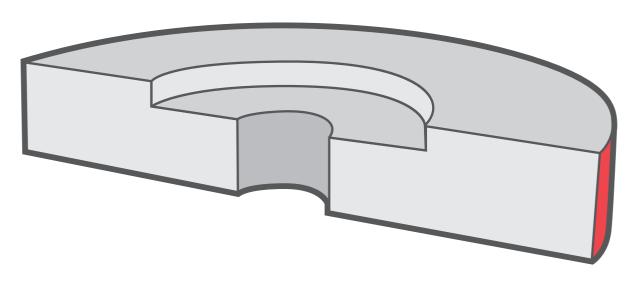
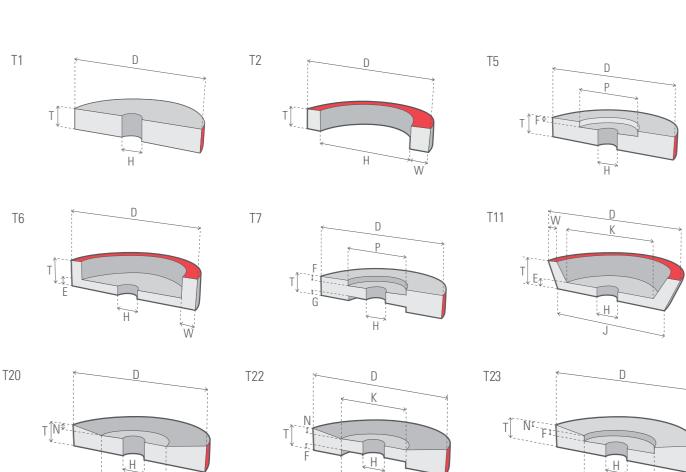
SURFACE GRINDING AND CREEP FEED GRINDING WHEELS



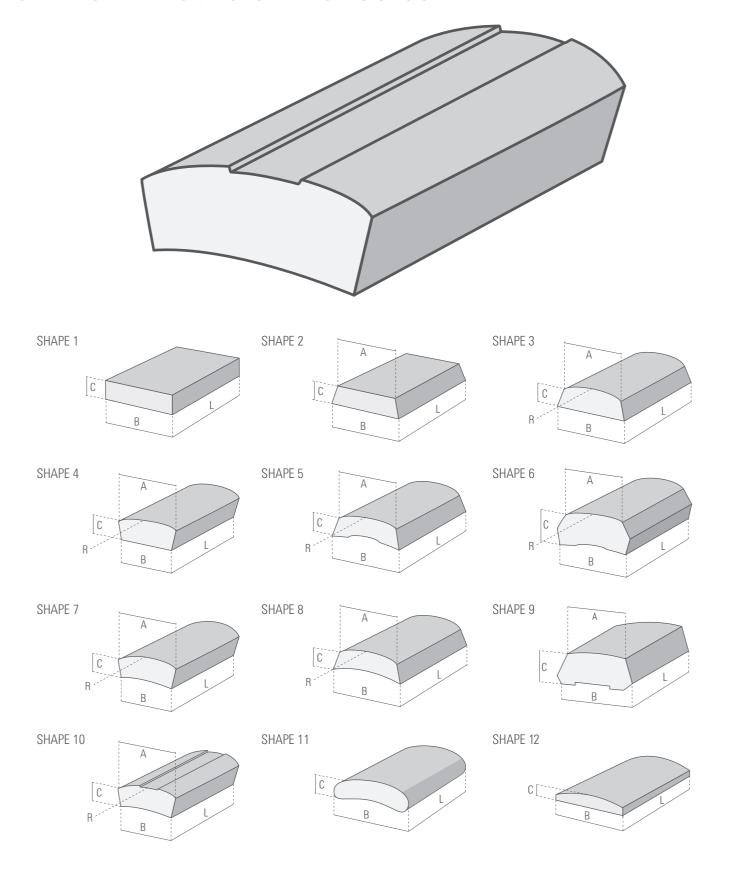
SHAPES OF STANDARD FEPA GRINDING WHEELS molemab





Naphthalene-Free since 1961 With our products we contribute to a cleaner environment and a greener future for generations to come

