

# VERTICAL TURNING CENTERS RONIVIL SERIES

## **INNOVATION** + QUALITY

#### ROMI: Producing high quality technology since 1930.

Since the beginning, Romi has been recognized for its focus on creating products and innovative solutions which has guaranteed its technological leadership among large manufacturers of machine tools.

Romi's industrial complex is among the most modern and productive sites in the fields of machine tools, plastic processing machines, and high quality cast iron parts.

Continuous investments in Research & Development result in products with state-of-the-art technology. The technology applied to Romi machines offers highly reliable products, with high accuracy, efficiency and great flexibility for several types of machining processes.

#### Present throughout Brazil and in over 60 countries.

Romi covers all domestic territory through its sale subsidiaries network fully prepared to support customers by supplying an extensive range of services from marketing to after sales assistance.

The international market is covered by Romi's subsidiaries which are located in the United States, Mexico, Europe, and by its many dealers located in strategic logistic centers around the globe that are capable of serving customers in 5 continents.

Romi R&D is focused on increasing competitiveness for its customers.



## **ROMI VTL** SERIES



ROMI VTL 500R ROMI VTL 500L ROMI VTL 500MR ROMI VTL 500ML ROMI VTL 700R ROMI VTL 700L ROMI VTL 700MR ROMI VTL 700ML

Technology, reliability and productivity for machining of pieces with the aid of chuck. Vertical turning centers from ROMI VTL Series were designed to operate in medium and high production environment. They have a robust structure, offer rigidity, stability and flexibility in the processes for machining several types pieces with the aid of chuck. High metal cutting capacity high precision and assured productivity.



#### ROMI VTL 500L / VTL 500R

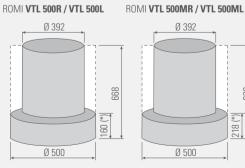
- Max. diameter allowed: Ø 740 mm (29") •
- Max. turning diameter: Ø 500 mm (20") .
- Chuck diameter: Ø 315 (12.4") or Ø 390 mm (15.4") .
- Main motor: 28 hp / 21 kW .
- Turret: 12-station for fixed tools .

#### ROMI VTL 500ML / VTL 500MR

- Max. diameter allowed: Ø 740 mm (29")
- Max. turning diameter: Ø 500 mm (20") .
- Chuck diameter: Ø 315 (12.4") or Ø 390 mm (15.4") .
- Main motor: 28 hp / 21 kW .
- Turret: 12-station BMT-65 disc for fixed and driven . tools for drilling, milling and tapping operations

## ROMI VTL 500R / VTL 500L / ROMI VTL 500MR / VTL 500ML

#### Capacidade



(\*) Área de interferência caso

ultrapasse 160 mm

o comprimento de trabalho

620 \* 218 ( Ø 500

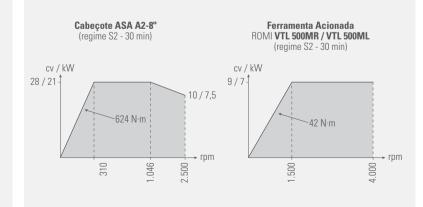
(\*) Área de interferência caso

ultrapasse 218 mm

o comprimento de trabalho

Ø 392

#### Gráfico de Potência



Flexibility for multiple applications of work generating significant increase of productivity and profitability.



#### ROMI VTL 700L / VTL 700R

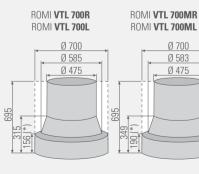
- Max. diameter allowed: Ø 750 mm (30")
- Max. turning diameter: Ø 700 mm (28") •
- Chuck diameter: Ø 390 (15.4") or Ø 500 mm (20") •
- Main motor: 46 hp / 34 kW •
- Turret: 12-station for fixed tools •

#### ROMI VTL 700ML / VTL 700MR

- Max. diameter allowed: Ø 750 mm (30")
- Max. turning diameter: Ø 700 mm (28") •
- Chuck diameter: Ø 390 (15.4") or Ø 500 mm (20")
- Main motor: 46 hp / 34 kW
- Turret: 12-station BMT-65 disc for fixed and driven tools for drilling, milling and tapping operations

