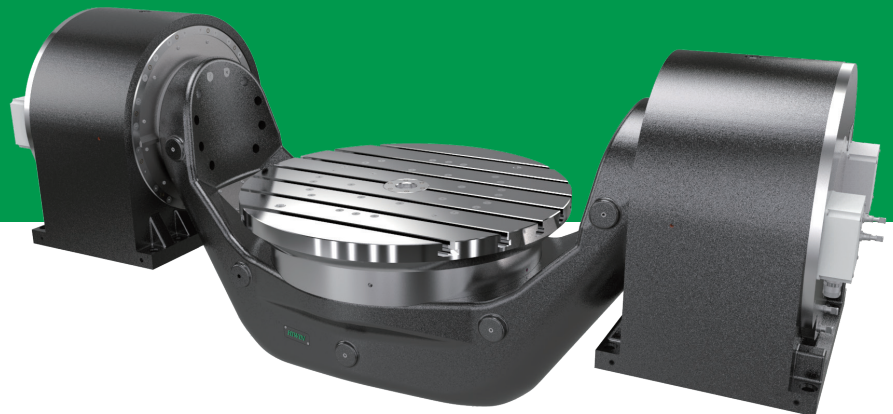




Torque Motor Rotary Table

Technical Information



HIWIN Support



About HIWIN



Semiconductor Subsystem

Semiconductor / LED / Panel

- EFEM
- (Equipment Front End Module)
- Wafer Robot
- Load Port
- Wafer Aligner



Multi-Axis Robot

Pick-and-Place / Assembly / Array and Packaging / Semiconductor / Electro-Optical Industry / Automotive Industry / Food Industry

- Articulated Robot
- SCARA Robot
- Electric Gripper
- Integrated Electric Gripper



Single-Axis Robot

Precision / Semiconductor / Medical / FPD

- KK, SK
- KS, KA
- KU, KE, KC
- KA B-TYPE
- KC B-TYPE



Torque Motor Rotary Table

Medical / Automotive Industry / Machine Tools / Machinery Industry

- RAB Series
- RAS Series
- RCV Series
- RCH Series

Wire-cut EDM / Die-sinker EDM / Small-hole Drilling EDM

- RAS-E Series
- RCV-E Series
- RCH-E Series



Ball screw

Precision Ground / Rolled

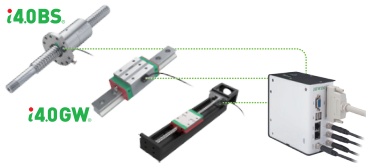
- Super S Series
- Super T Series
- Mini Roller
- Ecological & Economical Lubrication Module E2
- Auxiliary Lubrication Module EL
- Rotating Nut (R1, R2)
- Energy-Saving & Thermal-Controlling (Cool Type)
- Heavy Load Series (RD)



Linear Guideway

Automation / Semiconductor / Medical

- Ball Type-HG, EG, WE, MG, CG
- Quiet Type-QH, QE, QW, QR
- Other-Stainless Steel, AG, RG, E2, EL, PG, SE, RC



i-Series

Semiconductor / Automation Equipment / Industrial Machines / Machine Tools

- Intelligent 4.0 Ball screw
- Intelligent 4.0 Guideway
- Intelligent Single-Axis Robot



DATORKER® Strain Wave Gear

Robot / Automation / Semiconductor / Machine Tools

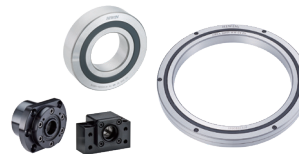
- Standard-DSC, DSH Type
- Heavy Load-DGC, DGH Type
- Lightweight-DLC Type



Ball Spline

Robot / Medical / Automation Equipment / Industrial Machines / Machine Tools / Semiconductor

- Linear ball spline-RS Type, FS Type, FSR Type
- Compound ball spline-FBR type



Bearing

Machine Tools / Robot / Industrial Machines / Automation

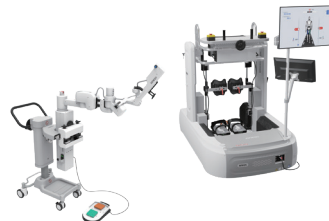
- Crossed Roller Bearing
- Ball screw Bearing
- Support Unit



Controller / Drive/ AC Servo Motor

Semiconductor / SMT / 3C Electronics / Automation Equipment / New Energy Equipment / Industrial Machinery

- Drives-D1, D2T/D2T-LM, E1, E2
- Motors-FR, E Series



Medical Equipment

Hospital / Rehabilitation Centers / Long-term Care Facility

- Robotic Endoscope Holder MTG-H100
- Robotic Gait Training System MRG-P110
- Robotic Gait Training System MRG-P100



Linear Motor / Linear Motor Stage

Automated Transport / AOI Application / Precision Positioning / Semiconductor Application

- Ironcore Linear Motor
- Ironless Linear Motor
- Tubular Motors
- Air Bearing Platform
- XY Stage • Gantry Systems
- Single-Axis Linear Motor Stage



Torque Motor / Direct Drive Motor

Machine Tools / Lithium-ion Battery / Gear Machining and Inspection

- Torque Motor-TM-2 / IM-2, TMRW Series

Display / Automation / Semiconductor / Lithium-ion Battery / Robot / Laser Cutting / AOI Inspection

- Direct Drive Motor-DMS, DMY, DMN, DMT, DMH Series



Torque Motor Rotary Table

Technical Information Index

1. Introduction	2
2. Core Technology.....	3
3. Single Axis Series	5
3-1 RCV Series - Single Axis Vertical Type	5
3-2 RCH Series - Single Axis Horizontal Type	13
4. Dual Axis Series	19
4-1 RAS Series - Dual Axis Single Arm Type	19
4-2 RAB Series - Dual Axis Double Arm Type	23
5. Standard Accuracy.....	27
6. Glossary.....	29
7. Precautions	31
8. Selection Guide.....	32

1. Introduction

HIWIN's Torque Motor Rotary Table features a water-cooled torque motor, built-in high rigidity and high precision bearing, absolute encoder, and robust clamping system. Compared to mechanical types, the HIWIN Torque Motor Rotary Table boasts high speed, high torque, and high precision, making it suitable for various precision machining industries.

The HIWIN Torque Motor Rotary Table utilizes a direct drive transmission structure, distinct from traditional mechanical types. It eliminates the mechanical transmission components of traditional rotary tables, such as worm gears and roller cams, significantly reducing wear and resulting in zero backlash. This improvement enhances the stability of machining accuracy. By integrating a Torque Motor Rotary Table, existing machining equipment can be upgraded to a 3+1-axis, 4-axis, or 5-axis machine, enabling one-time clamping machining and improving efficiency and productivity.

Torque Motor

Zero backlash
Improve the consistency of product quality

Compact Structure Design

Save machine space

Adopts Axial-Radial Bearing

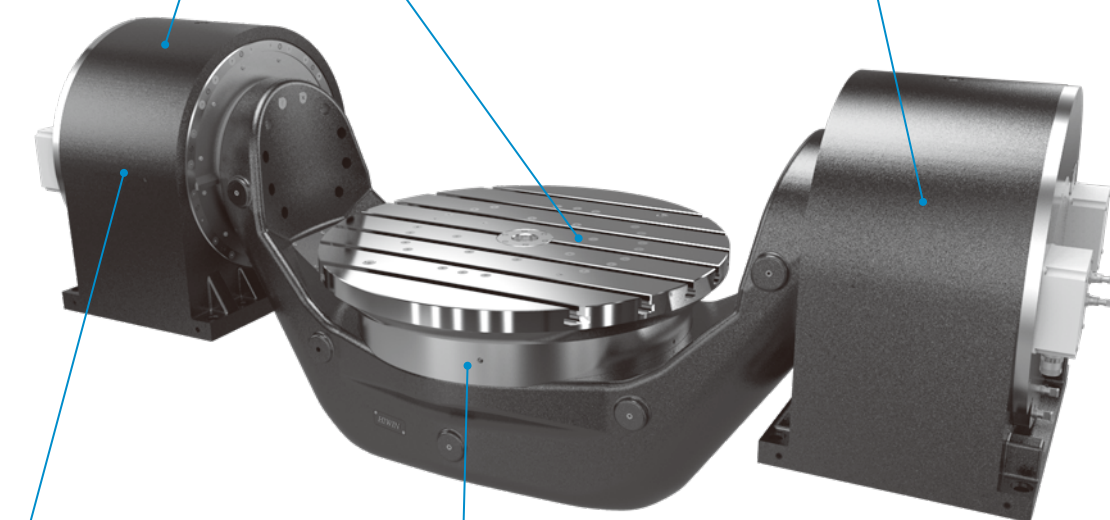
High rigidity
Low runout when load is applied

Close Loop Encoder

High dynamic accuracy

High Rotation Speed

Suitable for Turnmill machining with improved yield and efficiency



2. Core Technology

• Torque Motor



High Torque

The combination of a high output torque stator and rotor is suitable for precision machining. The water-cooled design not only reduces the thermal deformation of the motor but also achieves high torque.

Zero Backlash

The torque motor is designed as a direct drive system, eliminating the need for a reduction mechanism. With no contact between the rotor and the stator, there is zero backlash. This setup markedly improves the reliability of the rotary table and ensures consistent product accuracy.

High Rotation Speed

Torque motors without reduction mechanism can provide high rotation speed and high acceleration and deceleration, suitable for rapid positioning and high-speed turning applications.

• High Accuracy Absolute Encoder



High Dynamic Accuracy

The absolute encoder is capable of providing real-time position feedback, enabling the system to monitor the position changes of the rotary table in real-time. It can promptly detect any position deviation or error, thereby offering higher efficiency in applications that require high-precision control and positioning for machining.

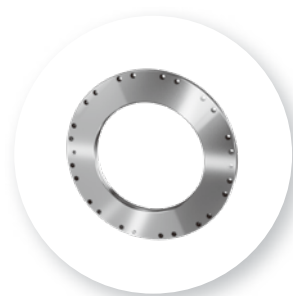
• Radial-Axial Bearing



High Rigidity

With HIWIN manufactured specialized bearings providing high rigidity, high load and high precision. These bearings can withstand radial load, bidirectional axial load, and overturning moment, ensuring the stability and precision of the rotary table.

• Clamping System



Safety Clamp

Our advanced clamping systems guarantee uninterrupted operation, even during power outages. This feature secures the rotary table firmly in place, eliminating any risk of movement and ensuring a safe working environment. Our range of clamping systems, including disc, pneumatic, and hydraulic options, provides robust solutions tailored to meet diverse operational needs.

- Disc Clamping System

With clamping discs installed on the fixed seat and rotating shaft, applying compressed air to press the piston against the discs, a strong clamping force is achieved through the friction between the discs.

- Full Circumference Pneumatic Clamping System

The clamping force is high, and the accuracy error variation after braking is low. Due to the brake being a pneumatic system, the response time is very fast. By directly connecting the quick exhaust valve and high-speed gate valve to the clamping mechanism, extremely short clamping time can be achieved.

- Full Circumference Hydraulic Clamping System

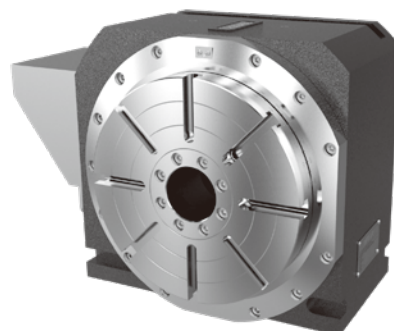
By adopting a full circumference hydraulic clamping system, it effectively avoids plate runout issues. It has a larger clamping area and can maintain stable clamping force.

3. Single Axis Series

3-1 RCV Series - Single Axis Vertical Type

Features

- Built-in Torque Motor with high acceleration, high torque, zero backlash
- Adopts high rigidity radial-axial bearing
- Equipped with high accuracy encoder, able to achieve high positioning accuracy and high repeatability



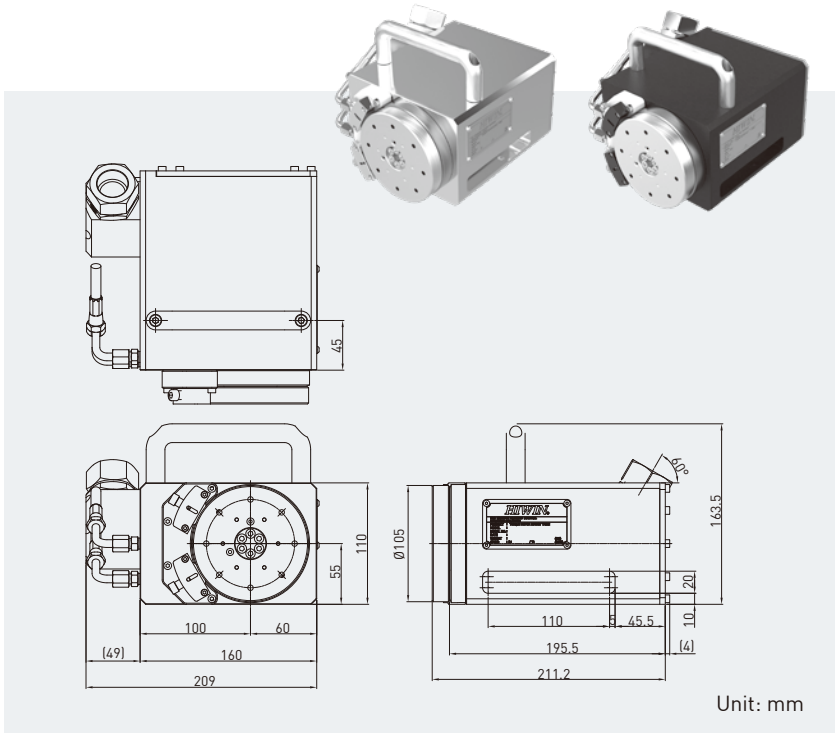
Spec./Model	Unit	RCV-100		RCV-125		RCV-170			RCV-230	RCV-250	RCV-320	RCV-400			RCV-500
Table Diameter	mm	105	100	125	125	170	170	170	230	250	320	400	-	-	500
Center Height	mm	55	160	81	100	135	135	165	240.5	160	210	220	-	-	250
Center Through Hole	mm	-	-	-	Ø30x26L	Ø60	Ø60	Ø40	Ø60	Ø60	Ø60	Ø60	Ø70	Ø60	-
T-Slot Width	mm	-	-	-	12H8	12H8	12H8	-	-	12H8	14H8	14H8	-	-	14H8
Max. Rotation Speed ※2	rpm	200	200	200/1000 (opt.)	400	150	200	200	60	140	60	90	50	100	25
Max. Torque	Nm	20.9	83.1	33.8	59.4	188	203	160	390	280	640	810	1360	1160	2400
Max. Current	A	6.8	27	13.5	27	12	24.3	51	48.6	24.3	40.5	40.5	40.5	38.1	81
Positioning Accuracy	arc-sec	±5	±5	±5	±5	±15	±5	±5	±5	±5	±5	±5	±5	±5	±5
Repeatability	arc-sec	4	4	4	4	8	4	4	4	4	4	4	4	4	4
Clamping Type	-	-	-	Electromagnetic	Pneumatic (6bar)			-	Pneumatic (6bar)				Hydraulic gear type (55bar)		Pneumatic (6bar)
Clamping Torque	Nm	-	-	9	100	300	300	-	-	600	900	900	2400	7200	2400
Cooling Power	W	-	1276	-	927	-	1002	1148	1666	1272	2558	3287	4630	3860	8262
Net Weight	kg	12	160	20	50	60	95	120	250	150	200	320	320	250	500
Allowable Load	kg	10	20	20	20	50	70	50	150	160	200	250	-	-	800
Cooling Method	-	Convection	Water	Convection	Water	Convection	Water								

※1: All models in the above table are standard specifications, any special requirements, please contact HIWIN.

※2: The rotation speed will vary depending on the voltage of power supply.

