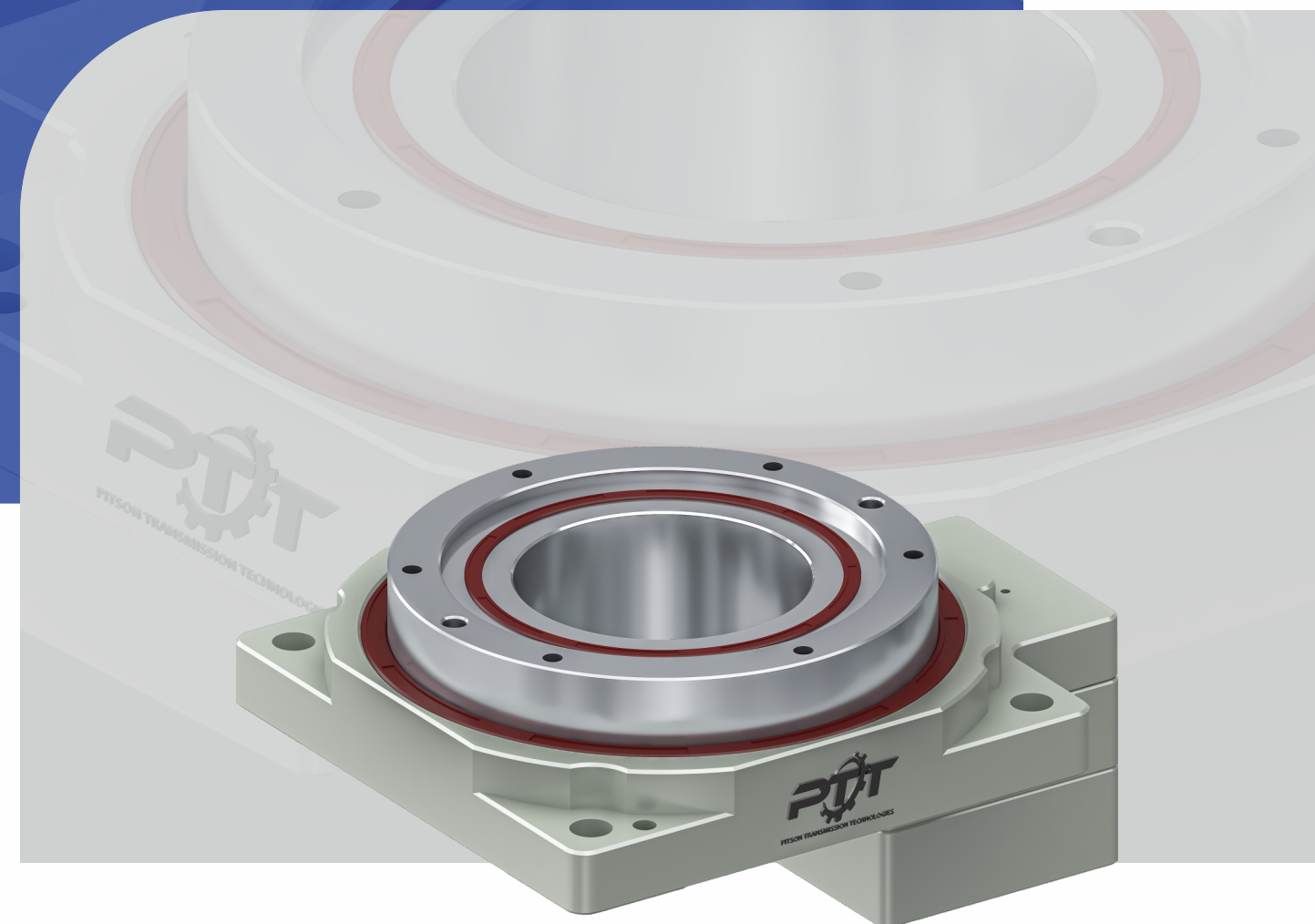




PHG Series

Precision Hollow Rotary Actuator



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PRECISION HOLLOW ROTARY ACTUATOR

