

# 2016-2017 General catalog update

## Motorized Linear Stages : KX Serie

### Update

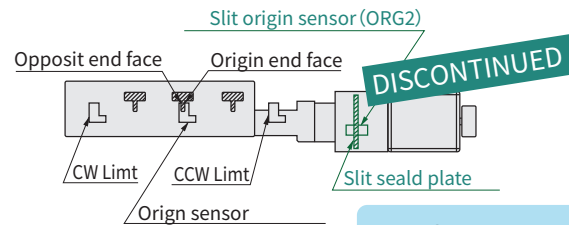
- ① Motor update
- ② Slit origin sensor replaced
- ③ Motor code update
- ④ Change of External dimension

Precision specifications and prices are unchanged by the motor modification. Motor code of XY-axis (KY) and Z-axis(KZ) changes as same as X-axis(KX).  
The slit origin sensor (ORG2) is replaced with the 3-sensor specification.  
The sensor logic switching circuit board is still installed, sensor logic switching can be performed.

### ① Motor update

	Old model	New model
Motor model no.	C7214-9015-1	PK544PMB-C18
Phases	5Phase	5Phase
Rated current	0.75A/Phase	0.75A/Phase
Size	□38mm	□42mm
Basic step angle	0.36°	0.36°
Excitation maximum still torque	0.135N · m	0.24N · m
Roter inertial moment	35 × 10 <sup>-7</sup> kg · m <sup>2</sup>	60 × 10 <sup>-7</sup> kg · m <sup>2</sup>
Mass	0.27kg	0.3kg
Temperature	-10°C~+50°C	-10°C~+50°C

### ② Slit origin sensor replaced



Replace to 3-sensor model.

The connector is panel mounted.

### ③ Motor code update

Model Select code Option code  
**KX0725C-L 5**

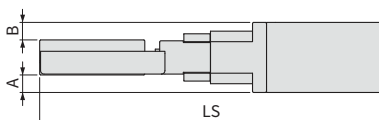
1	2	3	4	5	6
<b>1</b> Axis	<b>2</b> Table size	<b>3</b> Travel length			
X X-axis	07 □70mm	25	25mm		
Y XY-axis	08 □80mm	30	30mm		
Z Z-axis	10 □100mm	40	40mm		
	12 □120mm	50	50mm		
<b>4</b> Guide	<b>5</b> Cable option				
C closed	Blank	2m			
	1	2m One end loose			
	2	4m			
<b>5</b> Sensor cover position	3	4m One end loose			
L L position	4	Only connector (Cable is not included)			
R Opposite hand	5	Cable is not included (Standard)			
	6	Robot cable 2m			
	7	Robot cable 4m			
	8	Robot cable 4m One end loose			
	9	Robot cable One end loose			

Model Select code Option code  
**KX0725-LG 5**

1	2	3	4	5
<b>1</b> Axis	<b>2</b> Table size	<b>3</b> Travel length	<b>4</b> Sensor cover position	
X X-axis	07 □70mm	25	25mm	L L position
Y XY-axis	08 □80mm	30	30mm	R Opposite hand
Z Z-axis	10 □100mm	40	40mm	
	12 □120mm	50	50mm	
<b>5</b> Cable option				
Blank	2m			
1	2m One end loose			
2	4m			
3	4m One end loose			
4	Only connector (Cable is not included)			
5	Cable is not included (Standard)			
6	Robot cable 2m			
7	Robot cable 4m			
8	Robot cable 4m One end loose			
9	Robot cable One end loose			

Change of the select code. Add to "G" in to the select code.

