



Car Torsional Vibration Damper Chery Intelligent Multi Level Vibration Reduction

Our Product Introduction

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Basic Information

- Place of Origin: China
- Brand Name: Dongfeng
- Certification: IATF 16949:2016
- Model Number: 484J-1005070
- Minimum Order Quantity: 100 piece
- Price: EXW 56.8CNY/piece
- Packaging Details: Metal mesh box packaging
- Delivery Time: Spot goods
- Payment Terms: T/T
- Supply Ability: Annual production of 500000 pieces



Product Specification

- Installation Method: Bolt-on
- Model: XYZ-100
- Package Contents: Car Torsional Vibration Damper
- Efficiency: Effectively Reduces Vibration By 80%
- Size: 10 Cm X 10 Cm X 5 Cm
- Maximum Torque Capacity: 500 Nm
- Function: Reduce Torsional Vibration
- Warranty: 1 Year
- Durability: Highly Durable
- Color: Black
- Application: Automotive Industry
- Operating Temperature: -40°C To 120°C
- Maintenance: Low Maintenance Required
- Damping Coefficient: 0.8
- Material: Steel



More Images



Product Description

Torsion shock absorber: providing stable support for your mechanical equipment

In the modern industrial field, the stability and reliability of mechanical equipment are crucial. As an important mechanical component, torsional vibration dampers play an irreplaceable role in reducing vibration, improving equipment performance, and extending service life. This article will provide a detailed introduction to the working principle, types, application areas, selection, and maintenance of torsional vibration dampers, helping you better understand and use this key equipment.

1, Working principle of torsional vibration damper

A torsional vibration damper is a device specifically designed to reduce or eliminate torsional vibrations in mechanical equipment. Torsion vibration is usually caused by periodic torque fluctuations generated by components such as the engine, transmission shaft, or load during operation. This vibration not only affects the smooth operation of the equipment, but may also cause damage to components and shorten their lifespan.

The working principle of torsional vibration dampers is mainly based on their internal elastic and damping elements. When mechanical equipment undergoes torsional vibration, elastic elements absorb the vibration energy and convert it into thermal energy or other forms of energy. At the same time, damping elements will consume vibration energy, gradually weakening the vibration until it disappears. In this way, torsional vibration dampers can effectively reduce or eliminate torsional vibration, protecting the normal operation of mechanical equipment.

2, Types of torsional vibration dampers

According to different structures and working principles, torsional vibration dampers can be classified into various types. Here are some common types of torsional vibration dampers:

Rubber torsional vibration damper: Rubber torsional vibration dampers are known for their excellent elasticity and damping performance. They usually use rubber as an elastic element to absorb and dissipate vibration energy through the deformation of rubber. This type of shock absorber has the advantages of simple structure, low cost, easy installation and maintenance, and is widely used in various mechanical equipment.

Liquid torsional vibration damper: Liquid torsional vibration damper utilizes the damping effect of liquid to reduce vibration.

They usually contain one or more chambers filled with liquid, and when mechanical equipment vibrates, the liquid flows inside the chambers and generates damping force, thereby consuming vibration energy. This type of shock absorber has high damping performance and stability, making it suitable for situations that require significant torque and vibration.

Gas torsional vibration damper: Gas torsional vibration damper uses gas (such as nitrogen) as the elastic element. When mechanical equipment vibrates, gas is compressed or expanded, thereby absorbing and releasing vibration energy. This type of shock absorber has advantages such as fast response speed and stable dynamic performance, making it particularly suitable for situations that require fast response and precise control.

Composite torsional vibration damper: The composite torsional vibration damper combines the advantages of various dampers, such as rubber, liquid, and gas. They typically have more complex structures and higher performance requirements, but can provide more comprehensive vibration control effects. This type of shock absorber is suitable for applications that require extremely high vibration control, such as precision machinery, aerospace, and other fields.

