

# Hydraulic Jar

Pulls stuck strings loose with upward-moving shock

## APPLICATIONS

- Downhole test operations
- Tubing-conveyed perforating operations
- Any application involving mechanical packers

## BENEFITS

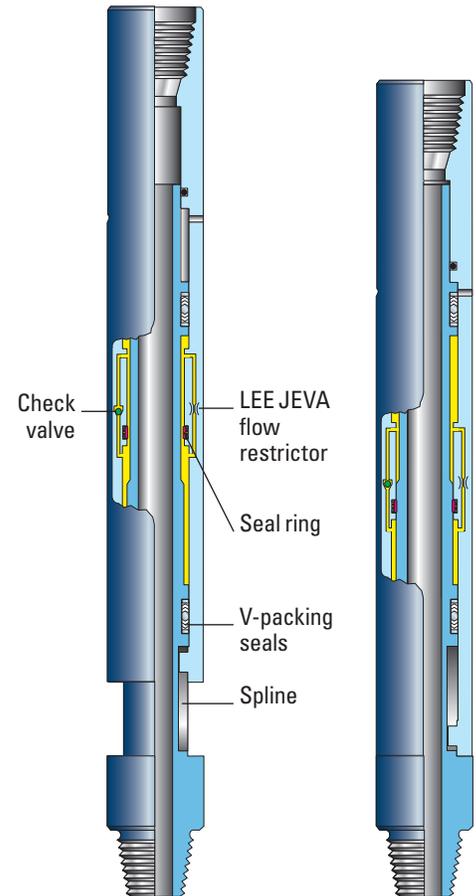
- Frees stuck tools without tripping
- Permits repeated jarring with resettable capability

## FEATURES

- Automatically resets by applying string weight on the packer
- Withstands HPHT environments
- Controls metering
- Provides an unlimited number of concentrated shock loads

The hydraulic jar tool (JAR) is used if a packer or guns become stuck. The JAR can be used to provide an upward shock to help pull the tools loose. The tool comprises two parts: a housing connected to the free tools and a spline mandrel attached to the stuck tools. The housing can move up and down the mandrel.

An oil chamber between the housing and the spline mandrel is separated into two parts by a flow restrictor and check valve. The JAR is initially closed (housing down). If the lower section becomes stuck, an overpull is put on the string to store energy in the drillpipe. This overpull causes the JAR to begin metering. Oil slowly moves through the flow restrictor, transferring oil from the top chamber to the lower chamber until the seal ring reaches the undercut on the mandrel. When this occurs, the housing moves up quickly, and an impact is produced upward on the stuck tools. Once the JAR is activated, the string is lowered, and the housing moves down. Oil flows through the one-way check valve back into the upper section, and the tool is recocked, ready to jar again as many times as needed.



Hydraulic jar tool.

## Specifications

Model	JAR-F	JAR-G	JAR-HK
Max. OD, in [mm]	5 [127]	3.125 [79]	7 [178]
Tool ID, in [mm]	2.25 [57]	1.125 [29]	3.5 [89]
Max. differential pressure, psi [MPa]	15,000 [103]	15,000 [103]	12,000 [83]
Temperature rating, degF [degC]	375 [191]	375 [191]	350 [176]
Length, ft [m]	7.92 [2.41]	7.52 [2.29]	10.66 [3.25]
Weight, lbm [kg]	419 [190]	165 [75]	800 [363]
Service (NACE MR0175)	H <sub>2</sub> S, acid	H <sub>2</sub> S, acid	H <sub>2</sub> S, acid
Tensile strength at min. yield after jarring, lbf [kN]	350,000 [1,557]	160,000 [712]	480,000 [2,135]
Max. jarring pull, lbf [kN]	70,000 [311]	35,000 [156]	125,000 [556]
Connection	3½ IF or PH-6	2¾ Reg or PH-6	5-in 26.7-lbm/ft Tenaris Wedge 563