

# RV<sup>®</sup>



## Precision Reduction Gear RV<sup>™</sup> Low-profile Gearhead

# RS

RS SERIES

New  
Release



# Nabtesco



## Features

### Maximum ease of use

- (1) The hollow construction allows cables to pass through the reduction gear.
- (2) The servomotor shaft (input shaft) is positioned at a right angle to reduce the height from the base.
- (3) RS series gears can be installed with servomotors for most manufacturers.
- (4) All RS series gears are provided pre-greased.
- (5) The use of a specialized input spline and motor flange means motors can be easily attached and detached.

### High reliability High rigidity High precision

The double-end support design and unique pin gear mechanism provide the following advantages:

- (1) Capable of five times the rated torque (Emergency stop)
- (2) Demonstrates extremely high resistance to twisting (torsional rigidity)
- (3) Achieves minimal backlash (1 arc.min)
- (4) Produces a high torque density from a small body

### Heavy load support

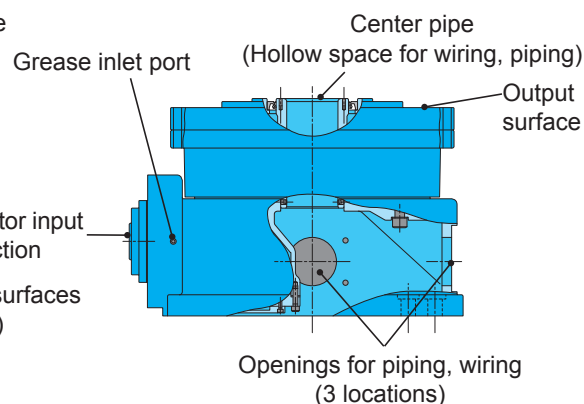
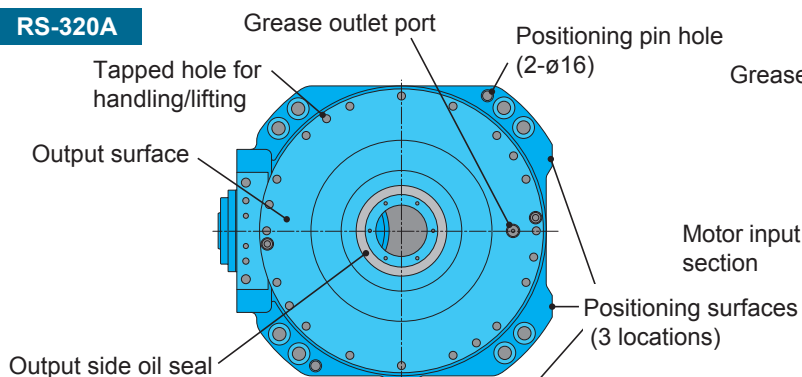
A set of internal main bearings (large, angular ball bearings) provides complete support of heavy external loads.



	RS-320A	RS-900A
Allowable thrust load	5,000 kg	9,000 kg
Floor to surface mounting	345 mm	400 mm
Cable clearance pass through (hollow shaft)	ø85	ø95
Output speed (Max.)	20 rpm (120° /sec)	10 rpm (60° /sec)
Floor, wall mount		

## Cross-section of gear (with part names)

### RS-320A





## Rating table

Model	RS-320A	RS-900A
Speed ratio	170	193.6, 240
Allowable thrust load	5,000 kg	9,000 kg
Rated torque	3,136 Nm (320 kgf-m)	8,820 Nm (900 kgf-m)
Allowable acceleration/ deceleration torque	7,840 Nm (800 kgf-m)	17,640 Nm (1,800 kgf-m)
Momentary max. allowable torque	15,680 Nm (1,600 kgf-m)	35,280 Nm (3,600 kgf-m)
Allowable moment	(*1)	
Inertia $I=GD^2/4$ (*2)	$3.4 \times 10^{-3} \text{ kg-m}^2$	$i=1/193.6 \quad 1.16 \times 10^{-2} \text{ kg-m}^2$ $i=1/240.0 \quad 1.14 \times 10^{-2} \text{ kg-m}^2$
Allowable max. output speed	20 rpm	10 rpm
Rotation range	Infinite	
Backlash	Max. 1arc.min	
Main body weight (*3)	290 kg	480 kg

