

NAKANISHI POLISHING TOOLS

POLISHING TOOLS



Headquarters · Factory
700 Shimohinata, Kanuma, Tochigi 322-8666, Japan
TEL +81-289-64-3520 FAX +81-289-62-1135

www.nakanishi-inc.com
NAKANISHI INC. 2018

PR-K318E Ver.4 '18.11.03.㊞

Specifications and design are subject to change without notice.



Nature of Tochigi, Japan

Symbols used in NAKANISHI Tools Catalogue

	Shank Diameter Shows shank diameter of the tools. Nakanishi produces tools with several shank diameters. *Nakanishi micro grinders utilize a collet system, which insures maximum precision. Therefore, please use the collet that best corresponds to the tool shank diameter.
	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. *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.
	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 → SHANK Ø3.0

Code number (Order number) → 11411, 11412, 11413, 11401, 11402, 11403, 11501, 11502, 11503, 11521, 11522, 11524, 11521, 11522, 11523

Standard package quantity → 10 pcs.

Maximum allowable speed → 15,000 min⁻¹, 20,000 min⁻¹, 25,000 min⁻¹, 30,000 min⁻¹, 35,000 min⁻¹, 40,000 min⁻¹

Total length of the tool (mm) → 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

Grit → #100, #150, #220, #320, #400, #500, #600, #700, #800, #1000, #1200, #1500, #1800, #2000, #3000, #4000, #6000, #8000

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.**
- 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.

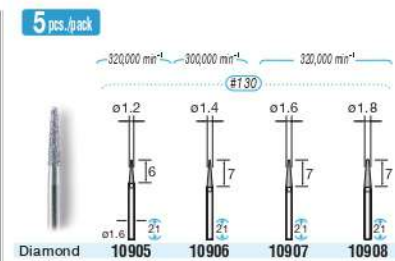
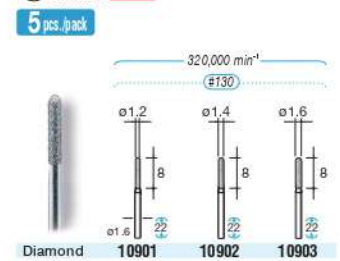
Main Work Materials Effective for iron metal materials such as burned materials with iron and steel materials (harder than HRC60)

- 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

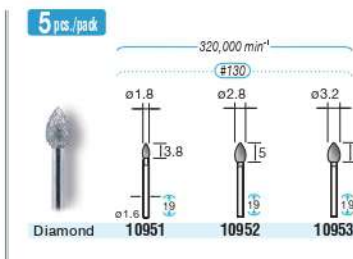
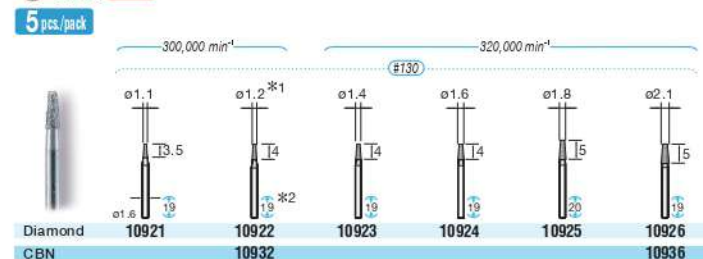


1.6 mm shank diameter series.
Short type for high-speed rotation.
Best for grinding very small parts.

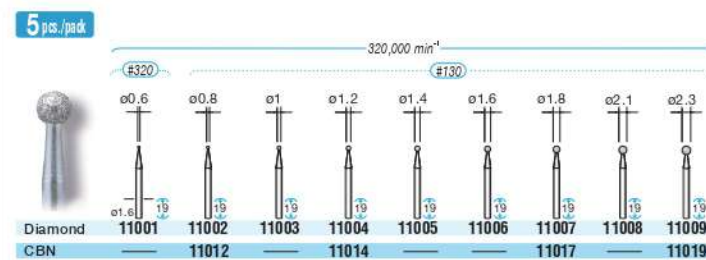
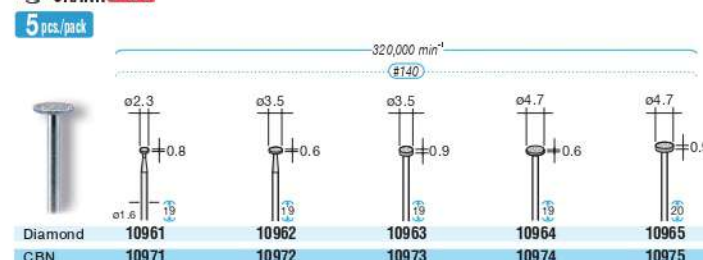
SHANK Ø1.6



