



FENIX

Travelling Column Milling Machine



correa

ROBUSTNESS

"Today's investment, **tomorrow's saving**"

Generously sized and properly ribbed structural parts, strong milling heads, machines in perfect geometry... have always been the distinctive features of **NICOLÁS CORREA** since its foundation in 1947.

We are convinced Robustness is a good bet for our customers, a sensible investment that will result in the following benefits/values:

RELIABILITY

In **NICOLÁS CORREA**, we extend the concept of robustness to the whole production process of the machine, always choosing technical solutions of the highest quality. For this reason, we offer as standard 5 year warranty on our milling machines.



PRECISION

The milling machine is stable and maintains geometry values longer.

DURABILITY

Our machines are designed and assembled to last for decades. Tireless workers that maintain their chip removal capacity in good condition for years.

MILLING HEADS

Unique robust milling head technology with superb repeatability, flexible to perform roughing and finishing operations.





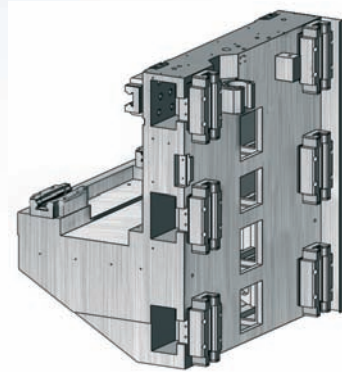
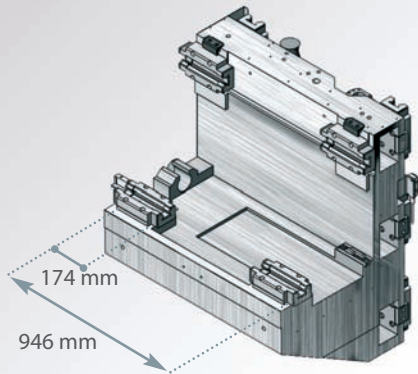


L GUIDE-WAY SYSTEM CONFIGURATION

6 sliding blocks in the vertical movement guaranteeing good performance of the machine.

L-shape guiding system:

- Greater rigidity and stability during machining.
- Greater geometric precision.
- Less ram droop effect.



ECO-DESIGN

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



HIGH DYNAMIC CAPACITY

25 m/min feed in the X, Y and Z axes, thanks to the linear guide system.



The biggest cross sections in the market.

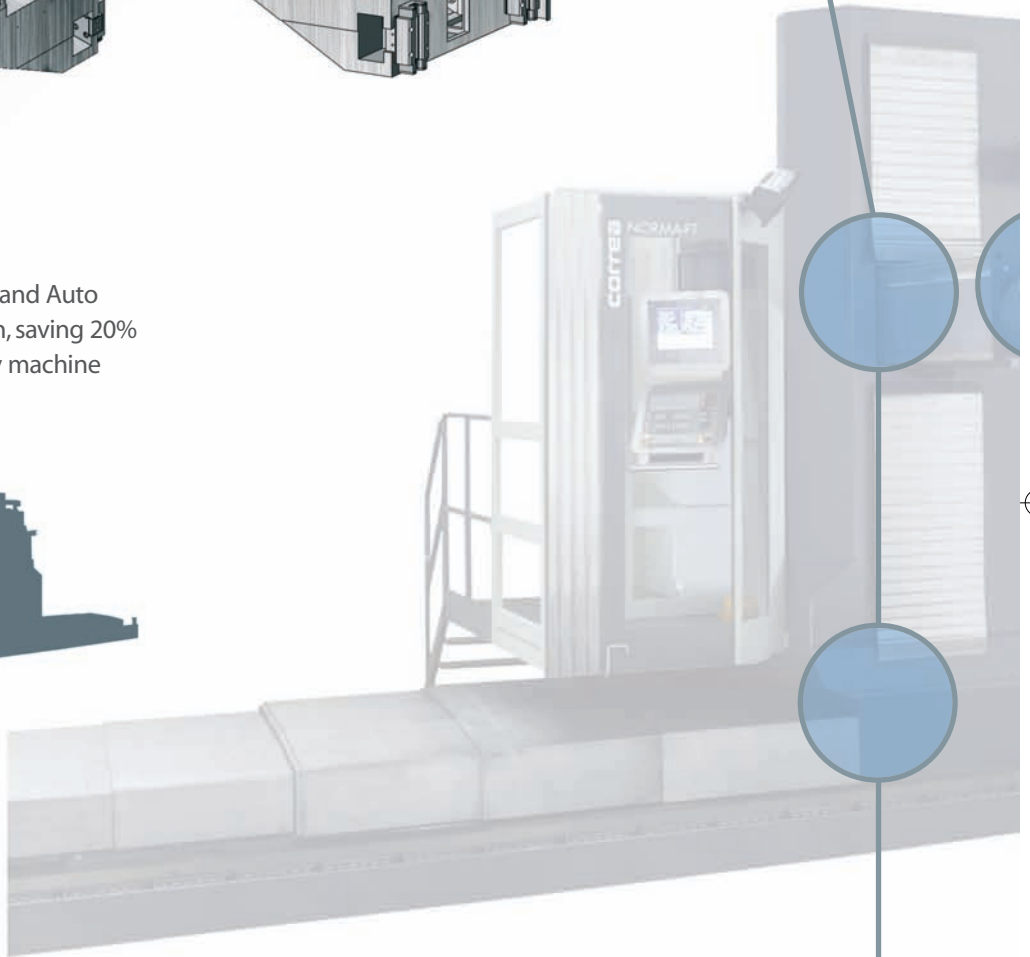
Roughing capacity + Machine geometry stability.