### ④ Change of External dimensions



A : The distance of the table bottom to the stage bottom.  
B : The distance of the tabletop to the surface.  
LS : Length(MAX length)

Product No.	A		B		LS	
	Old	New	Old	New	Old	New
KX0725	10.5	12.5	6.5	8.5	209.5	207.5
KX0830	9.5	11.5	2.5	4.5	227	225
KX1040					257	255
KX1250					288	286

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## Motorized Linear Stages : KS101 Serie

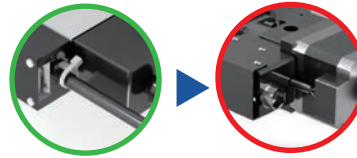
### Update

- ① Micro step motor ( M S ) update
- ② Motor code update
- ③ Change of External dimention

Precision specifications and prices are unchanged by the motor modification. Motor code of XY-axis(101-30)and Z-axis(103-30)changes as same as X-axis(101-30).

### ① Micro step motor update

	旧型式	新型式
Motor model no.	C7214-9015-1	PK544PMB-C18
Phases	5Phase	5Phase
Rated current	0.75A/Phase	0.75A/Phase
Size	□38mm	□42mm
Basic step angle	0.36°	0.36°
Excitation maximus still torque	0.135N · m	0.24N · m
Roter inertial moment	35 × 10 <sup>-7</sup> kg · m <sup>2</sup>	60 × 10 <sup>-7</sup> kg · m <sup>2</sup>
Mass	0.27kg	0.3kg
Temperature	-10°C~+50°C	-10°C~+50°C



The connector is panel mounted.

### ② Motor code update

Model	Select code	Option code
KS101-30	LM	S5
KS101-30	L	G5

1 Axis	2 Travel length	3 Sensor cover position
1 X-axis 2 XY-axis 3 Z-axis	30 30mm	L L position R Opposite hand

4 Motor option	5 Cable option
C Standard MS <input checked="" type="checkbox"/> 38Microstep PA <input type="checkbox"/> 28αStep(DC) QA <input type="checkbox"/> 42αStep(AC)	Blank 2m 1 2m One end loose 2 4m 3 4m One end loose 4 Only connector (Cable is not included) 5 Cable is not included (Standard) 6 Robot cable 2m 7 Robot cable 4m 8 Robot cable 4m One end loose 9 Robot cable One end loose

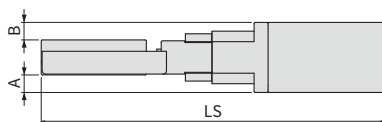
1 Axis	2 Travel length	3 Sensor cover position
1 X-axis 2 XY-axis 3 Z-axis	30 30mm	L L position R Opposite hand

4 Motor option	5 Cable option
C Standard G <input checked="" type="checkbox"/> High resolution PA <input type="checkbox"/> 28α Step (DC) QA <input type="checkbox"/> 42α Step (AC)	Blank 2m 1 2m One end loose 2 4m 3 4m One end loose 4 Only connector (Cable is not included) 5 Cable is not included (Standard) 6 Robot cable 2m 7 Robot cable 4m 8 Robot cable 4m One end loose 9 Robot cable One end loose

Base step angle 0.36° motor's code are change for "MS" to "G".

### ③ Change of External dimentions



A : The distance of the table bottom to the stage bottom.  
B : The distance of the tabletop to the surface.  
LS : Length(MAX length)

Product No.	A		B		LS	
	Old	New	Old	New	Old	New
KS101-30	3	5	5	7	165.5	159.5

mm

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## Motorized Linear Stages : KS102 Serise

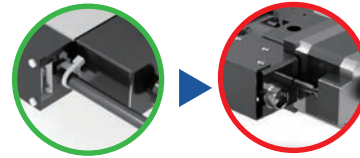
### Update

- ① Motor update
- ② Motor code update
- ③ Change of External dimention

Precision specifications and prices are unchanged by the motor modification.

### ① Motor update

	旧型式	新型式
Motor model no.	C7214-9015-1	PK544PMB-C18
Phases	5Phase	5Phase
Rated current	0.75A/Phase	0.75A/Phase
Size	□38mm	□42mm
Basic step angle	0.36°	0.36°
Excitation maximus still torque	0.135N · m	0.24N · m
Roter inertial moment	35 × 10 <sup>-7</sup> kg · m <sup>2</sup>	60 × 10 <sup>-7</sup> kg · m <sup>2</sup>
Mass	0.27kg	0.3kg
Temperature	-10°C~+50°C	-10°C~+50°C



The connector is panel mounted.

