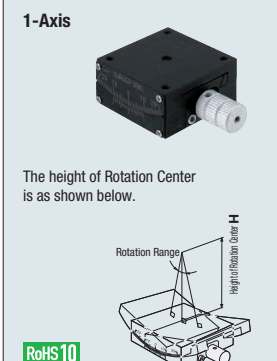


# [High Precision] Dovetail, Goniometer Stages

1-Axis / 2-Axis

Positioning Stages

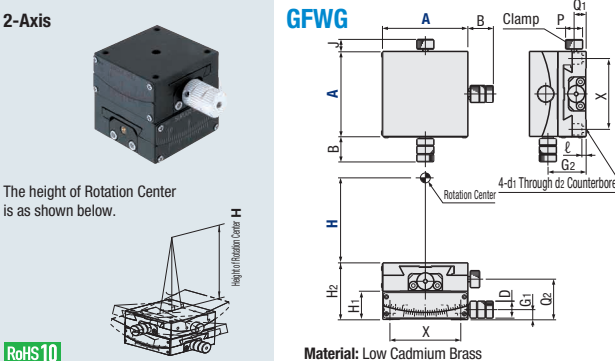
### 1-Axis



The height of Rotation Center is as shown below.

**Material:** Low Cadmium Brass  
**Surface Treatment:** Black Fluororesin Treatment

### 2-Axis



The height of Rotation Center is as shown below.

**Material:** Low Cadmium Brass  
**Surface Treatment:** Black Fluororesin Treatment

### Table Mounting Hole Dimensions

Part Number	Dimensions
A25	25x25, 4-M2 Depth 3, 4-M2 Depth 3
A30	30x30, 4-M3 Depth 3, 4-M2 Depth 3
A40	40x40, 4-M3 Depth 4, 4-M3 Depth 4
A50	50x50, 8-M3 Depth 3, 4-M3 Depth 3
A60	60x60, 4-M4 Depth 6, 4-M3 Depth 5
A80	80x80, 8-M4 Depth 6, 4-M3 Depth 5

### 1-Axis Performance

Part Number	Type	A-H	B	J	E	F	H <sub>1</sub>	H <sub>2</sub>	D	G	P	Q	X	I	d <sub>1</sub>	d <sub>2</sub>	Accessories (4 pcs.)
25-20	GFG	19	9	15	10	5.5	10	6.2	20	3	2.5	4.2					SCB2-6
25-35		19	9	15	10	6	10	7.7	20	3	2.5	4.2					SCB2-8
30-30		19.5	8.7	14	10	6.5	6	6.3	13	5	2.5	3.8					SCB3-6
30-44		19.5	8.7	13	10	6.5	6	6.3	13	5	2.5	3.8					SCB3-8
40-25		17.5	8	15	9	4.8	10	5.8	32	2	3.5	6					SCB3-6
40-40		18	8	20	12	8.5	10	9.7	32	5	3.5	6					SCB3-6
40-60		18	8	20	12	8.5	10	9.7	32	5	3.5	6					SCB3-6
50-50		18	7.7	18	12	7	10	7	40	3	3.5	6					SCB4-8
50-68		18	7.7	18	12	8	10	8	40	3	3.5	6					SCB4-8
50-86		18	7.7	18	12	8	10	8	40	3	3.5	6					SCB4-12
60-35		18	8.6	25	12	9	12	10	50	3	4.5	8					SCB4-12
60-60		18	8.6	20	12	7	12	8.5	50	3	4.5	8					SCB4-12
60-80		18	8.6	20	12	7	12	8.5	50	3	4.5	8					SCB4-12
80-100		25	14	30	15	11	15	14	70	7	4.5	8					SCB4-12
80-130	25	14	30	15	11	15	13	70	7	4.5	8					SCB4-12	

