FAVRETTO

Horizontal and Universal spindle rotary table Grinding Machines

MR AND MR/U SERIES

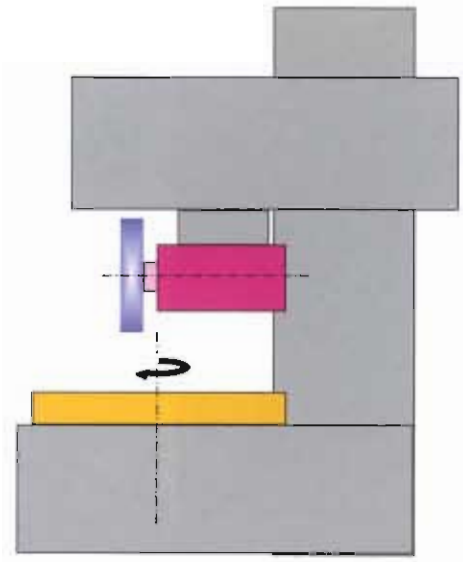



Specialist since 1934

Specialized in the manufacture of surface and profile grinding machines since 1934

Summary

Single column machine with horizontal spindle

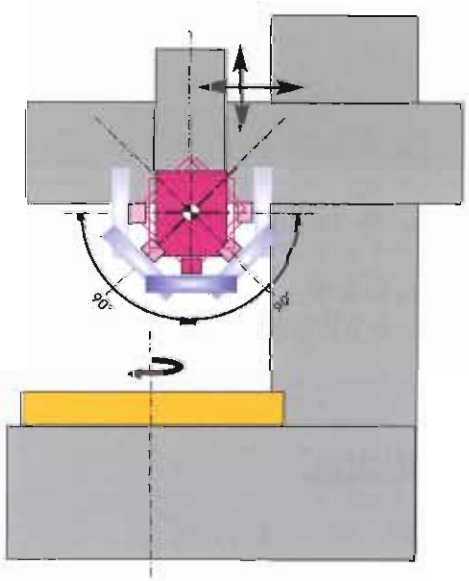


MR Series

Main tecnical specifications:

- Grinding diameter: 400 ⇨ 1600 mm.
- Vertical capacity: 240 ⇨ 600 mm.
- Power of spindle motor: 7,5 ⇨ 22 kW
- Wheel diameter: 350 ⇨ 457 mm.

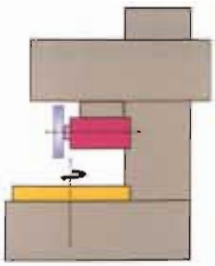
Single column machine with universal spindle



MR/U Series

Main tecnical specifications:

- Max. External diameter	: 600 ⇨ 1000 mm.
- Max. Heigth of workpiece horizontal wheel position	: 550 ⇨ 750 mm.
- Max depth grinding	: dxb 150x200 mm
- Power spindle motor	: 7,5 kW
- Angular swivelling	: +/- 90°
- Min angular position	: 1°
- Dimension of STD wheel dxbxw	: min. 70x20x20 mm max 406x152,4x50 mm



Single column

Single column machine with Horizontal spindle

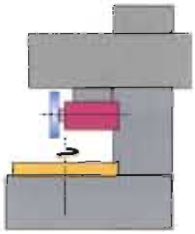
Modulo MR Series

The equipment of the machine illustrated may differ from standard supply.

- **dgt$_{cnc}$** *Digital electronic system with numerical control*
- **dgt$_{plus}$** *Digital electronic system for the automatic control of the working cycle*

Main technical specifications:

- Table diameter	: 400	⇨ 1600 mm.
- Vertical capacity	: 240	⇨ 600 mm.
- Power of spindle motor	: 7,5	⇨ 22 kW
- Wheel diameter	: 350	⇨ 457 mm.

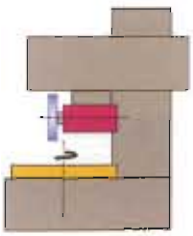


Single column technical specifications

Modulo MR 30-40 Series

			MR 30	MR 40
Working capacity	Max. Grinding Diameter	mm	400	500
	Max. Grinding height	mm	240	
Spindle head	Power	Kw	7,5	
	Grinding wheel size (diameter x bore x width)	mm	350 x 127 x 50	
	Wheel speed	rpm	1400	
Rotary axis table	Speed	rpm	15 ÷ 200	
	Load capacity (Max. without magnetic chuck)	Kg	300	400
	Working surface diameter (with central hole mm 20 H7)	mm	300	400
Cross axis head	Max. rapid speed	m/min	5	
	Grinding feed step-by-step	mm	1 ÷ 30	
	Grinding head infinitely variable	mm/min	0 ÷ 2000	
	Min. programmable increment	mm	0,001	
	Working travel	mm	175	225
	Max travel	mm	235	285
Vertical axis head	Max rapid speed	m/min	1,5	
	Min. progrommable increment	mm	0,001	
	Working travel	mm	440	
	Max. travel	mm	500	
Dimensions	LENGTH	mm	2460	
	WIDTH	mm	3430	
	HEIGHT	mm	2460	
	MACHINE WEIGHT	**Kg. (approx.)**	3600	3700
	POWER REQUIREMENT	**Kw. (approx.)**	21	

Dimensions, Weight, and Power may vary subject to optional equipment.

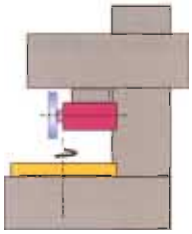


Single column technical specifications

Modulo MR 50-60-75 Series

			MR 50	MR 60	MR 75
Working capacity	Max. Grinding Diameter	mm	700	800	900
	Max. Grinding height	mm	450		
Spindle head	Power	Kw	15		
	Grinding wheel size (diameter x bore x width)	mm	406 x 152,4 x 100		
	Wheel speed	rpm	1400		
Rotary axis table	Speed	rpm	15 ÷ 120		
	Load capacity (Max. without magnetic chuck)	Kg	450		
	Working surfoce diameter (with central hole mm 20 H7)	mm	500	600	750
Cross axis head	Max. rapid speed	m/min	5		
	Grinding feed step-by-step	mm	1 ÷ 50		
	Grinding head infinitely variable	mm/min	0 ÷ 2000		
	Min. progrommable increment	mm	0,001		
	Working travel	mm	300	350	400
	Max travel	mm	335	385	435
Vertical axis head	Max rapid speed	m/min	1,5		
	Min. programmable increment	mm	0,001		
	Working travel	mm	690		
	Max. travel	mm	725		
Dimensions	LENGTH	mm	3450		
	WIDTH	mm	4250		
	HEIGHT	mm	2680		
	MACHINE WEIGHT	**Kg. (approx.)**	6000	6200	6300
	POWER REQUIREMENT	**Kw. (approx.)**	31		

Dimensions, Weight, and Power may vary subject to optional equipment.



