



ROMI

| WWW.ROMI.COM



Corporate Presentation



- **Timeline**
- **Social Responsibility**
- **Highlights**
- **Business Units**
- **Burkhardt+Weber**
- **Global player**
- **Brazilian manufacturing plants**

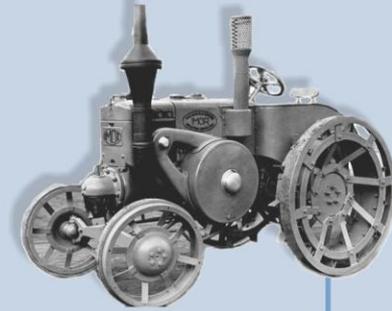
Américo Emilio Romi



Romi is founded
Garage Santa Bárbara



Starts manufacturing
IMOR engine lathes



Toro: first
Brazilian tractor

1930

1934

Launch of the
1st cast unit

1938

Change its name to
Agricultural Machines
Romi Ltda

1941

1944

Starts
exporting

1948

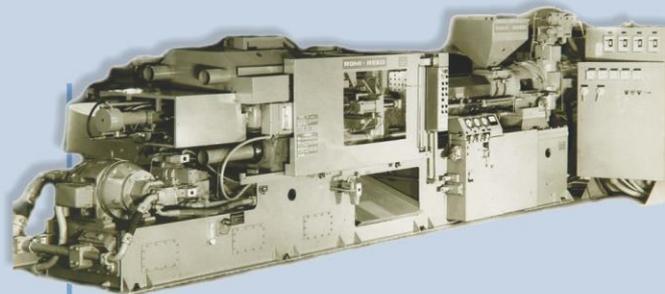
Santa Bárbara d'Oeste



Timeline



Romi-Isetta: 1st
Brazilian-made car



**Plastic injection
Moulding Machines**



**Launch of the
Tech Center**

1956

1957

1972

1978

2007

2011

2014



**Heavy Duty Machine
Tools**



**Upgrade to BM&F Bovespa
Novo Mercado**

**Acquisition of
Burkhardt + Weber**



Timeline

Romi Foundation sponsor

- Social Organization
- Mission: to promote social and human development through education and culture



Fundaç o Romi®



Vocational education

- Approximately 2,500 machines delivered to many Brazilian educational institutions in the past 6 years
- WorldSkills S o Paulo 2015



Official Sponsor



Social Responsibility



Customer comes 1st



Complete and customized solutions



Global player



High quality and reliability



4% of NOR invested in R&D



Highlights



Romi machines

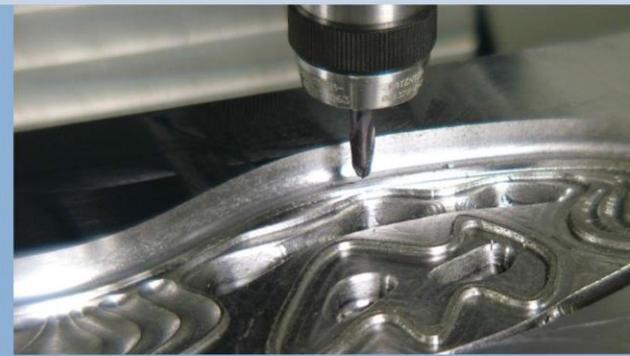
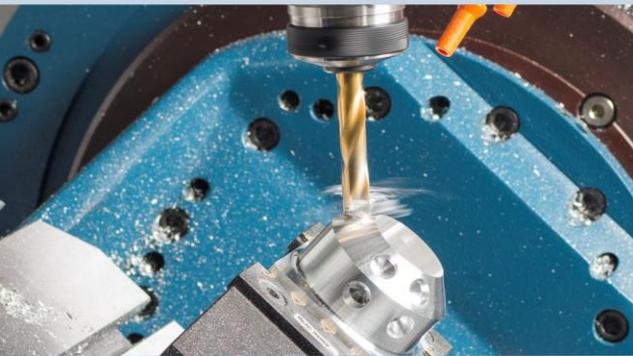


Burkhardt+Weber machines



Raw and Machined Cast Iron Parts

Business Units



Machine Tools

Robustness, accuracy and versatility

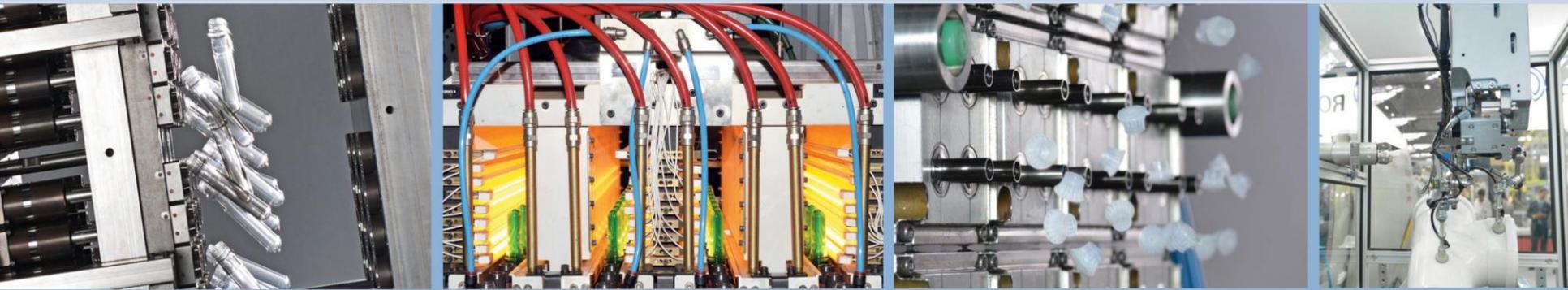
Wide portfolio: the best solutions for any size machining

