



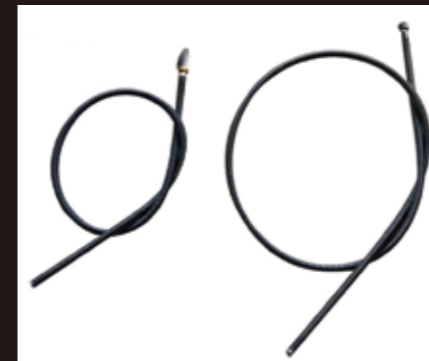
河北小鲨工具有限公司

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HEBEI SHARKY FILES AND TOOLS CO., LTD
河北小鲨工具有限公司

PROFESSIONAL BURS MANUFACTURER

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SHARKY CARBIDE BURRS INTRODUCTION

SHARKY Tools is a leading manufacturer specializing in research and development, production, and customization of Carbide Burrs in China. We provide a wide range of premium-quality tungsten carbide rotary burrs.

Carbide rotary burrs also called rotary files are used for deburring, cutting, shaping, grinding, and chamfering hard materials in our daily work. SHARKY supplies different cut types, including single, double, diamond, fine, coarse, aluminum, nonferrous chip-breaker, and customized types.

With the precision teeth design of burrs, every pcs of SHARKY burrs is made of high-quality carbide material, and machined by 5-axis CNC grinding machine, assuring exact contours and dimensions as well as perfect concentricity.

Because of the hardness can reach 90-91 HRA, SHARKY Tungsten Burrs are used around the world for the toughest metal-cutting works for cutting abrasive materials and metals too hard or tough for high-speed steel tools, such as below,

1. Shipbuilding
2. Aircraft Repairing
3. Space Industry
4. Foundry & Casting
5. Automotives industry
6. Welding and polishing
7. Mold & Die workshop
8. Woodworkers
9. Hobbies
10. Chamfering
11. Deburring
12. Jewelry making and many more...

We are always here waiting for working with you and your team, to create new fantastic grinding experience for our customers.



**PROFESSIONAL BURRS
MANUFACTURER**

SELECT THE RIGHT CARBIDE BURR CUTS

| APPLICATIONS | MATERIALS | CUT | PHOTO |
|---|--|------------------------|-------|
| Efficient Stock Removal deburring, finishing, cleaning | Ferrous metals Non-ferrous metals | Double Cut - (DC) | |
| Medium Stock Removal deburring, milling, cleaning, finishing | Non-hardened steel <45HRc Hardened steel >45HRc : stainless steel High temperature-resistant metals: nickel, cobalt, titanium Non-ferrous light metals: brass, copper, zinc Hardened >45HRc: cast iron | Single Cut - (SC) | |
| Fast Stock Removal deburring, milling, cleaning, finishing | Non-hardened steel <45HRc Non-ferrous light metals: brass, copper, zinc | Non-ferrous Cut - (NF) | |
| Efficient Stock Removal deburring, finishing, cleaning | Ferrous metals Non-ferrous metals | Chipbreaker Cut - (CC) | |



WORK ACCORDING TO THE SPEED GUIDE

1. Select application and material group.
2. Identify the appropriate cut style. Please refer to the chart above to match your application and the appropriate cutting style.
3. Identify recommended cutting speed.
4. Select bur diameter.
5. Follow maximum rotational speed.

CARBIDE BURRS SPEED GUIDE

| MATERIAL GROUP (1) | CUT STYLES (2) | | | | | | | | | |
|--------------------------------------|----------------|--|--|--|--|--|--|--|--|--|
| Super Alloy Materials | Cut 3 or 6 | | | | | | | | | |
| Hardened steel >45HRc | Cut 6 | | | | | | | | | |
| Non-hardened steel <45HRc | Cut 6 | | | | | | | | | |
| High temperature-resistant materials | Cut 6 | | | | | | | | | |
| Non-ferrous light metals | Cut 6 | | | | | | | | | |

| RECOMMENDED CUTTING SPEED (3) | | | | | | | | | | |
|-------------------------------|------|------|------|------|------|------|------|------|------|--|
| METRIC (m/min) | 420 | 480 | 540 | 600 | 660 | 720 | 780 | 840 | 900 | |
| FRACTIONAL (SFM) | 1400 | 1600 | 1800 | 2000 | 2200 | 2400 | 2600 | 2800 | 3000 | |

| BURRS DIAMETER (4) | | MAXIMUM ROTATIONAL SPEED (RPM) (5) | | | | | | | | | |
|--------------------|-------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|---------|--|
| Imperial (inch) | Metric (mm) | | | | | | | | | | |
| <1/8 | <3 | 45,000 | 53,000 | 60,000 | 66,000 | 73,000 | 79,000 | 86,000 | 92,500 | 100,000 | |
| 3/16 | 5 | 35,000 | 40,000 | 45,000 | 50,000 | 55,000 | 60,000 | 65,000 | 70,000 | 75,000 | |
| 1/4 | 6 | 26,000 | 30,000 | 34,000 | 37,500 | 41,500 | 45,000 | 49,000 | 52,500 | 55,000 | |
| 5/16 | 8 | 21,000 | 24,000 | 27,000 | 30,000 | 33,000 | 36,000 | 39,000 | 42,000 | 45,000 | |
| 3/8 | 10 | 17,500 | 20,000 | 22,500 | 25,000 | 27,500 | 30,000 | 32,500 | 35,000 | 37,500 | |
| 1/2 | 12 | 13,000 | 15,000 | 17,000 | 19,000 | 20,500 | 22,500 | 24,500 | 26,000 | 28,000 | |
| 5/8 | 15 | 10,500 | 12,000 | 13,500 | 15,000 | 16,500 | 18,000 | 19,500 | 21,000 | 22,500 | |
| 3/4 | 20 | 9,000 | 10,000 | 11,000 | 12,500 | 14,000 | 15,000 | 16,250 | 17,500 | 19,000 | |
| 1 | 25 | 6,500 | 7,500 | 8,500 | 9,500 | 10,500 | 11,000 | 12,000 | 13,000 | 14,000 | |

CARBIDE BURRS USING TIPS

1. Use lubricant or wax to prevent flute loading in soft materials.
2. Using the recommended speed prevents premature wear and/or insufficient material removal rates.
3. Maintain grinder concentricity to optimize material removal rates and extend bur life.
4. Reduce flutes and increase speed in softer materials. Increase flutes and reduce speed in hardened materials.
5. Cross-cut styles generally improve stock removal, and control, and reduce chip size.



MATERIAL INNOVATION

The rotary file uses tungsten carbide as the material of the cutter head. For the carbide material itself, the hardness is very high, the comprehensive performance is better than that of high-speed steel, and it is more suitable for high-intensity work.

However, hardness and toughness are a pair of contradictions. To balance the relationship better between them, we have been seeking a better solution plan.

During the production of the blank materials, we need to adjust the chemical compositions for a better grinding experience. If hardness increases, toughness suffers; if toughness is optimized, hardness decreases. This is a difficult problem that has plagued the entire industry for many years.

Combining more than 20 years of production experience accumulation and actual end-user feedback from various markets all around the world, we have developed a new material with GESAC, which is the No.1 factory in carbide alloy manufacturing in China. We named the new material GK15E. The burrs are made of new GK15E, the durability is increased by about 25% than normal. which has achieved a good balance in hardness and toughness.

At present, the feedback of customers has been very good. Great improvement, excellent performance in dealing with extreme work.

Physical and Mechanical Properties of GK15E

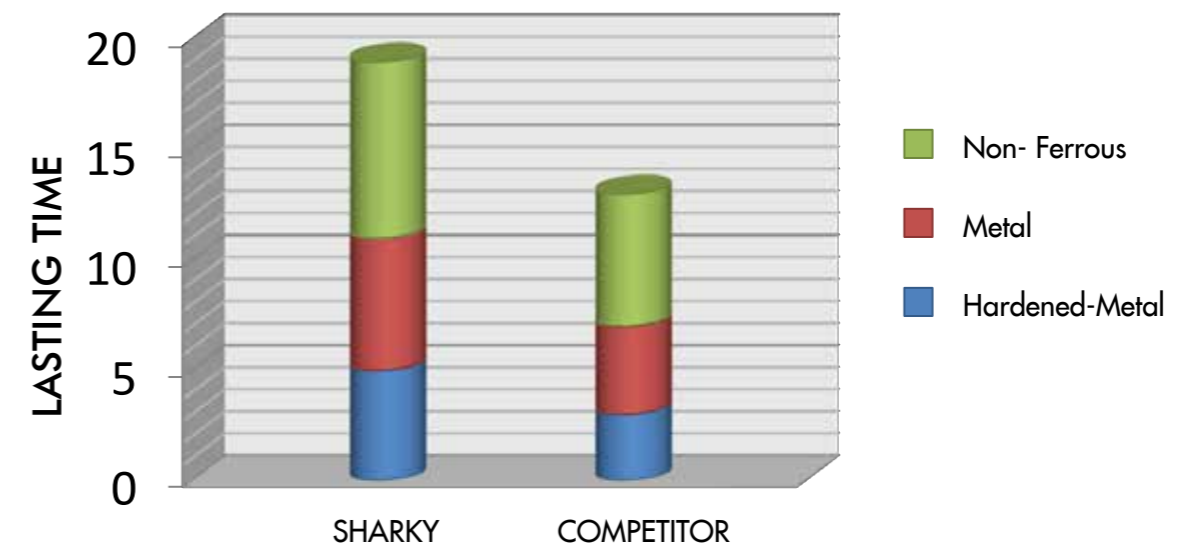
| Hardness HRA | Density (g/cm ³) | Coercivity (Oe) | Relative magnetic saturation (MS%) | Bending resistance min(N/mm ²) | Porosity | | |
|-----------------|---------------------------------|--------------------|--|--|----------|----|----|
| | | | | | A | B | C |
| 90.0 ~ 91.0 | 14.75 ~ 14.95 | 165 ~ 195 | 80 ~ 100 | 2800 | 02 | 00 | 00 |



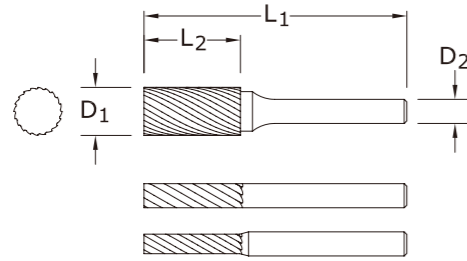
BRAZING IMPROVEMENT

As you know, for most of the carbide burrs, we weld the cutter and shank with high-frequency brazing. The burrs tend to break easily under high intensity working on hard metal, this will cause unnecessary injury to the operators.

To focus on this consumption pain point, we improved the welding process with the welding technician master by adjusting weld flux and improving equipment accuracy. The strength of the welding has been increased by about 40% than normal.

