CNC CATALOGUE

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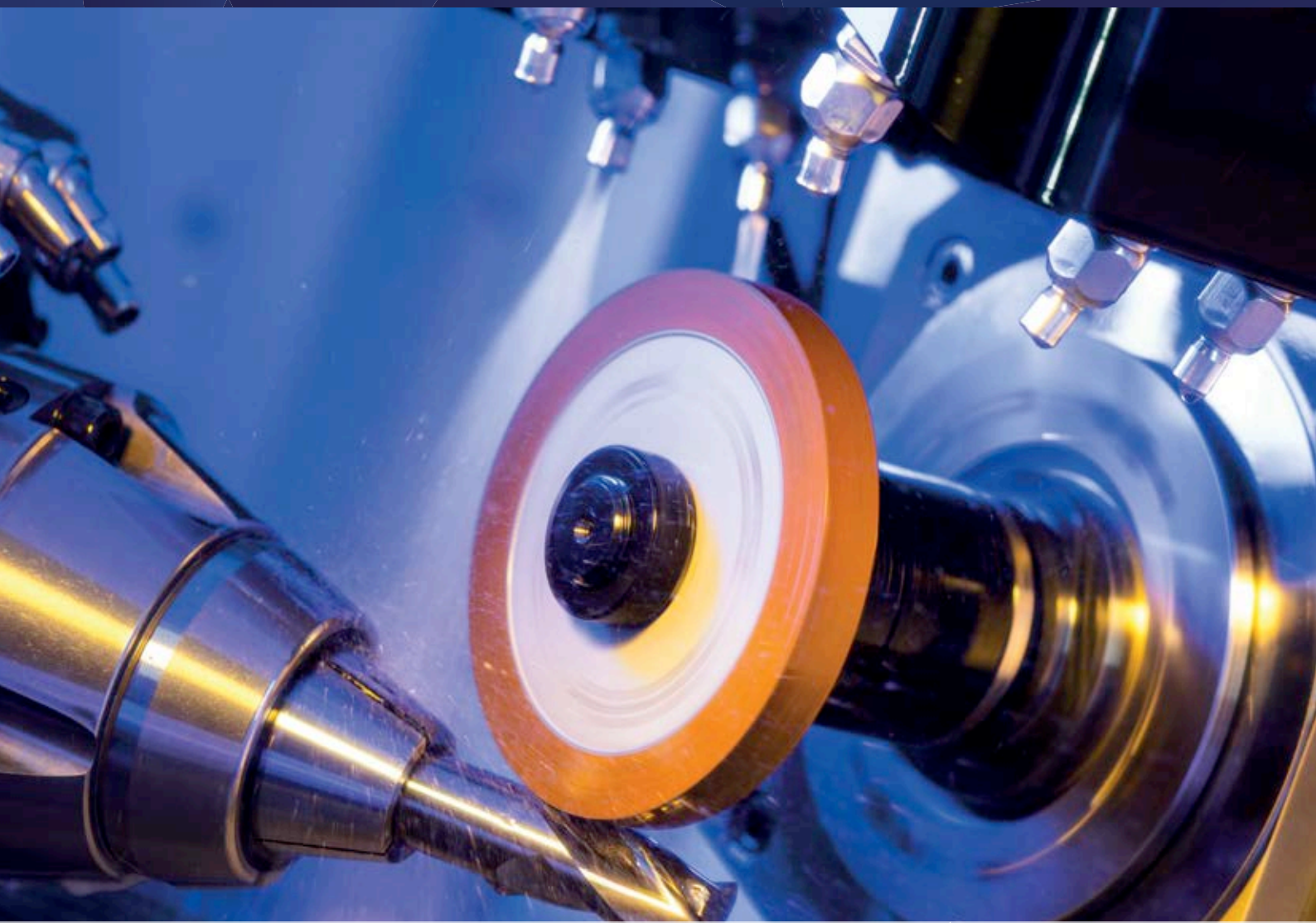


saidtools
INNOVATIVE DIAMOND SOLUTIONS

SAIDTOOLS
CNC LINE

Why choose CNC Saidtools line?

CNC line, thanks to highest precision production processes, offers several advantages compared to standard grinding wheels.

Line dedicated to construction and grinding of milling cutters and high-precision tools. It ensures consistent performance and excellent durability.

