上海布莱斯克石油设备有限公司
Topland Oilfield Supplies Ltd.

QKY21-25 Liquid-pneumatic switch

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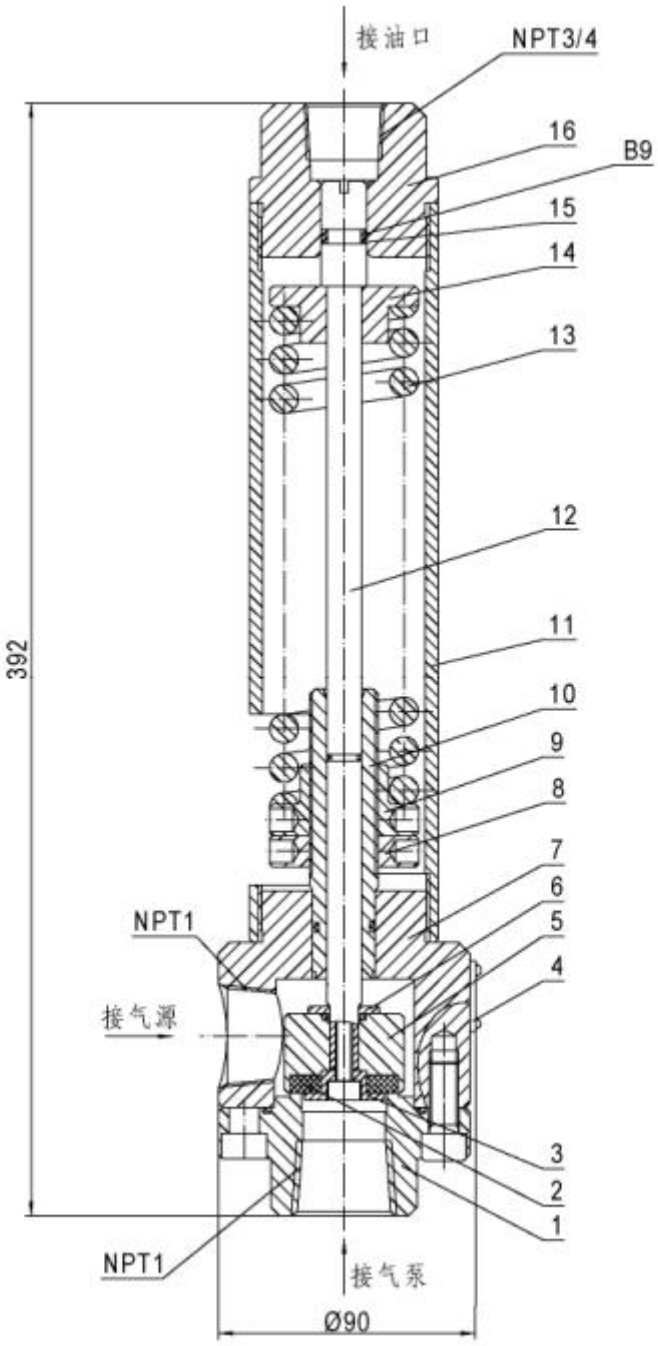