OVERSIZED STRUCTURAL ELEMENTS

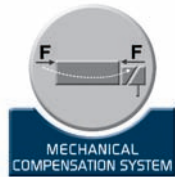
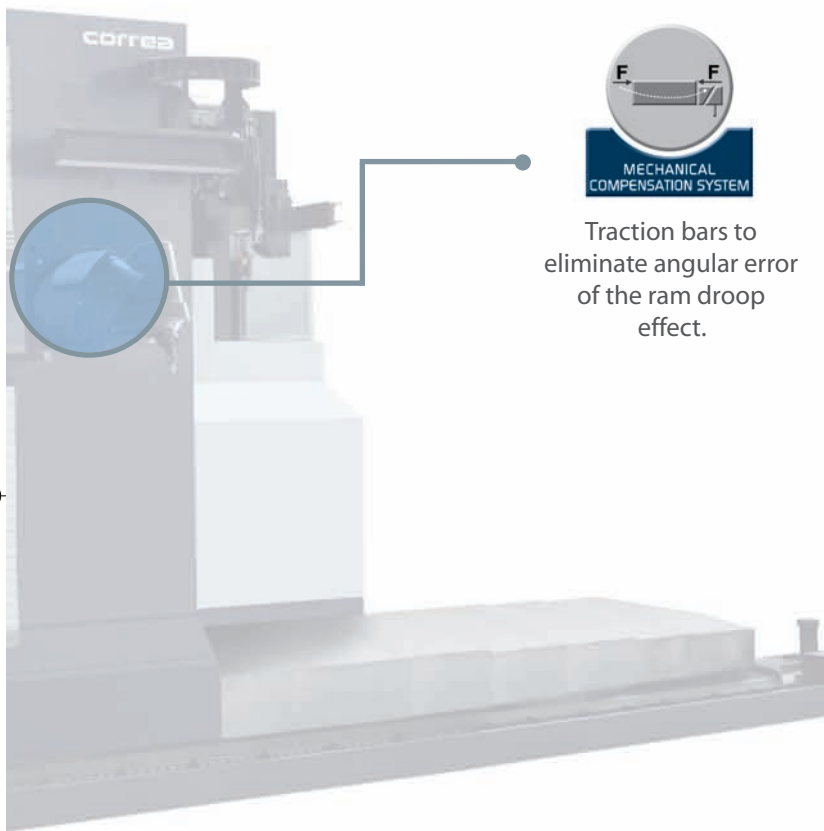


HIGH GEOMETRICAL PRECISION

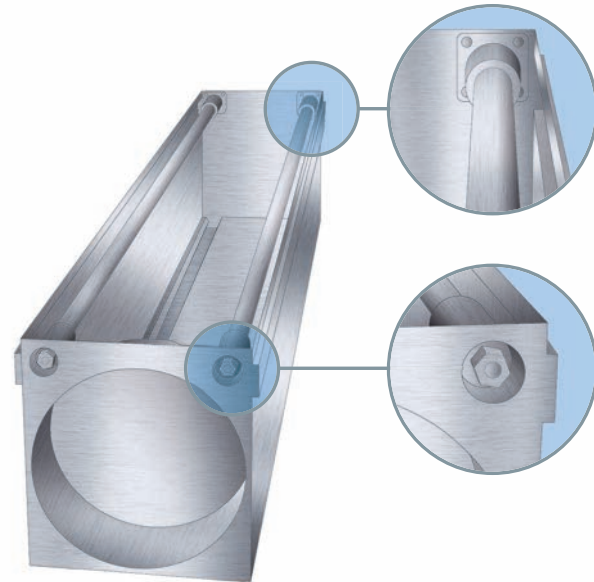


What makes the **difference** in the **FENIX**?

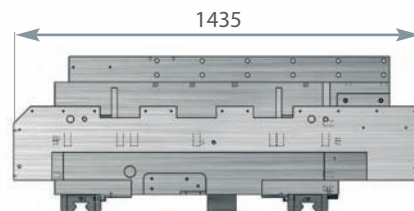
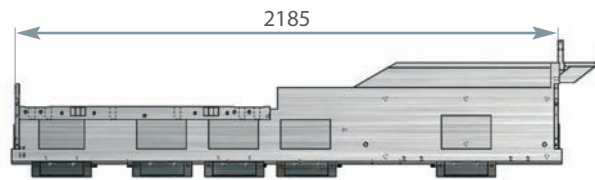
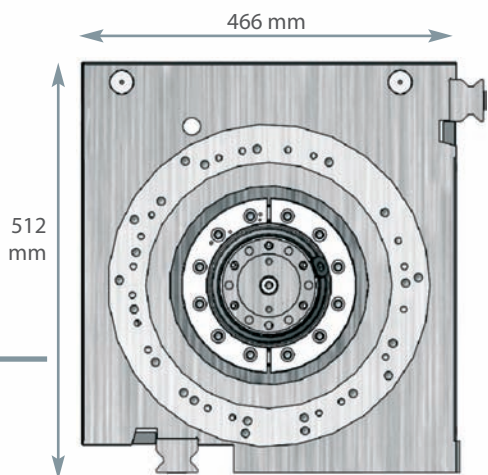
The **FENIX** represents a new concept of travelling column machine with lateral ram. Highly robust based on a system of L-guided ram. High precision thanks to the mechanical system of ram droop correction. A flexible machine appropriate for roughing and finishing operations.



