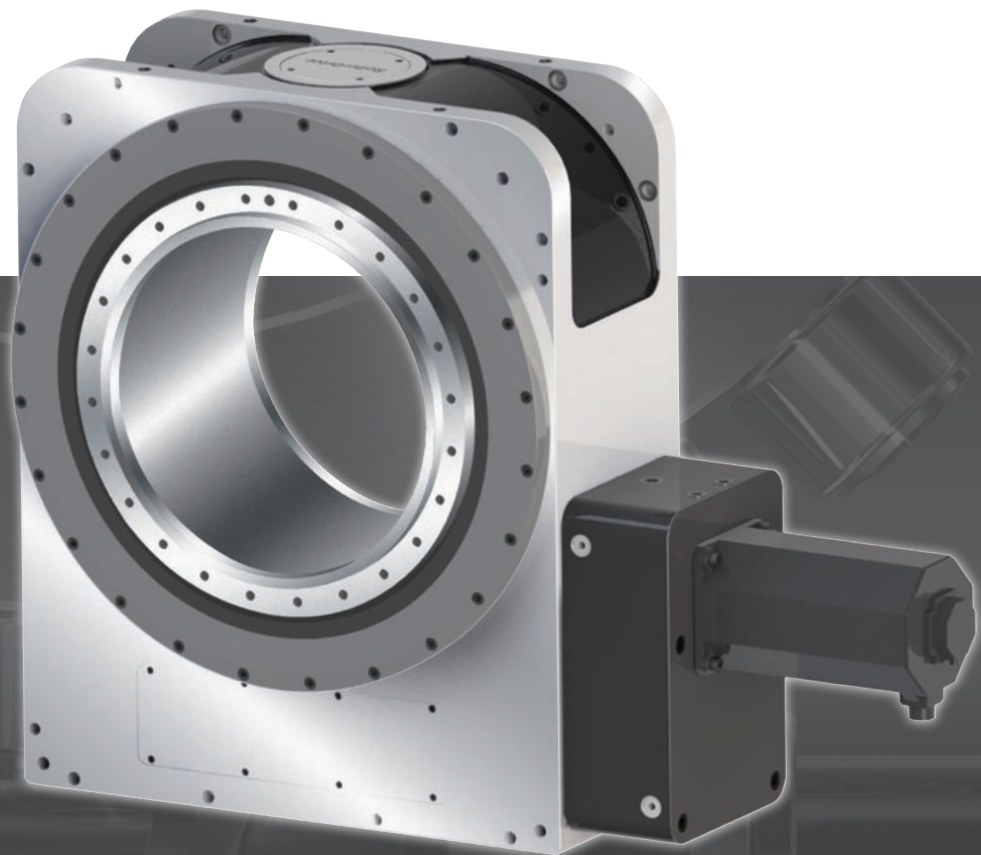


Universal Positioning Unit

***RollerDrive***<sup>®</sup>

**RU series**

**RU160, 200, 250, 315, 400, 500**



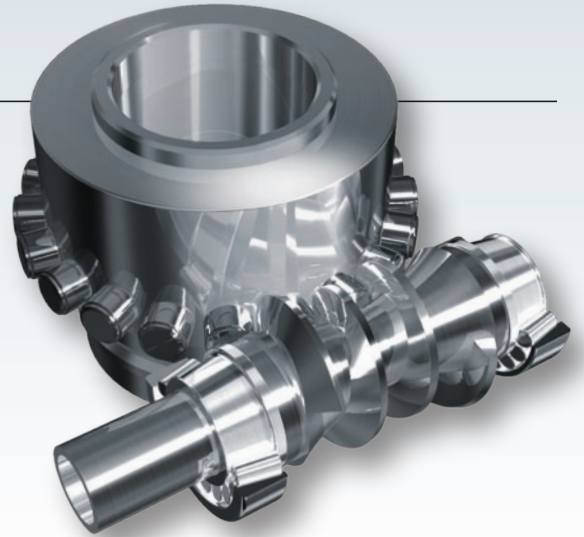
# The ZERO-Backlash Technology

A mechanism developed through the pursuit of outstanding functionality and performance.

## Superior movement achieved with zero-backlash technology

In FA equipment, motion control using servo systems is a crucial element which greatly affects equipment performance. Naturally, equipment specifications and performance are designed assuming that the expected motion is attained, but if there are factors such as backlash, insufficient rigidity or control instability in the motion control section, then output motion will deviate from input control commands, and it will be difficult to attain the expected performance.

With the RollerDrive RU Series, a servomotor is mechanically reduced while maintaining powerful torque, rigidity and stability. An output motion faithful to input control commands can be attained by achieving zero-backlash with our unique preloaded mechanism. This is a revolutionary FA motion control unit, which combines rolling transmission for high-efficiency and elimination of wear, an orthogonal layout of input and output axes for greater compactness, and standard features like a large diameter hollow shaft for greater ease-of-use.



## Theory of Operation

The RollerDrive is a positioner that uses the roller gear cam mechanism, one of the finest motion control mechanisms available. The unit is constructed from an input shaft and a turret (output shaft) that is assembled with roller followers.

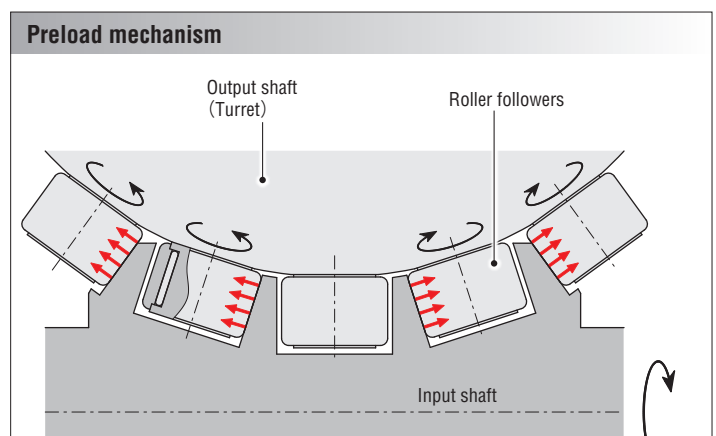
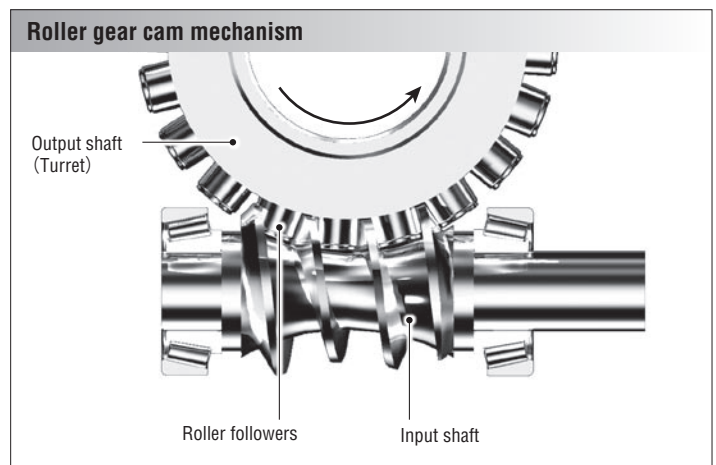
The roller followers are preloaded against a screw-like input shaft to eliminate backlash.

Our proprietary adjustment mechanism provides optimum preload.

The roller followers in the turret use internal roller bearings to transfer torque while rotating.

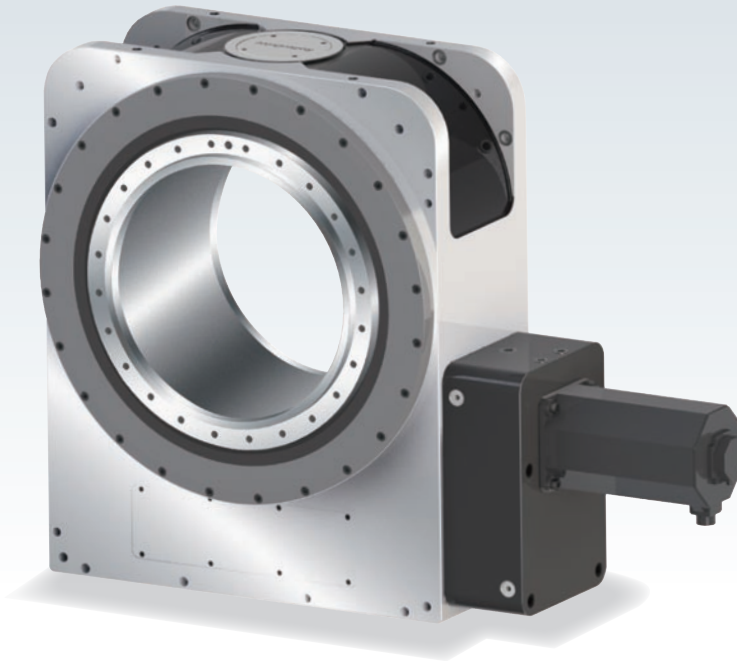
This mechanism ensures zero backlash, precision, and efficiency while preventing wear. It also provides long-term, consistent accuracy.

The servomotor drive delivers unparalleled, ultimate motion control.



# RollerDrive® RU series

## All-Purpose Model for Various Applications

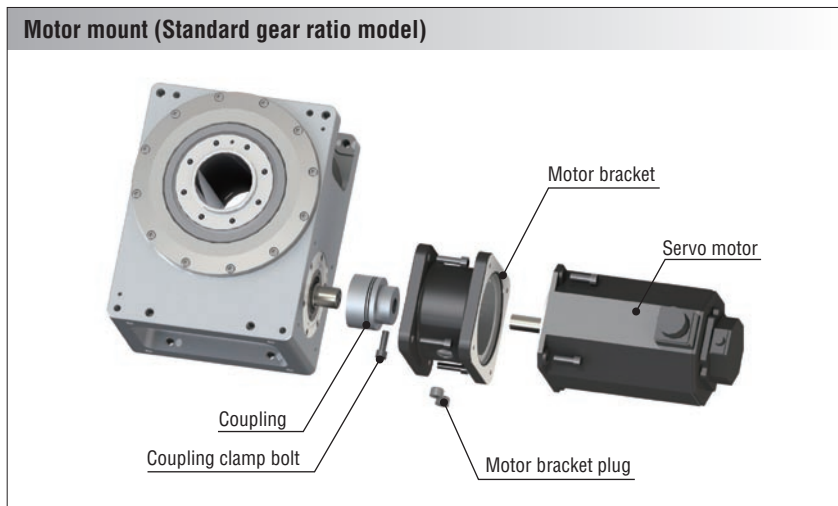


**Feature 1** **Heavy-duty drive with a compact motor**  
Our product lineup includes high gear ratio reducers that use proprietary reducer gears to deliver heavy torque using a small servomotor.

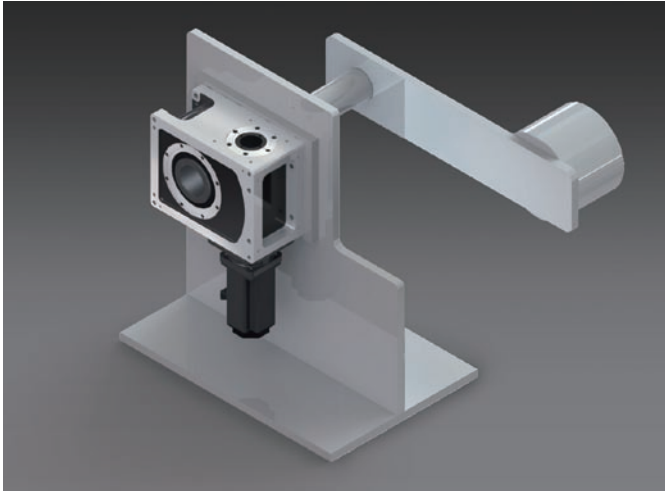
**Feature 2** **High rigidity**  
The internal structure was redesigned with a cast iron housing and heavy-duty output bearing for high rigidity.

**Feature 3** **Flexible Servomotor Options**  
Compatible with a wide range of servomotor sizes (for each brand). Servomotors are coupling-mounted for installation. Easy to install even for first-time users.

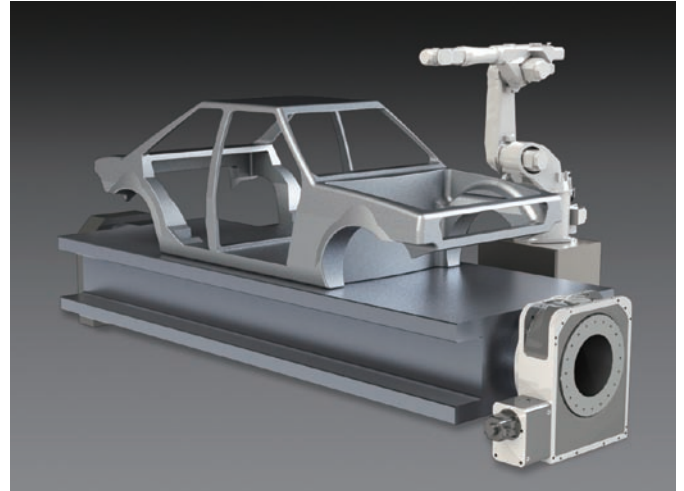
**Feature 4** **Suitable for Use in Harsh Environments**  
We offer a water-proof and dust-proof option that uses a special seal for protection against washdown and dust-prone environments.



