

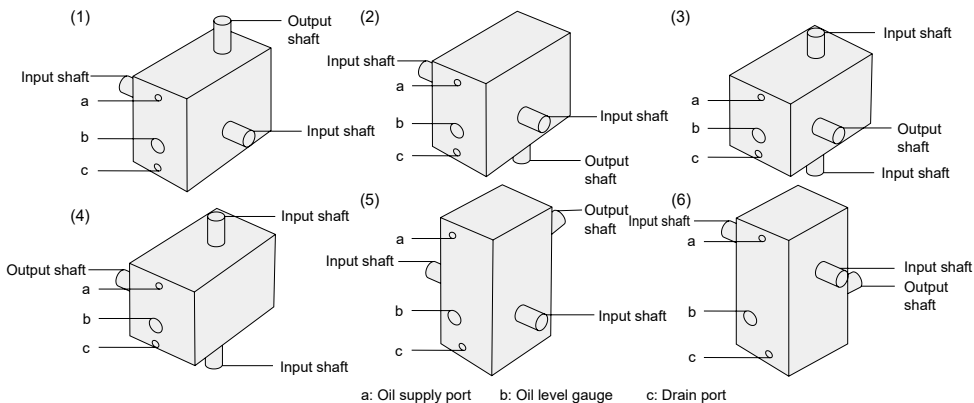
Common specifications



1. Installation position

For the positions of the oil fill/drain ports and the oil level gauge, refer to the dimensions page for each size.

Depending on position of index drive, oil supply port, drain port and oil level gauge are located at different positions. You need to choose 1 of the correct positions from (1) to (6).

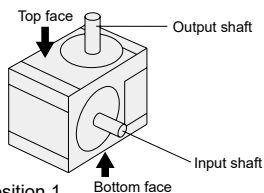


2. Housing mounting holes: mounting holes all machined on the 6 faces of the housing.

3. Housing material/Fc

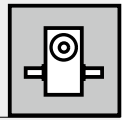
4. Housing dowel pin hole dimensions (custom order)

When housing dowel pin holes are added, the dimensions below should be standard:

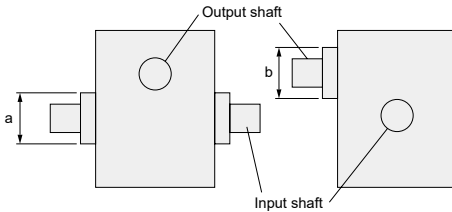


Size	063	080	110	140	180	250
Top face						
Bottom face						
Standard hole diameter	2-ø6H7 depth 9	2-ø8H7 depth 12	2-ø10H7 depth 15	2-ø13H7 depth 20	2-ø13H7 depth 20	2-ø16H7 depth 24

* For the tolerance of positioning pins on the lower face, contact CKD.



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



Dimensions Size	a	b
063	ø 17	ø 20
080	ø 25	ø 25
110	ø 28	ø 30
140	ø 32	ø 35
180	ø 42	ø 42
250	ø 55	ø 55

6. Optional worm reducer

Standard worm reducers

Main model No.		HO reducer size	Reduction ratio Value in () represents the special reduction ratio.	TE reducer side	Reduction ratio
RGIL	063	HO 32	1/20, 1/40, 1/60 (1/30, 1/50)	TE 35	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	080	HO 40	1/20, 1/40, 1/60 (1/30, 1/50)	TE 42	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	110	HO 50	1/20, 1/30, 1/40 1/50, 1/60	TE 51	1/10, 1/20, 1/30 1/40, 1/50, 1/60
RGOL	140	HO 60	1/20, 1/30, 1/40 1/50, 1/60	TE 63	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	180	HO 80	1/20, 1/30, 1/40 1/50, 1/60	TE 80	1/10, 1/20, 1/30 1/40, 1/50, 1/60
	250	HO 100	1/20, 1/30, 1/40 1/50, 1/60	TE 100	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.

7.Option/Input shaft - with rotation detection cam + proximity switch

Proximity switch model No.

Body shaft interval	SW model No.	Manufacturer
063 { 110	E2S-Q23	OMRON
140 { 250	E2E-X2E1	

8.Optional torque saver (TSF4 - TSF14) Torque guard (TGX20 - TGX70) + release detection proximity switch

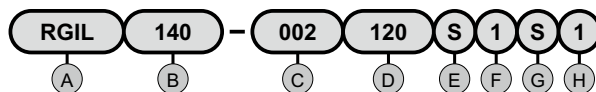
Proximity switch model No.

Torque saver Torque guard	SW model No.	Manufacturer
TSF4	TL-W3MC1	OMRON
TSF5 ⌋	TL-W5MC1	
TSF14		
TGX20 ⌋		
TGX70		

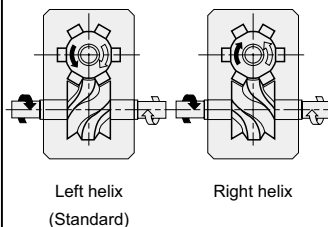
Wide angle

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 Cam helix direction/dwell No.	
RGIL	063	63 mm	002	2	045	45°	S	MS curve (Standard)	1	Left helix/1 dwell	
	080	80 mm	003	3	060	60°	C T	MC curve (MCV50) MT curve	5	Right helix/1 dwell * For Wide angle, the number of dwell interval is limited to 1.	
	110	110 mm	004	4	090	90°					
	140	140 mm	006	6	120	120°					
	180	180 mm	008	8	150	150°					
	250	250 mm			180	180°					
					210	210°					
					240	240°					



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

Example of model No. (1)

RGIL063-003090S5S1

Shaft interval 63 mm

Index number 3

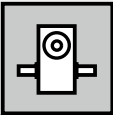
Total index angle 90°

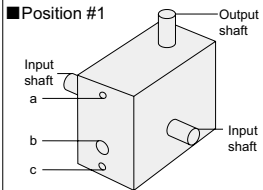
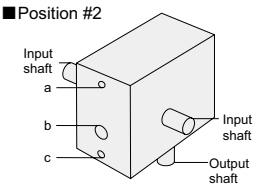
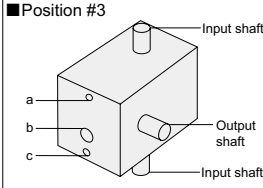
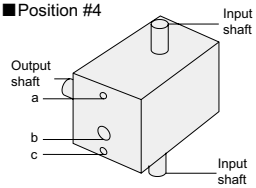
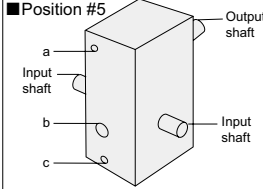
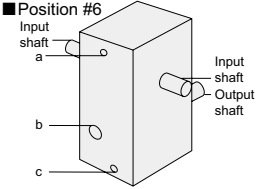
Cam curve MS curve

Spiral direction of the cam Right helix

Shape of the output shaft Straight

Installation position Position #1



G Shape of the output shaft		H Installation position	
S Straight	1	Position #1	
	2	Position #2	
	3	Position #3	
	4	Position #4	
	5	Position #5	
	6	Position #6	

a: Oil supply port b: Oil level gauge c: Drain port

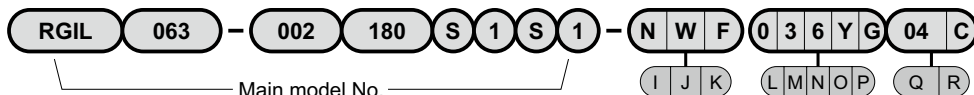
Product specifications

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

Wide angle

2-1. Model No. with options

Common for index and oscillating series



Product specifications

Compact

Standard

Table

Wide angle

Basic

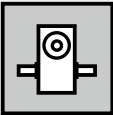
Parallel cam drive

Linear
Circular
Pulse and
Phase drive

Option

Input/Output shaft specification code

① Input shaft specification code (left shaft)		② Input shaft specification code (right shaft)		③ Output shaft specification code	
N		N		N	
K		K		K	
C		C		F / A / X / C	
W		W		S / B / Y / D	
J		J			Note 2
N	Standard (with keyway)			N	Standard (with keyway)
K	No keyway			K	No keyway (straight shaft)
C	Cutoff * This is cut off at the stepped spot. It will protrude from the housing. Verify the dimensions with the diagram.			F	With Torque saver (TSF)
W	With the worm reducer (W: HO reducer, E: TE reducer)			A	With Torque saver (TSF)
E	* Since the specification for the worm reducer is required, determine "Worm reducer installation specification code."			X	With Torque guard (TGX)
J	Input shaft - with rotation detection cam + proximity switch (1 station) * Double or higher are custom order items. (When the input shaft is rotated in both directions, double may be required.) * The proximity switch detects 2 spots for the oscillation setup.			C	With Torque guard (TGX)
				S	(Output shaft without keyway)
				B	Torque saver (TSF)
				Y	+ With proximity switch for release detection
				D	(Output shaft without keyway)
					+ With proximity switch for release detection
					(Output shaft without keyway)
					Since the specifications for a torque saver and a torque guard are required when F, A, X, C, S, B, Y, or D is selected, determine "Torque saver/guard installation specification code."



▼ When a worm reducer is installed

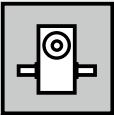
Worm reducer installation specification code										
Reducer size		Reduction ratio		Clutch/Brake:		Mounting direction				
L	M	N		O		P				
03	HO32, TE35	1	1/10 (TE reducer only)	Y	Clutch/Brake: Yes	Left shaft installation	A	B	C	D
04	HO40, TE42	2	1/20	N	Clutch/Brake: No		J	K	L	M
05	HO50, TE51	3	1/30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

Wide angle

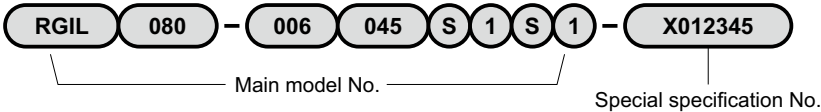
2-2. Examples of model numbers with options / 3. Custom specification model No.

