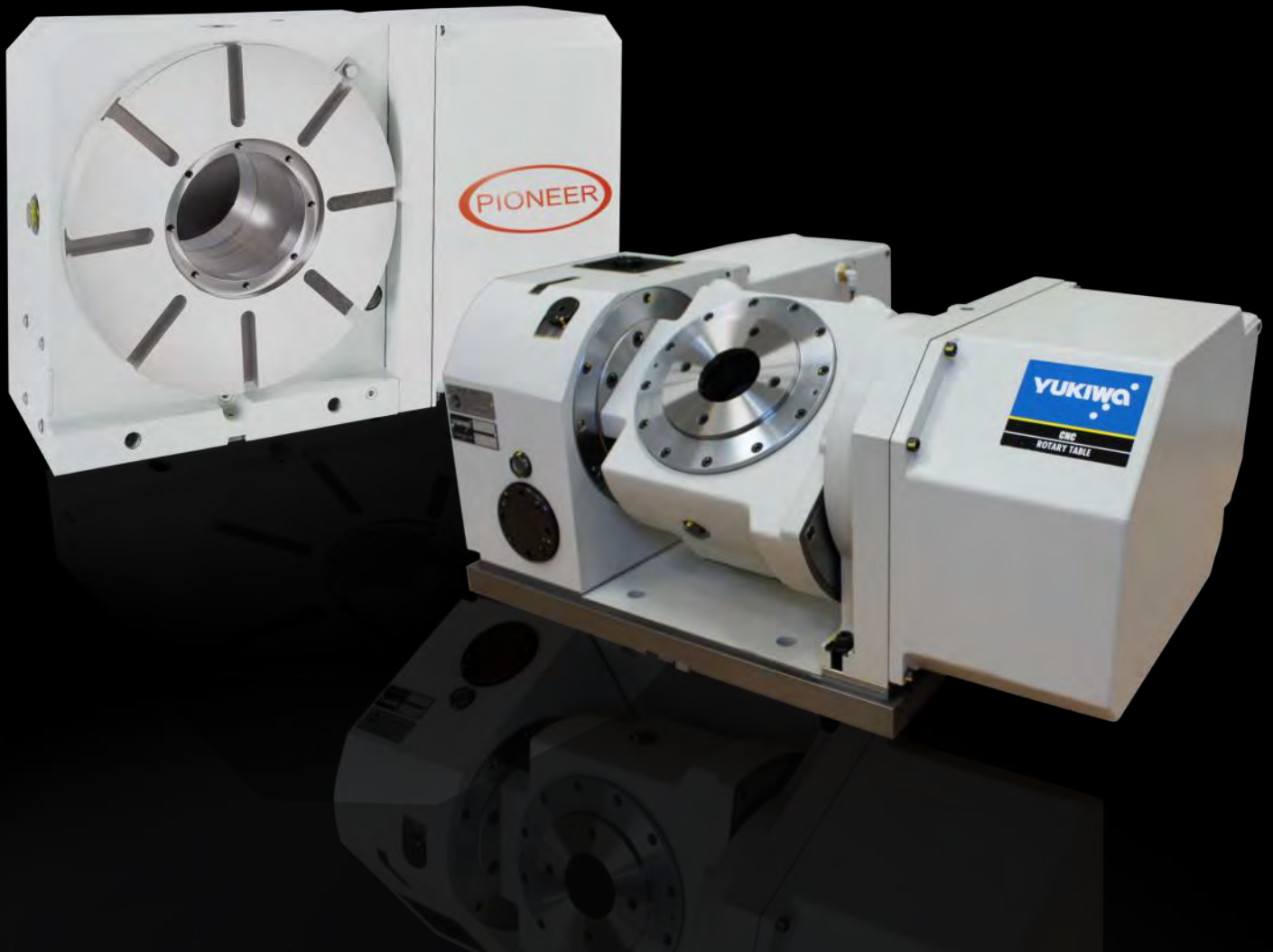



# Premium Rotary Table Systems



**AHB** Tooling & Machinery, Inc.  
Complete Metalworking Solutions  
Roseville Saginaw & Jackson, MI

ISO Certified  
(800) 991-4225  
[www.ahbinc.com](http://www.ahbinc.com)  
[customerservice@ahbinc.com](mailto:customerservice@ahbinc.com)

The logo for AHB Tooling & Machinery, Inc. features the letters "AHB" in a large, stylized, white font with a red outline, set against a background of the American flag. To the right of the logo, the company name and contact information are listed in white text.



