

Single-Axis Robot

8. KE Series

8.1 Features

- ◎ Lightweight aluminum base
- ◎ Dustproof design
- ◎ High accuracy, high efficiency, high reliability

8.2 Applications

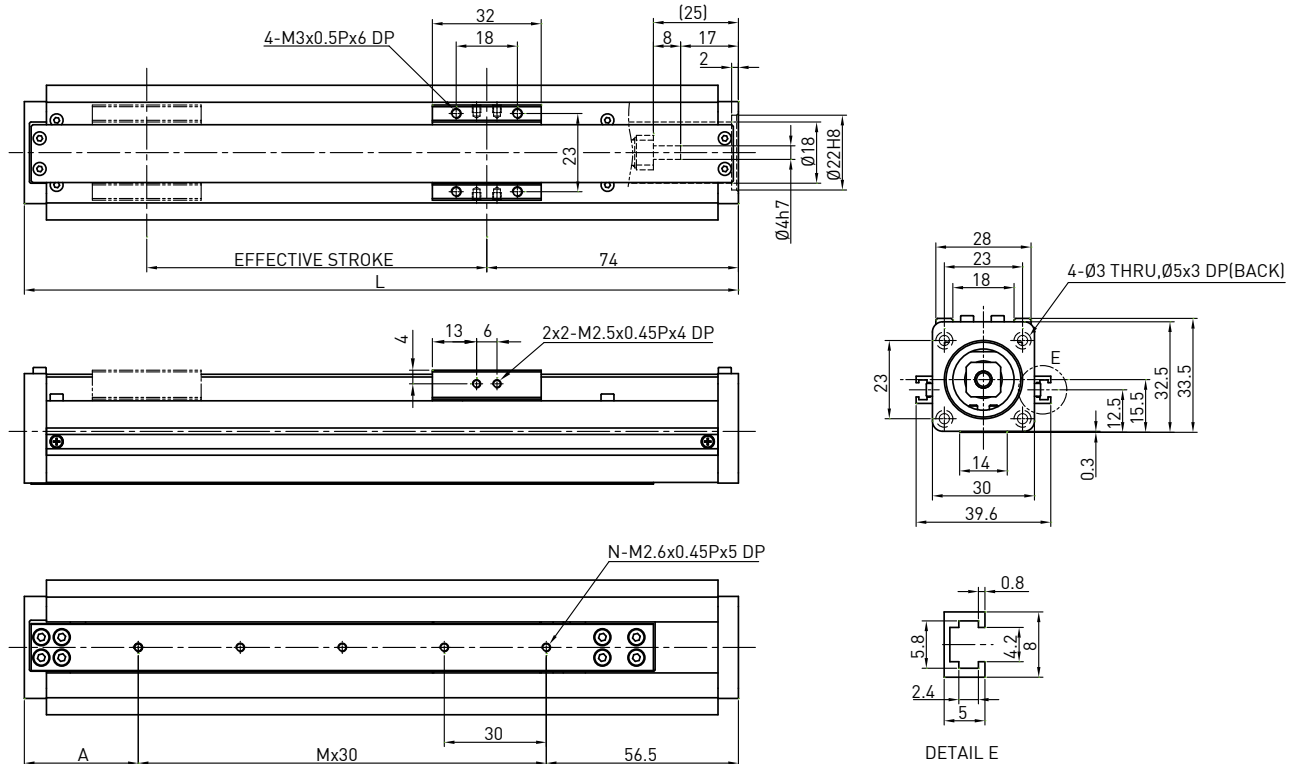
- ◎ Precision industry & semiconductor
- ◎ Inspection, testing & assembly equipment
- ◎ Optical & medical equipment



8.3 KE Series

Model Number for KE030

KE030	-1	C	-300	A	F0	S1	M
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	1 mm	C: Normal P: Precision		A: Standard	F0: Direct	S1: OMRON SX671 S2: OMRON SX674 S3: Panasonic GX-F12A S4: Panasonic GX-F12A-P None: No Limit Switch	M:customer specified None:Without Motor