SHAPE OF ABRASIVE SEGMENTS molemab





SURFACE GRINDING AND CREEP FEED GRINDI

Surface Grinding / Pro-S Line			Pro-S	Pro-S
Material	Heat treatment	Hardness	T < 35	T > 35
Carbon steel	Trouv in Cathridae	HRC 24 ÷ 38	11A 036 I 10 V86	11A 036 I 10 V86
Carbon steel		HRC 24 ÷ 38	1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11A 046 H 10 V86
Carbon / Low alloy steel		HRC 40 ÷ 52	09A 046 FG12 V34 P3	09A 046 FG12 V34 P3
Carbon / Alloy steel	Heat-treated / Hardened steel	HRC 42 ÷ 56	45A 060 G12 VG5 P13	45A 046/2 GH12 V34 P4
Carbon / Alloy steel	Heat-treated / Hardened steel	HRC 42 ÷ 56	1071 000 012 1001 10	45A 054 FG12 V85 P1
Carbon / Alloy steel	Hardened steel	HRC 52 ÷ 58	43A 046 G12 V34 P1	43A 046 G12 V34 P1
HSS / Carbon / Alloy steel	Hardened / Cemented / Nitrided	HRC 52 ÷ 64	1TA 054 F12 VG4 P3	1TA 046 F12 VG4 P3
HSS / Carbon / Alloy steel	Hardened / Cemented / Nitrided	HRC 52 ÷ 64	11/4 0541 12 0041 5	1TA 054 F12 VG4 P3
Tibby Carbony Andy steel	Hardened / Cemented / Withded	TINC 32 : 04		117 0341 12 0041 3
Surface Grinding / Arctic Line			Arctic	Arctic
 Material	Heat treatment	Hardness	T < 35	T > 35
Carbon / Alloy steel	Heat-treated / Hardened steel	HRC 42 ÷ 56	OMA 054 G12 V85 P4	OMA 054 G12 V85 P4
	Treat treated / Transaction Steel	1110 12 1 00	0111/00/012/00/1	011/1001012 70011
Surface Grinding / Arctic Plus Line			Arctic Plus	Arctic Plus
Material	Heat treatment	Hardness	T < 35	T > 35
HSS / Carbon / Alloy steel	Hardened / Cemented / Nitrided	HRC 52 ÷ 64	1GA 54/9 GH12 V86 P1	1GA 54/9 GH12 V86 P1
Surface Grinding / Special Appli	cation			
Material	Type	Heat Treatment	T < 35	T > 35
Stainless steel	AISI family 400	Hardened and unhard.	45A 54/2 G12 V34 P3	45A 54/2 G12 V34 P3
Stainless steel Stainless steel	AISI family 400		08C 046 G10 V01	08C 046 G12 V01 P3
Stainless steel	AISI Iamily 500	Unhardened	08C 046 GIO VOI	08C 046 GI2 V01 P3
Creep Feed Grinding			Glacier Max	Glacier Max
Material	Heat treatment	Hardness	T < 35	T > 35
Carbon / Alloy steel	Heat-treated / Hardened steel	HRC 42 ÷ 56	96A 80/2 GH12 V84	96A 80/2 GH12 V84
HSS / Carbon / Alloy steel	Hardened / Cemented / Nitrided	HRC 52 ÷ 64	1GA 54/9 H09 V86	1GA 54/9 H09 V86
HSS / Carbon / Alloy steel	Hardened / Cemented / Nitrided	HRC 52 ÷ 64	4AK 60/100 GH13 VK4 P1	
Surface Grinding with CUP				
	Hoot treatment	Hardnoss	Ø 170	Ø 200
Material Carbon / Low allow steel	Heat treatment	Hardness	Ø 178	Ø 200
Carbon / Low-alloy steel	Heat treatment	HRC 40 ÷ 52	09A 036 G10 V34 P	09A 36 G10 V34 P
Carbon / Low-alloy steel Carbon / Low-alloy steel		HRC 40 ÷ 52 HRC 40 ÷ 52	09A 036 G10 V34 P 09A 046 H12 V86 P	09A 36 G10 V34 P 09A 36 H8 V20
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel	Heat-treated / Hardened steel	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4
Carbon / Low-alloy steel Carbon / Low-alloy steel		HRC 40 ÷ 52 HRC 40 ÷ 52	09A 036 G10 V34 P 09A 046 H12 V86 P	09A 36 G10 V34 P 09A 36 H8 V20
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel	Heat-treated / Hardened steel Hardened / Cemented / Nitrided	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel	Heat-treated / Hardened steel Hardened / Cemented / Nitrided	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron Aluminium / Bronze / Brass / Copper	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron Non ferrous metals	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron Aluminium / Bronze / Brass / Copper	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron Non ferrous metals Surface Grinding with Segments	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron Aluminium / Bronze / Brass / Copper	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56 HRC 52 ÷ 64	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron Non ferrous metals Surface Grinding with Segments Material	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron Aluminium / Bronze / Brass / Copper	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56 HRC 52 ÷ 64	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Continuos cutting 09A 030 G08 V86 09A 036 H08 V86	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Discontinuos cutting
