LYOR



HONING MACHINES

YUM



PRECISION SINCE 1936

ROBBI

MADE IN ITALY

Robbi Group srl
Via dell'Industria 7
37040 Veronella - VR
Italia
39 0442 47700
39 0442 47966
robbi@robbigroup.com
https://rettificatrici-robbi.com

MEMBER COMPANY UCIMU

LYOR - HORIZONTAL HONING MACHINES

- **Horizontal honing machines LYOR are distinguished by their rigidity and power.**
- **Honing head movement with recirculating ball screw**
- **Spindle transmission by gearbox and 2-speed gear (ground and hardened gear) to transmit the maximum power**
- **Spindle rotation with three-phase electric motor, controlled by vector inverter with forced ventilation**
- **Easy operation programming**
- **The touch-screen displays all the working data and enables the operator to attend during the working cycle.**







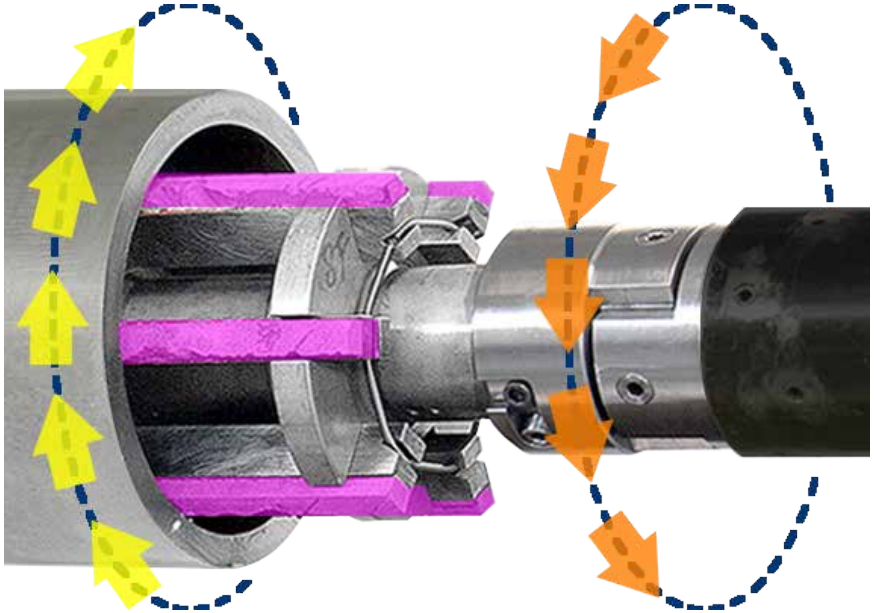
Working Capacity		40.20	40.30	40.40	40.50	40.60	40.70
Bore diameter (Min—Max)	mm	20-400					
Max cylinder length to be honed	mm	2000	3000	4000	5000	6000	7000
Max Honing Head Stroke	mm	3000	4000	5000	6000	7000	8000
Steady rests for honing head extension	n	1			2		
Machine length	m	9	11	13	15	17	19
Machine width	m	2,8			3,4		

Technical Specifications	M	S
Bed in normalized electro-welded steel with oversized guides in high resistance steel.	X	X
Roller monorail grease lubricated	X	X
Head in normalized electro-welded steel	X	X
Gear adapter and transmission speed lubricated in oil bath	X	X
Spindle motor variable with vector inverter	X	X
Cooling installation with pump and tank with possibility to apply a depuration system	X	X
Electric and electronic components are closed inside an electric cabinet with protection IP 55.	X	X
Touch screen color operator panel (7')	X	X
Mechanical pushbuttons (for frequent operations) ergonomically positioned	X	X
PLC permits working in both automatic and manual	X	X
Hydraulic power pack is separate from the machine	X	X
Prisms for clamping (manual closing)	X	
Steday rest for cylinder support (manual closing)	X	
Hydraulic expansion system with infinitesimal regulation of the stone pressure		X
Self centering chuck spindle (hydraulic closing)		X
Standard Equipment		
Clamping prisms (manual closing)	X	
1 Steady rest for hoing head extension bars	X	X
1 Travelling rest for honing head extension (machines with honing stroke major than 4 meters)	X	X
1 Steady rest for cylinders (manual closing)	X	X
Self centering chuck spindel for cylinder clamping (hydraulic closing)		X
On Request		
Honing head expansion stroke controlled by a mechanical stroke end, with micrometric adjustment	X	X
Honing heads , stones and stone holders	X	X
Honing head extensions	X	X
Magnetic cleaner, paper roll cleaner or combined magnetic and paper roll cleaner.	X	X
Steady rest, self centering (hydraulic closing)		X

LYOR S



LYOR S



Besides the honing head spindle with the honing stone hydraulic expansion, a second spindle rotates the cylinder in the opposite direction to the honing head.

