

## TECHNICAL DETAILS

### AXES STROKES

X	mm	400
Y	mm	240
Z	mm	450
B-axis (swivel axis)	°	-113 to +20
C-axis (rotary axis)	°	360 (endless)

### FEED RATE / RAPID TRAVERSE RATE

Linear axes	m/min	40
Swivel axis B	°/min	12,500
Rotary axis C	°/min	150,000

### ACCELERATION

Linear axes	m/s <sup>2</sup>	10
Swivel axis B	°/s <sup>2</sup>	7,000
Rotary axis C	°/s <sup>2</sup>	15,000

### POSITIONING ACCURACY VDI/DGQ 3441

Standard linear axes	P/Ps in mm	0.003/0.001
High precision linear axes	P/Ps in mm	0.0015/0.001
perpendicularity	µm/100mm	1.5
Resolution capacity	µm	0.1

### CNC-CONTROL

Heidenhain	TNC7
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### WORKING SPINDLE

Speed range	rpm	500 - 100,000
Power S1/S6-40%	kW	2.5/3.5 bis 16.6/21
Torque S1/S6-40%	Nm	0.5/0.7 bis 15/19.4
Tool holder	HSK	25 / 32 / 40

### TOOL CHANGER

Number of tool pockets	60 to 150
Tool diameter	mm 40

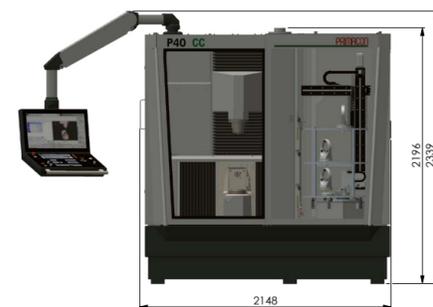
### WORKPIECE HANDLING OPTION

Storage capacity	20 to 75
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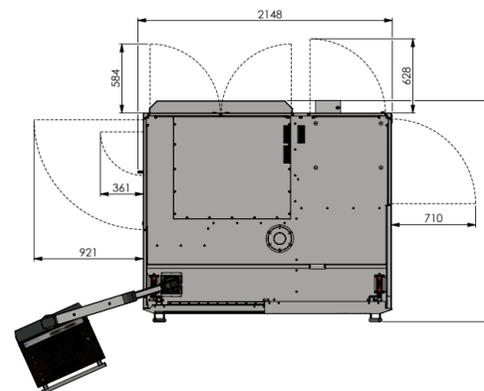
### GENERAL

Machine weight	kg	3,500
Space requirement	m <sup>2</sup>	2.2 x 1.9
Mains voltage	V AC	3 x 400
Nominal frequency	Hz	50 - 60
Nominal power (depending on the equipment)	kW	17 - 30
Air pressure	bar	6

## INSTALLATION PLAN



FRONT VIEW



TOP VIEW

## PRIMA CON CONSULTING AND SERVICE

Comprehensive and competent – right from the start

### PRIMA CON Consulting

Starting from the first sales talk, we will assist you in selecting the most suitable machine configuration for your product and advise you in detail about:

- ✓ Programming
- ✓ CAD/CAM
- ✓ Milling technology
- ✓ Tools
- ✓ Clamping technique
- ✓ Lubrication and Cooling unit

### PRIMA CON Application Consulting & Training

Our specialists will gladly answer any question regarding milling or programming and support your production competently with modern CAD / CAM technology and our know-how.

In addition, we also provide training on the operation and maintenance of our machines.

### PRIMA CON Spare parts service

Replacement part supply with availability of 95%. If you order before 2 pm, the parts will be shipped the same day.

### PRIMA CON After Sales Service

When you have decided on a PRIMA CON machine, we will take over the delivery and commissioning. As long as the machine is used in your production we provide service and assist you in a quick and uncomplicated way.

We provide remote maintenance by data transfer and update your software to the latest version on a regular basis.

