



Conventional abrasives
for precision grinding

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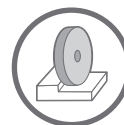
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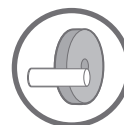
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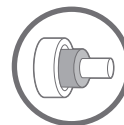
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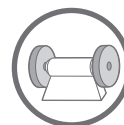
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The group

THE HEADQUARTERS

Molemab is an Italian industrial group which has an extensive international presence while remaining deeply rooted in the local area.

Molemab's head office is located in Ome, province of Brescia, in the Franciacorta wine-growing area of northern Italy.

From here the Molemab group is organised. This is the main factory where the conventional and superabrasive vitrified bonded wheels are manufactured.

Another facility, located in Maclodio, in the province of Brescia, is where some types of vitrified bonded wheels are using a highly automated technology.

The factories in Ome and Maclodio are amongst the best organised facilities in Europe, including a manufacturing line with presses up to 2,500 tons as well as a modern research and development department. Having over 50 years of experience, the Molemab Group is now able to produce 5,000 tons of wheels per year, with diameters up to 2,100 mm.

THE PRODUCTION FACILITIES

The presence of Molemab worldwide has been spreading throughout the years thanks to the growing potential and market demand of hi-tech products.

Molemab Inotech GmbH is located in Launsdorf, Austria. This is an advanced factory, focused on resinoid and metal bonded Diamond and CBN hi-tech wheels produced by the most modern machinery.

In Venezuela Ruedas Abrasivas Maracay S.A. manufactures conventional grinding wheels and abrasive discs and distributes Molemab products throughout the South American market.

THE COMMERCIAL BRANCHES

In addition to the production facilities Molemab has various commercial branches.

They follow customers worldwide, providing technical and commercial support for every industrial sector.

The European market is serviced by Molemab Iberica (Barcelona, Spain), Molemab France (Lyon, France) and Molemab GmbH (Troisdorf, Germany), whilst in North America Molemab USA and Molemab Canada operate.

Molemab also keeps its eye on Eastern European, Russian, Indian and Chinese markets thanks to reliable commercial and productive partnerships and joint ventures.

All companies sell the complete range of Molemab abrasive products and follow customers' needs.

Supported by qualified distributors and agents worldwide, Molemab can reach all of its customers, wherever they are.

OUR VISION

Molemab aspires to a well-distributed and sustainable technological progress, respecting human dignity.

OUR MISSION

Molemab designs modern and efficient technological solutions in the abrasives' field. The company's goal is to offer its customers the confidence to work with the most reliable products.

OUR VALUES

Since 1961, when Molemab started its activity, the world has changed and so have the markets, the manufacturing processes materials and the technological challenges. Molemab values still remain the same: innovation, safety, quality and strong collaboration with customers and suppliers.

Innovation - Since its foundation Molemab has strived for constant improvement. Original patents, unique and custom made equipment and the most modern solutions have always characterised Molemab history. Molemab takes on the most difficult challenges: conventional wheels for the toughest applications and special superabrasive wheels reaching almost the speed of sound.

Safety - Molemab aims to ensure its customers and partners the safest working conditions and environment. Molemab applies the strictest safety rules on work making accurate security tests in its laboratories.

Quality - The certifications accredited to Molemab in all the production facilities are the result of constant research. Molemab quality is granted by meticulous production controls together with the continuous improvement of its technicians' skills and a scrupulous analysis of the market requirements.

Collaboration - Sharing experiences between the manufacturer and the end user leads to the best results. The feedback exchange and dialogue are the two pillars on which Molemab's success is based. Sharing ideas, ambitions and problems with our partners while keeping an eye on market evolution and dynamics is the key to step by step growth.

HIGHLIGHTS

Molemab finds its roots in the heritage of its territory: the passion for work, moral coherence and concreteness. With its endless research for the best products, machinery and raw materials, Molemab has been able to build a strong and solid business history.

A continuous, harmonious growth with its customers, partners and suppliers remains the main goal for Molemab in Italy and worldwide.

Molemab is proud of its work and its values and retains them with passion and integrity.



molemab conventional abrasives

CONVENTIONAL AND SPECIAL ALUMINIUM OXIDE	
SYMBOL	TYPE
00A	REGULAR ALUMINIUM OXIDE
75A	SEMI-FRIABLE ALUMINIUM OXIDE
15A	MIX OF GREY AND WHITE ALUMINIUM OXIDE
51A	SPECIAL ALUMINIUM OXIDE MIX
09A	WHITE ALUMINIUM OXIDE
91A	SPECIAL ALUMINIUM OXIDE MIX
11A	PINK ALUMINIUM OXIDE
31A	RUBY ALUMINIUM OXIDE
43A	MONO-CRYSTALLINE ALUMINIUM OXIDE
14A	SPECIAL ALUMINIUM OXIDE MIX

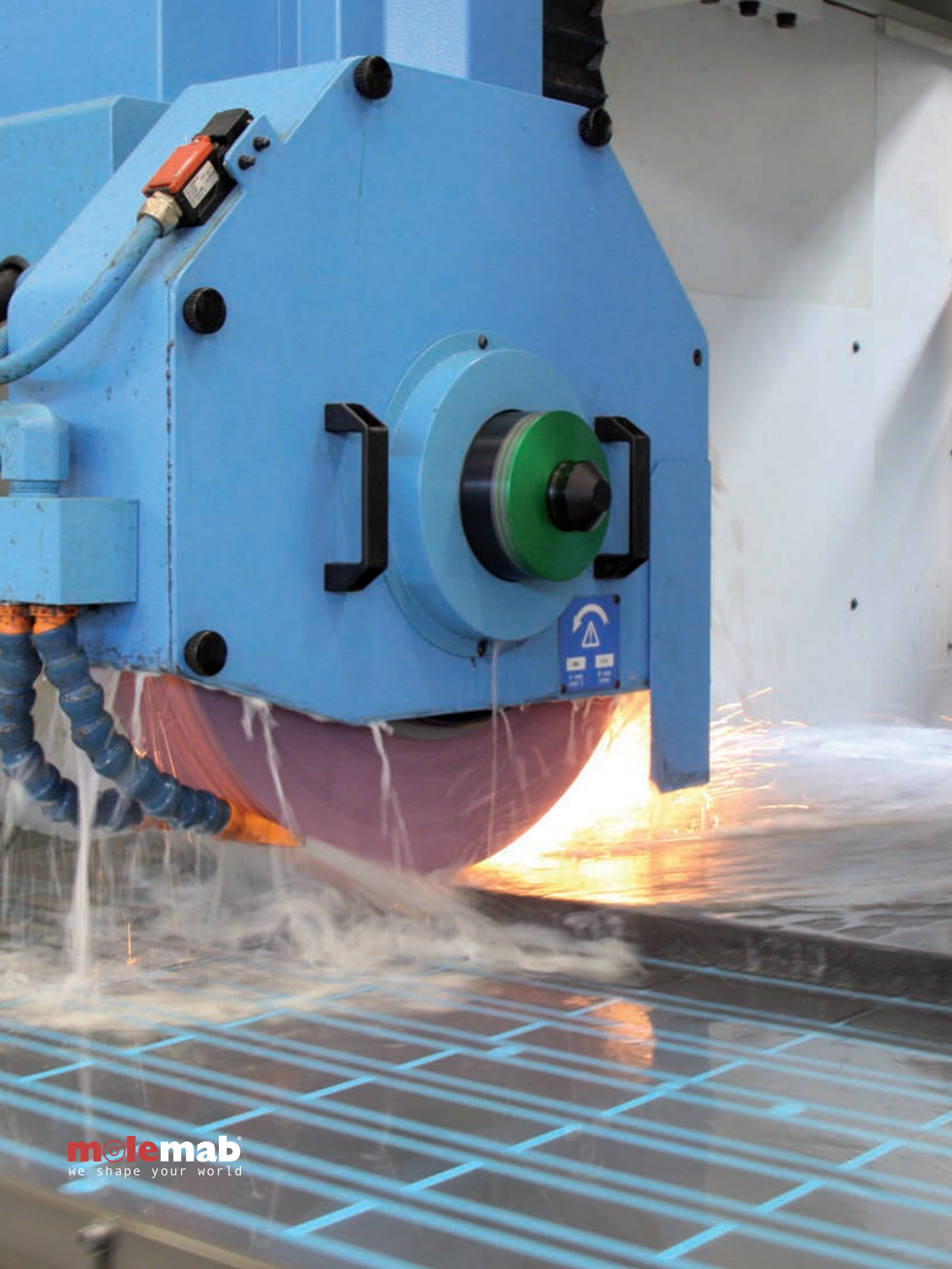
SILICON CARBIDE	
SYMBOL	TYPE
04C	BLACK SILICON CARBIDE
06C	MIX OF BLACK-GREEN SILICON CARBIDE
08C	GREEN SILICON CARBIDE

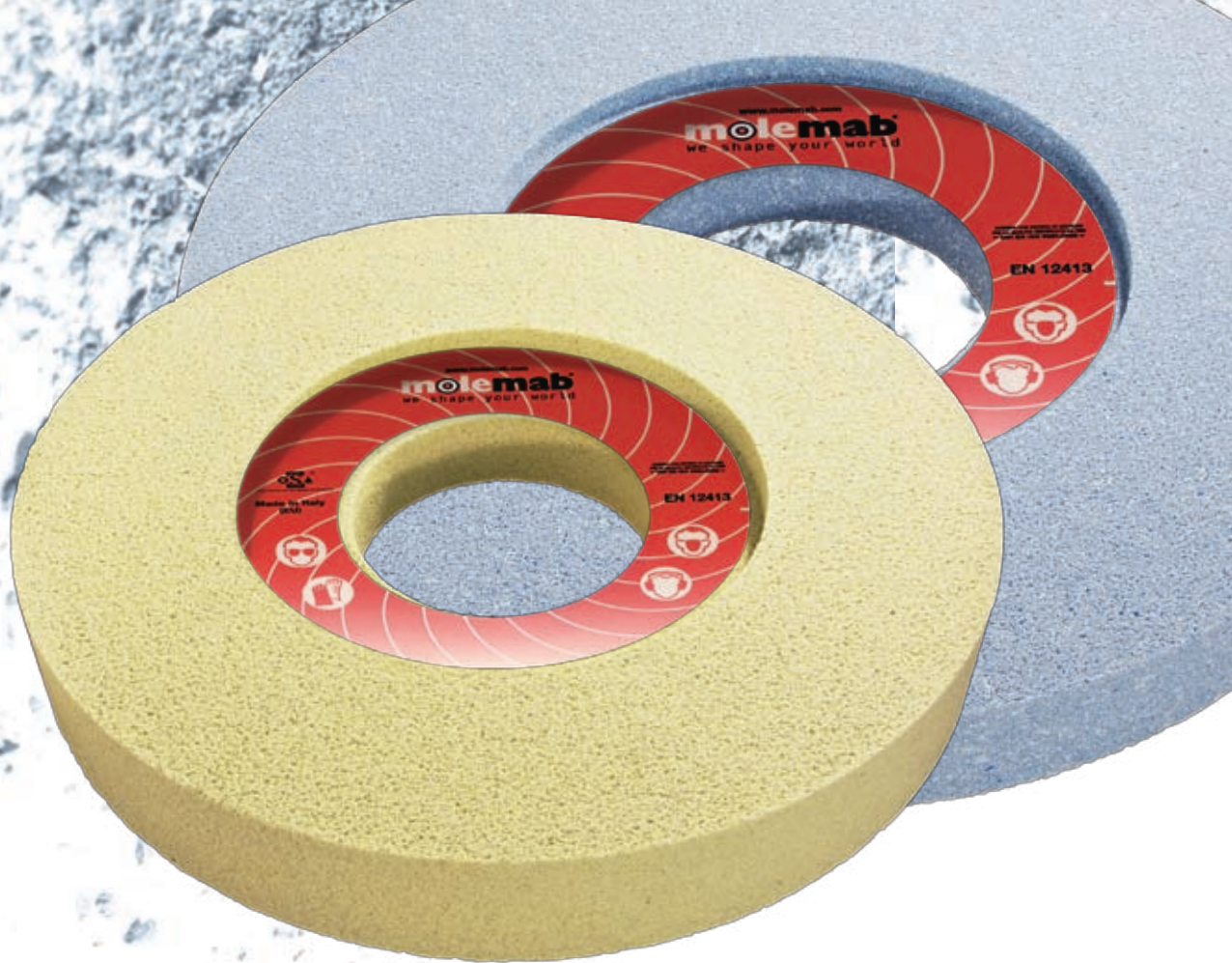
IN ADDITION TO THE ABRASIVE TYPES LISTED ABOVE, MOLEMAB USES OTHER SPECIAL FORMULATIONS, DESIGNED FOR SPECIFIC NEEDS.

molemab innovative abrasives

NEW GENERATION MICROCRYSTALLINE ALUMINIUM OXIDE ABRASIVES OFFER SIGNIFICANT IMPROVEMENTS IN THE GRINDING PROCESS.

NEW GENERATION MICROCRYSTALLINE ALUMINIUM OXIDE	
SYMBOL	TYPE
0MA	SPECIAL ARCTIC MIX
1SA - 1TA - 1HA	SPECIAL MICROCRYSTALLINE ALUMINIUM OXIDE
2SA - 2TA - 2HA	
3SA - 3TA - 3HA	
5SA - 5TA - 5HA	





SA - TA - HA ABRASIVES

Specifically designed for grinding high alloy steels. Their micro-crystalline grain structure provides the following benefits:

- > Higher stock removal compared to traditional abrasives
- > Best shape retention
- > Reduction of dressing cycles
- > Less overheating and improved maintenance of size tolerances of workpieces
- > Longer life
- > Significantly lower grinding times and costs

These benefits are the result of the microscopic crushing of the abrasive grain during grinding.

This ensures that cutting edges remain constantly exposed and reduce the occurrence of flattened grains in wheel/workpiece contact area.

OMA - ARCTIC

High porosity grinding wheels to increase lubrication levels.

