

# [Simplified Adjustments] XY-Axis, Feed Screw, Large Lead (3.0mm)

Standard/Large Handle Selectable

# MISUMI C-VALUE [Standard] XY-Axis Cross Roller / XY-Axis Linear Ball Slide

Features: 3.0mm lead feed screw stages are combined into XY arrangement. Convenient when rapid feeding characteristic is desired.

**XY-Axis**

X-Axis P.1912

Travel per Rotation: 3.0mm

RoHS

**Accuracy Standards**

Not recommended for precise positioning due to its clearance shown on the left. Values are for single-axis configuration.

0.1 or less

0.1 or less

0.1 or less

**One Point**

Long stroke moves can be made easily with use of a ball-point hex wrench.

Type		Main Body		Shaft	Knob	Feed Screw	Accessory
Standard Handle	Large Handle	Material	Surface Treatment	Material	Material	Material	
XYKS	XYKSL	Aluminum Alloy	Black Anodize	SUS304	SUS303	SUS304	SCB5-20, 4 pcs.

**No.40**

**Handle Shape Comparisons**

Standard Handle

Large Handle

Hex Wrench Hole Details

When the large handle is selected, the handle diameter will exceed the end plate height. Please be aware of potential interferences.

**No.60**

**No.80**

Do not force the handle to turn past the end of the travel limits as it may cause the handle to come loose.

Part Number	Type	No.	Large Handle	Stage Surface (mm)	Travel Distance (mm)	Load Capacity (N)	Weight (kg)	Unit Price			
								XYKS	XYKSL	XYKSL	XYKSL
(Standard Handle)	40	L	(Large Handle Top & Bottom)	40x40	±25	62.7	0.66				
(Large Handle Selection)	60	A	(Large Handle Top only)	60x60	±25	62.7	1.17				
	80	B	(Large Handle Bottom only)	80x80	±25	56.8	1.64				

Travel per Rotation: 3.0mm

Alterations

Part Number - (MMR, CLC)  
XYKSL40A - MMR

**Mounting of a Scaled Plate on the Stage**

Scaled Plate will be mounted.  
Minimum Graduation: 0.5mm  
Included screws are changed as shown on the below right.

MMR alteration will change the mounting hole pitch since a plate is attached to the stage.

No.	P1	P2	d1	d2	ℓ
40	65	14	4.5	7.5	3
60	85	30	4.5	7.5	3
80	105	30	4.5	7.5	3

Accessory (4 pcs.)  
No.40: CBSST4-8 No.60: CBSST4-8  
No.80: CBSST4-8

MMR

**Change of Clamp (Knurled Knob)**

Changes Clamp Screw to Knurled Knob.  
Changes are for both X and Y axes.

CLC

Points on Similar Product Comparison | Travel Accuracy Straightness: 30µm, Parallelism: 60µm

Similar Product Pages P.1943, P.1946

Features: Economical stages with a micrometer head capable of 0.01mm resolution adjustments.

**XY-Axis Cross Roller**

XYCRS

X-Axis P.1917  
Z-Axis P.1967

RoHS

High Precision Stage Existing Product: XYPG (P.1943)  
For Mounting Hole Dimensions of the Top Table, see P.1917.

25 Type has different feed bracket configuration.

A120 micrometer tip shape is different

Material: Aluminum Alloy  
Surface Treatment: Black Anodize

Part Number	Top View						Front View						Side View					
	A	B	Travel Distance (mm)	E	F	J	D	G	H	L	T	P	Q	X	d1	d2	ℓ	
XYCRS	25	29	±3.2	7	11.8	(6.8)	9.5	9.3	21.8	24.3	30	6	6.8	20	2.4	4.2	2.5	
	40	26		8	19	(10.8)	13	13	34.5	33	40	10	14.5	32	3.4	6	3.3	
	50	23		8	19	(10.8)	13	13	34.5	33	40	10	14.5	40	3.4	6	3.5	
	60	21	±6.5	8	19	(10.8)	13	13	34.5	33	40	10	14.5	50	4.5	8	4.4	
	80	22		8	19	(10.8)	13	13	34.5	33	40	10	14.5	70	4.5	8	4.4	
	90	34.8		8	19	(10.8)	13	13	34.5	33	40	10	14.5	80	4.5	8	5.3	
	100	20.8	±12.5	8	19	(10.8)	13	13	34.5	33	40	10	14.5	90	4.5	8	5.3	
	120	88	±25	13.5	26	(10.8)	19.1	11	34.5	31	40	10	14.5	100	4.5	8	5.3	