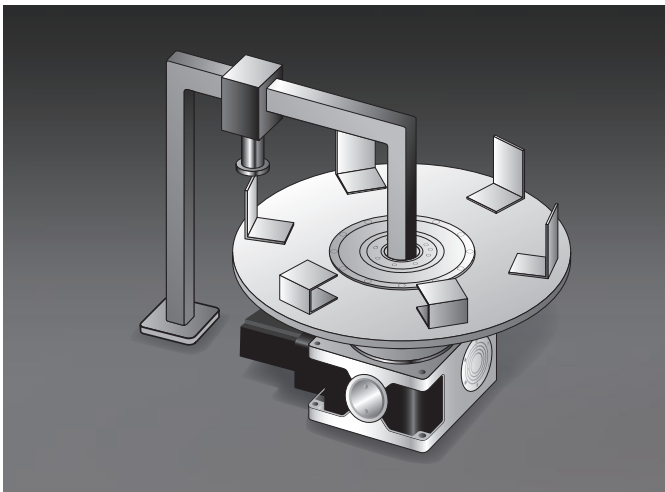
# Applications



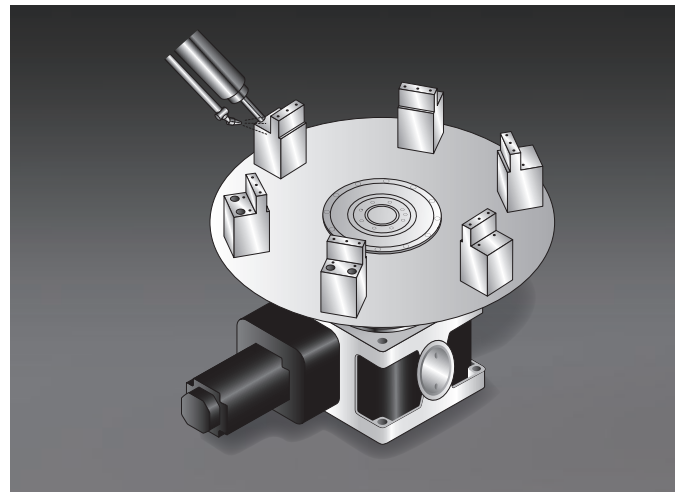
Oscillating Work with Off-Center Loads



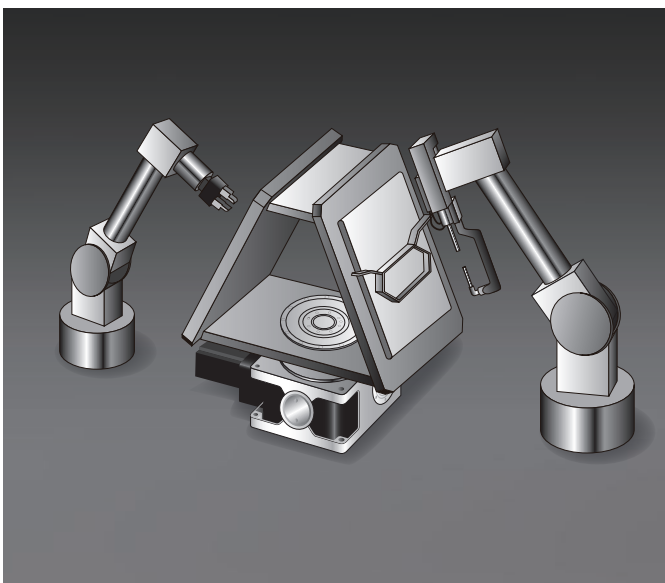
Automotive Welding and Assembly Process



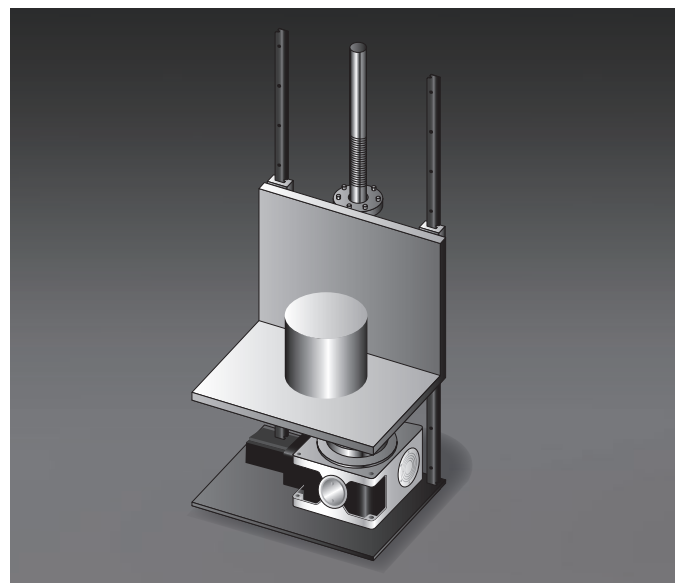
Using the Hollow Shaft for Crimping



Boring Machine



Rotary Positioner for Welding Machines



Vertical Ball Screw Drive

# Model Code

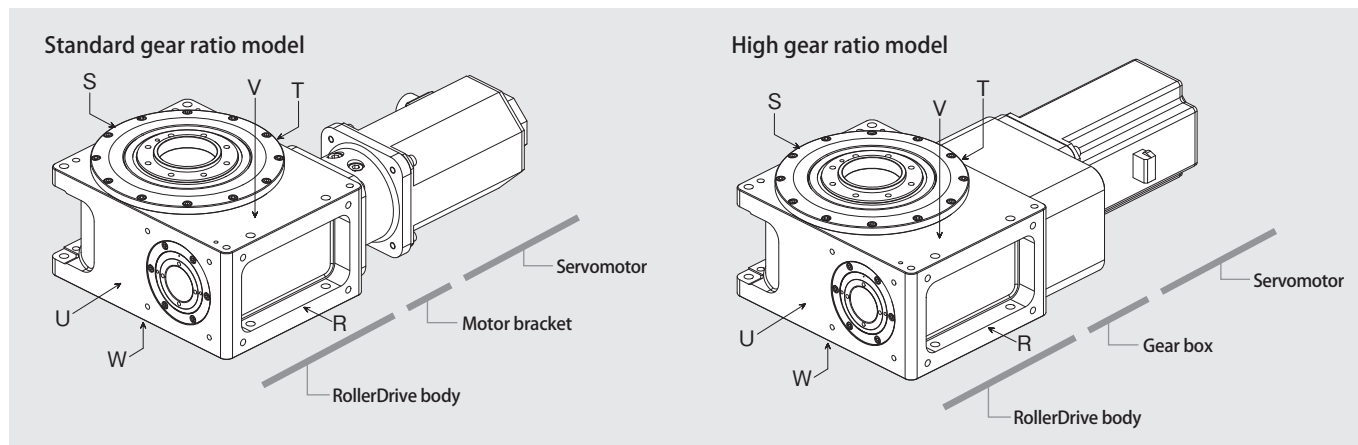
## Model Code

# RU 160 - 24 G T - AR - A

①      ②      ③      ④      ⑤      ⑥      ⑦

① Model	② Size	③ Gear ratio	④ Lubrication and mounting position	⑤ Servomotor position	⑥ Attachment code	⑦ Waterproof and dustproof option
RU RUX (High accuracy type)	160	24, 72	Grease lubrication (RU160 and RU200 only) <b>G: All positions are available</b>  Oil lubrication <b>1·2·3·4·5·6</b> See Oil lubrication mounting position code	<b>T: Standard</b> Mounts on right side  <b>U:</b> Mounts on left side	<b>A R</b> : With attachment (Standard gear ratio only available on models RU160 to RU250) Position of access hole (Access hole only on side S for high gear ratio models) Attachment code  <b>0 0</b> : Without attachment (Standard gear ratio models only) See Dimensions Diagrams for each size. ➔ P.7~18	Blank: None  A: Include
	200	30, 90				
	250	30, 100				
	315	32, 120				
	400	36, 120				
	500	40, 150				

### RollerDrive Surfaces



※ Shown with servo motor on "T" surface

### Oil lubrication mounting position code

1	2	3	4	5	6
W surface on bottom	V surface on bottom	U surface on bottom	T surface on bottom	R surface on bottom	S surface on bottom

### Position of access hole

R	S	V	W
Toward R surface	Toward S surface	Toward V surface	Toward W surface

# RollerDrive Specifications

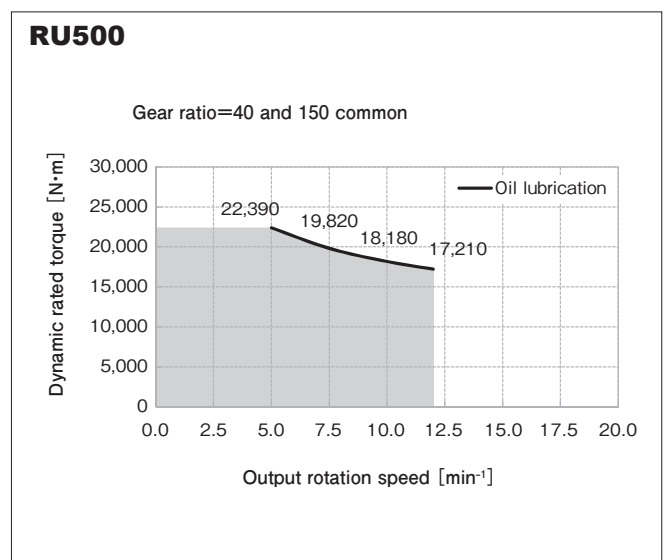
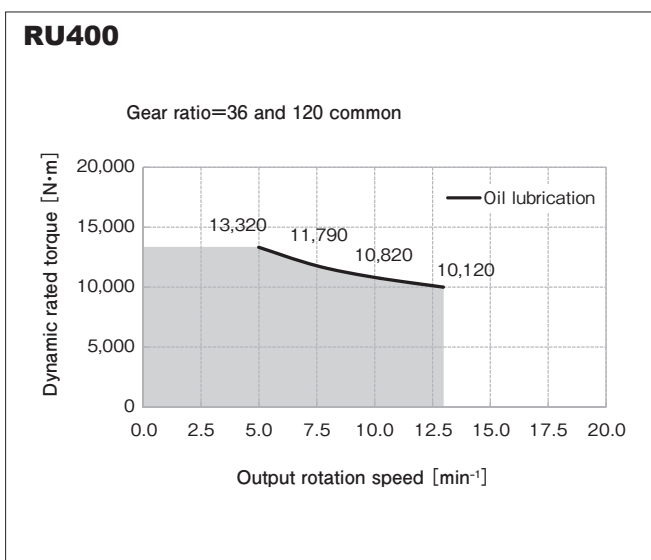
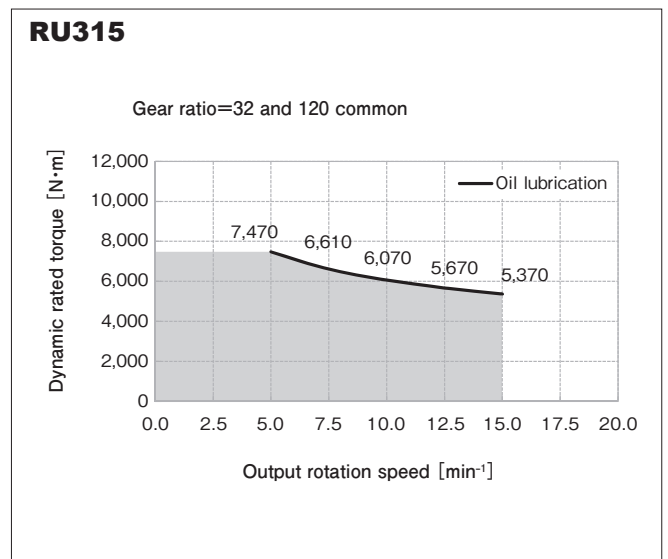
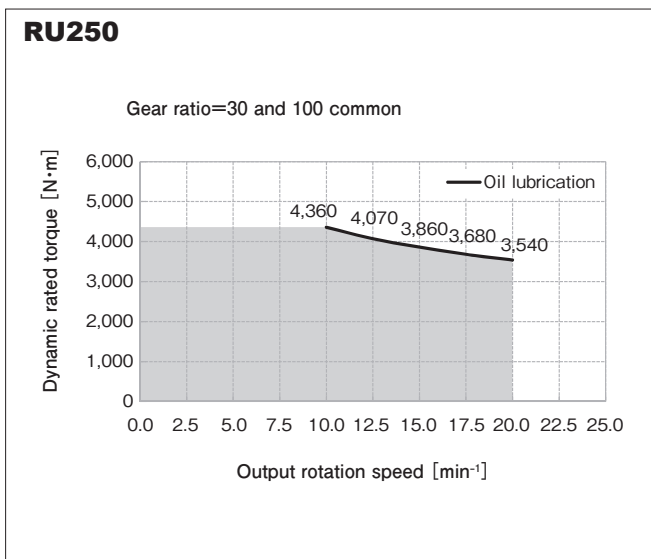
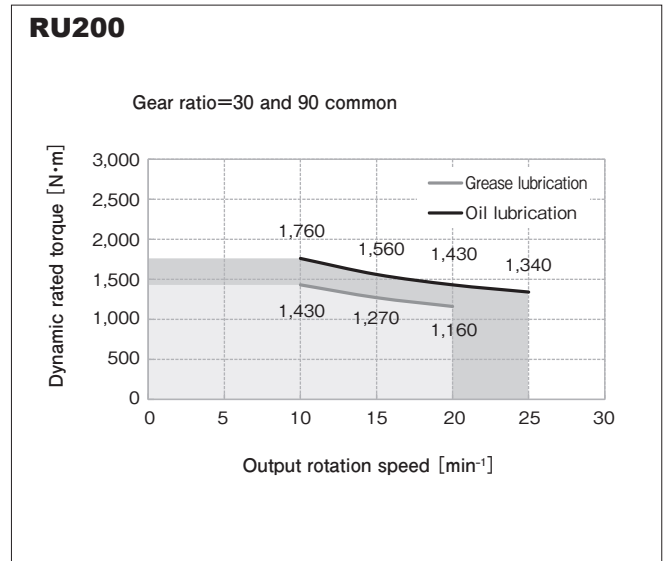
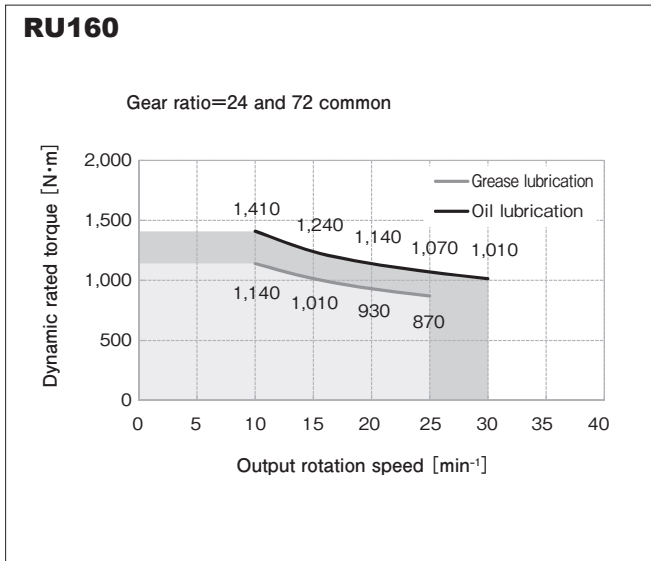
**Capacity Table for Oil Lubrication** Figures in parenthesis are for grease lubrication.

サイズ		RU160		RU200		RU250		RU315		RU400		RU500			
Gear ratio		24	72	30	90	30	100	32	120	36	120	40	150		
Max Acceleration Torque start/stop		N·m		1,730 (1,410)		2,170 (1,760)		6,250		8,710		15,530		26,090	
Static rated output torque		N·m		2,400		3,090		8,140		11,720		21,290		34,950	
Maximum output speed*1		min <sup>-1</sup>		100 (60)		65 (40)		40		30		25		20	
Rated output speed*1		min <sup>-1</sup>		30 (25)		25 (20)		20		15		13		12	
Internal moment of inertia at the input shaft*2		×10 <sup>-2</sup> kg·m <sup>2</sup>		0.57 [0.41]	0.26	0.68 [0.52]	0.36	3.44 [3.28]	0.71	[6.97]	1.27	[20.56]	2.94	[28.91]	3.55
Angular transmission accuracy	Standard accuracy model	arcsec or less						40							
	High accuracy model	arcsec or less						20							
Angular repeatability accuracy	Standard accuracy model	arcsec or less						±5							
	High accuracy model	arcsec or less						±3							
Output shaft axial runout (Side V)	Standard accuracy model	μm or less						10							
	High accuracy model	μm or less		3				5							
Output shaft radial runout (Side V)	Standard accuracy model	μm or less						10							
	High accuracy model	μm or less		3				5							
Allowable axial load output shaft		N		55,000		63,000		130,000		140,000		160,000		180,000	
Allowable radial load output shaft		N		43,000		48,000		95,000		110,000		135,000		150,000	
Allowable moment load output shaft		N·m		9,700		16,000		38,000		65,000		110,000		200,000	
Weight		kg		140	155	180	200	380	425	660	705	985	1,066	1,585	1,715

\*1 If you want to rotate the output continuously for 360° or more, please contact us in advance.  
 \*2 Figures in brackets [ ] are for standard gear ratio models without the attachment.

# Dynamic Rated Output Torque

The dynamic rated output torque is the load torque for which an expected service life of 12,000 hours or greater is ensured. The dynamic rated output torque is dependent on the output rotation speed.





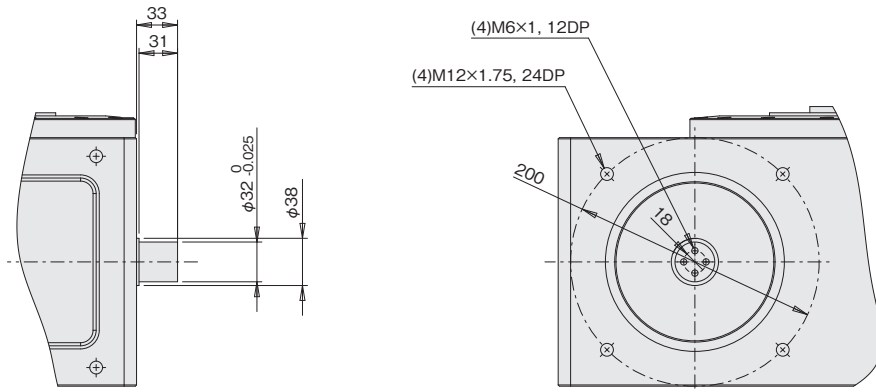


# RU160 Dimensions

## Input Shaft Detailed Drawing Standard Gear Ratio Models [Gear ratio=24] Without Attachment

RU160

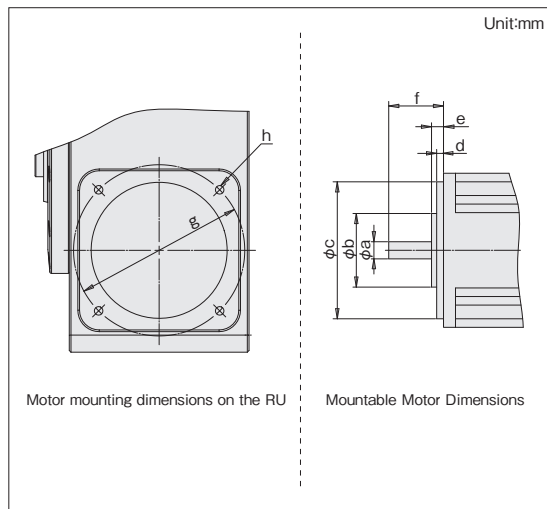
Unit:mm



## Attachment Code Selection Chart Standard Gear Ratio Models [Gear ratio=24] With Attachment

RU160

Check the dimensions for a to h in the diagram below, and choose the proper attachment code.