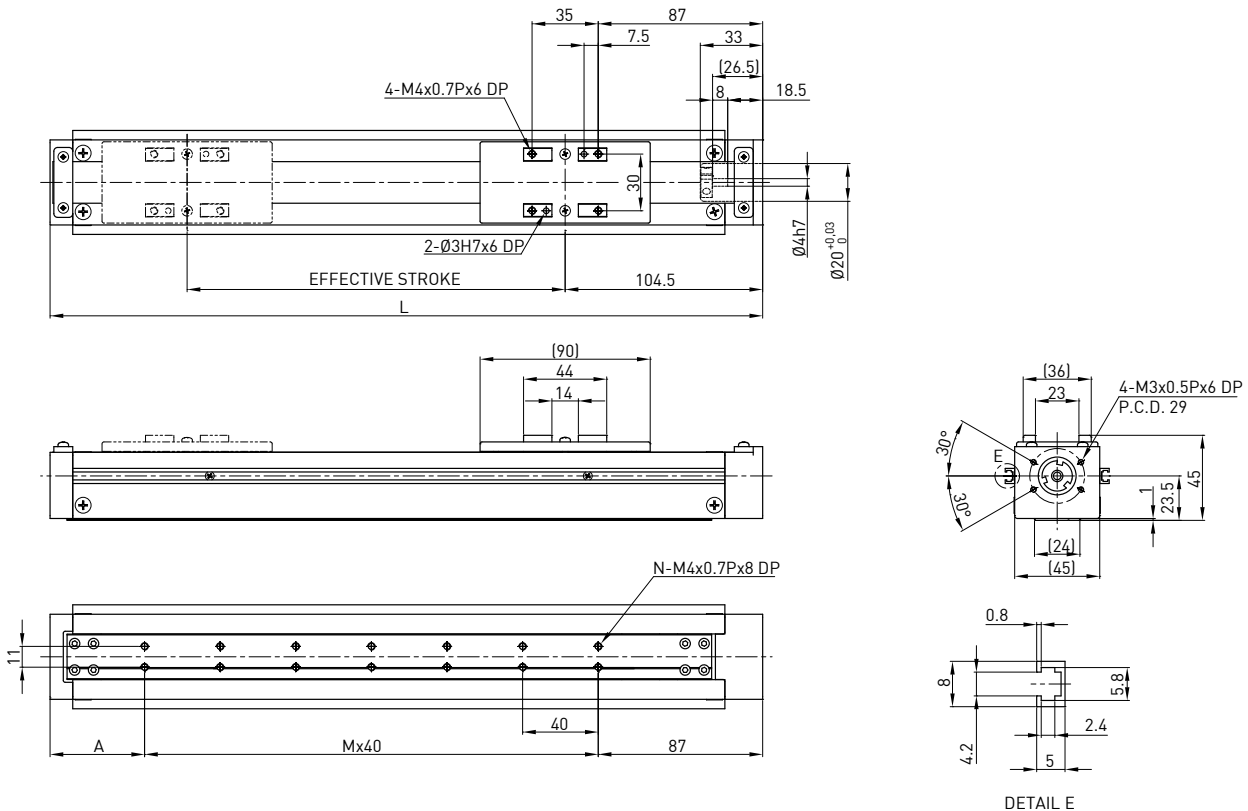
Effective stroke (mm)	L	A	M	N	Weight (kg)	AC motor output	W	28 stepping motor	
50	160	43.5	2	3	0.2	Rated RPM	RPM	-	
100	210	33.5	4	5	0.5	Lead	mm	1.25	
150	260	23.5	6	7	0.8	Max linear speed	mm/sec	62.5	
200	310	43.5	7	8	1.1	Rated thrust	N	175	
250	360	33.5	9	10	1.4	Repeatability	mm	±0.02	
300	410	53.5	10	11	1.9	Effective stroke	mm	50-300	
						Max load (H)	kg	3	
							Fyd	N	4
					Fzd		N	30	
					Mxd		N-m	0.2	
					Myd		N-m	0.1	
					Mzd		N-m	0.1	
						Rated dynamic load*			
						Permitted load condition**	$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ Fy, Fz, Mx, My, Mz Mz are working loads		

* The load condition is based on 10,000km operation.

** If used on the vertical axis or in a special condition, please contact HIWIN.

Model Number for KE040

KE040	-10	C	-300	A	F0	S1	M051
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	2 mm 5 mm	C: Normal P: Precision		A: Standard	F0 : Direct	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



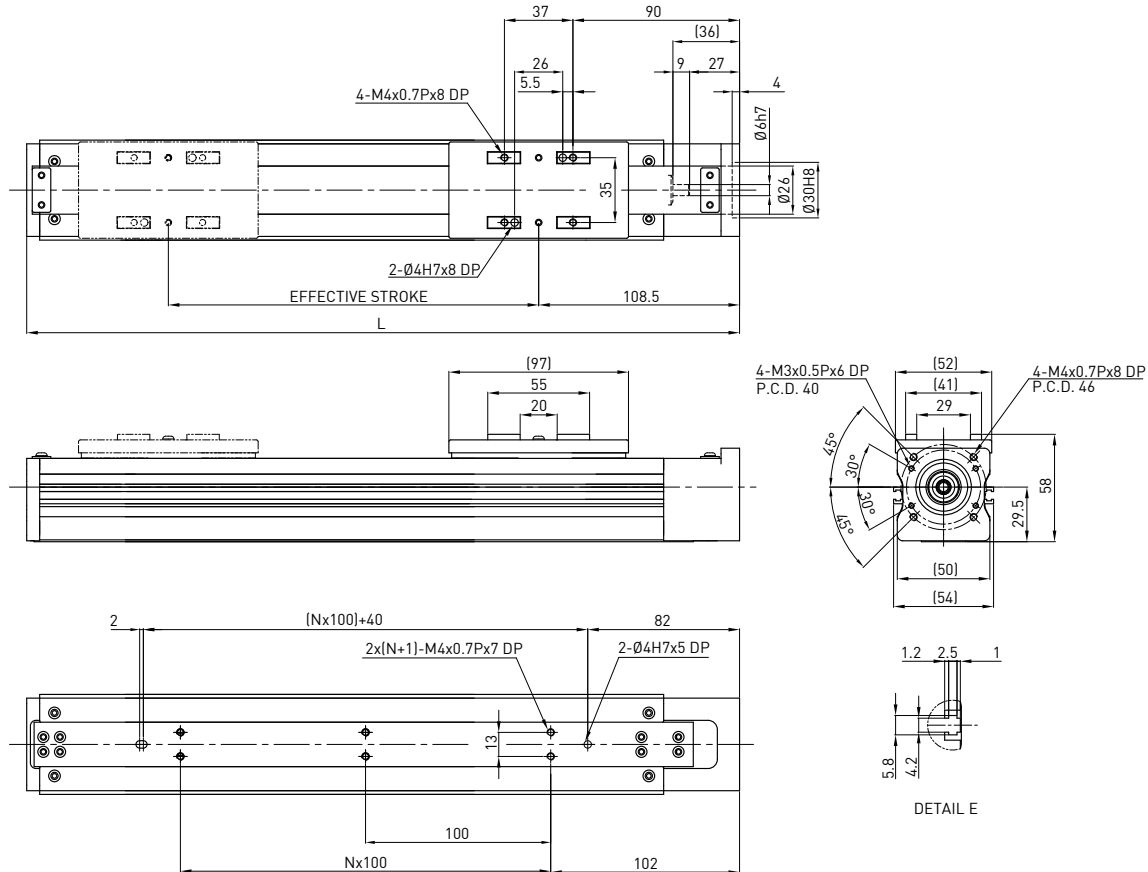
Effective stroke (mm)	L	A	M	N	Weight (kg)	AC motor output	W	50
50	227	60	2	6	1	Rated RPM	RPM	3000 3000
100	277	70	3	8	1.3	Lead	mm	2 5
150	327	40	5	12	1.6	Max linear speed	mm/sec	100 250
200	377	50	6	14	1.9	Rated thrust	N	280 140
250	427	60	7	16	2.2	Repeatability	mm	±0.02
300	477	70	8	18	2.5	Effective stroke	mm	50-300
						Max load (H)	kg	6 4
							Fyd	N 10 10
					Fzd		N 60 30	
					Mxd		N-m 1 1	
					Myd		N-m 0.55 0.6	
					Mzd		N-m 0.55 0.5	
					Rated dynamic load*			
					Permitted load condition**	$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ Fy, Fz, Mx, My, Mz Mz are working loads		