RCV-100

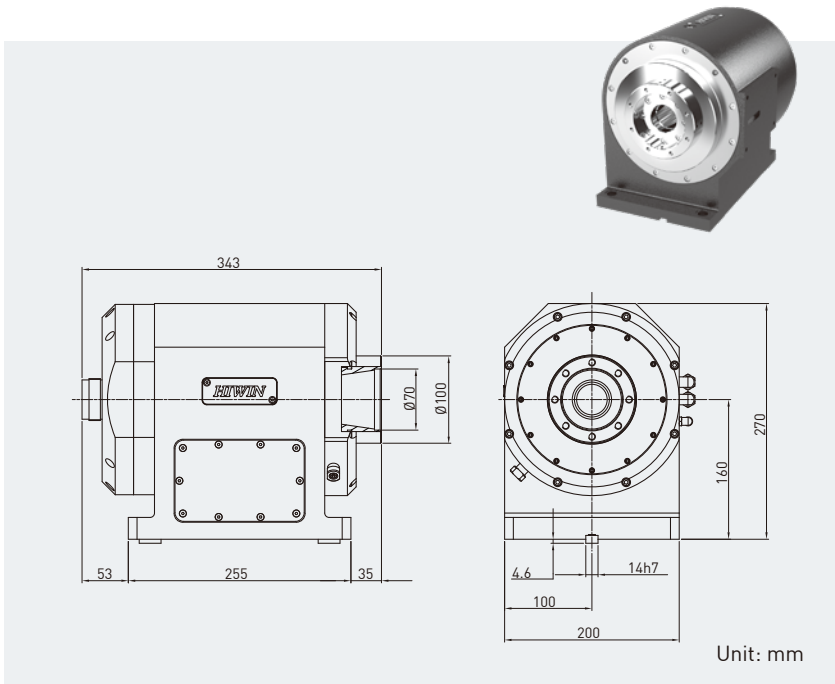
Spec./Model	Unit	RCV-100
Water Protection	-	IP68
Table Diameter	mm	105
Center Height	mm	55
Max. Rotation Speed	rpm	200
Max. Torque	Nm	20.9
Max. Current	A	6.8
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Net Weight	kg	12
Allowable Load	kg	10
Cooling Method	-	Convection



Suitable Applications Wire cut EDM, Cleaning machine, Under water ultrasonic testing machine

RCV-100

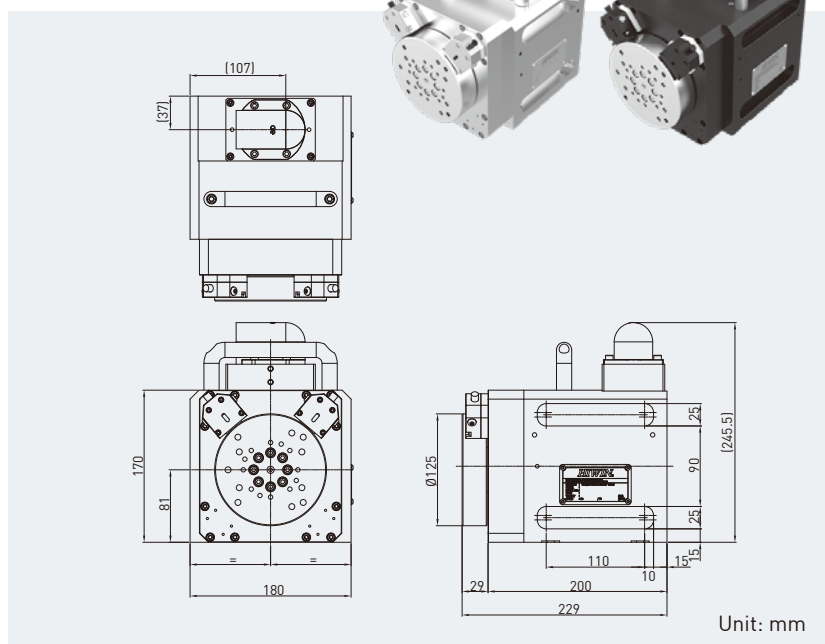
Spec./Model	Unit	RCV-100
Table Diameter	mm	100
Axial Runout	mm	0.005
Radial Runout	mm	0.005
Center Height	mm	160
Max. Rotation Speed	rpm	200
Max. Torque	Nm	83.1
Max. Current	A	27
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Cooling Power	W	1276
Net Weight	kg	160
Allowable Load	kg	20
Cooling Method	-	Water
Taper Spec.	-	BT50



Suitable Applications Tool grinding machining, Gear cutting, Medical industry part machining

RCV-125

Spec./Model	Unit	RCV-125
Water Protection	-	IP68
Table Diameter	mm	125
Center Height	mm	81
Max. Rotation Speed	rpm	200/1000(opt.)
Max. Torque	Nm	33.8
Max. Current	A	13.5
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Torque	Nm	9
Net Weight	kg	20
Allowable Load	kg	20
Cooling Method	-	Convection

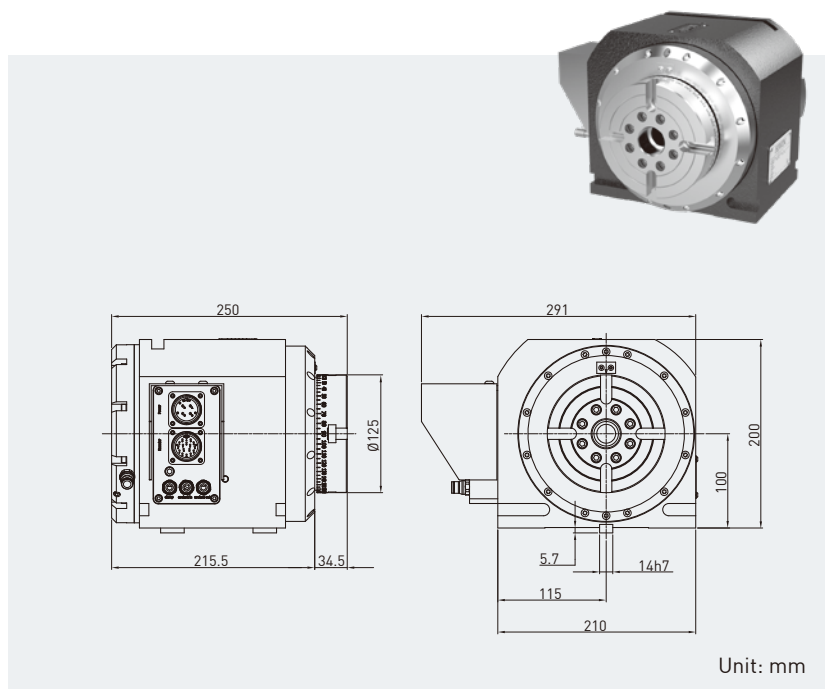


Suitable Applications

Wire cut EDM, Cleaning machine,
Under water ultrasonic testing machine

RCV-125

Spec./Model	Unit	RCV-125
Table Diameter	mm	125
Center Height	mm	100
Center Through Hole	mm	Ø 30×26L
T-Slot Width	mm	12H8
Max. Rotation Speed	rpm	400
Max. Torque	Nm	59.4
Max. Current	A	27
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Pneumatic (6bar)
Clamping Torque	Nm	100
Cooling Power	W	927
Net Weight	kg	50
Allowable Load	kg	20
Cooling Method	-	Water

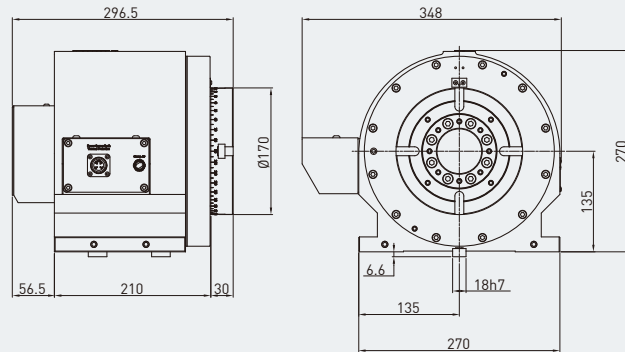


Suitable Applications

Die & Mold machining, Metal parts machining,
Tool machining, Electronic parts machining

RCV-170

Spec./Model	Unit	RCV-170
Table Diameter	mm	170
Center Height	mm	135
Center Through Hole	mm	Ø 60
T-Slot Width	mm	12H8
Max. Rotation Speed	rpm	150
Max. Torque	Nm	188
Max. Current	A	12
Positioning Accuracy	arc-sec	±15
Repeatability	arc-sec	8
Clamping Type	-	Pneumatic (6bar)
Clamping Torque	Nm	300
Net Weight	kg	60
Allowable Load	kg	50
Cooling Method	-	Convection



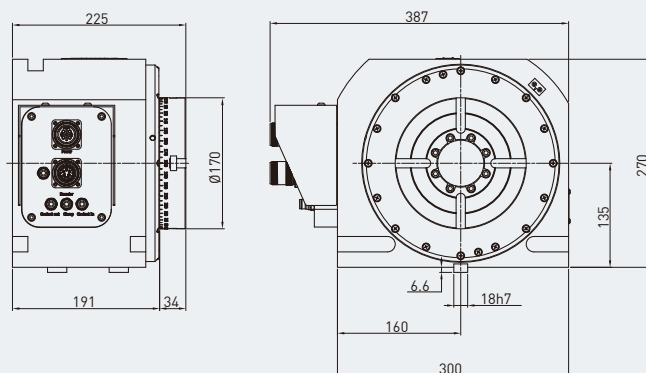
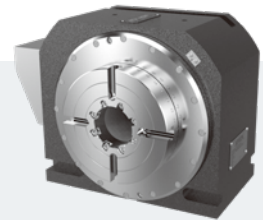
Unit: mm

Suitable Applications

Die & Mold machining, Metal parts machining,
Tool machining, Electronic parts machining

RCV-170

Spec./Model	Unit	RCV-170
Table Diameter	mm	170
Center Height	mm	135
Center Through Hole	mm	Ø 60
T-Slot Width	mm	12H8
Max. Rotation Speed	rpm	200
Max. Torque	Nm	203
Max. Current	A	24.3
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Pneumatic (6bar)
Clamping Torque	Nm	300
Cooling Power	W	1002
Net Weight	kg	95
Allowable Load	kg	70
Cooling Method	-	Water



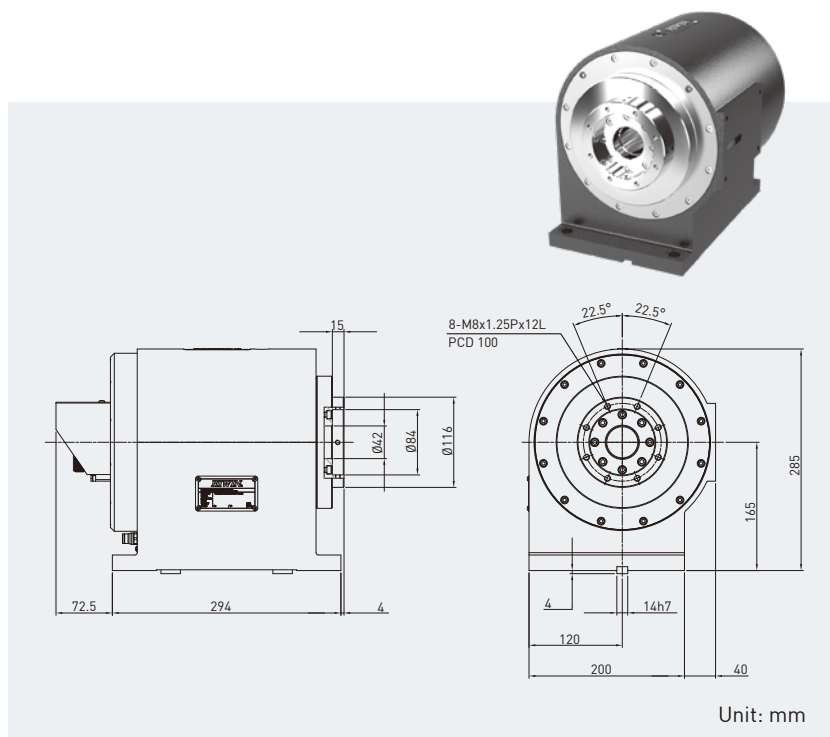
Unit: mm

Suitable Applications

Die & Mold machining, Metal parts machining,
Tool machining, Electronic parts machining

RCV-170

Spec./Model	Unit	RCV-170
Table Diameter	mm	170
Axial Runout	mm	0.005
Radial Runout	mm	0.005
Center Height	mm	165
Center Through Hole	mm	Ø 40
Max. Rotation Speed	rpm	200
Max. Torque	Nm	160
Max. Current	A	51
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Cooling Power	W	1148
Net Weight	kg	120
Allowable Load	kg	50
Cooling Method	-	Water

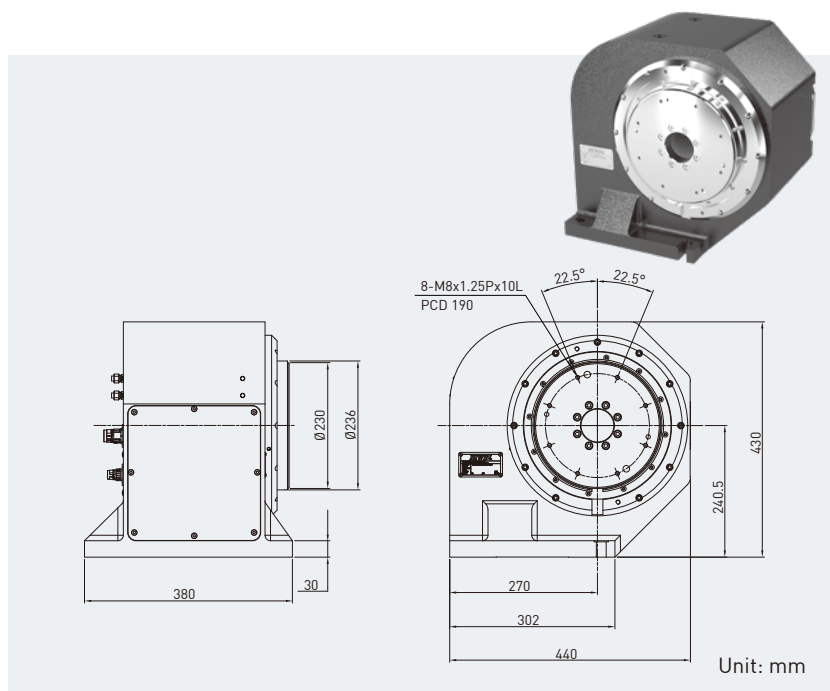


Suitable Applications

Tool grinding machining, Gear cutting,
Medical industry parts machining

RCV-230

Spec./Model	Unit	RCV-230
Table Diameter	mm	230
Axial Runout	mm	0.005
Radial Runout	mm	0.005
Center Height	mm	240.5
Center Through Hole	mm	Ø 60
Max. Rotation Speed	rpm	60
Max. Torque	Nm	390
Max. Current	A	48.6
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Cooling Power	W	1666
Net Weight	kg	250
Allowable Load	kg	150
Cooling Method	-	Water

