

Parallel cam drive

Index

PC I S

040 to 250

Oscillator

PCOS

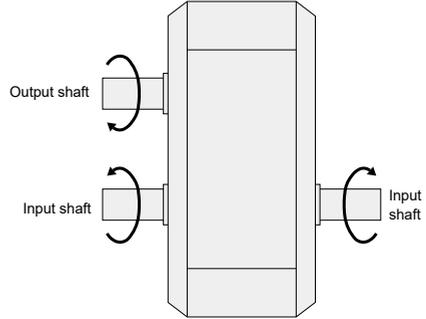
Common specifications

Option Reducer TE Series has been discontinued.



1. Rotational direction of input/output shaft

The parallel cam index drive's output shaft rotates in the direction opposite the input shaft (cam shaft) viewed from the input shaft side. The input shaft allows either clockwise or counterclockwise rotation.



Reference: HO reducer installation and shaft rotation direction

		Left shaft installation (on housing side)		Right shaft installation (on housing plate side)	
Wide angle	Table	A	J	E	N
		B	K	F	P
Basic	Parallel cam drive	C	L	G	Q
		D	M	H	R

* Combinations where the rotation is opposite the direction of the arrows are also possible.

Product specifications

Compact

Standard

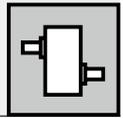
Wide angle

Basic

Option

Roller gear cam drive

Linear, Circular, Rack and Pinion drive



2. Installation position and input/output shaft layout

Shaft layout code	Meaning
S	Standard layout
R	Reverse layout Note: Output shaft comes out on housing plate side.
1	Output shaft comes out opposite to the input shaft.
2	Output shaft comes out on the same side as the input shaft.
3	Input shaft comes out on both sides.

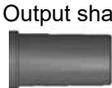
Product specifications

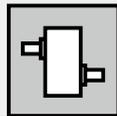
Option	Pics and Pics drive Linear Circular	Roller gear cam drive		
		Basic	Wide angle	Table
		Parallel cam drive		
		Standard	Compact	

Index	PCIS	040 to 250
Oscillator	PCOS	

● Common specifications

PCIS shaft layout and installation position PCIS ***_* ** * ** *^{GH}

		Shaft layout G Position H	S1 (Model No. display: 1)	S2 (Model No. display: 2)	S3 (Model No. display: 3)		
Product specifications	Compact	1	1 1 	2 1 	3 1 	Input shaft 	
						Output shaft 	
	Standard	2	1 2 	2 2 	3 2 	Oil filler 	
						Oil level gauge 	
	Table Roller gear cam drive	Wide angle	3	1 3 	2 3 	3 3 	Drain port 
							Housing plate 
Basic	Parallel cam drive	4	1 4 	2 4 	3 4 		
		5	1 5 	2 5 	3 5 		
Option		6	1 6 	2 6 	3 6 		



PCIS shaft layout and installation position PCIS ***_*** ** GH

Shaft layout G Position H	R1 (Model No. display: 4)	R1 (Model No. display: 5)	R3 (Model No. display: 6)	
1	4 1 	5 1 	6 1 	Input shaft
				Output shaft
2	4 2 	5 2 	6 2 	Oil filler
				Oil level gauge
3	4 3 	5 3 	6 3 	Drain port
				Housing plate
4	4 4 	5 4 	6 4 	
5	4 5 	5 5 	6 5 	
6	4 6 	5 6 	6 6 	

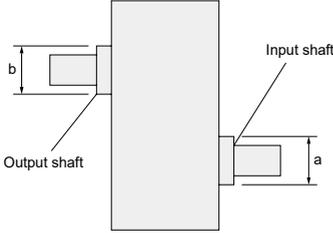
Product specifications

Roller gear cam drive	Compact
	Standard
	Table
Wide angle	Basic
	Parallel cam drive
Piez and Pne drive	Linear
	Circular
Option	

Index	PC IS	040 to 250
Oscillator	PCOS	

● Common specifications

3. Diameter of the stepped section of the input/output shaft



Dimensions Size	a	b
040	∅ 15	∅ 15
050	∅ 17	∅ 17
063	∅ 22	∅ 22
080	∅ 28	∅ 28
100	∅ 35	∅ 35
125	∅ 40	∅ 40
160	∅ 48	∅ 48
200	∅ 65	∅ 65
250	∅ 75	∅ 75

Discontinue

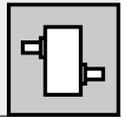
4. Optional worm reducer

List of standard mounting worm reducers

Main model No.	HO reducer Size	Reduction ratio Value in () represents the special reduction ratio	TE reducer Size	Reduction ratio
PCIS PCOS	040	-	-	-
	050	HO 32	TE 35	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	063	HO 40	TE 42	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	080	HO 50	TE 51	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	100	HO 60	TE 63	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	125	HO 80	TE 80	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	160	HO100	TE100	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	200	HO100	TE100	1/10, 1/20, 1/30 1/40, 1/50, 1/60
		HO135	TE150	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	250	HO135	TE150	1/10, 1/20, 1/30 1/40, 1/50, 1/60

* The above indicates the combinations of standard installations. Check the reducer load torque (Ter) and the reducer rated output torque before use.

Product specifications
 Compact
 Standard
 Table
 Roller gear cam drive
 Wide angle
 Basic
 Parallel cam drive
 Linear, Circular
 Rack and Pinion drive
 Option



5. Optional/Torque saver (TSF4 to TSF18) Torque guard (TGX20 to TGX70) + release detection proximity switch

Proximity switch model No.

Torque saver Torque guard	SW model No.	Manufacturer
TSF4	TL-W3MC1	OMRON
TSF5 to TSF18	TL-W5MC1	
TGX20 to TGX70		

Product specifications

Pick and Place drive Linear Circular	Roller gear cam drive		
	Basic	Wide angle	Table
Parallel cam drive	Standard	Compact	
	Option		

Parallel cam drive

1. Standard model No. Index series

Product specifications



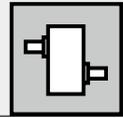
		(A) Model	(B) Distance between shafts	(C) Indexing number (n)		(D) Total index angle (θ)		(E) Cam curve		(F) Number of dwell intervals of the cam		(G) Input/Output layout			
Roller gear cam drive	Table	PCIS	040 40 mm	001	1	090	90°	S	MS curve (Standard)	1	1 dwell Index number: 1.2.3.4	1	S1		
			050 50 mm	002	2	120	120°	C				2	2 dwell Index number: 6.8	2	S2
			063 63 mm	003	3	150	150°							3	S3
			080 80 mm	004	4	180	180°							4	R1
			100 100 mm	006	6	210	210°		5	R2					
			125 125 mm	008	8	240	240°	6	R3						
			160 160 mm			270	270°								
			200 200 mm			300	300°								
	250 250 mm			330	330°										
		For details of the timing chart, refer to B-7.													
		When a torque saver (optional) and a torque guard (optional) are added, the code will be either 1 (S1) or 4 (R1).													