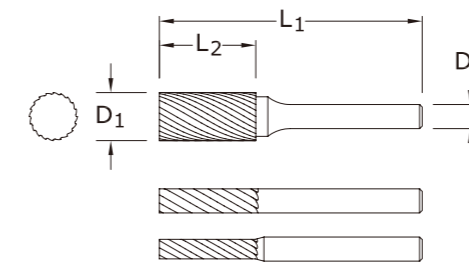


SA - Cylindrical Shape - Fractional



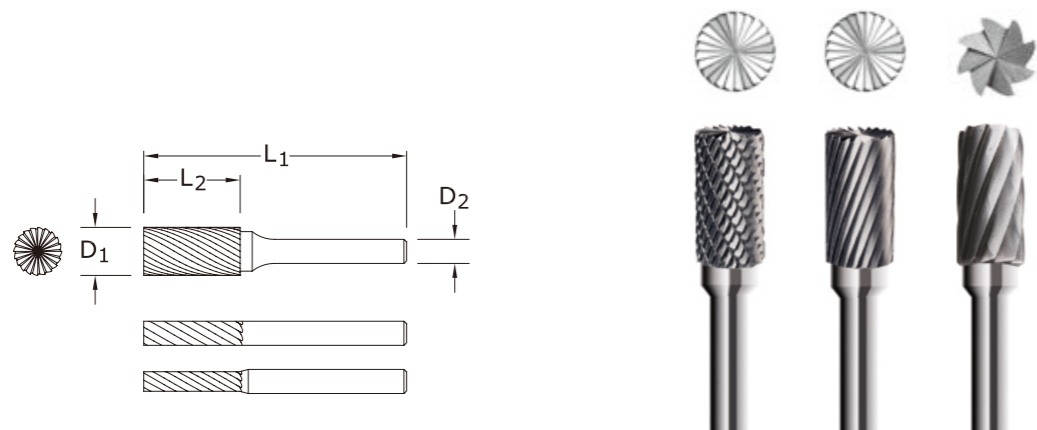
| Tool No. | Cutter Diameter | Length of Cut | Shank Diameter | Overall Length | Double Cut EDP No. | Single Cut EDP No. | Aluminum Cut EDP No. |
|-----------|-----------------|----------------|----------------|----------------|--------------------|--------------------|----------------------|
| | D ₁ | L ₂ | D ₂ | L ₁ | | | |
| SA-41 | 1/16 | 1/4 | 1/8 | 1-1/2 | 10603 | 10600 | - |
| SA-41L2 | 1/16 | 1/4 | 1/8 | 2 | 17103 | 17100 | - |
| SA-41L3 | 1/16 | 1/4 | 1/8 | 3 | 17128 | 17125 | - |
| SA-61 | 1/16 | 1/4 | 3/32 | 1-1/4 | 10753 | 10750 | - |
| SA-63 | 3/32 | 3/8 | 3/32 | 1-1/4 | 10778 | 10775 | - |
| SA-42 | 3/32 | 7/16 | 1/8 | 1-1/2 | 10628 | 10625 | - |
| SA-42L2 | 3/32 | 7/16 | 1/8 | 2 | 17153 | 17150 | - |
| SA-42L3 | 3/32 | 7/16 | 1/8 | 3 | 17178 | 17175 | - |
| SA-11 | 1/8 | 1/2 | 1/4 | 2-5/16 | 10403 | 10400 | - |
| SA-43 | 1/8 | 9/16 | 1/8 | 1-1/2 | 10653 | 10650 | - |
| SA-43L2 | 1/8 | 9/16 | 1/8 | 2 | 17203 | 17200 | - |
| SA-43L3 | 1/8 | 9/16 | 1/8 | 3 | 17228 | 17225 | - |
| SA-12 | 1/8 | 5/8 | 1/4 | 2-4/9 | 10428 | 10425 | - |
| SA-52 | 5/32 | 1/2 | 1/8 | 1-1/2 | 10703 | 10700 | - |
| SA-13 | 5/32 | 5/8 | 1/4 | 2 | 10453 | 10450 | - |
| SA-81 | 3/16 | 1/2 | 3/16 | 2 | 10803 | 10800 | - |
| SA-53 | 3/16 | 1/2 | 1/8 | 1-1/2 | 10728 | 10725 | - |
| SA-14 | 3/16 | 5/8 | 1/4 | 2 | 10478 | 10475 | - |
| SA-51 | 1/4 | 1/2 | 1/8 | 2 | 10678 | 10675 | - |
| SA-1 | 1/4 | 5/8 | 1/4 | 2 | 10003 | 10000 | - |
| SA-1L | 1/4 | 1 | 1/4 | 2 | 10028 | 10025 | - |
| SA-1L6 | 1/4 | 5/8 | 1/4 | 6-1/2 | 16178 | 16175 | - |
| SA-1NF | 1/4 | 3/4 | 1/4 | 2 | - | - | 19000 |
| SA-2 | 5/16 | 3/4 | 1/4 | 2-1/2 | 10053 | 10050 | - |
| SA-3 | 3/8 | 3/4 | 1/4 | 2-1/2 | 10078 | 10075 | - |
| SA-3L | 3/8 | 1 | 1/4 | 2-3/4 | 10103 | 10100 | - |
| SA-3L6 | 3/8 | 3/4 | 1/4 | 6-3/4 | 16203 | 16200 | - |
| SA-3NF | 3/8 | 3/4 | 1/4 | 2-1/2 | - | - | 19002 |
| SA-3X | 3/8 | 1-1/2 | 1/4 | 3-1/4 | 10128 | 10125 | - |
| SA-4 | 7/16 | 1 | 1/4 | 2-3/4 | 10153 | 10150 | - |
| SA-5 | 1/2 | 1 | 1/4 | 2-3/4 | 10178 | 10175 | - |
| SA-5L6 | 1/2 | 1 | 1/4 | 7 | 16228 | 16225 | - |
| SA-5NF | 1/2 | 1 | 1/4 | 2-3/4 | - | - | 19004 |
| *SA-6 | 5/8 | 1 | 1/4 | 2-3/4 | 10203 | 10200 | - |
| *SA-6NF | 5/8 | 1 | 1/4 | 2-3/4 | - | - | 19006 |
| *SA-15 | 3/4 | 1/2 | 1/4 | 2-1/4 | 10503 | 10500 | - |
| *SA-16 | 3/4 | 3/4 | 1/4 | 2-1/2 | 10553 | 10550 | - |
| *SA-7 | 3/4 | 1 | 1/4 | 2-3/4 | 10253 | 10250 | - |
| SA-7NF | 3/4 | 1 | 1/4 | 2-3/4 | - | - | 19008 |
| SA-7NF3/8 | 3/4 | 1 | 3/8 | 3 | - | - | 19010 |
| *SA-8 | 7/8 | 1 | 1/4 | 2-3/4 | 10303 | 10300 | - |
| *SA-9 | 1 | 1 | 1/4 | 2-3/4 | 10353 | 10350 | - |

SA - Cylindrical Shape - Metric



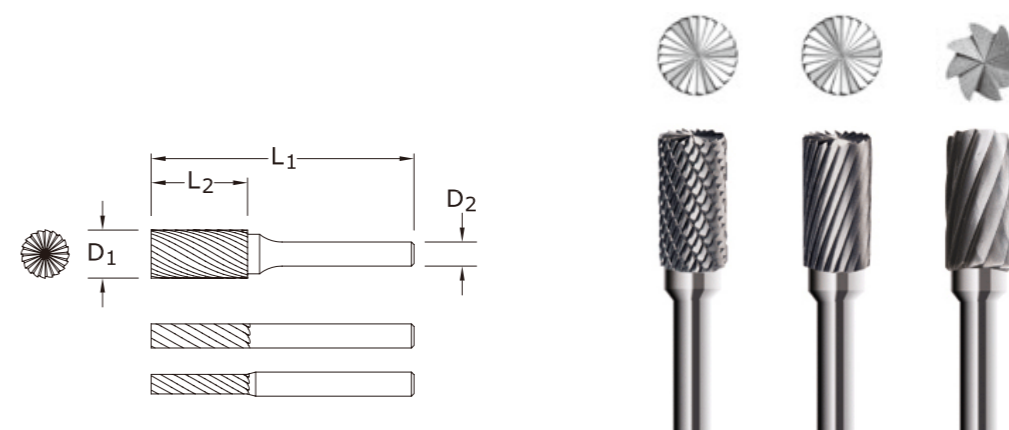
| Tool No. | Cutting Diameter | Length of Cut | Shank Diameter | Overall Length | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|----------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|------------------------|
| | D ₁ mm | L ₂ mm | D ₂ mm | L ₁ mm | | | |
| SA-41M | 1,5 | 6 | 3 | 38 | 20603 | 20600 | - |
| SA-41ML2 | 1,5 | 6 | 3 | 50 | 27103 | 27100 | - |
| SA-41ML3 | 1,5 | 6 | 3 | 75 | 27128 | 27125 | - |
| SA-42M | 2,5 | 11 | 3 | 38 | 20628 | 20625 | - |
| SA-42ML2 | 2,5 | 11 | 3 | 50 | 27153 | 27150 | - |
| SA-42ML3 | 2,5 | 11 | 3 | 75 | 27178 | 27175 | - |
| SA-43M | 3 | 14 | 3 | 38 | 20653 | 20650 | - |
| SA-43ML2 | 3 | 14 | 3 | 50 | 27203 | 27200 | - |
| SA-43ML3 | 3 | 14 | 3 | 75 | 27228 | 27225 | - |
| SA-11M | 3 | 12 | 6 | 56 | 20403 | 20400 | - |
| SA-12M | 3 | 16 | 6 | 60 | 20428 | 20425 | - |
| SA-52M | 4 | 12,7 | 3 | 38 | 20703 | 20700 | - |
| SA-13M | 4 | 16 | 6 | 50 | 20453 | 20450 | - |
| SA-53M | 5 | 12,7 | 3 | 38 | 20728 | 20725 | - |
| SA-14M | 5 | 16 | 6 | 50 | 20478 | 20475 | - |
| SA-1M | 6 | 16 | 6 | 50 | 20003 | 20000 | - |
| SA-1MNF | 6 | 19 | 6 | 50 | - | - | 29000 |
| SA-1ML | 6 | 25 | 6 | 50 | 20028 | 20025 | - |
| SA-1ML6 | 6 | 12,7 | 6 | 162 | 26178 | 26175 | - |
| SA-51M | 6,3 | 12,7 | 3 | 50 | 20678 | 20675 | - |
| SA-2M | 8 | 19 | 6 | 63 | 20053 | 20050 | - |
| SA-3M | 9,5 | 19 | 6 | 63 | 20078 | 20075 | - |
| SA-3MNF | 9,5 | 19 | 6 | 63 | - | - | 29002 |
| SA-3ML | 9,5 | 25 | 6 | 69 | 20103 | 20100 | - |
| SA-3ML6 | 9,5 | 19 | 6 | 169 | 26203 | 26200 | - |
| SA-3MZ | 10 | 20 | 6 | 60 | 29101 | 29100 | - |
| SA-4M | 11 | 25 | 6 | 69 | 20153 | 20150 | - |
| SA-5MZ | 12 | 25 | 6 | 65 | 29105 | 29104 | - |
| SA-5M | 12,7 | 25 | 6 | 69 | 20178 | 20175 | - |
| SA-5MNF | 12,7 | 25 | 6 | 69 | - | - | 29004 |
| SA-5ML6 | 12,7 | 25 | 6 | 175 | 26228 | 26225 | - |
| *SA-6M | 16 | 25 | 6 | 69 | 20203 | 20200 | - |
| *SA-6MNF | 16 | 25 | 6 | 69 | - | - | 29006 |
| *SA-7M | 19 | 25 | 6 | 69 | 20253 | 20250 | - |
| *SA-7MNF | 19 | 25 | 6 | 69 | - | - | 29008 |
| SA-7MNF | 19 | 25 | 8 | 69 | - | - | 29010 |
| *SA-9M | 25 | 25 | 6 | 69 | 20353 | 20350 | - |

SB - Cylindrical Shape End Cut - Fractional



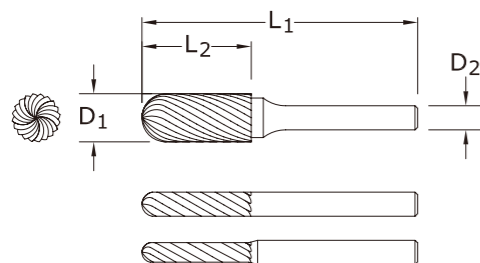
| Tool No. | Cutter Diameter D ₁ | Length of Cut L ₂ | Shank Diameter D ₂ | Overall Length L ₁ | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|-----------|-----------------------------------|---------------------------------|----------------------------------|----------------------------------|-----------------------|-----------------------|---------------------------|
| SB-41 | 1/16 | 1/4 | 1/8 | 1-1/2 | 11453 | 11450 | — |
| SB-41L2 | 1/16 | 1/4 | 1/8 | 2 | 17253 | 17250 | — |
| SB-41L3 | 1/16 | 1/4 | 1/8 | 3 | 17278 | 17275 | — |
| SB-42 | 3/32 | 7/16 | 1/8 | 1-1/2 | 11478 | 11475 | — |
| SB-42L2 | 3/32 | 7/16 | 1/8 | 2 | 17303 | 17300 | — |
| SB-42L3 | 3/32 | 7/16 | 1/8 | 3 | 17328 | 17325 | — |
| SB-ECO | 1/8 | — | 1/8 | 3 | — | 11525 | — |
| SB-11 | 1/8 | 1/2 | 1/4 | 2-5/16 | 11253 | 11250 | — |
| SB-12 | 1/8 | 5/8 | 1/4 | 2-4/9 | 11278 | 11275 | — |
| SB-43 | 1/8 | 9/16 | 1/8 | 1-1/2 | 11503 | 11500 | — |
| SB-43L2 | 1/8 | 9/16 | 1/8 | 2 | 17353 | 17350 | — |
| SB-43L3 | 1/8 | 9/16 | 1/8 | 3 | 17378 | 17375 | — |
| SB-13 | 5/32 | 5/8 | 1/4 | 2 | 11303 | 11300 | — |
| SB-14 | 3/16 | 5/8 | 1/4 | 2 | 10328 | 10825 | — |
| SB-51 | 1/4 | 3/16 | 1/8 | 1-11/16 | 11550 | 11553 | — |
| SB-1 | 1/4 | 5/8 | 1/4 | 2 | 10853 | 10850 | — |
| SB-1L | 1/4 | 1 | 1/4 | 2 | 10878 | 10875 | — |
| SB-1NF | 1/4 | 3/4 | 1/4 | 2 | — | — | 19012 |
| SB-2 | 5/16 | 3/4 | 1/4 | 2-1/2 | 10903 | 10900 | — |
| SB-3 | 3/8 | 3/4 | 1/4 | 2-1/2 | 10928 | 10925 | — |
| SB-3L | 3/8 | 1 | 1/4 | 2-3/4 | 10953 | 10950 | — |
| SB-3NF | 3/8 | 3/4 | 1/4 | 2-1/2 | — | — | 19014 |
| SB-3X | 3/8 | 1-1/2 | 1/4 | 3-1/4 | 10978 | 10975 | — |
| SB-4 | 7/16 | 1 | 1/4 | 2-3/4 | 11003 | 11000 | — |
| SB-5 | 1/2 | 1 | 1/4 | 2-3/4 | 11028 | 11025 | — |
| SB-5NF | 1/2 | 1 | 1/4 | 2-3/4 | — | — | 19016 |
| *SB-6 | 5/8 | 1 | 1/4 | 2-3/4 | 11053 | 11050 | — |
| *SB-6NF | 5/8 | 1 | 1/4 | 2-3/4 | — | — | 19018 |
| *SB-15 | 3/4 | 1/2 | 1/4 | 2-1/4 | 11353 | 11350 | — |
| *SB-16 | 3/4 | 3/4 | 1/4 | 2-1/2 | 11403 | 11400 | — |
| *SB-7 | 3/4 | 1 | 1/4 | 2-3/4 | 11103 | 11100 | — |
| SB-7NF | 3/4 | 1 | 1/4 | 2-3/4 | — | — | 19020 |
| SB-7NF3/8 | 3/4 | 1 | 3/8 | 3 | — | — | 19022 |
| *SB-8 | 7/8 | 1 | 1/4 | 2-3/4 | 11153 | 11150 | — |
| *SB-9 | 1 | 1 | 1/4 | 2-3/4 | 11203 | 11200 | — |