Single column technical specifications

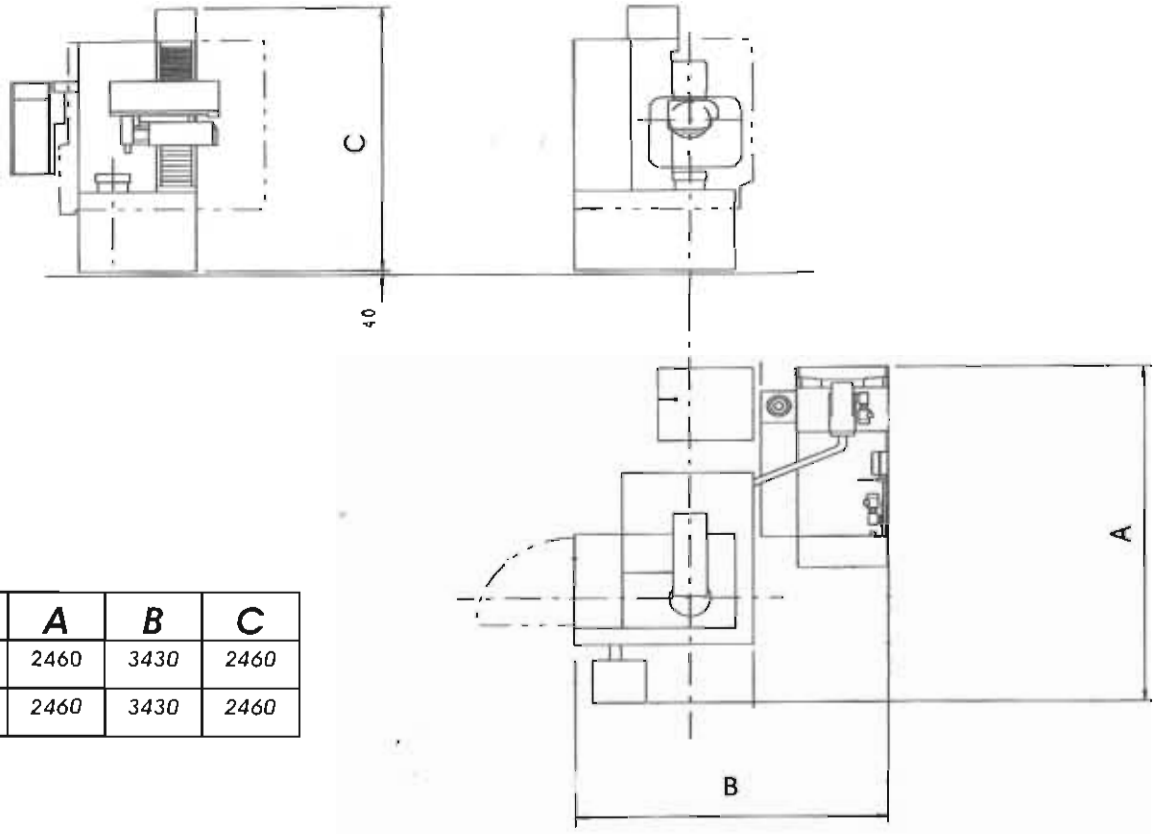
Modulo MR 100-120-140 series

			MR * 100	MR * 120	MR * 140
Working capacity	Max. Grinding Diameter	mm	1200	1400	1600
	Max. Grinding height	mm	600		
Spindle head	Power	Kw	22		
	Grinding wheel size (diameter x bore x width)	mm	457 x 203,2 x 100		
	Wheel speed	rpm	1400		
Rotary axis table	Speed	rpm	8,5 ÷ 42		
	Load capacity (Max. without magnetic chuck)	Kg	800		
	Working surface diameter (with central hole mm 20 H7)	mm	1000	1200	1400
Cross axis head	Max. rapid speed	m/min	5		
	Grinding feed step-by-step	mm	1 ÷ 50		
	Grinding head infinitely variable	mm/min	0 ÷ 2000		
	Min. programmable increment	mm	0,001		
	Working travel	mm	550	650	750
	Max. travel	mm	585	685	785
Vertical axis head	Max. rapid speed	m/min	1,5		
	Min. programmable increment	mm	0,001		
	Working travel	mm	770		
	Max. travel	mm	805		
Dimensions	LENGTH	mm	3950		
	WIDTH	mm	4700		
	HEIGHT	mm	2955		
	MACHINE WEIGHT	**Kg. (approx.)**	9600	10000	13000
	POWER REQUIREMENT	**Kw. (approx.)**	43		

For Workpiece height more than 300 mm the option 011 - Dresser on cross rail is necessary.

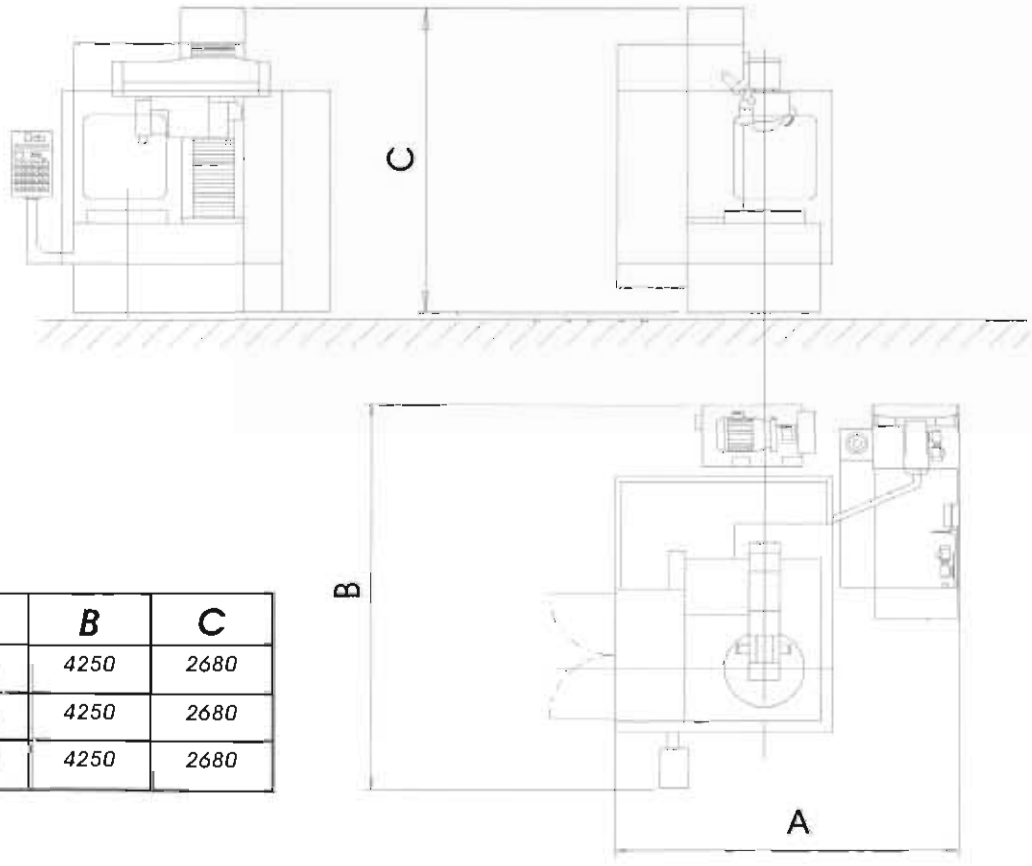
Dimensions, Weight, and Power may vary subject to optional equipment.

