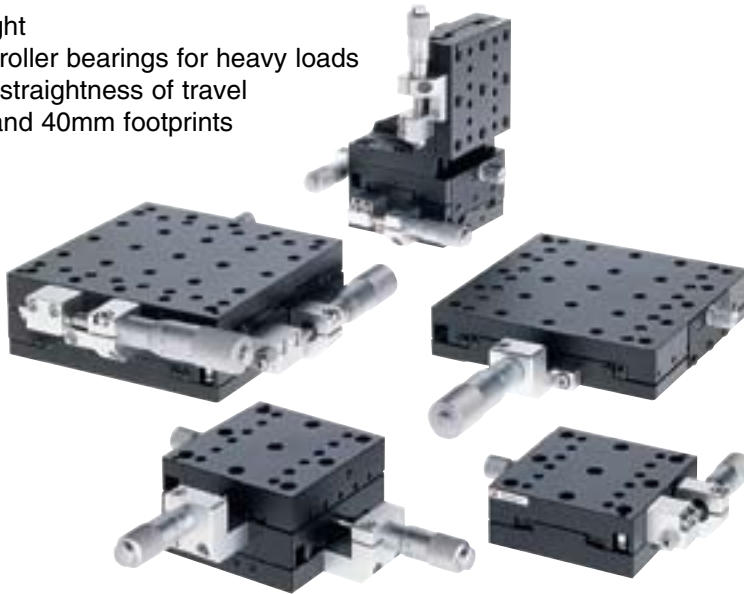


## Aluminum Crossed-roller Bearing Stages

- Lightweight
- Crossed-roller bearings for heavy loads
- Superior straightness of travel
- 120, 65 and 40mm footprints
- Lockable

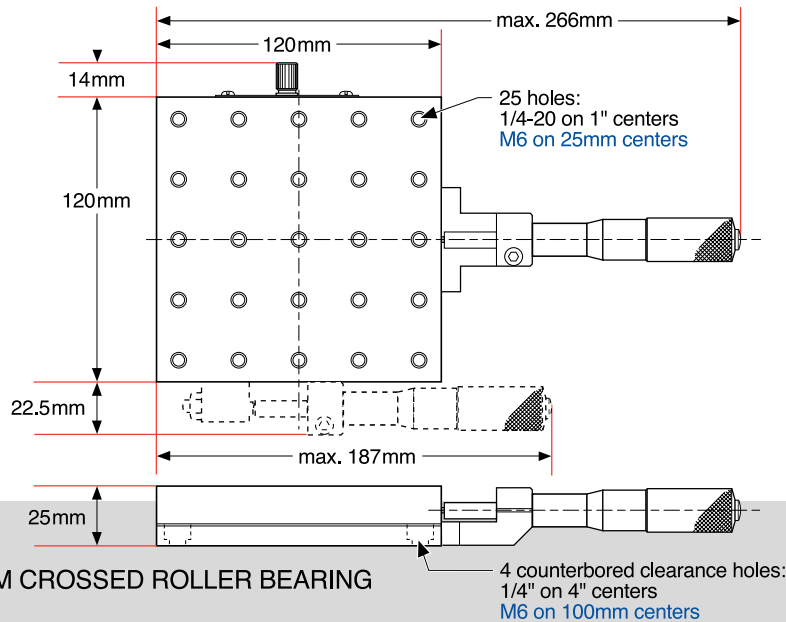


In many manufacturing applications weight is at a premium. Aluminum stages are used when weight needs to be minimized. In order to maintain the required accuracy precision crossed-roller bearings are mounted into the machined aluminum.

Three sizes cover most applications. The 120mm stages are best for heavy load applications. While the 65mm size is ideal for most general equipment applications. A 40mm range provides more compact mounting for use in instruments where space is at a premium. All sizes have inch or metric hole patterns which enable them to be built as compactly as possible. Travel is listed in the table on page 381 for each stage but can be extended slightly beyond this range if necessary.

### 120mm Aluminum Crossed Roller Stages

Part No. 123-0410/0415/0420/0425



Steel Extended Contact Bearing Stages

Steel Extended Contact Bearing Stages

Aluminum Stages

Rotation Stages

Goniometers

Rack & Pinion Dovetail Stages

Preset Dovetail Stages

Leadscrew Slides

Tilt Platforms

OEM Slides

Accessories

Crossed-roller bearings provide a high degree of linearity combined with a high load bearing capacity.

ORDERING  
&  
TECHNICAL SUPPORT  
(949) 851-5881  
FAX (949) 851-5058  
E-MAIL  
sales@optosigma.com  
WEB  
www.optosigma.com