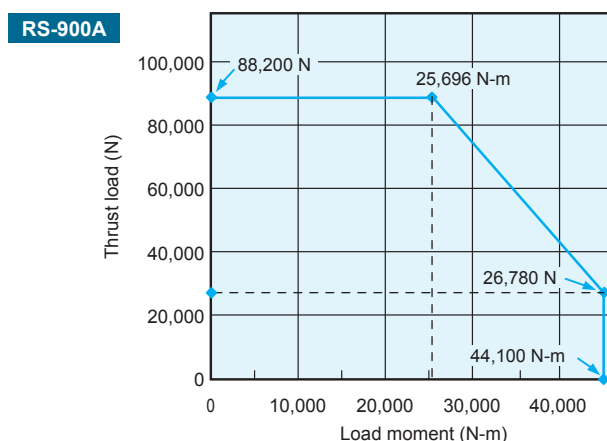
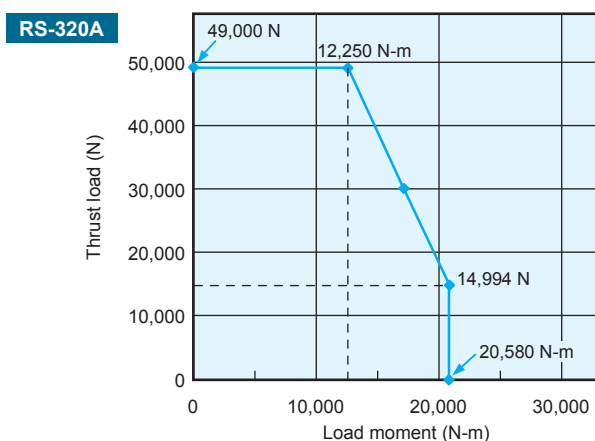
**Note:** The allowable output speed may be limited by heat depending on the operation rate and the ambient temperature.

\*1: Please refer to the allowable thrust load and allowable moment diagram.

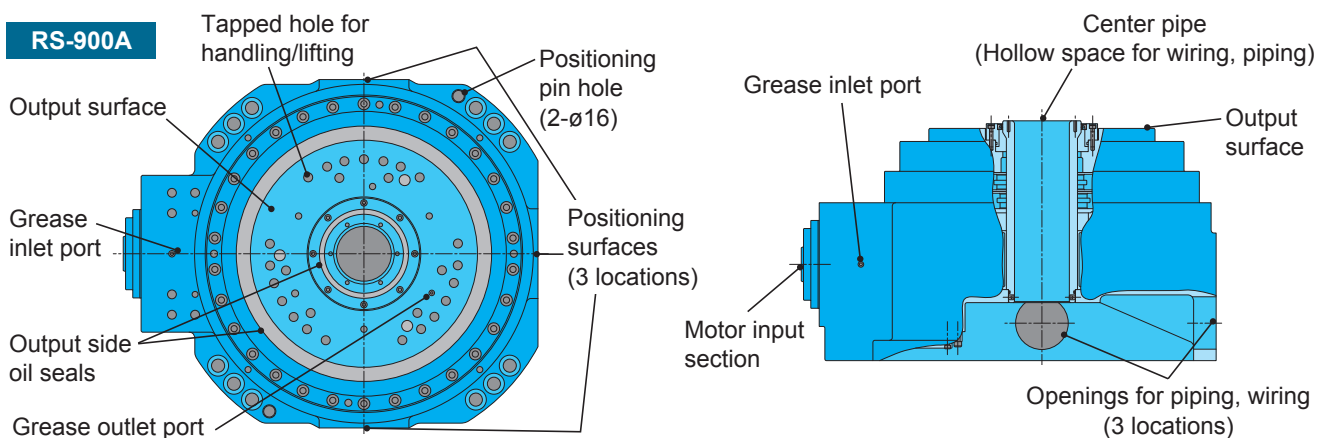
\*2: The inertia is the value at the reduction gear. The value at the input spline is not included.

\*3: The main body weight varies with the type of motor.

## Allowable moment and allowable thrust load



**Note:** When the load moment and the thrust load are applied concurrently, ensure that the reduction gears are used within the corresponding allowable moment range, which is indicated in the diagram.