High technology with excellent value

Safe and easy-to-operate equipment



Machine Tools



Plastic Processing Machines

Complete solutions for plastic processing

Supplies many market segments

Highly precise and excellent repeatability

Reduced power and raw material consumption with less noise



Plastic Processing Machines



Casting and Machined Parts



Assorted alloys for production of many parts

High installed capacity

Complete machining solutions

Quality and reliability

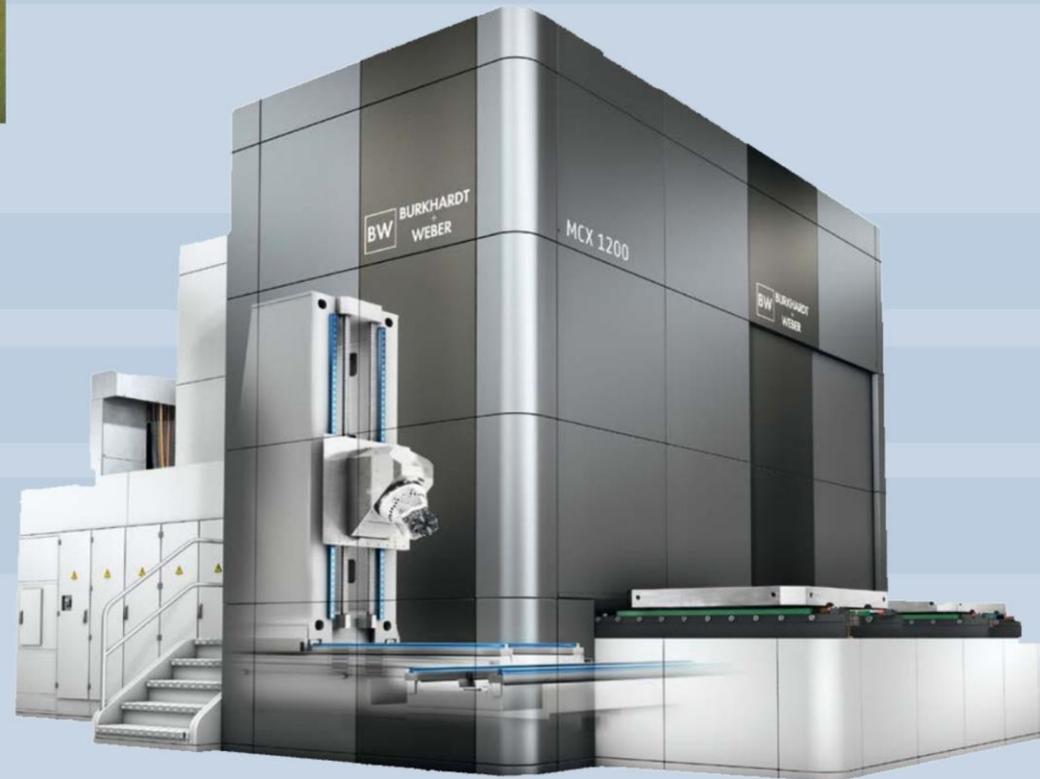


Casting and Machined Parts



- Manufacturing machine tools in Reutlingen – Germany since 1888

- Special solution in manufacturing
- Customized projects
- Highly precise applications





Manufacturing units

Burkhardt+Weber - Reutlingen, Alemanha



Romi - Santa Bárbara d'Oeste-SP, Brazil



Subsidiaries

Americas

- USA
- Mexico



Europe

- Germany
- France
- United Kingdom
- Spain
- Italy



Asia

- China



Global player



Manufacturing Plant 01

Light and medium machining

Manufacturing Plant 03

Metal sheet cutting, assembly and painting of enclosings



Manufacturing Plant 11

Medium and heavy machining

Manufacturing Plant 10

Light and medium casting



Manufacturing Plant 82

Heavy casting

Manufacturing Plant 14

Computers and electric and electronical controls



Manufacturing Plant 16

Assembly of Machine Tools

Manufacturing Plant 15

Assembly of Plastic Processing Machines



Manufacturing Plant 19

Assembly of heavy Machine Tools

Brazilian manufacturing plants



ROMI |

WWW.ROMI.COM

Eduardo Paiva
epaiva@romiusa.com



ROMI®

A TRADITION OF INNOVATION



VT Series

03/13/2013



VT Series

CNC Vertical Lathes:

