

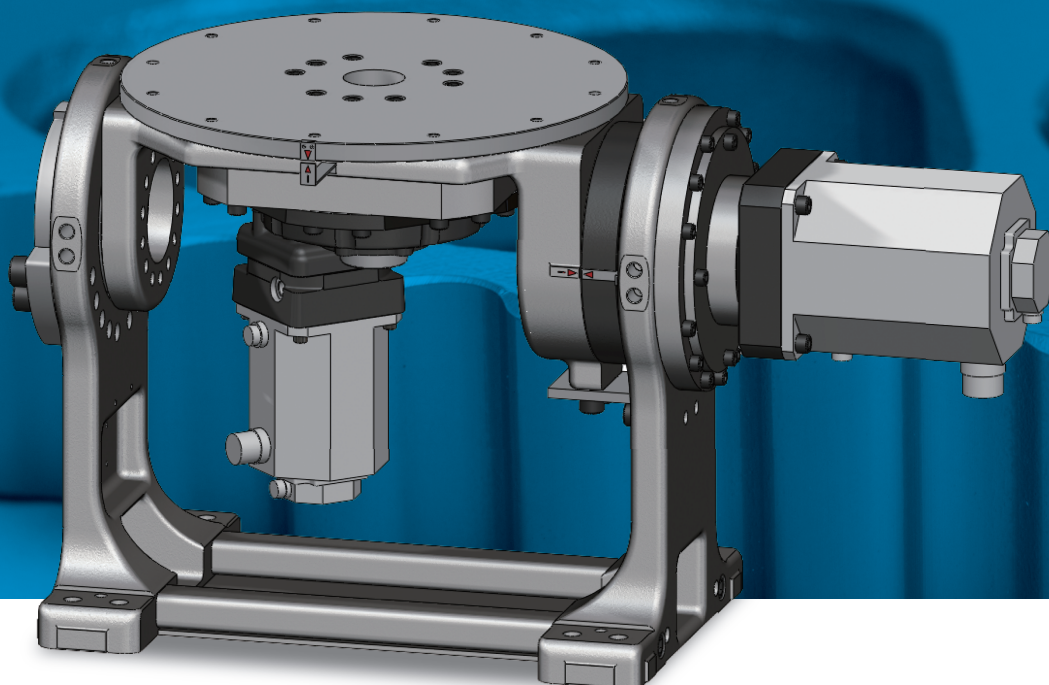


Reference Material

Precision Reduction Gear RV™

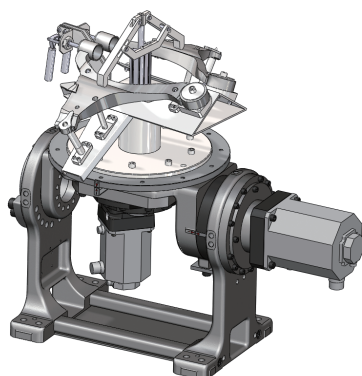
RVP

A Series



New dual-axis positioner gearhead supports motors from all manufacturers!

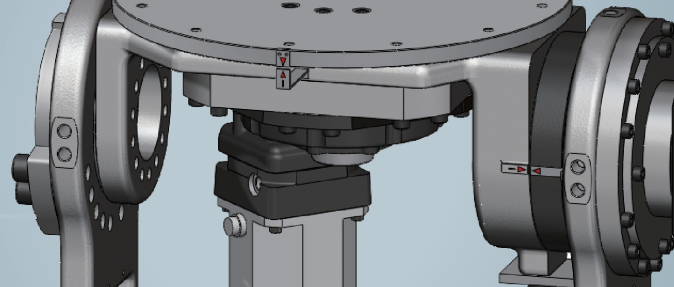
Application example



Features

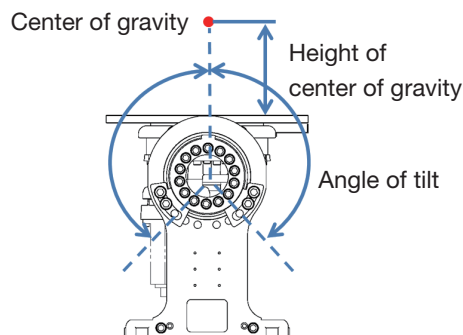
- ▶ Utilizes our precision reduction gear RV™ technology developed specifically for industrial robots
- ▶ Reduces design, production and assembly times
- ▶ Enables high speed, high precision positioning
- ▶ Allows endless travel of its rotary axis
- ▶ Comes pre-lubricated with grease