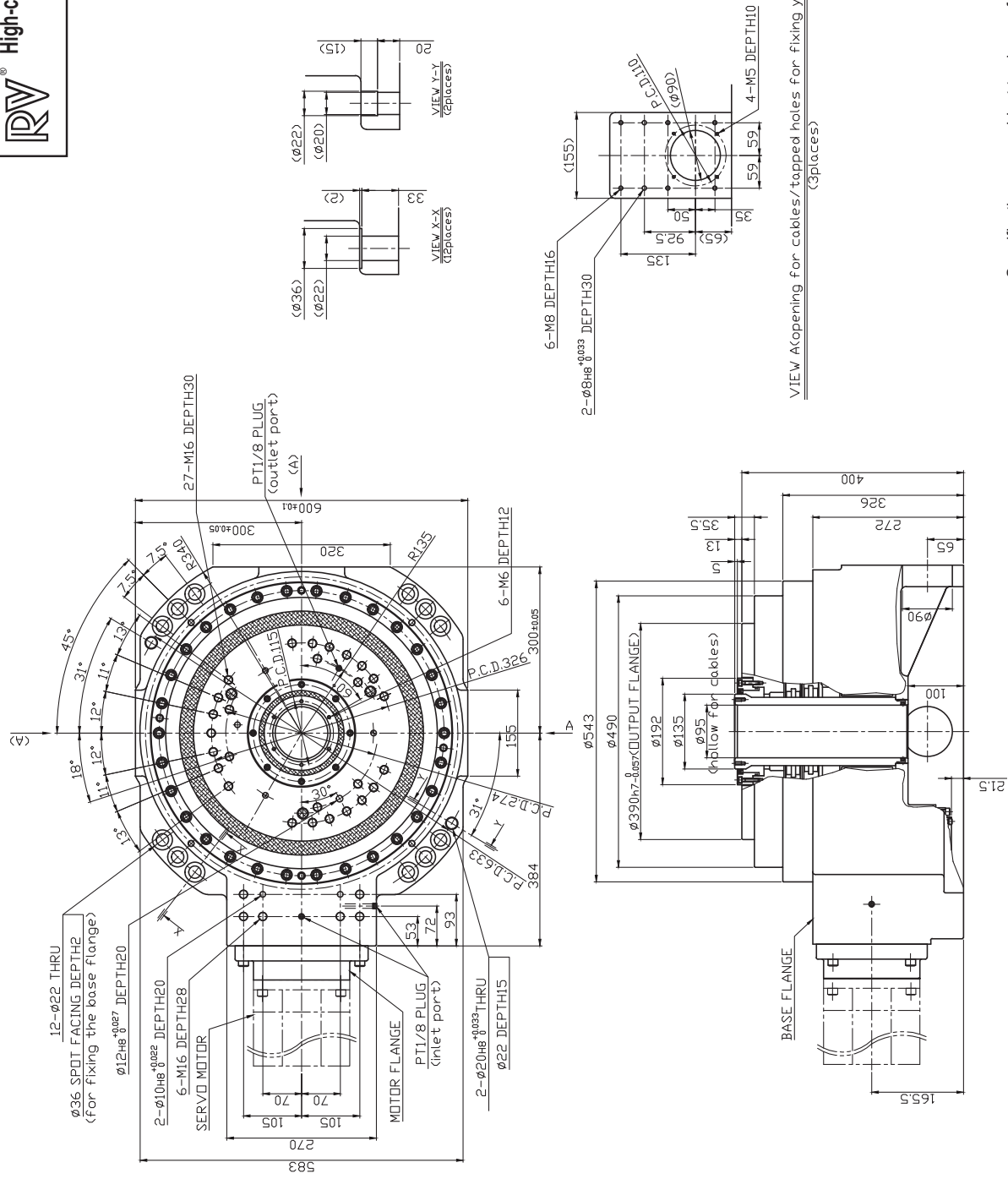
**RPV<sup>®</sup>** High-capacity Low-profile Indexer  
**RS-320A**



- Specifications are subject to change for improvement without notice.



**RV<sup>®</sup> High-capacity Low-profile Indexer RS-900A**



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# New release! RS-260A



- Allowable thrust load 2,500 kg
- Largest cable clearance (through hollow shaft) Ø110 mm in RS series
- Floor to installation surface mounting 335 mm (When removing the base 233.5 mm)

**Ideal for applications requiring a flat configuration when using general small-scale industrial machinery and labor-saving automated equipment**

No openings for piping or wiring are provided for the lowest floor-mounted unit when the base is removed.