SB - Cylindrical Shape End Cut - Metric



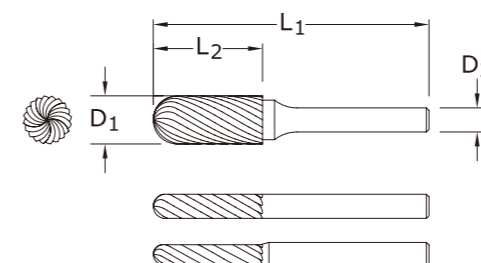
| Tool No. | Cutting Diameter D ₁ mm | Length of Cut L ₂ mm | Shank Diameter D ₂ mm | Overall Length L ₁ mm | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|----------|--|---------------------------------------|--|--|-----------------------|-----------------------|---------------------------|
| SB-41M | 1,5 | 6 | 3 | 38 | 21453 | 21450 | — |
| SB-41ML2 | 1,5 | 6 | 3 | 50 | 27253 | 27250 | — |
| SB-41ML3 | 1,5 | 6 | 3 | 75 | 27278 | 27275 | — |
| SB-42M | 2,5 | 11 | 3 | 38 | 21478 | 21475 | — |
| SB-42ML2 | 2,5 | 11 | 3 | 50 | 27303 | 27300 | — |
| SB-42ML3 | 2,5 | 11 | 3 | 75 | 27328 | 27325 | — |
| SB-ECOM | 3 | — | 3 | 38 | — | 21525 | — |
| SB-43M | 3 | 14 | 3 | 38 | 21503 | 21500 | — |
| SB-43ML2 | 3 | 14 | 3 | 50 | 27353 | 27350 | — |
| SB-43ML3 | 3 | 14 | 3 | 75 | 27378 | 27375 | — |
| SB-11M | 3 | 12 | 6 | 56 | 21253 | 21250 | — |
| SB-12M | 3 | 16 | 6 | 60 | 21278 | 21275 | — |
| SB-13M | 4 | 16 | 6 | 50 | 21303 | 21300 | — |
| SB-14M | 5 | 16 | 6 | 50 | 21328 | 21325 | — |
| SB-1M | 6 | 16 | 6 | 50 | 20853 | 20850 | — |
| SB-1MNF | 6 | 19 | 6 | 50 | — | — | 29012 |
| SB-1ML | 6 | 25 | 6 | 50 | 20873 | 20875 | — |
| SB-51M | 6,3 | 4,7 | 3 | 43 | 21553 | 21550 | — |
| SB-2M | 8 | 19 | 6 | 63 | 20903 | 20900 | — |
| SB-3M | 9,5 | 19 | 6 | 63 | 20928 | 20925 | — |
| SB-3MNF | 9,5 | 19 | 6 | 63 | — | — | 29014 |
| SB-3ML | 9,5 | 25 | 6 | 69 | 20953 | 20950 | — |
| SB-3MZ | 10 | 20 | 6 | 60 | 29109 | 29108 | — |
| SB-4M | 11 | 25 | 6 | 69 | 21003 | 21000 | — |
| SB-5MZ | 12 | 25 | 6 | 65 | 29113 | 29112 | — |
| SB-5M | 12,7 | 25 | 6 | 69 | 21028 | 21025 | — |
| SB-5MNF | 12,7 | 25 | 6 | 69 | — | — | 29016 |
| *SB-6M | 16 | 25 | 6 | 69 | 21053 | 21050 | — |
| *SB-6MNF | 16 | 25 | 6 | 69 | — | — | 29018 |
| *SB-7M | 19 | 25 | 6 | 69 | 21103 | 21100 | — |
| *SB-7MNF | 19 | 25 | 6 | 69 | — | — | 29020 |
| SB-7MNF | 19 | 25 | 8 | 69 | — | — | 29022 |
| *SB-9M | 25 | 25 | 6 | 69 | 21203 | 21200 | — |

SC - Cylinder Shape - Radius End - Fractional



| Tool No. | Cutter Diameter D ₁ | Length of Cut L ₂ | Shank Diameter D ₂ | Overall Length L ₁ | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|-----------|-----------------------------------|---------------------------------|----------------------------------|----------------------------------|-----------------------|-----------------------|---------------------------|
| SC-61 | 3/32 | 3/8 | 3/32 | 1-1/4 | 12378 | 12375 | - |
| SC-41 | 3/32 | 7/16 | 1/8 | 1-1/2 | 12253 | 12250 | - |
| SC-11 | 1/8 | 1/2 | 1/4 | 2-5/16 | 12053 | 12050 | - |
| SC-42 | 1/8 | 9/16 | 1/8 | 1-1/2 | 12278 | 12275 | - |
| SC-42L2 | 1/8 | 9/16 | 1/8 | 2 | 17453 | 17450 | - |
| SC-42L3 | 1/8 | 9/16 | 1/8 | 3 | 17478 | 17475 | - |
| SC-12 | 1/8 | 5/8 | 1/4 | 2-4/9 | 12078 | 12075 | - |
| SC-52 | 5/32 | 1/2 | 1/8 | 1-1/2 | 12328 | 12325 | - |
| SC-13 | 5/32 | 5/8 | 1/4 | 2 | 12103 | 12100 | - |
| SC-81 | 3/16 | 1/2 | 3/16 | 2 | 12403 | 12400 | - |
| SC-53 | 3/16 | 1/2 | 1/8 | 1-1/2 | 12353 | 12350 | - |
| SC-14 | 3/16 | 5/8 | 1/4 | 2 | 12128 | 12125 | - |
| SC-51 | 1/4 | 1/2 | 1/8 | 2 | 12303 | 12300 | - |
| SC-1 | 1/4 | 5/8 | 1/4 | 2 | 11703 | 11700 | - |
| SC-1L | 1/4 | 1 | 1/4 | 2 | 11728 | 11725 | - |
| SC-1L6 | 1/4 | 5/8 | 1/4 | 6-1/2 | 16328 | 16325 | - |
| SC-1NF | 1/4 | 3/4 | 1/4 | 2 | - | - | 19024 |
| SC-2 | 5/16 | 3/4 | 1/4 | 2-1/2 | 11753 | 11750 | - |
| SC-3 | 3/8 | 3/4 | 1/4 | 2-1/2 | 11778 | 11775 | - |
| SC-3L | 3/8 | 1 | 1/4 | 2-3/4 | 11803 | 11800 | - |
| SC-3L6 | 3/8 | 3/4 | 1/4 | 6-3/4 | 16353 | 16350 | - |
| SC-3NF | 3/8 | 3/4 | 1/4 | 2-1/2 | - | - | 19026 |
| SC-3X | 3/8 | 1-1/2 | 1/4 | 3-1/4 | 11828 | 11825 | - |
| SC-4 | 7/16 | 1 | 1/4 | 2-3/4 | 11853 | 11850 | - |
| SC-5 | 1/2 | 1 | 1/4 | 2-3/4 | 11878 | 11875 | - |
| SC-5L6 | 1/2 | 1 | 1/4 | 7 | 16378 | 16375 | - |
| SC-5NF | 1/2 | 1 | 1/4 | 2-3/4 | - | - | 19028 |
| *SC-6 | 5/8 | 1 | 1/4 | 2-3/4 | 11903 | 11900 | - |
| *SC-6NF | 5/8 | 1 | 1/4 | 2-3/4 | - | - | 19030 |
| *SC-15 | 3/4 | 1/2 | 1/4 | 2-1/4 | 12153 | 12150 | - |
| *SC-16 | 3/4 | 3/4 | 1/4 | 2-1/2 | 12203 | 12200 | - |
| *SC-7 | 3/4 | 1 | 1/4 | 2-3/4 | 11953 | 11950 | - |
| SC-7NF | 3/4 | 1 | 1/4 | 2-3/4 | - | - | 19032 |
| SC-7NF3/8 | 3/4 | 1 | 3/8 | 3 | - | - | 19034 |
| *SC-9 | 1 | 1 | 1/4 | 2-3/4 | 12003 | 12000 | - |

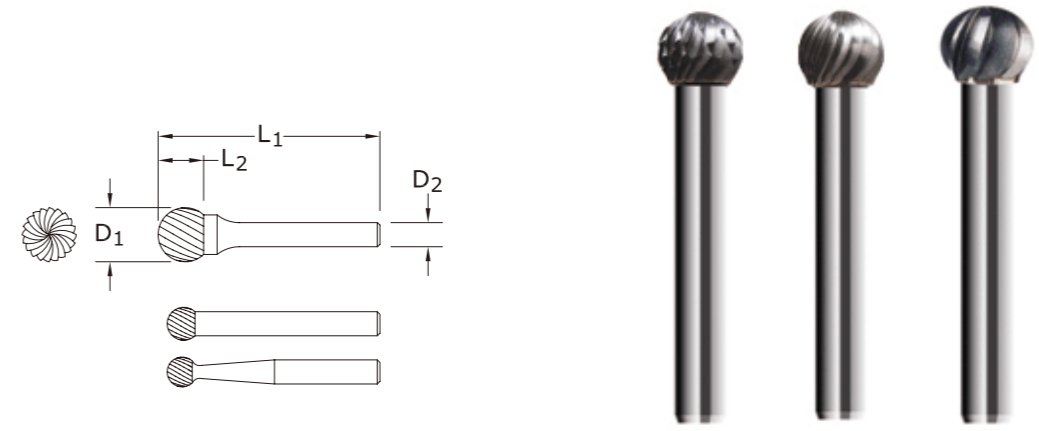
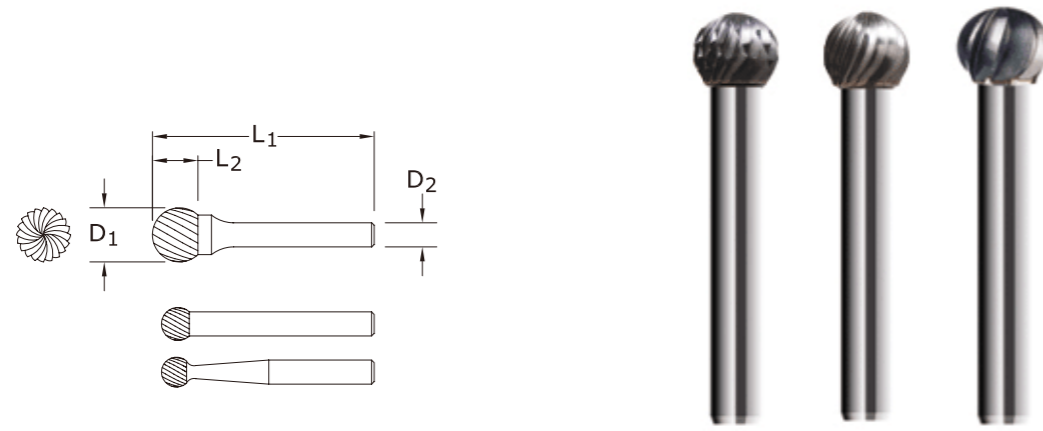
SC - Cylindrical Shape End Cut - Metric



| Tool No. | Cutting Diameter D ₁ mm | Length of Cut L ₂ mm | Shank Diameter D ₂ mm | Overall Length L ₁ mm | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|----------|--|---------------------------------------|--|--|-----------------------|-----------------------|---------------------------|
| SC-41M | 2,5 | 11 | 3 | 38 | 22253 | 22250 | - |
| SC-42M | 3 | 14 | 3 | 38 | 22278 | 22275 | - |
| SC-42ML2 | 3 | 14 | 3 | 50 | 27453 | 27450 | - |
| SC-42ML3 | 3 | 14 | 3 | 75 | 27478 | 27475 | - |
| SC-11M | 3 | 12 | 6 | 56 | 22053 | 22050 | - |
| SC-12M | 3 | 16 | 6 | 60 | 22078 | 22075 | - |
| SC-52M | 4 | 12,7 | 3 | 38 | 22328 | 22325 | - |
| SC-13M | 4 | 16 | 6 | 50 | 22103 | 22100 | - |
| SC-53M | 5 | 12,7 | 3 | 38 | 22353 | 22350 | - |
| SC-14M | 5 | 16 | 6 | 50 | 22128 | 22125 | - |
| SC-1M | 6 | 16 | 6 | 50 | 21703 | 21700 | - |
| SC-1MNF | 6 | 19 | 6 | 50 | - | - | 29024 |
| SC-1ML | 6 | 25 | 6 | 50 | 21728 | 21725 | - |
| SC-1ML6 | 6 | 12,7 | 6 | 162 | 26328 | 26325 | - |
| SC-51M | 6,3 | 12,7 | 3 | 50 | 22303 | 22300 | - |
| SC-2M | 8 | 19 | 6 | 63 | 21753 | 21750 | - |
| SC-3M | 9,5 | 19 | 6 | 63 | 21778 | 21775 | - |
| SC-3MNF | 9,5 | 19 | 6 | 63 | - | - | 29026 |
| SC-3ML | 9,5 | 25 | 6 | 69 | 21803 | 21800 | - |
| SC-3ML6 | 9,5 | 19 | 6 | 169 | 26353 | 26350 | - |
| SC-3MZ | 10 | 20 | 6 | 60 | 29117 | 29116 | - |
| SC-4M | 11 | 25 | 6 | 69 | 21853 | 21850 | - |
| SC-5MZ | 12 | 25 | 6 | 65 | 29121 | 29120 | - |
| SC-5M | 12,7 | 25 | 6 | 69 | 21878 | 21875 | - |
| SC-5ML6 | 12,7 | 25 | 6 | 175 | 26378 | 26375 | - |
| SC-5MNF | 12,7 | 25 | 6 | 69 | - | - | 29028 |
| *SC-6M | 16 | 25 | 6 | 69 | 21903 | 21900 | - |
| *SC-7M | 19 | 25 | 6 | 69 | 21953 | 21950 | - |
| *SC-7MNF | 19 | 25 | 6 | 69 | - | - | 29032 |
| SC-7MNF | 19 | 25 | 8 | 69 | - | - | 29034 |
| *SC-9M | 25 | 25 | 6 | 69 | 22003 | 22000 | - |

