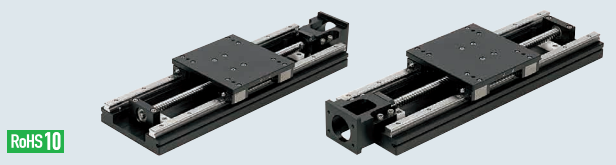


KU – Single Axis Units

Rolled Ball Screw Type

Linear Actuators



RoHS10

KUA Servo Motor Type
KUB Stepping Motor Type

Note 1) When fixing a workpiece to the table, make sure that the screw length is not longer than plate thickness t_2 .
 Note 2) Access hole is provided when $L=340$ (except $L=100$).
 Note 3) Stroke limit is the stroke at the point of contact with the stopper.
 Note 4) Some motor brackets have D dimensions smaller than D1. When selecting couplings, refer to "Coupling Application Examples Parts Numbers" below.
 Ⓞ For KUB Motor installation interface drawing and dimensions, please see the right-hand page.

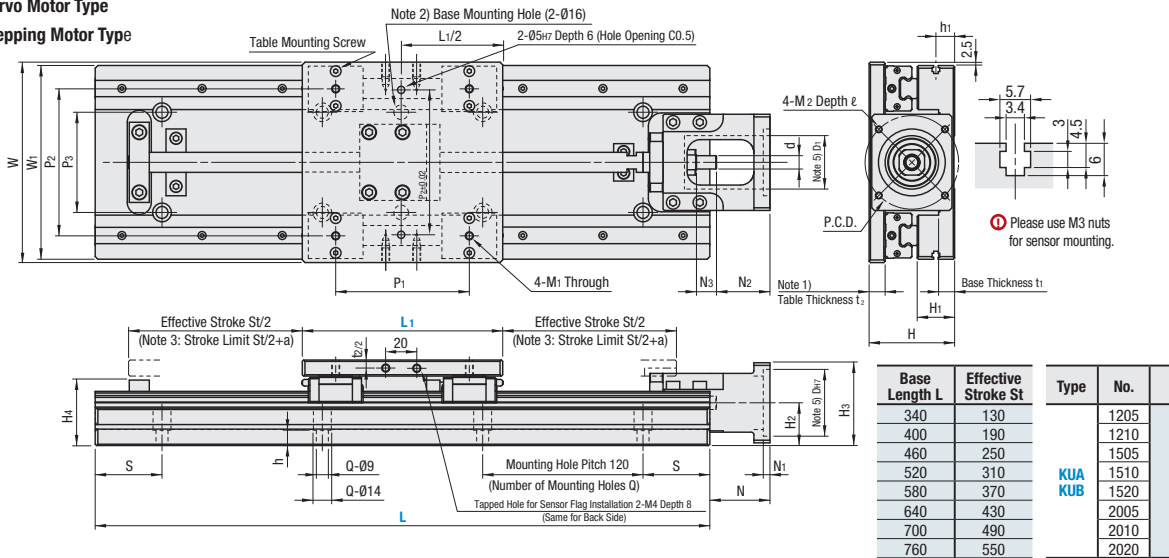


Table Mounting Screw
 Note 2) Base Mounting Hole (2-Ø16)
 2-Ø5 $\frac{1}{2}$ Depth 6 (Hole Opening C0.5)
 L1/2
 4-M2 Depth 2
 P.C.D.
 Base Thickness t_1
 Please use M3 nuts for sensor mounting.

Effective Stroke $St/2$
 (Note 3: Stroke Limit $St/2+a$)
 L1
 Effective Stroke $St/2$
 (Note 3: Stroke Limit $St/2+a$)
 H
 H2
 Note 5) Dr.
 H3
 S
 Q-09
 Q-014
 Mounting Hole Pitch 120
 (Number of Mounting Holes Q)
 Tapped Hole for Sensor Flag Installation 2-M4 Depth 8
 (Same for Back Side)

Base Length L	Effective Stroke St	Type	No.	a
340	130	KUA KUB	1205	5
400	190		1210	
460	250		1505	
520	310		1510	
580	370		1520	
640	430		2005	
700	490		2010	
760	550		2020	
820	610			

