

Proven Friction Reduction, Improved Weight Transfer

National Oilwell Varco Downhole offers the most comprehensive range of proven friction reduction tools for Drilling, Completions, and Intervention Services.

The Agitator tool has provided unparalleled downhole friction reduction technology for far longer than any other tool in the industry. The Agitator gently oscillates the Bottom Hole Assembly to significantly improve weight transfer and reduce friction. This improves weight transfer and reduces stick-slip in all modes of drilling, but especially when oriented drilling with a steerable motor.

The Agitator provides BHA excitement to improve weight transfer to the bit. Extends the boundaries of extended reach drilling with motors, or enhance efficiency in less complex or rotary applications.

FEATURES AND BENEFITS

Significantly Improves Directional Control

- Gentle oscillation of BHA reduces friction and dramatically improves weight transfer
- Enhances toolface control & reduces Stick-slip
- Extends step-out capability
- Prevents weight stacking and allows excellent tool face control
- Provides means of sliding at increased ROP and lower weight off hook
- Allows weight transfer with less drill pipe compression

Bit Friendly

- Can be used with roller cone bit or fixed cutter bits
- No impact forces to damage teeth or bearings
- Extends PDC life through fine weight transfer; no spudding

Downhole Tool Compatibility

- Fully compatible with all vendor MWD/LWD
- Field proven above RSS
- Reduces shocks during drilling
- Reduced lateral and torsional vibration
- Optimized steerable assembly rotary efficiency
- No interference with downhole tool signals
- Run above or below MWD
- No impact force to bit or tubulars

Efficiency

- Increased sliding ROP
- Reduced time lost in toolface orientation and working BHA
- Increased ROP in some rotary applications



Technical Specifications

Tool Size (OD)	3¾"	3¾"	4¾" (High Flow)	6¾"	8"	9½"
Overall Length	6½ ft	12½ ft	9 ft	9 ft	11 ft	12½ ft
Weight	125 lbs	240 lbs	310 lbs	1,000 lbs	1,600 lbs	2,000 lbs
Recommended Flow Range	90-140 gpm	90-140 gpm	150-270 gpm (250-330 gpm)	400-600 gpm	500-1,000 gpm	600-1,100 gpm
Temp Range	150°C	150°C	150°C	150°C	150°C	150°C
Operating frequency	26 Hz @ 120 gpm	26 Hz @ 120 gpm	18-19 Hz @ 250 gpm (16-17 Hz @ 250 gpm)	16-17 Hz @ 500 gpm	16 Hz @ 900 gpm	12-13 Hz @ 900 gpm
Operational Pressure Drop Generated	450-700 psi	500-700 psi	550-650 psi	600-700 psi	600-700 psi	500-700 psi
Max Pull	184,000 lbs	250,000 lbs *depends on service conn.	354,000 lbs	693,000 lbs	990,000 lbs	1,260,000 lbs
Connections	2½" Reg pin/box or 2½" Reg pin/box	2½" IF, 2 7/8" IF, 2½" AMOH or 2½" Reg	3½" IF pin/box	4½" IF pin/box	6½" REG pin/box	7½" Reg box up 7½" Reg pin down or 6½" Reg pin down
Shock Tool (OD)	3½"	3½"	4¾"	6¾"	8"	9½"
Overall Length	5 ft	5 ft	7.3 ft	9 ft	12½ ft	11 ft
Weight	115 lbs	115 lbs	350 lbs	1,000 lbs	1,600 lbs	2,200 lbs
Connections	2½" Reg pin/box or 2½" Reg pin/box	2½" Reg pin/box or 2½" Reg pin/box	3½" IF pin/box	4½" IF pin/box	6½" REG pin/box	7½" Reg pin/box

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