



NEW

Clean-Room Actuator

Low dust generation structure

High speed (maximum speed 2000[mm/s])

Compact size and high rigidity

CSKR



For details, visit THK at www.thk.com

*Product information is updated regularly on the THK website.

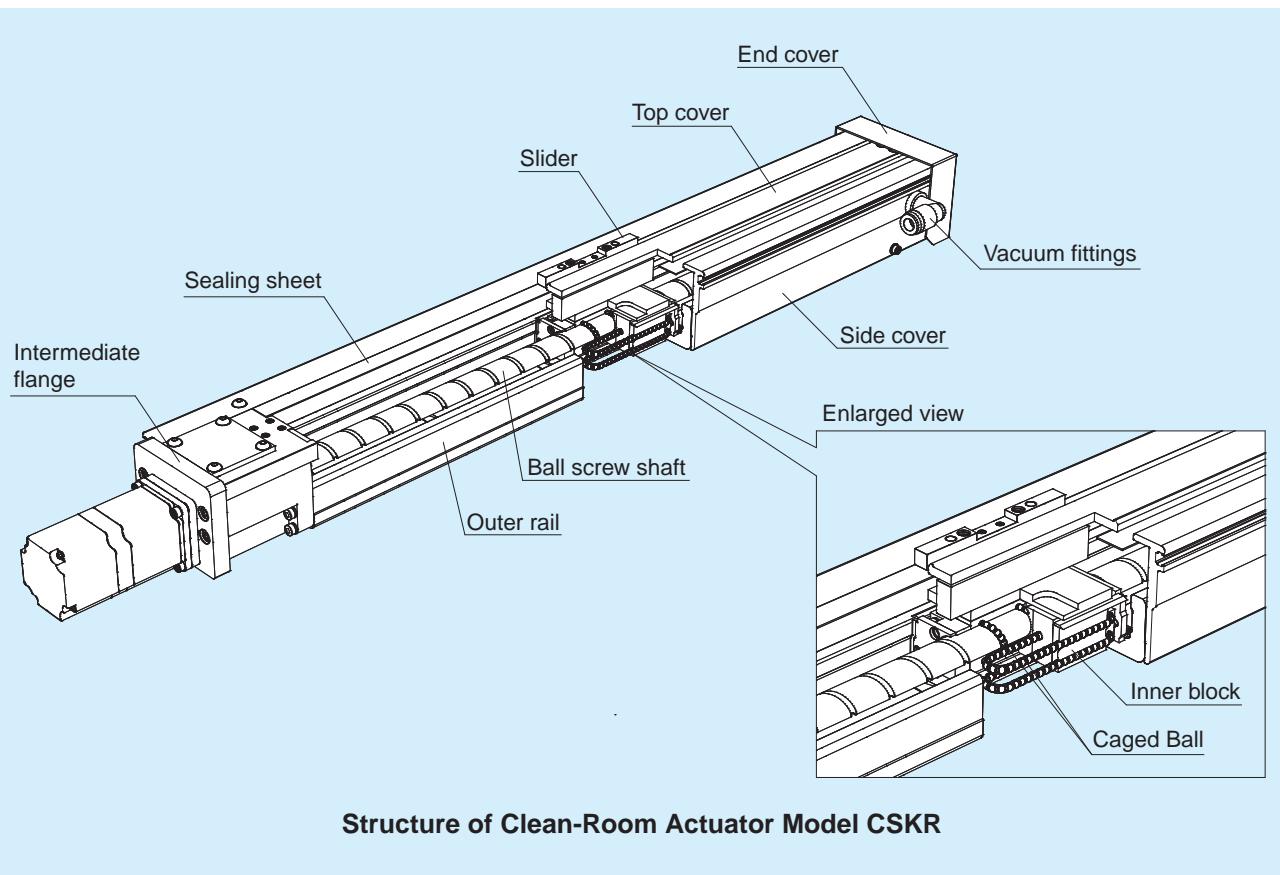
THK CO., LTD.

TOKYO, JAPAN

CATALOG No.355-1E

Structure

Model CSKR is the clean-room actuator using the Caged Ball LM Guide Actuator Model SKR.



Features

1. Low dust generation structure

With a unique covering mechanism using a sealing sheet, models CSKR20 and 26 have achieved the classification of clean-room level of ISO14644-1^{*1} class 3^{*2} (equivalent to FED209E class 1) and models CSKR33 and 46 have achieved the classification of clean-room level of ISO14644-1^{*1} class 4^{*2} (equivalent to FED209E class 10).

2. High speed

Models CSKR33 and 46 are capable of continuous operation^{*3} at the maximum speed of 2000[mm/s] under the environment of ISO14644-1^{*1} class 4^{*2} (equivalent to FED209E class 10).

3. Compact size and high rigidity

Model CSKR uses a highly rigid U-shaped outer rail. It is a compact clean-room actuator integrating the Caged Ball LM Guide and ball screws. (For models CSKR 20 and 26, only the LM Guide Unit uses Caged-Ball Technology. Lubrication unit QZ is installed in the ball screw unit.) With use of Caged-Ball Technology, excellent high speed, low noise, and long-term maintenance free characteristics are achieved.

4. High corrosion resistance

The outer rail, inner block and ball screw shaft are treated with AP-C which is highly resistant to corrosion. (AP-C treatment is an industrial black chrome coating with better corrosion resistance than martensitic stainless steel).

5. For clean-room application

Model CSKR uses THK Grease AFE-CA, which is excellent in low dust generative characteristics, and Clean One-Touch Fittings KPQL (by SMC) for clean-room application.

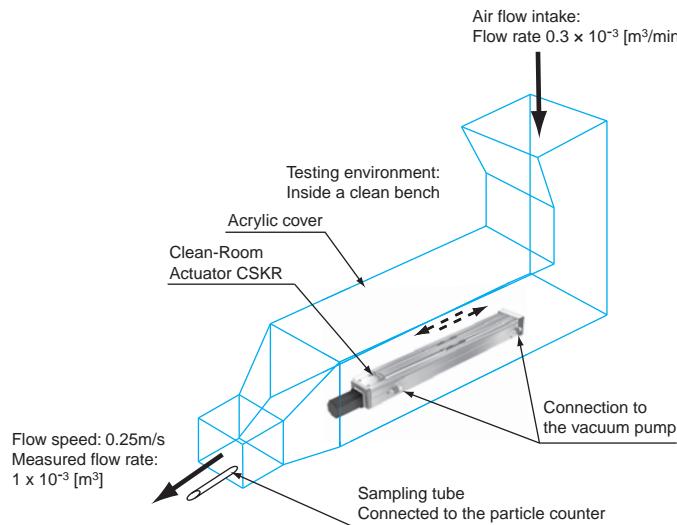
*1 ISO14644-1 is equivalent to JIS B9920.

*2 Negative pressure through the vacuum fittings must be induced to achieve a class 3 or class 4 rating.

*3 With use of THK AFE-CA grease.

Particle Generation Test

Measurement method



<Testing conditions>

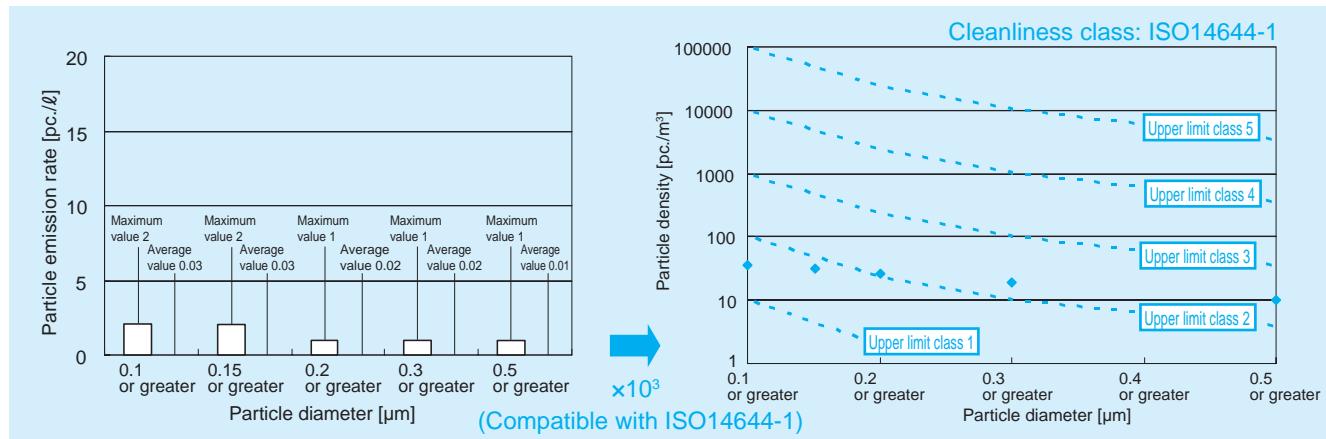
Item	Description
Model no.	CSKR3320B (precision grade)
Stroke	289[mm]
Speed	2000[mm/s]
Acceleration/deceleration speed	$14.7[\text{m/s}^2]$ (1.5[G])
Vacuum rate	$70 \times 10^{-3} [\text{m}^3/\text{min}]$ ($70[\ell/\text{min}]$)
Operating load	None

<Measuring conditions>

Item	Description
Measurement devices	Particle counter (KC-18 by Rion)
Flow speed of the measurement section	$250[\text{mm/s}]$
Air intake rate	$0.3 \times 10^{-3} [\text{m}^3/\text{min}]$ ($0.3[\ell/\text{min}]$)
Measured air rate	$1 \times 10^{-3} [\text{m}^3]$ ($1[\ell]$)
Measurement time	50[h]

Measurement results

■ Evaluation result of model CSKR 50-hour continuous operation (maximum speed 2000[mm/s])



■ Evaluation result of model CSKR cleanliness level

Model no.	Stroke [mm]	Speed [mm/s]	Acceleration/deceleration speed [m/s^2]	Vacuum rate*1 $\times 10^{-3} [\text{m}^3/\text{min}]$	Cleanliness level*2 (ISO14644-1)
CSKR2006A (precision grade)	129	600	4.9	12	3
CSKR2606A (precision grade)	206	600	4.9	24	3
CSKR3320A (precision grade)	365	2000	14.7	56	4
CSKR3320B (precision grade)	489	1200	4.9	60	4
CSKR4620A (precision grade)	369	2000	14.7	80	4
CSKR4620B (precision grade)	659	800	4.9	46	4

*1 The effects of pipe flow resistance are not taken into consideration when the vacuum rate is determined. Pipe flow resistance is the resistance value arising from pipe length or pipe diameter. Consider the flow rate reduction due to peripheral components.