* The load condition is based on 10,000km operation.

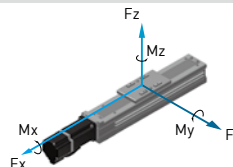
** If used on the vertical axis or in a special condition, please contact HIWIN.

Model Number for KE050 (Single Slider)

KE050	-04	C	-400	A	F0	S2	M051
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	4 mm	C: Normal		A: Standard	F0:Direct	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. catalof P.167 M:customer specified None:Without Motor



Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	50		
				Rated RPM	RPM	3000		
	100	285		1	1.4	Lead	mm	4
	200	385		2	1.7	Max linear speed	mm/sec	200
	300	485		3	2	Rated thrust	N	175
400	585	4	2.3	Repeatability	mm	±0.02		
Rated dynamic load*	Effective stroke			mm	100~400			
	Max load (H)			kg	8			
	Permitted load condition**	Fzd			N	10		
		Fzd			N	80		
		Mxd			N-m	1.5		
		Myd			N-m	0.8		
		Mzd			N-m	0.8		
$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ Fy, Fz, Mx, My, Mz are working loads								

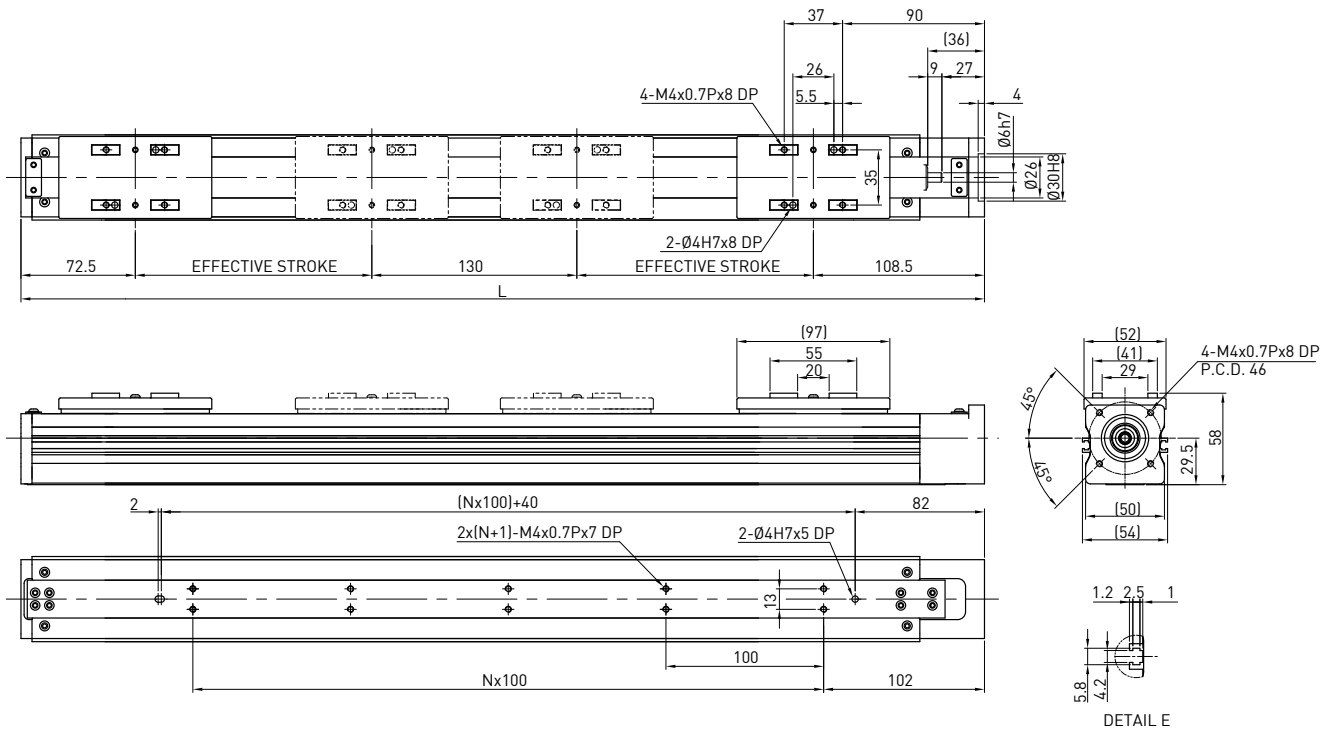


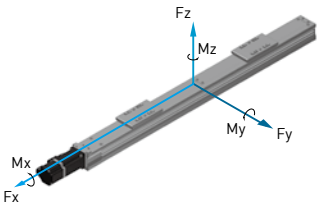
* The load condition is based on 10,000km operation.

