

Updated product specifications of precise positioning stages “Mont Blanc Series”

The product specifications have received major updates, affecting a review of recent measurement data. Almost important values have been improved.

Kohzu will strive further to improve the precision.

Motorized X/XY Stage

Model number	Specification	Before	→	After
XA07A-R103	Straightness (Vertical)	$\cong 1 \mu\text{m}/20\text{mm}$	→	$\cong 0.6 \mu\text{m}/20\text{mm}$
YA07A-R103	Straightness (Vertical)	$\cong 1 \mu\text{m}/20\text{mm}$	→	$\cong 0.6 \mu\text{m}/20\text{mm}$
XA07A-R202	Straightness (Vertical)	$\cong 1 \mu\text{m}/20\text{mm}$	→	$\cong 0.6 \mu\text{m}/20\text{mm}$
YA07A-R202	Straightness (Vertical)	$\cong 1 \mu\text{m}/20\text{mm}$	→	$\cong 0.6 \mu\text{m}/20\text{mm}$
XA07F-R103	Straightness (Vertical)	$\cong 1 \mu\text{m}/20\text{mm}$	→	$\cong 0.6 \mu\text{m}/20\text{mm}$
YA07F-R103	Straightness (Vertical)	$\cong 1 \mu\text{m}/20\text{mm}$	→	$\cong 0.6 \mu\text{m}/20\text{mm}$
XA07F-R202	Straightness (Vertical)	$\cong 1 \mu\text{m}/20\text{mm}$	→	$\cong 0.6 \mu\text{m}/20\text{mm}$
YA07F-R202	Straightness (Vertical)	$\cong 1 \mu\text{m}/20\text{mm}$	→	$\cong 0.6 \mu\text{m}/20\text{mm}$
XA10A-R102	Straightness (Vertical)	$\cong 1 \mu\text{m}/25\text{mm}$	→	$\cong 0.5 \mu\text{m}/25\text{mm}$
YA10A-R102	Straightness (Vertical)	$\cong 1 \mu\text{m}/25\text{mm}$	→	$\cong 0.5 \mu\text{m}/25\text{mm}$
XA10A-R202	Straightness (Vertical)	$\cong 1 \mu\text{m}/25\text{mm}$	→	$\cong 0.5 \mu\text{m}/25\text{mm}$
YA10A-R202	Straightness (Vertical)	$\cong 1 \mu\text{m}/25\text{mm}$	→	$\cong 0.5 \mu\text{m}/25\text{mm}$
XA10F-R102	Straightness (Vertical)	$\cong 1 \mu\text{m}/25\text{mm}$	→	$\cong 0.5 \mu\text{m}/25\text{mm}$
YA10F-R102	Straightness (Vertical)	$\cong 1 \mu\text{m}/25\text{mm}$	→	$\cong 0.5 \mu\text{m}/25\text{mm}$
XA10F-R202	Straightness (Vertical)	$\cong 1 \mu\text{m}/25\text{mm}$	→	$\cong 0.5 \mu\text{m}/25\text{mm}$
YA10F-R202	Straightness (Vertical)	$\cong 1 \mu\text{m}/25\text{mm}$	→	$\cong 0.5 \mu\text{m}/25\text{mm}$
XA05A-L202	Accumulated Lead Error	$\cong 15 \mu\text{m}/50\text{mm}$	→	$\cong 8 \mu\text{m}/50\text{mm}$
	Backlash	$\cong 1 \mu\text{m}$	→	$\cong 0.5 \mu\text{m}$
	Moment Load Stiffness	0.26 arcsec/N·cm	→	0.2 arcsec/N·cm
XA07A-L202	Accumulated Lead Error	$\cong 15 \mu\text{m}/70\text{mm}$	→	$\cong 8 \mu\text{m}/70\text{mm}$
	Moment Load Stiffness	0.26 arcsec/N·cm	→	0.18 arcsec/N·cm

Motorized X/XY Stage

Model number	Specification	Before	→	After
XA10A-L101	Straightness (Vertical)	$\cong 3 \mu\text{m}/100\text{mm}$	→	$\cong 2 \mu\text{m}/100\text{mm}$
YA10A-L101	Straightness (Vertical)	$\cong 3 \mu\text{m}/100\text{mm}$	→	$\cong 2 \mu\text{m}/100\text{mm}$
XA10A-L201	Accumulated Lead Error	$\cong 15 \mu\text{m}/100\text{mm}$	→	$\cong 8 \mu\text{m}/100\text{mm}$
	Straightness (Vertical)	$\cong 3 \mu\text{m}/100\text{mm}$	→	$\cong 2 \mu\text{m}/100\text{mm}$
	Backlash	$\cong 2 \mu\text{m}$	→	$\cong 1 \mu\text{m}$
YA10A-L201	Accumulated Lead Error	$\cong 15 \mu\text{m}/100\text{mm}$	→	$\cong 8 \mu\text{m}/100\text{mm}$
	Straightness (Vertical)	$\cong 3 \mu\text{m}/100\text{mm}$	→	$\cong 2 \mu\text{m}/100\text{mm}$
	Backlash	$\cong 2 \mu\text{m}$	→	$\cong 1 \mu\text{m}$
XA16A-R202	Accumulated Lead Error	$\cong 10 \mu\text{m}/60\text{mm}$	→	$\cong 6 \mu\text{m}/60\text{mm}$
YA16A-R202	Accumulated Lead Error	$\cong 10 \mu\text{m}/60\text{mm}$	→	$\cong 6 \mu\text{m}/60\text{mm}$
XA16F-L2101	Straightness (Vertical)	$\cong 4 \mu\text{m}/100\text{mm}$	→	$\cong 2 \mu\text{m}/100\text{mm}$