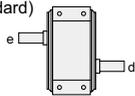
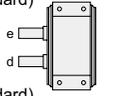
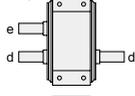
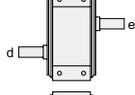
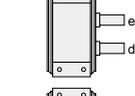
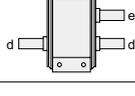
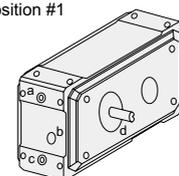
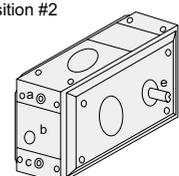
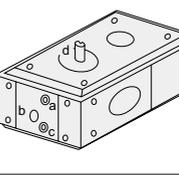
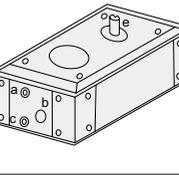
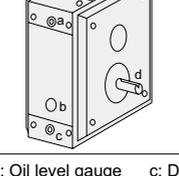
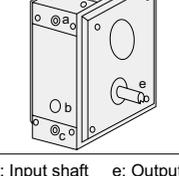
Example of model No. (1)

PCIS063-008270S216

- Shaft interval 63 mm
- Index number 8
- Total index angle 270° (135° × 2)
- Cam curve MS curve
- Dwell No. of the cam 2 dwell
- Input/Output layout S1
- Installation position Position #6

 Parallel cam drive
 Linear, Circular, Rack and Pinion drive
 Option



		(H) Installation position	
<p>■ S1 (standard)</p>  <p>■ S2 (standard)</p>  <p>■ S3 (standard)</p>  <p>■ R1</p>  <p>■ R2</p>  <p>■ R3</p> 	<ol style="list-style-type: none"> 1 Position #1 2 Position #2 3 Position #3 4 Position #4 5 Position #5 6 Position #6 <p>Depending on the orientation of the index drive, the oil supply port, the drain port and the oil level gauge will be located at different positions and so it is necessary to choose one of the orientations from (1) to (6).</p>	<p>■ Position #1</p>  <p>■ Position #2</p>  <p>■ Position #3</p>  <p>■ Position #4</p>  <p>■ Position #5</p>  <p>■ Position #6</p> 	

a: Oil supply port b: Oil level gauge c: Drain port d: Input shaft e: Output shaft

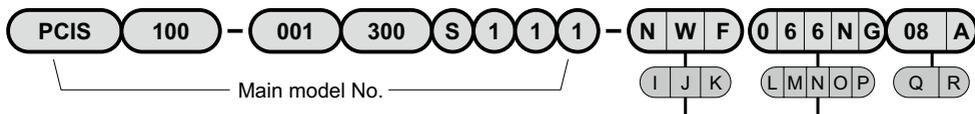
Parallel cam drive	Basic	Wide angle	Table	Standard	Compact
	Roller gear cam drive				
	Option				
	Pick and Place drive				

Linear	Circular
--------	----------

Parallel cam drive

2-1. Model No. with options

Common for index and oscillating series



Product specifications

Compact

Standard

Table

Wide angle

Basic

Parallel cam drive

Linear, Circular, Rack and Pinion drive

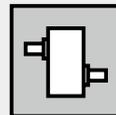
Option

Input/Output shaft specification code

Input shaft specification code (left shaft)		Input shaft specification code (right shaft)		Output shaft specification code	
I		J		K	
N		N		N	
K		K		K	
W / E		W / E		F / X	
V / L		V / L		S / Y	
N	Standard (with keyway)	N	Standard (with keyway)	N	Standard (with keyway)
K	No keyway	K	No keyway (straight shaft)	K	No keyway (straight shaft)
W	With the worm reducer (W: HO reducer, E: TE reducer)	W	With the worm reducer (W: HO reducer, E: TE reducer)	F	With Torque saver (TSF)
E	* Since the specification for the worm reducer is required, determine "Worm reducer installation specification code."	E	* Since the specification for the worm reducer is required, determine "Worm reducer installation specification code."	X	With Torque guard (TGX)
V	With the worm reducer (Extended shaft: HO reducer, L: TE reducer)	V	With the worm reducer (Extended shaft: HO reducer, L: TE reducer)	S	With Torque saver (TSF) + proximity switch for release detection
L	* Since the specification for the worm reducer is required, determine "Worm reducer installation specification code."	L	* Since the specification for the worm reducer is required, determine "Worm reducer installation specification code."	Y	With Torque guard (TGX) + proximity switch for release detection
				Note 2 Since the specifications for a torque saver and a torque guard are required when F, X, S, or Y is selected, determine "Torque saver/guard installation specification code."	

Relationship between the input/output shaft layout and the input/output shaft specification code

Input/Output shaft Layout	S1			S2			S3			R1			R2			R3		
	I	J	K	I	J	K	I	J	K	I	J	K	I	J	K	I	J	K
Available code	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K
	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

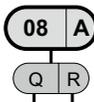


▼ When a worm reducer is installed

Worm reducer installation specification code						
Reducer size		Reduction ratio	Clutch/Brake:		Mounting direction	
03	HO32, TE35	1 1/10 (TE reducer only)	Y	Clutch/Brake: Yes	Left shaft installation	
04	HO40, TE42	2 1/20	N	Clutch/Brake: No		A
05	HO50, TE51	3 1/30				B
06	HO60, TE63	4 1/40				C
08	HO80, TE80	5 1/50			D	
10	HO100, TE100	6 1/60			J	
13	HO135, —	* Those of 1/30 and 1/50 for HO32, HO40 and HO135 have special ratio. Verify the delivery schedule.			K	
15	—, TE150		L			
			M			
			AR			
			BR			
			CR			
			DR			
			E			
			F			
			G			
		H				
		N				
		P				
		Q				
		R				
		ER				
		FR				
		GR				
		HR				

* While a torque saver/guard is installed onto the output shaft and when none of the worm reducer can be installed onto the input shaft, insert a hyphen "-" at (L) and continue with the torque saver/guard installation specification code.
Example: PCIS063-003270S111-NNF-06D

PCIS100-001300S111-NW F066NG



▼ When a torque saver is installed

▼ When a torque guard is installed

Torque saver mounting specification code		Application index size
TSF size	Release torque range	
04	TSF4	040
05	TSF5	050/063
06	TSF6	063/080
08	TSF8	100
11	TSF11	125
14	TSF14	160
18	TSF18	200/250

Torque guard mounting specification code		Application index size
TGX size	Trip torque range	
20	TGX20	050/063
35	TGX35	LC
50	TGX50	MC
70	TGX70	HC

Note 1: When you specify the release (trip) torque of a torque saver/guard, notify CKD of the value. Otherwise, the product will be shipped adjusted at the min. value within the adjusting range.

* Refer to D-589 to 619.

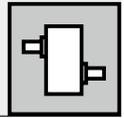
Note 2: The proximity switch for release detection of a torque saver/guard is the NO type. NC type is also available.

Parallel cam drive

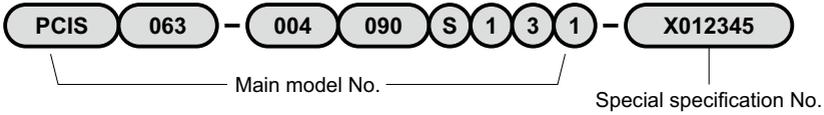
2-2. Examples of model numbers with options / 3. Custom specification model No.

When you place an order with a model number, ensure that it exactly matches what you order. Even if 1 letter is incorrectly written, the product will be different with different specifications. In order for us to deliver what you really want, carefully determine the model number referring to the following examples.