Nabtesco

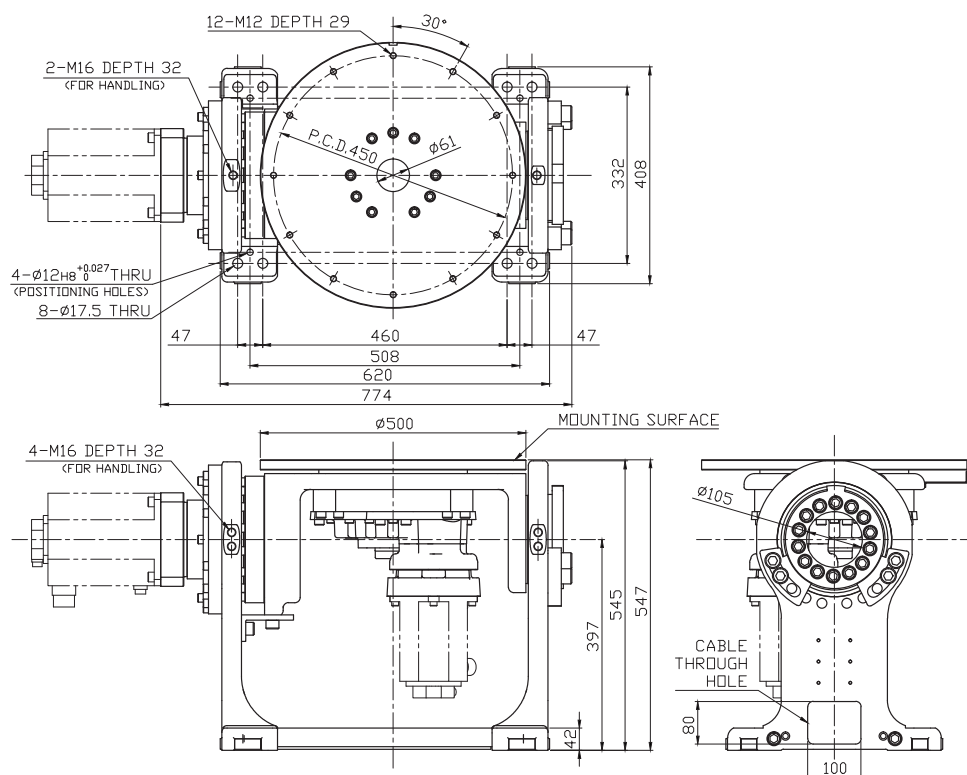


Specification list

Maximum carrying capacity		500 kg
Maximum height of center of gravity		250 mm
Maximum angle of tilt		±135 deg
Hollow diameter of rotary axis		φ 61
Weight		300 kg
Reduction speed ratio	Rotary axis	101
	Tilting axis	156



External dimensions



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CAT.170530-Rev.001 (Issued on May 30, 2017)