**Performance**

A	Stage Surface (mm)	Load Capacity (N)	Travel Accuracy		Moment Load Capacity (N-m)			Moment Rigidity ("/N-cm)			Parallelism	Weight (kg)	Unit Price
			Straightness	Motion Parallelism	Pitching	Yawing	Rolling	Pitching	Yawing	Rolling			
25	25x25	9.8	30µm	60µm	0.4	0.8	0.4	4.83	5.70	4.83	100µm	0.09	
40	40x40	17.6			2.0	2.2	2.0	6.66	8.84	6.66		0.28	
50	50x50	28			3.4	3	3.4	0.35	0.4	0.35		0.36	
60	60x60	44.1			5.2	4.3	5.2	0.19	0.22	0.19	0.48		
80	80x80	98.1			17.3	15.1	17.3	0.09	0.10	0.09	0.77		
90	90x90	110			22.0	20.0	22.0	0.09	0.10	0.09	1.00		
100	100x100	140			33.0	30.0	33.0	0.11	0.14	0.11	1.20		
120	120x120	180			57.2	44.7	57.2	0.04	0.04	0.04	1.91		

Ordering Example

Part Number  
XYCRS60

Points on Similar Product Comparison | Travel Accuracy (Straightness) 10µm

**XY-Axis, Linear Ball Slide**

XYLBS40 (Standard)

X-Axis P.1920  
Z-Axis P.1965

RoHS

XYLBS-CR (Reversed)

XYLBS60 (Standard)

Material: SUS440C  
Surface Treatment: Electroless Nickel Plating

High Precision Stage Existing Product: XYSG (P.1946)

Type	Part Number	No.	Micrometer Head Pos.	Stage Surface (mm)	Travel Distance (mm)	Load Capacity (N)	Minimum Graduation (µm)	Travel Accuracy			Moment Rigidity ("/N-cm)			Parallelism (µm)	Weight (kg)	Included Screw (SUS Hex Socket Low Head Cap Screw)	Unit Price
								Straightness	Pitching	Yawing	Pitching	Yawing	Rolling				
XYLBS	40	No Symbol (Standard)		40x40		95.6	10	10µm	30"	25"	0.59	0.7	0.59	60	0.48	M3-8, 4 pcs.	
	60	CR (Right/Left Reversed)		60x60	±6.5	191.6	10	10µm	35"	30"	0.15	0.16	0.15	60	0.88	M4-8, 4 pcs.	

Ordering Example

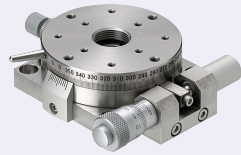
Part Number  
XYLBS40

# [High Precision] Rotary Cross Roller Bearing

Stainless Steel / Through Hole

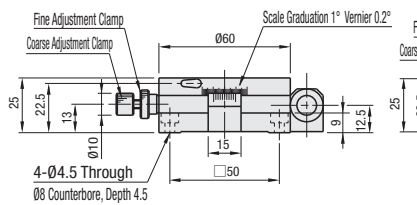
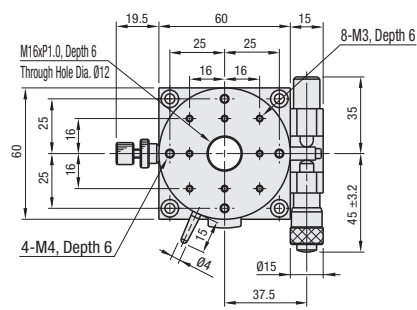
■ Features: Stainless steel material used has improved rigidity over aluminum alloy rotary stages.

