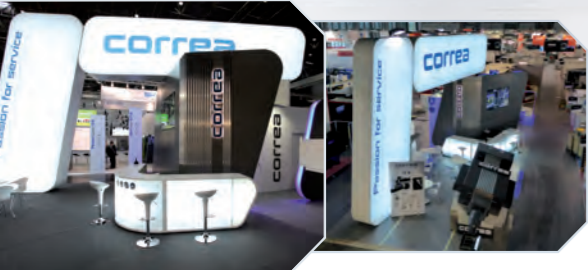




ORIX

Super Finishing Top Gantry Milling Machine



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06-2016

correa

ENG

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

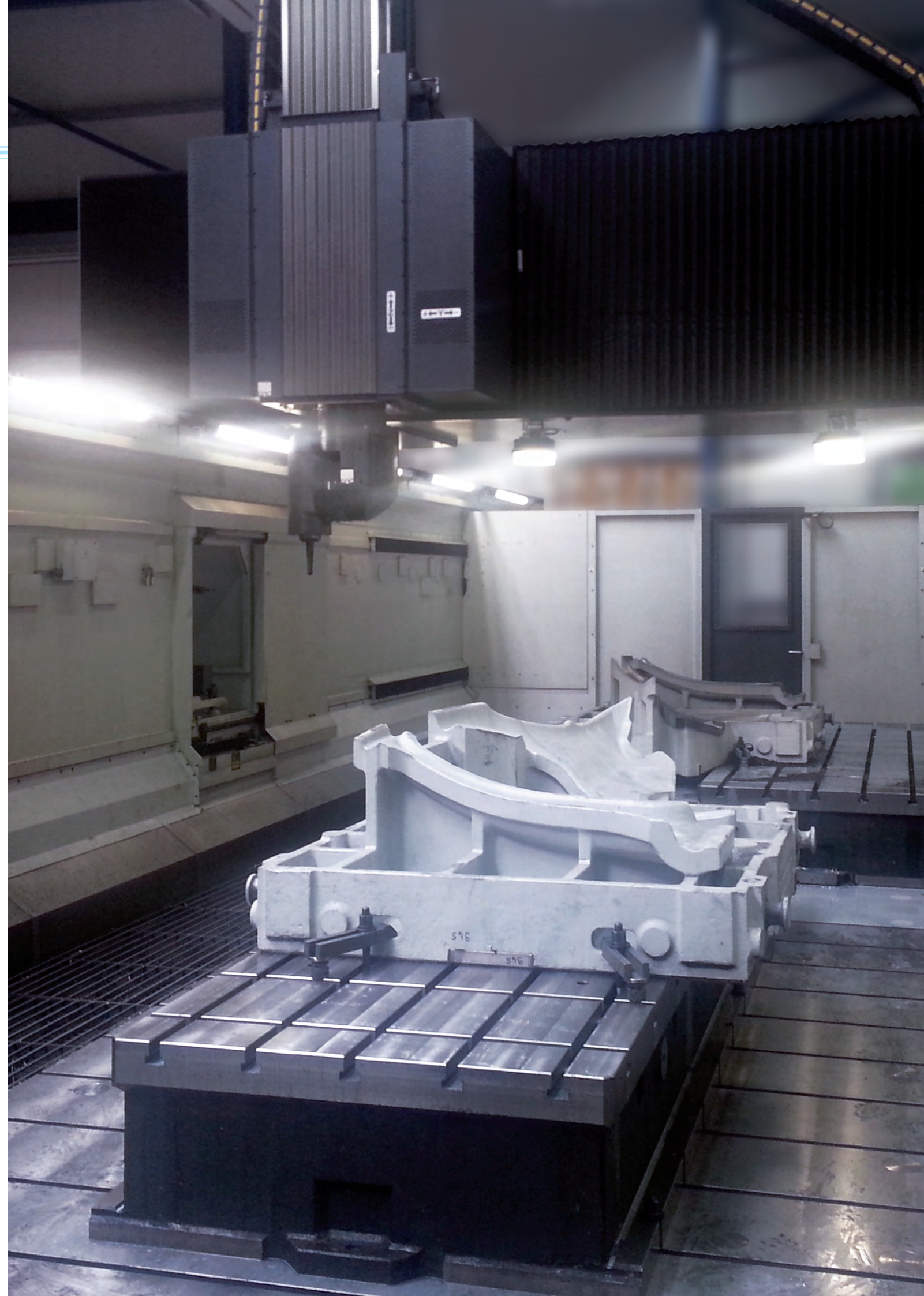
The milling machine is stable and maintains geometry values longer.