Steel Extended  
Contact Bearing Stages

Stainless Steel Extended  
Contact Bearing Stages

Aluminum Stages

Rotation Stages

Goniometers

Rack & Pinion  
Dovetail Stages

Preset Dovetail Stages

Leadscrew Slides

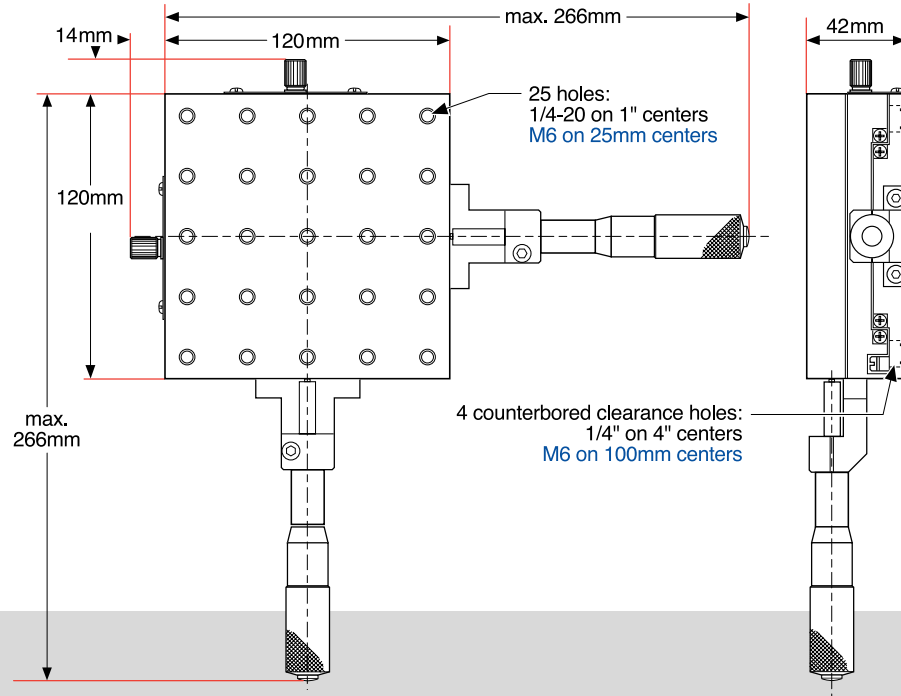
Tilt Platforms

OEM Slides

Accessories

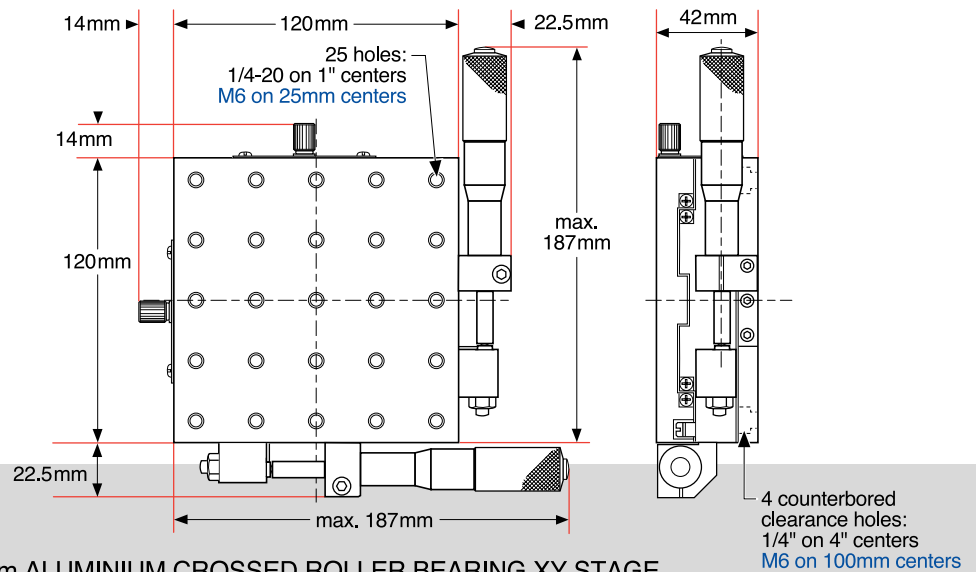
## 65mm Aluminum Crossed Roller Stages

Part No. 123-0430/0435



120mm ALUMINIUM CROSSED ROLLER BEARING XY STAGE

Part No. 123-0440/0445



120mm ALUMINIUM CROSSED ROLLER BEARING XY STAGE

ORDERING  
&  
TECHNICAL SUPPORT

(949) 851-5881  
FAX (949) 851-5058

E-MAIL  
sales@optosigma.com

WEB  
www.optosigma.com

# 65mm Aluminum Crossed Roller Stages

Steel Extended Contact Bearing Stages

Steel Extended Contact Bearing Stages

Aluminum Stages

Rotation Stages