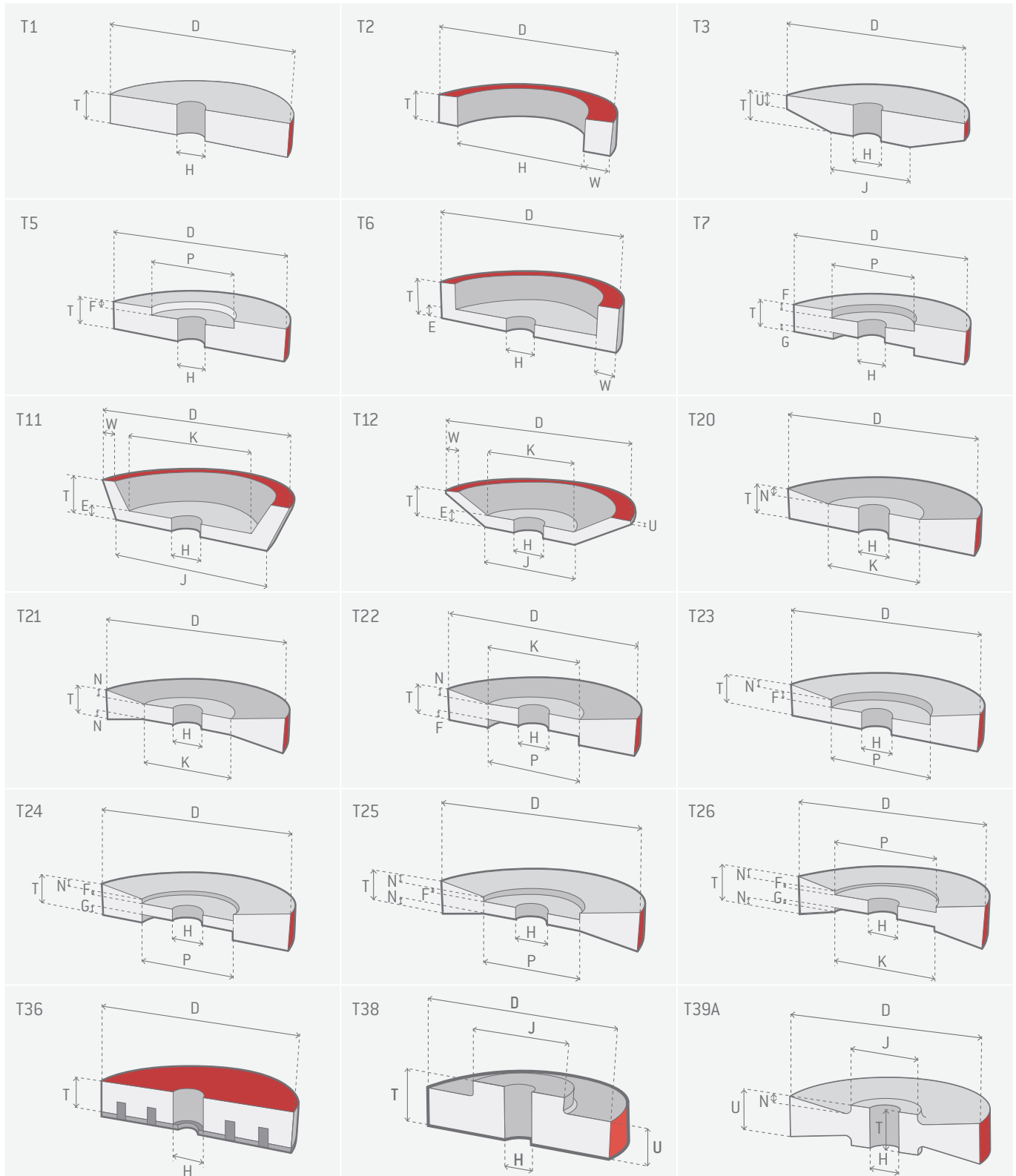
Made from a formulation of high-performance Aluminium Oxide with a special binding agent, these wheels are guaranteed to work cold to prevent overheating of the machining piece. Ideal for tangential grinding on alloy steels with hardness up to 64 HRC.

Offer shorter grinding times and higher shape retention compared to traditional grinding wheels.

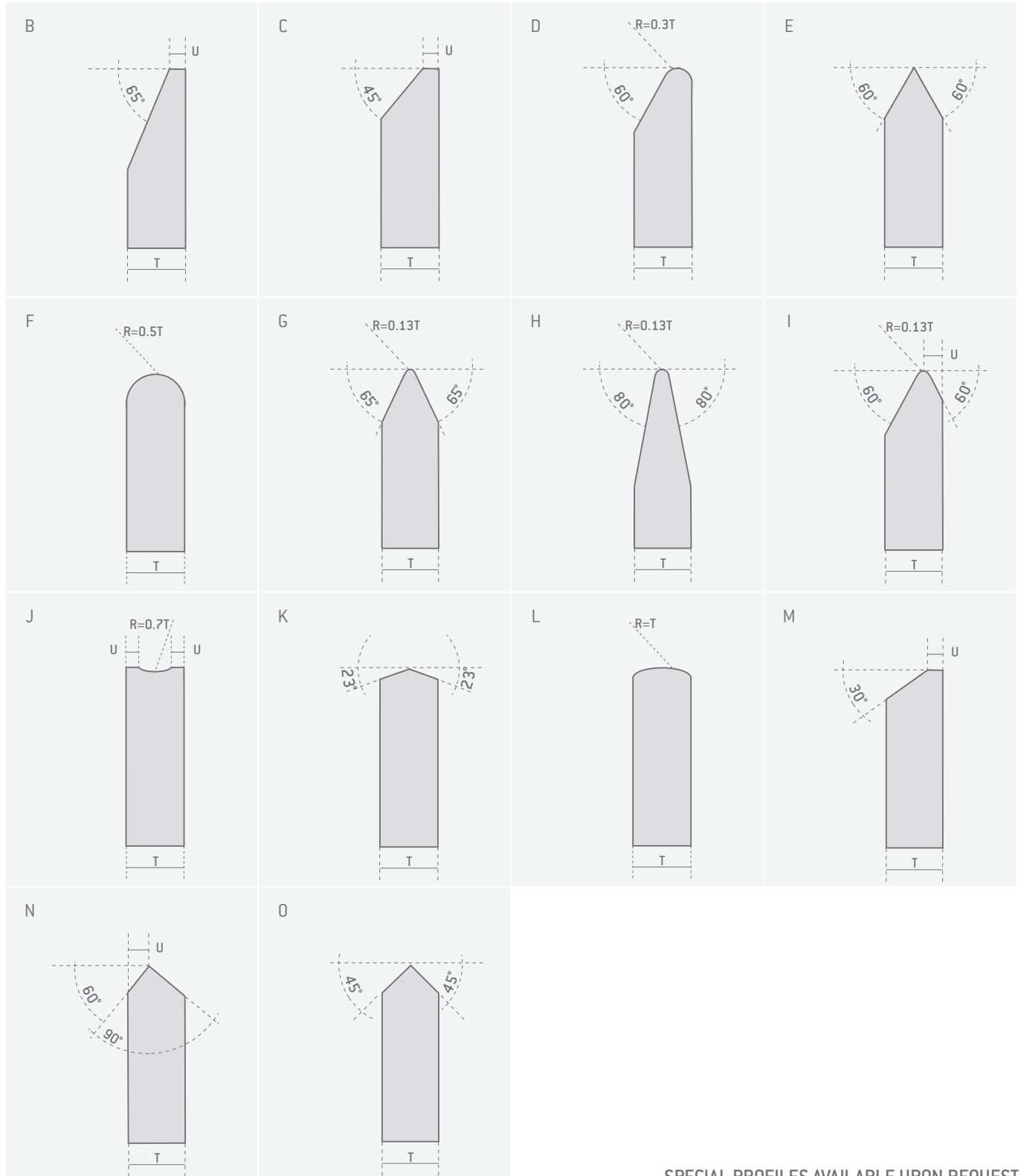
They significantly lower the thermal load in the wheel/workpiece contact area and reduce cycle times and dressing depth.

wheel shapes

ACCORDING TO FEPA STANDARDS



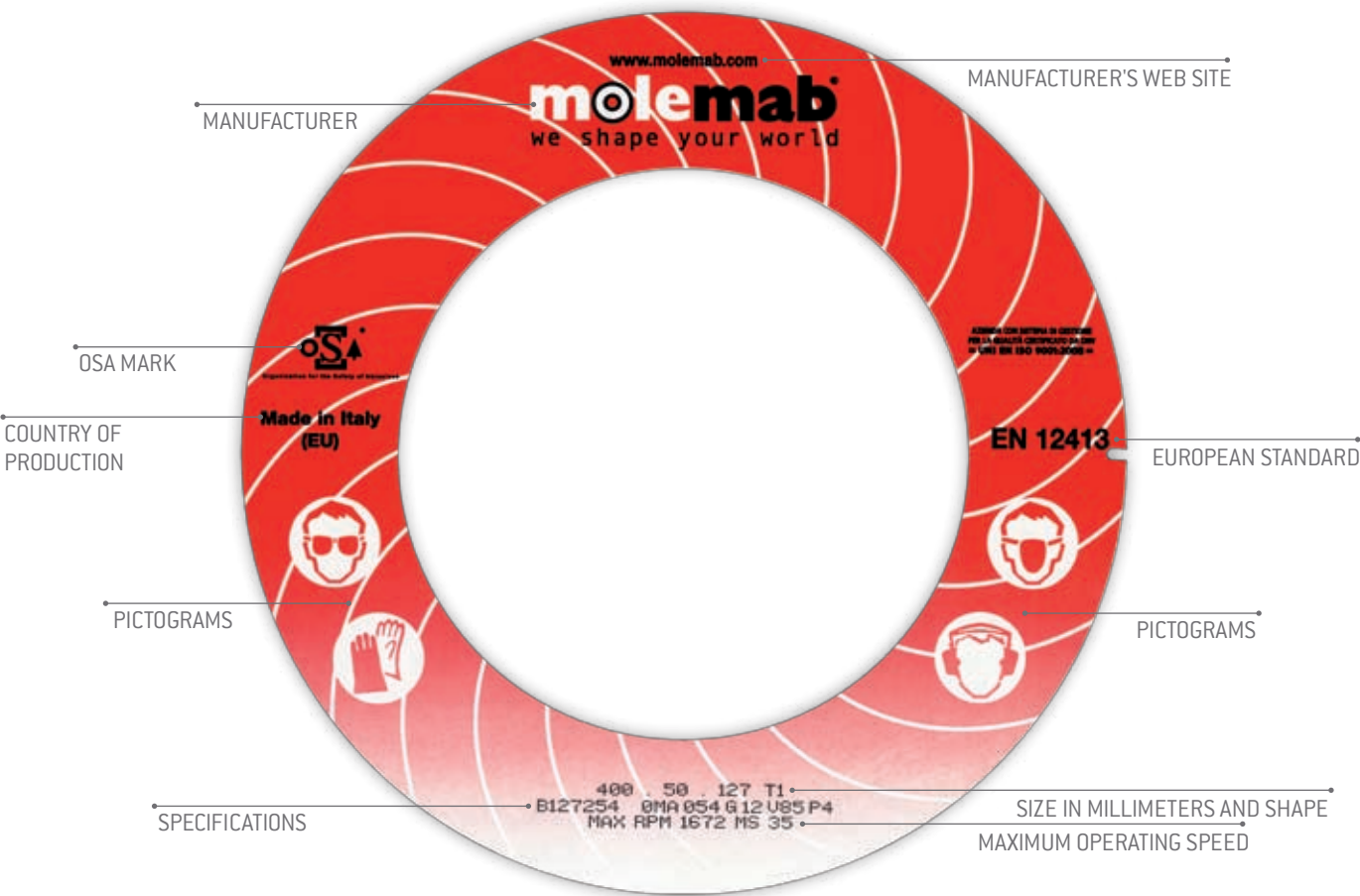
standard profiles



SPECIAL PROFILES AVAILABLE UPON REQUEST

molemab markings

IN COMPLIANCE WITH SAFETY STANDARDS, GRINDING WHEELS ARE MARKED AS DETAILED BELOW



specifications

OMA 054 G 12 V85 P4					
ABRASIVE TYPE	GRIT SIZE	HARDNESS	STRUCTURE	BOND TYPE	POROSITY
Regular Aluminium Oxide	Very coarse	Very soft/soft	Closed/open natural porosity	Vitrified for regular Aluminium Oxide	Porous
Silicon carbide	Coarse	Medium	Open induced porosity	Vitrified for silicon carbide	Super-porous
Micro-crystalline Aluminium Oxide	Medium	Hard	High induced porosity	Vitrified for microcrystalline Aluminium Oxide	
	Fine	Very Hard		Resinoid for Aluminium Oxide and Silicon Carbide	
	Very fine		Very high induced porosity	Rubber for regulating wheels	

molemab specification

ABRASIVE TYPE	GRIT SIZE	WHEEL HARDNESS	WHEEL STRUCTURE	BOND TYPE	POROSITY
CONVENTIONAL ALUMINIUM OXIDE	VERY COARSE	VERY SOFT	NATURAL CLOSED POROSITY	VITRIFIED FOR CONVENTIONAL ALUMINIUM OXIDE	INDUCED POROSITY
00A	8	C	3	V20	P1
75A	10	D	4	V30	P2
15A	12	E	5	V34	SUPER-POROUS
51A	COARSE	F	6	V36	P3
09A	14	SOFT	NATURAL OPEN POROSITY	V54	P4
91A	16	G	7	V58	
11A	20	H	8	V72	
31A	MEDIUM	I	HIGH INDUCED POROSITY	V84	
43A	30	J	11	V85	
14A	36	MEDIUM	12	V86	
SILICON CARBIDE	46	K	13	V92	
04C	54	L	14	VITRIFIED FOR MICROCRYSTALLINE ALUMINIUM OXIDE	
06C	60	M	VERY HIGH INDUCED POROSITY	V114	
08C	FINE	N	15	VK	
MICROCRYSTALLINE ALUMINIUM OXIDE	70	HARD	16	VITRIFIED FOR SILICON CARBIDE	
OMA	80	O	17	V01	
1SA - 1TA - 1HA	100	P	18	V11	
2SA - 2TA - 2HA	120	Q		V55	
3SA - 3TA - 3HA	VERY FINE	R		RESINOID FOR ALUMINIUM OXIDE AND SILICON CARBIDE	
5SA - 5TA - 5HA	150	VERY HARD		B	
	180	S		RUBBER FOR REGULATING WHEELS	
	220	T		R	
	240	U			
		V			
		Z			

EXAMPLE OF ORDER

SHAPE	SIZES (mm)	NOTE	SPEED	SPECIFICATION
T7	400x76x127	2 REC. 210x20/10 mm	35 m/sec	09A046FG12V34P3

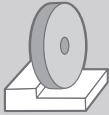
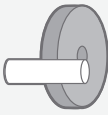
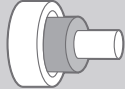
THE COLOURED TRIANGLE SHOWS
THE ACTUAL COLOUR OF THE WHEEL