### ② Motor code update

Model: KS102-30   -5

1 Axis: 1 X-axis

2 Travel length: 30 30mm, 70 70mm, 100 100mm

3 Sensor cover position: L L position, R Opposite hand

4 Motor option: Blank Standard, QA □42 α Step(AC)

5 Cable option: Blank 2m, 1 2m One end loose, 2 4m, 3 4m One end loose, 4 Only connector (Cable is not included), 5 Cable is not included (Standard), 6 Robot cable 2m, 7 Robot cable 4m, 8 Robot cable 4m One end loose, 9 Robot cable One end loose

※Omitted of cable for a step motor.

Model: KS102-30   G-5

1 Axis: 1 X-axis

2 Travel length: 30 30mm, 70 70mm, 100 100mm

3 Sensor cover position: L L position, R Opposite hand

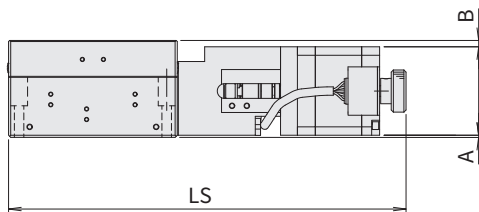
4 Motor option: G Standard, QA □42 α Step(AC)

5 Cable option: Blank 2m, 1 2m One end loose, 2 4m, 3 4m One end loose, 4 Only connector (Cable is not included), 5 Cable is not included (Standard), 6 Robot cable 2m, 7 Robot cable 4m, 8 Robot cable 4m One end loose, 9 Robot cable One end loose

※Omitted of cable for a step motor.

Change of the select code. Add to "G" in to the select code.

### ③ Change of External dimentions



A : The distance of the motor bottom to the tablr bottom.  
 B : The distance of the motor upper to the tablr upper.  
 LS : Length(MAX length)

Product No.	A		B		LS	
	Old	New	Old	New	Old	New
KS102-30	3	1	2	3	209.5	203.5
KS102-70			3		279.5	273.5
KS102-100			3		324.5	318.5

# 2016-2017 Catalog update

## Motorized Goniometer Stage : KG05/KA05 Series

### Update

- ① Motor
- ② Slit origin sensor
- ③ Motor select code
- ④ Dimensions

Precision specifications and prices are unchanged by the motor modification.

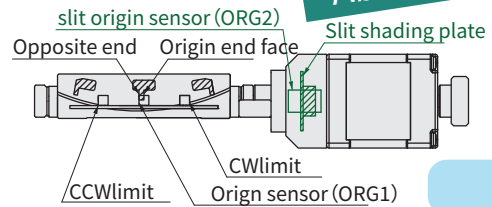
Motor code of 2-axis KA05 changes as same as 1-axis KG05.

Eliminate the use of slit origin sensors (ORG2) use three sensors as standard specifications.

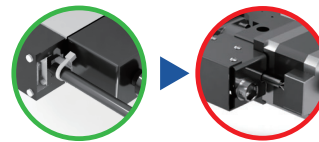
### ① Motor

	Current model	New model	New model
Motor model	C9582-9015-1	PK525HPMB-C1	PK544PMB-C18
Phases	5phases	5phases	5phases
Rated current	0.75A/phases	0.75A/phases	0.75A/phases
Size	□38mm	□28mm	□42mm
Basic step angle	0.36°	0.36°	0.36°
Excitation max torque	0.135N · m	0.09N · m	0.24N · m
Rotor moment of inertia	35×10 <sup>-7</sup> kg · m <sup>2</sup>	19×10 <sup>-7</sup> kg · m <sup>2</sup>	60×10 <sup>-7</sup> kg · m <sup>2</sup>
Weight	0.27kg	0.2kg	0.3kg
Ambient temperature	-10°C~+50°C	-10°C~+50°C	-10°C~+50°C

### ② Slit origin sensor



3sensor



Panel mount connector  
※Image is for illustration purposes.