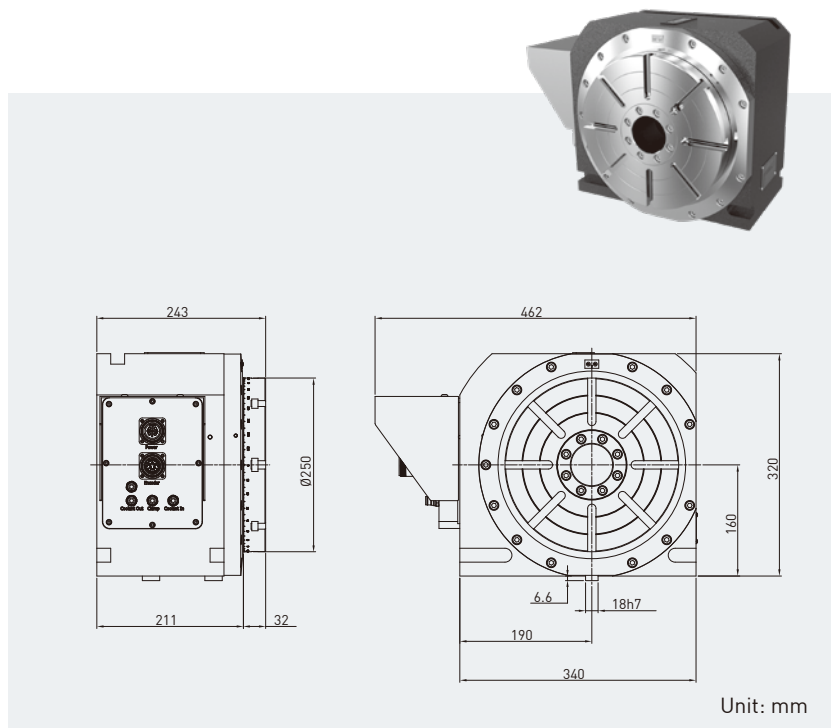


Suitable Applications

Tool grinding machining, Gear cutting,
Medical industry parts machining

RCV-250

Spec./Model	Unit	RCV-250
Table Diameter	mm	250
Center Height	mm	160
Center Through Hole	mm	Ø 60
T-Slot Width	mm	12H8
Max. Rotation Speed	rpm	140
Max. Torque	Nm	280
Max. Current	A	24.3
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Pneumatic (6bar)
Clamping Torque	Nm	600
Cooling Power	W	1272
Net Weight	kg	150
Allowable Load	kg	160
Cooling Method	-	Water

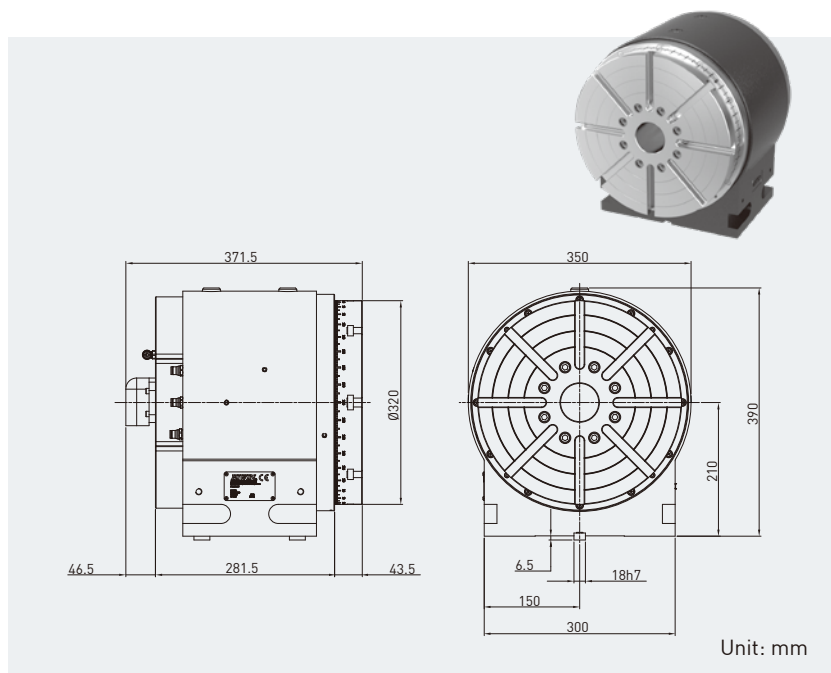


Suitable Applications

Die & Mold machining, Metal parts machining, Tool machining, Electronic parts machining

RCV-320

Spec./Model	Unit	RCV-320
Table Diameter	mm	320
Center Height	mm	210
Center Through Hole	mm	Ø 60
T-Slot Width	mm	14H8
Max. Rotation Speed	rpm	60
Max. Torque	Nm	640
Max. Current	A	40.5
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Pneumatic (6bar)
Clamping Torque	Nm	900
Cooling Power	W	2558
Net Weight	kg	200
Allowable Load	kg	200
Cooling Method	-	Water

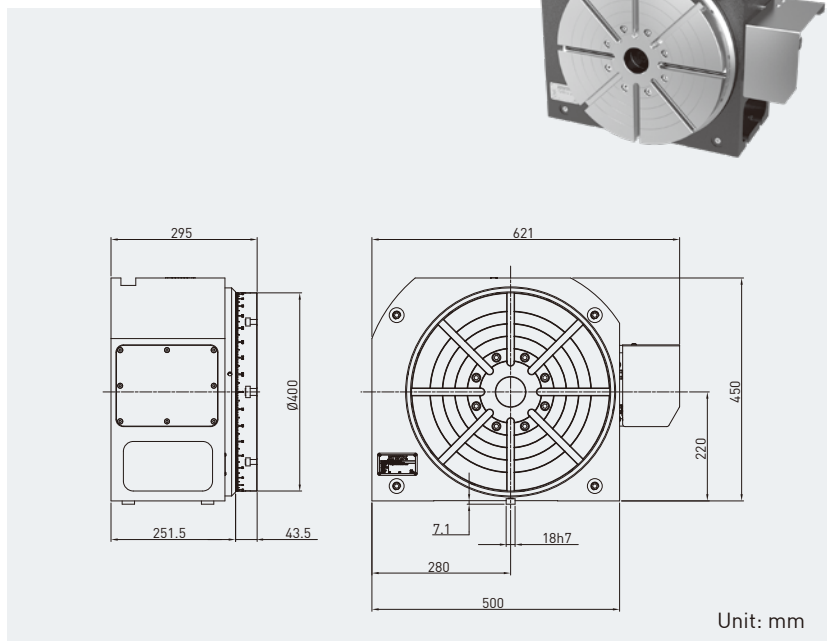


Suitable Applications

Die & Mold machining, Metal parts machining, Tool machining, Electronic parts machining

RCV-400

Spec./Model	Unit	RCV-400
Table Diameter	mm	400
Center Height	mm	220
Center Through Hole	mm	Ø 60
T-Slot Width	mm	14H8
Max. Rotation Speed	rpm	90
Max. Torque	Nm	810
Max. Current	A	40.5
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Pneumatic (6bar)
Clamping Torque	Nm	900
Cooling Power	W	3287
Net Weight	kg	320
Allowable Load	kg	250
Cooling Method	-	Water

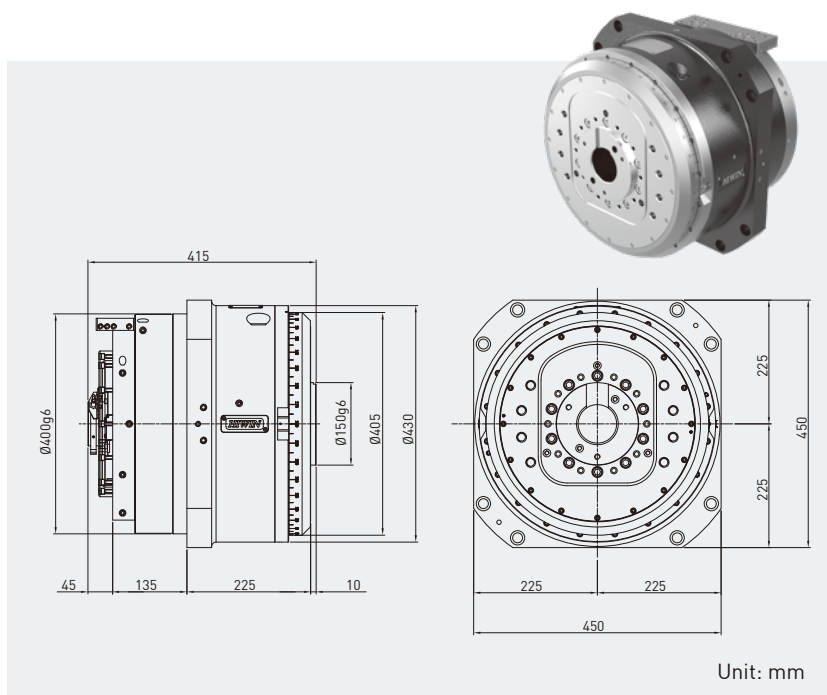


Suitable Applications

Die & Mold machining, Metal parts machining, Tool machining, Electronic parts machining

RCV-400

Spec./Model	Unit	RCV-400
Center Through Hole	mm	Ø 70
Max. Rotation Speed	rpm	50
Max. Torque	Nm	1360
Max. Current	A	40.5
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Pneumatic (6bar)
Clamping Torque	N-m	2400
Cooling Power	W	4630
Net Weight	kg	320
Cooling Method	-	Water



Suitable Applications

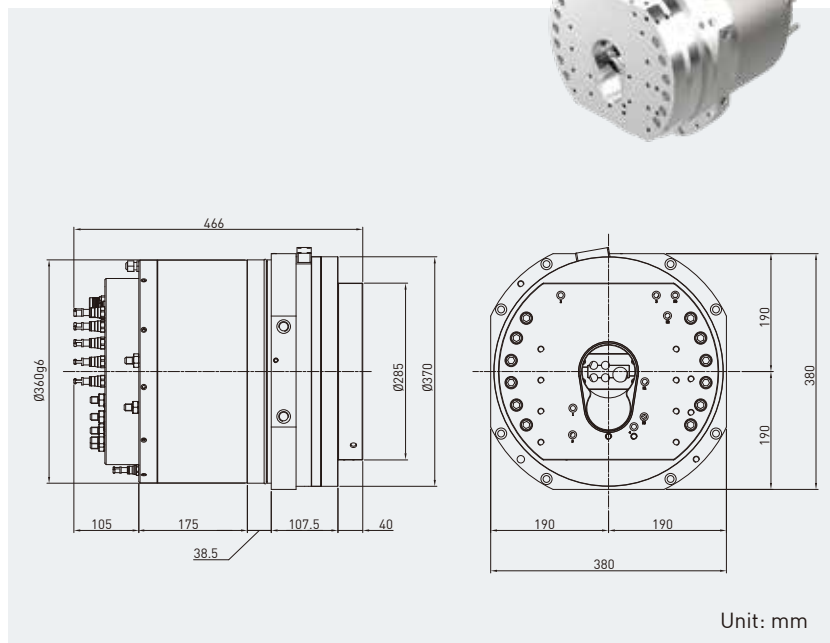
Automotive parts machining, Die & Mold machining, Light metal parts machining

Note: This model can be equipped with a spindle for milling and turning compound machining, and the spindle must be provided by the customer.

RCV-400

Spec./Model	Unit	RCV-400
Center Through Hole	mm	Ø 60
Max. Rotation Speed	r.p.m.	100
Max. Torque	Nm	1160
Max. Current	A	38.1
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Hydraulic gear type (55bar)
Clamping Torque	Nm	7200
Min. Increment	degree	5
Cooling Power	W	3860
Net Weight	kg	250
Cooling Method	-	Water

Note: This model can be equipped with a spindle for milling and turning compound machining, and the spindle must be provided by the customer.

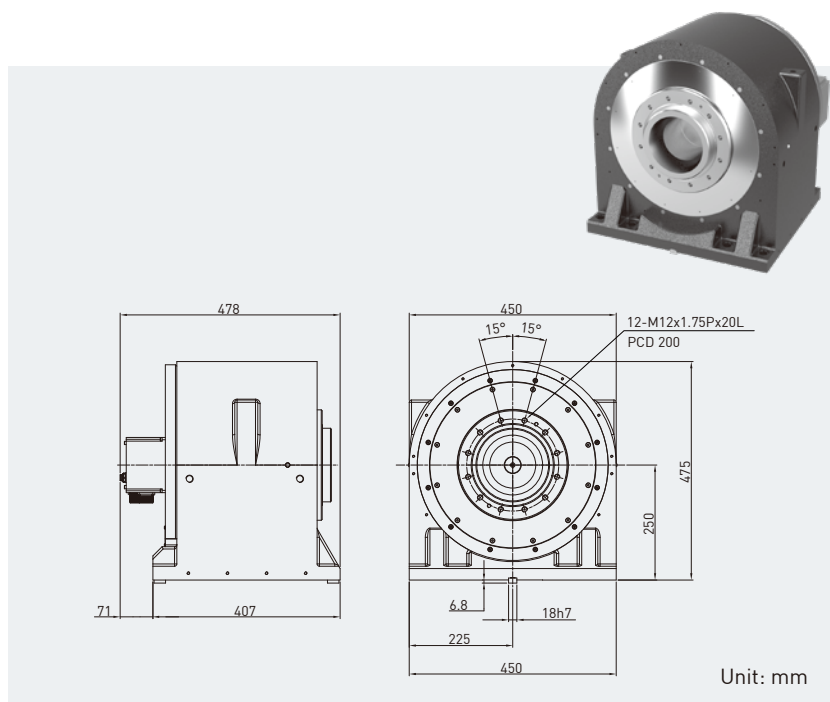


Suitable Applications

Automotive parts machining, Die & Mold machining, Light metal parts machining, Trunnion rotary transfer machine

RCV-500

Spec./Model	Unit	RCV-500
Table Diameter	mm	500
Center Height	mm	250
T-Slot Width	mm	14H8
Max. Rotation Speed	rpm	25
Max. Torque	Nm	2400
Max. Current	A	81
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Pneumatic (6bar)
Clamping Torque	Nm	2400
Cooling Power	W	8262
Net Weight	kg	500
Allowable Load	kg	800
Cooling Method	-	Water



Suitable Applications

Die & Mold machining, Metal parts machining, Tool machining, Electronic parts machining

3-2 RCH Series - Single Axis Horizontal Type

Features

- Built-in Torque Motor with high acceleration, high torque, zero backlash
- High dynamic performance positioning rotary table
- Low runout accuracy
- Integrated milling, turning and grinding machining



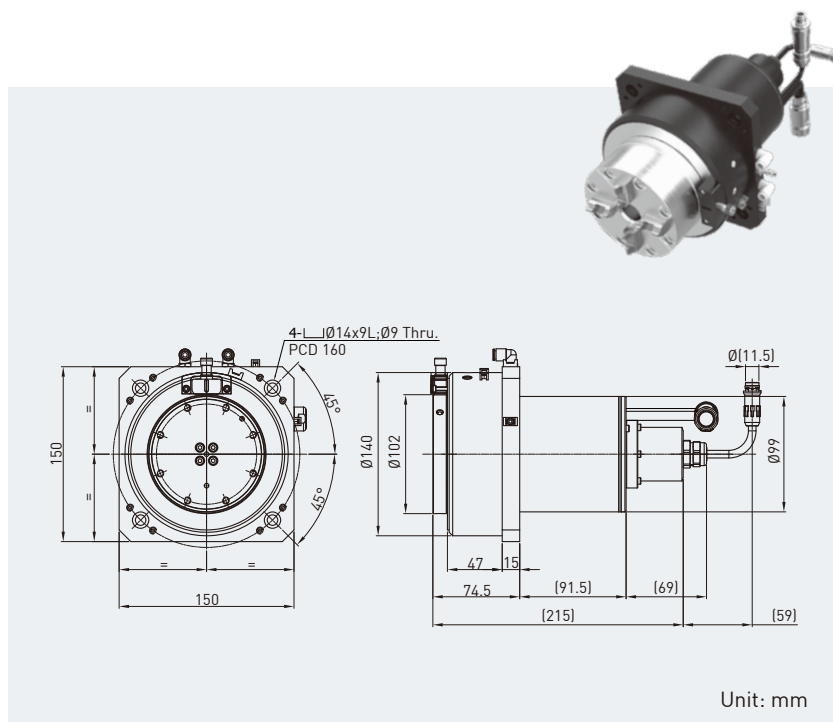
Spec./Model	Unit	RCH-100		RCH-200	RCH-250		RCH-320	RCH-400	RCH-600	RCH-800	RCH-1000
Table Diameter	mm	102	100	200	250	250	320	400	600	800	1000
Max. Rotation Speed ※2	rpm	200	120	250	60	50	120	115	100	80	80
Max. Torque	Nm	20.9	329.4	280	1140	80.7	1360	910	2400	3600	3900
Max. Current	A	6.8	24	24.3	56	12	81	40.5	81	162	108.5
Positioning Accuracy	arc-sec	±15	±20	±5	±5	±5	±5	±5	±5	±5	±5
Repeatability	arc-sec	10	5	4	4	4	4	4	4	4	4
Clamping Type	-	-	-	Pneumatic (6bar)	-	-	-	Hydraulic (70bar)			
Clamping Torque	Nm	-	-	600	-	-	-	2000	3200	4200	4200
Cooling Power	W	-	-	1272	4002	-	4630	3483	7600	9990	9987
Net Weight	kg	10	90	130	110	90	150	190	430	750	1150
Allowable Load	kg	30	40	100	250	100	80	500	850	1800	1800
Cooling Method	-	Convection		Water	Convection			Water			

※1: All models in the above table are standard specifications, any special requirements, please contact HIWIN.