DURABILITY

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

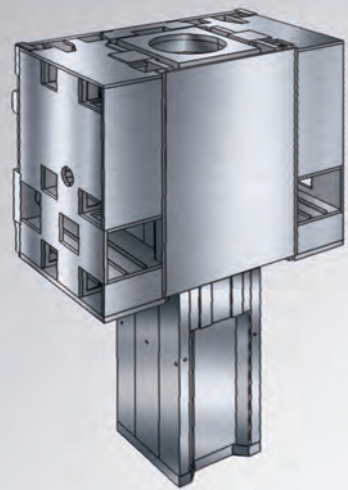
MILLING HEADS

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

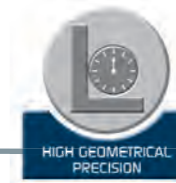
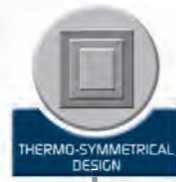


What makes the difference in the ORIX?

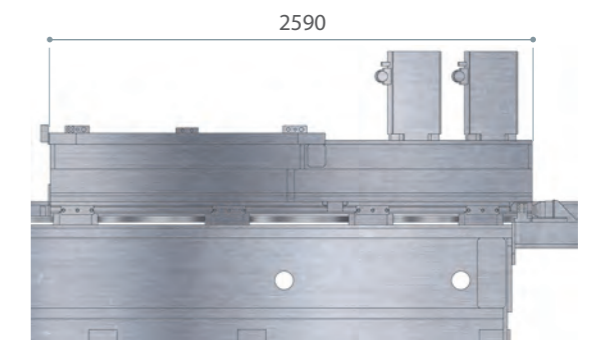
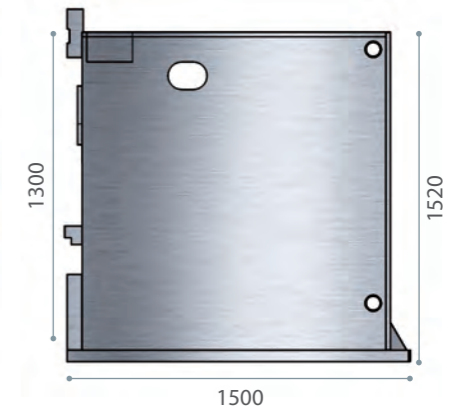
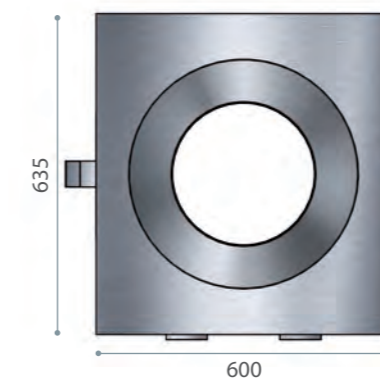
The **ORIX** is a "Top Gantry" milling machine designed specifically for super-finishes of surfaces while maintaining good dynamics and geometric precision at the tip of the tool



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



- High-speed finishing capacity
- Geometric stability in time



- Wide cross sections
- Long lengthwise carriage that guarantees optimal bench support via 8 extra-long skids
- Bench structure: Steel and concrete, guaranteeing greater sturdiness and optimal buffering capacity
- Motor weights evenly distributed over the carriage with regard to beam weight



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



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



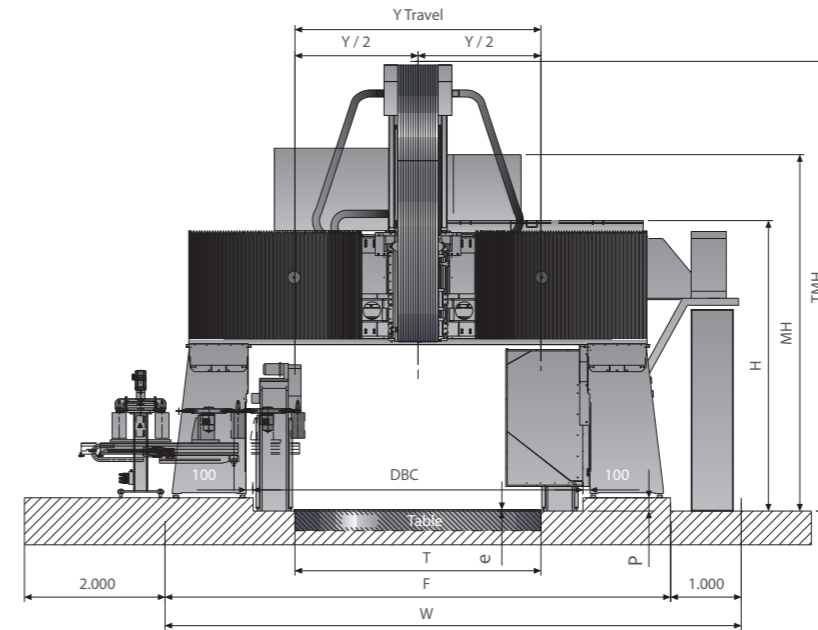
- Machine designed to obtain superb quality surface finishes
- Specific electrospindle designed to obtain finishes at high rpms
- Dynamic behaviour with parameter settings for:
 - Surface quality
 - Part geometrics
 - Machining time



