WEMA VOGTLAND
ITALY

WEMA Grind

SINGLEGRINDX

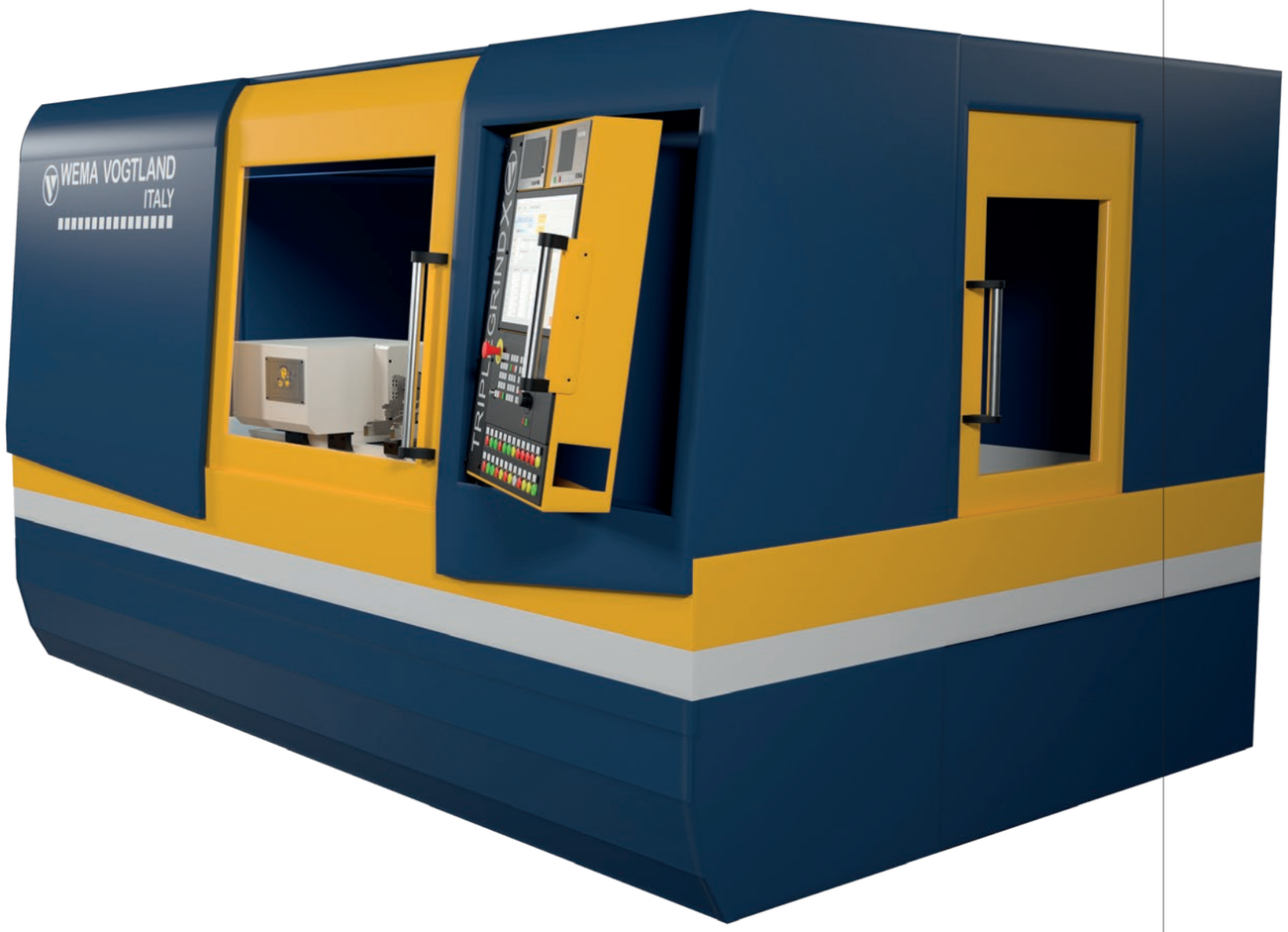
TWINGRINDX

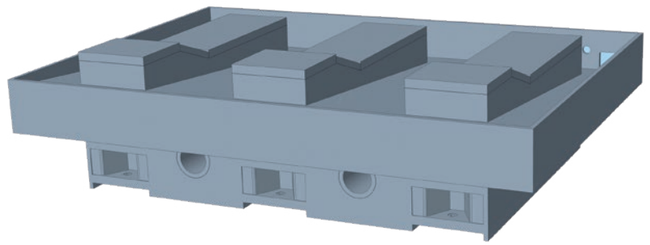
TRIPLEGRINDX

QUADRIGRINDX

WEMA Grinding Division - The Ultraflexible Cross Axis Machine

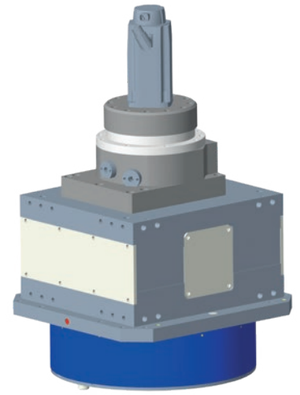
Strong, compact, flexible, modular and
configurable, made with an unparalleled design and construction accuracy.





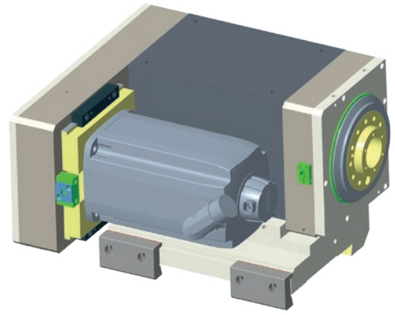
Machine base

The WEMA machine base, as well as for the groups of the X and Z axes, for the workhead, the tailstock and the grinding wheel unit are made of stabilized cast iron. This material guarantees great advantages, such as the damping of vibrations, thermal stability and high resistance to wear. The base has a modular design in order to be sized as required.



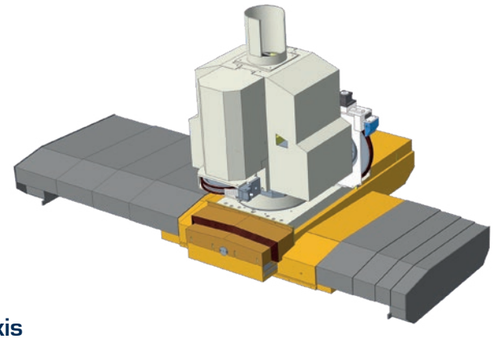
B Axis

The WEMA cast iron grinding wheel head has been designed with an oversized modular system, which makes it capable of being configured, according to the requirements, with one, two, three or even four grinding wheels for outside or for inside diameters, for conventional or CBN wheels with different peripheral speed and external diameters or with vertical or horizontal bearings spindles configuration, to adapt to the many specific requests of the market. The orientation of this unit is always automatic on free angles programmable by CNC at intervals of 0.001 °, or with angular improvement on extra-precise 2.5 ° Hirth toothing.