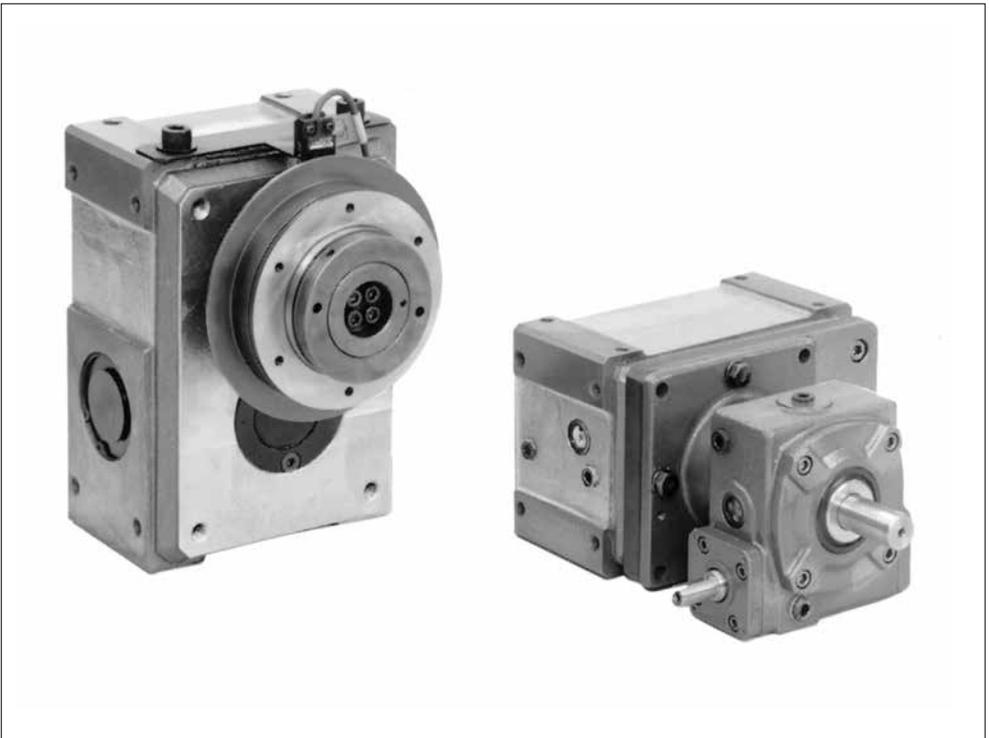
Product specifications	Compact	Roller gear cam drive	<p>Example of model No. (2)</p> <p>PCIS250-004090S135-KKK</p> <p>Input shaft specification</p> <p>Left shaft: No keyway</p> <p>Right shaft: No keyway</p> <p>Output shaft specification</p> <p>No keyway</p>	<p>Example of model No. (3)</p> <p>PCIS160-003180S111-NWN104YQ</p> <p>Input shaft specification</p> <p>Left shaft: Standard</p> <p>Right shaft: Worm reducer installed</p> <p>Output shaft specification: Standard</p> <p>Worm reducer installation specification</p> <p>Reducer size: HO100</p> <p>Reduction ratio: 1/40</p> <p>Clutch/Brake: Yes</p> <p>Mounting direction: Q</p>
	Standard		Standard	
	Table		Table	
	Wide angle		Wide angle	
Basic	Parallel cam drive	<p>Example of model No. (4)</p> <p>PCIS040-004090S115-NNS-04A</p> <p>Input shaft specification</p> <p>Left shaft: Standard</p> <p>Right shaft: Standard</p> <p>Output shaft specification: Torque saver + proximity switch for release detection installed</p> <p>Torque saver mounting specification</p> <p>TSF size: TSF4</p> <p>Release torque range: A</p>	<p>Example of model No. (5)</p> <p>PCIS160-001300S141-WNF102YL14C</p> <p>Input shaft specification</p> <p>Left shaft: Worm reducer installed</p> <p>Right shaft: Standard</p> <p>Output shaft specification: Torque saver installed</p> <p>Worm reducer installation specification</p> <p>Reducer size: HO100</p> <p>Reduction ratio: 1/20</p> <p>Clutch/Brake: Yes</p> <p>Mounting direction: L</p> <p>Torque saver mounting specification</p> <p>TSF size: TSF14</p> <p>Release torque range: C</p>	
Linear	Linear			
Circular	Circular			
Option	Option			



● Special specification model number Common for index and oscillating series



- * Add "-X (6 digit number)" after the main model No. as the special specification number.
- The special specification model number shall be determined after a consultation with the customer.
- Options other than the standard are available upon request. Please provide us with the specifications.
- * High speed specifications (input shaft rotational speed of 200 rpm or higher) are deemed to be special specifications.



Product specifications

Option	Linear	Parallel cam drive	Table	Roller gear cam drive	Standard	Compact
	Circular		Wide angle		Basic	

Parallel cam drive

1. Standard model No. Oscillating series

Product specifications	Product specifications								
	A	B	C		D		E		F
	Model	Distance between shafts		Oscillating angle (ψ)		Total index angle (θ)		Cam curve	Orbit pattern
Compact	PCOS	040	40 mm	015	15°	060	60° (30°×2)	S	<p>When the input shaft starts to rotate from the rotation reference point, the output shaft rotates in sequence from 1 and 2 as in the figure.</p> <p>Input/Output layout [S1] [R1]</p> <p>Output shaft oscillation Reference position (keyway)</p> <p>T (Standard)</p>
Standard		050	50 mm	030	30°	090	90° (45°×2)	C	
		063	63 mm	045	45°	120	120° (60°×2)		
		080	80 mm			180	180° (90°×2)		
		100	100 mm			240	240° (120°×2)		
		125	125 mm			300	300° (150°×2)		
		160	160 mm			360	360° (180°×2)		
		200	200 mm						
Table	Discontinue	250	250 mm						
Wide angle								S	
Basic									

Example of model No. (1)

PCOS080-030240ST15

Shaft interval80 mm

Oscillating angle30°

Total index angle240° (120° × 2)

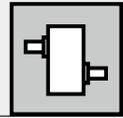
Cam curveMS curve

Orbit patternT

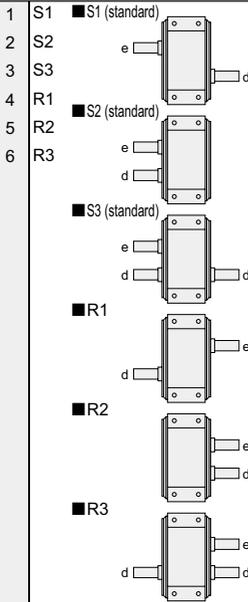
Input/Output layoutS1

Installation positionPosition #5

For details of the timing chart, refer to B-7.



G Input/Output layout

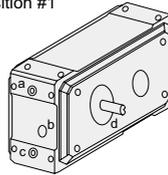


H Installation position

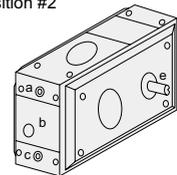
1 Position #1
 2 Position #2
 3 Position #3
 4 Position #4
 5 Position #5
 6 Position #6

Depending on the orientation of the index drive, the oil supply port, the drain port and the oil level gauge will be located at different positions and so it is necessary to choose one of the orientations from (1) to (6).

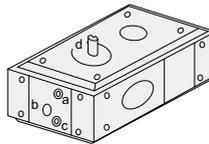
■ Position #1



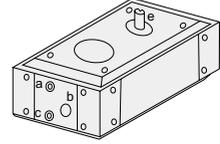
■ Position #2



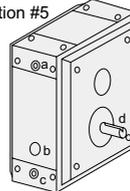
■ Position #3



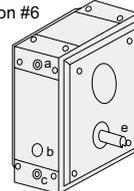
■ Position #4



■ Position #5

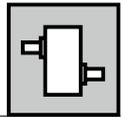


■ Position #6



a: Oil supply port b: Oil level gauge c: Drain port d: Input shaft e: Output shaft

* When a torque saver (optional) and a torque guard (optional) are added, the code will be either 1 (S1) or 4 (R1).