** If used on the vertical axis or in a special condition, please contact HIWIN.

Model Number for KE050 (Double Slider)

KE050	D	-04	C	-250	A	F0	S2	M051
Model	Double Slider	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
		4mm	C: Normal		A: Standard	F0 :Direct	S2: OMRON SX674 None: No Limit Switch	M05□, K05□ M10□, K10□ Motor specification: ref. catalog P.167 M:customer specified None:Without Motor



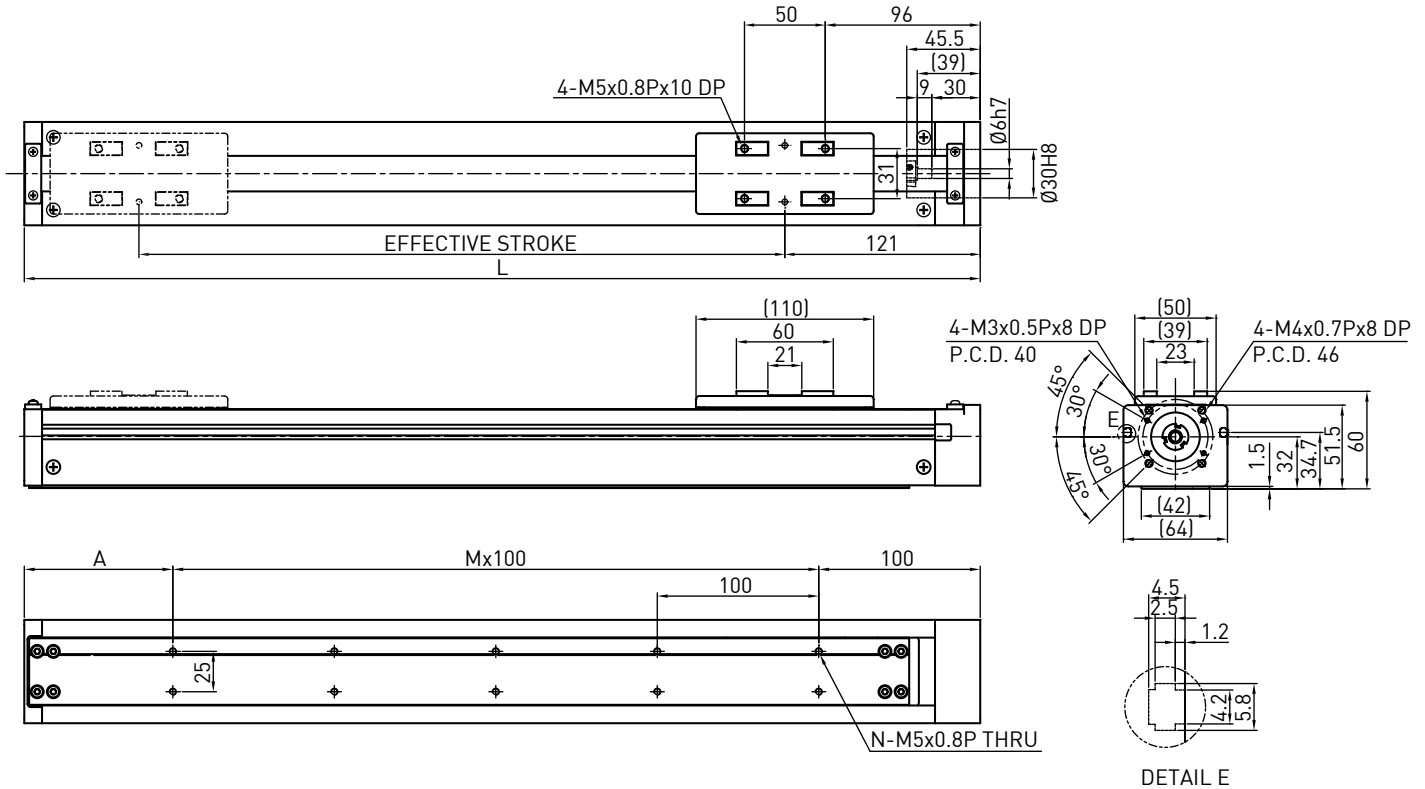
Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	50	
				Rated RPM	RPM	3000	
100	511	3	2.3	Lead	mm	4	
150	611	4	2.5	Max linear speed	mm/sec	200	
200	711	5	2.8	Rated thrust	N	175	
250	811	6	3.0	Repeatability	mm	±0.02	
				Effective stroke	mm	100-400	
				Max load (H)	kg	8	
				Rated dynamic load* 	Fyd	N	10
					Fzd	N	80
					Mxd	N-m	1.5
					Myd	N-m	0.8
					Mzd	N-m	0.8
				Permitted load condition**	$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ Fy, Fz, Mx, My, Mz are working loads		

* The load condition is based on 10,000km operation.

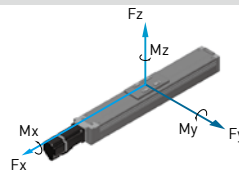
** If used on the vertical axis or in a special condition, please contact HIWIN.