■ Stainless Steel

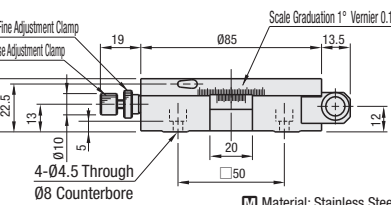
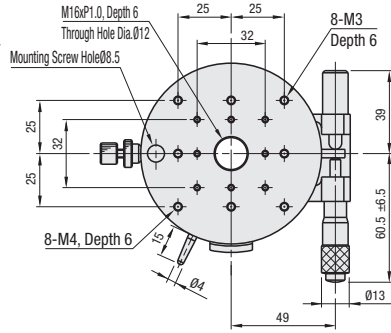


RoHS

RPGS60



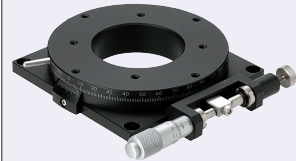
RPGS85



Material: Stainless Steel

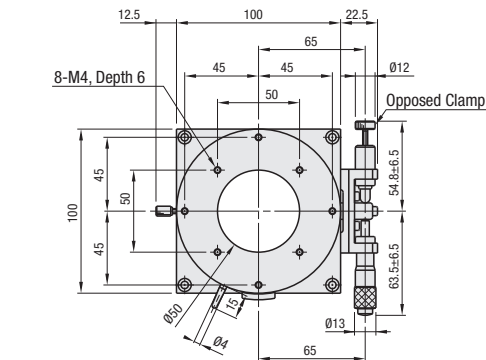
■ Features: There is a through hole in the center of the stage allowing passages of laser, wiring and etc.

■ Through Hole



RoHS

RPGT100



Material: Aluminum Alloy  
Surface Treatment: Black Anodize

Part Number Type	No.	Stage Surface (mm)	Travel Distance	Resolution		Load Capacity (N) Horizontal	Eccentricity (mm)	Weight (kg)	Accessory (4 pcs.) Type	Unit Price (1 ~ 4 pcs.)
				Vernier	Micrometer					
RPGS	60	060	Coarse 360° Fine ±5°	0.2°	≈55"/Scale Graduation	49.0	0.05	0.58	SCB4-8	
	85	085		0.1°	≈42"/Scale Graduation	58.8				
RPGT	100	0100	Coarse 360° Fine ±5°	0.1°	≈32"/Scale Graduation	58.8	0.05	0.45	SCB4-6	

⚠ Knob Cover HDCVR13 (Sold Separately); 013 micrometer knob can be increased in diameter by installing the cover. P.2004  
⚠ Extension Cover HDEXT13 (Sold Separately); 013 micrometer head knob can be extended. P.2004

Ordering Example Part Number **RPGS60**

Alterations Part Number - (NR) **RPGS60 - NR**

⚠ Mounting dimensions of micrometer head and clamp are different from those of standard products. See the CAD data for details.

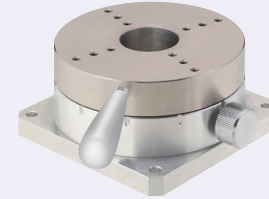
Alteration	Micrometer Position
Spec.	Side Mount - Right/ Left Reversed
	⚠ Not applicable to RPGS85
Code	NR

# [Manual Units] Rotary Tables

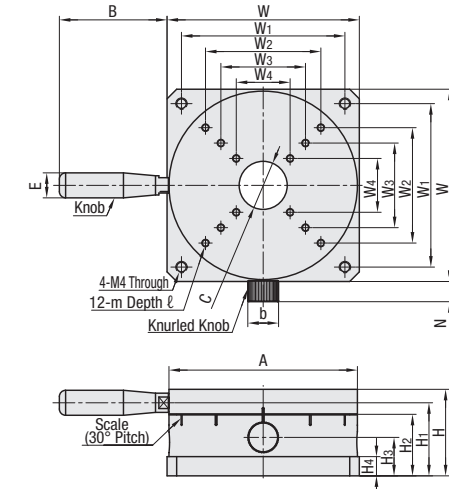
■ Features: Units best suited for simplified positioning. With a built-in plunger, positions are indexed by 30°.

■ Rotary Tables

KUS



RoHS



Material: S45C  
Surface Treatment: Electroless Nickel Plating  
Knob : GRMSN (P.2-1150)  
Knurled Knob : NOBA (P.2-1160)

⚠ Through Hole C is not applicable to KUS50.

