

大型卧式缠绕机使用说明书

Operating Manual of Horizontal Type Spiral Wound Gasket Strip Winding Machine

尊敬的用户：

使用前，请仔细阅读本说明书。这样，将会使您对机床的性能特点有一个全面的了解，从而能够安全熟练的操作使用本机床。

为保证机床的加工精度和较长的使用寿命，也为了保证您安全，务请牢记：

Dear customer,

Before operating this machine, please read this manual completely. Having a good knowledge of the performance characteristics of the machine will make skilled and safe operation.

In order to make sure the machining precision, longer service lifetime of the machine and your safety, please keep in mind:



危险

- 1、确信机器已按照说明书的要求接好电源，且已正确接地！
- 2、在任何调整和修理时必须切断电源！
- 3、在启动机器前确信钢带与填充带已符合产品要求！



Danger

1. Make sure the machine connect with power according to the demands of this operating manual and properly grounded!
2. Turn off the power before any adjustment and repair!
3. Make sure the steel strip and filler tape meet the product requirements before starting.



警告

- 1、机床上所有可移的部件在锁紧状态下，不允许移动该部件，以免损坏机床！
- 2、机器运转时，禁止触摸正在旋转的部件，以免造成人身伤害！
- 3、本机床因结构限制，虽有设置装置，但也不能全部防护到位，请在操作时特别小心，以免伤害您的身体！
- 4、工作台每次缠绕完毕后，必须将先停机，操作气动阀门，取出产品。



Warn

- 1、Any removable parts in the locked state can not be moved, preventing any machine damages.
- 2、Do not touch the rotating parts for safety when running.
- 3、The machine has set up protective device but can not provide a complete protection. Please be careful when operation to prevent any physical harm.
- 4、Stop the machine, operate the pneumatic valve and take out the product after the winding finished.



提醒

- 1、为了延长机床使用寿命，各部位请每班加注润滑油，建议使用 46 号润滑油！



Caution

- 1、To extend the service lifetime of the machine, please inject lubricant on each parts. 46# lubricant is recommended.

安全注意事项

在安装、配线、操作、维护及检查时，应随时注意以下安全注意事项。

Safety Caution

Please pay attention to the following safety precautions when installing, wiring, operating, maintaining and checking.



- ★ 当机械设备开始运转前，须配合其使用参数调整设定值。若无调整到相符的正确设定值，可能会导致机械设备运转失去控制或发生故障。
- ★ 机器开始运转前，请确认是否可以随时启动紧急开关停机。
- ★ 在移动或者维修有此标志的相关部件时，请千万小心操作，否则可能会对人身造成一定的伤害，或导致产品严重损坏。
- ★ 在首次运行前，请确保所有零件安装完毕，接线正确。



- ★ Adjust the set value according to the technical data of machine before running the machine. Wrong set values will make the machine out of control or break down..
- ★ Please make sure the emergency stop switch work any time before running.
- ★ Please be careful when move and repair the parts with this sign. Or it will lead to personnel injury and serious damage of the product.
- ★ Make sure all parts are installed completely before first time of running.



- ★ 在配线和接线时，请一定看准各线路和相应的接口，不能弄错。
- ★ 机器运行时，有此标志的部位可能会有较高电压的元器件，请勿靠近。
- ★ 在维修或者拆卸相关部件时，请务必在停机，而且断电的状态下操作，否则容易触电导致生命危险。
- ★ 在正常情况下，相关部件一般都是锁在机器的内部。所以机器正常运转时，有此标牌的部位请保证处于封闭状态，以保证操作者的人身安全。



- ★ Confirm the right wire and corresponding interface. Don't mix them when wiring.
- ★ Keep away from the parts with this sign where there may be higher voltages components.
- ★ Stop the machine and turn off the power when any parts are repaired and disassembled, preventing the danger of electrical shock.
- ★ Normally all parts with this signal are locked inside the machined. For personal safety, never unlock those parts while the machine is running.