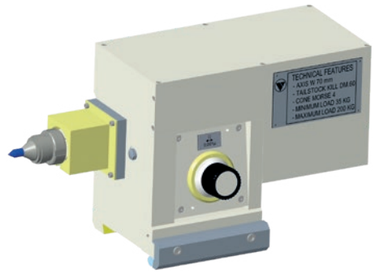
Workhead

The WEMA universal workhead is the result of a careful design study, which has led to the creation of a workhead capable of adapting to any machine configuration. In fact, it can be configured as a versatile universal head with the possibility of grinding both live center rotation and fix center with only piece rotation, or configured as a head with high rotation speed (especially for grinding technology CBN) with the capacity of housing the diamond disc and maximum speed above 5000 rpm. The optional C-axis enables thread and form grinding, increasing the machine's potential application.



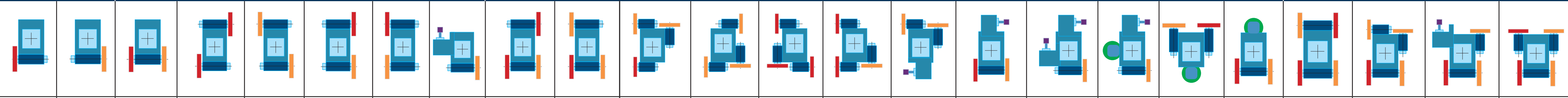
Cross axis

The cross longitudinal and transversal hydrodynamic slides are manufactured from high-quality grey cast iron and have higly precise, ground V and flat guideways optimally suited to the machine's overall rigidity. Compact roller guides are available as an option. The slides are advanced by 50 mm diameter circulating ball screws, connected to a three-phase servomotor via torsion-resistant coupling. These axes can be equipped with rotative or linear measuring systems, depending on the requirements.



