

高品质弧形辊

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弧形辊说明书

Instructions for operation &  
maintenance of spreader roll

邯郸市达南科机械科技有限公司

HanDan DNK MECHANICAL SCIENCE AND TECHNOLOGY CO.,LTD

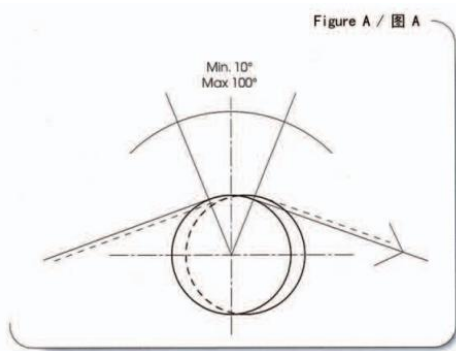


## 弧形辊简介

弧形心轴上通过轴承安装一系列的可旋转的弧形辊面来达到展平作用。

通常外表上看弧形辊是固定的，橡胶套是可以旋转的，弧形展平辊用于薄膜、纸、纺织品及类似产品的加工设备上，或者有时也安装与其他导辊无法安装的位置上。

根据卷材材质的不同一般包角在  $10^{\circ}$  - $100^{\circ}$  之间，见图 Fig.A

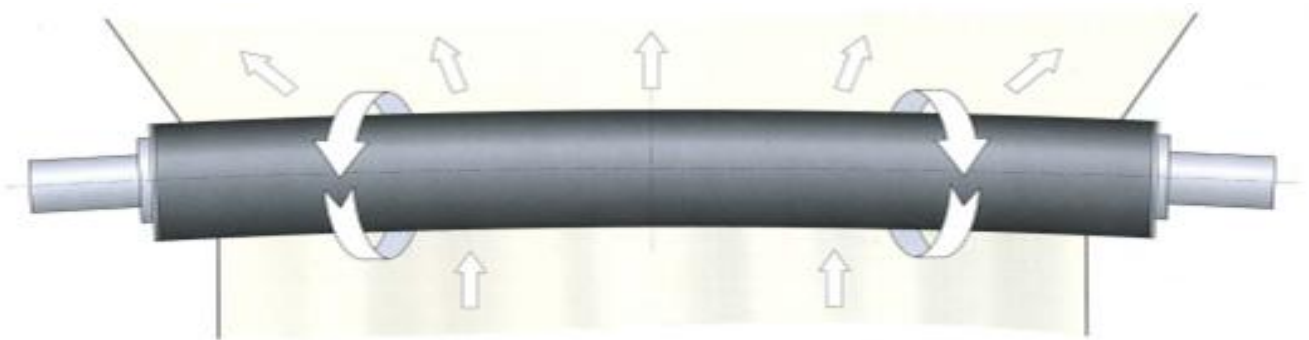


## Spreader roll

The spreading effect of the curved rolls is obtained through the curved steel shaft onto which rotate some rolls mounted on ball bearings .

Externally onto the rolls is fitted ,as a rule ,a rubber sleeve which is free to rotate,The curved spreader roll is used for plastic film 、 paper 、 fabrics and similar products,or any time the installation of other types of rolls is impossible.

The Winding angle (Fig.A)generally lies between  $10^{\circ}$  - $100^{\circ}$  max, depending on the web material.