Technical Features

| ORIX TABLE | | | | | |
|---------------------------|-------------------|--------------------------------|-------|-------|-------|
| Surface | mm | 4.000 - 16.000 x 2.500 - 3.500 | | | |
| Maximum load on the table | Tm/m ² | 15 | | | |
| TRAVERSES | | | | | |
| Longitudinal | X mm | 3 500 - 24.500 | | | |
| Cross | Y mm | 3.000 | 3.500 | 4.000 | 4.500 |
| Vertical | Z mm | 1.250, 1.500, 2.000 | | | |
| WORK CAPACITY | | | | | |
| Distance between columns | mm | 4.200 | 4.700 | 5.200 | 5.700 |
| FEEDS | | | | | |
| Maximum | X m/min | 30 | | | |
| | Y m/min | 30 | | | |
| | Z m/min | 30 | | | |
| SPINDLE SPECIFICATIONS | | | | | |
| Spindle nose | | ISO-50 HSK-63 HSK-100 | | | |
| Programmable speed | rpm | 6.000 / 12.000 / 24.000 | | | |
| Maximum power | kW | 52 / 35 / 60 | | | |
| Maximum torque | Nm | 1.375 / 120 / 60 | | | |

External Dimensions



| X Travel | A | B | C |
|----------|--------|--------|--------|
| 3.500 | 6.000 | 7.520 | 11.310 |
| 5.000 | 9.000 | 9.000 | 12.790 |
| 6.500 | 9.000 | 10.520 | 14.310 |
| 8.000 | 12.000 | 12.000 | 15.790 |
| 9.500 | 12.000 | 14.300 | 18.090 |
| 11.000 | 15.000 | 15.000 | 18.790 |
| 12.500 | 15.000 | 18.000 | 21.790 |
| 15.500 | 18.000 | 21.700 | 25.490 |
| 18.500 | 21.000 | 25.400 | 29.190 |
| 21.500 | 24.000 | 29.100 | 32.890 |
| 24.500 | 27.000 | 32.800 | 36.590 |

| Z Travel | Vert. Capacity | DBT | e | P | H | MH | TMH |
|----------|----------------|-------|-----|-----|-------|-------|-------|
| 1.250 | A | 2.165 | 330 | 0 | 3.850 | 5.215 | 6.550 |
| | B | 2.165 | 330 | 0 | 3.850 | 5.215 | 6.800 |
| 1.500 | B | 2.595 | 20 | 120 | 3.970 | 5.645 | 6.920 |
| | C | 2.695 | 20 | 190 | 4.040 | 5.745 | 7.490 |
| 2.000 | D | 3.095 | 20 | 620 | 4.470 | 6.145 | 7.920 |

| Y Travel | DBC | F | W | T |
|----------|-------|-------|-------|-------|
| 3.000 | 4.200 | 6.700 | 7.700 | 3.000 |
| 3.500 | 4.700 | 7.200 | 8.200 | 3.500 |
| 4.000 | 5.200 | 7.700 | 8.700 | 4.000 |
| 4.500 | 5.700 | 8.200 | 9.200 | 4.500 |

Standard Equipment

Five-axes twist drill head equipped with electrospindle

Numerical control Heidenhain or Siemens (Operate HMI)