Model Number for KE065

KE065	-10	C	-600	A	F0	S1	M101
Model	Lead	Accuracy Grade	Effective Stroke	Slider Type	Flange F0	Limit Switch	Motor
	5 mm 10 mm	C: Normal P: Precision		A: Standard	F0: 100W	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. catalof P.167 M:customer specified None:Without Motor



Effective stroke (mm)	L	A	M	N	Weight (kg)	AC motor output		W		
						Rated RPM		3000	3000	
50	242	42	1	4	2.5	Lead	mm	5	10	
100	292	92	1	4	2.8	Max linear speed*	mm/sec	250	500	
150	342	42	2	6	3.1	Rated thrust	N	280	140	
200	392	92	2	6	3.4	Repeatability	mm	±0.02		
250	442	42	3	8	3.7	Effective stroke	mm	50-600		
300	492	92	3	8	4	Max load (H)	kg	15	8	
350	542	42	4	10	4.3	Rated dynamic load**	F _{yd}	N	10	10
400	592	92	4	10	4.6		F _{zd}	N	150	80
450	642	42	5	12	4.9		M _{xd}	N-m	4.4	4.7
500	692	92	5	12	5.2		M _{yd}	N-m	2.3	2.6
550	742	42	6	14	5.5		M _{zd}	N-m	2.3	2.6
600	792	92	6	14	5.8	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			



* Vibration might occur when the effective stroke is longer than 550mm.

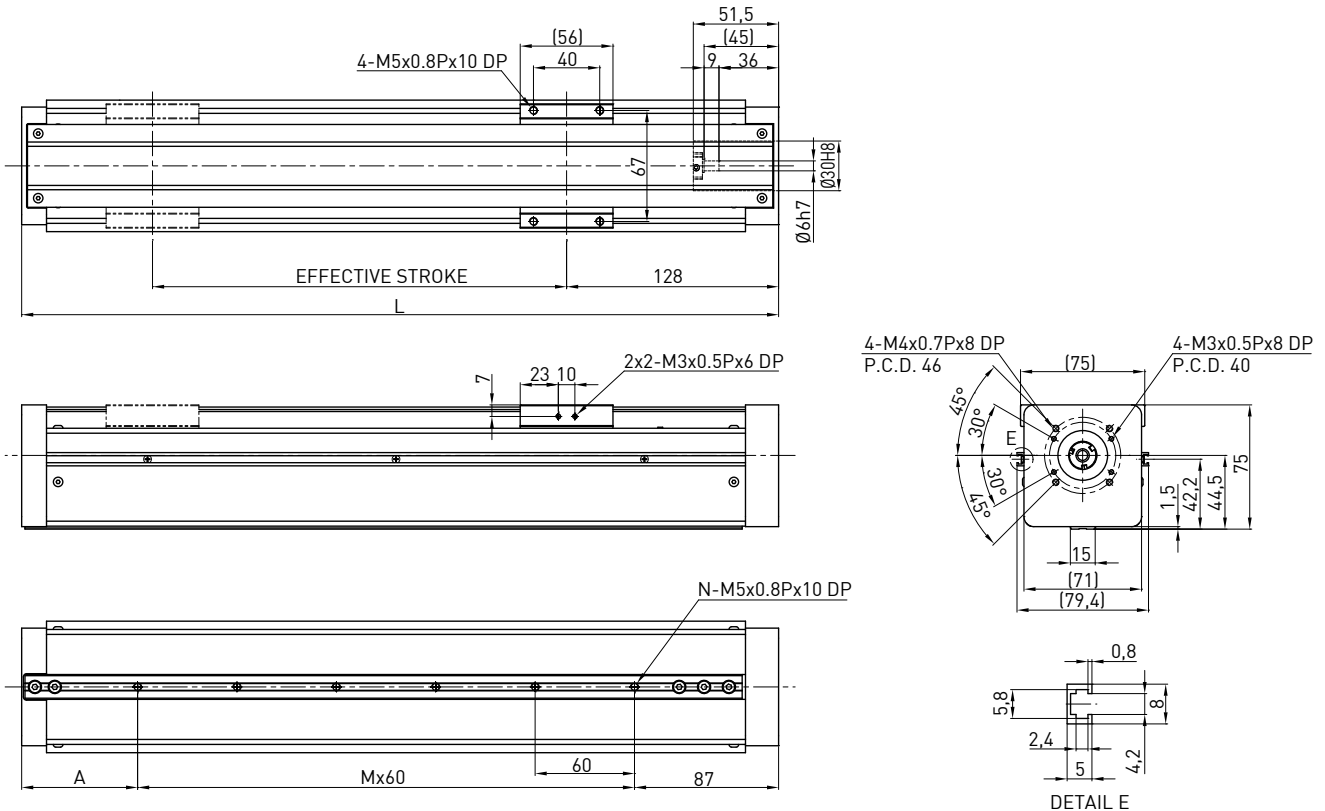
The maximum speed should be decreased by 15% for every 100mm of increased stroke.

**The load condition is based on 10,000km operation.

***If used on vertical axis or special condition, please contact HIWIN.

Model Number for KE070

KE070	-10	C	-600	A	F0	S1	M101
Model	Lead	Accuracy Grade	Effective Stroke	Slider Type	Flange F0	Limit Switch	Motor
	5 mm 10 mm	C: Normal P: Precision		A: Standard	F0: Direct	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. catalof P.167 M:customer specified None:Without Motor