3, Application fields of torsional vibration dampers

Twisted vibration dampers are widely used in various mechanical equipment, and the following are some of the main application areas:

Automotive industry: In the automotive industry, torsional vibration dampers are widely used in components such as engines, driveshafts, and drive axles. They can effectively reduce engine vibration and noise, improve driving comfort and safety.

Shipbuilding industry: In the shipbuilding industry, torsional vibration dampers are used in the propulsion and transmission systems of ships. They can reduce the vibration transmission between propellers and engines, improve the stability and navigation efficiency of ships.

Wind power generation: In the field of wind power generation, torsional vibration dampers are used in the transmission system of wind turbines. They can reduce the vibration and noise generated by wind turbines during operation, improve power generation efficiency and reliability.

Construction machinery: In construction machinery, torsional vibration dampers are used in various transmission systems and drive devices. They can reduce the vibration and impact generated by construction machinery during operation, and improve the stability and durability of the equipment.

Aerospace: In the aerospace field, torsional vibration dampers are used in the transmission systems and engines of aircraft and rockets. They can ensure the stability and safety of aircraft and rockets during high-speed flight and launch.

4, How to choose the appropriate torsional vibration damper

Choosing appropriate torsional vibration dampers is crucial for ensuring the stability and reliability of mechanical equipment.

Here are some factors to consider when choosing torsional vibration dampers:

Working conditions: Firstly, the working conditions of mechanical equipment need to be considered, including torque magnitude, vibration frequency, temperature range, etc. These factors will directly affect the selection and performance requirements of torsional vibration dampers.

Installation method: Choose the appropriate installation method based on the structure and layout of the mechanical equipment. For example, some shock absorbers require horizontal installation, while others require vertical installation. Ensure that the installation method of shock absorbers meets the actual needs of mechanical equipment.

Performance requirements: Select torsional vibration dampers with appropriate damping performance and stiffness according to the performance requirements of the mechanical equipment. Ensure that shock absorbers can effectively reduce vibration and noise without affecting the normal operation of mechanical equipment.

Brand and Quality: Choosing well-known brands and high-quality products can ensure the reliability and durability of torsional vibration dampers. When making a selection, you can refer to information such as user reviews, technical specifications, and certification status of the product.

Cost effectiveness: In addition to considering the above factors, cost-effectiveness also needs to be taken into account. Choosing cost-effective torsional vibration dampers can provide better protection for your mechanical equipment while reducing maintenance costs.

5, Maintenance and upkeep of torsional vibration dampers

In order to ensure the long-term stable operation of torsional vibration dampers, regular maintenance and upkeep are required.

Here are some common maintenance and upkeep measures:

Regular inspection: Regularly inspect the torsional vibration damper, including its appearance, connectors, and elastic components. Ensure that the shock absorber is not damaged, loose, or deformed.

Cleaning and lubrication: Keep the torsional vibration damper clean and lubricated. Regularly clean the dirt and grease on the surface of the shock absorber, and apply an appropriate amount of lubricant to reduce friction and wear.

Replace elastic components: When the elastic components wear or age, they need to be replaced in a timely manner. Ensure that the new elastic element matches the original shock absorber and has appropriate stiffness and damping performance.

Adjust damping force: Adjust the damping force of the torsional vibration damper according to the actual needs of the mechanical equipment. Ensure that the shock absorber can provide appropriate damping effect to reduce vibration and noise.

Record and maintain history: Record the maintenance history of torsional vibration dampers, including inspection dates, replacement parts, and repair status. This helps to promptly identify potential issues and take corresponding measures.

epilogue

As an important component in mechanical equipment, torsional vibration dampers play an irreplaceable role in reducing vibration, improving equipment performance, and extending service life. By understanding the working principle, types, application areas, selection and maintenance of torsional vibration dampers, we can better understand and use this key equipment. When selecting torsional vibration dampers, it is necessary to comprehensively consider factors such as working conditions, installation methods, performance requirements, brand and quality, and cost-effectiveness. Meanwhile, regular maintenance and upkeep can ensure the long-term stable operation of torsional vibration dampers. I hope this article can provide you with useful information and guidance to help you better understand and use torsional vibration dampers.



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