

Single-Axis Robot

4. KC Series

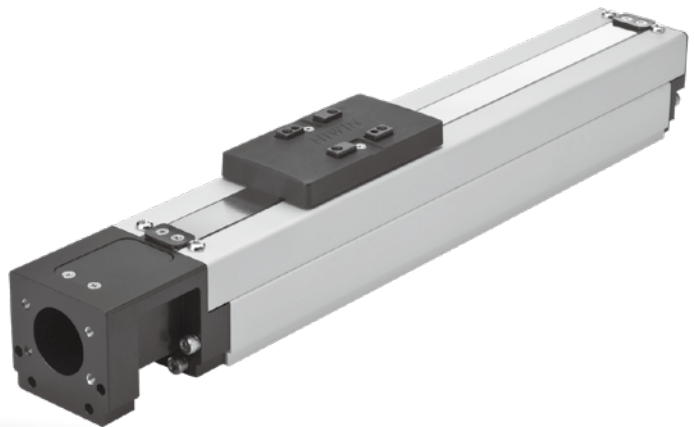
The HIWIN KC industrial robot integrates a ballscrew and guideway into a single modularized unit. With a ballscrew driven block traveling on a light weight optimized U-rail, this device offers high accuracy and efficiency, compact size, and fast installation.

4.1 Features

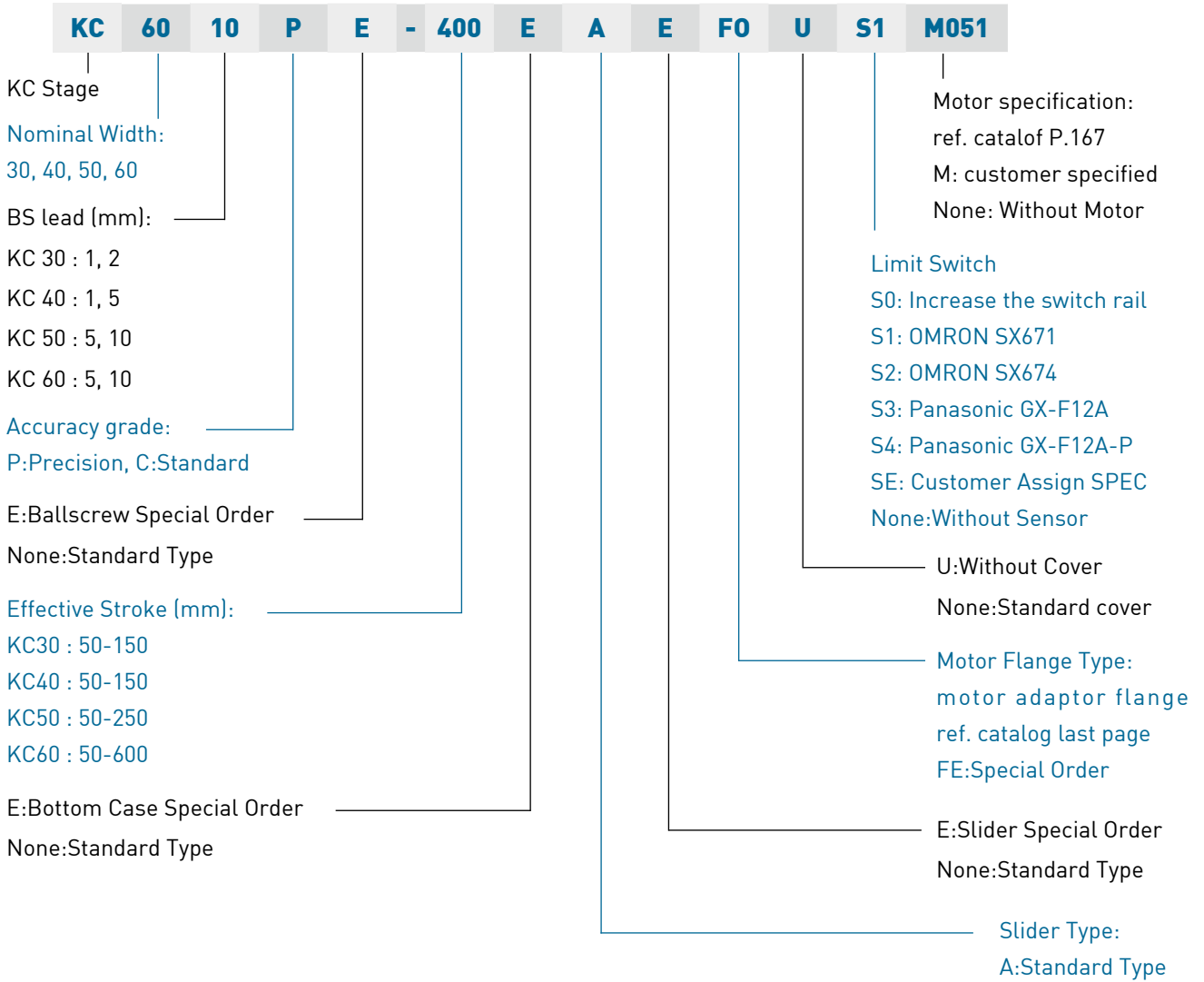
- ◎ Light Weight
- ◎ Easy Installation
- ◎ High Repeatability

4.2 Applications

- ◎ Pick and Place
- ◎ Automatic Inspection
- ◎ Assembly Machine



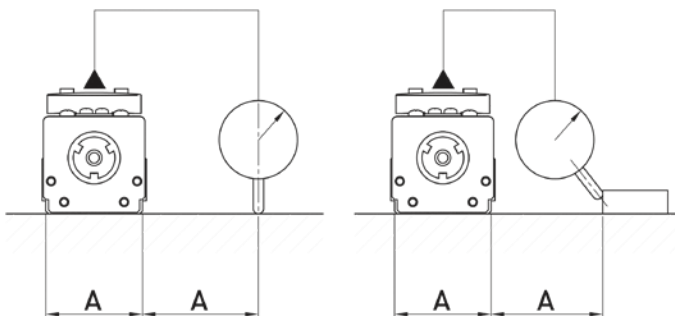
4.3 Model Number of KC Series



4.4 Precision

- ◎ Repeatability:
C : Standard Grade = ±0.02mm P : Precision Grade = ±0.01mm
※Attention: The KC series does not indicate absolute positional accuracy.