BENEFITS

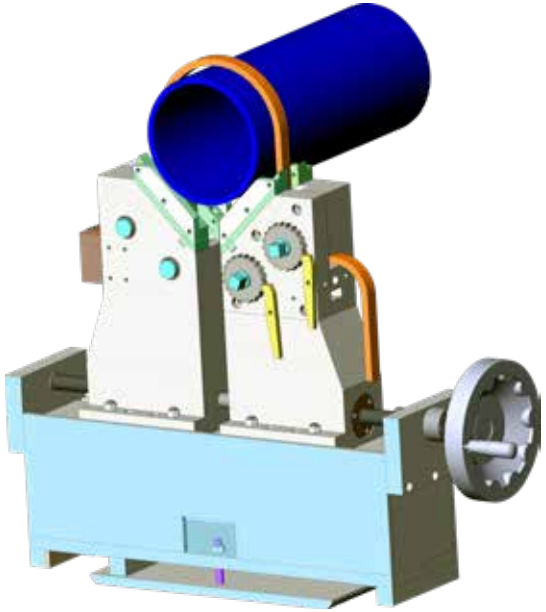
- improved roundness and straightness of the bore
- major productivity, especially on small cylinder diameters
- the honing oil is distributed uniformly and constantly in the cylinder, increasing the heat dispersion produced by the honing process (on machines without rotation, the heat is concentrated on the top part of the cylinder where there is less honing oil).

TECHNICAL SPECIFICATIONS

Diameter	Max admitted	mm	500
	Max chuck	mm	500
Cylinder rotation speed variabile (2 ranges)		rpm	10-150
Honing spindle rotation speed variable (2 ranges)		rpm	10-300
Honing Head Travel Speed		m/min	0-35
Motor	Honing Spindle Rotation	kW	15
	Cylinder rotation	kW	7,5
	Honing Head Movement	kW	18,5
	Hydraulic expansion power pack	kW	0,75
	Coolant pump	kW	0,75

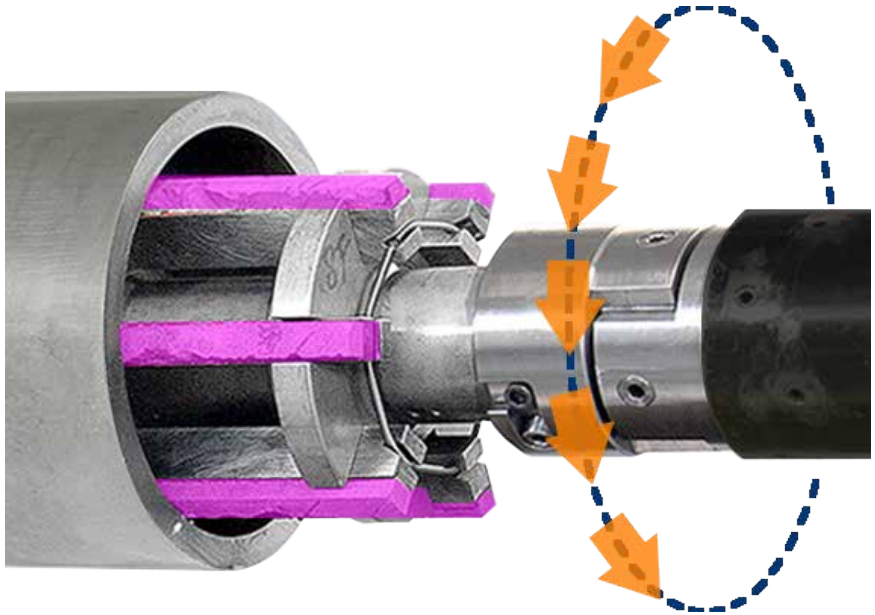
LYOR M





The cylinders to be honed are placed and clamped on prisms. The hydraulic expansion of the honing, rotates inside the cylinder to be honed.