Traction bars to eliminate angular error of the ram droop effect.



Direct transmission of drive to vertical axis to guarantee maximum sturdiness and precision.



Large-section lengthwise carriage with 10 extra-long skids.

- Maximum sturdiness
- Maximum geometric precision
- Minimum column shift error
- Maximum machining stability

Technical Features

FENIX		
TABLE		
Surface	mm	4.000 x 1.000 23.000 x 3.000
Maximum load on the table	Tn/m ²	10 / 15
TRAVERSES		
Longitudinal	X mm	4.000 - 25.000
Cross	Y mm	1.250 - 1.500
Vertical	Z mm	1.500 - 2.300
FEEDS		
Maximum	X m/min	25
	Y m/min	25
	Z m/min	25
VERTICAL SPINDLE SPECIFICATIONS		
Spindle nose		ISO-50 / HSK
Programmable speed	rpm	3.000 / 4.000 / 6.000
Maximum power	kW	24 / 33
Maximum torque	Nm	840 / 990

Standard Equipment

Automatic Universal
Head

Numerical control Heidenhain
or Siemens (Operate HMI)

Portable handwheel

Air-conditioned electrical cabinet

Linear guides in the X,Y,Z axes

Lamp in the working area

Hydraulic and cooling group

Absolute Heidenhain measurement
rules in all axes

Exterior coolant
with adjustable lance nozzles

Internal and external
air flow

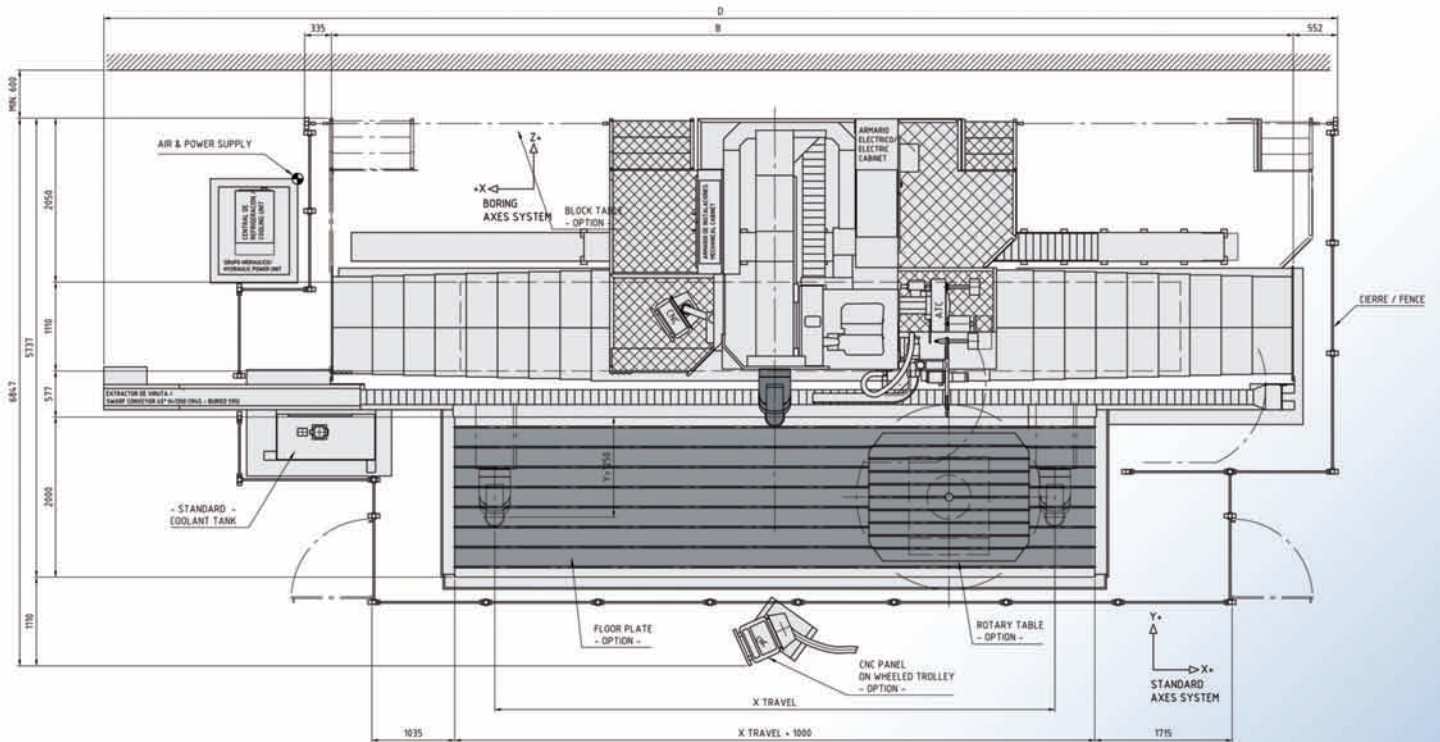
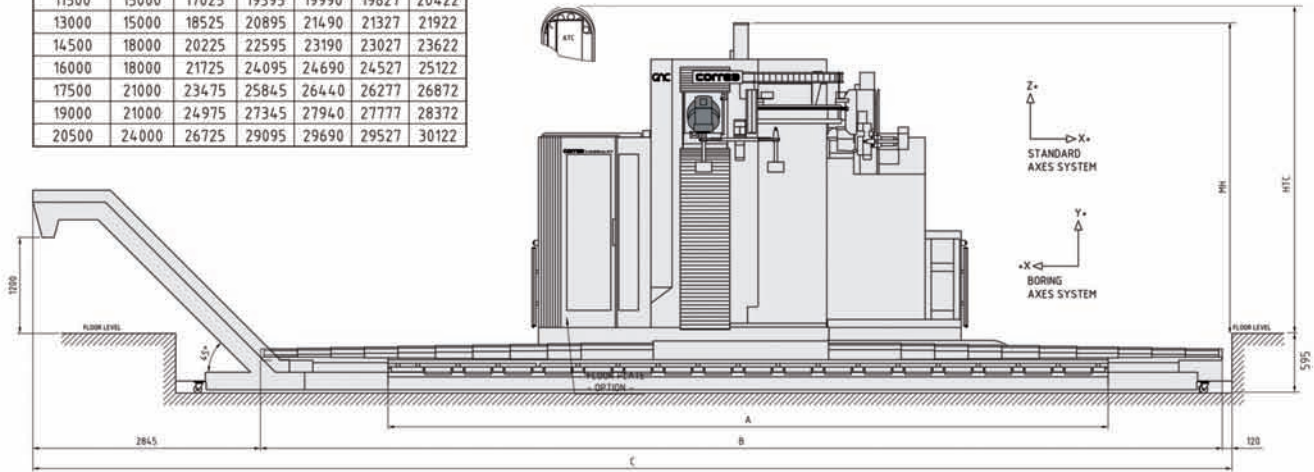
Guarding