Goniometers

Rack & Pinion Dovetail Stages

Preset Dovetail Stages

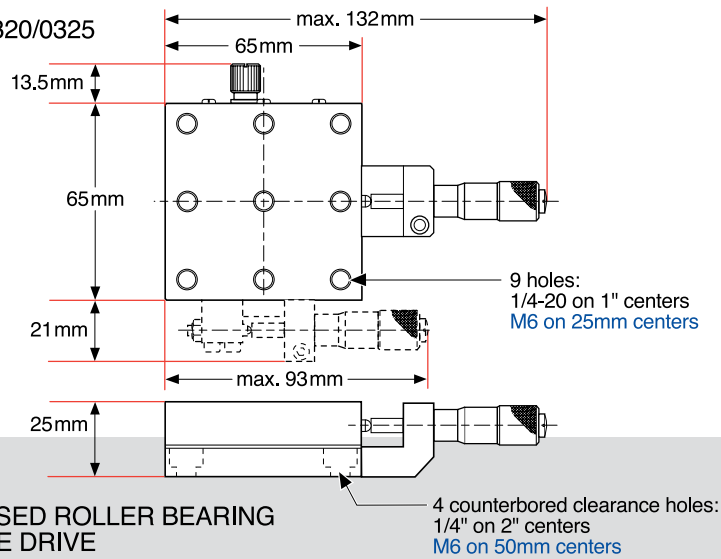
Leadscrew Slides

Tilt Platforms

OEM Slides

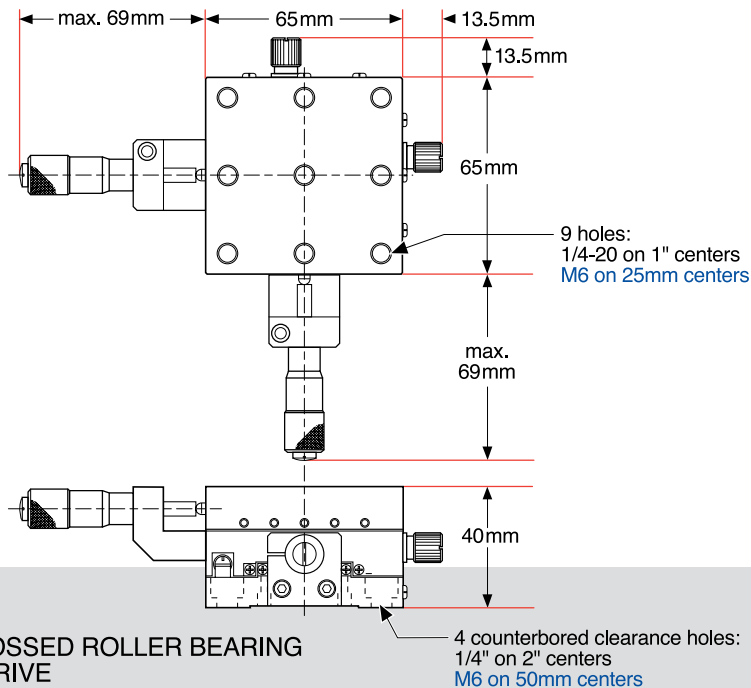
Accessories

Part No. 123-0310/0315/0320/0325



65mm ALUMINUM CROSSED ROLLER BEARING STAGE X CENTER & SIDE DRIVE

Part No. 123-0330/0335



65mm ALUMINUM CROSSED ROLLER BEARING STAGE XY CENTER DRIVE

ORDERING & TECHNICAL SUPPORT

(949) 851-5881

FAX (949) 851-5058

E-MAIL

sales@optosigma.com

WEB

www.optosigma.com



**MANUAL POSITIONERS**

Steel Extended  
Contact Bearing Stages

Stainless Steel Extended  
Contact Bearing Stages

**Aluminum Stages**

Rotation Stages

Goniometers

Rack & Pinion  
Dovetail Stages

Preset Dovetail Stages

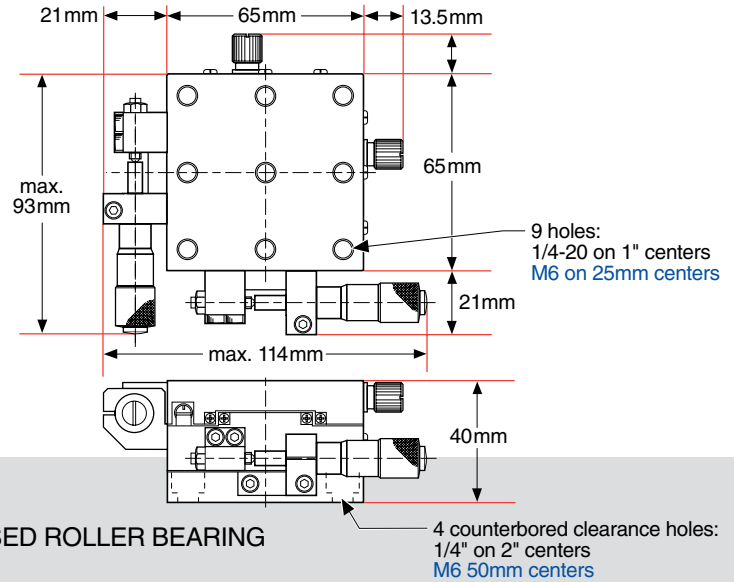
Leadscrew Slides