- VT 1400
- VT 2000
- VT 2500





VT Series

Typical Application



ROMI[®]
VT 1400
CNC Vertical Lathe



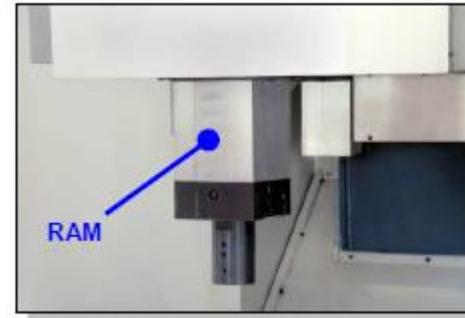
Illustrative picture



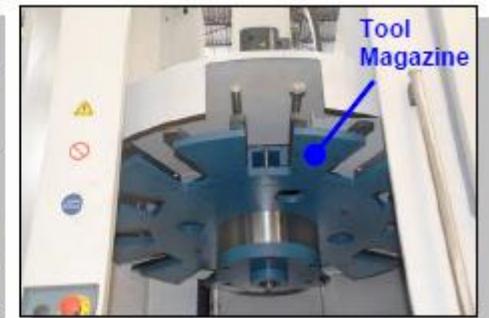
VT Series



Illustrative Image
Machine equipped with optional



RAM



Tool Magazine



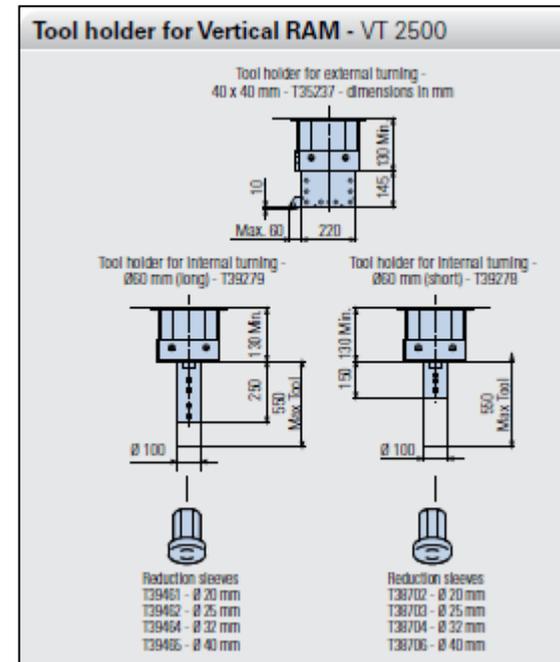
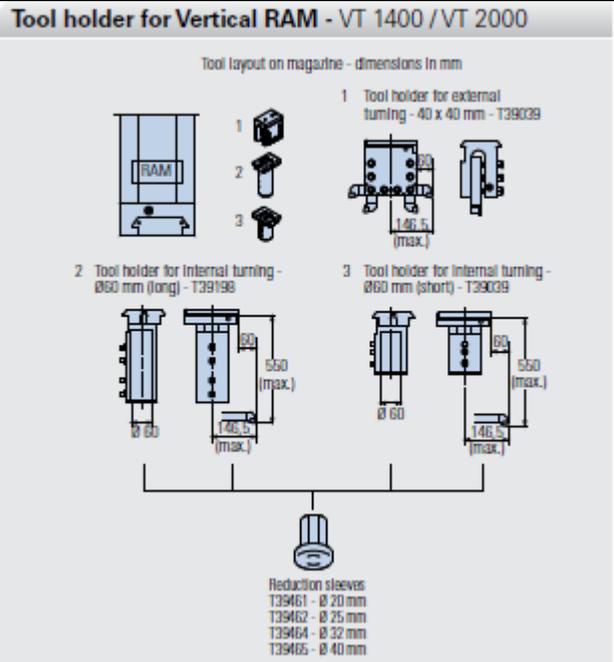
Robust 4 jaws Independent chuck with hardened and ground jaws guideways