※2: The rotation speed will vary depending on the voltage of power supply.

RCH-100

Spec./Model	Unit	RCH-100
Max. Electrode Weight	kg	35
Max. Rotation Speed	rpm	200
Max. Torque	Nm	20.9
Max. Current	A	6.8
Max. Centric Flushing Pressure	bar	20
Positioning Accuracy	arc-sec	±15
Repeatability	arc-sec	10
Net Weight	kg	10
Cooling Method	-	Convection

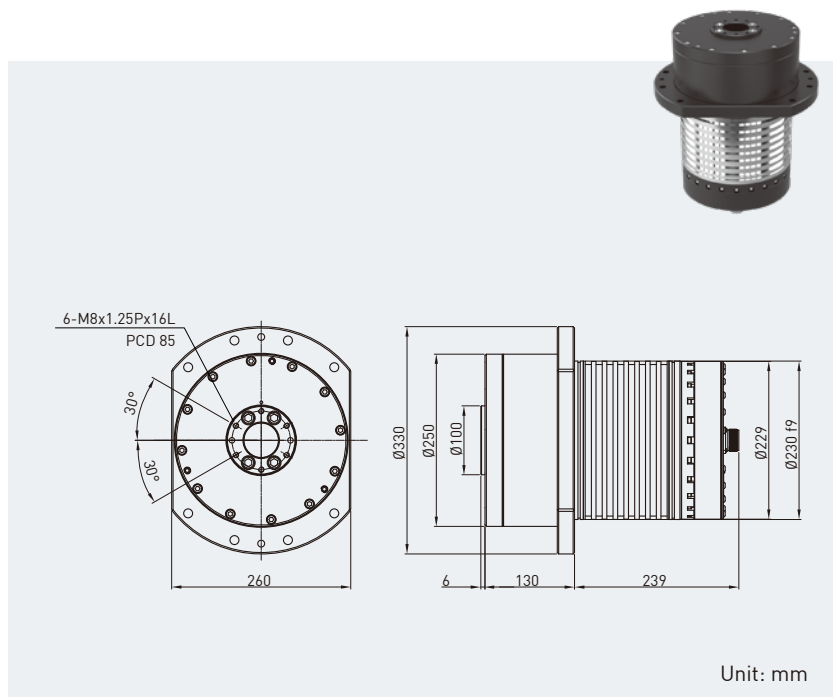


Suitable Applications

Die-Mold EDM, Drilling EDM

RCH-100

Spec./Model	Unit	RCH-100
Table Diameter	mm	100
Axial Runout	mm	0.01
Radial Runout	mm	0.01
Max. Rotation Speed	rpm	120
Max. Torque	Nm	329.4
Max. Current	A	24
Positioning Accuracy	arc-sec	±20
Repeatability	arc-sec	5
Net Weight	kg	90
Allowable Load	kg	40
Cooling Method	-	Convection

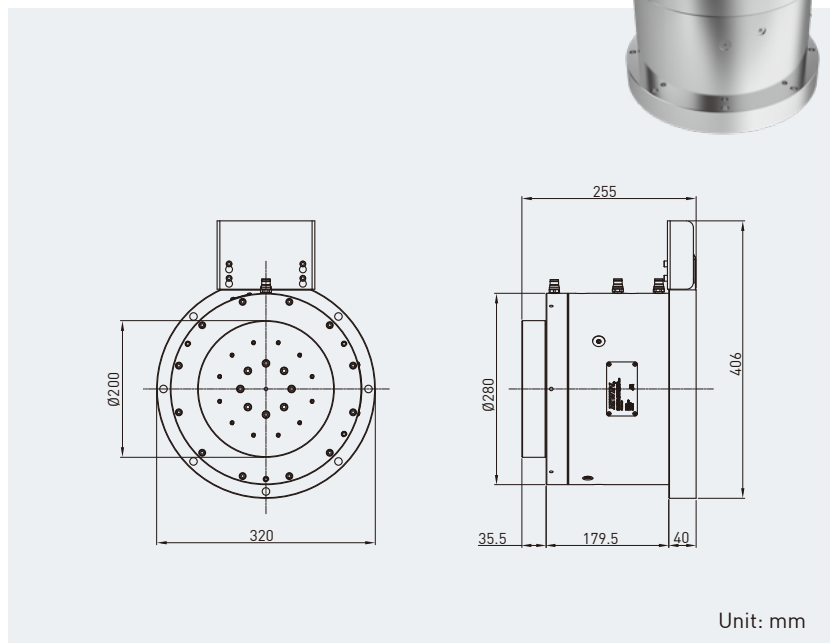


Suitable Applications

Tool grinding, Gear chamfering, Trunnion rotary transfer machine

RCH-200

Spec./Model	Unit	RCH-200
Table Diameter	mm	200
Max. Rotation Speed	rpm	250
Max. Torque	Nm	280
Max. Current	A	24.3
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Pneumatic (6bar)
Clamping Torque	Nm	600
Cooling Power	W	1272
Net Weight	kg	130
Allowable Load	kg	100
Cooling Method	-	Water

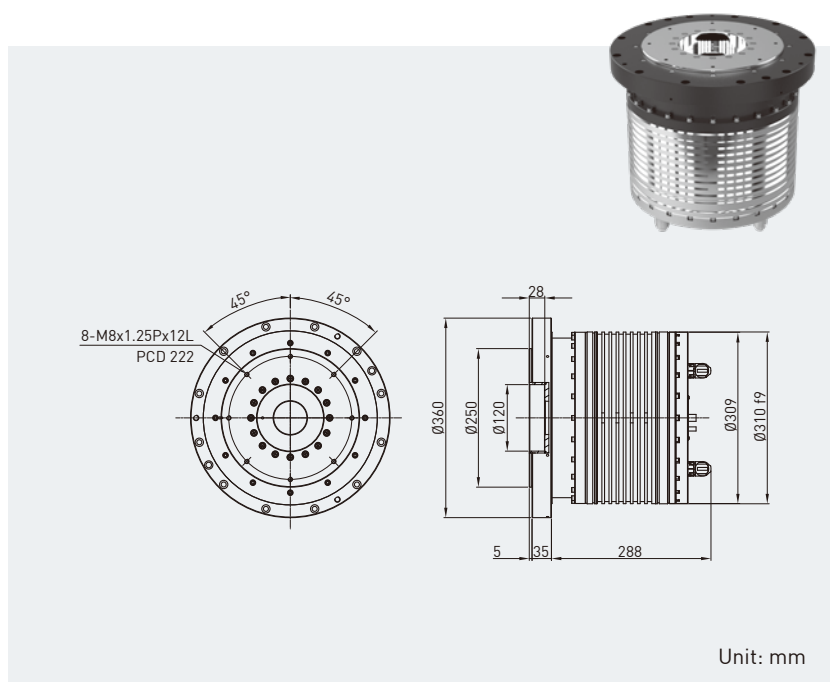


Suitable Applications

Automotive parts machining, Milling-turning compound machining, Die & Mold machining, Appearance inspection equipment, Chemical Mechanical Polishing(CMP), Electronic parts machining, Trunnion rotary transfer machine

RCH-250

Spec./Model	Unit	RCH-250
Table Diameter	mm	250
Axial Runout	mm	0.01
Radial Runout	mm	0.01
Max. Rotation Speed	rpm	60
Max. Torque	Nm	1140
Max. Current	A	56
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Cooling Power	W	4002
Net Weight	kg	110
Allowable Load	kg	250
Cooling Method	-	Convection

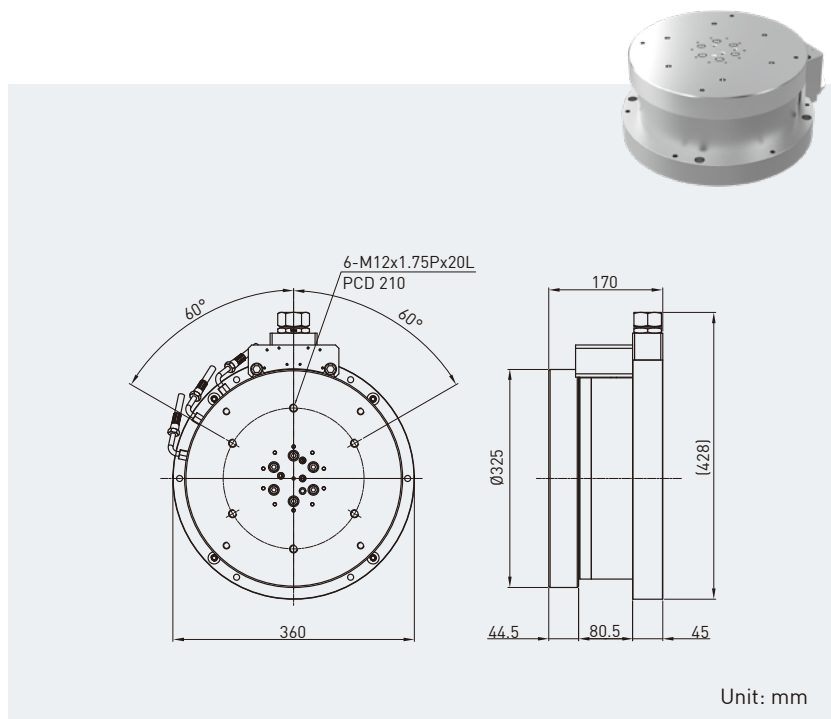


Suitable Applications

Tool grinding, Gear chamfering, Trunnion rotary transfer machine

RCH-250

Spec./Model	Unit	RCH-250
Water Protection	-	IP68
Max. Rotation Speed	rpm	50
Max. Torque	Nm	80.7
Max. Current	A	12
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Net Weight	kg	90
Allowable Load	kg	100
Cooling Method	-	Convection

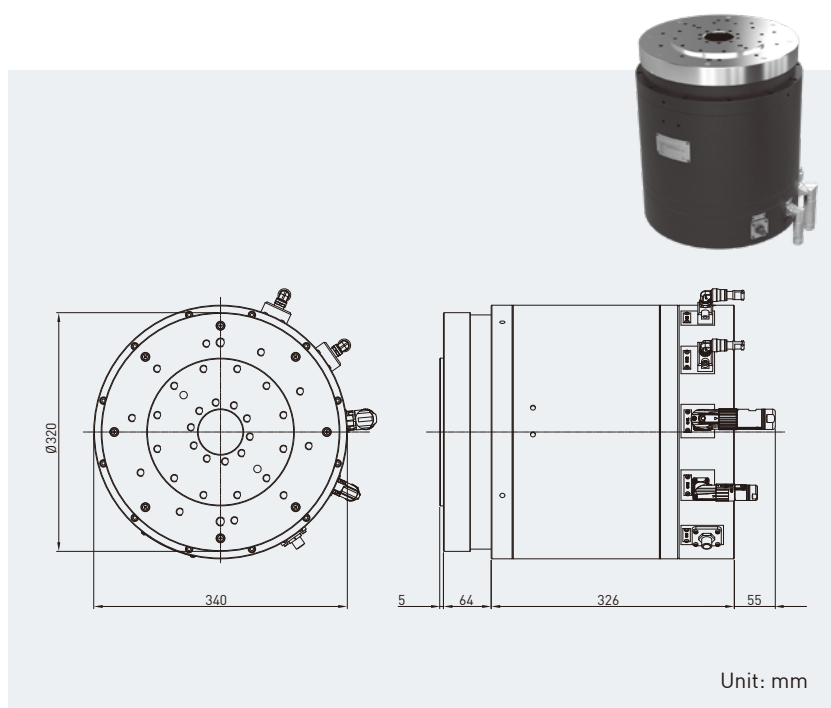


Suitable Applications

Die-Mold EDM, Drilling EDM, Cleaning machine, Under water ultrasonic testing machine

RCH-320

Spec./Model	Unit	RCH-320
Table Diameter	mm	320
Max. Rotation Speed	rpm	120
Max. Torque	Nm	1360
Max. Current	A	81
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Cooling Power	W	4630
Max. Allowable Work Inertia	kg-m ²	7
Net Weight	kg	150
Allowable Load	kg	80
Cooling Method	-	Convection

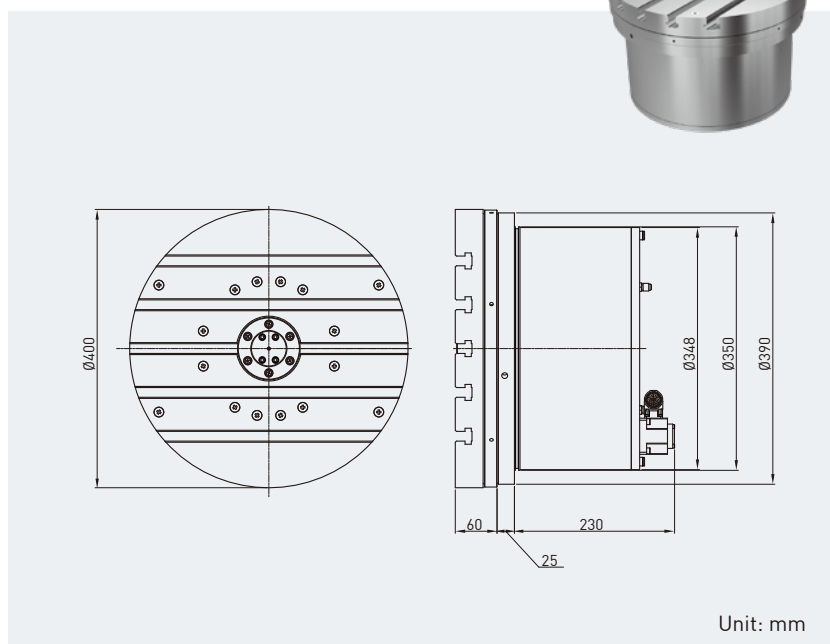


Suitable Applications

Automation equipment

RCH-400

Spec./Model	Unit	RCH-400
Table Diameter	mm	400
Max. Rotation Speed	rpm	115
Max. Torque	Nm	910
Max. Current	A	40.5
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Hydraulic (70bar)
Clamping Torque	Nm	2000
Cooling Power	W	3483
Net Weight	kg	190
Allowable Load	kg	500
Cooling Method	-	Water

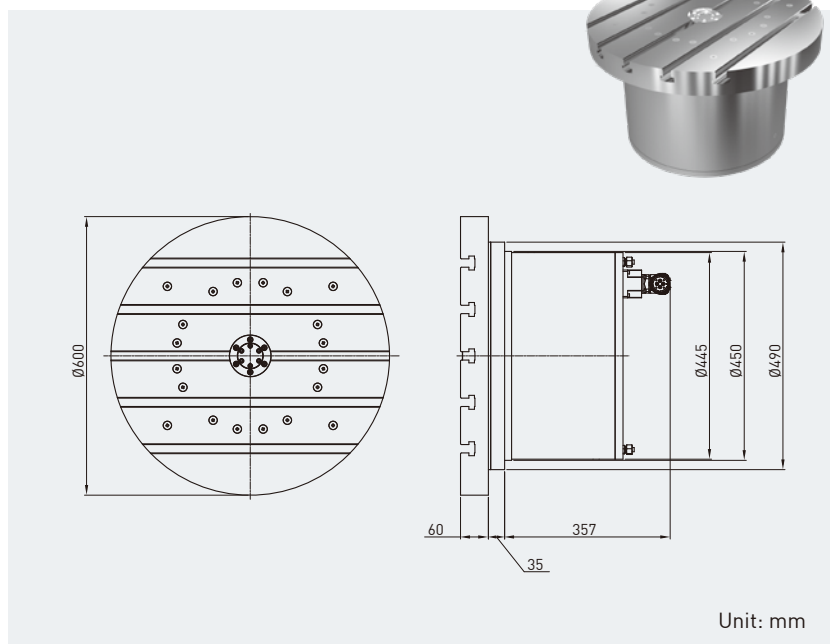


Suitable Applications

Automotive parts machining, Milling-turning compound machining, Die & Mold machining, Chemical Mechanical Polishing(CMP), Electronic parts machining, Trunnion rotary transfer machine

