

Belt Polishing Head Attachment for Mud Pump Rotors Lathe Machine Attachment

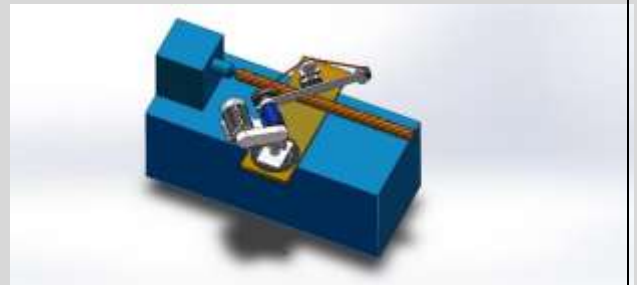
The Belt polishing head attachment is installed on the user's own standard lathe machine. The pump rotor workpiece is fixed in the lathe's headstock and tailstock. The work piece is rotated by the lathe headstock. (also, we can design with slide carriage to fit into a stand of the customers own construction if a lathe is not available).

The Belt polishing head attachment is mounted on the lathe machines carriage, replacing the tool post. During the polishing work, the carriage moves the Belt polishing head attachment along the axial direction of the workpiece.

When attached to a standard lathe, the belt polishing attachment is moved along with the screw feed function of the standard lathe. The mounting of the belt polishing attachment will be designed to fit to your lathe based on the drawings provided.

Technical Specifications

1. Belt drive motor power: 3.0 KW, variable speed, frequency conversion motor
2. Polishing belt surface speed: 20-40 linear meters per second, step less speed control and adjustment with variable speed frequency converter
3. Maximum belt width: 100mm wide
4. Maximum workpiece diameter: ϕ 280 mm (11 inches)
5. Minimum workpiece diameter: ϕ 115 mm (3.5 inches)
6. The maximum length of the workpiece: as this is an attachment to the original equipment, the length is limited by the length of the lathe.
7. Power supply: 380V, 50Hz
8. Belt polishing head attachment running noise: \leq 80db



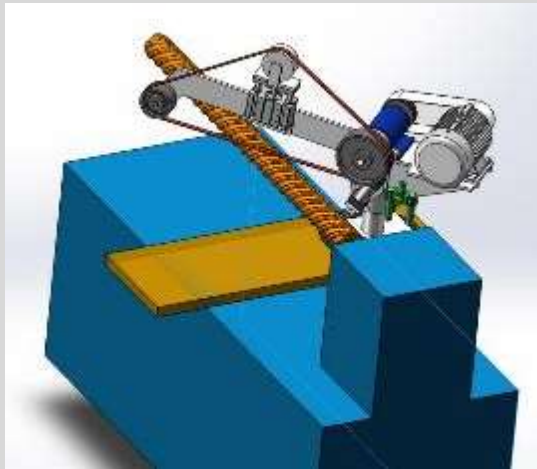
Belt polishing head attachment structure

The Belt polishing head attachment consists of the following:

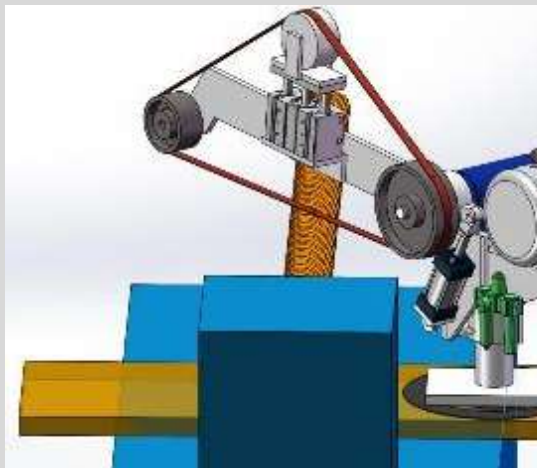
- Belt polishing head attachment seat,
- Belt polishing head attachment
- The abrasive belt drive,
- The driving wheel main shaft system,
- The driving wheel,
- Support arm,
- Abrasive belt spring tensioning device,
- Tension correction steering wheel system,
- Belt polishing head attachment floating lifting device

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- Electronic control system and other components.



the Belt polishing head attachment to a position that does not interfere with the lifting of the workpiece. See below.



The drive motor rotates the drive wheel to drive the belt at high speed (high surface meters per minute). The belt is under tension with a spring tensioning mechanism.

The diamond polishing belt contacts the work piece on the free area of the belt, between the driving wheel and the tensioning wheel. This permit grinding and polishing and the belt conforms to the shape of the workpiece.

The upper part of the Belt polishing head attachment seat can rotate and can be manually rotated in a range of 360 degrees. This allows the operator to adjust the match angle of the Belt polishing head attachment to the spiral angle of the pump rotor. angle of the Belt polishing head attachment is then locked with a handle.

When loading and unloading the workpiece, it is also necessary to rotate

Different widths of abrasive diamond belts are used, depending on the shape of the workpiece. Grinding a twisted-shaped screw (mud pump rotor) typically requires a narrower belt. Rotate the Belt polishing head attachment to an angle, at which the belt is close to the helix angle of the workpiece. Adjust the rotational speed of the workpiece and the traverse movement of the Belt polishing head

attachment along the workpiece in following the helix angle.

Grinding the outer diameter of the screw can be done with a diamond belt width of 60mm.

Grinding the bottom of the valley of the screw, the width of the belt is selected according to the width of the bottom of the valley of screw.

Pneumatic system: It controls the lifting and lowering of the Belt polishing head attachment and allows the Belt polishing head attachment to float.

1. consists of cylinders,
2. electromagnetic reversing valves,
3. air supply components,
4. pneumatic lines.

The electrical control system consists of

1. inverters, circuit breakers,
2. thermal relays,
3. intermediate relays, and
4. operational safety knobs.

The polishing attachment head is built with the high-quality brands of electromechanical parts:

1. Variable Speed Frequency Control Motor: Siemens
2. Inverter: Delta Taiwan

3. Bearings: Luoyang Bearing Factory
4. Pneumatic components: Zhengtai
5. Low-voltage electrical appliances: Delixi or Zhengtai
6. reducer: Hangzhou Yuqiu Machinery Co., Ltd.

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Typical measurements needed for the tool post mount.