We understand the engineering intricacies that vary by industry. That's why Pioneer actively invests in research and development to enhance our already superior line of products and allow for development of individualized solutions. We are continuously working to expand our available product lines by listening to our customers while staying on top of market trends and new technology.

Since 1974, **PIONEER** has delivered world class tool and work holding products, earning a reputation built on unsurpassed service, custom solutions, and innovation.

We believe that a quality tool requires quality balance and are uncompromising in our pursuit to provide the most cost effective work holding in the market, going above and beyond the industry standard. Why? Because we know that higher accuracy results in superior outcomes, while also reducing wear and tear, and ultimately saving our customers money by extending their tool life.

Whatever your need, we have your business covered with our Premium and Standard product lines. We are passionate about providing our customers the latest, most sophisticated technology to guarantee a competitive advantage. We guarantee better performance through increased consistency and accuracy and invite you to explore the Pioneer difference.



# Power to Perform

**YUKIWA** and **PIONEER** put the highest level of technology and engineering together to build the CNC Rotary Tables that have the power to perform.

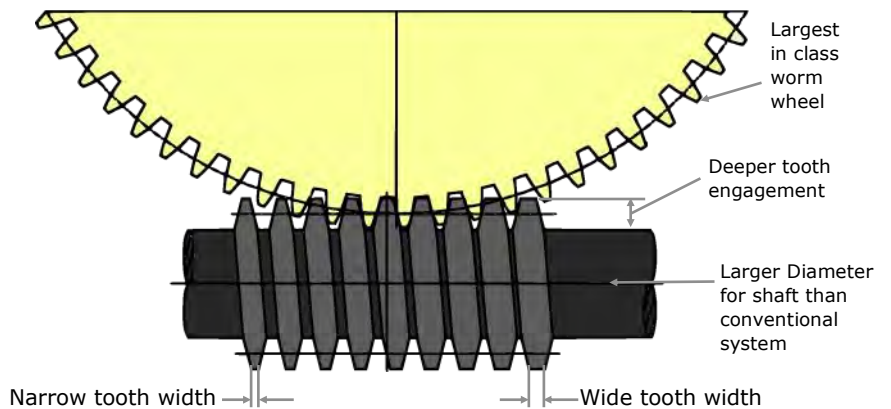


## Durable and Rigid Dual-Lead Gear System

All YUKIWA and PIONEER tables use a combination of case hardened special alloy dual-lead screw that has larger shaft diameter, and special high tensile strength brass worm wheel ensures exceptional wear resistant and long durability for the life of the gear system.

## Largest in Class Worm Wheel

Using the largest diameter in class worm wheel adds extra rigidity, smoothness and torque transfer efficiency to the gear system. It also allows deeper tooth engagement that improves surface contact by 30% compared to a conventional wheel, securing extra rigidity for heavier duty application.



Adjustment of back lash is easy and quick!

### 1 million index test



Model JNC140

Weight 50 lbs

1 million Indexes = Equivalent to 1 Index / 1Minute cycle, 24/7, 1.9years worth

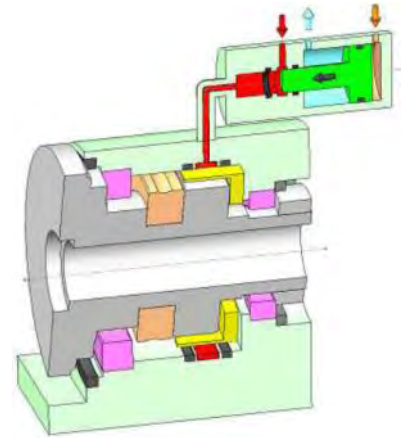
Backlash amount

Start 0.0005" (13 micron)

