

Single-Axis Robot

6. KS Series

6.1 Features

- ⊙ For use in clean room
- ⊙ Stainless steel cover
- ⊙ Already installed AC servo motor (optional)
- ⊙ High repeatability $\pm 0.02\text{mm}$
- ⊙ Dustproof
- ⊙ Different strokes available

6.2 Applications

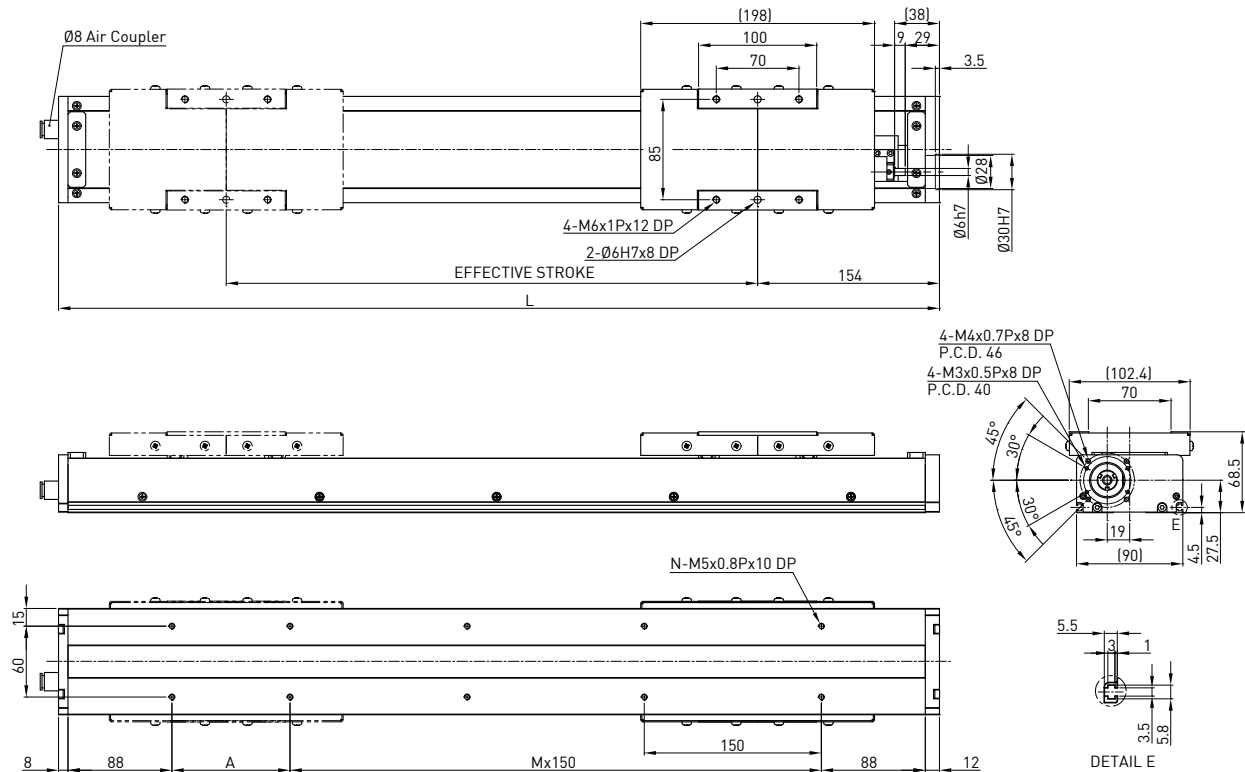
- ⊙ FPD industry
- ⊙ Semiconductor
- ⊙ Medical applications
- ⊙ FPD glass transfer
- ⊙ Inspection & testing equipment



6.3 KS Series

Model Number for KS090

KS090	-10	P	-0600	A	F0	S1	M101
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	5mm 10mm	P: Precision 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. catalog P.167 M:customer specified None:Without Motor

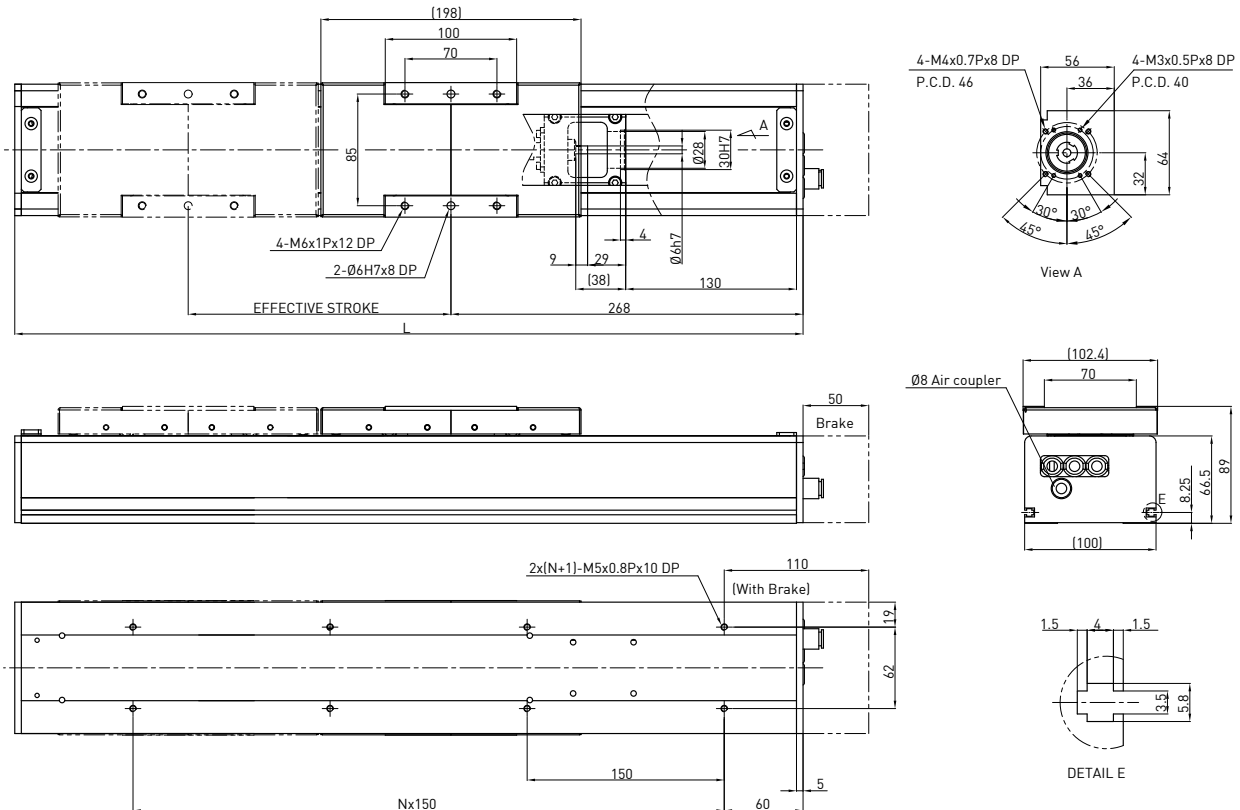


Effective stroke (mm)	L	A	M	N	Weight (kg)	AC motor output		W	
						Drive		100	Ballscrew C7(normal)
50	346	150	0	4	3.38	mm	5	10	
100	396	50	1	6	3.78	RPM	3000	3000	
150	446	100	1	6	4.18	mm/sec	250	500	
200	496	150	1	6	4.58	N	280	140	
250	546	50	2	8	4.98	mm	±0.02		
300	596	100	2	8	5.38	mm	50-600		
350	646	150	2	8	5.78	kg	24	12	
400	696	50	3	10	6.18	F _{yd}	N	50	50
450	746	100	3	10	6.58	F _{zd}	N	240	120
500	796	150	3	10	7.19	M _{xd}	N-m	5	4.5
550	846	50	4	12	7.38	M _{yd}	N-m	2.3	2.1
600	896	100	4	12	7.78	M _{zd}	N-m	2.3	2.1
						Permitted load condition*** $\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ F _y , F _z , M _x , M _y , M _z are working loads			

* Vibration might occur when the effective stroke is longer than 650mm.
 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 the vertical axis or in a special condition, please contact HIWIN.

Model Number for KS100-FI

KS100	-20	P	-800	A	FI	S2	M101
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	10mm 20mm	P: Precision C: Normal		A: Standard	FI: Internal	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

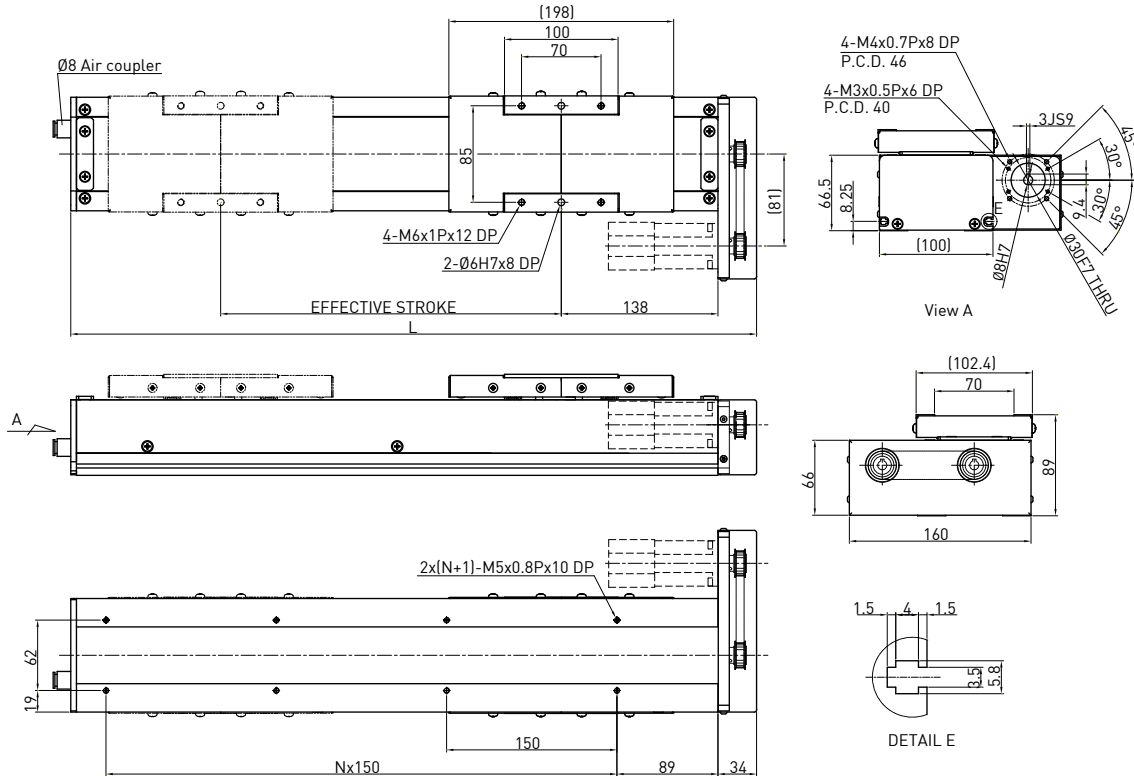


Effective stroke (mm)	L	N	Weight (kg)	AC motor output Drive	W	100			
200	600	3	9.1	Lead	mm	5	10	20	
300	700	4	9.8	Rated RPM	RPM	3000	3000	3000	
400	800	4	10.5	Max linear speed*	mm/sec	250	500	1000	
500	900	5	11.2	Rated thrust	N	280	140	70	
600	1000	6	11.9	Repeatability	mm	±0.02			
700	1100	6	12.6	Effective stroke	mm	200-800			
800	1200	7	13.3	Max load (H)	kg	8	6	3.5	
				Rated dynamic load** 	Fyd	N	20	20	20
					Fzd	N	80	60	35
					Mxd	N-m	1.1	1.2	1.1
					Myd	N-m	0.9	0.9	0.9
					Mzd	N-m	0.9	0.9	0.9
				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				

* Vibration might occur when the effective stroke is longer than 650mm.
 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 the vertical axis or in a special condition, please contact HIWIN.

