



Applicable series			
<b>Dgr series rotary joint</b>	<b>D500 series rotary joint</b>	<b>D600 series rotary joint</b>	<b>DRH series rotary joint</b>
Please read this instruction manual carefully and fully understand its contents before using the product. Please keep it in a safe place for your reference.			

## Safety Precautions:

This chapter provides information on the safe handling of the dewel swivel.

❑ For your own safety and the safety of others, please read this operating manual carefully before using the Dewel swivel.

This manual describes the rotary joints of the manufacturer Dewey. In a further description/interpretation, the name "Dewel" is omitted for better readability.

❑ This operating manual is an important part of the specified rotary joint, and the operator responsible person should pay attention to this manual.

❑ Always use the latest version of the operating manual available at [www.sddeweier.com](http://www.sddeweier.com).

操作 The operator of the swivel joint shall not make any modifications or additions or modifications to the swivel joint without the manufacturer's consent.

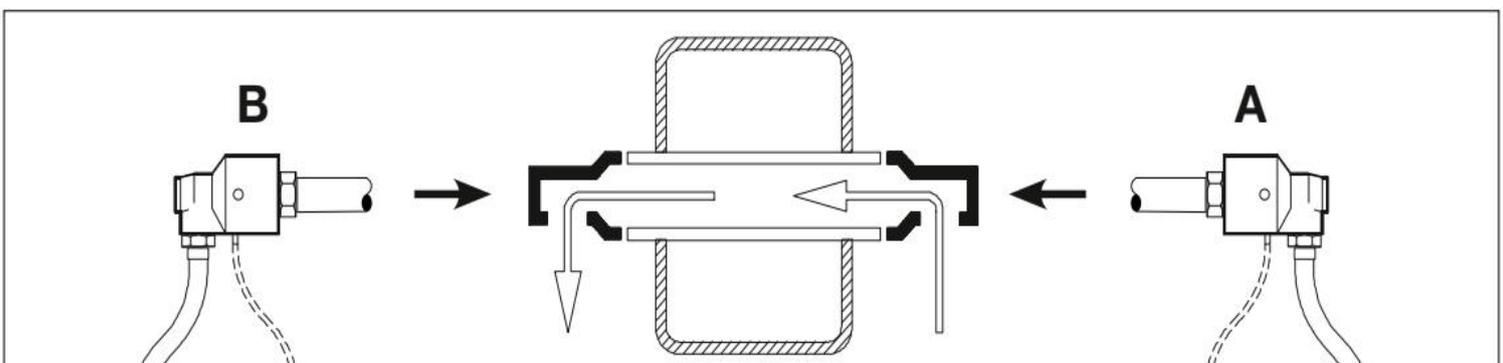
按照 Follow the additional instructions "Installation" for safe and correct swivel joint

installation. Installation instructions are included in the federation that has been delivered.

## 1. Application of one-way rotary joint

For the one-way type, models are available that can be mounted on the machine shaft from the outside or machine shaft.

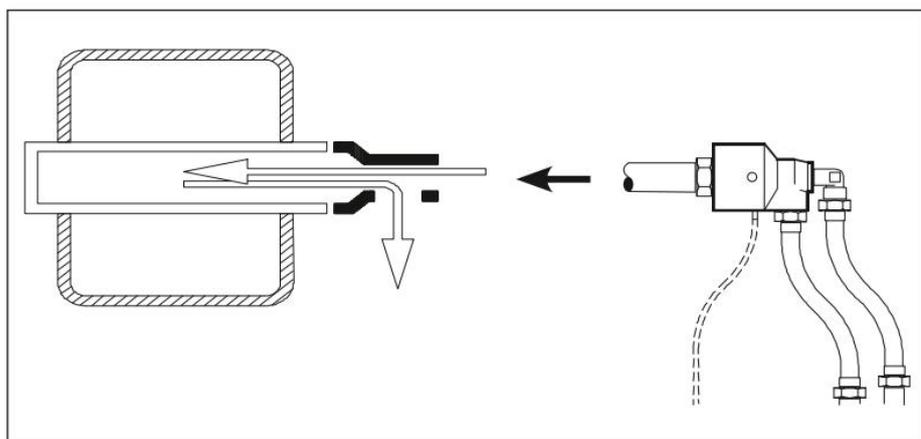
### Rotary joint external installation



## Figure 1: One-way schematic

A one-way form of the swivel joint is mounted at each of the two ends of the roller. The rotary joint (a) conveys the medium into the roller. The swivel joint (b) delivers the medium to the piping system of the machine.

## 2. Application of two-way rotary joint



## Figure 2: Two-way schematic

The two-way swivel joint is provided with an axial connection at the elbow. Through the elbow, the medium is conveyed through the supply pipe into the machine shaft; the return medium is absorbed by the same swivel joint and conveyed through the radial connection to the piping system of the machine.