*2 Cleanliness level varies depending on the operating conditions.

■ Upper limit cleanliness density level according to ISO14644-1

Particle diameter	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6
0.1μm or greater	10	100	1000	10000	100000	1000000
0.2μm or greater	2	24	237	2370	23700	237000
0.3μm or greater	—	10	102	1020	10200	102000
0.5μm or greater	—	4	35	352	3520	35200

Product Specifications

Specifications

Model no.				CSKR20		CSKR26		CSKR33			CSKR46	
Ball screw lead		[mm]	1	6	2	6	6	10	20	10	20	
Effective stroke Note 1)		[mm]	40.9 to 140.9		68.4 to 218.4		55 to 605			98.5 to 808.5		
Positioning repeatability Note 2)		[mm]	Normal grade: ±0.01, high grade: ±0.005, precision grade: ±0.003									
Maximum carrying weight Note 3)	Motor Size	50W	Horizontal	10	10	22	22	-	-	-	-	
		50W	Vertical	3	6	14	7	35	30	24	-	
		100W	Horizontal	-	-	-	-	19	12	6	-	
		100W	Vertical	-	-	-	-	-	-	-	-	
		200W	Horizontal	-	-	-	-	-	-	-	77	
		200W	Vertical	-	-	-	-	-	-	-	51	
		400W	Horizontal	-	-	-	-	-	-	-	18	
		400W	Vertical	-	-	-	-	-	-	-	77	
		-	-	-	-	-	-	-	-	-	36	
		-	-	-	-	-	-	-	-	-	18	
Vacuum rate Recommendation Note 4)		× 10 ⁻³ [m ³ /min]	3 to 12		4 to 14		10 to 70			16 to 86		

Note 1: Effective stroke is shortened according to the slider length. For details, confirm with the dimensional drawing.

Note 2: Positioning repeatability is determined according to an ambient temperature is 20°C.

Note 3: The guideline for the maximum carrying weight is the weight when the motor is at the rated revolution and the acceleration/deceleration speed is 0.3G (0.15G for 6mm or less lead).

The motor capacity is decided based on an AC servo motor.

Note 4: The effects of pipe flow resistance are not taken into consideration when the vacuum rates are determined.

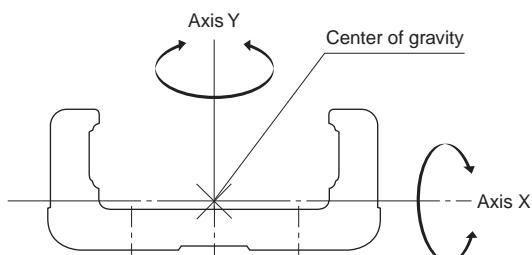
Maximum speed

Model no.			CSKR20		CSKR26		CSKR33			CSKR46			
Ball screw lead [mm]			1	6	2	6	6	10	20	10	20		
Outer rail length [mm]	100	100	600	-	-	-	-	-	-	-	-		
	150			200	600	600	1000	2000					
	200												
	250												
	300												
	340												
	400												
	440												
	500												
	540												
	600												
	640												
	700												
	840												
	940												

Note: The maximum speed is the speed limited by the motor revolution (6000[min⁻¹]) or the permissible rotational speed of the ball screw.

Geometrical moment of inertia and mass

Model no.	Geometrical moment of inertia		Mass [kg/m]
	I _x [mm ⁴]	I _y [mm ⁴]	
CSKR20	6.0 × 10 ³	6.14 × 10 ⁴	2.6
CSKR26	1.66 × 10 ⁴	1.48 × 10 ⁵	3.9
CSKR33	5.35 × 10 ⁴	3.52 × 10 ⁵	6.1
CSKR46	2.05 × 10 ⁵	1.45 × 10 ⁶	12.6



Load rating and radial clearance

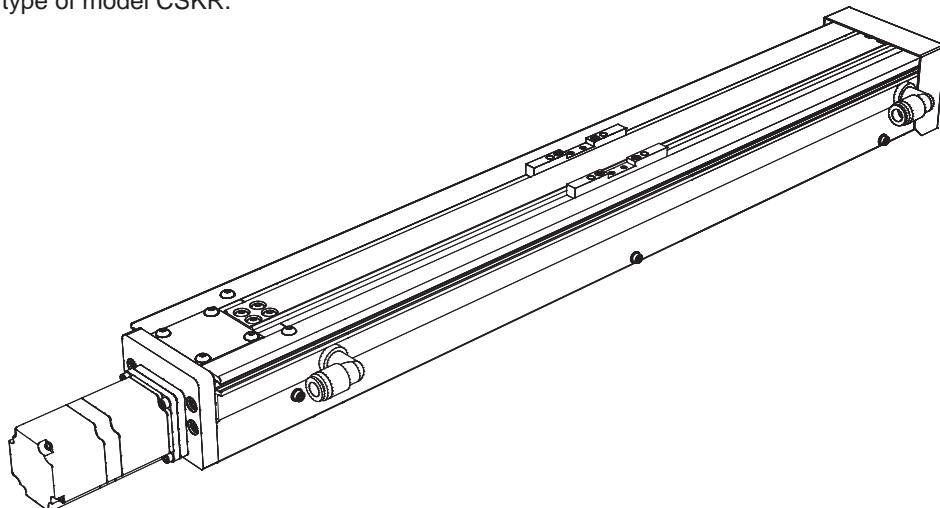
Model no.		CSKR20		CSKR26		CSKR33			CSKR46			
Ball screw lead [mm]		1	6	2	6	6	10	20	10	20		
LM Guide unit	Basic dynamic load rating C [N] ^{Note}	6010		13000		17000			39500			
	Basic static load rating C ₀ [N] ^{Note}	8030		16500		20400			45900			
	Radial clearance [mm]	Normal grade, high grade	-0.004 to 0		-0.006 to 0		-0.004 to 0			-0.006 to 0		
		Precision grade	-0.006 to -0.004		-0.007 to -0.006		-0.012 to -0.004			-0.016 to -0.006		
Ball screw unit	Basic dynamic load rating C _a [N]	Normal grade, high grade	660	860	2350	1950	4400	2700	2620	4350	4240	
		Precision grade		1060		2390						
	Basic static load rating C _{0a} [N]	Normal grade, high grade	1170	1450	4020	3510	6290	3780	3770	6990	7040	
		Precision grade		1600		3900						
Bearing unit (Fixed side)	Axial direction	Basic dynamic load rating C _a [N]	1150		2000		6250			6700		
		Basic static load rating P _{0a} [N]	735		1230		2700			3330		

Note: The load ratings in the LM Guide unit indicate the load rating per inner block.

Type

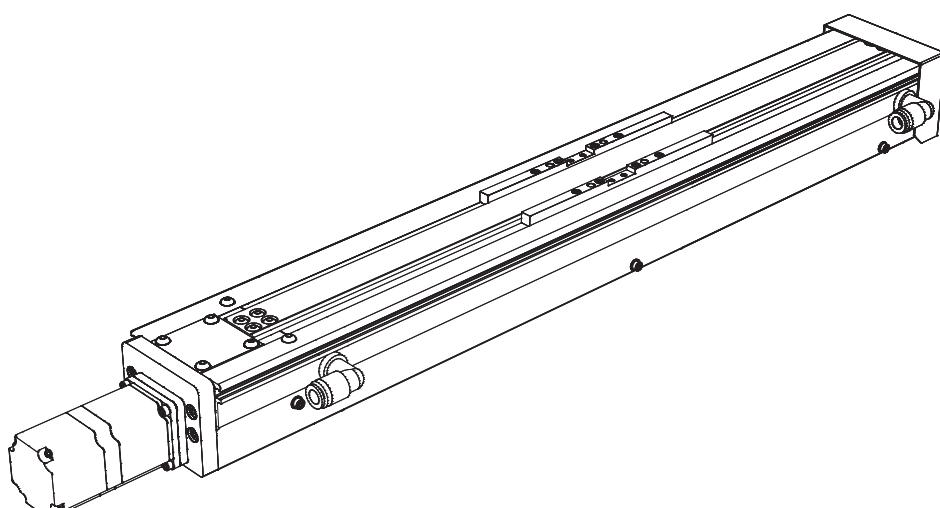
Model CSKR-A (slider type A)

Representative type of model CSKR.