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.

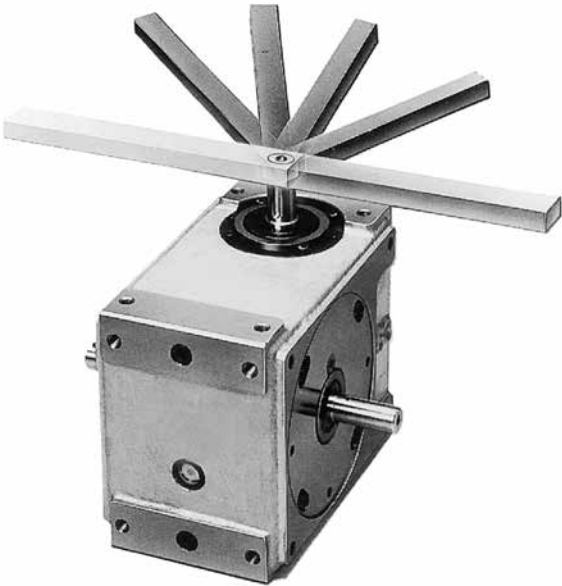
Product specifications	Compact	Example of model No. (2)		Example of model No. (3)	
		RGIL110-004060S1S5-NJK		RGIL250-004060S1S1-WNN104YL	
		Input shaft specification		Input shaft specification	
		Left shaft: Standard		Left shaft: Worm reducer installed	
Standard	Roller gear cam drive	Right shaft: Input shaft - with rotation detection cam + proximity switch (1 station)		Right shaft: Standard	
		Output shaft specification		Output shaft specification: Standard	
		No keyway		Worm reducer installation specification	
				Reducer size: HO100	
Table	Wide angle			Reduction ratio: 1/40	
				Clutch/Brake: Yes	
				Mounting direction: L	
Basic	Parallel cam drive	Example of model No. (4)		Example of model No. (5)	
		RGIL080-003120S1S5-NNF-05B		RGIL180-003150C1S1-JWF086YG11B	
		Input shaft specification		Input shaft specification	
		Left shaft: Standard		Left shaft: Input shaft - with rotation detection cam + proximity switch (1 station)	
Option	Linear and Circular	Right shaft: Standard		Right shaft: Worm reducer installed	
		Output shaft specification: Torque saver installed		Output shaft specification: Torque saver installed	
		TSF installation specifications		Worm reducer installation specification	
		TSF size: TSF5		Reducer size: HO80	
		Release torque range: B		Reduction ratio: 1/60	
				Clutch/Brake: Yes	
				Mounting direction: G	
				Torque saver mounting specification	
				TSF size: TSF11	
				Release torque range: B	



● 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.



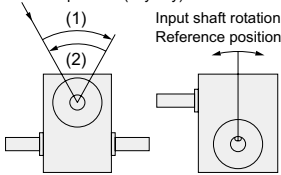
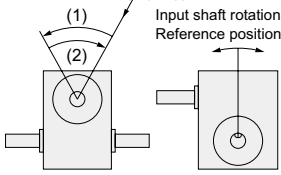
Product specifications

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

Wide angle

1. Standard model No. Oscillating series

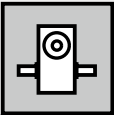
Product specifications

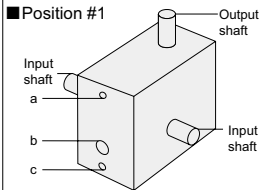
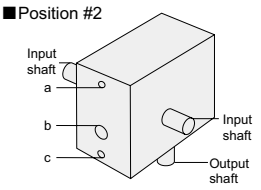
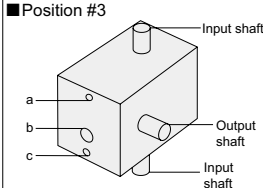
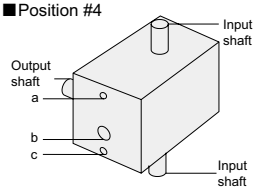
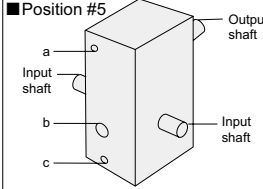
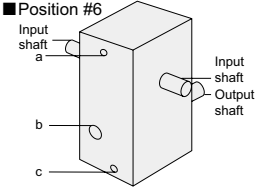
Compact		Standard		Table		Wide angle		Basic			
Roller gear cam drive											
A Model		B Distance between shafts		C Oscillating angle (ψ)		D Total index angle (θt)		E Cam curve		F Orbit pattern	
RGOL		063	63 mm	180	180°	090	90° (45°×2)	S	MS curve (Standard)	T	When the input shaft starts to rotate from the rotation reference point, the output shaft rotates in sequence from 1 and 2 as in the figure. Output shaft oscillation Reference position (keyway)  S 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. Output shaft oscillation Reference position (keyway)  For details of the timing chart, Refer to B-7.
	080	80 mm	120	120°	120	120° (60°×2)	C	MC curve (MCV50)			
	110	110 mm	090	90°	180	180° (90°×2)	T	MT curve			
	140	140 mm	060	60°	240	240° (120°×2)					
	180	180 mm	045	45°	300	300° (150°×2)					
	250	250 mm			360	360° (180°×2)					

Example of model No. (1)

RGOL080-120180STS1

Shaft interval80 mm
 Oscillating angle120°
 Total index angle180° (90° × 2)
 Cam curveMS curve
 Orbit patternT
 Shape of the output shaftStraight
 Installation positionPosition #1



G Shape of the output shaft		H Installation position	
S Straight	1	Position #1	
	2	Position #2	
	3	Position #3	
	4	Position #4	
	5	Position #5	
	6	Position #6	

a: Oil supply port b: Oil level gauge c: Drain port

Product specifications

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

Pick and Place drive	Linear
	Circular

Difference
between shafts: **63** mm

Discontinue

Index

RG I L 063

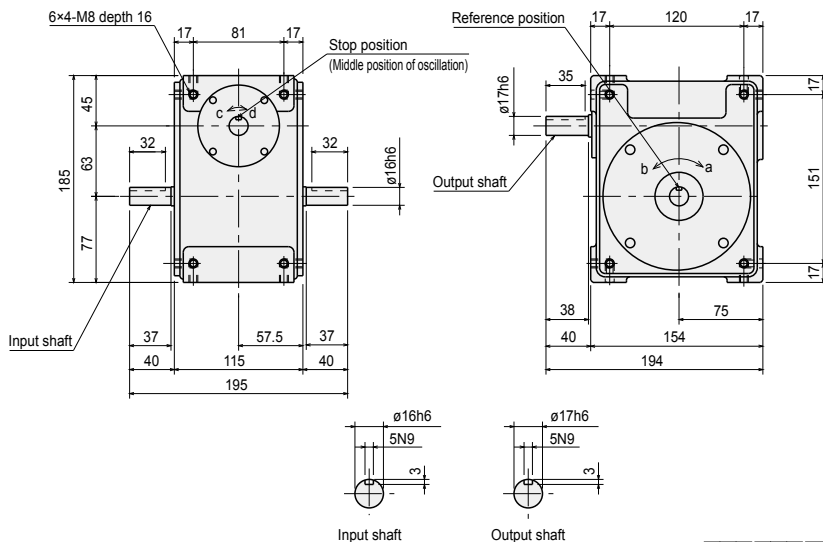
Oscillator

RGOL 063

Wide angle

● Standard specifications

Dimensions

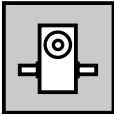


RG I L 063-
RGOL 063

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

Installation position	1	2	3
Series	RGIL/RGOL	RGIL/RGOL	RGIL/RGOL
Dimensions			The dimensions in () are for RGOL.
Installation position	4	5	6
Series	RGIL/RGOL	RGIL/RGOL	RGIL
Dimensions	The dimensions in () are for RGOL.		

- Oil fill/drain port (Rc¹/₄)
- Oil level gauge (ø 20)



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	1000	1300
Allowable radial force	N	1300	900
Allowable bending moment	N·m	38	-
Moment of inertia	kg·m ²	7.20 × 10 ⁻⁵	1.57 × 10 ⁻³

Descriptions	Unit	Characteristics
Internal frictional torque (Tin)	N·m	5.8
Product weight	kg	17
Oil level	ℓ	0.3
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	±60
	2 dwell	-
	3 dwell	-
	4 dwell	-
Repeatability		30

Oscillating accuracy (sec.)	
Indexing accuracy	±120
Repeatability	30

* For the dwell accuracy, please contact CKD.