Machine dimensions MR30-40 series



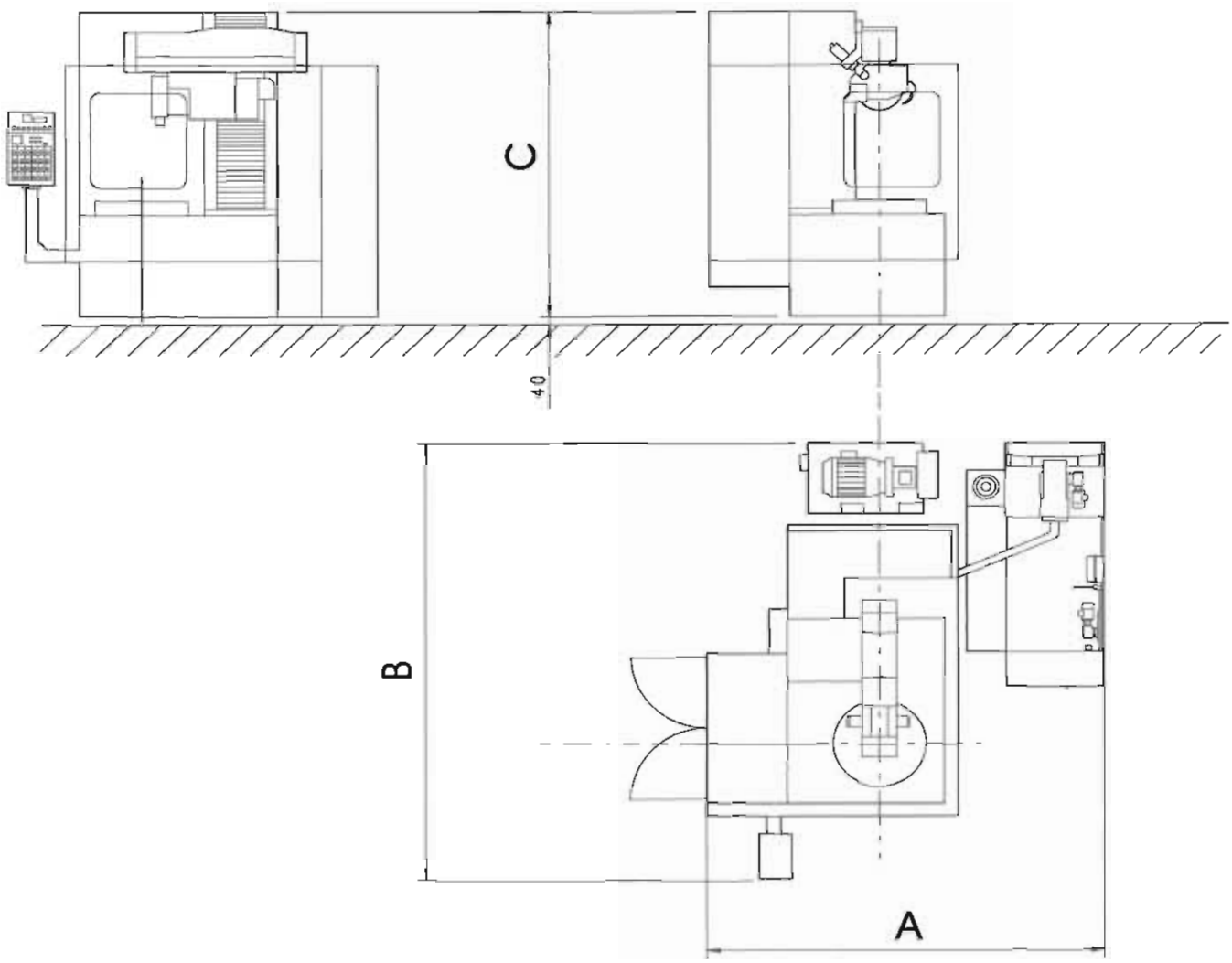
MODEL	A	B	C
MR 30	2460	3430	2460
MR 40	2460	3430	2460

Machine dimensions MR50-60-75 series

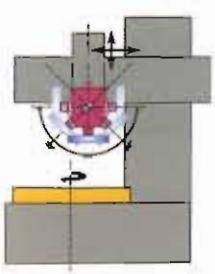


MODEL	A	B	C
MR 50	3450	4250	2680
MR 60	3450	4250	2680
MR 75	3450	4250	2680

Machine dimensions MR 100-120-140 series



MODEL	A	B	C
MR 100	3950	4700	2955
MR 120	3950	4700	2955
MR 140	3950	4700	2955



Single column

Single column machine with Universal spindle

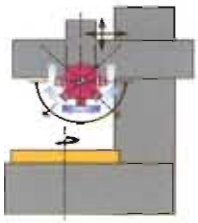
Modulo MR/U series

The equipment of the machine illustrated may differ from standard supply.

- **dgt$_{cnc}$** *Digital electronic system with numerical control*

Main technical specifications:

- Max. External diameter	: 600 ⇨ 1000 mm.
- Max. Heigth of workpiece horizontal wheel position	: 550 ⇨750 mm.
- Max depth grinding	: dxh 150x200 mm
- Power spindle motor	: 7,5 kW
- Angular swivelling	: +/- 90°
- Min angular position	: 1°
- Dimension of STD wheel dxbxw	: min. 70x20x20 mm max 406x152,4x50 mm