Model CSKR-B (slider type B)

Type with two inner blocks for model CSKR-A and the slider overall length is extended.



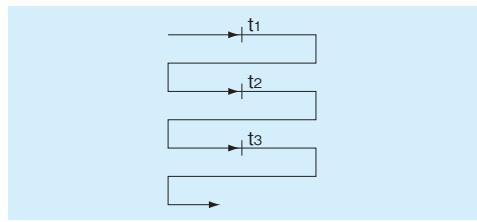
Accuracy Standard

The accuracy of model CSKR is defined in positioning repeatability, positioning accuracy, backlash and running parallelism (vertical).

Positioning repeatability

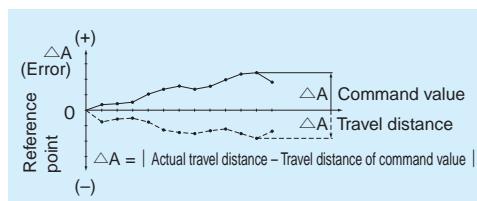
After repeated positioning to a given point in the same direction seven times, measure the resting point and calculate the value of half the maximum difference.

Perform this measurement at the center and at both ends of the travel distance; the largest value becomes the measurement value, and the positioning repeatability is expressed by placing the symbol "±" next to the value of half the maximum difference.



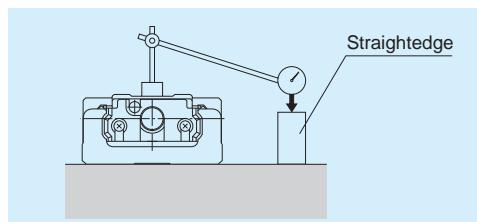
Positioning accuracy

Using the maximum stroke as the reference length, express as an absolute value the maximum error between the actual distance traveled from the reference point and the commanded value as positioning accuracy.



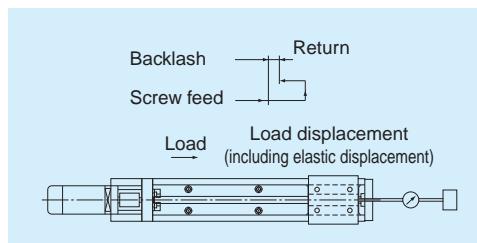
Running parallelism (vertical)

Placing a straightedge on the surface where model CSKR is mounted, measure throughout the travel distance of the inner block using a dial indicator. Use the maximum difference between the readings within this travel distance as the measurement of running parallelism.



Backlash

Advance the inner block forward and record the measurement on the test indicator as a reference value. Subsequently, apply load to the inner block from the same direction (table feed direction), and then release the nut block from this load. Use the difference between the reference value and the return value as the backlash measurement. Perform this measurement in the center and near both ends, and use the maximum value as the measurement value.



The accuracies of model CSKR are classified into normal grade (no symbol), high grade (H) and precision grade (P). The tables below show standards for all the accuracies.

Normal grade (no symbol)

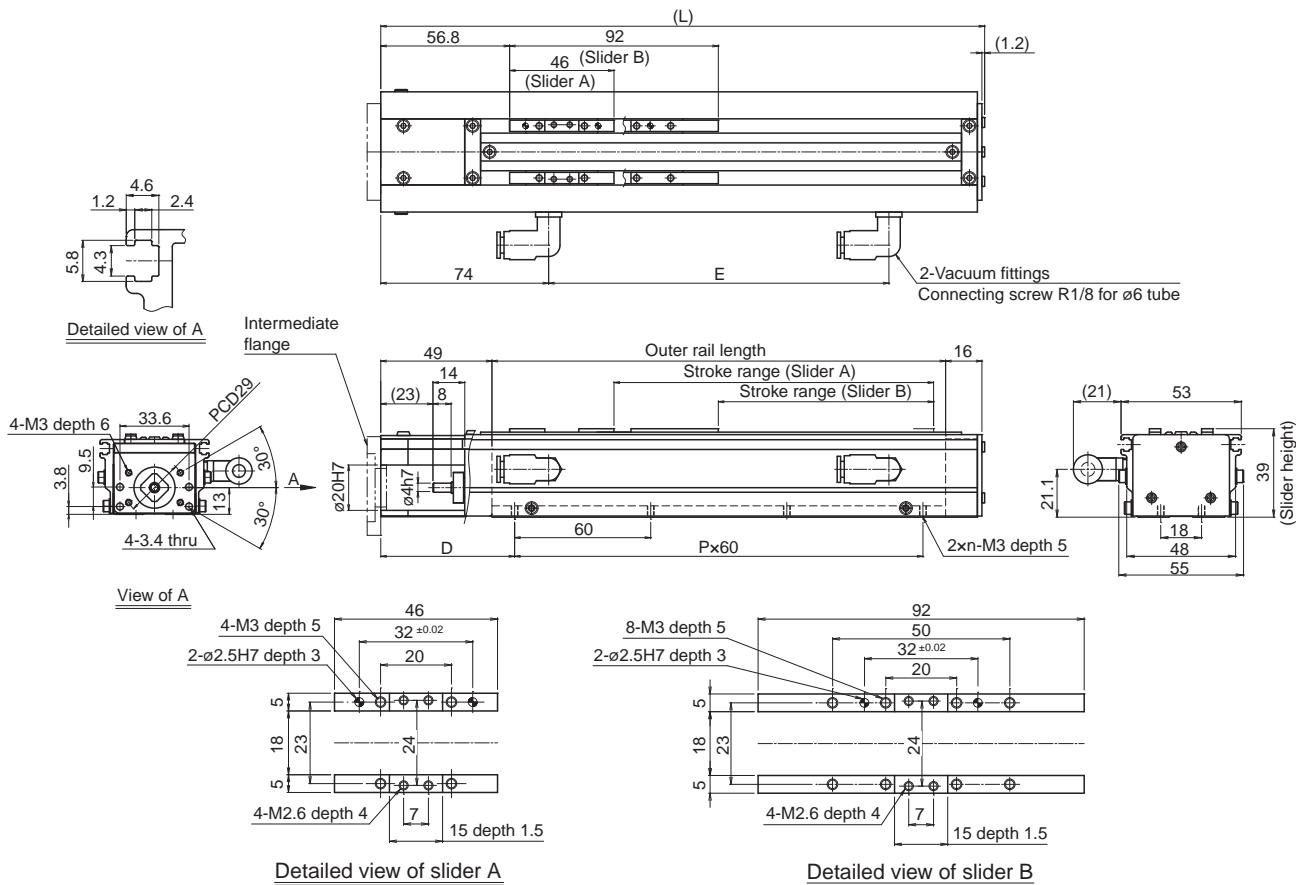
Unit: mm

Model no.	Outer rail length	Positioning repeatability	Positioning accuracy	Running parallelism (vertical)	Backlash	Start torque [N·cm]
CSKR20	100	±0.01	No standard defined	No standard defined	0.02	0.8
	150					
	200					
CSKR26	150	±0.01	No standard defined	No standard defined	0.02	2.3
	200					
	250					
	300					
CSKR33	150	±0.01	No standard defined	No standard defined	0.02	8.7
	200					
	300					
	400					
	500					
	600					
	700					
CSKR46	340	±0.01	No standard defined	No standard defined	0.02	12.3
	440					
	540					
	640					
	840					
	940					

High grade (H)						Unit: mm		
Model no.	Outer rail length	Positioning repeatability	Positioning accuracy	Running parallelism (vertical)	Backlash	Start torque [N·cm]		
CSKR20	100	± 0.005	0.06	0.025	0.01	0.8		
	150							
	200							
CSKR26	150	± 0.005	0.06	0.025	0.01	2.3		
	200							
	250							
	300							
CSKR33	150	± 0.005	0.06	0.025	0.02	8.7		
	200							
	300							
	400		0.10	0.035				
	500							
	600		0.12	0.04				
	700							
CSKR46	340	± 0.005	0.10	0.035	0.02	12.3		
	440							
	540							
	640		0.12	0.04				
	840							
	940		0.15	0.05				

Precision grade (P)						Unit: mm		
Model no.	Outer rail length	Positioning repeatability	Positioning accuracy	Running parallelism (vertical)	Backlash	Start torque [N·cm]		
CSKR20	100	± 0.003	0.02	0.01	0.003	1.9		
	150							
	200							
CSKR26	150	± 0.003	0.02	0.01	0.003	6.1		
	200							
	250							
	300							
CSKR33	150	± 0.003	0.02	0.01	0.003	18.3		
	200							
	300							
	400		0.025	0.015				
	500							
	600		0.03	0.02				
	700							
CSKR46	340	± 0.003	0.025	0.015	0.003	18.3		
	440							
	540							
	640		0.03	0.02				
	840							
	940			20.7				

Model CSKR20



Note 1: The vacuum fittings can be mounted on either side.

Note 2: The motor-wrap specification can also be provided. For more information, please contact THK.