Portable handwheel

Air-conditioned electrical cabinet

Linear guides in the X, Y and Z axes

Lamp in the working area

Hydraulic and cooling group

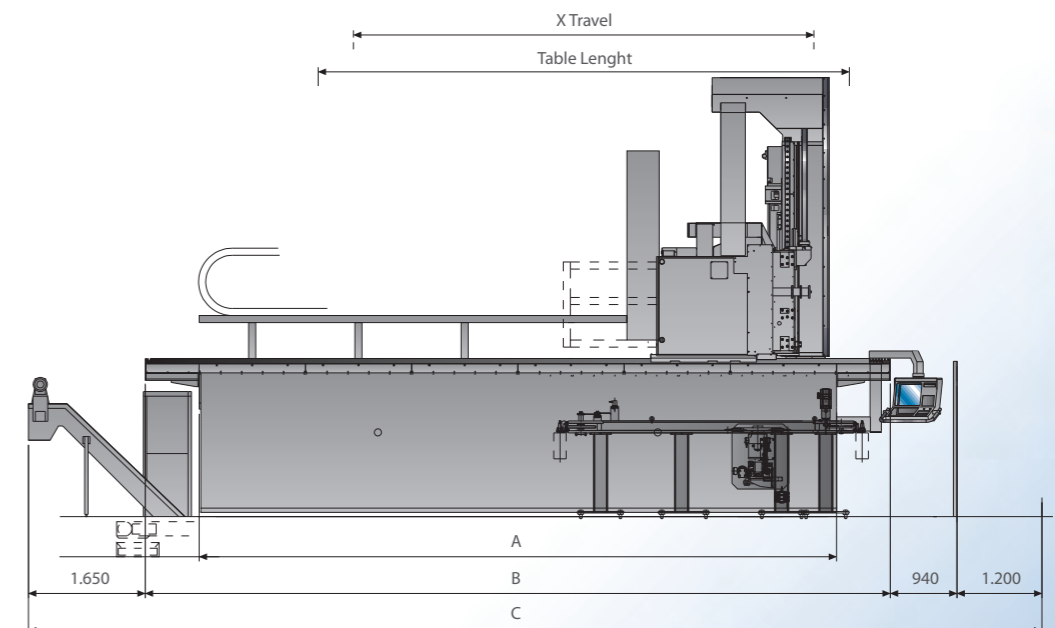
Linear scales in all axes

External Coolant with adjustable nozzles

Internal and external air flow

Guarding

Tele-service





ESE Milling Head

FLEXIBILITY

- Axis C rotation, from **-200° to +200°**
- Axis B rotation, from **-110° to +110°**
- 3** configurable electrospindles on the same boring head
- Cutting fluid and/or air through the spindle, which can be adjusted from **17 to 70 bar**
- Cutting fluid and/or outside air with **integrated adjustable nozzles**

PRODUCTIVITY

- C axis rotation speed: **45 rpm**
- C axis acceleration: **10 rev / sec²**
- B axis rotation speed: **25 rpm**
- B axis acceleration: **10 rev / sec²**

ROBUSTNESS

- C axis working torque: **2200 Nm** (Motor-Torque)
- C axis braking torque: **4000 Nm**
- B axis working torque: **2026 Nm** (Motor + reduction + gears)
- B axis braking torque: **4000 Nm**
- Superior quality **Kessler or Fischer** electrospindle