Tele-service

External Dimensions

X TRAVEL	A	B	C		D	
			BURIED 0	595	BURIED 0	595
4000	6000	9020	11390	11985	11822	12418
5500	9000	10520	12890	13485	13322	13918
7000	9000	12020	14390	14985	14822	15418
8500	12000	13520	15890	16485	16322	16918
10000	12000	15020	17390	17985	17822	18418
11500	15000	17025	19395	19990	19827	20422
13000	15000	18525	20895	21490	21327	21922
14500	18000	20225	22595	23190	23027	23622
16000	18000	21725	24095	24690	24527	25122
17500	21000	23475	25845	26440	26277	26872
19000	21000	24975	27345	27940	27777	28372
20500	24000	26725	29095	29690	29527	30122

MH	HTC			
	0 BURIED		595 BURIED	
	ATC-60	ATC-80	ATC-60	ATC-80
Z 1500: 3405	4685	4360	4090	3765
Z 2300: 4205	-	-	-	-











Unique Indexing Milling

Patented w

FLEXIBILITY

Rotation/indexation every **0,02°** thanks to the double Hirth coupling patented worldwide

6.000 rpm with no limitations

Adjustable coolant through spindle **17 - 70 bar**

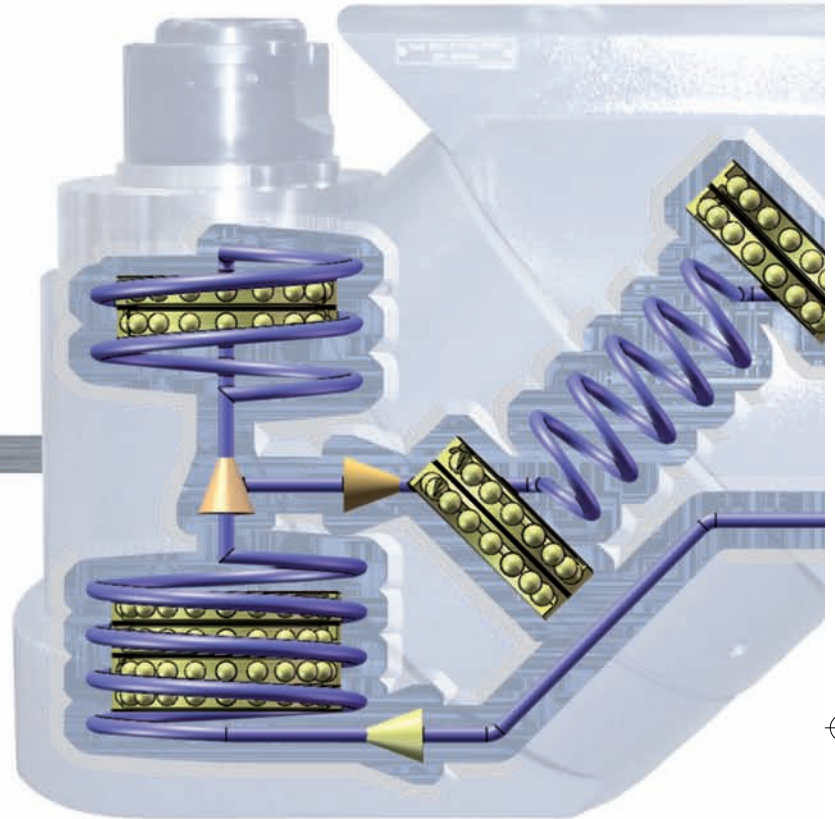
100% ROBUST

RELIABILITY

Design and fabrication entirely by NCSA. The whole assembly process is monitored by NCSA

