

# 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

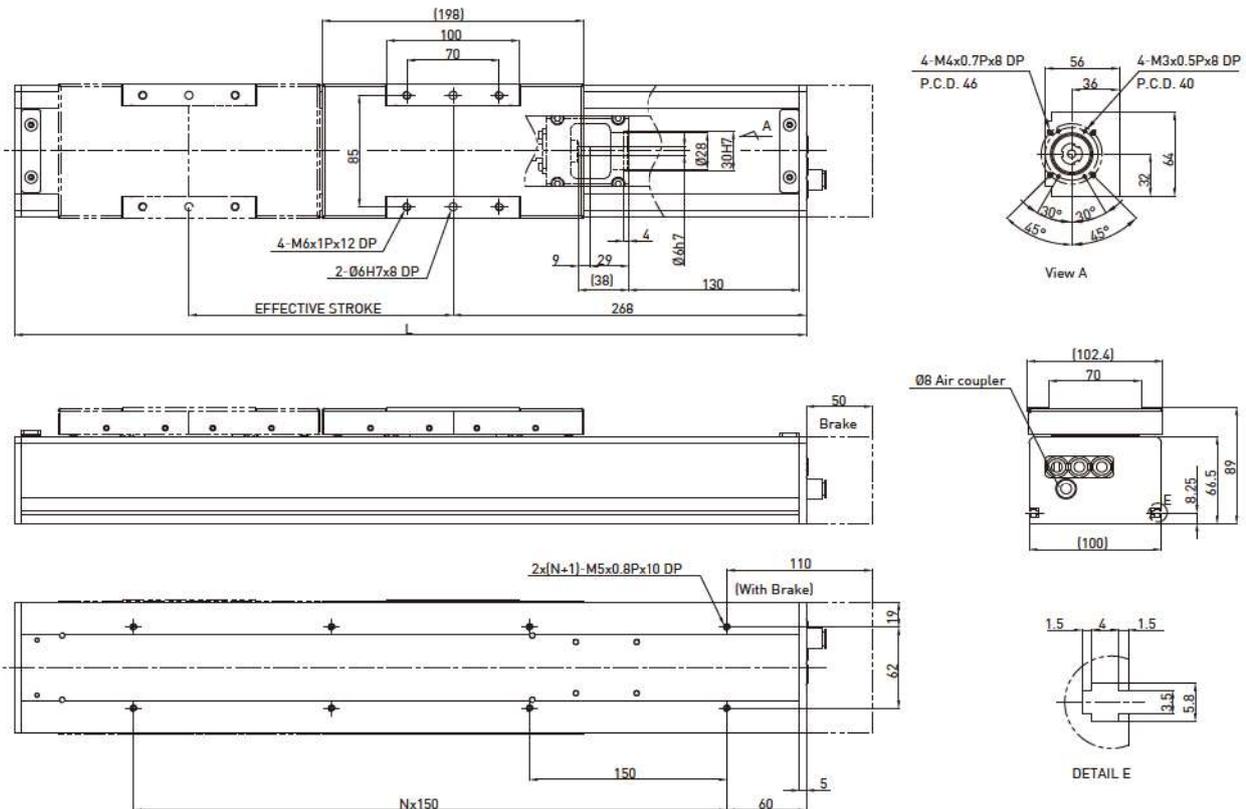
- ⊙ FPD industry
- ⊙ Semiconductor
- ⊙ Medical applications
- ⊙ FPD glass transfer
- ⊙ Inspection & testing equipment





## 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. catalof 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	
					F <sub>yd</sub>	N	20	20	20
					F <sub>zd</sub>	N	80	60	35
					M <sub>xd</sub>	N-m	1.1	1.2	1.1
					M <sub>yd</sub>	N-m	0.9	0.9	0.9
					M <sub>zd</sub>	N-m	0.9	0.9	0.9
<b>Rated dynamic load**</b>									
<b>Permitted load condition***</b>				$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ F <sub>y</sub> , F <sub>z</sub> , M <sub>x</sub> , M <sub>y</sub> , M <sub>z</sub> are working loads					

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

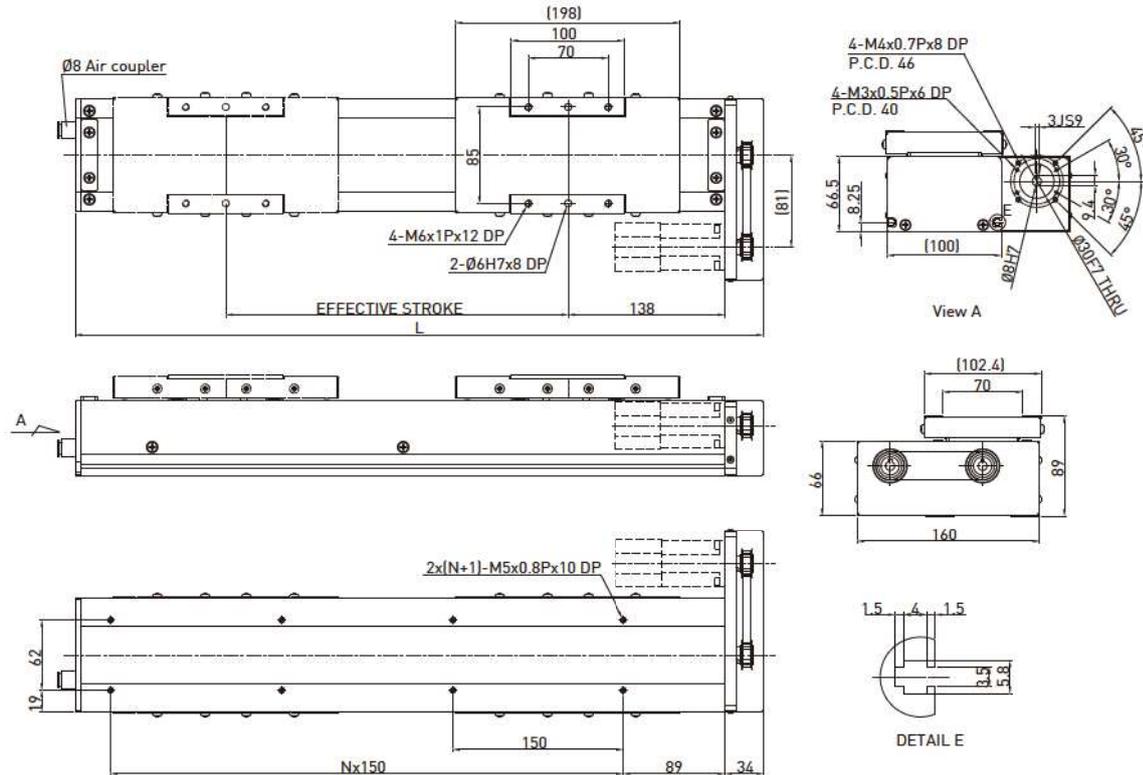
The maximum speed should be decreased by 15% for every 100mm of increased stroke.

\*\* 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.

