Dual Chamber Double Acting Hydraulic Drilling Jar

The Dual Chamber Double Acting Hydraulic Drilling Jar (DHJDA) is a bi-directional drilling jar incorporating hydraulic delay without a latch mechanism. This jar will allow the operator to apply variable impact in both the up and down directions.
A variant of the Ultimate Double Acting Hydraulic Drilling Jar, the DHJDA separates the up and down chambers allowing customization of the working fluid.

Features and Benefits

- The DHJDA is hydraulically controlled and jars in both directions, with impact force controlled by the operator.
- The metering device ensures consistent delay times over the full range of operating temperatures.
- The DHJDA operates via a simple up and down motion and is unaffected by right- or left-hand torque.
- Using different fluids in the up and down chambers allows for different delay times in the up and down directions.
- Standard and optional high temperature seal kits are available. External sealing surfaces are tungsten carbide-coated to enhance wear and corrosion resistance.

Operation

Jarring Up

- With the jar in the neutral position, apply the desired overpull in excess of the free string weight, starting the hydraulic delay sequence. At the end of the hydraulic delay, the jar will release causing an upward impact force.
- If necessary, lower the drill string sufficiently to close the jar to the neutral position, ready to jar up again.

Jarring Down

- With the jar in the neutral position, lower the drill string to apply the desired down force, starting the hydraulic delay sequence. At the end of the hydraulic delay, the jar will release causing a downward impact force.
- If necessary, raise the drill string sufficiently to open the jar to the neutral position, ready to jar down again.

Handling

- To prevent unintentional tripping during handling, the DHJDA is fitted with a safety clamp to keep the jar in the fully extended position. The safety clamp must remain installed until the jar is ready to run into the hole.
- When preparing to run into the hole, connect the jar to the drill string and apply tension before removing the safety clamp.
- When coming out of the hole, install the safety clamp while the jar is still under tension and fully extended.

Dual Chamber Double Acting Hydraulic Jar Specifications

IMPERIAL

Nominal OD* (inch)	Length (feet)	Thru Bore (inch)	Tensile Yield (lbs)	Torsional Limit (ft lbs)	Max Pull During Delay (lbs)	Free Stroke Up / Down (inch)	Total Stroke (inch)
4.25	21.3	2.00	310 000	16 300	70 000	8.0	25.0
4.75	22.0	2.25	461 000	21 500	98 000	8.0	25.0
6.50	23.1	2.75	1 220 000	63 700	175 000	8.0	25.0
6.75	23.1	2.75	1 220 000	63 700	190 000	8.0	25.0
8.00	23.2	3.00	1 163 800	103 200	240 000	8.0	25.0

METRIC

Nominal OD* (mm)	Length (m)	Thru Bore (mm)	Tensile Yield (daN)	Torsional Limit (N·m)	Max Pull During Delay (daN)	Free Stroke Up / Down (mm)	Total Stroke (mm)
108	6.5	51	137 900	22 100	31 100	200	640
121	6.7	57	205 100	29 100	43 600	200	640
165	7.0	70	542 700	86 400	77 800	200	640
171	7.0	70	542 700	86 400	84 500	200	640
203	7.1	76	517 700	139 900	106 800	200	640

Other sizes available upon request.
Torsional Limit is based on a coefficient of friction of 0.12.
*As-new OD is typically the nominal OD plus API Drill Collar Allowance.
Specifications are based on as-new condition and are subject to change without notice.