- ◎ Running Parallelism:
The Parallelism between module platform surface and module mounting surface is < 0.1 mm/m. Inspection distance is twice the width of the aluminum base, method as follows:



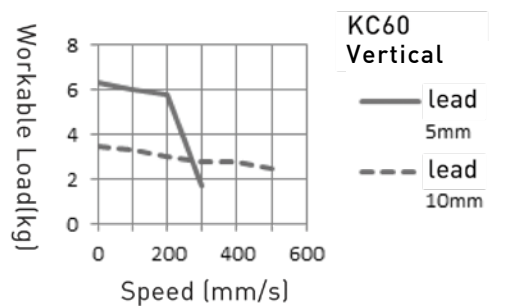
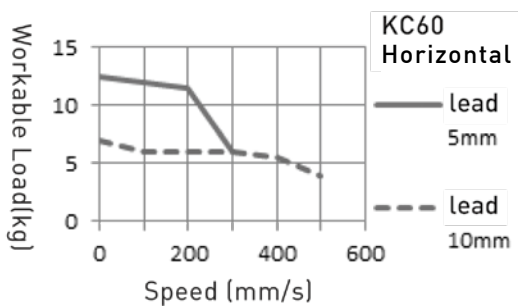
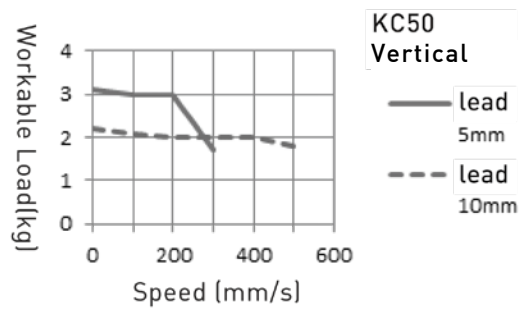
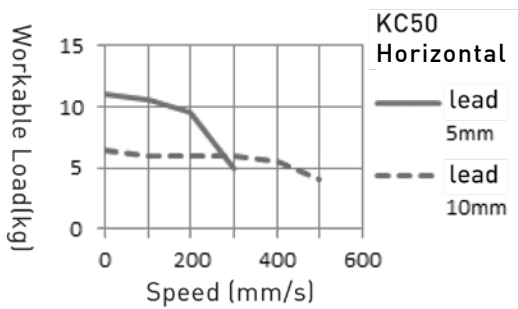
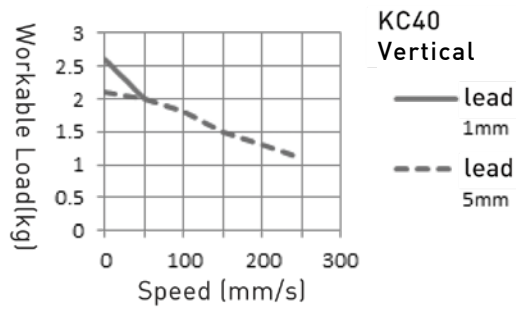
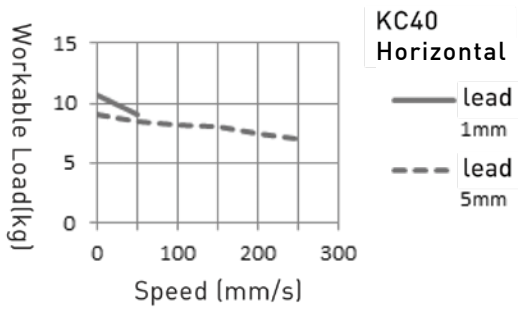
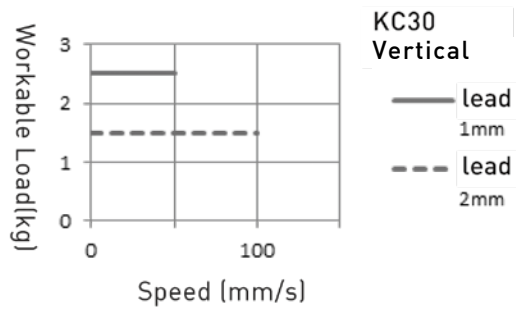
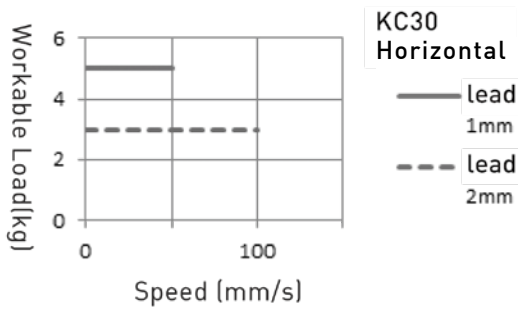
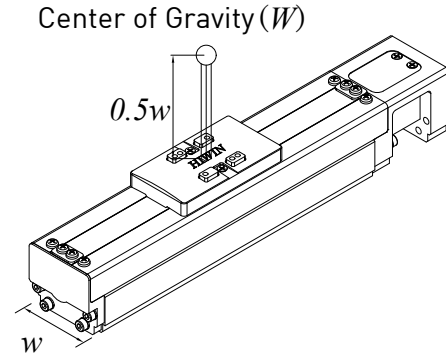
※Attention : Recommended flatness of installation plane is ≤ 0.05mm.

4.5 Reference

Speed & load relation diagrams:

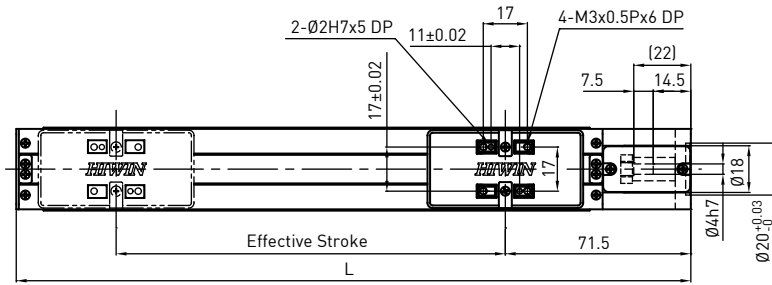
Diagrams are actual test results based on the following assumptions. If used under different conditions, please contact HIWIN.

- ⊙ Assumed travel life: 5,000Km
- ⊙ Acceleration: 0.3G (0.2G calculated for lead=1mm).
- ⊙ Stroke: 100mm
- ⊙ Center of Gravity is located in the nominal direction on 0.5x width (w) of bottom case.