CUSTOMIZATION

Wide possibility of customization, both in terms of geometry and design, with no dimensional limits.

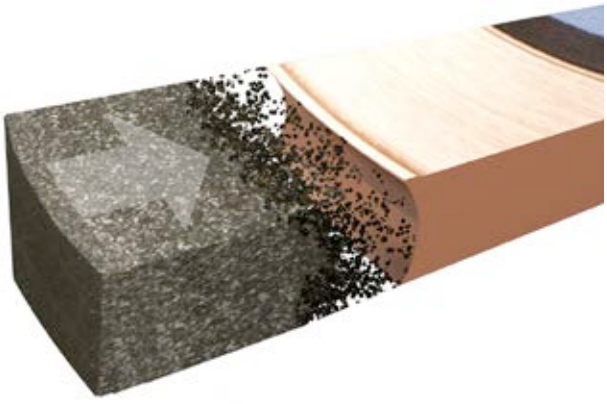
SAIDTOOLS EXCLUSIVE TECHNOLOGIES

PRODUCT TRACEABILITY 4.0

Proprietary management software and IoT tools, allow to have constant product traceability.

RAW MATERIAL CHECK

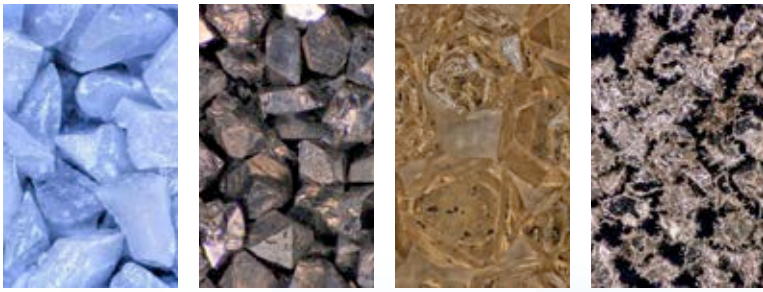
The raw materials choice and quality check begin with an accurate selection of suppliers, all identified in the European Union, for technical and financial reliability.



Use of higher quality abrasives and the application-based specific treatment, grant increased performance in terms of removal capacity, finishing properties and profile retention.

The operator will save a lot of time already in presetting phase, thanks to grinding wheel accurancy. Also profiling and dressing operations will be speeded up.

TOLERANCES	
BORE	H6
SHAPE	0,02 mm
ANGLE	0,1°
RADIUS	+/- 0,02 mm
BALANCING	ISO G = 2,5



CNC line offers abrasives quality (diamond and CBN) designed only to meet the need of high performances.

Resinoid, hybrid, metallic and vitrified configurations satisfy operators' need of "performance without concern".

ROLLOMATIC

GRINDING WHEELS SET

Roughing and finishing
Rollomatic NP30-NP50

Field of application

High precision peeling

Technical characteristics

Carbide and HSS rods grinding is a critical operation to obtain an excellent tool. Saidtools, thanks to several tests, has developed the most suitable grinding wheel set for this kind of applications. Ensuring necessary features like grinding wheel durability and excellent finishing.

Extreme profile retention

Extreme profile retention and high removal capacity, thanks to MD2 metallic bond in grain 91.

Optimal finishing

Due to RX bond Dia 9/15/25, low roughness guaranteed and high profile retention.

Reference application

MACHINE:	ROLLOMATIC ShapeSmart NP50
ROUGHING:	CNC 3V1 250 x 6 x 6 V=11° ØH 31,75 T=19 E=12 Dia 091 MD2
FINISHING:	CNC 3V1 150 x 5 x 10 V=10°+ 6° ØH31,75 Dia 9 RX8
WORKPIECE:	Carbide rod Ø12 mm L.100 mm

Roughing

Ae: 6 mm in just one pass (only 9 minutes).
Feed rate: 6mm/min
RPM: 4500 variable depending on geometry.

Finishing

RPM: 4400 roughing / 6160 finishing
Feed rate: 7mm/min
Obtained Ra: ø 8 Ra = 0,038 ø 9 Ra = 0,027

MX9.0M

Application

Fluting

Saidtools MX9.0M was designed with the aim of increase productive capacity, providing an important gain in terms of life and performance on machine.
New hybrid metallic configuration will be developed for other grinding wheels' geometries, to come up with a full package for milling tools construction.