Model Number for KS100-FL

KS100	-20	P	-800	A	FL	S2	M101
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	10mm 20mm	P: Precision C: Normal		A: Standard	FL: Left	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

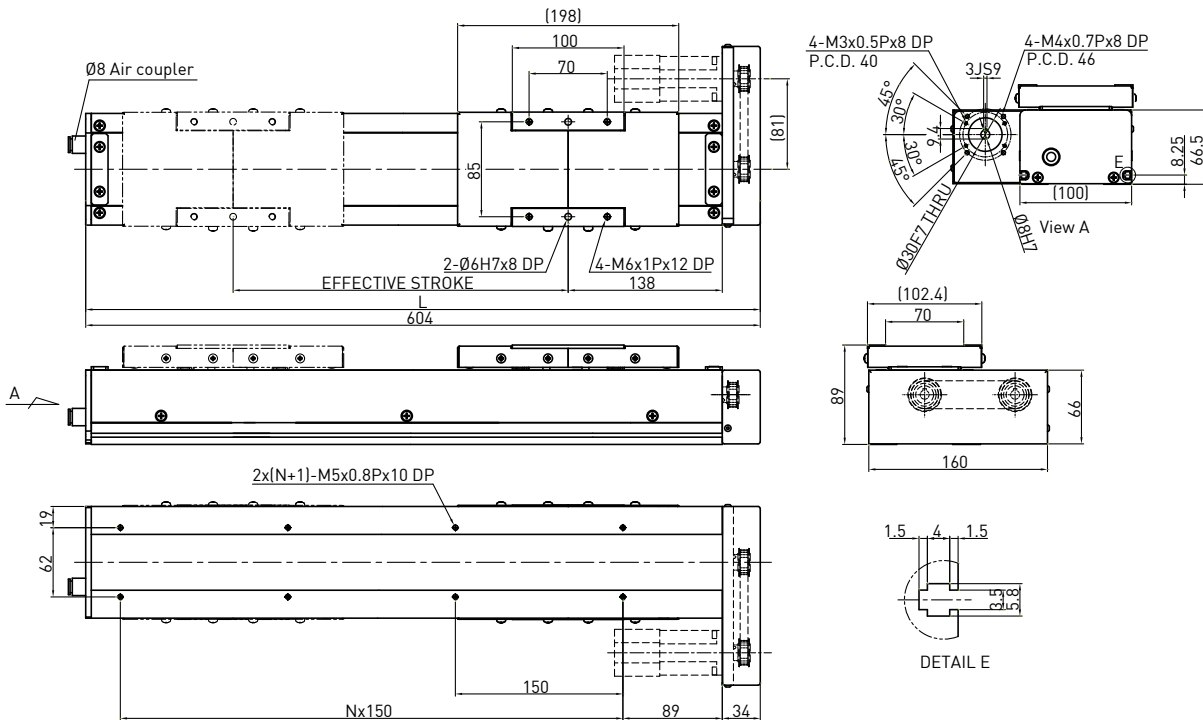


Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	100			
200	504	2	6.0	Drive		Ballscrew C7(normal)			
300	604	3	6.9	Lead	mm	5	10	20	
400	704	3	7.8	Rated RPM	RPM	3000	3000	3000	
500	804	4	8.7	Max linear speed*	mm/sec	250	500	1000	
600	904	5	9.6	Rated thrust	N	280	140	70	
700	1004	5	10.5	Repeatability	mm	±0.02			
800	1104	6	11.4	Effective stroke	mm	200-800			
				Max load (H)	kg	8	6	3.5	
				Rated dynamic load** 	Fyd	N	20	20	20
					Fzd	N	80	60	35
					Mxd	N-m	1.1	1.2	1.1
					Myd	N-m	0.9	0.9	0.9
					Mzd	N-m	0.9	0.9	0.9
				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				

* Vibration might occur when the effective stroke is longer than 650mm.
 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 the vertical axis or in a special condition, please contact HIWIN.

Model Number for KS100-FR

KS100	-20	P	-800	A	FR	S2	M101
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	10mm 20mm	P: Precision C: Normal		A: Standard	FR: Right	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	N	Weight (kg)	AC motor output				W				
				Drive				100				
200	504	2	6.0	Ball screw C7(normal)								
300	604	3	6.9	mm	5	10	20	RPM	3000	3000	3000	
400	704	3	7.8	mm/sec	250	500	1000	Rated thrust	N	280	140	70
500	804	4	8.7	mm	±0.02			Repeatability				
600	904	5	9.6	mm	200-800			Effective stroke				
700	1004	5	10.5	kg	8	6	3.5	Max load (H)				
800	1104	6	11.4		N	20	20	20	F _{yd}			
					N	80	60	35	F _{zd}			
					N-m	1.1	1.2	1.1	M _{xd}			
					N-m	0.9	0.9	0.9	M _{yd}			
					N-m	0.9	0.9	0.9	M _{zd}			
				$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$								
				Permitted load condition*** F _y , F _z , M _x , M _y , M _z are working loads								

* Vibration might occur when the effective stroke is longer than 650mm.

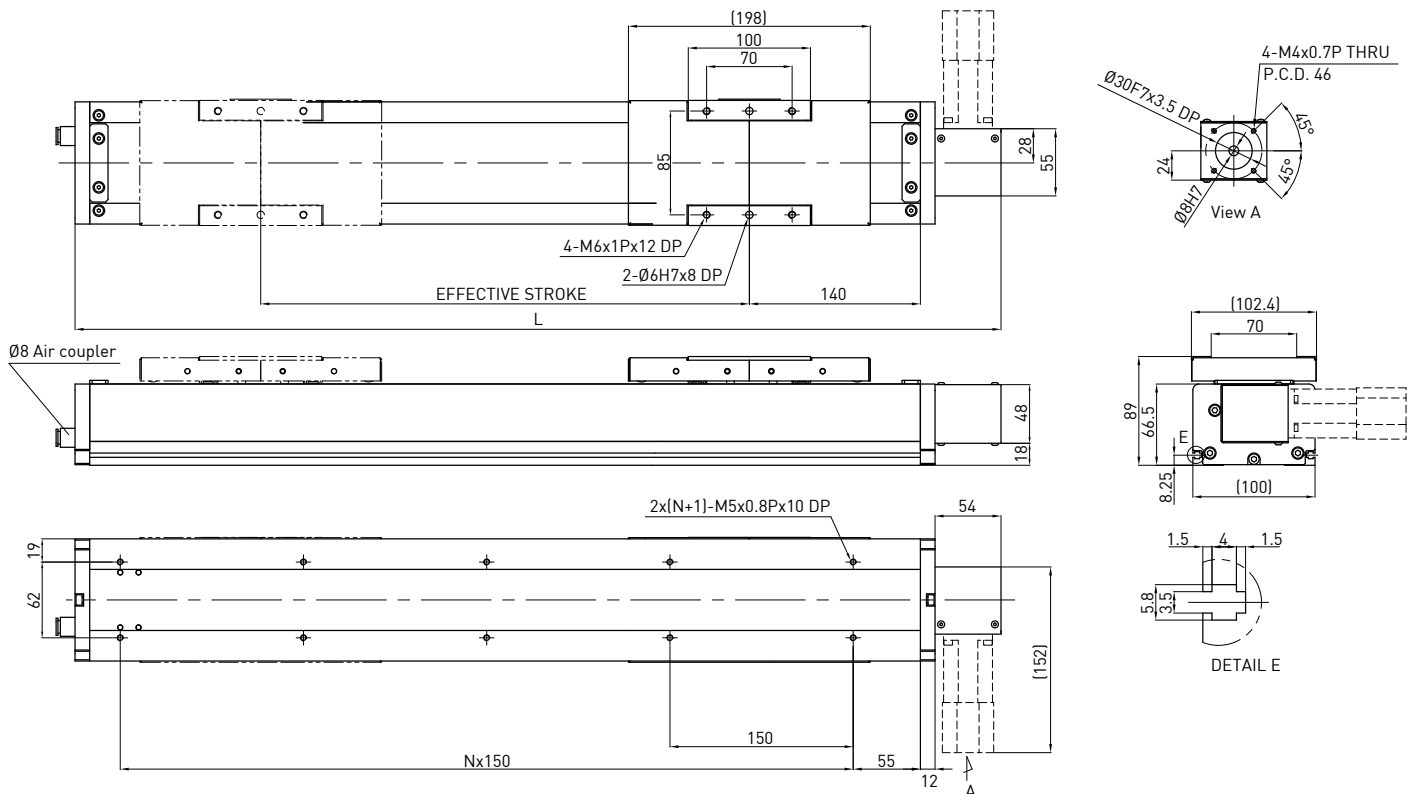
The maximum speed should be decreased by 15% for every 100mm of increased stroke.