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	480	280
Allowable radial force	N	350	200
Allowable bending moment	N·m	18	-
Moment of inertia	kg·m ²	1.09 × 10 ⁻⁴	1.29 × 10 ⁻⁴

Descriptions	Unit	Characteristics
Internal frictional torque (Tin)	N·m	1.1
Product weight	kg	3
Oil level	ℓ	0.12
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	± 90
	2 dwell	± 180
	3 dwell	-
	4 dwell	-
Repeatability		90

Oscillating accuracy (sec.)	
Indexing accuracy	± 180
Repeatability	90

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **PCIS 040** Cam curve/MS

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1								○	○
	2			○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○
2 dwell	6		○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○

Cam curve/MC

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1					○	○	○	○	○
	2		○	○	○	○	○	○	○	○

Oscillating series **RCOS 040** Cam curve/MS

Total index angle (θt)		60	90	120	180	240	300	360
Oscillating angle (ψ)								
45				○	○	○	○	○
30			○	○	○	○	○	○
15		○	○	○	○	○	○	○

Product specifications

Compact

Standard

Roller gear cam drive

Table

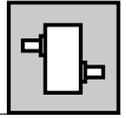
Wide angle

Basic

Parallel cam drive

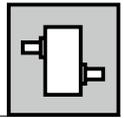
Pick and Place drive
Linear Circular

Option



Product specifications

Option	Pick and Place drive Linear Circular	Roller gear cam drive			Compact
		Parallel cam drive	Wide angle	Table	
		Basic		Standard	



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	1100	650
Allowable radial force	N	780	520
Allowable bending moment	N·m	26	-
Moment of inertia	kg·m ²	3.51×10^{-4}	3.18×10^{-4}

Descriptions	Unit	Characteristics
Internal frictional torque (Tin)	N·m	1.7
Product weight	kg	6
Oil level	ℓ	0.2
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	± 60
	2 dwell	± 140
	3 dwell	-
	4 dwell	-
Repeatability		60

Oscillating accuracy (sec.)	
Indexing accuracy	± 140
Repeatability	60

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **PCIS 050** Cam curve/MS

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1								○	○
	2			○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○
2 dwell	6		○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○

Cam curve/MC

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1					○	○	○	○	○
	2		○	○	○	○	○	○	○	○

Oscillating series **RCOS 050** Cam curve/MS

Total index angle (θt)		60	90	120	180	240	300	360
Oscillating angle (ψ)								
45				○	○	○	○	○
30			○	○	○	○	○	○
15	○	○	○	○	○	○	○	○

Product specifications

Compact

Standard

Roller gear cam drive

Table

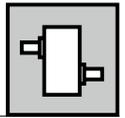
Wide angle

Basic

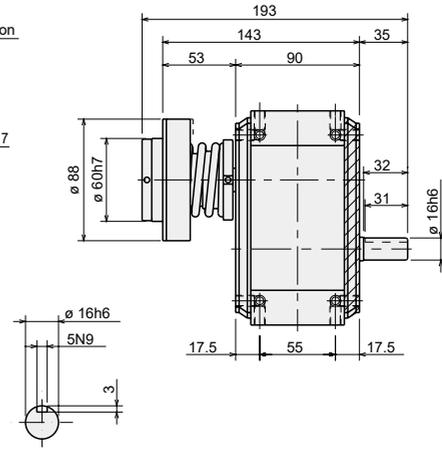
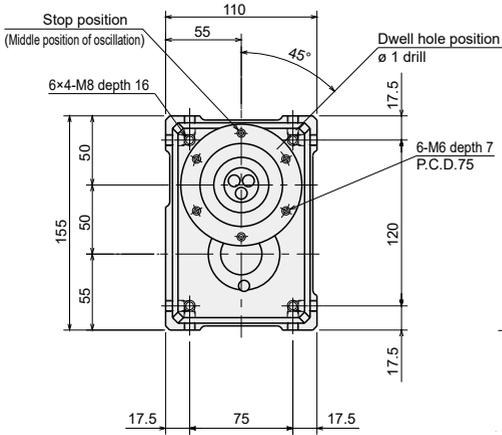
Parallel cam drive

Pick and Place drive
Linear Circular

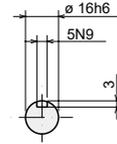
Option



With Torque saver (TSF5)



Input shaft



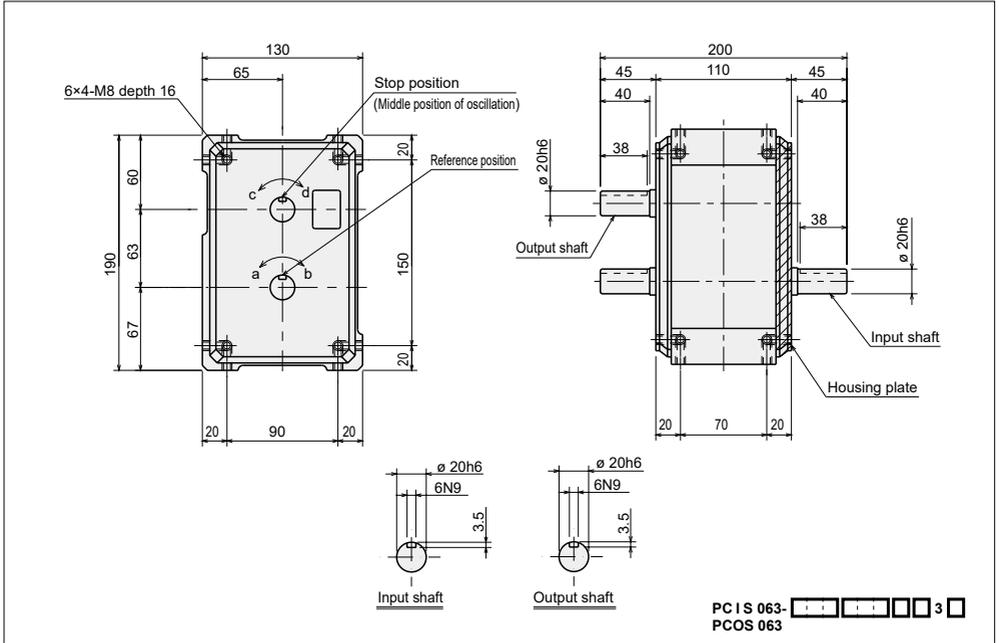
PC I S 050- [] [] [] [] [] 1 [] -NNF-05 []
 PCOS 050

Product specifications

Option	Roller gear cam drive	Standard	Compact
	Wide angle	Table	
	Basic		
	Parallel cam drive		
Pick and Place drive	Linear		
	Circular		

● Standard specifications

Dimensions



PC I S 063- 3

Installation position and oil supply/drain port and oil level gauge positions

- Oil fill/drain port (Rc^{1/4})
- Oil level gauge (ø 20)

Installation position	1	2	3
Series	PCIS/PCOS	PCIS/PCOS	PCIS/PCOS
Dimensions			
Installation position	4	5	6
Series	PCIS/PCOS	PCIS/PCOS	PCIS/PCOS
Dimensions			

Product specifications

Compact

Standard

Table

Roller gear cam drive

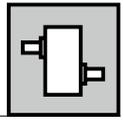
Wide angle

Basic

Parallel cam drive

Linear, Circular, Rack and Pinion

Option



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	2500	1800
Allowable radial force	N	1800	1400
Allowable bending moment	N·m	52	-
Moment of inertia	kg·m ²	8.01×10^{-4}	1.27×10^{-3}

Descriptions	Unit	Characteristics
Internal frictional torque (Tin)	N·m	3.1
Product weight	kg	11
Oil level	ℓ	0.4
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	±60
	2 dwell	±90
	3 dwell	-
	4 dwell	-
Repeatability		60

Oscillating accuracy (sec.)	
Indexing accuracy	±90
Repeatability	60

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **PCIS 063** Cam curve/MS

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1								○	○
	2			○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○
2 dwell	6		○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○

Cam curve/MC

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1					○	○	○	○	○
	2		○	○	○	○	○	○	○	○

