



TSUNAMI
AXIAL VIBRATION TOOL



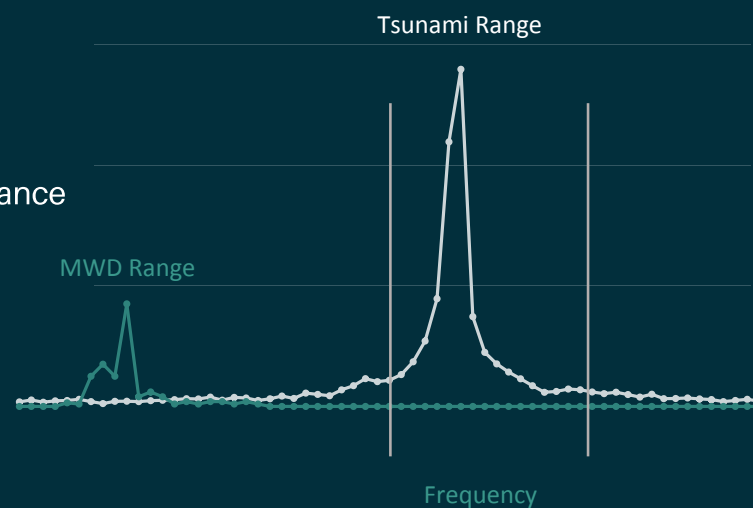
ARRIVAL
ENERGY SOLUTIONS

The ULTIMATE Reach from Innovative Design

Engineered to go further than other Friction Reduction Devices (FRD) and built to achieve superior performance with unsurpassed reliability. The Tsunami™ offers unmatched flexibility in downhole drilling performance.

Cost Saving Benefits

- Reduce drilling dysfunction
- Mitigate Stick-Slip
- Improve Weight Transfer
- Improve Sliding and Rotating ROP
- Improve Tool Face Control and RSS Performance
- Variable Frequency Downhole
- Superior On-Demand Capabilities



Features

- Surface Chemically Hardened Materials
- Premium Steel Components - North American steel products
- PDC Thrust Bearings - PDC bearings provide longer life
- Custom Power Section - Proprietary use in the Tsunami
- Low Friction Bearings - Less friction means lower operating pressures
- Dart System - Flexibility to control the tool frequency and mode from surface
- Valve Setup - Proprietary design allows for lower PSI drop
- Shock Tool - Arrival manufactured and designed with configurable Amplifiers
- Safety Joint - Arrival manufactured and designed

Arrival Canada
(780) 980-3080

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(833) 645-8665

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Technical Specifications

525 SERIES

| | |
|---------------------|-----------------------------------------------------|
| Hole Size | 6.00 to 6.75 inch (152 to 172 mm) |
| Standard Connection | DS-40 †Can accommodate most drill pipe connections. |
| Make-up Torque | 19,600 ft/lbs (26,574 Nm) |
| Tool Length | 26.58 feet (8.10 meters) †With Safety Sub attached |
| Connection OD (Pin) | 5.25 inch (133.35 mm) |
| Connection OD (Box) | 5.25 inch (133.35 mm) |
| Through Bore | 2.00 inch (50.8 mm) |
| Flow Range | 200 - 350 GPM (757 - 1325 LPM) |
| Temperature | 320°F (160°C) |
| Frequency | 8 to 14 Hz |



Configurable Amplifiers

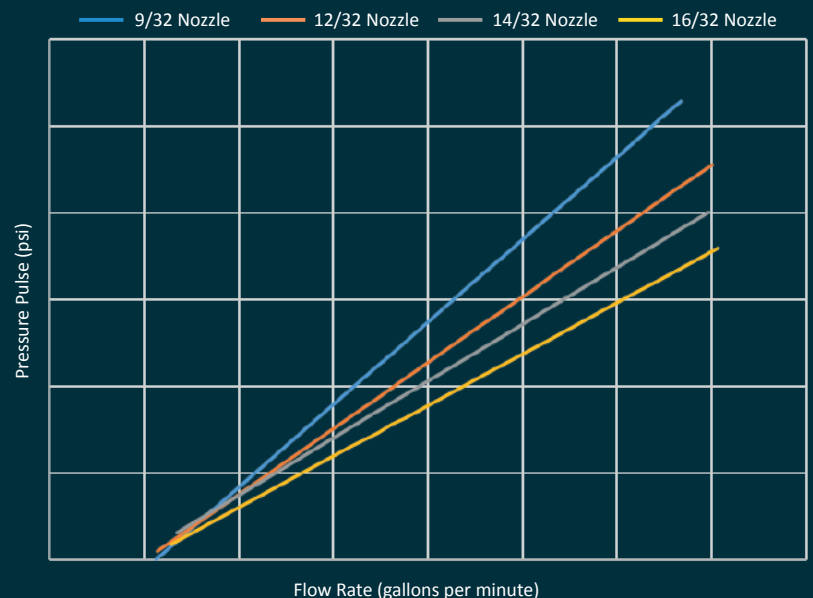
Shock Tool Design

Dual action design is optimized to allow for maximum force transfer.

Drop Dart Design

Selectable Dart design allows users to control tool mode changes while downhole. Flexibility to change operating and frequency modes when needed gives users control.

- Decide when and how to activate
- Control pressure and force
- Change frequency
- Improve function for environment
- Selectable nozzles for all applications



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