## 弧形辊安装

正确的安装方法可使弧形辊达到最佳的展平效果，基材通过弧形辊的凹面，通常要有较长的导入距离 -B- 和较短的导出距离

-C- ，距离 -B- 通常是距离 -C- 的 2 倍左右，尺寸 -C- 要接近 2 倍或 2.5 倍弧形辊的直径。

**提示：**安装弧形辊时，请确保弯辊和基材是对齐和垂直水平的（FigB）

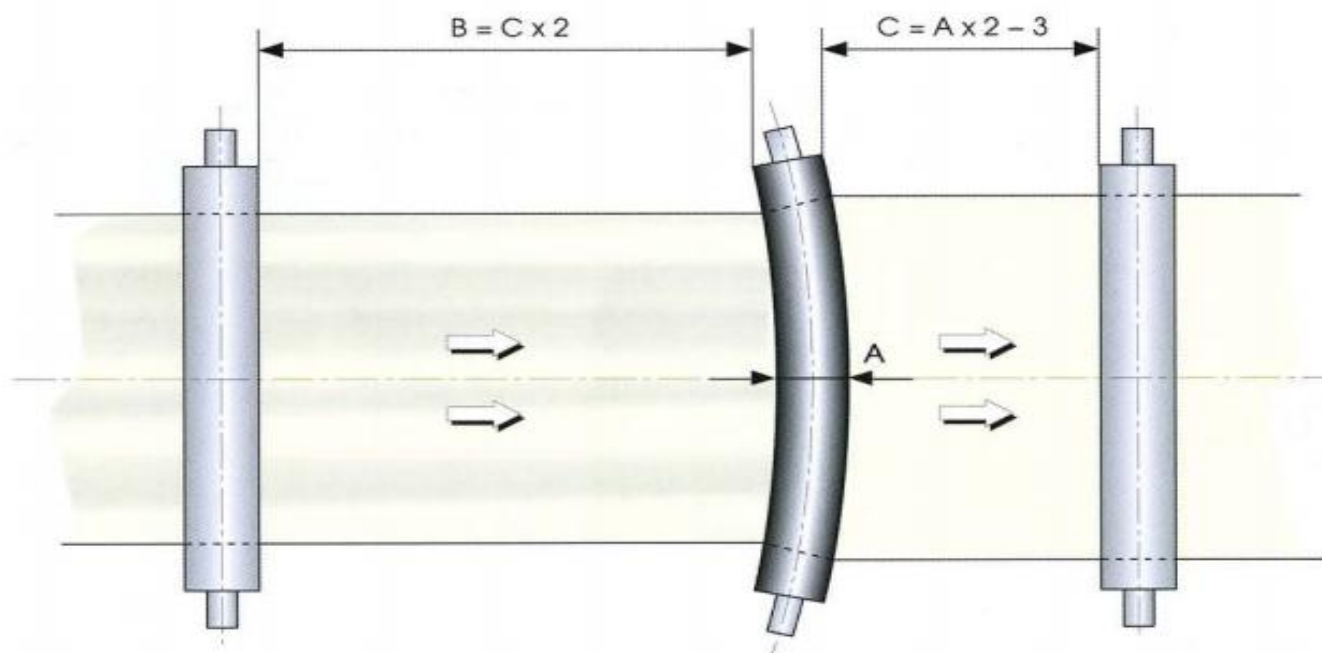
## Installation

Optimum effect will be achieved by mounting the spreader roll .

Long entry distance - B - short output distance

- C - The material web should always pass over the concave side of the Bowed Roller Dimension "B" should always be twice the exit span " C " . Dimension " C " should be approximately two and a half times of the Bowed Roller.

Note: When install the Bowed Roller please ensure that it is aligned both vertically and horizontally onto the material web As shown in



## 包角设置/Web angle setting

### 弧形辊包角

包角  $w$  根据不同的卷材要进行适时地调整，下面根据不同的卷材推荐的包角角度。

纸行业：成形网 25-20° 湿毛毡 30-60° 纸/板 15-30°。

薄膜和锡箔：PA 和 PP 膜 1-6 微米 60-90°、8-20 微米 45-60° 20 微米以上 45°、静电膜 15-20°。

纺织行业：普通织物 45-60° 延展布 60-90°。

### Wrapping Angle

The wrapping angle “W” is determined by the type of material being processed.

The following angles of wrap are recommended:

#### Paper industry

forming fabrics 25-20° ;

Wet felts 30-60° ; Paper/board 15-30° ;

#### Film and Foil industry

Films PP and PA

1-6 Micron 60-90° ;

8-20 Micron 45-60° ;

More than 20 45° ;

Metalised films 15-20° ;

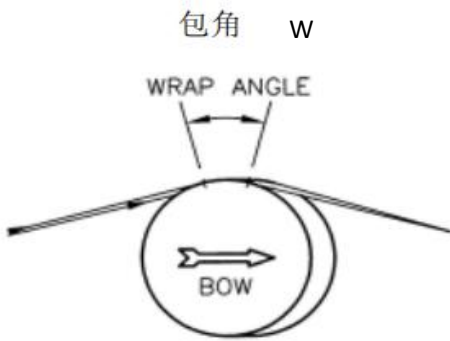
#### Textile industry

General 45-60° ;

Extensible fabrics 60-90°

## 弧度方向调节/Angle adjusting

消除中间或两侧的褶皱/To eliminate creasing ,slack edges or slack centre.

