

# KT310

## Precision XY Stage

### XY stage for universal applications

With a travel of 200 mm in the X and Y directions, the XY stage can be used for all applications, especially for tasks in testing and measurement engineering. Its concept with internal motors, cross roller bearings and high precision ball screws enables excellent precision with optimum use of the installation place.

- Ideal for high-precision inspection and microscopy
- High-precision repeatability up to 0.7  $\mu\text{m}$
- Easy to combine for multi-axis applications

#### Options:

- Available with DC motor or stepper motor
- Different high resolution measuring systems
- Version for clean room and vacuum on request

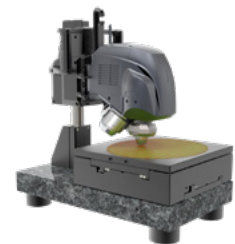


### Fields of application

High resolution microscopy, automatic optical inspection (AOI), inspection systems for clean room, wafer inspection



XYZ Combination  
for automated inspections  
Travel 200 x 200 x 50 mm



XYZ Combination  
for optical wafer inspection  
Travel 200 x 200 mm

### Recommended Motion Controllers

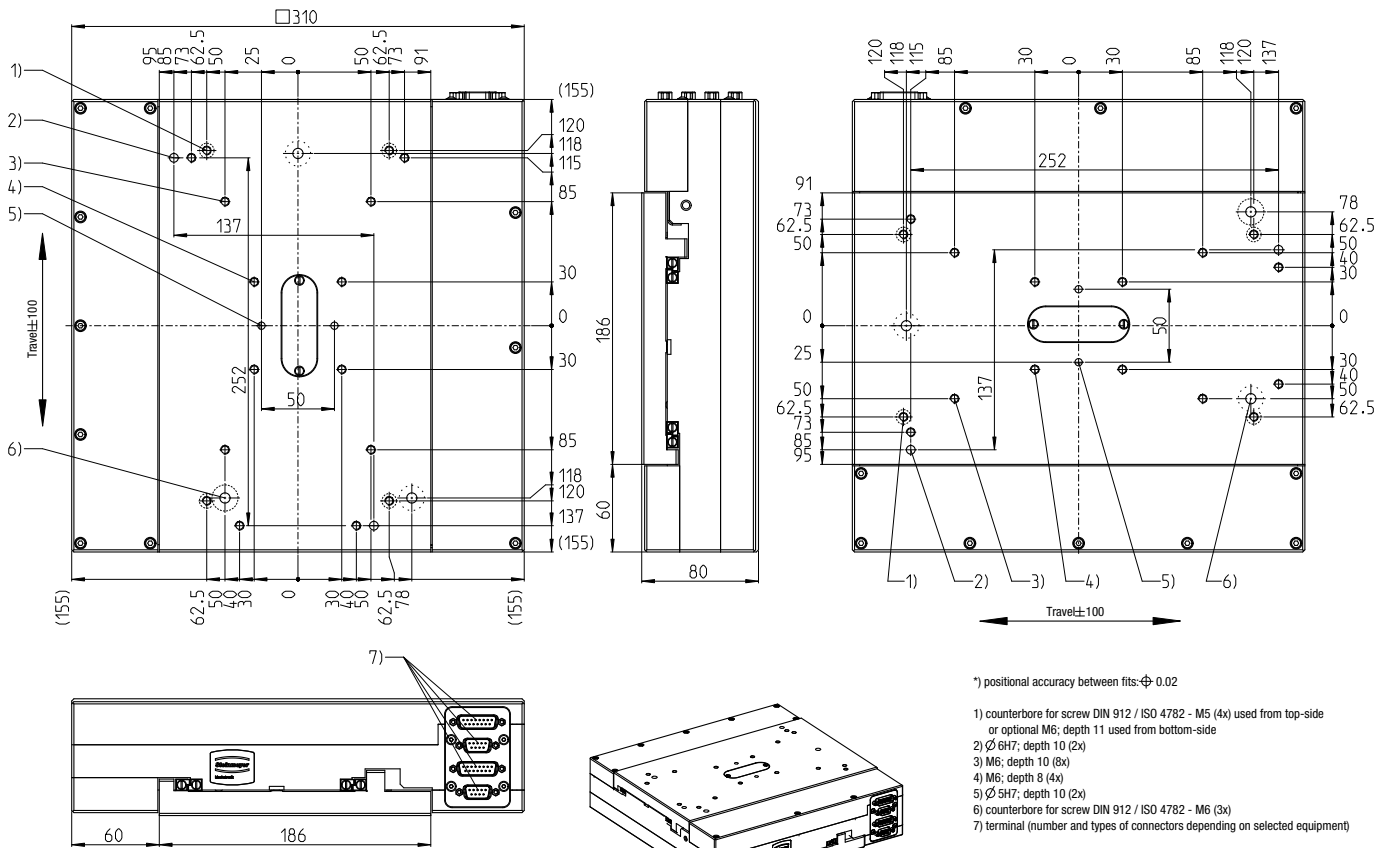
- Integration into ACS architectures
- Integration into PLC architectures