### Performance

Part Number	Type	A-H	Stage (mm)	Height of Rotation Center H (mm)	Travel Distance	Travel per Rotation	Load Capacity (N)	Weight (kg)
25-20	GFG	19	25 x 25	20±0.1	±15°	≈2.0°	19.6	0.07
25-35		19	25 x 25	35±0.1	±10°	≈2.06°	9.8	0.10
30-30		19.5	30 x 30	30±0.1	±10°	≈1.5°	29.4	0.24
30-44		19.5	30 x 30	44±0.1	±10°	≈1.89°	58.8	0.58
40-25		17.5	40 x 40	25±0.1	±20°	≈1.33°	49.0	0.64
40-40		18	40 x 40	40±0.1	±15°	≈1.55°		
40-60		18	40 x 40	60±0.1	±10°	≈1.2°		
50-50		18	50 x 50	50±0.1	±8°	≈0.97°		
50-68		18	50 x 50	68±0.1	±8°	≈2.0°		
50-86		18	50 x 50	86±0.1	±25°	≈1.3°		
60-35		18	60 x 60	35±0.1	±20°	≈1.0°		
60-60		18	60 x 60	60±0.1	±15°	≈1.0°		
60-80		18	60 x 60	80±0.1	±18°	≈1.0°		
80-100		25	80 x 80	100±0.1	±15°	≈1.0°		
80-130	25	80 x 80	130±0.1	±15°	≈1.0°			

Resolution (Vernier Scale Indication): 0.17/division

### 2-Axis Performance

Part Number	Type	A-H	B	J	H <sub>1</sub>	H <sub>2</sub>	D	G <sub>1</sub>	G <sub>2</sub>	P	Q <sub>1</sub>	Q <sub>2</sub>	X	I	d <sub>1</sub>	d <sub>2</sub>	Accessories (4 pcs.)
25-20	GFWG	19	9	15	30	10	6	21.15	10	7.7	20.5	20	3	2.5	4.2		SCB2-6
30-30		19.5	8.7	13	27	10	6.5	19.5	6	6.3	19.5	13	5	2.3	3.8		SCB2-8
40-25		17.5/18*	8	20	35	12	8.5	25.8	10	9.7	24.8	32	5	3.5	6		SCB3-6
40-40		18	8	20	40	12	8.5	29.7	10	9.7	28.5	32	5	3.5	6		SCB3-8
50-50		18	7.7	18	36	12	8	25	10	8	25	40	3	3.5	6		SCB3-6
50-68		18	7.7	18	36	12	8	26	10	8	26	40	3	3.5	6		SCB3-6
60-35		18	8.6	20	45	12	7	30	12	8.5	30	50	3	4.5	8		SCB4-8
60-60		18	8.6	20	40	12	7	28.5	12	8.5	27	50	3	4.5	8		SCB4-8
80-100		25	14	30	60	15	11	44	15	13	41	70	7	4.5	8		SCB4-12

\* GFWG40-25 handle length (B): Top 17.5, Bottom 18mm

### Performance

Part Number	Type	A-H	Stage Surface (mm)	Height of Rotation Center H (mm)	Travel Distance	Travel per Rotation	Allowable Moment Load (N • m)	Load Capacity (N)	Weight (kg)
25-20	GFWG	19	25 x 25	20±0.1	(Top) ±15° / (Bottom) ±10°	(Top) = 2.0° / (Bottom) = 2.0°	0.3	19.6	0.14
30-30		19.5	30 x 30	30±0.1	(Top) ±10° / (Bottom) ±10°	(Top) = 2.06° / (Bottom) = 1.5°	0.5	9.8	0.20
40-25		17.5	40 x 40	25±0.1	(Top) ±20° / (Bottom) ±15°	(Top) = 2.2° / (Bottom) = 1.89°	0.8	27.4	0.42
40-40		18	40 x 40	40±0.1	(Top) ±15° / (Bottom) ±10°	(Top) = 1.89° / (Bottom) = 1.33°	1.0	26.4	0.48
50-50		18	50 x 50	50±0.1	(Top) ±10° / (Bottom) ±10°	(Top) = 1.55° / (Bottom) = 1.2°	1.0	24.5	0.72
50-68		18	50 x 50	68±0.1	(Top) ±10° / (Bottom) ±8°	(Top) = 1.2° / (Bottom) = 0.97°	1.0	24.5	0.72
60-35		18	60 x 60	35±0.1	(Top) ±25° / (Bottom) ±20°	(Top) = 2.0° / (Bottom) = 1.3°	1.5	51.9	1.30
60-60		18	60 x 60	60±0.1	(Top) ±20° / (Bottom) ±15°	(Top) = 1.3° / (Bottom) = 1.0°	2.0	52.9	1.16
80-100		25	80 x 80	100±0.1	(Top) ±18° / (Bottom) ±15°	(Top) = 1.0° / (Bottom) = 1.0°	2.0	42.1	1.28

