TECHNOLOGY BUILDS THE FUTURE

COMPANY NAME:HEBEI YIDI IMPORT AND EXPORT TRADING CO.,LTD
ADDRESS: Address/ADDRESS:1-1-501,DONGFANG YIYUAN,
CHANG' AN DISTRICT,SHIJIAZHUANG CITY,CHINA

YIDI MOTION

YIDI MOTION

SINGLE AXIS ROBOT

SINGLE AXIS ROBOT

Tel:+86-18134111662
EMAIL: adam@yidimotion.com
COMTACT PERSON: adam liu
Business QQ: 760142161
WECHAT: 18134111662

YIDI MOTION

TECHNOLOGY BUILDS THE FUTURE

COMPANY PROFILE

HEBEI YIDI IMPORT AND EXPORT TRADING CO.,LTD.was established in 2015. Is a professional factory for ball screw, linear guide, Single Axis Actuator,ball spline and bearing products. We have a team of 200 employees, and it is our mission to provide customers with high-quality products and services. Our company has introduced advanced equipment from Germany and Taiwan to ensure the high efficiency and stable quality of the production process. we are very proud to have our own brand – YIDI, which represents our company's core values: innovation, quality and reliability. Our products are exported to more than 30 countries around the world, including Germany, United States, and France, and have been widely recognized for their excellent quality and competitive prices. We always adhere to customer demand-oriented, and constantly strive to improve product performance and technical level to meet the needs of different customers. Hebei Yidi Import and Export Trade Co., Ltd. is based on integrity and professionalism, and is committed to becoming a world-leading linear motion factory. We sincerely look forward to cooperating with you to create a better future together!

CONTENTS

Comprehensive Explanation

Matters Needing Attention

This kk single axis robot series product belongs to mechanical and electrical equipment. In order to maintain the safety of users, please read the relevant catalogue and the following precautions carefully before selecting the model and actually operating this product, and use it according to the instructions. If you do not use this product according to the precautions, we will not be responsible for any abnormal performance, damage or other accidents.

Life safety

- This product is suitable for industrial use, not for security components directly related to human life or personnel.
- During the operation of this product, the personnel should be kept outside the scope of mechanical action to avoid central injury or other industrial safety accidents.
- When this product is connected with a motor and powered on, the device with a heart rate regulator should be kept at a distance of one meter to avoid interference.
- This product should not be installed near fire source, inflammable material and combustible gas to prevent fire.

Storage and installation

- Avoid falling or collision during handling.
- When storing this product, it is recommended that it should be placed flat and properly packed to avoid exposure to high temperature, low temperature and humidity.
- Do not disassemble or refit this product by yourself, so as to avoid foreign matters entering or damaging the product, resulting in abnormal functions or industrial safety accidents.
- The product should be locked during installation to avoid loosening due to vibration.
- When installing the coupling and motor, select appropriate components, and pay attention to lock the screws after aligning with the shaft centerline. Do not force the installation.

Operation and use

- During operation, the rated conditions recorded in the catalogue, such as maximum speed, load, etc., shall be followed to avoid functional damage or industrial safety accident.
- Dust, chips and other foreign matters should be avoided to invade the ball ring system, resulting in damage, short life or abnormal function.
- The operating environment temperature should be below 80C. If you need to use the products in high temperature places, please negotiate with Huajiang.
- When the environment is special, such as strong vibration, vacuum chamber, dust-free chamber, corrosive chemicals, organic solvents or reagents, extremely high or low temperature wet splashing, oil droplets, oil mist, high salinity, heavy load, vertical or cantilever installation, etc., please confirm the product's use conditions.

  When the load is installed vertically, there is a risk of falling. It is recommended to install an emergency brake, and confirm that the function of the vehicle is normal before use.

Maintain

- Fill up the lubricating oil before the first use. Please pay attention to the type of oil. Different lubricating oils should not be mixed.
- Under normal use, it is recommended to check the running condition of each 100km trip once to "remove dirt" and add lubricating oil. The guide rail and lead screw should be kept lubricated.

Operation steps

The selection of single axis robot products, according to different conditions and restrictions, can refer to the following selection process.

1 Conditions of use

- Effective stroke
- Space constraints (width, height, length)
- Installation mode (horizontal, vertical, side hanging)
- Position of load center of gravity
- Operating conditions (load, speed, acceleration and deceleration, duty cycle)
- Service environment (high temperature, vibration, oil, water, corrosion)

5 Motor load calculation

- Max speed
- Motor selection
- Motor torque calculation

2 Accuracy required

- Position accuracy
- Reproduction accuracy
- Walking parallelism

6 Operation analysis

- Acceleration
- Actual operation mode (V-T diagram)

3 Application form

- Linear
- Two axes
- Multi-axis
- Special combination

7 Other accessories

- Selection of required accessories [illegible]

4 Motor selection

- AC servo motor
- Stepper motor
- With or without brake (internal or external)

8 Final confirmation

- Reconfirmation of use conditions
- Price and delivery date
- Additional processing
- Special requirements

accuracy

Precision includes accuracy and precision, as follows:

1. *positioning accuracy (accuracy)*

   The maximum difference (absolute value) between the distance that the module moves along a certain direction from the reference point and the original set distance is called positioning accuracy.

2. *repeatability of round trip position (precision)*

   Or the specified reproducibility, which means the position difference value measured at a set position during the round-trip movement of Hiwi Huatai. The maximum value in the whole journey is called the round-trip position reproducibility.

3. *Walking parallelism*

1) *It refers to the parallelism between the slide plate of kk module and the installation plane of module. The gauge is mounted in the center of the sliding table plane, and the pointer is placed on the installation plane, taking the maximum difference measured in the whole stroke.*

2) *It refers to the parallelism between the sliding table of kk module and the module installation reference plane. The gauge is mounted in the center of the slide plane, and the pointer is placed on the side mounting reference plane of the module, and the maximum difference value measured in the whole stroke is taken.*

speed

1. *Maximum linear velocity*

The maximum linear speed (V) of kk slide is calculated by multiplying the maximum speed (s) of ball screw by the lead (L).

V (mm/ sec) =S (rpm) ÷60×L (mm)

2. *Maximum speed*

Indicates that the maximum allowable speed of the ball screw is determined by the critical speed. At the critical speed of the frying pan, resonance may occur. The critical speed is related to the length of the ball screw. Therefore, the critical speed of the ball screw also determines the effective stroke and total length.
The maximum allowable rotation speed of ball screw is calculated as follows:

$$Np = 0.8 \times 2.71 \times 10^{7} \times \frac{M_1 d_1}{L_1^2}$$

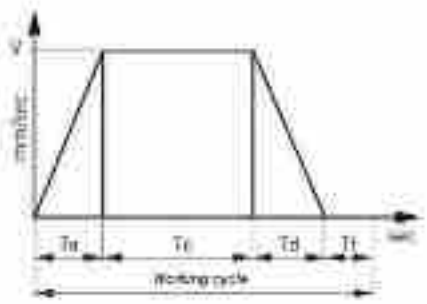
3. *Acceleration and deceleration*

The so-called speed refers to the operating speed set by the sliding table. The sliding table must start to accelerate from the stop state, maintain the speed to move to the destination after reaching the working speed, and start to decelerate and stop before reaching the destination.
The acceleration and deceleration are determined by the user according to the actual needs. In kk design, the acceleration is set as 0.15g for load 5 or less, and 0.3g for other loads. 1G=9.8m/s², 0.3G=2940mm/s². The maximum removable mass of kk module depends on the acceleration.

Note: the acceleration and deceleration will cause inertia load on the moving mass. The greater the acceleration and deceleration, the smaller the movable mass. Excessive acceleration and deceleration will produce large impact force, which should be avoided.

4. *Acceleration and deceleration*

The work cycle is decided by the customer according to the actual needs. Common work cycles are shown in the figure below, including acceleration time Ta, constant velocity time Tc, deceleration time Td and residence time Tf.



Acceleration = V / Ta
Deceleration = V / Td
Working period (sec) = Ta + Tc + Td + Tf
*Working time = working cycle * times*
Operation rate = working time / (working time + downtime)
The operation rate should be determined according to the motor load. It is not suitable to work continuously for a long time. It is suggested that 0.5 should be taken as the standard.

Install

If the ball screw type is determined to be used in the vertical direction (Z-axis), please note that the vertical installation belongs to a special use state, and the load should be used within the maximum movable weight (vertical) listed in the table. In addition, the time gauge belt type is prohibited to be used in the vertical direction.

*Note: In order to prevent the load from sliding, the motor with brake should be used when it is installed vertically

Life

For horizontal installation, side hanging installation and inclined installation (the angle is less than 30 degrees), the service life of ss shall be subject to the service life of linear guide rail; for vertical installation and inclined installation (the angle is more than 30 degrees), the service life of kk shall be subject to the service life of lead screw or fixed end bearing (whichever is less).
The rated dynamic load listed in the table (FY, FZ, MX, my, MZ) is the service life of 10,000km relative to the module. If the load is less than the loadable condition listed in the table (FY / fyD + FZ / Fzd + MX / MXD + my / MyD = 1), otherwise, if the load is greater than the rated value listed in the table, the service life will be less than the rated value. In order to ensure the long-term use of kk, it is recommended to use it within the listed load range as far as possible.

Maintain

The maintenance parts of kk module include ball screw, U-shaped guide rail and related accessories. Every three months or every 100 km, the lubricant must be added to the roller screw and linear guide, and please check whether there is any dirt or debris in the system. If the grease becomes dirty, please change the grease. If you have any special maintenance problems, please contact us.

Product application

kk series products are widely used and can be used in general automation equipment. Examples are as follows:
Automatic tin welding machine, screw locking machine, material rack parts box taking and placing, small stack, adhesive coating, parts and accessories taking and placing and handling, CCD lens moving, automatic jet machine, automatic loading and unloading device, cutting machine, electronic component production equipment, small assembly line, small platen, spot welding machine, surface coating process. Automatic labeling machine, liquid filling and packing, parts and accessories inspection equipment, production line workpiece sorting, material filling device, packaging machine, engraving machine, conveyor belt displacement, workpiece cleaning device, etc.

Main Feature

Industrial Robot

- *Modular design, smaller size*
- *U-shaped steel based track, overall quenching, hrc56 degree or above, high strength, high bearing capacity.*
- *Standardized production, fast delivery, lower cost.*
- *High versatility, complete specifications and models, to meet the needs of customers in various industries*

Modular

Through the modular design of ball guide and U-shaped industrial screw, the robot can be integrated.
Industrial robots can provide fast selection, installation, compact size, high rigidity and other features, which can greatly reduce the use space of the client.

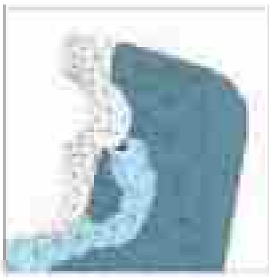
Single axis Robot KK Type

kk single axis robot is mainly through modular design: ball screw and U-shaped guide rail are integrated together, so it can provide high precision, rapid installation, selection, high rigidity, small volume, space saving and other characteristics.

By using high-precision ball screw as the transmission structure, and with the optimal design of U-shaped track as the guide structure, to ensure the accuracy and rigidity of the demand.

1.1 Characteristic

- Easy to design and install
- Small size and light weight.
- high-precision.
- High rigidity.
- It is fully equipped.
- Optimization design.
  The track structure is analyzed by finite element method to get the best rigidity and weight. The analysis is shown in the right figure



1.1.1 Modular

Through the modular design, kk single axis robot integrates ball screw and U-shaped guide rail, which can save the selection of guidance and driving parts for traditional braking platform, and greatly reduce the space and time of client.

Traditional linear platform

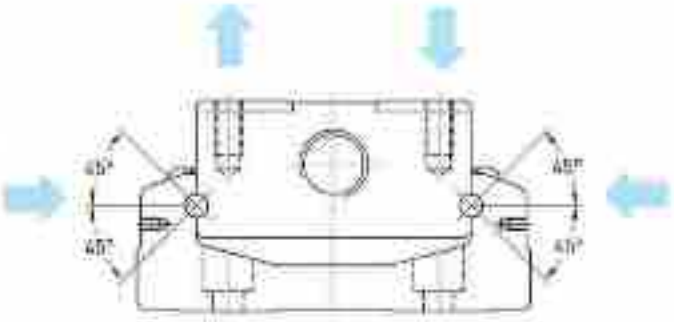
1 platform
2 linear guide rail
1 Ball screw
1 Pedestal

kk single axis robot

1 Ball screw
1 Guide

1.1.2 Four direction equal load

The contact surface between the ball and the groove of the return system between the rail and the slider is designed with a 2-row Gooths profile, which has a contact angle of 45 degrees. The modified design can make the kk single axis robot bear the equal load in four directions.

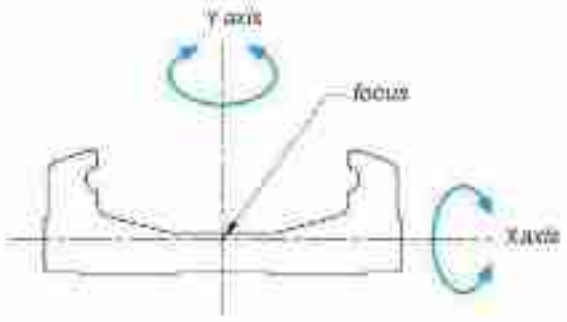


1.1.3 High rigidity

The track configuration adopts U section, and through the design of finite element analysis software, the balance point between volume and rigidity is achieved, which makes the track have the characteristics of high rigidity, compact volume and light weight.

Moment of inertia *Unit:mm⁴*

Model	I_x	I_y
KK40	3.533x10⁵	5.137x10⁴
KK50	9.6x10⁵	1.34x10⁵
KK60	5.056x10⁶	2.802x10⁵
KK86	7.455x10⁶	1.134x10⁶
KK100	1.296x10⁷	2.035x10⁶
KK130	2.546x10⁷	5.073x10⁶



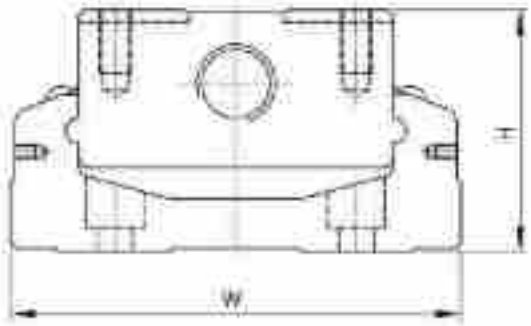
I_x : Moment of inertia along the x-axis

I_y : Moment of inertia along y-axis

1.1.4 All specifications

According to different needs, we have developed the following kit single axis robots, which can be selected by customers according to their needs, space and load.