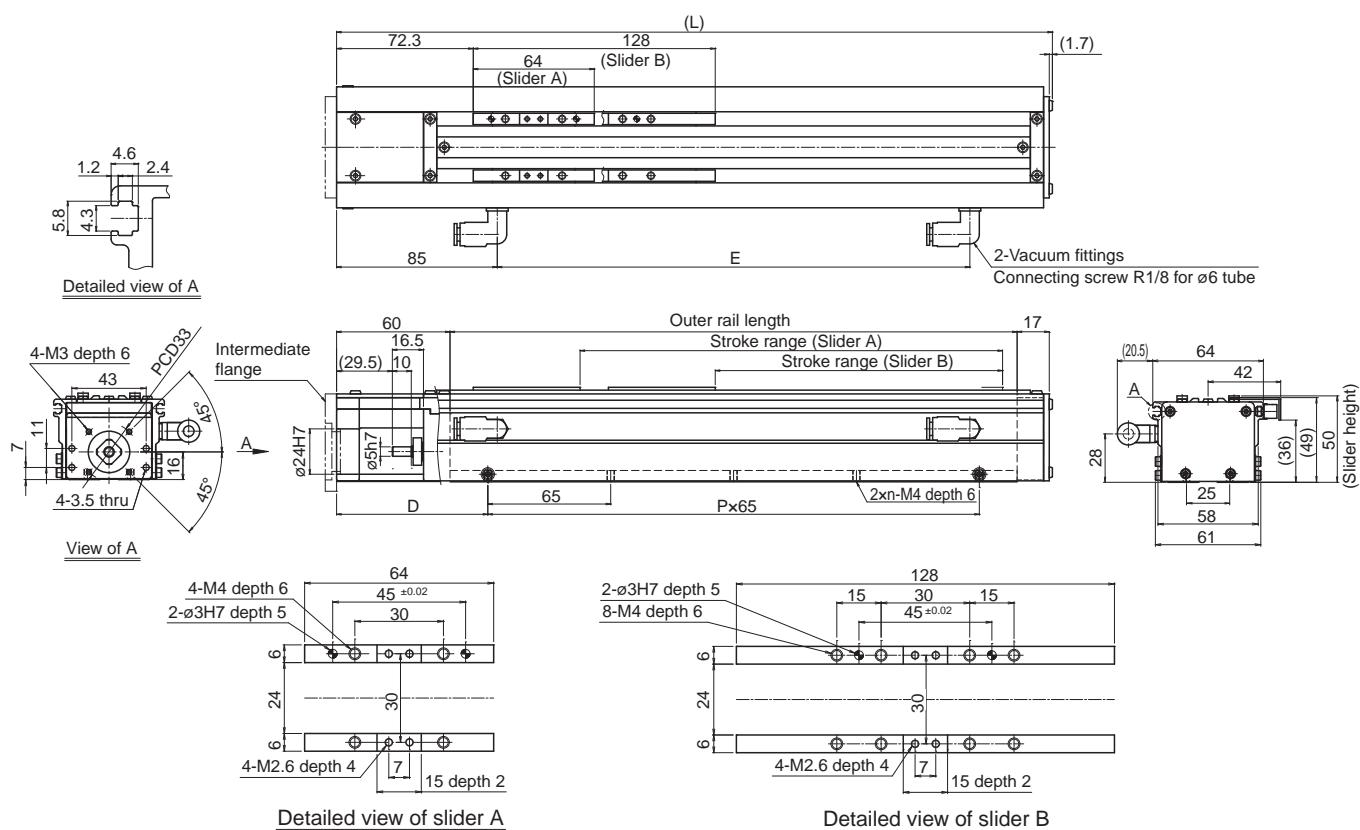
Model Number Chart

CSKR20 01 A + 150L P 0 - 0 A N

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Ball screw lead	01, 06
② Slider type	A (With one inner block)/B (With two inner blocks)
③ Outer rail length	100 to 200
④ Accuracy standard	No symbol : Normal grade H : High grade P : Precision grade
⑤ With/without motor	0 : Without motor 1 : With motor
⑥ Sensor specification	0 : Without sensor Attached table (→ Page 17) : With sensor
⑦ Intermediate flange	Attached table (→ Pages 11 and 12)
⑧ Base plate (Optional)	N : Without base plate B : With base plate

Model CSKR26



Outer rail length [mm]	Stroke range [mm]		L [mm]	D [mm]	P	n [pcs]	E [mm]	Reference main unit mass [kg]	
	Slider type A	Slider type B						Slider type A	Slider type B
150	68.4	—	228.7	70	2	3	100	1.8	—
200	118.4	54.2	278.7	95	2	3	150	2	2.6
250	168.4	104.2	328.7	87.5	3	4	200	2.3	2.9
300	218.4	154.2	378.7	80	4	5	250	2.5	3.1

Note 1: The vacuum fittings can be mounted on either side.

Note 2: The motor-wrap specification can also be provided. For more information, please contact THK.

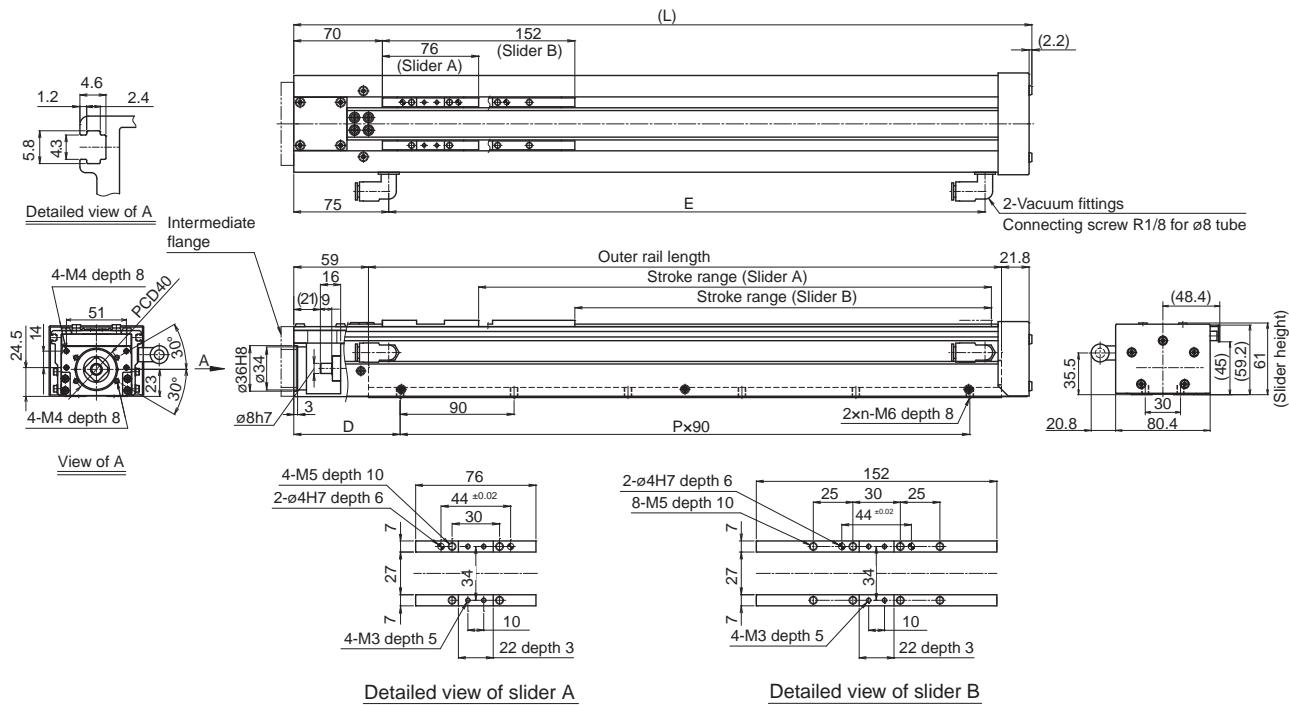
Model Number Chart

CSKR26 06 A + 250L P 0 - 0 A N

(1) (2) (3) (4) (5) (6) (7) (8)

(1) Ball screw lead	02, 06
(2) Slider type	A (With one inner block)/B (With two inner blocks)
(3) Outer rail length	150 to 300
(4) Accuracy standard	No symbol : Normal grade H : High grade P : Precision grade
(5) With/without motor	0 : Without motor 1 : With motor
(6) Sensor specification	0 : Without sensor Attached table (→ Page 17) : With sensor
(7) Intermediate flange	Attached table (→ Pages 11 and 12)
(8) Base plate (Optional)	N : Without base plate B : With base plate

Model CSKR33



Outer rail length [mm]	Stroke range [mm]		L [mm]	D [mm]	P	n [pcs]	E [mm]	Reference main unit mass [kg]	
	Slider type A	Slider type B						Slider type A	Slider type B
150	55	—	233	89	1	2	121	3.2	—
200	105	—	283	69	2	3	171	3.7	—
300	205	129	383	74	3	4	271	4.5	5.2
400	305	229	483	79	4	5	371	5.4	6.1
500	405	329	583	84	5	6	471	6.2	6.9
600	505	429	683	89	6	7	571	7.2	7.9
700	605	529	783	94	7	8	671	8	8.7

Note 1: The vacuum fittings can be mounted on either side.

Note 2: The motor-wrap specification can also be provided. For more information, please contact THK.