List of index angles

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

Total index angle (9t)		45	60	90	120	150	180	210	240
Index number (n)									
1 dwell	2				○	○	○	○	○
	3			○	○	○	○		
	4		○	○	○				
	6	○	○	○					
	8	○	○						

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

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

Product specifications

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

Difference
between shafts: **80** mm

Discontinue

Index

RG I L 080

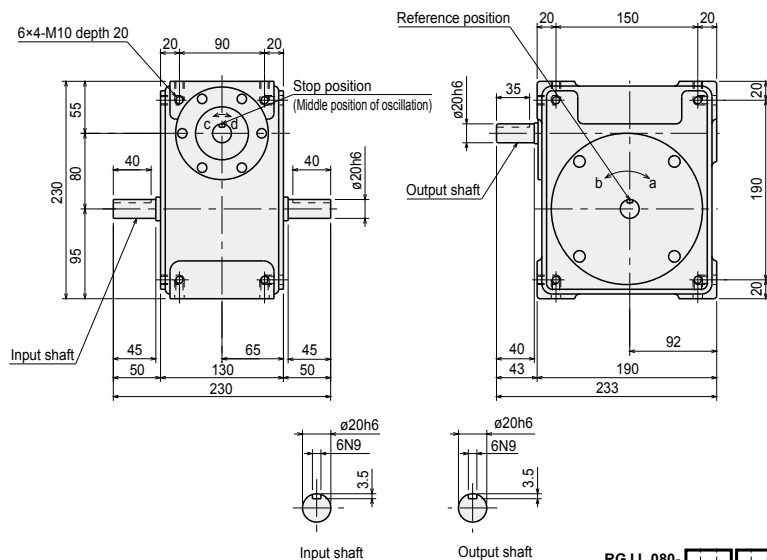
Oscillator

RGOL 080

Wide angle

● Standard specifications

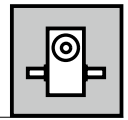
Dimensions



RG I L 080-
RGOL 080

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

Installation position	1	2	3
Series	RGIL/RGOL	RGIL/RGOL	RGIL/RGOL
Dimensions			
• Oil fill/drain port (RC ³ / ₈) ○ Oil level gauge (ø 30)			
Installation position	4	5	6
Series	RGIL/RGOL	RGIL/RGOL	RGIL
Dimensions			
The dimensions in () are for RGOL.			



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	1500	2200
Allowable radial force	N	1900	1900
Allowable bending moment	N·m	60	-
Moment of inertia	kg·m ²	2.70×10^{-4}	4.72×10^{-3}

Descriptions	Unit	Characteristics
Internal frictional torque (T _{in})	N·m	9.3
Product weight	kg	27
Oil level	ℓ	0.8
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	±30
	2 dwell	-
	3 dwell	-
	4 dwell	-
Repeatability		15

Oscillating accuracy (sec.)	
Indexing accuracy	±90
Repeatability	15

* For the dwell accuracy, please contact CKD.

List of index angles

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

Total index angle (θt)		45	60	90	120	150	180	210	240
Index number (n)									
1 dwell	2				○	○	○	○	○
	3			○	○	○	○		
	4		○	○	○				
	6	○	○	○					
	8	○	○						

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

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

Product specifications

Compact

Standard

Roller gear cam drive

Table

Wide angle

Basic

Parallel cam drive

Pick and Place drive

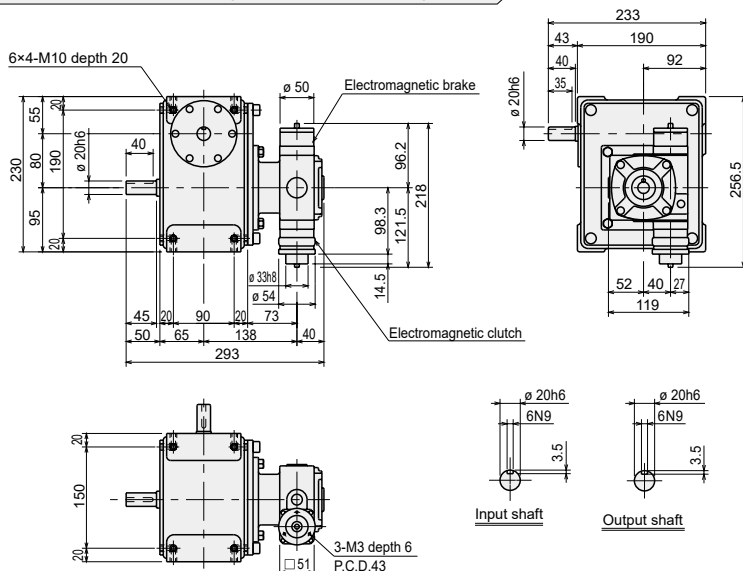
Linear Circular

Option

● Dimensions with options

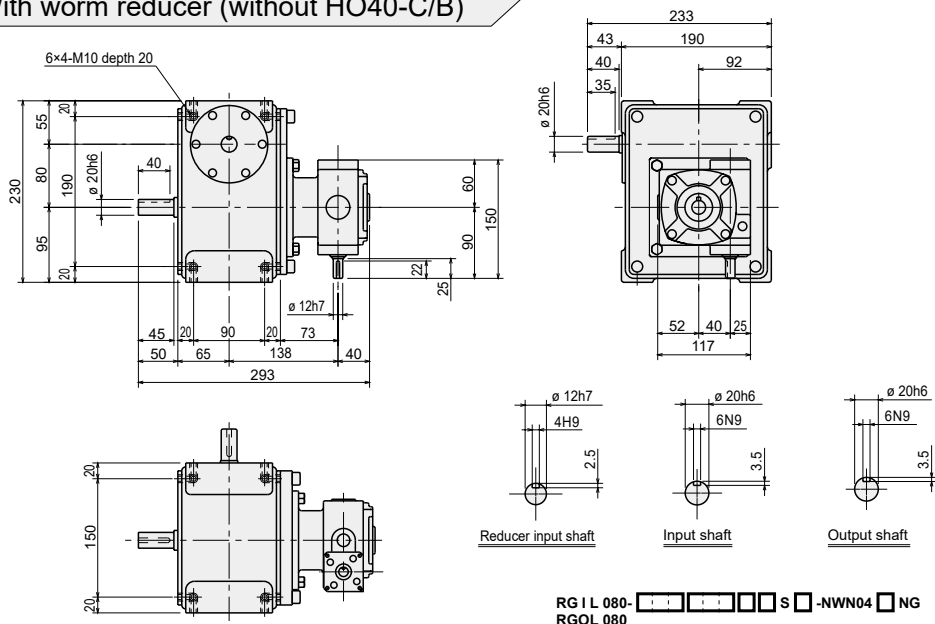
Product specifications

With worm reducer (with HO40-C/B)

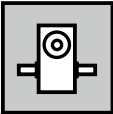


RG I L 080- ☐ ☐ ☐ ☐ ☐ S ☐ -NWN04 ☐ YG
RGOL 080

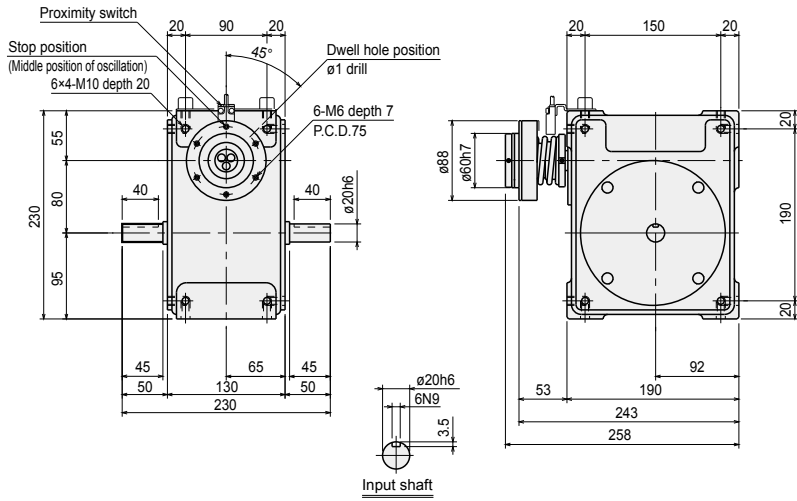
With worm reducer (without HO40-C/B)



RG I L 080- ☐ ☐ ☐ ☐ ☐ S ☐ -NWN04 ☐ NG
RGOL 080



With Torque saver (TSF5)



RG I L 080- ☐ ☐ ☐ ☐ ☐ ☐ S ☐ -NNF-05 ☐
RGOL 080

Product specifications

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

Difference between shafts: **110** mm

Discontinue

Index

RG I L 110

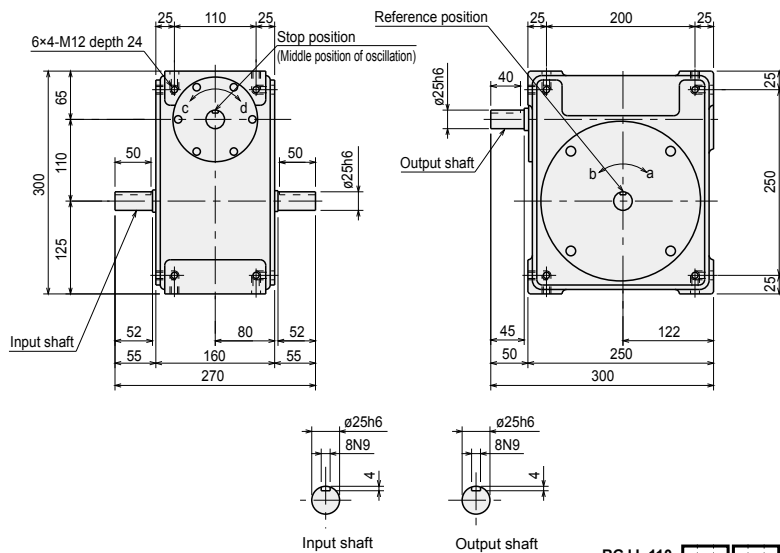
Oscillator

RGOL 110

Wide angle

● Standard specifications

Dimensions



RG I L 110-
RGOL 110

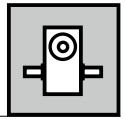
Installation position and oil supply/drain port and oil level gauge positions

Installation position	1	2	3
Series	RGIL/RGOL	RGIL/RGOL	RGIL/RGOL
Dimensions			

- Oil fill/drain port (RC³/₈)
- Oil level gauge (ø 30)

Installation position	4	5	6	
Series	RGIL/RGOL	RGIL/RGOL	RGIL	RGOL
Dimensions				

The dimensions in () are for RGOL.