Parts	Base	Table	Motor Bracket	Nut Bracket	Fixed Side Support Unit	Support Side Bearing with Housing	Stopper
Material	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Steel	Aluminum Alloy	Plastic
Surface Treatment	Black Anodize	Black Anodize	Black Anodize	Black Anodize	Black Oxide	Black Anodize	—

Part Number	Selection	Ball Screw		Table						Coupling Application Examples Part Numbers						
		L Base Length	L1 Table Length	Diameter	Lead	W Width	H Height	H1 Guide Height	H2 Shaft Center Height	W	t2	M1	P1	P2	KUA	KUB
KUA KUB	1204 1210 *1204S *1210S 1505 1510 1520 1204L 520 1210L 580 *1204LS 640 *1210LS 700 1505L 760 1510L 820 1520L 2005L 2010L 2020L	340 400 460 520 580 640 700 760 820	100 150	12 15	150	55 64	21 28	28 32	10 12	150 160	M6	110 160	110 160	110 160	CPDW25 MCSLC25	CPDW19 MCSLC20 CPDW32 MCSLC32

Part Number	Base	Base Mounting Holes				*Motor Installation Interface (KUA)															
		W1	H1	t1	h1	P3	h	Q	S	P.C.D.	D	D1	H3	N	N1	N2	N3	d	M2	l	
KUA KUB	1204 (S) 1210 (S) 1505 1510 1520 1204L (S) 1210L (S) 1505L 1510L 1520L 2005L 2010L 2020L	145	42	10	13	9.5	75	11.5	340 400 460 520 580 640 700 760 820	150 200	340 400 460 520 580 640 700 760 820	150 200	46	30	34	49	37	32	8	M4	8

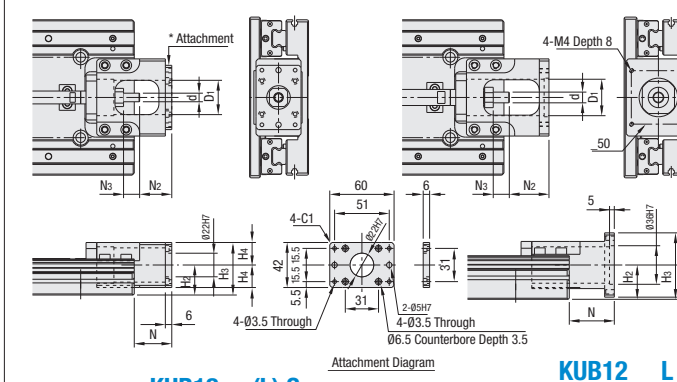
Part Number Example: **KUA1204 - 340 - 150**

KU – Single Axis Units

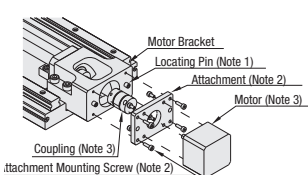
Rolled Ball Screw Type, continued

Linear Actuators

KUB Motor Installation Interface / NEMA Motor Installation Interface (KUA/KUB)



Mounting Instruction (KUB12_ (L))
 Note 1) Locating pin is press-fit into the motor bracket.
 Note 2) A motor adapter plate and 4 Pcs. of mounting screws M3 x 10 are included.
 Note 3) Motor and coupling are not included.



Part Number	Motor Installation Interface (KUB)										
Type	No.	D	D1	H3	H4	N	N2	N3	d	M2	l
Stepping Motor Type KUB	12_ (L)	50	22	33.5	49	21	35	30	8	M4	8
	*12_ S (LS)	31		58	45	40	15	10			
	15_ (L)	50	36	35.5	64	30	43	38			
	2005L 2010L 2020L				58	40	8	12			

Ⓞ KUB12_ S (LS) flanged surface (H3 dimensions) protrudes downward from the base bottom surface by 2 mm.