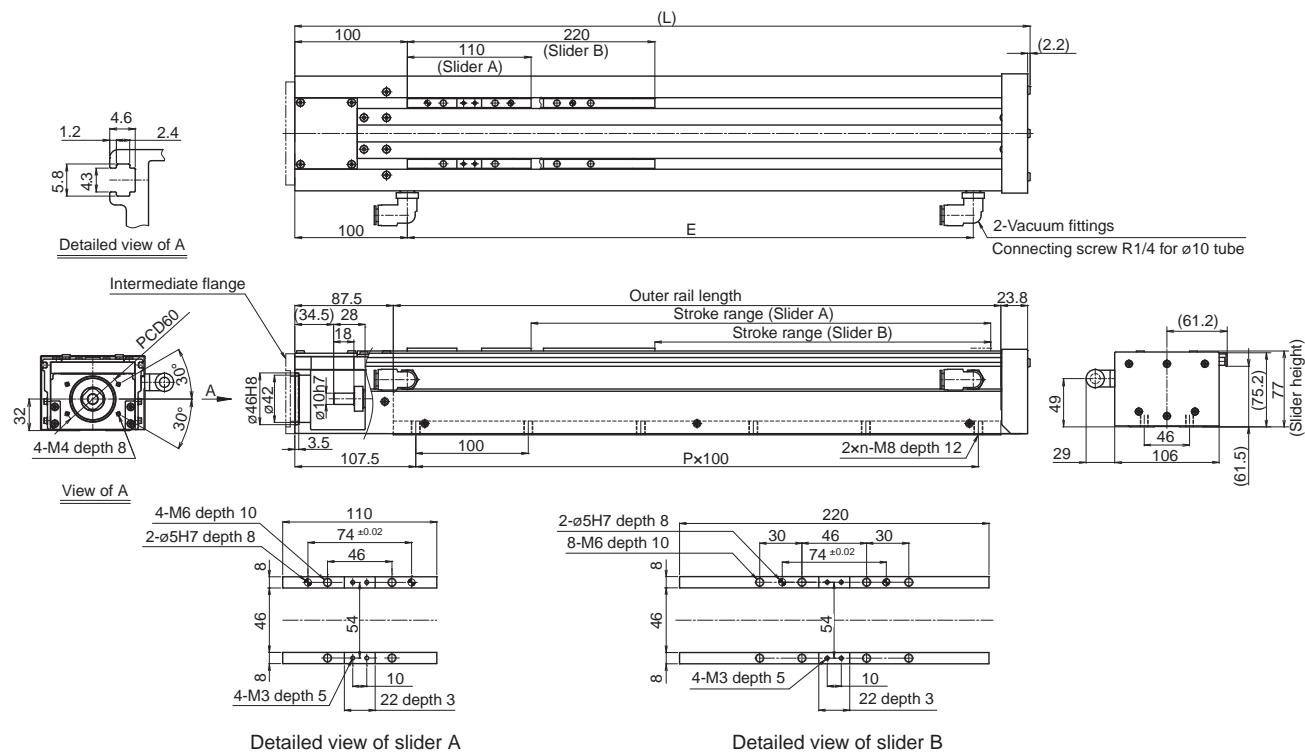
Model Number Chart

CSKR33 10 A + 500L P 0 - 0 A N

(1) (2) (3) (4) (5) (6) (7) (8)

- ① Ball screw lead 06, 10, 20
- ② Slider type A (With one inner block)/B (With two inner blocks)
- ③ Outer rail length 150 to 700
- ④ Accuracy standard No symbol : Normal grade
H : High grade
P : Precision grade
- ⑤ With/without motor 0 : Without motor
1 : With motor
- ⑥ Sensor specification 0 : Without sensor
Attached table (→ Page 17) : With sensor
- ⑦ Intermediate flange Attached table (→ Pages 11 and 12)
- ⑧ Base plate
(Optional) N : Without base plate
B : With base plate

Model CSKR46



Outer rail length [mm]	Stroke range [mm]		L [mm]	P	n [pcs]	E [mm]	Reference main unit mass [kg]	
	Slider type A	Slider type B					Slider type A	Slider type B
340	208.5	98.5	453.5	3	4	303	9.6	11.5
440	308.5	198.5	553.5	4	5	403	11.2	13.1
540	408.5	298.5	653.5	5	6	503	12.8	14.7
640	508.5	398.5	753.5	6	7	603	14.4	16.3
840	708.5	598.5	953.5	8	9	803	17.6	19.5
940	808.5	698.5	1053.5	9	10	903	19.2	21.1

Note 1: The vacuum fittings can be mounted on either side.

Note 2: The motor-wrap specification can also be provided. For more information, please contact THK.

Model Number Chart

CSKR46 20 A + 540L P 0 - 0 A N

(1) (2) (3) (4) (5) (6) (7) (8)

- ① Ball screw lead 10, 20
- ② Slider type A (With one inner block)/B (With two inner blocks)
- ③ Outer rail length 340 to 940
- ④ Accuracy standard No symbol : Normal grade
H : High grade
P : Precision grade
- ⑤ With/without motor 0 : Without motor
1 : With motor
- ⑥ Sensor specification 0 : Without sensor
Attached table (→ Page 17) : With sensor
- ⑦ Intermediate flange Attached table (→ Pages 11 and 12)
- ⑧ Base plate
(Optional) N : Without base plate
B : With base plate

Optional

Intermediate flange

Intermediate flanges are available so that various motors may be mounted. Specify the intermediate flange suitable for your motor.

Table of motors used and corresponding intermediate flanges (1)

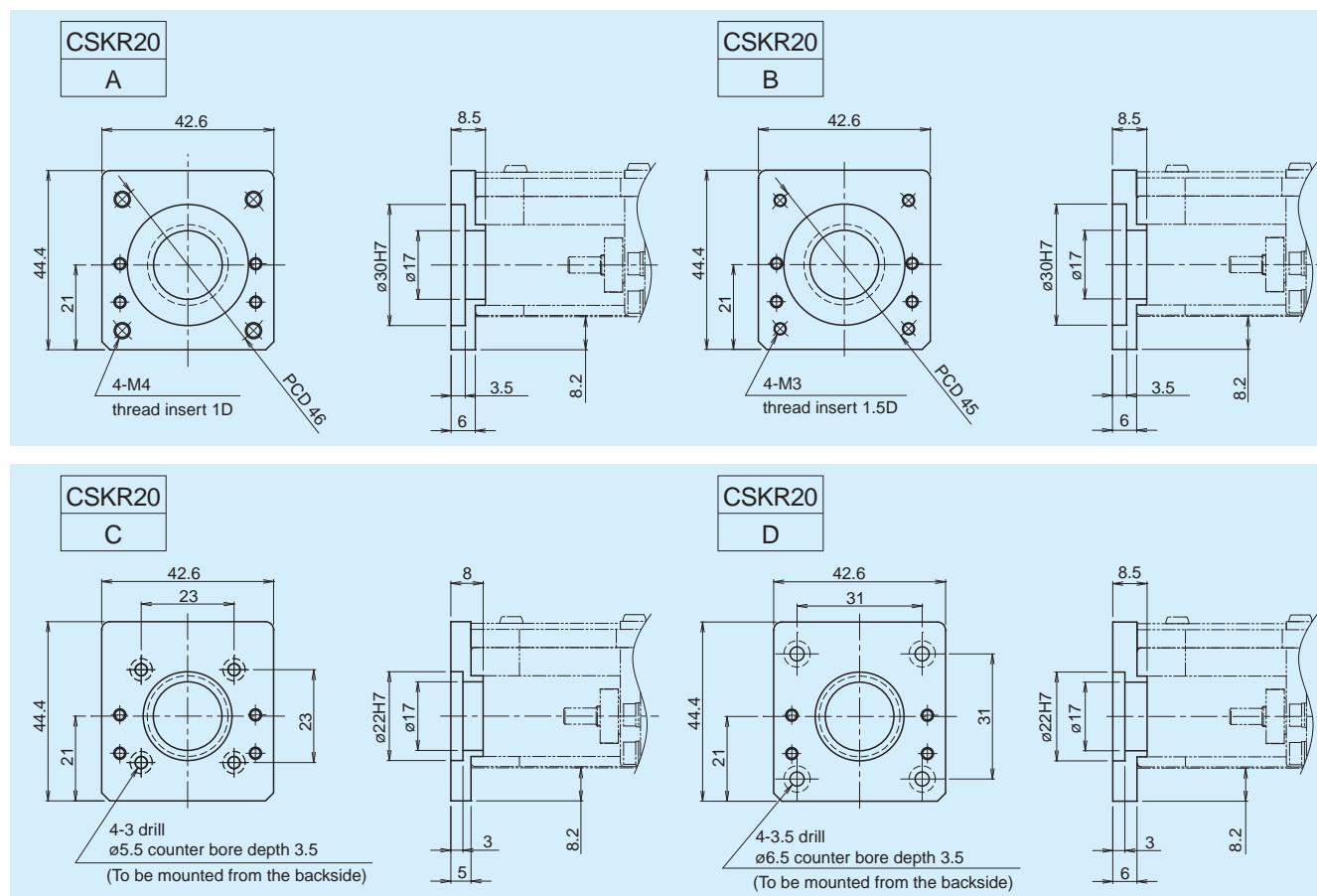
Motor type			Rated output	Flange angle	CSKR20	CSKR26	CSKR33	CSKR46
Yaskawa Electric	Σ-V	SGMV-A5 SGMAV-A5 SGMV-01 SGMAV-01 SGMAV-C2 SGMV-02 SGMAV-02 SGMV-04 SGMAV-04	50W	□40	A	A	A	A
			100W		—	—		
			150W		—	—		
			200W		—	—		
			400W	□60	—	—	—	B
			30W		—	—	A	A
			50W		A	A		
			100W		—	—		
AC servo motor	Σ-II	SGMAH-A3 SGMAH-A5 SGMAH-01 SGMPH-01 SGMAH-02 SGMAH-04 SGMPH-02 SGMPH-04	30W	□40	—	—	B	B
			50W		—	—		
			100W		—	—		
			200W	□60	—	—		
			400W		—	—	—	C
			200W		—	—		
			400W		—	—		
			30W	□40	A	A	A	A
Mitsubishi Electric	MEI-SERVO	HF-MP053 HF-KP053 HF-MP13 HF-KP13 HF-MP23 HF-KP23 HF-MP43 HF-KP43	50W		—	—		
			100W		—	—		
			200W	□60	—	—	—	B
			400W		—	—		
			50W	□40	A	A	A	A
			100W		—	—		
			200W		—	—		
			400W		—	—		
Panasonic	J2 Super	HC-MFS053 HC-KFS053 HC-MFS13 HC-KFS13 HC-MFS23 HC-KFS23 HC-MFS43 HC-KFS43	50W	□40	—	—	A	A
			100W		—	—		
			200W	□60	—	—		
			400W		—	—		
			50W	□40	A	A	A	A
			100W		—	—		
			200W		—	—		
			400W		—	—		
MINAS	A4	MSMD 5A MSMD 01 MQMA 01 MSMD 02 MAMA 02 MSMD 04 MAMA 04	50W	□38	B	B	C	D
			100W		—	—		
			200W	□60	—	—	D	E
			400W		—	—		
			50W	□80	—	—	—	B
			100W		—	—		
A III	E	MSMA 3A MSMA 5A MSMA 01 MSMA 02	30W	□38	B	B	C	D
			50W		—	—		
			100W	□60	—	—		
			200W		—	—		
		MSMA 04 MAMA 04	400W	□60	—	—	—	E
			200W		—	—		
			400W		—	—		
		MUMA 02	200W	□60	—	—	—	E
		MUMA 04	400W		—	—		

