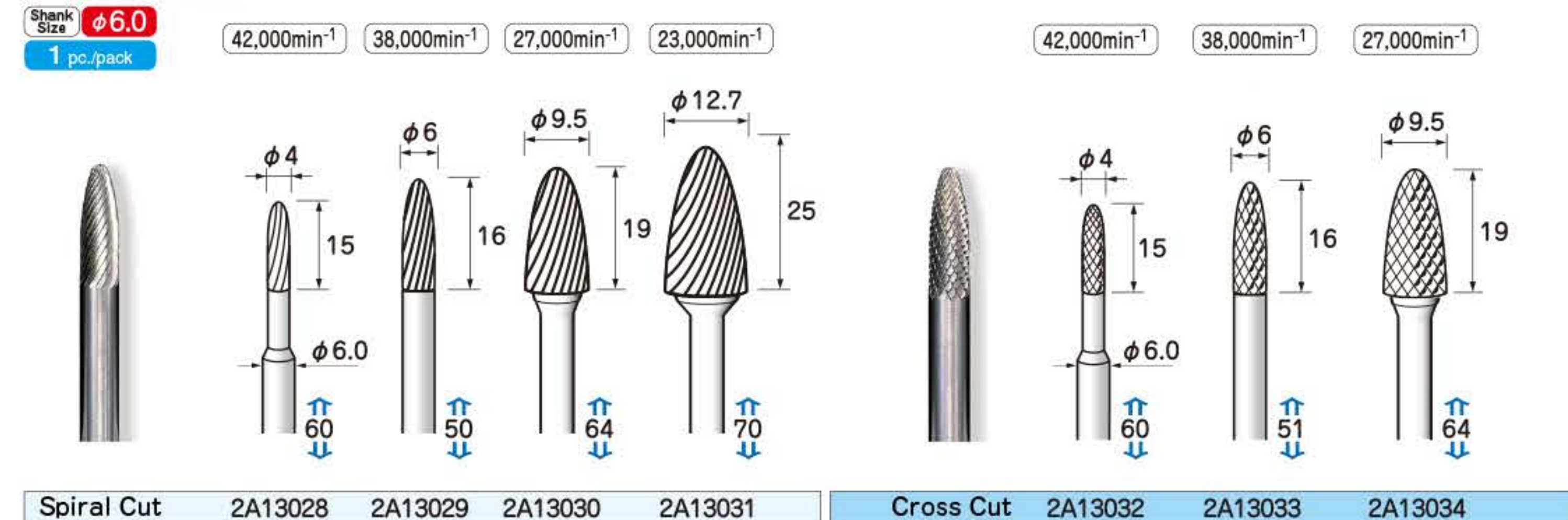
Carbide Cutters

E-FORCE

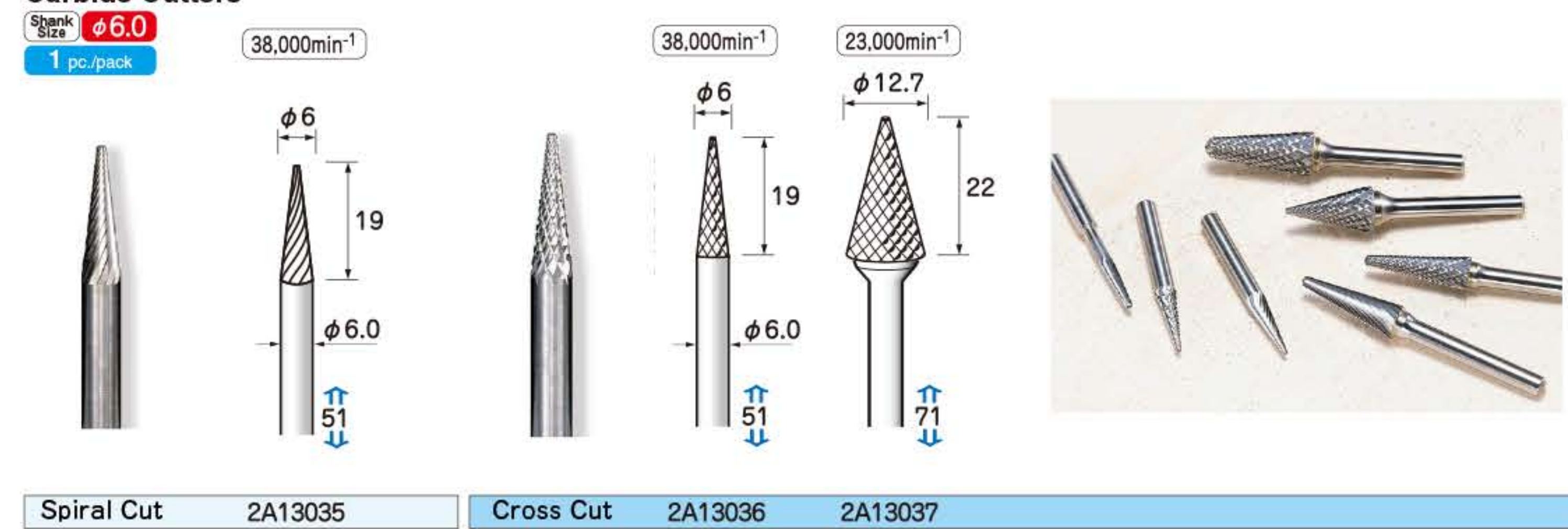
Carbide Cutters



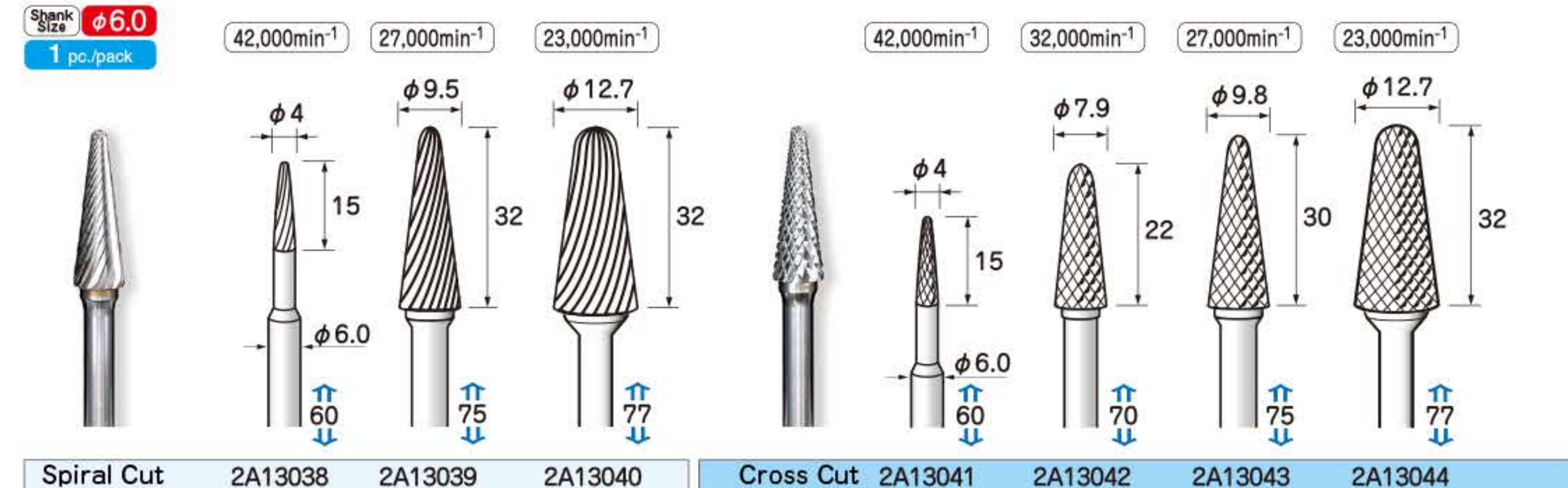
Carbide Cutters



Carbide Cutters



Carbide Cutters



Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

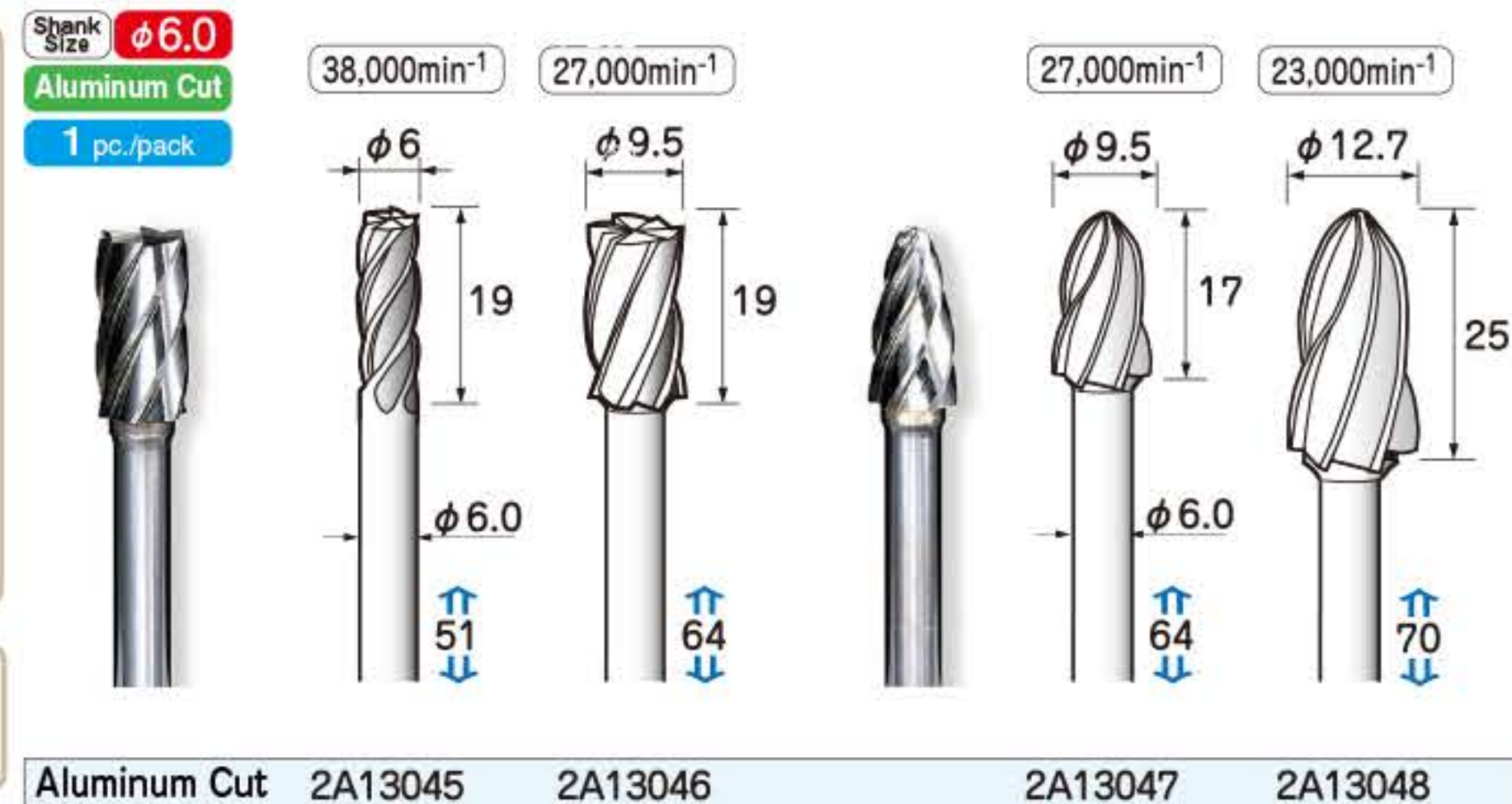
Aluminum Cut (Shank Size $\phi 6.0$ mm)

Feature

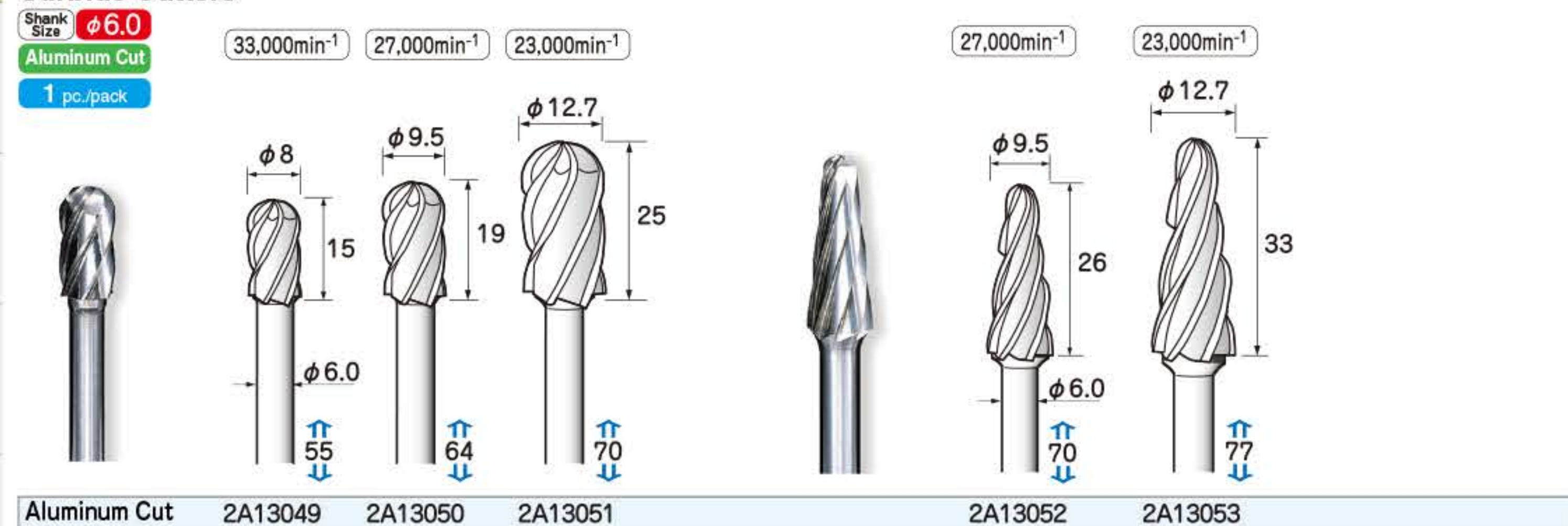
- Best suits for non-ferrous, likely to clog metals such as Aluminum, Brass, and Copper, and also for resin, hard rubber, plaster etc.
- Good cutting ability with sharp deep blades is also suitable for rough finishing of various materials.
- Broad span of flutes provides less clogging. Also performs well in cutting acryl, plastic, hard rubber etc. with low heat generation.

⚠ Aluminum Cut has sharp blades and biting force is strong. Be careful not to put excessive pressure on work.

Carbide Cutters



Carbide Cutters



Multifunctional Carbide Cutters

Feature

- Functional carbide rotary burs with blades best suitable for chamfering and deburring.
- Flute patterns are different in top and bottom parts of the peanut shell shaped body. Chamfering in/outside, deburring and multiple works can be done by applying this unique tool in various angles.

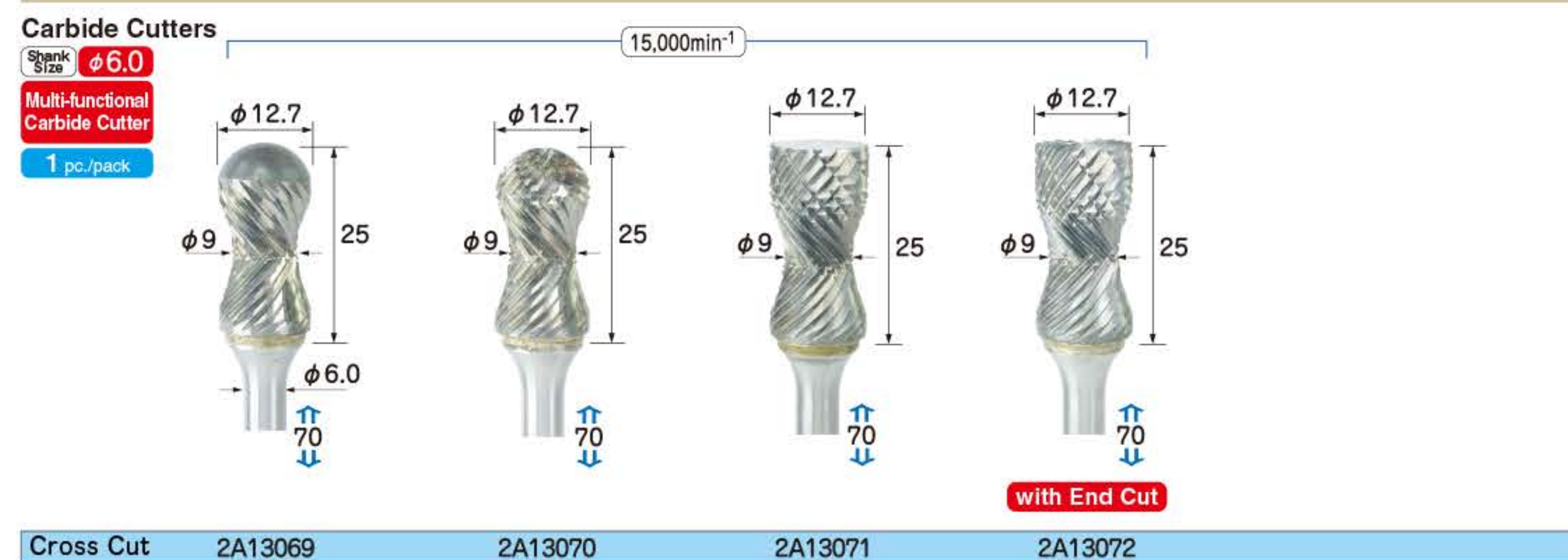
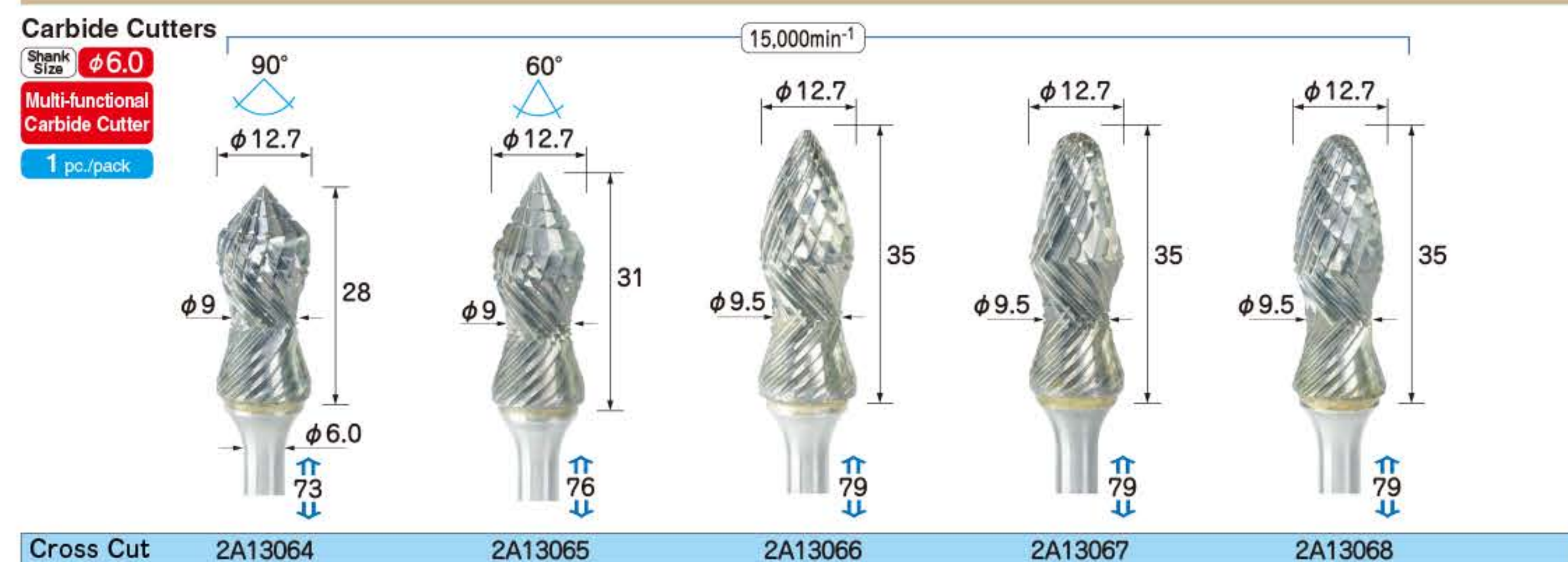
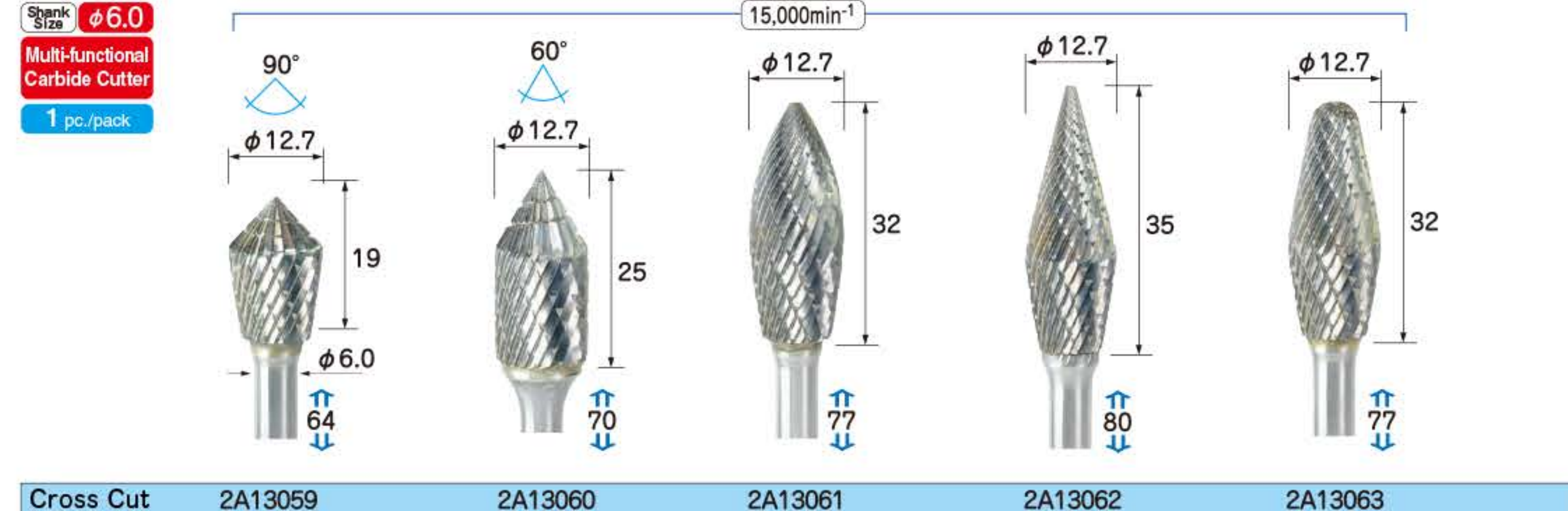
- Different flute patterns in top and bottom.
- Free working angle.
- Swift easy chamfering.
- Deburring along the edge.



Carbide Cutters



Carbide Cutters



Long Shank Carbide Cutters

⚠ WARNING (Precautions for using long shank carbide cutters.)

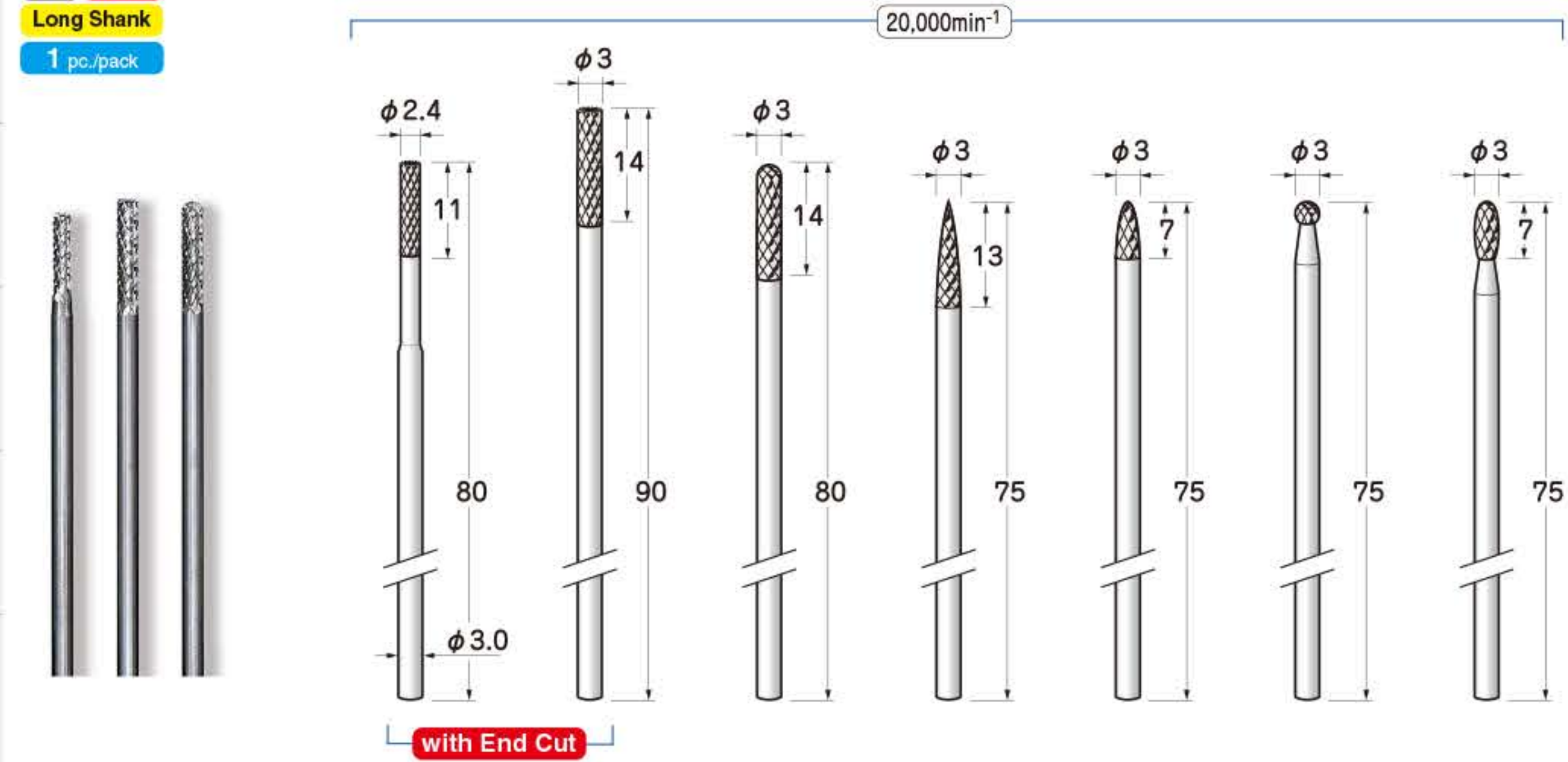
- * DO NOT use with electric powered or air grinders which are not equipped with speed control function.
- * For safety, check wobbling of axis by installing tool firmly to the bottom of the hole of grinder and make a trial run in the lowest speed.
- * On operation, insert the cutter well into the hole first and accelerate gradually.
- * NEVER force the tool or conduct cutting with the whole periphery of disc or the both sides of tool contacting the wall of hole or groove which may cause breakage of the blades and the shank resulting in unexpected accidents.
- * Always wear protective glasses, dust mask and other safety equipment.

Carbide Cutters

Shank Size $\phi 3.0$

Long Shank

1 pc./pack



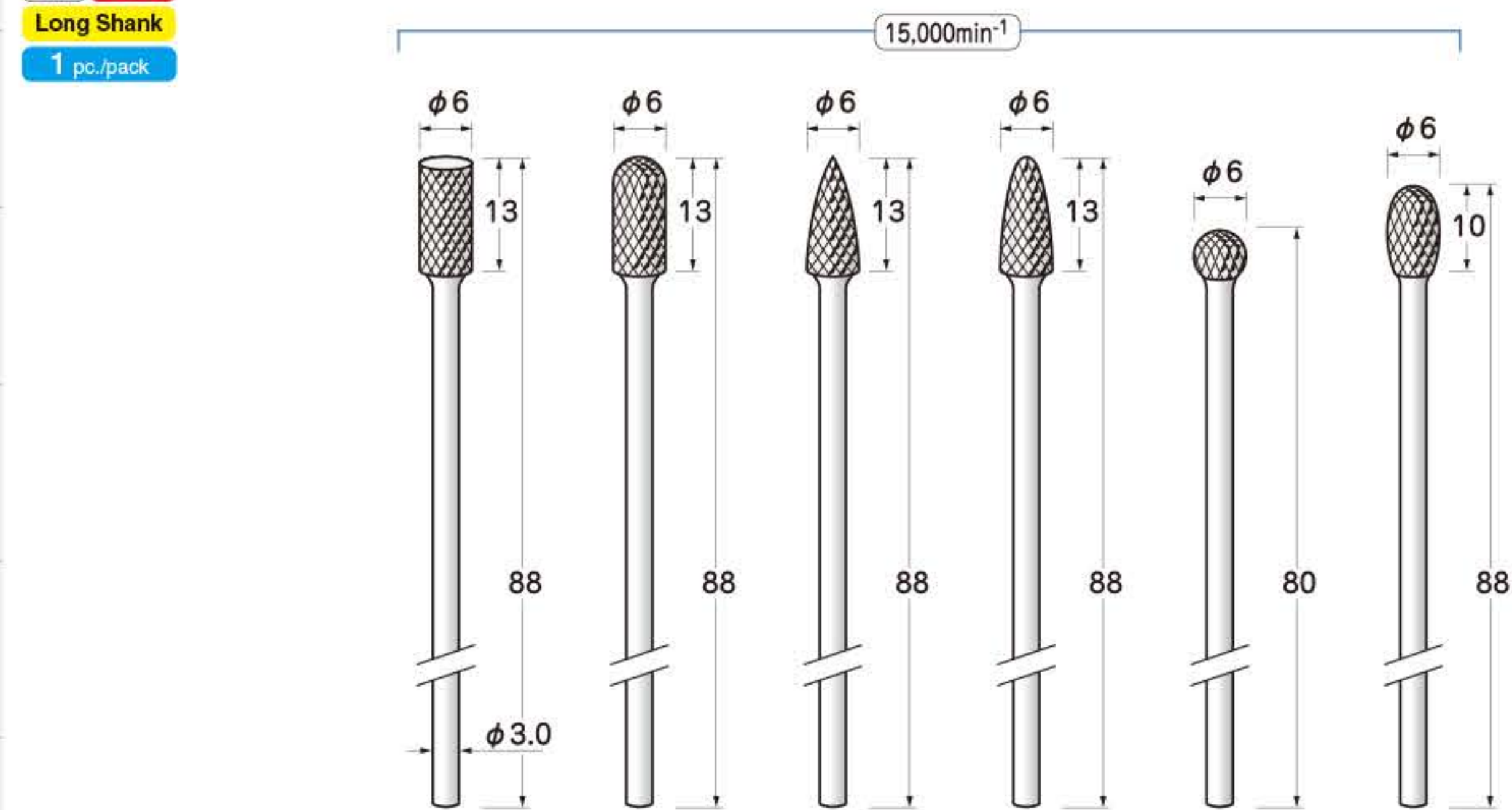
Cross Cut 2A12077 2A12078 2A12079 2A12080 2A12081 2A12082 2A12083

Carbide Cutters

Shank Size $\phi 3.0$

Long Shank

1 pc./pack



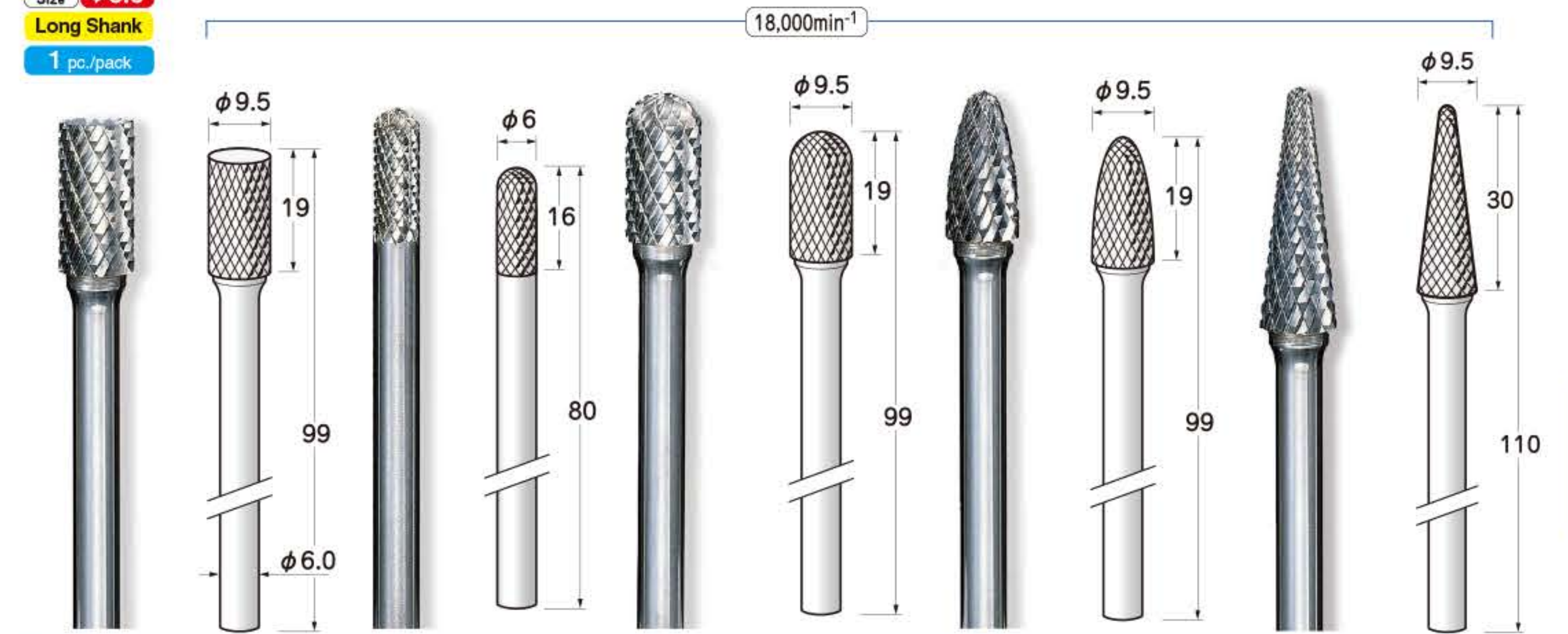
Cross Cut 2A12084 2A12085 2A12086 2A12087 2A12088 2A12089

Carbide Cutters

Shank Size $\phi 6.0$

Long Shank

1 pc./pack



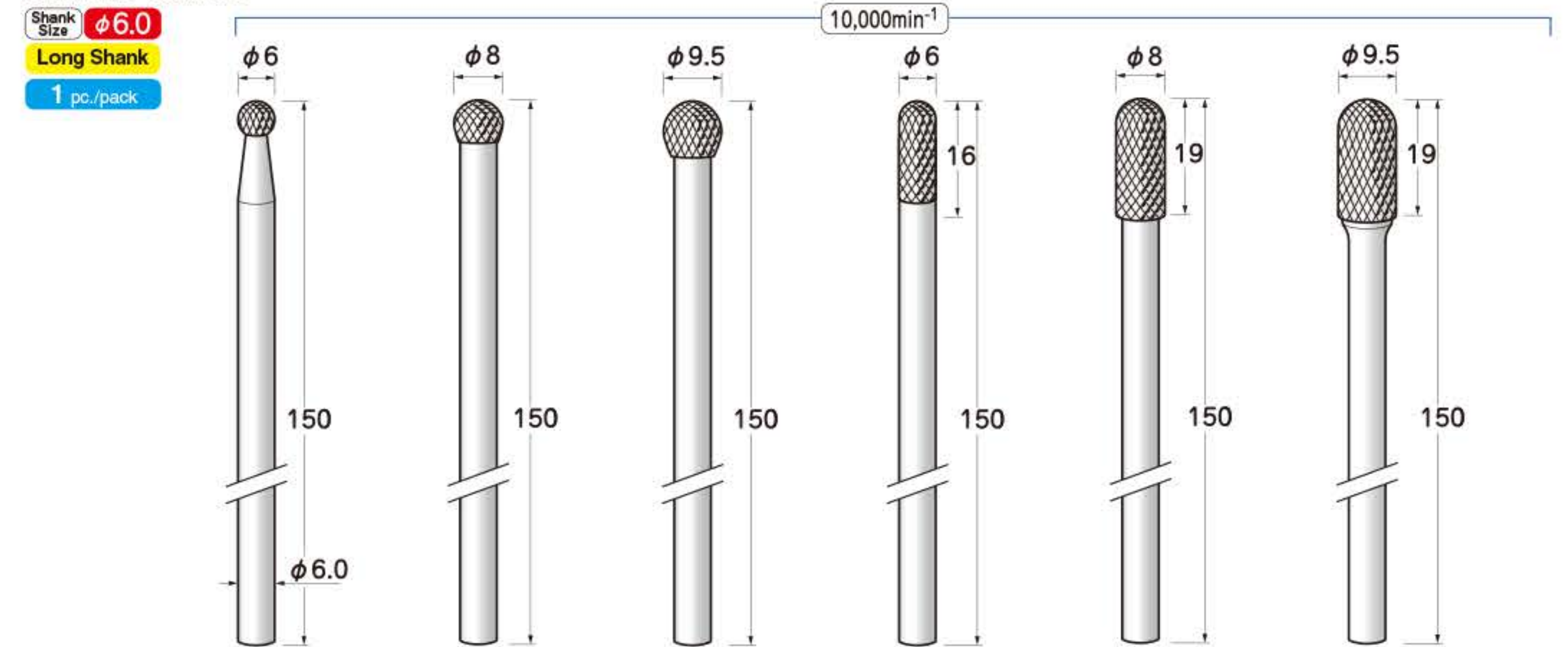
Cross Cut 2A13073 2A13074 2A13075 2A13076 2A13077

Carbide Cutters

Shank Size $\phi 6.0$

Long Shank

1 pc./pack



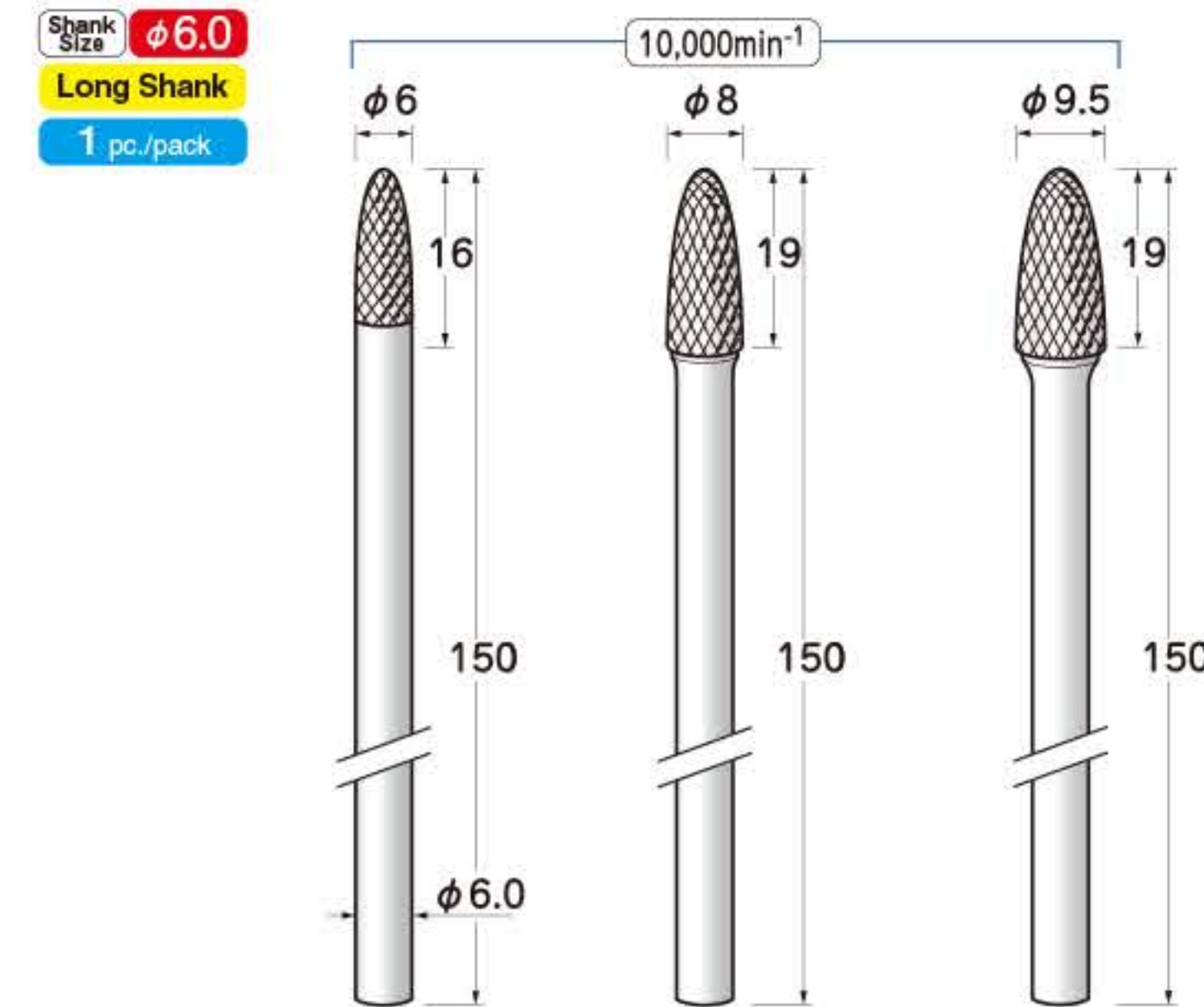
Cross Cut 2A13078 2A13079 2A13080 2A13081 2A13082 2A13083

Carbide Cutters

Shank Size $\phi 6.0$

Long Shank

1 pc./pack



Cross Cut 2A13084 2A13085 2A13086



! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Steel Cutters

EIKO

Steel Cutters

Feature

- Suitable for variety of materials such as soft metals (Aluminum, Brass etc.), and also resin, wood etc.

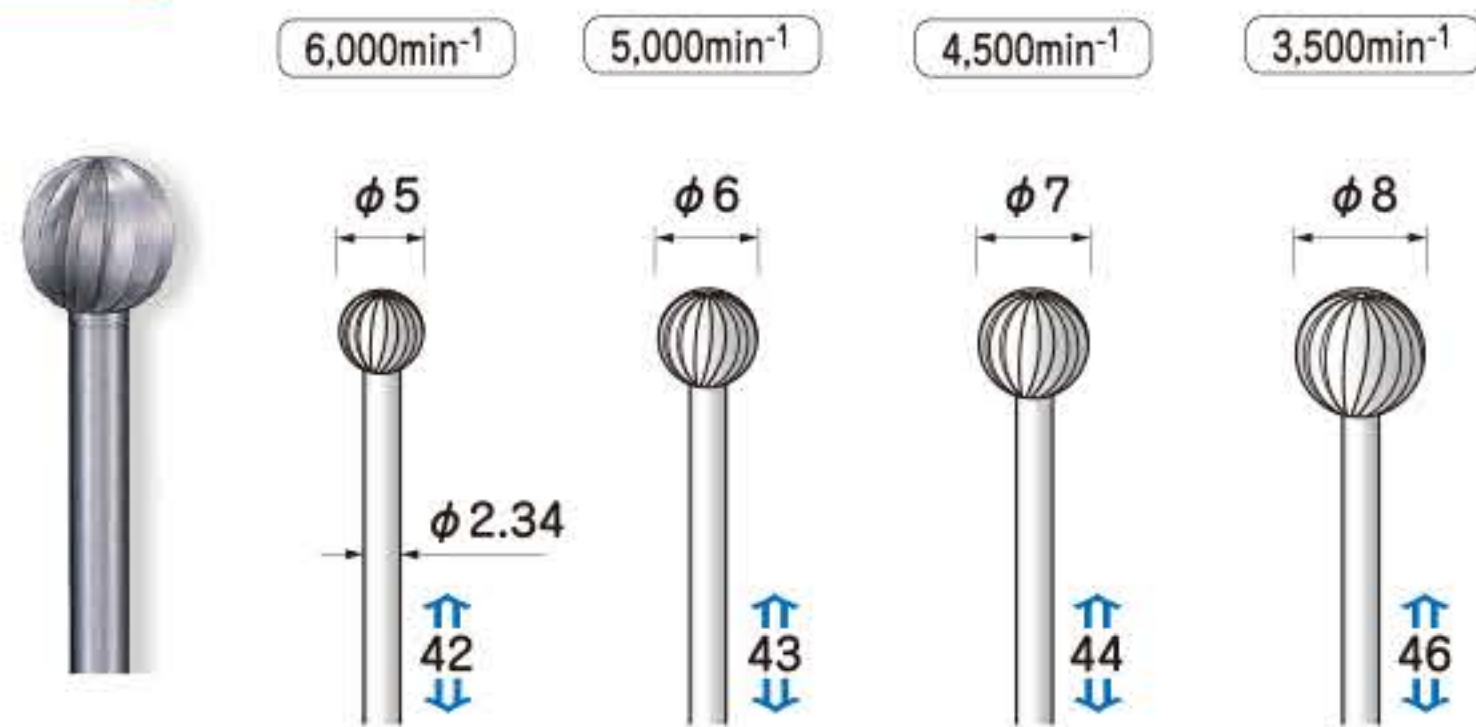
High Speed Steel Cutters

Feature

- Cutters made of high-speed steel. Stronger and tougher than standard tool steel.
- However neither as hard nor durable as carbide, superior against impact and torsion stress.

Steel Cutters

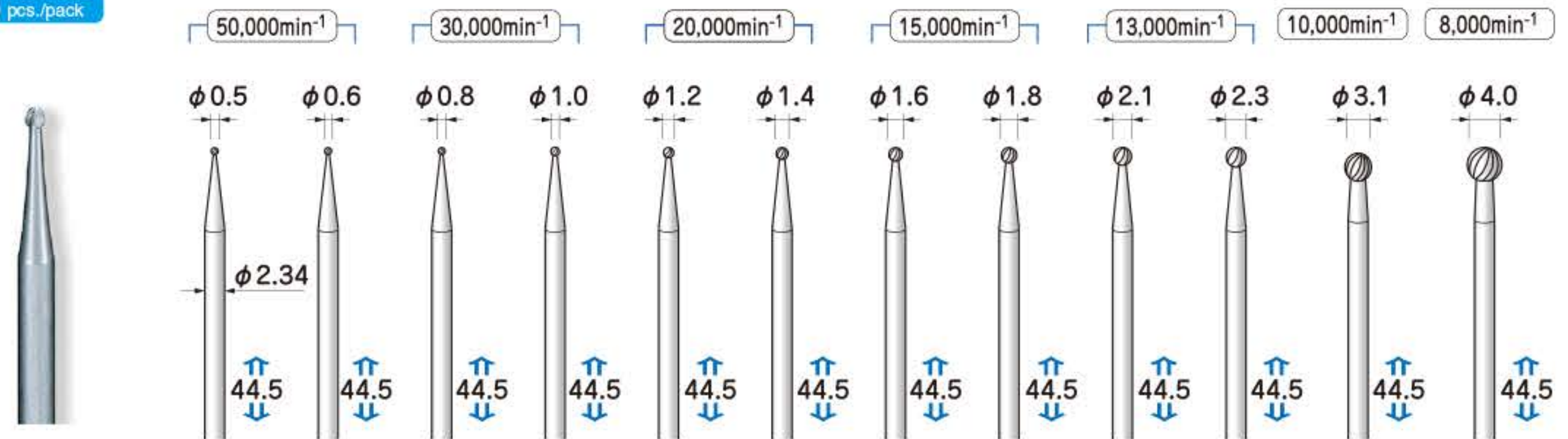
Shank Size $\phi 2.34$
2 pcs./pack



Steel Cutters 2A21001 2A21002 2A21003 2A21004

Steel Cutters

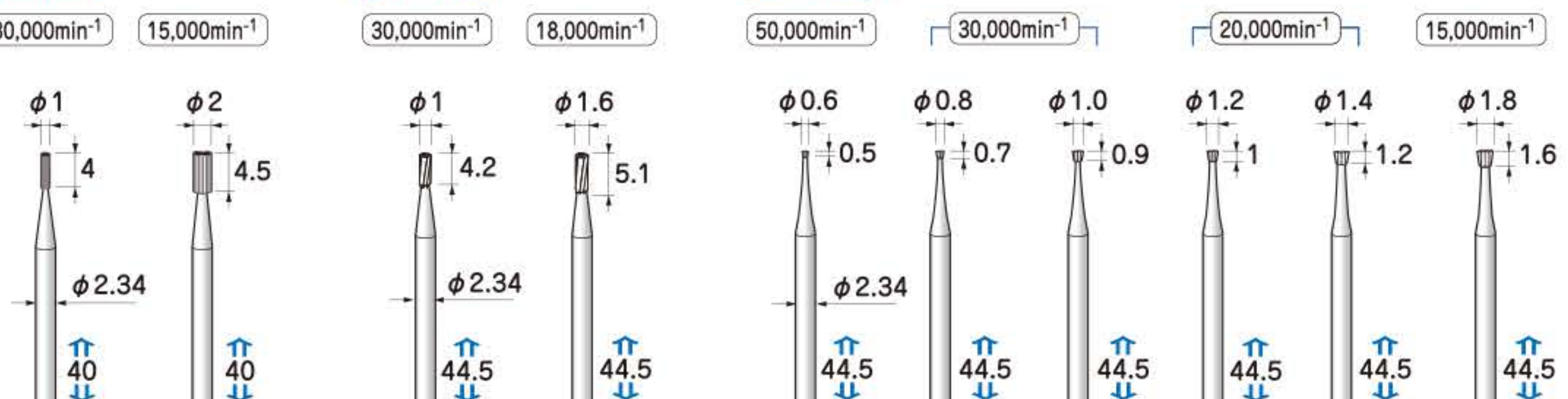
Shank Size $\phi 2.34$
5 pcs./pack



Steel Cutters 2A21005 2A21006 2A21007 2A21008 2A21009 2A21010 2A21011 2A21012 2A21013 2A21014 2A21015 2A21016

Steel Cutters

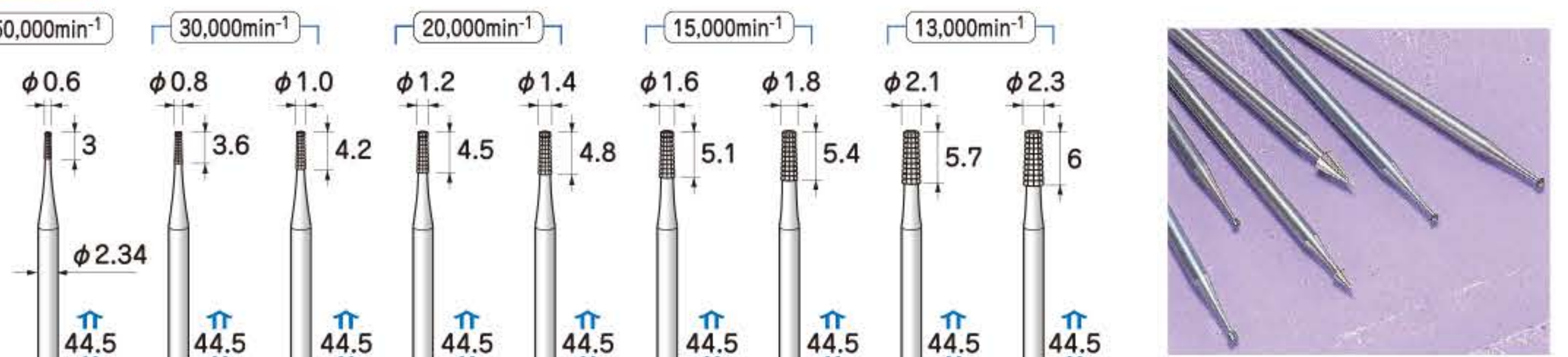
Shank Size $\phi 2.34$
3 pcs./pack



2A21017 2A21018 2A21019 2A21020 2A21021 2A21022 2A21023 2A21024 2A21025 2A21026

Steel Cutters

Shank Size $\phi 2.34$
5 pcs./pack



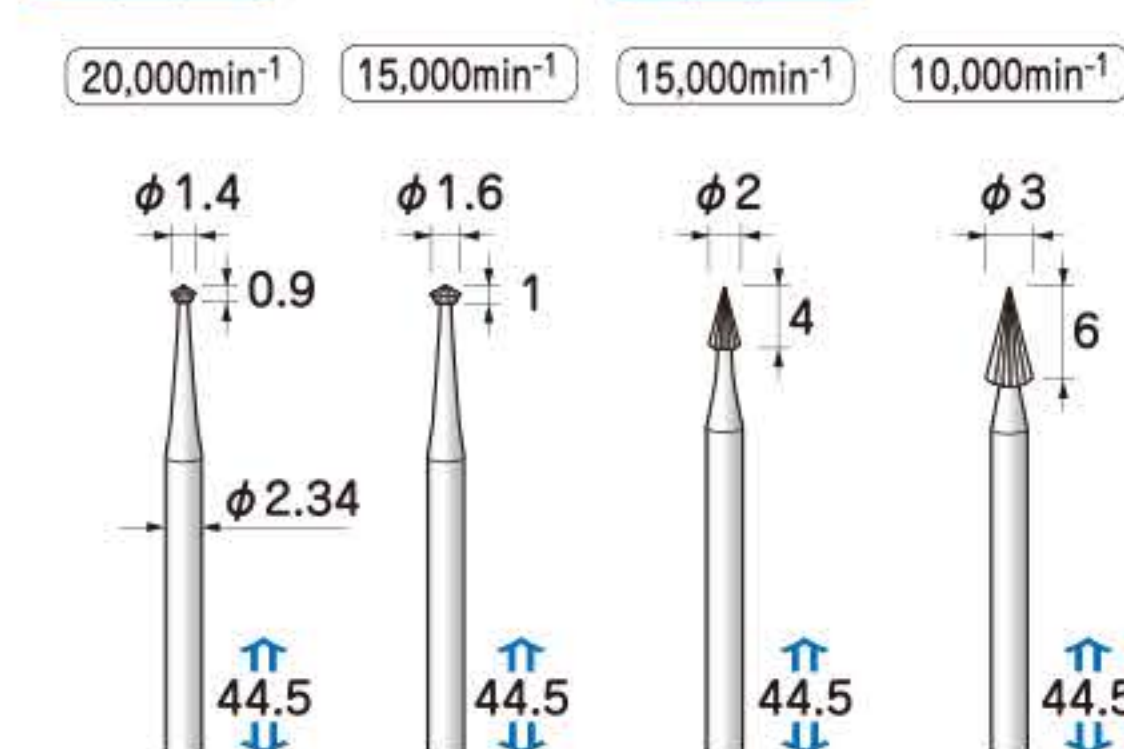
2A21027 2A21028 2A21029 2A21030 2A21031 2A21032 2A21033 2A21034 2A21035

Steel Cutters

E-FORCE

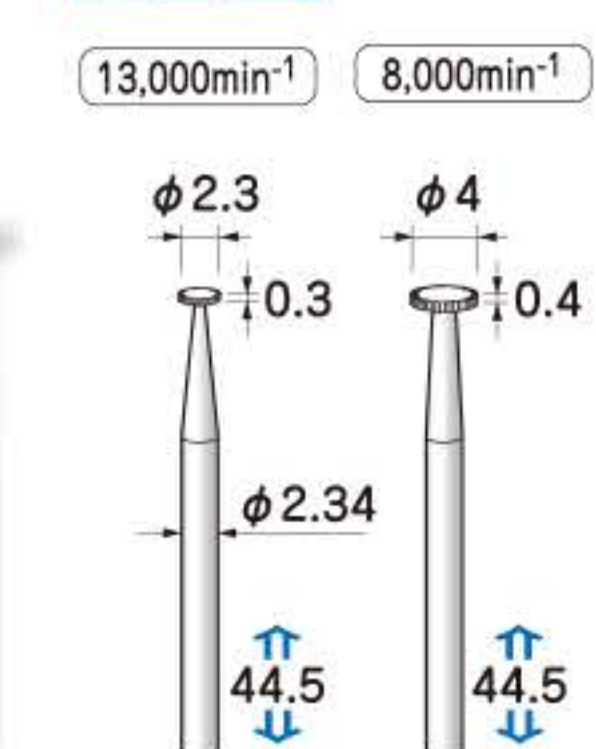
Steel Cutters

Shank Size $\phi 2.34$
5 pcs./pack



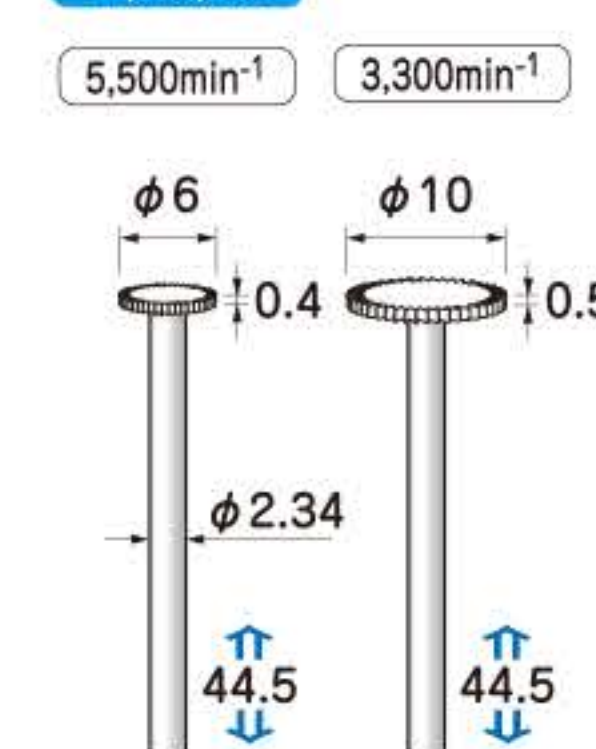
2A21036 2A21037 2A21038 2A21039

3 pcs./pack



2A21040 2A21041

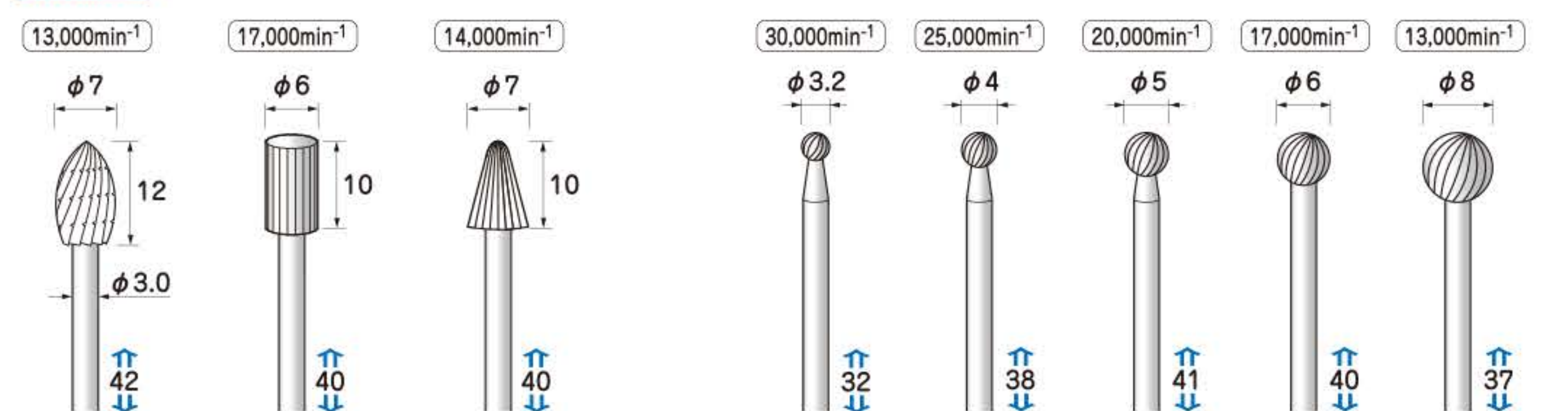
2 pcs./pack



2A21042 2A21043

High Speed Steel Cutters

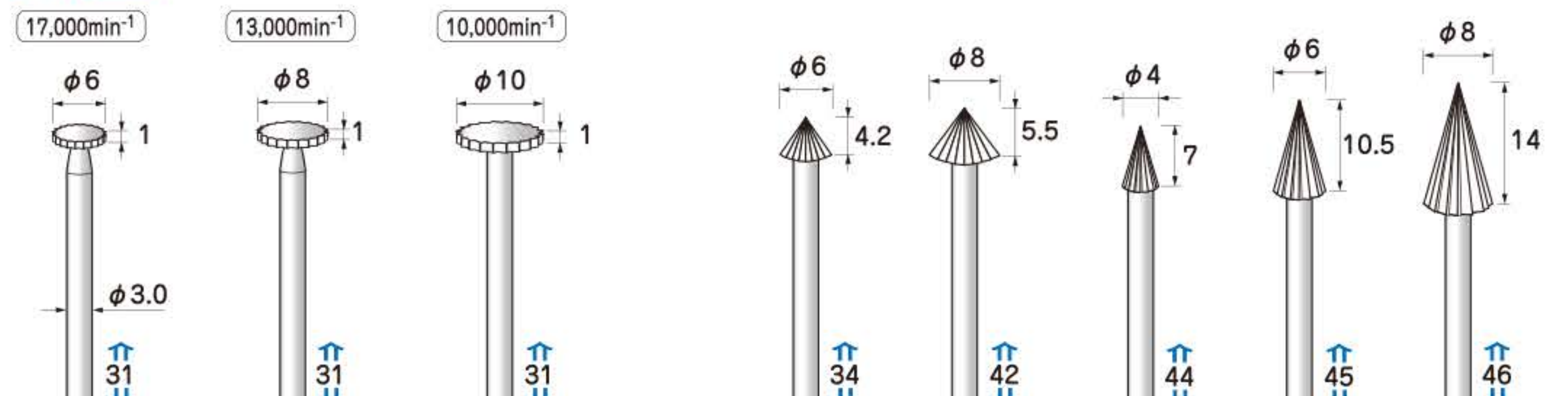
Shank Size $\phi 3.0$
1 pc./pack



2A22001 2A22002 2A22003 2A22004 2A22005 2A22006 2A22007 2A22008

High Speed Steel Cutters

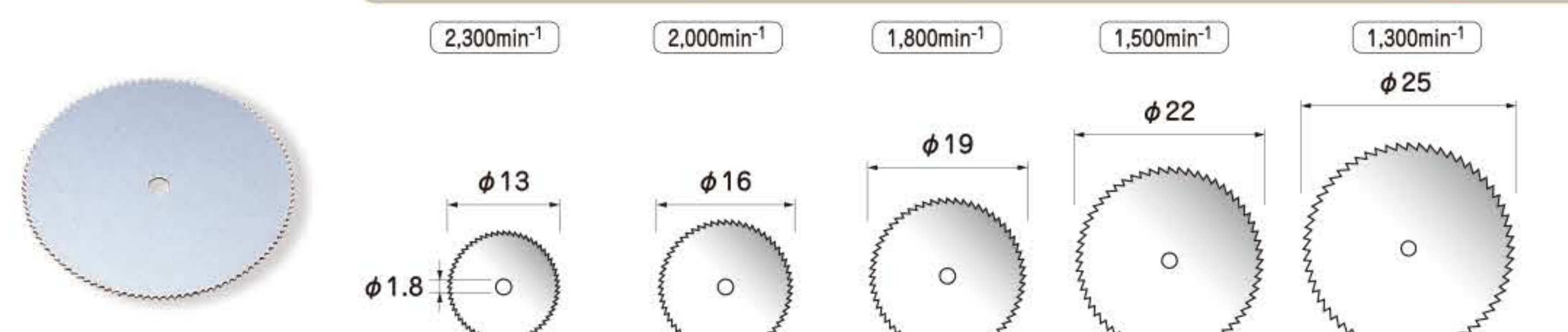
Shank Size $\phi 3.0$
1 pc./pack



2A22009 2A22010 2A22011 2A22012 2A22013 2A22014 2A22015 2A22016

Saw Blades

Thickness 0.1mm
5 pcs./pack



Saw Blade 2A24001 2A24002 2A24003 2A24004 2A24005

Saw Blades

Use with M1.7 type Mandrel.
For cutting and grooving resin, wood, wax etc. For more details of mandrels, see page 53.

Always use safety glasses and protective tools for your safety.
Use the tool below maximum operating rotation speed.

Steel Cutters (for non-metallic material)

Feature

- Steel Cutters for deburring and shaping non-metal materials such as wood, plastic, rubber etc.

Steel Cutter (for finishing)

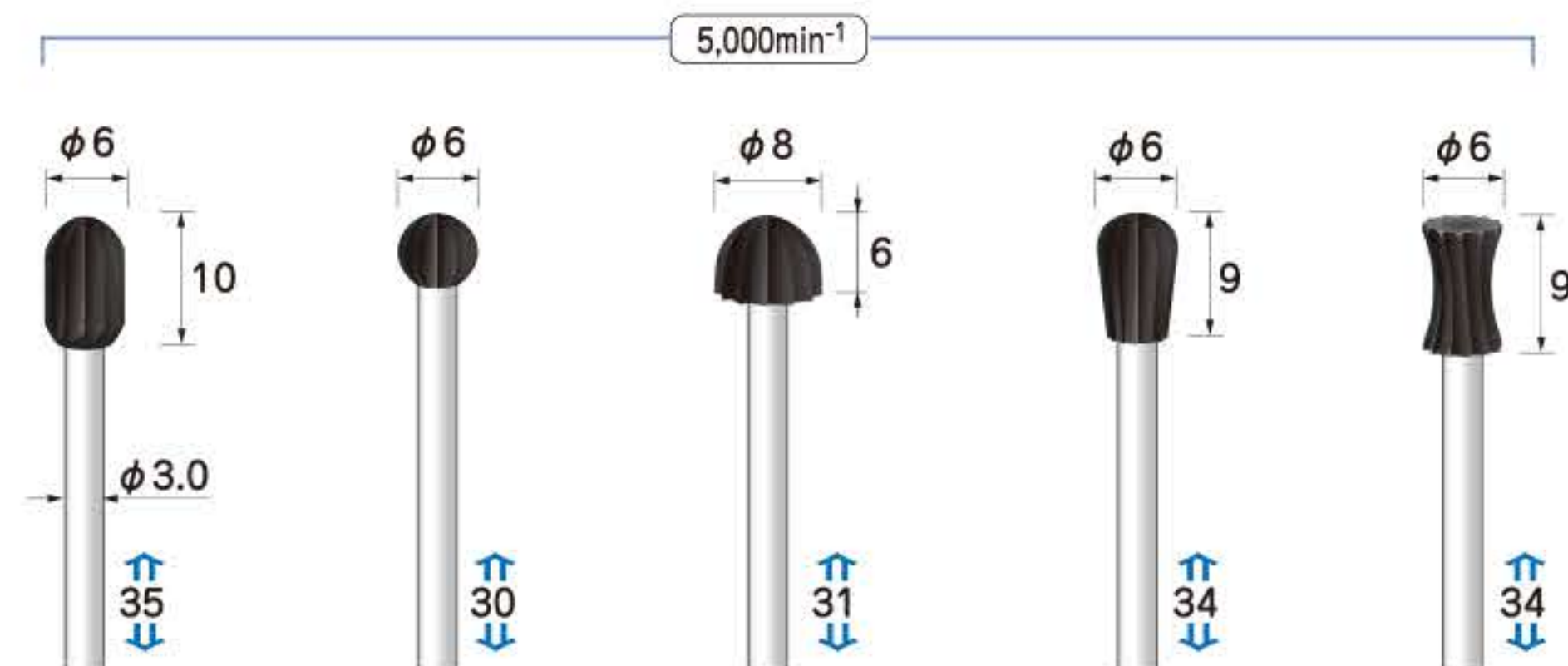
Shank Size $\phi 3.0$
Flute
5 pcs./pack



Flute 2A22017 2A22018 2A22019

Steel Cutter (for finishing)

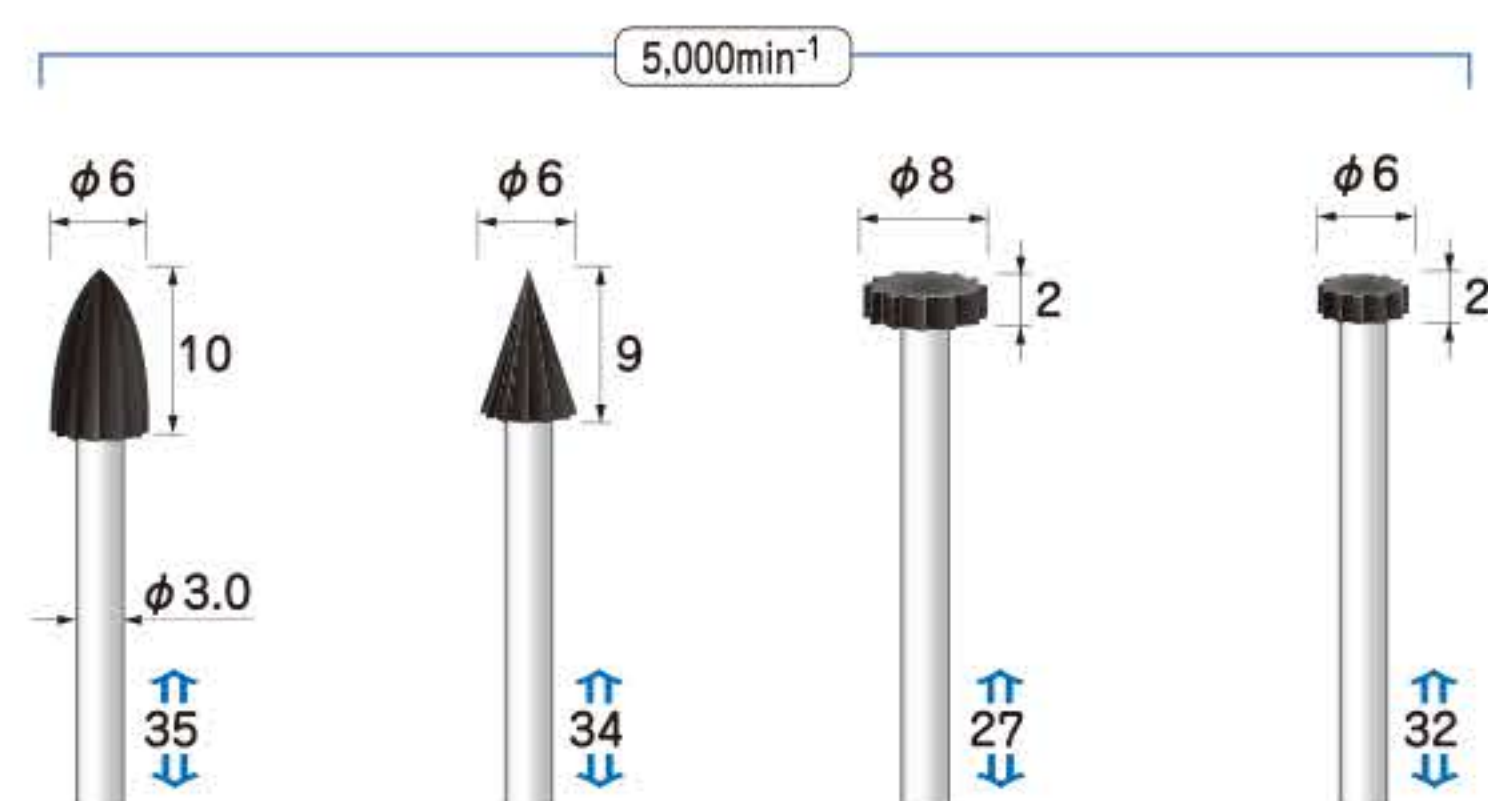
Shank Size $\phi 3.0$
Flute
5 pcs./pack



Flute 2A22020 2A22021 2A22022 2A22023 2A22024

Steel Cutter (for finishing)

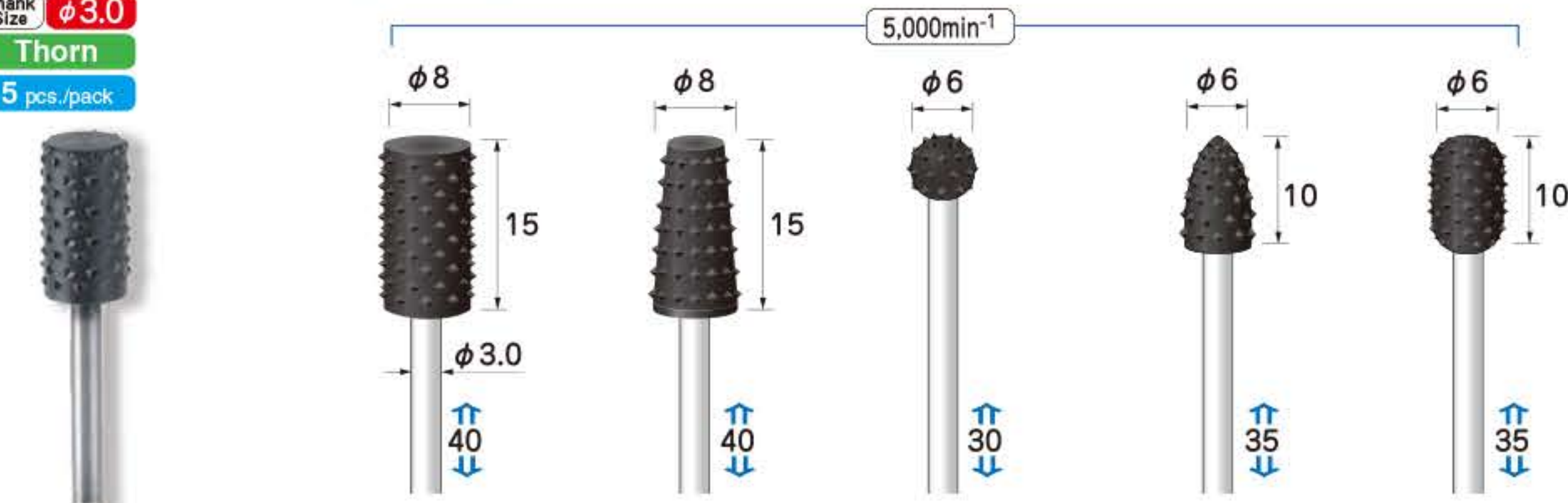
Shank Size $\phi 3.0$
Flute
5 pcs./pack



Flute 2A22025 2A22026 2A22027 2A22028

Steel Cutter (for rough grinding)

Shank Size $\phi 3.0$
Thorn
5 pcs./pack



Thorn 2A22029 2A22030 2A22031 2A22032 2A22033

Enhancing freedom of creativity of specialists.

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Electroplated Diamond/CBN Cutting Discs
Stripped Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Electroplated Diamond/CBN Cutting Discs
Stripped Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Twist Drills

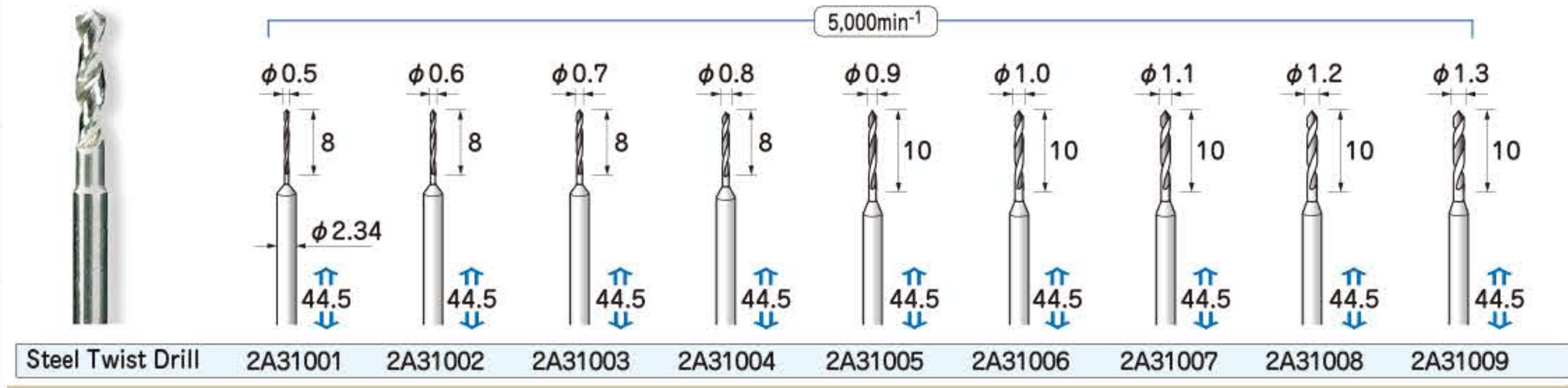
EIKO

Steel Twist Drill

Shank Size $\phi 2.34$
5 pcs./pack

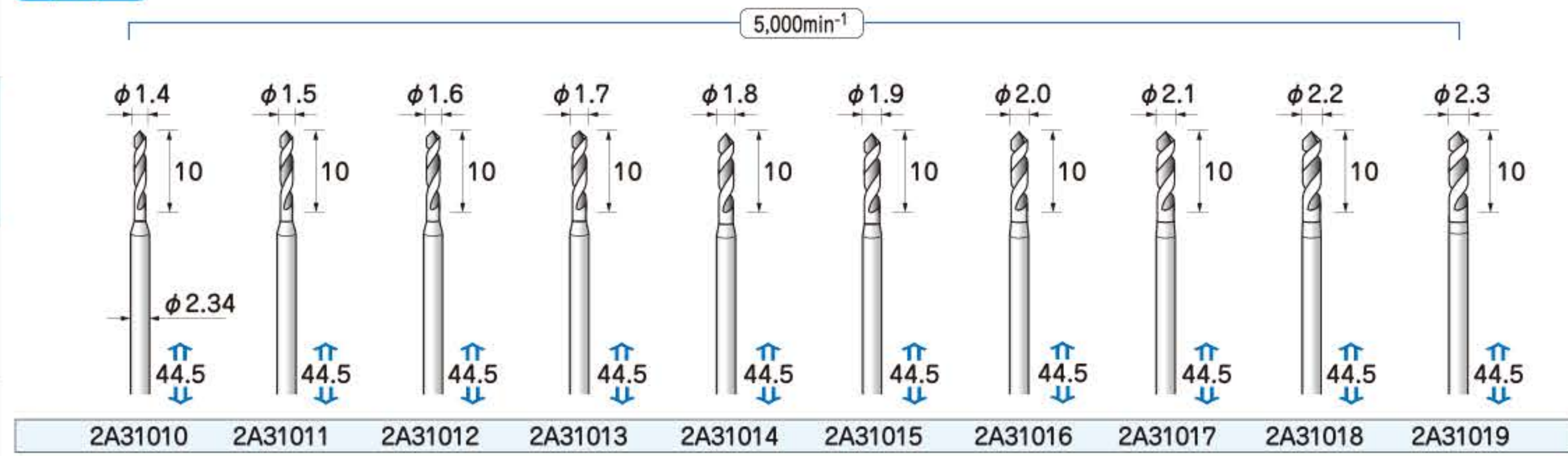
Steel Twist Drill

- Feature**
- For precise drilling on wood, acryl, plastic etc.
 - Made of softer material than that of high-speed steel twist drills.



Steel Twist Drill

Shank Size $\phi 2.34$
5 pcs./pack



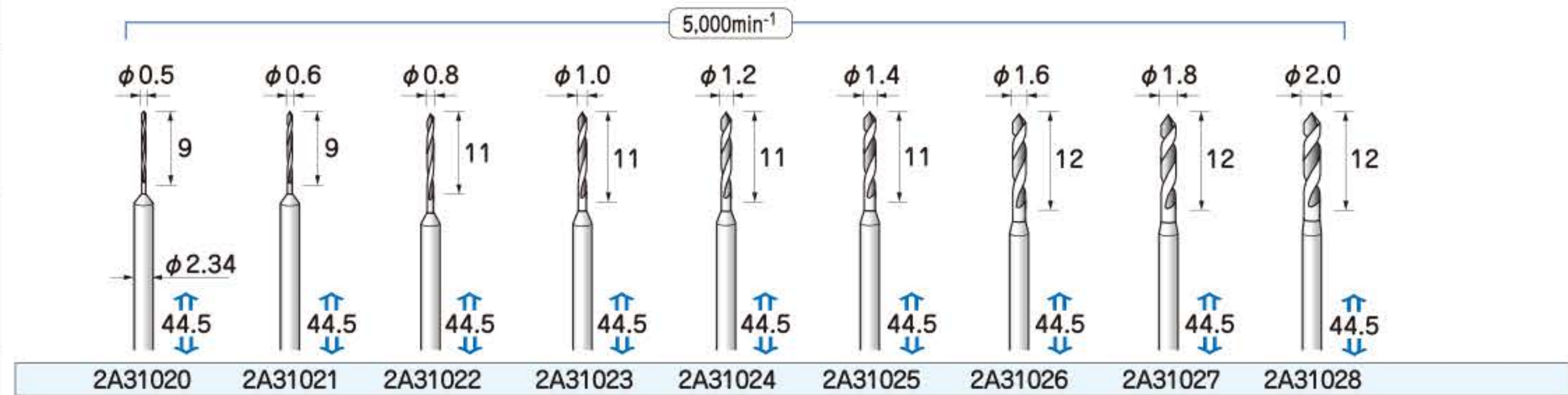
High Speed Steel

Twist Drill

Shank Size $\phi 2.34$
3 pcs./pack

High Speed Steel Twist Drill

- Feature**
- Suitable for drilling on relatively soft metals (copper, brass, aluminum etc.), and also acryl, plastic etc.
 - Made of harder material than that of steel twist drills.

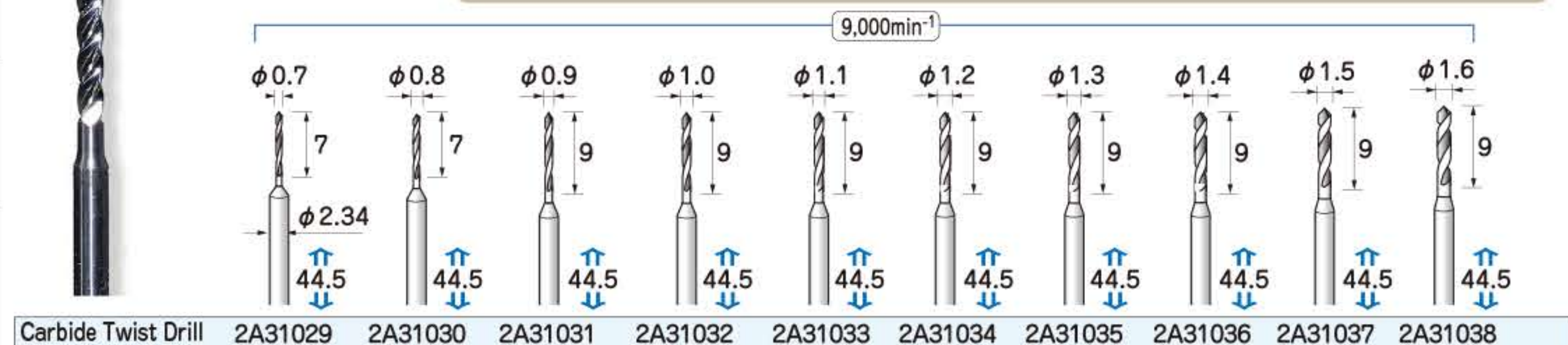


Carbide Twist Drill (Four-Flute)

Shank Size $\phi 2.34$
1 pc./pack

Carbide Twist Drill (Four-Flute)

- Feature**
- Made of ultrafine carbide alloy, **exclusively for drilling on pearls and corals.**
 - The specially designed smooth cutting four-flute helical blades provide a precise drilling with little chipping.



Twist Drills

E-FORCE®

Carbide Twist Drill (Four-Flute)

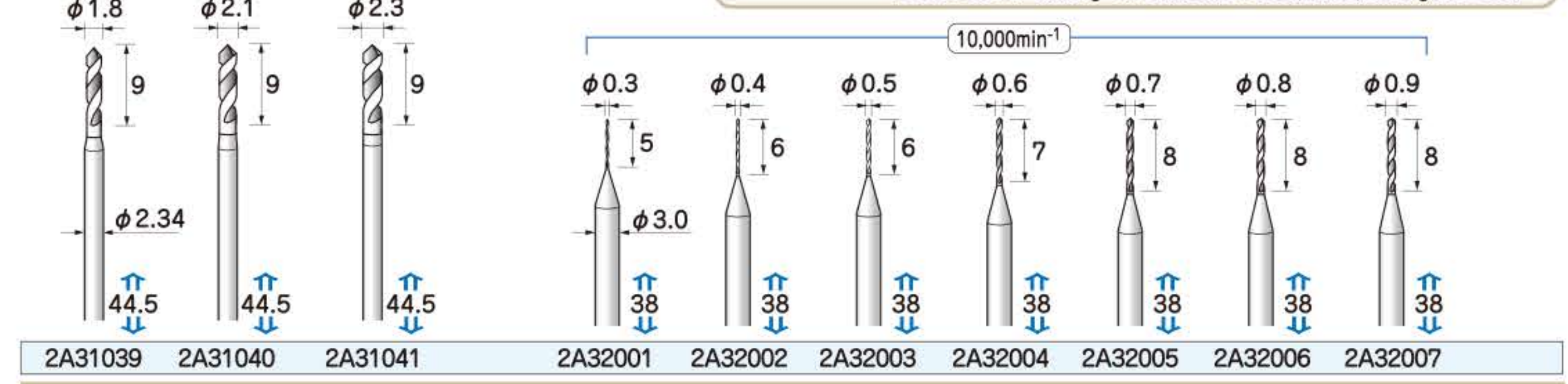
Shank Size $\phi 2.34$
1 pc./pack

Carbide Twist Drill

Shank Size $\phi 3.0$
1 pc./pack

Carbide Twist Drill

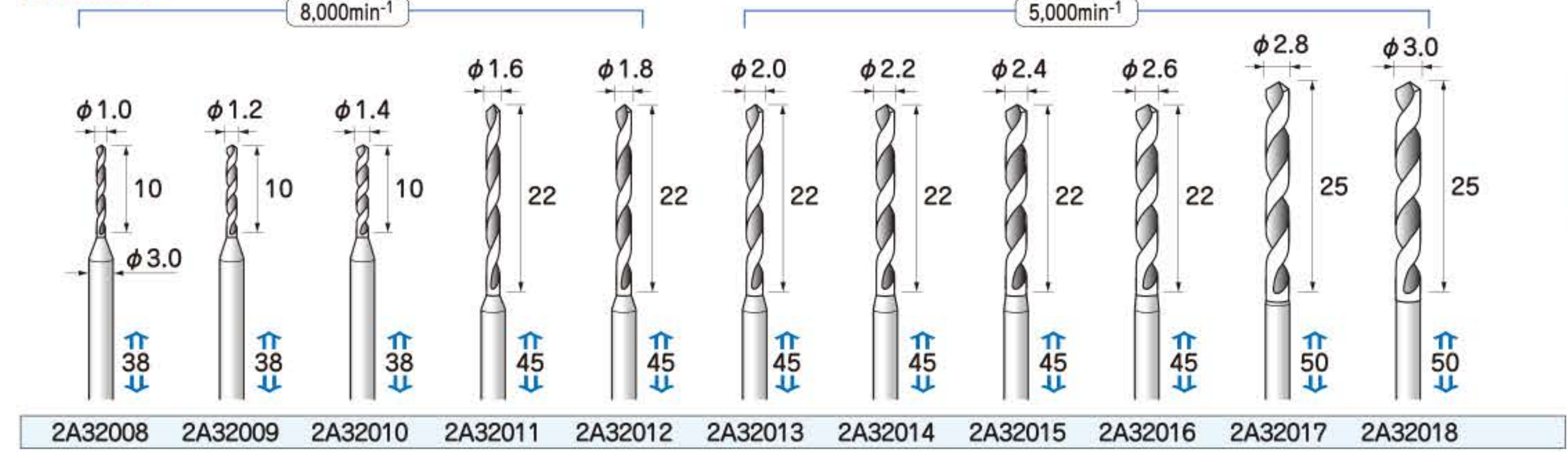
- Feature**
- Precise, quality carbide drills with ultrafine carbide alloy.
 - Satisfactory cutting performance with flutes specially designed for steel processing.
 - Best suit for drilling on standard steel, dies, and glass etc.



Carbide Twist Drill

Shank Size $\phi 3.0$
1 pc./pack

※ Available in sizes in each 0.01mm step on request.

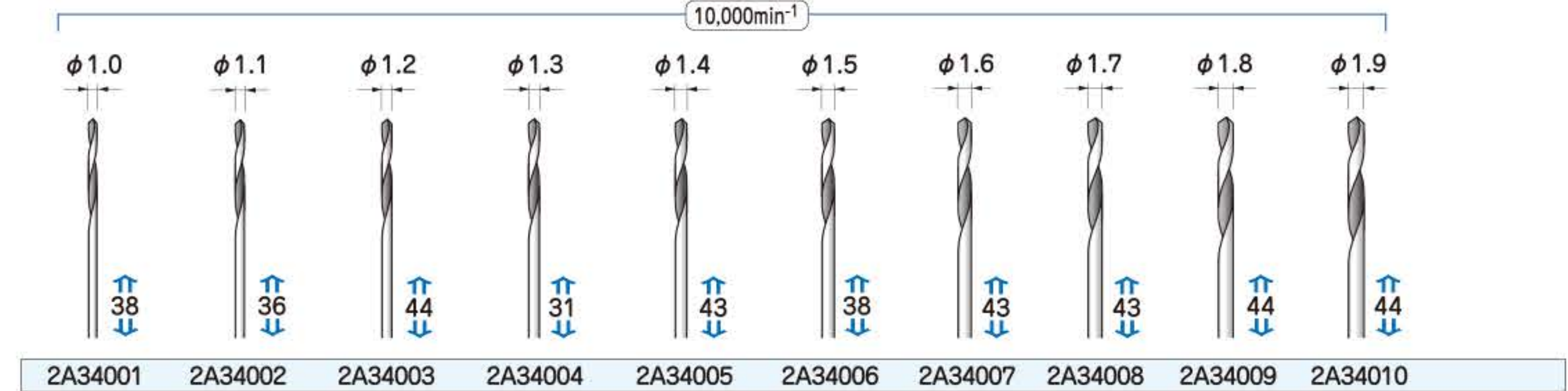


Carbide Magnum Drill

Shank Size **Straight Shank**
1 pc./pack

Carbide Magnum Drill (Straight Shank)

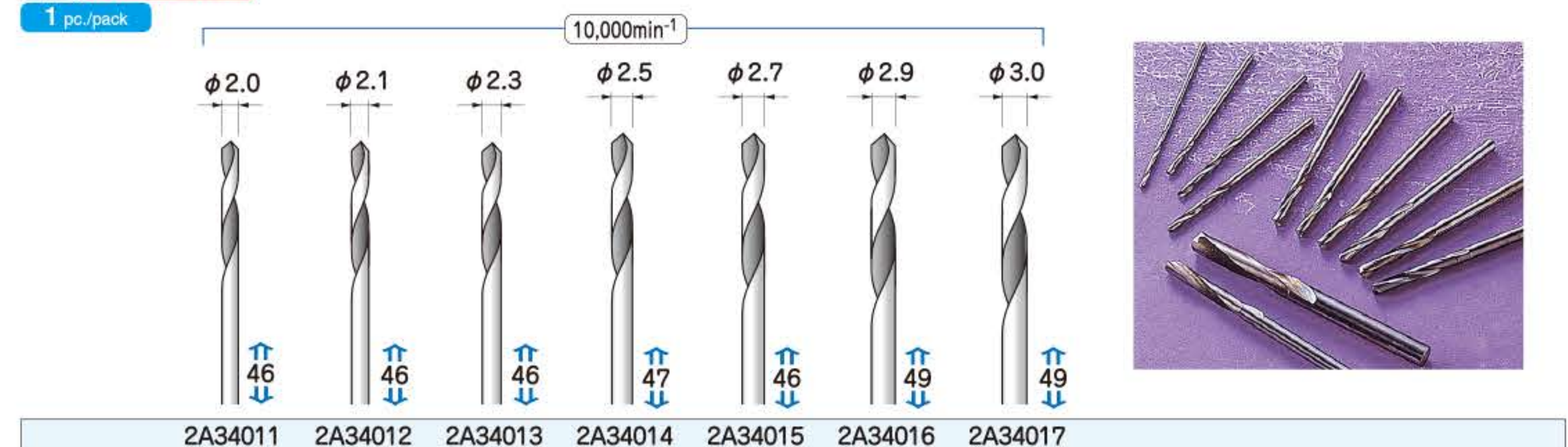
- Feature**
- Exclusively for hard-to-cut materials with excellent cutting and hardness.
 - Best suits for drilling on materials which are likely to work-hardened such as titanium, inconel, flux, stainless, hardened steel etc. and flexible materials.



Carbide Magnum Drill

Shank Size **Straight Shank**
1 pc./pack

※ Available in sizes 0.1mm or larger on request.



! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Mandrels

Feature

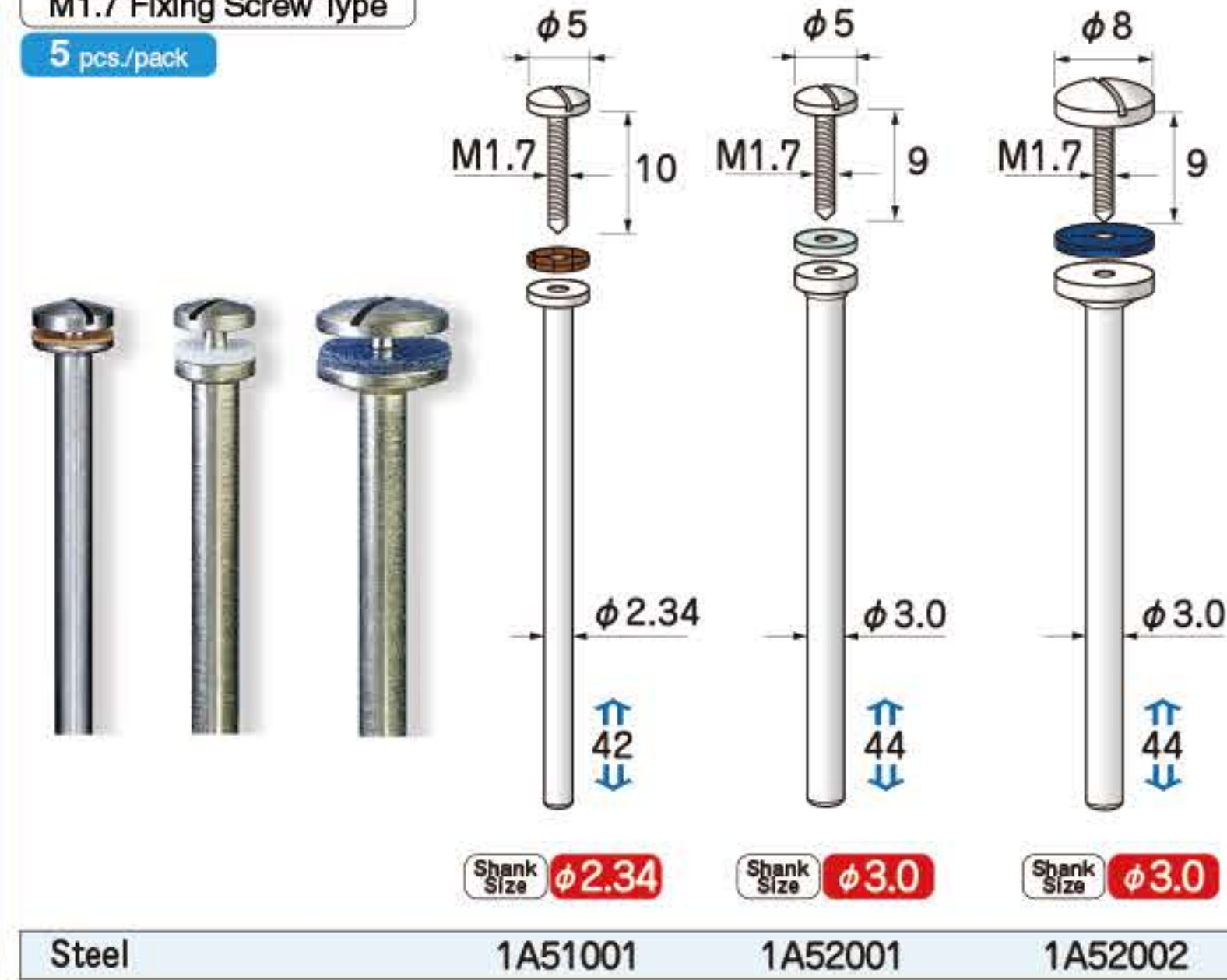
- Mandrels are generic shafts to be used with wheel type tools, such as Cutting Stone Discs, Saw Blades, Felt Wheels, Abrasive Rubber Wheels etc.
- Available in economical steel and rustproof rigid stainless.
- M3 type mandrel is with a more durable screw to suit for works with high load compared to M1.7 type.
- Two screw lengths are available to match thickness of tools to be installed.



Steel Mandrels

M1.7 Fixing Screw Type

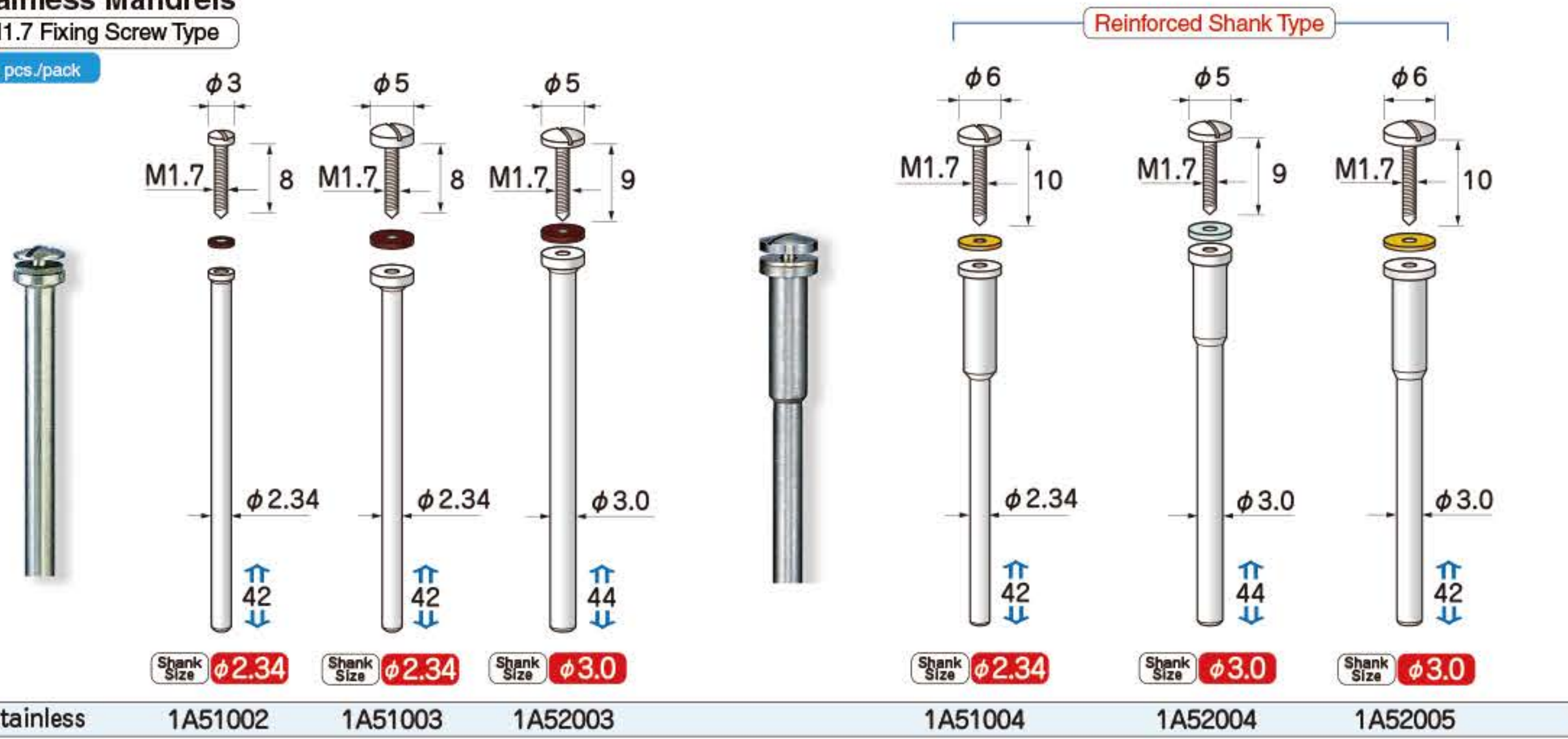
5 pcs./pack



Stainless Mandrels

M1.7 Fixing Screw Type

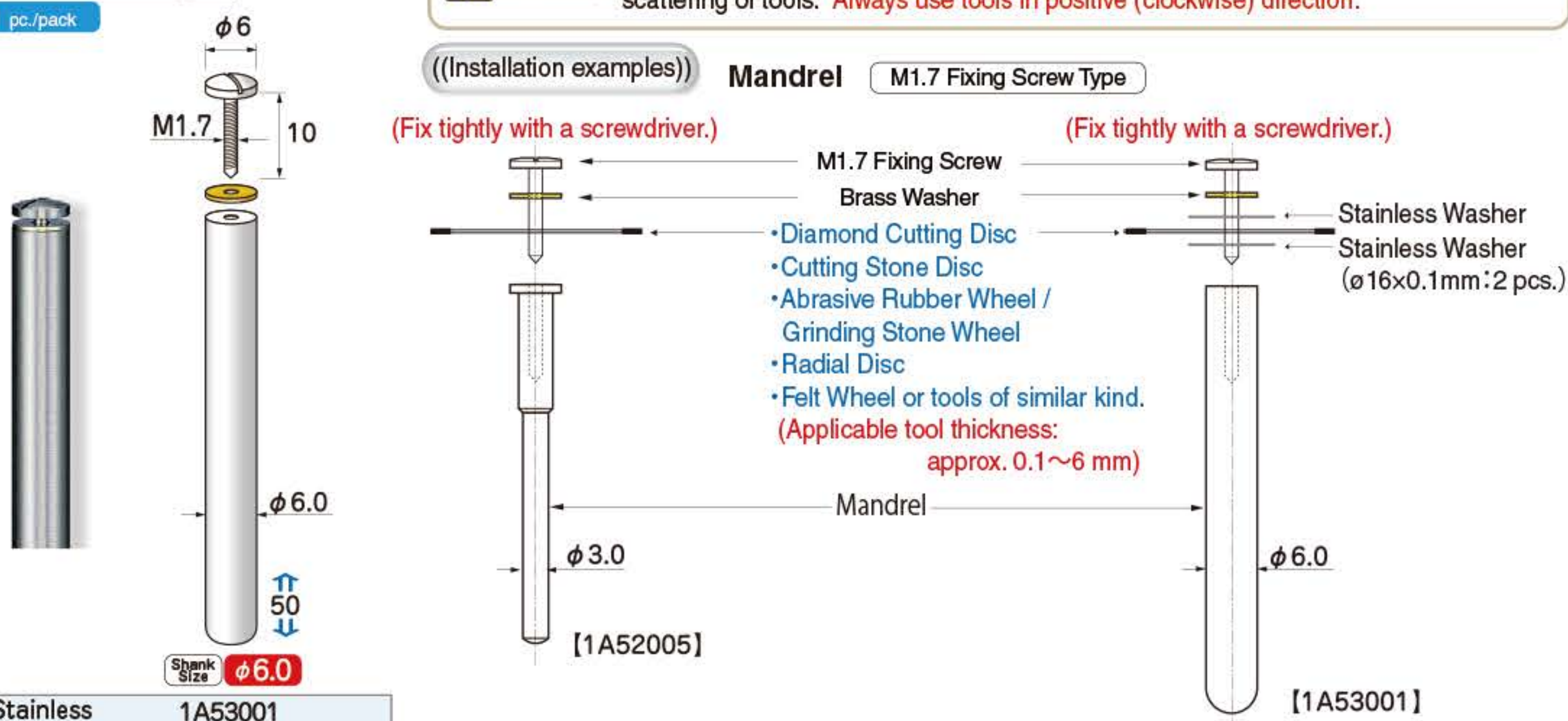
5 pcs./pack



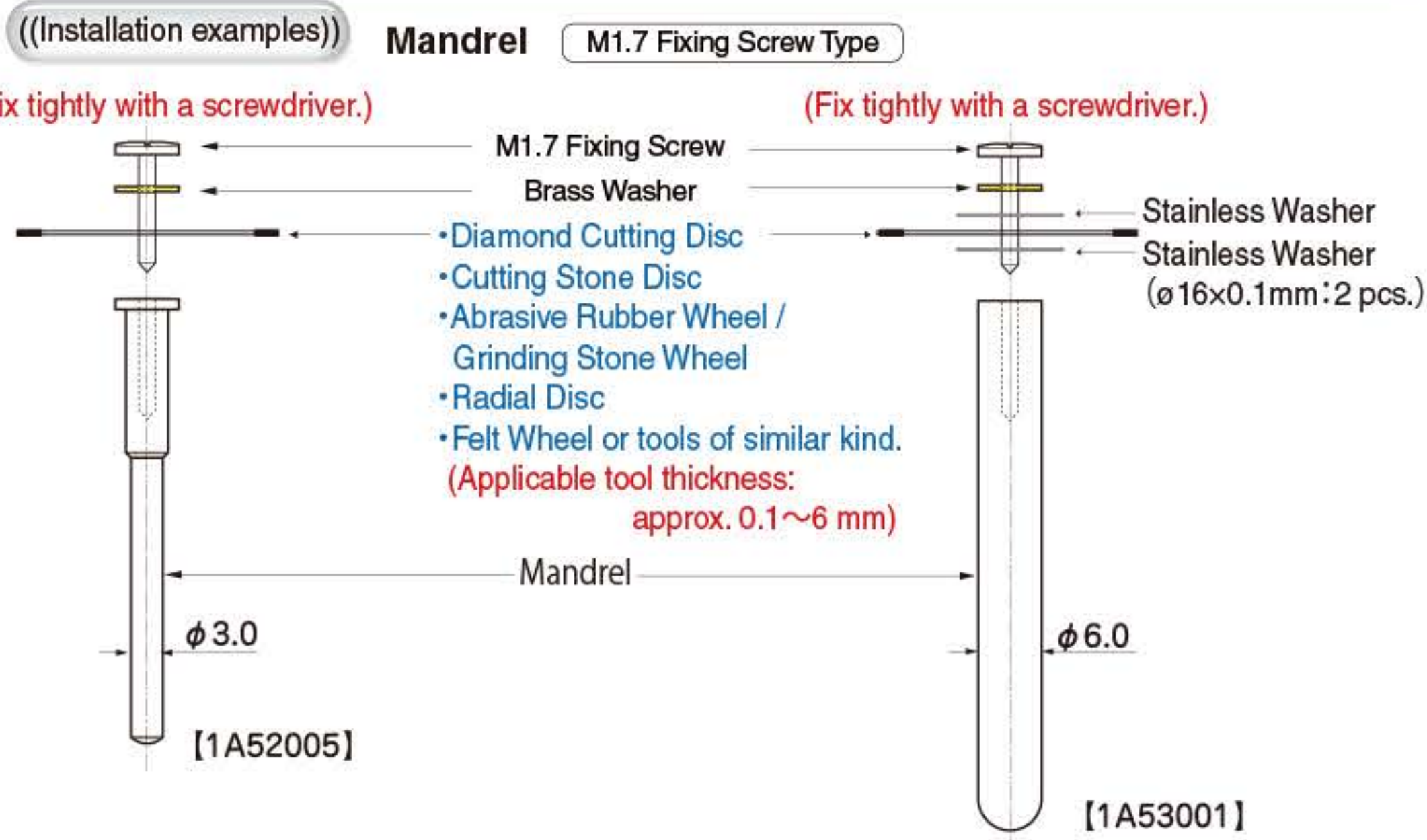
Stainless Mandrels

M1.7 Fixing Screw Type

1 pc./pack

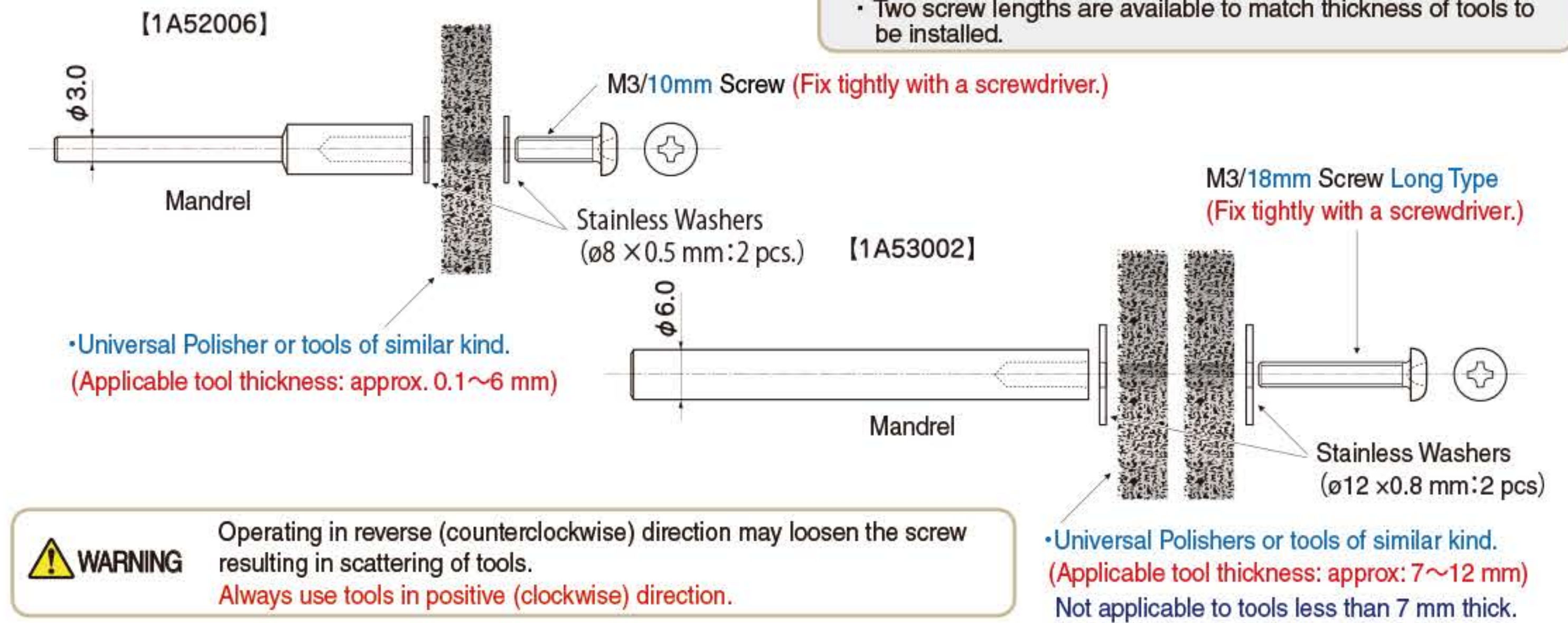


WARNING Operating in reverse (counterclockwise) direction may loosen the screw resulting in scattering of tools. Always use tools in positive (clockwise) direction.