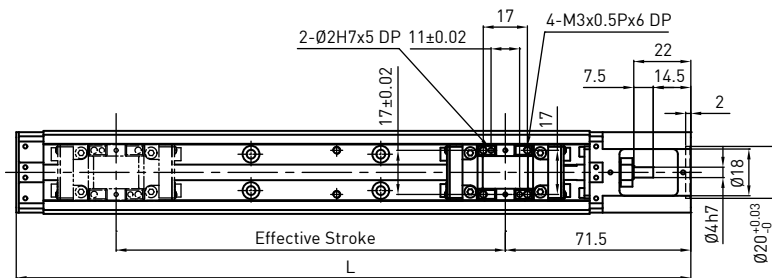


4.6 KC Series

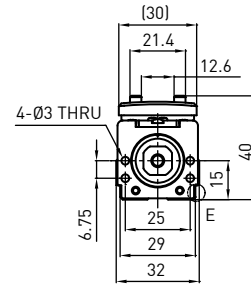
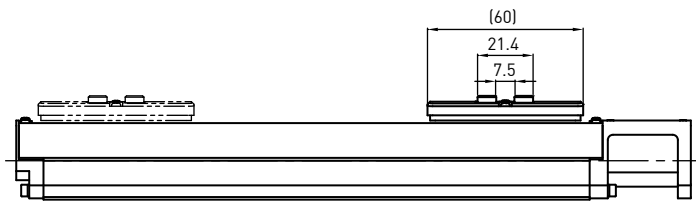
KC30



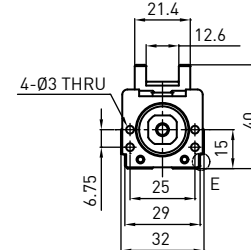
Standard Type



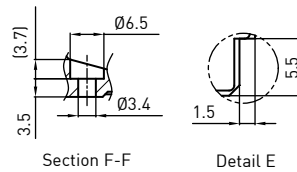
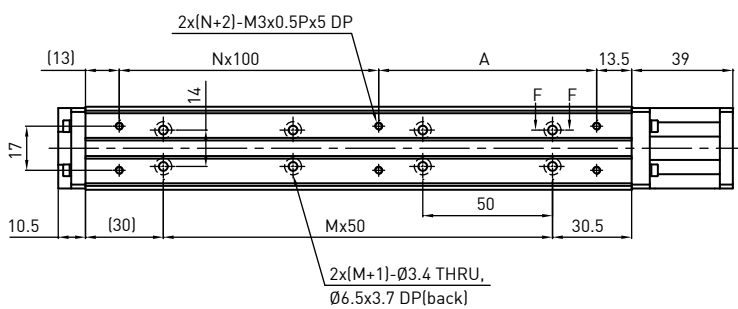
Without Cover



Standard Type



Without Cover



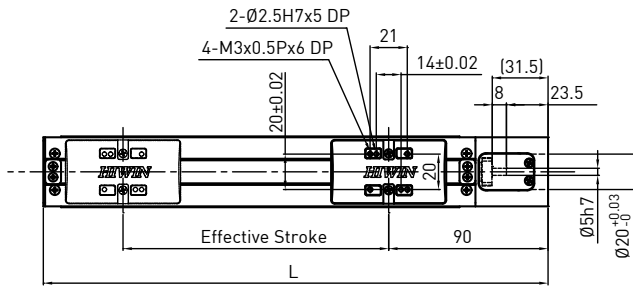
Section F-F

Detail E

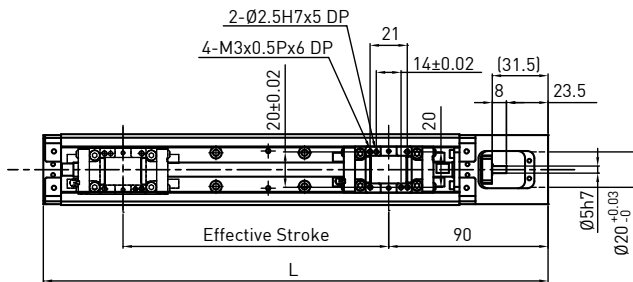
Effective Stroke (mm)	L	A	M	N	Weight (kg)	W/O Cover WT. (kg)
50	160	84	1	0	0.28	0.24
100	210	34	2	1	0.34	0.3
150	260	84	3	1	0.4	0.36

Note: Special ballscrew spindle end of 3 mm diameter is available, please contact hiwin if necessary.

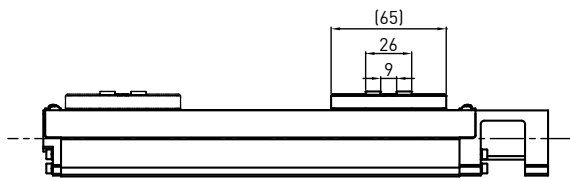
KC40



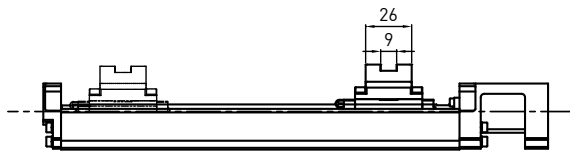
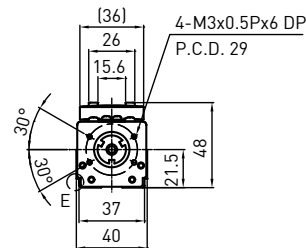
Standard Type



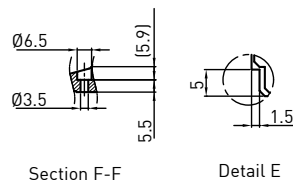
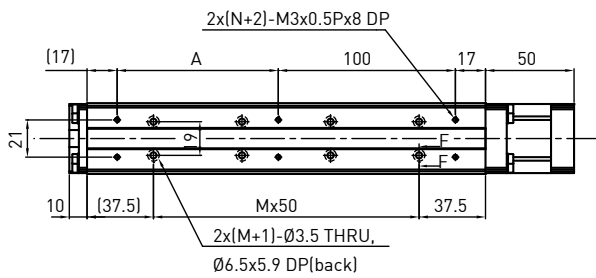
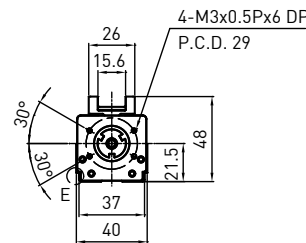
Without Cover