Table of motors used and corresponding intermediate flanges (2)

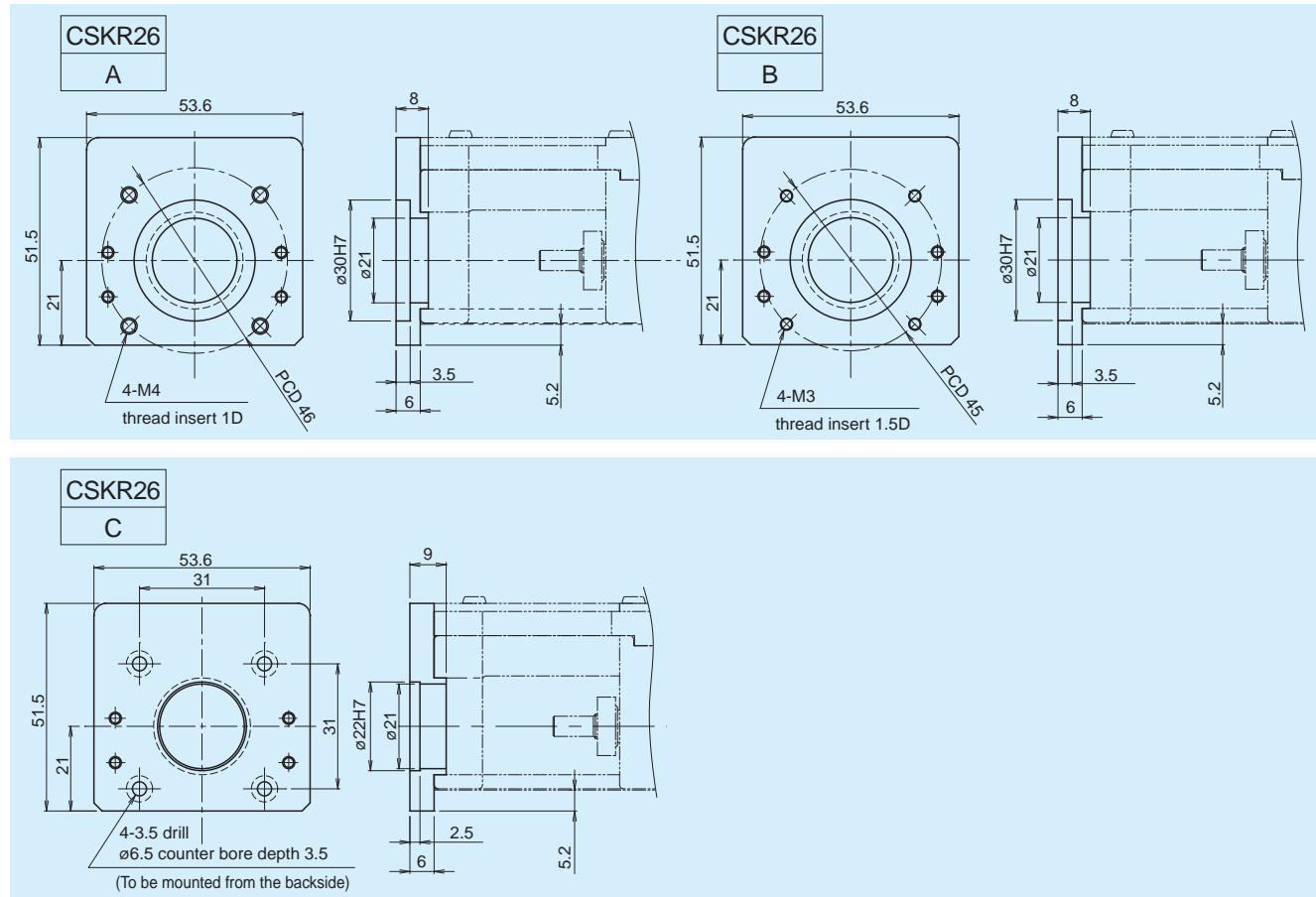
Motor type			Rated output	Flange angle	CSKR20	CSKR26	CSKR33	CSKR46
AC servo motor	Sanyo Denki	SANMOTION Q1	Q1AA04003D	30W	□40	A	A	A
			Q1AA04005D	50W		—	—	
			Q1AA04010D	100W	□60	—	—	B
			Q1AA06020D	200W		—	—	
			Q1AA06040D	400W		—	—	
	OMRON	OMNUC G5	Q2AA04006D	60W	□42	—	—	E
			Q2AA04010D	100W		—	—	—
			Q2AA05005D	50W	□54	—	—	F
			Q2AA05010D	100W		—	—	G
			Q2AA05020D	200W	□76	—	—	
			Q2AA07020D			—	—	F
			Q2AA07030D	300W		—	—	
Stepping motor	Oriental Motor	αSTEP αGRADE	R88M-K05030	50W	□40	A	A	A
			R88M-K10030	100W		—	—	
			R88M-K20030	200W	□60	—	—	E
			R88M-K40030	400W		—	—	
			R88M-G05030	50W	□40	A	A	A
			R88M-G10030	100W		—	—	
			R88M-GP10030	□60	—	—	E	
			R88M-G20030		200W	—		—
			R88M-G40030	400W	□80	—	—	F
			R88M-GP20030	200W		—	—	
			R88M-GP40030	400W		—	—	
	Sanyo Denki	5-phase	AR46		□42	D	C	G
			AR66		□60	—	—	H
			AR69			—	—	—
			AR98		□85	—	—	J
			ASC3*		□28	C	—	—
			AS46, ASC46		□42	D	C	G
			AS66, ASC66		□60	—	—	H
			AS69			—	—	I
			AS98		□85	—	—	
			CSK52*		□28	C	—	—
			CSK54*		□42	D	C	G
			CSK564, CSK566		□60	—	—	H
			CSK569			—	—	
			CSK596		□85	—	—	J
			RK54*		□42	D	C	G
			RK564, RK566		□60	—	—	H
			103F35		□28	C	—	—
			103F55		□42	D	C	G
			103F785		□60	—	—	H
						—	—	I