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

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

Model Number for KS100B-FR

KS100	B	-84	C	-3000	A	FR	S2	M101
Model	Timing Belt	Pulley Perimeter	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
			C: Normal		A: Standard	FR: Right	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



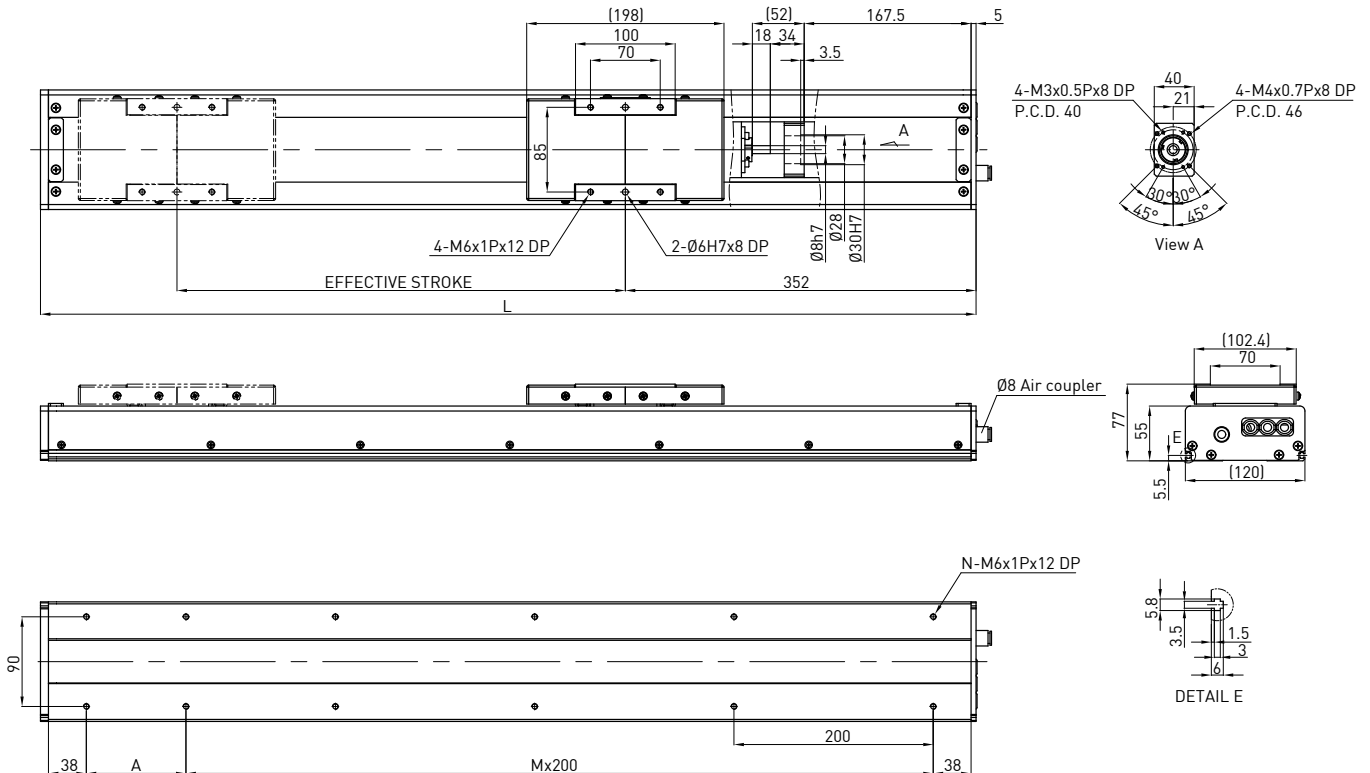
Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	100	
				Drive		Timing Belt	
200	558	2	6.1	Pulley Perimeter	mm	84	
400	758	4	7.6	Pulley RPM	RPM	1286	
600	958	5	9.1	Max linear speed	mm/sec	1800	
800	1158	6	10.6	Rated thrust	N	33	
1000	1358	8	12.1	Repeatability	mm	±0.1	
1200	1558	9	13.6	Effective stroke	mm	200-3000	
1400	1758	10	15.1	Max load (H)	kg	3	
1600	1958	12	16.6	Rated dynamic load*	Fyd	N	20
1800	2158	13	18.1		Fzd	N	30
2000	2358	14	19.6		Mxd	N-m	1.2
2200	2558	16	21.1		Myd	N-m	1
2400	2758	17	22.6		Mzd	N-m	1
2600	2958	18	24.1				
2800	3158	20	25.6	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			
3000	3358	21	27.1				

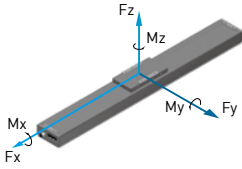
*The load condition is based on 10,000km operation.

**For horizontal applications only. If used in a special condition, please contact HIWIN.

Model Number for KS120

KS120	-20	P	-1050	A	FI	S1	M101
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	5 mm 10 mm 20 mm	P: Precision C: Normal		A: Standard	FI: Internal	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

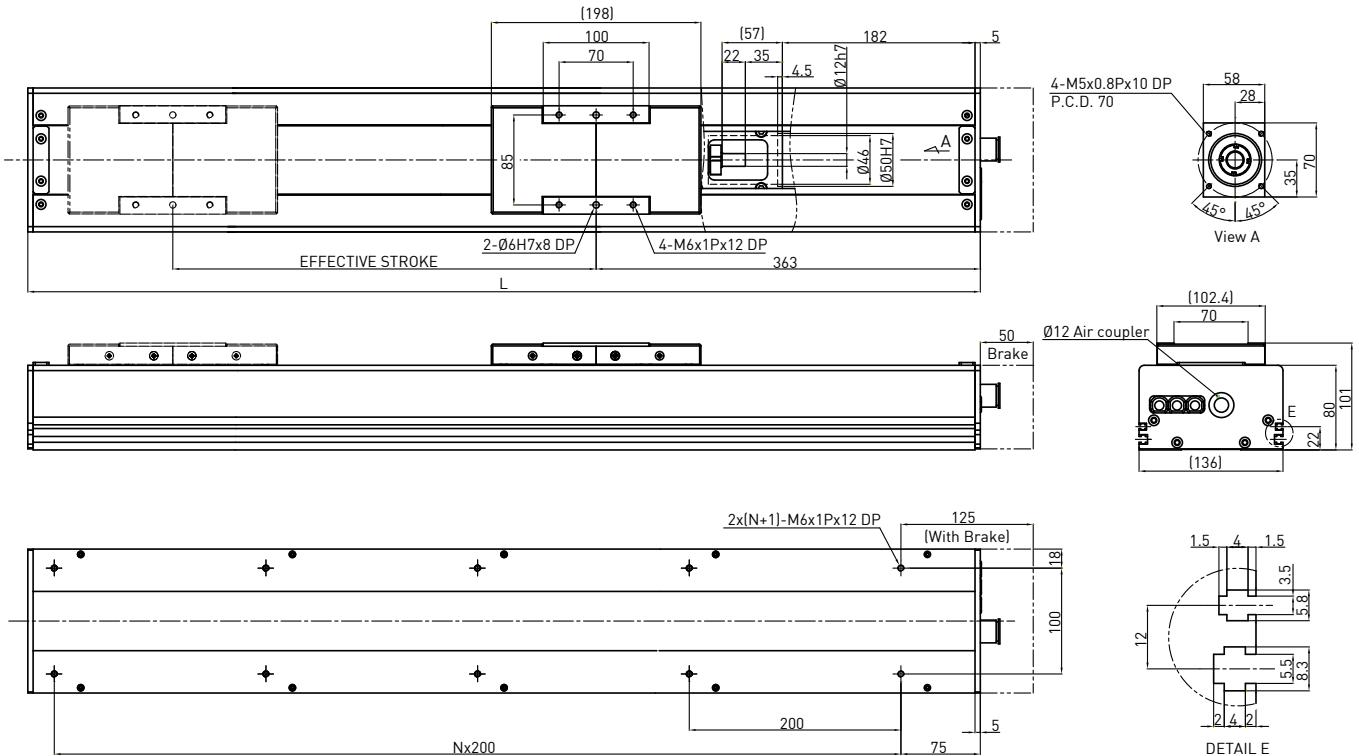


Effective stroke (mm)	L	A	M	N	Weight (kg)	AC motor output	W	100																							
						Drive		Ballscrew C7(normal)																							
100	589	100	2	8	6.32	Lead	mm	5 10 20																							
150	639	150	2	8	6.94	Rated RPM	RPM	3000 3000 3000																							
200	689	200	2	8	7.57	Max linear speed*	mm/sec	250 500 1000																							
250	739	50	3	10	8.2	Rated thrust	N	280 140 70																							
300	789	100	3	10	8.83	Repeatability	mm	±0.02																							
350	839	150	3	10	9.46	Effective stroke	mm	100~1050																							
400	889	200	3	10	10.09	Max load (H)	kg	50 32 20																							
450	939	50	4	12	10.72	<div style="display: flex; align-items: center;">  <table border="1" style="margin-left: 10px;"> <tr> <td>Fyd</td> <td>N</td> <td>50</td> <td>50</td> <td>50</td> </tr> <tr> <td>Fzd</td> <td>N</td> <td>500</td> <td>320</td> <td>200</td> </tr> <tr> <td>Mxd</td> <td>N-m</td> <td>25</td> <td>27</td> <td>28</td> </tr> <tr> <td>Myd</td> <td>N-m</td> <td>20</td> <td>22</td> <td>23</td> </tr> <tr> <td>Mzd</td> <td>N-m</td> <td>20</td> <td>22</td> <td>23</td> </tr> </table> </div>	Fyd	N	50	50	50	Fzd	N	500	320	200	Mxd	N-m	25	27	28	Myd	N-m	20	22	23	Mzd	N-m	20	22	23
Fyd	N	50	50	50																											
Fzd	N	500	320	200																											
Mxd	N-m	25	27	28																											
Myd	N-m	20	22	23																											
Mzd	N-m	20	22	23																											
500	989	100	4	12	11.35	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>Rated dynamic load**</p> </div> </div>																									
550	1039	150	4	12	11.98																										
600	1089	200	4	12	12.61																										
650	1139	50	5	14	13.24																										
700	1189	100	5	14	13.87																										
750	1239	150	5	14	14.5																										
800	1289	200	5	14	15.13	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>Permitted load condition***</p> </div> <div> $\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ <p>Fy, Fz, Mx, My, Mz are working loads</p> </div> </div>																									
850	1339	50	6	16	15.76																										
900	1389	100	6	16	16.39																										
950	1439	150	6	16	17.02																										
1000	1489	200	6	16	17.65																										
1050	1539	50	7	18	18.28																										

* Vibration might occur when the effective stroke is longer than 600mm.
 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 the vertical axis or in a special condition, please contact HIWIN.

Model Number for KS140-FI

KS140	-20	P	-1100	A	FI	S2	M201
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	10mm 20mm	P: Precision C: Normal		A: Standard	FI: Internal	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

