

NAKANISHI INC.

Headquarters · Factory

700 Shimohinata, Kanuma-Shi, Tochigi-Ken 322-8666
TEL 0289-64-3280 FAX 0289-62-1135

Tokyo Office

9F TIXTOWER UENO, 4-8-1, Higashiueno Taito-Ku Tokyo 110-0015
TEL +81-3-5828-7740 FAX +81-3-5828-0064

● Specifications and design are subject to change without notice.

PR-K318E Ver.1 '14.08.05.⑦



www.nakanishi-inc.com





TOOLS

TOOLS


Deburring, Grinding, & Polishing


NAKANISHI INC. 2014


Symbols used in NAKANISHI Tools Catalogue


	Shank Diameter Shows shank diameter of the tools. Nakanishi produces tools with several shank diameters. <small>*Nakanishi micro grinders utilize a collet system, which insures maximum precision. Therefore, please use the collet that best corresponds to the tool shank diameter.</small>
	Standard Package One package is the minimum shipping unit. This number shows the number of pieces in the standard package (bag, box and etc.). Please order the number of packages needed for the desired quantity.
	Maximum allowable speed Do not exceed the maximum allowable tool speed. For your safety, use the tools below the indicated allowable speed. Start at low speed and increase gradually to insure safety. The preceding is particularly important for the use of new tools and machines. <small>*Maximum allowable speed assumes an overhang of less than 13mm. Decrease speed if the overhang is more than 13mm. Refer to "Precautions for using Nakanishi Tools" on the next page. *Check the tools and machinery for mechanical defects prior to each use.</small>
	Grit This shows grain size of various grinding tools. Rough Cutting..... 46, 54, 60, 70, 80, 90 Medium Cutting..... 100, 120, 150, 180 Pre Finishing..... 220, 240, 280, 320, 400 Finishing..... 500, 600, 700, 800, 1000 Fine Finishing and Mirror Polishing..... 1200, 1500, 1800, 2000, 3000, 4000, 6000, 8000 ...


First code number on each page — CAT. **11411~**


Shank diameter of the tool — 

Code number (Order number) — 

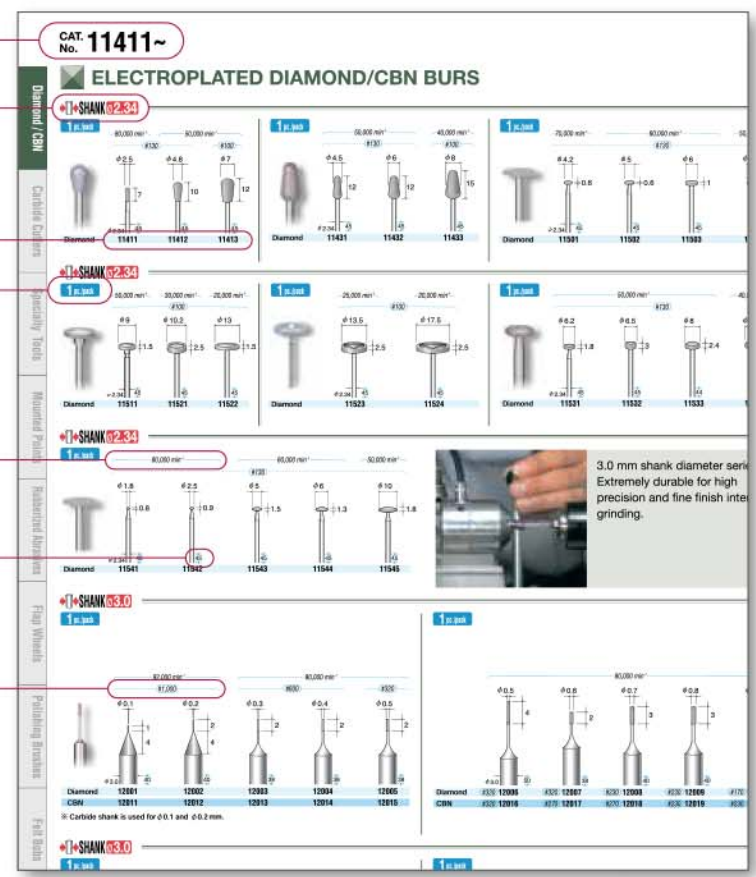
Standard package quantity — 

Maximum allowable speed — 

Total length of the tool (mm) — 

Grit — 


Note : Specifications may be changed without notice. Colors of the tools in this catalogue may not be the same as actual colors due to printing limitations.



Precautions for using Nakanishi Tools


For safe use of the tools

- Please read operation manuals before using any tools.
- Please keep all operation manuals on hand for reference whenever necessary.

 **Caution** Incorrect use of the tools, or ignoring 'CAUTIONS for safety' described in the operating manuals, could cause fatal or serious bodily injury.

CAUTIONS

-  **Always use safety glasses, mask, face guard for your safety.**
-  **Fasten the chuck firmly.**
Make sure the tool is fully installed in the chuck to avoid tool slippage.
-  **Do not touch the tools when in operation.**
Make sure the work area is neat and there is sufficient light.
-  **Do not use damaged or broken electric cords and air hoses.**
-  **Do not use the tool where flammable liquids or gases exist.**
-  **Start at low speed and increase gradually to insure safe work.**
This is particularly important for the use of new tools, large cutting tools and elastic tools such as rubber grindstone, sander and brush tools.
-  **Do not leave operating tools.**
Confirm that the tool has stopped completely after switching off.
-  **Keep the tools and products in a cool, dry place.**
-  **Select proper tools and products for your application.**
Select tools carefully considering the performance of the tools, work procedure and type/shape of the material.
-  **Check the tools carefully before use.**
Confirm that the tools are free of chips, cracks, splits, scratches, irregular bondings, and out of round shanks, etc.
-  **Fix the work material firmly in a vise and/or other clamping fixture.**
-  **Stop grinding or polishing immediately whenever unusual sounds, vibrations, or wear are found.**
Restart the work only after the problem is found and corrected.
-  **Do not wear loose clothing and/or accessories that may be caught in machinery.**
Long hair should be secured prior to machine operation.
-  **Only use attachments, parts, consumable articles and accessories produced by NAKANISHI.**
-  **Check all tools carefully before use.**
Clean the inside of the chuck and tool shank, chips or fine metals inside the chuck could cause tool slippage and result in damage to machinery or bodily injury.
-  **Do not apply high pressure to or pry with the tools.**
This can break and/or bend the tools. Use the tools within their design limitation. Excessive pressure will decrease the efficiency of your work and cause excessive wear of the tools.

 **The tools should be used by taking care of the overhang and below maximum allowable speed.**
The catalogue shows the maximum allowable speed at 13 mm overhang (distance between the face of the chuck and the top of the tool shank).

Decrease the speed as shown in the table below, if you are using a longer overhang than 13 mm.

Overhang	Maximum allowable speed (min ⁻¹)
Less than 13 mm	Shown in the catalogue (A)
Less than 20 mm	(A) x 0.5
Less than 25 mm	(A) x 0.3
Less than 50 mm	(A) x 0.1

Diamond / CBN
Carbide Cutters
Specialty Tools
Mounted Points
Rubberized Abrasives
Flap Wheels
Polishing Brushes
Felt Bobs
Abrasive Compounds & Polishing Tools
NSK Exclusive Tools

ELECTROPLATED DIAMOND/CBN BURS

Types of Abrasive Grain

Diamond

Main Applications Suitable for grinding non-ferrous metals and non-metals ; rubber, plastic, FRP, FRM, stone material, carbide alloy, ceramics, pottery, glass, ferrite, zirconia, quartz, silicon, rare earth magnet, crystal and jewelry.

Main Work Materials Effective for hard and brittle materials such as non-ferrous metal materials.

- Carbide alloy, cermet, burned material such as alumina
- Stone material, ceramic, refractory material, tile, and concrete
- Ceramics, pottery and silicon
- Glass, crystal and jewelry
- Plastic, FRP, graphite and carbon fiber
- General Grinding
- Heat resistant injection metal and stellite
- Magnetic material, ferrite and rare earth materials

CBN

Main Applications *For grinding of hardened steels such as alloy steels and tool steels, alumite and copper
*For internal grinding of mold or jig grinder ; parts for precision machine, automobile, bearing and sewing machine.

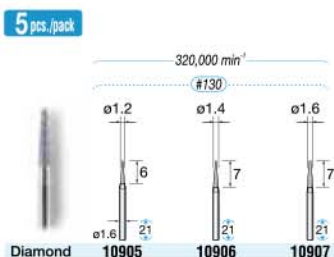
Main Work Materials Effective for iron metal materials such as burned materials with iron and steel materials (harder than HRC60)

- Steel : carbon steel tools (SK), high speed steel (SKH), tool steel alloys (SKS, SKD), bearing steels (SUJ), structural alloy steels (SCM, SNCM, Scr and SACM), heat resistant steels (SUH) and stainless steels (SUS3 and SUS 4)
- Alloy : Ultra heat resistant cobalt alloys (haynes alloy, stellite, airresist, walex and inconel) Ultra heat resistant nickel alloys (inconel, hastelloy, Colmoy, and waspaloy)
- Cast iron : FC and FCD
- Stainless steel : SUS
- Injection metal
- Titanium alloys
- Magnetic materials: alnico, permalloy and sendust

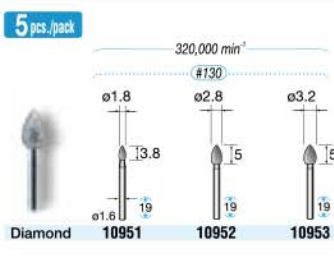
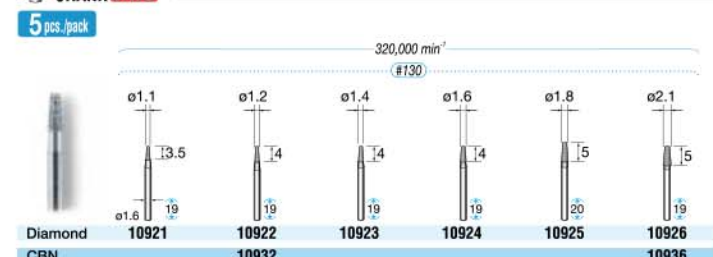


1.6 mm shank diameter series.
Short type for high-speed rotation.
Best for grinding very small parts.

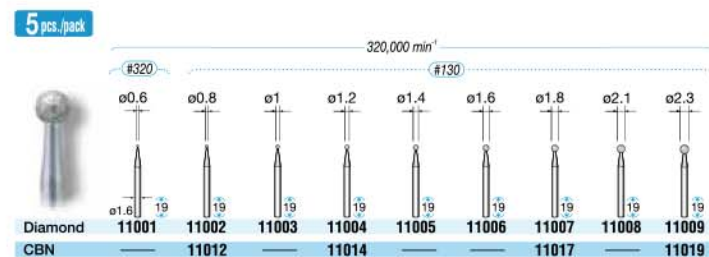
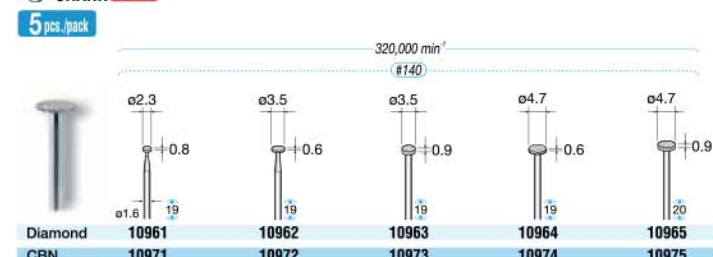
SHANK $\phi 1.6$



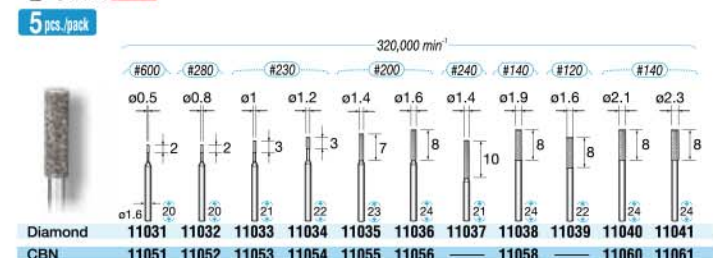
SHANK $\phi 1.6$



SHANK $\phi 1.6$

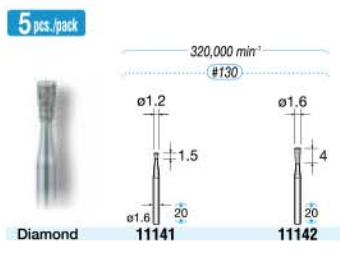
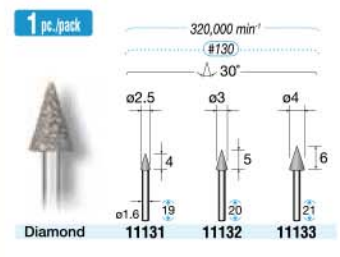
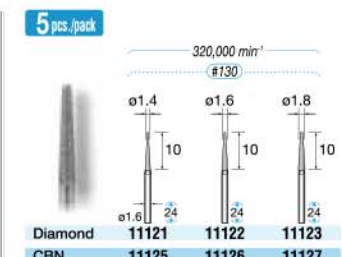
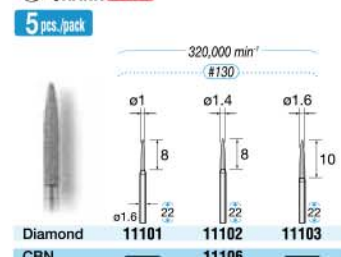


SHANK $\phi 1.6$

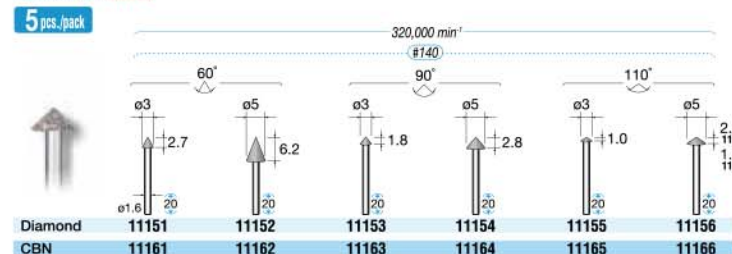


ELECTROPLATED DIAMOND/CBN BURS

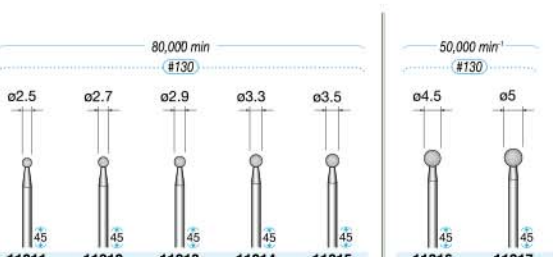
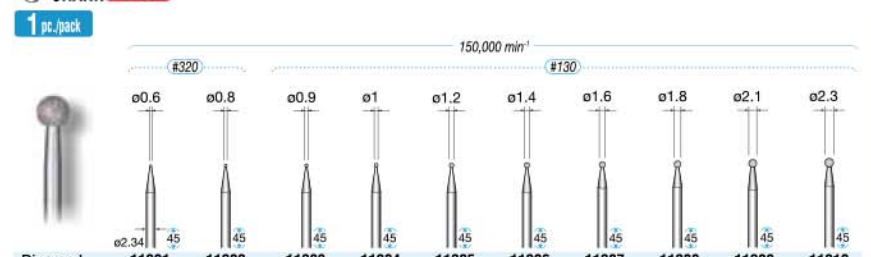
SHANK $\phi 1.6$



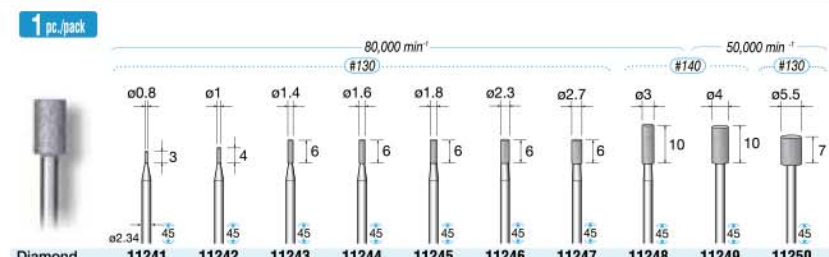
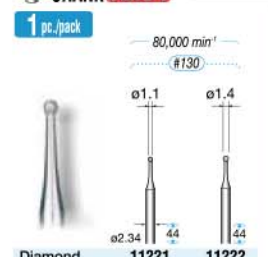
SHANK $\phi 1.6$



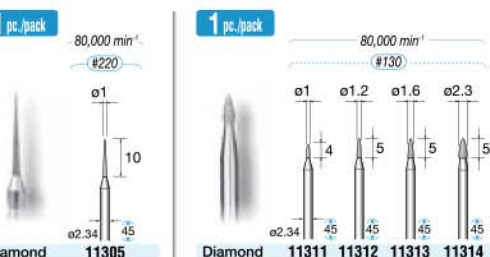
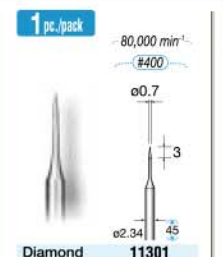
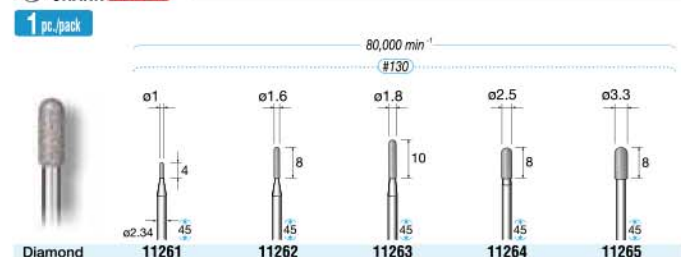
SHANK $\phi 2.34$



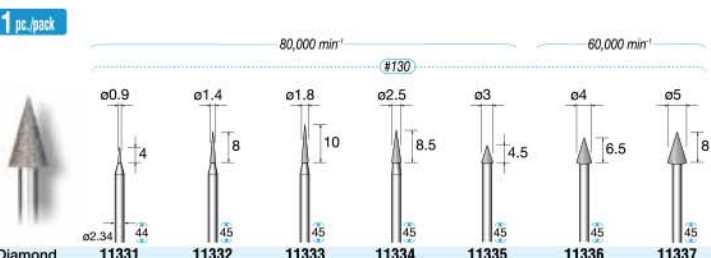
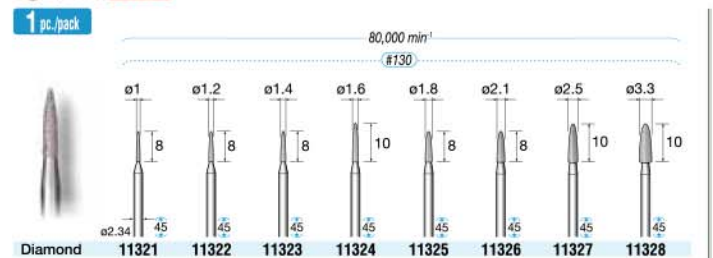
SHANK $\phi 2.34$



SHANK $\phi 2.34$



SHANK $\phi 2.34$



ELECTROPLATED DIAMOND/CBN BURS

SHANK $\phi 2.34$
1 pc./pack

80,000 min⁻¹ (#130)

Diamond 11341 11342

80,000 min⁻¹ (#130)

Diamond 11351 11352 11353 11354 11355 11356 11357 11358 11359

SHANK $\phi 2.34$
1 pc./pack

80,000 min⁻¹ (#130)

Diamond 11361 11362 11363 11364 11365 11366

80,000 min⁻¹ (#130) 50,000 min⁻¹

Diamond 11391 11392 11393 11394

SHANK $\phi 2.34$
1 pc./pack

80,000 min⁻¹ (#130) 50,000 min⁻¹

Diamond 11401 11402 11403 11404 11405 11406

50,000 min⁻¹ (#130) 50,000 min⁻¹ (#100)

Diamond 11412 11413

50,000 min⁻¹ (#130) 30,000 min⁻¹

Diamond 11425 11426

SHANK $\phi 2.34$
1 pc./pack

50,000 min⁻¹ (#130) 40,000 min⁻¹ (#100)

Diamond 11431 11432 11433

20,000 min⁻¹ (#80)

Diamond 11441

70,000 min⁻¹ (#130) 60,000 min⁻¹ (#130) 50,000 min⁻¹

Diamond 11501 11502 11503 11504

SHANK $\phi 2.34$
1 pc./pack

50,000 min⁻¹ (#100) 30,000 min⁻¹ (#100) 20,000 min⁻¹

Diamond 11511 11521 11522

25,000 min⁻¹ (#100) 20,000 min⁻¹

Diamond 11523 11524

30,000 min⁻¹ (#100) 20,000 min⁻¹

Diamond 11525 11527

SHANK $\phi 2.34$
1 pc./pack

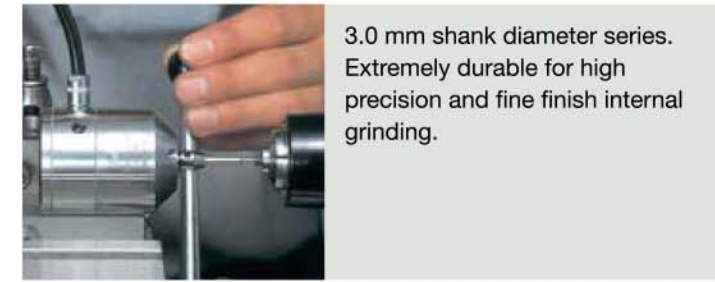
30,000 min⁻¹ (#130) 40,000 min⁻¹

Diamond 11531 11532 11533 11534

80,000 min⁻¹ (#130) 60,000 min⁻¹ (#130) 50,000 min⁻¹

Diamond 11541 11542 11543 11544 11545

ELECTROPLATED DIAMOND/CBN BURS



SHANK $\phi 3.0$
1 pc./pack

60,000 min⁻¹

Diamond #200 11791
#325 11803 11804 11805 11806 11807 11808
#600 11813 11814 11815 11816 11817 11818

CBN #200 11792
#325 11823 11824 11825 11826 11827 11828
#600 11833 11834 11835 11836 11837 11838

SHANK $\phi 3.0$
1 pc./pack

60,000 min⁻¹

Diamond #200 11793
#325 11853 11854 11855 11856 11857 11858
#600 11863 11864 11865 11866 11867 11868

CBN #200 11794
#325 11873 11874 11875 11876 11877 11878
#600 11883 11884 11885 11886 11887 11888

SHANK $\phi 3.0$
1 pc./pack

92,000 min⁻¹ (#1,000) 80,000 min⁻¹ (#600) (#320)

Diamond * 12001 * 12002 12003 12004 12005
CBN * 12011 * 12012 12013 12014 12015

* Carbide shank is used for $\phi 0.1$ and $\phi 0.2$ mm.

SHANK $\phi 3.0$
1 pc./pack

80,000 min⁻¹

Diamond #320 12006 #320 12007 #230 12008 #230 12009 #170 12010
CBN #320 12016 #270 12017 #270 12018 #230 12019 #230 12020

SHANK $\phi 3.0$
1 pc./pack

80,000 min⁻¹

Diamond #100 12051 12052 12053 12054 12055 12056 12057 12058
#140 12051 12052 12053 12054 12055 12056 12057 12058
#220 12091 12092 12093 12094 12095 12096 12097 12098
#320 12111 12112 12113 12114 12115 12116 12117 12118
#600 12131 12132 12133 12134 12135 12136 12137 12138

CBN #120 12155 12156 12157 12158
#140 12151 12152 12153 12154
#220 12171 12172 12173 12174 12175 12176 12177 12178

SHANK $\phi 3.0$
1 pc./pack

80,000 min⁻¹ 70,000 min⁻¹

Diamond #100 12059 12060 12061 12062 12063 12064 12065
#140 12039 12040 12041 12042 12043 12044 12045
#220 12099 12100 12101 12102 12103 12104 12105
#320 12119 12120 12121 12122 12123 12124 12125
#600 12139 12140 12141 12143 12145

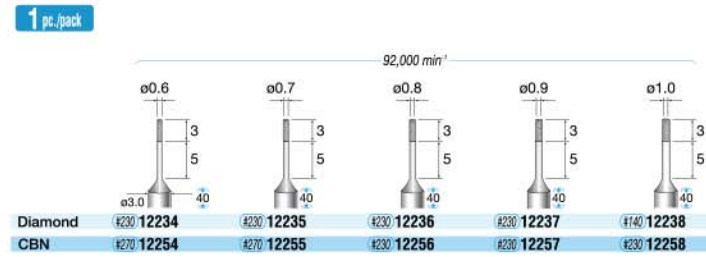
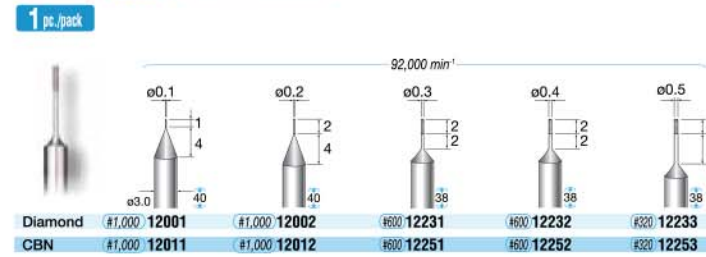
CBN #120 12159 12160 12161 12162 12163 12164 12165
#220 12179 12180 12181 12182 12183 12184 12185

ELECTROPLATED DIAMOND/CBN BURS

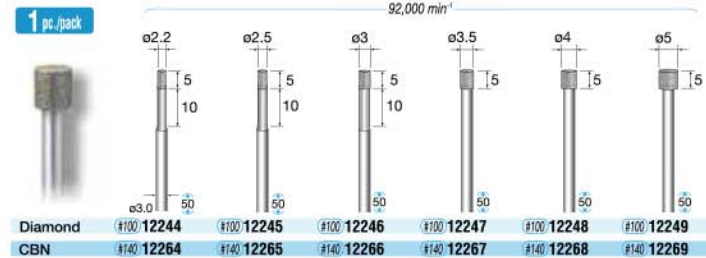
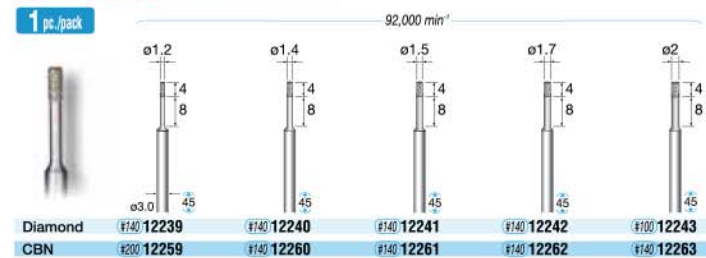


High rigidity and long clearance allow for high precision grinding of deep IDs. The up to 3 fold increase in rigidity versus stainless steel tools allows for much more precision and efficient grinding.

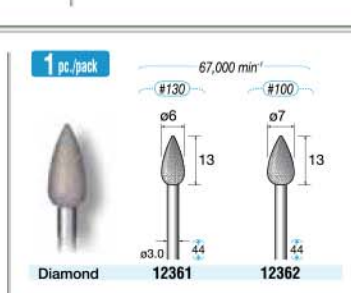
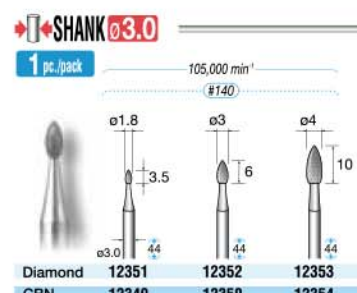
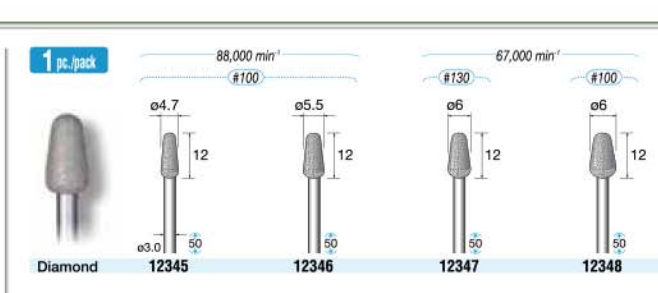
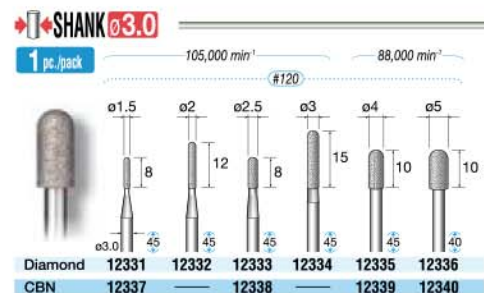
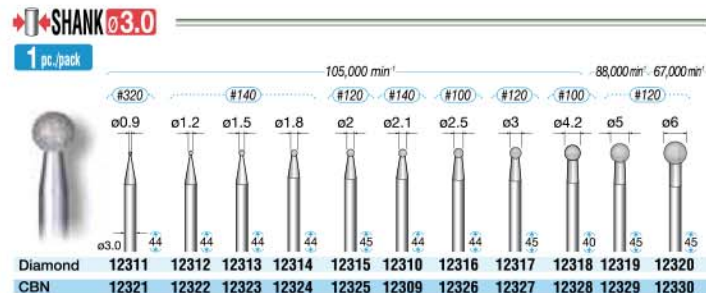
SHANK Ø3.0 Carbide



SHANK Ø3.0 Carbide

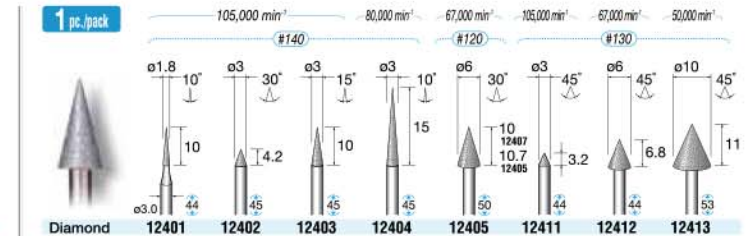
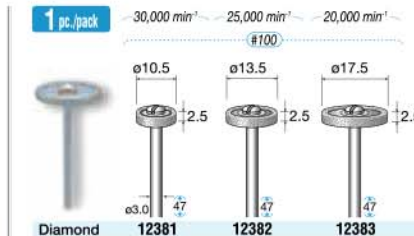


3.0 mm shank diameter series. Extremely durable for high precision burr removal and fine finishing.

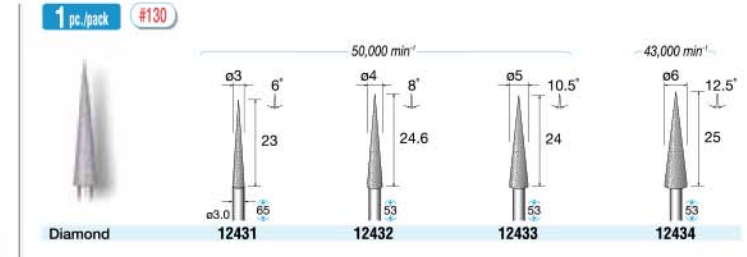
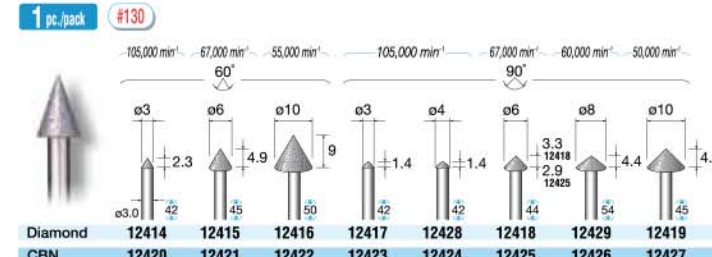


ELECTROPLATED DIAMOND/CBN BURS

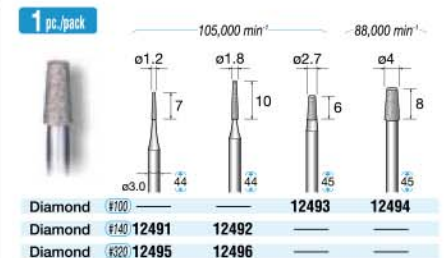
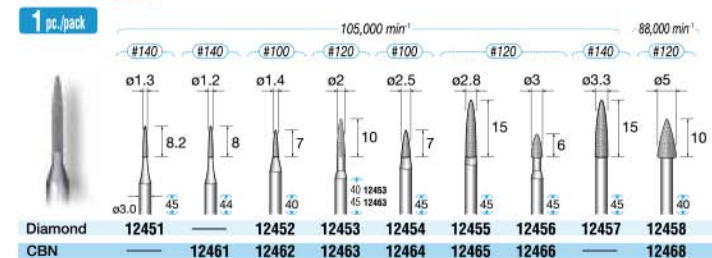
SHANK Ø3.0



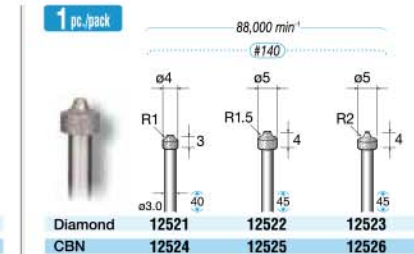
SHANK Ø3.0



SHANK Ø3.0

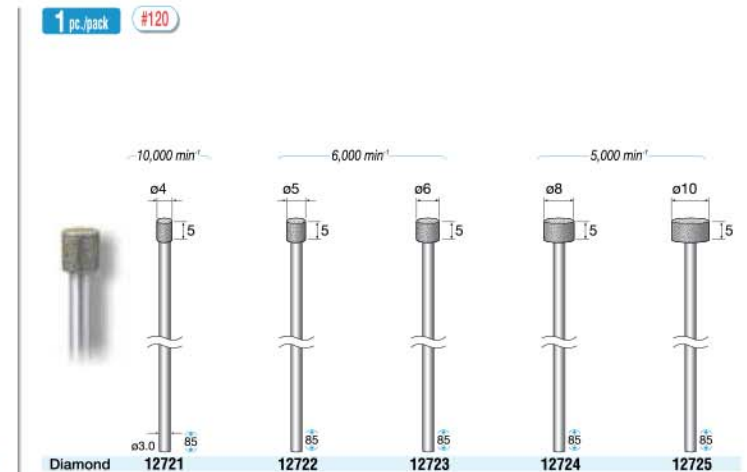
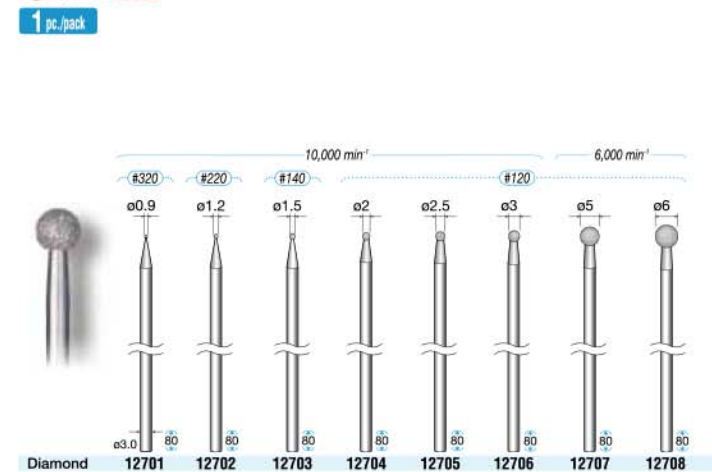


SHANK Ø3.0



3.0 mm shank diameter long shank series. Useful for grinding deep holes and grooves.

