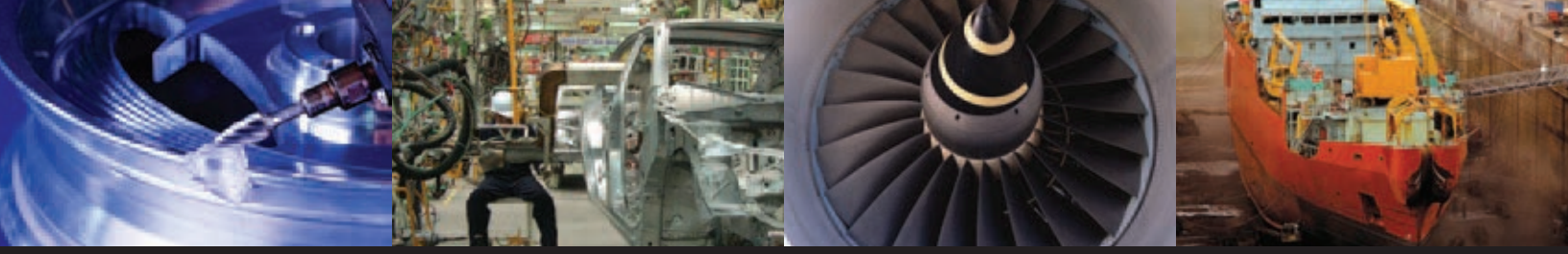




Rotary Carbide Burs

Durable Industry
Performance





As one of the world's most technologically advanced bur manufacturing companies, ATA offers bur configurations for every imaginable ferrous or nonferrous application for efficient stock removal and excellent surface finish. With a state-of-the-art, climate controlled manufacturing facility, SGS burs are the most widely used burs in the world serving a variety of industries, materials and applications.

- Offering complete with miniature sizes
- Ideal for handheld or robotic applications
- Superior surface finishes
- Durable construction in demanding applications
- Extended length shanks available for long reach applications
- Full factory resharpening services available
- Custom design and build capabilities
- Also available with Coating

Mold & Die industry requires deburring tools that can handle the complexity of workpiece configurations and deliver accuracy required for tight tolerance applications. SGS burs are precisely ground on multi-axis CNC grinding machines offering unparalleled performance meeting the demands of challenging materials, including carbon steels, hardened steels, tool steels, stainless steels, and aluminum.

- Chamfering, Creating a Radium, Weld Removal and Blending, Beveling, Repair

Castings & Foundry work requires safe, effective, and consistent performance when it comes to approaching high-strength and heat-resistant materials. ATA is an ISO Certified Company, utilizing rigorous quality control measures throughout the manufacturing process. Our quality burs are ideal for cast materials, including iron, steel, copper-based alloys, aluminum based alloys, exotic alloys, titanium alloys.

- Parting Line Removal, Fin Removal, Finishing of Casting Risers and Flash Removal

Power Generation requires tooling specifically developed for efficient and economical removal of difficult to machine materials. SGS burs maintain superior tool life and control achieved through engineered geometry and consistent braze. Bur construction is torque measured to ensure braze strength and durability.

- Turbine Manufacturing and Repair

Automotive machining means high production and cost control without sacrificing quality. The durability of SGS burs can be seen within automotive manufacturing or aftermarket service repair.

- Flash Removal, Chamfering, Weld Removal and Blending, Beveling, Aftermarket Repair





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Para más información, contacte a su Representante		

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Revêtement (TiN, TiCN, AlTiN, TiB₂)		
Pour plus d'informations, contactez votre Agent		



Omega Burs – Aggressive, Deep Double Cut

Omega Burs are Deep, Aggressive Double Cut Burs designed to handle your most challenging applications. With a deep, aggressive tooth pattern, Omega Burs allow for improved chip control and rapid stock removal in harder materials . . . with minimal chatter.



BURS
OMEGA BURS
 Aggressive Deep Double Cut

Features & Benefits:

- Enhanced geometry and deep flute configuration for increased tooth strength
- Longer tool life vs. conventional burs
- Maximum stock removal
- Improved productivity and cost savings

Applications include:

- Mild steels
- Stainless steel
- Cast iron
- Other ferrous metals

Industries:

- Marine & shipbuilding
- Offshore MRO
- Foundries
- Automotive
- Metal fabrication



Fresas Para Cavidad Omega – Corte doble profundo agresivo

Las Omega son fresas para cavidad de corte doble profundo agresivo, diseñadas para manejar sus aplicaciones más exigentes. Las fresas para cavidad Omega, con su patrón de dientes profundo y agresivo, permiten un control de virutas mejorado y un arranque de viruta rápido en materiales más duros, con mínimo golpeteo.

Características y ventajas:

- Geometría mejorada y configuración profunda de canales para mejorar la resistencia de los dientes
- Mayor vida útil de la herramienta en relación con las fresas para cavidad convencionales
- Máximo arranque de viruta
- Mejor productividad y ahorro de costos

Las aplicaciones comprenden:

- Aceros dulces
- Acero inoxidable
- Hierro fundido
- Otros metales ferrosos

Industrias:

- Náutica y de construcción naviera
- Mantenimiento, reparaciones y reacondicionamiento (MRO) costa afuera
- Fundiciones
- Automotriz
- Fabricación metálica

Fraises Omega – Double coupe profonde et agressive

Les fraises Omega sont à double coupe profonde et agressive, elles sont conçues pour satisfaire vos applications les plus exigeantes. Avec leur disposition à dentures profondes et mordantes, les fraises Omega permettent un meilleur contrôle des copeaux et un enlèvement de matière rapide dans des matériaux plus durs ... avec un broutage minimal.

Caractéristiques et Avantages:

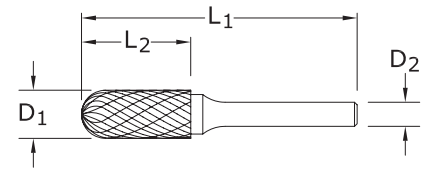
- Géométrie améliorée et configuration à goujures profondes pour plus de solidité des dentures
- Plus longue durée de service, comparées à des fraises classiques
- Enlèvement de matière maximal
- Meilleure productivité et coûts diminués

Applications Possibles:

- Aciers doux
- Acier inox
- Fonte
- Autres métaux non ferreux

Industries:

- Marine et construction navale
- MRE au large
- Fonderies
- Automobile
- Transformation des métaux



Serie DDC – DDC-M



Omega Burs – Aggressive, Deep Double Cut.

Serie DDC – DDC-M



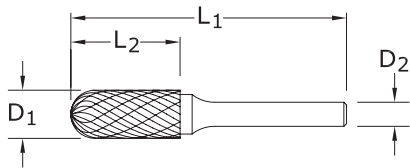
Fresas Para Cavidad Omega – Corte doble profundo agresivo.

Série DDC – DDC-M

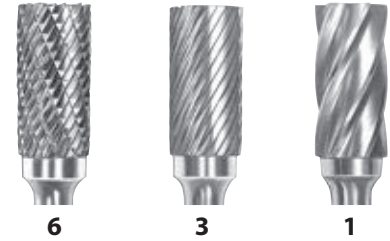
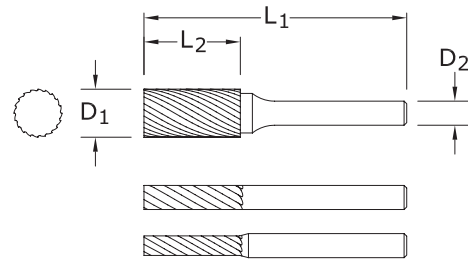


Fraises Omega – Double coupe profonde et aggressive.

Series	Tool No.	Cutting Diameter d_1	Length of Cut l_2	Shank Diameter d_2	Overall Length l_1	Uncoated EDP	Ti-NAMITE-A (AlTiN) EDP No.
SA	SA-3 DDC	3/8	3/4	1/4	2 1/2	10269	10304
SA	SA-3L6 DDC	3/8	3/4	1/4	6 3/4	10329	10354
SA	SA-5 DDC	1/2	1	1/4	2 3/4	10270	10305
SA	SA-5L6 DDC	1/2	1	1/4	7	10337	10355
SA	SA-5 3/8 DDC	1/2	1	3/8	3	10271	10306
SB	SB-3 DDC	3/8	3/4	1/4	2 1/2	10272	10307
SB	SB-5 DDC	1/2	1	1/4	2 3/4	10273	10308
SB	SB-5 3/8 DDC	1/2	1	3/8	3	10274	10309
SC	SC-3 DDC	3/8	3/4	1/4	2 1/2	10275	10310
SC	SC-3L6 DDC	3/8	3/4	1/4	6 3/4	10338	10356
SC	SC-5 DDC	1/2	1	1/4	2 3/4	10276	10311
SC	SC-5L6 DDC	1/2	1	1/4	7	10339	10357
SC	SC-5 3/8 DDC	1/2	1	3/8	2 3/4	10277	10312
SC	SC-6 3/8 DDC	5/8	1	3/8	3	10278	10313
SD	SD-3 DDC	3/8	15/47	1/4	2 3/50	10279	10314
SD	SD-3L6 DDC	3/8	15/47	1/4	6 5/16	10340	10358
SD	SD-5 DDC	1/2	17/40	1/4	2 1/5	10280	10315
SD	SD-5L6 DDC	1/2	17/40	1/4	6 9/20	10341	10359
SD	SD-5 3/8 DDC	1/2	17/40	3/8	2 9/20	10281	10316
SE	SE-3 DDC	3/8	5/8	1/4	2 19/50	10282	10317
SE	SE-3L6 DDC	3/8	5/8	1/4	6 5/8	10342	10360
SE	SE-5 DDC	1/2	7/8	1/4	2 31/50	10283	10318
SE	SE-5L6 DDC	1/2	7/8	1/4	6 7/8	10343	10361
SE	SE-5 3/8 DDC	1/2	7/8	3/8	2 7/8	10284	10319
SF	SF-3 DDC	3/8	3/4	1/4	2 1/2	10285	10320
SF	SF-3L6 DDC	3/8	3/4	1/4	6 3/4	10344	10362
SF	SF-5 DDC	1/2	1	1/4	2 3/4	10286	10321
SF	SF-5L6 DDC	1/2	1	1/4	7	10345	10363
SF	SF-5 3/8 DDC	1/2	1	3/8	3	10287	10322
SF	SF-6 3/8 DDC	5/8	1	3/8	3	10288	10323
SG	SG-3 DDC	3/8	3/4	1/4	2 1/2	10289	10324
SG	SG-3L6 DDC	3/8	3/4	1/4	6 3/4	10346	10364
SG	SG-5 DDC	1/2	1	1/4	2 3/4	10290	10325
SG	SG-5L6 DDC	1/2	1	1/4	7	10347	10365
SG	SG-5 3/8 DDC	1/2	1	3/8	3	10291	10326
SG	SG-6 3/8 DDC	5/8	1	3/8	3	10292	10327
SH	SH-5 DDC	1/2	1 1/4	1/4	3	10293	10330
SH	SH-5L6 DDC	1/2	1 1/4	1/4	7 1/4	10348	10366
SH	SH-5 3/8 DDC	1/2	1 1/4	3/8	3 1/4	10294	10331
SL	SL-3 DDC	3/8	1 1/16	1/4	2 47/50	10295	10332
SL	SL-3L6 DDC	3/8	1 1/16	1/4	7 1/16	10349	10367
SL	SL-4 DDC	1/2	1 1/8	1/4	3	10296	10333
SL	SL-4L6 DDC	1/2	1 1/8	1/4	7 1/8	10351	10368
SL	SL-4 3/8 DDC	1/2	1 1/8	3/8	3 13/48	10297	10334
SM	SM-5 DDC	1/2	7/8	1/4	2 3/4	10298	10335
SM	SM-5 3/8 DDC	1/2	7/8	3/8	3	10299	10336