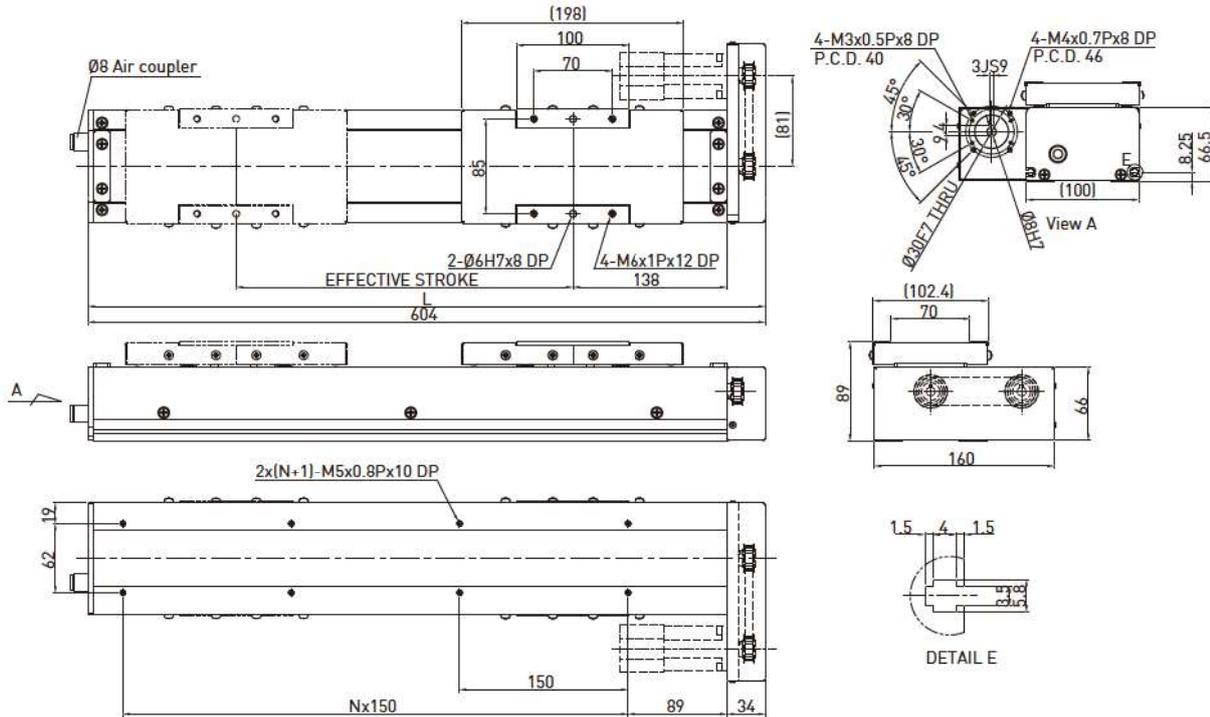
The maximum speed should be decreased by 15% for every 100mm of increased stroke.

\*\* 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. catalof P.167 M:customer specified None:Without Motor



Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	100			
				Drive		Ballscrew C7(normal)			
200	504	2	6.0	Lead	mm	5	10	20	
300	604	3	6.9	Rated RPM	RPM	3000	3000	3000	
400	704	3	7.8	Max linear speed*	mm/sec	250	500	1000	
500	804	4	8.7	Rated thrust	N	280	140	70	
600	904	5	9.6	Repeatability	mm	±0.02			
700	1004	5	10.5	Effective stroke	mm	200-800			
800	1104	6	11.4	Max load (H)	kg	8	6	3.5	
					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***	$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ <p>Fy, Fz, Mx, My, Mz are working loads</p>				

\* 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.

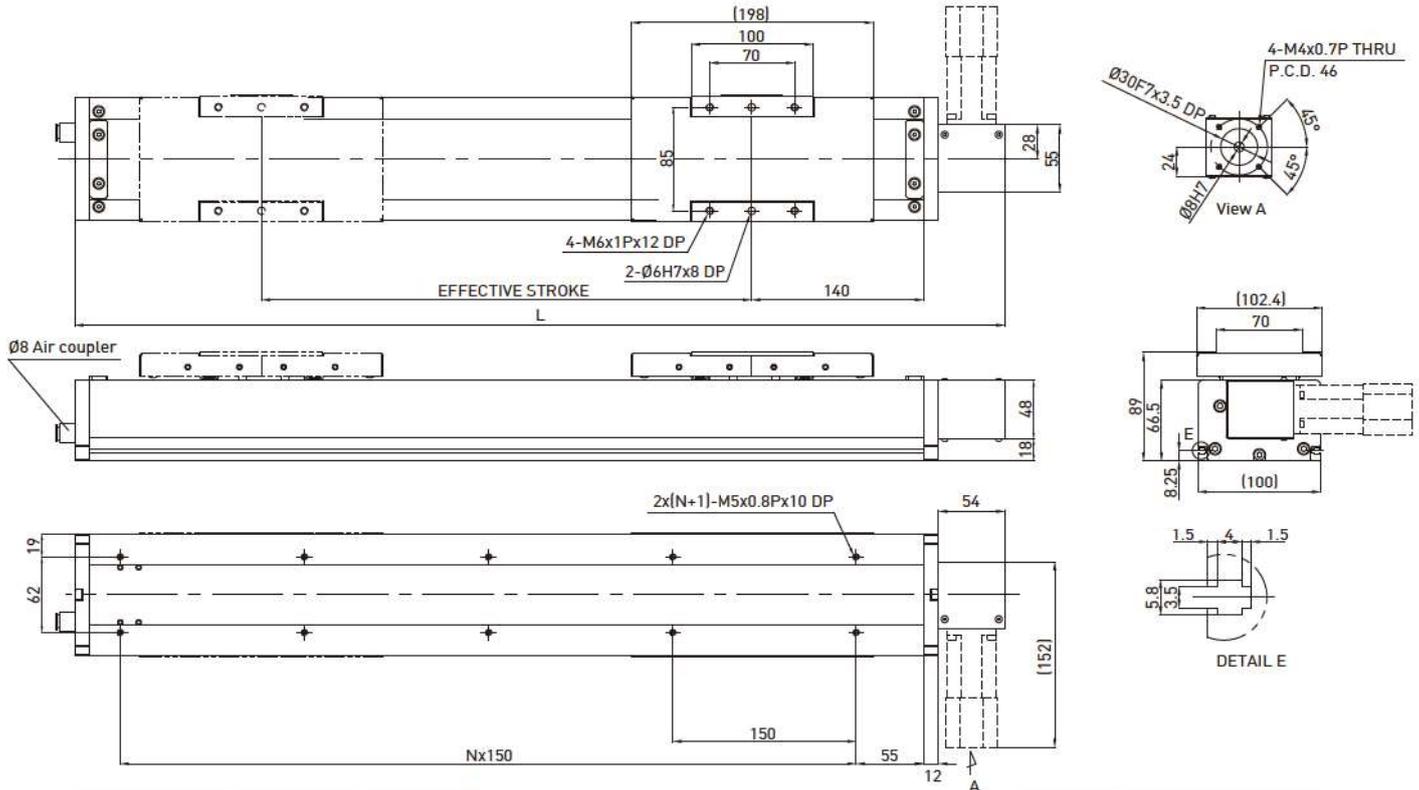
\*\* The load condition is based on 10,000km operation.

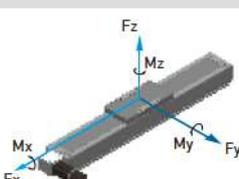
\*\*\* If used on the vertical axis or in a special condition, please contact HIWIN.