Oscillating series **PCOS 063** Cam curve/MS

Total index angle (θt)		60	90	120	180	240	300	360
Oscillating angle (ψ)								
45				○	○	○	○	○
30			○	○	○	○	○	○
15	○	○	○	○	○	○	○	○

Product specifications

Compact

Standard

Roller gear cam drive

Table

Wide angle

Basic

Parallel cam drive

Pick and Place drive
Linear Circular

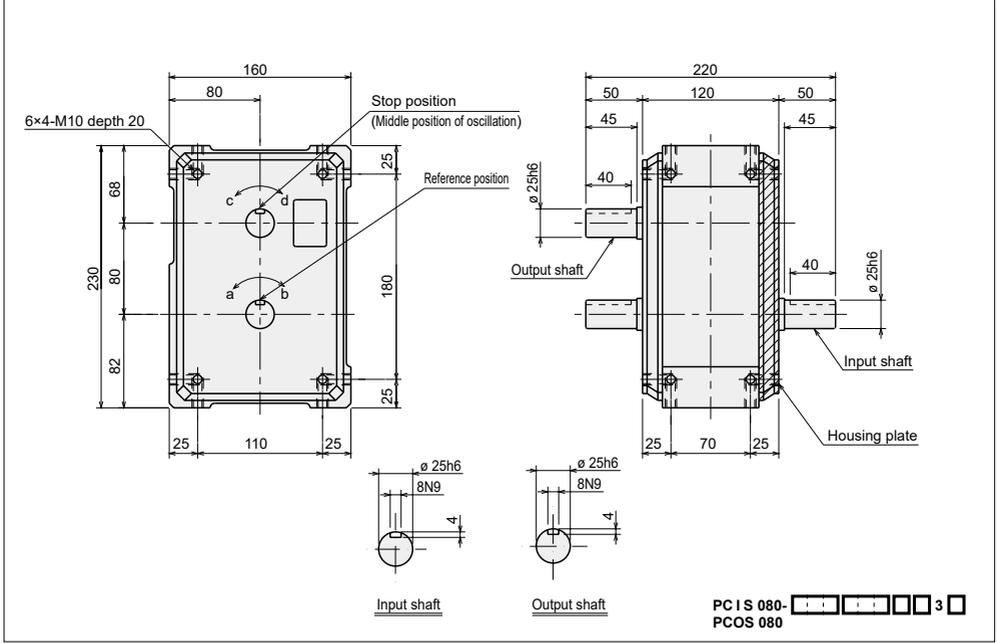
Option

Difference between shafts: **80** mm

Index	PC I S 080
Oscillator	PCOS 080

● Standard specifications

Dimensions



PC I S 080- 3

Installation position and oil supply/drain port and oil level gauge positions

- Oil fill/drain port (Rc^{3/8})
- Oil level gauge (ø 30)

Installation position	1	2	3
Series	PCIS/PCOS	PCIS/PCOS	PCIS/PCOS
Dimensions			
Installation position	4	5	6
Series	PCIS/PCOS	PCIS/PCOS	PCIS/PCOS
Dimensions			

Product specifications

Compact

Standard

Table

Roller gear cam drive

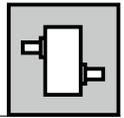
Wide angle

Basic

Parallel cam drive

Linear Circular Rack and Pinion

Option



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	3500	2500
Allowable radial force	N	2700	1800
Allowable bending moment	N·m	110	-
Moment of inertia	kg·m ²	2.23 × 10 ⁻³	3.73 × 10 ⁻³

Descriptions	Unit	Characteristics
Internal frictional torque (Tin)	N·m	4.9
Product weight	kg	19
Oil level	ℓ	0.6
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	± 60
	2 dwell	± 90
	3 dwell	-
	4 dwell	-
Repeatability		60

Oscillating accuracy (sec.)	
Indexing accuracy	± 90
Repeatability	60

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **PCIS 080** Cam curve/MS

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1								○	○
	2			○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○
2 dwell	6		○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○

Cam curve/MC

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1					○	○	○	○	○
	2		○	○	○	○	○	○	○	○

Oscillating series **PCOS 080** Cam curve/MS

Total index angle (θt)		60	90	120	180	240	300	360
Oscillating angle (ψ)								
45				○	○	○	○	○
30			○	○	○	○	○	○
15	○	○	○	○	○	○	○	○

Product specifications

Compact

Standard

Roller gear cam drive

Table

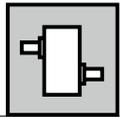
Wide angle

Basic

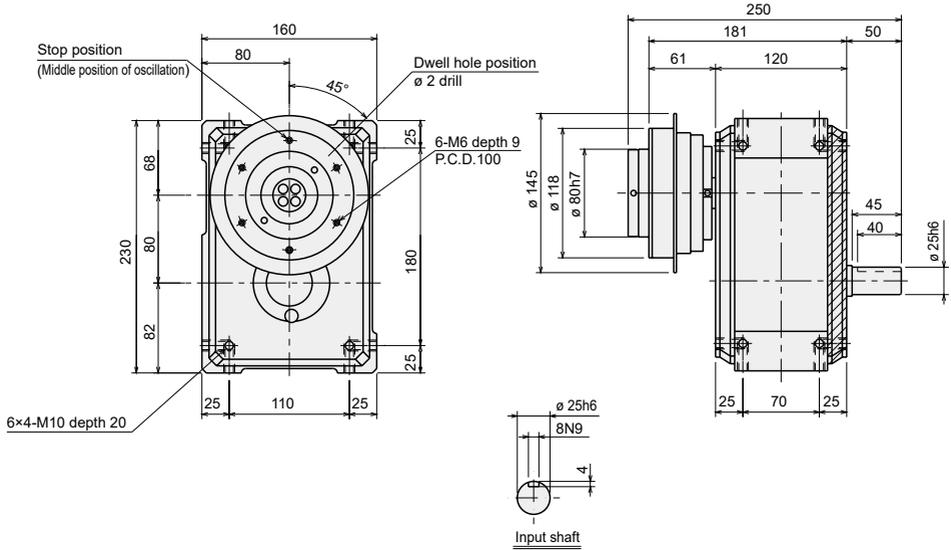
Parallel cam drive

Pick and Place drive
Linear Circular

Option



With Torque saver (TSF6)



PC I S 080- 1 -NNF-06
PCOS 080

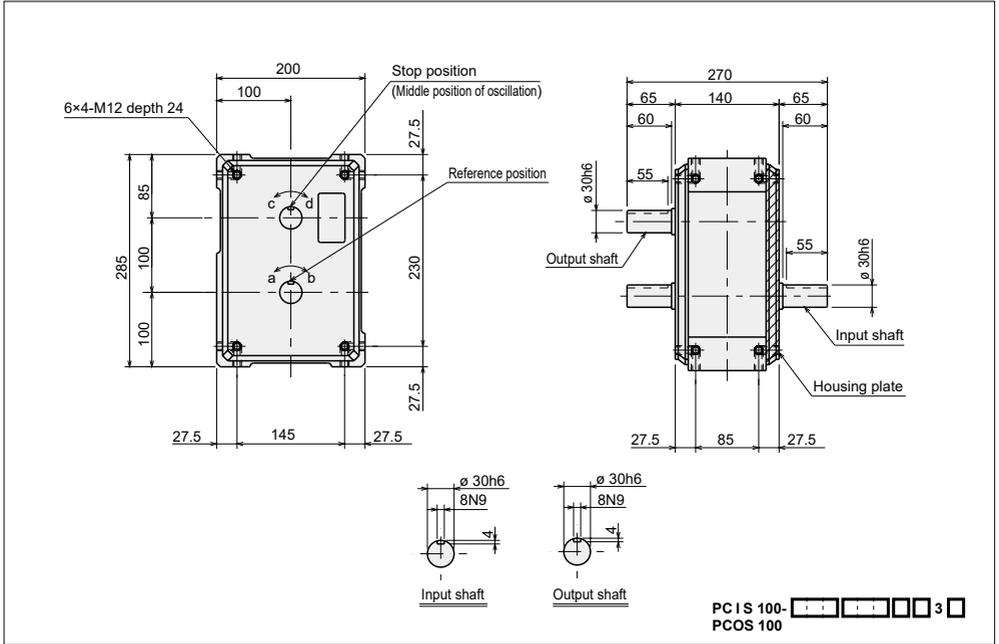
Product specifications

Option	Roller gear cam drive	Compact
	Table	Standard
Basic	Wide angle	Table
	Parallel cam drive	Basic
Pick and Place drive	Linear	Parallel cam drive
	Circular	Wide angle

