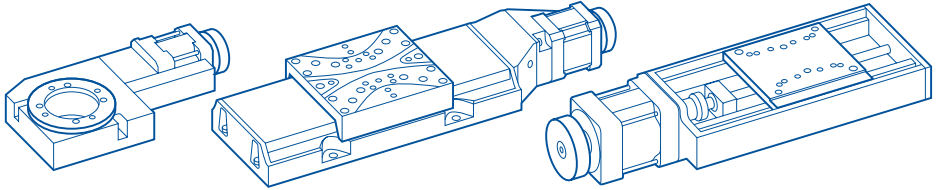


Positioners with Electric Motors



Short Instructions

DT-xx / HPS-170 / L-xxx / LS-xxx / PRS-xxx / RS-40 /
UPL-120 / V-611 / VT-80 / WT-xx / WT-xxx



User Information

These short instructions contain an overview of the most important safety and handling instructions for positioners with electric motors with the product codes given above (x: any number).

Subject to change. These short instructions are superseded by any new release. The latest respective release is available for download on our website.



Downloading and Reading the Manual

The actions during installation, startup, operation, and maintenance require additional information from the manuals of the positioner and/or the electronics.

Manuals may be titled as follows: "User Manual", "Technical Note".

Downloading the Manuals from the Website

1. Open the website **www.pi.ws**.
2. Search the website for the product number (e.g., RS-40).
3. Click the corresponding product to open the product detail page.
4. Click the **Downloads** tab.
The manuals are shown under **Documentation**.
5. Click the **ADD TO LIST** button for the desired manual and then click **REQUEST**.
6. Fill out the request form and click **SEND REQUEST**.

The download link will then be sent to the email address entered.

If you cannot find the manual you are looking for or if you have any questions:
Contact our customer service department via service@pi.de.



Safety Instructions

Intended Use

The positioner is a laboratory device as defined by DIN EN 61010-1. It is intended to be used in interior spaces and in an environment which is free of dirt, oil and lubricants.

In accordance with its design, the positioner is intended for positioning and adjusting of loads at different velocities. The positioner is not intended for applications in areas in which a failure would present severe risks to human beings or the environment.

The intended use of the positioner is only possible when completely mounted and connected and only in combination with a suitable controller.

The positioner may only be installed, operated, maintained and cleaned by authorized and appropriately qualified personnel.

Installation

If the drive screw of the positioner is not covered, there is a risk of serious injury from hair, jewelry or clothing becoming trapped.

- ▶ Shield areas with rotating components.
- ▶ Do not work on an unprotected positioner with loose hair, hanging jewelry or loose-fitting clothing.

There is a risk of minor injuries from crushing between the moving parts of the positioner or the load and a fixed part or obstacle.

- ▶ Use protective structures to keep limbs away from areas in which they could be seized by moving parts.
- ▶ Maintain safety distances in accordance with DIN EN ISO 13857.

Electrostatic discharge can damage the positioner.

- ▶ If the positioner is supplied with an ESD protective cap: Remove the ESD protective cap from the connector first, when connecting the positioner to the controller.

Mechanical forces can damage or misalign the positioner.

- ▶ Observe the maximum permissible forces (see manual).
- ▶ Include the masses of the moved positioners in multi-axis systems in the calculations.

Manually moving the platform can cause increased wear on positioners with a gearhead.

- ▶ Only move the platform of positioners with a gearhead manually if there is no other possibility for motion.

Collisions can damage the positioner, the load to be moved and the environment.

- ▶ Mount the positioner and the load so that the load cannot get jammed or blocked, or collide with objects in the workspace.

Unsuitable mounting can warp the positioner and reduce the accuracy.

- ▶ Mount the positioner on an even surface with similar thermal expansion properties (for recommended evenness, see manual).

A cable break leads to a failure of the positioner.

- ▶ Install the positioner so that the cable is not bent or squeezed too severely during operation.

Heat produced during operation can affect your application.

- ▶ Install the positioner so that your application is not affected by the dissipating heat.

Start-Up

Operating voltages that are too high or incorrectly connected can cause damage to the positioner.

- ▶ Only use compatible controllers.
- ▶ Observe the operating voltage range of the positioner (see manual).
- ▶ Observe the correct pin assignment (see manual).

The positioner can carry out an unintentional motion when being connected to the controller.

- ▶ Before connecting the positioner, check whether a macro is defined as the start-up macro in the controller and cancel the selection if necessary.

Uncontrolled oscillations can damage your application or the positioner.

- ▶ If oscillations occur, immediately switch off the servo mode or stop the positioner.
- ▶ Check the settings of the servo-control parameters (see manual).

High accelerations can cause damage to or considerable wear on the mechanical system.

- ▶ Stop the motion immediately if a controller malfunction occurs.
- ▶ Approach the end of the travel range at low velocity.



Mounting the Positioner and Affixing the Load



NOTICE!

Damage from incorrect mounting.

- ▶ **Linear stage:** When the motion axis is aligned vertically, the load must be lower than the holding force of the drive (see manual).
- ▶ **Rotary stage:** When the positioner is mounted vertically, the load must be lower than the maximum torque of the drive (see manual).

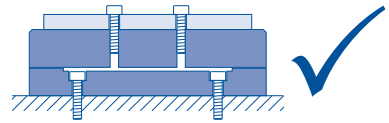


NOTICE!

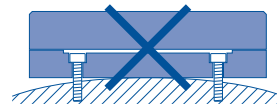
Damage from incorrect mounting of the screws.

- ▶ Select screw length according to the depth of the mounting holes.
- ▶ Do not let screw heads protrude.
- ▶ Mount the positioner to the provided mounting holes.
- ▶ Affix the load to the provided mounting holes.
- ▶ Check that the positioner and the load are affixed firmly.

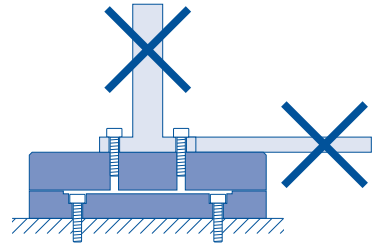
Correct mounting



Unsuitable mounting surface



Incorrect alignment of the load



Incorrect mounting of the screws