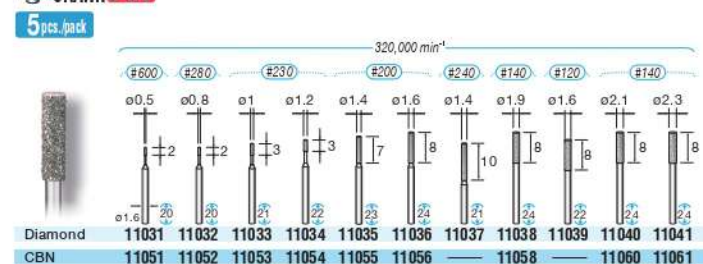
SHANK Ø1.6



SHANK Ø1.6

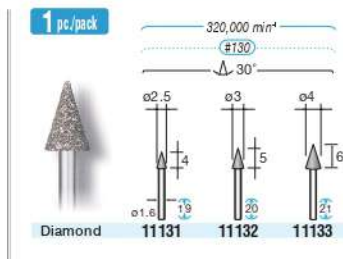


SHANK Ø1.6

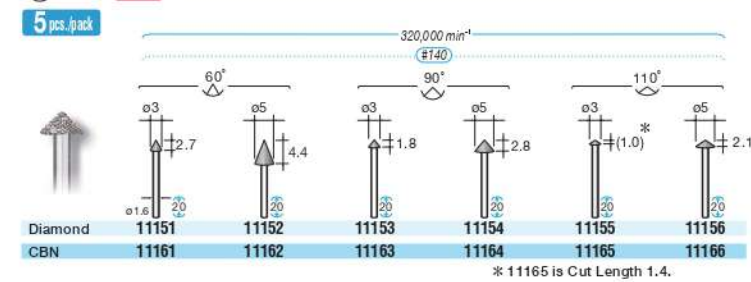


ELECTROPLATED DIAMOND/CBN BURS

SHANK Ø1.6

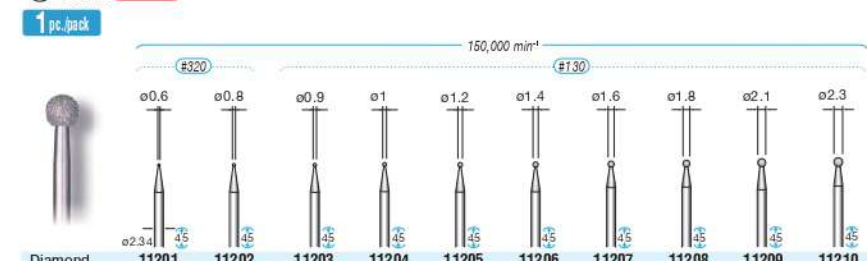


SHANK Ø1.6

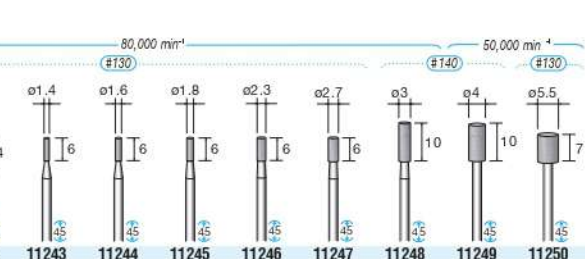
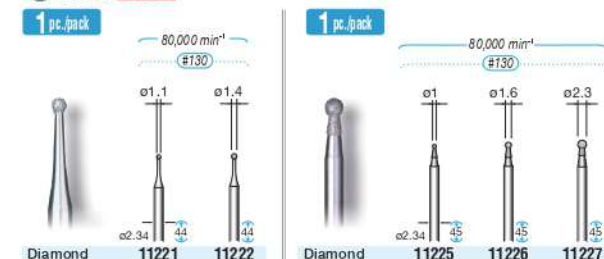


2.34 mm shank diameter series.
Best for engraving, or precise burrs removal.

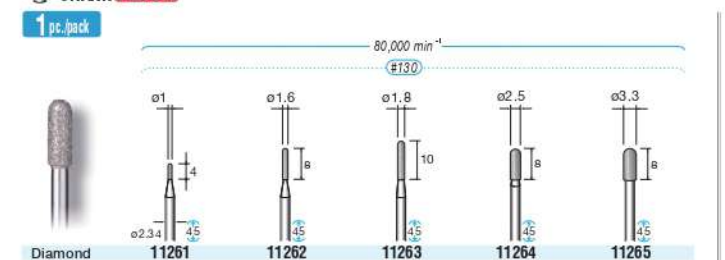
SHANK Ø2.34



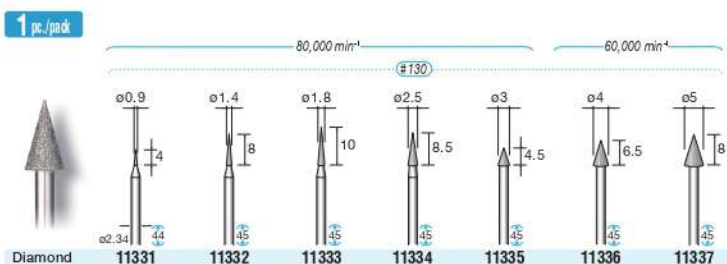
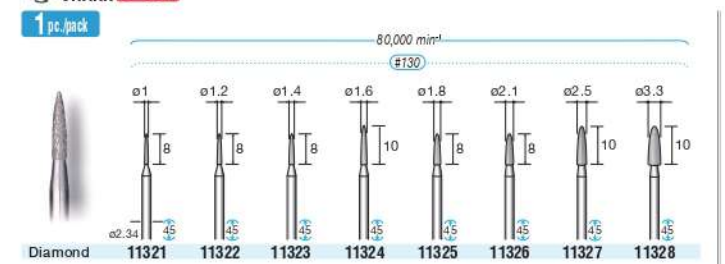
SHANK Ø2.34



SHANK Ø2.34



SHANK Ø2.34



ELECTROPLATED DIAMOND/CBN BURS

SHANK Ø2.34 1 pc./pack

50,000 min⁻¹ (#130)

Diamond 11341 (ø1.2, 4), 11342 (ø1.8, 4)

Diamond 11351 (ø1.2, 7), 11352 (ø1.4, 8), 11353 (ø1.6, 10), 11354 (ø1.8, 10), 11355 (ø2.1, 10), 11356 (ø2.3, 10), 11357 (ø2.5, 13), 11358 (ø3.1, 10), 11359 (ø4, 9)

SHANK Ø2.34 1 pc./pack

50,000 min⁻¹ (#130)

Diamond 11360 (ø0.6, 4), 11361 (ø0.9, 4), 11362 (ø1.2, 8), 11363 (ø1.6, 8), 11364 (ø2.3, 8), 11365 (ø3.3, 9), 11366 (ø4, 9)

Diamond 11391 (ø2.1, 15), 11392 (ø2.5, 15), 11393 (ø3.1, 15), 11394 (ø5, 15)

SHANK Ø2.34 1 pc./pack

50,000 min⁻¹ (#130) / 30,000 min⁻¹

Diamond 11401 (ø1.2, 1.5), 11402 (ø1.8, 2.3), 11403 (ø2.7, 2.5), 11404 (ø4.7, 2.8), 11405 (ø6, 3), 11406 (ø9, 3.5)