Vertical RAM

Fixed tool with 12 Tool magazine

VT Series

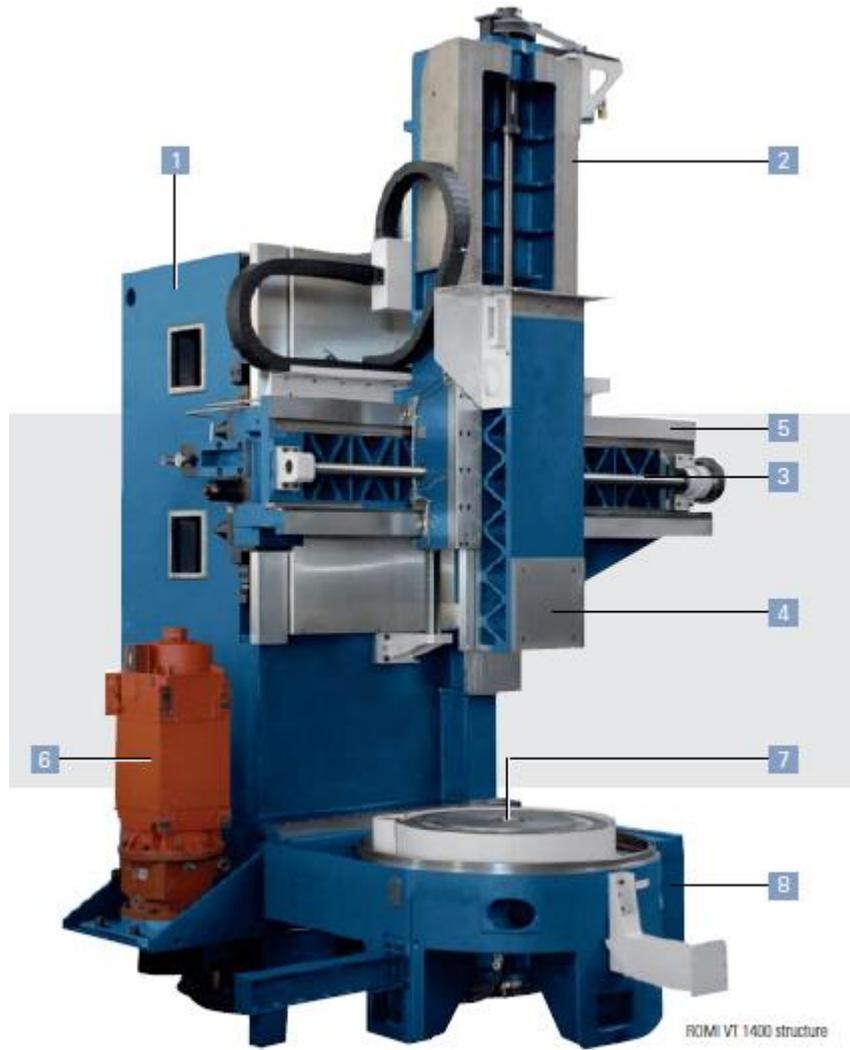


VT Series

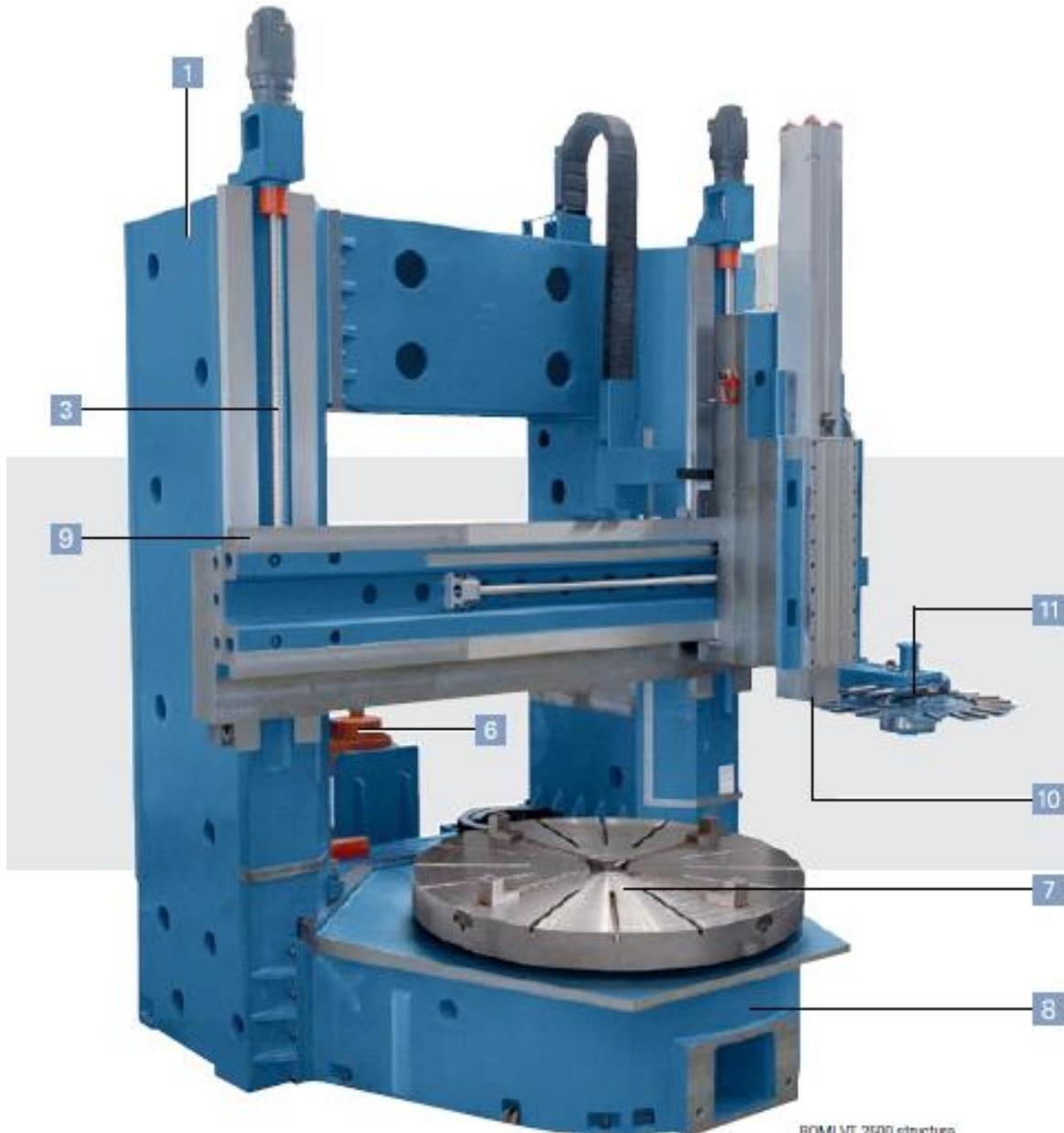


Illustrative Image
Machine equipped with optional

Driven tool and C-axis



VT 1400 & VT 2000
Single Column



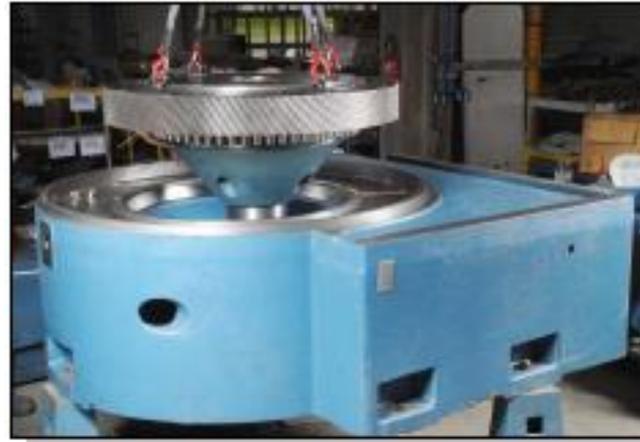
ROMI VT 2500 structure

VT 2500 Double Column



Double Column is programmable and clamp in place with pins.

Z axis is the vertical column. The two motors shown are for positioning only.



Base :

Mono block and robust. Designed to support high loads and absorb vibrations.

The base encloses the headstock assembly, as well as the precision bearing way and the chuck transmission system.

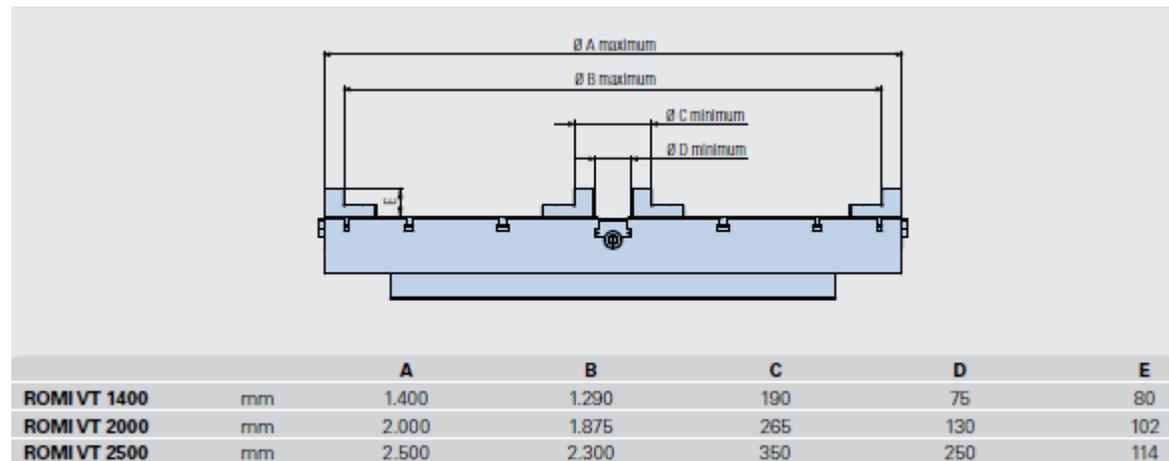
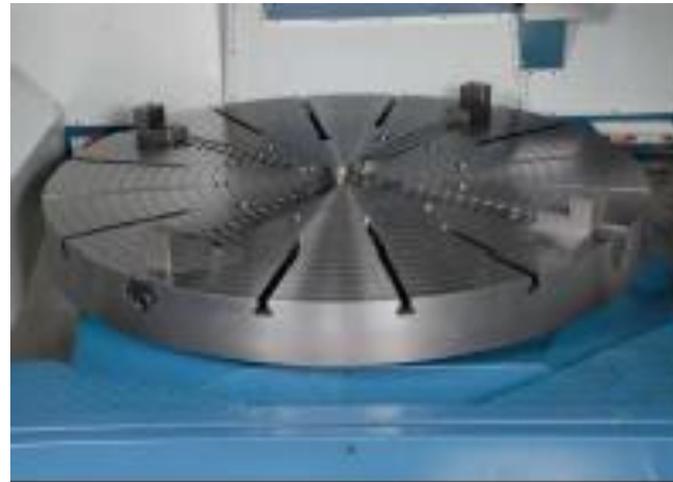
Headstock :

Provides two variable speed ranges. Provide torque for roughing and speed for finishing.