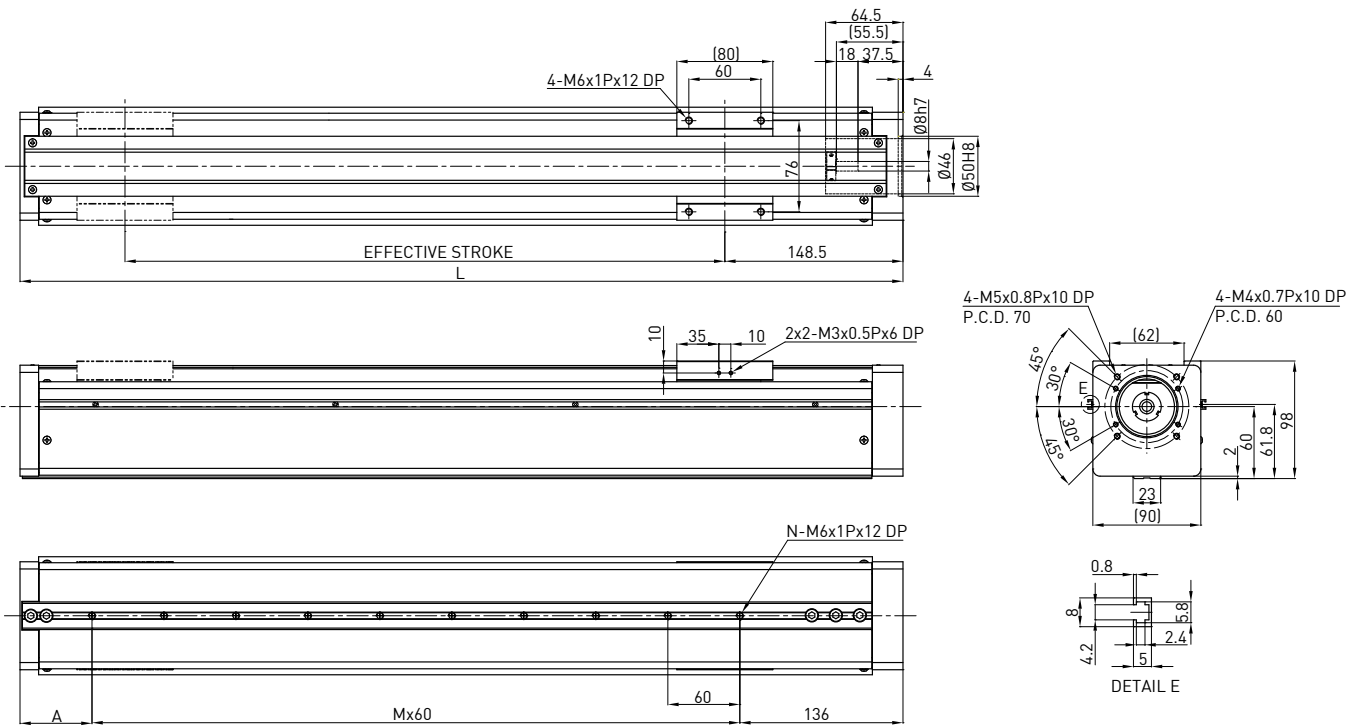


Effective stroke (mm)	L	A	M	N	Weight (kg)	AC motor output	W	100	
50	257	50	2	3	2.8	Rated RPM	RPM	3000 3000	
100	307	40	3	4	3.1	Lead	mm	5 10	
150	357	90	3	4	3.4	Max linear speed*	mm/sec	250 500	
200	407	80	4	5	3.7	Rated thrust	N	280 140	
250	457	70	5	6	4	Repeatability	mm	±0.02	
300	507	60	6	7	4.3	Effective stroke	mm	50-600	
350	557	50	7	8	4.6	Max load (H)	kg	20 15	
400	607	40	8	9	4.9		Fyd	N	10 10
450	657	90	8	9	5.2		Fzd	N	200 150
500	707	80	9	10	5.5		Mxd	N-m	3.5 3.5
550	757	70	10	11	5.8		Myd	N-m	2 2.1
600	807	60	11	12	6.1		Mzd	N-m	2 2.1
Permitted load condition***						$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ Fy, Fz, Mx, My, Mz Mz are working loads			

* 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 on vertical axis or special condition , please contact HIWIN.

Model Number for KE090

KE090	-10	C	-600	A	F0	S1	M201
Model	Lead	Accuracy Grade	Effective Stroke	Slider Type	Flange F0	Limit Switch	Motor
	5 mm 10 mm	C: Normal P: Precision		A: Standard	F0: Direct	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)	L	A	M	N	Weight (kg)	AC motor output	W	200	
50	286	90	1	2	6.7	Rated RPM	RPM	3000 3000	
100	336	80	2	3	7	Lead	mm	5 10	
150	386	70	3	4	7.3	Max linear speed	mm/sec	250 500	
200	436	60	4	5	7.6	Rated thrust	N	560 280	
250	486	50	5	6	7.9	Repeatability	mm	±0.02	
300	536	40	6	7	8.2	Effective stroke	mm	50-600	
350	586	90	6	7	8.5	Max load (H)	kg	25 23	
400	636	80	7	8	8.8		Fyd	N	10 10
450	686	70	8	9	9.1		Fzd	N	250 230
500	736	60	9	10	9.4		Mxd	N-m	13 12
550	786	50	10	11	9.7		Myd	N-m	7.1 7.3
600	836	40	11	12	10		Mzd	N-m	7.1 7.3
Rated dynamic load*						$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ Fy, Fz, Mx, My, Mz are working loads			
Permitted load condition**									

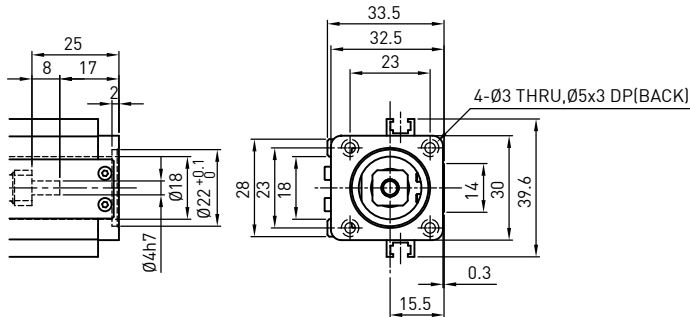
*The load condition is based on 10,000km operation.

