



**Z-axis precision  
manipulator,  
motorized, stainless  
steel, DN 100 CF**

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# Z-Axis manipulator

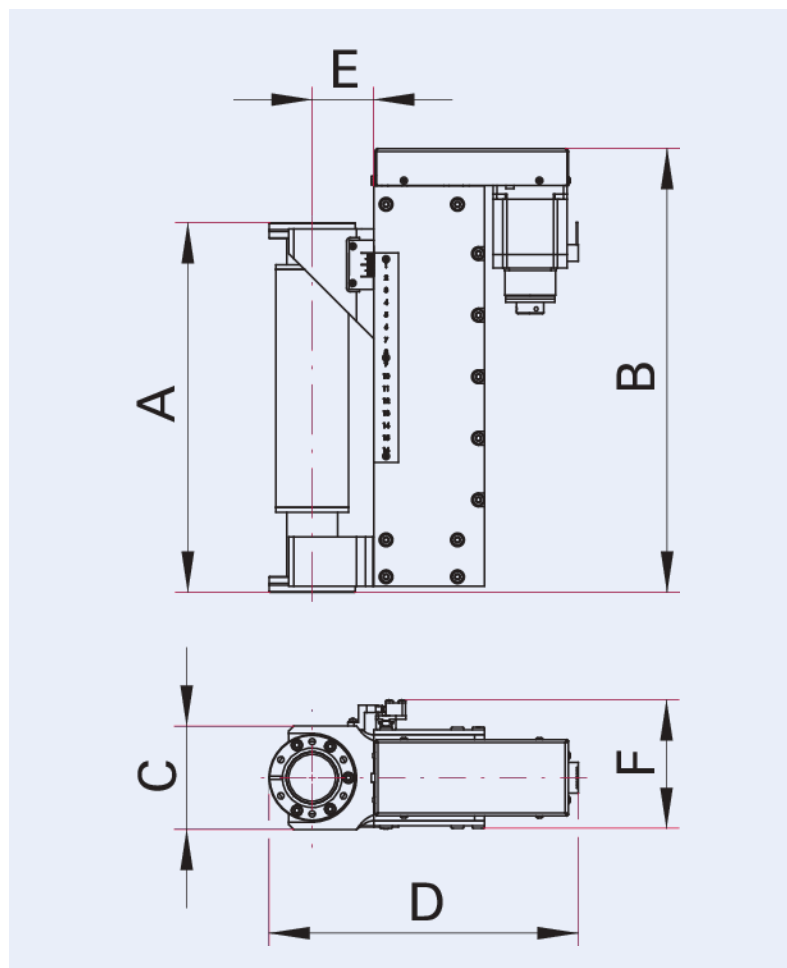


Illustration only

## **Z-axis precision manipulator, motorized, stainless steel, DN 100 CF**

- Recirculating ball bearing guides and recirculating ball screw drive
- Zero backlash and no slip-stick effect
- Guide and drive are wear-free and maintenance-free
- Extremely stable design concept minimizes position offset due to pressure changes
- Limit switches fully adjustable
- Fixing brake (currentless closed) prevents independent movement
- Power consumption brake: 24 V DC, 0.5 A
- Connection flange with through holes, traversable flange with threaded holes

## Dimensions



A	190 - 490 mm
B	550 mm
C	176 mm
D	343 mm
E	91 mm
F	126 mm

Technical Data	Z-axis precision manipulator, motorized, stainless steel, DN 100 CF
Motor rating	Motor, 4.8 V DC, max. 2.8 A/phase bipolar parallel
Motor type	2-ph stepping motor
Pitch of ball screw drive	2 mm/Rotation
Bakeout temperature without electric parts	230 °C
Bakeout temperature with electric parts	80 °C
Bellows guidance necessary	No
Operating temperature	-10 – 50 °C
Mounting orientation	Arbitrary
Tightness	$<1 \cdot 10^{-11}$ Pa m <sup>3</sup> /s   $<7.5 \cdot 10^{-11}$ Torr l/s   $<1 \cdot 10^{-10}$ mbar l/s
Stroke	300 mm   11.81103 inch
Bakeout temperature without electric parts	230 °C   446 °F   503.15 K
Bakeout temperature with electric parts	80 °C   176 °F   353.15 K
Maximum allowable payload	25 kg   55.12 lb
Resolution	1.25 µm (at 1/8 motor step)
Power consumption	Motor: 4.8 V DC; max. 2.8 A/phase bipolar parallel; brake: 24 V DC, 0.5 A
Repeatable precision	1.25 µm (at 1/8 motor step)
Connection flange	DN 100 CF
Pressure range	$1 \cdot 10^{-10}$ hPa – to ambient pressure
Inner diameter	DN 40: 38 mm; DN 63: 65 mm; DN 100: 102 mm
Material	Stainless steel (bellows: 316L, flange and tube 304L, housing 304)

Order number	Z-axis precision manipulator, motorized, stainless steel, DN 100 CF
Z-axis precision manipulator, motorized, stainless steel, DN 100 CF	420MZA100-300-m

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