SHANK Ø3.0



ELECTROPLATED DIAMOND/CBN BURS

SHANK $\phi 3.0$

1 pc./pack #120

Diamond	12741	12742	12743	12744
---------	-------	-------	-------	-------

1 pc./pack #120

Diamond	12745	12746	12747	12748
---------	-------	-------	-------	-------

SHANK $\phi 3.0$

3 pcs./pack

Diamond	12801	12802	12803	12804	12805	12806	12807	12808	12809
---------	-------	-------	-------	-------	-------	-------	-------	-------	-------

SHANK $\phi 3.0$

3 pcs./pack

Diamond	12811	12812	12813	12814	12815
---------	-------	-------	-------	-------	-------

3 pcs./pack

Diamond	12821	12822	12823	12824	12825	12826	12827	12828	12829
---------	-------	-------	-------	-------	-------	-------	-------	-------	-------

SHANK $\phi 3.0$

3 pcs./pack

Diamond	12831	12832	12833	12834	12835	12836	12837
---------	-------	-------	-------	-------	-------	-------	-------

18 pcs./pack Assorted Set

12841

Set (18 pieces)
(Each code No. one piece-pack)

12801	12813	12825
12803	12815	12827
12805	12817	12828
12807	12819	12832
12809	12821	12833
12811	12823	12836

SHANK $\phi 6.0$

1 pc./pack

Diamond #100	13011	13012	13013 L=55	13014	13034
CBN #140	13101	13102	13103 L=50	13104	13124

SHANK $\phi 6.0$

1 pc./pack

Diamond #100	13035	13015	13036 L=87	13016	13037	13017	13038	13018	13039 L=80	13040	13019
CBN #140	13125	13105	13126 L=80	13106	13127	13107	13128	13108	13129 L=89	13130	13109

ELECTROPLATED DIAMOND/CBN BURS

SHANK $\phi 6.0$

1 pc./pack

Diamond #100	13021	13041	13042	13021	13022
CBN #140	13110	13131	13132	13111	13112

1 pc./pack

Diamond	13201	13202	13203	13204	13205
CBN	13206	13207	13208	13209	13210

SHANK $\phi 6.0$

1 pc./pack

Diamond	13241	13242	13243
CBN	13246	13247	13248

1 pc./pack

Diamond	13261	13262	13263
CBN	13266	13267	13268

SHANK $\phi 6.0$

1 pc./pack #120

Diamond	13301
CBN	13302

1 pc./pack #120

Diamond	13321	13322	13332
CBN	13326	13327	13336

SHANK $\phi 6.0$

1 pc./pack #120

Diamond	13340	13341	13342	13343
CBN	13344	13345	13346	

1 pc./pack #120

Diamond	13351	13352	13353	13354
CBN	13355	13356	13357	13358

SHANK $\phi 6.0$

1 pc./pack #120

Diamond	13371	13372
CBN	13375	13376

1 pc./pack #120

Diamond	13381	13382	13391	13392
CBN	13385	13386	13395	13396

SHANK $\phi 3.0$

1 pc./pack

Diamond	13820	13822	13824
---------	-------	-------	-------

SHANK $\phi 2.34$

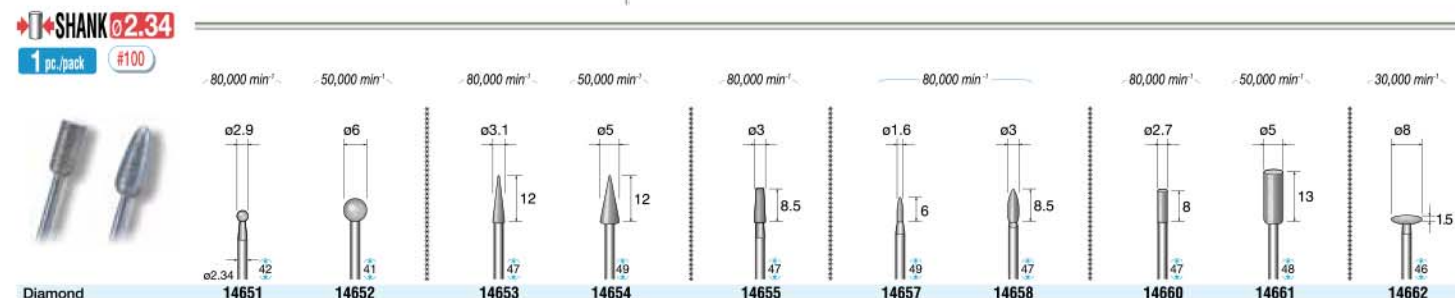
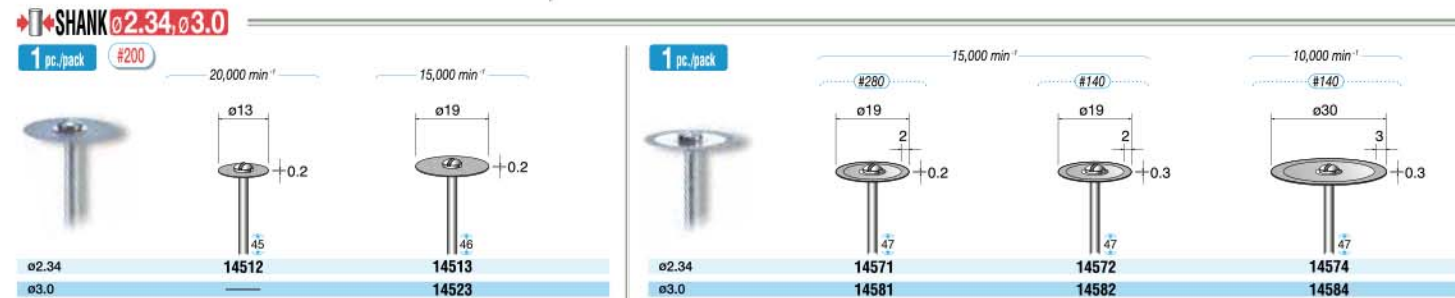
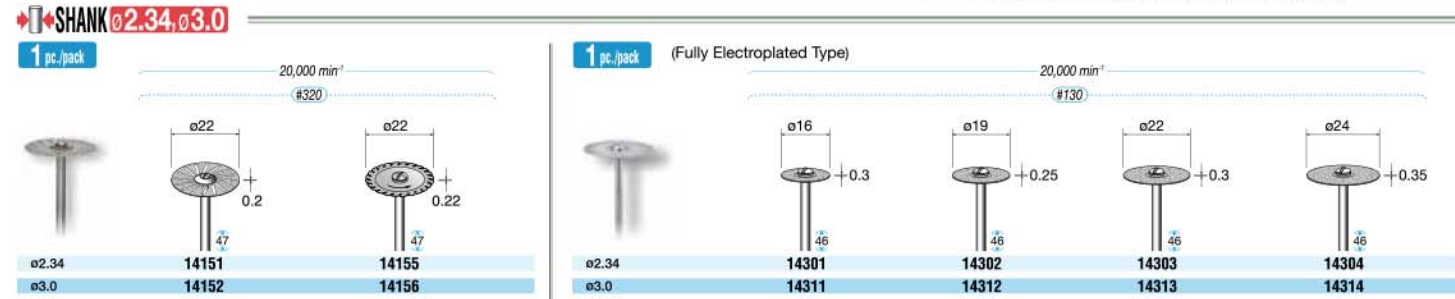
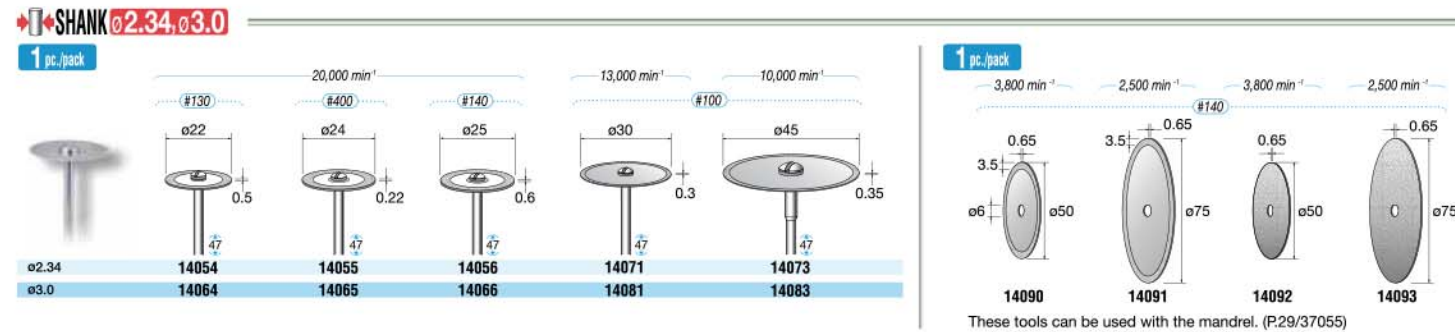
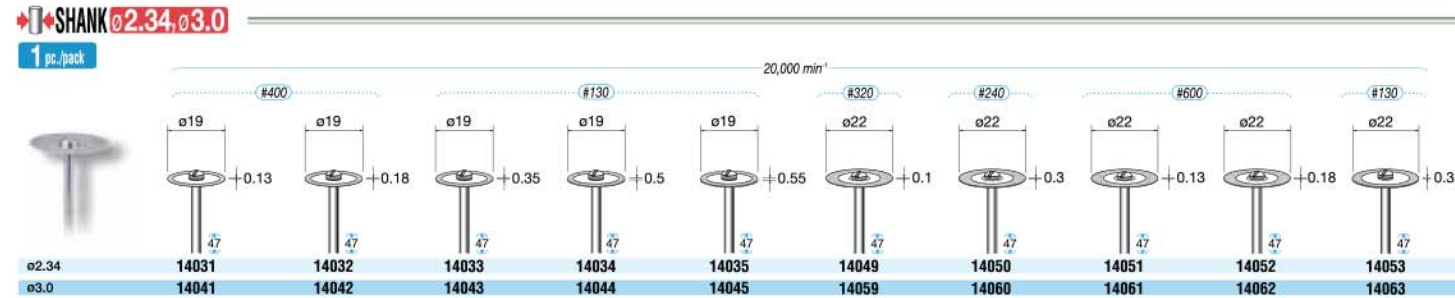
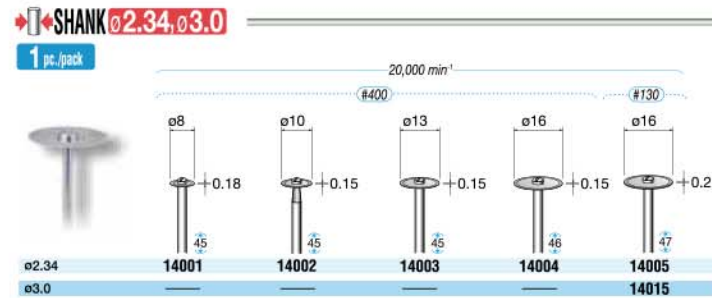
1 pc./pack #120

ϕ mm	Lmm	Code
0.8	8	13851
0.9	8	13852
1.0	8	13853
1.1	8	13854
1.2	10	13855
1.3	10	13856
1.4	10	13857
1.5	10	13858

ELECTROPLATED DIAMOND/CBN BURS



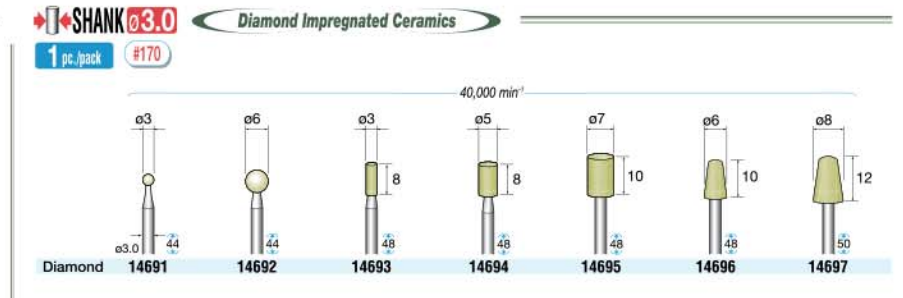
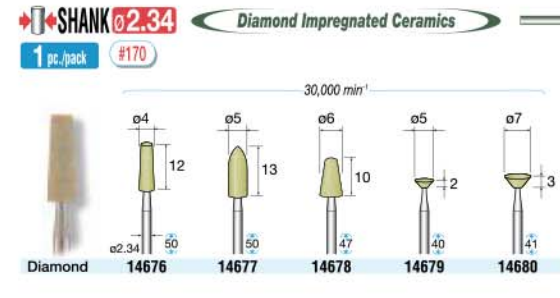
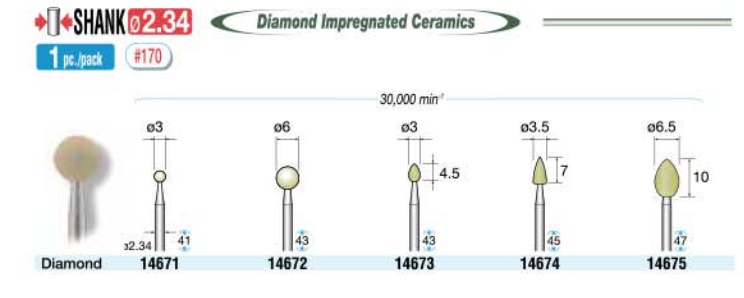
2.34 / 3.0 mm shank diameters. Diamond grinding discs, ideal for ceramics, FRP, glass, ferrites, various stones, and super hard alloys.



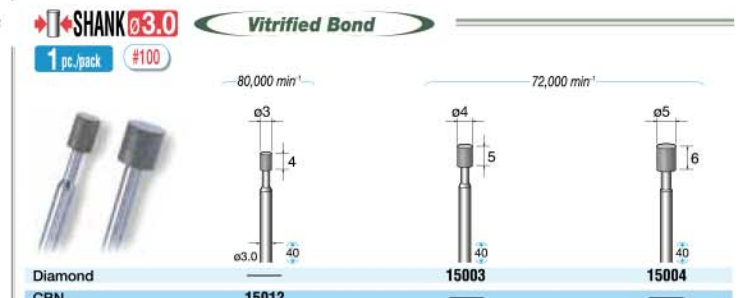
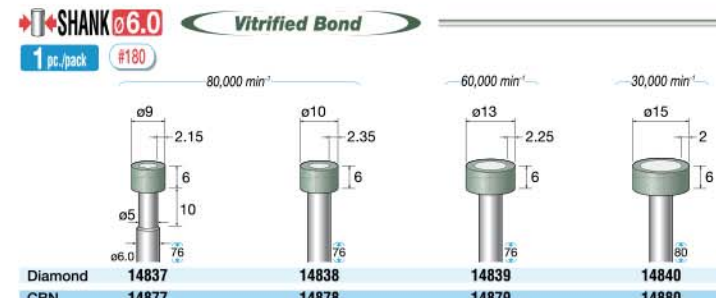
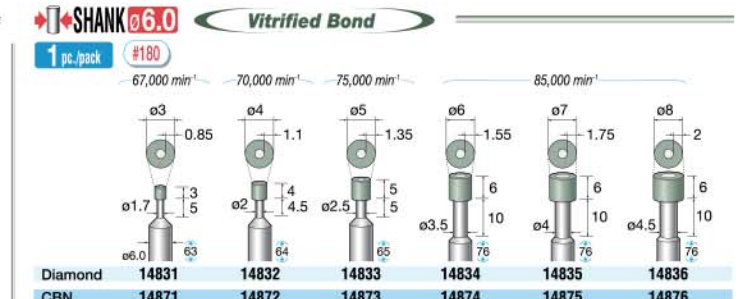
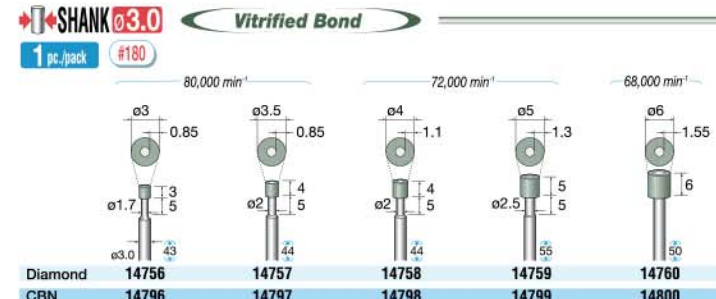
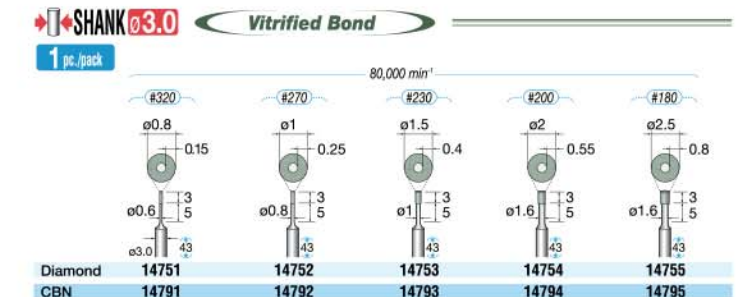
VITRIFIED / RESIN BONDED DIAMOND / CBN AND DIAMOND IMPREGNATED CERAMIC BARS



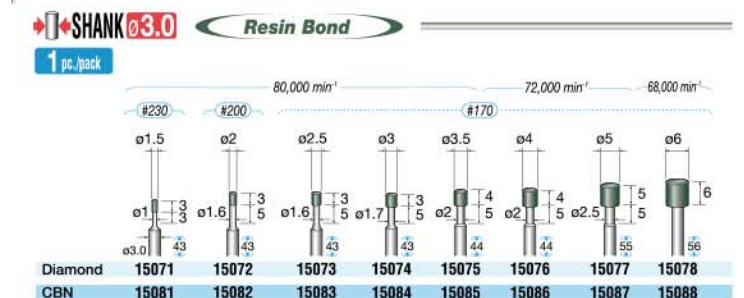
2.34 / 3.0 mm shank diameters. Diamond impregnated ceramics have the same basic cutting properties of standard abrasives but are very durable.



Vitrified, Diamond & CBN grindstones. Highly durable bonding and high abrasive concentration make these tools ideal for mass production applications.



Resin bonded, Diamond & CBN grindstones. Good for general grinding, these grindstones will exhibit better performance than standard abrasives.



VITRIFIED / RESIN BONDED DIAMOND / CBN AND DIAMOND IMPREGNATED CERAMIC BARS

SHANK $\phi 6.0$ **Resin Bond**

1 pc./pack

Diamond	15101	15102	15103	15104	15105
CBN	15111	15112	15113	15114	15115

SHANK $\phi 2.34$

12 pcs./pack **Assorted Set**

15301	
Set (12 pieces) (Each code No. one piece-pack)	
11204	11313
11208	11321
11213	11333
11242	11356
11247	11366
11250	11502

SHANK $\phi 3.0$

12 pcs./pack **Assorted Set**

15305	
Set (12 pieces) (Each code No. one piece-pack)	
12317	12403
12320	12405
12336	12412
12341	12415
12355	12451
12401	12492

SHANK $\phi 3.0$

10 pcs./pack **Assorted Set**

15311				15312			
Set (10 pieces) (Each code No. one piece-pack)				Set (10 pieces) (Each code No. one piece-pack)			
ϕ mm	CAT. NO.	ϕ mm	CAT. NO.	ϕ mm	CAT. NO.	ϕ mm	CAT. NO.
0.8	12009	3	12058	0.8	12019	3	12158
1	12051	3.5	12060	1	12151	3.5	12160
1.5	12053	4	12061	1.5	12153	4	12161
2	12055	5	12063	2	12155	5	12163
2.5	12057	6	12065	2.5	12157	6	12165

SHANK $\phi 3.0$

8 pcs./pack **Assorted Set**

15321				15322			
Set (8 pieces) (Each code No. one piece-pack)				Set (8 pieces) (Each code No. one piece-pack)			
ϕ mm	CAT. NO.	ϕ mm	CAT. NO.	ϕ mm	CAT. NO.	ϕ mm	CAT. NO.
1	14752	3	14756	1	14792	3	14796
1.5	14753	4	14758	1.5	14793	4	14798
2	14754	5	14759	2	14794	5	14799
2.5	14755	6	14760	2.5	14795	6	14800

SHANK $\phi 3.0$

8 pcs./pack **Assorted Set**

15331				15332			
Set (8 pieces) (Each code No. one piece-pack)				Set (8 pieces) (Each code No. one piece-pack)			
ϕ mm	CAT. NO.	ϕ mm	CAT. NO.	ϕ mm	CAT. NO.	ϕ mm	CAT. NO.
1.5	15071	3.5	15075	1.5	15081	3.5	15085
2	15072	4	15076	2	15082	4	15086
2.5	15073	5	15077	2.5	15083	5	15087
3	15074	6	15078	3	15084	6	15088

CARBIDE CUTTERS

Tool / Cut types and features (*'S' Shows available shank sizes for each cut type)

<p>Single Cut (1)</p> <p>Single cut produces superior surface finishes. * $\phi 1.6, \phi 2.34, \phi 3.0, \phi 6.0$</p>	<p>Single Cut Coarse (2)</p> <p>Single Cut Coarse has similar cutting characteristics to Single cut, but is better for gummy materials due to deep helix design. Ideal for rubbers, resins, and plasters. * $\phi 2.34, \phi 3.0$</p>	<p>Chip Breaker (3)</p> <p>Chip Breaker is the single cut with a chip breaker. The chip breaker clears chips easily making aggressive cutting very efficient. Surface finish is rougher than single cut. * $\phi 1.6, \phi 2.34$</p>	<p>Alumina Cut (4)</p> <p>Alumina Cut has very sharp edge with a deep helix. The deep helix design prevents tool loading. Ideal for aluminum, magnesium alloys, plastics and hard rubbers. * $\phi 6.0$</p>
<p>Double Cut (5)</p> <p>Smooth Cut with small tooth design minimizes chatter. This tool also helps enhance safety as it produces very small chips. * $\phi 2.34, \phi 3.0, \phi 6.0$</p>	<p>Double Cut Coarse (6)</p> <p>Deep helix design prevents tool loading. Ideal for grinding hard rubbers, resins and plaster. * $\phi 2.34$</p>	<p>Diamond Cut Fine (7)</p> <p>Diamond Cut Fine (7) has similar characteristics as Double Cut (5). Specially designed for very hard materials. Produces fine surface finish. * $\phi 2.34, \phi 3.0$</p>	<p>Diamond Cut Coarse (8)</p> <p>Specially designed for very hard materials. Produces fine surface finish. * $\phi 3.0, \phi 6.0$</p>

Titanium coating insures long tool life and minimizes tool loading.

SHANK $\phi 3.0$

1 pc./pack **Double Cut**

50,000 min⁻¹, 40,000 min⁻¹, 80,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹, 50,000 min⁻¹

SHANK $\phi 3.0$

1 pc./pack **Double Cut**

1 pc./pack **Single Cut**

40,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹, 60,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹, 80,000 min⁻¹, 70,000 min⁻¹, 50,000 min⁻¹

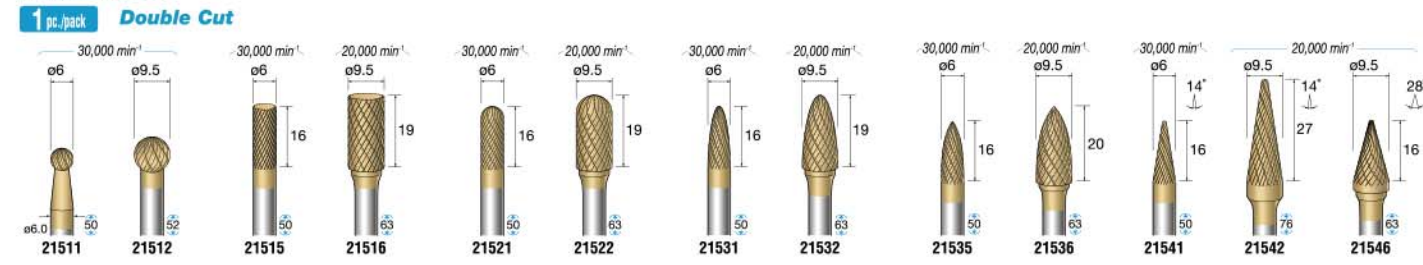
SHANK $\phi 3.0$

1 pc./pack **Single Cut**

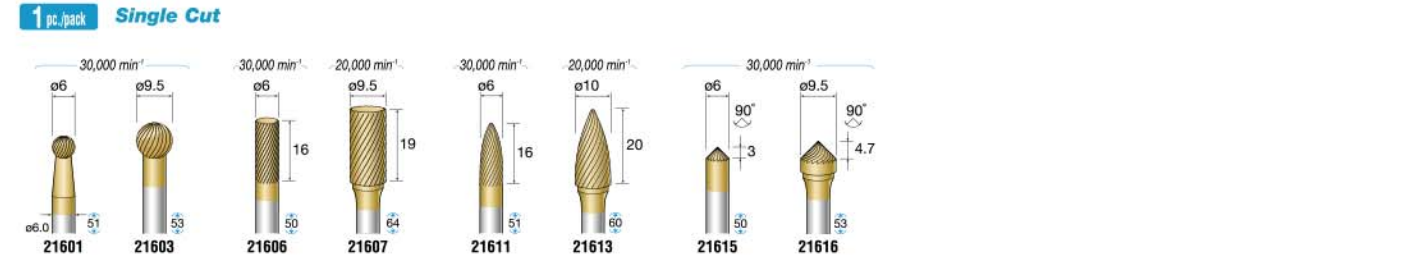
40,000 min⁻¹, 60,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹, 50,000 min⁻¹, 40,000 min⁻¹

CARBIDE CUTTERS

SHANK $\phi 6.0$

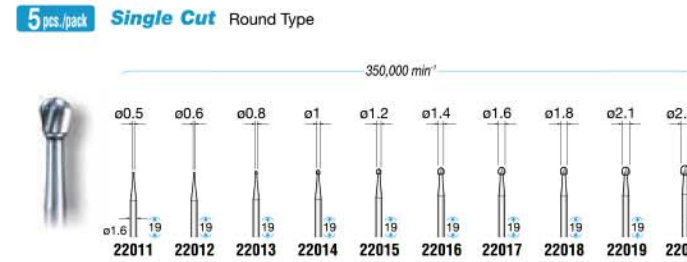


SHANK $\phi 6.0$

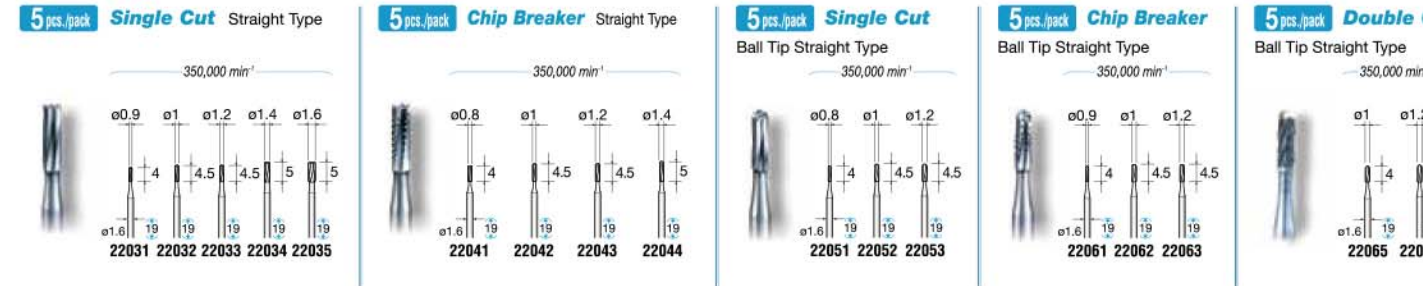


1.6 mm shank diameter series.
Short type for high speed rotation.
Best for grinding very small parts.

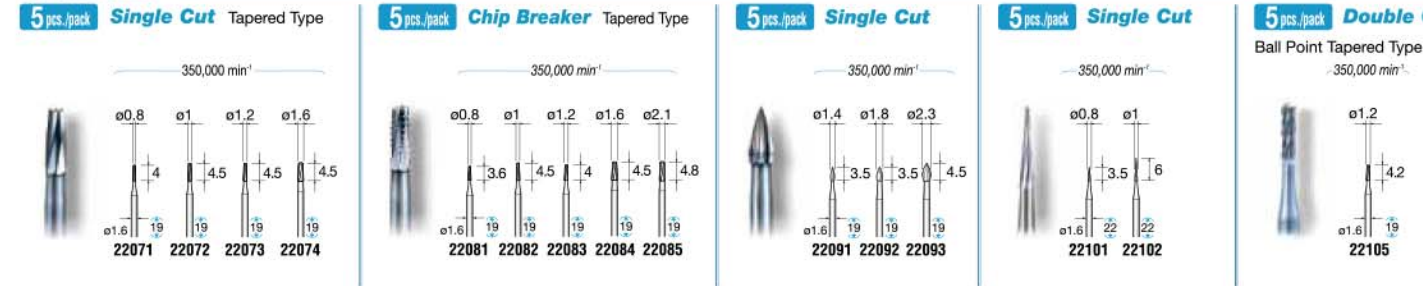
SHANK $\phi 1.6$



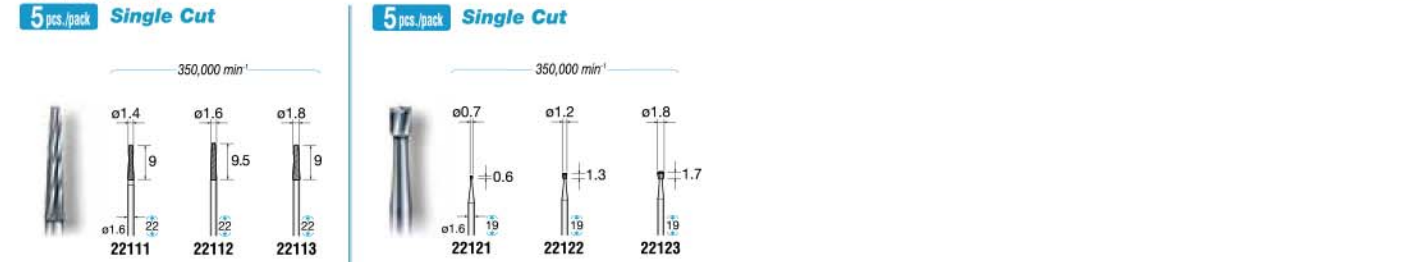
SHANK $\phi 1.6$



SHANK $\phi 1.6$



SHANK $\phi 1.6$

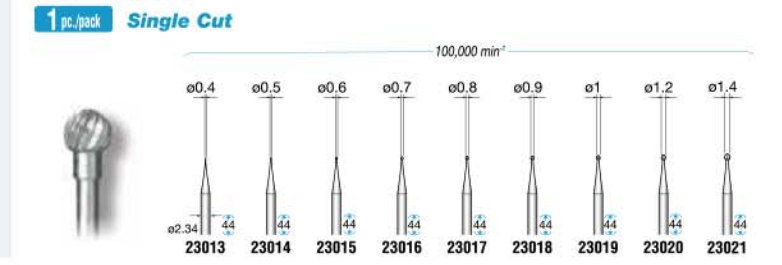


CARBIDE CUTTERS

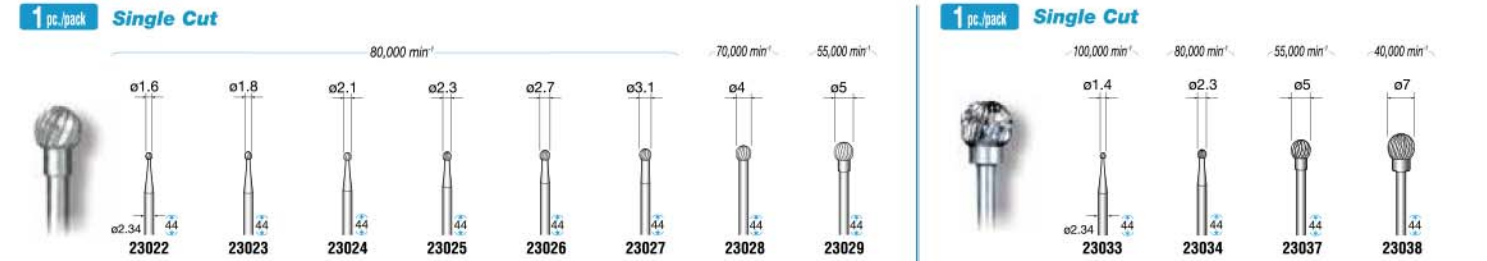


2.34 mm shank diameter series.
Ideal for engraving, and high precision burr removal.