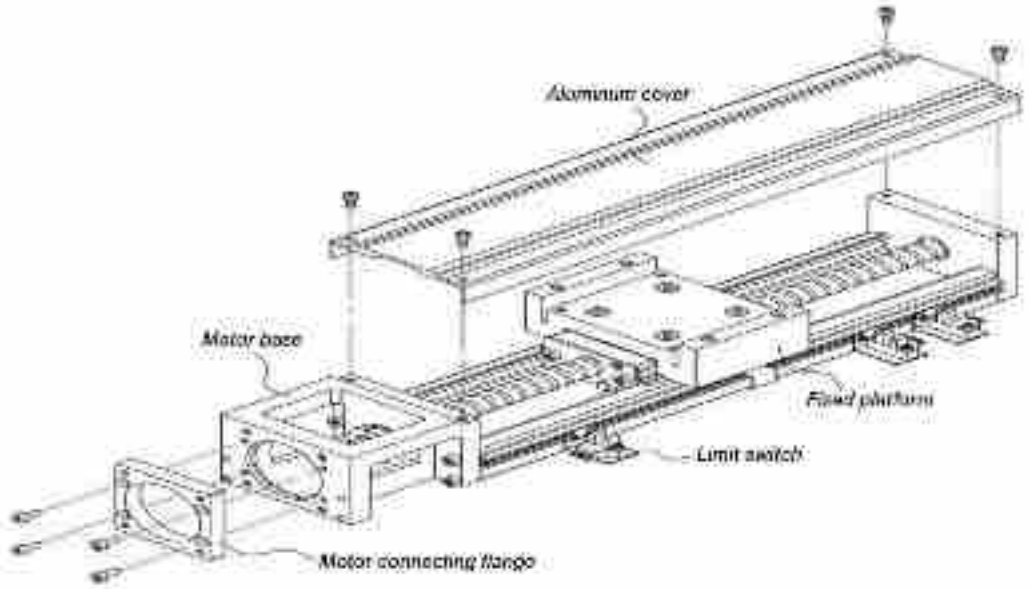
Model	W	H
KK40	40	20
KK50	50	26
KK60	60	33
KK86	86	46
KK100	100	55
KK130	130	65



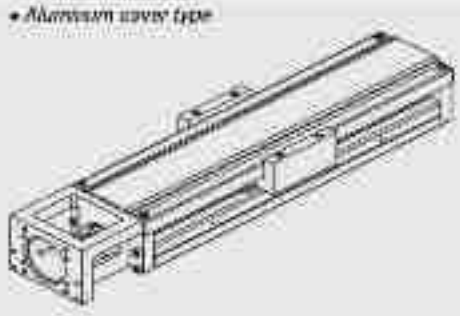
1.1.5 Shop accessories

In order to meet the needs of various applications, industrial robots can also choose aluminum cover, telescopic sheath, motor connecting flange and limit switch.

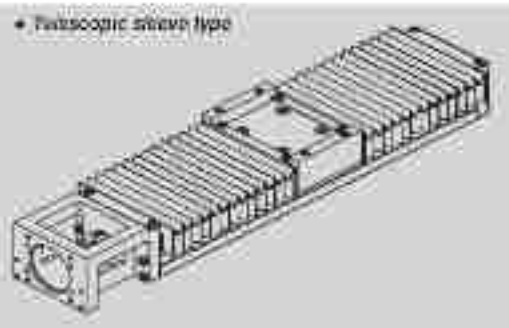
- *Aluminum cover and telescopic sheath: it can prevent foreign matters and liquid flies from entering the interior of the industrial robot and affecting its service life, accuracy and smoothness.*
- *Motor connecting flange: various motors can be locked on the industrial robot.*
- *Limit switch: provide the safety mechanism of slider positioning, starting origin and preventing the stroke of slider flying pan.*



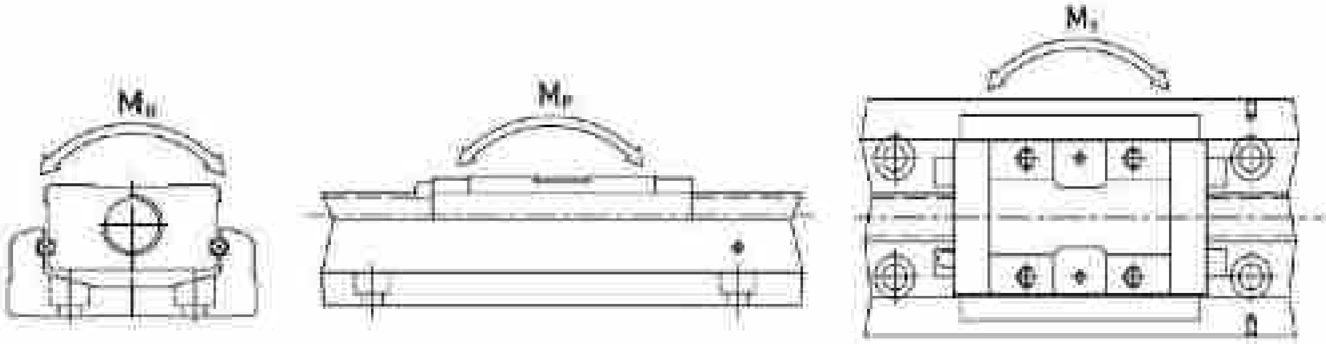
• *Aluminum cover type*



• *Telescopic sleeve type*



1.1.6 Load Specification



1.1.7

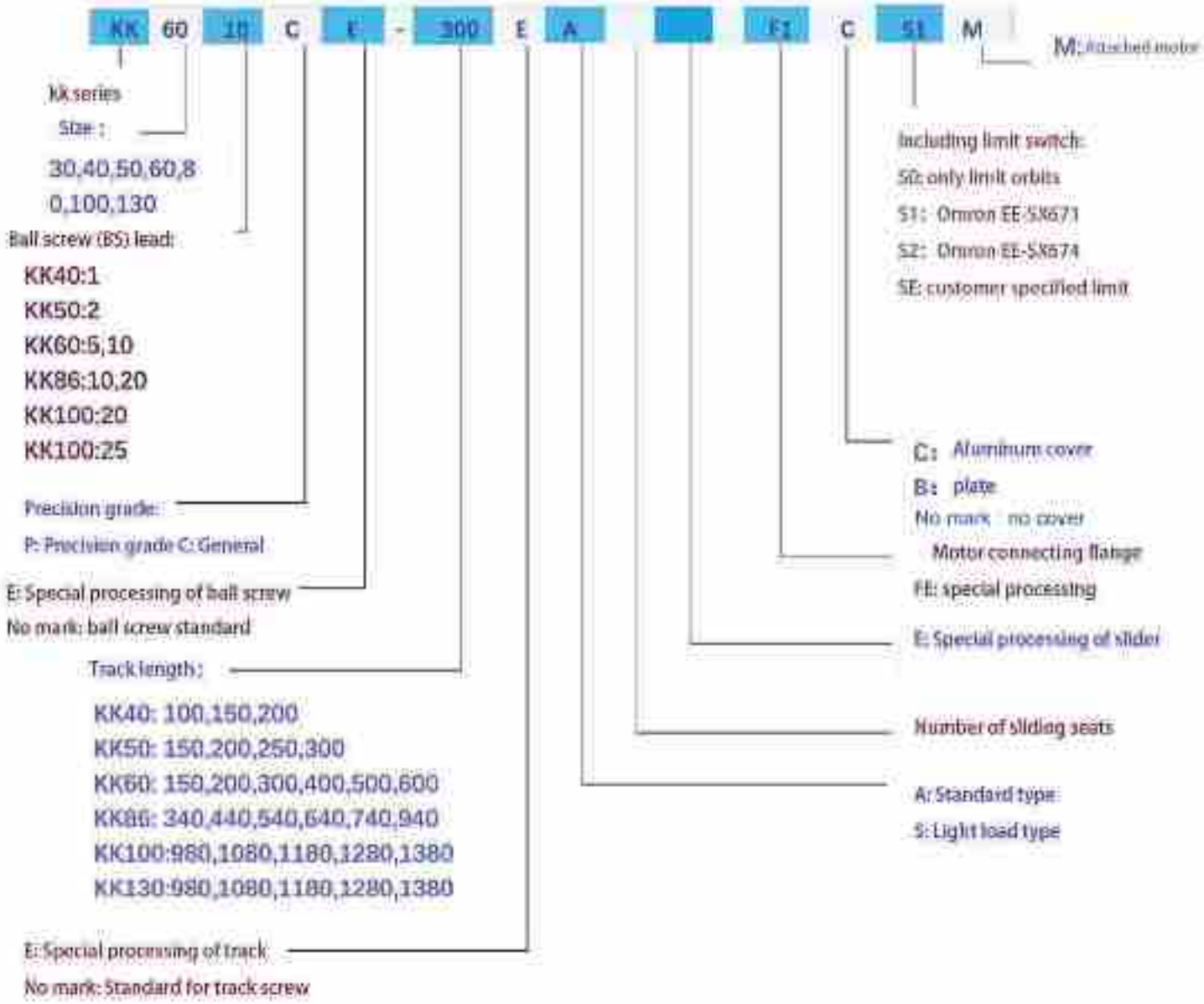
[illegible]		[illegible] (mm)	[illegible] (mm)	[illegible] (N)	[illegible] (N)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	精密级	8	1	735	1538	3920	—	6468	—	88	182	—	—	33	132	—	—	81	132	—	—
	一般级			876	1284																
[illegible]	精密级	8	2	2136	3463	8037	—	12916	—	116	346	—	—	116	646	—	—	222	444	—	—
	一般级			1813	2510																
[illegible]	精密级	12	5	3744	6643	13230	7137	21682	11374	133	348	71	275	357	348	72	285	416	836	341	680
	一般级			3077	5520																
[illegible]	精密级	12	10	2410	3743	13230	7137	21682	11374	133	348	71	305	356	346	72	305	416	836	341	682
	一般级			2127	3234																
[illegible]	精密级	16	10	7143	12641	31048	21301	50674	29476	622	3010	160	1309	527	3050	106	1209	1507	3014	847	1694
	一般级			6479	11367																
[illegible]	精密级	16	20	4645	7602	31048	21301	50674	29476	622	3010	160	1809	522	3050	106	1209	1507	3014	847	1694
	一般级			4175	5589																
	一般级			4722	0183																

1.1.8 Accuracy class

Unit: mm

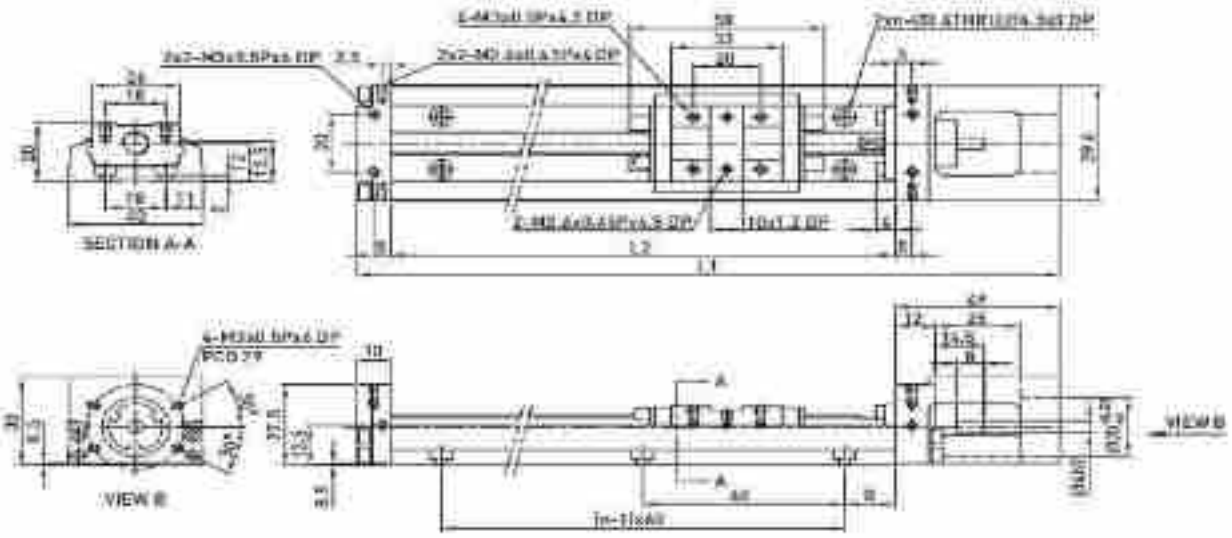
Model	Base length	Positioning repeatability		Positioning accuracy		Rotating precision		Maximum allowable torque (N·cm)	
		Precision	General type	Precision	General type	Precision	General type	Precision	General type
KK40	100 150 200	±0.003	±0.005	0.020	--	0.010	--	1.2	0.8
KK50	150 200 250 300	±0.003	±0.005	0.020	--	0.010	--	4	2
KK60	150 200 300 400	±0.003	±0.005	0.025	--	0.010	--	15	7
	500 600	±0.003	±0.005	0.025	--	0.015	--	15	7
KK86	340 440 540 640	±0.003	±0.005	0.030	--	0.015	--	15	10
	740	±0.003	±0.005	0.040	--	0.020	--	17	10
	940	±0.003	±0.005	0.035	--	0.030	--	25	10
KK100	980 1080	±0.005	±0.01	0.035	--	0.025	--	17	12
	1180	±0.005	±0.01	0.040	--	0.03	--	20	12
	1280	±0.005	±0.01	0.045	--	0.035	--	23	15
	1380			0.05		0.04		25	
KK130	980	±0.005	±0.01	0.035	--	0.025	--	25	15
	1180			0.04		0.03		25	15
	1380								
	1680	±0.007	±0.012	0.05	--	0.04	--	27	18

1.1.9 Accuracy class


KK 60 10 C E - 300 E A F1 C S1 M
M: Attached motor
KK series
Size:
30,40,50,60,8
0,100,130
Ball screw (BS) lead:
KK40:1
KK50:2
KK60:5,10
KK86:10,20
KK100:20
KK100:25
Precision grade:
P: Precision grade C: General
E: Special processing of ball screw
No mark: ball screw standard
Track length:
KK40: 100,150,200
KK50: 150,200,250,300
KK60: 150,200,300,400,500,600
KK86: 340,440,540,640,740,940
KK100:980,1080,1180,1280,1380
KK130:980,1080,1180,1280,1380
E: Special processing of track
No mark: Standard for track screw
Including limit switch:
S0: only limit orbits
S1: Omron EE-SX671
S2: Omron EE-SX674
SE: customer specified limit
C: Aluminum cover
B: plate
No mark: no cover
Motor connecting flange
FE: special processing
E: Special processing of slider
Number of sliding seats
A: Standard type
S: Light load type

