

hydraulic cylinders for seeders: a key component for improving seeding accuracy

In modern agriculture, [hydraulic cylinders for seeders](#) control the lifting, row spacing adjustment, and seeding depth of seeding components through smooth extension and retraction movements, ensuring that seeds are evenly buried in the soil and laying a solid foundation for crop growth.

1. Control depth to ensure optimal seed germination conditions

Seed germination requires an appropriate soil depth. If the depth is too shallow, seeds may be washed away by rain; if too deep, they may struggle to break through the soil. The hydraulic cylinder enables precise adjustment of the seeder's soil penetration depth, with a range of 1 cm to 5 cm. When planting corn, the cylinder pushes the furrow opener down by 3 centimeters to ensure the seeds are in a moist soil layer; when planting vegetables, the cylinder retracts via a button operation, lifting the components to reduce the depth to 1.5 centimeters.

In uneven fields, this precise control is even more critical. When encountering small hills, the cylinder automatically extends or retracts to compensate for height differences, ensuring that the burial depth error for each row of seeds does not exceed 2 millimeters. According to tests by agricultural machinery operators, seeders equipped with hydraulic cylinders achieve a 15% higher seed germination rate compared to traditional machinery, and the uniformity of seedlings in later stages is also significantly improved.

2. Adjust row spacing to meet the needs of different crops.

Different crops require different growing spaces. Corn row spacing is typically 60 cm, while soybeans require 40 cm. Hydraulic cylinders can easily adjust the spacing of the seeding units. By turning the adjustment lever, the cylinders push or pull the seeding legs to move, allowing row spacing to be changed in just a few minutes.

Large seeders are typically equipped with multiple cylinders, each controlling a set of seeders. This allows for simultaneous adjustment of the overall row spacing or individual fine-tuning of a specific row. On irregular plots, the cylinders can retract the edge seeders to prevent seed waste on field borders.

3. Quick lifting and lowering to reduce headland loss

When transferring the seeder from the road to the field, the cylinders quickly lower the seeding components; and when turning at the field edge, they can be raised within 3 seconds to prevent seeders from entering the soil in non-seeding areas. This action reduces ineffective seeding area by nearly 10 square meters daily, equivalent to an additional 5 kilograms of grain per mu.

When seeders encounter hard objects such as rocks or weed piles, the cylinders quickly retract to lift the components, minimizing damage to blades and gears.

4. Easy maintenance and long service life

[Hydraulic cylinders for seeders](#) require minimal maintenance. Simply wipe off any dirt from the piston rod after each use and inspect the hydraulic hose connections for leaks once a month. If the lifting speed slows down, it is likely due to contaminated hydraulic fluid. Replacing the hydraulic fluid takes only 20 minutes, which is simpler than changing engine oil.

High-quality cylinders are made from special steel with a hard chrome plating on the surface, making them resistant to dirt wear. Under normal use, they can last for over five years. Even during early spring planting at -10°C, the hydraulic oil inside the cylinder will not freeze, ensuring normal operation.

Currently, an increasing number of seeders are equipped with hydraulic cylinders. Though cost-effective, they can double seeding efficiency and save seeds. For farmers, hydraulic cylinders reduce labor input and genuinely increase yields, making them widely recognized.

toro 20 hydraulic seeder

toro hydraulic slit seeder

toro 20 seeder