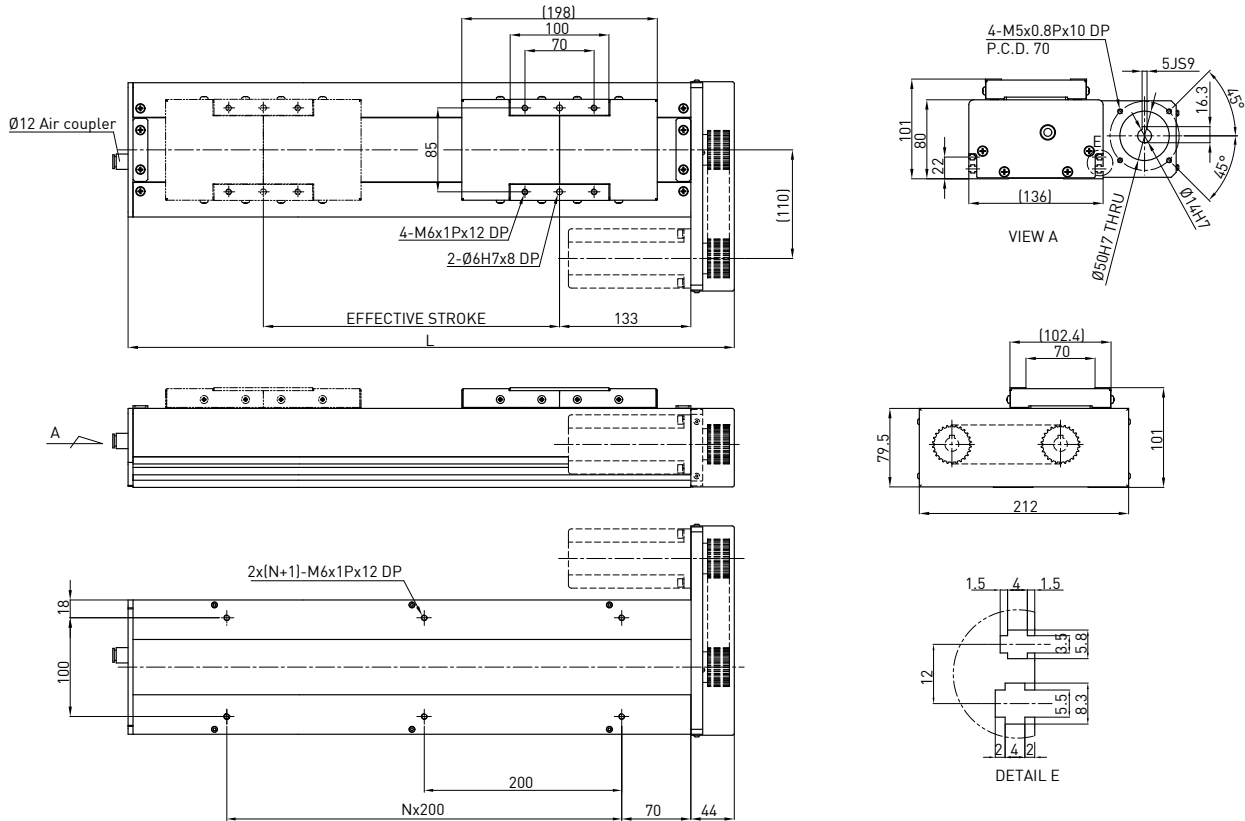


Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	200	
200	700	3	13.5	Drive		Ballscrew C7(normal)	
300	800	3	14.7	Lead	mm	10 20	
400	900	4	15.9	Rated RPM	RPM	3000 3000	
500	1000	4	17.1	Max linear speed*	mm/sec	500 1000	
600	1100	5	18.3	Rated thrust	N	280 140	
700	1200	5	19.5	Repeatability	mm	±0.02	
800	1300	6	20.7	Effective stroke	mm	200~1100	
900	1400	6	21.9	Max load (H)	kg	75 35	
1000	1500	7	23.2		Fyd	N	50 50
1100	1600	7	24.4		Fzd	N	750 350
					Mxd	N-m	55 60
					Myd	N-m	47 51
					Mzd	N-m	47 51
				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		

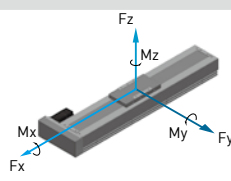
* Vibration might occur when the effective stroke is longer than 800mm.
 The maximum speed should be decreased by 15% for every 100mm of increased stroke.
 ** The load condition is based on 10,000km operation.
 *** If used on the vertical axis or in a special condition, please contact HIWIN.

Model Number for KS140-FL

KS140	-20	P	-1100	A	FL	S2	M201
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	10mm 20mm	P: Precision C: Normal		A: Standard	FL: Left	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. catalof P.167 M:customer specified None:Without Motor



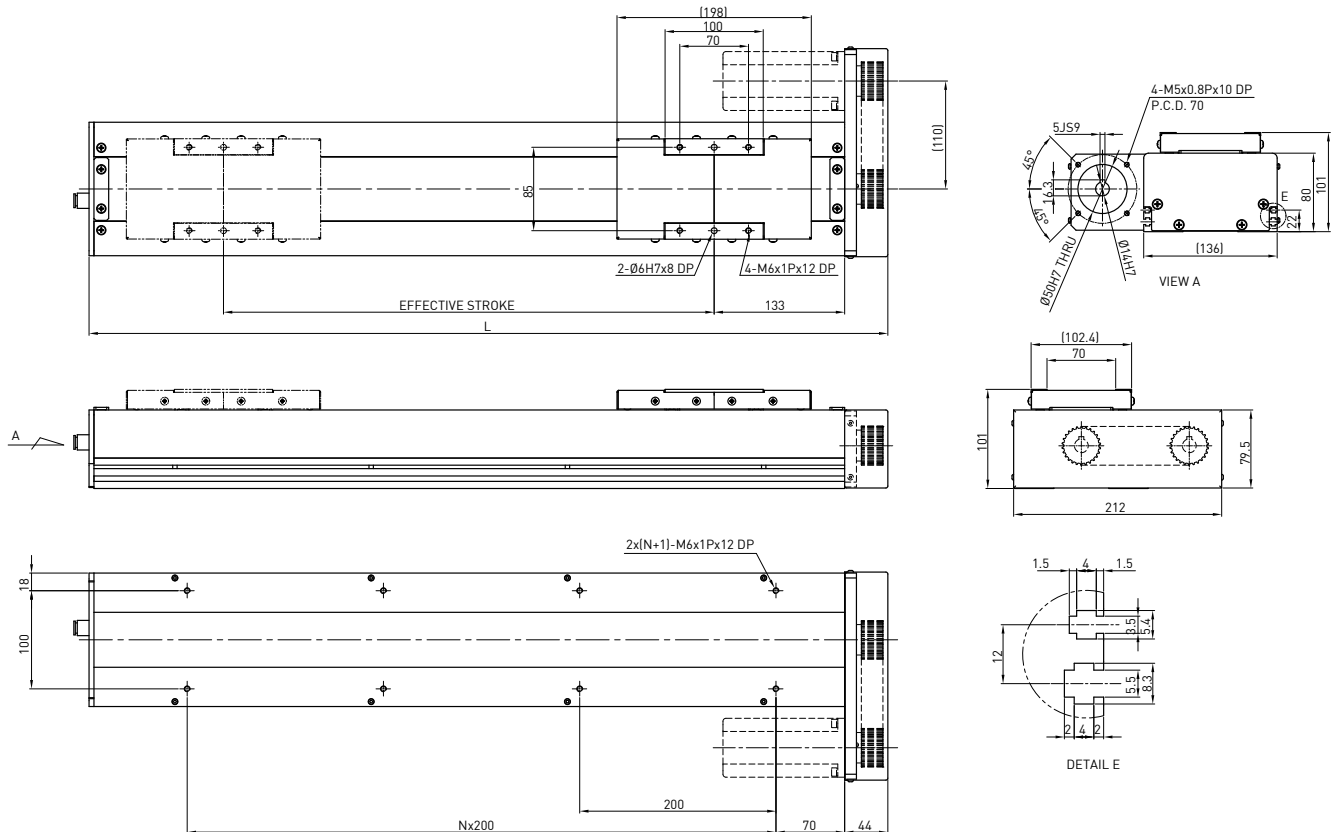
Effective stroke (mm)	L	N	Weight (kg)	AC motor output Drive	W	200		
200	514	1	11.5	Lead	mm	10	20	
300	614	2	13.0	Rated RPM	RPM	3000	3000	
400	714	2	14.5	Max linear speed*	mm/sec	500	1000	
500	814	3	16.0	Rated thrust	N	280	140	
600	914	3	17.5	Repeatability	mm	±0.02		
700	1014	4	19.0	Effective stroke	mm	200~1100		
800	1114	4	20.5	Max load (H)	kg	75	35	
900	1214	5	22.0	Rated dynamic load**	F _{yd}	N	50	50
1000	1314	5	23.5		F _{zd}	N	750	350
1100	1414	6	25.0		M _{xd}	N-m	55	60
					M _{yd}	N-m	47	51
					M _{zd}	N-m	47	51
				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			

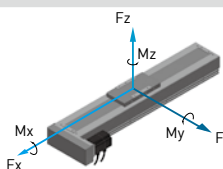


* Vibration might occur when the effective stroke is longer than 800mm.
 The maximum speed should be decreased by 15% for every 100mm of increased stroke.
 ** The load condition is based on 10,000km operation.
 *** If used on the vertical axis or in a special condition, please contact HIWIN.

Model Number for KS140-FR

KS140	-20	P	-1100	A	FR	S2	M201
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	10mm 20mm	P: Precision C: Normal		A: Standard	FR: Right	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. catalof P.167 M:customer specified None:Without Motor

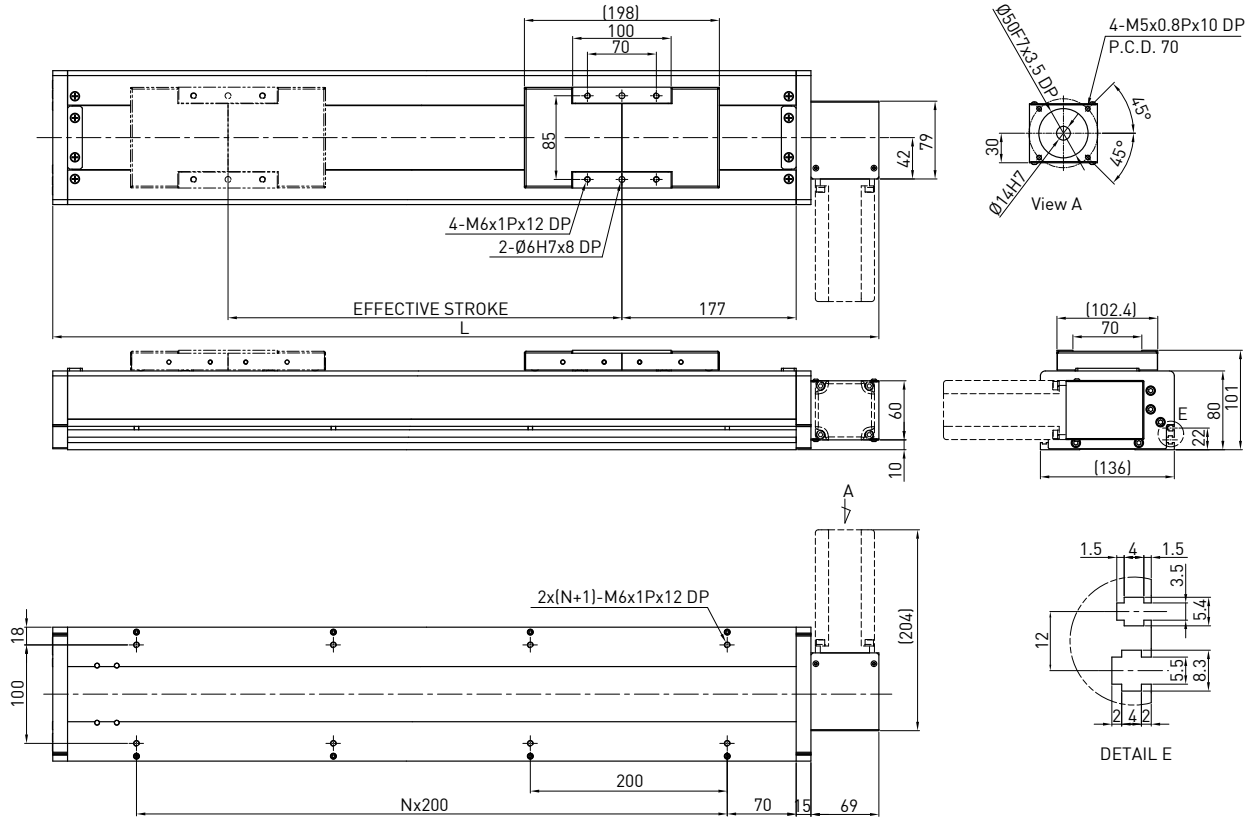


Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	200	
200	514	1	11.5	Drive	Ballscrew C7(normal)		
300	614	2	13.0	Lead	mm	10 20	
400	714	2	14.5	Rated RPM	RPM	3000 3000	
500	814	3	16.0	Max linear speed*	mm/sec	500 1000	
600	914	3	17.5	Rated thrust	N	280 140	
700	1014	4	19.0	Repeatability	mm	±0.02	
800	1114	4	20.5	Effective stroke	mm	200~1100	
900	1214	5	22.0	Max load (H)	kg	75 35	
1000	1314	5	23.5	Rated dynamic load** 	Fyd	N	50 50
1100	1414	6	25.0		Fzd	N	750 350
					Mxd	N-m	55 60
					Myd	N-m	47 51
					Mzd	N-m	47 51
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			

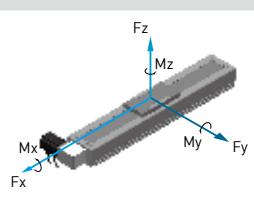
* Vibration might occur when the effective stroke is longer than 800mm.
 The maximum speed should be decreased by 15% for every 100mm of increased stroke.
 ** The load condition is based on 10,000km operation.
 *** If used on the vertical axis or in a special condition, please contact HIWIN.