Tilt Platforms

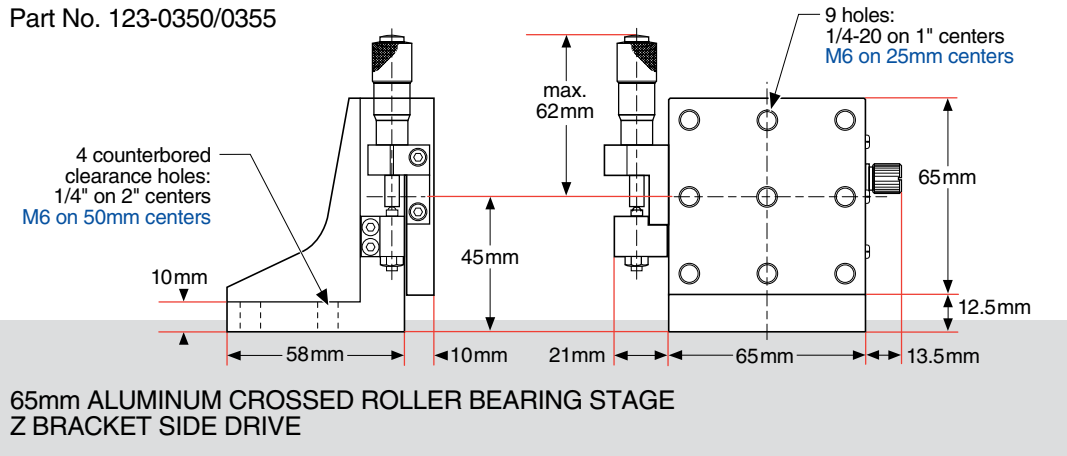
OEM Slides

Accessories

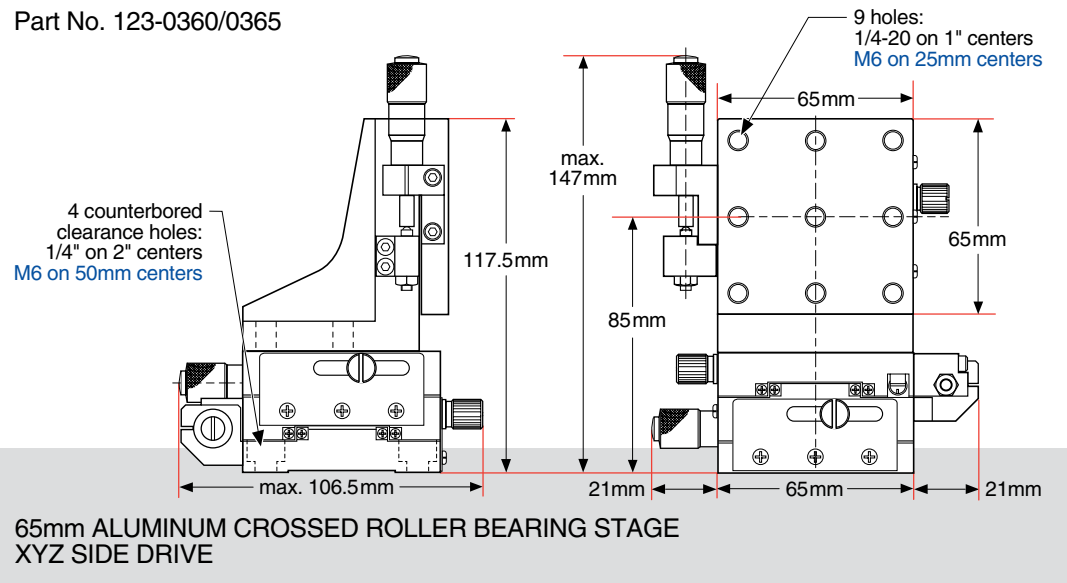
Part No. 123-0340/0345



Part No. 123-0350/0355



Part No. 123-0360/0365



ORDERING  
&  
TECHNICAL SUPPORT  
(949) 851-5881  
FAX (949) 851-5058  
E-MAIL  
sales@optosigma.com  
WEB  
www.optosigma.com



Steel Extended  
Contact Bearing Stages

Steel Extended  
Contact Bearing Stages

Aluminum Stages

Rotation Stages

Goniometers

Rack & Pinion  
Dovetail Stages

Preset Dovetail Stages

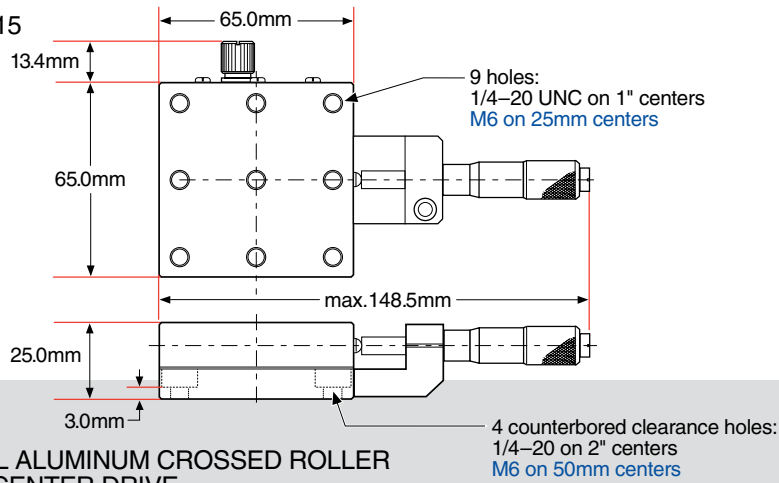
Leadscrew Slides

Tilt Platforms

OEM Slides

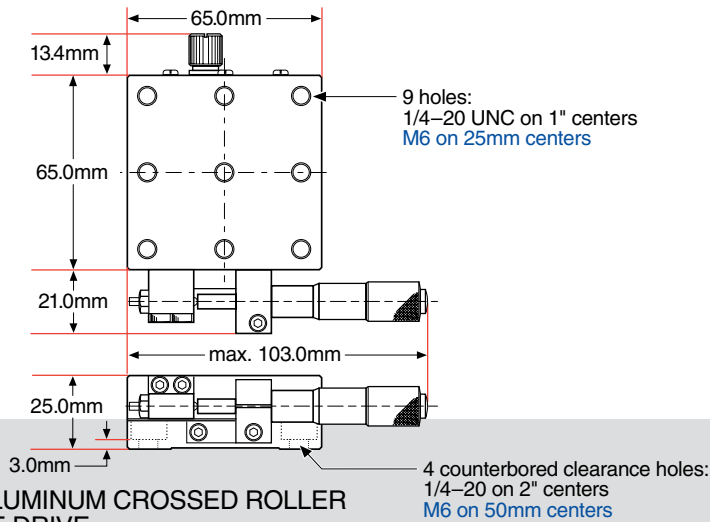
Accessories

Part No. 123-0610/0615



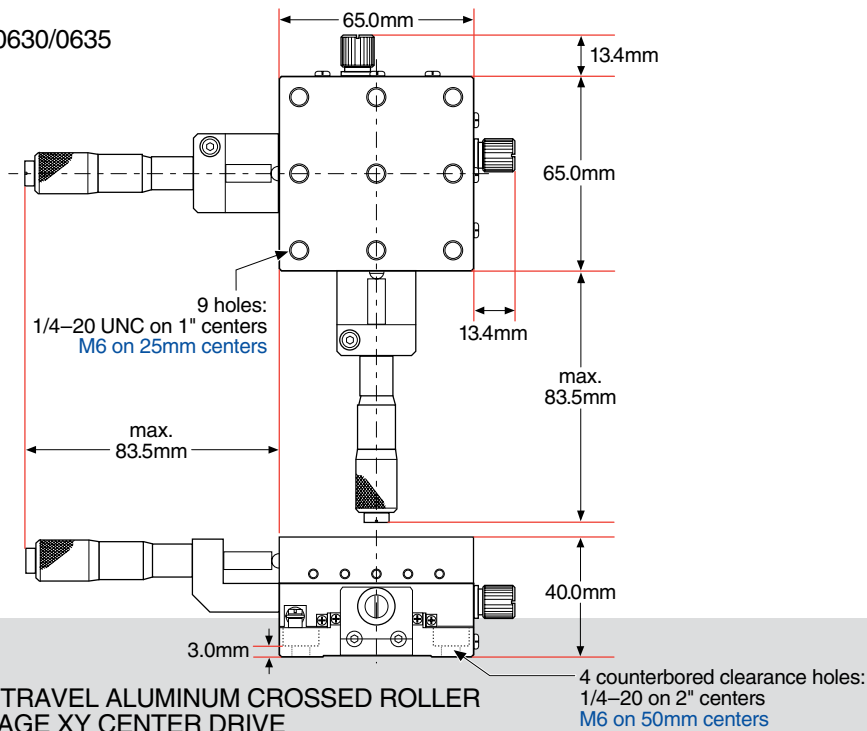
65mm 25mm TRAVEL ALUMINUM CROSSED ROLLER BEARING STAGE X CENTER DRIVE