Single Axis Robot
KK40

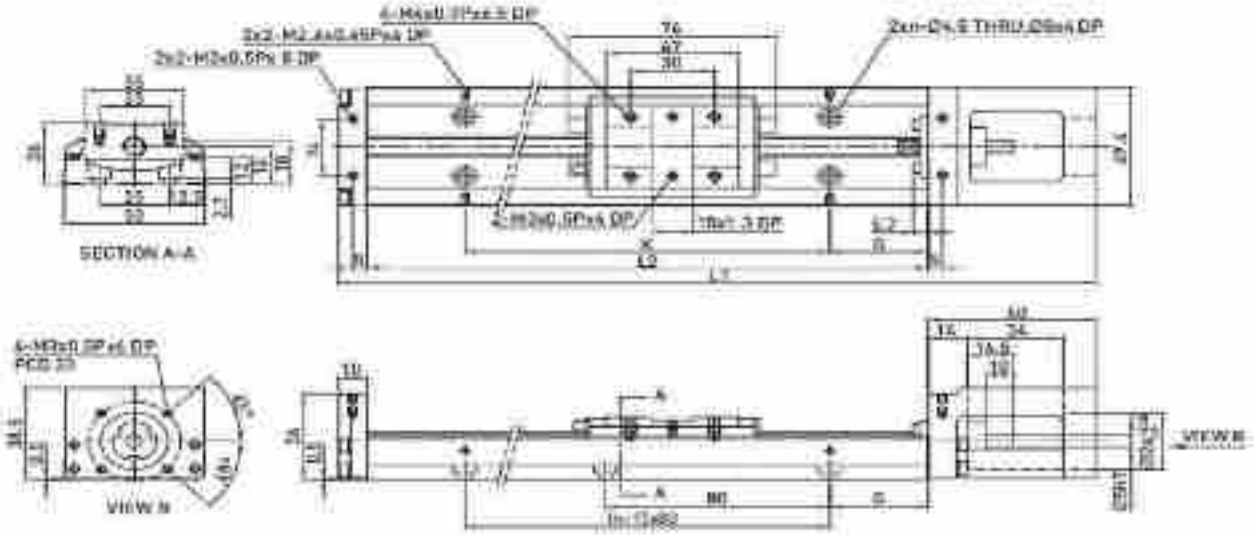
KK40(Without Cover)



Track length (L2)	Overall length (L1)	Maximum stroke (mm) A1 Sliding seat	Maximum stroke (mm) A2 Sliding seat	G(mm)	n	Weight (Kg) A1 Sliding seat	Weight (Kg) A2 Sliding seat
100	159	36	--	20	2	0.48	--
150	209	86	34	15	3	0.6	0.67
200	259	136	84	40	3	0.72	0.79

Single Axis Robot
KK50

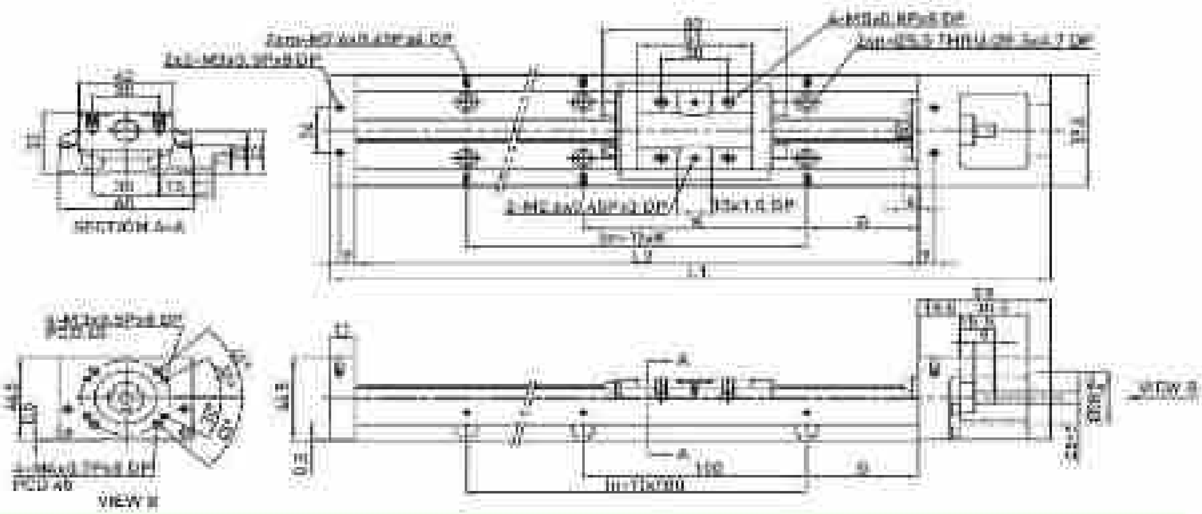
KK50(Without Cover)



Trace length (L2)	Overall length	Maximum stroke (mm)		G(mm)	K(mm)	n	Weight(Kg)	
		A1 Sliding seat	A2 Sliding seat				A1 Sliding seat	A2 Sliding seat
150	220	70	--	35	80	2	1	--
200	270	120	55	20	160	3	1.2	1.4
250	320	170	105	45	160	3	1.4	1.6
300	370	220	155	30	240	4	1.6	1.8

Single Axis Robot
KK60

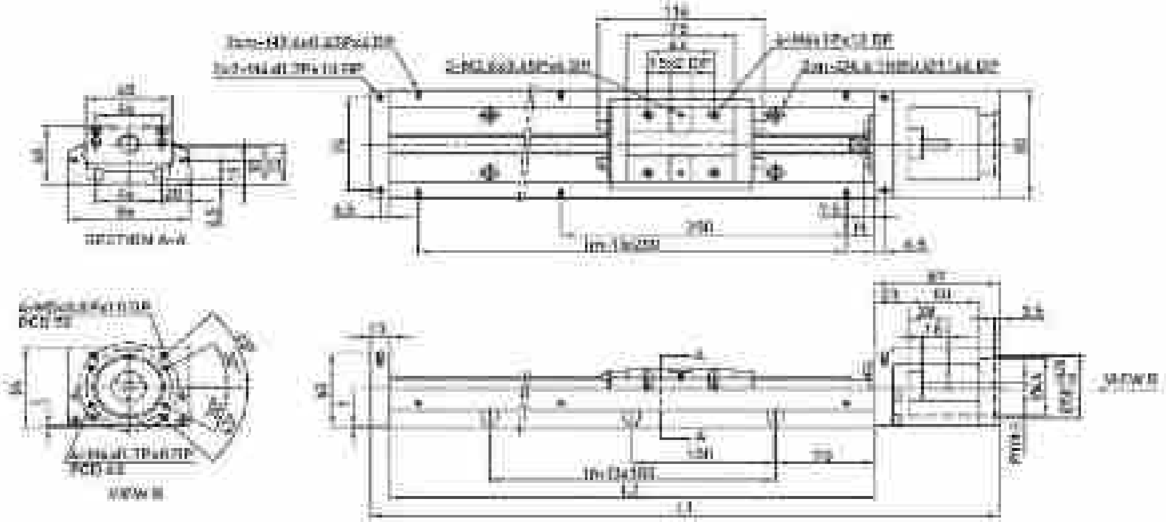
KK60(Without Cover)



Rail length (L2)	Overall length (L1)	Maximum stroke (mm)		G(mm)	K(mm)	n	m	Weight(Kg)	
		A1 Sliding seat	A2 Sliding seat					A1 Sliding seat	A2 Sliding seat
150	220	60	--	25	100	2	2	1.5	--
200	270	110	--	50	100	2	2	1.8	--
300	370	210	135	50	200	3	3	2.4	2.7
400	470	310	235	50	100	4	4	3	3.3
500	570	410	335	50	200	5	5	3.6	3.9
600	670	510	435	50	100	6	6	4.2	4.6

Single Axis Robot
KK86

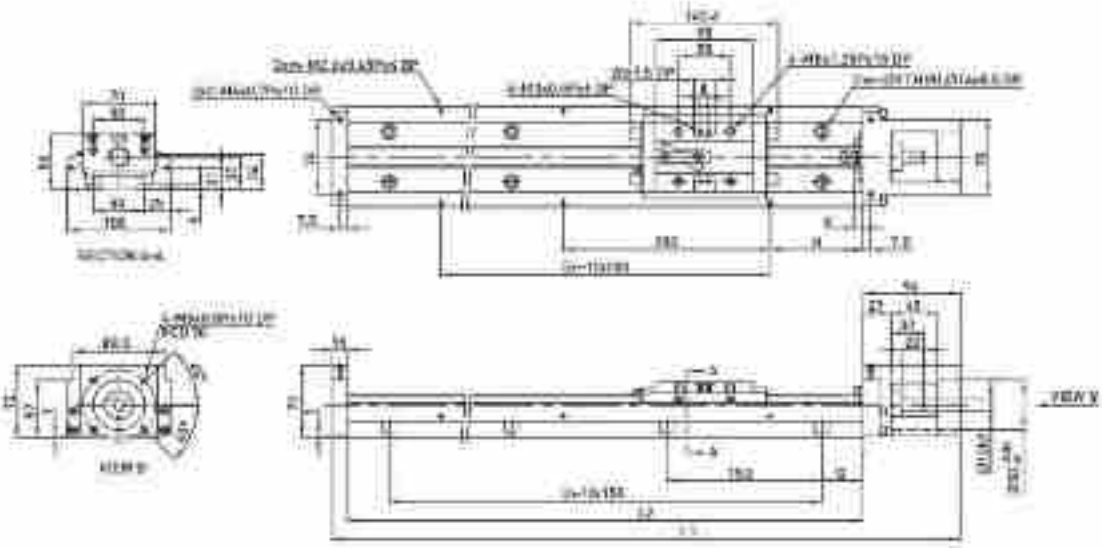
KK86(Without Cover)



Track length (L2)	Overall length (L1)	Maximum stroke (mm)		H(mm)	n	m	Weight(Kg)	
		A1	A2				A1	A2
340	440	216.5	108.5	70	3	2	5.7	6.5
440	540	316.5	208.5	20	4	3	6.9	7.7
540	640	416.5	308.5	70	5	3	8.0	8.8
640	740	516.5	408.5	20	6	4	9.2	10.0
740	840	616.5	508.5	70	7	4	10.4	11.2
940	1040	816.5	708.5	70	9	5	11.6	12.4

Single Axis Robot
KK100

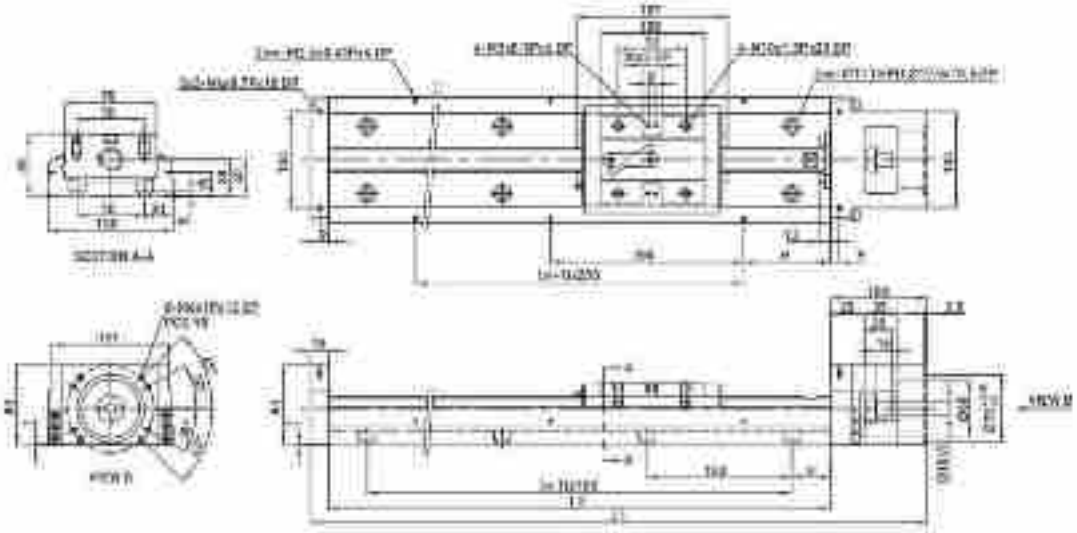
KK100(Without Cover)



Body weight (L2)	Overall length (L1)	Maximum stroke (mm)		G(mm)	H(mm)	n	m	Weight (Kg)	
		A1 Standard model	A2 Standard model					A1 Standard model	A2 Standard model
980	1089	828	700	40	90	7	5	18.6	20.3
1080	1189	928	800	15	40	8	6	20.3	22.0
1180	1289	1028	900	65	90	8	6	22.0	23.7
1280	1389	1128	1000	40	40	9	7	23.6	25.3
1380	1489	1228	1100	15	90	10	7	25.3	27.0

Single Axis Robot
KK130

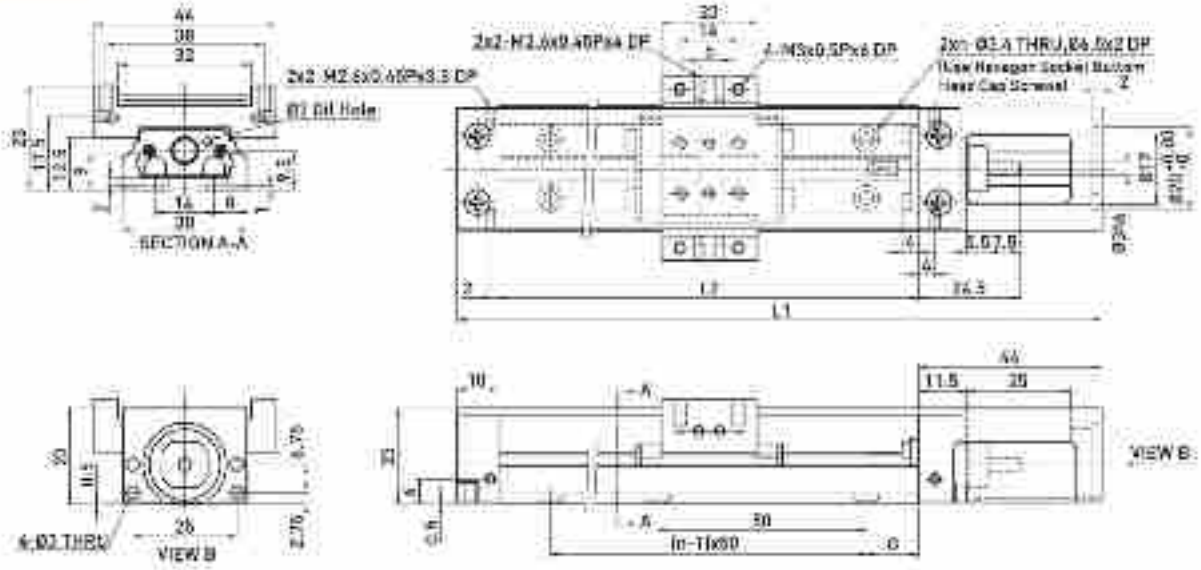
KK130(Without Cover)



(LZ)	(L)	Working range (mm) A1 Sliding seat	Working range (mm) A2 Sliding Seat	G(mm)	H(mm)	n	m	Weight(Kg) A1 Sliding seat	Weight(Kg) A2 Sliding seat
980	1098	811	659	40	90	7	5	29.4	32.3
1180	1298	1011	659	65	90	8	6	34.3	37.2
1380	1498	1211	1059	90	90	9	7	39.2	42.1
1680	1798	1511	1359	90	40	11	9	46.5	49.4

