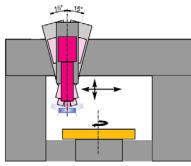


Double column technical specifications

Modulo TRD series

		TRD 1500	TRD 2000	TRD 2500	TRD 3000
Working capacity	Max Grinding external diameter x height (standard wheel) mm	1600x800	2100x800	2600x800	3100x800
	Min Int. grinding diameter x depth (standard wheel) in cavity -without cover mm	600x800 (with no extension)			
	Min Grinding diameter x depth with extension mm	100x350 ÷ 200x450 ÷ 300x500 (different extension on request)			
	Max. Grinding end face height (std wheel) mm	1000			
Vertical Spindle Head	Power Kw	10		15	
	STD wheel dimension Min - Max diameter mm	(400 ÷ 508) x 75			
	Wheel dimension with extensions Min - Max diameter mm	80 ÷ 406			
	Speed (Min. - Max.) rpm	1400 - 5000			
Rotary table	Diameter mm	1500	2000	2500	3000
	Speed (automatically adjustable with relation to position of the Y axis) rpm	1 ÷ 50			
	Load max (without magnetic chuck) Kg	10000	15000	20000	25000
	Load max (with magnetic chuck) Kg	8500	11500	14000	16500
Cross axis head	Rapid speed m/min	10			
	Min. Programmable step feed mm	0,001			
	Working travel mm	2730	3230	3730	4230
	Max travel mm	2810	3310	3810	4310
Vertical axis head	Rapid speed m/min	10			
	Min. Programmable step feed mm	0,001			
	Working travel mm	1250			
	Max travel mm	1330			
Dimensions	LENGTH mm	5130	5630	6130	6630
	WIDTH mm	3650		4150	
	HEIGHT mm	5420		5470	
	MACHINE WEIGHT Kg. (approx)	25000	28000	32000	37000
	POWER REQUIREMENT Kw. (approx)	75		85	

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

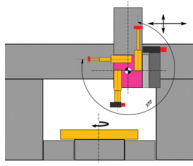


Double column technical specifications

Modulo TRD/S series

		TRD/S 1500	TRD/S 2000	TRD/S 2500	TRD/S 3000
Working capacity	Max Grinding external diameter x height (standard wheel) mm	1600x800	2100x800	2600x800	3100x800
	Min Int. grinding diameter x depth (standard wheel) in cavity -without cover mm	600x800 (with no extension)			
	Min Grinding diameter x depth with extension mm	100x350 ÷ 200x450 ÷ 300x500 (different extension on request)			
	Max. Grinding end face height (std wheel) mm	1000			
Vertical Spindle Head	Power Kw	10		15	
	STD wheel dimension Min - Max diameter mm	400 ÷ 508 x 75			
	Wheel dimension with extension Min - Max diameter mm	80 ÷ 406			
	Speed (Min. - Max.) rpm	1400 - 5000			
Rotary table	Diameter mm	1500	2000	2500	3000
	Speed (automatically adjustable with relations to position of the Y axis) rpm	1 ÷ 50			
	Load max (without magnetic chuck) Kg	10000	15000	20000	25000
	Load max (with magnetic chuck) Kg	8500	11500	14000	16500
Cross axis head	Rapid speed m/min	10			
	Min. Programmable step feed mm	0,001			
	Working travel mm	2730	3230	3730	4230
	Max travel mm	2810	3310	3810	4310
Vertical axis head	Rapid speed m/min	10			
	Min. Programmable step feed mm	0,001			
	Working travel mm	1250			
	Max travel mm	1330			
	Angle Swivelling degrees	+/- 15°			
Min. indexing angle degrees	0° 10'				
Dimensions	LENGTH mm	5130	5630	6130	6630
	WIDTH mm	3650		4150	
	HEIGHT mm	5420		5470	
	MACHINE WEIGHT Kg. (approx)	25000	28000	32000	37000
	POWER REQUIREMENT Kw. (approx)	75		85	