Part No. 123-0620/0625



65mm 25mm TRAVEL ALUMINUM CROSSED ROLLER BEARING STAGE X SIDE DRIVE

Part No. 123-0630/0635



65mm 25mm TRAVEL ALUMINUM CROSSED ROLLER BEARING STAGE XY CENTER DRIVE

ORDERING  
&  
TECHNICAL SUPPORT  
(949) 851-5881  
FAX (949) 851-5058  
E-MAIL  
sales@optosigma.com  
WEB  
www.optosigma.com



**MANUAL POSITIONERS**

Steel Extended  
Contact Bearing Stages

Stainless Steel Extended  
Contact Bearing Stages

**Aluminum Stages**

Rotation Stages

Goniometers

Rack & Pinion  
Dovetail Stages

Preset Dovetail Stages

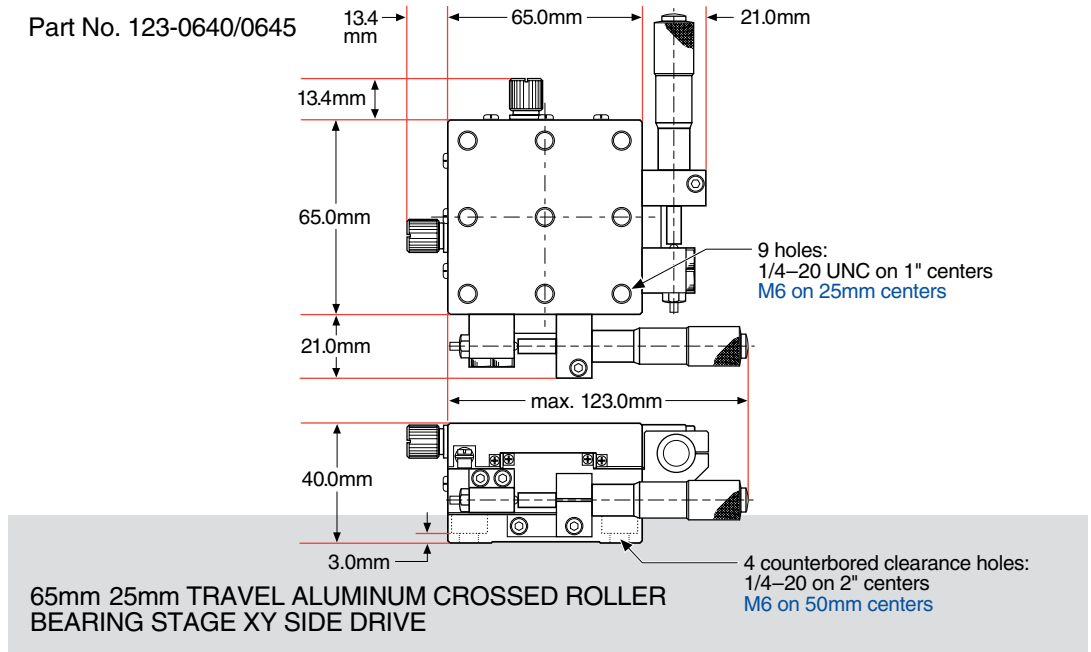
Leadscrew Slides

Tilt Platforms

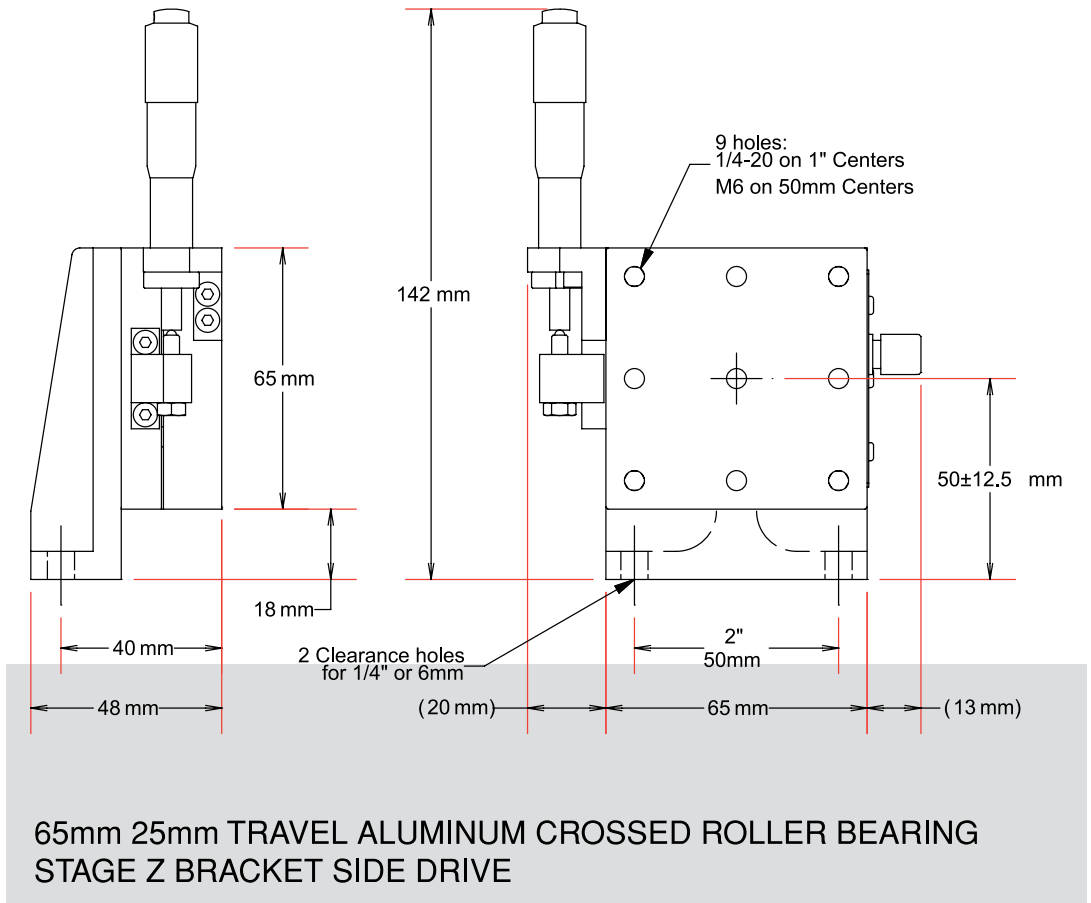
OEM Slides

Accessories

Part No. 123-0640/0645



Part No. 122-0660/0665



ORDERING  
&  