NEMA Motor Alterations

Type	Code	Application Motor Part Number	Coupling Application Examples
NEMA23	N2	KUA (Servo Motor) V0100-211-B-000 V0100-214-B-000 V0200-211-B-000 V0200-214-B-000 V0250-214-B-000 V0300-211-B-000 V0300-212-B-000	KUB (Stepping Motor) HT23-601 STM23X-3RX
		KUA (Servo Motor) V0400-211-C-000 V0400-212-C-000	KUB (Stepping Motor) HT34-505

NEMA Motor Installation Interface

Part Number	NEMA Motor Installation Interface (KUA/KUB)												
Type	No.	D	D1	H2	H3	H4	N	N2	N3	d	M2	l	
NEMA23	12_ (L)	47.1	38.1	35.5	28	58	42	37	15	8	M4	8	
	*12_ S (LS)				32	62	43	38	10				
	15_ (L)				34	64	30	55	37	20			12
	2005L 2010L 2020L				40	70	34	64	56	51			15
NEMA34	15_ (L)	69.9	73.03	45	34	77	43	68	50	20	12	15	
	2010L				40	83	34	77	68	50	20	12	
	2020L				34	77							

* When H2-H4<0, Motor Bracket protrudes from Base Fixing Surface.
 * When MCSLC40 is to be applied to NEMA34 series, ensure input torque is limited to 9.0N·m (=1,270 oz-in) or less.

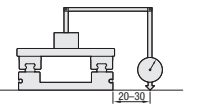
Servo Motor Application Table

Part Number	Manufacturers	Part Number	Output (W)	Flange
KUA12_ (L)	Yasukawa Electric Corp.	SGMAH-A3	30	40
		SGMAH-A5	50	
		SGMAH-01	100	
		HC-MFS053	50	
		HC-MFS13	100	
	Mitsubishi Electric Corporation	HF-MP053	50	
		HF-MP13	100	
		R2A04003F	30	
		R2A04005F	50	
		R2A04010F	100	
Sanyo Denki Co., Ltd.	R88M-W03030	30	60	
	R88M-W05030	50		
	R88M-W10030	100		
	SGMAH-02	200		
	SGMAH-04	400		
KUA15_ (L) KUA20_ L	Yasukawa Electric Corp.	HC-MFS23	200	60
		HC-MFS23	200	
		HF-MP23	200	
		HA-KP23	200	
		HC-MFS43	400	
	Mitsubishi Electric Corporation	HC-KFS43	400	
		HF-MP43	400	
		HA-KP43	400	
		R2A05020F	200	
		R2A05040F	400	
Sanyo Denki Co., Ltd.	R88M-W20030	200	60	
	R88M-W40030	400		

Accuracy / Maximum Speed

Part Number	*Positioning Repeatability Positioning (mm)	Static Load Capacity (kg)		*Parallelism (mm)		
		Horizontal	Vertical			
KUA KUB	±0.03	1679	138	L Parallelism 340 0.06 400 0.07 460 0.08 520 0.09 580 0.10 640 0.12 700 0.13 760 0.14 820 0.15		
	±0.05				153	
	±0.03					137
	±0.05					
	±0.08	169				
	±0.05		4345		169	

Parallelism Measurement



Ⓞ The table to the left lists reference values in static state. For actual life calculations, please use our Technical Calculation Software (visit the address indicated on P.568).
 Ⓞ See P.569 for Max. Speed and Static Load Capacity. See our website for Moment of Inertia.
 Ⓞ For Terminology, see P.569.

Stepping Motor Application Table

Part Number	Manufacturers	Part Number	Flange
KUB12_ (L) KUB12_ L	Oriental Motor	α Step AS46 / ASC46	42
		5-Phase RK54* (PK543)	
		5-Phase RK54* (PK544)	
		5-Phase RK54* (PK545)	
		α Step AS66 / ASC66	
		α Step AS69	
		5-Phase RK56* (PK564)	
		5-Phase RK56* (PK566)	
		5-Phase RK56* (PK569)	
		α Step AS66 / ASC66	
KUB12_ S KUB12_ LS	Oriental Motor	α Step AS69	60
		5-Phase RK56* (PK564)	
		5-Phase RK56* (PK566)	
		5-Phase RK56* (PK569)	
KUB15_ (L) KUB15_ L KUB20_ L	Oriental Motor	α Step AS69	60
		5-Phase RK56* (PK564)	
		5-Phase RK56* (PK566)	
		5-Phase RK56* (PK569)	

Part Number Alterations: **KUA1204 - L - L1 - (N2 * N3)**
KUA1204 - 340 - 150 - N2

Ⓞ KUA and KUB Sensor Set can be specified as an alteration. For details of alterations, see P.578.