Diamond 11412 (ø4.8, 10), 11413 (ø7, 12)

SHANK Ø2.34 1 pc./pack

50,000 min⁻¹ (#130) / 30,000 min⁻¹ / 40,000 min⁻¹ / 20,000 min⁻¹ (#100)

Diamond 11425 (ø4.7, 12), 11426 (ø6, 20)

Diamond 11431 (ø4.5, 12), 11432 (ø6, 12), 11433 (ø8, 15)

Diamond 11441 (ø12.5, 18)

SHANK Ø2.34 1 pc./pack

70,000 min⁻¹ (#130) / 60,000 min⁻¹ / 50,000 min⁻¹ / 50,000 min⁻¹ (#100)

Diamond 11501 (ø4.2, 0.6), 11502 (ø5, 0.6), 11503 (ø6, 1), 11504 (ø7.5, 0.6)

Diamond 11511 (ø9, 1.5), 11521 (ø10.2, 2.5), 11522 (ø13, 1.5)

SHANK Ø2.34 1 pc./pack

30,000 min⁻¹ (#130) / 40,000 min⁻¹ / 80,000 min⁻¹ / 60,000 min⁻¹ / 50,000 min⁻¹ (#130)

Diamond 11531 (ø6.3, 1.8), 11532 (ø6.5, 3), 11533 (ø8.3, 2.3), 11534 (ø10, 3.4)

Diamond 11541 (ø1.8, 0.8), 11542 (ø2.3, 0.9), 11543 (ø5, 1.5), 11544 (ø6, 1.3), 11545 (ø10, 1.8)

ELECTROPLATED DIAMOND/CBN BURS



SHANK Ø3.0 1 pc./pack

60,000 min⁻¹

Diamond 11791 (ø0.5, 3), 11803 (ø0.6, 3), 11804 (ø0.7, 3), 11805 (ø0.8, 3), 11806 (ø0.9, 3), 11807 (ø1.0, 3)

Diamond 11803 (ø0.5, 3), 11804 (ø0.6, 3), 11805 (ø0.7, 3), 11806 (ø0.8, 3), 11807 (ø0.9, 3), 11808 (ø1.0, 3)

Diamond 11813 (ø0.5, 3), 11814 (ø0.6, 3), 11815 (ø0.7, 3), 11816 (ø0.8, 3), 11817 (ø0.9, 3), 11818 (ø1.0, 3)

CBN 11792 (ø0.5, 3), 11823 (ø0.6, 3), 11824 (ø0.7, 3), 11825 (ø0.8, 3), 11826 (ø0.9, 3), 11827 (ø1.0, 3)

CBN 11833 (ø0.5, 3), 11834 (ø0.6, 3), 11835 (ø0.7, 3), 11836 (ø0.8, 3), 11837 (ø0.9, 3), 11838 (ø1.0, 3)

SHANK Ø3.0 1 pc./pack

60,000 min⁻¹

Diamond 11793 (ø0.5, 3), 11853 (ø0.6, 3), 11854 (ø0.7, 3), 11855 (ø0.8, 3), 11856 (ø0.9, 3), 11857 (ø1.0, 3)

Diamond 11853 (ø0.5, 3), 11854 (ø0.6, 3), 11855 (ø0.7, 3), 11856 (ø0.8, 3), 11857 (ø0.9, 3), 11858 (ø1.0, 3)

Diamond 11863 (ø0.5, 3), 11864 (ø0.6, 3), 11865 (ø0.7, 3), 11866 (ø0.8, 3), 11867 (ø0.9, 3), 11868 (ø1.0, 3)

CBN 11794 (ø0.5, 3), 11873 (ø0.6, 3), 11874 (ø0.7, 3), 11875 (ø0.8, 3), 11876 (ø0.9, 3), 11877 (ø1.0, 3)

CBN 11883 (ø0.5, 3), 11884 (ø0.6, 3), 11885 (ø0.7, 3), 11886 (ø0.8, 3), 11887 (ø0.9, 3), 11888 (ø1.0, 3)

SHANK Ø3.0 1 pc./pack

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

Diamond 12001 (ø0.1, 4), 12002 (ø0.2, 4), 12003 (ø0.3, 2), 12004 (ø0.4, 2), 12005 (ø0.5, 2)

CBN 12011 (ø0.1, 4), 12012 (ø0.2, 4), 12013 (ø0.3, 2), 12014 (ø0.4, 2), 12015 (ø0.5, 2)

* Carbide shank is used for ø 0.1 and ø 0.2 mm.

SHANK Ø3.0 1 pc./pack

80,000 min⁻¹

Diamond 12006 (ø0.5, 4), 12007 (ø0.6, 2), 12008 (ø0.7, 3), 12009 (ø0.8, 3), 12010 (ø0.9, 3)

CBN 12016 (ø0.5, 4), 12017 (ø0.6, 2), 12018 (ø0.7, 3), 12019 (ø0.8, 3), 12020 (ø0.9, 3)

SHANK Ø3.0 1 pc./pack

80,000 min⁻¹

Diamond 12051 (ø1, 6), 12052 (ø1.2, 6), 12053 (ø1.5, 4), 12054 (ø1.7, 4), 12055 (ø2, 6), 12056 (ø2.2, 5), 12057 (ø2.5, 5), 12058 (ø3, 5)

Diamond 12091 (ø1, 6), 12092 (ø1.2, 6), 12093 (ø1.5, 4), 12094 (ø1.7, 4), 12095 (ø2, 6), 12096 (ø2.2, 5), 12097 (ø2.5, 5), 12098 (ø3, 5)

Diamond 12111 (ø1, 6), 12112 (ø1.2, 6), 12113 (ø1.5, 4), 12114 (ø1.7, 4), 12115 (ø2, 6), 12116 (ø2.2, 5), 12117 (ø2.5, 5), 12118 (ø3, 5)