## Rating table

Model	RS-260A
Speed ratio	120
Allowable thrust load	2,500 kg
Rated torque	2,548 Nm (260 kgf-m)
Allowable acceleration/deceleration torque	6,370 Nm (650 kgf-m)
Momentary max. allowable torque	12,740 Nm (1,300 kgf-m)
Allowable moment	(*1)
Inertia $I=GD^2/4$ (*2)	$5,759 \times 10^{-3} \text{ kg-m}^2$
Allowable max. output speed	21.5 rpm
Rotation range	Infinite
Backlash	Max. 1arc.min
Main body weight (*3)	165 kg

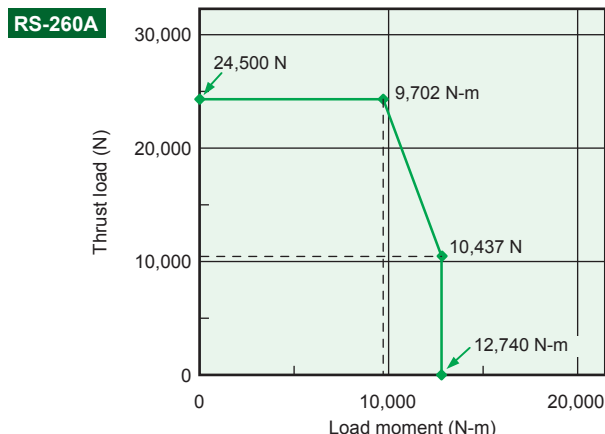
**Note:** The allowable output speed may be limited by heat depending on the operation rate and the ambient temperature.

\*1: Please refer to the allowable thrust load and allowable moment diagram.

\*2: The inertia is the value at the reduction gear. The value at the input spline is not included.

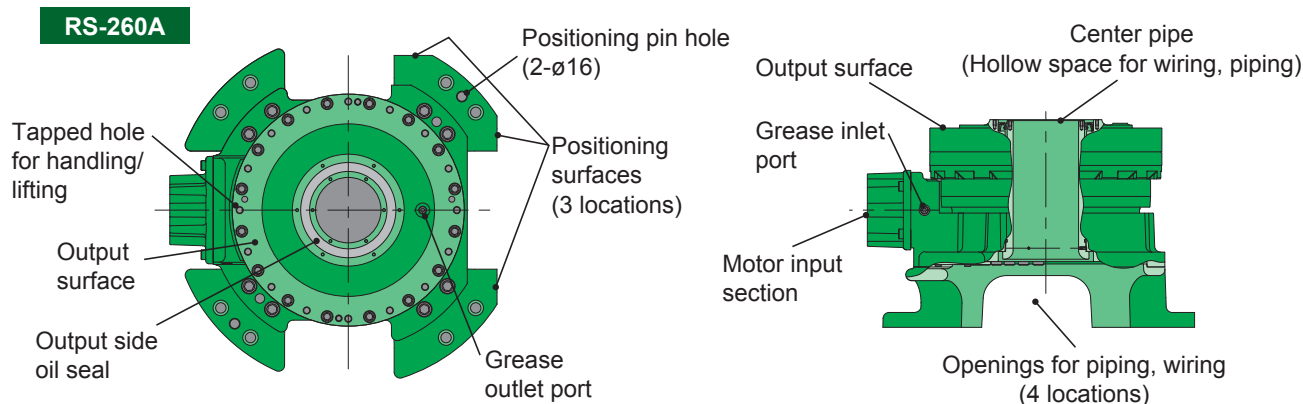
\*3: The main body weight varies with the type of motor.

## Allowable moment and allowable thrust load



**Note:** When the load moment and the thrust load are applied concurrently, ensure that the reduction gears are used within the corresponding allowable moment range, which is indicated in the diagram.