Dimensions

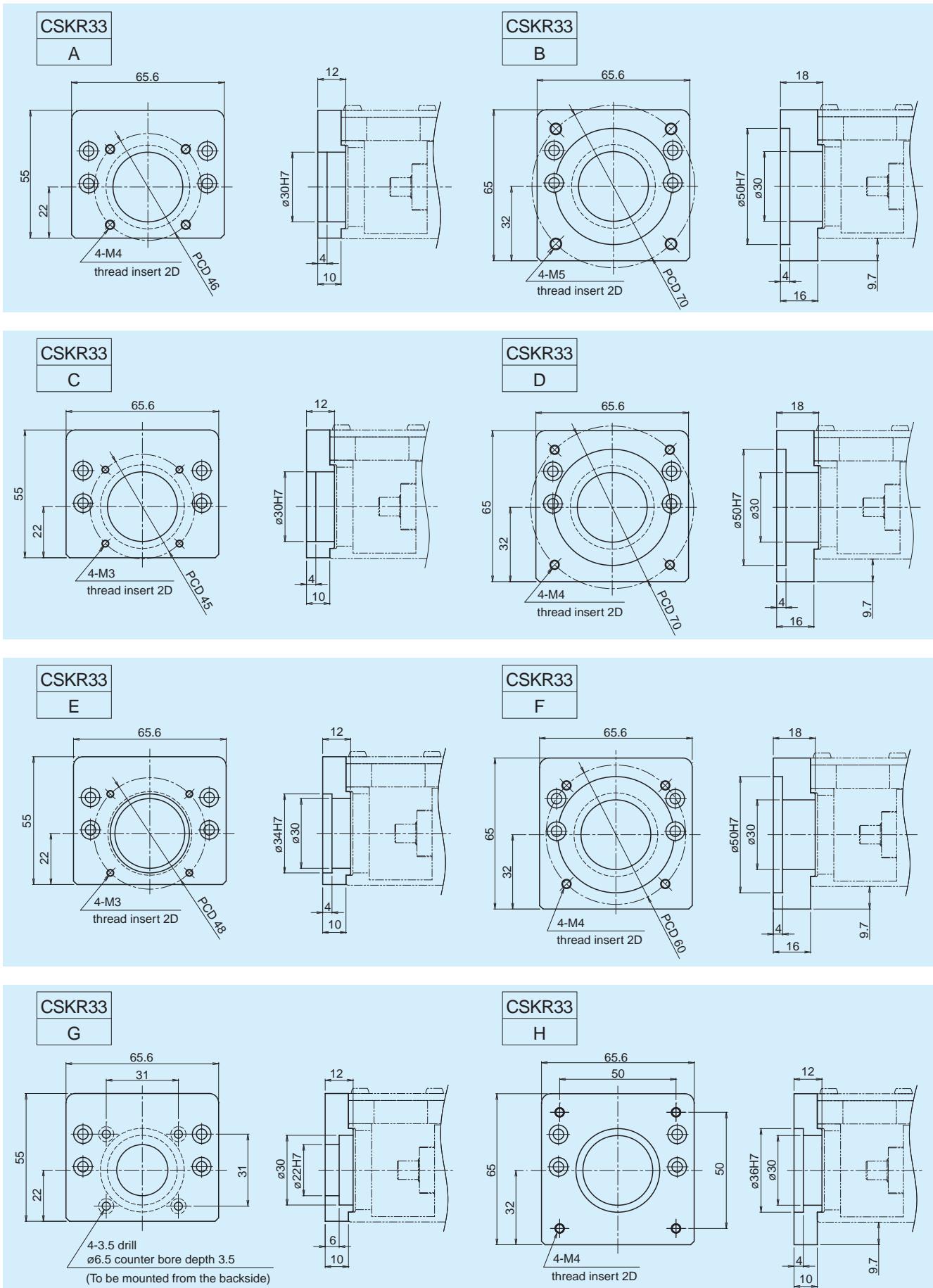
For CSKR20



For CSKR26

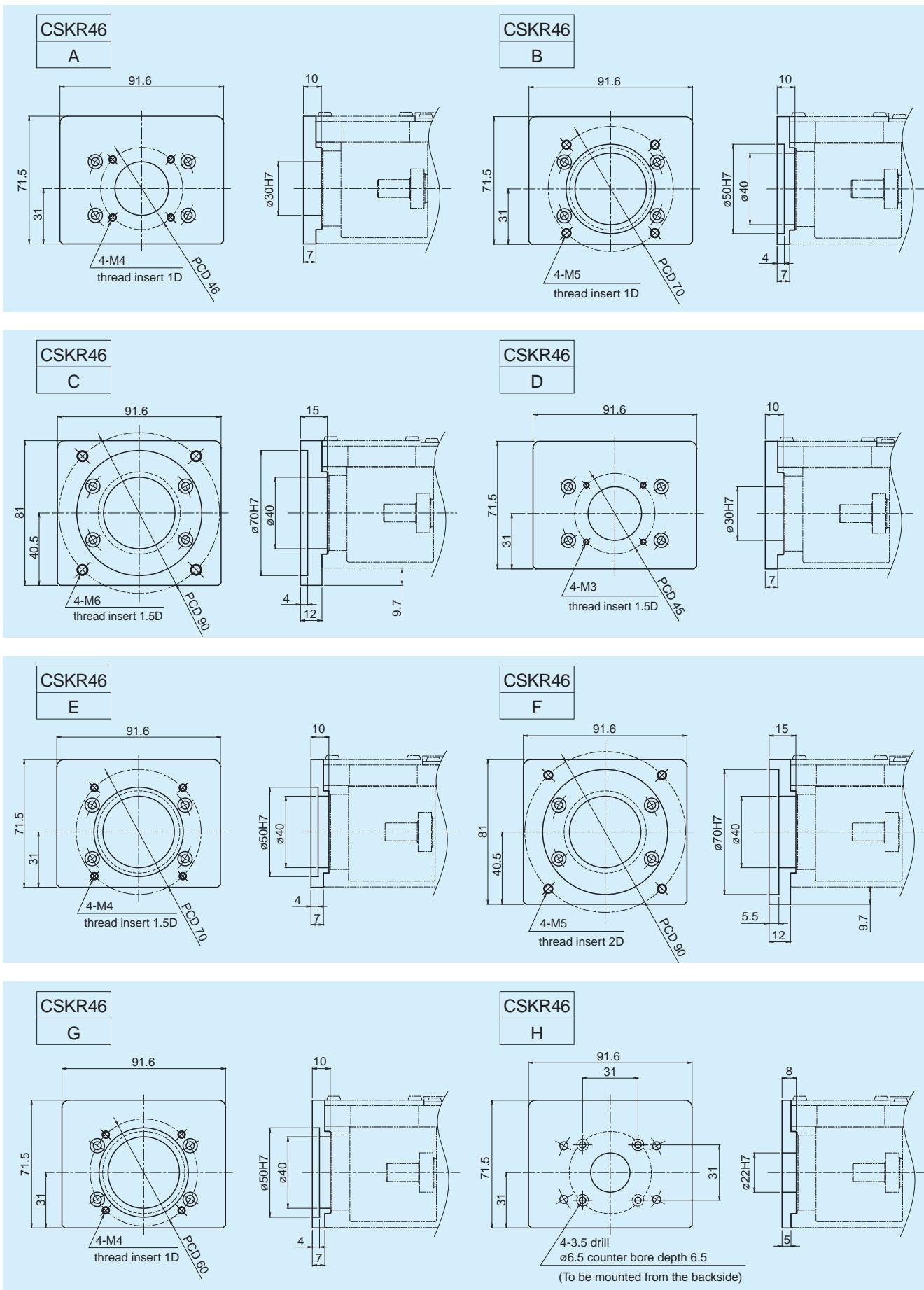


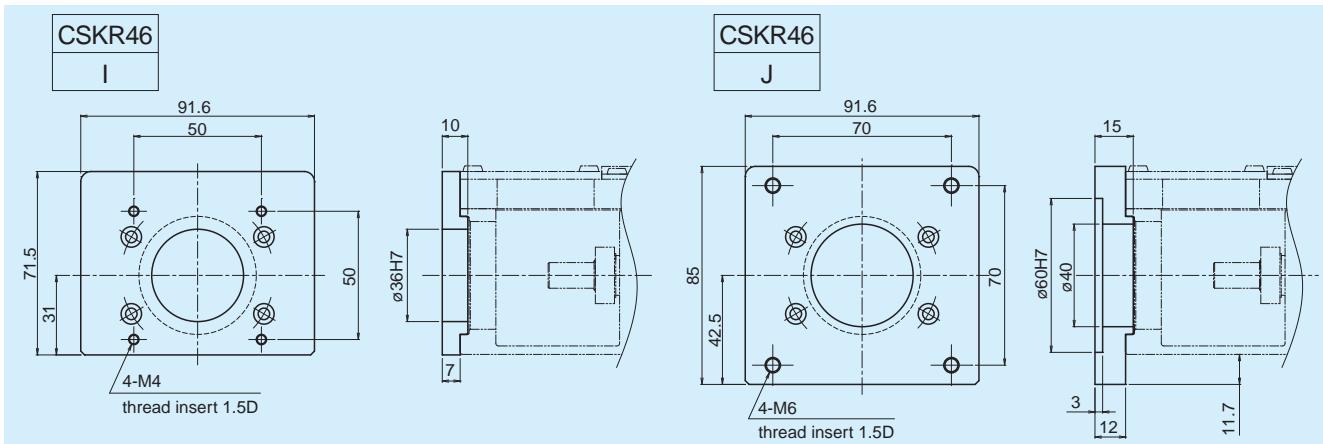
For CSKR33



Dimensions

For CSKR46





Optional

Sensor

Various sensors can be mounted on model CSKR using the T slot at the side cover.

To select a sensor, indicate the appropriate symbol from the corresponding table.