100% ROBUST

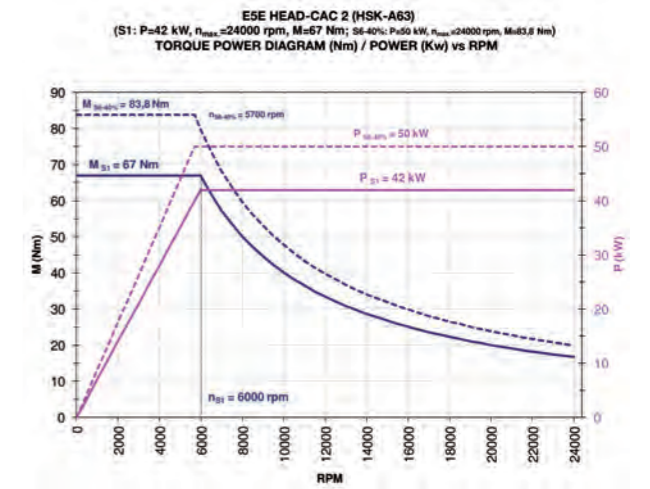
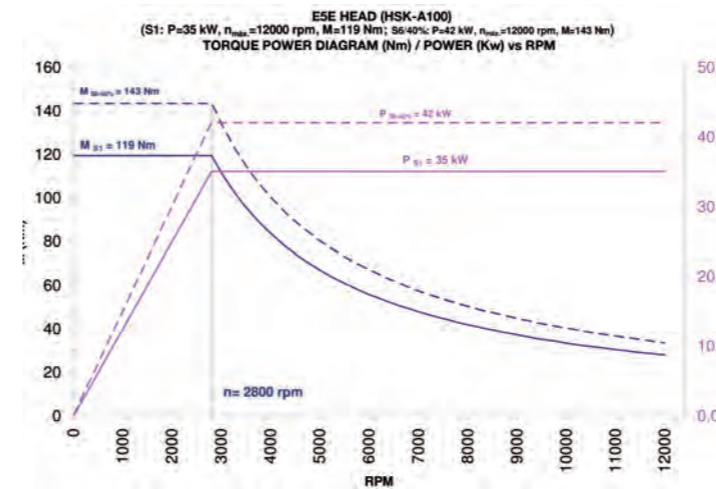
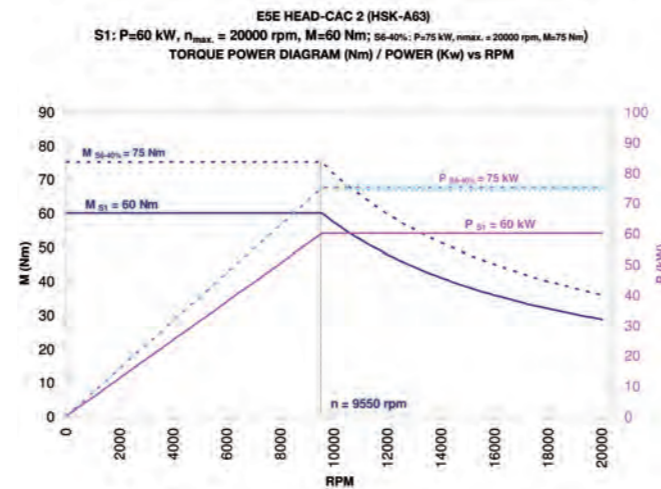
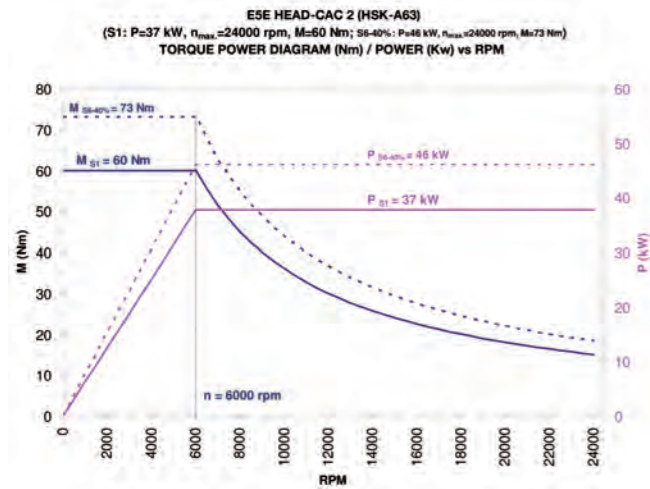
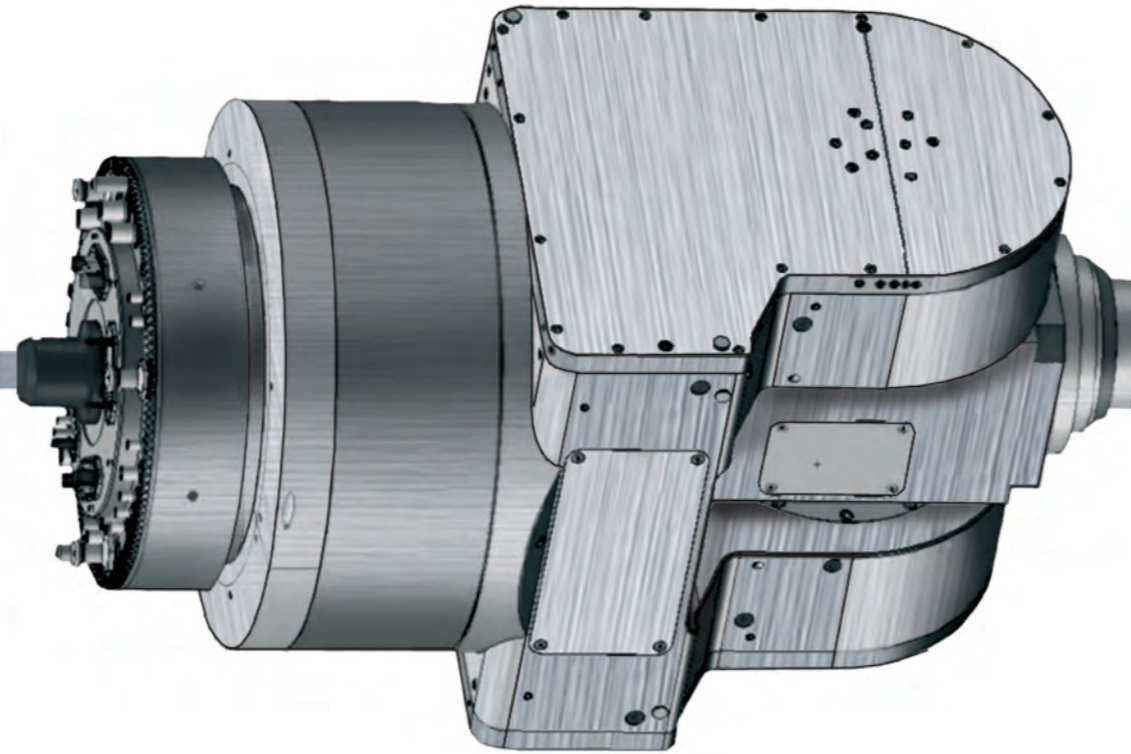
100% RELIABLE

