

## TECHNICAL DETAILS

### AXIS STROKES

X	mm	400
Y	mm	240
Z	mm	350
B-axis (swifel axis)	°	-20° to +110°
C-axis (swifel axis)	°	360 (endless)

### FEED RATE / RAPID TRAVERSE RATE

Linear axes	m/min	40
Swifel axis B	°/min	12.500
Rotary axis C	°/min	180.000

### ACCELERATION

Linear axis	m/s²	10
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### POSITIONING ACCURACY ACCORDING TO VDI/DGQ 3441

Standard linear axis	P/Ps in mm	0,003/0,001
High precision linear axis	P/Ps in mm	0,0015/0,001
Perpendicularity	µm/100 mm	1,5
Resolution capacity	µm	0,1

### CNC-CONTROL

Heidenhain	ITNC 530 / TNC 640
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### WORKING SPINDLE

Speed range	U/min	500 - 80.000
Power	KW	2 - 16
Tourque	Nm	1,2 - 12
Tool interface		HSK 25 / 32 / 40

### TOOL CHANGER

Number of tool pockets		60 - 100
Tool diameter	mm	40

### WORKPIECE HANDLING OPTIONS

Storage capacity		12 - 71
Changing time	s	< 20

### MISCELLANEOUS

Machine Weight	kg	3.100
Space required	m²	2,2 x 1,9

## PRIMACON CONSULTING AND SERVICE

Comprehensive and competent - right from the start

### PRIMACON 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 technology
- ✓ Lubrication and Cooling units

### Application advice & 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 offer training courses related to the operation and maintenance of our machines.

### PRIMACON After Sales Service

When you have decided on a PRIMACON 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 also support you in the service case via remote maintenance and when updating your software status by regular updates.

We offer you:

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



## PRIMACON PFM 4024-5D

Automated micro-precison milling cell

### PRIMACON Service-Hotline

Our specialists will help you finding solutions and fix problems before they arise.  
Please contact us:

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# A NEW ERA IN MICROPRECISION

## PRIMAACON PFM 4024-5D

The PRIMAACON PFM 4024-5D is a high-precision milling machine optimized for tool and mould making, which is already designed in its basic version for 5-axis. This allows a particularly economical complete processing of workpieces in one clamping. But even though 5D-simultaneously processing won't be used for everything, the 5-axis constitutes an inestimable value especially for mould making. This is because the workpieces can be machined in the most favorable position and therefore time and money can be saved.

### Air-bearing high-frequency milling spindle

- Rotation speeded from 500 rpm - 80.000 rpm
- Air bearing technology for best surface quality
- Wear free

new option



### Ergonomic operating concept

- High-tech machine control from Heidenhain
- Clearly arranged and user friendly
- Controls all automatic operation
- High contour accuracy of the finished workpiece during machining at high speed

