

Wired Griffith HMJ Hydraulic/Mechanical Jar

The Wired Griffith™ Hydraulic/Mechanical Drilling Jar (Wired-HMJ) is well suited for virtually all drilling conditions. The Wired HMJ is engineered to overcome the limitations associated with pure hydraulic or mechanical jars, yet retain the advantages of both types while maintaining bi-directional data network connectivity within the IntelliServ network of wired pipe. The Wired HMJ is a hydraulic delay upstroke jar and mechanical downstroke jar featuring a mechanical latch which holds the mandrel in place during tripping and drilling operations. The high data transmission coaxial cable runs through the tool providing a reliable data transmission network seamlessly integrated into the well-known and reliable mechanical design of the Griffith HMJ tool.

To jar upward, overpull is applied to the drillstring until the preset mechanical latch setting is overcome allowing the jar to enter into the hydraulic delay sequence. The desired overpull, above free string weight, is taken up as the jar opens slowly under hydraulic restriction (delay) after which the jar enters the free stroke and the mandrel accelerates to the fully extended position creating the upward jarring impact. Lowering the drillstring resets the latch making the Wired HMJ ready for another jarring cycle or to resume drilling operations.

To jar down, the drillstring is lowered until the compressive force applied exceeds the preset mechanical latch setting. Once the latch releases, the mandrel accelerates to the fully closed position to create the downward jarring impact. Raising the drillstring until free movement stops indicates the latch has reset and the Wired HMJ is prepared to jar again or to continue drilling operations.

Technical data

OD	4.75 in.	6.5 in.	8 in.
Series/assembly	4540	474	336
Wired series/assembly	4540	4547	4536
ID	2.25 in.	2.75 in.	2.81 in.
Max hole diameter	7.875 in.	12.25 in.	17.5 in.
Length	22 ft.	27 ft.	23 ft.
Weight	900 lbs	2,100 lbs	2,972 lbs
Stroke up	4 in.	6 in.	5 in.
Stroke down	4 in.	6 in.	6 in.
Torsional yield	16,000 ft.lb	41,000 ft.lb	68,000 ft.lb
Jarring load up/down	75,000 lbf	180,000 lbf	220,000 lbf
Max tensile load to yield	354,000 lbf	865,000 lbf	956,000 lbf
POA	6.5 in ²	11 in ²	14.2 in ²
Connection type	wXT39	wDS50	wDC58
Coil version	V2	V2	V2
Wired seal kit	KTF0158	KTF0094	KTF0093

4.75 in. Base series/assembly #380 and wired series/assembly #4540

6.5 in. Base series/assembly #474 and wired series/assembly #4547

8 in. Base series/assembly #336 and wired series/assembly #4536

4.75 in. Wire kit PN# KTF0158, 6.5 in. wire kit PN# KTF0094, and 8 in. wire kit PN#0093

All Wired Griffith Hydraulic-Mechanical Drilling Jar connections have last generation V2 coils



Features and benefits

- 100% integrated into the IntelliServ broadband network
- State of the art and last generation V2 coils & armored coaxial cable for reliable high speed data transmission
- Hydraulic delay upstroke jar and mechanical downstroke jar
- Adjustable mechanical latch settings
- Jar placement can be in tension, neutral or compression
- Connectivity and real time data transmission – high speed, bi-directional downhole data transmission to surface with up to 57,600 bits/sec
- Simple to operate: requires no torque application in the jarring procedure
- No unexpected jarring while making connections or drilling
- Continuous and consistent jarring performance