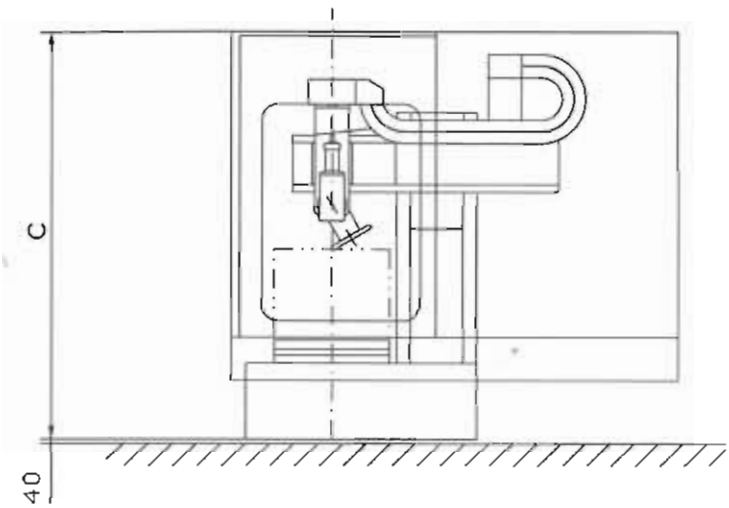
Single column technical specifications

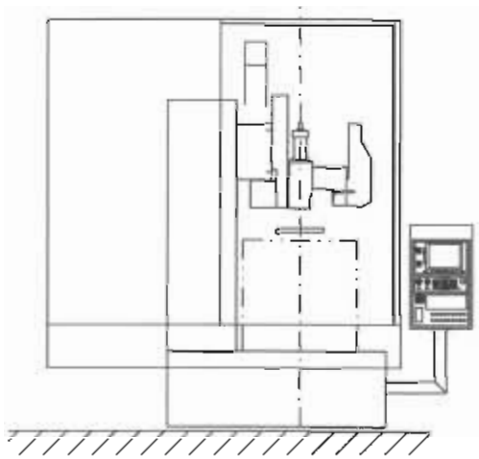
Modulo MR/U series

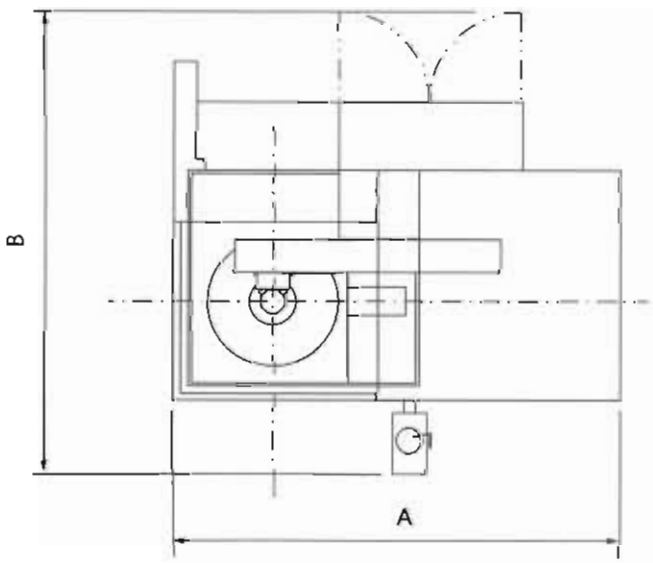
			MR/U 50	MR/U 75	MR/U 100
Working capacity	Max. Grinding external diameter by height (Standard wheel)	mm	600 x 400	850 x 400	1000 x 400
	Min. Grinding internal diameter by depth (Standard extension)	mm	150 x 200		
	Max. Workpiece height	mm	550	750	
Spindle Head	Power	Kw	7,5		
	Angle Swivelling	degrees	+/- 90°		
	Min. Indexing angle	degrees	1°		
	STD wheel dimensions (diameter x bore x width)	mm	406 x 152,4 x 50		
	Min. Wheel dimension with extension for I.D. (diameter x bore x width)	mm	70 x 20 x 20		
	Speed (min. - max.)	rpm	1400 - 6500		
Rotary table	Diameter	mm	500	750	1000
	Speed (automatically adjustable with relation to position of the Yaxis)	rpm	15 ÷ 120		8,5 ÷ 42
	Load max (without megnetic chuck)	Kg	650	1100	1600
	Load max (with magnetick chuck)	Kg	500	750	1000
Cross axis head	Rapid speed	m/min	10		
	Min. Programmable step feed	mm	0,001		
	Working travel	mm	1425		1675
	Max travel	mm	1500		1750
Vertical axis head	Rapid speed	m/min	10		
	Min. Programmable step feed	mm	0,001		
	Working travel	mm	550	750	
	Max travel	mm	625	825	
Dimensions	LENGTH	mm	2750	3250	
	WIDTH	mm	2000	2100	
	HEIGHT	mm	3500	3900	
	MACHINE WEIGHT	**Kg. (approx)**	8000	9000	10500
	POWER REQUIREMENT	**Kw. (approx)**	40	50	

Dimensions, Weight, and Power may vary subject to optional equipment.

Machine dimensions MR/U series

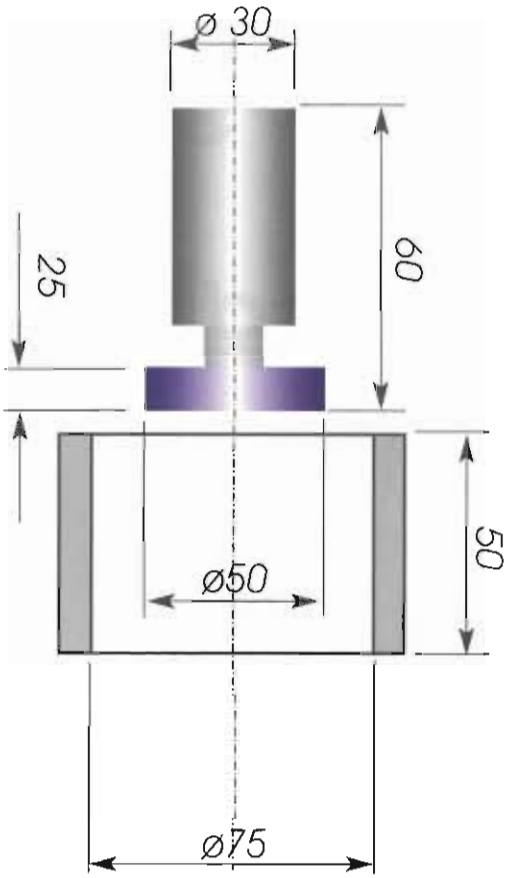


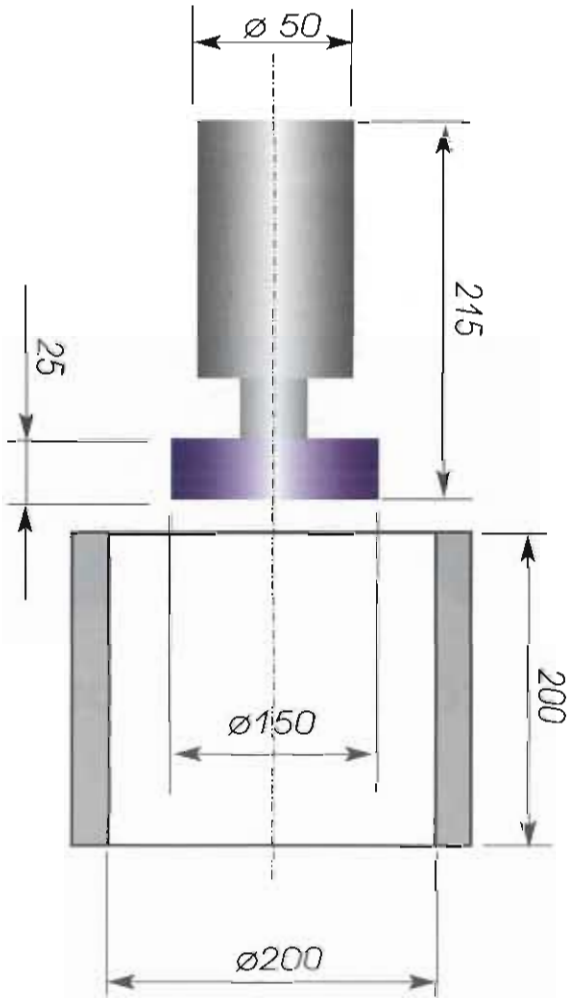




MODEL	A	B	C
MR/U 50		4700	2955
MR/U 75	3950	4700	2955
MR/U 100	3950	4700	2955

Standard Extensions





CNC Tecnology
Favretto
Innovative Grinding
Solutions

Standard technical specifications cnc tecnology

dgtplus

Multiple cycles for automatic surface grinding operations.