TECHNICAL SUPPORT

(949) 851-5881  
FAX (949) 851-5058

E-MAIL  
sales@optosigma.com

WEB  
www.optosigma.com



Part No. 123-0680/0685

Steel Extended  
Contact Bearing Stages

Steel Extended  
Contact Bearing Stages

Aluminum Stages

Rotation Stages

Goniometers

Rack & Pinion  
Dovetail Stages

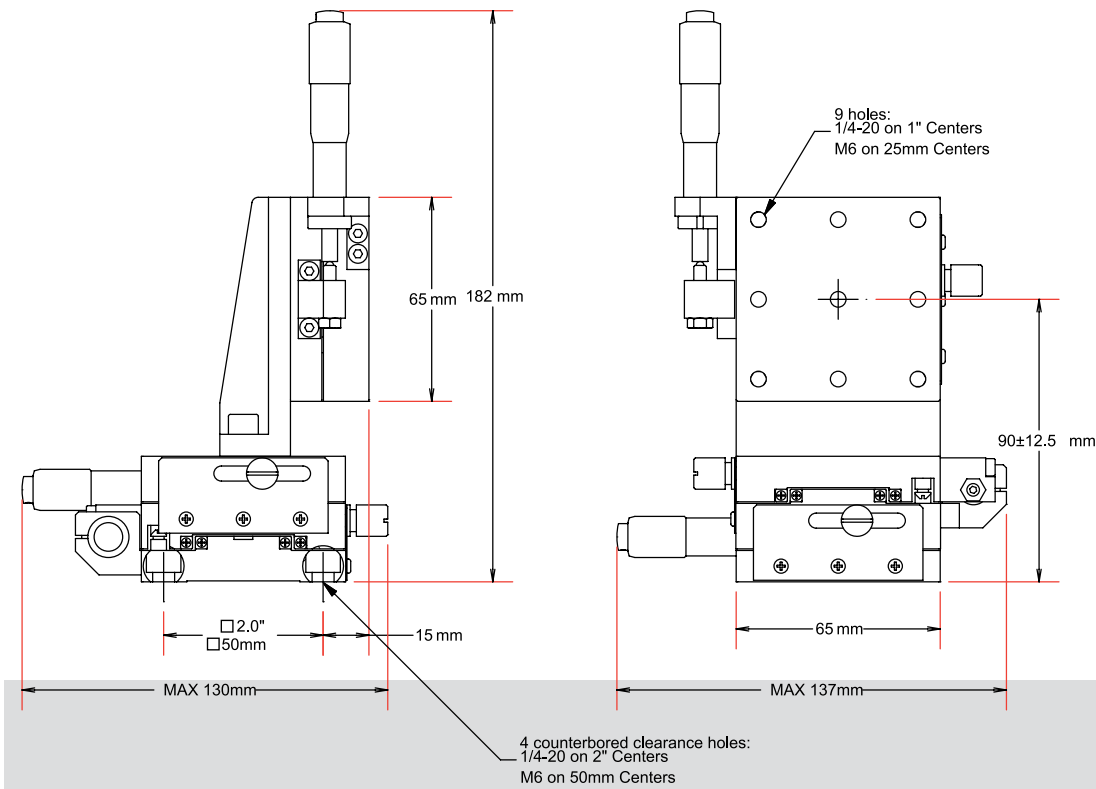
Preset Dovetail Stages

Leadscrew Slides

Tilt Platforms

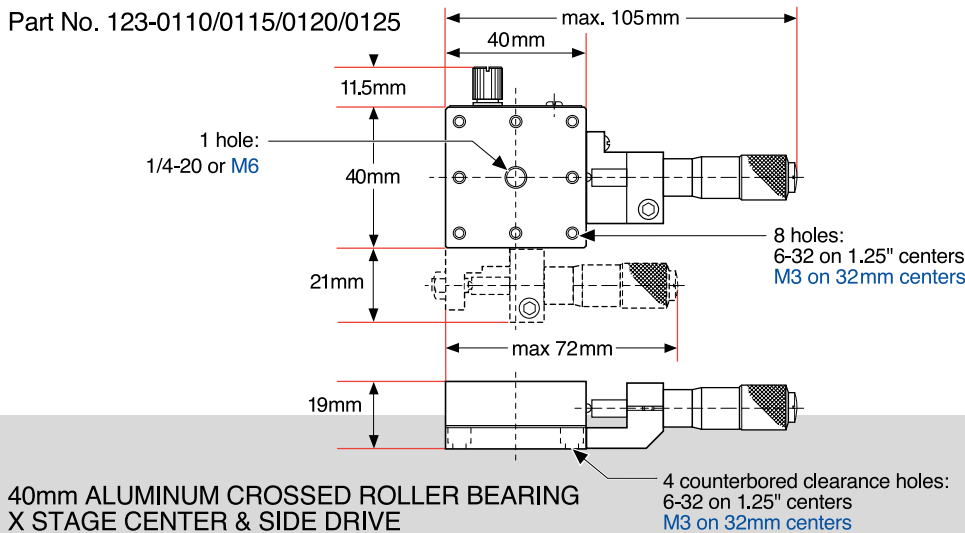
OEM Slides

Accessories



ALUMINUM CROSSED ROLLER BEARING STAGE XYZ SIDE DRIVE

40mm Aluminum Crossed Roller Stages



40mm ALUMINUM CROSSED ROLLER BEARING X STAGE CENTER & SIDE DRIVE

ORDERING  
&  
TECHNICAL SUPPORT  
(949) 851-5881  
FAX (949) 851-5058  
E-MAIL  
sales@optosigma.com  
WEB  
www.optosigma.com