Head assembly in a **cleanroom** with constant temperature 22°C

Milling head run in the **test bench for 60 hours** performing body & spindle rotations



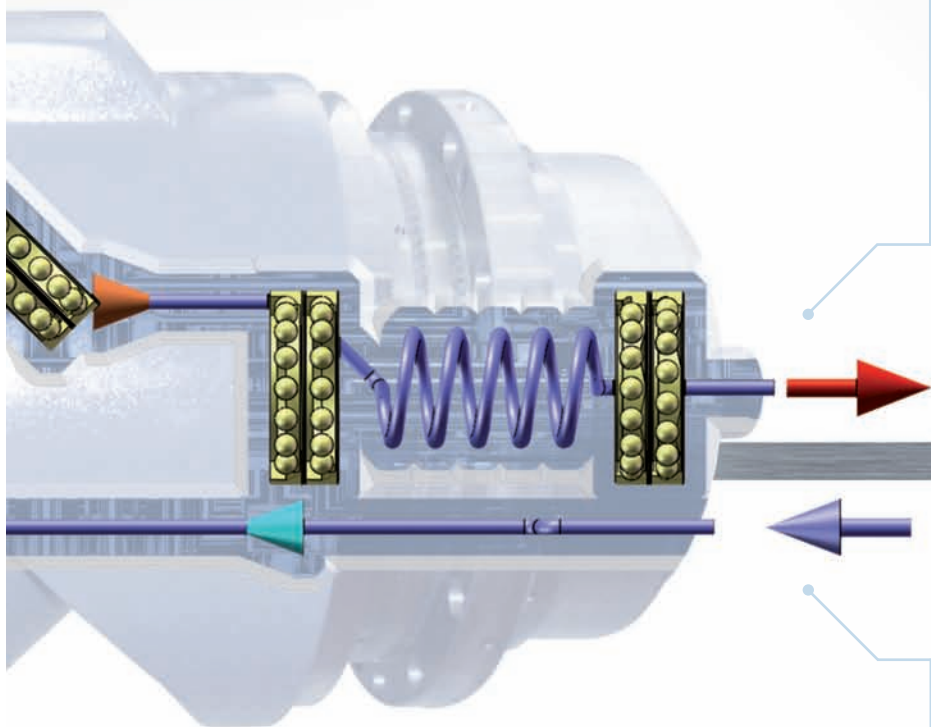
12





ling Head Technology

worldwide



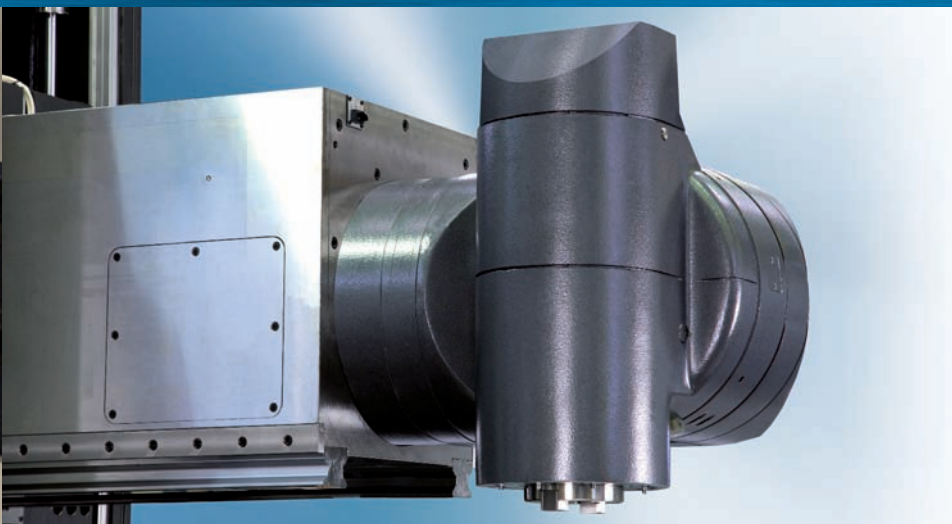
ROBUSTNESS

- 4+2 Bearings in the main spindle
- Tool clamping force: **2.500 kg**
- Hirth coupling s locking force: **22.000 kg**
- The milling head s design allows **52 kW – 1.375 Nm in S1**
- Milling head body made of **casted steel GGG-50**

100% RELIABLE

PRECISION

- Maximum coupling repeatability error **+ - 3"**
- The bearing's cages of the main spindle & the external spacers of the secondary axes bearings, are cooled with water