## 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



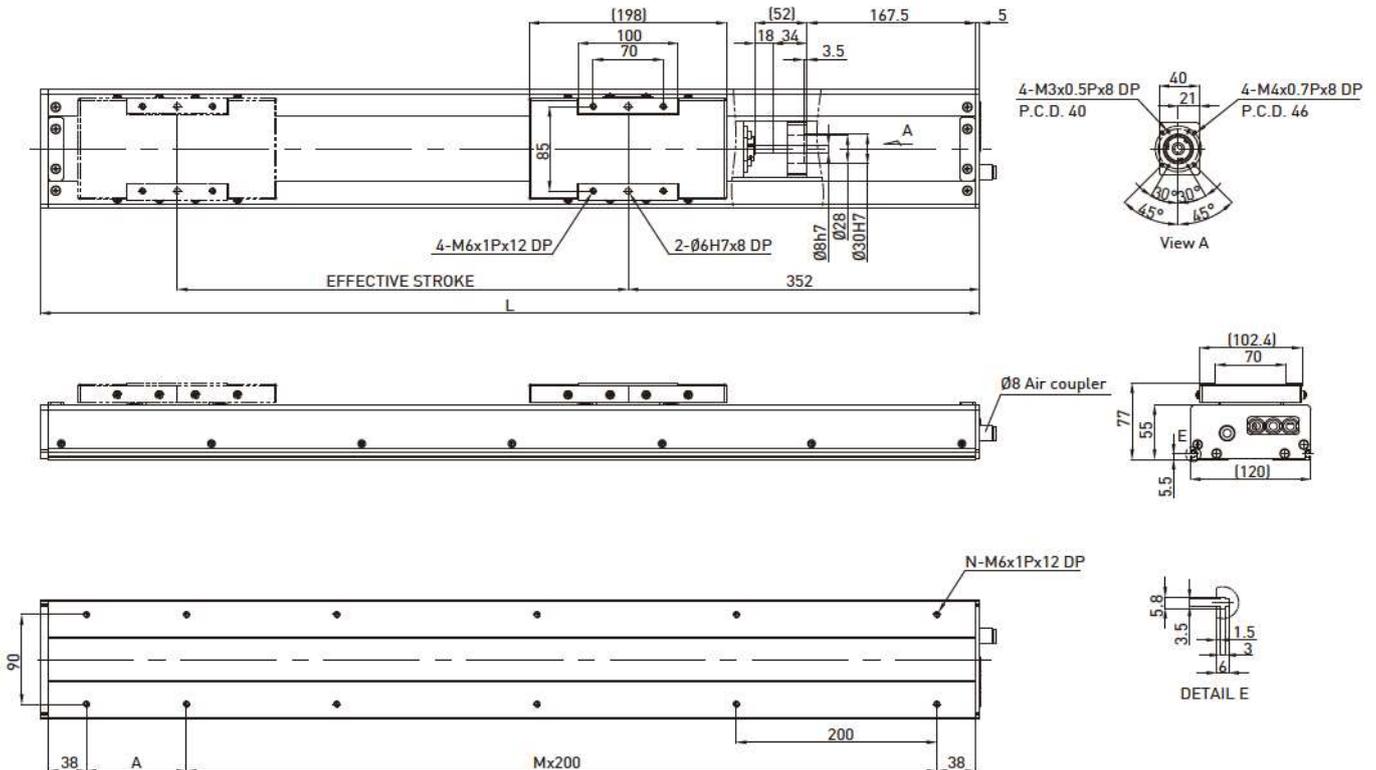
Effective stroke (mm)	L	N	Weight (kg)	AC motor output Drive	W	100	
200	558	2	6.1	Pulley Perimeter	mm	84	
400	758	4	7.6	Pulley RPM	RPM	1286	
600	958	5	9.1	Max linear speed	mm/sec	1800	
800	1158	6	10.6	Rated thrust	N	33	
1000	1358	8	12.1	Repeatability	mm	±0.1	
1200	1558	9	13.6	Effective stroke	mm	200-3000	
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		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	3158	20	25.6				
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



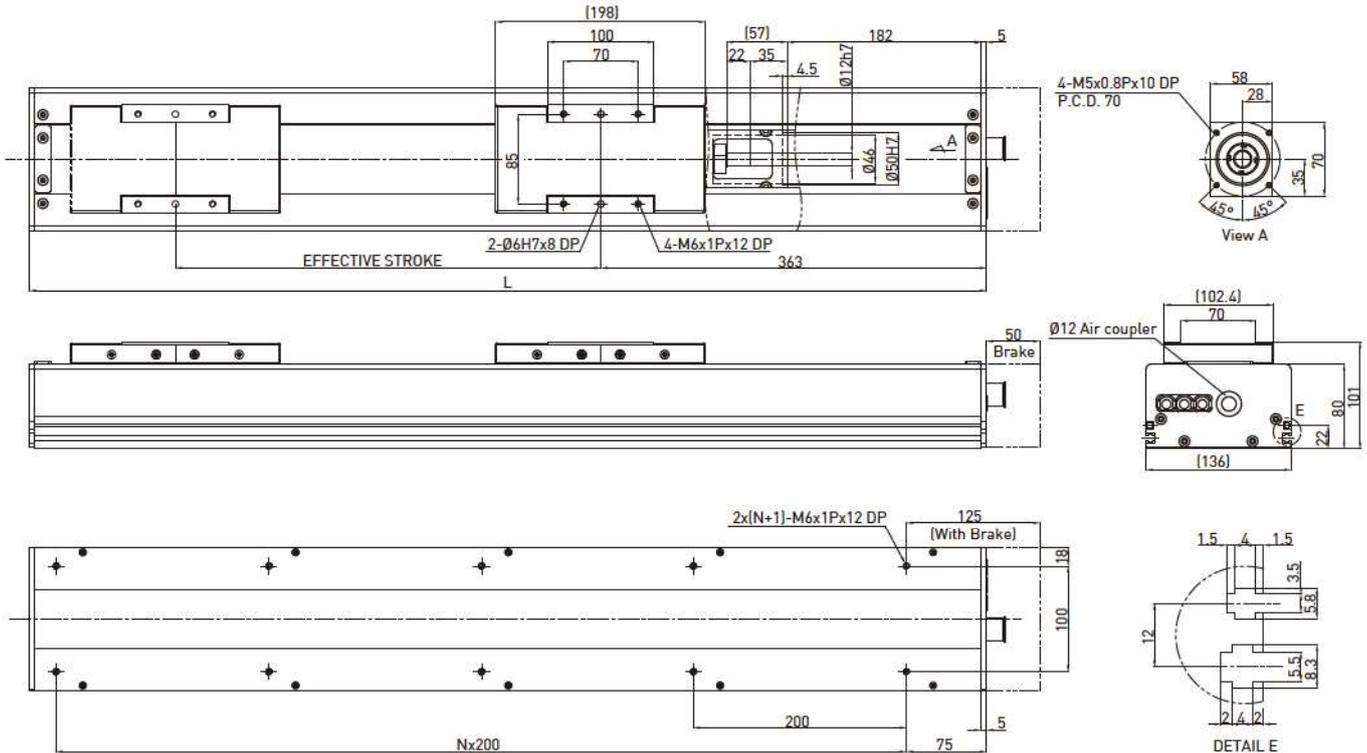
Effective stroke (mm)	L	A	M	N	Weight (kg)	AC motor output Drive	W	100			
100	589	100	2	8	6.32	Lead	mm	5	10	20	
150	639	150	2	8	6.94	Rated RPM	RPM	3000	3000	3000	
200	689	200	2	8	7.57	Max linear speed*	mm/sec	250	500	1000	
250	739	50	3	10	8.2	Rated thrust	N	280	140	70	
300	789	100	3	10	8.83	Repeatability	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	Rated dynamic load** 	Fyd	N	50	50	50
500	989	100	4	12	11.35		Fzd	N	500	320	200
550	1039	150	4	12	11.98		Mxd	N-m	25	27	28
600	1089	200	4	12	12.61		Myd	N-m	20	22	23
650	1139	50	5	14	13.24		Mzd	N-m	20	22	23
700	1189	100	5	14	13.87						
750	1239	150	5	14	14.5	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	1289	200	5	14	15.13						
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