**MANUAL POSITIONERS**

Steel Extended  
Contact Bearing Stages

Stainless Steel Extended  
Contact Bearing Stages

**Aluminum Stages**

Rotation Stages

Goniometers

Rack & Pinion  
Dovetail Stages

Preset Dovetail Stages

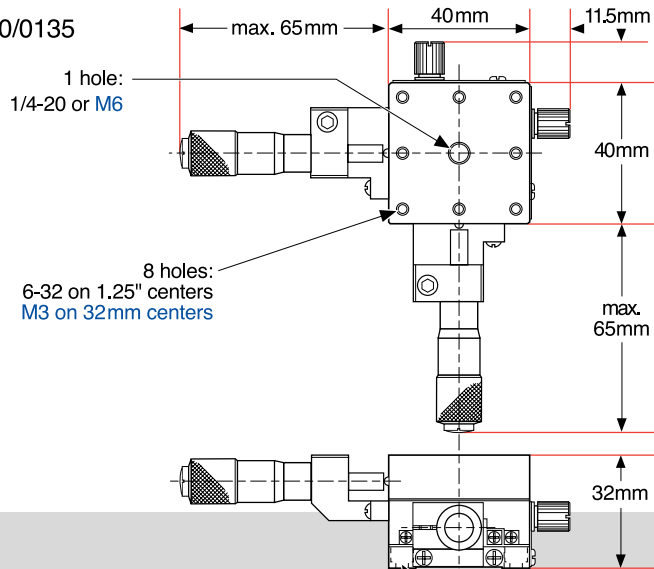
Leadscrew Slides

Tilt Platforms

OEM Slides

Accessories

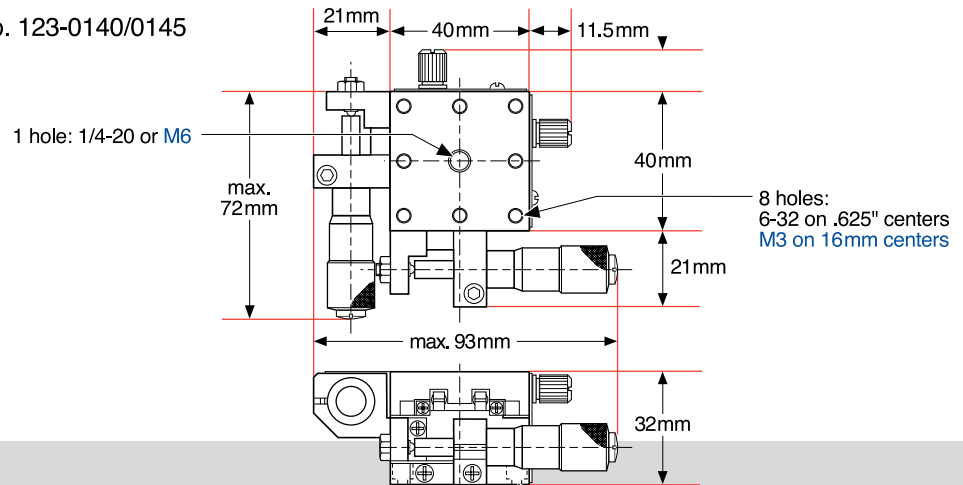
Part No. 123-0130/0135



**40mm ALUMINUM CROSSED ROLLER BEARING  
XY STAGE CENTER DRIVE**

4 counterbored clearance holes:  
6-32 on 1.25" centers or M3 on 32mm centers

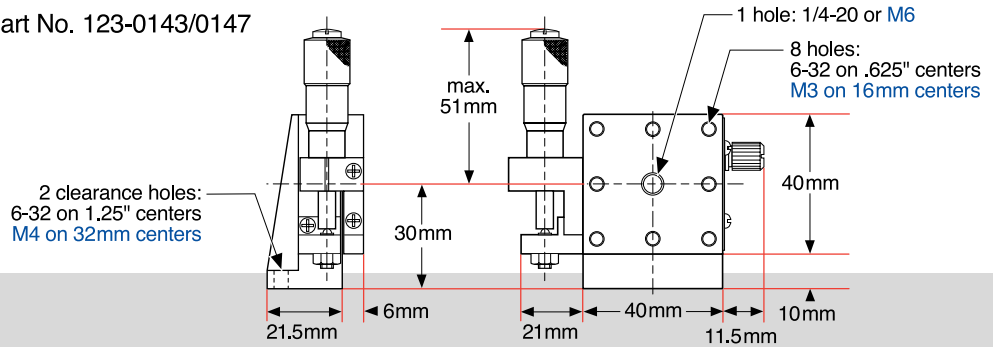
Part No. 123-0140/0145



**40mm ALUMINUM CROSSED ROLLER BEARING  
XY STAGE SIDE DRIVE**

4 counterbored clearance holes:  
6-32 on 1.25" centers  
M4 32mm centers

Part No. 123-0143/0147



**40mm ALUMINUM CROSSED ROLLER BEARING Z STAGE**

ORDERING  
&  
TECHNICAL SUPPORT

(949) 851-5881  
FAX (949) 851-5058

E-MAIL  
sales@optosigma.com

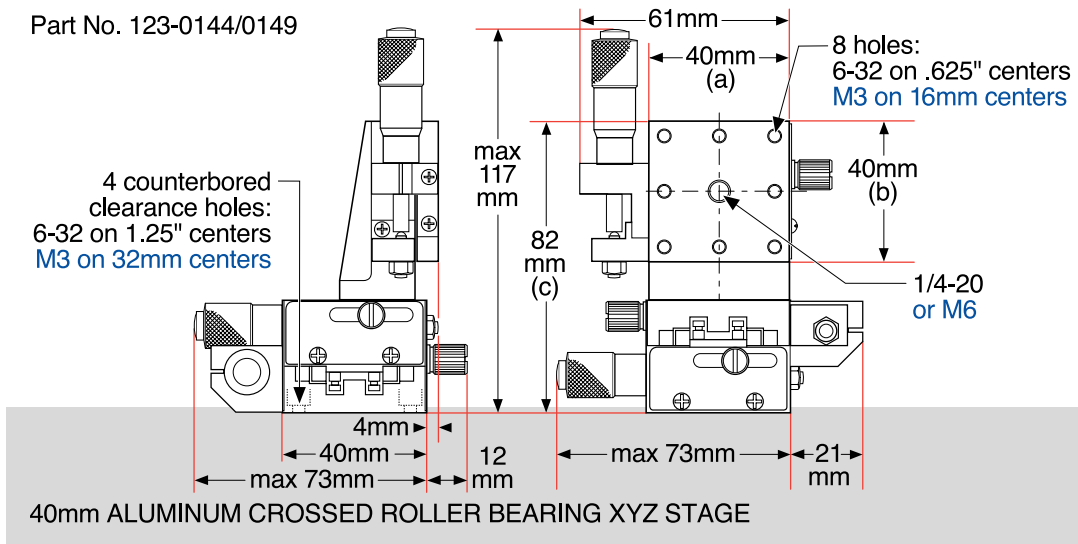
WEB  
www.optosigma.com





- Steel Extended Contact Bearing Stages
- Steel Extended Contact Bearing Stages
- Aluminum Stages
- Rotation Stages
- Goniometers
- Rack & Pinion Dovetail Stages
- Preset Dovetail Stages
- Leadscrew Slides
- Tilt Platforms
- OEM Slides
- Accessories

Part No. 123-0144/0149



### Specifications & Tolerances

Dimensions:  $\pm 0.2\text{mm}$       Straightness:  $3\mu\text{m}$   
 Pitch:  $<25\text{arcsec}$       Yaw:  $<15\text{arcsec}$   
 Micrometer sensitivity:  $10\mu\text{m}$       Material: Aluminum  
 Position Resolution:  $3\mu\text{m}$       Finish: Black anodized

### Aluminum Crossed-Roller Bearing Stages

Dimensions a x b Height (mm)	Height (mm)	Axes of Travel	Travel (mm)	Micrometer Position	Load Capacity (kg)	Price	INCH	METRIC
