

Single-Axis Robot

7. KU Series

7.1 Features

- ⊙ Lightweight aluminum base
- ⊙ Highly dustproof
- ⊙ High accuracy, high efficiency, high reliability
- ⊙ Cost effective
- ⊙ Easy installation and maintenance

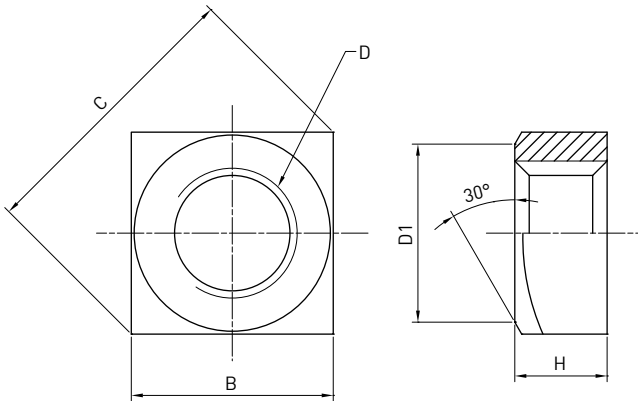
7.2 Applications

- ⊙ Precision industry & semiconductor
- ⊙ Inspection, testing & assembly equipment
- ⊙ Optical & medical equipment

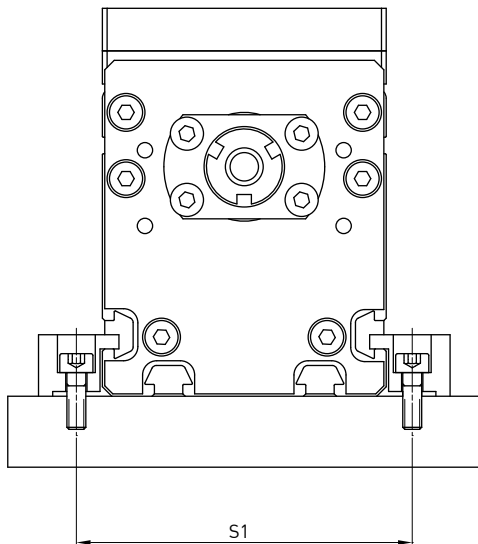


7.3 KU Mounting

Square nut



	B	C	D	D1	H
KU60	7	9.9	M4x0.7	6.8	3.2
KU80	8	11.3	M5x0.8	7.8	4

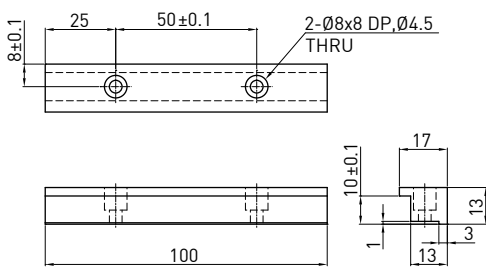


KU Model	S1	Screw
KU80	93	M5
KU60	71	M4

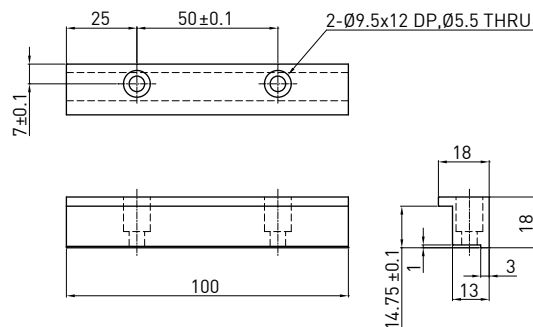
Note: In addition to square nuts, special nuts are also available. Please contact HIWIN sales.