SHANK $\phi 2.34$



SHANK $\phi 2.34$



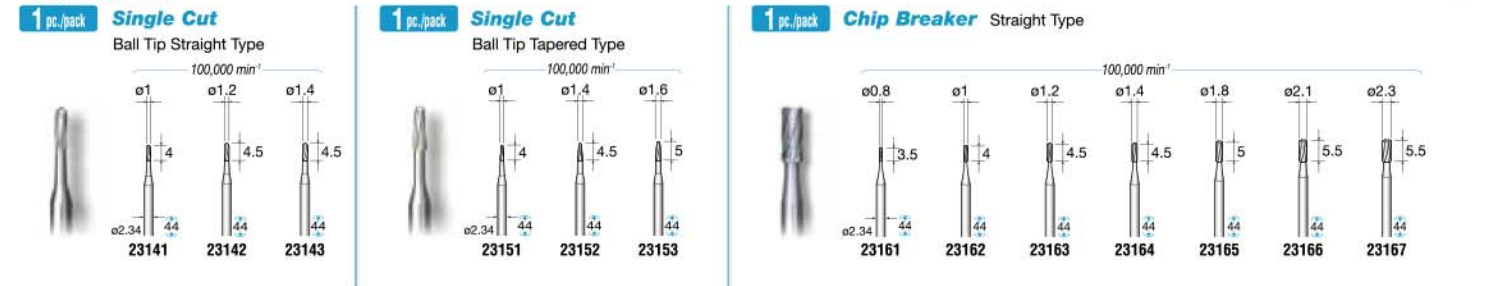
SHANK $\phi 2.34$



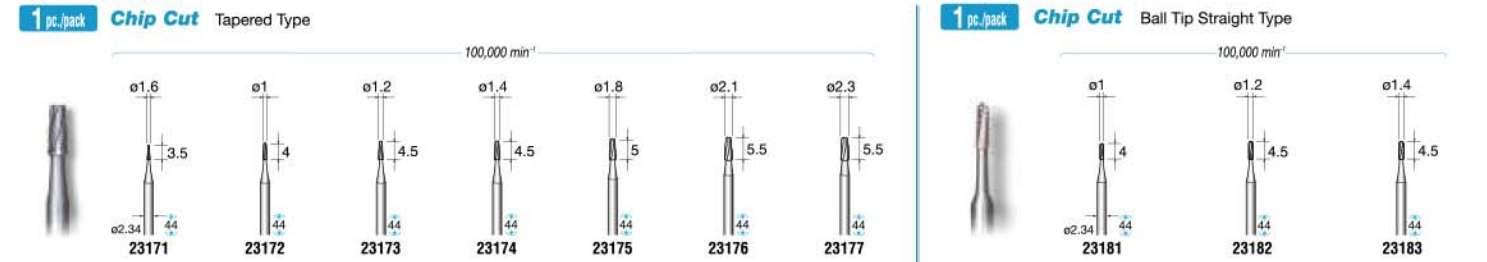
SHANK $\phi 2.34$



SHANK $\phi 2.34$



SHANK $\phi 2.34$



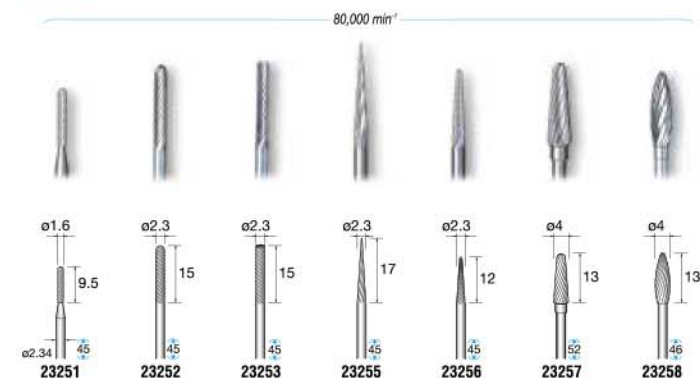
Diamond / CBN
Carbide Cutters
Specialty Tools
Mounted Points
Rubberized Abrasives
Flap Wheels
Polishing Brushes
Felt Bobs
Abrasive Compounds & Polishing Tools
NSK Exclusive Tools

Diamond / CBN
Carbide Cutters
Specialty Tools
Mounted Points
Rubberized Abrasives
Flap Wheels
Polishing Brushes
Felt Bobs
Abrasive Compounds & Polishing Tools
NSK Exclusive Tools

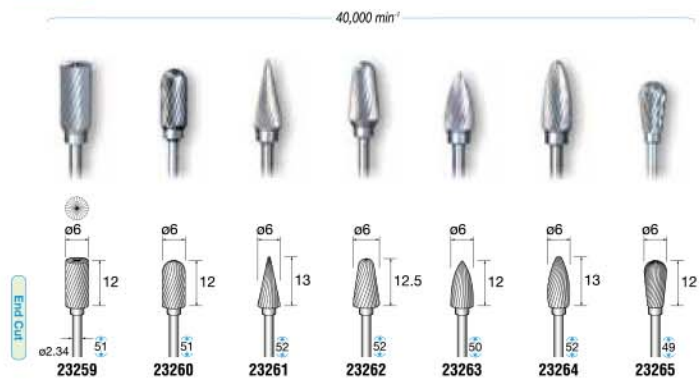
CARBIDE CUTTERS

SHANK $\phi 2.34$

1 pc./pack Single Cut

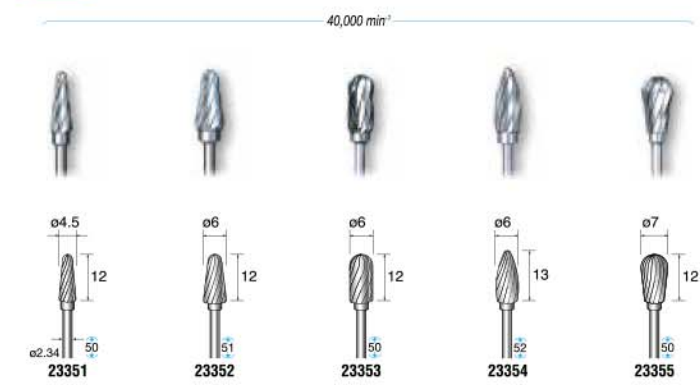


1 pc./pack Single Cut

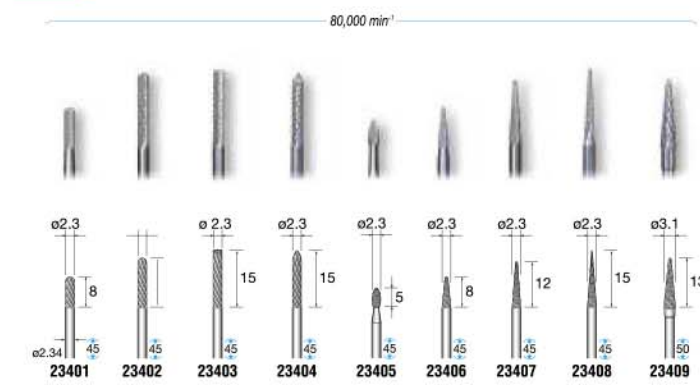


SHANK $\phi 2.34$

1 pc./pack Single Cut

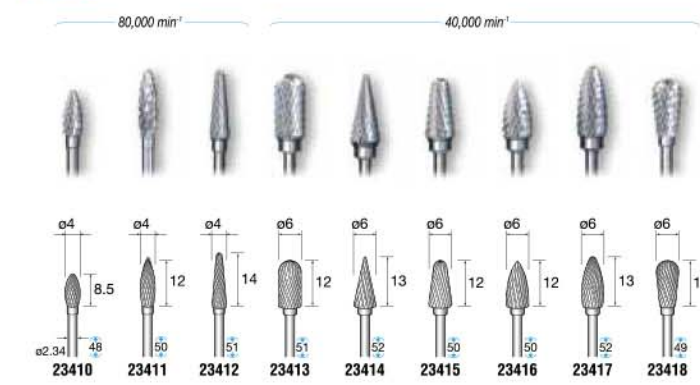


1 pc./pack Double Cut

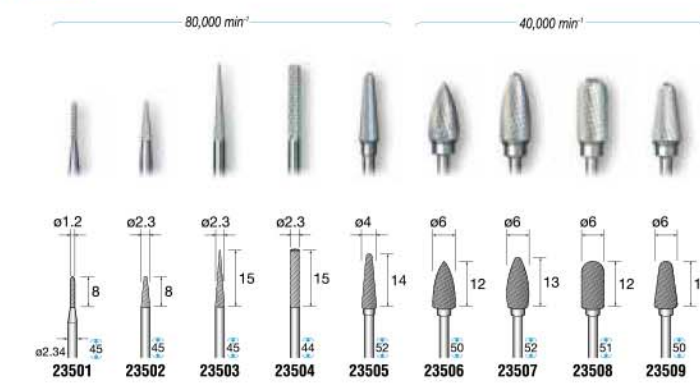


SHANK $\phi 2.34$

1 pc./pack Double Cut

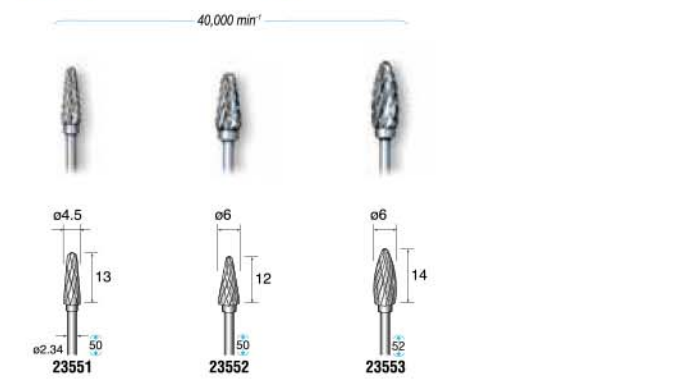


1 pc./pack Diamond Cut <Fine>

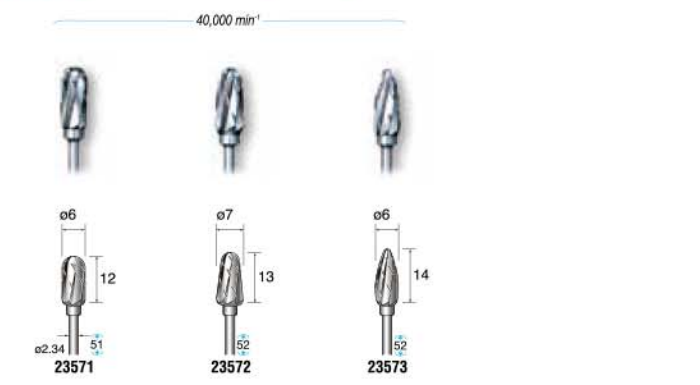


SHANK $\phi 2.34$

1 pc./pack Double Cut <Rough>



1 pc./pack Double Cut <Super Rough>



CARBIDE CUTTERS

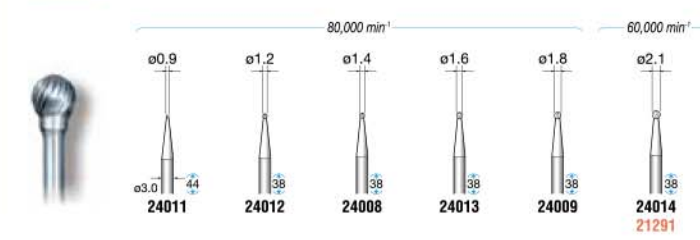
Orange code numbers indicate Titanium-Coated Type.



3.0 mm shank diameter series. High quality carbide cutters offer superior durability and produce fine surface finishes.

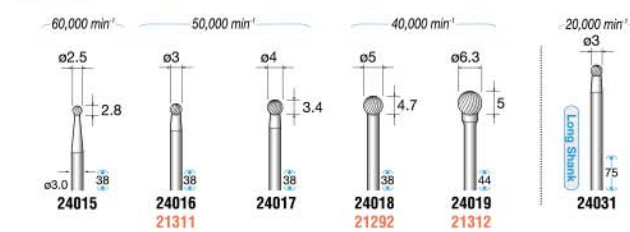
SHANK $\phi 3.0$

1 pc./pack Single Cut

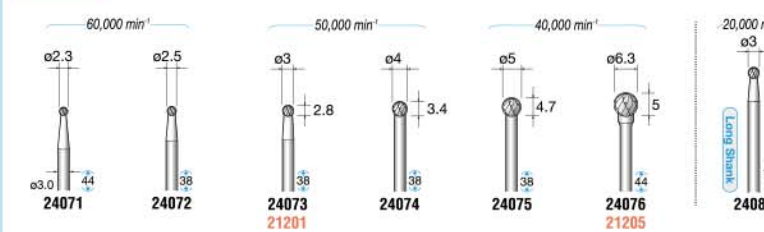


SHANK $\phi 3.0$

1 pc./pack Single Cut

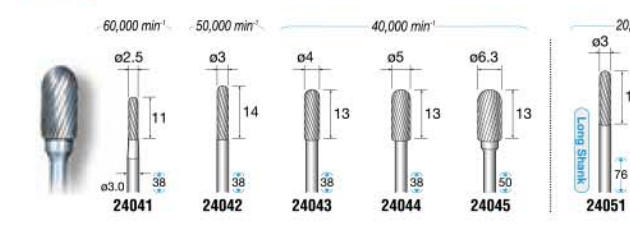


1 pc./pack Double Cut

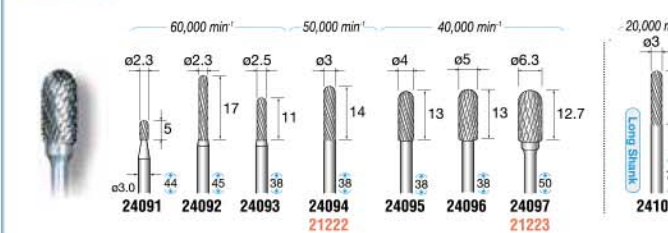


SHANK $\phi 3.0$

1 pc./pack Single Cut

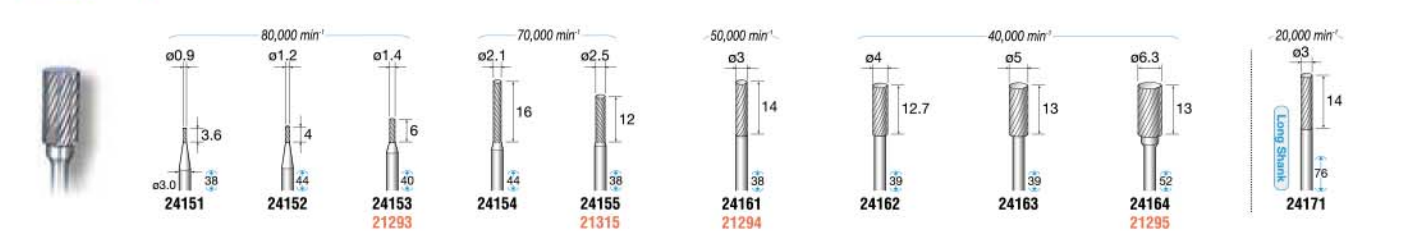


1 pc./pack Double Cut



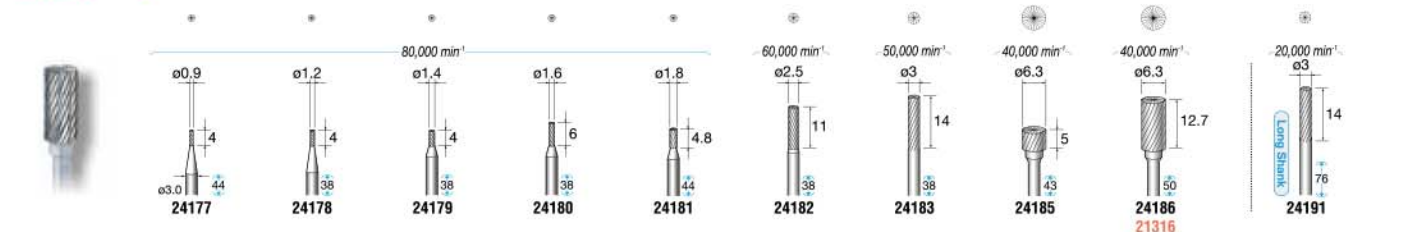
SHANK $\phi 3.0$

1 pc./pack Single Cut



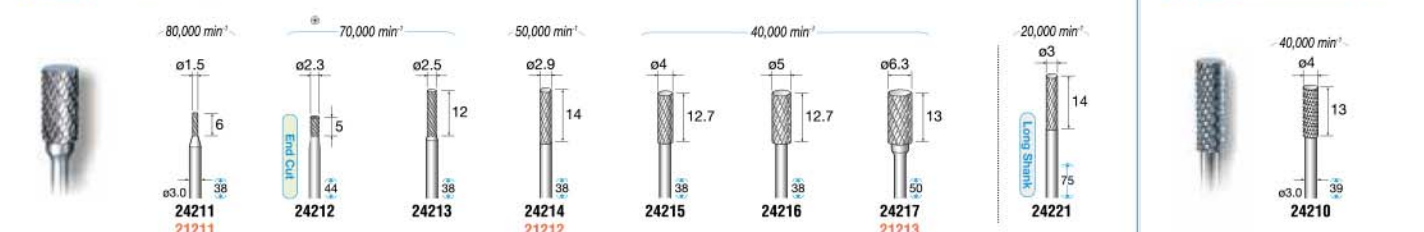
SHANK $\phi 3.0$

1 pc./pack Single Cut End Cut



SHANK $\phi 3.0$

1 pc./pack Double Cut



1 pc./pack Diamond Cut

CARBIDE CUTTERS

Orange code numbers indicate Titanium-Coated Type.

SHANK $\phi 3.0$

1 pc./pack **Double Cut** End Cut

80,000 min⁻¹ $\phi 1.5$ 24231
 60,000 min⁻¹ $\phi 2.5$ 24232
 50,000 min⁻¹ $\phi 3$ 24233 21215
 40,000 min⁻¹ $\phi 6.3$ 24234 21216
 40,000 min⁻¹ $\phi 6.3$ 24235
 20,000 min⁻¹ $\phi 3$ 24241

1 pc./pack **Single Cut**

50,000 min⁻¹ $\phi 3$ 24261
 40,000 min⁻¹ $\phi 5$ 24262
 20,000 min⁻¹ $\phi 6.3$ 24263
 20,000 min⁻¹ $\phi 3$ 24271

SHANK $\phi 3.0$

1 pc./pack **Single Cut**

50,000 min⁻¹ $\phi 3$ 24281
 40,000 min⁻¹ $\phi 3$ 24282
 40,000 min⁻¹ $\phi 5$ 24283
 20,000 min⁻¹ $\phi 6.3$ 24284 21324
 20,000 min⁻¹ $\phi 3$ 24291

1 pc./pack **Single Cut**

50,000 min⁻¹ $\phi 3$ 24301 21321
 40,000 min⁻¹ $\phi 3$ 24302 21322
 40,000 min⁻¹ $\phi 5$ 24303 21322
 40,000 min⁻¹ $\phi 6.3$ 24304 21323
 20,000 min⁻¹ $\phi 6.3$ 24305 21323
 20,000 min⁻¹ $\phi 3$ 24311

SHANK $\phi 3.0$

1 pc./pack **Double Cut**

50,000 min⁻¹ $\phi 3$ 24321 24231
 40,000 min⁻¹ $\phi 5$ 24322
 20,000 min⁻¹ $\phi 6.3$ 24323 24235
 20,000 min⁻¹ $\phi 3$ 24331

1 pc./pack **Double Cut**

50,000 min⁻¹ $\phi 3$ 24341 21241
 40,000 min⁻¹ $\phi 3$ 24342 21242
 40,000 min⁻¹ $\phi 5$ 24343
 20,000 min⁻¹ $\phi 6.3$ 24344 21245
 20,000 min⁻¹ $\phi 3$ 24351

SHANK $\phi 3.0$

1 pc./pack **Double Cut**

60,000 min⁻¹ $\phi 2.2$ 24361
 50,000 min⁻¹ $\phi 3$ 24362 21261
 40,000 min⁻¹ $\phi 3$ 24363 21262
 40,000 min⁻¹ $\phi 5$ 24364
 40,000 min⁻¹ $\phi 6.3$ 24365 21265
 20,000 min⁻¹ $\phi 6.3$ 24366 21265
 20,000 min⁻¹ $\phi 3$ 24371

1 pc./pack **Single Cut**

50,000 min⁻¹ $\phi 3$ 24402 21296
 40,000 min⁻¹ $\phi 5$ 24403
 20,000 min⁻¹ $\phi 6.3$ 24411

SHANK $\phi 3.0$

1 pc./pack **Single Cut**

40,000 min⁻¹ $\phi 6$ 24425
 40,000 min⁻¹ $\phi 6$ 24435
 60,000 min⁻¹ $\phi 2.3$ 24450

1 pc./pack **Single Cut**

50,000 min⁻¹ $\phi 3$ 24451 21318
 40,000 min⁻¹ $\phi 3$ 24452 21319
 40,000 min⁻¹ $\phi 5$ 24453
 20,000 min⁻¹ $\phi 6.3$ 24454 21297
 20,000 min⁻¹ $\phi 3$ 24461

SHANK $\phi 3.0$

1 pc./pack **Single Cut**

60,000 min⁻¹ $\phi 2.5$ 24471
 50,000 min⁻¹ $\phi 3$ 24472
 40,000 min⁻¹ $\phi 5$ 24473
 40,000 min⁻¹ $\phi 6.3$ 24474 21299
 50,000 min⁻¹ $\phi 3$ 24475
 40,000 min⁻¹ $\phi 6.3$ 24476

1 pc./pack **Single Cut**

40,000 min⁻¹ $\phi 5$ 24485 21298
 50,000 min⁻¹ $\phi 3$ 24491
 50,000 min⁻¹ $\phi 3$ 24492
 50,000 min⁻¹ $\phi 3$ 24493
 50,000 min⁻¹ $\phi 3$ 24494

CARBIDE CUTTERS

Orange code numbers indicate Titanium-Coated Type.

SHANK $\phi 3.0$

1 pc./pack **Single Cut**

50,000 min⁻¹ $\phi 6.3$ 24496
 90° $\phi 6.3$ 24497

1 pc./pack **Double Cut**

60,000 min⁻¹ $\phi 2.2$ 24501 21251
 50,000 min⁻¹ $\phi 2.3$ 24502
 40,000 min⁻¹ $\phi 3$ 24503 21252
 40,000 min⁻¹ $\phi 5$ 24504 21253
 20,000 min⁻¹ $\phi 3$ 24506

1 pc./pack **Diamond Cut**

40,000 min⁻¹ $\phi 4$ 24525

SHANK $\phi 3.0$

1 pc./pack **Double Cut**

40,000 min⁻¹ $\phi 6$ 24515

1 pc./pack **Diamond Cut**

60,000 min⁻¹ $\phi 2.3$ 24551

1 pc./pack **Double Cut**

50,000 min⁻¹ $\phi 3$ 24531 21271
 40,000 min⁻¹ $\phi 3$ 24532 21272
 40,000 min⁻¹ $\phi 5$ 24533
 20,000 min⁻¹ $\phi 6.3$ 24534 21275
 20,000 min⁻¹ $\phi 3$ 24541

SHANK $\phi 3.0$

1 pc./pack **Double Cut**

60,000 min⁻¹ $\phi 2.2$ 24561
 80° $\phi 2.5$ 24562
 80° $\phi 3$ 24563
 80° $\phi 5$ 24564
 80° $\phi 6.3$ 24565

1 pc./pack **Double Cut**

40,000 min⁻¹ $\phi 6$ 24572

1 pc./pack **Double Cut**

50,000 min⁻¹ $\phi 3$ 24581
 90° $\phi 3$ 24582

SHANK $\phi 3.0$

1 pc./pack **Alloy Cut**

60,000 min⁻¹ $\phi 3$ 24611
 2.8 $\phi 6.3$ 24612
 5 $\phi 2.5$ 24621
 11 $\phi 3$ 24622
 14 $\phi 6.3$ 24623
 12.7 $\phi 3$ 24631
 14 $\phi 6.3$ 24632
 12.7 $\phi 3$ 24635
 12.7 $\phi 6.3$ 24636
 5.5 $\phi 3$ 24641
 9.5 $\phi 6.3$ 24642
 12.7 $\phi 3$ 24645

End Cut

60,000 min⁻¹ $\phi 3$ 24611
 2.8 $\phi 6.3$ 24612
 5 $\phi 2.5$ 24621
 11 $\phi 3$ 24622
 14 $\phi 6.3$ 24623
 12.7 $\phi 3$ 24631
 14 $\phi 6.3$ 24632
 12.7 $\phi 3$ 24635
 12.7 $\phi 6.3$ 24636
 5.5 $\phi 3$ 24641
 9.5 $\phi 6.3$ 24642
 12.7 $\phi 3$ 24645

SHANK $\phi 3.0$

1 pc./pack **Alloy Cut**

60,000 min⁻¹ $\phi 6.3$ 24646
 12.7 $\phi 2.9$ 24651
 6.3 $\phi 3$ 24652
 8 $\phi 3$ 24653
 12.7 $\phi 6.3$ 24654
 12.7 $\phi 3$ 24661
 11 $\phi 3$ 24662
 16 $\phi 6.3$ 24663

1 pc./pack **Alloy Cut**

60,000 min⁻¹ $\phi 6.3$ 24646
 12.7 $\phi 2.9$ 24651
 6.3 $\phi 3$ 24652
 8 $\phi 3$ 24653
 12.7 $\phi 6.3$ 24654
 12.7 $\phi 3$ 24661
 11 $\phi 3$ 24662
 16 $\phi 6.3$ 24663

12 pcs./pack **Assorted Set**

24601
 Set (12 pieces)
 (Each code No. one piece-pack)

24611	24646
24612	24651
24622	24653
24623	24654
24631	24661
24632	24663

SHANK $\phi 6.0$

1 pc./pack **Alloy Cut**

30,000 min⁻¹ $\phi 6$ 24670
 30,000 min⁻¹ $\phi 8$ 24671
 20,000 min⁻¹ $\phi 9.5$ 24672
 20,000 min⁻¹ $\phi 12.7$ 24673

1 pc./pack **Alloy Cut**

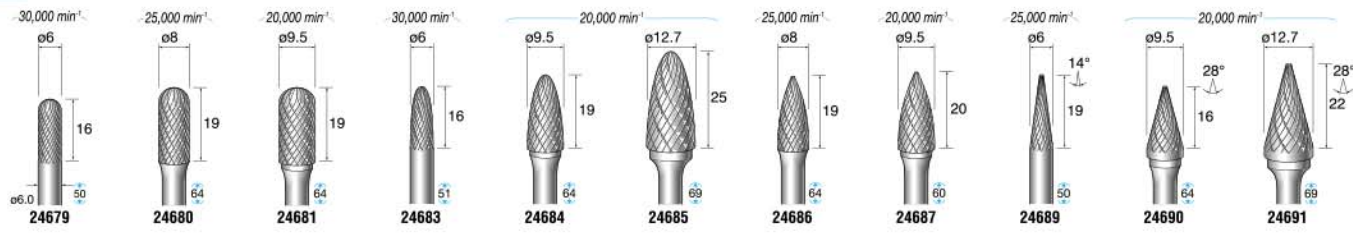
30,000 min⁻¹ $\phi 5$ 24674
 30,000 min⁻¹ $\phi 6$ 24675
 25,000 min⁻¹ $\phi 8$ 24676
 20,000 min⁻¹ $\phi 9.5$ 24677
 20,000 min⁻¹ $\phi 12.7$ 24678

CARBIDE CUTTERS

Orange code numbers indicate Titanium-Coated Type.

SHANK $\phi 6.0$

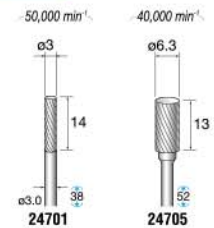
1 pc./pack Alloy Cut



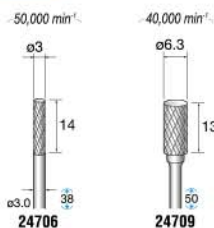
Left Handed
Left handed carbide cutters. For left handed grinders and a wide variety of automated machines.

SHANK $\phi 3.0$ Left Handed

1 pc./pack Single Cut

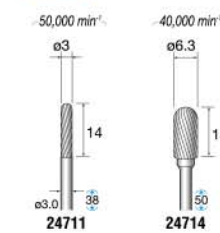


1 pc./pack Double Cut

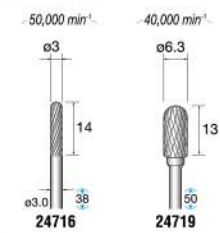


SHANK $\phi 3.0$ Left Handed

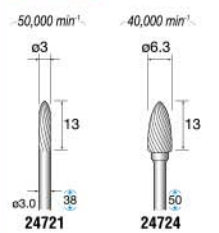
1 pc./pack Single Cut



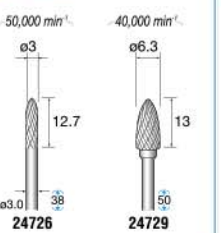
1 pc./pack Double Cut



1 pc./pack Single Cut

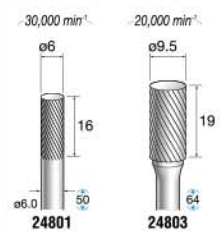


1 pc./pack Double Cut

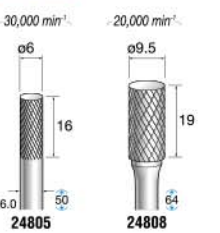


SHANK $\phi 6.0$ Left Handed

1 pc./pack Single Cut

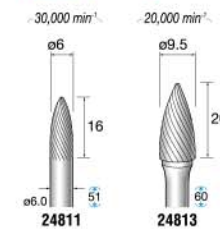


1 pc./pack Double Cut

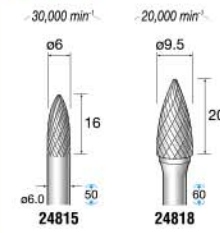


SHANK $\phi 6.0$ Left Handed

1 pc./pack Single Cut



1 pc./pack Double Cut



6.0 mm shank diameter series. Ideal for grinding, polishing and general finishing of large work areas.

SHANK $\phi 6.0$

1 pc./pack Single Cut

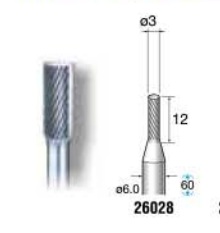


1 pc./pack Double Cut

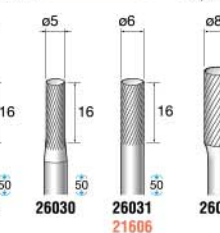


SHANK $\phi 6.0$

1 pc./pack Single Cut



1 pc./pack Double Cut

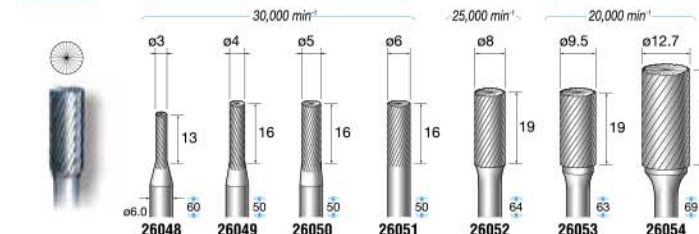


CARBIDE CUTTERS

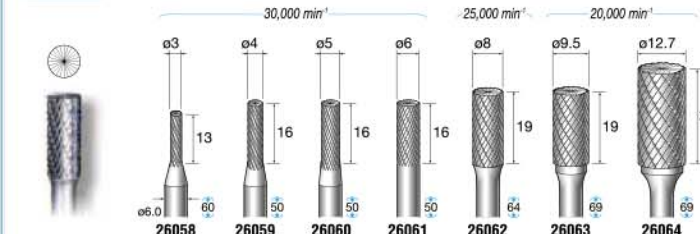
Orange code numbers indicate Titanium-Coated Type.

SHANK $\phi 6.0$

1 pc./pack Single Cut

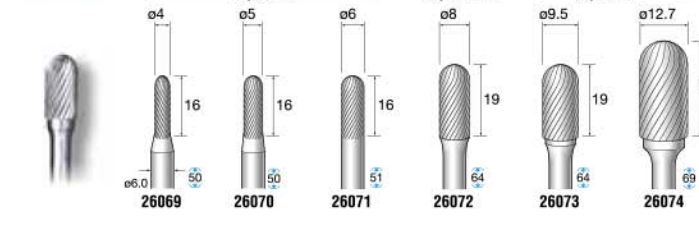


1 pc./pack Double Cut

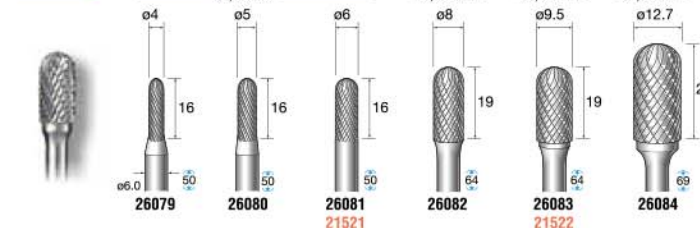


SHANK $\phi 6.0$

1 pc./pack Single Cut

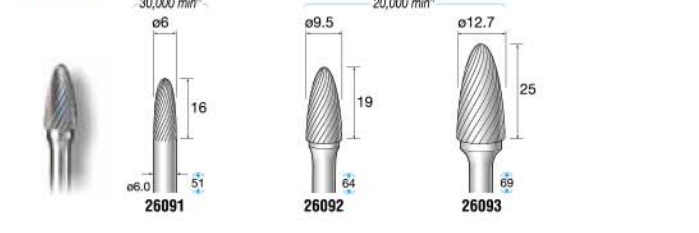


1 pc./pack Double Cut

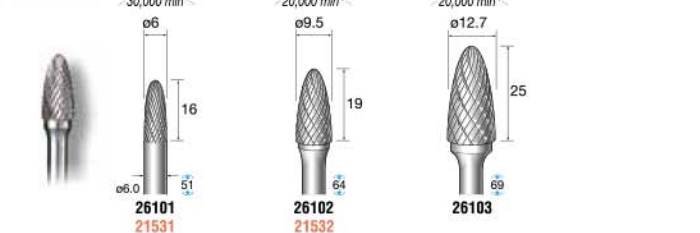


SHANK $\phi 6.0$

1 pc./pack Single Cut

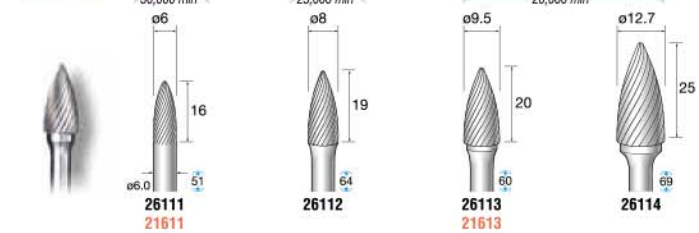


1 pc./pack Double Cut

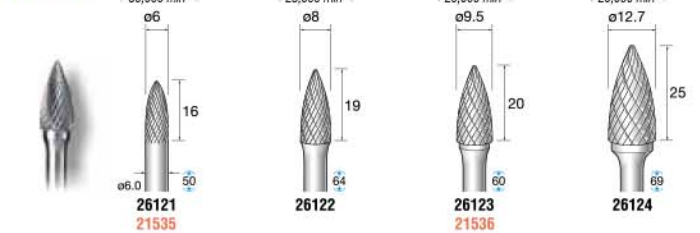


SHANK $\phi 6.0$

1 pc./pack Single Cut

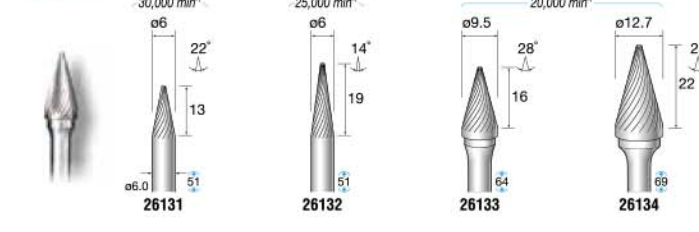


1 pc./pack Double Cut

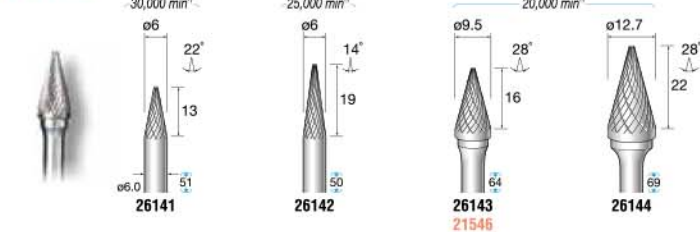


SHANK $\phi 6.0$

1 pc./pack Single Cut

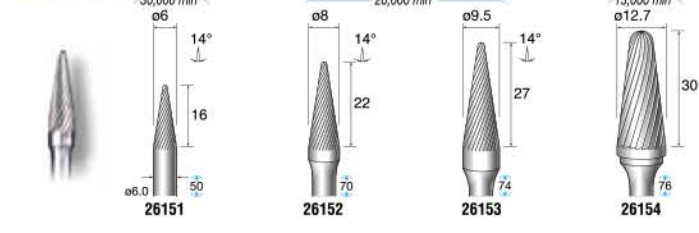


1 pc./pack Double Cut

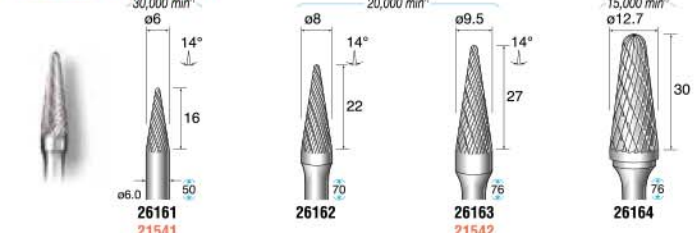


SHANK $\phi 6.0$

1 pc./pack Single Cut



1 pc./pack Double Cut

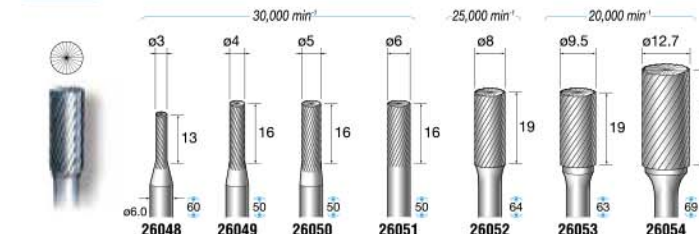


CARBIDE CUTTERS

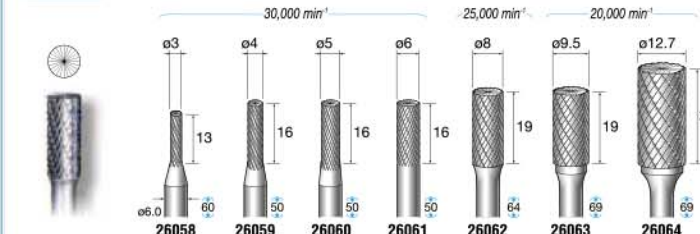
Orange code numbers indicate Titanium-Coated Type.