SD- Ball Shape (Round) - Fractional

SD- Ball Shape (Round) - Metric

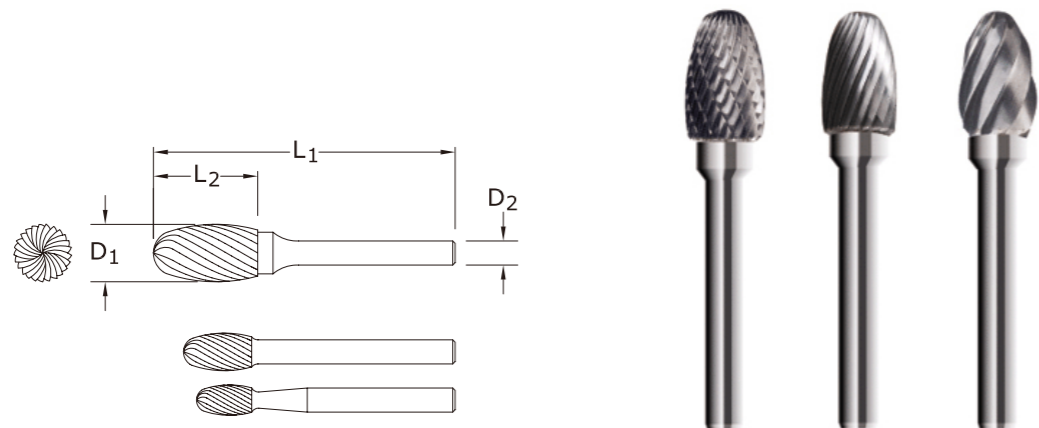


| Tool No. | Cutter Diameter d ₁ | Length of Cut l ₂ | Shank Diameter d ₂ | Overall Length l ₁ | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|-----------|-----------------------------------|---------------------------------|----------------------------------|----------------------------------|-----------------------|-----------------------|---------------------------|
| SD-41 | 3/32 | 3/32 | 1/8 | 1-1/2 | 12778 | 12775 | – |
| SD-61 | 3/32 | 3/32 | 3/32 | 1-1/4 | 12878 | 12875 | – |
| SD-11 | 1/8 | 3/32 | 1/4 | 2 | 12728 | 12725 | – |
| SD-42 | 1/8 | 1/8 | 1/8 | 1-1/2 | 12803 | 12800 | – |
| SD-42L2 | 1/8 | 1/8 | 1/8 | 2 | 17553 | 17550 | – |
| SD-42L3 | 1/8 | 1/8 | 1/8 | 3 | 17578 | 17575 | – |
| SD-52 | 5/32 | 5/32 | 1/8 | 1-1/2 | 12840 | 12837 | – |
| SD-14 | 3/16 | 1/8 | 1/4 | 2 | 12753 | 12750 | – |
| SD-81 | 3/16 | 5/32 | 3/16 | 2 | 12903 | 12900 | – |
| SD-53 | 3/16 | 5/32 | 1/8 | 1-1/2 | 12853 | 12850 | – |
| SD-1 | 1/4 | 7/32 | 1/4 | 2 | 12453 | 12450 | – |
| SD-1L6 | 1/4 | 7/32 | 1/4 | 6-2/9 | 16403 | 16400 | – |
| SD-1NF | 1/4 | 7/32 | 1/4 | 2 | – | – | 19036 |
| SD-51 | 1/4 | 7/32 | 1/8 | 1-3/4 | 12828 | 12825 | – |
| SD-2 | 5/16 | 1/4 | 1/4 | 2 | 12478 | 12475 | – |
| SD-3 | 3/8 | 5/16 | 1/4 | 2-1/16 | 12503 | 12500 | – |
| SD-3L6 | 3/8 | 5/16 | 1/4 | 6-1/3 | 16428 | 16425 | – |
| SD-3NF | 3/8 | 5/16 | 1/4 | 2-1/16 | – | – | 19038 |
| SD-4 | 7/16 | 3/8 | 1/4 | 2-1/7 | 12528 | 12525 | – |
| SD-5 | 1/2 | 7/16 | 1/4 | 2-1/5 | 12553 | 12550 | – |
| SD-5L6 | 1/2 | 7/16 | 1/4 | 6-5/11 | 16453 | 16450 | – |
| SD-5NF | 1/2 | 7/16 | 1/4 | 2-1/5 | – | – | 19040 |
| *SD-6 | 5/8 | 9/16 | 1/4 | 2-1/3 | 12578 | 12575 | – |
| *SD-6NF | 5/8 | 9/16 | 1/4 | 2-1/3 | – | – | 19042 |
| *SD-7 | 3/4 | 11/16 | 1/4 | 2-4/9 | 12628 | 12625 | – |
| SD-7NF | 3/4 | 11/16 | 1/4 | 2-4/9 | – | – | 19044 |
| SD-7NF3/8 | 3/4 | 11/16 | 3/8 | 2-11/16 | – | – | 19046 |
| *SD-9 | 1 | 15/16 | 1/4 | 2-2/3 | 12678 | 12675 | – |

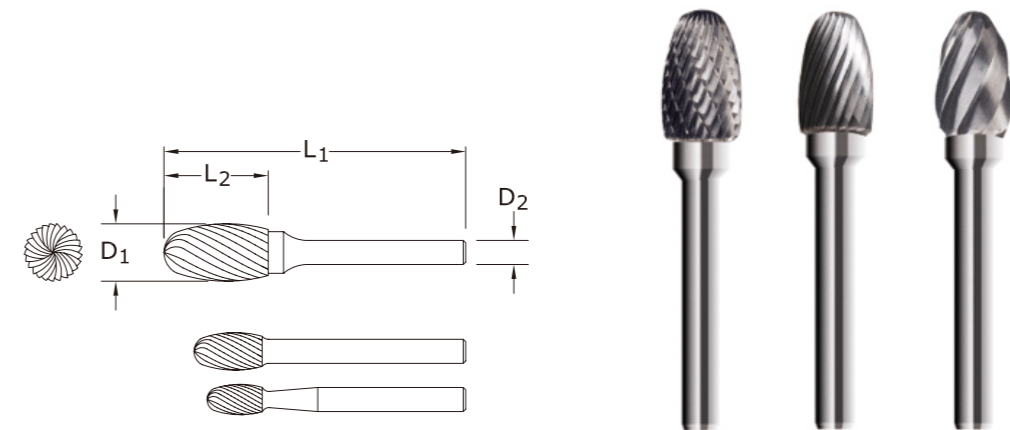
| Tool No. | Cutting Diameter d ₁ mm | Length of Cut l ₂ mm | Shank Diameter d ₂ mm | Overall Length l ₁ mm | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|----------|--|---------------------------------------|--|--|-----------------------|-----------------------|---------------------------|
| SD-41M | 2,5 | 2,3 | 3 | 38 | 22778 | 22775 | – |
| SD-42M | 3 | 2,8 | 3 | 38 | 22803 | 22800 | – |
| SD-42ML2 | 3 | 2,8 | 3 | 50 | 27553 | 27550 | – |
| SD-42ML3 | 3 | 2,8 | 3 | 75 | 27578 | 27575 | – |
| SD-11M | 3 | 2,8 | 6 | 50 | 22728 | 22725 | – |
| SD-52M | 4 | 3,4 | 3 | 38 | 22840 | 22837 | – |
| SD-53M | 5 | 4,7 | 3 | 38 | 22853 | 22850 | – |
| SD-14M | 5 | 4 | 6 | 50 | 22753 | 22750 | – |
| SD-1M | 6 | 5 | 6 | 50 | 22453 | 22450 | – |
| SD-1ML6 | 6 | 5 | 6 | 155 | 26403 | 26400 | – |
| SD-1MNF | 6 | 5 | 6 | 50 | – | – | 29036 |
| SD-51M | 6,3 | 5 | 3 | 44 | 22828 | 22825 | – |
| SD-2M | 8 | 6,4 | 6 | 50 | 22478 | 22475 | – |
| SD-3M | 9,5 | 8 | 6 | 52 | 22503 | 22500 | – |
| SD-3MNF | 9,5 | 8 | 6 | 52 | – | – | 29038 |
| SD-3ML6 | 9,5 | 8 | 6 | 158 | 26428 | 26425 | – |
| SD-3MZ | 10 | 9 | 6 | 49 | 29125 | 29124 | – |
| SD-4M | 11 | 9,5 | 6 | 54 | 22528 | 22525 | – |
| SD-5MZ | 12 | 10,8 | 6 | 51 | 29129 | 29128 | – |
| SD-5M | 12,7 | 11 | 6 | 55 | 22553 | 22550 | – |
| SD-5MNF | 12,7 | 11 | 6 | 55 | – | – | 29040 |
| SD-5ML6 | 12,7 | 11 | 6 | 161 | 26453 | 26450 | – |
| *SD-6M | 16 | 14 | 6 | 58 | 22578 | 22575 | – |
| *SD-6MNF | 16 | 14 | 6 | 58 | – | – | 29042 |
| *SD-7M | 19 | 16 | 6 | 62 | 22628 | 22625 | – |
| *SD-7MNF | 19 | 16 | 6 | 62 | – | – | 29044 |
| SD-7MNF | 19 | 16 | 8 | 62 | – | – | 29046 |
| *SD-9M | 25 | 21 | 6 | 72 | 22678 | 22675 | – |

SE - Oval Shape - Fractional

SE - Oval Shape - Metric

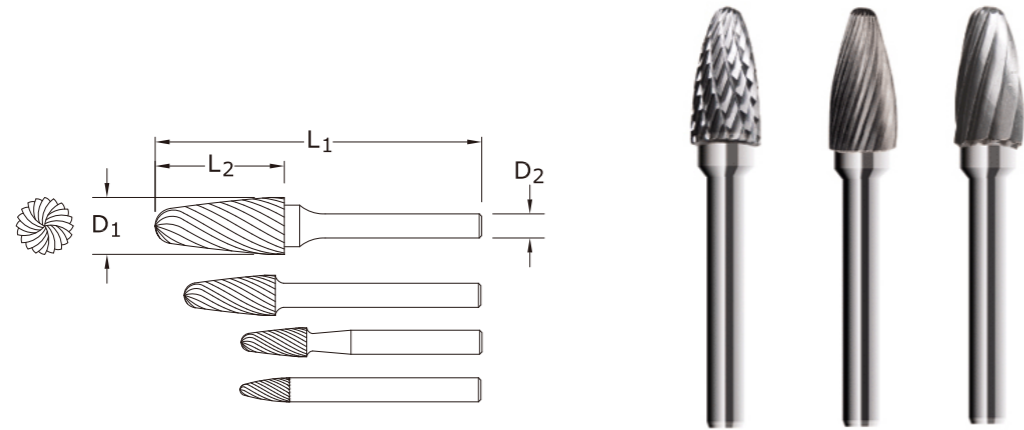


| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|-----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|---------------------------|
| SE-61 | 3/32 | 1/8 | 3/32 | 1-1/4 | 13228 | 13225 | — |
| SE-41 | 1/8 | 7/32 | 1/8 | 1-1/2 | 13153 | 13150 | — |
| SE-41L2 | 1/8 | 7/32 | 1/8 | 2 | 17603 | 17600 | — |
| SE-41L3 | 1/8 | 7/32 | 1/8 | 3 | 17628 | 17625 | — |
| SE-81 | 3/16 | 9/32 | 3/16 | 2 | 13253 | 13250 | — |
| SE-53 | 3/16 | 9/32 | 1/8 | 1-1/2 | 13203 | 13200 | — |
| SE-11 | 3/16 | 5/16 | 1/4 | 2 | 13128 | 13125 | — |
| SE-1 | 1/4 | 3/8 | 1/4 | 2 | 12953 | 12950 | — |
| SE-1L6 | 1/4 | 3/8 | 1/4 | 6-3/8 | 16478 | 16475 | — |
| SE-51 | 1/4 | 3/8 | 1/8 | 1-8/9 | 13178 | 13175 | — |
| SE-3 | 3/8 | 5/8 | 1/4 | 2-3/8 | 12978 | 12975 | — |
| SE-3L6 | 3/8 | 5/8 | 1/4 | 6-5/8 | 16503 | 16500 | — |
| SE-3NF | 3/8 | 5/8 | 1/4 | 2-3/8 | — | — | 19048 |
| SE-5 | 1/2 | 7/8 | 1/4 | 2-5/8 | 13003 | 13000 | — |
| SE-5L6 | 1/2 | 7/8 | 1/4 | 6-8/9 | 16528 | 16525 | — |
| SE-5NF | 1/2 | 7/8 | 1/4 | 2-5/8 | — | — | 19050 |
| *SE-6 | 5/8 | 1 | 1/4 | 2-3/4 | 13028 | 13025 | — |
| *SE-6NF | 5/8 | 1 | 1/4 | 2-3/4 | — | — | 19052 |
| *SE-7 | 3/4 | 1 | 1/4 | 2-3/4 | 13078 | 13075 | — |
| SE-7NF | 3/4 | 1 | 1/4 | 2-3/4 | — | — | 19054 |
| SE-7NF3/8 | 3/4 | 1 | 3/8 | 2-3/4 | — | — | 19056 |



