

SHOCK TOOL



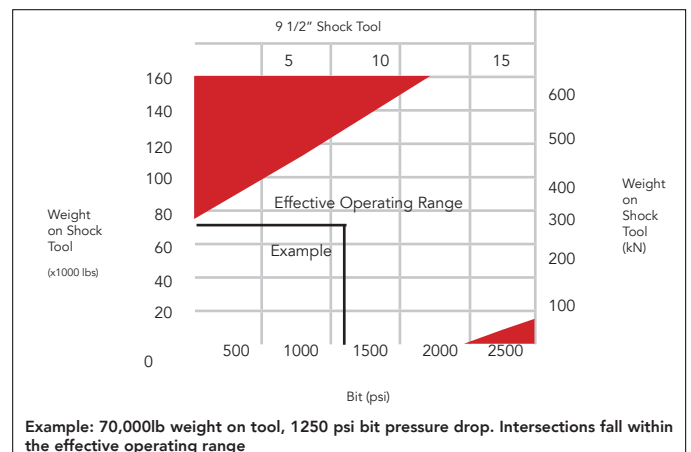
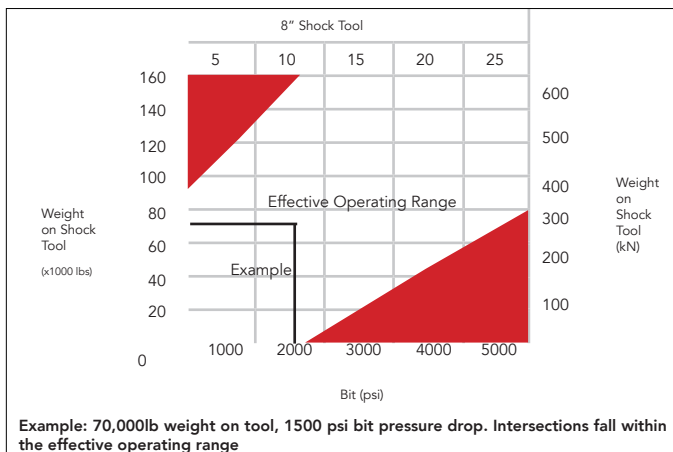
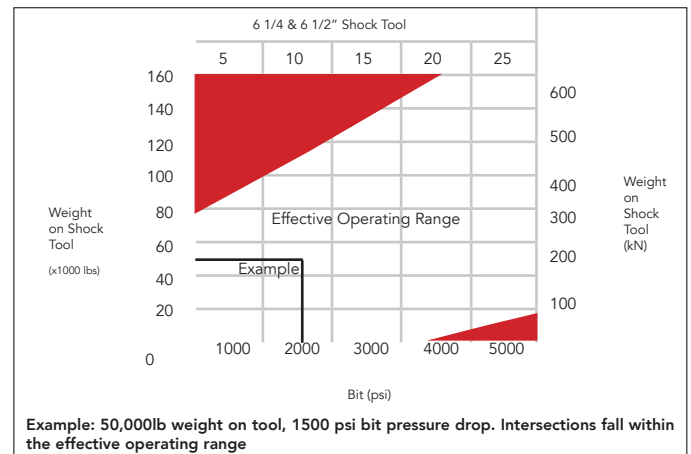
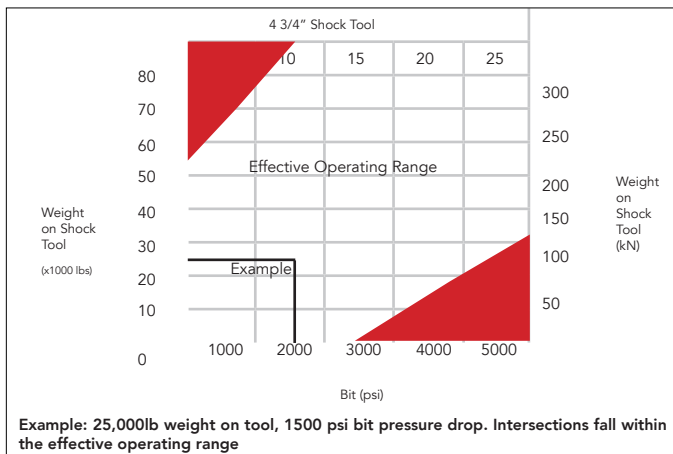
The Cathedral Shock Tools are designed to absorb axial vibrations under any combination of drilling weight, hole depths, mud weights or bit pressure drops. They operate effectively under conditions far exceeding those used under normal drilling operations.