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron Non ferrous metals Surface Grinding with Segments Material Carbon steel	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron Aluminium / Bronze / Brass / Copper Type Mild steel / Low alloy	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56 HRC 52 ÷ 64 Hardness HRC 24 ÷ 38	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Continuos cutting 09A 030 G08 V86	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Discontinuos cutting 11A 030 G09 V86
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron Non ferrous metals Surface Grinding with Segments Material Carbon steel Carbon steel	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron Aluminium / Bronze / Brass / Copper Type Mild steel / Low alloy Mild steel / Low alloy	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56 HRC 52 ÷ 64 Hardness HRC 24 ÷ 38 HRC 24 ÷ 38	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Continuos cutting 09A 030 G08 V86 09A 036 H08 V86	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Discontinuos cutting 11A 030 G09 V86 11A 046 E10 V86
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron Non ferrous metals Surface Grinding with Segments Material Carbon steel Carbon / Alloy steel	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron Aluminium / Bronze / Brass / Copper Type Mild steel / Low alloy Mild steel / Low alloy Heat-treated / Hardened steel	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56 HRC 52 ÷ 64 Hardness HRC 24 ÷ 38 HRC 24 ÷ 38 HRC 42 ÷ 56	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Continuos cutting 09A 030 G08 V86 09A 036 H08 V86 09A 036 G10 V92	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Discontinuos cutting 11A 030 G09 V86 11A 046 E10 V86 11A 036 G08 V86
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron Non ferrous metals Surface Grinding with Segments Material Carbon steel Carbon steel Carbon / Alloy steel HSS / Carbon / High alloy steel	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron Aluminium / Bronze / Brass / Copper Type Mild steel / Low alloy Mild steel / Low alloy Heat-treated / Hardened steel Heat-treated / Hardened steel	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56 HRC 52 ÷ 64 Hardness HRC 24 ÷ 38 HRC 24 ÷ 38 HRC 42 ÷ 56 HRC 42 ÷ 56	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Continuos cutting 09A 030 G08 V86 09A 036 H08 V86 09A 036 G10 V92 91A 036 G12 V86	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Discontinuos cutting 11A 030 G09 V86 11A 046 E10 V86 11A 036 G08 V86 31A 036 G08 V89
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron Non ferrous metals Surface Grinding with Segments Material Carbon steel Carbon / Alloy steel Carbon / Alloy steel Carbon / Alloy steel	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron Aluminium / Bronze / Brass / Copper Type Mild steel / Low alloy Mild steel / Low alloy Heat-treated / Hardened steel Heat-dened / Cemented / Nitrided Hardened / Cemented / Nitrided	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56 HRC 52 ÷ 64 Hardness HRC 24 ÷ 38 HRC 24 ÷ 38 HRC 42 ÷ 56 HRC 42 ÷ 56 HRC 52 ÷ 64	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 108 V01 08C 046 H10 V11 P3 Continuos cutting 09A 030 G08 V86 09A 036 H08 V86 09A 036 G10 V92 91A 036 G12 V86 09A 036 F12 V34 P	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Discontinuos cutting 11A 030 G09 V86 11A 046 E10 V86 11A 036 G08 V86 31A 036 G08 V89 3SA 30/1 FG9 V40 P
Carbon / Low-alloy steel Carbon / Low-alloy steel Carbon / Alloy steel HSS / Carbon / Alloy steel Cast iron Non ferrous metals Surface Grinding with Segments Material Carbon steel Carbon steel Carbon / Alloy steel Carbon / Alloy steel HSS / Carbon / High alloy steel HSS / Carbon / High alloy steel	Heat-treated / Hardened steel Hardened / Cemented / Nitrided Spheroidal cast iron / Grey cast iron Aluminium / Bronze / Brass / Copper Type Mild steel / Low alloy Mild steel / Low alloy Heat-treated / Hardened steel Heat-dened / Cemented / Nitrided	HRC 40 ÷ 52 HRC 40 ÷ 52 HRC 42 ÷ 56 HRC 52 ÷ 64 Hardness HRC 24 ÷ 38 HRC 24 ÷ 38 HRC 42 ÷ 56 HRC 42 ÷ 56 HRC 52 ÷ 64	09A 036 G10 V34 P 09A 046 H12 V86 P 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Continuos cutting 09A 030 G08 V86 09A 036 H08 V86 09A 036 G10 V92 91A 036 G12 V86 09A 036 F12 V34 P 31A 036 F12 V86 P	09A 36 G10 V34 P 09A 36 H8 V20 0MA 54/2 G12 V85 P4 3SA 046 G08 V114 06C 036 I08 V01 08C 046 H10 V11 P3 Discontinuos cutting 11A 030 G09 V86 11A 046 E10 V86 11A 036 G08 V86 31A 036 G08 V89 3SA 30/1 FG9 V40 P 3SA 036 G08 V24