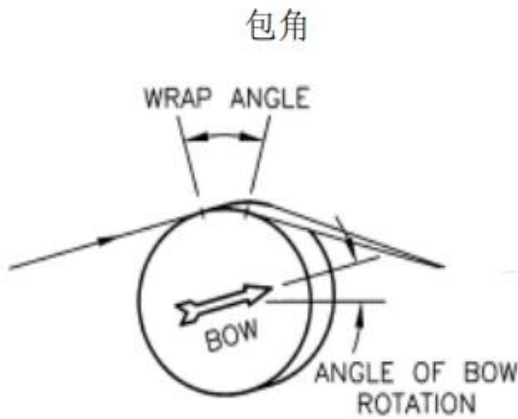


弧形方向

### 正常装配位置/Basic setting

导入和导出角度应该相同，  
整个辊子表面有均匀并较低的张力，  
建议作为安装起始位置。

To eliminate creasing the angle of entry and exit should be identical .  
The tension between the center and edge of the web should be low and evenly.  
Recommended start up position



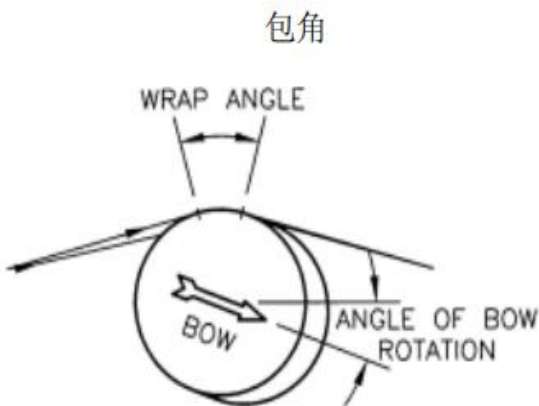
弧形方向

弧形转角

### 中心位置展平/Setting of slack centre

向上调节弧度方向  
卷材中部张紧。

Rotate upward the angle of bow;  
Tighten center of web.



弧形方向

弧形转角

### 展平卷材两侧/Removal of slack edges

向下调节弧度方向  
张紧卷材边缘。

Rotate downward the angle of bow  
Tighten edges of web

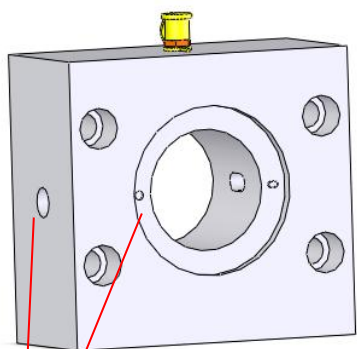
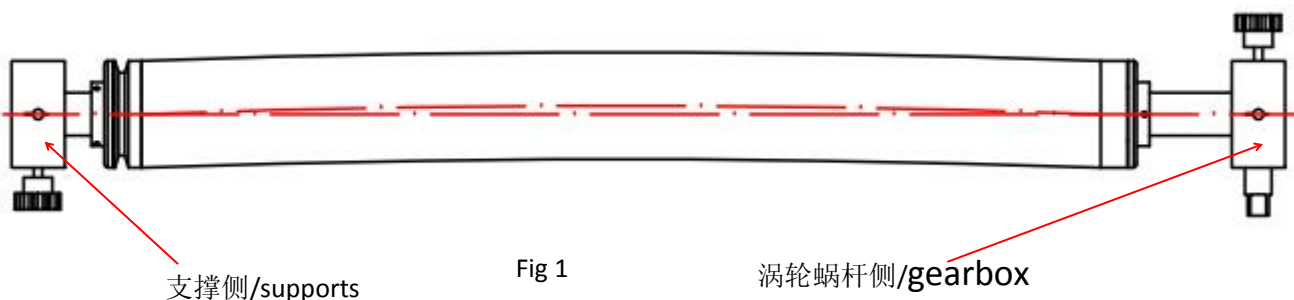
## 弧形辊的安装与调节/Installation and adjustable of the spreader roll

