NEW

PRECISION DIAPHRAGM CHUCK
VMCHP
Precision Diaphragm Chuck VMCHP

Modern grinding machines require matching workholding systems to fully exploit the machines’ potential and to ensure that the workpieces are manufactured efficiently.

Worldwide, SwissChuck is second to none when it comes to high-precision chucks. The very close collaboration with renowned machine tool builders and our continuous drive for innovation are the foundation of our technological leadership. For this reason, SwissChuck products offer the user the highest level of precision, reliability and flexibility in application.

The pneumatically actuated diaphragm chuck family 6VMCHP guarantees clamping of workpieces at the highest level of precision and delivers a repeatability of ≤ 0.002 mm. During clamping, the pull-back effect of the diaphragm ensures that the workpieces are pulled back against the end-stop, which, in turn, ensures that tight linear tolerances can be maintained reliably during the whole manufacturing process.

A through bore allows the supply of coolant, purge air or room for a part presence checking probe in the center of the chuck. The pneumatic rotary feed device fits through the spindle and can be screwed directly into the chuck body.

### Advantages

- High precision ≤ 0.002 mm
- Opening stroke suitable for automatic loading
- Axial end-stop mounted directly on chuck body offering absolute stability
- Coolant supply via central bore (through hole)
- Precision interfaces for top jaws; no need for regrinding the clamping section
- Pull-back effect

### Function

- Pneumatically actuated on front-end
- Hermetically sealed against contamination
### VMCHP

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Precision interfaces with ball positioning

Explanation of symbols: SwissChuck.com

Suitability according to machining process:

- **A** Cylindrical grinding
- **B** Eccentric cylindrical or orbital pin grinding
- **C** Turning
- **D** Hard turning
- **E** Combination Grinding/hard turning

VMCHP

Precision Workholding

SwissChuck.com
EXAMPLES OF APPLICATIONS

6VMCHP 200

Injection mold insert:
- Clamping on outside diameter
  - Grinding of bore and taper
  - Extremely tight axial tolerances
  - Highest concentricity of ID to OD

3VMCHP 240 So

Helical gear:
- Clamping in the pitch circle, with pull-back onto axial end-stop
  - Grinding of the bore and the outside diameter
  - Fast changeover of jaws due to radially accessible mounting bolts
  - Compensation by means of pendulum jaws
  - With radially adjustable pro-centering pins
6VMCHP 160

**Spur gear**

- Clamping in the pitch circle, with pull-back onto axial end-stop
- Grinding of the bore and the taper
- Excellent concentricity of bore and taper to the pitch circle
- Very tight linear tolerances; perfect pull-back onto axial end-stop
- Coolant supply via central through bore

6VMCHP 85 So

**Small component**

- Outside clamping of ø 7.5 / 3.5 x 5.8 with pull-back onto axial end-stop
- Grinding of the bore and the faces
- Very tight linear tolerances; perfect pull-back onto axial end-stop
- Coolant supply via central through bore

6MCHP 160 So

**Fuel injection body**

- Outside clamping with pull-back onto axial end-stop
- Grinding of the bore and the faces
- Very tight linear tolerances; perfect pull-back onto axial end-stop
- Coolant supply via central through bore
- Pneumatic cylinder actuated special solution
ACCESSORIES VMCHP

Diaphragm VMCHP

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Diaphragms

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Opening strokes

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Top Jaws VMCHP

Soft top jaws (set of six pieces – Material CK 45)

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MOUNTING EXAMPLES

The chuck is specifically mounted according to the machine type, SwissChuck designs and provides all the required components. Hence, our customers will receive the entire workholding unit ready for installation.
KCHP/VKCHP  
High-precision force chuck

SAP to KCHP  
Automated drive carrier

KFHP  
Precision power chuck

KCHSF  
Centrifugal force chuck

VMCHP  
Diaphragm chuck

LZK/LSK-S  
Collet chuck with clamping lamellas

DL  
Collet expanding mandrel

TGC/FTGC  
Tool chuck

OVEK  
High-precision force chuck

OVEKA  
Compensating chuck

OVEKAV  
Moving compensating chucks

FLD/AFLD  
Twist finger type console chuck

SPECIAL SOLUTIONS  
Tailor made solutions

PZLHM  
Pneumatic force clamping cylinder