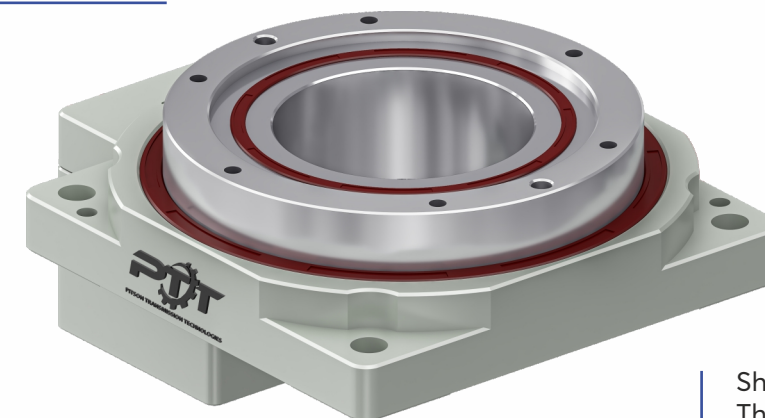
PHG SERIES



Direct connection
Simple design to improve trust

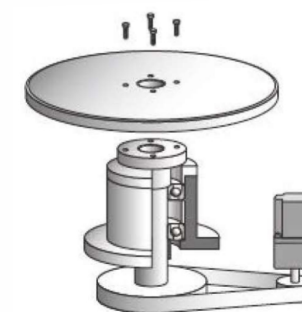
Hollow rotary transmission
device with large diameter
Simple wiring and piping

High positioning precision
The accuracy of repeated
positioning is + 15sec
Lost motion is 2mins
Angle transmission error
is 4mins

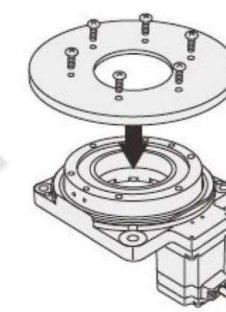


Easy of origin regression
regression thanks to the using
the origin sensor kit
(Choose and purchase accessories)

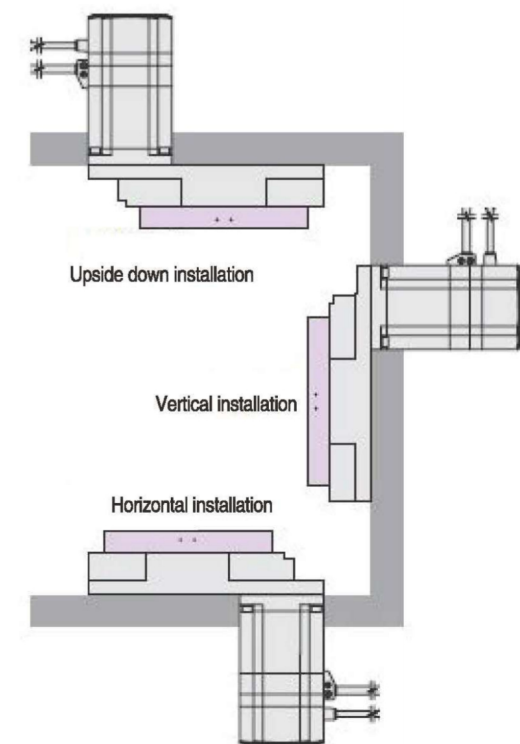
Short time positioning
The positioning of the
inertial load can be
realized in a short time



Motor + mechanism components
(separate design * procurement)



PHG series
(Integrated Product)