### 1. 固定弧高弧形辊和支撑座的调节/Roll with fixed bow and gearbox

1. 为了方便安装，安装前用软物体轻轻敲击支撑侧外侧球体，（见 Fig1）支撑侧可以向里移动一点距离。
2. 将弧形辊安装到设备墙板上。
3. 用手轮调节弧形辊，使支撑端球体侧面凹孔对准侧面的螺纹孔，顶紧顶丝。见 Fig2
4. 按照第 3 页介绍调整弧形辊，将弧形辊调到合适的位置。
5. 拧紧两侧的锁紧手柄。见 Fig3

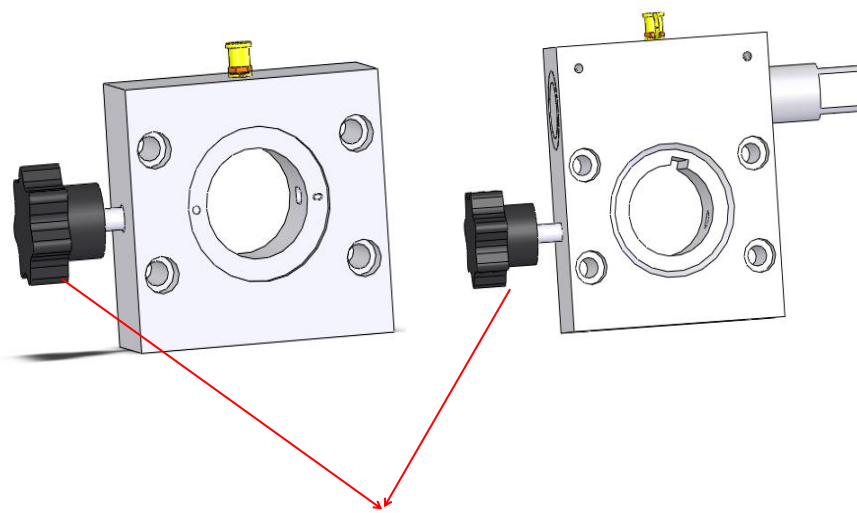
1. For easy to install, use a soft hammer to beat the lateral of the ball in the support, as shown in (Fig1).The support will move a little distance laterally.
2. Secure the spreader roll mounting the machine frame.
3. Turn the roller with the hand wheel. Make the concave hole in the ball point the threaded hole in the support.then tighten the clamping screw. See (Fig2)
4. Adjust the spreader roll into its correct position as described in page 3.
5. Tighten the clamping handle. See (Fig3)

用软性物体轻轻敲击支撑座内球体外侧  
/Use a soft hammer to beat the lateral of  
the ball in the support



调整手轮使两孔对齐，然后顶紧顶丝 /adjust the hand wheel,and make the two holes in same line then tighten the clamping screw.