((Installation examples))

Mandrel M3 Fixing Screw Type

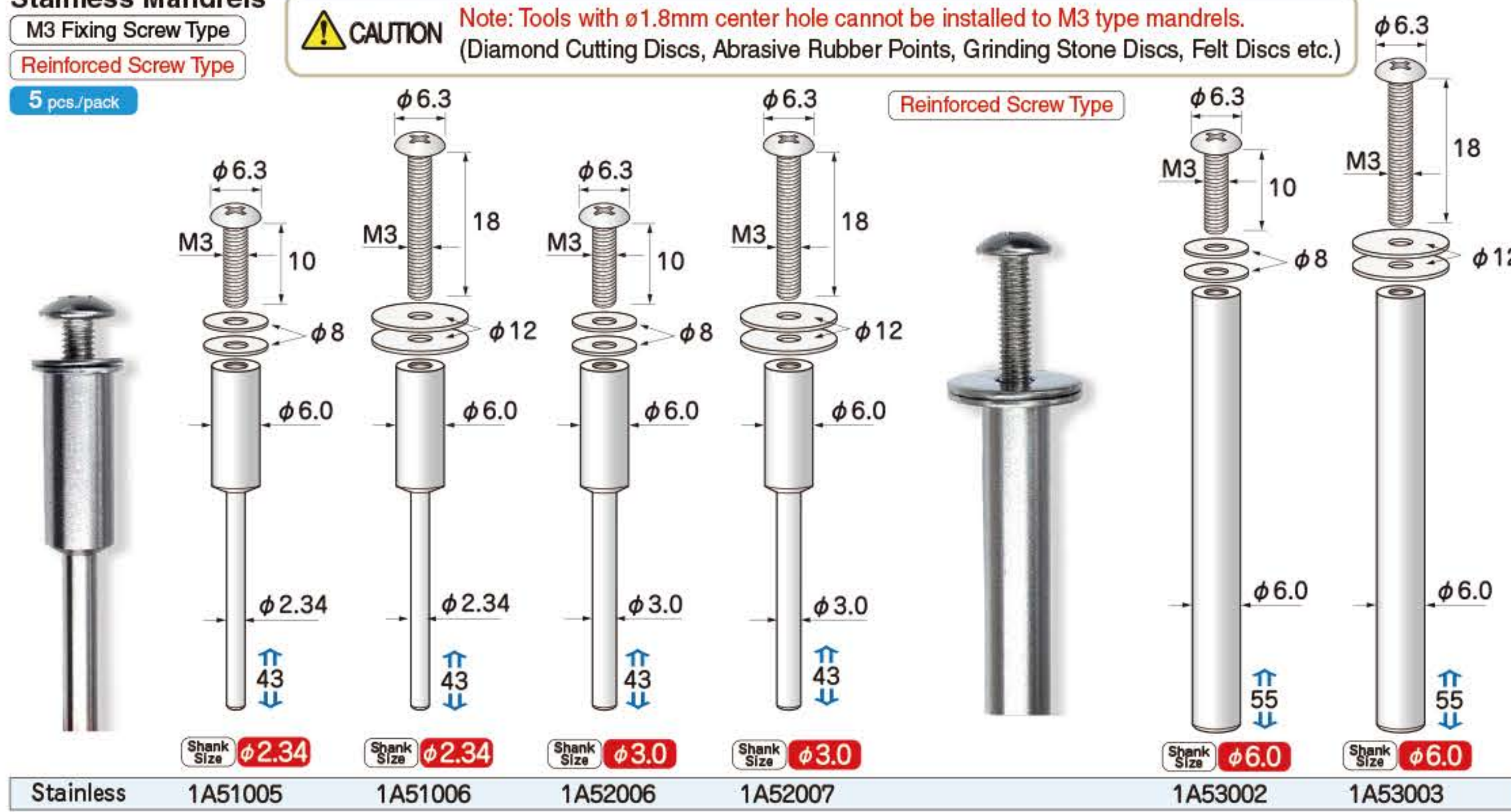


Stainless Mandrels

M3 Fixing Screw Type

Reinforced Screw Type

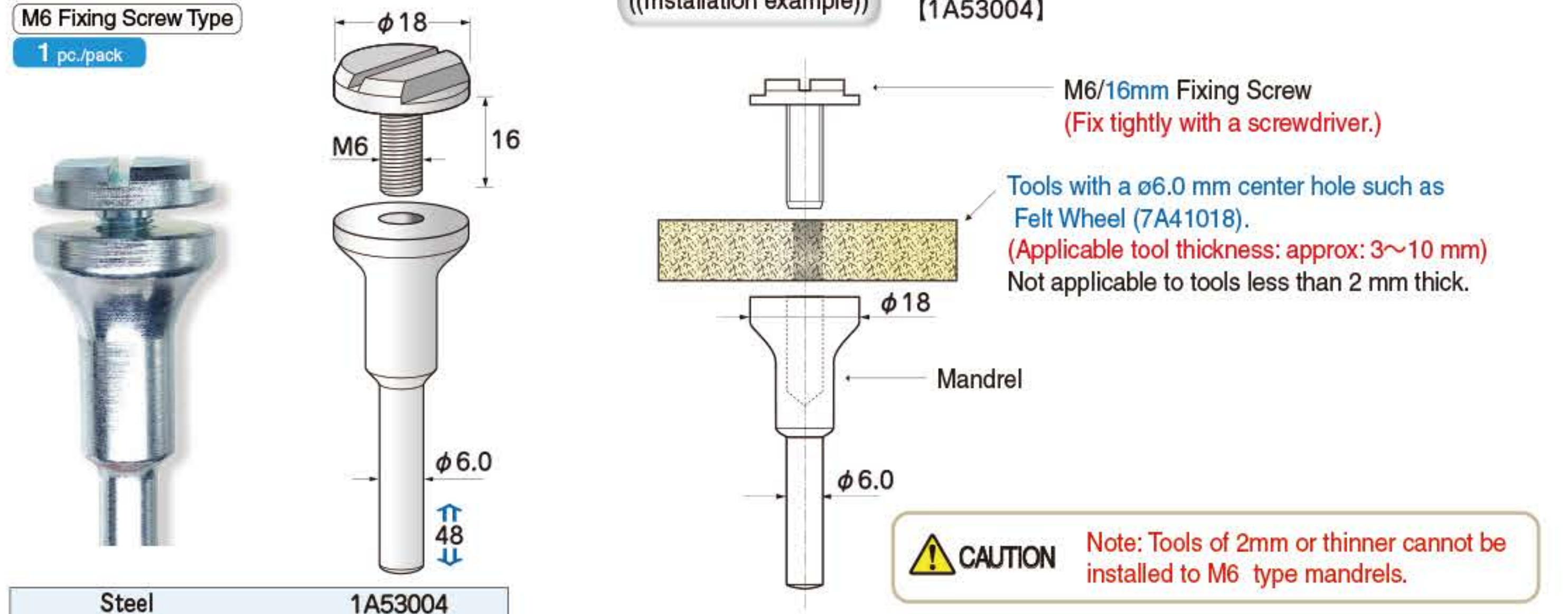
5 pcs./pack



Steel Mandrels

M6 Fixing Screw Type

1 pc./pack



Electroplated Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels/Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds/Hand Tools
Special Tools
Tool Sets

Shank Adapters

EIKO

Shank Adapters

Feature

- A handy adapter to convert the shank size without exchanging collet, and the other to extend the shank length.
- Processing easily in deep holes unreachable with ordinary tools.
- Cost and time saving. No need for ordering custom made tools.

WARNING

- Tool must be inserted fully to the end of the hole of the adapter and tightened firmly.
- When processing in deep holes, always check for safety, and insert the tool into the hole before starting the grinder, then gradually accelerate the speed up to 1/30 or less of the maximum operation speed of the tool in clockwise direction only.
- Always use safety glasses and protective tools for your safety.
- DO NOT use with electric powered or air grinders not equipped with speed control function.

We will not take any responsibility for any accident or damage of workpiece caused in operation because the adapters or installed tools may break or bend depends on condition used.

Spanner Set

10mm · 11mm

Set of 1 each

Set of 10mm and 11mm spanners for 9A13003 · 9A14001 · 9A14002 · 9A14003.



Spanner Set 9A15001

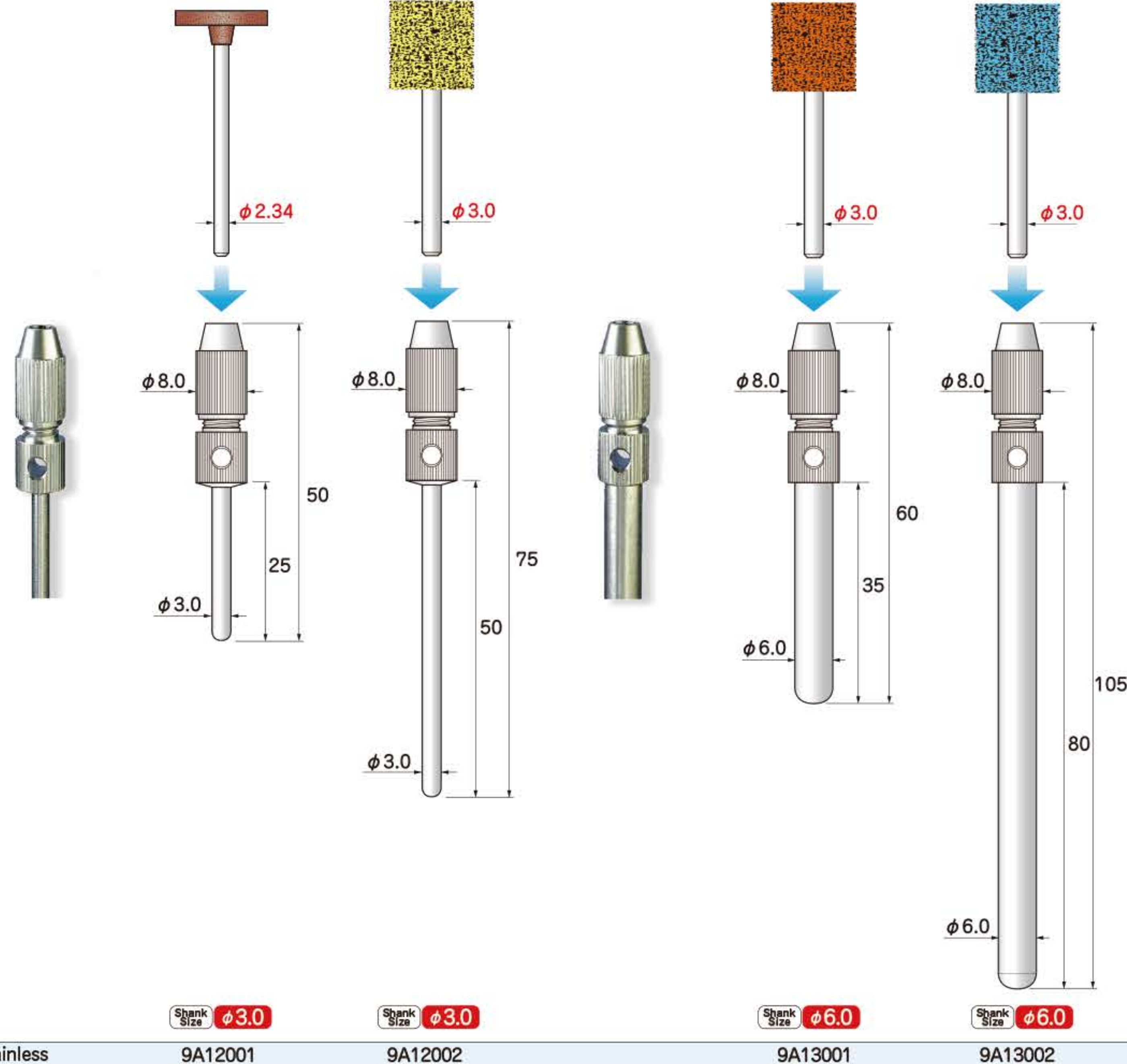
Shank Adapters (Stainless)

1 pc./pack

For $\phi 2.34$ mm Shank

For $\phi 3.0$ mm Shank

For $\phi 3.0$ mm Shank



Shank Adapters

E-FORCE[®]

Shank Adapters (Stainless)

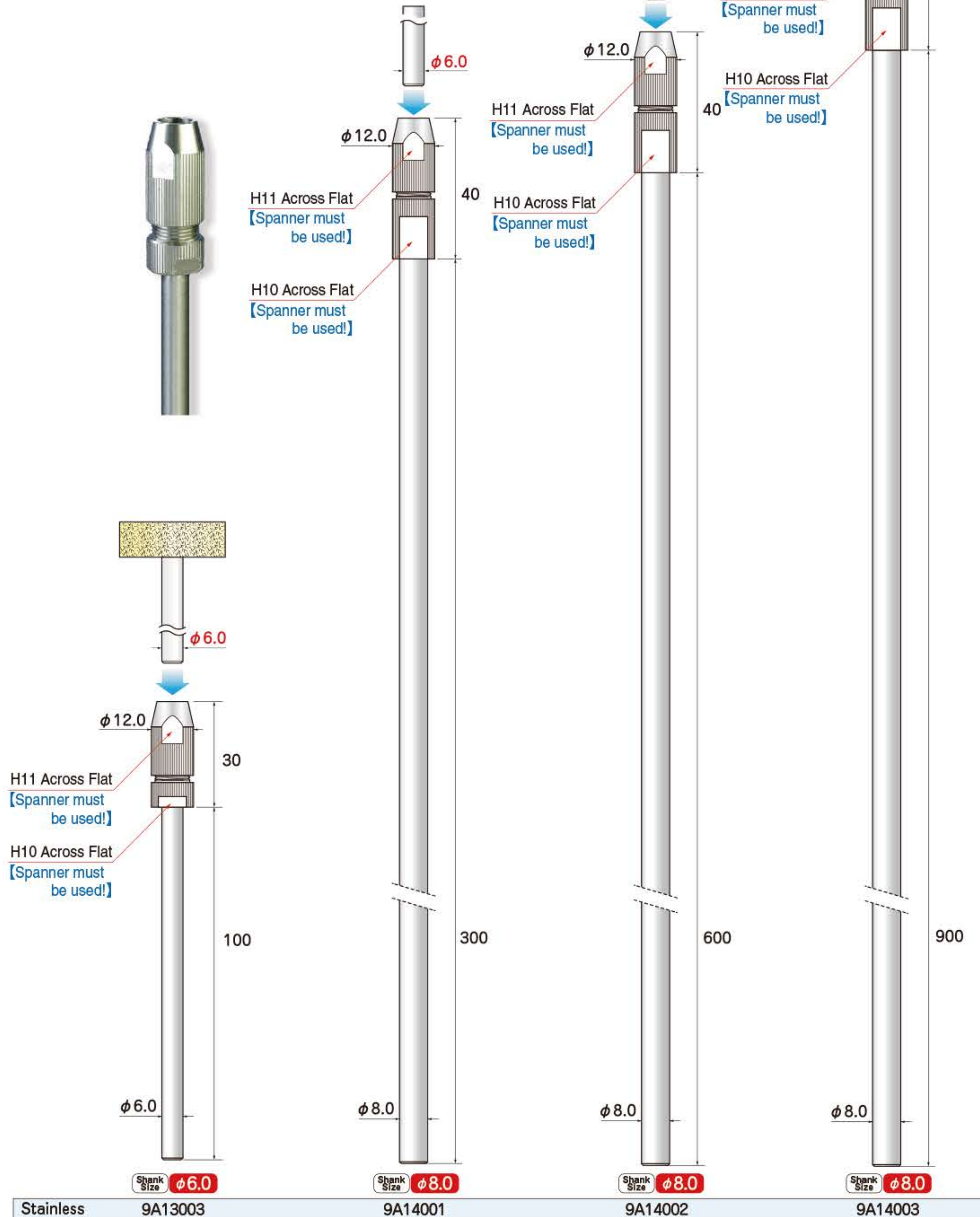
For $\phi 6.0$ mm Shank

1 pc./pack

On installation, tool shaft must be inserted fully to the end of hole of 9A13003·9A14001·9A14002·9A14003 and tightened firmly with spanners.

Shank Adapter (for $\phi 6.0$ mm Shank)

- Specially designed for tools with $\phi 6.0$ mm shank.
- High strength and fit to super deep holes.
- Enables to work in deep holes such as inside of pipes, water jackets without ordering custom made tools.



Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels/Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds/Hand Tools
Special Tools
Tool Sets

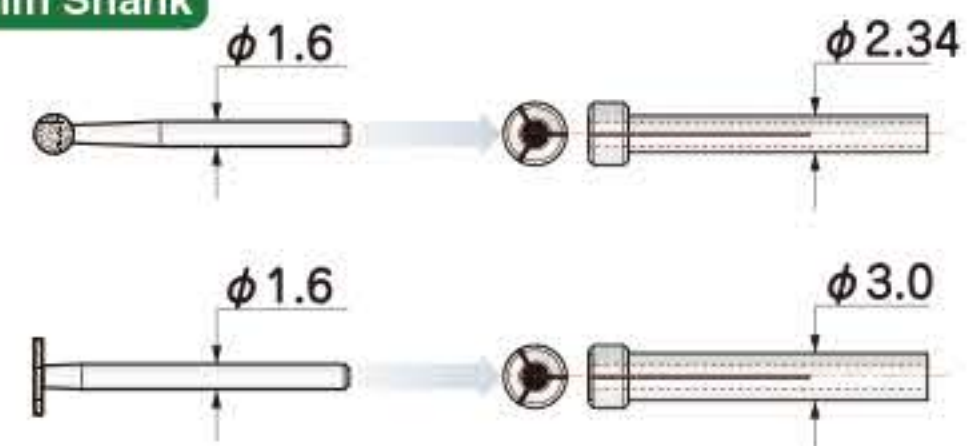
Sleeve Collets

Collet sizes of grinders are generally $\phi 2.34\text{mm}$, $\phi 3.0\text{mm}$, and $\phi 3.175\text{mm}$. Most industrial grinders are equipped with $\phi 3.0$ collet. Tools with $\phi 0.4\sim\phi 2.0\text{mm}$ shanks can be used by quickly installing these sleeve collets to your $\phi 3.0$ collet grinder.

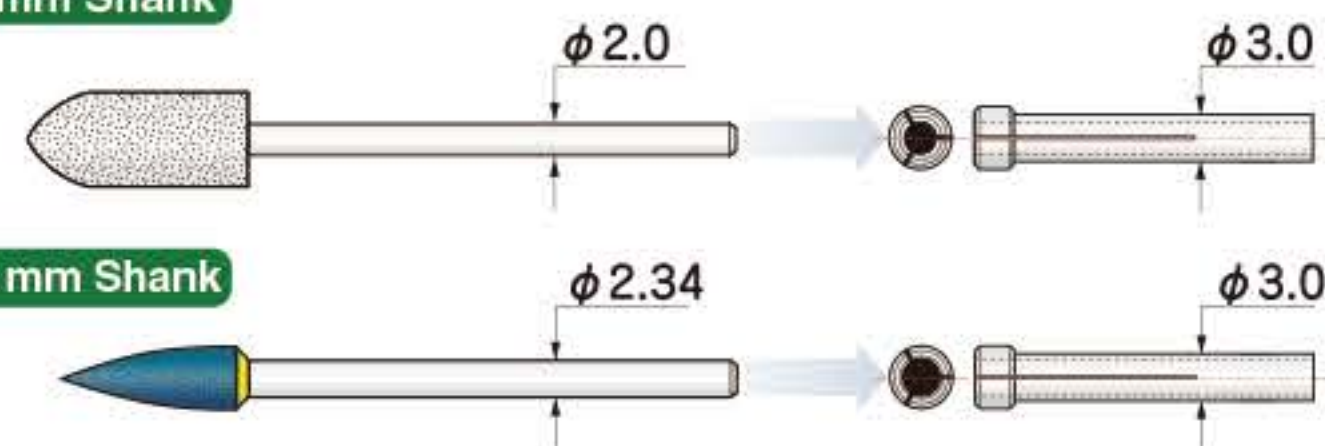
Installation examples

Handy sleeve collets enable thinner shanks to fit $\phi 3.0\text{mm}$ collet without replacing collet.

For $\phi 1.6$ mm Shank



For $\phi 2.0$ mm Shank

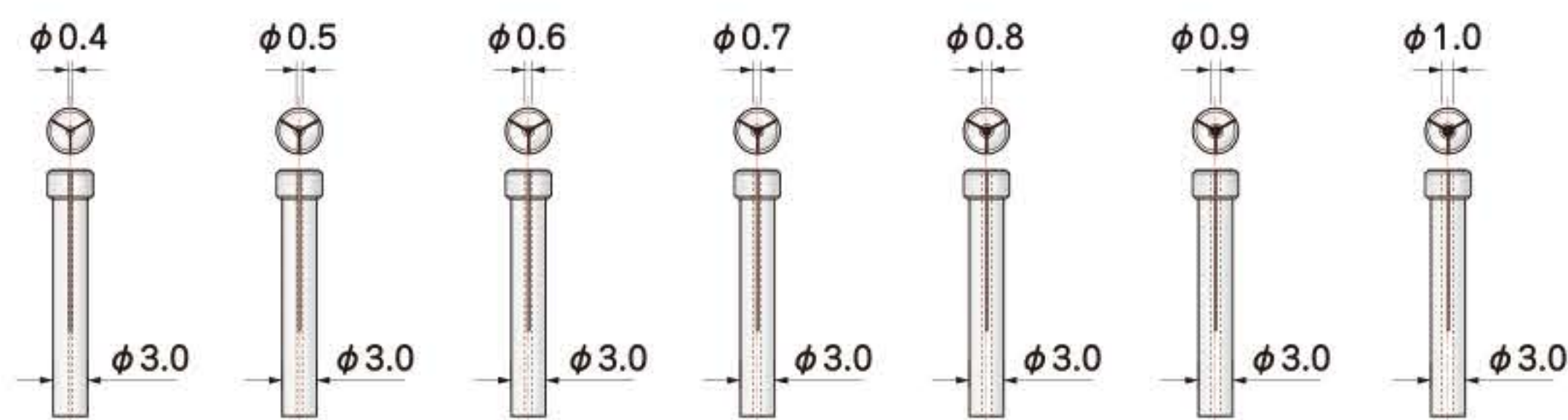


For $\phi 2.34$ mm Shank



Sleeve Collets

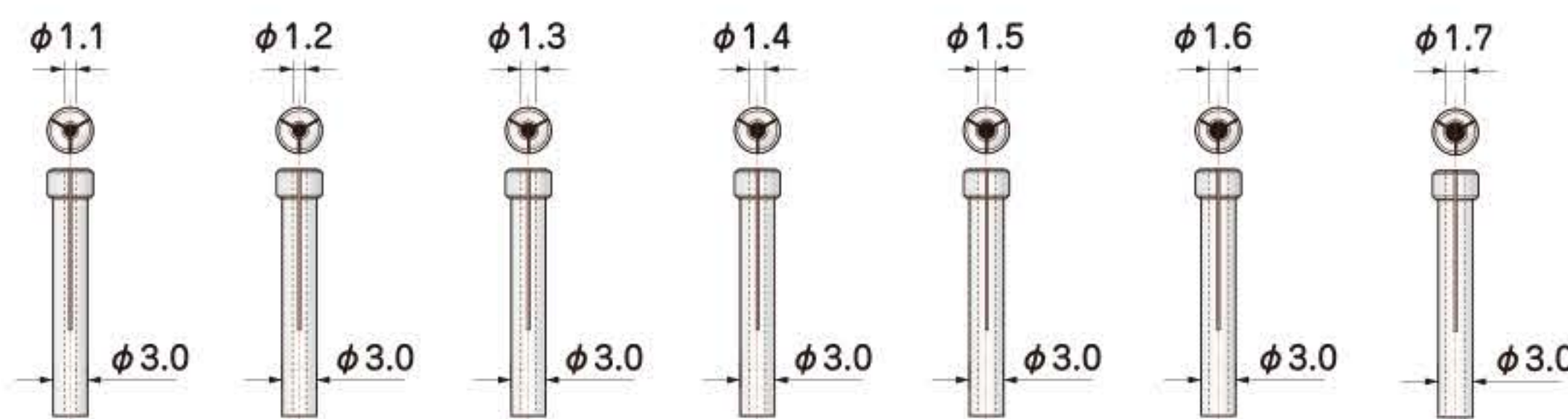
Shank Size $\phi 3.0$
1 pc./pack



Sleeve Collet	9A22001	9A22002	9A22003	9A22004	9A22005	9A22006	9A22007
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Sleeve Collets

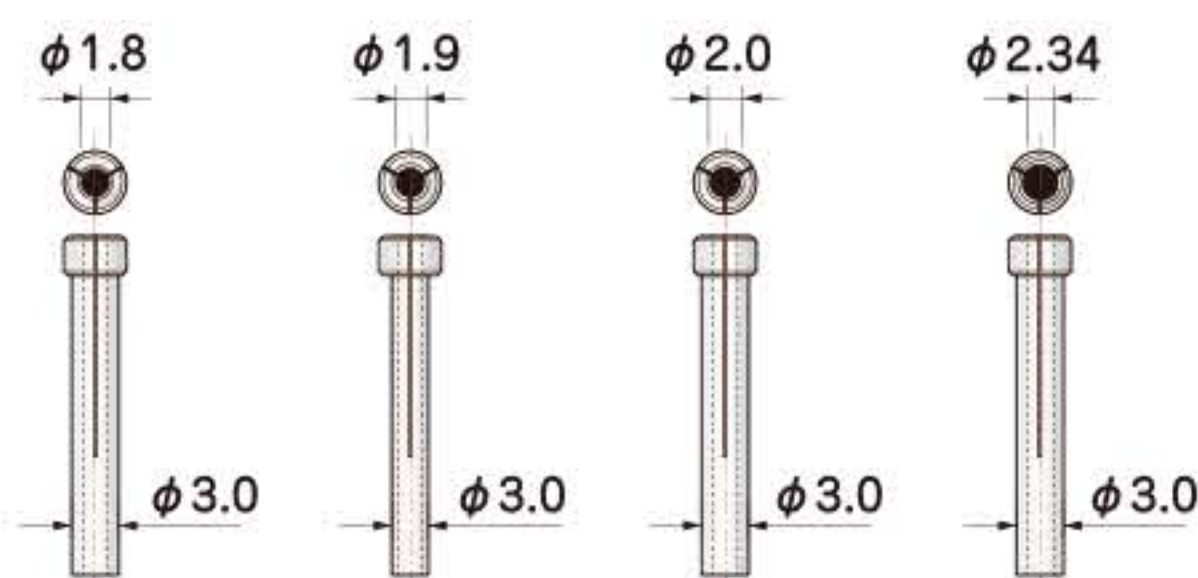
Shank Size $\phi 3.0$
1 pc./pack



Sleeve Collet	9A22008	9A22009	9A22010	9A22011	9A22012	9A22013	9A22014
---------------	---------	---------	---------	---------	---------	---------	---------

Sleeve Collets

Shank Size $\phi 3.0$
1 pc./pack



Sleeve Collet

Shank Size $\phi 2.34$
1 pc./pack



Sleeve Collet	9A22015	9A22016	9A22017	9A22018	9A21001
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Enhancing freedom of creativity of specialists.

E-FORCE®



Grinding Stones

EIKO

Grinding Stones

Feature

For grinding and polishing with handheld grinders etc. Various stones are available to suit materials and purpose of your work. Select the stones to suit the content of your work.

Abrasive Grains

Alumina-Based Principal component is alumina oxide.

WA grain Widely used grinding stone mainly composed of high purity alumina.

(Plain carbon Steel, Alloy Steel, Tool Steel)

A grain Less fracture and more durable comparing with WA stones. (Rough shaping of standard steel materials, unhardened steel, low-carbon steel, cast iron, and low hardness metals.)

PW grain Better cutting ability and durability comparing with WA stones. Suitable for processing dies etc.

(Inconel, Stainless Steel, Tool Steel, Hardened Alloy)

PA grain Grinding stone made of fused alumina with small addition of chromium trioxide. (Alloy Steel, Hardened Tool Steel, Stainless Steel)

SA grain Single crystal Alumina grinding stone. Excellent grinding ability unlikely to get clogged. Suitable for wide range of metal grinding. (Alloy Steel, Tool Steel, Hardened Steel)

Silicon Carbide Based Principal component is silicon carbide (SiC).

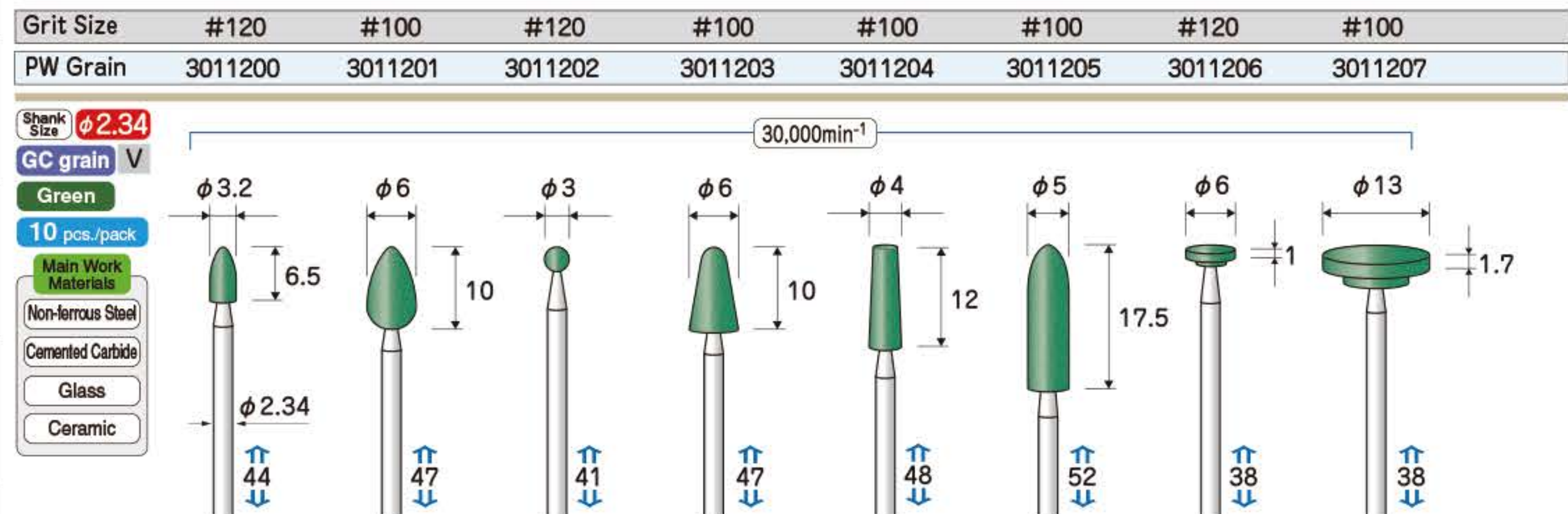
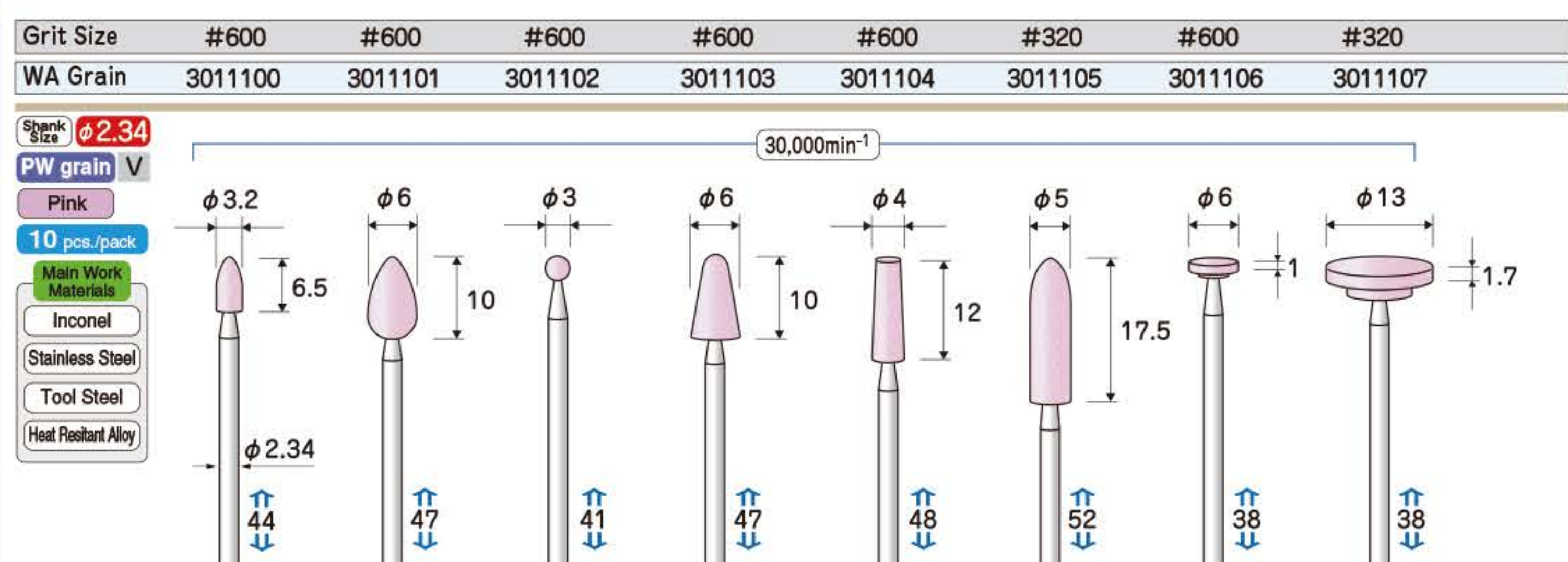
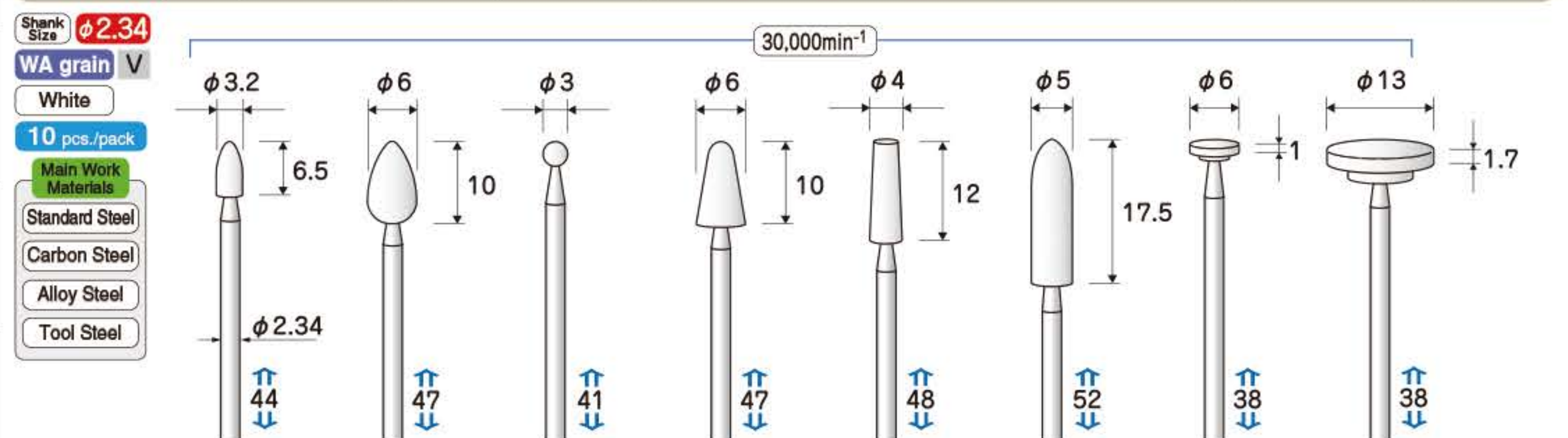
GC grain Green silicon carbide based. The hardest in common grains. Its good frangibility is suitable for hard, less flexible materials. (Cemented Carbide, Glass, Ceramics, Jewel, Chinaware, Stone)

SG grain Consists of ultrafine crystal (sub-micron) ceramic. Its unique frangibility features low heat generation and long life sharpness. (Grinding on Hardened Steel, High Speed Steel, and other hard steels.)

Bonding Agents

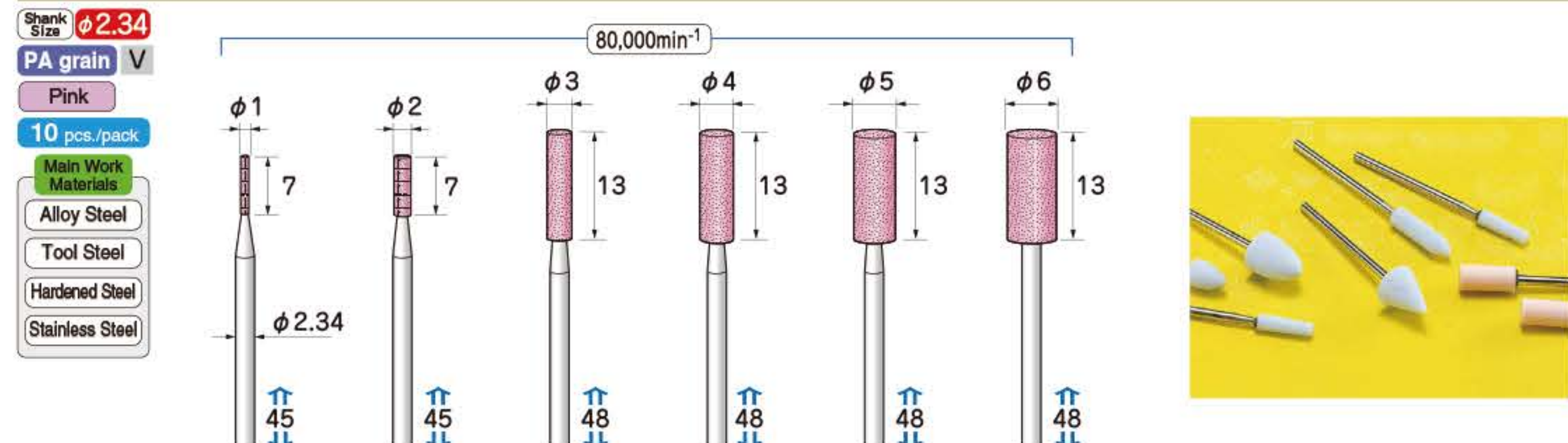
V (Vitrified) Principal component is ceramic raw materials (feldspar, pottery stone, clay etc.) Chemically stable.

B (Resinoid) Phenol resin based. Hard enough to be used in high speed.

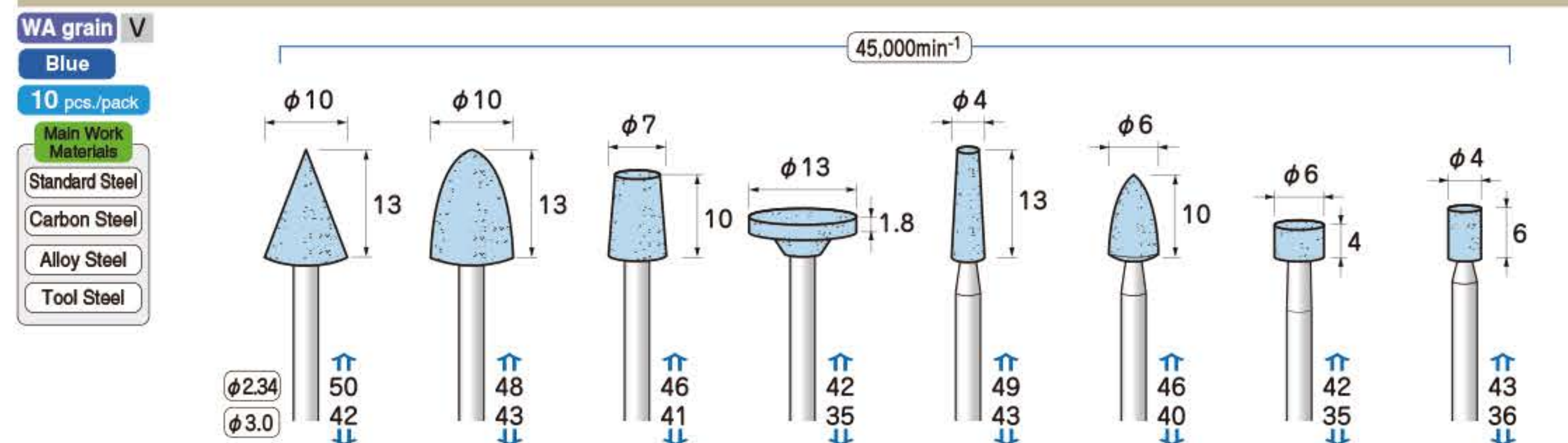


Grinding Stones

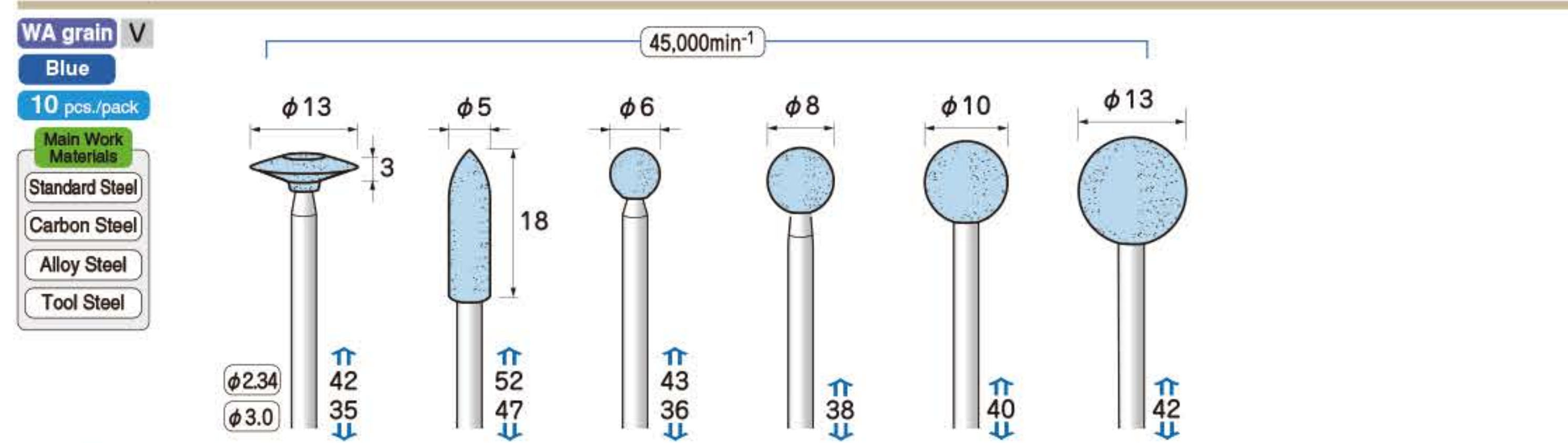
E-FORCE®



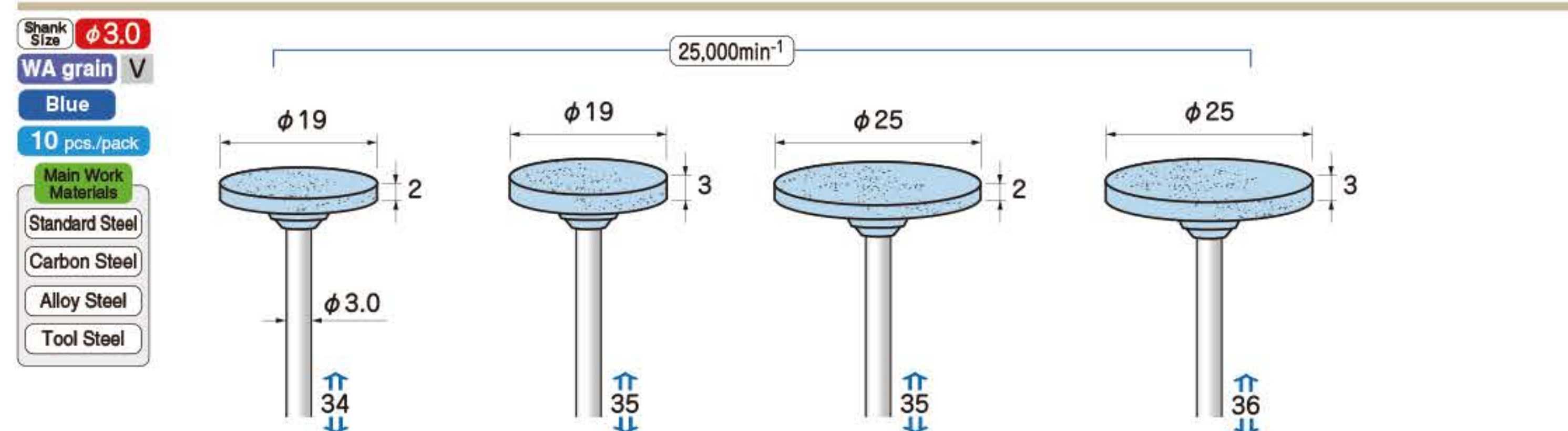
Grit Size	#220	#180	#120	#120	#120	#120
PA Grain	3A11001	3A11002	3A11003	3A11004	3A11005	3A11006



Grit Size	#120	#120	#120	#120	#120	#120	#120	#120
Shank Size $\phi 2.34$ WA Grain	3A11007	3A11008	3A11009	3A11010	3A11011	3A11012	3A11013	3A11014
Shank Size $\phi 3.0$ WA Grain	3A12001	3A12002	3A12003	3A12004	3A12005	3A12006	3A12007	3A12008



Grit Size	#120	#120	#120	#120	#120	#120
Shank Size $\phi 2.34$ WA Grain	3A11015	3A11016	3A11017	-	-	-
Shank Size $\phi 3.0$ WA Grain	3A12009	3A12010	3A12011	3A12012	3A12013	3A12014



Grit Size	#120	#120	#120	#120
WA Grain	3A12015	3A12016	3A12017	3A12018

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Grinding Stones

EIKO

Shank Size $\phi 3.0$
 WA grain V
 Reddish Brown
 10 pcs./pack
 Main Work Materials: Standard Steel, Carbon Steel, Alloy Steel

Grit Size	#320	#320	#120	#80	#80	#80	#80
WA Grain	3012100	3012101	3012102	3012103	3012104	3012105	3012106

Shank Size $\phi 3.0$
 WA grain V
 Reddish Brown
 10 pcs./pack
 Main Work Materials: Standard Steel, Carbon Steel, Alloy Steel

Grit Size	#60	#60	#60	#60	#60	#60	#60
WA Grain	3012107	3012108	3012109	3012110	3012111	3012112	3012113

Shank Size $\phi 3.0$
 WA grain V
 Reddish Brown
 10 pcs./pack
 Main Work Materials: Standard Steel, Carbon Steel, Alloy Steel

Grit Size	#80	#60	#60	#120	#80	#80	#60
WA Grain	3012114	3012115	3012116	3012117	3012118	3012119	3012120

Shank Size $\phi 3.0$
 WA grain V
 Reddish Brown
 10 pcs./pack
 Main Work Materials: Standard Steel, Carbon Steel, Alloy Steel

Grit Size	#60	#60	#60
WA Grain	3012121	3012122	3012123

Grinding Stones

E-FORCE®

Shank Size $\phi 3.0$
 PW grain V
 Pink
 10 pcs./pack
 Main Work Materials: Inconel, Stainless Steel, Tool Steel, Heat Resistant Alloy

Grit Size	#320	#320	#220	#120	#120	#120	#120
PW Grain	3012200	3012201	3012202	3012203	3012204	3012205	3012206

Shank Size $\phi 3.0$
 PW grain V
 Pink
 10 pcs./pack
 Main Work Materials: Inconel, Stainless Steel, Tool Steel, Heat Resistant Alloy

Grit Size	#120	#120	#120	#120	#120	#80	#80
PW Grain	3012207	3012208	3012209	3012210	3012211	3012212	3012213

Shank Size $\phi 3.0$
 PW grain V
 Pink
 10 pcs./pack
 Main Work Materials: Inconel, Stainless Steel, Tool Steel, Heat Resistant Alloy

Grit Size	#80	#80	#100	#120	#120	#120	#80
PW Grain	3012214	3012215	3012216	3012217	3012218	3012219	3012220

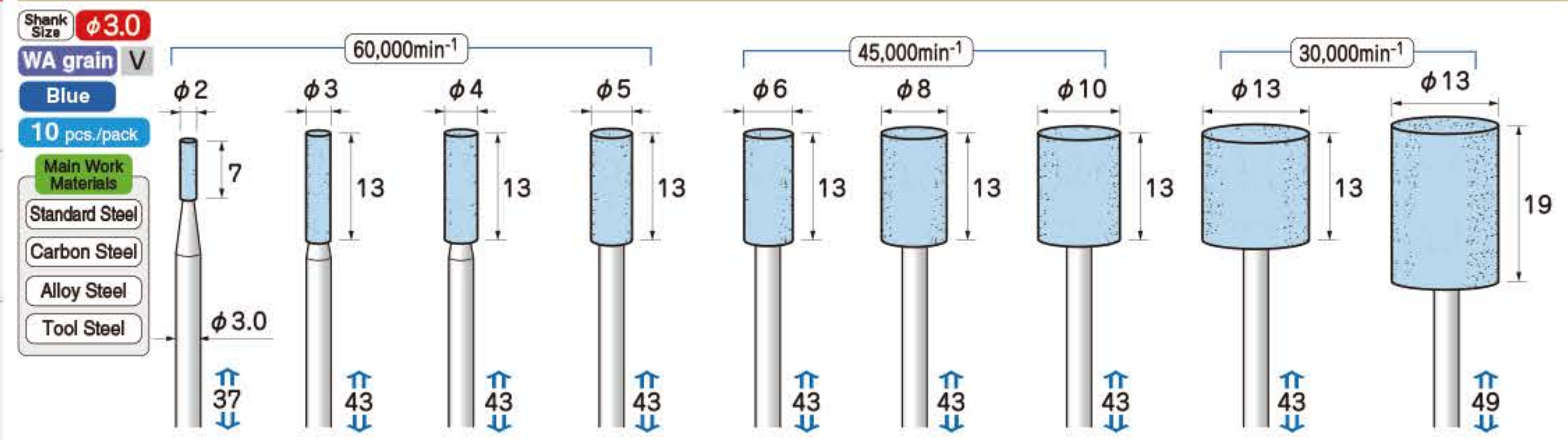
Shank Size $\phi 3.0$
 PW grain V
 Pink
 10 pcs./pack
 Main Work Materials: Inconel, Stainless Steel, Tool Steel, Heat Resistant Alloy

Grit Size	#80	#80	#80
PW Grain	3012221	3012222	3012223

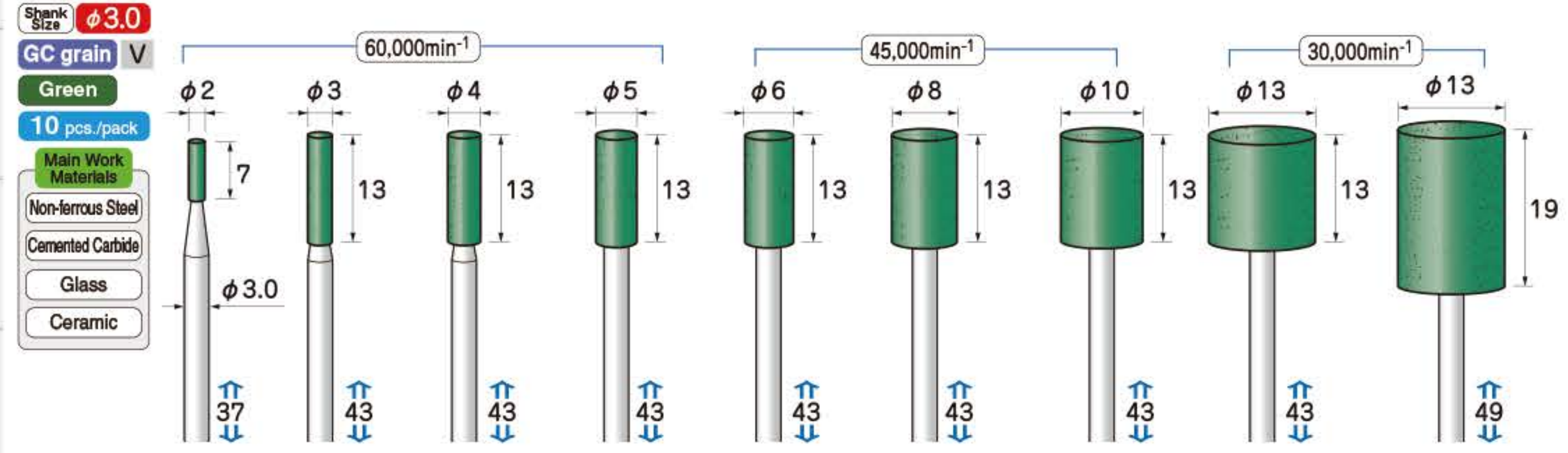
Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Grinding Stones

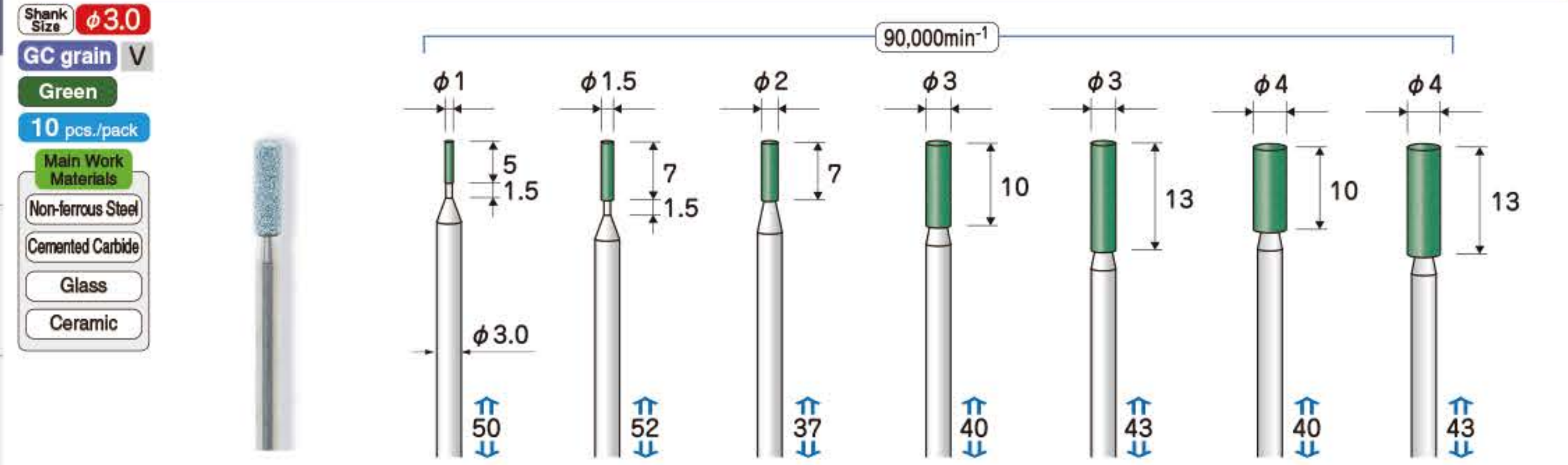
EIKO



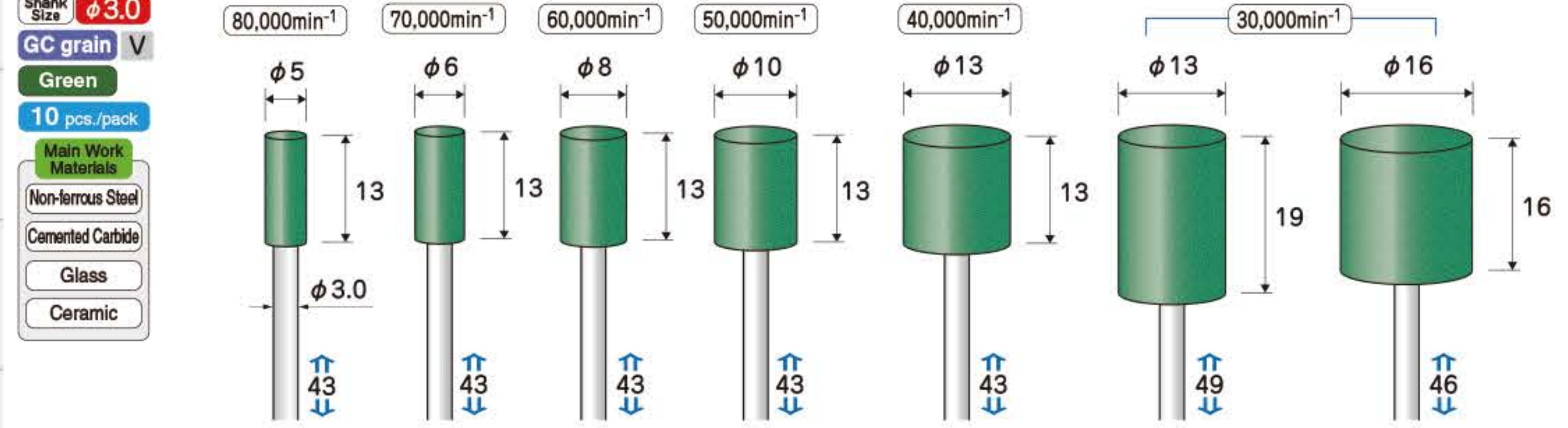
Grit Size	#180	#100	#100	#100	#100	#100	#100	#100	#100
WA Grain	3A12019	3A12020	3A12021	3A12022	3A12023	3A12024	3A12025	3A12026	3A12027



Grit Size	#180	#100	#100	#100	#100	#100	#100	#100	#100
GC Grain	3A12028	3A12029	3A12030	3A12031	3A12032	3A12033	3A12034	3A12035	3A12036



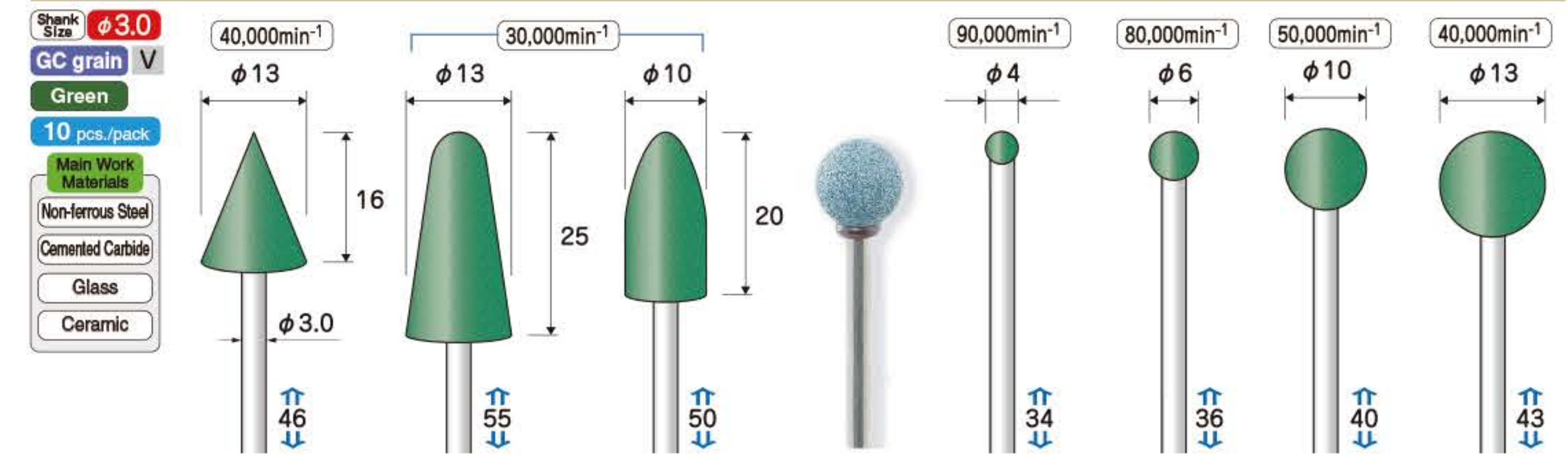
Grit Size	#320	#320	#150	#120	#120	#120	#120
GC Grain	3012300	3012301	3012302	3012303	3012304	3012305	3012306



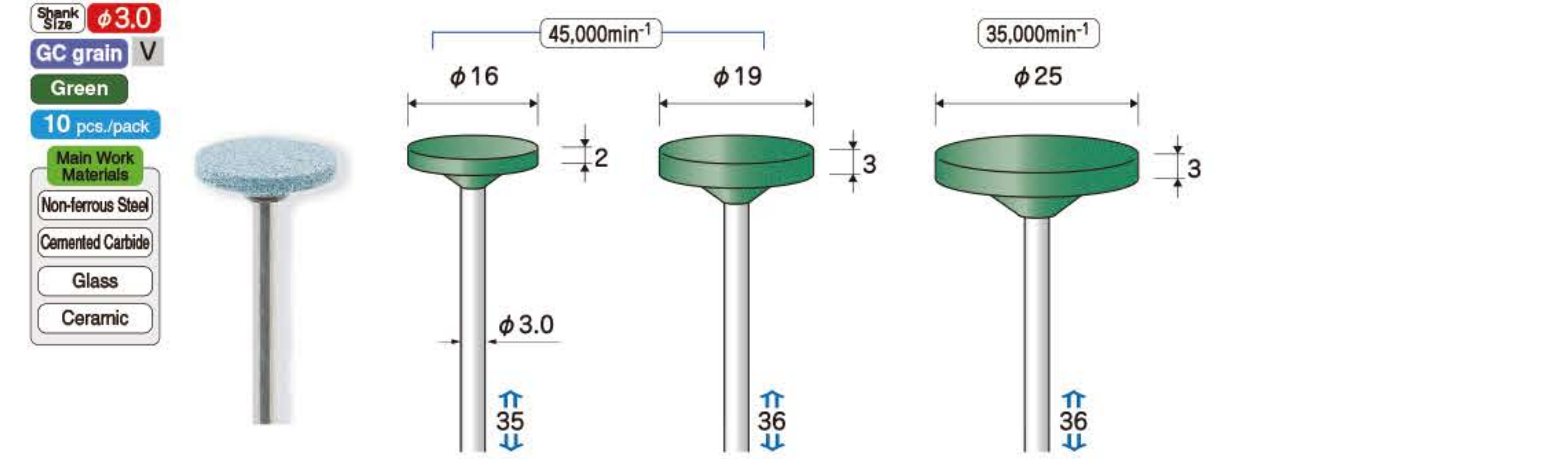
Grit Size	#120	#120	#120	#120	#120	#120	#120
GC Grain	3012307	3012308	3012309	3012310	3012311	3012312	3012313

Grinding Stones

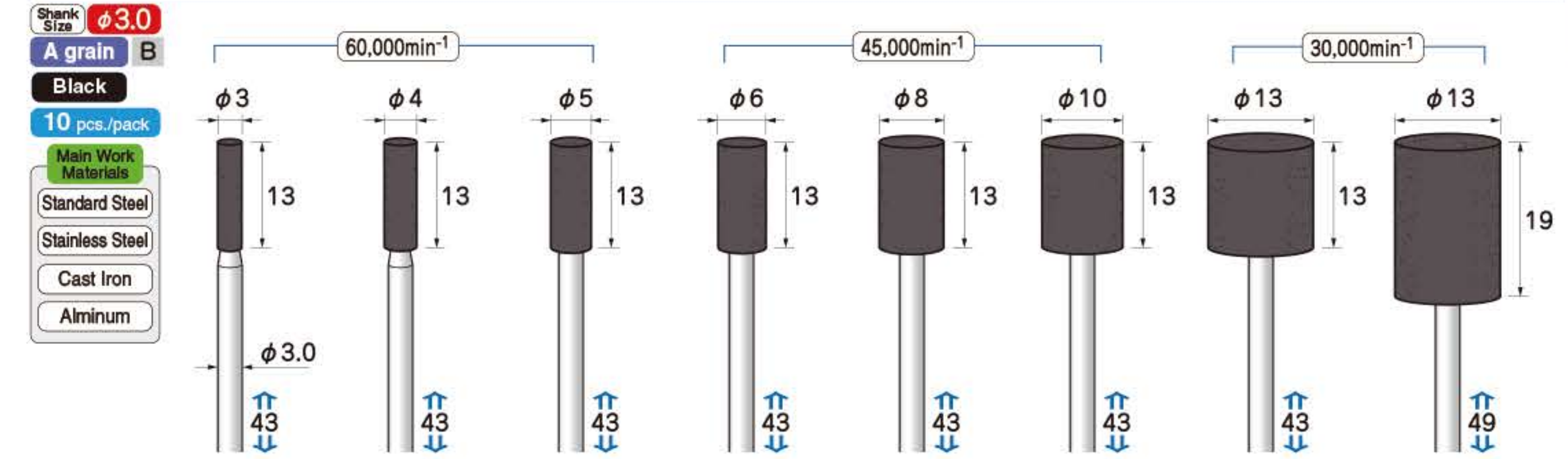
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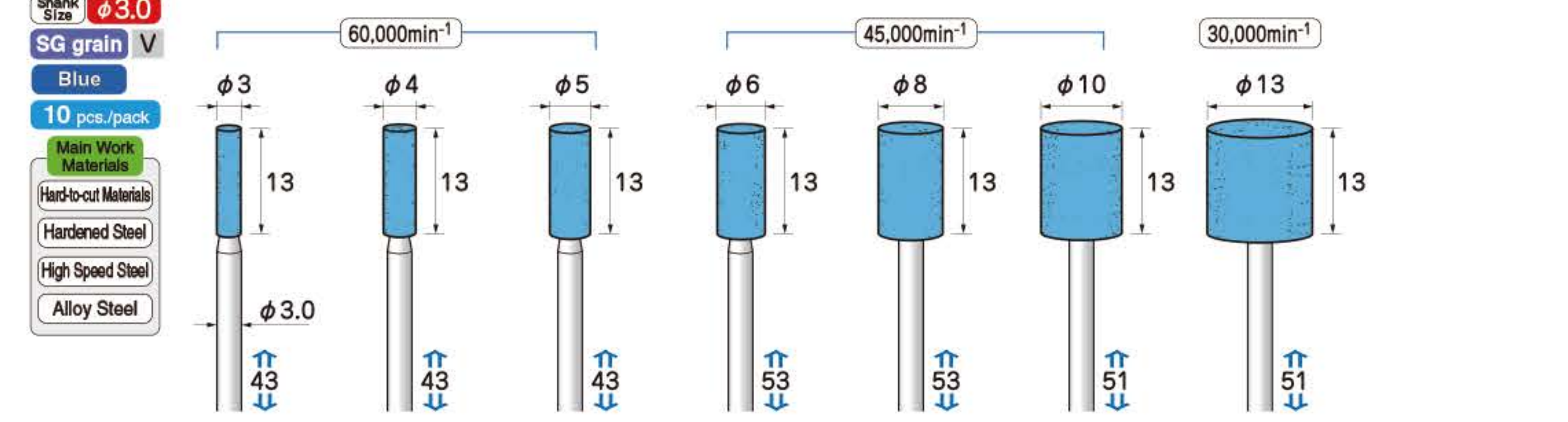
Grit Size	#120	#120	#100	#120	#100	#100	#100
GC Grain	3012314	3012315	3012316	3012317	3012318	3012319	3012320



Grit Size	#120	#120	#120
GC Grain	3012321	3012322	3012323



Grit Size	#60	#60	#60	#60	#46	#46	#46	#46
A Grain	3A12037	3A12038	3A12039	3A12040	3A12041	3A12042	3A12043	3A12044



Grit Size	#120	#120	#120	#120	#120	#120	#120
SG Grain	3A12045	3A12046	3A12047	3A12048	3A12049	3A12050	3A12051

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Grinding Stones

EIKO

Shank Size $\phi 3.0$
PA grain V
Pink
10 pcs./pack
Main Work Materials: Alloy Steel, Tool Steel, Hardened Steel, Stainless Steel

60,000min⁻¹

Grit Size	#220	#220	#180	#100	#100	#100
PA Grain	3A12052	3A12053	3A12054	3A12055	3A12056	3A12057

Shank Size $\phi 3.0$
PA grain V
Pink
10 pcs./pack
Main Work Materials: Alloy Steel, Tool Steel, Hardened Steel, Stainless Steel

45,000min⁻¹ 30,000min⁻¹

Grit Size	#100	#100	#100	#100
PA Grain	3A12058	3A12059	3A12060	3A12061

Shank Size $\phi 3.0$
SA grain V
Pink
10 pcs./pack
Main Work Materials: Alloy Steel, Tool Steel, Hardened Steel

60,000min⁻¹

Grit Size	#220	#220	#180	#100	#100	#100
SA Grain	3A12062	3A12063	3A12064	3A12065	3A12066	3A12067

Shank Size $\phi 3.0$
SA grain V
Pink
10 pcs./pack
Main Work Materials: Alloy Steel, Tool Steel, Hardened Steel

45,000min⁻¹ 30,000min⁻¹

Grit Size	#100	#100	#100	#100
SA Grain	3A12068	3A12069	3A12070	3A12071

Grinding Stones

E-FORCE®

Shank Size $\phi 3.0$
WA grain V
Yellow
10 pcs./pack
Main Work Materials: Standard Steel, Carbon Steel, Alloy Steel, Tool Steel

WARNING
•Set overhang to 55 mm or less in use.
•Check for wobbling and other safety before use. Use within the maximum operation speed of indicated value.

10,000min⁻¹ 6,000min⁻¹ 5,000min⁻¹ 4,500min⁻¹

What is the Self Dressing/ Self Sharpening action?
Cutting edges of abrasive grains become blunt gradually as it wears off. As a result, the resistance against the cutting edge increases to make abrasive grains fracture or fall off. Subsequently to the fallen off grains, sharp edges are formed on the fractured grains, or new grains emerge to surface, which create new sharp cutting edges. Thus, spontaneous substitution of worn-out edge with new sharp edge is called self dressing or self sharpening.

Grit Size	#120	#120	#120	#120
WA Grain	3A12072	3A12073	3A12074	3A12075

Shank Size $\phi 3.0$
WA grain V
White
10 pcs./pack
Main Work Materials: Standard Steel, Carbon Steel, Alloy Steel, Tool Steel

•Grinding stones made of hard baked, high purity white alumina.
•An efficient and long lasting tool with straight long grind stone, suitable for grinding on turbine blades of aircraft etc.
•Sphere grinding stones with 80mm long shank are handy for deburring inside deep cross holes.

35,000min⁻¹ 30,000min⁻¹ 25,000min⁻¹ 22,000min⁻¹ 20,000min⁻¹ 10,000min⁻¹ 8,000min⁻¹ 7,000min⁻¹ 6,000min⁻¹

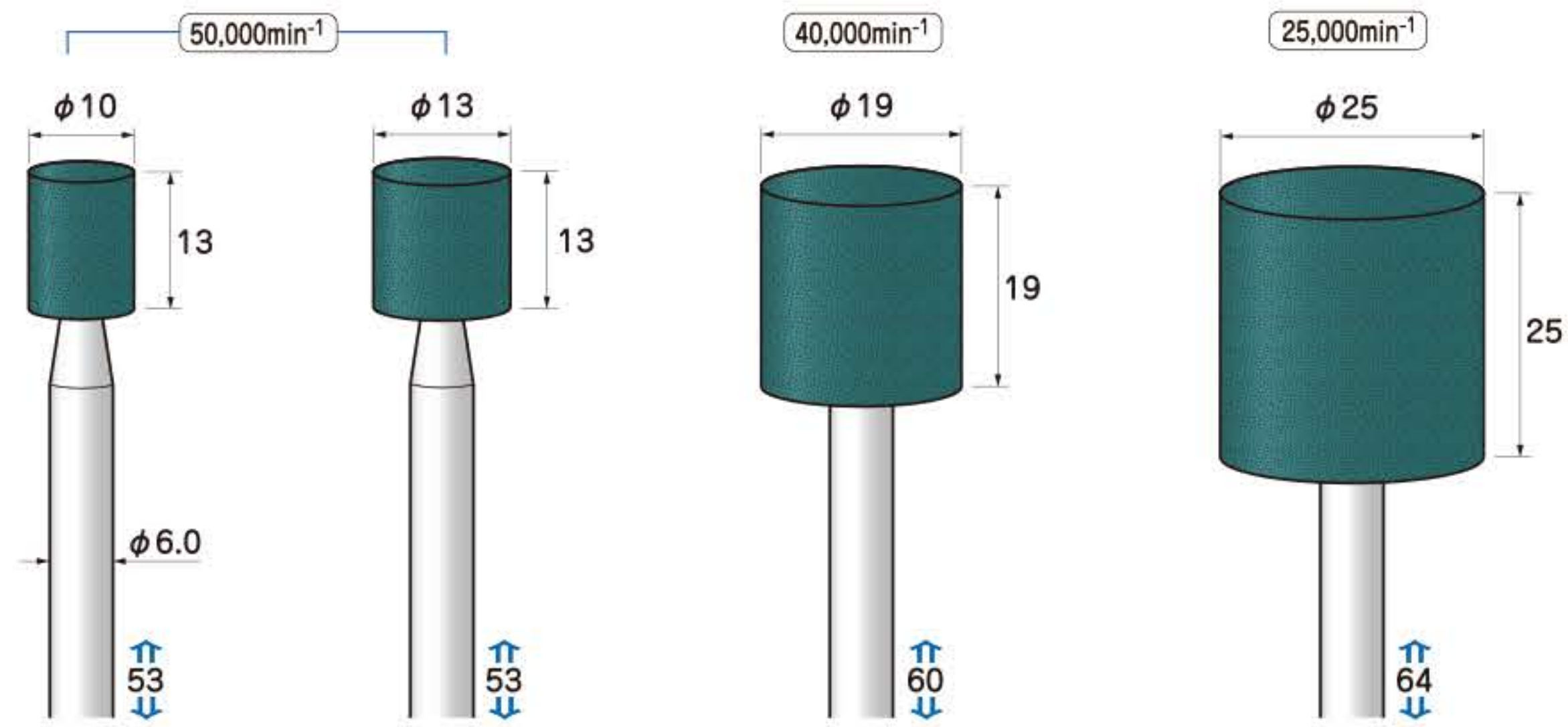
Grit Size	#100	#100	#100	#100	#100	#100	#100	#100	#100
WA Grain	3A12076	3A12077	3A12078	3A12079	3A12080	3A12081	3A12082	3A12083	3A12084

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Grinding Stones

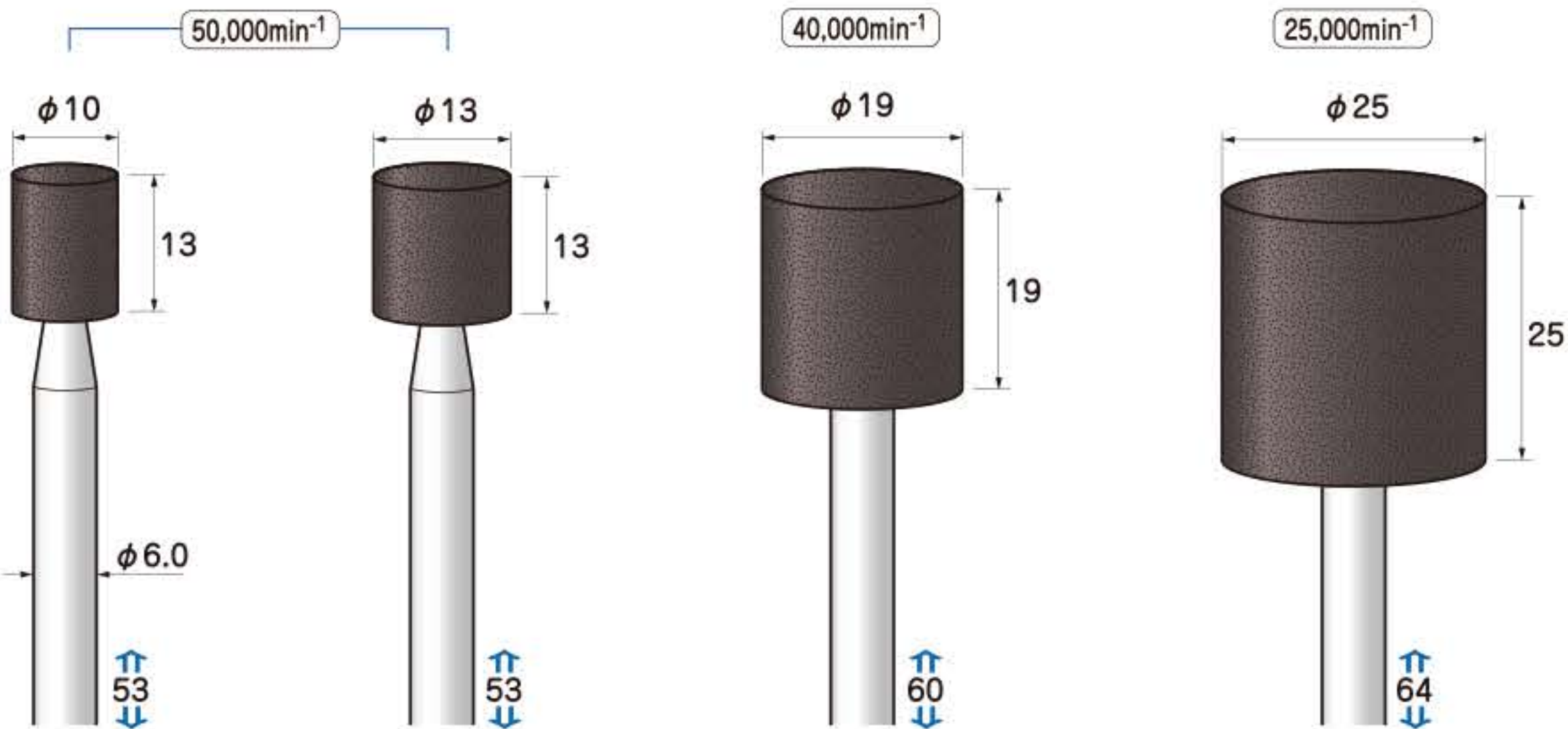
EIKO

- Shank Size $\phi 6.0$
- GC grain
- Green
- 10 pcs./pack
- Main Work Materials:
 - Non-ferrous Steel
 - Cemented Carbide
 - Glass
 - Ceramic



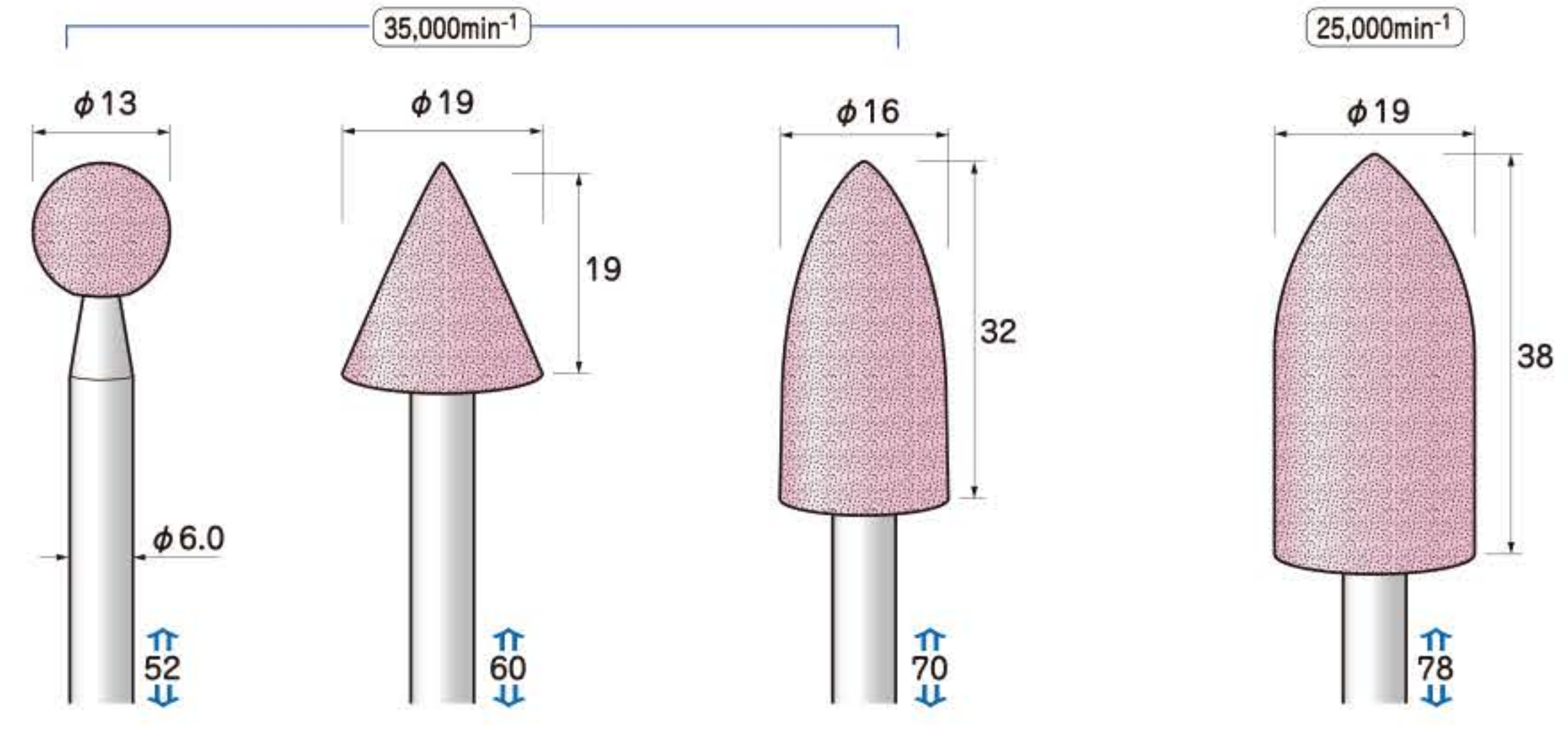
Grit Size	#60	#60	#60	#60
GC Grain	3A13001	3A13002	3A13003	3A13004

- Shank Size $\phi 6.0$
- A grain B
- Black
- 10 pcs./pack
- Main Work Materials:
 - Standard Steel
 - Stainless Steel
 - Cast Iron
 - Aluminum



Grit Size	#46	#46	#46	#46
A Grain	3A13005	3A13006	3A13007	3A13008

- Shank Size $\phi 6.0$
- PA grain V
- Pink
- 10 pcs./pack
- Main Work Materials:
 - Alloy Steel
 - Tool Steel
 - Hardened Steel
 - Stainless Steel

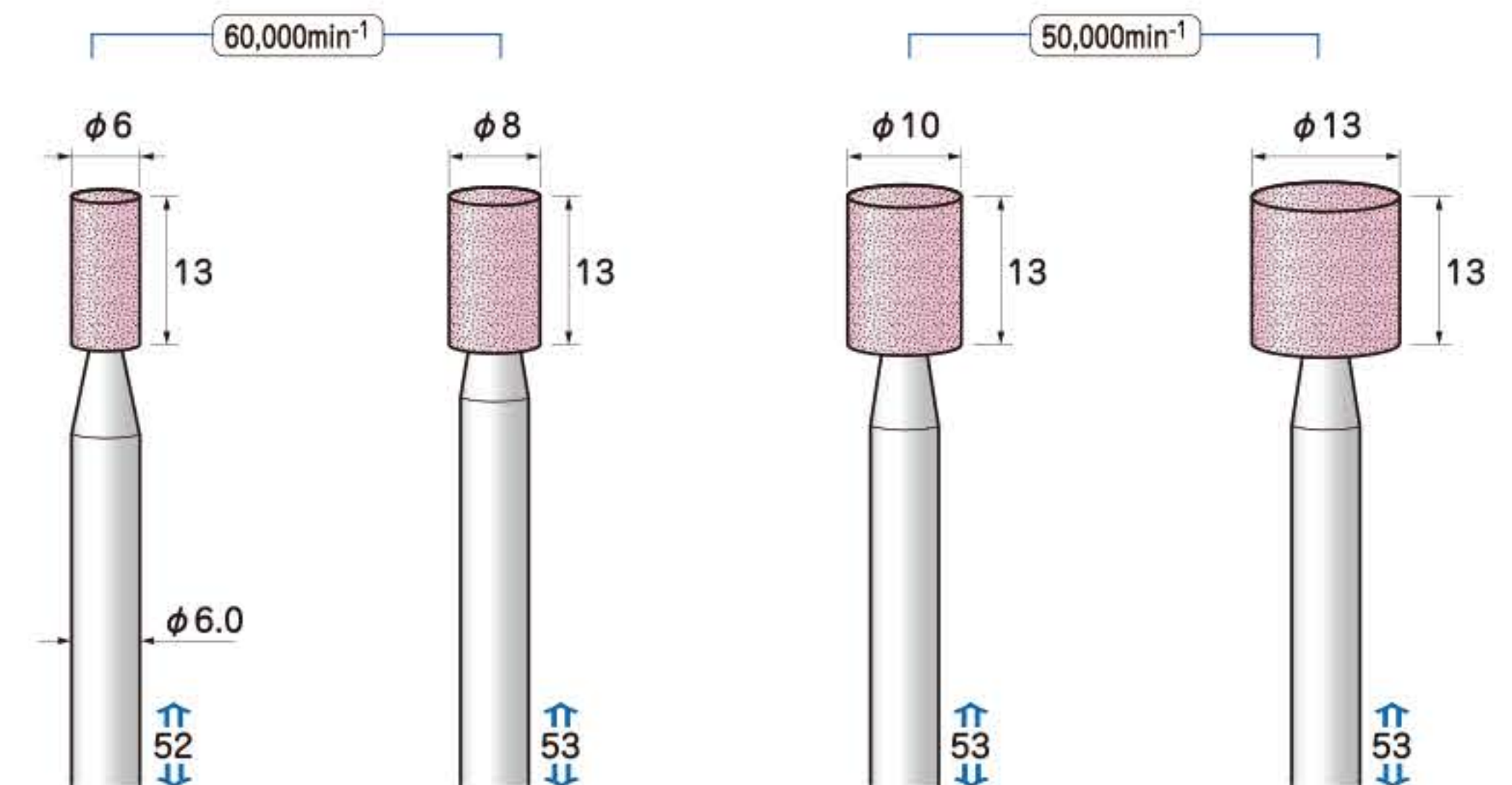


Grit Size	#60	#60	#60	#60
PA Grain	3A13009	3A13010	3A13011	3A13012

Grinding Stones

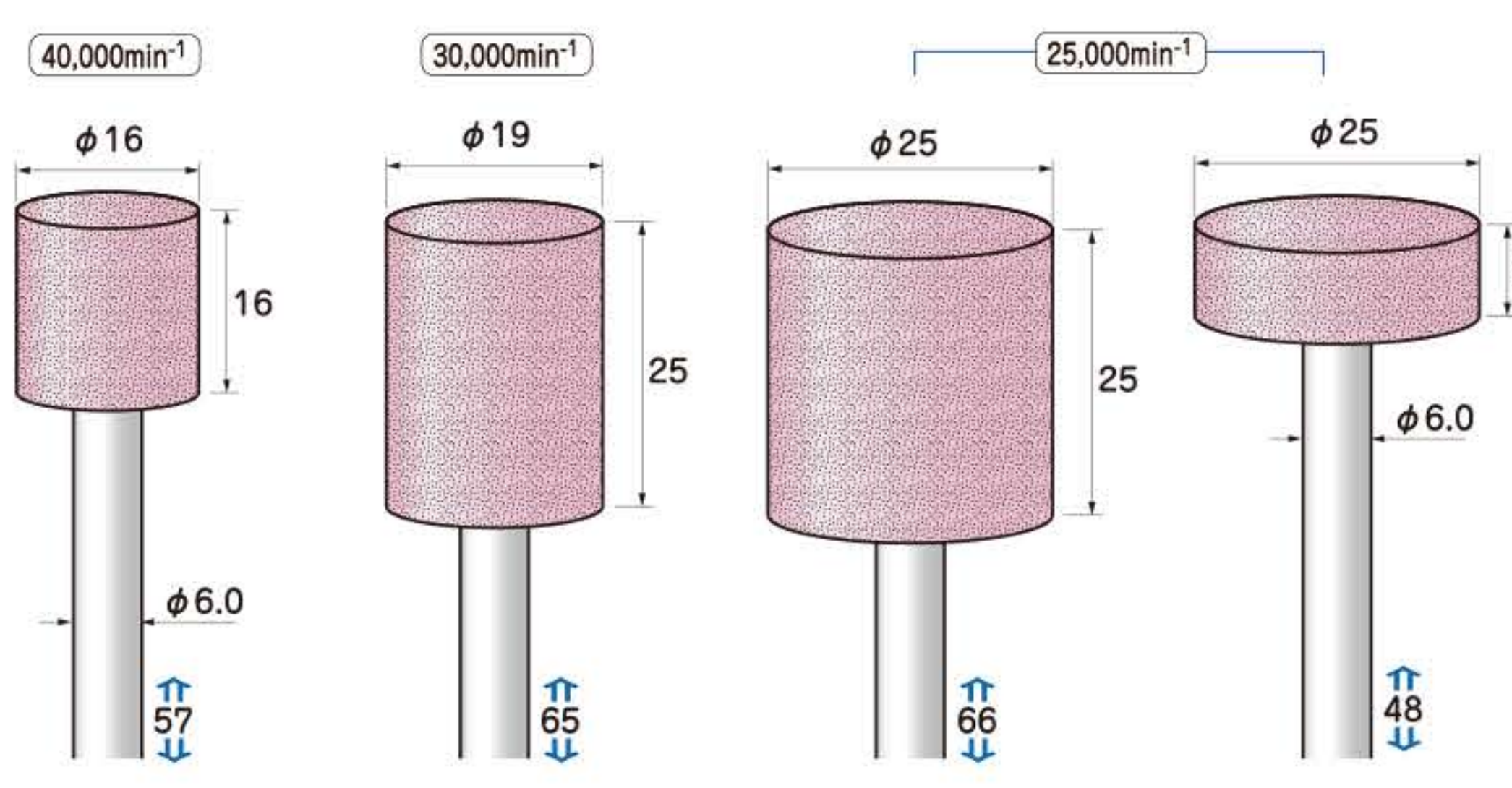
E-FORCE®

- Shank Size $\phi 6.0$
- PA grain V
- Pink
- 10 pcs./pack
- Main Work Materials:
 - Alloy Steel
 - Tool Steel
 - Hardened Steel
 - Stainless Steel



Grit Size	#60	#60	#60	#60
PA Grain	3A13013	3A13014	3A13015	3A13016

- Shank Size $\phi 6.0$
- PA grain V
- Pink
- 10 pcs./pack
- Main Work Materials:
 - Alloy Steel
 - Tool Steel
 - Hardened Steel
 - Stainless Steel



Grit Size	#60	#60	#60	#60
PA Grain	3A13017	3A13018	3A13019	3A13020



Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Grinding Stone Wheels

EIKO

White Grinding Stone Wheels

• Suitable for standard steel materials, alloy steel, tool steel, stainless steel.



White Grinding Stone Wheels

M1.7 Fixing Screw Type

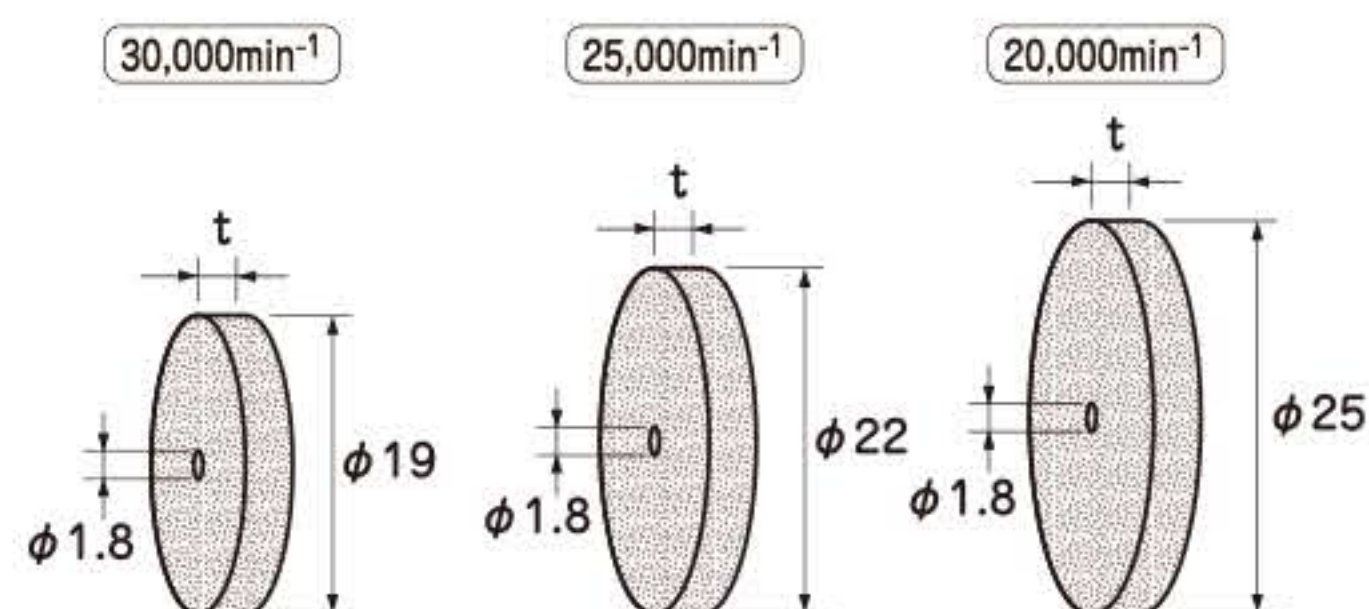
WA grain V

White

10 pcs./pack

Main Work Materials

- Standard Steel
- Carbon Steel
- Alloy Steel
- Tool Steel



Grit Size	#120	#120	#120
t = 1.5 mm	3A21001	3A21003	3A21005
t = 3.0 mm	3A21002	3A21004	3A21006

Green Grinding Stone Wheels

• Suitable for non-ferrous metals such as cemented carbide, ceramics, glass etc.



Cutting Stone Discs (Diamond, WA, GC) are mini discs of which diameter are less than 50mm. Note that the cutting ability is relatively weak compared with large cutting stone discs, and the tool can be damaged easily with overload as disc is too thin to insert reinforcing materials. Recommended sizes of work materials are plates of 0.3 mm or less, round bars of $\phi 1.0$ mm or less. Install to the special mandrel (M1.7 type) only, and use in clockwise rotation.

Use with M1.7 type Mandrels. (See page 53.)

Green Grinding Stone Wheels

M1.7 Fixing Screw Type

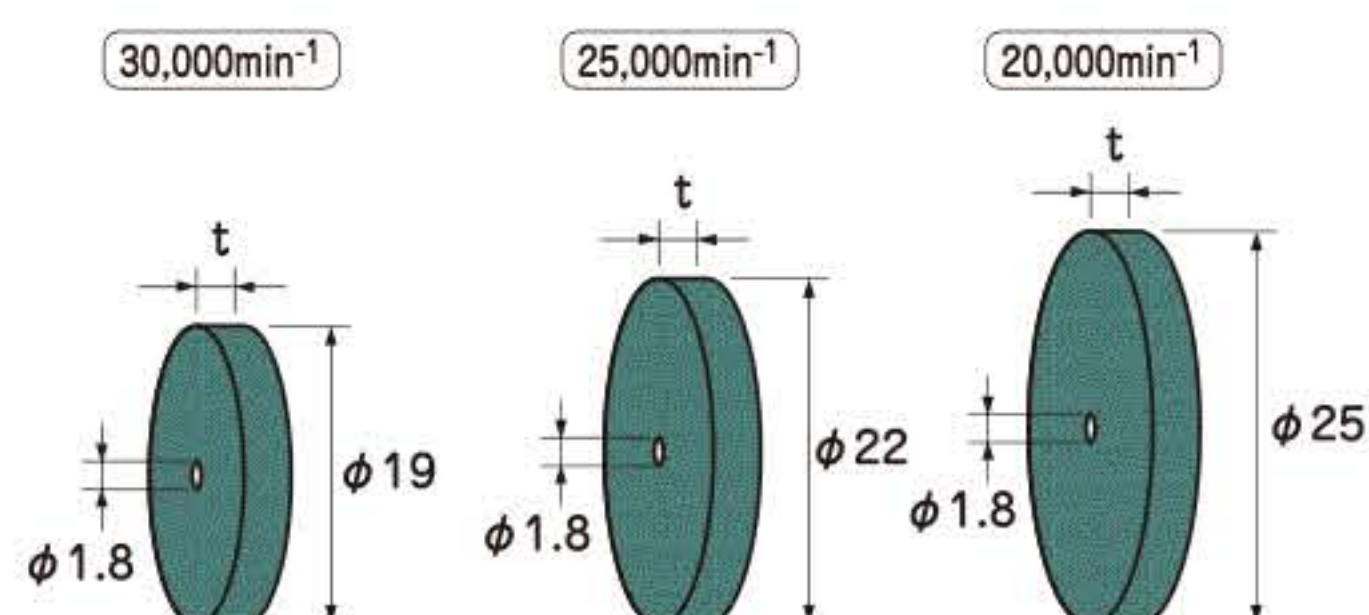
GC grain V

Green

10 pcs./pack

Main Work Materials

- Non-ferrous Steel
- Cemented Carbide
- Glass
- Ceramic



Grit Size	#120	#120	#120
t = 1.5 mm	3A21007	3A21009	3A21011
t = 3.0 mm	3A21008	3A21010	3A21012

Resinoid Bonded Diamond Discs

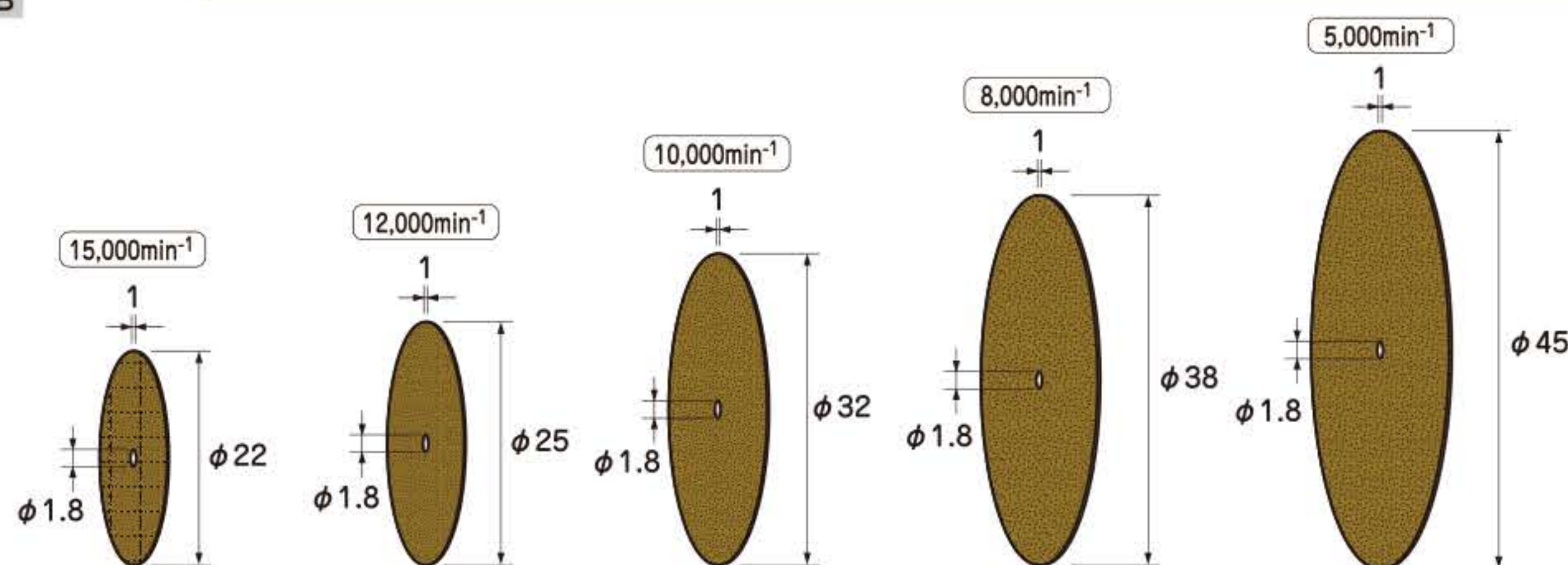
M1.7 Fixing Screw Type

Diamond grain B

1 pc./pack

Resinoid Bonded Diamond Discs

• Discs with sintered diamond grains with resinoid bond. Suitable for cutting and grooving relatively hard materials.



Grit Size	#120	#120	#120	#120	#120
t = 1.0 mm	3A21013	3A21014	3A21015	3A21016	3A21017

Grinding Stone Wheels

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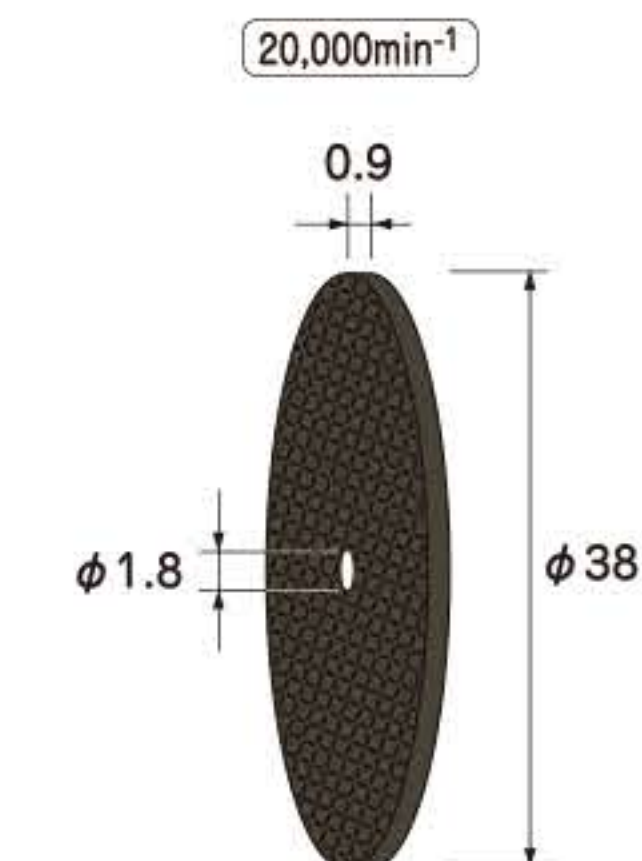
Resinoid Bonded Glass Fiber Disc

Feature • Disc contains glass fiber for cutting metals and plastics.
• Application: cutting iron, aluminum, brass, FRP.

Resinoid Bonded Glass Fiber Disc

M1.7 Fixing Screw Type

5 pcs./pack



Use with M1.7 type Mandrels. (See page 53.)

Resinoid Bonded Glass Fiber Disc

3A21018

Cutting Stone Discs

Feature • Discs with sintered WA/GC grain with resinoid bond. An economical alternative to electroplated diamond disc for cutting or grooving general steel materials. Features long last sharpness by self dressing action.

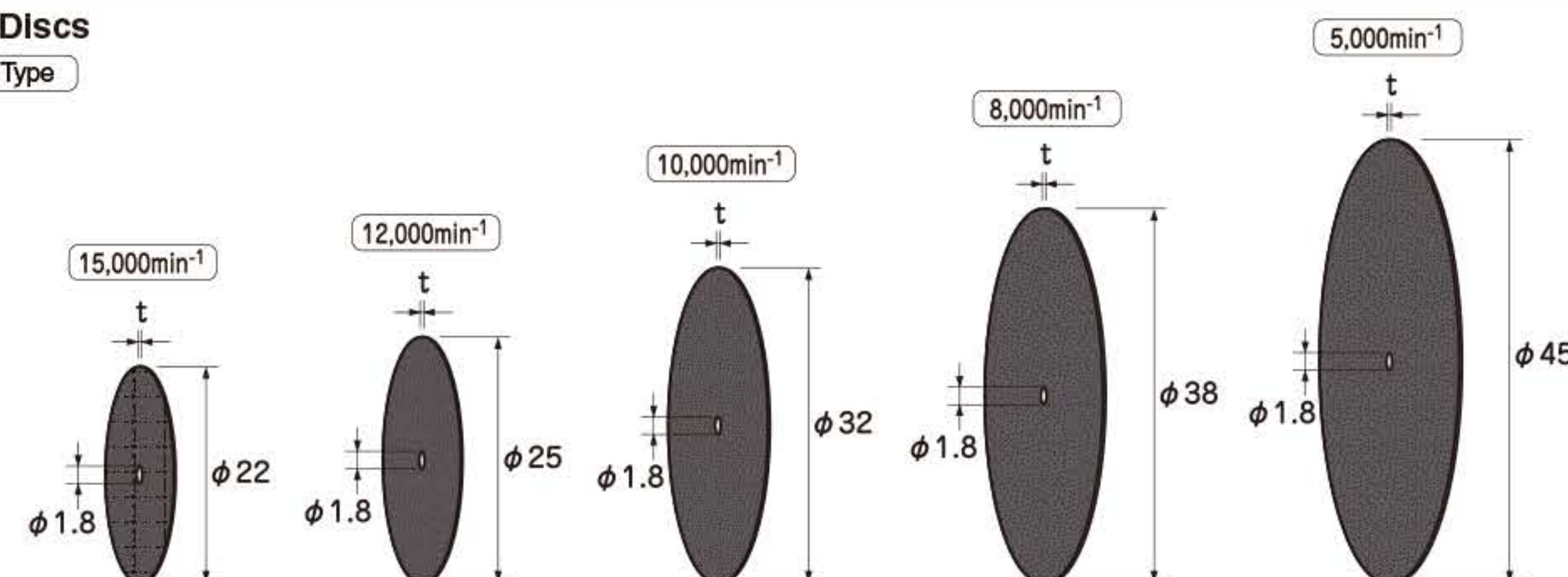
WARNING Note that the Cutting Stone Discs (diamond, WA, GC) are not configured with reinforcing materials, and they may be damaged easily by overloading or prying during work.

Cutting Stone Discs

M1.7 Fixing Screw Type

WA grain B

5 pcs./pack



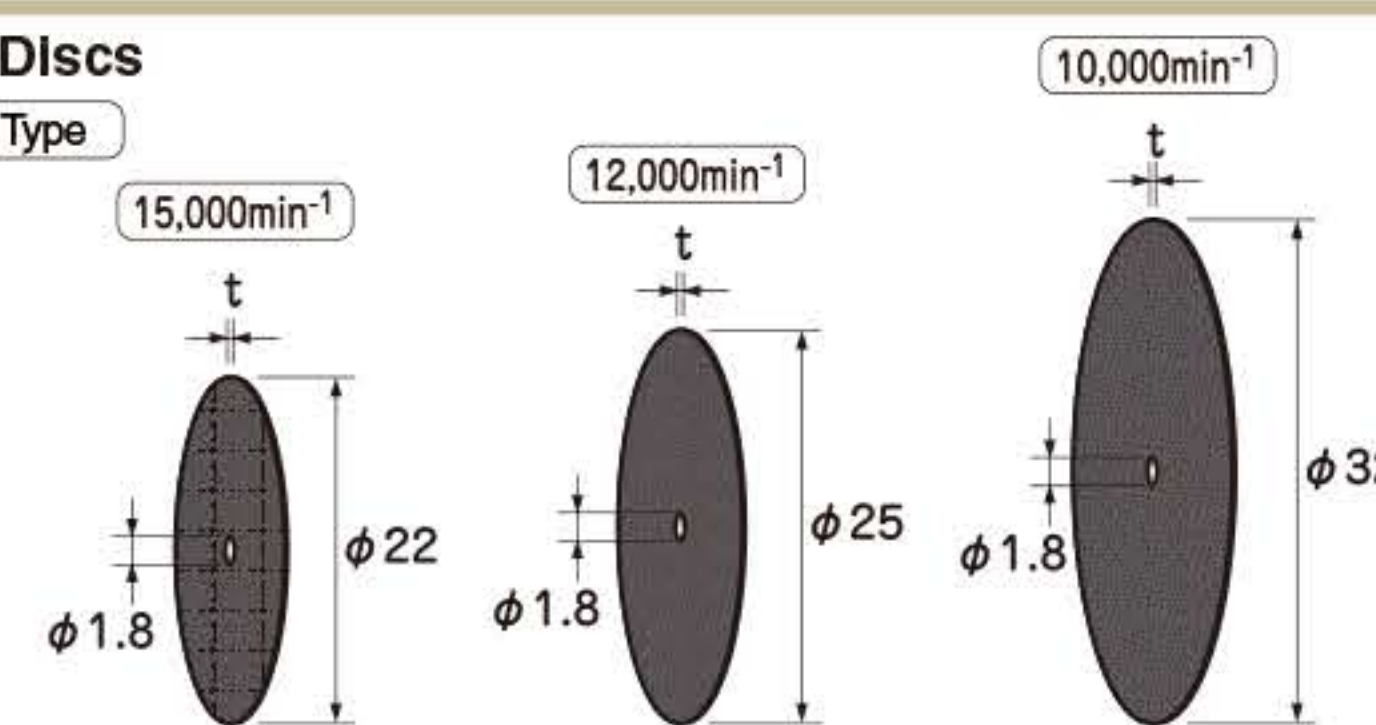
Grit Size	#100	#100	#100	#100	#100
WA Grain t = 0.5 mm	3A21019	3A21022	3A21025	3A21028	3A21031
WA Grain t = 0.7 mm	3A21020	3A21023	3A21026	3A21029	3A21032
WA Grain t = 1.0 mm	3A21021	3A21024	3A21027	3A21030	3A21033

Cutting Stone Discs

M1.7 Fixing Screw Type

GC grain B

5 pcs./pack



Grit Size	#100	#100	#100
GC Grain t = 0.5 mm	3A21034	3A21037	3A21040
GC Grain t = 0.7 mm	3A21035	3A21038	3A21041
GC Grain t = 1.0 mm	3A21036	3A21039	3A21042

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Abrasive Rubber Points

EIKO

Abrasive Rubber Points

Feature

- Elastic rubber features softer and less resistant working feel than stone tools.
- Variety of tools are available in high grinding ability type for modifying shaping of metals, and polishing type for medium/final polishing.

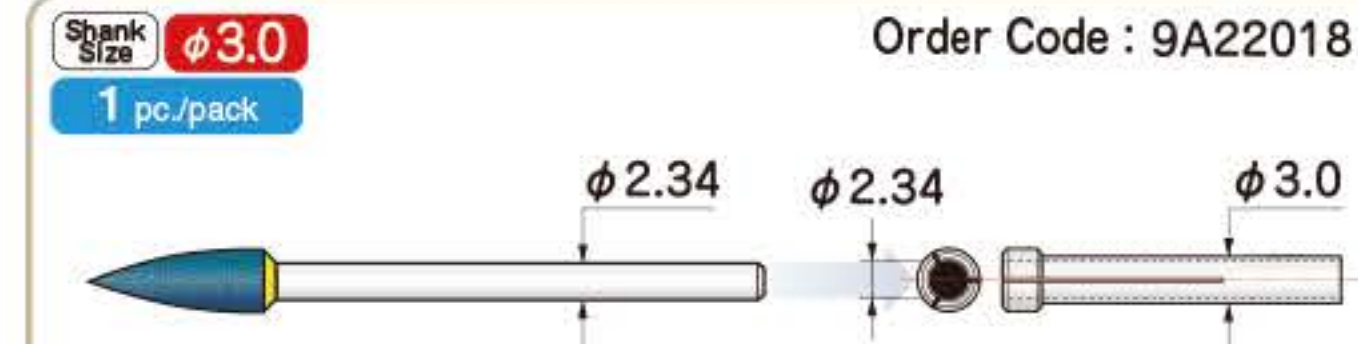
Main Application

- Removal of end milling tracks on forging dies.
- Removal of machining tracks on stainless steel and heat resistant alloy.
- Polishing surfaces of cast aluminum.
- Removal of machining tracks on soft metals such as aluminum.
- Removal of processing tracks on mass produced aluminum items.
- Deburring on various materials.

Sleeve Collet

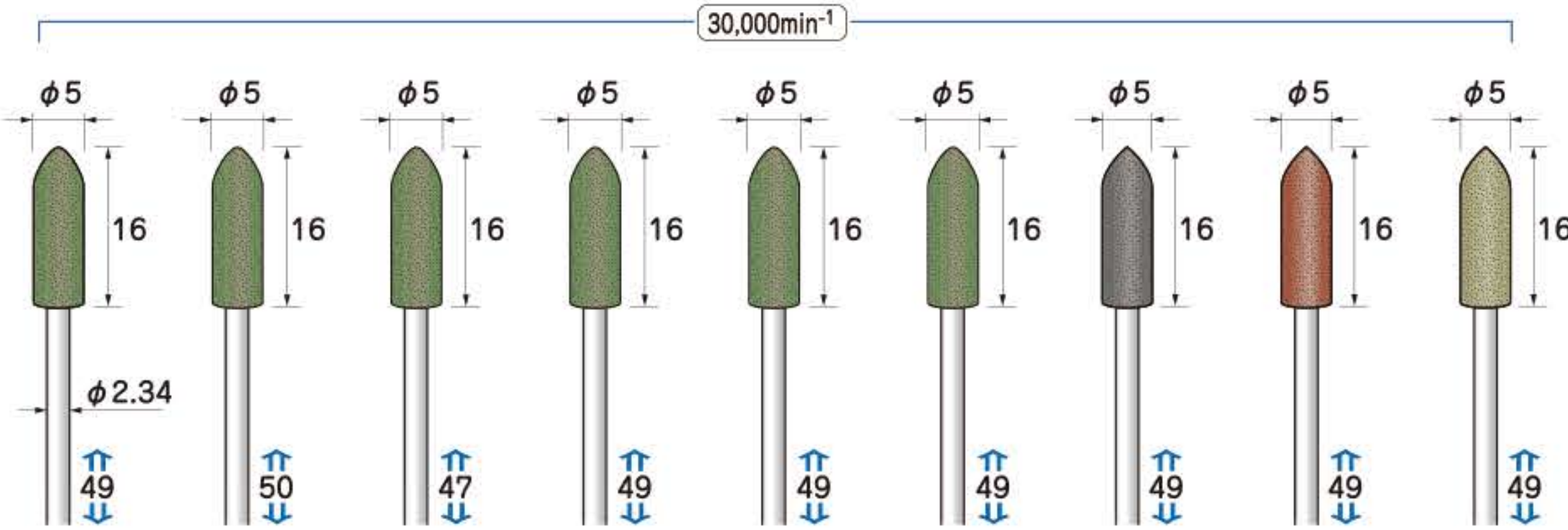
A handy adapter which converts $\phi 2.34$ mm shank to fit your $\phi 3.0$ mm collets.

Some industry grinders are equipped with $\phi 3.0$ mm collets only. By installing a sleeve collet, $\phi 2.34$ mm tools can be quickly converted to $\phi 3.0$ mm. Enjoy using wider variety of tools without wasting time in replacing collet chuck.