- ★ 在机械启动时，请保证操作人员的身体没有靠近相关部件，否则可能发生危险。
- ★ 当机械运转时，很多部件都在高速运作，此时切勿靠近，尤其不能用手直接接触这些部件，否则会对人身造成较大的伤害。
- ★ 在维修或拆修机械时，请在停机并且断电的情况下进行操作，并且拆修相关部件时，在确保安全的情况下才能直接用手拆卸，否则会对身体造成不可预计的伤害。



- ★ It is very dangerous if the operator is too close to the parts with this sign when starting machine.
- ★ Keep away and do not touch the parts in high speed running with hands. It's dangerous to our body.
- ★ Stop the machine and turn off the power when the machine is repaired. Ensure the safety when disassemble any parts by hands.



- ★ 在此标志的机器部件一般都是主要的部件，所以也要注意经常维护和保养，以延长机械使用寿命。
- ★ 不论机械处于何种状态，都不要用手直接接触此类部件。即使部件静止不动，接触此类部件时也可能会发生意外，造成不可预计的人身伤害。
- ★ 当需要维修或拆卸时，尽量不要用手直接接触此类部件，而用工具来进行相关操作。如果实在需要用手来操作，请戴上手套并小心操作，以保证人身安全。
- ★ 在需要更换此类部件时，最好请专门的人员来进行更换，在保证安全的同时也能保证机械的良好运转。



- ★ Usually the parts with this sign are main parts. Pay attention to maintenance and repair to extend service lifetime of machine.
- ★ Do not touch the parts with this sign by hands in any state. Even the parts stop, there may be an accident when you touch and cause huge personal injury.
- ★ Repair and disassemble the machine with tools instead of by hands. Please wear gloves and operate carefully when there is a necessary to repair by hands.
- ★ Replace the parts with this sign by professional to ensure safety and good operation of machinery.

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一、机床的用途和性能

I. Application And Property of Machine

1、大型卧式缠绕机，属于轻型专用机床。

1、Spiral wound gasket strip winding machine is one kind of light-duty specialized machine.

2、本机床适用于内径 250mm 以上的金属缠绕机加工。

2、The machine is suitable for winding of spiral wound gasket (ID>250mm)

二、机床的主要规格

II. Main Specifications of Machine

工作台

工作台的工作面尺寸（长×宽）	2400×2400	mm
产品最宽封面	75	mm

Work Bench

Size of working table (Length×Width)	2400×2400	mm
Max width of sealing face	75	mm

主轴

电机速比	1:30	
主轴规格	160	mm
辊轮垂直行程（手动）	50	mm

Main Shaft

Motor Speed Ratio	1:30	
Specification of Main Shaft	160	mm
Vertical Travel of Roller	50	mm

机床性能

主轴转速		0~46/分
主轴转速范围	转/分	650, 1400, 2300

Machine Property

Rotating Speed of Main Shaft		0~46/min
Rotating Speed Range of Main Shaft	RPM	650, 1400, 2300

动力、体积、重量

主轴电机功率	KW	0.4
主轴电机转速	转/分	1400

Power, Volume And Weight

Power of Main Shaft Motor	KW	0.4
Rotating Speed of Main Shaft Motor	RPM	1400

主机外型尺寸（长×宽×高）	mm	1400×750×1200
External Dimensions of Host Machine (length×width×height)	mm	1400×750×1200

工作平台外型尺寸（长×宽×高）	mm	2400X2400X800
External Dimensions of Working Table (length×width×height)	mm	2400×2400×800

机床重量	KG	350
Weight of Machine	KG	350

三、机床的传动系统

主轴的传动系统

主轴的传动是由链条链轮与电机软联接来实现的。转速由变频器控制

III. Transmission System of Machine

Transmission of Main Shaft

The transmission of main shaft will be achieved by the soft connection of chain, chain wheel and motor. The rotate speed is controlled by the transducer.

四、机床的电气设备

IV. Electrical Equipment of Machine

1、本机床使用 380 伏，50 赫兹三相交流电源，用户如有特殊要求，可在订货时提出。

1、 The machine use the three-phase AC supply of 380 V, 50 HZ. Special requirements should be mentioned in order.

2、接线：请将电源引出接入小型断路器（建议 10A），待校正电源相序后拧紧接线端子。

2、 Wiring: Lead the power supply and connect to miniature circuit breaker (suggest 10A). Tighten the connection terminal after correcting the power phase sequence.