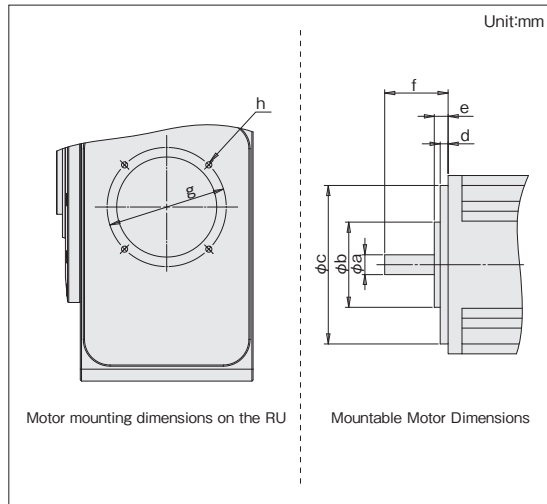
Attachment code	a	b	c	d	e	f	g	h	Max motor torque
A□	$\phi 35^{+0.010}_0$	Less than $\phi 90$	$\phi 114.3$	Less than 7	Less than 47.8	79~80	200	(4)M12×1.75, 20DP	160N·m
B□	$\phi 42^{+0.016}_0$								

※1 The most common servomotors suitable for these models are given on page 19.

## Attachment Code Selection Chart High Gear Ratio Models [Gear ratio=72] With Attachment

RU160

Check the dimensions for a to h in the diagram below, and choose the proper attachment code.



Attachment code	a	b	c	d	e	f	g	h	Max motor torque
AS	$\phi 24_{-0.021}^0$	Less than $\phi 100$	$\phi 110$	Less than 10	Less than 12	40~65	145	(4)M8×1.25, 16DP	80N·m
BS	$\phi 28_{-0.021}^0$								
CS	$\phi 35^{+0.010}_0$	$\phi 114.3$	40~80	200	(4)M12×1.75, 24DP				
DS	$\phi 35_{-0.016}^0$								

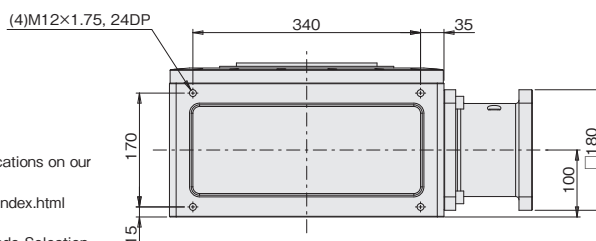
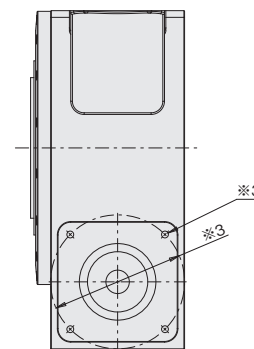
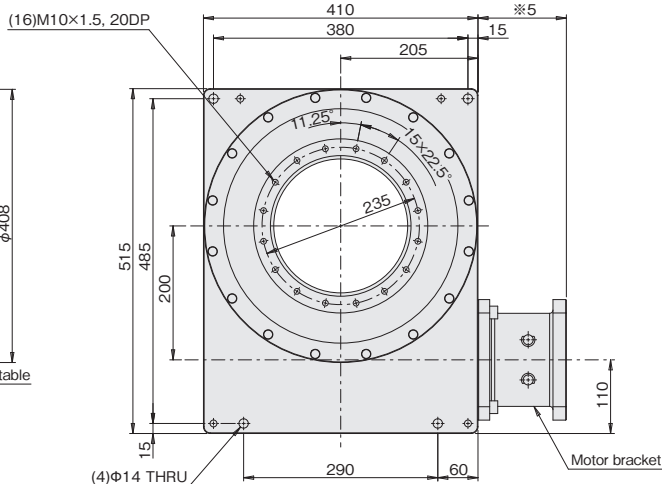
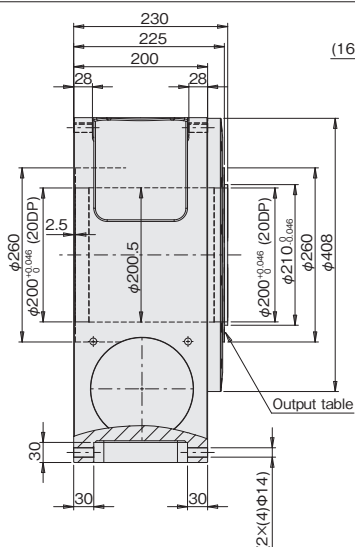
※1 The most common servomotors suitable for these models are given on pages 20 to 21.

# RU200 Dimensions

## Standard Gear Ratio Model Dimension Drawings (Gear ratio=30)

RU200

Unit:mm



※1 For detailed dimensions, refer to the standard specifications on our website.  
<http://www.sankyo-seisakusho.co.jp/download/size/index.html>

※2 Customer to provide servomotor.

※3 These dimensions can be found in the Attachment Code Selection Chart for Standard Gear Ratio Models on the following page.

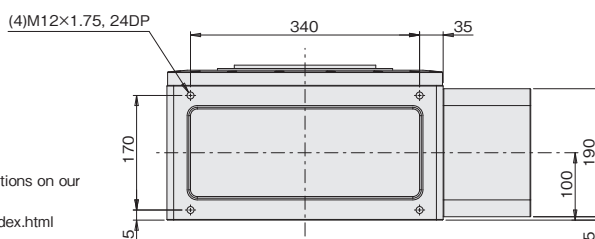
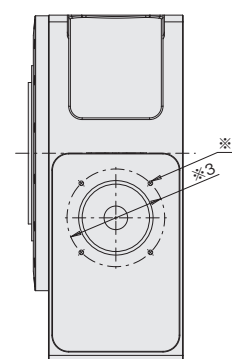
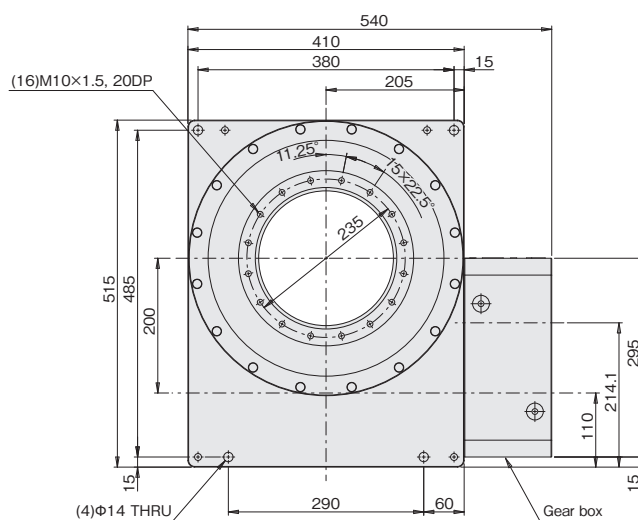
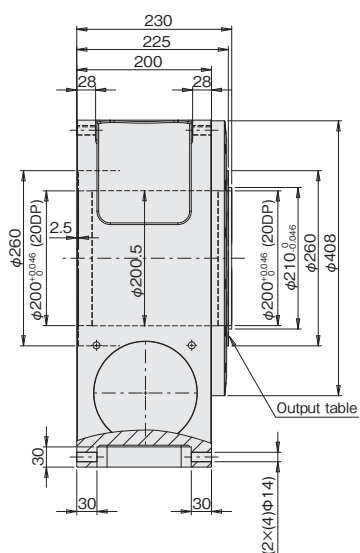
※4 Use the product code to specify the position of the access hole in the motor bracket. (Refer to P.4)

Attachment code	※5 Dimensions
A <input type="checkbox"/>	132
B <input type="checkbox"/>	166
C <input type="checkbox"/>	166

## High Gear Ratio Model Dimension Drawings (Gear ratio=90)

RU200

Unit:mm



※1 For detailed dimensions, refer to the standard specifications on our website.  
<http://www.sankyo-seisakusho.co.jp/download/size/index.html>

※2 Customer to provide servomotor.

※3 These dimensions can be found in the Attachment Code Selection Chart for High Gear Ratio Models on the following page.

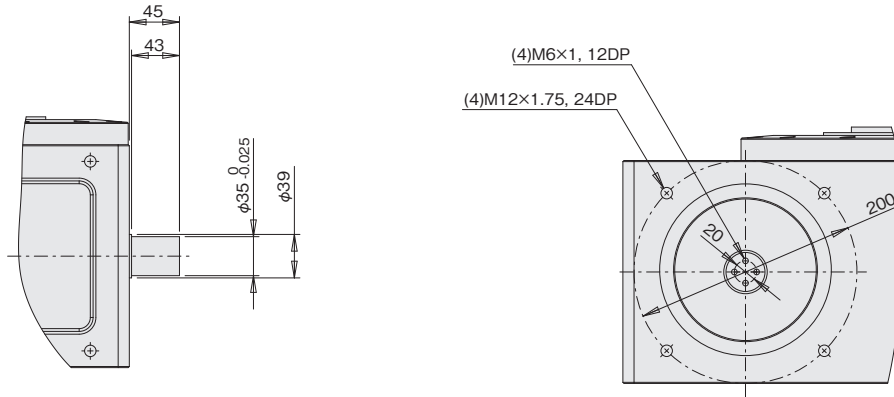
※4 The access hole for the gear box is located on side S. (Refer to P.4)

# RU200 Dimensions

## Input Shaft Detailed Drawing Standard Gear Ratio Models [Gear ratio=30] Without Attachment

RU200

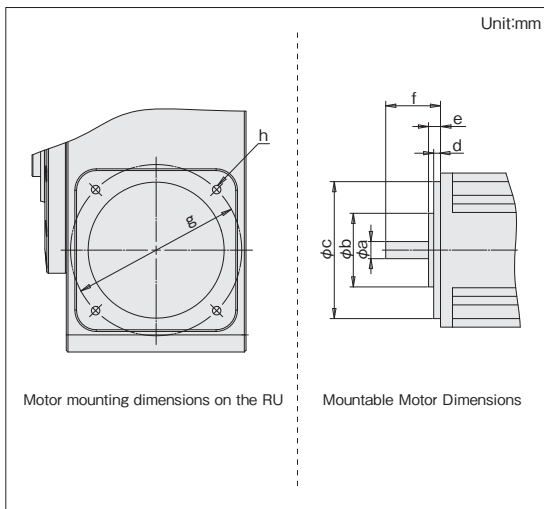
Unit:mm



## Attachment Code Selection Chart Standard Gear Ratio Models [Gear ratio=30] With Attachment

RU200

Check the dimensions for a to h in the diagram below, and choose the proper attachment code.



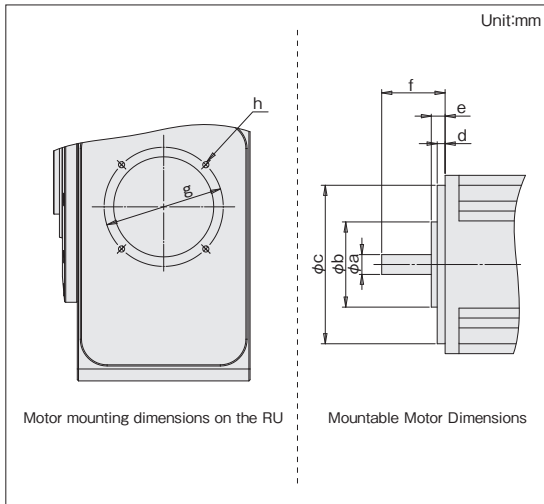
Attachment code	a	b	c	d	e	f	g	h	Max motor torque
A□	$\phi 35^{+0.010}_0$	Less than $\phi 90$	$\phi 114.3$	Less than 7	Less than 47.8	79~80	200	(4)M12×1.75, 20DP	160N·m
B□	$\phi 35^{-0.016}_0$								
C□	$\phi 42^{-0.016}_0$				Less than 81.8	112~113			

※1 The most common servomotors suitable for these models are given on pages 22 to 23.

## Attachment Code Selection Chart High Gear Ratio Models [Gear ratio=90] With Attachment

RU200

Check the dimensions for a to h in the diagram below, and choose the proper attachment code.



Attachment code	a	b	c	d	e	f	g	h	Max motor torque
AS	$\phi 24^{-0.021}_0$	Less than $\phi 100$	$\phi 110$	Less than 10	Less than 11.5	40~65	145	(4)M8×1.25, 16DP	125N·m
BS	$\phi 28^{-0.021}_0$								
CS	$\phi 35^{+0.010}_0$		$\phi 114.3$		Less than 12	40~80	200	(4)M12×1.75, 24DP	
DS	$\phi 35^{-0.016}_0$								

※1 The most common servomotors suitable for these models are given on pages 23 to 24.

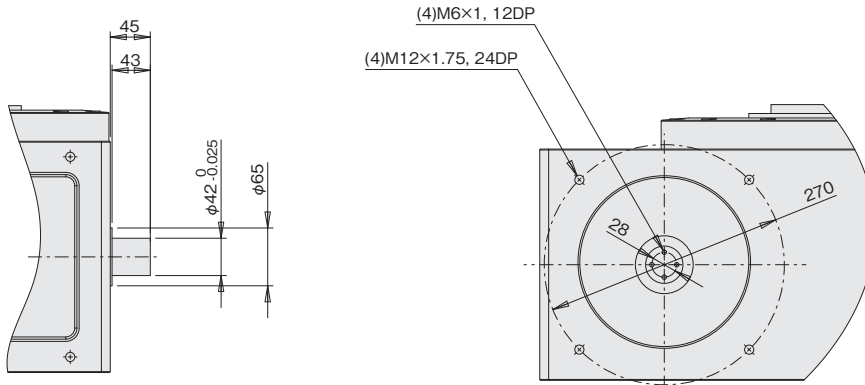


# RU250 Dimensions

## Input Shaft Detailed Drawing Standard Gear Ratio Models [Gear ratio=30] Without Attachment

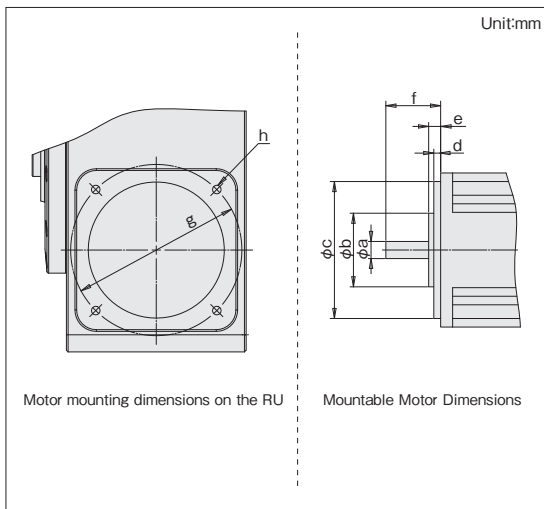
RU250

Unit:mm



## Attachment Code Selection Chart Standard Gear Ratio Models [Gear ratio=30] With Attachment RU250

Check the dimensions for a to h in the diagram below, and choose the proper attachment code.

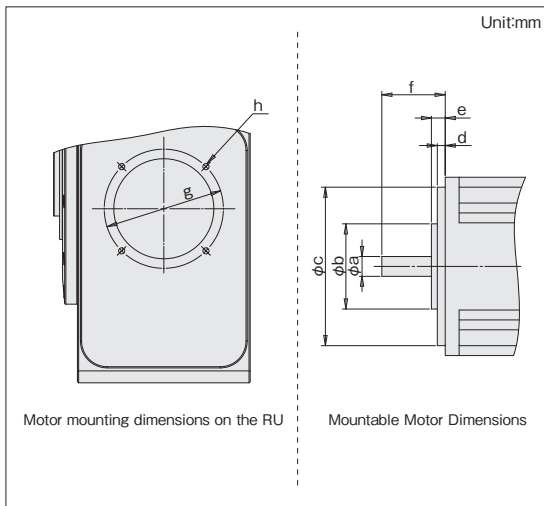


Attachment code	a	b	c	d	e	f	g	h	Max motor torque
A□	$\phi 35^{+0.010}_0$	-	$\phi 114.3$	Less than 47.8	-	79~80	200	(4)M12×1.75, 20DP	180N·m
B□	$\phi 35^{-0.016}_0$								
C□	$\phi 42^{-0.016}_0$			Less than 81.8		112~113			

※1 The most common servomotors suitable for these models are given on page 25.

## Attachment Code Selection Chart High Gear Ratio Models [Gear ratio=100] With Attachment RU250

Check the dimensions for a to h in the diagram below, and choose the proper attachment code.



Attachment code	a	b	c	d	e	f	g	h	Max motor torque
AS	$\phi 35^{+0.010}_0$	-	$\phi 114.3$	Less than 7.5	-	40~80	200	(4)M12×1.75, 24DP	110N·m
BS	$\phi 35^{-0.016}_0$								

※1 The most common servomotors suitable for these models are given on page 26.