### ③ Motor select code

Model Select code Option code  
KG05-W050A□-5

1 Axis	2 Work distance(W.D.)	3 Sensor cover position	4 Cable options
G 1-axis	050 50mm	None L	None 2m
A 2-axes	068 68mm	R Oppsit side	1 2m Rose on one end
	086 86mm		2 4m
			3 4m Rose on one end
			4 Connector only (no cable)
			5 No cable (standard)

Model Select code Option code  
KG05-W050A□-□5

1 軸	2 Work distance(W.D.)	3 Sensor cover position	4 Motor options	5 Cable options
G 1-axis	050 50mm	L L	H 28mm Stpper	None 2m
A 2-axes	068 68mm	R Oppsit side	G 42mm Stpper	1 2m Rose on one end
	086 86mm			2 4m
				3 4m Rose on one end
				4 Connector only (no cable)
				5 No cable (standard)

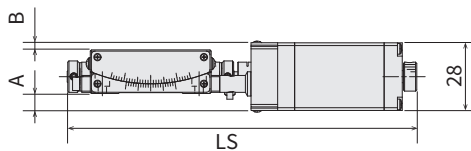
Added motor option and □28mm(H)/□42mm(G) can be selected.

The L position code changes from "None" to "L".

\* There is no difference in SPECS depending on the selected motor. External weight and dimensions differ.

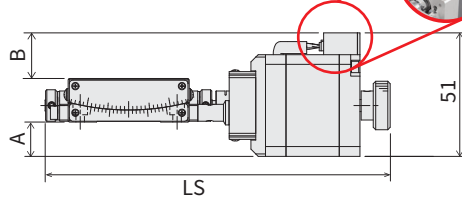
### ④ Dimentions

H : □28mm stepper motor



Model	A		B		LS	
	Old	New	Old	New	Old	New
KG05-W050A□-H	12.05	7.1	7.95	2.9		
KG05-W068A□-H	11.4	6.4	8.6	3.6	156	144.5
KG05-W086A□-H	12.15	7.2	7.85	2.8		

G : □42mm stepper motor



Position the motor connector on the top side of the stage.

Model	A		B		LS	
	Old	New	Old	New	Old	New
KG05-W050A□-G	12.05	14.1	7.95	19		
KG05-W068A□-G	11.4	13.4	8.6	19.6	156	142.5
KG05-W086A□-G	12.15	14.2	7.85	18.9		

A: Distance from bottom of table to bottom of stage  
B: Distance from desktop to stage  
LS: Total length (stroke center)

# 2016-2017 Catalog update

## Motorized Goniometer Stage : KG07/KA07 Series

### Update

- ① Motor
- ② Slit origin sensor
- ③ Motor select code
- ④ Dimensions

Precision specifications and prices are unchanged by the motor modification.

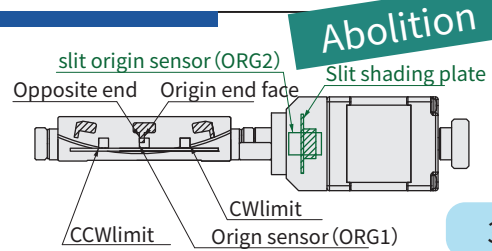
Motor code of 2-axis KA07 changes as same as 1-axis KG07.

Eliminate the use of slit origin sensors (ORG2) use three sensors as standard specifications.

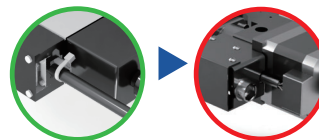
### ① Motor

Motor model	Current model	New model	New model
	C9582-9015-1	PK525HPMB-C1	PK544PMB-C18
Phases	5phases	5phases	5phases
Rated current	0.75A/phases	0.75A/phases	0.75A/phases
Size	□38mm	□28mm	□42mm
Basic step angle	0.36°	0.36°	0.36°
Excitation max torque	0.135N · m	0.09N · m	0.24N · m
Rotor moment of inertia	35 × 10 <sup>-7</sup> kg · m <sup>2</sup>	19 × 10 <sup>-7</sup> kg · m <sup>2</sup>	60 × 10 <sup>-7</sup> kg · m <sup>2</sup>
Weight	0.27kg	0.2kg	0.3kg
Ambient temperature	-10°C~+50°C	-10°C~+50°C	-10°C~+50°C

### ② Slit origin sensor



3sensor



Panel mount connector  
※Image is for illustration purposes.