Abrasive Rubber Points

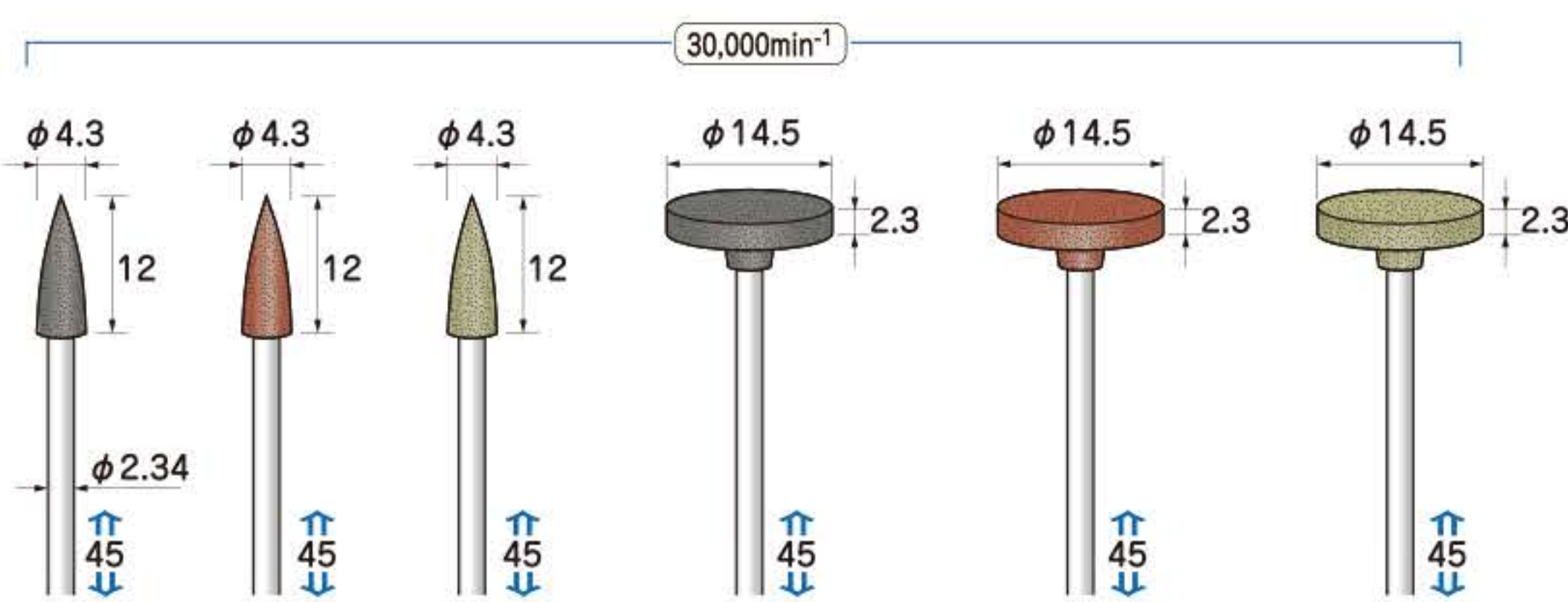
Shank Size $\phi 2.34$ 5 pcs./pack



Grit Size	#120	#180	#220	#320	#800	#1000	#140	#325	#1200
Abrasive Rubber Point	4A11001	4A11002	4A11003	4A11004	4A11005	4A11006	4A11007	4A11008	4A11009

Abrasive Rubber Points

Shank Size $\phi 2.34$ 5 pcs./pack

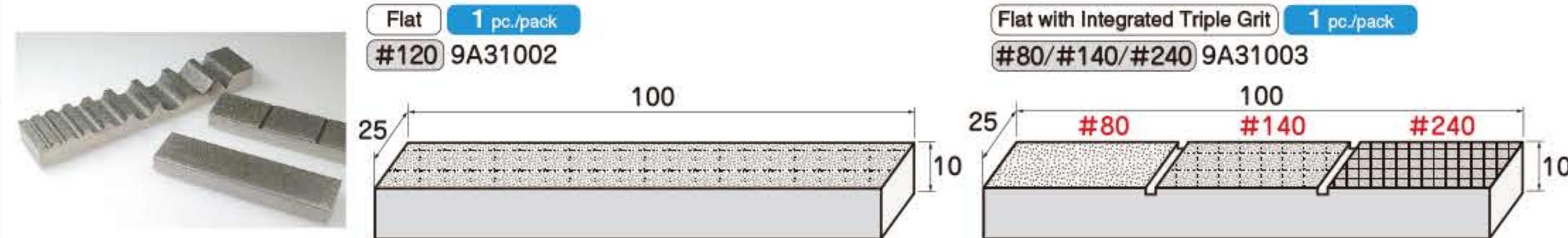
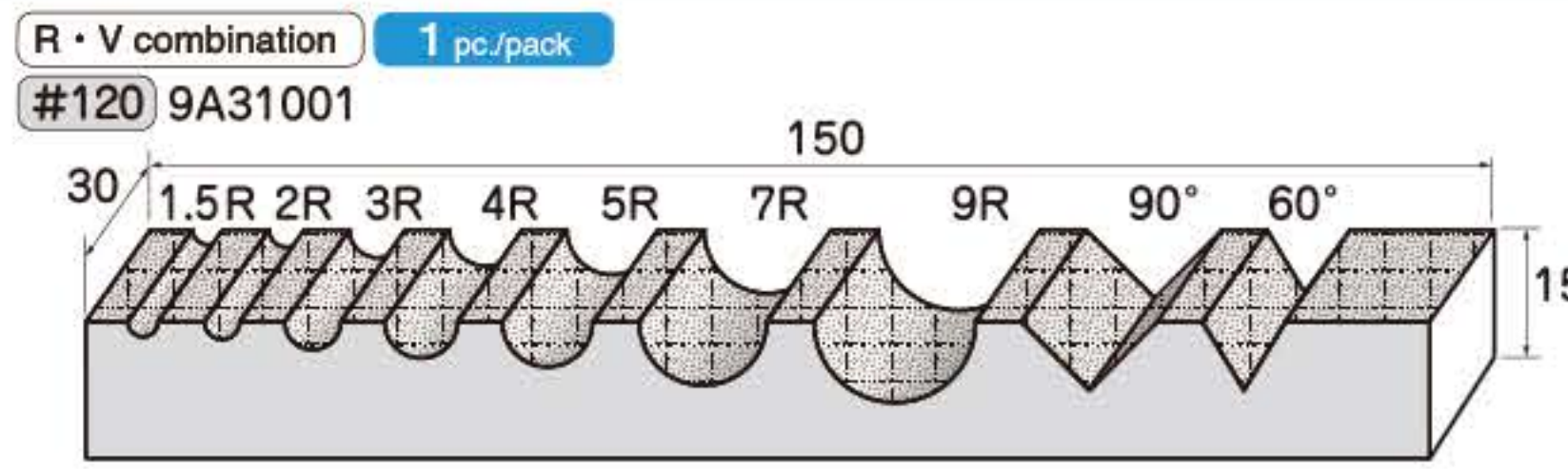


Grit Size	#140	#325	#1200	#140	#325	#1200
Abrasive Rubber Point	4A11010	4A11011	4A11012	4A11013	4A11014	4A11015

Electroplated Diamond Dressers

- For truing and dressing grinding stones, abrasive rubber points etc.
- Round and V-shaped grooves for truing on one stone.
- An Integrated type of three grit sizes is also available.
- Stable and economical large size.

(For more details of dressers, see page 140.)



Abrasive Rubber Points

E-FORCE®

Tornado Polishers

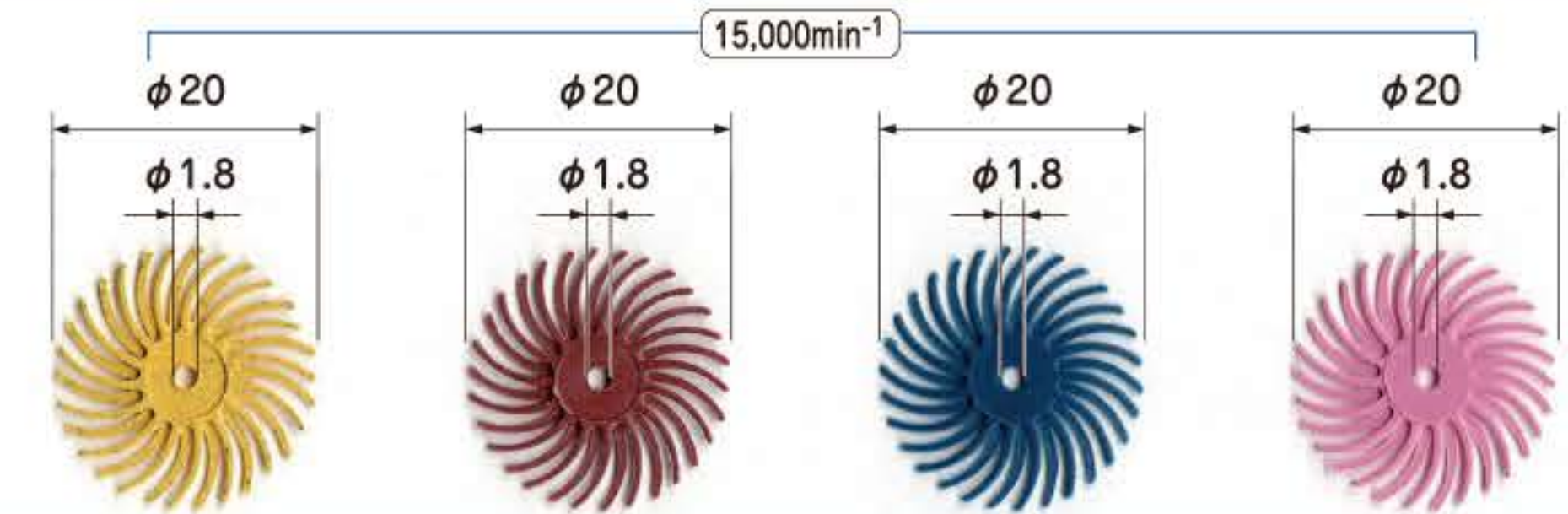
20 pcs./pack



Use with M1.7 type Mandrels.

Tornado Polishers

Spiral comb-shaped abrasive grain added resin discs. The excellently flexible radial disc follows contour of workpiece well, resulting in soft finish without scratches. Best suits for polishing precious metals.



Grit Size	#80	#220	#400	#1200
Tornado Polisher	4A21001	4A21002	4A21003	4A21004

Diamond Abrasive Rubber Points

- Diamond abrasive added rubber suits for polishing ceramic, glass, artificial teeth etc.

Grit interval is wide. Follow the guide below;

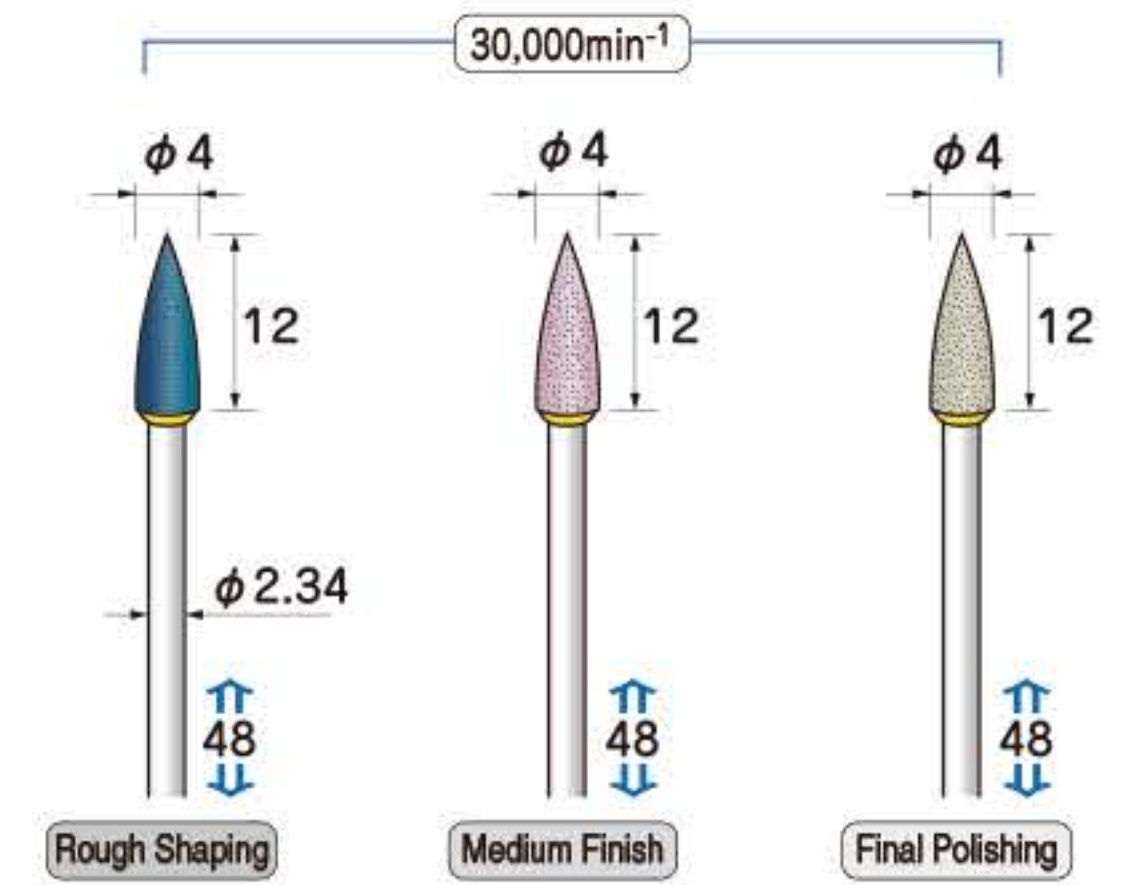
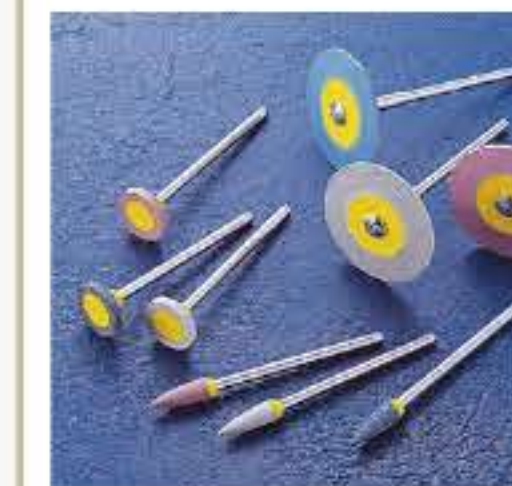
- #140 Rough Shaping
- #325 Medium Finish
- #3000 Final Polishing

Elasticity of rubber provides soft feeling of use and conformity to contours which conventional diamond tools haven't ever presented.

The yellow base material does not contain diamond grains.

Diamond Abrasive Rubber Points

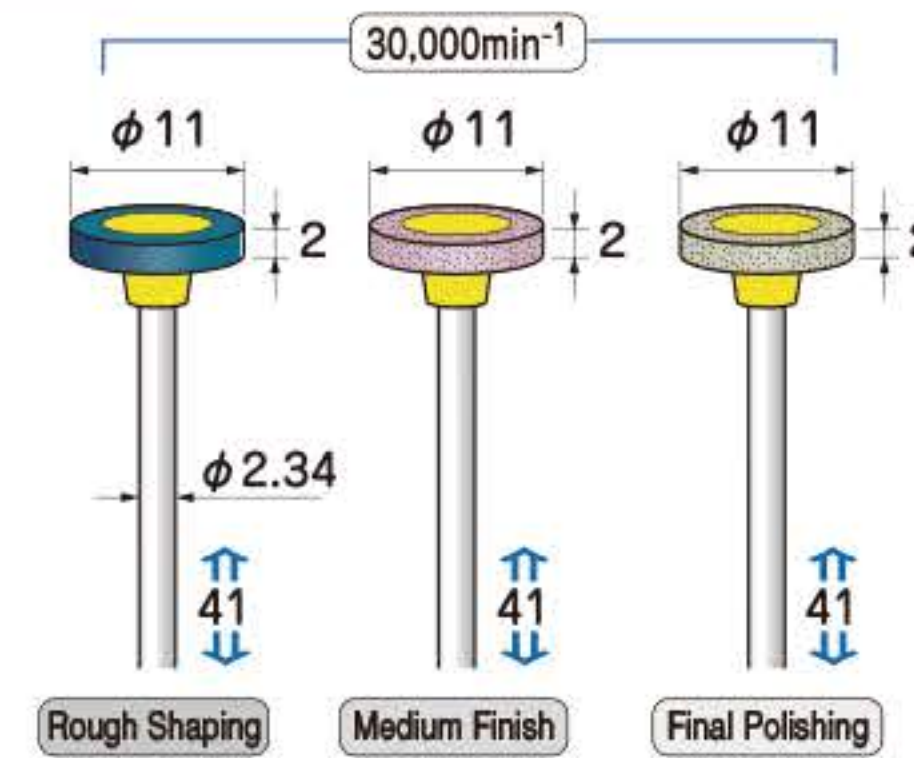
Shank Size $\phi 2.34$ Diamond grain 1 pc./pack



Grit Size	#140	#325	#3000
Diamond Grain	4A11016	4A11017	4A11018

Diamond Abrasive Rubber Points

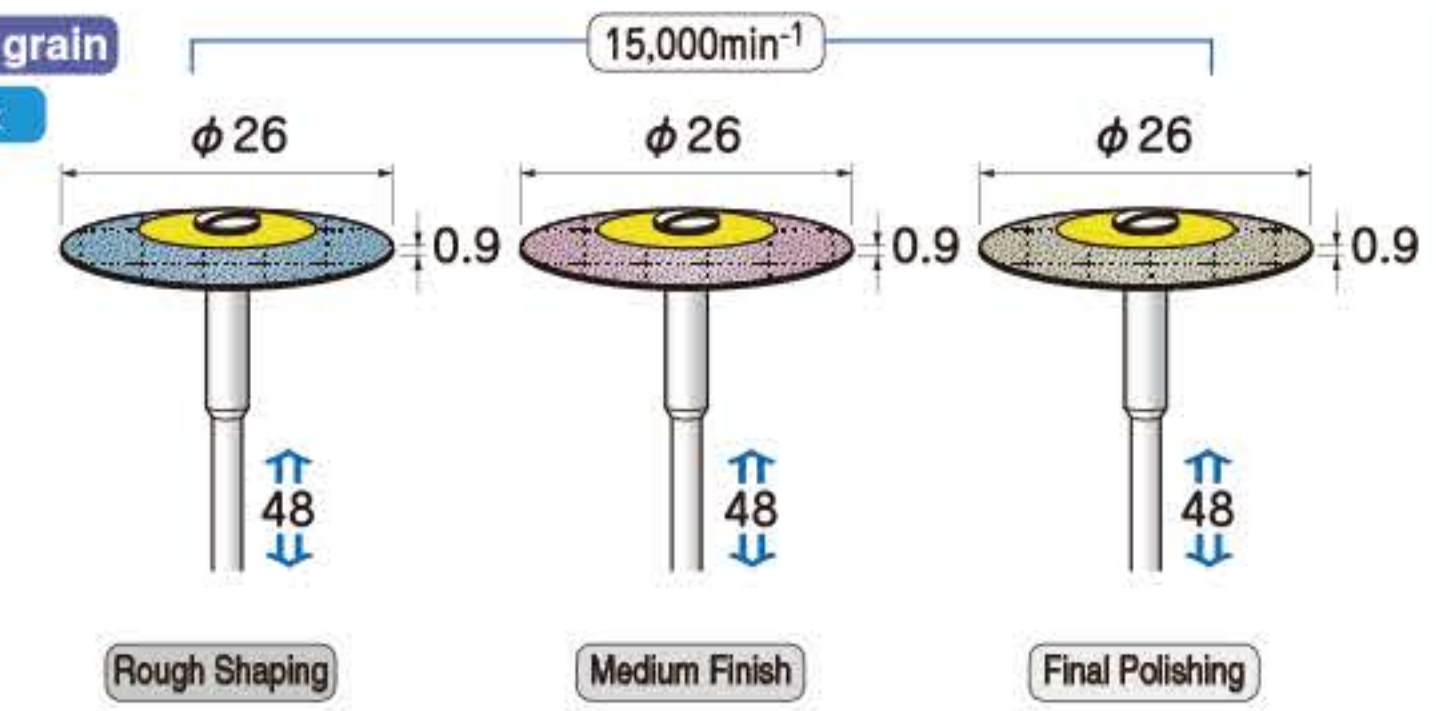
Shank Size $\phi 2.34$ Diamond grain 1 pc./pack



Grit Size	#140	#325	#3000
Diamond Grain	4A11019	4A11020	4A11021

Diamond Abrasive Rubber Wheels

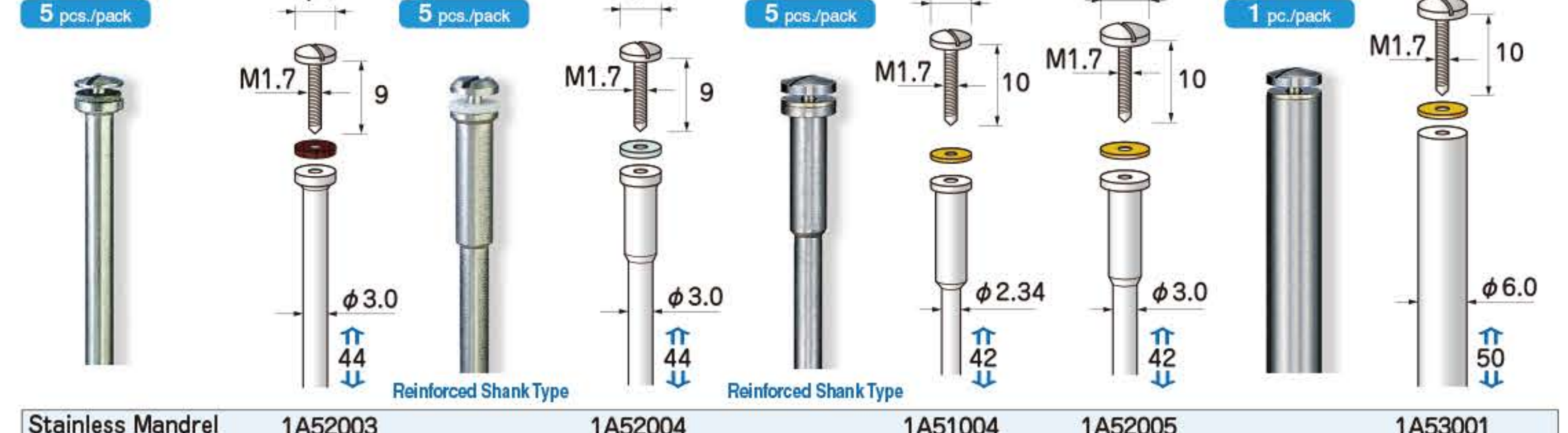
Diamond grain 1 pc./pack



Grit Size	#140	#325	#3000
Diamond Grain	4A31001	4A31002	4A31003
Diamond Grain	4A32001	4A32002	4A32003

Stainless Mandrels

M1.7 Fixing Screw Type 5 pcs./pack



Stainless Mandrel	1A52003	1A52004	1A51004	1A52005	1A53001
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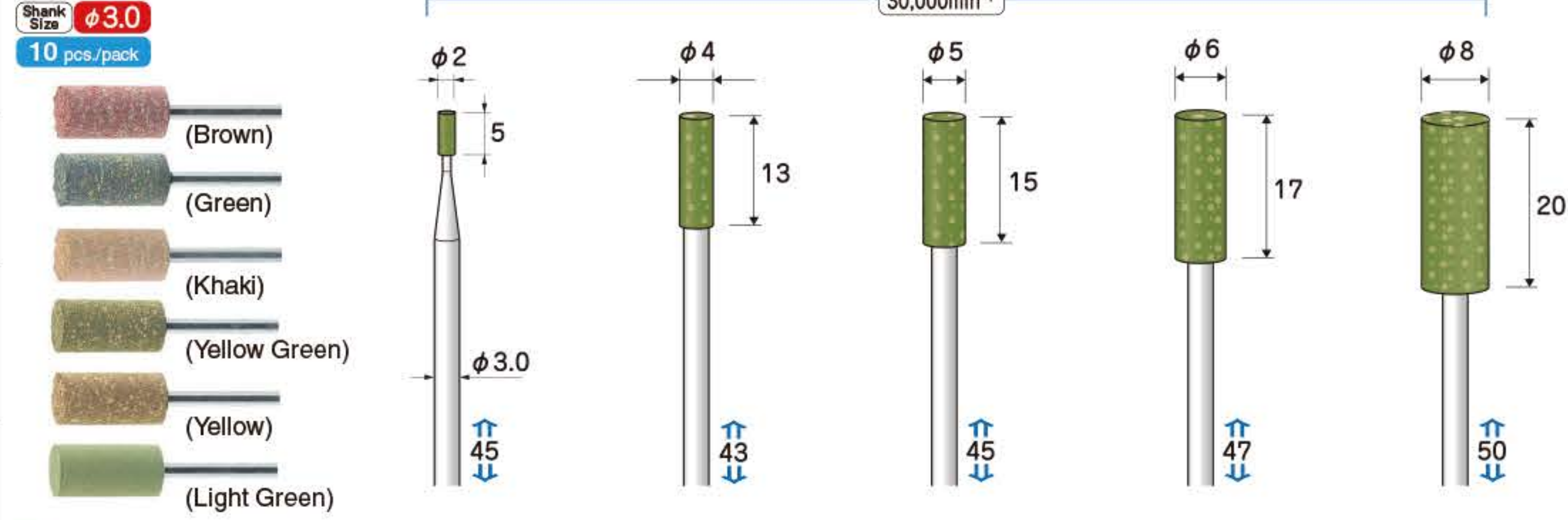
Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Abrasive Rubber Points

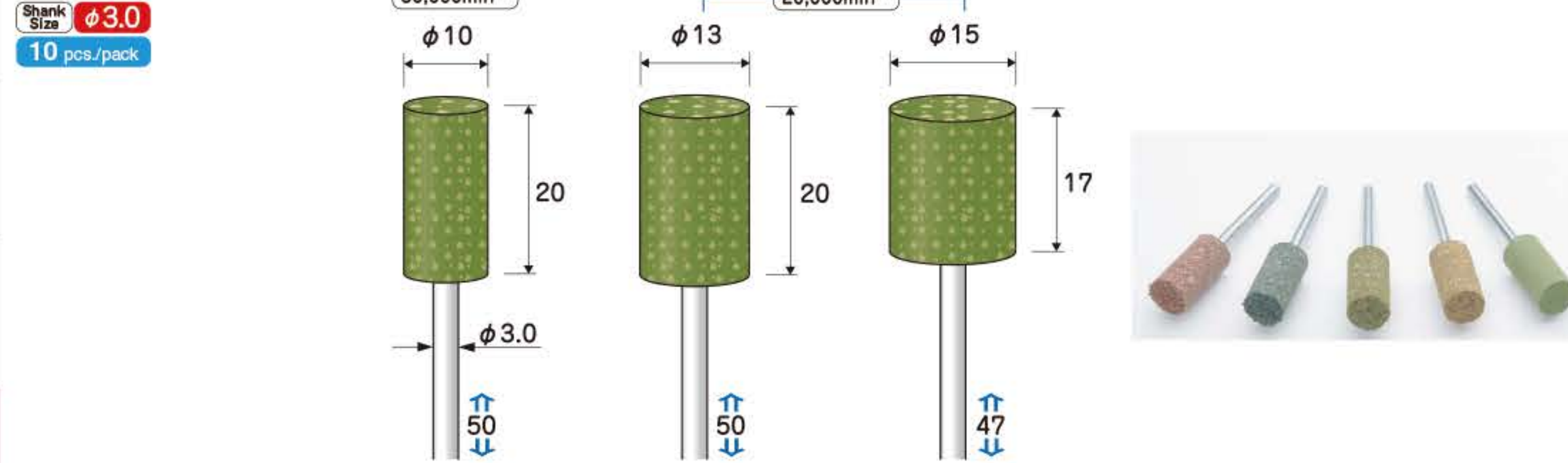
EIKO

Abrasive Rubber Points



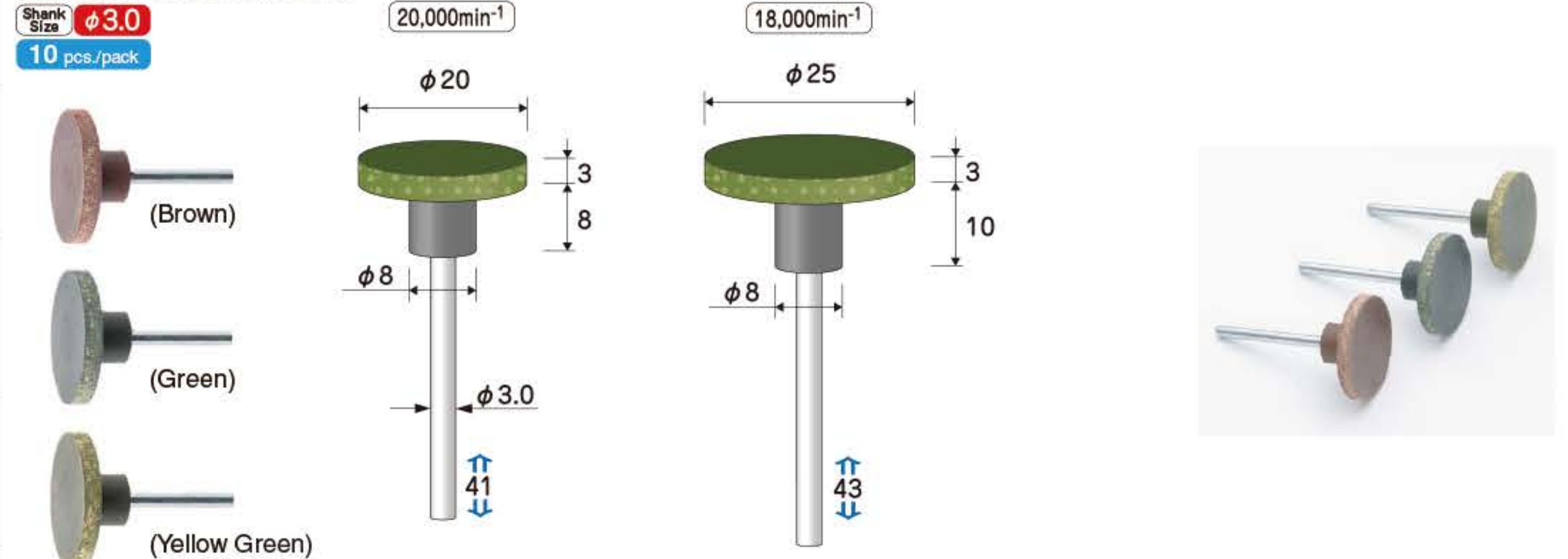
Grit Size #80 (Brown)	4A12001	4012100	4012105	4012110	4012115
Grit Size #120 (Green)	4A12002	4012101	4012106	4012111	4012116
Grit Size #180 (Khaki)	4A12003	4A12006	-	4A12007	4A12008
Grit Size #220 (Yellow Green)	4A12004	4012102	4012107	4012112	4012117
Grit Size #320 (Yellow)	4A12005	4012103	4012108	4012113	4012118
Grit Size #400 (Light Green)	-	4012104	4012109	4012114	4012119

Abrasive Rubber Points



Grit Size #80 (Brown)	4012120	4012125	4012130
Grit Size #120 (Green)	4012121	4012126	4012131
Grit Size #180 (Khaki)	4A12009	4A12010	-
Grit Size #220 (Yellow Green)	4012122	4012127	4012132
Grit Size #320 (Yellow)	4012123	4012128	4012133
Grit Size #400 (Light Green)	4012124	4012129	-

Abrasive Rubber Points

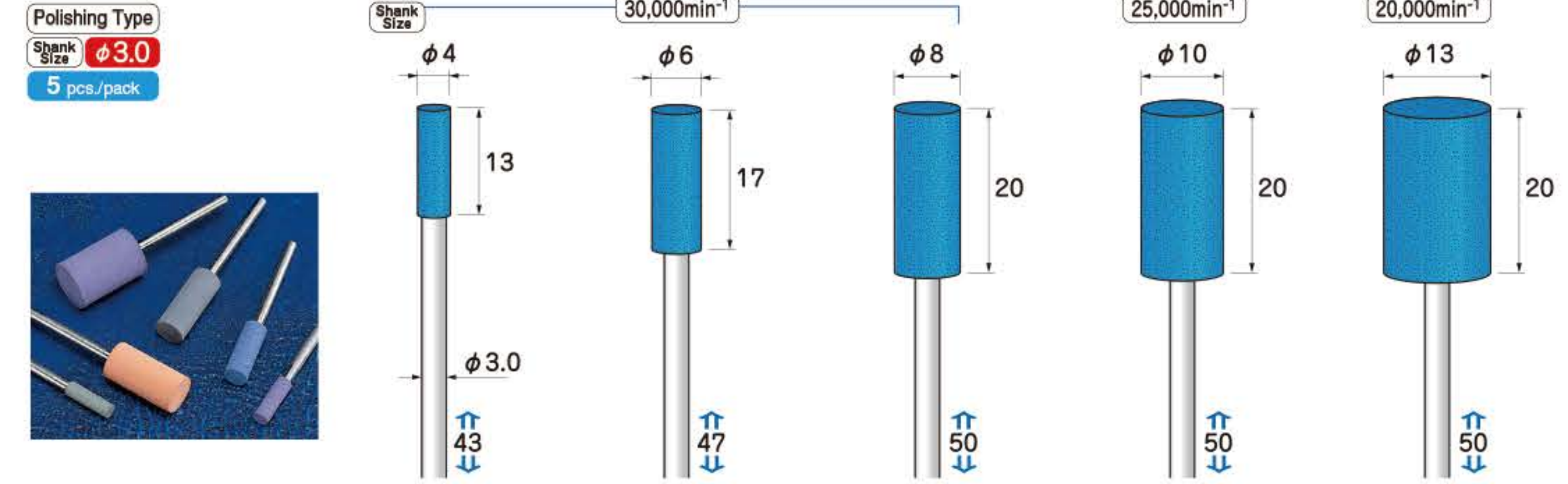


Grit Size #80 (Brown)	4012200	4012203
Grit Size #120 (Green)	4012201	4012204
Grit Size #220 (Yellow Green)	4012202	4012205

Abrasive Rubber Points

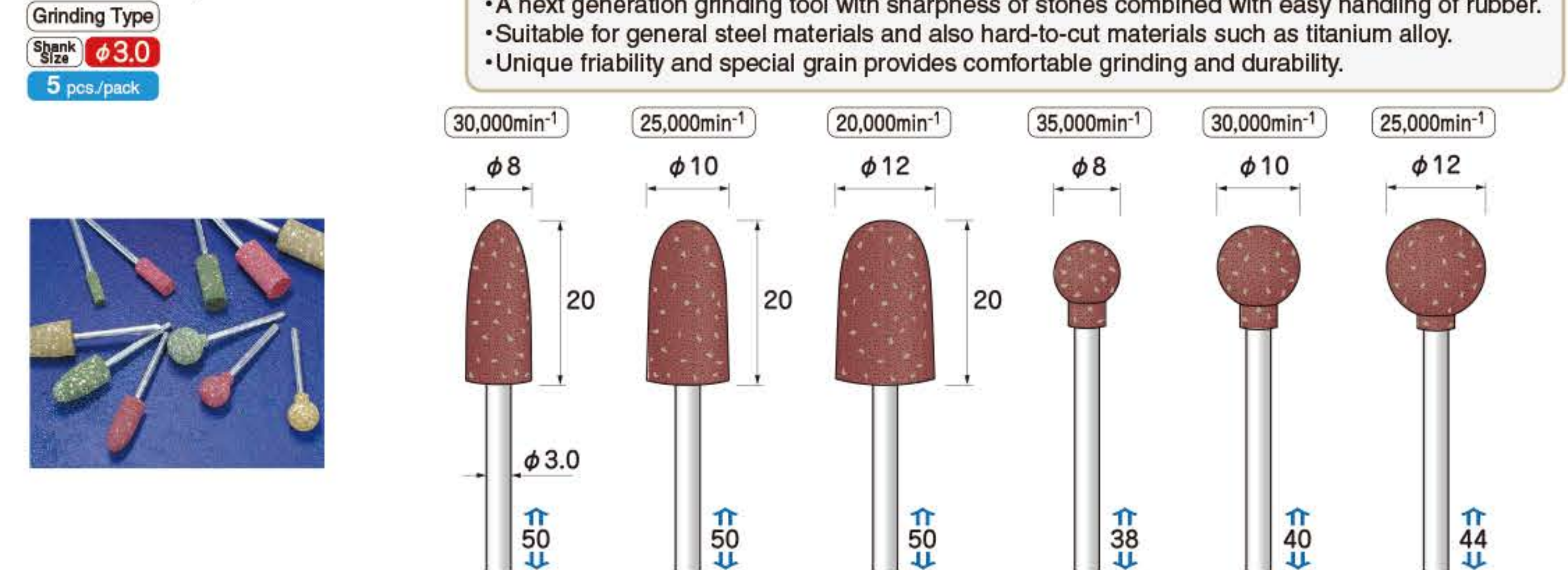
E-FORCE®

Abrasive Rubber Points



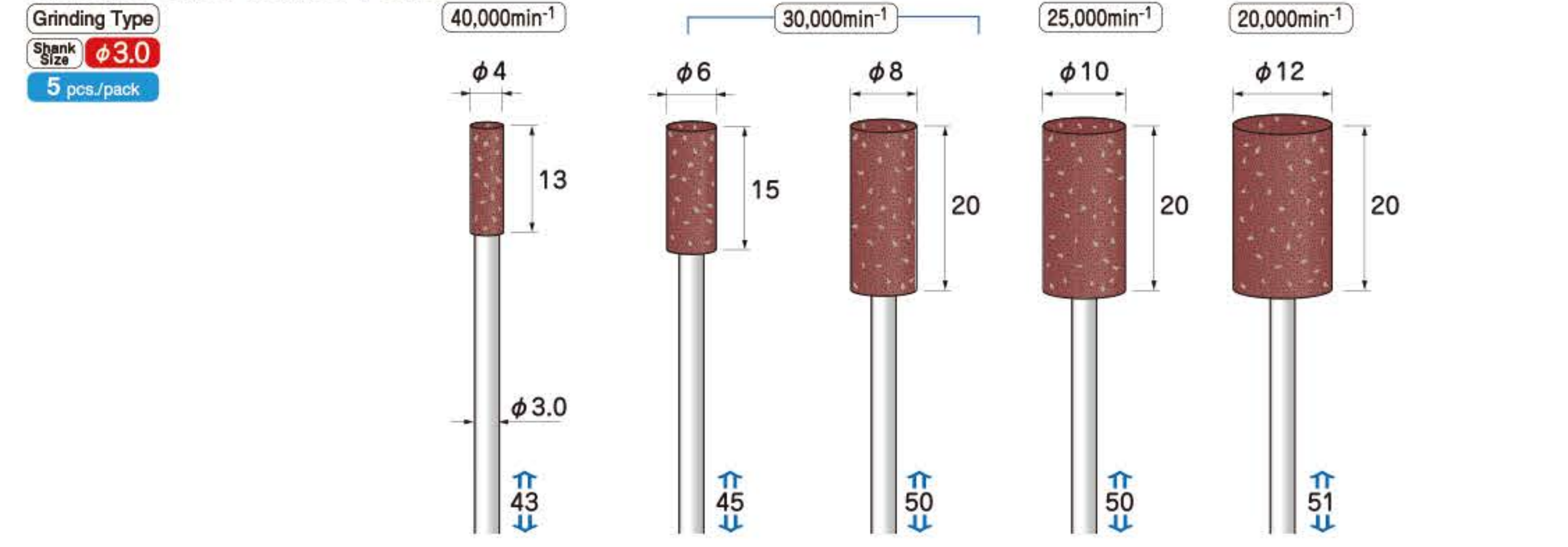
Grit Size #80 (Pink)	4A12011	4A12017	4A12023	4A12029	4A12035
Grit Size #120 (Blue)	4A12012	4A12018	4A12024	4A12030	4A12036
Grit Size #220 (Green)	4A12013	4A12019	4A12025	4A12031	4A12037
Grit Size #320 (Violet)	4A12014	4A12020	4A12026	4A12032	4A12038
Grit Size #500 (Light Brown)	4A12015	4A12021	4A12027	4A12033	4A12039
Grit Size #1000 (Grey)	4A12016	4A12022	4A12028	4A12034	4A12040

Abrasive Super Rubber Points



Grit Size #80 (Brown)	4A12041	4A12044	4A12047	4A12050	4A12053	4A12056
Grit Size #120 (Green)	4A12042	4A12045	4A12048	4A12051	4A12054	4A12057
Grit Size #220 (Yellow)	4A12043	4A12046	4A12049	4A12052	4A12055	4A12058

Abrasive Super Rubber Points



Grit Size #80 (Brown)	4A12059	4A12062	4A12065	4A12068	4A12071
Grit Size #120 (Green)	4A12060	4A12063	4A12066	4A12069	4A12072
Grit Size #220 (Yellow)	4A12061	4A12064	4A12067	4A12070	4A12073

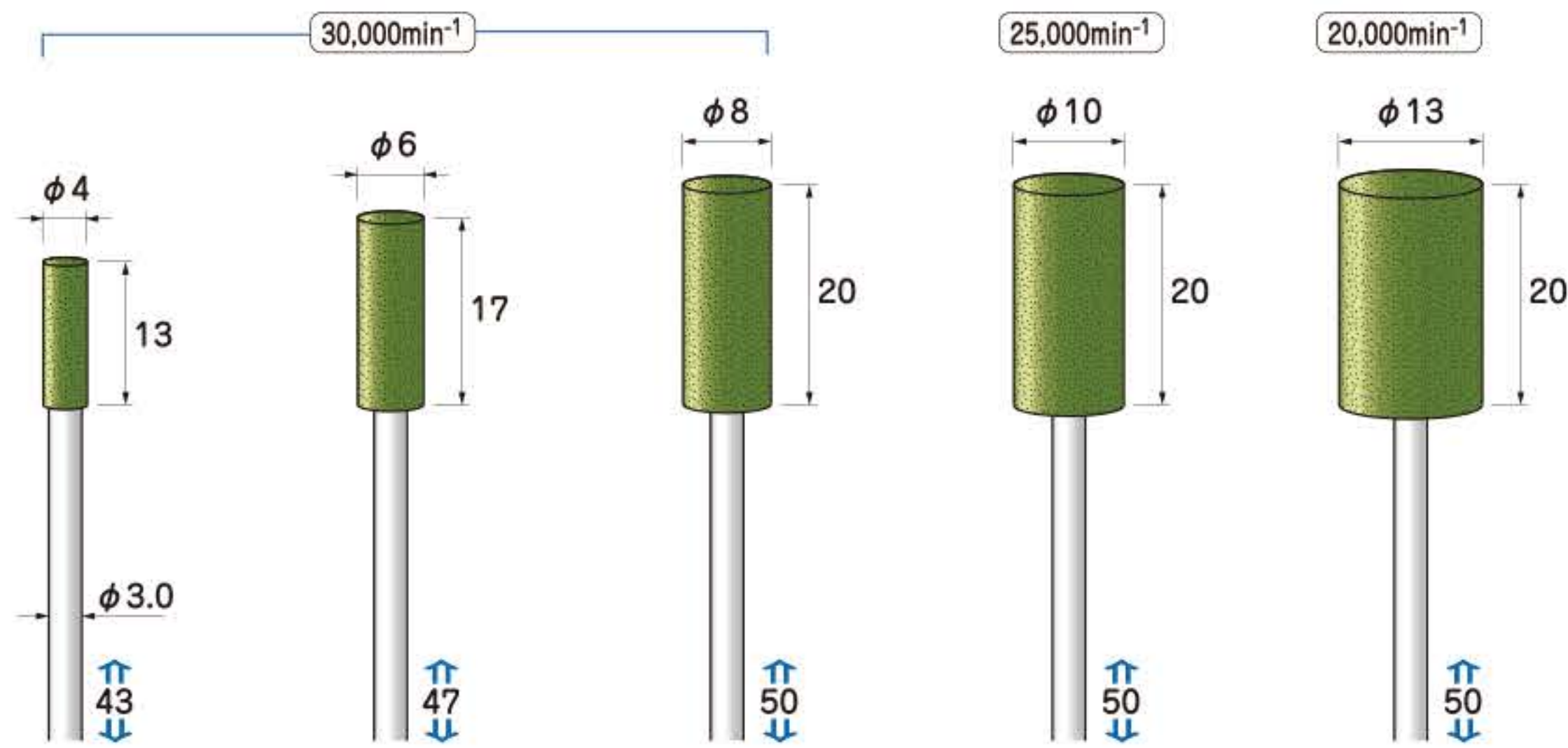
Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Abrasive Rubber Points

EIKO

Abrasive Rubber Points

Grinding Type
Shank Size $\phi 3.0$
GC grain
5 pcs./pack



Grit Size #80	4A12074	4A12077	4A12080	4A12083	4A12086
Grit Size #120	4A12075	4A12078	4A12081	4A12084	4A12087
Grit Size #220	4A12076	4A12079	4A12082	4A12085	4A12088

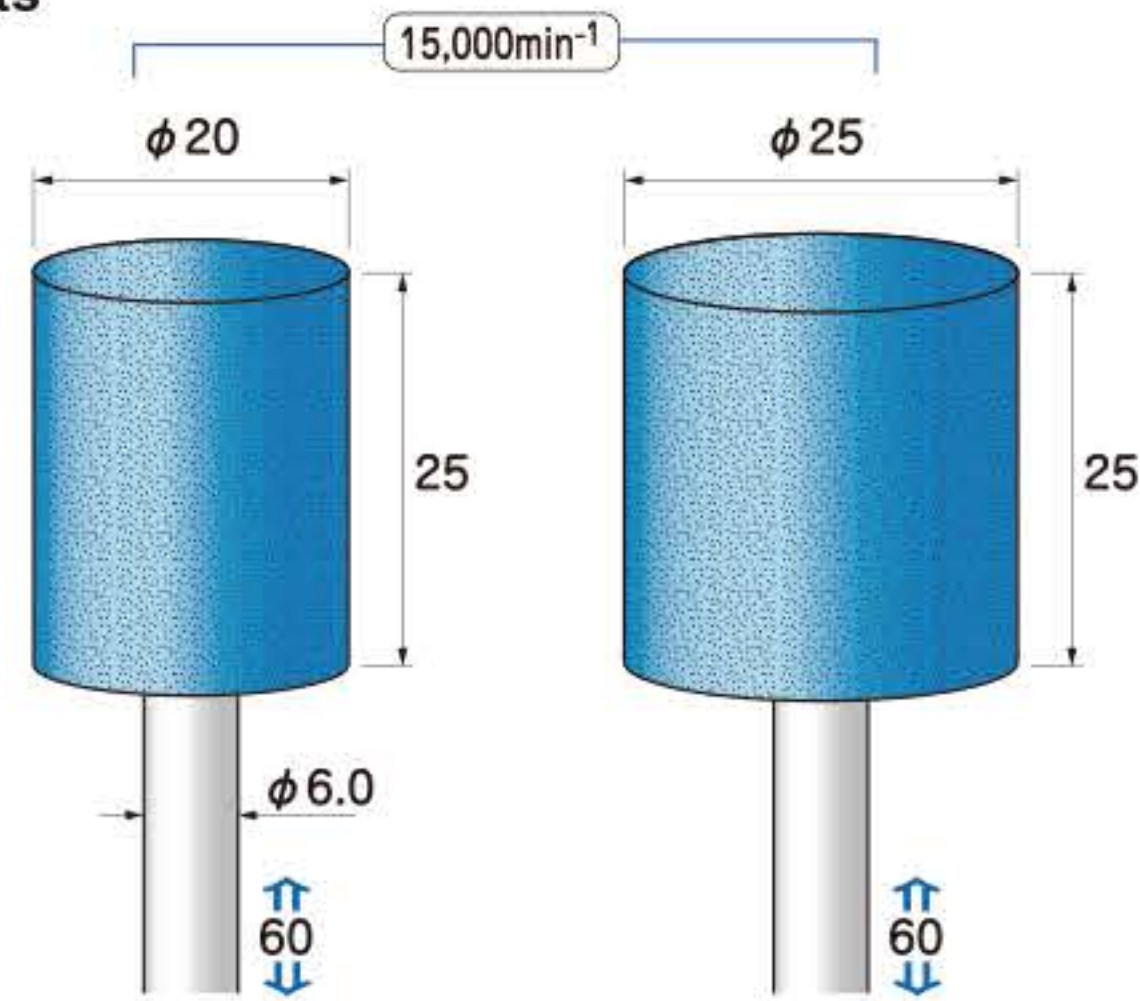
Abrasive Rubber Points

Polishing Type
Shank Size $\phi 6.0$
5 pcs./pack

• With tough $\phi 6.0$ shank, suitable for grinding-polishing with high load, and processing large area efficiently.

• Polishing type (4A13001~4A13008) provides one grade superior glossy finish to conventional grades. Suitable for burnishing without spoiling workpiece's original shape.

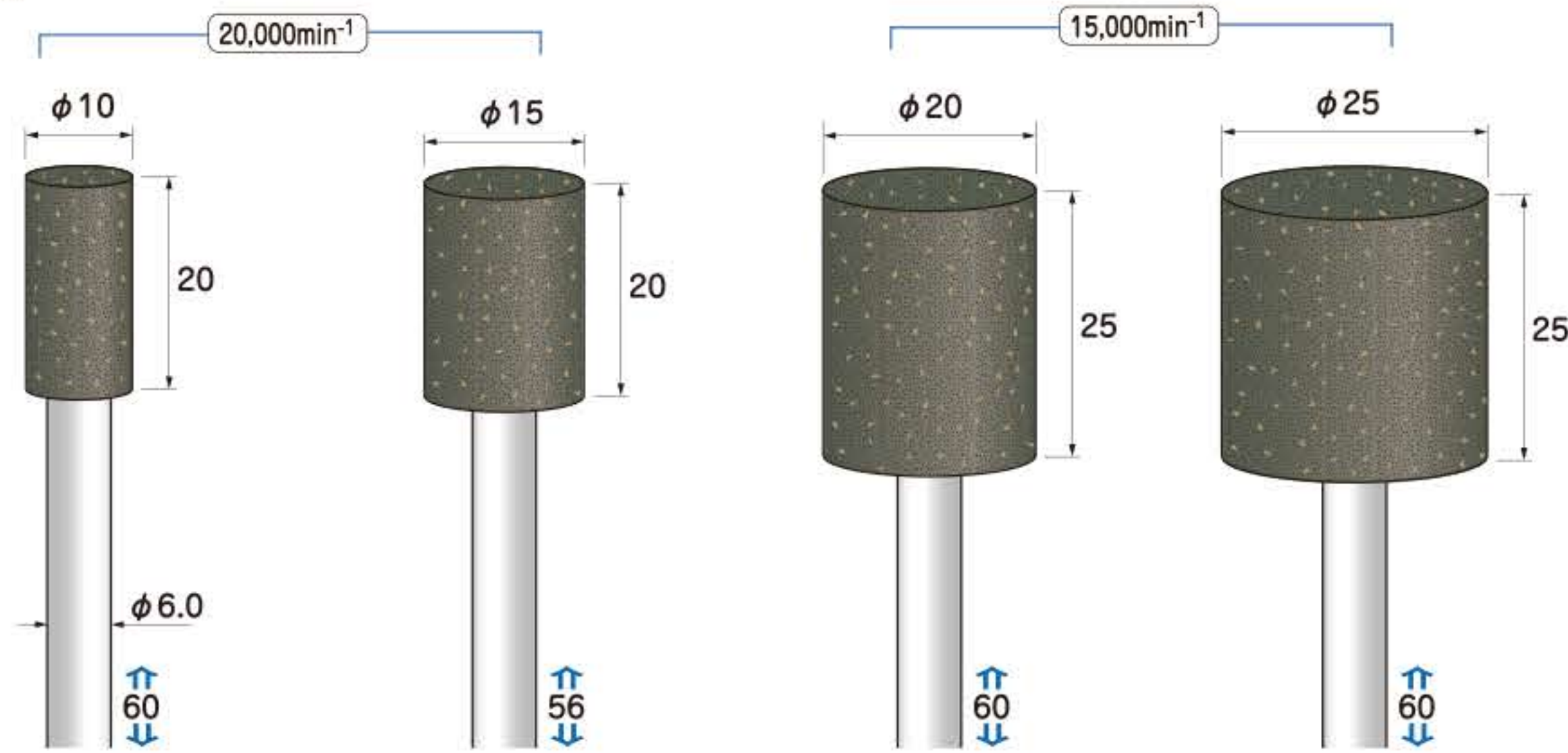
• Grinding type with excellent grinding ability (4A13009~4A13020) provides swift rough shaping and medium finish.



Grit Size #80 (Pink)	4A13001	4A13005
Grit Size #120 (Blue)	4A13002	4A13006
Grit Size #320 (Violet)	4A13003	4A13007
Grit Size #500 (Light Brown)	4A13004	4A13008

Abrasive Rubber Points

Grinding Type
Shank Size $\phi 6.0$
5 pcs./pack



Grit Size #60 (Khaki)	4A13009	4A13012	4A13015	4A13018
Grit Size #80 (Brown)	4A13010	4A13013	4A13016	4A13019
Grit Size #120 (Grey)	4A13011	4A13014	4A13017	4A13020

Abrasive Rubber Points

E-FORCE®



WARNING
Long Shank Abrasive Rubber Points shall be used for deep hole processing only. Using the tool in a open space other than deep hole, overloading or prying the tool may cause bending or breakage of the shank resulting in danger.

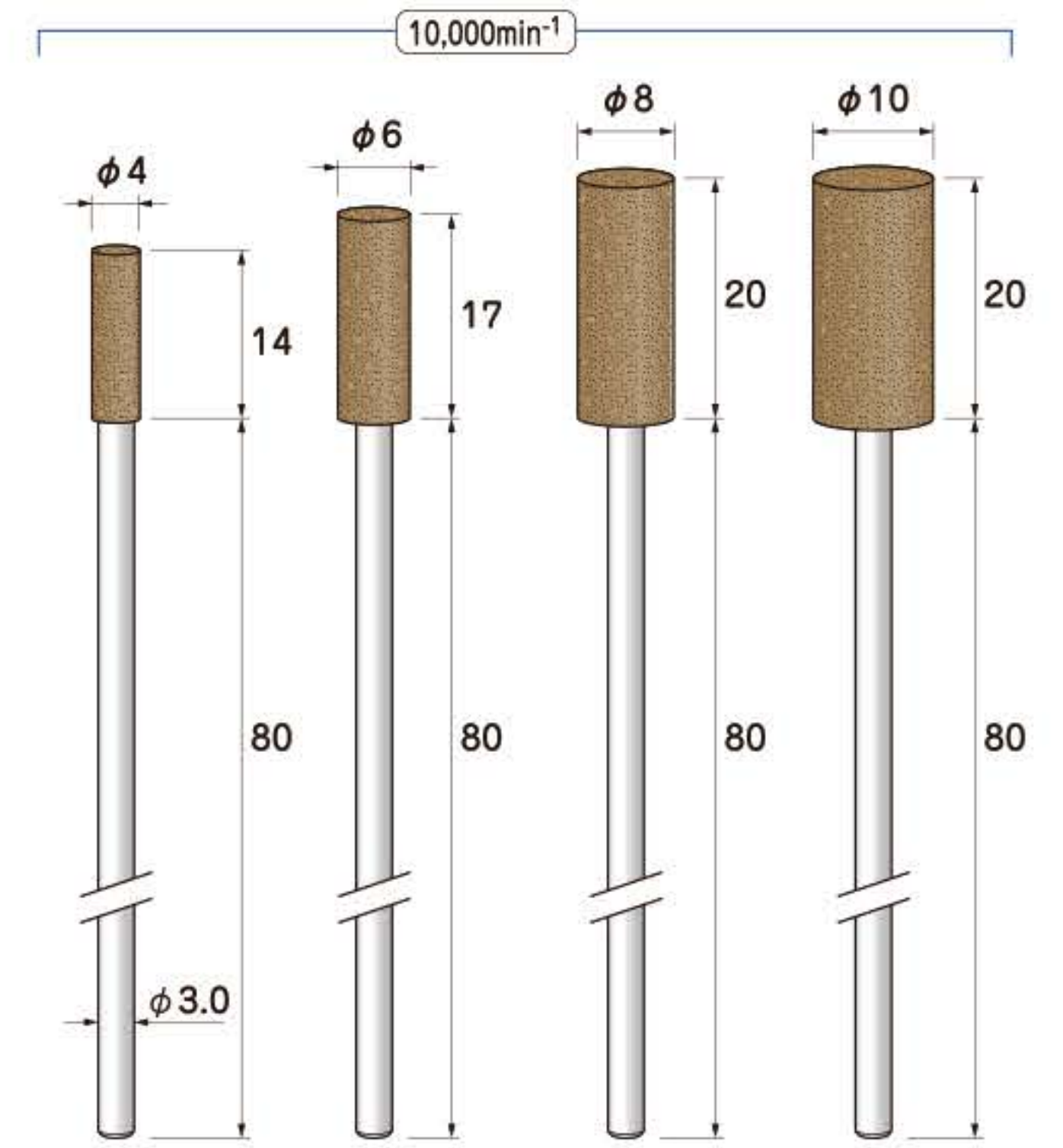
To avoid accident during use, always wear protective glasses, dust mask and other safety equipment. DO NOT use with electric powered or air grinders which are not equipped with speed control function.

On operation, insert the tool shaft thoroughly into the hole of grinder, and before starting the grinder locate the tool well into the hole to work, then accelerate the rotation gradually.



Long Shank Abrasive Rubber Points

Grinding Type
Shank Size $\phi 3.0$
5 pcs./pack



Grit Size #120 (Green)	4A12089	4A12091	4A12093	4A12095
Grit Size #180 (Khaki)	4A12090	4A12092	4A12094	4A12096

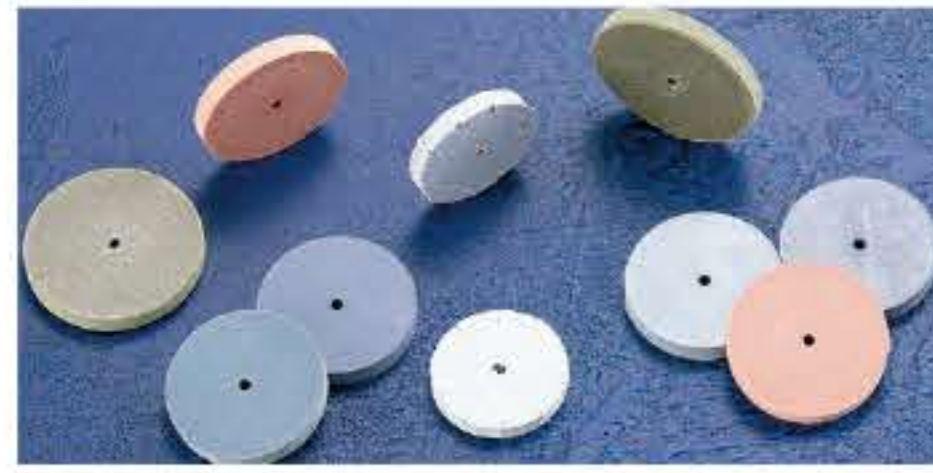
Enhancing freedom of creativity of specialists.

E-FORCE®

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Abrasive Rubber Wheels

- Wheel type grinding rubber to be used with mandrels.
- Best suits for polishing in grooves and on rounded parts.
- For truing and dressing, use the Diamond Dresser or the Brick Grinding Stone Dresser.

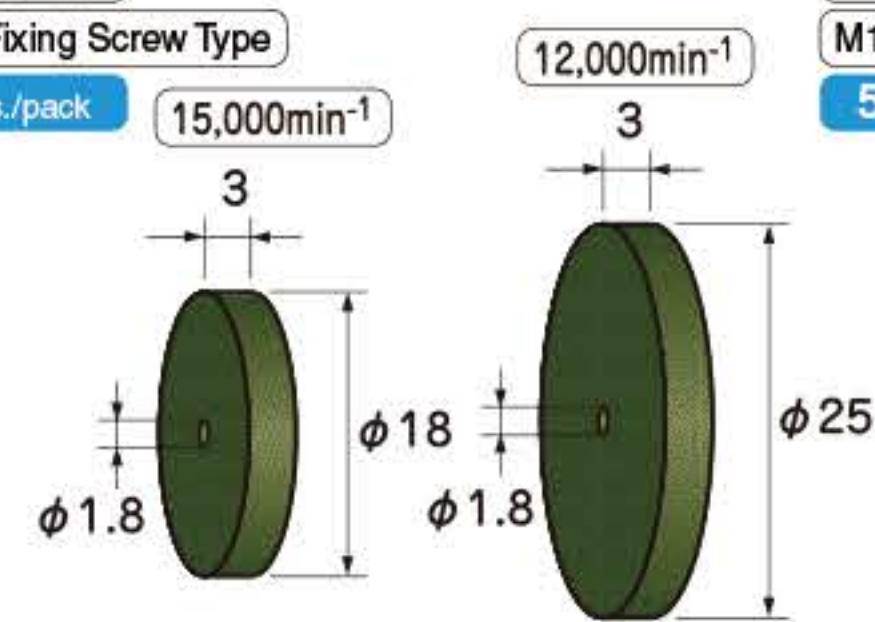


Abrasive Rubber Wheels

Grinding Type

M1.7 Fixing Screw Type

5 pcs./pack



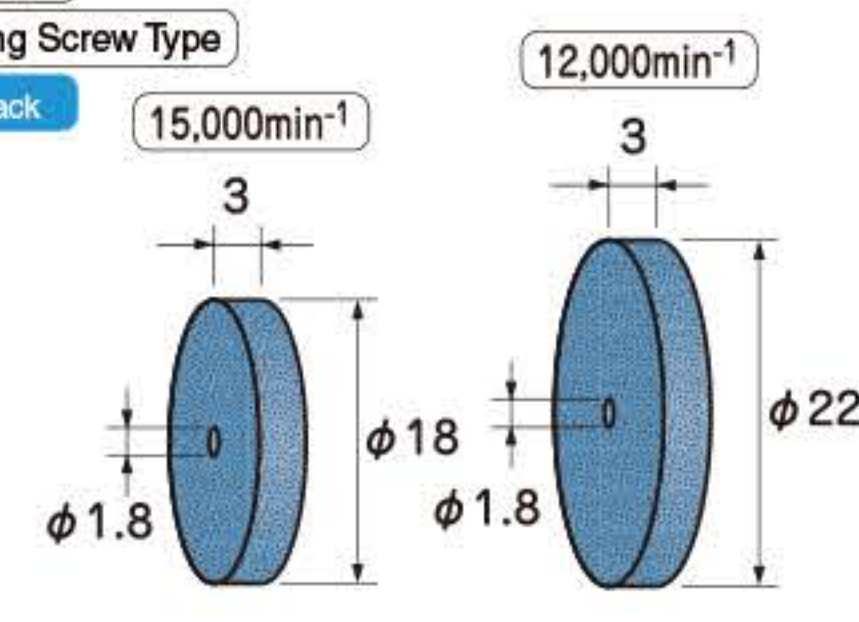
Grit Size #80	4A21005	4A21009
Grit Size #120	4A21006	4A21010
Grit Size #220	4A21007	4A21011
Grit Size #320	4A21008	4A21012

Abrasive Rubber Wheels

Polishing Type

M1.7 Fixing Screw Type

5 pcs./pack



Grit Size #220	4A21013	4A21016
Grit Size #500	4A21014	4A21017
Grit Size #1000	4A21015	4A21018

Use with M1.7 type Mandrels.

Diamond Abrasive Rubber Wheels

- More diamond grains are added to improve grinding ability.

- Features excellent grinding ability and good bite.

- Suitable for grinding hardened steel, titanium alloy.

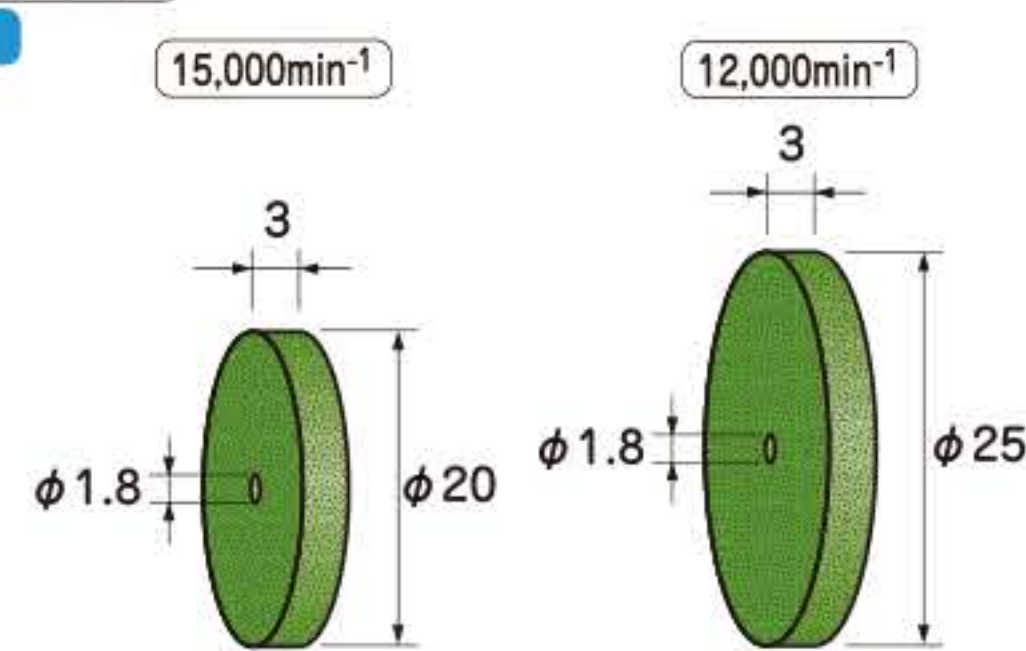
- Use with M1.7 type Mandrels.

Diamond Abrasive Rubber Wheels

Grinding Type

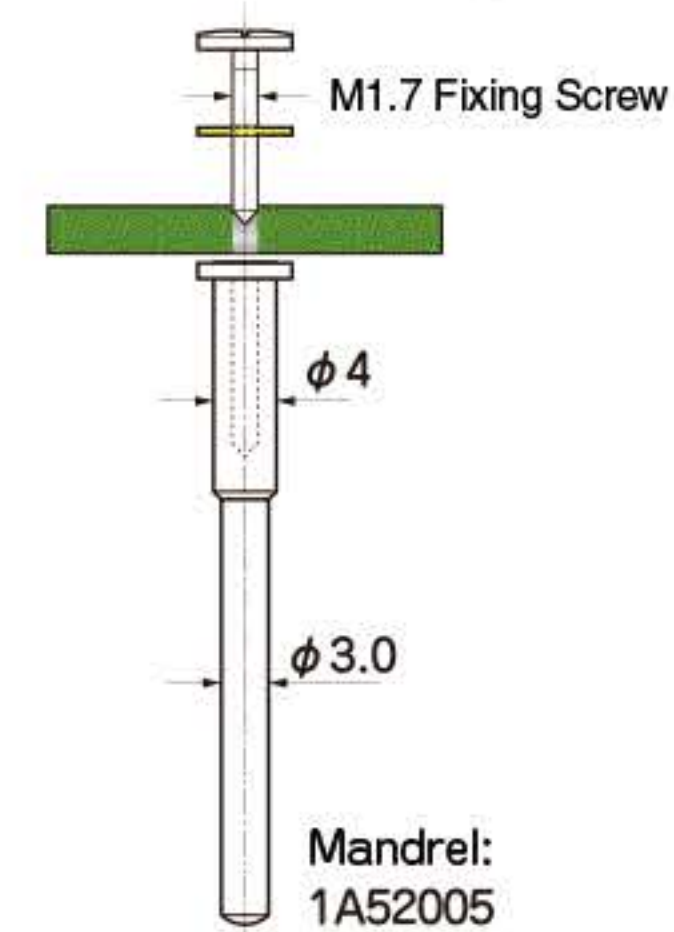
M1.7 Fixing Screw Type

1 pc./pack



Grit Size #170	4A21019	4A21022
Grit Size #400	4A21020	4A21023
Grit Size #800	4A21021	4A21024

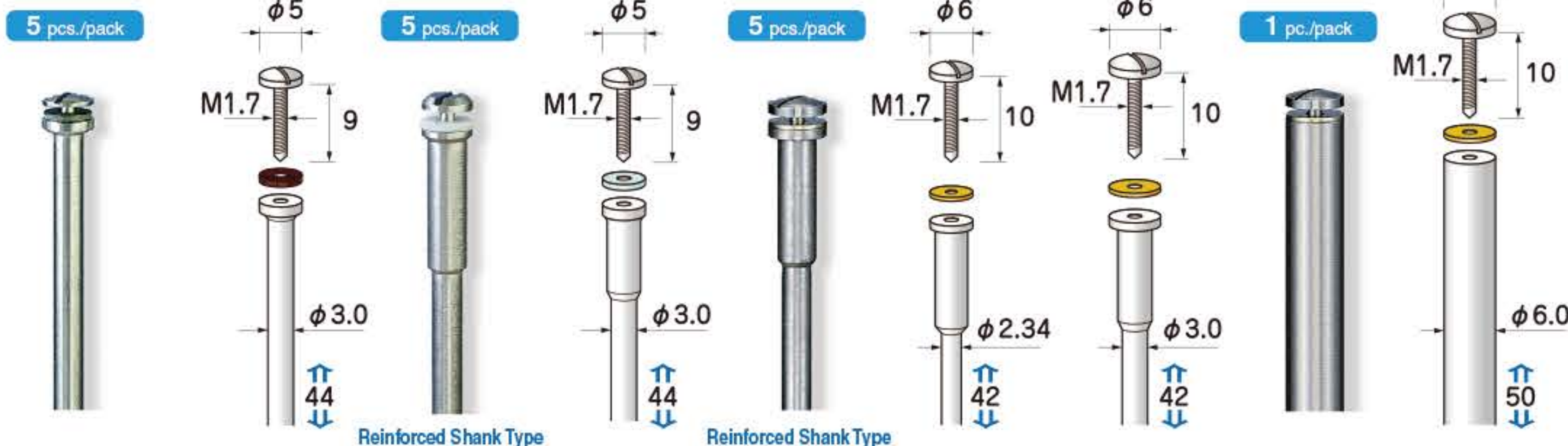
((Installation Example))



Mandrel: 1A52005

Stainless Mandrels (For more details of mandrels, see page 53.)

M1.7 Fixing Screw Type



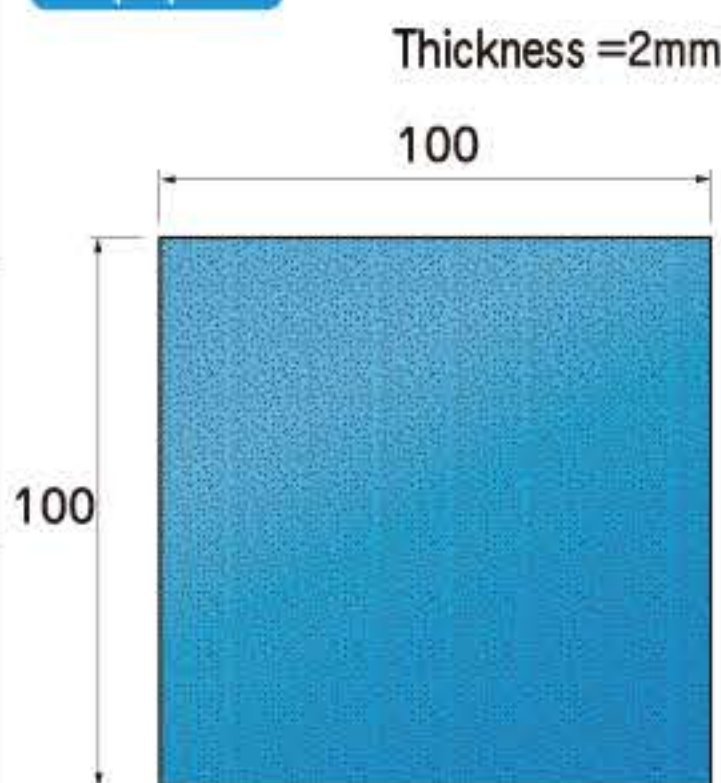
Stainless Mandrel	1A52003	1A52004	1A51004	1A52005	1A53001
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Polishing Rubber Sheets

Polishing Type

1 pc./pack

- Abrasive rubber points (4A12011~4A12040) in sheet forms with adhesion treatment on back side.
- Can be cut to desired sizes with a cutter knife. Attach to a holder etc. to use.
- Elasticity of rubber with soft working feel provides a good smooth finish.
- Superior finish by one or two grade to the indicated grade can be obtained. Best suits for medium finish polishing of precious metals with a little deformation of workpiece's original shape.



Color	Grit Size	Order Code
Grey	#46	9A42001
Pink	#80	9A42002
Blue	#120	9A42003
Green	#220	9A42004
Violet	#320	9A42005
Light Brown	#500	9A42006

Self Adhesive Backed (Thickness=2mm)



Enhancing freedom of creativity of specialists.

E-FORCE®

Electroplated Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Abrasive Sanders

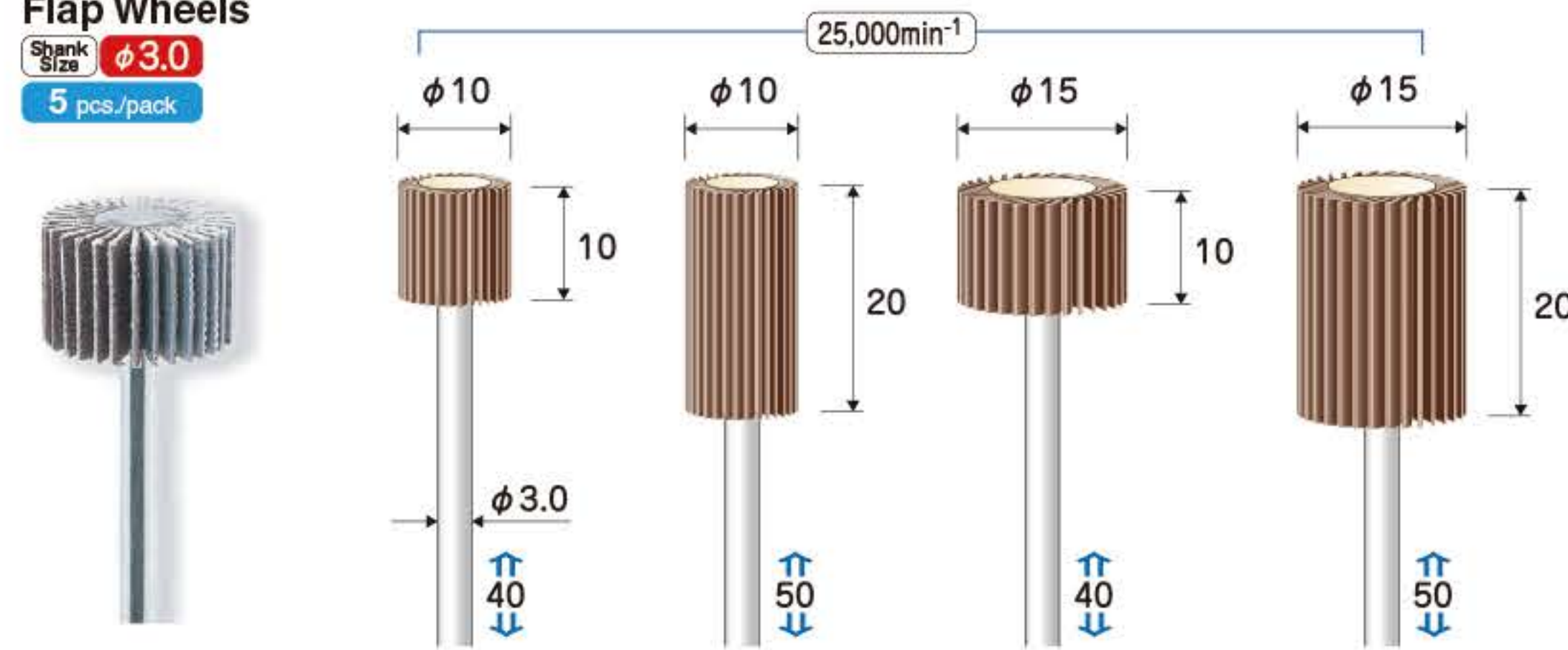
EIKO

Flap Wheels

- Abrasive cloth flaps are radially mounted.
- Follows well on contours, soft feeling of use.
- Features low heat generation, and a constant finish.
- Best suits for cleaning, rust removal, and also paint stripping.
- No wobbling even in high speed rotation, and with wide range of sizes available from $\phi 10$ mm dia. and larger, can be used for variety of works from polishing minute, narrow parts to deburring.

Flap Wheels

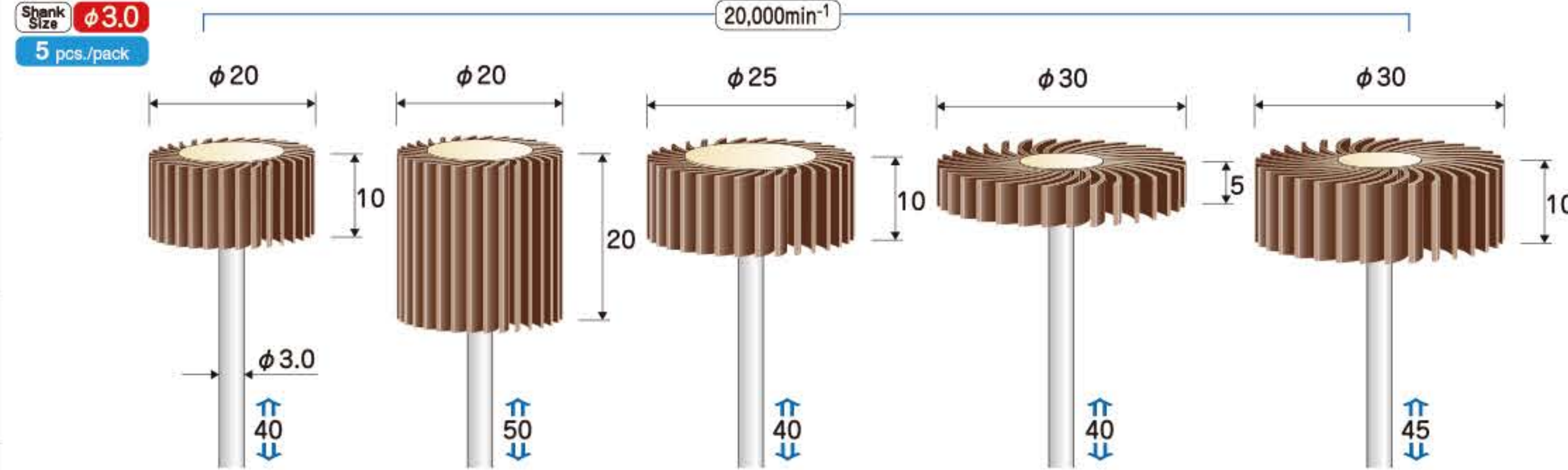
Shank Size $\phi 3.0$
5 pcs./pack



Grit Size #60	5012100	5012200	5012300	5012400
Grit Size #80	5012101	5012201	5012301	5012401
Grit Size #120	5012102	5012202	5012302	5012402
Grit Size #180	5012103	5012203	5012303	5012403
Grit Size #240	5012104	5012204	5012304	5012404
Grit Size #320	5A12001	5A12002	5A12003	-

Flap Wheels

Shank Size $\phi 3.0$
5 pcs./pack

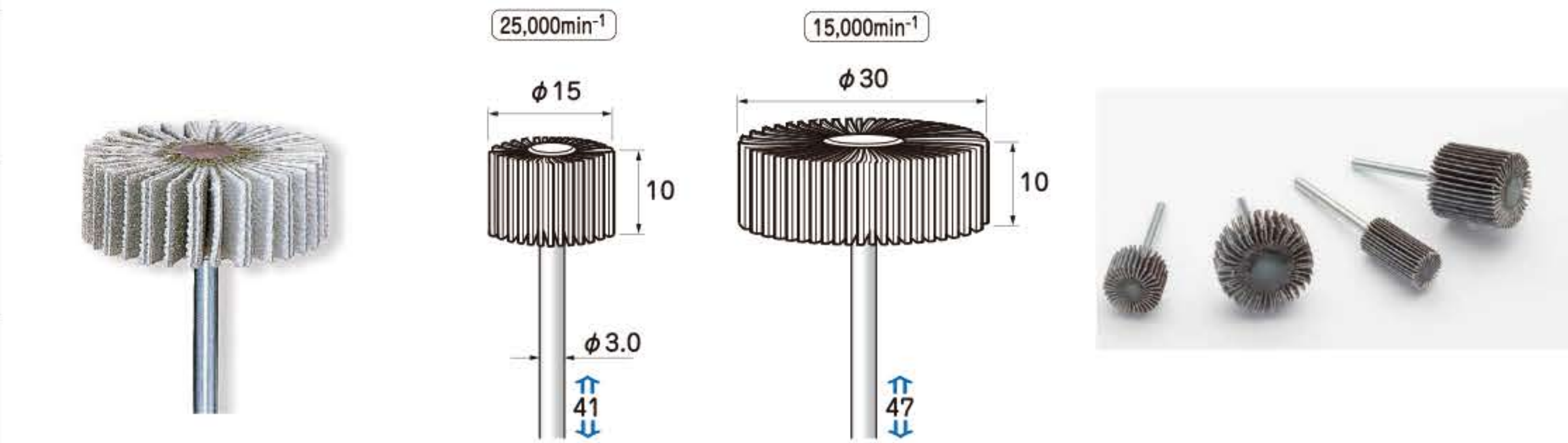


Grit Size #60	5012500	5012600	5012700	5022100	5022200
Grit Size #80	5012501	5012601	5012701	5022101	5022201
Grit Size #120	5012502	5012602	5012702	5022102	5022202
Grit Size #180	5012503	5012603	5012703	5022103	5022203
Grit Size #240	5012504	5012604	5012704	5022104	5022204
Grit Size #320	5A12004	5A12005	5A12006	-	5A12007

Diamond Flap Wheels

Shank Size $\phi 3.0$
1 pc./pack

- Abrasive cloths with electroplated diamond grains are radially mounted.
- Suits for grinding stone materials, ceramics, glass etc.



Grit Size #100	5A12008	5A12012
Grit Size #240	5A12009	5A12013
Grit Size #400	5A12010	5A12014
Grit Size #800	5A12011	5A12015

Abrasive Sanders

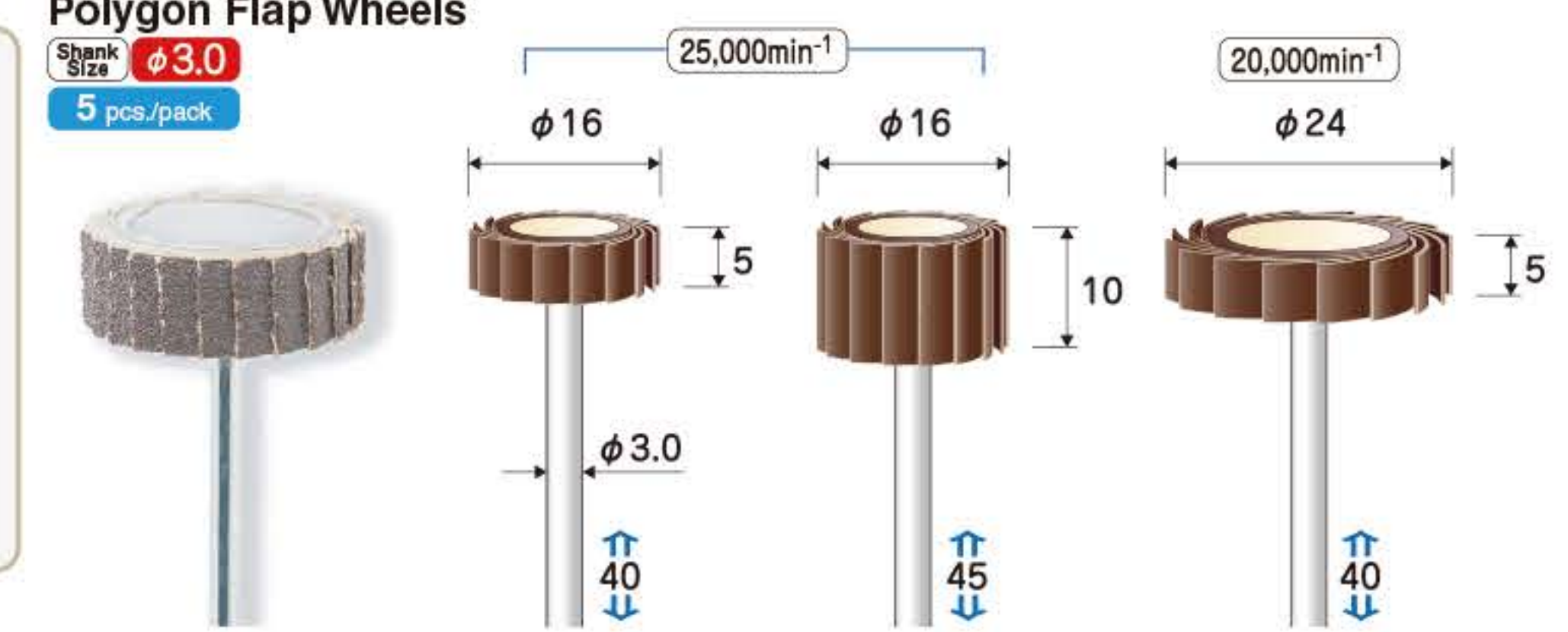
E-FORCE®

Polygon Flap Wheels

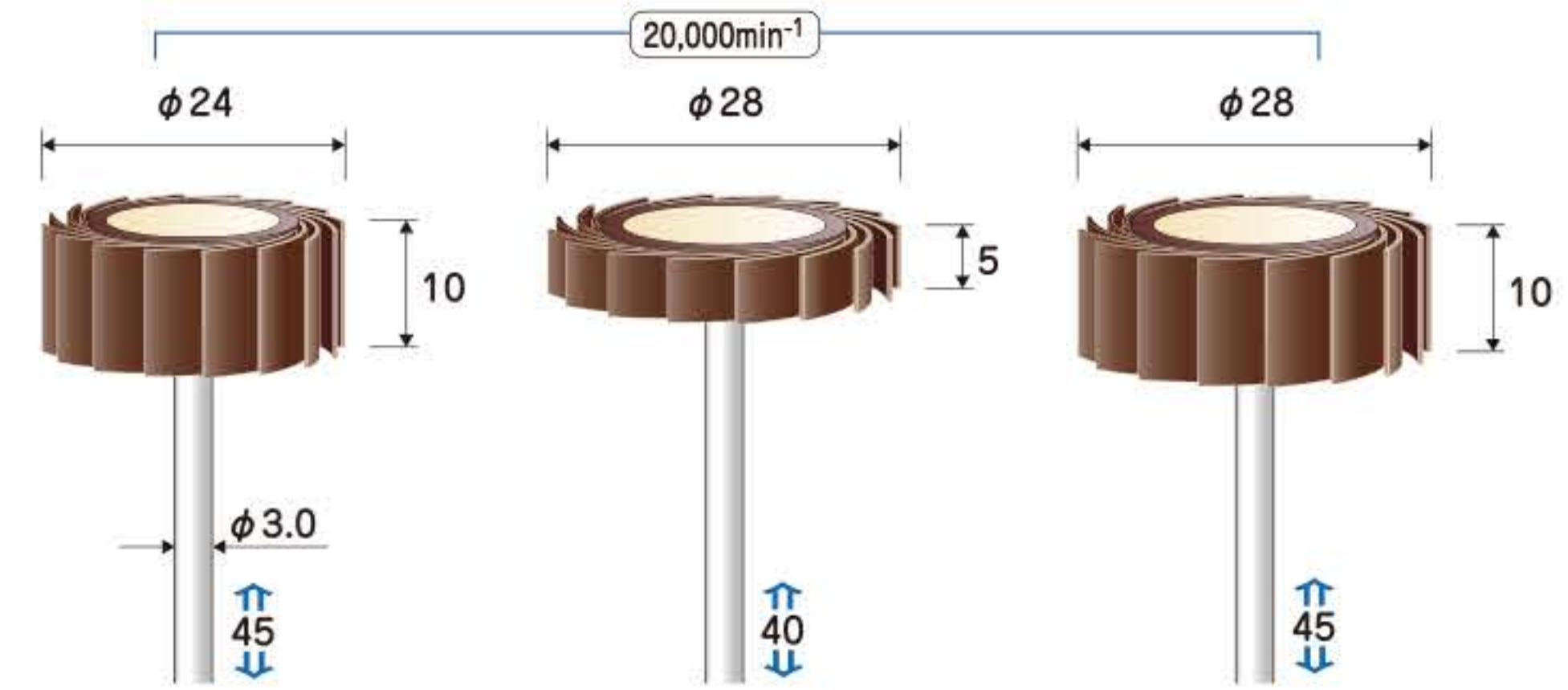
- Abrasive cloths are fixed in polygon shape to provide wider contacting area onto workpiece for more efficient workability. Soft feeling of use. No overworking on workpieces.
- Works in grinding, polishing iron, stainless steel, polishing inside pipes, rounding edges, deburring, and rust removal.

Polygon Flap Wheels

Shank Size $\phi 3.0$
5 pcs./pack



Grit Size #60	-	-	5032300
Grit Size #80	5032100	5032200	5032301
Grit Size #120	5032101	5032201	5032302
Grit Size #180	5032102	5032202	5032303
Grit Size #240	5032103	5032203	5032304
Grit Size #320	5032104	5032204	5032305
Grit Size #400	5032105	5032205	5032306



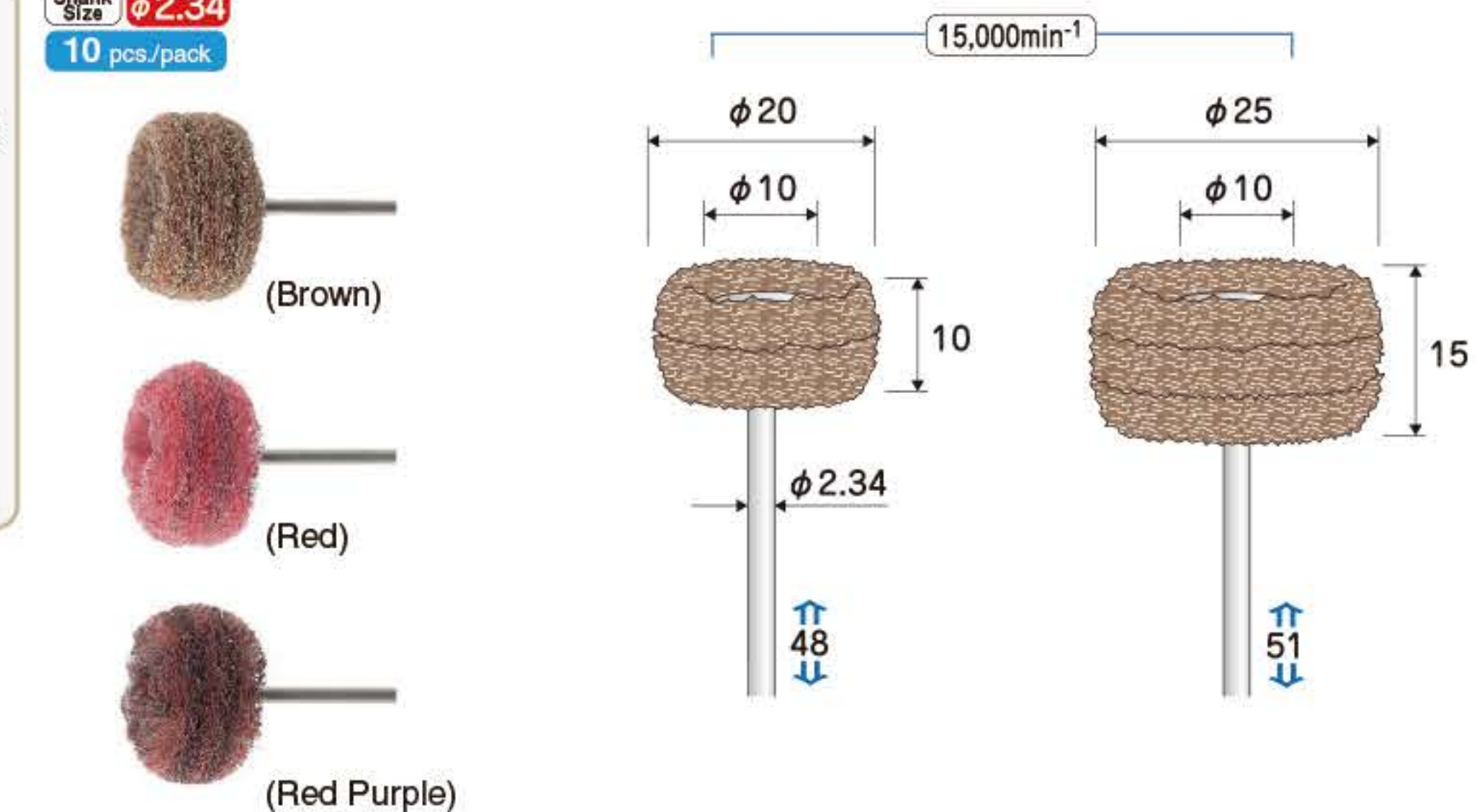
Grit Size #60	5032400	5032500	5032600
Grit Size #80	5032401	5032501	5032601
Grit Size #120	5032402	5032502	5032602
Grit Size #180	5032403	5032503	5032603
Grit Size #240	5032404	5032504	5032604
Grit Size #320	5032405	5032505	5032605
Grit Size #400	5032406	5032506	5032606

Abrasive Fiber Sanders

- Nonwoven abrasive nylon fiber materials are layered. So soft as to follow contours well, achieving efficient surface polishing.
- For removal of oxide film or rust, cleaning before welding, surface preparation before painting/laminating, removal of weld burning.

Abrasive Fiber Sanders

Shank Size $\phi 2.34$
10 pcs./pack



Grit Size #180 (Brown)	5061100	5061200
Grit Size #240 (Red)	5061101	5061201
Grit Size #320 (Red Purple)	5061102	5061202

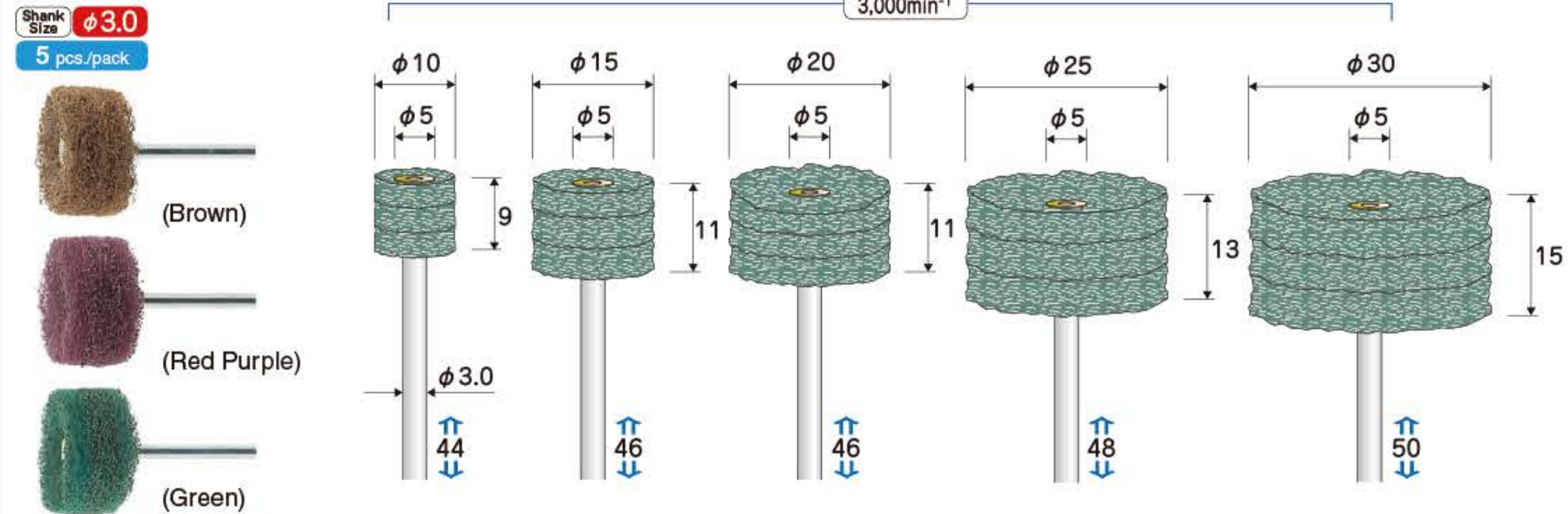
! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Cutting Discs
Shined Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Abrasive Sanders

EIKO

Abrasive Fiber Sanders

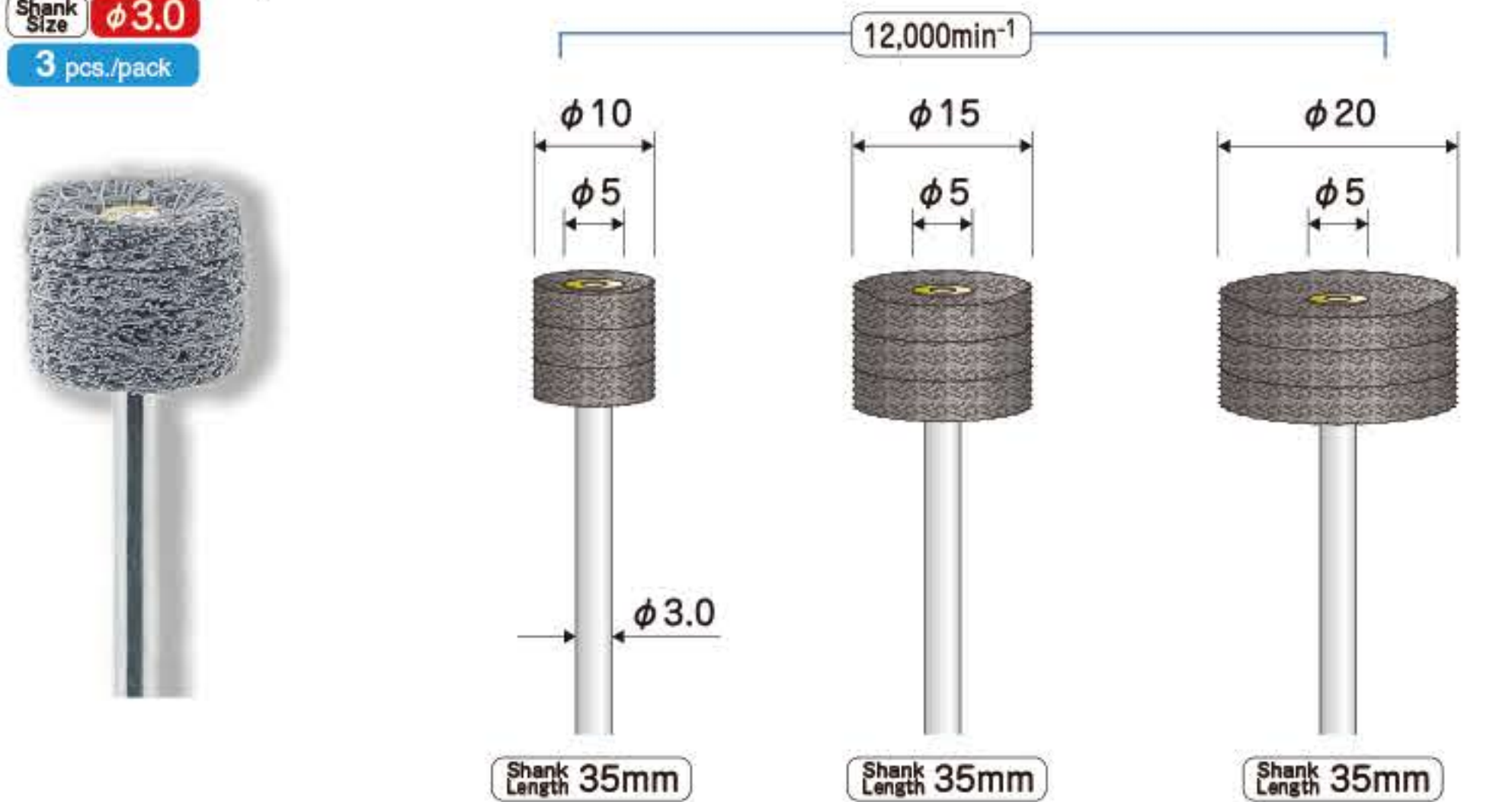


Grit Size #180 (Brown)	5062100	5062200	5062300	5062400	5062500
Grit Size #240 (Red Purple)	5062101	5062201	5062301	5062401	5062501
Grit Size #320 (Red Purple)	5062102	5062202	5062302	5062402	5062502
Grit Size #400 (Green)	5062103	5062203	5062303	5062403	5062503

Abrasive Poly-fiber Sanders

•Special nonwoven abrasive fiber materials are layered. So soft as to follow contours well, achieving efficient surface polishing.
•For removal of weld burning, preparation for mirror finish, removal of oxide film, cleaning, restoring scratches on aluminum/copper, delinting woods.

Abrasive Poly-fiber Sanders



Grit Size #120 (3 Ply)	5072100	5072200	5072300
Grit Size #240 (3 Ply)	5072101	5072201	5072301
Grit Size #400 (4 Ply)	5072102	5072202	5072302

Abrasive Poly-fiber Sanders



Cleaning	█	█
Restoring Scratches	█	█
Final Polishing	█	█
Burnishing	█	█

█ ... Poly-fiber Sanders
█ ... Fiber Sanders

Grit Size #120 (3 Ply)	5072400	5072500
Grit Size #240 (3 Ply)	5072401	5072501
Grit Size #400 (4 Ply)	5072402	5072502

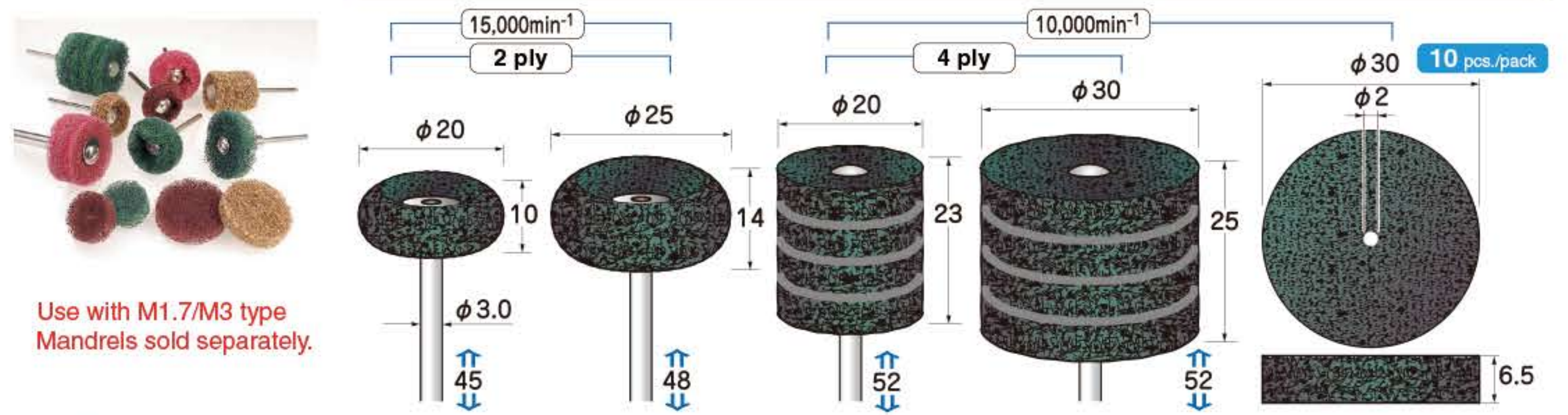
Grit size #120/240 are 3 ply while #400 is 4 ply.
Thickness of a layer differs by grit size.

Abrasive Sanders

E-FORCE®

Scotch Brite Sanders

•Soft wheels with Scotch Brite (Abrasive grain impregnated non-woven nylon fabric).
•Flexible material follows contours on workpiece well. Best suits for grinding/polishing inside holes as well.
•Results in constant finish with no deep scratches. Application ranges from rust removal to medium finish polishing.
•Also for processing hairline finish on stainless steel.



Grit Size #180	5A22001	5A22005	5A22009	5A22013	5A22017
Grit Size #240	5A22002	5A22006	5A22010	5A22014	5A22018
Grit Size #320	5A22003	5A22007	5A22011	5A22015	5A22019
Grit Size #400	5A22004	5A22008	5A22012	5A22016	5A22020

Abrasive Sponge Points

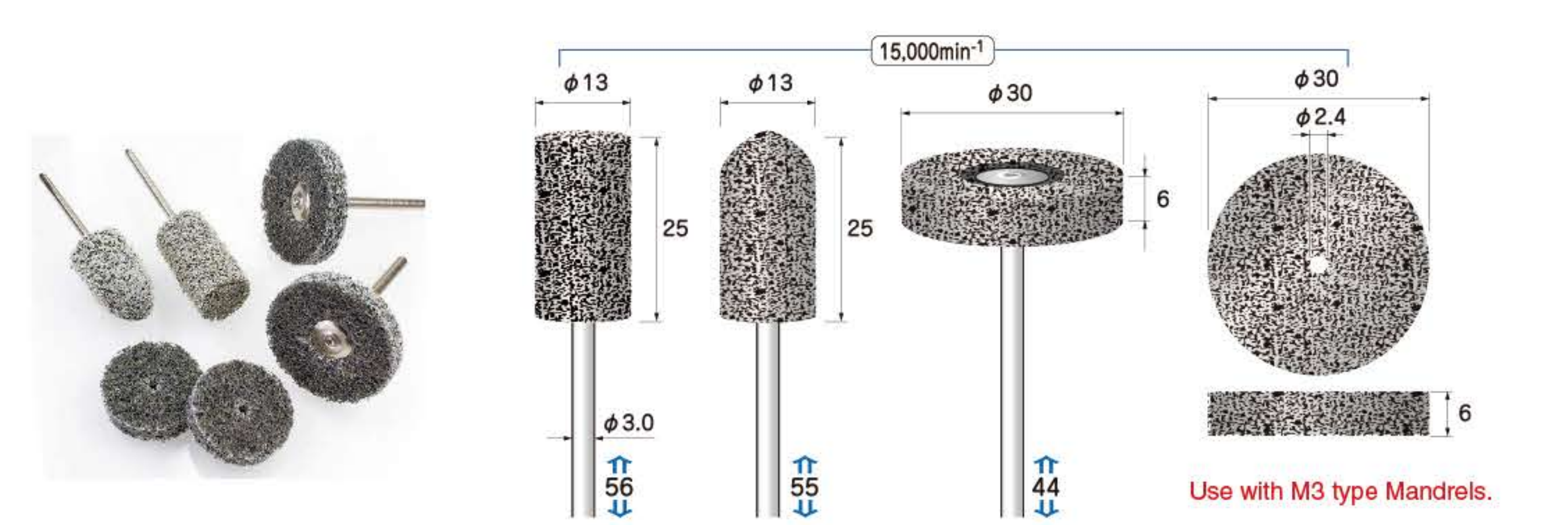
•With elastic porous unwoven fabric, smooth finish without burning or biting can be obtained.
•Suits for polishing general steel materials, also for likely-to-clog materials such as aluminum, stainless steel, brass etc.



Grit Size	#240	#320	#400	#600	#800	#1000	#1500
Abrasive Sponge Point	5A32001	5A32002	5A32003	5A32004	5A32005	5A32006	5A32007

Universal Polishers

•Durable grinding tools of resin treated unwoven fabric with relatively hard abrasive grain.
•Suits for general steel materials, also for titanium, alloy steel etc.



Grit Size	#240	#240	#240	#240
Universal Polisher	5A42001	5A42002	5A42003	5A42004

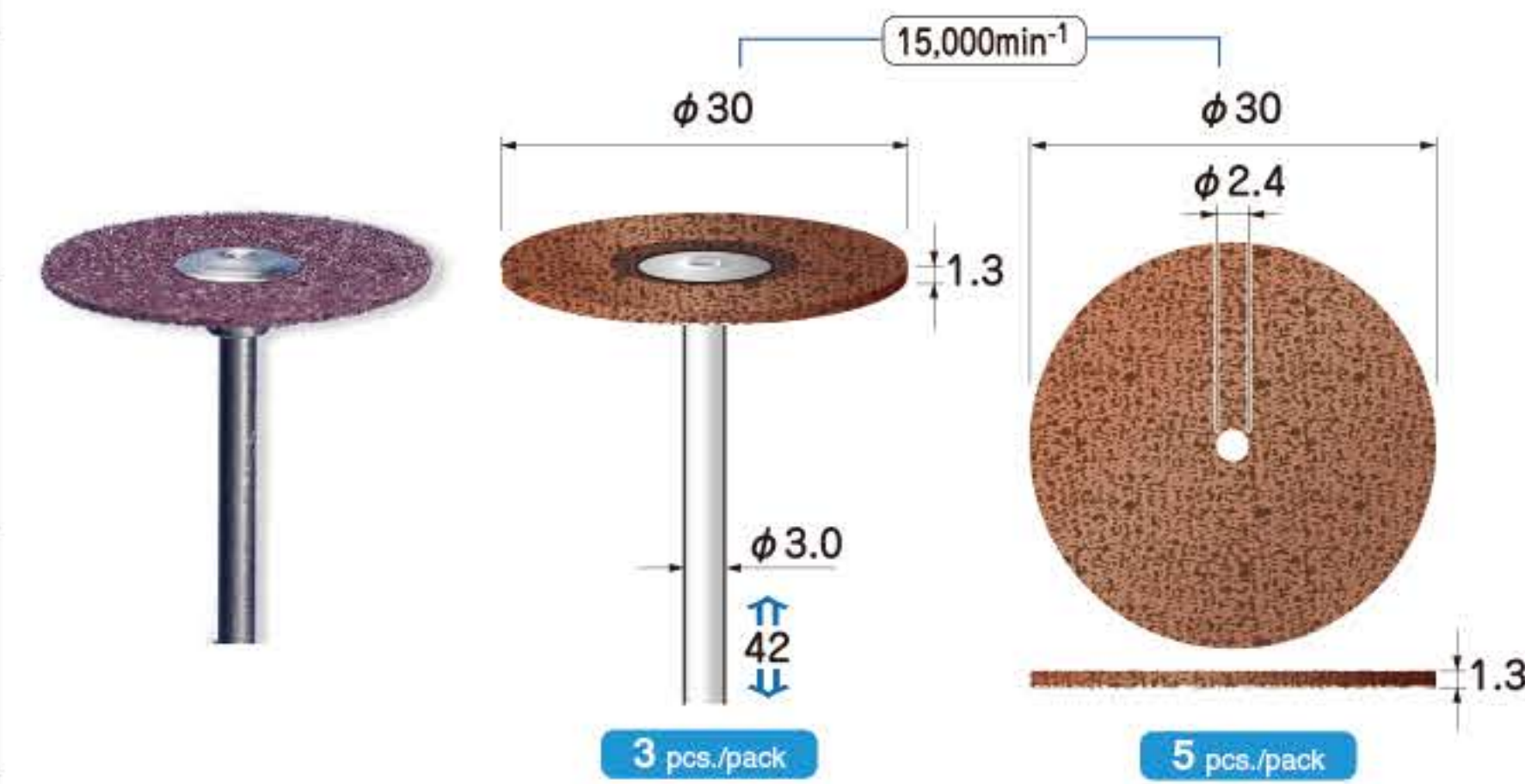
! Always use safety glasses and protective tools for your safety.
Use the tool below maximum operating rotation speed.

Disc Polishers

M3 Fixing Screw Type

Shank Size $\phi 3.0$

- Discs of compressed abrasive added unwoven fabric. Best suitable for polishing in grooves and slit parts.
- In addition to the disc face, the outside rim face of the disc can be used for deburring and grinding.
- Use with M3 type Mandrels. Discs can be layered to use.