RCH-600

Spec./Model	Unit	RCH-600
Table Diameter	mm	600
Max. Rotation Speed	rpm	100
Max. Torque	Nm	2400
Max. Current	A	81
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Hydraulic (70bar)
Clamping Torque	Nm	3200
Cooling Power	W	7600
Net Weight	kg	430
Allowable Load	kg	850
Cooling Method	-	Water

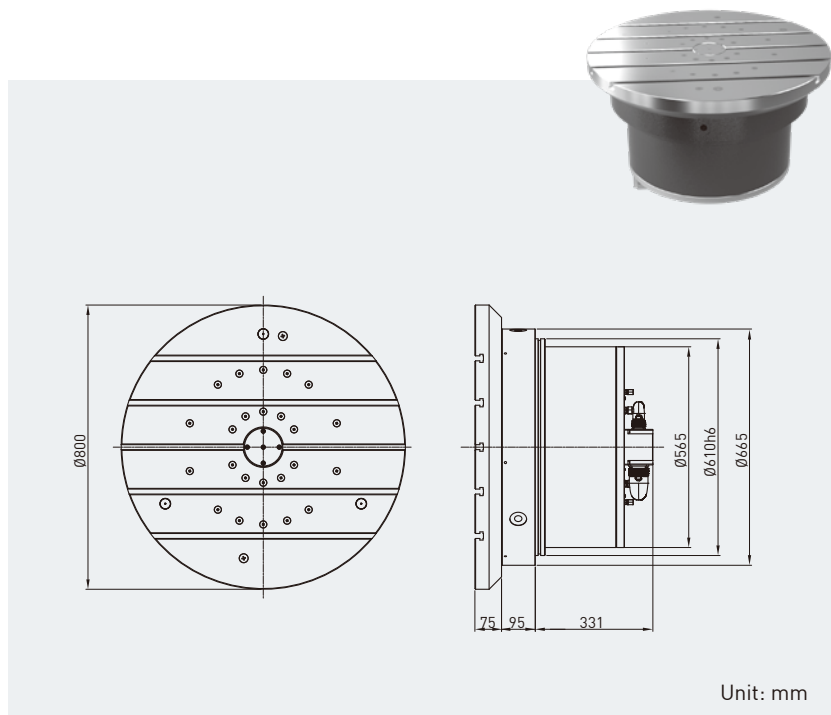


Suitable Applications

Automotive parts machining, Milling-turning compound machining, Die & Mold machining, Chemical Mechanical Polishing(CMP), Electronic parts machining, Trunnion rotary transfer machine

RCH-800

Spec./Model	Unit	RCH-800
Table Diameter	mm	800
Max. Rotation Speed	rpm	80
Max. Torque	Nm	3600
Max. Current	A	162
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Hydraulic (70bar)
Clamping Torque	Nm	4200
Cooling Power	W	9990
Net Weight	kg	750
Allowable Load	kg	1800
Cooling Method	-	Water

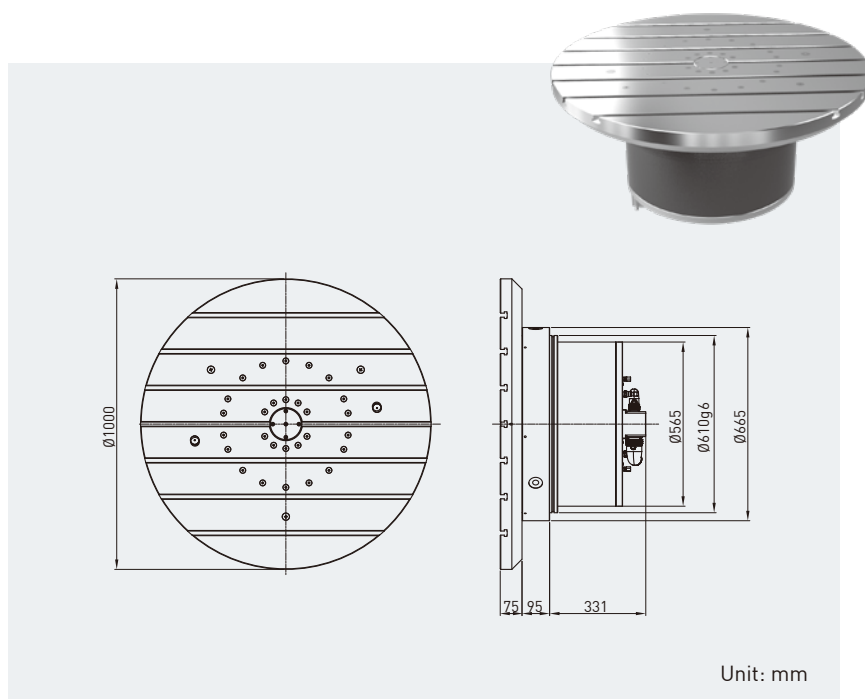


Suitable Applications

Automotive parts machining,
Aircraft parts machining, Die & Mold machining

RCH-1000

Spec./Model	Unit	RCH-1000
Table Diameter	mm	1000
Max. Rotation Speed	rpm	80
Max. Torque	Nm	3900
Max. Current	A	108.5
Positioning Accuracy	arc-sec	±5
Repeatability	arc-sec	4
Clamping Type	-	Hydraulic (70bar)
Clamping Torque	Nm	4200
Cooling Power	W	9987
Net Weight	kg	1150
Allowable Load	kg	1800
Cooling Method	-	Water



Suitable Applications

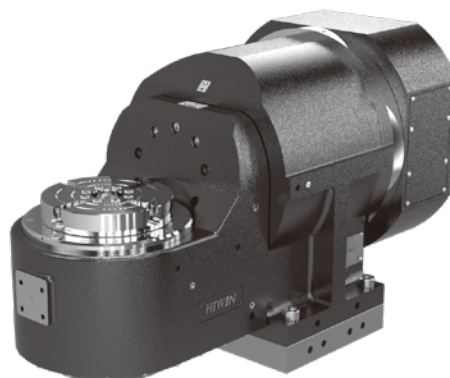
Automotive parts machining,
Aircraft parts machining, Die & Mold machining

4. Dual Axis Series

4-1 RAS Series - Dual Axis Single Arm Type

Features

- Built-in Torque Motor with high acceleration, high torque, zero backlash
- Single-arm tilting rotary table with compact structure, suitable for five-axis machine design with limited space
- Widely used in 3+2-axis, 4+1-axis positioning processing or 5-axis simultaneous processing



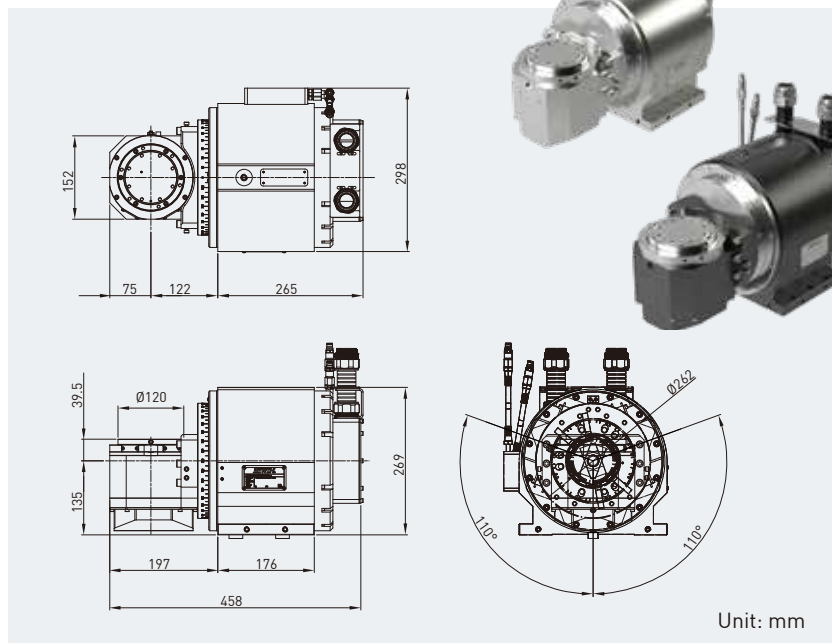
Spec./Model	Unit	RAS-125		RAS-125		RAS-170		RAS-400		RAS-650	
Table Diameter	mm	120		125		170		400		650	
Center Height	mm	135		135		260		180		300	
Center Through Hole	mm	174.5		210		260		180		250	
T-Slot Width	mm	-		-		14H8		12H8		14H8	
Axis	-	Rotary	Tilting ±110°	Rotary	Tilting ±120°	Rotary	Tilting ±120°	Rotary	Tilting ±120°	Rotary	Tilting ±120°
Max. Rotation Speed ※2	rpm	100	100	100	100	200	100	150	100	100	60
Max. Torque	Nm	10	188	16.9	188	66.5	390	203	640	1100	3600
Max. Current	A	16	12	13.5	12	22.3	48.6	24.3	40.5	81	162
Positioning Accuracy	arc-sec	±8	±8	±5	±5	±5	±5	±5	±5	±5	±5
Repeatability	arc-sec	6	6	4	4	4	4	4	4	4	4
Clamping Type	-	Electromagnetic		Pneumatic (6bar)							
Clamping Torque	Nm	4.5	35	50	300	342	840	840	1680	2400	4200
Cooling Power	W	-		-		609	1666	1002	2558	4077	9900
Net Weight	kg	90		85		250		650		1300	
Allowable Load	kg	25		10		30		200		300	
Cooling Method	-	Convection				Water					

※1: All models in the above table are standard specifications, any special requirements, please contact HIWIN.

※2: The rotation speed will vary depending on the voltage of power supply.

RAS-125

Spec./Model	Unit	RAS-125	
Water Protection	-	IP68	
Table Diameter	mm	120	
Center Height	mm	135	
Table Height	mm	174.5	
Axis	-	Rotary	Tilting $\pm 110^\circ$
Max. Rotation Speed	rpm	100	100
Max. Torque	Nm	10	188
Max. Current	A	16	12
Positioning Accuracy	arc-sec	± 8	± 8
Repeatability	arc-sec	6	6
Clamping Type	-	Electromagnetic	
Clamping Torque	Nm	4.5	35
Net Weight	kg	90	
Allowable Load	kg	25	
Cooling Method	-	Convection	

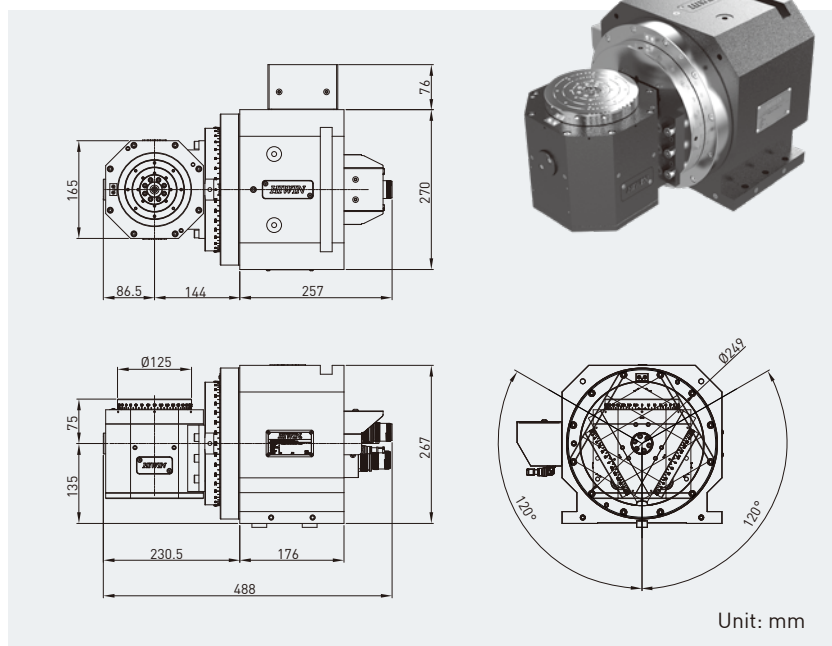


Suitable Applications

Drilling EDM, Cleaning machine,
Under water ultrasonic testing machine

RAS-125

Spec./Model	Unit	RAS-125	
Table Diameter	mm	125	
Center Height	mm	135	
Table Height	mm	210	
Axis	-	Rotary	Tilting $\pm 120^\circ$
Max. Rotation Speed	rpm	100	100
Max. Torque	Nm	16.9	188
Max. Current	A	13.5	12
Positioning Accuracy	arc-sec	± 5	± 5
Repeatability	arc-sec	4	4
Clamping Type	-	Pneumatic (6bar)	
Clamping Torque	Nm	50	300
Net Weight	kg	85	
Allowable Load	kg	10	
Cooling Method	-	Convection	

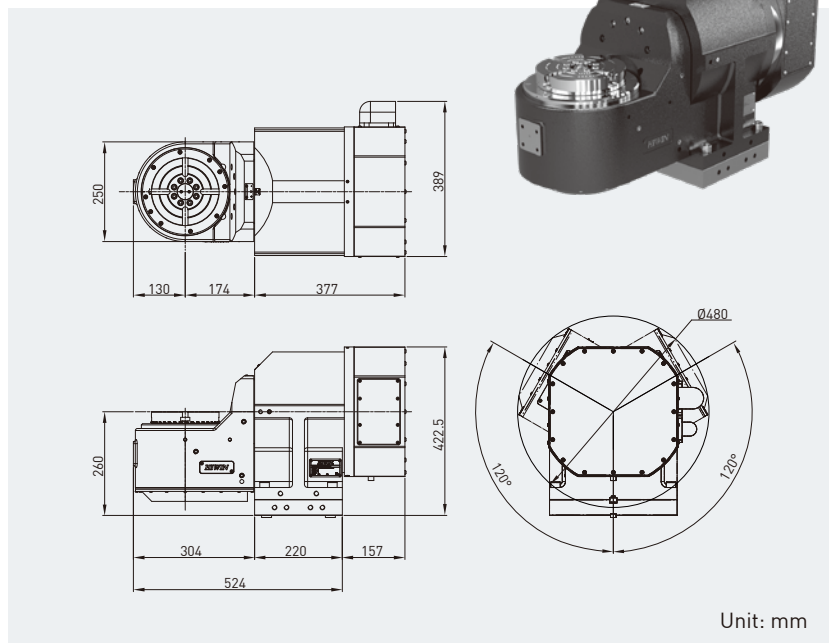


Suitable Applications

Medical equipment parts machining,
Laser machining, Die & Mold machining,
Jewelry machining, Precision tool machining

RAS-170

Spec./Model	Unit	RAS-170	
Table Diameter	mm	170	
Center Height	mm	260	
Table Height	mm	260	
T-Slot Width	mm	14H8	
Axis	-	Rotary	Tilting $\pm 120^\circ$
Max. Rotation Speed	rpm	200	100
Max. Torque	Nm	66.5	390
Max. Current	A	22.3	48.6
Positioning Accuracy	arc-sec	± 5	± 5
Repeatability	arc-sec	4	4
Clamping Type	-	Pneumatic (6bar)	
Clamping Torque	Nm	342	840
Cooling Power	W	609	1666
Net Weight	kg	250	
Allowable Load	kg	30	
Cooling Method	-	Water	