Model Number for KS140B-FL

KS140	B	-120	C	-3000	A	FL	S2	M201
Model	Timing Belt	Pulley Perimeter	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
			C: Normal		A: Standard	FL: Left	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



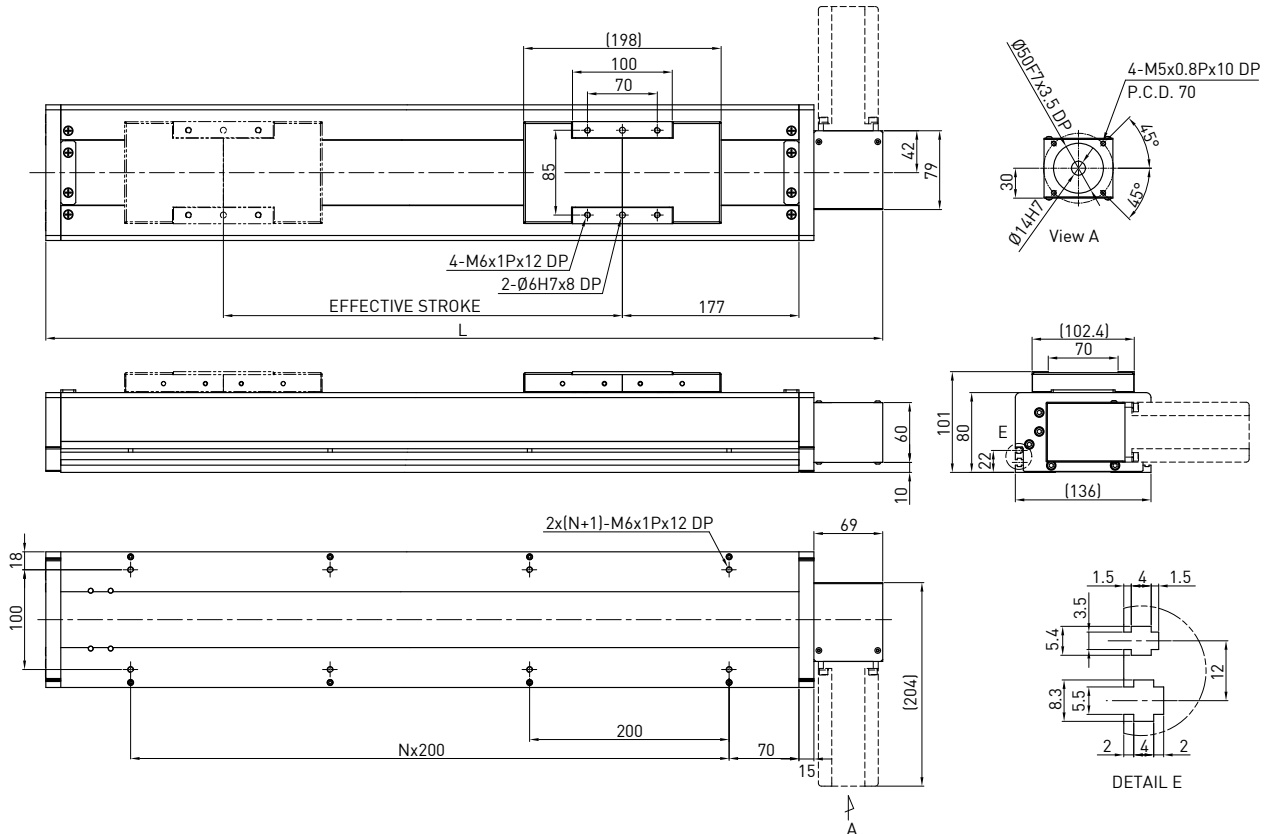
Effective stroke (mm)	L	N	Weight (kg)	AC motor output Drive	W	200			
200	639	2	10.4	Pulley Perimeter	mm	120			
400	839	3	12.6	Pulley RPM	RPM	900			
600	1039	4	14.8	Max linear speed	mm/sec	1800			
800	1239	5	17.0	Rated thrust	N	67			
1000	1439	6	19.2	Repeatability	mm	±0.1			
1200	1639	7	21.4	Effective stroke	mm	200-3000			
1400	1839	8	23.6	Max load (H)	kg	15			
1600	2039	9	25.8	Rated dynamic load*	F _{yd}	N	50		
1800	2239	10	28.0		F _{zd}	N	150		
2000	2439	11	30.2		M _{xd}	N-m	67		
2200	2639	12	32.4		M _{yd}	N-m	53		
2400	2839	13	34.6		M _{zd}	N-m	53		
2600	3039	14	36.8		$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ F _y , F _z , M _x , M _y , M _z are working loads				
2800	3239	15	39.0	Permitted load condition**					
3000	3439	16	41.2						

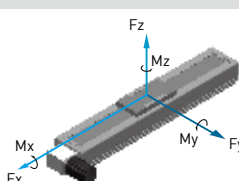


*The load condition is based on 10,000km operation.
**For horizontal applications only. If used in a special condition, please contact HIWIN.

Model Number for KS140B-FR

KS140	B	-120	C	-3000	A	FR	S2	M201
Model	Timing Belt	Pulley Perimeter	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
			C: Normal		A: Standard	FR: Right	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



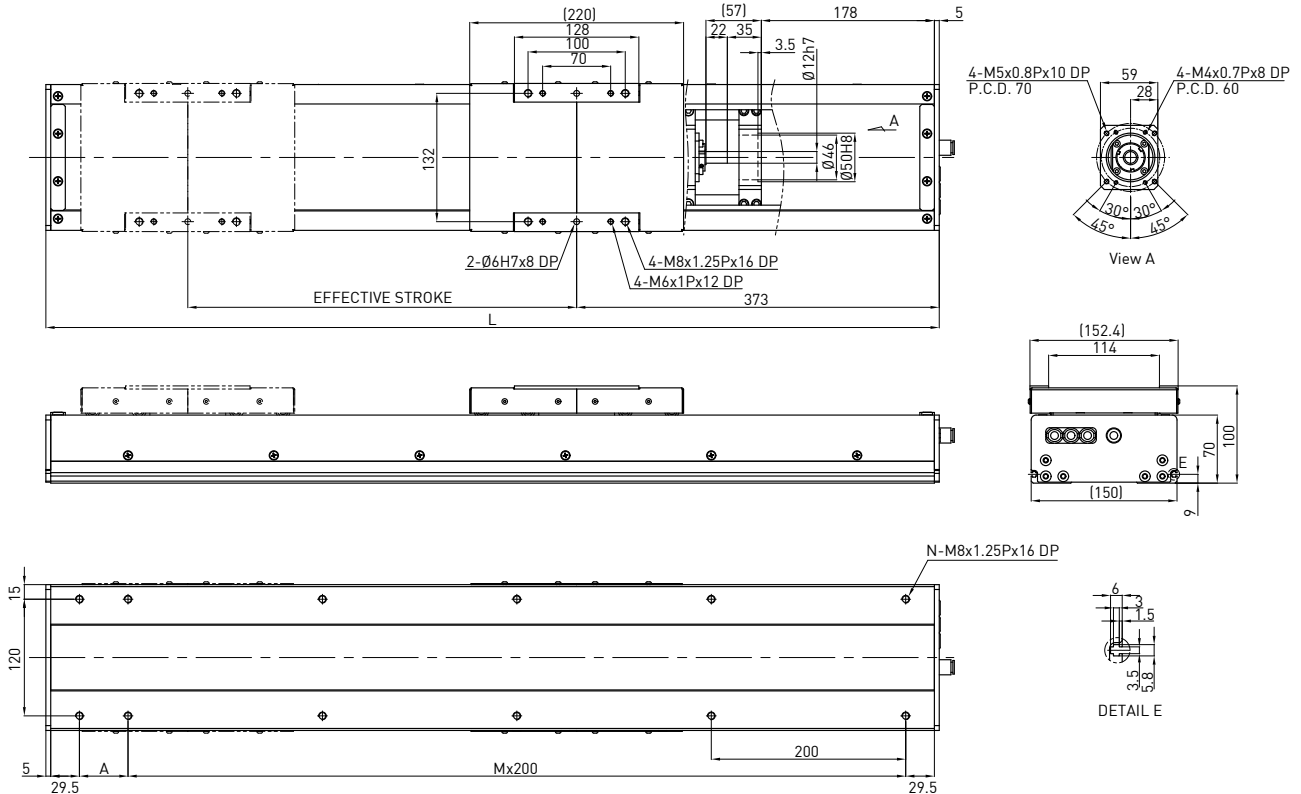
Effective stroke (mm)	L	N	Weight (kg)	AC motor output Drive	W	200													
200	639	2	10.4	Pulley Perimeter	mm	120													
400	839	3	12.6	Pulley RPM	RPM	900													
600	1039	4	14.8	Max linear speed	mm/sec	1800													
800	1239	5	17.0	Rated thrust	N	67													
1000	1439	6	19.2	Repeatability	mm	±0.1													
1200	1639	7	21.4	Effective stroke	mm	200~3000													
1400	1839	8	23.6	Max load (H)	kg	15													
1600	2039	9	25.8	<div style="display: flex; align-items: center;">  <table border="1" style="margin-left: 10px;"> <tr><td>Fyd</td><td>N</td><td>50</td></tr> <tr><td>Fzd</td><td>N</td><td>150</td></tr> <tr><td>Mxd</td><td>N-m</td><td>67</td></tr> <tr><td>Myd</td><td>N-m</td><td>53</td></tr> <tr><td>Mzd</td><td>N-m</td><td>53</td></tr> </table> </div>	Fyd	N	50	Fzd	N	150	Mxd	N-m	67	Myd	N-m	53	Mzd	N-m	53
Fyd	N	50																	
Fzd	N	150																	
Mxd	N-m	67																	
Myd	N-m	53																	
Mzd	N-m	53																	
1800	2239	10	28.0	Rated dynamic load*															
2000	2439	11	30.2																
2200	2639	12	32.4																
2400	2839	13	34.6																
2600	3039	14	36.8	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															
2800	3239	15	39.0																
3000	3439	16	41.2																

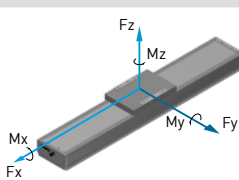
*The load condition is based on 10,000km operation.