Standard Type



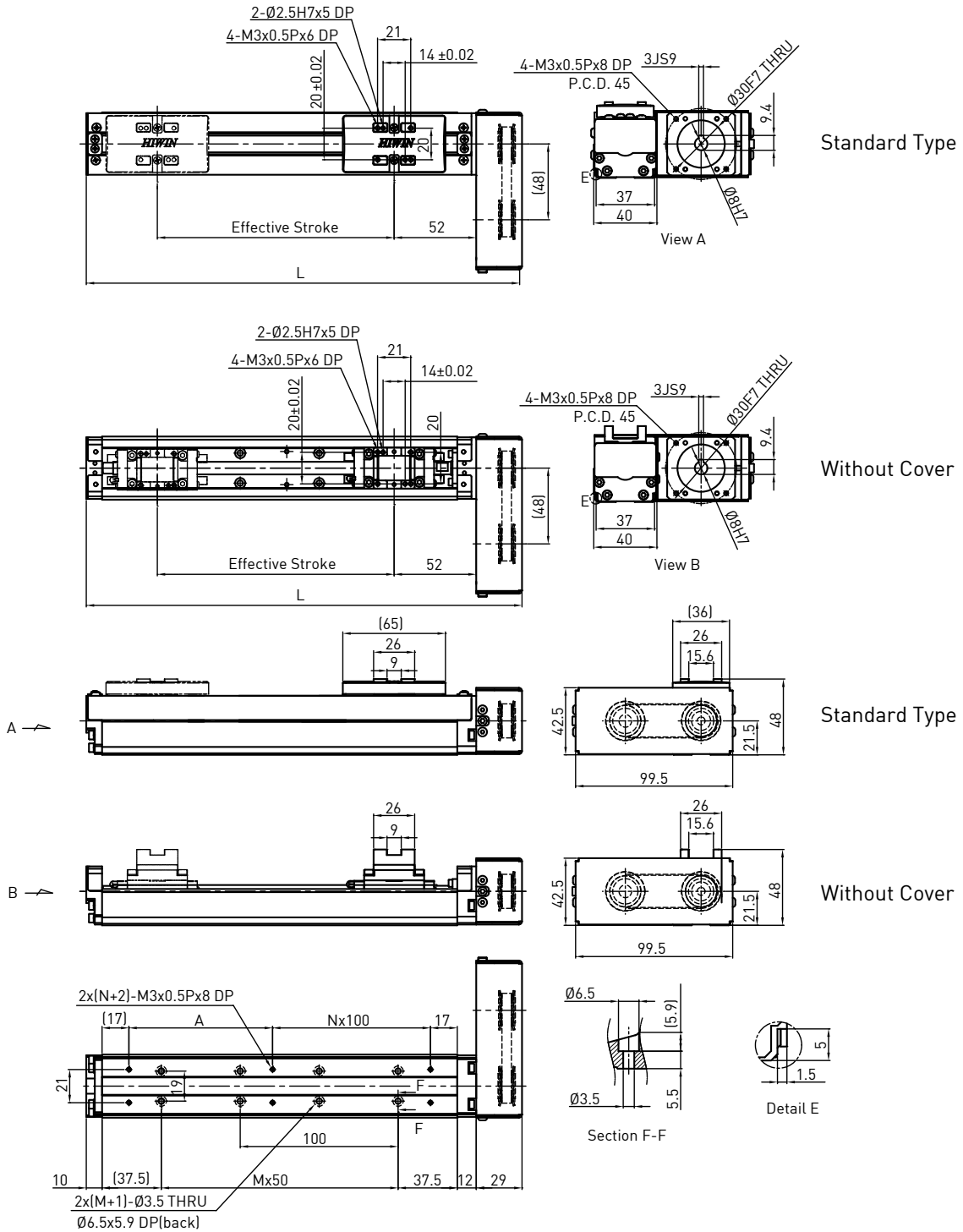
Without Cover



Effective Stroke (mm)	L	A	M	N	Weight (kg)	W/O Cover WT. (kg)
50	185	91	1	0	0.6	0.5
100	235	41	2	1	0.7	0.6
150	285	91	3	1	0.8	0.7
200	335	41	4	2	0.9	0.8

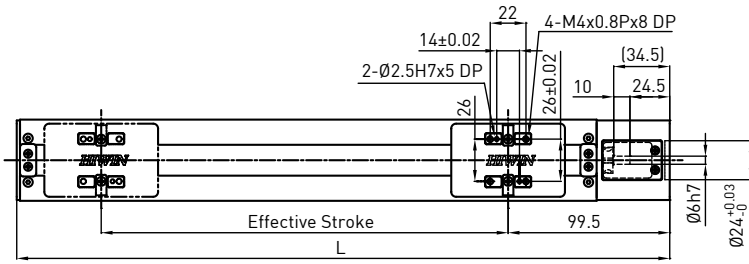
Note: Special ballscrew spindle end of 4 mm diameter is available, please contact hiwin if necessary.

KC40 Motor side mount (Left)

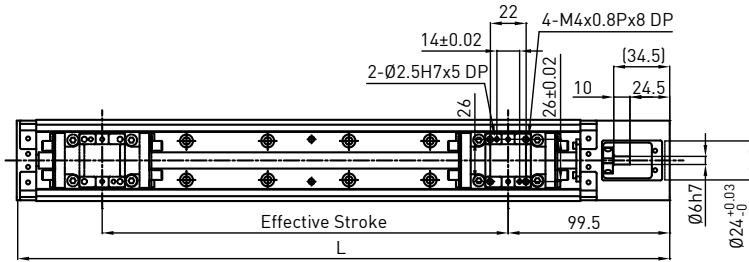


Effective Stroke (mm)	L	A	M	N	Weight (kg)	W/O Cover WT. (kg)
50	174.5	91	1	0	0.7	0.6
100	224.5	41	2	1	0.8	0.7
150	274.5	91	3	1	0.9	0.8
200	324.5	41	4	2	1	0.9

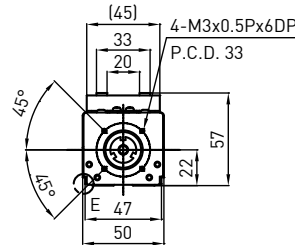
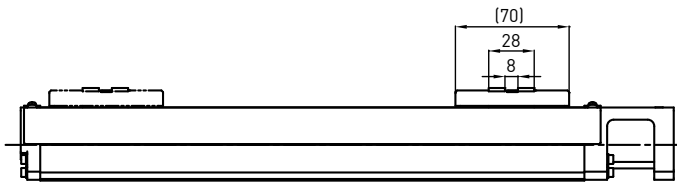
KC50



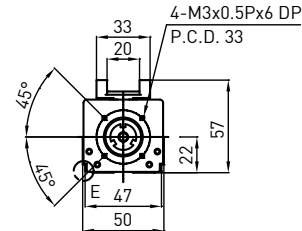
Standard Type



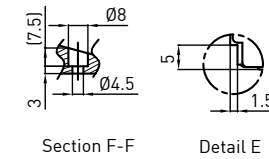
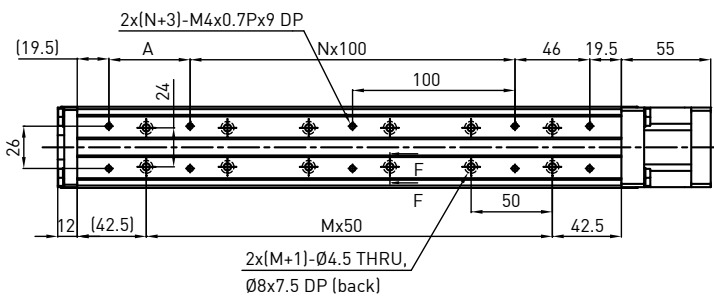
Without Cover