KU – Single Axis Units

Precision Ball Screw Type

Linear Actuators

RoHS10

Note 1) When fixing a workpiece to the table, make sure that the screw length is not longer than plate thickness t_2 .
 Note 2) Access hole is provided when $L=340$ (except $L=100$).
 Note 3) Stroke limit is the stroke at the point of contact with the stopper.
 Note 4) Some motor brackets have D dimensions smaller than D_1 . When selecting couplings, refer to "Coupling Application Examples Part Numbers" below.
 For KUT Motor installation interface drawing and dimensions, please see the following page.

KUH Servo Motor Type
KUT Motor Type

Table Mounting Screw, Note 2) Base Mounting Hole (2- $\phi 16$), $L_1/2$, 2- $\phi 5H7$ Depth 6 (Hole Opening C0.5), 4-M2 Depth ϵ , P.C.D., Base Thickness t_1 , Note 1) Table Thickness t_2 , 4-M1 Through, N_3 , N_2 , Effective Stroke $St/2$, (Note 3: Stroke Limit $St/2+a$), L_1 , L , H_4 , H_3 , H_2 , H_1 , N_1 , N , S , F , $Q-\phi 9$, $Q-\phi 14$, Tapped Hole for Sensor Flag Installation 2-M4 Depth 8 (Same for Back Side), Mounting Hole Pitch 120 (Number of Mounting Holes Q).

Type	No.	a
KUH	1205	5
	1210	3.5
	1204S	5
	1205S	5
	1210S	3.5
KUT	1505	5
	1510	3.5
	1520	5
	2005L	5
	1210L	3.5
	1210LS	3.5
	1210LS	3.5
1505L	5	
1510L	3.5	
1520L	5	
2005L	5	
2010L	3.5	
2020L	3.5	

Parts	Base	Table	Motor Bracket	Nut Bracket	Fixed Side Support Unit	Support Side Bearing with Housing	Stopper
Material	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Aluminum Alloy	Steel	Aluminum Alloy	Plastic
Surface Treatment	Black Anodize	Black Anodize	Black Anodize	Black Anodize	Black Oxide	Black Anodize	—

Part Number	Selection	Ball Screw		Table				Coupling Application Examples Part Numbers							
		L Base Length	L ₁ Table Length	W Width	H Height	H ₁ Guide Height	H ₂ Shaft Center Height	W	t ₂	M ₁	P ₁	P ₂	KUH	KUT	
KUH KUT	1205 1210 *1204S *1205S *1210S 1505 1510 1520 1205L 1210L *1205LS *1210LS 1505L 1510L 1520L 2005L 2010L 2020L	340 400 460 520 580 640 700 760 820	100 150	12	150	55	21	28	150	10	M6	110	110	CPDW25 MCSLC25	CPDW19 MCSLC20
	CPDW32 MCSLC32													CPDW40 MCSLC40	
	CPDW40 MCSLC40													CPDW32 MCSLC32	
	CPDW25 MCSLC25													CPDW19 MCSLC20	
	CPDW32 MCSLC32													CPDW40 MCSLC40	
	CPDW40 MCSLC40													CPDW32 MCSLC32	
	KUH KUT	1505L 1510L 1520L 2005L 2010L 2020L	150 200	15	200	64	28	32	200	12	12	160	160	CPDW40 MCSLC40	CPDW32 MCSLC32
														CPDW40 MCSLC40	CPDW32 MCSLC32
														CPDW40 MCSLC40	CPDW32 MCSLC32
														CPDW40 MCSLC40	CPDW32 MCSLC32
														CPDW40 MCSLC40	CPDW32 MCSLC32
														CPDW40 MCSLC40	CPDW32 MCSLC32

Caution: Cautions are required when CPDW is used for 400W Servo Motors. Motor peak torque may exceed coupling allowable torque.

