

BICO BIDIRECTIONAL SHOCK TOOLS

Benefits

BICO FASTER Shock Tools are used to greatly reduce shocks and vibrations in drilling applications to enhance performance and provide a much smoother drilling operation.

The specially designed, oil bathed disc springs absorb and dampen both natural and induced vibrations. Penetration rates can improve because cutters stay in contact with the formation more often instead of bouncing. Cutter and bearing life are often increased by minimizing the chipping of cutter inserts and by the reduction of peak loading on bearings. The reduced axial vibration leads to increased life for the drill string and other rig components, which can include downhole electronic instrumentation such as MWD tools.

BICO FASTER Shock Tools are available in a variety of sizes and they can be specifically configured to accommodate either low weights on bit, as would be encountered with PDC bit, or high weights on bit that you encounter with traditional rock bits.

Features

- Bidirectional Shock Tool
- Designed to Work Independently or with Axial Vibration Tool
- Hydrostatically Balanced
- Optimum Spring Rates to Improve ROP, Improve Weight Transfer, and Reduce Friction
- Large Bore
- Reliable: High Yield Material Construction and Quality Seals Design
- High Temperature Applications (up to 400 degF)
- Patented spline design geometry enhances hydraulic oil transfer and operational performance of the shock tool

Shock Tool Specifications

O.D.	5.25 in (133 mm)	6.50 in (165 mm)	8.00 in (203 mm)
I.D.	2.25 in (57 mm)	2.25 in (57 mm)	2.75 in (69.85 mm)
Max. Recommended Hole Diameter	6.75 in (171 mm)	8.5 in (216 mm)	12.25 in (311 mm)
Fish Neck Length	24 in (610 mm)	18 in (457 mm)	18 in (457 mm)
Spring Rate	Min. - 4,600 lbf/in (806 N/mm) Max. - 18,000 lbf/in (3,152 N/mm)	Min. - 22,000 lbf/in (3,853 N/mm)	Min. - 28,000 lbf/in (4,903 N/mm)
Opening Travel	2 in (50.8 mm)	2.5 in (63.5 mm)	3 in (76.2 mm)
Closing Travel	2 in (50.8 mm)	3 in (76.2 mm)	3 in (76.2 mm)
Stroke	4 in (101.6 mm)	5.5 in (139.7 mm)	6 in (152.4 mm)
Max. Operational WOB (Standard)	36,000 lbf (16,000 daN)	66,000 lbf (29,360 daN)	85,000 lbf (37,810 daN)
Tensile Yield (Joint Strength)	410,000 lbf (182,300 daN)	660,000 lbf (293,580 daN)	840,000 lbf (373,650 daN)
Torsional Yield (Joint Strength)	17,000 ft-lbf (23,000 Nm)	52,000 ft-lbf (70,503 Nm)	89,200 ft-lbf (120,940 Nm)
Pump Open Area	12.6 in ² (8,100 mm ²)	15.6 in ² (10,065 mm ²)	17.8 in ² (11,484 mm ²)
Length	14.6 ft (4.5 m)	10.5 ft (3.2 m)	14.8 ft (4.51 m)
Approx. Weight	840 lbs (380 kg)	1,050 lbs (476 kg)	2,100 lbs (953 kg)
Operating Temp	Standard 250°F (120°C) High Temp. 400°F (204°C)	Standard 250°F (120°C) High Temp. 400°F (204°C)	Standard 250°F (120°C) High Temp. 400°F (204°C)
Connection Options	NC 40, XT-38, XT-39, XTF-39, GPDS40	API 4-1/2 IF, API 4-1/2 XH	API 6-5/8 REG, NC 56