Standard Type



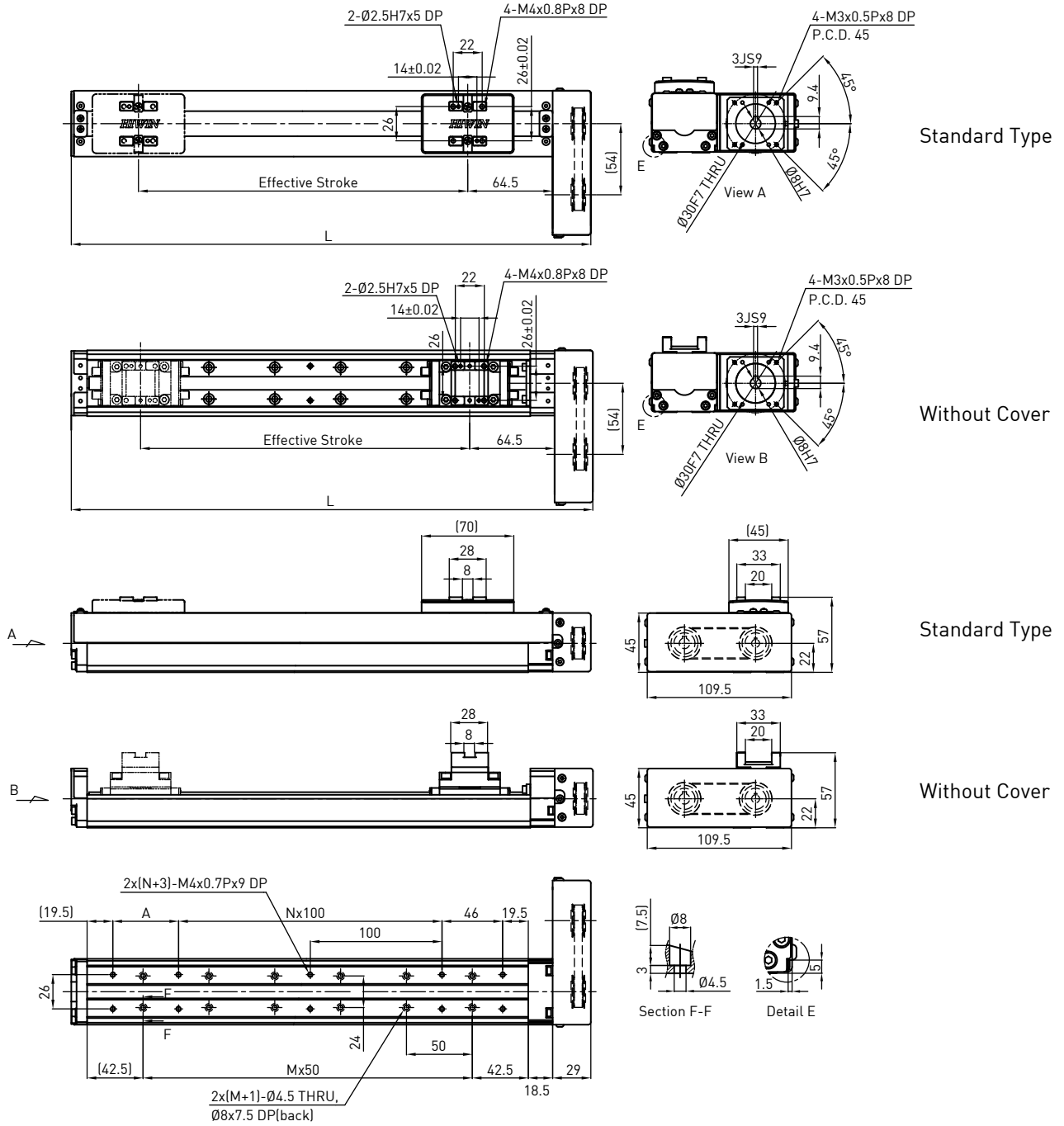
Without Cover



Effective Stroke (mm)	L	A	M	N	Weight (kg)	W/O Cover WT. (kg)
50	202	50	1	0	1.1	1
100	252	100	2	0	1.2	1.1
150	302	50	3	1	1.4	1.2
200	352	100	4	1	1.5	1.4
250	402	50	5	2	1.6	1.5
300	452	100	6	2	1.8	1.6