Fixed plate

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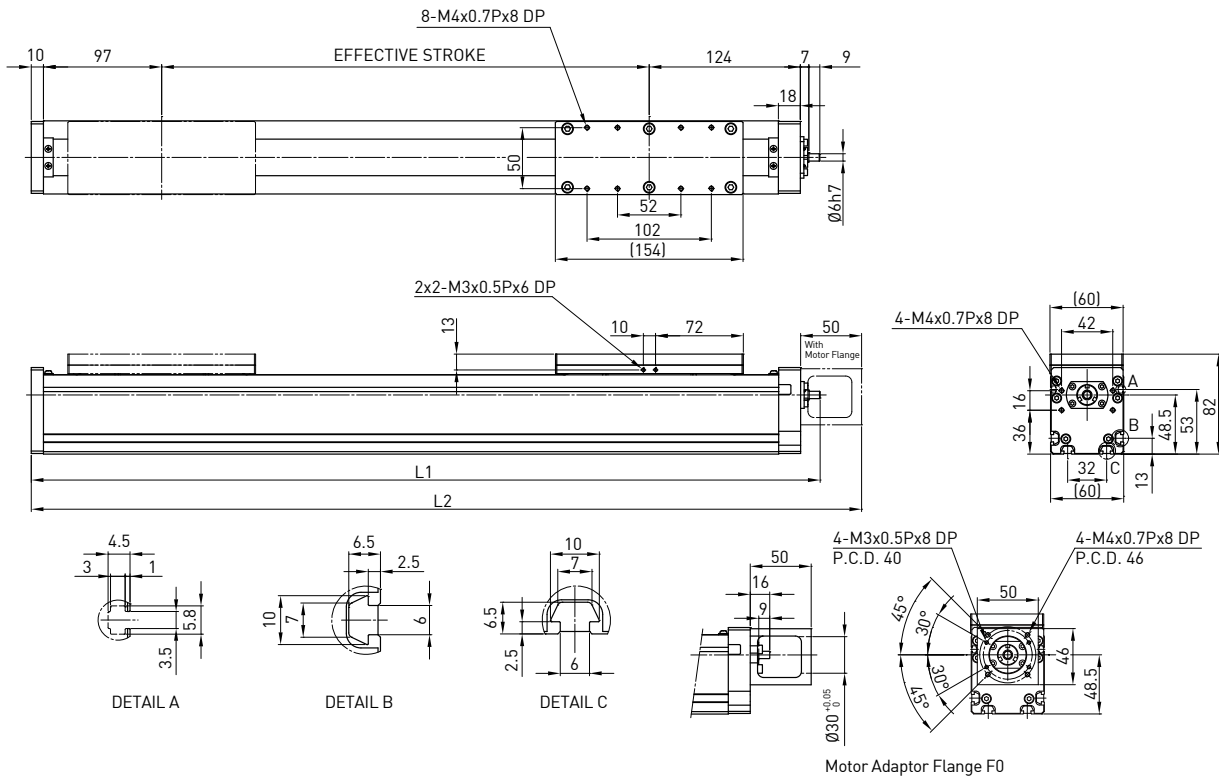
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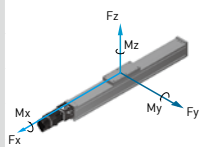
7.4 KU Series

Model Number for KU060

KU060	-10	P	-600	A	F0	S1	M101
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	5 mm 10 mm	C: Normal P: Precision		A: Standard	F0: 100W F: No Flange	S1: OMRON SX671 S2: OMRON SX674 S3: Panasonic GX-F12A S4: Panasonic GX-F12A-P None: No Limit Switch	M05□, K05□ M10□, K10□ Motor specification: ref. catalog P.167 M:customer specified None:Without Motor