Series	Tool No.	Cutting Diameter d_1 mm	Length of Cut l_2 mm	Shank Diameter d_2 mm	Overall Length l_1 mm	Uncoated EDP	Ti-NAMITE-A (AlTiN) EDP No.
SA	SA-3M DDC	9,5	19	6	63	20269	20300
SA	SA-3ML6 DDC	9,5	19	6	169	20331	20354
SA	SA-5M DDC	12,7	25	6	69	20270	20301
SA	SA-5ML6 DDC	12,7	25	6	175	20331	20355
SA	SA-5M8 DDC	12,7	25	8	69	20271	20302
SB	SB-3M DDC	9,5	19	6	63	20272	20303
SB	SB-5M DDC	12,7	25	6	69	20273	20304
SB	SB-5M8 DDC	12,7	25	8	69	20274	20305
SC	SC-3M DDC	9,5	19	6	63	20275	20306
SC	SC-3ML6 DDC	9,5	19	6	169	20333	20356
SC	SC-5M DDC	12,7	25	6	69	20276	20307
SC	SC-5ML6 DDC	12,7	25	6	175	20334	20357
SC	SC-5M8 DDC	12,7	25	8	69	20277	20308
SC	SC-6M8 DDC	16,0	25	8	69	20278	20309
SD	SD-3M DDC	9,5	8	6	52	20279	20310
SD	SD-3ML6 DDC	9,5	8	6	158	20335	20358
SD	SD-5M DDC	12,7	11	6	55	20280	20311
SD	SD-5ML6 DDC	12,7	11	6	161	20336	20359
SD	SD-5M8 DDC	12,7	11	8	62	20281	20312
SE	SE-3M DDC	9,5	16	6	60	20282	20313
SE	SE-3ML6 DDC	9,5	16	6	166	20337	20360
SE	SE-5M DDC	12,7	22	6	66	20283	20314
SE	SE-5ML6 DDC	12,7	22	6	172	20338	20361
SE	SE-5M8 DDC	12,7	22	8	69	20284	20315
SF	SF-3M DDC	9,5	19	6	63	20285	20316
SF	SF-3ML6 DDC	9,5	19	6	169	20339	20362
SF	SF-5M DDC	12,7	25	6	69	20286	20317
SF	SF-5ML6 DDC	12,7	25	6	175	20340	20363
SF	SF-5M8 DDC	12,7	25	8	69	20287	20318
SF	SF-6M8 DDC	16,0	25	8	69	20288	20319
SG	SG-3M DDC	9,5	19	6	63	20289	20320
SG	SG-3ML6 DDC	9,5	19	6	169	20341	20364
SG	SG-5M DDC	12,7	25	6	69	20290	20321
SG	SG-5ML6 DDC	12,7	25	6	175	20342	20365
SG	SG-5M8 DDC	12,7	25	8	69	20291	20322
SG	SG-6M8 DDC	16,0	25	8	69	20292	20323
SH	SH-5M DDC	12,7	32	6	76	20293	20324
SH	SH-5ML6 DDC	12,7	32	6	182	20343	20366
SH	SH-5M8 DDC	12,7	32	8	76	20294	20325
SL	SL-3M DDC	9,5	27	6	74	20295	20326
SL	SL-3ML6 DDC	9,5	27	6	177	20344	20367
SL	SL-4M DDC	12,7	28	6	76	20296	20327
SL	SL-4ML6 DDC	12,7	28	6	178	20345	20368
SL	SL-4M8 DDC	12,7	28	8	76	20297	20328
SM	SM-5M DDC	12,7	22	6	69	20298	20329
SM	SM-5M8 DDC	12,7	22	8	69	20299	20330



Cylinder Shape Burs



Solid Carbide – To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Service Available

* 3/8"/8 mm shanks optional.

Limas rotativas forma cilíndrica



Carburo sólido – Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafilado de limas rotativas

* Mango de 3/8"/8 mm opcional.

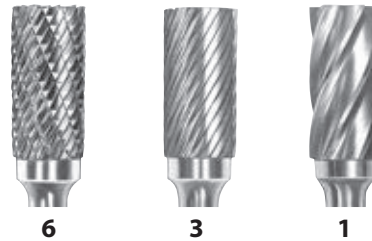
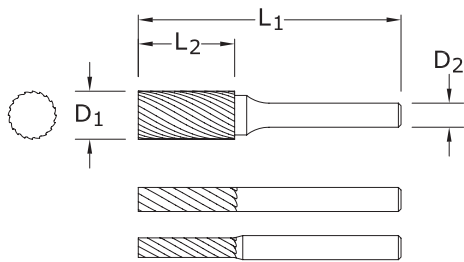
Fraises – Limes forme cylindrique



Carbure monobloc – Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible

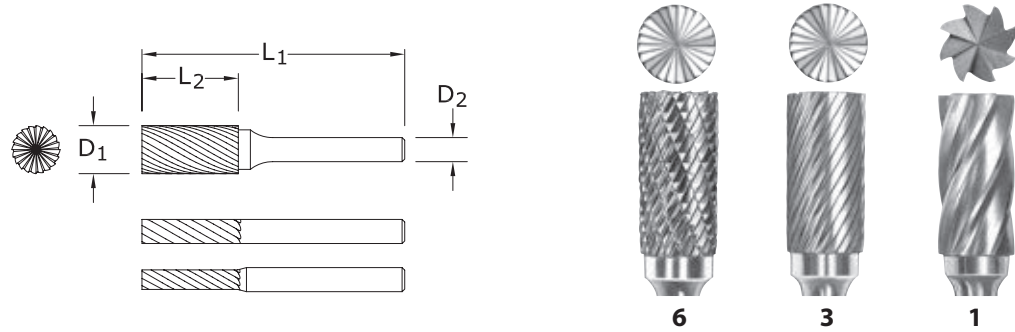
* Queue de 3/8"/8 mm en option.

Tool No.	Cutter Diameter d_1	Length of Cut l_2	Shank Diameter d_2	Overall Length l_1	Double Cut	Single Cut	Nonferrous Cut
					EDP No.	EDP No.	EDP No.
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	–



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.
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	–





Cylinder Shape Burs with End Cut



Solid Carbide

To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut. – Complete Bur Regrind Service Available
* 3/8" / 8 mm shanks optional.

Limas rotativas en forma cilíndrica con corte frontal



Carburo sólido

Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafilado de limas rotativas
* Mango de 3/8" / 8 mm opcional.

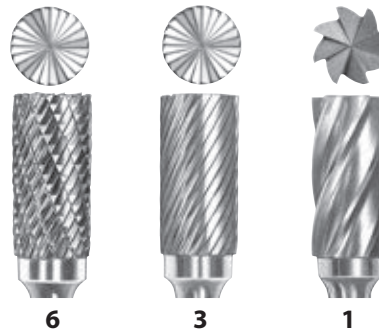
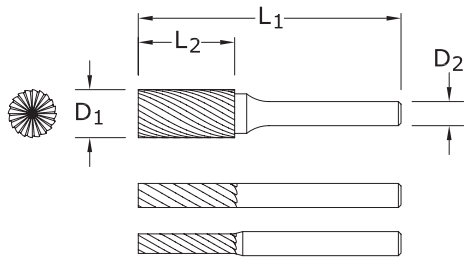
Fraises-limes de forme cylindrique avec denture en bout



Carbure monobloc

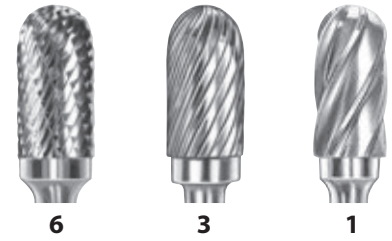
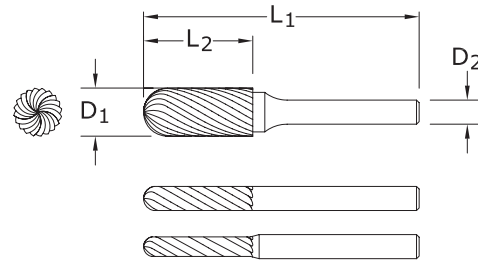
Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8" / 8 mm en option.

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	–



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	–





Cylinder Shape Burs with Radius End



Solid Carbide – To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Service Available
* 3/8"/8 mm shanks optional.

Limas rotativas en forma cilíndrica con radio



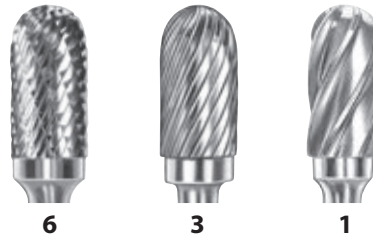
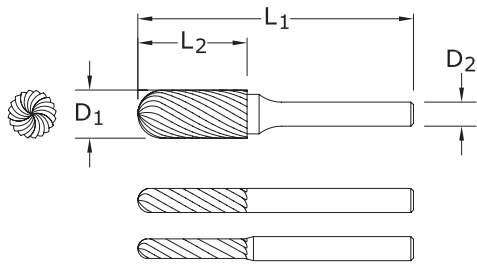
Carburo sólido – Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafileado de limas rotativas
* Mango de 3/8"/8 mm opcional.

Fraises-limes de forme cylindrique à bout hémisphérique



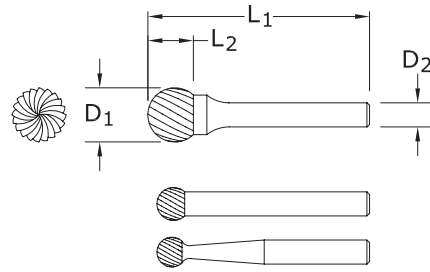
Carbure monobloc – Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8"/8 mm en option.

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	–



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	Single Cut	Nonferrous Cut
					EDP No.	EDP No.	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	–





Ball Shape Burs



Solid Carbide – To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Services Available
* 3/8"/8 mm shanks optional.

Limas rotativas esféricas



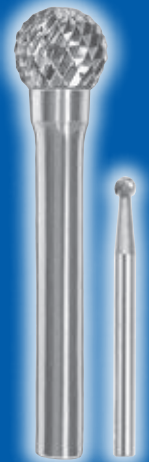
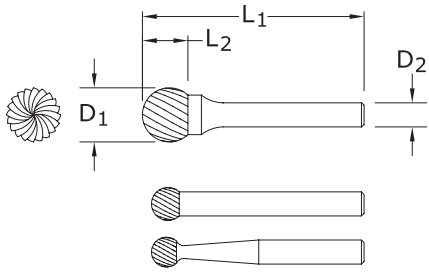
Carburo sólido – Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafilado de limas rotativas
* Mango de 3/8"/8 mm opcional.

Fraises-limes de forme sphérique

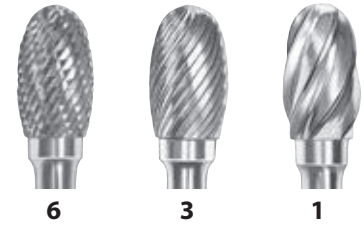
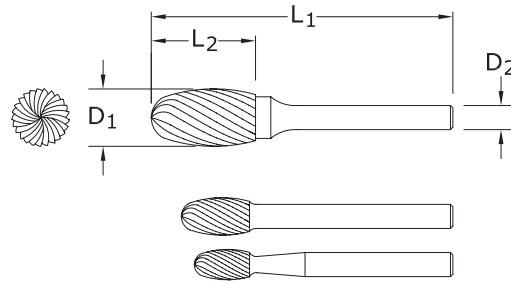


Carbure monobloc – Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe. – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8"/8 mm en option.

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	Single Cut	Nonferrous Cut
					EDP No.	EDP No.	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	–



Oval Shape Burs



Solid Carbide

To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Service Available
* 3/8"/8 mm shanks optional.

Limas rotativas en forma ovalada



Carburo sólido

Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafilado de limas rotativas
* Mango de 3/8"/8 mm opcional.

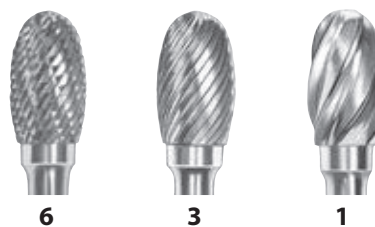
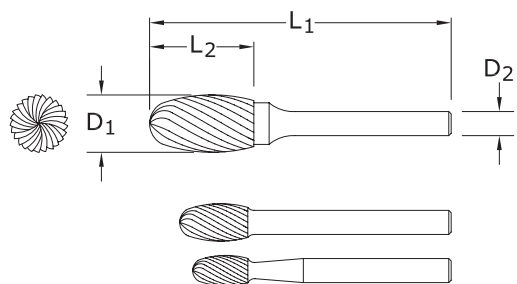
Fraises-limes de forme ovale



Carbure monobloc

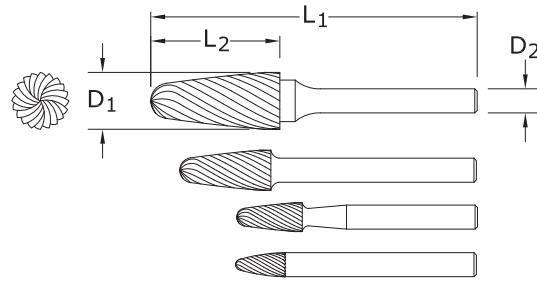
Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8"/8 mm en option.

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	Single Cut	Nonferrous Cut
					EDP No.	EDP No.	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





Tree Shape Burs with Radius End



Solid Carbide – To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Service Available
* 3/8"/8mm shanks optional.

Limas rotativas en forma de árbol



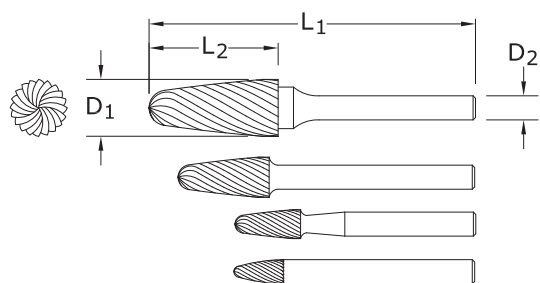
Carburo sólido – Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafileado de limas rotativas
* Mango de 3/8"/8 mm opcional.