Index	PC I S 100
Oscillator	PCOS 100

● Standard specifications

Dimensions



Installation position and oil supply/drain port and oil level gauge positions

- Oil fill/drain port (Rc^{3/8})
- Oil level gauge (ø 30)

Installation position	1	2	3
Series	PCIS/PCOS	PCIS/PCOS	PCIS/PCOS
Dimensions			
Installation position	4	5	6
Series	PCIS/PCOS	PCIS/PCOS	PCIS/PCOS
Dimensions			

Product specifications

Compact

Standard

Table

Roller gear cam drive

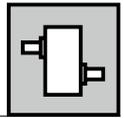
Wide angle

Basic

Parallel cam drive

Linear, Circular, Rack and Pinion

Option



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	5000	3500
Allowable radial force	N	3800	2500
Allowable bending moment	N·m	190	-
Moment of inertia	kg·m ²	7.04×10^{-3}	1.04×10^{-2}

Descriptions	Unit	Characteristics
Internal frictional torque (Tin)	N·m	7.7
Product weight	kg	32
Oil level	ℓ	1.2
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	± 60
	2 dwell	± 90
	3 dwell	-
	4 dwell	-
Repeatability		60

Oscillating accuracy (sec.)	
Indexing accuracy	± 90
Repeatability	60

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **PCIS 100** Cam curve/MS

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1								○	○
	2			○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○
2 dwell	6		○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○

Cam curve/MC

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1					○	○	○	○	○
	2		○	○	○	○	○	○	○	○

Oscillating series **PCOS 100** Cam curve/MS

Total index angle (θt)		60	90	120	180	240	300	360
Oscillating angle (ψ)								
45				○	○	○	○	○
30			○	○	○	○	○	○
15	○	○	○	○	○	○	○	○

Product specifications

Compact

Standard

Roller gear cam drive

Table

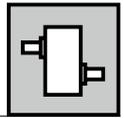
Wide angle

Basic

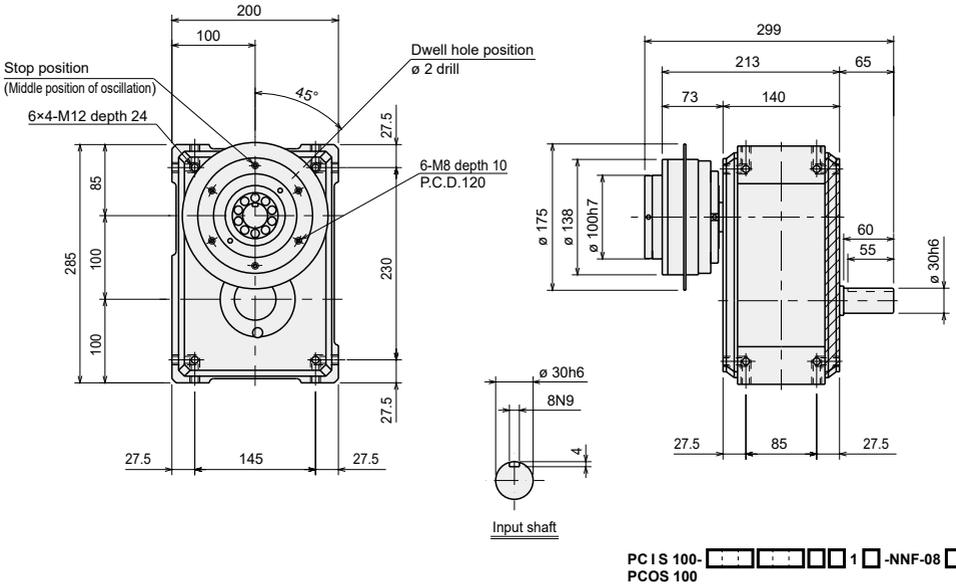
Parallel cam drive

Pick and Place drive
Linear Circular

Option



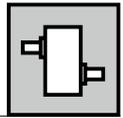
With Torque saver (TSF8)



Product specifications

Option	Piez and Pne drive Linear Circular	Roller gear cam drive		
		Wide angle	Table	Standard
		Basic	Compact	

Parallel cam drive



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	5800	4000
Allowable radial force	N	5200	3200
Allowable bending moment	N·m	260	-
Moment of inertia	kg·m ²	1.86 × 10 ⁻²	3.06 × 10 ⁻²

Descriptions	Unit	Characteristics
Internal frictional torque (Tin)	N·m	12
Product weight	kg	62
Oil level	ℓ	2.5
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	± 60
	2 dwell	± 90
	3 dwell	-
	4 dwell	-
Repeatability		60

Oscillating accuracy (sec.)	
Indexing accuracy	± 90
Repeatability	60

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **PCIS 125** Cam curve/MS

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1								○	○
	2			○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○
2 dwell	6		○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○

Cam curve/MC

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1					○	○	○	○	○
	2		○	○	○	○	○	○	○	○

Oscillating series **PCOS 125** Cam curve/MS

Total index angle (θt)		60	90	120	180	240	300	360
Oscillating angle (ψ)								
45				○	○	○	○	○
30			○	○	○	○	○	○
15	○	○	○	○	○	○	○	○

Product specifications

Compact

Standard

Roller gear cam drive

Table

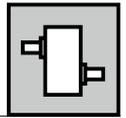
Wide angle

Basic

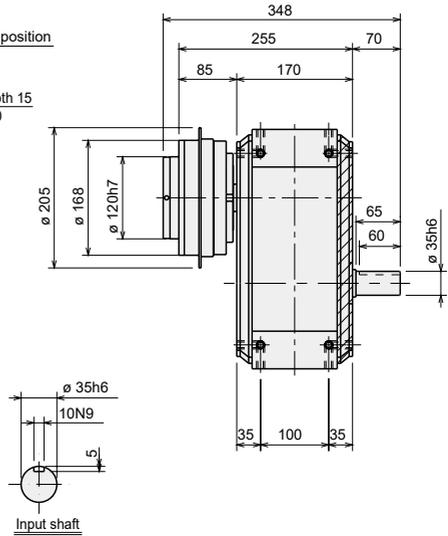
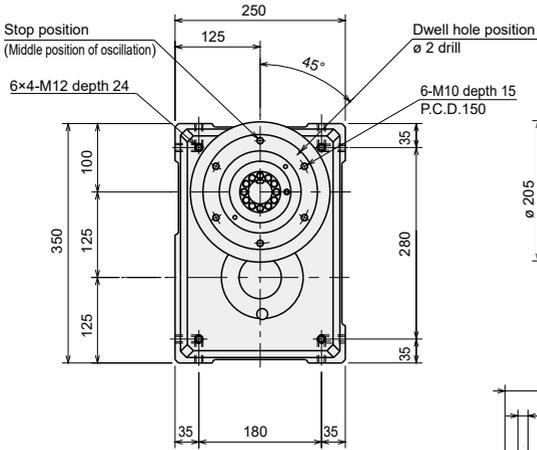
Parallel cam drive