SHANK $\phi 6.0$

1 pc./pack Single Cut

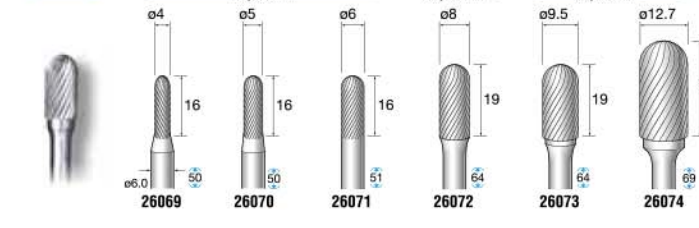


1 pc./pack Double Cut

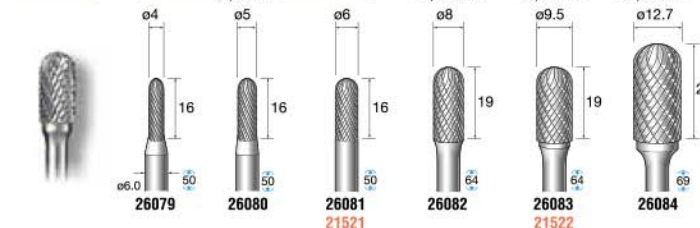


SHANK $\phi 6.0$

1 pc./pack Single Cut

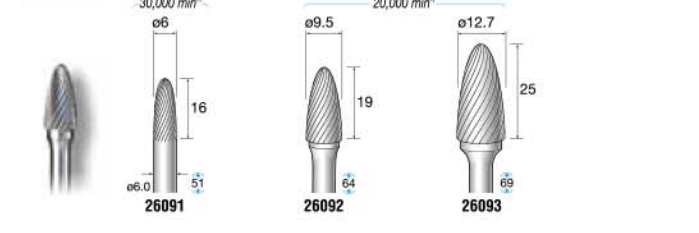


1 pc./pack Double Cut

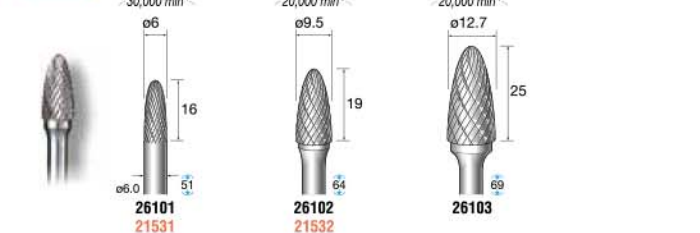


SHANK $\phi 6.0$

1 pc./pack Single Cut

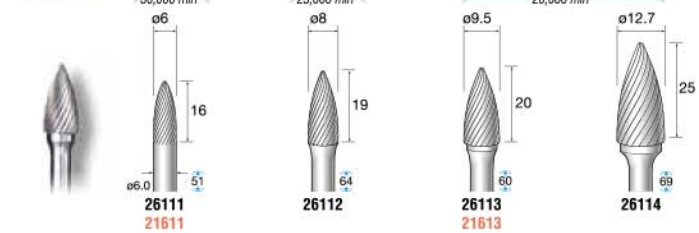


1 pc./pack Double Cut

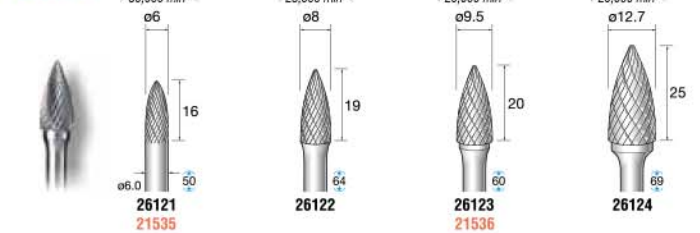


SHANK $\phi 6.0$

1 pc./pack Single Cut

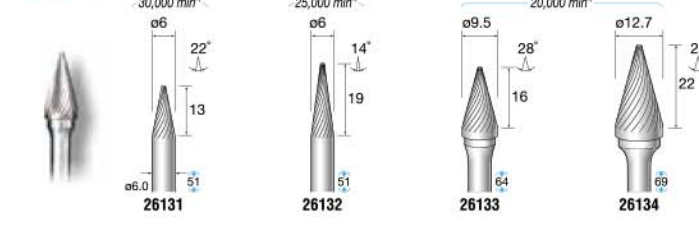


1 pc./pack Double Cut

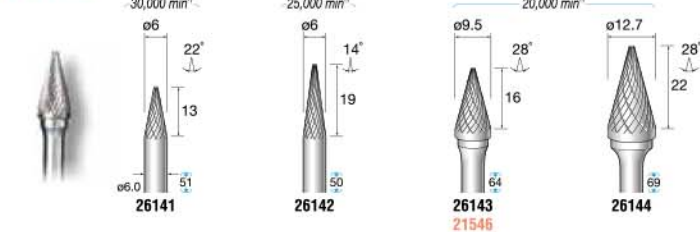


SHANK $\phi 6.0$

1 pc./pack Single Cut

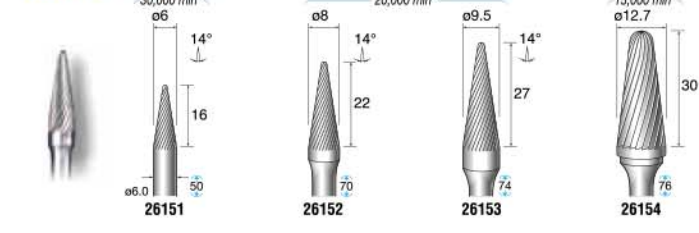


1 pc./pack Double Cut

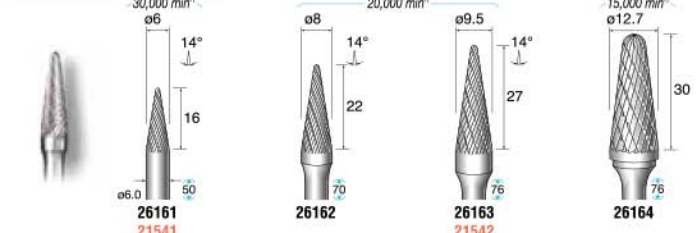


SHANK $\phi 6.0$

1 pc./pack Single Cut

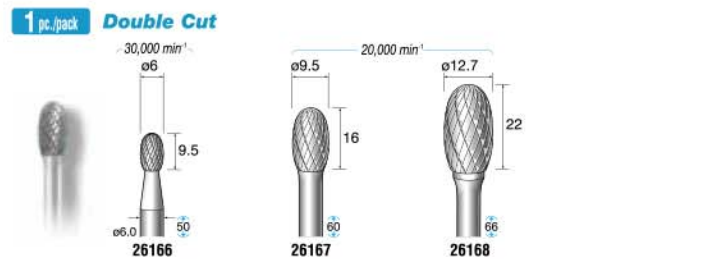
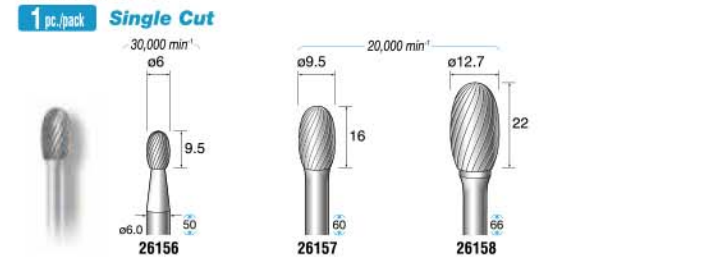


1 pc./pack Double Cut

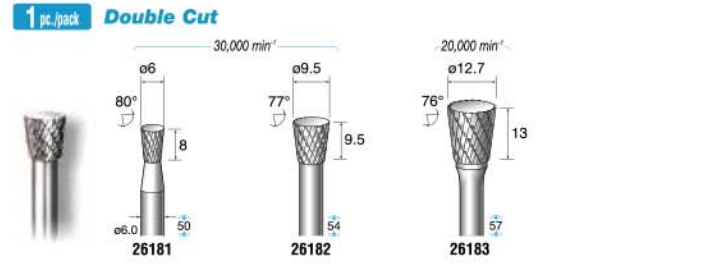
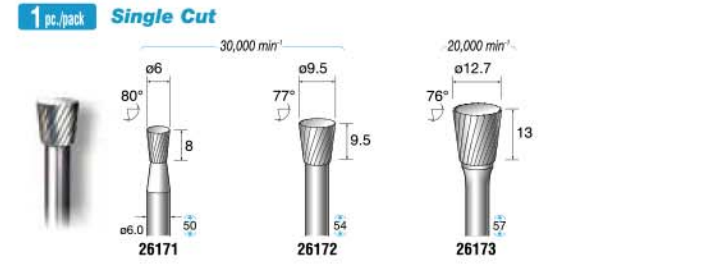


CARBIDE CUTTERS • Orange code numbers indicate Titanium-Coated Type.

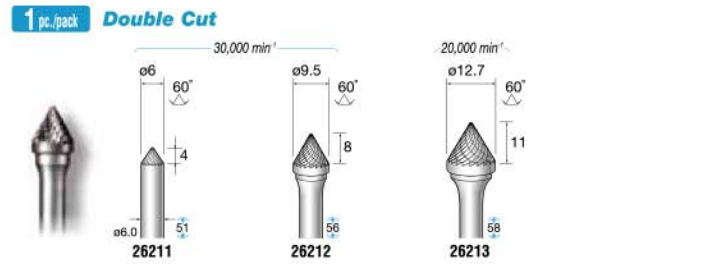
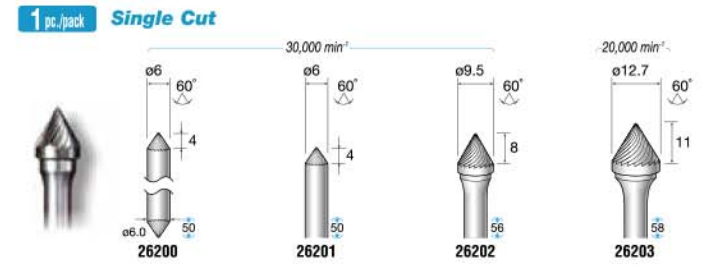
SHANK $\phi 6.0$



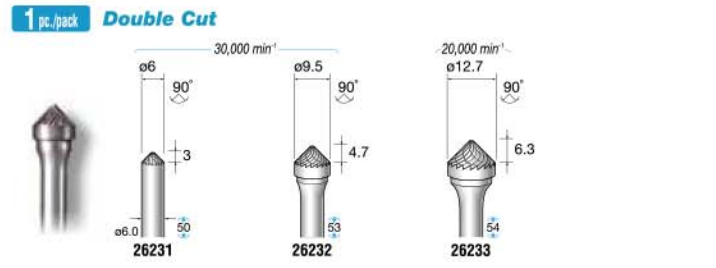
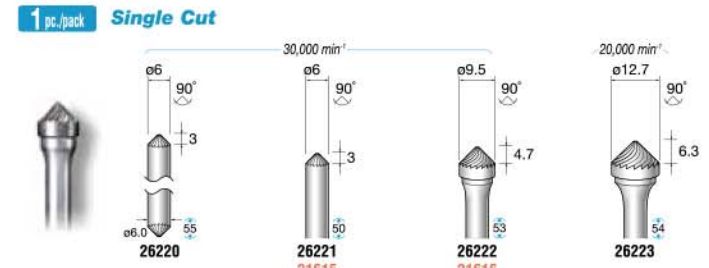
SHANK $\phi 6.0$



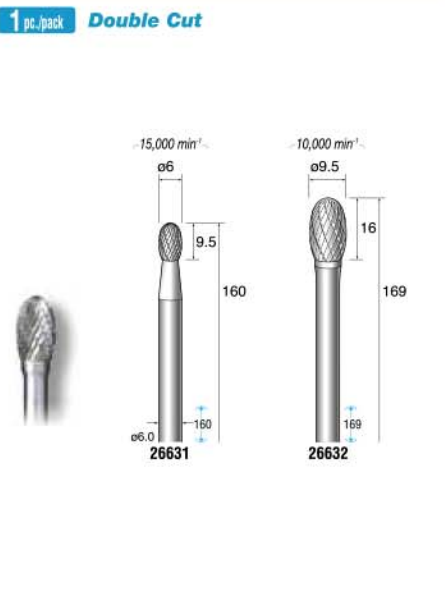
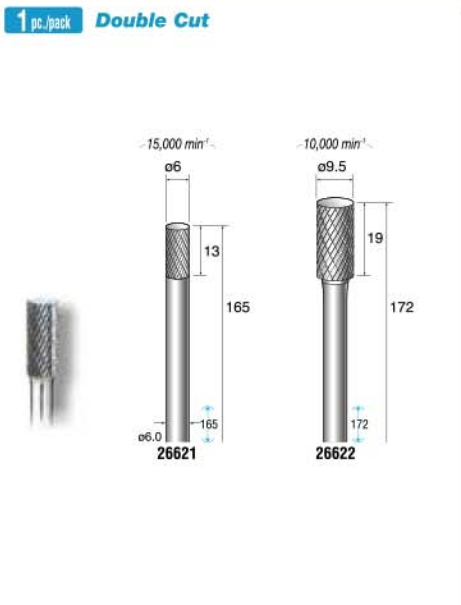
SHANK $\phi 6.0$



SHANK $\phi 6.0$

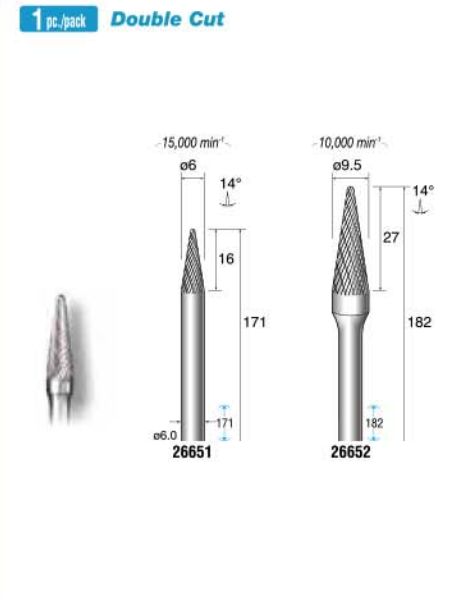
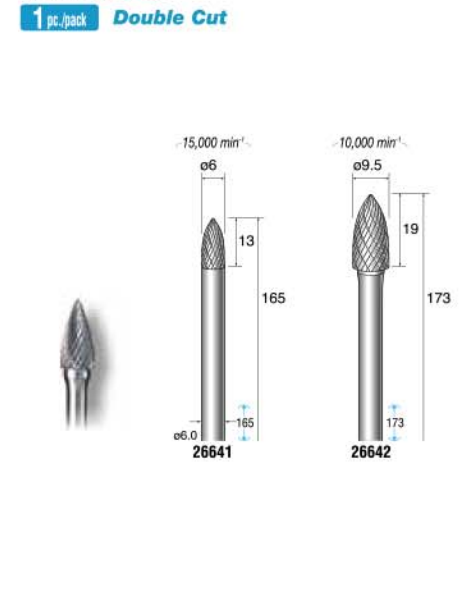


SHANK $\phi 6.0$

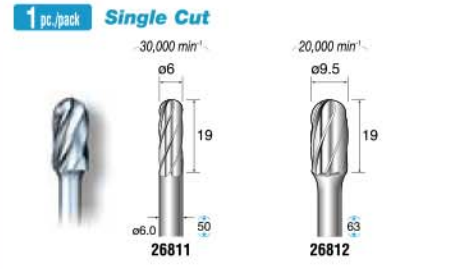
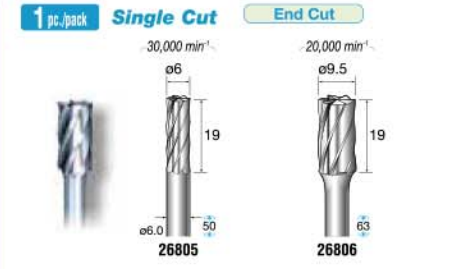


CARBIDE CUTTERS

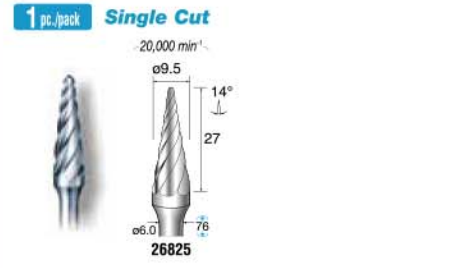
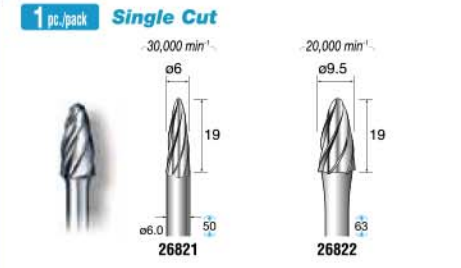
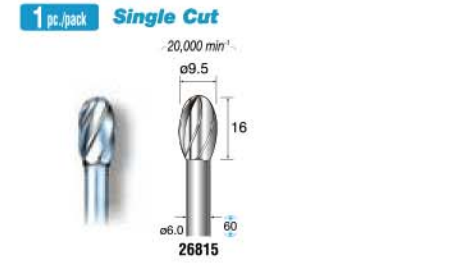
SHANK $\phi 6.0$



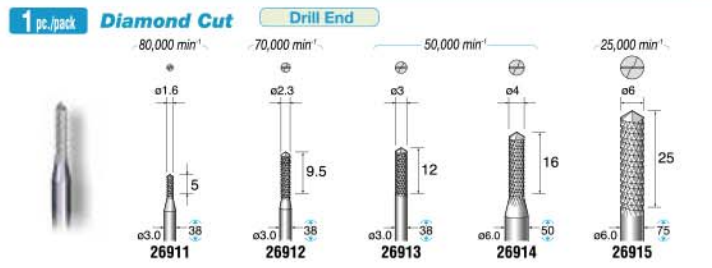
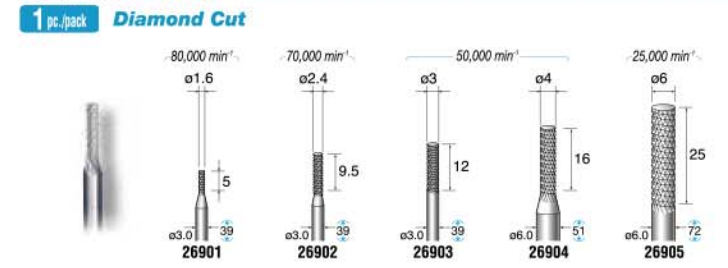
SHANK $\phi 6.0$



SHANK $\phi 6.0$



SHANK $\phi 3.0, \phi 6.0$



SHANK $\phi 1.0, \phi 1.5, \phi 2.0, \phi 2.5$



D=φ1.0 Length=30			D=φ1.5 Length=30			D=φ2.0 Length=38			D=φ2.5 Length=43		
d	l		d	l		d	l		d	l	
0.5	4.0	26935	0.8	6.3	26938	1.5	11.2	26945	2.0	12.0	26950
0.6	4.5	26936	0.9	7.1	26939	1.6	12.0	26946	2.1	12.0	26951
0.7	5.6	26937	1.0	9.0	26940	1.7	12.0	26947	2.2	12.0	26952
			1.1	9.0	26941	1.8	12.0	26948	2.3	12.0	26953
			1.2	10.0	26942	1.9	12.0	26949	2.4	12.0	26954
			1.3	10.0	26943						
			1.4	11.2	26944						

CARBIDE CUTTERS

SHANK $\phi 3.0$
12 pcs./pack **Single Cut Assorted Set**



28111 Titanium Coating	
Set (12 pieces) (Each code No. one piece-pack)	
21201	21245
21205	21261
21212	21262
21213	21265
21241	21272
21242	21275

SHANK $\phi 6.0$
8 pcs./pack **Double Cut Assorted Set**



28115 Titanium Coating	
Set (8 pieces) (Each code No. one piece-pack)	
21511	21535
21512	21536
21515	21541
21516	21546

SHANK $\phi 2.34$
12 pcs./pack **Single Cut Assorted Set**



28121	
Set (12 pieces) (Each code No. one piece-pack)	
23014	23132
23017	23133
23019	23161
23022	23162
23024	23163
23131	23166

SHANK $\phi 6.0$
12 pcs./pack **Double Cut Assorted Set**



28125	
Set (12 pieces) (Each code No. one piece-pack)	
23403	23415
23405	23416
23407	23504
23410	23507
23412	23553
23413	23573

SHANK $\phi 3.0$
12 pcs./pack **Single Cut Assorted Set**



28141	
Set (12 pieces) (Each code No. one piece-pack)	
24016	24301
24019	24303
24041	24305
24044	24402
24161	24452
24164	24454

SHANK $\phi 6.0$
12 pcs./pack **Double Cut Assorted Set**



28145	
Set (12 pieces) (Each code No. one piece-pack)	
24073	24362
24076	24364
24093	24366
24096	24504
24214	24532
24217	24534

SHANK $\phi 6.0$
8 pcs./pack **Single Cut Assorted Set**



28171	
Set (8 pieces) (Each code No. one piece-pack)	
26011	26111
26031	26131
26071	26151
26091	26171

SHANK $\phi 6.0$
8 pcs./pack **Single Cut Assorted Set**



28175	
Set (8 pieces) (Each code No. one piece-pack)	
26013	26113
26033	26133
26073	26153
26092	26172

SHANK $\phi 6.0$
8 pcs./pack **Double Cut Assorted Set**



28181	
Set (8 pieces) (Each code No. one piece-pack)	
26021	26121
26041	26141
26081	26161
26101	26181

SHANK $\phi 6.0$
8 pcs./pack **Double Cut Assorted Set**



28185	
Set (8 pieces) (Each code No. one piece-pack)	
26023	26123
26043	26143
26083	26163
26102	26182

SHANK $\phi 3.0$
12 pcs./pack **Alloy Cut Assorted Set**



24601	
Set (12 pieces) (Each code No. one piece-pack)	
24611	24646
24612	24651
24622	24653
24623	24654
24631	24661
24632	24663

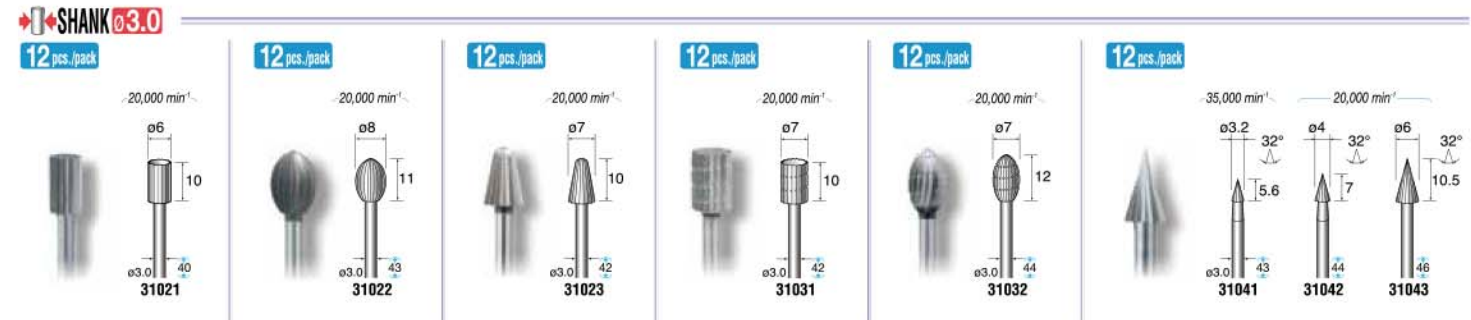
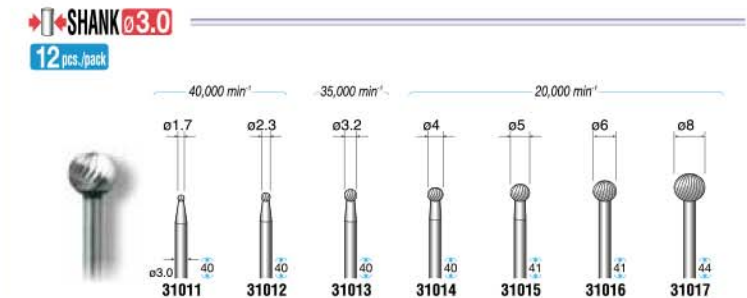
1 pc./pack Wood Case



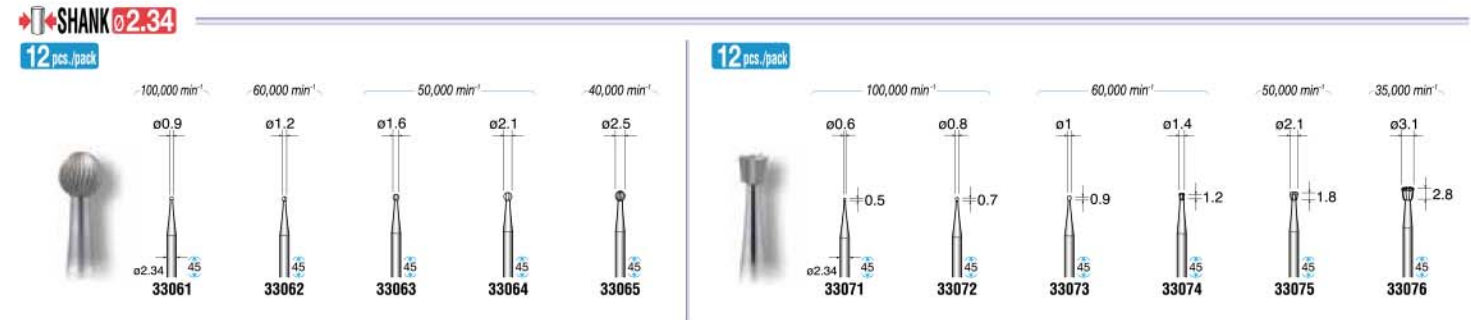
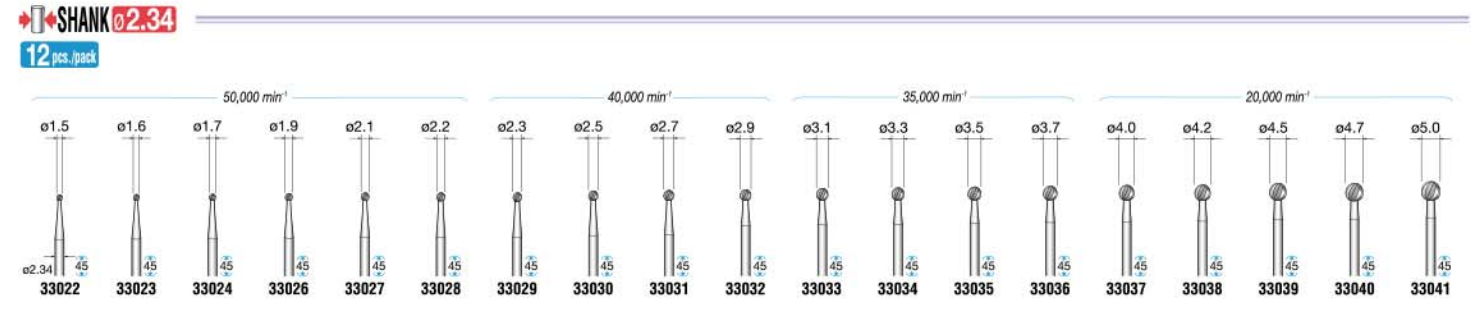
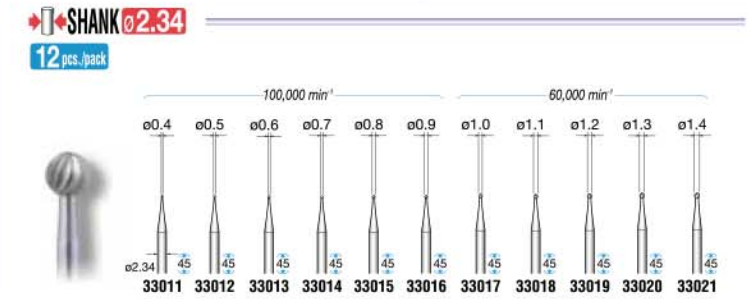
SPECIALTY TOOLS



High Speed Steel(H.S.S.)Cutters.
For cutting of general steels,
light metals, non-metals, plastics,
resins, etc.

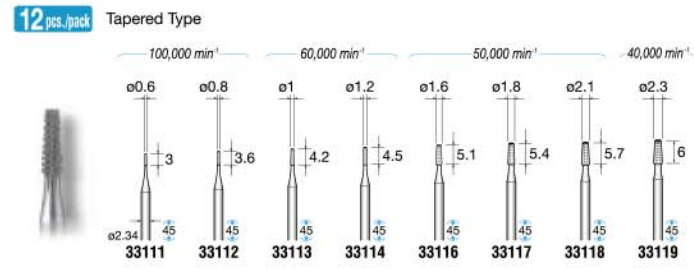
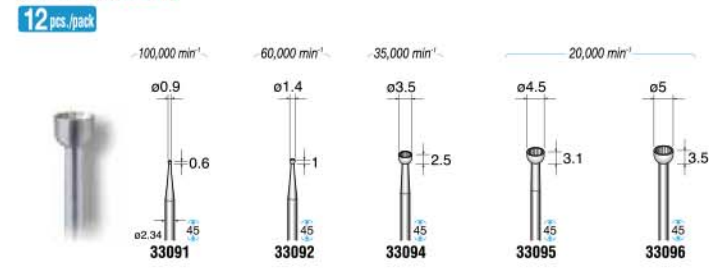


Tungsten Vanadium Steel Cutters.
For fine finishing of soft materials,
resins, bronze, acrylics, etc.

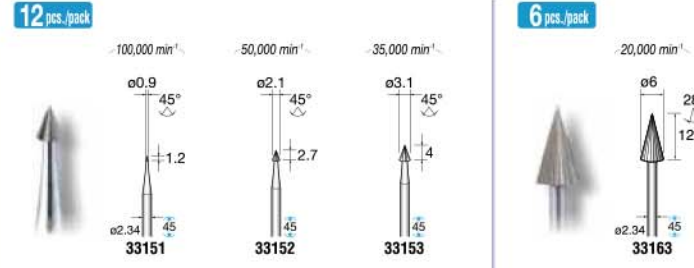
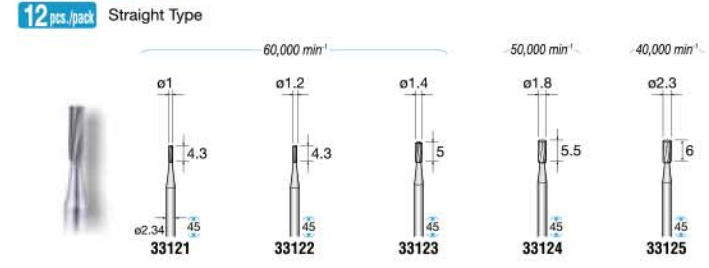


SPECIALTY TOOLS

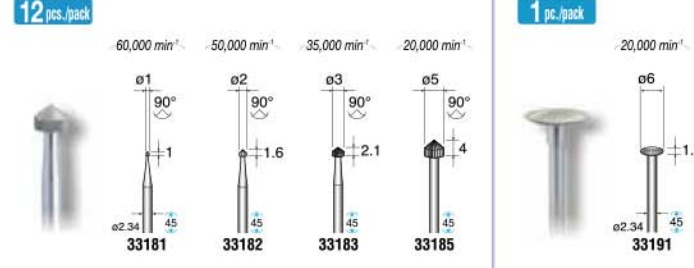
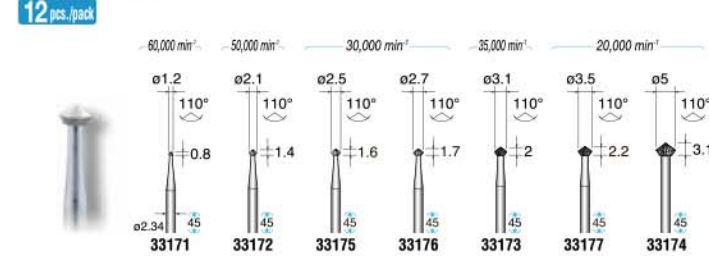
SHANK $\phi 2.34$



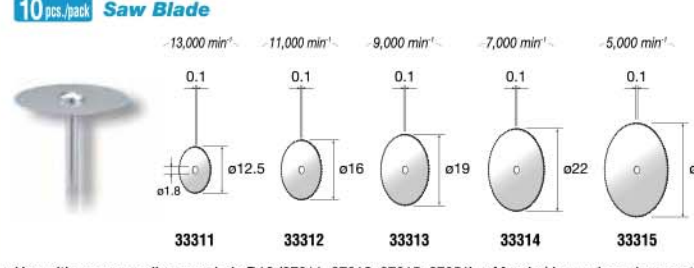
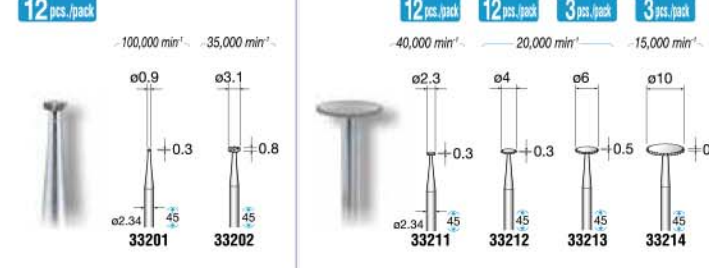
SHANK $\phi 2.34$



SHANK $\phi 2.34$

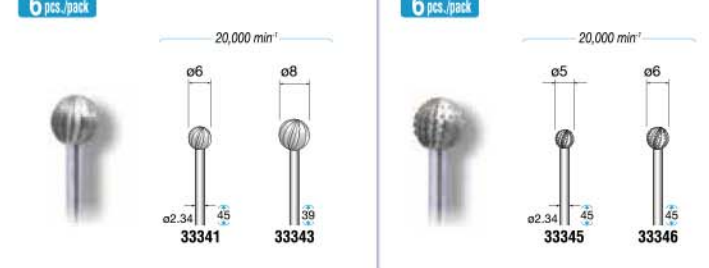


SHANK $\phi 2.34$

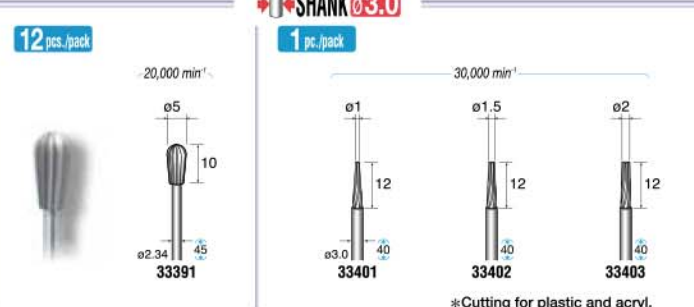


*Use with corresponding mandrels P.19 (37011, 37012, 37015, 37051). *Mandrel is purchased separately.