Fraises-limes en forme d'ogive à bout hémisphérique



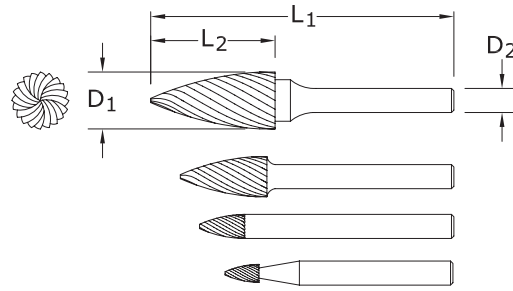
Carbure monobloc – Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8"/8 mm en option.

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	–



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	–





Tree Shape Burs with Pointed End



Solid Carbide – To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Service Available
* 3/8"/8 mm shanks optional.

Limas rotativas en forma de árbol puntiagudo



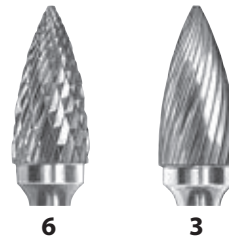
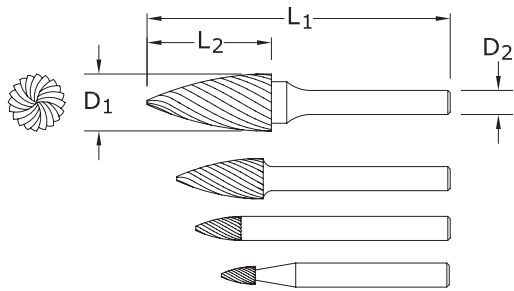
Carburo sólido – Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafileado de limas rotativas
* Mango de 3/8"/8 mm opcional.

Fraises-limes en forme d'ogive à bout pointu



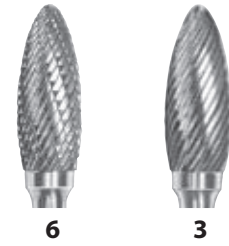
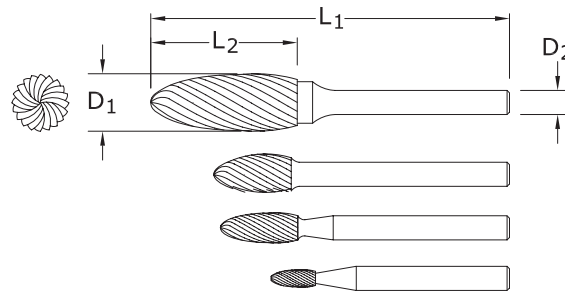
Carbure monobloc – Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8"/8 mm en option.

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	Single Cut
					EDP No.	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





Flame Shape Burs



Solid Carbide – To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional cut – Complete Bur Regrind Service Available
* 3/8"/8 mm shanks optional.

Limas rotativas en forma de llama



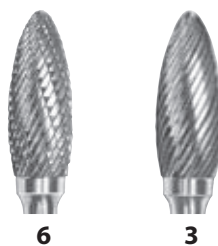
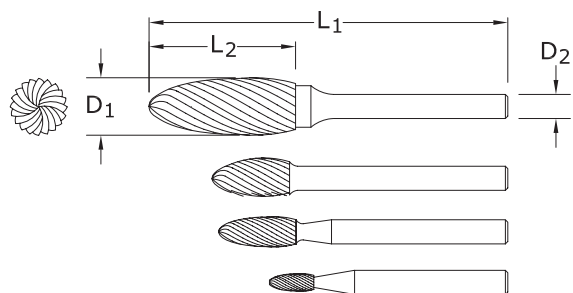
Carburo sólido – Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafilado de limas rotativas
* Mango de 3/8"/8 mm opcional.

Fraises-limes en forme de flamme



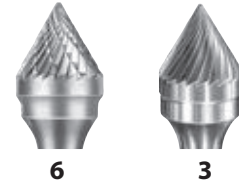
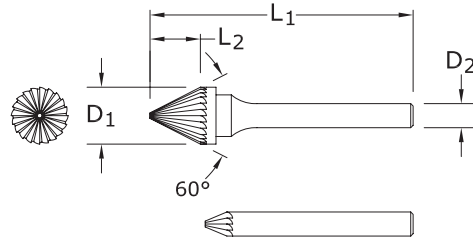
Carbure monobloc – Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8"/8 mm en option.

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



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 – 60° Cone Shape Burs

Solid Carbide – To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Service Available
* 3/8"/8 mm shanks optional.

Limas rotativas cónica

Carburo sólido

SJ – Forma cónica a 60°

Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafilado de limas rotativas
* Mango de 3/8"/8 mm opcional.

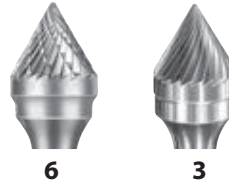
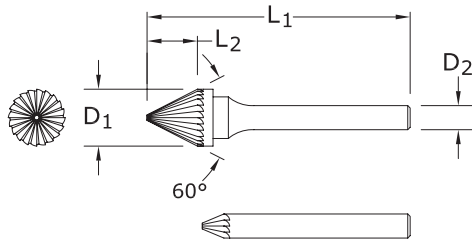
Fraises-limes de forme Conique, à 60°

Carbure monobloc

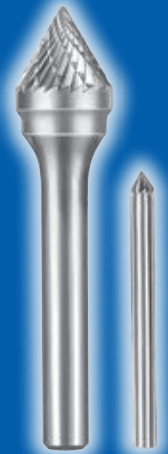
SJ – Forme conique, 60°

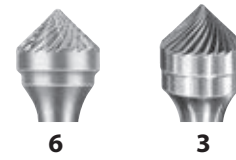
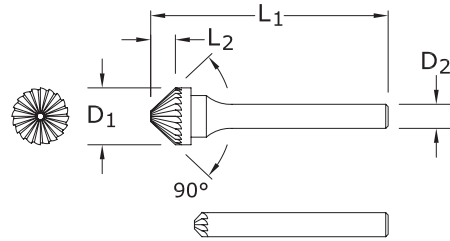
Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8"/8 mm en option.

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



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 – 90° Cone Shape Burs

Solid Carbide

To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Service Available
* 3/8"/8 mm shanks optional.

Limas rotativas cónica

a 90°

Carburo sólido

SK – Forma cónica a 90°

Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafilado de limas rotativas

* Mango de 3/8"/8 mm opcional.

Fraises-limes de forme conique, à 90°

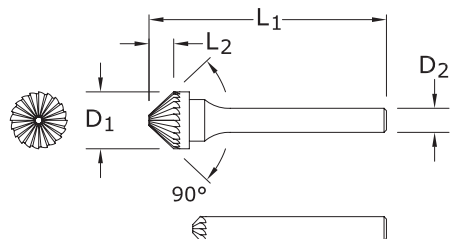
Carbure monobloc

SK – Forme conique, 90°

Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible

* Queue de 3/8"/8 mm en option.

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

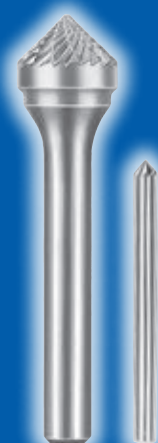


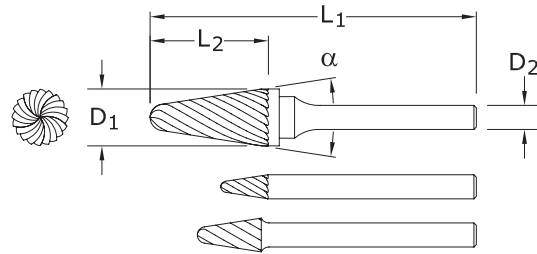
6



3

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





Taper with Radius End Burs



Solid Carbide – To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Service Available
* 3/8"/8 mm shanks optional.

Limas rotativas cónicas con radio en la punta



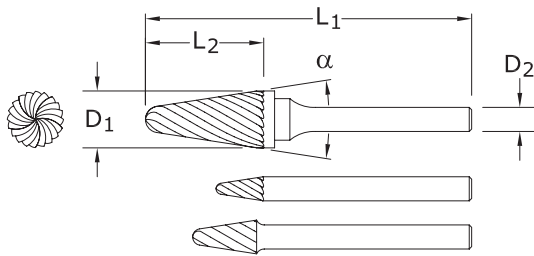
Carburo sólido – Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafilado de limas rotativas
* Mango de 3/8"/8 mm opcional.

Fraises-limes de forme conique, à bout hémisphérique



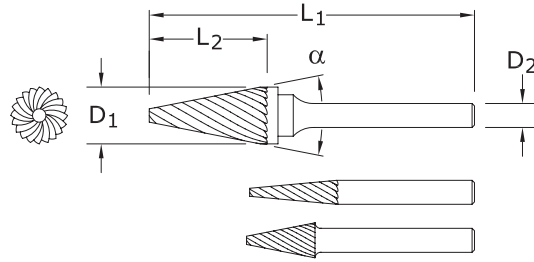
Carbure monobloc – Pour commander les coupes en option 4, 3SP, 2, 5 : indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8"/8 mm en option.

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.	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



Tool No.	Cutting Diameter d_1 mm	Length of Cut l_2 mm	Shank Diameter d_2 mm	Overall Length l_1 mm	Angle α	Double Cut	Single Cut	Nonferrous Cut
						EDP No.	EDP No.	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





Cone Shape Burs

Solid Carbide – To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Service Available
* 3/8"/8 mm shanks optional.

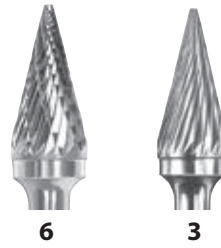
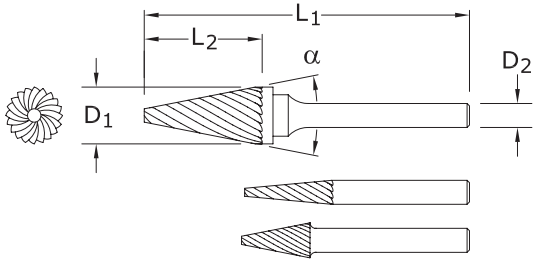
Limas rotativas cónicas

Carburo sólido – Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafilado de limas rotativas
* Mango de 3/8"/8 mm opcional.

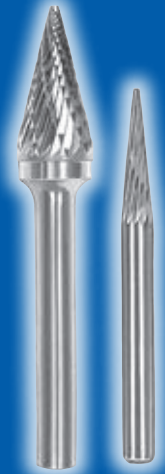
Fraises-limes de forme conique

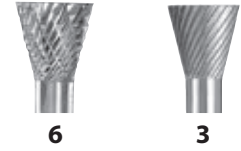
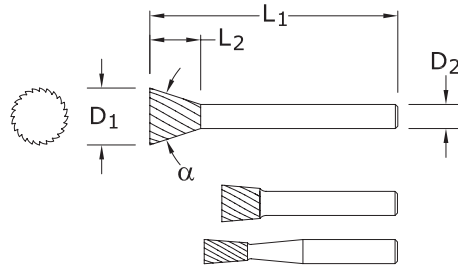
Carbure monobloc – Pour commander les coupes en option 4, 3SP, 2, 5: indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8"/8 mm en option.

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



Tool No.	Cutting Diameter	Length of Cut	Shank Diameter	Overall Length	Angle α	Double Cut EDP No.	Single Cut EDP No.
	d_1 mm	l_2 mm	d_2 mm	l_1 mm			
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





Inverted Cone Shape Burs



Solid Carbide – To Order Optional Cuts 4, 3SP, 2, 5 – Specify Quantity, Tool No. & Optional Cut – Complete Bur Regrind Service Available
* 3/8"/8mm shanks optional.

Limas rotativas cónica invertida



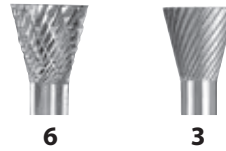
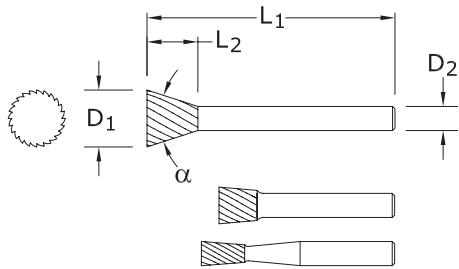
Carburo sólido – Para ordenar cortes opcionales 4, 3SP, 2, y 5 : Especifique la cantidad, no. de herramienta y tipo de corte opcional – Disponemos de un servicio completo de reafileado de limas rotativas
* Mango de 3/8"/8 mm opcional.

Fraises-limes de forme conique inversée

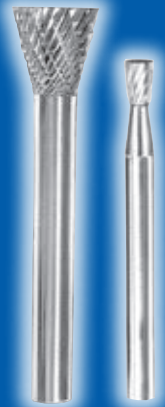


Carbure monobloc – Pour commander les coupes en option 4, 3SP, 2, 5: indiquer la quantité, le N° d'outil et la coupe – Service de réaffûtage complet de fraises rotatives disponible
* Queue de 3/8"/8 mm en option.