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

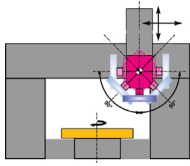


Double column technical specifications

Modulo TRD/T Series

			TRD/T 2000	TRD/T 2500	TRD/T 3000
Working capacity	Max. Diameter	mm	2100	2600	3100
	Max. Height	mm	1000		
Horizontal spindle Head	Power	Kw	22		
	Speed	rpm	1100 ÷ 2000		
	Wheel external diameter	mm	508		
	Width	mm	150		
Spindle Head for external - Internal Diameters	Grinding external diameter	mm	0 ÷ 2100	0 ÷ 2600	0 ÷ 3100
	MIN. internal diameter	mm	700		
	MAX depth	mm	1000		
	Power	Kw	15		
	Speed	rpm	1100 ÷ 2200		
	Wheel external diameter	mm	508		
	Width	mm	100		
Spindle Head for Internal Diameters	MIN. internal diameter	mm	240		
	MAX depth	mm	1000		
	Power	Kw	10		
	Speed	rpm	2200 ÷ 3600		
	Wheel external diameter	mm	250		
	minim diameter	mm	175		
	Width	mm	60		
Spindle Head for Internal small diameters	MIN. internal diameter	mm	160		
	MAX depth	mm	500		
	Power	Kw	10		
	Speed	rpm	3000 ÷ 6000		
	Wheel external diameter	mm	175		
	minim diameter	mm	120		
	width	mm	50		
Idrostatic rotary table	Diameter	mm	2000	2500	3000
	Speed (automatically adjustable with relations to position of the Y axis)	rpm	1 ÷ 50		
	Load max (without magnetic chuck)	Kg	15000	20000	25000
	Load max (with magnetic chuck)	Kg	11500	14000	16500
Cross axis head	Rapid speed	m/min	10		
	Grinding feed infinitely variable	mm/min	0 ÷ 2000		
	Min. Programmable step feed	mm	0,001		
	Working travel	mm	2200	2600	3000
	Max travel	mm	2250	2650	3050
Vertical axis head	Rapid speed	m/min	5		
	Min. Programmable step feed	mm	0,001		
	Working travel	mm	800 ÷ 1200 optional		
	Max travel	mm	825 ÷ 1225 optional		
Dimensions	LENGTH	mm	5975		
	WIDTH	mm	3600		
	HEIGHT	mm	6500		
	MACHINE WEIGHT	Kg. (approx)	28000	31000	40000
	POWER REQUIREMENT	Kw. (approx)	80		

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

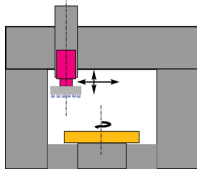


Double column technical specifications

Modulo TRD/U series

		TRD/U 1500	TRD/U 2000	TRD/U 2500	TRD/U 3000
Working capacity	Max Grinding external diameter x height (standard wheel) mm	1600x800	2100x800	2600x800	3100x800
	Min Int grinding diameter x depth (standard wheel) mm	900x300 (with no extension) 900x500 (with extension 200 mm length)			
	Min Grinding diameter x depth with extension mm	100x350 ÷ 200x450 ÷ 300x500 ÷ 400x600 ÷ 600x800			
	Max. Grinding end face height (std wheel) mm	1000			
Universal Spindle Head	Power Kw	30			
	Angle Swivelling degrees	+/- 110°			
	Min. indexing angle degrees	1°			
	STD wheel dimension (diameter x bore x width) mm	610 x 304,8 x 100			
	Wheel dimension with extensions Min. - Max diameter mm	80 ÷ 406			
	Speed (Min. - Max.) rpm	800 ÷ 5000			
For smaller wheels and extensions refer to different layout					
Rotary table	Diameter mm	1500	2000	2500	3000
	Speed (automatically adjustable with relations to position of the Y axis) rpm	1 ÷ 50			
	Load max (without magnetic chuck) Kg	10000	15000	20000	25000
	Load max (with magnetic chuck) Kg	8500	11500	14000	16500
Cross axis head	Rapid speed m/min	10			
	Min. Programmable step feed mm	0,001			
	Working travel mm	3600	4100	4600	5100
	Max travel mm	3680	4180	4680	5180
Vertical axis head	Rapid speed m/min	10			
	Min. Programmable step feed mm	0,001			
	Working travel mm	1250			
	Max travel mm	1330			
Dimensions	LENGTH mm	6400	6900	7400	7900
	WIDTH mm	3650		4150	
	HEIGHT mm	5420		5470	
	MACHINE WEIGHT Kg. (approx)	27000	30000	34000	39000
	POWER REQUIREMENT Kw. (approx)	75		85	