Part Number	Type	No.	Base			Base Mounting Holes			*Motor Installation Interface (KUH)																															
			W ₁	H ₄	t ₁	h ₁	P ₃	h	Q	S	P.C.D.	D	D ₁	H ₃	N	N ₁	N ₂	N ₃	d	M ₂	l																			
KUH KUT	KUH	1205 (S)	145	42	10	13	9.5	75	11.5	340	6	6	340	50	50	46	30	34	49	37	32	8	M4	8																
		1210 (S)																							400	6	8	400	80	20	70	50	45	62	45	40	10	M5	10	
		1505																							460	8	8	460	50	50	46	30	34	49	37	5	32	8	M4	8
		1510																							520	8	10	520	80	20	46	30	34	49	37	5	32	8	M4	8
		1205L (S)																							580	10	10	580	50	50	46	30	34	49	37	5	32	8	M4	8
		1210L (S)																							640	10	12	640	80	20	46	30	34	49	37	5	32	8	M4	8
	KUT	1505L	700	12	12	700	50	50	46	30	34	49	37	5	32	8	M4	8																						
		1510L	760	12	14	760	80	20	46	30	34	49	37	5	32	8	M4	8																						
		1520L	820	14	14	820	50	50	46	30	34	49	37	5	32	8	M4	8																						
		2005L	760	12	14	760	80	20	46	30	34	49	37	5	32	8	M4	8																						
		2010L	820	14	14	820	50	50	46	30	34	49	37	5	32	8	M4	8																						
		2020L	820	14	14	820	50	50	46	30	34	49	37	5	32	8	M4	8																						

Part Number Example: **KUA1204 - 340 - 150**

KU – Single Axis Units

Precision Ball Screw Type, continued

Linear Actuators

KUT Motor Installation Interface / NEMA Motor Installation Interface (KUH/KUT)

Motor Adapter Plate Installation Drawing (KUT12_L)
 Note 1) Locating pin is press-fit into the motor bracket.
 Note 2) A motor adapter plate and 4 Pcs. of mounting screws M3 x 10 are included.
 Note 3) Motor and coupling are not included.

Part Number	Motor Installation Interface (KUT)													
	Type	No.	□	D	D ₁	H ₂	H ₃	H ₄	N	N ₂	N ₃	d	M ₂	l
Stepping Motor Type	12 (L)	50	22	50	28	58	49	21	35	30	15	8	M4	8
	*12_S (LS)	31		31	33.5	58	49	21	45	40	15	8		
	15 (L)	50	36	50	35.5	62	43	38	58	40	8	12		
	2005L	50	36	50	35.5	64	43	38	58	40	8	12		
KUT	2010L	50	36	50	35.5	70	43	38	58	40	8	12	M4	8
	2020L	50	36	50	35.5	70	43	38	58	40	8	12		

Please see Motor Adapter Plate installation diagram.

NEMA Motor Alterations

Type	Code	Application Motor Part Number	Coupling Application Examples		
NEMA23	N2	KUH (Servo Motor) V0100-211-B-000 V0100-214-B-000 V0200-211-B-000 V0200-214-B-000 V0250-214-B-000 V0300-211-B-000 V0300-212-B-000	KUT (Stepping Motor) HT23-601 STM23X-3RX		
		MCSLC32			
		NEMA34	N3	KUH (Servo Motor) V0400-211-C-000 V0400-212-C-000	KUT (Stepping Motor) HT34-505
				MCSLC40	