Fig2



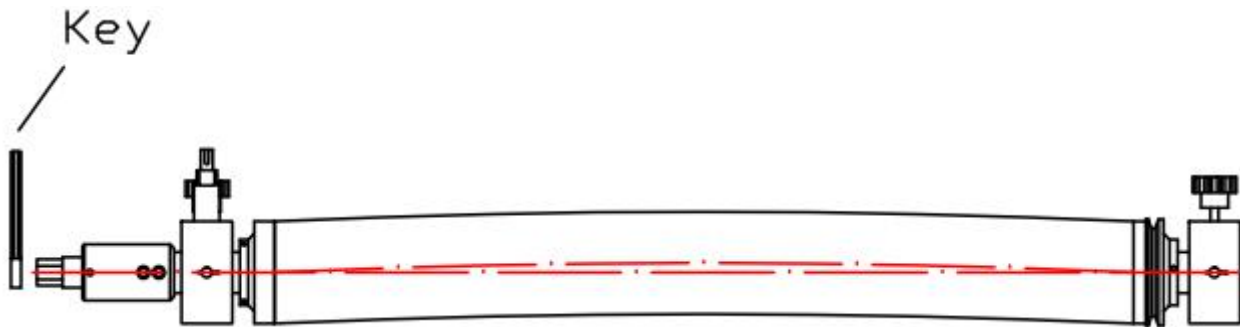
锁紧手柄/clamping handle

Fig3

## 2. 曲率可调弧形辊/Roll with Variable curvature adjustable bow

- 1 机械可调弧形辊的基础安装和固定弧高的安装一样。
2. 通过用扳手或者棘轮扳手调节辊子前部的方头来调节弧度的大小。
3. 允许客户在设备工作中调整弧高，以提高展平质量或分切质量。
4. 调整后的弧高会被固定，通过轴端的刻度盘记录下弧高位置。
5. 顺时针调整弧高。

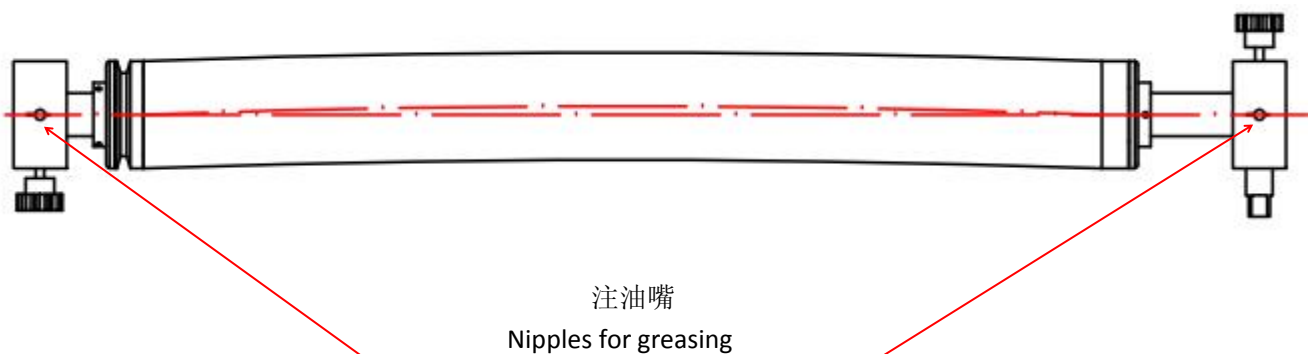
1. The installation of the adjustable bow is same as the normal bowed roll.
2. Adjust the amount of bow "DB" at the front of the square end axle using a wrench key or ratchet spanner.
3. Allows the operator to change the roll bow while the machine is working ,depending on the material to be processed ,and improve the cut separation.
4. Be adjusted bow will now be held,record the position on the scale at the front side of the axle.
5. Please generate the high of bow adjustment only clockwise.



## 支撑座的维护/Maintenance of the swivel worm gear.

支撑座已经通过油嘴进行过润滑（见 Fig4），干燥环境下三个月润滑一次，潮湿使用环境下建议一个月润滑一次。

Greasing is done through the greasing nipples (see Fig4), In dry working conditions three times a month is adequate. For wet working conditions once a month is recommended.