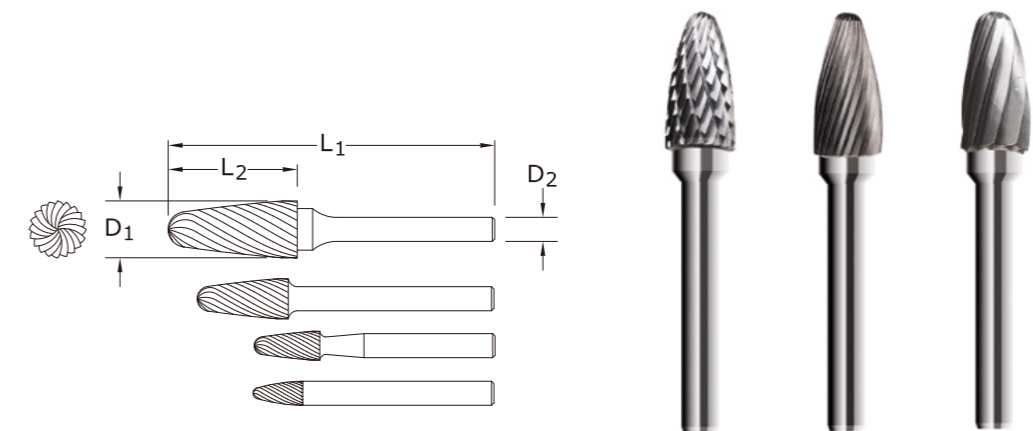
| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|---------------------------|
| SE-41M | 3 | 5,5 | 3 | 38 | 23153 | 23150 | — |
| SE-41ML2 | 3 | 5,5 | 3 | 50 | 27603 | 27600 | — |
| SE-41ML3 | 3 | 5,5 | 3 | 75 | 27628 | 27625 | — |
| SE-53M | 5 | 7,1 | 3 | 38 | 23203 | 23200 | — |
| SE-1M | 6 | 9,5 | 6 | 50 | 22953 | 22950 | — |
| SE-1ML6 | 6 | 9,5 | 6 | 160 | 26478 | 26475 | — |
| SE-51M | 6,3 | 9,5 | 3 | 47 | 23178 | 23175 | — |
| SE-3M | 9,5 | 16 | 6 | 60 | 22978 | 22975 | — |
| SE-3ML6 | 9,5 | 16 | 6 | 166 | 26503 | 26500 | — |
| SE-3MNF | 9,5 | 16 | 6 | 60 | — | — | 29048 |
| SE-5M | 12,7 | 22 | 6 | 66 | 23003 | 23000 | — |
| SE-5ML6 | 12,7 | 22 | 6 | 172 | 26528 | 26525 | — |
| SE-5MNF | 12,7 | 22 | 6 | 66 | — | — | 29050 |
| *SE-6M | 16 | 25 | 6 | 69 | 23028 | 23025 | — |
| *SE-6MNF | 16 | 25 | 6 | 69 | — | — | 29052 |
| *SE-7M | 19 | 25 | 6 | 69 | 23078 | 23075 | — |
| *SE-7MNF | 19 | 25 | 6 | 69 | — | — | 29054 |
| SE-7MNF | 19 | 25 | 8 | 69 | — | — | 29056 |

SF - Tree Shape - Fractional



| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|------------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|---------------------------|
| SF-61 | 3/32 | 1/4 | 3/32 | 1-1/4 | 13778 | 13775 | — |
| SF-41 | 1/8 | 1/4 | 1/8 | 1-1/2 | 13678 | 13675 | — |
| SF-11 | 1/8 | 1/2 | 1/4 | 2-1/32 | 13503 | 13500 | — |
| SF-42 | 1/8 | 1/2 | 1/8 | 1-1/2 | 13703 | 13700 | — |
| SF-42L2 | 1/8 | 1/2 | 1/8 | 2 | 17653 | 17650 | — |
| SF-42L3 | 1/8 | 1/2 | 1/8 | 3 | 17678 | 17675 | — |
| SF-81 | 3/16 | 1/2 | 3/16 | 2 | 13803 | 13800 | — |
| SF-53 | 3/16 | 1/2 | 1/8 | 1-1/2 | 13753 | 13750 | — |
| SF-51 | 1/4 | 1/2 | 1/8 | 2 | 13728 | 13725 | — |
| SF-1 | 1/4 | 5/8 | 1/4 | 2 | 13303 | 13300 | — |
| SF-1L6 | 1/4 | 5/8 | 1/4 | 6-1/2 | 16553 | 16550 | — |
| SF-1NF | 1/4 | 3/4 | 1/4 | 2 | — | — | 19058 |
| SF-3 | 3/8 | 3/4 | 1/4 | 2-1/2 | 13328 | 13325 | — |
| SF-3L6 | 3/8 | 3/4 | 1/4 | 6-3/4 | 16578 | 16575 | — |
| SF-3NF | 3/8 | 3/4 | 1/4 | 2-1/2 | — | — | 19060 |
| SF-4 | 7/16 | 1 | 1/4 | 2-3/4 | 13353 | 13350 | — |
| SF-13 | 1/2 | 3/4 | 1/4 | 2-1/2 | 13528 | 13525 | — |
| SF-5 | 1/2 | 1 | 1/4 | 2-3/4 | 13378 | 13375 | — |
| SF-5L6 | 1/2 | 1 | 1/4 | 7 | 16603 | 16600 | — |
| SF-5NF | 1/2 | 1 | 1/4 | 2-3/4 | — | — | 19062 |
| *SF-6 | 5/8 | 1 | 1/4 | 2-3/4 | 13403 | 13400 | — |
| *SF-6NF | 5/8 | 1 | 1/4 | 2-3/4 | — | — | 19064 |
| *SF-7 | 3/4 | 1 | 1/4 | 2-3/4 | 13453 | 13450 | — |
| *SF-14 | 3/4 | 1-1/4 | 1/4 | 3 | 13578 | 13575 | — |
| SF-14NF | 3/4 | 1-1/4 | 1/4 | 3 | — | — | 19066 |
| SF-14NF3/8 | 3/4 | 1-1/4 | 3/8 | 3-1/4 | — | — | 19068 |
| *SF-15 | 3/4 | 1-1/4 | 1/4 | 3-1/4 | 13628 | 13625 | — |

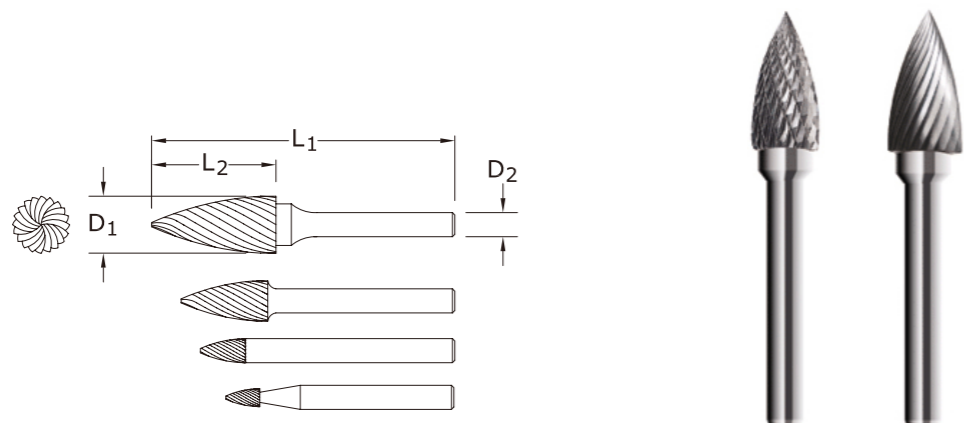
SF - Tree Shape - Metric



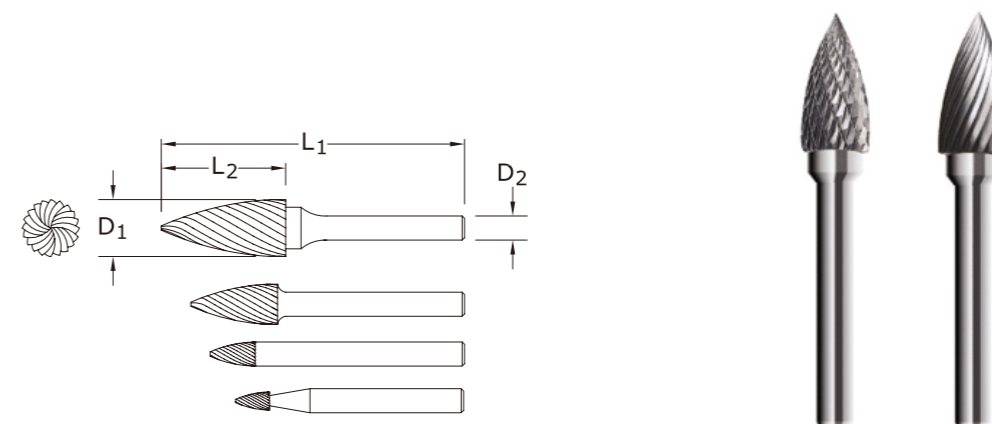
| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|-----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|---------------------------|
| SF-41M | 3 | 6 | 3 | 38 | 23678 | 23675 | — |
| SF-42M | 3 | 12,7 | 3 | 38 | 23703 | 23700 | — |
| SF-11M | 3 | 12,7 | 6 | 56 | 23503 | 23500 | — |
| SF-42ML2 | 3 | 12,7 | 3 | 50 | 27653 | 27650 | — |
| SF-42ML3 | 3 | 12,7 | 3 | 75 | 27678 | 27675 | — |
| SF-53M | 5 | 12,7 | 3 | 38 | 23753 | 23750 | — |
| SF-1M | 6 | 16 | 6 | 50 | 23303 | 23300 | — |
| SF-1ML6 | 6 | 12,7 | 6 | 163 | 26553 | 26550 | — |
| SF-1MNF | 6 | 19 | 6 | 50 | — | — | 29058 |
| SF-51M | 6,3 | 12,7 | 3 | 56 | 23728 | 23725 | — |
| SF-3M | 9,5 | 19 | 6 | 63 | 23328 | 23325 | — |
| SF-3ML6 | 9,5 | 19 | 6 | 169 | 26578 | 26575 | — |
| SF-3MNF | 9,5 | 19 | 6 | 63 | — | — | 29060 |
| SF-4M | 11 | 25 | 6 | 69 | 23353 | 23350 | — |
| SF-5MZ | 12 | 25 | 6 | 65 | 23522 | 23520 | — |
| SF-13M | 12,7 | 19 | 6 | 63 | 23528 | 23525 | — |
| SF-5M | 12,7 | 25 | 6 | 69 | 23378 | 23375 | — |
| SF-5ML6 | 12,7 | 25 | 6 | 175 | 26603 | 26600 | — |
| SF-5MNF | 12,7 | 25 | 6 | 69 | — | — | 29062 |
| *SF-6M | 16 | 25 | 6 | 69 | 23403 | 23400 | — |
| *SF-6MNF | 16 | 25 | 6 | 69 | — | — | 29064 |
| *SF-7M | 19 | 25 | 6 | 69 | 23453 | 23450 | — |
| *SF-14M | 19 | 32 | 6 | 76 | 23578 | 23575 | — |
| *SF-14MNF | 19 | 32 | 6 | 76 | — | — | 29066 |
| SF-14MNF | 19 | 32 | 8 | 76 | — | — | 29068 |
| *SF-15M | 19 | 38 | 6 | 82 | 23628 | 23625 | — |

SG - Tree Shape - Pointed End - Fractional

SG - Tree Shape - Pointed End - Metric

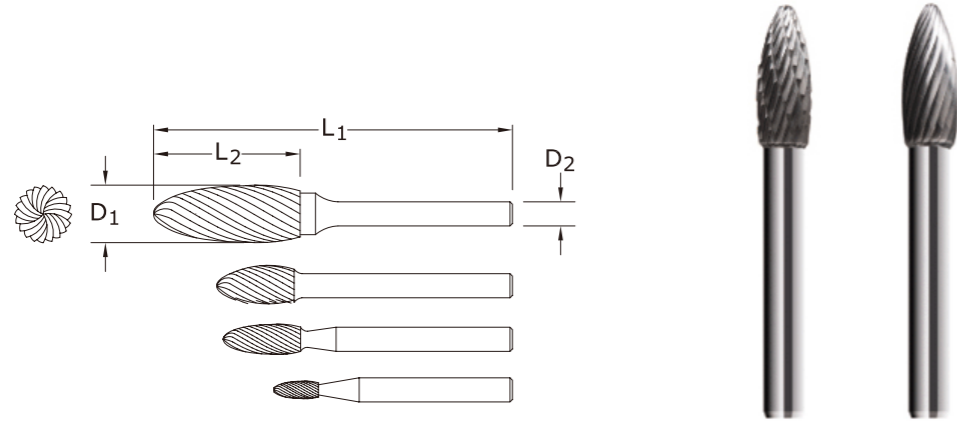


| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SG-61 | 3/32 | 1/4 | 3/32 | 1-1/4 | 14303 | 14300 |
| SG-41 | 1/8 | 1/4 | 1/8 | 1-1/2 | 14153 | 14150 |
| SG-42 | 1/8 | 5/16 | 1/8 | 1-1/2 | 14178 | 14175 |
| SG-43 | 1/8 | 3/8 | 1/8 | 1-1/2 | 14203 | 14200 |
| SG-44 | 1/8 | 1/2 | 1/8 | 1-1/2 | 14228 | 14225 |
| SG-44L2 | 1/8 | 1/2 | 1/8 | 2 | 17853 | 17850 |
| SG-44L3 | 1/8 | 1/2 | 1/8 | 3 | 17878 | 17875 |
| SG-81 | 3/16 | 1/2 | 3/16 | 2 | 14328 | 14325 |
| SG-53 | 3/16 | 1/2 | 1/8 | 1-1/2 | 14278 | 14275 |
| SG-1 | 1/4 | 5/8 | 1/4 | 2 | 13853 | 13850 |
| SG-1L6 | 1/4 | 1/2 | 1/4 | 6-1/2 | 16628 | 16625 |
| SG-51 | 1/4 | 1/2 | 1/8 | 2 | 14253 | 14250 |
| SG-2 | 5/16 | 3/4 | 1/4 | 2-1/2 | 13878 | 13875 |
| SG-3 | 3/8 | 3/4 | 1/4 | 2-1/2 | 13903 | 13900 |
| SG-3L6 | 3/8 | 3/4 | 1/4 | 6-3/4 | 16653 | 16650 |
| SG-13 | 1/2 | 3/4 | 1/4 | 2-1/2 | 14053 | 14050 |
| SG-5 | 1/2 | 1 | 1/4 | 2-3/4 | 13928 | 13925 |
| SG-5L6 | 1/2 | 1 | 1/4 | 7 | 16678 | 16675 |
| *SG-6 | 5/8 | 1 | 1/4 | 2-3/4 | 13953 | 13950 |
| *SG-7 | 3/4 | 1 | 1/4 | 2-3/4 | 14003 | 14000 |
| *SG-15 | 3/4 | 1-1/2 | 1/4 | 3-1/4 | 14103 | 14100 |



| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SG-41M | 3 | 6 | 3 | 38 | 24153 | 24150 |
| SG-43M | 3 | 9,5 | 3 | 38 | 24203 | 24200 |
| SG-44M | 3 | 12,7 | 3 | 38 | 24228 | 24225 |
| SG-44ML2 | 3 | 12,7 | 3 | 50 | 27853 | 27850 |
| SG-44ML3 | 3 | 12,7 | 3 | 75 | 27878 | 27875 |
| SG-53M | 5 | 12,7 | 3 | 38 | 24278 | 24275 |
| SG-1M | 6 | 16 | 6 | 50 | 23853 | 23850 |
| SG-1ML6 | 6 | 12,7 | 6 | 163 | 26628 | 26625 |
| SG-51M | 6,3 | 12,7 | 3 | 50 | 24253 | 24250 |
| SG-2M | 8 | 19 | 6 | 63 | 23878 | 23875 |
| SG-3M | 9,5 | 19 | 6 | 63 | 23903 | 23900 |
| SG-3ML6 | 9,5 | 19 | 6 | 169 | 26653 | 26650 |
| SG-3MZ | 10 | 20 | 6 | 60 | 24042 | 24040 |
| SG-5MZ | 12 | 25 | 6 | 65 | 24046 | 24045 |
| SG-13M | 12,7 | 19 | 6 | 63 | 24053 | 24050 |
| SG-5M | 12,7 | 25 | 6 | 69 | 23928 | 23925 |
| SG-5ML6 | 12,7 | 25 | 6 | 175 | 26678 | 26675 |
| *SG-6M | 16 | 25 | 6 | 69 | 23953 | 23950 |
| *SG-7M | 19 | 25 | 6 | 69 | 24003 | 24000 |
| *SG-15M | 19 | 38 | 6 | 82 | 24103 | 24100 |