**If used on vertical axis or special condition, please contact HIWIN.

8.4 Motor Adaptor Flange List

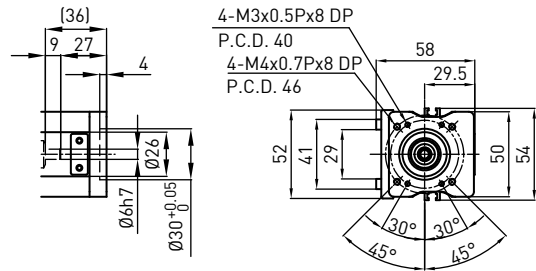
KE30

Motor Adaptor Flange F0



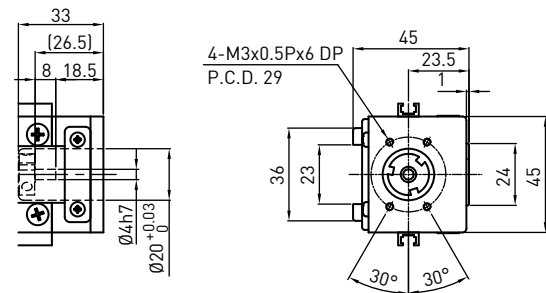
KE50

Motor Adaptor Flange F0

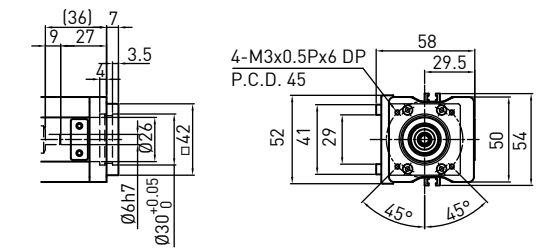


KE40

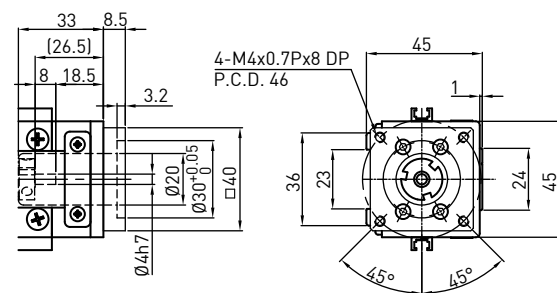
Motor Adaptor Flange F0



Motor Adaptor Flange F1

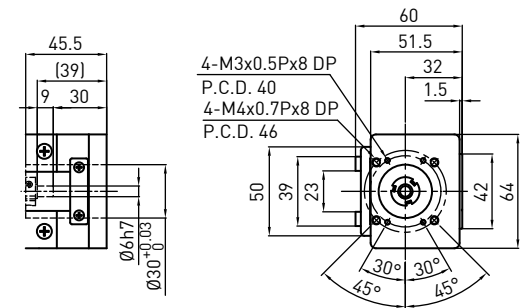


Motor Adaptor Flange F1

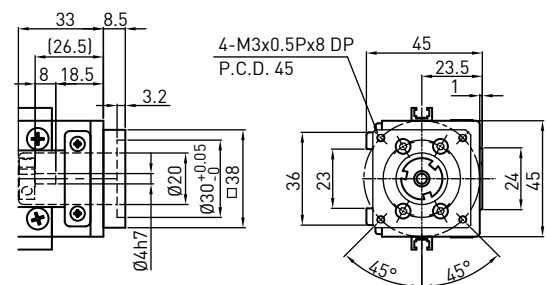


KE65

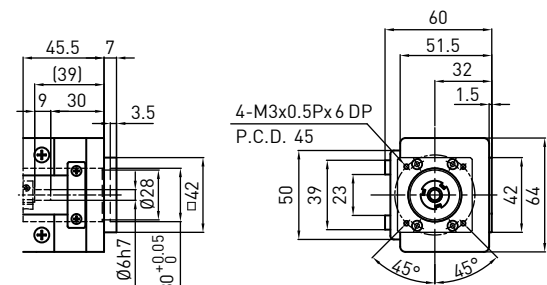
Motor Adaptor Flange F0



Motor Adaptor Flange F2

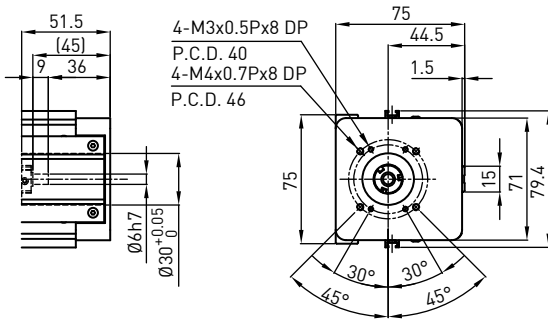


Motor Adaptor Flange F1

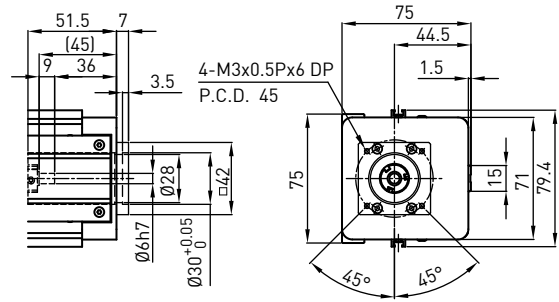


KE70

Motor Adaptor Flange F0

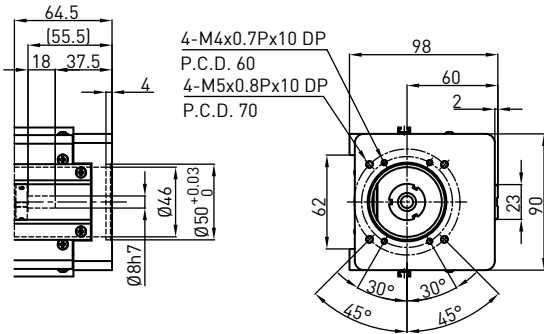


Motor Adaptor Flange F1

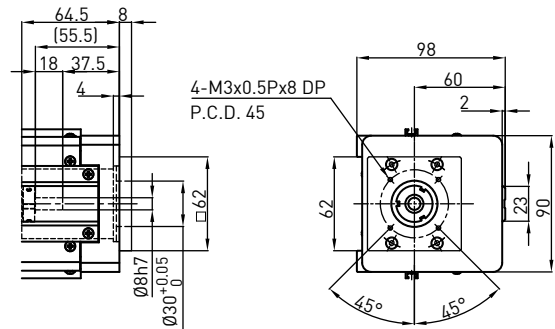


KE90

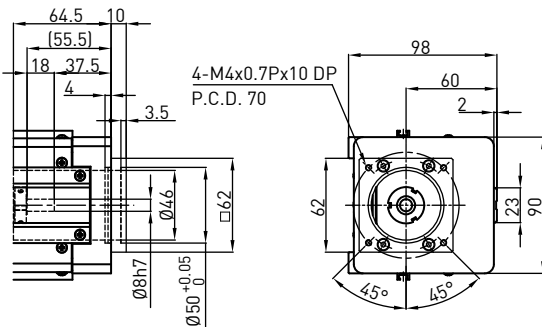
Motor Adaptor Flange F0



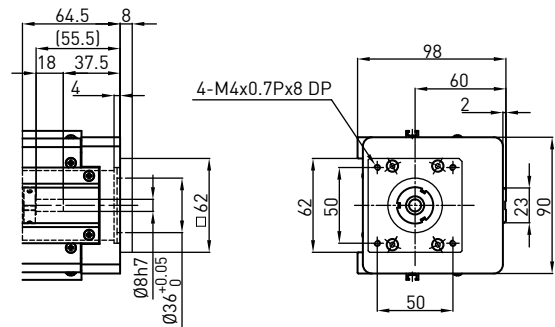
Motor Adaptor Flange F3



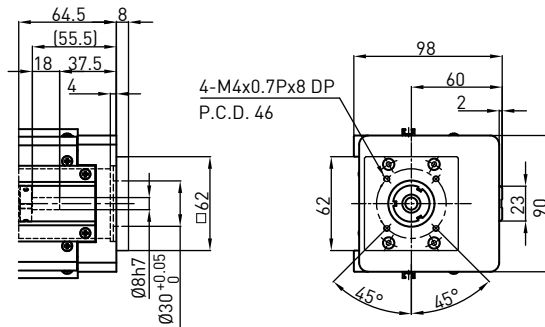
Motor Adaptor Flange F1



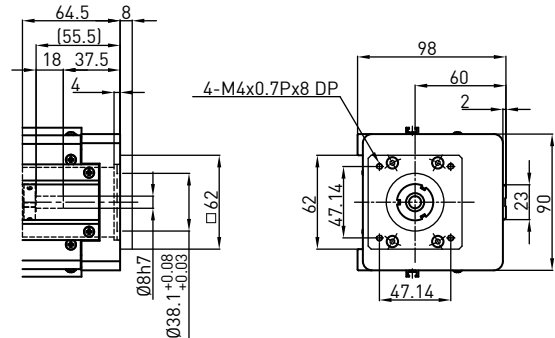
Motor Adaptor Flange F5



Motor Adaptor Flange F2



