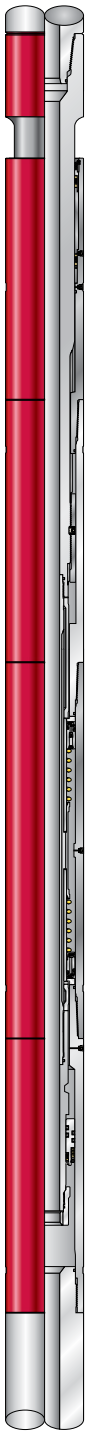
Dailey® HyPulse Jar Slinger®



Weatherford's patented *Dailey HyPulse Jar Slinger* is designed for use in conjunction with a drilling jar to maximize the impact forces.

Applications

- All conventional, deviated, and extended-reach wells

Features, Advantages and Benefits

- The one-piece involute spline mandrel provides maximum torque with minimal backlash to ensure effective transfer of drillstring torque through the tool. Full torque can be transmitted through the tool at all times without affecting the operation of the slinger.
- The tool requires nothing more than axial motion for operation. The drillers need only be concerned with the operation of the drilling jar.
- The design of this tool provides the storage of energy required to maximize the effectiveness of the jar.

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Specifications

OD (in./*mm*)	4-3/4 *120.65*	6-1/4 *158.75*	6-1/2 *165.10*	7 *177.80*	7-3/4 *196.85*	8 *203.20*	9-1/2 *241.30*
ID (in./*mm*)	2-1/4 *57.15*	2-1/4 *57.15*	2-3/4 *69.85*	2-3/4 *69.85*	3 *76.20*	3 *76.20*	3 *76.20*
Tool joint size (API)	NC-38, 3-1/2 IF	NC-46, 4-1/2 XH	NC-50, 4-1/2 IF	5-1/2 FH	6-5/8 Reg.	6-5/8 Reg.	7-5/8 Reg.
Tensile yield* (lbf/*kN*)	500,000 *2,224*	832,000 *3,701*	934,000 *4,155*	1,200,000 *5,338*	1,600,000 *7,117*	1,750,000 *7,784*	2,300,000 *10,231*
Torsional yield* (lbf-ft/*kN•m*)	20,000 *27.1*	49,300 *66.8*	56,200 *76.2*	76,400 *103.6*	76,400 *103.6*	105,000 *142.4*	160,000 *216.9*
Maximum overpull up/down (lbf/*kN*)	85,000 *378*	200,000 *890*	175,000 *778*	220,000 *979*	260,000 *1,157*	300,000 *1,334*	500,000 *2,224*
Approximate length extended (ft/*m*)	32.0 *9.8*	33.0 *10.1*	33.0 *10.1*	33.0 *10.1*	33.0 *10.1*	33.0 *10.1*	35.5 *10.8*
Approximate weight (lb/*kg*)	1,200 *544*	2,050 *930*	2,400 *1,089*	3,000 *1,361*	3,500 *1,588*	3,800 *1,724*	5,500 *2,495*
Free-travel up/down stroke (in./*mm*)	7.50 *191*	8.25 *210*	8.50 *216*	8.50 *216*	9.75 *248*	9.75 *248*	9.75 *248*
Maximum bottomhole temperature (°F/°*C*)	400° *204°*						
Pump-open area (in.^{2}/*cm*^{2})	10.3 *66.5*	15.9 *102.6*	19.6 *126.5*	23.8 *153.5*	28.3 *182.6*	28.3 *182.6*	38.5 *248.4*
Circulating pressure (psi/*bar*)	5,000 *345*						
Hydrostatic pressure (psi/*bar*)	N/A						

* Tensile and torsional yield values are calculated per API RP7G, based on nominal dimensions and the published yield strength of the material. These values do not constitute a guarantee, actual or implied.