Pick and Place drive
Linear Circular

Option



With Torque saver (TSF11)



PC I S 125- 1 -NNF-11
 PCOS 125

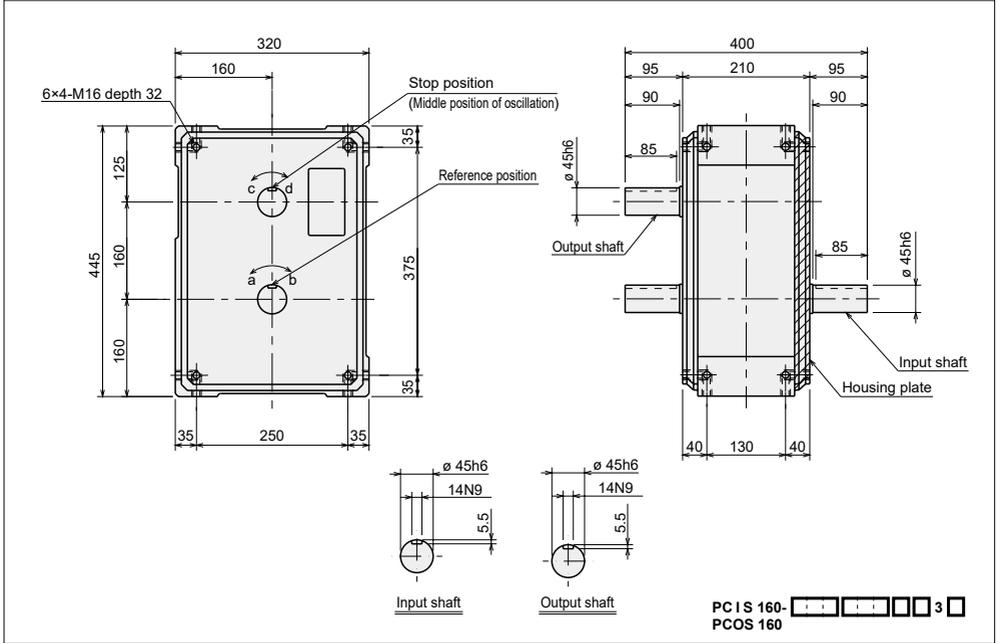
Product specifications

Option	Pick and Place drive Linear	Parallel cam drive	Roller gear cam drive		
			Table	Standard	Compact
Basic	Wide angle	Paralle cam drive	Roller gear cam drive		
			Table	Standard	Compact

Index	PC I S 160
Oscillator	PCOS 160

● Standard specifications

Dimensions



Installation position and oil supply/drain port and oil level gauge positions

- Oil fill/drain port (Rc $1/2$)
- Oil level gauge ($\varnothing 30$)

Installation position	1	2	3
Series	PCIS/PCOS	PCIS/PCOS	PCIS/PCOS
Dimensions			
Installation position	4	5	6
Series	PCIS/PCOS	PCIS/PCOS	PCIS/PCOS
Dimensions			

Product specifications

Compact

Standard

Table

Roller gear cam drive

Wide angle

Basic

Parallel cam drive

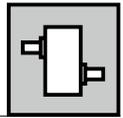
Linear

Circular

Piston and

Piston drive

Option



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	8000	6200
Allowable radial force	N	6500	4000
Allowable bending moment	N·m	340	-
Moment of inertia	kg·m ²	0.084	0.11

Descriptions	Unit	Characteristics
Internal frictional torque (Tin)	N·m	20
Product weight	kg	130
Oil level	ℓ	4
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	± 60
	2 dwell	± 90
	3 dwell	-
	4 dwell	-
Repeatability		60

Oscillating accuracy (sec.)	
Indexing accuracy	± 90
Repeatability	60

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **PCIS 160** Cam curve/MS

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1								○	○
	2			○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○
2 dwell	6		○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○

Cam curve/MC

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1					○	○	○	○	○
	2			○	○	○	○	○	○	○

Oscillating series **PCOS 160** Cam curve/MS

Total index angle (θt)		60	90	120	180	240	300	360
Oscillating angle (ψ)								
45				○	○	○	○	○
30			○	○	○	○	○	○
15	○	○	○	○	○	○	○	○

Product specifications

Compact

Standard

Roller gear cam drive

Table

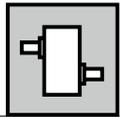
Wide angle

Basic

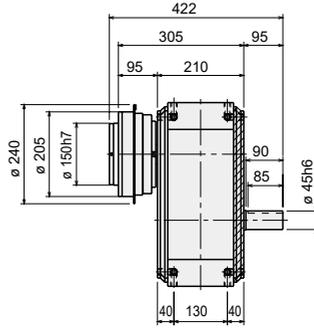
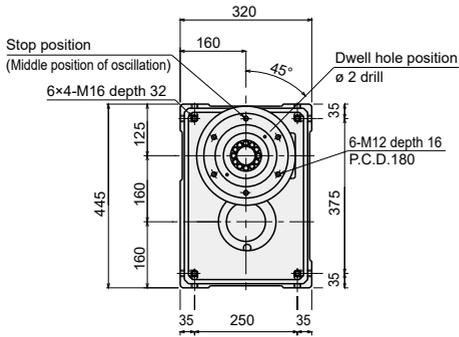
Parallel cam drive

Pick and Place drive
Linear
Circular

Option



With Torque saver (TSF14)



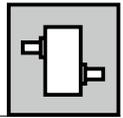
Input shaft

PC I S 160- 1 -NNF-14

PCOS 160

Product specifications

Pick and Place drive Linear Circular	Roller gear cam drive		
	Table	Standard	Compact
	Wide angle		
	Basic		
Option	Parallel cam drive		



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	14000	10000
Allowable radial force	N	11000	7500
Allowable bending moment	N·m	1200	-
Moment of inertia	kg·m ²	0.19	0.32

Descriptions	Unit	Characteristics
Internal frictional torque (Tin)	N·m	31
Product weight	kg	240
Oil level	ℓ	7
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	± 60
	2 dwell	± 90
	3 dwell	-
	4 dwell	-
Repeatability		60

Oscillating accuracy (sec.)	
Indexing accuracy	± 90
Repeatability	60

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **PCIS 200** Cam curve/MS

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1								○	○
	2			○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○
2 dwell	6		○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○

Cam curve/MC

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1					○	○	○	○	○
	2		○	○	○	○	○	○	○	○

Oscillating series **PCOS 200** Cam curve/MS

Total index angle (θt)		60	90	120	180	240	300	360
Oscillating angle (ψ)								
45				○	○	○	○	○
30			○	○	○	○	○	○
15	○	○	○	○	○	○	○	○