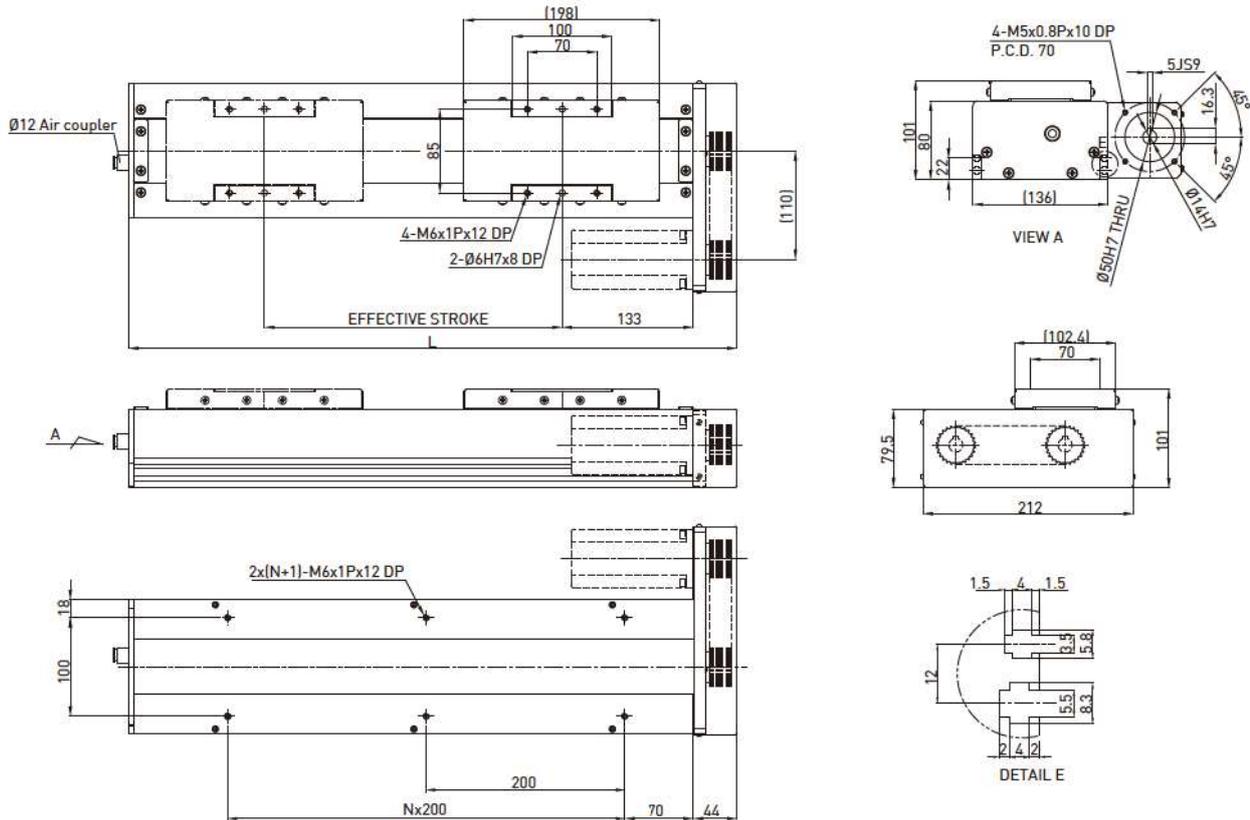


Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	200	
200	700	3	13.5	Drive		Ballscrew C7(normal)	
300	800	3	14.7	Lead	mm	10 20	
400	900	4	15.9	Rated RPM	RPM	3000 3000	
500	1000	4	17.1	Max linear speed*	mm/sec	500 1000	
600	1100	5	18.3	Rated thrust	N	280 140	
700	1200	5	19.5	Repeatability	mm	±0.02	
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
				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 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. catalog P.167 M: customer specified None: Without Motor

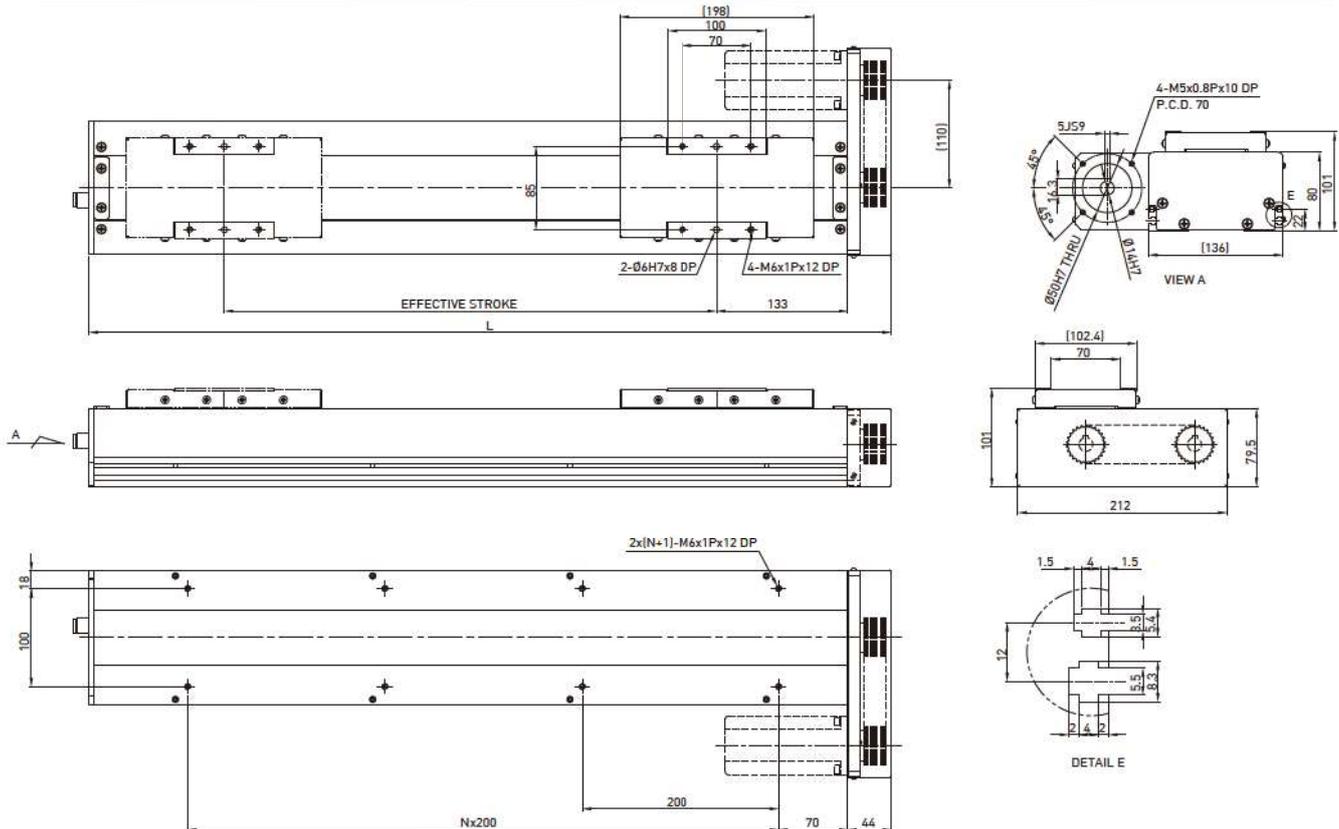


Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	200	
200	514	1	11.5	Drive		Ballscrew C7(normal)	
300	614	2	13.0	Lead	mm	10 20	
400	714	2	14.5	Rated RPM	RPM	3000 3000	
500	814	3	16.0	Max linear speed*	mm/sec	500 1000	
600	914	3	17.5	Rated thrust	N	280 140	
700	1014	4	19.0	Repeatability	mm	±0.02	
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		

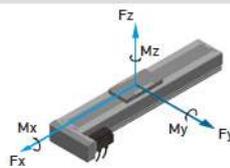
\* Vibration might occur when the effective stroke is longer than 800mm.  
 The maximum speed should be decreased by 15% for every 100mm of increased stroke.  
 \*\* The load condition is based on 10,000km operation.  
 \*\*\* If used on the vertical axis or in a special condition, please contact HIWIN.