## Precautions for use of swivel joints!!! Danger

The following areas are prohibited:

- potentially explosive areas

Rotating joints must not be used in potentially explosive areas as they are not approved for use in potentially explosive areas. Operation in these areas can cause an explosion.

Food, detergent and disinfectant residues cannot be removed from the swivel. People may be poisoned.

The following applications are prohibited:

transporting combustible media or hydrocarbons

Combustible media or hydrocarbons may ignite or cause an explosion.

Exception: Hot oil is within the permissible temperature range. Please observe the safety data sheet of the used heat transfer oil.

Connected to overstressed piping

If excessive pressure is applied to the swivel joint, the supply tube may fall off and cause personal injury or property damage.

no lubrication operation

Dry operation of the swivel joint (no media) can damage the shaft seal.

Connected fixed pipe

If connected by a fixed pipe, the swivel joint may leak and the ball bearing may be damaged.

Transfer overheated media

If the media exceeds the maximum allowable temperature of the swivel joint, the static seal (elastic seal) may be damaged, resulting in leakage of the swivel joint, personal injury or property damage.

## safety instructions

**This chapter provides information on hazards through a swivel joint.**

### 1.1.1 Danger due to surface overheating

The rotating joint is heated by the temperature of the medium. Skin contact with heated swivel joints may result in injury.

⌚ When operating the swivel, use safety gloves and ppe (personal protective equipment) to prevent heat.

Visible A visible hazard sign can be seen on/beside the swivel to warn of danger.

### 1.1.2 Hazard of improper hose

For the connection of the swivel to the machine, you must select the appropriate hose for the appropriate media to meet the application's specifications.

If you use an incorrect hose, they may become porous or burst. This can result in personal injury and/or property damage to the components of the machine.

If the media has water, steam, and heat transfer oil, use a hose that is suitable for the maximum system pressure of the machine and the maximum temperature of the media.

### 1.1.3 Danger caused by the media

Skin or eye contact with the media may cause injury when working on the swivel.

❑ Please pay attention to the safety instructions of the flow media. Observe the coshh safety data sheet for the flow media.

#### 1.1.4 Danger caused by installation errors

If the swivel is not installed correctly, the hose and connections may leak. The media can escape. Depending on the media, personal injury or property damage can result from machine components.

之前 Before installing the swivel joint, make sure that no feed pressure and residual pressure are applied to the piping of the machine.

安装 Install the swivel on the machine using only the hose to avoid pressure on the swivel.

❑ Install the hose to avoid pressure.

❑ Install the swivel joint so that the leaking media can safely move down at the lowest point and the drain line shows a drop (minimum 15°).

安装 Attach the hose to the swivel joint before installing the hose onto the machine shaft.

## Information about this manual

### 2 Information about design

This chapter provides information about which items must be followed in the design.

A positive impact on the service life of the swivel joint.

You can get a drawing of the swivel joint from Dewel for reference.

The rotary joint in the figure.

#### 2.1 filter media

Unfiltered media having a particle size in excess of 60  $\mu\text{m}$  can result in increased wear of the rotary joint.

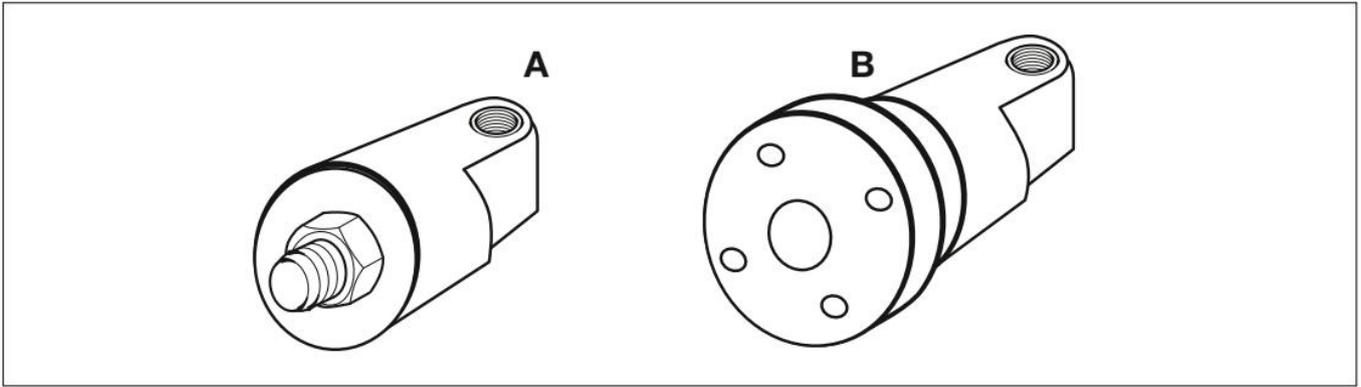
The larger the particles in the medium, the higher the wear of the swivel joint. The

the higher the total amount of all particles (contamination load), the higher the wear.