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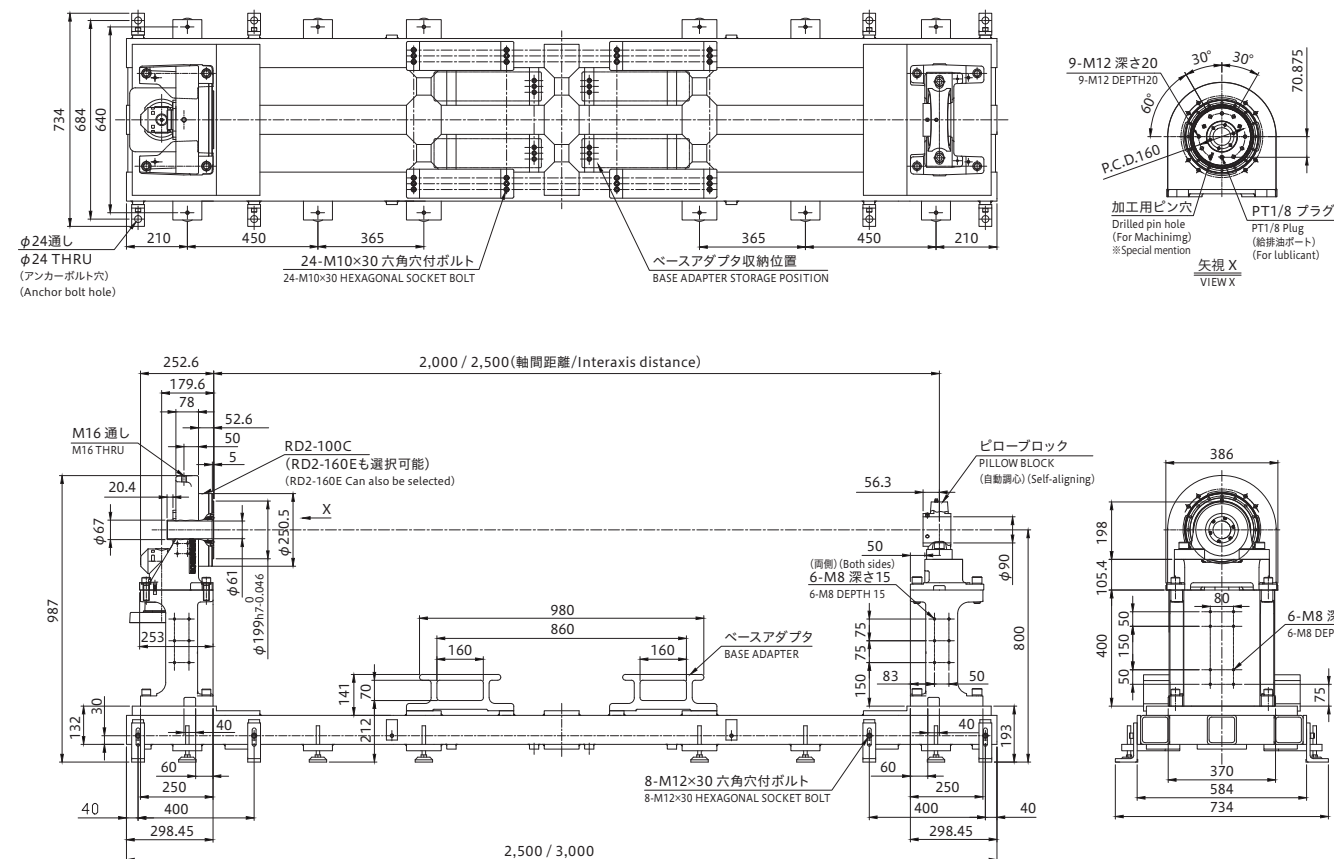
Tsu Plant

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B Series

External Dimensions



* This drawing is for the RD2-100C version.
Please contact us for the RD2-160E version.

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CAT.180425-Rev.001 (Issued on April 25, 2018)