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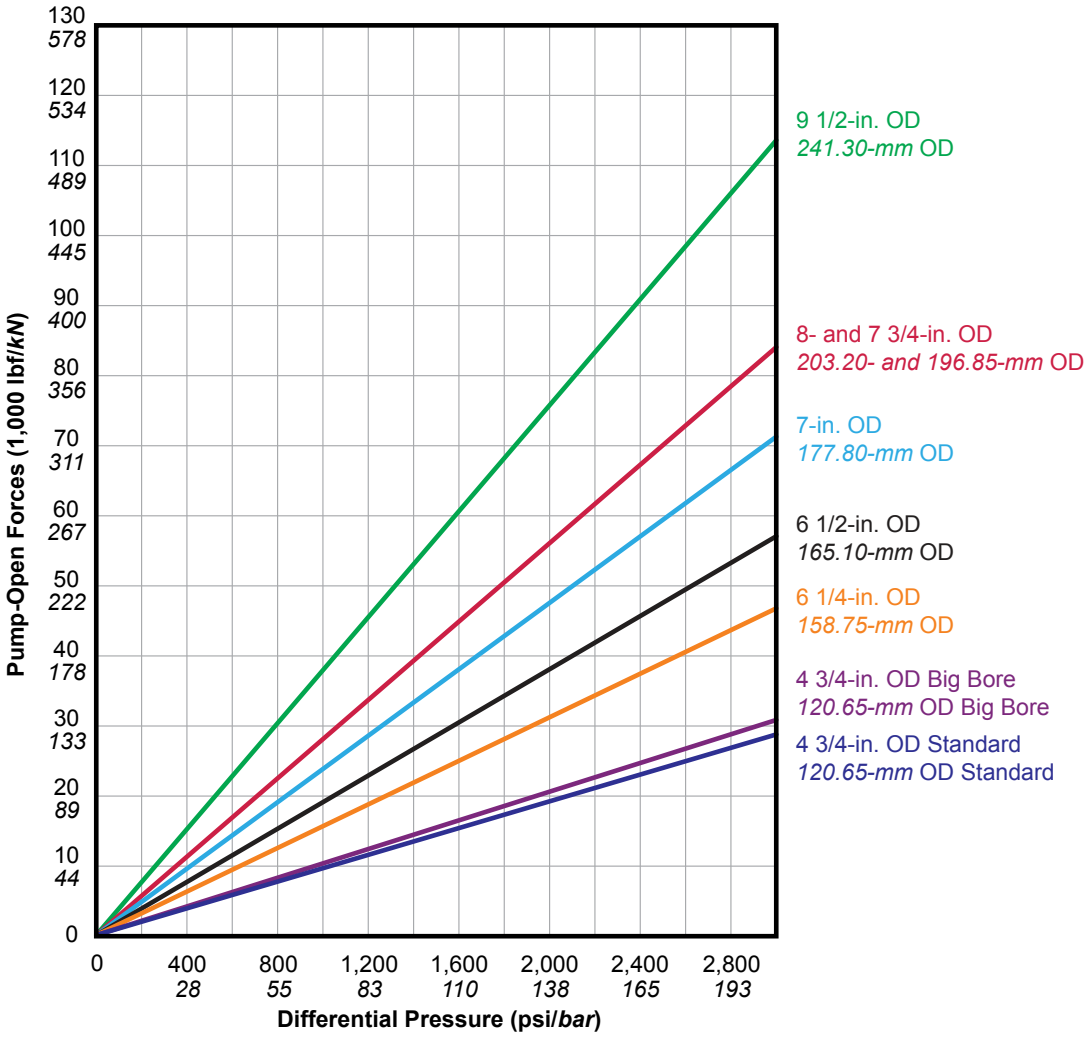
Pump-Open Force Chart



Pump-open force is created by pressure drop across the bit. The pump pressure creates a reaction force in the tool that tries to force it open. Reduce the pump to idle before attempting to jar.

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Operation

Run the tool above the jar with adequate joints of heavyweight pipe or drill collars between it and the jar. If down-jarring is anticipated, run several joints of heavyweight pipe or drill collars above the tool. The weight above the slinger compresses the fluid during down-jarring, and this compression within the slinger accelerates the weight between jar and slinger downward when the jar releases. The load that the drawworks places on the drillpipe as the pipe is pulled to actuate the jar compresses the fluid during up-jarring. When the jar releases, the fluid compressed within the tool and the stretch of the pipe above it causes the weight between the jar and tool to accelerate upward. For down-jarring the string weight compresses the fluid. When the jar releases, the compressed fluid and the pipe weight accelerate the weight between the jar and tool downward.

The tool is not affected by drilling torque. No pipe manipulation, other than axial motion, is required for operating this tool. If left in tension or compression for an extended period of time, as in normal drilling operations or when the tool is “racked back,” the tool will slowly open or close, depending on the direction in which it is loaded. Therefore, when beginning the jarring operation, slack off or pick up enough weight to ensure that the pressure chamber is filled before pulling on the drillpipe.

Maintenance

Take the following steps each trip out of the hole:

1. Wash the mud from the polished mandrel and from inside the bottom connection.
2. Check the polished mandrel carefully for any signs of corrosion, pitting, or flaking of the coating.