RELIABILITY

- Head **designed and manufactured in NCSA**
- Head assembled in **white room** at 22°C
- Kessler / Fischer** electrospindle
- More demanding **cutting tests**
- Automatic** lubrication

PRECISION

- Temperature-based **pivoting distance correction**. Main axis bearings
- Mean Ps error < 0.001°**
- Total P error < 0.002°**
- B axis encoder** placed on last rotation axis

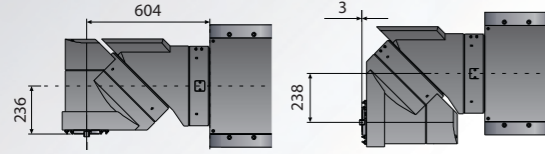


Milling Head

52 kW | 1.375 Nm | 6.000 rpm

Universal Auto-Indexing Differential Head

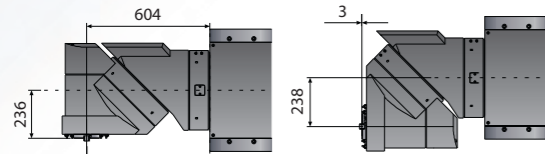
UAD 0.02° x 0.02°



52 kW | 1.375 Nm | 4.000 rpm

Universal Auto-Indexing Differential Head

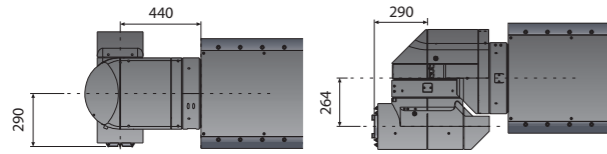
UGA 2.5° x 2.5°



52 kW | 1.375 Nm | 6.000 rpm

Orthogonal Auto-Indexing Differential Head

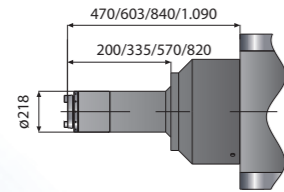
OAD 0.02° x 0.02°



15 • 52 kW | 1.375 Nm | 3.000 • 4.000 rpm

Front Spindle

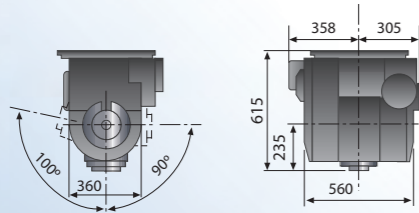
FC-20 | 30 | 60 | 80



37 kW | 371 • 707 Nm | 4.000 rpm

2-Axis continuous Milling Head

CSE

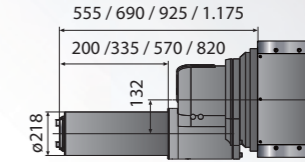


Milling Head

FD-20 | 30 | 60 | 80

Non-centered front spindle

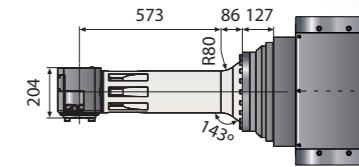
15 • 52 kW | 1.375 Nm | 3.000 • 4.000 rpm



AL-600 2.5°

Reach-out Angle Milling Head

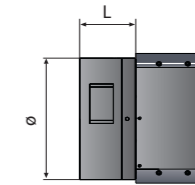
25 kW | 800 Nm | 1.500 rpm



UT-500 | UT-630

D'Andrea Head

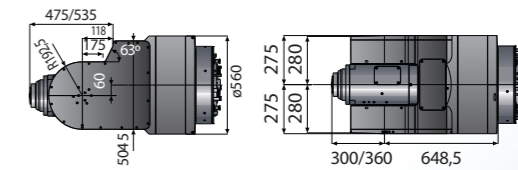
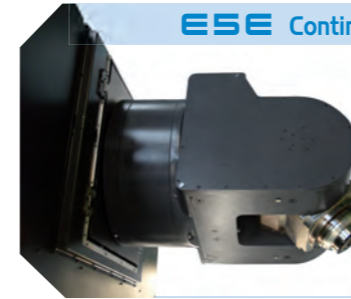
52 kW | 8.000 Nm | 315, 250 rpm



