



Shock Tool

The Wenzel Downhole Shock Tool effectively reduces impact loading on the bit to extend bit life and reduce bit trips. By isolating axial bit vibrations from the drill string, the Shock Tool will reduce lateral and torsional drill string vibrations, and related fatigue damage or failure of the rotary connections. The Shock Tool allows optimum bit speed to be used under rough drilling conditions, increasing the rate of penetration.

Features and Benefits

- ▶ Isolates bit induced vibrations from the drill string.
- ▶ Fully oil-sealed and lubricated for extended service life.
- ▶ Does not use temperature-sensitive elastomers for shock absorption, therefore is suitable for use in temperatures to 250°F (120°C), with optional seals available for temperatures up to 320°F (160°C).
- ▶ Reliable Belleville disc springs provide optimum load/deflection characteristics to maintain consistent contact between bit and formation, effectively reducing impact loading to extend bit life.
- ▶ Pressure balanced to eliminate the effect of downhole hydrostatic pressure.
- ▶ Low friction torsional drive permits free vertical movement.
- ▶ Well-stabilized, with internal three-point lateral support to minimize deflection.
- ▶ Reduces wear and tear on rig and equipment, and fatigue failures on drill collars and drill pipe.
- ▶ Automatically compensates for pump open force.

Operation

- For maximum effectiveness, position the Shock Tool immediately above the bit.
- With a packed bottom hole assembly, the Shock Tool may be located a minimum of two drill collar lengths above the top stabilizer, however bit protection will be reduced due to the greater un-sprung mass below the tool.
- Automatic compensation of pump open effect makes the Shock Tool effective with any combination of bit weight or circulating pressure.

Shock Tool Specifications

IMPERIAL						
Nominal OD (inch)	Length (feet)	Thru Bore (inch)	Tensile Yield (lbs)	Pump Open Area (in ²)	Torsional Limit (ft lbs)	Approx Weight (lbs)
3.38	7.9	1.00	102 000	5.9	8 000	225
3.50	7.8	1.00	239 000	5.9	10 000	230
4.75	10.7	1.50	561 500	11.0	20 000	540
6.25	11.7	2.25	926 600	19.6	37 900	1000
6.50	11.6	2.25	960 000	19.6	39 500	1030
6.75	11.5	2.75	837 400	21.6	46 400	1100
8.00	11.9	2.75	1 378 800	30.6	104 600	1690
9.00	12.3	3.00	1 502 000	38.5	125 000	2220
9.50	12.3	3.00	1 209 000	41.3	131 000	2500
10.00	12.3	3.00	1 246 500	41.3	132 300	2680
11.00	12.0	3.00	1 628 300	63.6	225 600	3240
11.25	14.6	3.00	1 775 300	56.7	255 800	4120
12.00	12.0	3.00	1 628 300	63.3	345 400	3900

METRIC						
Nominal OD (mm)	Length (m)	Thru Bore (mm)	Tensile Yield (daN)	Pump Open Area (mm ²)	Torsional Limit (N·m)	Approx Weight (kg)
86	2.4	25	45 400	3 800	11 000	100
89	2.4	25	106 300	3 800	14 000	100
121	3.3	38	249 800	7 000	28 000	250
159	3.6	57	412 200	12 700	53 000	450
165	3.5	57	427 000	12 700	55 000	470
171	3.5	70	372 500	13 900	64 000	500
203	3.6	70	613 300	19 700	145 000	770
229	3.7	76	668 100	24 800	174 000	1010
241	3.7	76	537 800	26 600	182 000	1140
254	3.7	76	554 500	26 600	184 000	1220
279	3.7	76	724 300	41 000	313 000	1470
286	4.4	76	789 700	36 600	355 000	1870
305	3.7	76	724 300	41 000	480 000	1770

Specifications are based on as new condition and are subject to change without notice.