Diamond 12131 (ø1, 6), 12132 (ø1.2, 6), 12133 (ø1.5, 4), 12134 (ø1.7, 4), 12135 (ø2, 6), 12136 (ø2.2, 5), 12137 (ø2.5, 5), 12138 (ø3, 5)

CBN 12155 (ø2, 6), 12156 (ø2.2, 5), 12157 (ø2.5, 5), 12158 (ø3, 5)

CBN 12171 (ø1, 6), 12172 (ø1.2, 6), 12173 (ø1.5, 4), 12174 (ø1.7, 4), 12175 (ø2, 6), 12176 (ø2.2, 5), 12177 (ø2.5, 5), 12178 (ø3, 5)

SHANK Ø3.0 1 pc./pack

80,000 min⁻¹ / 70,000 min⁻¹

Diamond 12059 (ø3.2, 5), 12060 (ø3.5, 5), 12061 (ø4, 5), 12062 (ø4.5, 5), 12063 (ø5, 5), 12064 (ø5.5, 5), 12065 (ø6, 5)

Diamond 12039 (ø3.2, 5), 12040 (ø3.5, 5), 12041 (ø4, 5), 12042 (ø4.5, 5), 12043 (ø5, 5), 12044 (ø5.5, 5), 12045 (ø6, 5)

Diamond 12099 (ø3.2, 5), 12100 (ø3.5, 5), 12101 (ø4, 5), 12102 (ø4.5, 5), 12103 (ø5, 5), 12104 (ø5.5, 5), 12105 (ø6, 5)

Diamond 12119 (ø3.2, 5), 12120 (ø3.5, 5), 12121 (ø4, 5), 12122 (ø4.5, 5), 12123 (ø5, 5), 12124 (ø5.5, 5), 12125 (ø6, 5)

Diamond 12139 (ø3.2, 5), 12140 (ø3.5, 5), 12141 (ø4, 5), 12143 (ø5, 5), 12145 (ø6, 5)

CBN 12159 (ø3.2, 5), 12160 (ø3.5, 5), 12161 (ø4, 5), 12162 (ø4.5, 5), 12163 (ø5, 5), 12164 (ø5.5, 5), 12165 (ø6, 5)

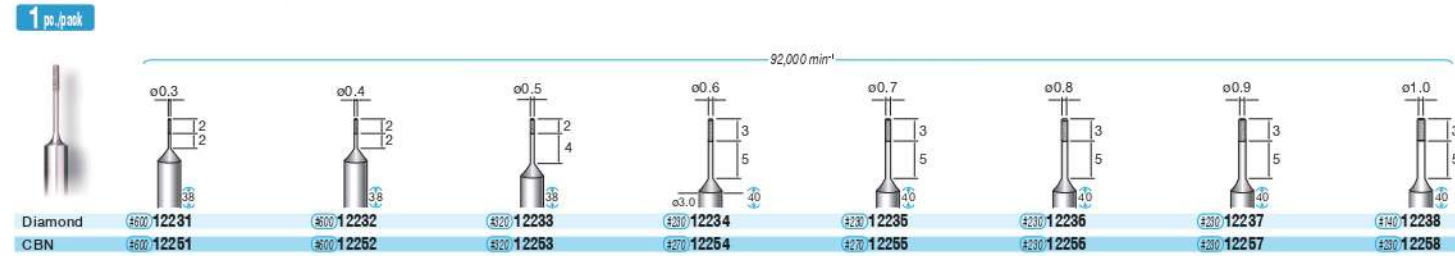
CBN 12179 (ø3.2, 5), 12180 (ø3.5, 5), 12181 (ø4, 5), 12182 (ø4.5, 5), 12183 (ø5, 5), 12184 (ø5.5, 5), 12185 (ø6, 5)