LYOR M



TECHNICAL SPECIFICATIONS

Distance spindle centre to floor		mm	1150
Max Admitted Diameter		mm	500
Honing spindle rotation variable speed (2 ranges)		rpm	10-300
Honing head feed		m/min	0-35
Motor	Honing Spindle Rotation	Kw	15
	Head Movement	Kw	11
	Head expansion power pack	Kw	0,75
	Coolant Pump	Kw	0,75

VERTICAL HONING MACHINE - YUM



BENEFITS

- better roundness than the horizontal honing
- lower outflow of coolant
- smoother measuring of the honed diameter

FEATURES

- adjustment of head stroke end from operator panel
- head movement roll guides
- hydraulic expansion of honing tool stones
- instant and uniform abrading action
- possibility to remove considerable stock removal quickly and efficiently while maintaining tight tolerances and accurate precision
- centralized coolant plant
- possibility to install filtering and cooling systems
- variable spindle rotation speed with gear rpm change (max. is obtained from the spindle torque)

0,1 mm PRECISION GUARANTEED ON HEAD MOVEMENT REVERSE

- Transmission of vertical head movement with recirculating ball screw

AUTOMATIC STOP IN CASE OF BELT BREAKAGE

- Verification system for the integrity of the transmission belt.
- Stop of the machine in case of belt breakage.

AUTOMATIC ADJUSTMENT OF STONE PRESSURE

Automatic cycle permits the stone pressure adjustment and possibility to stop the position: particularly useful for taper and oval cylinders

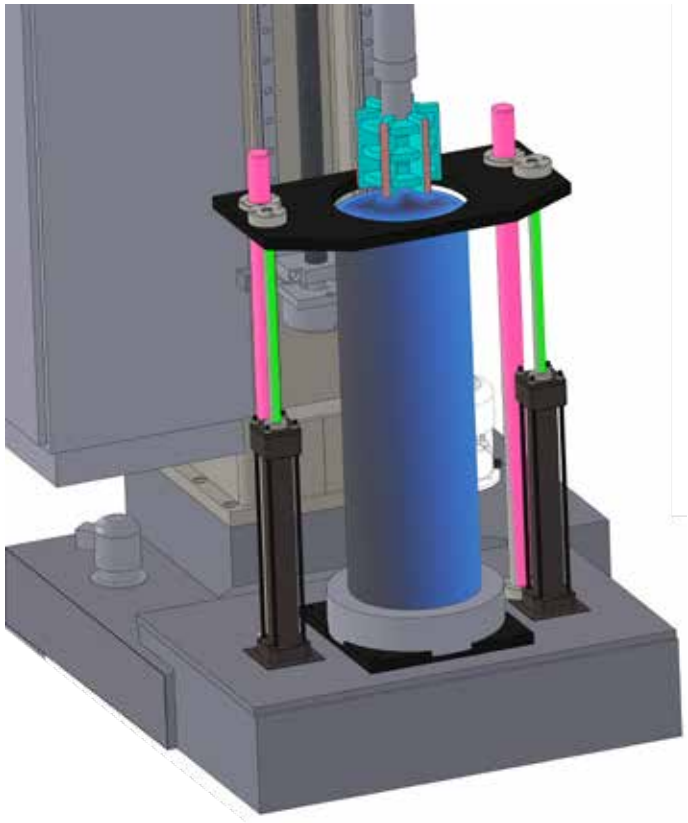
DISCONTINUITY AUTOMATIC DETECTION

The power absorbed detection system permits

- to detect the less stress points and consequently
- the smallest diameter points.

SPEED RANGES

Numbers	Speed
2	200
3	300
	400



TECHNICAL SPECIFICATIONS			200 10	200 12	300 14	300 18
Honing Diameter	Min	mm	22			
	Max	mm	200		300	
Max Head Stroke		mm	1100	1300	1500	1900
Max Honing Length		mm	1000	1200	1400	1800
Distance spindle to column centre		mm	375		435	
Spindle Rotation Speeds (3 ranges)		rpm	40 ÷ 300		20 ÷ 300	
Head Feeds		m/min	0 ÷ 20		0 ÷ 20	
Motors	Spindle Rotation	kw	4		10	
	Head Movement	kw	5,5		7,5	
	Coolant pump	kw	0,5		0,5	
	Hydraulic clamp	kw	2,0		3,0	
Machine	Height	mm	2750	3150	3600	4600
	Height (with max elevated head)	mm	3400	3800	4400	5150
Workspace Required	Length	mm	1300	1300	1385	1385
	Width	mm	1100	1100	1710	1710