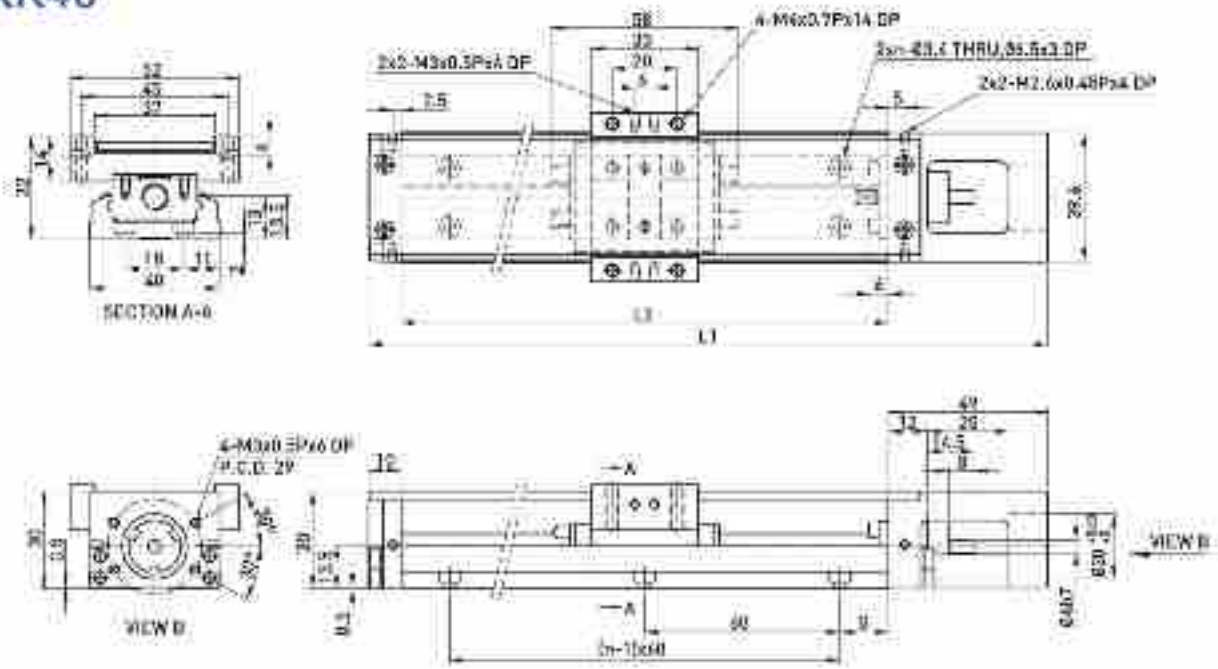
2.9.2 With cover

KK30



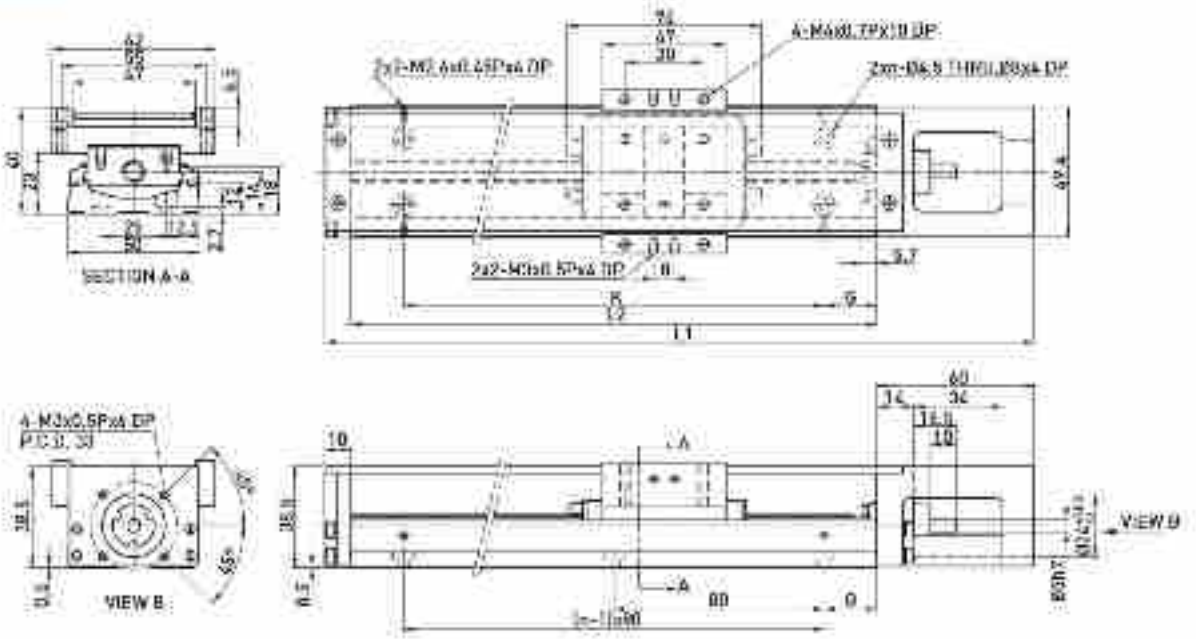
Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		G (mm)	n	Mass (kg)	
		A1 Block	A2 Block			A1 Block	A2 Block
75	127	31	-	12.5	2	0.25	-
100	154	56	-	25	2	0.27	-
125	179	81	65	12.5	3	0.3	0.36
150	204	106	90	25	3	0.33	0.39
175	229	131	55	12.5	4	0.37	0.42
200	254	156	120	25	4	0.4	0.46

KK40



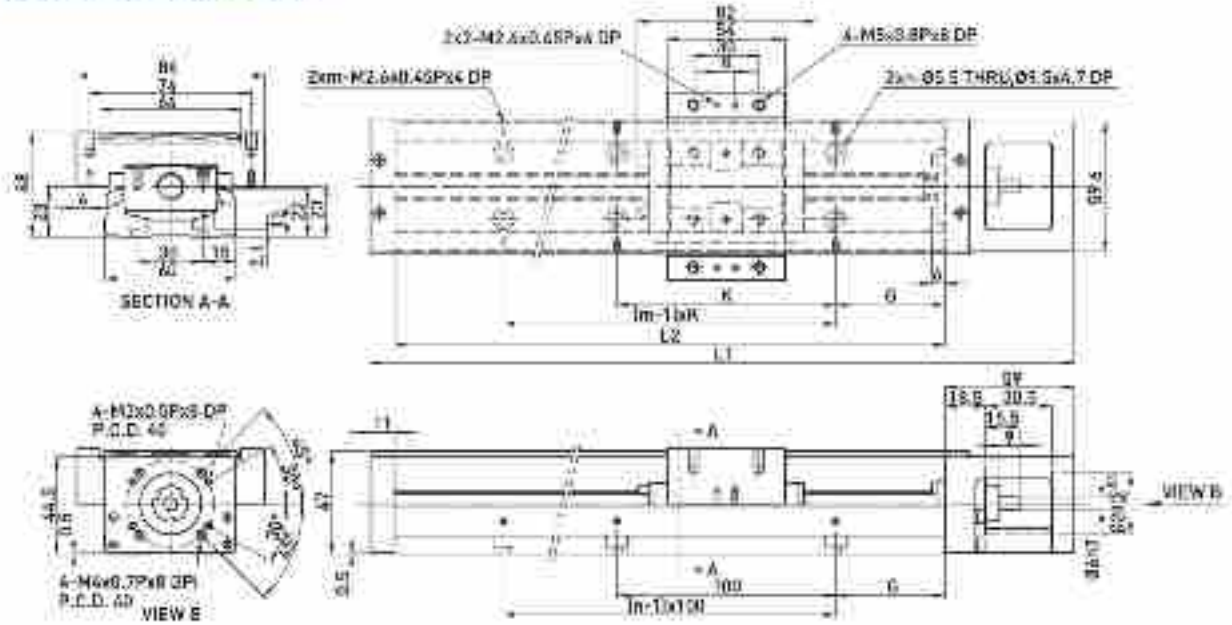
Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		G (mm)	n	Mass (kg)	
		A1 Block	A2 Block			A1 Block	A2 Block
100	156	36		20	2	0.55	
150	209	86	34	15	3	0.68	0.76
200	259	136	84	40	3	0.82	0.89

KK50



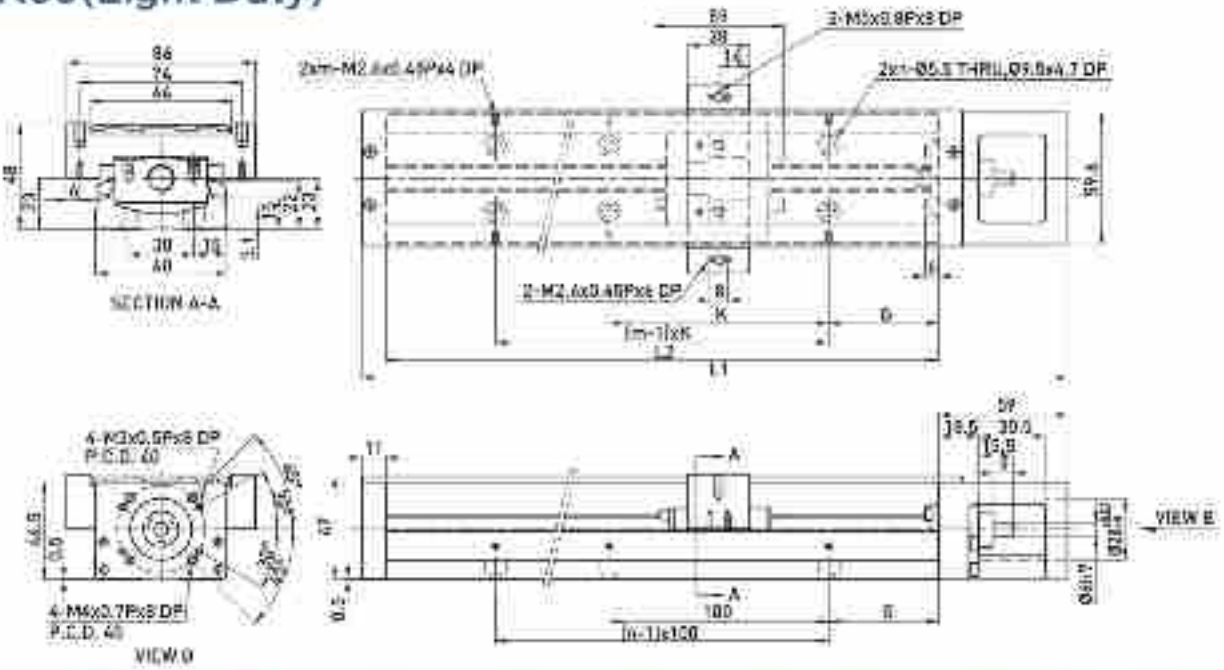
Rail Length L2 [mm]	Total Length L1 [mm]	Maximum Stroke [mm]		S [mm]	K [mm]	n	Mass [kg]	
		A1 Block	A2 Block				A1 Block	A2 Block
150	220	70	-	35	80	2	1.1	-
200	270	120	55	20	160	3	1.3	1.5
250	320	170	105	40	160	3	1.6	1.8
300	370	220	155	30	240	4	1.8	2.0

KK60(Standard)



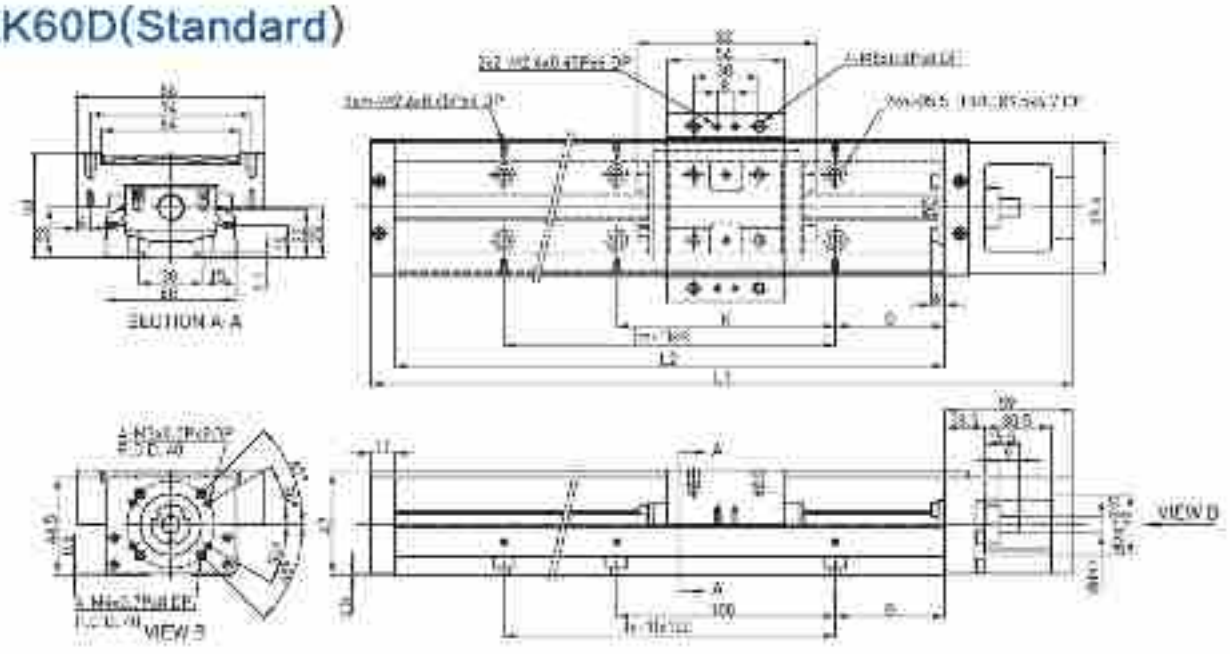
Rail Length L2 [mm]	Total Length L1 [mm]	Maximum Stroke [mm]		S [mm]	K [mm]	n	m	Mass [kg]	
		A1 Block	A2 Block					A1 Block	A2 Block
150	220	60		25	100	2	2	1.7	
200	270	110	-	50	100	2	2	2.1	-
300	370	210	135	50	200	3	3	2.9	3.0
400	470	310	235	50	300	4	4	3.8	3.4
500	570	410	335	50	400	5	5	3.9	4.2
600	670	510	435	50	500	6	6	4.6	5.0

KK60(Light Duty)