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

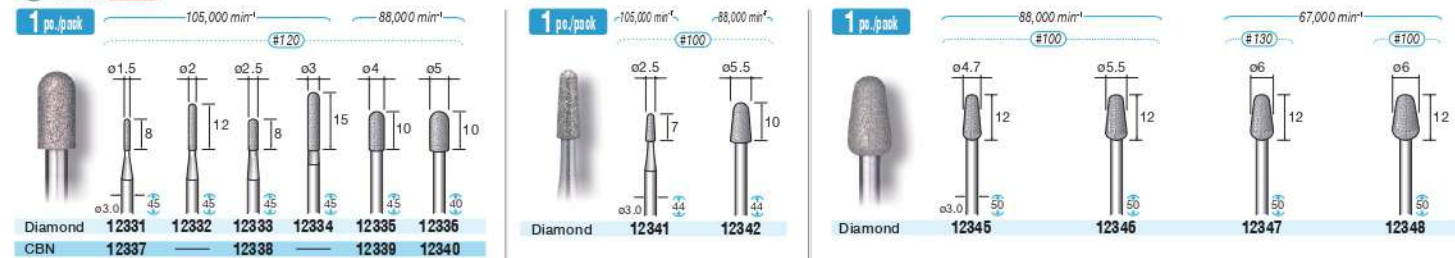


SHANK Ø3.0 Carbide



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

SHANK Ø3.0



SHANK Ø3.0

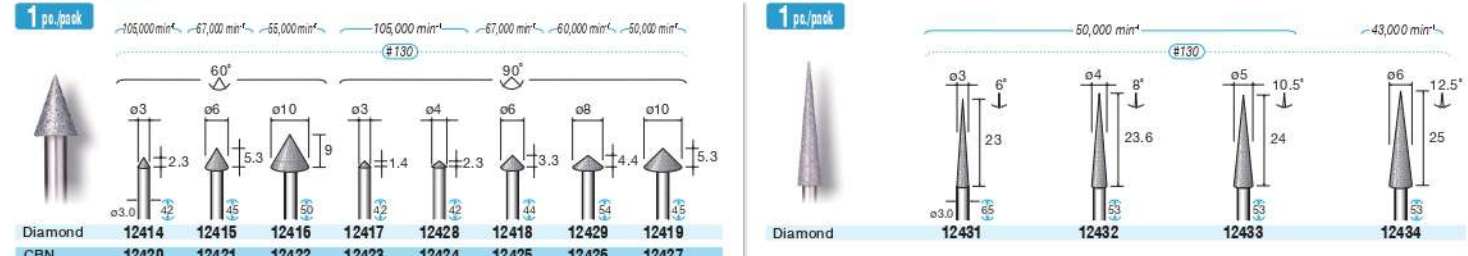


ELECTROPLATED DIAMOND/CBN BURS

SHANK Ø3.0



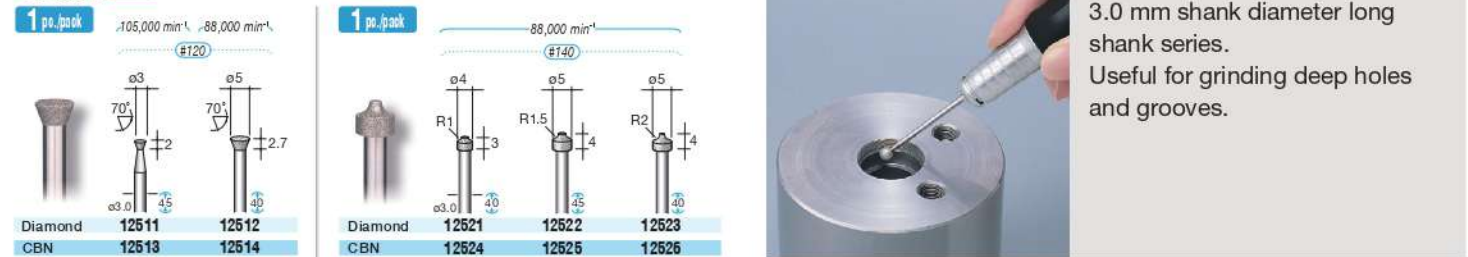
SHANK Ø3.0



SHANK Ø3.0

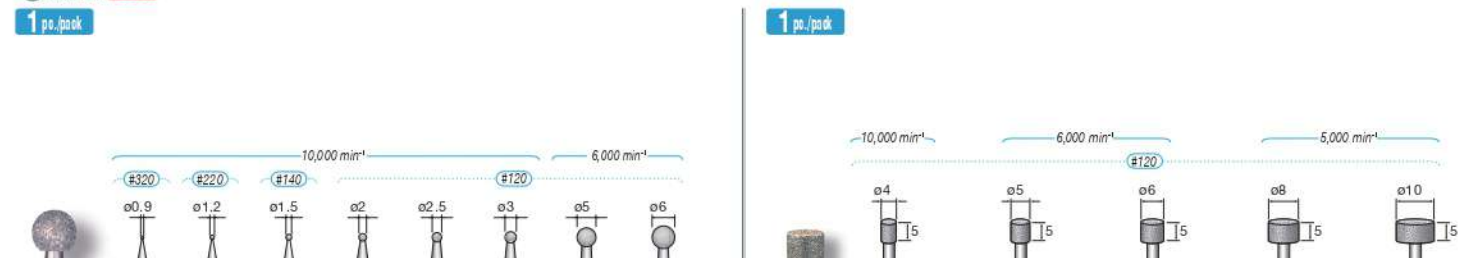


SHANK Ø3.0



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

SHANK Ø3.0



SHANK Ø3.0



ELECTROPLATED DIAMOND/CBN BURS

SHANK Ø3.0
1 pc./pack

Diamond 12741 12742 12743 12744

SHANK Ø3.0
1 pc./pack

Diamond 12745 12746 12747 12748



3.0 mm shank diameter series.
Ideal for engraving and craft / hobby work.

SHANK Ø3.0
3 pcs./pack

Diamond 12801 12802 12803 12804 12805 12806 12807 12808 12809

SHANK Ø3.0
3 pcs./pack

Diamond 12811 12812 12813 12814 12815

SHANK Ø3.0
3 pcs./pack

Diamond 12816 12817 12818 12819

SHANK Ø3.0
3 pcs./pack

Diamond 12821 12822 12823 12824 12825

SHANK Ø3.0
3 pcs./pack

Diamond 12826 12827 12828 12829

SHANK Ø3.0
3 pcs./pack

Diamond 12831 12832 12833 12834 12835 12836 12837

Assorted Set
18 pcs./pack

12841
Set (18 pieces)

12801	12813	12825
12803	12815	12827
12805	12817	12828
12807	12819	12832
12809	12821	12833
12811	12823	12835



6.0 mm shank diameter series.
Medium grit tools for highly efficient ID and jig grinding or burr removal.

SHANK Ø6.0
1 pc./pack

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

SHANK Ø6.0
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

ELECTROPLATED DIAMOND/CBN BURS

SHANK Ø6.0
1 pc./pack

Diamond #100 13020 13041 L=60 13042 L=80 13021 L=80 13022 L=80
CBN #140 13110 13131 13132 13111 13112