## Model Number for 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



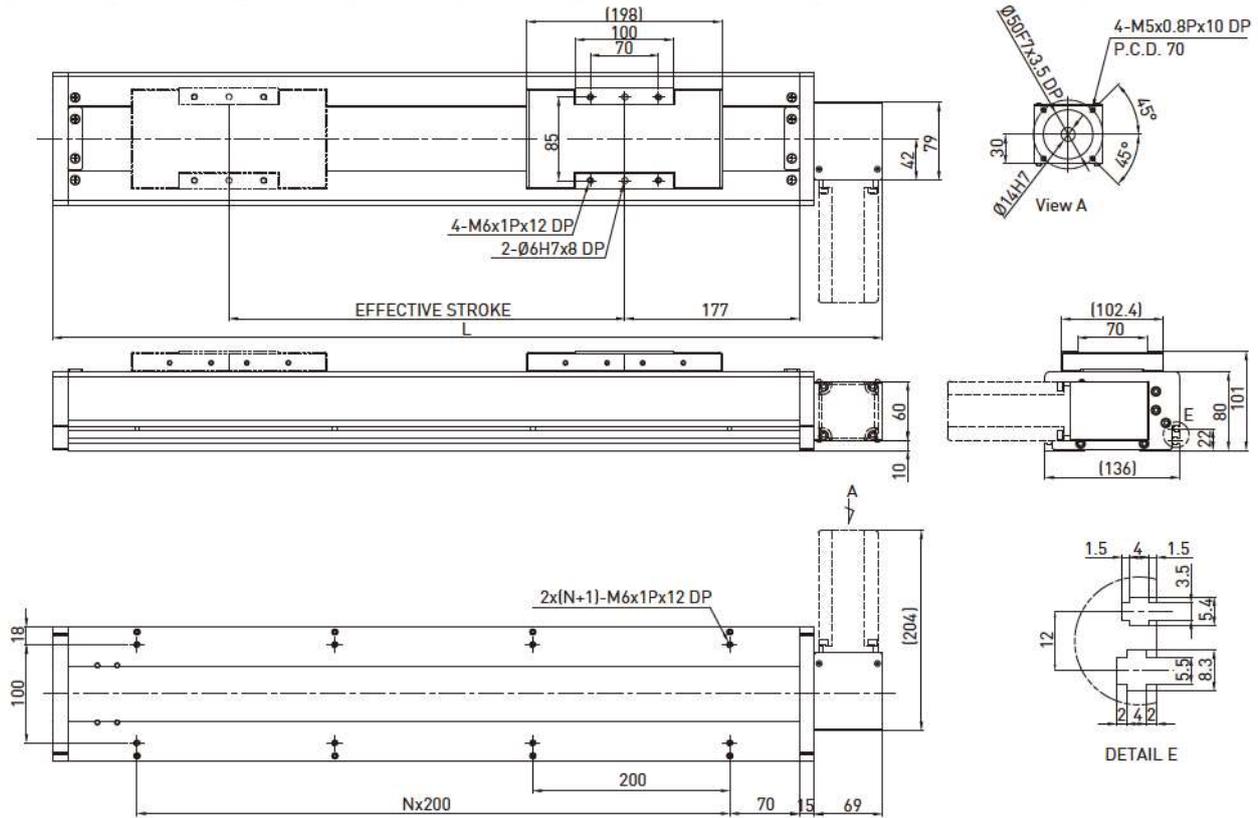
Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	200
200	514	1	11.5	Drive		Ballscrew C7(normal)
300	614	2	13.0	Lead	mm	10 20
400	714	2	14.5	Rated RPM	RPM	3000 3000
500	814	3	16.0	Max linear speed*	mm/sec	500 1000
600	914	3	17.5	Rated thrust	N	280 140
700	1014	4	19.0	Repeatability	mm	±0.02
800	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**	F <sub>yd</sub>	N 50 50
1100	1414	6	25.0		F <sub>zd</sub>	N 750 350
					M <sub>xd</sub>	N-m 55 60
					M <sub>yd</sub>	N-m 47 51
					M <sub>zd</sub>	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 <sub>y</sub> , F <sub>z</sub> , M <sub>x</sub> , M <sub>y</sub> , M <sub>z</sub> are working loads	



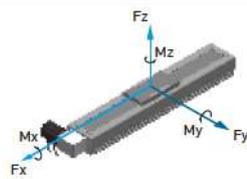
\* Vibration might occur when the effective stroke is longer than 800mm.  
 The maximum speed should be decreased by 15% for every 100mm of increased stroke.  
 \*\* The load condition is based on 10,000km operation.  
 \*\*\* If used on the vertical axis or in a special condition, please contact HIWIN.

## 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



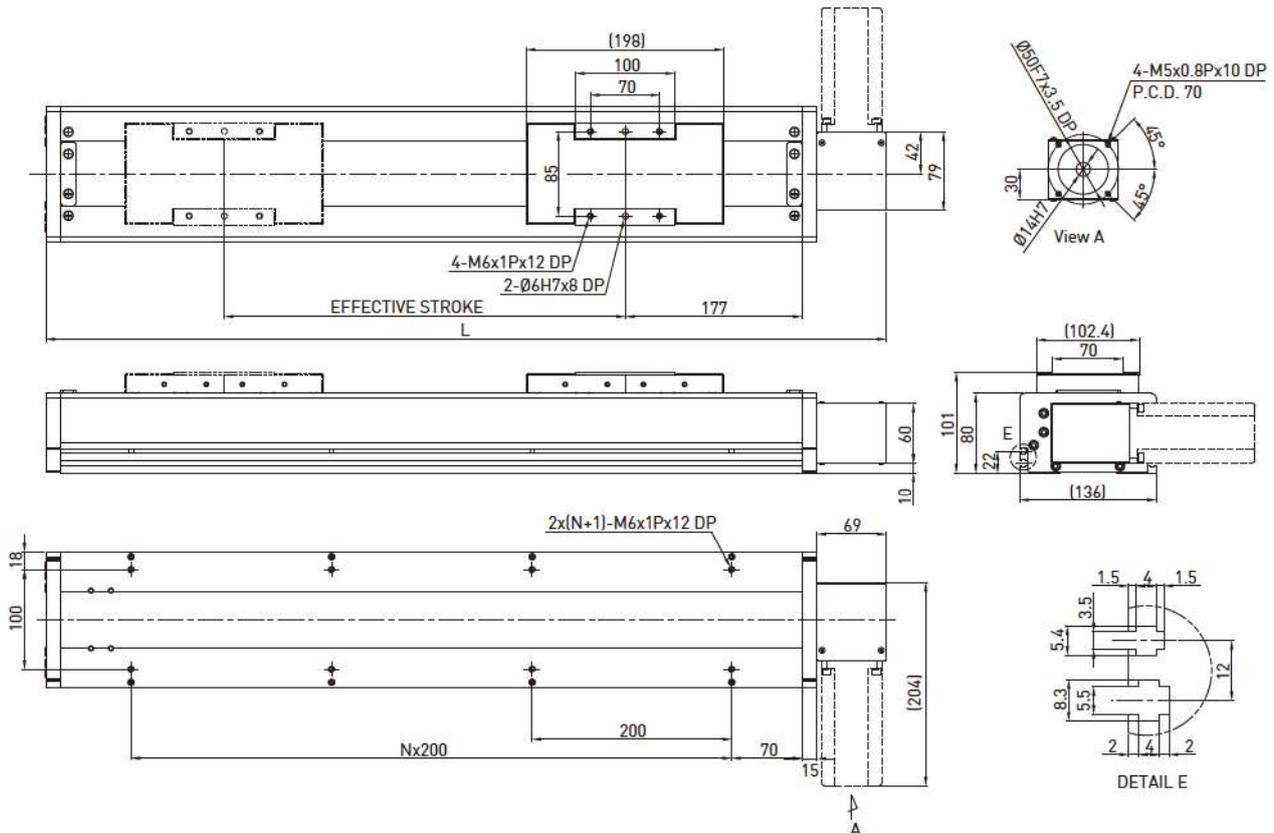
Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	200	
200	639	2	10.4	Drive		Timing Belt	
400	839	3	12.6	Pulley Perimeter	mm	120	
600	1039	4	14.8	Pulley RPM	RPM	900	
800	1239	5	17.0	Max linear speed	mm/sec	1800	
1000	1439	6	19.2	Rated thrust	N	67	
1200	1639	7	21.4	Repeatability	mm	±0.1	
1400	1839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