Tailstock

The cylindricity correction (adjustment ± 0.001µ), the self-aligning system on the machine table and the hydraulic positioning and power adjustment from the machine CNC programming software are the most important caracteristics of the over-dimensioned WEMA tailstock.

					SINGLEGRINDX		TWINGRINDX						TRIPLEGRINDX												QUADRIGRINDX			
Machine MAINHEAD Execution																												
Spindle Configurations Execution					L	R	LR	L/L	R/R	L/R	R/L	R/LI	LR/L	LR/R	L/R/R	R/R/R	L/L/L	L/L/R	LI/R/R	LR/LI	R /LI/LI	R/LI/V	L/R/V	LR/V	LR/LR	LR/R/R	LR/LI/R	LR/R/L
Max. Degree Angle					0 ÷ -30	0 ÷ +30	-30 ÷ +30	-30 ÷ +180	0 ÷ +210	0 ÷ +180	0 ÷ -180	0 ÷ -110	-30 ÷ +180	-30 ÷ -180	-30 ÷ +210	-30 ÷ +180	30 ÷ -180	-30 ÷ +210	-30 ÷ +210	-30 ÷ +180	30 ÷ -180	0 ÷ +265	30 ÷ -210	30 ÷ -180	-30 ÷ +210	-30 ÷ +210	30 ÷ -210	30 ÷ -210
	Machine Dimensions	Wheel Type	Max. Wheel Diameter	Machine Model																								
Distance between centers 800mm, (max grinding length 500mm)	Center height 180 - 210 - 240 - 305 mm	Conventional	Ø508X100	50 - 06			50 - 06	50 - 06	50 - 06	50 - 06	50 - 06	50 - 06	50 - 06	50 - 06	50 - 06	50 - 06	50 - 06	50 - 06	50 - 06	50 - 06	50 - 06				50 - 06	50 - 06	50 - 06	50 - 06
		Conventional	Ø610X100	61 - 06	61 - 06	61 - 06	61 - 06	61 - 06	61 - 06	61 - 06	61 - 06	61 - 06	61 - 06	61 - 06	61/50 - 06	61/50 - 06	61/50 - 06	61/50 - 06		61 - 06	61 - 06				61 - 06	61/50 - 06	61/50 - 06	61/50 - 06
		Conventional	Ø610X180	61L - 06	61L - 06	61L - 06	61L - 06	61L - 06	61L - 06	61L - 06	61L - 06	61L - 06	61L /61-06	61L /61-06						61L - 06								
		Conventional	Ø760X100	76 - 06	76 - 06	76 - 06	76 - 06					76 - 06	76 /50 - 06	76 /50 - 06						76 - 06								
		Conventional	Ø760X300	76L - 06	76L - 06	76L - 06																						