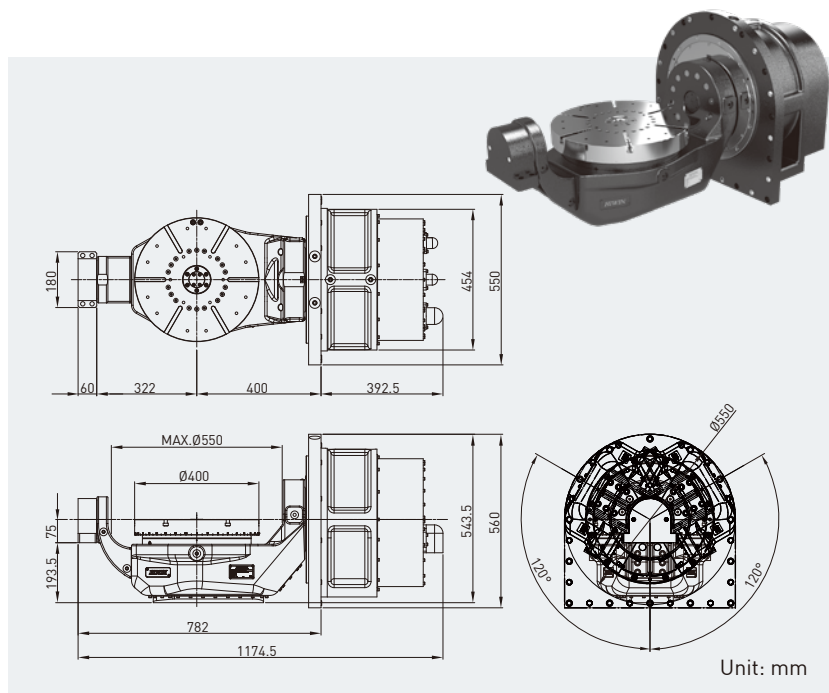


Suitable Applications

Automotive parts machining, Medical equipment parts machining, Die & Mold machining, Precision tool machining

RAS-400

Spec./Model	Unit	RAS-400	
Table Diameter	mm	400	
Center Height	mm	180	
Table Height	mm	180	
T-Slot Width	mm	12H8	
Axis	-	Rotary	Tilting $\pm 120^\circ$
Max. Rotation Speed	rpm	150	100
Max. Torque	Nm	203	640
Max. Current	A	24.3	40.5
Positioning Accuracy	arc-sec	± 5	± 5
Repeatability	arc-sec	4	4
Clamping Type	-	Pneumatic (6bar)	
Clamping Torque	Nm	840	1680
Cooling Power	W	1002	2558
Net Weight	kg	650	
Allowable Load	kg	200	
Cooling Method	-	Water	

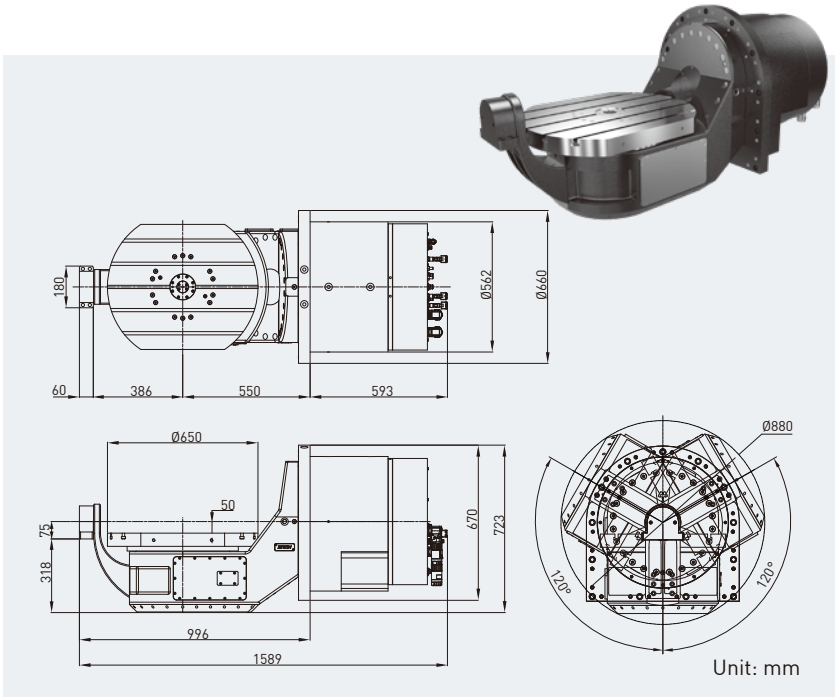


Suitable Applications

Automotive parts machining, Die & Mold machining, Aircraft parts machining

RAS-650

Spec./Model	Unit	RAS-650	
Table Diameter	mm	650	
Center Height	mm	300	
Table Height	mm	250	
T-Slot Width	mm	14H8	
Axis	-	Rotary	Tilting ±120°
Max. Rotation Speed	rpm	100	60
Max. Torque	Nm	1100	3600
Max. Current	A	81	162
Positioning Accuracy	arc-sec	±5	±5
Repeatability	arc-sec	4	4
Clamping Type	-	Pneumatic (6bar)	
Clamping Torque	Nm	2400	4200
Cooling Power	W	4077	9900
Net Weight	kg	1300	
Allowable Load	kg	300	
Cooling Method	-	Water	



Suitable Applications

Automotive parts machining,
Die & Mold machining, Aircraft parts machining

4-2 RAB Series - Dual Axis Dual Arm Type

Features

- Built-in Torque Motor with high acceleration, high torque, zero backlash
- Rigid and symmetrical mechanical design
- High positioning accuracy, suitable for high accuracy simultaneous machining
- Built-in powerful clamping system
- Precise stop and swing angle settings
- Widely used in 3+2-axis, 4+1-axis positioning machining or 5-axis simultaneous machining



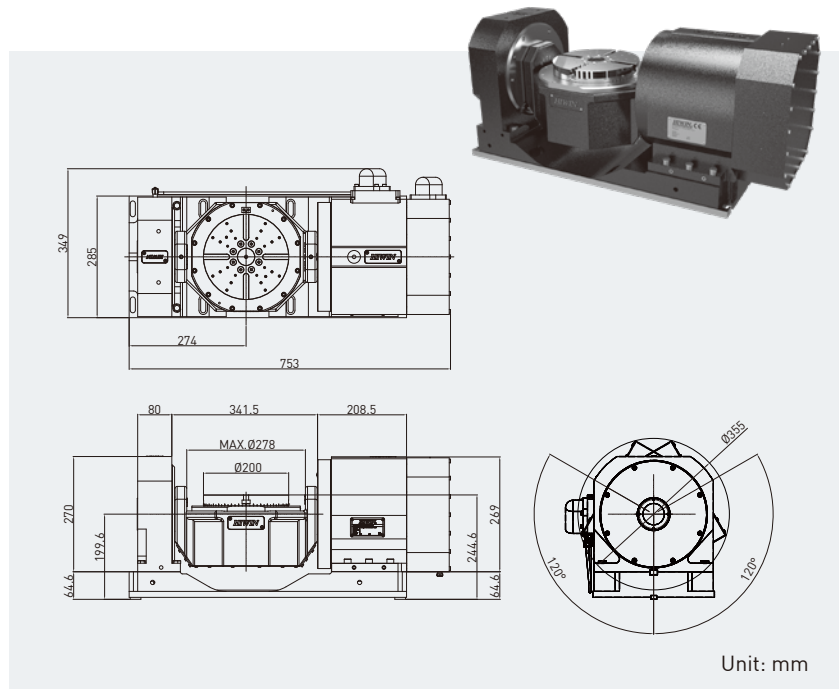
Spec./Model	Unit	RAB-200		RAB-400		RAB-500		RAB-630		RAB-800	
Table Diameter	mm	200		400		500		630		800	
Center Height	mm	195		180		250		325		325	
Table Height	mm	240		180		190		265		225	
T-Slot Width	mm	12H8		12H8		14H8		14H8		14H8	
Drive Type	-	Single Drive		Single Drive		Single Drive		Dual Drive		Dual Drive	
Axis	-	Rotary	Tilting ±120°	Rotary	Tilting ±120°	Rotary	Tilting ±120°	Rotary	Tilting ±120°	Rotary	Tilting ±120°
Max. Rotation Speed ※2	rpm	400	150	150	100	100	60	100	60	90	60
Max. Torque	Nm	81	280	203	640	1100	2400	1100	2400*2	3900	3900*2
Max. Current	A	12	12	24.3	40.5	81	81	81	81*2	108.5	108.5*2
Positioning Accuracy	arc-sec	±5	±5	±5	±5	±5	±5	±5	±5	±5	±5
Repeatability	arc-sec	4	4	6	6	4	4	4	4	4	4
Clamping Type	-	Pneumatic (6bar)									
Clamping Torque	Nm	300	500	840	1380	2400	4800	2400	4800	4200	8400
Cooling Power	W	-		1002	2558	4077	7600	4077	15200	9900	19800
Net Weight	kg	180		650		1050		1190		2200	
Allowable Load	kg	50		200		600		850		1200	
Cooling Method	-	Convection		Water							

※1: All models in the above table are standard specifications, any special requirements, please contact HIWIN.

※2: The rotation speed will vary depending on the voltage of power supply.

RAB-200

Spec./Model	Unit	RAB-200	
Table Diameter	mm	200	
Center Height	mm	195	
Table Height	mm	240	
T-Slot Width	mm	12H8	
Drive Type	-	Single Drive	
Axis	-	Rotary	Tilting $\pm 120^\circ$
Max. Rotation Speed	rpm	400	150
Max. Torque	Nm	81	280
Max. Current	A	12	12
Positioning Accuracy	arc-sec	± 5	± 5
Repeatability	arc-sec	4	4
Clamping Type	-	Pneumatic (6bar)	
Clamping Torque	Nm	300	500
Net Weight	kg	180	
Allowable Load	kg	50	
Cooling Method	-	Convection	

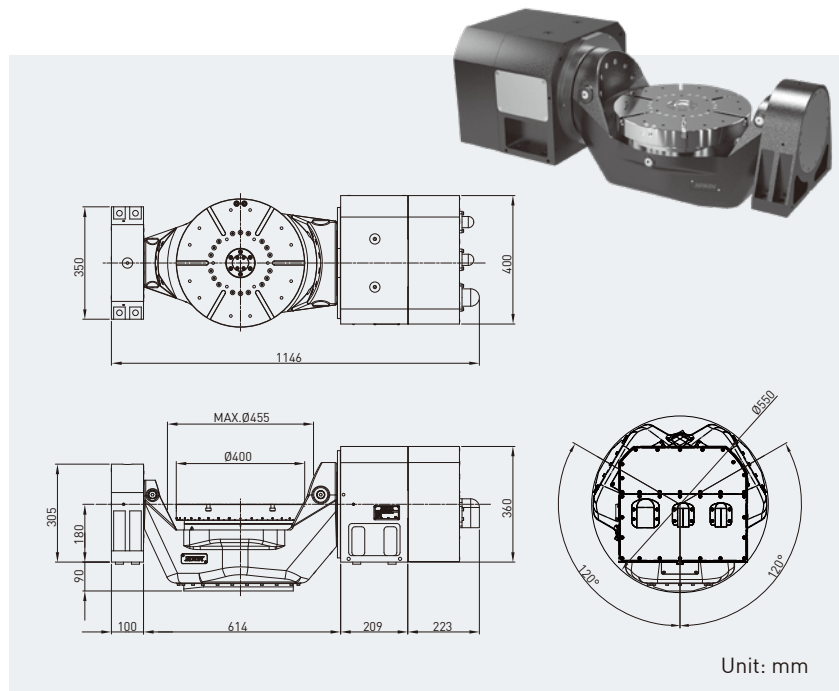


Suitable Applications

Automotive parts machining, Metal parts machining, Electronic parts machining, Bicycle parts machining, Optical parts machining, Medical equipment parts machining

RAB-400

Spec./Model	Unit	RAB-400	
Table Diameter	mm	400	
Center Height	mm	180	
Table Height	mm	180	
T-Slot Width	mm	12H8	
Drive Type	-	Single Drive	
Axis	-	Rotary	Tilting $\pm 120^\circ$
Max. Rotation Speed	rpm	150	100
Max. Torque	Nm	203	640
Max. Current	A	24.3	40.5
Positioning Accuracy	arc-sec	± 5	± 5
Repeatability	arc-sec	6	6
Clamping Type	-	Pneumatic (6bar)	
Clamping Torque	Nm	840	1380
Cooling Power	W	1002	2558
Net Weight	kg	650	
Allowable Load	kg	200	
Cooling Method	-	Water	

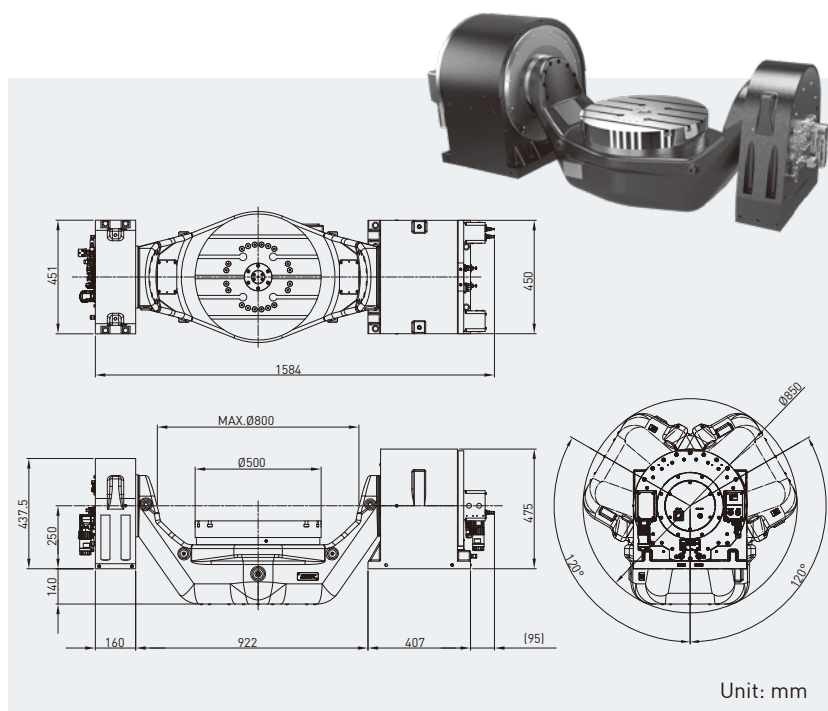


Suitable Applications

Automotive parts machining, Die & Mold machining, Aircraft parts machining

RAB-500

Spec./Model	Unit	RAB-500	
Table Diameter	mm	500	
Center Height	mm	250	
Table Height	mm	190	
T-Slot Width	mm	14H8	
Drive Type	-	Single Drive	
Axis	-	Rotary	Tilting $\pm 120^\circ$
Max. Rotation Speed	rpm	100	60
Max. Torque	Nm	1100	2400
Max. Current	A	81	81
Positioning Accuracy	arc-sec	± 5	± 5
Repeatability	arc-sec	4	4
Clamping Type	-	Pneumatic (6bar)	
Clamping Torque	Nm	2400	4800
Cooling Power	W	4077	7600
Net Weight	kg	1050	
Allowable Load	kg	600	
Cooling Method	-	Water	