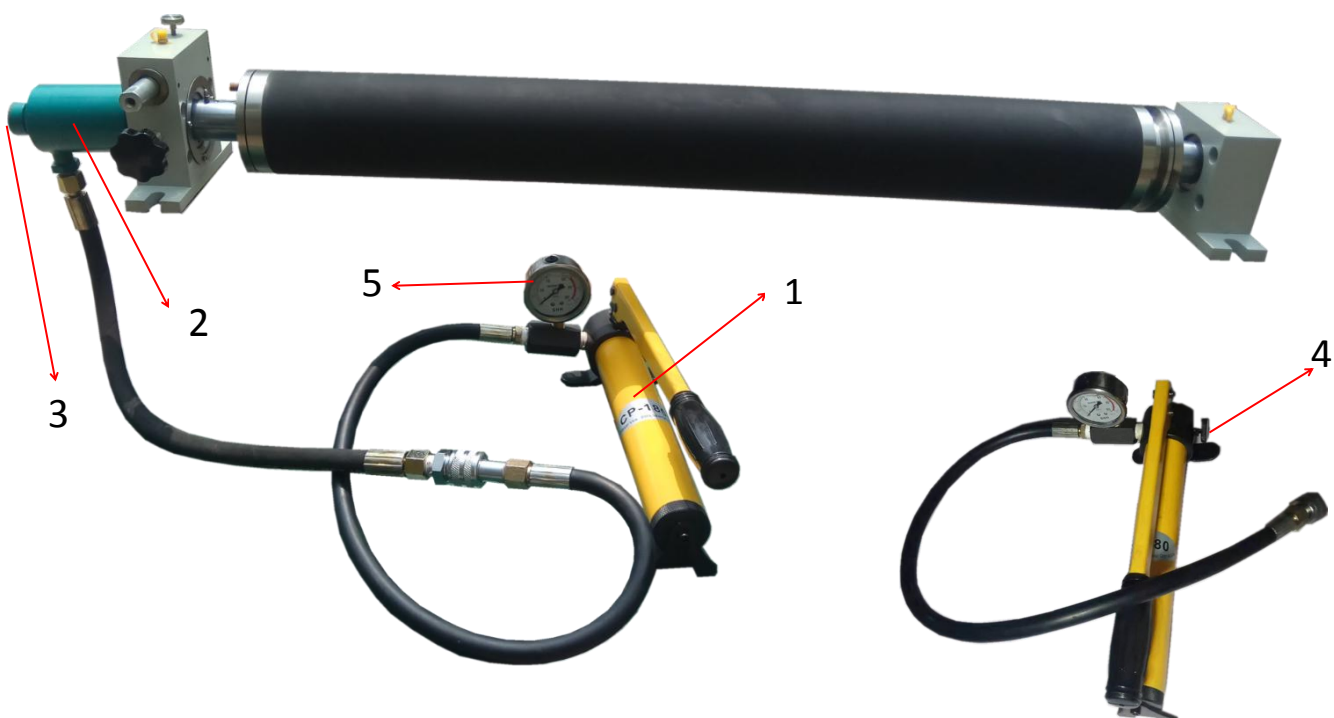


### 3. 液压可调式弧形辊/Roller with hydraulic adjustable

1. 机械可调弧形辊的基础安装和固定弧高的安装一样。
2. 调整弧高前首先将油泵进油螺母（4）拧紧，通过调节油泵调节杆弧度大小，不同的材料通过观察材料的展平状态来确定最佳弧高，弧高确定后拧紧锁紧螺母（3），这时可以通过打开进油螺母（4）来给油泵泄压，此时系统没有压力，所以不会有漏油出现。
3. 如果重新调节弧度的大小，油缸需要重新打压直到锁紧螺母（3）可以轻松的拧开，相同的方法来重新调节弧高。基本上同一个压力会对应相应的弧高，客户可以通过调节的经验根据不同的辊径和面宽来做好相应的记录。

液压泵 / hydraulic pump (1),  
液压缸/ slave hydraulic cylinder (2),  
锁紧螺母/ counter nut (3),  
止动螺钉/ stop screw (4)  
压力表/ pressure-manometer (5).

- 1.The installation of the adjustable bow is same as the normal bowed roll.
- 2.For setting the curve height the stop screw (4) must be closed first. The rollers axis is curved by pumps with the band lever. The ideal bow height for the different webs and applications are determined by watching the web. The adjusted curve height is fixed by band tied screwed of the counter nut (3) . Now the constructed pressure can be relieved by opening the stop screw (4). So the system is free of pressure. Thus, any leak losses are eliminated.
- 3.To re-adjust the curve height from this position to a higher or lower level, the original pressure must be pumped first again, until the counter nut can easily be turned loose. The new curve height can be adjusted and fixed by the same process. A curve height always corresponds with a corresponding pressure. On account of the different diameters and lengths of the roller np tables can be named here. These are to be created after your experiences.