+20% Feed increase

Mx9.0M increases by 20% feed rate, compared to the previous version Mx8.0M.

+20% wheel life

Innovative Diamond on grain 64 and 91, guarantees 20% rise of grinding wheel's life.

Reduced machine loading

Steady reduction of machine loading, performance stability and increase of worked pieces.

Stock availability

Mx9.0M configuration (diameters 100 and 125) will be available soon in stock.

Reference application

GRINDING WHEEL:	CNC 1A1 100 x 10 x 10 Dia 064 Mx9.0M
WORKPIECE:	Carbide rod Ø20 mm L.100 mm
REMOVAL CAPACITY:	5,5 mm in single pass

FEEDRATE

MX9.0M Dia 64: 80 mm/min

MX8.0M Dia 64: 65 mm/min

AVERAGE MACHINE ABSORPTION

MX8.0M Dia 64: 17,4%

MX9.0M Dia 64: 15,8%

R28.3
ULTRALUX

Application

Lapping flutes

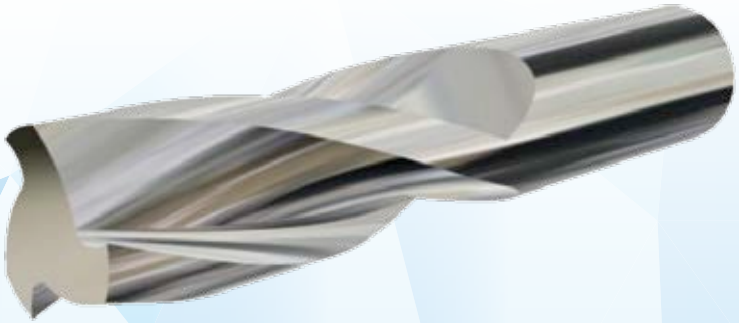
R28.3 Ultralux is designed to meet “mirror finishing” need of rotary tools, like milling cutters and H.S.S. microtools.
Usually suggested after roughing operation, performed using Mx9.0M grinding wheel with hybrid metal bond.
Available grinding wheels: 11V9-12V9-1A1-1V1

Indicative benchmarks

- CUTTING SPEED: 25mm/s
- WORKPIECE: Carbide rod Ø 8-25mm
- FEED RATE: 55 mm/mln,

Reference application

GRINDING WHEEL:	CNC 1A1 100 x 3 x 10 Dia 25 R28.3
WORKPIECE:	End mill MD Ø16 mm L.100 mm
REMOVAL CAPACITY:	from 0,03 mm to 0,1mm per pass
FINISHING:	from Ra 0,08 to Ra 0,05
PIECES PRODUCED:	250 pcs
DRESSING:	after 150 pcs approx



MX9.0H

Application

Grinding 1st and 2nd clearance angle and end relief, gashing

Saidtools Mx9.0H was created to offer a solution which has high profile retention and excellent cutting capacity, with focus of finishing too. New hybrid/metal configuration will be developed for other grinding wheels' shapes, to come up with a full package for milling tools construction.

Extreme profile retention

Mx9.0M increases by 20% profile retention, compared to the previous version Mx8.0M.

Consistency in performance

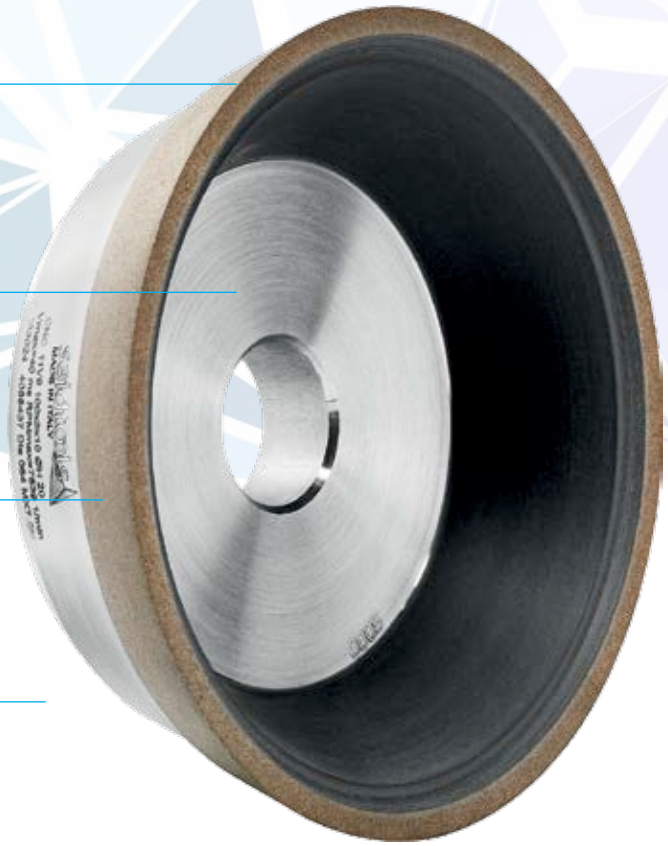
High, constant performance and great stability also for large lots, reduce interventions to the minimum.