### ③ Motor select code

Model	Select code	Option code
KG07-W070	□ □	□ □ - 5

1 Axis	2 Axis
G	1-axis
A	2-axes

Type	CWLS	ORG1	CCWLS	ORG2
A	N.C.	N.C.	N.C.	N.C.
B	N.O.	N.O.	N.O.	N.O.
C	N.C.	N.O.	N.C.	N.O.

2 Work distance(W.D.)	3 Cable code
070   70mm	None   2m
096   96mm	1   2m Rose on one end
122   122mm	2   4m
	3   4m Rose on one end
	4   Connector only (no cable)
	5   No cable (standard)

1 Axis	2 Axis
G	1-axis
A	2-axes

Type	CWLS	ORG	CCWLS	ORG2
A	N.C.	N.C.	N.C.	N.C.
B	N.O.	N.O.	N.O.	N.O.
C	N.C.	N.O.	N.C.	N.O.

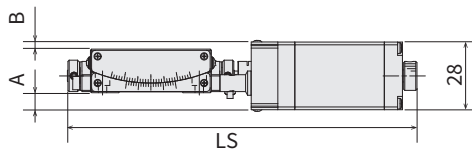
2 Work distance(W.D.)	3 Sensor logic	4 Sensor cover position	5 Motor options	6 Cable code
070   70mm	L   L	H   □28motor	None   2m	1   2m Rose on one end
096   96mm	R   Oppsit side	G   □42motor	2   4m	2   4m
122   122mm			3   4m Rose on one end	3   4m Rose on one end
			4   Connector only (no cable)	4   Connector only (no cable)
			5   No cable (standard)	5   No cable (standard)

Added motor option and □28mm(H)/□42mm(G) can be selected.  
The L position code changes from "None" to "L".

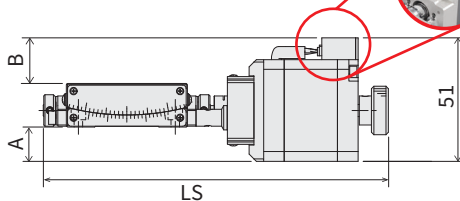
\* There is no difference in SPECS depending on the selected motor. External weight and dimensions differ.

### ④ Dimentions

H : □28Motor



G : □42Motor



A: Distance from bottom of table to bottom of stage  
B: Distance from desktop to stage  
LS: Total length (stroke center)

Model	A		B		LS	
	Old	New	Old	New	Old	New
KG07-W070□□-H	10.1	5.1	1.9	-3.1	190	174.5
KG07-W096□□-H	7.25	2.2	4.75	-0.2		
KG07-W122□□-H	7.15	2.1	4.85	-0.1		

Position the motor connector on the top side of the stage.

Model	A		B		LS	
	Old	New	Old	New	Old	New
KG07-W070□□-G	10.1	12.1	1.9	3.9	190	175.5
KG07-W096□□-G	7.25	9.2	4.75	6.8		
KG07-W122□□-G	7.15	9.1	4.85	6.9		

# 2016-2017 General catalog update

## Motorized Rotary Stage : KS402-75

### Update

- ① Motor update
- ② Motor code update
- ③ Change of External dimension

Precision specifications and prices are unchanged by the motor modification. This update only KS402-75. KS402-100/KS402-180 is unchange.