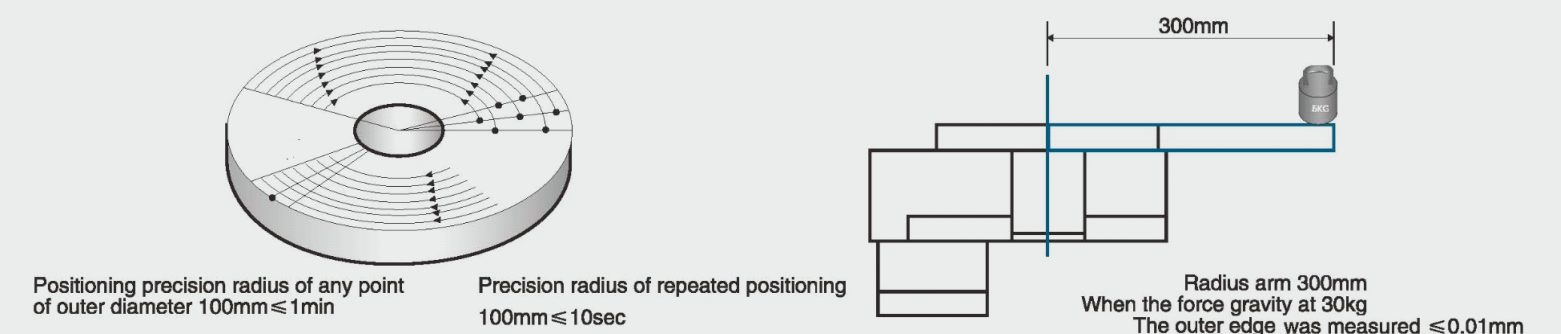
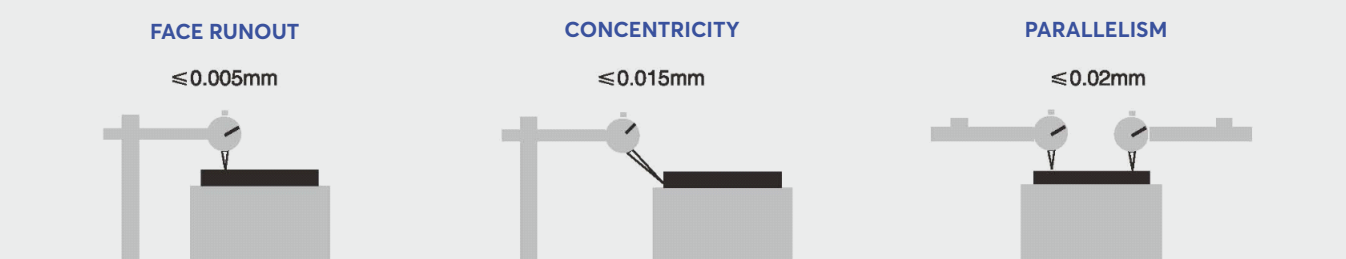
MODEL NOMENCLATURE

SERIES	MODEL	RATIO	SP
PHG	R60	5	MOTOR CODE

MODEL	UNIT/SYMBOL	PHG-R60-XX-H-SP	PHG-R85-XX-H-SP	PHG-R130-XX-H-SP	PHG-R200-XX-H-SP	PHG-R280-XX-H-SP	PHG-R450-XX-H-SP
RATIO AVAILABILITY	"XX"	5, 10, 15	5, 10, 20, 30, 40, 50	6, 10, 18	10, 18	10, 18	10
BEARING	-	CROSS ROLLER	CROSS ROLLER	CROSS ROLLER	CROSS ROLLER	CROSS ROLLER	CROSS ROLLER
ALLOWABLE MOTOR RANGE	W	100, 200	200/400	400	750	1500	3000
ALLOWABLE MOTOR SHAFT DIA "SP"	mm	8	8, 14	8, 14	14, 19	19, 24	35
ALLOWABLE TORQUE	Nm	5	18	35	60	180	387
MOMENT OF INERTIA	kg.cm ²	4.5	21.09	110.725	876.41	1460	3802.3
ALLOWABLE OUTPUT SPEED	rpm	200	200	200	200	200	200
ALLOWABLE INERTIA MOMENT LOAD	Nm	9	27	58	96	216	767
ALLOWABLE AXIAL LOAD	N	300	800	2500	4500	7000	7000
REPEATABILITY	arc.sec	5	5	5	5	5	5
POSITIONING ACCURACY	arc.min	1	1	1	1	1	1
FACE RUNOUT	mm	0.005	0.005	0.005	0.005	0.005	0.005
CONCENTRICITY	mm	0.01	0.01	0.01	0.01	0.01	0.01
PARALLELISM	mm	0.015	0.015	0.015	0.015	0.015	0.015
SERVICE LIFE	hours	25000	25000	25000	25000	20000	20000
WEIGHT	kg	0.55 - 1.1	1.15 - 2.2	2.2 - 4	7.9 - 12	22	80
Centre Bore diameter	mm	28	33	62	62	150	250

