

Hydraulic cylinders for plows

[Hydraulic cylinders for plows](#) typically feature a double-acting design, offering bidirectional control, high precision, and high load capacity. They are suitable for applications such as reversible plows and depth adjustment, requiring selection of appropriate specifications and types based on specific requirements. Below is a detailed introduction to [hydraulic cylinders for plows](#):

First, Application Scenarios

1. Reversible Plows: Hydraulic cylinders play a critical role in reversible plows by controlling the plow body's rotation, enabling rapid field conversion. For instance, modern hydraulic reversible plows utilize the extension and retraction of the cylinder's piston rod to drive the plow body on the frame through vertical rotation within a horizontal plane. This reciprocating motion alternates positions until the working position is reached.

2. Depth Adjustment: Hydraulic cylinders also regulate plow depth to ensure consistent tillage quality. Precise control of cylinder stroke enables fine-tuning of plow body penetration depth.

Second, Types and Characteristics

1. Single-Acting Hydraulic Cylinder:

Characteristics: Relies solely on hydraulic pressure for extension; retraction occurs via gravity or spring return. Features simple structure and lower cost.

Applications: Suitable for single-direction operations like tractor lift arms. However, due to the need for bidirectional control in plow applications, single-acting cylinders are less common.

2. Double-Acting Hydraulic Cylinder:

Features: Utilizes dual oil circuits to control extension/retraction, enabling bidirectional force output and speed regulation. Offers higher control precision and load capacity.

Applications: Widely used in plow functions like tilting and depth adjustment. For example, in combine harvester header elevation, double-acting cylinders achieve control accuracy of ± 1 mm, ensuring consistent cutting height.

Third, Performance Parameters

1. Thrust: Cylinder thrust must match plow load and tillage requirements. Large plows may require higher thrust for turning and depth adjustment.

2. Stroke: Stroke determines the plow's turning angle or depth adjustment range achievable by the cylinder. Selection must align with the plow's specific design.

3. Control Precision: For applications requiring precise cultivation depth control, select cylinders with higher control accuracy.

Fourth, Selection and Maintenance

1. Selection:

Choose appropriate cylinder types and specifications based on the plow's design and cultivation requirements.

Verify that performance parameters such as thrust, stroke, and control precision meet requirements.

Select reputable brands and suppliers with reliable after-sales service.

2. Maintenance:

Regularly inspect seals for wear or aging, replacing them promptly to maintain sealing integrity.

Keep the cylinder clean to prevent debris ingress causing wear or malfunctions.

Periodically check connections for looseness or leaks, tightening or replacing seals as needed.

Hydraulic plow cylinders for sale

Hydraulic snow plow cylinders