SHANK Ø6.0
1 pc./pack

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

SHANK Ø6.0
1 pc./pack

Diamond 13241 13242 13243
CBN 13245 13247 13248

SHANK Ø6.0
1 pc./pack

Diamond 13251 13252 13253
CBN 13256 13257 13258

SHANK Ø6.0
1 pc./pack

Diamond 13301
CBN 13302

SHANK Ø6.0
1 pc./pack

Diamond 13311 13312

SHANK Ø6.0
1 pc./pack

Diamond 13321 13322 13332
CBN 13335

SHANK Ø6.0
1 pc./pack

Diamond 13340 13341 13342 13343
CBN 13344 13345 13346

SHANK Ø6.0
1 pc./pack

Diamond 13351 13352 13353 13354
CBN 13355 13356 13357 13358

SHANK Ø6.0
1 pc./pack

Diamond 13371 13372
CBN 13375 13376

SHANK Ø6.0
1 pc./pack

Diamond 13381 13382
CBN 13385 13386

SHANK Ø2.34
1 pc./pack

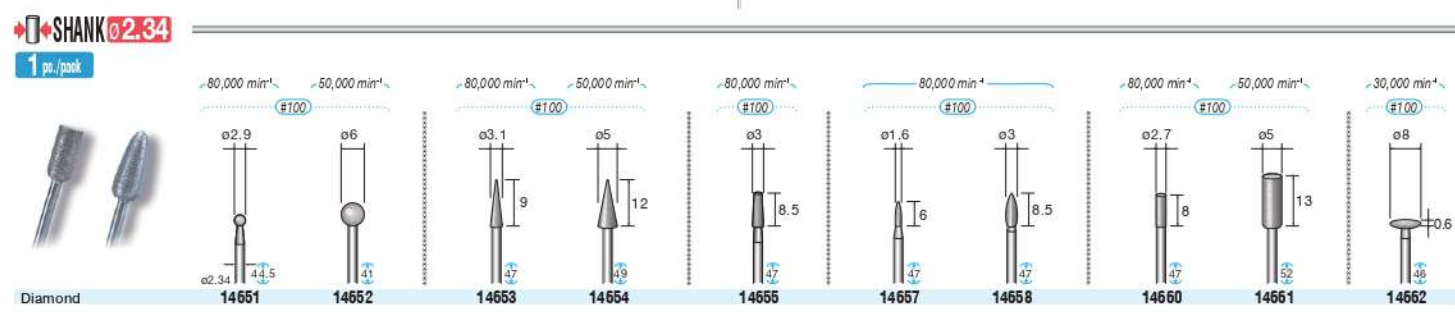
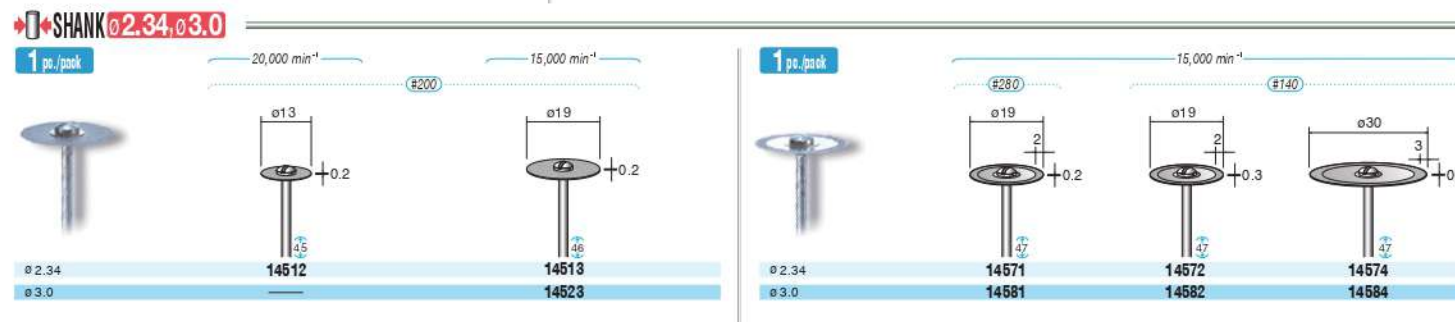
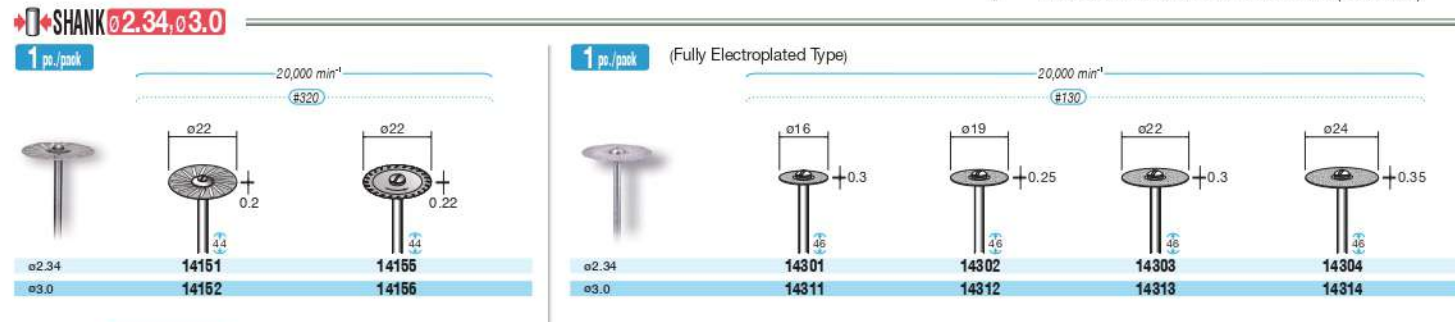
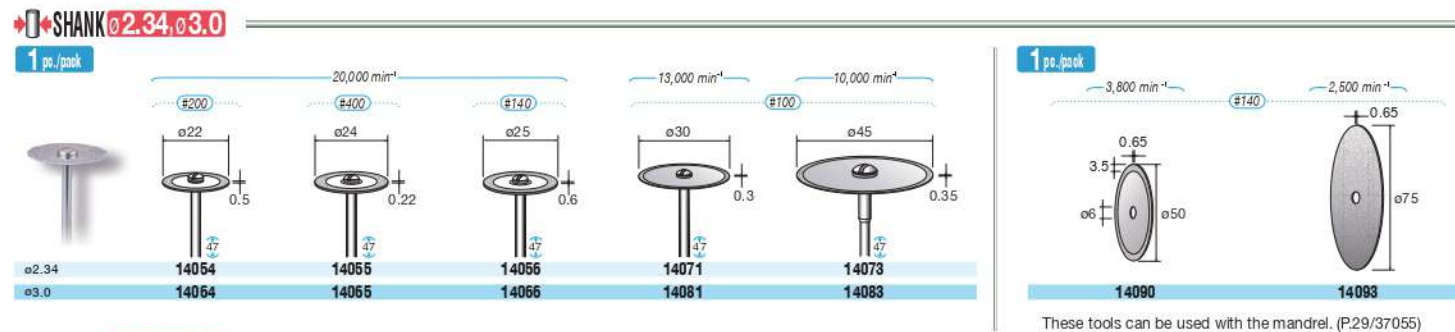
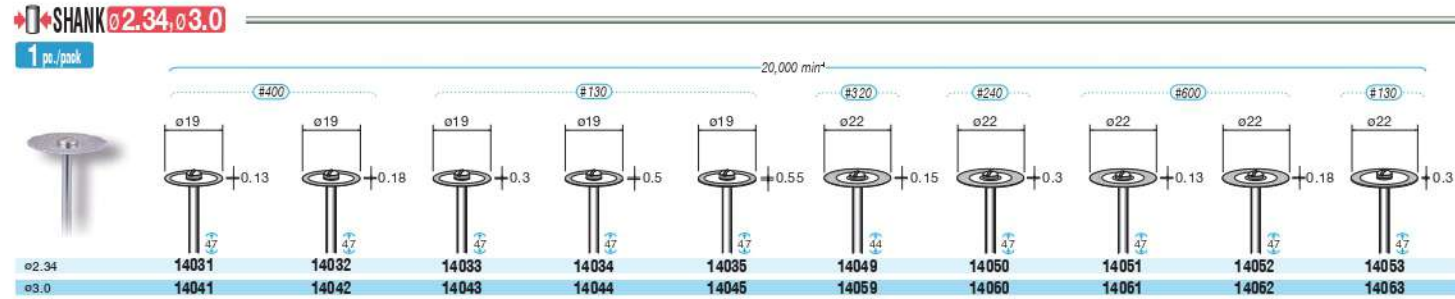
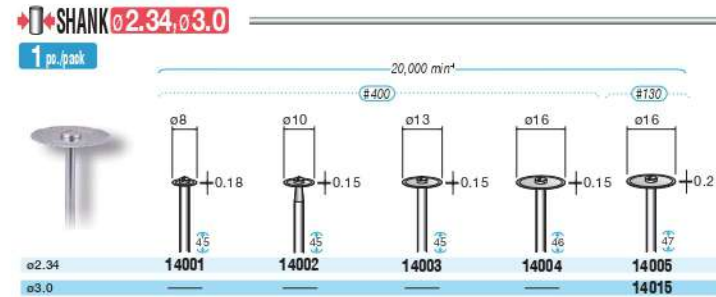
Diamond 13851 13852 13853 13854 13855 13856 13857 13858