	Center height 180 - 210 mm	CBN	Ø400X50	HS40 - 06			HS40 - 06	HS40 - 06	HS40 - 06	HS40 - 06	HS40 - 06		HS40 - 06	HS40 - 06	HS40 - 06	HS40 - 06	HS40 - 06	HS40 - 06				HS40 - 06	HS40 - 06	HS40 - 06	HS40 - 06	HS40 - 06		HS40 - 06
		CBN	Ø450X50	HS45 - 06			HS45 - 06	HS45 - 06	HS45 - 06	HS45 - 06	HS45 - 06		HS45 - 06	HS45 - 06	HS45 - 06	HS45 - 06	HS45 - 06	HS45 - 06				HS45 - 06	HS45 - 06	HS45 - 06	HS45 - 06	HS45 - 06		HS45 - 06
		CBN	Ø500X45	HS50 - 06			HS50 - 06	HS50 - 06	HS50 - 06	HS50 - 06	HS50 - 06		HS50 - 06	HS50 - 06	HS50 - 06	HS50 - 06	HS50 - 06	HS50 - 06				HS50 - 06	HS50 - 06	HS50 - 06	HS50 - 06	HS50 - 06		HS50 - 06
Distance between centers 1200mm, (max grinding length 800mm)	Center height 180 - 210 - 240 - 305 mm	Conventional	Ø508X100	50 - 08			50 - 08	50 - 08	50 - 08	50 - 08	50 - 08	50 - 08	50 - 08	50 - 08	50 - 08	50 - 08	50 - 08	50 - 08	50 - 08	50 - 08	50 - 08				50 - 08	50 - 08	50 - 08	50 - 08
		Conventional	Ø610X100	61 - 08	61 - 08	61 - 08	61 - 08	61 - 08	61 - 08	61 - 08	61 - 08	61 - 08	61 - 08	61 - 08	61/50 - 08	61/50 - 08	61/50 - 08	61/50 - 08		61 - 08	61 - 08				61 - 08	61/50 - 08	61/50 - 08	61/50 - 08
		Conventional	Ø610X180	61L - 08	61L - 08	61L - 08	61L - 08	61L - 08	61L - 08	61L - 08	61L - 08	61L - 08	61L /61-08	61L /61-08						61L - 08								
		Conventional	Ø760X100	76 - 08	76 - 08	76 - 08	76 - 08					76 - 08	76 /50 - 08	76 /50 - 08						76 - 08								
		Conventional	Ø760X300	76L - 08	76L - 08	76L - 08																						
	Center height 180 - 210 mm	CBN	Ø400X50	HS40 - 08			HS40 - 08	HS40 - 08	HS40 - 08	HS40 - 08	HS40 - 08		HS40 - 08	HS40 - 08	HS40 - 08	HS40 - 08	HS40 - 08	HS40 - 08				HS40 - 08	HS40 - 08	HS40 - 08	HS40 - 08	HS40 - 08		HS40 - 08