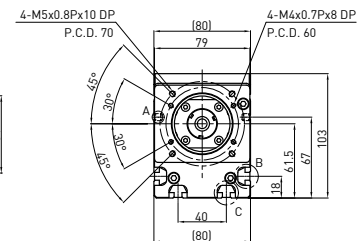
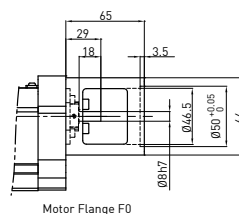
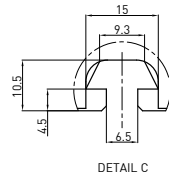
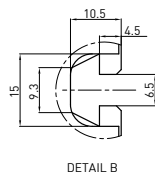
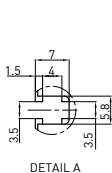
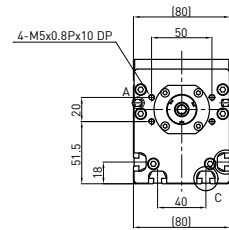
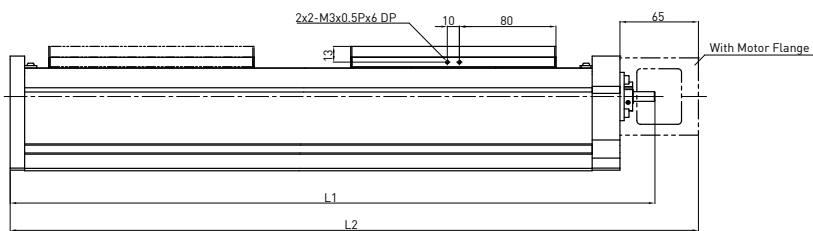
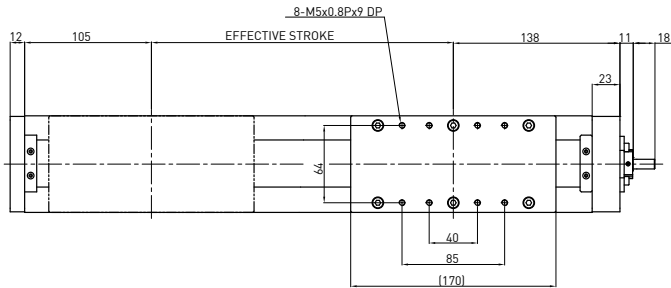
Effective Stroke (mm)	L1	L2	Weight (kg)	AC motor output		W		
				W	100	W	100	
50	297	331	1	Drive		Ball screw C7(normal)		
100	347	381	1.5	Lead	mm	5	10	
150	397	431	2	Rated RPM	RPM	3000	3000	
200	447	481	2.5	Max linear speed*	mm/sec	250	500	
250	497	531	3	Rated thrust	N	280	140	
300	547	581	3.5	Repeatability	mm	±0.02		
350	597	631	4	Effective stroke	mm	50~600		
400	647	681	4.5	Max load (H)	kg	30	20	
450	697	731	5	Rated dynamic load**	F _{yd}	N	50	50
500	747	781	5.5		F _{zd}	N	300	200
550	797	831	6		M _{xd}	N-m	10	10.5
600	847	881	6.5		M _{yd}	N-m	8	9
				Permitted load condition***	M _{zd}	N-m	8	9
					$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ F _y 、F _z 、M _x 、M _y 、M _z are working loads			



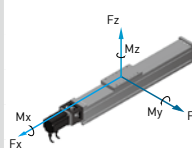
* Vibration might occur when the effective stroke is longer than 500mm.
 The maximum speed should be decreased by 15% for every 100mm of increased stroke.
 **The load condition is based on 10,000km operation.
 *** If used in a special condition, please contact HIWIN.

Model Number for KU080

KU080	-10	P	-1100	A	F0	S1	M201
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	5 mm 10 mm 20 mm	C: Normal P: Precision		A: Standard	F0: 200W F: Without Flange	S1: OMRON SX671 S2: OMRON SX674 S3: Panasonic GX-F12A S4: Panasonic GX-F12A-P None: No Limit Switch	M20□, K20□ M40□, K40□ Motor specification: ref. catalog P.167 M:customer specified None:Without Motor



Effective Stroke (mm)	L1	L2	Weight (kg)	AC motor output	W	200
				Drive		Ballscrew C7(normal)
100	384	420	7.04	Lead	mm	5 10 20
150	434	470	7.48	Rated RPM	RPM	3000 3000 3000
200	484	520	7.92	Max linear speed*	mm/sec	250 500 1000
250	534	570	8.36	Rated thrust	N	560 280 140
300	584	620	8.8	Repeatability	mm	±0.02
350	634	670	9.24	Effective stroke	mm	100-1100
400	684	720	9.68	Max load (H)	kg	60 40 20
450	734	770	10.12	Rated dynamic load**	F _{yd}	N 50 50 50
500	784	820	10.56		F _{zd}	N 600 400 200
550	834	870	11.0		M _{xd}	N-m 11 12.5 14
600	884	920	11.44		M _{yd}	N-m 9 10 11
650	934	970	11.88		M _{zd}	N-m 9 10 11
700	984	1020	12.32		Permitted load condition***	$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ F _y 、F _z 、M _x 、M _y 、M _z are working loads
750	1034	1070	12.76			
800	1084	1120	13.2			
850	1134	1170	13.64			
900	1184	1220	14.08			
950	1234	1270	14.52			
1000	1284	1320	14.96			
1050	1334	1370	15.4			
1100	1384	1420	15.84			