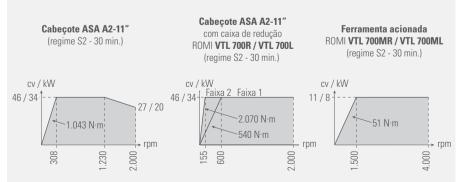
## ROMI VTL 700R / VTL 700L / ROMI VTL 700MR / VTL 700ML

#### Capacidade



(\*) Região de interferência caso ultrapasse 156 mm (\*) Região de interferência caso ultrapasse 190 mm

#### Gráfico de Potência



- •



### **STRUCTURE**

#### 1 Base

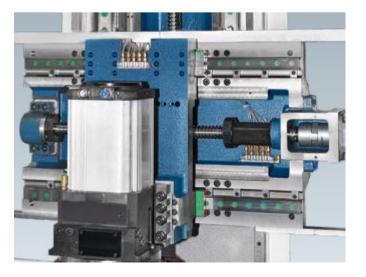
Robust monoblock base made of cast iron is designed to withstand heavy loads and absorb vibrations in severe machining conditions. It supports the motor and the headstock assemblies.

#### 2 Column

Cast iron structure which supports X and Z carriages offering rigidity and stability for machining at full power.

#### 3 Linear guides

ROMI VTL 500R, VTL 500L, VTL 500MR and ROMI VTL 500ML machines are equipped with linear roller guides in X and Z axes offering high load capacity and excellent rigidity. They are designed to withstand high machining efforts and enable feed rates up to 30 m/min. (1,181 in/min)



#### **Square guides**

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ROMI VTL 700R, VTL 700L, VTL 700MR and VTL 700ML machines are equipped with hardened and ground square guides in X and Z axes. They are designed to offer high rigidity, absorption of vibrations and high load capacity. They are designed to withstand high machining efforts and enable feed rates up to 20 m/min (787 in/min).

## ROMI VTL 700R, VTL 700L, VTL 700MR and VTL 700ML "X" and "Z" carriages.



#### 4 Servomotors

Directly coupled to high precision ball screws providing excellent performance in speed and accelerations of axes.

#### 5 Ball screws

They are very precise, hardened and ground, with pre-loaded nuts and offer high rigidity for carriages motion. Together with the servomotors they offer fast and accurate displacements, high speed and accelerations.

#### 6 Linear scale (optional)

ROMI VTL machines can be equipped with linear scale (optional) in X and Z axes granting high precision and repeatability of axes positioning. It provides a direct reading of the position where the axis is and send relative signals to the CNC. The reading is real and direct so there is no interference of any possible ball screw error caused by heating or expansion.



## **HEADSTOCK**



#### Headstock

It consists of a robust spindle cartridge supported on high precision ball bearings of high load capacity.

It enables high rotations ensuring excellent performance even under severe machining conditions.

It provides a system of bearing sealing, between the chuck and spindle, to prevent cartridge contamination with coolant and particles from machining process.





## TURRET



T type turret Servodriven with hydraulic locking system and ROMI disc for 12 fixed tools (ROMI VTL 500R / VTL 500L / VTL 700R / VTL 700L).



M type turret Servodriven with hydraulic locking system and BMT-65 disc for 12 fixed or driven tools (ROMI VTL 500MR and VTL 500ML) and BMT-75 disc (ROMI VTL 700MR and VTL 700ML).



#### Technology, performance and reliability

#### **CNC Siemens Sinumerik 828D**

15" touch screen LCD color monitor with softkeys for functions selection and activation, communication interfaces: USB port and Compact Flash card and Ethernet interface (optional), providing the user the flexibility for loading programs and parameters.

It offers excellent resources for creating and editing machining, programs, such as canned cycles for turning and drilling, linear and circular interpolation functions, thread opening functions, coordinate

systems, 512 pairs of tool wear offsets, tool de life cycle manager, 5 Mbytes of memory, background editing and excellent resources for simulation of 2D machining. Besides, the conversation system ProgramGUIDE is also available which that allows creation of machining programs in an easy and quick manner, through graphical resources, without the need of ISO codes.