**End 0.0009" (23 micron)**

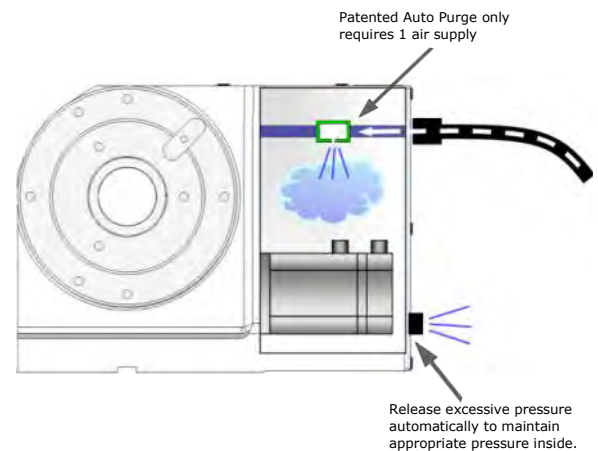
## The Most Powerful Brake System

With Yukiwa's proprietary brake system, YNCP and TNT series deliver the most powerful brake torque, but you do not need an expensive and cumbersome hydraulic supply. Thanks to the Yukiwa's compact built-in air over hydraulic booster, simply supply standard shop air and it immediately generates strong brake torque equivalent to a hydraulic brake system. This feature makes the YUKIWA table the heaviest duty in its class.



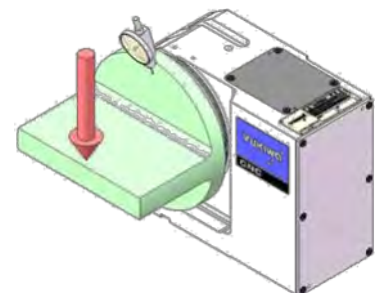
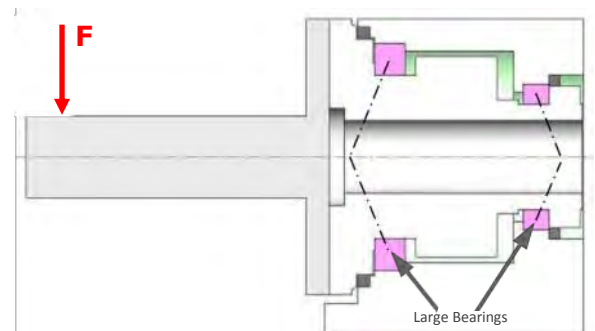
## Auto Air Purge Protects You From Water Hazards

If you have ever experienced problems with the rotary tables within a couple of year or so, 90% of the problems are with electric devices like servo motors, solenoid switches and wire harness caused by cutting fluid. As high pressure coolant is getting more popular, it has become more important to select a table that has excellent water protection. Yukiwa's patented auto air purging system is the ultimate answer. It always keeps the appropriate pressure inside the cover to protect electric devices from water hazards. Auto Air Purge is standard on all Yukiwa models. Air purge is available as an option for most PIONEER models. Don't let the water down your machine any more!



## Rock Solid Design gets your job done right

YUKIWA's True Dual Bearing System with Triple Support makes the YNCP and TNT series most robust and rock solid table in its class. Large bearings are located beneath the table face providing axial and radial support. Unlike most competitors who use only "1" bearing, YUKIWA added one more bearing at the very end of the spindle for extra support. Mated with the largest diameter spindle, YNCP and TNT series are the most robust and rock solid table. This massive construction reduces displacement from machining load by nearly 80% compared to competitors equivalent table. Whether you need to just index or simultaneous cut, remember your accuracy relies on the rigidity of the rotary table. YUKIWA rotary tables guarantees your job gets done right.



**100% inspection is our policy**

In order to guarantee quality for our rotary tables 100%, we believe the only way is to inspect every single rotary table before we ship. YUKIWA and PIONEER tables are subject to 100% inspection at the factory to ensure quality and performance of the rotary tables meet or exceed specifications. All YUKIWA and PIONEER table are provided with actual inspection certificate from the factory so you know your table has guaranteed quality. Further more, all YUKIWA tables are subject to test run at least 3 hours at the factory.