STANDARD EQUIPMENT

- Electric equipment
- Hydraulic equipment (without oil)
- Coolant equipment (without oil)
- Mechanical clamping fixture
- Instruction manual

HYDRAULIC CLAMPING FIXTURE (EXTRA)

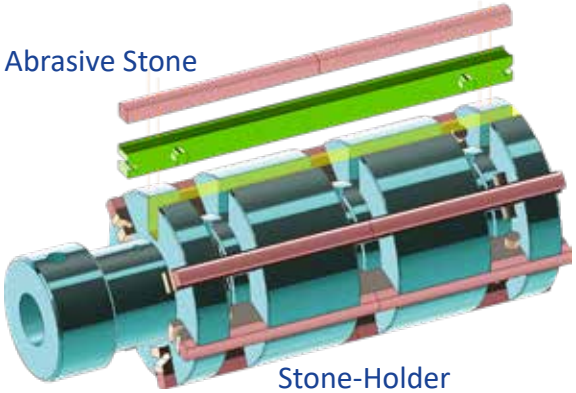
Hydraulic clamping fixture (extra equipment) permits a fast and steady camping of the cylinder.
The system allows to obtain a higher degree of honing roundness.
The main plate is equipped with fixing plated flanges (adaptable to the diameter of the cylinder to be honed)

EXTRA EQUIPMENT

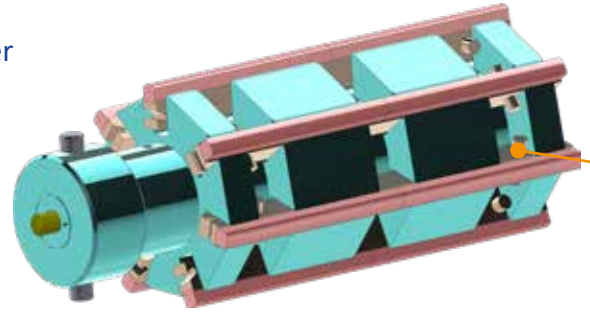
- Honing tools with hydraulic expansion
- Extension bars for honing tools
- Stone-holders for honing tools
- Abrasives stones
- Hydraulic clamping fixture
- Bed with through hole
- Coolant clarifier

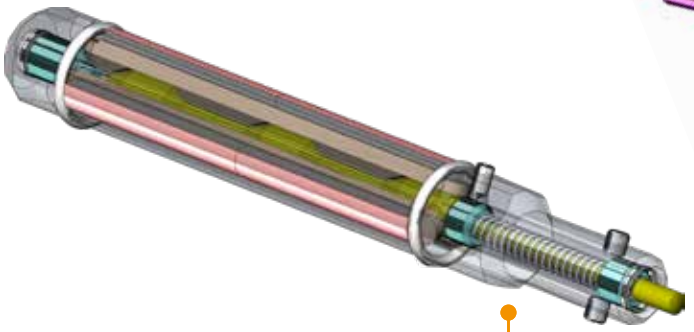
Honing Tools

Abrasive Stone



Stone-Holder







Expansion System of the Honing Tools



Honing Tool

Extension Bar

The extensions bars are manufactured considering the length limits specified in the table on the next page



Steady rest for honing head extension bars

Honing Stones Length mm				Honing Diameters	Stones Holder		Extension Bars		
					N	Capacity	Cod	Length	
Cod	TLY	TMY	TOY	mm		mm		Min	Max
20	40	70	100						
22	50			23÷26	3	23÷26			
26	60	80	100	26÷30	3	25÷30 27÷32	PLY 26	1000	1500
30	60	80	100	30÷35	3	28÷34 30÷36 32÷38	PLY 30	1000	2000
35	80	100		35÷45	3	33÷41 36÷44 38÷46 40÷48	PLY 35	1000	2500
40			150						
45	80	125	150	45÷60	4	43÷51 46÷54 50÷58 53÷61	PLY 45	1000	10000
60	100	150	200	60÷80	4	57÷67 62÷72 67÷77 72÷82	PLY60	1000	10000
70		150		70÷90					
80	125	200	200	80÷100	5	77÷92 82÷97 87÷102 92÷107	PLY80	1000	10000
100	150	200	250	100÷125	6	96÷112 106÷122 112÷128 116÷132	PLY100/125	1000	10000
125	150	250		125÷150	6	122÷140 128÷146 132÷150 138÷156			
150	200	300		150÷180	6	146÷169 156÷179 166÷189 176÷199	PLY150/180	1000	10000
180	200	300		180÷220	6	176÷199 186÷209 196÷219 206÷229			
220	250			220÷260		216÷246 226÷256 236÷266 246÷276	PLY220/260	1000	10000
260				260÷300	6	256÷286 266÷296 276÷306 286÷316			
300				300÷400	7	295÷335 315÷355 335÷375 355÷395 375÷415 394÷435		1000	10000