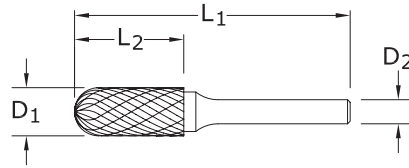
Tool No.	Cutter Diameter d_1	Length of Cut l_2	Shank Diameter d_2	Overall Length l_1	Included Angle a	Double Cut EDP No.	Single Cut EDP No.
SN-41	3/32	1/8	1/8	1-1/2	10°	16028	16025
SN-61	3/32	1/8	3/32	1-1/4	10°	16128	16125
SN-42	1/8	3/16	1/8	1-1/2	10°	16053	16050
SN-81	3/16	1/4	3/16	2	10°	16153	16150
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



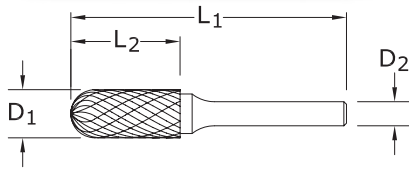
Tool No.	Cutting Diameter	Length of Cut	Shank Diameter	Overall Length	Angle a	Double Cut	Single Cut
	d_1 mm	l_2 mm	d_2 mm	l_1 mm		EDP No.	EDP No.
SN-41M	2,5	3	3	38	10°	26028	26025
SN-42M	3	4	3	38	10°	26053	26050
SN-53M	5	6,3	3	38	10°	26103	26100
SN-1M	6	8	6	50	10°	25853	25850
SN-51M	6,3	6	3	44	10°	26078	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




























Designed specifically for High Nickel Alloys, Stainless Steel, Titanium, Inconel & Hard-to-Machine Materials



	Tool No.	Cutter Diameter d_1	Length of Cut l_2	Overall Length l_1	Shank Diameter d_2	Uncoated Ti-NAMITE-A (AlTiN)	
						EDP No.	EDP No.
Cylinder Shape	SA-43G D/C	1/8	9/16	1-1/2	1/8	19200	19240
	SA-51G D/C	1/4	1/2	2	1/8	19201	19241
	SA-3G D/C	3/8	3/4	2-1/2	1/4	19203	19243
	SA-5G D/C	1/2	1	2-3/4	1/4	19204	19244
	SA-51G D/C E/C	1/4	1/2	2	1/8	19202	19242
Cylinder Shape with End Cut	SB-43G D/C	1/8	9/16	1-1/2	1/8	19205	19245
Cylinder Shape with Radius End	SC-41G D/C	3/32	7/16	1-1/2	1/8	19206	19246
	SC-42G D/C	1/8	9/16	1-1/2	1/8	19207	19247
	SC-42GL2 D/C	1/8	9/16	2	1/8	19208	19248
	SC-42GL3 D/C	1/8	9/16	3	1/8	19209	19249
	SC-51G D/C	1/4	1/2	2	1/8	19210	19250
	SC-3G D/C	3/8	3/4	2-1/2	1/4	19211	19251
	SC-5G D/C	1/2	1	2-3/4	1/4	19212	19252
Ball Shape	SD-42G D/C	1/8	3/32	1-1/2	1/8	19213	19253
	SD-51G D/C	1/4	7/32	1-3/4	1/8	19214	19254
	SD-3G D/C	3/8	5/16	2-1/16	1/4	19215	19255
	SD-5G D/C	1/2	7/16	2-3/16	1/4	19216	19256
Oval Shape	SE-41G D/C	1/8	7/32	1-1/2	1/8	19217	19257
	SE-51G D/C	1/4	3/8	1-7/8	1/8	19218	19258
	SE-3G D/C	3/8	5/8	2-3/8	1/4	19219	19259
	SE-5G D/C	1/2	7/8	2-5/8	1/4	19220	19260
Tree Shape with Radius End	SF-42G D/C	1/8	1/2	1-1/2	1/8	19221	19261
	SF-42GL2 D/C	1/8	1/2	2	1/8	19222	19262
	SF-51G D/C	1/4	1/2	2	1/8	19223	19263
	SF-3G D/C	3/8	3/4	2-1/2	1/4	19224	19264
	SF-5G D/C	1/2	1	2-3/4	1/4	19225	19265
Tree Shape with Pointed End	SG-42G D/C	1/8	5/16	1-1/2	1/8	19226	19266
	SG-44G D/C	1/8	1/2	1-1/2	1/8	19227	19267
	SG-51G D/C	1/4	1/2	2	1/8	19228	19268
	SG-3G D/C	3/8	3/4	2-1/2	1/4	19229	19269
	SG-5G D/C	1/2	1	2-3/4	1/4	19230	19270
Flame Shape	SH-41G D/C	1/8	1/4	1-1/2	1/8	19231	19271
	SH-5G D/C	1/2	1-1/4	3	1/4	19232	19272
Taper with Radius End	SL-4G D/C	1/2	1-1/8	3	1/4	19233	19273
Cone Shape	SM-42G D/C	1/8	7/16	1-1/2	1/8	19234	19274
	SM-43G D/C	1/8	5/8	1-1/2	1/8	19235	19275
	SM-51G D/C	1/4	1/2	2-1/8	1/8	19236	19276
	SM-5G D/C	1/2	7/8	2-3/4	1/4	19237	19277



		Tool No.	Cutter Diameter d_1	Length of Cut l_2	Shank Diameter d_2	Overall Length l_1	Uncoated EDP No.
Cylinder Shape		SA-43MG D/C	3,0	14,0	3,0	38,0	29200
		SA-51MG D/C	6,3	12,7	3,0	45,0	29201
		SA-51MG D/C E/C	6,3	12,7	3,0	45,0	29202
Cylinder Shape with End Cut							
		SB-43MG D/C	3,0	14,0	3,0	38,0	29203
Cylinder Shape with Radius End		SC-41MG D/C	2,3	11,0	3,0	38,0	29204
		SC-41MGL2 D/C	2,3	11,0	3,0	50,0	29205
		SC-42MG D/C	3,0	14,0	3,0	38,0	29206
		SC-42MGL2 D/C	3,0	14,0	3,0	50,0	29207
		SC-42MGL3 D/C	3,0	14,0	3,0	75,0	29208
		SC-51MG D/C	6,3	12,7	3,0	45,0	29209
Ball Shape		SD-42MG D/C	3,0	2,8	3,0	38,0	29210
		SD-51MG D/C	6,3	5,0	3,0	38,0	29224
Oval Shape		SE-41MG D/C	3,0	5,5	3,0	38,0	29225
		SE-51MG D/C	6,3	9,5	3,0	41,0	29211
Tree Shape with Radius End		SF-42MG D/C	3,0	12,7	3,0	38,0	29212
		SF-42MGL2 D/C	3,0	12,7	3,0	50,0	29213
		SF-51MG D/C	6,3	12,7	3,0	45,0	29214
Tree Shape with Pointed End		SG-42MG D/C	3,0	8,0	3,0	38,0	29215
		SG-44MG D/C	3,0	12,7	3,0	38,0	29216
		SG-51MG D/C	6,3	12,7	3,0	45,0	29217
Flame Shape		SH-41MG D/C	3,0	6,3	3,0	38,0	29218
Cone Shape		SM-42MG D/C	3,0	11,0	3,0	38,0	29220
		SM-43MG D/C	3,0	16,0	3,0	38,0	29221
		SM-51MG D/C	6,3	12,7	3,0	48,0	29223

Solid Carbide Miniature Bur Set #1



1/8" shank diameter - 1-1/2" overall length

Contains the following twelve 1/8" Burs in a sturdy oak box: SA-42, SA-43, SC-41, SC-42, SD-42, SE-41, SF-42, SG-43, SH-41, SL-42, SM-42, SN-42

Solid Carbide Miniature Bur Set #2

3/32" shank diameter - 1-1/4" overall length

Contains the following nine 3/32" Burs in a sturdy oak box: SA-61, SA-63, SC-61, SD-61, SE-61, SF-61, SG-61, SM-61, SN-61

Solid Carbide Miniature Bur Set #4

3/16" shank diameter - 2" overall length

Contains the following eight 3/16" Burs in a sturdy oak box: SA-81, SC-81, SD-81, SE-81, SF-81, SG-81, SL-81, SN-81

Juego de caja #1 de limas rotativas miniatura en carburo sólido



Mango de diámetro 1/8" - Longitud total 1-1/2"

Contiene las siguientes nueve rotativas de 1/8" en una caja de madera de roble: SA-42, SA-43, SC-41, SC-42, SD-42, SE-41, SF-42, SG-43, SH-41, SL-42, SM-42, SN-42

Juego de caja #2 de limas rotativas miniatura en carburo sólido

Mango de diámetro 3/32" - Longitud total 1-1/4"

Contiene las siguientes nueve rotativas de 3/32" en una caja de madera de roble: SA-61, SA-63, SC-61, SD-61, SE-61, SF-61, SG-61, SM-61, SN-61

Juego de caja #4 de limas rotativas miniatura en carburo sólido

Mango de diámetro 3/16" - Longitud total 2"

Contiene las siguientes ocho rotativas de 3/16" en una caja de madera de roble: SA-81, SC-81, SD-81, SE-81, SF-81, SG-81, SL-81, SN-81

Jeu de Mini-Fraises rotatives en carbure monobloc N°1



Diamètre de la queue 1/8" - Longueur totale 1-1/2"

Contient les douze fraises rotatives 1/8" suivantes dans un coffret en chêne robuste: SA-42, SA-43, SC-41, SC-42, SD-42, SE-41, SF-42, SG-43, SH-41, SL-42, SM-42, SN-42

Jeu de Mini-Fraises rotatives en carbure monobloc N°2

Diamètre de la queue 3/32" - Longueur totale 1-1/4"

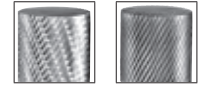
Contient les neuf fraises rotatives 3/32" suivantes dans un coffret en chêne robuste: SA-61, SA-63, SC-61, SD-61, SE-61, SF-61, SG-61, SM-61, SN-61

Jeu de Mini-Fraises rotatives en carbure monobloc N°4

Diamètre de la queue 3/16" - Longueur totale 2"

Contient les huit fraises rotatives 3/16" suivantes dans un coffret en chêne robuste: SA-81, SC-81, SD-81, SE-81, SF-81, SG-81, SL-81, SN-81

Set 1



6

3

Double
Cut
EDP No.

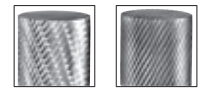
18201

Single
Cut
EDP No.

18200



Set 2



6

3

Double
Cut
EDP No.

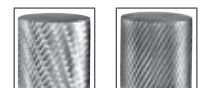
18203

Single
Cut
EDP No.

18202



Set 4



6

3

Double
Cut
EDP No.

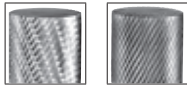
18207

Single
Cut
EDP No.

18206



Set 5



6

3

Double Cut EDP No.	Single Cut EDP No.
18209	18208



Miniature Bur Set #5



1/8" steel shank diameter

Contains the following nine Burs in a sturdy oak box:

SA-51, SB-51, SC-51, SD-51, SE-51, SF-51, SG-51, SM-51, SN-51

Solid Carbide Miniature Bur Set #6

1/4" Steel Shank Diameter

Contains the following eight burs in a sturdy oak box:

SA-5, SC-3, SC-5, SD-5, SF-3, SF-5, SG-3, SL-4

Juego de caja #5 de limas rotativas miniatura



Mango de acero de diámetro 1/8"

Contiene las siguientes nueve rotativas en una caja de madera de roble:

SA-51, SB-51, SC-51, SD-51, SE-51, SF-51, SG-51, SM-51, SN-51

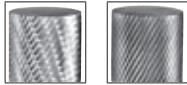
Juego de caja #6 de limas rotativas en carburo sólido

Mango de acero de diámetro 1/4"

Contiene las siguientes ocho rotativas en una caja de madera de roble:

SA-5, SC-3, SC-5, SD-5, SF-3, SF-5, SG-3, SL-4

Set 6



6

3

Double Cut EDP No.	Single Cut EDP No.
18211	18210



Jeu de Mini-Fraises rotatives N°5



Queue en acier, diamètre 1/8" - Longueur totale 2"

Contient les neuf fraises rotatives 1/8" suivantes dans un coffret en chêne robuste:

SA-51, SB-51, SC-51, SD-51, SE-51, SF-51, SG-51, SM-51, SN-51

Jeu de Fraises rotatives N°6 - carbure monobloc

Queue en acier, diamètre 1/4"

Contient les huit fraises rotatives dans un coffret en chêne robuste:

SA-5, SC-3, SC-5, SD-5, SF-3, SF-5, SG-3, SL-4

Solid Carbide Miniature Bur Set #7

1/8" diameter solid carbide shank, 1-1/2" overall length

Contains the following twelve burs in a sturdy oak box:

SA-52, SA-53, SC-52, SC-53, SD-53, SE-53, SF-53, SG-53, SH-53, SL-53, SM-53, SN-53

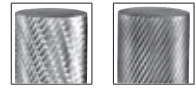
Extra Long Bur Set #8

1/4" diameter - 6" long steel shank

Contains the following eight burs in a clear/blue acrylic case:

SA-1L6, SA-5L6, SC-1L6, SC-5L6, SD-1L6, SF-1L6, SG-1L6, SL-1L6

SET 7



6

3

Double Cut EDP No.	Single Cut EDP No.
18213	18212

Juego de caja #7 de limas rotativas miniatura en carburo sólido

Mango de carburo sólido de diámetro 1/8" - Longitud total 1-1/2"

Contiene las siguientes doce rotativas en una caja de madera de roble:

SA-52, SA-53, SC-52, SC-53, SD-53, SE-53, SF-53, SG-53, SH-53, SL-53, SM-53, SN-53

Juego de Caja #8 de rotativas extra-largas

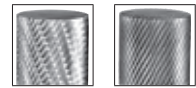
Mango de diámetro 1/4" - mango largo de acero de 6"

Contiene las siguiente ocho rotativas en una caja de plástico transparente/azul:

SA-1L6, SA-5L6, SC-1L6, SC-5L6, SD-1L6, SF-1L6, SG-1L6, SL-1L6



SET 8



6

3

Double Cut EDP No.	Single Cut EDP No.
18215	18214

Jeu de Mini-Fraises rotatives en carbure monobloc N°7

Queue en carbure monobloc, diamètre 1/8", Longueur totale 1-1/2"

Contient les douze fraises rotatives dans un coffret en chêne robuste.