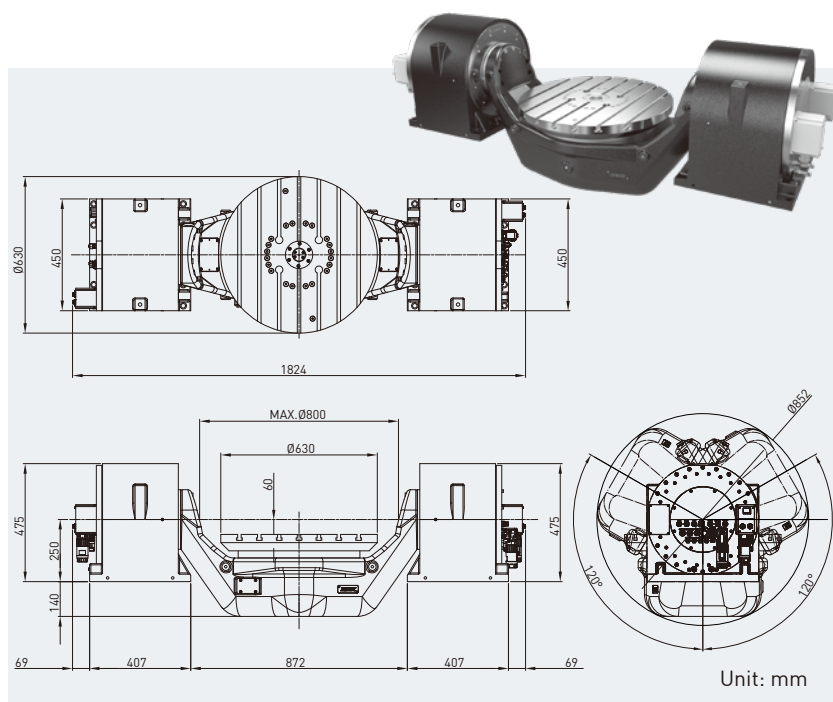


Suitable Applications

Automotive parts machining,
Die & Mold machining, Aircraft parts machining

RAB-630

Spec./Model	Unit	RAB-630	
Table Diameter	mm	630	
Center Height	mm	325	
Table Height	mm	265	
T-Slot Width	mm	14H8	
Drive Type	-	Dual Drive	
Axis	-	Rotary	Tilting $\pm 120^\circ$
Max. Rotation Speed	rpm	100	60
Max. Torque	Nm	1100	2400*2
Max. Current	A	81	81*2
Positioning Accuracy	arc-sec	± 5	± 5
Repeatability	arc-sec	4	4
Clamping Type	-	Pneumatic (6bar)	
Clamping Torque	Nm	2400	4800
Cooling Power	W	4077	15200
Net Weight	kg	1190	
Allowable Load	kg	850	
Cooling Method	-	Water	

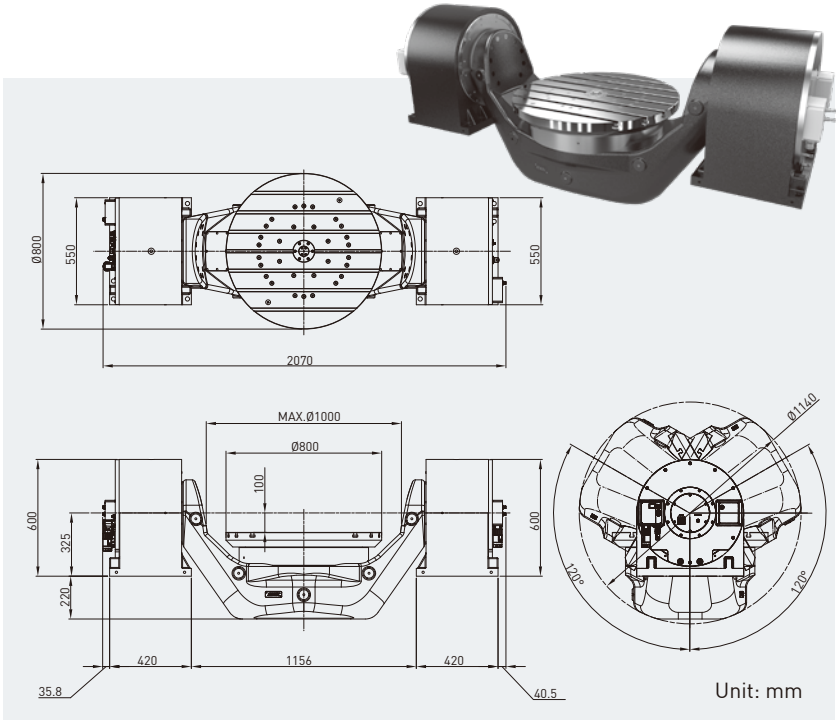


Suitable Applications

Automotive parts machining,
Die & Mold machining, Aircraft parts machining

RAB-800

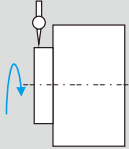
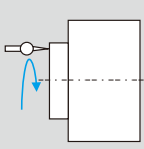
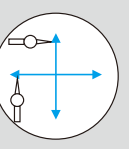
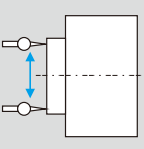
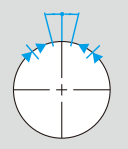
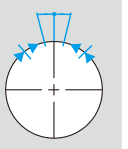
Spec./Model	Unit	RAB-800	
Table Diameter	mm	800	
Center Height	mm	325	
Table Height	mm	225	
T-Slot Width	mm	14H8	
Drive Type	-	Dual Drive	
Axis	-	Rotary	Tilting ±120°
Max. Rotation Speed	rpm	90	60
Max. Torque	Nm	3900	3900*2
Max. Current	A	108.5	108.5*2
Positioning Accuracy	arc-sec	±5	±5
Repeatability	arc-sec	4	4
Clamping Type	-	Pneumatic (6bar)	
Clamping Torque	Nm	4200	8400
Cooling Power	W	9900	19800
Net Weight	kg	2200	
Allowable Load	kg	1200	
Cooling Method	-	Water	



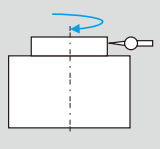
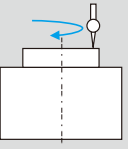
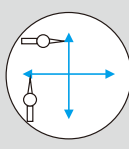
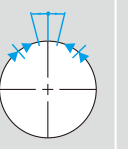
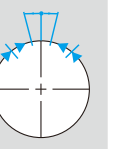
Suitable Applications	Automotive parts machining, Die & Mold machining, Aircraft parts machining
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5. Standard Accuracy

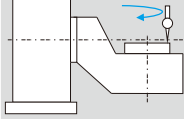
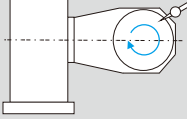
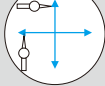
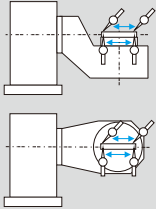
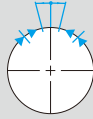
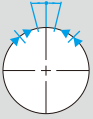
• RCV Series - Single Axis Vertical Type

Item	Worktable Radial Runout	Worktable Face Axial Runout	Worktable Face Flatness	Worktable Face Verticality	Positioning Accuracy	Repeatability
						
RCV-125	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RCV-170	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RCV-250	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RCV-320	$\leq 0.005\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RCV-400	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RCV-500	$\leq 0.01\text{mm}$	-	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"

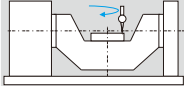
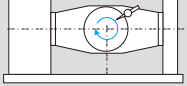
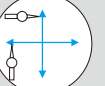
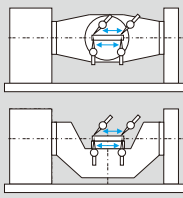
• RCH Series - Single Axis Horizontal Type

Item	Worktable Radial Runout	Worktable Face Axial Runout	Worktable Face Flatness	Positioning Accuracy	Repeatability
					
RCH-200	$\leq 0.005\text{ mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RCH-320	$\leq 0.005\text{ mm}$	$\leq 0.005\text{mm}$	$\leq 0.02\text{mm}$	10"	4"
RCH-400	$\leq 0.01\text{ mm}$	$\leq 0.015\text{mm}$	$\leq 0.015\text{mm}$	10"	4"
RCH-600	$\leq 0.01\text{ mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RCH-800	$\leq 0.02\text{ mm}$	$\leq 0.01\text{mm}$	$\leq 0.02\text{mm}$	10"	4"
RCH-1000	$\leq 0.02\text{ mm}$	$\leq 0.02\text{mm}$	$\leq 0.02\text{mm}$	10"	4"

• RAS Series - Dual Axis Single Arm Type

Item	Worktable Face Axial Runout (Tilting axis= 0°)	Worktable Face Axial Runout (Tilting axis= 90°)	Worktable Face Flatness	Parallelism Between Tilting Axis and Base	Positioning Accuracy	Repeatability
						
RAS-125	$\leq 0.01\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RAS-170	$\leq 0.01\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RAS-400	$\leq 0.01\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RAS-650	$\leq 0.01\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.01\text{mm}$	10"	4"

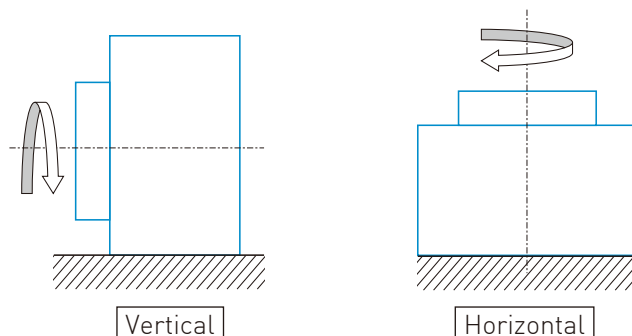
• RAB Series - Dual Axis Dual Arm Type

Item	Worktable Face Axial Runout (Tilting axis= 0°)	Worktable Face Axial Runout (Tilting axis= 90°)	Worktable Face Flatness	Parallelism Between Tilting Axis and Base	Positioning Accuracy	Repeatability
						
RAB-200	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RAB-400	$\leq 0.01\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.02\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RAB-410	$\leq 0.01\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RAB-500	$\leq 0.01\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	10"	4"
RAB-630	$\leq 0.01\text{mm}$	$\leq 0.01\text{mm}$	$\leq 0.02\text{mm}$	$\leq 0.015\text{mm}$	10"	4"
RAB-800	$\leq 0.015\text{mm}$	$\leq 0.015\text{mm}$	$\leq 0.02\text{mm}$	$\leq 0.010\text{mm}$	10"	4"

6. Glossary

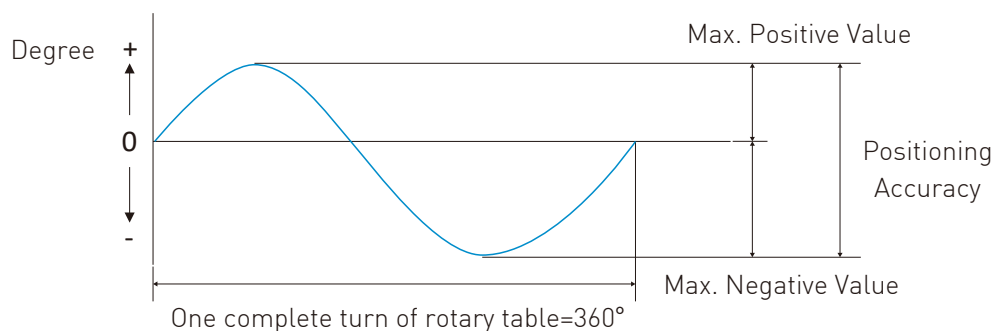
• Vertical / Horizontal

The vertical rotary table is installed with the table surface perpendicular with the table surface of the machine, while the horizontal rotary table is installed with the table surface parallel with the table surface of the machine.



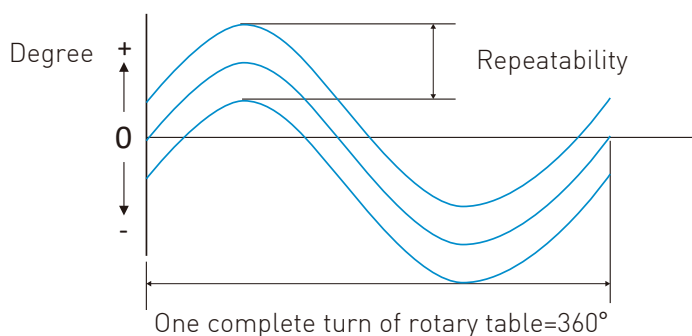
• Positioning Accuracy

Starting from the reference point of 0 degrees, the rotary table indexing one rotation and the measured value is recorded. The positioning accuracy is the sum of the maximum difference in positive values and negative values.



• Repeatability

Positioning at every specific angle is carried out 3 times for clockwise rotation to measure the positioning angle, then obtain the difference between the minimum and maximum values measured at each angular position. The average value between the maximum value and the minimum value is the repeatability of the rotary table.



- **Clamping Torque**

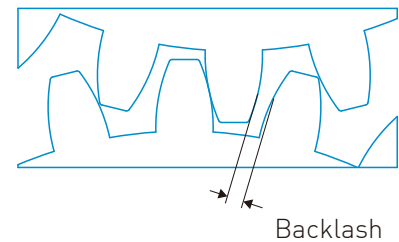
Indicates the clamping force that locks the rotary table mechanism to ensure that the rotary table does not slip off during machining.

- **Allowable Load**

The value indicated is the maximum mass that can be carried on the rotary table.

- **Backlash**

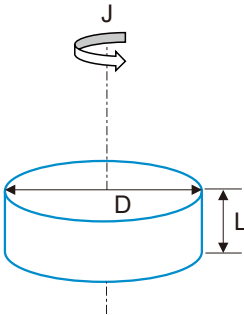
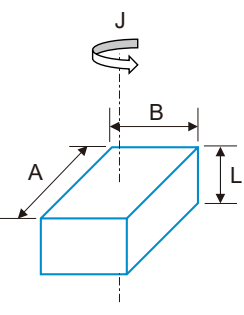
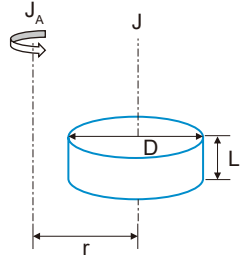
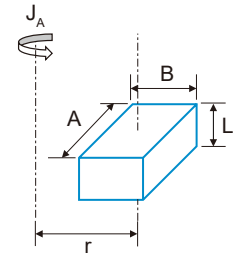
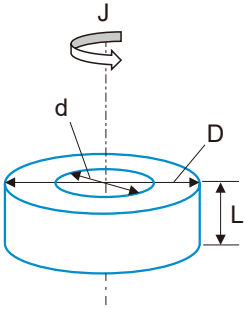
The backlash is the gap between the two workpieces when they are combined and is also called the return difference. For example, there is a backlash in the gear set, which is the gap between the gear tooth.



- **Allowable Work Inertia**

Inertia is the amount of load required against when a static object needs to rotate, or rotating object needs to stop. Inertia is represented by weight and diameter. If the weight of the fixture and workpiece on the table is large, the inertia will be larger and greater acceleration and deceleration torque will be required.