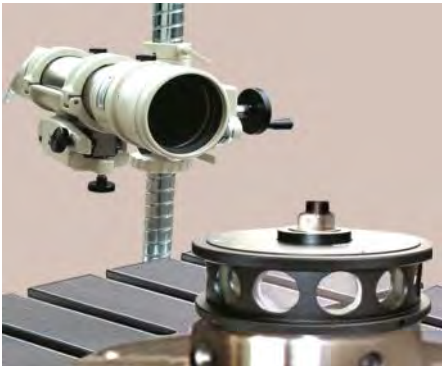
Tilting Rotary Table - Inspection Report					
Model	TNT170R	Manufacturing Serial No.	120		
Order					
Delivery					
Accuracy					
No.	Inspection Items	Unit	Tolerance	Actual	
1	Parallelism of Table Face to Bottom Face (Tilting Axis direction)	Over 300mm	mm	0.02	0.002
2	Roundness of Table Face (Circle location)	10mm inside from table edge	mm	0.02	0.003
3	Roundness of Table Flange Face	On Table Flange 150mm	mm	0.01	0.004
4	Parallelism of Tilting Axis-Center Line to Bottom Face	On $\phi$ 300mm	mm	0.03	0.006
5	Indicating Accuracy of table	Accumulated Pitch Error	"	30	10
6	Indicating Accuracy of Tilting Axis	"10" $\pm$ 20" Accumulated Pitch Error	"	45	15

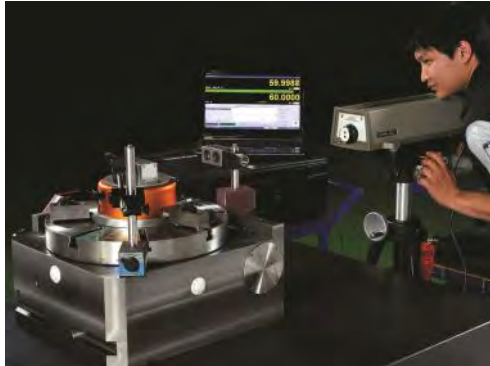
1	2	3
4	5	6

YUKIWA SEIKO INC.

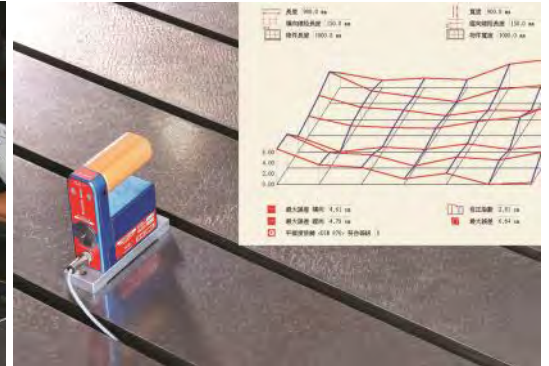
**Top notch inspection equipment ensures accuracy**