## Specifications

KT310		-200-DC-R	-200-DC-L	-200-SM
Travel	[mm]	200	200	200
Repeatability unidirectional	[ $\mu\text{m}$ ]	$\pm 2.5$	$\pm 0.7$	$\pm 2.3$
Repeatability bidirectional	[ $\mu\text{m}$ ]	$\pm 4.5$	$\pm 1.2$	$\pm 4.3$
Accuracy	[ $\mu\text{m}$ ]	$\pm 13.7$	$\pm 3$	$\pm 13.4$
Flatness	[ $\mu\text{m}$ ]	$\pm 4$	$\pm 4$	$\pm 4$
Straightness	[ $\mu\text{m}$ ]	$\pm 3$	$\pm 3$	$\pm 3$
Positioning speed	[mm/s]	30	30	10
Max. speed	[mm/s]	60	60	20
Max. acceleration	[m/s <sup>2</sup> ]	0.5	0.5	0.2
Max. load Fx	[N]	45	45	45
Max. load Fy	[N]	45	45	45
Max. load Fz	[N]	110	110	110
Max. torque Mx	[Nm]	5.3	5.3	5.3
Max. torque My	[Nm]	5.3	5.3	5.3
Max. torque Mz	[Nm]	5.1	5.1	5.1
Pitch	[ $\mu\text{rad}$ ]	$\pm 140$	$\pm 140$	$\pm 140$
Yaw	[ $\mu\text{rad}$ ]	$\pm 70$	$\pm 70$	$\pm 70$
Weight	[kg]	18	18	18
Length	[mm]	310	310	310
Width	[mm]	310	310	310
Height	[mm]	80	80	80
Motor		DC Motor	DC Motor	Stepper Motor
Feedback		Motor Encoder	Linear Scale	Open Loop

Specifications are subject to change. Values are for the single axis with our controller. Parameters shown here are typical values for a standard configuration. By customization and given in depth knowledge of your application significantly improved values can be achieved. Please contact us.

# Dimensions / Interface



\*) positional accuracy between fits:  $\pm 0.02$

- 1) counterbore for screw DIN 912 / ISO 4782 - M5 (4x) used from top-side or optional M6; depth 11 used from bottom-side
- 2)  $\varnothing$  6H7; depth 10 (2x)
- 3) M6; depth 10 (8x)
- 4) M6; depth 8 (4x)
- 5)  $\varnothing$  5H7; depth 10 (2x)
- 6) counterbore for screw DIN 912 / ISO 4782 - M6 (3x)
- 7) terminal (number and types of connectors depending on selected equipment)

requirement on mounting surfaces: flatness 0.005 mm

drawingscale: 2:5  
metric system (mm)

M1:5

Revision 07/2023  
Doc-Nr.: 451608