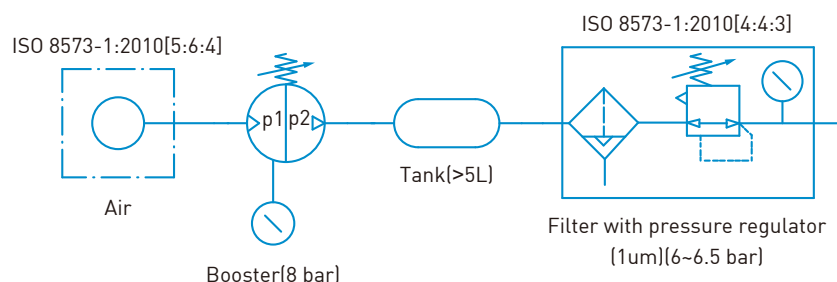
• Inertia Moment Formula

	$W = \frac{\pi D^2}{4} \times L \rho$		$W = ABL \rho$
	$J = \frac{WD^2}{8}$		$J = \frac{1}{12} W(a^2 + b^2)$
	$W = \frac{\pi D^2}{8} \times L \rho$		$W = ABL \rho$
	$J = \frac{WD^2}{8}$ $J_A = J \times W \cdot r^2$		$J_A = \frac{1}{12} W(a^2 + b^2 + 12r^2)$
	$W = \left[\frac{\pi D^2}{4} \times L \rho \right] - \left[\frac{\pi d^2}{4} \times L \rho \right]$	D : Diameter (mm) L : Length (mm) W : Mass (kg) ρ : Density (kg/m³) J : Moment of inertia (kgm²) J_A : Moment of inertia of the round-bar at the center A (kgm²)	
	$J = \frac{1}{8} W(D^2 + d^2)$		<u>Densities of the material (ρ)</u> Copper : 8.94 × 103 kg/m³ Brass : 8.5 × 103 kg/m³ Cast iron : 7.35 × 103 kg/m³ Aluminum : 2.7 × 103 kg/m³

7. Precautions

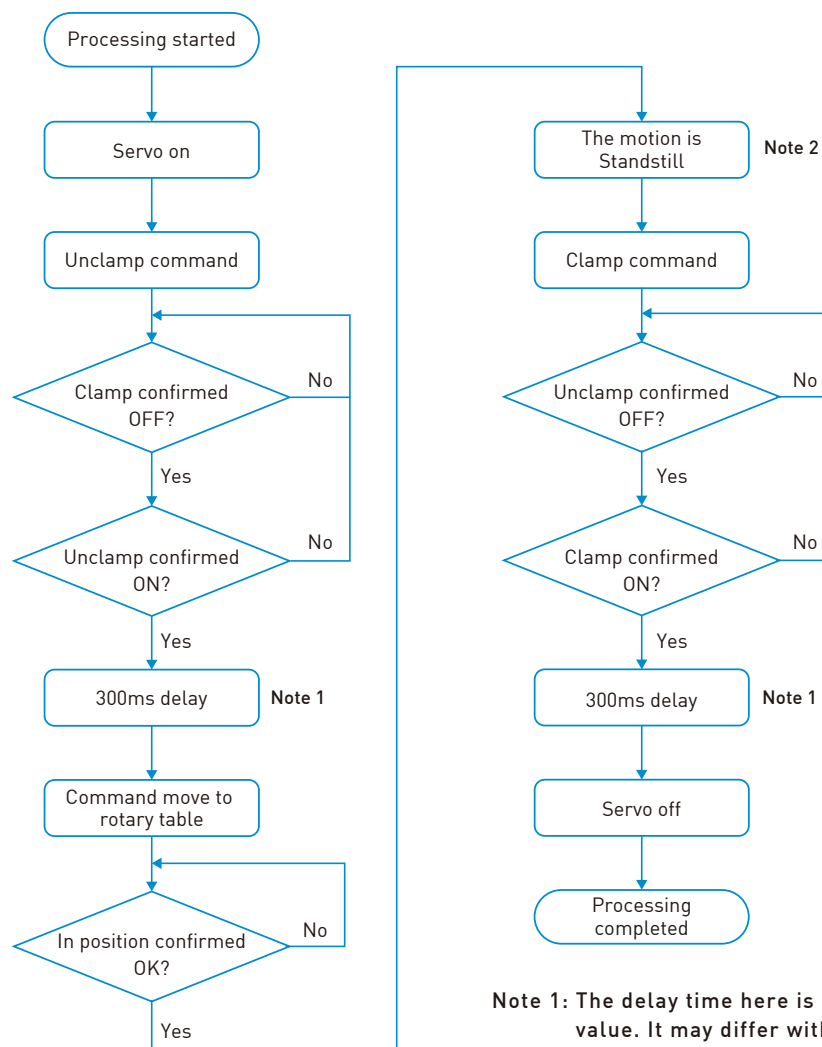
• Pneumatic Components and Air Purity

If the pneumatic clamping system is used on the HIWIN Torque Motor Rotary Table, it needs to be equipped with the pneumatic components to provide sufficient air pressure for the normal operation of the clamping system. The purity of the air supply must be in accordance with the ISO standard indicated in the clamp circuit diagram to ensure that the electronic components inside the rotary table will not malfunction or rust due to moisture from the air supply.

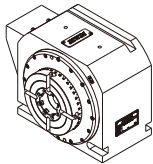
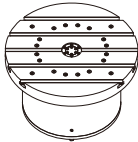
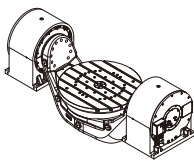
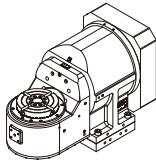
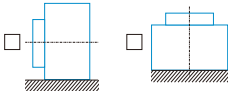
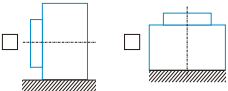


• Time Sequence for Clamping System

The time sequence for clamping system must be programmed according to the flowchart as shown in the figure below to prevent the damage of the torque motor and clamping system.



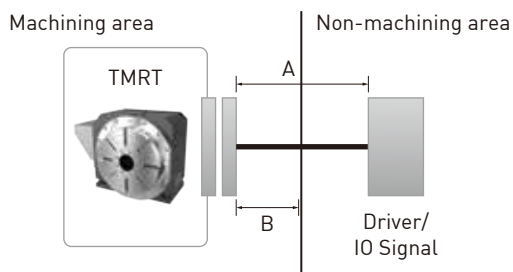
8. Selection Guide

Company Name ^{*1}		Industry ^{*1}		Date	
Specification of the Machine ^{*1}	Machine	Brand Name :		Model No. :	
	Controller	☐ HEIDENHAIN ☐ SIEMENS ☐ MITSUBISHI ☐ FANUC ☐ Other _____			
	Driver Interface	☐ Cable ☐ EtherCAT ☐ Pulse ☐ Analog ☐ Other _____			
	Driven Voltage ^{*3}	☐ 220V	☐ 380V	☐ Other _____	
	Demand of Rotary Table	☐ New machine ☐ Machine upgrade or retrofit : The brand or model of rotary table used in the past _____			
	Machining Type	☐ Milling ☐ Turning ☐ Grinding ☐ EDM ☐ Inspection Equipment ☐ Automation Equipment ☐ Other _____			
	Machining Application	☐ Index ☐ Simultaneous			
Schematic diagram					
Type ^{*1}	☐ RCV	☐ RCH	☐ RAB	☐ RAS	
Installation Type ^{*1}			-	-	
Table Diameter ^{*1}	☐ 170 mm ☐ 250 mm ☐ Other _____ mm	☐ 200 mm ☐ 400 mm ☐ 600 mm ☐ Other _____ mm	☐ 200 mm ☐ 500 mm ☐ 630 mm ☐ 800 mm ☐ Other _____ mm	☐ 170 mm ☐ 650 mm ☐ Other _____ mm	
Positioning Accuracy/ Repeatability ^{*1}	☐ ±5"/4" ☐ ±15"/8" ☐ Other _____	☐ ±5"/4" ☐ Other _____	☐ ±5"/4" ☐ Other _____	☐ ±5"/4" ☐ Other _____	
Workpiece Specification	Workpiece weight: _____ kg : Workpiece size: _____ mm : Workpiece inertia: _____ kgm ²				
Machining and Motion Condition ^{*1}					
Machining Condition			Motion Condition		
☐ Milling Workpiece material : _____ Spindle rotation speed : _____ rpm Cutting tool diameter : _____ mm Flutes : _____ Feed rate : _____ mm/min Cutting depth : _____ mm Cutting width : _____ mm			☐ Drilling and tapping Drill diameter : _____ mm Tapping specifications : _____ Spindle rotation speed : _____ rpm Feed rate : _____ mm/min		Cycle time : _____ Dwell time : _____ Acceleration/ deceleration time : _____
Note:					

*1 : Required *2 : Please refer to the second page for the selection of accessories

*3 : Voltage will affect the maximum speed of the rotary table

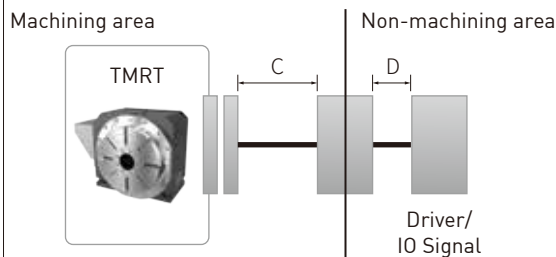
Torque Motor Rotary Table Accessories

1.Cable ☐ Require ☐ No require * If require, please fill in the following options.☐ Type 1

A : Power cable, Signal cable, Encoder cable (TMRT to driver)

☐ 3m ☐ 6m ☐ 9m ☐ 12m

B : Protective tube (Stainless steel wire hose)_____m

☐ Type 2^{*4}

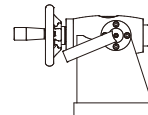
C : Cable from TMRT to machine metal sheet (including protective tube)

Power cable, Signal cable, Encoder cable
☐ 1.5m ☐ 2m ☐ 3m ☐ 4m

D : Cable from machine metal sheet to driver (not include protective tube)

Power cable, Signal cable, Encoder cable
☐ 3m ☐ 6m ☐ 9m ☐ 12m ☐ None

Connector type on the sheet metal

☐ Military ☐ HARTING2.Tailstock ☐ Require ☐ No require (Only for RCV series, if require, please fill in the following options)☐ Rotary tailstock☐ Tailstock3.Pneumatic components ☐ Require ☐ No require (If require, please fill in the following options)

Pneumatic Module

☐ Require ☐ No require (Connectors required for pneumatic components are included)

Optional Accessories

☐ Require ☐ No require (Connectors required for pneumatic components are included)Booster^{*5}

(Example model: SMC,VBA10A-02GN)

☐ Require ☐ No require

Connector

☐ Require ☐ No requireTank^{*5}

(Example model : SMC,VBAT05S1-V)

☐ Require ☐ No require

Connector

☐ Require ☐ No requireFilter with pressure regulator^{*5}

(Example model : SMC,AC30D-02CE-6-D)

☐ Require ☐ No require

Connector

☐ Require ☐ No requireSolenoid valve^{*5}(Example model : SMC,SY5120-5LZE-02-F2,five-way two position)
(Example model : SMC,SY5420-5LZE-02-F2,five-way two position)☐ Require ☐ No require

Connector

☐ Require ☐ No requireCheck valve^{*5}

(Example model : SMC,AKH08B-02S)

☐ Require ☐ No requirePressure sensor^{*5}

(Example model : SMC,ISE20A-Y-01-J)

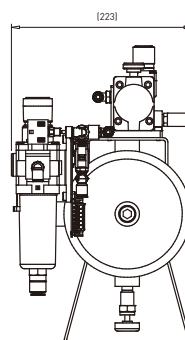
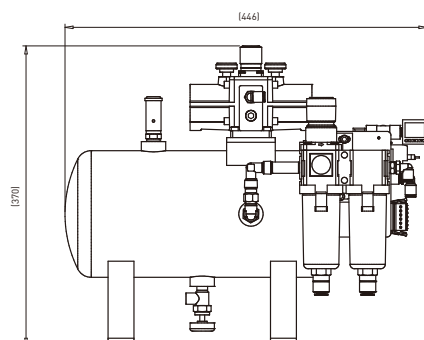
☐ Require ☐ No requireRapid exhaust valve^{*5}

(Example model : SMC,AQ1510-01)

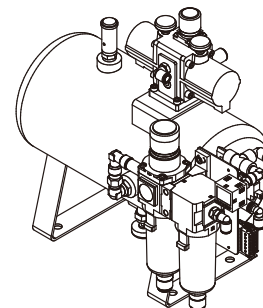
☐ Require ☐ No require^{*4} : Customer's machine metal sheet must perforate ^{*5} : No notification if the model of the original product is modified

Schematic diagram of pneumatic components

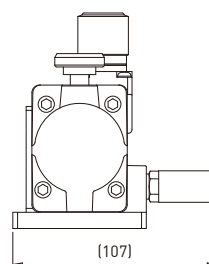
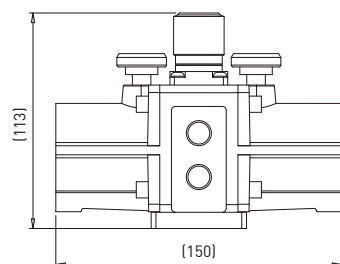
Pneumatic Components Module



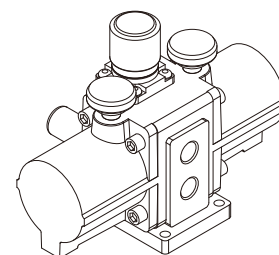
Air in: $\phi 8\text{mm}$
Air out: $\phi 8\text{mm}$



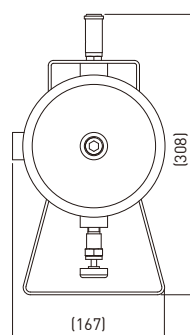
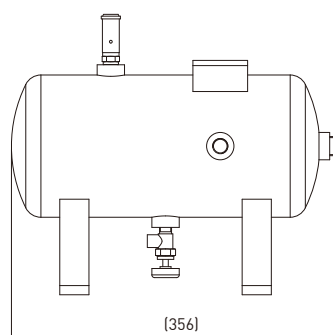
Booster



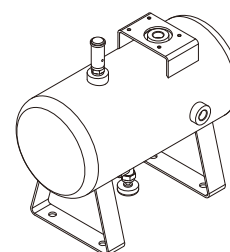
*₆ Air in: PT1/4 $\times \phi 10\text{mm}$
Air out: PT1/4 $\times \phi 10\text{mm}$



Tank



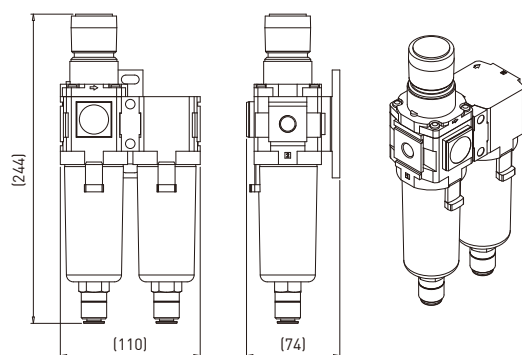
*₆ Air in: PT3/8 $\times \phi 8\text{mm}$
Air out: PT3/8 $\times \phi 8\text{mm}$



*₆ : Please refer to the second page of the selection table for corresponding connectors.

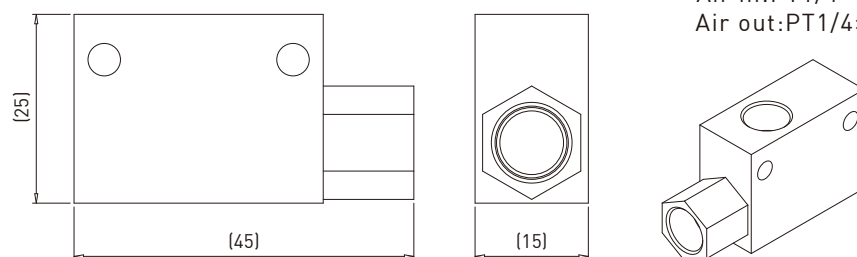
Schematic diagram of pneumatic components

Filter with
pressure
regulator



*6 Air in: PT1/4× ϕ 8mm
Air out: PT1/4× ϕ 8mm

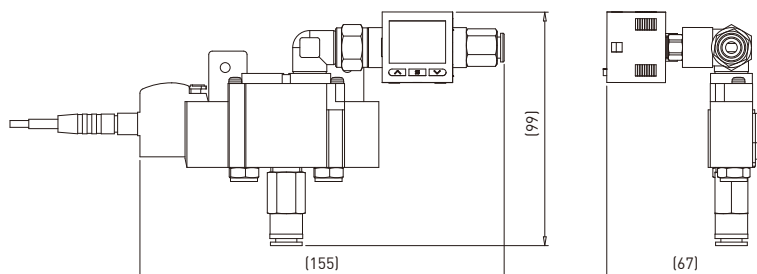
Rapid exhaust
valve



*6 Air in: PT1/4× ϕ 8mm
Air out: PT1/4× ϕ 8mm

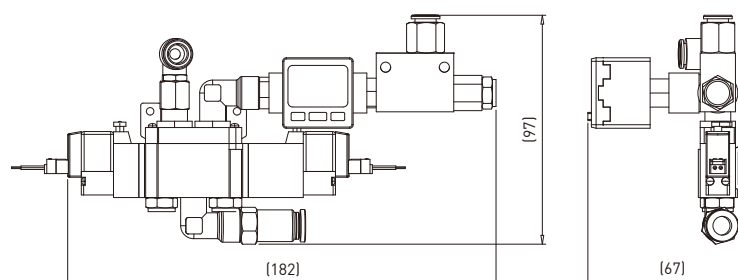
Solenoid Valve Module(Solenoid valve+Check valve+Pressure sensor)

No.of port: 5, No.of position: 2



*6 Air in: ϕ 8mm
Air out: ϕ 8mm

No.of port: 5, No.of position: 3



*6 Air in: ϕ 8mm
Air out: ϕ 8mm

*6 : Please refer to the second page of the selection table for corresponding connectors.

Torque Motor Rotary Table Technical Information

Publication Date : August 2024, first edition

-
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