Ø mm	L mm	
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



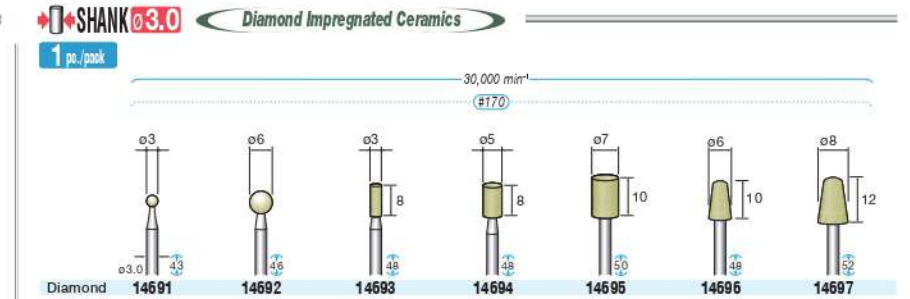
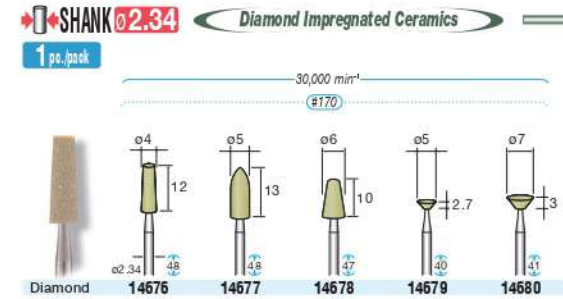
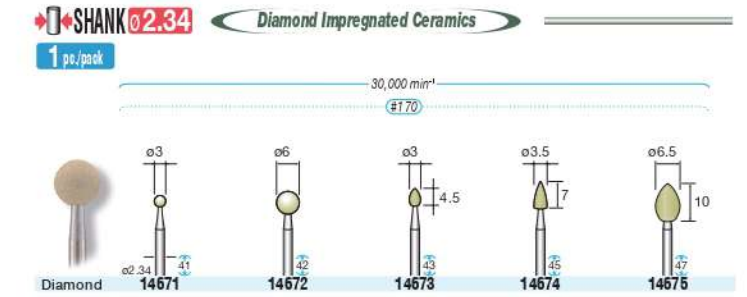
2.34 / 3.0 mm shank diameters. Diamond grinding discs, ideal for ceramics, FRP, glass, ferrites, various stones, and super hard alloys.