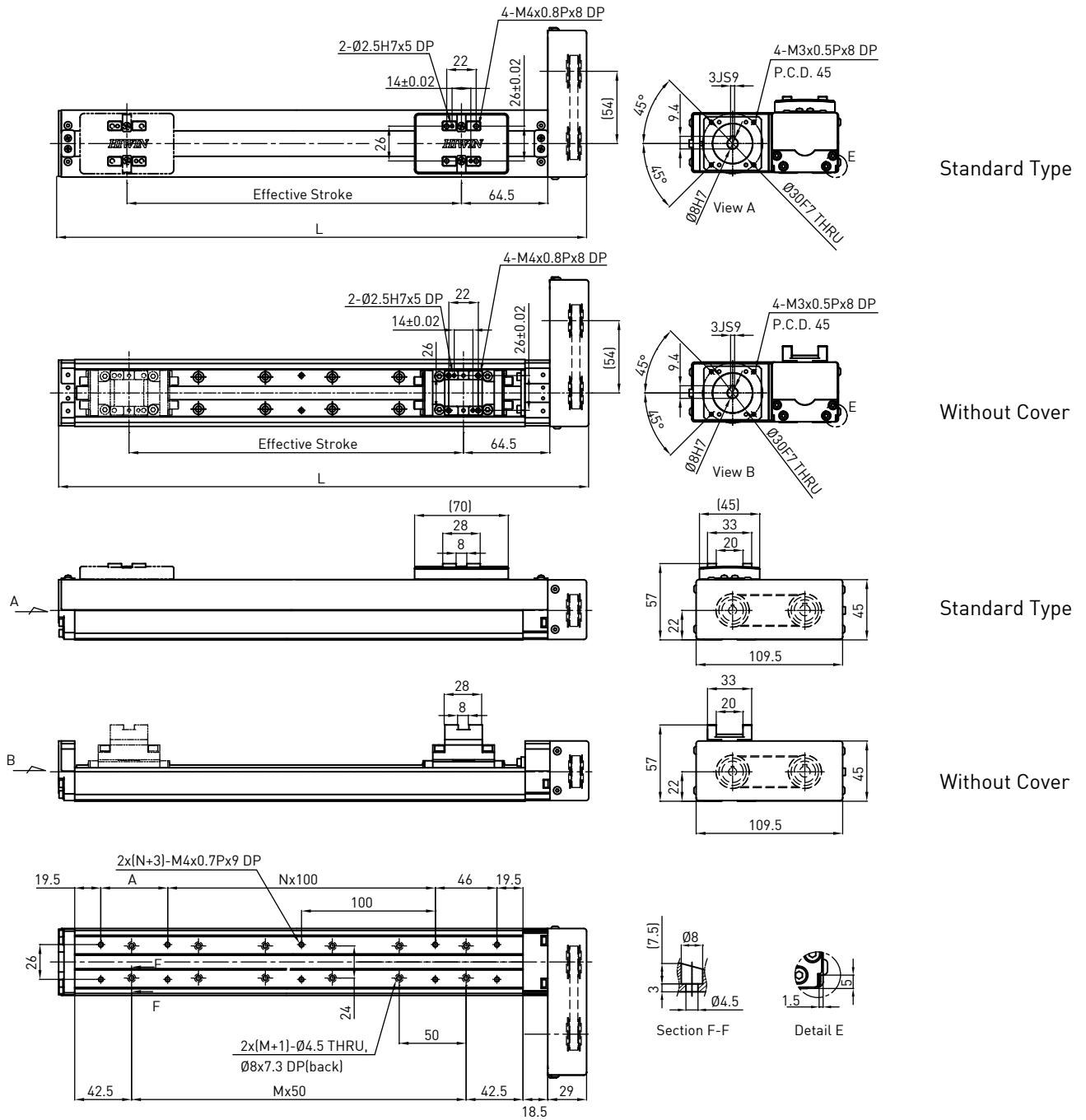
Note: Special ballscrew spindle end of 5 mm diameter is available, please contact hiwin if necessary.

KC50 Motor side mount (Left)



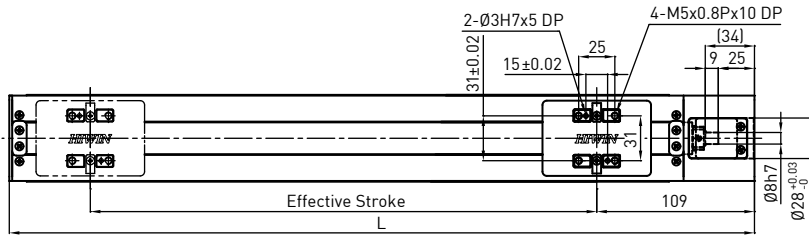
Effective Stroke (mm)	L	A	M	N	Weight (kg)	W/O Cover WT. (kg)
50	194.5	50	1	0	1.2	1.1
100	244.5	100	2	0	1.3	1.2
150	294.5	50	3	1	1.4	1.4
200	344.5	100	4	1	1.6	1.5
250	349.5	50	5	2	1.7	1.6
300	444.5	100	6	2	1.9	1.7

KC50 Motor side mount (Right)

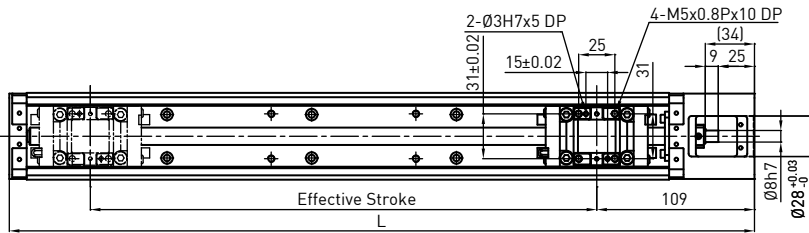


Effective Stroke (mm)	L	A	M	N	Weight (kg)	W/O Cover WT. (kg)
50	194.5	50	1	0	1.1	1
100	244.5	100	2	0	1.2	1.1
150	294.5	50	3	1	1.4	1.2
200	344.5	100	4	1	1.5	1.4
250	349.5	50	5	2	1.6	1.5
300	444.5	100	6	2	1.7	1.6

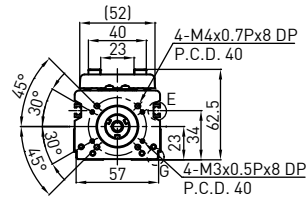
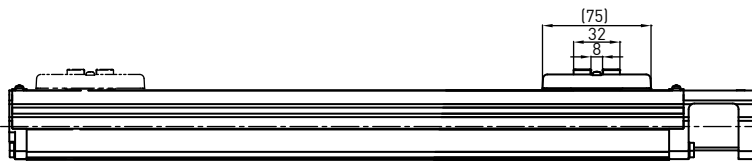
KC60



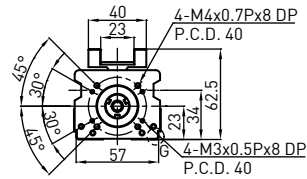
Standard Type



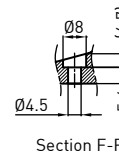
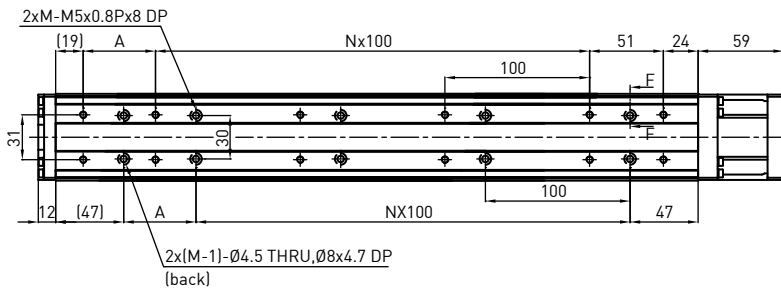
Without Cover