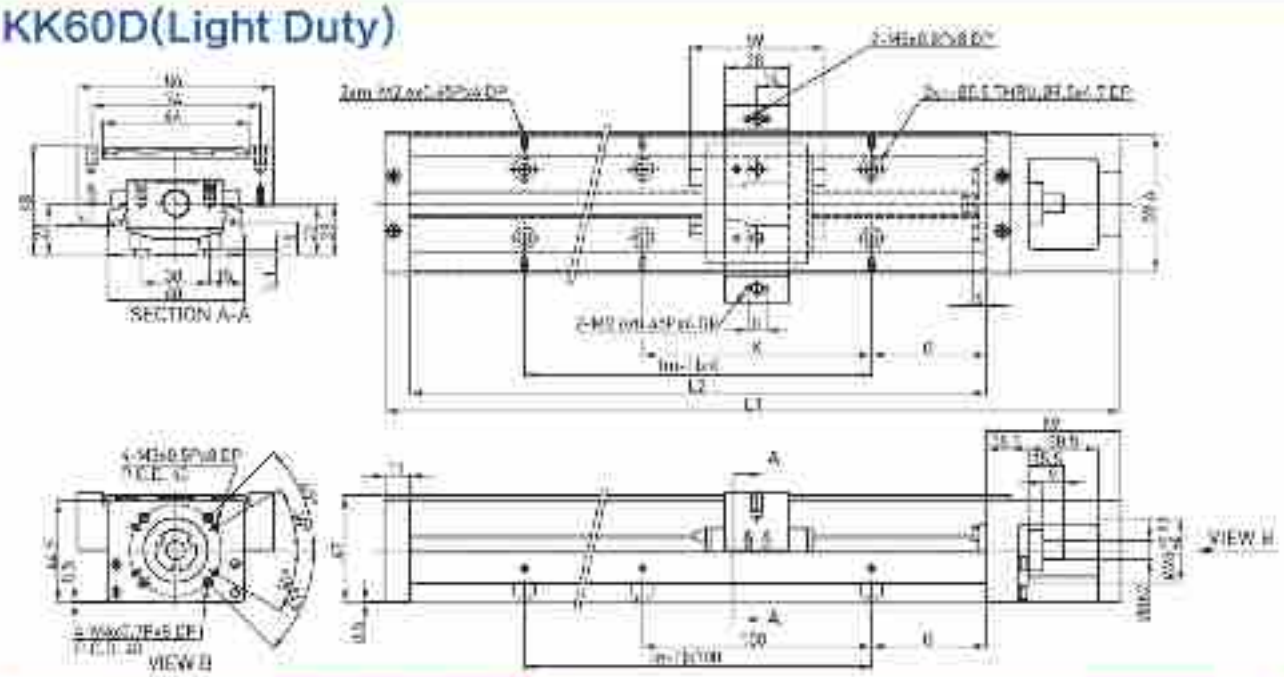
Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		G (mm)	K (mm)	n	m	Mass (kg)	
		S1 Block	S2 Block					S1 Block	S2 Block
150	220	85	34	25	100	2	2	1.6	1.8
200	270	135	84	50	100	2	2	1.9	2.1
250	320	185	134	50	200	3	2	2.3	2.7
400	470	335	284	50	100	4	4	3.1	3.3
350	520	435	384	50	200	5	3	3.7	3.9
600	670	535	486	50	100	5	4	4.4	4.6

KK60D(Standard)



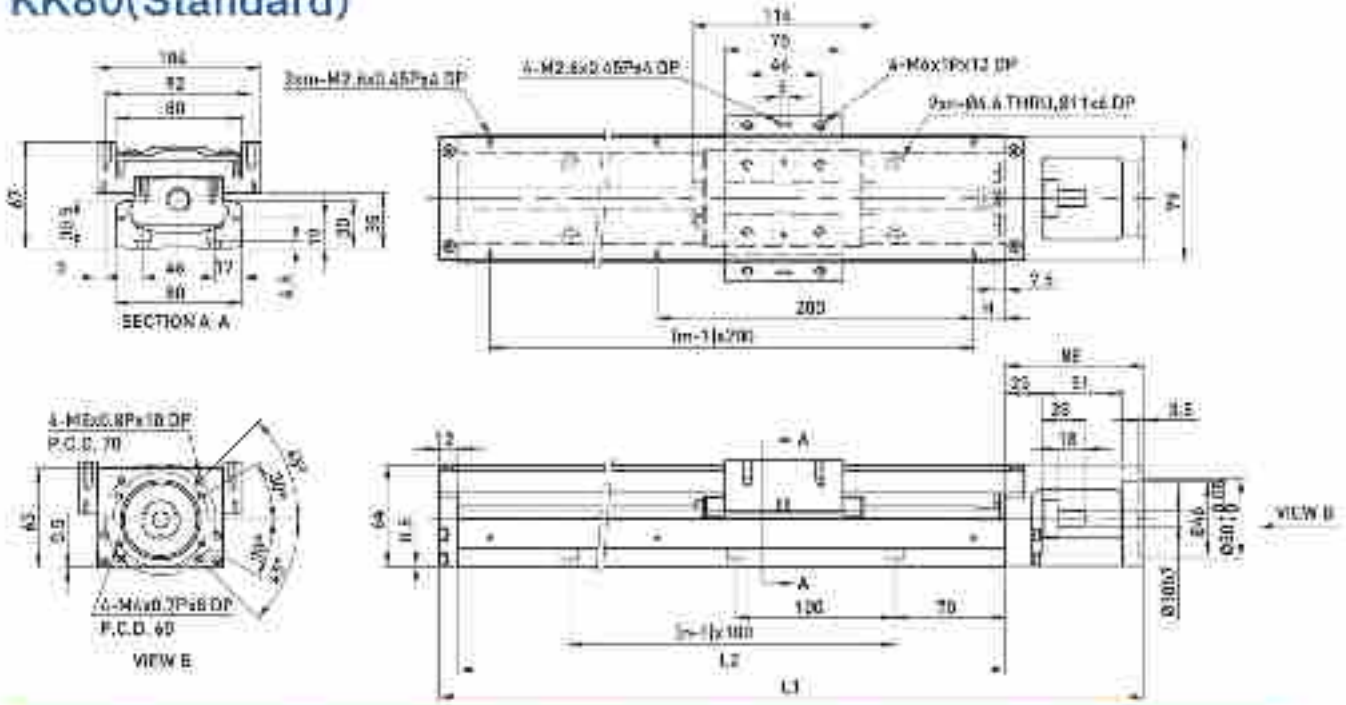
Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		G (mm)	K (mm)	n	m	Mass (kg)	
		A1 Block	A2 Block					A1 Block	A2 Block
150	220	60		25	100	2	2	1.7	
200	270	110		50	100	2	2	2.1	
300	370	210	159	50	200	3	2	2.7	2.6
400	470	310	235	50	100	4	4	3.3	2.8
500	570	410	435	50	200	5	3	3.9	4.2
600	670	510	435	50	100	6	4	4.6	5.0

KK60D(Light Duty)



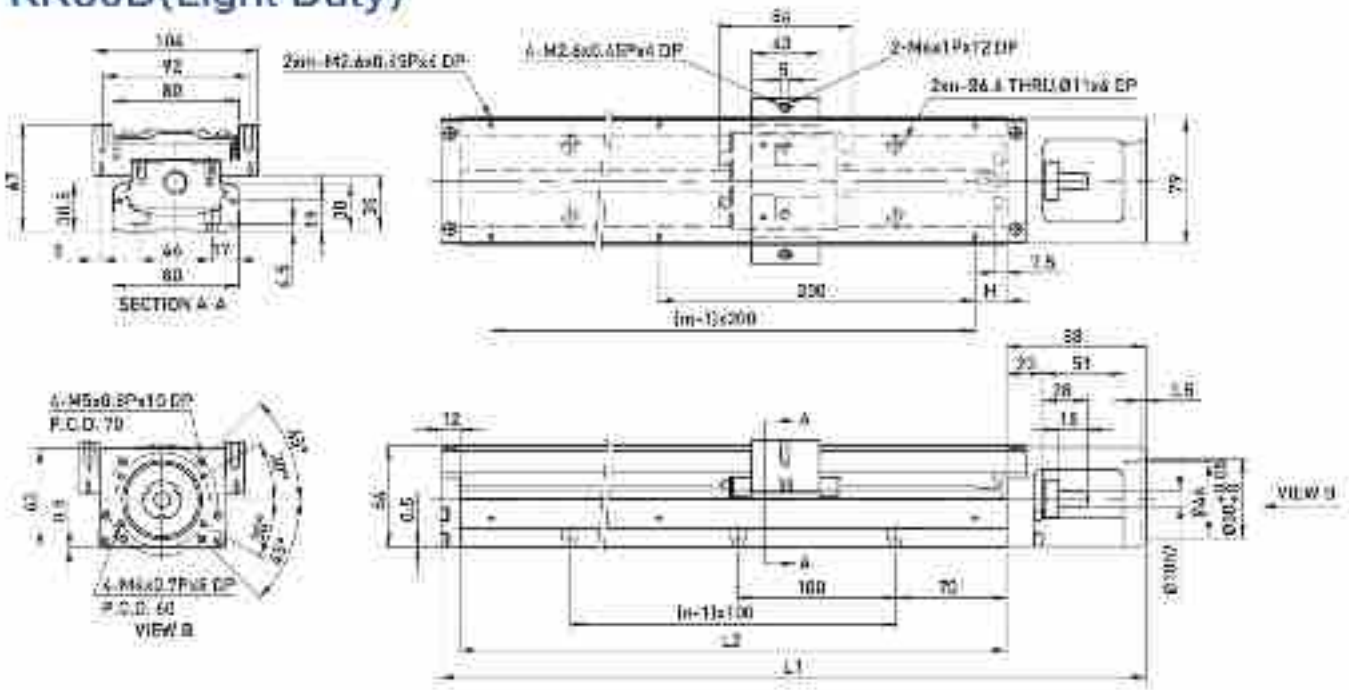
Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		G (mm)	K (mm)	n	m	Mass (kg)	
		S1 Block	S2 Block					S1 Block	S2 Block
190	220	89	84	25	100	2	2	1.6	1.8
290	270	135	84	50	80	2	2	1.9	2.1
390	370	235	184	50	200	3	3	2.5	2.7
490	470	335	284	50	100	4	4	3.1	3.3
590	570	435	384	50	200	5	5	3.7	3.9
690	670	535	484	50	100	6	6	4.3	4.6

KK80(Standard)



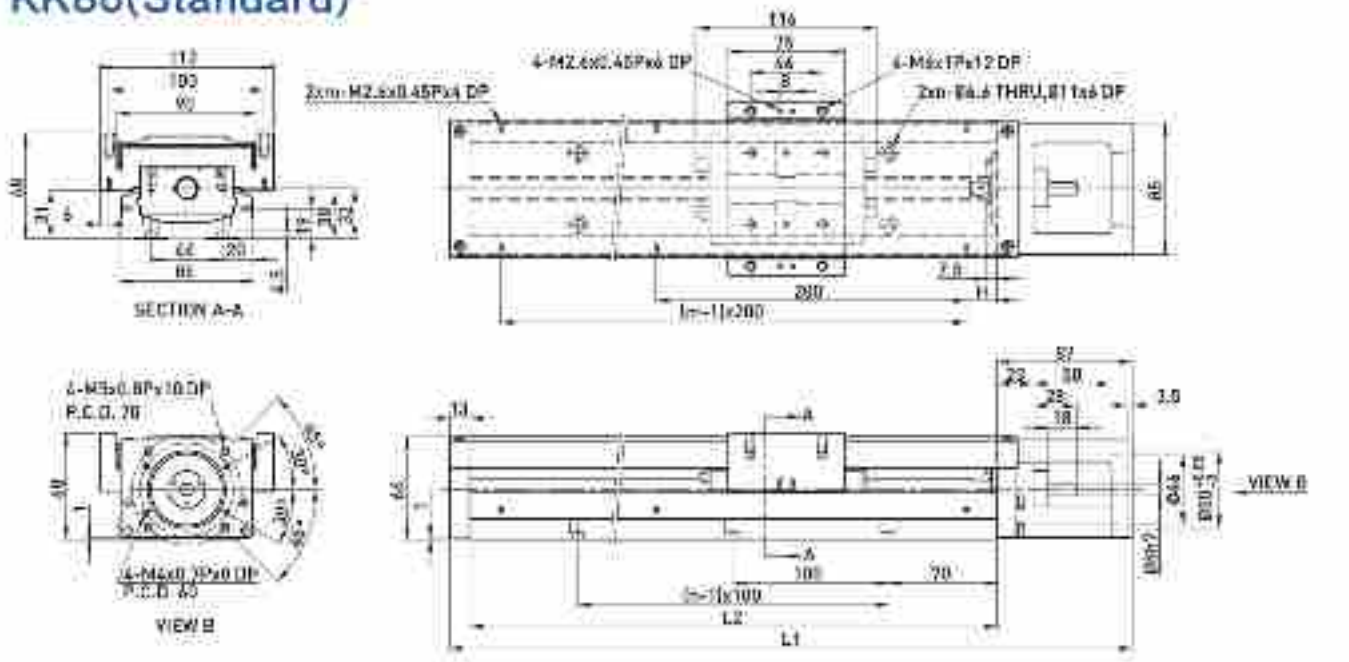
Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		K (mm)	n	m	Mass (kg)	
		A1 Block	A2 Block				A1 Block	A2 Block
340	440	216.5	168.5	70	3	2	6	7.1
440	540	316.5	268.5	20	4	3	7.2	8.3
540	640	416.5	368.5	70	5	3	8.4	9.5
640	740	516.5	468.5	20	6	4	9.7	10.8
740	840	616.5	568.5	70	7	4	10.9	12
840	940	716.5	668.5	70	8	5	12.5	13.6

KK80D(Light Duty)



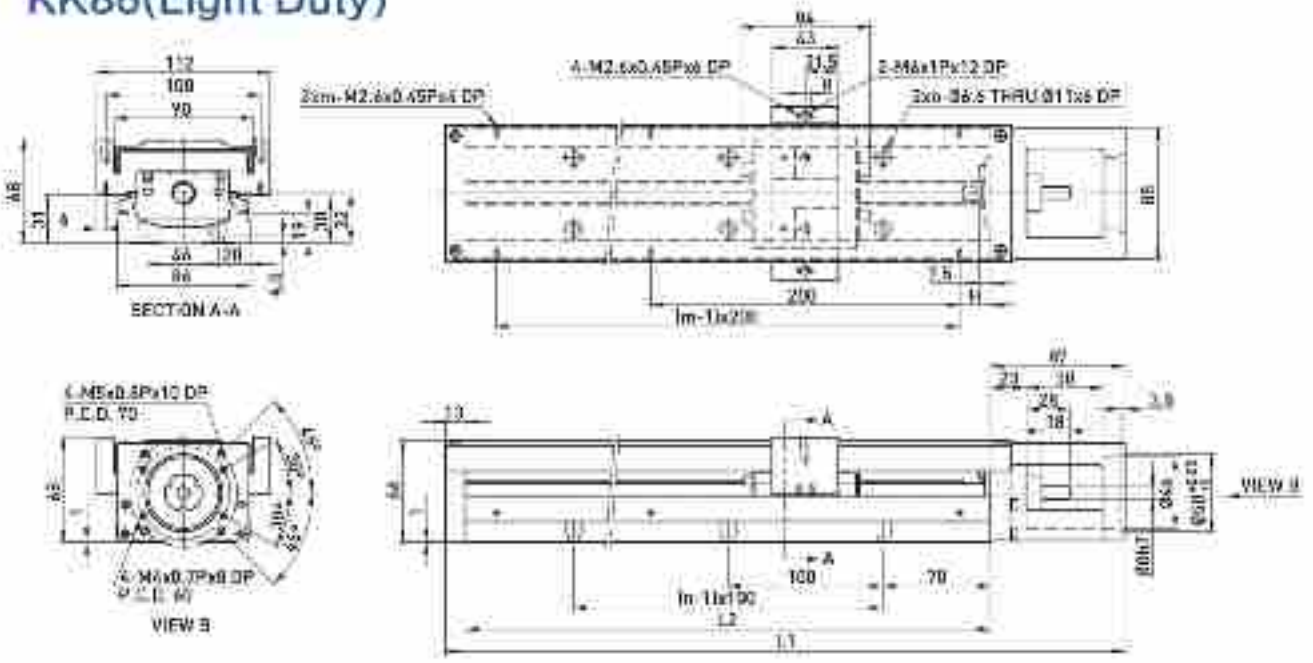
Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		H (min)	n	m	Mass (kg)	
		S1 Block	S2 Block				S1 Block	S2 Block
340	440	208.5	172.5	70	3	2	5.6	6.4
440	540	348.5	272.5	20	4	3	6.8	7.4
540	640	446.5	372.5	70	5	3	7.9	8.5
640	740	568.5	472.5	20	6	4	9.2	9.8
740	840	648.5	572.5	70	7	4	10.3	11.1
840	940	848.5	722.5	70	9	5	12	12.6