Pro-S

Standard line of grinding wheels designed for use on horizontal spindle grinding machines. Ideal for machining mild, annealed, hardened, and tempered steel.

Standard grits:

11A 36/46/54 - 09A 36/46/54 Standard bonds: V34 - V86



Arctic

Grinding wheels developed for machining hardened steels with hardness up to 56 HRC.

Standard grits: 45A 54 - OMA 54/60 Standard bond: V34 - V85



Arctic Plus

The new line was designed and developed using new abrasives and bonds of last generation, featuring improved mechanical strength to take full advantage of the potential of Aluminium Oxide and Ceramic Abrasives. Ideal on hardened steels up to 62 HRC.

Standard grits: 1GA 54/9 Standard bond: V86



Glacier Max

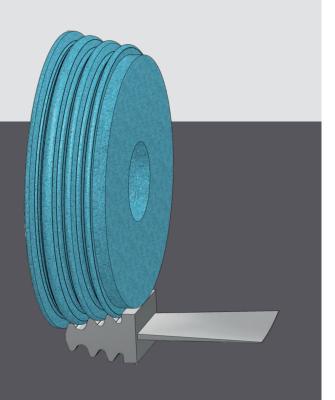
Line exclusively dedicated to Creep Feed operations

A perfect profile holding, thanks to the special bond. A cold cut, due to the incredible porous structure, which guarantees a reduction in machining time.



AK60 - 4AK60 - 1GA - 96A

Bond: VK4 - V84 - V86





Grinding wheels and segments for surface grinding on vertical spindle machines

For mild steel, hardened steel, HSS, and stainless steel.

Abrasives: 09A - 11A - 3SA

For Cast Iron, Hard Metal and Nonferrous Metals.

Abrasives: 09A - 06C - 08C





DIA/CBN VIT

The increasing need to improve machine performances and reduce production difficulties require always better tools. To offer excellent results in surface grinding, Molemab has developed a line of vitrified bonded diamond and CBN grinding wheels.

Advantages

Higher profile retention
Reduced dressing cycle
Wide range of application

Titan-X

The Titan-X line is the new line of vitrified CBN wheels which offers extraordinary versatility and resistance. A special vitrified bond has been specifically designed for this application. These grinding wheels offer exceptional wear resistance and much longer profile retention than conventional grinding wheels. Titan-X wheels are ideal for machining hard alloys, hardened and casehardened steels, cast iron and other metal alloys based on nickel, chromium and molybdenum, usually very difficult to grind.

Advantages

Cost reduction

Improved performances

Reduced cycle times

Excellent surface finishing





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