CM009



JQA-EM721



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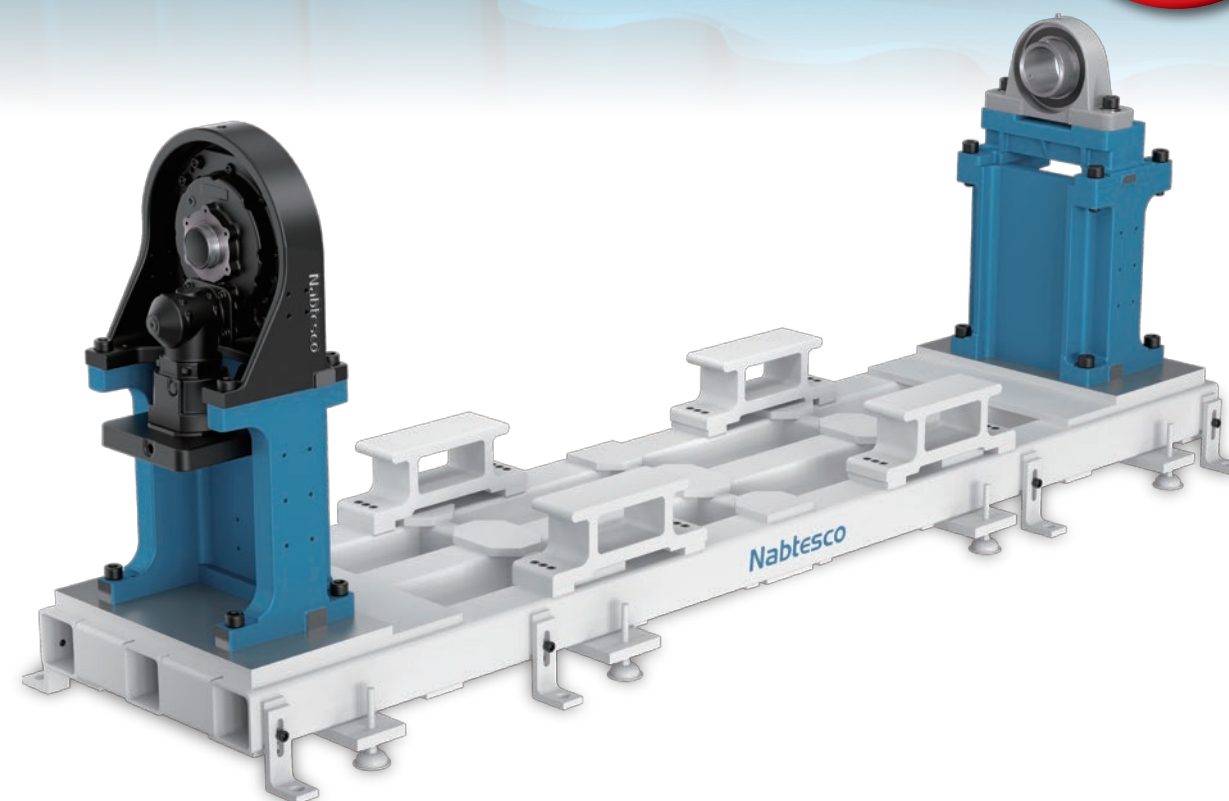
Precision Reduction Gear RV™

