

TECHNICAL DATA

CNC – Portal Milling Machine

manufacturer	CORREA
type	FP 40
control	HEIDENHAIN iTNC 530
built	2007



Travels

longitudinal movement (x-axis)	4.000	mm
lateral movement (y-axis)	3.000	mm
vertical movement (z-axis)	1.000	mm
min. / max. distance spindle nose / table	500 / 1.500	mm

Clamping table

clamping surface	4.500 x 2.000	mm
t-slots	22 H8	mm distance 8 x 150 mm
workpiece load max.	10.000	kg
distance between columns	2.500	mm

Feeds

X-axis, stepless	2 - 15.000	mm/min.
Y- and Z-axis, stepless	2 - 12.000	mm/min
Torque of the drives	37	Nm

Ball screws

Longitudinal (X)-axis, Ø / Pitch	63 / 12	mm
Lateral (Y)-axis, Ø / Pitch	50 / 10	mm
Vertical (Z)-axis, Ø	63 / 10	mm

Working spindle with automatic milling head UAD

power at 100 % ED	30	kW	from 198 min-1
gear steps	2		
speed range, infinitely variable	40 – 5.000	min-1	
max. torque	1.045	Nm	up to 273 min-1
tool taper SK 50			SK 50 – DIN 69871 Form A
pull stud			DIN 69872 Form A
head pitch in both planes	0,1	°	each plane
automatic tool clamping	18.000	N	clamping force

CNC-control HEIDENHAIN iTNC 530

including digital drive control, hard disk memory, 15" TFT color screen, 6 GB hard disk space

Programs

Standard drilling and milling cycles, deep drilling, tapping with and without floating tap holder, milling of grooves, rectangular and circular pockets, rectangular and circular journals, boring, drill milling (helical path), off-line drilling, drilling patterns, head swiveling, countersinking, Shifting and/or rotating the coordinate system, mirroring, scaling factor also axis-specific, Tool Center Point Management TCPM, linear interpolation, circular interpolation, tilting the working plane, helices, circular interpolation in space with tilted working plane

Memory and interface

Central tool memory for any number of tools, also with variable space coding, return to contour, touch probe cycles for measuring and zero point determination, data interface V24/RS-232-C and V11/RS-422, data transmission speed up to max. 115,200 baud, Fast Ethernet interface (100 Mbaud), remote diagnosis via Ethernet card possible

Automatic tool changer ATC

max. capacity	60 pos.	
tool diameter max.	200 / 125 mm	adjacent places free / occupied
tool length max.	400 mm	
tool weight max	25 kg	
changing positions		vertically + horizontally

Guides, drive and measuring systems

- All axis drives with digital servo motors, manufacturer SIEMENS
- Direct measuring systems for X, Y and Z Axes, manufacturer HEIDENHAIN
- X-, Y- and Z-axis guidance using high-precision linear guides for maximum precision and dynamics
- Precision ball screws with preloaded nuts in X-, Y- and Z-axis

Chip conveyor

- 2 chip conveyors mounted lengthwise between machine stand and clamping table
- Discharge height approx. 1070mm
- All chip conveyors as hinged belt conveyors

Coolant system

- Coolant outlet at milling head via shower rim 25 l/min, 3 bar.
- Tank capacity ca. 300 l
- Internal coolant supply 40 l/min 17 bar
- Coolant filtration via MAHLE automatic centrifuge filter (fineness 0.05 mm)

Dimensions, weight

Base area machine l x w	ca. 11 x 6,7	m
overall height	ca. 5,4	m
Machine weight approx.	43.000	kg

Electrical connection values

total electrical power supply	44	kW
operating voltage	400	V
operating frequency	50	Hz

Equipment / Accessories

- Machine bed, stand, milling slide and vertical slide in pearlitic cast iron GG-30 with a hardness of 220 HB are generously dimensioned and ribbed
- Automatic indexing milling head UAD with 0.1° pitch in both planes
- 2-stage automatic gearbox with recirculating oil lubrication Oil cooling unit for cooling the main spindle gear unit
- spindle drive 30 kW, make SIEMENS
- Spindle speed max. 5.000 min⁻¹
- Axis drives by means of precision ball screws and digital servo motors
- Prepared for M&H 20.00 touch probe with radio transmission (touch probe missing)
- CNC control HEIDENHAIN iTNC 530 incl. digital drive technology
- Portable electronic handwheel HEIDENHAIN HR 410 with 3 m spiral cable
- Pivoting control panel for machine operation
- Automatic tool changer with 60 magazine positions, changing positions vertically + horizontally
- Coolant system with external shower rim and internal coolant supply through the spindle
- 2 chip conveyors left and right of the clamping table
- IKO - Linear guides in the X-axis, sliding guides made of hardened steel strips and plastic-coated counter guides in the Y- and Z-axis
- Precision ball screws with pre-tapped double nuts in all axes
- Direct measuring system in all axes make HEIDENHAIN
- Hydraulic weight compensation in the vertical axis
- Telescopic cover of the X-axis
- Bellows cover of the Y-axis
- Splash guard cladding of the working area on 4 sides. The sliding door at the front of the machine is operated manually. The door on the side of the tool changer opens and closes automatically. In X - direction the working area is closed by a swiveling PVC curtain. Safety fencing for the area of the tool- and magazine with a secured access door.
- Air conditioning for electrical cabinet
- Approx. operating hours: control 18.260 h, machine 20.265 h, read off program run 15,000 h estimated