\*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



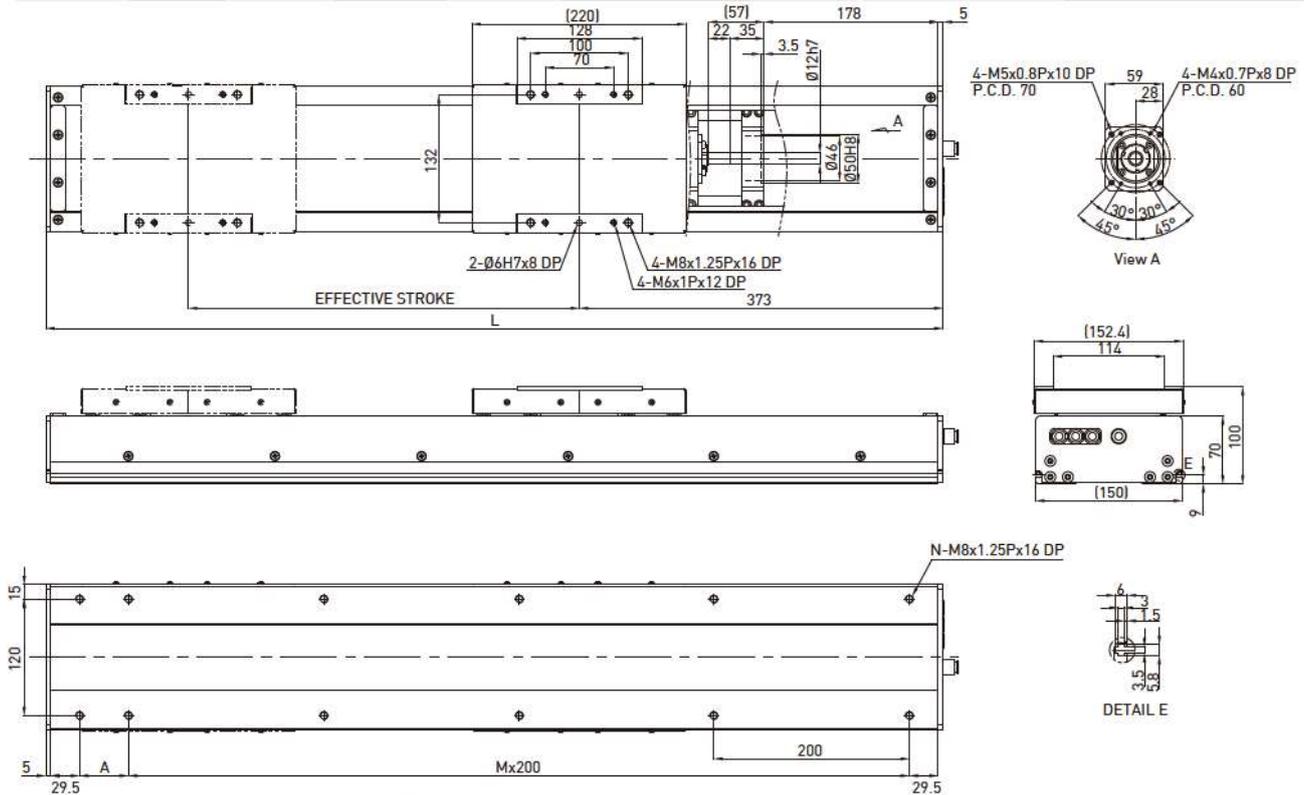
Effective stroke (mm)	L	N	Weight (kg)	AC motor output Drive	W	200	
200	639	2	10.4	Pulley Perimeter	mm	120	
400	839	3	12.6	Pulley RPM	RPM	900	
600	1039	4	14.8	Max linear speed	mm/sec	1800	
800	1239	5	17.0	Rated thrust	N	67	
1000	1439	6	19.2	Repeatability	mm	±0.1	
1200	1639	7	21.4	Effective stroke	mm	200-3000	
1400	1839	8	23.6	Max load (H)	kg	15	
1600	2039	9	25.8		Fyd	N	50
1800	2239	10	28.0		Fzd	N	150
2000	2439	11	30.2		Mxd	N-m	67
2200	2639	12	32.4		Myd	N-m	53
2400	2839	13	34.6		Mzd	N-m	53
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



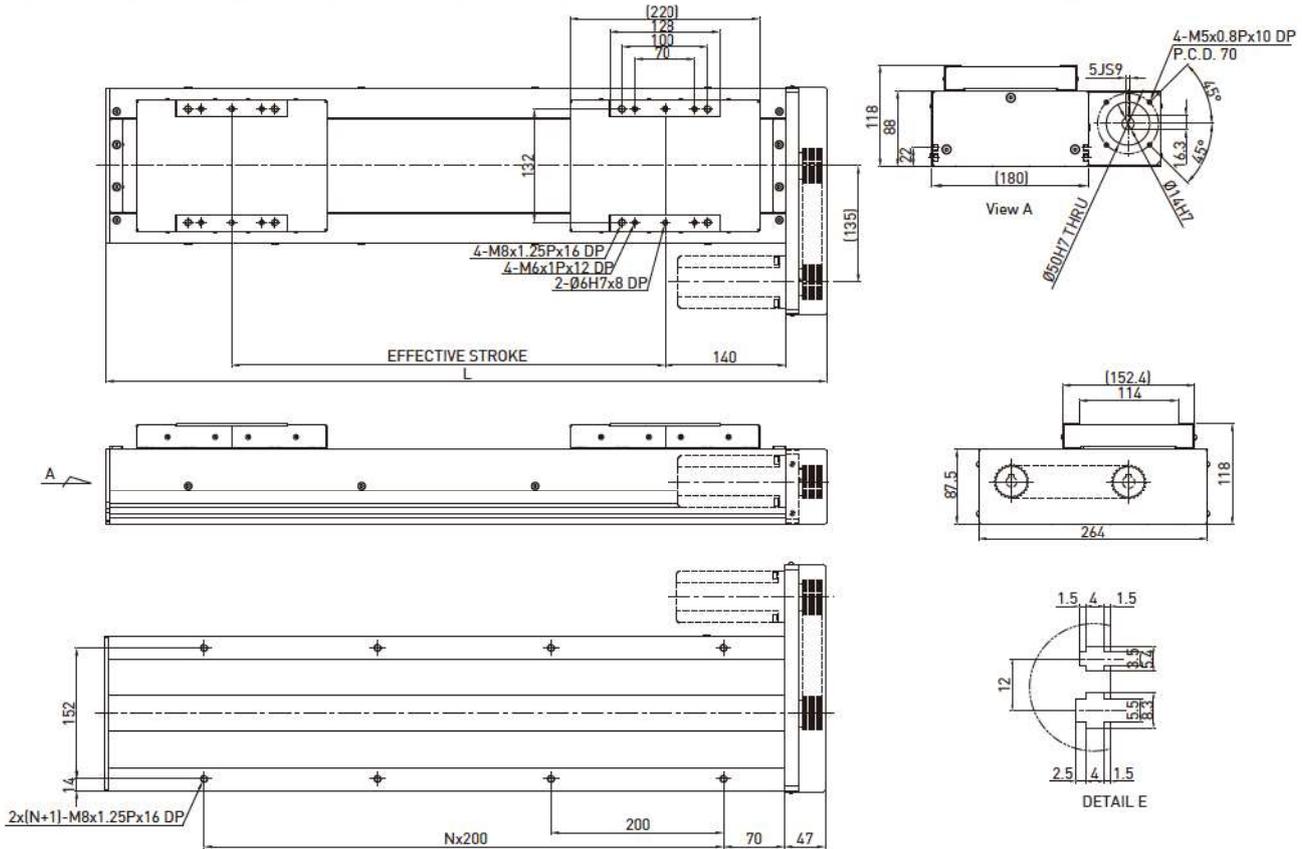
Effective stroke (mm)	L	A	M	N	Weight (kg)	AC motor output Drive	W	200	
150	669	200	2	8	13.96	Lead	mm	10 20	
200	719	50	3	10	14.84	Rated RPM	RPM	3000 3000	
250	769	100	3	10	15.72	Max linear speed*	mm/sec	500 1000	
300	819	150	3	10	16.6	Rated thrust	N	280 140	
350	869	200	3	10	17.48	Repeatability	mm	±0.02	
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		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		$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ Fy, Fz, Mx, My, Mz are working loads		
800	1319	50	6	16	25.4	<b>Permitted load condition***</b>			
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-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