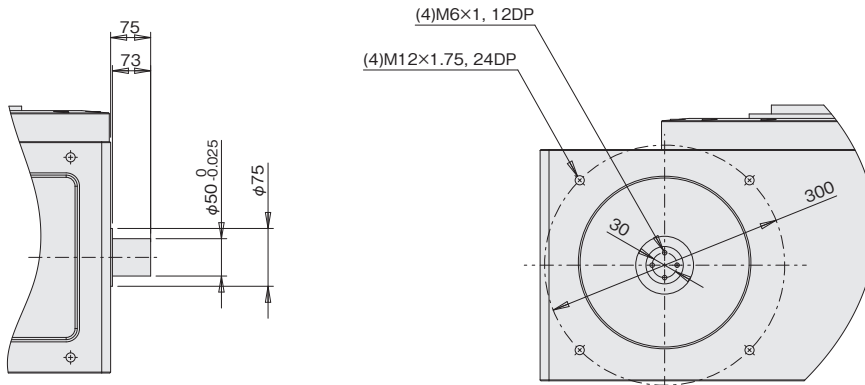


# RU315 Dimensions

## Input Shaft Detailed Drawing Standard Gear Ratio Models [Gear ratio=32] Without Attachment

RU315

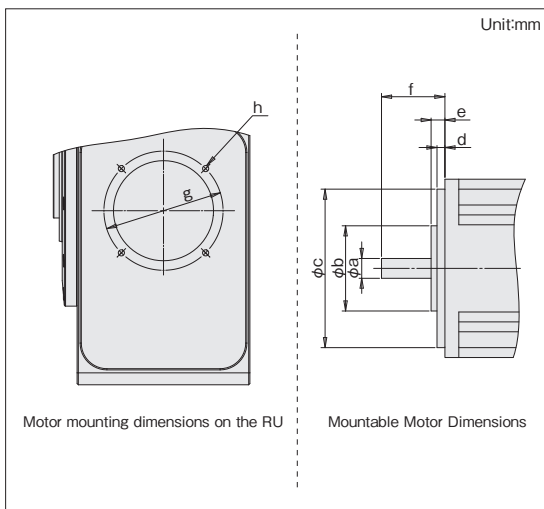
Unit:mm



## Attachment Code Selection Chart High Gear Ratio Models [Gear ratio=120] With Attachment

RU315

Check the dimensions for a to h in the diagram below, and choose the proper attachment code.



Attachment code	a	b	c	d	e	f	g	h	Max motor torque
AS	$\phi 35^{+0.010}_0$	—	$\phi 114.3$	Less than 5	—	40~80	200	(4)M12x1.75, 24DP	150N·m
BS	$\phi 35_{-0.016}^0$	—	$\phi 114.3$	Less than 5	—	40~80	200	(4)M12x1.75, 24DP	150N·m

※1 The most common servomotors suitable for these models are given on page 27.



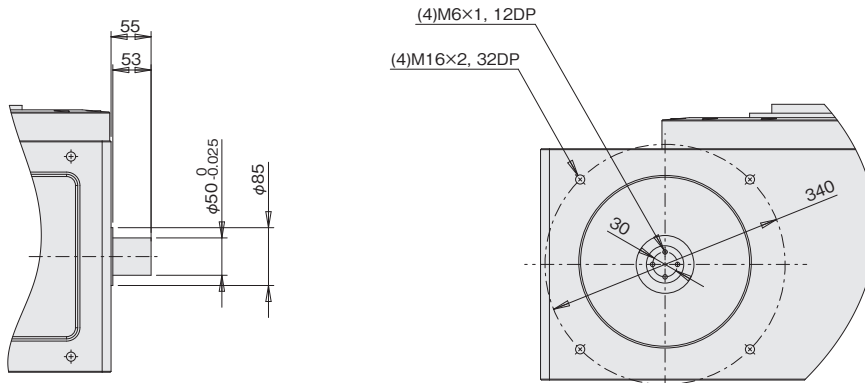


# RU400 Dimensions

## Input Shaft Detailed Drawing Standard Gear Ratio Models [Gear ratio=36] Without Attachment

RU400

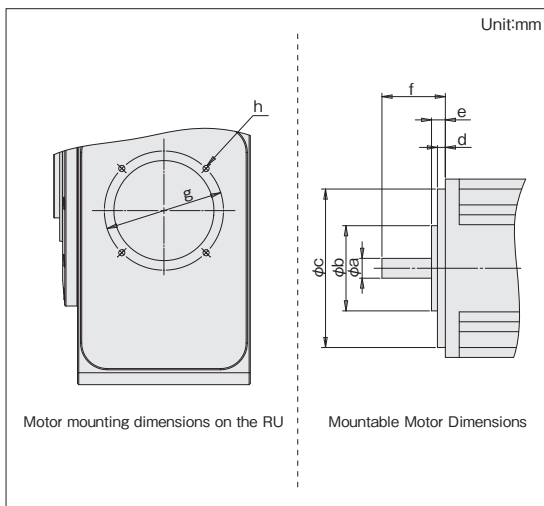
Unit:mm



## Attachment Code Selection Chart High Gear Ratio Models [Gear ratio=120] With Attachment

RU400

Check the dimensions for a to h in the diagram below, and choose the proper attachment code.



Attachment code	a	b	c	d	e	f	g	h	Max motor torque
AS	$\phi 35_{+0.010}^0$	Less than $\phi 110$	$\phi 114.3$	Less than 7.5	Less than 10	50~80	200	(4)M12x1.75, 24DP	235N·m
BS	$\phi 35_{-0.016}^0$								
CS	$\phi 42_{-0.016}^0$								

※1 The most common servomotors suitable for these models are given on page 28.

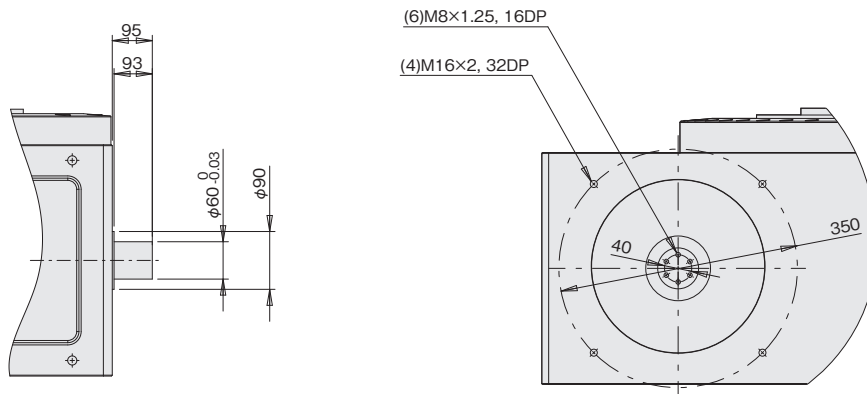


# RU500 Dimensions

## Input Shaft Detailed Drawing Standard Gear Ratio Models [Gear ratio=40] Without Attachment

RU500

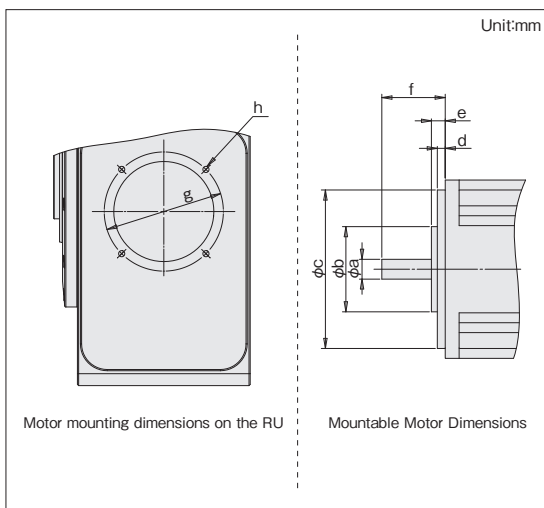
Unit:mm



## Attachment Code Selection Chart High Gear Ratio Models [Gear ratio=150] With Attachment

RU500

Check the dimensions for a to h in the diagram below, and choose the proper attachment code.



Attachment code	a	b	c	d	e	f	g	h	Max motor torque
AS	$\phi 35_{-0.016}^{+0.010}$	-	$\phi 114.3$	Less than 49	-	79~80	200	(4)M12x1.75, 24DP	235N·m
BS	$\phi 35_{-0.016}^0$								
CS	$\phi 42_{-0.016}^0$	Less than $\phi 170$	$\phi 200$	Less than 49	85	235			
DS	$\phi 55_{-0.019}^0$								

※1 The most common servomotors suitable for these models are given on page 29.

# Compatible Servomotor Models

## RU160 Standard gear ratio model (Gear ratio=24)

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code
OMRON	G	R88M-G2K010T	2.00	19.10	1,000	0.36	A□
		R88M-G3K010T	3.00	28.40	1,000	0.56	A□
	G5	R88M-K2K010H	2.00	19.10	1,000	0.30	A□
		R88M-K2K010F	2.00	19.10	1,000	0.30	A□
		R88M-K3K010H	3.00	28.70	1,000	0.48	A□
		R88M-K3K010F	3.00	28.70	1,000	0.48	A□
KEYENCE	SV	SV-M300A	2.90	18.60	1,500	0.46	A□
		SV-M500A	4.40	28.40	1,500	0.68	A□
SANYO DENKI	R1	R1AA18550H	5.50	35.00	1,500	0.33	B□
		R1AA18750H	7.50	48.00	1,500	0.42	B□
	R2	R2AA18550R	5.50	35.00	1,500	0.68	B□
		R2AA18750H	7.50	48.00	1,500	0.98	B□
Panasonic	MINAS_A5	MHME202_C	2.00	9.55	2,000	0.58	A□
		MGME202_C	2.00	19.10	1,000	0.30	A□
		MHME302_C	3.00	14.30	2,000	0.91	A□
		MGME302_C	3.00	28.70	1,000	0.48	A□
		MHME402_C	4.00	19.10	2,000	1.12	A□
		MHME502_C	5.00	23.90	2,000	1.62	A□
FANUC	α	α iF12/4000	3.00	12.00	3,000	0.62	A□
		α iF22/3000	4.00	22.00	3,000	1.20	A□
		α iF40/3000	6.00	38.00	2,000	2.20	A□
		α iF30/4000	7.00	30.00	3,000	1.70	A□
		α iF40/3000Fan	9.00	53.00	2,000	2.20	A□
		α is22/4000	4.50	22.00	3,000	0.53	A□
		α is30/4000	5.50	30.00	3,000	0.76	A□
		α is40/4000	5.50	40.00	3,000	0.99	A□
	β	β iS22/2000	2.50	20.00	2,000	0.53	A□
		β iS22/3000	3.00	20.00	2,000	0.53	A□
		β iS30/2000	3.00	27.00	2,000	0.76	A□
		β iS40/2000	3.00	36.00	1,500	0.99	A□
		HF-204	2.00	6.40	3,000	0.38	A□
		HF-302	3.00	14.30	2,000	0.75	A□
Mitsubishi Electric	CNC	HF-303	3.00	14.30	2,000	0.75	A□
		HF-354	3.50	11.10	3,000	0.75	A□
		HF-453	4.50	14.30	3,000	1.12	A□
		HF-703	7.00	22.30	3,000	1.54	A□
		HF-H204	2.00	6.40	3,000	0.38	A□
		HF-H354	3.50	11.10	3,000	0.75	A□
		HF-H453	4.50	14.30	3,000	1.12	A□
		HF-H703	7.00	22.30	3,000	1.54	A□
		J4	HG-JR703	7.00	22.30	3,000	0.43
	HG-JR7034		7.00	22.30	3,000	0.43	A□
	HG-JR903		9.00	28.60	3,000	0.56	A□
	HG-JR9034		9.00	28.60	3,000	0.56	A□
	HG-SR121		1.20	11.50	1,000	0.47	A□
	HG-SR202		2.00	9.50	2,000	0.47	A□
	HG-SR2024		2.00	9.50	2,000	0.47	A□
	HG-SR201		2.00	19.10	1,000	0.79	A□
	HG-SR301		3.00	28.60	1,000	1.00	A□
	HG-SR352		3.50	16.70	2,000	0.79	A□
HG-SR3524	3.50		16.70	2,000	0.79	A□	
HG-SR421	4.20		40.10	1,000	1.51	A□	
J5	HG-SR502	5.00	23.90	2,000	1.00	A□	
	HG-SR5024	5.00	23.90	2,000	1.00	A□	
	HG-SR702	7.00	33.40	2,000	1.51	A□	
	HG-SR7024	7.00	33.40	2,000	1.51	A□	
	HK-ST2024W	1.20	11.50	1,000	0.36	A□	
	HK-ST202W	2.00	9.50	2,000	0.36	A□	
	HK-ST3524W	2.00	19.10	1,000	0.54	A□	
	HK-ST5024W	3.00	28.60	1,000	0.71	A□	
	HK-ST352W	3.50	16.70	2,000	0.54	A□	
HK-ST7024W	4.20	40.10	1,000	1.05	A□		
HK-ST502W	5.00	23.90	2,000	0.71	A□		
HK-ST702W	7.00	33.40	2,000	1.05	A□		

The box in the Attachment Code indicates the location of the access holes for the motor bracket. Specify with the product code. (Refer to page 4.)  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

**RU160 Standard gear ratio model (Gear ratio=24)**

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code
Yaskawa Electric	Σ-V	SGMGV-30A	2.90	18.60	1,500	0.46	A□
		SGMGV-44A	4.40	28.40	1,500	0.68	A□
	Σ-7	SGM7G-30A	2.90	18.60	1,500	0.46	A□
		SGM7G-44A	4.40	28.40	1,500	0.68	A□

The box in the Attachment Code indicates the location of the access holes for the motor bracket. Specify with the product code. (Refer to page 4.)  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

**RU160 High gear ratio model (Gear ratio=72)**

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code
OMRON	G	R88M-G2K010T	2.00	19.10	1,000	0.36	DS
		R88M-G3K020T	3.00	14.30	2,000	0.22	AS
		R88M-G3K010T	3.00	28.40	1,000	0.56	DS
		R88M-G4K030T	4.00	12.60	3,000	0.13	AS
		R88M-G5K030T	5.00	15.80	3,000	0.18	AS
	G5	R88M-K2K010F	2.00	19.10	1,000	0.30	DS
		R88M-K2K010H	2.00	19.10	1,000	0.30	DS
		R88M-K3K020F	3.00	14.30	2,000	0.13	AS
		R88M-K3K020H	3.00	14.30	2,000	0.13	AS
		R88M-K4K030F	4.00	12.70	3,000	0.13	AS
		R88M-K4K030H	4.00	12.70	3,000	0.13	AS
		R88M-K4K020F	4.00	19.10	2,000	0.38	DS
		R88M-K4K020H	4.00	19.10	2,000	0.38	DS
		R88M-K5K030F	5.00	15.90	3,000	0.17	AS
KEYENCE	SV	SV-M200A	1.80	11.50	1,500	0.26	AS
		SV-M300A	2.90	18.60	1,500	0.46	CS
SANYO DENKI	Q1	Q1AA13300D	3.00	9.50	3,000	0.05	BS
		Q1AA13400D	4.00	12.70	3,000	0.06	BS
		Q1AA13500D	5.00	15.70	3,000	0.08	BS
	Q2	Q2AA18200H	2.00	9.50	2,000	0.20	DS
		R2AA13200D	2.00	9.50	2,000	0.12	BS
		R2AA13200L	2.00	9.50	2,000	0.12	BS
		R2AA18350D	3.50	17.00	2,000	0.40	DS
R2	R2AA18350L	3.50	17.00	2,000	0.40	DS	
Panasonic	MINAS_A5	MFME152_1	1.50	7.16	2,000	0.18	DS
		MHME202_C	2.00	9.55	2,000	0.58	DS
		MGME202_C	2.00	19.10	1,000	0.30	DS
		MDME302_C	3.00	14.30	2,000	0.13	AS
		MHME302_C	3.00	14.30	2,000	0.91	DS
		MSME402_C	4.00	12.70	3,000	0.13	AS
		MDME402_C	4.00	19.10	2,000	0.38	DS
		MHME402_C	4.00	19.10	2,000	1.12	DS
MSME502_C	5.00	15.90	3,000	0.17	AS		
FANUC	α	αiF12/4000	3.00	12.00	3,000	0.62	CS
		αiF22/3000	4.00	22.00	3,000	1.20	CS
		αiS12/4000	2.70	12.00	3,000	0.23	AS
	β	βiS12/2000	1.40	10.50	2,000	0.23	AS
		βiS12/3000	1.80	11.00	2,000	0.23	AS
		βiS22/2000	2.50	20.00	2,000	0.53	CS
		βiS22/3000	3.00	20.00	2,000	0.53	CS
βiS30/2000	3.00	27.00	2,000	0.76	CS		
Fuji Electric	GYC	GYC102D5	1.00	3.18	3,000	0.03	AS
		GYC152D5	1.50	4.78	3,000	0.04	AS
		GYC202D5	2.00	6.37	3,000	0.06	AS
	GYS	GYS302D5	3.00	9.55	3,000	0.08	BS
		GYS402D5	4.00	12.70	3,000	0.11	BS
		GYS502D5	5.00	15.90	3,000	0.13	BS