We guarantee you:

- ✓ Service coordination within 24 hours
- ✓ and On-site service within 48 hours



## PRIMA CON P40 CC – Compact Cell

5-axis-milling to perfection  
high-precision and fully automatic

### PRIMA CON Service-Hotline

Our specialists will assist you quickly in finding solutions and fixing errors before they become a problem. Please contact us:

+49 (0)8803 6321 - 30

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# EFFICIENCY REDEFINED

## PRIMA CON P40 CC

The **PRIMA CON P40 CC** is an optimised high-precision milling machine, which is already designed in its basic version for **5-axis machining**. This allows a particularly economical and dynamic complete processing of a wide variety of workpieces in one clamping. But even though 5D-simultaneously processing won't be used for everything, the 5-axis system constitutes an inestimable value. This is because the workpieces can be machined in the most favourable position for milling.

The equipment with a clever **energy efficiency kit** and the integrated **full automation** optimise process sequences and therefore **save** a considerable amount of **time and money**.

Thanks to the **multi-machining concept**, the machine can also be used for **coordinate grinding** and **guilloché** in addition to **HSC-milling**. The ergonomic layout and modern design round off the overall construction.



### TOOL CHANGER WITH DOUBLE ARM GRIPPER

- Tool changing magazine includes as standard 60 / 100 / 150 positions
- Reduction of idle-times (tool and workpiece changer are set up parallel to production time)

### PALLET CHANGER / 6-AXIS ROBOT

- Integrated automation
- High degree of automation in a small space
- Direct handling of workpieces
- Automatic workpiece changer integrated with 25 / 50 / 75 positions

### NEU 50 % MORE CAPACITY IN THE TOOL CHANGER AND PALLET CHANGER

### NEU THE PERFECT SPINDLE SOLUTION FOR EVERY APPLICATION

- Air bearing high-frequency milling spindle – „THE ELEGANT“
  - for ultra-precision and maximum surface quality
  - rotation speed up to 80,000 r.p.m.
- Air-oil lubricated spindle – „THE ALL-ROUNDER“
  - rotation speed up to 42,000 r.p.m.
- Air-oil lubricated spindle – „THE POWERFUL“
  - for high cutting performance
  - rotation speed up to 24,000 r.p.m.

## ERGONOMIC OPERATING CONCEPT

- High-tech machine control Heidenhain TNC7
- Clearly arranged and user friendly
- Controls all automatic operation

## ADVANTAGES OF THE P40 CC

### NEU ENERGY EFFICIENCY KIT

- Automated complete shutdown of the machine
- 0.2 kW standby power / 1.9 kW at standstill / 3.5 kW in reference mode
- State-of-the-art smart meter functions

- ✓ Customised solutions possible due to modular 5-axis machine concept (As option also available with 3 axes)

- ✓ Low maintenance, thus high machine availability and low maintenance costs

- ✓ Equipped with the latest high-tech components

- ✓ Processing of dusty materials without refitting or upgrading the machine

- ✓ Optimised temperature management system with 0.1 Kelvin hysteresis

- ✓ Reliable chip removal thanks to optimised tub flushing (even with high chip volume)

- ✓ Minimum quantity cooling lubrication system, full jet lubrication, cold air nozzle, chip conveyor, IKZ up to 80 bar

- ✓ Conventional clamping systems (System 3R, EROWA) and open interface for customised solutions

- ✓ Long-lasting micro-precision

- ✓ Zero point stability – cooling of all heat-emitting elements (milling spindle, motors, axes, control cabinet); active cooling of the cooling lubricants