Gearhead for Positioners

RVP™

B Series

New Product

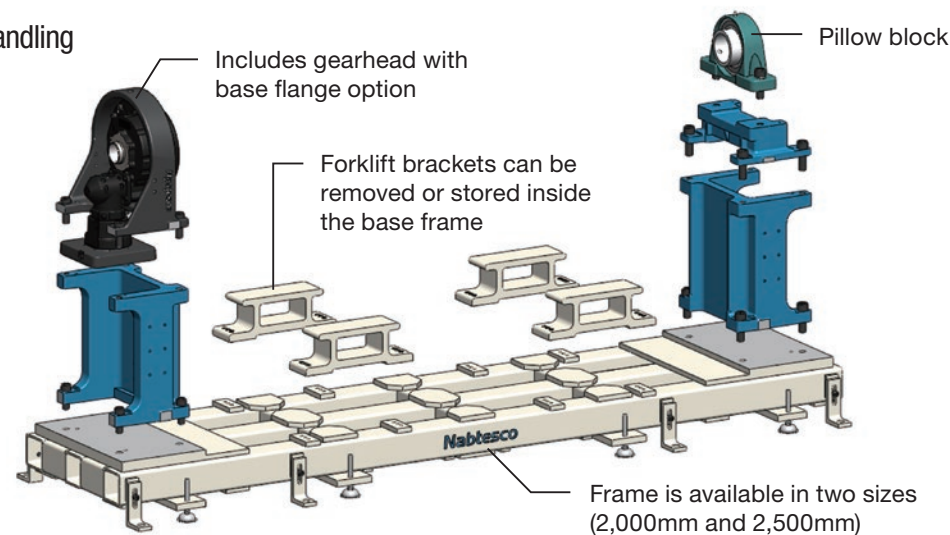


**New BBQ positioner gearhead kit equipped with
the welding positioner industry-proven
Precision Reduction Gear RV™**

Nabtesco

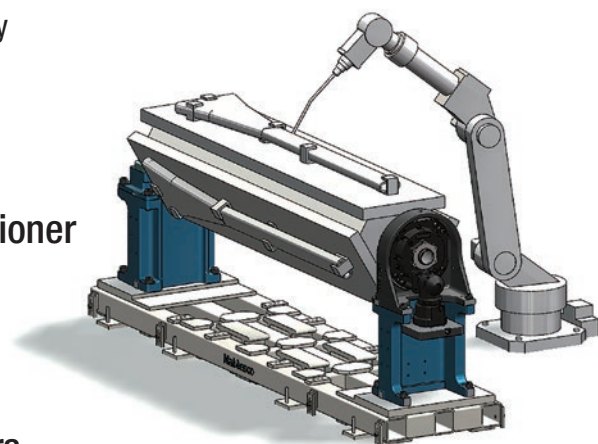
Features

- **A gearhead utilizing the industrial robot industry-proven Precision Reduction Gear RV™**
High accuracy, rigidity, and reliability → Improved welding quality
- **No centering alignment necessary**
Faster setup and assembly time
- **Includes all major parts needed for a BBQ positioner**
One stop shopping for all major parts simplifies and streamlines procurement
Reduction of time needed for design and production
- **Support for all major servo motor manufacturers**
Compatible for collaborative work using many different robots
- **High-rigidity, shock resistant frame**
Easy transportation and handling



Application Example

Forklift brackets stored inside base frame



Specification Table

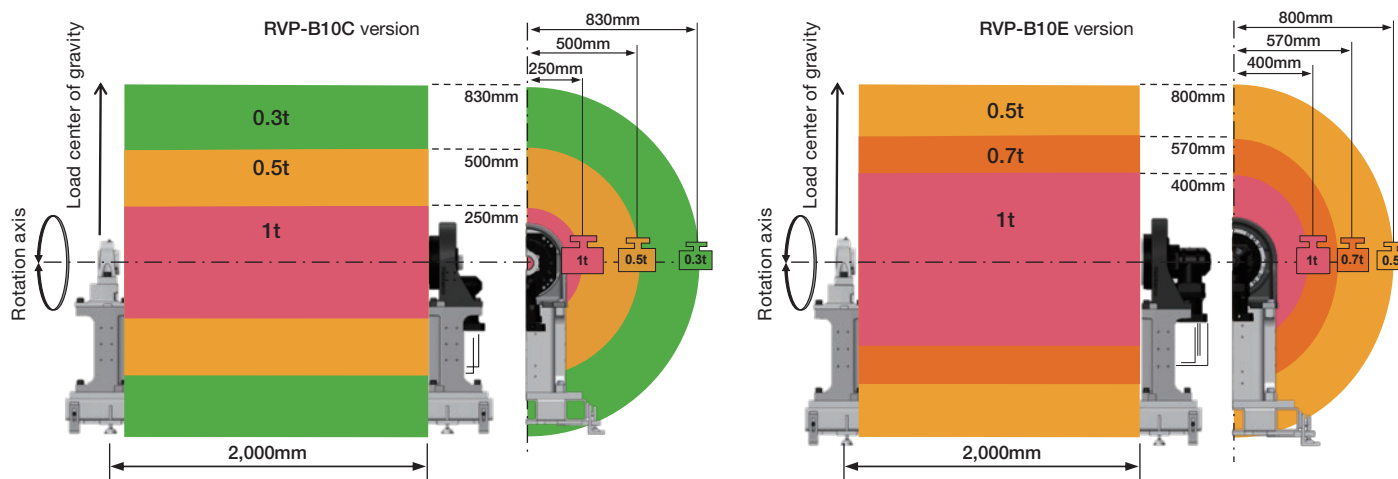
Model	RVP-B10C		RVP-B10E	
Maximum allowable load	1,000kg		400mm	
Maximum center of gravity height	250mm		-	
Hollow shaft diameter (Reduction gear)	Ø61		Ø90	
Hollow shaft diameter (Pillow bearing)	2,450Nm		3,920Nm	
Allowable startup/stop torque	8.23×10 ⁻⁴ ~2.16×10 ⁻³ kg·m ²		8.94×10 ⁻⁴ ~6.68×10 ⁻³ kg·m ²	
Moment of inertia I (I=GD²/4) motor input conversion	1 arc.min.		1.5 arc.min.	
Backlash/ RDS, RDP	702kg (Frame length 2,500mm) / 665kg (Frame length 2,000mm)		718kg (Frame length 2,500mm) / 681kg (Frame length 2,000mm)	
Lost motion RDR	100.5		66	
Weight *1	210		121	
Reduction ratio	150		81	
	258		101	
Allowable output speed	20rpm (2sec/180deg)			