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

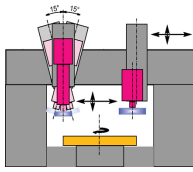


Double column technical specifications

Modulo TRD/V series

			TRD/V 2000	TRD/V 2500	TRD/V 3000
Working capacity	Max. Grinding Diameter	mm	2100	2600	3100
	Max. Grinding height	mm	750		
Spindle head	Power	Kw	60		
	Grinding wheel size diameter	mm	600		
	Wheel speed max.	rpm	800		
Rotary axis table	Speed	rpm	8,5 ÷ 42		
	Load capacity (Max. without magnetic chuck)	Kg	15000	20000	25000
	Working surface diameter	mm	2000	2500	3000
Cross axis head	Max. rapid speed	m/min	10		
	Grinding head infinitely variable	mm/min	0 ÷ 2000		
	Min. programmable increment	mm	0,001		
	Working travel	mm	1200	1500	1700
	Max. travel	mm	1225	1525	1725
Vertical axis head	Max. rapid speed	m/min	10		
	Min. programmable increment	mm	0,001		
	Working travel	mm	800		
	Max. travel	mm	825		
Dimensions	LENGTH	mm	5270	5520	5770
	WIDTH	mm	3750	4000	4250
	HEIGHT	mm	5450		
MACHINE WEIGHT		Kg. (approx.)	30000	34000	39000
POWER REQUIREMENT		Kw. (approx.)	95		

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

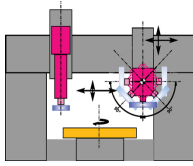


Double column technical specifications

Modulo TRD/S-2H series

		TRD/S-2H 1500	TRD/S-2H 2000	TRD/S-2H 2500	TRD/S-2H 3000	
Working capacity	Max Grinding diameter	mm	1600	2100	2600	3100
	Min. Grinding diameter internal (STD wheel)	mm	300		400	
	Min. Grinding diameter Int. with extension	mm	200		250	
	Max Grinding height (STD wheel)	mm	1200			
	Max Grinding height with extension	mm	900		800	
	Extension length	mm	300		400	
Spindle Head for internal	Power	Kw	10		15	
	STD wheel dimension		270 ÷ 406		350 ÷ 508	
	Min. - Max diameter	mm				
	Wheel dimension with extension		150 ÷ 250		200 ÷ 300	
	Min. - Max diameter	mm				
	Speed (Min. - Max.)	rpm	800 ÷ 5000			
Spindle Head for external	Power	Kw	30			
	Wheel dimension (diameter x bore x width)	mm	610 x 304,8 x 150			
	Speed (Min. - Max.)	rpm	500 - 2000			
Rotary table	Diameter	mm	1500	2000	2500	3000
	Speed (automatically adjustable with relation to position of the Y axis)	rpm	1 ÷ 50			
	Load max (without magnetic chuck)	Kg	10000	15000	20000	25000
	Load max (with magnetic chuck)	Kg	8500	11500	14000	16500
Cross axis head for internal	Rapid speed	m/min	10			
	Min. Programmable step feed	mm	0,001			
	Working travel	mm	2600	2850	3100	3350
	Max travel	mm	2680	2930	3180	3430
Cross axis head for external	Rapid speed	m/min	10			
	Min. Programmable step feed	mm	0,001			
	Working travel	mm	2360	2610	2860	3110
	Max travel	mm	2440	2690	2940	3190
Vertical axis head for internal	Rapid speed	m/min	10			
	Min. Programmable step feed	mm	0,001			
	Working travel	mm	1250			
	Max travel	mm	1330			
	Angle Swivelling	degrees	+/- 15°			
	Min. indexing angle	degrees	0° 10'			
Vertical axis head for external	Rapid speed	m/min	10			
	Min. Programmable step feed	mm	0,001			
	Working travel	mm	1250			
	Max travel	mm	1330			
Dimensions	LENGTH	mm	8795	9295	9795	10295
	WIDTH	mm	3650		4150	
	HEIGHT	mm	5420		5470	
	MACHINE WEIGHT	Kg. (approx)	34000	37000	41000	46000
	POWER REQUIREMENT	Kw. (approx)	125		125	

