

Compact PIMag® Rotation Stage

Flat Design at High-Torque for Loads up to 2 kg



V-610

- Flat and compact design
- Clear aperture for transmitted-light applications
- Ironless torque motor developed in-house for high drive torque
- Optional holding brake

PIMag® magnetic direct drive

3-phase magnetic direct drives do not use mechanical components in the drivetrain, they transmit the drive force to the motion platform directly and without friction. The drives reach high velocities and accelerations. Ironless motors are particularly suitable for positioning tasks with the highest demands on precision because there is no undesirable interaction with the permanent magnets. This allows smooth running even at the lowest velocities and at the same time, there is no vibration at high velocities. Nonlinearity in control behavior is avoided and any position can be controlled easily. The drive force can be set freely.

Application fields

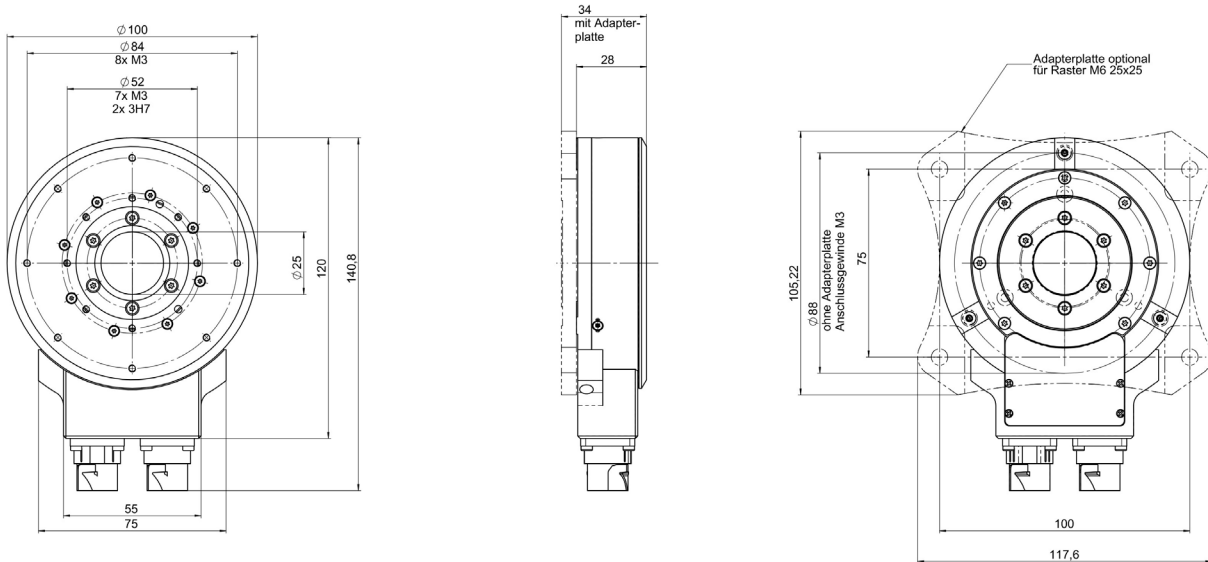
Medical industry. Sample inspection. Precision microassembly. Research. Biotechnology. Semiconductor technology. Metrology. Automation.

Specifications

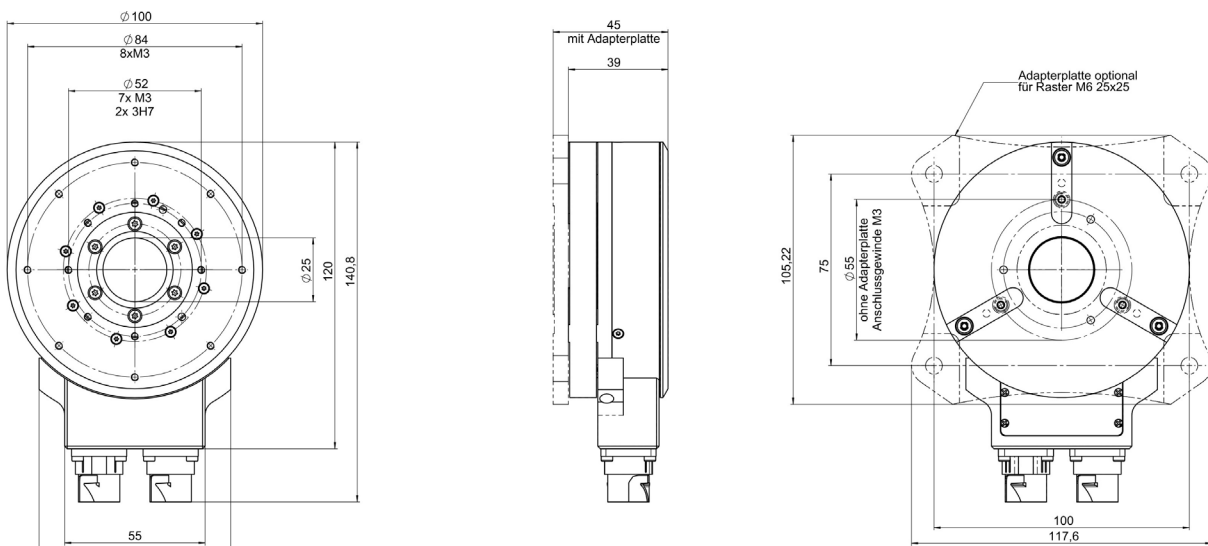
| | V-610.998061 V-610.998061B | Unit | Tolerance |
|-------------------------------|--|------------------------------|-------------|
| Motion and positioning | | | |
| Active axes | θ_z | | |
| Travel range | >360 | ° | |
| Integrated sensor | Incremental angle measuring system | | |
| Sensor signal | Sin/cos, 1 V peak-peak | | |
| Sensor resolution | 9 | μrad | |
| Minimum incremental motion | 27 | μrad | typ. |
| Bidirectional repeatability | ± 54 | μrad | typ. |
| Angular velocity | 540 | °/s | max. |
| Mechanical properties | | | |
| Bearing | Ball bearings | | |
| Load capacity / axial force | 20 | N | max. |
| Drive properties | | | |
| | V-610.998061 | V-610.998061B | |
| Drive type | Ironless 3-phase torque motor | | |
| Nominal torque, RMS | 0.4 | | N·m max. |
| Peak torque, RMS | 1.2 | | N·m max. |
| Holding brake | – | Electromagnetic safety brake | |
| Miscellaneous | | | |
| | V-610.998061 | V-610.998061B | |
| Operating temperature range | 0 to 40 | | °C |
| Material | Aluminum, black anodized | | |
| Mass | 630 | 870 | g $\pm 5\%$ |
| Recommended controller | C-891 (single axis) C-885 with C-891.11C885 (up to 20 axes) ACS modular controller | | |

Ask about customized versions.

Drawings / Images



V-610.998061, dimensions in mm



V-610.998061B, dimensions in mm

Ordering Information

V-610.998061

Compact PIMag® rotation stage, \varnothing 25 mm clear aperture, ironless 3-phase torque motor, incremental angle measuring system with sin/cos signal transmission

V-610.998061B

Compact PIMag® rotation stage, \varnothing 25 mm clear aperture, ironless 3-phase torque motor, incremental angle measuring system with sin/cos signal transmission, holding brake