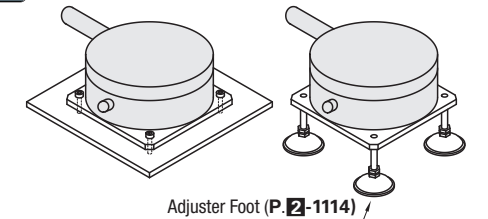
Part Number Type	No.	Stage Surface (mm)							Base (mm)							Knob (mm)		Knurled Knob (mm)		
		A	W	W1	W2	W3	W4	M	C	m	l	H	H1	H2	H3	H4	B	E	N	b
KUS	50	048	50	40	27	18	9	M5	-	M4	6	34	28	22	13	5	44	010	11.5	012
	100	098	100	85	60	44	28	M6	025	M4	8	45	38	32	20	10	56	013	10.5	016
	200	0198	200	175	124	94	64	M8	070	M5	10	70	61	52.5	32	12	67	016	14.5	030

Part Number Type	No.	Stage Surface (mm)	Number of Indexed Positions	Indexing Angle	Load Capacity N(kgf)	Indexable Load (Reference Values) N(kgf)		Travel Accuracy			Weight (kg)	Unit Price 1 ~ 2 pcs.
						Eccentricity (mm)	Parallelism (mm)	Surface Runout (mm)				
KUS	50	048	12	30°±1°	980(100)	98(10)	0.1	0.2	0.1	0.34	1.64	
	100	098			1470(150)	196(20)						
	200	0198			1960(200)	294(30)						

⚠ Still usable when exceeding the indexable loads but plunger indexing will not work.

Ordering Example Part Number **KUS100**

EX Example



■ Rotary Table Mounting Orientation

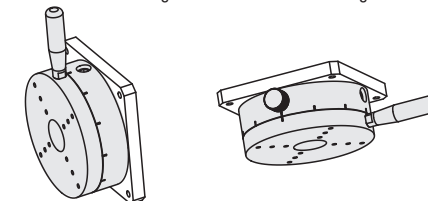
Care must be taken for installations shown on the right.

No.	Inverted Mounting	Vertical Side Mounting
50	○	○
100	△	○
200	△	△

○ Usable, though limitations apply for loads and moments.  
△ Performance may be seriously affected depending on application.  
⚠ Make sure to take precaution against load from falling if failure occurs in this application.

• Vertical Side Mounting

• Inverted Mounting



# Manual Units - Overview

# Manual Units Standard

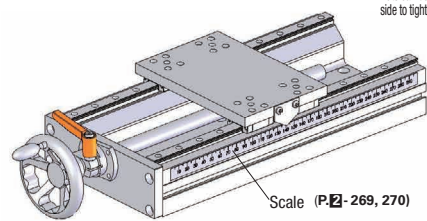
## Product List

Type		Manual	Motorized (with Motor)
Standard		Features: Units best suited for simplified positioning. Shipping cost is small. P2018	Type: KUK / KUG Listed on our website
Rapid Feed		Features: Built-in speed multiplier enables feed rate of 2.5 times of the standard units. P2019	-
With Position Indicator	Standard	Features: Position Indicator allows easy position adjustments. P2020	-
	Elevator Type	Features: Units suited for up-and-down movements. P2023	-
Table Fixed Type		Features: Direct table clamping avoids position drifts. P2021	-
Handwheel Orientation Configurable	Standard	Features: Handwheel orientation is selectable. Best suited for use in limited spaces. P2022	-
	Elevator Type	Features: Units suited for up-and-down movements. P2025	-
Symmetrical Action Dual Carriages		Features: Right and left tables move simultaneously. Usable as an inspection component. P2026	-

⚠ Description of Rotary Tables KUS si moved to P.1983.