NEMA Motor Installation Interface

Part Number	NEMA Motor Installation Interface (KUH/KUT)													
	Type	No.	□	D	D ₁	H ₂	H ₃	H ₄	N	N ₂	N ₃	d	M ₂	l
NEMA23	12 (L)	47.1	38.1	35.5	28	58	49	21	35	30	15	8	M4	8
	*12_S (LS)	31		31	32	62	43	38	45	40	15	8		
	15 (L)	47.1	38.1	35.5	34	64	30	55	37	20	12	10		
	2005L	47.1	38.1	35.5	40	70	43	38	58	40	8	12		
	2020L	47.1	38.1	35.5	40	70	43	38	58	40	8	12		
NEMA34	15 (L)	69.9	73.03	45	32	75	56	51	15	10	10	14	M5	15
	2005L	69.9	73.03	45	34	77	43	68	50	20	12	15		
	2010L	69.9	73.03	45	40	83	43	68	50	20	12	15		
	2020L	69.9	73.03	45	40	83	43	68	50	20	12	15		

* When H₂-H₄<0, Motor Bracket protrudes from Base Fixing Surface.
 * When MCSLC40 is to be applied to NEMA34 series, ensure input torque is limited to 9.0N·m (=1,270 oz-in) or less.

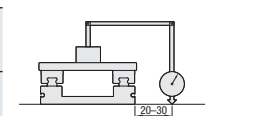
Servo Motor Application Table

Part Number	Manufacturers	Part Number	Output (W)	Flange
KUH12_ (L)	Yasukawa Electric Corp.	SGMAH-A3	30	40
		SGMAH-A5	50	
		SGMAH-01	100	
		HC-MFS053	50	
		HF-MP053	50	
		HC-MFS13	100	
	Sanyo Denki Co., Ltd.	R2AA04003F	30	40
		R2AA04005F	50	
		R2AA04010F	100	
		R88M-W03030	30	
		R88M-W05030	50	
		R88M-W10030	100	
KUH15_ (L) KUH20_ (L)	Yasukawa Electric Corp.	SGMAH-02	200	60
		SGMAH-04	400	
		HC-MFS23	200	
		HF-MP23	200	
		HA-KP23	200	
		HC-MFS43	400	
	Mitsubishi Electric Corporation	HC-KFS43	400	60
		HF-MP43	400	
		HA-KP43	400	
		R2AA06020F	200	
		R2AA06040F	400	
		R88M-W20030	200	
Sanyo Denki Co., Ltd.	R2AA06020F	200	60	
	R2AA06040F	400		
	R88M-W20030	200		
	R88M-W40030	400		
	R88M-W20030	200		
	R88M-W40030	400		

Accuracy / Maximum Speed

Part Number	*Positioning Repeatability (mm)	Static Load Capacity (kg)		*Parallelism (mm)
		Horizontal	Vertical	
KUH KUT	±0.003	1679	138	1205 (S)
				1210 (S)
				1505
				1510
		2897	153	1205L (S)
				1210L (S)
				1505L
				1510L
4345	169	2005L		
		2010L		
		2010L		
		2020L		

Parallelism Measurement



The table to the left lists reference values in static state. For actual life calculations, please use our Technical Calculation Software (visit the address indicated on P.568).
 See P.569 for Max. Speed and Static Load Capacity. See our website for Moment of Inertia.
 For Terminology, see P.569.

Stepping Motor Application Table

Part Number	Manufacturers	Part Number	Flange	
KUT12_ (L) KUT15_ (L) KUT20_ (L)	Oriental Motor	α Step AS46 / ASC46	42	
		5-Phase RK54* (PK543)		
		5-Phase RK54* (PK544)		
		5-Phase RK54* (PK545)		
		α Step AS66 / ASC66		
		α Step AS69		
	KUT12_ S KUT12_ LS	Oriental Motor	α Step AS69	60
			5-Phase RK56* (PK564)	
			5-Phase RK56* (PK566)	
			5-Phase RK56* (PK569)	
			α Step AS66 / ASC66	
			α Step AS69	
KUT15_ (L) KUT15_ L KUT20_ (L)	Oriental Motor	α Step AS69	60	
		5-Phase RK56* (PK564)		
		5-Phase RK56* (PK566)		
		5-Phase RK56* (PK569)		
		α Step AS66 / ASC66		
		α Step AS69		

Part Number Alterations

Part Number - L - L₁ - (N2 • N3)
KUA1204 - 340 - 150 - N2

KUA and KUB Sensor Set can be specified as an alteration. For details of alterations, see P.578.