POSITIONING ACCURACY EXAMINATION

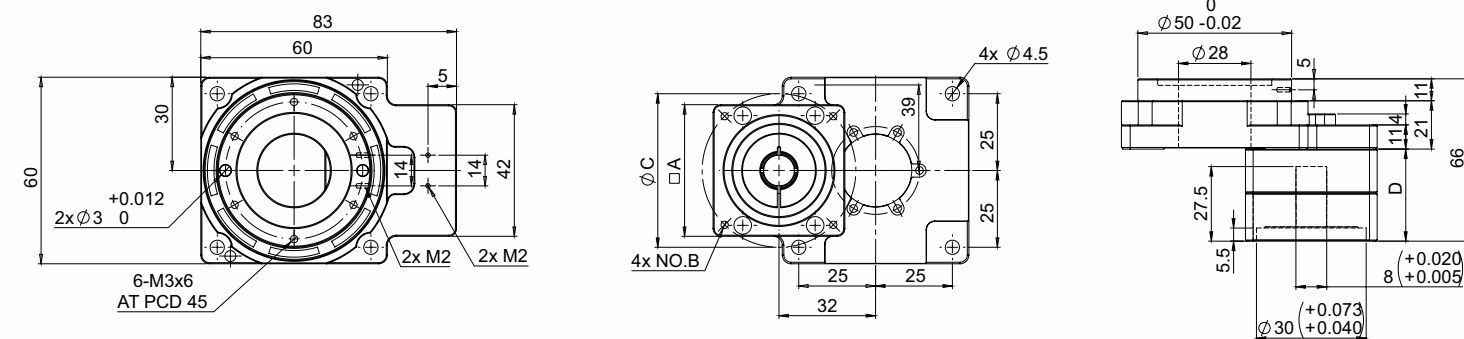
The accuracy of this specification is tested by this ratio



DIMENSIONS

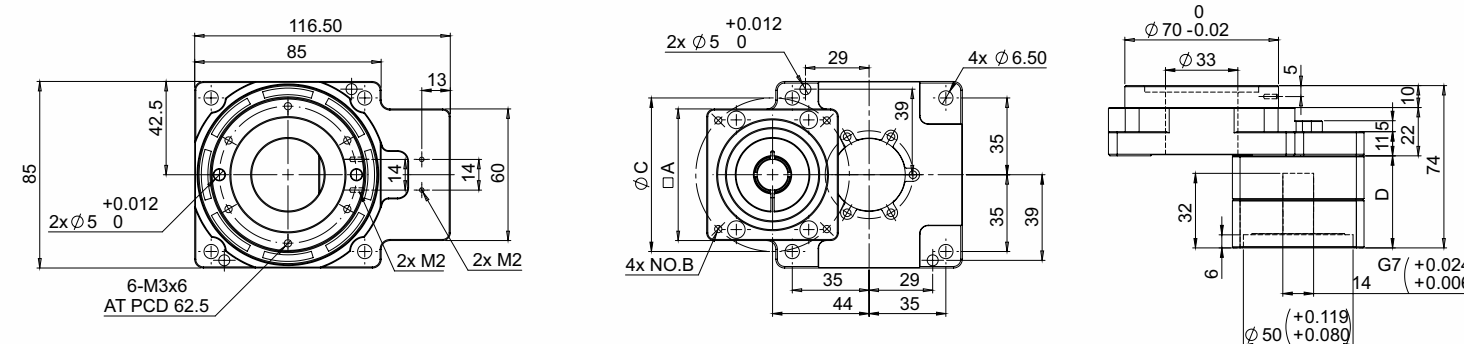
PHG-60-(HGA060825.005.00)

Unit: mm



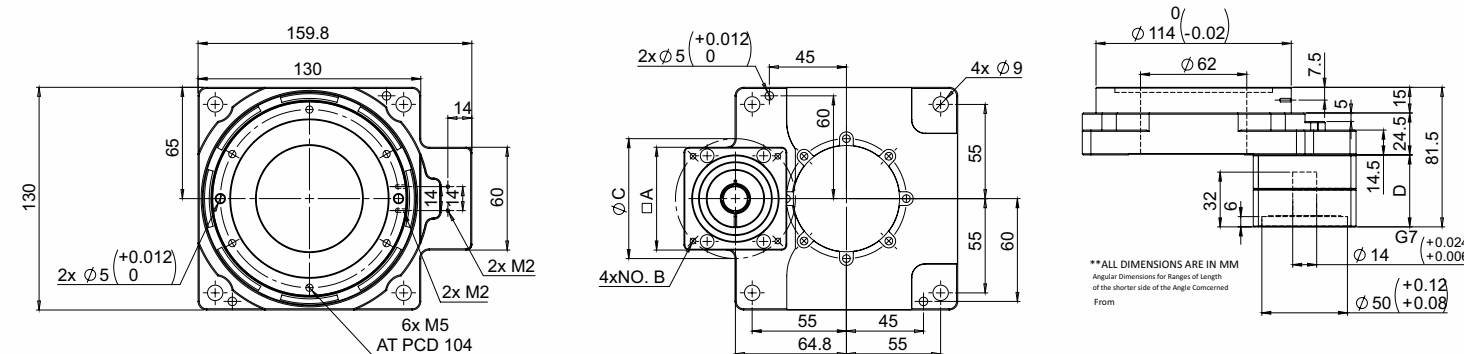
PHG-85-(HGA060825.001.00)