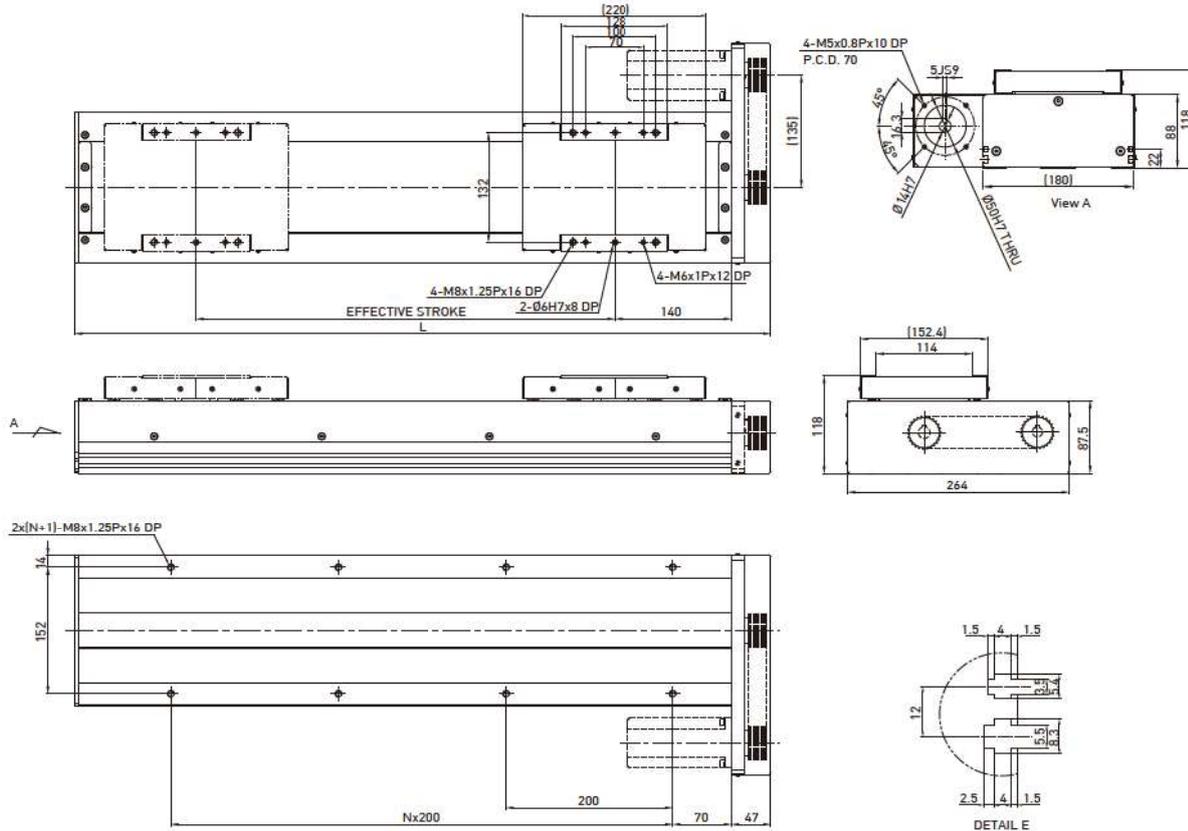
Effective stroke (mm)	L	N	Weight (kg)	AC motor output	W	400
200	532	1	11.3	Drive	Ball screw C7(normal)	
300	632	2	12.3	Lead	mm	10 20
400	732	2	13.3	Rated RPM	RPM	3000 3000
500	832	3	14.3	Max linear speed*	mm/sec	500 1000
600	932	3	15.3	Rated thrust	N	560 280
700	1032	4	16.3	Repeatability	mm	±0.02
800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

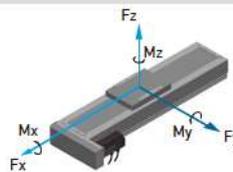


## Model Number for KS180-FR

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. catalog P.167 M: customer specified None: Without Motor



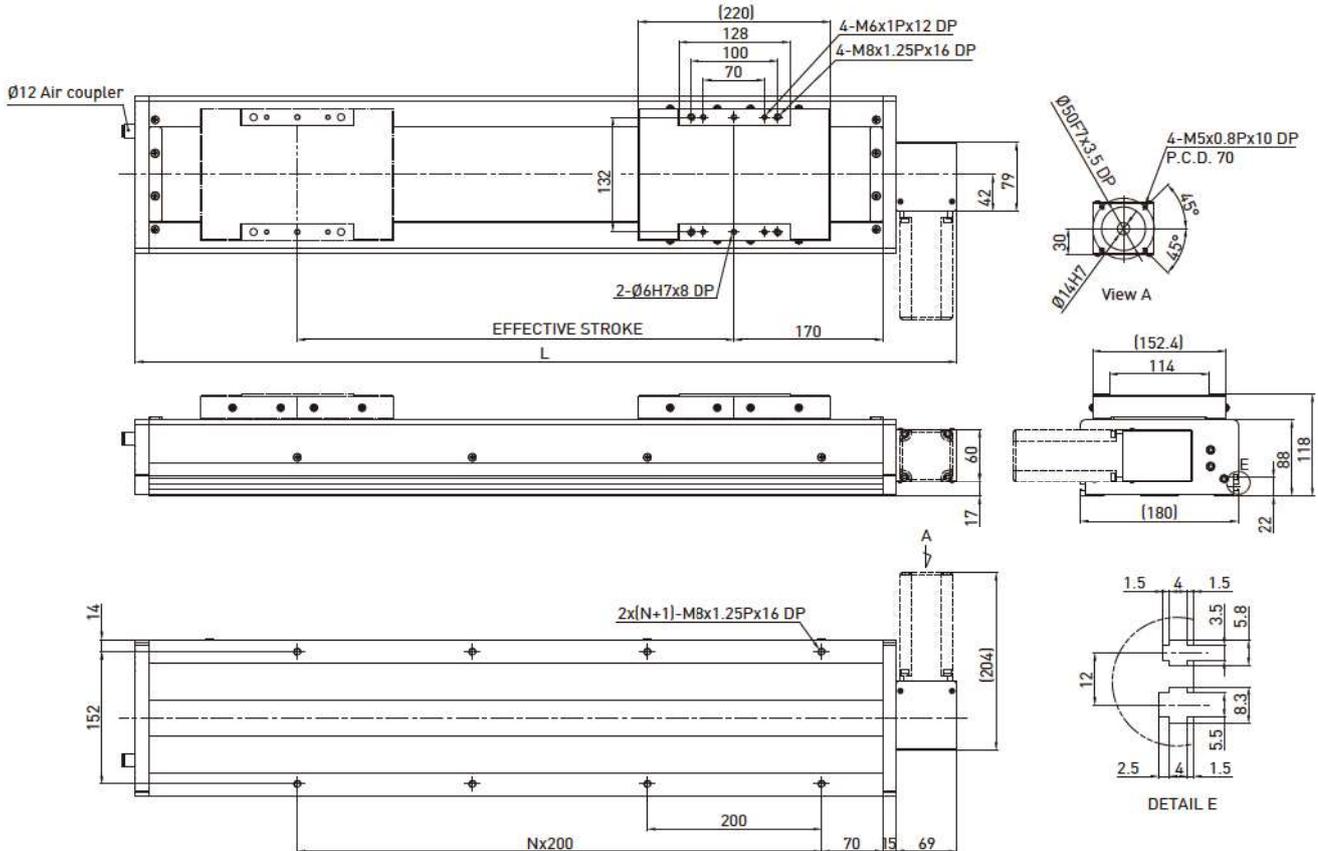
Effective stroke (mm)	L	N	Weight (kg)	AC motor output		W	
				Drive	Lead	400	
200	532	1	11.3		mm	10	20
300	632	2	12.3		RPM	3000	3000
400	732	2	13.3		mm/sec	500	1000
500	832	3	14.3		N	560	280
600	932	3	15.3		mm	±0.02	
700	1032	4	16.3		mm	200-1200	
800	1132	4	17.3		kg	110	50
900	1232	5	18.3		N	50	50
1000	1332	5	19.3		N	1100	500
1100	1432	6	20.3		N-m	60	65
1200	1532	6	21.3		N-m	45	53
					N-m	45	53
					$\frac{F_y}{F_{yd}} + \frac{F_z}{F_{zd}} + \frac{M_x}{M_{xd}} + \frac{M_y}{M_{yd}} + \frac{M_z}{M_{zd}} \leq 1$ 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 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