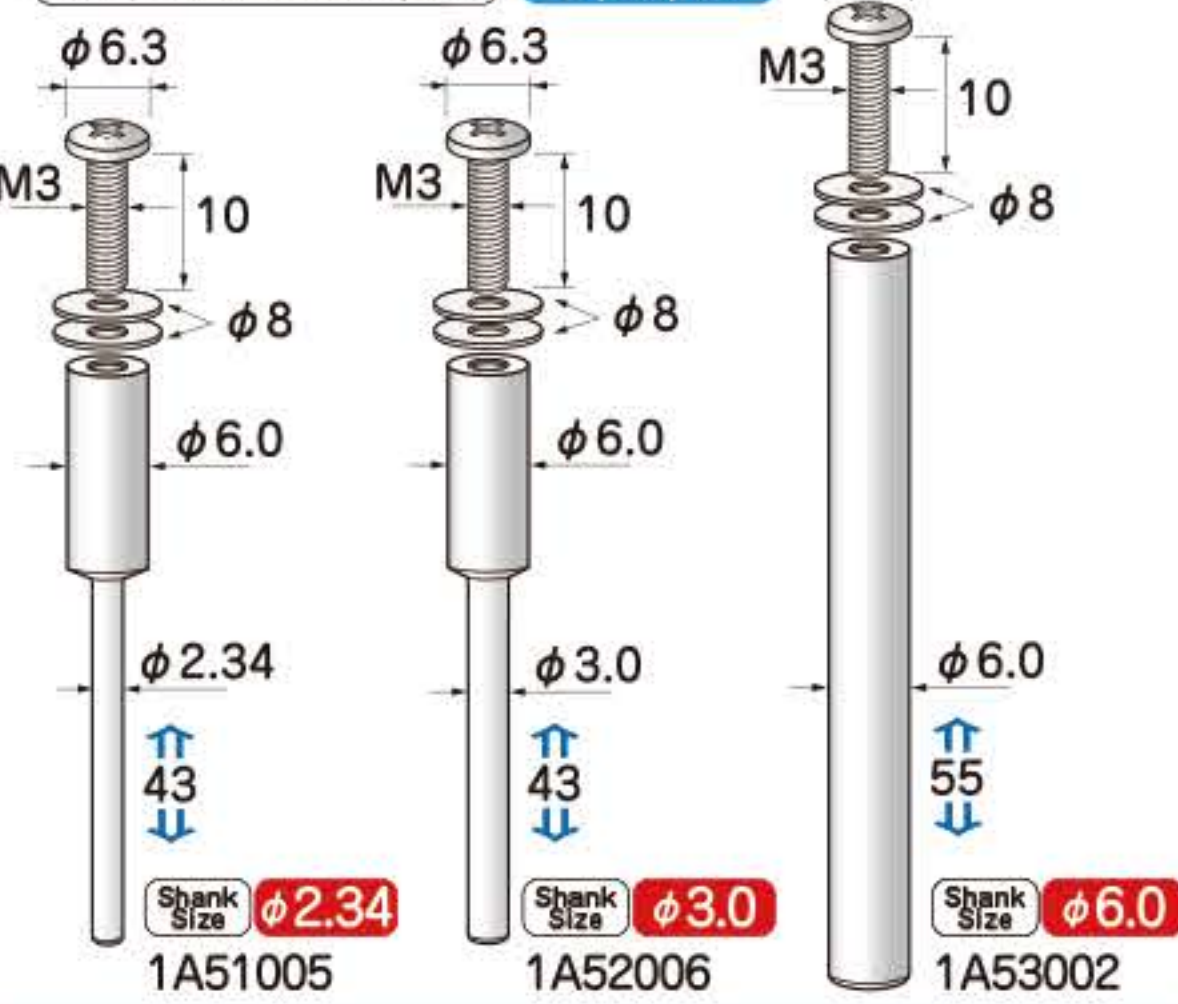


Grit Size #120 (Brown)	5A52001	5A52004
Grit Size #240 (Red)	5A52002	5A52005
Grit Size #400 (Green)	5A52003	5A52006

Stainless Mandrels

M3 Fixing Screw Type

5 pcs./pack

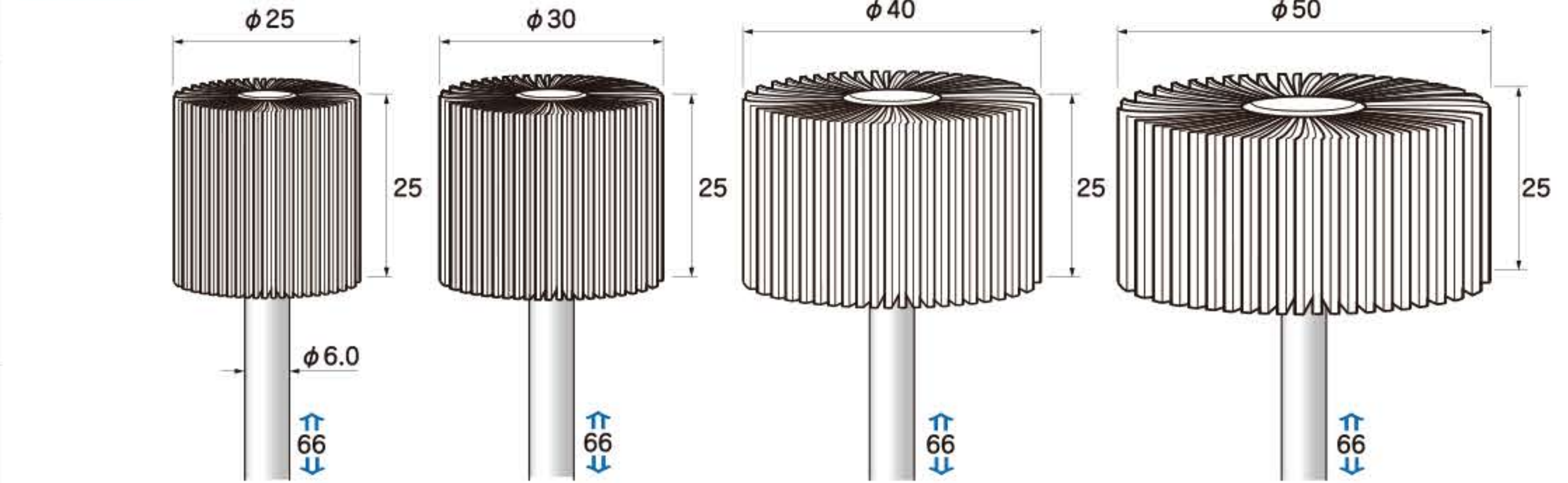


Shank Size $\phi 2.34$	1A51005
Shank Size $\phi 3.0$	1A52006
Shank Size $\phi 6.0$	1A53002

Flap Wheels

Shank Size $\phi 6.0$

1 pc./pack



Grit #80	5A13001	5A13004	5A13007	5A13010
Grit #120	5A13002	5A13005	5A13008	5A13011
Grit #240	5A13003	5A13006	5A13009	5A13012

Flap Wheels

Slitted

Shank Size $\phi 6.0$

1 pc./pack

- Abrasive cloth flaps with slits follow round surface and angulations well.



Grit Size #80	5A13013	5A13016
Grit Size #120	5A13014	5A13017
Grit Size #240	5A13015	5A13018

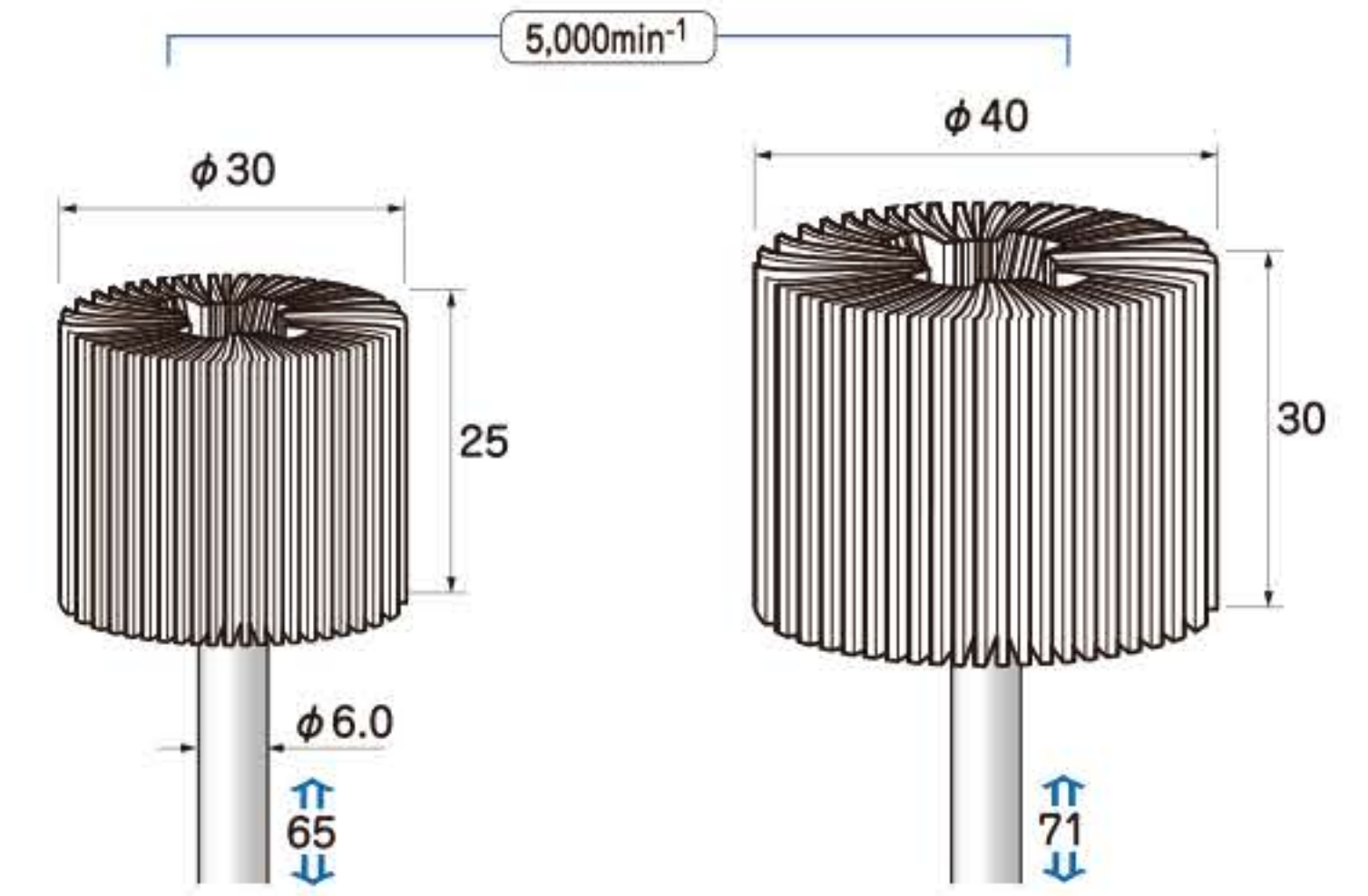
Flap Wheels

Bottom Type

Shank Size $\phi 6.0$

1 pc./pack

- Abrasive cloths are radially affixed.
- The center of top of the tool is recessed to enable to polish with top as well as the side at the same time.
- Best suits for cleaning, rust removal, and also paint stripping.



Grit Size #80	5A13019	5A13022
Grit Size #120	5A13020	5A13023
Grit Size #240	5A13021	5A13024

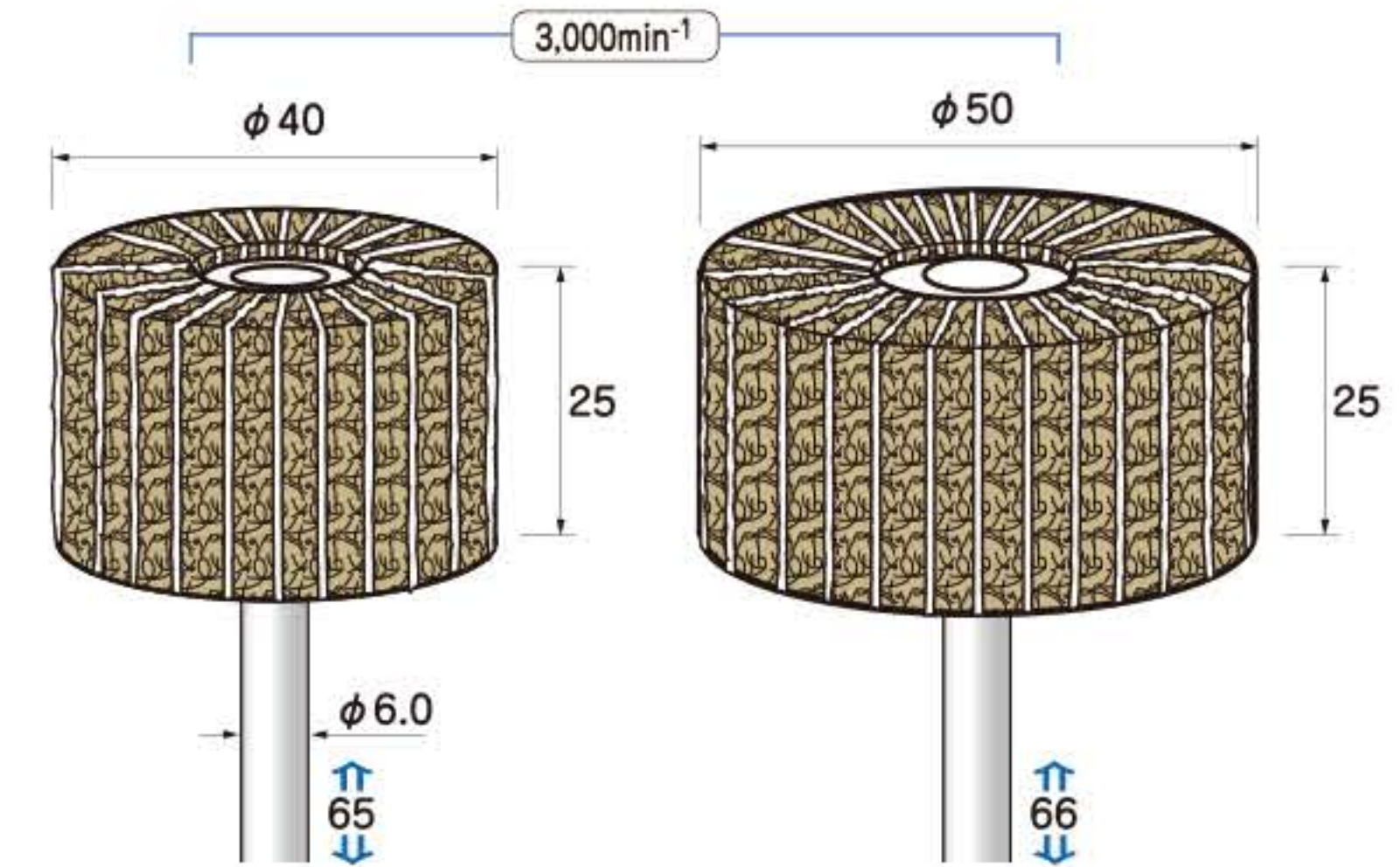
Scotch Brite Flap Wheels

Radial

Shank Size $\phi 6.0$

1 pc./pack

- Flaps of Scotch Brite are radially mounted to provide soft finish.
- Suits for polishing various metals and rust removal etc.



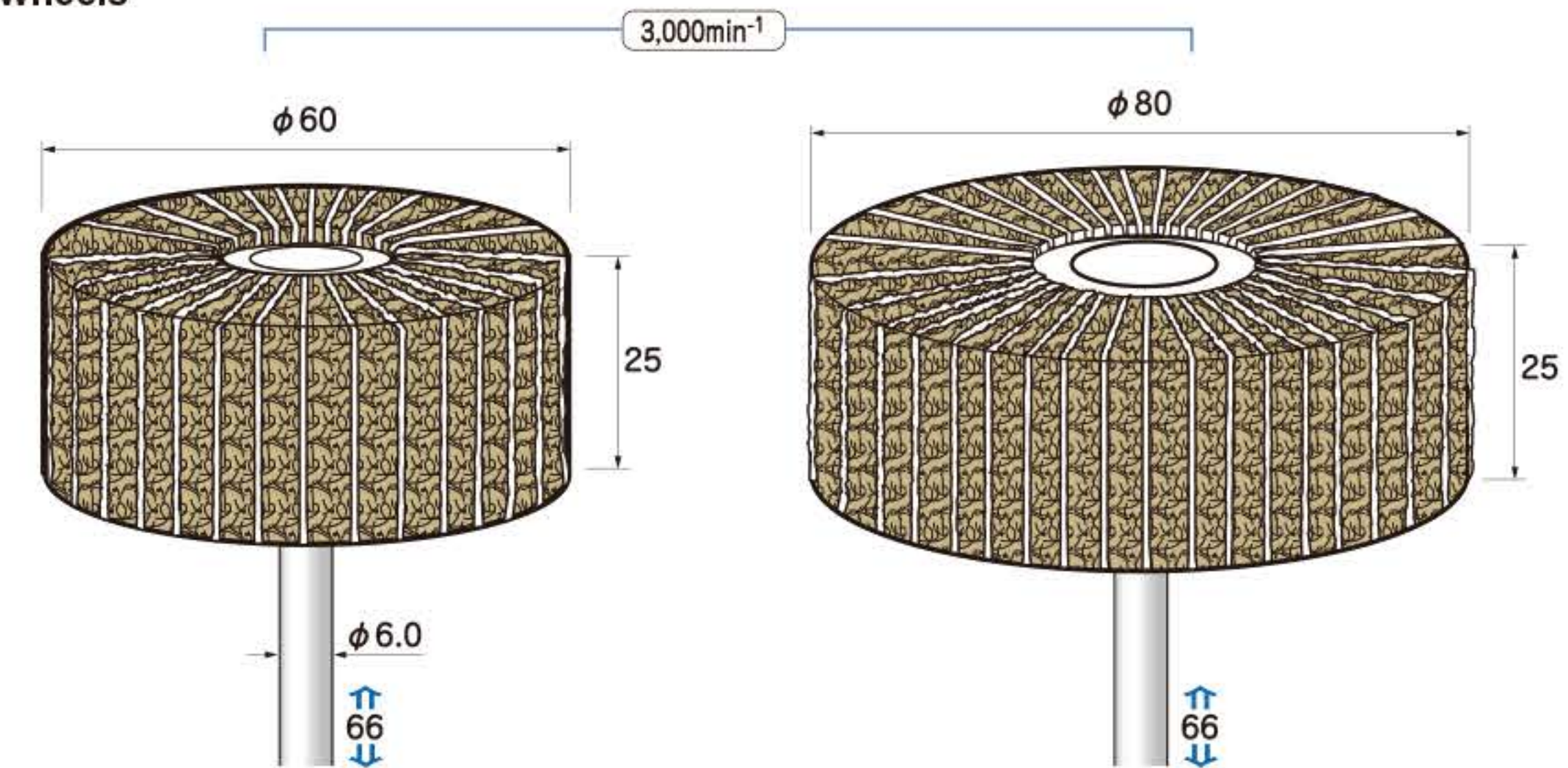
Grit Size #180 (Brown)	5A23001	5A23005
Grit Size #240 (Mahogany)	5A23002	5A23006
Grit Size #320 (Garnet)	5A23003	5A23007
Grit Size #400 (Green)	5A23004	5A23008

Scotch Brite Flap Wheels

Radial

Shank Size $\phi 6.0$

1 pc./pack



Grit Size #180 (Brown)	5A23009	5A23013
Grit Size #240 (Mahogany)	5A23010	5A23014
Grit Size #320 (Garnet)	5A23011	5A23015
Grit Size #400 (Green)	5A23012	5A23016

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

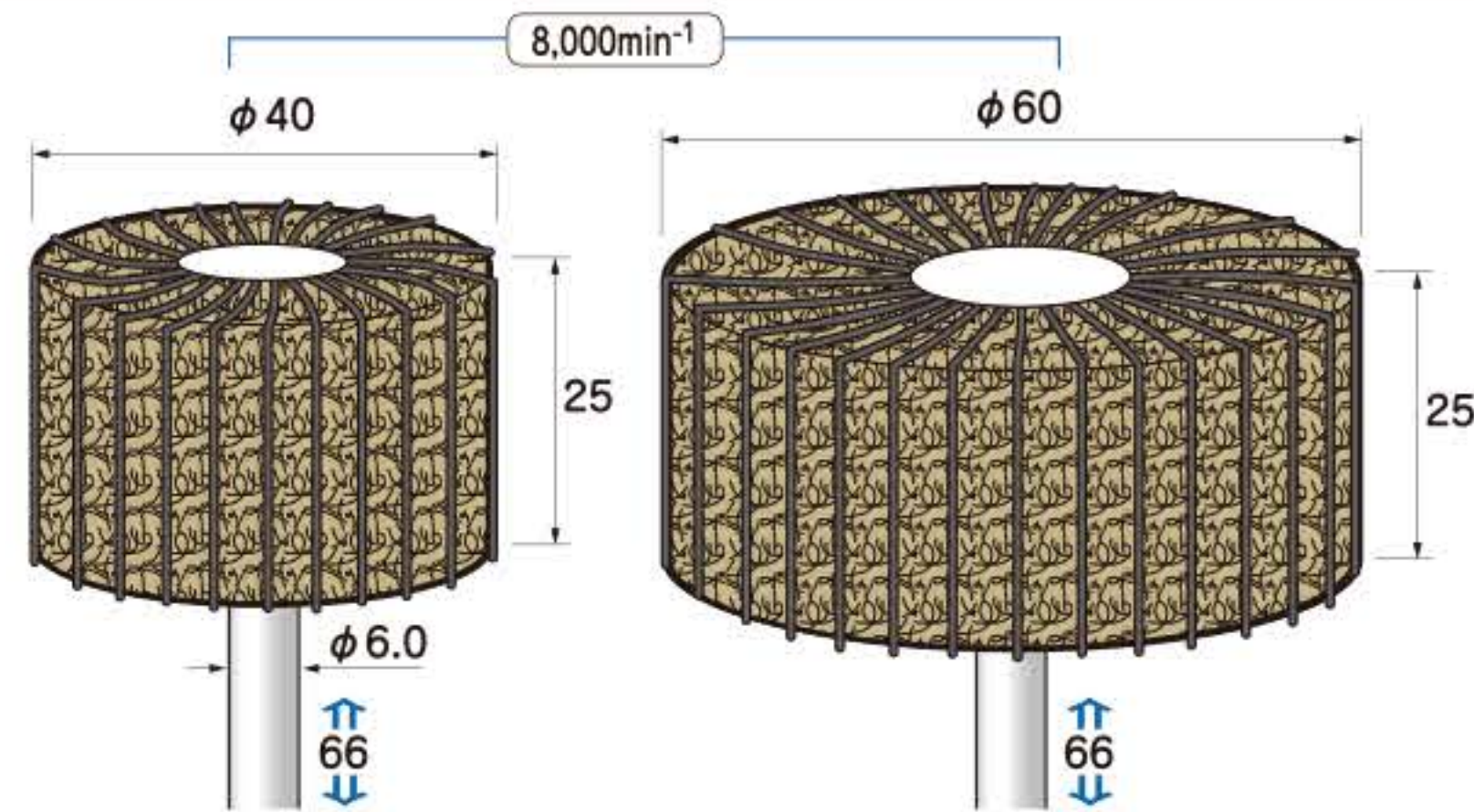
Electroplated Diamond/CBN Cutting Discs
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Carbide Cutters
Steel Cutters
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Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Interleaved Flap Wheels

Abrasive Cloth Interleaved

- Abrasive cloths are radially interleaved with Scotch Brite flaps.
- Features softness of Scotch Brite together with grinding ability of sanding paper.

Radial
Shank Size **φ6.0**
1 pc./pack

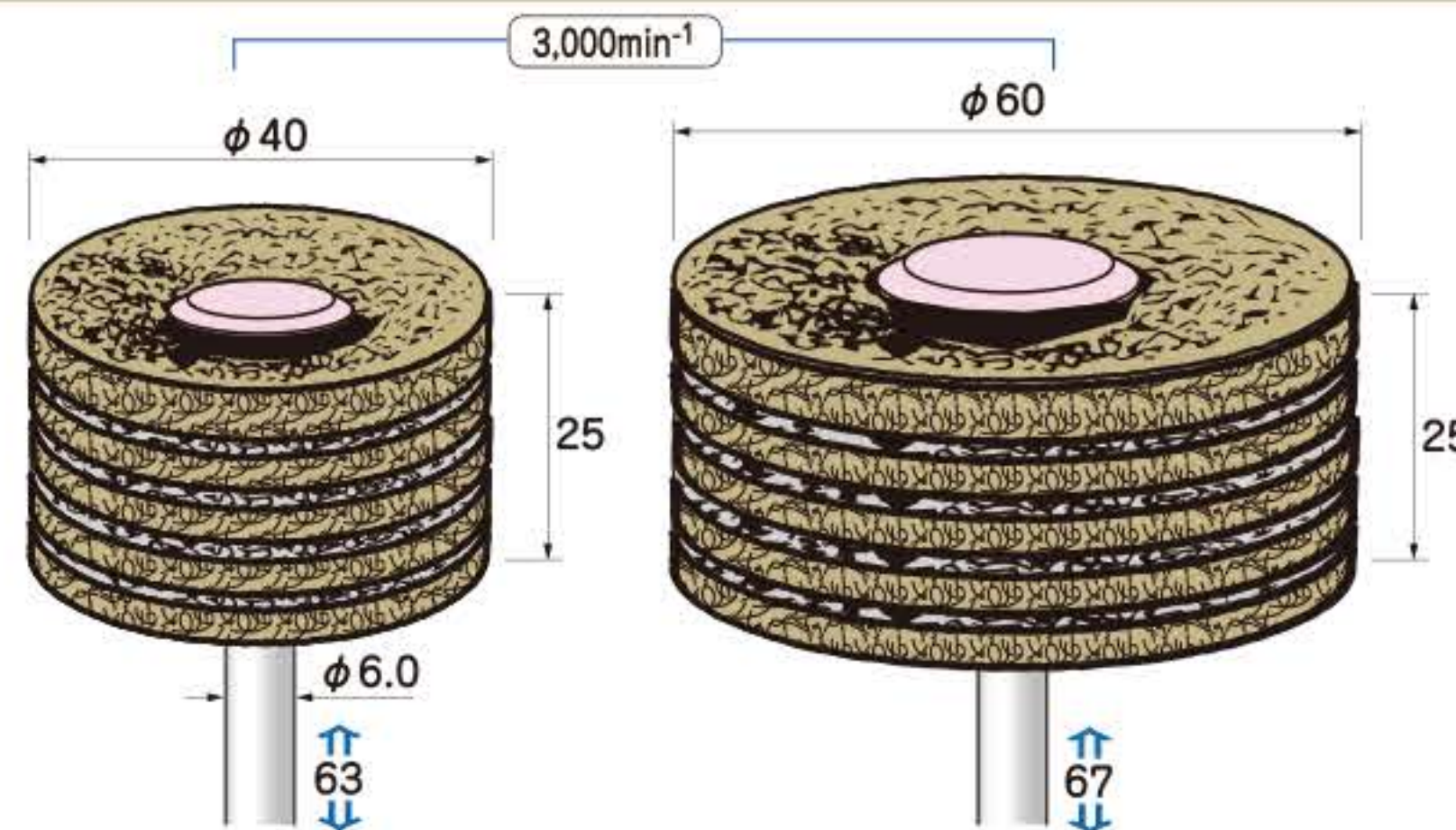


Grit Size #180 (Brown)	5A23017	5A23021
Grit Size #240 (Mahogany)	5A23018	5A23022
Grit Size #320 (Garnet)	5A23019	5A23023
Grit Size #400 (Green)	5A23020	5A23024

Scotch Brite Sanders

Layered
Shank Size **φ6.0**
1 pc./pack

- Scotch Brite discs are layered.
- Very soft contact onto workpiece, also suitable for hairline polishing.



Grit Size #180 (Brown)	5A23025	5A23029
Grit Size #240 (Mahogany)	5A23026	5A23030
Grit Size #320 (Garnet)	5A23027	5A23031
Grit Size #400 (Green)	5A23028	5A23032

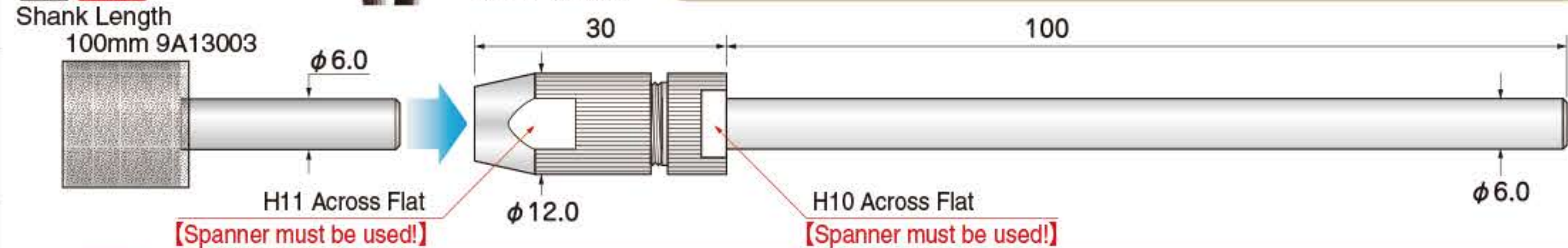
Shank Adapters

Stainless
1 pc./pack
Shank Size **φ6.0**

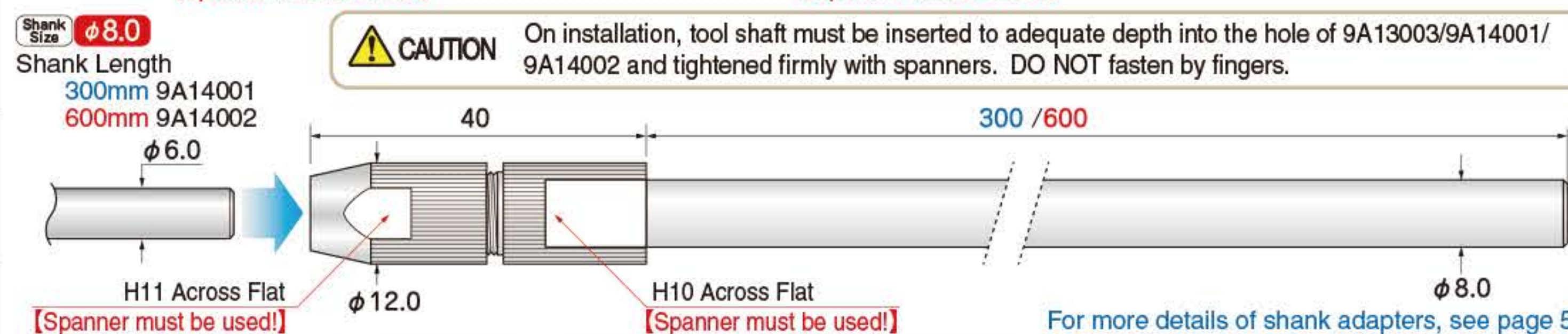


Spanner Set
9A15001
10mm 11mm
Set of 1 each

- Extension adapters for φ6.0 mm shank tools.
- For working in deep holes unreachable with the ordinary tools.
- Cost and time saving, no need to order custom made tools.



CAUTION On installation, tool shaft must be inserted to adequate depth into the hole of 9A13003/9A14001/9A14002 and tightened firmly with spanners. DO NOT fasten by fingers.



WARNING When using 9A14001/9A14002, always check for safety, and run at the speed up to 1/30 or less of the maximum operation speed of the tool installed.

For more details of shank adapters, see page 55.

Cap Sanders

- Abrasive fabric is formed specially to a plug shape.
- Use with the special holders only.
- Economical sander caps can be replaced individually.

- Suitable for various materials such as general metals, and hardened steel.
- Can be used in wide range of works, such as grinding metals, deburring parts, also for grinding resin and wood.

- Best suits for working on titanium, aluminum alloy.
- Outstanding cutting ability especially for turbines of aircraft. Ideal for rough/medium finishing and grinding in maintenance duties.
- Carefully selected grains with special bonding material provides efficient work by minimizing heat generation to protect workpiece from heat, preventing grains from falling off, and less burning.

- A next generation abrasive sander with ceramic grains.
- Specialized for grinding hard-to-cut materials such as Inconel and hastelloy for turbines of aircraft and nuclear power generation, and flexible metals such as stainless alloy, heat-resistant nickel/stainless steel, cobalt alloy etc.
- Coarse, less likely to be clogged special structure provides efficiency in work with less burning by minimizing heat generation.

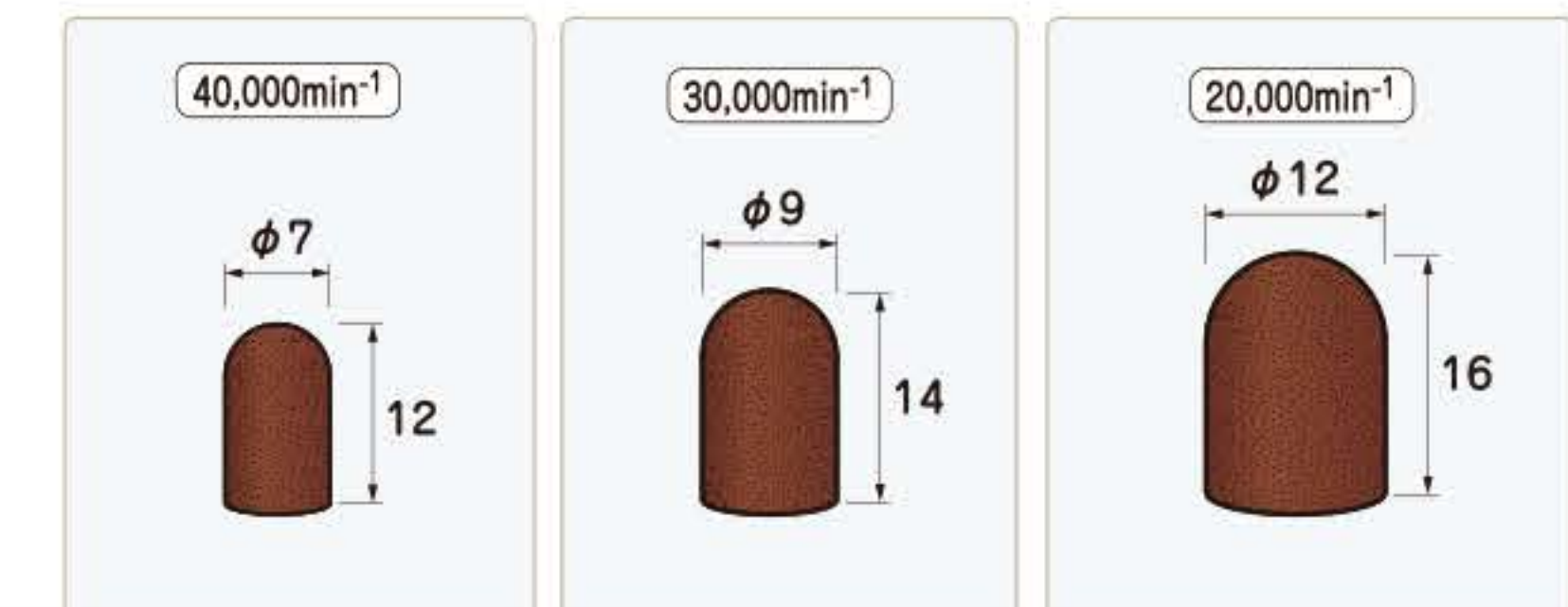
Special Holders for Cap Sanders

Normal Holder Shank Size **φ3.0**
Quick Change Holder Shank Size **φ2.34 φ3.0 φ6.0**

WARNING Always use in clockwise direction, because operating the quick change holder with translucent end in counterclockwise direction may make the fixing screw on top be loosened, resulting in scattering of tool installed.

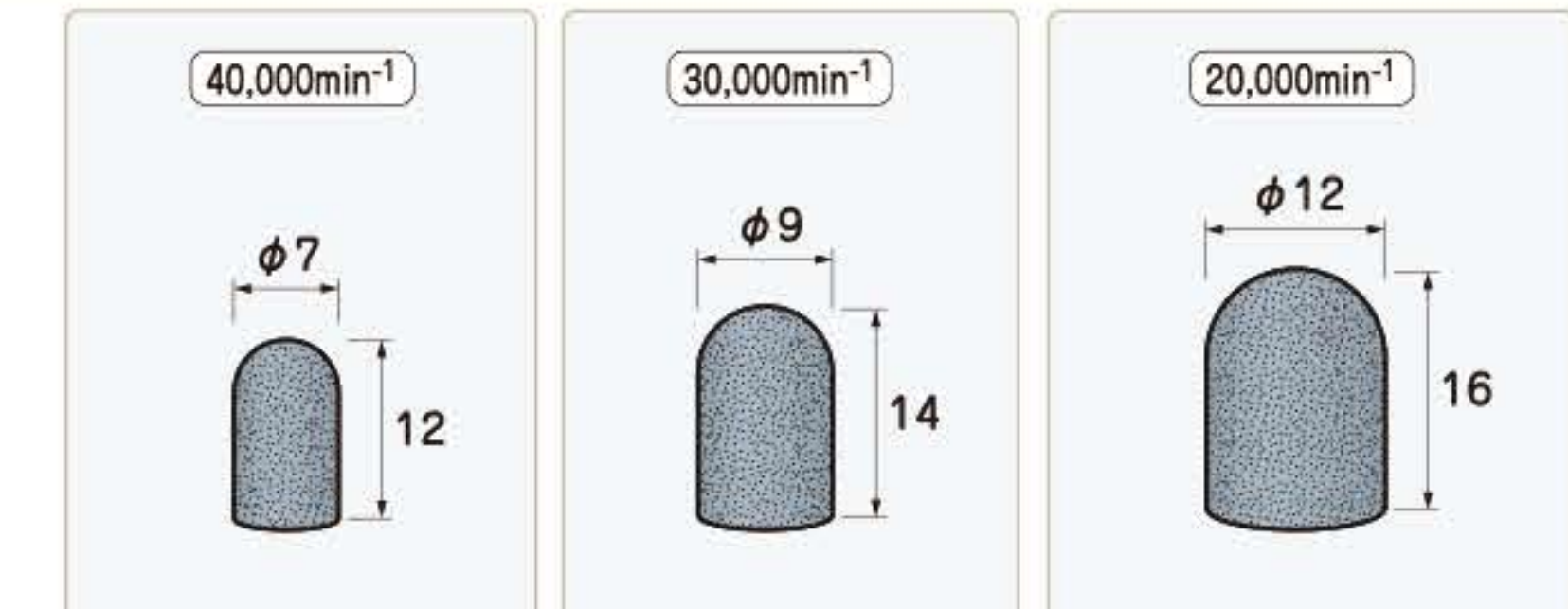
- These holders are exclusive to Cap Sanders.
- Holders with black end part hold the cap tightly and can be used in reverse rotating direction.
- New quick change holders with translucent end part provide easy installation/removal simply by turning the cap part. Tool-less replacement improves workability greatly.
- Available in φ2.34mm • φ3.0mm • φ6.0mm shanks. Sterilize agent proof stainless and medical silicon rubber.

A grain
10 pcs./pack
Use with the special holders only.



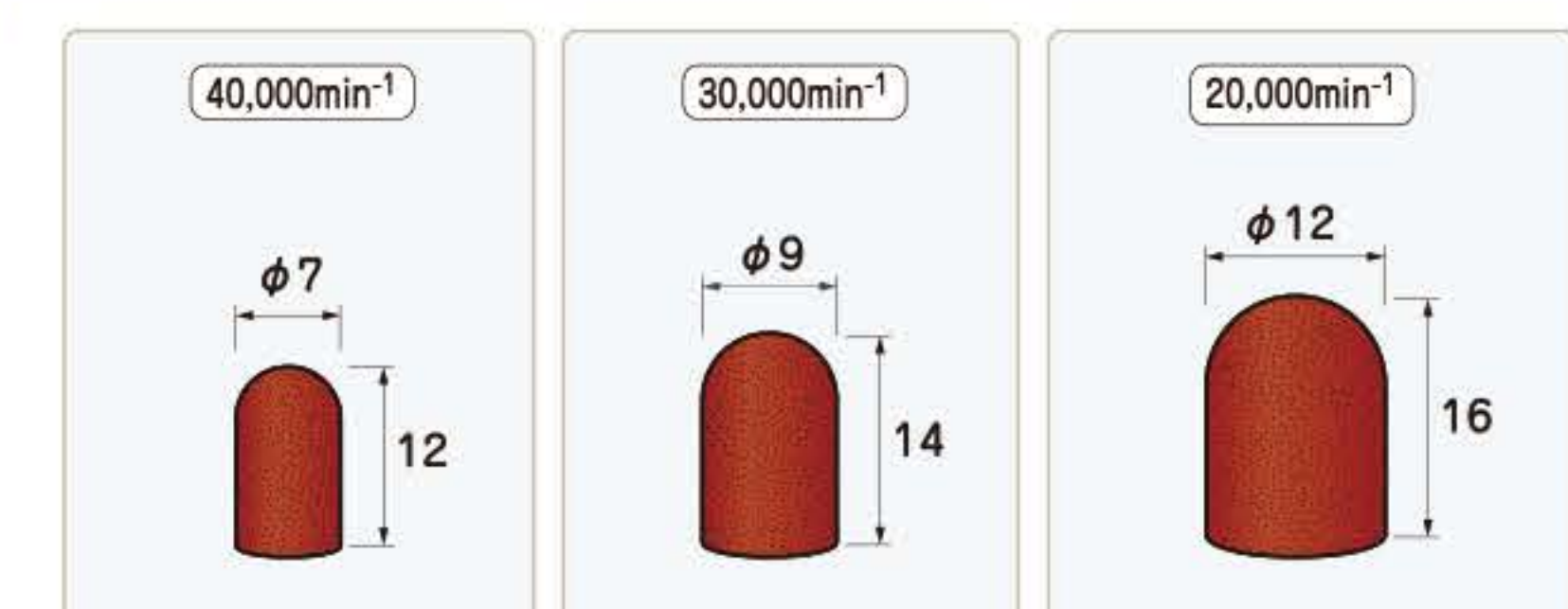
Grit Size #80	5A61001	5A61004	5A61007
Grit Size #150	5A61002	5A61005	5A61008
Grit Size #280	5A61003	5A61006	5A61009

SIC grain
10 pcs./pack
Use with the special holders only.



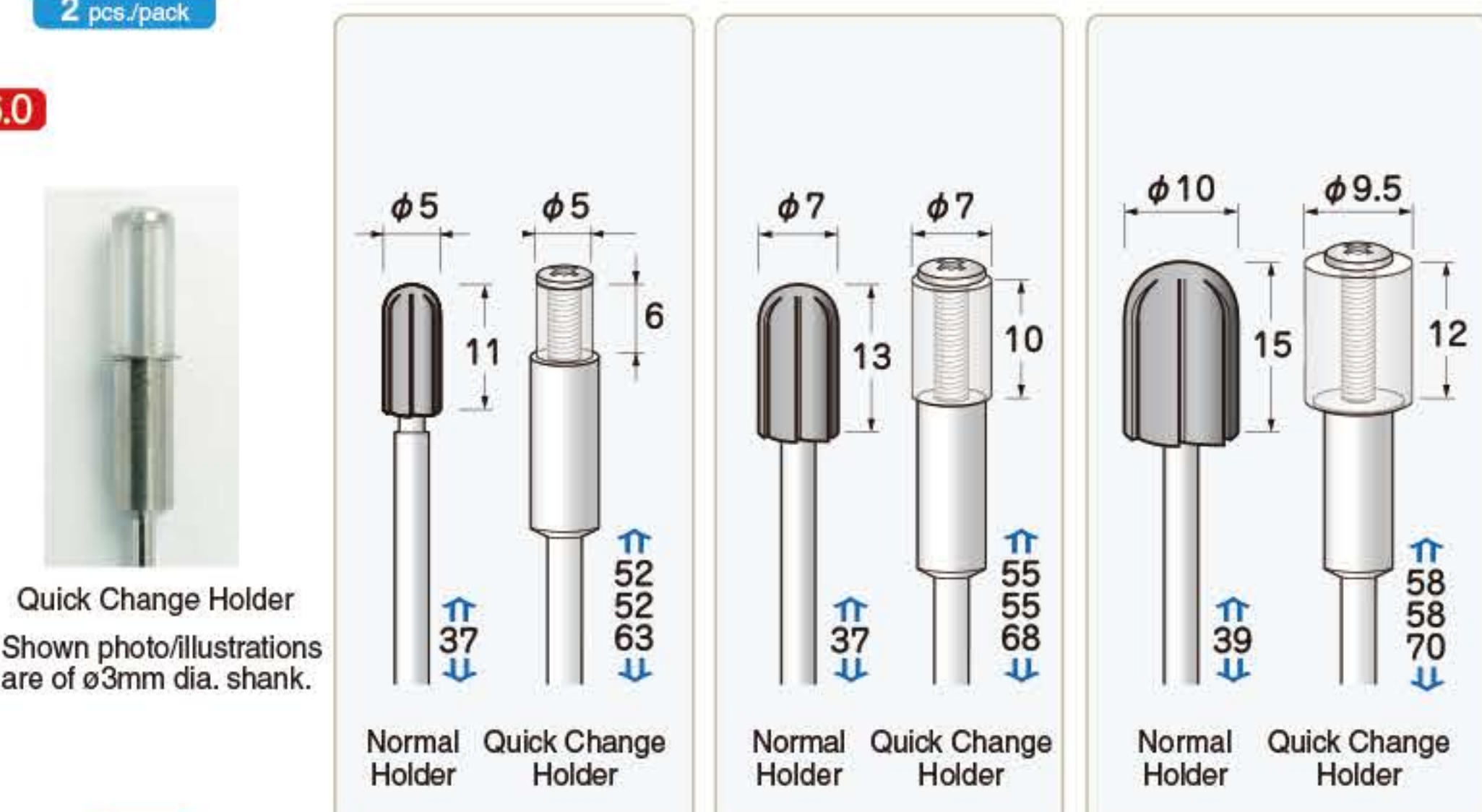
Grit Size #80	5A61010	5A61012	5A61014
Grit Size #150	5A61011	5A61013	5A61015

Ceramic grain
10 pcs./pack
Use with the special holders only.



Grit Size #80	5A61016	5A61018	5A61020
Grit Size #120	5A61017	5A61019	5A61021

2 pcs./pack



Shank Size φ2.34	-	5A62002	-	5A62006	-	5A62010
Shank Size φ3.0	5A62001	5A62003	5A62005	5A62007	5A62009	5A62011
Shank Size φ6.0	-	5A62004	-	5A62008	-	5A62012

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

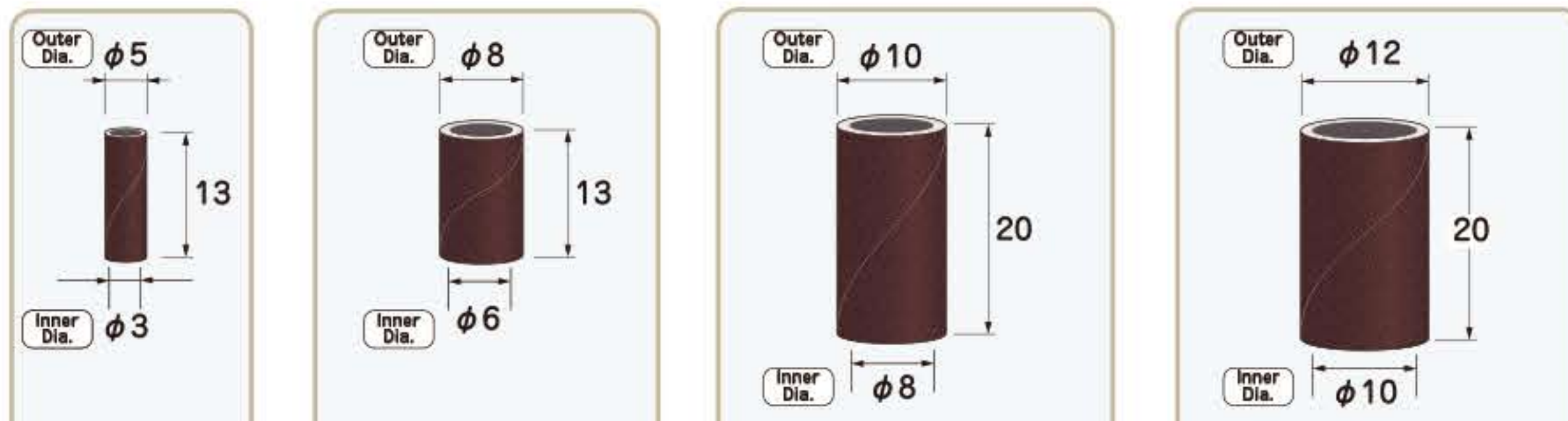
Abrasive Rolls

- Abrasive cloth formed specially to cylindrical shape. Install to the special holders to use.
- Individually replaceable sanders are economical.
- Normal holders are made of rubber (excl. $\phi 3.0$ mm type), providing soft feeling without overworking on workpiece.
- For deburring iron, stainless steel, and non-ferrous metals. Suitable for grinding/polishing inside cylinders or curved surface.

Abrasive Rolls

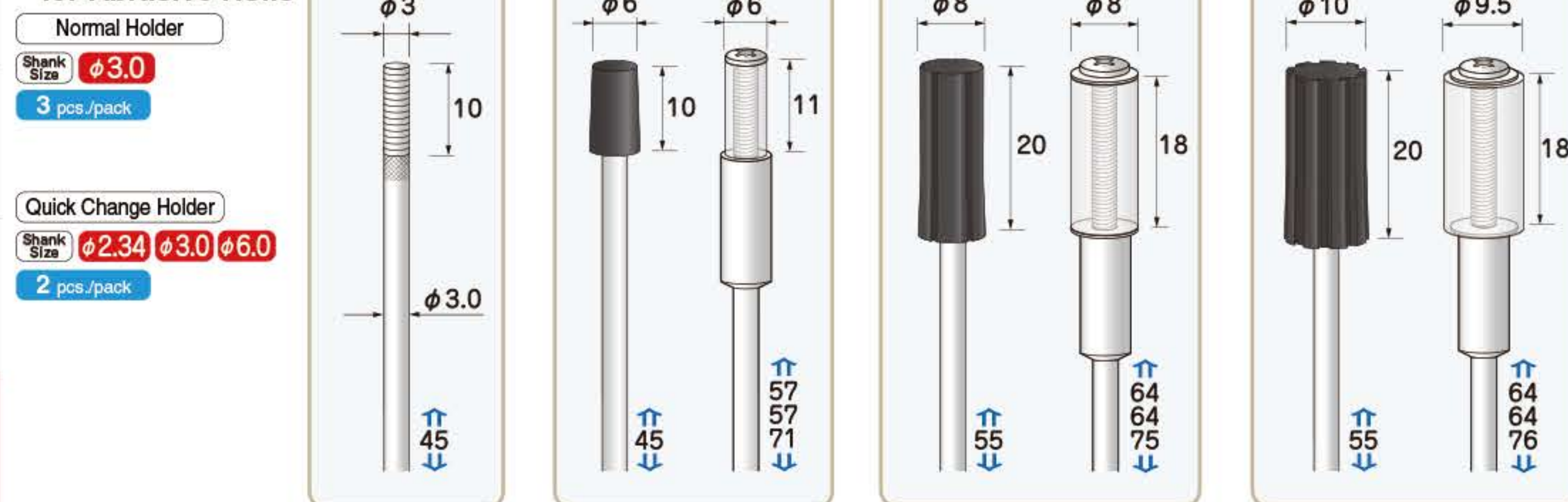
A grain
20 pcs./pack

25,000min⁻¹



Grit Size	5042100	5042200	5042300	5042400
Grit Size #60	5042100	5042200	5042300	5042400
Grit Size #80	5042101	5042201	5042301	5042401
Grit Size #120	5042102	5042202	5042302	5042402
Grit Size #180	5042103	5042203	5042303	5042403
Grit Size #240	5042104	5042204	5042304	5042404
Grit Size #320	5042105	5042205	5042305	5042405
Grit Size #400	5042106	5042206	5042306	5042406
Grit Size #600	5A61022	5A61023	5A61024	5A61025

Special Holders for Abrasive Rolls



Shank Size	Normal Holder	Normal Holder	Quick Change Holder	Normal Holder	Quick Change Holder	Normal Holder	Quick Change Holder
$\phi 2.34$	-	-	5A62013	-	5A62016	-	5A62019
$\phi 3.0$	5052100	5052101	5A62014	5052102	5A62017	5052103	5A62020
$\phi 6.0$	-	-	5A62015	-	5A62018	-	5A62021

Quick Change Holders

- New quick change holders with translucent end part provide easy installation/removal simply by turning the cap part.



The photo shown is of shank size $\phi 6.0$ mm.

CAUTION Use the special holder of which the outer dia. is same as inner dia. of abrasive rolls.

WARNING Always use in clockwise direction, because operating the quick change holder with translucent end in counterclockwise direction may make the fixing screw on top be loosened, resulting in scattering of tool installed.

Abrasive Nylon Fiber Discs (Shank Dia. $\phi 6.0$ mm)

- Flexible disc shaped abrasive impregnated nylon unwoven fabric follows to contour well to provide an efficient polishing.
- Suitable for fine adjustment of metal or wood surfaces.
- Rubber holder prevents overworking on workpiece.



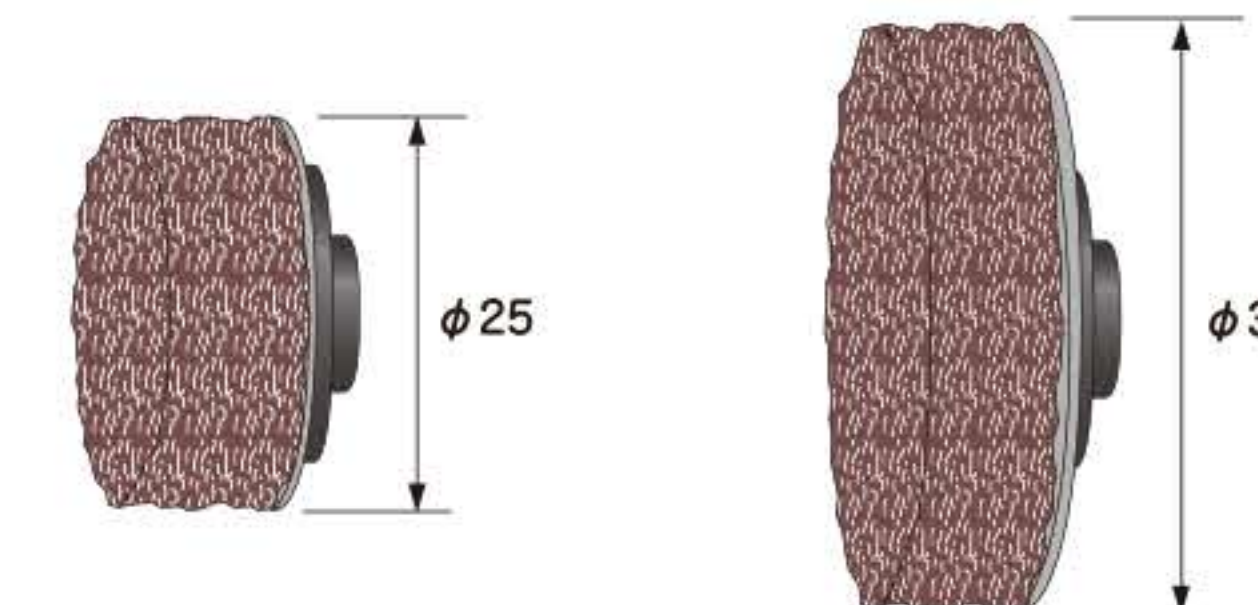
WARNING Always use in clockwise direction because operating in counterclockwise direction may make the fixing screw be loosened resulting in scattering of tool installed.

Abrasive Nylon Fiber Discs

10 pcs./pack

CAUTION Use the rubber disc holders exclusive to this tool.

12,000min⁻¹



Grit Size #100 Medium	5A71001	5A71004
Grit Size #150 Fine	5A71002	5A71005
Grit Size #240 Extra Fine	5A71003	5A71006

Rubber Disc Holders

Shank Size $\phi 6.0$
2 pcs./pack

CAUTION Use the rubber holders of appropriate size corresponding to that of fiber discs.



Rubber Disc Holder

5A72001

5A72002

Enhancing freedom of creativity of specialists.

E-FORCE®



Bristle

Feature

- Finishing tools suitable for polishing metals.
- Flexible to contact surface well and provides no biting and soft finishing.
- Processing ability differs by brush materials, lengths, and shapes. Shall be chosen for the purpose of work intended.

Main Application

Deburring, cleaning, finish polishing etc. Suitable for variety of uses by brush materials and shapes.

General steels, stainless steel, aluminum, copper, brass, plastics etc.

Brush Shapes



Bristle Brushes

• Flexible, durable, tense quality bristle is used.
• Moderate contact on workpiece. Superior in deburring and cleaning.

Flat Black Bristle 10 pcs./pack

	20,000min ⁻¹		15,000min ⁻¹		10,000min ⁻¹	
	φ10	φ12	φ14	φ20	φ23	φ25
	φ2.34	φ3.0	φ3.0	φ3.0	φ3.0	φ3.0
	42	37	37	44	44	47
	48	48	49	49	49	49
Shank Size φ2.34	Black Bristle -	6A11001	6A11002	6011100	6011101	6A11003
Shank Size φ3.0	Black Bristle	6A12001	6A12002	6A12003	6012100	6012101
						6A12004

Bristle Brushes

• Soft hair. Making contact on workpiece by centrifugal force of rotation.
• High density hair is ideal for cleaning or finish polishing.

Flat White Bristle 10 pcs./pack

	20,000min ⁻¹		15,000min ⁻¹		10,000min ⁻¹	
	φ10	φ12	φ14	φ19	φ22	φ25
	φ2.34	φ3.0	φ3.0	φ3.0	φ3.0	φ3.0
	42	37	37	46	46	47
	48	48	49	49	49	49
Shank Size φ2.34	White Bristle -	6A11004	6A11005	6A11006	6A11007	6A11008
Shank Size φ3.0	White Bristle	6A12005	6A12006	6A12007	6A12008	6A12009
						6A12010

Goat Hair Brushes

• Very soft and inelastic goat hair hardly damages workpieces, and polishes materials softly combined with abrasive agents.
• Hardness of hair : goat hair is the softest, then horse hair, and bristle is the hardest.

Flat Goat Hair 10 pcs./pack

	15,000min ⁻¹		10,000min ⁻¹
	φ20	φ23	φ25
	φ2.34	φ3.0	φ3.0
	44	44	46
Shank Size φ2.34	Goat Hair	6011200	6011201
Shank Size φ3.0	Goat Hair	6012200	6012201
			6012202

Bristle Brushes

Flat Black Bristle 2 pcs./pack 10,000min⁻¹

Flat Tampico Fiber 2 pcs./pack 10,000min⁻¹

	φ22	φ25	φ25	φ30
	φ3.0	φ3.0	φ3.0	φ3.0
	47	46	40	40
Black Bristle	6A12011	6012102	Tampico Fiber	6A22001
				6A22002

Horse Hair Brushes

Cup Horse Hair 5 pcs./pack 10,000min⁻¹

Cup Tampico Fiber 1 pc./pack 3,000min⁻¹

	φ14	φ16	φ25	φ16
	φ3.0	φ3.0	φ3.0	φ3.0
	51	51	56	50
Horse Hair	6A12012	6A12013	6A12014	Tampico Fiber
				6A22003

Bristle Brushes

Cup Black Bristle 10 pcs./pack

	φ7	φ12	φ14	φ20
	φ2.34	φ3.0	φ3.0	φ3.0
	45	45	53	51
Shank Size φ2.34	Black Bristle	6A11009	6A11010	6011102
Shank Size φ3.0	Black Bristle	6A12015	6A12016	6012104
				6012105

Bristle Brushes

Cup White Bristle 10 pcs./pack

Cup Goat Hair 10 pcs./pack

	φ7	φ12	φ14	φ14	φ20
	φ2.34	φ3.0	φ3.0	φ3.0	φ3.0
	45	45	51	53	51
Shank Size φ2.34	White Bristle	6A11011	6A11012	6A11013	Goat Hair
Shank Size φ3.0	White Bristle	6A12017	6A12018	6A12019	Goat Hair
					6011202
					6012204
					6012205

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Cutting Discs
Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Slabs
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Bristle Brushes

Flat End Black Bristle
10 pcs./pack

Shank Size $\phi 2.34$	Black Bristle	6A11014	6A11015	6011103	-	-	-
Shank Size $\phi 3.0$	Black Bristle	6A12020	6A12021	6012106	6A12022	6A12023	6012107

Goat Hair Brushes

Flat End Goat Hair
10 pcs./pack

Bristle Brushes Flat End White Bristle
10 pcs./pack

Shank Size $\phi 2.34$	Goat Hair	-	-	6011203	-	White Bristle	6A11016
Shank Size $\phi 3.0$	Goat Hair	6A12024	6A12025	6012206	6012207	White Bristle	6A12026

Horse Hair Brush

Flat End Horse Hair
10 pcs./pack

Bristle Brush Bevel Black Bristle
10 pcs./pack

Goat Hair Brush Bevel Goat Hair
10 pcs./pack

Shank Size $\phi 2.34$	Horse Hair	-	Black Bristle	-	Goat Hair	-
Shank Size $\phi 3.0$	Horse Hair	6A12027	Black Bristle	6012103	Goat Hair	6012203

Nylon Brushes

Feature

- Flexibility of nylon fiber provides a soft finish with less scratch.
- Brushes do not contain abrasive agent and provide soft grinding without damaging workpiece.
- Beveled brushes are handy to grind in corners.

Main Application

Washing, cleaning
Main Work Materials:
iron, steel materials, stainless, aluminum, copper, brass, plastics.

Nylon Brushes

Flat Nylon
10 pcs./pack

Shank Size $\phi 2.34$	Nylon	6021100	6021101	-
Shank Size $\phi 3.0$	Nylon	6022100	6022101	6022102

Nylon Brushes

Bevel Nylon
10 pcs./pack

Flat End Nylon
10 pcs./pack

Shank Size $\phi 2.34$	Nylon Wire Dia. $\phi 0.2\text{mm}$	-	6021103	-
Shank Size $\phi 3.0$	Nylon Wire Dia. $\phi 0.2\text{mm}$	6022103	6022106	6022107

Nylon Brushes

Cup Nylon
10 pcs./pack

Shank Size $\phi 2.34$	Nylon Wire Dia. $\phi 0.2\text{mm}$	-	-	6021102	-
Shank Size $\phi 3.0$	Nylon Wire Dia. $\phi 0.2\text{mm}$	6A32001	6A32002	6022104	6022105

C Grain Nylon Brushes

Feature

- Nylon fiber with abrasive grains provides less biting and soft finish.
- Resistant to oil, water and chemicals.
- With C type grains, suitable for general cleaning and rust removal.

Main Application

Preparation for painting, removal of rust, finish polishing.
Main Work Materials:
iron, steel materials, stainless, aluminum, copper, brass, plastics.

C Grain Nylon Brushes

Flat Nylon with C Grain
5 pcs./pack

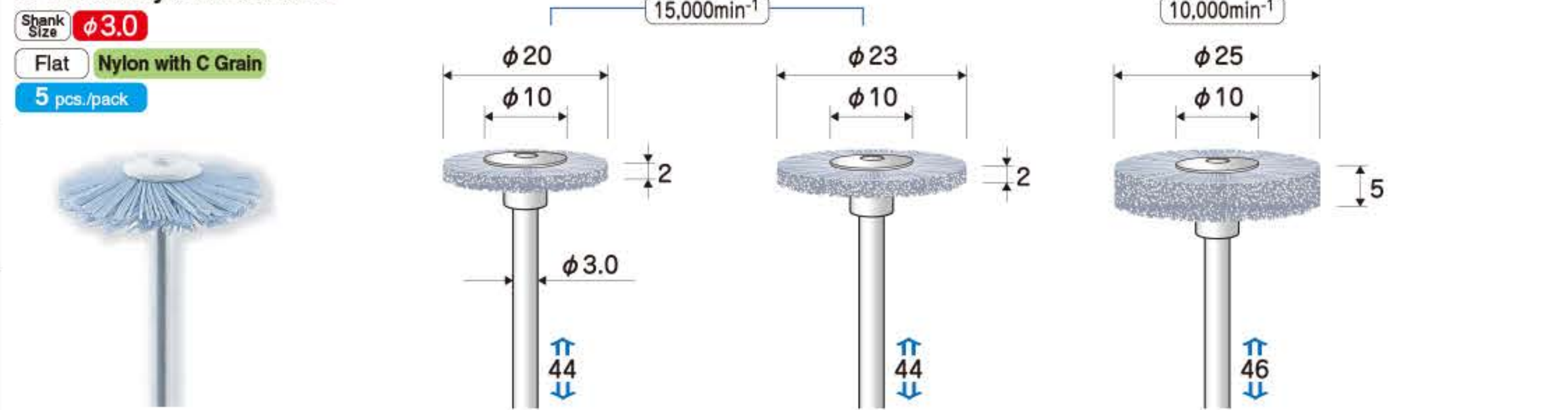
Grit Size #180	Wire Dia. $\phi 0.3\text{mm}$	6031100	6031200
Grit Size #240	Wire Dia. $\phi 0.3\text{mm}$	6031101	6031201
Grit Size #320	Wire Dia. $\phi 0.3\text{mm}$	6031102	6031202

C Grain Nylon Brushes

Cup Nylon with C Grain
5 pcs./pack

Grit Size #180	Wire Dia. $\phi 0.3\text{mm}$	6031300	6031400
Grit Size #240	Wire Dia. $\phi 0.3\text{mm}$	6031301	6031401
Grit Size #320	Wire Dia. $\phi 0.3\text{mm}$	6031302	6031402

C Grain Nylon Brushes



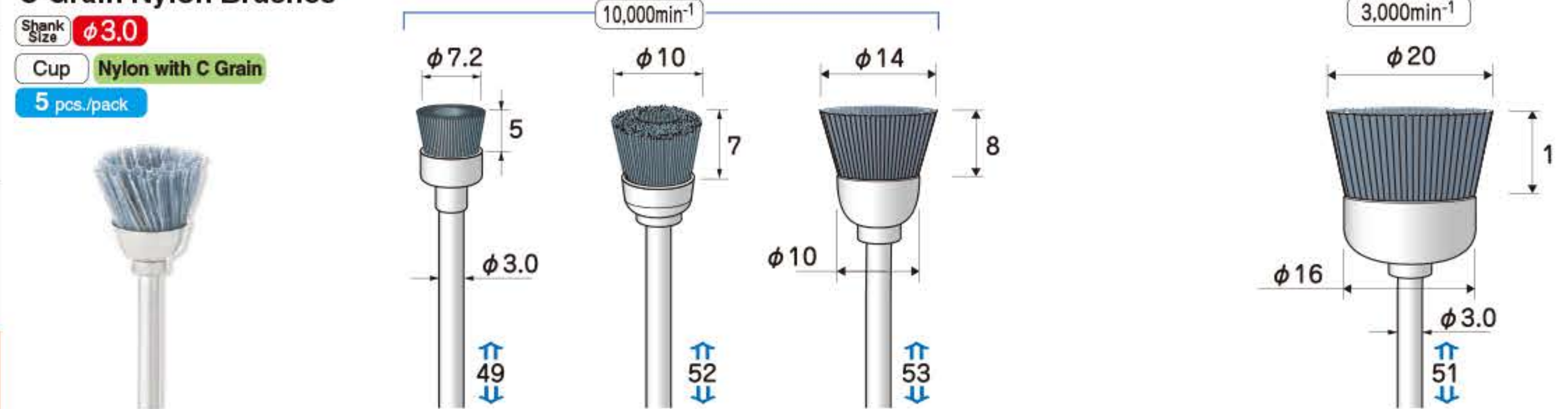
Grit Size #180 Wire Dia. ϕ 0.3mm	6032100	6032200	6032300
Grit Size #240 Wire Dia. ϕ 0.3mm	6032101	6032201	6032301
Grit Size #320 Wire Dia. ϕ 0.3mm	6032102	6032202	6032302

C Grain Nylon Brushes



Grit Size #120 Wire Dia. ϕ 0.55mm	6A42001	6A42003		Grit Size #180 Wire Dia. ϕ 0.3mm	6032700	6032800
Grit Size #180 Wire Dia. ϕ 0.3mm	6032400	-		Grit Size #240 Wire Dia. ϕ 0.3mm	6032701	6032801
Grit Size #240 Wire Dia. ϕ 0.3mm	6032401	-		Grit Size #320 Wire Dia. ϕ 0.3mm	6032702	6032802
Grit Size #320 Wire Dia. ϕ 0.3mm	6032402	-				
Grit Size #500 Wire Dia. ϕ 0.45mm	6A42002	6A42004				

C Grain Nylon Brushes



Grit Size #180 Wire Dia. ϕ 0.3mm	6A42005	6A42008	6032500	Grit Size #120 Wire Dia. ϕ 0.55mm	6032600
Grit Size #240 Wire Dia. ϕ 0.3mm	6A42006	6A42009	6032501	Grit Size #240 Wire Dia. ϕ 0.55mm	6032601
Grit Size #320 Wire Dia. ϕ 0.3mm	6A42007	6A42010	6032502	Grit Size #320 Wire Dia. ϕ 0.55mm	6032602

Diamond Grain Nylon Brushes

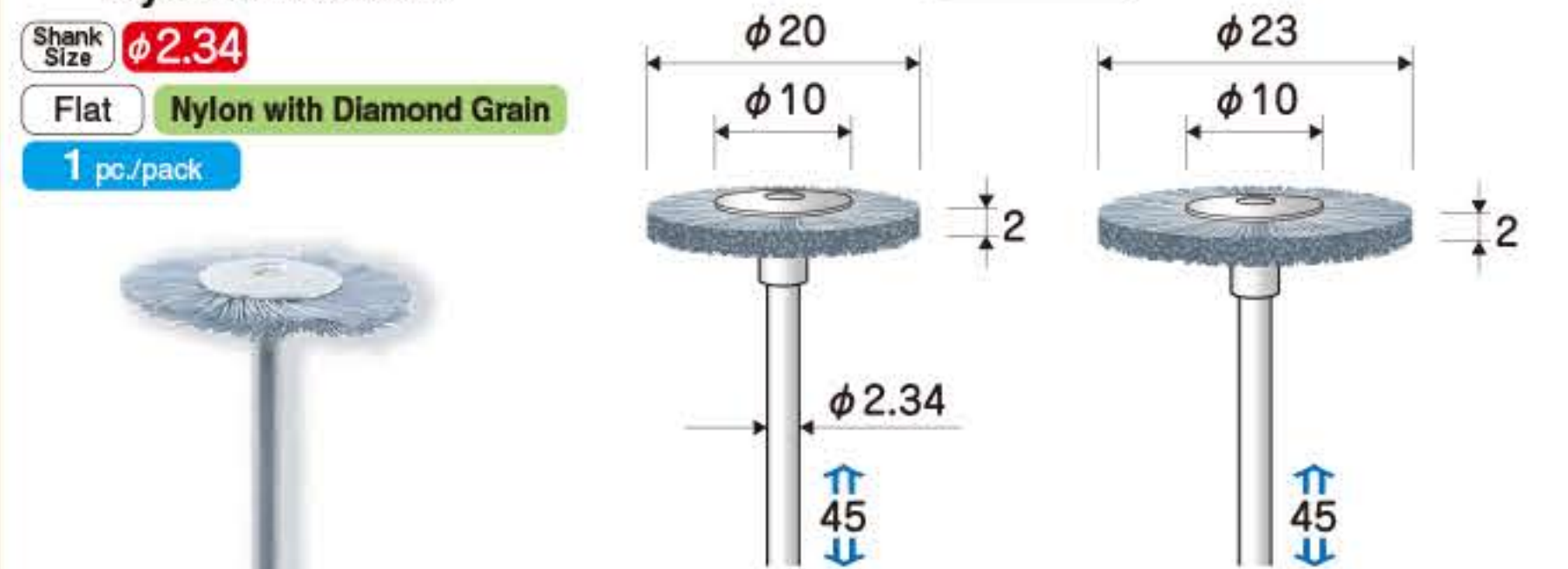
Feature

- Flexible nylon fiber with diamond abrasive grains provides superior polishing.
- Bite-free, soft surface finish.
- Resistant to oil, water, and chemicals.

Main Application

Minute deburring of hard-to-cut materials, or heat resistant metals such as cemented carbide, ceramics, rust removal, finish polishing.
Main Work Materials: iron, steel materials, stainless, ceramics.

Diamond Grain Nylon Brushes



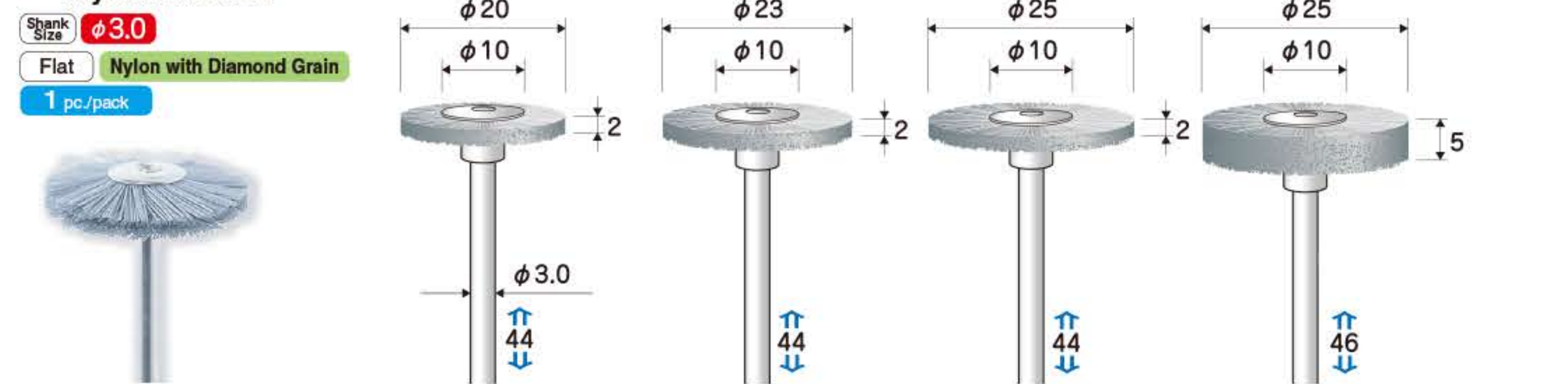
Grit Size #400 Wire Dia. ϕ 0.25mm	6041100	6041200
Grit Size #600 Wire Dia. ϕ 0.25mm	6041101	6041201
Grit Size #800 Wire Dia. ϕ 0.25mm	6041102	6041202

Diamond Grain Nylon Brushes



Grit Size #400 Wire Dia. ϕ 0.25mm	6041300	6041400
Grit Size #600 Wire Dia. ϕ 0.25mm	6041301	6041401
Grit Size #800 Wire Dia. ϕ 0.25mm	6041302	6041402

Diamond Grain Nylon Brushes



Grit Size #400 Wire Dia. ϕ 0.25mm	6042100	6042200	6042300	6042400
Grit Size #600 Wire Dia. ϕ 0.25mm	6042101	6042201	6042301	6042401
Grit Size #800 Wire Dia. ϕ 0.25mm	6042102	6042202	6042302	6042402

Diamond Grain Nylon Brushes



Grit Size #400 Wire Dia. ϕ 0.25mm	6042500	6042800	6042900
Grit Size #600 Wire Dia. ϕ 0.25mm	6042501	6042801	6042901
Grit Size #800 Wire Dia. ϕ 0.25mm	6042502	6042802	6042902

Diamond Grain Nylon Brushes



Grit Size #400 Wire Dia. ϕ 0.25mm	6A52001	6A52004	Wire Dia. ϕ 0.25mm	6042600	Wire Dia. ϕ 0.45mm	6042700
Grit Size #600 Wire Dia. ϕ 0.25mm	6A52002	6A52005	Wire Dia. ϕ 0.25mm	6042601	Wire Dia. ϕ 0.45mm	6042701
Grit Size #800 Wire Dia. ϕ 0.25mm	6A52003	6A52006	Wire Dia. ϕ 0.25mm	6042602	Wire Dia. ϕ 0.45mm	6042702

Heat Resistant Fiber (Aramid) Brushes

Feature

- A heat resistant, repulsive and stiff, durable fiber.
- Overcame weakness of chemical fibres against heat. 430°C melting point, 250°C application limit, and chemically resistant.
- Restrains static electricity and less dust collection.

Main Application

Suitable for removing adhesives on metal, and cleaning parts in high temperature (heater etc.)
Main Work Materials: iron, steel materials, stainless, aluminum, copper, brass, plastics, ceramics.

Heat Resistant Fiber (Aramid) Brushes

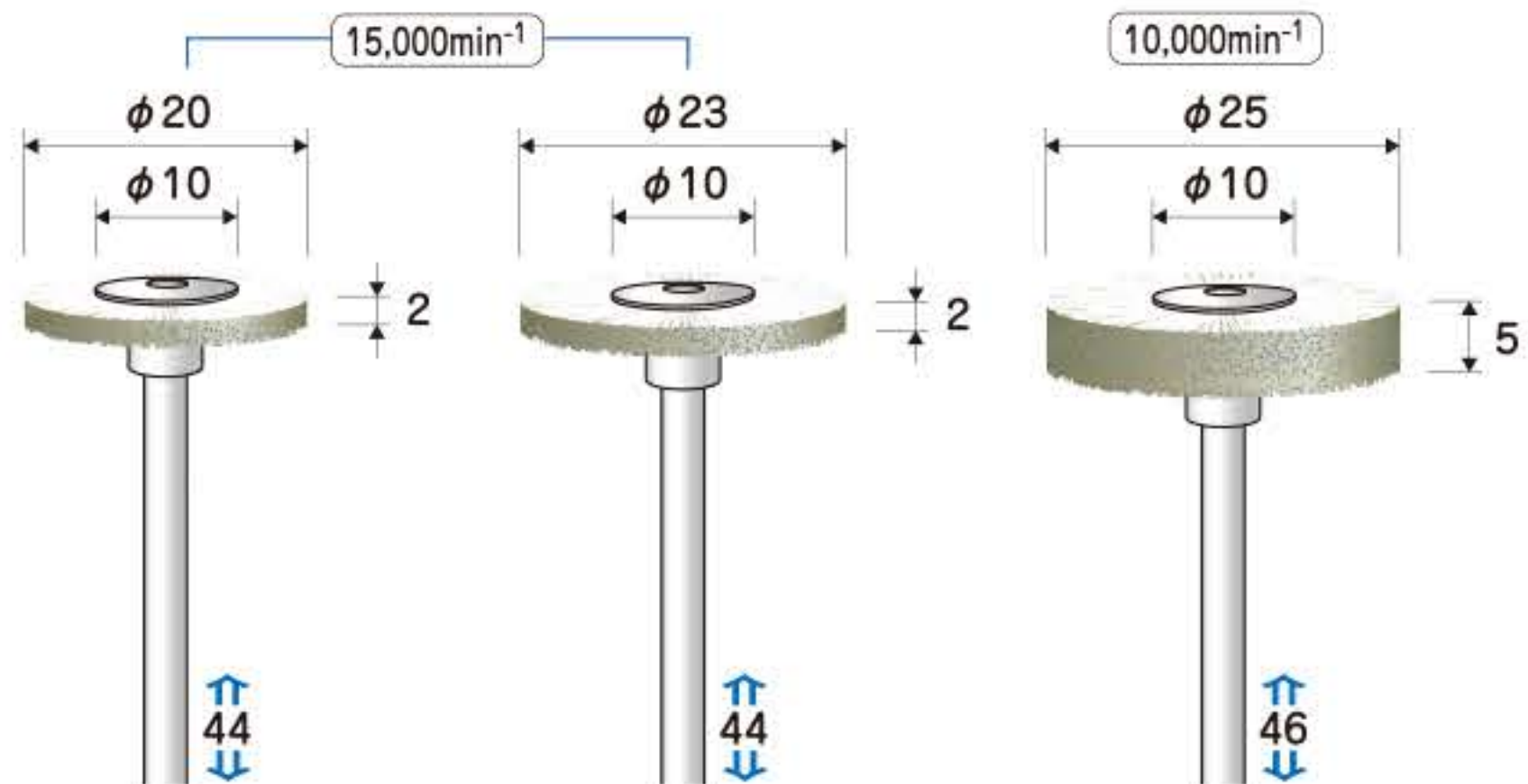
Shank Size $\phi 3.0$
Bevel Aramid
5 pcs./pack



Aramid	Wire Dia. $\phi 0.2\text{mm}$	6022203
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Heat Resistant Fiber (Aramid) Brushes

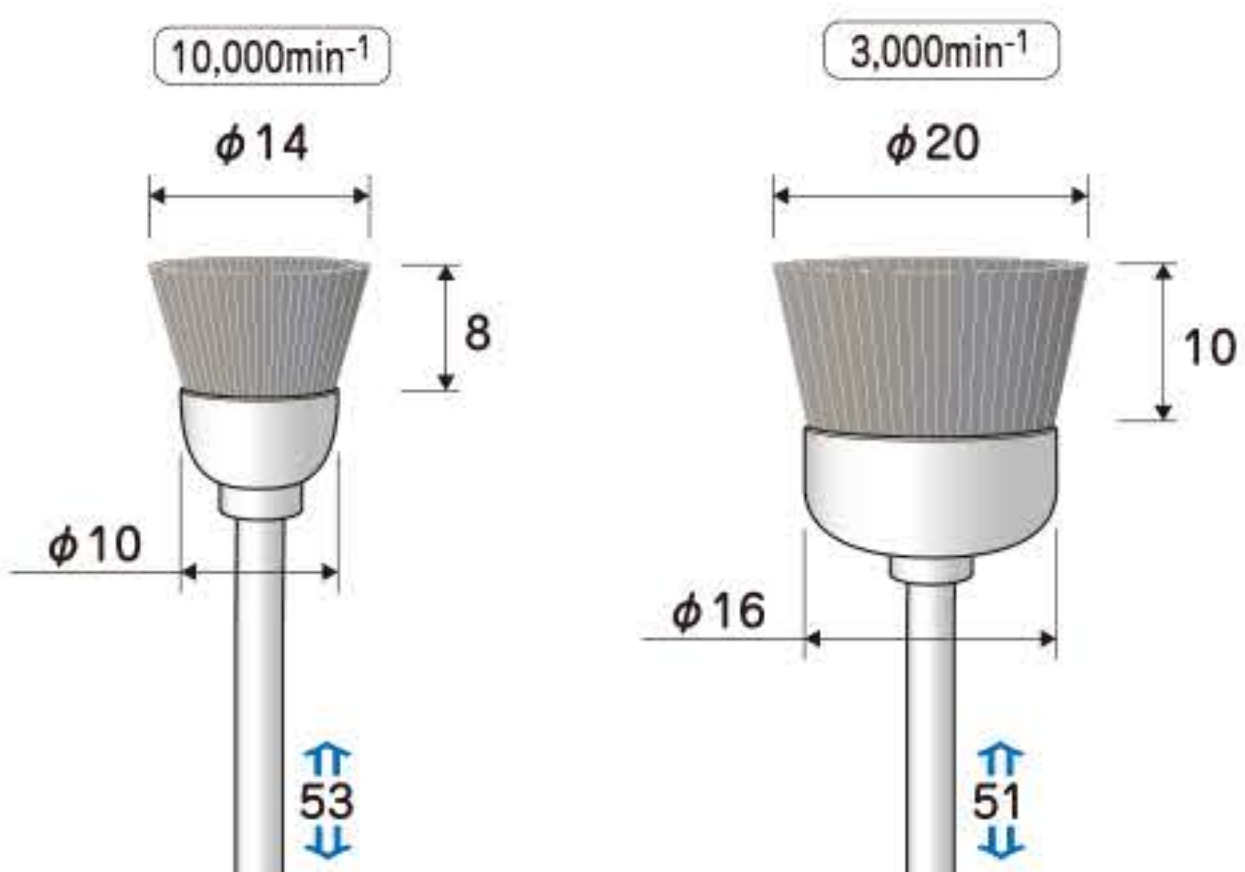
Flat Aramid
5 pcs./pack



Shank Size $\phi 2.34$	Aramid	Wire Dia. $\phi 0.2\text{mm}$	6021200	6021201	-
Shank Size $\phi 3.0$	Aramid	Wire Dia. $\phi 0.2\text{mm}$	6022200	6022201	6022202

Heat Resistant Fiber (Aramid) Brushes

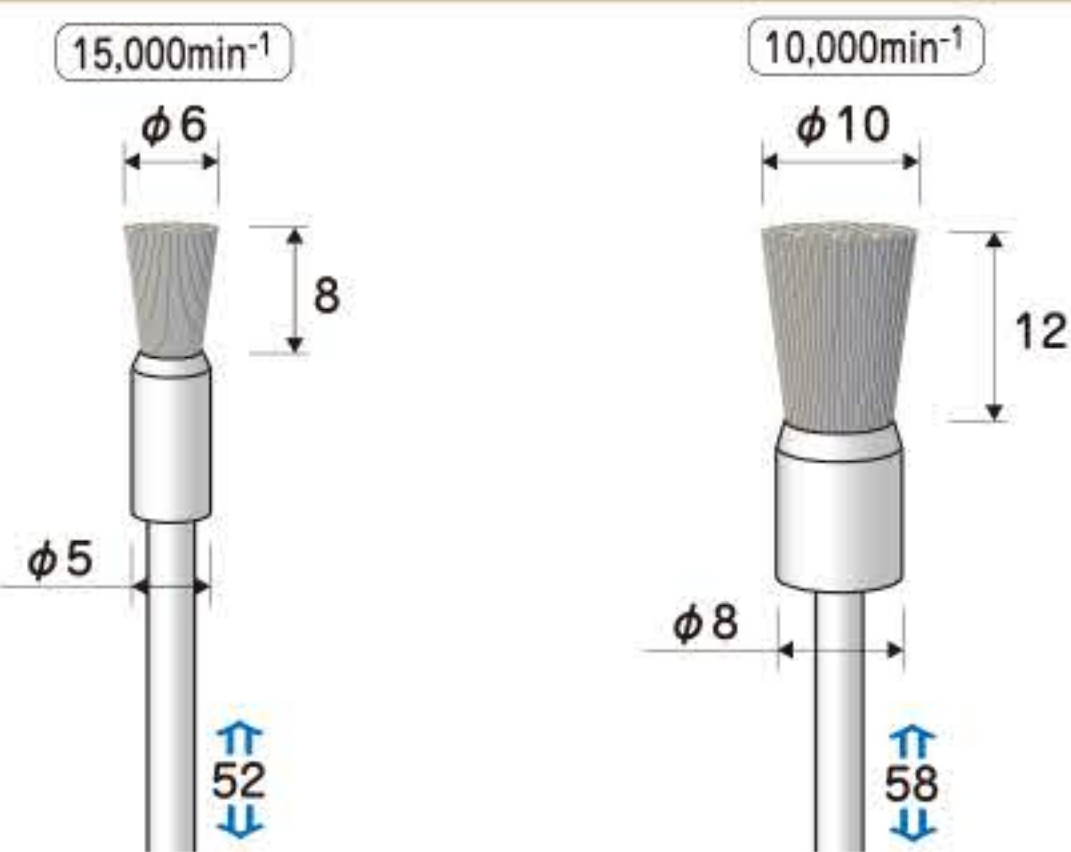
Cup Aramid
5 pcs./pack



Shank Size $\phi 2.34$	Aramid	Wire Dia. $\phi 0.2\text{mm}$	6021202	-
Shank Size $\phi 3.0$	Aramid	Wire Dia. $\phi 0.2\text{mm}$	6022204	6022205

Heat Resistant Fiber (Aramid) Brushes

Flat End Aramid
5 pcs./pack



Shank Size $\phi 2.34$	Aramid	Wire Dia. $\phi 0.2\text{mm}$	6021203	-
Shank Size $\phi 3.0$	Aramid	Wire Dia. $\phi 0.2\text{mm}$	6022206	6022207

Wire Brushes

- Available in stainless steel, steel, and brass.
- Can be used in cleaning, rust removal, deburring, paint stripping, and also for removing oxide film of welding.
- Wire becomes softer in order of **stainless steel, steel, and brass.**
- With same material, the longer the fibers are, the softer the contact becomes and the less the polishing ability becomes, and vice versa.

- Dimensions may vary slightly due to either the nature of products or measuring methods.

Stainless Steel

- Suits for polishing stainless steel and aluminum, polishing in high temperature. Resistant to acid, alkali, and heat, rustproof and hard to break.

Steel

- Cold-rolled to obtain hardness of brush. Suitable for deburring, rust removal, preparation for plating, finishing on welding, deburring on punched edge, paint stripping etc.

Brass

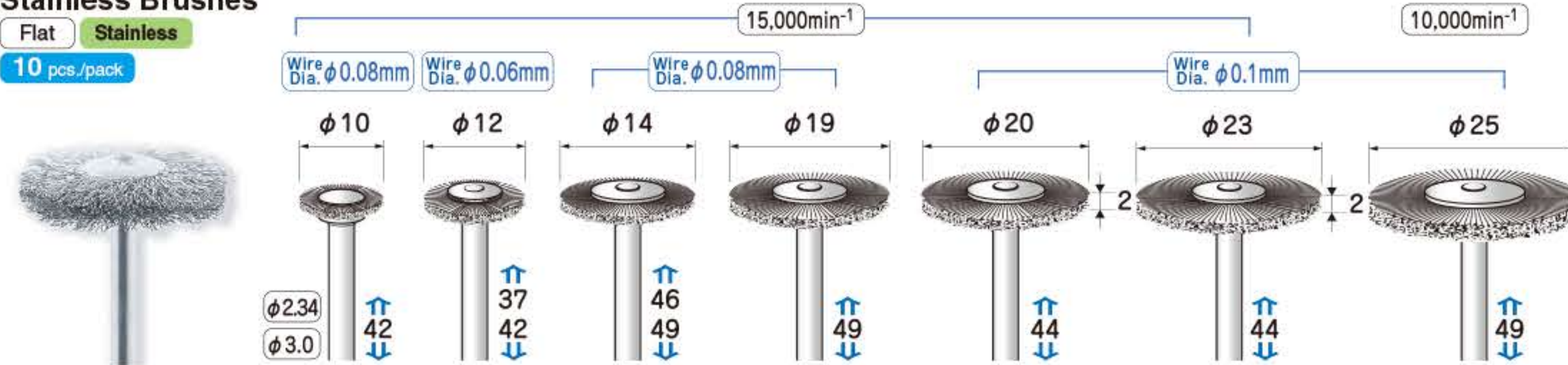
- The softest of metal wire brushes. The most gentle brush to workpiece. Suits for finishing, deburring of copper alloy or brass.

CAUTION Workpiece may be colored with detached brass from brass brush due to the nature of material characteristics. Use on workpieces of similar materials such as brass is recommended.

WARNING Wires of brush may break and scatter in use, resulting in losing the eyesight. Always use safety glasses for your safety. Use the tool below maximum operating rotation speed with great caution.

Stainless Brushes

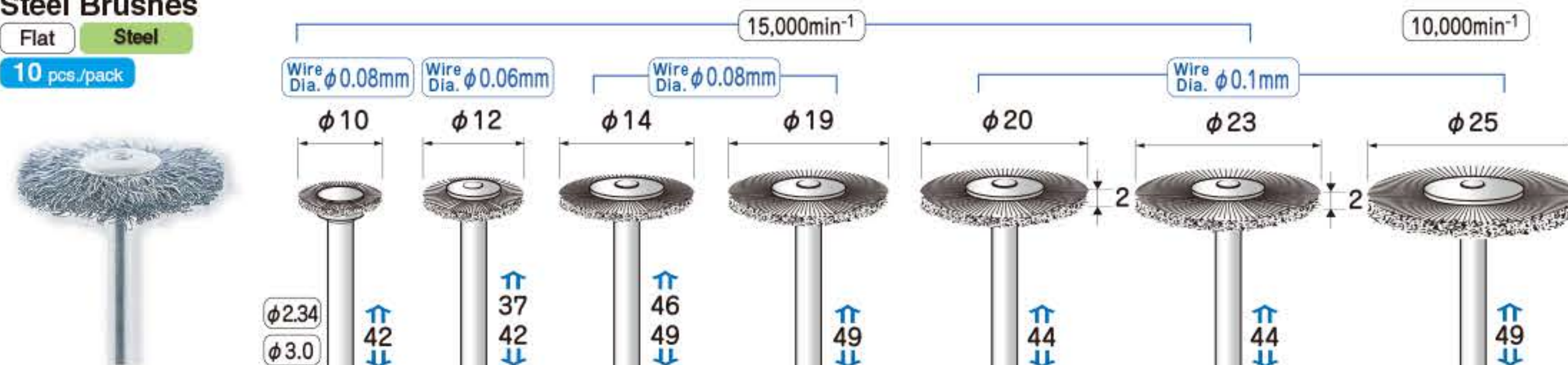
Flat Stainless
10 pcs./pack



Shank Size $\phi 2.34$	Stainless	-	6A61001	6A61002	-	6061100	6061101	-
Shank Size $\phi 3.0$	Stainless	6A62001	6A62002	6A62003	6A62004	6062100	6062101	6A62005

Steel Brushes

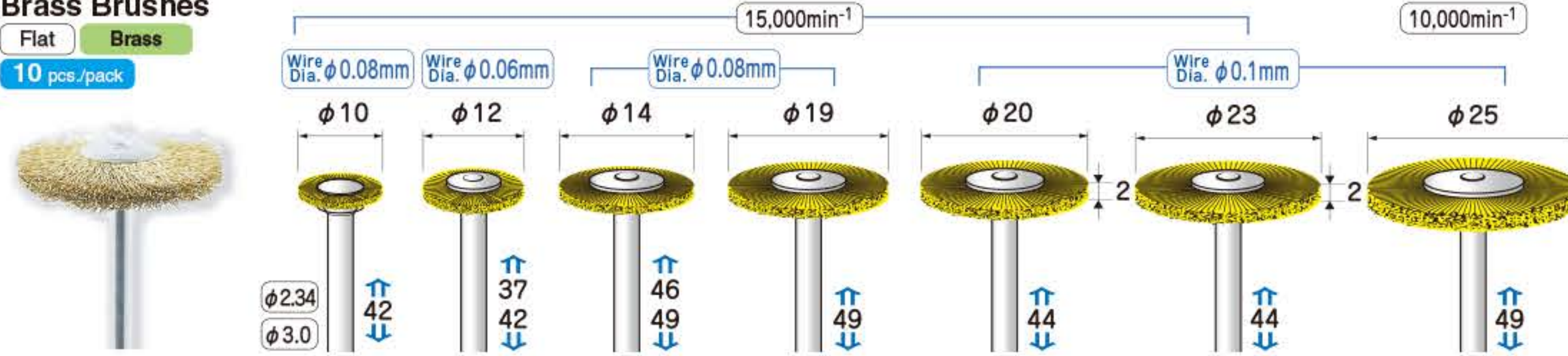
Flat Steel
10 pcs./pack



Shank Size $\phi 2.34$	Steel	-	6A71001	6A71002	-	6051100	6051101	-
Shank Size $\phi 3.0$	Steel	6A72001	6A72002	6A72003	6A72004	6052100	6052101	6A72005

Brass Brushes

Flat Brass
10 pcs./pack



Shank Size $\phi 2.34$	Brass	-	6A81001	6A81002	-	6071100	6071101	-
Shank Size $\phi 3.0$	Brass	6A82001	6A82002	6A82003	6A82004	6072100	6072101	6A82005

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Brushes

EIKO

Stainless Brushes Flat / Extra Thick
Shank Size $\phi 3.0$ Stainless

2 pcs./pack 10 pcs./pack

Wire Dia. $\phi 0.1\text{mm}$ $\phi 0.15\text{mm}$

$\phi 22$ $\phi 25$ $\phi 22$ $\phi 25$

10,000min⁻¹

$\phi 3.0$

6 5 6 5

47 46 50 46

Stainless 6A62006 6062102

Steel Brushes Flat / Extra Thick
Shank Size $\phi 3.0$ Steel

2 pcs./pack 10 pcs./pack

Wire Dia. $\phi 0.1\text{mm}$ $\phi 0.15\text{mm}$

$\phi 22$ $\phi 25$ $\phi 22$ $\phi 25$

10,000min⁻¹

$\phi 3.0$

6 5 6 5

48 46

Brass 6A82006 6072102

Brass Brushes Flat / Extra Thick
Shank Size $\phi 3.0$ Brass

2 pcs./pack 10 pcs./pack

Wire Dia. $\phi 0.1\text{mm}$ $\phi 0.15\text{mm}$

$\phi 22$ $\phi 25$ $\phi 22$ $\phi 25$

10,000min⁻¹

$\phi 3.0$

6 5 6 5

48 46

Stainless Brushes Cup Stainless

10 pcs./pack

15,000min⁻¹ Wire Dia. $\phi 0.08\text{mm}$

10,000min⁻¹ Wire Dia. $\phi 0.1\text{mm}$

3,000min⁻¹ Wire Dia. $\phi 0.15\text{mm}$

1 pc./pack

$\phi 8$ $\phi 14$ $\phi 16$ $\phi 20$ $\phi 25$

5 6 8 10 14

$\phi 10$ $\phi 16$

50 49 53 51 56

Shank Size $\phi 2.34$ Stainless - - 6061200 - -
Shank Size $\phi 3.0$ Stainless 6A62007 6A62008 6062300 6062301 6A62009

Steel Brushes Cup Steel

10 pcs./pack

15,000min⁻¹ Wire Dia. $\phi 0.08\text{mm}$

10,000min⁻¹ Wire Dia. $\phi 0.1\text{mm}$

3,000min⁻¹ Wire Dia. $\phi 0.15\text{mm}$

1 pc./pack

$\phi 8$ $\phi 14$ $\phi 16$ $\phi 20$ $\phi 25$

5 6 8 10 14

$\phi 10$ $\phi 16$

50 49 53 51 56

Shank Size $\phi 2.34$ Steel - - 6051200 - -
Shank Size $\phi 3.0$ Steel 6A72007 6A72008 6052300 6052301 6A72009

Brass Brushes Cup Brass

10 pcs./pack

15,000min⁻¹ Wire Dia. $\phi 0.08\text{mm}$

10,000min⁻¹ Wire Dia. $\phi 0.1\text{mm}$

3,000min⁻¹ Wire Dia. $\phi 0.15\text{mm}$

1 pc./pack

$\phi 8$ $\phi 14$ $\phi 16$ $\phi 20$ $\phi 25$

5 6 8 10 14

$\phi 10$ $\phi 16$

50 49 53 51 56

Shank Size $\phi 2.34$ Brass - - 6071200 - -
Shank Size $\phi 3.0$ Brass 6A82007 6A82008 6072300 6072301 6A82009

Brushes

E-FORCE®

Stainless Brush Wire Dia. $\phi 0.1\text{mm}$ 10,000min⁻¹

Shank Size $\phi 3.0$ Bevel Stainless

10 pcs./pack

$\phi 25$ $\phi 15$ $\phi 3.0$ 7

50

Stainless 6062200

Steel Brush Wire Dia. $\phi 0.1\text{mm}$ 10,000min⁻¹

Shank Size $\phi 3.0$ Bevel Steel

10 pcs./pack

$\phi 25$ $\phi 15$ $\phi 3.0$ 7

50

Steel 6052200

Brass Brush Wire Dia. $\phi 0.1\text{mm}$ 10,000min⁻¹

Shank Size $\phi 3.0$ Bevel Brass

10 pcs./pack

$\phi 25$ $\phi 15$ $\phi 3.0$ 7

50

Brass 6072200

Stainless Brushes Flat End Stainless

10 pcs./pack

8,000min⁻¹

Wire Dia. $\phi 0.08\text{mm}$ $\phi 0.1\text{mm}$

$\phi 3$ $\phi 6$ $\phi 8$ $\phi 10$

8 8 10 12

$\phi 5$ $\phi 8$

30 52 54 58

Shank Size $\phi 2.34$ Stainless - - 6061300 - -
Shank Size $\phi 3.0$ Stainless 6A62010 6062400 6A62011 6062401

Steel Brushes Flat End Steel

10 pcs./pack

8,000min⁻¹

Wire Dia. $\phi 0.08\text{mm}$ $\phi 0.1\text{mm}$

$\phi 3$ $\phi 6$ $\phi 8$ $\phi 10$

8 8 10 12

$\phi 5$ $\phi 8$

30 52 54 58

Shank Size $\phi 2.34$ Steel - - 6051300 - -
Shank Size $\phi 3.0$ Steel 6A72010 6052400 6A72011 6052401

Brass Brushes Flat End Brass

10 pcs./pack

8,000min⁻¹

Wire Dia. $\phi 0.08\text{mm}$ $\phi 0.1\text{mm}$

$\phi 3$ $\phi 6$ $\phi 8$ $\phi 10$

8 8 10 12

$\phi 5$ $\phi 8$

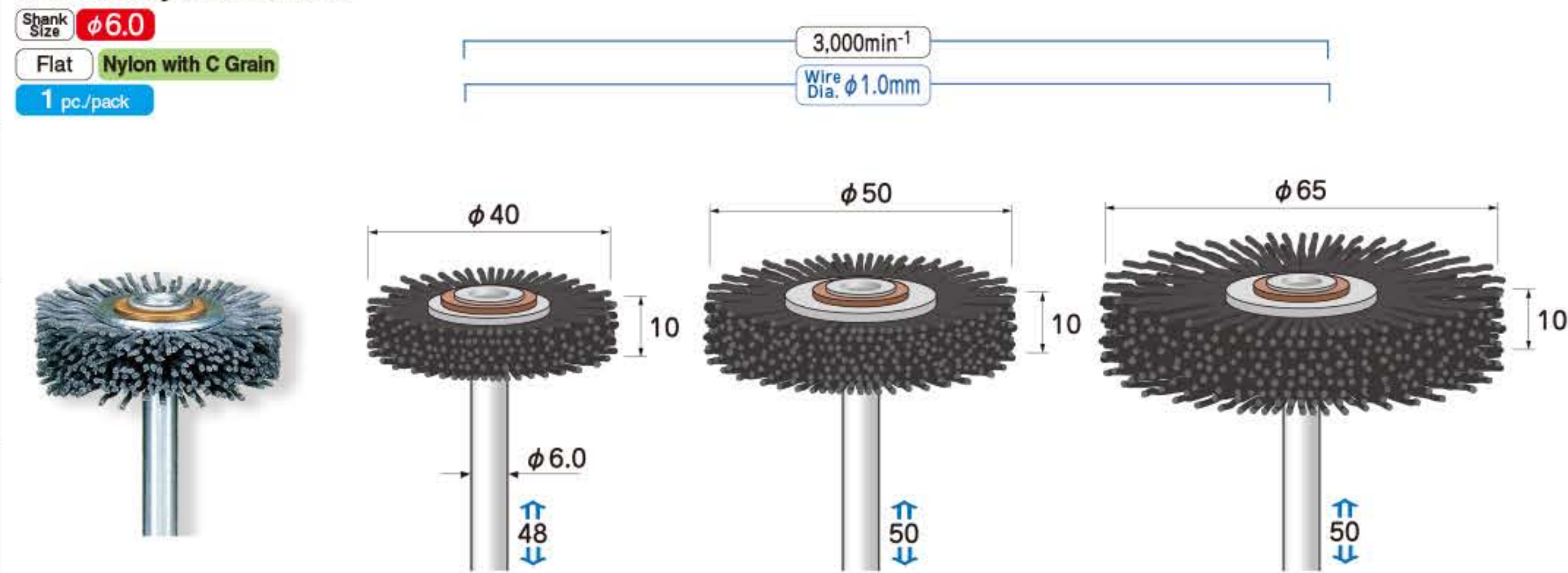
30 52 54 58

Shank Size $\phi 2.34$ Brass - - 6071300 - -
Shank Size $\phi 3.0$ Brass 6A82010 6072400 6A82011 6072401

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

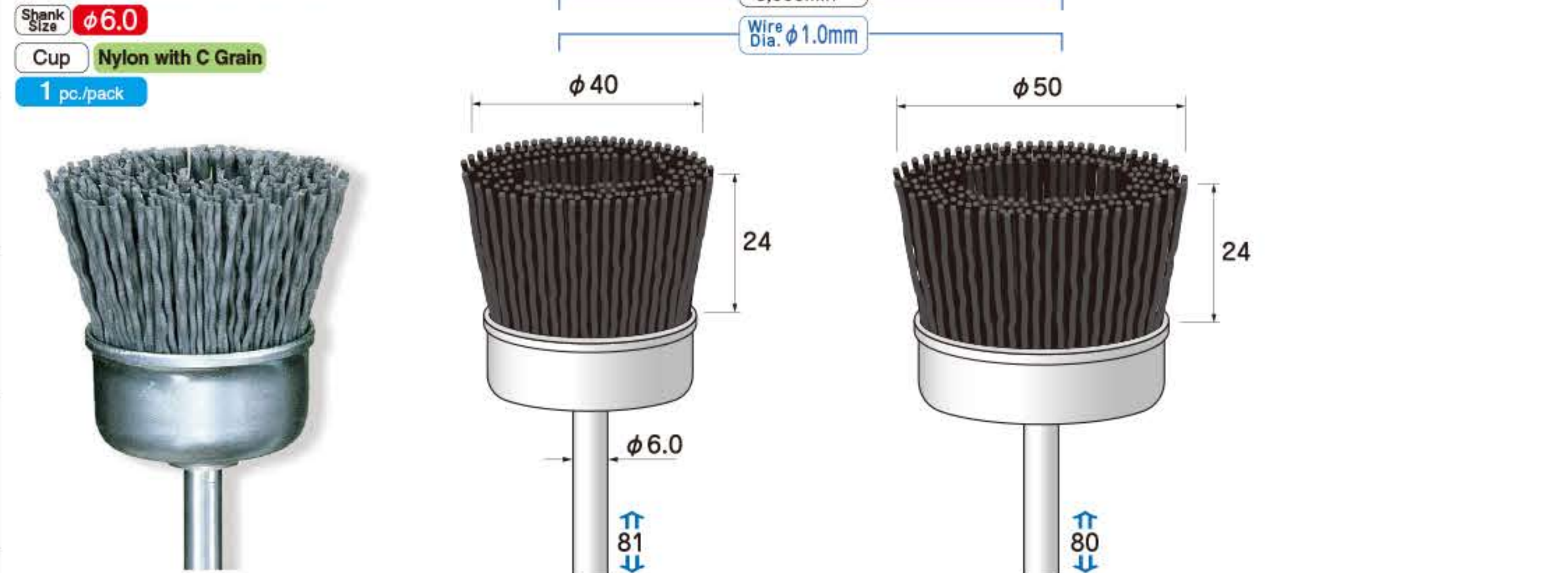
Electroplated Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

C Grain Nylon Brushes



Grit Size #80	6A43001	6A43004	6A43007
Grit Size #120	6A43002	6A43005	6A43008
Grit Size #240	6A43003	6A43006	6A43009

C Grain Nylon Brushes



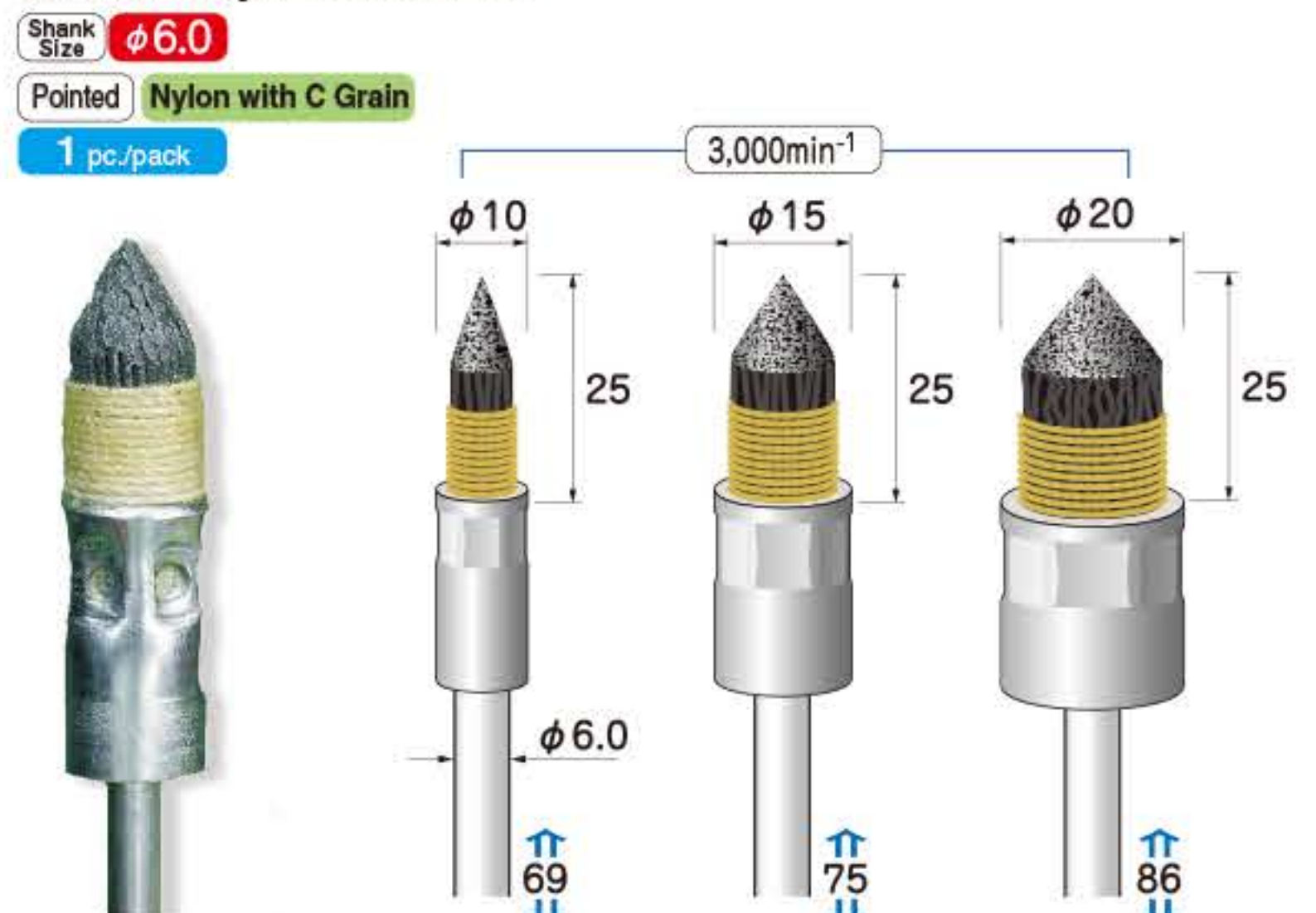
Grit Size #80	6A43010	6A43013
Grit Size #120	6A43011	6A43014
Grit Size #240	6A43012	6A43015

C Grain Nylon Brushes



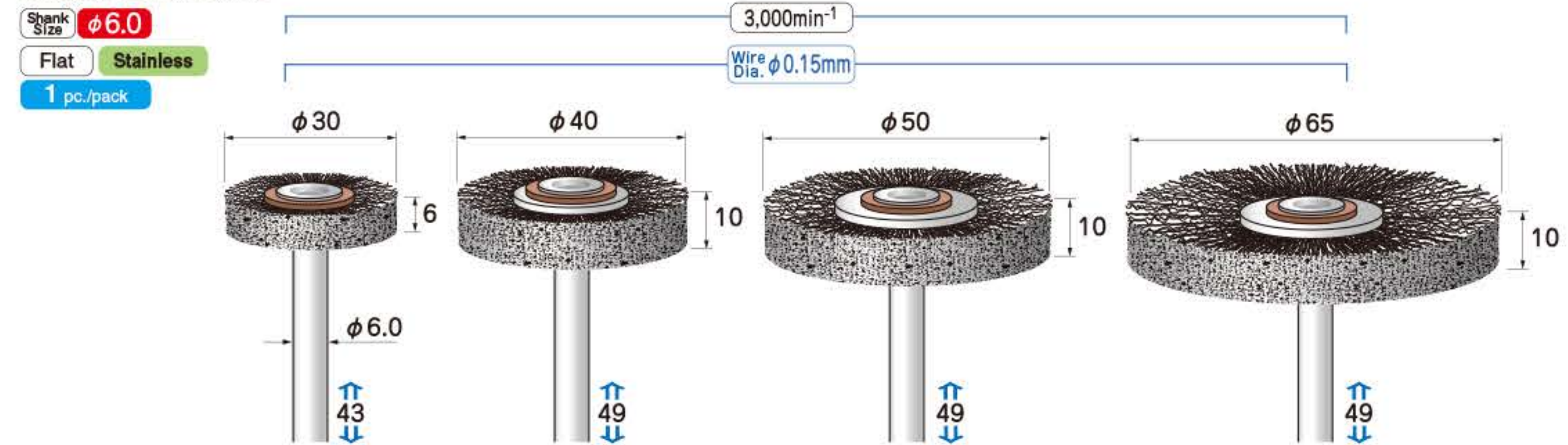
Grit Size #80	6A43016	6A43019
Grit Size #120	6A43017	6A43020
Grit Size #240	6A43018	6A43021

C Grain Nylon Brushes



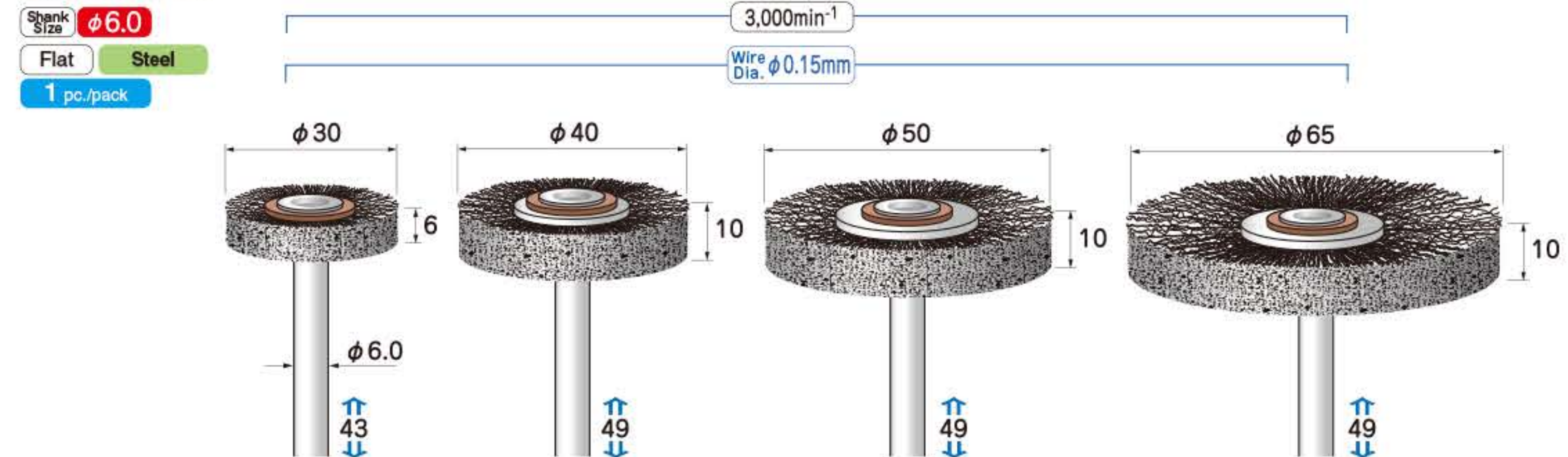
Wire Dia. φ 1.25mm	6A43022	6A43025	6A43028
Wire Dia. φ 1.0mm	6A43023	6A43026	6A43029
Wire Dia. φ 1.0mm	6A43024	6A43027	6A43030

Stainless Brushes



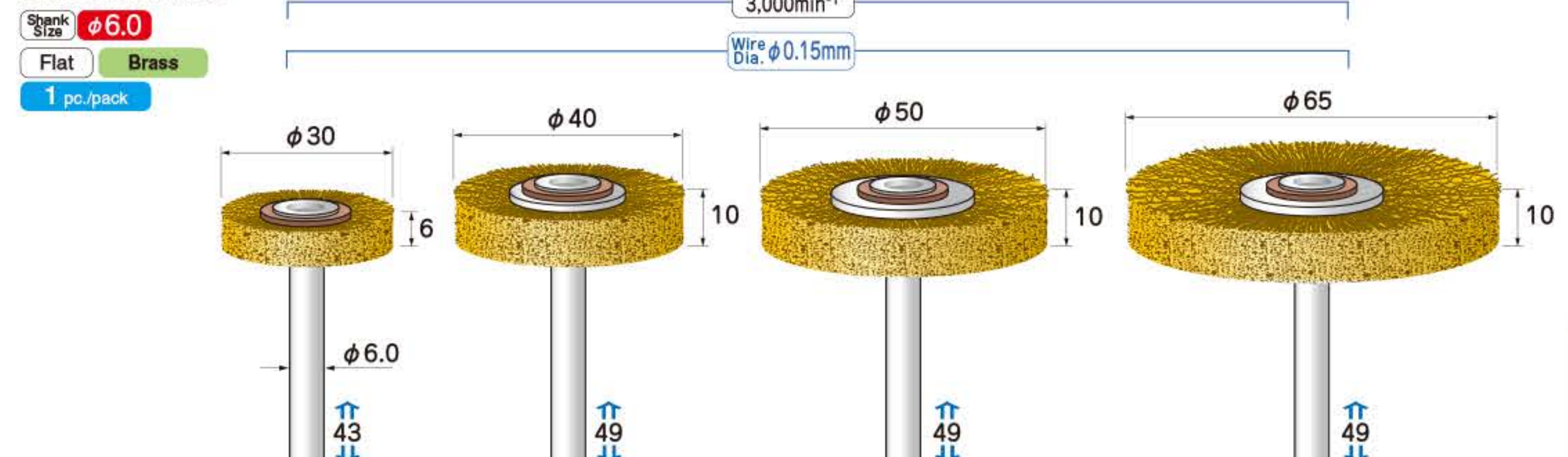
Stainless	6A63001	6A63002	6A63003	6A63004
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Steel Brushes



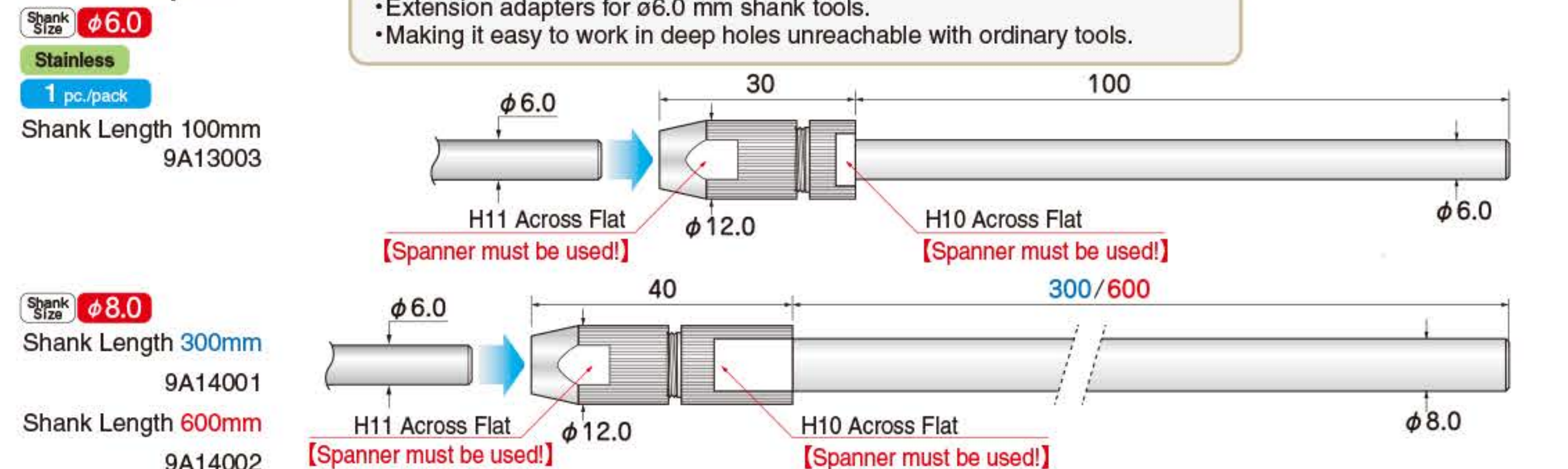
Steel	6A73001	6A73002	6A73003	6A73004
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Brass Brushes



Brass	6A83001	6A83002	6A83003	6A83004
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Shank Adapters



• Extension adapters for φ6.0 mm shank tools.
• Making it easy to work in deep holes unreachable with ordinary tools.