In the VT2500, the gear transmission system is incorporated in the machine base.



Column - The robust structure supports the cross rail and the vertical slide. The column is the basis for the machine rigidity, vibration absorbency and geometric stability. These are critical factors during heavy machining operations.



4 Jaw Chuck



Central Lubrication System

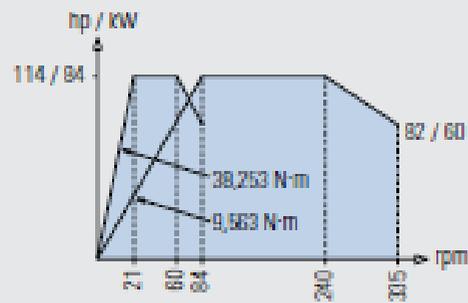
Headstock Oil Cooler



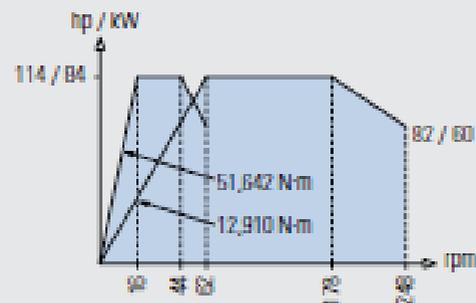
Sheet Metal – fully enclosed work area



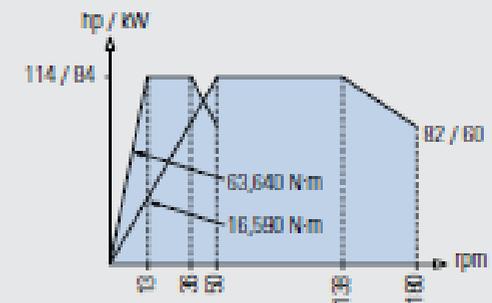
ROMI VT 1400



ROMI VT 2000



ROMI VT 2500

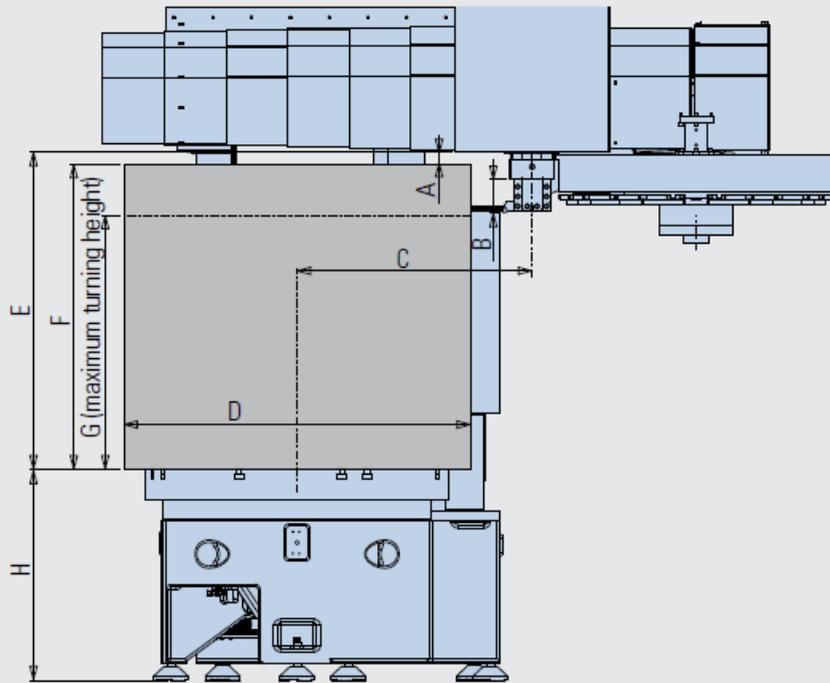


Power Graphs

VT Series



Vertical RAM or Vertical RAM with driven tool



Front view

Work Area Layout

		A	B	C	D	E	F	G	H
ROMI VT 1400									
Vertical RAM	mm	55	156	1085	1600	1555	1500	1265	1026
	inch	2.1654	6.1417	42.717	62.992	61.22	59.055	49.803	40.394
ROMI VT 2000									
Vertical RAM	mm	55	156	1415	2200	1555	1500	1265	1026
	inch	2.1654	6.1417	55.709	86.614	61.22	59.055	49.803	40.394
ROMI VT 2500									
Vertical RAM	mm	200	145	1570	2700	2300	2500	2100	1171
	inch	7.874	5.7087	61.811	106.3	90.551	98.425	82.677	46.102

VT Series



Feeds			
Vertical rapid traverse (Z axis) m/min (ipm)	10/393.7	10/393.7	10/393.7
Horizontal rapid traverse (X axis) m/min (ipm)	10/393.7	10/393.7	10/393.7
Chuck			
Diameter mm (in)	1,400 / 55.12	2000 / 78.74	2500 / 98.43
Speed range rpm	1-335	1-248	1-180
Range 1 rpm	1-84	1-62	1-45
Range 2 rpm	1-335	1-248	1-180
Max. admissible weight kg (lbs)	12000 / 26,455	18000 / 39,683	25000 / 55,116
Vertical RAM			
Vertical axis max. stroke (ram) mm (in)	1000 / 39.37	1000 / 39.37	1500 / 59.06
Cross rail max. stroke locking in each 160 mm / 6.30" mm (in)	960 / 37.8	960 / 37.8	
Horizontal axis max. stroke X axis) mm (in)	1240 / 48.82	1540 / 60.63	2100 / 82.68
RAM head section dimensions mm (in)	200 x 200	200 x 200	250 x 250
	7.87 x 7.87	7.87 x 7.87	10 x 10
ATC tool capacity	12	12	12
C axis (optional)			
Max. Torque N·m (lbf·ft)	12300 / 9,072	14500 / 10,694	24300 / 17,923
Speed range rpm	0-2	0-2	0-2
Vertical RAM with driven tool			
Spindle Taper ISO	50	50	50
Speed Range rpm	3 -3,000	3 - 3,000	3 - 3,000
Max. Torque N·m (lbf·ft)	1100 / 811	1100 / 811	1100 / 811
Driven Tool Power hp / kW	40 / 30	40 / 30	40 / 30
Max. Installed Power kVA	100	100	100
Tool Magazine Capacity	20	20	20
Power			
AC main motor 30 minutes continuous) hp / kW	114/84 (82/60)	114/84 (82/60)	114/84 (82/60)
Dimensions and weight (approximately)			
Height m (in)	4.9/192.91	4.9/192.91	6 / 236.22
Area (length x width) mm (in)	5.5 x 4.5	5.8 x 4.8	5.8 x 5.2
	216.54 x 177.17)	228.35 x 188.98	288.35 x 204.72
Net weight kg (lbs)	23,400	28,700	50,000