KK86(Standard)



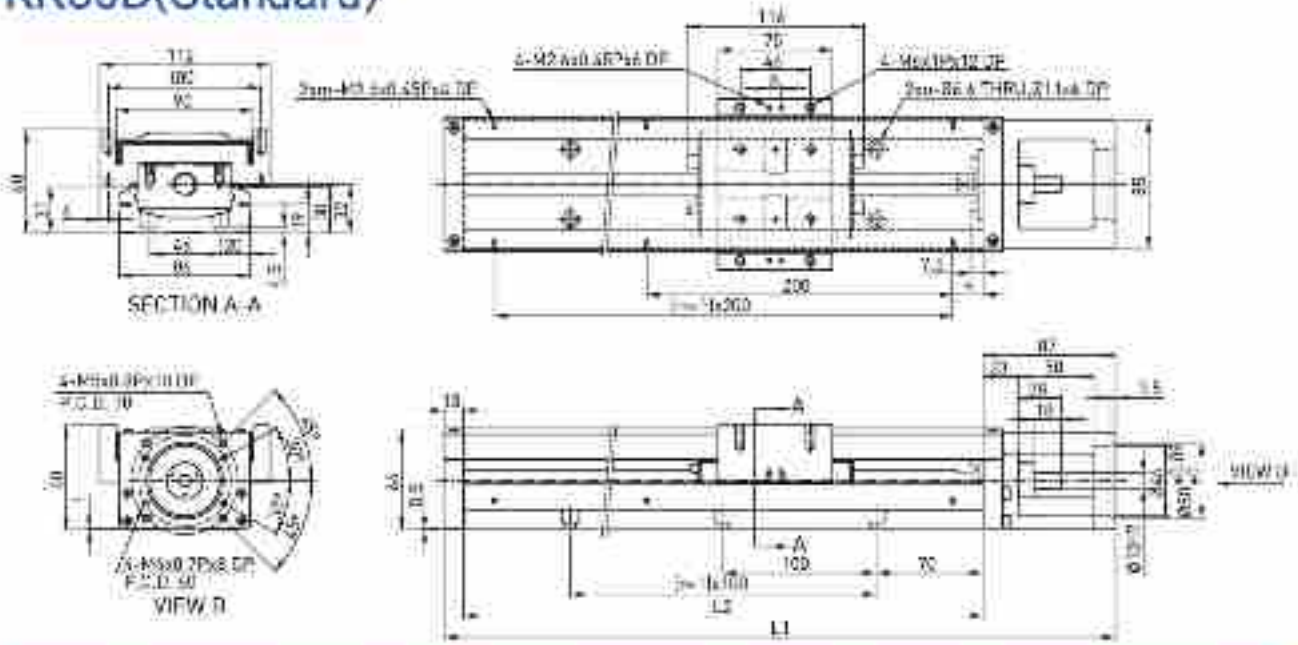
Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		H (min)	n	m	Mass (kg)	
		A1 Block	A2 Block				A1 Block	A2 Block
340	440	208.5	108.5	70	3	2	6.5	7.0
440	540	316.5	236.5	20	4	3	7.8	8.3
540	640	416.5	336.5	70	5	3	8.8	9.6
640	740	516.5	436.5	20	6	4	10.3	11.3
740	840	616.5	536.5	70	7	4	11.6	12.4
840	940	816.5	736.5	70	9	5	13.6	13.8

KK86(Light Duty)



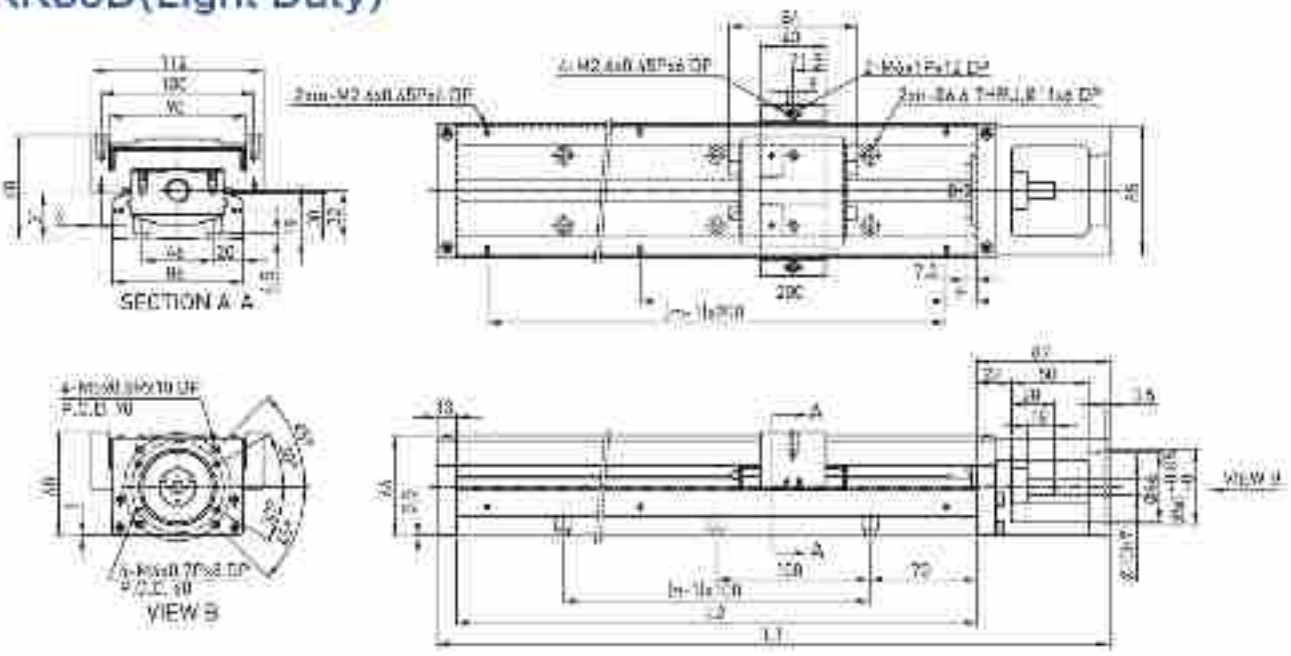
Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		H (mm)	n	m	Mass (kg)	
		S1 Block	S2 Block				S1 Block	S2 Block
340	440	248.5	172.5	20	3	2	6.3	7.1
440	540	348.5	272.5	20	4	3	7.6	8.4
540	640	448.5	372.5	20	5	3	8.8	9.6
640	740	548.5	472.5	20	6	4	10.1	11.1
740	840	648.5	572.5	20	7	4	11.4	12.5
840	940	748.5	672.5	20	8	5	12.8	13.8

KK86D(Standard)



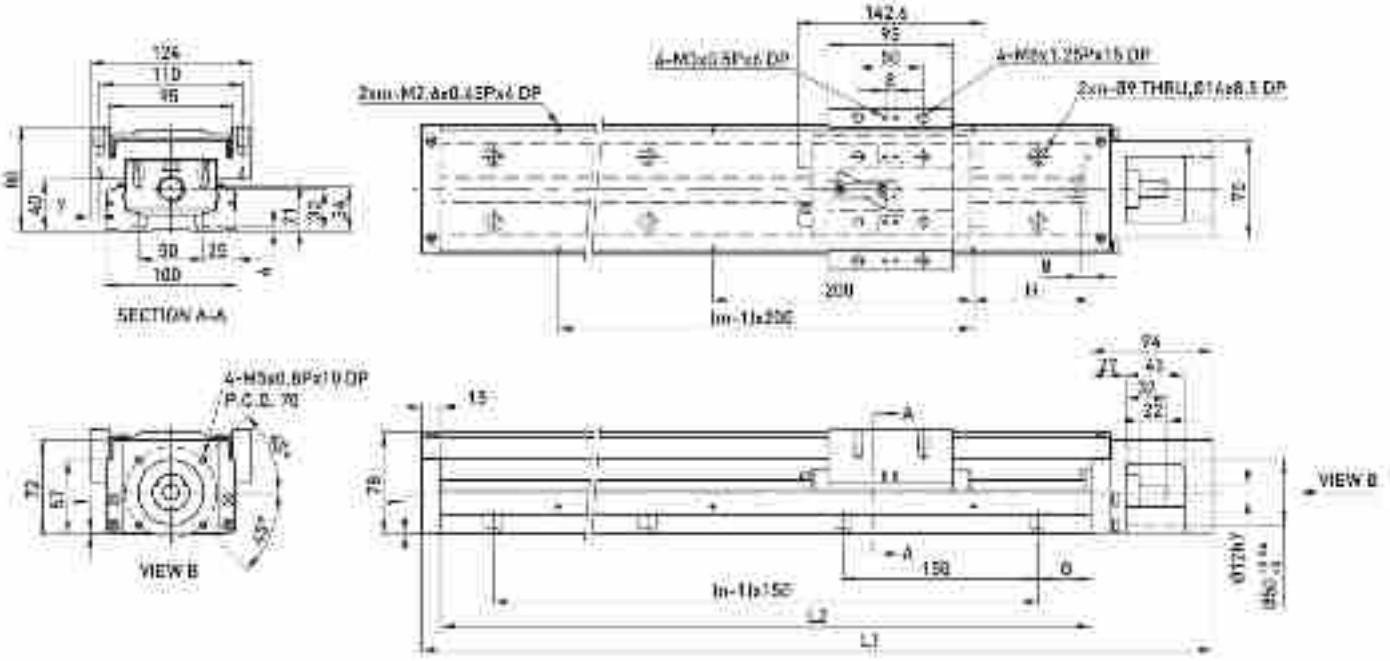
Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		H (mm)	n	m	Mass (kg)	
		A1 Block	A2 Block				A1 Block	A2 Block
340	440	215.5	139.5	20	3	2	6.3	7.1
440	540	315.5	239.5	20	4	3	7.6	8.4
540	640	415.5	339.5	20	5	3	8.8	9.6
640	740	515.5	439.5	20	6	4	10.1	11.1
740	840	615.5	539.5	20	7	4	11.4	12.4
840	940	715.5	639.5	20	8	5	12.8	13.8

KK86D(Light Duty)



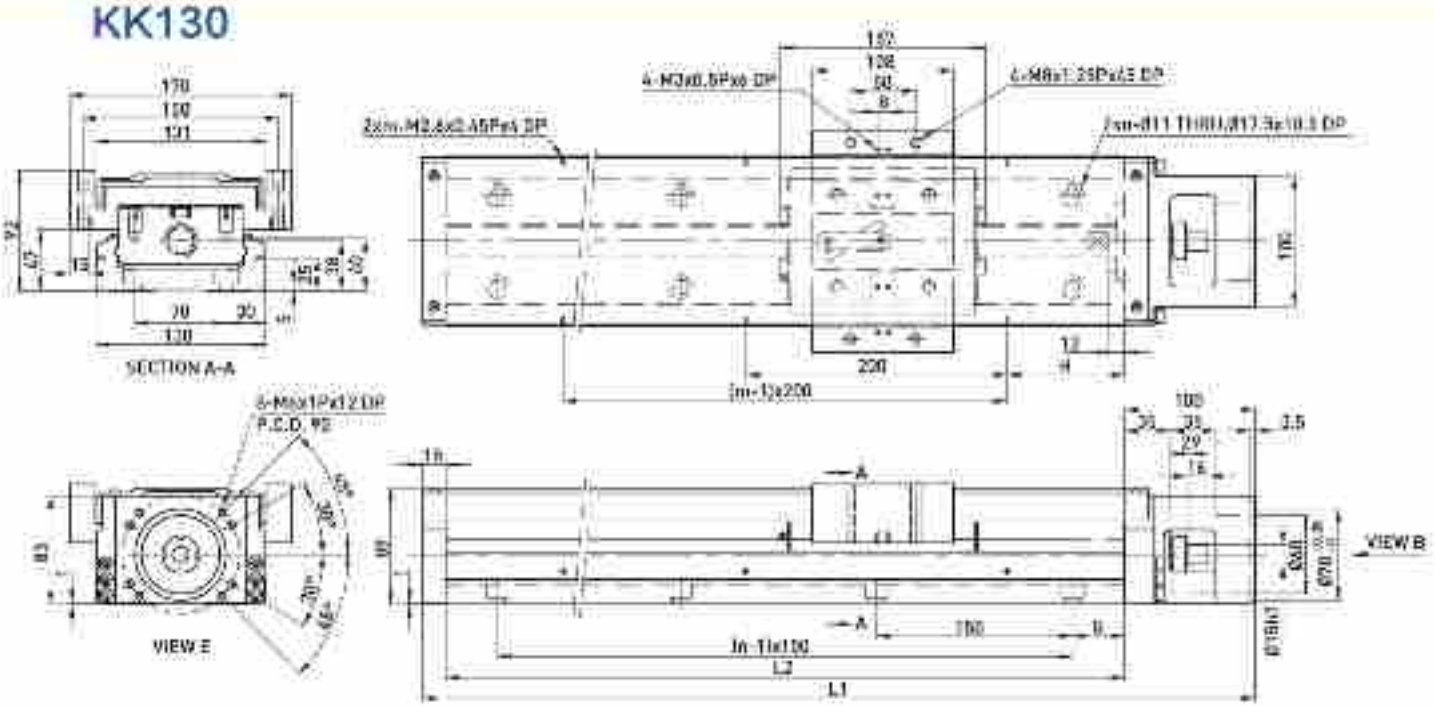
Rail Length L2(mm)	Total Length L1(mm)	Maximum Stroke (mm)		H(mm)	n	m	Mass (kg)	
		S1 Block	S2 Block				S1 Block	S2 Block
340	440	248.5	122.5	20	3	2	6.0	7.1
440	540	348.5	222.5	20	4	3	7.4	8.4
540	640	448.5	322.5	20	5	3	8.8	9.8
640	740	548.5	422.5	20	6	4	10.1	11.1
740	840	648.5	522.5	20	7	4	11.4	12.2
940	1040	848.5	722.5	20	9	5	12.8	13.5