SH - Flame Shape - Fractional

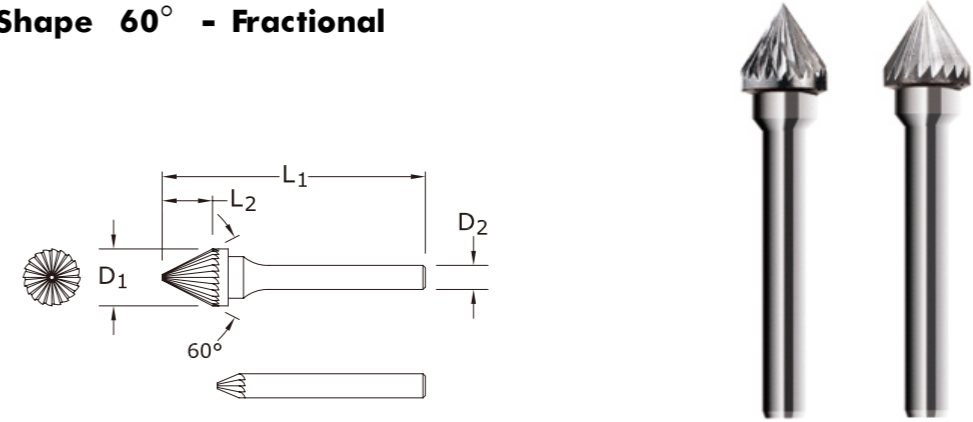


| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SH-41 | 1/8 | 1/4 | 1/8 | 1-1/2 | 14553 | 14550 |
| SH-41L2 | 1/8 | 1/4 | 1/8 | 2 | 17903 | 17900 |
| SH-41L3 | 1/8 | 1/4 | 1/8 | 3 | 17928 | 17925 |
| SH-53 | 3/16 | 3/8 | 1/8 | 1-1/2 | 14603 | 14600 |
| SH-1 | 1/4 | 5/8 | 1/4 | 2 | 14378 | 14375 |
| SH-2 | 5/16 | 3/4 | 1/4 | 2-1/2 | 14403 | 14400 |
| SH-2L6 | 5/16 | 3/4 | 1/4 | 6-3/4 | 16703 | 16700 |
| SH-5 | 1/2 | 1-1/4 | 1/4 | 3 | 14428 | 14425 |
| SH-5L6 | 1/2 | 1-1/4 | 1/4 | 7-1/4 | 16728 | 16725 |
| *SH-6 | 5/8 | 1-7/16 | 1/4 | 3-1/5 | 14453 | 14450 |
| *SH-7 | 3/4 | 1-5/8 | 1/4 | 3-3/8 | 14503 | 14500 |

SH - Flame Shape - Metric

| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SH-41M | 3 | 6,3 | 3 | 38 | 24553 | 24550 |
| SH-41ML2 | 3 | 6,3 | 3 | 50 | 27903 | 27900 |
| SH-41ML3 | 3 | 6,3 | 3 | 75 | 27928 | 27925 |
| SH-53M | 5 | 9,5 | 3 | 38 | 24603 | 24600 |
| SH-2M | 8 | 19 | 6 | 63 | 24403 | 24400 |
| SH-2ML6 | 8 | 19 | 6 | 169 | 26703 | 26700 |
| SH-5M | 12,7 | 32 | 6 | 76 | 24428 | 24425 |
| SH-5ML6 | 12,7 | 32 | 6 | 182 | 26728 | 26725 |
| *SH-6M | 16 | 36 | 6 | 80 | 24453 | 24450 |
| *SH-7M | 19 | 41 | 6 | 85 | 24503 | 24500 |

SJ - Cone Shape 60° - Fractional

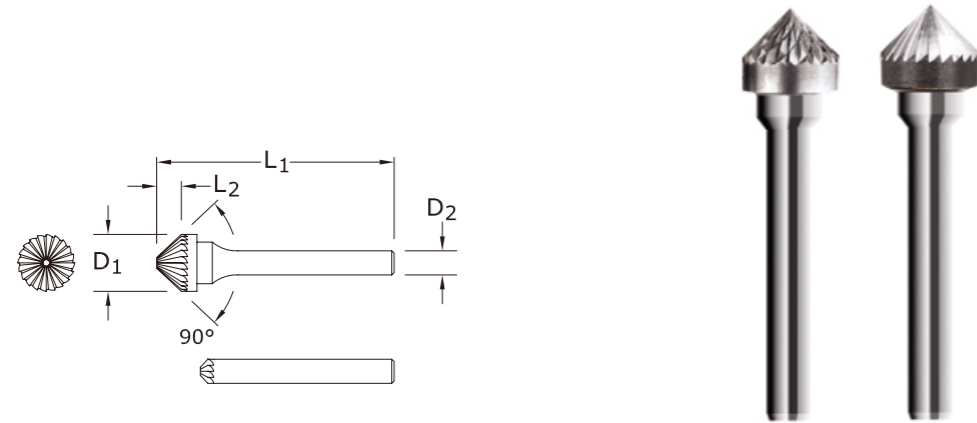


| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SJ-42 | 1/8 | 3/32 | 1/8 | 1-1/2 | 14903 | 14900 |
| SJ-1 | 1/4 | 3/16 | 1/4 | 2 | 14678 | 14675 |
| SJ-3 | 3/8 | 5/16 | 1/4 | 2-1/5 | 14703 | 14700 |
| SJ-5 | 1/2 | 7/16 | 1/4 | 2-1/3 | 14728 | 14725 |
| *SJ-6 | 5/8 | 9/16 | 1/4 | 2-4/9 | 14753 | 14750 |
| *SJ-7 | 3/4 | 11/16 | 1/4 | 2-5/9 | 14803 | 14800 |
| *SJ-9 | 1 | 15/16 | 1/4 | 2-7/9 | 14853 | 14850 |

SJ - Cone Shape 60° - Metric

| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SJ-42M | 3 | 2,5 | 3 | 38 | 24903 | 24900 |
| SJ-1M | 6 | 4 | 6 | 50 | 24678 | 24675 |
| SJ-3M | 9,5 | 8 | 6 | 55 | 24703 | 24700 |
| SJ-5M | 12,7 | 11 | 6 | 58 | 24728 | 24725 |
| *SJ-6M | 16 | 14,5 | 6 | 61 | 24753 | 24750 |
| *SJ-7M | 19 | 17,5 | 6 | 65 | 24803 | 24800 |
| *SJ-9M | 25 | 24,5 | 6 | 68 | 24853 | 24850 |

SK - Cone Shape 90° - Fractional

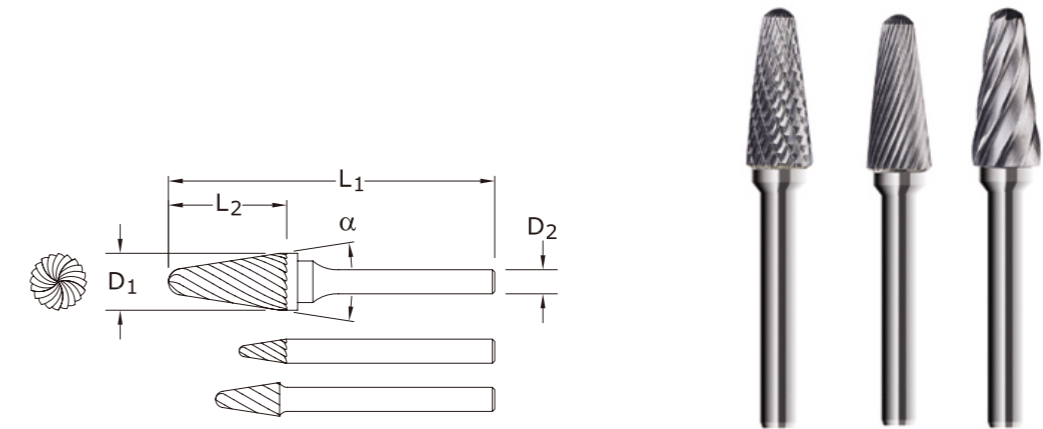


| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SK-42 | 1/8 | 1/16 | 1/8 | 1-1/2 | 15153 | 15150 |
| SK-1 | 1/4 | 1/8 | 1/4 | 2 | 14928 | 14925 |
| SK-3 | 3/8 | 3/16 | 1/4 | 2-1/16 | 14953 | 14950 |
| SK-5 | 1/2 | 1/4 | 1/4 | 2-1/9 | 14978 | 14975 |
| *SK-6 | 5/8 | 5/16 | 1/4 | 2-1/4 | 15003 | 15000 |
| *SK-7 | 3/4 | 3/8 | 1/4 | 2-1/3 | 15053 | 15050 |
| *SK-9 | 1 | 1/2 | 1/4 | 2-3/8 | 15103 | 15100 |

SK - Cone Shape 90° - Metric

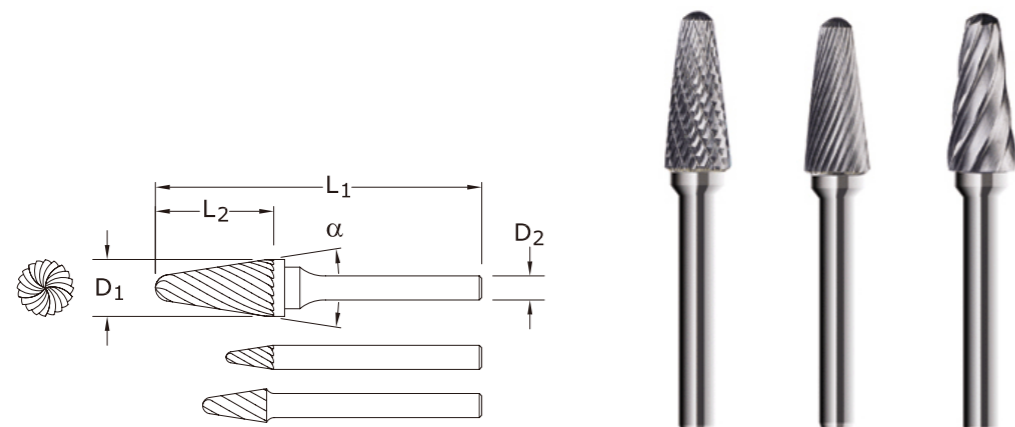
| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SK-42M | 3 | 1,5 | 3 | 38 | 25153 | 25150 |
| SK-1M | 6 | 3 | 6 | 50 | 24928 | 24925 |
| SK-3M | 9,5 | 4,7 | 6 | 52 | 24953 | 24950 |
| SK-5M | 12,7 | 6,3 | 6 | 54 | 24978 | 24975 |
| *SK-6M | 16 | 8 | 6 | 57 | 25003 | 25000 |
| *SK-7M | 19 | 9,5 | 6 | 58 | 25053 | 25050 |
| *SK-9M | 25 | 12,7 | 6 | 60 | 25103 | 25100 |