Product specifications

Compact

Standard

Roller gear cam drive

Table

Wide angle

Basic

Parallel cam drive

Pick and Place drive
Linear Circular

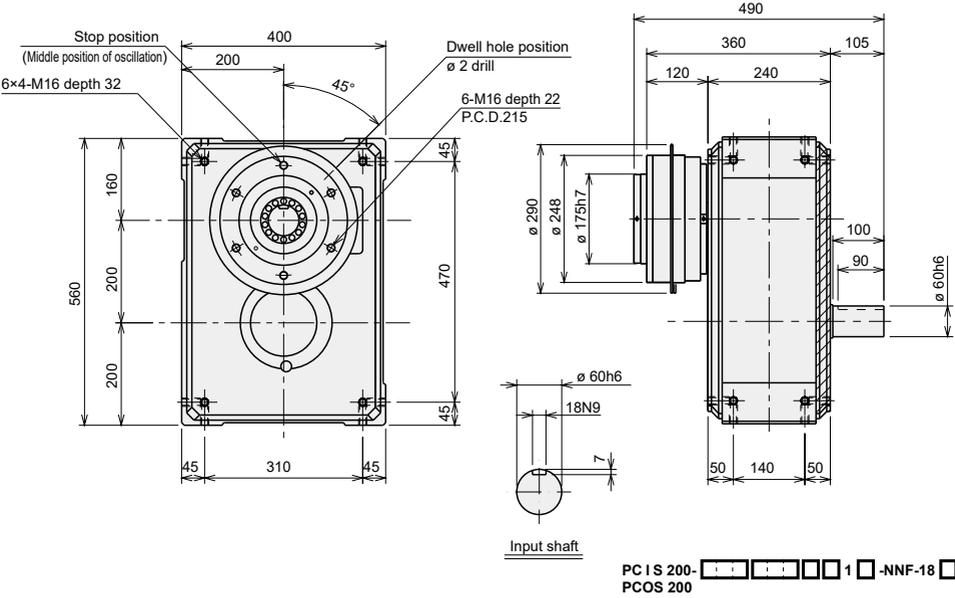
Option

Index	PC I S 200
Oscillator	PCOS 200

● Dimensions with options

With Torque saver (TSF18)

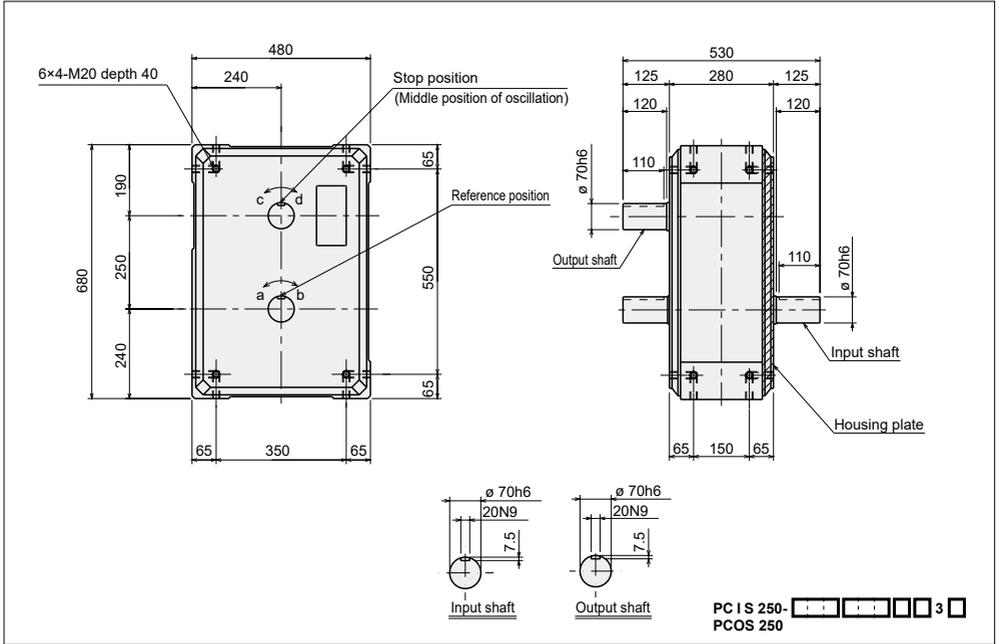
Product specifications	Compact
	Standard
Roller gear cam drive	Table
	Wide angle
Basic	Parallel cam drive
Option	Linear Circular Pico and Pico drive



Index	PC I S 250
Oscillator	PCOS 250

● Standard specifications

Dimensions



PC I S 250- [] [] [] [] [] 3 []
PCOS 250

- Oil fill/drain port (Rc 1/2)
- Oil level gauge ($\varnothing 30$)

Installation position and oil supply/drain port and oil level gauge positions

Installation position	1	2	3
Series	PCIS/PCOS	PCIS/PCOS	PCIS/PCOS
Dimensions			
Installation position	4	5	6
Series	PCIS/PCOS	PCIS/PCOS	PCIS/PCOS
Dimensions			

Product specifications

Compact

Standard

Table

Roller gear cam drive

Wide angle

Basic

Parallel cam drive

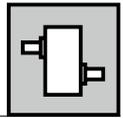
Linear

Circular

Pico and

Pico drive

Option



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	18000	15000
Allowable radial force	N	15000	12000
Allowable bending moment	N·m	2100	-
Moment of inertia	kg·m ²	0.51	0.73

Descriptions	Unit	Characteristics
Internal frictional torque (Tin)	N·m	48
Product weight	kg	400
Oil level	ℓ	13
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	± 60
	2 dwell	± 90
	3 dwell	-
	4 dwell	-
Repeatability		60

Oscillating accuracy (sec.)	
Indexing accuracy	± 90
Repeatability	60

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **PCIS 250** Cam curve/MS

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1								○	○
	2			○	○	○	○	○	○	○
	3	○	○	○	○	○	○	○	○	○
	4	○	○	○	○	○	○	○	○	○
2 dwell	6		○	○	○	○	○	○	○	○
	8	○	○	○	○	○	○	○	○	○

Cam curve/MC

Total index angle (θt)		90	120	150	180	210	240	270	300	330
Index number (n)										
1 dwell	1					○	○	○	○	○
	2		○	○	○	○	○	○	○	○

Oscillating series **PCOS 250** Cam curve/MS

Total index angle (θt)		60	90	120	180	240	300	360
Oscillating angle (ψ)								
45				○	○	○	○	○
30			○	○	○	○	○	○
15	○	○	○	○	○	○	○	○

Product specifications

Compact

Standard

Roller gear cam drive

Table

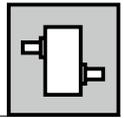
Wide angle

Basic

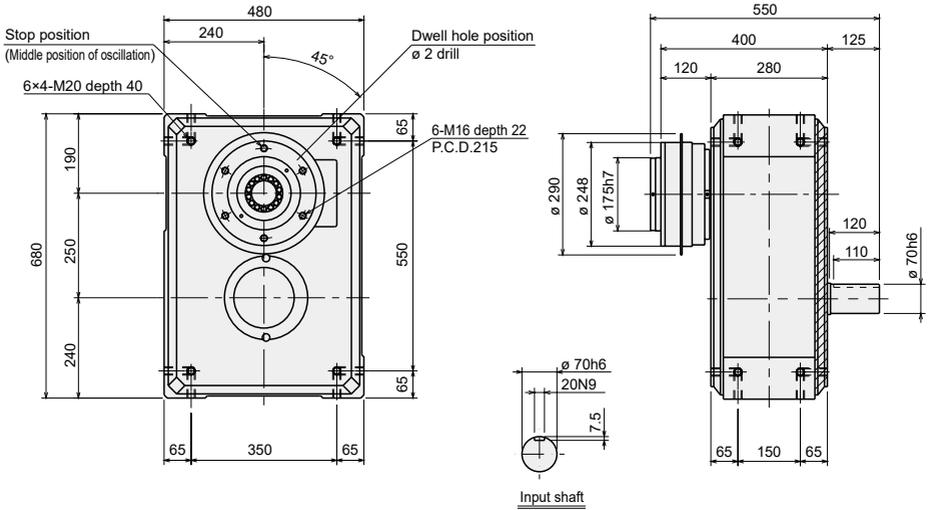
Parallel cam drive

Pick and Place drive
Linear Circular

Option



With Torque saver (TSF18)



PC 1 S 250- 1 -NNF-18

Product specifications

Option	Roller gear cam drive	Compact
	Table	Standard
Basic	Wide angle	Table
	Parallel cam drive	Basic
Pick and Place drive	Linear	Linear
	Circular	Circular