THE HONING TOOLS TLY, TMY AND TOY
USE ABRASIVE STONES OF DIFFERENT LENGTH

LYOR (HORIZONTAL HONING MACHINE) CAN USE
TMY AND **TOY** HONING TOOLS

YUM (VERTICAL HONING MACHINE CAN USE
TLY, TMY AND TOY HONING TOOLS

Operator Panel

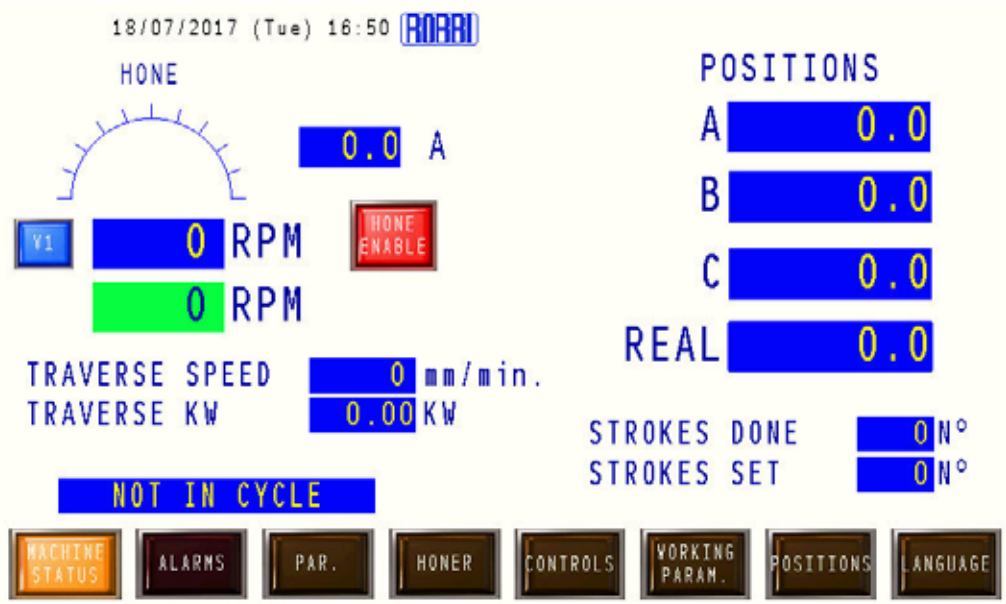
The ‘touch-screen’ control panel permits an easy programming and management of all the operating parameters performed by the PLC:

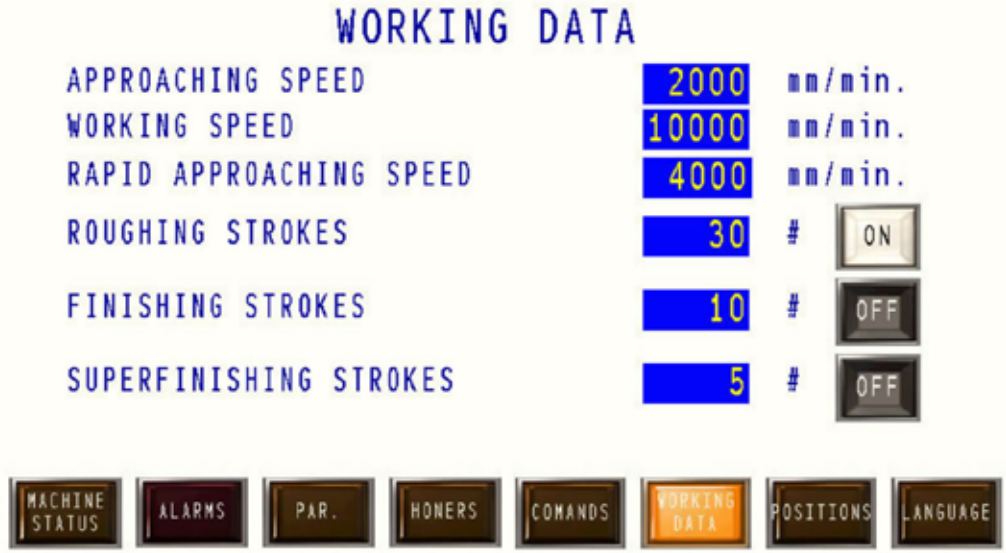
- position of honing head inversion points
- position of honing head for component loading/unloading
- honing stone expansion pressure (On request, honing head expansion stroke is controlled by a mechanical stroke end, with micrometric adjustment)
- working speed of honing head longitudinal movement
- positioning speed of honing head
- honing head rotation speed
- workhead spindle rotation speed (only for LYOR-S)
- number of honing strokes
- number of finish strokes
- abrasive stone pressure



