



**Z-axis precision  
manipulator,  
motorized, 200 mm  
stroke, stainless steel,  
DN 100 CF**

---



**PFEIFFER** 

# Z-Axis manipulator

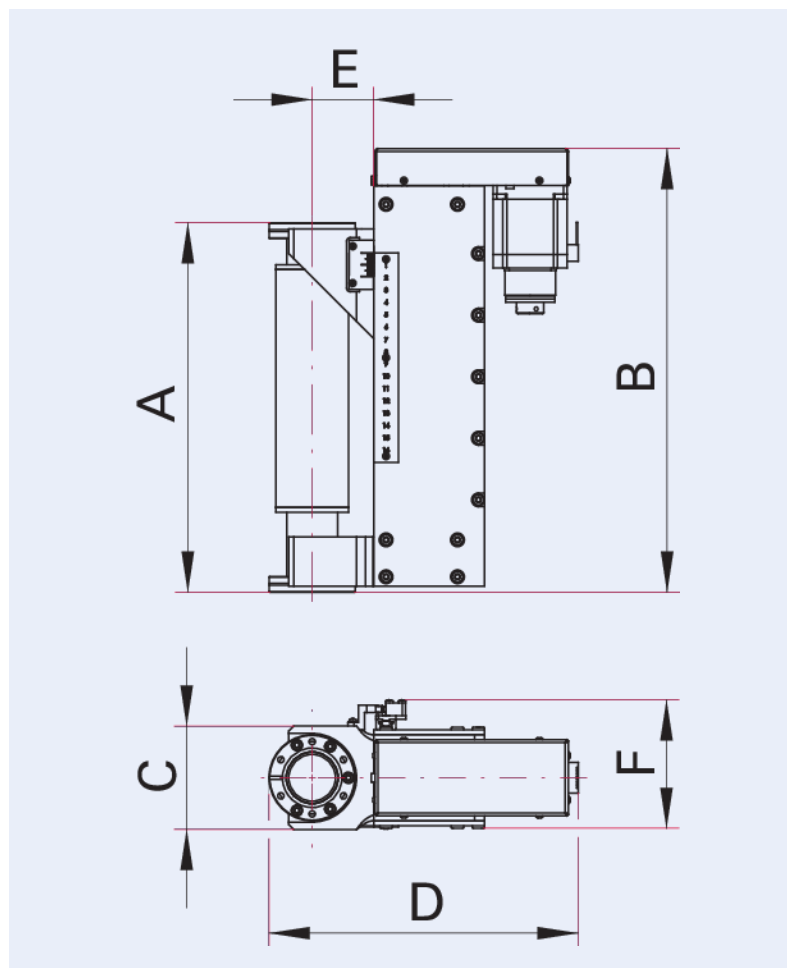


Illustration only

## **Z-axis precision manipulator, motorized, 200 mm stroke, 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 - 390 mm |
| B | 450 mm       |
| C | 176 mm       |
| D | 343 mm       |
| E | 91 mm        |
| F | 126 mm       |

| Technical Data                             | Z-axis precision manipulator, motorized, 200 mm stroke, 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                                     | 200 mm   7.87402 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, 200 mm stroke, stainless steel, DN 100 CF |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Z-axis precision manipulator, motorized, 200 mm stroke, stainless steel, DN 100 CF | 420MZA100-200-m                                                                    |

Are you looking for an optimum vacuum solution?  
Talk to us:  
**Pfeiffer Vacuum Components & Solutions GmbH Germany**  
**T +49 551 99963-0**  
**info-cs@pfeiffer-vacuum.com**

Or scan the barcode, to visit our web page:



<https://webportal.pfeiffer-vacuum.com/global/en/contact>



Errors and/or changes excepted. - 5/14/2025

Follow Us On Social Media  
#pfeiffervacuum



[www.pfeiffer-vacuum.com](http://www.pfeiffer-vacuum.com)

**PFEIFFER** 