



Direct drive actuator

AX1000 Series actuator

Precise specifications (such as runout of output shaft and index accuracy)

- Max. torque: 22/45/75/150/210N·m

Actuator specifications

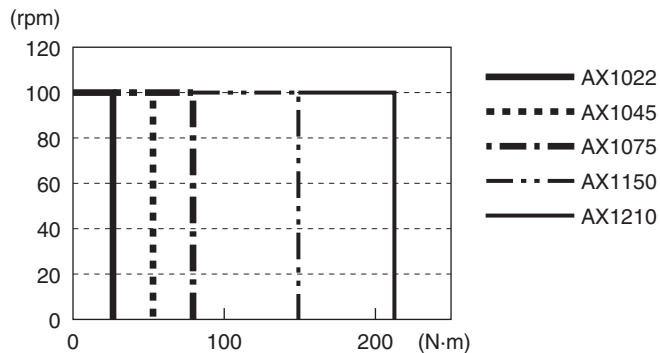
Descriptions		AX1022	AX1045	AX1075	AX1150	AX1210
Maximum output torque	N·m	22	45	75	150	210
Continuous output torque	N·m	7	15	25	50	70
Maximum rotation speed	rpm	100 (Note 2)			100	
Allowable axial load	N	600			2200	
Allowable moment load	N·m	19	38	70	140	170
Allowable radial load	N	1000			4000	
Output shaft moment of inertia	kg·m ²	0.00505	0.00790	0.03660	0.05820	0.09280
Allowable load moment of inertia	kg·m ²	0.6	0.9	4.0	6.0	10.0
Index accuracy (Note 1)	sec.	±15				
Repeatability	sec.	±5				
Output shaft friction torque	N·m	2.0			8.0	
Resolver resolution	P/rev	540672				
Motor insulation grade		Class F				
Motor withstanding voltage		1500 VAC for one minute				
Motor insulation resistance		10MΩ and over 500 VDC				
Working ambient temperature range		0 to 45°C				
Working ambient humidity range		20 to 85%RH with no dew condensation				
Storage ambient temperature range		-20 to 80°C				
Storage ambient humidity range		20 to 90%RH with no dew condensation				
Weight	kg	8.9	12.0	23.0	32.0	44.0
Runout of output shaft	mm	0.01				
Runout of output shaft surface	mm	0.01				

Note 1: Refer to the "CKD Index Units General Catalog" (CB-019SA) "Technical explanation, Static index precision" for details on the index precision.

Note 2: Consult with CKD if rotation speed is 100 rpm or faster.

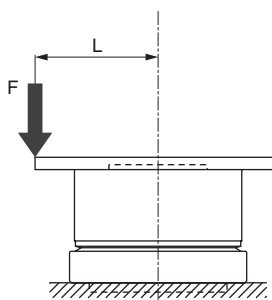
(With models having a maximum torque of 45 N·m or less, the S type is used with special specifications up to 150 rpm and the H driver up to 180 rpm. Contact CKD for details. Note that maximum speed cannot be changed after delivery.)

Speed/max. torque characteristics

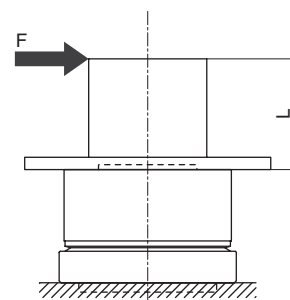


*This is characteristics at three phase 200 VAC .

(Note) Moment load



(Fig. a)



(Fig. b)

$$M \text{ (N·m)} = F \text{ (N)} \times L \text{ (m)}$$

M : Moment load

F : Load

L : Distance from center of output shaft

$$M \text{ (N·m)} = F \text{ (N)} \times (L + 0.02) \text{ (m)}$$

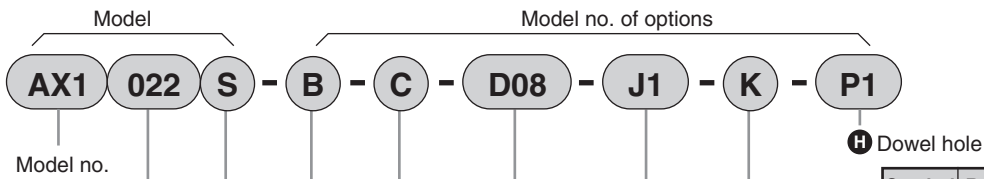
M : Moment load

F : Load

L : Distance from output shaft flange surface

⚠ Refer to the safety precautions on Intro 13 to 20 before operating.