VT Series



CNC Siemens 840D sl with 10.4" LCD color screen

Headstock with 2 two continuously variable speed ranges, from: 1 to 84 rpm and 1 to 335 rpm, and 1600mm max cutting diameter and 114hp / 84kW (regime 30min) main motor

Ø 1.400mm 4-jaw independent chuck

Programmed Movable crossrail (axis travel = 960mm with programmable stopping every 160mm)

Vertical RAM (section 200 x 200mm) travel = 1,000mm

Automatic Tool Changer with capacity for 12 tools

Rapid feed vertical and horizontal of 10,000mm/min

Splash guard with frontal sliding door and electrical safety interlock. Telescopic protection made of steel for X axis and protection for the Z axis

Electrical installation available for the following voltage/frequencies: 380VCA / 50-60Hz

Worklight

Chip conveyor interface

Ethernet interface

Linear scale for X and Z axis

Pivoted operation panel

Manual auxiliary panel, with JOG and handwheel functions for the both axis;

Cleaning system for protections

Centralized lubrication system with line filter and oil level sensor for the axes guides vertical and horizontal ballscrews.

Lubricate and coolant system of the headstock equipped with heat exchanger, temperature, pressure, flow and dirty filter sensors

Electric panel with air cooling

Set of leveling screws and nuts

Set of wrenches for machine operation

Complete documentation for Romi product on CD

Standard colors: Texturized epoxy enamel Munsell Blue 10B-3/4 and Texturized Epoxy Gray RAL 7035

Siemens Maintenance Service (RSC - Repair service contract), converting 24 months of service provided by Siemens World Wide Service Net, including labor and travel expenses. Note: Find RSC Rules in "Standard Functions" page.



VT Series



Headstock with 2 two continuously variable speed ranges, from: 1 to 62 rpm and 1 to 248 rpm, and 2200mm max cutting diameter, and 114hp / 84kW (regime 30min) main motor

Ø 2000mm 4-jaw independent chuck

Programmed Movable crossrail (axis travel = 960mm with programmable stopping every 160mm)



Headstock with 2 two continuously variable speed ranges, from: 1 to 51 rpm and 1 to 180 rpm, and 2700mm max cutting diameter, and 114hp / 84kW (regime 30min)

. Ø 2,500mm 4-jaw independent chuck

. Programmed Movable crossrail (axis travel = 1600mm with programmable stopping every 160mm)

. Vertical RAM (section 250 x 250mm) travel = 1,500mm



Options	
X54143	Autotransformer - 360 to 480VCA / 50-60Hz (#3) 4.646
SE1008	2 Generic interface with miscellaneous functions (4 M codes) 128
X55518	Line Filter 4.049
X54157	Oil skimmer 767
X54784	Remote diagnosis interface 622
X54154	Wash gun 2.249
SE1008	5 Extra set of operating, maintenance, programing, instalation and parts manuals on CD 132
SE1008	6 Extra set of operating, maintenance, programing, instalation and parts manuals on paper 282
Tooling	
T35237	Turning tool holder (external) 40 x 40 mm 2.197
T39278	Turning tool holder (internal) Ø 60 mm (short) 2.160
T38702	Reduction sleeve Ø 20 x 60mm 128
T38703	Reduction sleeve Ø 25 x 60mm 128
T38704	Reduction sleeve Ø 32 x 60mm 128
T38706	Reduction sleeve Ø 40 x 60mm 128
T39279	Turning tool holder (internal) Ø 60 mm (long) 2.375
T39461	Reduction sleeve Ø 20 x Ø 60mm 128
T39462	Reduction sleeve Ø 25 x Ø 60mm 128
T39464	Reduction sleeve Ø 32 x Ø 60mm 128
T39465	Reduction sleeve Ø 40 x Ø 60mm 128

VT Series



Machine		
X	ROMI VT 1400- with auto transformer	\$564,580
Coolant Pum - Choose one		
X	Coolant pump (10lpm @ 2 bar, 0,5kw / .75cv)	\$979
	Coolant pump (10lpm @ 7bar, 1,5kw / 2cv)	
Chip Conveyor - Choose one		
	Transversal (rear) Drag belt chip conveyor (TCA) (for short thin chips, cast iron and non-ferrous - not proper for steel)	
X	Transversal (rear) Hinged belt chip conveyor (TCE) (universal, many types of chips, indicated for short curled chips, usually steel)	\$16,491
		\$582,050
Machine		
X	ROMI VT 2000- with auto transformer	\$644,829
Coolant Pum - Choose one		
X	Coolant pump (10lpm @ 2 bar, 0,5kw / .75cv)	\$979
	Coolant pump (10lpm @ 7bar, 1,5kw / 2cv)	
Chip Conveyor - Choose one		
	Transversal (rear) Drag belt chip conveyor (TCA) (for short thin chips, cast iron and non-ferrous - not proper for steel)	
X	Transversal (rear) Hinged belt chip conveyor (TCE) (universal, many types of chips, indicated for short curled chips, usually steel)	\$16,491
		\$662,299
Machine		
X	ROMI VT 2000- with auto transformer	\$809,142
Coolant Pum - Choose one		
X	Coolant pump (10lpm @ 2 bar, 0,5kw / .75cv)	\$979
	Coolant pump (10lpm @ 7bar, 1,5kw / 2cv)	
Chip Conveyor - Choose one		
	Transversal (rear) Drag belt chip conveyor (TCA) (for short thin chips, cast iron and non-ferrous - not proper for steel)	
X	Transversal (rear) Hinged belt chip conveyor (TCE) (universal, many types of chips, indicated for short curled chips, usually steel)	\$14,497
		\$824,618