		CBN	Ø450X50	HS45 - 08			HS45 - 08	HS45 - 08	HS45 - 08	HS45 - 08	HS45 - 08		HS45 - 08	HS45 - 08	HS45 - 08	HS45 - 08	HS45 - 08	HS45 - 08				HS45 - 08	HS45 - 08	HS45 - 08	HS45 - 08	HS45 - 08		HS45 - 08
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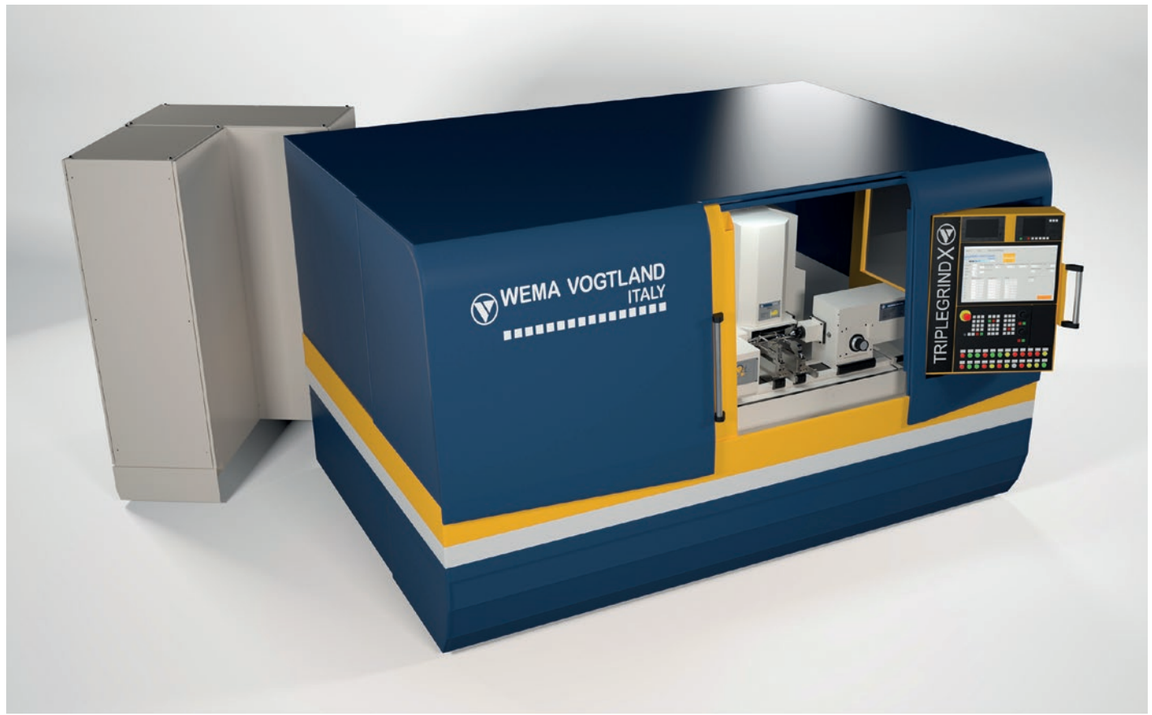
Distance between centers 1600mm, (max grinding length 1200mm)	Center height 180 - 210 - 240 - 305 mm	Conventional	Ø508X100	50 - 12			50 - 12	50 - 12	50 - 12	50 - 12	50 - 12	50 - 12	50 - 12	50 - 12	50 - 12	50 - 12	50 - 12	50 - 12	50 - 12	50 - 12	50 - 12				50 - 12	50 - 12	50 - 12	50 - 12
		Conventional	Ø610X100	61 - 12	61 - 12	61 - 12	61 - 12	61 - 12	61 - 12	61 - 12	61 - 12	61 - 12	61 - 12	61 - 12	61/50 - 12	61/50 - 12	61/50 - 12	61/50 - 12		61 - 12	61 - 12				61 - 12	61/50 - 12	61/50 - 12	61/50 - 12
		Conventional	Ø610X180	61L - 12	61L - 12	61L - 12	61L - 12	61L - 12	61L - 12	61L - 12	61L - 12	61L - 12	61L /61-12	61L /61-12						61L - 12								
		Conventional	Ø760X100	76 - 12	76 - 12	76 - 12	76 - 12					76 - 12	76 /50 - 12	76 /50 - 12						76 - 12								
		Conventional	Ø760X300	76L - 12	76L - 12	76L - 12																						
	Center height 180 - 210 mm	CBN	Ø400X50	HS40 - 12			HS40 - 12	HS40 - 12	HS40 - 12	HS40 - 12	HS40 - 12		HS40 - 12	HS40 - 12	HS40 - 12	HS40 - 12	HS40 - 12	HS40 - 12				HS40 - 12	HS40 - 12	HS40 - 12	HS40 - 12	HS40 - 12		HS40 - 12
		CBN	Ø450X50	HS45 - 12			HS45 - 12	HS45 - 12	HS45 - 12	HS45 - 12	HS45 - 12		HS45 - 12	HS45 - 12	HS45 - 12	HS45 - 12	HS45 - 12	HS45 - 12				HS45 - 12	HS45 - 12	HS45 - 12	HS45 - 12	HS45 - 12		HS45 - 12
		CBN	Ø500X45	HS50 - 12			HS50 - 12	HS50 - 12	HS50 - 12	HS50 - 12	HS50 - 12		HS50 - 12	HS50 - 12	HS50 - 12	HS50 - 12	HS50 - 12	HS50 - 12				HS50 - 12	HS50 - 12	HS50 - 12	HS50 - 12	HS50 - 12		HS50 - 12