H11 Across Flat [Spanner must be used!] φ 12.0 H10 Across Flat [Spanner must be used!]

H11 Across Flat [Spanner must be used!] φ 12.0 H10 Across Flat [Spanner must be used!]

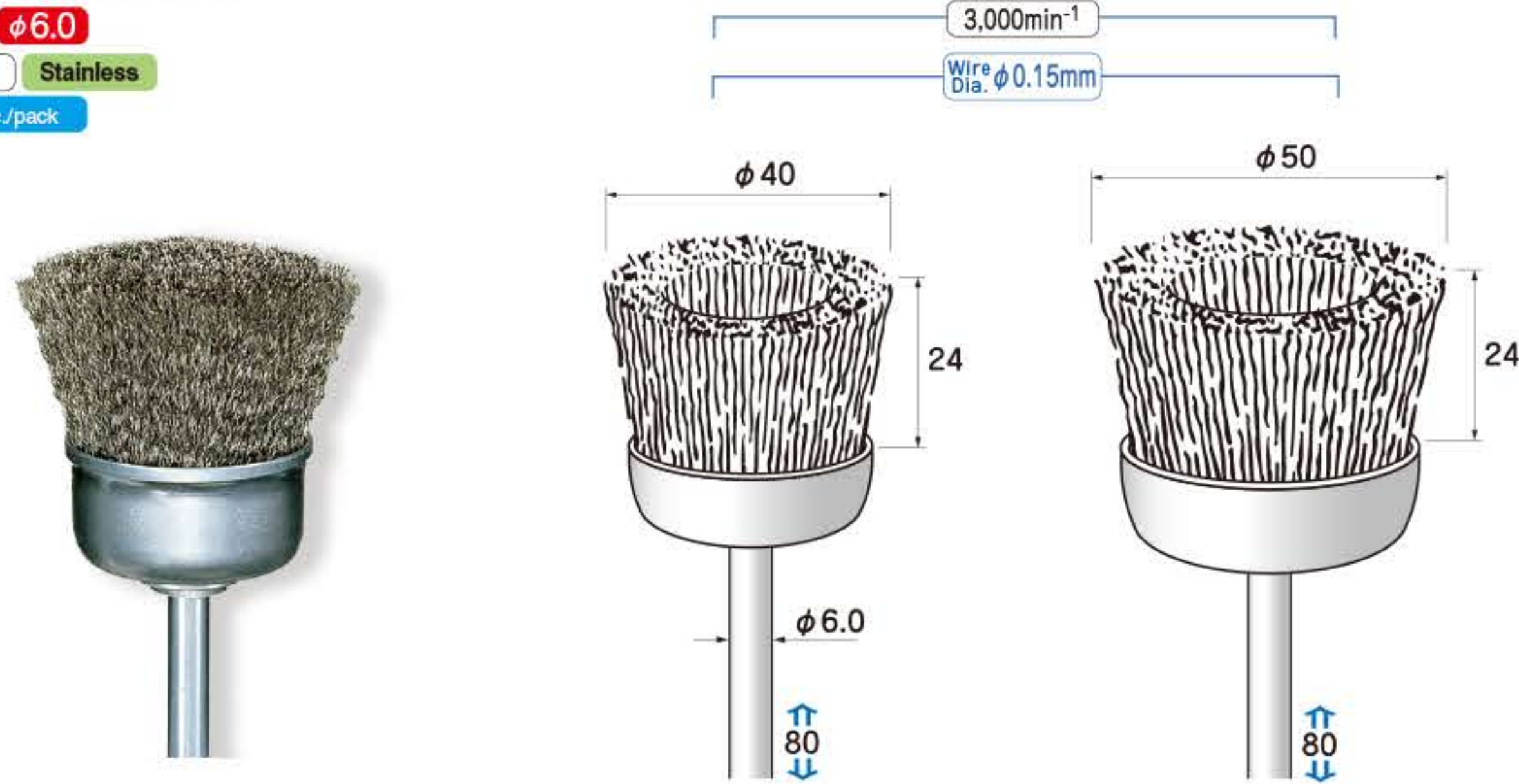
For more details of shank adapters, see page 55.

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Cutting Discs
Diamond Cutting Discs
Shaped Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels/Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds/Hand Tools
Special Tools
Tool Sets

Stainless Brushes

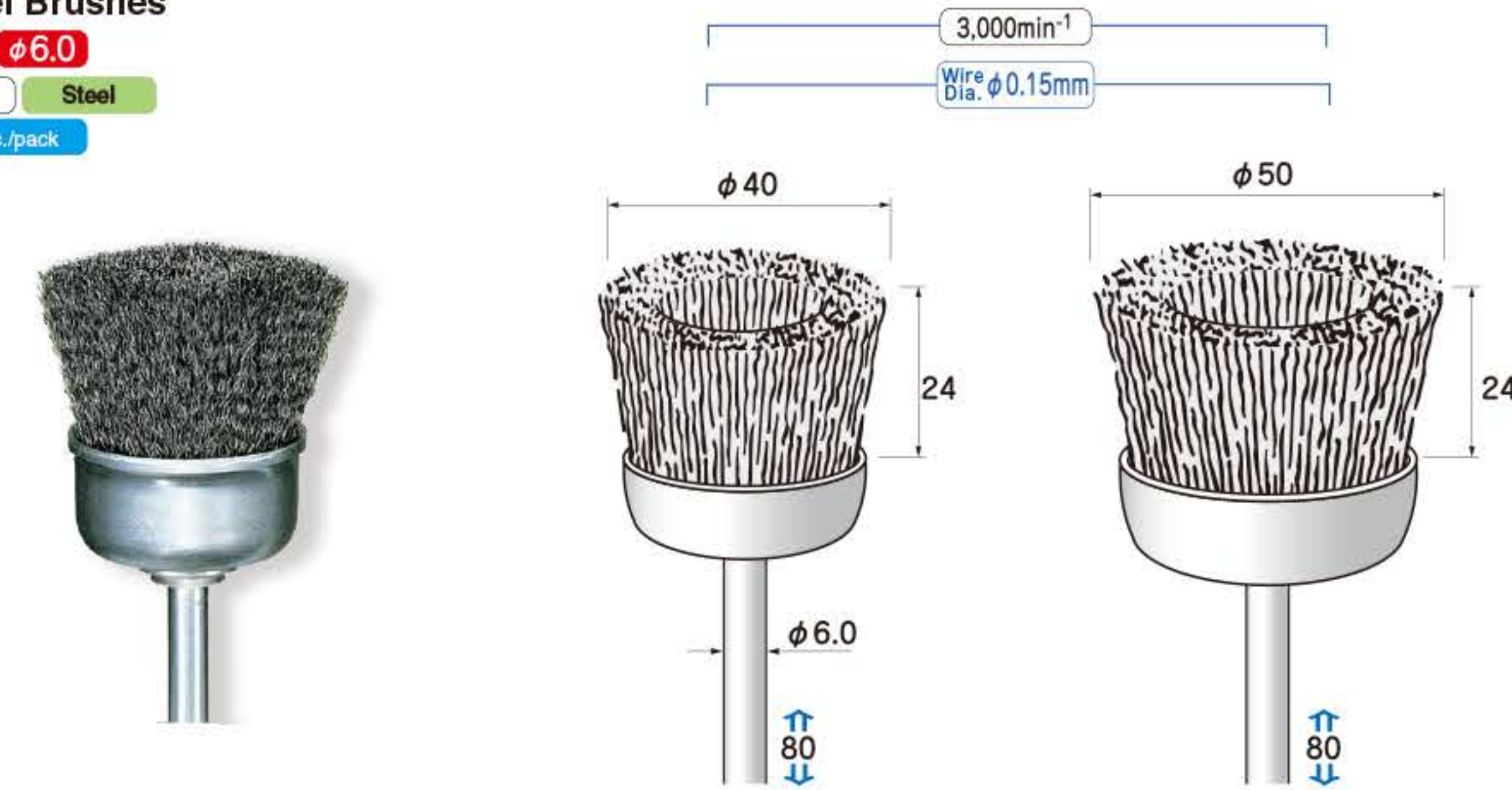
Shank Size **φ6.0**
Cup **Stainless**
1 pc./pack



Stainless 6A63005 6A63006

Steel Brushes

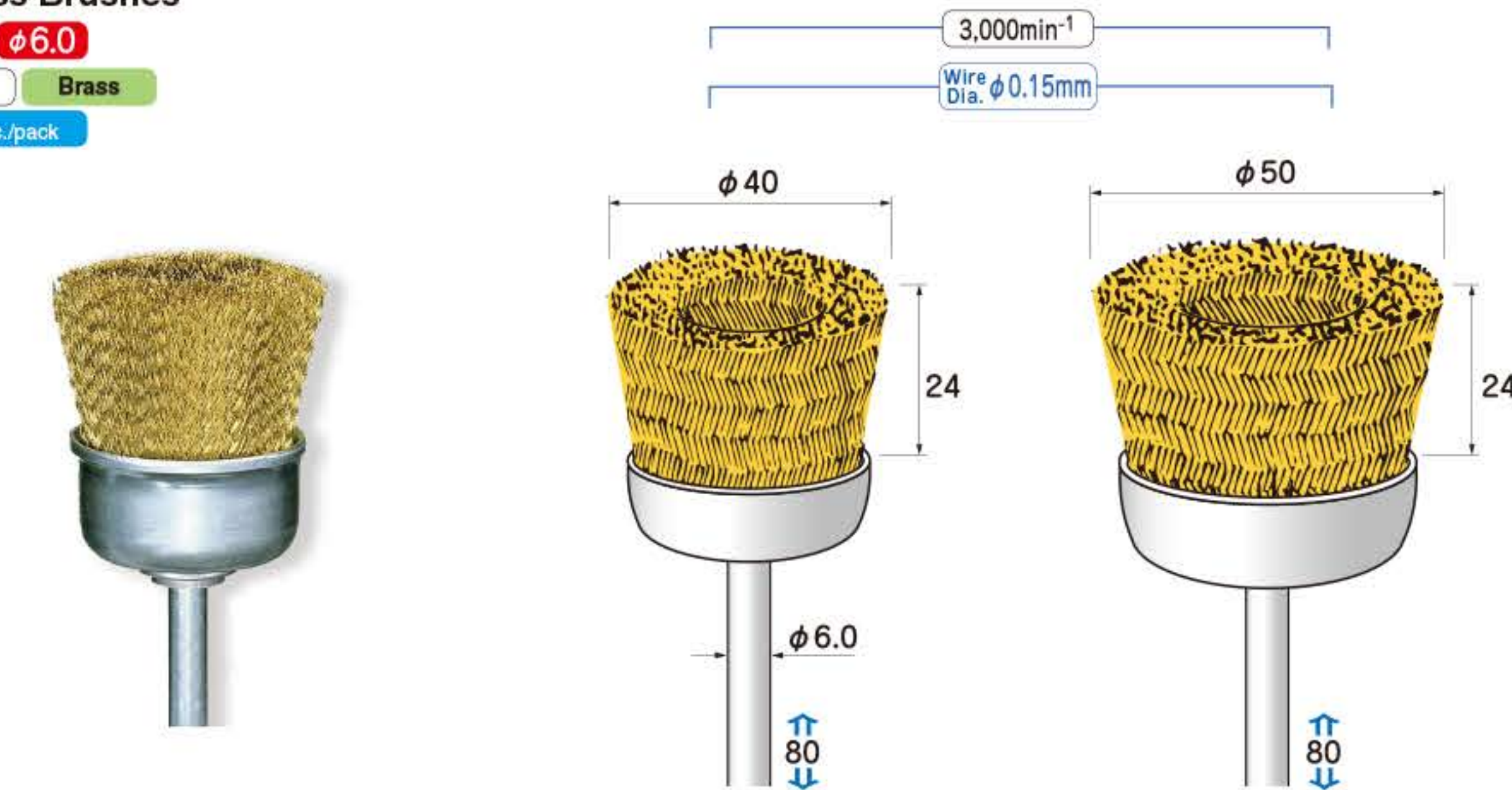
Shank Size **φ6.0**
Cup **Steel**
1 pc./pack



Steel 6A73005 6A73006

Brass Brushes

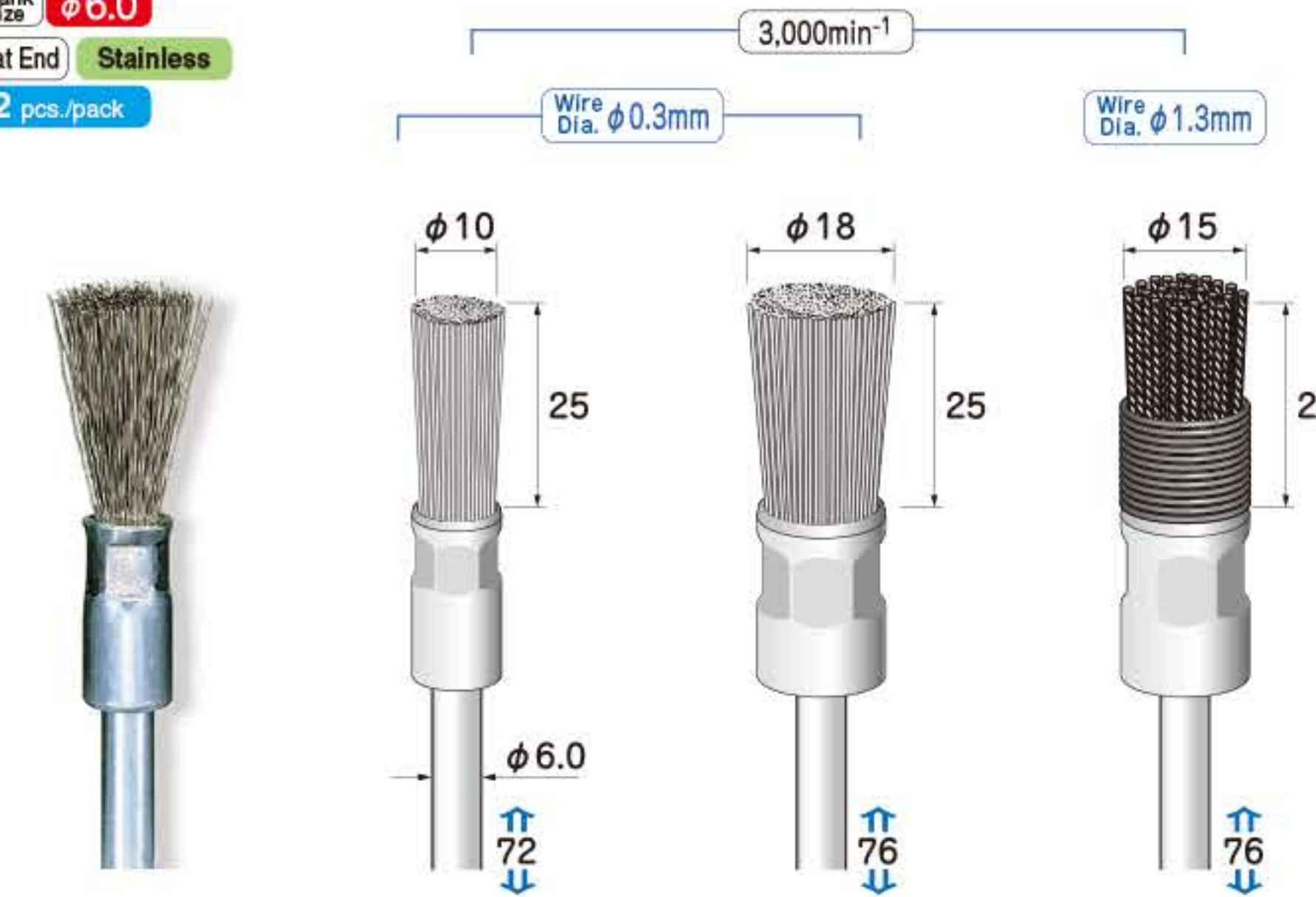
Shank Size **φ6.0**
Cup **Brass**
1 pc./pack



Brass 6A83005 6A83006

Stainless Brushes

Shank Size **φ6.0**
Flat End **Stainless**
2 pcs./pack



Stainless 6A63007 6A63008 6A63009

6A63009 is a very strong brush consisting of $\phi 0.4$ mm stainless wires twisted to $\phi 1.3$ mm wire rope and bundled with rings. Suitable for cleaning, removal of rust or oxide film after welding, polishing etc.



Steel Brushes

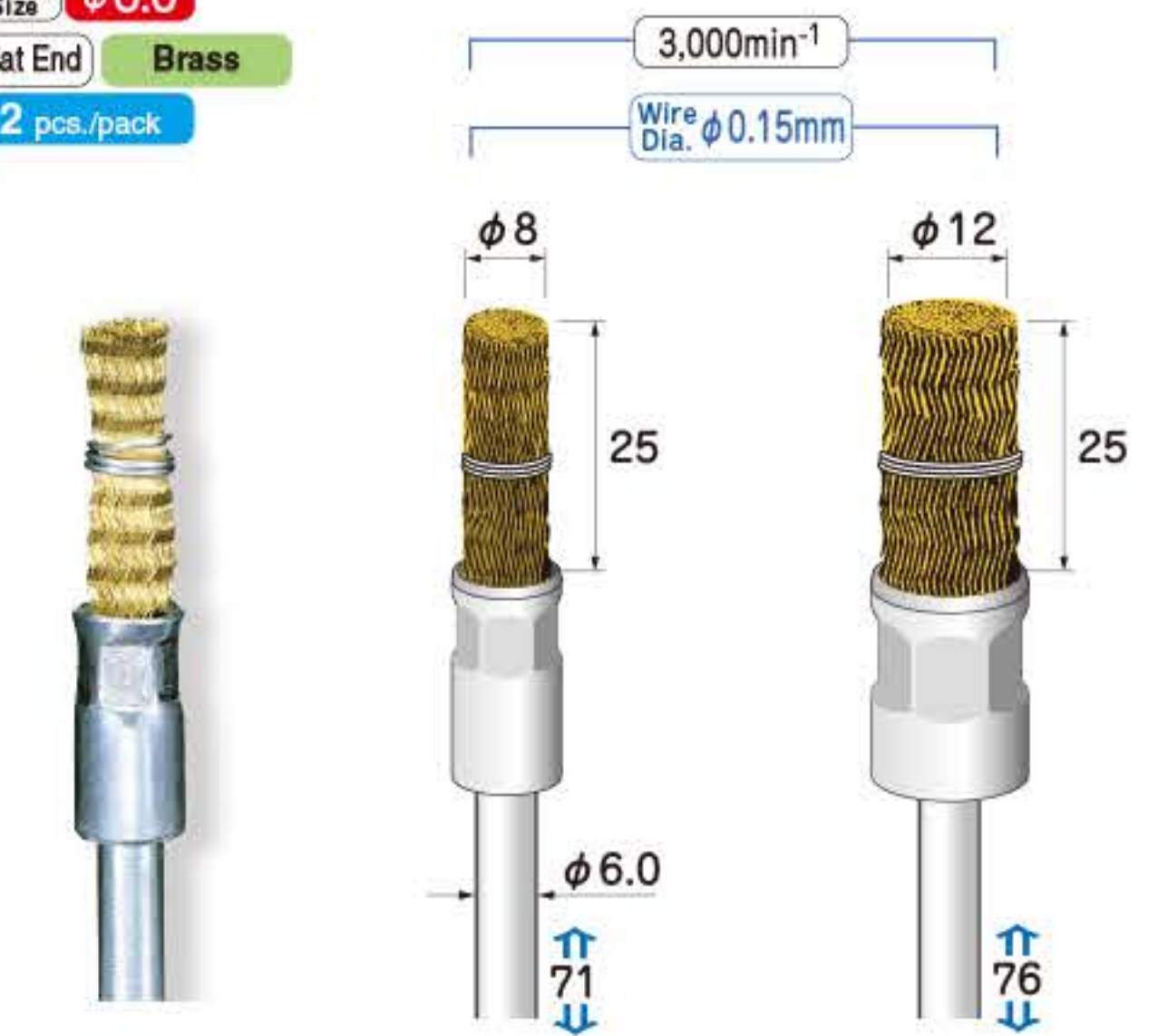
Shank Size **φ6.0**
Flat End **Steel**
2 pcs./pack



Steel 6A73007 6A73008

Brass Brushes

Shank Size **φ6.0**
Flat End **Brass**
2 pcs./pack



Brass 6A83007 6A83008

Stainless Brushes

Shank Size **φ6.0**
Thistle **Stainless**
1 pc./pack

- Thistle shaped brush consists of radially mounted bristles spreading uniformly. Two adjacent faces such as wall and bottom can be polished simultaneously. Efficient for inside of cylinder, groove, or corner etc.
- Suitable for cleaning, rust removal, deburring, paint stripping, removing oxide film of welding.



Stainless 6A63010 6A63011

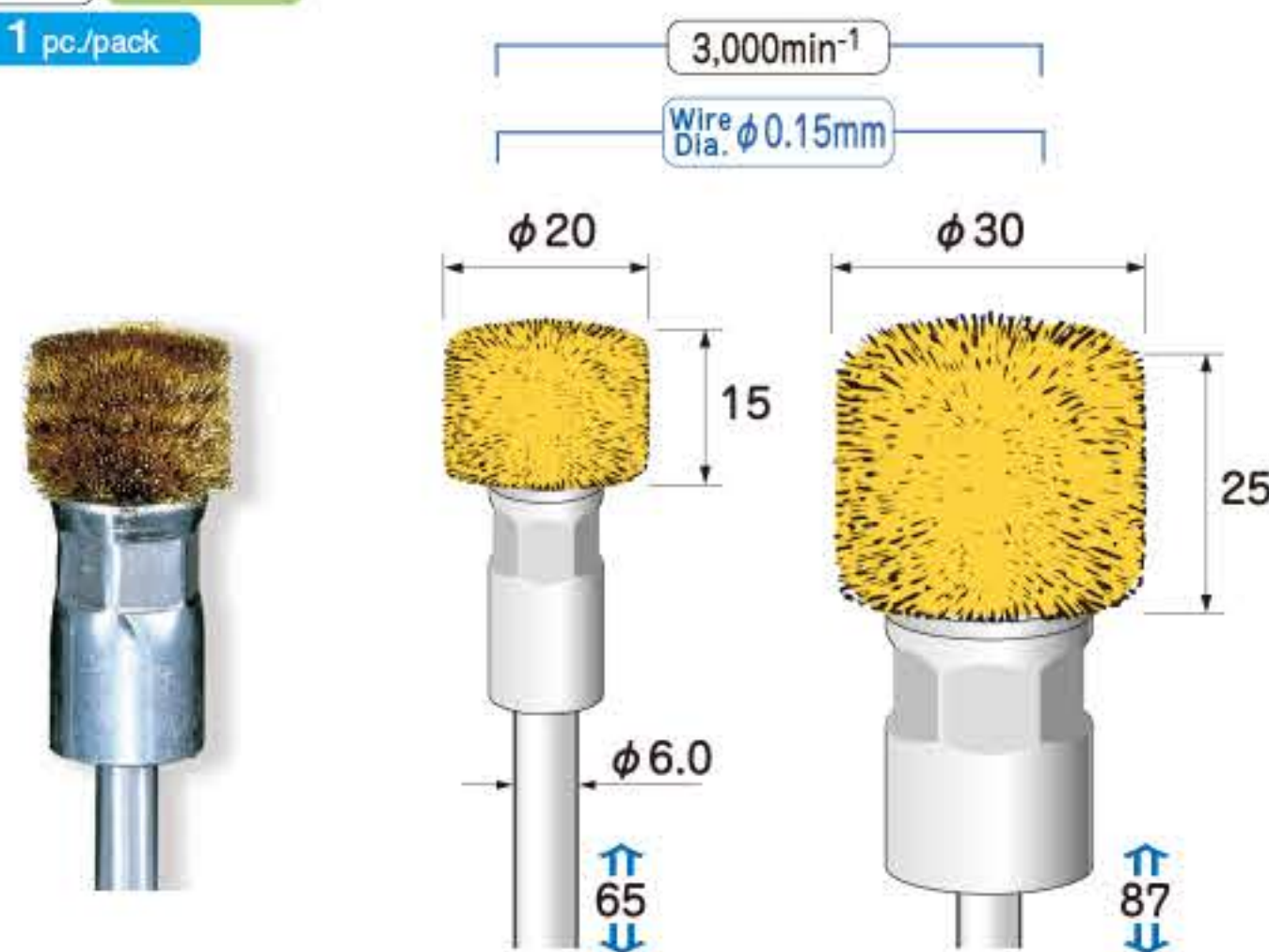
Steel Brushes

Shank Size **φ6.0**
Thistle **Steel**
1 pc./pack



Brass Brushes

Shank Size **φ6.0**
Thistle **Brass**
1 pc./pack



Steel	6A73009	6A73010	Brass	6A83009	6A83010
-------	---------	---------	-------	---------	---------

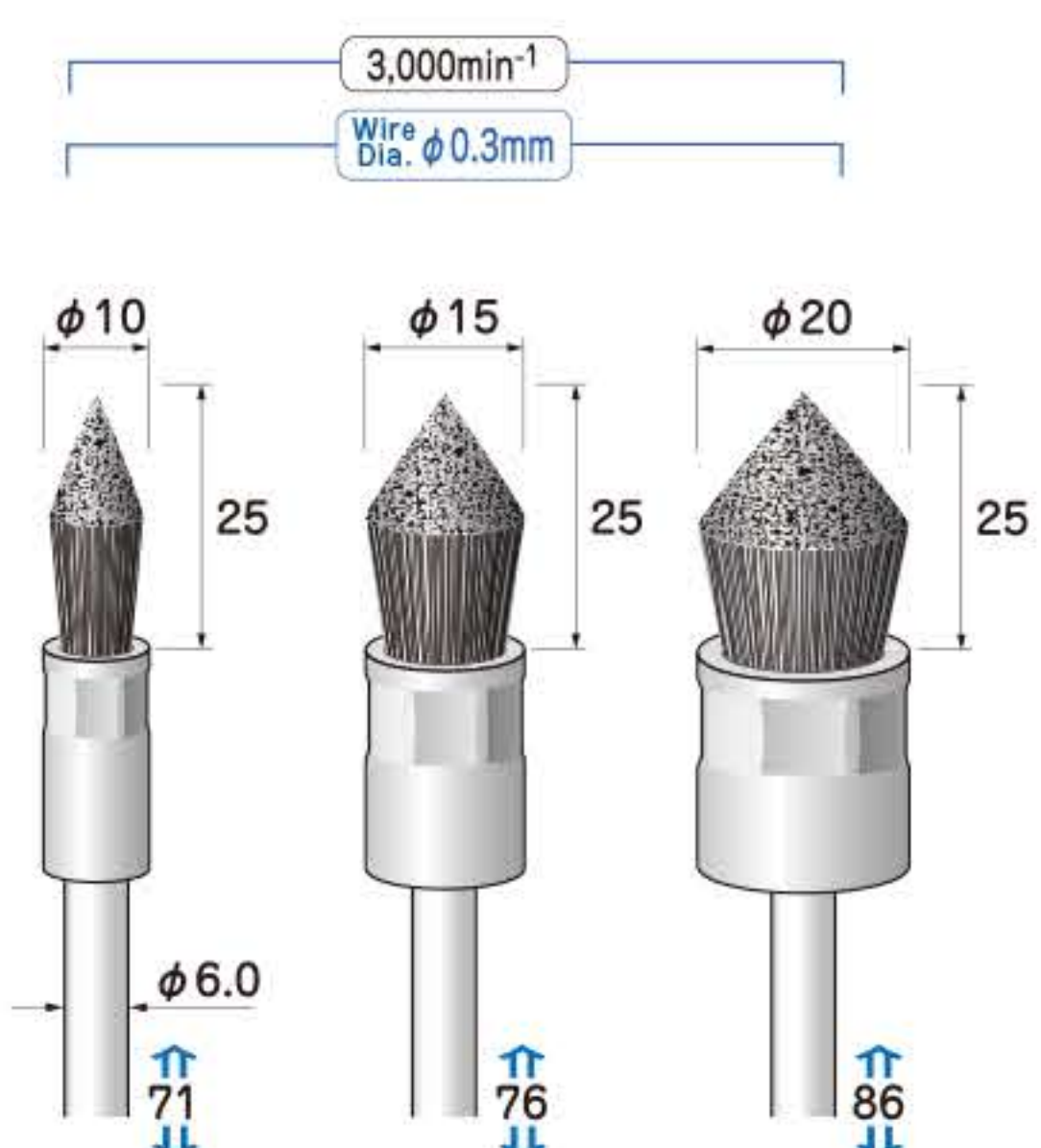
Pointed Shape Brushes

- Pointed head is handy for deburring weld corners, entrance of holes.
- For rust removal, dust removal, cleaning before/after welding, cleaning of threaded holes.



Stainless Brushes

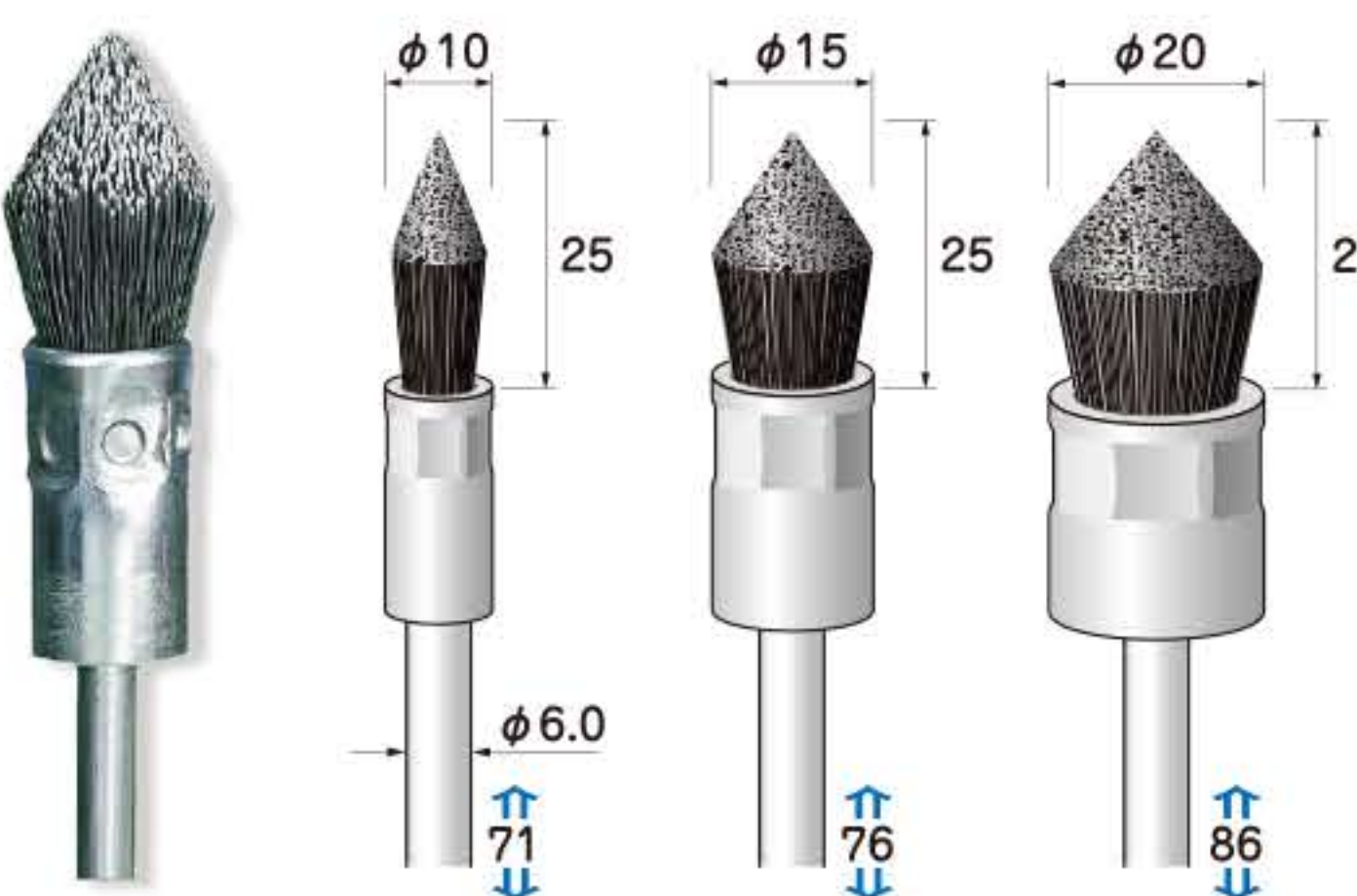
Shank Size **φ6.0**
Pointed **Stainless**
2 pcs./pack



Stainless	6A63012	6A63013	6A63014
-----------	---------	---------	---------

Steel Brushes

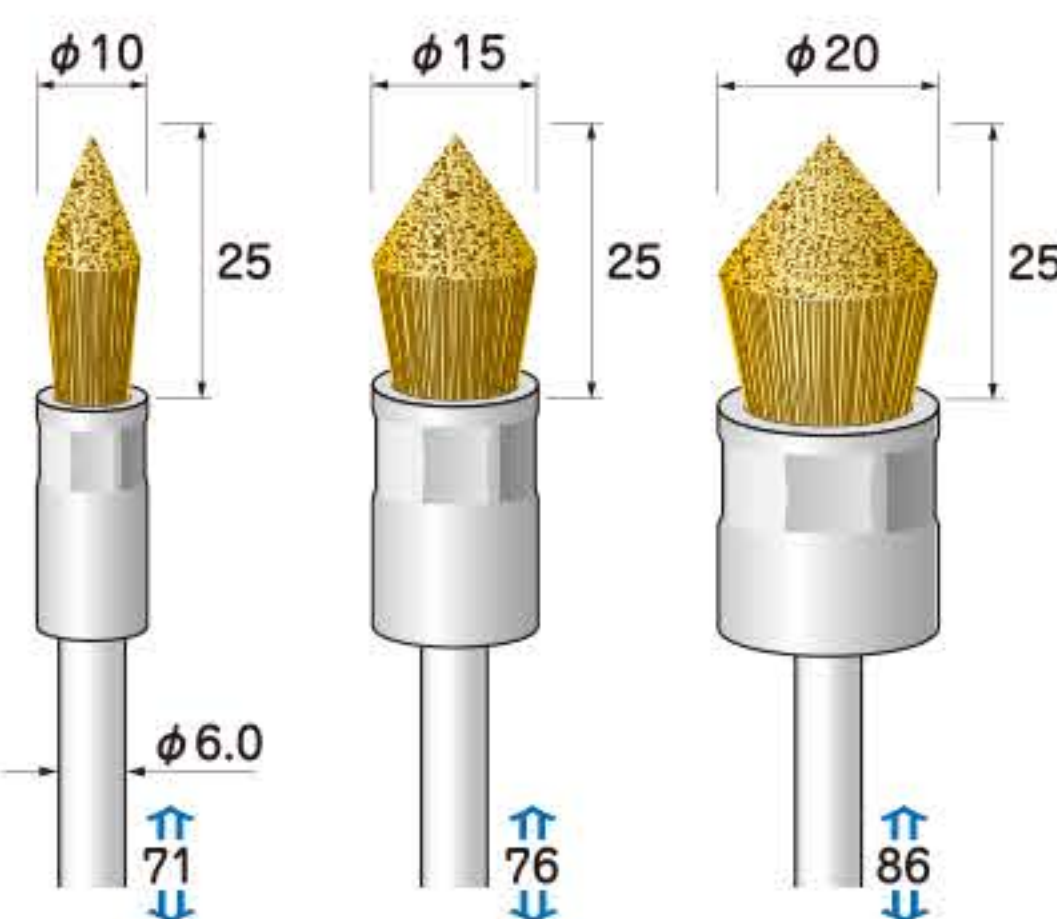
Shank Size **φ6.0**
Pointed **Steel**
2 pcs./pack



Steel	6A73011	6A73012	6A73013
-------	---------	---------	---------

Brass Brushes

Shank Size **φ6.0**
Pointed **Brass**
2 pcs./pack



Brass	6A83011	6A83012	6A83013
-------	---------	---------	---------

Ceramic Fiber Brushes

Feature

- Cutting blades concentrating on the tip of specially formed fiber stone strips removes burrs efficiently together with its square cross-sectional shape.
- Unlike ordinal brushes, the brush retains its shape without spreading in rotation, which enables a pinpoint grinding at the aimed area. Best suits for minute deburring of small cross holes.
- Superior in restorability without such torsional deformation seen in wire brushes. Constantly reproduced cutting edges keeps sharpness throughout the use.
- Suitable for deburring general steel materials, also for flexible materials such as stainless steel, aluminum etc.

Main Application

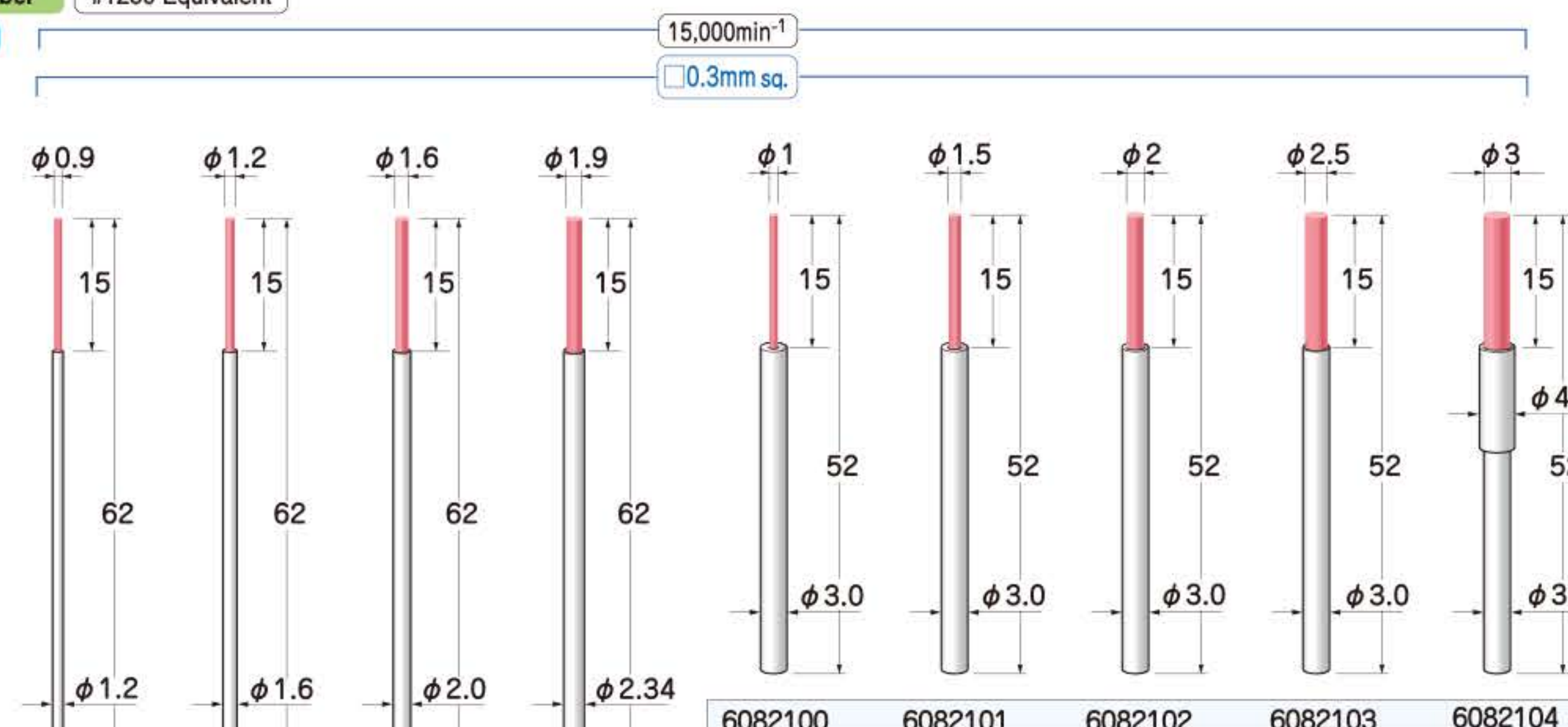
Main Work Materials:
iron, steel materials, stainless, aluminum, copper, brass, plastics.



Best suits for minute deburring of small crossing holes.

Ceramic Fiber Brushes

Ceramic Fiber #1200 Equivalent
1 pc./pack



#1200 Equiv.	6A94001	6A94002	6A94003	6A94004
Sleeve Collet	9A22009	9A22013	9A22017	9A22018

Sleeve Collets

A handy sleeve which converts a thin shank to fit ø3.0 collet without replacing the collet.

Collet sizes of grinders are generally ø2.34mm, ø3.0mm, ø3.175mm, and ø6.0mm. Most industrial grinders are equipped with ø3.0mm collet. However they are not equipped with collets for ø1.2mm and ø2.0mm, these ceramic fiber brushes can be used by quickly installing this sleeve to ø3.0mm collet of your grinder.

* For more details of sleeve collet, see page 57.

Ceramic Fiber Brushes

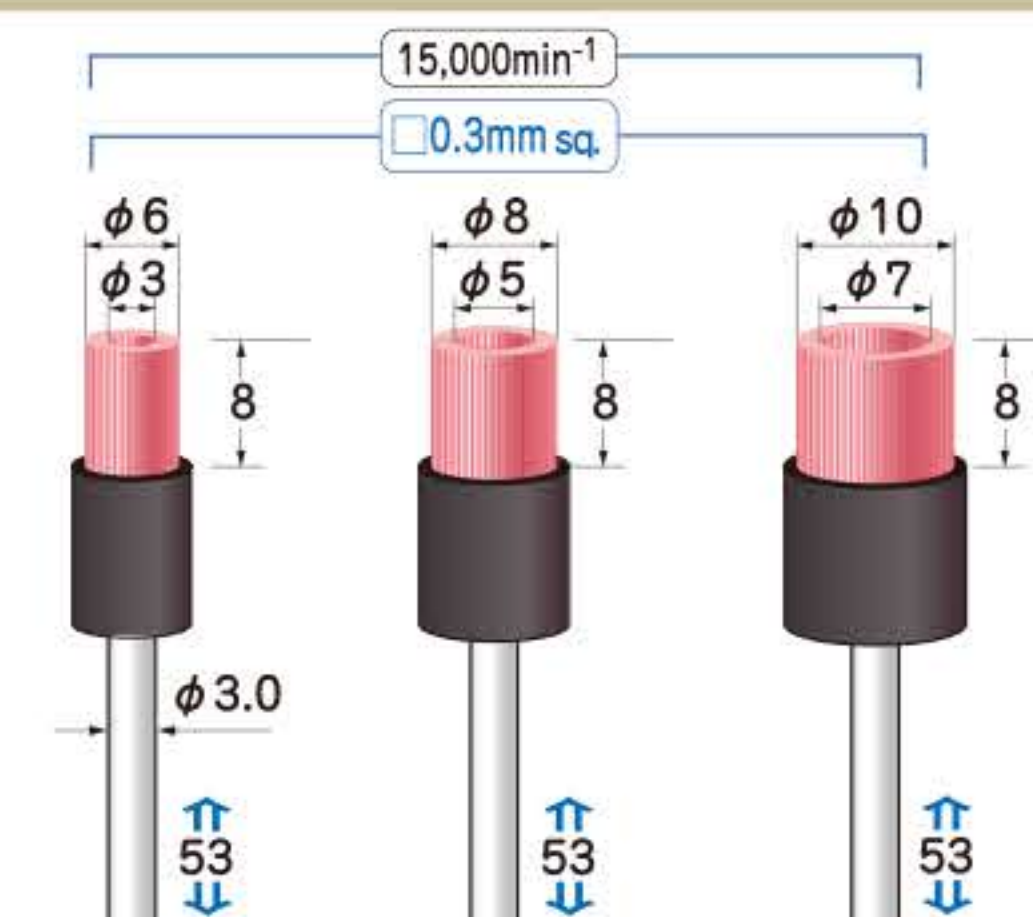
- A hollow core shaped brush suits for deburring on bottom part like cup shape brushes.
- Without spreading or twisting of bristles unlike wire material brushes, its cutting edges contact constantly on workpiece to achieve outstanding cutting performance.

WARNING

- DO NOT use with electric powered or air grinders not equipped with speed control function.
- Sharp spiny powders of broken fiber may cause pricking when attached on human body. Protect yourself from dust and take sufficient care for safety in operation.

Ceramic Fiber Brushes

Shank Size **φ3.0**
Ceramic Fiber #1200 Equivalent
1 pc./pack



Ceramic Fiber #1200 Equiv.	6A92001	6A92002	6A92003
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Ceramic Fiber Brushes

Shank Size $\phi 3.0$
Ceramic Fiber
1 pc./pack

•Grit sizes shown are only for reference because fiber textile does not contain abrasive grains.

10,000min⁻¹

Ceramic Fiber	6A92004	6A92005	6A92006	6A92007	6A92008	6A92009
---------------	---------	---------	---------	---------	---------	---------

Ceramic Fiber Hand Brushes

- Hand tools with bundled ceramic fiber strips formed to pen shape. (DO NOT use with grinders.)
- With sharpness of ceramic fiber, superior in grinding ability at the end of bristle. Removing dirt and burrs efficiently.
- Strong fibers have excellent restorability without flattening like wire brushes. The polishing ability remains to the last.

WARNING •DO NOT use with grinders.
•DO NOT force the tool in use. It may break the bristles.

A convenient **hand brush** for polishing and minute deburring with pen-like feeling.

Ceramic Fiber Hand Brushes

Ceramic Fiber
1 pc./pack

#1,000 Equivalent
0.45mm sq.

Ceramic Fiber	9A52001	9A52002	9A52003
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Hand Holder (ø8 × 130mm)

ø3.0 mm round /1.0 mm flat Compatible
1 pc./pack
Order Code : 9A51001

Compatible with ø3.0 mm round bars & 1.0 mm thick flat plates

Hand Holder

- A hand holder for ø3.0 mm/1.0 mm thick ceramic fiber stones and ruby stone sticks.
- Also fits tools of ø3.0 mm shank.
- Ceramic fiber brushes can be attached to this holder to use as a hand brush.

Order Code : 9A51001

Single Wire Knot Brushes

- Stainless plain wires twisted to a rope form can be used as deburring brush.
- The end of wire gets loosened and spread to work as a soft touch brush for polishing. Best suits for minute deburring in small cross holes.

Single Knot End Brushes

Shank Size $\phi 3.0$
Stainless
1 pc./pack

8,000min⁻¹

Single Knot End Brush	6A01001	6A01002	6A01003	6A01004
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Wire Lap Tools/Electroplated Diamond Wire Lap Tools

- A special tool for lapping on plane surfaces, inside holes etc. consisting of bundled piano wires.
- Suits for deburring entrance edge or inside of holes, and lapping with abrasive agents.
- Also available with electroplated diamond wires for superior grinding ability.

Wire Lap Tools

Piano Wire
1 pc./pack

10,000min⁻¹

Shank Size $\phi 2.34$	6A02001	6A02002	6A02003
Shank Size $\phi 3.0$	6A02004	6A02005	6A02006

Electroplated Diamond Wire Lap Tools

Shank Size $\phi 3.0$
Electroplated Diamond
1 pc./pack

10,000min⁻¹

Electroplated Diamond Wire #180	6A02007	6A02010	6A02013
Electroplated Diamond Wire #320	6A02008	6A02011	6A02014
Electroplated Diamond Wire #500	6A02009	6A02012	6A02015

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Cutting Discs
Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels/Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds/Hand Tools
Special Tools
Tool Sets

Abrasive Added Nylon Spiral Brushes

Feature

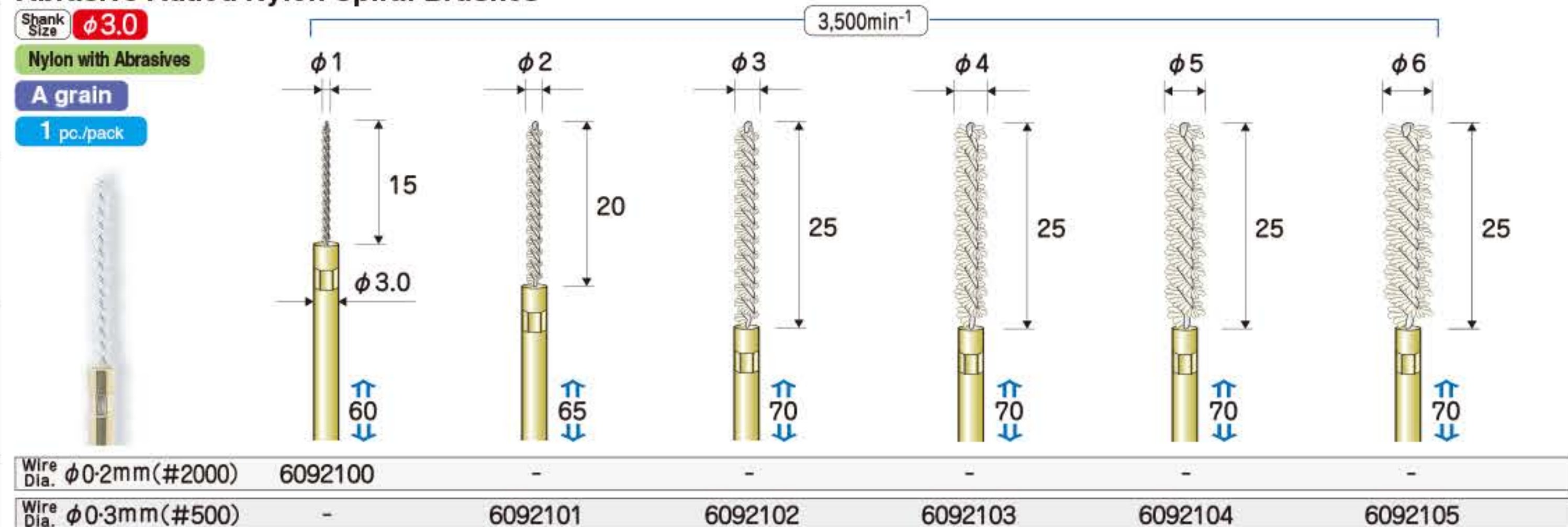
- Twisted brushes of nylon bristles kneaded with #500 alumina grain for $\phi 3.0$ mm shank models (#2000 for $\phi 1.0$ mm brush dia. model) and #320 silicon carbide grain for $\phi 6.0$ mm shank models.
- Bristles fit well on a uneven surface in deburring threaded holes and cross holes resulting in satisfactory finished surface.

Main Application

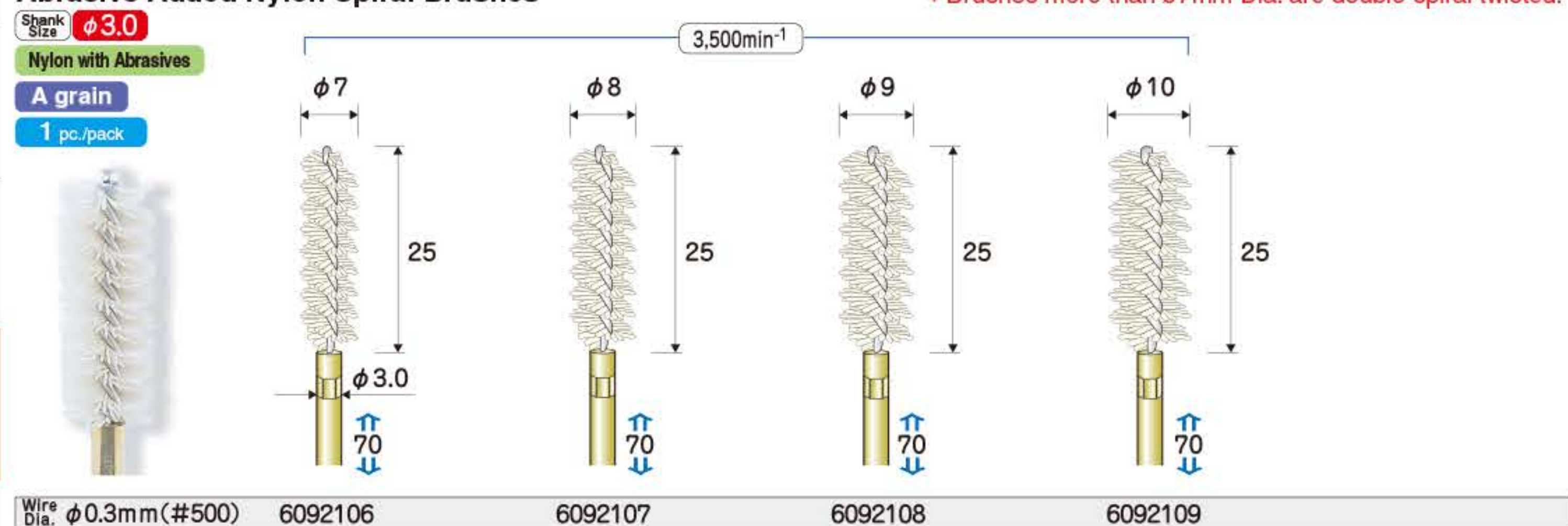
For relatively minute deburring, removing dirt, polishing, and cleaning internal diameters.
Main Work Materials:
iron, steel materials, stainless, aluminum, copper, brass, plastics.



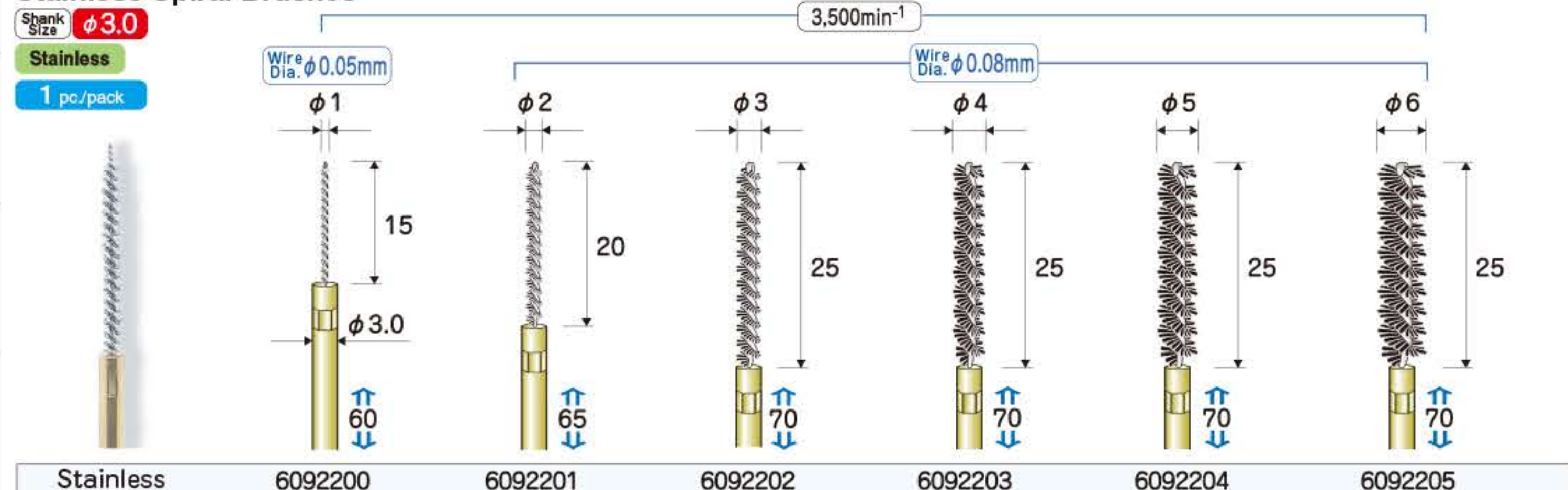
Abrasive Added Nylon Spiral Brushes



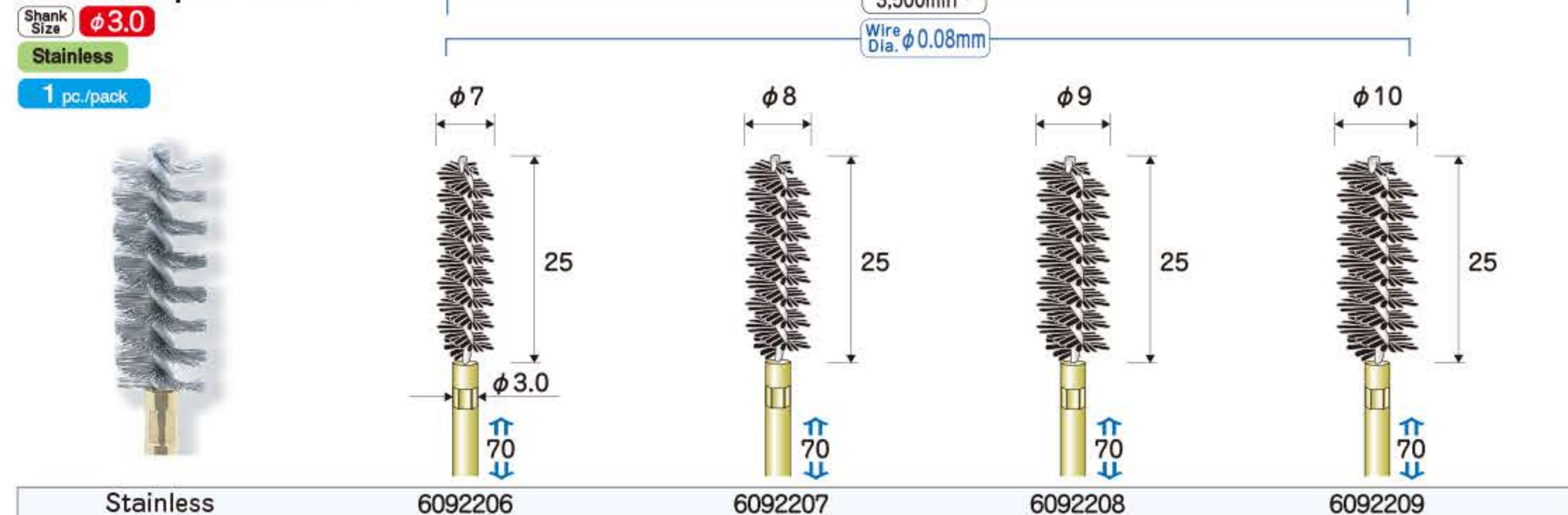
Abrasive Added Nylon Spiral Brushes



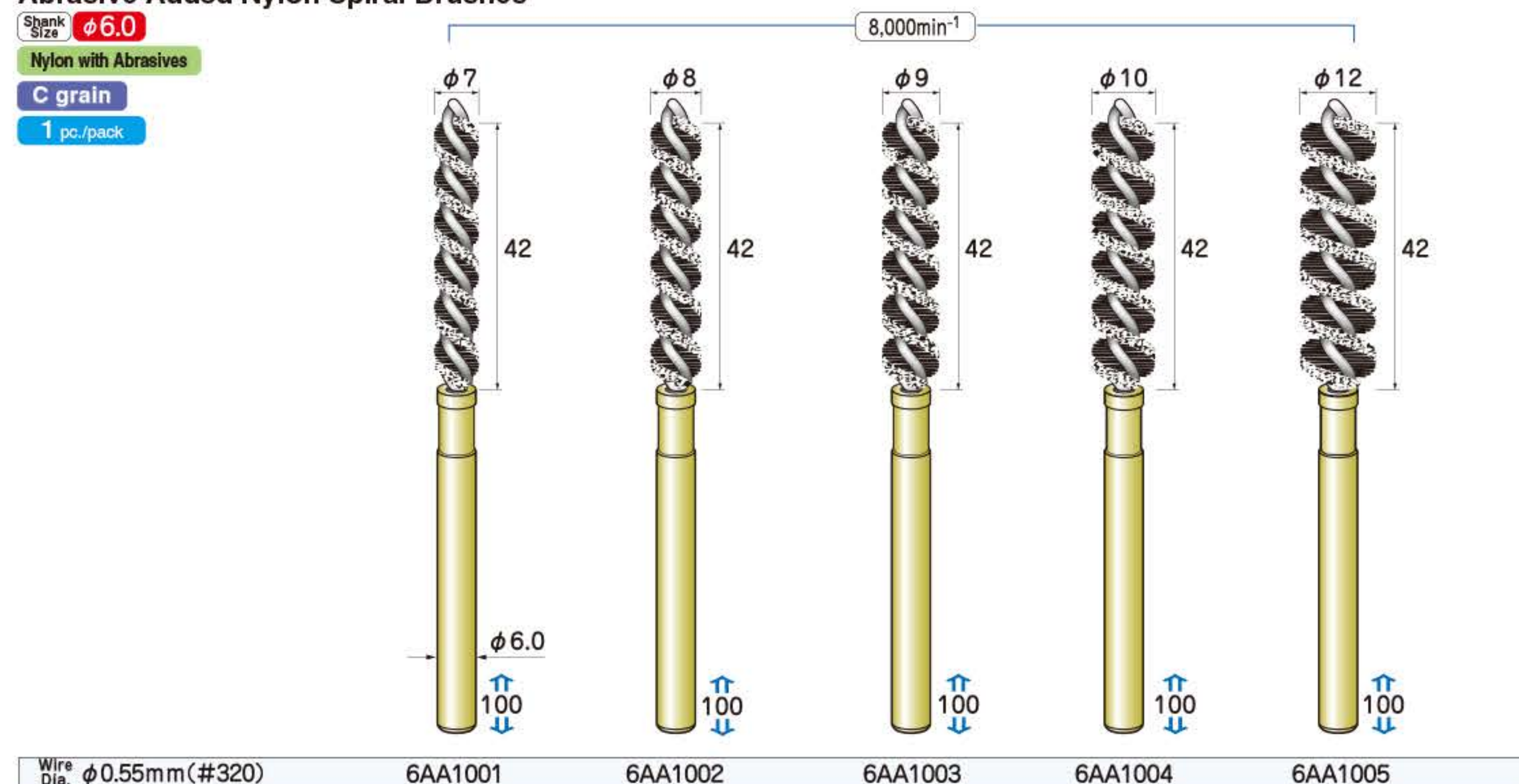
Stainless Spiral Brushes



Stainless Spiral Brushes

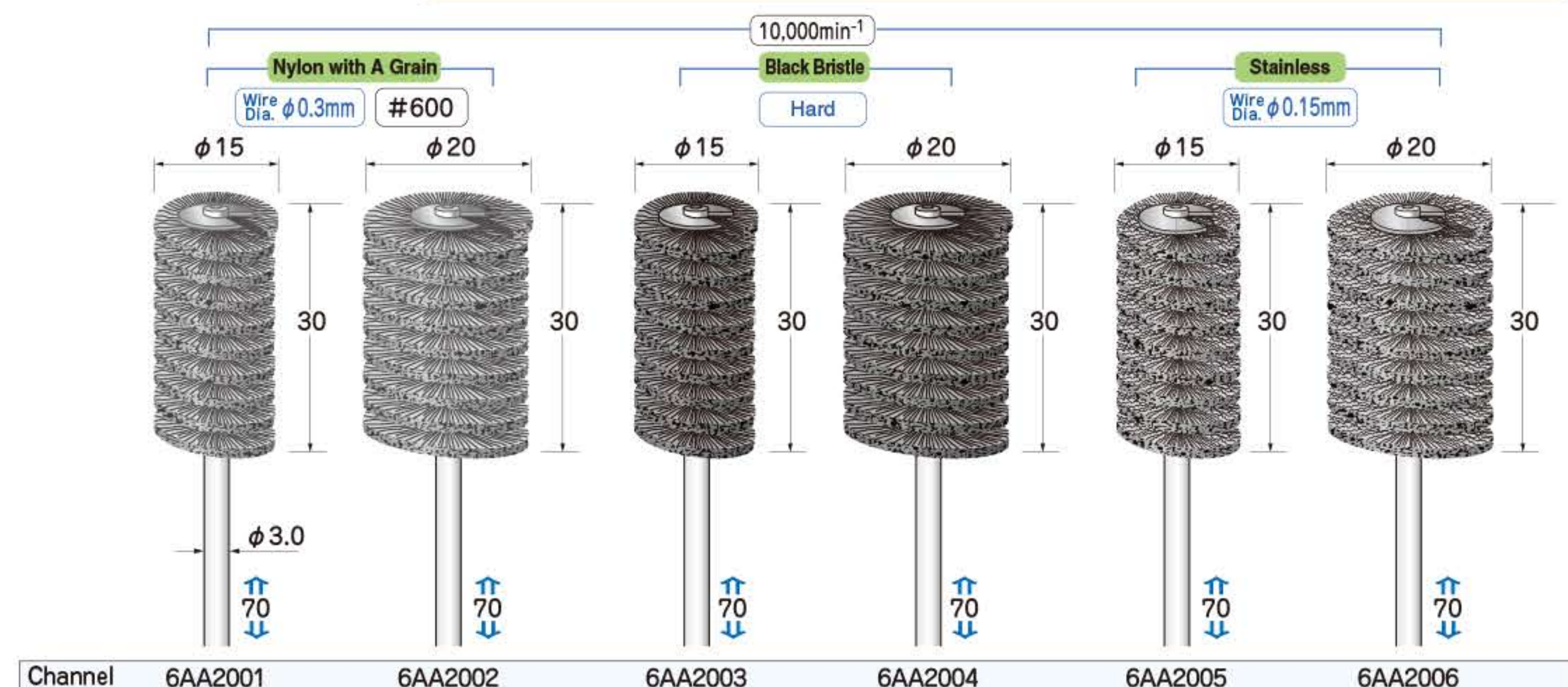


Abrasive Added Nylon Spiral Brushes



Spiral Channel Brushes

- Dense bristles implanted on a backing strip called "channel (rail)" are mounted spirally onto a $\phi 3.0$ mm shank.
- Compared to the ordinal brushes, bristle is much denser, providing superior grinding/polishing ability and constant finish.



Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Twisted Wire Lap Tools

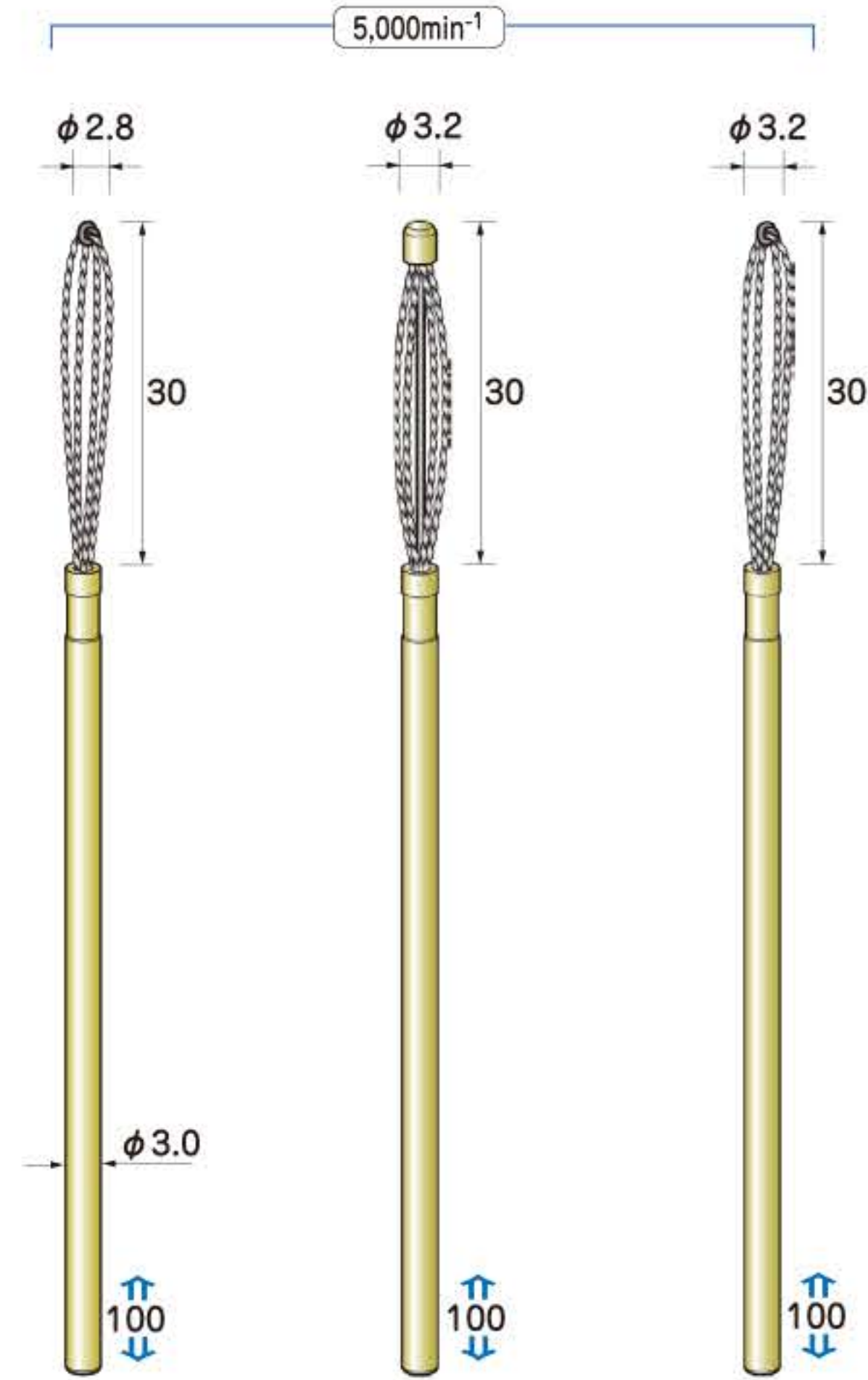
Feature

- Burnishing burs for deburring, consisting of bundled twisted triangle steel wires.
- The edges of twisted triangle wire are designed to scrape burrs.

Main Application

For deburring entrance of hole, inside of hole, intersecting holes. (Cutting ability is not as strong as flute type burs.)

* Dimensions may vary slightly due to either the nature of products or measuring methods.



Twisted Wire Lap Tools

Shank Size $\phi 3.0$

Triangle Wire

1 pc./pack



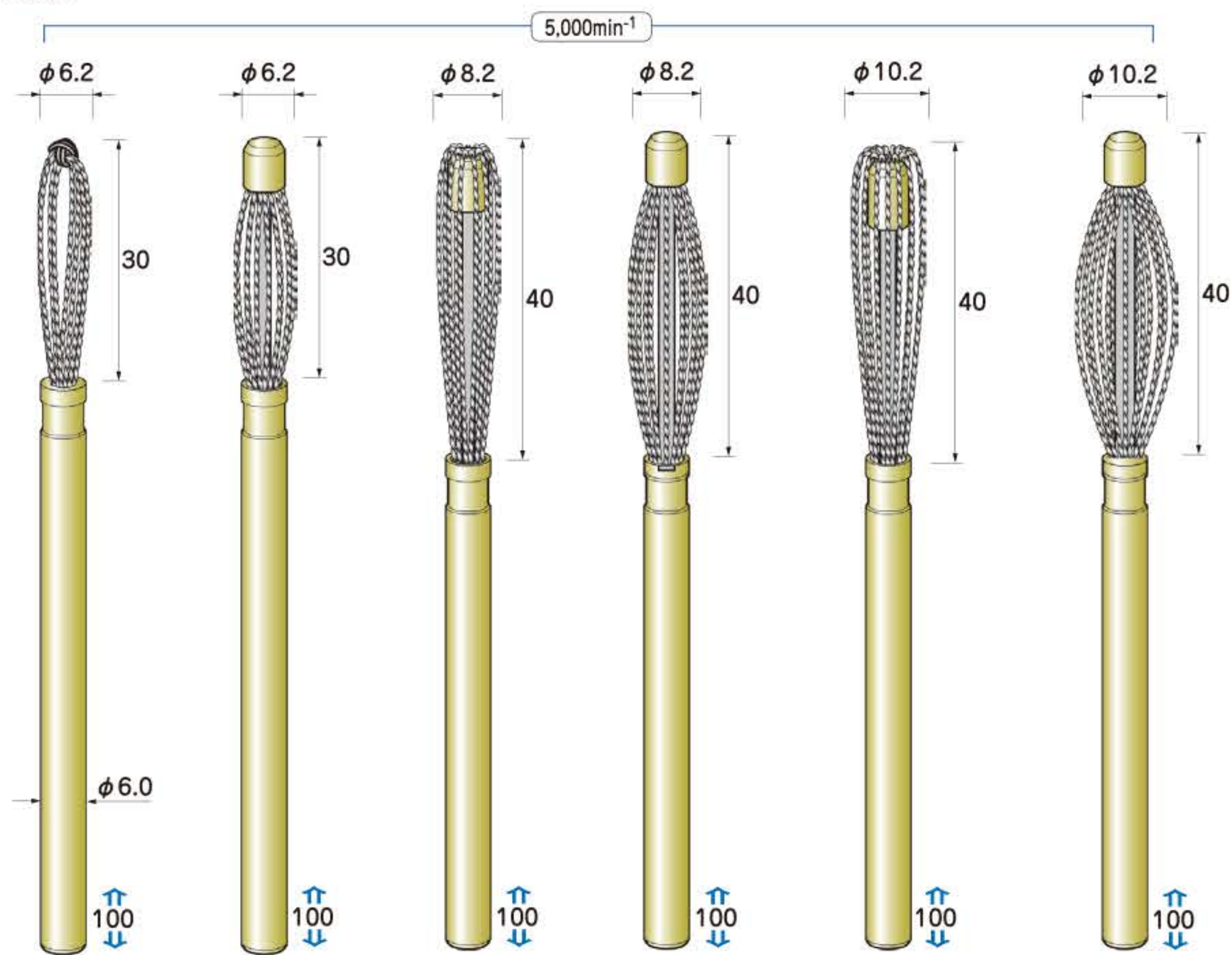
Twisted Wire Lap Tool	6A02016	6A02017	6A02018
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Twisted Wire Lap Tools

Shank Size $\phi 6.0$

Triangle Wire

1 pc./pack



Twisted Wire Lap Tool	6A02019	6A02020	6A02021	6A02022	6A02023	6A02024
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Enhancing freedom of creativity of specialists.

E-FORCE®



Electroplated Diamond/CBN Diamond Cutting Discs Slotted Diamond/CBN Grinding Stones Carbide Cutters Steel Cutters Twist Drills Mandrels/Shank Adapters Grinding Stones Abrasive Rubber Points Abrasive Sanders Brushes Felt Bobs Compounds/Hand Tools Special Tools Tool Sets

Electroplated Diamond/CBN Diamond Cutting Discs Slotted Diamond/CBN Grinding Stones Carbide Cutters Steel Cutters Twist Drills Mandrels/Shank Adapters Grinding Stones Abrasive Rubber Points Abrasive Sanders Brushes Felt Bobs Compounds/Hand Tools Special Tools Tool Sets

Felt Bobs

Feature

- Fine wool is tightly compressed to form shapes.
- Abrasive agent is well absorbed and held. Suits for polishing. (Use with abrasive agent.)
- Soft and hard types are available for each shape.
- Also available with abrasive agent of chromium oxide or alumina contained.

Main Application

Mirror polishing metals, deburring/rounding general metals, finish polishing resin.

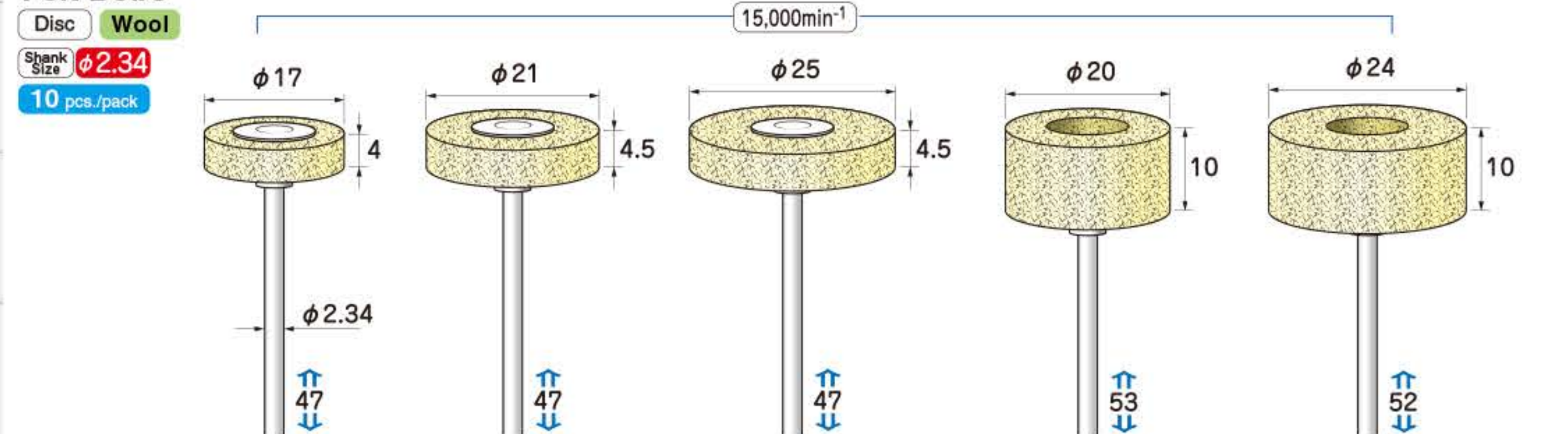
Felt Shapes



Felt Materials

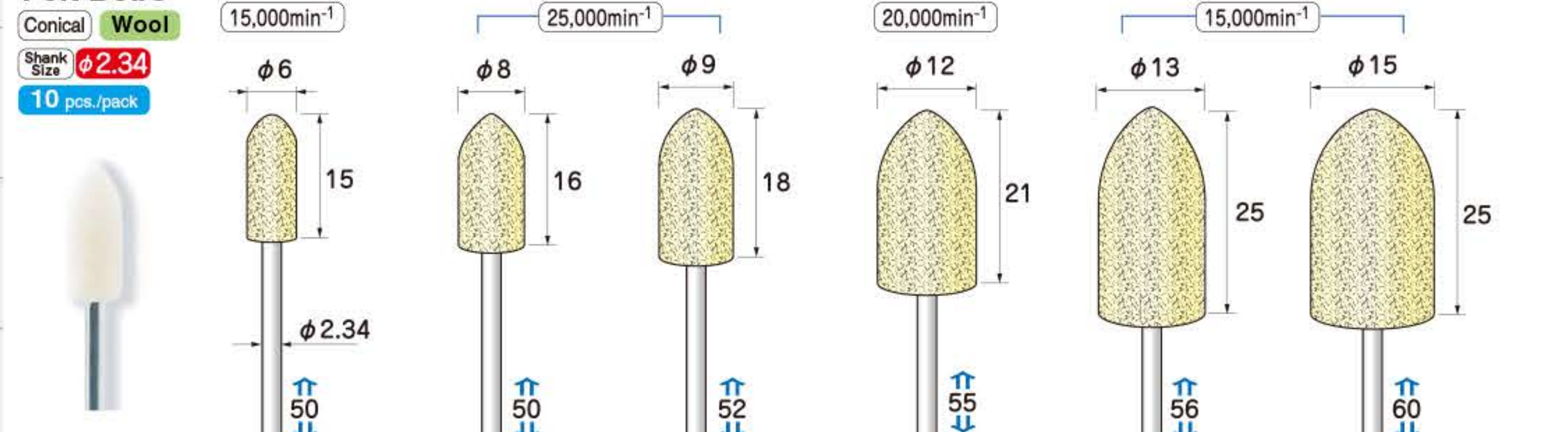
- Wool
 - Hard
 - Soft
- Alumina Impregnated
- Chromium Oxide Impregnated
- Cerium Oxide Impregnated
- Cotton (Thread)
- Cotton Cloth
- Chamois
- Polyurethane

Felt Bobs



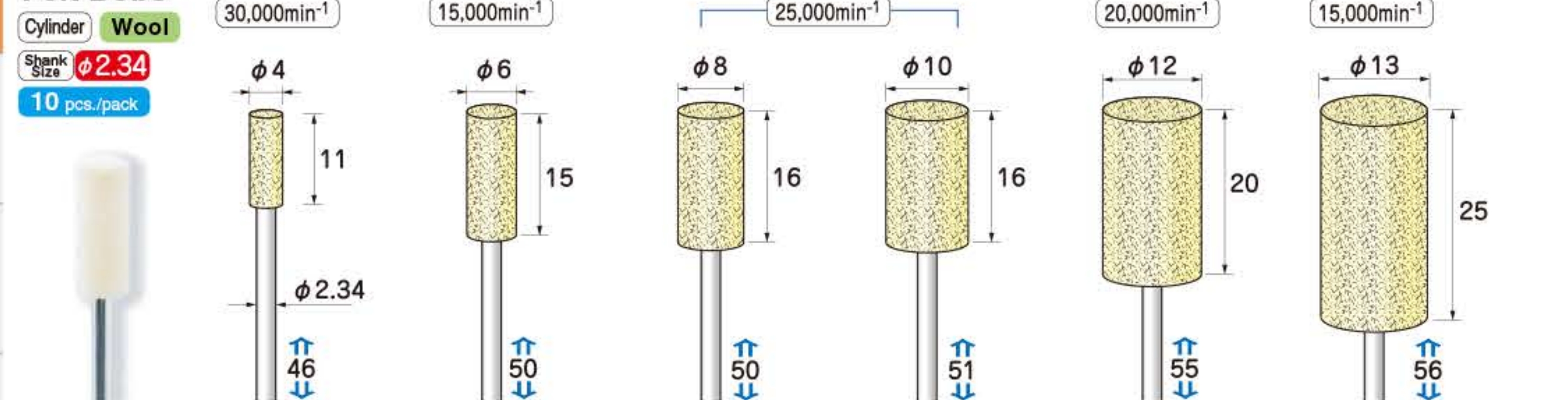
Hard	7A11001	7A11002	7A11003	Soft	7A11004	7A11005
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Felt Bobs



Hard	7011200	7A11006	7A11008	7A11010	-	7A11012
Soft	7011201	7A11007	7A11009	7A11011	7011202	7A11013

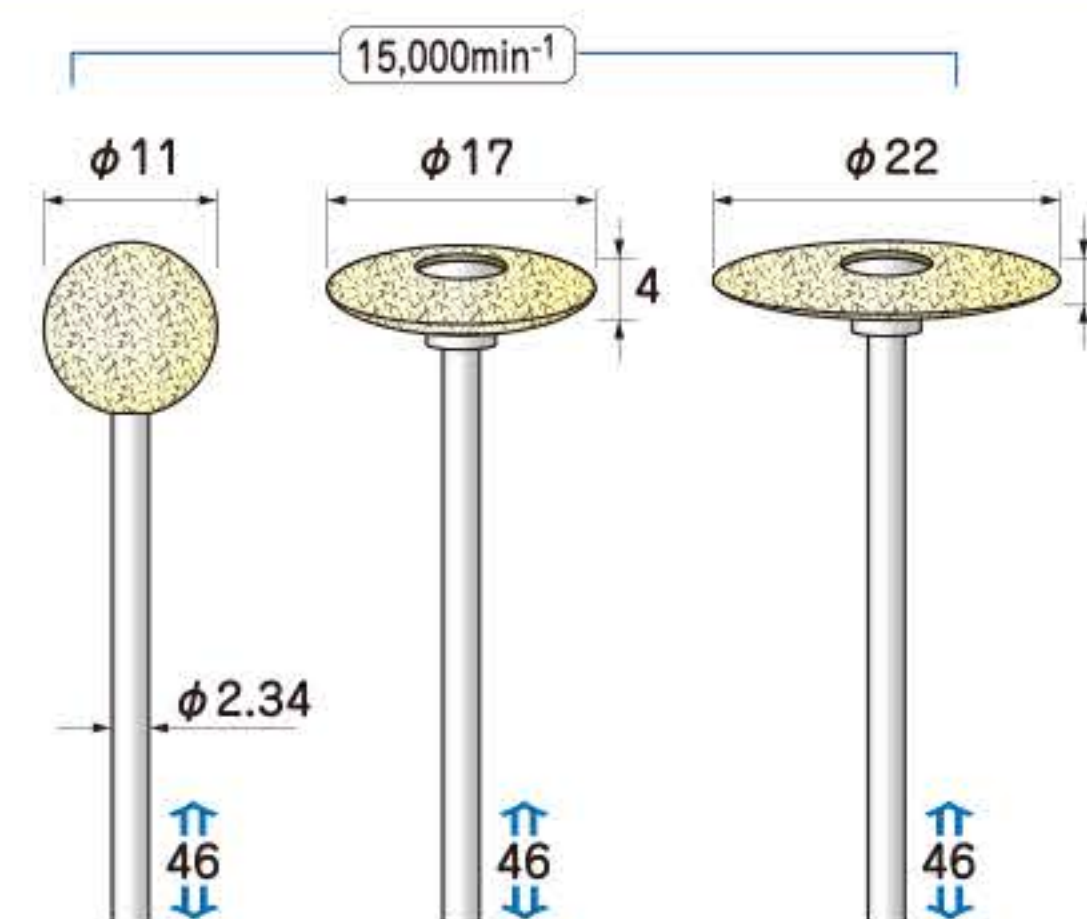
Felt Bobs



Hard	7A11014	7011100	7A11016	7A11018	7A11020	-
Soft	7A11015	7011101	7A11017	7A11019	7A11021	7011102

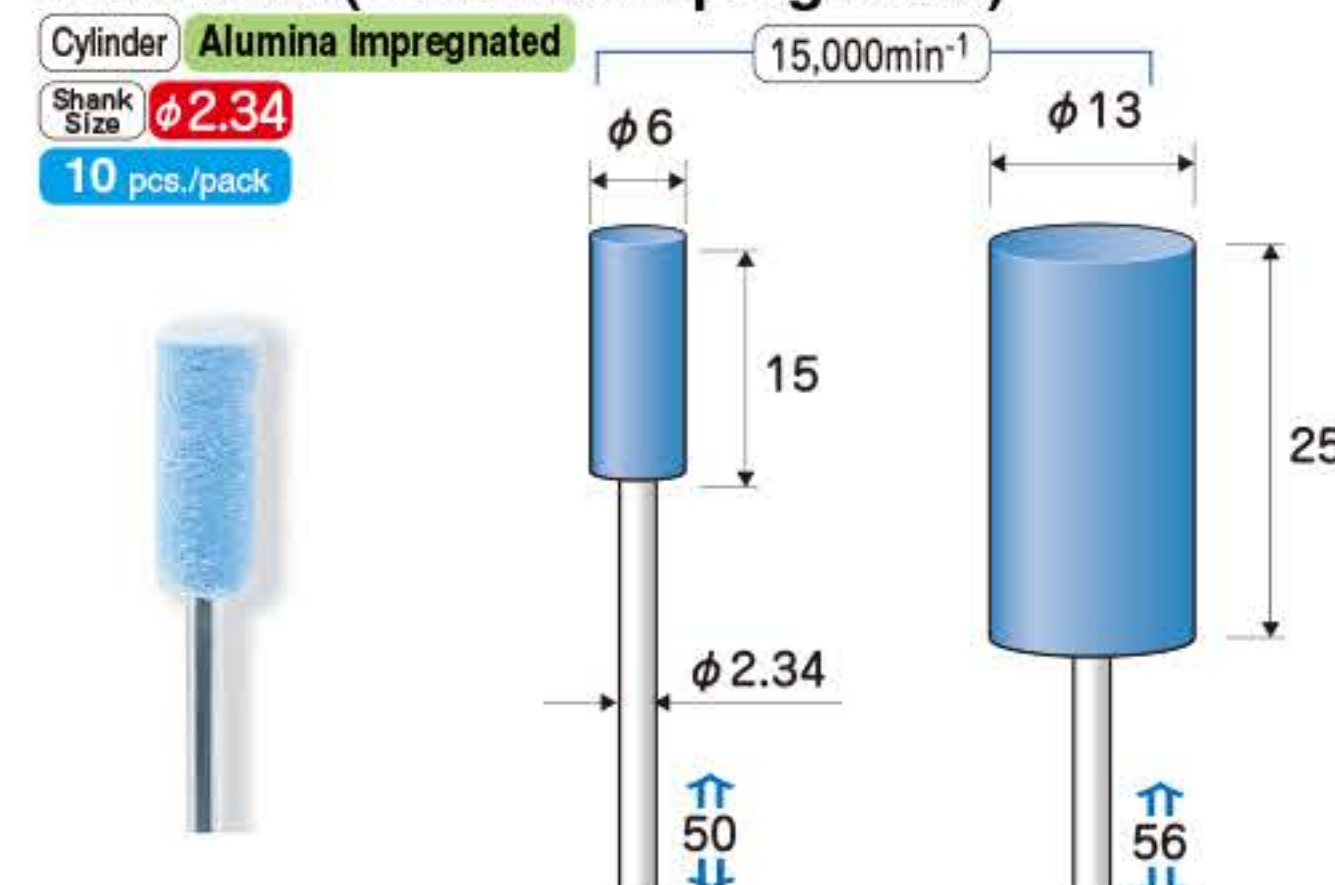
Felt Bobs

- Wool
- Shank Size $\phi 2.34$
- 10 pcs./pack

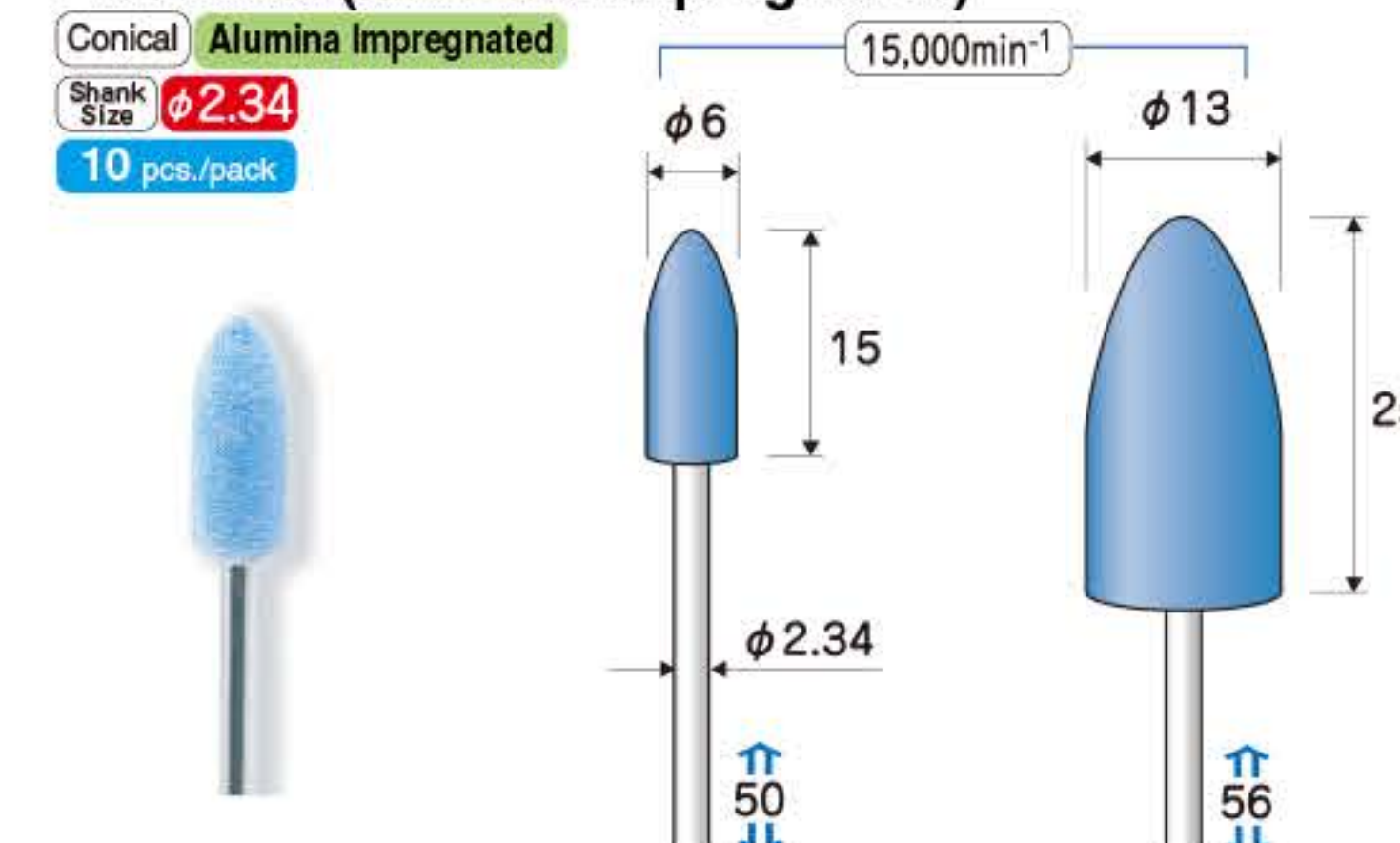


Hard	7A11022	7A11023	7A11024
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Felt Bobs (Alumina Impregnated)

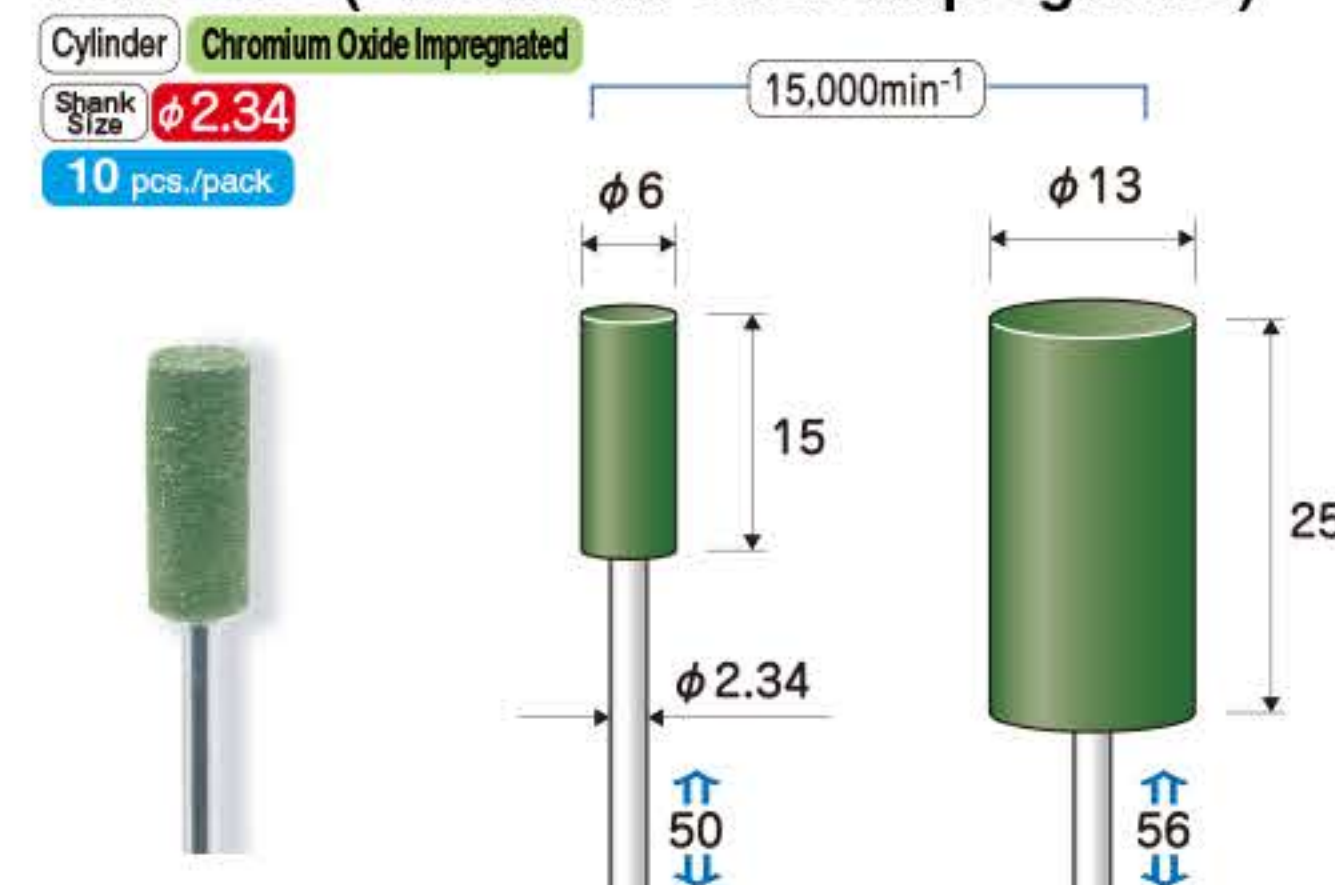


Felt Bobs (Alumina Impregnated)

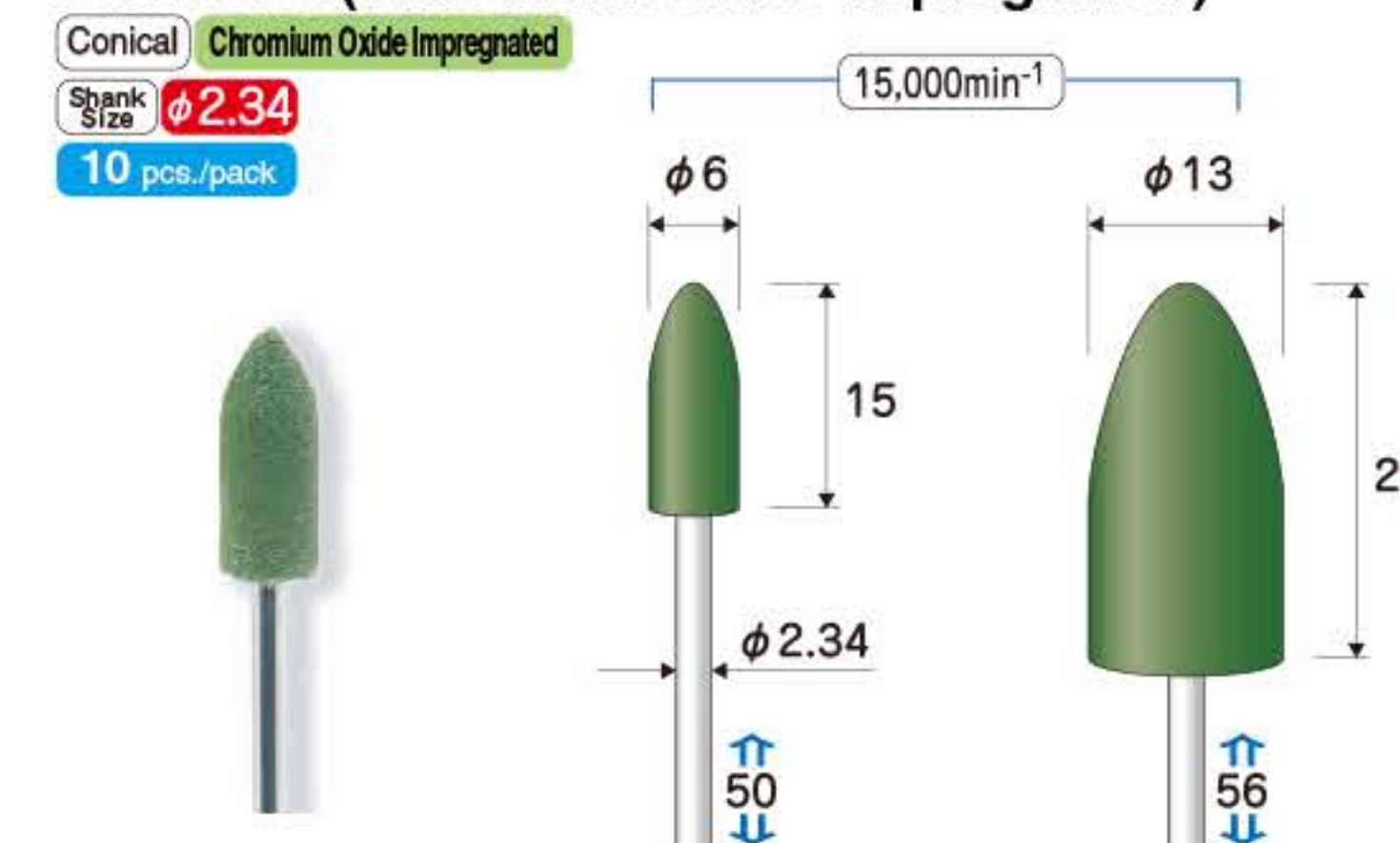


Alumina Impregnated	7011103	7011104	7011203	7011204
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Felt Bobs (Chromium Oxide Impregnated)

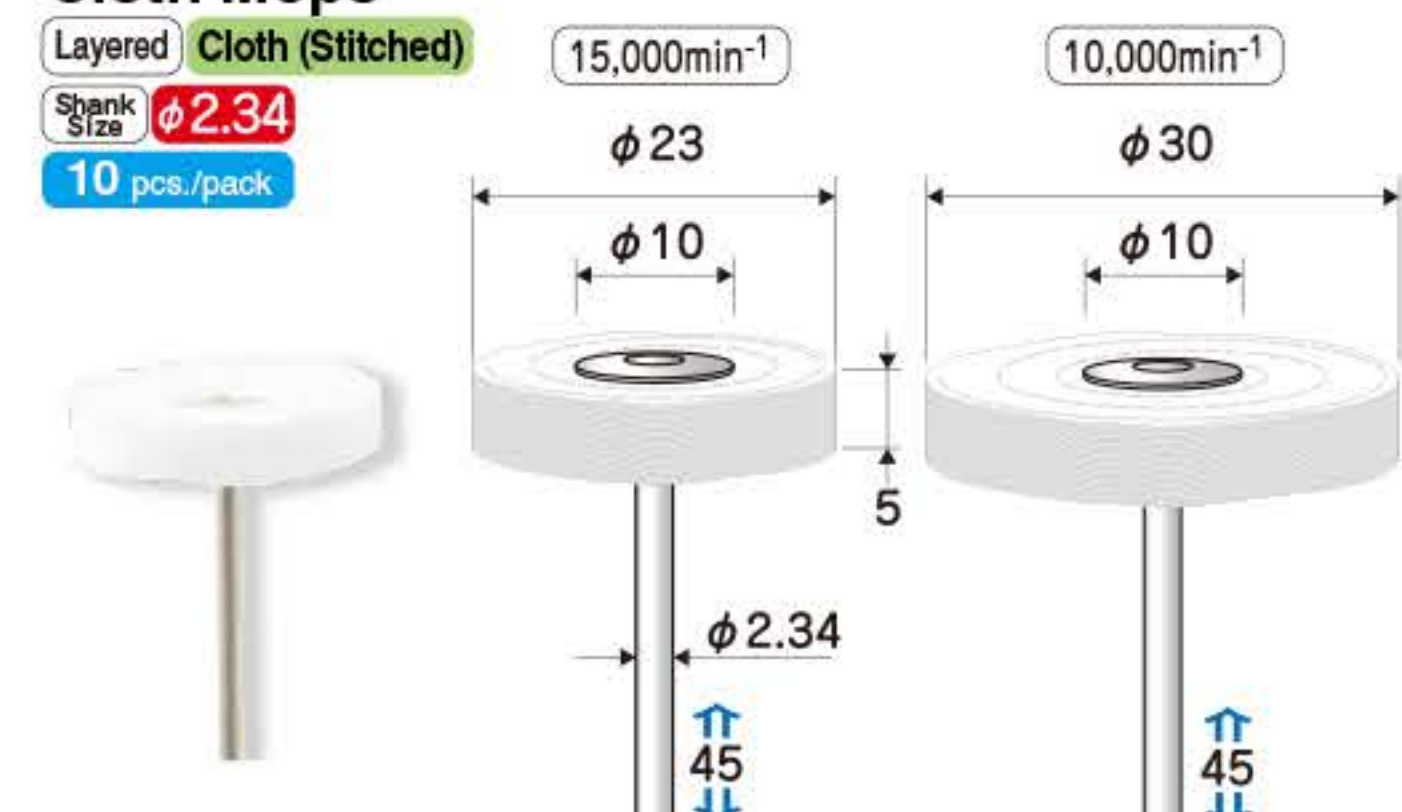


Felt Bobs (Chromium Oxide Impregnated)

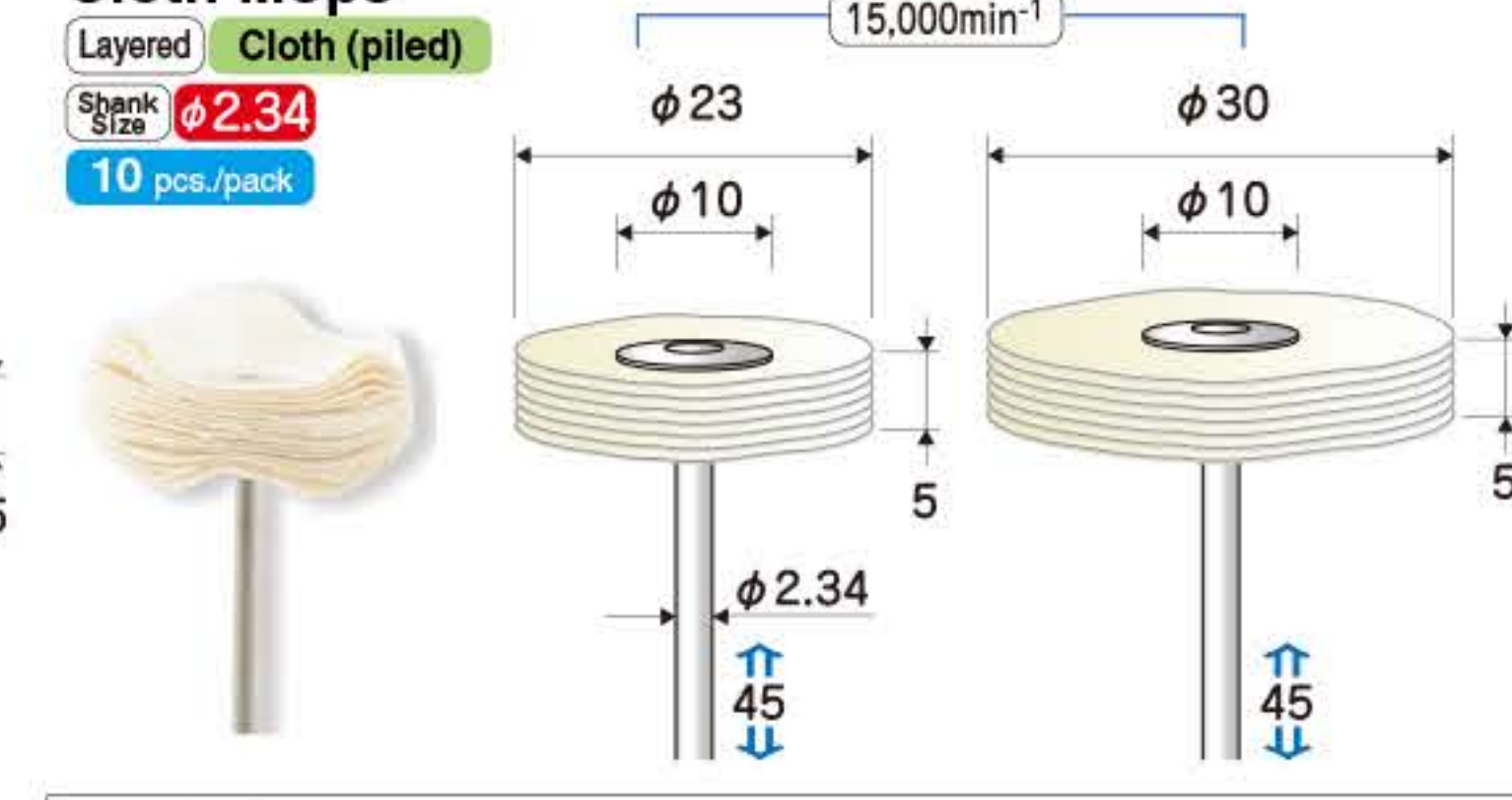


Chromium Oxide Impregnated	7011105	7011106	7011205	7011206
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Cloth Mops