The ‘touch-screen’ control panel displays:

- machine status and alarm messages
- all set parameters of the automatic cycle in working
- eventual corrections made to the set parameters during the automatic cycle in working
- diagram of the honing head spindle power band during the honing head stroke





Horizontal Honing Machines Gallery



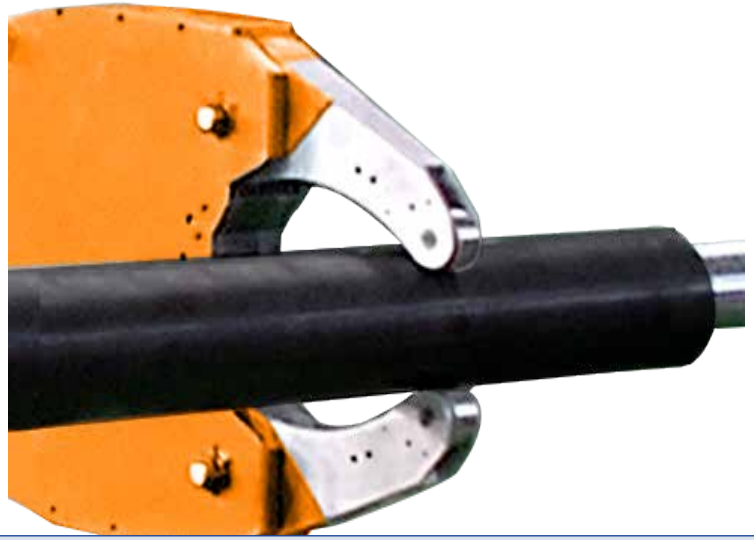
Work Head (S only)



M Version Clampings



Honing Head



Steady Rest, self centering (hydraulic closing - S only)

At Your Service Since 1936

Robbi has operated in the machine tool market since 1936 and specialise in the manufacture of machines tailored to meet the more demanding needs of the customer's complexed and more specialised demands.

Whilst maintaining competitive prices, Robbi have ensured their machines have stability and precision.
Robbi grinding machines, use the best technology and the most robust and reliable components available on the market in their build programme.
Robbi have a commitment to assist and help, proactively, its customers to ensure they maximise the efficiency of the machine.

Robbi, in fact, offers various service solutions, including the:

- *development of manufacturing processes;*
- *replacement parts spare part programme,*
- *making parts available for older models,*
- *tailored operational training programs*
- *and maintenance training to maximise the features of grinding machines and maintain the Robbi Grinders longevity.*

Understanding the needs of our customers we are offer the best solutions and services that increase their return on productivity thus improving our customers return on his investment.
Ideas that may improve our business are always appreciated from customers.
If there's anything we can do to improve your experience with Robbi, please let us know.
Robbi have a commitment to ensure all customers are completely satisfied.

Choose Robbi precision for increased productivity and a faster return on your investment.
Call us today,we've have a solution for your grinding application.



PRECISION SINCE 1936
ROBBI
MADE IN ITALY

Robbi Group srl
Via dell'Industria 7
37040 Veronella - VR
Italia
39 0442 47700
39 0442 47966
robbi@robbigroup.com
https://rettificatrici-robbi.com

MEMBER COMPANY UCIMU

Texts, illustrations and specifications reported in this catalogue are based on information available at the time of publication. Despite the efforts, this document can contain technical inaccuracies or typographical errors.

Robbi Group reserves the right to make changes at any time and without notice , any content including pictures and text. Robbi Group assumes no responsibility for any inaccuracies , errors or omissions presents in this catalogue.