Motorized Z Stage(Vertical Stage)

Model number	Specification	Before	→	After
ZA05A-W101	Verticalness	$\cong 6 \mu\text{m}/8\text{mm}$	→	$\cong 5 \mu\text{m}/8\text{mm}$
ZA05A-W2C01	Repeatability	$\cong \pm 0.5 \mu\text{m}$	→	$\cong \pm 0.2 \mu\text{m}$
ZA07A-W202	Repeatability	$\cong \pm 0.5 \mu\text{m}$	→	$\cong \pm 0.2 \mu\text{m}$
	Lost Motion	$\cong 1 \mu\text{m}$	→	$\cong 0.5 \mu\text{m}$
ZA07A-W2C02	Repeatability	$\cong \pm 0.5 \mu\text{m}$	→	$\cong \pm 0.2 \mu\text{m}$
ZA07A-V1F01	Repeatability	$\cong \pm 0.5 \mu\text{m}$	→	$\cong \pm 0.2 \mu\text{m}$
ZA10A-W202	Repeatability	$\cong \pm 0.5 \mu\text{m}$	→	$\cong \pm 0.2 \mu\text{m}$
ZA10A-W2C02	Repeatability	$\cong \pm 0.5 \mu\text{m}$	→	$\cong \pm 0.2 \mu\text{m}$
ZA10A-32F01	Repeatability	$\cong \pm 0.5 \mu\text{m}$	→	$\cong \pm 0.2 \mu\text{m}$
ZA16A-32F01	Repeatability	$\cong \pm 0.5 \mu\text{m}$	→	$\cong \pm 0.3 \mu\text{m}$
	Lost Motion	$\cong 2 \mu\text{m}$	→	$\cong 1 \mu\text{m}$
ZA16A-W2C01	Repeatability	$\cong \pm 0.5 \mu\text{m}$	→	$\cong \pm 0.2 \mu\text{m}$

Motorized Rotation Stage

Model number	Specification	Before	→	After
RA04A-W01	Angular Repeatability	$\cong 0.005^\circ$	→	$\cong 0.002^\circ$
	Backlash	$\cong 0.002^\circ$	→	$\cong 0.001^\circ$
RA05A-W02	Angular Repeatability	$\cong 0.005^\circ$	→	$\cong 0.002^\circ$
RA07A-W02	Angular Repeatability	$\cong 0.003^\circ$	→	$\cong 0.002^\circ$
	Surface Runout	$\cong 20 \mu\text{m}/360^\circ$	→	$\cong 15 \mu\text{m}/360^\circ$
RA10A-W01	Eccentricity	$\cong 6 \mu\text{m}/360^\circ$	→	$\cong 5 \mu\text{m}/360^\circ$
RA10A-T02	Lost Motion	$\cong 0.005^\circ$	→	$\cong 0.003^\circ$

Motorized Swivel Stage (Goniometer Stage)

Model number	Specification	Before	→	After
SA05A-R2T01	Repeatability	$\cong \pm 0.003^\circ$	→	$\cong \pm 0.001^\circ$
SA05A-R2M01	Repeatability	$\cong \pm 0.003^\circ$	→	$\cong \pm 0.001^\circ$
SA05A-R2B01	Repeatability	$\cong \pm 0.003^\circ$	→	$\cong \pm 0.001^\circ$
SA05A-R2G01	Repeatability	$\cong \pm 0.003^\circ$	→	$\cong \pm 0.001^\circ$
SA05A-R2S01	Repeatability	$\cong \pm 0.003^\circ$	→	$\cong \pm 0.001^\circ$
SA05A-R2L01	Repeatability	$\cong \pm 0.003^\circ$	→	$\cong \pm 0.001^\circ$
SA05A-R2BG01	Repeatability	$\cong \pm 0.003^\circ$	→	$\cong \pm 0.001^\circ$
SA13A-RT01	Backlash	$\cong 0.003^\circ$	→	$\cong 0.001^\circ$
SA13A-RM01	Lost Motion	$\cong 0.005^\circ$	→	$\cong 0.002^\circ$
	Backlash	$\cong 0.003^\circ$	→	$\cong 0.001^\circ$
SA13A-RS01	Lost Motion	$\cong 0.005^\circ$	→	$\cong 0.005^\circ$ (RT01) $\cong 0.002^\circ$ (RM01)
	Backlash	$\cong 0.003^\circ$	→	$\cong 0.001^\circ$
SA16A-RT01	Backlash	$\cong 0.003^\circ$	→	$\cong 0.001^\circ$
SA16A-RM01	Lost Motion	$\cong 0.005^\circ$	→	$\cong 0.002^\circ$
	Backlash	$\cong 0.003^\circ$	→	$\cong 0.001^\circ$
SA16A-RS01	Lost Motion	$\cong 0.005^\circ$	→	$\cong 0.005^\circ$ (RT01) $\cong 0.002^\circ$ (RM01)
	Backlash	$\cong 0.003^\circ$	→	$\cong 0.001^\circ$