SHANK $\phi 2.34$



SHANK $\phi 2.34$



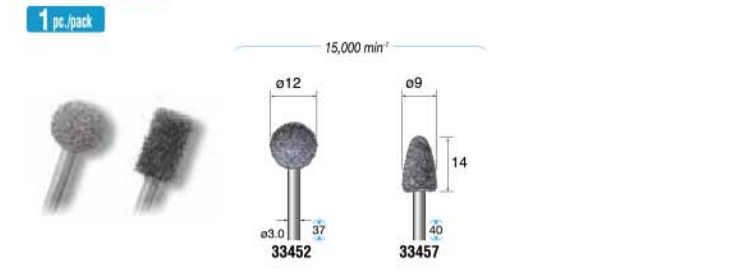
*Cutting for plastic and acrylic.

SPECIALTY TOOLS

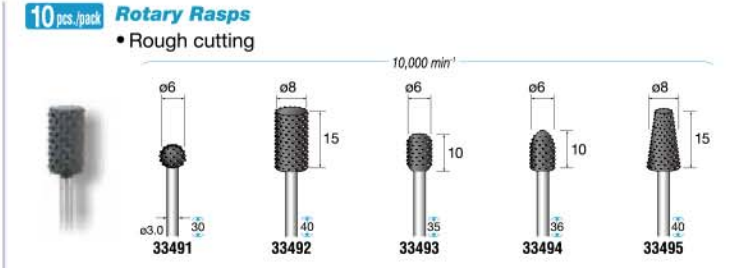
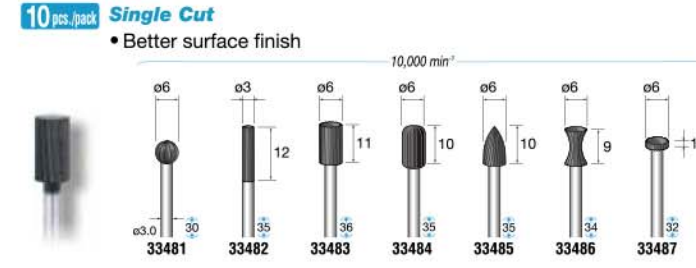


Wood and Plastic working rotary rasps and files. Three types for rough cutting, pre-finishing and finishing.

SHANK $\phi 3.0$



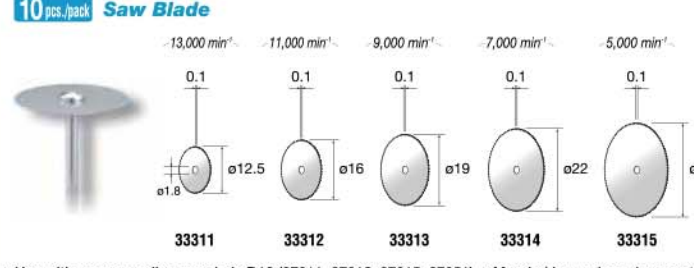
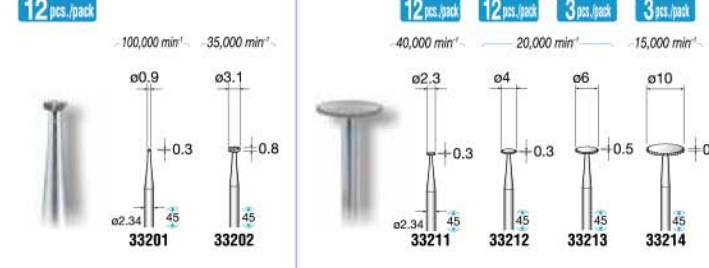
SHANK $\phi 3.0$



SHANK $\phi 3.0$

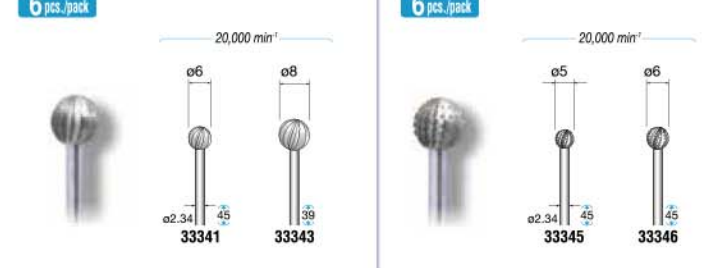


SHANK $\phi 2.34$

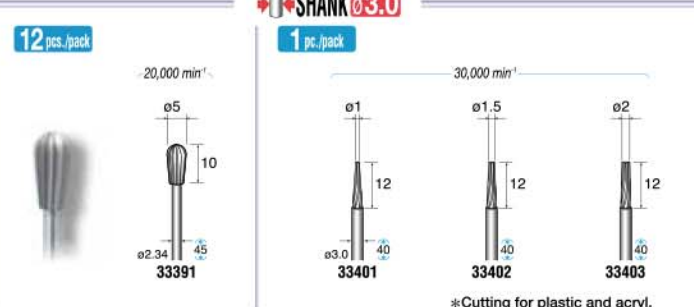


*Use with corresponding mandrels P.19 (37011, 37012, 37015, 37051). *Mandrel is purchased separately.

SHANK $\phi 2.34$



SHANK $\phi 2.34$



*Cutting for plastic and acrylic.

SHANK $\phi 2.34$



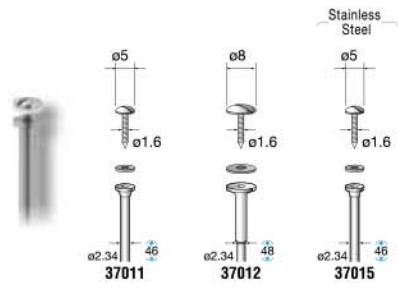
* $\phi 0.5$ ~2.3 mm each 1 pc. Full Size Set (No. 36051 ~ 36069 ; 19 pcs. - pack) ; Special case provided 36070



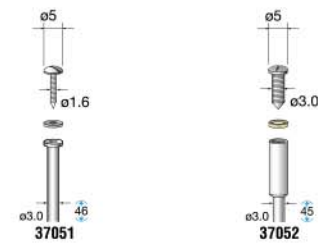
* $\phi 0.5$ ~2.3 mm each 1 pc. Full Size Set (No. 36111 ~ 36129 ; 9 pcs. - pack) ; Special case provided 36130

SPECIALTY TOOLS

SHANK $\phi 2.34$
10 pcs./pack Mandrels



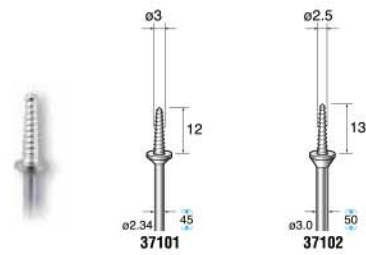
SHANK $\phi 3.0$
10 pcs./pack Mandrels 3 pcs./pack Mandrels



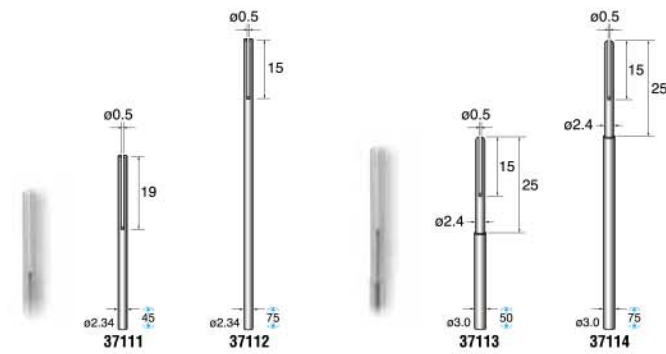
SHANK $\phi 6.0$
1 pc./pack Mandrels



SHANK $\phi 2.34, \phi 3.0$
10 pcs./pack



10 pcs./pack



MOUNTED POINTS

Types of Abrasive Grain

"Abrasive Grain" is a general term of very hard abrasive particles for polishing and grinding. Abrasive Grain is harder than work materials and functions to grind work materials. Abrasive Grain is classified generally into three types.

Alumina type

Primary ingredient is alumina (aluminium oxide : Al_2O_3).

- A** : For rough grinding of iron and steel materials, low carbon steels, forged products, castings and raw steel materials.
- WA** : For general grinding of alloy steels, tool steels and carbon steels.
- PA** : For general grinding of heat treated alloy steels, tool steels, and stainless steels.

Silicon Carbide type

Primary ingredient is silicon carbide (SiC).

- C** : For general grinding of cast iron, chilled cast iron, copper, bronze, brass, aluminum and non ferrous metals.
- GC** : For general grinding of super hard alloys, ceramics, stone, jewelry, glass, pottery, wood and synthetic resins.

Mixed Abrasive Grain type

Mixed use of abrasive grain of the same type

- PA · W** : For precision grinding of high speed steel, alloy steels, tool steels and special alloys.
- A · WA** : For rough grinding of iron and steel materials, low carbon steels, forged products, castings, steel materials and stainless steels.

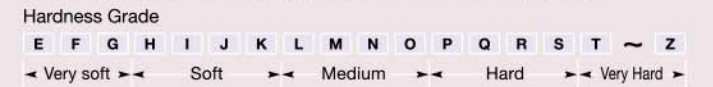
Bonding Material

Material used to bond and hold abrasive grains. Primary bonding materials are shown below.

- V (vitrified)** : Mainstream of magnetic bonding material, grinding stone
- B (resinoid)** : Bonding material is mainly made of thermosetting
- R (rubber)** : Hard rubber
- E (shellac)** : Thermoplastic resin (natural resin)

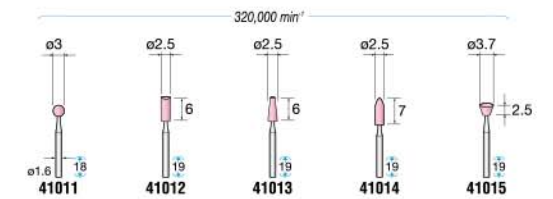
Hardness Grade

This shows bonding strength of abrasive grain, bonding materials and wear resistance of grinding stone. The Hardness Grade is measured by various instruments. The hardness is classified from A to Z, A is the softest while Z is the hardest.

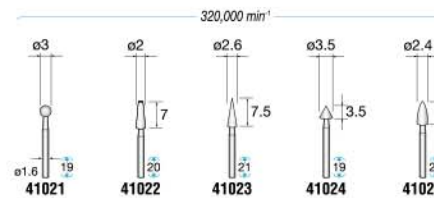


1.6 mm shank diameter series. Short Shank Type grindstones for high-speed rotation. Ideal for very small parts.

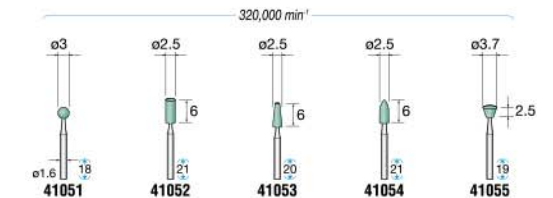
SHANK $\phi 1.6$
10 pcs./pack #140 WA V P PINK



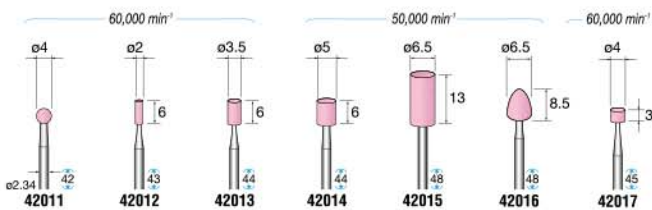
SHANK $\phi 1.6$
10 pcs./pack #500 WA V P WHITE



10 pcs./pack #120 GC V M GREEN



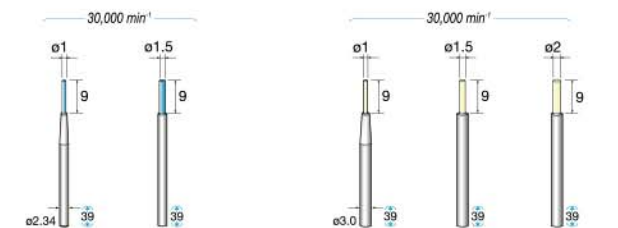
SHANK $\phi 2.34$
10 pcs./pack #80 WA V P PINK



SHANK $\phi 2.34, \phi 3.0$
10 pcs./pack



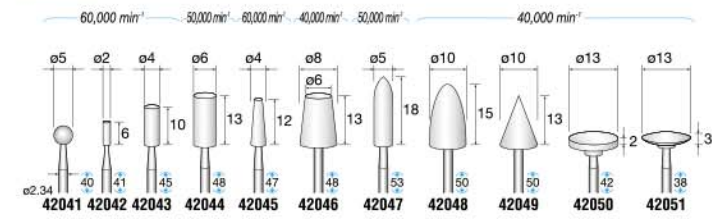
Ceramic fiber grindstones containing abrasive alumina fibers. These stones are very tough and ideal for grinding and polishing of very small parts.



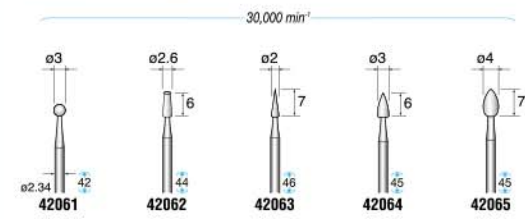
#180 Ivory	41501	41511	#180 Ivory	41551	41561	41571
#300 Brown	41502	41512	#300 Brown	41552	41562	41572
#400 Orange	41503	41513	#400 Orange	41553	41563	41573
#600 Black	41504	41514	#600 Black	41554	41564	41574
#800 Blue	41505	41515	#800 Blue	41555	41565	41575
#1000 White	41506	41516	#1000 White	41556	41566	41576
#1200 Pink	41507	41517	#1200 Pink	41557	41567	41577
Assorted Set	41509	41519	Assorted Set	41559	41569	41579

MOUNTED POINTS

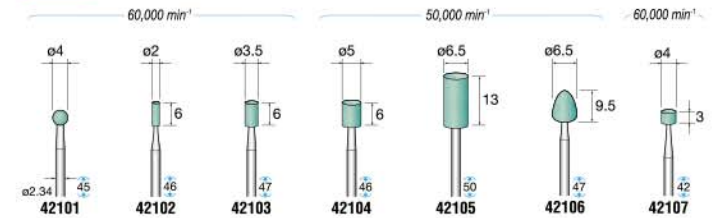
SHANK $\phi 2.34$
 10 pcs./pack #120 WA V P WHITE



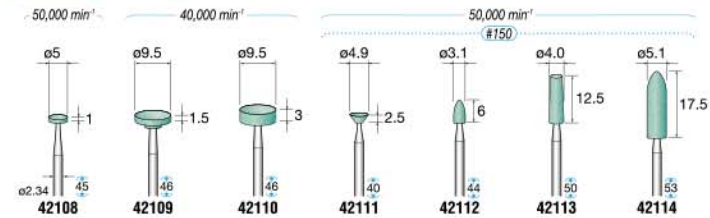
10 pcs./pack #500 WA V P WHITE



SHANK $\phi 2.34$
 10 pcs./pack #100 GC V M GREEN

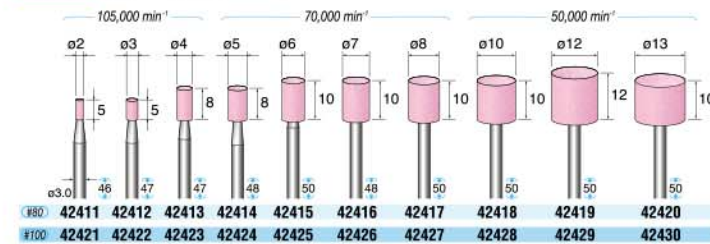


10 pcs./pack #100 GC V M GREEN

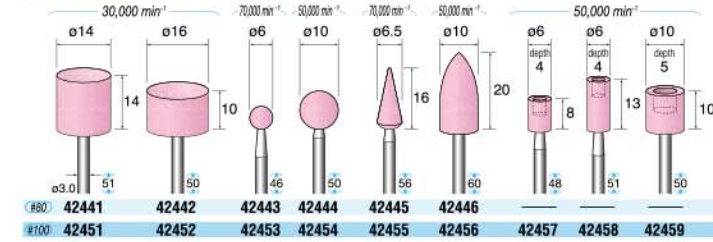


3.0 mm shank diameter series.
 Perfect for high surface finishing,
 precision work.

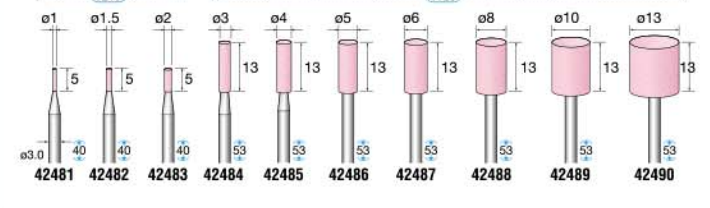
SHANK $\phi 3.0$
 10 pcs./pack WA V P PINK



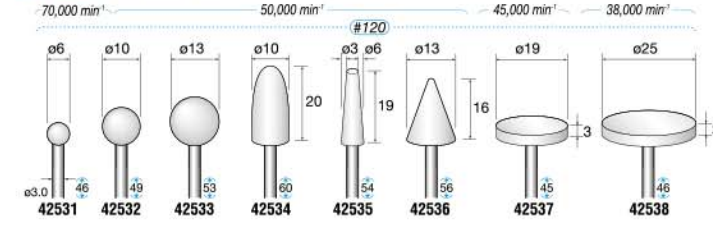
SHANK $\phi 3.0$
 10 pcs./pack WA V P PINK



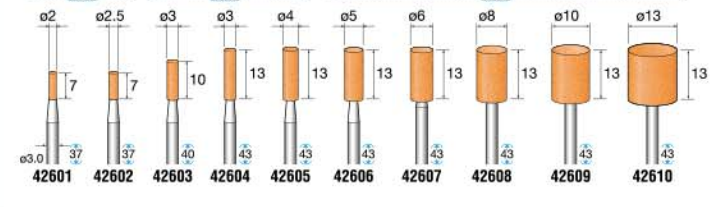
10 pcs./pack PA V N PINK



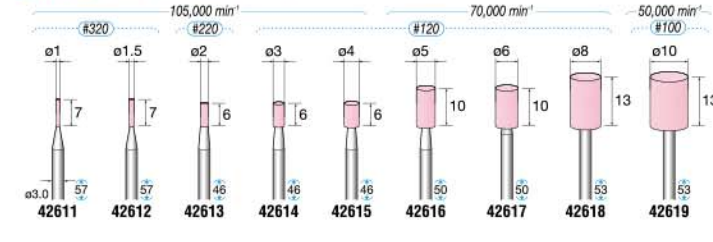
SHANK $\phi 3.0$
 10 pcs./pack WA V P WHITE



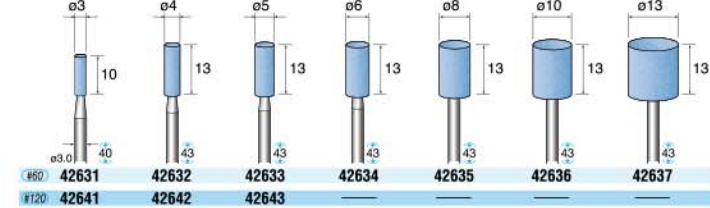
10 pcs./pack WA V P RED



SHANK $\phi 3.0$
 10 pcs./pack PAW V Q PINK

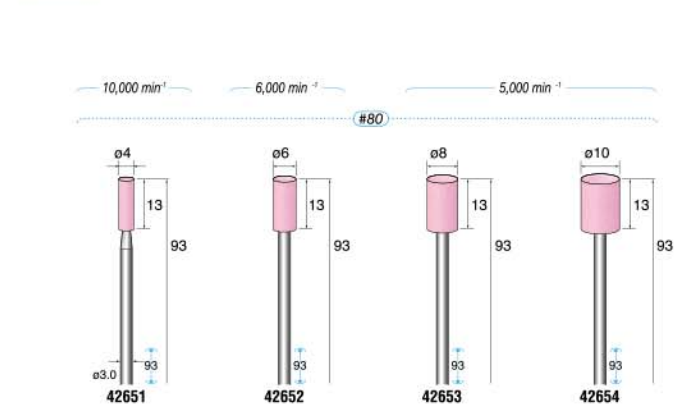


10 pcs./pack PA V P BLUE

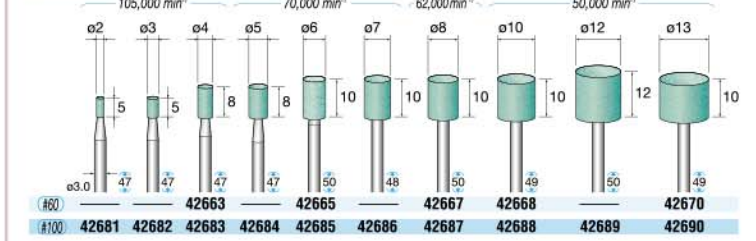


MOUNTED POINTS

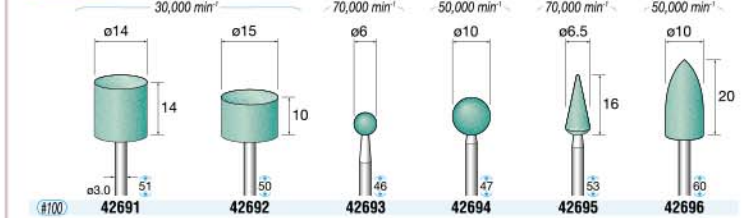
SHANK $\phi 3.0$
 10 pcs./pack WA V P PINK



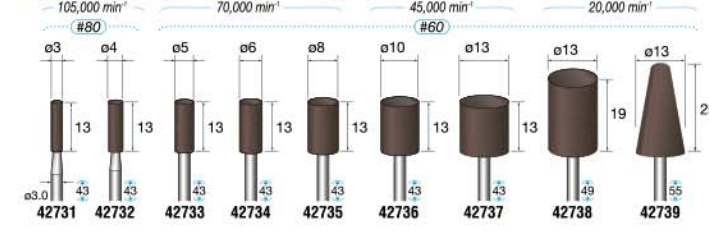
10 pcs./pack GC V M GREEN



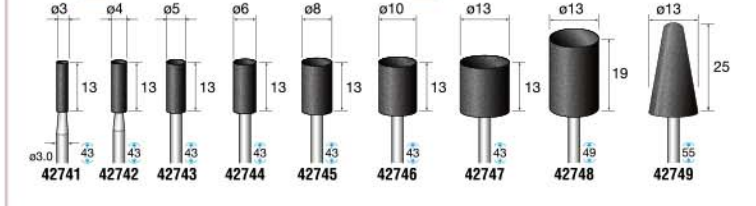
SHANK $\phi 3.0$
 10 pcs./pack GC V M GREEN



SHANK $\phi 3.0$
 10 pcs./pack AWA B Q BROWN

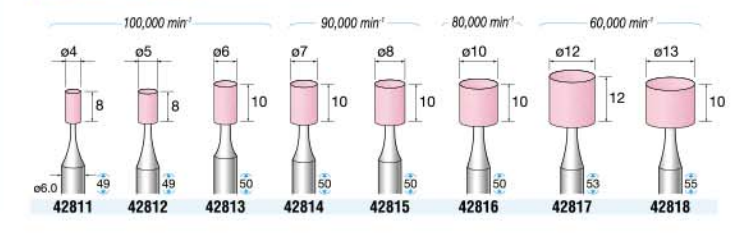


10 pcs./pack A B Q BLACK

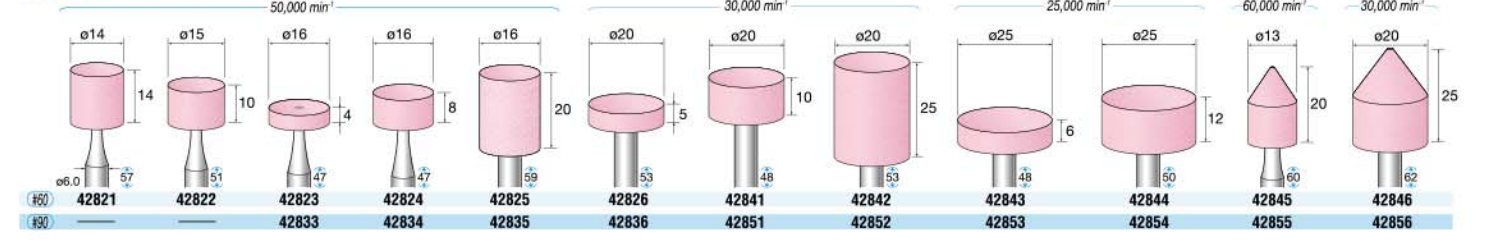


6.0 mm shank diameter series.
 High quality finishing grindstones.

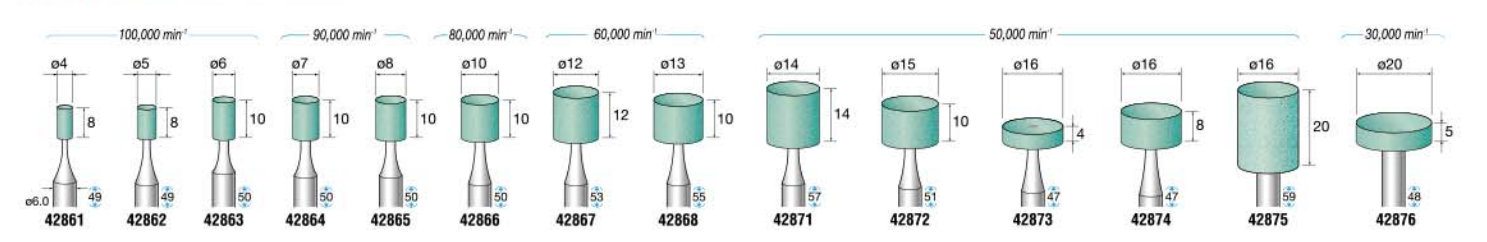
SHANK $\phi 6.0$
 10 pcs./pack #100 WA V Q PINK



SHANK $\phi 6.0$
 10 pcs./pack WA V Q PINK



SHANK $\phi 6.0$
 10 pcs./pack #100 GC V M GREEN



MOUNTED POINTS

SHANK $\phi 6.0$
10 pcs./pack #100 GC V M GREEN

Model	Shank ϕ	Height	Top ϕ	RPM Range
42881	6.0	10	20	30,000 min ⁻¹
42882	6.0	25	20	25,000 min ⁻¹
42883	6.0	6	25	25,000 min ⁻¹
42884	6.0	12	25	25,000 min ⁻¹
42885	6.0	20	13	60,000 min ⁻¹
42886	6.0	25	20	30,000 min ⁻¹

SHANK $\phi 6.0$
10 pcs./pack A-WA B Q BROWN

Model	Shank ϕ	Height	Top ϕ	RPM Range
42901	6.0	13	6	102,000 min ⁻¹
42902	6.0	13	8	90,000 min ⁻¹
42903	6.0	13	10	81,000 min ⁻¹
42904	6.0	13	13	69,000 min ⁻¹
42905	6.0	16	16	55,000 min ⁻¹
42906	6.0	19	19	42,000 min ⁻¹
42907	6.0	19	19	34,000 min ⁻¹
42908	6.0	25	25	25,000 min ⁻¹



Grinding disk for metal grinding, slitting and cutting. Can easily be attached to mandrels (P.19)
*Mandrel is purchased separately.

SHANK $\phi 2.34$
20 pcs./pack #120 GC Center Hole Diameter $\phi 1.8$ mm

Model	Shank ϕ	Height	Top ϕ	RPM
43121	2.34	0.2	22	15,000 min ⁻¹
43122	2.34	0.25	22	15,000 min ⁻¹
43123	2.34	0.35	22	15,000 min ⁻¹
43124	2.34	0.45	22	15,000 min ⁻¹

SHANK $\phi 2.34$
18 pcs./pack Assorted Set

43401 Set (18 pieces) (Each code No. one piece-pack)

WA	GC
#80 42011 #120 42020	#100 42101
#80 42012 #120 42047	#100 42102
#80 42013 #120 42048	#100 42103
#80 42014 #120 42050	#100 42104
#80 42016 #120 42051	#100 42106
#80 42018	#100 42108
	#100 42110

SHANK $\phi 3.0$
15 pcs./pack Assorted Set

43410 Set (15 pieces) (Each code No. one piece-pack)

PAW	PA
#320 42612 #120 42616	#60 42631
#220 42613 #120 42617	#60 42632
#120 42614 #120 42618	#60 42633
#120 42615 #120 42619	#60 42634
	#60 42635
	#60 42636
	#60 42637

SHANK $\phi 6.0$
10 pcs./pack A B Q BLACK

Model	Shank ϕ	Height	Top ϕ	RPM Range
42911	6.0	13	6	102,000 min ⁻¹
42912	6.0	13	8	90,000 min ⁻¹
42913	6.0	13	10	81,000 min ⁻¹
42914	6.0	13	13	69,000 min ⁻¹
42915	6.0	16	16	55,000 min ⁻¹
42916	6.0	19	19	42,000 min ⁻¹
42917	6.0	19	19	34,000 min ⁻¹
42918	6.0	25	25	25,000 min ⁻¹

SHANK $\phi 2.34$
10 pcs./pack WA GC Green Polisher

Center Hole Diameter $\phi 1.8$ mm

Model	Shank ϕ	Height	Top ϕ	RPM
43101	2.34	0.15	22	15,000 min ⁻¹
43103	2.34	0.3	22	15,000 min ⁻¹
43104	2.34	0.7	22	13,000 min ⁻¹
43105	2.34	0.7	25	8,000 min ⁻¹
43106	2.34	0.7	35	8,000 min ⁻¹

SHANK $\phi 3.0$
3 pcs./pack Ceramic Fiber Grindstone Disk

Model	Shank ϕ	Height	Top ϕ	RPM
43202	3.0	0.4	19	20,000 min ⁻¹
43203	3.0	0.4	19	18,000 min ⁻¹
43205	3.0	0.4	22	18,000 min ⁻¹

SHANK $\phi 3.0$
18 pcs./pack Assorted Set

43405 Set (18 pieces) (Each code No. one piece-pack)

WA	PA
#90 42421 #90 42428	#120 42484
#90 42422 #90 42430	#120 42485
#90 42423 #90 42454	#120 42486
#90 42424 #90 42455	#120 42487
#90 42425 #90 42456	#120 42488
#90 42427	#120 42489
	#120 42490

SHANK $\phi 3.0$
12 pcs./pack Assorted Set

43415 Set (12 pieces) (Each code No. one piece-pack)

GC
#100 42681 #100 42688
#100 42682 #100 42690
#100 42683 #100 42692
#100 42684 #100 42694
#100 42685 #100 42695
#100 42687 #100 42696

RUBBERIZED ABRASIVES

SHANK $\phi 1.6$
10 pcs./pack WA Silicon Polisher

1.6 mm shank diameter series. Short type for high-speed rotation. Ideal for grinding very small parts.

SHANK $\phi 1.6$
10 pcs./pack WA Silicon Polisher

Model	Shank ϕ	Height	Top ϕ	RPM
46011	1.6	7	3	30,000 min ⁻¹
46012	1.6	7	3	30,000 min ⁻¹
46013	1.6	7	3	30,000 min ⁻¹
46014	1.6	7	3	30,000 min ⁻¹
46015	1.6	7	3	30,000 min ⁻¹

SHANK $\phi 2.34$
10 pcs./pack WA GC Green Polisher

2.34 mm shank diameter series. Perfect for precision finishing and deburring.

SHANK $\phi 2.34$
10 pcs./pack WA High Shine Polisher

Model	Shank ϕ	Height	Top ϕ	RPM
46211	2.34	16	5	24,000 min ⁻¹
46215	2.34	22	10	15,000 min ⁻¹
46221	2.34	15	5	24,000 min ⁻¹
46225	2.34	20	8	20,000 min ⁻¹
46231	2.34	3	12	24,000 min ⁻¹
46235	2.34	2	12	24,000 min ⁻¹

SHANK $\phi 2.34$
10 pcs./pack WA Silicon Polisher

Model	Shank ϕ	Height	Top ϕ	RPM
46311	2.34	16	5	30,000 min ⁻¹
46315	2.34	22	10	15,000 min ⁻¹
46322	2.34	12	10	15,000 min ⁻¹
46326	2.34	12	14	15,000 min ⁻¹
46331	2.34	18	15	15,000 min ⁻¹
46342	2.34	3	14	30,000 min ⁻¹
46346	2.34	2	14	30,000 min ⁻¹

SHANK $\phi 3.0$
10 pcs./pack WA Silicon Polisher

Model	Shank ϕ	Height	Top ϕ	RPM
46351	3.0	8	3	30,000 min ⁻¹
46362	3.0	1.2	22	15,000 min ⁻¹
46364	3.0	0.7	22	15,000 min ⁻¹
46368	3.0	10	7	30,000 min ⁻¹

SHANK $\phi 3.0$
10 pcs./pack WA Power Polisher

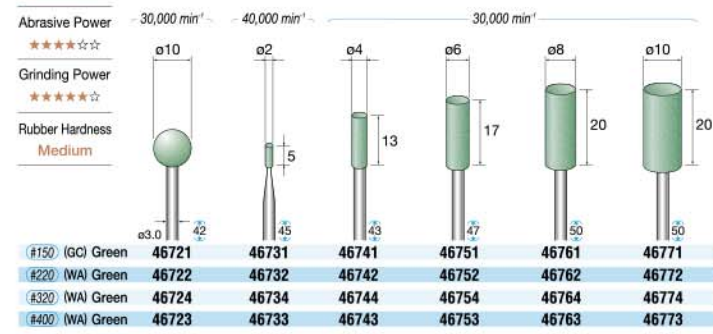
3.0 mm shank diameter series. Produces a smoother, better surface finish due to greater pliability versus standard grindstones.