A TRADITION OF INNOVATION



ROMI MACHINE TOOLS
www.romiusa.com

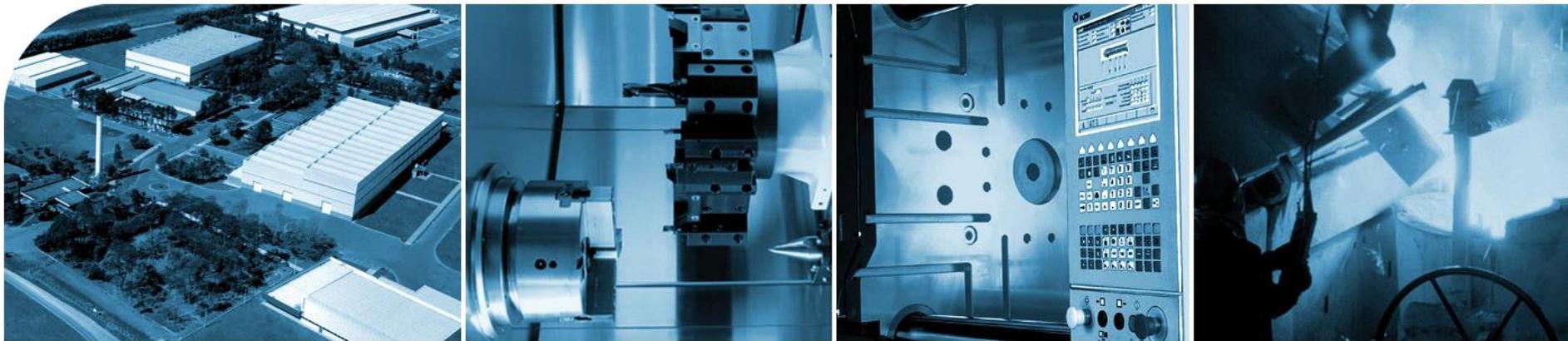


For our BURKHARDT+WEBER Products
contact our BW Product Group
www.burkhardt-weber.com



ROMI®

A TRADITION OF INNOVATION



Gerdau Corsa – Mexico **Mill rolls production with ROMI CNC Lathes**

10/07/2015



Who we are

Indústrias Romi S.A.

Founded in 1930, Romi is the Brazilian leader in the Machine Tools and Plastic Processing Machines sector, as well as an important Castings producer.



Machine Tools



Plastic Processing Machines



Castings



Machine Tools

METAL CHIPING					
TURNING			MILLING		
ENGINE LATHES	CNC LATHES		TURNING CENTERS	MACHINING CENTERS	BORING MACHINES
	LIGHTWEIGHT	HEAVYWEIGHT			
					
EXAMPLES OF PARTS PRODUCED IN OUR MACHINES					
	Machine-Tool spindle	Pulley	spindle and mill cylinder set	Automotive transmission gear	Automotive transmission housing
					
					Large size valve

OUR CLIENTS BUSINESS SECTORS

MACHINING AND TOOLING SHOPS, PARTS MAKER FOR THE AUTOMOTIVE, AVIATION, OIL/ENERGY/SUGAR AND ALCOHOL INDUSTRIES, CAPITAL GOODS AND OTHER



Plastic Processing Machines

PLASTIC PROCESSING MACHINES

INJECTION MOLDING

BLOW MOLDING

INJECTION MOLDING MACHINES

PLASTIC BLOW MOLDING MACHINES

PET BLOW MOLDING MACHINES



EXAMPLES OF PARTS PRODUCED IN OUR MACHINES



18 liter Industrial Bucket



Beach chair



Motorcycle fender



Automotive taillight



Syringe



Pastic blown bottles for the Hygiene, Cleaning, Food, Pharmaceutical and Chemical industries, among others.



PET bottles up to 6 liters

OUR CLIENTS BUSINESS SECTORS

SERVICE PROVIDERS, PACKAGING MANUFACTURERS FOR THE FOOD, CLEANING AND CHEMICAL SECTORS, AMONG HOUSEWARES, FURNITURE, HI-TECH PARTS FOR THE AUTOMOTIVE AND CAPITAL GOODS, CONSTRUCTION SECTORS AND OTHERS



Castings

FOUNDRY

ROUGH CASTINGS

PARTS PRODUCED OF GRAY, NODULAR AND VERMICULAR IRON CAST



MACHINED CASTINGS

CNC MACHINING CASTS



EXAMPLES OF PARTS PRODUCED



Reducer Housing



Pump Housing



Differential Cage



Fifth Wheel Coupling



Pinion Cage



Wind Generator Hub

OUR CLIENTS BUSINESS SECTORS

PARTS FOR AUTOMOTIVE INDUSTRIES (CARS AND COMMERCIAL), ENERGY, AGRICULTURE AND CAPITAL GOODS, AMONG OTHERS



Our headquarters in Brazil

Total **1,500,000 ft²** built area



District plant



Downtown plant



BRAZIL

Santa Bárbara d'Oeste -
São Paulo state



UF82 Foundry



Worldwide Presence



Romi Machine Tools Ltd.
Erlanger, KY, USA



Romi Italia srl
Grugliasco
Italy



Romi Europa GmbH
Gross Gerau,
Germany



Burkhardt + Weber
Reutlingen,
Germany

Manufacturing Plants

Brazil

Italy

Germany

R&D Centers

Brazil and Germany

Technical Centers (Support for Pre-Sales and After-Sales Service)