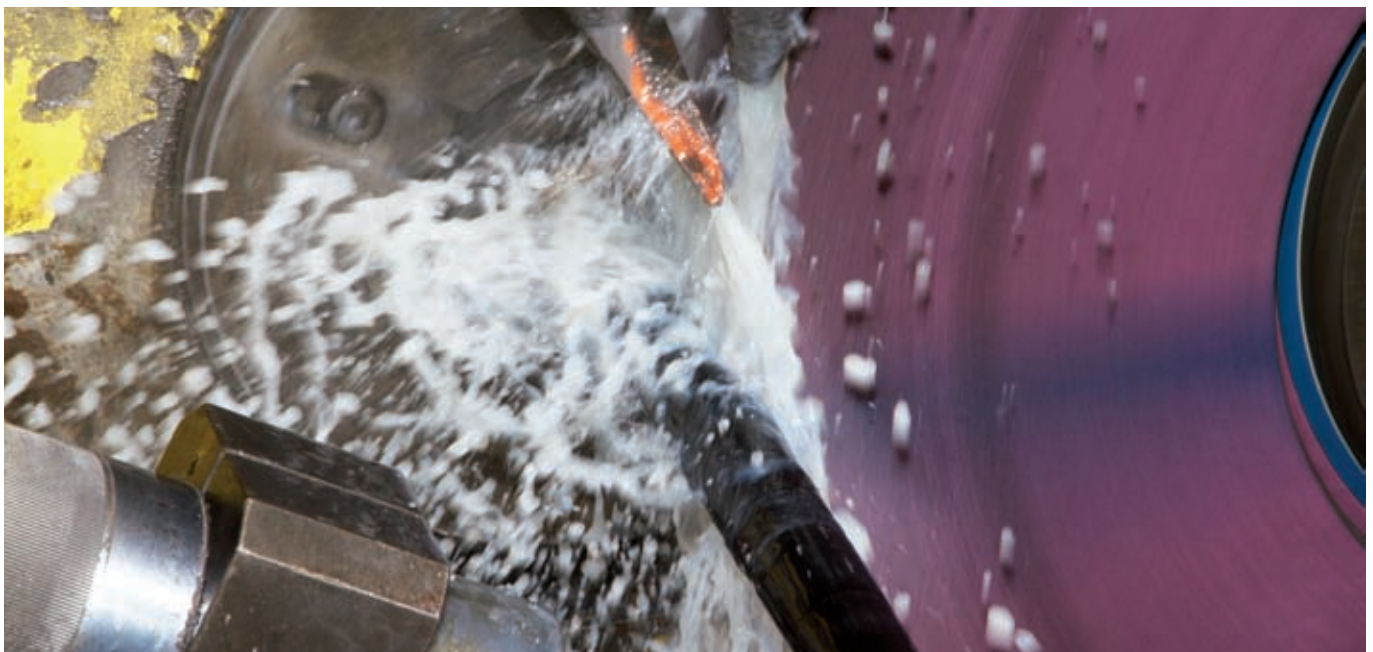
grinding wheel speed table

RPM AND M/SEC CORRESPONDING PERIPHERAL SPEED FOR SOME WHEEL DIAMETERS

mm	m/sec									
DIAMETER	20	25	32	35	40	45	50	63	80	100
6	64,000	80,000	102,000	112,000	128,000	143,500	160,000	201,000		
8	48,000	60,000	76,500	84,000	95,500	107,500	120,000	150,500	191,000	
10	38,200	48,000	61,200	67,000	76,500	86,000	95,500	120,500	153,000	153,000
13	29,500	36,800	47,100	51,500	58,800	66,200	73,500	92,600	118,000	147,000
16	23,900	29,850	38,200	41,800	47,800	53,750	59,700	75,200	95,500	120,000
20	19,500	23,900	30,600	33,500	38,200	43,000	47,800	60,200	76,500	95,500
25	15,300	19,100	24,500	26,800	30,600	34,500	38,200	48,200	61,200	76,500
32	11,950	14,950	19,100	20,900	23,900	27,000	30,000	37,600	48,000	60,000
40	9,550	11,950	15,300	16,750	19,100	21,500	23,900	30,100	38,200	47,800
50	7,650	9,550	12,550	13,400	15,300	17,200	19,100	24,100	30,600	38,200
63	6,100	7,600	9,750	10,650	12,150	13,650	15,200	19,100	24,300	30,350
80	4,800	6,000	7,650	8,400	9,550	10,750	12,000	15,100	19,100	23,900
100	3,850	4,800	6,150	6,700	7,650	8,600	9,550	12,100	15,300	19,100
125	3,100	3,850	4,900	5,350	6,150	6,900	7,650	9,650	12,250	15,300
150	2,550	3,200	4,100	4,500	5,100	5,750	6,400	8,050	10,200	12,750
180	2,150	2,700	3,400	3,750	4,250	4,780	5,350	6,700	8,500	10,650
200	1,950	2,400	3,100	3,350	3,850	4,300	4,800	6,050	7,650	9,550
230	1,700	2,100	2,700	2,950	3,350	3,750	4,200	5,250	6,650	8,350
250	1,550	1,950	2,450	2,700	3,100	3,450	3,850	4,850	6,150	7,650
300	1,300	1,600	2,050	2,250	2,550	2,870	3,200	4,050	5,100	6,400
350/356	1,100	1,400	1,750	1,950	2,200	2,460	2,750	3,450	4,400	5,500
400/406	960	1,200	1,550	1,700	1,950	2,150	2,400	3,050	3,850	4,800
450/457	850	1,100	1,400	1,500	1,700	1,910	1,700	2,700	3,400	4,250
500/508	765	960	1,250	1,350	1,550	1,720	1,950	2,450	3,100	3,850
600/610	640	800	1,050	1,150	1,300	1,450	1,600	2,050	2,550	3,200
660	580	725	930	1,050	1,200	1,300	1,450	1,850	2,350	2,900
750/762	510	640	820	895	1,050	1,150	1,300	1,650	2,050	2,550
800/813	480	600	765	840	960	1,075	1,200	1,550	1,950	2,400
900/914	425	535	680	750	850	955	1,100	1,350	1,700	2,150
1000/1016	385	480	615	670	765	860	960	1,250	1,550	1,950
1050/1067	365	455	585	640	730	820	910	1,150	1,500	1,850
1100/1120	350	435	560	610	695	785	870	1,100	1,400	1,750
1200/1220	320	400	510	560	640	720	800	1,050	1,300	1,600

average working parameters for conventional grinding wheels

PARAMETERS FOR ALUMINIUM OXIDE AND SILICON CARBIDE GRINDING WHEELS	OPERATION/MATERIAL	SURFACE GRINDING	EXTERNAL GRINDING	INTERNAL GRINDING
				
Peripheral speed of the grinding wheel (m/sec)		20+35 m/sec	30+50 m/sec	25+35 m/sec
Workpiece speed m/min $\frac{\text{m/min}}{3.14 \times D \text{ in m}} = \text{revolutions per minute}$	Roughing or unhardened	10+20 m/minute	20+50 m/minute	30+60 m/minute
	Finishing or hardened	5+10 m/minute	10+15 m/minute	20+40 m/minute
Ratio between peripheral wheel speed and peripheral workpiece speed	Roughing	-	40 ÷ 60	60 ÷ 70
	Medium removal	-	60 ÷ 80	70 ÷ 80
	Finishing	-	80 ÷ 120	80 ÷ 90
Transverse movement T = grinding wheel thickness	Roughing or unhardened	1/4 ÷ 1/2 di T	1/4 ÷ 1/2 di T	1/4 ÷ 1/2 di T
	Finishing or hardened	1/10 ÷ 1/5 di T	1/10 ÷ 1/5 di T	1/10 ÷ 1/5 di T
Depth of cut (measured on the radius for external and internal grinding)	Roughing or unhardened	0.01 ÷ 0.05 mm	0,01 ÷ 0.05 mm	0.005 ÷ 0.02 mm
	Finishing or hardened	0.005 ÷ 0.02 mm	0.005 ÷ 0.02 mm	0.005 ÷ 0.01 mm



grinding wheel safety



Molemab products are manufactured in compliance with international safety standards. To guarantee compliance to European Standards, Molemab is a member of FEPA, the European Abrasives Federation, and o.S.a. (Abrasive Safety Organization).

The United States apply the 1988 ANSI (American National Standard Institute) Safety Code Standard B7.1 and the 1970 OSHA (Occupational Health and Safety Act) Regulations.

Other European and non-European countries have their own regulations regarding safety and the use of grinding wheels.

The procedures described below must be carefully followed to minimize the risk of accidents.

1 - RECEPTION AND STORAGE

Handling: Grinding wheels must be handled with care, avoiding impacts and falls.

Visual check: Upon reception, the wheels must be checked visually.

Storage: Except for thin grinding wheels, all wheels must be stored vertically on suitable shelves. The storage location must be dry and not subject to significant or sudden temperature changes.

Expiry date: Resin bond wheels have a "Use Before Date" and must be stored for use in chronological order.

Vitrified bond wheels can be stored for an indefinite period of time.

2 - BEFORE MOUNTING

Visual check: Never use broken or cracked grinding wheels.

Sound test: A sound test must be carried out on new or partially used wheels.

Smaller wheels can be held on a finger or mounted on the spindle vertically, heavier wheels must be placed standing vertically on the floor.

Using a small non-metal mallet, hit the wheel at the right and at the left of the vertical centre line. If the sound is ringing and clear, the grinding wheel is free of cracks or breakages. A dull, hollow sound indicates the presence of cracks.

Machine conditions: All machine parts subject to wear must be in good condition and regularly checked.

3 - MOUNTING THE WHEEL

Carton labels: Always use carton labels that are slightly larger than the diameter of the flanges, to ensure that the clamping pressure of the flanges on the wheel is uniform.

Bore: The grinding wheel must fit the spindle correctly. Never force the wheel onto the spindle and do not use grinding wheels with a bore that is too large for the spindle.

Flanges: Carefully follow the instructions regarding type of flange and installation of the wheel.

Speed: Confirm the maximum working speed shown on the grinding wheel and check it against the speed of the machine. Never exceed the maximum speed specified by the manufacturer.

Safety cover: Check that all safety covers and guards are in good conditions to ensure containment of airborne fragments in case the wheel should break.

4 - OPERATION

Balancing: All wheels are systematically balanced by Molemab.

The first on-machine balancing must be carried out after mounting the grinding wheel with the arrow located at the bottom (unless otherwise specified).

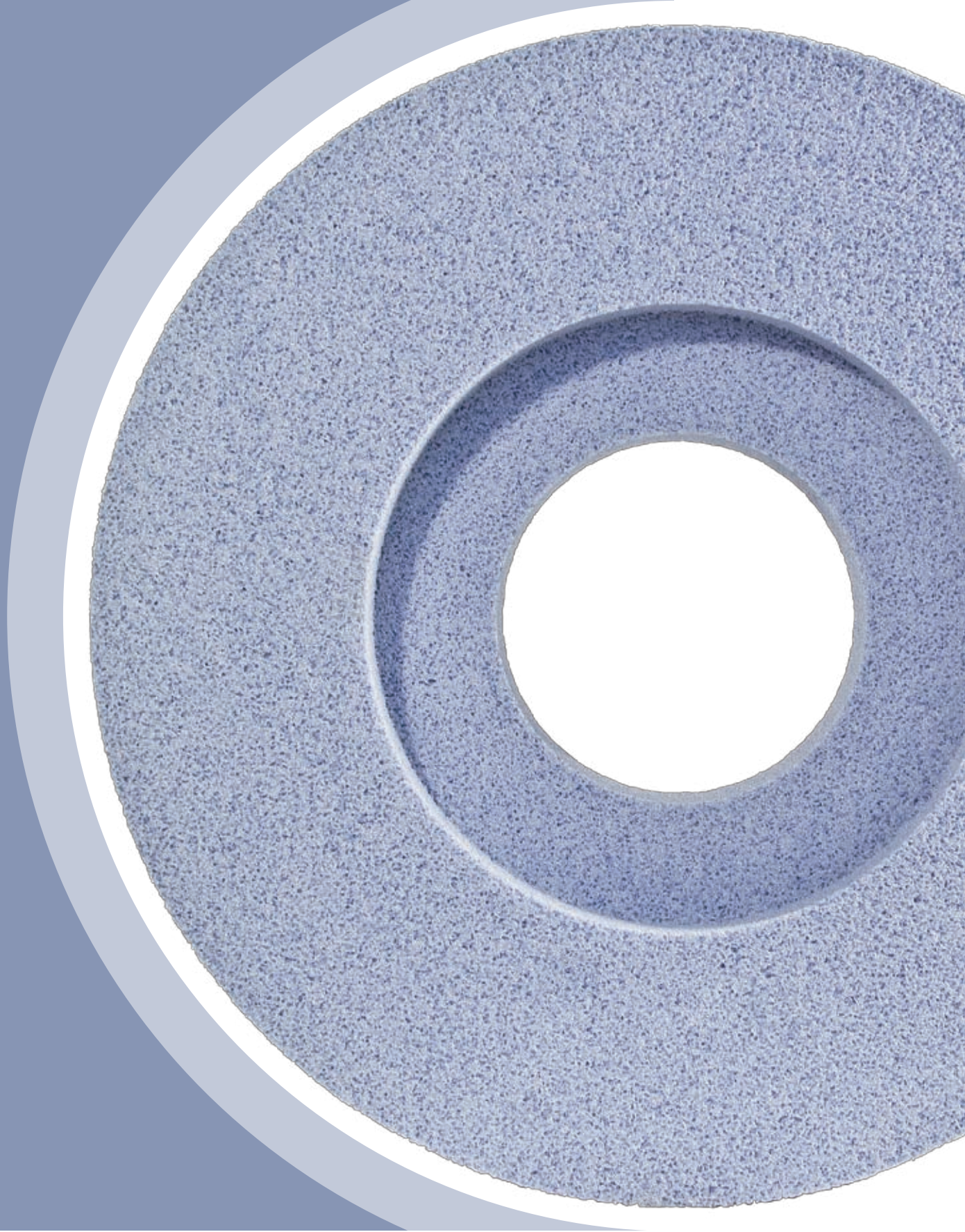
New generation grinding machines are often equipped with an automatic balancing system.

Starting the wheel: Before starting to remove material, the grinding wheel must be run at maximum speed for at least one minute.

During this operation, all personnel must remain in safe areas.

Dressing and sharpening the wheel: Dressing frequency depends on the type of operation.

ALL THE OPERATIONS DESCRIBED ABOVE MUST BE CARRIED OUT BY QUALIFIED PERSONNEL.