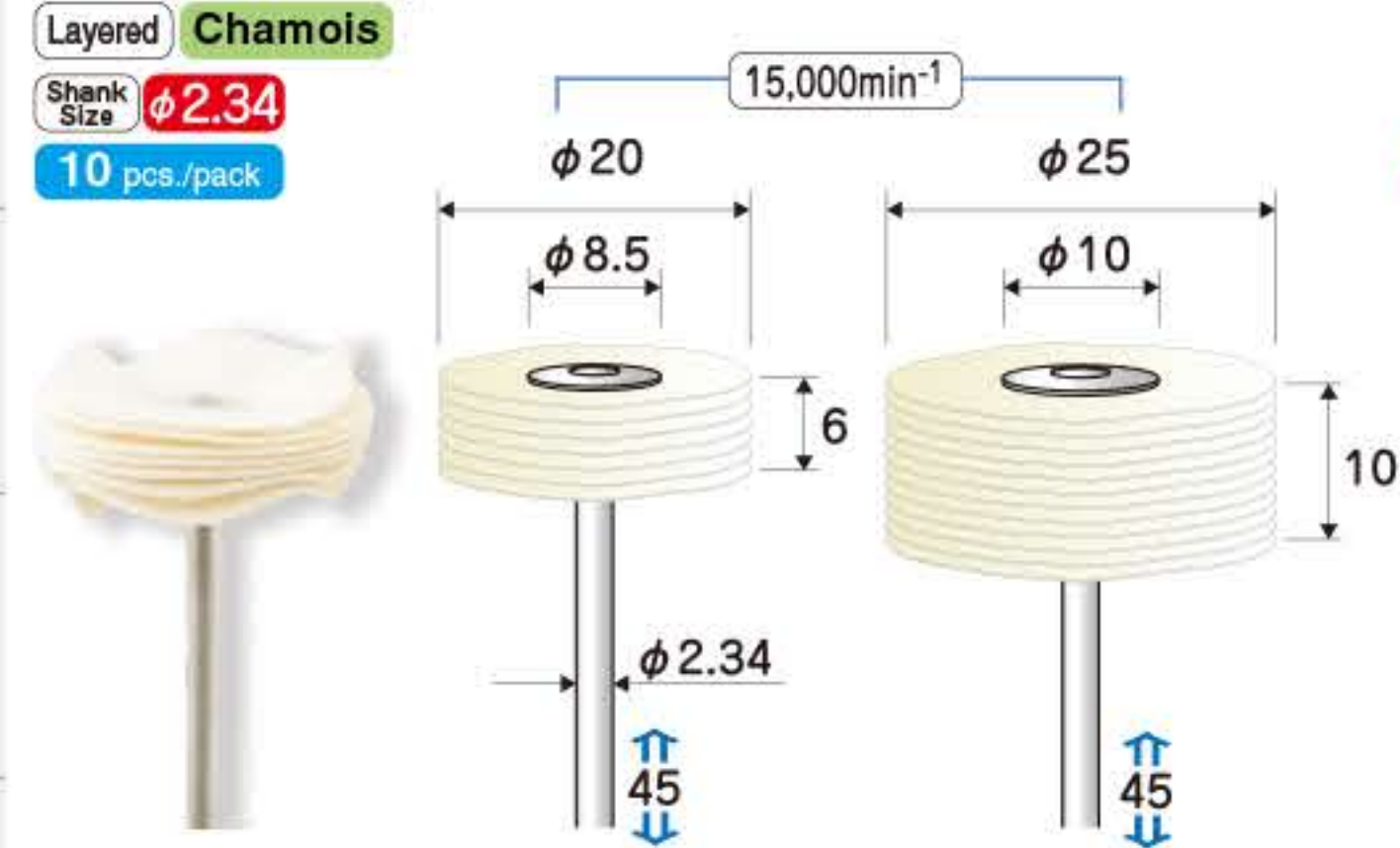
Cloth Mops



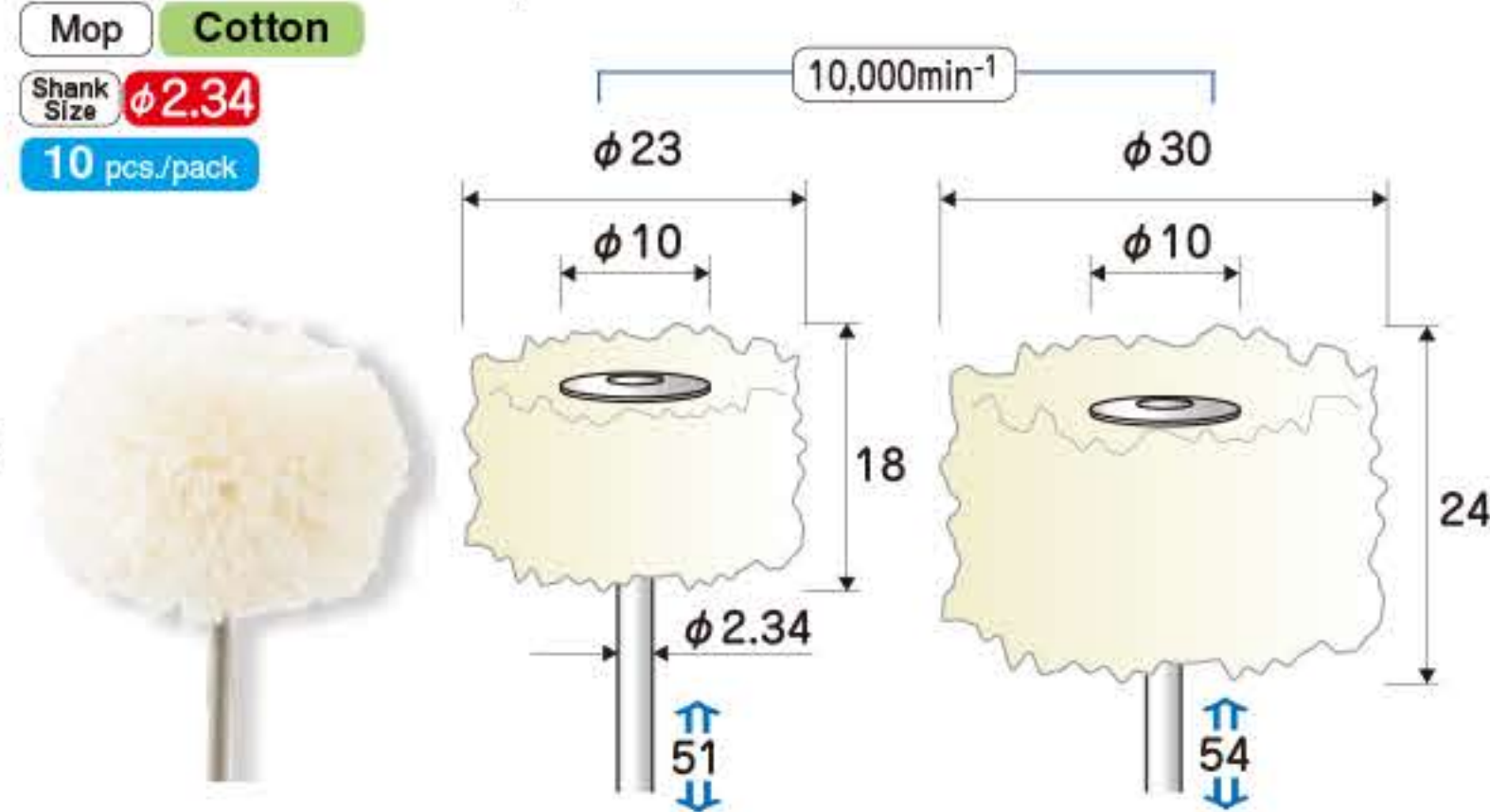
Stitched	7021100	7021101	Piled	7021200	7021201
			Piled (Soft)	7021300	7021301

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Chamois Mops

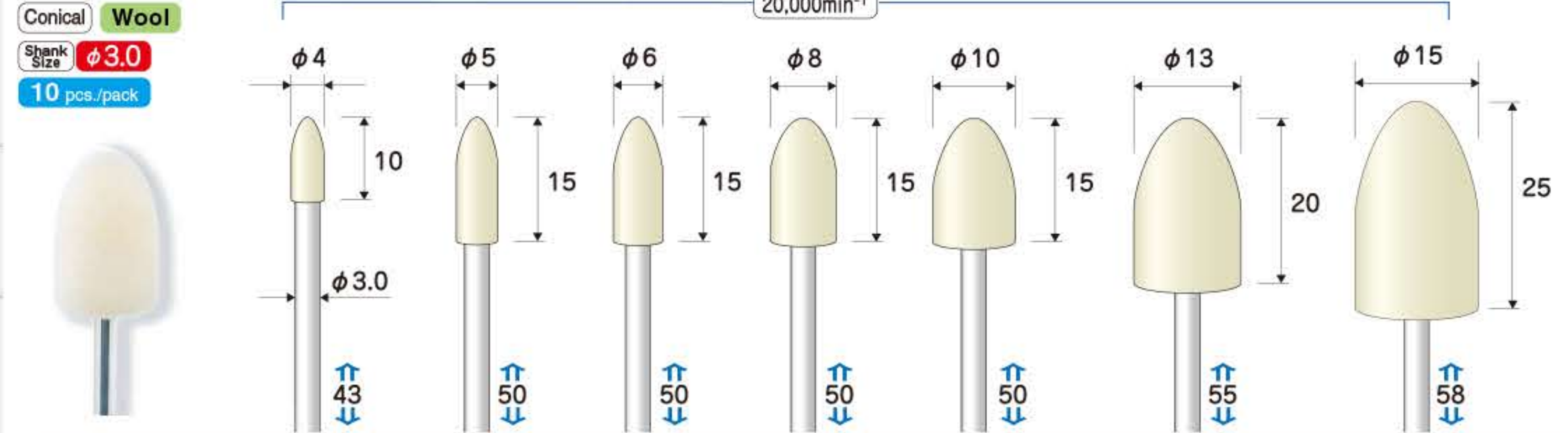


Cotton Thread Mops



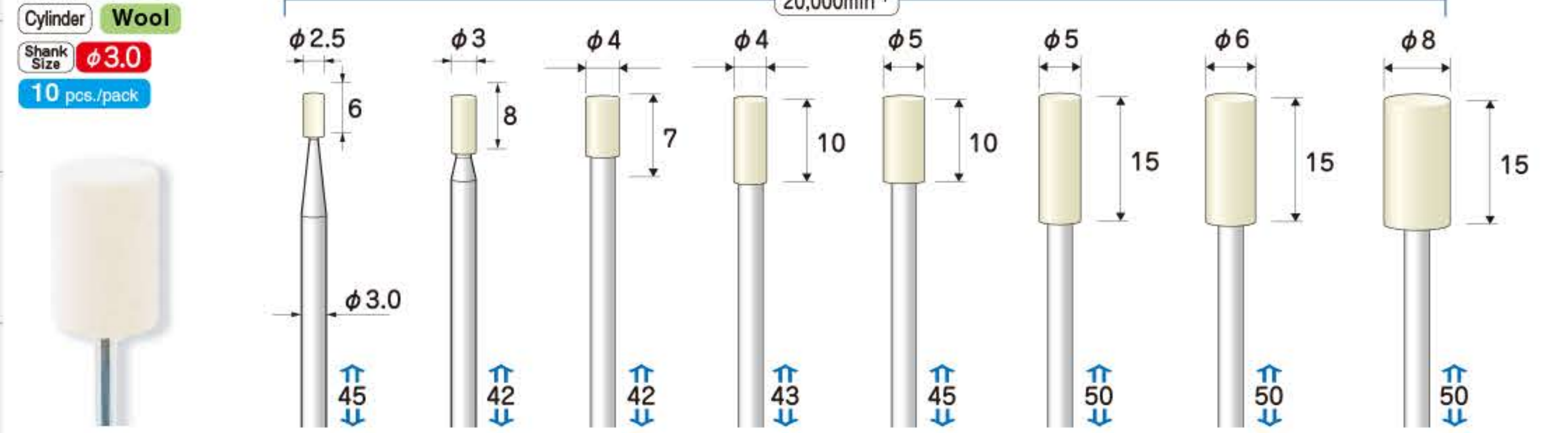
Chamois	7021400	7021401	Cotton (Thread)	7021500	7021501
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Felt Bobs



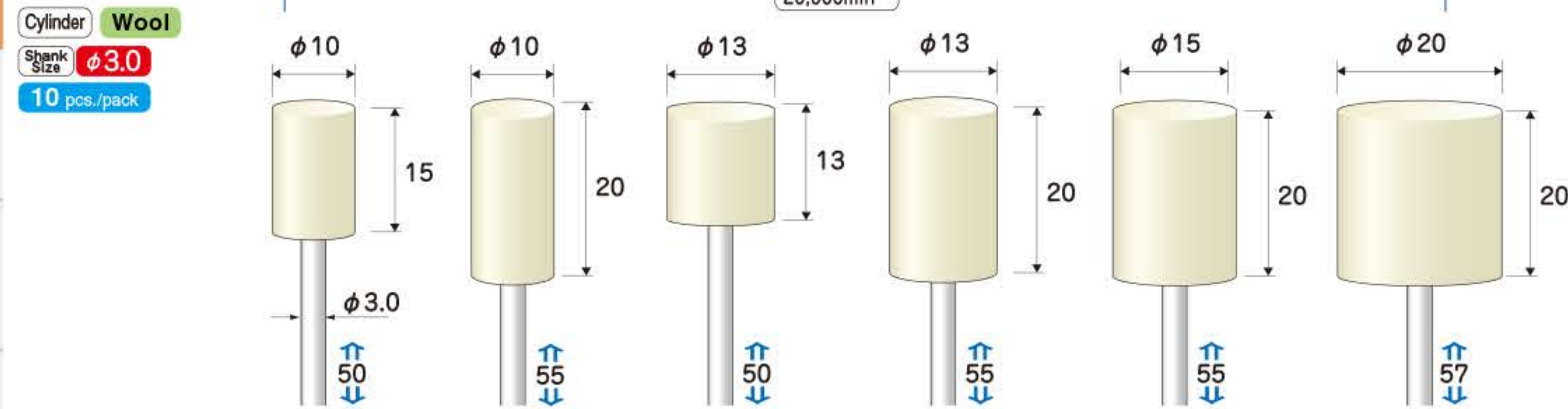
Hard	7012200	7012201	7012202	7012203	7012204	7012205	7A12001
Soft	-	-	7012206	7012207	7012208	7012209	7A12002

Felt Bobs



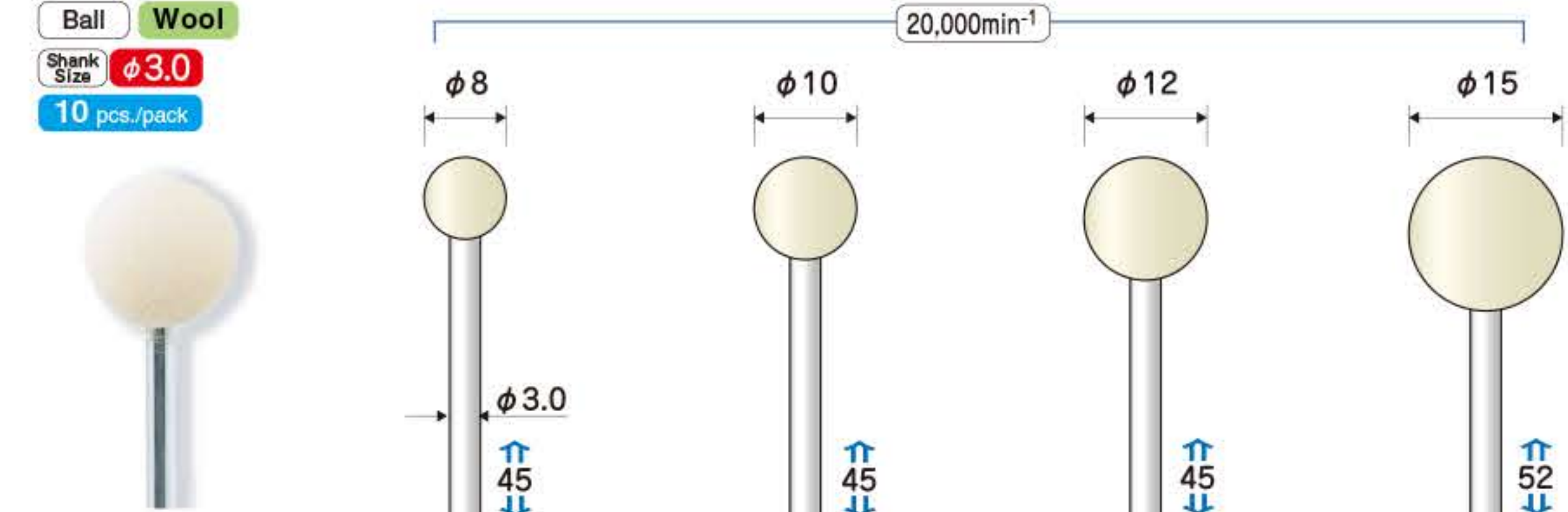
Hard	7A12003	7A12004	7A12005	7012100	7A12007	7012101	7012102	7012103
Soft	-	-	7A12006	-	7A12008	-	7012106	7012107

Felt Bobs



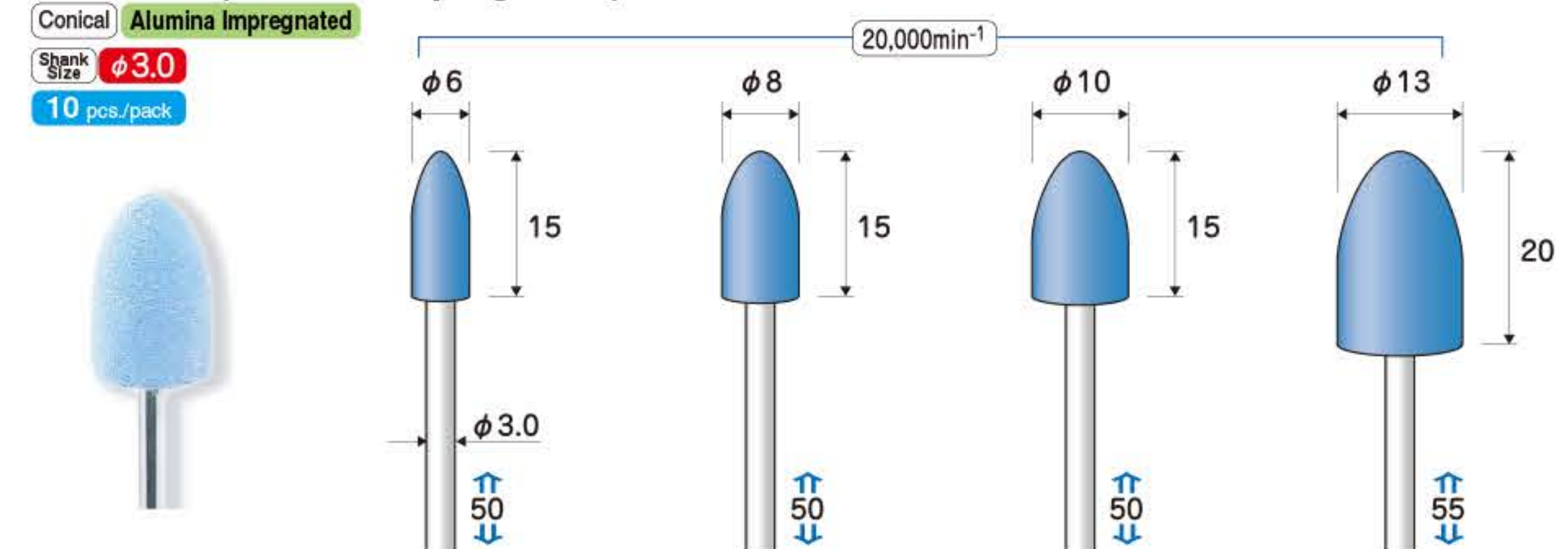
Hard	7012104	7A12009	7A12011	7012105	7A12013	7A12015
Soft	7012108	7A12010	7A12012	7012109	7A12014	7A12016

Felt Bobs



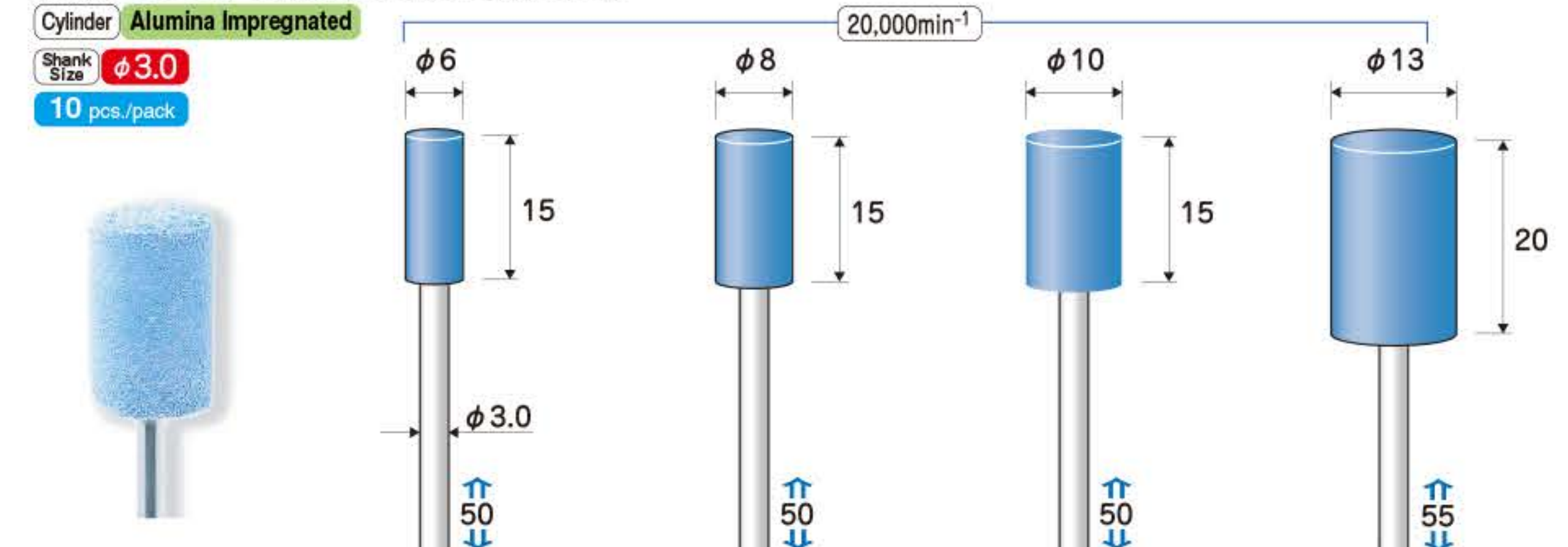
Hard	7012300	7012301	7012302	7012303
Soft	7012304	7012305	7012306	7012307

Felt Bobs (Alumina Impregnated)



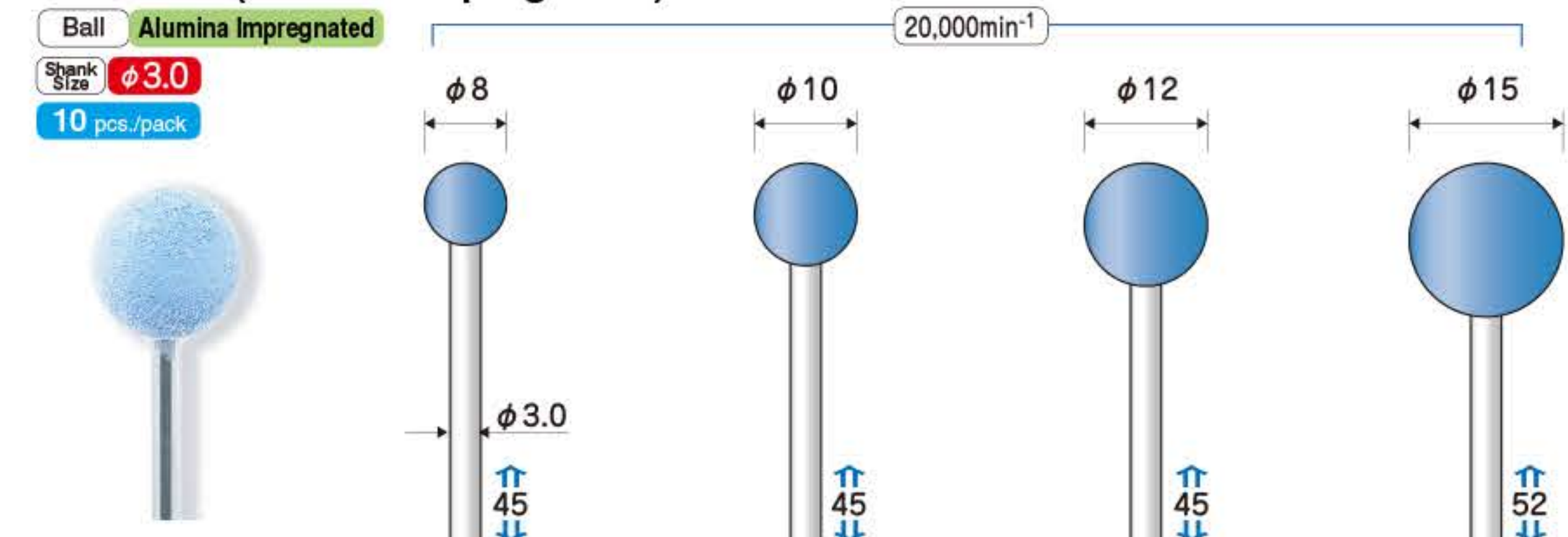
Alumina Impregnated	7012210	7012211	7012212	7012213
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Felt Bobs (Alumina Impregnated)



Alumina Impregnated	7012110	7012111	7012112	7012113
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Felt Bobs (Alumina Impregnated)



Alumina Impregnated	7012308	7012309	7012310	7012311
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! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Yellow Felt Bobs (Alumina Impregnated)

Conical Alumina Impregnated
Shank Size $\phi 3.0$
10 pcs./pack

5,000min⁻¹

Alumina Impregnated	7A21001	7A21002	7A21003	7A21004
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Yellow Felt Bobs (Alumina Impregnated)

Cylinder Alumina Impregnated
Shank Size $\phi 3.0$
10 pcs./pack

5,000min⁻¹

Alumina Impregnated	7A21005	7A21006	7A21007	7A21008
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Felt Bobs (Chromium Oxide Impregnated)

Conical Chromium Oxide Impregnated
Shank Size $\phi 3.0$
10 pcs./pack

5,000min⁻¹ 20,000min⁻¹ 5,000min⁻¹

Chromium Oxide Impregnated	7A22001	7012214	7012215	7012216	7012217	7A22002
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Felt Bobs (Chromium Oxide Impregnated)

Cylinder Chromium Oxide Impregnated
Shank Size $\phi 3.0$
10 pcs./pack

20,000min⁻¹ 5,000min⁻¹

Chromium Oxide Impregnated	7012114	7012115	7012116	7012117	7A22003
----------------------------	---------	---------	---------	---------	---------

Felt Bobs (Chromium Oxide Impregnated)

Ball Chromium Oxide Impregnated
Shank Size $\phi 3.0$
10 pcs./pack

20,000min⁻¹

Chromium Oxide Impregnated	7012312	7012313	7012314	7012315
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Compound Felt Bobs

Cylinder Cerium Oxide Impregnated
WA #10000 Impregnated
Shank Size $\phi 3.0$
10 pcs./pack

30,000min⁻¹ 25,000min⁻¹ 20,000min⁻¹

Cerium Oxide Impregnated	7A23001	7A23003	7A23005	7A23007	7A23009
WA #10000 Impregnated	7A23002	7A23004	7A23006	7A23008	7A23010

- Soft type felt bobs. Cerium Oxide suitable for polishing glasses, or #10000 WA grains Impregnated.
- Can be used in polishing by itself as abrasive agents are already impregnated.
- Can be used with oil based liquid, also for wet polishing with water.

Cloth Mops

Layered Cloth (Stitched)
Shank Size $\phi 3.0$
10 pcs./pack

15,000min⁻¹ 10,000min⁻¹

Layered Cloth (Piled)
Shank Size $\phi 3.0$
10 pcs./pack

15,000min⁻¹

Stitched	7022100	7022101	Piled	7022200	7022201
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Soft Cloth Mops

Layered Cloth (Piled)
Shank Size $\phi 3.0$
10 pcs./pack

15,000min⁻¹

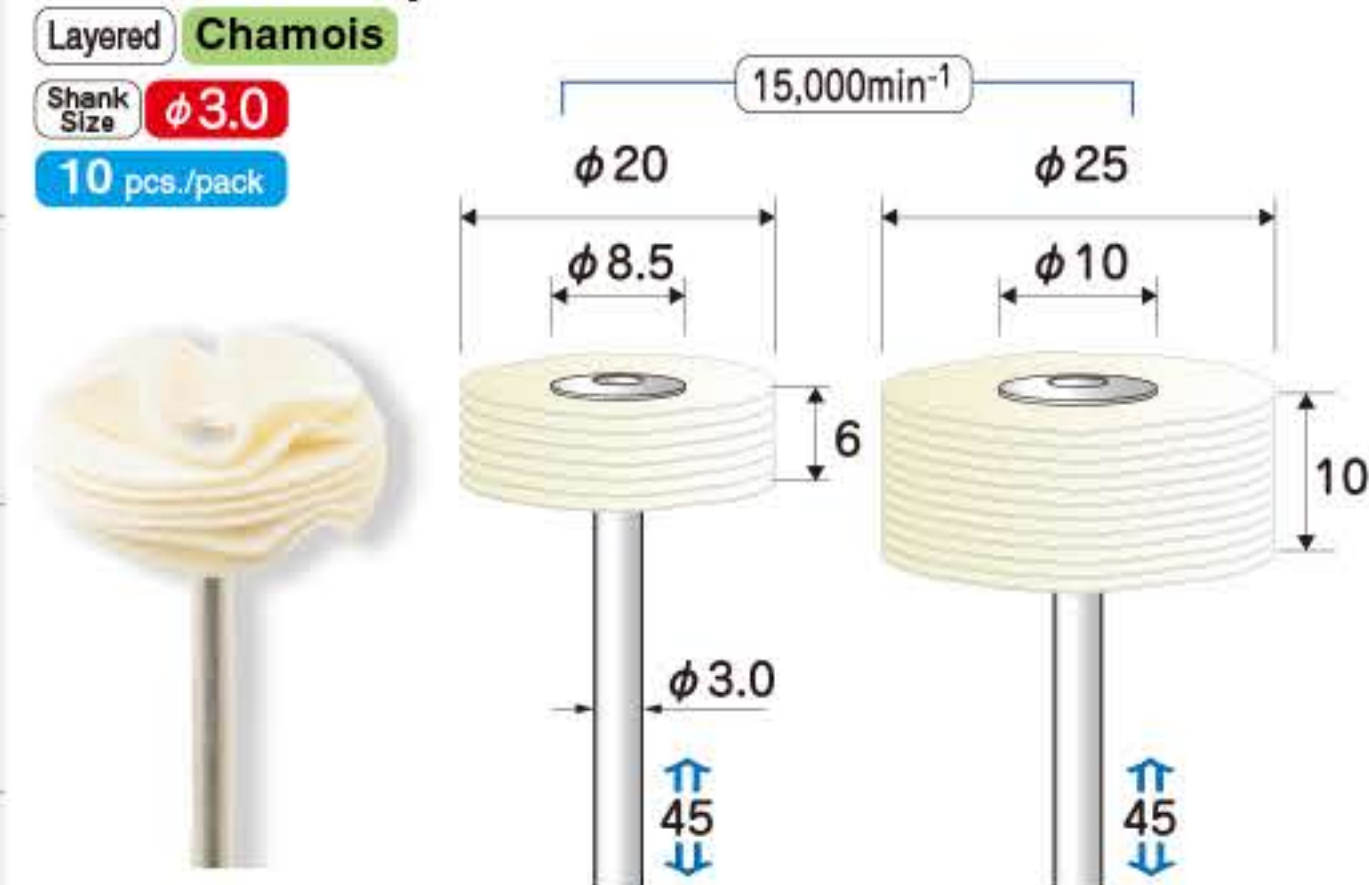
Piled (Soft)	7022300	7022301
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! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

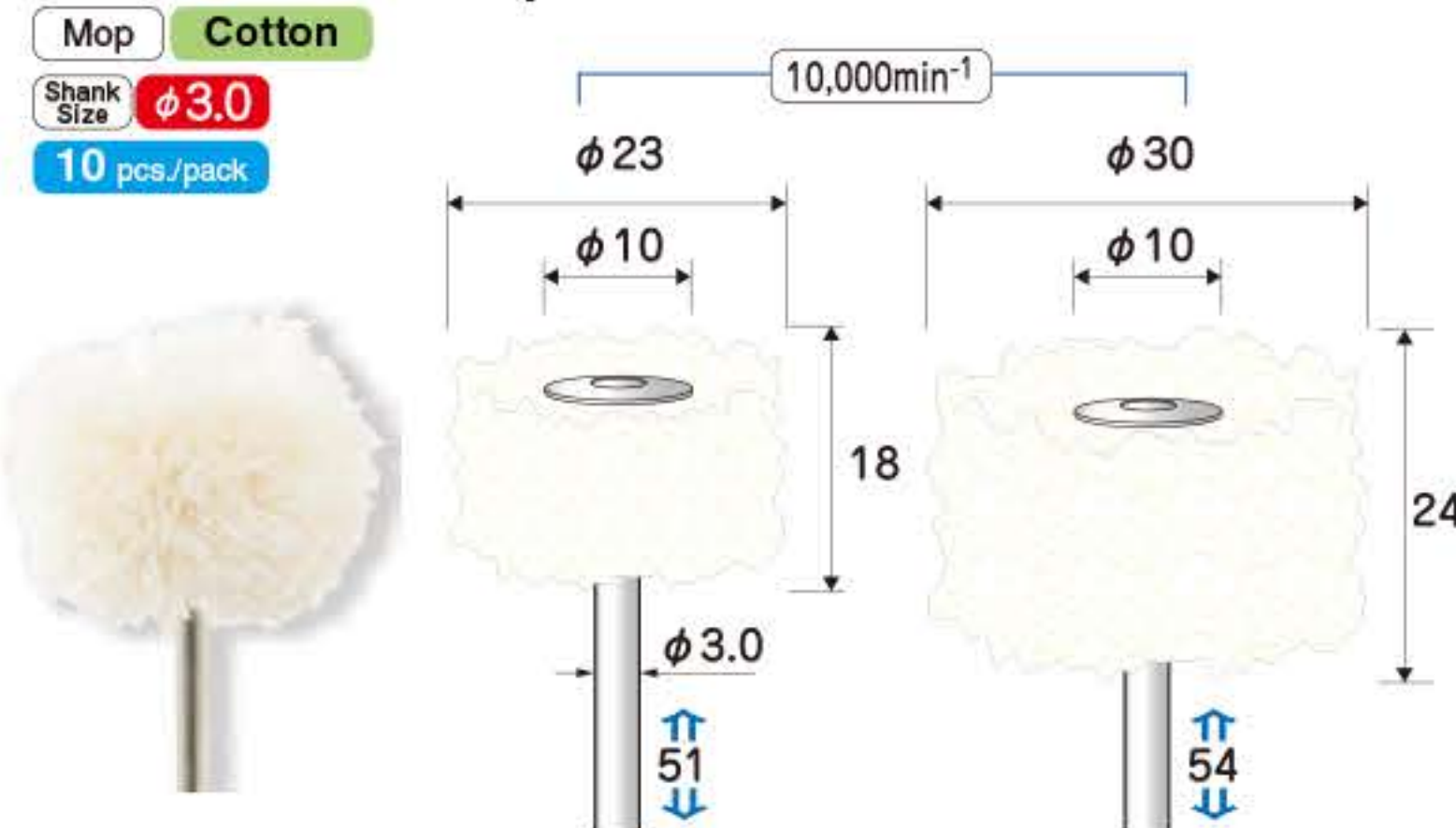
Felt Bobs

EIKO

Chamois Mops



Cotton Thread Mops



Chamois (Piled)	7022400	7022401	Cotton (Thread)	7022500	7022501
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Long Shank Felt Bobs

• Specially equipped with extended shanks for processing in deep holes. Available in soft and hard type.

- The tool is exclusive to work in deep hole. DO NOT use in an open space.
- DO NOT use with electric powered or air grinders which are not equipped with speed control function.
- Note that overloading or forcing the tool in an excessive angle may cause breakage of the shaft.
- On operation, insert the Long shank Felt Bob well into the hole before starting the grinder, and accelerate the machine gradually.

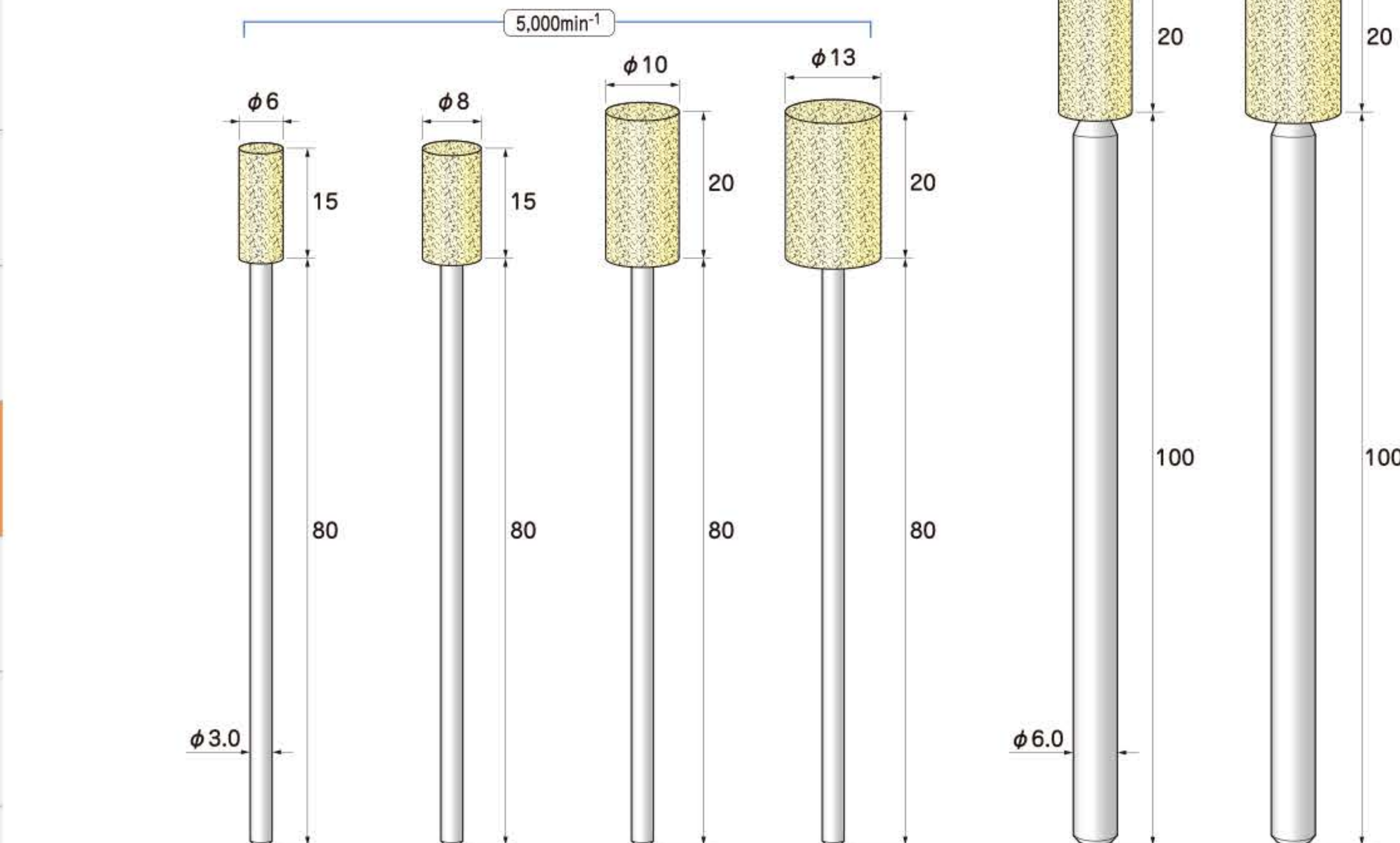
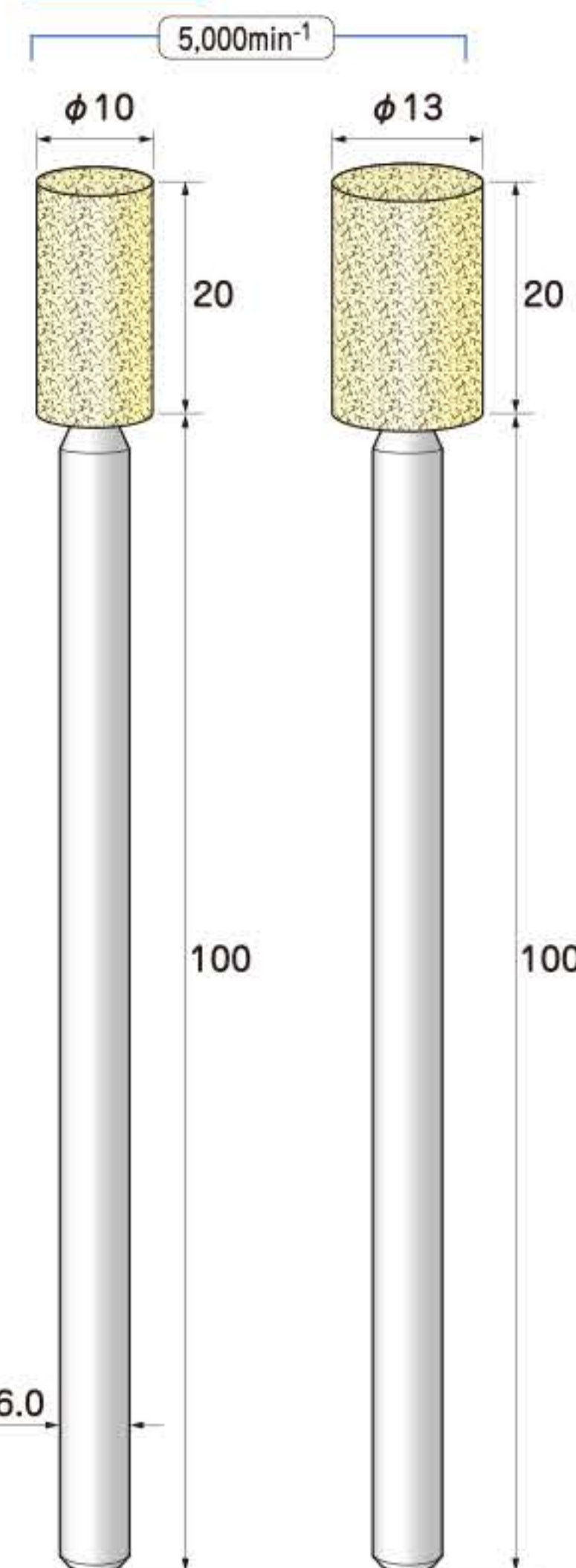
Long Shank Felt Bobs



Cylinder **Wool**
Shank Size **φ3.0**
5 pcs./pack

Long Shank Felt Bobs

Cylinder **Wool**
Shank Size **φ6.0**
5 pcs./pack



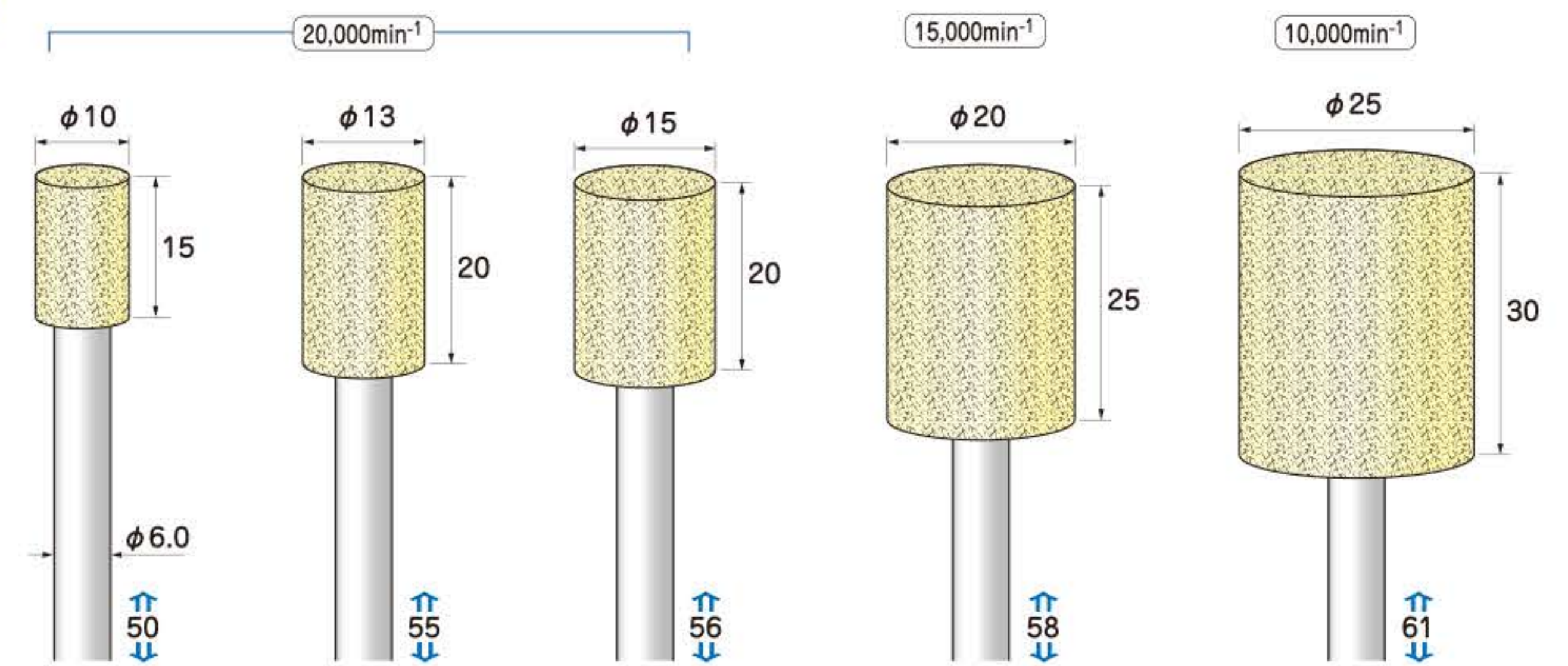
Hard	7A12017	7A12019	7A12021	7A12023	7A13001	7A13003
Soft	7A12018	7A12020	7A12022	7A12024	7A13002	7A13004

Felt Bobs

E-FORCE®

Felt Bobs

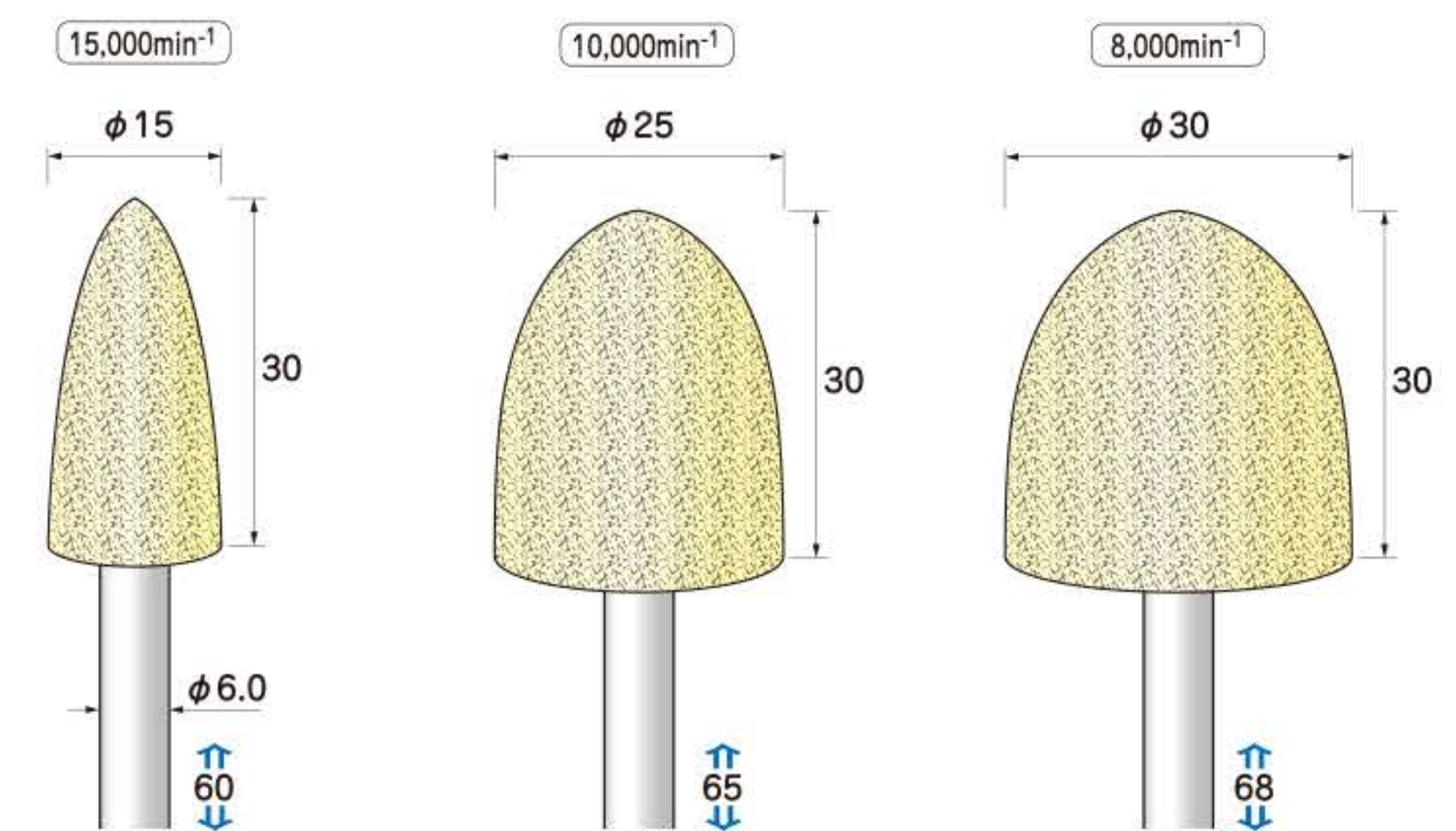
Cylinder **Wool**
Shank Size **φ6.0**
5 pcs./pack



Hard	7A13005	7A13007	7A13009	7A13011	7A13013
Soft	7A13006	7A13008	7A13010	7A13012	7A13014

Felt Bobs

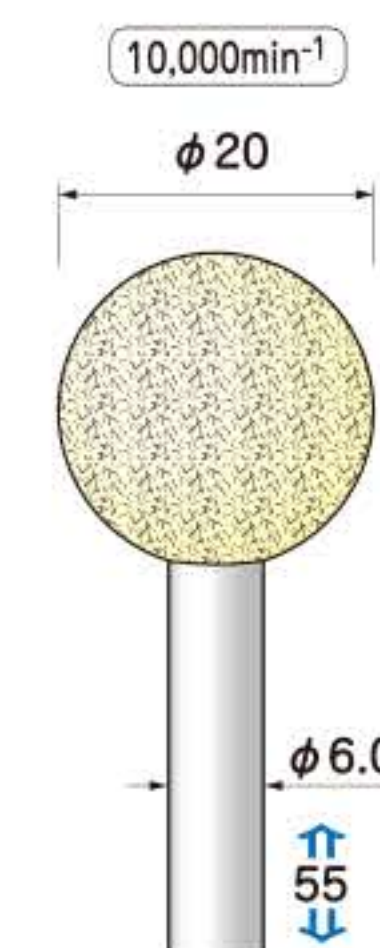
Conical **Wool**
Shank Size **φ6.0**
5 pcs./pack



Hard	7A13015	7A13017	7A13019
Soft	7A13016	7A13018	7A13020

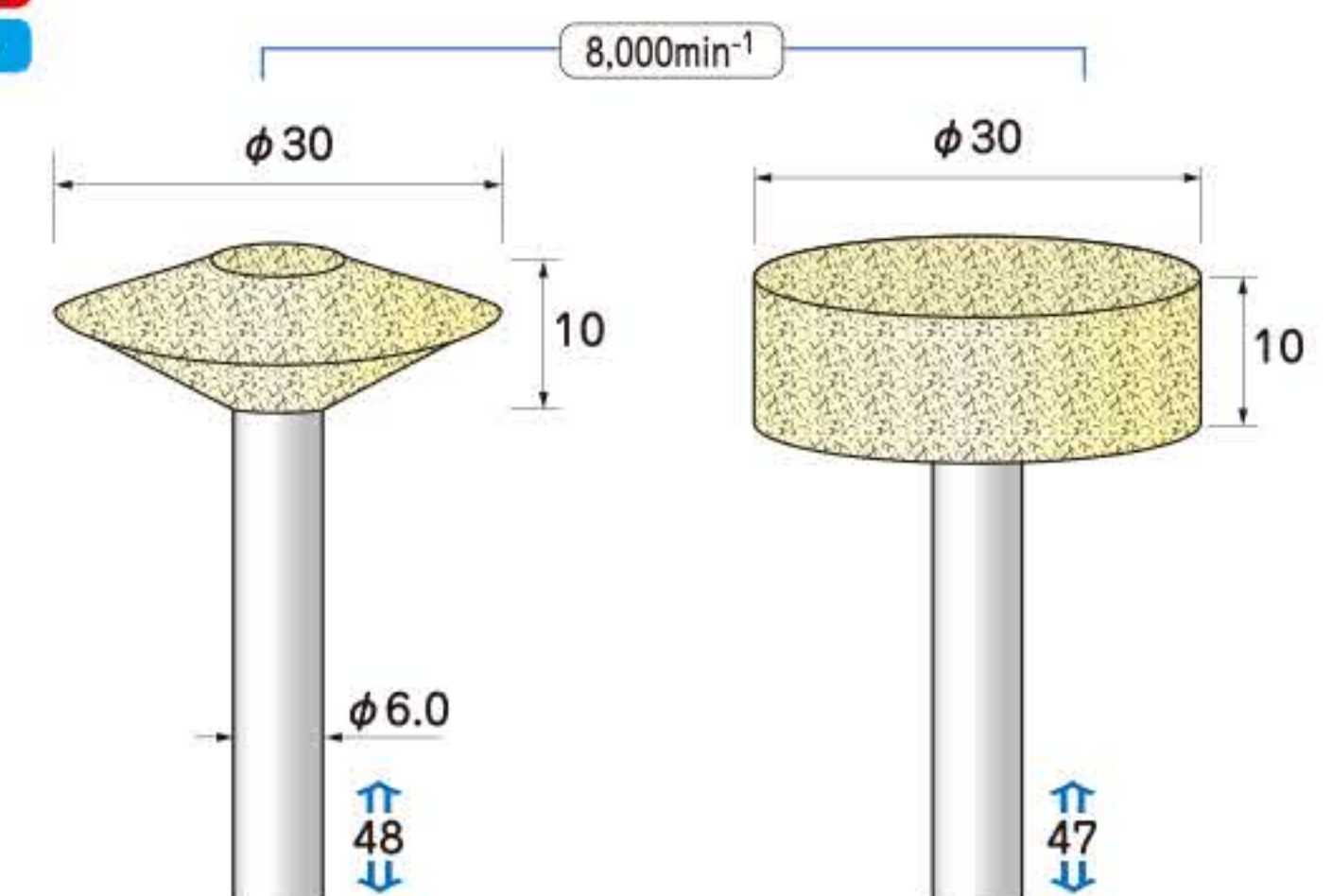
Felt Bobs

Ball **Wool**
Shank Size **φ6.0**
5 pcs./pack



Felt Bobs

Disc **Wool**
Shank Size **φ6.0**
5 pcs./pack

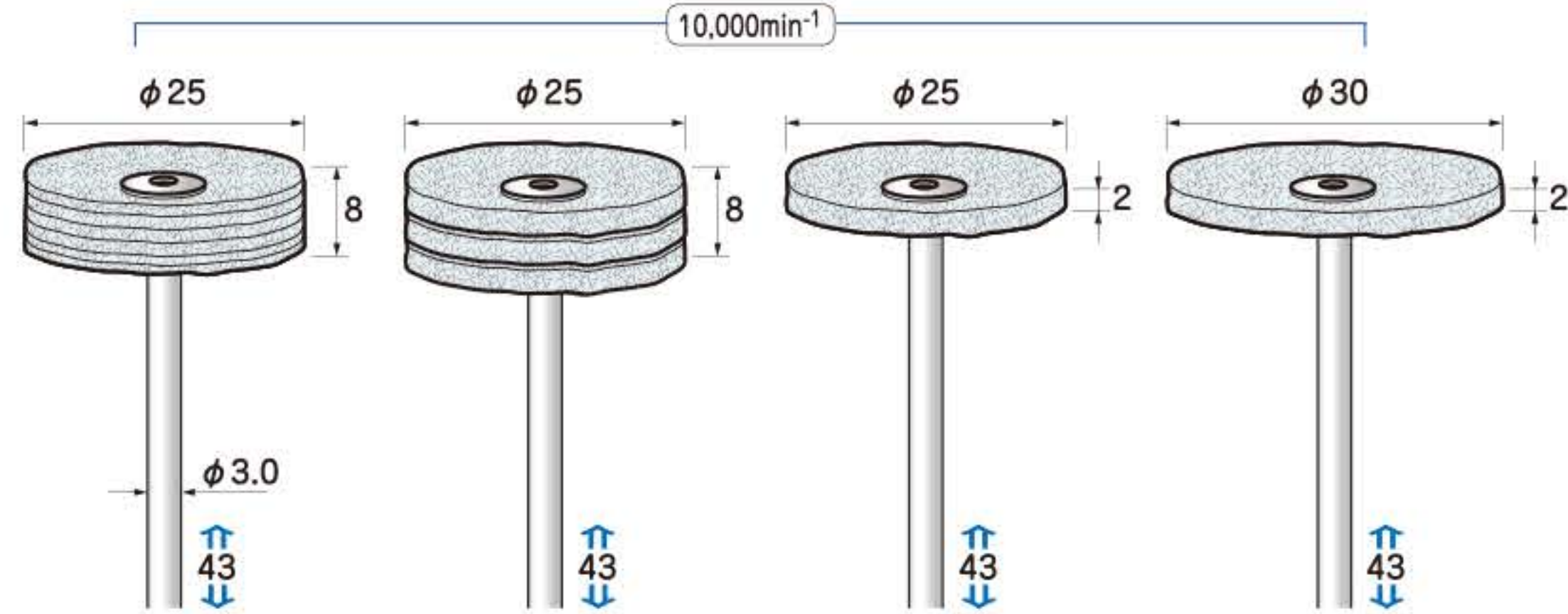


Hard	7A13021	7A13023	7A13025
Soft	7A13022	7A13024	7A13026

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Polyurethane Bobs

Layered **Polyurethane**
Shank Size **φ3.0**
5 pcs./pack



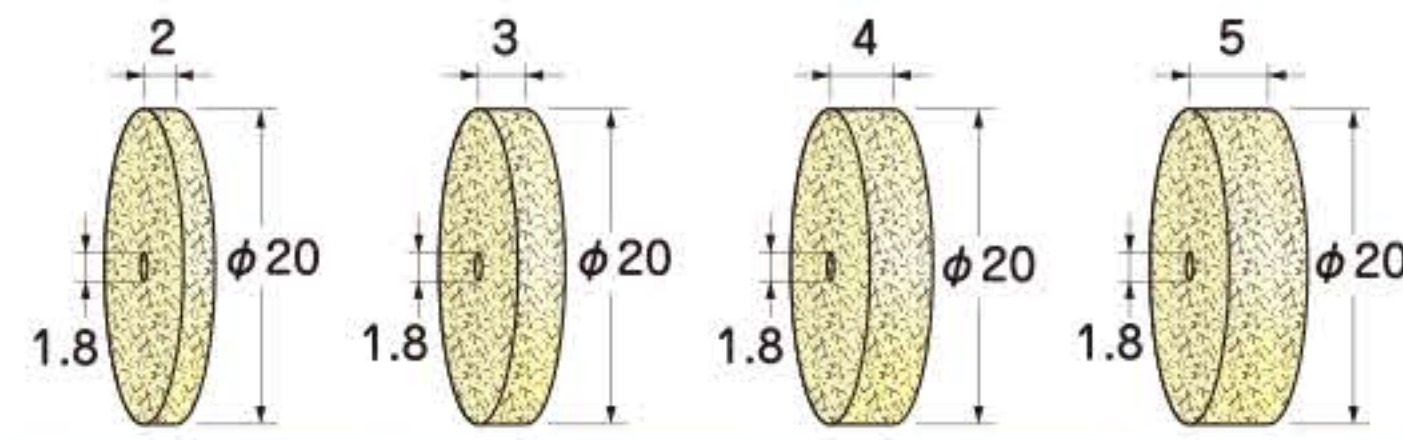
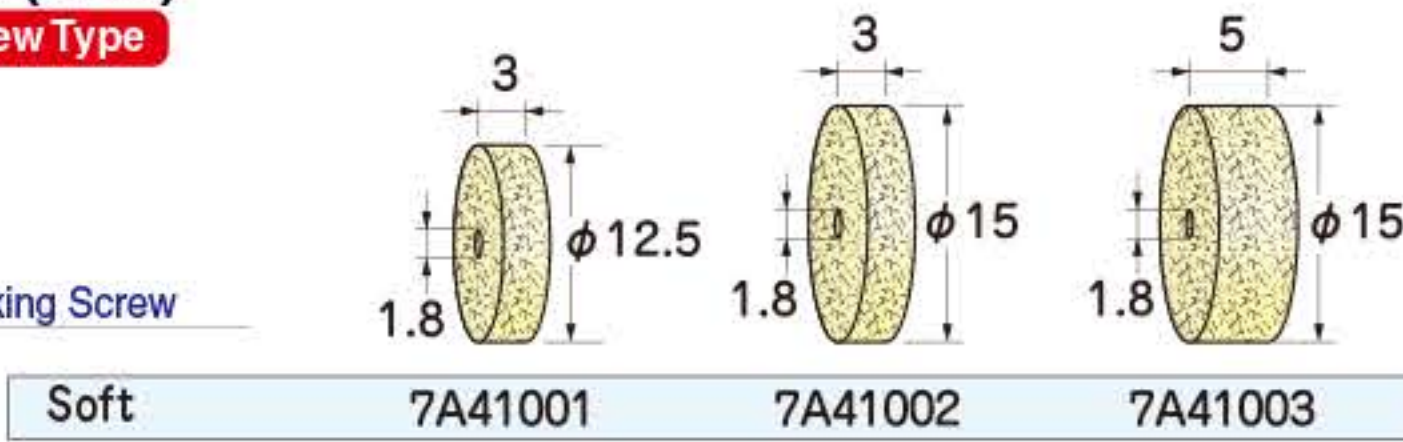
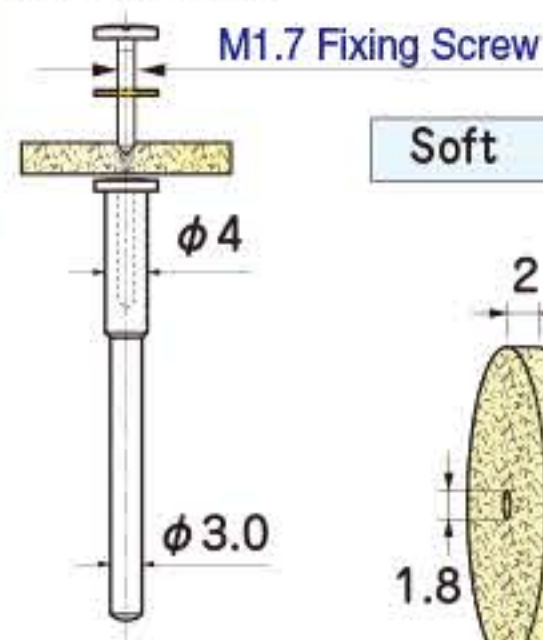
Polyurethane	7A31001	7A31002	7A31003	7A31004
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Felt Wheels

- Small soft wheel-shaped felts to be used with mandrels.
- Compound Felt Bobs contains abrasive agents. Polishes by itself.
- Yellow wheels are alumina grain impregnated. Green wheels are chromium oxide impregnated.

Felt Wheels (Soft)

M1.7 Fixing Screw Type
Disc **Wool**
10 pcs./pack
15,000min⁻¹



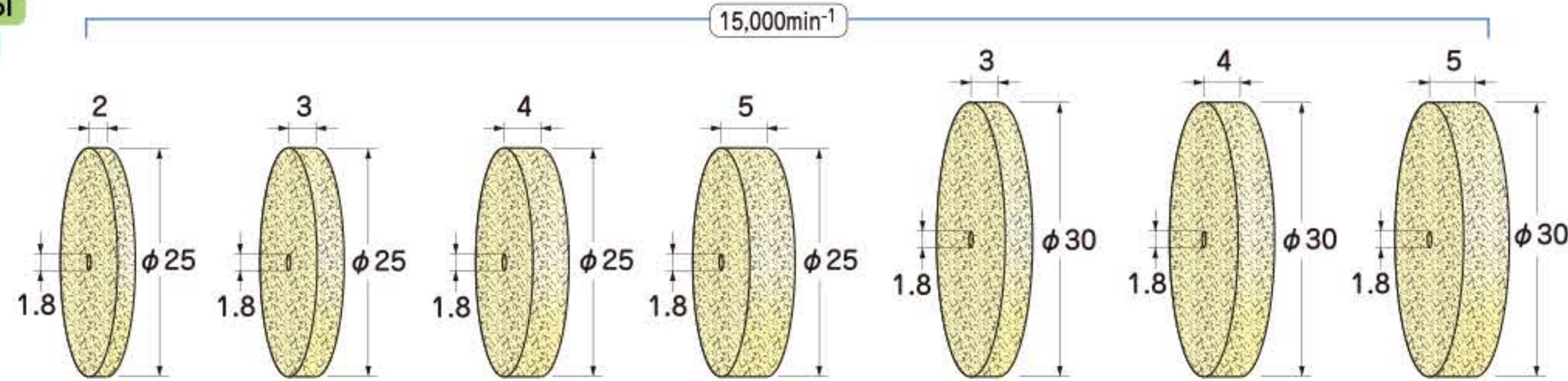
Mandrel: 1A52005

Soft	7A41001	7A41002	7A41003	7A41004	7A41005	7A41006	7A41007
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Use with M1.7 type Mandrel. (See page 53.)

Felt Wheels (Soft)

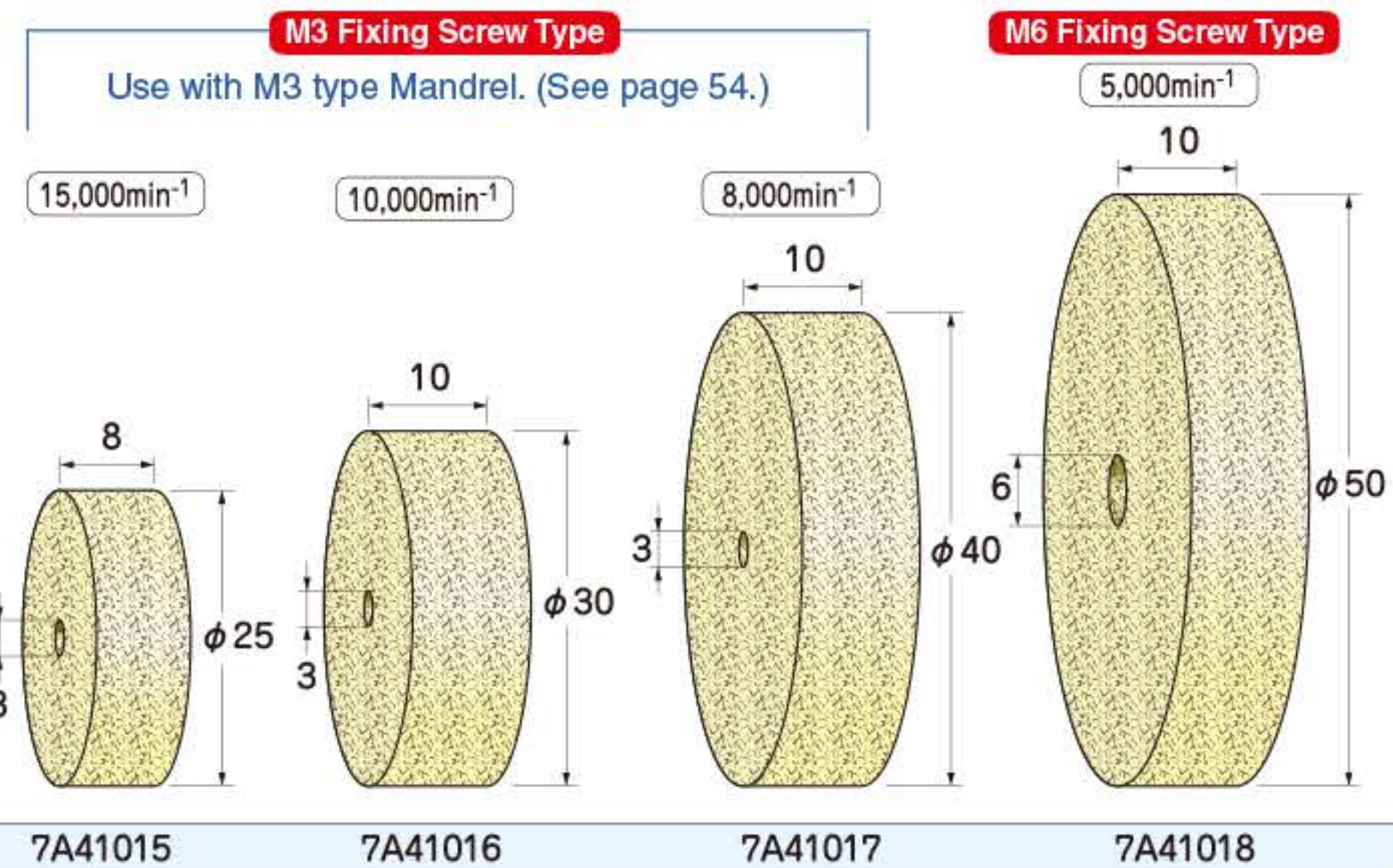
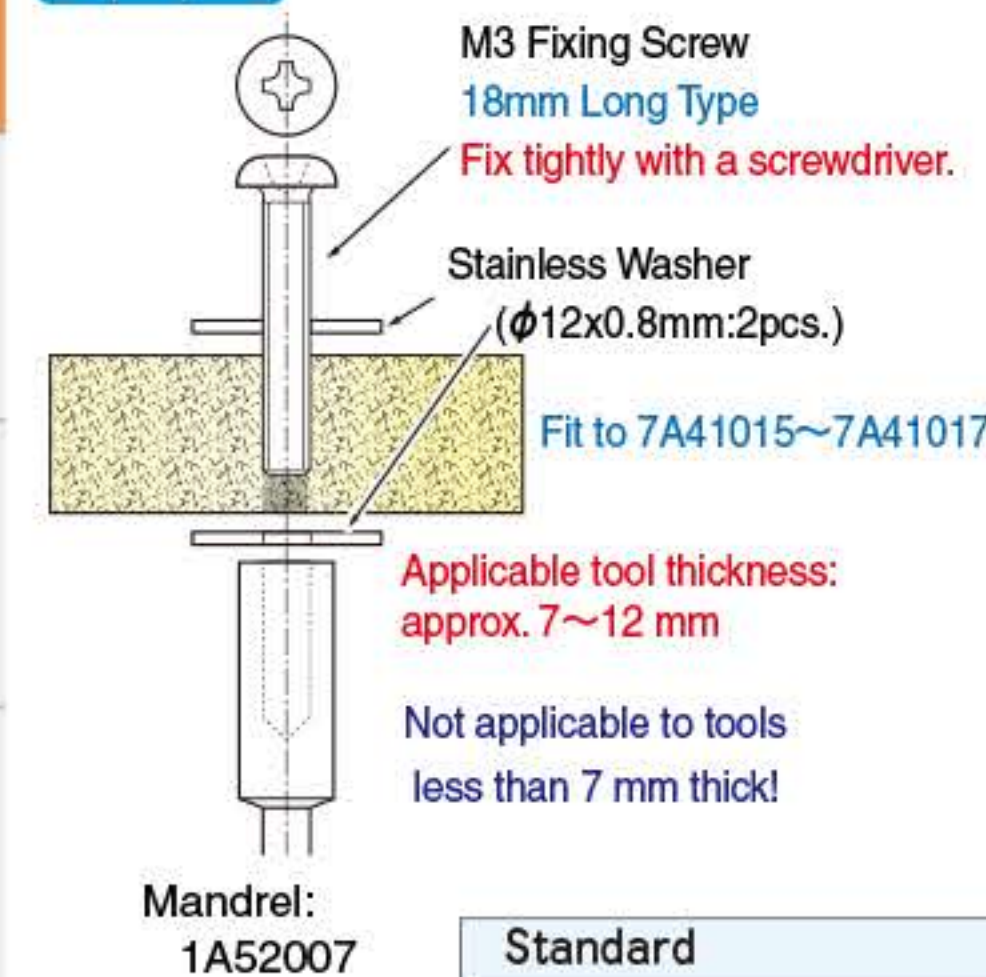
M1.7 Fixing Screw Type
Disc **Wool**
10 pcs./pack
15,000min⁻¹



Soft	7A41008	7A41009	7A41010	7A41011	7A41012	7A41013	7A41014
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Felt Wheels (Standard)

Disc **Wool** M3/M6 Fixing Screw
5 pcs./pack

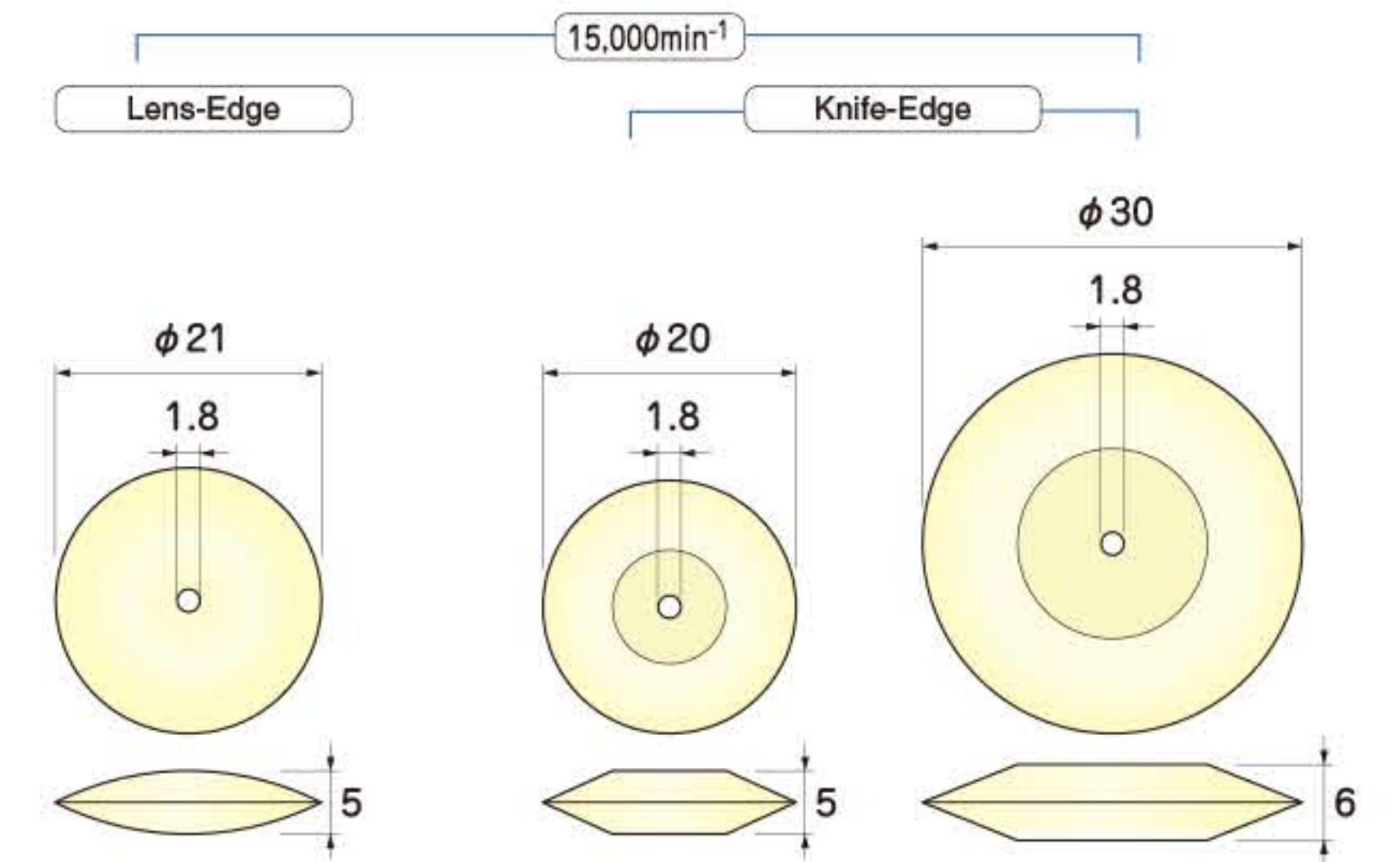


Standard	7A41015	7A41016	7A41017	7A41018
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Felt Wheels

M1.7 Fixing Screw Type
Disc **Wool**
5 pcs./pack

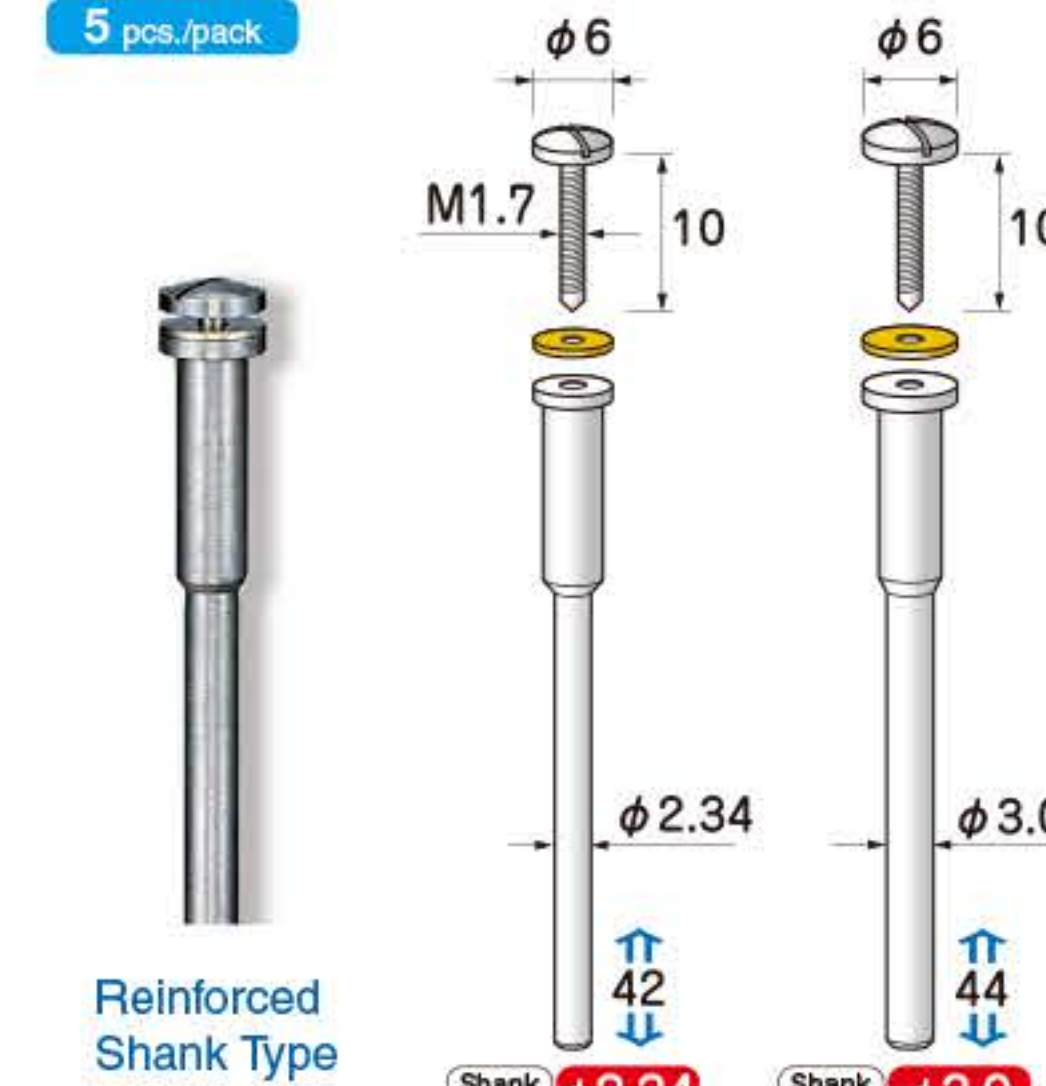
Use with M1.7 type Mandrel. (See page 53.)



Hard	-	7A41020	7A41022
Soft	7A41019	7A41021	7A41023

Compound Felt Wheels

M1.7 Fixing Screw Type
Disc **Alumina Impregnated**
5 pcs./pack

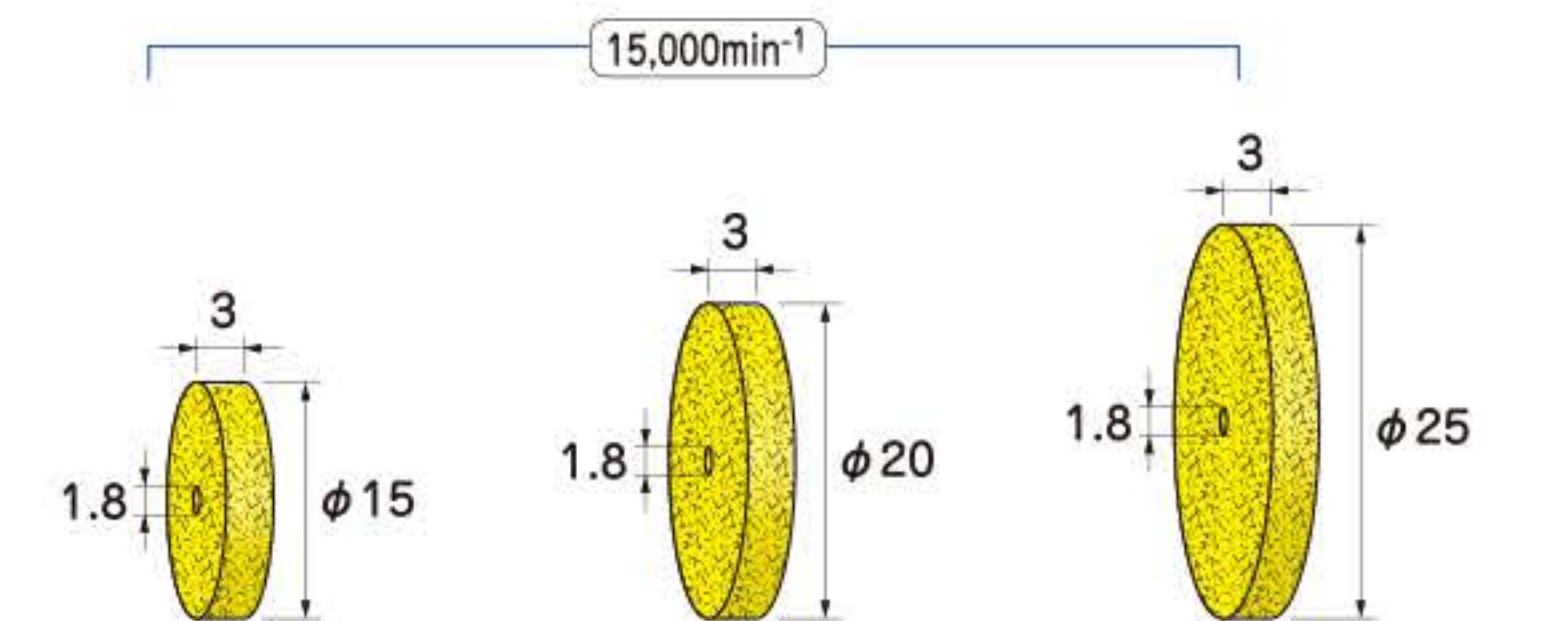


Mandrel	1A51004	1A52005
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Alumina

- A popular abrasive mainly consists of Alumina (Al₂O₃).
- A predominant abrasive grain used in various forms for grinding stones and polishing cloths. Suits for processing metals.

Use with M1.7 type Mandrel. (See page 53.)



Alumina	7A42001	7A42002	7A42003
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Compound Felt Wheels

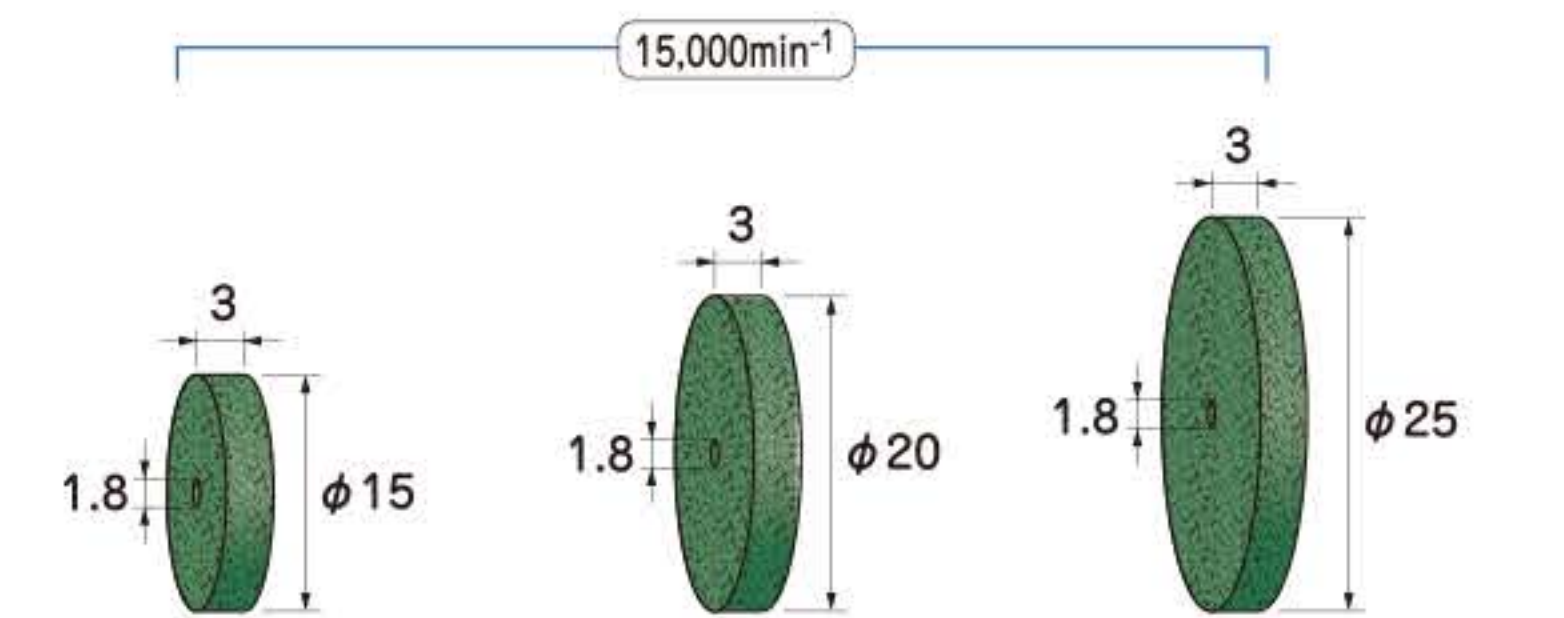
M1.7 Fixing Screw Type
Disc **Chromium Oxide Impregnated**
5 pcs./pack

Use with M1.7 type Mandrel. (See page 53.)



Chromium Oxide

- Obtained by baking chromic acid in 1400°C or dichromate with reducing agent such as sulfur or starch in 500~700°C.
- Chemically stable rhombohedral crystal structure same as alumina with high melting point.
- Excellent processing performance as polishing grain for metal materials.



Chromium Oxide	7A43001	7A43002	7A43003
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Buff Wheels

• Buffing wheels for bench grinders. Use with tapered mandrels.
 • The pleated wheels are stiffer and contact a little harder than the unpleated ones.
 * Use with abrasive agent. Dimensions may vary slightly depending on measuring methods.
 (Center hole dia. is approx. ø6.0 mm.)

Soft ★★★★★
 Hard ★☆☆☆☆

Brush Wheel

Approx. ø 80 dia. x 15 mm thick

2 pcs./pack

3,000min⁻¹



7A51001

Cotton Thread Wheels

Approx. ø 60 dia. x 20 mm thick

1 pc./pack

1,400min⁻¹



Soft ★★★★★

7A51002

Approx. ø 80 dia. x 30 mm thick



Soft ★★★★★

7A51003

Approx. ø 100 dia. x 30 mm thick



Soft ★★★★★

7A51004

Flannel Wheels

Approx. ø 100 dia. x 30 mm thick

1 pc./pack

1,400min⁻¹



Soft ★★★★★ 20 ply

7A51005

Approx. ø 80 dia. x 18 mm thick



Soft ★★★★★ 10 ply

7A51006 Pleated

Approx. ø 100 dia. x 30 mm thick



Soft ★★★★★ 20 ply

7A51007 Pleated

Cotton Cloth Wheels

Approx. ø 100 dia. x 8 mm thick

1 pc./pack

1,400min⁻¹



Soft ★★★★★ 20 ply

7A51008

Approx. ø 80 dia. x 15 mm thick



Soft ★★★★★ 2 ply

7A51009 Pleated

Approx. ø 100 dia. x 20 mm thick



Soft ★★★★★ 2 ply

7A51010 Pleated

Felt Wheels

Approx. ø 100 dia. x 15 mm thick

1 pc./pack

1,400min⁻¹



Soft ★★★★★ 6 ply

7A51011

Chamois Wheels

Approx. ø 80 dia. x 8 mm thick

1 pc./pack

1,400min⁻¹



Soft ★★★★★ 6 ply

7A51012

Approx. ø 100 dia. x 10 mm thick



Soft ★★★★★ 7 ply

7A51013

Enhancing freedom of creativity of specialists.

E-FORCE®



Electroplated Diamond/CBN Cutting Discs
 Sintered Diamond/CBN Grinding Stones
 Carbide Cutters
 Steel Cutters
 Twist Drills
 Mandrels / Shank Adapters
 Grinding Stones
 Abrasive Rubber Points
 Abrasive Sanders
 Brushes
 Felt Bobs
 Compounds / Hand Tools
 Special Tools
 Tool Sets

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 Abrasive Sanders
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 Felt Bobs
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 Special Tools
 Tool Sets

Diamond Compound Dilute Liquids

Bottle Size **300cc**
1 pc./pack



Oil Based Water Based

Dilute Liquid	8021100	8021200
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Diamond Compounds

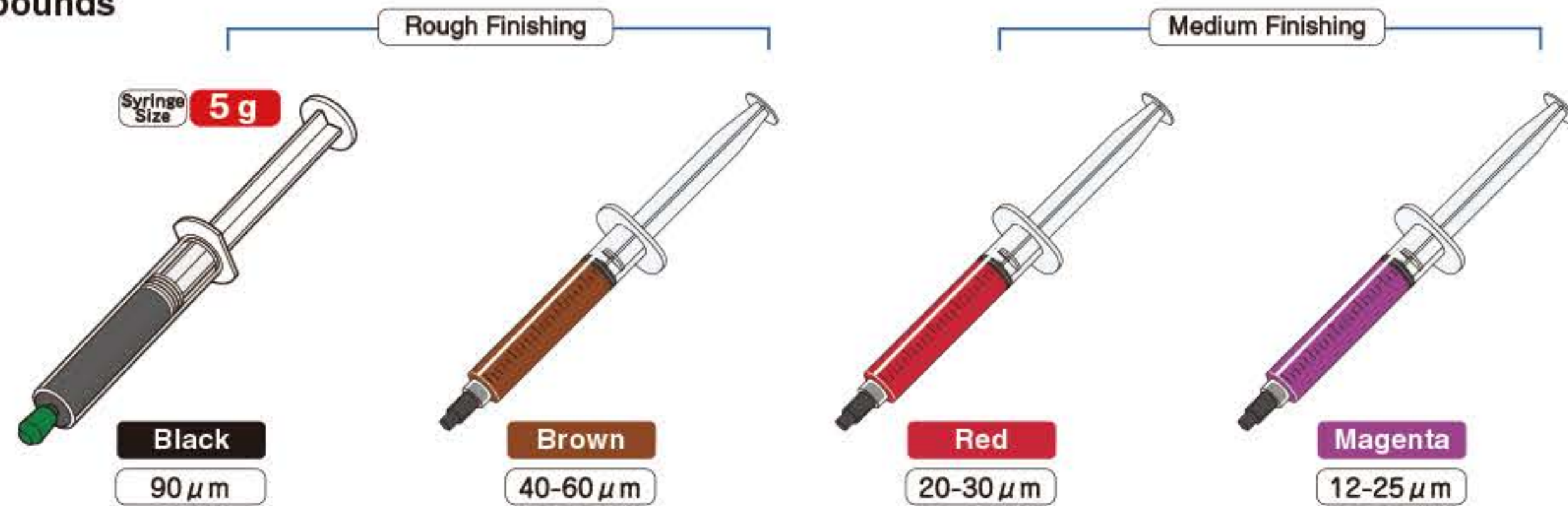
- Diamond grain blended oil based/water based compounds.
- Quality diamond powders is densely mixed for polishing hardened steel, die steel, high speed steel, and cemented carbide etc. Works excellently well with felt bobs, lapping woods etc.
- Grinding is the more effective with the harder lapping materials, and polishing results in the better finishing with the softer materials such as felt bobs.

Diamond Compound Dilute Liquids

- Dilute with this special liquid in use of Diamond Compounds. Polishing efficiency can be improved with diluting liquid.

Diamond Compounds

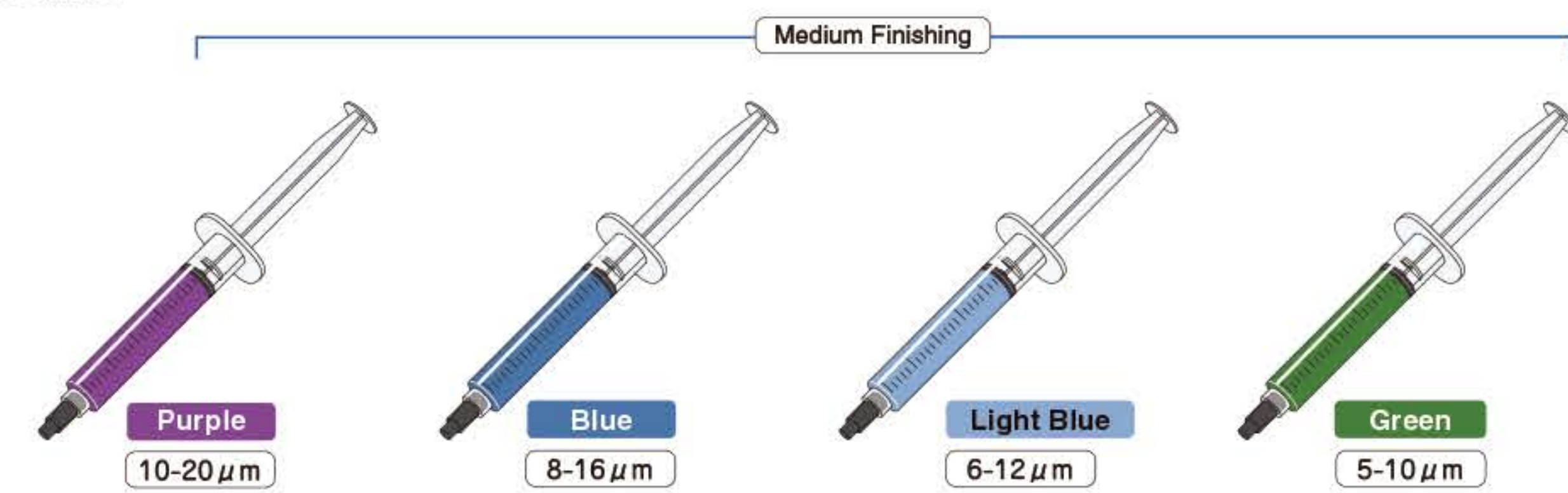
Syringe Size **6g**
1 pc./pack



	Black 90 μm	Brown 40-60 μm	Red 20-30 μm	Magenta 12-25 μm
Grit Size	#200	#400	#600	#800
Oil Based	8A11001	8011100	8011101	8011102
Water Based	8A12001	8011200	8011201	8011202

Diamond Compounds

Syringe Size **6g**
1 pc./pack



	Purple 10-20 μm	Blue 8-16 μm	Light Blue 6-12 μm	Green 5-10 μm
Grit Size	#1000	#1200	#1500	#2000
Oil Based	8011103	8011104	8011105	8011106
Water Based	8011203	8011204	8011205	8011206

Diamond Compounds

Syringe Size **6g**
1 pc./pack



	Lime 4-6 μm	Orange 2-4 μm	Pink 0-2 μm	Grey 1/2 μm	Grey 1/4 μm
Grit Size	#3000	#5000	#8000	#60000	#100000
Oil Based	8011107	8011108	8011109	8A11002	8A11003
Water Based	8011207	8011208	8011209	8A12002	8A12003

Diamond Gels

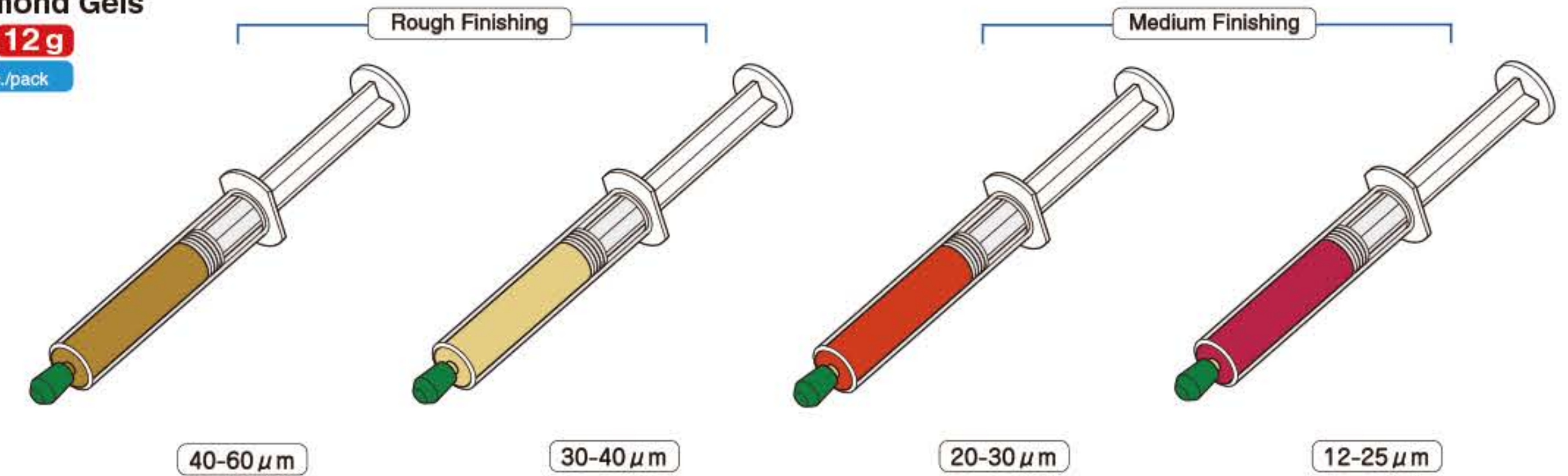
- Diamond grains blended in oil based gel.
- Spreads well without the diluting liquid, absorbed well to felt bobs.
- Remains in gel form even in lapping work with rotating tools. Causing less messy scattering of compound, easy to handle.
- Feel luxury to use as much as 12g package of a new abrasive agent of high cost performance with rich blend of diamond grains for superior cutting ability.



* Use with oil based diluting liquid.

Diamond Gels

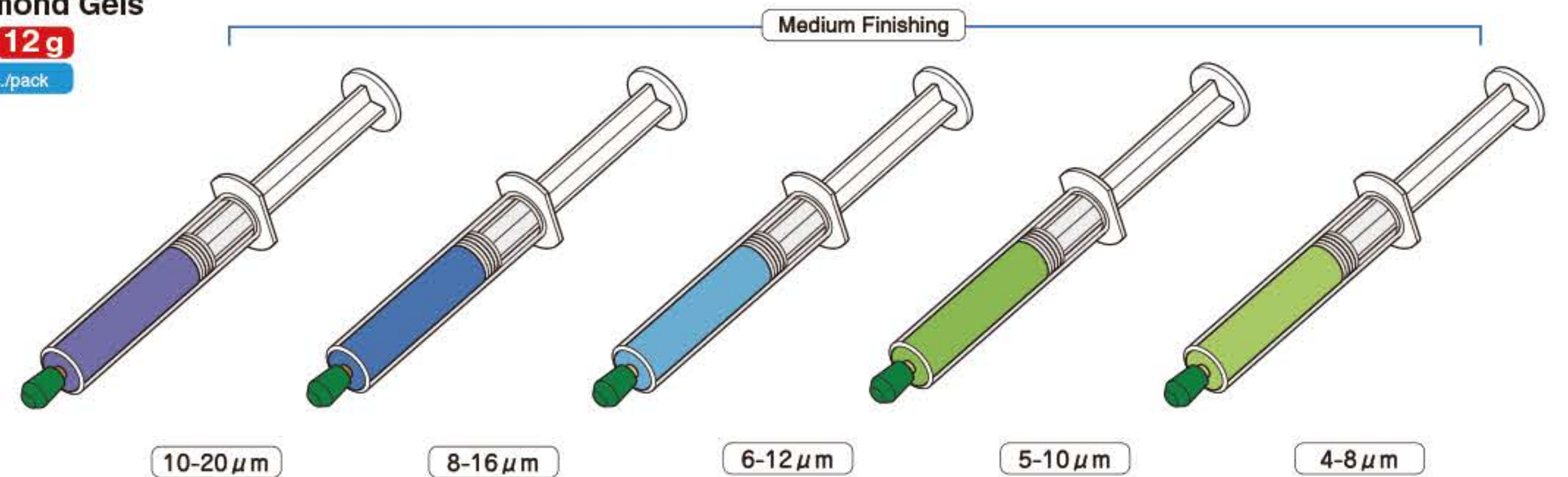
Syringe Size **12g**
1 pc./pack



	40-60 μm	30-40 μm	20-30 μm	12-25 μm
Grit Size	#270	#400	#800	#1000
Oil Based	8A21001	8A21002	8A21003	8A21004

Diamond Gels

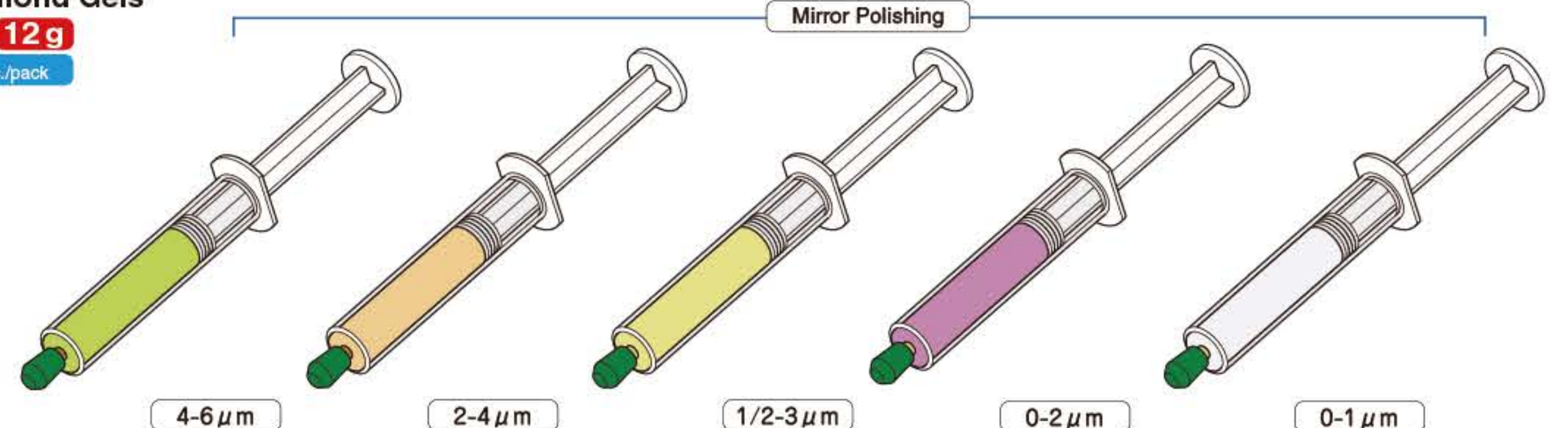
Syringe Size **12g**
1 pc./pack



	10-20 μm	8-16 μm	6-12 μm	5-10 μm	4-8 μm
Grit Size	#1200	#1500	#2000	#2500	#3000
Oil Based	8A21005	8A21006	8A21007	8A21008	8A21009

Diamond Gels

Syringe Size **12g**
1 pc./pack



	4-6 μm	2-4 μm	1/2-3 μm	0-2 μm	0-1 μm
Grit Size	#5000	#8000	#10000	#14000	#30000
Oil Based	8A21010	8A21011	8A21012	8A21013	8A21014

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN
Diamond/CBN Cutting Discs
Slotted Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

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Diamond/CBN Cutting Discs
Slotted Diamond/CBN Grinding Stones
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Electroplated Diamond Metal Sheets

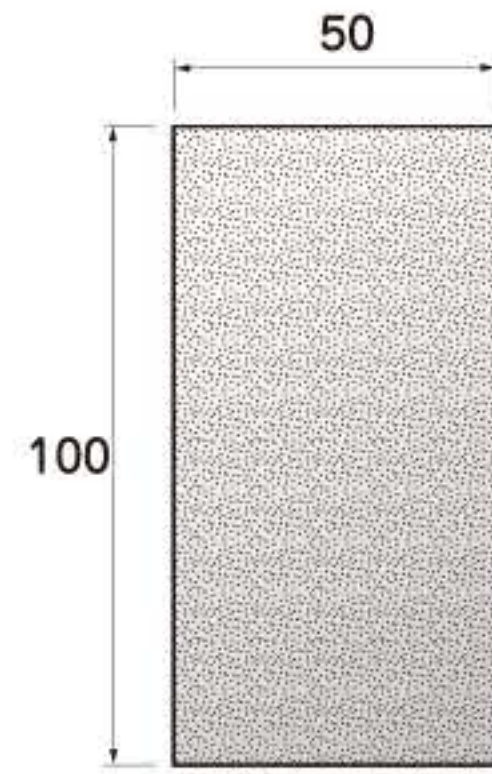
- Diamond grains are electroplated on thin metal sheets.
- Extremely strong cutting ability with characteristic of electroplated diamond grains which is dense and with well protruding grains.

Electroplated Diamond Metal Sheets

Diamond grain

Self Adhesive Backed

1 pc./pack



Grit Size	Order Code
#100	8A31001
#140	8A31002
#170	8A31003
#270	8A31004
#400	8A31005
#600	8A31006
#800	8A31007
#1000	8A31008
#2000	8A31009
#3000	8A31010

Diamond Lapping Films

- Diamond grains are electroplated on film sheets.
- Soft polishing with less scratches.
- Self adhesive backed. Cut to desired size to attach holders etc. to use.

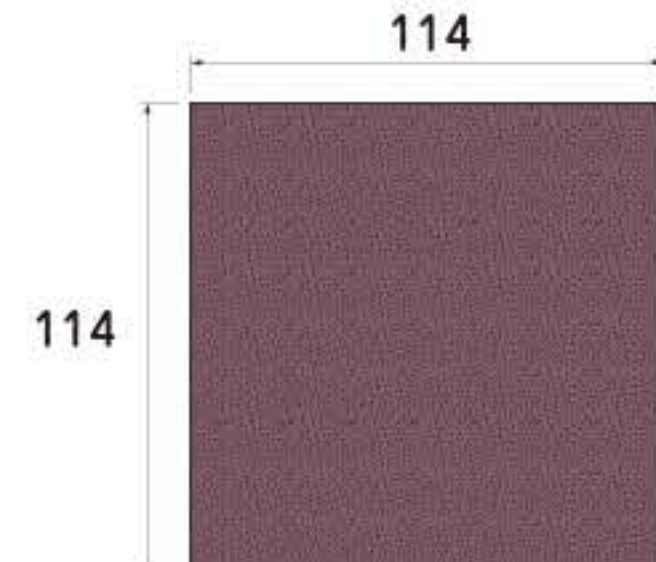
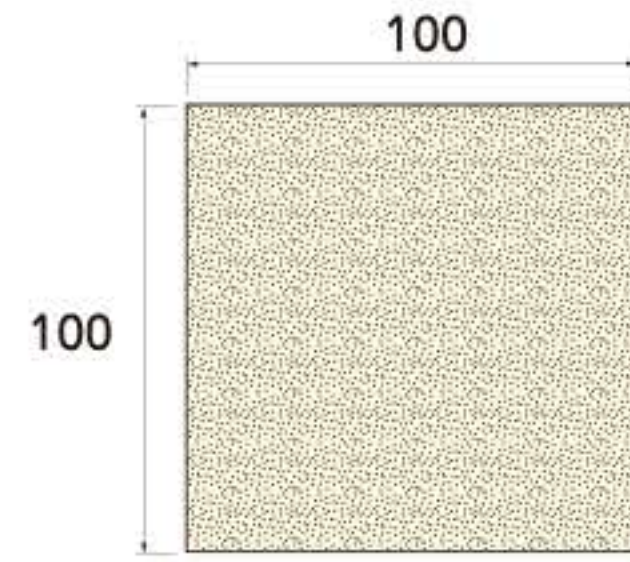
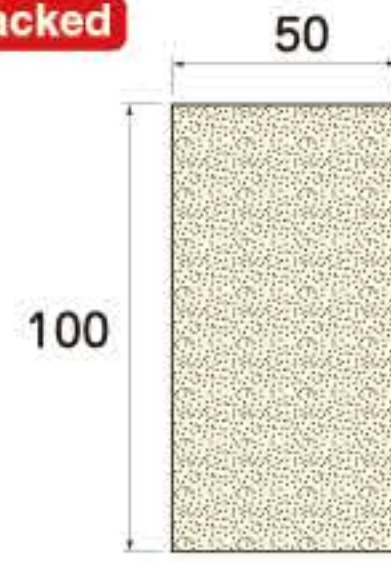
Diamond Lapping Films

Diamond grain

Self Adhesive Backed

1 pc./pack

High-strength Heat-resistant Resin



Grit Size	Order Code
#240	8A32001
#320	8A32002
#400	8A32003
#600	8A32004
#800	8A32005
#1000	8A32006
#1500	8A32007
#2500	8A32008
#4000	8A32009
#8000	8A32010

Grit Size	Order Code
#240	8A32011
#320	8A32012
#400	8A32013
#600	8A32014
#800	8A32015
#1000	8A32016
#1500	8A32017
#2500	8A32018
#4000	8A32019
#8000	8A32020

Grit Size	Order Code	Color
#600	8031100	Brown
#800	8031101	Light Green
#1000	8031102	Dark Brown
#1500	8031103	Black
#3000	8031104	Green

Thickness of Sheet 75 μm

Abrasive Diamond Cloths

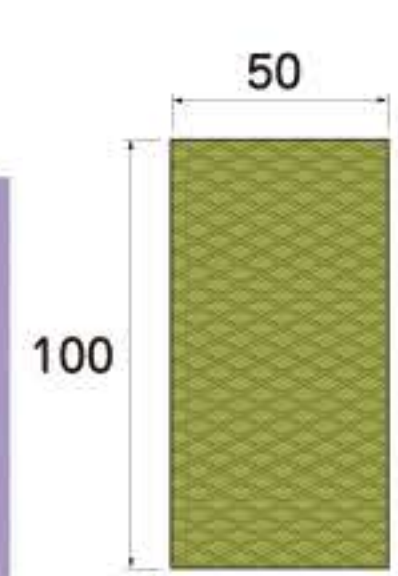
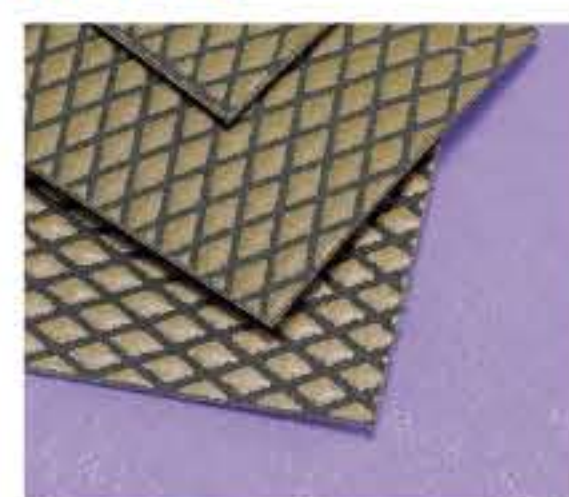
- Diamond grains are resin-bonded on cloth sheets. Grains are hard to fall off even with high load. Mainly suitable for polishing stones.

Abrasive Diamond Cloth

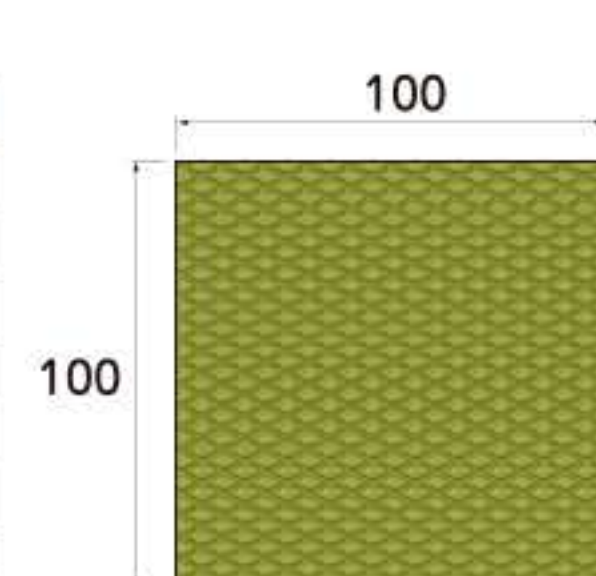
Diamond grain

Self Adhesive Backed

1 pc./pack



Sheet Size 50x100	
Grit Size	Order Code
#240	8A33001
#320	8A33002
#400	8A33003
#600	8A33004
#800	8A33005
#1000	8A33006
#1200	8A33007



Sheet Size 100x100	
Grit Size	Order Code
#240	8A33008
#320	8A33009
#400	8A33010
#600	8A33011
#800	8A33012
#1000	8A33013
#1200	8A33014

Lapping Film Sheets

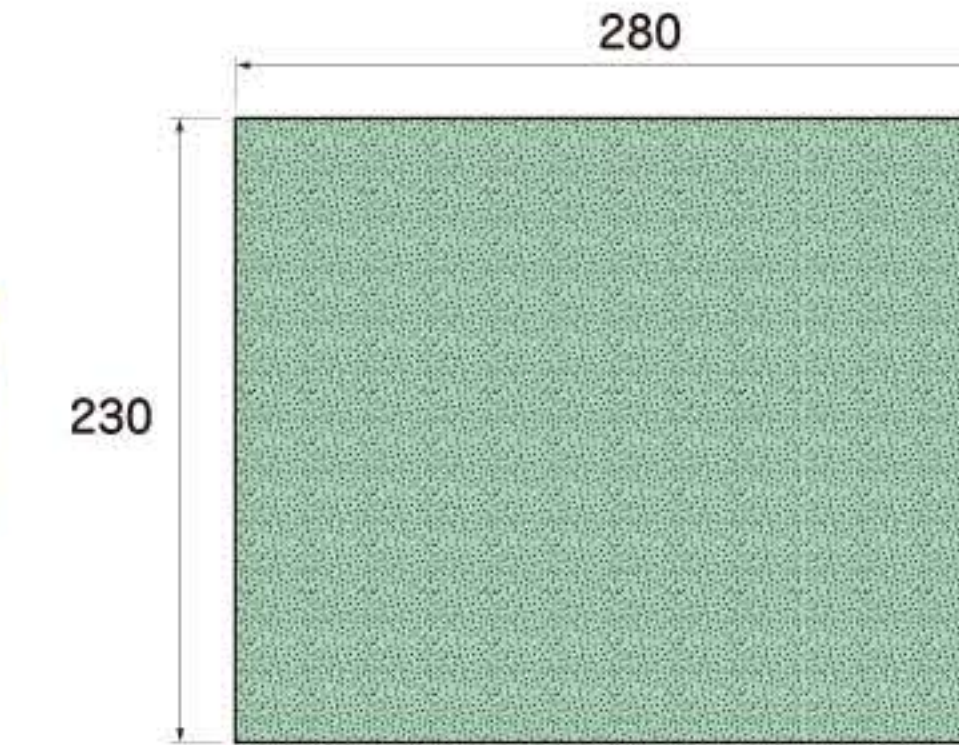
- Coated with resin bond on which ultra micro abrasive agents are spread uniformly. Constant finishing surface is obtained without deep scratches.
- Smooth and strong polyester film of uniform thickness is adopted for base element.
- Superior water/oil-proof bonding provides excellent durability in wet or dry polishing.