- ✓ Tailstock for 5-axis simultaneous machining

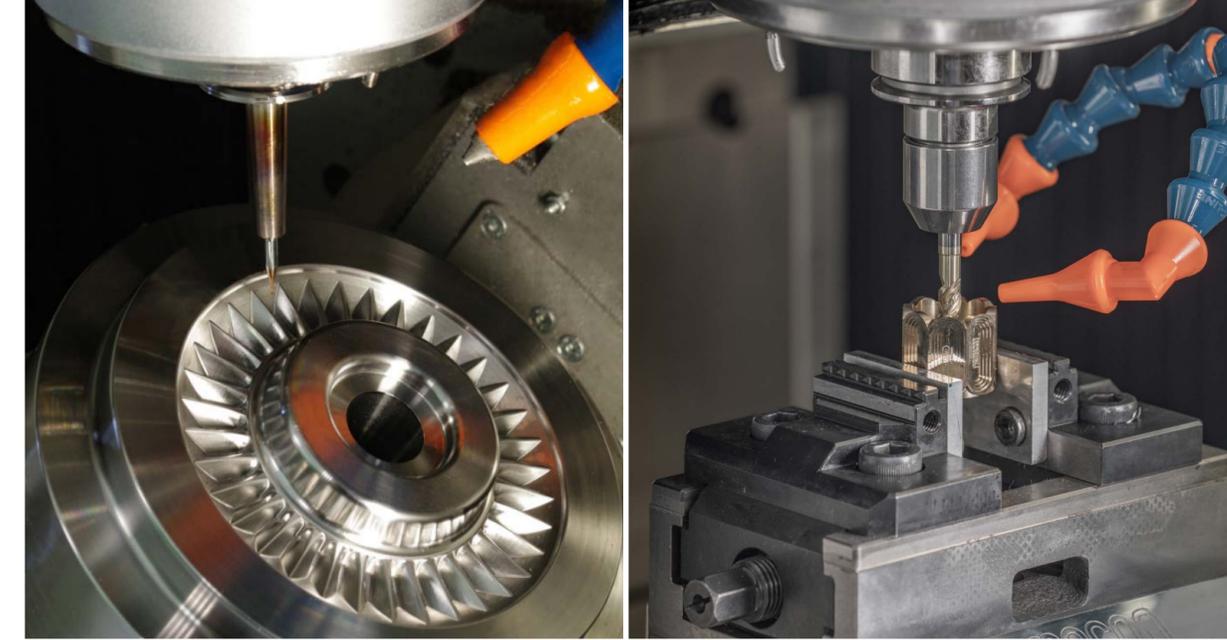
- ✓ High precision set according to VDI / DGQ 3441 P/PS in mm 0,0015 / 0,001

- ✓ Low installation dimension of less than 4 m<sup>2</sup> including automation

- ✓ 3D touch probe for workpiece measurement in the machine

- ✓ Laser tool measurement (dirt-insensitive); more precise measuring results through smaller focus point

- ✓ High contour accuracy of the finished workpiece when machining at high speed



## BASIS FOR BEST PERFORMANCE

Particularly high stiffness and low vibration – the basis for the outstanding dynamics and precision of the PRIMA CON P40 CC – are decisively achieved by two constructive measures: On the one hand, the developers put great emphasis on keeping the moving masses extremely small. On the other hand, machine beds and lifting stands are constructed in steel-concrete composite construction. Thus, the stiffness of steel could be combined with the damping properties of concrete.

A solid foundation for the further set-up: The machine bed carries the longitudinal slide with the rotary axes, the driving stand the vertical slide with the milling.

- High-dynamics concept – innovative axes arrangement for minimal balancing movements in the linear axes and exceptional acceleration also in the rotation and swivel axis thanks to modern torque technology
- Machine bed and motors water-cooled – for maximum precision without temperature drift
- Hydraulic compensation of vertical weight



- ✓ Watch and jewellery industry
- ✓ Tool and mould making
- ✓ Fluid mechanics
- ✓ Dental and medical technology
- ✓ Optics
- ✓ Micro and precision engineering



- ✓ Hard machining
- ✓ Fibrous composite materials
- ✓ Ceramics



- ✓ Guilloché
- ✓ High-gloss surfaces