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

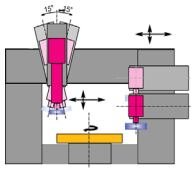


Double column technical specifications

Modulo TRD/U-2H series

		TRD-2H 1500	TRD-2H 2000	TRD-2H 2500	TRD-2H 3000	
Working capacity	Max Grinding diameter	mm	1600	2100	2600	3100
	Min. Grinding diameter internal (STD Wheel)	mm	300		400	
	Min. Grinding diameter Int. with extension	mm	200		250	
	Max Grinding height (STD wheel)	mm	1200			
	Max Grinding height with extension	mm	900		800	
	Extension length	mm	300		400	
Vertical Head for Internal	Power	Kw	10		15	
	STD wheel dimension		270 - 406		350 - 508	
	Min. - Max diameter	mm				
	Wheel dimension with extension		150 - 250		200 - 300	
Min. - Max diameter	mm					
Speed (Min. - Max.)	rpm	1400 - 3500		800 - 2800		
Universal Spindle Head	Power	Kw	30			
	Angle Swivelling	degrees	+/- 110°			
	Min. indexing angle	degrees	1°			
	STD wheel dimension (diameter x bore x width)	mm	610 x 304,8 x 100			
	Wheel dimension with extension		125 ÷ 200			
	Min. - Max diameter	mm				
Speed (Min. - Max.)	rpm	800 ÷ 5000				
For smaller wheels and extensions refer different layout						
Rotary table	Diameter	mm	1500	2000	2500	3000
	Speed (automatically adjustable with relation to position of the Y axis)	rpm	1 ÷ 50			
	Load max (without magnetic chuck)	Kg	10000	15000	20000	25000
	Load max (with magnetic chuck)	Kg	8500	11500	14000	16500
Cross axis head for internal	Rapid speed	m/min	10			
	Min. Programmable step feed	mm	0,001			
	Working travel	mm	2600	2850	3100	3350
	Max travel	mm	2680	2930	3180	3430
Cross axis head for external	Rapid speed	m/min	10			
	Min. Programmable step feed	mm	0,001			
	Working travel	mm	2360	2610	2860	3110
	Max travel	mm	2440	2690	2940	3190
Vertical axis head for internal-external	Rapid speed	m/min	10			
	Min. Programmable step feed	mm	0,001			
	Working travel	mm	1250			
	Max travel	mm	1330			
Dimensions	LENGTH	mm	8795	9295	9795	10295
	WIDTH	mm	3650		4150	
	HEIGHT	mm	5420		5470	
	MACHINE WEIGHT	Kg. (approx)	34000	37000	41000	46000
	POWER REQUIREMENT	Kw. (approx)	125		135	

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



Double column technical specifications

Modulo TR-CN series

		TR-CNC 1500	TR-CNC 2000	TR-CNC 2500	TR-CNC 3000
Working capacity	Max Grinding diameter mm	1600	2100	2600	3100
	Min. Grinding diameter internal (STD wheel) mm	400			
	Min. Grinding diameter Int. with extension mm	250			
	Max Grinding height (STD wheel) mm	1550			
	Max Grinding height with extension mm Extension length mm	1150 400			
Vertical Head for internal	Power Kw	15			
	STD wheel dimension Min. - Max diameter mm	350 ÷ 508			
	Wheel dimension with extension Min. - Max diameter mm	200 ÷ 300			
	Speed (Min. - Max.) rpm	800 ÷ 2800			
Vertical Head for external	Power Kw	30			
	Wheel dimensions (diameter x bore x width) mm	610 x 304,8 x 150			
	Speed (Min. - Max.) rpm	500 ÷ 2000			
Rotary table	Diameter mm	1500	2000	2500	3000
	Speed (automatically adjustable with relation to position of the Y axis) rpm	1 ÷ 50			
	Load max (without magnetic chuck) Kg	10000	15000	20000	25000
	Load max (with magnetic chuck) Kg	8500	11500	14000	16500
Cross axis head for internal	Rapid speed m/min	10			
	Min. Programmable step feed mm	0,001			
	Working travel mm	2200		2700	
	Max travel mm	2280		2780	
Cross axis head for external	Rapid speed m/min	10			
	Min. Programmable step feed mm	0,001			
	Working travel mm	1000		1450	
	Max travel mm	1080		1530	
Vertical axis head for internal	Rapid speed m/min	10			
	Min. Programmable step feed mm	0,001			
	Working travel mm	1600			
	Max travel mm	1680			
	Angle Swivelling degrees	+/- 15°			
Vertical axis head for external	Min. indexing angle degrees	0° 10'			
	Rapid speed m/min	10			
	Min. Programmable step feed mm	0,001			
	Working travel mm	1750			
Dimensions	Max travel mm	1830			
	LENGTH mm	8900		10400	
	WIDTH mm	4980			
	HEIGHT mm	6750		6800	
	MACHINE WEIGHT Kg. (approx)	122000	132000	142000	152000
POWER REQUIREMENT Kw. (approx)	315				

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