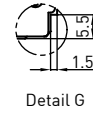
Standard Type



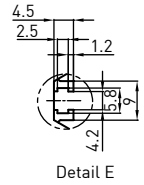
Without Cover



Section F-F



Detail G

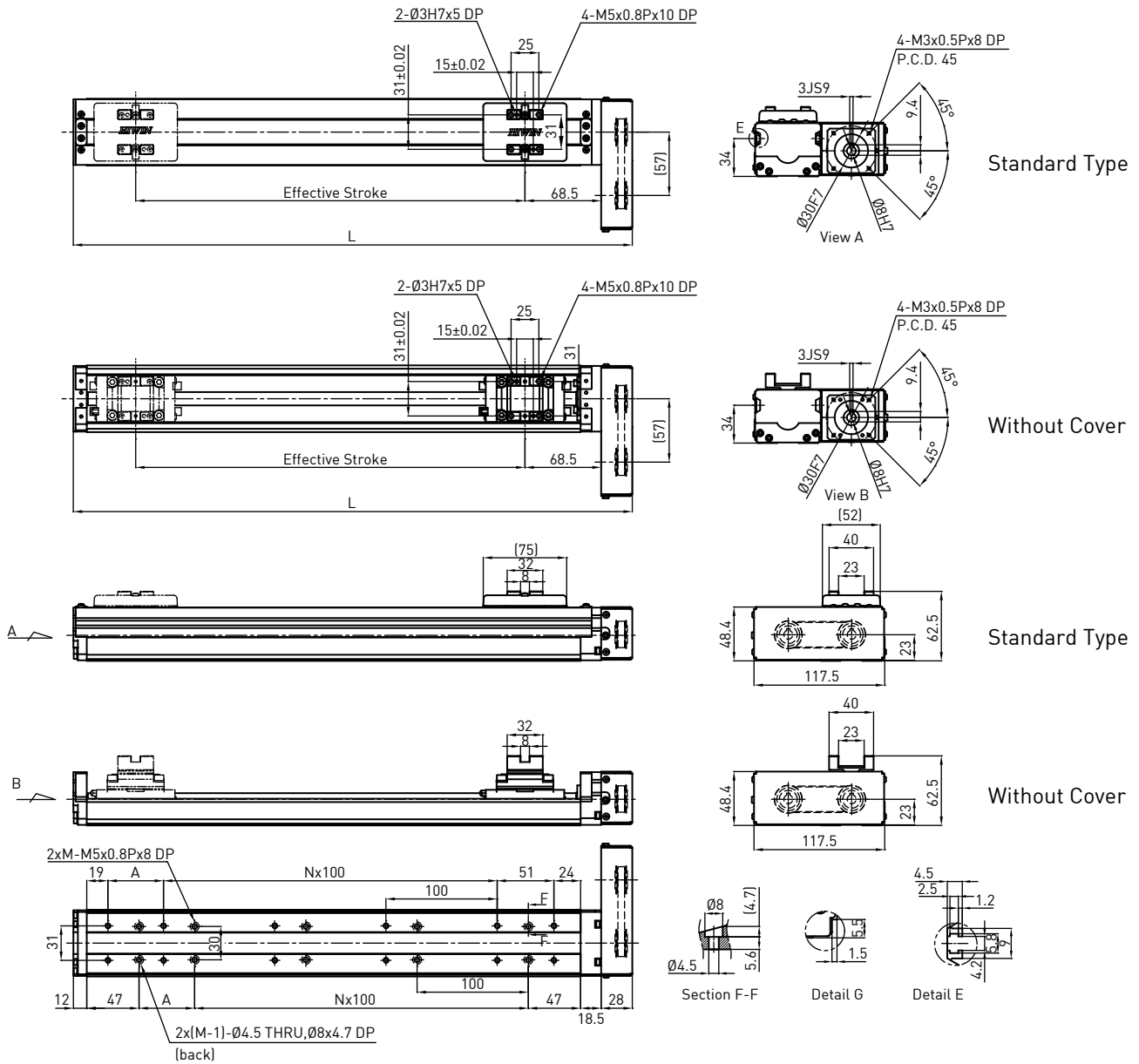


Detail E

Effective Stroke (mm)	L	A	M	N	Weight (kg)	W/O Cover WT. (kg)
50	215	50	3	0	1.4	1.1
100	265	100	3	0	1.5	1.2
150	315	50	4	1	1.7	1.4
200	365	100	4	1	1.8	1.5
250	415	50	5	2	2	1.7
300	465	100	5	2	2.1	1.8
350	515	50	6	3	2.3	2
400	565	100	6	3	2.4	2.1
450	615	50	7	4	2.6	2.3
500	665	100	7	4	2.7	2.4
550	715	50	8	5	2.9	2.6
600	765	100	8	5	3	2.7

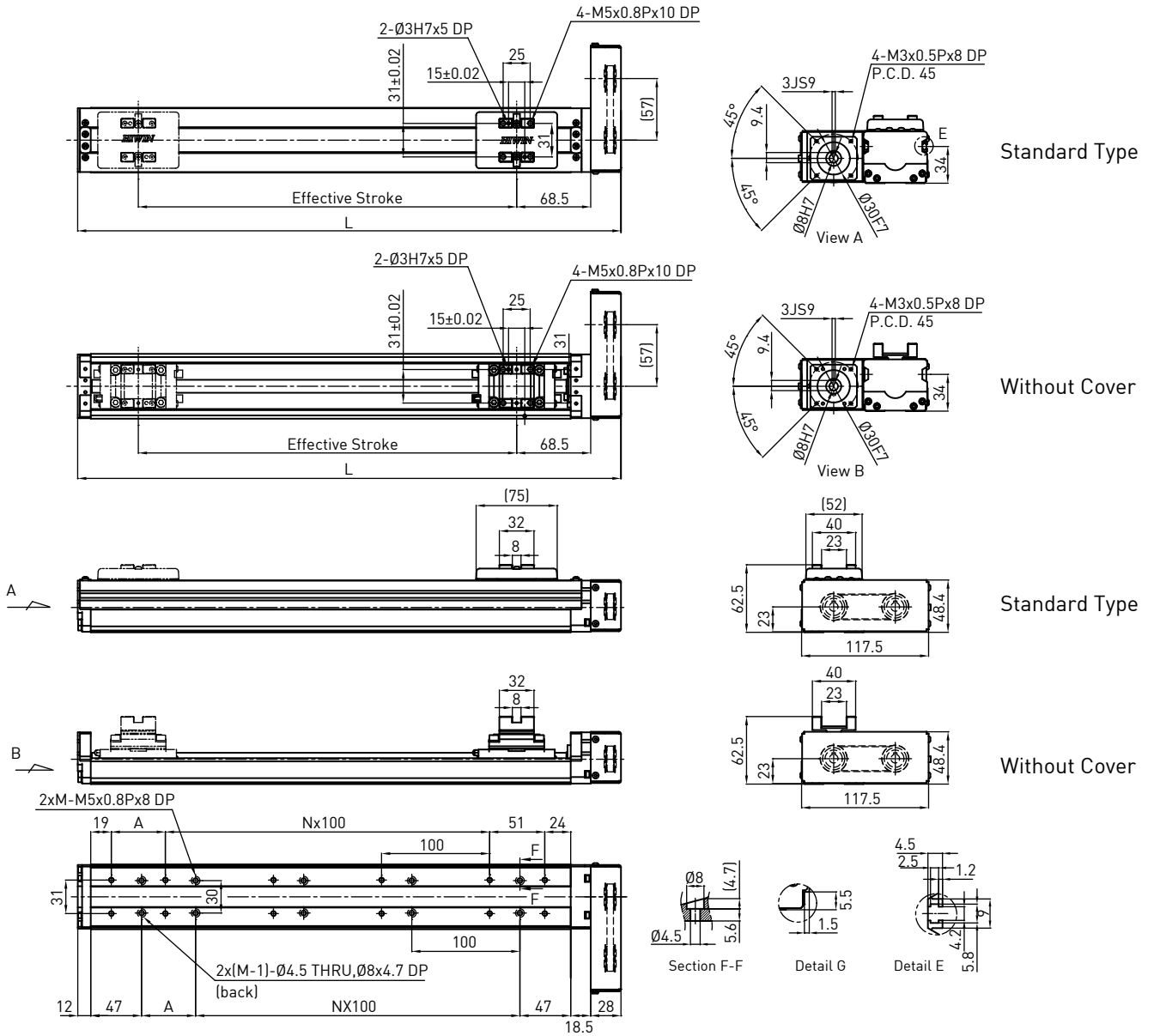
Note: Special ballscrew spindle end of 6 mm diameter is available, please contact hiwin if necessary.