SHANK $\phi 3.0$
10 pcs./pack WA Power Polisher

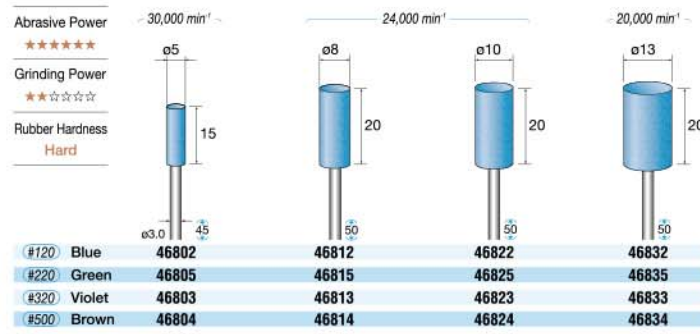
Model	Shank ϕ	Height	Top ϕ	RPM
46601	3.0	45	10	30,000 min ⁻¹
46611	3.0	43	4	30,000 min ⁻¹
46621	3.0	47	6	30,000 min ⁻¹
46631	3.0	50	8	30,000 min ⁻¹
46641	3.0	50	10	30,000 min ⁻¹
46651	3.0	50	13	30,000 min ⁻¹

RUBBERIZED ABRASIVES

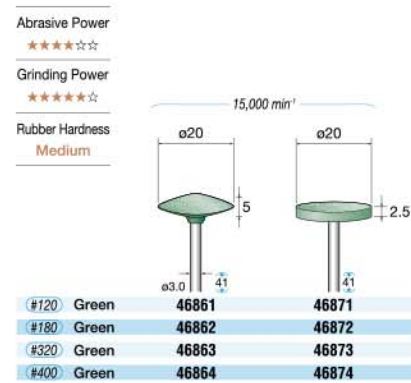
SHANK $\phi 3.0$
10 pcs./pack WA GC Green Polisher



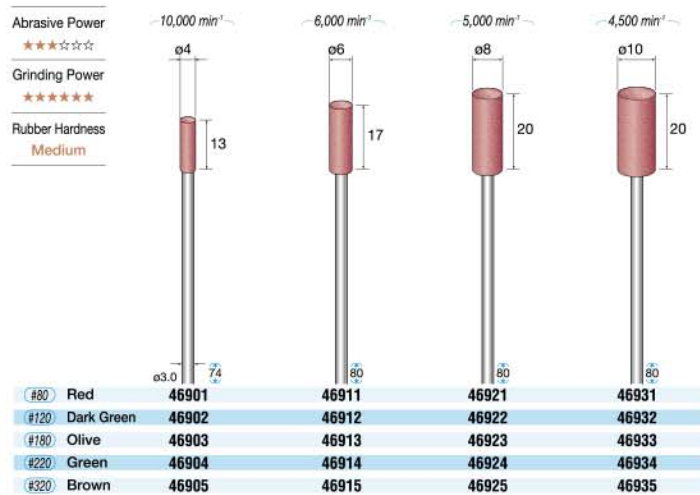
10 pcs./pack WA High Shine Polisher



SHANK $\phi 3.0$
10 pcs./pack WA Green Polisher



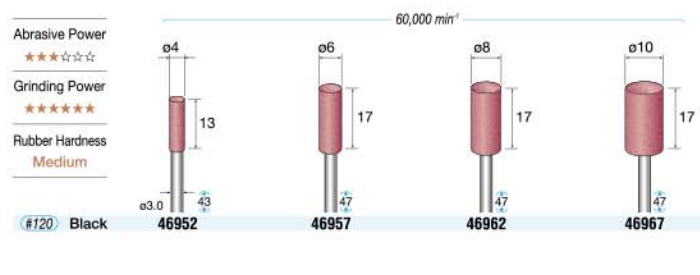
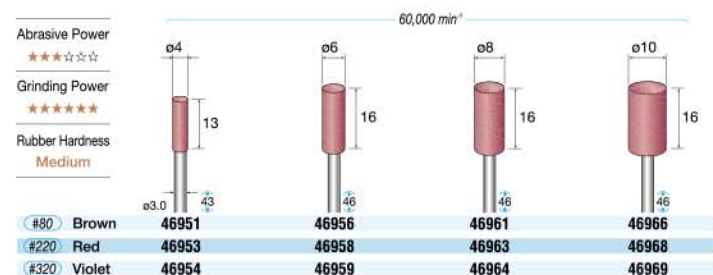
10 pcs./pack WA Long Reach Power Polisher



SHANK $\phi 3.0$
10 pcs./pack WA Special Rubber Grindstone For High-Speed Rotation (For 60,000min⁻¹)

Special rubber grindstones for high speed rotation. Useful for grinding and polishing with IMPULSE & ESPERT 500 (Both Nakanishi Micro-grinder Series) because of long durability at high speeds of 60,000min⁻¹.

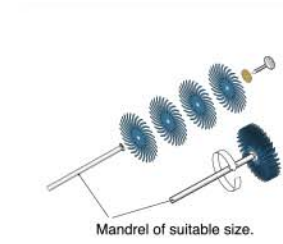
- Micro Air Grinder "IMPULSE".....Max. Speed: 60,000min⁻¹
- Brushless Micro-Grinder "ESPERT 500"Max. Speed: 50,000min⁻¹



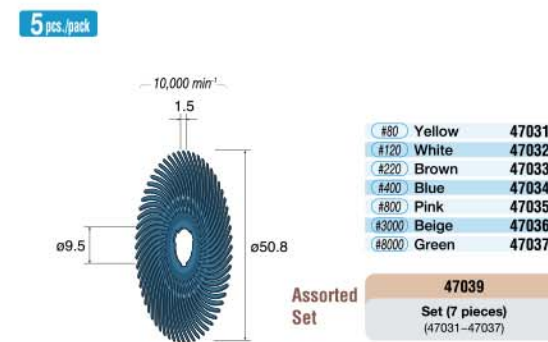
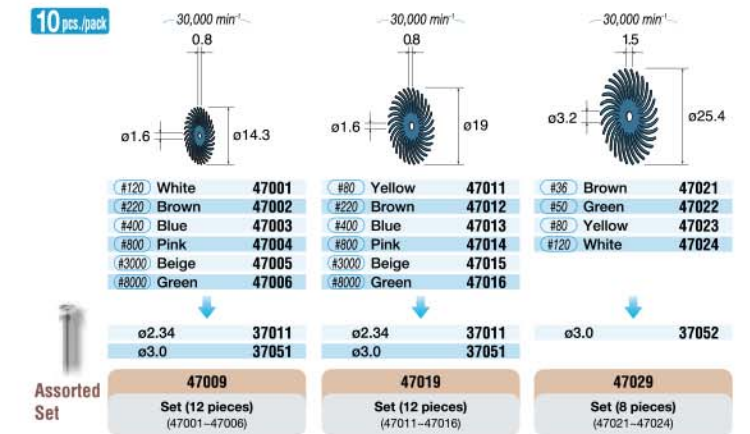
#80 Brown	46951	46956	46961	46966
#220 Red	46953	46958	46963	46968
#320 Violet	46954	46959	46964	46969

#120 Black	46952	46957	46962	46967
------------	-------	-------	-------	-------

RUBBERIZED ABRASIVES



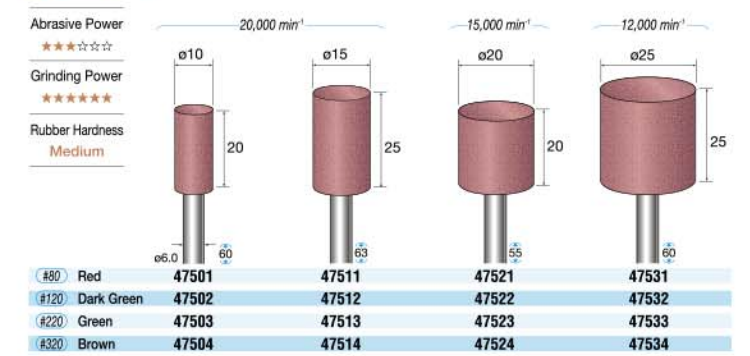
Spiral abrasive rubber disk for finishing. Useful for efficient finishing because of the spiral shape. These tools can be used with mandrels (37011, 37051, 37052, 47042, 47043, 47044). Please use a mandrel of suitable size.



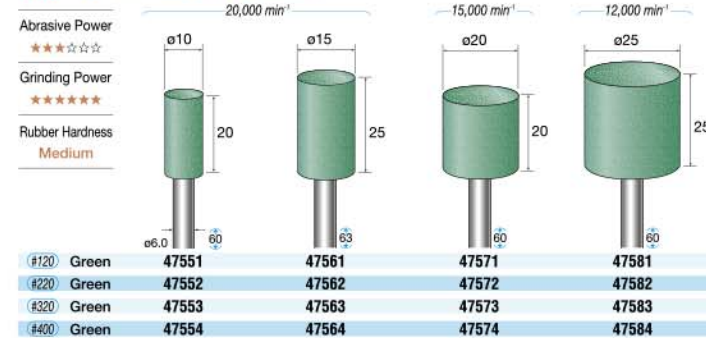
6.0 mm shank diameter series. Easy to use rubber grindstone's feature low noise levels and because of increased pliability produce very fine surface finishes.



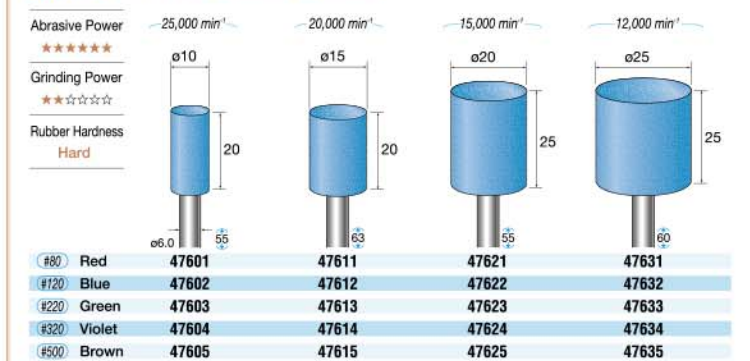
SHANK $\phi 6.0$
10 pcs./pack WA Power Polisher



SHANK $\phi 6.0$
10 pcs./pack WA Green Polisher



10 pcs./pack WA High Shine Polisher



RUBBERIZED ABRASIVES

SHANK ϕ 2.34

3 pcs./pack

20,000 min⁻¹

Abrasive Power ★★★★★
Grinding Power ★★★★★
Rubber Hardness Soft

#2000	47751	47752	47753	47754
-------	-------	-------	-------	-------

10 pcs./pack WA Silicon Wheel Rubber Grindstone

15,000 min⁻¹

Abrasive Power ★★★★★
Grinding Power ★★★★★
Rubber Hardness Soft

#120	Black	47804	#800	Pink	47811	47813
#180	Gray	47805	#1200	Gray	47812	47814
#240	Brown	47802	47806		47816	47818
#500	Dark Brown	47808			47819	
#1800	Green	47803	47807			

SHANK ϕ 2.34
12 pcs./pack Abrasive Rubber Point Assortment Set



47901

Set (12 pieces) (Each code No. one piece-pack)

Green Polisher (#220)	High Shine Polisher (#320)	Silicon Polisher (#500)
46112	46212	46312
46122	46216	46316
46152	46232	46342
46156	46236	46346

10 pcs./pack WA Green Wheel Rubber Grindstone

15,000 min⁻¹

Abrasive Power ★★★★★
Grinding Power ★★★★★
Rubber Hardness Medium

#120	Green	47841	47851	47861	47871
#220	Green	47842	47852	47862	47872
#520	Green	47843	47853	47863	47873

*Use after attaching to mandrel P.00 (No. 37011~37051).
*Mandrel needs to be purchased separately.

SHANK ϕ 3.0
12 pcs./pack Abrasive Rubber Point Assortment Set



47905

Set (12 pieces) (Each code No. one piece-pack)

Power Polisher (#180)	Green Polisher (#150)	High Shine Polisher (#320)
46623	46741	46803
46633	46751	46813
46643	46761	46823
46653	46771	46833

FLAP WHEELS



SHANK ϕ 2.34

10 pcs./pack

15,000 min⁻¹

#180 Brown

48701	48711
-------	-------

SHANK ϕ 3.0

5 pcs./pack 5 pcs./pack 10 pcs./pack 10 pcs./pack

18,000 min⁻¹ 15,000 min⁻¹

#120	Green	48681	48691	48704	48714
#180	Brown	48682	48692	48705	48715
#320	Red Brown	48683	48693	48706	48716
#400	Beige	48684	48694	48708	48718
#600	Gray	48685	48695	48707	48717

3 pcs./pack

15,000 min⁻¹ 12,000 min⁻¹ 12,000 min⁻¹

*Use after attaching to mandrel P.19.
*Mandrel needs to be purchased separately.

#120	Black	48724	48731	#120	Black	48736
#180	Brown	48725	48732	#180	Brown	48737
#320	Red Brown	48726	48733	#320	Red Brown	48738
#400	Green	48728	48734	#400	Green	48739
#600	Gray	48727	48735	#600	Gray	48740

SHANK ϕ 6.0

3 pcs./pack

3,000 min⁻¹

#120	Black	48744	48754
#180	Brown	48745	48755
#320	Red Brown	48747	48757



SHANK ϕ 3.0

3 pcs./pack ⚠ Need to be used dry. (Do not use water or grinding solution)

20,000 min⁻¹ 18,000 min⁻¹ 15,000 min⁻¹

#120	48783	48793	48803	48813
#240	48785	48795	48805	48815
#400	48786	48796	48806	48816
#600	48787	48797	48807	48817

SHANK ϕ 6.0

3 pcs./pack ⚠ Need to be used dry. (Do not use water or grinding solution)

12,000 min⁻¹ 10,000 min⁻¹

#120	48823	48833	48843
#240	48825	48835	48845
#400	48826	48836	48846
#600	48827	48837	48847

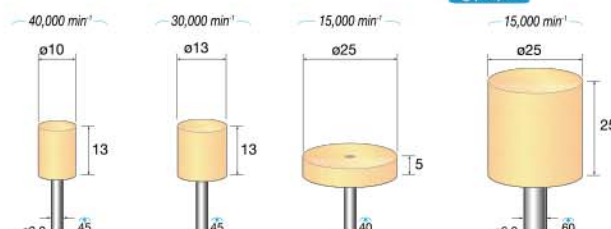
FLAP WHEELS



Nylon fabric polishing tools. High quality fibers are highly resistant to loading and very flexible for polishing irregular shapes.

SHANK $\phi 3.0, 6.0$

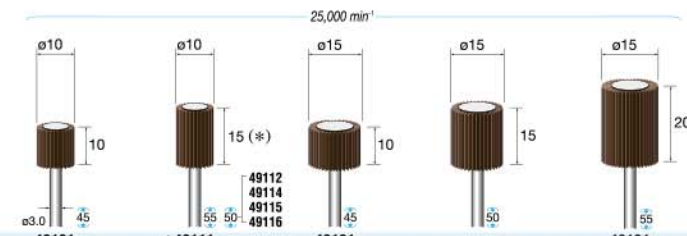
10 pcs./pack



#	Color	48871	48881	48891	48931
#120	Gray	48871	48881	48891	48931
#240	Purple	48872	48882	48892	48932
#320	Red	48873	48883	48893	48933
#600	Blue	48874	48884	48894	48934
#800	Violet	48875	48885	48895	48935
#1000	Orange	48876	48886	48896	48936
#1500	Yellow	48877	48887	48897	48937

SHANK $\phi 3.0$

5 pcs./pack

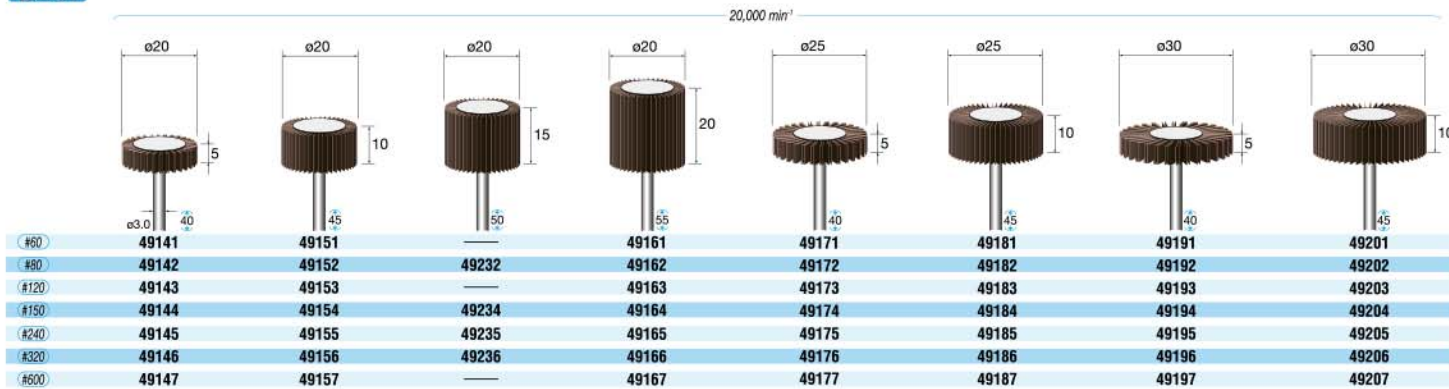


#	49101	*49111	49121	49222	49131
#60	49101	*49111	49121	49222	49131
#80	49102	49112	49122	49223	49132
#120	49103	*49113	49123	49224	49133
#150	49104	49114	49124	49225	49134
#240	49105	49115	49125	49226	49135
#320	49106	49116	49126	49227	49136
#600	49107	*49117	49127	49228	49137

*49111, 49113, 49117 is Total Length 20mm.

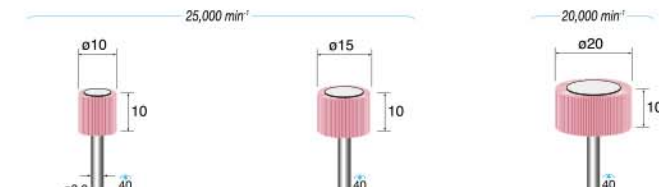
SHANK $\phi 3.0$

5 pcs./pack



SHANK $\phi 3.0$

1 pc./pack



#	Color	49251	49261	49271
#800	Brown/Yellow	49251	49261	49271
#1000	Pink	49252	49262	49272
#1000	Green	49253	49263	49273
#1000	Blue	49254	49264	49274
#1000	Orange	49255	49265	49275

Assorted Set

49259
Set (5 pieces)
(49251-49255)

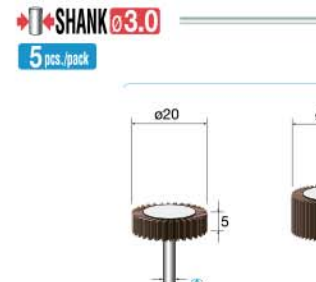
49269
Set (5 pieces)
(49261-49265)

49279
Set (5 pieces)
(49271-49275)

*There is not the difference in quality by the difference in color.



Flap wheels are made from many tightly, evenly packed abrasive cloth affixed to steel mandrels. They are highly effective for finishing of irregular shapes and flat surfaces.



Fine flap wheel is for final polishing. Perfect for polishing, metal, non-ferrous alloy, light metal, wood, resin, etc.

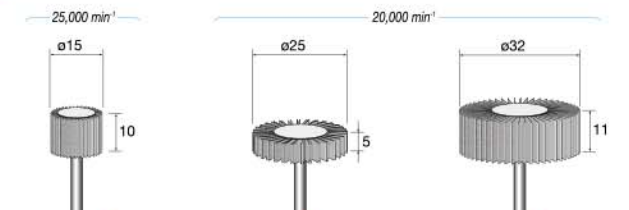
FLAP WHEELS



Diamond flap wheel made of electroplate diamond abrasive cloths. Perfect for polishing ceramics, glass, FRP, super hard alloys, etc.

SHANK $\phi 3.0$

1 pc./pack



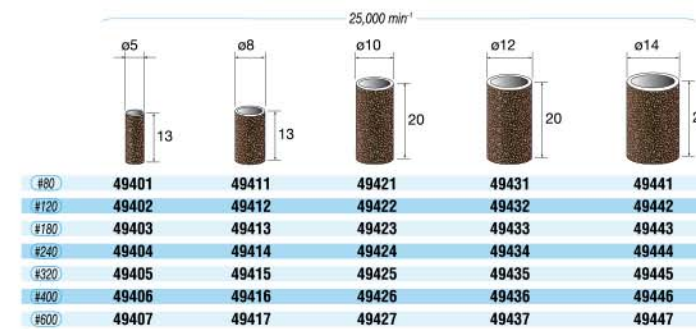
#	49303	49313	49323
#120	49303	49313	49323
#180	49304	49314	49324
#240	49305	49315	49325
#400	49306	49316	49326
#600	49307	49317	49327

SHANK $\phi 3.0$

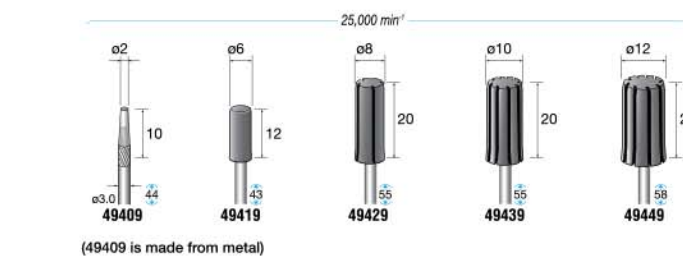


Seamless abrasive cartridges are easily pushed onto a rubber holder and can be quickly changed. They are ideal for finishing wide open areas.

20 pcs./pack Cartridge (Seamless Abrasives)

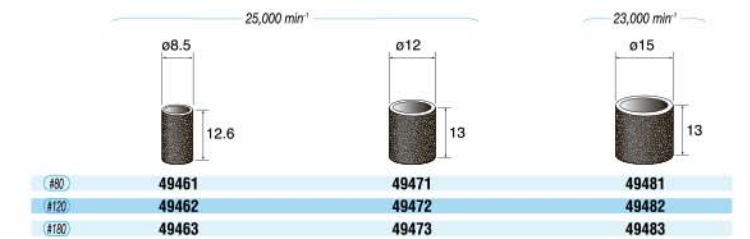


3 pcs./pack Cartridge Seamless Abrasives (Special Rubber Holder)



(49409 is made from metal)

200 pcs./pack Cartridge (Seamless Abrasives)



3 pcs./pack Cartridge Seamless Abrasives (Screw Type Special Rubber Holder)



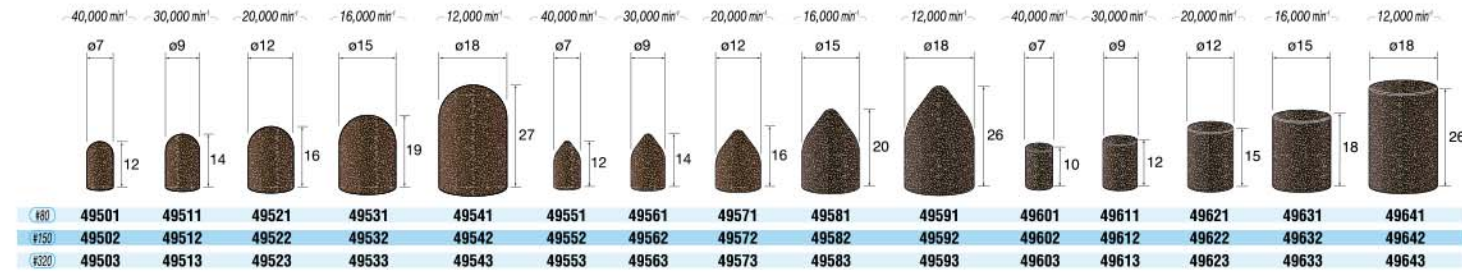
FLAP WHEELS

SHANK $\phi 3.0$

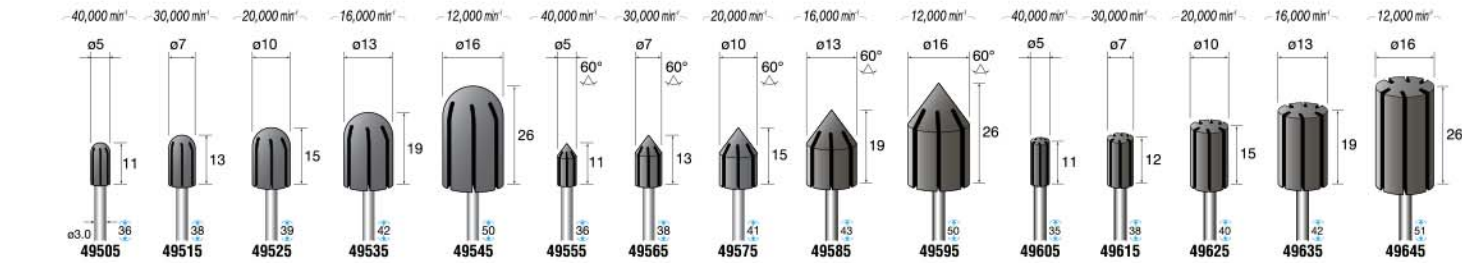


Seamless cap abrasives are easily pushed onto a rubber holder and can be quickly changed. Both the sides and ends can be used for polishing and finishing.

20 pcs./pack Cap (Seamless Abrasives)



3 pcs./pack Cap Seamless Abrasives (Special Rubber Holder)



POLISHING BRUSHES

Selection and Use of Polishing Brushes

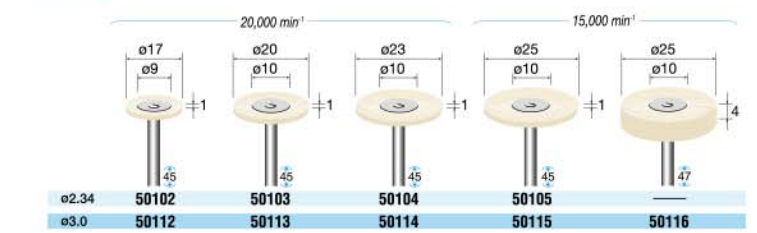
- ◆ **Selection of Brush Materials :**
Brushes should be selected according to the desired finish.
- ◆ **Length and Diameter of Wire :**
Longer brush wires are very flexible and best suited to polishing. Shorter brush wires are suited to heavier cutting. Before using, cut the brush wires to the required length.
- ◆ **Density of Wire Material :**
Higher density wires cut quicker due to their greater rigidity.
- ◆ **Brushing Pressure :**
Using the edge of the applied perpendicular brush to the polishing surface is the most effective method. Use pressure sufficient to deflect the brush tips 1 to 2 mm.
- ◆ **Rotation Direction of Brush :**
Set rotation direction of the micro-grinder considering the lay of the bristles. (Nakanishi micro-grinders can rotate in either direction)
- ◆ **Suitable Brush Rotation Speed :**
Using brushes at less than the maximum allowable speed makes the brush last longer. Confirm suitable rotation speed by test brushing a small area at first.
- ◆ **Features of Polishing Brushes :**
The brushes conform to the polishing surface and result in uniform surface finishes. Brushes are superior tools for finishing compared to other tools.



Polishing brushes with $\phi 2.34$ mm and $\phi 3.0$ mm shanks. They are made from bristle, wool and animal hair.

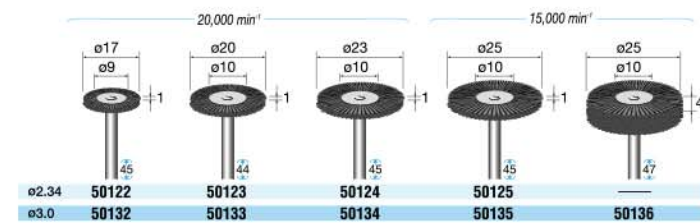
SHANK $\phi 2.34, \phi 3.0$

10 pcs./pack **Hard Type** • Hardness : Hard • Color : White • Material : Bristle

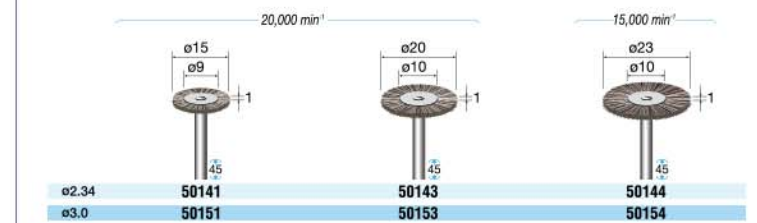


SHANK $\phi 2.34, \phi 3.0$

10 pcs./pack **Hard Type** • Hardness : Hard • Color : Black • Material : Bristle



10 pcs./pack **Medium Type** • Hardness : Medium • Color : Brown • Material : Animal Hair

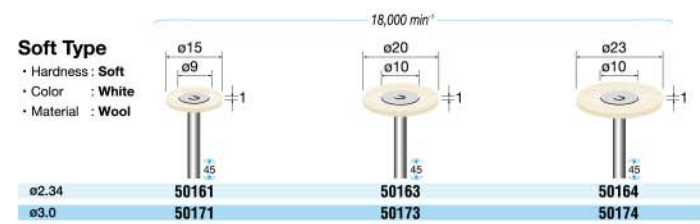


SHANK $\phi 2.34, \phi 3.0$

10 pcs./pack

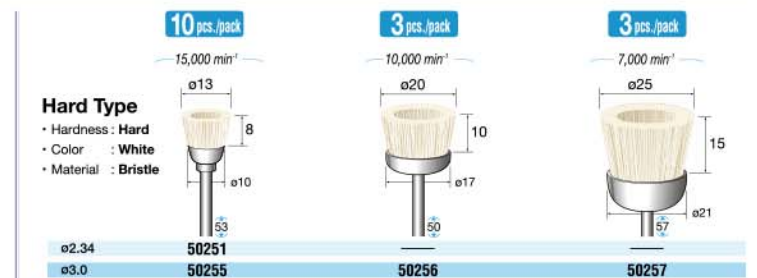
Soft Type

• Hardness : Soft
• Color : White
• Material : Wool



Hard Type

• Hardness : Hard
• Color : White
• Material : Bristle



SHANK $\phi 2.34, \phi 3.0$

10 pcs./pack

Hard Type

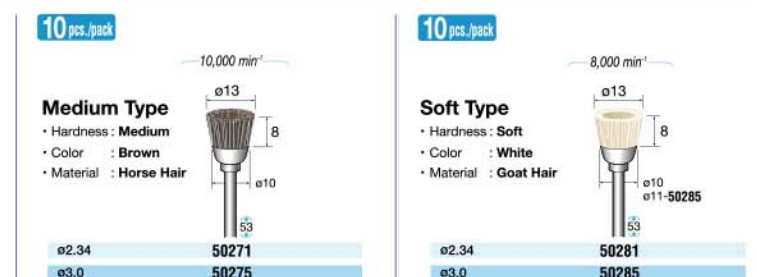
• Hardness : Hard
• Color : Black
• Material : Bristle



10 pcs./pack

Medium Type

• Hardness : Medium
• Color : Brown
• Material : Horse Hair



10 pcs./pack

Soft Type

• Hardness : Soft
• Color : White
• Material : Goat Hair



POLISHING BRUSHES

SHANK $\phi 2.34, \phi 3.0$

10 pcs./pack

Hard Type
 • Hardness : Hard
 • Color : White
 • Material : Hog Hair

$\phi 2.34$	50311	50312	50317
$\phi 3.0$	50315	50316	50317

10 pcs./pack

Hard Type
 • Hardness : Hard
 • Color : Black
 • Material : Hog Hair

$\phi 2.34$	50321	50322	50327
$\phi 3.0$	50325	50326	50327

SHANK $\phi 2.34, \phi 3.0$

10 pcs./pack

Medium Type
 • Hardness : Medium
 • Color : Brown
 • Material : Horse Hair

$\phi 2.34$	50331	50341
$\phi 3.0$	50335	50345

Soft Type
 • Hardness : Soft
 • Color : White
 • Material : Goat Hair



SHANK $\phi 2.34, \phi 3.0$ **Stainless**

10 pcs./pack

Wire Diameter 0.1 mm

$\phi 2.34$	50412	50413	50414	50415
$\phi 3.0$	50422	50423	50424	50425

SHANK $\phi 3.0$ **Stainless**

5 pcs./pack

10,000 min⁻¹
0.15 mm

$\phi 3.0$	50426	50427
------------	-------	-------

10 pcs./pack

15,000 min⁻¹
0.1 mm

$\phi 3.0$	50515	50516
------------	-------	-------

SHANK $\phi 2.34, \phi 3.0$ **Stainless**

10 pcs./pack

15,000 min⁻¹
0.1 mm

$\phi 2.34$	50521	50526
$\phi 3.0$	50525	50526

SHANK $\phi 2.34, \phi 3.0$ **Steel**

10 pcs./pack

Wire diameter 0.1 mm

$\phi 2.34$	50432	50433	50434	50435
$\phi 3.0$	50442	50443	50444	50445

SHANK $\phi 3.0$ **Steel**

5 pcs./pack

10,000 min⁻¹
0.15 mm

$\phi 3.0$	50446	50447
------------	-------	-------

10 pcs./pack

15,000 min⁻¹
0.1 mm

$\phi 2.34$	50531	50536
$\phi 3.0$	50535	50536

SHANK $\phi 2.34, \phi 3.0$ **Steel**

10 pcs./pack

15,000 min⁻¹
0.1 mm

$\phi 2.34$	50541	50546
$\phi 3.0$	50545	50546

SHANK $\phi 2.34, \phi 3.0$ **Brass**

10 pcs./pack

Wire diameter 0.1 mm

$\phi 2.34$	50452	50453	50454	50455
$\phi 3.0$	50462	50463	50464	50465

SHANK $\phi 3.0$ **Brass**

5 pcs./pack

10,000 min⁻¹
0.15 mm

$\phi 3.0$	50466	50467
------------	-------	-------

10 pcs./pack

15,000 min⁻¹
0.1 mm

$\phi 2.34$	50551	50556
$\phi 3.0$	50555	50556

SHANK $\phi 2.34, \phi 3.0$ **Brass**

10 pcs./pack

15,000 min⁻¹
0.1 mm

$\phi 2.34$	50561	50566
$\phi 3.0$	50565	50566

POLISHING BRUSHES



Nylon Brush
Wire diameter [0.2 mm]

Heatproof Nylon Brush
Wire diameter [0.2 mm]

Nylon Brush
contained proof material against static electricity
Wire diameter [0.15 mm]

SHANK $\phi 2.34, \phi 3.0$

Nylon Brush Wire diameter [0.2 mm]

10 pcs./pack **10 pcs./pack** **10 pcs./pack** **5 pcs./pack** **10 pcs./pack** **10 pcs./pack**

$\phi 2.34$	50711	50712	50713	50724	50715	50726
$\phi 3.0$	50721	50722	50723	50725	50726	50726

Heatproof Nylon Brush Wire diameter [0.2 mm]

5 pcs./pack

Armid Fiber
 • Melted Temperature : 420°C
 • Continuous Use Limit Temperature : 210°C

$\phi 3.0$	50731	50732	50733	50735	50736
------------	-------	-------	-------	-------	-------

SHANK $\phi 3.0$

5 pcs./pack **Nylon Brush** contained proof material against static electricity Wire diameter [0.15 mm]

$\phi 3.0$	50741	50742	50743	50745	50746
------------	-------	-------	-------	-------	-------



Abrasive Impregnated (GC) Nylon Brush
Wire diameter [0.2-0.5 mm]

Diamond Impregnated Nylon Brush
Wire diameter [0.2-0.5 mm]

SHANK $\phi 2.34, \phi 3.0$

5 pcs./pack **Abrasive Impregnated (GC) Nylon Brush** Wire diameter [0.2-0.5 mm]

$\phi 2.34$	#180 50751	50771	50791
$\phi 2.34$	#240 50752	50772	50792
$\phi 2.34$	#320 50753	50773	50793
#180	50755	50775	50785
#180	50756	50776	50786
$\phi 3.0$	#240 50757	50777	50797
$\phi 3.0$	#320 50758	50778	50798

1 pc./pack **Diamond Impregnated Nylon Brush** Wire diameter [0.2-0.5 mm]

$\phi 2.34$	#180 51011	51031	51041
$\phi 2.34$	#240 51012	51032	51042
$\phi 2.34$	#400 51013	51033	51043
#600	51014	51034	51044
#180	51015	51035	51045
#240	51016	51036	51046
#400	51017	51037	51047
#600	51018	51038	51048

INSIDE POLISHING BRUSHES



Inside diameter brushes are made from wire fixed to a straight shank. Ideal for polishing internal surfaces, ID threads and curved surfaces.

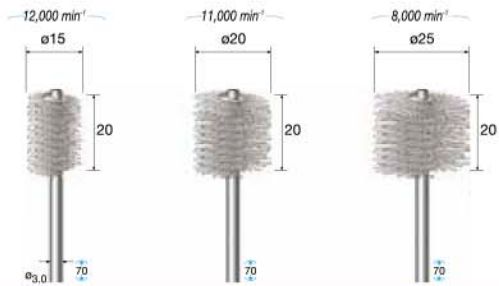


- Abrasive Impregnated Nylon Brush
- Bristle Brush
- Wire Brush

⚠ Do not exceed the maximum rotating speed. Long length brushes are highly susceptible to shank and brush deflection.