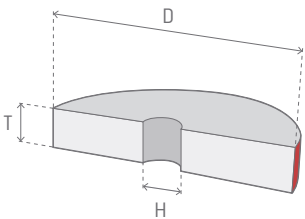
surface grinding

molemab[®]
we shape your world

horizontal spindle surface grinding wheels

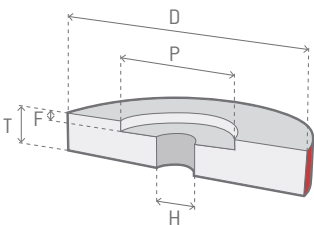
SHAPES AND SIZES			
SHAPE	D	T	H
T1	150	20	31.75 - 32
	180	6 - 8 - 10 - 13 - 16 - 20	31.75 - 32
	200	6 - 8 - 10 - 13 - 16 - 20	31.75 - 32
	225	20	50.8
	250	25	76.2
	300	25 - 32 - 40	76.2 - 127
	350	32 - 40 - 50	127
	400	40-50-60-76	127
	450	50 - 63 - 76	203.2
	508	50 - 63 - 80	203.2

SHAPE T1



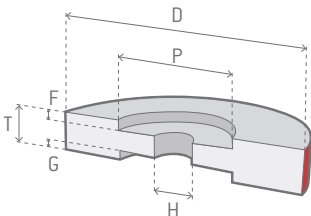
SHAPES AND SIZES					
SHAPE	D	T	H	P	F
T5	180	20	31.75 - 32	100	6
	200	25	31.75 - 32	110	10
	225	25	50.8	110	10
	250	32	76.2	125	12
	300	40	127	190	13
	300	50	127	190	13
	350	50	127	210	10
	400	50	127	210	10

SHAPE T5



SHAPES AND SIZES						
SHAPE	D	T	H	P	F	G
T7	300	50	76.2	155	10	10
	300	50	127	155	10	10
	350	50	127	210	10	10
	400	60	127	210	10	10
	400	76	127	210	20	10
	450	80	203.2	290	13	13
	508	100	203.2	300	15	15
	600	100	304.8	390	15	15

SHAPE T7



OTHER SIZES AVAILABLE ON REQUEST



horizontal spindle surface grinding wheels

SPECIFICATION					
MATERIAL	TYPE	WHEELS DIAM. < 250 mm		WHEELS DIAM. > 250 mm	
		SPECIFICATIONS	APPLICATION	SPECIFICATIONS	APPLICATION
STEEL	Mild steel Medium hardness steel	09A046H08V86	General use	11A036I10V86	General use
		09A060H08V86	Finishing		
	Hardened steel Alloy steel hardness < 58 HRC	09A046FG12V34P3	General use	09A046FG12V34P3	General use
		09A060FG12V34P3	Finishing	09A060FG12V34P3	Finishing
	Tool steels High alloy steel hardness > 58 HRC	0MA054G12V85P4 ARCTIC	General use	0MA054G12V85P4 ARCTIC	General use
		3TA054FV114PA	General use	3TA054FV114PA	General use
MOULD STEEL	Mould steel	09A120H08V86	Profiling with diaform		
STAINLESS STEEL	Stainless steel Acid and heat resistant stainless steel, Inconel, nimonic	09A060F13V92P3	Creep-feed turbine blades	09A060F13V92P3	Creep-feed turbine blades
		09A080F13V92P3	Creep-feed turbine blades	09A080F13V92P3	Creep-feed turbine blades
CAST IRON	Ductile iron Nodular cast iron Hardened cast iron	09A046FG12V34P3	General use	09A046FG12V34P3	General use
	Grey cast iron	08C060H10V11P		08C060H10V11P	
NON-FERROUS METALS	Aluminium, bronze, General use	08C060H10V11P	General use	08C060H10V11P	General use

SPECIFICHE MOLE T1-T5-T7 IMPEDIO SU RETTIFICHE IN PIANO AD ALBERO ORIZZONTALE

EXAMPLE OF ORDER

SHAPE	SIZES (mm)	NOTE	SPEED	SPECIFICATION
T7	400x76x127	2 REC. 210x20/10 mm	35 m/sec	09A046FG12V34P3

THE COLOURED TRIANGLE SHOWS
THE ACTUAL COLOUR OF THE WHEEL



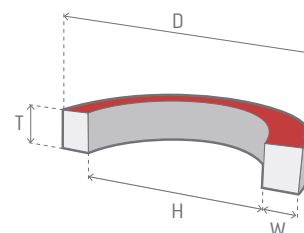


ring wheels for vertical spindle surface grinding

SHAPE T2

SHAPES AND SIZES			
SHAPE	D	T	H
T2	175	80	135
	200	100	160
	250	100	200

T2 WHEELS SPECIFICATIONS			
MATERIAL	TYPE	SPECIFICATION	APPLICATION
STEEL	Mild Steel Alloy steel hardness ≤ 58HRC	09A036G08V86	General use High removal
		09A046G08V86	General use
	Tool steels High alloy HSS steel hardness ≥ 58 HRC	09A036F12V34P3	General use
		09A046F12V34P3	Finishing

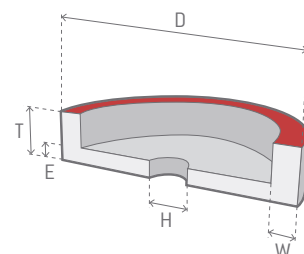


cylindrical cup wheels for vertical spindle surface grinding

SHAPE T6

SHAPES AND SIZES					
SHAPE	D	T	H	W	E
T6	178	78	78	19	19
	200	80	78	22	22

T6 WHEELS SPECIFICATIONS			
MATERIAL	TYPE	SPECIFICATION	APPLICATION
STEEL	Mild Steel Alloy steel hardness ≤ 58HRC	09A030H08V86	General use High removal
		09A036H08V86	General use
	Tool steels High alloy HSS steel hardness ≥ 58 HRC	09A036G10V34P	General use



OTHER SIZES AVAILABLE UPON REQUEST

EXAMPLE OF ORDER

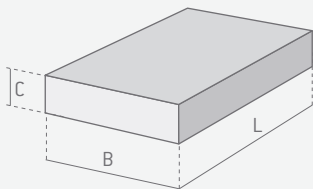
SHAPE	SIZES (mm)	NOTE	SPEED	SPECIFICATION
T6	200x80x78	W=22 E=22	35 m/sec	09A036G10V34P

THE COLOURED TRIANGLE SHOWS THE ACTUAL COLOUR OF THE WHEEL

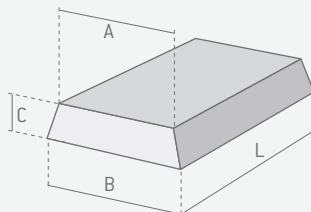


abrasive segments

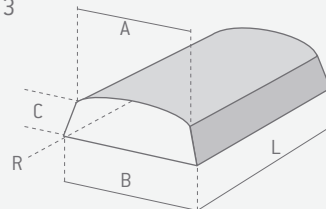
SHAPE 1



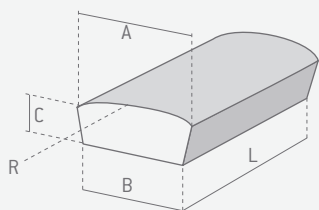
SHAPE 2



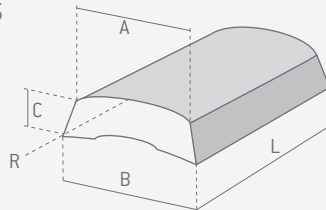
SHAPE 3



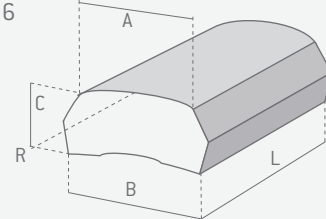
SHAPE 4



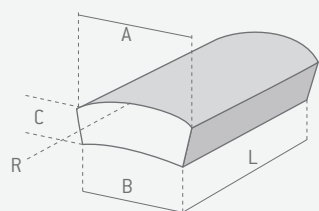
SHAPE 5



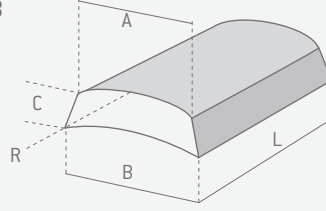
SHAPE 6



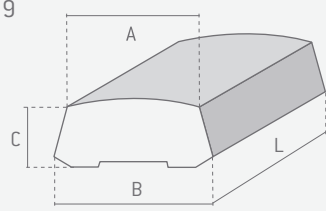
SHAPE 7



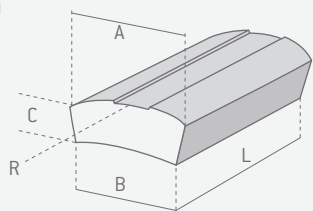
SHAPE 8



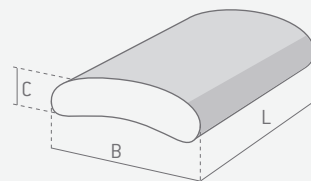
SHAPE 9



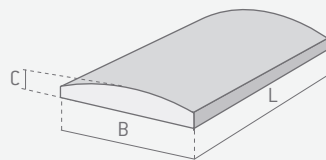
SHAPE 10



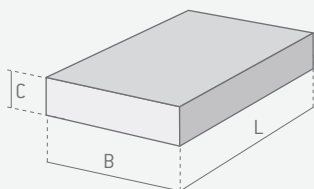
SHAPE 11



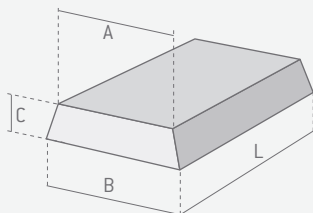
SHAPE 12



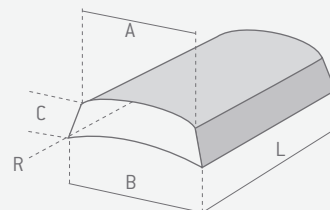
HOW TO IDENTIFY SIZES



$B \times C \times L$



$B/A \times C \times L$



$B/A \times C \times L$

Surface grinding segments

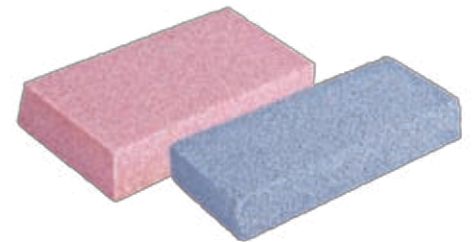
THE FOLLOWING TABLES LIST THE MOST COMMON ABRASIVE SEGMENT SHAPES AND SIZES. OTHER SPECIFICATIONS AND SHAPES ARE AVAILABLE UPON REQUEST.

SHAPES AND SIZES				
SHAPE	ST.	B	C	L
1	MAT	50	25	200
	218	60	25	150
	122C	65	20	110
	122	65	20	150
	36C	80	25	125
	36N	80	25	150

SHAPES AND SIZES					
SHAPE	ST.	B	A	C	L
2	197	60	54	22	110
	211	65	58	20	60
	201N	70	64	25	150
	219	103	94	38	180

SHAPES AND SIZES						
SHAPE	ST.	B	A	C	L	R
5	212	80	70	20	80	150
SHAPES AND SIZES						
SHAPE	ST.	B	A	C	L	R
7	153N	80	70	25	160	210
SHAPES AND SIZES						
SHAPE	ST.	B	A	C	L	R
8	129	50	45	16	90	

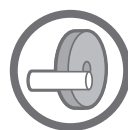
SPECIFICATIONS			
MATERIAL	TYPE	CONTINUOUS CUTTING	DISCONTINUOUS CUTTING
		SPECIFICATION	SPECIFICATION
STEEL	Mild Steel Low/medium hardness steel	09A036H08V86	11A024I08V86 11A030H09V86
	Hardened steel Alloy steel Hardness ≤ 58HRC	09A036G10V20P 09A030G10V92	11A036G08V86
	High alloy steels HSS tool steel Hardness ≥ 58 HRC	09A036F12V34P	3SA046F12V114P
STAINLESS	Unhardened stainless steel	09A024H09V86	11A024I08V86
	Hardened and alloyed stainless steel	09A36G09V86	11A036G09V86
CAST IRON	Steel cast iron, grey cast iron	09A024H09V86	11A024I08V86
	Engine head cast iron	06C036I07V11	
	Annealed and ductile iron		
CARBIDE	Tungsten carbide	08C060G08V01	
NON-FERROUS METALS	Aluminium, bronze, copper, non-ferrous alloys	08C046G05V01	
		08C046H05V11	



EXAMPLE OF ORDER

SHAPE	ST. (MOULD)	SIZES (mm)	SPECIFICATION
8	129	50/45 x 16 x 90	09A036F12V34P

THE COLOURED TRIANGLE SHOWS THE ACTUAL COLOUR OF THE WHEEL



external grinding

molemab[®]
we shape your world

external grinding wheels

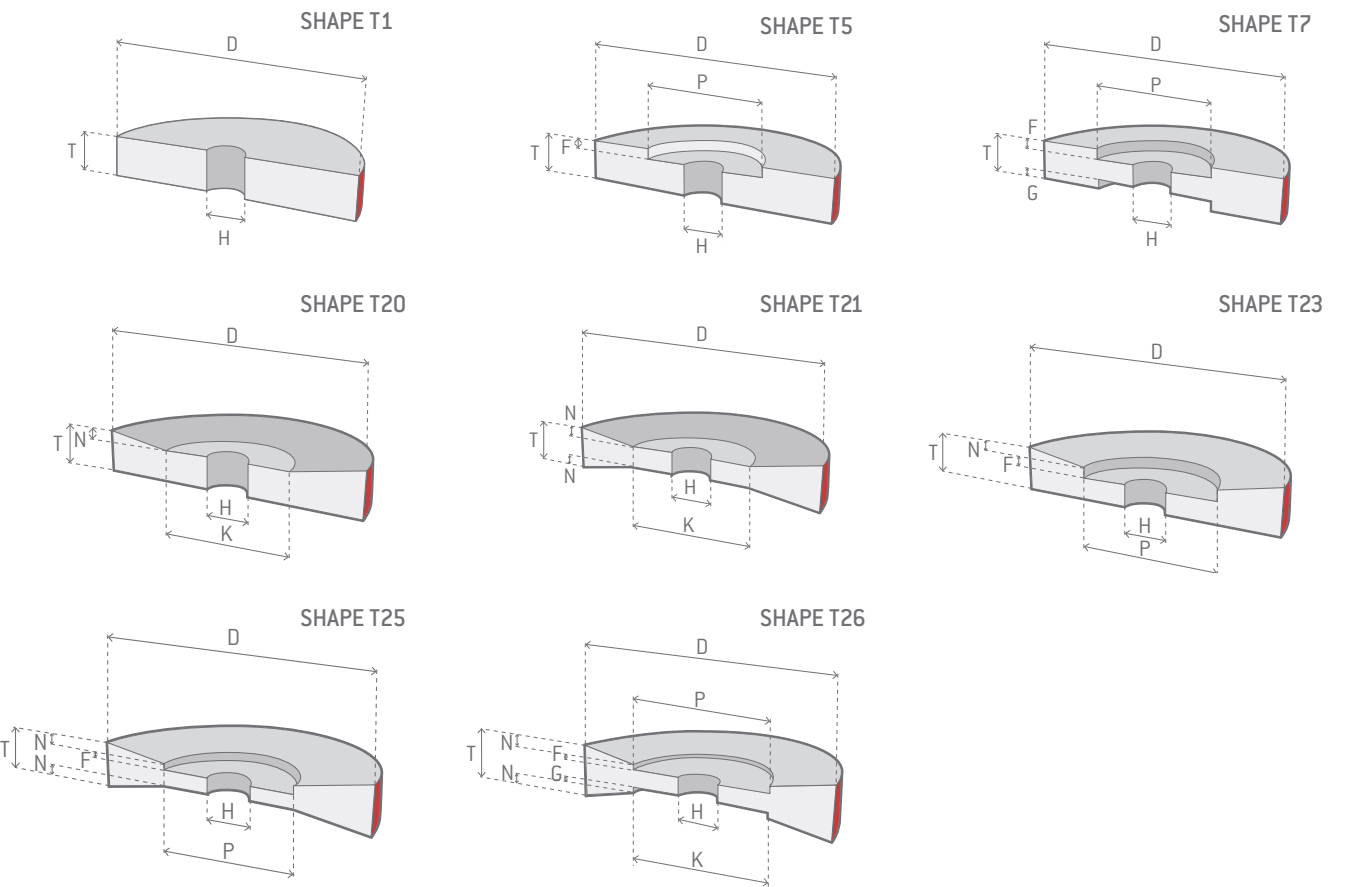
EXTERNAL GRINDING WHEELS ARE AVAILABLE WITH DIAMETERS RANGING FROM 300 TO 1200 MM AND BORES FROM 76.2 TO 508 MM. THE STANDARD SIZES ARE LISTED IN THE TABLES BELOW