On high gear ratio models, the access hole faces the S surface.  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

# Compatible Servomotor Models

## RU160 High gear ratio model (Gear ratio=72)

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [ $\times 10^{-2} \text{kg} \cdot \text{m}^2$ ]	Motor mounting code
Mitsubishi Electric	CNC	HF-54	0.50	1.60	3,000	0.06	AS
		HF-104	1.00	3.20	3,000	0.12	AS
		HF-123	1.20	5.70	2,000	0.12	AS
		HF-142	1.40	6.70	2,000	0.18	AS
		HF-154	1.50	4.80	3,000	0.18	AS
		HF-204	2.00	6.40	3,000	0.38	CS
		HF-224	2.20	7.00	3,000	0.24	AS
		HF-223	2.20	10.50	2,000	0.24	AS
		HF-302	3.00	14.30	2,000	0.75	CS
		HF-303	3.00	14.30	2,000	0.75	CS
		HF-H54	0.50	1.60	3,000	0.06	AS
		HF-H104	1.00	3.20	3,000	0.12	AS
		HF-H154	1.50	4.80	3,000	0.18	AS
		HF-H204	2.00	6.40	3,000	0.38	CS
	J4	HG-JR353	3.30	10.50	3,000	0.13	BS
		HG-JR3534	3.30	10.50	3,000	0.13	BS
		HG-JR503	5.00	15.90	3,000	0.19	BS
		HG-JR5034	5.00	15.90	3,000	0.19	BS
		HG-JR703	7.00	22.30	3,000	0.43	CS
		HG-JR7034	7.00	22.30	3,000	0.43	CS
		HG-RR353	3.50	11.10	3,000	0.08	BS
		HG-RR503	5.00	15.90	3,000	0.12	BS
		HG-SR52	0.50	2.40	2,000	0.07	AS
		HG-SR524	0.50	2.40	2,000	0.07	AS
		HG-SR51	0.50	4.80	1,000	0.12	AS
		HG-SR81	0.85	8.10	1,000	0.16	AS
		HG-SR102	1.00	4.80	2,000	0.12	AS
		HG-SR1024	1.00	4.80	2,000	0.12	AS
		HG-SR121	1.20	11.50	1,000	0.47	CS
		HG-SR152	1.50	7.20	2,000	0.16	AS
		HG-SR1524	1.50	7.20	2,000	0.16	AS
		HG-SR202	2.00	9.50	2,000	0.47	CS
		HG-SR2024	2.00	9.50	2,000	0.47	CS
		HG-SR201	2.00	19.10	1,000	0.79	CS
	HG-SR352	3.50	16.70	2,000	0.79	CS	
	HG-SR3524	3.50	16.70	2,000	0.79	CS	
	J5	HK-ST52W	0.50	2.40	2,000	0.06	AS
		HK-ST1724W	0.85	8.10	1,000	0.11	AS
		HK-ST102W	1.00	4.80	2,000	0.09	AS
		HK-ST2024W	1.20	11.50	1,000	0.36	CS
		HK-ST202W	2.00	9.50	2,000	0.36	CS
		HK-ST3524W	2.00	19.10	1,000	0.54	CS
HK-ST352W	3.50	16.70	2,000	0.54	CS		
Yaskawa Electric	$\Sigma$ -V	SGMGV-20A	1.80	11.50	1,500	0.26	AS
		SGMGV-30A	2.90	18.60	1,500	0.46	CS
	$\Sigma$ -7	SGM7G-20A	1.80	11.50	1,500	0.26	AS
		SGM7G-30A	2.90	18.60	1,500	0.46	CS

On high gear ratio models, the access hole faces the S surface.

Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

**RU200 Standard gear ratio model (Gear ratio=30)**

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code	
OMRON	G	R88M-G2K010T	2.00	19.10	1,000	0.36	A□	
		R88M-G3K010T	3.00	28.40	1,000	0.56	A□	
		R88M-G4K510T	4.50	42.90	1,000	0.81	C□	
		R88M-G6K010T	6.00	57.20	1,000	0.99	C□	
		R88M-G7K515T	7.50	48.00	1,500	0.99	C□	
	G5	R88M-K2K010H	2.00	19.10	1,000	0.30	A□	
		R88M-K2K010F	2.00	19.10	1,000	0.30	A□	
		R88M-K3K010H	3.00	28.70	1,000	0.48	A□	
		R88M-K3K010F	3.00	28.70	1,000	0.48	A□	
		R88M-K4K510T	4.50	43.00	1,000	0.79	C□	
		R88M-K4K510C	4.50	43.00	1,000	0.79	C□	
		R88M-K6K010T	6.00	57.30	1,000	1.01	C□	
		R88M-K6K010C	6.00	57.30	1,000	1.01	C□	
		R88M-K7K515T	7.50	47.80	1,500	1.01	C□	
R88M-K7K515C	7.50	47.80	1,500	1.01	C□			
KEYENCE	SV	SV-M300A	2.90	18.60	1,500	0.46	A□	
		SV-M500A	4.40	28.40	1,500	0.68	A□	
SANYO DENKI	R1	R1AA18550H	5.50	35.00	1,500	0.33	B□	
		R1AA18750H	7.50	48.00	1,500	0.42	B□	
	R2	R2AA18550R	5.50	35.00	1,500	0.68	B□	
		R2AA18550H	5.50	35.00	1,500	0.68	B□	
		R2AA18750H	7.50	48.00	1,500	0.98	B□	
R2AA1811KR	11.00	70.00	1,500	1.10	B□			
Panasonic	MINAS_A5	MHME202_C	2.00	9.55	2,000	0.58	A□	
		MGME202_C	2.00	19.10	1,000	0.30	A□	
		MHME302_C	3.00	14.30	2,000	0.91	A□	
		MGME302_C	3.00	28.70	1,000	0.48	A□	
		MHME402_C	4.00	19.10	2,000	1.12	A□	
		MGME452_1	4.50	43.00	1,000	0.79	C□	
		MHME502_C	5.00	23.90	2,000	1.62	A□	
		MGME602_1	6.00	57.30	1,000	1.01	C□	
		MDME752_1	7.50	47.80	1,500	1.01	C□	
MHME752_1	7.50	47.80	1,500	2.73	C□			
FANUC	α	α iF12/4000	3.00	12.00	3,000	0.62	A□	
		α iF22/3000	4.00	22.00	3,000	1.20	A□	
		α iF40/3000	6.00	38.00	2,000	2.20	A□	
		α iF30/4000	7.00	30.00	3,000	1.70	A□	
		α iF40/3000Fan	9.00	53.00	2,000	2.20	A□	
		α is50/3000	4.00	53.00	2,000	1.45	A□	
		α is22/4000	4.50	22.00	3,000	0.53	A□	
		α is30/4000	5.50	30.00	3,000	0.76	A□	
		α is40/4000	5.50	40.00	3,000	0.99	A□	
	β	β iS22/2000	2.50	20.00	2,000	0.53	A□	
		β iS22/3000	3.00	20.00	2,000	0.53	A□	
		β iS30/2000	3.00	27.00	2,000	0.76	A□	
		β iS40/2000	3.00	36.00	1,500	0.99	A□	
Mitsubishi Electric	CNC	HF-204	2.00	6.40	3,000	0.38	A□	
		HF-302	3.00	14.30	2,000	0.75	A□	
		HF-303	3.00	14.30	2,000	0.75	A□	
		HF-354	3.50	11.10	3,000	0.75	A□	
		HF-453	4.50	14.30	3,000	1.12	A□	
		HF-703	7.00	22.30	3,000	1.54	A□	
		HF-H204	2.00	6.40	3,000	0.38	A□	
		HF-H354	3.50	11.10	3,000	0.75	A□	
		HF-H453	4.50	14.30	3,000	1.12	A□	
		HF-H703	7.00	22.30	3,000	1.54	A□	
	J4	HG-JR703	7.00	22.30	3,000	0.43	A□	
		HG-JR7034	7.00	22.30	3,000	0.43	A□	
		HG-JR903	9.00	28.60	3,000	0.56	A□	
		HG-JR9034	9.00	28.60	3,000	0.56	A□	
		HG-SR121	1.20	11.50	1,000	0.47	A□	
		HG-SR202	2.00	9.50	2,000	0.47	A□	

The box in the Attachment Code indicates the location of the access holes for the motor bracket. Specify with the product code. (Refer to page 4.)  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

# Compatible Servomotor Models

## RU200 Standard gear ratio model (Gear ratio=30)

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code
Mitsubishi Electric	J4	HG-SR2024	2.00	9.50	2,000	0.47	A□
		HG-SR201	2.00	19.10	1,000	0.79	A□
		HG-SR301	3.00	28.60	1,000	1.00	A□
		HG-SR352	3.50	16.70	2,000	0.79	A□
		HG-SR3524	3.50	16.70	2,000	0.79	A□
		HG-SR421	4.20	40.10	1,000	1.51	A□
		HG-SR502	5.00	23.90	2,000	1.00	A□
		HG-SR5024	5.00	23.90	2,000	1.00	A□
	HG-SR702	7.00	33.40	2,000	1.51	A□	
	HG-SR7024	7.00	33.40	2,000	1.51	A□	
	J5	HK-ST2024W	1.20	11.50	1,000	0.36	A□
		HK-ST202W	2.00	9.50	2,000	0.36	A□
		HK-ST3524W	2.00	19.10	1,000	0.54	A□
		HK-ST5024W	3.00	28.60	1,000	0.71	A□
		HK-ST352W	3.50	16.70	2,000	0.54	A□
		HK-ST7024W	4.20	40.10	1,000	1.05	A□
HK-ST502W		5.00	23.90	2,000	0.71	A□	
Yaskawa Electric	Σ-V	SGMGV-30A	2.90	18.60	1,500	0.46	A□
		SGMGV-44A	4.40	28.40	1,500	0.68	A□
		SGMGV-55A	5.50	35.00	1,500	0.89	C□
		SGMGV-75A	7.50	48.00	1,500	1.25	C□
	Σ-7	SGM7G-30A	2.90	18.60	1,500	0.46	A□
		SGM7G-44A	4.40	28.40	1,500	0.68	A□
		SGM7G-55A	5.50	35.00	1,500	0.89	C□
		SGM7G-75A	7.50	48.00	1,500	1.25	C□

The box in the Attachment Code indicates the location of the access holes for the motor bracket. Specify with the product code. (Refer to page 4.)  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

## RU200 High gear ratio model (Gear ratio=90)

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code
OMRON	G	R88M-G2K010T	2.00	19.10	1,000	0.36	DS
		R88M-G3K020T	3.00	14.30	2,000	0.22	AS
		R88M-G3K010T	3.00	28.40	1,000	0.56	DS
		R88M-G5K030T	5.00	15.80	3,000	0.18	AS
		R88M-G5K020T	5.00	23.80	2,000	0.61	DS
	G5	R88M-K2K010F	2.00	19.10	1,000	0.30	DS
		R88M-K2K010H	2.00	19.10	1,000	0.30	DS
		R88M-K3K010F	3.00	28.70	1,000	0.48	DS
		R88M-K3K010H	3.00	28.70	1,000	0.48	DS
		R88M-K4K020F	4.00	19.10	2,000	0.38	DS
		R88M-K4K020H	4.00	19.10	2,000	0.38	DS
		R88M-K5K030F	5.00	15.90	3,000	0.17	AS
		R88M-K5K030H	5.00	15.90	3,000	0.17	AS
		R88M-K5K020F	5.00	23.90	2,000	0.48	DS
R88M-K5K020H	5.00	23.90	2,000	0.48	DS		
KEYENCE	SV	SV-M200A	1.80	11.50	1,500	0.26	AS
		SV-M300A	2.90	18.60	1,500	0.46	CS
		SV-M500A	4.40	28.40	1,500	0.68	CS
SANYO DENKI	Q1	Q1AA13300D	3.00	9.50	3,000	0.05	BS
		Q1AA13400D	4.00	12.70	3,000	0.06	BS
		Q1AA13500D	5.00	15.70	3,000	0.08	BS
	Q2	Q2AA18200H	2.00	9.50	2,000	0.20	DS
		R2AA13200D	2.00	9.50	2,000	0.12	BS
	R2	R2AA13200L	2.00	9.50	2,000	0.12	BS
		R2AA18350D	3.50	17.00	2,000	0.40	DS
		R2AA18350L	3.50	17.00	2,000	0.40	DS
		R2AA18450H	4.50	21.50	2,000	0.50	DS

On high gear ratio models, the access hole faces the S surface.  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.



**RU200 High gear ratio model (Gear ratio=90)**

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code
Panasonic	MINAS_A5	MFME152_1	1.50	7.16	2,000	0.18	DS
		MHME202_C	2.00	9.55	2,000	0.58	DS
		MGME202_C	2.00	19.10	1,000	0.30	DS
		MHME302_C	3.00	14.30	2,000	0.91	DS
		MGME302_C	3.00	28.70	1,000	0.48	DS
		MDME402_C	4.00	19.10	2,000	0.38	DS
		MHME402_C	4.00	19.10	2,000	1.12	DS
		MSME502_C	5.00	15.90	3,000	0.17	AS
		MDME502_C	5.00	23.90	2,000	0.48	DS
		MHME502_C	5.00	23.90	2,000	1.62	DS
FANUC	α	αiF12/4000	3.00	12.00	3,000	0.62	CS
		αiF22/3000	4.00	22.00	3,000	1.20	CS
		αiF30/4000	7.00	30.00	3,000	1.70	CS
		αiS12/4000	2.70	12.00	3,000	0.23	AS
		αiS22/4000	4.50	22.00	3,000	0.53	CS
	β	βiS12/2000	1.40	10.50	2,000	0.23	AS
		βiS12/3000	1.80	11.00	2,000	0.23	AS
		βiS22/2000	2.50	20.00	2,000	0.53	CS
		βiS22/3000	3.00	20.00	2,000	0.53	CS
		βiS30/2000	3.00	27.00	2,000	0.76	CS
		βiS40/2000	3.00	36.00	1,500	0.99	CS
Fuji Electric	GYS	GYS302D5	3.00	9.55	3,000	0.08	BS
		GYS402D5	4.00	12.70	3,000	0.11	BS
		GYS502D5	5.00	15.90	3,000	0.13	BS
Mitsubishi Electric	CNC	HF-142	1.40	6.70	2,000	0.18	AS
		HF-154	1.50	4.80	3,000	0.18	AS
		HF-204	2.00	6.40	3,000	0.38	CS
		HF-224	2.20	7.00	3,000	0.24	AS
		HF-223	2.20	10.50	2,000	0.24	AS
		HF-302	3.00	14.30	2,000	0.75	CS
		HF-303	3.00	14.30	2,000	0.75	CS
		HF-354	3.50	11.10	3,000	0.75	CS
		HF-H154	1.50	4.80	3,000	0.18	AS
		HF-H204	2.00	6.40	3,000	0.38	CS
		HF-H354	3.50	11.10	3,000	0.75	CS
	J4	HG-JR353	3.30	10.50	3,000	0.13	BS
		HG-JR3534	3.30	10.50	3,000	0.13	BS
		HG-JR503	5.00	15.90	3,000	0.19	BS
		HG-JR5034	5.00	15.90	3,000	0.19	BS
		HG-JR703	7.00	22.30	3,000	0.43	CS
		HG-JR7034	7.00	22.30	3,000	0.43	CS
		HG-JR903	9.00	28.60	3,000	0.56	CS
		HG-JR9034	9.00	28.60	3,000	0.56	CS
		HG-RR353	3.50	11.10	3,000	0.08	BS
		HG-RR503	5.00	15.90	3,000	0.12	BS
		HG-SR121	1.20	11.50	1,000	0.47	CS
		HG-SR202	2.00	9.50	2,000	0.47	CS
		HG-SR2024	2.00	9.50	2,000	0.47	CS
		HG-SR201	2.00	19.10	1,000	0.79	CS
		HG-SR301	3.00	28.60	1,000	1.00	CS
		HG-SR352	3.50	16.70	2,000	0.79	CS
		HG-SR3524	3.50	16.70	2,000	0.79	CS
	HG-SR502	5.00	23.90	2,000	1.00	CS	
	HG-SR5024	5.00	23.90	2,000	1.00	CS	
	J5	HK-ST2024W	1.20	11.50	1,000	0.36	CS
		HK-ST202W	2.00	9.50	2,000	0.36	CS
		HK-ST3524W	2.00	19.10	1,000	0.54	CS
HK-ST5024W		3.00	28.60	1,000	0.71	CS	
HK-ST352W		3.50	16.70	2,000	0.54	CS	
HK-ST502W		5.00	23.90	2,000	0.71	CS	
Yaskawa Electric	Σ-V	SGMGV-20A	1.80	11.50	1,500	0.26	AS
		SGMGV-30A	2.90	18.60	1,500	0.46	CS
		SGMGV-44A	4.40	28.40	1,500	0.68	CS
	Σ-7	SGM7G-20A	1.80	11.50	1,500	0.26	AS
		SGM7G-30A	2.90	18.60	1,500	0.46	DS
		SGM7G-44A	4.40	28.40	1,500	0.68	DS