Removal capacity and finishing

Innovative diamond in grain 46 and 64, guarantees optimum removal capacity and obtaining very low roughness.

Stock availability

Mx9.0H configuration will be available in stock (with 12V9 shape), therefore will be provided quickly.



Reference application

GRINDING WHEEL: CNC 11V9 100 x 3 x 10 Dia 046 Mx9.0H
WORKPIECE: End mill MD Ø16 mm L.100 mm
REMOVAL CAPACITY: 0,3 mm per pass

GRINDING WHEEL DIAMETER WEAR

MX9.0H Dia 46: 0,11

RX8 Dia 64: 0,28

AVERAGE MACHINE ABSORPTION

MX9.0H Dia 46: 14%

RX8 Dia 64: 18%

RX 9

Application

Grinding 1st and 2nd clearance angle and end relief, gashing

Saidtools RX9 was designed to meet the increasing market needs of resinoid grinding wheel's profile retention, both for tools construction and for resharpening.
Not only great profile retention, but even excellent removal capacity and finishing, also with fine grain.

Increase of profile retention

Rx9 improves by 10% corner retention, compared to Rx8 version.

Increase of profiling interval

Innovative production technology, combined with new Rx9 resinoid bond, ensures an extension of profiling interval.

Removal capacity

High, steady performance and great stability also for large lots, afford a minimum intervention.

Stock availability

Mx9.0H configuration will be available in stock (with 12V9 shape), therefore it can be delivered in a few days.

Reference application

GRINDING WHEEL: CNC11V9100x3x10 Dia064RX9
WORKPIECE: End mill MD Ø16 mm L.100 mm
REMOVAL CAPACITY: from 0,3 mm to 0,5 mm per pass

GRINDING WHEEL DIAMETER WEAR

RX9 Dia 64: 0,20

RX8 Dia 64: 0,28

AVERAGE MACHINE ABSORPTION

RX9 Dia 64: 14%

RX8 Dia 64: 18%

MR

High precision profiling

MR is the metal bond configuration created by Saidtools for very high precision profiling and for complex geometries, where it's needed extreme accuracy.

Extreme profile retention

The productive process technologically advanced, combined to diamond and CBN of the latest generation, ensures incomparable profile sealing. Practically it's not required resharpening.

R = 0,05 mm!

MR bond allows great profile accuracy of abrasive layer.
Are satisfied very complex geometry needs and with a high precision grade.
Offers the execution of radious up to 0.05 mm, granting great stability and toughness.

Application

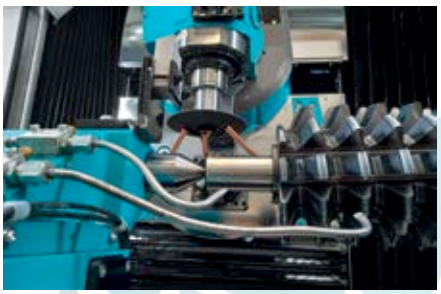
Complex geometries execution

VL3-HP1
VITRIFIED BOND

Saidtools VL3-HP1 vitrified bond configuration was designed to satisfy increasingly frequent requests of sharpening-time reduction.
In the specific case of hob sharpening, there is the need to reduce as far as possible dead time, while guaranteeing flawless finishing.

Application

Hobs sharpening



Edge retention

VL3HP1 ensures extreme edge retention, essential quality for these applications.