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	2700	3000
Allowable radial force	N	4000	3000
Allowable bending moment	N·m	110	-
Moment of inertia	kg·m ²	1.12×10^{-3}	2.37×10^{-2}

Descriptions	Unit	Characteristics
Internal frictional torque (T _{in})	N·m	18
Product weight	kg	60
Oil level	ℓ	2
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	±30
	2 dwell	-
	3 dwell	-
	4 dwell	-
Repeatability		15

Oscillating accuracy (sec.)	
Indexing accuracy	±90
Repeatability	15

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **RGIL 110** Cam curve/MS

Total index angle (θt)		45	60	90	120	150	180	210	240
Index number (n)									
1 dwell	2				○	○	○	○	○
	3			○	○	○	○		
	4		○	○	○				
	6	○	○	○					
	8	○	○						

Oscillating series **RGOL 110** Cam curve/MS

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

Product specifications

Compact

Standard

Roller gear cam drive

Table

Wide angle

Basic

Parallel cam drive

Pick and Place drive

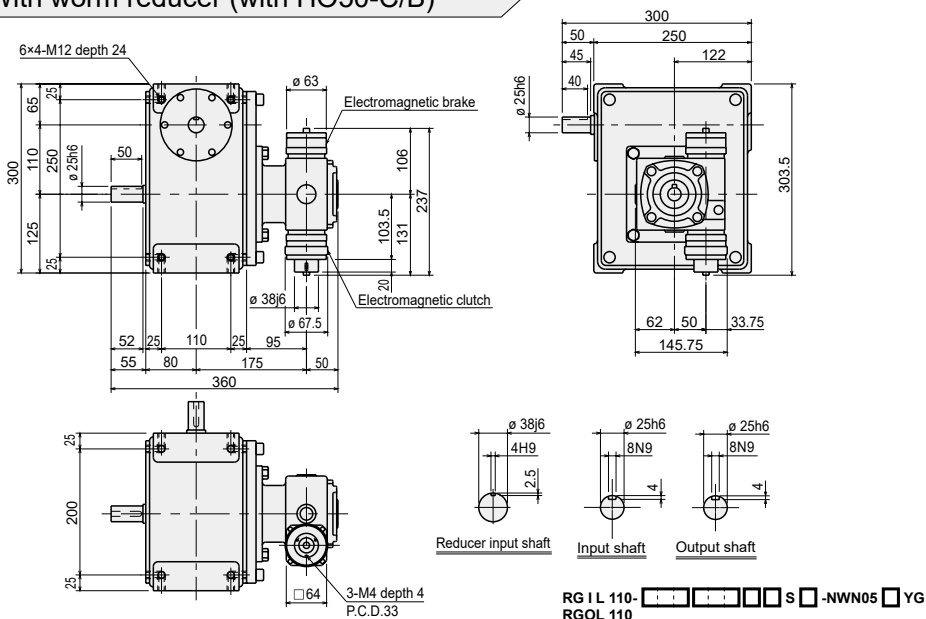
Linear Circular

Option

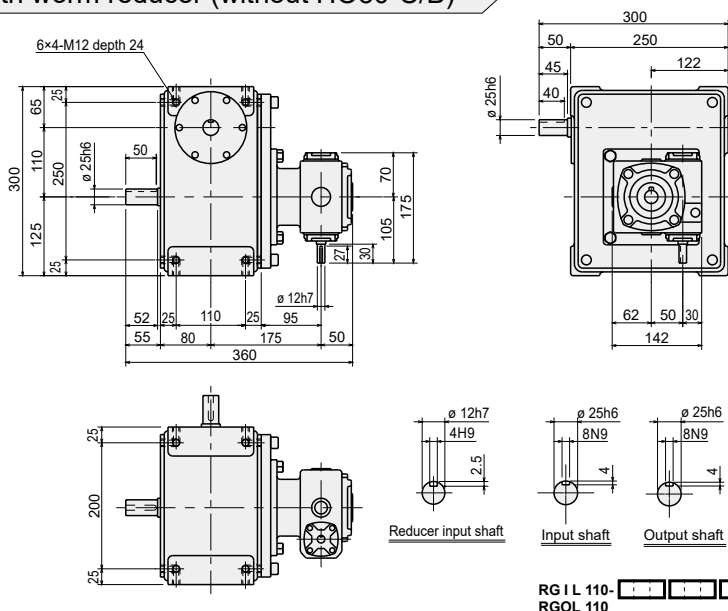
● Dimensions with options

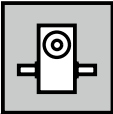
Product specifications

With worm reducer (with HO50-C/B)

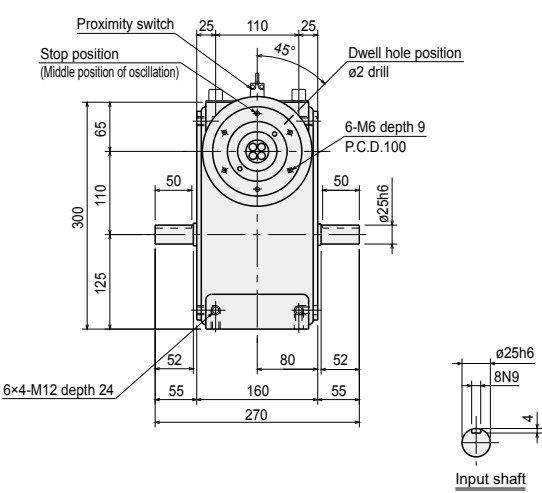


With worm reducer (without HO50-C/B)





With Torque saver (TSF6)



RG | L 110- ☐ ☐ ☐ ☐ ☐ S ☐ -NNF-06 ☐
RGOL 110

Product specifications

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

Difference
between shafts: **140** mm

Discontinue

Index

RG I L 140

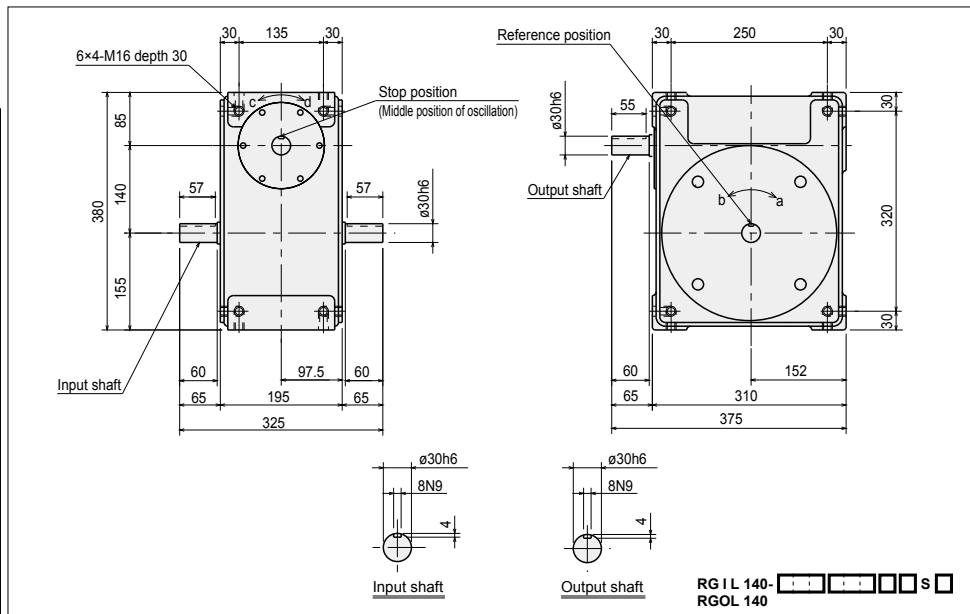
Oscillator

RGOL 140

Wide angle

● Standard specifications

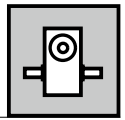
Dimensions



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

Installation position	1	2	3
Series	RGIL/RGOL	RGIL/RGOL	RGIL/RGOL
Dimensions			
			The dimensions in () are for RGOL.
Installation position	4	5	6
Series	RGIL/RGOL	RGIL/RGOL	RGIL
Dimensions			
			The dimensions in () are for RGOL.