Many different machine center heights and max. grinding lengths are available as a special requirement, depending on the customer's needs.

All the machine configurations described above can also be composed of one or more vertical wheels of your choice depending on your requirements.
In this case the execution takes the letter V instead of the letter R or L or I

Machine Backside

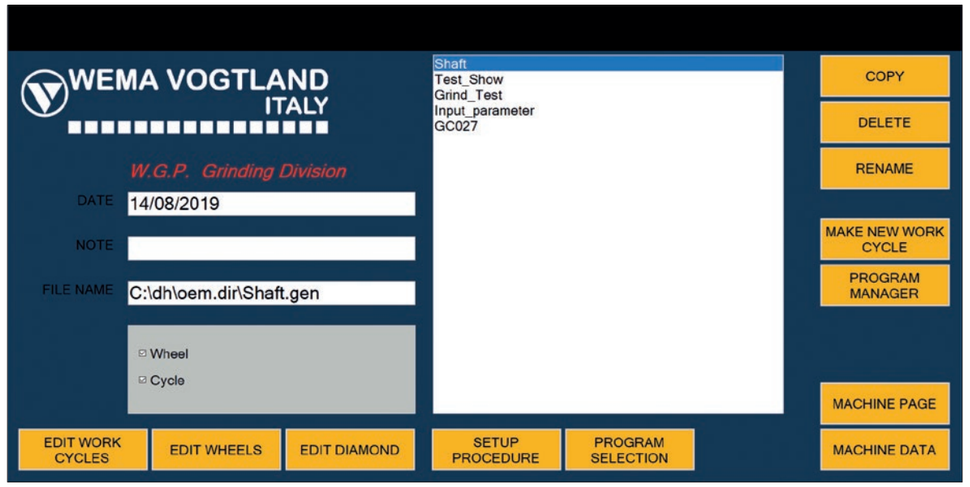
and the electrical cabinet

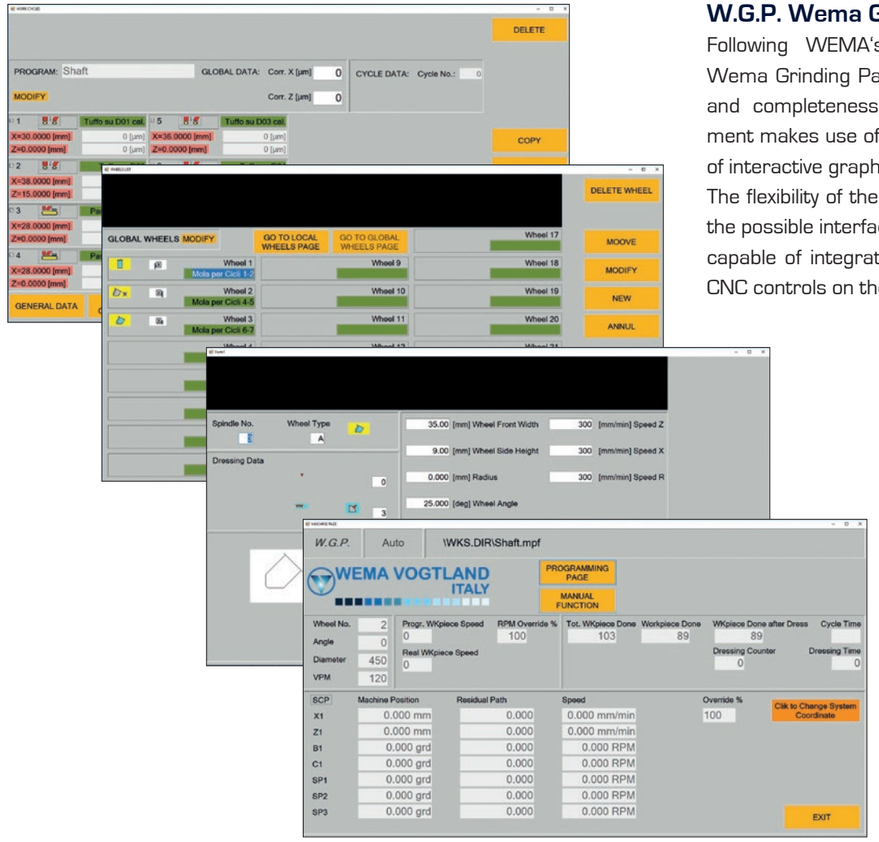


Compact and Ergonomic

WEMA Grind is a grinding machine that distinguishes by an innovative ergonomics in particular for its compactness, but also for the easy access for maintenance. That is the reason why it is designed with a hidden and removable hydraulic unit as integral part of the machine, and with a movable electrical cabinet built on wheels to allow access into the machine from both sides, despite being compact in size.

Machine Software





W.G.P. Wema Grinding Package

Following WEMA's long experience, the W.G.P. Wema Grinding Package is a result of simplicity and completeness. The programming environment makes use of the most modern techniques of interactive graphics.

The flexibility of the source and the modularity of the possible interfaces make the software W.G.P. capable of integrating with the major brands of CNC controls on the market.

WEMA VOGTLAND Technology GmbH/ ITALY Department

Cylindrical grinding machines are the core competence of the specialists in the Italian branch of WEMA VOGTLAND Technology GmbH. Since its foundation in 2016, WEMA VOGTLAND's Italy division has rebuilt and overhauled a large number of cylindrical grinding machines for customers worldwide.

With the WEMA Grind the company now presents its own series of cylindrical grinding machines which due to their modular design are available in a multitude of versions for a wide variety of machining tasks.

Our own engineers and application specialists with many years of experience in the field of cylindrical grinding develop new machining solutions. Specially trained fitters and commissioning engineers ensure a professional and smooth implementation of retooling/retrofitting, overhauling and service work.

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