

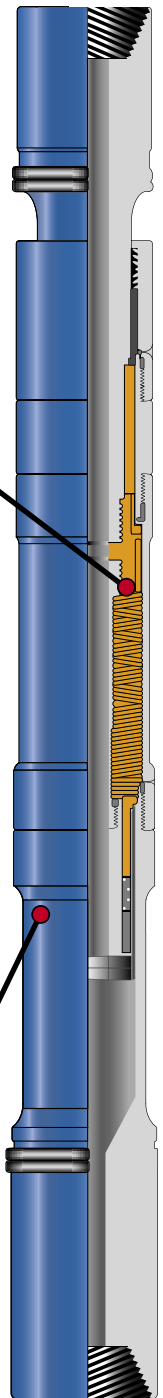
BICO Shock-EZE Shock Absorbers are used to greatly reduce shock and vibration loads in drilling applications to enhance smoother drilling operations.

Benefits of the BICO Shock-EZE include:

- **Faster penetration rates** - Cutters stay in constant contact with the formation, which can reduce bit bounce and vibration.
- **Increased cutter and bearing life** by minimizing the chipping of cutter inserts and reducing peak shock loads on bearing.
- **Increased life for drill string and rig components** such as guidance electronics and drill pipe due to dampened vibration and axial shock loads.

Speciality designed oil bathed Disc Spring Stack absorbs and dampens both natural and induced vibrations.

Size	in (mm)	4-3/4 LS (121)	6-1/4 SS (159)	6-1/2 LS (165)	6-3/4 LS (171)	8 LS (203)	9 LS (229)
Bore	in (mm)	1-3/4 (32)	2 (51)	2 (51)	2 (51)	2-3/4 (70)	2-1/2 (64)
Max Hole Diameter	in (mm)	6-3/4 (171)	8-1/2 (216)	8-3/4 (222)	8-3/4 (222)	12-1/4 (311)	13-3/4 (349)
Length	ft (m)	12 (3.7)	6 (1.8)	12.6 (3.8)	12 (3.7)	14 (4.3)	13 (4)
Weight	lb (kg)	625 (283)	525 (238)	1050 (476)	1125 (510)	1450 (660)	2250 (1020)
Closing Travel	in (mm)	2.5 (64)	1-3/4 (44)	3 (76)	3 (76)	4 (102)	3 (76)
Opening Travel	in (mm)	0 (0)	0 (0)	0 (0)	0 (0)	2 (51)	3/4 (19)
Pump Open Area	in ² (cm) ²	5.84 (37.7)	9.42 (60.8)	9.42 (60.8)	12.76 (82.3)	17.82 (115.0)	23.37 (150.8)
Load To Fully Compress	lb (daN)	37,500 (16,900)	44,000 (19,600)	75,000 (33,400)	89,000 (39,600)	90,500 (40,200)	105,000 (46,700)
Spring Rate	lb/in (n/mm)	Variable	Variable	Variable	Variable	Variable	Variable
Average Spring Rate	lb/in (daN)	15,000 (2,630)	7,000 (1,230)	14,000 (2,450)	24,000 (4,200)	22,600 (3,950)	20,550 (3,600)
Max Torque Transfer (To Yield Body Threads)	lb/ft (Nm)	15,700 (21,300)	46,450 (63,000)	46,450 (63,000)	50,550 (68,500)	75,000 (101,600)	82,100 (111,300)
Tensile Load at Yield	lb (daN)	379,000 (169,000)	304,000 (136,000)	556,000 (248,000)	632,000 (282,000)	840,000 (375,000)	860,000 (384,000)



Some Shock-EZE Shock Absorbers can be configured for single or double acting.