

correa

# ORIX

Top gantry milling machine

WARRANTY



**75** YEARS  
ANNIVERSARY  
1947 • 2022

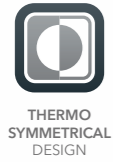
**Nicolás Correa**, founded in Spain in 1947, is one of world's leading companies in the manufacturing of large milling machines. With over 900 bridge type machines, 1000 floor type machines and 3500 bed type machines installed all over the world, offers milling solutions designed for the most demanding production environments, such as the power generation, automotive, aerospace and railway industries.

**Nicolás Correa** is the parent company of **Correa Group** composed of five industrial subsidiaries linked to the machine tool sector: Hypatia, Steelworks, Electrónica, Service and Kunming. The Group has commercial subsidiaries in China, Germany, United States and India with the aim to offer the best service in all countries. Belonging to the group provides **Nicolás Correa** with access to top quality critical supplies and offers tailored solutions especially designed for each customer's needs.

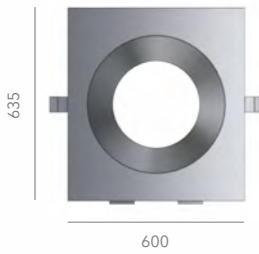
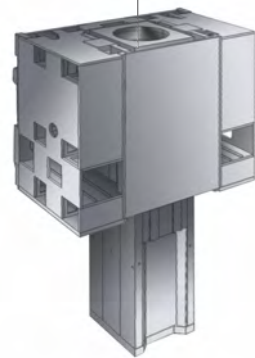


Thousands of customers around the world place their trust in **correa** range of milling machines. **Correa Group** currently exports around 90% of its production to over 30 different countries. To guarantee a high-quality service to our customers, we have an extensive international commercial and technical service network in most of the world's countries. **Correa Group** offers the widest range of milling solutions on the market, including bed type machines, gantry, floor type machines, bridge type machines, it also has a several options of multi-tasking machines. The entire range is designed and manufactured in Spain. **Nicolás Correa, S.A.** has been listed on the Madrid Stock Exchange since 1989.

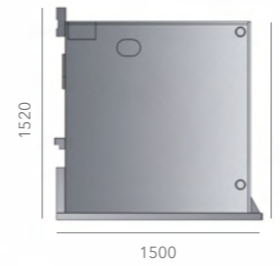
The **ORIX** is a "Top Gantry" milling machine designed specifically for super-finishes of surfaces while maintaining good dynamics and geometric precision at the tip of the tool.



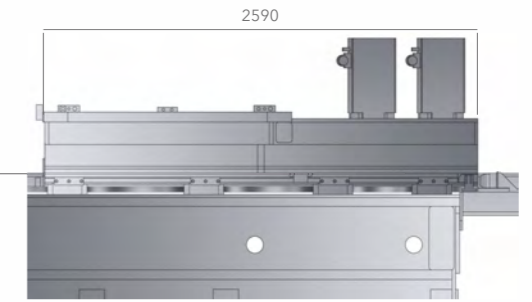
- Symmetrically guided ram.
- Ram symmetrically centred on frame.
- Better geometrical behaviour under temperature changes in the workshop.
- Specific temperature compensation cycle in machine volume.



MORE ABOUT THE **ORIX**



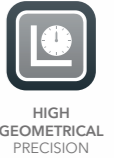
Motor weights evenly distributed over the carriage with regard to beam weight



Long lengthwise carriage that guarantees optimal bench support via 8 extra-long skids.



OVERSIZED STRUCTURAL ELEMENTS



HIGH GEOMETRICAL PRECISION

Wide cross sections.  
High-speed finishing capacity.  
Geometric stability in time.

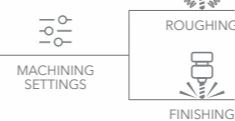


Mixed structure of "HDC" concrete and steel. The "HDC" concrete is a material of high density mixed with micro-fibres developed by Nicolás Correa.