Innovative grinding solutions

DGTplus is available for rotary table grinding machines.

The system is ideal for achieving high productivity when machining one-off, small and medium workpiece batch sizes.

Equipped with powerful and advanced software, DGT Plus can be used to link grinding cycles, with shaped grinding wheels. It will also carry out shoulder grinding and many other options, all using simple and guided programming, appropriate for experienced and inexperienced operators alike.

The control is housed in an ergonomically positioned operator console which complies with all current applicable standards.

dgtplus functional advantages

- **Linked cycles** — *Minimize idle time*

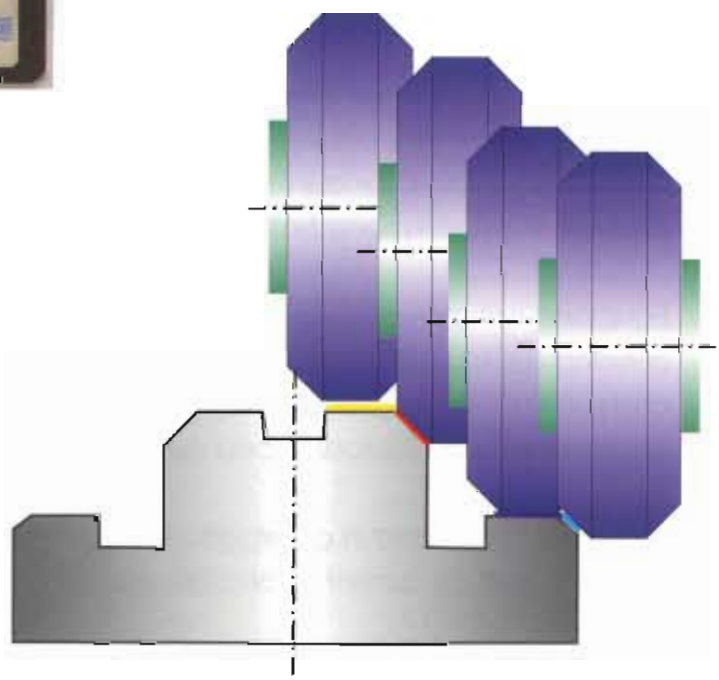
- *Simple icons make the control buttons readily identifiable*

- *The operating sectors are clearly organised for simple identification*

- *DGT Plus allows you to easily link up to four automatic cycles.*

- component datum storage

- choice of cycles



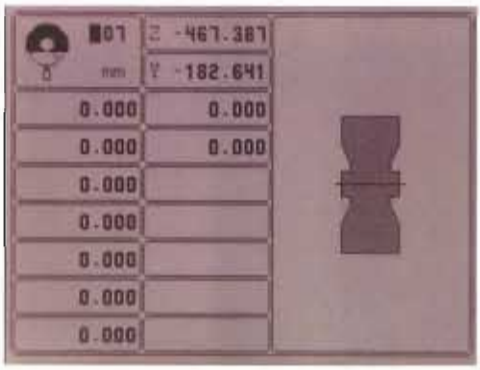
Surface 1
Surface 2
Surface 3
Surface 4

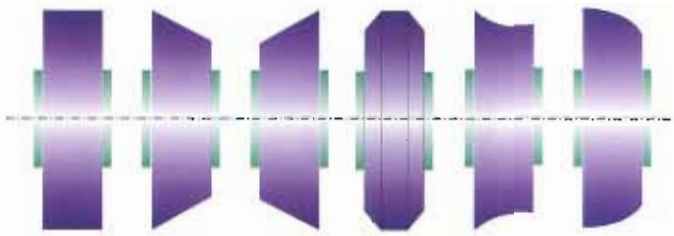
dgtplus functional advantages

- Grinding wheel shapes — Maximised versatility

- DGT Plus makes using shaped grinding wheels simple thanks to powerful and clear graphics.

- The most commonly used grinding wheel shapes are included in the Standard Grinding Wheel Library. To define the geometric features, simply fill in the values of the table for the required grinding wheel.

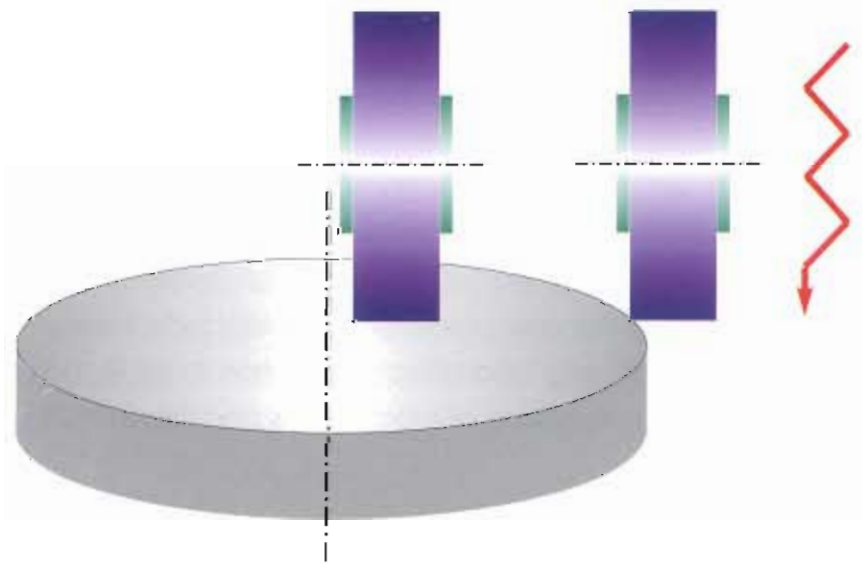




- Shoulder Grinding — Minimised Operator Intervention

- Continuous downfeed cycle

- With DGT Plus you can carry out particularly problematic machining like shoulder grinding in automatic mode