SA-52, SA-53, SC-52, SC-53, SD-53, SE-53, SF-53, SG-53, SH-53, SL-53, SM-53, SN-53

Jeu de Fraises rotatives extra-longues N°8

Queue diamètre 1/4" - queue longue en acier 6"

Contient les huit fraises rotatives dans un étui en acrylique bleu clair:

SA-1L6, SA-5L6, SC-1L6, SC-5L6, SD-1L6, SF-1L6, SG-1L6, SL-1L6



SET 16



6

Double
Cut
EDP No.

18217



3

Single
Cut
EDP No.

18216



Bur Set #16



1/4" steel shank diameter

Contains the following sixteen burs in a sturdy oak box: SA-1, SA-3, SA-5, SC-1, SC-3, SC-5, SD-3, SD-5, SE-3, SF-1, SF-3, SF-5, SG-1, SG-3, SL-3, SL-4

Juego de Caja #16 de limas rotativas



Mango de acero de diámetro 1/4"

Contiene las siguiente dieciséis rotativas en una caja de madera de roble:

SA-1, SA-3, SA-5, SC-1, SC-3, SC-5, SD-3, SD-5, SE-3, SF-1, SF-3, SF-5, SG-1, SG-3, SL-3, SL-4

Jeu de Fraises rotatives N°16



Queue en carbure monobloc, diamètre 1/4"

Contient les seize fraises rotatives dans un étui en coffret en chêne robuste:

SA-1, SA-3, SA-5, SC-1, SC-3, SC-5, SD-3, SD-5, SE-3, SF-1, SF-3, SF-5, SG-1, SG-3, SL-3, SL-4

Solid Carbide Bur Set #6

6 mm steel shank diameter

Contains the following eight burs in a sturdy oak box:

SA-5M, SC-3M, SC-5M, SD-5M, SF-3M, SF-5M, SG-3M, SL-4M

Juego de caja #6 de limas rotativas en carburo sólido

Mango de acero de diámetro 6 mm

Contiene las siguientes ocho rotativas en una caja de madera de roble:

SA-5M, SC-3M, SC-5M, SD-5M, SF-3M, SF-5M, SG-3M, SL-4M

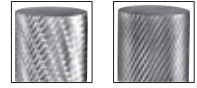
Jeu de Fraises rotatives N°6 - carbure monobloc

Queue en acier, diamètre 6 mm

Contient les huit fraises rotatives dans un coffret en chêne robuste:

SA-5M, SC-3M, SC-5M, SD-5M, SF-3M, SF-5M, SG-3M, SL-4M

SET 6M



6

3

Double Cut
EDP No.
28211

Single Cut
EDP No.
28210



Solid Carbide Miniature Bur Set #1

3 mm shank diameter - 38 mm overall length

Contains the following twelve 3 mm Burs in a sturdy oak box: SA-42M, SA-43M, SC-41M, SC-42M, SD-42M, SE-41M, SF-42M, SG-43M, SH-41M, SL-42M, SM-42M, SN-42M

Juego de caja #1 de limas rotativas miniatura en carburo sólido

Mango de diámetro 3 mm - Longitud total 38 mm

Contiene las siguientes nueve rotativas de 3 mm en una caja de madera de roble:

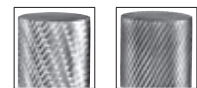
SA-42M, SA-43M, SC-41M, SC-42M, SD-42M, SE-41M, SF-42M, SG-43M, SH-41M, SL-42M, SM-42M, SN-42M

Jeu de Mini-Fraises rotatives en carbure monobloc N°1

Diamètre de la queue 3 mm - Longueur totale 38 mm

Contient les douze fraises rotatives 3 mm suivantes dans un coffret en chêne robuste: SA-42M, SA-43M, SC-41M, SC-42M, SD-42M, SE-41M, SF-42M, SG-43M, SH-41M, SL-42M, SM-42M, SN-42M

SET 1M



6

3

Double Cut
EDP No.
28201

Single Cut
EDP No.
28200



SET 8M**6****3**

Double Cut EDP No.
28215

Single Cut EDP No.
28214

**Extra Long Bur Set #8**

6 mm diameter - 152.4 mm long steel shank

Contains the following eight burs in a clear/blue acrylic case:

SA-1ML6, SA-5ML6, SC-1ML6, SC-5ML6, SD-1ML6, SF-1ML6, SG-1ML6, SL-1ML6

Juego de Caja #8 de rotativas extra-largas

Mango de diámetro 6 mm - mango largo de acero de 152,4 mm

Contiene las siguiente ocho rotativas en una caja de plástico transparente/azul:

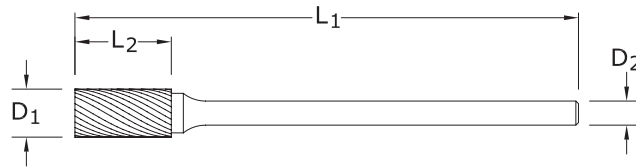
SA-1ML6, SA-5ML6, SC-1ML6, SC-5ML6, SD-1ML6, SF-1ML6, SG-1ML6, SL-1ML6

Jeu de Fraises rotatives extra-longues N°8

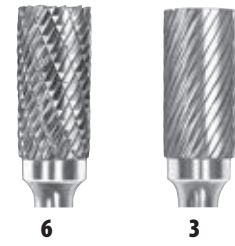
Queue diamètre 6 mm - queue longue en acier 152,4 mm

Contient les huit fraises rotatives dans un étui en acrylique bleu clair:

SA-1ML6, SA-5ML6, SC-1ML6, SC-5ML6, SD-1ML6, SF-1ML6, SG-1ML6, SL-1ML6



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

Long Shank Burs



Solid Carbide
 Special shank lengths are available up to 18"/450 mm long
 – Our stocking program on Long Shank Carbide Burs provides quick delivery for solving tough, hard-to-reach deburring areas. – Complete Bur Re grind Service Available.

Limas rotativas con mango largo



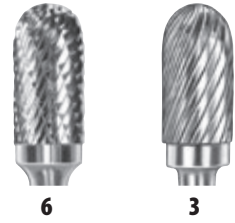
Carburo sólido
 Tamaño máximo disponible: 18"/450 mm
 – Nuestro programa de disponibilidad de limas rotativas en carburo sólido de mango largo proporciona una entrega rápida para solucionar trabajos complicados en zonas difíciles de alcanzar. – Disponemos de un servicio completo de reafilado de limas rotativas.

Fraises-limes à queue longue



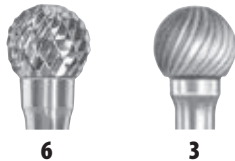
Carbure monobloc
 Disponibles jusqu'à 18"/450 mm de long
 – Notre programme d'ébauche pour les fraises rotatives en carbure à queue longue permet une livraison rapide permettant de résoudre les problèmes concernant les zones d'ébavurage tenaces et difficiles à atteindre. – Service de réaffûtage complet de fraises rotatives disponible.

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



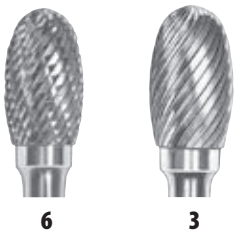
Tool No.	Cutter Diameter d_1	Length of Cut l_2	Shank Diameter d_2	Overall Length l_1	Double Cut EDP No.	Single Cut EDP No.
SC-1L6	1/4	1/2	1/4	6-1/2	16328	16325
SC-3L6	3/8	3/4	1/4	6-3/4	16353	16350
SC-5L6	1/2	1	1/4	7	16378	16375

Ball Shape
Forma esférica
Forme sphérique

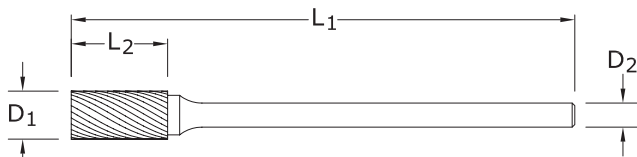


Tool No.	Cutter Diameter d_1	Length of Cut l_2	Shank Diameter d_2	Overall Length l_1	Double Cut EDP No.	Single Cut EDP No.
SD-1L6	1/4	7/32	1/4	6-2/9	16403	16400
SD-3L6	3/8	5/16	1/4	6-1/3	16428	16425
SD-5L6	1/2	7/16	1/4	6-4/9	16453	16450

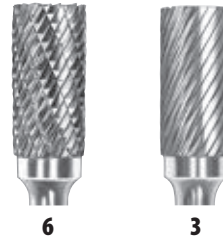
Oval Shape
Forma ovalada
Forme ovale



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

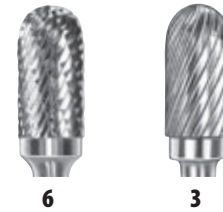


Cylinder Shape
Forma cilíndrica
Forme cylindrique



Tool No.	Cutting Diameter	Length of Cut	Shank Diameter	Overall Length	Double Cut	Single Cut
	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	EDP No.	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



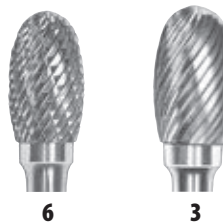
Tool No.	Cutting Diameter	Length of Cut	Shank Diameter	Overall Length	Double Cut	Single Cut
	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	EDP No.	EDP No.
SC-1ML6	6	12,7	6	162	26328	26325
SC-3ML6	9,5	19	6	169	26353	26350
SC-5ML6	12,7	25	6	175	26378	26375

Ball Shape
Forma esférica
Forme sphérique

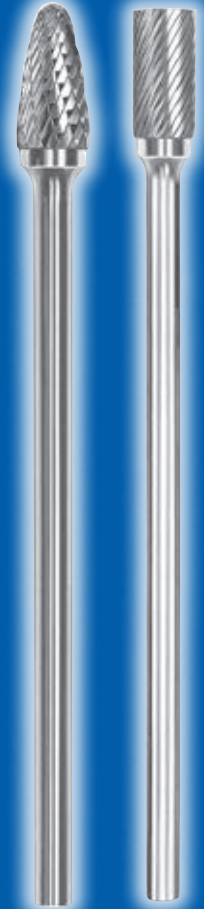


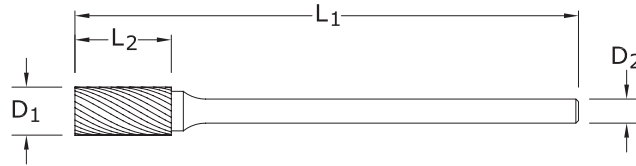
Tool No.	Cutting Diameter	Length of Cut	Shank Diameter	Overall Length	Double Cut	Single Cut
	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	EDP No.	EDP No.
SD-1ML6	6	5	6	155	26403	26400
SD-3ML6	9,5	8	6	158	26428	26425
SD-5ML6	12,7	11	6	161	26453	26450

Oval Shape
Forma ovalada
Forme ovale



Tool No.	Cutting Diameter	Length of Cut	Shank Diameter	Overall Length	Double Cut	Single Cut
	d ₁ mm	l ₂ mm	d ₂ mm	l ₁ mm	EDP No.	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



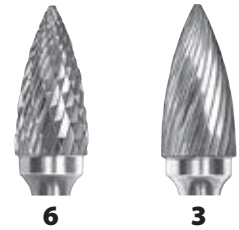


Tree Shape Radius End
Forma de árbol Con radio
Forme d'ogive Bout hémisphérique



Tool No.	Cutter Diameter d_1	Length of Cut l_2	Shank Diameter d_2	Overall Length l_1	Double Cut	Single Cut
					EDP No.	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	Single Cut
					EDP No.	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	Single Cut
					EDP No.	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	Single Cut
					EDP No.	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



Solid Carbide
 Special shank lengths are available up to 18"/450 mm long – Our stocking program on Long Shank Carbide Burs provides quick delivery for solving tough, hard-to-reach deburring areas.
 Complete Bur Regrind Service Available.