Lapping Film Sheets

WA grain

Self Adhesive Backed

5 pcs./pack



Grit Size	Order Code	Color
#600	8041100	Green
#800	8041101	Orange
#1000	8041102	Purple
#1500	8041103	Beige
#3000	8041104	Yellow

Thickness of Sheet 25 μm

Felt Sheets/Sticks

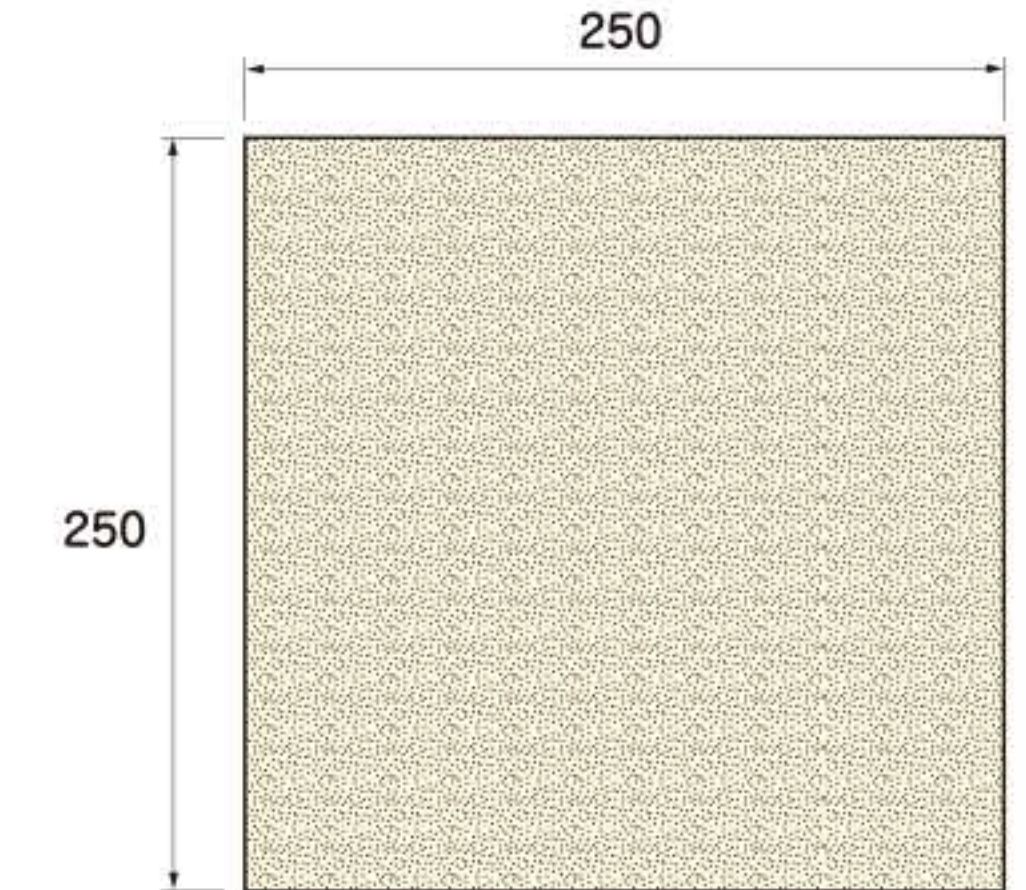
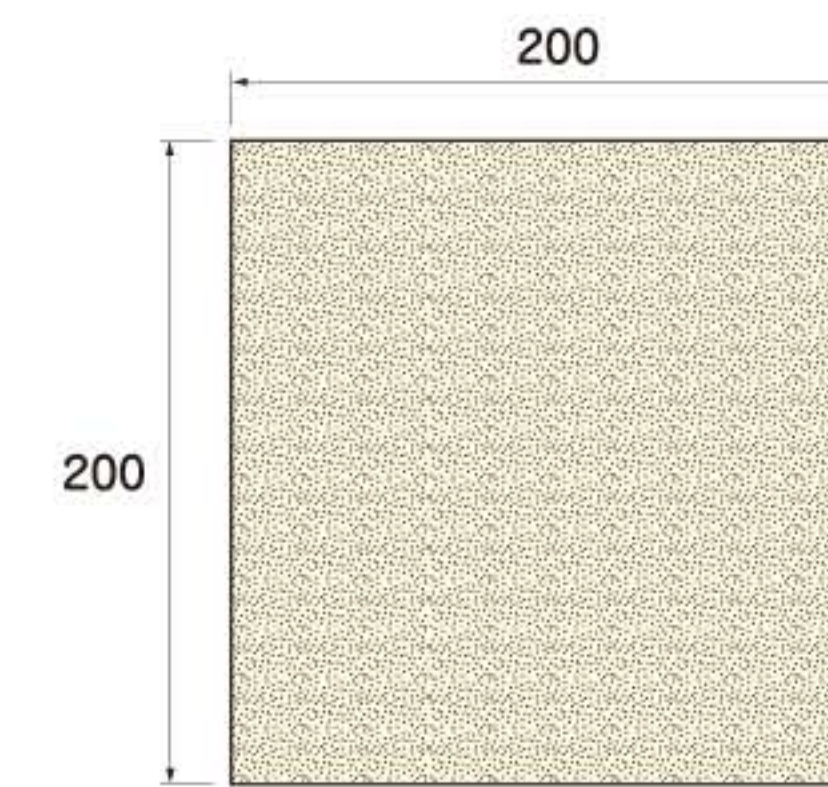
- Specially selected fine wool for polishing is densely compressed.
- Self Adhesive Backed. Cut to desired size to attach holders to use.

Felt Sheets

Wool Soft

Self Adhesive Backed

1 pc./pack



* Use with abrasive agent.

Felt Sheet	Thickness	Order Code
Felt Sheet 1mm Thick	-	8A41001
Felt Sheet 2mm Thick	8051100	8A41002
Felt Sheet 3mm Thick	8051101	8A41003

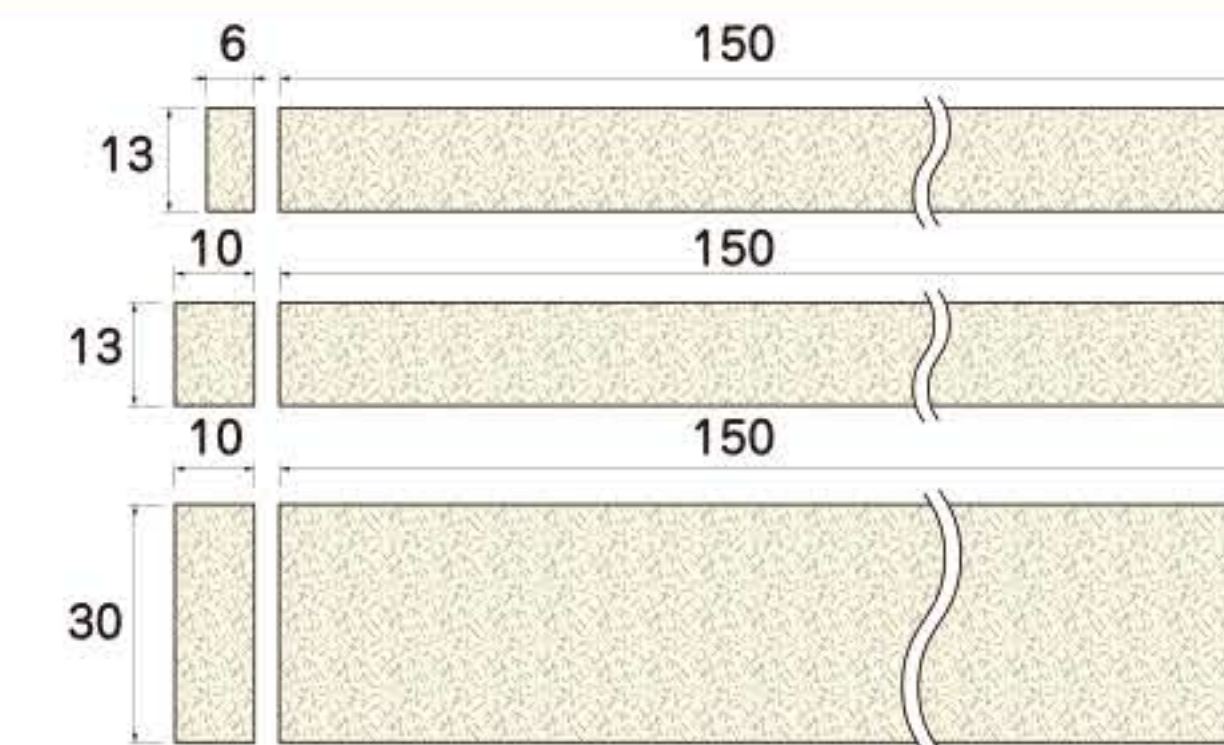
Felt Sticks

Wool Hard

2 pcs./pack



* Use with abrasive agent.



8A51001

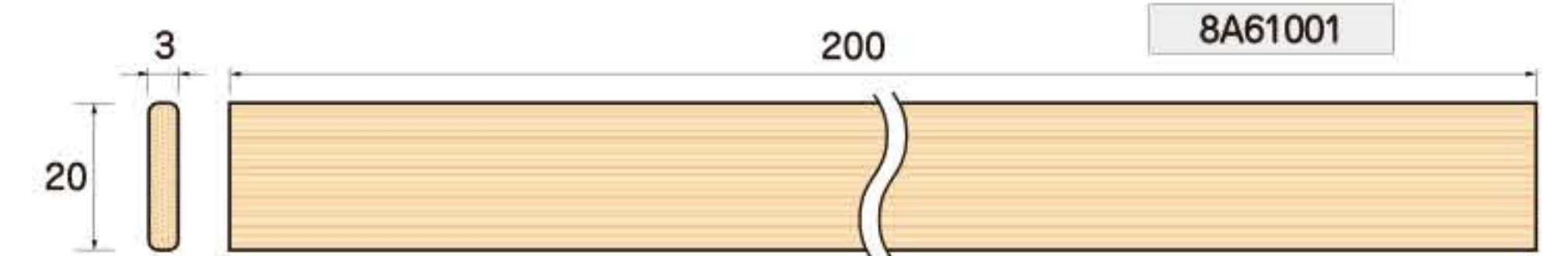
8A51002

8A51003

Bamboo Holders

2 pcs./pack

- Cut felt sheets or diamond sheets to a desired size to attach this bamboo holders to use.
- Natural bamboo's flexibility offers an exquisite feel in work, without damaging work materials.



8A61001

* This product is made of natural material, which may contain bamboo joints and there may be individual difference and dimensional discrepancy among products.

Ruby Stone Sticks

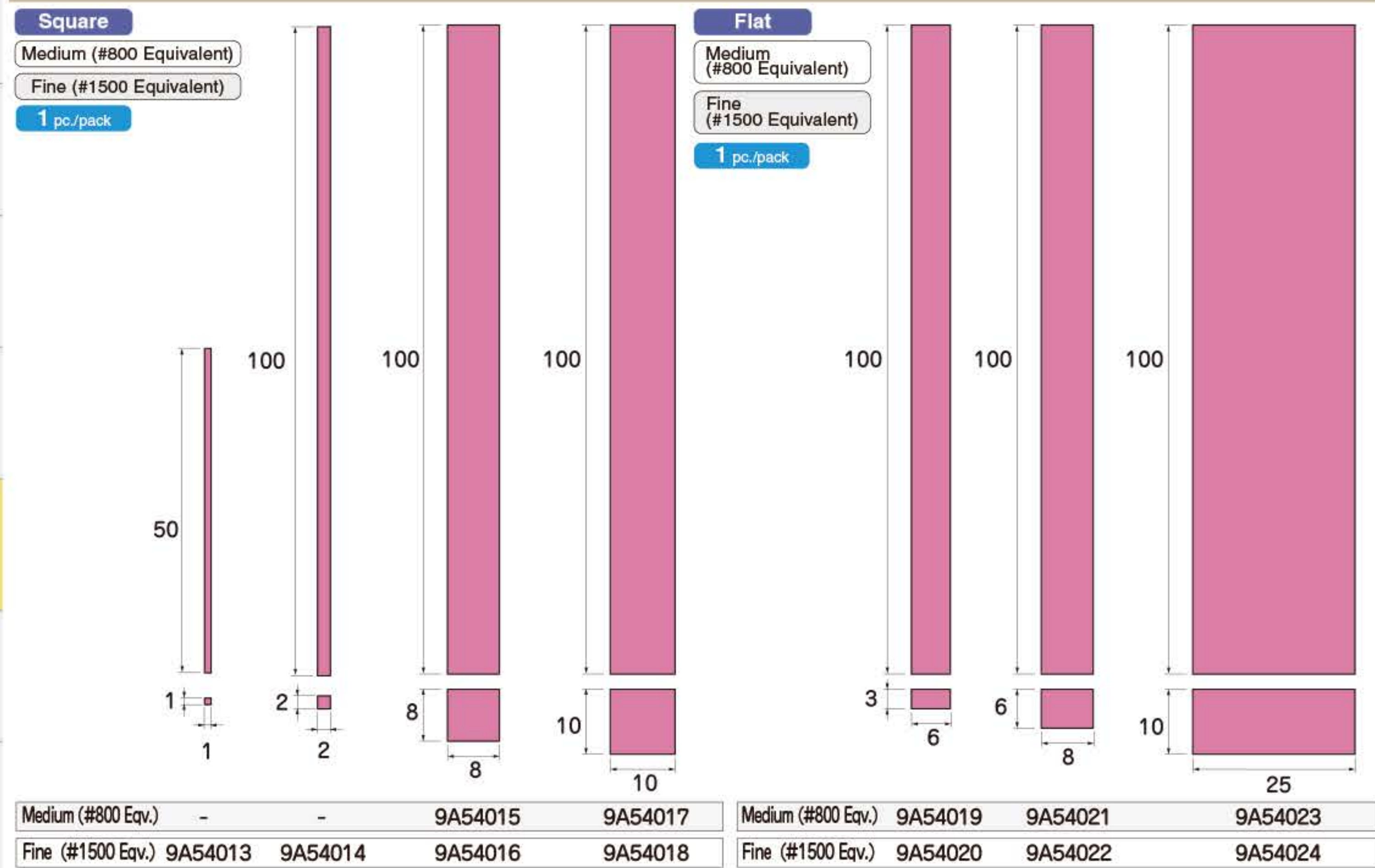
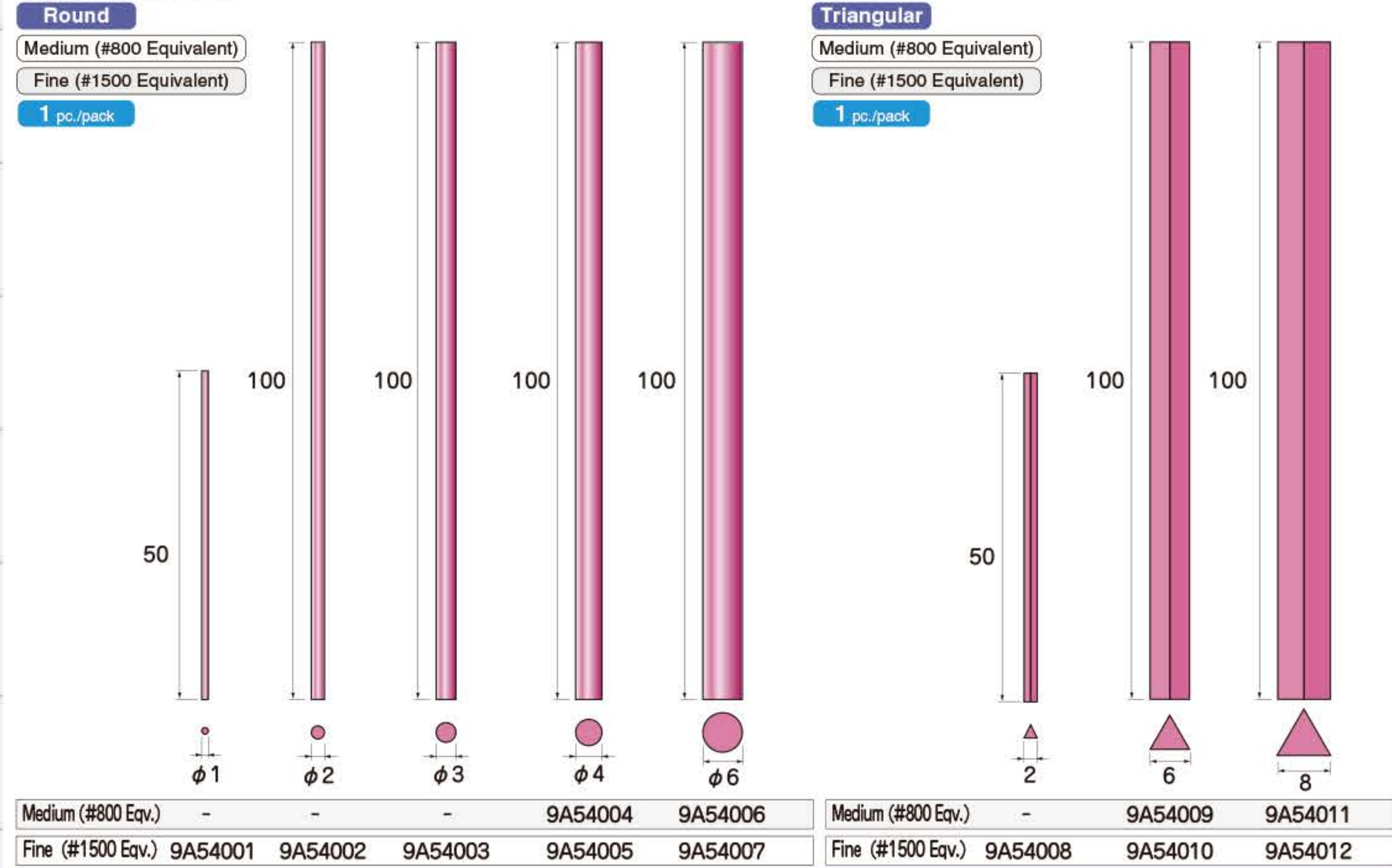
EIKO

Ruby Stone Sticks

- More durable with less pores compared with ordinal vitrified stone sticks, its sharp hard edges suits well for polishing in the corner of die etc.
- Polishing with diamond compounds is also effective for rigid materials such as hardened steel.



Ruby Stone Sticks



Fiber Stone Sticks

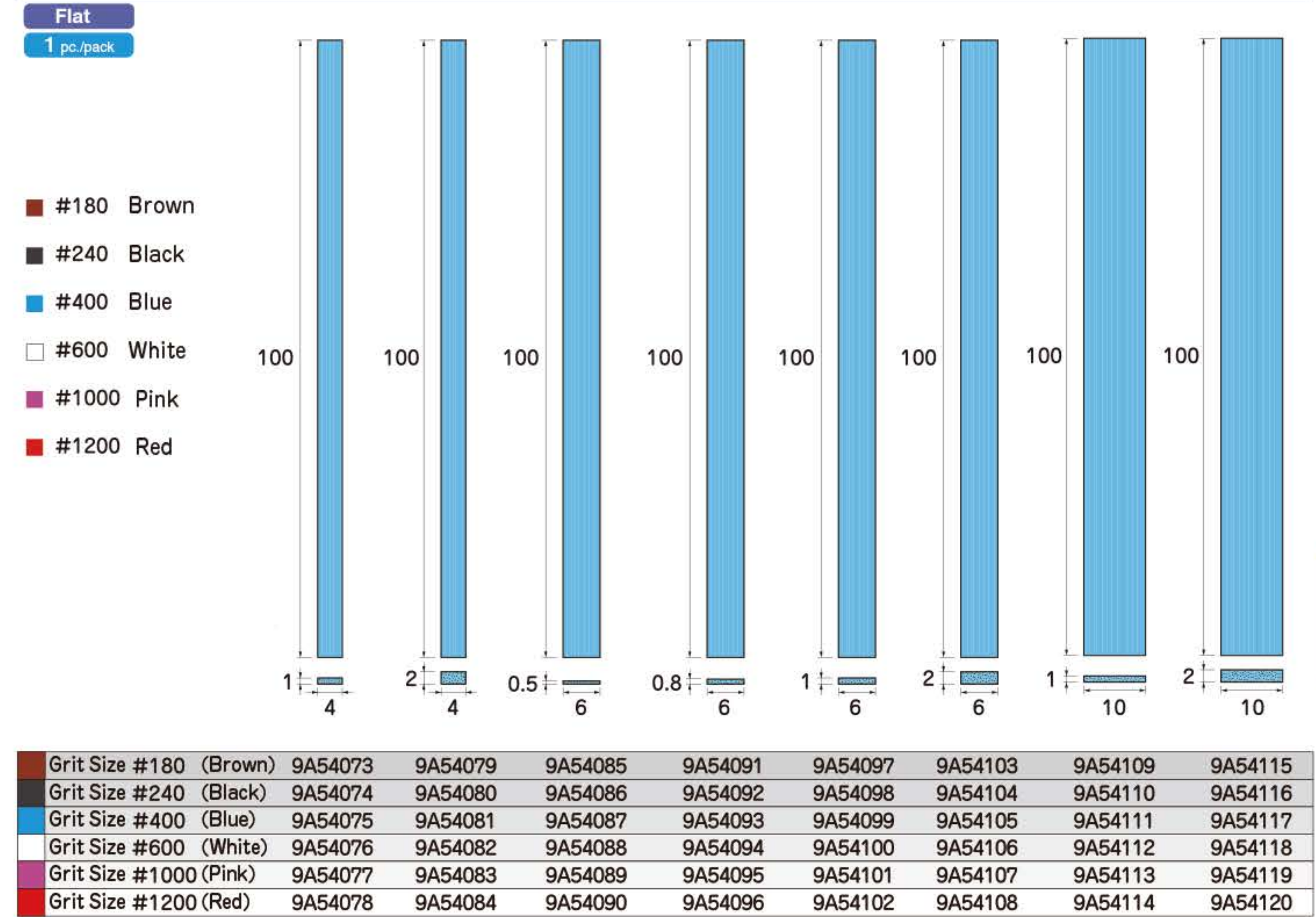
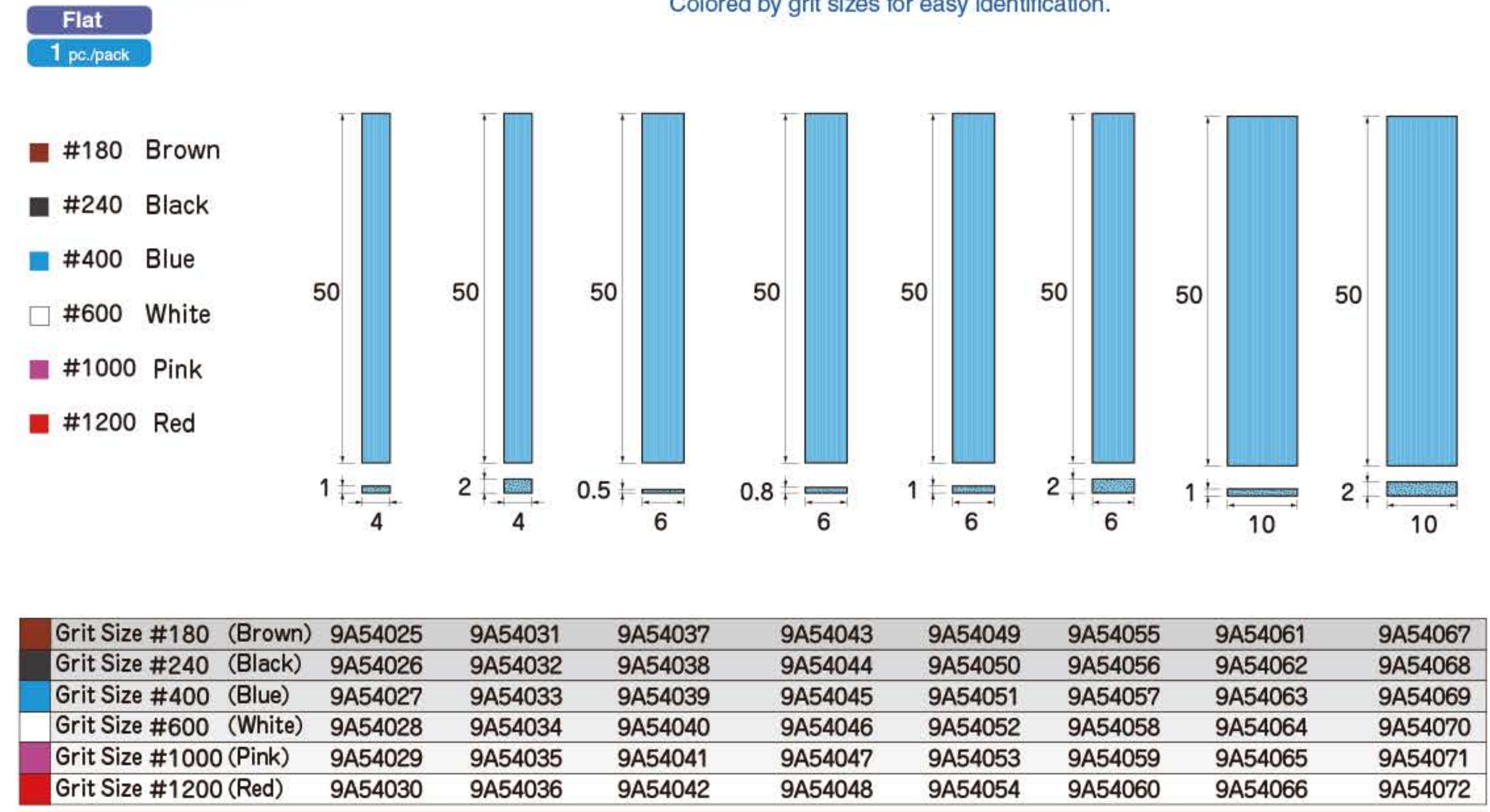
E-FORCE®

Fiber Stone Sticks

- A breakthrough grinding stone made of inorganic fibers such as alumina fiber, and glass fiber etc. assembled with thermosetting epoxy resin.
- Unlike ordinal grinding stones, so flexible as not to break even in thin profile.
- Beautiful finish surface is obtained without little scratches benefitted by ceramic fiber cutting edges.



Fiber Stone Sticks



Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Fiber Stone Sticks

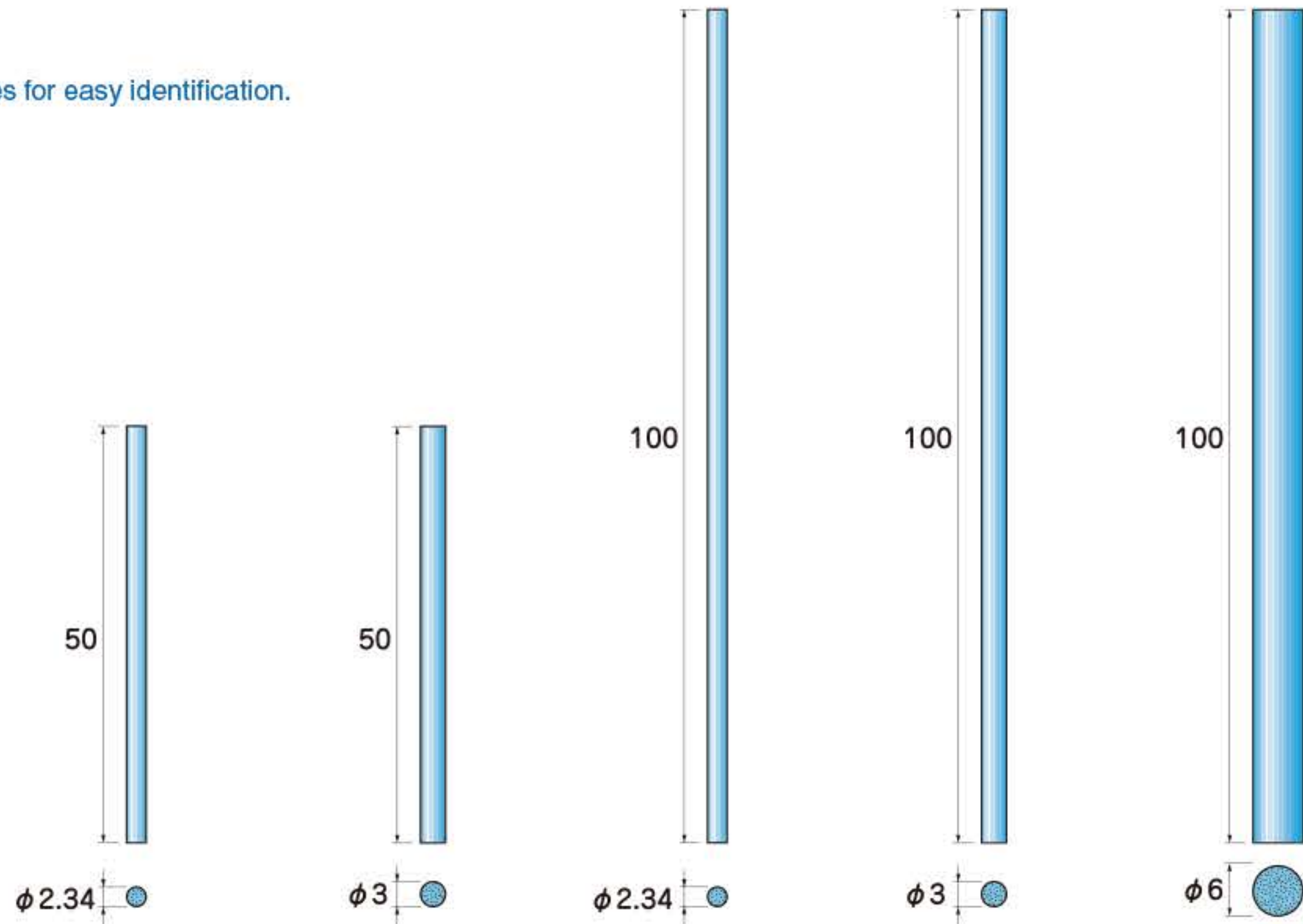
EIKO

Fiber Stone Sticks

Round
1 pc./pack

Colored by grit sizes for easy identification.

- #180 Brown
- #240 Black
- #400 Blue
- #600 White
- #1000 Pink
- #1200 Red



Grit Size #180 (Brown)	9A54121	9A54127	9A54133	9A54139	9A54145
Grit Size #240 (Black)	9A54122	9A54128	9A54134	9A54140	9A54146
Grit Size #400 (Blue)	9A54123	9A54129	9A54135	9A54141	9A54147
Grit Size #600 (White)	9A54124	9A54130	9A54136	9A54142	9A54148
Grit Size #1000 (Pink)	9A54125	9A54131	9A54137	9A54143	9A54149
Grit Size #1200 (Red)	9A54126	9A54132	9A54138	9A54144	9A54150

Diamond Fiber Stone Sticks

Diamond grains are evenly blended in conventional ceramic fibers to combine benefits of fiber stones and sintered diamond stones.

Cuts well on hardened materials, die steel, high speed steel, cemented carbides. Omni-directional protrusions of diamond grains enables working on side face as well.

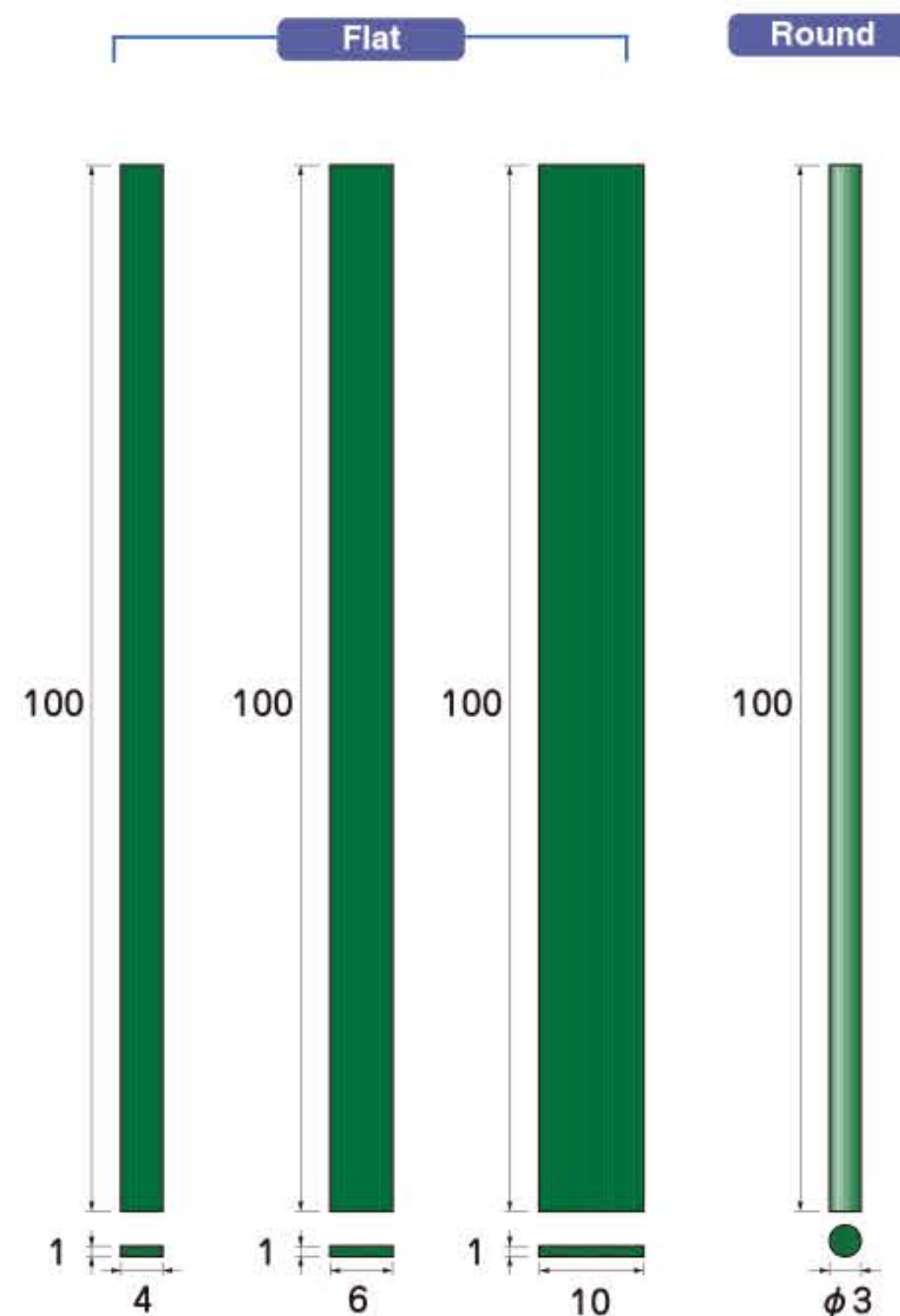
Use with hand holders, and also use with ultrasonic grinders and reciprocating electric grinders for more efficiency.

Diamond Fiber Stone Sticks

1 pc./pack

Colored by grit sizes for easy identification.

- #200 Black
- #400 Grey
- #600 Green



Grit Size #200 (Black)	9A54151	9A54154	9A54157	9A54160
Grit Size #400 (Grey)	9A54152	9A54155	9A54158	9A54161
Grit Size #600 (Green)	9A54153	9A54156	9A54159	9A54162

Abrasive Stone Sticks

E-FORCE®

EDM Stone Sticks

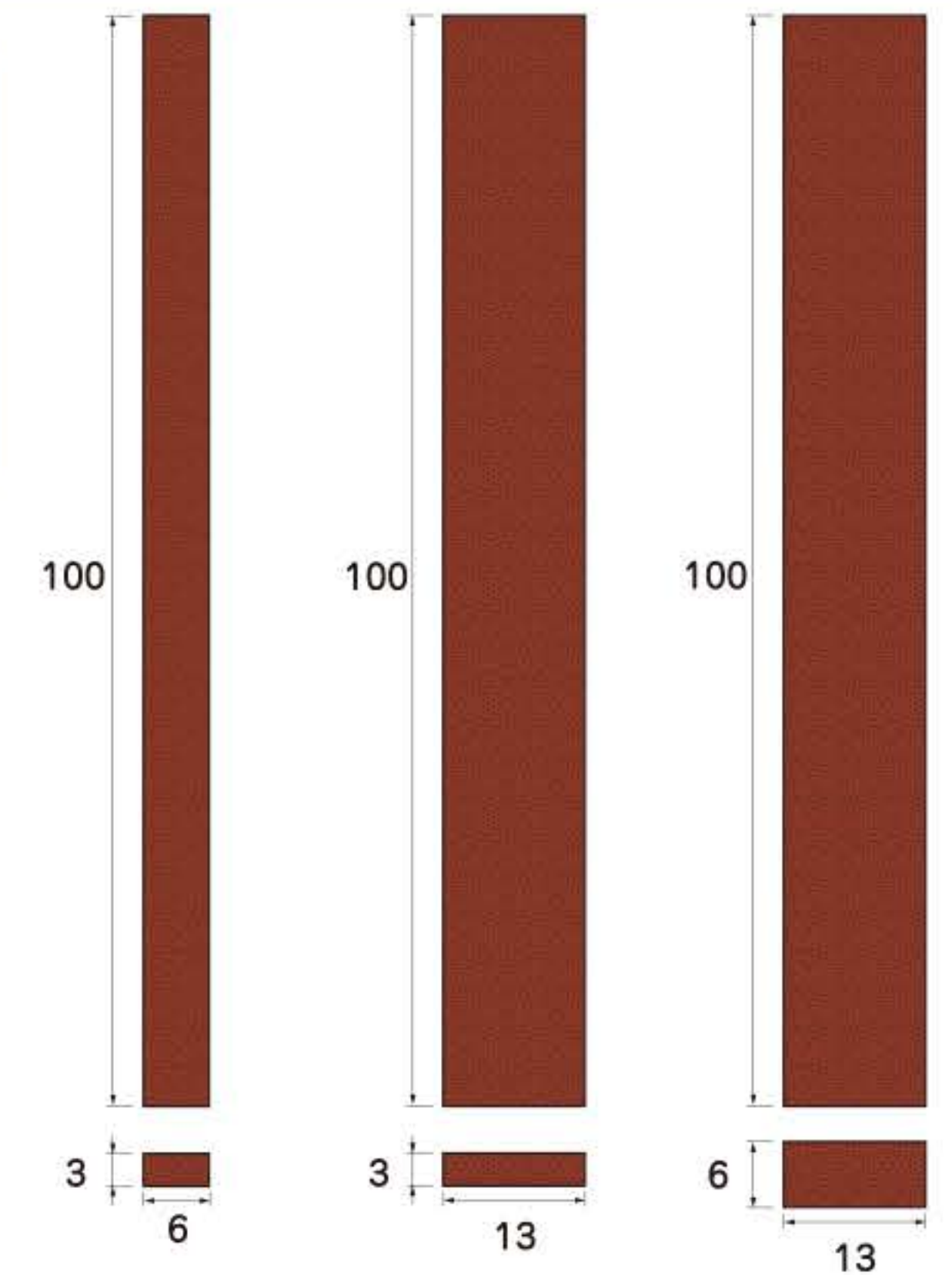
Suitable for removal of hardened layer after EDM. Sharp cutting ability and good biting. Stone remains its shape well.

Use in hand, and also works excellently well with electric/air grinders and ultrasonic grinders.

*EDM . . . Electrical Discharge Machining

EDM Stone Sticks

Flat
5 pcs./pack



Grit Size #150	9A54163	9A54170	9A54177
Grit Size #180	9A54164	9A54171	9A54178
Grit Size #220	9A54165	9A54172	9A54179
Grit Size #320	9A54166	9A54173	9A54180
Grit Size #400	9A54167	9A54174	9A54181
Grit Size #600	9A54168	9A54175	9A54182
Trial Kit (contain 1 each of 6 grit sizes. Set of 6.)	9A54169	9A54176	9A54183

Finishing Stone Sticks (Sulphur Impregnated)

Very soft grind stones with carefully selected sulphur impregnated alumina grains.

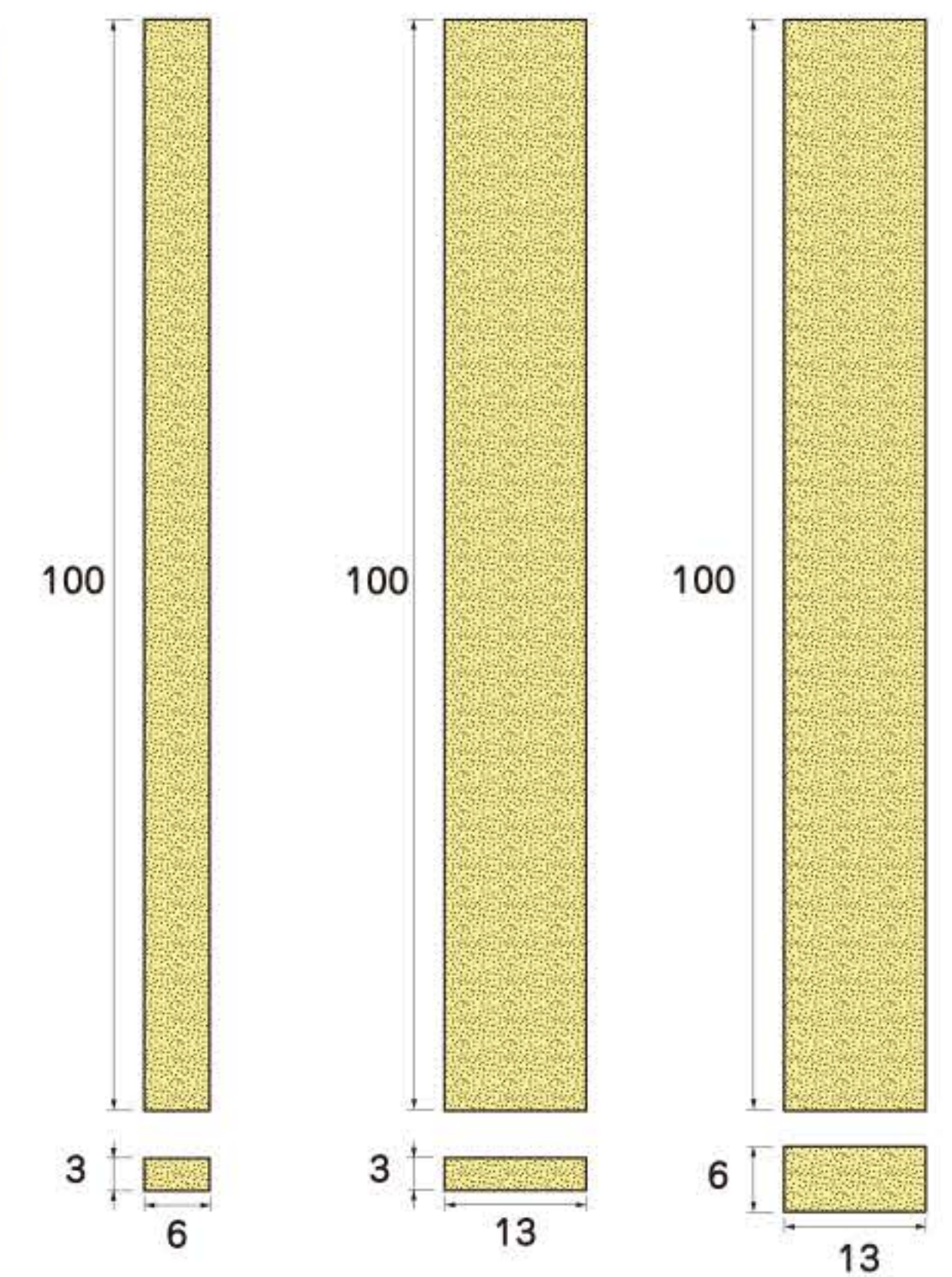
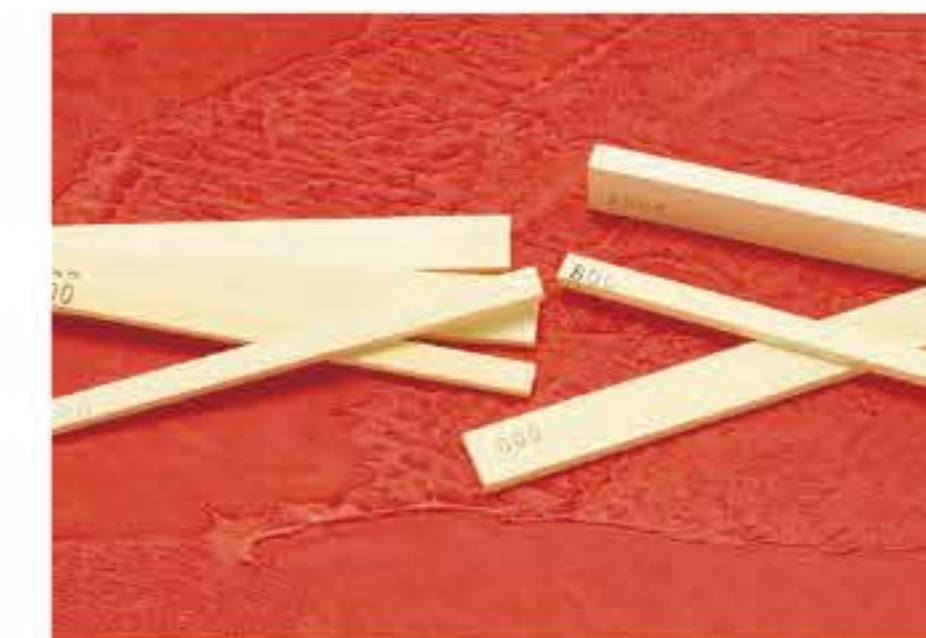
Superior in frangibility, good finish surface is obtained with no scratch.

Breaks down well, best suits for finishing round surfaces.

Best suits for finish polishing prior to diamond compound polish.

Finishing Stone Sticks (Sulphur Impregnated)

Flat Sulphur Impregnated
5 pcs./pack



Grit Size #400	9A54184	9A54190	9A54196
Grit Size #600	9A54185	9A54191	9A54197
Grit Size #800	9A54186	9A54192	9A54198
Grit Size #1000	9A54187	9A54193	9A54199
Grit Size #2000	9A54188	9A54194	9A54200
Trial Kit (Contains 1 each of 5 grit sizes. Set of 5.)	9A54189	9A54195	9A54201

Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Abrasive Stone Sticks

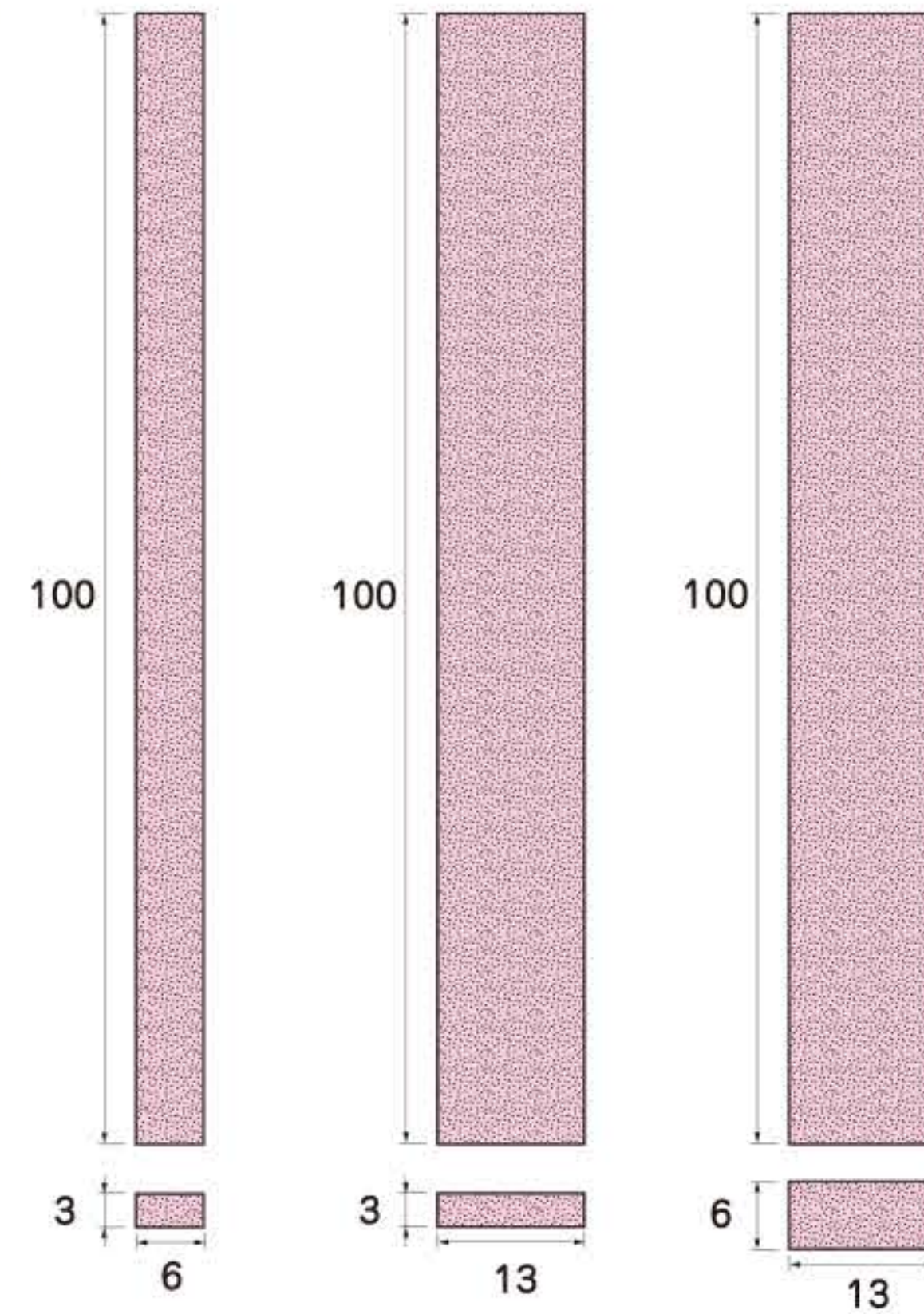
EIKO

Pink Stone Sticks

- High grade grain based very sharp stone for efficient grinding on standard steel and also hardened steel without clogging.
- Hardness grades in the middle between the EDM's and finishing stones with grains of good frangibility. Provides a swift work, and constant finish surfaces.
- Best suits for rough/medium finishing prior to the work with finishing stones.

Pink Stone Sticks

Flat
5 pcs./pack



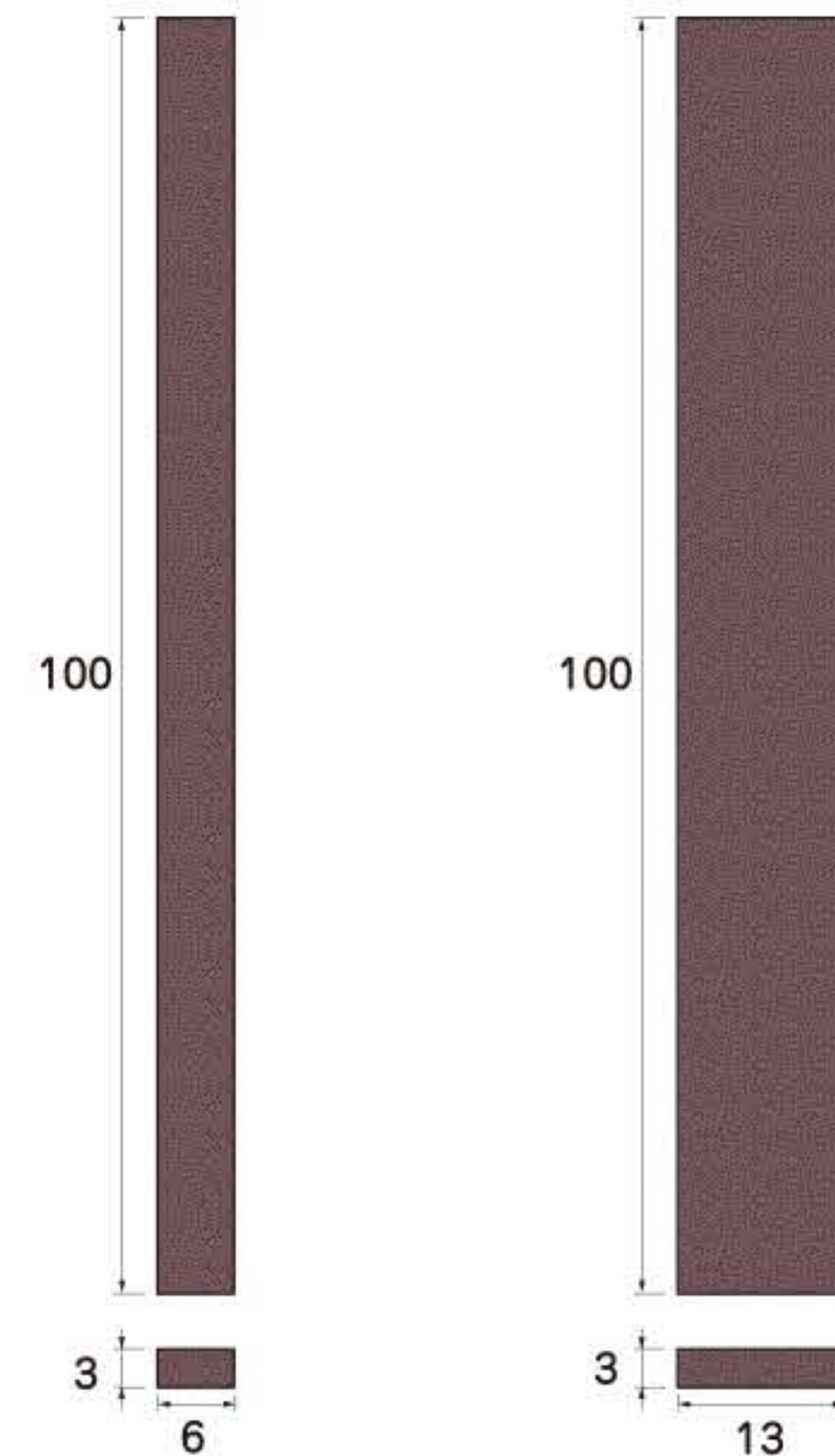
Grit Size #120	9A54202	9A54208	9A54214
Grit Size #150	9A54203	9A54209	9A54215
Grit Size #220	9A54204	9A54210	9A54216
Grit Size #320	9A54205	9A54211	9A54217
Grit Size #400	9A54206	9A54212	9A54218
Trial Kit (Contains 1 each of 5 grit sizes. Set of 5.)	9A54207	9A54213	9A54219

Standard Stone Sticks

- From general steel materials to die steel, performs well in grinding. Set this stone as standard.
- A cost effective stone with adequate softness providing a good friction on work.

Standard Stone Sticks

Flat
5 pcs./pack



Grit Size #220	9A54220	9A54227
Grit Size #320	9A54221	9A54228
Grit Size #400	9A54222	9A54229
Grit Size #600	9A54223	9A54230
Grit Size #800	9A54224	9A54231
Grit Size #1000	9A54225	9A54232
Trial Kit (Contains 1 each of 6 grit sizes. Set of 6.)	9A54226	9A54233

Abrasive Stone Sticks

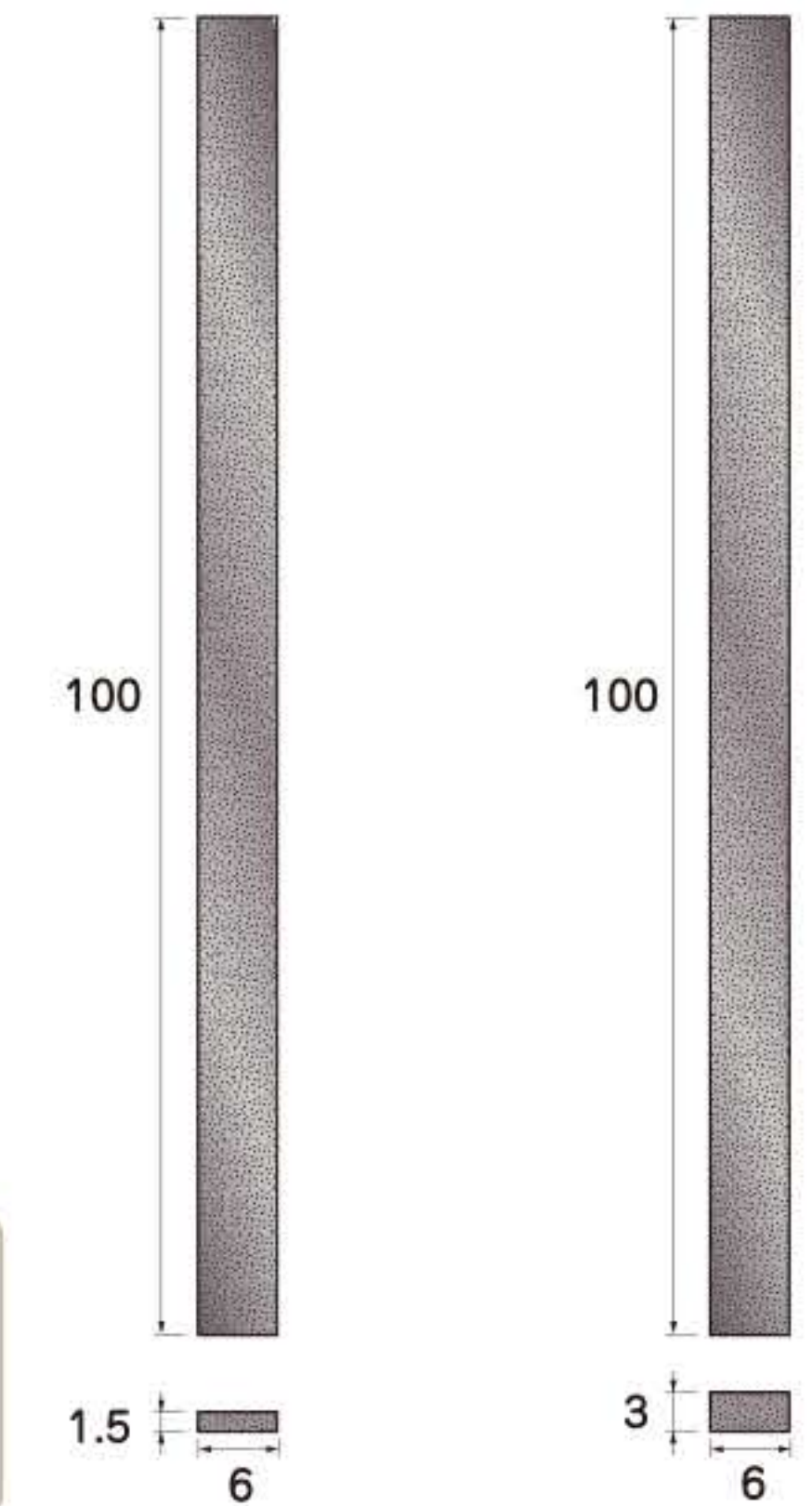
E-FORCE®

Diamond Stone Sticks

- Diamond grains are sintered for grinding carbide dies, and also standard steel, and special steel with excellent cutting ability and durability.
- Much harder than conventional grinding stones. Long-life and economical.

Diamond Stone Sticks

Flat
1 pc./pack



- Handle the tool with care, because however the Diamond Stone Stick is made of very hard material itself, it is fragile to impact. It may be easily damaged by forcing the tool with excessive loads or dropping the tool.
- Use with a hand holder.

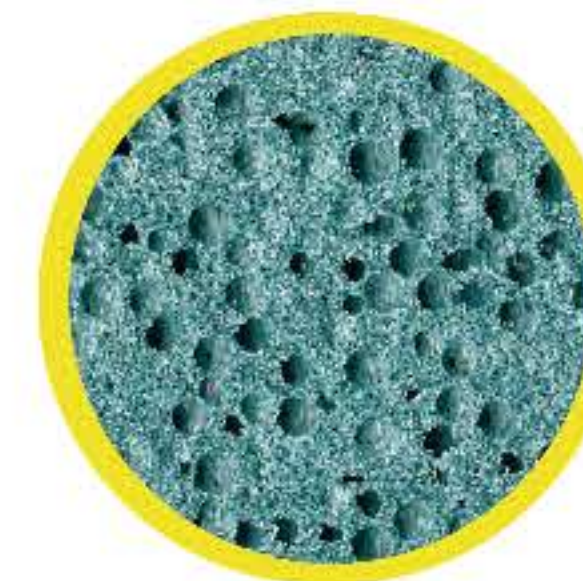
Grit Size #400	9A54234	9A54240
Grit Size #600	9A54235	9A54241
Grit Size #800	9A54236	9A54242
Grit Size #1000	9A54237	9A54243
Grit Size #2000	9A54238	9A54244
Grit Size #3000	9A54239	9A54245

Bubble Stone Stick Express

- A unique grinding stone with sharp GC grains sintered in large porous form like a pumice stone.
- Suitable for rough finishing on aluminum, and also hardened steel with a clog-free fine grinding.
- Performs well for quickly removing deep scratches, cutter marks, and rust.
- Sizes for large dies are also available.

Bubble Stone Stick Express

Flat
5 pcs./pack



Magnified image of surface



- Bubble Stone Stick Express is a specially sintered grinding stone with porous structure. NOTE that forcing the tool in use may break the tool.

Grit Size #80	9A54246	9A54250
Grit Size #120	9A54247	9A54251
Grit Size #220	9A54248	9A54252
Trial Kit (Contains 1 each of 3 grit sizes. Set of 3.)	9A54249	9A54253



Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond/CBN Cutting Discs
Sintered Diamond/CBN Grinding Stones
Carbide Cutters
Steel Cutters
Twist Drills
Mandrels / Shank Adapters
Grinding Stones
Abrasive Rubber Points
Abrasive Sanders
Brushes
Felt Bobs
Compounds / Hand Tools
Special Tools
Tool Sets

Abrasive Stone Sticks

EIKO

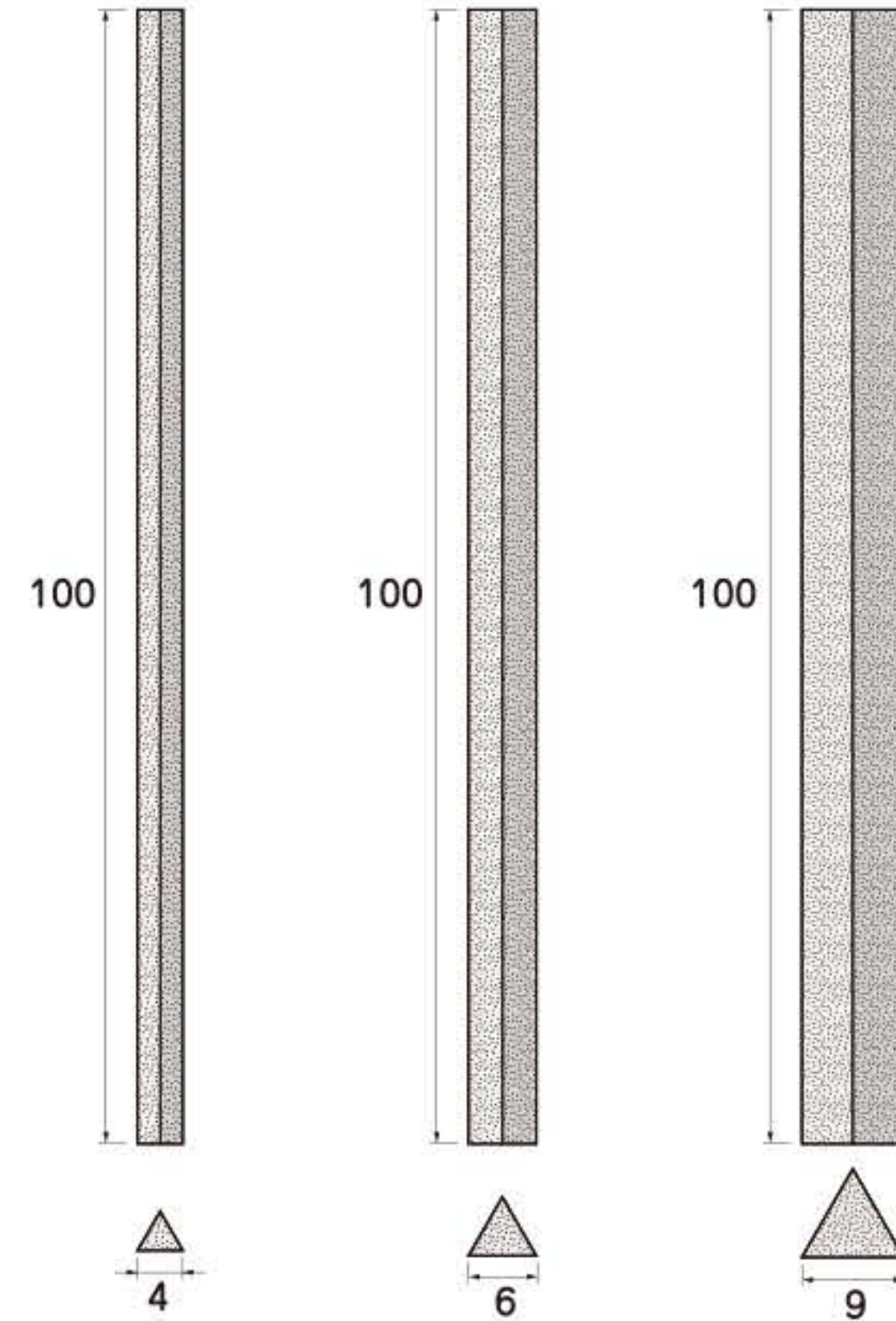
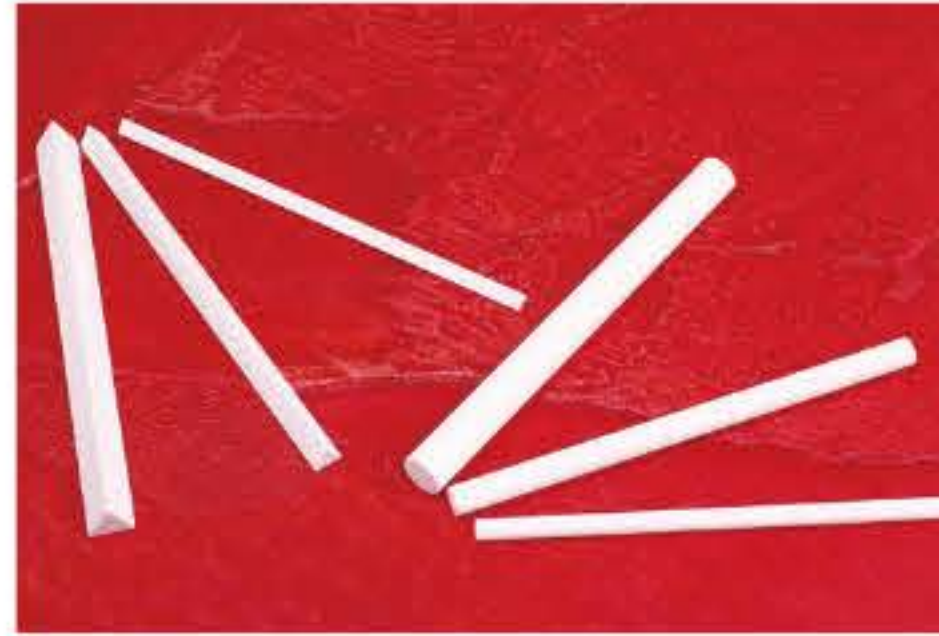
White Stone Sticks

- Handy for working in corners and round parts of variety of metal materials such as standard steel, and also hardened steel. Available in triangular and cylinder shape.
- Carefully selected sintered white alumina grains with adequate frangibility provide a good cutting ability and a constant finish surface instantly.

White Stone Sticks

Triangular

5 pcs./pack



Grit Size #320	9A54254	9A54260	9A54266
Grit Size #400	9A54255	9A54261	9A54267
Grit Size #600	9A54256	9A54262	9A54268
Grit Size #800	9A54257	9A54263	9A54269
Grit Size #1000	9A54258	9A54264	9A54270
Trial Kit (Contains 1 each of 5 grit sizes. Set of 5.)	9A54259	9A54265	9A54271

White Stone Sticks

Round

5 pcs./pack

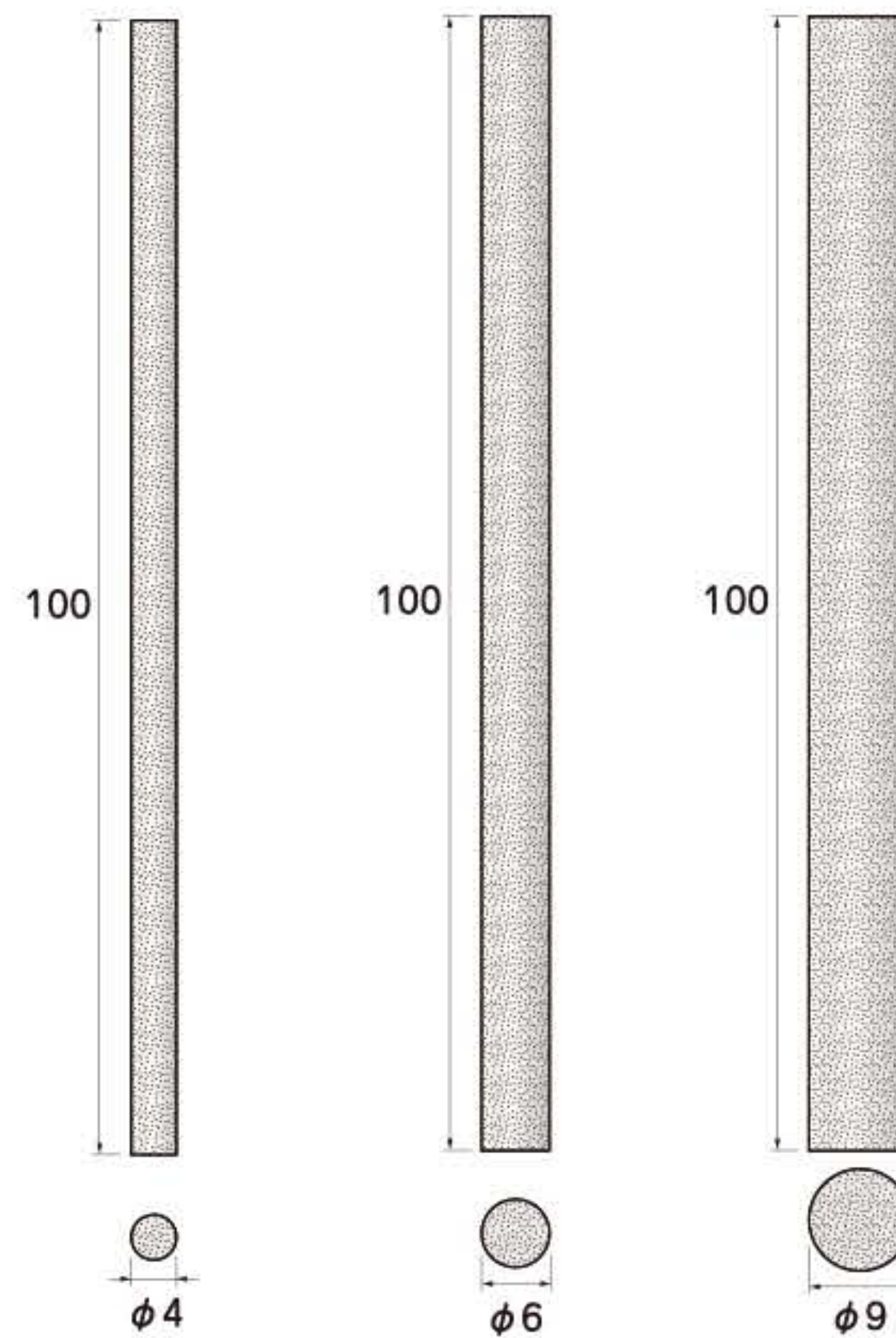
* Use of the Pin Vise (9A53004) is recommended to hold the $\phi 4.0$ mm White Stone Sticks.

Pin Vises

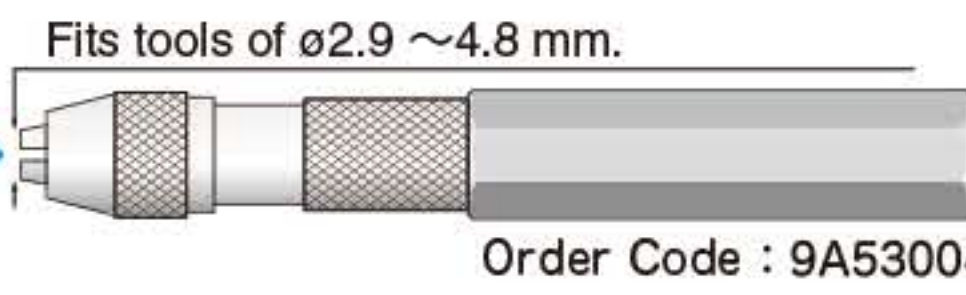
1 pc./pack

Shank Size $\phi 2.9 \sim 4.8$

Order Code 9A53004



Grit Size #320	9A54272	9A54278	9A54284
Grit Size #400	9A54273	9A54279	9A54285
Grit Size #600	9A54274	9A54280	9A54286
Grit Size #800	9A54275	9A54281	9A54287
Grit Size #1000	9A54276	9A54282	9A54288
Trial Kit (Contains 1 each of 5 grit sizes. Set of 5.)	9A54277	9A54283	9A54289



* For more details of Pin Vises, see page 135.

Hand Holders

E-FORCE®

Stick Stone Hand Holders

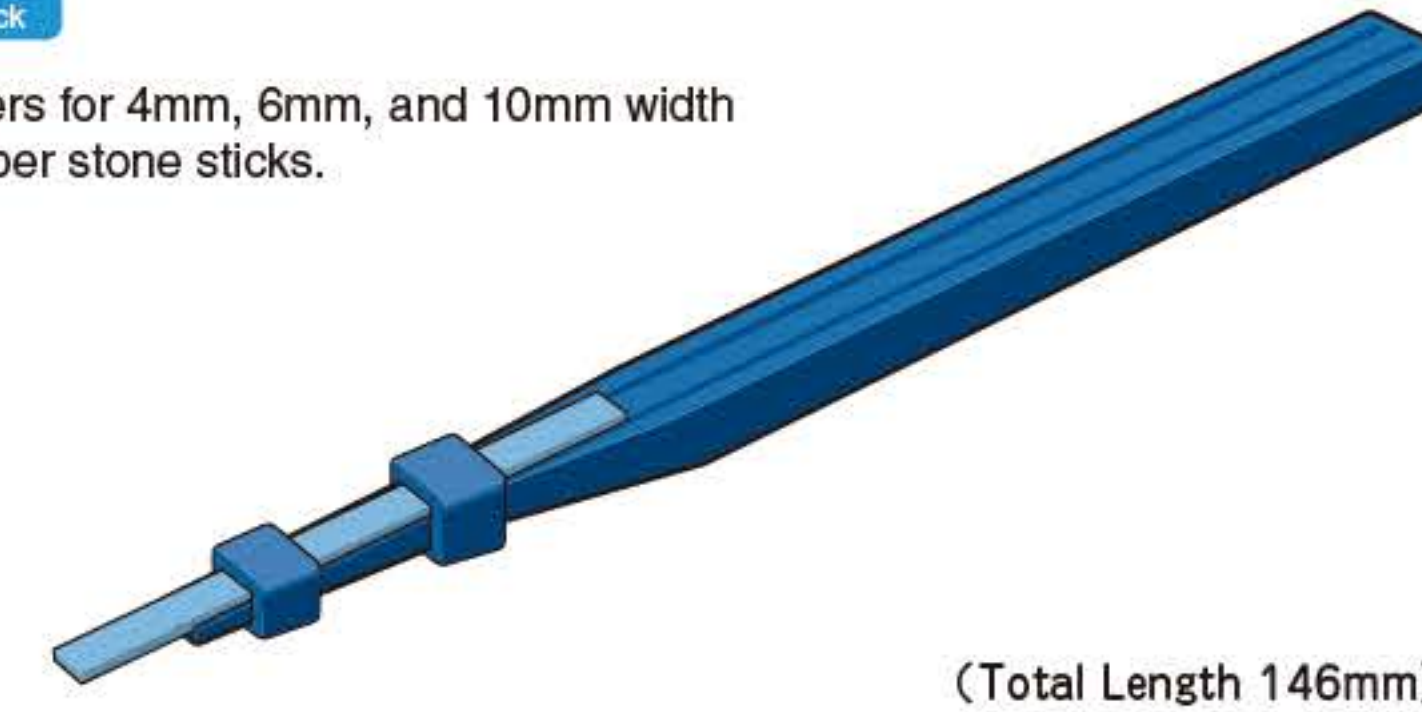
- Tightly holds the fiber stones and also the stick stones. Provides a stability in work and eases the burden of fingers.
- Worn, short files can be used as well. Friendly on your wallet.

Fiber Stone Stick Hand Holders

Flat

2 pcs./pack

- Holders for 4mm, 6mm, and 10mm width flat fiber stone sticks.



(Total Length 146mm)

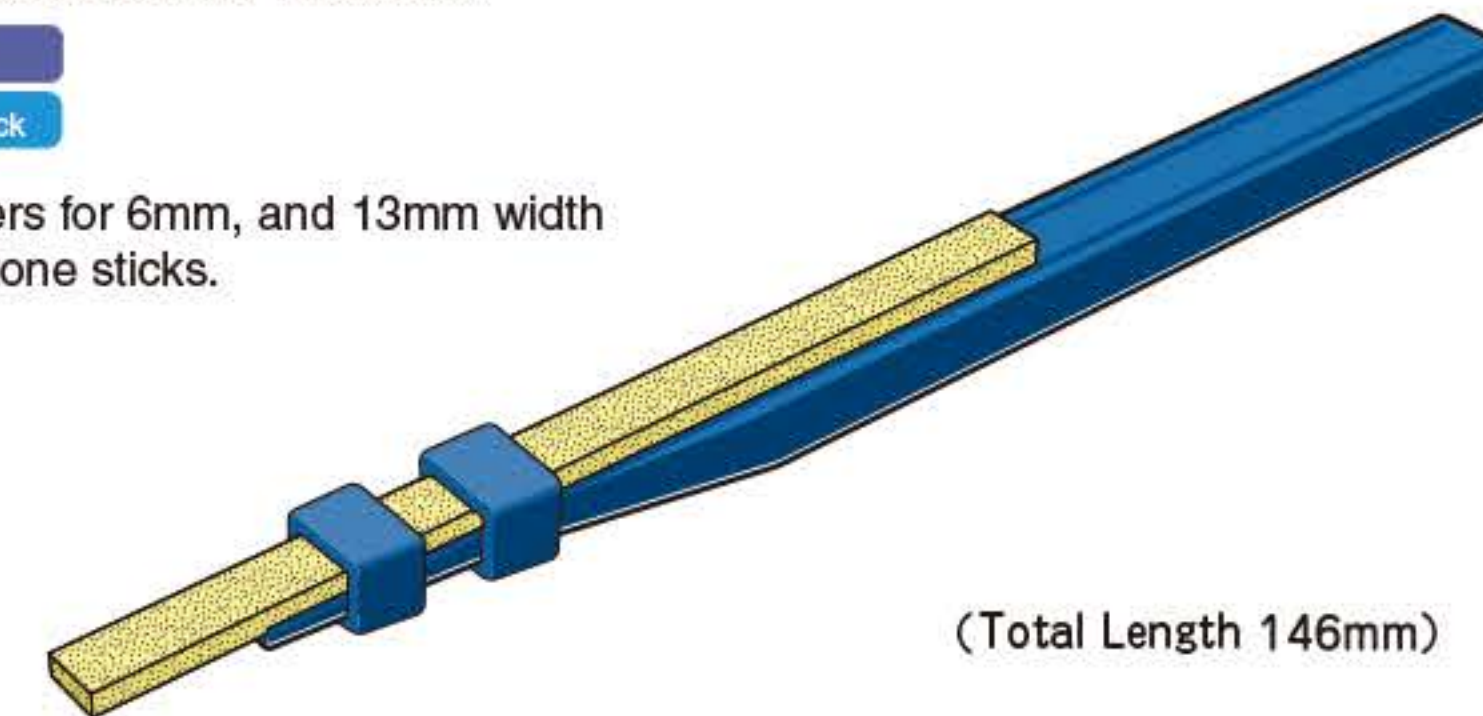
$4 \pm 1 \sim 2$	$6 \pm 0.5 \sim 2$	$10 \pm 1 \sim 2$
For 4mm width	For 6mm width	For 10mm width
9A51002	9A51003	9A51004

Stick Stone Hand Holders

Flat

2 pcs./pack

- Holders for 6mm, and 13mm width flat stone sticks.



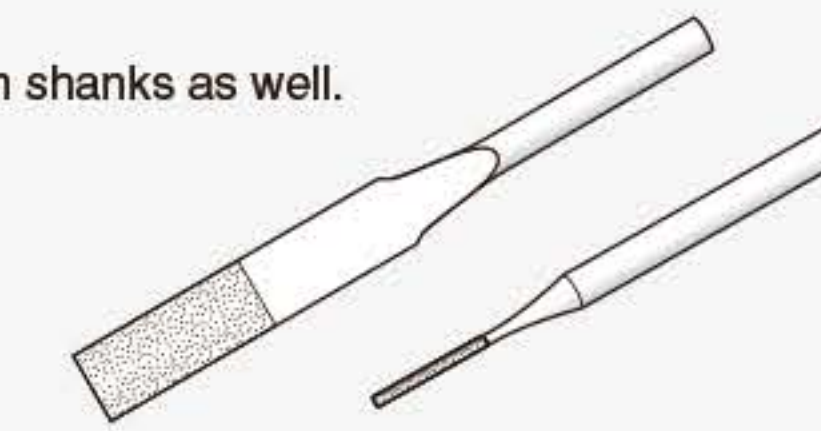
(Total Length 146mm)

6 ± 3	13 ± 3	13 ± 6
For 6w x 3t mm	For 13w x 3t mm	For 13w x 6t mm
9A51005	9A51006	9A51007

Compatible Hand Holder for $\phi 3.0$ mm Round /1.0 mm Flat Bars

- A holder for both $\phi 3.0$ mm shaft dia. and 1.0 mm thickness fiber stone sticks or ruby stone sticks.

- Holds rotation tools with $\phi 3.0$ mm shanks as well.

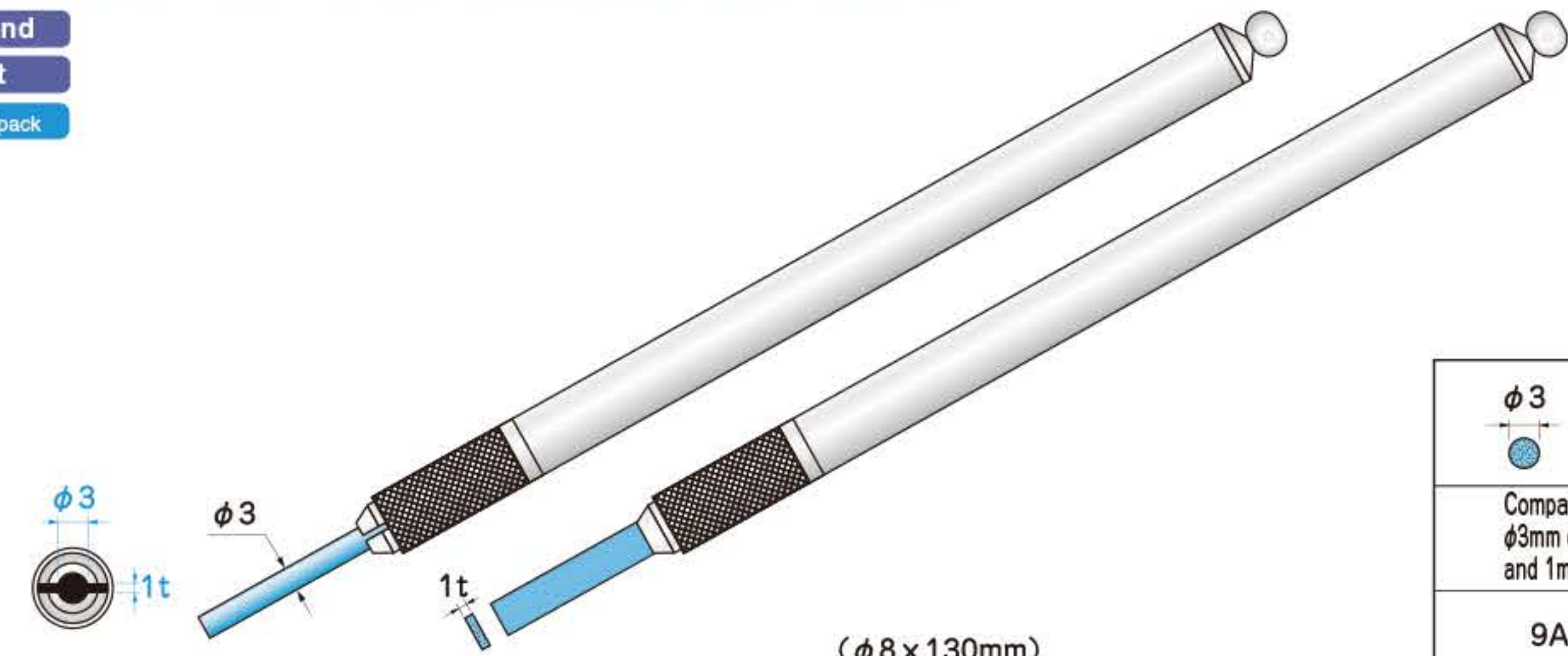


Compatible Hand Holder for $\phi 3.0$ mm Round /1.0 mm Flat Bars

Round

Flat

1 pc./pack



($\phi 8 \times 130$ mm)

$\phi 3$	$1t$
Compatible with $\phi 3$ mm dia. round and 1mm thick flat.	
9A51008	

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

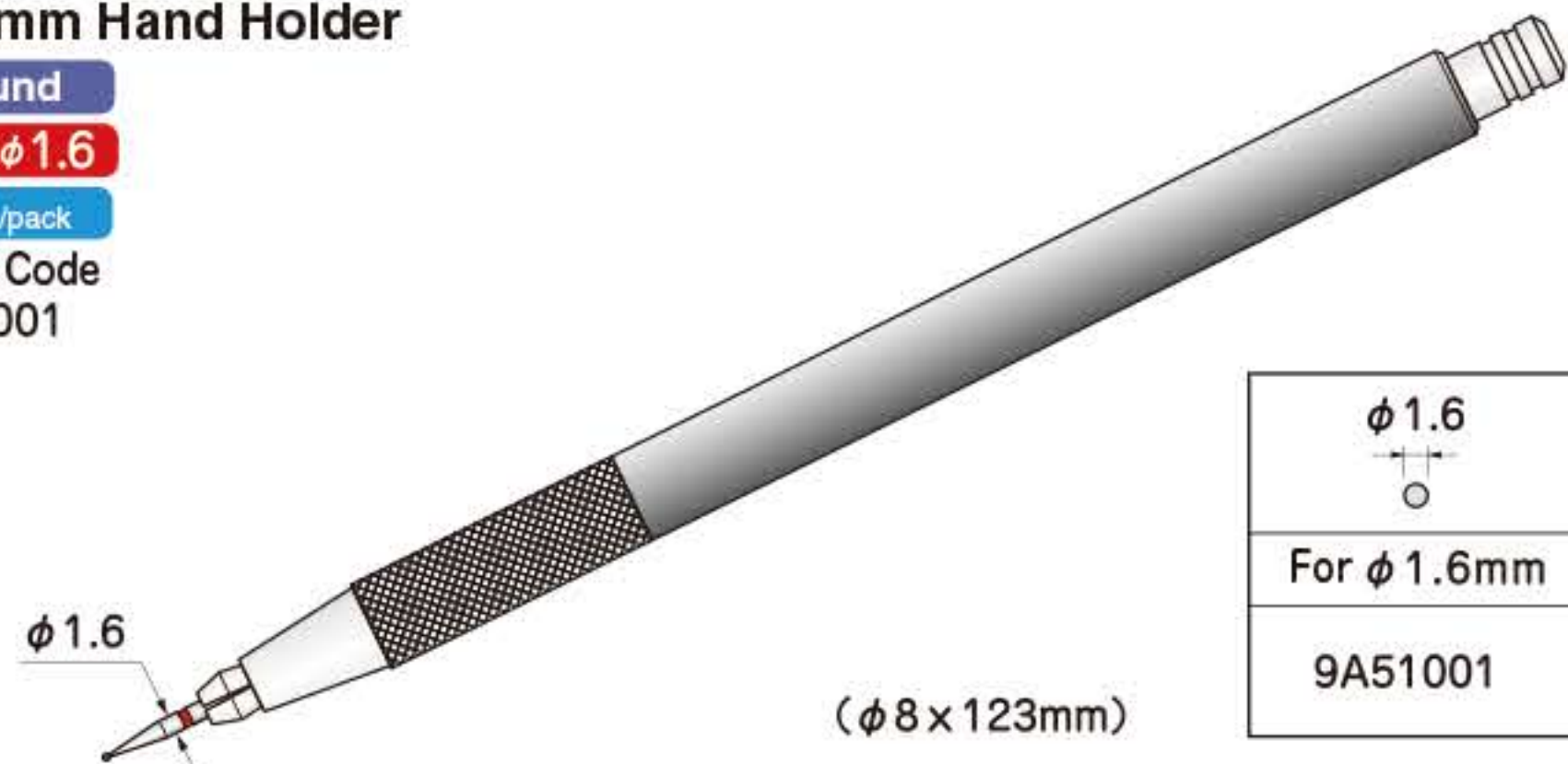
Hand Holders

ø1.6mm Hand Holder

- A hand holder exclusively for the diamond burs with ø1.6mm shank.
- Knocking style chucking provides swift replacement of diamond bur tools, and its sure holding is best suits for curving on glass which requires delicate works.

ø1.6mm Hand Holder

Round
Shank Size **ø1.6**
1 pc./pack
Order Code
9A51001



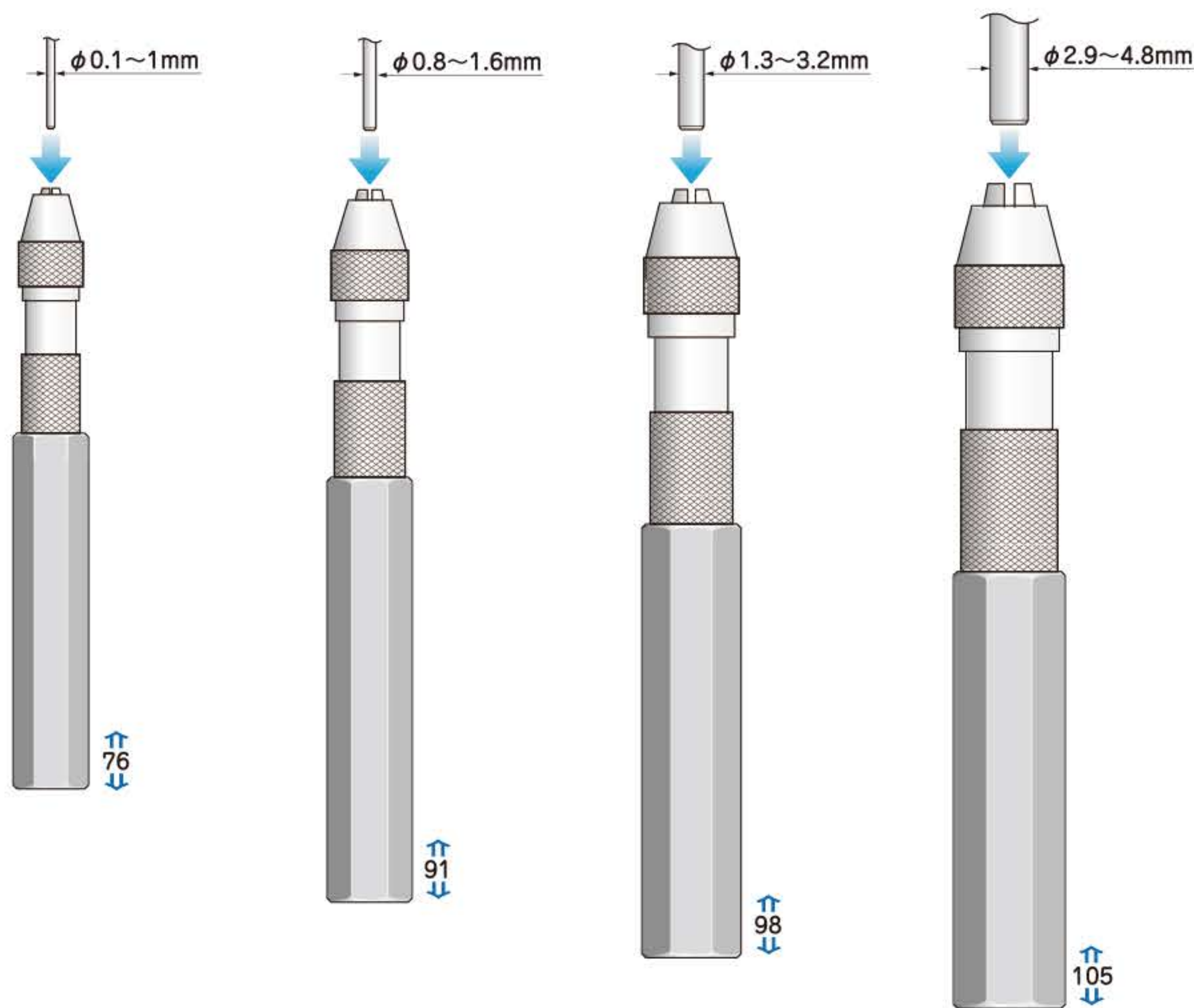
Pin Vises

- A handy pin vise to clamp $\phi 0.1\text{mm} \sim \phi 4.8\text{mm}$ tools.
- The chucking hole accepts round bars as well as square and hexagonal.
- Tools even longer than the holder's body can be held through the hollow body.

Pin Vises

Shank Size **ø0.1 ~ ø4.8**
1 pc./pack

* The images are for illustrative purposes only.
The tools sold separately.



Pin Vise	9A53001	9A53002	9A53003	9A53004
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EIKO

Hand Brushes

E-FORCE®

Ceramic Fiber Hand Brushes

- Hand tools with bundled ceramic fiber strips formed to a pencil shape. **(DO NOT use with grinders.)**
- With sharpness of ceramic fiber, superior in cutting ability at the end of bristle. Removing dirt and burrs efficiently.
- Strong fibers have excellent restorability without flattening like wire brushes. The polishing ability remains to the last.



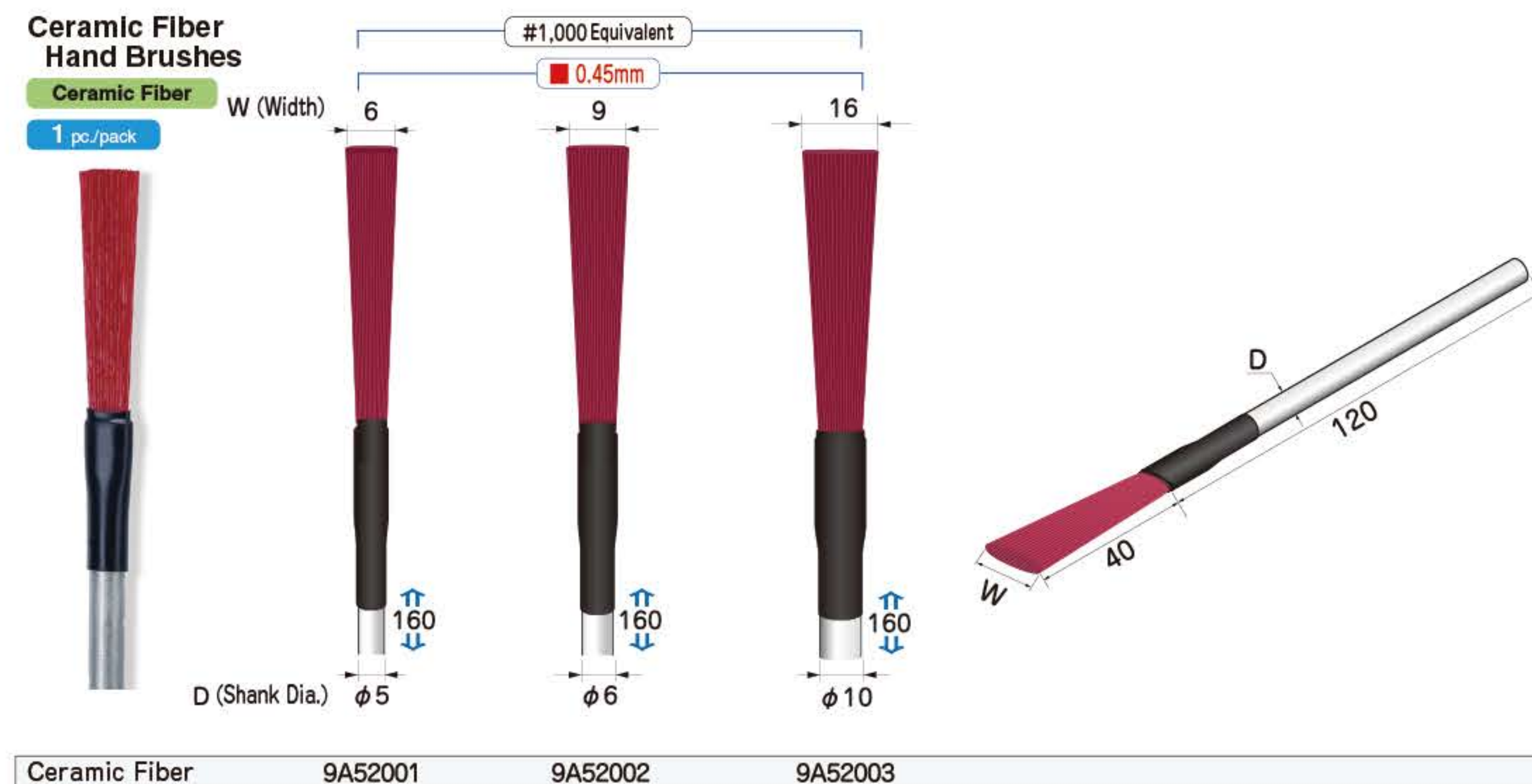
- DO NOT use with grinders.
- DO NOT force the tool in use. It may break the fibers.



A convenient **hand brush** for polishing and minute deburring with pen-like feeling.

Ceramic Fiber Hand Brushes

Ceramic Fiber
1 pc./pack



Enhancing freedom of creativity of specialists.

E-FORCE®



! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond Files

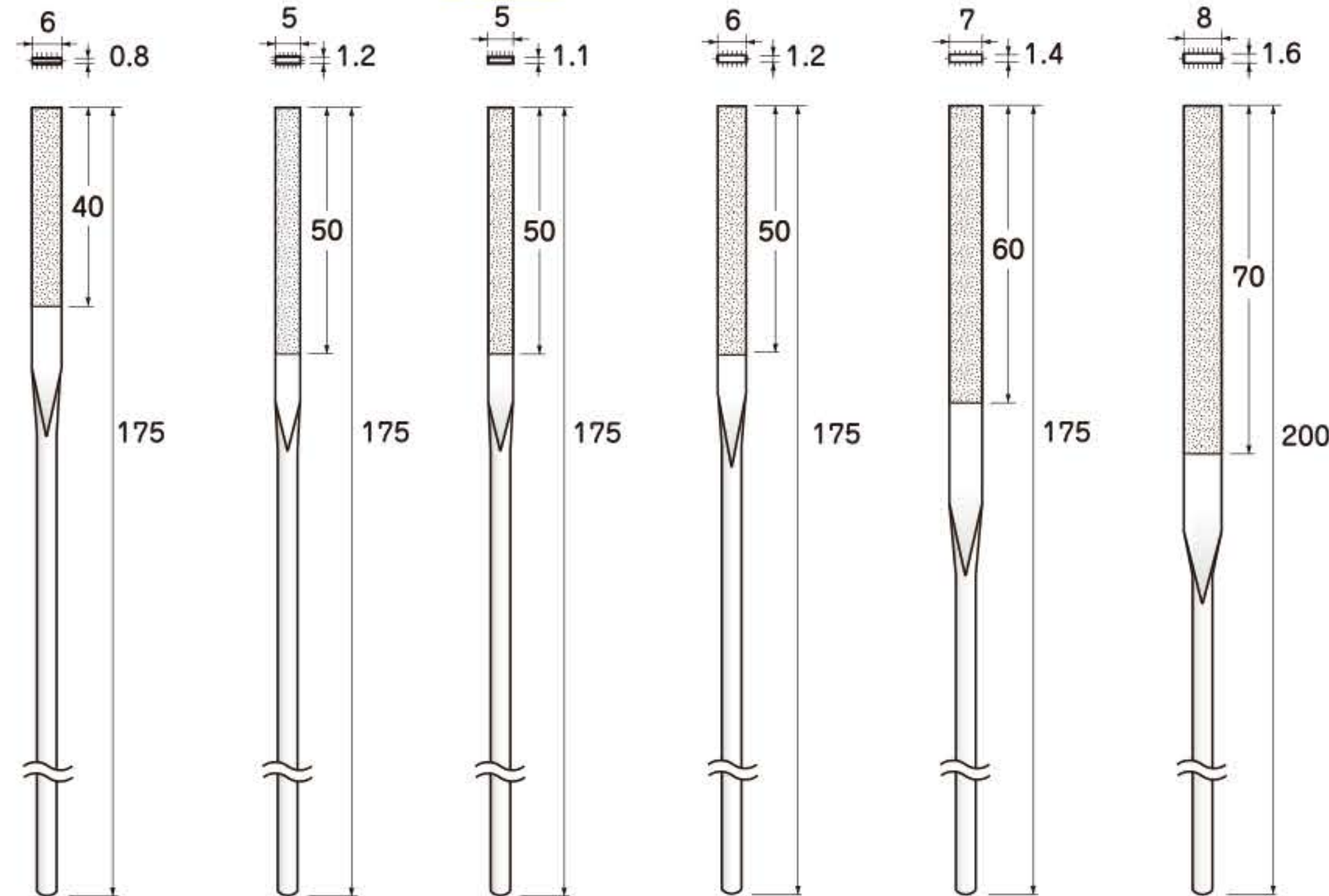
- Quality diamond grains are electroplated on easy-to-use base bars.
- Excellent cutting ability with well protruding diamond grains.
- For deburring, modifying cemented carbide, ceramic, hardened steel, and also for glass, hard rubber, and resins etc.

Electroplated Diamond Files

Flat

Single-Side

1 pc./pack



Grit Size #140	9A55001	-	-	9A55006	-	9A55009
Grit Size #170	9A55002	9A55004	9A55005	9A55007	9A55008	9A55010
Grit Size #270	9A55003	-	-	-	-	-

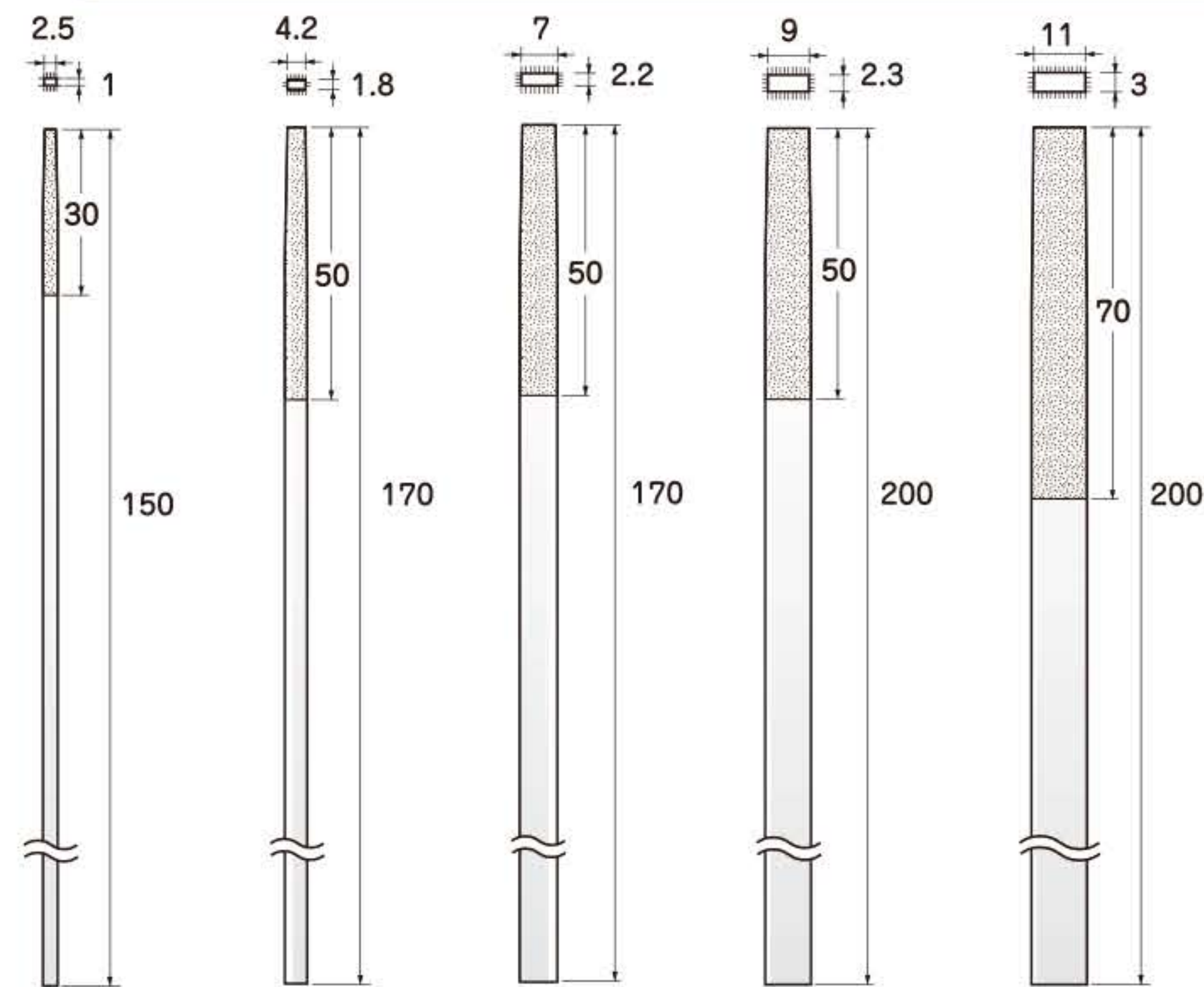
Electroplated Diamond Files

Flat (Tapered)

1 pc./pack



• Dimensions and shapes may vary slightly due to either the nature of products or measuring methods. Dimensions in section views are of the broadest part of diamond part. It may vary by each grit size.



Grit Size #140	-	9A55013	9A55014	9A55017	9A55018
Grit Size #170	9A55011	-	9A55015	-	-
Grit Size #270	9A55012	-	9A55016	-	-

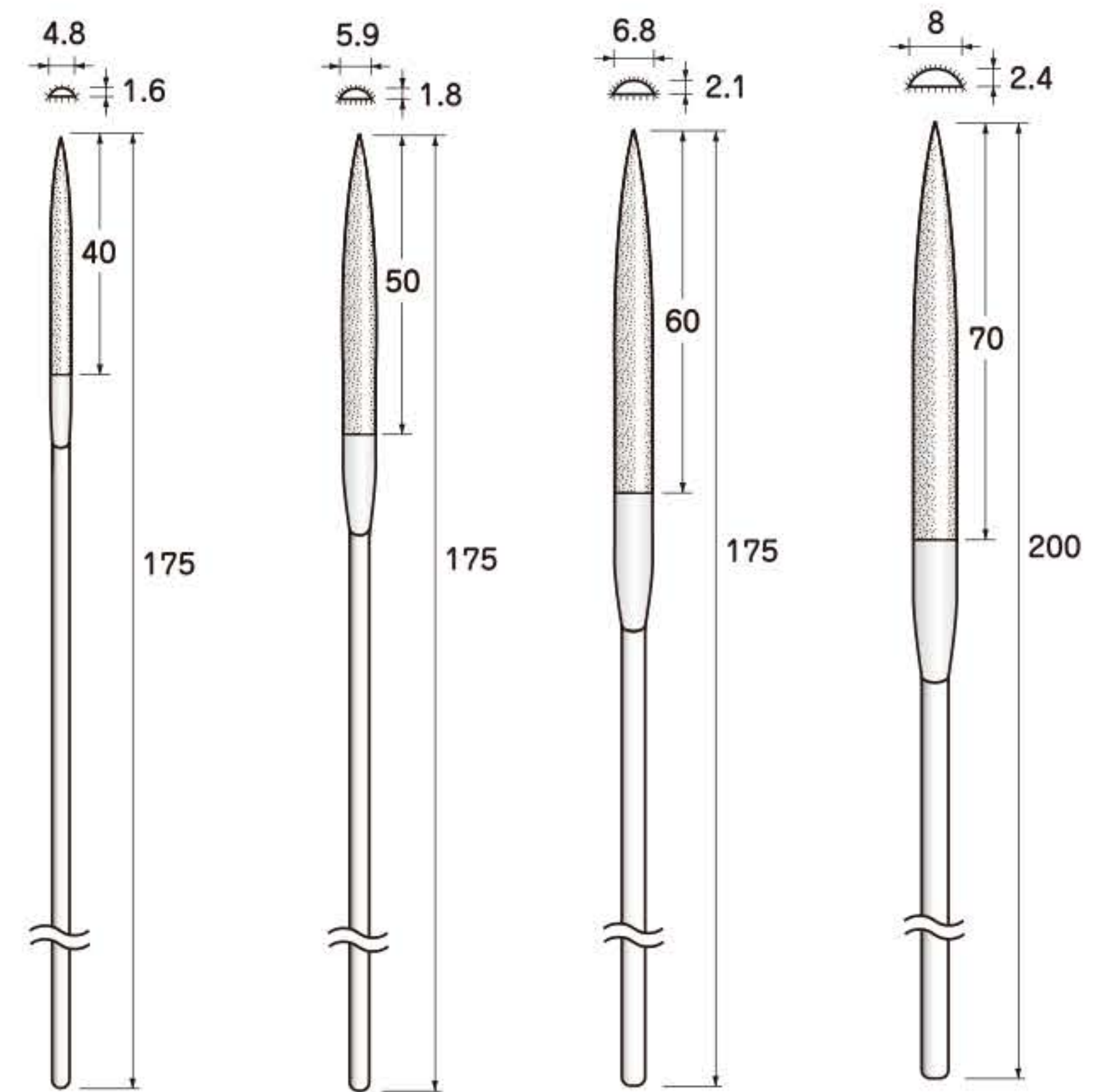
Electroplated Diamond Files

Half-Round

1 pc./pack



• Dimensions shown in the section views are those of the broadest part of diamond part. It may vary by each grit size.