插入 Insert a filter in front of the rotary joint to filter particles with a particle size of 60  $\mu\text{m}$  or larger

From the media.

#### 2.2 Connection options for rotary joints on the machine shaft



**Figure 5: Options installed on the machine shaft**

The swivel joint can be fixed to the rotating shaft of the machine by means of threads (a) or flanges (b).

### 2.3 Hose Installation Options

The following example shows how to install a hose at a swivel joint.

These connection options ensure that the hose does not transfer stress to the rotary joint machine shaft when it is rotated.

#### 2.3.1 Connection of hose and rotary joint

The hoses must be installed and bent without stress so that they do not exert any force on the swivel joint. The figure below shows an example of the installation.



If the swivel is fitted with a horizontal connection, connect the hose as

shown.

**Figure 6: Horizontal connection hose**

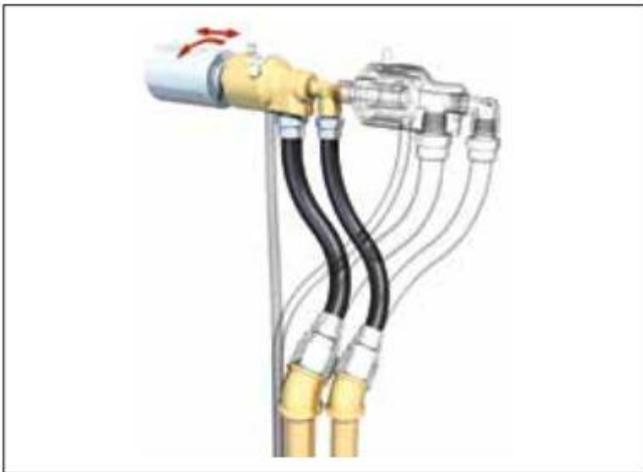


If you want to guide the hose away from the swivel joint and bend it 90°

vertically, connect the hose as shown.

**Figure 7: Hose bends 90°**

### 2.3.2 Hose connection when the machine shaft is attached for axial movement



If the swivel is mounted on a machine shaft with a shaft for swing (axial) motion, the hose must  
No pressure on two extreme positions.

**Figure 8: The hoses are arranged in a curve**

### 2.3.3 Hose connection for hoses with sae flanges

It only appears when you order a rotary joint using the sae connection.



The hose is fastened to the swivel joint by means of its sae flange with four

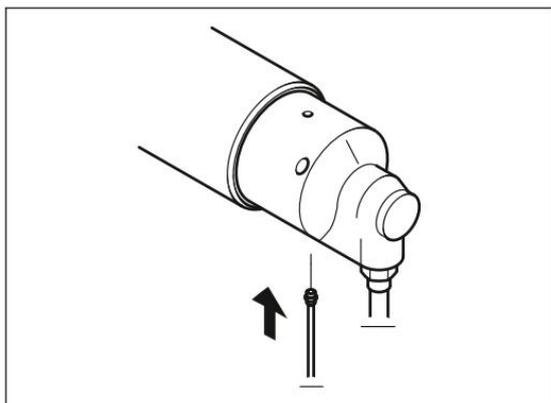
screws.

## Figure 9: Flange connection

### 2.3.4 Optional: Connect the leak line

This is only possible when the swivel is externally mounted.

To prevent damage to the surrounding components from leaking media, if necessary, connect the leak line to the swivel



The swivel joint is equipped with a leak hole. When used in a dirty environment, we recommend protecting the leak from infiltrated dirt.

## Figure 10: Installable leak line (collecting leaking media)

### 3. Installation

The "Installation" instructions are available at [www.sddeweier.com](http://www.sddeweier.com).

Make sure that the person installing the swivel receives the following information:

- Position and position of the swivel in the machine
- Planned connection hose
- Location of the leak line
- Information about the media

### 4. Avoid idling or dry wear

Missing lubricant results in component damage (dry running) The axial face seal of the swivel joint is lubricated by the media. If the swivel joints are operated without the presence of media, they are not lubricated and are therefore so damaged.

Make sure the swivel joint is operated with media.

关闭 If the swivel is running without media, turn off the device/machine.

### 5. Storage

Damage to components due to incorrect storage If the rotary joints are stored incorrectly, they may leak or be damaged.

存放 Store the swivel in a dry space of 3 ° C to 40 ° C.