On high gear ratio models, the access hole faces the S surface.  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

# Compatible Servomotor Models

## RU250 Standard gear ratio model (Gear ratio=30)

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code
OMRON	G	R88M-G4K510T	4.50	42.90	1,000	0.81	C□
		R88M-G6K010T	6.00	57.20	1,000	0.99	C□
		R88M-G7K515T	7.50	48.00	1,500	0.99	C□
	G5	R88M-K4K510T	4.50	43.00	1,000	0.79	C□
		R88M-K4K510C	4.50	43.00	1,000	0.79	C□
		R88M-K6K010T	6.00	57.30	1,000	1.01	C□
		R88M-K6K010C	6.00	57.30	1,000	1.01	C□
		R88M-K7K515T	7.50	47.80	1,500	1.01	C□
KEYENCE	SV	SV-M500A	4.40	28.40	1,500	0.68	A□
SANYO DENKI	R1	R1AA1811KR	11.00	70.00	1,500	0.64	B□
	R2	R2AA18550R	5.50	35.00	1,500	0.68	B□
		R2AA18550H	5.50	35.00	1,500	0.68	B□
		R2AA18750H	7.50	48.00	1,500	0.98	B□
		R2AA1811KR	11.00	70.00	1,500	1.10	B□
Panasonic	MINAS_A5	MHME302_C	3.00	14.30	2,000	0.91	A□
		MHME402_C	4.00	19.10	2,000	1.12	A□
		MGME452_1	4.50	43.00	1,000	0.79	C□
		MHME502_C	5.00	23.90	2,000	1.62	A□
		MGME602_1	6.00	57.30	1,000	1.01	C□
		MDME752_1	7.50	47.80	1,500	1.01	C□
		MHME752_1	7.50	47.80	1,500	2.73	C□
FANUC	α	α iF22/3000	4.00	22.00	3,000	1.20	A□
		α iF40/3000	6.00	38.00	2,000	2.20	A□
		α iF30/4000	7.00	30.00	3,000	1.70	A□
		α iF40/3000Fan	9.00	53.00	2,000	2.20	A□
		α is50/3000	4.00	53.00	2,000	1.45	A□
		α is60/2000	5.00	65.00	1,500	1.95	A□
		α is30/4000	5.50	30.00	3,000	0.76	A□
		α is40/4000	5.50	40.00	3,000	0.99	A□
	β	β iS30/2000	3.00	27.00	2,000	0.76	A□
		β iS40/2000	3.00	36.00	1,500	0.99	A□
Mitsubishi Electric	CNC	HF-302	3.00	14.30	2,000	0.75	A□
		HF-303	3.00	14.30	2,000	0.75	A□
		HF-354	3.50	11.10	3,000	0.75	A□
		HF-453	4.50	14.30	3,000	1.12	A□
		HF-703	7.00	22.30	3,000	1.54	A□
		HF-H354	3.50	11.10	3,000	0.75	A□
		HF-H453	4.50	14.30	3,000	1.12	A□
		HF-H703	7.00	22.30	3,000	1.54	A□
	J4	HG-SR201	2.00	19.10	1,000	0.79	A□
		HG-SR301	3.00	28.60	1,000	1.00	A□
		HG-SR352	3.50	16.70	2,000	0.79	A□
		HG-SR3524	3.50	16.70	2,000	0.79	A□
		HG-SR421	4.20	40.10	1,000	1.51	A□
		HG-SR502	5.00	23.90	2,000	1.00	A□
		HG-SR5024	5.00	23.90	2,000	1.00	A□
		HG-SR702	7.00	33.40	2,000	1.51	A□
	J5	HG-SR7024	7.00	33.40	2,000	1.51	A□
		HK-ST3524W	2.00	19.10	1,000	0.54	A□
		HK-ST5024W	3.00	28.60	1,000	0.71	A□
		HK-ST352W	3.50	16.70	2,000	0.54	A□
		HK-ST7024W	4.20	40.10	1,000	1.05	A□
HK-ST502W		5.00	23.90	2,000	0.71	A□	
Yaskawa Electric	Σ-V	SGMGV-44A	4.40	28.40	1,500	0.68	A□
		SGMGV-55A	5.50	35.00	1,500	0.89	C□
		SGMGV-75A	7.50	48.00	1,500	1.25	C□
	Σ-7	SGM7G-44A	4.40	28.40	1,500	0.68	A□
		SGM7G-55A	5.50	35.00	1,500	0.89	C□
		SGM7G-75A	7.50	48.00	1,500	1.25	C□
		SGM7G-75A	7.50	48.00	1,500	1.25	C□

The box in the Attachment Code indicates the location of the access holes for the motor bracket. Specify with the product code. (Refer to page 4.)  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

**RU250 High gear ratio model (Gear ratio=100)**

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code	
OMRON	G	R88M-G2K010T	2.00	19.10	1,000	0.36	BS	
		R88M-G3K010T	3.00	28.40	1,000	0.56	BS	
		R88M-G5K020T	5.00	23.80	2,000	0.61	BS	
	G5	R88M-K2K010F	2.00	19.10	1,000	0.30	BS	
		R88M-K2K010H	2.00	19.10	1,000	0.30	BS	
		R88M-K3K010F	3.00	28.70	1,000	0.48	BS	
		R88M-K3K010H	3.00	28.70	1,000	0.48	BS	
		R88M-K4K020F	4.00	19.10	2,000	0.38	BS	
		R88M-K4K020H	4.00	19.10	2,000	0.38	BS	
KEYENCE	SV	SV-M300A	2.90	18.60	1,500	0.46	AS	
		SV-M500A	4.40	28.40	1,500	0.68	AS	
SANYO DENKI	Q2	Q2AA18200H	2.00	9.50	2,000	0.20	BS	
	R2	R2AA18350D	3.50	17.00	2,000	0.40	BS	
		R2AA18350L	3.50	17.00	2,000	0.40	BS	
		R2AA18450H	4.50	21.50	2,000	0.50	BS	
Panasonic	MINAS_A5	MFME152_1	1.50	7.16	2,000	0.18	BS	
		MHME202_C	2.00	9.55	2,000	0.58	BS	
		MGME202_C	2.00	19.10	1,000	0.30	BS	
		MHME302_C	3.00	14.30	2,000	0.91	BS	
		MGME302_C	3.00	28.70	1,000	0.48	BS	
		MDME402_C	4.00	19.10	2,000	0.38	BS	
		MHME402_C	4.00	19.10	2,000	1.12	BS	
		MDME502_C	5.00	23.90	2,000	0.48	BS	
		MHME502_C	5.00	23.90	2,000	1.62	BS	
FANUC	α	αiF12/4000	3.00	12.00	3,000	0.62	AS	
		αiF22/3000	4.00	22.00	3,000	1.20	AS	
		αiF30/4000	7.00	30.00	3,000	1.70	AS	
		αiS22/4000	4.50	22.00	3,000	0.53	AS	
	β	βiS22/2000	2.50	20.00	2,000	0.53	AS	
		βiS22/3000	3.00	20.00	2,000	0.53	AS	
		βiS30/2000	3.00	27.00	2,000	0.76	AS	
		βiS40/2000	3.00	36.00	1,500	0.99	AS	
Mitsubishi Electric	CNC	HF-204	2.00	6.40	3,000	0.38	AS	
		HF-302	3.00	14.30	2,000	0.75	AS	
		HF-303	3.00	14.30	2,000	0.75	AS	
		HF-354	3.50	11.10	3,000	0.75	AS	
		HF-H204	2.00	6.40	3,000	0.38	AS	
		HF-H354	3.50	11.10	3,000	0.75	AS	
	J4	HG-JR703	7.00	22.30	3,000	0.43	AS	
		HG-JR7034	7.00	22.30	3,000	0.43	AS	
		HG-JR903	9.00	28.60	3,000	0.56	AS	
		HG-JR9034	9.00	28.60	3,000	0.56	AS	
		HG-SR121	1.20	11.50	1,000	0.47	AS	
		HG-SR202	2.00	9.50	2,000	0.47	AS	
		HG-SR2024	2.00	9.50	2,000	0.47	AS	
		HG-SR201	2.00	19.10	1,000	0.79	AS	
		HG-SR301	3.00	28.60	1,000	1.00	AS	
		HG-SR352	3.50	16.70	2,000	0.79	AS	
		HG-SR3524	3.50	16.70	2,000	0.79	AS	
		HG-SR502	5.00	23.90	2,000	1.00	AS	
			HG-SR5024	5.00	23.90	2,000	1.00	AS
	J5	HK-ST2024W	1.20	11.50	1,000	0.36	AS	
		HK-ST202W	2.00	9.50	2,000	0.36	AS	
		HK-ST3524W	2.00	19.10	1,000	0.54	AS	
		HK-ST5024W	3.00	28.60	1,000	0.71	AS	
HK-ST352W		3.50	16.70	2,000	0.54	AS		
HK-ST502W		5.00	23.90	2,000	0.71	AS		
Yaskawa Electric	Σ-V	SGMGV-30A	2.90	18.60	1,500	0.46	AS	
		SGMGV-44A	4.40	28.40	1,500	0.68	AS	
	Σ-7	SGM7G-30A	2.90	18.60	1,500	0.46	AS	
		SGM7G-44A	4.40	28.40	1,500	0.68	AS	

On high gear ratio models, the access hole faces the S surface.  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

# Compatible Servomotor Models

## RU315 High gear ratio model (Gear ratio=120)

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code
OMRON	G	R88M-G2K010T	2.00	19.10	1,000	0.36	BS
		R88M-G3K010T	3.00	28.40	1,000	0.56	BS
		R88M-G5K020T	5.00	23.80	2,000	0.61	BS
	G5	R88M-K2K010F	2.00	19.10	1,000	0.30	BS
		R88M-K2K010H	2.00	19.10	1,000	0.30	BS
		R88M-K3K010F	3.00	28.70	1,000	0.48	BS
		R88M-K3K010H	3.00	28.70	1,000	0.48	BS
		R88M-K4K020F	4.00	19.10	2,000	0.38	BS
		R88M-K4K020H	4.00	19.10	2,000	0.38	BS
KEYENCE	SV	SV-M300A	2.90	18.60	1,500	0.46	AS
		SV-M500A	4.40	28.40	1,500	0.68	AS
SANYO DENKI	Q2	Q2AA18200H	2.00	9.50	2,000	0.20	BS
	R2	R2AA18350D	3.50	17.00	2,000	0.40	BS
		R2AA18350L	3.50	17.00	2,000	0.40	BS
Panasonic	MINAS_A5	R2AA18450H	4.50	21.50	2,000	0.50	BS
		MFME152_1	1.50	7.16	2,000	0.18	BS
		MHME202_C	2.00	9.55	2,000	0.58	BS
		MGME202_C	2.00	19.10	1,000	0.30	BS
		MHME302_C	3.00	14.30	2,000	0.91	BS
		MGME302_C	3.00	28.70	1,000	0.48	BS
		MDME402_C	4.00	19.10	2,000	0.38	BS
		MHME402_C	4.00	19.10	2,000	1.12	BS
		MDME502_C	5.00	23.90	2,000	0.48	BS
FANUC	α	MHME502_C	5.00	23.90	2,000	1.62	BS
		α iF12/4000	3.00	12.00	3,000	0.62	AS
		α iF22/3000	4.00	22.00	3,000	1.20	AS
		α iF40/3000	6.00	38.00	2,000	2.20	AS
		α iF30/4000	7.00	30.00	3,000	1.70	AS
		α iF40/3000Fan	9.00	53.00	2,000	2.20	AS
		α is22/4000	4.50	22.00	3,000	0.53	AS
		α is30/4000	5.50	30.00	3,000	0.76	AS
	β	α is40/4000	5.50	40.00	3,000	0.99	AS
		β iS22/2000	2.50	20.00	2,000	0.53	AS
		β iS22/3000	3.00	20.00	2,000	0.53	AS
		β iS30/2000	3.00	27.00	2,000	0.76	AS
		β iS40/2000	3.00	36.00	1,500	0.99	AS
		HF-204	2.00	6.40	3,000	0.38	AS
Mitsubishi Electric	CNC	HF-302	3.00	14.30	2,000	0.75	AS
		HF-303	3.00	14.30	2,000	0.75	AS
		HF-354	3.50	11.10	3,000	0.75	AS
		HF-453	4.50	14.30	3,000	1.12	AS
		HF-703	7.00	22.30	3,000	1.54	AS
		HF-H204	2.00	6.40	3,000	0.38	AS
		HF-H354	3.50	11.10	3,000	0.75	AS
		HF-H453	4.50	14.30	3,000	1.12	AS
		HF-H703	7.00	22.30	3,000	1.54	AS
J4	HG-JR703	7.00	22.30	3,000	0.43	AS	
	HG-JR7034	7.00	22.30	3,000	0.43	AS	
	HG-JR903	9.00	28.60	3,000	0.56	AS	
	HG-JR9034	9.00	28.60	3,000	0.56	AS	
	HG-SR121	1.20	11.50	1,000	0.47	AS	
	HG-SR202	2.00	9.50	2,000	0.47	AS	
	HG-SR2024	2.00	9.50	2,000	0.47	AS	
	HG-SR201	2.00	19.10	1,000	0.79	AS	
	HG-SR301	3.00	28.60	1,000	1.00	AS	
	HG-SR352	3.50	16.70	2,000	0.79	AS	
	HG-SR3524	3.50	16.70	2,000	0.79	AS	
	HG-SR421	4.20	40.10	1,000	1.51	AS	
	HG-SR502	5.00	23.90	2,000	1.00	AS	
	HG-SR5024	5.00	23.90	2,000	1.00	AS	
	HG-SR702	7.00	33.40	2,000	1.51	AS	
HG-SR7024	7.00	33.40	2,000	1.51	AS		

On high gear ratio models, the access hole faces the S surface.

Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

**RU315 High gear ratio model (Gear ratio=120)**

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code
Mitsubishi Electric	J5	HK-ST2024W	1.20	11.50	1,000	0.36	AS
		HK-ST202W	2.00	9.50	2,000	0.36	AS
		HK-ST3524W	2.00	19.10	1,000	0.54	AS
		HK-ST5024W	3.00	28.60	1,000	0.71	AS
		HK-ST352W	3.50	16.70	2,000	0.54	AS
		HK-ST7024W	4.20	40.10	1,000	1.05	AS
		HK-ST502W	5.00	23.90	2,000	0.71	AS
		HK-ST702W	7.00	33.40	2,000	1.05	AS
Yaskawa Electric	Σ-V	SGMGV-30A	2.90	18.60	1,500	0.46	AS
		SGMGV-44A	4.40	28.40	1,500	0.68	AS
	Σ-7	SGM7G-30A	2.90	18.60	1,500	0.46	AS
		SGM7G-44A	4.40	28.40	1,500	0.68	AS

On high gear ratio models, the access hole faces the S surface.  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

**RU400 High gear ratio model (Gear ratio=120)**

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code	
OMRON	G	R88M-G2K010T	2.00	19.10	1,000	0.36	BS	
		R88M-G3K010T	3.00	28.40	1,000	0.56	BS	
		R88M-G5K020T	5.00	23.80	2,000	0.61	BS	
	G5	R88M-K3K010F	3.00	28.70	1,000	0.48	BS	
		R88M-K3K010H	3.00	28.70	1,000	0.48	BS	
		R88M-K4K020F	4.00	19.10	2,000	0.38	BS	
		R88M-K4K020H	4.00	19.10	2,000	0.38	BS	
		R88M-K5K020F	5.00	23.90	2,000	0.48	BS	
		R88M-K5K020H	5.00	23.90	2,000	0.48	BS	
KEYENCE	SV	SV-M300A	2.90	18.60	1,500	0.46	AS	
		SV-M500A	4.40	28.40	1,500	0.68	AS	
SANYO DENKI	R2	R2AA18350D	3.50	17.00	2,000	0.40	BS	
		R2AA18350L	3.50	17.00	2,000	0.40	BS	
		R2AA18450H	4.50	21.50	2,000	0.50	BS	
		R2AA18550H	5.50	35.00	1,500	0.68	CS	
		R2AA18550R	5.50	35.00	1,500	0.68	CS	
		R2AA18750H	7.50	48.00	1,500	0.98	CS	
		R2AA1811KR	11.00	70.00	1,500	1.10	CS	
Panasonic	MINAS_A5	MHME202_C	2.00	9.55	2,000	0.58	BS	
		MHME302_C	3.00	14.30	2,000	0.91	BS	
		MGME302_C	3.00	28.70	1,000	0.48	BS	
		MDME402_C	4.00	19.10	2,000	0.38	BS	
		MHME402_C	4.00	19.10	2,000	1.12	BS	
		MDME502_C	5.00	23.90	2,000	0.48	BS	
		MHME502_C	5.00	23.90	2,000	1.62	BS	
FANUC	α	α iF12/4000	3.00	12.00	3,000	0.62	AS	
		α iF22/3000	4.00	22.00	3,000	1.20	AS	
		α iF40/3000	6.00	38.00	2,000	2.20	AS	
		α iF30/4000	7.00	30.00	3,000	1.70	AS	
		α iF40/3000Fan	9.00	53.00	2,000	2.20	AS	
		α is50/2000	4.00	53.00	2,000	1.45	AS	
		α is22/4000	4.50	22.00	3,000	0.53	AS	
		α is30/4000	5.50	30.00	3,000	0.76	AS	
		α is40/4000	5.50	40.00	3,000	0.99	AS	
				β iS22/2000	2.50	20.00	2,000	0.53
	β	β iS22/3000	3.00	20.00	2,000	0.53	AS	
		β iS30/2000	3.00	27.00	2,000	0.76	AS	
		β iS40/2000	3.00	36.00	1,500	0.99	AS	