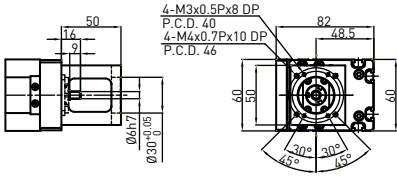


* Vibration might occur when the effective stroke is longer than 550mm.
 The maximum speed should be decreased by 15% for every 100mm of increased stroke.
 **The load condition is based on 10,000km operation.
 ***If used in a special condition, please contact HIWIN.

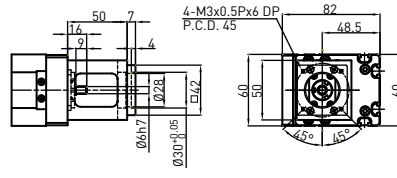
7.5 Motor Adaptor Flange List

KU60

Motor Adaptor Flange F0

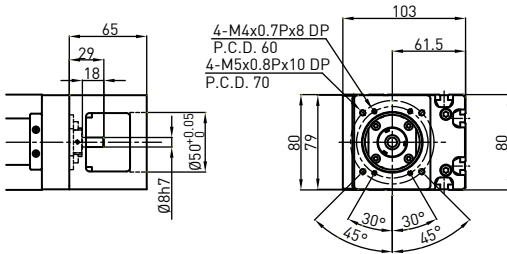


Motor Adaptor Flange F1

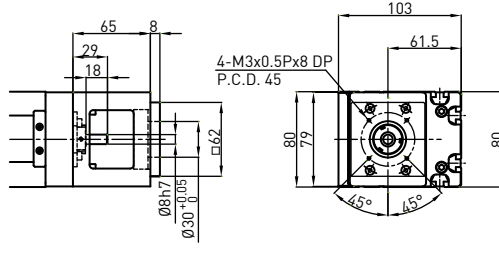


KU80

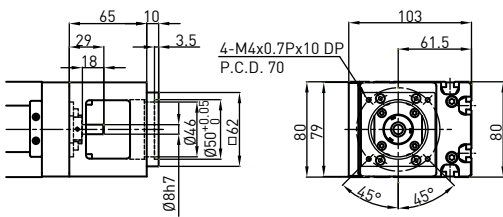
Motor Adaptor Flange F0



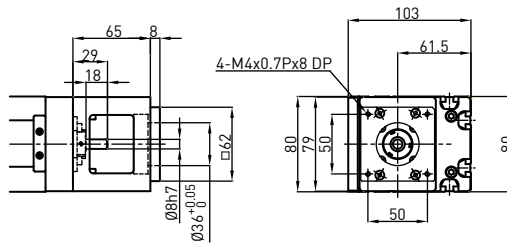
Motor Adaptor Flange F3



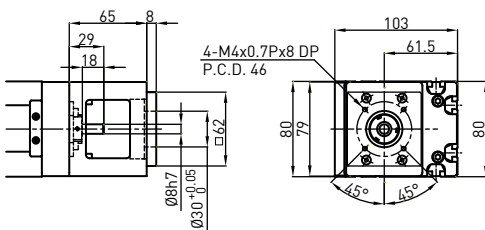
Motor Adaptor Flange F1



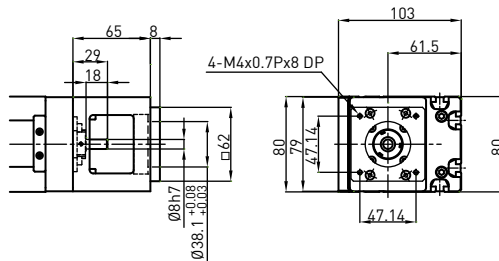
Motor Adaptor Flange F5



Motor Adaptor Flange F2



Motor Adaptor Flange F6



7.6 Motor Housing and Motor Adaptor Flange(KU Series)

HIWIN Mikrosystem Servo Motor

Motor Output	Motor	Flange Selection		Drive	Remarks
		KU60	KU80		
50W	FRLS052□□A4□	F1	F3	D2T-0123-S-A□	220V
100W	FRLS102□□A4□	F1	F3		220V
200W	FRLS202□□06□	-	F0	D2T-0423-S-B□	220V
400W	FRLS402□□06□	-	F0		220V
750W	FRMS752□□08□	-	-	D2T-1023-S-C□	220V

Mitsubishi Servo Motor

Motor Output	Motor	Flange Selection		Drive	Remarks
		KU60	KU80		
50W	HF-KP053	F0	F2	MR-J3S-10A	220V
100W	HF-KP13	F0	F2	MR-J3S-10A	220V
200W	HF-KP23	-	F0	MR-J3S-20A	220V
400W	HF-KP43	-	F0	MR-J3S-40A	220V
750W	HF-KP73	-	-	MR-J3S-70A	220V

Panasonic Servo Motor