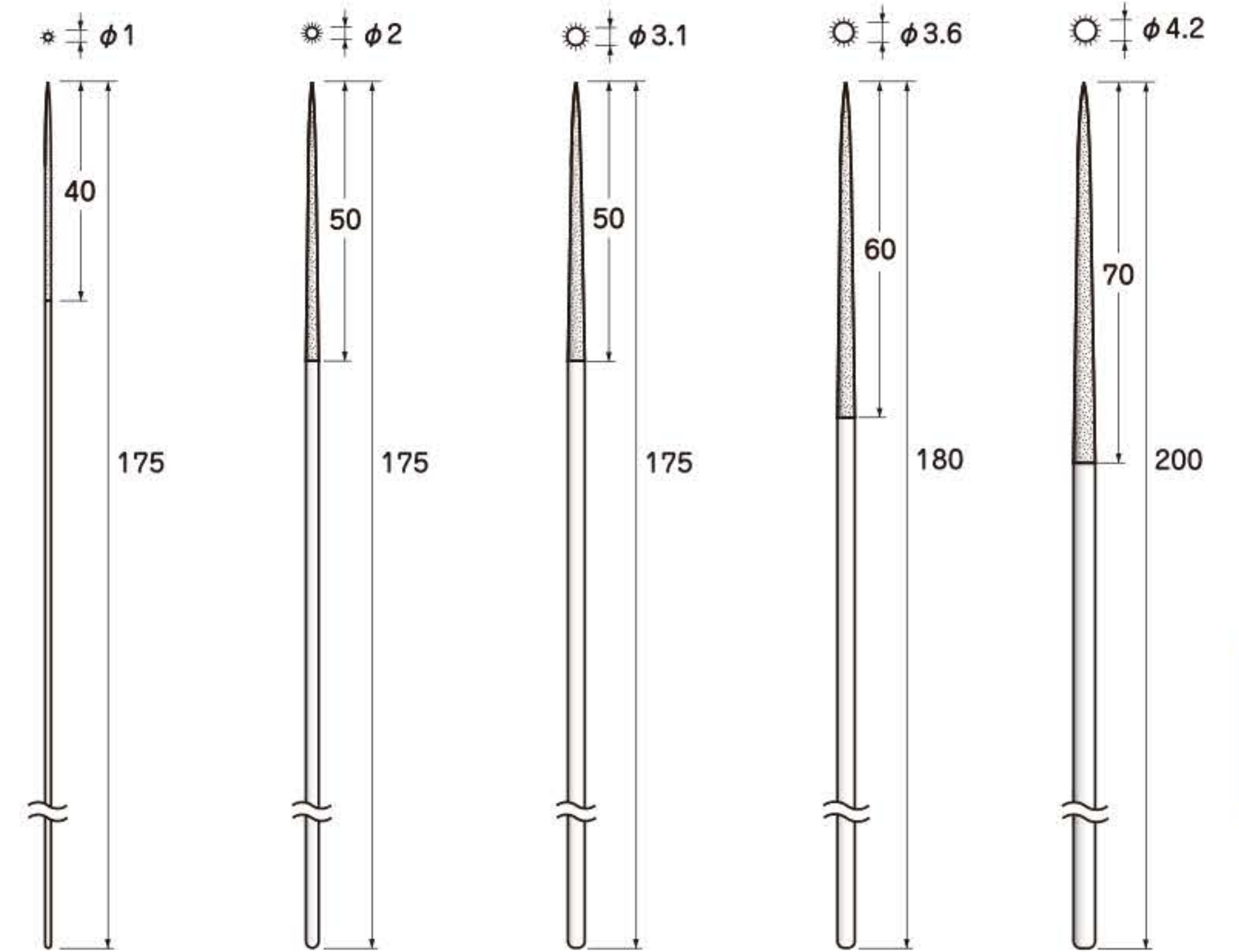


Grit Size #170	9A55019	9A55020	9A55021	9A55022
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Electroplated Diamond Files

Round

1 pc./pack



Grit Size #140	-	-	-	9A55027	-
Grit Size #170	-	9A55025	9A55026	9A55028	9A55030
Grit Size #270	9A55023	-	-	9A55029	-
Grit Size #600	9A55024	-	-	-	-

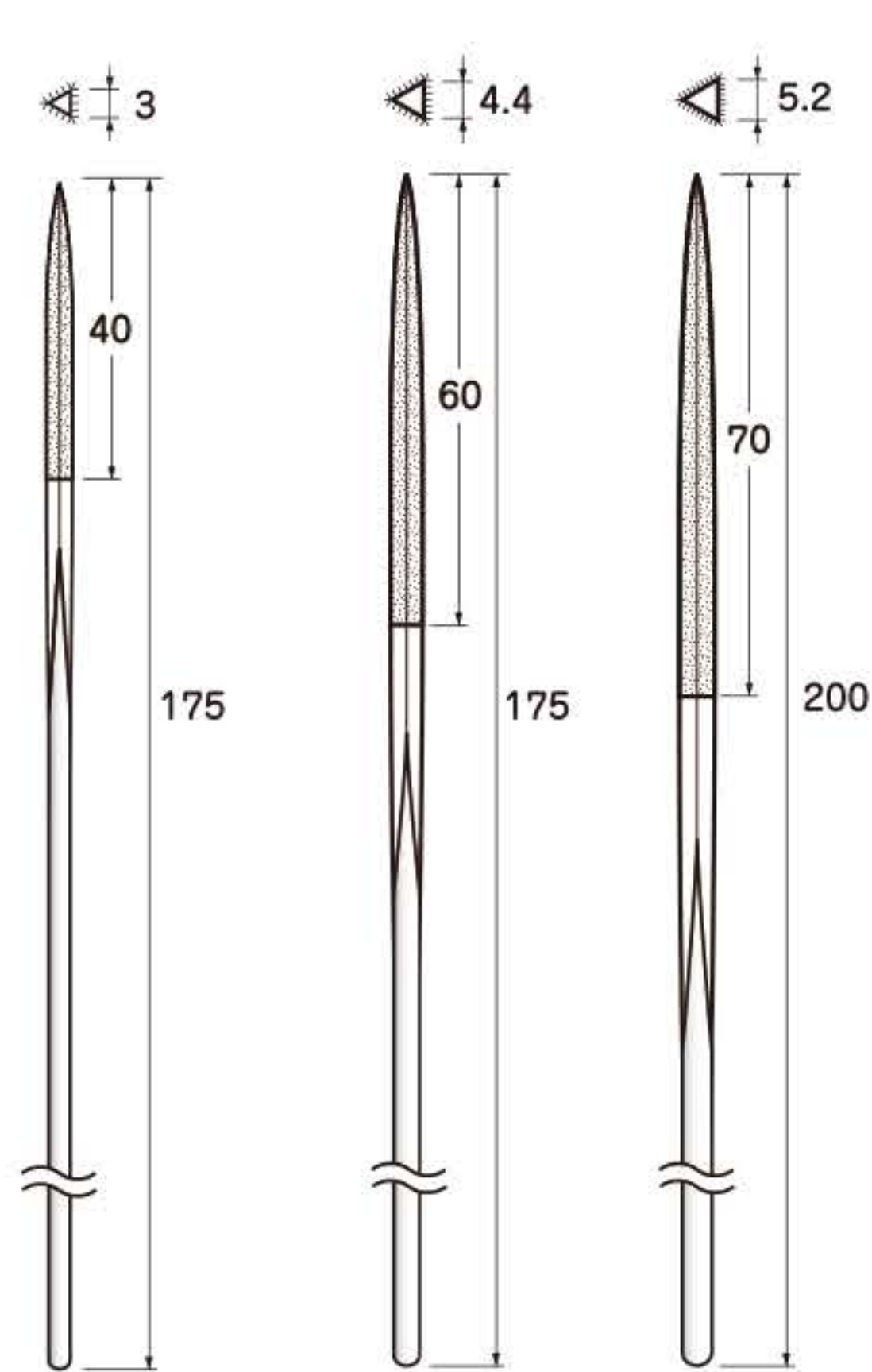


Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Electroplated Diamond Files

3-Square

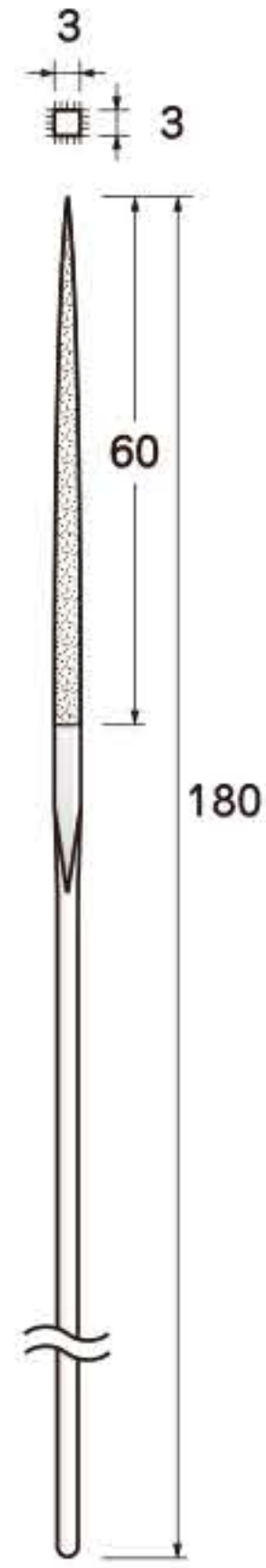
1 pc./pack



Electroplated Diamond Files

Square

1 pc./pack

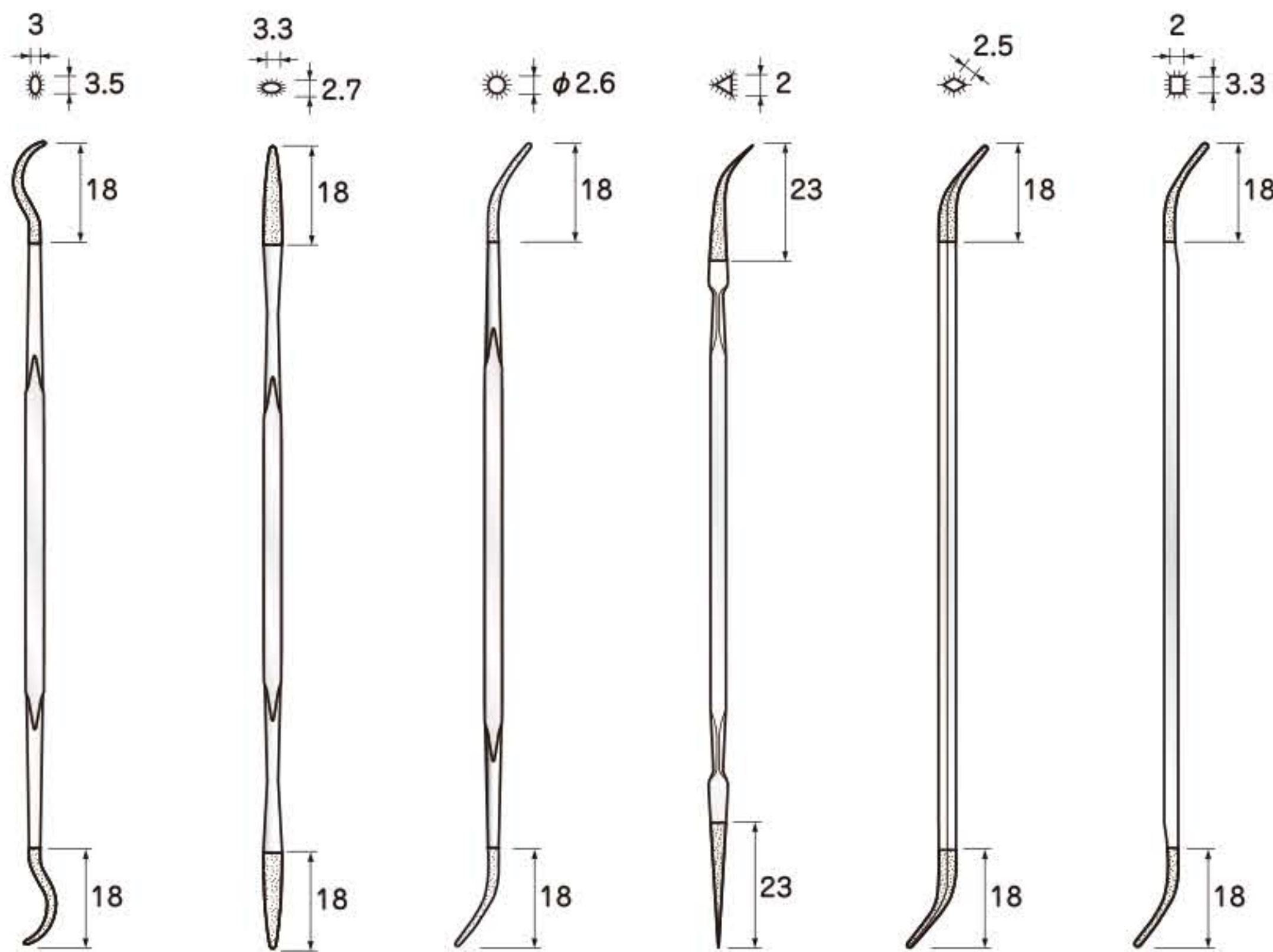


Grit Size #140	-	9A55032	-	-
Grit Size #170	9A55031	9A55033	9A55035	9A55036
Grit Size #270	-	9A55034	-	-

Electroplated Diamond Files

Riffler files

1 pc./pack



Oval (Curved) Oval Round 3-Square Slitting Rectangular

Grit Size #170	9A55037	9A55038	9A55039	9A55040	9A55041	9A55042
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Electroplated Diamond Files (Needle Ends)

- Quality diamond grains are electroplated on flexible and strong special steel.
- Best suitable for finish grinding in narrow grooves, corners, and holes etc.
- Both round and square files can be used with commercially available mechanical pencils (0.5mm lead dia.).
- Both ends can be used. Cost-effective.

- CAUTION**
- Both ends of the tool are sharp and pointed. Handle the tool with care for safety.
 - Install the tool so that protruding amount of file becomes 20mm or less. If used with longer amount, the tool may be bent or break.
 - Use with mechanical pencils with collet which consist of three parts.



Electroplated Diamond Files

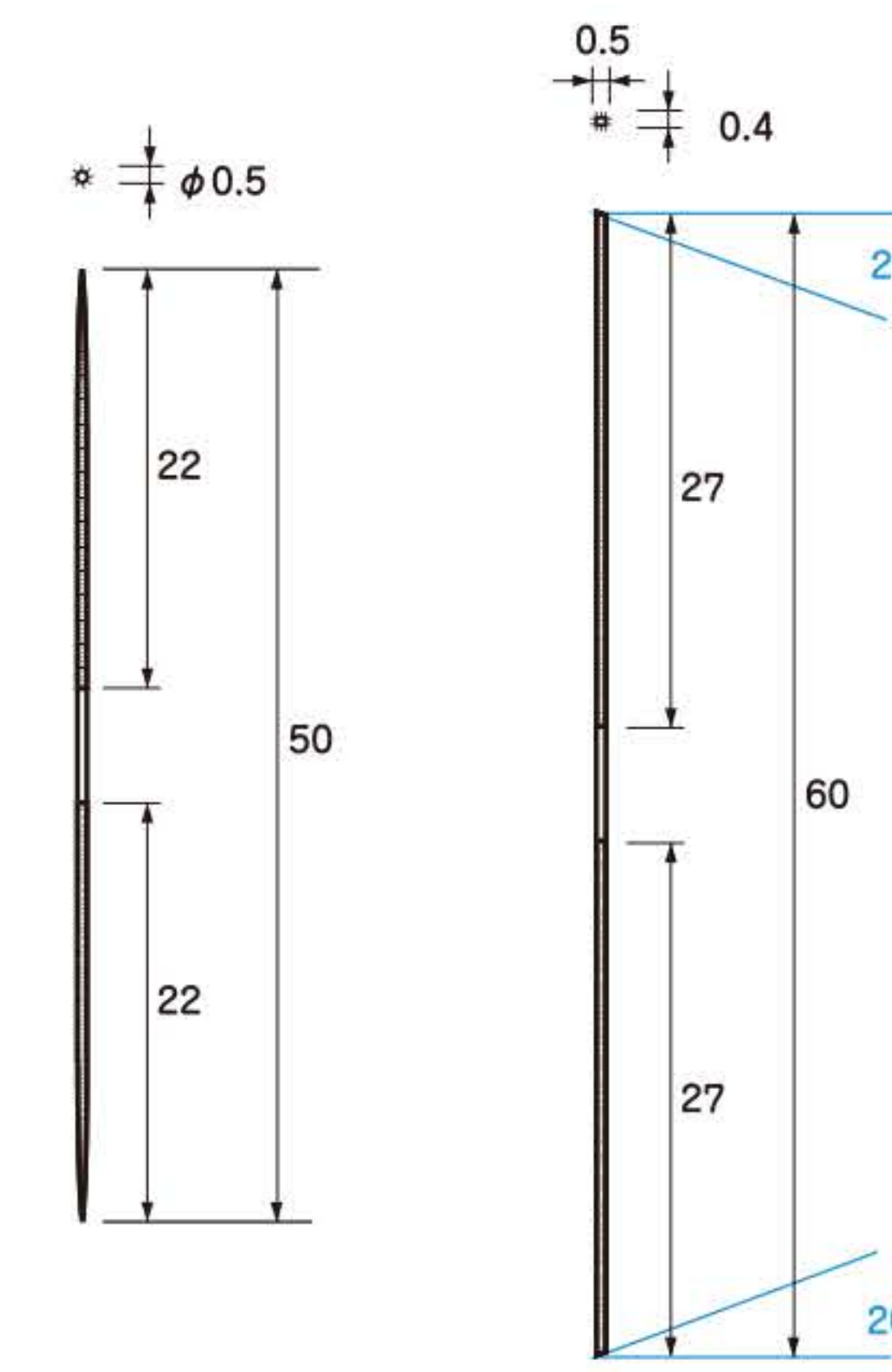
Illustrations are shown in enlarged size.

Round

1 pc./pack

Rectangular

1 pc./pack



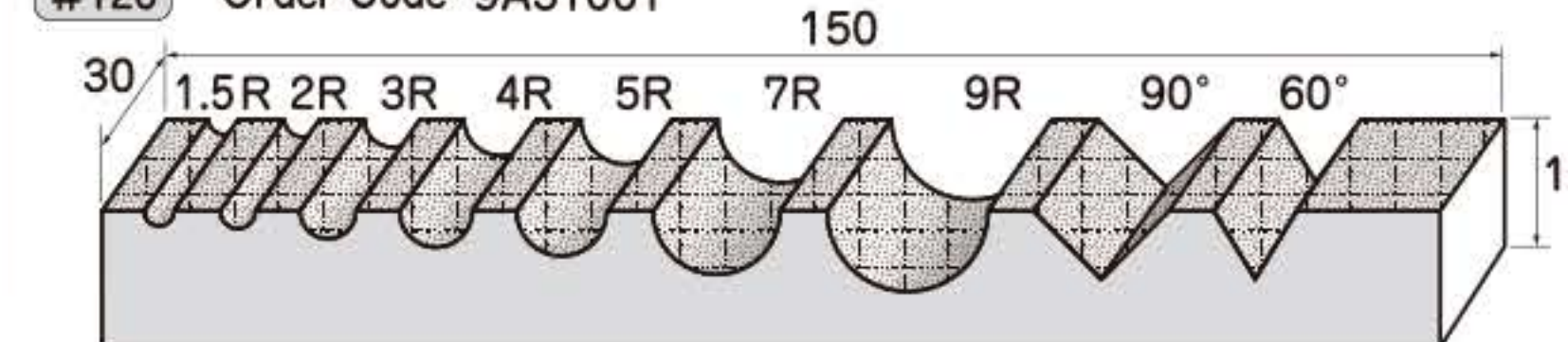
Grit Size #600	9A55043	9A55044
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Electroplated Diamond Dressers

- For truing and dressing grinding stones, abrasive rubber points etc.
- Round and V-shaped grooves for truing.
- An Integrated type of three grit sizes is also available.
- Bulky heavy body is stable and economical.

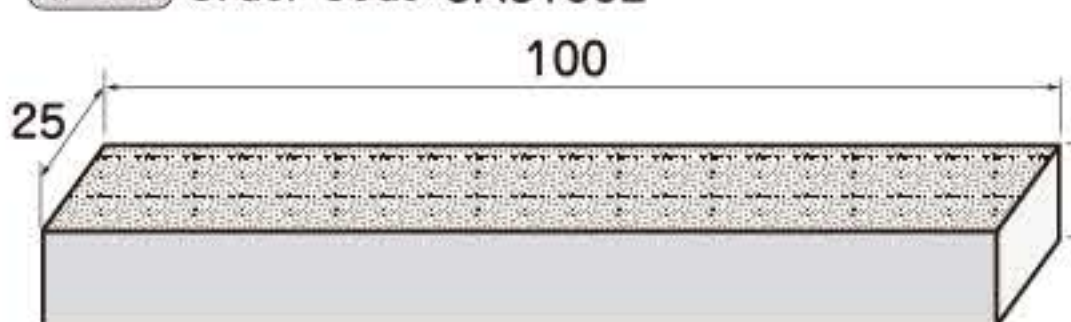
R · V combination 1 pc./pack

#120 Order Code 9A31001



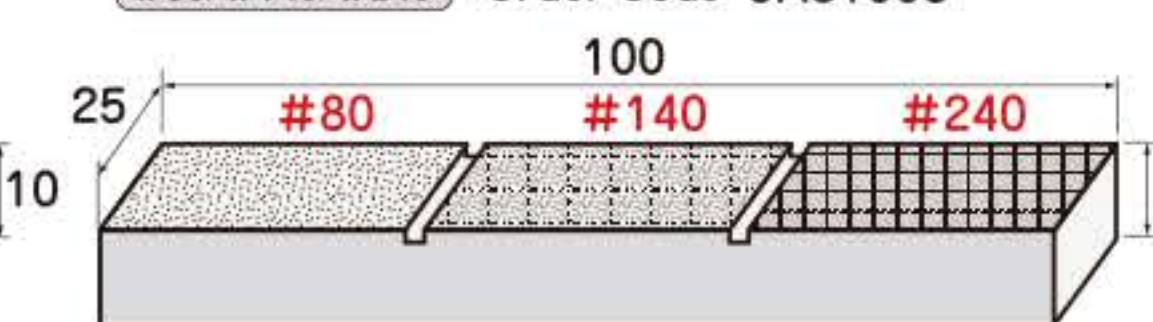
Flat 1 pc./pack

#120 Order Code 9A31002



Flat with 3 Grit Sizes 1 pc./pack

#80/#140/#240 Order Code 9A31003

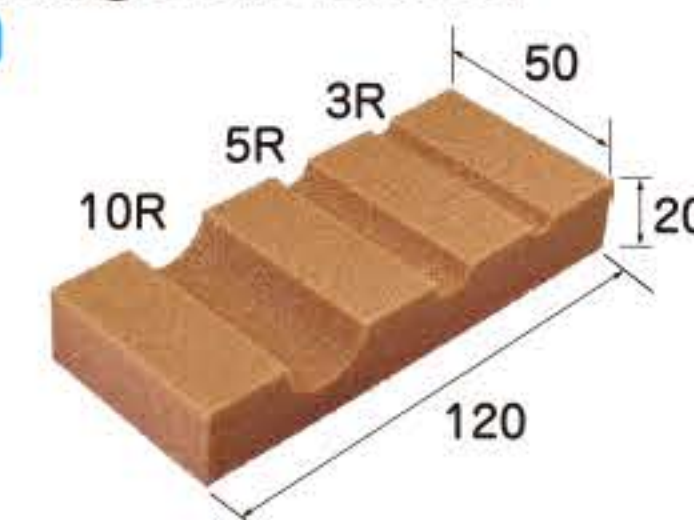


Brick Grinding Stone Dresser

- A grindstone dresser with round-grooves for dressing and truing grindstones and rubber points.
- High cost performing dresser sintered to ideal hardness and grit size for dressing and truing.

Brick Grinding Stone Dresser

1 pc./pack



C grain Grit Size #60

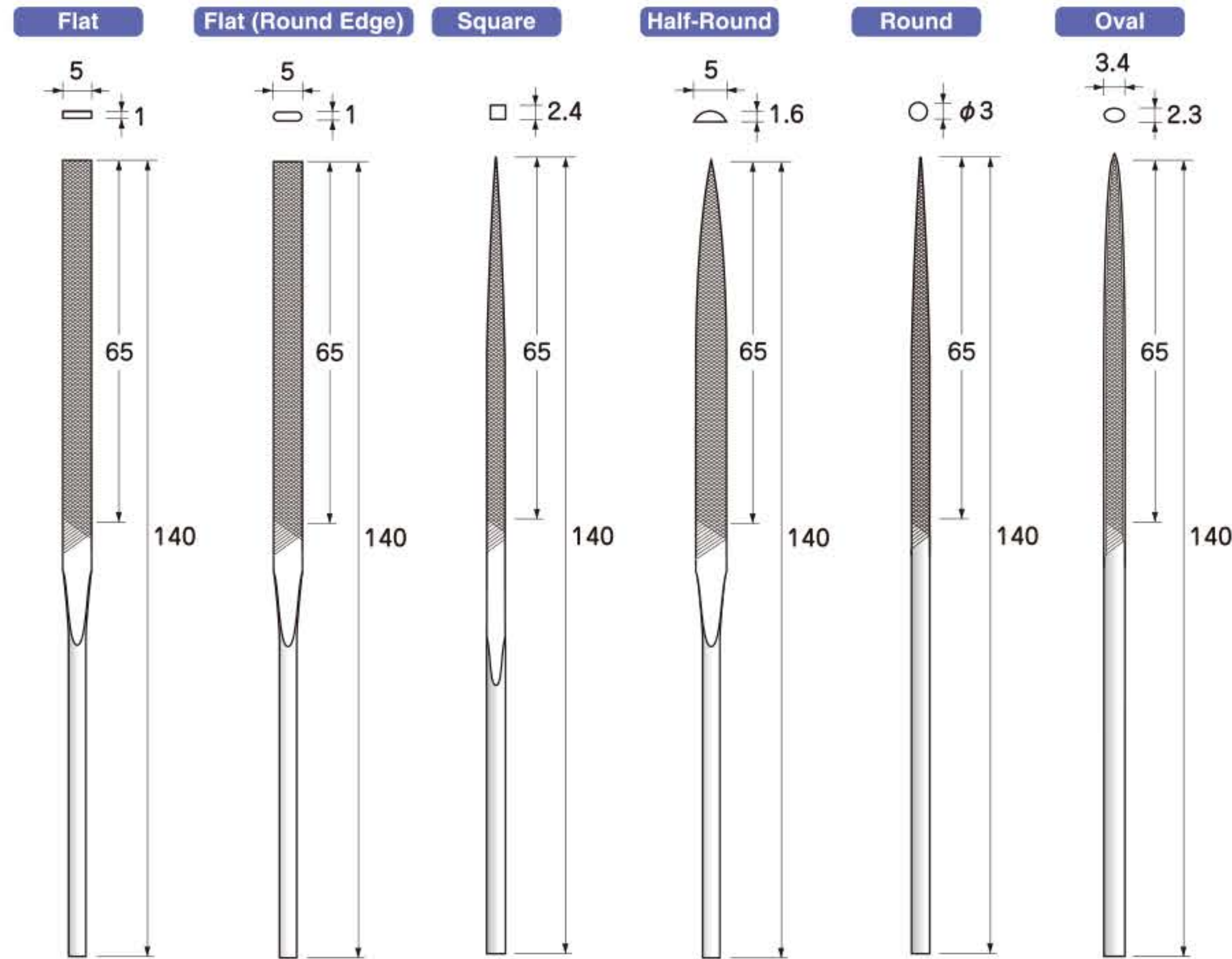
WA grain Grit Size #60

9A32001	9A32002
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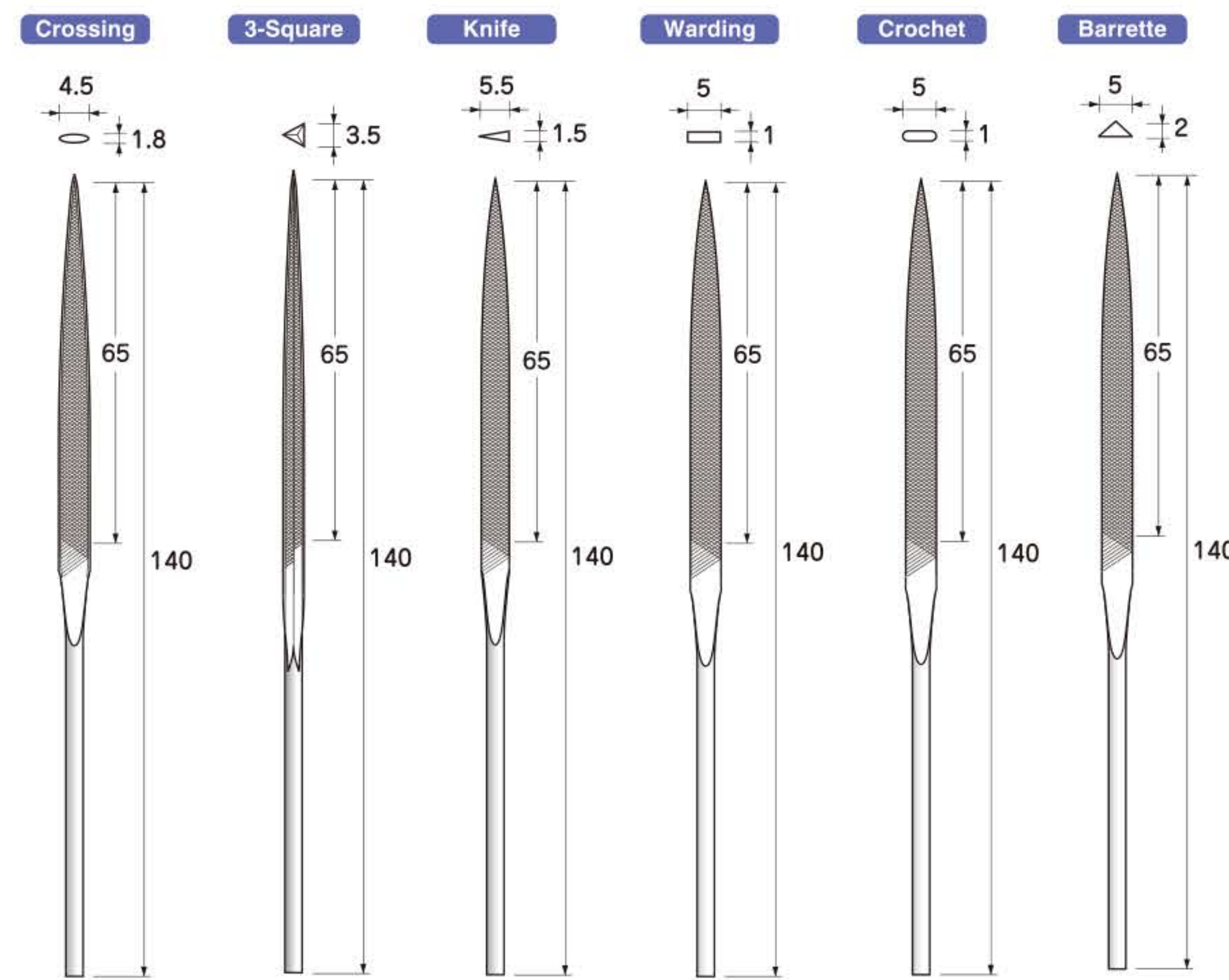
Precision Files (Fine)

3 pcs./pack

CAUTION Dimensions in section views are those of the broadest part of file part. It may vary by each production lot.



Fine 9A56001 9A56002 9A56003 9A56004 9A56005 9A56006



Fine 9A56007 9A56008 9A56009 9A56010 9A56011 9A56012

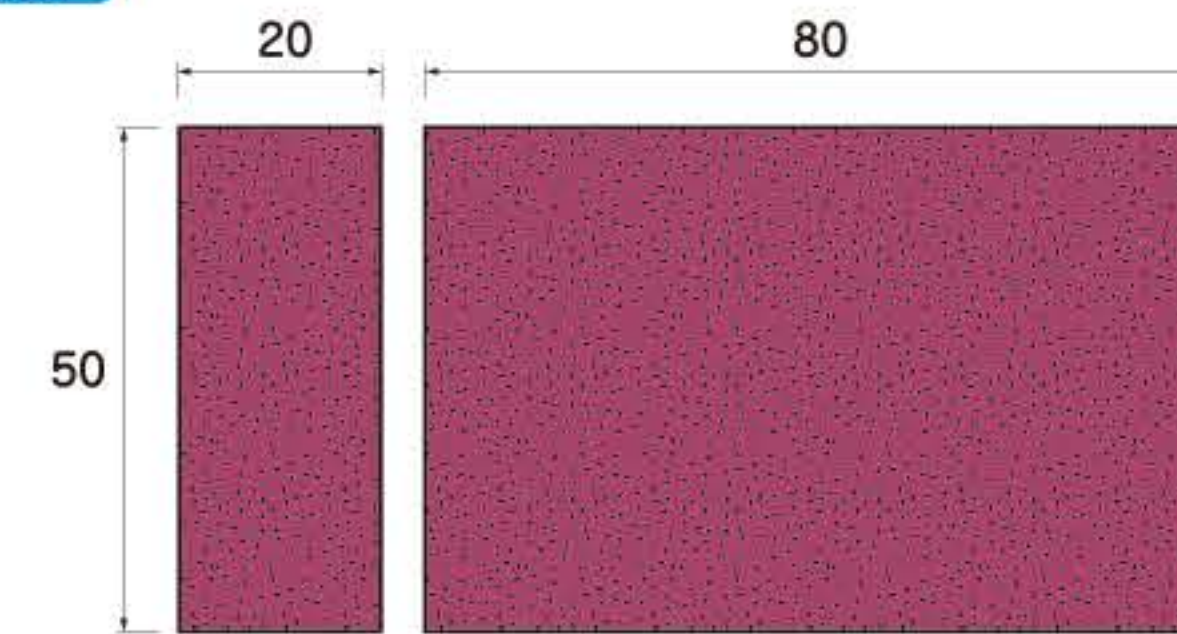
Rubber Polishers

- Constantly bonded grains by spring effect of soft and elastic bonding rubber along with the exquisite frangibility provide constantly polished surface without deep scratches even in coarse grit sizes.
- Can be cut to desired sizes with a cutter knife. Attach to a holder etc. to use.
- Best suitable for cleaning on stainless, aluminum, copper etc. and also for hairline finish and deburring etc.
- For dry polishing, and also for wet polishing with water or abrasive oil for superior finish surface.



Rubber Polishers

1 pc./pack



Colored by grit sizes for easy identification.

Color	Grit Size	Order Code
Wine	#36	9A41001
Blue	#60	9A41002
Grey	#120	9A41003
Brown	#240	9A41004

Polishing Rubber Sheets

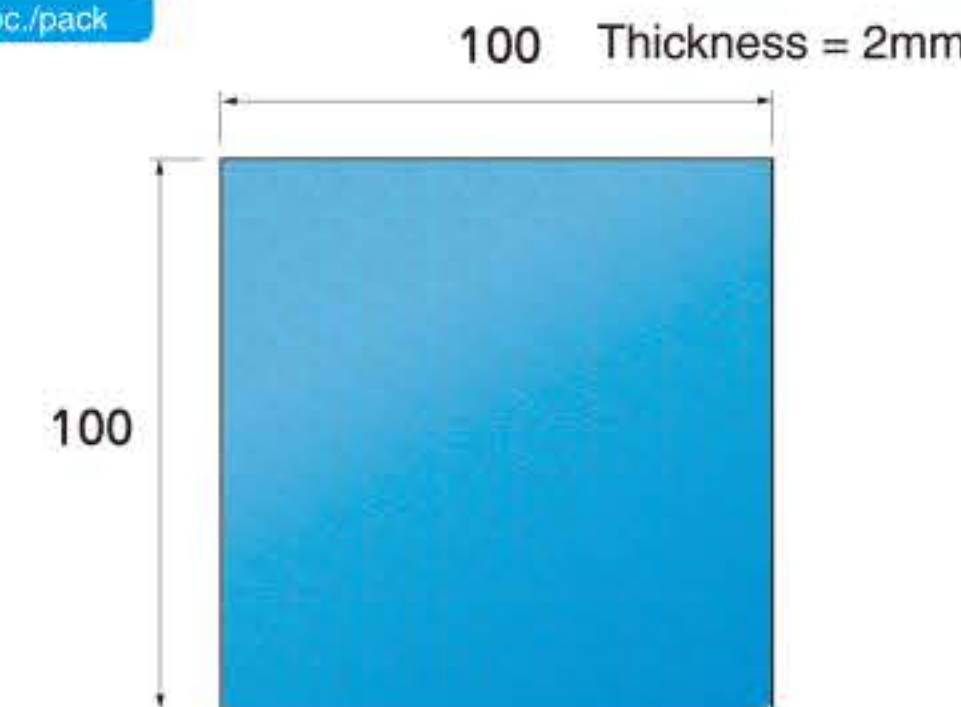
- Abrasive rubber points (4A12011~4A12040) in sheet form with self adhesive backing.
- Can be cut to desired sizes with a cutter knife. Attach to a holder etc. to use.
- Elasticity of rubber with soft feeling of use provides a good smooth finish.
- Superior finish by one or two grades to the indicated grit size can be obtained. Ideal for medium finish polishing of jewels with a little deformation of workpiece's original shape.



Polishing Rubber Sheets

Polishing Type

1 pc./pack



Color	Grit Size	Order Code
Grey	#46	9A42001
Pink	#80	9A42002
Blue	#120	9A42003
Green	#220	9A42004
Violet	#320	9A42005
Light Brown	#500	9A42006

Self Adhesive Backed
(Thickness = 2mm)



! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Rubber Disc Holders

•Special rubber disc holders for grinding discs. Available in 3 sizes.

Rubber Disc Holders

Shank Size $\phi 3.0$
5 pcs./pack



Angle90
Model Code : DAG90
Order Code : 1037



Angle60
Model Code : DAG60
Order Code : 1038



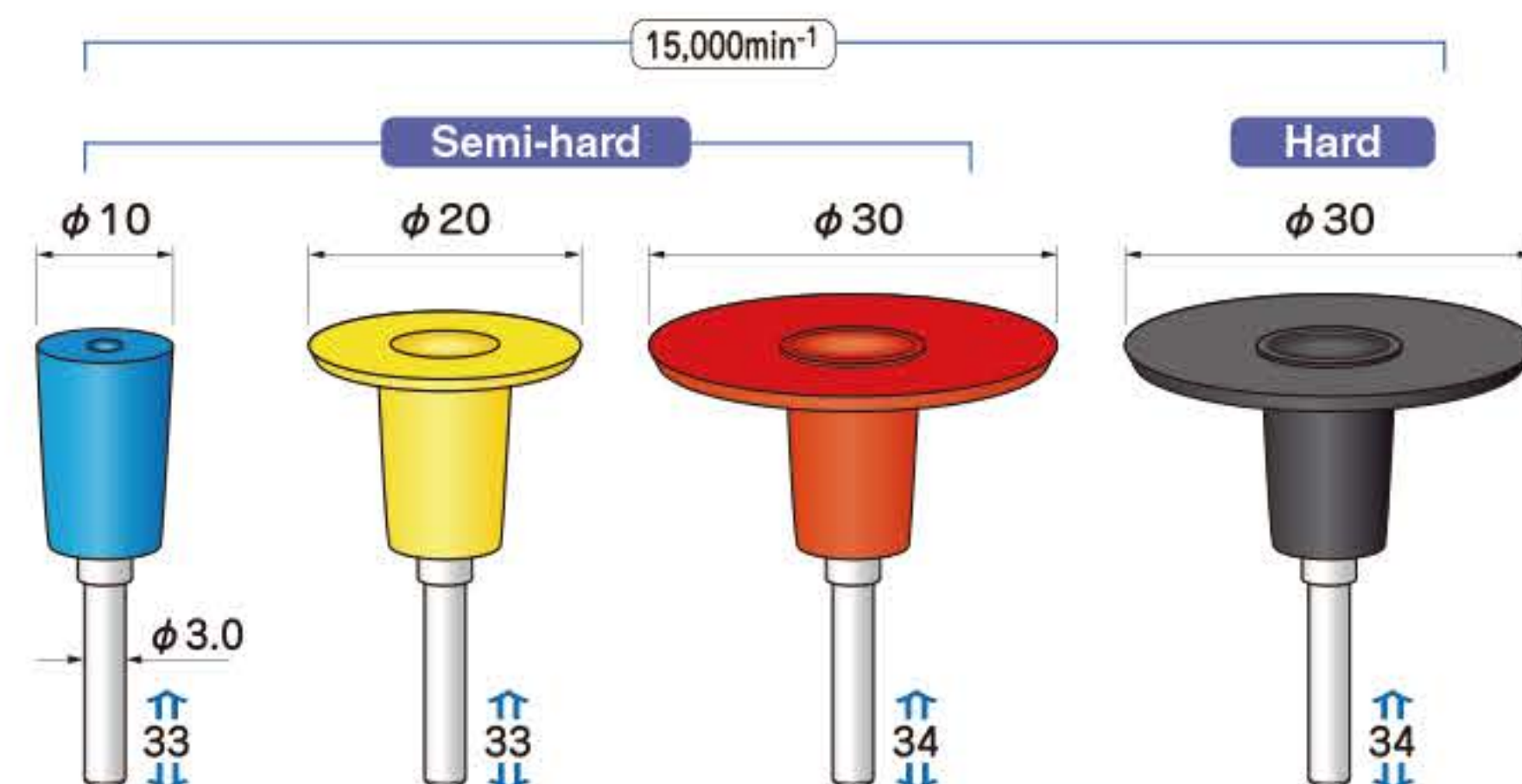
Rubber Disc Holder	9012100	9012101	9012102
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Rainbow Plastic Disc Holders

•Seven rainbow colored holders for easy recognition of grit sizes of attached disc.
•Hard type with little elasticity is handy for modifying workpiece.

Rainbow Plastic Disc Holders

Shank Size $\phi 3.0$
3 pcs./pack



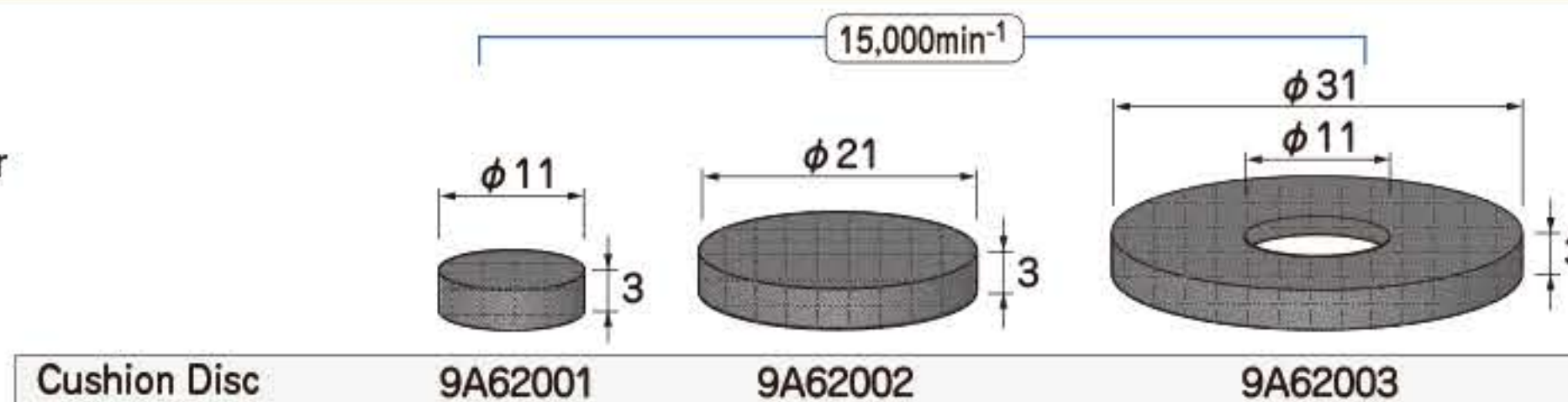
Red	9A61001	9A61009	9A61017	Black	9A61025
Blue	9A61002	9A61010	9A61018		
Yellow	9A61003	9A61011	9A61019		
Pink	9A61004	9A61012	9A61020		
Orange	9A61005	9A61013	9A61021		
Green	9A61006	9A61014	9A61022		
White	9A61007	9A61015	9A61023		
Rainbow Set (Contains 1 of each, Set of 7)	9A61008	9A61016	9A61024		

*Hard type is only available in black.

Cushion Discs

30 pcs./pack Self Adhesive Backed

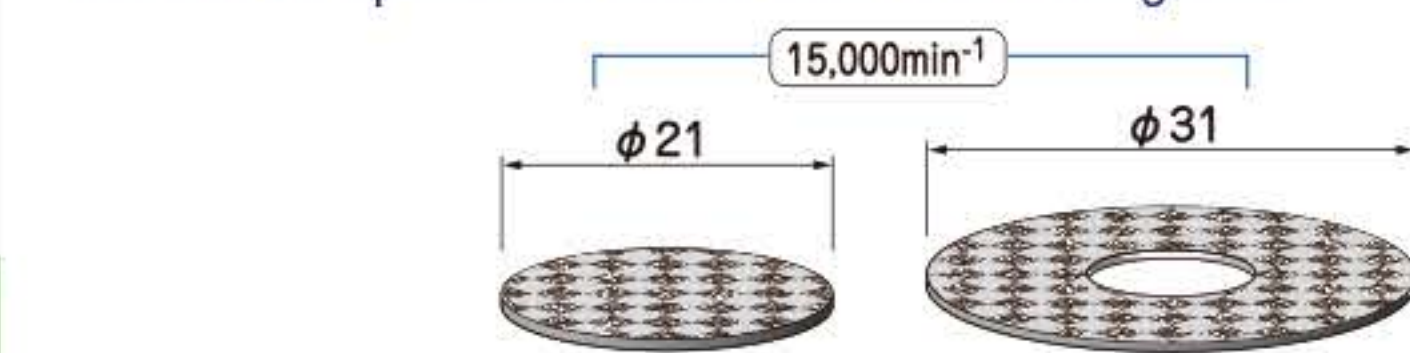
•By attaching the cushion disc between the holder and abrasive disc, cushioning effect is obtained providing less biting.
•Can be also used as a polishing tool by applying abrasive agent directly on the surface.



Diamond Cloth Discs

3 pcs./pack •Discs with resin coated diamonds.
•Best suitable for polishing glass, stone, cloisonne ware etc.

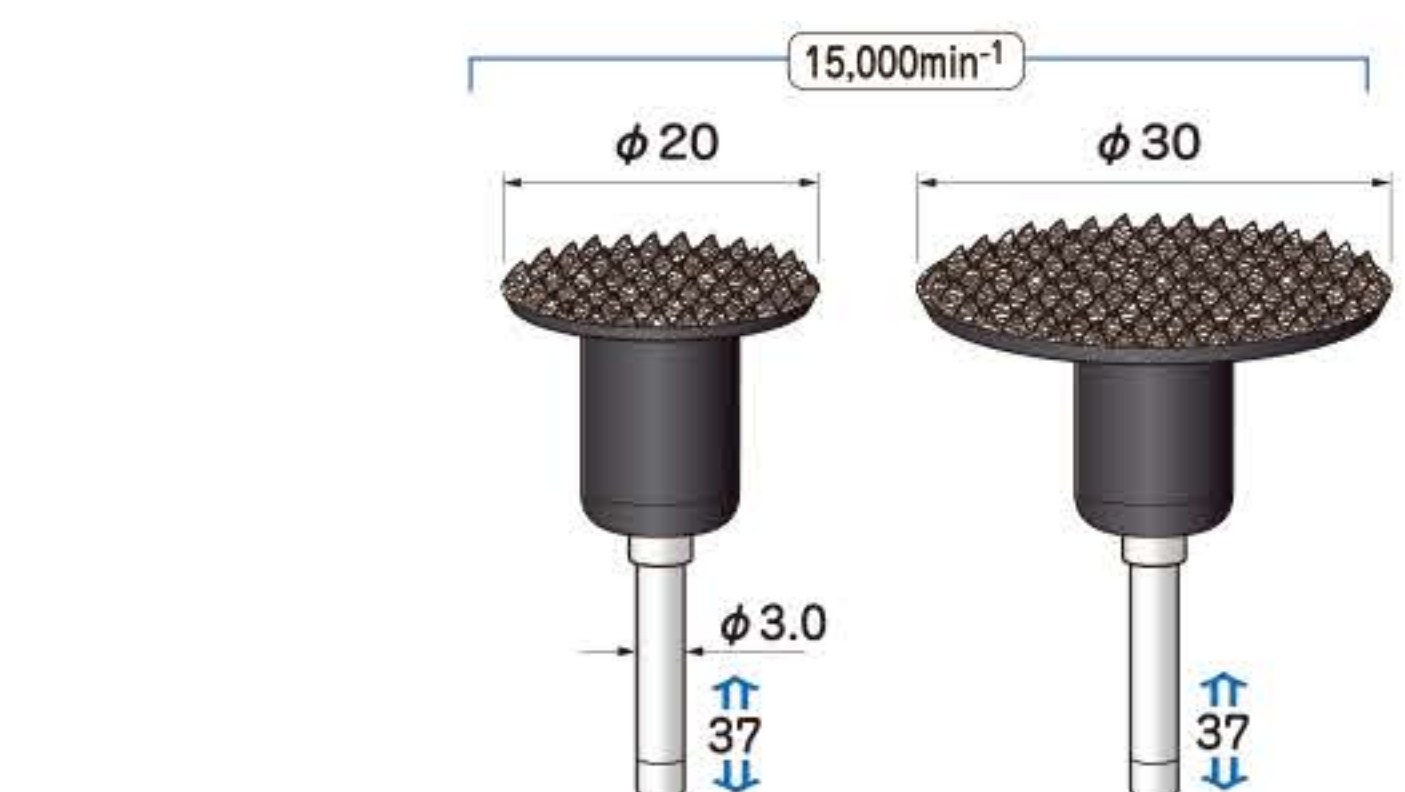
*Diamond Cloth Discs are attached with Velcro on the back. Use with the Special Soft Rubber Disc Holders designated.



Grit Size #60	9A66001	9A66008
Grit Size #100	9A66002	9A66009
Grit Size #300	9A66003	9A66010
Grit Size #600	9A66004	9A66011
Grit Size #1000	9A66005	9A66012
Grit Size #2000	9A66006	9A66013
Grit Size #4000	9A66007	9A66014

Special Soft Rubber Disc Holders

Shank Size $\phi 3.0$
3 pcs./pack •Exclusive rubber pads for Diamond Cloth Discs. Tools can be replaced quickly and repeatedly with Velcro attachment.



Special Soft Rubber Disc Holder	9A61026	9A61027
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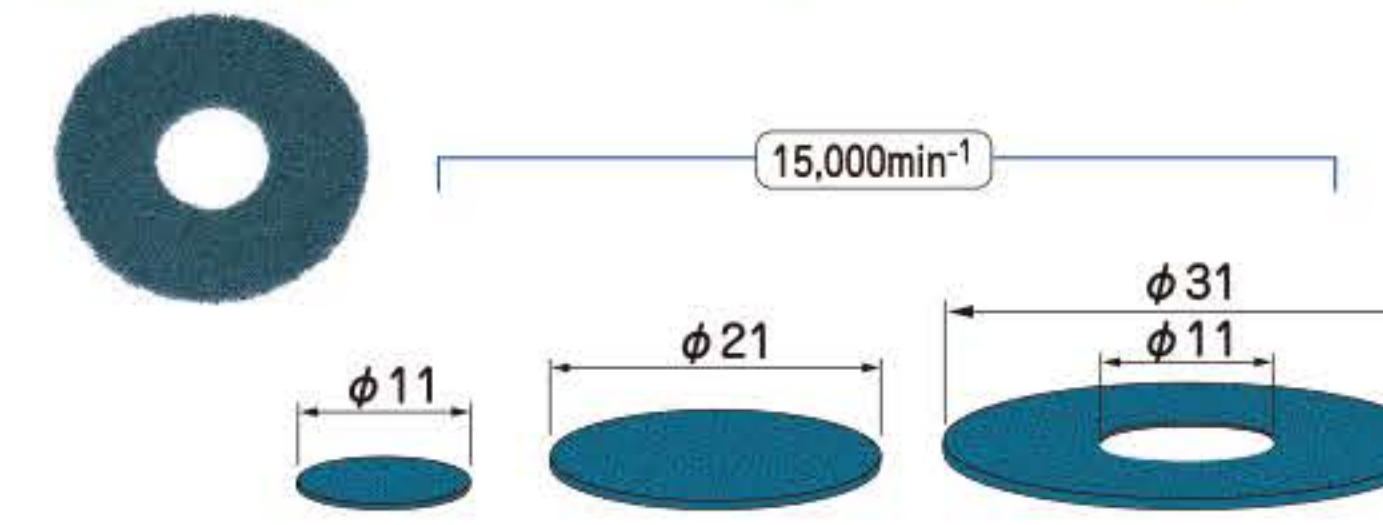
Zirconia Discs

•Discs with specially coated zirconia grains to provide superior cutting and durability. Suitable for grinding easy to clog materials such as aluminum, brass, stainless etc. as well as standard steel.

Zirconia Discs

100 pcs./pack Self Adhesive Backed

*Set of 40 contains 10 of each grit size.



#60	9022100	9022200	9022300
#80	9022101	9022201	9022301
#120	9022102	9022202	9022302
#150	9A64001	9A64003	9A64005
Set of 40	9A64002	9A64004	9A64006

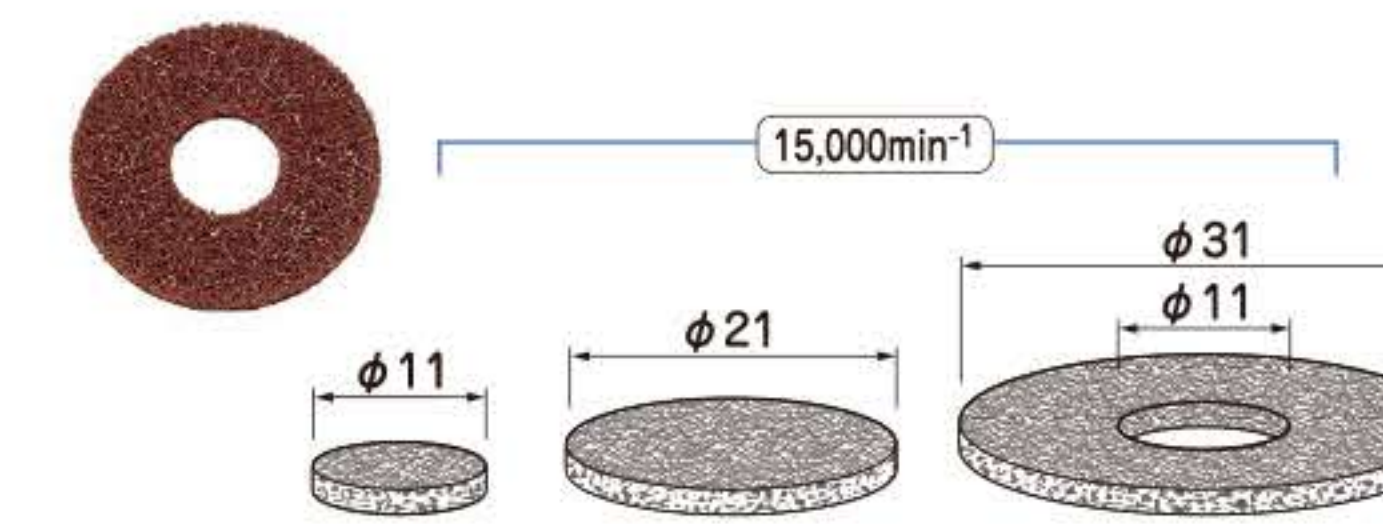
Sponge Discs

•Elastic special fiber provides constant finishing surface quickly without biting. Performs well in grinding ferrous or non-ferrous materials with less clogging and chips

Sponge Discs

10 pcs./pack Self Adhesive Backed

*Set of 12 contains 3 of each grit size.



#240	9A65001	9A65006	9A65011
#400	9A65002	9A65007	9A65012
#800	9A65003	9A65008	9A65013
#1200	9A65004	9A65009	9A65014
Set of 12	9A65005	9A65010	9A65015

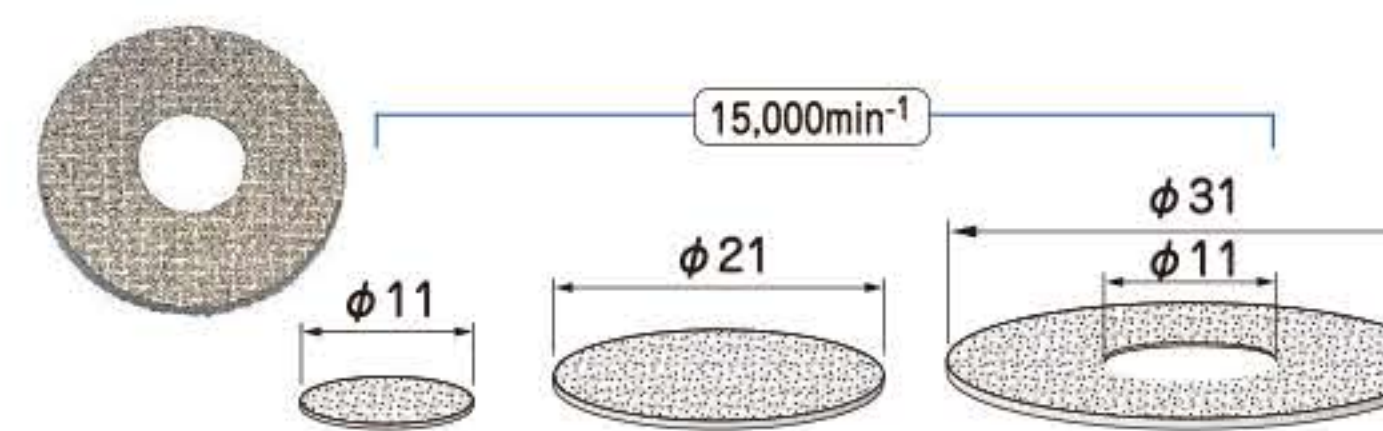
Diamond Cloth Discs

•Diamond grains are specially electroplated on cloth sheets. Works gently on workpiece surface, satisfactory finish with less biting is obtained.

Diamond Cloth Discs

Electroplated Soft Type Self Adhesive Backed

1 pc./pack



#100	9A66015	9A66021	9A66027
#180	9A66016	9A66022	9A66028
#240	9A66017	9A66023	9A66029
#320	9A66018	9A66024	9A66030
#400	9A66019	9A66025	9A66031
#800	9A66020	9A66026	9A66032

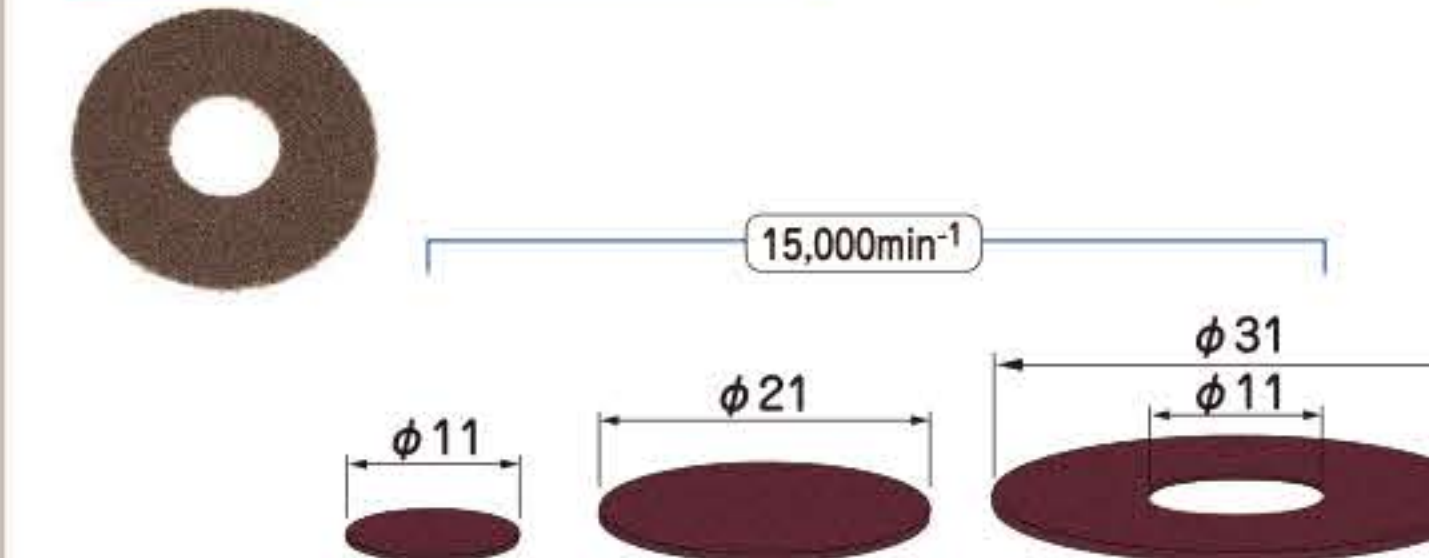
Sanding Cloth Discs

•Standard discs widely applied for standard steel, wood, and also resin. Cloth base with self adhesive backing.

Sanding Cloth Discs

100 pcs./pack Self Adhesive Backed

*Set of 90 contains 10 of each grit size.



#60	9021100	9021200	9021300
#80	9021101	9021201	9021301
#120	9021102	9021202	9021302
#180	9021103	9021203	9021303
#240	9021104	9021204	9021304
#320	9021105	9021205	9021305
#400	9021106	9021206	9021306
#600	9021107	9021207	9021307
#800	9A63001	9A63003	9A63005
Set of 90	9A63002	9A63004	9A63006

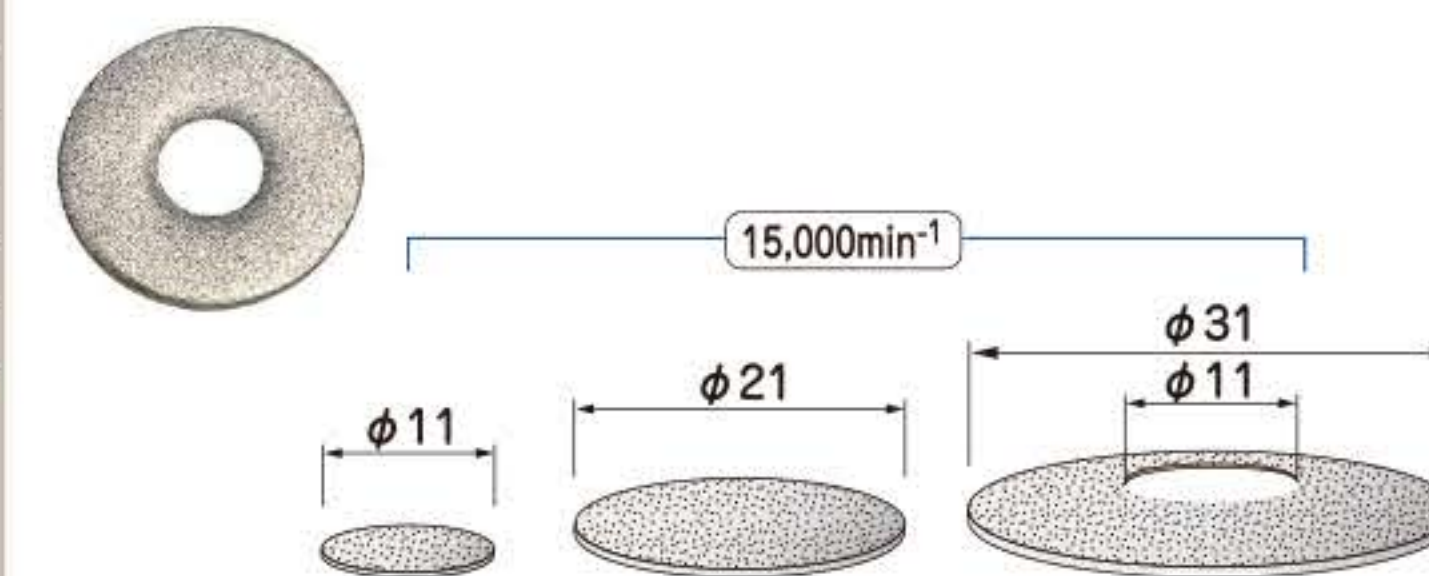
Electroplated Diamond Metal Discs

•Thin copper discs with electroplated diamonds. Excellent cutting ability with well protruding diamond grains.

Electroplated Diamond Metal Discs

Electroplated Hard Type Self Adhesive Backed

1 pc./pack



#100	9023100	9023200	9023300
#140	9A67001	9A67006	9A67011
#220	9A67002	9A67007	9A67012
#240	9023101	9023201	9023301
#320	9A67003	9A67008	9A67013
#400	9023102	9023202	9023302
#600	9A67004	9A67009	9A67014
#800	9A67005	9A67010	9A67015



Felt Discs

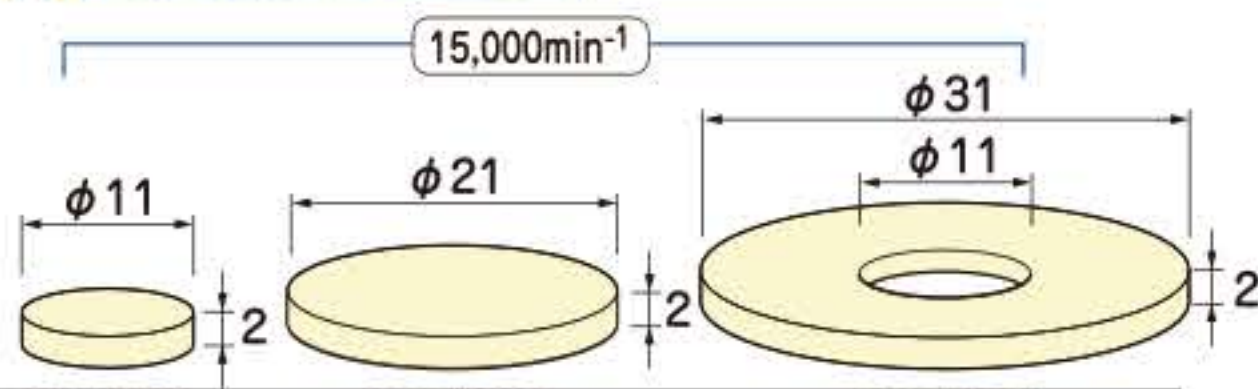
- Specially selected fine wool for polishing is densely compressed.
- Use with abrasive agents.

Cushioned Felt Discs

- Shock absorbing disc is layered with felt disc.
- Best suitable for polishing on soft workpiece with very soft working feel.

Felt Discs

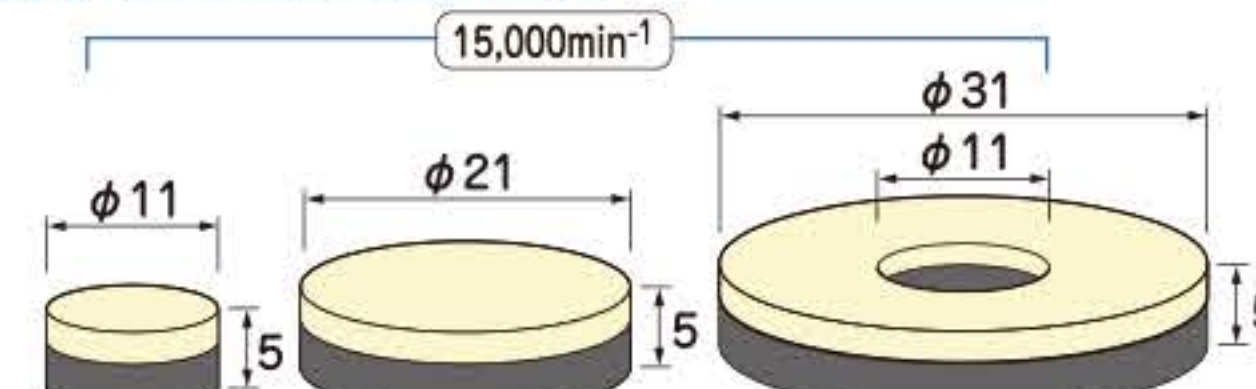
20 pcs./pack Self Adhesive Backed



Hard	9024100	9024200	9024300
Soft	9024101	9024201	9024301

Cushioned Felt Discs

20 pcs./pack Self Adhesive Backed



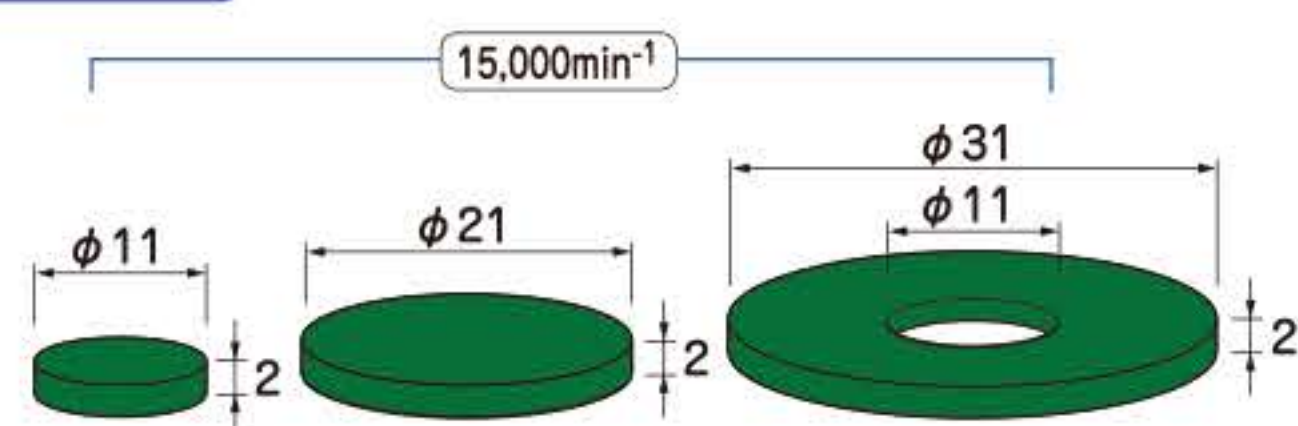
Cushioned Felt	9A68001	9A68002	9A68003
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Green Felt Discs

- Chromium oxide is impregnated to felt discs as abrasive agent.
- Also use for varnishing metals by itself.

Green Felt Discs

20 pcs./pack Self Adhesive Backed



Chromium Oxide Impregnated	9A68004	9A68005	9A68006
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Angle Abrasive Rubber Discs

- Pad shaped unique abrasive rubbers can be used as grindstones by themselves.
- Excellently durable, cost performing grinding tools.
- Available in grinding, micro-grinding, and polishing type.
- Colored by grit sizes for easy identification to avoid mistakes of processing order.



Angle Abrasive Rubber Discs

Shank Size $\phi 3.0$
3 pcs./pack



#80 Red Ring	9A69001	9A69003	#80 Pink	9A69005	9A69012
#120 Blue Ring	9A69002	9A69004	#120 Blue	9A69006	9A69013
			#180 Yellow	9A69007	9A69014
			#220 Green	9A69008	9A69015
			#320 Purple	9A69009	9A69016
			#500 Orange	9A69010	9A69017
			Set of 6 (1 of each grit)	9A69011	9A69018

Enhancing freedom of creativity of specialists.

E-FORCE®

Special Tools for Belt Sander

EIKO

Belt Arm

- The Belt Sander is equipped with the Belt Arm (without guides) as a standard accessory to which 4mm, 6mm, 8mm belt fits.
- For wider range of use, optional belt arms are available. Select one to suit your work.

Belt Sander

Model Code : DBT30
Order Code : 1048



A Belt Arm (without guides) is equipped as a standard accessory.

Belt Arm (without guides)

Belt Width **4mm 6mm 8mm**
Belt Length **300mm**

1 pc./pack

Order Code : 9121101

Without the belt guide plates of the end roller, possible to work with the tip of belt sander. Belt Arm (without guide) is equipped as a standard accessory of Belt Sander DBT 30.



without Guide Plates

With Belt Installed



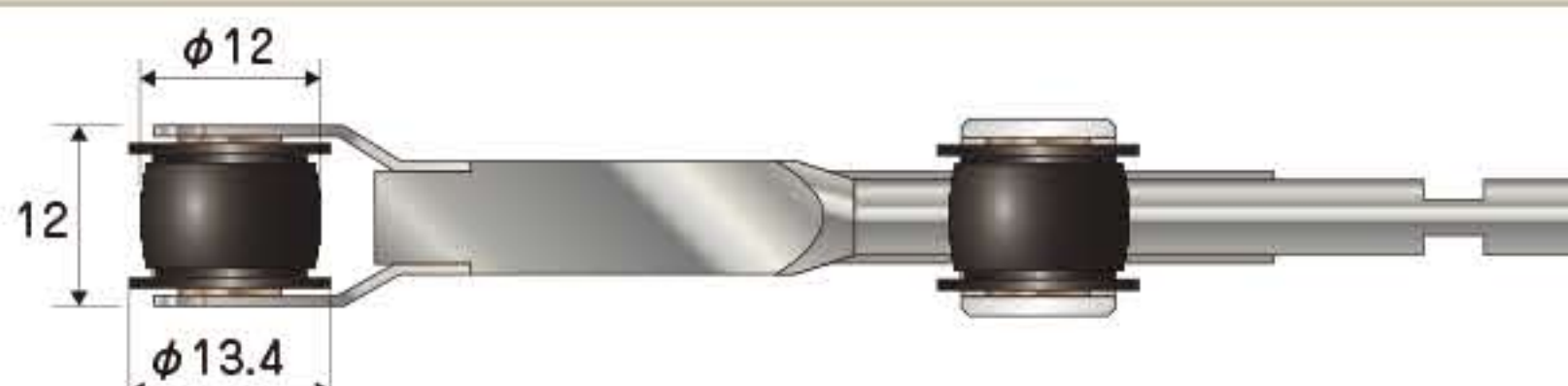
Belt Arm (with guides)

Belt Width **4mm 6mm 8mm**
Belt Length **300mm**

1 pc./pack

Order Code : 9121102

The guide plates are equipped to the end roller to prevent the belt from falling out during work. Use for works with beltsander moving sideways.



with Guide Plates

With Belt Installed



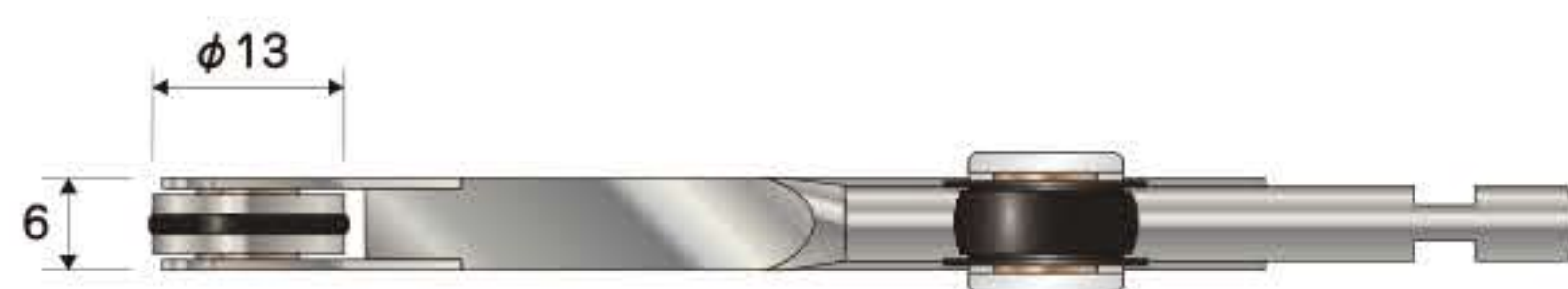
4mm Belt Arm

Belt Width **4mm**
Belt Length **300mm**

1 pc./pack

Order Code : 9121100

Exclusive to 4mm width belt for processing in narrow part. The tip of belt sander can be used for processing. Best suitable for processing in narrow areas.



Exclusive to 4mm Belt

With Belt Installed



Special Tools for Belt Sander

E-FORCE®

Special Abrasive Belts for Belt Sander

- Special belts of 300mm belt length for the Belt Sander.
- Diamond belt suits for grinding carbide, stone, and glass. Zirconia belt suits for grinding aluminum, brass, stainless.
- Bar shape workpieces can be easily processed by fixing them to a lathe and applying the belt on the rotating surface, resulting in a nice, constant finish.



Sand Belts

- Grinding belts for standard steel materials. Versatile standard belts suits from wood to resin.
- Available in 4mm, 6mm, and 8mm width.

Sand Belts

Belt Length 300mm

30 pcs./pack



Belt Length 300mm

Belt Width	W=4mm	W=6mm	W=8mm
Grit Size #80	9111100	9111200	9111300
Grit Size #120	9111101	9111201	9111301
Grit Size #180	9111102	9111202	9111302
Grit Size #240	9111103	9111203	9111303
Grit Size #320	9111104	9111204	9111304
Grit Size #400	9111105	9111205	9111305
Grit Size #600	-	-	9111306
Grit Size #800	-	-	9111307

Zirconia Belts

- Belts with specially coated zirconia grains to provide superior cutting ability and durability.
- Suitable for grinding on aluminum, brass, and high-carbon steels such as stainless.

Zirconia Belts

Belt Length 300mm

30 pcs./pack



Belt Length 300mm

Belt Width	W=8mm
Grit Size #80	9112100
Grit Size #120	9112101
Grit Size #180	9112102

Diamond Belts

- Flexible grinding belts with diamond grains.
- Suitable for hard to cut materials such as carbide, ceramic, glass, and stone etc.

Diamond Belts

Belt Length 300mm

3 pcs./pack



Belt Length 300mm

Belt Width	W=8mm
Grit Size #120	9113100
Grit Size #180	9A71001
Grit Size #240	9113101
Grit Size #320	9A71002
Grit Size #400	9113102
Grit Size #600	9A71003
Grit Size #800	9A71004
Grit Size #1000	9A71005

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Mini Recipro Model Code : DRP10 Order Code : 1059

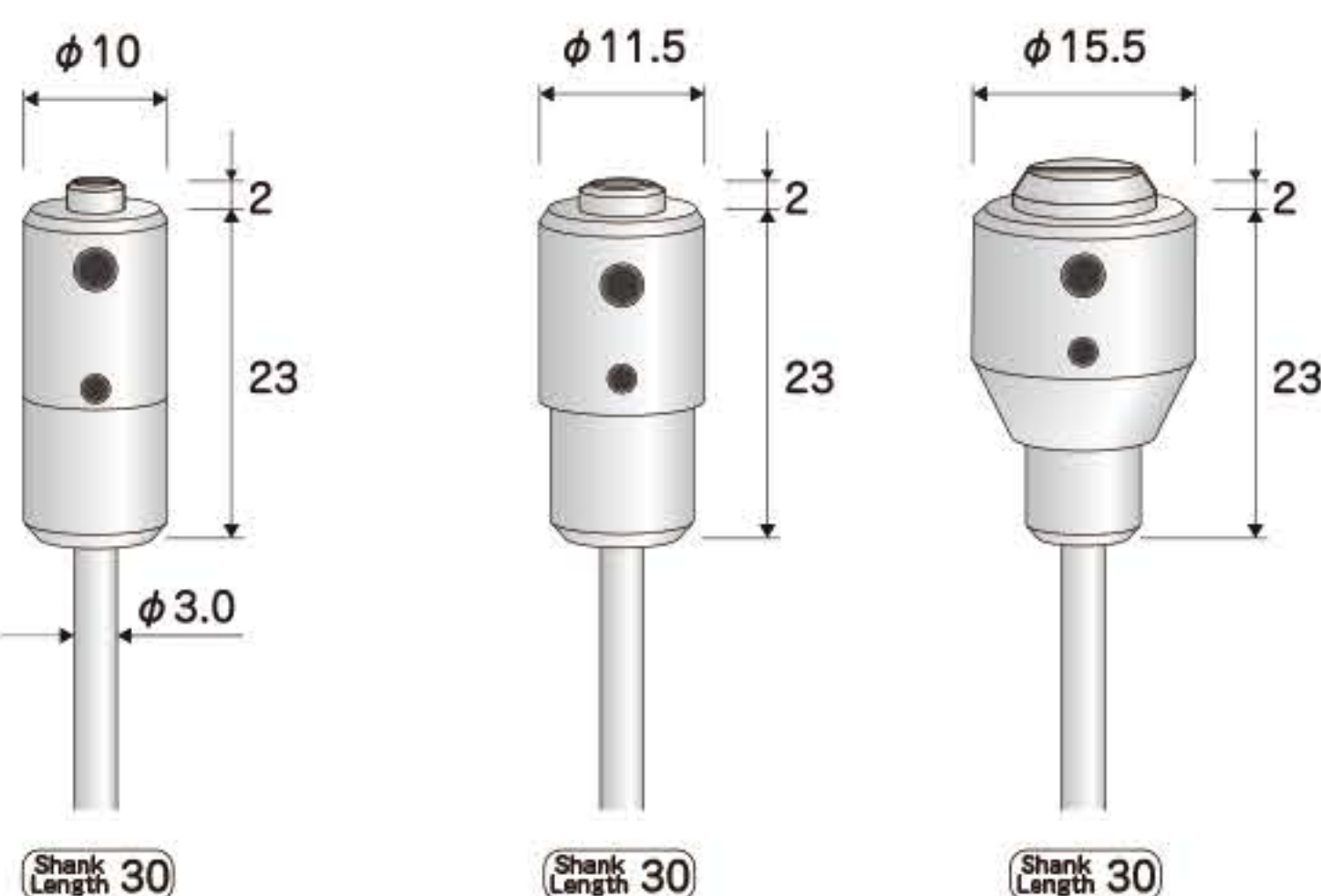
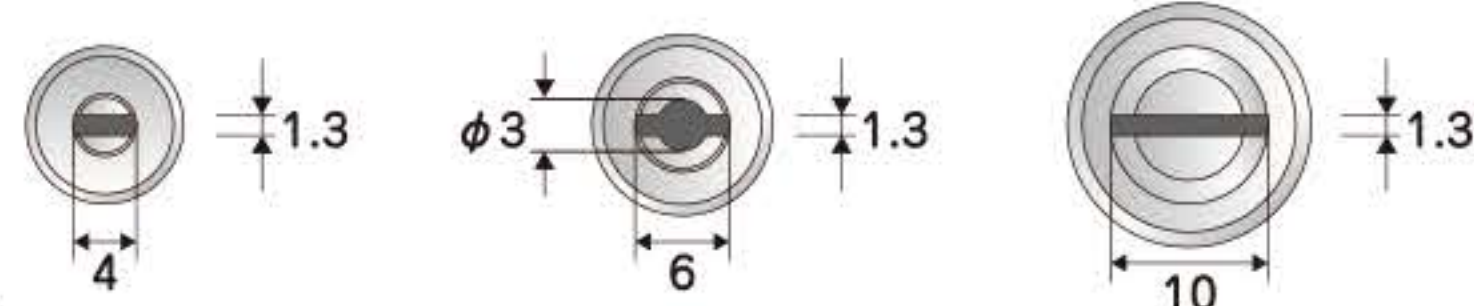


Ceramic Fiber Grindstone Holders

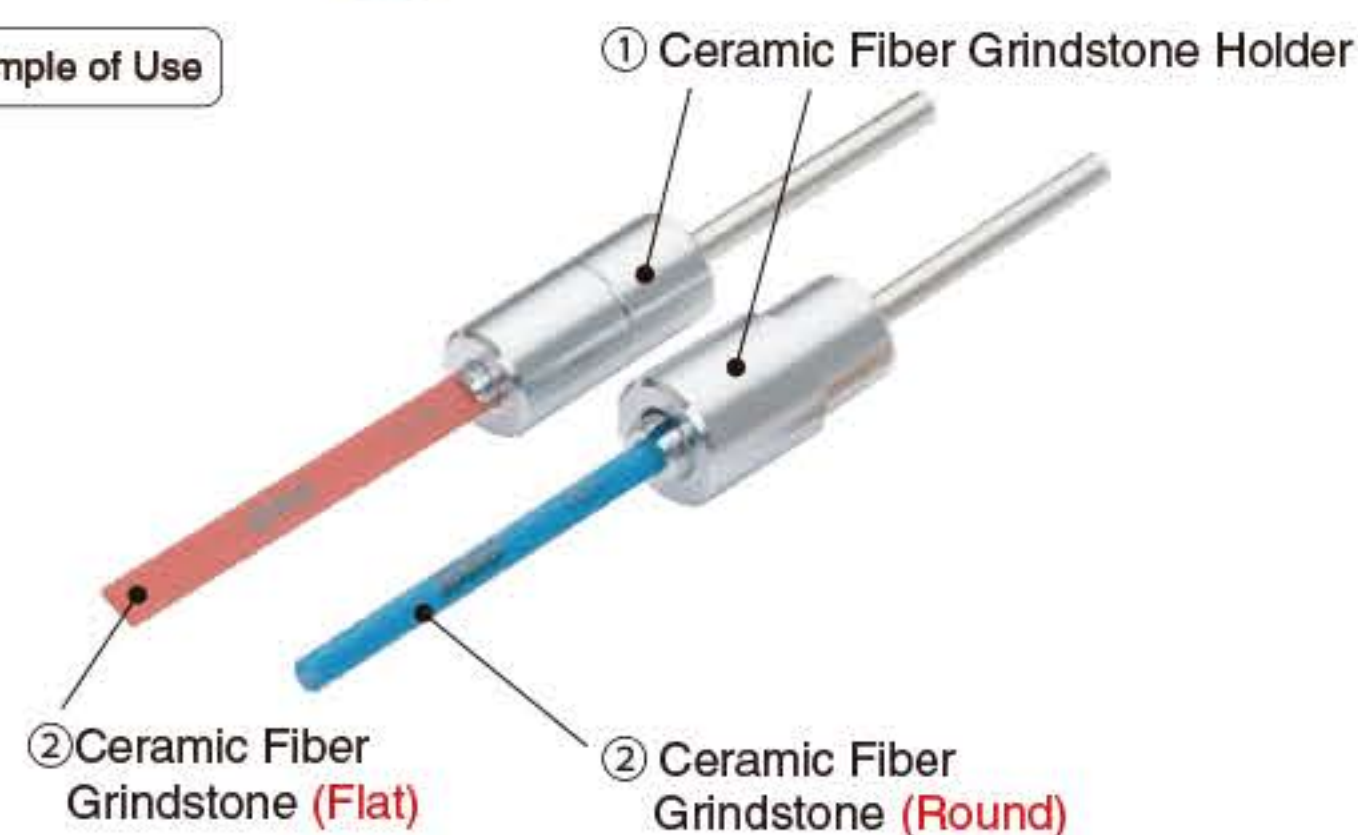
- Available in 3 types to fit the sizes of ceramic fiber grinding stones.
- Use with appropriate size/shape of the fiber grinding stones.

Ceramic Fiber Grindstone Holders

Shank Size $\phi 3.0$
1 pc./pack



Example of Use



- 1 Insert the Ceramic Fiber Grindstone to the Ceramic Fiber Grindstone Holder (Flat/Round).
- 2 Tighten the set screw to fix the tool to use.

Max. Clamp Size	1mm thick x 4mm wide	1mm thick x 6mm wide	1mm thick x 10mm wide
Ceramic Fiber Grindstone Holder	9232100	9232101	9232102

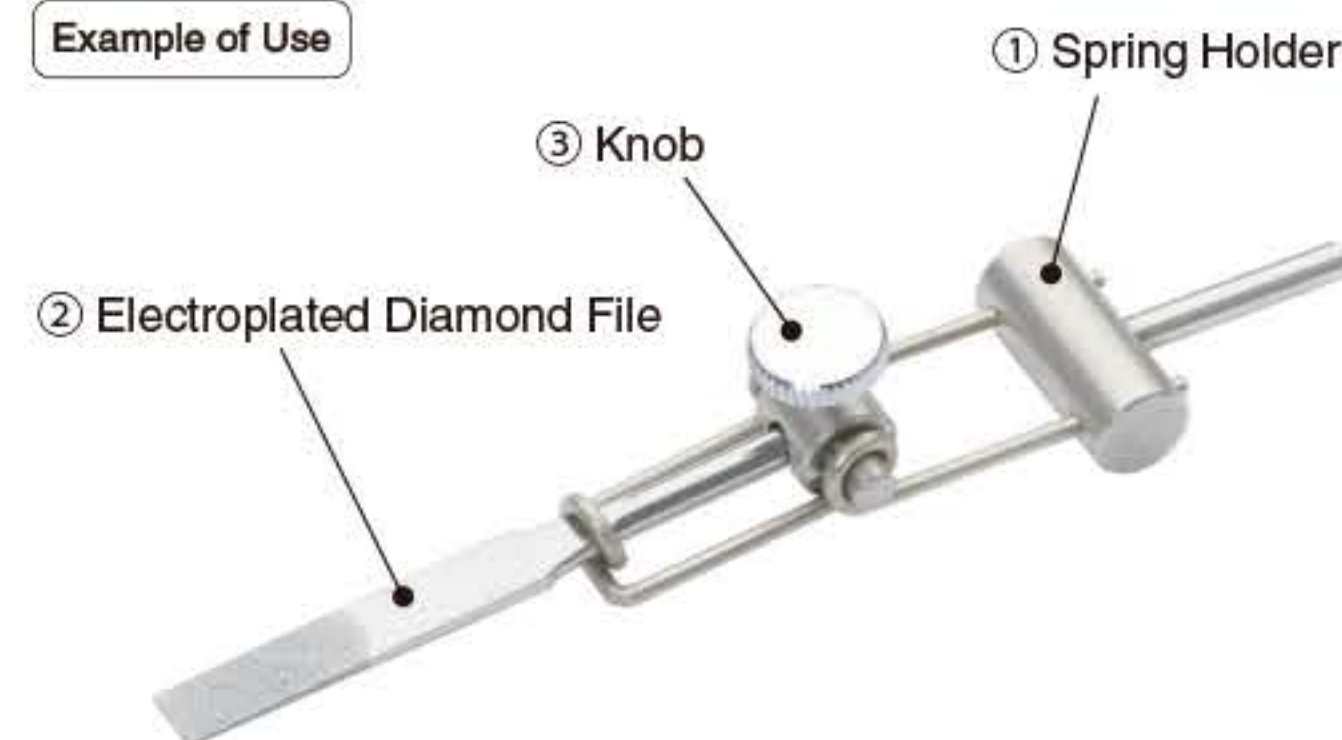
Spring Holder

- Shock absorbing function against the working material can be obtained by installing electroplated diamond files etc.

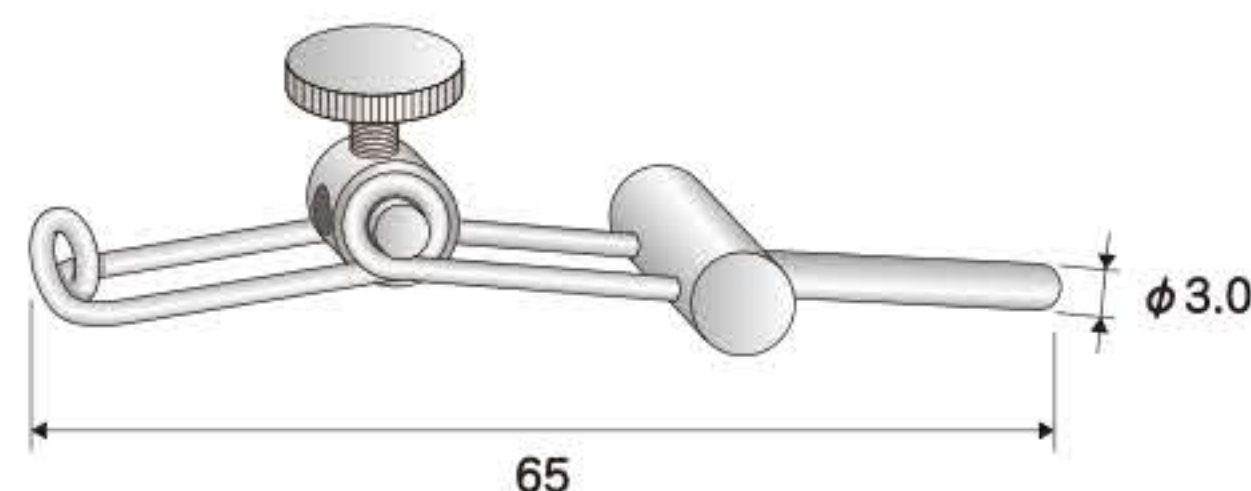
Spring Holder

Shank Size $\phi 3.0$
1 pc./pack

Example of Use



- 1 To the Spring Holder,
- 2 Insert the Electroplated Diamond File.
- 3 Tighten the knob to fix the tool to use.



Spring Holder 9242100

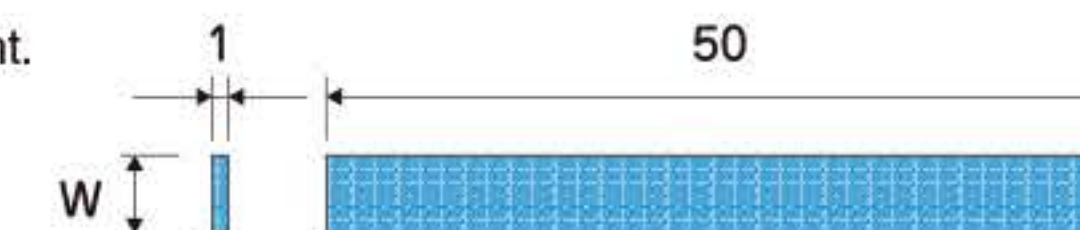
Ceramic Fiber Grindstones

- Ceramic Fiber Grindstone for polishing and deburring on dies.
- Works efficiently for grinding on NAK material of less than HRC57, and standard steel. Best suitable for micro grinding on variety of molding dies (ribs, planes, bosses etc.).

Ceramic Fiber Grindstones (Flat)

Flat
Total Length 50mm
2 pcs./pack

Consists of ceramic fibers sorted by being pulled in straight. Use the end of stick to polish.



Stone Width	W=4mm	W=6mm	W=10mm
Grit Size #220 (Dark Brown)	9222100	9222107	9222114
Grit Size #300 (Reddish Brown)	9222101	9222108	9222115
Grit Size #400 (Orange)	9222102	9222109	9222116
Grit Size #600 (Black)	9222103	9222110	9222117
Grit Size #800 (Blue)	9222104	9222111	9222118
Grit Size #1000 (White)	9222105	9222112	9222119
Grit Size #1200 (Red)	9222106	9222113	9222120

Ceramic Fiber Grindstones (Round)

Round
Total Length 50mm
2 pcs./pack

Consists of ceramic fibers yarned in braid form. Use both the end and the side of the stick to polish.



Stone Size	$\phi 3\text{mm} \times \text{L} 50\text{mm}$
Grit Size #220 (Grey)	9223100
Grit Size #300 (Reddish Brown)	9223101
Grit Size #400 (Orange)	9223102
Grit Size #600 (Black)	9223103
Grit Size #800 (Blue)	9223104
Grit Size #1000 (White)	9223105
Grit Size #1200 (Red)	9223106

Ceramic Fiber Grindstones (Round)

Round
Total Length 100mm
1 pc./pack



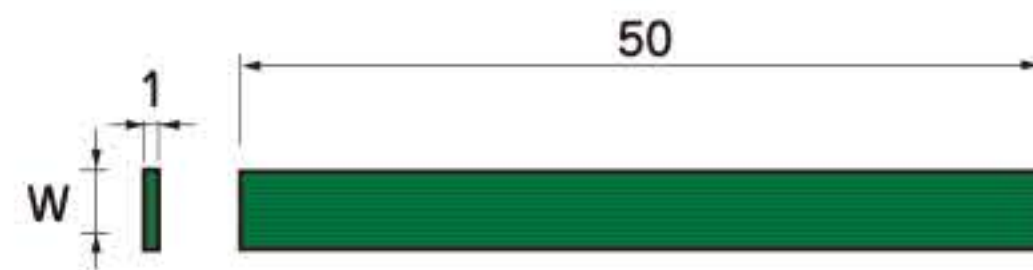
Stone Size	$\phi 3\text{mm} \times \text{L} 100\text{mm}$
Grit Size #180 (Brown)	9A81001
Grit Size #240 (Black)	9A81002
Grit Size #400 (Blue)	9A81003
Grit Size #600 (White)	9A81004
Grit Size #1000 (Pink)	9A81005
Grit Size #1200 (Red)	9A81006

Diamond Fiber Grindstones

- Diamond grains are evenly blended to conventional ceramic fibers. Combines benefits of fiber stones and sintered diamond stones.
- Cuts well on hardened materials, die steel, high speed steel, cemented carbides. Omni-directional protrusion of diamond grains enables working on side faces as well.

Diamond Fiber Grindstones (Flat)

Flat
Total Length 50mm
1 pc./pack



Stone Width	W=4mm	W=6mm	W=10mm
Grit Size #200 (Black)	9A82001	9A82004	9A82007
Grit Size #400 (Grey)	9A82002	9A82005	9A82008
Grit Size #600 (Green)	9A82003	9A82006	9A82009

Diamond Fiber Grindstones (Round)

Round
Total Length 50mm
1 pc./pack

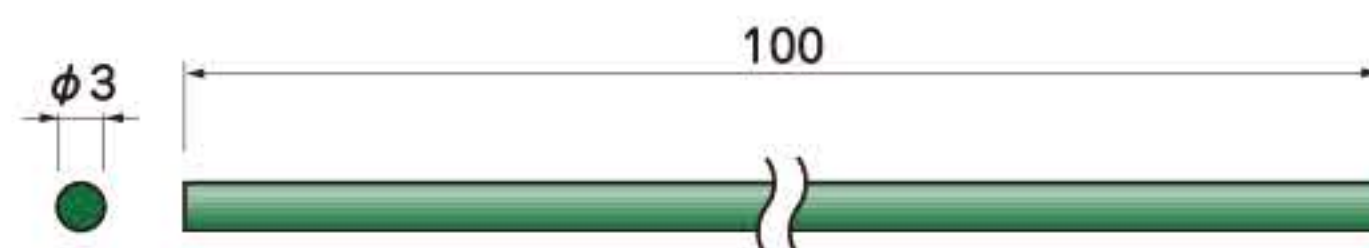


*ø3.0 mm round bars fit the Mini Recipro attachment directly without holders.

Stone Size	ø3mm x L 50mm
Grit Size #200 (Black)	9A82010
Grit Size #400 (Grey)	9A82011
Grit Size #600 (Green)	9A82012

Diamond Fiber Grindstones (Round)

Round
Total Length 100mm
1 pc./pack

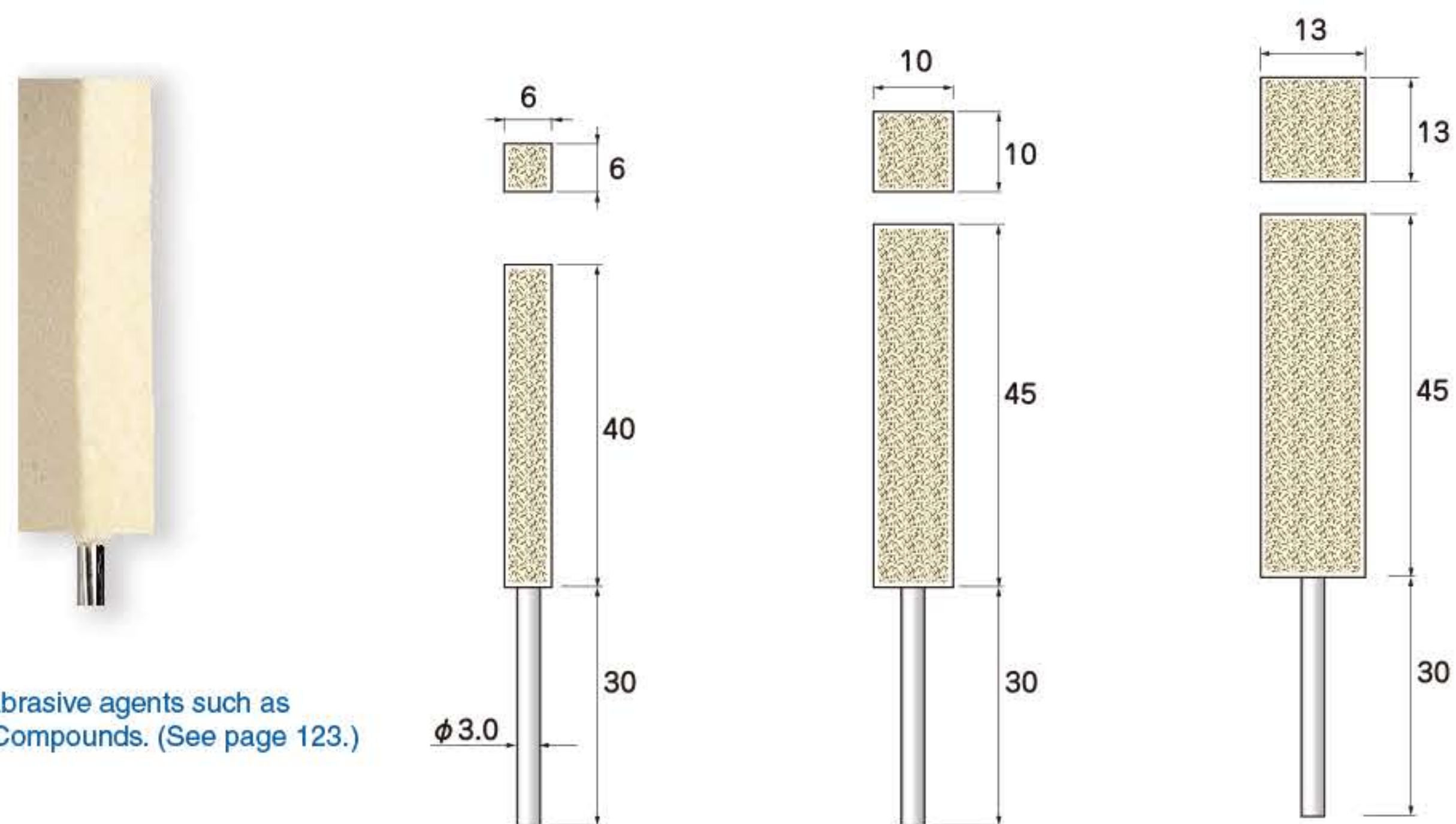


Stone Size	ø3mm x L 100mm
Grit Size #200 (Black)	9A82013
Grit Size #400 (Grey)	9A82014
Grit Size #600 (Green)	9A82015

Mounted Felt Sticks

Shank Size ø3.0
Square
5 pcs./pack

WARNING •Felt stick are exclusive tools to the Mini Recipro. NEVER USE with other rotating attachments such as Rotary etc.



Hard	9A83001	9A83003	9A83005
Soft	9A83002	9A83004	9A83006

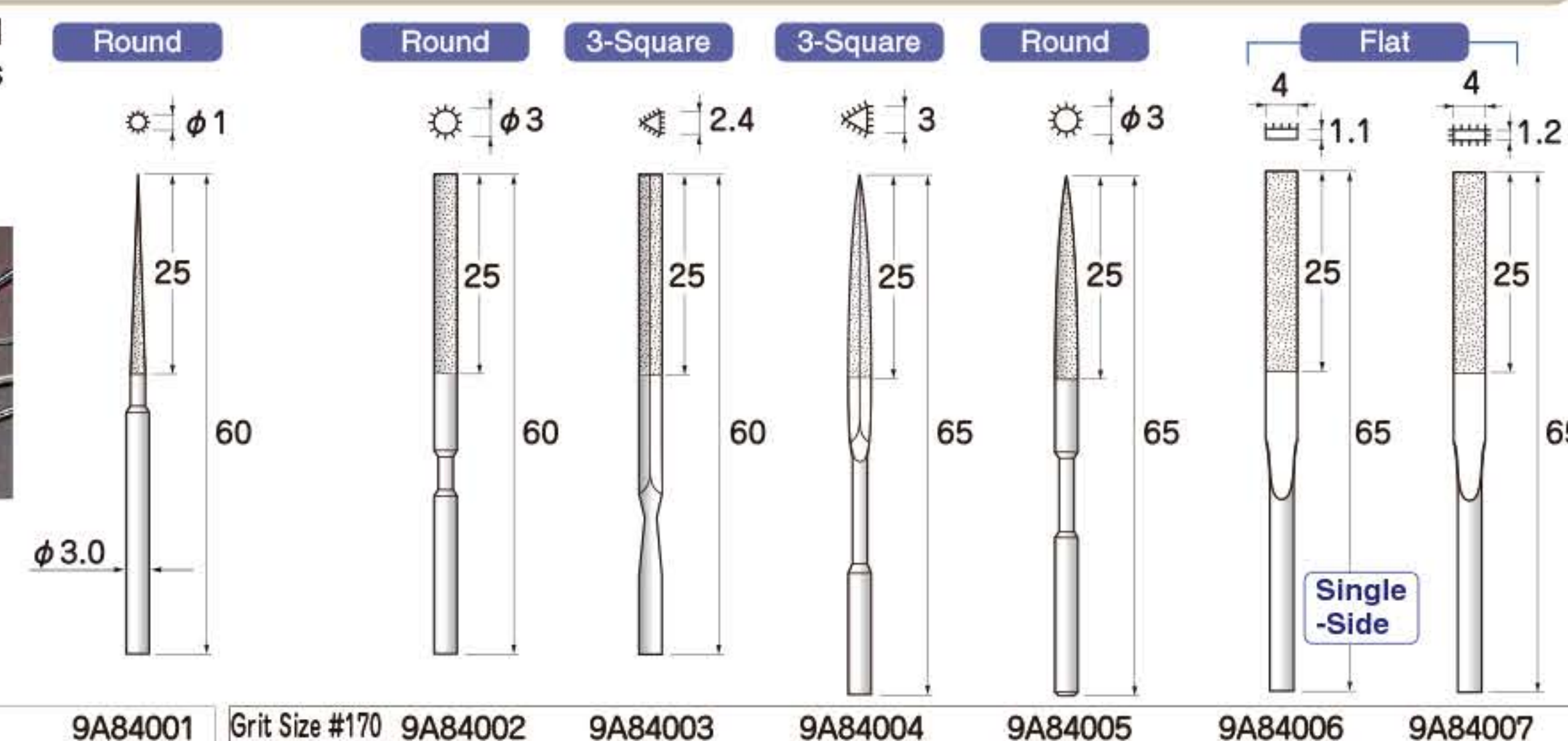
Use with abrasive agents such as Diamond Compounds. (See page 123.)

Electroplated Diamond Files

- Available in flat, round and 3-square to fit workpiece. Fits the Mini Recipro attachment directly.
- The top part of the Tapered type is thinner than the bottom. Provides an exquisite flexibility.

Electroplated Diamond Files

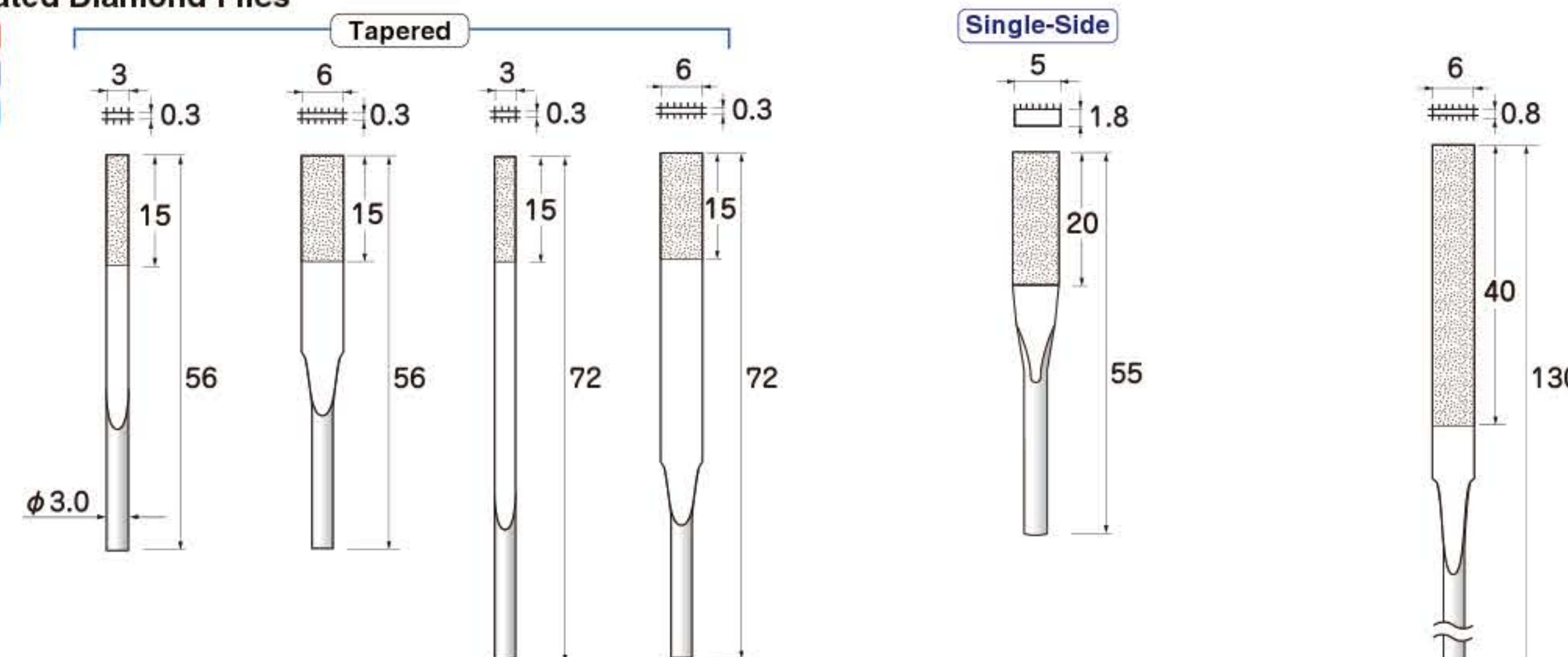
Shank Size ø3.0
1 pc./pack



Grit Size #200	9A84001	Grit Size #170	9A84002	9A84003	9A84004	9A84005	9A84006	9A84007
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Electroplated Diamond Files

Shank Size ø3.0
Flat
1 pc./pack

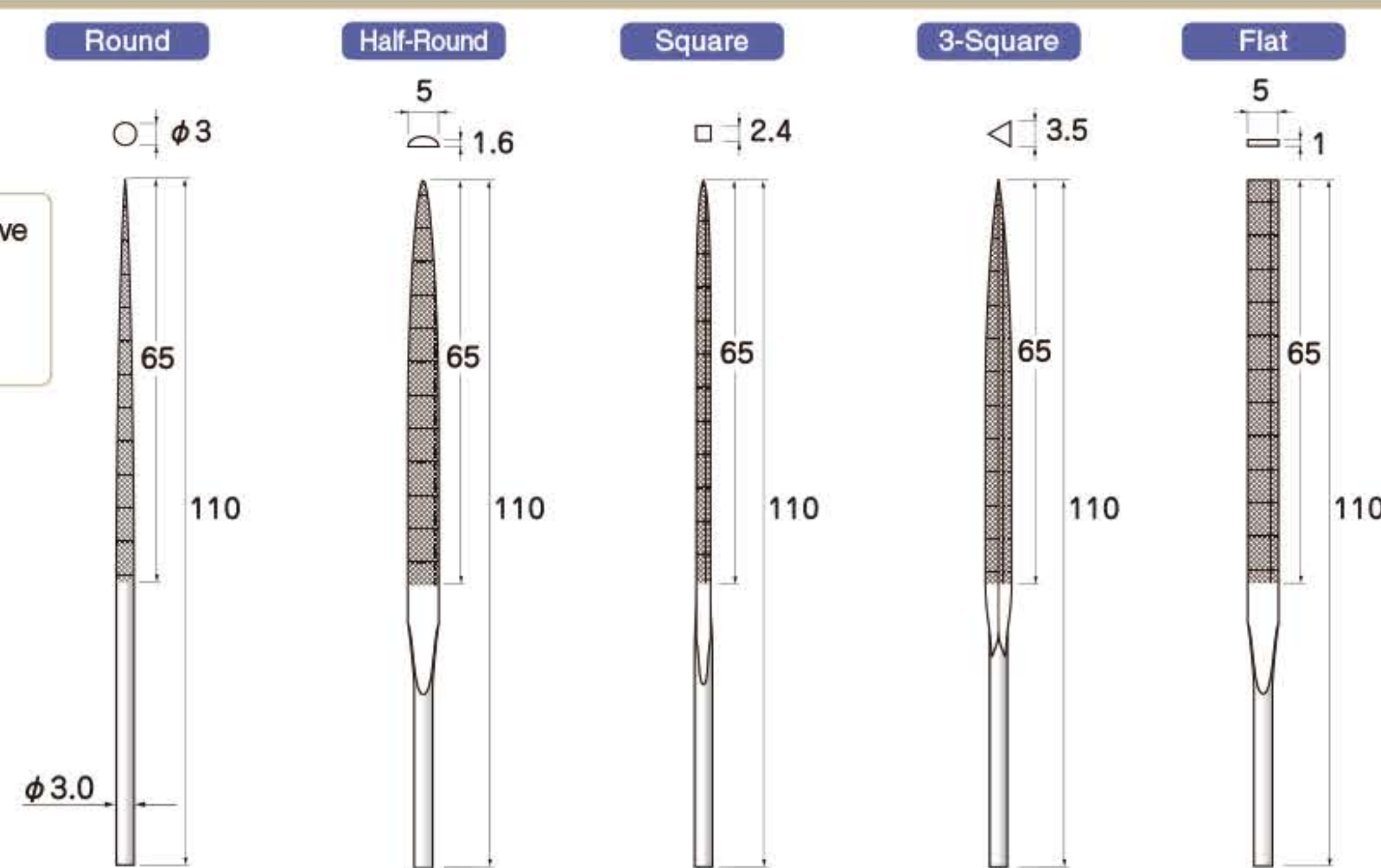


Grit Size #200	9212100	9212200	9A84008	9A84011	Grit Size #150	9212300
Grit Size #400	9212101	9212201	9A84009	9A84012	Grit Size #200	9212301
Grit Size #600	9212102	9212202	9A84010	9A84013	Grit Size #400	9212302
Grit Size #170 9A84014						

Precision Files

Shank Size ø3.0
3 pcs./pack

WARNING These tools are exclusive to Mini-Recipro. NEVER USE with rotating machines.



Precision File	9A84015	9A84016	9A84017	9A84018	9A84019
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Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.

Assorted Diamond Set A

Shank Size $\phi 2.34$
10 pcs./pack

0A11001



Product Contents (1 of each size / Set of 10)

1011107	1011113	1A11014	1A11024	1A11028
1A11037	1A11043	1A11035	1A11059	1A11056

Assorted Diamond Set B

Shank Size $\phi 2.34$
10 pcs./pack

0A11002



Product Contents (1 of each size/ Set of 10)

1A11006	1A11008	1A11022	1A11031	1A11029
1A11039	1011115	1A11036	1A11049	1A11052

Straight Diamond Set

Shank Size $\phi 3.0$
10 pcs./pack

0A11003



Product Contents (1 of each size / Set of 10)

1A12007	1A12010	1A12011	1A12012	1A12014
1A12015	1A12016	1A12018	1A12021	1A12022

Conical Diamond Set

Shank Size $\phi 3.0$
10 pcs./pack

0A11004



Product Contents (1 of each size / Set of 10)

1A12051	1A12052	1A12057	1012129	1A12059
1A12060	1A12062	1A12063	1A12065	1A12066

Cross Cut Carbide Cutter Set A

Shank Size $\phi 2.34$
10 pcs./pack

0A12001



Product Contents (1 of each size / Set of 10)

2A11036	2A11024	2A11038	2A11041	2A11044
2A11047	2A11053	2A11058	2A11060	2A11050

Ten Carbide Cutter Point Set

Shank Size $\phi 2.34$
10 pcs./pack

0A12002



Product Contents (1 of each size / Set of 10)

2A11064	2A11065	2A11066	2A11067	2A11068
2A11069	2A11070	2A11071	2A11072	2A11073

Cross Cut Carbide Cutter Set B

Shank Size $\phi 3.0$
8 pcs./pack

0A12003



Product Contents (1 of each size / Set of 8)

2A12002	2A12018	2A12039	2012900	2012002
2012101	2012800	2012400		

Cross Cut Carbide Cutter Set C

Shank Size $\phi 3.0$
8 pcs./pack

0A12004



Product Contents (1 of each size / Set of 8)

2012702	2A12026	2012004	2012103	2A12043
2A12045	2A12047	2A12049		

High Speed Steel Drill Set

Shank Size $\phi 2.34$
9 pcs./pack

0A13001



Product Contents (1 of each size / Set of 9)

2A31020	2A31021	2A31022	2A31023	2A31024
2A31025	2A31026	2A31027	2A31028	

Enhancing freedom of creativity of specialists.

E-FORCE®

! Always use safety glasses and protective tools for your safety. Use the tool below maximum operating rotation speed.