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## A Detailed Guide to Hollow Rotary Platforms also called Indexers

Hollow rotary platforms are critical components in automation equipment. They use a single-stage helical gear reduction mechanism to increase output torque, driven by an external motor, enabling fully automated angle adjustment with unlimited rotations. Due to its flexibility in angle adjustments, this component is widely applied in various high-precision positioning applications in automated production equipment, significantly improving production efficiency and precision.

This article will delve into the working principle, power source, operational characteristics, lifespan, precision performance, advantages and disadvantages, application range, and usage precautions of hollow rotary platforms to help you better understand the function and value of this essential component.

Hollow rotary platforms utilize a single-stage helical gear reduction mechanism to increase output torque, driven by an external motor. With its capability for unlimited and rapid angle adjustments, it is particularly suited for applications requiring multi-angle positioning. The hollow structure greatly enhances the convenience of installing air tubes and wires, while allowing flexible compatibility with various brands of servo and stepper motors.

Under normal conditions, the precision lifespan of a hollow rotary platform can reach up to 20,000 hours, with repeat positioning accuracy controlled within 5 arc seconds. These features make it a key component in high-precision production and mechatronics systems.

### Advantages of Hollow Rotary Platforms

- High Repeat Positioning Accuracy: Capable of rapid and precise positioning at any angle.
- Hollow Structure Design: Facilitates the installation of air tubes and wires, improving overall equipment layout.
- Flexible Motor Compatibility: Can be connected to various brands of servo or stepper motors to meet diverse requirements.
- Direct Workpiece Connection: The disc-shaped output shaft structure allows direct connection to workpieces, reducing the need for additional connectors and saving on design, assembly, and procurement costs.
- Fast High-Precision Positioning: Capable of quickly positioning inertial loads, enhancing production efficiency.

### Disadvantages of Hollow Rotary Platforms

- High Cost: Due to its complex manufacturing process and numerous components, the production cost of hollow rotary platforms is relatively high.
- Wear and Tear from Heavy Loads: Hanging excessively heavy objects can put immense pressure on the drive mechanism and bearings, leading to wear and aging, thus requiring additional reinforcement during use.
- Operational Limitations with Large Objects: When large objects are mounted, there may be operational limitations that could affect the normal operation of the platform and surrounding equipment.

### Application Range

- Automation Equipment: Widely used in various automated production lines and robotic arms, improving both production efficiency and precision.

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- Robotics: Serves as a joint or rotary base for robots, providing smooth rotary motion and high-precision positioning.
- CNC Machines: Used in rotary tables and indexing devices to ensure high precision and rigidity during the machining process.

## Precautions for Use

- Understand the working principle of the hollow rotary platform to avoid improper operation or equipment damage.
  - Select the appropriate size and load capacity to ensure platform stability.
  - Do not hammer or drop the platform, as this can cause damage.
  - During operation, ensure hands and other objects are kept away from the rotating shaft to avoid accidents.
  - Ensure stable installation, with secure connections, and that the installation site does not affect normal operation or maintenance.
- Avoid disassembling or reassembling the hollow rotary platform to prevent damage to its performance.

## Conclusion

Hollow rotary platforms, with their stable performance, excellent precision, and diverse applications, are crucial components in automation equipment. Choosing the right hollow rotary platform can not only enhance the operational efficiency of production lines but also significantly improve positioning accuracy. If you wish to learn more about how our Hollow rotary platforms can enhance the performance of your equipment, please feel free to [contact us](#).