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



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	3600	3800
Allowable radial force	N	5000	3800
Allowable bending moment	N·m	190	-
Moment of inertia	kg·m ²	2.16×10^{-3}	8.86×10^{-2}

Descriptions	Unit	Characteristics
Internal frictional torque (T _{in})	N·m	29
Product weight	kg	100
Oil level	ℓ	3.5
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	±30
	2 dwell	-
	3 dwell	-
	4 dwell	-
Repeatability		15

Oscillating accuracy (sec.)	
Indexing accuracy	±60
Repeatability	15

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **RGIL 140** Cam curve/MS

Total index angle (θt)		45	60	90	120	150	180	210	240
Index number (n)									
1 dwell	2				○	○	○	○	○
	3			○	○	○	○		
	4		○	○	○				
	6	○	○	○					
	8	○	○						

Oscillating series **RGOL 140** Cam curve/MS

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

Product specifications

Compact
Standard
Table
Wide angle
Basic

Parallel cam drive

Pick and Place drive
Linear
Circular

Option

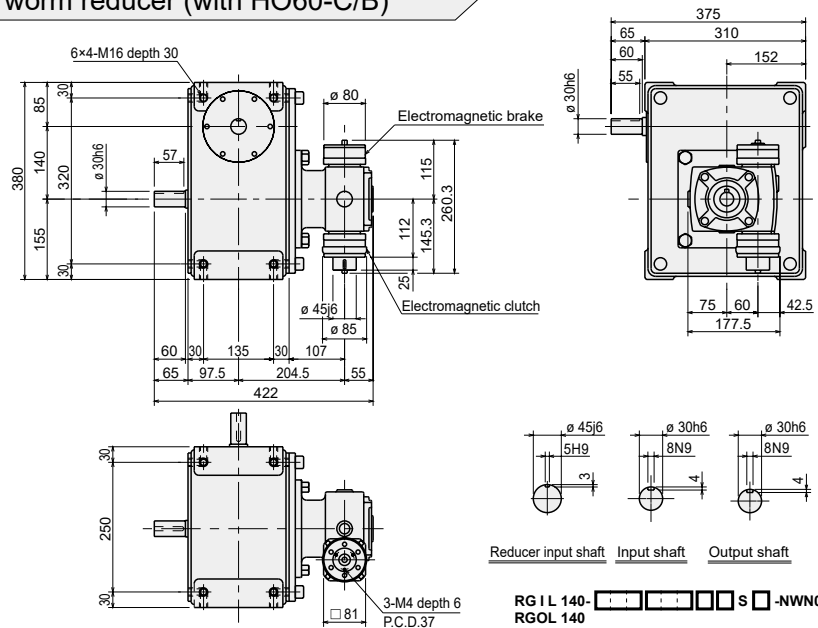
Index	RG I L 140
Oscillator	RGOL 140

● Dimensions with options

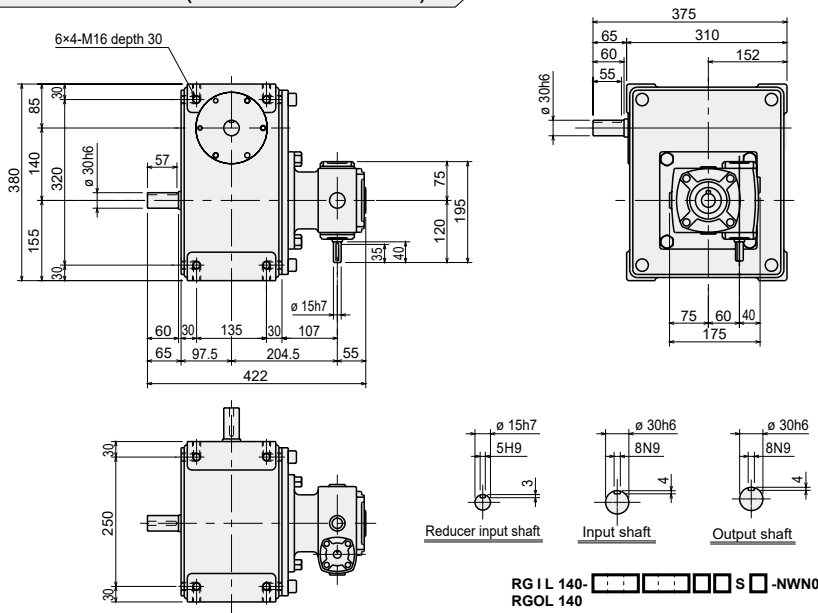
Product specifications

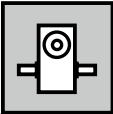
Compact
Standard
Table
Wide angle
Basic
Parallel cam drive
Linear
Circular
Option

With worm reducer (with HO60-C/B)

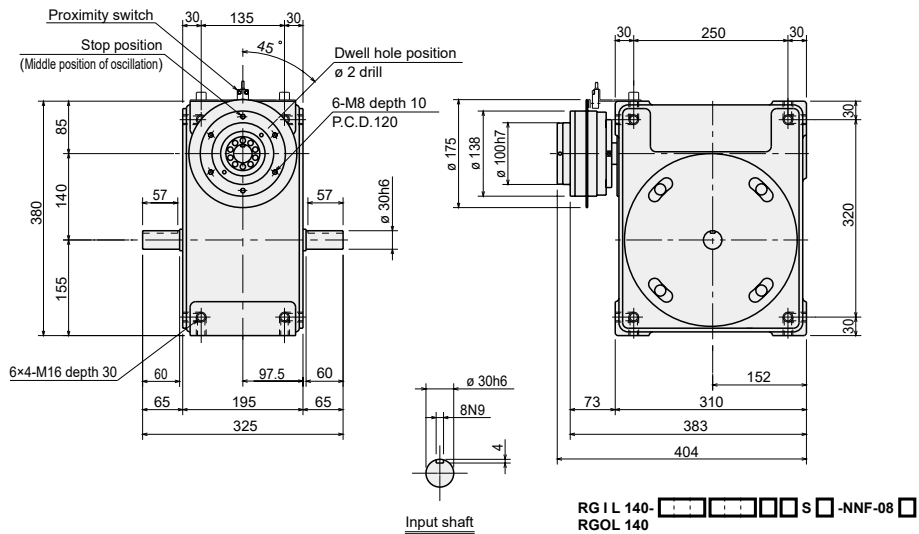


With worm reducer (without HO60-C/B)





With Torque saver (TSF8)

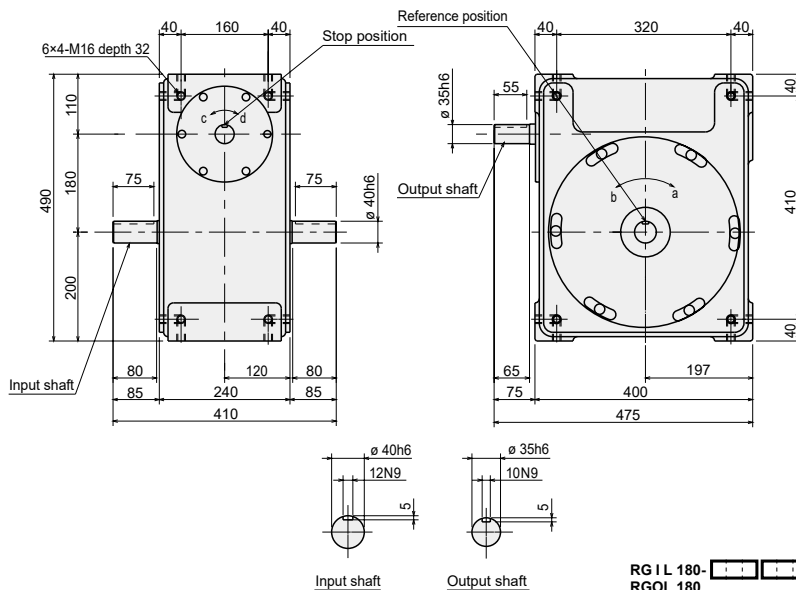


Option	Pick and Place drive Linear Circular	Parallel cam drive			Roller gear cam drive			Product specifications	
		Basic		Wide angle	Table		Standard	Compact	

Wide angle

● Standard specifications

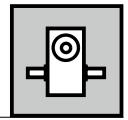
Dimensions



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

- Oil fill/drain port (Rc^{3/4})
- Oil level gauge (ø 30)

Installation position	1	2	3
Series	RGIL/RGOL	RGIL/RGOL	RGIL/RGOL
Dimensions			
			The dimensions in () are for RGOL.
Installation position	4	5	6
Series	RGIL/RGOL	RGIL/RGOL	RGIL/RGOL
Dimensions			
	The dimensions in () are for RGOL.		



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	5800	5000
Allowable radial force	N	7500	4900
Allowable bending moment	N·m	270	-
Moment of inertia	kg·m ²	0.0088	0.26

Descriptions	Unit	Characteristics
Internal frictional torque (T _{in})	N·m	47
Product weight	kg	300
Oil level	ℓ	8
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	±30
	2 dwell	-
	3 dwell	-
	4 dwell	-
Repeatability		15

Oscillating accuracy (sec.)	
Indexing accuracy	±60
Repeatability	15

* For the dwell accuracy, please contact CKD.