Resolution (Vernier Scale Indication): 0.17/division

**Part Number Example**

Part Number: **GFG40-25**  
GFWG60-60


**Part Number Alterations**

Part Number: **GFG40-25 - (NR)**  
GFWG60-60 - NR

**Alteration**

**Feed Knob Position Change**

**Side Mount - Right / Left Reversed**

Spec. 

Code: **NR**


See the CAD data for the details.

# [High Precision] Cross Roller, Goniometer Stage

1-Axis / 2-Axis

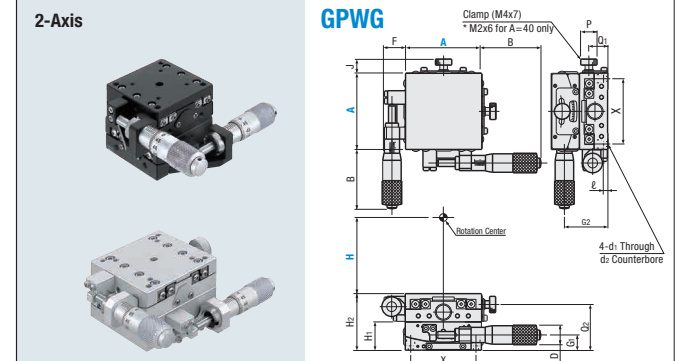
Positioning Stages

### 1-Axis



**Material:** Aluminum Alloy  
**Surface Treatment:** GPG40/60: Black Anodize  
PG50/70: Clear Anodize

### 2-Axis



**Material:** Aluminum Alloy  
**Surface Treatment:** GPWG40/60: Black Anodize  
PWG50/70: Clear Anodize

### Table Mounting Hole Dimensions

Part Number	Dimensions
A40	40x40, 4-M2 Depth 4, 4-M3 Depth 3
A50	50x50, 8-M3 Depth 4, 4-M3 Depth 2
A60	60x60, 4-M4 Depth 5, 4-M3 Depth 5
A70	70x70, 8-M4 Depth 4, 8-M3 Depth 4

### 1-Axis Performance

Part Number	Type	A-H	B	J	E	F	H <sub>1</sub>	H <sub>2</sub>	D	G	P	Q	X	I	d <sub>1</sub>	d <sub>2</sub>	Accessories (4 pcs.)
40-40	GPG	38	5.5	7.5	14	20	13	11	3.8	14	32				3.5	6	SCB3-6
40-60		38	5.5	7.5	14	20	13	11	3.8	15	32				3.5	6	SCB3-6
50-50		31	13	11.5	18	18	13	9.3	15	10	40				4.5	8	SCB4-10
50-68		31	13	11.5	18	18	13	9.3	15	10	40				4.5	8	SCB4-10
50-86		31	13	11.5	18	18	13	9.3	15	10	40				4.5	8	SCB4-10
60-50		31	13.5	7.5	14	25	13	12.9	15	15.5	50	5			4.5	8	SCB4-10
60-75		31	13.5	7.5	14	25	13	12.9	15	15.9	50	5			4.5	8	SCB4-10
60-100		31	13.5	7.5	14	25	13	12.9	15	16.4	50	5			4.5	8	SCB4-10
60-125		31	13.5	7.5	14	25	13	12.8	15	16.3	50	5			4.5	8	SCB4-10
70-70		52	13.3	12.5	21.5	26	18	14	15	16	60	4					SCB4-8
70-96		52	13.3	12.5	21.5	26	18	14	15	17.5	60	4					SCB4-8
70-122		52	13.3	12.5	21.5	26	18	14	15	17.5	60	4					SCB4-8