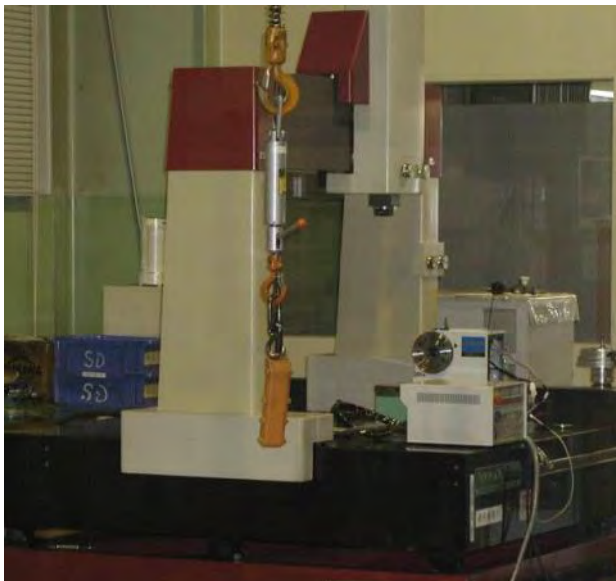
Nikon autocollimator



HP optical angle encoder



Wyler electric level tester



Large CMM for after finished table inspection

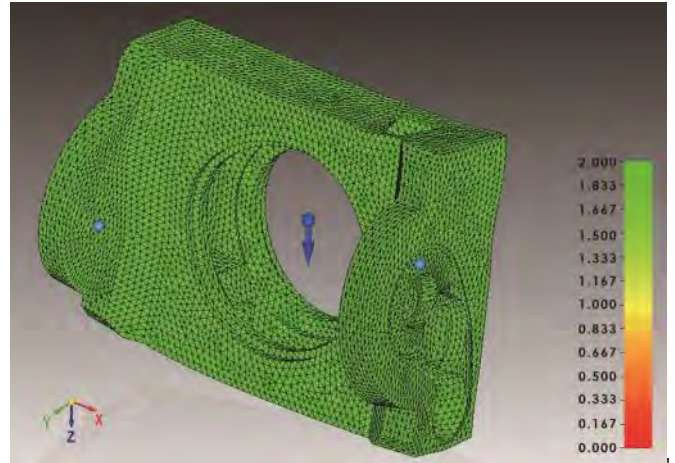


ZEISS CMM for components inspection



### State of the art factory equipment makes

YUKIWA and PIONEER with the state of the art factory equipment produce the widest range of CNC rotary table products such as: 5" most affordable table to up to 80" super large table, compact 5 axis table for BT30 application to up to 800mm 5 axis trunnion table, industry standard worm gear system, roller gear cam, Direct Drive system, and many more. From our standard rotary tables to special tailor made rotary tables, we have the ability to quote, build and service. This feature makes us the "one stop shop" for all your rotary table needs.



**PIONEER** brings an Installation and Service department second to none, with over 20 years experience in full rotary table 4th and 5th Axis installations as well as repair and service on many popular brands.

- Full Turnkey Installations on many Fanuc based controls including Fanuc 0i, 16i, 18i, 21i series and more.
- Guaranteed Compatibility - We only install OEM Motors & Controllers to guarantee 100% compatibility with the machine control.

#### **Installation includes:**

- Drive (Amplifier) Installation
- Table Installation
- Parameter Updates
- External Cable Installation
- Cable Set
- Communication Cables
- Fiber Optic Cables
- Bulkhead Cable Set

#### **Rotary Tables or Indexer - Which one do you need?**

- **Indexer:** using a secondary controller for part positioning. While simultaneous or contour milling is not possible with indexer, advantage of indexer is you can move the indexer and controller from machine to machine easily when you need it on the other machine. Indexer option only needs one M-code function to send FIN signal to the secondary controller. Most machines these days come with M-code function so check your local machine dealer or builder if the machine has the M-code function.
- **Integrated Rotary Table:** which is wired directly to the machine control and functions as an additional true axis of the machine. This configuration can be used for positioning and simultaneous cutting. While interfacing is a lot more complicated than indexer (we can do that for you!), the benefits and options are dramatically improved. Integrated Rotary Table is the only option that enables you to perform true 4th and 5th axis work on your machine.

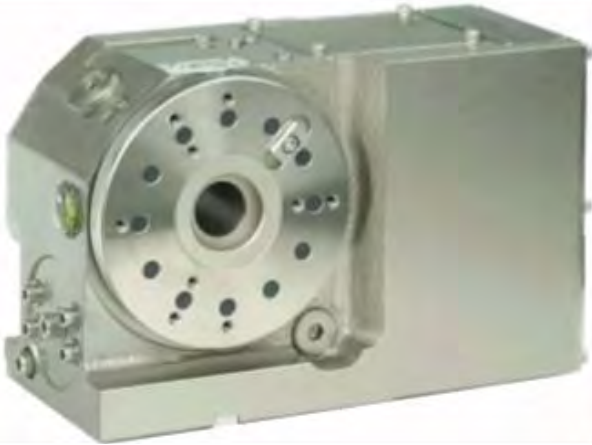
#### **Machine and control capability**

Even though you want to install 4th & 5th axis rotary table if the machine control is capable of only 4 simultaneous axis, it will only be 4th axis and you will need separate control for your 5th axis. It is also possible that your machine control is capable of 5 simultaneous axis but your machine does not have 5th axis software preinstalled at the factory. If you are not sure, we can help you find your machine and control capability. With over 15 years of installation experience PIONEER knows many different machines and controls.