							PART NUMBER	PART NUMBER
120 x 120	25.0	X	$\pm 20$	Center	18		<b>123-0410</b>	<b>123-0415</b>
120 x 120	25.0	X	$\pm 20$	Side	18		<b>123-0420</b>	<b>123-0425</b>
120 x 120	42.0	XY	$\pm 20$	Center	18		<b>123-0430</b>	<b>123-0435</b>
120 x 120	42.0	XY	$\pm 20$	Side	18		<b>123-0440</b>	<b>123-0445</b>
65 x 65	25.0	X	$\pm 6.5$	Center	6		<b>123-0310</b>	<b>123-0315</b>
65 x 65	25.0	X	$\pm 6.5$	Side	6		<b>123-0320</b>	<b>123-0325</b>
65 x 65	40.0	XY	$\pm 6.5$	Center	6		<b>123-0330</b>	<b>123-0335</b>
65 x 65	40.0	XY	$\pm 6.5$	Side	6		<b>123-0340</b>	<b>123-0345</b>
65 x 65	77.5	Z	$\pm 6.5$	Bracket Side	2		<b>123-0350</b>	<b>123-0355</b>
65 x 65	117.5	XYZ	$\pm 6.5$	Side	2		<b>123-0360</b>	<b>123-0365</b>
65 x 65	25.0	X	$\pm 12.5$	Center	6		<b>123-0610</b>	<b>123-0615</b>
65 x 65	25.0	X	$\pm 12.5$	Side	6		<b>123-0620</b>	<b>123-0625</b>
65 x 65	40.0	XY	$\pm 12.5$	Center	6		<b>123-0630</b>	<b>123-0635</b>
65 x 65	40.0	XY	$\pm 12.5$	Side	6		<b>123-0640</b>	<b>123-0645</b>
65 x 65	77.5	Z	$\pm 12.5$	Bracket Side	2		<b>123-0660</b>	<b>123-0665</b>
65 x 65	122.5	XYZ	$\pm 12.5$	Side	2		<b>123-0680</b>	<b>123-0685</b>
40 x 40	19.0	X	$\pm 6.5$	Center	2		<b>123-0110</b>	<b>123-0115</b>
40 x 40	19.0	X	$\pm 6.5$	Side	2		<b>123-0120</b>	<b>123-0125</b>
40 x 40	32.0	XY	$\pm 6.5$	Center	2		<b>123-0130</b>	<b>123-0135</b>
40 x 40	32.0	XY	$\pm 6.5$	Side	2		<b>123-0140</b>	<b>123-0145</b>
40 x 40	50.0	Z	$\pm 6.5$	Bracket Side	1		<b>123-0143</b>	<b>123-0147</b>
40 x 40	108.0	XYZ	$\pm 6.5$	Side	1		<b>123-0144</b>	<b>123-0149</b>

Side micrometers are normally mounted on the left hand side of the stage. For **right hand** mounted micrometers **append -R**.