1030

- Specific electrospindle designed to obtain finishes at high rpms.
- Machine designed to obtain superb quality surface finishes.
- Dynamic performance parametrizable in accordance with:
  - ROUGHING OPERATION
  - FINISHING OPERATION



30 m/min in X, Y and Z axes, thanks to its V-Shaped linear guide-ways in all axes



HIGH FEED RATES



ECO DESIGN

Stand-by function and Auto Switch off function, saving 20% of the total energy machine consumption

## Technical Features

### TABLE

Surface	6000 / 27000 x 3000 / 4000 / 5000	mm
Maximum load on the table	10 / 15	t/m <sup>2</sup>

### TRAVERSES

Longitudinal [X]	3500 / 24500	mm
Cross [Y]	3250 / 4250 / 5250	mm
Vertical [Z]	1500 / 2000	mm

### WORK CAPACITY

Distance between columns	4150 / 5150 / 6150	mm
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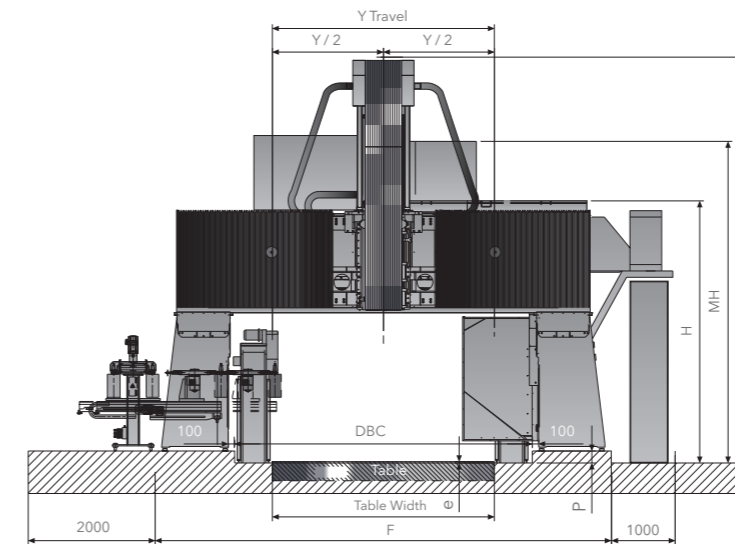
### FEEDS

Maximum [X]	30	m/min
Maximum [Y]	30	m/min
Maximum [Z]	30	m/min

### SPINDLE SPECIFICATIONS

Spindle nose	ISO-50 Big Plus / HSK-100	
Programmable speed	10000 / 6000	rpm
Maximum power	42 / 52	kW
Maximum torque	620 / 1375	Nm