KK100



Rail Length L2(mm)	Total Length L1(mm)	Maximum Stroke (mm)		O (mm)	H (mm)	n	m	Mass (kg)	
		A1 Block	A2 Block					A1 Block	A2 Block
990	1089	826	760	40	90	7	5	20.6	22.1
1090	1189	926	860	50	60	8	6	22.2	23.7
1190	1289	1026	960	65	90	8	6	24.8	25.7
1290	1389	1126	1060	40	60	9	7	25.7	27.6
1390	1489	1226	1160	50	90	10	7	27.6	29.2

KK130



Rail Length L2 (mm)	Total Length L1 (mm)	Maximum Stroke (mm)		G (mm)	H (mm)	n	m	Mass (kg)	
		A1 Block	A2 Block					A1 Block	A2 Block
980	1050	811	659	40	60	7	5	35.9	35.9
1180	1298	1011	859	55	90	8	6	37.1	41.1
1380	1498	1211	1059	70	90	9	7	42.2	46.2
1680	1798	151	1359	90	40	11	9	49.9	53.9

2.10 Motor Housing and Motor Adaptor Flange

2.10.1 Motor Selection

YIDI Mikrosystem Servo Motor

Motor Output	Motor	Weight (kg)	Flange Selection								+Brake Weight (kg)	Drive	Weight (kg)	Remarks
			KK30	KK40	KK50	KK60	KK80	KK86	KK100	KK130				
50W	FRL5052[ ][ ]A4[ ]	0.45	-	F2	F2	F2	F0	F0	-	-	0.58			220V
100W	FRL5102[ ]AA[ ]	0.6	-	F2	F2	F2	F0	F0	-	-	0.75			220V
200W	FRL5202[ ][ ]A6[ ]	1					F0	F0	F0	F1	1.5	DDT	1.35	220V
400W	FRL5402[ ]A6[ ]	1.45					F0	F0	F0	F1	1.95			220V
750W	FRM5075[ ][ ]B6[ ]	2.65	-	-	-	-	-	-	F1	F2	3.22			220V

Mitsubishi Servo Motor

Motor Output	Motor	Weight (kg)	Flange Selection								+Brake Weight (kg)	Drive	Weight (kg)	Remarks
			KK30	KK40	KK50	KK60	KK80	KK86	KK100	KK130				
10W	HC-AQ0135D	0.19	F1	-	-	-	-	-	-	-	0.29	MR-JR-10A1	0.2	
20W	HC-AQ0235D	0.22	F1	-	-	-	-	-	-	-	0.32	MR-JR-20A1	0.2	
50W	HF-KP053	0.38	-	F1	F1	F1	F2	F2	-	-	0.75	MR-J3S-10A	0.8	220V
100W	HF-KP13	0.56	-	F1	F1	F1	F2	F2	-	-	0.89	MR-J3S-10A	0.8	220V
200W	HF-KP23	0.94	-	-	-	-	F3	F0	F0	F1	1.6	MR-J3S-20A	0.8	220V
400W	HF-KP43	1.5					F3	F0	F0	F1	2.1	MR-J3S-40A	1	220V
750W	HF-KP73	2.9	-	-	-	-	-	-	F1	F2	3	MR-J3S-70A	1.4	220V

Panasonic Servo Motor

Motor Output	Motor	Weight (kg)	Flange Selection								+Brake Weight (kg)	Drive	Weight (kg)	Remarks
			KK30	KK40	KK50	KK60	KK80	KK86	KK100	KK130				
50W	MSMD5AZP1	0.32	-	F2	F2	F2	F3	F3	-	-	0.53	MADDT1105	0.8	100V
50W	MSMD5AZP1	0.32	-	F2	F2	F2	F3	F3	-	-	0.53	MADDT1205	0.8	220V
100W	MSMD011P1	0.47		F2	F2	F2	F3	F3			0.68	MADDT1107	0.8	100V
100W	MSMD012P1	0.47		F2	F2	F2	F3	F3			0.68	MADDT1205	0.8	220V
200W	MSMD021P1	0.82	-	-	-	-	F1	F1	-	-	1.3	MADDT1210	1.1	100V
200W	MSMD022P1	0.82	-	-	-	-	F1	F1	-	-	1.3	MADDT1207	0.8	220V
400W	MSMD041P1	1.2	-	-	-	-	F1	F1	-	-	1.7	MADDT3129	1.5	100V
400W	MSMD042P1	1.2	-	-	-	-	F1	F1	-	-	1.7	MADDT3210	1.1	220V
750W	MSMD082P1	2.0					F4	F4	F2	F4	3.1	MADDT3520	1.5	220V

Yasukawa Servo Motor

Motor Output	Motor	Weight (kg)	Flange Selection								+Brake Weight (kg)	Drive	Weight (kg)	Remarks
			KK30	KK40	KK50	KK60	KK80	KK86	KK100	KK130				
10W	SGMMV-A1A2A21	0.13	F2	-	-	-	-	-	-	-	0.215	SGDV-R90A01A	0.9	220V
20W	SGMMV-A2A2A21	0.17	F2	-	-	-	-	-	-	-	0.27	SGDV-R90A01A	0.9	220V
50W	SGMAV-A5A2A61	0.3		F1	F1	F1	F2	F2				SGDV-R70A01A	0.9	with key
50W	SGMAV-A5A2A21	0.3	-	F1	F1	F1	F2	F2	-	-		SGDV-R70A01A	0.9	no key
100W	SGMAV-A5A2A21	0.3	-	F1	F1	F1	F2	F2	-	-	0.75	SGDV-R70A01A	0.9	Motor brake
100W	SGMAV-01ADA64	0.4	-	F1	F1	F1	F2	F2	-	-	0.85	SGDV-R90A01A	0.9	
200W	SGMAV-02ADA65	0.7	-	-	-	-	F0	F0	F0	F1	1.6	SGDV-1R6A01A	0.9	
400W	SGMAV-04ADA64	1.2	-	-	-	-	F0	F0	F0	F1	2.1	SGDV-2R8A01A	1	
750W	SGMAV-08ADA67	2.6							F1	F2	4	SGDV-5R5A01A	1.5	

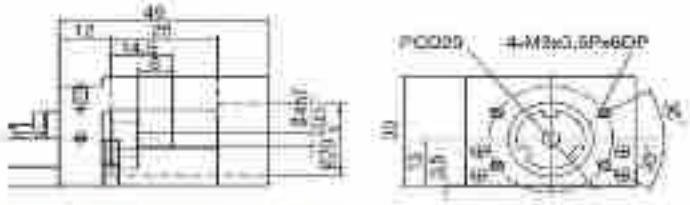
Oriental Step Motor

Series	Model	Flange Selection								Built in Motor	Weight (kg)	Built in Drive	Weight (kg)
		KK30	KK40	KK60	KK60	KK80	KK86	KK100	KK130				
	CSK243-AP		F3	F3	F3	-	-		-	PK243-01A	0.21	CSD2130-P	0.12
	CSK244-AP		F3	F3	F3	-	-		-	PK244-01A	0.27	CSD2117-P	0.12
	CSK245-AP	-	F3	F3	F3	-	-	-	-	PK245-01A	0.35	CSD2112-P	0.12
	CSK264-AP				F4	F4	F4			PK264-02A	0.45	CSD2128-P	0.12
CSK 2 phase	CSK266-AP		-	-	F4	F4	F4		-	PK266-02A	0.7	CSD2120-P	0.12
	CSK268-AP	-	-	-	F4	F4	F4	-	-	PK268-02A	1	CSD2130-P	0.12
	CSK296-AP	-	-	-	-	-	-	F4	F3	PK296-03A	1.7	CSD2145P	0.2
	CSK299-AP							F4	F4	PK299-03A	2.8	CSD2145P	0.2
	CSK2913-AP	-	-	-	-	-	-	F4	F3	PK2913-03A	3.8	CSD2150P	0.2
CSK 2 phase	CSK523-AP	F3	-	-	-	-	-	-	-	PK523A	0.1	SD5103P3	0.04
	CFK543AP2	-	F3	F3	F3	-	-	-	-	PK543NAW	0.21	CFCS107P	0.2
	CFK544AP2		F3	F3	F3	-			-	PK544NAW	0.27	CFCS107P	0.2
	CFK545AP2		F3	F3	F3	-	-	-	-	PK545NAW	0.35	CFCS107P	0.2
	CFK564AP2	-	-	-	-	F5	F5	-	-	PK564NAW	0.5	CFCS114P	0.2
CFK II	CFK566AP2					F5	F5			PK566NAW	0.8	CFCS114P	0.2
5 Phase micro stepping	CFK569AP2	-	-	-	-	F5	F5	-	-	PK569NAW	1.3	CFCS114P	0.2
	CFK566HAP2	-	-	-	-	F5	F5	-	-	PK566HNAW	0.8	CFCS128P	0.22
	CFK569HAP2		-	-	-	F5	F5	-	-	PK569HNAW	1.3	CFCS128P	0.22
	CFK596HAP2		-	-	-	-		F3	-	PK596HNAW	1.7	CFCS128P	0.22
	CFK599HAP2	-	-	-	-	-	-	F3	-	PK599HNAW	2.8	CFCS128P	0.22
	CFK5913HAP2	-	-	-	-	-	-	F3	-	PK5913HNAW	3.8	CFCS128P	0.22
	UMK243A		F3	F3	F3					PK243-01	0.21	UDK2109	0.47
	UMK244A	-	F3	F3	F3	-	-	-	-	PK244-01	0.27	UDK2112	0.47
UMK 2 phase	UMK245A	-	F3	F3	F3	-	-	-	-	PK245-01	0.35	UDK2112	0.47
	UMK264A				F4	F4	F4			PK264-02	0.45	UDK2120	0.47
	UMK266A	-	-	-	F4	F4	F4	-	-	PK266-02	0.7	UDK2120	0.47
	UMK268A	-	-	-	F4	F4	F4	-	-	PK268-02	1	UDK2120	0.47
	RK543AA		F3	F3	F3					PK543W	0.35	RKD507-A	0.4
	RK544AA	-	F3	F3	F3	-	-	-	-	PK544W	0.3	RKD507-A	0.4
	RK545AA	-	F3	F3	F3	-	-	-	-	PK545W	0.4	RKD507-A	0.4
RK	RK566AA					F5	F5			PK566W	0.8	RKD514L-A	0.85
5 phase	RK569AA	-	-	-	-	F5	F5	-	-	PK569W	1.3	RKD514L-A	0.85
	RK596AA	-	-	-	-	-	-	F3	-	PK596W	1.7	RKD514H-A	0.85
	RK599AA							F3		PK599W	2.8	RKD514H-A	0.85
	RK5913AA		-	-	-	-	-	F3	-	PK5913W	3.8	RKD514H-A	0.85
ASC II-Step	ASC36AK	F3	-	-	-	-	-	-	-	ASM36AK	0.19	ASD13A-K	0.25

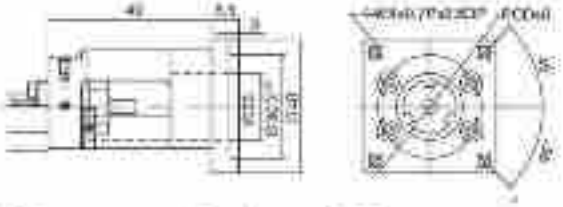
Connection Motor and Motor Bracket

KK40(Without Cover)

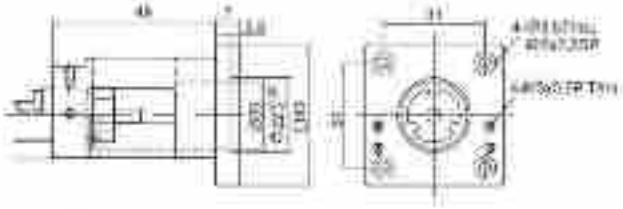
Motor base F0



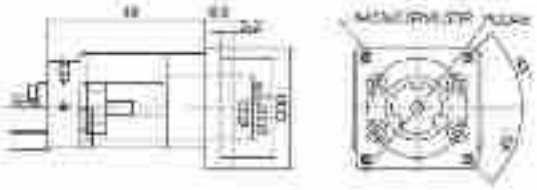
Motor connecting flange F1



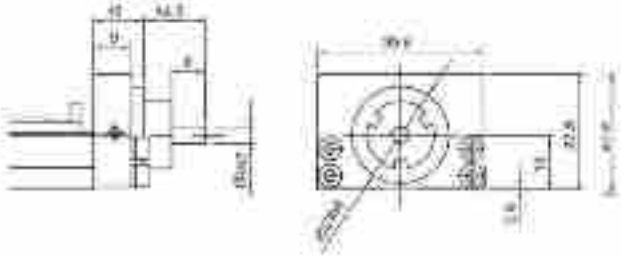
Motor connecting flange F3



Motor connecting flange F2

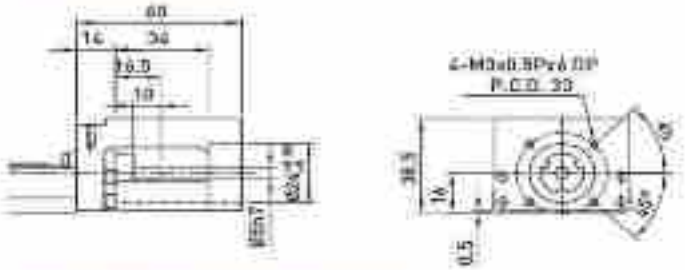


Transfer fixation H0

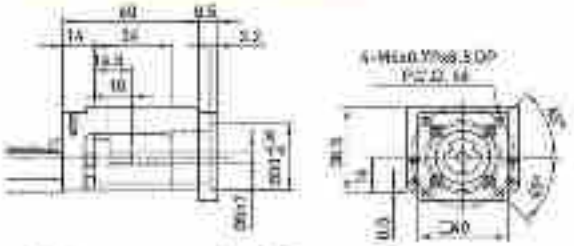


KK50(Without Cover)