KC60 Motor side mount (Left)



Effective Stroke (mm)	L	A	M	N	Weight (kg)	W/O Cover WT. (kg)
50	202.5	50	3	0	1.7	1.6
100	252.5	100	3	0	1.8	1.7
150	302.5	50	4	1	2	1.8
200	352.5	100	4	1	2.2	1.9
250	402.5	50	5	2	2.5	2
300	452.5	100	5	2	2.6	2.2
350	502.5	50	6	3	2.8	2.3
400	552.5	100	6	3	3	2.5
450	602.5	50	7	4	3.1	2.6
500	652.5	100	7	4	3.3	2.7
550	702.5	50	8	5	3.4	2.9
600	752.5	100	8	5	3.6	3

KC60 Motor side mount (Right)



Effective Stroke (mm)	L	A	M	N	Weight (kg)	W/O Cover WT. (kg)
50	202.5	50	3	0	1.7	1.6
100	252.5	100	3	0	1.8	1.7
150	302.5	50	4	1	2	1.8
200	352.5	100	4	1	2.2	1.9
250	402.5	50	5	2	2.5	2
300	452.5	100	5	2	2.6	2.2
350	502.5	50	6	3	2.8	2.3
400	552.5	100	6	3	3	2.5
450	602.5	50	7	4	3.1	2.6
500	652.5	100	7	4	3.3	2.7
550	702.5	50	8	5	3.4	2.9
600	752.5	100	8	5	3.6	3

4.7 Motor Selection

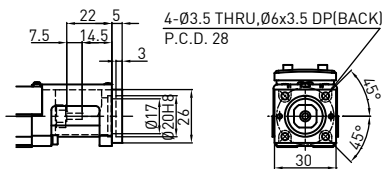
HIWIN Servo Motor

Model selection	Rated Output	Brakes	Flange Selection			
			KC30	KC40	KC50	KC60
M05□	50W	Without	F4	F2	F2	F2
K05□		With				
M10□	Without					
K10□	With					

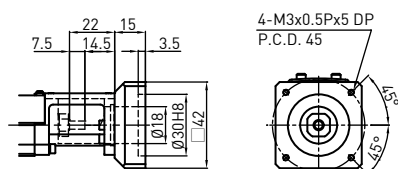
*1. If alternate motor pairing is required, please contact HIWIN.
2. ref. catalog P.167

◎ KC30

Motor Adaptor Flange F2

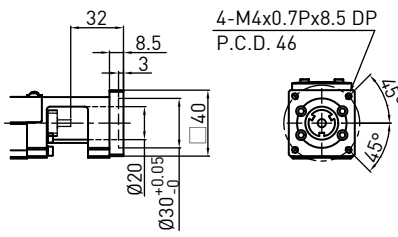


Motor Adaptor Flange F4

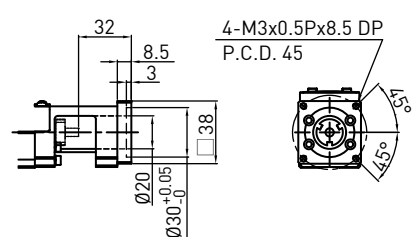


◎ KC40

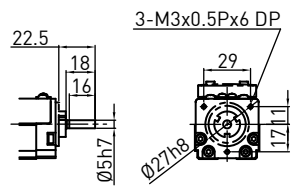
Motor Adaptor Flange F1



Motor Adaptor Flange F2

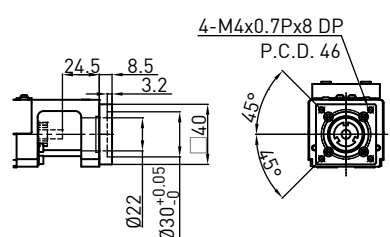


Mount Housing H0

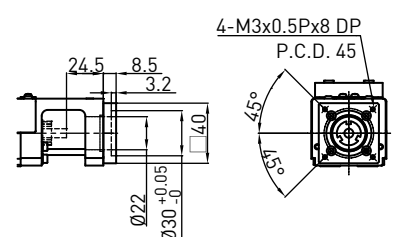


◎ KC50

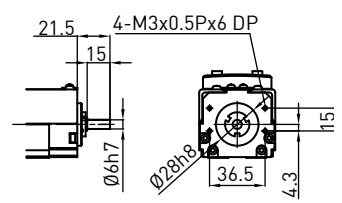
Motor Adaptor Flange F1



Motor Adaptor Flange F2

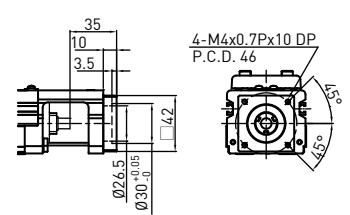


Mount Housing H0

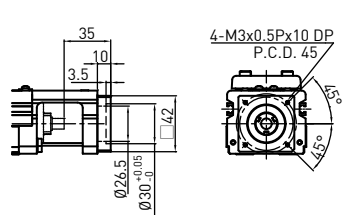


◎ KC60

Motor Adaptor Flange F1



Motor Adaptor Flange F2



Mount Housing H0