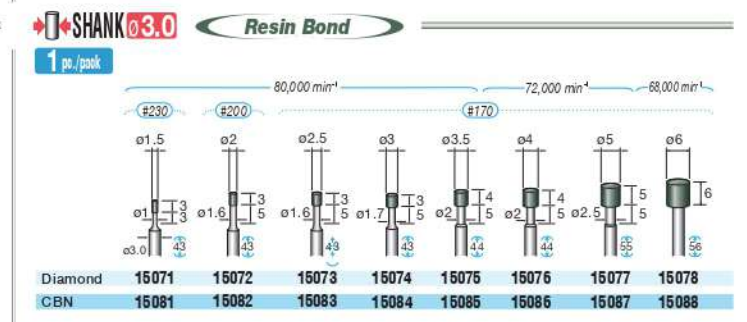
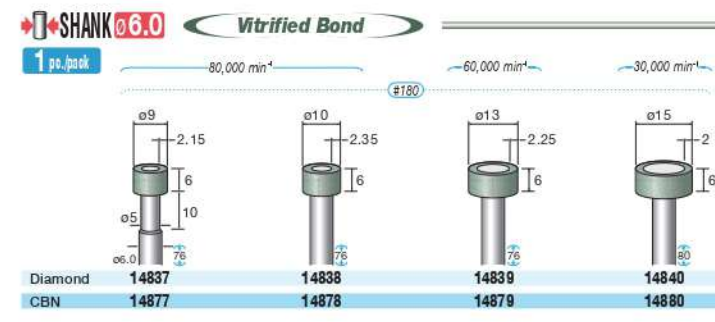
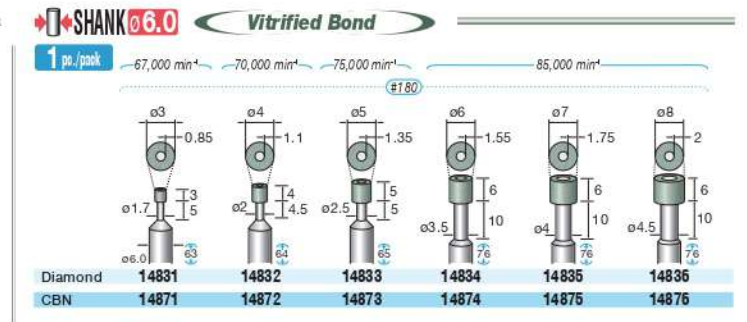
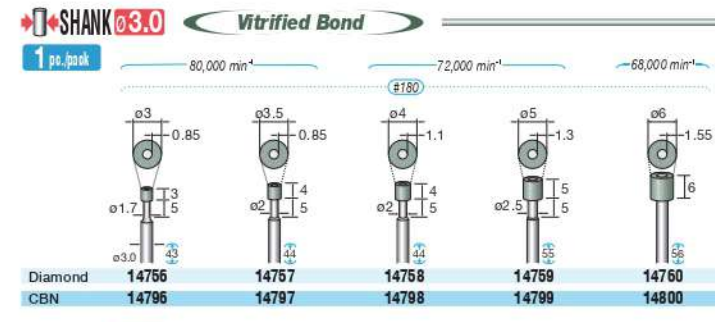
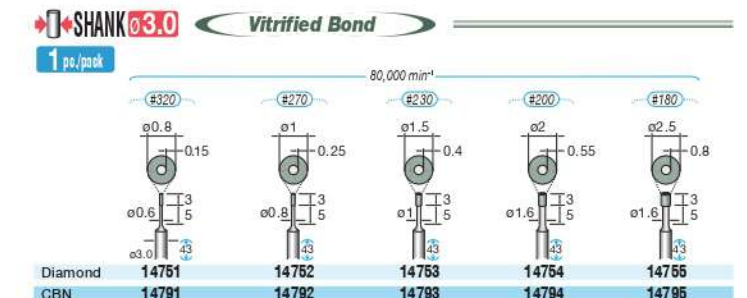
VITRIFIED / RESIN BONDED DIAMOND / CBN AND DIAMOND IMPREGNATED CERAMIC BARS



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.

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

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			
Set (10 pieces) (Each code No. one piece-pack)			
ϕ mm	CAT. NO.	ϕ mm	CAT. NO.
0.8	12009	3	12058
1	12051	3.5	12060
1.5	12053	4	12061
2	12055	5	12063
2.5	12057	6	12065

15312			
Set (10 pieces) (Each code No. one piece-pack)			
ϕ mm	CAT. NO.	ϕ mm	CAT. NO.
0.8	12019	3	12158
1	12151	3.5	12160
1.5	12153	4	12161
2	12155	5	12163
2.5	12157	6	12165

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

15321			
Set (8 pieces) (Each code No. one piece-pack)			
ϕ mm	CAT. NO.	ϕ mm	CAT. NO.
1	14752	3	14756
1.5	14753	4	14758
2	14754	5	14759
2.5	14755	6	14760

15322			
Set (8 pieces) (Each code No. one piece-pack)			
ϕ mm	CAT. NO.	ϕ mm	CAT. NO.
1	14792	3	14796
1.5	14793	4	14798
2	14794	5	14799
2.5	14795	6	14800

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

15331			
Set (8 pieces) (Each code No. one piece-pack)			
ϕ mm	CAT. NO.	ϕ mm	CAT. NO.
1.5	15071	3.5	15075
2	15072	4	15076
2.5	15073	5	15077
3	15074	6	15078

15332			
Set (8 pieces) (Each code No. one piece-pack)			
ϕ mm	CAT. NO.	ϕ mm	CAT. NO.
1.5	15081	3.5	15085
2	15082	4	15086
2.5	15083	5	15087
3	15084	6	15088

CARBIDE CUTTERS

Tool / Cut types and features (*' 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

$\phi 3$	$\phi 6.3$	$\phi 1.5$	$\phi 3$	$\phi 6.3$	$\phi 3$	$\phi 6.3$	$\phi 3$	$\phi 6.3$	$\phi 3$	$\phi 6.3$	$\phi 3$	$\phi 6.3$	$\phi 3$	$\phi 6.3$	$\phi 2.2$	$\phi 3$
21201	21205	21211	21212	21213	21215	21216	21222	21223	21231	21235	21241	21242	21245	21251	21252	

SHANK $\phi 3.0$
1 pc./pack Double Cut

$\phi 5$	$\phi 3$	$\phi 3$	$\phi 6.3$	$\phi 3$	$\phi 3$	$\phi 6.3$
21253	21261	21262	21265	21271	21272	21275

SHANK $\phi 3.0$
1 pc./pack Single Cut

$\phi 2.1$	$\phi 3$	$\phi 5$	$\phi 6.3$	$\phi 1.4$	$\phi 2.5$	$\phi 3$
21291	21311	21292	21312	21293	21315	21294

SHANK $\phi 3.0$
1 pc./pack Single Cut

$\phi 6.3$	$\phi 6.3$	$\phi 3$	$\phi 3$	$\phi 3$	$\phi 6.3$	$\phi 6.3$	$\phi 3$	$\phi 3$	$\phi 6.3$	$\phi 6.3$
21295	21316	21296	21318	21319	21297	21299	21321	21322	21323	21324

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