SHAPES AND SIZES		
SHAPE	D	H
T1	300	76,2 - 127
	350	127
	400	127 - 203.2
	450	127 - 203.2
	508	203.2 - 304.8
	610	203.2 - 304.8
	760	304.8
	800	304.8
	915	304.8 - 508
	1060	304.8
	1200	

SHAPES AND SIZES					
SHAPE	D	H	P/K	F	N
T5 T20 T23	300	127	210	RECESS AND TAPER SIZE UPON REQUEST	
	350	127	210		
	400	203.2	290		
	450	203.2	290		
	508	304.8	390		
	610	203.2	290		
	760	304.8	390		
	800	304.8	410		
	915	304.8	410		
	1060				
	1200				

SHAPES AND SIZES						
SHAPE	D	H	P/K	F	G	N
T7 T21 T25 T26	300	127	210	RECESS AND TAPER SIZE UPON REQUEST		
	350	127	210			
	400	203.2	290			
	450	203.2	290			
	508	304.8	390			
	610	203.2	290			
	760	304.8	390			
	800	304.8	410			
	915	304.8	410			
	1060					
	1200					

WHEEL THICKNESS UPON REQUEST





external grinding wheels

PERIPHERAL SPEED 35 ÷ 50 M/SEC

SPECIFICATIONS					
MATERIAL	TYPE	WHEEL DIAMETER ≤ 508 mm		WHEEL DIAMETER > 508 mm	
		SPECIFICATION	APPLICATION	SPECIFICATION	APPLICATION
STEEL	Mild Steel Steel casting Case-hardening steel before tempering	15A046K07V86	Roughing	15A046K07V86	Roughing
		15A060K08V86	Finishing	15A060K08V86	Finishing
	Case-hardened tempered steel Alloy steel Hardness ≤ 60 HRC	09A046K07V86	Roughing	09A046K07V86	Roughing
		09A060K07V86	Finishing	09A060K07V86	Finishing
	Tool steel High alloy steel HSS* hardness ≥ 60 HRC	14A060J08V85	Roughing	14A060J08V85	Roughing
		3SA070I08V114 Ceramic Blue		3SA070I08V114 Ceramic Blue	
		14A080J08V85	Finishing	14A080J08V85	Finishing
		3SA100I08V114 Ceramic Blue		3SA100I08V114 Ceramic Blue	
STAINLESS STEEL ACID- AND HEAT-RESISTANT STEELS	Unhardened stainless steel	09A060J08V86	Roughing	09A060J08V86	Roughing
		09A080J08V86	Finishing	09A080J08V86	Finishing
	Tempered stainless steel	08C060J08V1	Roughing	08C060J08V1	Roughing
		08C080J08V1	Finishing	08C080J08V1	Finishing
	Inconel Nimonic	43A060K08V86	Roughing	43A054K08V86	Roughing
		43A080J08V86	Finishing	09A080J08V92	Finishing
CHROME	Chrome plating	09A100I08V86	Finishing	09A080I08V86	Finishing
CAST IRON	Grey cast iron	06C060I07V11	Roughing	06C054I07V11	Roughing
		06C080I07V11	Finishing	06C080I07V11	Finishing
	Annealed cast iron Ductile iron	43A060K08V86	Roughing	43A054K08V86	Roughing
		43A080J08V86	Finishing	43A070J08V86	Finishing
TITANIUM	Aeronautical titanium	08C060J08V11	Roughing	08C054K07V11	Roughing
		08C100I08V11	Finishing	08C080J08V11	Finishing
SINTERED MATERIALS	Tungsten carbide Ceramics**	08C046H10V11P	Roughing	08C054H08V11	Roughing
		08C080H08V11	Finishing	08C060H08V11	Finishing
NON-FERROUS METALS	Aluminium, copper, bronze, light alloys	08C046H10V11P	Roughing	08C046H10V11P	Roughing
		08C080H10V11P	Finishing	08C060H10V11P	Finishing
PLASTICS	Various plastic materials	08C046H10V11P	Roughing	08C046H10V11P	Roughing
		08C080H10V11P	Finishing	08C060H10V11P	Finishing
RUBBER	Rubber of various hardness	001AC1740V ***	General	001AC1740V***	General

[*] For HSS and high alloy steels, CBN grinding wheels are recommended (see specific catalogue)

[**] For tungsten carbide and ceramics, diamond wheels are recommended (see specific catalogue)

[***] Super-porous wheel: max speed 30 m/sec

FOR PLUNGE EXTERNAL GRINDING USE WHEELS 1 OR 2 STEPS FINER





shellac superfinishing and lapping wheels

PERIPHERAL SPEED 20 ÷ 30 M/SEC

SPECIFICATIONS

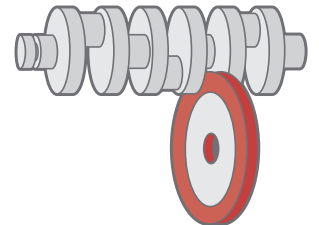
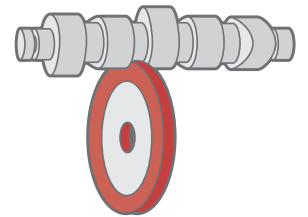
MATERIAL	TYPE	SPECIFICATION	APPLICATION
VARIOUS	Various	08C220 E3E	Superfinishing
		08C320 E3E	Mirror finishing

camshafts - crankshafts (conventional production grinding)

PERIPHERAL SPEED 50 ÷ 63 M/SEC

SPECIFICATIONS

MATERIAL	TYPE	SPECIFICATION	APPLICATION
CAMSHAFTS	Cams Hardened steel	75A060K07V86	Roughing
		3SA070K07V114	Roughing higher stock removal
	Chilled iron cams	75A060L07V86	Roughing
		3SA070L07V114	Roughing higher stock removal
	Journals tempered steel and cast iron	75A060Q07V86	General for wheels with thickness > 20 mm
		3SA070P07V114	
		75A060P07V86	General for wheels with thickness > 20 mm
		3SA070007V114	
CRANKSHAFTS	Hardened steel and cast iron	15A060K07V86	Roughing
		11A080J08V86	Finishing
		3SA070K07V114	General



FOR PRODUCTION GRINDING OF NEW GENERATION CAMSHAFTS AND CRANKSHAFTS VITRIFIED BOND CBN GRINDING WHEELS ARE USED
(SEE OUR SPECIFIC CATALOGUE FOR VITRIFIED CBN)

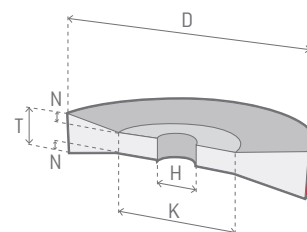
CONTACT OUR TECHNICAL DEPARTMENT TO IDENTIFY THE MOST SUITABLE SPECIFICATIONS FOR YOUR SPECIFIC APPLICATION.

crankshaft grinding wheels (reconditioning grinding)

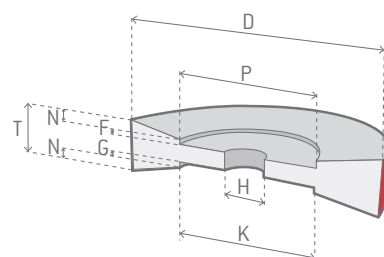
PERIPHERAL SPEED 35 M/SEC

SHAPES AND SIZES								
SHAPE	D	T	U	H	J/K	F	G	N
T39A	660	25	19	203.2	320			1.5
T39A	660	25	22	203.2	320			2
T39A	660	25	25	203.2	320			2.5
T21	660	32	-	203.2	320			4
T39A	710	25	19	203.2	320			1.5
T39A	710	25	22	203.2	320			1.5
T39A	710	25	25	203.2	320			2.5
T39A	710	28	28	203.2	320			3
T21	710	32	-	203.2	320			4
T26	710	38	-	203.2	320	4	4	1.5
T39A	760	25	19	203.2	320			1.5
T39A	760	25	22	203.2	320			1.5
T39A	760	25	25	203.2	320			2.5
T39A	760	28	28	203.2	320			3
T21	760	32	-	203.2	320			4
T26	760	38	-	203.2	320	4	4	1.5
T39A	812	25	19	203.2	320			1.5
T39A	812	25	22	203.2	320			1.5
T39A	812	25	25	203.2	320			2.5
T39A	812	28	28	203.2	320			3
T21	812	32	-	203.2	320			4
T26	812	38	-	203.2	320	4	4	1.5
T39A	915	25	22	304.8	400			1.5
T39A	915	25	25	304.8	400			2.5
T39A	915	28	28	304.8	400			3
T21	915	32	-	304.8	400			4
T26	915	38	-	304.8	400	4	4	1.5
T26	915	45	-	304.8	400	6	6	3
T26	915	50	-	304.8	400	7	7	3
T21	1016	32	-	304.8	400			4
T26	1016	38	-	304.8	400	4	4	1.5
T26	1016	45	-	304.8	400	6	6	3
T26	1016	50	-	304.8	400	7	7	3
T26	1016	63	-	304.8	400	13	13	3

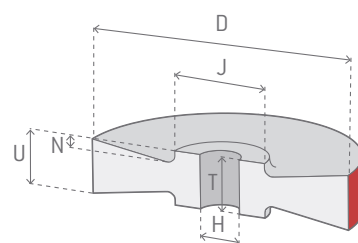
SHAPE T21



SHAPE T26



SHAPE T39A



EXAMPLE OF ORDER

SHAPE	SIZES (mm)	NOTE	SPEED	SPECIFICATION
T39A	760x25x203.2	J/K=320 N=2.5	35 m/sec	00A054LM06V86

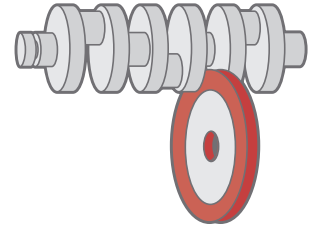
THE COLOURED TRIANGLE SHOWS THE ACTUAL COLOUR OF THE WHEEL



crankshaft grinding wheels (reconditioning grinding)

PERIPHERAL SPEED 35 M/SEC

SPECIFICATIONS				
MATERIAL	TYPE	DIAMETER \leq 610 mm	DIAMETER $>$ 610 mm	APPLICATION
		SPECIFICATION	SPECIFICATION	
CRANKSHAFTS	Hardened steel Cast iron	15A054K07V86	00A054LM06V86	General use
			15A054L06V86	High removal
	Hardened steel Chrome plated cast iron		09A054K06V92	High removal

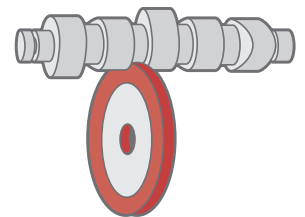
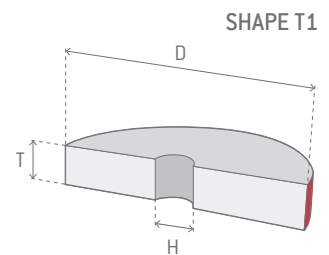


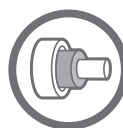
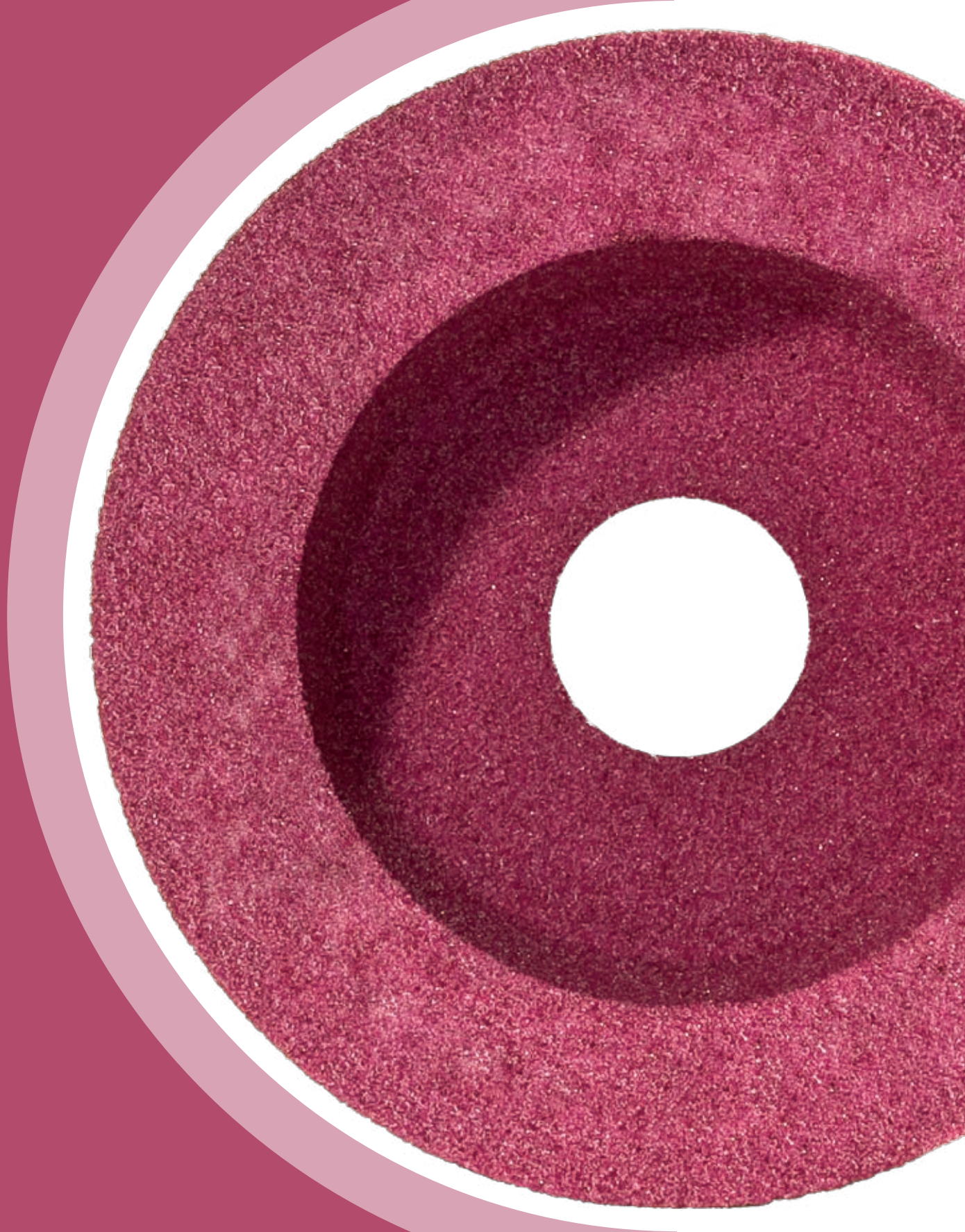
camshafts grinding wheels (reconditioning grinding)