dgtcnc Simple to use CNC control

- The Power of control

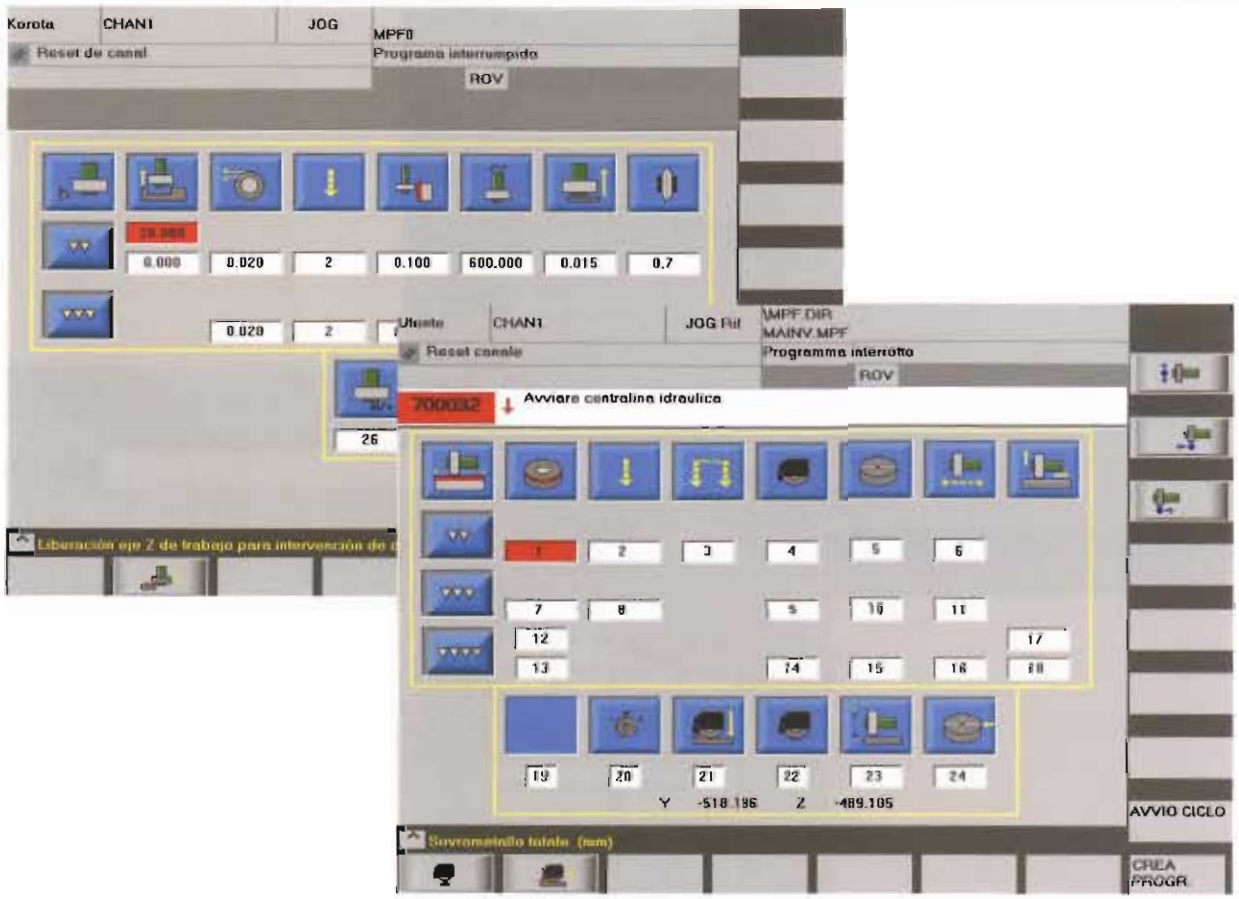
In FAVRETTO philosophy, Power of Control is an essential factor for success.

Power of Control - *the use of the latest generation SIEMENS numeric control power allows advanced application software.*

- *it allows inexperienced operators to create and use formed wheels through extremely powerful graphical templates.*
- *It offers an easy and effective solution to all technical challenges with the simple combination of work cycles and the forming of wheels.*

dgtcnc functional advantages

- Guaranteed reliability



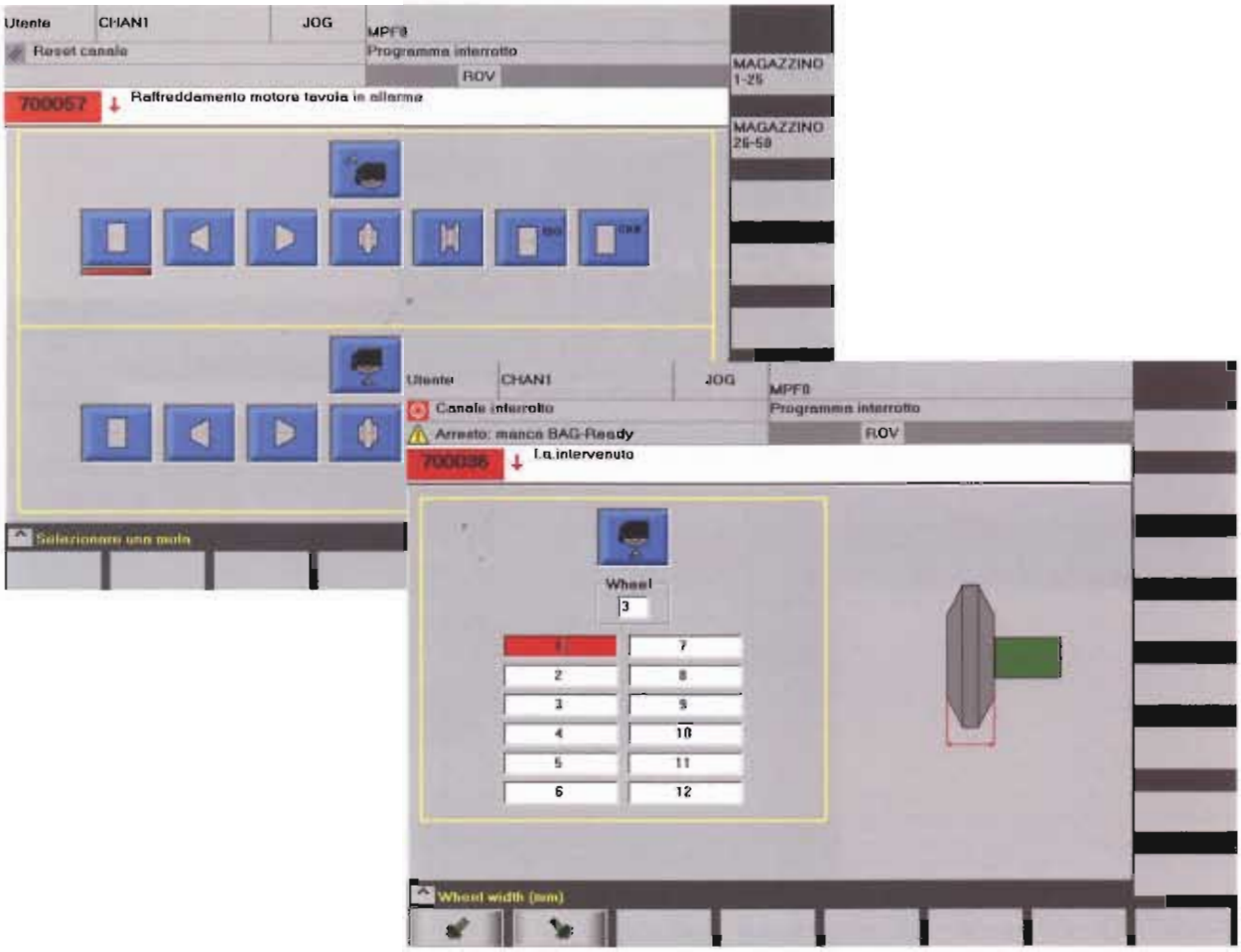
*In FAVRETTO philosophy, **Guaranteed Reliability** is an indispensable factor for success.*