USA, Germany, England, France, Spain
and Mexico

Distributors and Sales Agents

40 + countries covered

Romi Industrial Complex
Santa Bárbara d'Oeste, SP
Brazil



First export

1944

Number of machines shipped abroad
More than 28,000

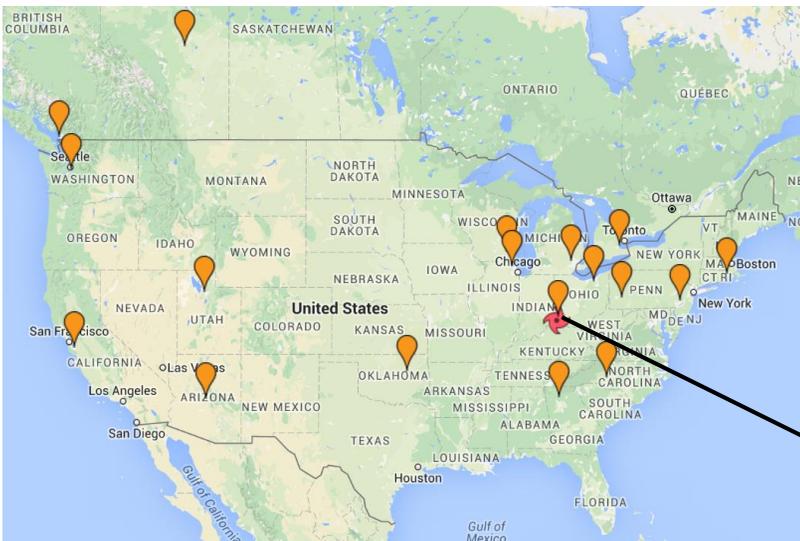


ROMI in USA



Romi Machine Tools LTD

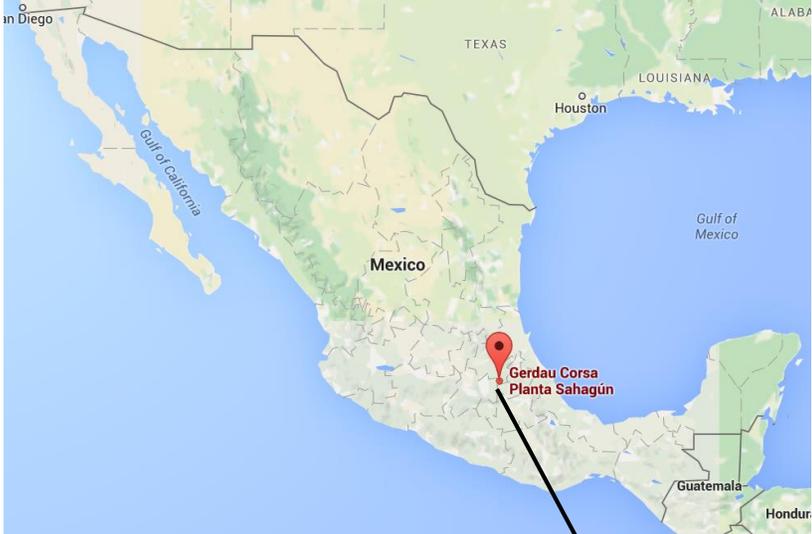
- Since 1985
- Located in Northern Kentucky
- 18 distributors
- Thousands of machines sold in US
- Subsidiary with sales support, service and spare parts



USA
Erlanger - KY



GERDAU CORSA



Mexico
Ciudad Sahagún - Hidalgo

Gerdau Corsa plant Ciudad Sahagún, Hidalgo - Mexico



New plant in Ciudad Sahagún, Hidalgo - Mexico

GERDAU CORSA

- US \$600 million investment
- Capacity: 2.2 Bn lbs of steel and 1.5 Bn lbs of rolled products
- Main segments: construction and industrial development in Mexico
- The try outs started in 2014 and full operation in 2015
- Production: I and H beams
- Beams sizes: 150 to 610 / W and HP



New plant in Ciudad Sahagún, Hidalgo - Mexico

GERDAU CORSA





New plant in Ciudad Sahagún, Hidalgo - Mexico

GERDAU CORSA

- All the machining process with ROMI Lathes:
 - ✓ Two horizontal CNC lathe
 - ✓ One vertical CNC lathe
- Total of 43 Romi lathes at Gerdau Group:

MODEL	CUSTOMER
C 2200H	GERDAU CORSA
C 2200H	GERDAU CORSA
VT 1400	GERDAU CORSA
TCP 600	GERDAU
UC 900	GERDAU
S90	GERDAU
S90A	GERDAU
S90C	GERDAU
MHS III	GERDAU AÇO MINAS
U900A	GERDAU AÇO MINAS
UT 42	GERDAU AÇO MINAS
UT 50A	GERDAU AÇO MINAS
UTC 27	GERDAU AÇO MINAS
UTC 27	GERDAU AÇO MINAS
UTC 42	GERDAU AÇO MINAS

UTC 42A	GERDAU AÇO MINAS
UTC 42A	GERDAU AÇO MINAS
UTC 55	GERDAU AÇO MINAS
UTC 55	GERDAU AÇO MINAS
MHS II	GERDAU AÇOS ESPECIAIS
S140	GERDAU AÇOS ESPECIAIS
S90A	GERDAU AÇOS ESPECIAIS
UT 27	GERDAU AÇOS ESPECIAIS
UT 29	GERDAU AÇOS ESPECIAIS
UT 29	GERDAU AÇOS ESPECIAIS
UT 42	GERDAU AÇOS ESPECIAIS
UT 50	GERDAU AÇOS ESPECIAIS
UT 62	GERDAU AÇOS ESPECIAIS



GERDAU CORSA

ROMI C 2200H x 236 in (6,000 mm) – 2 machines



- 82.7" (2,100 mm) max. turning diameter
- 110,231 lb (50,000 kg) load capacity

- Double blade type turret
- Sandvik Capto C8-X tool holders
- ARTIS tool load monitor system





ROMI VT 1400

GERDAU CORSA



- 63" (1,600 mm) max. turning diameter
- Vertical RAM
- 12-station tool magazine
- 26,455 lb (12,000 kg) load capacity





BD rolls

GERDAU CORSA

- Material: Forging adomit steel
- Roll diameter: 55.7 in (1,415 mm)
- Hardness: 60hs
- Cutting tool insert: solid carbide
- Constant surface speed: 295 feet/min (90 m/min)
- Cutting depth: 2.05 in (52 mm) per pass
- Feedrate: 0.05 in/rev (1.3 mm /rev)
- Cutting length with the same cutting edge:
47.2 in (1200 mm)
- Finishing: to 32 μ in (0.8 μ m)





Horizontal rolls

GERDAU CORSA

- Material: Centrifuged adamit steel
- Roll diameter: 47.2 dia (1200 mm)
- Hardness: 75hs
- Cutting tool insert: ceramic
- Constant surface speed: 492 feet/min (150 m/min)
- Cutting depth: 1.26 in (32 mm) per pass
- Feedrate: 0.02 in/rev (0.5 mm /rev)
- Cutting length with the same cutting edge:
23.6 in (600 mm)
- Finishing: to 32 μ in (0.8 μ m)





Vertical turning

GERDAU CORSA





ROMI®

A TRADITION OF INNOVATION

Chris Lamping

Cell 859-412-5540

Phone: (859) 647-7566

clamping@romiusa.com

www.romi.com