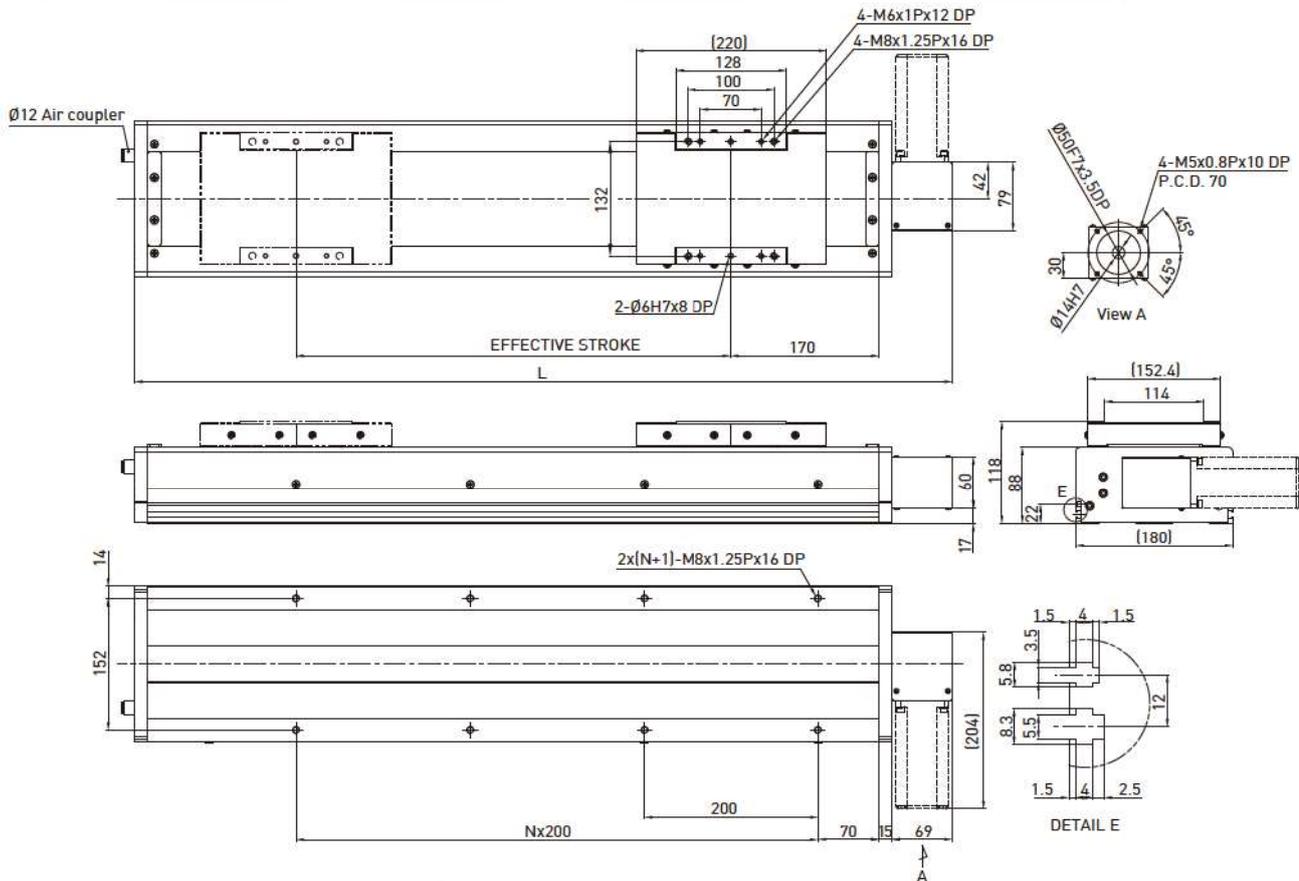
Effective stroke (mm)	L	N	Weight (kg)	AC motor output Drive	W	400	
200	639	2	14.2	Pulley Perimeter	mm	120	
400	839	3	17.0	Pulley RPM	RPM	900	
600	1039	4	19.8	Max linear speed	mm/sec	1800	
800	1239	5	22.6	Rated thrust	N	133	
1000	1439	6	25.4	Repeatability	mm	±0.1	
1200	1639	7	28.2	Effective stroke	mm	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. catalof 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*	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				

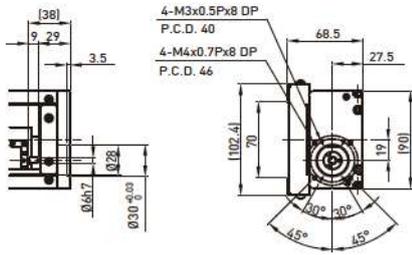
\*The load condition is based on 10,000km operation.

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

## 6.4 Motor Adaptor Flange List

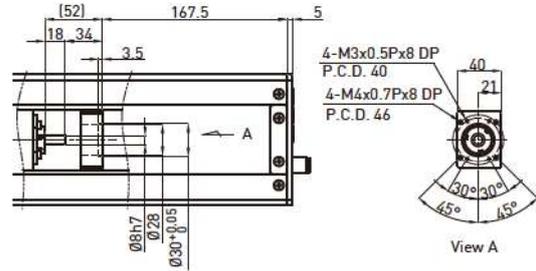
### KS90

Motor Adaptor Flange F0

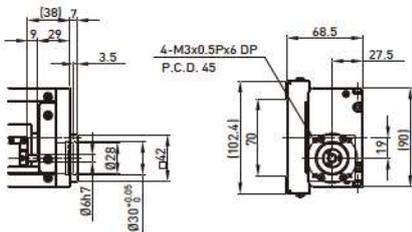


### KS120

Motor Adaptor Flange FI

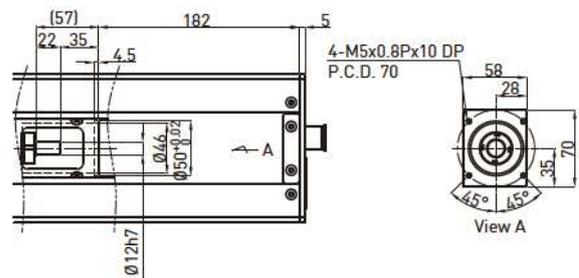


Motor Adaptor Flange F1



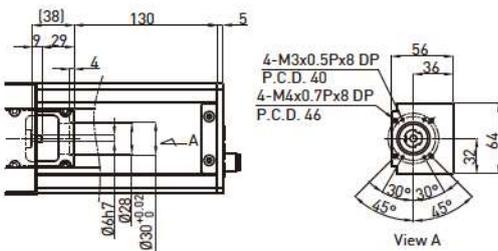
### KS140

Motor Adaptor Flange FI



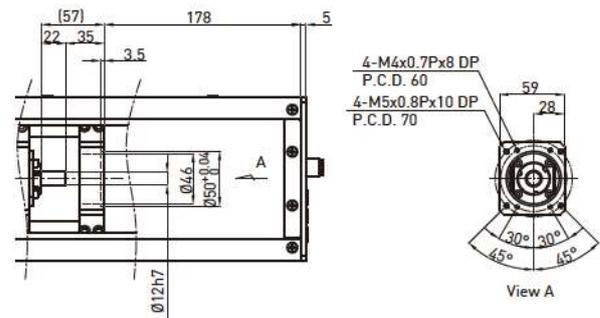
### KS100

Motor Adaptor Flange FI

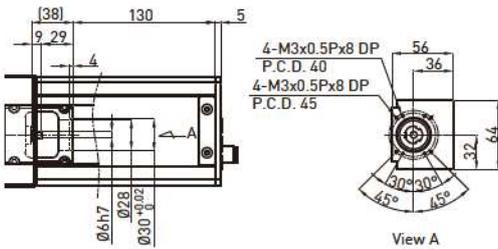


### KS150

Motor Adaptor Flange FI

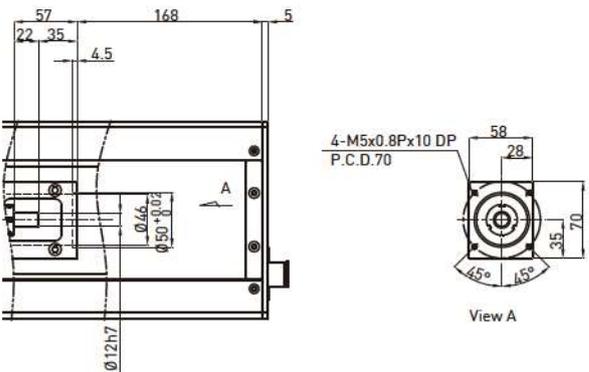


Motor Adaptor Flange F1



### 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	