### **TECHNICAL DETAILS**

#### AXIS STROKES

| Х                    | mm | 240           |
|----------------------|----|---------------|
| Y                    | mm | 240           |
| Z                    | mm | 240           |
| B-axis (swifel axis) | ٥  | -30° to +120° |
| C-axis (swifel axis) | 0  | 360 (endless) |

#### FEED RATE / RAPID TRAVERSE RATE

| Linear axes   | m/min | 12     |
|---------------|-------|--------|
| Swifel axis B | °/min | 5.500  |
| Rotary axis C | °/min | 21.600 |

#### ACCELERATION

| Linear axis m/s <sup>2</sup> |
|------------------------------|
|------------------------------|

#### POSITIONING ACCURACY ACCORDING TO VDI/DGQ 3441

| Linear axis         | P/Ps in mm | 0,001/0,0005 |
|---------------------|------------|--------------|
| Rectangularity      | µm/100 mm  | 1            |
| Resolution capacity | μm         | 0,1          |

10

#### CNC-CONTROL

| Heidenhain | TNC 640 |
|------------|---------|
|            |         |

### WORKING SPINDLE

| Speed range | rpm | 500 - 80.000     |
|-------------|-----|------------------|
| Power       | KW  | 2-6              |
| Tool holder |     | HSK F32 / HSK 25 |

#### TOOL CHANGER

| Number of tool pockets |    | 40 - 80 |  |
|------------------------|----|---------|--|
| Tool diameter          | mm | 40      |  |

#### WORKPIECE HANDLING OPTIONS

| Storage capacity |   | 25 - 120 |
|------------------|---|----------|
| Changing time    | S | < 20     |

#### MISCELLANEOUS

| Machine weight | kg | 1.500     |
|----------------|----|-----------|
| Space required | m² | 1,8 x 1,7 |

### **INSTALLATION PLAN**



1. | Service door - Supply 4. | Service door - Water/Heat 2. | Service door - Control cabinet exchanger, Air containers 3. | Service door - Control cabinet (both optional)

5. | Workpiece changer

6. | Operator panels, working area

7. | Control panel Tool changer

### 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:

| $\odot$ | Programming                  |
|---------|------------------------------|
| $\odot$ | CAD/CAM                      |
| $\odot$ | Milling technology           |
| $\odot$ | Tools                        |
| $\odot$ | Clamping technique           |
| $\odot$ | Lubrication and Cooling unit |
|         |                              |

### PRIMACON 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.

### PRIMACON Spare parts service

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

### **PRIMACON Service-Hotline**

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







### 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 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



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## PRIMACON PFM 24 CC - CompactCell

Automated microprecision milling cell

simply more precise

# A NEW ERA IN MICROPRECISION

### PRIMACON PFM 24 CC - CompactCell

As an advancement of the proven machine concept of the PFM 24, the CompactCell was created with an automatic production cell and a micro-precision for highest user requirements. The CompactCell was designed for a µm-precise multi-layer production of small workpieces and enables micro-milling and guilloching in one machine.

In addition, you will continue to benefit from all proven options from the well-known PFM 24 product line.

### Air-bearing high-frequency milling spindle

- Speed range from 500 rpm 80.000 rpm
- Air bearing technology for best surface quality
- Wear free



### ADVANTAGES OF THE **PFM 24 CC**

- Customized solutions possible due to modular machine concept (3 to 5 axes)
- Low maintenance, thus high machine availability and low maintenance costs
- Economical processing of any machinable material
- Minimum volume cooling lubrication system, , full jet lubrication or cold air nozzle

- Equipped with the latest high-tech components
- User-friendly handling
- Processing of dusty material without refitting or upgrading the machine
- Optimized temperature management system with 0.1 Kelvin hysteresis

- High production quality thus constant accuracy results on the workpiece
- Ergonomically designed machine control elements
- Conventional clamping systems (System 3R, Erowa) can be implemented
- Zero point stability Cooling of all heat-emitting elements (milling spindle, motors, axes, control cabinet)

- Reliability and longevity in 24 hours continuous operation
- Low installation dimension
- 3D Touch probe for workpiece measurement directly in the machine



### Ergonomic operating concept

- High-tech machine control TNC 640 by Heidenhain
- Clearly arranged and user friendly
- Regulates the largely automated operation
- High contour accuracy of the finished workpiece during
- machining at high speed

### Double arm gripper on tool changer

Tool changing magazine includes 80 slots as standard Reduction of chip-to-chip times to 5 seconds (tool- and workpiece changers are prepared 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 24 125 positions



Reduction of machining time by the

tool changer with double arm gripper

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

## **EXCLUSIVITY INCREASED BY** THE GUILLOCHIER OPTION

The Guilloche technique makes it possible to produce finely structured patterns with excellent surface quality. The resulting noble appearance is unmatched in its exclusivity. However, this is associated with a very large manual effort and a limited design freedom. Therefore, this elaborate process has so far been used mainly in the watchmaking and jewelery industry.

With the PFM 24 CC, PRIMACON has developed a machine solution with an integrated CAM system, which also offers considerable potential for a large range of applications, such as the production of microfluidic or microoptical structures. This new software solution creates design freedom and allows you to create designs and patterns in just a few minutes.



### **RANGE OF APPLICATIONS**

- Sewelry industry Watchmaking industry
  - Tool and Mould Making
  - Fiber composite materials
- Micro- and precision engineering O Dental and medical technology
- ...simply everything that requires high precision!

