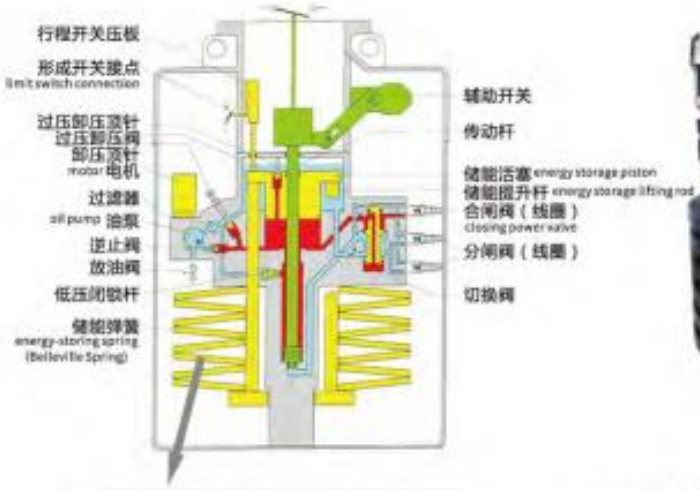
SUNZO 液压碟簧操作机构原理简介

Principle of Hydraulic Disc Spring Operating Mechanism





弹簧储能，提供压力，从而建立高压油

基本原理

由弹簧作为储能部件（目的是建立油压），液压油作为传动载体的机构。

主要零部件

储能部件：电机、油泵、碟形弹簧、储能活塞及储能提升杆等。

储能控制部件：行程开关。

控制回路：辅助开关、合分闸阀、切换阀

原理图

分闸状态原理示意图

储能过程

当机构失压时，行程开关的接点导通控制，电机通电，电机转动带动油泵将油从低压区泵向高压区，随着高压油量的增加，高压油推动储能活塞向上运动，储能活塞带动提升杆向上运动，提升杆带动拖盘压缩碟形弹簧，到达预定位置时，行程开关的接点断开，电机停转。由于密封系统的作用，弹簧被保持在压缩状态。

Basic principles

Use the spring as the energy storage part (aiming at establishing the oil pressure) and hydraulic oil as the mechanism of transmission carrier.

Major parts

Energy storage parts: motor, oil pump, disk spring, energy storage piston, energy storage lifting rod, etc.
Controlling parts for energy storage: limit switch.
Controlling circuit: auxiliary switch, closing and opening valve, switching valve.

Process of energy storage

When the mechanism loses the pressure, the contact joint of limit switch is connected to the control and the motor is electrified, after which the motor will rotate to drive the oil pump to pump oil from low pressure area to high pressure area. With the increase of oil volume in the high pressure area, the oil in the high pressure area will push the energy storage piston to move upward and the energy storage piston will drive the lifting rod to move upward. The lifting rod will drive the trawl compression spring. Upon arrival at the predetermined position, the contact joint of limit switch will be disconnected and the motor will stop rotating. Due to the effects of the sealing system, the spring is retained in the compression status.