How to order



Symbol	Descriptions
A	Size (max. torque)
022	22 N·m
045	45 N·m
075	75 N·m
150	150 N·m
210	210 N·m

B Driver type	
S	S type driver
H	H type driver

C Mounting base	
Blank	Standard (without mounting base)
B	With blackening mounting base

D Connector installation attitude	
Blank	Standard (connector horizontal installation)
C	Connector bottom installation

E Cable change	
Blank	Standard (cable length 4 m)
D**	Cable length change
DM**	Flexible cable length change

** cable length Note: The length and type cannot be changed after delivery.		
02	2 m	
Blank	4 m	Flexible cable 4 m: DM
06	6 m	[Note] Use the noise filter for the motor cable if the cable is longer than 6 m.
08	8 m	
10	10 m	
15	15 m	
20	20 m	
25	25 m	
30	30 m	

F Driver power voltage
Refer to the driver - power voltage table on the left.

G CE marking	
Blank	Standard (CE marking not available)
K	CE marking

H Dowel hole	
Blank	Standard (without dowel hole)
P1	1 on top

Note on model no. selection

Note 1: Select the driver according to the table below.

Driver - power voltage table

Model	Driver type	S type driver		H type driver	
		200 to 230 VAC	100 to 115 VAC	200 to 230 VAC	100 to 115 VAC
AX1022	Blank	J1			
AX1045	Blank	J1			
AX1075	Blank				
AX1150				Blank	
AX1210				Blank	

* S type driver is recommended if the max. torque is 75 N·m or less.
Contact CKD for details on the availability of the H type driver.

Note 2: Connector bottom installation (-C) and CE marking product (-K) can not be selected same time.

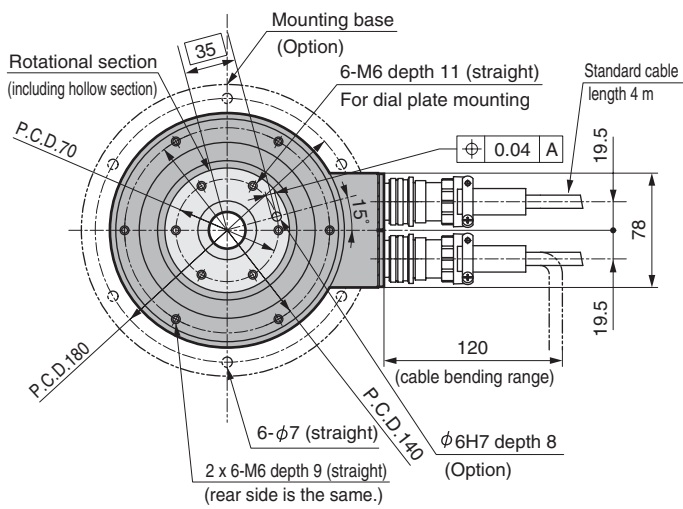
Note 3: Use the optional flexible cable in applications where the cable is bent repeatedly.

Refer to page 57 for dimensions of the cable.

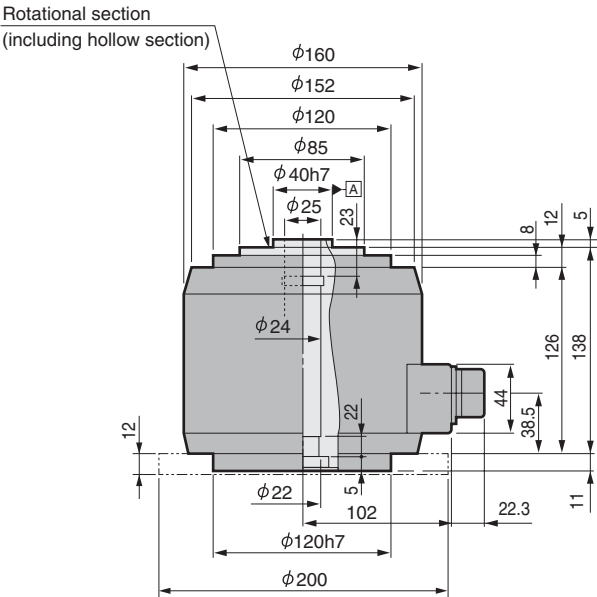
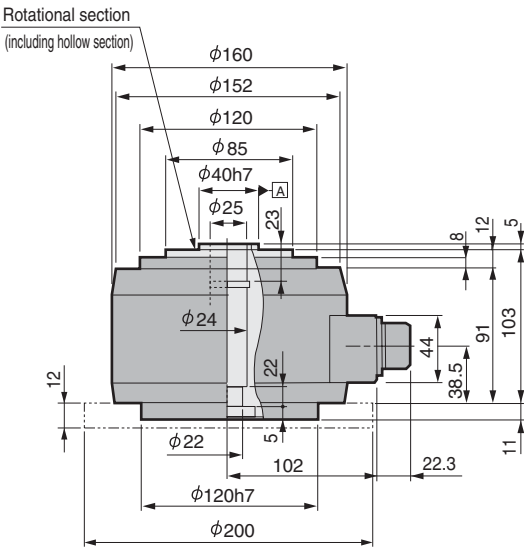
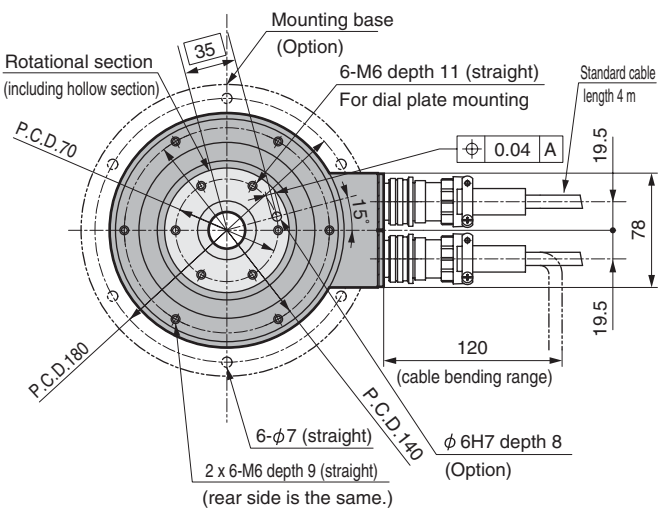
AX1000 Series