SL - Taper Shape Radius End - Fractional



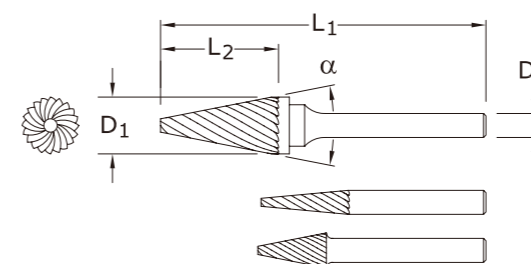
| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Included Angle α | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|-----------|--------------------------|------------------------|-------------------------|-------------------------|----------------------------|-----------------------|-----------------------|---------------------------|
| SL-41 | 1/8 | 3/8 | 1/8 | 1-1/2 | 8° | 15403 | 15400 | — |
| SL-42 | 1/8 | 1/2 | 1/8 | 1-1/2 | 8° | 15428 | 15425 | — |
| SL-42L2 | 1/8 | 1/2 | 1/8 | 2 | 8° | 17953 | 17950 | — |
| SL-42L3 | 1/8 | 1/2 | 1/8 | 3 | 8° | 17978 | 17975 | — |
| SL-81 | 3/16 | 7/16 | 3/16 | 2 | 14° | 15478 | 15475 | — |
| SL-53 | 3/16 | 1/2 | 1/8 | 1-1/2 | 14° | 15453 | 15450 | — |
| SL-1 | 1/4 | 5/8 | 1/4 | 2 | 14° | 15178 | 15175 | — |
| SL-1L6 | 1/4 | 5/8 | 1/4 | 6-3/4 | 14° | 16753 | 16750 | — |
| SL-2 | 5/16 | 7/8 | 1/4 | 2-3/4 | 14° | 15203 | 15200 | — |
| SL-3 | 3/8 | 1-1/16 | 1/4 | 2-15/16 | 14° | 15228 | 15225 | — |
| SL-3L6 | 3/8 | 1-1/16 | 1/4 | 7-2/9 | 14° | 16778 | 16775 | — |
| SL-3NF | 3/8 | 1-1/16 | 1/4 | 2-15/16 | 14° | — | — | 19070 |
| SL-4 | 1/2 | 1-1/8 | 1/4 | 3 | 14° | 15253 | 15250 | — |
| SL-4L6 | 1/2 | 1-1/8 | 1/4 | 7-3/11 | 14° | 16803 | 16800 | — |
| SL-4NF | 1/2 | 1-1/8 | 1/4 | 3 | 14° | — | — | 19072 |
| *SL-5 | 5/8 | 1-3/16 | 1/4 | 3-1/16 | 14° | 15278 | 15275 | — |
| *SL-5NF | 5/8 | 1-3/16 | 1/4 | 3-1/16 | 14° | — | — | 19074 |
| *SL-6 | 5/8 | 1-5/16 | 1/4 | 3-1/5 | 14° | 15303 | 15300 | — |
| *SL-6NF | 5/8 | 1-5/16 | 1/4 | 3-1/5 | 14° | — | — | 19076 |
| *SL-7 | 3/4 | 1-1/2 | 1/4 | 3-3/8 | 14° | 15353 | 15350 | — |
| SL-7NF | 3/4 | 1-1/2 | 1/4 | 3-3/8 | 14° | — | — | 19078 |
| SL-7NF3/8 | 3/4 | 1-1/2 | 3/8 | 3-5/8 | 14° | — | — | 19080 |

SL - Taper Shape Radius End - Metric



| Tool No. | Cutting Diameter d ₁ mm | Length of Cut l ₂ mm | Shank Diameter d ₂ mm | Overall Length l ₁ mm | Angle a | Double Cut EDP No. | Single Cut EDP No. | Nonferrous Cut EDP No. |
|----------|--|---------------------------------------|--|--|------------|-----------------------|-----------------------|---------------------------|
| SL-41M | 3 | 9,5 | 3 | 38 | 8° | 25403 | 25400 | — |
| SL-42M | 3 | 12,7 | 3 | 38 | 8° | 25428 | 25425 | — |
| SL-42ML2 | 3 | 12,7 | 3 | 50 | 8° | 27953 | 27950 | — |
| SL-42ML3 | 3 | 12,7 | 3 | 75 | 8° | 27978 | 27975 | — |
| SL-53M | 5 | 12,7 | 3 | 38 | 14° | 25453 | 25450 | — |
| SL-1M | 6 | 16 | 6 | 50 | 14° | 25178 | 25175 | — |
| SL-1ML6 | 6 | 16 | 6 | 166 | 14° | 26753 | 26750 | — |
| SL-2M | 8 | 22 | 6 | 69 | 14° | 25203 | 25200 | — |
| SL-3M | 9,5 | 27 | 6 | 74 | 14° | 25228 | 25225 | — |
| SL-3MNF | 9,5 | 27 | 6 | 74 | 14° | — | — | 29070 |
| SL-3ML6 | 9,5 | 27 | 6 | 177 | 14° | 26778 | 26775 | — |
| SL-4M | 12,7 | 28 | 6 | 76 | 14° | 25253 | 25250 | — |
| SL-4MNF | 12,7 | 28 | 6 | 76 | 14° | — | — | 29072 |
| SL-4ML6 | 12,7 | 28 | 6 | 178 | 14° | 26803 | 26800 | — |
| *SL-5M | 16 | 30 | 6 | 77 | 14° | 25278 | 25275 | — |
| *SL-5MNF | 16 | 30 | 6 | 77 | 14° | — | — | 29074 |
| *SL-7M | 19 | 38 | 6 | 85 | 14° | 25353 | 25350 | — |
| *SL-7MNF | 19 | 38 | 6 | 85 | 14° | — | — | 29078 |
| SL-7MNF | 19 | 38 | 8 | 85 | 14° | — | — | 29080 |

SM - Cone Shape- Fractional

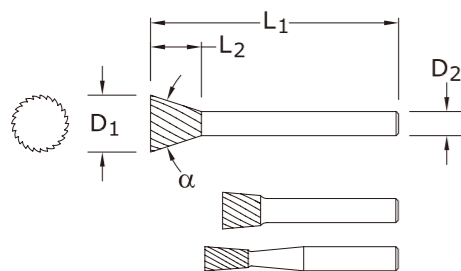


| Tool No. | Cutter Diameter d ₁ | Length of Cut l ₂ | Shank Diameter d ₂ | Overall Length l ₁ | Included Angle a | Double Cut EDP No. | Single Cut EDP No. |
|----------|-----------------------------------|---------------------------------|----------------------------------|----------------------------------|---------------------|-----------------------|-----------------------|
| SM-61 | 3/32 | 1/4 | 3/32 | 1-1/4 | 10° | 15803 | 15800 |
| SM-41 | 1/8 | 11/32 | 1/8 | 1-1/2 | 12° | 15678 | 15675 |
| SM-42 | 1/8 | 7/16 | 1/8 | 1-1/2 | 14° | 15703 | 15700 |
| SM-42L2 | 1/8 | 7/16 | 1/8 | 2 | 14° | 18053 | 18050 |
| SM-42L3 | 1/8 | 7/16 | 1/8 | 3 | 14° | 18078 | 18075 |
| SM-43 | 1/8 | 5/8 | 1/8 | 1-1/2 | 7° | 15728 | 15725 |
| SM-53 | 3/16 | 1/2 | 1/8 | 1-1/2 | 16° | 15778 | 15775 |
| SM-1 | 1/4 | 1/2 | 1/4 | 2 | 22° | 15503 | 15500 |
| SM-51 | 1/4 | 1/2 | 1/8 | 2-1/9 | 22° | 15753 | 15750 |
| SM-2 | 1/4 | 3/4 | 1/4 | 2 | 14° | 15528 | 15525 |
| SM-3 | 1/4 | 1 | 1/4 | 2 | 10° | 15553 | 15550 |
| SM-4 | 3/8 | 5/8 | 1/4 | 2-1/2 | 28° | 15578 | 15575 |
| SM-5 | 1/2 | 7/8 | 1/4 | 2-3/4 | 28° | 15603 | 15600 |
| *SM-6 | 5/8 | 1 | 1/4 | 2-8/9 | 31° | 15628 | 15625 |

SM - Cone Shape - Metric

| Tool No. | Cutting Diameter d ₁ mm | Length of Cut l ₂ mm | Shank Diameter d ₂ mm | Overall Length l ₁ mm | Angle a | Double Cut EDP No. | Single Cut EDP No. |
|----------|--|---------------------------------------|--|--|------------|-----------------------|-----------------------|
| SM-41M | 3 | 8,9 | 3 | 38 | 12° | 25678 | 25675 |
| SM-42M | 3 | 11 | 3 | 38 | 14° | 25703 | 25700 |
| SM-42ML2 | 3 | 11 | 3 | 50 | 14° | 28053 | 28050 |
| SM-42ML3 | 3 | 11 | 3 | 75 | 14° | 28078 | 28075 |
| SM-43M | 3 | 16 | 3 | 38 | 7° | 25728 | 25725 |
| SM-53M | 5 | 12,7 | 3 | 38 | 16° | 25778 | 25775 |
| SM-1M | 6 | 12,7 | 6 | 50 | 22° | 25503 | 25500 |
| SM-2M | 6 | 19 | 6 | 50 | 14° | 25528 | 25525 |
| SM-3M | 6 | 25 | 6 | 50 | 10° | 25553 | 25550 |
| SM-51M | 6,3 | 12,7 | 3 | 53 | 22° | 25753 | 25750 |
| SM-4M | 9,5 | 16 | 6 | 63 | 28° | 25578 | 25575 |
| SM-5M | 12,7 | 22 | 6 | 69 | 28° | 25603 | 25600 |
| *SM-6M | 16 | 25 | 6 | 73 | 31° | 25628 | 25625 |

SN - Inverted Cone Shape - Fractional

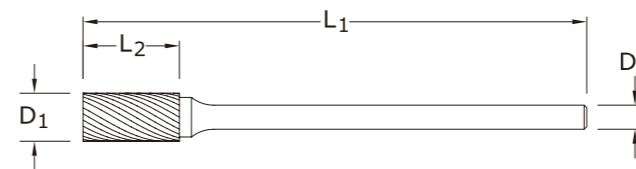


| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Included Angle a | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|-----------------------|
| SN-41 | 3/32 | 1/8 | 1/8 | 1-1/2 | 10° | 16028 | 16025 |
| SN-61 | 3/32 | 1/8 | 3/32 | 1-1/4 | 10° | 16128 | 16125 |
| SN-42 | 1/8 | 3/16 | 1/8 | 1-1/2 | 10° | 16053 | 16050 |
| SN-81 | 3/16 | 1/4 | 3/16 | 2 | 10° | 16153 | 16150 |
| SN-53 | 3/16 | 1/4 | 1/8 | 1-1/2 | 10° | 16103 | 16100 |
| SN-51 | 1/4 | 1/4 | 1/8 | 1-3/4 | 10° | 16078 | 16075 |
| SN-1 | 1/4 | 5/16 | 1/4 | 2 | 10° | 15853 | 15850 |
| SN-2 | 3/8 | 3/8 | 1/4 | 2-1/9 | 13° | 15878 | 15875 |
| SN-4 | 1/2 | 1/2 | 1/4 | 2-1/4 | 28° | 15903 | 15900 |
| *SN-6 | 5/8 | 3/4 | 1/4 | 2-1/2 | 18° | 15928 | 15925 |
| *SN-7 | 3/4 | 5/8 | 1/4 | 2-3/8 | 30° | 15978 | 15975 |

SN - Inverted Cone Shape - Metric

| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Angle a | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|--------------|-----------------------|-----------------------|
| SN-41M | 2,5 | 3 | 3 | 38 | 10° | 26028 | 26025 |
| SN-42M | 3 | 4 | 3 | 38 | 10° | 26053 | 26050 |
| SN-53M | 5 | 6,3 | 3 | 38 | 10° | 26103 | 26100 |
| SN-1M | 6 | 8 | 6 | 50 | 10° | 25853 | 25850 |
| SN-51M | 6,3 | 6 | 3 | 44 | 10° | 26078 | 26075 |
| SN-2M | 9,5 | 9,5 | 6 | 53 | 13° | 25878 | 25875 |
| SN-4M | 12,7 | 12,7 | 6 | 57 | 28° | 25903 | 25900 |
| *SN-6M | 16 | 19 | 6 | 63 | 18° | 25928 | 25925 |
| *SN-7M | 19 | 16 | 6 | 60 | 30° | 25978 | 25975 |

Long Shank Burs - Fractional



Cylinder Shape
Forma cilíndrica
Forme cylindrique

| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SA-1L6 | 1/4 | 1/2 | 1/4 | 6-1/2 | 16178 | 16175 |
| SA-3L6 | 3/8 | 3/4 | 1/4 | 6-3/4 | 16203 | 16200 |
| SA-5L6 | 1/2 | 1 | 1/4 | 7 | 16228 | 16225 |

Cylinder Shape Radius End
Forma cilíndrica Con radio
Forme cylindrique À bout hémisphérique



| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SC-1L6 | 1/4 | 1/2 | 1/4 | 6-1/2 | 16328 | 16325 |
| SC-3L6 | 3/8 | 3/4 | 1/4 | 6-3/4 | 16353 | 16350 |
| SC-5L6 | 1/2 | 1 | 1/4 | 7 | 16378 | 16375 |

Ball Shape
Forma esférica
Forme sphérique



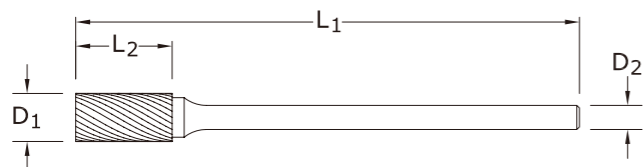
| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SD-1L6 | 1/4 | 7/32 | 1/4 | 6-2/9 | 16403 | 16400 |
| SD-3L6 | 3/8 | 5/16 | 1/4 | 6-1/3 | 16428 | 16425 |
| SD-5L6 | 1/2 | 7/16 | 1/4 | 6-4/9 | 16453 | 16450 |

Oval Shape
Forma ovalada
Forme ovale

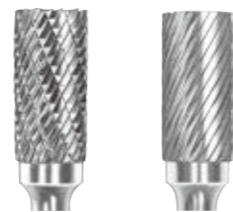


| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SE-1L6 | 1/4 | 3/8 | 1/4 | 6-3/8 | 16478 | 16475 |
| SE-3L6 | 3/8 | 5/8 | 1/4 | 6-5/8 | 16503 | 16500 |
| SE-5L6 | 1/2 | 7/8 | 1/4 | 6-8/9 | 16528 | 16525 |

Long Shank Burs - Metric



Cylinder Shape
Forma cilíndrica
Forme cylindrique



| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SA-1ML6 | 6 | 12,7 | 6 | 162 | 26178 | 26175 |
| SA-3ML6 | 9,5 | 19 | 6 | 169 | 26203 | 26200 |
| SA-5ML6 | 12,7 | 25 | 6 | 175 | 26228 | 26225 |