Technical specifications		ROMI VTL 500R / ROMI VTL 500L <sup>(*)</sup>	ROMI VTL 500MR / ROMI VTL 500ML <sup>(*)</sup>	ROMI VTL 700R / ROMI VTL 700L <sup>(*)</sup>	ROMI VTL 700MR / ROMI VTL 700ML <sup>(*)</sup>
Capacity					
Max. diameter allowed	mm (in)	740 (29)	740 (29)	750 (30)	750 (30)
Max. door opening (load / unload)	mm (in)	640 (25) (A)	640 (25) (A)	790 (31)	790 (31)
Max. turning diameter	mm (in)	500 (20)	500 (20)	700 (28)	700 (28)
Max. turning diameter (recommended)	mm (in)	390 (15.4)	390 (15.4)	470 (18.5)	470 (18.5)
Max. turning height	mm (in)	668 (26)	620 (24)	695 (27)	695 (27)
Max. height allowed	mm (in)	668 (26)	620 (24)	695 (27)	695 (27)
Travel (X axis)	mm (in)	325 (12.8)	325 (12.8)	365 (14.4)	365 (14.4)
Travel (Z axis)	mm (in)	700 (28)	700 (28)	700 (28)	700 (28)
Feeds					
Rapid traverse (Z axis)	m/min (in/min)	30 (1,181)	30 (1,181)	20 (787)	20 (787)
Rapid traverse (X axis)	m/min (in/min)	30 (1,181)	30 (1,181)	20 (787)	20 (787)
Headstock					
Spindle	ASA	A2-8"	A2-8"	A2-11"	A2-11"
Chuck diameter	mm (in)	315 or 390 (B) (12.4 or 15.4)	315 or 390 (B) (12.4 or 15.4)	390 or 500 (C) (15.4 or 19.7)	390 or 500 (C) (15.4 or 19.7)
Speed ranges	rpm	2 to 2,500	2 to 2,500	2 to 2,000	2 to 2,000
Speed ranges with ZF reduction gearbox	range l	-	-	6 to 600	-
	range II	-	-	2 to 2,000	-
Max. weight on chuck	kg (lbs)	590 (1,300)	590 (1,300)	1,200 (2,700)	1,200 (2,700)
Turret					
Number of tools / stations	un	12	12	12	12
Tool holder type		ROMI	BMT 65	ROMI	BMT 75
Tool section: square	mm (in)	25 x 25 (0.98 x 0.98)	25 x 25 (0.98 x 0.98)	32 x 32 (1.26 x 1.26)	32 x 32 (1.26 x 1.26)
Tool section bar: diameter	mm (in)	40 (1.57)	40 (1.57)	50 (2.0)	50 (2.0)
Axial driven tool holder	DIN 6499	-	ER-32 (Ø 3 - Ø 20 mm)	-	ER-40 (Ø 3 - Ø 26 mm)
Radial driven tool holder	DIN 6499	-	ER-32 (Ø 3 - Ø 20 mm)	-	ER-40 (Ø 3 - Ø 26 mm)
Speed ranges for driven tool	rpm	-	4 to 4,000	-	4 to 4,000
Driven tool motor (S2 - 30 min. rating)	hp / kW	-	9/7	-	11/8
Power					
Main motor (S2 - 30 min. rating)	hp / kW	28 / 21	28 / 21	46 / 34	46 / 34
Total installed power	kVA	30	30	50	50
Dimensions and weight (approx.) (D)					
Floor space required (front x side)	m (in)	1.7 x 2.3 (67 x 91)	1.7 x 2.3 (67 x 91)	2.0 x 2.3 (79 x 91)	2.0 x 2.3 (79 x 91)
Net weight	kg (lbs)	5,000 (11,000)	5,000 (11,000)	6,000 (13,200)	6,000 (13,200)
Max. machine height	m (in)	3.4 (134)	3.4 (134)	3.5 (138)	3.5 (138)

(A) If piece diameter is equal or bigger than maximum door opening it may occur some difficulty for parts load / unload.
(B) Speed range up to 2,400 rpm for Ø 390 mm (15.4") chuck.

(C) Speed range up to 1,500 rpm for Ø 500 mm (20") chuck.
(D) Without chip conveyor.
(\*) Available only for brazilian market.

#### **WORLDWIDE PRESENCE**





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ISO 14001:2015 Certificate No. 70671

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