On high gear ratio models, the access hole faces the S surface.  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

# Compatible Servomotor Models

## RU400 High gear ratio model (Gear ratio=120)

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code
Mitsubishi Electric	CNC	HF-204	2.00	6.40	3,000	0.38	AS
		HF-302	3.00	14.30	2,000	0.75	AS
		HF-303	3.00	14.30	2,000	0.75	AS
		HF-354	3.50	11.10	3,000	0.75	AS
		HF-453	4.50	14.30	3,000	1.12	AS
		HF-703	7.00	22.30	3,000	1.54	AS
		HF-H204	2.00	6.40	3,000	0.38	AS
		HF-H354	3.50	11.10	3,000	0.75	AS
		HF-H453	4.50	14.30	3,000	1.12	AS
	HF-H703	7.00	22.30	3,000	1.54	AS	
	J4	HG-JR703	7.00	22.30	3,000	0.43	AS
		HG-JR7034	7.00	22.30	3,000	0.43	AS
		HG-JR903	9.00	28.60	3,000	0.56	AS
		HG-JR9034	9.00	28.60	3,000	0.56	AS
		HG-SR121	1.20	11.50	1,000	0.47	AS
		HG-SR202	2.00	9.50	2,000	0.47	AS
		HG-SR2024	2.00	9.50	2,000	0.47	AS
		HG-SR201	2.00	19.10	1,000	0.79	AS
		HG-SR301	3.00	28.60	1,000	1.00	AS
		HG-SR352	3.50	16.70	2,000	0.79	AS
		HG-SR3524	3.50	16.70	2,000	0.79	AS
		HG-SR421	4.20	40.10	1,000	1.51	AS
		HG-SR502	5.00	23.90	2,000	1.00	AS
		HG-SR5024	5.00	23.90	2,000	1.00	AS
		HG-SR702	7.00	33.40	2,000	1.51	AS
		HG-SR7024	7.00	33.40	2,000	1.51	AS
	J5	HK-ST2024W	1.20	11.50	1,000	0.36	AS
		HK-ST202W	2.00	9.50	2,000	0.36	AS
		HK-ST3524W	2.00	19.10	1,000	0.54	AS
		HK-ST5024W	3.00	28.60	1,000	0.71	AS
		HK-ST352W	3.50	16.70	2,000	0.54	AS
		HK-ST7024W	4.20	40.10	1,000	1.05	AS
		HK-ST502W	5.00	23.90	2,000	0.71	AS
HK-ST702W		7.00	33.40	2,000	1.05	AS	
Yaskawa Electric	Σ-V	SGMGV-30A	2.90	18.60	1,500	0.46	AS
		SGMGV-44A	4.40	28.40	1,500	0.68	AS
	Σ-7	SGM7G-30A	2.90	18.60	1,500	0.46	AS
		SGM7G-44A	4.40	28.40	1,500	0.68	AS

On high gear ratio models, the access hole faces the S surface.  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

**RU500 High gear ratio model (Gear ratio=150)**

Manufacture	Servo series	Motor	Rated output [kW]	Rated torque [N·m]	Rated rotation speed [min <sup>-1</sup> ]	Motor rotor inertia [x10 <sup>-2</sup> kg·m <sup>2</sup> ]	Motor mounting code	
OMRON	G	R88M-G3K010T	3.00	28.40	1,000	0.56	AS	
KEYENCE	SV	SV-M500A	4.40	28.40	1,500	0.68	AS	
SANYO DENKI	Q2	Q2AA22550B	5.50	35.00	1,500	0.95	DS	
		Q2AA22700S	7.00	67.00	1,000	1.85	DS	
		Q2AA2211KV	11.00	70.00	1,500	1.86	DS	
		Q2AA2215KV	15.00	95.50	1,500	2.55	DS	
	R2	R2AA18550H	5.50	35.00	1,500	0.68	BS	
		R2AA18550R	5.50	35.00	1,500	0.68	BS	
		R2AA18750H	7.50	48.00	1,500	0.98	BS	
R2AA1811KR		11.00	70.00	1,500	1.10	BS		
Panasonic	MINAS_A5	MHME202_C	2.00	9.55	2,000	0.58	AS	
		MHME302_C	3.00	14.30	2,000	0.91	AS	
		MHME402_C	4.00	19.10	2,000	1.12	AS	
		MHME502_C	5.00	23.90	2,000	1.62	AS	
FANUC	α	αiF12/4000	3.00	12.00	3,000	0.62	AS	
		αiF22/3000	4.00	22.00	3,000	1.20	AS	
		αiF40/3000	6.00	38.00	2,000	2.20	AS	
		αiF30/4000	7.00	30.00	3,000	1.70	AS	
		αiF40/3000Fan	9.00	53.00	2,000	2.20	AS	
		αis50/2000	4.00	53.00	2,000	1.45	AS	
		αis60/2000	5.00	65.00	1,500	1.95	AS	
		αis30/4000	5.50	30.00	3,000	0.76	AS	
		αis40/4000	5.50	40.00	3,000	0.99	AS	
		αis50/3000Fan	14.00	75.00	3,000	1.45	AS	
	β	βis30/2000	3.00	27.00	2,000	0.76	AS	
		βis40/2000	3.00	36.00	1,500	0.99	AS	
Mitsubishi Electric	CNC	HF-302	3.00	14.30	2,000	0.75	AS	
		HF-303	3.00	14.30	2,000	0.75	AS	
		HF-354	3.50	11.10	3,000	0.75	AS	
		HF-453	4.50	14.30	3,000	1.12	AS	
		HF-703	7.00	22.30	3,000	1.54	AS	
		HF-H354	3.50	11.10	3,000	0.75	AS	
		HF-H453	4.50	14.30	3,000	1.12	AS	
		HF-H703	7.00	22.30	3,000	1.54	AS	
		J4	HG-JR903	9.00	28.60	3,000	0.56	AS
			HG-JR9034	9.00	28.60	3,000	0.56	AS
	HG-SR201		2.00	19.10	1,000	0.79	AS	
	HG-SR301		3.00	28.60	1,000	1.00	AS	
	HG-SR352		3.50	16.70	2,000	0.79	AS	
	HG-SR3524		3.50	16.70	2,000	0.79	AS	
	HG-SR421		4.20	40.10	1,000	1.51	AS	
	HG-SR502		5.00	23.90	2,000	1.00	AS	
	HG-SR5024		5.00	23.90	2,000	1.00	AS	
	HG-SR702		7.00	33.40	2,000	1.51	AS	
	J5	HG-SR7024	7.00	33.40	2,000	1.51	AS	
		HK-ST3524W	2.00	19.10	1,000	0.54	AS	
		HK-ST5024W	3.00	28.60	1,000	0.71	AS	
		HK-ST352W	3.50	16.70	2,000	0.54	AS	
		HK-ST7024W	4.20	40.10	1,000	1.05	AS	
		HK-ST502W	5.00	23.90	2,000	0.71	AS	
	Yaskawa Electric	Σ-V	SGMGV-44A	4.40	28.40	1,500	0.68	AS
		Σ-7	SGM7G-44A	4.40	28.40	1,500	0.68	AS

On high gear ratio models, the access hole faces the S surface.  
Please prepare the servo motor with no keyway. Consult Sankyo for using with motors not listed above.

# Oil Plug, Oil Level Gauge, and Drain Port on the RU (for oil lubricated units)

Unit:mm

Mounting position	1	2	3	4	5	6
<b>RU160</b>						
A	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2
A1	225	105	370	370	265	205
A2	170	35	290	40	395	55
B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
B1	165	165	110	110	165	165
B2	100	100	165	165	110	110
C	Drain plug Rc 1/2	Drain plug (2)Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2
C1	105	225	370	370	205	265
C2	35	170	40	290	55	395
C3	-	105	-	-	-	-
Oil volume(L)	3.4	2.3	2.9	2.9	1.7	4.0
<b>RU200</b>						
A	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2
A1	295	115	425	425	320	255
A2	165	35	370	40	475	55
B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
B1	205	205	110	110	205	205
B2	100	100	205	205	110	110
C	Drain plug Rc 1/2	Drain plug (2)Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2
C1	115	295	425	425	255	320
C2	35	165	40	370	55	475
C3	-	115	-	-	-	-
Oil volume(L)	4.9	3.4	4.1	4.1	2.0	6.3
<b>RU250</b>						
A	Oil plug Rc 3/4	Oil plug Rc 3/4	Oil plug Rc 3/4	Oil plug Rc 3/4	Oil plug Rc 3/4	Oil plug Rc 3/4
A1	375	135	290	290	330	375
A2	210	50	465	45	605	65
B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
B1	255	255	140	140	255	255
B2	130	130	255	255	140	140
C	Drain plug (3)Rc 3/4	Drain plug (3)Rc 3/4	Drain plug Rc 3/4	Drain plug Rc 3/4	Drain plug (3)Rc 3/4	Drain plug Rc 3/4
C1	135	135	290	290	375	330
C2	60	210	45	465	65	605
C3	255	255	-	-	255	-
C4	375	375	-	-	135	-
Oil volume(L)	10.4	7.4	8.9	8.9	4.4	13.4
<b>RU315</b>						
A	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1
A1	485	145	340	340	465	455
A2	245	55	580	50	750	75
B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
B1	315	315	175	175	315	315
B2	150	150	315	315	175	175
C	Drain plug (3)Rc 1	Drain plug (3)Rc 1	Drain plug Rc 1	Drain plug Rc 1	Drain plug (3)Rc 1	Drain plug Rc 1
C1	145	145	340	340	455	465
C2	55	245	50	580	75	750
C3	315	315	-	-	355	-
C4	485	485	-	-	175	-
Oil volume(L)	13.5	12.0	12.7	12.7	6.9	18.6
<b>RU400</b>						
A	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1
A1	580	220	395	395	550	580
A2	265	55	742.5	57.5	920	60
B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
B1	400	400	175	175	400	400
B2	160	160	400	400	175	215
C	Drain plug (3)Rc 1	Drain plug (3)Rc 1	Drain plug Rc 1	Drain plug Rc 1	Drain plug (3)Rc 1	Drain plug Rc 1
C1	220	220	395	395	580	550
C2	55	265	57.5	742.5	60	920
C3	400	400	-	-	400	-
C4	580	580	-	-	220	-
Oil volume(L)	26.5	19.4	23.0	23.0	10.8	33.1
<b>RU500</b>						
A	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1
A1	720	280	400	400	700	720
A2	280	60	940	60	1140	90
B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
B1	500	500	200	200	500	500
B2	170	170	500	500	200	230
C	Drain plug (3)Rc 1	Drain plug (3)Rc 1	Drain plug Rc 1	Drain plug Rc 1	Drain plug (3)Rc 1	Drain plug Rc 1
C1	280	280	400	400	720	700
C2	65	280	60	940	90	1140
C3	500	500	-	-	500	-
C4	720	720	-	-	280	-
Oil volume(L)	29.6	25.9	27.8	27.8	10.5	43.7



# Oil Plug, Oil Level Gauge, and Drain Port on the Gear Box (for oil lubricated units)

Unit:mm

Mounting position	1 (T)	1 (U)	2 (T)	2 (U)	3 (T)	3 (U)	4 (T)
<b>RU160</b>							
	A	Oil plug Rc 1/4	Oil plug Rc 1/4	Oil plug Rc 1/4	Oil plug Rc 1/4	Oil plug Rc 1/4	Oil plug Rc 1/4
	A1	50	50	50	50	190	105
	A2	175	175	175	175	100	100
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	95	95	95	95	95	200
	B2	30	30	30	30	35	80
	C	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1/4
	C1	50	50	50	50	190	105
C2	15	15	15	15	15	15	
Oil volume(L)	0.18	0.18	0.18	0.18	1.17	1.80	1.80
<b>RU200</b>							
	A	Oil plug Rc 1/4	Oil plug Rc 1/4	Oil plug Rc 1/4	Oil plug Rc 1/4	Oil plug Rc 1/4	Oil plug Rc 1/4
	A1	50	50	50	50	110	125
	A2	175	175	175	175	110	110
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	95	95	95	95	95	200
	B2	30	30	30	30	40	90
	C	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1/4
	C1	50	50	50	50	125	110
C2	15	15	15	15	20	20	
Oil volume(L)	0.19	0.19	0.19	0.19	1.63	2.02	2.02
<b>RU250</b>							
	A	Oil plug Rc 3/8	Oil plug Rc 3/8	Oil plug Rc 3/8	Oil plug Rc 3/8	Oil plug Rc 3/8	Oil plug Rc 3/8
	A1	85	85	85	85	160	160
	A2	230	230	230	230	120	120
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	125	125	125	125	125	250
	B2	45	45	45	45	45	95
	C	Drain plug Rc 3/8	Drain plug Rc 3/8	Drain plug Rc 3/8	Drain plug Rc 3/8	Drain plug Rc 3/8	Drain plug Rc 3/8
	C1	85	85	85	85	160	160
C2	20	20	20	20	20	20	
Oil volume(L)	1.02	1.00	1.00	1.02	2.84	4.24	4.24
<b>RU315</b>							
	A	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2
	A1	90	90	90	90	210	180
	A2	265	265	265	265	135	135
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	145	145	145	145	145	145
	B2	60	60	60	60	50	105
	C	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2
	C1	90	90	90	90	210	210
C2	25	25	25	25	20	20	
Oil volume(L)	1.93	1.94	1.94	1.93	4.48	5.98	5.98
<b>RU400</b>							
	A	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2	Oil plug Rc 1/2
	A1	85	85	85	85	195	195
	A2	280	280	280	280	135	135
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	150	150	150	150	150	300
	B2	50	50	50	50	110	110
	C	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2
	C1	85	85	85	85	195	195
C2	20	20	20	20	25	25	
Oil volume(L)	1.83	1.83	1.83	1.83	6.87	7.22	7.22
<b>RU500</b>							
	A	Oil plug Rc 3/4	Oil plug Rc 3/4	Oil plug Rc 3/4	Oil plug Rc 3/4	Oil plug Rc 3/4	Oil plug Rc 3/4
	A1	120	120	120	120	215	215
	A2	300	300	300	300	275	275
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	165	165	165	165	165	300
	B2	65	60	60	65	75	225
	C	Drain plug Rc 3/4	Drain plug Rc 3/4	Drain plug Rc 3/4	Drain plug Rc 3/4	Drain plug Rc 3/4	Drain plug Rc 3/4
	C1	120	120	120	120	215	215
C2	30	30	30	30	25	25	
Oil volume(L)	5.03	4.58	4.58	5.03	12.85	17.22	17.22

# Oil Plug, Oil Level Gauge, and Drain Port on the Gear Box (for oil lubricated units)

Unit:mm

Mounting position	4 (U)	5 (T)	5 (U)	6 (T)	6 (U)	
<b>RU160</b>						
	A	Oil plug Rc 1/4	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1/4	Oil plug Rc 1/4
	A1	105	35	80	140	140
	A2	100	95	95	14	15
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	200	57.5	57.5	57.5	57.5
	B2	35	55	55	215	215
	C	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1	Drain plug Rc 1
	C1	105	140	140	35	80
	C2	15	14	15	95	95
Oil volume(L)	1.17	0.57	0.57	0.58	0.58	
<b>RU200</b>						
	A	Oil plug Rc 1/4	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1/4	Oil plug Rc 1/4
	A1	185	42.5	87.5	130	130
	A2	110	95	95	15	15
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	200	65	65	65	65
	B2	40	45	45	210	210
	C	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1/4	Drain plug Rc 1	Drain plug Rc 1
	C1	170	130	130	42.5	87.5
	C2	20	15	15	95	95
Oil volume(L)	1.63	0.46	0.46	0.80	0.80	
<b>RU250</b>						
	A	Oil plug Rc 3/8	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 3/8	Oil plug Rc 3/8
	A1	215	42.5	97.5	165	165
	A2	120	125	125	20	20
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	250	70	70	70	70
	B2	45	52	52	270	270
	C	Drain plug Rc 3/8	Drain plug Rc 3/8	Drain plug Rc 3/8	Drain plug Rc 1	Drain plug Rc 1
	C1	215	165	165	42.5	97.5
	C2	20	20	20	125	125
Oil volume(L)	2.84	0.71	0.71	1.46	1.46	
<b>RU315</b>						
	A	Oil plug Rc 1/2	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1/2	Oil plug Rc 1/2
	A1	180	60	95	215	215
	A2	135	145	145	23	23
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	245	77.5	77.5	77.5	77.5
	B2	50	60	60	290	290
	C	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1	Drain plug Rc 1
	C1	180	215	215	60	95
	C2	20	23	23	145	145
Oil volume(L)	4.48	1.42	1.42	1.76	1.76	
<b>RU400</b>						
	A	Oil plug Rc 1/2	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 1/2	Oil plug Rc 1/2
	A1	255	50	110	225	225
	A2	135	150	150	20	20
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	300	80	80	80	80
	B2	50	55	55	325	325
	C	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1/2	Drain plug Rc 1	Drain plug Rc 1
	C1	255	225	225	50	110
	C2	25	20	20	150	150
Oil volume(L)	6.87	1.45	1.45	2.43	2.43	
<b>RU500</b>						
	A	Oil plug Rc 3/4	Oil plug Rc 1	Oil plug Rc 1	Oil plug Rc 3/4	Oil plug Rc 3/4
	A1	250	74	226	245	245
	A2	275	165	165	25	25
	B	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge	Oil level gauge
	B1	300	165	135	165	135
	B2	75	70	70	315	315
	C	Drain plug Rc 3/4	Drain plug Rc 3/4	Drain plug Rc 3/4	Drain plug Rc 1	Drain plug Rc 1
	C1	250	245	245	74	226
	C2	25	25	25	165	165
Oil volume(L)	12.85	4.00	4.00	5.77	5.77	

# Handling

## Mounting the Motor

Motor to be mounted by customer.