Guaranteed Reliability

- *is a result of the use of "reliable" materials, components and systems.*
- *it consider's the machine tool as an element of the productive system, including the operator and the environment.*
- *it foresee's and solve's those situations representing a threat to the productive system.*
- *it also means:*
  Maximum comfort for the operator.
  Availability of an easy solution for each problem.
  Maximum operator's satisfaction for the results obtained by their work.

dgtcnc functional advantages

- Functional technology



*In FAVRETTO philosophy, **Functional Technology** is an important factor for the success.*

Functional technology

- *makes the operator experience simple.*
- *makes advanced grinding cycles simple to achieve.*
- *makes changing a wide variety of parameters easy to achieve which enables maximum optimisation of any work cycle.*

Optional equipment and relative technical detailed lists

Operating Efficiency

Rotary magnetic chucks, pole pitch 12 mm. with brass entrefers.

Endless paper belt type mechanical swarf separator for coolant equipment.

- Tank 350 l Flow rate 100 l/min.

- Tank 600 l Flow rate 200 l/min.

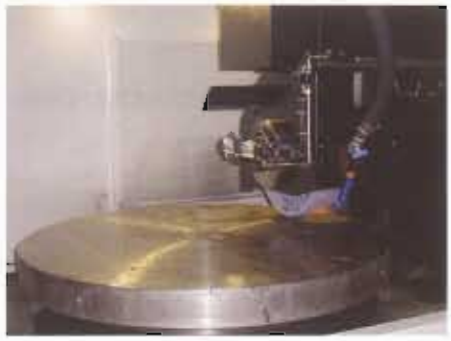
Static frequency converter for wheel speed control, maintaining a constant peripheral speed as the wheel diameter alters.

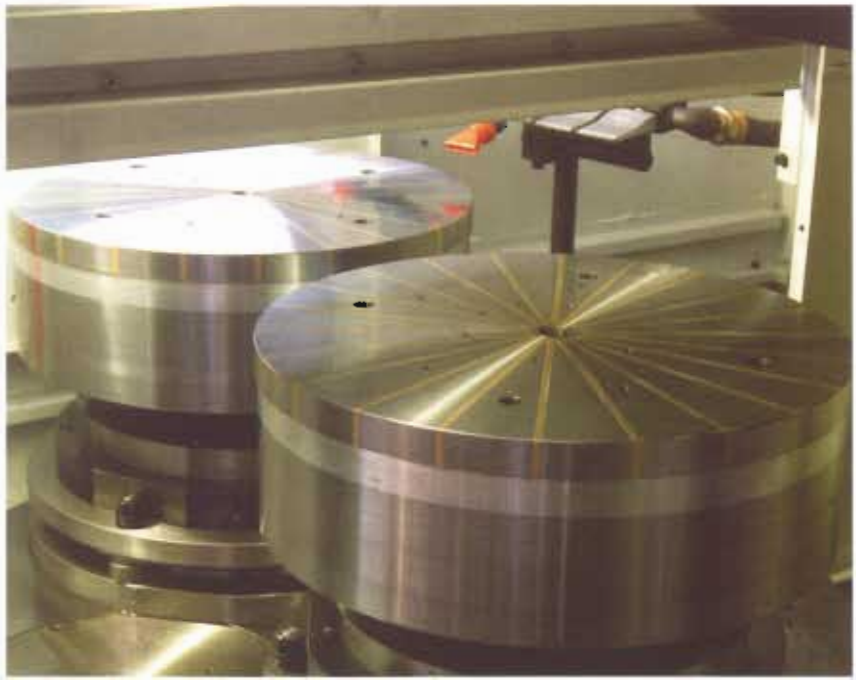
Dynamic balancing unit for the wheel including:

- *balancing head*
- *vibration transducer*
- *electronic control system*

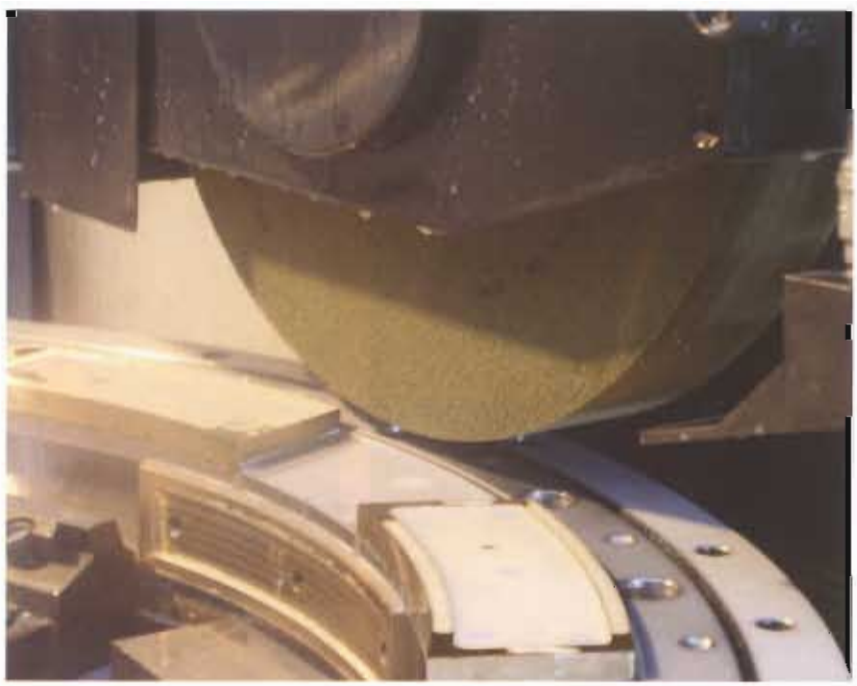
The system allows a balancing intervention by means of push button displaced on the machine keyboard panel.