Symbol	Type	Operation mode	Sensor model no.	No. of units	Manufacturer	Accessories
0	No sensor	—	—	—	—	—
2	Photo sensor	Switching is allowed.	EE-SX671	3	OMRON	Mounting screw, nut, sensor dog, mounting plate, connector (EE-1001)
6		Switching is allowed.	EE-SX674	3		Mounting screw, nut, sensor dog, mounting plate, connector (EE-1001)
C	Proximity sensor	N.O. contact	GL-N12F	1	SUNX	Mounting screw, nut, sensor dog
		N.C. contact	GL-N12FB	2		
E	Proximity sensor	N.O. contact	APM-D3A1-001	1	Yamatake	Mounting screw, nut, sensor dog
		N.C. contact	APM-D3B1-003	2		

Note 1: All sensor outputs are NPN outputs.

Note 2: All sensors are accessories.

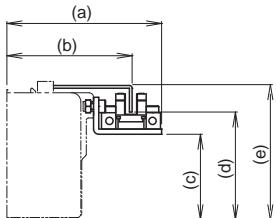
Note 3: N.O. contact: Normally open contact N.C. contact: Normally closed contact

Note 4: Sensors other than those shown in the table above may be mounted. For more information, please contact THK.

[Photo sensor]

EE-SX671

[Interchangeable for both N.O. and N.C. contact] (3 pcs.)
(OMRON)

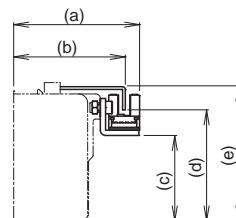


Unit: mm

Model no.	a	b	c	d	e
CSKR20	56.5	43.5	16.7	27.5	38.5
CSKR26	62	49.2	28.7	39.5	49
CSKR33	68.2	55.2	37.7	48.5	59.2
CSKR46	81	68.2	54.2	65	75.2

EE-SX674

[Interchangeable for both N.O. and N.C. contact] (3 pcs.)
(OMRON)



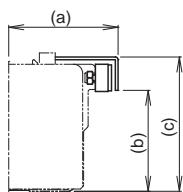
Unit: mm

Model no.	a	b	c	d	e
CSKR20	43.8	37.5	16.7	27.5	38.5
CSKR26	49.3	43	28.7	39.5	49
CSKR33	55.5	49.2	37.7	48.5	59.2
CSKR46	68.3	62.4	54.2	65	75.2

[Proximity sensor]

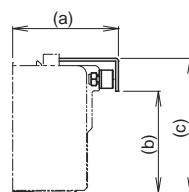
GL-N12F [N.O. contact] (1 pc.) (SUNX)

GL-N12FB [N.C. contact] (2 pcs.) (SUNX)



Unit: mm

Model no.	a	b	c
CSKR33	48.2	44.5	59.2
CSKR46	61.4	60.5	75.2

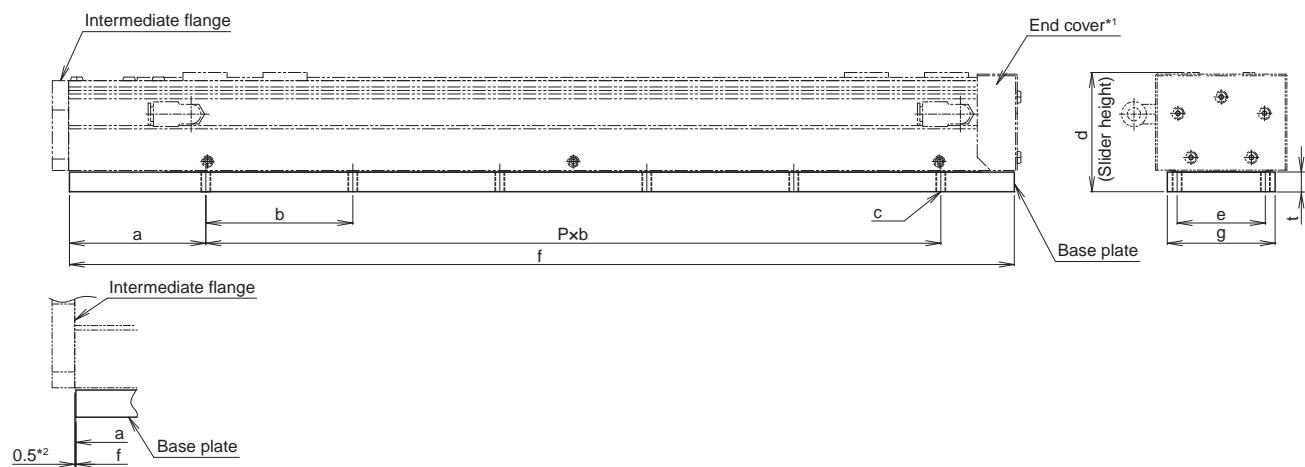


Unit: mm

Model no.	a	b	c
CSKR20	34.5	28	38.5
CSKR26	40	36.5	49
CSKR33	46.2	45.7	59.2
CSKR46	59	62.5	75.2

Base plate (optional)

Model CSKR can have the same slider height as that of conventional product (model CKR) by mounting the optional base plate.



*1 Models CSKR20 and 26 do not have end covers.

*2 The base plate is shortened by 0.5mm from the edge of the intermediate flange (→ See the figure above.).

Note: When the base plate is used, the positioning accuracy and running parallelism (vertical) of the accuracy standard are equivalent to normal grade.

■ Model CSKR20

Unit: mm

Outer rail length	a	b	P	c	d	e	f	g	t
100	68.5	60	1	4 × M3 thread insert 1.5D	45	32	162.5	42	6
150	63.5		2	6 × M3 thread insert 1.5D			212.5		
200	58.5		3	8 × M3 thread insert 1.5D			262.5		

■ Model CSKR26

Unit: mm

Outer rail length	a	b	P	c	d	e	f	g	t
150	69.5	65	2	6 × M4 thread insert 1.5D	58	42	223.5	52	8
200	94.5						273.5		
250	87		3				323.5		
300	79.5		4				373.5		

■ Model CSKR33

Unit: mm

Outer rail length	a	b	P	c	d	e	f	g	t
150	88.5	90	1	4 × M6 thread insert 1.5D	72	54	228.5	66	11
200	68.5			6 × M6 thread insert 1.5D			278.5		
300	73.5		2	8 × M6 thread insert 1.5D			378.5		
400	78.5		3	10 × M6 thread insert 1.5D			478.5		
500	83.5		4	12 × M6 thread insert 1.5D			578.5		
600	88.5		5	14 × M6 thread insert 1.5D			678.5		
700	93.5		6	16 × M6 thread insert 1.5D			778.5		

■ Model CSKR46

Unit: mm

Outer rail length	a	b	P	c	d	e	f	g	t
340	107	100	3	8 × M8 thread insert 1.5D	88	76	449	92	11
440				10 × M8 thread insert 1.5D			549		
540			4	12 × M8 thread insert 1.5D			649		
640			5	14 × M8 thread insert 1.5D			749		
840			6	18 × M8 thread insert 1.5D			949		
940			7	20 × M8 thread insert 1.5D			1049		
			8						

Precautions on Use

● Handling

- Do not disassemble this product unnecessarily. Otherwise, dirt may enter or performance may be lost.
- Do not drop or knock this product. Otherwise, injury or damage may occur. Giving an impact could also cause damage to its function even if the product looks intact.
- Do not operate the unit in excess of the permissible rotational speed. Otherwise, damage to the unit or an accident may occur.
* Contact THK for the permissible rotational speed.
- If the product is operating or in the ready state, never touch a moving part. In addition, do not enter the operating area of the actuator.
- If two or more people are involved in the operation, confirm the procedures such as sequences, signs, and abnormalities in advance, and appoint another person for monitoring the operation.
- Do not press the sealing sheet.
- Use the sealing sheet without deflection.
- Since the unit is designed to vacuum the volume inside the cover, particles may come in contact with the sealing sheet or its vicinity. Wipe it regularly with a rag for clean-room and ethanol.

● Operating environment

The wrong environment can cause failure for this product. The suitable environments for application are as follows:

- When the performance of cleanliness level class 3 or class 4 is required
Operating temperature:+16°C to +24°C (No condensation shall occur at the humidity of 20 to 60%RH.)
- When operation is performed under normal environment (atmosphere)
Operating temperature:+10°C to +40°C (No condensation shall occur at the humidity of 80%RH or less.)
* If considering use of the product outside its operating temperature range, contact THK.
- An environment free from corrosive gas or flammable gas
- An environment free from grit, dust, salt or metal powder
- An environment free from water, oil or chemicals
- An environment where vibration or impact are not transmitted to the unit
- When using the product in locations exposed to constant vibrations or in special environments such as vacuum and low/high temperature, contact THK in advance.

● Mounting the actuator

- The mounting surface shall be a machined surface or of equivalent properties. The flatness should be within 0.1mm/1000mm.

● Lubrication

- To maximize the performance of this product, lubrication is required. Using the product with insufficient lubrication may increase wear of the rolling elements or damage the system prematurely. In this product, THK AFE-CA grease is used as the standard grease.
- Do not mix lubricants of different physical properties.
- When planning to use a special lubricant, contact THK before using it.
- In normal use, the grease must be replenished every 100km as a guide. However, the greasing interval varies according to the conditions. We recommend determining the greasing interval based on the result of the initial inspection.
- In locations exposed to constant vibrations or in special environments such as vacuum and low/high temperature, normal lubricants may not be used. Contact THK for details.

● Storage

- When storing the product, enclose it in a package designated by THK and store it in a horizontal orientation while avoiding high temperature, low temperature and high humidity.

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