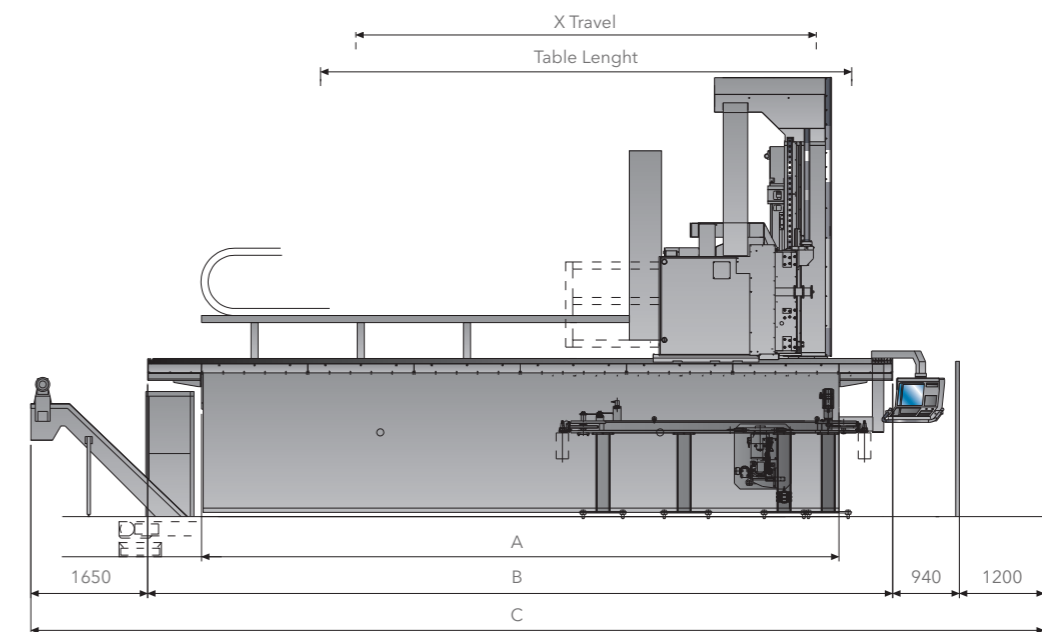
## External Dimensions



X Travel	A	B	C
3500	6000	7520	11310
5000	9000	9000	12790
6500	9000	10520	14310
8000	12000	12000	15790
9500	12000	14300	18090
11000	15000	15000	18790
12500	15000	18000	21790
15500	18000	21700	25490
18500	21000	25400	29190
21500	24000	29100	32890
24500	27000	32800	36590

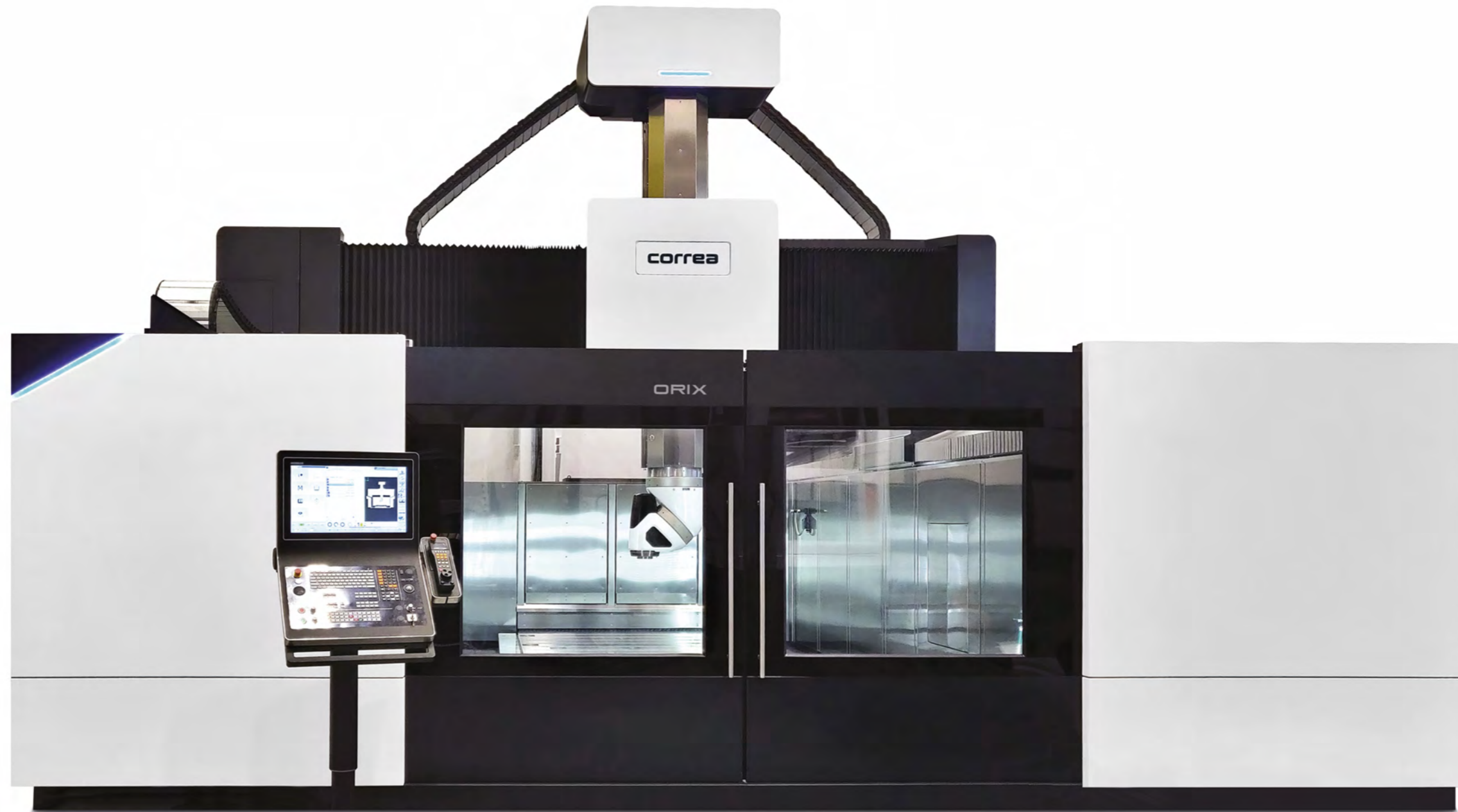
Z Travel	Vert. capacity	DBT	e	P	H	MH	TMH
1500	A	2165	330	0	3850	5215	6800
	B	2595	20	120	3970	5645	6920
2000	C	2695	20	190	4040	5745	7490
	D	3095	20	620	4470	6145	7920