Cylinder Shape Radius End
Forma cilíndrica Con radio
Forme cylindrique À bout hémisphérique



| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SC-1ML6 | 6 | 12,7 | 6 | 162 | 26328 | 26325 |
| SC-3ML6 | 9,5 | 19 | 6 | 169 | 26353 | 26350 |
| SC-5ML6 | 12,7 | 25 | 6 | 175 | 26378 | 26375 |

Ball Shape
Forma esférica
Forme sphérique



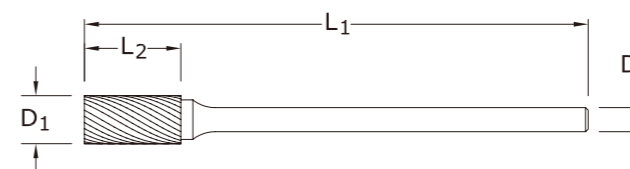
| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SD-1ML6 | 6 | 5 | 6 | 155 | 26403 | 26400 |
| SD-3ML6 | 9,5 | 8 | 6 | 158 | 26428 | 26425 |
| SD-5ML6 | 12,7 | 11 | 6 | 161 | 26453 | 26450 |

Oval Shape
Forma ovalada
Forme ovale



| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SE-1ML6 | 6 | 9,5 | 6 | 160 | 26478 | 26475 |
| SE-3ML6 | 9,5 | 16 | 6 | 166 | 26503 | 26500 |
| SE-5ML6 | 12,7 | 22 | 6 | 172 | 26528 | 26525 |

Long Shank Burs - Fractional



Tree Shape Radius End
Forma de árbol Con radio
Forme d'ogive Bout hémisphérique



| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SF-1L6 | 1/4 | 1/2 | 1/4 | 6-1/2 | 16553 | 16550 |
| SF-3L6 | 3/8 | 3/4 | 1/4 | 6-3/4 | 16578 | 16575 |
| SF-5L6 | 1/2 | 1 | 1/4 | 7 | 16603 | 16600 |

Tree Shape Pointed End
Forma de árbol
Forme d'ogive À bout pointu



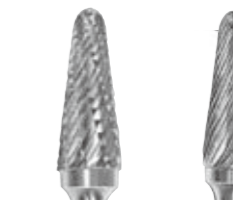
| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SG-1L6 | 1/4 | 1/2 | 1/4 | 6-1/2 | 16628 | 16625 |
| SG-3L6 | 3/8 | 3/4 | 1/4 | 6-3/4 | 16653 | 16650 |
| SG-5L6 | 1/2 | 1 | 1/4 | 7 | 16678 | 16675 |

Flame Shape
Forma de llama
Forme en flamme



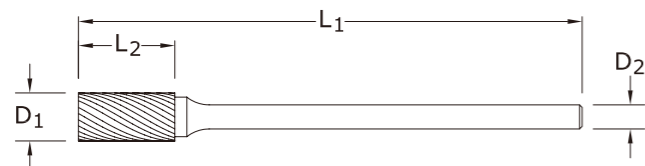
| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SH-2L6 | 5/16 | 3/4 | 1/4 | 6-3/4 | 16703 | 16700 |
| SH-5L6 | 1/2 | 1-1/4 | 1/4 | 7-1/4 | 16728 | 16725 |

14° Taper Radius End
Forma cónica a 14° Con radio
Conique, 14° Bout hémisphérique



| Tool No. | Cutter Diameter d_1 | Length of Cut l_2 | Shank Diameter d_2 | Overall Length l_1 | Double Cut EDP No. | Single Cut EDP No. |
|----------|--------------------------|------------------------|-------------------------|-------------------------|-----------------------|-----------------------|
| SL-1L6 | 1/4 | 5/8 | 1/4 | 6-3/4 | 16753 | 16750 |
| SL-3L6 | 3/8 | 1-1/16 | 1/4 | 7-2/9 | 16778 | 16775 |
| SL-4L6 | 1/2 | 1-1/8 | 1/4 | 7-3/11 | 16803 | 16800 |

Long Shank Burs - Metric



Tree Shape Radius End
Forma de árbol Con radio
Forme d'ogive Bout hémisphérique

| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SF-1ML6 | 6 | 12,7 | 6 | 163 | 26553 | 26550 |
| SF-3ML6 | 9,5 | 19 | 6 | 169 | 26578 | 26575 |
| SF-5ML6 | 12,7 | 25 | 6 | 175 | 26603 | 26600 |



Tree Shape Pointed End
Forma de árbol
Forme d'ogive À bout pointu

| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SG-1ML6 | 6 | 12,7 | 6 | 163 | 26628 | 26625 |
| SG-3ML6 | 9,5 | 19 | 6 | 169 | 26653 | 26650 |
| SG-5ML6 | 12,7 | 25 | 6 | 175 | 26678 | 26675 |



Flame Shape
Forma de llama
Forme en flamme

| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SH-2ML6 | 8 | 19 | 6 | 169 | 26703 | 26700 |
| SH-5ML6 | 12,7 | 32 | 6 | 182 | 26728 | 26725 |

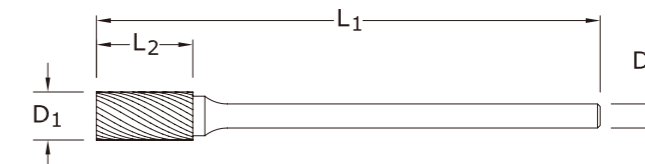


14° Taper Radius End
Forma cónica a 14° Con radio
Conique, 14° Bout hémisphérique

| Tool No. | Cutting Diameter d_1 mm | Length of Cut l_2 mm | Shank Diameter d_2 mm | Overall Length l_1 mm | Double Cut EDP No. | Single Cut EDP No. |
|----------|---------------------------------|------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------------|
| SL-1ML6 | 6 | 16 | 6 | 166 | 26753 | 26750 |
| SL-3ML6 | 9,5 | 27 | 6 | 177 | 26778 | 26775 |
| SL-4ML6 | 12,7 | 28 | 6 | 178 | 26803 | 26800 |



Flexible Shank Carbide Burs



Available in different shank sizes, cutter shapes, and sizes. Flexible shank carbide burs are usually used for inner housings, special castings, and any other spaces the normal burs are hard to reach. Can also be made according to your requirements.



CARBIDE BURRS WITH CHIPBREAKER CUT



CARBIDE BURRS WITH ALUMINUM CUT / NON-FERROUS CUT



CARBIDE BURRS WITH TiAlN COATING



SA SHAPE



SB SHAPE



SC SHAPE



SD SHAPE



SF SHAPE



SG SHAPE



SH SHAPE



SL SHAPE

The carbide burrs with TiAlN coating provides exceptional oxidation resistance and extreme hardness improvement. TiAlN coating burrs works well in toughest grinding applications, especially when tools are being pushed to the max strength.



CARBIDE BURRS WITH TiN COATING



The carbide burrs with TiN coating are wear-resistant, inert, and reduce friction, the coating helps the burrs to improve lasting life two to ten times, or more, over the uncoated tools. With its beautiful golden color, this kind of the coating technology can be used on all carbide burrs, all the shapes and cuts are available.



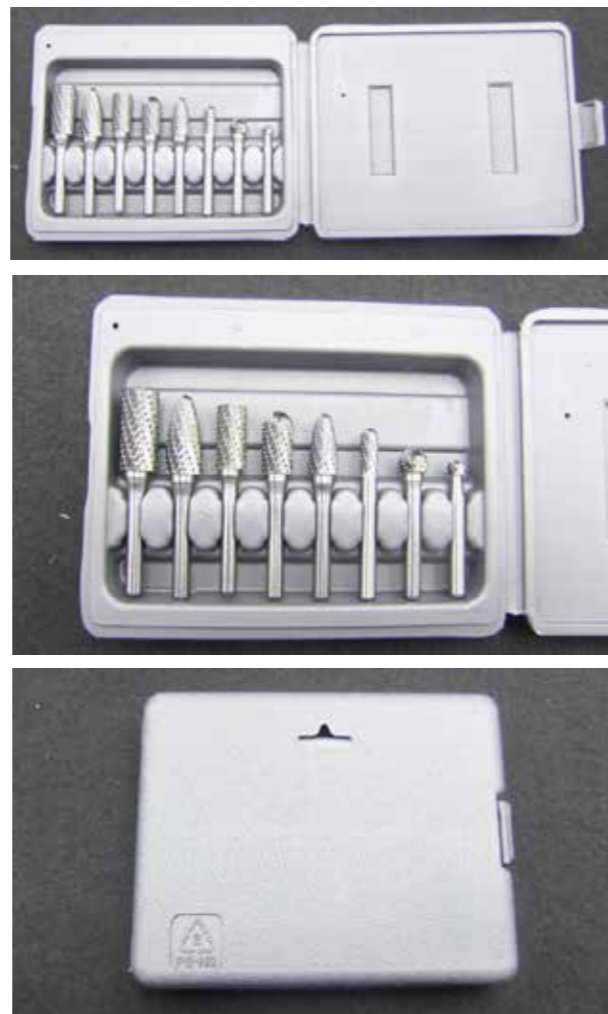
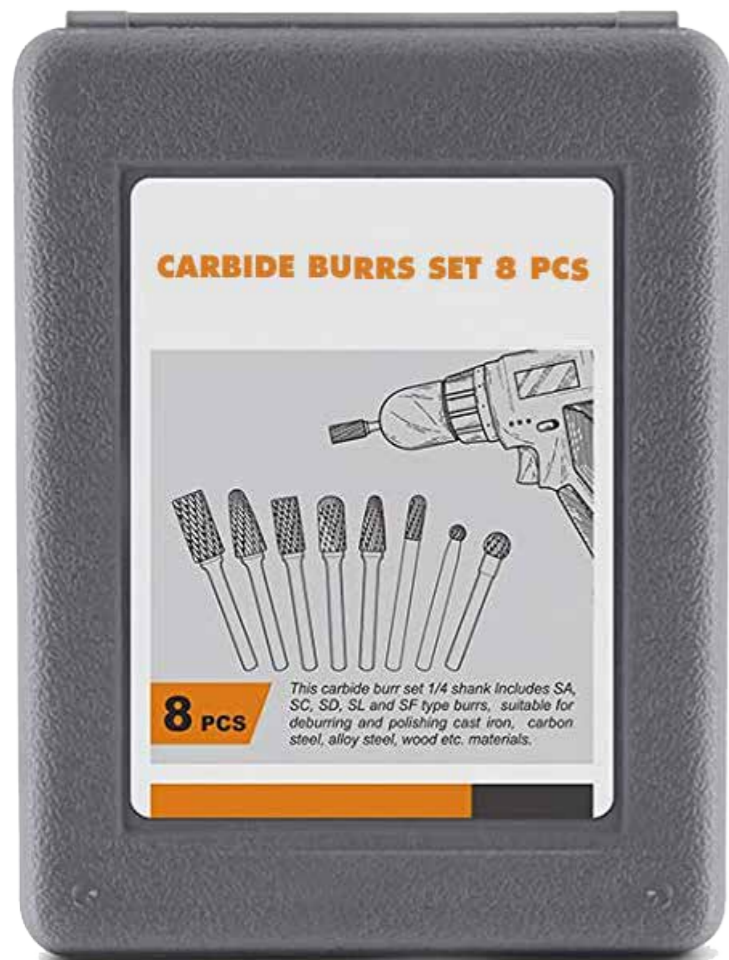
6MM SHANK CARBIDE BURRS SET

The 6mm burrs set is popular in the daily use with 8 or 10 different sizes and shapes, which are widely used in your professional or DIY work. Certainly, we accept the OEM service for this set, because you know the local market more than any others, and you can choose the best suitable sizes, shapes, and cuts for your target customers. It is the most direct way to create fast increasing sales.

We want to be the factory behind you and support your design and marketing.

So, just tell us which items you want to put in!

8 pcs with durable storage box



10 pcs with durable storage box



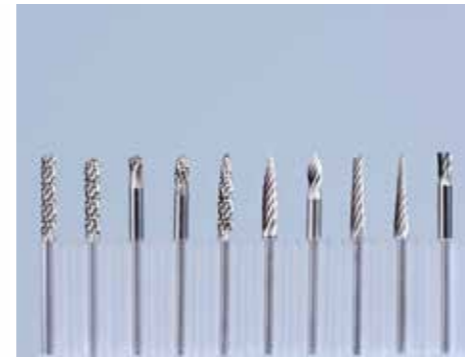
CARBIDE BURRS 3MM SHANK SERIES



#1
3mm shank*3mm cutter
single cut



#2
3mm shank*3mm cutter
double cut



#3
3mm shank*3mm cutter
single + double cut



#4
3mm shank*6mm cutter
single cut



#5
3mm shank*6mm cutter
non-ferrous cut



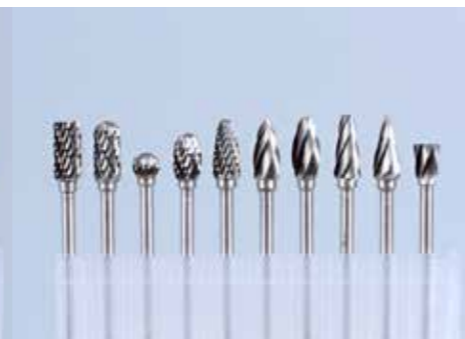
#6
3mm shank*6mm cutter
double cut



#7
3mm shank*6mm cutter
single + double cut



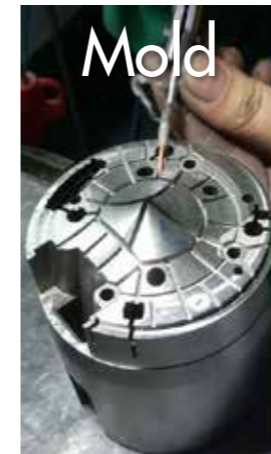
#8
3mm shank*6mm cutter
non-ferrous + single cut



#9
3mm shank*6mm cutter
double+ non-ferrous cut

APPLICATION

Widly used in the industry and DIY for polishing and cutting.



Mold



Chamfering



Welding



Casting



Turbine