Unit: mm



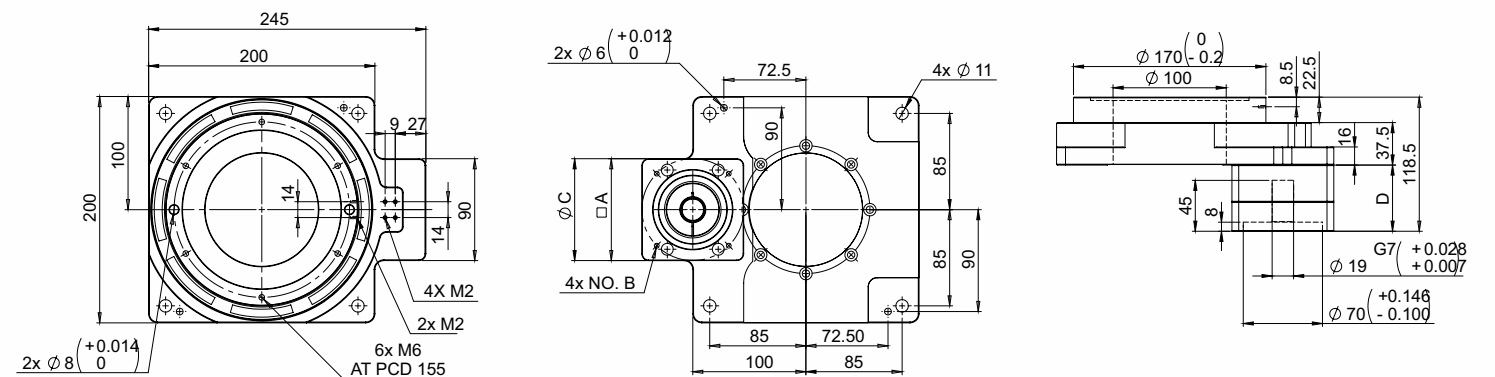
PHG-130-(HGA060825.002.00)

Unit: mm



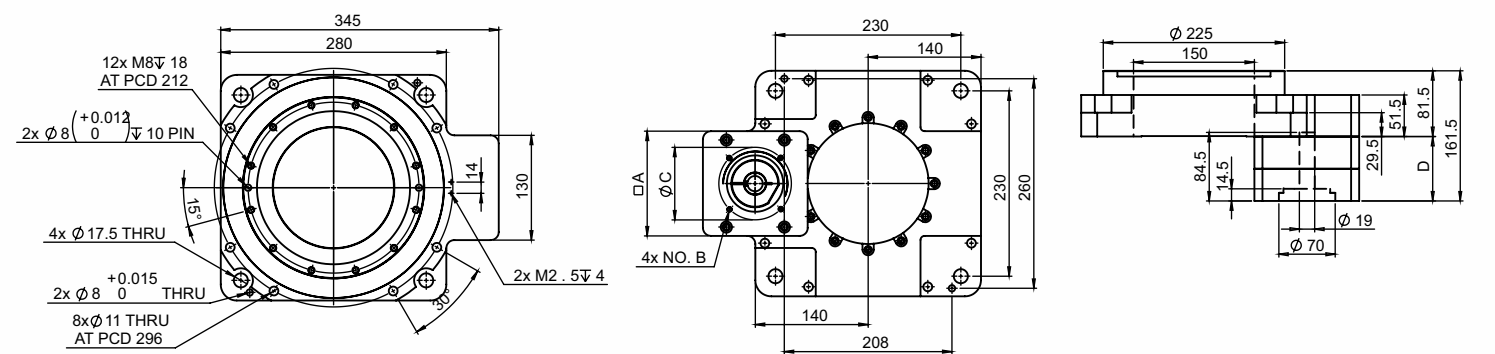
PHG-200-(HGA060825.003.00)