List of index angles

Index series **RGIL 180** Cam curve/MS

Total index angle (θt)		45	60	90	120	150	180	210	240
Index number (n)									
1 dwell	2				○	○	○	○	○
	3			○	○	○	○		
	4		○	○	○				
	6	○	○	○					
	8	○	○						

Oscillating series **RGOL 180** Cam curve/MS

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

Product specifications

Compact

Standard

Roller gear cam drive

Table

Wide angle

Basic

Parallel cam drive

Pick and Place drive
Linear Circular

Option

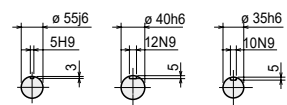
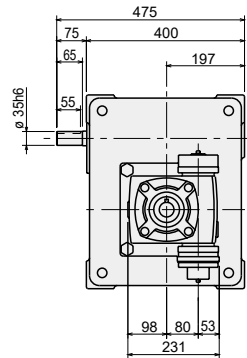
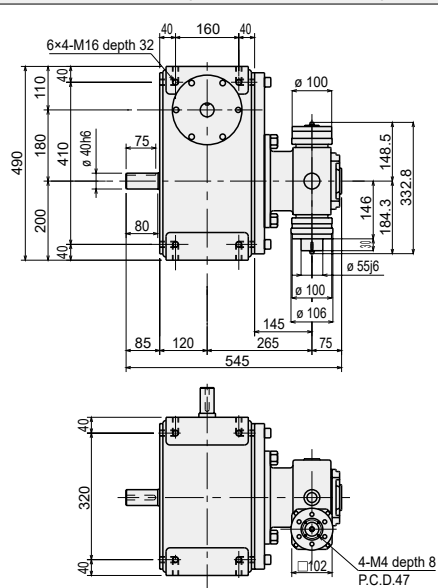
Index	RG I L 180
Oscillator	RGOL 180

● **Dimensions with options**

Product specifications

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

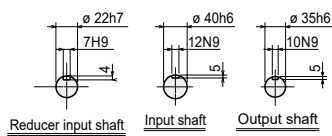
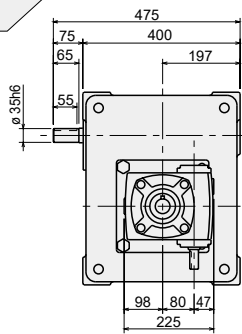
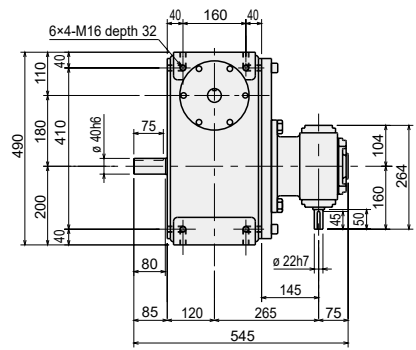
With worm reducer (with HO80-C/B)



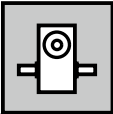
Reducer input shaft Input shaft Output shaft

RG I L 180- ☐ ☐ ☐ ☐ ☐ S ☐ -NWN08 ☐ YG
RGOL 180

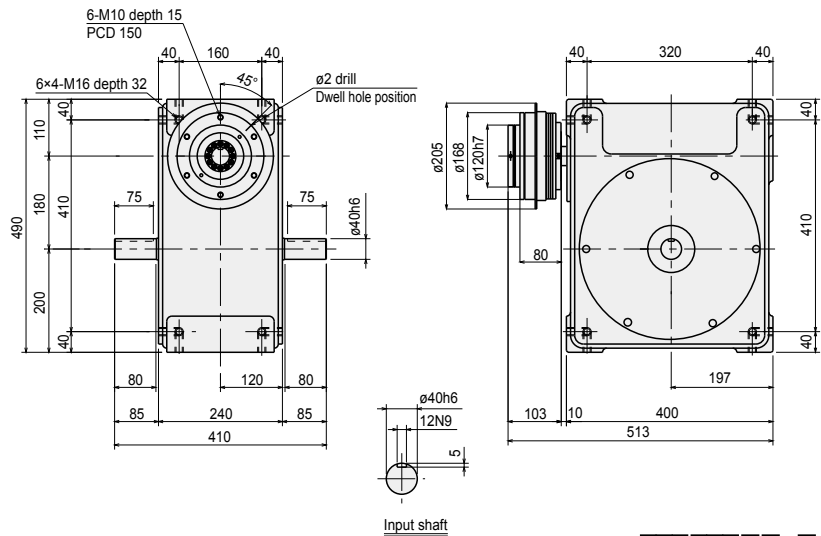
With worm reducer (without HO80-C/B)



RG I L 180- ☐ ☐ ☐ ☐ ☐ S ☐ -NWN08 ☐ NG
RGOL 180



With Torque saver (TSF11)



RG I L 180- ☐ ☐ ☐ ☐ ☐ S ☐ -NNF-11 ☐
RGOL 180

Product specifications

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

Difference between shafts: **250** mm

Discontinue

Index

RG I L 250

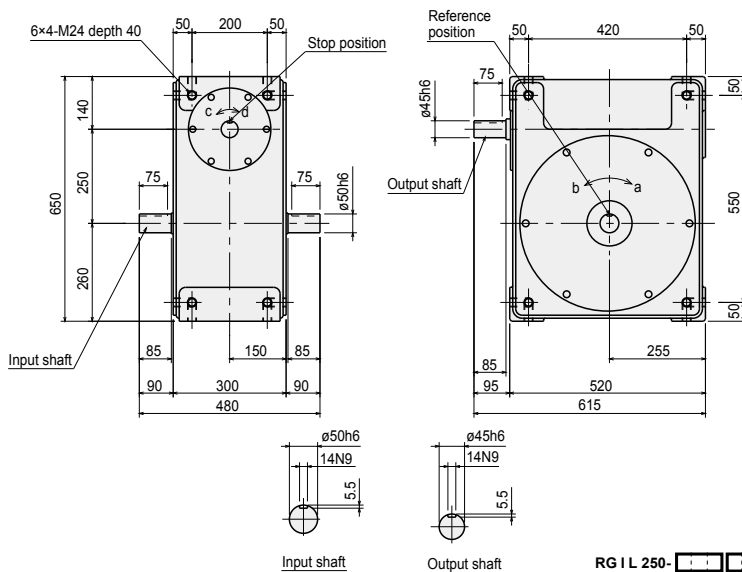
Oscillator

RGOL 250

Wide angle

● Standard specifications

Dimensions

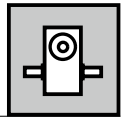


RG I L 250- RGOL 250

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

- Oil fill/drain port (Rc³/4)
- Oil level gauge ($\phi 30$)

Installation position	1	2	3
Series	RGIL/RGOL	RGIL/RGOL	RGIL/RGOL
Dimensions			 The dimensions in () are for RGOL.
Installation position	4	5	6
Series	RGIL/RGOL	RGIL/RGOL	RGIL/RGOL
Dimensions	 The dimensions in () are for RGOL.		



Characteristics

Descriptions	Unit	Characteristics	
		Output shaft	Input shaft
Allowable thrust force	N	9000	7000
Allowable radial force	N	12000	7800
Allowable bending moment	N·m	550	-
Moment of inertia	kg·m ²	0.032	1.36

Descriptions	Unit	Characteristics
Internal frictional torque (T _{in})	N·m	91
Product weight	kg	520
Oil level	ℓ	16
Paint color		Silver

Accuracy

Index accuracy (sec.)		
Indexing accuracy	1 dwell	±30
	2 dwell	-
	3 dwell	-
	4 dwell	-
Repeatability		15

Oscillating accuracy (sec.)	
Indexing accuracy	±60
Repeatability	15

* For the dwell accuracy, please contact CKD.

List of index angles

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

Total index angle (θt)		45	60	90	120	150	180	210	240
Index number (n)									
1 dwell	2				○	○	○	○	○
	3			○	○	○	○		
	4		○	○	○				
	6	○	○	○					
	8	○	○						

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

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

Product specifications

Compact

Standard

Roller gear cam drive

Table

Wide angle

Basic

Parallel cam drive

Pick and Place drive
Linear Circular

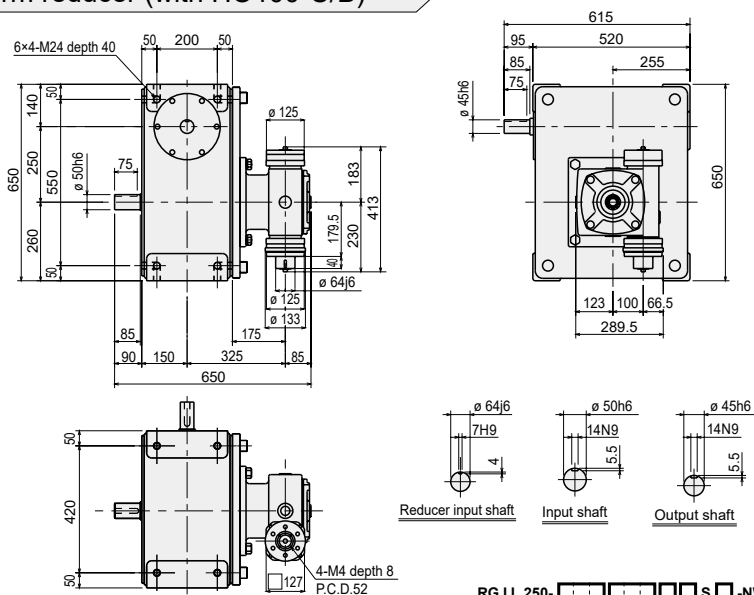
Option

Index	RG I L 250
Oscillator	RGOL 250

● Dimensions with options

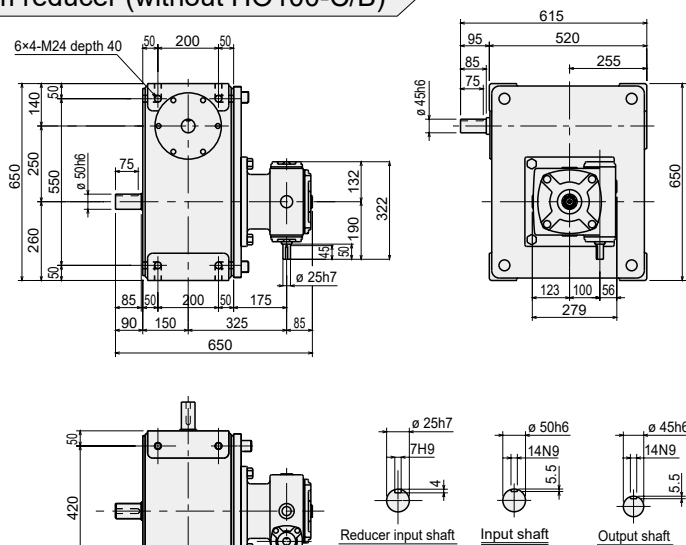
Product specifications

With worm reducer (with HO100-C/B)