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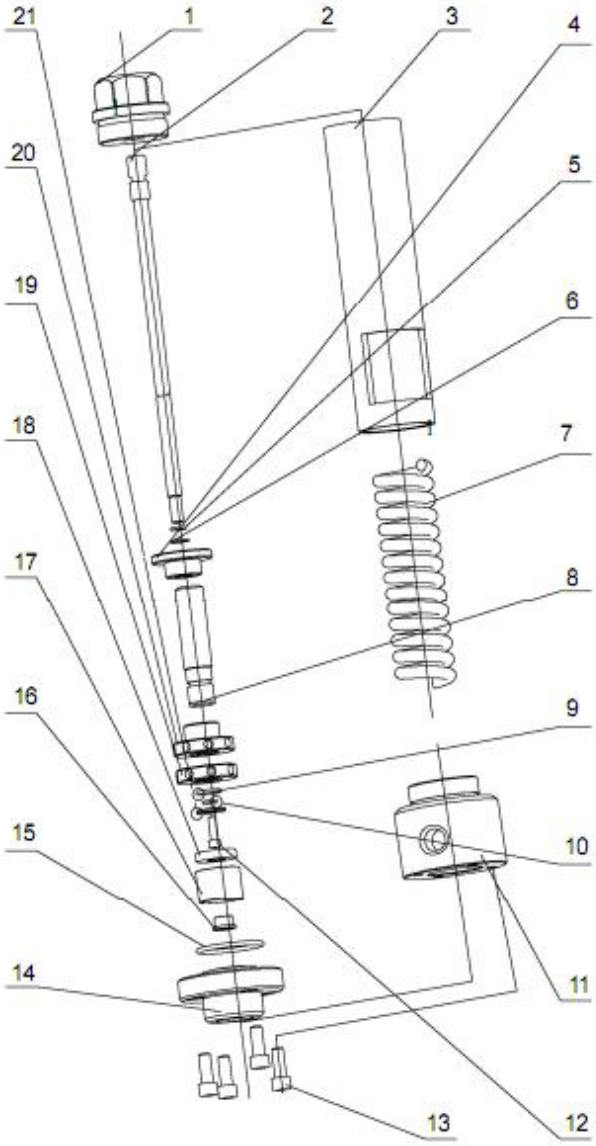

图 8 QKY21-25 型液气开关

QKY21-25 Liquid-pneumatic switch parts

SN	Product Name	Qty	Remark
1	Valve seat	1	
2	Mandrel	1	
3	Connection sleeve	1	
4	Support sleeve	1	
5	O-Ring	1	11.2*2.65
6	Retaining ring	1	
7	Spring	1	
8	Support core sleeve	1	
9	O-Ring	1	10*1.8
10	O-Ring	1	17*2.65
11	Vent connector	1	
12	Hexagon socket head cap screws	1	M6*18
13	Hexagon socket head cap screws	4	M10*25
14	Connecting flange	1	
15	O-Ring	1	51.5*2.65
16	Sleeve	1	
17	Seal seat	1	
18	Gasket	1	
19	Lock nut	1	
20	Support nut	1	
21	Gasket	1	

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Liquid-pneumatic switch

1. Overview

The liquid-pneumatic switch is a two-position two-way reversing valve that controls the start and stop of the pneumatic oil pump.

2. Main technical parameters

Type	Cracking pressure	Closing pressure	Weight
QKY21-25	17.85Mpa（2580psi）	21Mpa（3000psi）	7.8kg（17.2lb）

3. Structure and working principle

The main components of the QKY21-25 hydraulic switch include:

Connection flange, gasket, press sleeve, nameplate, sealing seat, gasket, vent joint, lock nut, back nut, support core sleeve, connecting sleeve, core rod, spring, support sleeve, retaining ring, valve seat, O-ring sealing ring.

The NPT3/4 interface of the valve seat is connected to the oil circuit of the accumulator, the NPT1 interface of the connecting flange is connected to the pneumatic pump, and the NPT1 interface of the joint is connected to the air source. The oil pressure of the accumulator acts on the core rod. When the hydraulic oil pressure drops to 17.85Mpa, the hydraulic pressure acting on the core rod is less than the spring force, and the core rod, the sealing seat and the gasket move up together under the action of the spring force. At the same time, the air circuit is connected, and the compressed air enters the pneumatic oil pump through the ventilation joint and makes it work. The pressure oil discharged by the pneumatic oil pump enters the system. When the system pressure rises to 21MPa (3000psi), the hydraulic pressure acting on the core rod is greater than the spring force, so that the core rod moves down, and the air circuit is closed at the same time, and the compressed air cannot enter through the ventilation joint. Pneumatic oil pump, the pneumatic oil pump stops working.

4. Instructions for use

The adjustment method of setting pressure is to insert a round steel rod into the round hole of the lock nut, unscrew the lock nut, and then insert the steel rod into the round hole of the support nut, rotate clockwise, the spring compresses, the tension increases, and the closing oil pressure rises. ; Rotate counterclockwise, the spring is stretched, the tension is weakened, and the closing oil pressure is reduced.

The oil pressure adjustment and calibration of the liquid-air switch should be carried out when the air pump is running. Generally, it has been adjusted before leaving the factory, and it is generally unnecessary to adjust it when it is used on site. However, after long-term use, the closing oil pressure is reduced, and it can be adjusted as appropriate.