Our proprietary Shock Tools are completely unaffected by extremes in hydrostatic head and automatically compensate for the effect of pump open force. The spring element in the Shock Tool consists of stack Belleville disk springs arranged to function in both directions.

FEATURES



- Double acting spring design: Provides dampening in tension and compression, minimizing pump open effects
- Hydrostatically balanced: Not affected by hydrostatic head
- Minimal connections: Reduces the potential of a connection failure
- Safety nut: Minimizes the risk of fishing in the event of connection failure
- Lock ring: Mandrel provides positive stop when jarring, force is not transmitted through the springs
- Belleville springs: Gives linear spring rate and high load capacity.
- Short length: Easier to handle and transport.





SHOCK TOOL SPECIFICATIONS

TOOL O.D. (+API Drill Collar Tolerance)	Inches	4.75	6.50	6.75	8.00	9.50
	(mm)	(121)	(165)	(171)	(203)	(241)
SERIES		155	150	147	160	151
MAX RECOMMENDED HOLE DIAMETER	Inches	6 3/4	8 1/2	8 3/4	12 1/4	17 1/2
	(mm)	(171)	(216)	(222)	(311)	(445)
TOOL I.D.	Inches	2.00	2.00	2.252	.752	.81
	(mm)	(51)	(51)	(57)	(70)	(71)
LENGTH	Feet	8.5	9.49	.4	12.5	10.8
	(m)	(2.59)	(2.87)	(2.87)	(3.81)	(3.29)
WEIGHT	Lbs	375	800	850	1,600	2,000
	(kg)	(170)	(360)	(390)	(730)	(1 000)
AXIAL TO FULL COMPRESS TOOL	Lbs	74,000	100,000	100,000	125,000	100,000
	(daN)	(33 000)	(44 000)	(44 000)	(56 000)	(44 000)
TENSILE LOAD AT YIELD	Lbs	254,000	540,000	576,000	872,000	1,500,000
	(daN)	(113 000)	(240 000)	(256 000)	(388 000)	(667 000)
MAX TORSIONAL LOAD	lb/ft	17,000	50,000	54,000	79,000	109,000
	(Nm)	(23 000)	(68 000)	(73 000)	(107 000)	(148 000)
PUMP OPEN AREA	Inch ²	11.0	15.9	17.7	30.7	38.5
	(cm ²)	(71)	(103)	(114)	(198)	(248)
SPRING RATE	Lbs/in	29,000	35,000	35,000	31,000	25,000
	(N/mm)	(5 100)	(6 100)	(6 100)	5 400	(4 400)
OPENING TRAVEL	Inches	1.01	.751	.751	.753	.3
	(mm)	(25)	(44)	(44)	(44)	(84)
CLOSING TRAVEL	Inches	2.5	2.9	3.04	4.0	4.0
	(mm)	(64)	(74)	(76)	(1.02)	(102)

PLACEMENT: Our shock tools are most effective when placed closest to the bit.



Our advantage is our many state of the art motor facilities where our equipment is meticulously maintained by our qualified team members.

MAINTENANCE: As part of the comprehensive maintenance program, all tubular components are inspected for thread and fatigue damage, magnetism and degaussed. Our motor fleet is also monitored through our Continuous Improvement Process which allows us to track individual component life histories. This process provides us the ability predict component life cycles and implement design modifications, being proactive rather than reactive.

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