ESE Continuous

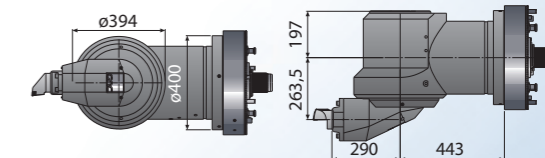
2-Axis continuous Milling Head

35 • 60 Kw | 12.000 • 24.000 rpm



TU 2.5°

Turning and shaping Head



Milling Head Changer

Optional Equipment



| MILLING HEAD | AUTOMATIC HEAD EXCHANGE | BUILT IN |
|-----------------|-------------------------|----------|
| UAD | • | • |
| UGA | • | • |
| OAD | • | • |
| FC-20 30 60 80 | • | • |
| FD-20 30 60 80 | • | • |
| AL-600 | • | • |
| UT-500 UT-630 | • | • |
| ESE Continuous | • | • |
| TU | • | • |
| CSE | • | • |

Other heads

Automatic head-changer

Probes of measurement, tools and parts

Automatic charger for 30, 40, 60, 120 tools

Pick up station for 6, 8, 12 tools

Air/Coolant cleaning gun

Self cleaning filter

Rotary tables

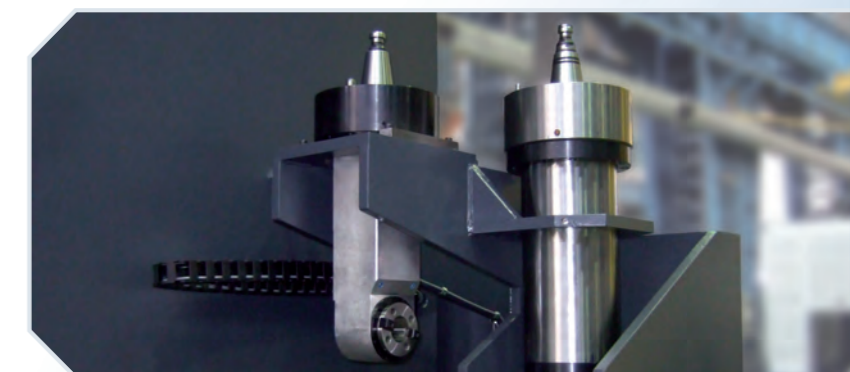
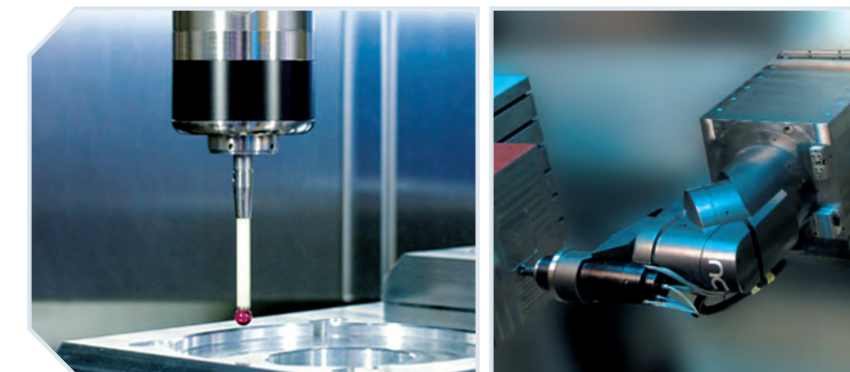
Chip conveyors