*1 This weight does not include the motor flange.

Center of Gravity Height and Allowable Load Range

* Loading beyond this range will exceed the startup/stop torque and/or allowable moment of the reduction gear, and may damage the reduction gear.

* Loads given are reference values.

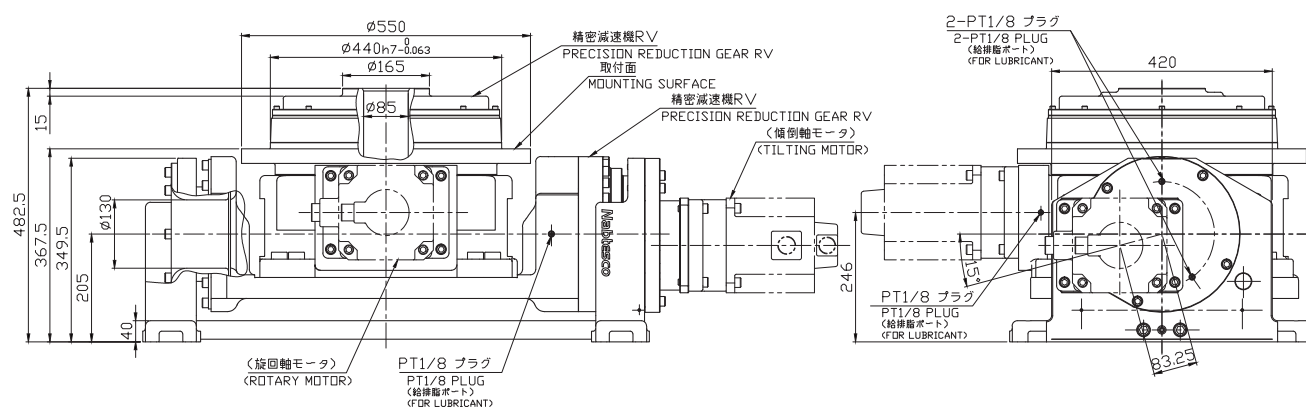
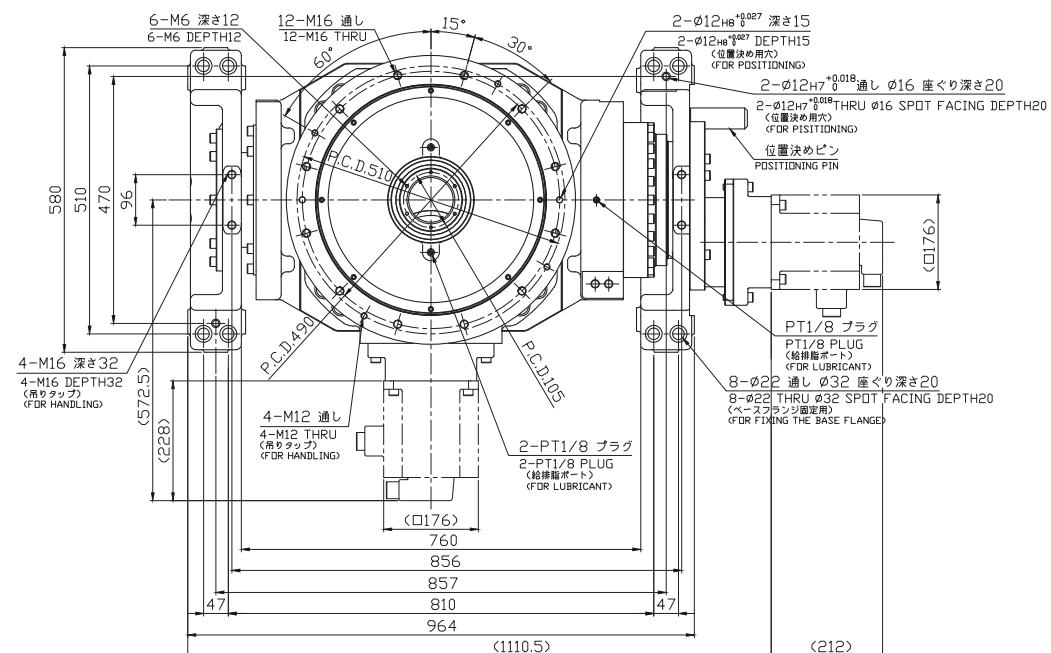