Store the swivel joint for up to two years.

### 6. Maintenance

This chapter provides information on how to extend the life of the swivel joint in the following ways.

#### 6.1 maintenance cycle

If you follow the maintenance cycle described, you can avoid product failure of the rotary joint and prolong the service life; Overheating or undercooling of the surface may cause the injured rotating joint to heat or cool through the temperature of the medium.

Skin contact with these heated or cooled rotary joints can cause serious injury.

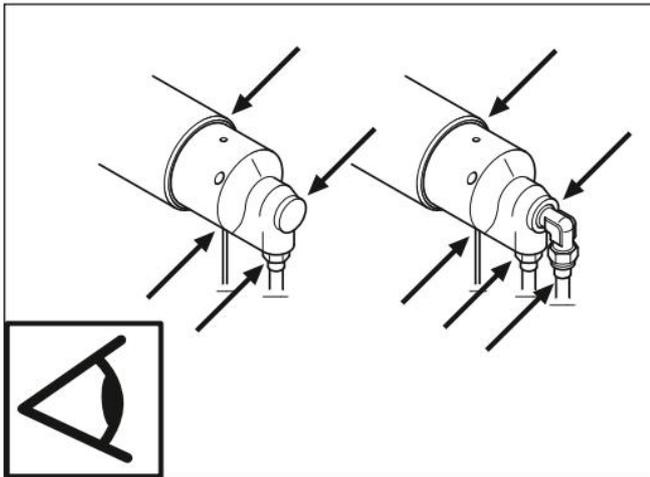
让 Let the machine cool down before starting to install the swivel joint.

❑ Use safety gloves and ppe (personal protective equipment) to prevent heat or cold, depending on the application of the rotating union.

### 6.2 daily inspection

Check the tightness of the swivel joint.

Applying line pressure can cause injury. If it is necessary to work on a swivel joint, the feed pressure of the applied medium or residual pressure in the piping of the machine can withstand the pressure when the connection is released. You and others may suffer severe injuries, ensuring that no feed pressure is applied and that there is no residual pressure in the piping system.



**Figure 11: Visual inspection**

Leakage connections and hoses may occur during machine operation depending on requirements

Rotating device.

1. Perform a daily visual inspection to check for leaks at the joint (see arrow).

If you find a leak:

1. Stop the machine.
2. Replace the defective hose.
3. Seal the leak connection.
4. If the swivel joint is worn and leaking, replace it with a new one.

⚠ “警告”

如果在流体泄漏的情况下继续运转，就有可能引起重大的事故。请迅速修理或更换新品。

### 6.3 Maintenance

This chapter describes how to relubricate the rotary joint. (The rotary joint has been lubricated at the factory and can be installed at any time)

The rotary joint is made of grease-sealed ball bearings and is self-lubricated during its service life. No additional maintenance is required other than periodically checking whether the swivel joint is leaking due to wear.

It is also possible to supply oil according to the appropriate cycle of use. When supplying oil, remove the plug and supply oil through the grease fitting;

Excessive oil supply has the same adverse effect as insufficient oil supply. Please refer to the following for the approximate standard of oil supply.

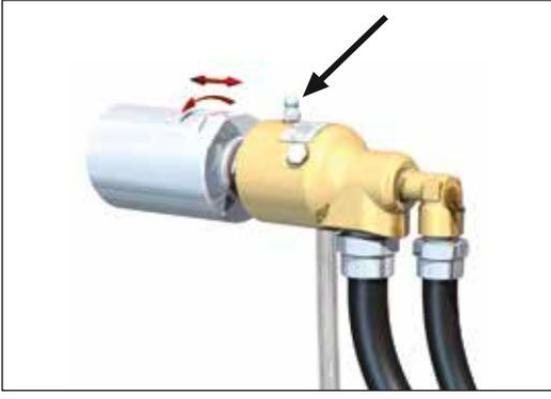
※ oil supply standard

温度(°C)	供油频率
0~60	6个月/1次
60~120	3个月/1次
120~150	1个月/1次

发生芯振动时，请勿继续运转。

请勿在停止运转的状态下长时间放置。因生锈等原因，有可能引起不良的结果。

Note: If you do not follow these instructions, the life of the ball bearing is shortened. If you transfer media with a temperature below 99° C via a swivel, you do not have to relubricate the swivel.



The following paragraphs describe how to place grease  
Spray the gun and inject a specified volume of grease into the ball bearing.

1. Install the grease gun on the grease fitting (see arrow).
2. Make sure the grease gun connector is properly placed on the grease fitting.
3. Start the grease gun to inject the specified volume  
Grease enters the ball bearing.
4. Calculate the running time of the following lubrication.