PERIPHERAL SPEED 35 M/SEC

SHAPES AND SIZE			
SHAPE	D	T	H
T1	457	18-25	152.4

SHAPES AND SIZE			
MATERIAL	TYPE	SPECIFICATION	APPLICATION
CAMSHAFTS	Cast iron and hardened steel cams	51A080J08V86	General use





internal grinding

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wheels for internal grinding

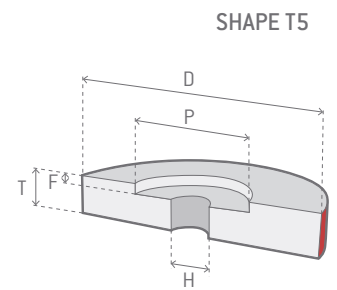
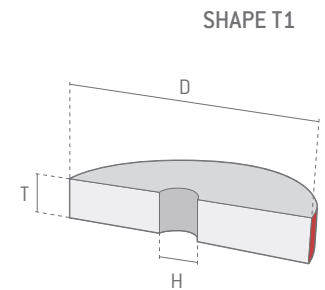
SHAPES AND SIZES				SHAPES AND SIZES					
SHAPE	D	T	H	SHAPE	D	T	H	P	F
T1	6	6 - 10	3	T5	13	13	6	8	6
	8	8 - 10 - 13	3		16	16	6	10	6
	10	6 - 10 - 13 - 20	3 - 4		20	20	6	13	10
	13	10 - 13 - 16 - 20	3 - 6		25	25	8	13	10
	16	10 - 16 - 20	6		32	20	10	13	10
	20	13 - 20 - 25 - 32	6		32	32	10	16	16
	25	13 - 16 - 20 - 25 - 32 - 40	6 - 8		40	32	10	20	16
	32	20 - 25 - 32 - 40	10		50	32	13	25	16
	40	20 - 25 - 32 - 40	10		63	40	20	32	20
	50	25 - 32 - 40	13 - 20		80	40	20	40	20
	63	25 - 32 - 40	13 - 20						
	80	25 - 32 - 40	20						

SPECIFICATIONS		
MATERIALS	TYPE	SPECIFICATION
STEEL	Mild steel Hardened steel ≤ 58 HRC	09A060K07V86
	Mild steel Hardened steel ≤ 58 HRC	31A060J08V86
	High alloy HSS steel hardness ≥ 58 HRC	5SA060K07V114
STAINLESS STEEL	300 and 400 series stainless, acid- and heat-resistant steel	06C046J08V01
CAST IRON	Grey cast iron Ductile iron	

EXAMPLE OF ORDER

SHAPE	SIZES (mm)	NOTE	SPEED	SPECIFICATION
T5	20x20x6	P=13 F=10	35 m/sec	31A060J08V86

THE COLOURED TRIANGLE SHOWS THE ACTUAL COLOUR OF THE WHEEL





centreless grinding

molemab[®]
we shape your world

operating wheels

SHAPES AND SIZES		
SHAPE	D	H
T1	300	127
	350	127
	400	203.2 - 152.4
	508	254 - 304.8
	610	304.8

SHAPES AND SIZES				
SHAPE	D	H	P	F
T5	300	127	190	To be specified $F_{max} = 1/2T$
	350	127	215	
	400	203.2	270	
	508	304.8	390	
	610	304.8	390	

SHAPE AND SIZES					
SHAPE	D	H	P	F	G
T7	300	127	190	To be specified $F+G_{max} = 1/2T$	
	350	127	215		
	400	203.2	270		
	508	304.8	390		
	610	304.8	390		

WHEEL THICKNESS UPON REQUEST

thickness 400, 508 and 610 supplied in 2 or 3 combined pieces

regulating wheels

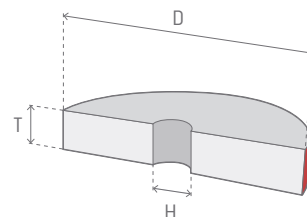
SHAPES AND SIZES		
SHAPE	D	H
T1	200	76.2
	250	127
	300	127
	350	127 - 203.2

SHAPES AND SIZES				
SHAPE	D	H	P	F
T5	200	76.2	115	To be specified
	250	127	190	
	300	127	190	
	350	127	215	
	350	203.2	270	

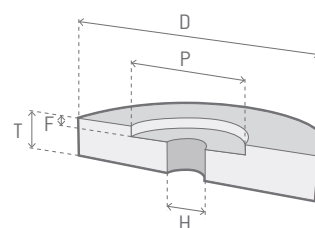
SHAPES AND SIZES					
SHAPE	D	H	P	F	G
T7	200	76.2	115	To be specified	
	250	127	190		
	300	127	190		
	350	127	215		
	350	203.2	270		

REGULATING WHEELS THICKNESS UPON REQUEST

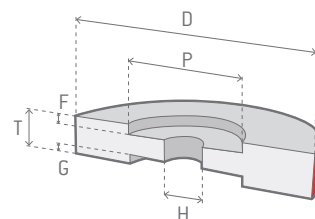
SHAPE T1



SHAPE T5



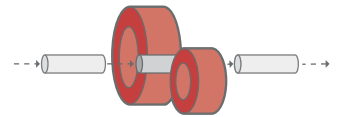
SHAPE T7





through-feed centreless grinding wheels

PERIPHERAL SPEED 35 ÷ 45 M/SEC

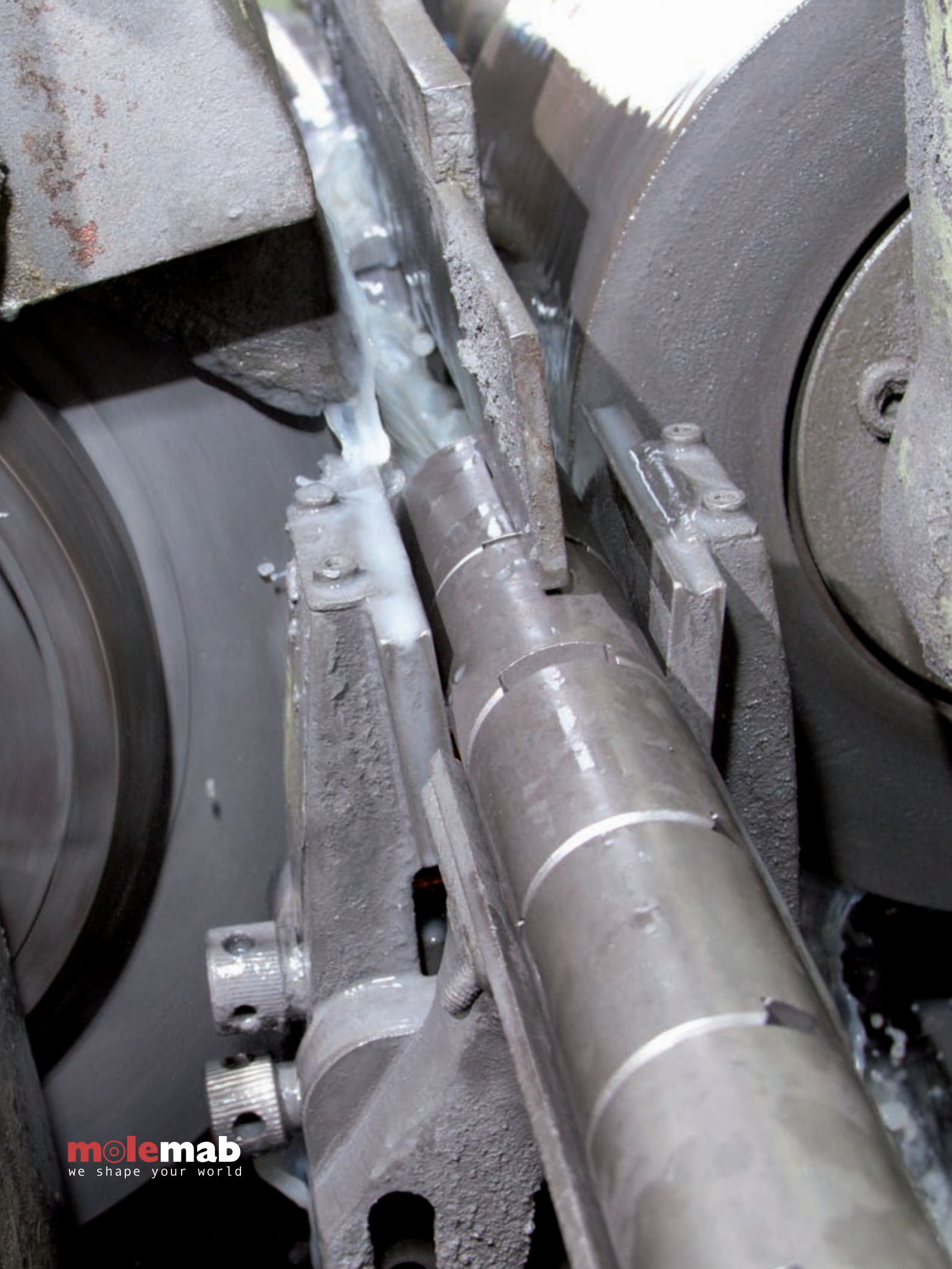


SPECIFICATIONS					
MATERIAL	TYPE	WHEEL DIAMETER ≤ 350 mm		WHEEL DIAMETER ≤ 350 mm	
		SPECIFICATION	APPLICATION	SPECIFICATION	APPLICATION
STEEL	Mild steel, Steel castings Case-hardened steel before tempering	00A070M07V86	General	00A060M07V86	General
	Case-hardened tempered steel Alloy steel hardness ≤60 HRC	15A080K07V86	General	15A060K07V86	General
	Tool steel High alloy steel HSS hardness ≥ 60 HRC	09A080J08V86	General	09A060J08V86	General
		3SA100J08V114	High removal, long life	3SA080J08V114	High removal, long life
		08C120K07V11	Finitura	08C100K07V11	Finitura
STAINLESS STEEL ACID- AND HEAT-RESISTANT STEELS	Martensitic stainless steels	75A060K07V86	General	75A060K07V86	General
	Austenitic stainless steels	08C080K07V11	General	08C060K07V11	General
	Stainless steel bars			07C060R06BX3	General
	Inconel, Nimonic	43A080K08V86	General	43A060K08V86	General
CHROME	Chrome plating	09A080J08V92	General	09A080I08V92	General
CAST IRON	Grey cast iron	08C080K07V11	General	08C060K07V11	General
	Annealed cast iron Ductile iron	15A080L07V86	General	15A060K07V86	General
TITANIUM	Aeronautical titanium	08C080K07V11	General	08C060K07V11	General
SINTERED MATERIALS	Tungsten carbide Ceramics	08C060H08V11	General	08C060H08V11	General
NON-FERROUS METALS	Aluminium - Copper Bronze - Light alloys	08C080H10V11P	General	08C060H10V11P	General
RUBBER	Hard rubber				
PLASTICS	Various plastic materials				

EXAMPLE OF ORDER

SHAPE	SIZES (mm)	SPEED	SPECIFICATION
T1	400x76X203.2	35 m/sec	09A080J08V92

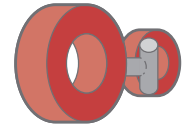
THE COLOURED TRIANGLE SHOWS
THE ACTUAL COLOUR OF THE WHEEL





plunge centreless grinding wheels

PERIPHERAL SPEED 35 ÷ 45 M/SEC



SPECIFICATIONS

MATERIAL	TYPE	WHEEL DIAMETER ≤ 350 mm		WHEEL DIAMETER ≥ 350 mm	
		SPECIFICATION	APPLICATION	SPECIFICATION	APPLICATION
STEEL	Mild steel, Steel castings Case-hardened steel before tempering	75A120L07V86	General	75A080L07V86	General
	Case-hardened tempered steel Alloy steel hardness ≤ 60 HRC	09A120L07V86	General	09A100L07V86	General
	Tool steel High alloy steel HSS hardness ≥ 60 HRC	09A120J08V86	General	09A100J08V86	General
		3SA120J08V114	High removal, long life	3SA100J08V114	High removal, long life
		08C120K07V11	Finishing	08C100J07V11	Finishing
STAINLESS STEEL ACID- AND HEAT-RESISTANT STEELS	Martensitic stainless steels	75A080L07V86	General	75A060K07V86	General
	Austenitic stainless steels	08C120J07V11	General	08C100J07V11	General
	Inconel, Nimonic	43A120K08V86	General	43A080K08V86	General
	Chrome plating	09A120I08V92	General	09A080I08V92	General
CAST IRON	Grey cast iron	08C120J07V11	General	08C080K07V11	General
	Annealed cast iron Ductile iron	75A120K07V86	General	75A080K07V86	General
TITANIUM	Titanium bolts and rivets	08C120N07V11	General	08C120N07V11	General
SINTERED MATERIALS	Tungsten carbide Ceramics	08C080H08V11	General	08C060H08V11	General
NON-FERROUS METALS	Aluminium - Copper Bronze - Light alloys	08C120H10V11P	General	08C080H10V11P	General
RUBBER	Hard rubber				
PLASTICS	Various plastic materials				