Limas rotativas de mango largo

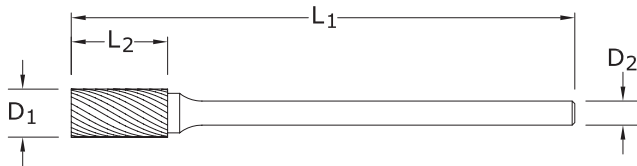


Carburo sólido
 Tamaño máximo disponible: 18"/450 mm – Nuestro programa de disponibilidad de limas rotativas en carburo sólido de mango largo proporciona una entrega rápida para solucionar trabajos complicados en zonas difíciles de alcanzar.
 Disponemos de un servicio completo de reafilado de limas rotativas.

Fraises-limes à queue longue



Carbure monobloc
 Disponibles jusqu'à 18"/450 mm de long – Notre programme d'ébauche pour les fraises rotatives en carbure à queue longue permet une livraison rapide permettant de résoudre les problèmes concernant les zones d'ébavurage tenaces et difficiles à atteindre.
 Service de réaffûtage complet de fraises rotatives disponible.



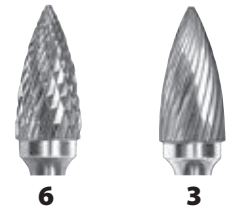
Tree Shape Radius End
Forma de árbol Con radio
Forme d'ogive Bout hémisphérique

Tool No.	Cutting Diameter	Length of Cut	Shank Diameter	Overall Length	6	3
	d_1 mm	l_2 mm	d_2 mm	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



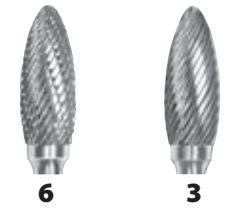
Tree Shape Pointed End
Forma de árbol
Forme d'ogive À bout pointu

Tool No.	Cutting Diameter	Length of Cut	Shank Diameter	Overall Length	6	3
	d_1 mm	l_2 mm	d_2 mm	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

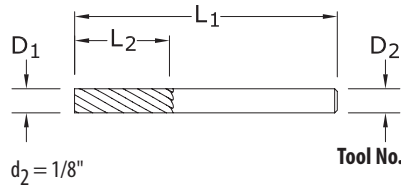
Tool No.	Cutting Diameter	Length of Cut	Shank Diameter	Overall Length	6	3
	d_1 mm	l_2 mm	d_2 mm	l_1 mm	Double Cut EDP No.	Single Cut EDP No.
SH-2ML6	8	19	6	169	26703	26700
SH-5ML6	12,7	32	6	182	26728	26725


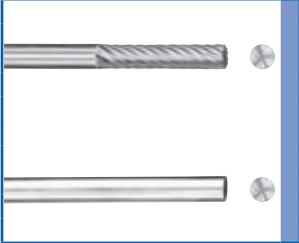



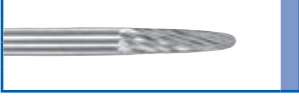

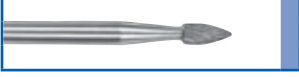


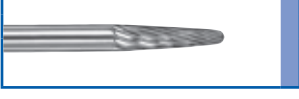
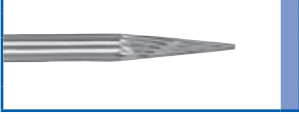



14° Taper Radius End
Forma cónica a 14° Con radio
Conique, 14° Bout hémisphérique

Tool No.	Cutting Diameter	Length of Cut	Shank Diameter	Overall Length	6	3
	d_1 mm	l_2 mm	d_2 mm	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





Tool No.	Cutter Diameter d_1	Length of Cut l_2	Overall Length l_1	Included Angle a	6	3	
					Double Cut EDP No.	Single Cut EDP No.	
	SA-41	1/16	1/4	1-1/2	—	10603	10600
	SA-41L2	1/16	1/4	2	—	17103	17100
	SA-41L3	1/16	1/4	3	—	17128	17125
	SA-42	3/32	7/16	1-1/2	—	10628	10625
	SA-42L2	3/32	7/16	2	—	17153	17150
	SA-42L3	3/32	7/16	3	—	17178	17175
	SA-43	1/8	9/16	1-1/2	—	10653	10650
	SA-43L2	1/8	9/16	2	—	17203	17200
	SA-43L3	1/8	9/16	3	—	17228	17225
	SB-41	1/16	1/4	1-1/2	—	11453	11450
	SB-41L2	1/16	1/4	2	—	17253	17250
	SB-41L3	1/16	1/4	3	—	17278	17275
	SB-42	3/32	7/16	1-1/2	—	11478	11475
	SB-42L2	3/32	7/16	2	—	17303	17300
	SB-42L3	3/32	7/16	3	—	17328	17325
	SB-ECO	1/8		1-1/2	—		11525
	SB-43	1/8	9/16	1-1/2	—	11503	11500
	SB-43L2	1/8	9/16	2	—	17353	17350
	SB-43L3	1/8	9/16	3	—	17378	17375
	SC-41	3/32	7/16	1-1/2	—	12253	12250
	SC-42	1/8	9/16	1-1/2	—	12278	12275
	SC-42L2	1/8	9/16	2	—	17453	17450
	SC-42L3	1/8	9/16	3	—	17478	17475
	SD-41	3/32	3/32	1-1/2	—	12778	12775
	SD-42	1/8	1/8	1-1/2	—	12803	12800
	SD-42L2	1/8	1/8	2	—	17553	17550
	SD-42L3	1/8	1/8	3	—	17578	17575
	SE-41	1/8	7/32	1-1/2	—	13153	13150
	SE-41L2	1/8	7/32	2	—	17603	17600
	SE-41L3	1/8	7/32	3	—	17628	17625
	SF-41	1/8	1/4	1-1/2	—	13678	13675
	SF-42	1/8	1/2	1-1/2	—	13703	13700
	SF-42L2	1/8	1/2	2	—	17653	17650
	SF-42L3	1/8	1/2	3	—	17678	17675
	SG-41	1/8	1/4	1-1/2	—	14153	14150
	SG-43	1/8	3/8	1-1/2	—	14203	14200
	SG-44	1/8	1/2	1-1/2	—	14228	14225
	SG-44L2	1/8	1/2	2	—	17853	17850
	SG-44L3	1/8	1/2	3	—	17878	17875
	SH-41	1/8	1/4	1-1/2	—	14553	14550
	SH-41L2	1/8	1/4	2	—	17903	17900
	SH-41L3	1/8	1/4	3	—	17928	17925
	SJ-42	1/8	3/32	1-1/2	60°	14903	14900
	SK-42	1/8	1/16	1-1/2	90°	15153	15150
	SL-41	1/8	3/8	1-1/2	8°	15403	15400
	SL-42	1/8	1/2	1-1/2	8°	15428	15425
	SL-42L2	1/8	1/2	2	8°	17953	17950
	SL-42L3	1/8	1/2	3	8°	17978	17975
	SM-41	1/8	11/32	1-1/2	12°	15678	15675
	SM-42	1/8	7/16	1-1/2	14°	15703	15700
	SM-42L2	1/8	7/16	2	14°	18053	18050
	SM-42L3	1/8	7/16	3	14°	18078	18075
	SM-43	1/8	5/8	1-1/2	7°	15728	15725
	SN-41	3/32	1/8	1-1/2	10°	16028	16025
	SN-42	1/8	3/16	1-1/2	10°	16053	16050

Mold, Tool & Die Making Burs



Solid Carbide
Complete Bur Regrind Service
Available.

Limas rotativas para moldes, herramientas y matrices

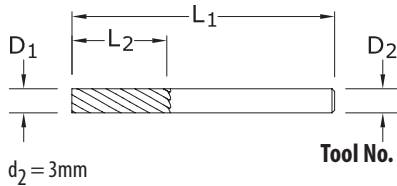


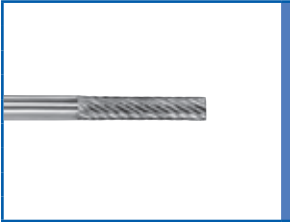
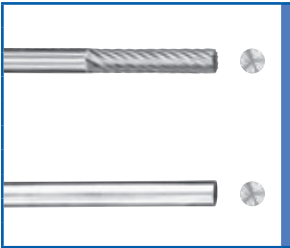











Carburo sólido
Disponemos de un servicio completo
de reaflado de limas rotativas.

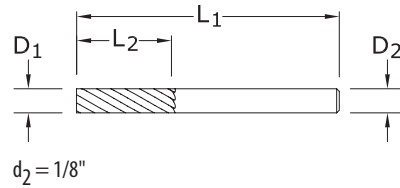
Fraises-limes pour moulistes, outils et matrices



Carbure monobloc
Service de réaffûtage complet de
fraises rotatives disponible.



Tool No.	Cutting Diameter d_1 mm	Length of Cut l_2 mm	Shank Diameter d_2 mm	Overall Length l_1 mm	Angle α	Double Cut		Single Cut	
						EDP No.	EDP No.	EDP No.	EDP No.
 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		
 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		
 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		
 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		
 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		
 SF-41M	3	6	3	38	–	23678	23675		
SF-42M	3	12,7	3	38	–	23703	23700		
SF-42ML2	3	12,7	3	50	–	27653	27650		
SF-42ML3	3	12,7	3	75	–	27678	27675		
 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		
 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		
 SJ-42M	3	2,5	3	38	–	24903	24900		
 SK-42M	3	1,5	3	38	–	25153	25150		
 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		
 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		
 SN-41M	2,5	3	3	38	10°	26028	26025		
SN-42M	3	4	3	38	10°	26053	26050		



1/4" Head – 1/8" Shank



Mold, Tool & Die Making Burs



1/4" Head – 1/8" Shank
– Brazed Construction
Complete Bur Regrind Service
Available.

Limas rotativas para moldes, herramientas y matrices



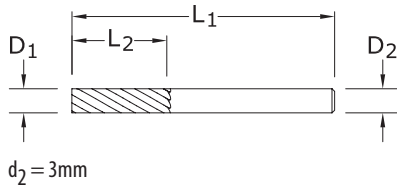
Cabeza de 1/4" – Mango de 1/8" con
construcción de soldadura de bronce
Disponemos de un servicio completo
de reafilado de limas rotativas.

Fraises-limes pour mouliste, outils et matrices



Tête de 1/4" – Queue de 1/8" – Brasées
Service de réaffûtage complet de
fraises rotatives disponible.

	Tool No.	Cutter Diameter d_1	Length of Cut l_2	Shank Diameter d_2	Overall Length l_1	Included Angle a	Cut Type	
							Double Cut EDP No.	Single Cut EDP No.
	SA-51	1/4	1/2	1/8	2	–	10678	10675
	SB-51	1/4	3/16	1/8	1-11/16	–	11553	11550
	SC-51	1/4	1/2	1/8	2	–	12303	12300
	SD-51	1/4	7/32	1/8	1-3/4	–	12828	12825
	SE-51	1/4	3/8	1/8	1-8/9	–	13178	13175
	SF-51	1/4	1/2	1/8	2	–	13728	13725
	SG-51	1/4	1/2	1/8	2	–	14253	14250
	SM-51	1/4	1/2	1/8	2-1/9	22°	15753	15750
	SN-51	1/4	1/4	1/8	1-3/4	10°	16078	16075

**6,3 mm Head – 3 mm Shank**

	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	Material	
							6	3
							Double Cut EDP No.	Single Cut EDP No.
	SA-51M	6,3	12,7	3	50	–	20678	20675
	SB-51M	6,3	4,7	3	43	–	21553	21550
	SC-51M	6,3	12,7	3	50	–	22303	22300
	SD-51M	6,3	5	3	44	–	22828	22825
	SE-51M	6,3	9,5	3	47	–	23178	23175
	SF-51M	6,3	12,7	3	56	–	23728	23725
	SG-51M	6,3	12,7	3	50	–	24253	24250
	SM-51M	6,3	12,7	3	53	22°	25753	25750
	SN-51M	6,3	6	3	44	10°	26078	26075

**Mold, Tool & Die Making
Burs**

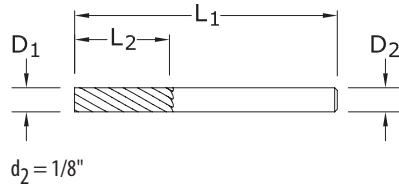
6.3 mm Head - 3 mm Shank -
Braze Construction
Complete Bur Regrind Service
Available.

**Limas rotativas para
moldes, herramientas
y matrices**

Cabeza de 6,3 mm - Mango de
3 mm con construcción de soldadura
de bronce
Disponemos de un servicio completo
de reafilado de limas rotativas.

**Fraises-limes pour mouliste,
outils et matrices**

Tête de 6,3 mm - Queue de 3 mm
- Brasées
Service de réaffûtage complet de
fraises rotatives disponible.



5/32", 3/16" Head – 1/8" Shank



Mold, Tool & Die Making Burs



5/32" – 3/16" Head, 1/8" Shank –
Solid Carbide
Complete Bur Regrind Service
Available.

Limas rotativas para moldes, herramientas y matrices



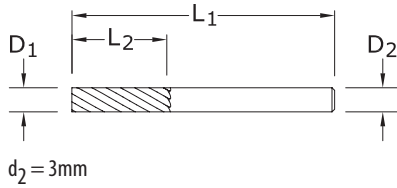
Cabeza de 5/32" – 3/16" – Mango
de 1/8" – Carburo sólido
Disponemos de un servicio completo
de reafilado de limas rotativas.