Dimensions

● AX1022

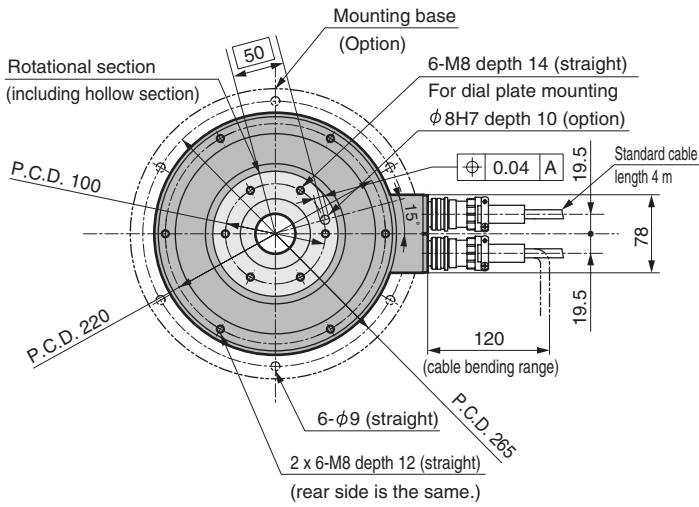


● AX1045

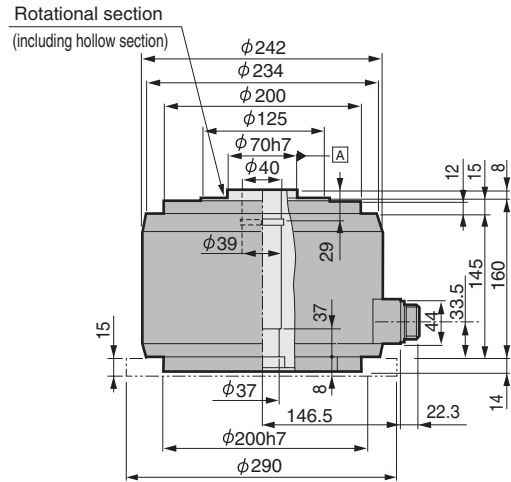
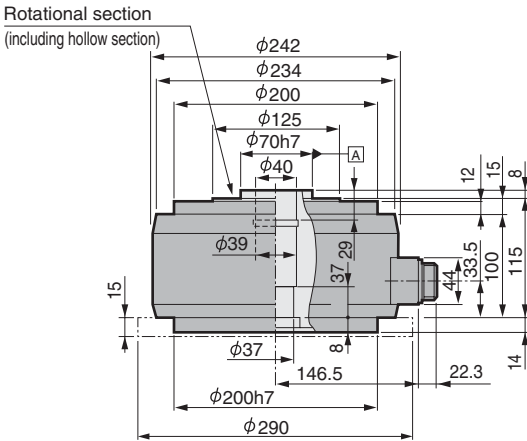
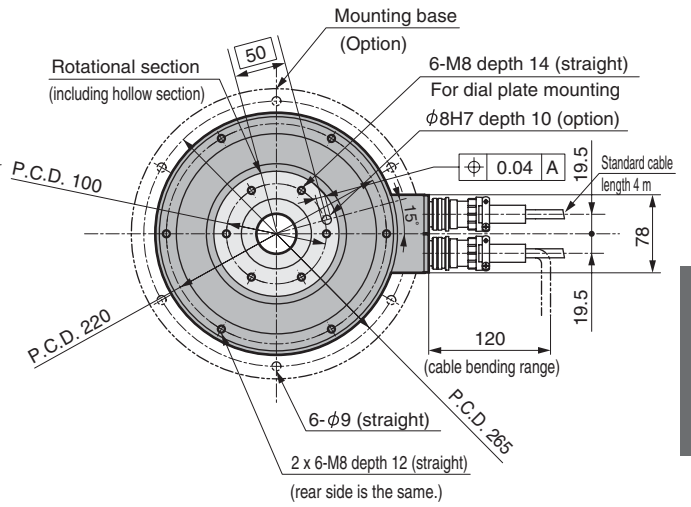