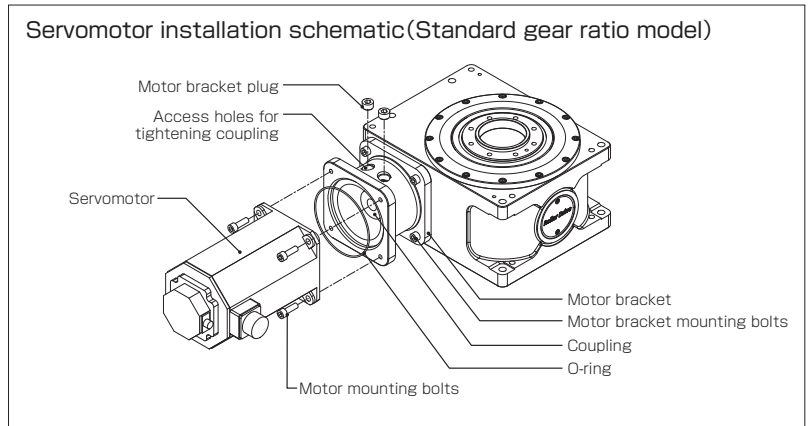
Mount the motor by following the procedure that applies to your model.

### (1) Standard gear ratio model

- ① Mount motor to motor bracket.
- ② Fasten coupling to motor shaft.
- ③ Fasten the motor bracket plugs.

#### [Supplied parts]

Motor bracket plugs x2, O-ring

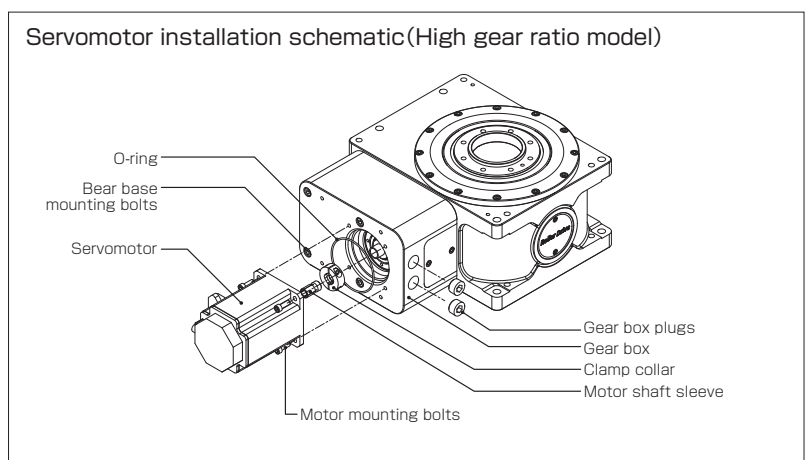


### (2) High gear ratio model (RU160-RU400)

- ① Hand-tighten the clamp collar to the gear shaft.
- ② Insert the motor shaft sleeve in the gear shaft. (The motor sleeve is not used for certain motor models.)
- ③ Mount the motor to the gear box.
- ④ Tighten the clamp collar.
- ⑤ Tighten the gear box plugs into the access holes for tightening the clamp collar.

#### [Supplied parts]

Gear box plugs x2, O-rings x1 to x4, motor shaft sleeve, clamp collar, clamp collar bolt x2

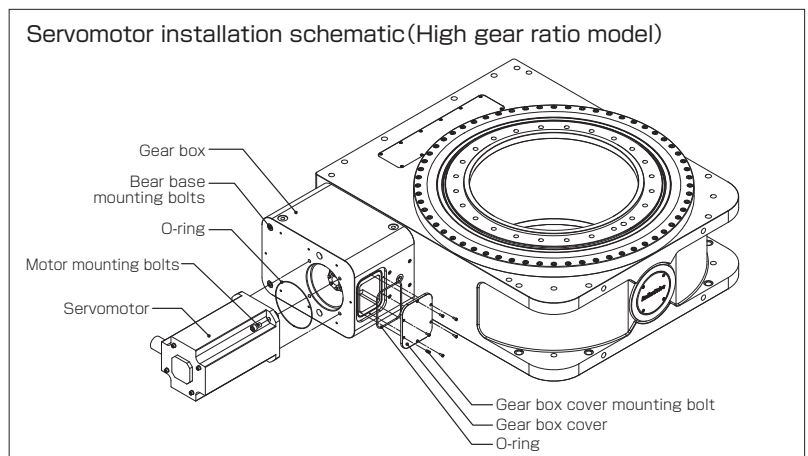


### (3) High gear ratio model (RU500)

- ① Remove the gear box cover.
- ② Mount the motor to the gear box.
- ③ Fasten coupling fastening bolts to motor shaft.
- ④ Mount the gear box cover.

#### [Supplied parts]

O-ring



## Installation Site

The product should be installed in a place satisfying the following conditions:

- Environment temperature from 5 to 40 °C  
Due to heat generated by the motor and internally by the RollerDrive, the surface temperature of the product may rise. Please take steps to cool the unit, such as a fan or the like, so that the surface temperature does not exceed 60°C.
- Humidity under 85% (no condensation)
- Non vacuum or extreme pressure
- No exposure to water, oil, chemicals, dusts, etc.
- No existence of explosive gas, other hazardous gas, or radio active materials
- No direct sunlight
- Excessive shock or force does not act
- Grounded from electric current
- Minimum electro magnetic noise (be cautious on welding machines)
- Easy to carry out maintenance and check oil level and drain

# Handling

## Lubricants

The unit may have the standard grease lubrication system or the high-speed oil lubrication system.

### ● Grease lubrication

Units designed for grease lubrication are virtually free of maintenance and do not require regular grease changes.

**Grease used in the RollerDrive: ENEOS Corporation PYRONOC GREASE UNIVERSAL 2**

**Grease used in the High gear ratio gear box: ENEOS Corporation PYRONOC GREASE UNIVERSAL 0**

### ● Oil lubrication

These units use high-performance lubrication oil. The lubrication oil will remain chemically and thermally stable, but should be replaced every 3,000 hours of operation to prolong the life of the unit. Use the oil level gauge to check the condition of the lubrication. Check lubrication when the unit has stopped. If the oil appears low or discolored, change it with fresh oil regardless of the hours of operation. Occasionally, air bubbles may form in the oil during operation but this is natural and not a quality concern.

※:Use the following lubricant for refill.

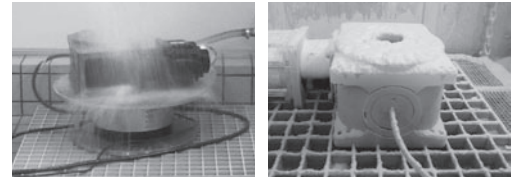
**Standard lubricant: Mobil SHC629 (VG150)**

Use of different oil can cause wearing or other problems.

## Notes on Water-proof, Dust-proof Products

Water-proofing and dust-proofing are provided as options to protect the RU Series. Sankyo performed industrial testing based on IEC60529 for IP66M conditions. Thereafter, TÜV Rheinland Japan confirmed that the RU Series chassis was free of water and dust intrusion.

[Testing was done on the RU80 (reduction ratio 20).]



IP is an abbreviation for International Protection and classifies and rates the degree of protection against the intrusion of foreign matter such as steel balls, copper wire, dust, and water, etc. IP6X indicates complete protection against dust particulate, and IPX6 indicates protection against water sprayed at high pressure (100 l per minute) from various angles. The suffix 'M' indicates the water ingress test was performed with the output shaft rotating.

- Water-proof and dust-proof protection does not ensure protection against failures or unlimited lifetime.
- It does not provide protection against the intrusion of solids and liquids under all environments.
- This product has not been rust-proofed. If subject to water or moisture, non-painted machined surfaces (such as the output shaft and mounting surfaces on the housing) will rust.
- When not adding water proof/dust-proof options, the protection code for RU series main unit is IP54 equivalent.

## ⚠ Notes

### Limitations on the use of this product

- This product cannot be used in applications where operation of the product has a direct impact in human life, or can cause bodily harm to people. The scope of these use limitations includes the following applications:
  - i . Medical equipment
  - ii . Nuclear power related equipment
  - iii . Aerospace equipment
  - iv . Equipment for handling explosive, corrosive or toxic substances etc.
- Please consult with our company if you are considering use in one of the above applications.
- If there is a possibility that this product will be used in a final use location outside Japan, in weapons or equipment for weapon manufacture, then it may be subject to regulation due to the Foreign Exchange and Foreign Trade Control Law. Please take extra care with regard to the application and region of use, and properly submit applications and follow procedures if necessary.
- When used in grinding machines, the seal device on the outer periphery of the output shaft may become damaged. The warranty does not cover any such damage.

### Notes on information

- Specifications, dimensions and other information relating to this product provided in this catalog are subject to change without prior notice.
- The information in this catalog is current as of March 2021.
- Patent rights and copyrights for some mechanisms, trademarks, images, drawings and other material in this catalog all belong to Sankyo Seisakusho Co. Copying, reuse or distribution of any material in this catalog without the permission of Sankyo Seisakusho is forbidden.

# Other RollerDrive Products

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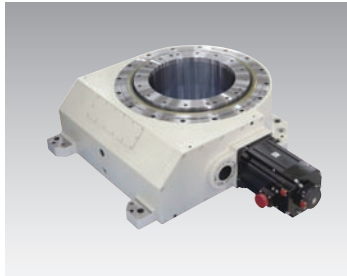
## RA series

The RA Series is a compact unit designed for easy integration. It features zero-backlash for precision positioning performance, and our RollerDrive positioner for high power transmission efficiency..

Cross-roller bearings are standard on the output for precision motion with strong rigidity.

Upon request, a servomotor can be sized and mounted to provide a drop-in solution that does not require you to design or assemble a drive system.

The output features an oversized hollow bore for use in conjunction with other equipment, and for routing cables and pipes.



## RW series

The RW Series is a positioner for welding machines. It holds up against shocks that are caused by high-speed positioning and emergency stopping of heavy loads.

The oversized hollow bore in the output neatly organizes all wiring and piping.

The low-profile body is especially suitable for compact machine designs.

Our contact person: \_\_\_\_\_

## Model Sizing Form for the **RollerDrive® RU** series

Customer's Company, Department		TEL
Address		FAX
Name	Email	

**A) Application**

**B) Overview drawing, loads, operating environment, etc.**

(Draw a sketch of the table, workpieces, fixtures, etc., to mount on the output shaft of the RU, and indicate any loads that will occur during rotation.)

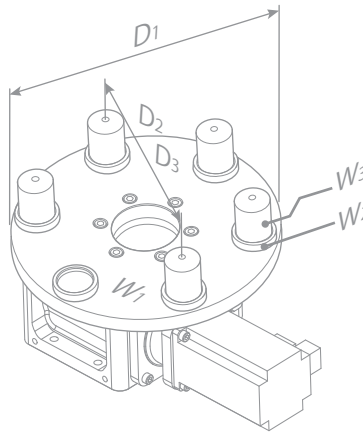
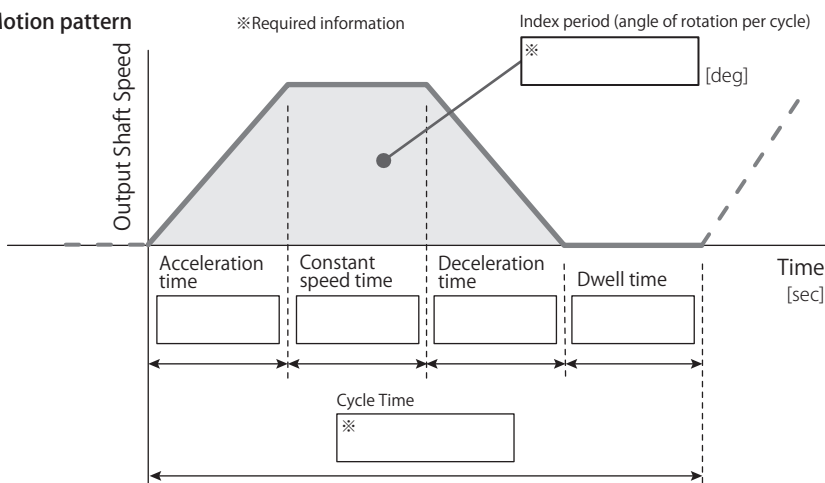


Table diameter : $D_1$	[mm]
Table mass : $W_1$	[kg]
P.C.D of fixtures : $D_2$	[mm]
Mass per fixture : $W_2$	[kg]
Number of fixtures : $n_2$	[pcs.]
P.C.D of workpieces : $D_3$	[mm]
Mass per workpiece : $W_3$	[kg]
Number of workpieces : $n_3$	[pcs.]

Load that acts upon the output shaft

Axial/radial loads	[N]	Moment load	[N·m]
--------------------	-----	-------------	-------

**C) Motion pattern**



**E) Intended servomotor**

Manufacture \_\_\_\_\_

Model No. \_\_\_\_\_

Motor size (rated output) \_\_\_\_\_ [kW]

**F) Mounting direction of servomotor**

T surface (right side viewed from front)

U surface (left side viewed from front)

Circle applicable answer.

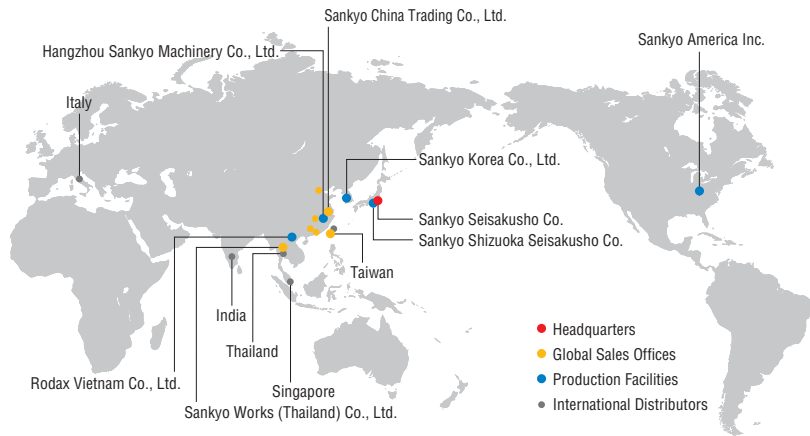
**D) Lubrication and product mounting position**

Select one from each question.

- Lubrication system :  Grease lubrication     Oil lubrication
- Product mounting position :  W surface on bottom     V surface on bottom     U surface on bottom
- T surface on bottom     R surface on bottom     S surface on bottom

**G) Motor mounting code**

## Global network



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