SHANK $\phi 3.0$

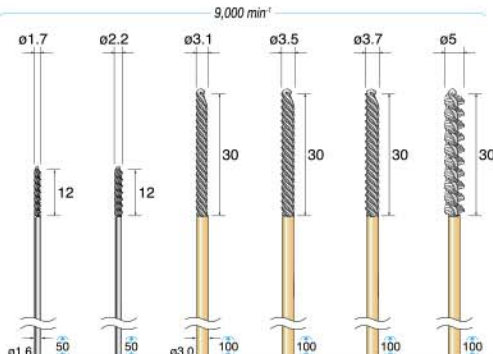
1 pc./pack



Brush Materials	#600 51501	51512	51513
Abrasive Impregnated Nylon Brush (GC)	—	—	—
Bristle Brush (Quality: Bristle / Hard / Black)	—	—	—

SHANK $\phi 1.6, \phi 3.0$

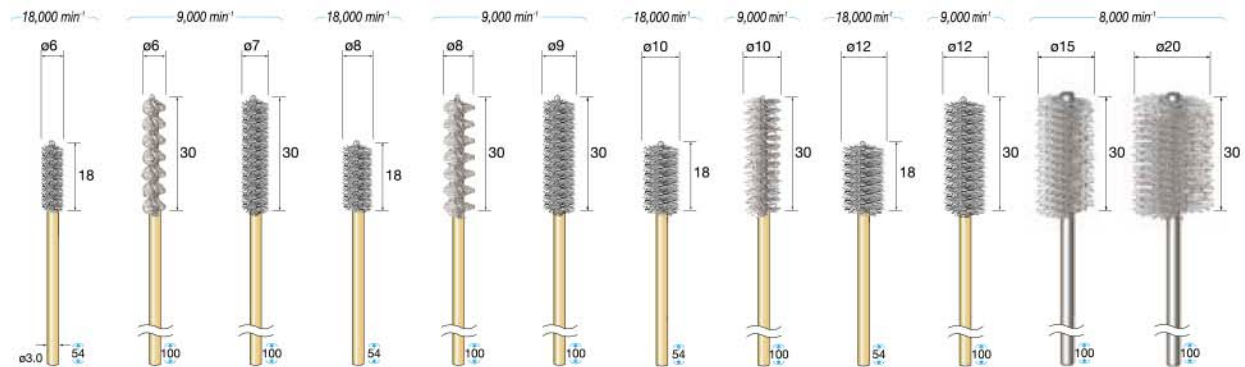
2 pcs./pack



Brush Materials	#600 51575	51576	51577	51578	51579	51580
Abrasive Impregnated Nylon Brush (GC)	—	—	—	—	—	—

SHANK $\phi 3.0$

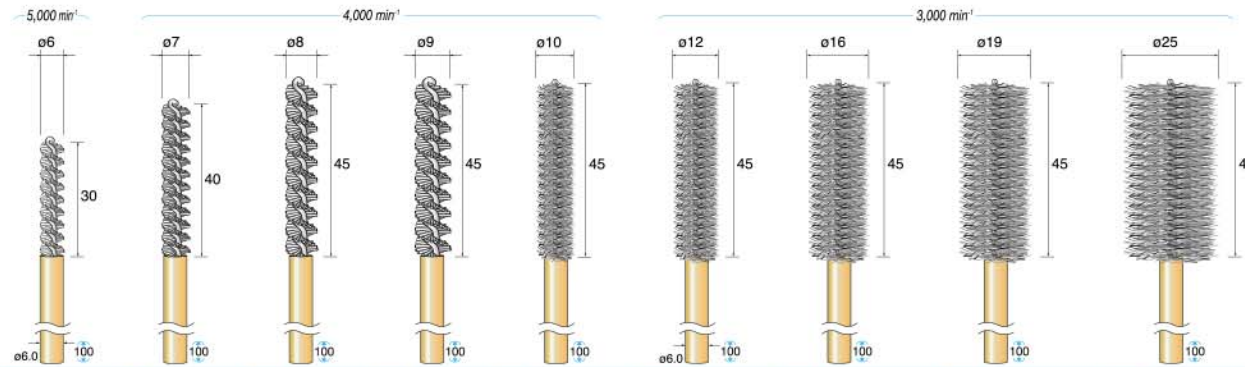
1 pc./pack



Brush Materials	#320 51581	51582	51583	51585	51586	51587	51588	51589	51601	51602	51603	51604	51605
Abrasive Impregnated Nylon Brush (GC)	—	—	—	—	—	—	—	—	—	—	—	—	—
Abrasive Impregnated Nylon Brush (GC)	—	—	—	—	—	—	—	—	—	—	—	—	—
Bristle Brush (Quality: Bristle / Hard / Black)	—	—	—	—	—	—	—	—	—	—	—	—	—
Wire Brush (Stainless Wire: Wire Diameter 0.1 mm)	51641	51621	51626	51642	51622	51627	51643	51623	51644	51628	—	—	—
Wire Brush (Stainless Wire: Wire Diameter 0.15 mm)	51631	51632	51633	51634	51635	51636	51637	51638	51639	51640	—	—	51608

SHANK $\phi 6.0$

1 pc./pack



Brush Materials	#500 51591	#120 51592	#120 51593	#120 51594	#120 51595	#120 51596	#120 51597	#120 51598	#120 51599
Abrasive Impregnated Nylon Brush (GC)	—	—	—	—	—	—	—	—	—
Wire Brush (Stainless Wire: Wire Diameter 0.15 mm)	51611	51612	51613	51614	51615	51616	51617	51618	51619

WIRE RAPPING TOOLS

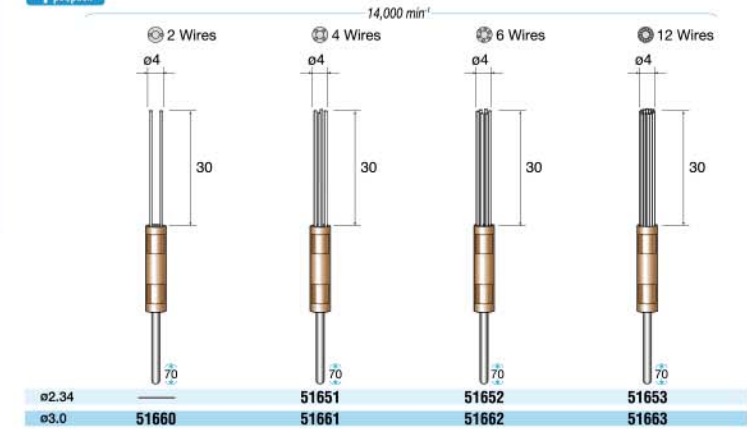


Wire lapping tools are made from banded piano wire. Ideal for burr removal and finishing of metals and plastics. They are also suited to polishing with abrasive compounds.

⚠ Do not exceed the maximum rotating speed. Long length brushes are highly susceptible to shank and brush deflection.

SHANK $\phi 2.34, \phi 3.0$

1 pc./pack



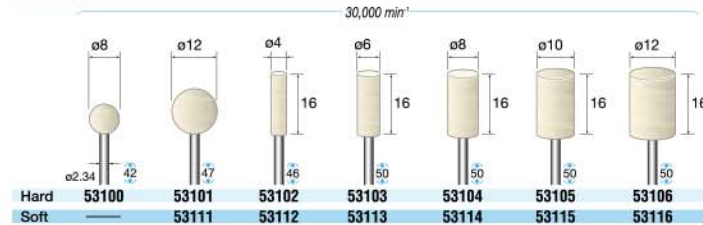
Shank Diameter	51651	51652	51653
$\phi 2.34$	—	—	—
$\phi 3.0$	51660	51661	51662

FELT BOBS

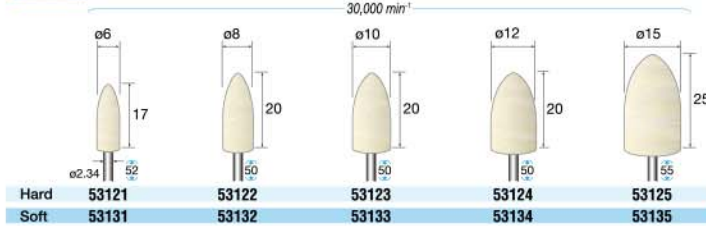


Felt bobs are made from 100% high quality wool. They are designed for superior finishing with abrasive compounds or with their embedded abrasives.

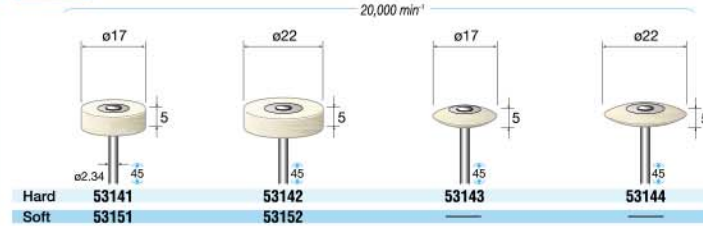
SHANK Ø2.34
10 pcs./pack



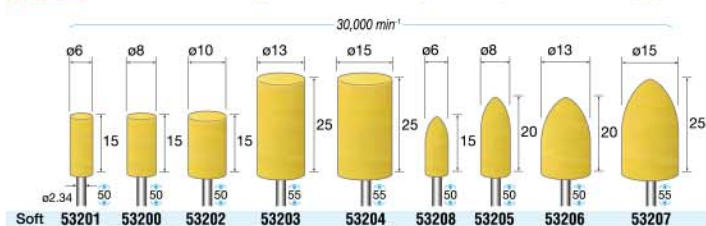
SHANK Ø2.34
10 pcs./pack



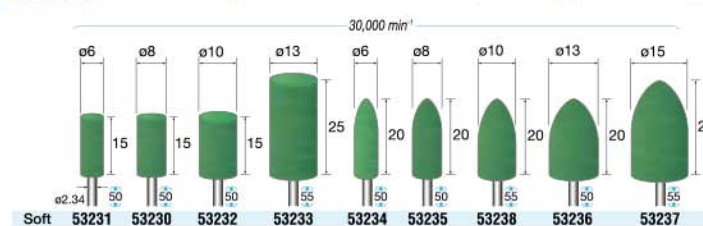
10 pcs./pack



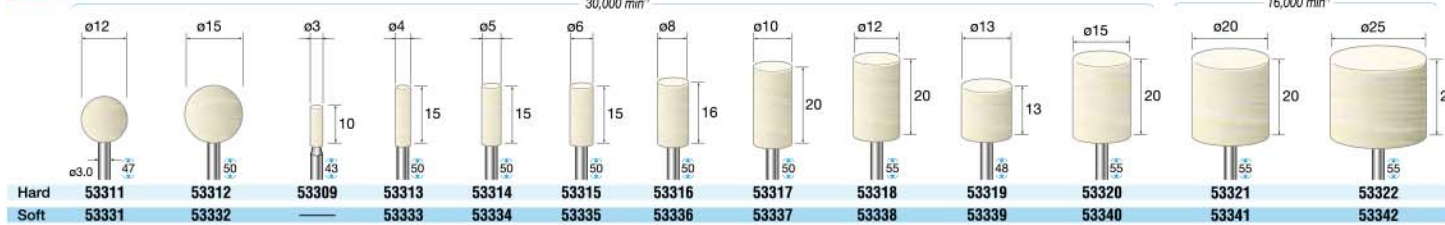
SHANK Ø2.34
10 pcs./pack



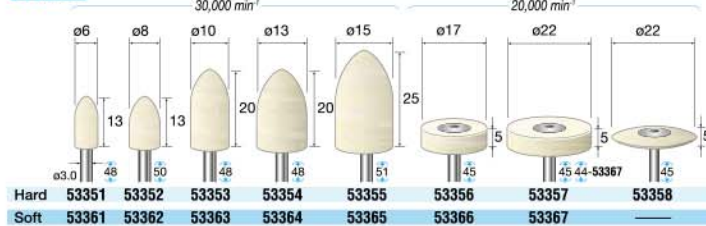
10 pcs./pack



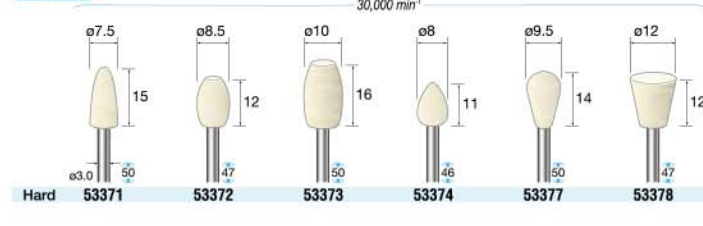
SHANK Ø3.0
10 pcs./pack



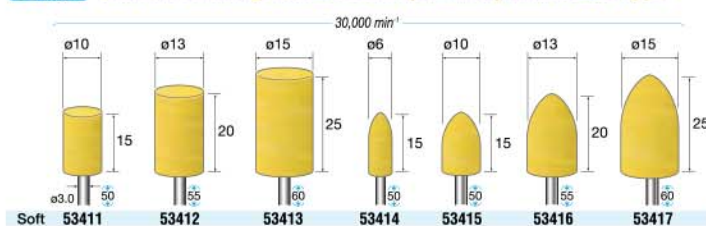
SHANK Ø3.0
10 pcs./pack



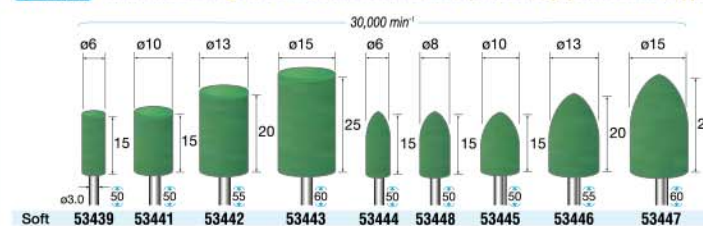
10 pcs./pack



SHANK Ø3.0
10 pcs./pack

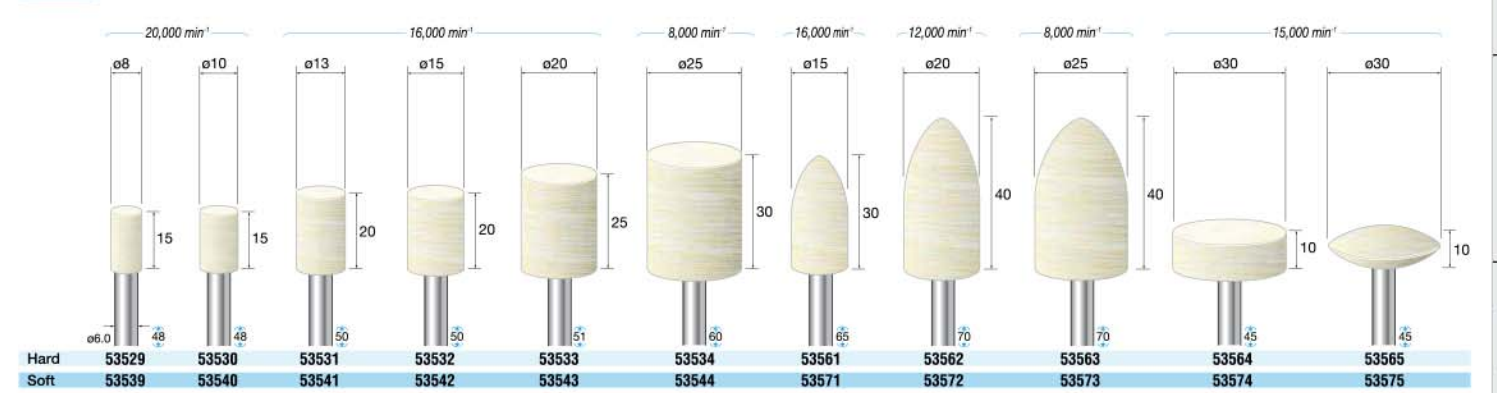


10 pcs./pack

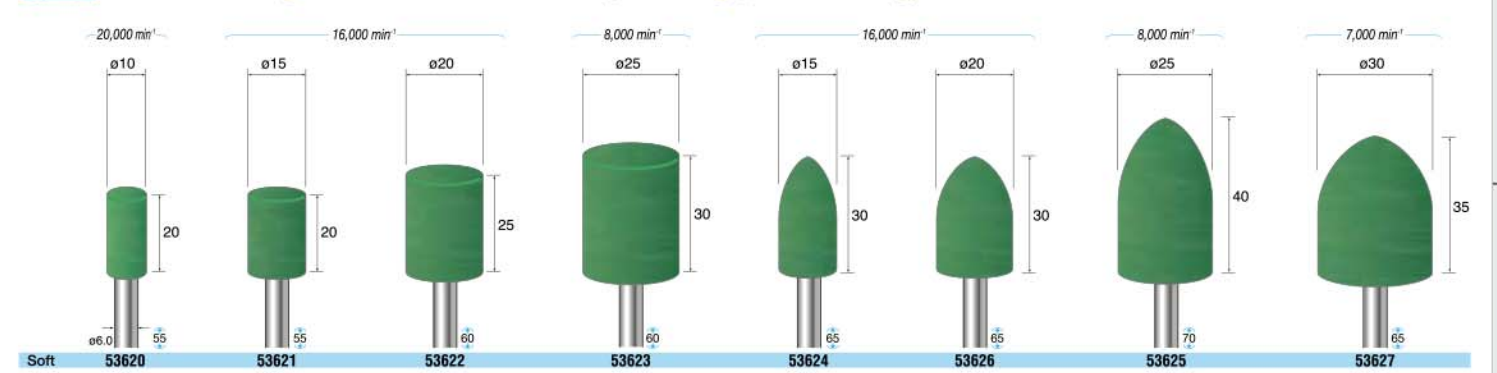


FELT BOBS

SHANK Ø6.0
5 pcs./pack



SHANK Ø6.0
5 pcs./pack

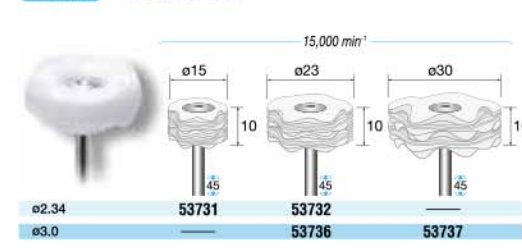


Cotton polishing bobs are made for soft polishing. They are well suited to a wide variety of materials.

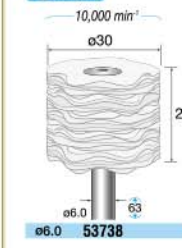
SHANK Ø2.34, Ø3.0
10 pcs./pack



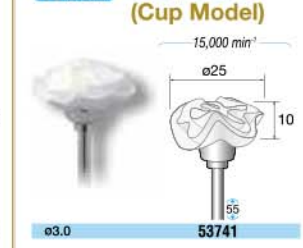
SHANK Ø2.34, Ø3.0
10 pcs./pack



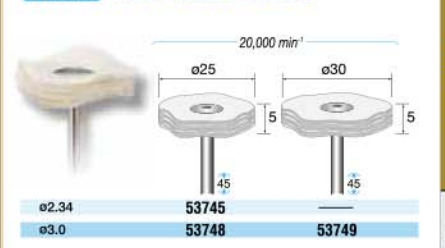
SHANK Ø6.0
5 pcs./pack



SHANK Ø3.0
10 pcs./pack



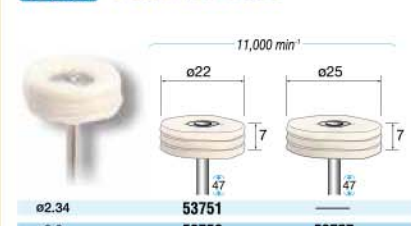
SHANK Ø2.34, Ø3.0
10 pcs./pack



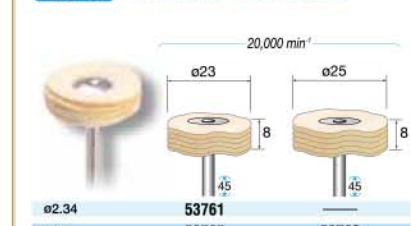
SHANK Ø2.34, Ø3.0
10 pcs./pack



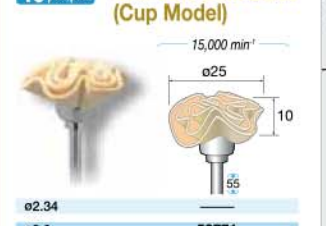
10 pcs./pack



10 pcs./pack



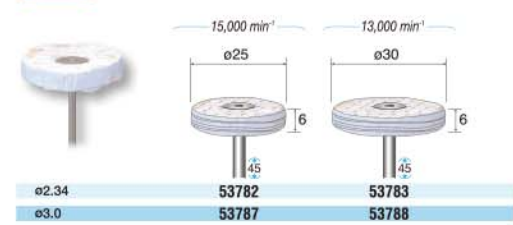
10 pcs./pack



FELT BOBS

SHANK $\phi 2.34, \phi 3.0$

5 pcs./pack Cotton Bobs



$\phi 2.34$	53782	53783
$\phi 3.0$	53787	53788

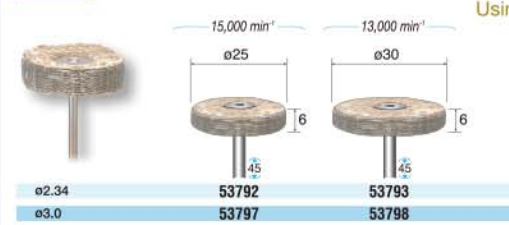
3 pcs./pack



53790

5 pcs./pack Dark Brown Cotton Bobs

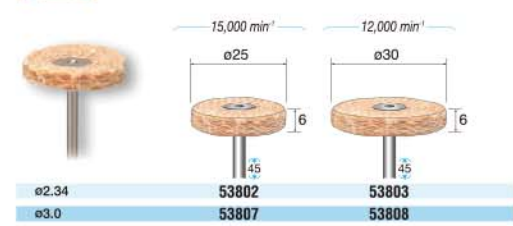
For metal semi-finishing. Using polishing materials.



$\phi 2.34$	53792	53793
$\phi 3.0$	53797	53798

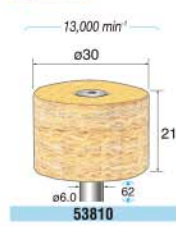
SHANK $\phi 2.34, \phi 3.0$

5 pcs./pack Sisal Bobs



$\phi 2.34$	53802	53803
$\phi 3.0$	53807	53808

3 pcs./pack



53810

SHANK $\phi 3.0$

7 pcs./pack Polishing Piled Bobs Assorted Set



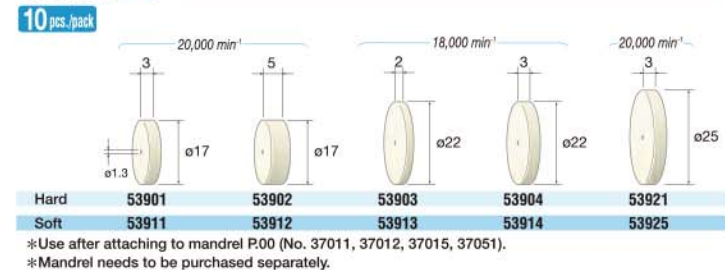
53811	
Set (7 pieces) (Each code No. one piece-pack)	
Soft	Hard
53717	53787
53736	53797
53757	53807
53766	

2 pcs./pack Polishing Compound (Solid Type)

For Metals	Applications	
Alumina for metal pre-finishing (white rouge)	55341	Aluminum, stainless steel, brass, chrome, etc.
Tripoli for metal pre-finishing (red rouge)	55342	Iron, aluminum, etc.
Chrome oxide for metal finishing (blue rouge)	55343	Precious metals, aluminum, stainless steel, brass, copper alloys, etc.

For Resins	Applications	
For resin pre-finishing (white rouge)	55345	For synthetic resins and coated surfaces
For resin finishing (white rouge)	55346	For synthetic resins and acrylics for coated surfaces

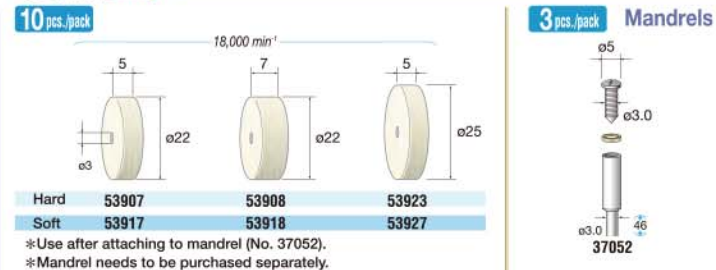
SHANK $\phi 1.3$



Hard	53901	53902	53903	53904	53921
Soft	53911	53912	53913	53914	53925

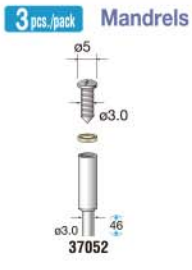
*Use after attaching to mandrel P.00 (No. 37011, 37012, 37015, 37051).
*Mandrel needs to be purchased separately.

SHANK $\phi 3.0$



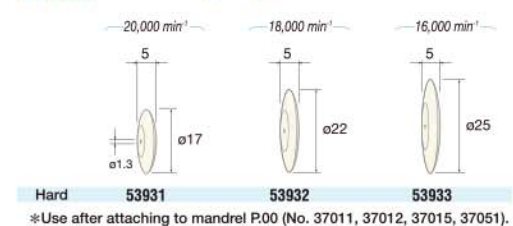
Hard	53907	53908	53923
Soft	53917	53918	53927

*Use after attaching to mandrel (No. 37052).
*Mandrel needs to be purchased separately.



SHANK $\phi 1.3$

10 pcs./pack Knife Edge Type



Hard	53931	53932	53933
------	-------	-------	-------

*Use after attaching to mandrel P.00 (No. 37011, 37012, 37015, 37051).
*Mandrel needs to be purchased separately.

SHANK $\phi 2.34$

16 pcs./pack Polishing Piled Bobs Assorted Set



54101			
Set (16 pieces) (Each code No. one piece-pack)			
53101	53123	53201	53712
53103	53124	53205	53732
53105	53142	53232	53751
53121	53144	53235	53761

SHANK $\phi 3.0$

16 pcs./pack Polishing Piled Bobs Assorted Set



54105			
Set (16 pieces) (Each code No. one piece-pack)			
53312	53351	53412	53716
53316	53353	53416	53736
53318	53355	53442	53741
53320	53357	53446	53765

ABRASIVE COMPOUNDS & POLISHING TOOLS

1 pc./pack Diamond Compounds

Standard	Water Soluble	55101 (Black)	55102 (Violet)	55103 (Brown)	55104 (Red)	55106 (Blue)	55108 (Green)	55109 (Orange)	55110 (Yellow)
Oil-Based	55121 (Black)	55122 (Violet)	55123 (Brown)	55124 (Red)	55126 (Blue)	55128 (Green)	55129 (Orange)	55130 (Yellow)	
Heavy Oil-Based	55241 (Ivory)	55242 (Orange)	55243 (Brick-red)	55244 (Red)	55246 (Blue)	55248 (Green)	55249 (Orange)	55250 (Yellow)	

5 g plastic syring

#180 90 μ m #230 60 μ m #325 45 μ m #600 30 μ m #1,200 15 μ m #1,800 9 μ m #3,000 6 μ m #8,000 3 μ m

The color in the illustration is the standard type.
* The micron grades indicate median range of grain diameters. * We recommend weak solutions for grinding, polishing, etc.

1 pc./pack Diamond Compounds

Standard	Water Soluble	55111 (Ivory)	55112 (White)	55113 (Gray)
Oil-Based	55131 (Ivory)	55132 (White)	55133 (Gray)	
Heavy Oil-Based	55251 (Gray)	55252 (Dark Gray)	55253 (Gray)	

5 g plastic syring

#14,000 1 μ m #60,000 1/2 μ m #100,000 1/4 μ m

The color in the illustration is the standard type.
* The micron grades indicate median range of grain diameters.
* We recommend weak solutions for grinding, polishing, etc.

1 pc./pack Diamond Micron Powder

Micron Range μ m (Grit)	10 Carats	50 Carats	Micron Range μ m (Grit)	10 Carats	50 Carats
80-100 (#200)	55301	55311	6-12 (#1,800)	55306	55316
40-60 (#325)	55302	55312	4-6 (#8,000)	55307	55317
30-40 (#600)	55303	55313	2-4 (#14,000)	55308	55318
20-30 (#800)	55304	55314	0-2 (#28,000)	55309	55319
10-20 (#1,200)	55305	55315	0-1 (#28,000)	55310	55320

1 pc./pack Diamond Compound, Weak Solution

Water Soluble 500 cc	55331
Oil-based 500 cc	55332

2 pcs./pack Polishing Compound (Solid Type)

For Metals	Applications	
Alumina for metal pre-finishing (white rouge)	55341	Aluminum, stainless steel, brass, chrome, etc.
Tripoli for metal pre-finishing (red rouge)	55342	Iron, aluminum, etc.
Chrome oxide for metal finishing (blue rouge)	55343	Precious metals, aluminum, stainless steel, brass, copper alloys, etc.

For Resins	Applications	
For resin pre-finishing (white rouge)	55345	For synthetic resins and coated surfaces
For resin finishing (white rouge)	55346	For synthetic resins and acrylics for coated surfaces



Wood lapping sticks retain abrasive compounds very well and are ideal for very fine polishing.

10 pcs./pack Wood Lapping Sticks (Total Length 150 mm)

Soft	55417 ($\phi 4.8$)	55418 ($\phi 6.4$)
------	----------------------	----------------------



The latest technology in polishing. These stone are very flexible and can be ground to shape. They are very long lasting and will hold the desired shape even after long use.

1 pc./pack Diamond Ceramic Fiber Grindstone (Total Length 100 mm)

Grit	Color	55471	55481	55485	55491
#200	Black				
#400	Gray	55472	55482	55486	55492
#600	Green	55473	55483	55487	55493

1 pc./pack Ceramic Fiber Grindstone (Total Length 100 mm)

Grit	Color	55514	55524	55534	55554	55574	55584	55594	55604
#180	Ivory								
#300	Brown	55515	55525	55535	55555	55575	55585	55595	55605
#400	Orange	55516	55526	55536	55556	55576	55586	55596	55606
#600	Black	55517	55527	55537	55557	55577	55587	55597	55607
#800	Blue	55518	55528	55538	55558	55578	55588	55598	55608
#1000	White	55519	55529	55539	55559	55579	55589	55599	55609
#1200	Pink	55520	55530	55540	55560	55580	55590	55600	55610

ABRASIVE COMPOUNDS & POLISHING TOOLS

1 pc./pack Ceramic Fiber Grindstone (Total Length 100 mm)

Grit	Color	55614	55624	55654	55684	55724	55744	55764
#180	Ivory	55614	55624	55654	55684	55724	55744	55764
#300	Brown	55615	55625	55655	55685	55725	55745	55765
#400	Orange	55616	55626	55656	55686	55726	55746	55766
#600	Black	55617	55627	55657	55687	55727	55747	55767
#800	Blue	55618	55628	55658	55688	55728	55748	55768
#1000	White	55619	55629	55659	55689	55729	55749	55769
#1200	Pink	55620	55630	55660	55690	55730	55750	55770

2 pcs./pack Special Hand Holder For Ceramic Fiber Grindstones

Flat (hold thickness 0.5~2 mm) Weight: 13 g

d	55461
For 2 mm width	55461
For 4 mm width	55462
For 6 mm width	55463
For 10 mm width	55464

4 Types
(for 2, 4, 6 and 10 mm width) 55465

1 pc./pack Rounded Hand Holder (Pin Vice)

Weight: 22 g

• Attachable shank diameter is $\phi 2.7\text{--}3.0$ mm

$\phi 3$ mm **57631**

6 pc./pack Abrasive Fiber Grindstone

Grit	56122	56157	56162	56167
#750	56122	56157	56162	56167
#220	56123	56158	56163	56168
#320	56124	56159	56164	56169
#400	56125	56160	56165	56170

6 pc./pack Abrasive Fiber Grindstone

Grit	56231	56241	56245
#120	56231	56241	56245
#180	56217	56232	56246
#220	56218	56233	56243
#320	56219	56234	56244

6 pc./pack Abrasive Fiber Grindstone

Grit	56341	56361	56371	56381
#100	56341	56361	56371	56381
#120	56342	56362	56372	56382
#180	56343	56363	56373	56383
#320	56345	56365	56375	56385
#800	56346	56366	56376	56386

6 pc./pack Abrasive Fiber Grindstone

Grit	56417	56437	56442
#240	56417	56437	56442
#320	56418	56438	56443
#400	56419	56434	56444
#600	56420	56435	56445

1 pc./pack Electroplated Diamond Sheet (Dot-Pattern Electroplated Type)

• Strongly bonded diamond-electroplated nickel alloy sheets.

Grit	Grain Diameter	Color	56701
# 60	250 μ	Green	56701
# 120	125 μ	Black	56702
# 200	74 μ	Red	56703
# 400	40 μ	Yellow	56704
# 800	20 μ	Gray	56705

Thickness 0.8 mm

1 pc./pack Electroplated Diamond Sheet (Fully Electroplated Type)

• Ultra-thin copper alloy is used for base material. Diamond abrasive is electroplated on the full sheet.

Grit	Size (mm)	56731	56741
# 120	100 x 20	56731	56741
# 150	100 x 20	56732	56742
# 200	100 x 20	56733	56743
# 300	100 x 20	56734	56744
# 400	100 x 20	56735	56745

Thickness 0.3 mm

1 pc./pack Resin Bond Diamond Sheet (Dot-Pattern Applied Type)

• Resin bonded diamond abrasive on resin base material.

Grit	Grain Diameter	Color	56771
# 500	30 μ	Yellow	56771
# 1,000	10 μ	Blue	56772
# 3,000	2 μ	Orange	56773

Thickness 1 mm

ABRASIVE COMPOUNDS & POLISHING TOOLS

1 pc./pack Diamond Lapping Film (Film Coated Type)

• Fine grain diamond is coated on a strong polyester film.

Grit	Grain Diameter	Color	56802
# 400	40 μ	Ivory	56802
# 800	25 μ	Ivory	56804
# 1,000	15 μ	Ivory	56805
# 1,500	12 μ	Ivory	56806
# 3,000	6 μ	Ivory	56807

Thickness 0.2 mm

1 pc./pack Felt Sheet

• Ideal for fine finishing with various abrasive compounds.

Thickness	56901
1 mm	56901
2 mm	56902
3 mm	56903

Size: (A4) 210 mm x 300 mm

1 pc./pack Abrasive Embedded Felt Sheet

• Chrome oxide (green rouge) is embedded into the felt sheet.

Thickness	56911
1 mm	56911

Size: (A4) 210 mm x 300 mm

1 pc./pack Lapping Film Sheet

Grit	Grain Diameter	Color	56961
# 320	50 μ	Purple	56961
# 400	40 μ	Ivory	56962
# 600	30 μ	Green	56963
# 800	20 μ	Blue	56964
# 1,000	15 μ	Orange	56965
# 1,200	12 μ	Gley	56966
# 1,500	10 μ	Olive	56967
# 3,000	5 μ	Violet	56968
# 6,000	2 μ	Light Blue	56969
# 10,000	1 μ	Yellow	56970

Thickness 0.08 mm

Abrasive Stone Sticks with high quality performance. They are highly effective for polishing.

Diamond files for precise finishing. Highly durable, they retain sharpness even after long use.