**For horizontal applications only. If used in a special condition, please contact HIWIN.

Model Number for KS150-FI

KS150	-10	P	-1250	A	FI	S1	M201
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	10 mm 20 mm	P: Precision C: Normal		A: Standard	FI: Internal	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

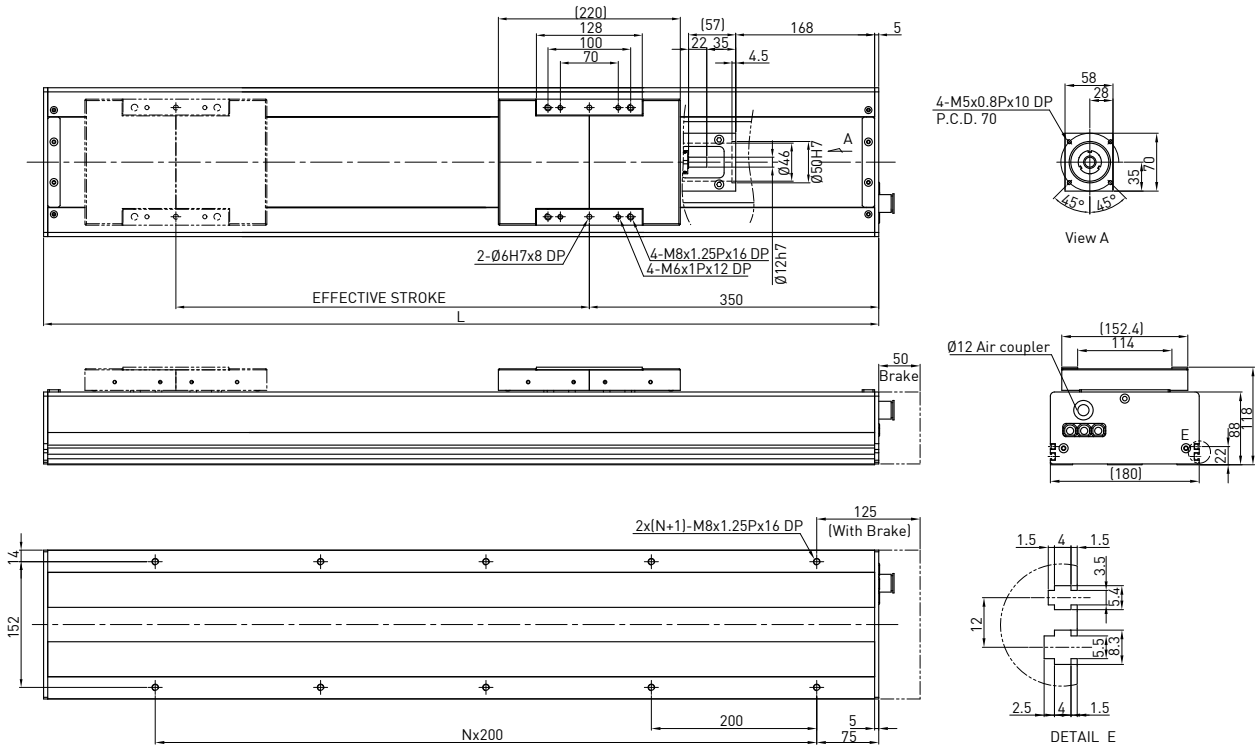


Effective stroke (mm)	L	A	M	N	Weight (kg)	AC motor output Drive	W	200	
150	669	200	2	8	13.96	Lead	mm	10 20	
200	719	50	3	10	14.84	Rated RPM	RPM	3000 3000	
250	769	100	3	10	15.72	Max linear speed*	mm/sec	500 1000	
300	819	150	3	10	16.6	Rated thrust	N	280 140	
350	869	200	3	10	17.48	Repeatability	mm	±0.02	
400	919	50	4	12	18.36	Effective stroke	mm	150~1250	
450	969	100	4	12	19.24	Max load (H)	kg	80 40	
500	1019	150	4	12	20.12	Rated dynamic load** 	Fyd	N	50 50
550	1069	200	4	12	21		Fzd	N	800 400
600	1119	50	5	14	21.88		Mxd	N-m	56 63
650	1169	100	5	14	22.76		Myd	N-m	49 53
700	1219	150	5	14	23.64		Mzd	N-m	49 53
750	1269	200	5	14	24.52	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			
800	1319	50	6	16	25.4				
850	1369	100	6	16	26.28				
900	1419	150	6	16	27.16				
950	1469	200	6	16	28.04				
1000	1519	50	7	18	28.92				
1050	1569	100	7	18	29.8				
1100	1619	150	7	18	30.68				
1150	1669	200	7	18	31.56				
1200	1719	50	8	20	32.44				
1250	1769	100	8	20	33.32				

* Vibration might occur when the effective stroke is longer than 700mm.
 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 the vertical axis or in a special condition, please contact HIWIN.

Model Number for KS180-FI

KS180	-20	P	-1200	A	FI	S2	M401
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	10mm 20mm	P: Precision C: Normal		A: Standard	FI: Internal	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

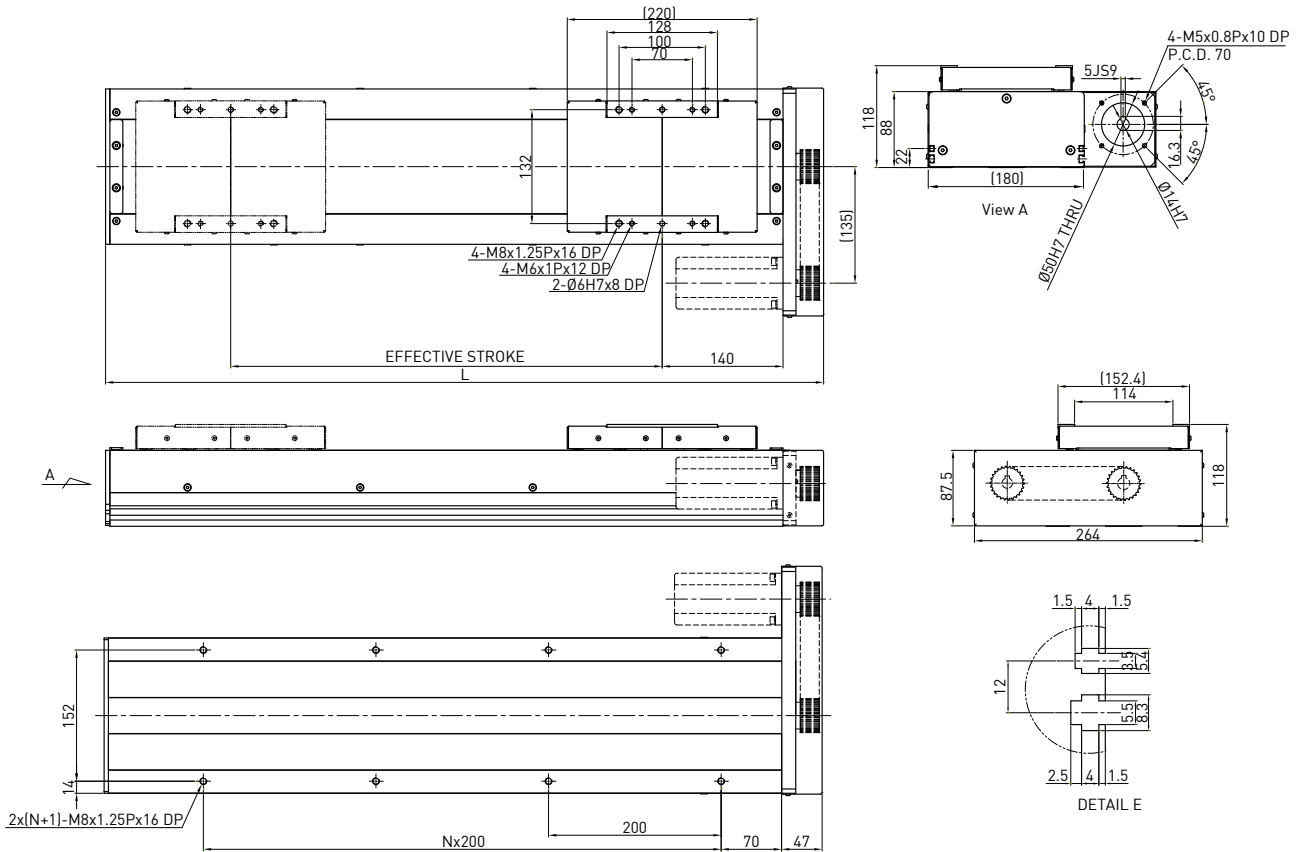


Effective stroke (mm)	L	N	Weight (kg)	AC motor output		W		
				Drive	Lead	400		
200	710	3	16.5		mm	10	20	
300	810	3	18.1		RPM	3000	3000	
400	910	4	19.7		mm/sec	500	1000	
500	1010	4	21.3		N	560	280	
600	1110	5	22.9		mm	±0.02		
700	1210	5	24.4		mm	200-1200		
800	1310	6	26		kg	110	50	
900	1410	6	27.6		Fyd	N	50	50
1000	1510	7	29.2		Fzd	N	1100	500
1100	1610	7	30.8		Mxd	N-m	60	65
1200	1710	8	32.3		Myd	N-m	45	53
					Mzd	N-m	45	53
Permitted load condition***				$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ <p>Fy, Fz, Mx, My, Mz are working loads</p>				

* Vibration might occur when the effective stroke is longer than 800mm.
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 the vertical axis or in a special condition, please contact HIWIN.