Motor Adaptor Flange F6



8.5 Motor Housing and Motor Adaptor Flange(KE Series)

HIWIN Mikrosystem Servo Motor

Motor Output	Motor	Flange Selection						Drive	Remarks
		KE30	KE40	KE50	KE65	KE70	KE90		
50W	FRLS052□□A4□	-	F2	F1	F1	F1	F3	D2T-0123-S-A□	220V
100W	FRLS102□□A4□	-	F2	F1	F1	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
		KE30	KE40	KE50	KE65	KE70	KE90		
50W	HF-KP053	-	F1	F0	F0	F0	F2	MR-J3S-10A	220V
100W	HF-KP13	-	F1	F0	F0	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
		KE30	KE40	KE50	KE65	KE70	KE90		
50W	MSMD5AZP1	-	F2	F1	F1	F1	F3	MADDT1105	110V
50W	MSMD5AZP1	-	F2	F1	F1	F1	F3	MADDT1205	220V
100W	MSMD011P1	-	F2	F1	F1	F1	F3	MADDT1107	110V
100W	MSMD012P1	-	F2	F1	F1	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
		KE30	KE40	KE50	KE65	KE70	KE90		
50W	SGMAV-A5ADA61	-	F1	F0	F0	F0	F2	SGDV-R70A01A	with key
50W	SGMAV-A5ADA2C	-	F1	F0	F0	F0	F2	SGDV-R70A01A	no key
50W	SGMAV-A5ADA21	-	F1	F0	F0	F0	F2	SGDV-R70A01A	no key
100W	SGMAV-01ADA21	-	F1	F0	F0	F0	F2	SGDV-R90A01A	
200W	SGMAV-02ADA21	-	-	-	-	-	F0	SGDV-1R6A01A	
400W	SGMAV-04ADA21	-	-	-	-	-	F0	SGDV-2R8A01A	
750W	SGMAV-08ADA21	-	-	-	-	-	F1	SGDV-5R5A01A	