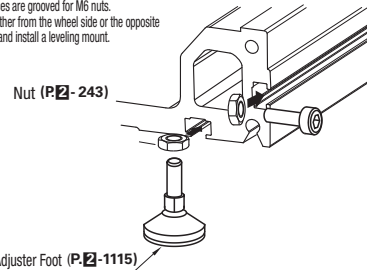
## Example App. Example of Manual Units

**Horizontal**  
Scales can be installed on the frame side surfaces.

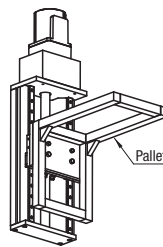


\* Application Example of KUE14-C-320

**Usage of Frame Slots**  
Side and bottom surfaces are grooved for M6 nuts. Nuts can be inserted either from the wheel side or the opposite side to tighten screws and install a leveling mount.



**Transfer**  
Used to move workpieces vertically.



Features: Units best suited for simple manual positioning.

**Standard**

**Handwheel Type A**  
Plastic Handle

**Handwheel Type B**  
Folding Type

**Handwheel Type C**  
Five Spoked Handwheel

Enlarged View of Nut Slot

Use M6 nuts.

**Components**

Parts	Base	Table	Lead Screw	Lead Screw Nut	Nut Bracket	Side Plate
M Material	Aluminum Alloy	Aluminum Alloy	S45C	Brass	Aluminum Alloy	Aluminum Alloy
S Surface Treatment	Clear Anodize	Clear Anodize	Black Oxide	-	Clear Anodize	Clear Anodize

4-M6, Depth 18

4-M6, Depth 10

2-M4, Depth 8 (Back side also)

Effective Stroke S/2 (Note 1: Stroke Limit S/2+5)

Effective Stroke S/2 (Note 1: Stroke Limit S/2+5)

Rotation Stopper Set

Mounting Hole Pitch S

Note 1) Stroke limit is where stroke reaches the mechanical limit.

Part Number	Type	No.	Handwheel Type	Base Length L (mm)	Effective Stroke St (mm)	Lead Screw		Allowable Load (N)			Allowable Moment (N·m)			Base Mounting Hole		(K)			Mass (kg)		
						Thread Dia.	Lead	Horizontal	Vertical	Ma	Mb	Mc	S	o (Number of Holes)	A	B	C	A	B	C	
KUE	14	A	Plastic Handle	170	53	14	3	245	49	7	7	13	150	4	100	82	115	2.9	2.9	3.2	
				220	103													3.4	3.4	3.7	
				320	203													4.4	4.4	4.7	
				370	253													4.9	4.9	5.2	
				420	303													5.4	5.4	5.7	
				470	353													5.9	5.9	6.2	
	20	B	Plastic Offset Handwheel - Folding Type	170	53	20	4	1470	294	43	43	81	150	4	103	85	118	3.5	3.5	3.8	
				220	103													4	4	4.3	
				320	203													5	5	5.3	
				370	253													5.5	5.5	5.8	
				420	303													6	6	6.3	
				470	353													6.5	6.5	6.8	

Ordering Example: Part Number - Handwheel Type - L  
KUE14 - A - 320

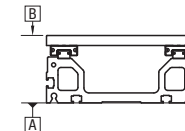
Part Number	Type	No.	Handwheel Type	Unit Price 1 ~ 2 pc(s).					
				L=170	L=220	L=320	L=370	L=420	L=470
KUE	14	A	A						
			B						
			C						
	20	B	B						
			A						
			C						

**Accuracy**

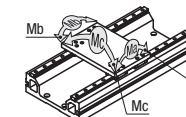
Type	Parallelism (mm)	Backlash (mm)
KUE	0.15	0.3

⚠ Parallelism is the degree of running parallelism for dimension B against dimension A. (See the diagram on the right.)  
⚠ Backlash is not a guaranteed value but reference value.

**Parallelism Fig.**



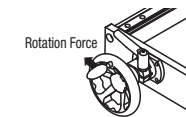
**Moment Diagram**



**Required Torque, Required Turning Force**

Part Number	Type	No.	Required Torque (N·m)		Required Turning Force (N)	
			Horizontal	Vertical	Horizontal	Vertical
KUE	14	A	0.04	0.2	1.5	7.7
			0.06	0.4	2.3	16.2

**Turning Force Fig.**



⚠ Torque and turning force required at max. load capacity.  
⚠ Turning force is the force that rotates the handwheel. (See the diagram on the right.)  
⚠ Vertical values are those when elevating the table.