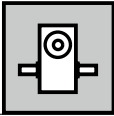


RG I L 250- ☐ ☐ ☐ ☐ ☐ S ☐ -NWN10 ☐ YG
RGOL 250

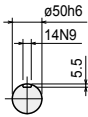
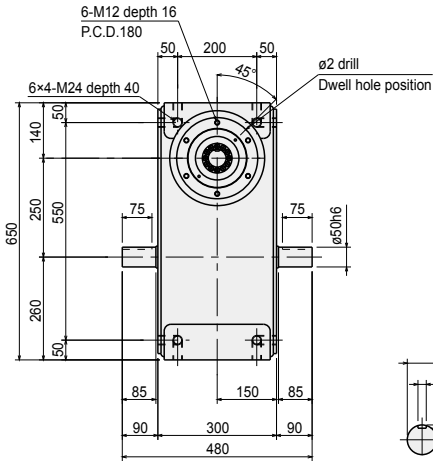
With worm reducer (without HO100-C/B)



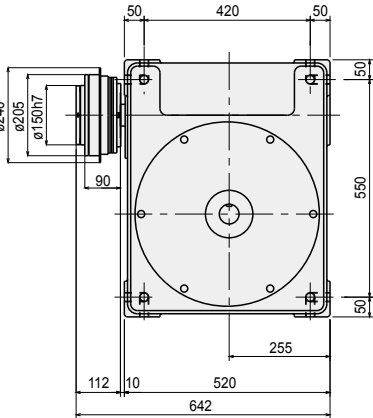
RG I L 250- ☐ ☐ ☐ ☐ ☐ S ☐ -NWN10 ☐ NG
RGOL 250



With Torque saver (TSF14)



Input shaft



RG I L 250- [] [] [] [] S [] -NNF-14 []
RGOL 250

Product specifications

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

Output torque table

Index series

● RGIL (1 dwell)

Cam curve/MS

Cam curve/MS														
Product specifications		Index number	Total index angle (deg)	Size	Static rated output torque (N·m)	Rated dynamic output torque (N·m)								
						Input shaft rotational speed (rpm)								
						30	60	90	120	150	200	300	400	600
Roller gear cam drive	Compact	2	120	063	18.7	7.66	6.81	5.80	5.16	4.71	4.15	3.39	2.82	
				080	50.1	25.4	22.5	19.2	17.1	15.5	13.6	11.0	8.9	
				110	129	52.9	46.9	39.8	35.3	32.0	27.7	21.3	15.6	
				140	169	105	98	90	80	72	63	49		
				180	568	262	232	196	173	155	132			
		250	1160	595	526	442	386	342						
		150	063	30.9	16.7	14.8	12.7	11.3	10.3	9.2	7.7	6.8		
			080	50.1	29.3	26.1	22.2	19.8	18.1	16.0	13.3	11.3		
			110	140	96.1	90.2	82.4	73.4	67.0	59.3	48.9	41.2		
			140	272	193	179	152	136	124	110	90	76		
			180	568	300	266	226	201	182	158	123			
		250	1630	846	750	636	562	507	436					
	180	063	30.9	18.6	16.5	14.1	12.6	11.5	10.3	8.7	7.7			
		080	50.1	32.5	28.9	24.6	22.0	20.1	17.8	14.9	12.9			
		110	140	106	100	91	81	74	66	55	48			
		140	272	212	197	168	150	137	122	101	87			
		180	710	430	382	325	290	264	233	189				
	250	1630	924	821	697	619	562	490						
	210	063	30.9	19.8	17.8	15.2	13.6	12.4	11.1	9.4	8.3			
		080	50.1	34.5	31.0	26.5	23.6	21.6	19.3	16.2	14.2			
		110	140	113	107	98	88	80	71	60	52			
		140	272	225	211	180	160	147	131	110	96			
		180	710	455	409	348	311	283	251	207	175			
	250	1630	975	875	744	662	603	530	427					
240	063	30.9	20.7	18.9	16.1	14.4	13.2	11.8	10.0	8.9				
	080	50.1	36.0	32.8	28.0	25.0	22.9	20.4	17.2	15.2				
	110	140	118	113	104	93	85	75	64	56				
	140	272	234	222	189	169	155	138	116	102				
	180	710	473	430	366	327	299	265	221	190				
250	1630	1010	920	780	700	630	560	460						
Parallel cam drive	Basic	3	90	063	30.9	15.3	13.6	11.6	10.3	9.4	8.4	6.9	5.9	
				080	50.1	27.0	24.0	20.4	18.1	16.5	14.5	11.6	9.2	
				110	129	56.2	49.9	42.3	37.5	33.9	29.3	22.1	15.7	
				140	248	146	129	110	97	88	77	60		
				180	568	277	245	207	182	163	138			
				250	1630	782	691	582	509	451	371			
		120	063	30.9	18.2	16.2	13.8	12.3	11.3	10.0	8.5	7.4		
			080	50.1	31.9	28.3	24.1	21.5	19.7	17.4	14.4	12.3		
			110	140	104	98	89	80	73	64	53	45		
			140	272	208	193	165	147	134	118	98	82		
			180	710	422	375	319	283	257	225	178			
			250	1630	907	805	682	603	544	468				
	150	063	30.9	20.3	18.0	15.4	13.7	12.6	11.2	9.5	8.4			
		080	50.1	35.3	31.4	26.8	23.9	21.8	19.4	16.3	14.2			
		110	140	115	108	99	88	81	72	60	52			
		140	272	229	213	181	162	148	131	110	95			
		180	710	464	412	351	313	285	252	206	171			
		250	1630	991	880	748	665	604	528	418				
	180	063	30.9	21.5	19.4	16.5	14.8	13.5	12.1	10.3	9.1			
		080	50.1	37.2	33.5	28.6	25.6	23.4	20.8	17.6	15.5			
		110	140	122	116	106	95	87	77	65	57			
		140	272	240	226	193	172	158	141	118	104			
		180	710	486	438	374	333	304	270	224	191			
		250	1630	1040	930	790	710	640	570	460	380			
Option	Circular Pin and Rack drive	3	90	063	30.9	15.3	13.6	11.6	10.3	9.4	8.4	6.9	5.9	
				080	50.1	27.0	24.0	20.4	18.1	16.5	14.5	11.6	9.2	
				110	129	56.2	49.9	42.3	37.5	33.9	29.3	22.1	15.7	
				140	248	146	129	110	97	88	77	60		
				180	568	277	245	207	182	163	138			
				250	1630	782	691	582	509	451	371			
	120	063	30.9	18.2	16.2	13.8	12.3	11.3	10.0	8.5	7.4			
		080	50.1	31.9	28.3	24.1	21.5	19.7	17.4	14.4	12.3			
		110	140	104	98	89	80	73	64	53	45			
		140	272	208	193	165	147	134	118	98	82			
		180	710	422	375	319	283	257	225	178				
		250	1630	907	805	682	603	544	468					
150	063	30.9	20.3	18.0	15.4	13.7	12.6	11.2	9.5	8.4				
	080	50.1	35.3	31.4	26.8	23.9	21.8	19.4	16.3	14.2				
	110	140	115	108	99	88	81	72	60	52				
	140	272	229	213	181	162	148	131	110	95				
	180	710	464	412	351	313	285	252	206	171				
	250	1630	991	880	748	665	604	528	418					
180	063	30.9	21.5	19.4	16.5	14.8	13.5	12.1	10.3	9.1				
	080	50.1	37.2	33.5	28.6	25.6	23.4	20.8	17.6	15.5				
	110	140	122	116	106	95	87	77	65	57				
	140	272	240	226	193	172	158	141	118	104				
	180	710	486	438	374	333	304	270	224	191				
	250	1630	1040	930	790	710	640	570	460	380				

Discontinue

Index series

● RGIL (1 dwell)