Model Number for KS180-FL

KS180	-20	P	-1200	A	FL	S2	M401
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	10mm 20mm	P: Precision C: Normal		A: Standard	FL: Left	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

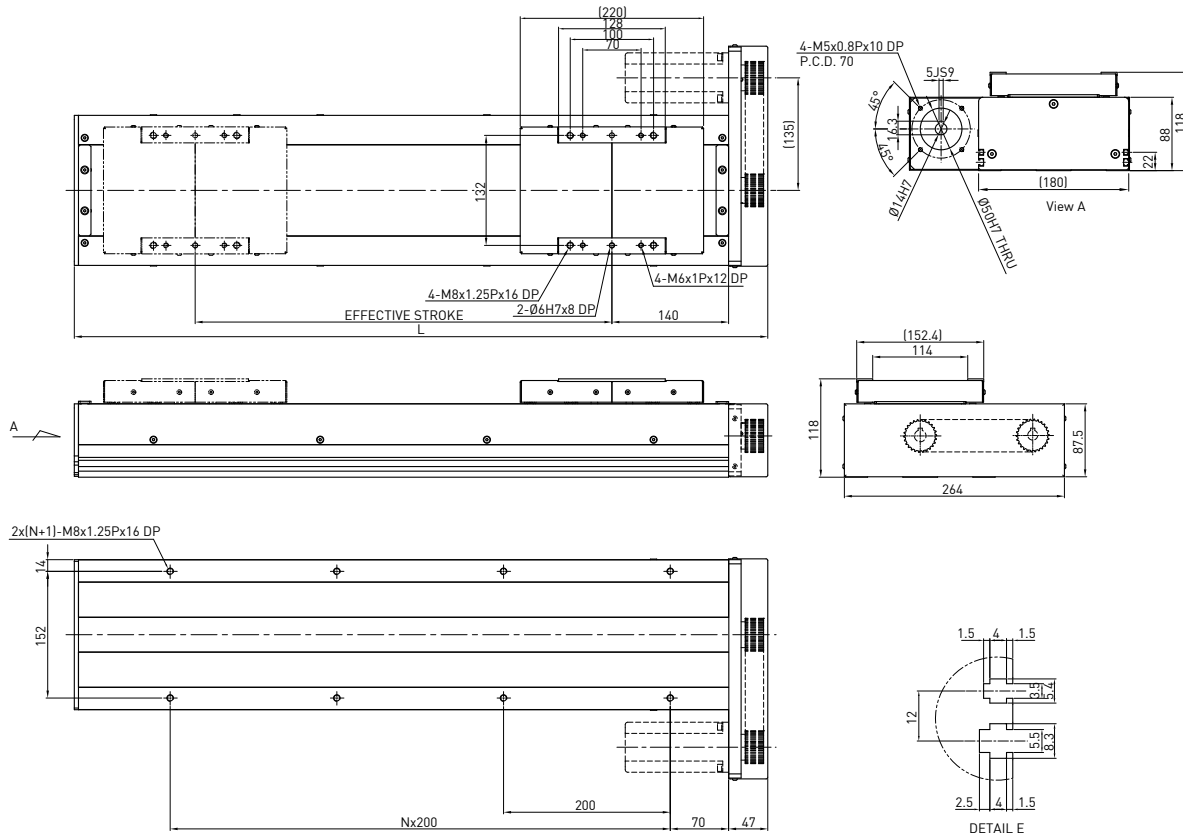


Effective stroke (mm)	L	N	Weight (kg)	AC motor output		W	
				Drive		400	
200	532	1	11.3			Ballscrew C7(normal)	
300	632	2	12.3			mm	10 20
400	732	2	13.3			RPM	3000 3000
500	832	3	14.3			mm/sec	500 1000
600	932	3	15.3			N	560 280
700	1032	4	16.3			mm	±0.02
800	1132	4	17.3			mm	200-1200
900	1232	5	18.3			kg	110 50
1000	1332	5	19.3	Rated dynamic load**		N	50 50
1100	1432	6	20.3			N	1100 500
1200	1532	6	21.3			N-m	60 65
						N-m	45 53
						N-m	45 53
				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		

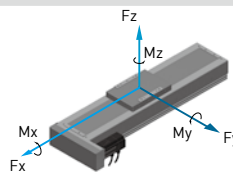
* Vibration might occur when the effective stroke is longer than 800mm.
 The maximum speed should be decreased by 15% for every 100mm of increased stroke.
 ** The load condition is based on 10,000km operation.
 *** If used on the vertical axis or in a special condition, please contact HIWIN.

Model Number for KS180-FR

KS180	-20	P	-1200	A	FR	S2	M401
Model	Lead	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
	10mm 20mm	P: Precision C: Normal		A: Standard	FR: Right	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. catalof P.167 M:customer specified None:Without Motor



Effective stroke (mm)	L	N	Weight (kg)	AC motor output		W		400	
				Drive		Ball screw C7(normal)			
200	532	1	11.3	Lead	mm	10	20		
300	632	2	12.3	Rated RPM	RPM	3000	3000		
400	732	2	13.3	Max linear speed*	mm/sec	500	1000		
500	832	3	14.3	Rated thrust	N	560	280		
600	932	3	15.3	Repeatability	mm	±0.02			
700	1032	4	16.3	Effective stroke	mm	200-1200			
800	1132	4	17.3	Max load (H)	kg	110	50		
900	1232	5	18.3	Rated dynamic load**	F _{yd}	N	50	50	
1000	1332	5	19.3		F _{zd}	N	1100	500	
1100	1432	6	20.3		M _{xd}	N-m	60	65	
1200	1532	6	21.3		M _{yd}	N-m	45	53	
					M _{zd}	N-m	45	53	
				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 800mm.

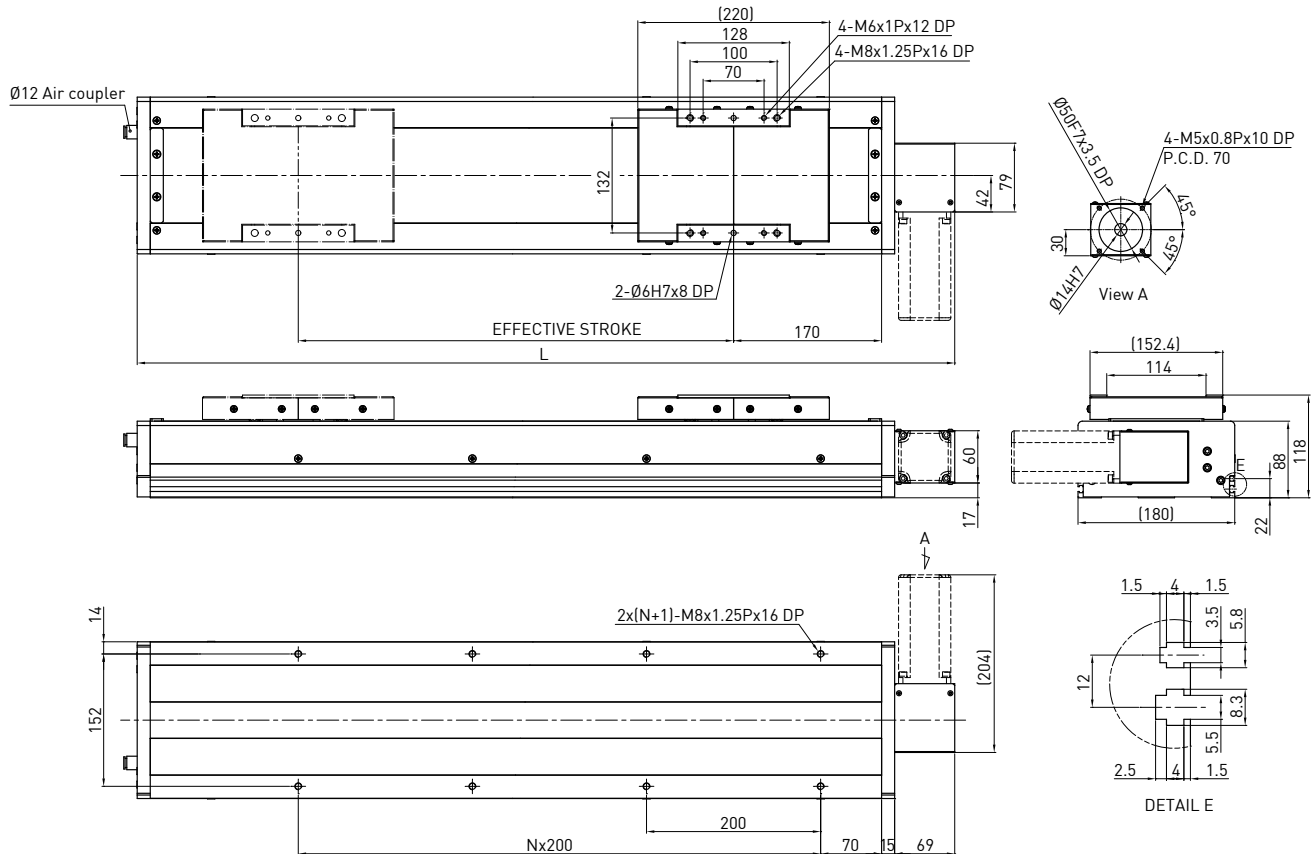
The maximum speed should be decreased by 15% for every 100mm of increased stroke.

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

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

Model Number for KS180B-FL

KS180	B	-120	C	-3000	A	FL	S2	M401
Model	Timing Belt	Pulley Perimeter	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
			C: Normal		A: Standard	FL: Left	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



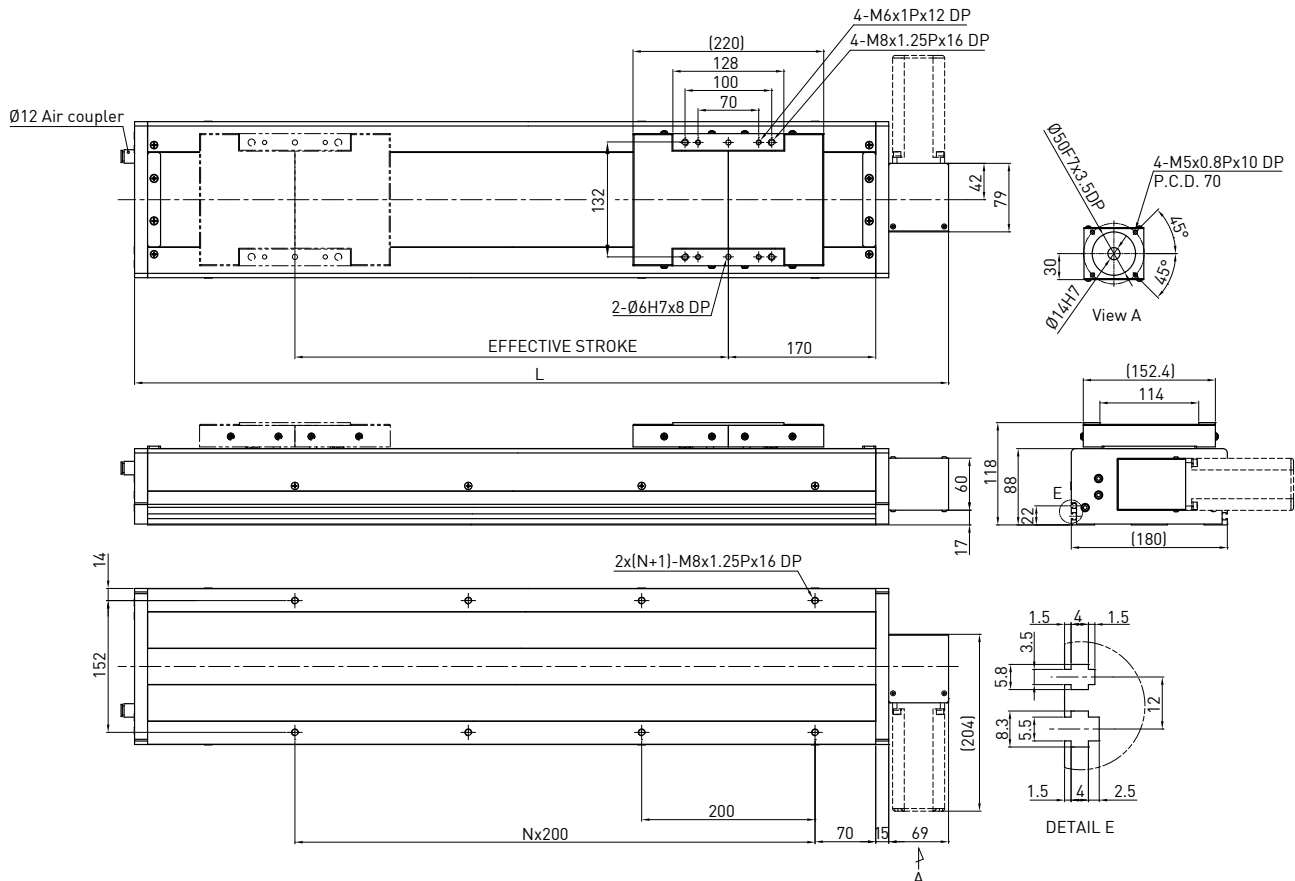
Effective stroke (mm)	L	N	Weight (kg)	AC motor output Drive	W	400	
200	639	2	14.2	Pulley Perimeter	mm	120	
400	839	3	17.0	Pulley RPM	RPM	900	
600	1039	4	19.8	Max linear speed	mm/sec	1800	
800	1239	5	22.6	Rated thrust	N	133	
1000	1439	6	25.4	Repeatability	mm	±0.1	
1200	1639	7	28.2	Effective stroke	mm	200-3000	
1400	1839	8	31.0	Max load (H)	kg	30	
1600	2039	9	33.8		Fyd	N	50
1800	2239	10	36.6		Fzd	N	300
2000	2439	11	39.4		Mxd	N-m	70
2200	2639	12	42.2		Myd	N-m	55
2400	2839	13	45.0		Mzd	N-m	55
2600	3039	14	47.8	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			
2800	3239	15	50.6				
3000	3439	16	53.4				