#### **What machine and control brand can PIONEER do the installation?**

With over 15 years of experience we can install on most Fanuc based control machines including Mori Seiki. Installation on Yaskawa and Mitsubishi control can be available, too. We just need to know your machine make, model, year and control model, or simplest and best way is send us the machine data sheet then we can advise you if we can offer installation immediately.

Note that availability of installation on custom controls or proprietary control like Haas, Mazak, Okuma etc are subject to availability of information and support from the machine builder and/or dealer.



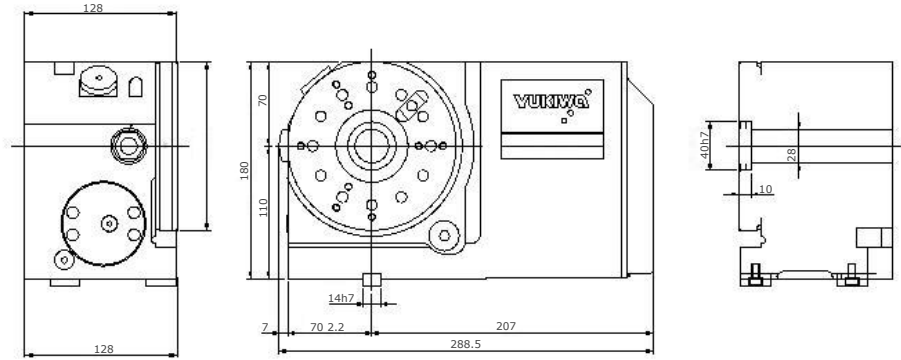
- Most affordable EDM rotary and indexing solution
- Submersible protection w/ Standard Auto Air Purging System (PAT)
- Optional stainless steel face plate with commutator block
- Optional nickel plating for corrosion protection
- Super high resolution indexing accuracy w/optional rotary scale
- Vertical installation standard – Optional horizontal available
- Available as :
  - o Integrated 4<sup>th</sup> axis
  - o Indexer with programmable YUKIWA AC4 control box

Model	JNC140R-EDM		JNC170R-EDM		JNC200R-EDM		JNC250R-EDM	
Table Diameter	140mm	5.51"	170mm	6.69"	200mm	7.87"	250mm	9.84"
Center Height	110mm	4.33"	135mm	5.31"	160mm	6.30"	200mm	7.87"
Center Pilot Diameter	40mm H7 x 10mm	1.57" H7 x 0.39"	60mm H7 x 10mm	2.36" H7 x 0.39"	70mm x H7	2.76" H7 x 0.39"	90mm H7 x 10mm	3.54" H7 x 0.39"
Center Hole Diameter	28mm	1.10"	45mm	1.77"	56mm	2.20"	72mm	2.83"
Guide Block Width	14mm h7	0.55" h7	14mm h7	0.55" h7	18mm h7	0.71" h7	18mm h7	0.71" h7
FANUC servo motor	βis1		αiF1/2		αiF2		αiF4/8	
Max. RPM	41.6		33.3		33.3		33.3	
Gear Ratio	1:72		1:90		1:90		1:90	
Indexing Accuracy arc sec.	± 20 seconds		± 20 seconds		± 20 seconds		± 15 seconds	
Net Weight without motors	27kg	60lbs	38kg	84lbs	58kg	128lbs	86kg	190lbs
Pneu. Clamp Torque (at 72 psi)	120Nm	89ft-lbs	230Nm	170ft-lbs	450Nm	332ft-lbs	650Nm	480ft-lbs
Vertical Weight Limit (Inertia)	 50kg (0.125kgm <sup>2</sup> )	110lbs (0.125kgm <sup>2</sup> )	70kg (0.25kgm <sup>2</sup> )	154lbs (0.25kgm <sup>2</sup> )	100kg (0.5kgm <sup>2</sup> )	220lbs (0.5kgm <sup>2</sup> )	125kg (1.0kgm <sup>2</sup> )	275lbs (1.0kgm <sup>2</sup> )
Horizontal Weight Limit (Inertia)	 100kg (0.25kgm <sup>2</sup> )	220lbs (0.25kgm <sup>2</sup> )	140kg (0.5kgm <sup>2</sup> )	309lbs (0.5kgm <sup>2</sup> )	200kg (1.0kgm <sup>2</sup> )	440lbs (1.0kgm <sup>2</sup> )	250kg (2.0kgm <sup>2</sup> )	550lbs (2.0kgm <sup>2</sup> )
Horizontal Load Limit	 4,000N	900lbf	5,000N	1,124lbf	7,000N	1,574lbf	8,000N	1,800lbf
Circumference Load Force	 120Nm	89ft-lbs	230Nm	170ft-lbs	450Nm	332ft-lbs	650Nm	480ft-lbs
Vertical Load Limit	 2,000N	450lbf	3,000N	675lbf	4,000N	900lbf	5,000N	1,124lbf