EXAMPLE OF ORDER

SHAPE	SIZES (mm)	SPEED	SPECIFICATION
T1	400x76X203.2	35 m/sec	09A080J08V92

THE COLOURED TRIANGLE SHOWS
THE ACTUAL COLOUR OF THE WHEEL

plunge and through-feed regulating wheels

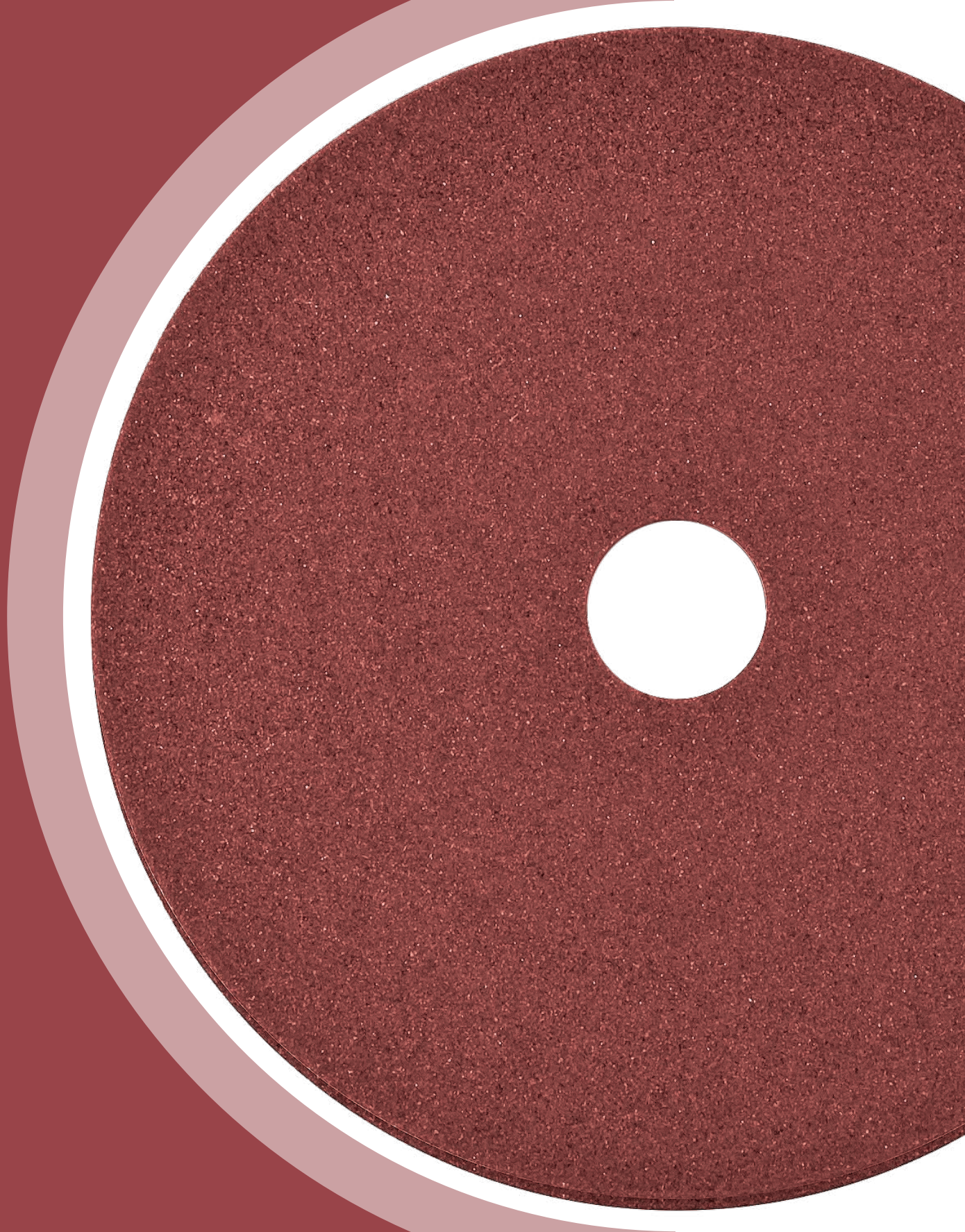
PERIPHERAL SPEED 35 M/SEC

SPECIFICATIONS		
GRINDING OPERATION	SPECIFICATION	APPLICATION
THROUGH-FEED CENTRELESS PLUNGE CENTRELESS	00A080 RR Rubber bond	General
	00A120 RR	Finishing
	00A180 SR	Superfinishing
	00A080 SV Ceramic bond	Only for specific production of pieces with diameter ≤ 16 mm



EXAMPLE OF ORDER

SHAPE	SIZES (mm)	SPECIFICATION
T1	300x76X127	00A120 RR



tool sharpening

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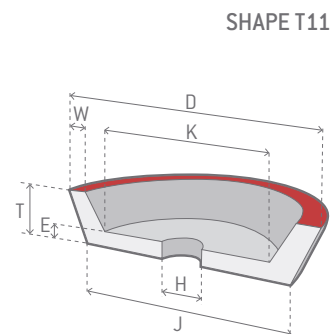
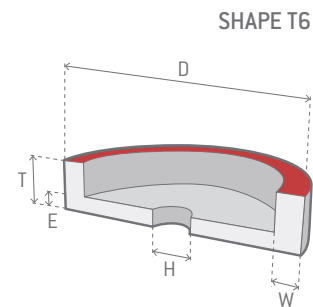
flaring and cylindrical cup wheels

PERIPHERAL SPEED 35 M/SEC

SHAPES AND SIZES					
SHAPE	D	T	H	W	E
T6	80	40	20	10	10
	100	50	20 - 32	10	10
	125	50	32	10	10
	150	50	32	10	16
	150	63	32	16	16
	200	40	76.2	40	13

SHAPES AND SIZES							
SHAPE	D	T	H	W	E	J	K
T11	80	32	20	8	10	57	46
	100	40	20 - 32	8	10	75	65
	125	45	32	8	10	96	78
	150	50	32	10	13	114	95

SPECIFICATIONS				
MATERIAL	TYPE	SPECIFICATION	APPLICATION	REMARKS
STEEL	HSS Alloy steels	09A046K06V86	Roughing General use	
		09A060K06V86	Finishing General use	
		3HA060K07V114	General use cool grinding without deformation	
		11A080K06V92	General use	Only for wheels T6 - D100
		31A070J07V86	General use	Only for wheels T6 - D100
CARBIDE	Tungsten carbide tools	08C060J08V01	Roughing	
		08C080J08V01	Finishing	



EXAMPLE OF ORDER

SHAPE	SIZES (mm)	NOTE	SPEED	SPECIFICATION
T6	100x50x20	W=10 E=10	35 m/sec	31A070J07V86

THE COLOURED TRIANGLE SHOWS
THE ACTUAL COLOUR OF THE WHEEL



tapered and dish wheels for dry application

PERIPHERAL SPEED 35 M/SEC

SHAPES AND SIZES

SHAPE	D	T	H	U	J
T3	125	8	20 - 32	2	63
	150	8	20 - 32	2	75

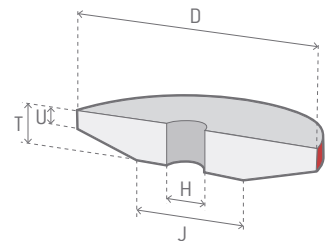
SHAPES AND SIZES

SHAPE	D	T	H	W	U	E	J=K
T12	80	10	13	4	2	6	31
	100	13	20	5	3	7	36
	125	14	20 - 32	6	3	7	61
	150	16	20 - 32	8	3	9	66
	200	19	32	10	3	12	90
	200	32	32	10	3	12	90

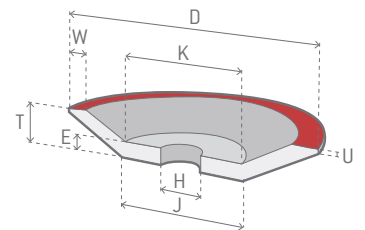
SPECIFICATIONS

MATERIAL	TYPE	SPECIFICATION	APPLICATION
STEEL	HSS and alloy steels	09A060J08V86	General use
		3HA060K07V114	General use
CARBIDE	Tungsten carbide tools	08C060J08V01	General use

SHAPE T3



SHAPE T12

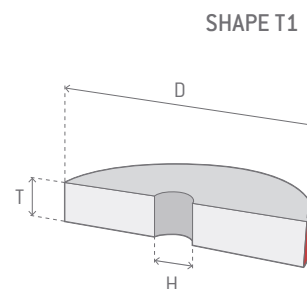


grinding wheels for circular saw sharpening

SPEED 35 AND 60 M/SEC

SHAPES AND SIZES			
SHAPE	D	T	H
T1	150	1.0 - 1.5 - 2 - 2.5 - 3 - 3.5 - 4 - 4.5 - 5 - 6	32
	175	2 - 3 - 4 - 6 - 8	51
	200	1.0 - 1.5 - 2 - 2.5 - 3 - 3.5 - 4 - 4.5 - 5 - 6 - 8 - 10	32
	250	6 - 8 - 10 - 13	32

SPECIFICATION			
MATERIAL	TYPE	SPECIFICATION	APPLICATION
CIRCULAR SAWS	HSS and Stellite	11A080N05V86	For very narrow toothed saws wheel thickness ≤ 3.5 mm
		11A080M06V86	For medium toothed saws wheel thickness 4 - 5 mm
		11A054M06V86	For wide toothed saws wheel thickness ≥ 6 mm
		09A080K08V20	General use high-speed grinding wheels

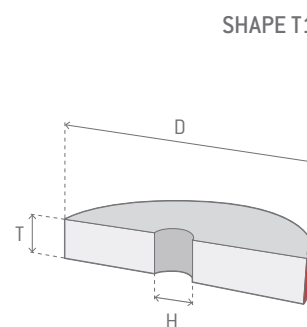


grinding wheels for band saw sharpening

PERIPHERAL SPEED 35 M/SEC

SHAPES AND SIZES			
SHAPE	D	T	H
T1 T1 BD	150	6 - 8 - 10	20 - 32
	200	6 - 8 - 10 - 13	32
	225	8 - 10 - 13	32
	250	8 - 10 - 13	32
	300	16 - 20	32

SPECIFICATION			
MATERIAL	TYPE	SPECIFICATION	APPLICATION
BAND SAWS	High alloy steels HSS and Stellite	09A054M06V86	General use
		09A054L06V86 1 resin hardened edge	General use improved profile* retention
		11A054M06V86	General use good profile retention
		11A054L06V86 1 resin hardened edge	General use improved profile* retention



T1-BD = SHAPE T1 WITH
RESIN HARD SIDE

* BEST FOR STELLITE SAWS

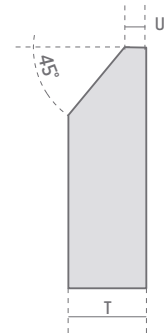


profiled wheels for band saw sharpening

PERIPHERAL SPEED 35 M/SEC

SHAPES AND SIZES			
SHAPE	D	T	H
T1-PR Profile C - 45°	150	6 - 8	20 - 32
	200	6 - 8 - 10	20 - 32
	250	10 - 13	32
SPECIFICATION			
MATERIAL	TYPE	SPECIFICATION	APPLICATION
CONVEN- TIONAL BAND SAWS	Medium-low hardness steel	15A060N05V12	General use
		09A054M06V86	General use best removal

SHAPE T1 PROFILE C-45°

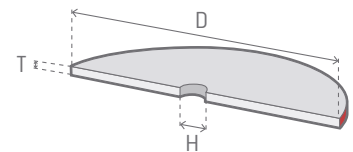


thin wheels for circular saw sharpening

SPEED 50 M/SEC

THIN RESIN BOUNDED DISCS FOR SHARPENING CIRCULAR SAWS WITH VERY NARROW TEETH (SPEED 50 M/SEC)			
SHAPE	D	T	H
T1	120	2	51
	150	1.5 - 2 - 3	20 - 32
	175	2 - 3	51
	200	1.5 - 2 - 3 - 4	32
SPECIFICATIONS OF THIN RESIN BOUNDED DISCS FOR SHARPENING AND GROOVING CIRCULAR SAWS WITH VERY NARROW TEETH (SPEED 50 M/SEC)			
MATERIAL	TYPE	ABRASIVE	APPLICATION
CIRCULAR SAWS WITH NARROW TEETH	Hardened steel - HSS	17A060P05BA	General use
		17A060N05BA	General use quick removal

SHAPE T1



EXAMPLE OF ORDER

SHAPE	SIZES (mm)	NOTE	SPEED	SPECIFICATION
T1-PR	150x6x20	PROFILE C-45°	35 m/sec	15A060N05V12

THE COLOURED TRIANGLE SHOWS
THE ACTUAL COLOUR OF THE WHEEL

boron carbide sticks dressing

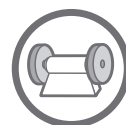
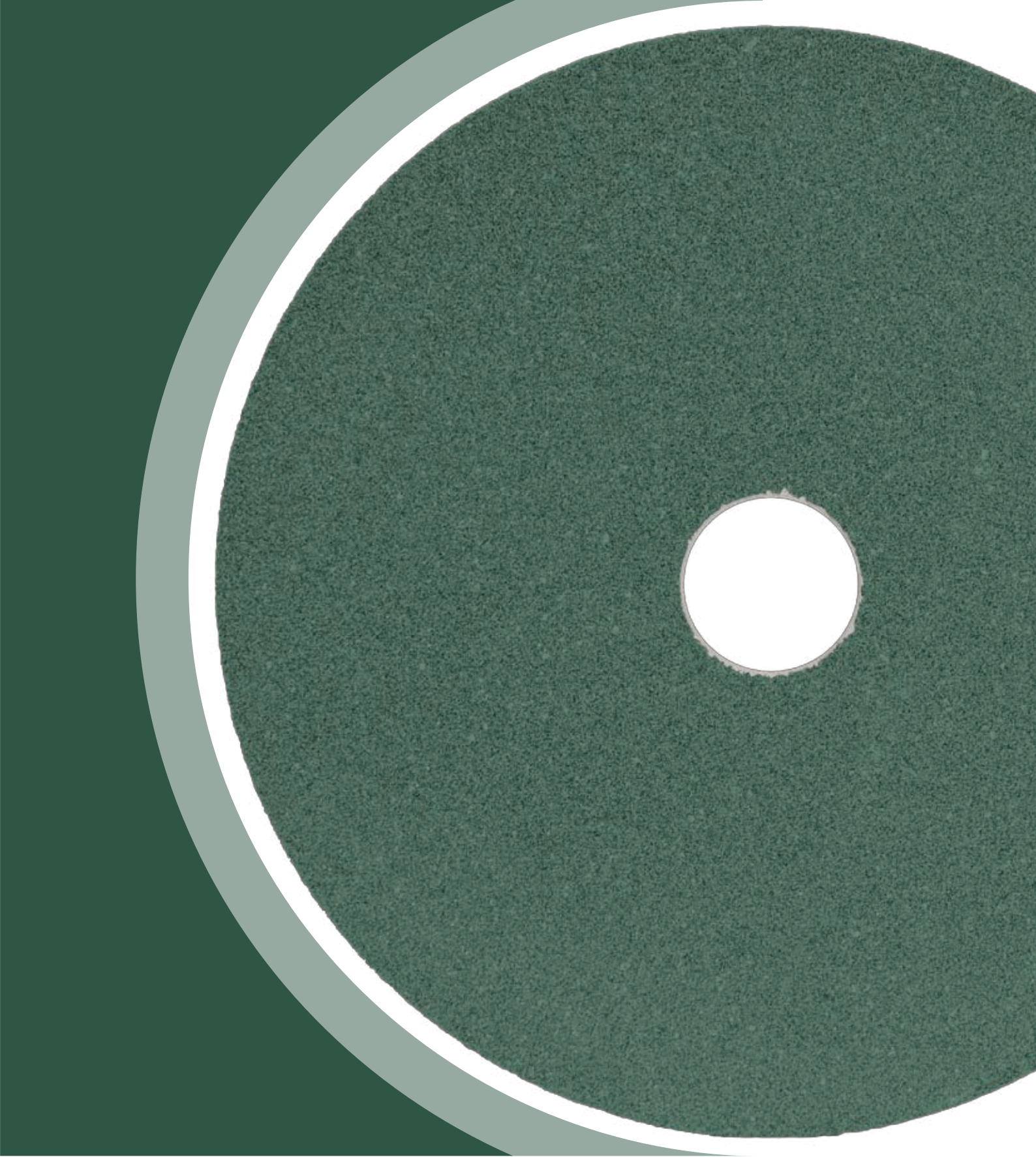
SHAPES AND SIZES			
SHAPE	HEIGHT	WIDTH	LENGTH
RECTANGULAR	5	13	76