Y Travel	DBC	F	Table Width
3250	4150	6260	3000
4250	5150	7260	4000
5250	6150	8260	5000



# ORIX

Top gantry milling machine



## Milling Heads

### UAD 0.02° x 0.02°

3+2 INDEXING TECHNOLOGY



Universal auto-indexing  
differential head  
52 kW | 1375 Nm | 6000 rpm

### OAD 0.02° x 0.02°

3+2 INDEXING TECHNOLOGY



Orthogonal auto-indexing  
differential head  
52 kW | 1375 Nm | 6000 rpm

## Milling Heads

### UDX 0.02° x 0.02°

3+2 INDEXING TECHNOLOGY



Universal auto-indexing head  
30 kW | 620 Nm | 10000 rpm

### UCE Universal

5-AXIS TECHNOLOGY



2-Axis continuous  
milling head  
24000 rpm

## Milling Heads

**FC-30 | 60 | 80**



Front spindle  
15 • 52 kW | 1375 Nm | 3000 • 4000 rpm

**AL-600 2.5°**

3+2 INDEXING TECHNOLOGY



Reach-out angle milling head  
25 kW | 800 Nm | 1500 rpm

**FD-30 | 60 | 80**

3+2 INDEXING TECHNOLOGY



Non-centered front spindle  
15 • 52 kW | 1375 Nm | 3000 • 4000 rpm

## Milling Heads

**ESE Continuous**

5-AXIS TECHNOLOGY



2-Axis continuous milling head  
35 • 60 kW | 12000 • 24000 rpm

**UT-500 | 630**

MULTITASKING TECHNOLOGY

D'Andrea head

52 kW | 8000 Nm | 315 • 250 rpm



**TU 2.5°**

MULTITASKING TECHNOLOGY

Turning and shaping head



**CSE**

5-AXIS TECHNOLOGY



2-Axis continuous milling head  
37 kW | 371 • 707 Nm | 4000 rpm

## Milling Head Changer



## Standard Equipment

- Five-axes twist drill head equipped with electrospindle • Hydraulic and cooling group
- Numerical control Heidenhain or Siemens [operate HMI] • Linear scales in all axes
- Portable handwheel • External Coolant with adjustable nozzles
- Air-conditioned electrical cabinet • Internal and external air flow
- Linear guides in the X, Y and Z axes • Guarding
- Lamp in the working area • Tele-service

## Optional Equipment

- Other heads • Vixion 4.0
- Automatic head-changer • Self cleaning filter
- Pick up station for 6, 8, 12 tools • Air/Coolant cleaning gun
- Automatic charger for 30, 40, 60, 120 tools • Chip conveyors
- Probes of measurement, tools and parts • Perimeter fence
- Rotary tables • Different enclosures according to user's needs [only in some models]
- Zero Point Clamping System integrated in the machine • Coolant through spindle 17, 36, 70 bar





MULTITASKING

**correa** multitasking machines combine several cutting processes on one machine. These machines offer the manufacturing capabilities of milling and turning machines into one integrated unit to use the functionality of both simultaneously.

## UAD T

The universal head **UAD T** incorporates a spindle internal brake to lock the spindle axis. This solution allows to rotate the turning tool to any position and lock the spindle accordingly. This is a mechanical transmission head providing a perfect integration between milling and turning.



### General Specifications

Tool holder HSK-100 for both milling and turning tools. In case of turning tools HSK-100T is required.

**Milling mode:** 6000 rpm and rotation every 0.02° in both bodies.

**Turning mode:** Rotation every 0.02° in both bodies.

## TU

Orthogonal turning head **TU** rotates every 2.5° thanks to the crown hirth coupling allows to position the tools. We can use neutral tools for turning providing the angel with the head position, reducing the number of tools needed.