Motor Output	Motor	Flange Selection		Drive	Remarks
		KU60	KU80		
50W	MSMD5AZP1	F1	F3	MADDT1105	110V
50W	MSMD5AZP1	F1	F3	MADDT1205	220V
100W	MSMD011P1	F1	F3	MADDT1107	110V
100W	MSMD012P1	F1	F3	MADDT1205	220V
200W	MSMD021P1	-	F1	MADDT2110	110V
200W	MSMD022P1	-	F1	MADDT1207	220V
400W	MSMD041P1	-	F1	MADDT3120	110V
400W	MSMD042P1	-	F1	MADDT2210	220V
750W	MSMD082S1	-	-	MADDT3520	220V

Yasukawa Servo Motor

Motor Output	Motor	Flange Selection		Drive	Remarks
		KU60	KU80		
50W	SGMAV-A5ADA61	F0	F2	SGDV-R70A01A	with key
50W	SGMAV-A5ADA2C	F0	F2	SGDV-R70A01A	no key
50W	SGMAV-A5ADA21	F0	F2	SGDV-R70A01A	no key
100W	SGMAV-01ADA21	F0	F2	SGDV-R90A01A	
200W	SGMAV-02ADA21	-	F0	SGDV-1R6A01A	
400W	SGMAV-04ADA21	-	F0	SGDV-2R8A01A	
750W	SGMAV-08ADA21	-	-	SGDV-5R5A01A	

Oriental Step Motor

Series	Model	Flange Selection		Drive	Remarks
		KU60	KU80		
CSK 2 phase	CSK243-AP	-	-		
	CSK244-AP	-	-		
	CSK245-AP	-	-		
	CSK264-AP	-	F6		
	CSK266-AP	-	F6		
	CSK268-AP	-	F6		
	CSK296-AP	-	-		
	CSK299-AP	-	-		
	CSK2913-AP	-	-		
CFKII 5 phase micro stepping	CFK543AP2	-	-		
	CFK544AP2	-	-		
	CFK545AP2	-	-		
	CFK564AP2	-	F5		
	CFK566AP2	-	F5		
	CFK569AP2	-	F5		
	CFK566HAP2	-	F5		
	CFK569HAP2	-	F5		
	CFK596HAP2	-	-		
	CFK599HAP2	-	-		
	CFK5913HAP2	-	-		
UMK 2 phase	UMK243A	-	-		
	UMK244A	-	-		
	UMK245A	-	-		
	UMK264A	-	F6		
	UMK266A	-	F6		
	UMK268A	-	F6		
RK 5 phase	RK543AA	-	-		
	RK544AA	-	-		
	RK545AA	-	-		
	RK566AA	-	F5		
	RK569AA	-	F5		
	RK596AA	-	-		
	RK599AA	-	-		
	RK5913AA	-	-		