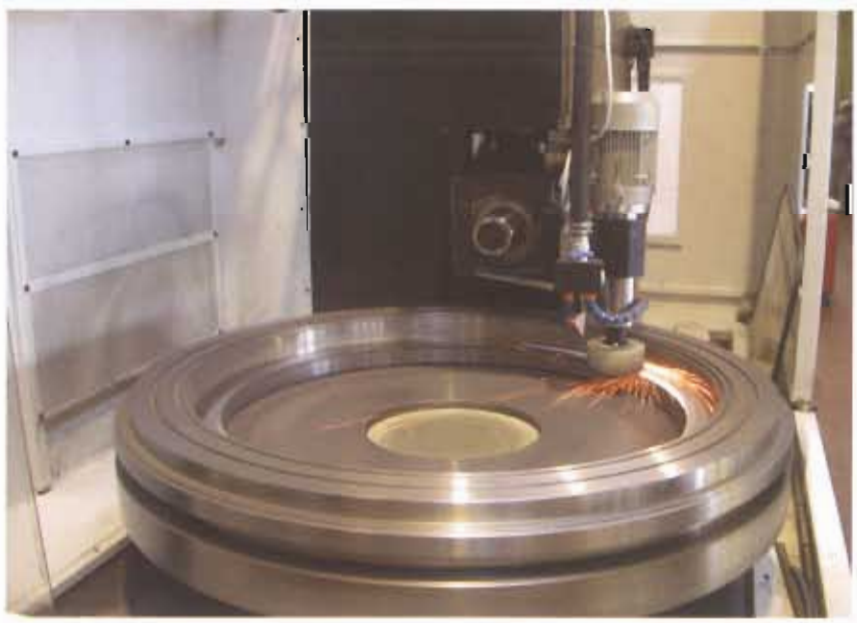
Working examples



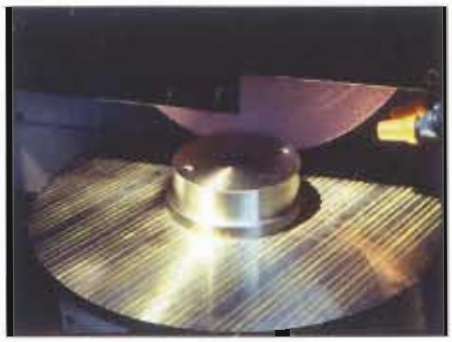


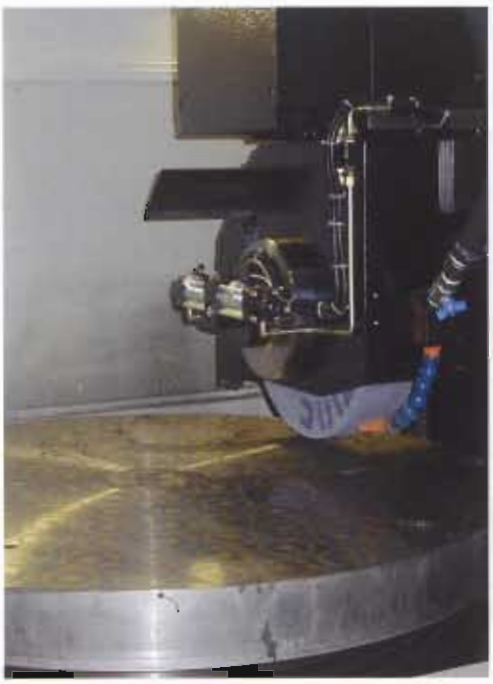
Working examples

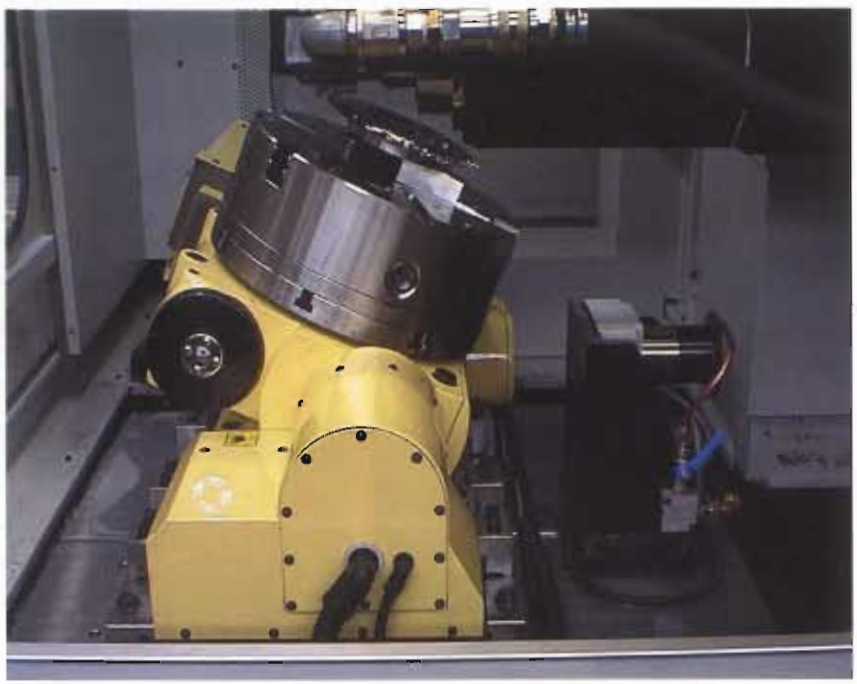




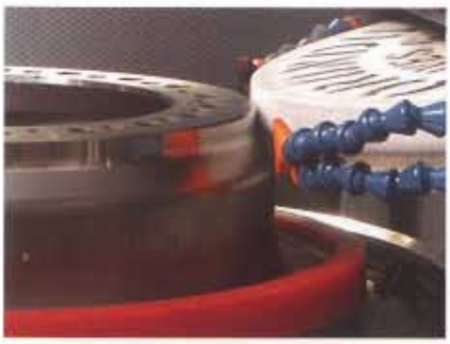
Working examples







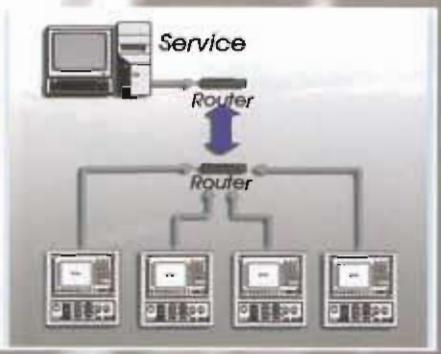
Working examples







Favretto technical service



NET SERVICE

Contact our Specialists for immediate remote machine diagnostics. Our Engineers will identify problems and advise solutions, using high speed internet connections, reducing travelling and other costs.

SERVICE

Favretto offer immediate support in case of a machine breakdown. A quick telephone call will be enough to establish your needs and send the relevant components and Specialist Engineers to resolve the problems in a prompt and professional manner.

TELESERVICE

Favretto provide TELESERVICE support to worldwide Customers. By Teleservice connection Machines at the User Plant can be checked and operated by the Favretto Service Station. In this way it is easier and faster to provide service for operation, trouble shouting and maintenance.

INSTALLATION

We provide a complete service, not only installing and commissioning the machine, but our Specialists will remain with you to ensure that full training is carried out relative to your production requirements. Favretto believe the most efficient and professional method of installing machines is to leave only when the machine is functioning and producing your components..

USED MACHINES

Should you decide to acquire a used machine, Favretto can provide reliable machines which meet Favretto's high standards of quality, productivity, precision and reliability in a cost effective manner.

SPARE PARTS

Thanks to state of the art spares management software, we can identify and supply spare parts. This system is continually updated throughout the day to ensure that Favretto work on up to the minute stock positions enabling accurate and rapid order processing.

Notes

Specialized in the manufacture of surface and profile grinding since 1934
with over 20.000 machines produced and distributed world wide

FMT
FUTURE MANUFACTURING TECHNOLOGY
FMT GROUP

FAVRETTO
meccanodora
cimat

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Fax: 860-528-3995
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