



# ENERGY CASE STUDY

## HYDRAULIC DOWNHOLE DRILLING JAR







MELDIN® HT THERMOPLASTICS

## Hydraulic Downhill Drilling Jar

Christophe Valdenaire March 2021

OIL & GAS BACK-UP RINGS HIGH TEMPERATURE

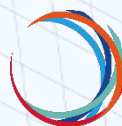
### Environment

Operated on land, offshore or ultra-hot boreholes, hydraulic downhole drilling jars are rather versatile and help to free and move the drill pipe components in the event that they become stuck in the formation. They are critical, significantly reducing the risk of expensive equipment loss.

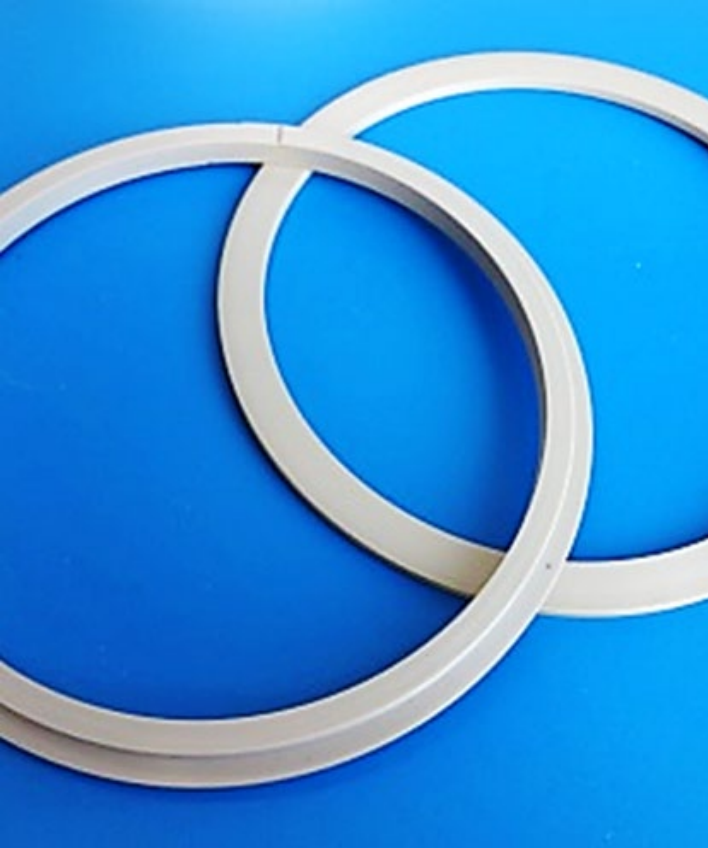
### Challenge

Due to the variable impact generated from both the up and down directions of modern drilling jars, wear and corrosion resistance are major concerns. There is a critical need to maximize efficiency of this equipment by the oil and gas industry. Drilling jars are built so they can better withstand the rotary and vibrational loading associated with the drilling process; therefore, they need to last for a longer period of time.

Within the jar's hydraulics are powerful seals that can withstand up to 20,000 psi and up to 260°C (500°F). Numerous back-up seals are used to guard against premature failure of drive lubrication seals and rig pump hydraulic seals.



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## Solution

When used with Meldin® backup rings, the drilling jar is able to endure high pressures and high temperatures in high-volume environments, making them extremely durable and requiring little maintenance.

## Sticky Situation Averted!

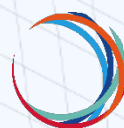
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### Benefits

- Excellent durability through superior thermal resistance
- Strong mechanical properties and chemical resistance

### Specifications

Solution	• Meldin® 5301
Area	• Hydraulic Downhole Drilling Jar
Material	• PEEK
Precision part	• Packing Kit Backup Ring
Technical details	• Media: Hydrocarbons, oil, water
	• Temperature: Up to 260°C (500°F)
	• Pressure: Up to 5,000 psi (345 bar)
	• Counter Surface: Inconel®



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### About the Author

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