

Well Flow Management

DST-TCP

Hydraulic Jar (JAR)

The Hydraulic Jar is used for the purpose of freeing stuck pipe and tools in the wellbore. This device delivers heavy impact blows to the test string by storing energy within the tool. In well test applications the tool is run directly above the Safety Joint. The Hydraulic Jar is designed to transmit torque and withstand severe tensile and compressive loads.

The Hydraulic Jar is activated by picking up on the test string and holding tension. The applied tension at the tool forces the oil in the oil chamber to pass through a flow regulator at a controlled rate. This controlled action continues until the piston reaches the grooved section of the cylinder bore; the oil is then rapidly discharged at an uncontrolled rate to the lower section of the oil chamber. This release of energy together with the energy stored in the stretched test string causes the mandrel to accelerate upwards until the mandrel hammer area strikes the anvil stop, delivering high impact force to the stuck object. The tool is multi-use and can be rapidly re-cocked by slacking off the work string.

Specifications

Working pressure	15,000 psi/103.42 Mpa
Working temperature (See note 1)	350 °F/175 °C
OD (in/mm)	5" / 127mm
ID (in/mm)	2.25"/57.2mm
Upper thread connection	3 ½" IF
Lower thread connection	3 ½" IF
Tensile strength	350,000 lbf / 155,600 daN
Tensile strength at max working pressure	30,000 lbf / 13,345 daN
Tool length (in/mm)	113.8in/2890mm
Tool weight (lbs/kg)	525 lbs/ 133 kg
Service condition	H2S per Nace MR-01-75
Maximum overpull before the jar fires	80,000lbs/36 tons

Note 1: Working temperature can be increased by changing sealing configuration as follows: Up to 400°F/204°C – Standard elastomers and premium back-up rings.