### General Specifications

Tool holder Capto C8.

Rotation every 2.5° to reduce the number of turning tools to be used.

Automatic tool changing.

## TU 25

Turning head **TU 25** incorporates two tapers to 90°. The two tapers offer flexibility to perform several facing and turning operations on a workpiece.



### General Specifications

Tool holder Capto C8.

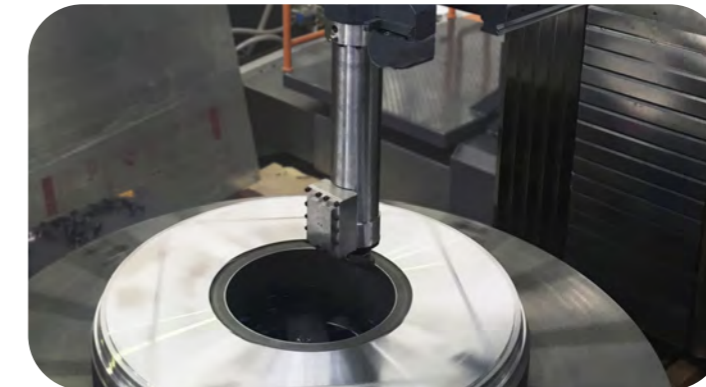
Double two tapers to 90°.

Manual tool change.

	Material	Ø (mm)	Ap (mm)	Vc (m/min)	F (mm/min)	Q (cm³/min)
Medium Duty Roughing	Ck-45 (60 kg/mm²)	1090	4.5	210	0.5	471
Heavy Duty Roughing	Ck-45 (60 kg/mm²)	1200	10	210	0.7	1450

## TUB

For internal turning operations in deep parts, Nicolás Correa has specifically designed a manual extension which includes a tuned mass absorber (TMA) internally for a better cutting performance.



## TURNING ROTARY TABLE

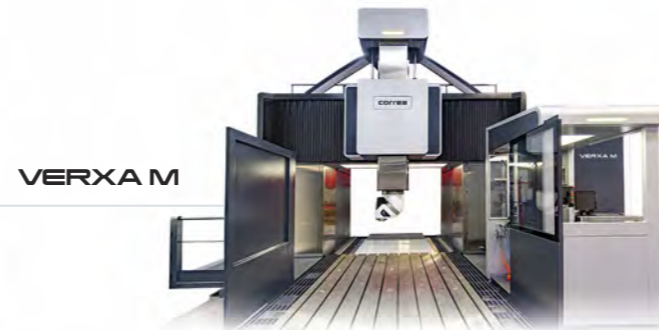
	Ø 2000 mm	Ø 2500 mm	Ø 3000 mm	
Maximum load milling/turning	5 - 20	10 - 30	10 - 60	t
Speed	250 - 150	250 - 150 - 120	250 - 150 - 100	rpm



# Range of Equipment



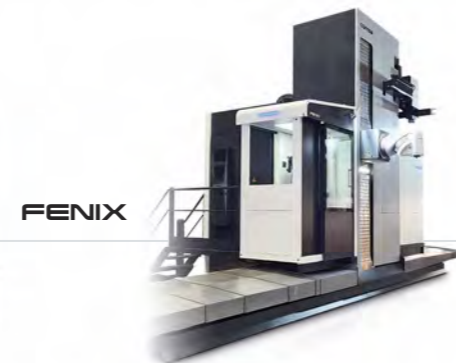
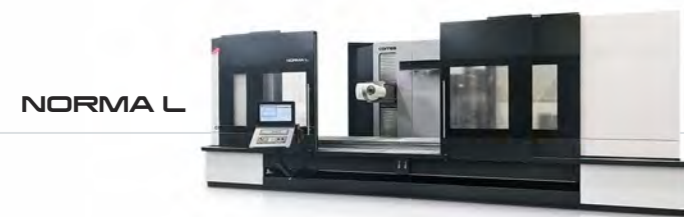
TOP GANTRY TYPE



GANTRY



BRIDGE TYPE



TRAVELLING COLUMN



BED TYPE

# CORREA GROUP

[www.nicolascorrea.com](http://www.nicolascorrea.com)

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