### Performance

Part Number	Type	Stage Surface (mm)	Height of Rotation Center H (mm)	Rotation Center Runout	Travel Distance	Resolution (1/division) (Micrometer)	Load Capacity (N)	Moment Capacity (N•m)	Moment Rigidity (1/N•cm)	Weight (kg)	Accessories (4 pcs.)				
40-40	GPG	40 x 40	40±0.2	±7°	≈42	≈42	29.4	1.0	0.8	0.9	1.30	1.15	0.27	0.13	SCB3-6
40-60		40 x 40	60±0.2	±4°	≈30	≈23	29.4	1.0	0.8	0.9	1.30	1.15	0.27	0.13	SCB3-6
50-50		50 x 50	50±0.2	±3°	≈40	≈33	49.0	1.5	1.2	2.5	0.60	0.26	0.37	0.23	SCB3-6
50-68		50 x 50	68±0.2	±3°	≈40	≈33	49.0	1.5	1.2	2.5	0.60	0.26	0.37	0.23	SCB3-6
50-86		50 x 50	86±0.2	±3°	≈40	≈33	49.0	1.5	1.2	2.5	0.60	0.26	0.37	0.23	SCB3-6
60-50		60 x 60	50±0.2	±4°	≈24	≈18	49.0	1.5	2.0	2.6	0.27	0.09	0.10	0.30	SCB4-10
60-75		60 x 60	75±0.2	±3°	≈24	≈18	49.0	1.5	2.0	2.6	0.27	0.09	0.10	0.30	SCB4-10
60-100		60 x 60	100±0.2	±3°	≈24	≈18	49.0	1.5	2.0	2.6	0.27	0.09	0.10	0.30	SCB4-10
60-125		60 x 60	125±0.2	±2.5°	≈24	≈18	49.0	1.5	2.0	2.6	0.27	0.09	0.10	0.30	SCB4-10
70-70		70 x 70	70±0.2	±3°	≈25	≈19	49.0	3.6	2.8	5.7	0.17	0.06	0.06	0.53	SCB4-8
70-96		70 x 70	96±0.2	±3°	≈25	≈19	49.0	3.6	2.8	5.7	0.17	0.06	0.06	0.53	SCB4-8
70-122		70 x 70	122±0.2	±3°	≈25	≈19	49.0	3.6	2.8	5.7	0.17	0.06	0.06	0.53	SCB4-8

### Performance

Part Number	Type	Stage (mm)	Height of Rotation Center H (mm)	Travel Distance	Min. Reading (1/division) (Micrometer)	Load Capacity (N)	Moment Capacity (N•m)	Moment Rigidity (1/N•cm)	Weight (kg)	Accessories (4 pcs.)				
40-40	GPWG	40 x 40	40±0.4	(Top) ±7° / (Bottom) ±4°	(Top) ≈ 42 / (Bottom) ≈ 30	27.4	1.0	0.8	0.9	1.57	2.30	1.57	0.26	SCB3-6
40-60		40 x 40	60±0.4	(Top) ±4° / (Bottom) ±4°	(Top) ≈ 30 / (Bottom) ≈ 23	27.4	1.0	0.8	0.9	1.57	2.30	1.57	0.26	SCB3-6
50-50		50 x 50	50±0.4	(Top) ±3° / (Bottom) ±3°	(Top) ≈ 53 / (Bottom) ≈ 40	27.4	1.5	1.2	1.5	0.97	0.52	0.97	0.46	SCB3-6
50-68		50 x 50	68±0.4	(Top) ±4° / (Bottom) ±4°	(Top) ≈ 40 / (Bottom) ≈ 33	27.4	1.5	1.2	1.5	0.97	0.52	0.97	0.46	SCB3-6
60-50		60 x 60	50±0.4	(Top) ±4° / (Bottom) ±4°	(Top) ≈ 33 / (Bottom) ≈ 24	46.0	1.5	2.0	1.5	0.37	0.18	0.37	0.62	SCB4-10
60-75		60 x 6												