We also offer customized solutions.
Please contact us for more information.
(Axis length, height, width, frame shape, etc.. can be customized)



C Series

External Dimensions



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CAT.180831-Rev.003 (Issued on August 31, 2018)



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Precision Reduction Gear RV™

Gearhead for Positioners

RVP™

C Series

New Product



New turntable gearhead equipped with a variable height mechanism

Nabtesco

RVP™

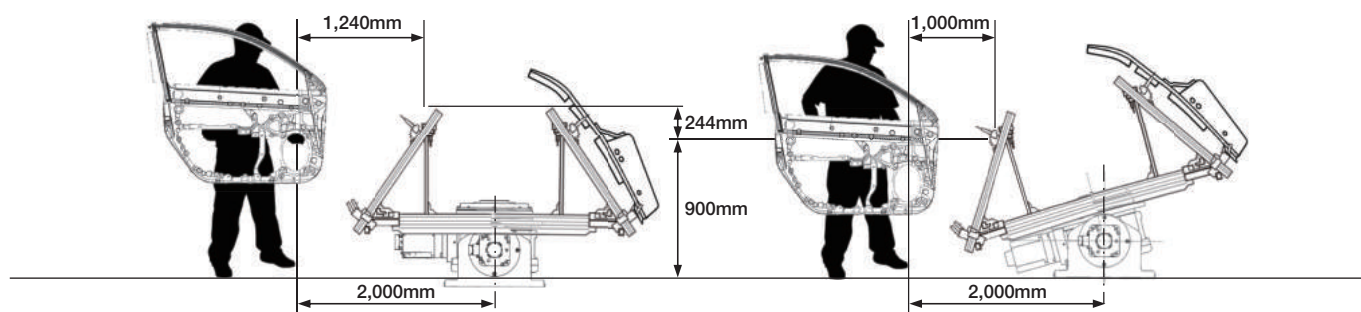
C Series

Features

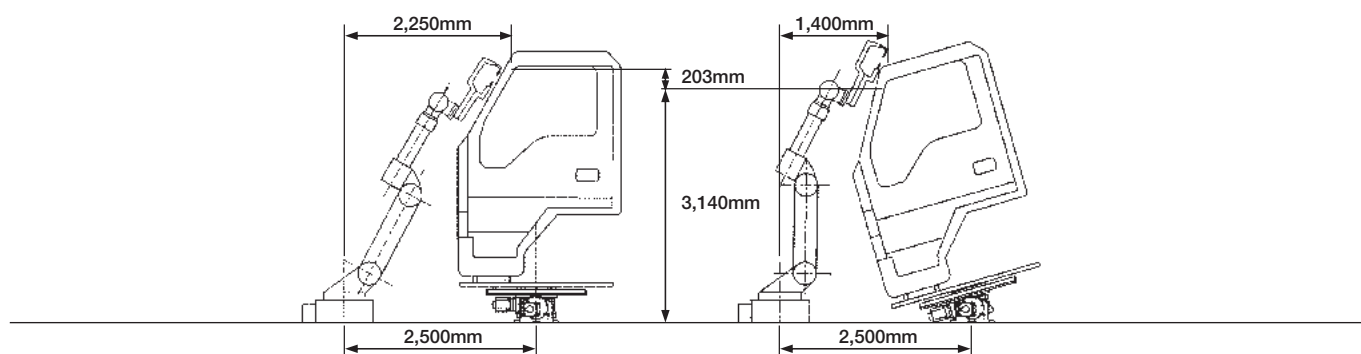
- **A gearhead utilizing the industrial robot industry-proven Precision Reduction Gear RV™**
High accuracy, rigidity, and reliability → Improved welding quality
- **A turntable equipped with a tilt axis**
Improved workability with human centered design → Reduction of the burden on workers • Faster setting times • Improved mixed model production
Area weldable by robot increased → Robot operating distance reduced → Shorter cycle and reduced production times
- **Support for all major servo motor manufacturers**
Compatible for collaborative work using many different robots
- **A wide variety of options are available**
(Mechanical stopper, origin positioning pin, mounting plate, etc..)

Application Example