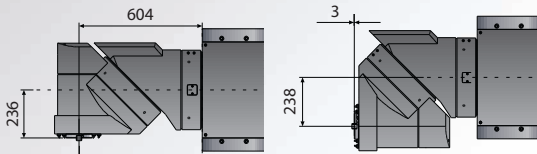


Milling Heads

24 kW | 840 Nm | 6.000 rpm
33 kW | 990 Nm | 6.000 rpm

Universal Auto-Indexing Differential Head

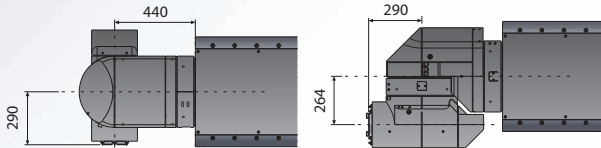
UAD 0.02° x 0.02°



24 kW | 840 Nm | 6.000 rpm
33 kW | 990 Nm | 6.000 rpm

Orthogonal Auto-Indexing Differential Head

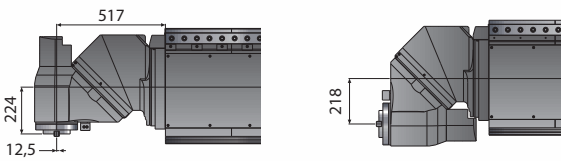
OAD 0.02° x 0.02°



24 kW | 840 Nm | 3.000 rpm
33 kW | 990 Nm | 3.000 rpm

Universal automatic head

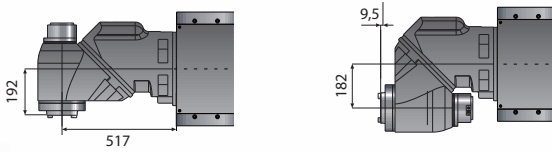
UDG 2.5° x 2.5°



24 kW | 840 Nm | 4.000 rpm
33 kW | 990 Nm | 4.000 rpm

Universal manual head

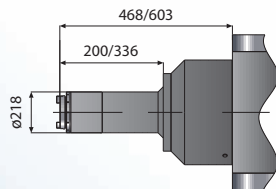
UM



24 kW | 840 Nm | 3.000 - 4.000 rpm
33 kW | 990 Nm | 3.000 - 4.000 rpm

Front Spindle

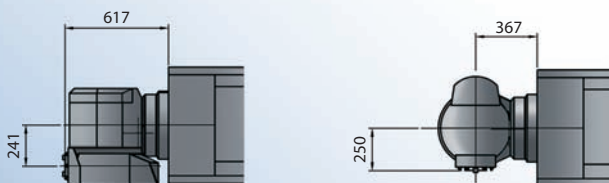
FC-20 | 30



24 kW | 840 Nm | 3.000 rpm
33 kW | 990 Nm | 3.000 rpm

Orthogonal Auto-Indexing Differential Head

UAG 2.5° x 2.5°



Optional Equipment

Other heads

Probes of measurement,
tools and parts

Automatic changer for
30, 40, 60, 120 tools

Pick up station for 8 and 12 tools

Air/Coolant cleaning gun

Self cleaning filter

Floor plates

Rotary tables

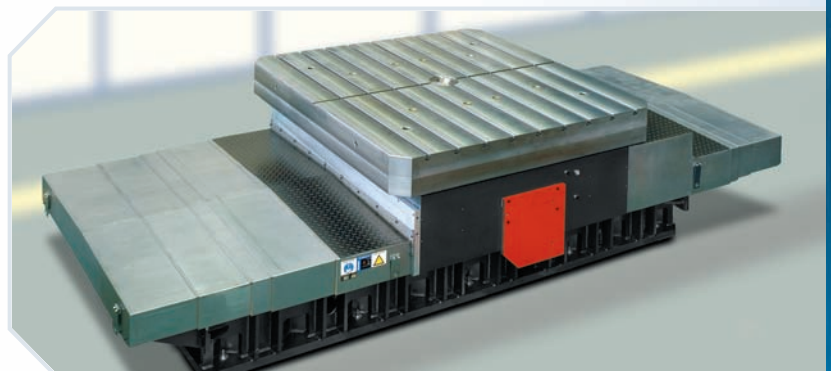
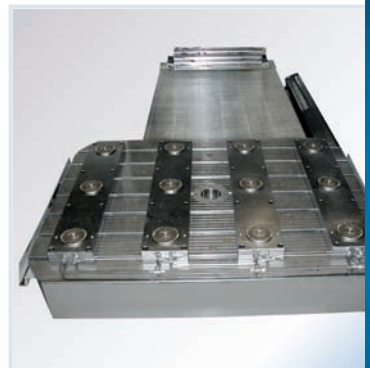
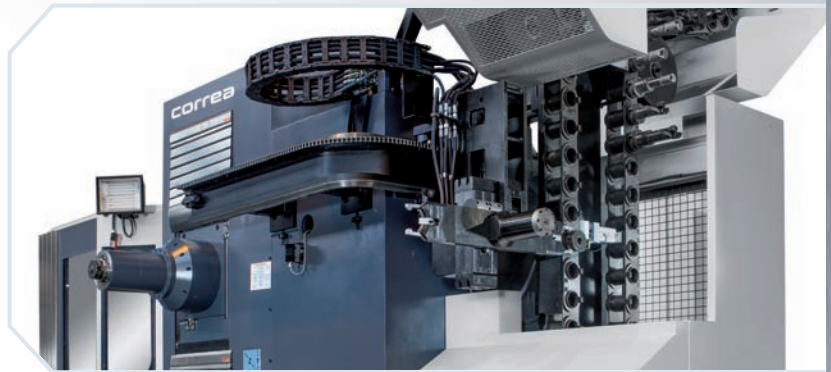
Turning tables