1 pc./pack Diamond Files (Flat Taper)

Grit	562301
# 200	562301
# 400	562302
# 600	562303

Thickness 1.4 mm

1 pc./pack Diamond Files (Flat, Half-Round, Round, Tapered)

Grit	562311
# 150	562311

Thickness 1.4 mm

Grit	562315
# 150	562315

Thickness 1.4 mm

Grit	562317
# 150	562317

Thickness 2.5 mm

1 pc./pack Diamond Files (Flat Taper, Flat)

Grit	562801
# 200	562801
# 400	562802
# 600	562803

Thickness 1.4 mm

Grit	562805
# 200	562805
# 400	562806
# 600	562807

Thickness 1.4 mm

Grit	562811
# 150	562811
# 200	562812
# 400	562813

Thickness 1.2 mm

Grit	562814
# 100	562814

Thickness 1.2 mm

1 pc./pack Diamond Files (Flat, Angular)

Grit	562815
# 150	562815
# 200	562816
# 400	562817

Thickness 1.4 mm

Grit	562821
# 150	562821
# 200	562822
# 400	562823

Thickness 1.4 mm

Grit	562825
# 150	562825
# 200	562826
# 400	562827

Thickness 1.4 mm

Grit	562831
# 150	562831
# 200	562832
# 400	562833

Thickness 2 mm

ABRASIVE COMPOUNDS & POLISHING TOOLS

SHANK $\phi 3.0$ Diamond Files (Round)

$\phi 1$	(Round)	Grit	
		# 100	62840
		# 150	62841
$\phi 2$	(Round)	Grit	
		# 150	62845
		# 200	62846
$\phi 3$	(Round)	Grit	
		# 150	62851
		# 200	62852
$\phi 4$	(Round)	Grit	
		# 150	62855
		# 200	62856
$\phi 5$	(Round)	Grit	
		# 150	62855
		# 200	62857

SHANK $\phi 3.0$ Diamond Files (Half-Round, Triangular)

$\frac{1.5}{4}$	(Half-round)	Grit	
		# 150	62865
		# 200	62866
$\frac{2}{4}$	(Half-round)	Grit	
		# 150	62871
		# 200	62872
$\frac{3}{4}$	(Triangular)	Grit	
		# 150	62881
		# 200	62882
$\frac{4}{4}$	(Triangular)	Grit	
		# 150	62883
		# 200	62883



SHANK $\phi 3.0$ Diamond Files (Flat Taper, Thin Flat, Flat)

$\frac{0.6}{2}$	(Flat taper)	Thickness 1.7	Grit	
			# 200	57101
			# 400	57102
$\frac{0.6}{4}$	(Flat taper)	Thickness 1.7	Grit	
			# 200	57104
			# 400	57105
$\frac{0.6}{6}$	(Flat taper)	Thickness 1.7	Grit	
			# 200	57106
			# 400	57106

SHANK $\phi 3.0$ Diamond Files (Flat Taper, Thin Flat, Flat)

$\frac{0.6}{6}$	(Flat taper)	Thickness 1.7	Grit	
			# 200	57107
			# 400	57108
$\frac{0.5}{5.5}$	(Thin flat)		Grit	
			# 150	57110
			# 200	57111
$\frac{0.5}{6}$	(Thin flat)		Grit	
			# 200	57111
			# 400	57112

$\frac{0.8}{5.5}$	(Thin flat)		Grit	
			# 150	57113
			# 200	57114
$\frac{1.4}{6}$	(Flat)		Grit	
			# 120	57116
			# 200	57117
$\frac{1.4}{6}$	(Flat)		Grit	
			# 200	57117
			# 400	57118

SHANK $\phi 1.0, \phi 2.0, \phi 3.0, \phi 3.4$ Diamond Files (Round)

$\phi 1$	(Round)	Grit	
		# 120	57131
		# 400	57132
$\phi 2$	(Round)	Grit	
		# 200	57133
		# 400	57134

$\phi 3$	(Round)	Grit	
		# 120	57135
		# 200	57136
$\phi 3.5$	(Round)	Grit	
		# 120	57138
		# 200	57139

SHANK $\phi 3.0, \phi 3.4$ Diamond Files (Half-Round)

$\frac{2}{5}$	(Half-round)	Grit	
		# 120	57141
		# 200	57142
$\frac{2}{6}$	(Half-round)	Grit	
		# 120	57144
		# 200	57145

SHANK $\phi 3.0, \phi 3.4$ Diamond Files (Tapered)

$\frac{2.5}{2.5}$	(Angular)	Grit	
		# 120	57151
		# 200	57152
$\frac{3}{3}$	(Angular)	Grit	
		# 200	57154

ABRASIVE COMPOUNDS & POLISHING TOOLS

SHANK $\phi 3.0, \phi 3.4$ Diamond Files (Triangular, Elliptical, Blade)

$\frac{3.5}{3.5}$	(Triangular)	Grit	
		# 120	57155
		# 200	57156
$\frac{4}{4}$	(Triangular)	Grit	
		# 100	57157
		# 200	57158

$\frac{2}{5}$	(Elliptical)	Grit	
		# 120	57160
		# 200	57161
$\frac{1.7}{6}$	(Blade)	Grit	
		# 120	57162
		# 200	57163

SHANK $\phi 3.0$ Diamond Files (Sickle Type) (Flat, Round, Half-Round, Angular, Triangular)

$\frac{6}{1.5}$	(Flat)	Grit	
		# 150	57171
		# 150	57173
$\frac{6}{26}$	(Round)	Grit	
		# 150	57173
		# 150	57173

$\frac{1.5}{5}$	(Half-round)	Grit	
		# 150	57175
		# 150	57177
$\frac{2.5}{2.5}$	(Angular)	Grit	
		# 150	57177
		# 150	57179
$\frac{3.5}{3.5}$	(Triangular)	Grit	
		# 150	57179
		# 150	57179

SHANK $\phi 3.0, \phi 3.5$ Precision Finishing Files (Flat, Round, Angular, Triangular, Half-Round)

Total length The length of file	140mm		180mm
	70mm	90mm	90mm
1(1.3)	Standard	Fine	Standard
5(6)	57301	57311	57321
3(3.5)	57302	57312	57322
2.5(2.7)	57303	57313	57323

Total length The length of file	140mm		180mm
	70mm	90mm	90mm
3.3(4.1)	Standard	Fine	Standard
5(6)	57304	57314	57324
2	57305	57315	57325

5 files-pack set

- Standard (total length 140mm) set (No.57301-No.57305 : 1pc. each) 57309
- Fine (total length 140mm) set (No.57311-No.57315 : 1pc. each) 57319
- Standard (total length 180mm) set (No.57321-No.57325 : 1pc. each) 57329

SHANK $\phi 3.0$ Rasps for plastics and wood working (Flat, Round, Angular, Triangular, Half-Round)

$\frac{2.2}{5.7}$	(Flat)	57401
	(Round)	57402
	(Angular)	57403

$\frac{3.8}{2.3}$	(Triangular)	57404
	(Half-round)	57405

5 files-pack set

- Rasps set for plastics and wood working (No.57401-No.57405 : 1pc. each) 57410

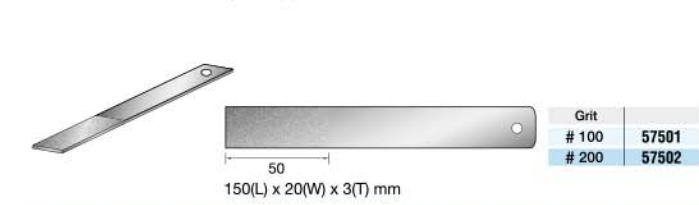
SHANK $\phi 3.0$ Special Grip Handle

- Attachable shank diameter is $\phi 2-4$ mm



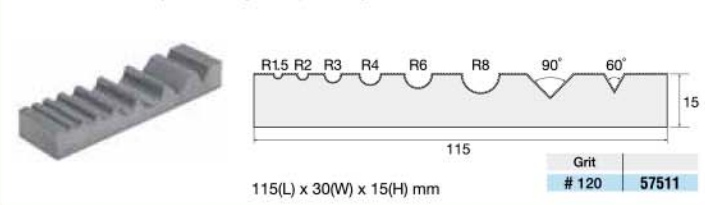
SHANK $\phi 3.0$ Diamond Hand Dresser

- Light weight, electroplated diamond dresser. Ideally suited to a wide variety of applications.



SHANK $\phi 3.0$ Diamond Block Dresser

- Can be molded for purpose use, by turning a work with axis, or by vibrating and pushing a stick abrasive material.



ABRASIVE COMPOUNDS & POLISHING TOOLS

1 pc./pack Grindstone Dresser

• Used for dressing diamond / CBN wheels, metal or resin bond.



Handy Type	Size 75(W) x 25(D) x 8(H) mm	WA	GC
		#80	#80
Stick Type	Mini Type 50(W) x 7(D) x 7(H) mm	57531 #200	57536 #360
	100(W) x 20(D) x 15(H) mm	57541 #200	57546 #360

1 pc./pack Natural Diamond Single Stone Dresser

• Used for dressing or shaping standard grindstones.

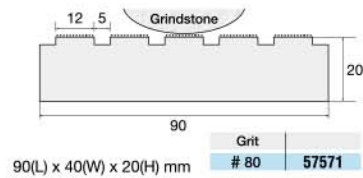
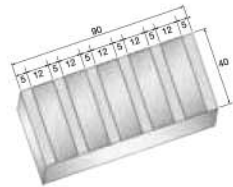


* Shank diameter : ϕ 11mm
Length : 100mm

No. of Carats	Recommended Grindstone Outer Diameter	
1/4 (0.25ct)	ϕ 75 mm	57551
1/2 (0.5ct)	ϕ 150-200 mm	57552
3/4 (0.75ct)	ϕ 255-300 mm	57553
1ct	ϕ 300-355 mm	57554

1 pc./pack Tooling Block Dresser

• Dresser with electroplated diamonds on a block metal surface.



1 pc./pack Imprint Dresser For Truing

• Used to adjust the grinding surface of diamond, CBN foil and standard grindstones.



Grit	
# 100	57581

NAKANISHI's EXCLUSIVE TOOLS

Exclusive Tools of Ultrasonic Polisher "SHEENUS NEO"



Special electroplated diamond files of Nakanishi's ultrasonic polisher "SHEENUS NEO". Ideal for fine burr removal and rough finishing.

1 pc./pack Electroplated Diamond File

File Type	Thickness	Grit	Part No.
Flat taper	0.4	# 200	60101
		# 320	60102
		# 600	60103
Flat	1	# 200	60105
		# 320	60106
		# 600	60107
Flat bent	1	# 200	60111
		# 320	60112
		# 600	60113
Column with the rounded edge	ϕ 1	# 200	60151
		# 320	60152
		# 600	60153
Column with the rounded edge	ϕ 2	# 200	60155
		# 320	60156
		# 600	60157
Round taper (cone-shaped)	ϕ 3	# 200	60181
		# 320	60182
		# 600	60183
Triangular taper (Triangular pyramid)	3	# 200	60185
		# 320	60186
		# 600	60187
Oval taper	2	# 200	60191
		# 320	60192
		# 600	60193
Flat long	1	# 200	60115
		# 320	60116
		# 600	60117
Flat long taper	1	# 200	60231
		# 320	60232
		# 600	60233
Flat long taper	1	# 200	60235
		# 320	60236
		# 600	60237

2 pcs./pack Ceramic Fiber Grindstone (Total Length 50 mm)

• Alumina fiber abrasive with the strength and the flexibility for rough or fine finishing.



Grain diameter	Color	W = 4 mm	W = 6 mm	W = 10 mm	Grain diameter	Color	ϕ 3 mm
# 180	Ivory	60701	60711	62961	# 180	Ivory	63101
# 300	Brown	60702	60712	62962	# 300	Red	63102
# 400	Orange	60703	60713	62963	# 400	Orange	63103
# 600	Black	60704	60714	62964	# 600	Black	63104
# 800	Blue	60705	60715	62965	# 800	Blue	63105
# 1,000	White	60706	60716	62966	# 1,000	White	63106
# 1,200	Pink	60707	60717	62966	7 # 1,200	Pink	63107

5 pcs./pack Brass Lapping Tip (Total Length 40 mm)

• Lapping tools for finishing using diamond or abrasive compounds.

Grain diameter	Part No.
d= ϕ 2 mm	60801
d= ϕ 3 mm	60802
	60805

*Use after clamping in Special Tip Holder

10 pcs./pack Wood Lapping Tip (Total Length 40 mm)

• Lapping tools for finishing using diamond or abrasive compounds.

Grain diameter	Part No.
ϕ 3	60811
	60815

*Use after clamping in Special Tip Holder

2 pcs./pack Special Tip Holder

Grain diameter	Part No.
d = ϕ 2.0 mm	60901
d = ϕ 3.0 mm	60902
d = ϕ 3.3 mm	60903
d = ϕ 3.2 mm	60904
d = ϕ 2.0 mm	60911
d = ϕ 3.0 mm	60912
d = ϕ 3.2 mm	60913

Grain diameter	Part No.
t=0.8 mm	60921
t=1.0 mm	60922
t=2.0 mm	60923
t=3.0 mm	60924
t=3.2 mm	60925
t=1.0 mm	60927

NAKANISHI's EXCLUSIVE TOOLS

2 pcs./pack M4 Screw Joint Adaptor

- Connection adaptor for attaching M4 screw tool to SHEENUS handpiece (SHEENUS ID thread is M6).



Exclusive Tools of Electromotive Polisher "LUSTER", "MINI-LUSTER", "SWING-LUSTER"

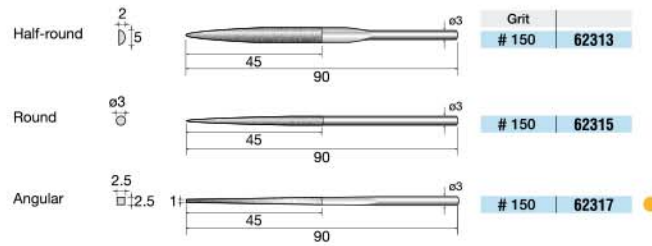
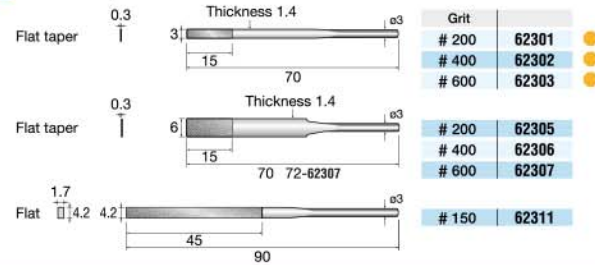


LUSTER

- Best for finishing large open work areas.
- Marked tools can be used for Sheenus neo with the Tip Holder. (60912)

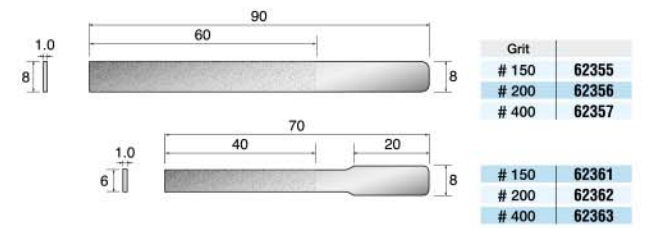
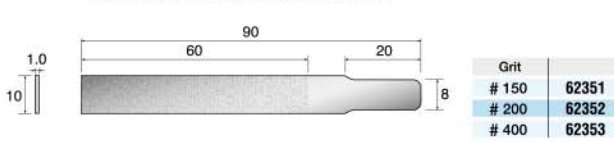
SHANK $\phi 3.0$

1 pc./pack Electroplated Diamond File



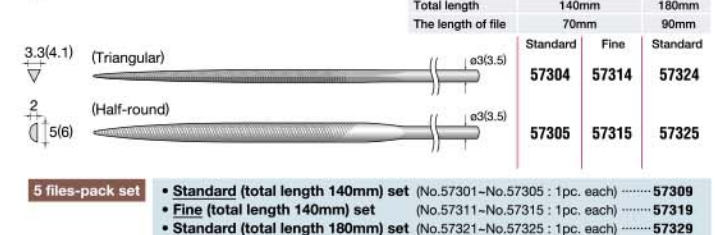
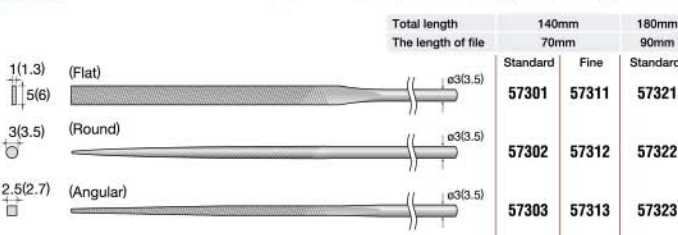
1 pc./pack Diamond File Flat Type

*Use with stone holder No.62502.



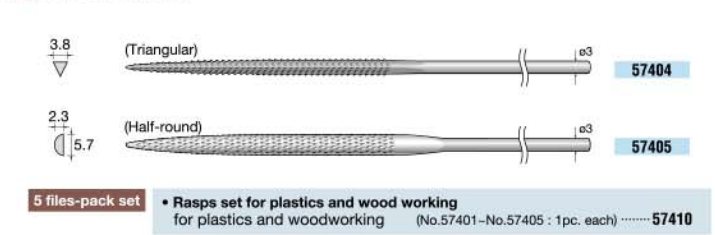
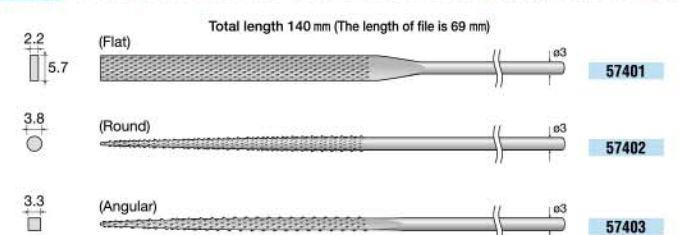
SHANK $\phi 3.0, \phi 3.5$

3 pcs./pack Precision Finishing Files (Flat, Round, Angular, Triangular, Half-Round)



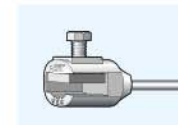
SHANK $\phi 3.0$

3 pcs./pack Rasps for plastics and wood working (Flat, Round, Angular, Triangular, Half-Round)

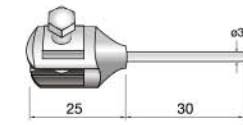


NAKANISHI's EXCLUSIVE TOOLS

1 pc./pack Stone Holder



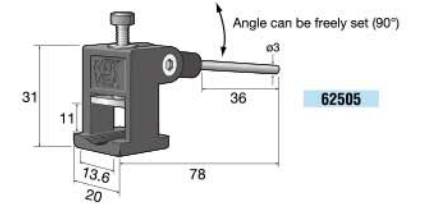
Maximum clamping thickness 4.5 x Width 11 mm



62502



Maximum clamping thickness 11 x Width 13.5 mm



62505

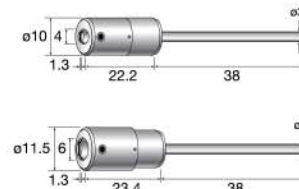
2 pcs./pack Ceramic Fiber Grindstone (Total Length 50 mm)

- Alumina fiber abrasive with the strength and the flexibility for rough or fine finishing.

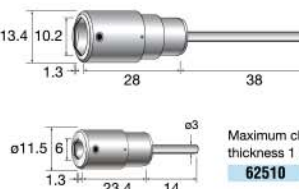
Flat				Flat				Round			
w		50		w		50		50		50	
Grit	Color	W = 4 mm	W = 6 mm	Grit	Color	W = 4 mm	W = 6 mm	W = 10 mm	Grit	Color	$\phi 3$ mm
# 180	Ivory	60701	60711	# 180	Ivory	60721	60731	62961	# 180	Ivory	63101
# 300	Brown	60702	60712	# 300	Brown	60722	60732	62962	# 300	Red	63102
# 400	Orange	60703	60713	# 400	Orange	60723	60733	62963	# 400	Orange	63103
# 600	Black	60704	60714	# 600	Black	60724	60734	62964	# 600	Black	63104
# 800	Blue	60705	60715	# 800	Blue	60725	60735	62965	# 800	Blue	63105
# 1,000	White	60706	60716	# 1,000	White	60726	60736	62966	# 1,000	White	63106
# 1,200	Pink	60707	60717	# 1,200	Pink	60727	60737	62966	7 # 1,200	Pink	63107



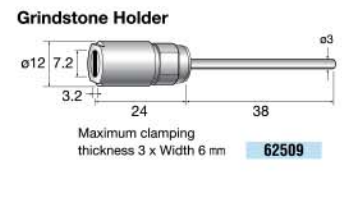
1 pc./pack Ceramic Fiber Grindstone Holder • Grindstone Holder



Maximum clamping thickness 1 x Width 4 mm

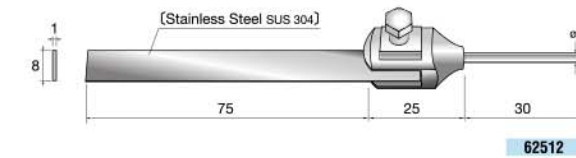


Maximum clamping thickness 1 x Width 10 mm

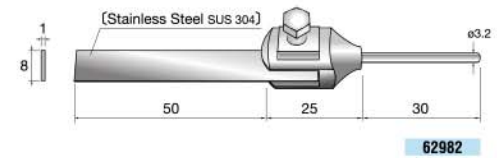


Maximum clamping thickness 3 x Width 6 mm

1 pc./pack Flat Holder • Tip for use with abrasive sheets.



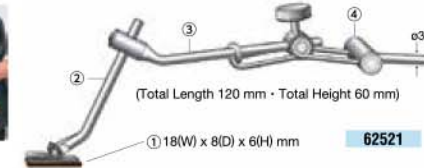
62512



62982

1 pc./pack Angular Pad Holder

- Holder for use with abrasive tips for polishing flat surfaces.

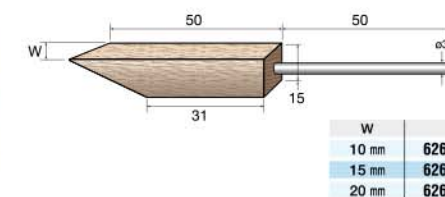


Grit	
①	62525
②	62526
③	62527
④	62751

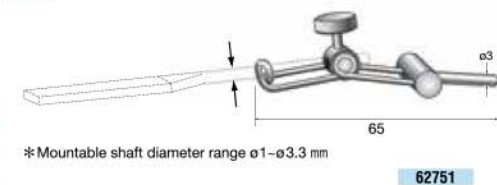
Abrasive Tip (For Flat Holder and Angular Pad Holder)

20 pcs./pack Felt Tip		100 pcs./pack Sand Paper Tip	
Thickness 1 mm		Thickness 0.7 mm	
Grit		Grit	
# 120	62552	# 600	62557
# 180	62553	# 800	62558
# 240	62554	# 1,000	62559
# 320	62555	# 1,500	62560
# 400	62556		

3 pcs./pack Wood Tip Holder



1 pc./pack Spring Holder



62751

NAKANISHI's EXCLUSIVE TOOLS

SHANK $\phi 3.0$
1 pc./pack Electroplated Diamond File

Flat taper		Thickness 1.4	t	Grit		Angular		Grit	
			0.5 mm	# 200	62801			# 150	62831
			0.4 mm	# 400	62802			# 200	62832
			0.35 mm	# 600	62803			# 400	62833
Flat taper		Thickness 1.4	0.5 mm	# 200	62805	Round		# 100	62840
			0.4 mm	# 400	62806			# 150	62841
			0.35 mm	# 600	62807			# 200	62842
								# 400	62843
Flat						Round		# 150	62845
								# 200	62846
								# 400	62847
Flat (Single side electroplating)						Round		# 150	62851
								# 200	62852
								# 400	62853
Flat						Round taper		# 150	62855
								# 200	62856
								# 400	62857
Flat (Single side electroplating)						Half-round		# 150	62865
								# 200	62866
								# 400	62867
Flat (Single side electroplating)						Half-round		# 150	62871
								# 200	62872
								# 400	62873
Flat (Single side electroplating)						Triangular		# 150	62881
								# 200	62882
								# 400	62883

Exclusive Tools of "45° & 90° ANGLE"

Special tools for Nakanishi Micro-grinder "Angle Attachment". Highly efficient for grinding, polishing, finishing, etc.

SHANK $\phi 3.0$
5 pcs./pack Special Rubber Pad For Abrasive and Felt Disks

20,000 min⁻¹

$\phi 10$	$\phi 20$	$\phi 30$
64101	64102	64103

100 pcs./pack Sand Paper Disk
Cloth Type

• For Metals ... Both for dry and wet finishing (Adhesive is resistant to water and oil)

	Grit	$\phi 11$	$\phi 21$	$\phi 31$
For Metals (Brown)	# 60	64111	64121	64141
	# 80	64112	64122	64142
	# 120	64113	64123	64143
	# 180	64114	64124	64144
	# 240	64115	64125	64145
	# 320	64116	64126	64146
	# 400	64117	64127	64147
	# 600	64118	64128	64148
	# 800	64119	64129	64149
	# 1,000	64120	64130	64150

Adhesive Back

Paper Type

• For Metals ... Both for dry and wet finishing (Adhesive is resistant to water and oil)

	Grit	$\phi 11$	$\phi 21$	$\phi 31$
For Metals (Black)	# 80	64131	64151	64171
	# 120	64132	64152	64172
	# 180	64133	64153	64173
	# 240	64134	64154	64174
	# 320	64135	64155	64175
	# 400	64136	64156	64176
	# 600	64137	64157	64177
	# 800	64138	64158	64178
	# 1,000	64139	64159	64179
	# 1,500	64140	64160	64180

Adhesive Back

Paper Type

• Dry type ... For Metal, Woodwork, Paint, Putty polishing, Dry use

	Grit	$\phi 11$	$\phi 21$	$\phi 31$
For Dry type (White)	# 80	64201	64211	64221
	# 120	64202	64212	64222
	# 180	64203	64213	64223
	# 240	64204	64214	64224
	# 320	64205	64215	64225
	# 400	64206	64216	64226
	# 600	64207	64217	64227

Adhesive Back

NAKANISHI's EXCLUSIVE TOOLS

100 pcs./pack Zirconium Disk

• Best for finishing aluminum, stainless steel, copper alloy, brass, etc.

Grit	$\phi 11$	$\phi 21$	$\phi 31$
# 60	64251	64261	64271
# 80	64252	64262	64272
# 120	64253	64263	64273
# 150	64254	64264	64274

Adhesive Back

20 pcs./pack Fiber Disk

• Soft finishing can be done on flat & curved surfaces, due to superior flexibility.

Grit	Color	$\phi 11$	$\phi 21$	$\phi 31$
# 120	Brown	64281	64291	64301
# 240	Violet	64282	64292	64302
# 320	Red Brown	64283	64293	64303
# 600	Dark Blue	64284	64294	64304
# 800	Gray	64285	64295	64305
# 1,000	Orange	64286	64296	64306

*Thickness 3 mm Adhesive Back

20 pcs./pack Felt Disk

• Ideal for finishing using abrasives and diamond compounds.

Description	$\phi 11$	$\phi 21$	$\phi 31$
Hard Type Felt Disk (1mm thickness)		64326	
Soft Type Felt Disk (1mm thickness)	64331	64332	64333
Soft Type Felt Disk (2mm thickness)	64335	64336	64337

Adhesive Back

20 pcs./pack Felt Disk Chromium Oxide (Blue Rouge) Embedded Type.

• Useful for speedy finishing because of Chromium Oxide (Blue Rouge) Embedded.

Description	$\phi 11$	$\phi 21$	$\phi 31$
Felt Disk Chromium Oxide (Blue Rouge) Embedded Type. (2mm thickness)	64341	64342	64343

Adhesive Back

20 pcs./pack Rubber Points Disk

• Best for coarse finishing, pre-finishing with great polishing power.

Grit	Color	$\phi 20$	$\phi 30$
# 60	Brown	64391	64401
# 80	Red	64392	64402
# 120	Dark Green	64393	64403
# 180	Olive	64394	64404
# 220	Green	64395	64405
# 320	Brown	64396	64406

*Thickness 2.5mm. Adhere to special rubber pads and use. Adhesive Back.

SHANK $\phi 3.0$
5 pcs./pack Mounted Rubber Disks (Rubber Pad Integration)

• Moderately hard abrasive grain have great polishing ability.

For finishing	Grit	Color	WA	GC
	# 80	Pink	64411	64421
	# 120	Blue	64412	64422
	# 180	Yellow	64413	64423
	# 220	Green	64414	64424
	# 320	Purple	64415	64425
	# 500	Brown	64416	64426

15,000 min⁻¹

For finishing $\phi 30$

For preliminary finishing $\phi 30$

For preliminary finishing (Fast grinding)

Grit	Color	WA
# 80	Black (Red Line)	64431
# 120	Black (Blue Line)	64432

1 pc./pack Diamond Disk (Fully Electroplated Type)

• Superior in sharpness and durability.

Grit	$\phi 11$	$\phi 21$	$\phi 31$
# 100	64451	64461	64471
# 140	64452	64462	64472
# 200	64453	64463	64473
# 280	64454	64464	64474
# 400	64455	64465	64475
# 600	64456	64466	64476
# 800	64457	64467	64477
# 1,000	64458	64468	64478

Adhesive Back

1 pc./pack Diamond Disk (Dot Electroplated Type, Wet Type)

• Electroplated nickel-alloy pellet is strongly adhered to resin base.

Grit	Color	$\phi 11$	$\phi 21$	$\phi 31$
# 60	Green	64501	64511	64521
# 120	Black	64502	64512	64522
# 200	Red	64503	64513	64523
# 400	Yellow	64504	64514	64524
# 800	Gray	64505	64515	64525

Adhesive Back

NAKANISHI's EXCLUSIVE TOOLS

3 pcs./pack Resin Bond Diamond Disk Star Pattern

Grit	Color	ø11	ø21	ø31
# 80	64531	64541	64551	
# 120	64532	64542	64552	
# 180	64533	64543	64553	
# 240	64534	64544	64554	
# 400	64535	64545	64555	
# 600	64536	64546	64556	
# 800	64537	64547	64557	
# 1,000	64538	64548	64558	
# 2,000	64539	64549	64559	

Adhesive Back

1 pc./pack Resin Bond Diamond Disk Dot Type

Grit	Color	ø11	ø21	ø31
# 500	Yellow	64571	64581	64591
# 1,000	Blue	64572	64582	64592
# 3,000	Orange	64573	64583	64593

Adhesive Back

3 pcs./pack Lapping Film Disk Diamond Abrasive

Diamond Film (Diamond)	Grit	Color	ø11	ø21	ø31
	# 400	Ivory	64601	64606	64611
	# 800	Ivory	64602	64607	64612
	# 1,500	Ivory	64603	64608	64613
	# 3,000	Ivory	64604	64609	64614

Adhesive Back

50 pcs./pack Lapping Film Disk WA Abrasive

Arandom Film (WA)	Grit	Color	ø11	ø21	ø31
	# 320	Purple	64621	64626	64631
	# 600	Green	64622	64627	64632
	# 1,000	Orange	64623	64628	64633
	# 1,500	Olive	64624	64629	64634
	# 3,000	Violet	64625	64630	64635

Adhesive Back

SHANK ø3.0

1 pc./pack Electroplated Diamond File

• Plastic and brass lapping rings for use with abrasive and diamond compounds.

10 pcs./pack Replacement Plastic Ring

• Do not use the same ring for different abrasive compound grits.

5 pcs./pack Replacement Brass Ring

1 pc./pack Replacement Holder

For internal diameter ø6 mm
For internal diameter ø10 mm

Exclusive Tools of "90° MINI ANGLE TYPE ATTACHMENT"

Steel cutters for radius grinding of deep cross holes for "Mini-Angle attachment". Ideal for radius grinding of holes or removing burrs from cross jigs, precision parts and inside surfaces of pipes.

MINI ANGLE TYPE E-max Evolution (Very Small Head)
MINI ANGLE TYPE E-max Evolution

SHANK ø1.6

1 pc./pack Steel Cutters For Deep Cross Hole Finishing

15,000 min⁻¹

SHANK ø1.6

1 pc./pack Diamond Coated Burs For Deep Cross Hole Finishing

320,000 min⁻¹

5 pcs./pack Diamond and CBN Coated Burs For Deep Cross Hole Finishing

320,000 min⁻¹

NAKANISHI's EXCLUSIVE TOOLS

Exclusive Tools of "IMPULSE"

Special tools for Nakanishi Micro-grinder "IMPULSE". Excellent for grinding or polishing flat surfaces, edges with Nakanishi's high-power air grinder.

90° ANGLE IMPULSE · NA90-230
45° ANGLE IMPULSE · NA45-230

5 pcs./pack Special Rubber Pad for Disk Abrasives

23,000 min⁻¹

12 pcs./pack Cup Wheel

23,000 min⁻¹

Grit	Grade Hardness	ø20	ø30
# 36	Standard	64830	64835
# 46	Hard	64831	64836
# 80	Standard	64832	64837
# 80	Hard	—	64838

5 pcs./pack Polishing Sander

• Abrasive Disk for high speed rotation is made from overlapping abrasive cloths.

Grit	
# 80	64842
# 120	64844
# 180	64846
# 240	64847
# 400	64849

• Convenient Assorted set for trial polishing
All grain size (5 types x each 1 pc.)
Total 5 pcs.-pack **64850**

10 pcs./pack Rubber Cup Wheel

• Rubber Cup Wheel with high elasticity for grinding & polishing.

Grit	Color	
# 60	Brown	64851
# 80	Red	64852
# 120	Blue	64853
# 180	Olive	64854
# 220	Green	64855
# 320	Brown	64856

• Convenient Assorted set for trial polishing
All grain size (6 types x each 2 pcs.)
Total 12 pcs.-pack **64859**

Exclusive Tools of "FINE BELT SANDER"

FINE BELT SANDER E-max Evolution

30 pcs./pack Abrasive Belts

• High Quality Abrasive Belts are superior in grinding & durability.

For Grinding or Polishing of Metals (Length 300 mm)			
Grit	W = 4 mm	W = 6 mm	W = 8 mm
# 80	64901	64911	64921
# 120	64902	64912	64922
# 180	64903	64913	64923
# 240	64904	64914	64924
# 320	64905	64915	64925
# 400	64906	64916	64926
# 600	—	—	64927
# 800	—	—	64928

• Assorted set for preliminary finishing (● Mark)
Grain size (4 types x each 10 pcs.), W = 8 mm
Total 40 pcs.-pack **64931**

For Woodwork (Length 300 mm)	
Grit	8 mm Width
# 80	64941
# 120	64942
# 240	64943

• Assorted set for woodwork
All grain size (3 types x each 10 pcs.)
Total 30 pcs.-pack **64955**

• Assorted set for finishing (● Mark)
Grain size (4 types x each 10 pcs.), W = 8 mm
Total 40 pcs.-pack **64932**

NAKANISHI's EXCLUSIVE TOOLS

3 pcs./pack Diamond Belt

• For grinding and polishing of Carbide, Hardened steel, Steel, Special steels, Ceramic, FRP, etc.



Hard Type (Length 300 mm)

Grit	8 mm Width
# 80	65011
# 120	65012
# 240	65014
# 320	65015
# 600	65017

• **Assorted set**

All grain size (5 types x each 1 pc.)
Total 5 pcs.-pack **65019**



Soft Type (Length 300 mm)

Grit	8 mm Width	Grit	8 mm Width
# 120	65021	# 600	65025
# 180	65022	# 800	65026
# 240	65023	#1,000	65027
# 320	65024		
# 400	65028		

• **Assorted set**

All grain size (8 types x each 1 pc.)
Total 8 pcs.-pack **65030**

30 pcs./pack Silicone Belt

• Best for polishing aluminum, stainless steel, brass



(Length 300 mm)

Grit	8 mm Width
# 80	64971
# 100	64972
# 120	64973

• **Assorted set**

All grain size (3 types x each 10 pcs.)
Total 30 pcs.-pack **64975**

5 pcs./pack Felt Belt

• Belt is made from high density wool on cloth base material.
For use with abrasive and diamond compounds.



(Length 300 mm)

8 mm Width x 1 mm Thickness | **65101**

Diamond / CBN

Carbide Cutters

Specialty Tools

Mounted Points

Rubberized Abrasives

Flap Wheels

Polishing Brushes

Felt Bobs

Abrasive Compounds & Polishing Tools

NSK Exclusive Tools