Plastic bushing for grinding wheel bores

SHAPES AND SIZES		
D	H	T
16	13	6
20	13	6
20	16	6
25	13	6
25	16	6
25	20	6
30	20	6
30	25	6
31.75	12.7	6
31.75	13	6
31.75	15.87	6
31.75	16	6
31.75	20	6
31.75	25	6
32	10.05	6
32	12.75	6
32	13	6
32	16	6
32	19	6
32	20	6
32	23	6
32	25	6
35	31.75	6
38	20	6
38	32	6





bench wheels

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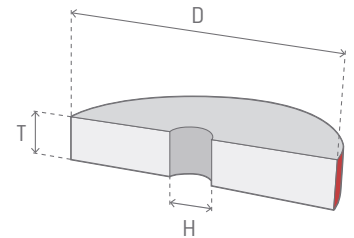
wheels for pedestal grinders

PERIPHERAL SPEED 35 M/SEC

SHAPES AND SIZES			
SHAPE	D	T	H
T1	125	16 - 20	13 - 20 - 32
	150	16 - 20 - 25	16 - 20 - 32
	178	20 - 25	20 - 32
	200	20 - 25 - 30	20 - 32 - 76,2
	250	25 - 30	25 - 32

SPECIFICATIONS			
MATERIAL	TYPE	SPECIFICATION	APPLICATION
STEEL	Mild Steel Medium hardness steel	00A024005V86	Roughing
		00A036N05V86	Roughing
		00A046L06V58	Semi-finishing
		00A060L06V58	Finishing
	Alloy steels Tool steel HSS	09A046K06V86	Roughing Universal use
		09A060K06V86	Finishing Universal use
		11A046K06V86	Roughing
		11A060K06V86	Finishing
CARBIDE	Tungsten carbide tools	08C060J08V01	Roughing
		08C080J08V01	Sharpening
		08C120I08V01	Chip breaker

SHAPE T1



PLASTIC BUSHING AVAILABLE FOR DIFFERENT BORES (SEE PAGE 46)

EXAMPLE OF ORDER

SHAPE	SIZES (mm)	SPEED	SPECIFICATION
T1	300x32x32	35 m/sec	00A036N05V86

THE COLOURED TRIANGLE SHOWS
THE ACTUAL COLOUR OF THE WHEEL



wheels for pedestal grinders

PERIPHERAL SPEED 35 M/SEC

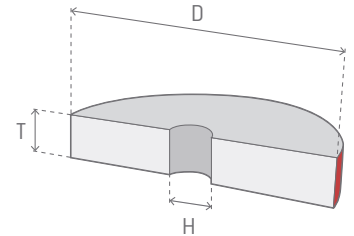
SHAPES AND SIZES

SHAPE	D	T	H
T1	300	32 - 40	32 - 127
	300	50	127 - 150
	350	40	32 - 127
	350	50	127 - 150
	400	40 - 50 - 63	40 - 127
	500	50 - 63	50 - 203,2

SPECIFICATIONS

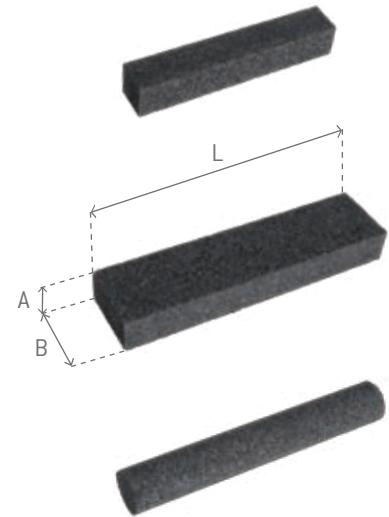
MATERIAL	TYPE	SPECIFICATION	APPLICATION
STEEL	Mild Steel Medium hardness steel	00A024005V86	Roughing
		00A036N05V86	Roughing
		00A046L06V58	Semi-finishing
		00A060L06V58	Finishing
	Alloy steels Tool steel HSS	09A046K06V86	Roughing
		09A060K06V86	Finishing
CARBIDE	Tungsten carbide tools	08C0046K07V01	Roughing
		08C060J08V01	Sharpening

SHAPE T1



dressing sticks

SHAPES AND SIZES				
SHAPE	A	B	L	SPECIFICATION
SQUARE	15	15	150	04C020S05V55
	20	20	200	
	25	25	150-200	
	50	50	200	
RECTANGULAR	13	25	150	
	25	50	200	
ROUND	15		100-150	04C020S05V55
	20		150-200	
	25		150-200	
	30		200	



trebel dressers

SHAPES AND SIZES				
SHAPE	D	T	H	SPECIFICATION
T1	90	40	22.2	04C020S05V55

aluminium oxide dressing sticks for diamond wheels

SHAPES AND SIZES					
CODE	A	B	L	SPECIFICATION	GRIT
A1RTA13251001	13	25	100	9A120G8V86	120
A1RTA13251005	13	25	100	9A240J8V86	240
A1RTA25502001	25	50	100	9A120J7V86	120



resin-bonded silicon carbide dressing stones for diamond wheels

SHAPES AND SIZES					
CODE	A	B	L	SPECIFICATION	GRIT
A1RTA50252001	50	25	200	2C150G4B07	150



dressing a grinding wheel

GENERAL CONSIDERATIONS

In all grinding operations, a correct dressing is essential to obtain the maximum performance of the grinding wheel.

"The dressing of conventional abrasive and microcrystalline Aluminium Oxide wheels is carried out using:

- > Single point diamond dressers
- > Manually mounted multi point blade type diamond dressers
- > PBP type multi point impregnated diamond dressers
- > Chisel type MCD monocrystalline diamond dressers
- > Diamond rollers

GENERAL TIPS FOR DRESSING

The dressing operation must always be carried out in the presence of an abundant flow of coolant. To avoid thermal shocks on the diamond, direct the coolant to the dressing area before starting the operation.

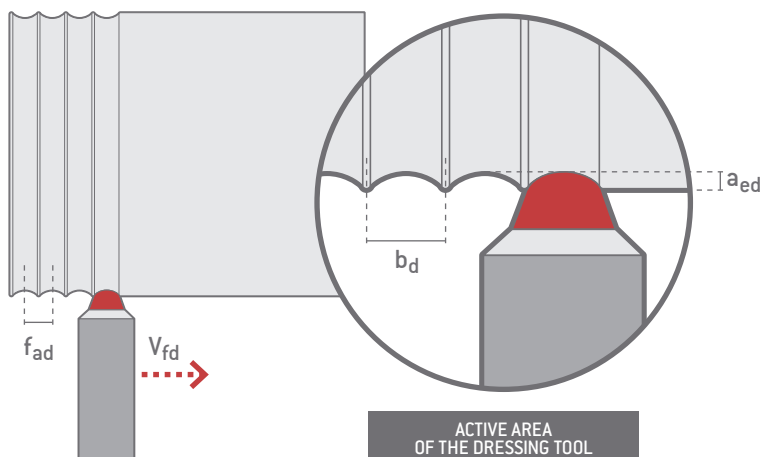
The tool carrier must be free from vibrations. Limit the protrusion of the dresser to less than twice the diameter of the shank. Ensure the correct positioning and the correct 10-15° angle of single point diamonds.

Choose the shape and size of the tool based on the size and specification of the grinding wheel and the type of grinding. The carat weight of the diamond must never be less than the recommended value.

The diamond must always be well sharpened.

Single diamond tools have a more marked action on the abrasive grain and are therefore more suitable for profiled and roughing wheels.

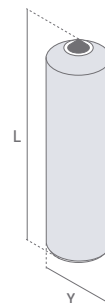
Multiple diamond tools are preferable to single diamond tools for dressing grinding wheels with linear peripheral banding, since they are less susceptible to the risk of breakage and cheaper (at the same carat weight).



diamond dressers

SINGLE POINT DRESSERS WITH CYLINDRICAL SHANK

	CODE	Ø Y	L	DIAMOND
		mm	mm	ct
STANDARD	U1SST050G10	10	40	0.5
	U1SST100G10	10	40	1.0
	U1SST150G10	10	40	1.5
	U1SST200G10	10	40	2.0
HIGH QUALITY	U4SST050G10	10	40	0.5
	U4SST100G10	10	40	1.0
	U4SST150G10	10	40	1.5
	U4SST200G10	10	40	2.0



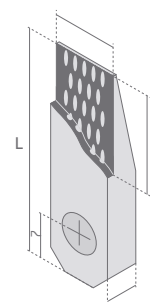
SINGLE POINT DRESSERS WITH MORSE TAPER 1 SHANK

	CODE	Ø Y	L	DIAMOND
		GAMBO		ct
STANDARD	U1SST050CM1	CM1		0.5
	U1SST100CM1	CM1		1.0
	U1SST150CM1	CM1		1.5
	U1SST200CM1	CM1		2.0
HIGH QUALITY	U4SST050CM1	CM1		0.5
	U4SST100CM1	CM1		1.0
	U4SST150CM1	CM1		1.5
	U4SST200CM1	CM1		2.0



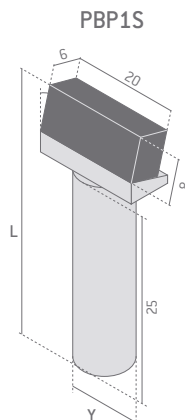
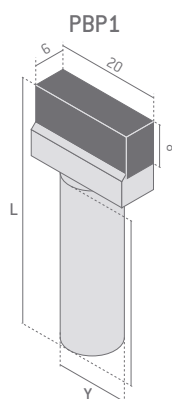
HANDSET BLADE DIAMOND DRESSERS

	CODE	Y	L	r	DIAMOND			
		mm	mm	mm	ct	ct	ct	ct
STANDARD	U1MSC10	10	15	33	1.0	1.5	2.0	2.5
	U1MSC15	15	15	33	1.0	1.5	2.0	2.5
	U1MSC20	20	15	33	1.0	1.5	2.0	2.5
HIGH QUALITY	U4MSC10	10	15	33	1.0	1.5	2.0	2.5
	U4MSC15	15	15	33	1.0	1.5	2.0	2.5
	U4MSC20	20	15	33	1.0	1.5	2.0	2.5



**MULTI POINT IMPREGNATED DRESSERS
CENTRELESS GRINDING**

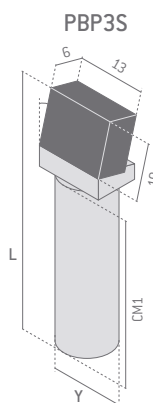
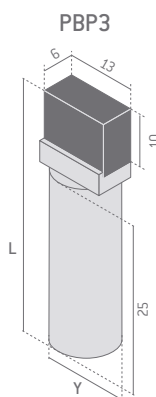
CODE	Ø Y	L	V°	SHAPE
	mm	mm		
U.120G10	10	40	-	PBP1
U.120CM1		CM1	-	PBP1
U1S20G10	10	40	15°	PBP1S
U1S20CM1		CM1	15°	PBP1S



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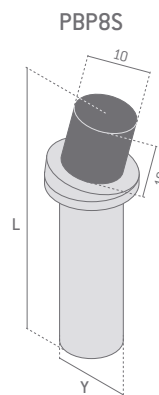
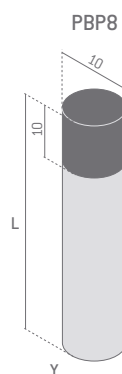
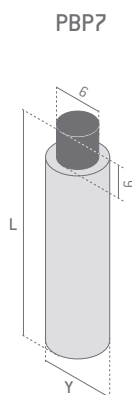
**MULTI POINT IMPREGNATED DRESSERS
EXTERNAL CYLINDRICAL GRINDING**

CODE	Ø Y	L	V°	SHAPE
	mm	mm		
U320G10	10	40	-	PBP3
U320CM1		CM1	-	PBP3
U3S20G10	10	40	15°	PBP3S
U3S20CM1		CM1	15°	PBP3S



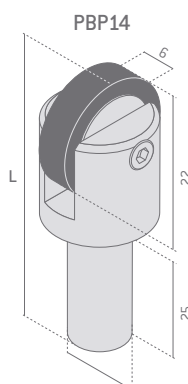
**MULTI POINT IMPREGNATED DRESSERS
SURFACE GRINDING**

CODE	Ø Y	L	V°	SHAPE
	mm	mm		
U720G10	10	45	-	PBP7
U720CM1		CM1	-	PBP7
U820G10	10	48	-	PBP8
U820CM1		CM1	-	PBP8
U8S20G10	10	48	15°	PBP8S
U8S20CM1		CM1	15°	PBP8S



**MULTI POINT IMPREGNATED DRESSERS
GENERAL PURPOSE**

CODE	Ø Y	L	V°	SHAPE
	mm	mm		
U1420G10	10	48	-	PBP14
U1420CM1		CM1	-	PBP14



CM1 = Morse taper 1

molemab filter cloth

LINE	ITEM	SHAPE	SIZE	WEIGHT
MAB TEX	T105010025	ROLL	0.50 x 100 m	25 g/m ²
MAB TEX	T107010025	ROLL	0.70 x 100 m	25 g/m ²
MAB TEX	T110010025	ROLL	1.00 x 100 m	25 g/m ²



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