Dimensions

● AX1075

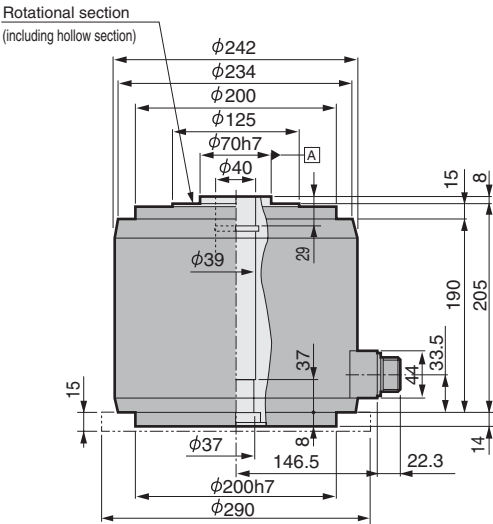
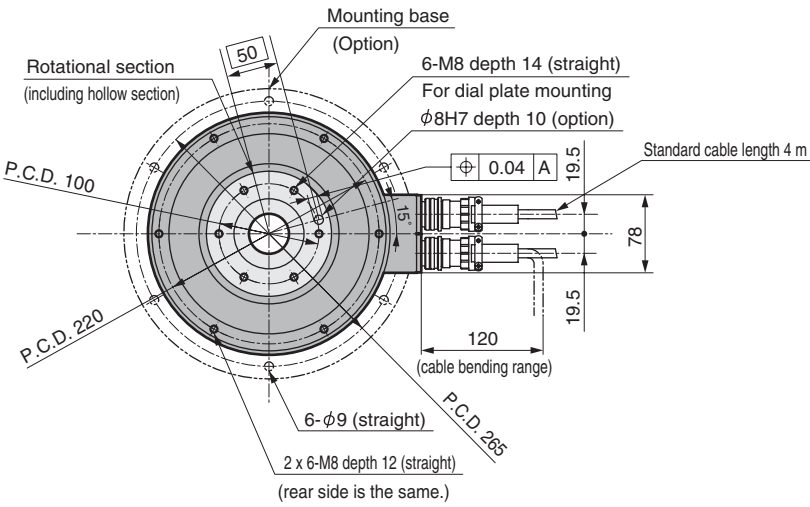


● AX1150



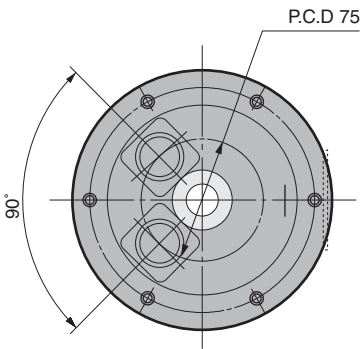
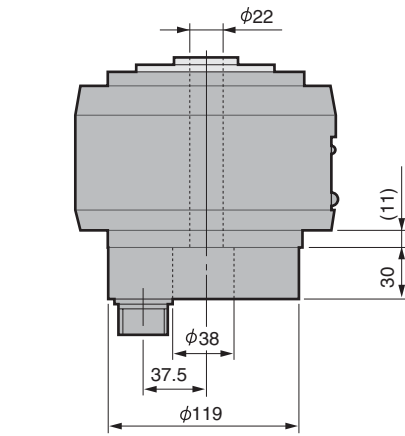
Dimensions

● AX1210



Dimensions with options

- Connector bottom installation (C)
AX1022/AX1045



AX1075/AX1150/AX1210