Chip conveyors

Perimeter fence

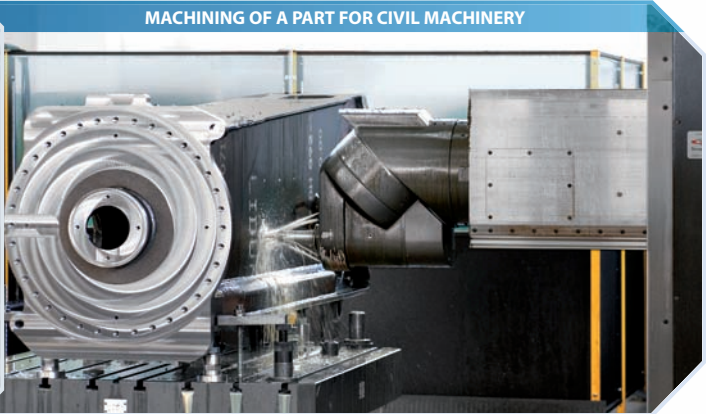
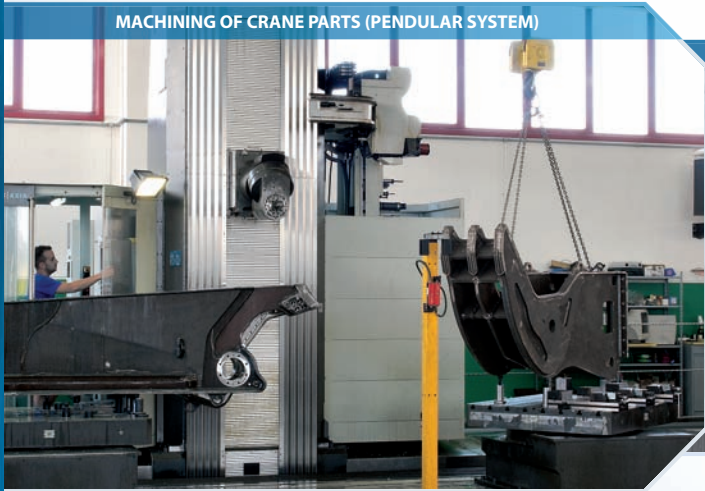
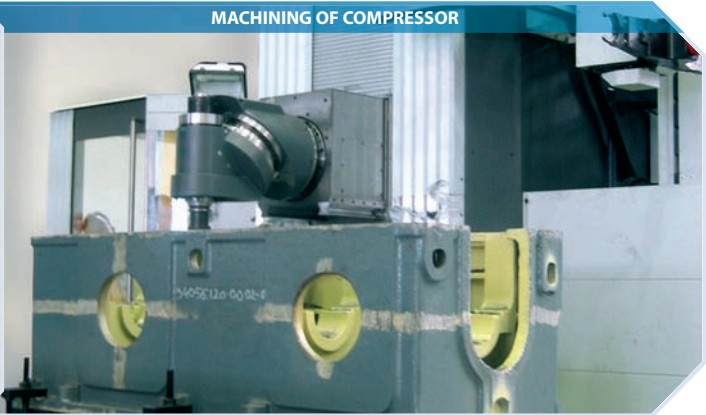
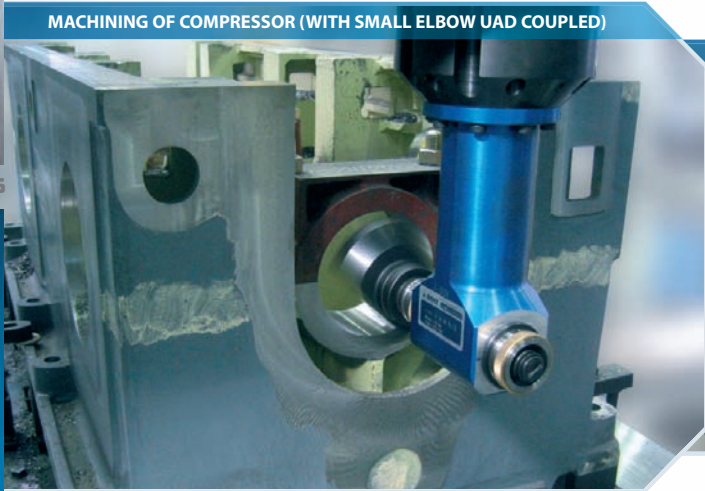
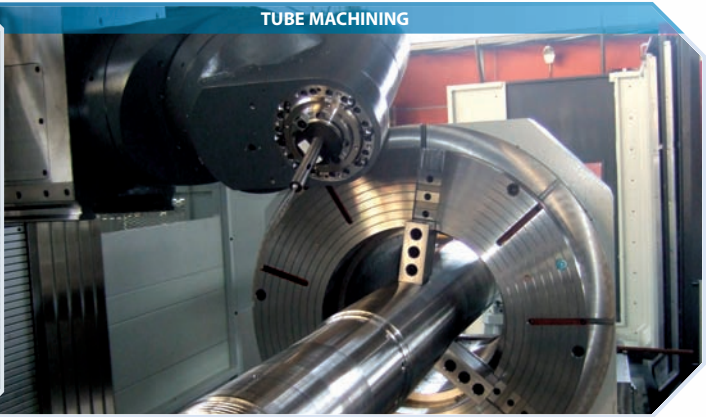
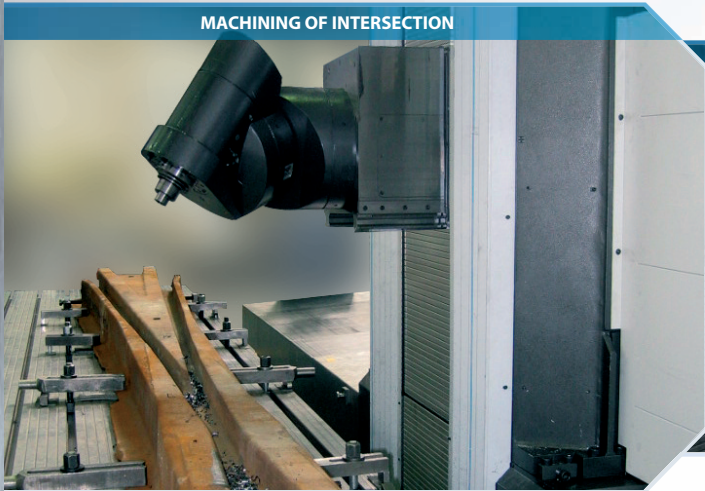
Different enclosures according to user's
needs (Only in some models)