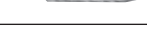







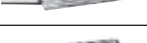


Fraises-limes pour mouliste, outils et matrices



Tête de 5/32" – 3/16" – Queue de
1/8" – Carbure monobloc
Service de réaffûtage complet de
fraises rotatives disponible.

	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.
	SA-52	5/32	1/2	1/8	1-1/2	–	10703	10700
	SA-53	3/16	1/2	1/8	1-1/2	–	10728	10725
	SC-52	5/32	1/2	1/8	1-1/2	–	12328	12325
	SC-53	3/16	1/2	1/8	1-1/2	–	12353	12350
	SD-52	5/32	5/32	1/8	1-1/2	–	12840	12837
	SD-53	3/16	5/32	1/8	1-1/2	–	12853	12850
	SE-53	3/16	9/32	1/8	1-1/2	–	13203	13200
	SF-53	3/16	1/2	1/8	1-1/2	–	13753	13750
	SG-53	3/16	1/2	1/8	1-1/2	–	14278	14275
	SH-53	3/16	3/8	1/8	1-1/2	–	14603	14600
	SL-53	3/16	1/2	1/2	1-1/2	14°	15453	15450
	SM-53	3/16	1/2	1/8	1-1/2	16°	15778	15775
	SN-53	3/16	1/4	1/8	1-1/2	10°	16103	16100

**5 mm / 4 mm Head – 3 mm Shank**

	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	Cutting Edge	
							Double Cut EDP No.	Single Cut EDP No.
	SA-52M	4	12,7	3	38	–	20703	20700
	SA-53M	5	12,7	3	38	–	20728	20725
	SC-52M	4	12,7	3	38	–	22328	22325
	SC-53M	5	12,7	3	38	–	22353	22350
	SD-52M	4	3,4	3	38	–	22840	22837
	SD-53M	5	4,7	3	38	–	22853	22850
	SE-53M	5	7,1	3	38	–	23203	23200
	SF-53M	5	12,7	3	38	–	23753	23750
	SG-53M	5	12,7	3	38	–	24278	24275
	SH-53M	5	9,5	3	38	–	24603	24600
	SL-53M	5	12,7	3	38	14°	25453	25450
	SM-53M	5	12,7	3	38	16°	25778	25775
	SN-53M	5	6,3	3	38	10°	26103	26100

**Mold, Tool & Die Making
Burs**

5 mm / 4 mm Head, 3 mm Shank –
Solid Carbide
Complete Bur Regrind Service
Available.

**Limas rotativas para
moldes, herramientas
y matrices**

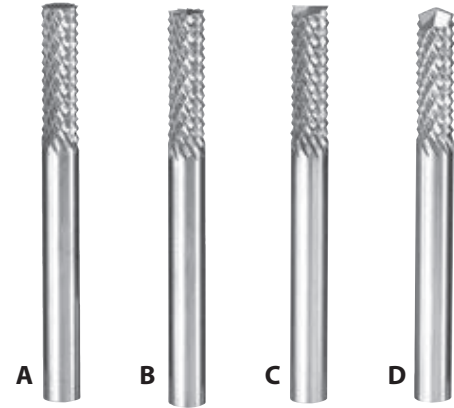
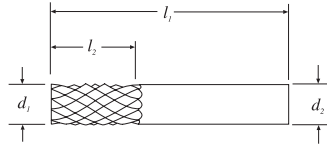
Cabeza de 5 mm / 4 mm – Mango
de 3 mm – Carburo sólido
Disponemos de un servicio completo
de reafilado de limas rotativas.

**Fraises-limes pour mouliste,
Soutils et matrices**

Tête de 5 mm / 4 mm – Queue de
3 mm – Carbure monobloc
Service de réaffûtage complet de
fraises rotatives disponible.

TOLERANCES

$d_1=1, 1-1=+.000/-0.004$
 $2-9=+.000/-0.005$
 $d_2=h6$



Fiberglass Routers

Solid Carbide – For Fiberglass And Non-Metallic Materials.

STYLE A: No End Cut

STYLE B: Burr End

STYLE C: End Mill End

STYLE D: Drill End

Fresa para fibra de vidrio

Carburo sólido – Para fibra de vidrio y otros materiales no metálicos.

ESTILO A: Sin corte frontal

ESTILO B: Con punta de lima rotativa

ESTILO C: Con punta de fresa

ESTILO D: Con punta de broca

Fraises pour fibre de verre

Carbure monobloc – Pour fibres de verre et matières non-métalliques.

Type A: sans taille en bout

Type B: taille en bout comme fraise-lime

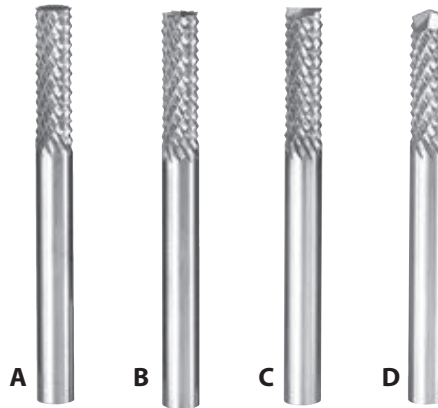
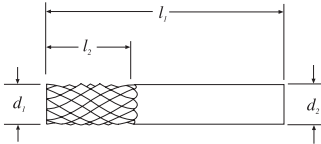
Type C: taille en bout comme fraise

Type D: taille en bout comme foret

Tool No.	Cutter Diameter d_1	Length of Cut l_2	Overall Length l_1	Shank Diameter d_2	Uncoated	Uncoated	Uncoated	Uncoated
					EDP No.	EDP No.	EDP No.	EDP No.
FGR-1	1/16	3/16	1-1/2	1/8	73001	73015	73030	73045
FGR 1-1	3/32	3/8	1-1/2	1/8	73002	73016	73031	73046
FGR-2	1/8	1/2	1-1/2	1/8	73003	73017	73032	73047
FGR-3	3/16	5/8	2	3/16	73004	73018	73033	73048
FGR-4	3/16	5/8	2	1/4	73005	73019	73034	73049
FGR-5	1/4	3/4	2	1/4	73006	73020	73035	73050
FGR-6	1/4	3/4	2-1/2	1/4	73007	73021	73036	73051
FGR 6-1	1/4	1	3	1/4	73008	73022	73037	73052
FGR-7	5/16	1	2-1/2	5/16	73009	73023	73038	73053
FGR-8	3/8	1	2-1/2	3/8	73010	73024	73039	73054
FGR-9	1/2	1	3	1/2	73011	73025	73040	73055

TOLERANCES

$d_1=1, 1-1=+0,00/-0,10$
 $2-9=+0,00/-0,13$
 $d_2=h6$



Tool No.	Cutting Diameter d_1 mm	Length of Cut l_2 mm	Overall Length l_1 mm	Shank Diameter d_2 mm	Uncoated	Uncoated	Uncoated	Uncoated
					EDP No.	EDP No.	EDP No.	EDP No.
FGR-1M	1,6	5	38	3	83001	83015	83030	83045
FGR 1-1M	2,4	9,5	38	3	83002	83016	83031	83046
FGR-2M	3	12	38	3	83003	83017	83032	83047
FGR-3M	4	16	50	4	83004	83018	83033	83048
FGR-4M	4	16	50	6	83005	83019	83034	83049
FGR-5M	6	19	50	6	83006	83020	83035	83050
FGR-6M	6	19	63	6	83007	83021	83036	83051
FGR 6-1M	6	25	75	6	83008	83022	83037	83052
FGR-7M	8	25	63	8	83009	83023	83038	83053
FGR-8M	10	25	75	10	83010	83024	83039	83054
FGR-9M	12	25	75	12	83011	83025	83040	83055

Recomendaciones para aplicación y velocidad Limas Rotativas de Carburo Recommandations sur l'application et la vitesse Fraises-limes en carbure



Basic Fluting Styles for Carbide Burs

- 6 Double Cut: Efficient stock removal, smaller chips, good finish, excellent control.
- 3 Single Cut: General purpose design, longer chips.
- 1 Nonferrous: Aggressive stock removal.
- 3SP Chip Breaker: Improved stock removal and control over single cut style.
- 4 Diamond Cut: Excellent control, good stock removal, smallest chips.
- 2 Coarse Cut: Improved chip clearance for softer materials, good stock removal.
- 5 Fine Cut: Hard materials, fine finishing where light stock removal is required.

Determining the Proper Cut Style and Speed

- Select your material type along the left side of Chart A.
- Move right to find the recommended cut style(s) and speed range in SFM.
- Select your tool diameter and SFM range on Chart B to determine operating RPM.

Chart A	Recommended Cut Style and Speed Range (SFM)						
	800	1,000	1,200	1,500	1,700	2,000	3,000
Carbon Steel <45 HRc					6 - 3 - 3SP		
Hardened Steel >45 HRc	6 - 3 - 3SP - 5						
Heat Resisting Alloys			6 - 3 - 3SP				
Stainless Steel	6 - 4 - 3SP						
Aluminum Alloys						1	
Brass-Copper-Zinc						6 - 3SP - 2	
Cast Iron <250 Bhn					6 - 3 - 3SP		
Cast Iron >250 Bhn		6 - 3 - 3SP					
Plastics						1 - 2	
Hard Rubber						2	
Fiberglass						4	
Carbon Fiber				6 - 4			



Safety

- The use of eye, face, and ear protection is strongly recommended.
- Burs with shanks longer than 1-3/4 (inch) should be used at 50% of the normal speed.
- Extended shank burs are only recommended for use in well maintained hand held grinders.
- Stabilize extended shank burs by lightly contacting the workpiece prior to starting the grinder.
- Blue discoloring of steel shanks indicates excessive heat due to overuse. Continued use could cause injury.

Application Tips

- Use lubricant or wax to prevent flute loading in soft materials.
- Using the recommended speed prevents premature wear and/or insufficient material removal rates.
- Maintain grinder concentricity to optimize material removal rates and extend bur life.
- Reduce flutes and increase speed in softer materials. Increase flutes and reduce speed in hardened materials.
- Cross cut styles (6, 3SP, 4) generally improve stock removal, control, and reduce chip size.



Estilos básicos de filos en las limas rotativas de carburo sólido

- 6 Doble Corte: Eliminación eficiente de materiales, virutas más cortas, buen acabado, Excelente control.
- 3 Único corte: Para el uso general, virutas mas largas.
- 1 Materiales no ferrosos: Eliminación de materiales mas agresiva.
- 3SP Rompe virutas: Mejora de la eliminación de material y un mejor control a través de un corte simple, virutas mas cortas.
- 4 Corte Diamante: Excelente control, bueno volumen de material mecanizado, virutas mas cortas.
- 2 Durante el corte: La depuración de chips mejorada para materiales blandos y extraer materiales de buena.
- 5 Dientes finas: Para los materiales duros, para el acabado cuando es necesario.

Determinar el tipo adecuado corte y la velocidad

- Seleccione el tipo de material en el lado izquierdo de la tabla A.
- Muévase a la derecha para encontrar el tipo de corte recomendado y el rango de velocidad en sfm.
- Elija el diámetro de la herramienta y la amplitud de la rotación en el cuadro B para determinar la rotación en rpm.



Seguridad

- La protección de los ojos, cara y orejas es muy recomendable.
- Las frisas más larga (1-3/4) deben ser utilizadas al 50% de la velocidad normal.
- El mango largo se recomienda su uso en buen estado en parte inaccesibles.
- Estabilizar la fresa larga con un ligero contacto con la pieza antes de empezar a moler.
- La coloración azulada de los vástagos de acero, indica el recalentamiento debido a la sobreexplotación. Puede dar lugar a fracturas y lesiones.

Sugerencias de aplicación

- Utilice un lubricante o cera para evitar que se pegue el material en la fresa.
- Usando la velocidad recomendada, se evita el desgaste prematuro y/o tasas de fracaso de la remoción de material.
- Mantener la concentricidad de la máquina de moler para optimizar el volumen de remoción de material y prolongar la vida de las frisas.
- Reducir el número de dientes y aumentar la velocidad en materiales blandos. Aumentar del número de dientes y reducir la velocidad en materiales duros.
- Los tipos de corte transversale (6, 3SP, 4) mejoran en general la eliminación de los materiales, el control y el reducimiento del tamaño de las virutas.



Types de dentures de base pour les fraises-limes

- 6 Double Coupe: enlèvement de matière efficace, copeaux plus courts, bonne finition, excellent contrôle.
- 3 Simple coupe: Utilisation d'usage général, copeaux plus longs.
- 1 Non ferreux: Enlèvement matière agressif.
- 3SP Brise copeaux: Amélioration de l'enlèvement de matière et contrôle grâce à la simple coupe, copeaux plus courts.
- 4 Coupe Diamant: Excellent contrôle, bon débit matières usinée, copeaux plus courts.
- 2 Cours de coupe: meilleur dégagement de carte à puce pour les matériaux tendres, enlèvement de matière de bonnes.
- 5 Denture fine: Pour les matériaux durs, pour la finition quand la matière enlevée est nécessaire.