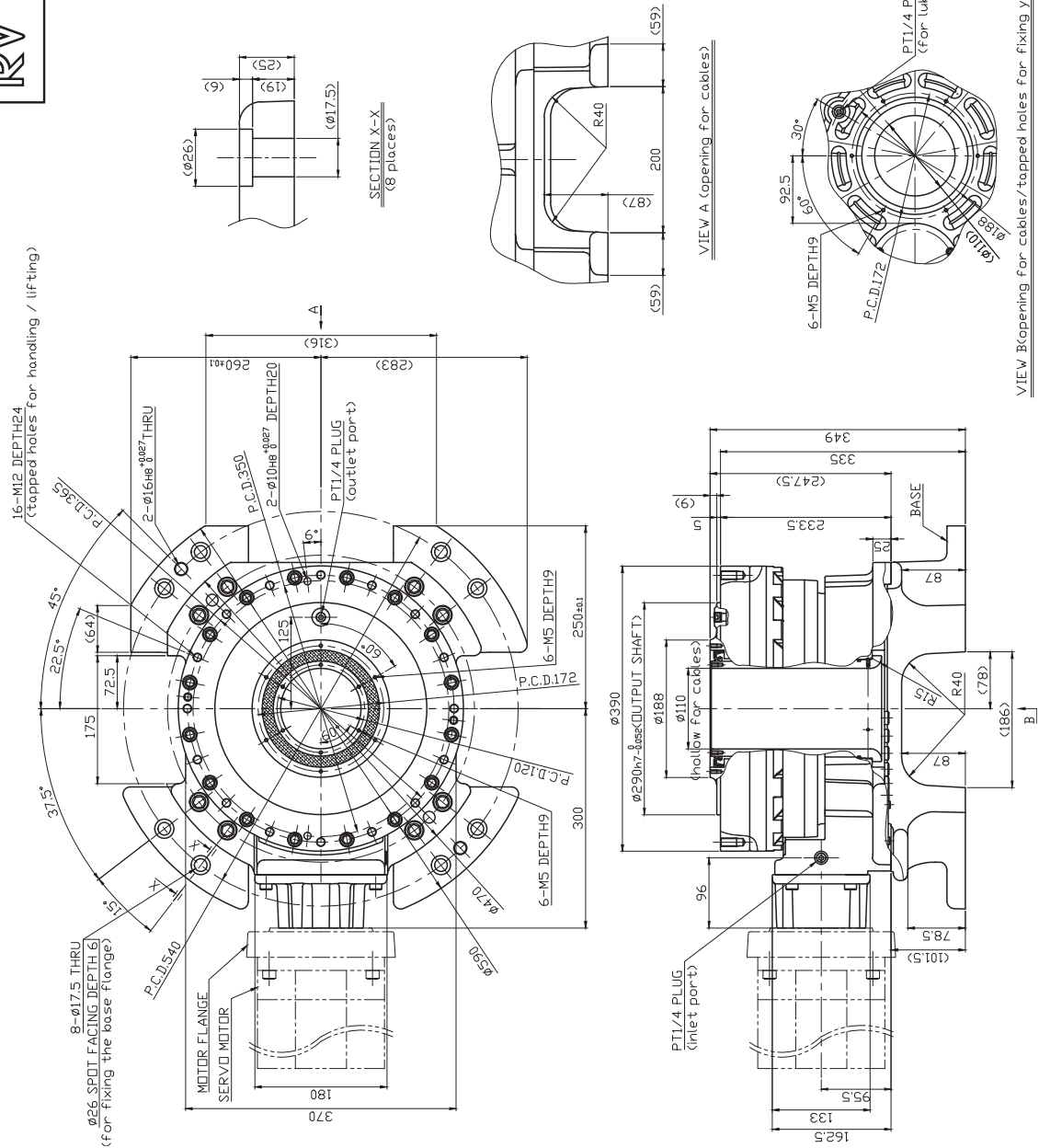
## Cross-section of gear (with part names)





# External dimension drawing

**RV**® High-capacity Low-profile Indexer  
RS-260A



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## Warranty

1. In the case where Nabtesco confirms that a defect of the Product was caused due to Nabtesco's design or manufacture within the Warranty Period of the Product, Nabtesco shall repair or replace such defective Product at its cost. The Warranty Period shall be from the delivery of the Product by Nabtesco or its distributor to you ("Customer") until the end of one (1) year thereafter, or the end of two thousand (2,000) hours running of the Product installed into Customer's equipment, whichever comes earlier.
2. Unless otherwise expressly agreed between the parties in writing, the warranty obligations for the Product shall be limited to the repair or replacement set forth herein. OTHER THAN AS PROVIDED HEREIN, THERE ARE NO WARRANTIES ON THE PRODUCT, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
3. The warranty obligation under the Section 1 above shall not apply if:
  - a) the defect was caused due to the use of the Product deviated from the Specifications or the working conditions provided by Nabtesco;
  - b) the defect was caused due to exposure to foreign substances or contamination (dirt, sand etc.)
  - c) lubricant or spare part other than the ones recommended by Nabtesco was used in the Product;
  - d) the Product was used in an unusual environment (such as high temperature, high humidity, a lot of dust, corrosive/volatile/inflammable gas, pressurized/depressurized air, under water/liquid or others except for those expressly stated in the Specifications);
  - e) the Product was disassembled, re-assembled, repaired or modified by anyone other than Nabtesco;
  - f) the defect was caused due to the equipment into which the Product was installed;
  - g) the defect was caused due to an accident such as fire, earthquake, lightning, flood or others; or
  - h) the defect was due to any cause other than the design or manufacturing of the Product.
4. The warranty period for the repaired/replaced Product/part under the Section 1 above shall be the rest of the initial Warranty Period of the defective Product subjected to such repair/replace.



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