Cam curve/MS

Index number	Total index angle (deg)	Size	Static rated output torque (N·m)	Rated dynamic output torque (N·m)							
				Input shaft rotational speed (rpm)							
				30	60	90	120	150	200	300	400 600
4	60	063	14.6	5.69	5.04	4.28	3.79	3.42	2.95	2.22	1.56
		080	23.3	9.40	8.30	6.98	6.10	5.40	4.42	2.64	
		110	67.4	33.7	29.7	24.9	21.7	19.1	15.4	8.5	
		140	148	64.1	56.6	47.6	41.5	36.7	30.0	17.5	
		180	216	130	121	108	92	78	58		
		250	742	346	301	245	203	164	100		
	90	063	18.7	9.48	8.42	7.18	6.40	5.84	5.17	4.27	3.62
		080	19.9	14.7	13.8	13.2	12.8	12.5	12.0	11.0	9.5
		110	91.5	57.4	50.9	43.3	38.4	34.9	30.4	23.8	18.3
		140	169	128	120	110	98	89	78	62	50
		180	345	262	243	206	182	164	140	103	
		250	943	566	500	421	369	328	271		
	120	063	18.7	10.7	9.5	8.1	7.3	6.7	5.9	5.0	4.3
		080	19.9	16.7	15.6	15.1	14.6	14.3	13.8	13.0	11.8
		110	129	74.3	66.1	56.3	50.1	45.8	40.5	33.3	28.0
		140	169	144	135	124	110	101	89	74	63
		180	345	295	274	233	207	188	165	131	104
		250	1160	802	712	604	535	484	419	320	
6	45	063	30.9	14.8	13.2	11.2	10.0	9.1	8.0	6.4	5.1
		080	50.1	26.1	23.2	19.6	17.4	15.6	13.4	9.9	6.7
		110	140	85.6	80.1	72.7	64.2	57.7	49.3	35.6	22.6
		140	272	172	159	135	119	107	91	65	
		180	568	268	236	198	171	149	117		
		250	1630	757	664	551	469	399	292		
	60	063	30.9	17.7	15.7	13.4	11.9	10.9	9.7	8.0	6.8
		080	50.1	30.9	27.4	23.3	20.7	18.9	16.6	13.3	10.6
		110	140	101	95	86	77	70	61	49	38
		140	272	202	187	159	141	128	112	89	69
		180	710	409	363	307	271	243	208	149	
		250	1630	879	776	654	571	506	416		
	90	063	30.9	21.1	18.8	16.0	14.3	13.1	11.7	9.9	8.7
		080	50.1	36.6	32.5	27.7	24.7	22.6	20.1	16.7	14.4
		110	140	120	112	103	92	84	74	62	53
		140	272	236	219	187	167	152	135	112	96
		180	710	478	424	361	321	292	257	207	167
		250	1630	1020	900	770	680	620	530	410	300
8	45	063	18.7	9.18	8.15	6.94	6.16	5.60	4.91	3.91	3.10
		080	19.9	14.2	13.3	12.7	12.3	11.9	11.2	9.7	7.5
		110	91.5	55.6	49.2	41.6	36.7	32.9	27.9	19.5	11.4
		140	169	124	116	106	93	84	72	53	36
		180	345	254	234	197	172	152	124	72	
		250	943	547	481	399	341	292	216		
	60	063	18.7	10.4	9.3	7.9	7.0	6.4	5.7	4.7	4.0
		080	19.9	16.1	15.1	14.5	14.1	13.7	13.2	12.1	10.4
		110	129	72.0	63.9	54.4	48.3	43.8	38.3	30.2	23.4
		140	169	140	131	119	106	97	85	68	54
		180	568	348	308	261	231	208	179	132	88
		250	1160	777	687	580	509	453	378	246	

Product specifications

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

Output torque table

Oscillating series



Cam curve/MS

Product specifications		Oscillating angle (deg)	Total index angle (deg)	Size	Static rated output torque (N·m)	Rated dynamic output torque (N·m)									
						Input shaft rotational speed (rpm)									
						15	30	45	60	75	100	150	200	300	
Roller gear cam drive	Compact	180	240	063	19.1	7.99	7.27	6.20	5.54	5.07	4.52	3.82	3.36	2.71	
				080	50.1	26.4	24.0	20.5	18.3	16.7	14.9	12.6	11.0	8.7	
				110	129	55.1	50.1	42.7	38.1	34.8	30.9	25.8	22.2	16.5	
				140	169	109	105	96	86	78	70	58	51	39	
				180	568	273	248	211	188	172	152	125	105		
				250	1160	620	563	479	426	388	340	273			
		300	360	063	30.9	17.0	15.8	13.5	12.1	11.0	9.9	8.4	7.5	6.3	
				080	50.1	29.9	27.8	23.7	21.2	19.4	17.3	14.7	13.0	10.6	
				110	140	98.1	96.1	87.9	78.5	71.9	64.1	54.3	47.9	39.2	
				140	272	197	191	163	145	133	119	100	89	72	
				180	568	306	284	242	216	198	176	147	127	96	
				250	1630	864	801	682	608	556	492	408	347		
	Standard	180	240	063	30.9	18.6	17.6	15.0	13.4	12.3	11.0	9.3	8.3	7.0	
				080	50.1	32.6	30.7	26.2	23.4	21.5	19.2	16.3	14.5	12.1	
				110	140	107	106	97	87	80	71	60	54	44	
				140	272	213	210	179	160	146	131	111	98	82	
				180	710	432	407	348	310	284	253	214	188	151	
				250	1630	928	875	746	666	609	541	454	393		
		300	360	063	30.9	16.1	14.5	12.4	11.0	10.1	9.0	7.7	6.8	5.6	
				080	50.1	28.3	25.5	21.8	19.4	17.8	15.8	13.3	11.6	9.2	
				110	129	59.0	53.2	45.4	40.5	37.0	32.8	27.3	23.4	17.1	
				140	248	153	138	118	105	96	85	71	62	47	
				180	568	291	262	223	199	181	160	131	109		
				250	1630	822	741	630	561	510	448	359	289		
Parallel cam drive	Basic	120	240	063	30.9	18.6	17.2	14.7	13.2	12.1	10.8	9.2	8.1	6.8	
				080	50.1	32.6	30.2	25.7	23.0	21.1	18.8	15.9	14.1	11.6	
				110	140	107	104	95	85	78	70	59	52	43	
				140	272	213	206	176	157	144	128	108	96	78	
				180	710	432	400	341	304	278	248	208	181	140	
				250	1630	928	859	732	653	596	528	438	374		
		300	360	063	30.9	20.3	19.2	16.4	14.6	13.4	12.0	10.2	9.1	7.7	
				080	50.1	35.3	33.4	28.5	25.5	23.3	20.8	17.7	15.7	13.2	
				110	140	116	115	106	94	86	77	66	58	49	
				140	272	229	226	193	173	158	141	120	106	89	
				180	710	465	439	375	335	306	273	231	203	164	
				250	1630	993	938	800	714	654	581	488	425	330	
	Option	90	120	063	14.6	6.06	5.38	4.59	4.09	3.74	3.32	2.76	2.36	1.71	
				080	23.7	10.0	8.9	7.6	6.7	6.1	5.4	4.3	3.4	1.8	
				110	67.4	35.9	31.9	27.1	24.1	21.9	19.1	15.2	11.9	5.5	
				140	148	68.3	60.7	51.6	45.9	41.7	36.6	29.2	23.3	11.8	
				180	216	139	130	119	105	95	82	61	42		
				250	742	370	328	277	243	217	183	123	63		
		180	240	063	19.1	9.91	9.06	7.73	6.90	6.32	5.64	4.78	4.22	3.46	
				080	19.9	15.2	14.7	14.1	13.8	13.5	13.1	12.5	11.5	9.2	
				110	91.5	59.4	54.3	46.3	41.3	37.8	33.6	28.1	24.4	18.7	
				140	169	133	128	117	105	96	85	72	63	49	
				180	345	272	259	221	197	180	159	132	112	79	
				250	943	587	536	456	406	369	324	261	211		



Cam curve/MS

Oscillating angle (deg)	Total index angle (deg)	Size	Static rated output torque (N-m)	Rated dynamic output torque (N-m)								
				Input shaft rotational speed (rpm)								
				15	30	45	60	75	100	150	200	300
90	240	063	19.1	11.0	10.3	8.8	7.9	7.2	6.4	5.5	4.9	4.1
		080	19.9	16.8	16.7	16.1	15.6	15.3	14.9	14.3	13.3	11.0
		110	129	75.0	70.4	60.1	53.6	49.1	43.8	37.1	32.7	26.7
		140	169	145	144	132	118	108	96	82	72	59
		180	345	298	292	249	222	203	181	152	132	104
		250	1160	810	760	648	578	528	468	390	335	248
60	90	063	30.9	15.8	14.0	12.0	10.7	9.8	8.7	7.3	6.4	5.1
		080	50.1	27.8	24.7	21.1	18.8	17.2	15.2	12.6	10.7	7.6
		110	140	91.2	85.6	78.2	69.7	63.6	56.3	46.4	39.2	27.0
		140	272	183	170	145	129	118	104	86	72	49
		180	568	286	254	216	191	173	151	117	89	
		250	1630	808	716	608	537	485	417	310	213	
	120	063	30.9	18.6	16.7	14.3	12.7	11.7	10.4	8.8	7.8	6.4
		080	50.1	32.6	29.2	24.9	22.3	20.4	18.1	15.3	13.3	10.5
		110	140	107	101	92	83	75	67	56	49	38
		140	272	213	199	170	152	139	124	104	90	70
		180	710	432	387	330	294	268	237	196	165	112
		250	1630	928	832	708	629	573	503	404	324	
	180	063	30.9	21.5	20.0	17.1	15.2	14.0	12.5	10.6	9.5	8.0
		080	50.1	37.2	34.6	29.5	26.4	24.2	21.6	18.3	16.2	13.5
		110	140	122	120	109	98	90	80	68	60	50
		140	272	240	234	199	178	163	146	123	109	90
		180	710	486	452	386	345	315	281	237	207	164
		250	1630	1040	960	820	730	670	590	500	430	320
45	90	063	19.1	9.87	8.78	7.49	6.68	6.11	5.44	4.57	3.99	3.12
		080	19.9	15.1	14.2	13.7	13.3	13.0	12.6	11.9	10.7	8.0
		110	91.5	59.2	52.6	44.8	39.9	36.4	32.2	26.4	22.1	14.6
		140	169	132	124	113	101	92	82	68	58	41
		180	345	271	251	214	190	173	151	121	96	48
		250	943	584	518	440	389	351	303	227	159	
	120	063	19.1	11.0	10.0	8.5	7.6	7.0	6.2	5.3	4.7	3.8
		080	19.9	16.8	16.1	15.6	15.1	14.8	14.4	13.7	12.6	10.1
		110	129	75.0	68.2	58.2	51.9	47.5	42.2	35.4	30.8	23.7
		140	169	145	140	128	114	104	93	78	68	53
		180	568	362	329	281	250	228	202	168	142	101
		250	1160	810	736	626	557	508	447	363	297	177

Product specifications

Roller gear cam drive	Compact
	Standard
	Table
	Wide angle
Parallel cam drive	Basic

Pick and Place drive
Linear Circular

Option