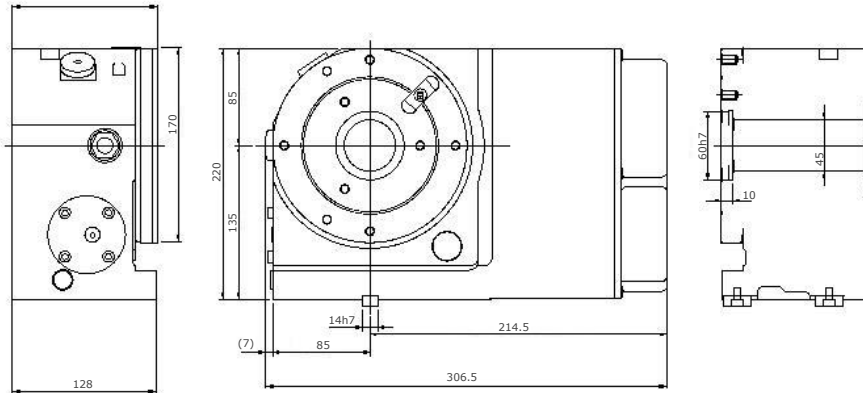
\* All specifications can be modified according to customer's requirement



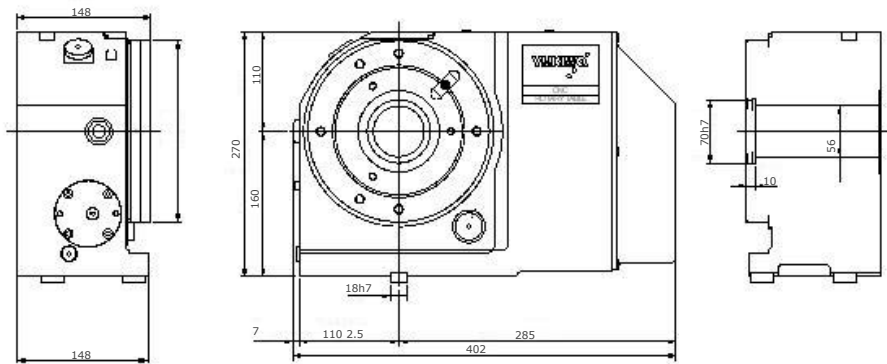
**JNC 140R-EDM**



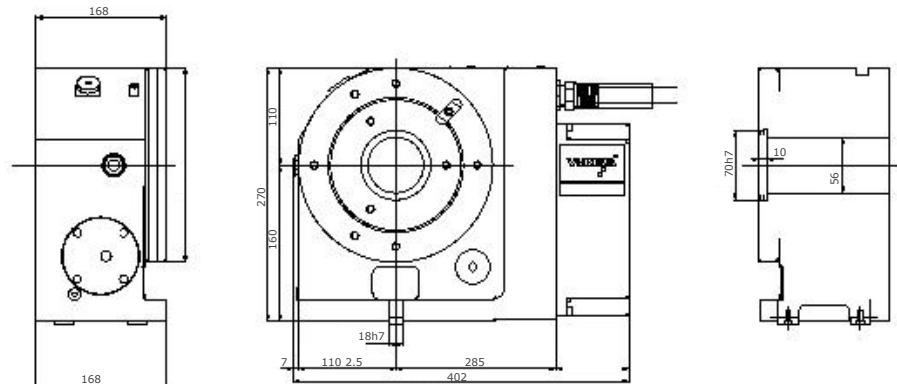
**JNC170R-EDM**



**JNC200R-EDM**



**JNC 250R-EDM**





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USA

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