Unit: mm



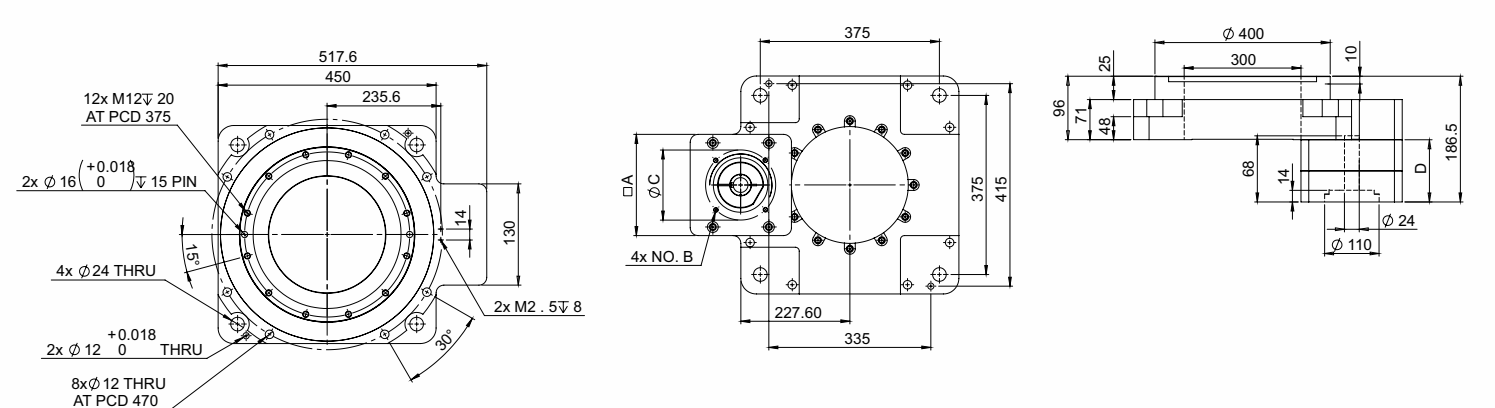
PHG-280-(HGA060825.004.00)

Unit: mm



PHG-450-(HGA060825.007.00)

Unit: mm

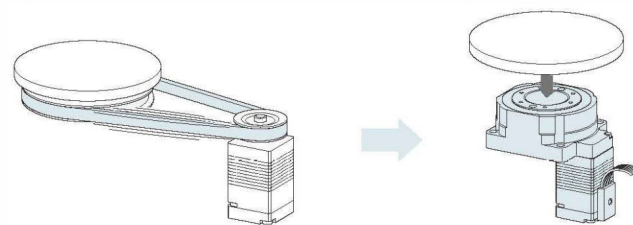


FLANGE DIMENSION				
FRAME	□ A	B	Φ C	D
AS PER SERVO MOTOR				

HOLLOW ROTARY TRANSMISSION DEVICE

Direct connection → Simple design to improve trust

The hollow output platform can directly install the worktable and machine arm of the equipment. When the general equipment is positioned and run through the belt pulley and other parts, the precision of the transmission efficiency of the mechanism is reduced, or the necessity of maintaining the parts of the mechanism. The PHG series can be directly installed because it does not pass through the intermediate parts, except that the accuracy of the product itself, it can also realize free-maintenance.

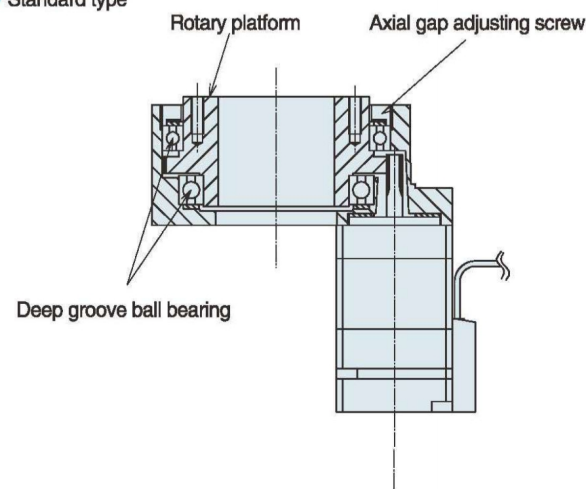


Hollow rotary platform with large diameter → simple wiring and piping

The design of a large diameter hollow hole (penetration) is realized by using one stage reduction gear mechanism to increase the diameter of the driven gear. It is suitable for the complicated wiring and piping application and so on, which makes the equipment design more succinct.