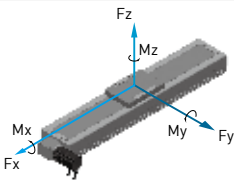
*The load condition is based on 10,000km operation.

**For horizontal applications only. If used in a special condition, please contact HIWIN.

Model Number for KS180B-FR

KS180	B	-120	C	-3000	A	FR	S2	M401
Model	Timing Belt	Pulley Perimeter	Precision Grade	Effective Stroke	Slider Type	Motor Flange	Limit Switch	Motor
			C: Normal		A: Standard	FR: Right	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	N	Weight (kg)	AC motor output Drive	W	400	
200	639	2	14.2	Pulley Perimeter	mm	120	
400	839	3	17.0	Pulley RPM	RPM	900	
600	1039	4	19.8	Max linear speed	mm/sec	1800	
800	1239	5	22.6	Rated thrust	N	133	
1000	1439	6	25.4	Repeatability	mm	±0.1	
1200	1639	7	28.2	Effective stroke	mm	200-3000	
1400	1839	8	31.0	Max load (H)	kg	30	
1600	2039	9	33.8	Rated dynamic load* 	F _{yd}	N	50
1800	2239	10	36.6		F _{zd}	N	300
2000	2439	11	39.4		M _{xd}	N-m	70
2200	2639	12	42.2		M _{yd}	N-m	55
2400	2839	13	45.0		M _{zd}	N-m	55
2600	3039	14	47.8	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			
2800	3239	15	50.6				
3000	3439	16	53.4				

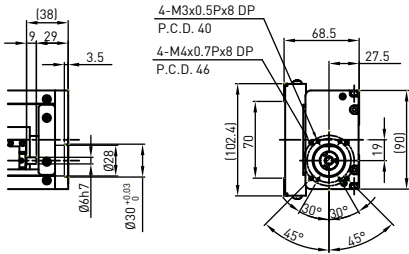
*The load condition is based on 10,000km operation.

**For horizontal applications only. If used in a special condition, please contact HIWIN.

6.4 Motor Adaptor Flange List

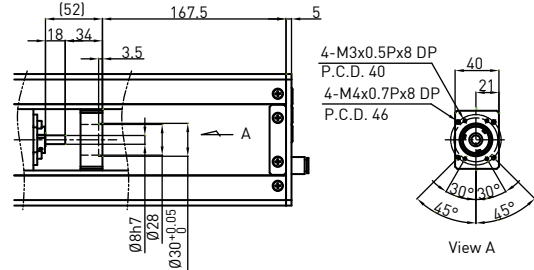
KS90

Motor Adaptor Flange F0

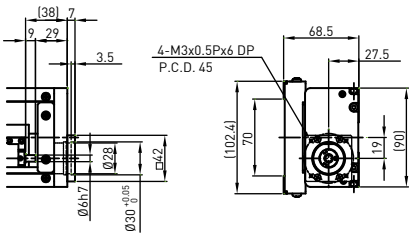


KS120

Motor Adaptor Flange FI

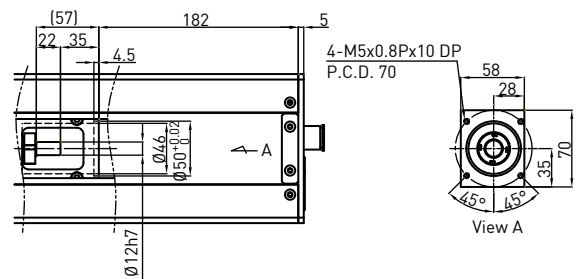


Motor Adaptor Flange F1



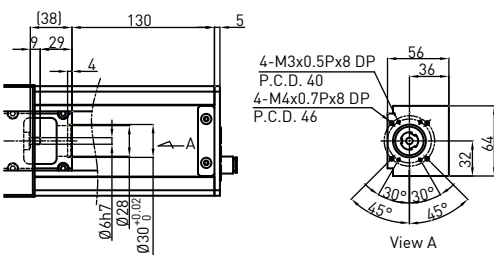
KS140

Motor Adaptor Flange FI



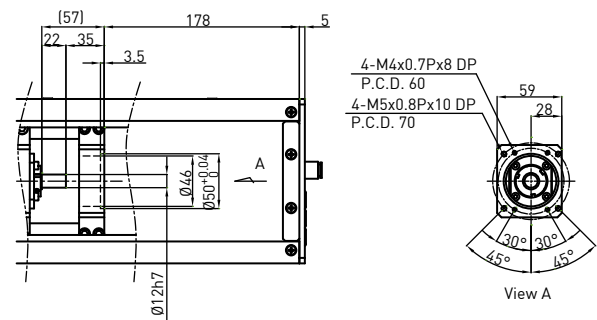
KS100

Motor Adaptor Flange FI

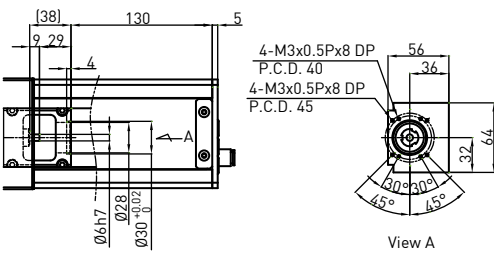


KS150

Motor Adaptor Flange FI

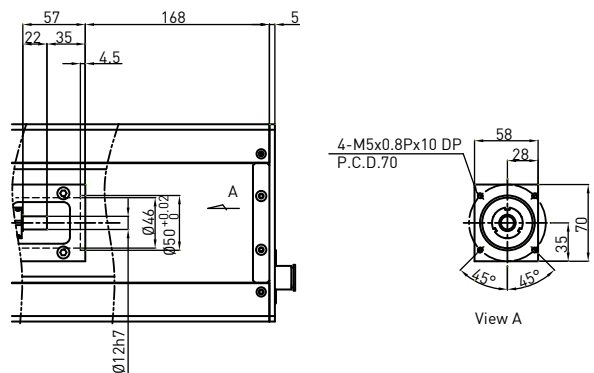


Motor Adaptor Flange F1



KS180

Motor Adaptor Flange FI



6.5 Motor Housing and Motor Adaptor Flange(KS Series)

HIWIN Mikrosystem Servo Motor

Motor Output	Motor	Flange Selection						Drive	Remarks
		KS90	KS100	KS120	KS140	KS150	KS180		
50W	FRLS052□□A4□	F1	F1	F1	-	-	-	D2T-0123-S-A□	220V
100W	FRLS102□□A4□	F1	F1	F1	-	-	-		220V
200W	FRLS202□□06□	-	-	-	FI	FI	FI	D2T-0423-S-B□	220V
400W	FRLS402□□06□	-	-	-	FI	FI	FI		220V
750W	FRMS752□□08□	-	-	-	-	-	-	D2-T1023-S-C□	220V

Mitsubishi Servo Motor

Motor Output	Motor	Flange Selection						Drive	Remarks
		KS90	KS100	KS120	KS140	KS150	KS180		
50W	HF-KP053	F0	FI	FI	-	-	-	MR-J3S-10A	220V
100W	HF-KP13	F0	FI	FI	-	-	-	MR-J3S-10A	220V
200W	HF-KP23	-	-	-	FI	FI	FI	MR-J3S-20A	220V
400W	HF-KP43	-	-	-	FI	FI	FI	MR-J3S-40A	220V
750W	HF-KP73	-	-	-	-	-	-	MR-J3S-70A	220V

Panasonic Servo Motor

Motor Output	Motor	Flange Selection						Drive	Remarks
		KS90	KS100	KS120	KS140	KS150	KS180		
50W	MSMD5AZP1	F1	F1	F1	-	-	-	MADDT1105	110V
50W	MSMD5AZP1	F1	F1	F1	-	-	-	MADDT1205	220V
100W	MSMD011P1	F1	F1	F1	-	-	-	MADDT1107	110V
100W	MSMD012P1	F1	F1	F1	-	-	-	MADDT1205	220V
200W	MSMD021P1	-	-	-	-	-	-	MADDT2110	110V
200W	MSMD022P1	-	-	-	-	-	-	MADDT1207	220V
400W	MSMD041P1	-	-	-	-	-	-	MADDT3120	110V
400W	MSMD042P1	-	-	-	-	-	-	MADDT2210	220V
750W	MSMD082S1	-	-	-	-	-	-	MADDT3520	220V

Yasukawa Servo Motor

Motor Output	Motor	Flange Selection						Drive	Remarks
		KS90	KS100	KS120	KS140	KS150	KS180		
50W	SGMAV-A5ADA61	F0	FI	FI	-	-	-	SGDV-R70A01A	with key
50W	SGMAV-A5ADA2C	F0	FI	FI	-	-	-	SGDV-R70A01A	no key
50W	SGMAV-A5ADA21	F0	FI	FI	-	-	-	SGDV-R70A01A	no key
100W	SGMAV-01ADA21	F0	FI	F0	-	-	-	SGDV-R90A01A	
200W	SGMAV-02ADA21	-	-	-	FI	FI	FI	SGDV-1R6A01A	
400W	SGMAV-04ADA21	-	-	-	FI	FI	FI	SGDV-2R8A01A	
750W	SGMAV-08ADA21	-	-	-	-	-	-	SGDV-5R5A01A	