3、起动和停止：按下起动按钮 ON，接触器 KM、吸合，则主机供电，踩下脚踏开关（或按下连续运行）按钮开机，放开脚踏开关或释放连续运行按钮，运转全部停止。

3、 Start and stop: Press on the start button ON, contactor KM and pull-in. It will supply the power to host machine. Start the machine by stepping on the foot switch or pressing the button for continuous operation. Stop the machine by releasing the foot switch or the button for continuous operation.

五、机床结构、操作及调整

V. Machine Structure, Operation And Adjustment

结构：机床由底座、主机、工作平台组成。

Structure: Machine consists of base, motor and work bench.

1、底座：底座由 2mm 铁板折边焊接而成。

1、Seat: Seat is welded by folding steel plate in thickness 2mm.

2、主机：主机由钢件构成，分为底板，横向悬板，悬板底座，上下辊轮等构成。

2、Host machine: Host machine is made of steel, it consists of bottom plate, lateral hanging late, hanging bottom plate, upper and subtus roller.

3、传动系统：传动系统由齿轮减速异步电机，链条，主动辊轮，被动辊轮，压紧拖板，气缸，电磁阀门，调压表构成。

3 、 Transmission System: Transmission System is composed of gear reducing asynchronous motor, chains, drive roller, passive roller, pressed pallet, cylinders, electromagnetic valves and pressure regulator.

操纵及调整

Operation And Adjustment

1、工件的装夹：将金属环放在主动辊轮上，操作（辊轮动作）按钮，被动辊轮下压，操作（顶轮动作）按钮，顶轮前移，调整工件导向器并作固定（应在金属环的内侧）。

1、Install and clamp work piece: Put the metal ring on the drive roller, press the button (Roller Action) and passive roller will be pressed down. Press the button (Wheel Action), the wheel forward. Adjust the guide apparatus and fix it on the inner side of

metal ring.

2、产品的加工：拉出钢带并点焊连接在内环上，操作脚踏开关点动运行，边运行边点焊至 3—4 圈，放入石墨，石墨要经由钢带导向轮预成型再进入缠绕，缠绕至所需尺寸，剪掉石墨。完成外圈【3—4 圈】的缠绕，外圈也应点焊加工。

2、Product processing: Pull the steel strip and spot weld it on the inner ring. Start the machine by stepping on the foot switch. Put in the filler tape after 3-4 circles running and welding. The filler tape should be pre-formed through strip guide wheel before winding. Cut off the filler tape when the length is enough. Outer ring also should be welded after 3-4 circles winding.

3、产品的取出：先操作【顶轮动作】按钮，则顶轮释放。后操作【辊轮动作】按钮，则辊轮释放，取出产品，取出时应加倍小心。

3、Take the product out: Press the button (Wheel Action) to release the wheel. Then press the button (Roller Action) to release the roller. Take the product out carefully.

六、机床的运输、开箱、安装和试车

VI. Transportation , Unpacking, Installing And Commissioning

1、运输

包装好的机床，需用叉车或堆高车搬运到指定地点。

搬运开箱后的机床，应加倍小心，以免损坏油漆和手轮、压力表等露在外面的零件。

1、Transportation

Packed machine should be carried to a designated location by forklift or stacker.

Be careful when carrying unpacked machine, preventing damage to paint, hand wheel,

pressure regulator and other exposed parts.

2、开箱

开箱后应检查附件是否齐全，手轮、压力表等是否有损坏，应立即提出。机床一经使用，制造商概不负责。

2、Unpacking

Check whether all the parts are complete when unpacking. Customers should mention if there is any damage in hand wheel, pressure regulator and any other parts. Manufacturer will not be responsible for the used machine.

3、安装

机床放在指定位置后，应检查是否平稳，并留出使用维修面积。

3、Installing

Place the machine at specific location, check the steady and make room for using and maintenance.

4、试车

在试车前，装上运输时拆下的工件支架，接通电源、气源、加注润滑油、上下拖板的燕尾，主轴的链条，请使用 46#润滑油。

4、Commissioning

Install the work support disassembled during transportation. Turn on power and gas supply, inject the 46# lubricant to dovetails of upper and subcut carriages and chain of main shaft.