Removal capacity and finishing

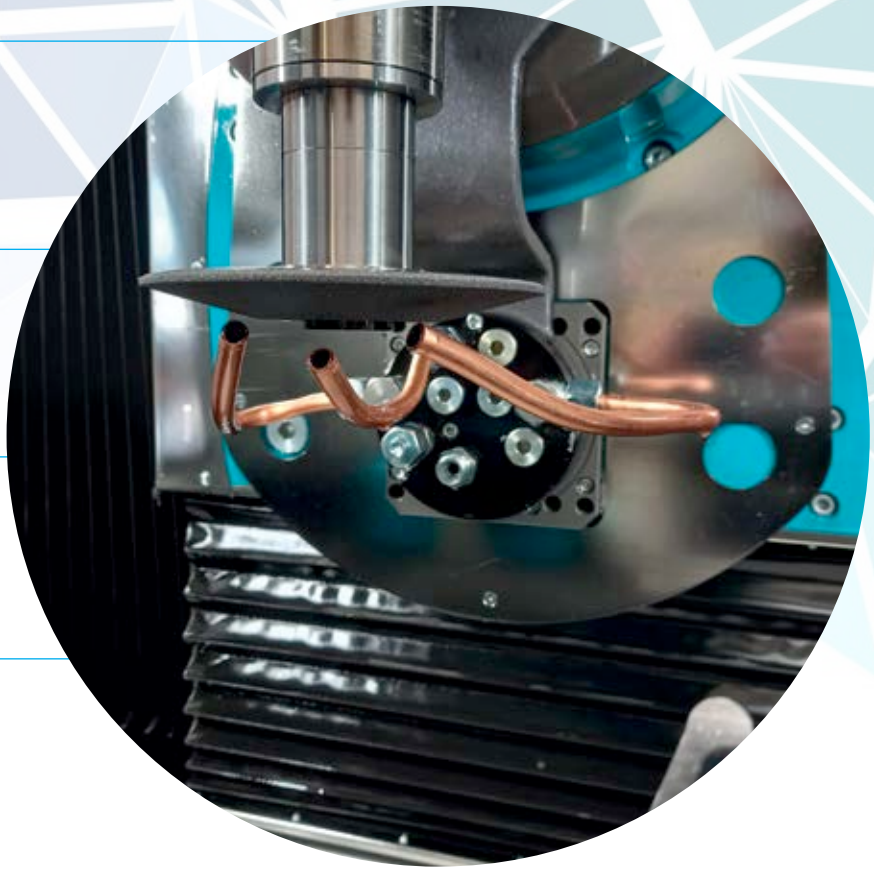
Excellent removal capacity in single pass and amazing finishing.

Consistency in performance

High constant performance and optimum reliability, also for large lots.

Diamond dressing interval

The new Saidtools vitrified bond increases diamond dressing interval on machine.



Reference application

GRINDING WHEEL: CNC 4V5 125 x 30 x 2,3 V=15° ØH 20 CBN 091 VL3HP1
WORKPIECE: HSS hob Ø160 mm L.200 mm
MACHINE: SCHNEEBERGER CORVUS

ROUGHNESS

VL3HP1: Ra 0,12

COMPETITION: Ra 0,30

REMOVAL CAPACITY IN SINGLE PASS

VL3HP1 0,4 mm

COMPETITION: 0,2 mm

VL4-HP4
VITRIFIED BOND

Vitrified bond VL4-HP4 taps construction and sharpening

HSS taps construction and sharpening follow high-precision applications and surface finishing able to provide an excellent coating. Saidtools, after many internal tests has developed new vitrified configuration VL4-HP4, that ensures an optimum accuracy of worked dimensions and significantly reduced grinding times.

Application

Grinding spiral flute /tap

Reference application

GRINDING WHEEL: CNC 1F1 100 x 10 x 5 R=5 ØH 32 T=10 E=10 CBN 091 VL4HP4
WORKPIECE: Tap HSS-PM Ø16 mm L.125 mm

Advantages

- Better profitability, due to state-of-the-art vitrified bonds;
- Increase of reprofiling interval, thanks to special treatments of CBN;
- Increase of corner retention by 20%, compared to VL3MP1;
- Increase of removal capacity and finishing grade, thanks to enhanced porosity of abrasive layer.

SAIDTOOLS,
FUTURE IS HERE!

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SAIDTOOLS S.R.L.
Via Scovizze, 1 - 36033 Isola Vicentina (VI) ITALY
Tel. +39 0444 977440 - Fax. +39 0444 976050
saidtools@saidtools.com - www.saidtools.com