Déterminer le type coupe adéquate et de la vitesse

- Sélectionnez votre type de matériau sur le côté gauche du tableau A.
- Déplacer vers la droite pour trouver le type de coupe recommandé et la plage de vitesse en sfm.
- Choisissez votre diamètre de l'outil et gamme de rotation sur le tableau B pour déterminer la rotation en rpm.

Chart B

Chart B	SFM						
	800	1,000	1,200	1,500	1,700	2,000	3,000
Diameter	RPM						
1/16	49,000	61,000	73,000	92,000	104,000	122,000	183,000
3/32	33,000	41,000	49,000	61,000	69,000	81,000	122,000
1/8	24,000	31,000	37,000	46,000	52,000	61,000	92,000
3/16	16,000	20,000	24,000	31,000	35,000	41,000	61,000
1/4	12,000	15,000	18,000	23,000	26,000	31,000	46,000
5/16	10,000	12,000	15,000	18,000	21,000	24,000	37,000
3/8	8,000	10,000	12,000	15,000	17,000	20,000	31,000
1/2	6,000	8,000	9,000	11,000	13,000	15,000	23,000
5/8	5,000	6,000	7,000	9,000	10,000	12,000	18,000
3/4	4,000	5,000	6,000	8,000	9,000	10,000	15,000
1	3,000	4,000	5,000	6,000	7,000	8,000	11,000



Sécurité

- La protection des yeux, du visage et des oreilles est fortement recommandée.
- Fraises à queue plus longue (1-3/4 pouces) doivent être utilisées à 50% de la vitesse normale.
- Les fraises à queue longue ne sont recommandées pour une utilisation bien maintenues dans partie difficilement accessibles.
- Stabiliser les fraises à queue longue par un léger contact avec la pièce avant de démarrer le meulage.
- La décoloration bleue des queues en acier, indique une chaleur excessive due à la surexploitation. Elle pourrait entraîner des ruptures et des blessures.

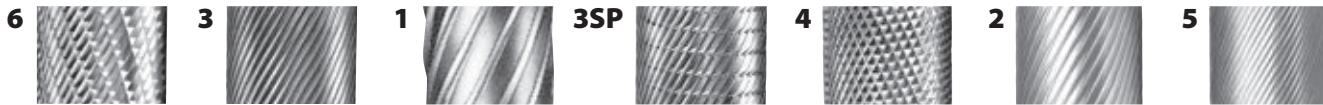
Conseils d'application

- Utiliser un lubrifiant ou de la cire pour empêcher le collage de la matière dans les matériaux tendres.
- En utilisant la vitesse recommandée, cela évite l'usure prématurée et/ou l'insuffisance de taux d'enlèvement de matière.
- Maintenir la concentricité de la meuleuse permet d'optimiser les taux d'enlèvement de matière et de prolonger la durée de vie des fraises.
- Réduire le nombre de dents et augmenter la vitesse dans les matériaux tendres. Augmenter nombre de dents et réduire la vitesse dans les matériaux durs.
- les types de dentures croisées (6, 3SP, 4) améliorent de façon générale l'enlèvement de matière, contrôlent et de réduisent la taille des copeaux.

Application and Speed Recommendations – Carbide Burs – Metric



Recomendaciones para aplicación y velocidad *Limas Rotativas de Carburo* Recommandations sur l'application et la vitesse *Fraises-limes en carbure*



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Determining the Proper Cut Style and Speed

- Select your material type along the left side of Chart A.
- Move right to find the recommended cut style(s) and speed range in M/MIN.
- Select your tool diameter and M/MIN range on Chart B to determine operating RPM.

Chart A	Recommended Cut Style and Speed Range (M/MIN)						
	250	300	365	450	520	600	915
Carbon Steel <45 HRC					6 - 3 - 3SP		
Hardened Steel >45 HRC	6 - 3 - 3SP - 5						
Heat Resisting Alloys			6 - 3 - 3SP				
Stainless Steel	6 - 4 - 3SP						
Aluminum Alloys						1	
Brass-Copper-Zinc						6 - 3SP - 2	
Cast Iron <250 Bhn					6 - 3 - 3SP		
Cast Iron >250 Bhn			6 - 3 - 3SP				
Plastics						1 - 2	
Hard Rubber						2	
Fiberglass						4	
Carbon Fiber				6 - 4			



Safety

- The use of eye, face, and ear protection is strongly recommended.
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- Blue discoloring of steel shanks indicates excessive heat due to overuse. Continued use could cause injury.

Application Tips

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- Using the recommended speed prevents premature wear and/or insufficient material removal rates.
- Maintain grinder concentricity to optimize material removal rates and extend bur life.
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Estilos básicos de filos en las limas rotativas de carburo sólido

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- 1 Materiales no ferrosos: Eliminación de materiales más agresiva.
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- 2 Durante el corte: La depuración de chips mejorada para materiales blandos y extraer materiales de buena.
- 5 Dientes finas: Para los materiales duros, para el acabado cuando es necesario.

Determinar el tipo adecuado corte y la velocidad

- Seleccione el tipo de material en el lado izquierdo de la tabla A.
- Muévase a la derecha para encontrar el tipo de corte recomendado y el rango de velocidad en M/MIN.
- Elija el diámetro de la herramienta y la amplitud de la rotación en el cuadro B para determinar la rotación en rpm.



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- Sélectionnez votre type de matériau sur le côté gauche du tableau A.
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- Choisissez votre diamètre de l'outil et gamme de rotation sur le tableau B pour déterminer la rotation en rpm.

Chart B

Chart B	M/MIN						
	250	300	365	450	520	600	915
Diameter	RPM						
1,5	49,000	61,000	73,000	92,000	104,000	122,000	183,000
2,5	33,000	41,000	49,000	61,000	69,000	81,000	122,000
3	24,000	31,000	37,000	46,000	52,000	61,000	92,000
5	16,000	20,000	24,000	31,000	35,000	41,000	61,000
6	12,000	15,000	18,000	23,000	26,000	31,000	46,000
8	10,000	12,000	15,000	18,000	21,000	24,000	37,000
10	8,000	10,000	12,000	15,000	17,000	20,000	31,000
12	6,000	8,000	9,000	11,000	13,000	15,000	23,000
16	5,000	6,000	7,000	9,000	10,000	12,000	18,000
19	4,000	5,000	6,000	8,000	9,000	10,000	15,000
25	3,000	4,000	5,000	6,000	7,000	8,000	11,000



Sécurité

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- Fraises à queue plus longue (1-3/4 pouces) doivent être utilisées à 50% de la vitesse normale.
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Conseils d'application

- Utiliser un lubrifiant ou de la cire pour empêcher le collage de la matière dans les matériaux tendres.
- En utilisant la vitesse recommandée, cela évite l'usure prématurée et/ou l'insuffisance des taux d'enlèvement de matière.
- Maintenir la concentricité de la meuleuse permet d'optimiser les taux d'enlèvement de matière et de prolonger la durée de vie des fraises.
- Réduire le nombre de dents et augmenter la vitesse dans les matériaux tendres. Augmenter nombre de dents et réduire la vitesse dans les matériaux durs.
- Les types de dentures croisées (6, 3SP, 4) améliorent de façon générale l'enlèvement de matière, contrôlent et réduisent la taille des copeaux.



Speed and Feed Recommendations – Series FGR – Fractional and Metric

FGR	Diameter	Spindle Speed rpm	Feed Rate ipm
	1/16	40,000 - 45,000	40 - 60
	3/32	25,000 - 30,000	45 - 70
	1/8	20,000 - 25,000	45 - 70
	3/16	20,000 - 24,000	35 - 65
	1/4	20,000 - 24,000	35 - 65
	3/8	15,000 - 20,000	30 - 60
	1/2	10,000 - 15,000	20 - 50

FGR-M	Diameter mm	Spindle Speed rpm	Feed Rate cm/min
	1.6	40,000 - 45,000	100 - 150
	2.4	25,000 - 30,000	115 - 180
	3	20,000 - 25,000	115 - 180
	4	20,000 - 24,000	90 - 165
	6	20,000 - 24,000	90 - 165
	10	15,000 - 20,000	75 - 150
	12	10,000 - 15,000	50 - 125



FLEXBUR

The FLEXBUR is designed to remove material in difficult to reach external and internal component features that just cannot be addressed with a rigid standard or long shank bur.

The FLEXBUR is ideal for managing the complex deburring operations found in many challenging castings such as impellers, pump casings, turbine blade assemblies and engine blocks.

Due to the wide variety of unique opportunities the FLEXBUR can address, you define the tool using this brochure and ATA manufactures it in the most technologically advanced bur manufacturing facility in the world.

Excellent for the cleaning of burnt sand, welds, fins, and various blending operations.

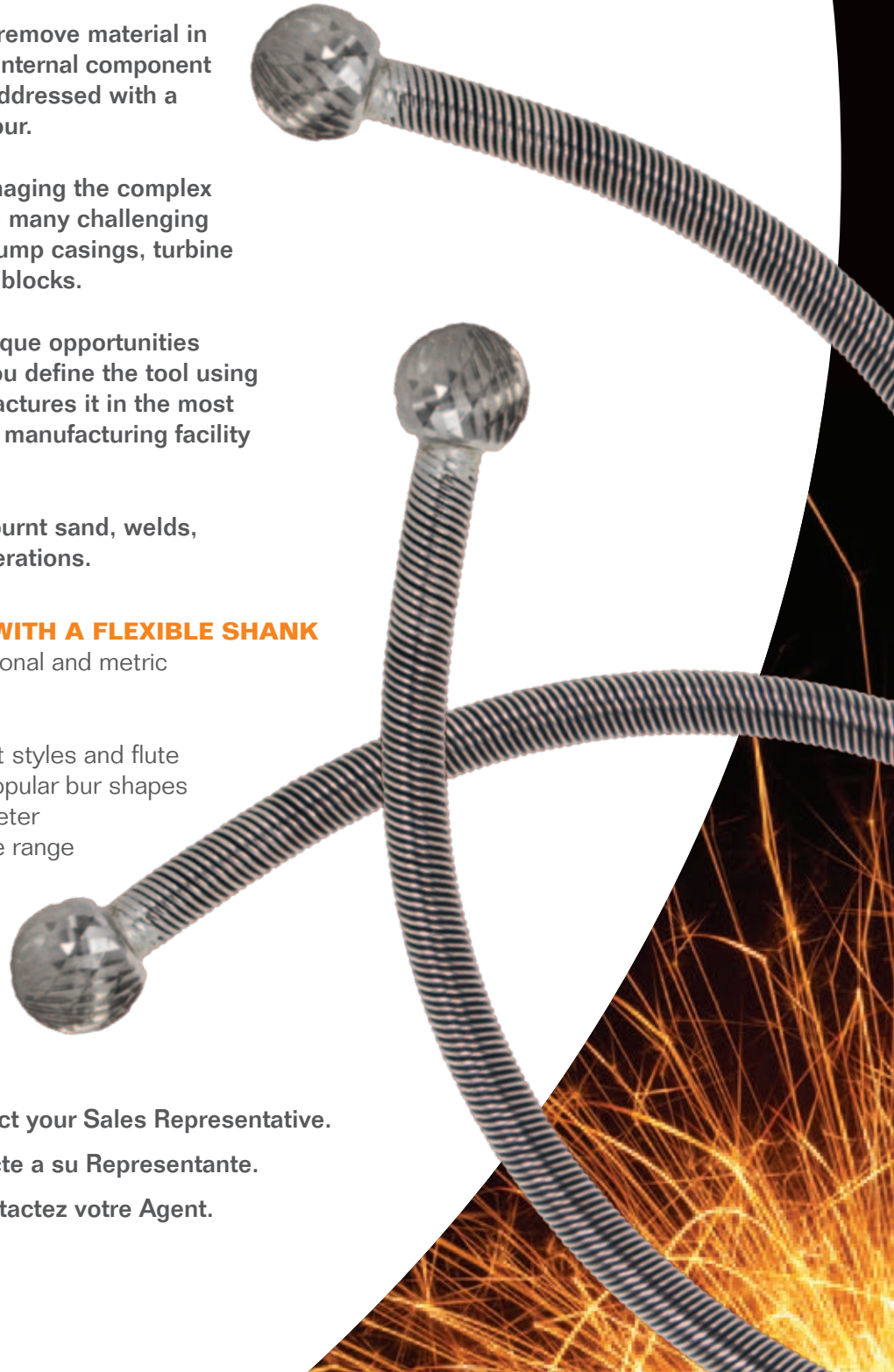
REACH AROUND BENDS WITH A FLEXIBLE SHANK

- Available in a variety of fractional and metric shank diameters
- Shanks up to 6" in length
- Available with a variety of cut styles and flute configurations in the most popular bur shapes up to 1/2" or 12.7mm in diameter
- Able to accommodate a wide range of angles and can be used in conjunction with a rigid sleeve during operation
- Tools may be sent back for reconditioning

For further information, contact your Sales Representative.

Para más información, contacte a su Representante.

Pour plus d'informations, contactez votre Agent.





Contact Details

t +1 330-928-7744

f +1 330-686-5733

e sales@atatools.com

w www.atatools.com

ATA Tools Inc., 238 Marc Drive
Cuyahoga Falls, Ohio 44223

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