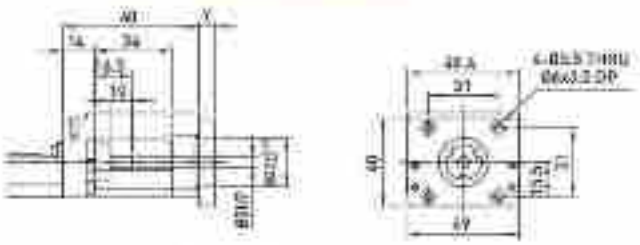
Motor base F0



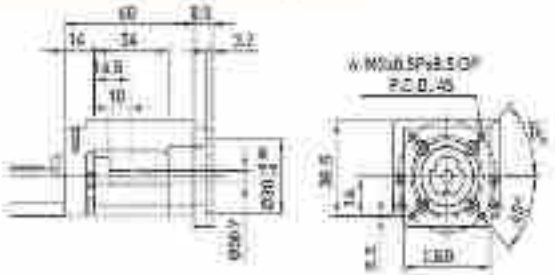
Motor connecting flange F1



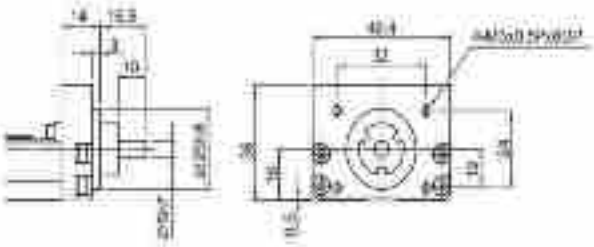
Motor connecting flange F3



Motor connecting flange F2

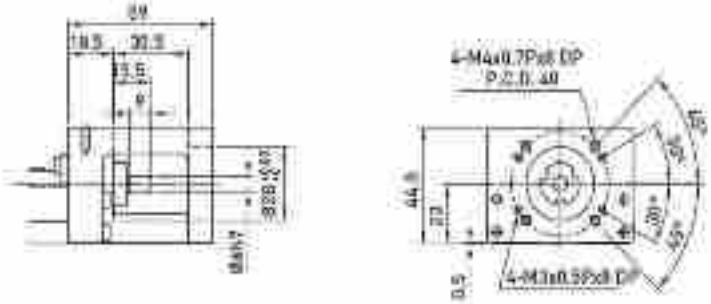


Motor fixed H0

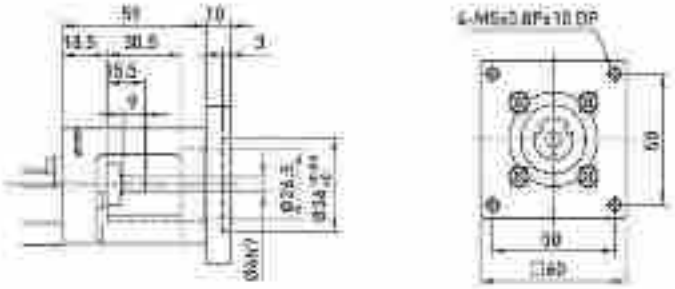


KK60(Without Cover)

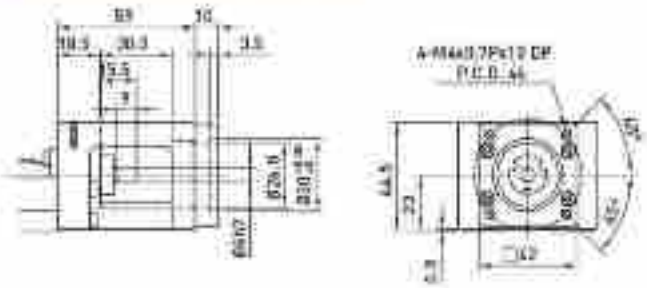
Motor base F0



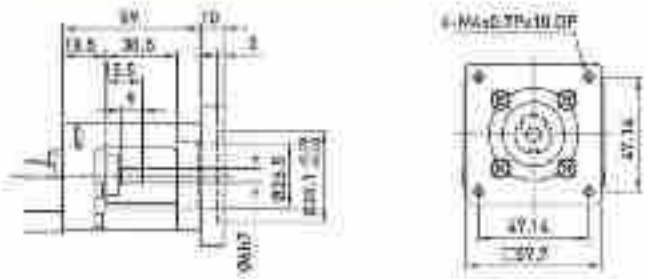
Motor connecting flange F3



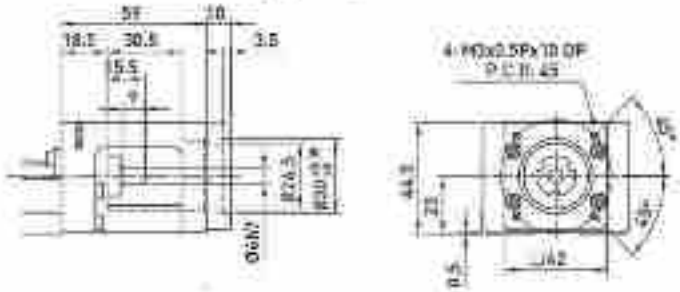
Motor connecting flange F1



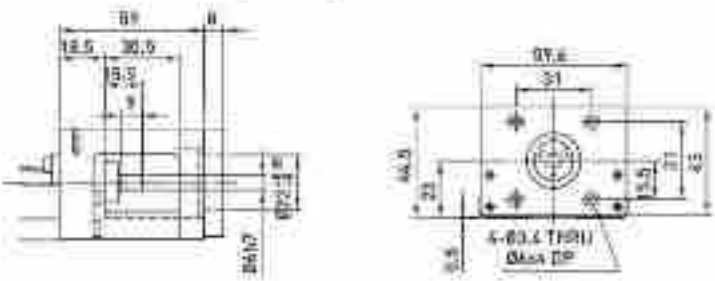
Motor connecting flange F4



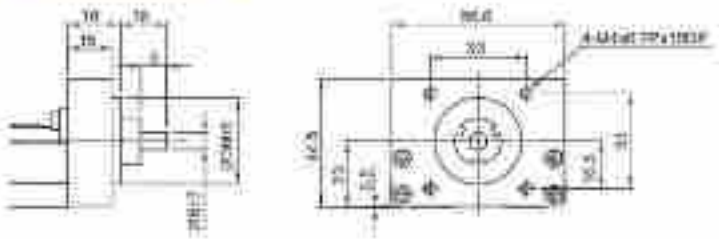
Motor connecting flange F2



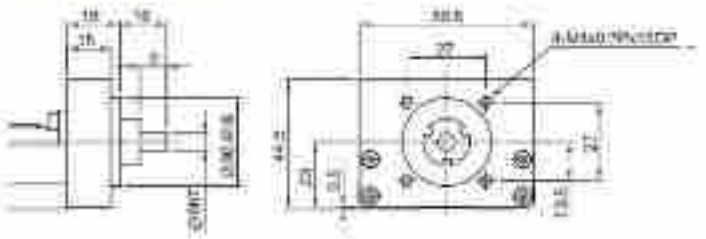
Motor connecting flange F5



Motor fixed H0

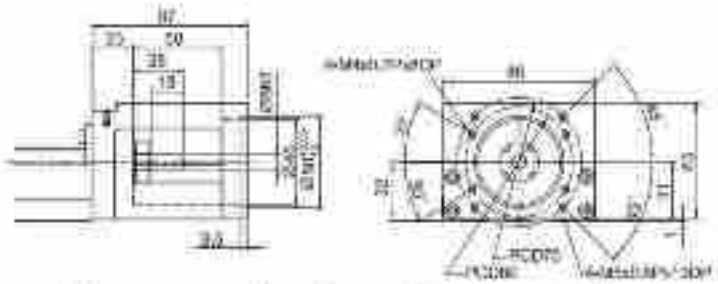


Motor fixed H1

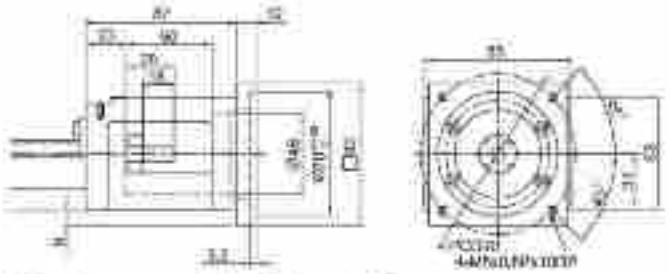


KK86(Without Cover)

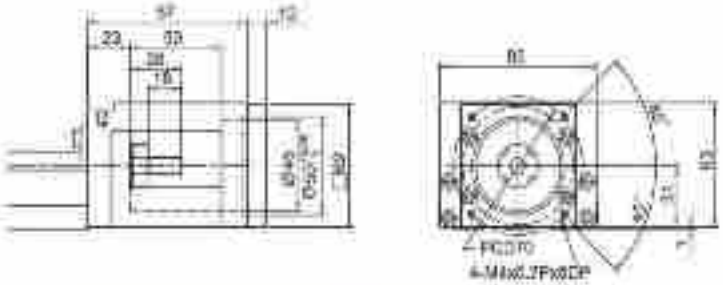
Motor base F0



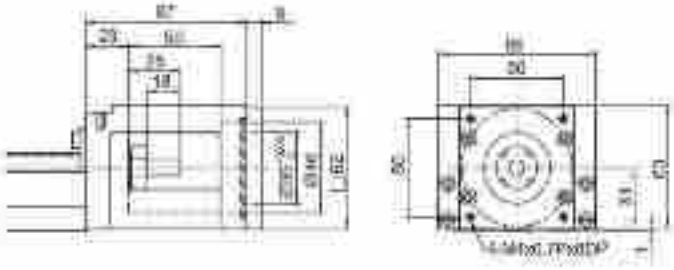
Motor connecting flange F4



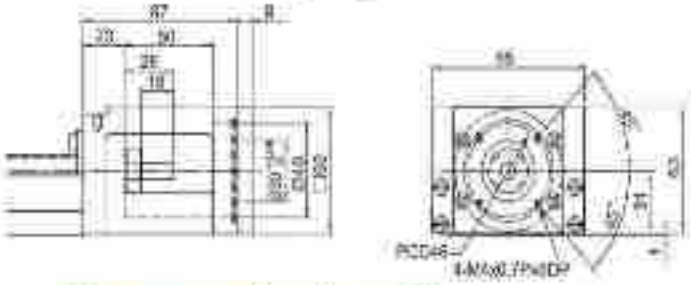
Motor connecting flange F1



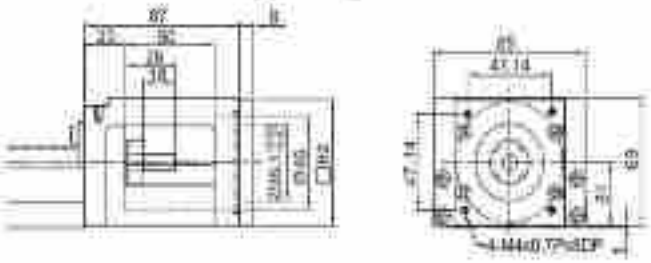
Motor connecting flange F5



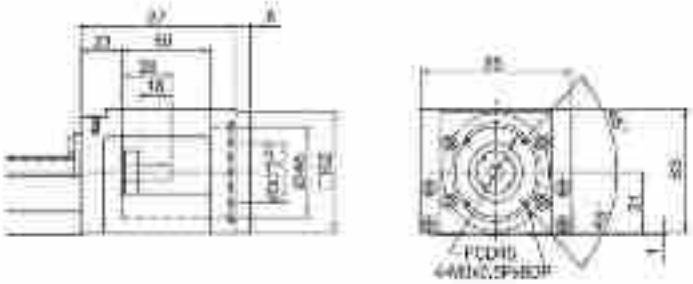
Motor connecting flange F2



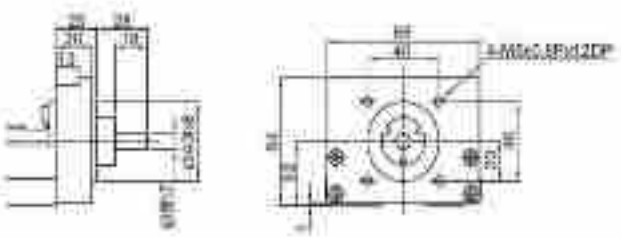
Motor connecting flange F6



Motor connecting flange F3

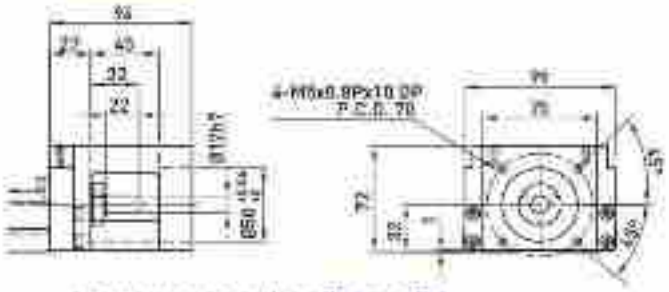


Motor fixed H0

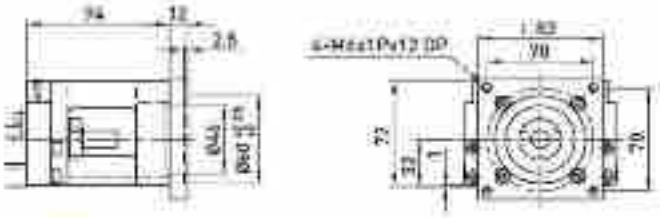


KK100(Without Cover)

Motor base F0

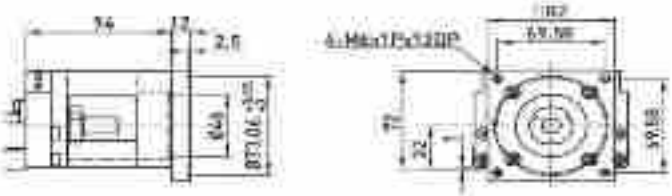


Motor connecting flange F3

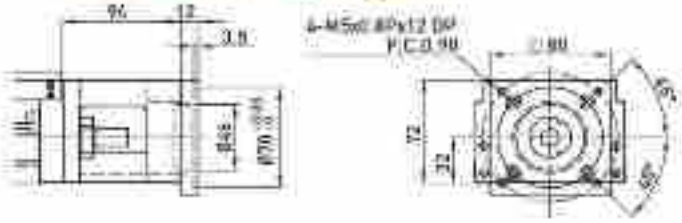


Motor connecting flange F1

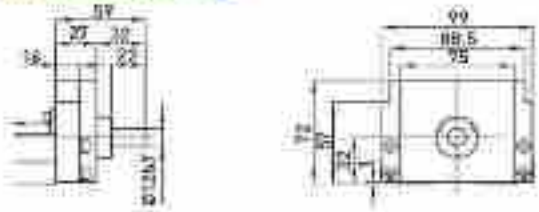
Motor connecting flange F4



Motor connecting flange F2

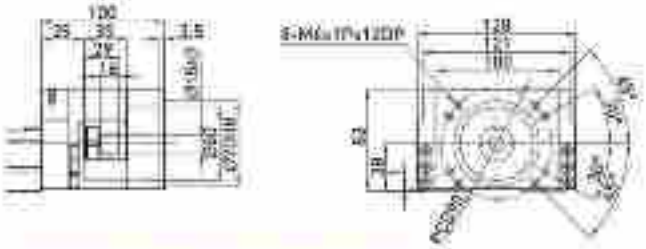


Transfer fixation H0



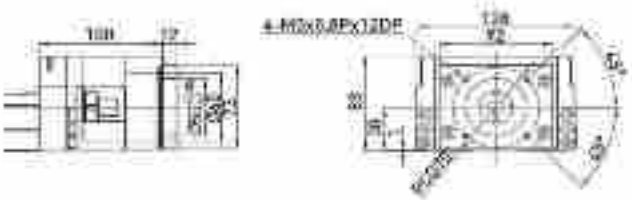
KK130(Without Cover)

Motor base F0

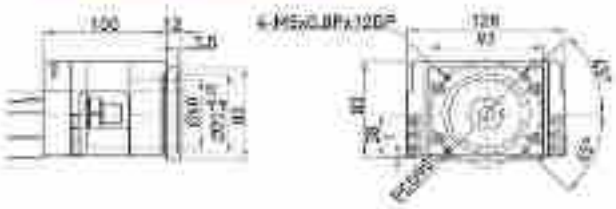


Motor connecting flange F3

Motor connecting flange F1



Motor connecting flange F4



Motor connecting flange F2

Motor fixed H0