Improved workability with human centered design • Faster setting times • Increased flexibility for mixed model production



By varying the height, areas that would normally be unreachable for the robot can be welded



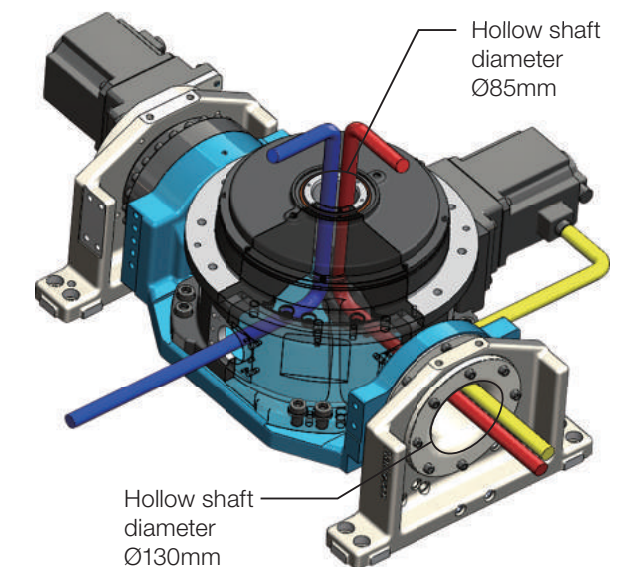
Specification Table

Model	RVP-C40	
Maximum allowable load	4,000kg	
Maximum center of gravity height	500mm	
Maximum tilt angle	±16deg *1	
Hollow shaft diameter (Rotary axis/Tilt axis)	Ø85/Ø130	
Allowable startup/stop torque	Rotary axis	7,840Nm
	Tilt axis	9,310Nm
Moment of inertia I (I=GD²/4) motor input conversion	Rotary axis	3.40×10⁻³kg·m²
	Tilt axis	3.21×10⁻³kg·m²
Backlash • Lost motion	1 arc.min.	
Weight	Rotary axis	609kg *2
	Tilt axis	706.5
Reduction ratio	Rotary axis	170
	Tilt axis	706.5
(Reference) Maximum output speed	Rotary axis	17.6rpm (1.78sec/180deg)
	Tilt axis	4.2rpm (1.78sec/16deg)

*1 The maximum tilt angle is ±25 degrees, but may change depending on the load and the center of gravity of the load. For details, please refer to the figure below.

*2 Weight of motor flange and input spline are not included.

Cable Layout Example



Center of Gravity Height and Allowable Load Range

* Loading beyond this range will exceed the startup/stop torque and/or allowable moment of the reduction gear, and may damage the reduction gear.

* Loads given are reference values.

