

The liner hanger is designed for lowering the "liners" (secret columns) of casing pipes \varnothing 168 mm and their cementing during the construction of oil and gas wells. Back off the hanger with rotation "to the right" 15 rotations.

The liner hanger includes (Fig. 1):

1-body; 2-seat bushing; 3-breaking pins, 4-coupling; 5-stem; 6 - slider; 7-subcoupling; 8-displacement plug; 9-sealing cup (made of high-temperature rubber up to $+200^{\circ}\text{C}$); 10,11 - O-rings GOST 98833-73/GOST 18829-73 (made of high-temperature rubber up to $+200^{\circ}\text{C}$); 12- discharge plug; 13-male hub, 14 - nozzle.

Materials:

Steel 40X GOST 4543-71, incl. indicated in table 1;

Table 1

Part name	Pos. in fig. 1	Material	HRC hardness, max.	Yield point, σ_T , MPa
Body	1	40X GOST 4543-71	32...36HRC ₉	750
Coupling	4	40X GOST 4543-71	28...32HRC ₉	650
Male hub	13	40X GOST 4543-71	32...36HRC ₉	750
Nozzle	14	40X GOST 4543-71	32...36HRC ₉	750

Aluminum alloy D16;

High-temperature rubber RK-1802;

B cavity, filed with the lubricant TOMFLON SCM 200 ($0...+200^{\circ}\text{C}$) (TS 0254-012-76643964-05).

Technical characteristics:

Working pressure, max.	20 MPa
External excess pressure, max.	53,85 MPa
Internal excess pressure, max.	55,59 MPa
Cargo capacity, max.	150 tons
Working temperature, max.	$+200^{\circ}\text{C}$
Pressure of the discharge plug pin cut:	40-50 atm
Pressure of the cut of pins of the plug for opening the "windows":	80-100 atm