### ① Motor update

	Old model	New model
Motor model no.	C7214-9015-1	PK544PMB-C18
Phases	5Phase	5Phase
Rated current	0.75A/Phase	0.75A/Phase
Size	□38mm	□42mm
Basic step angle	0.36°	0.36°
Excitation maximus still torque	0.135N · m	0.24N · m
Roter inertial moment	35 × 10 <sup>-7</sup> kg · m <sup>2</sup>	60 × 10 <sup>-7</sup> kg · m <sup>2</sup>
Mass	0.27kg	0.3kg
Temperature	-10°C ~ +50°C	-10°C ~ +50°C

### ② Motor code update

Model    Select code    Option code  
**KS402-75-5**

1 Stage size

75	Φ75mm
100C	Φ100mm
180C	Φ180mm

2 Cable option

Blank	2m
1	2m One end loose
2	4m
3	4m One end loose
4	Only connector (Cable is not included)
5	Cable is not included (Standard)
6	Robot cable 2m
7	Robot cable 4m
8	Robot cable 4m One end loose
9	Robot cable One end loose

Model    Select code    Option code  
**KS402-75G-5**

1 Stage size

75G	Φ75mm
100C	Φ100mm
180C	Φ180mm

2 Cable option

Blank	2m
1	2m One end loose
2	4m
3	4m One end loose
4	Only connector (Cable is not included)
5	Cable is not included (Standard)
6	Robot cable 2m
7	Robot cable 4m
8	Robot cable 4m One end loose
9	Robot cable One end loose

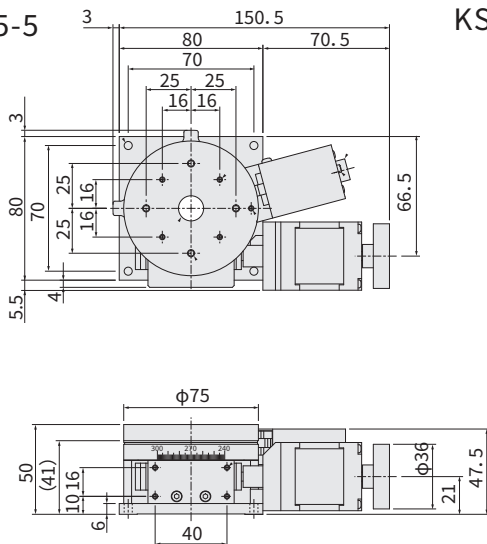
※100/180 Unchange.

※100/180 Unchange.

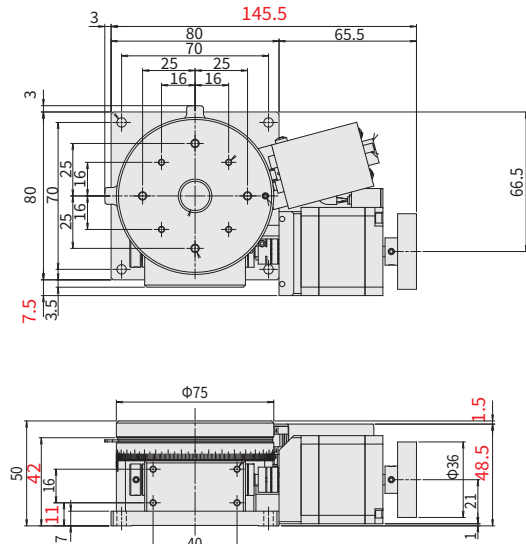
Change of the select code. Add to "G" in to the select code.

### ③ Change of External dimention

KS402-75-5



KS402-75-G5



# 2016-2017 Catalog update

## Stepping motor rotation speed-torque characteristic diagram

This is a comparison material of motor torque characteristics.

This product has the same warranty specifications regardless of the motor size.

External weight and dimensions are different.

Please use within the specifications regardless of the difference in torque.

Product model (example)-Mounted motor

①KG05-W070A-5	□38mm	C9582-9015-1
②KG05-W070AL-H5	□28mm	PK525HPMB-C1
③KG05-W070AL-G5	□42mm	PK544PMB-C18

Measurement condition:24V DC power supply motor driver  
(Set current: 0.75A/phase Step angle: 0.36°)

