Hydraulic pipe puncher type DGT-2

The hydraulic pipe puncher is used to punch hole to drain fluid from tubing during repair and emergency works in the well. The pipe puncher is lowered in an assembly of pipes, on cable or by dropping.

Fig. 1.

Setup and operation principle

The hydraulic pipe puncher consists of body1, body2, body3, piston, core, retracting mechanism, rod, back-pressure valve, nozzle, sub, shear pins, plug and sealing rings with circular section. Bodies, sub and nozzle are connected by threads. Rod is connected with sub by shear pin (shear pins have different diameter in order to receive various shearing loads depending on pressure on rod). The pot between rod and body 1 is filled with air at atmospheric pressure. Pots of body 2 and body 3 are filled with oil. The nozzle of rod comes into body 2 aperture and has sealing ring with circular cross-section. Piston with center punch is set in body 3. Body 2 pot is connected by oil port in body 3 into piston underside pot. There is also an oil port to the nozzle with backpressure valve in it. The body has retracting mechanism of piston with center punch after punching a hole in tubing.

Technical parameters

Code	DGT-2-73
Diameter of punched pipes, in	*2.87*
Connecting thread	*NKT-48*
OD of body1, in	*2.2*
OD of box, in	*2.24*
OD of nozzle,	*1.85*
OD of center punch, in	*0.35*
OD of shearing pin, in	*0.22/ 0.25*
OD of valve shearing pin, in	*0.2*
Pressure differential necessary to shear shear pin, psi - diameter 0.22 in - diameter 0.25 in	 *3770+290* *4205+290*
Length, ft	*3.74*
Weight, lb	*24.26*