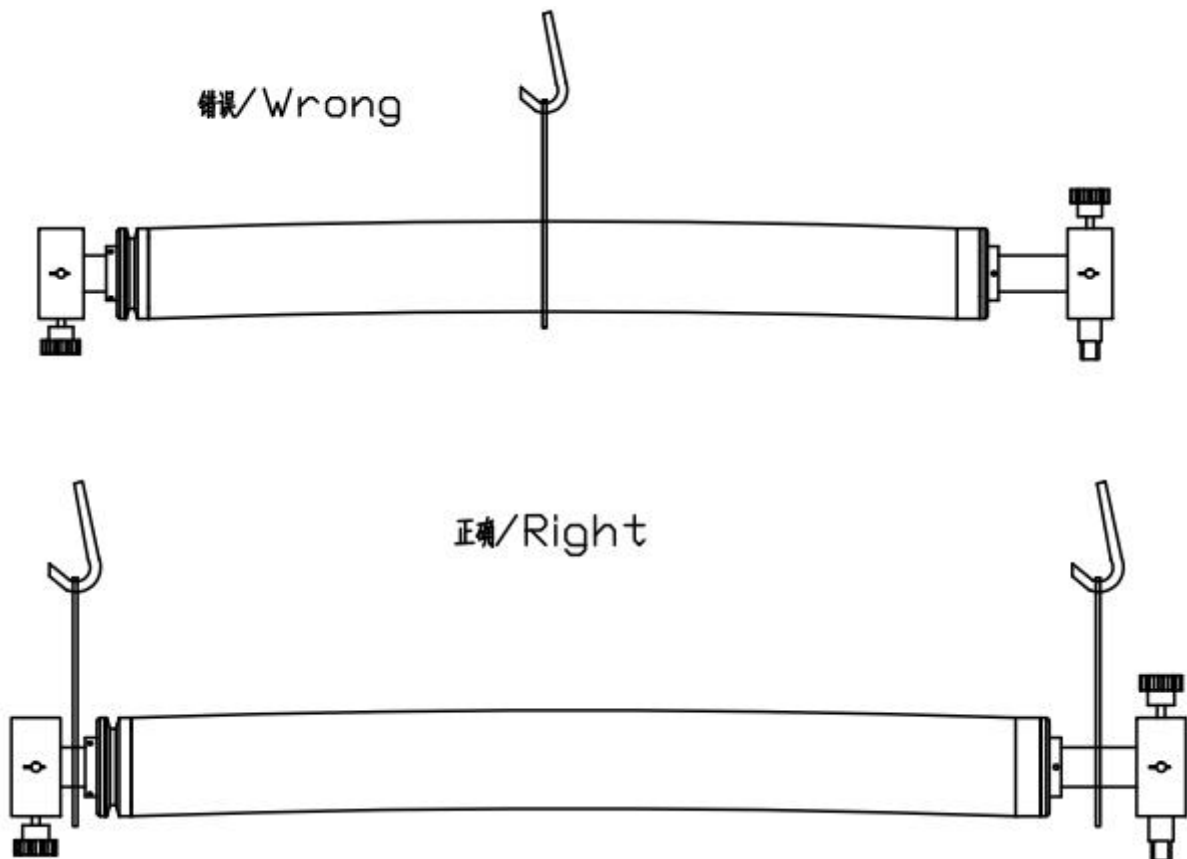
## 清洁和运输/ Cleaning and transport

不要暴力或者用尖锐的物品清理辊面，否则会损坏橡胶面。  
清洗辊面时不能用水枪直接清洗端面的密封，防止密封油脂被冲洗掉。

No aggressive solution or sharp tools may be used because they will damage the rubber sleeve .  
When cleaning the roll, please ensure that water jets are not sprayed directly at the end seals ,to prevent the grease being washed out of the labyrinth and seals.

调辊子时不要起吊辊面的中间，否则会损坏辊体内部结构，要用吊带吊辊子轴头两端。

Never lift the roller in center, as this would lead to damage within the roller. Always attach the transport belts or slings to the axle ends.





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