Coolant through the spindle





Applications



Applications

MACHINING OF A STRUCTURAL PART FOR TOOLING-MACHINE



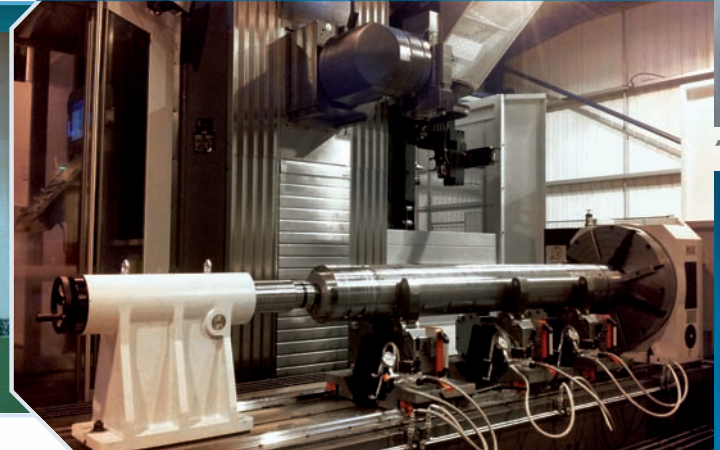
MACHINING OF A WIND TURBINE HUB



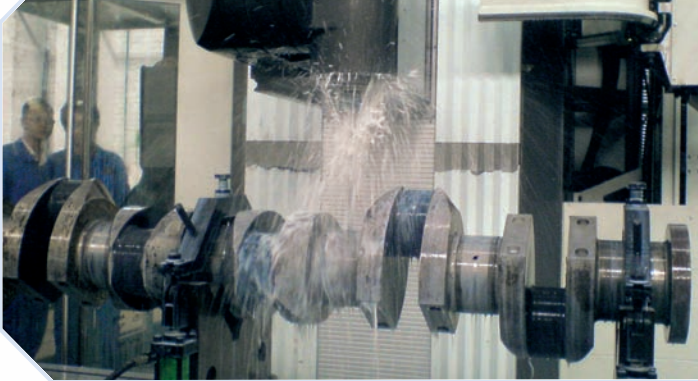
MACHINING OF PLASTIC INJECTION MOULDS



MACHINING OF A PETROL SECTOR COMPONENT



MACHINING OF A CRANKSHAFT



MACHINING OF A MOTOR BLOCK





Nicolás Correa Group



NICOLÁS CORREA S.A.

Founded in 1947 and dedicated to the design and fabrication of medium and large size milling machines, is the headquarters of the Group **NICOLÁS CORREA** also formed by 4 other industrial affiliates:

GNC HYPATIA

Design and fabrication of **CORREA** milling machines of small size, as well as accessories for the tool machine industry such as ATCs and milling heads.

GNC KUNMING

Fabrication and distribution of milling machines for the local Chinese market.

GNC ELECTRÓNICA

Design and fabrication of electrical assemblies.

GNC CALDERERÍA

Welded structures, sheet parts, and machine guarding systems.

Some critical components are supplied inside the group to assure quality and fulfill the flexibility requirements of our customers.

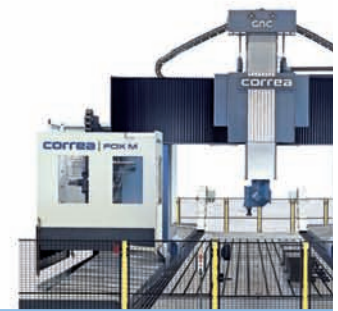
NICOLÁS CORREA offers one of the widest milling machine ranges on the market including:

- Bed type
- Travelling column
- Portal milling machines

The design and manufacture are entirely made in Europe.

It quotes in the Madrid Stock Exchange since 1989.

In order to guarantee service and personal assistance to our customers, we have a wide sales and service network all over the world, being present through subsidiaries or agents in most of the countries.



FOX-M



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NORMA-L



XPERTA



PERFORMER-MG



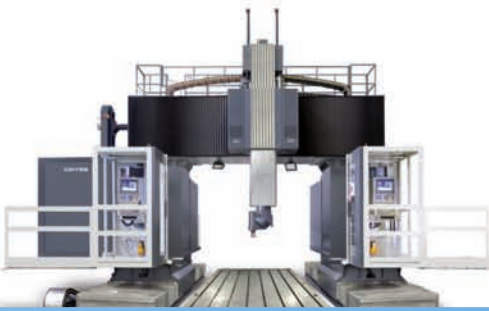
Product Range



XPIDER



ORIX



VERSA-M



VERSA-MW



FOX



VERSA



FENIX



AXIA



MAGNA



NORMA



VH-PLUS-MG

TOP GANTRY

GANTRY TYPE

BRIDGE TYPE

TRAVELLING COLUMN

BED TYPE



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