STRUCTURE DRAWING

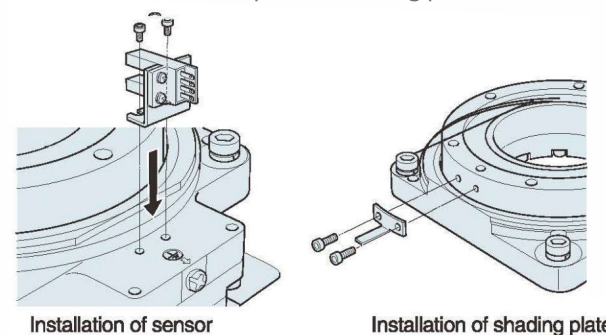
Standard type



Simple origin regression → save time and labor for design and parts procurement.

In order to simplify the operation of the origin regression, the company also prepares the original sensor kit for customers (Choose and purchase accessories). The kit includes all the pads required to mark the original point. It can save the users' time and labor of installing the sensor for the design, production, and part purchase.

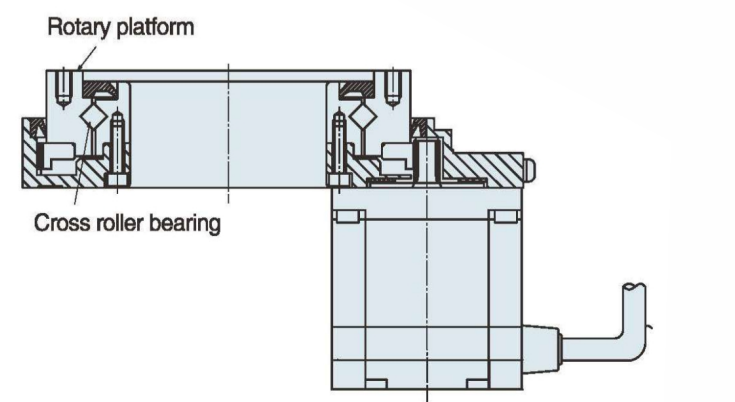
(PHG130R sensor, example of shading plate installation)



High Positioning accuracy → repeated positioning accuracy is + 15sec Lost Motion is 2mins

The mechanism part have no backlash, because the gearbox adopts micro precision gear, and it can eliminate the backlash through its own adjusting mechanism. The repeated positioning accuracy of single direction is 15sec, while the that motion is 2mins of two direction positioning, no it can achieve high precision positioning.

High rigidity type (PHG85R, PHG130R)



SAFETY PRECAUTIONS

CAUTIONS FOR STORAGE

Whenever temporarily keeping the product, keep the following directions:

1. Keep in a clean and dry place.
2. Whenever storing outdoors or in a humid place, put in a box so that it does not directly contact rain or external air and cover with a vinyl sheet (Take a measure to prevent rust.)

CAUTIONS FOR OPERATION

When the reducer is delivered to you...

When the product delivered, please confirm that you received the exact same model you have ordered. Please wipe out the input and output shaft of the reducer which is covered by anti-corrosive oil.

*Please remove the rubber cap on the input shaft before you wipe the shafts.

*Lubricant (grease) is already laid in the reducer. It is available as it is.

FIXATION & INSTALLATION

Avoid use in a place where rain or water drops directly.

In case of use outdoors or in a place where dust and water drops, consult in advance.

Install at 0°C ~ 40°C of surrounding temperature.

In case of use at temperature out of the above-mentioned range, contact the headquarters and consult on this.

Firmly fix with a bolt onto a solid stand without vibration.

Install in consideration of convenience in repair and inspection.

CAUTIONS PRIOR TO STARTING THE OPERATION

Reducer can be used soon after arrival, since it has already been laid out with lubrication.

At initial operation, check the rotating direction of the output shaft and then gradually apply load.

CAUTIONS DURING OPERATION

Avoid overload. Ensure that input speed shall not be the number of revolutions beyond the specification. In the following cases, stop the operation and check the following points:

- If temperature sharply increases
- If an abnormal noise appears sharply
- If the number of revolutions becomes unstable sharply

REGULATIONS

The scope of warranty only includes the product.

The following costs and damages are not covered by the warranty.

- 1) Shipping cost of this product.
- 2) The cost of removing, installing or other incidental construction of the product from other devices after connection or installation.
- 3) Due to the failure of this product, indirect damage caused to the user due to loss of use opportunities or business interruption.
- 4) All other derived or consequential damages

Note