

# KDT380

## Heavy duty XY stage

### Precision aperture stage for heavy loads

The KDT380 heavy-duty XY stage with aperture enables high-precision positioning of heavy loads up to 20 kg. The use of a backlash-free ball screw drive enables maximum precision as well as excellent running behavior, while at the same time providing very high rigidity and a long life time.

Highly compact for a wide range of inspection tasks:

- Ideal for high-precision inspection, microscopy or scanning applications
- Large aperture of 170 x 170 mm
- Very rigid positioning of high loads up to 20 kg

Options:

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



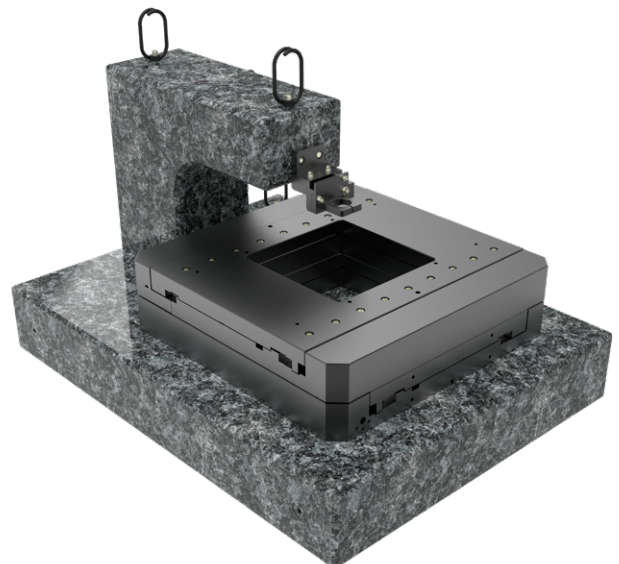
### Fields of application

Metrology, high resolution microscopy, 3D inspection, inspection systems, inspection technology, automatic optical inspection (AOI), inline inspection, surface inspection, coating thickness measurement

### Application solutions with KDT380

XY Laboratory Analytics System

- Ideal for the setup and expansion of high-resolution analysis, scanning and microscopy applications
- Attachment for a sensor or camera in Z
- Can be combined to a XY-Z positioning system (e.g. LA85, MT130)

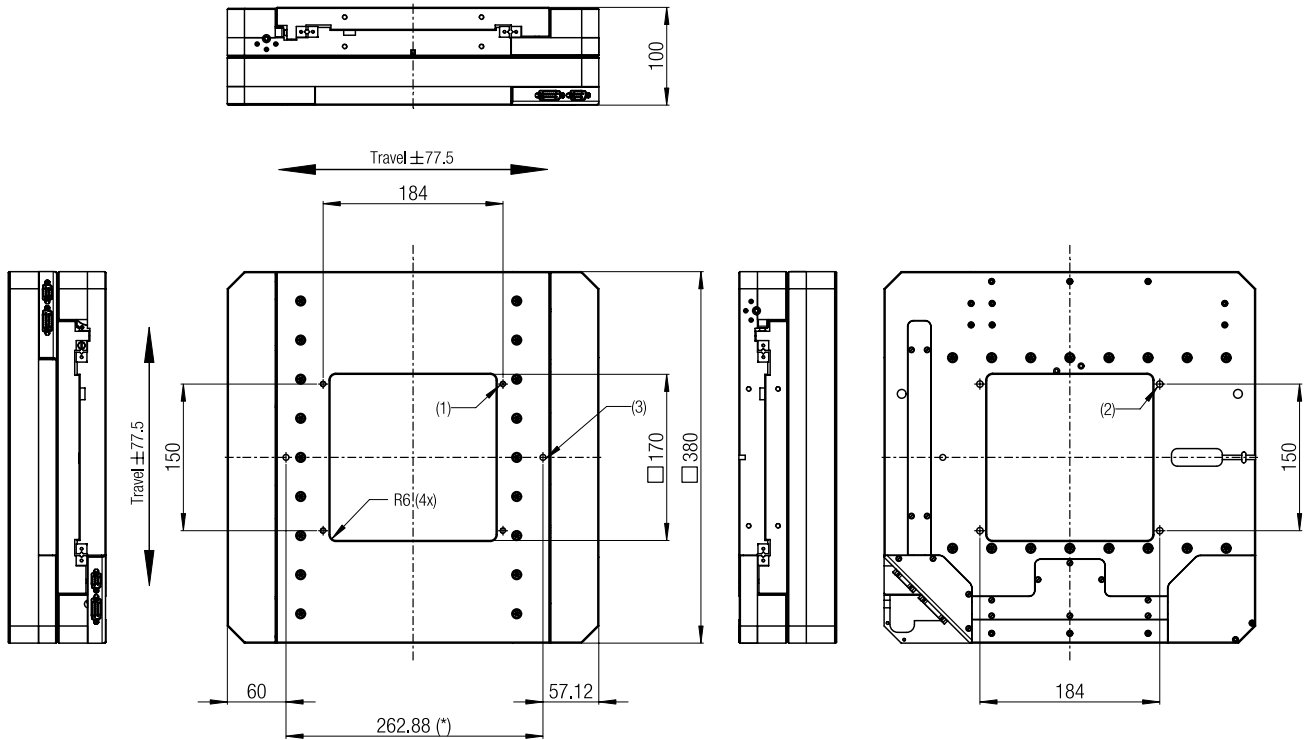


## Specifications

KDT380		-155-DC-R	-155-DC-L	-155-SM
Travel	[mm]	155	155	155
Repeatability unidirectional	[ $\mu\text{m}$ ]	$\pm 2$	$\pm 0.5$	$\pm 1.6$
Repeatability bidirectional	[ $\mu\text{m}$ ]	$\pm 2.5$	$\pm 0.7$	$\pm 2.1$
Accuracy	[ $\mu\text{m}$ ]	$\pm 13.5$	$\pm 3.5$	$\pm 13.2$
Flatness	[ $\mu\text{m}$ ]	$\pm 11$	$\pm 11$	$\pm 11$
Straightness	[ $\mu\text{m}$ ]	$\pm 3.9$	$\pm 3.9$	$\pm 3.9$
Positioning speed	[mm/s]	35	35	13
Max. speed	[mm/s]	50	50	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	[ $\mu\text{rad}$ ]	$\pm 190$	$\pm 190$	$\pm 190$
Yaw	[ $\mu\text{rad}$ ]	$\pm 120$	$\pm 120$	$\pm 120$
Weight	[kg]	30	30	30
Length	[mm]	380	380	380
Width	[mm]	380	380	380
Height	[mm]	100	100	100
Aperture	[mm]	170 x 170	170 x 170	170 x 170
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.

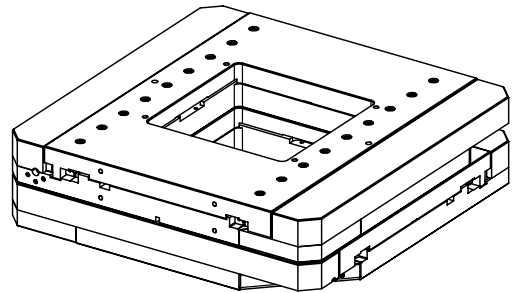
# Dimensions / Interface



\*) positional accuracy between fits:  $\pm 0.04$

- 1) M6; depth 8 (4x) used from top-side
- 2) counterbore for screw DIN 912 / ISO 4782 - M6 (4x) used from top-side
- 3)  $\varnothing 6H7$ ; depth 12 (2x)

requirement on mounting surfaces: flatness 0.05 mm



drawingscale: 1:5  
metric system (mm)

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