Perimeter fence

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

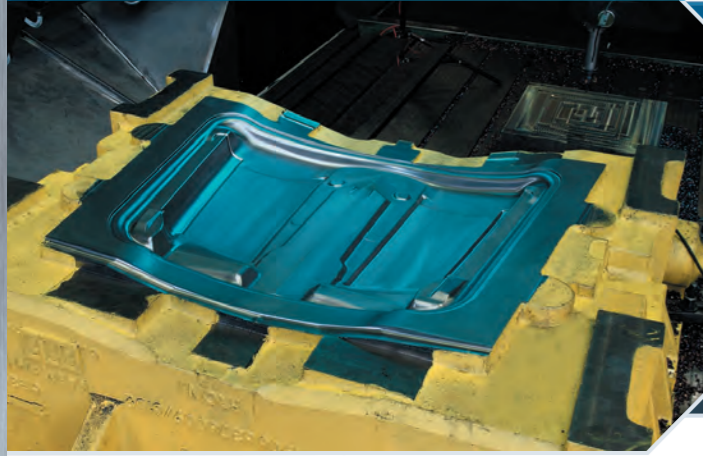
Coolant through spindle 17, 36, 70 bar

Zero Point Clamping System integrated in the machine



Applications

LEATHER FINISHES



INJECTION MOULD FINISH



AERONAUTIC MOULD MACHINING



LEATHER FINISHES



DIE FINISH



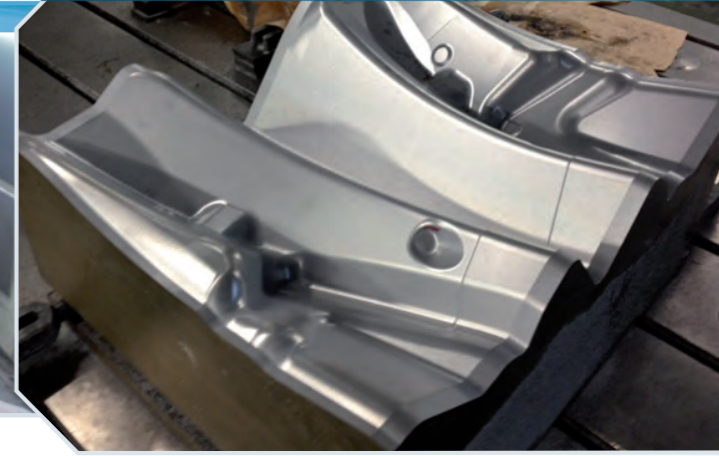
LARGE STRUCTURAL PART MACHINING (AERONAUTICS)



DIE MACHINING



MODEL FINISHES



CAST MOULD MACHINING



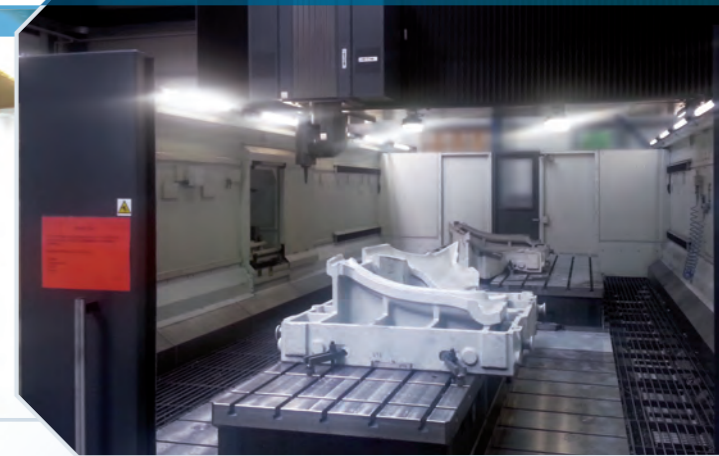
DIE MACHINING



DIE MACHINING



DIE FINISH





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.

In 2006 **NICOLÁS CORREA** and **INDUSTRIAS ANAYAK** merged, what gave us the chance to offer one of the widest milling machine ranges on the market including: bed type (Also T-Configuration), Travelling column (Also T-Configuration), Portal milling machines. The design and manufacture are entirely made in Europe.

It quotes in the Madrid Stock Exchange since 1989.

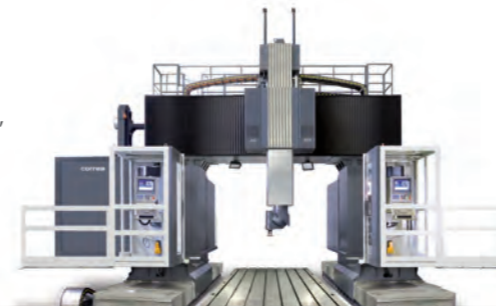
In order to guarantee service and personal assistance to our customers, we have a wide sales and service network all over the world, being present through subsidiaries or agents in most of the countries.



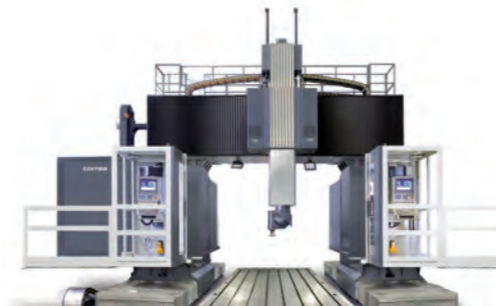
HVM-LANZA



VH-PLUS LANZA



FOX-M



VERSA-M



VERSA-MW



ORIX



FOX



VERSA



VERSA-W



NORMA-L



FENIX



HVM



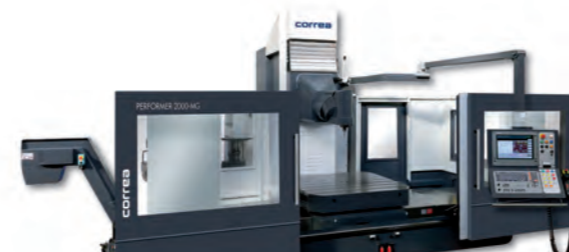
AXIA



MAGNA



XPERTA



PERFORMER-MG



NORMA



VH-PLUS-MG