

Hydraulic cylinders for harvesters

[Hydraulic cylinders for harvesters](#) serve as the core actuators within hydraulic systems. Driven by hydraulic oil pressure, they move pistons to adjust cutterbar height and angle, offering stable force transmission, flexible control, and high load capacity. Selection requires comprehensive consideration of system pressure, cylinder bore, stroke, and mounting configuration.

First, the role of hydraulic cylinders in harvesters

Hydraulic cylinders in harvesters undertake transmission and power control tasks. Through hydraulic transmission devices, they convert engine power into mechanical energy and transmit it to various components of the harvester. The hydraulic system can provide different power outputs according to the operator's needs, thereby enabling various working functions of the harvester, such as blade lifting and lowering, rotation speed adjustment, and blade spacing adjustment.

Second, Types and Characteristics of [Hydraulic Cylinders for harvesters](#)

1. Classified by Motion Type:

Thrust Cylinders: Designed for linear motion, the most common type in harvesters.

Swing Cylinders: Designed for oscillating motion, suitable for specific functional components in harvesters.

2. Classified by Operating Mode:

Single-Acting Cylinders: Hydraulic pressure drives the piston (or plunger) in one direction only; return motion relies on external force (gravity or spring force). This type suits certain unidirectional applications but is relatively uncommon in harvesters.

Double-acting hydraulic cylinders: Enable movement in both directions using hydraulic pressure, offering high control precision to meet harvester requirements across varied terrains and operating conditions. This is the most common type in harvesters.

Third, Hydraulic Cylinder Maintenance and Care

1. Regular Fluid Inspection:

Hydraulic fluid serves as the working medium for hydraulic systems, and its quality directly impacts cylinder performance and lifespan. Regularly inspect fluid condition; replace immediately if deterioration or contamination is detected.

2. Maintain Cleanliness:

Keep cylinders free from dust and contaminants. Ensure work areas and tools are clean during cylinder disassembly and installation.

3. Regularly Inspect Seals:

Seals are critical components of hydraulic cylinders, directly affecting sealing effectiveness. Regularly inspect seals for wear and aging. Replace damaged seals promptly.

4. Avoid Overloading:

Prevent overloading during operation to avoid damaging the cylinder and system. Select appropriate cylinder specifications and models during design and use to ensure they meet operational load requirements.

Hydraulic cylinders for grain harvester

Hydraulic cylinders for combine harvesters