### Tool changer with double arm gripper

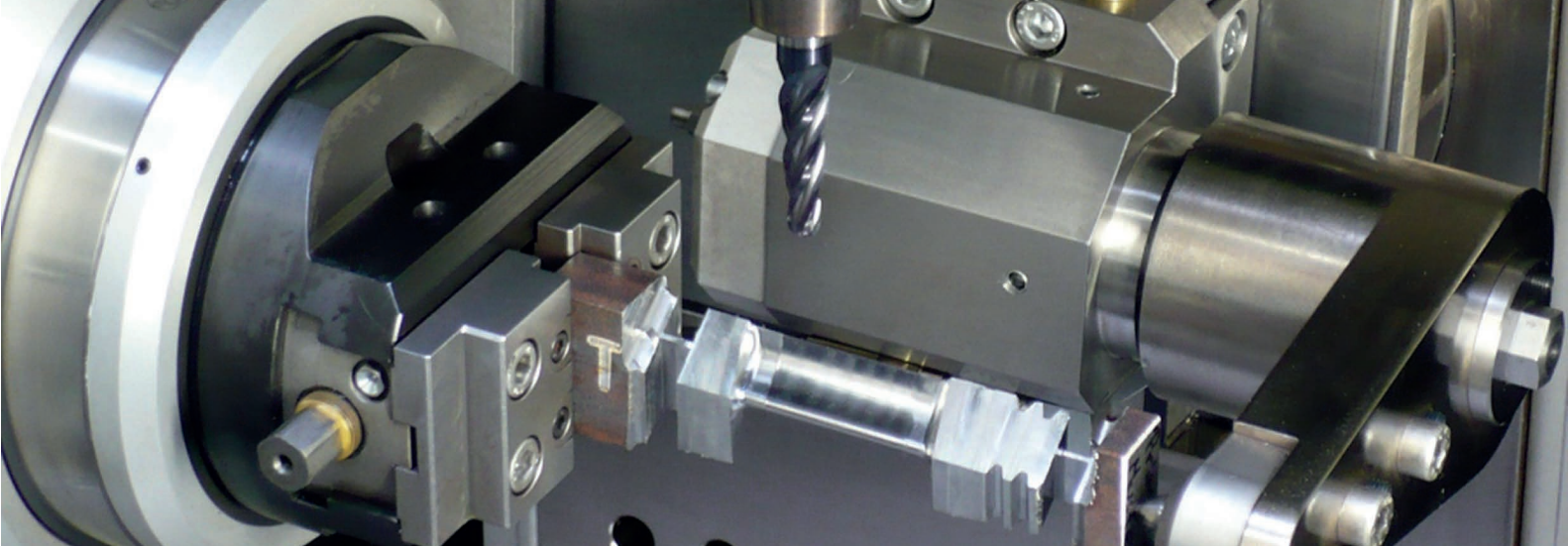
- Tool changing magazine includes as standard 60/100 places
- Reduction of idle-times (tool changers and workpiece changers are prepared in parallel to production time)

### Pallet changer / 6-axes robot

- Integrated automation
- High degree of automation in a small space
- Direct handling of workpieces
- Automatic workpiece changer, integrated with 12 - 71 positions

## ADVANTAGES OF THE PFM 4024-5D

- ✓ Customized solutions possible due to modular 5-axis machine concept (As option also available as 3-axes)
- ✓ User-friendly handling with ergonomically designed machine control elements
- ✓ Minimum volume cooling lubrication system, full jet lubrication, cold air nozzle, chip conveyor, IKZ up to 80 bar
- ✓ Zero point stability - Cooling of all heat-emitting elements (milling spindle, motors, axes, control cabinet)
- ✓ Laser tool measurement (dirt-insensitive); More precise measuring results through smaller focus point
- ✓ Low maintenance, thus high machine availability and low maintenance costs
- ✓ Equipped with the latest high-tech components
- ✓ High production quality - thus constant accuracy results on the workpiece
- ✓ Low installation dimension
- ✓ Reduction of machining time by the tool changer with double arm gripper
- ✓ Economical processing of any machinable material
- ✓ Processing of dusty materials without refitting or upgrading the machine
- ✓ Conventional clamping systems (System 3R, Erowa) can be implemented
- ✓ 3D touch probe for workpiece measurement direct in the machine
- ✓ Tailstock for 5-axes simultaneous machining
- ✓ Reliability and longevity in 24 hours continuous operation
- ✓ Optimized temperature management system with 0.1 Kelvin hysteresis
- ✓ Long-lasting micro-precision
- ✓ **High precision set according to VDI / DGQ 3441**  
**P/Ps in mm 0,0015 / 0,001**



## BASIS FOR BEST PERFORMANCE

Particularly high stiffness and low vibration - the basis for the outstanding dynamics and precision of the PRIMAACON PFM 4024-5D - 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

## RANGE OF APPLICATIONS

- ✓ Micro- and precision engineering
- ✓ Dental and medical technology
- ✓ Tool and Mould Making
- ✓ Fiber composite materials
- ✓ Jewelry industry
- ✓ Watchmaking industry

...simply everything that requires high precision!

