

# i-Opener Single Open (SO)

The i-Opener™ Single Open (SO) Toe Initiation Sleeve is designed for use in horizontal multi-zone completions as the primary initiation point to establish injection into the formation without the need for intervention. Once activated, the high flow area through the ports allows injection of fluid to support plug-and-perf operations or stimulation of the first frac stage.

The i-Opener SO Toe Sleeve utilizes redundant burst discs that protect the inner components of the sleeve from debris and/or cement during installation. The tool functions once exceeding the absolute pressure rating applied to the rupture discs. Once ruptured, pressure shifts the sleeve; thereby opening the injection ports and providing communication to the reservoir.



## Features and benefits

- Large ID through the tool
- No inner sleeve between ports once activated
- Engineered rupture discs (instead of shear screws)
- Redundant flow path to open sleeve
- Compatible with industry standard wiper plug
- Unrestricted large flow area reduces plugging potential
- Greater accuracy for activation pressure
- Debris tolerant during activation

## Applications

- Cemented and open hole horizontal multistage completions
- Toe initiation for plug-and-perf and sleeve systems
- First stage fracs

Casing Size in. (mm)	Casing Weight lb/ft (kg/m)	Max OD in. (mm)	Min ID in. (mm)	Overall Length in. (mm)	Burst Pressure Rating psi (bar)	Collapse Pressure Rating psi (bar)	Flow Area sq. in. (sq. mm)	Rupture Disc Range psi (bar)	Temp. Rating °F (°C)
4.500 (114.3)	11.6 - 15.1 (17.26 - 22.47)	5.650 (143.51)	3.710 (94.23)	42.5 (1,079)	15,000 (1,034.2)	11,700 (806.7)	12.0 (7,742)	3,000 - 16,500 (207 - 1,137)	300 (150)
5.000 (127.0)	18.0 (26.79)	6.125 (155.57)	4.166 (105.81)	42.5 (1,079)	17,500 (1,206)	14,250 (982)	13.63 (8,797)	3,000 - 17,500 (207 - 1,206.5)	300 (150)
5.000 (127.0)	18.0 - 21.4 (26.79 - 31.85)	5.650 (143.51)	3.710 (94.23)	42.5 (1,079)	17,500 (1,206)	11,700 (806.7)	12.0 (7,742)	3,000 - 16,500 (207 - 1,137)	300 (150)
5.000 (127.0)	21.4 (31.85)	5.875 (149.23)	3.710 (94.23)	44.45 (1,129)	17,500 (1,206)	11,700 (806.7)	24.3 (15,677)	3,000 - 16,500 (207 - 1,137)	300 (150)
5.500 (139.7)	17.0 - 26.0 (25.30 - 38.69)	7.060 (179.32)	4.663 (118.44)	43.4 (1,102)	16,000 (1,103)	11,000 (758.4)	17.0 (10,967)	3,000 - 15,500 (207 - 1,068)	325 (163)
5.500 (139.7)	26.0 (38.69)	7.060 (179.32)	4.575 (116.21)	43.4 (1,102)	20,600 (1,420)	11,000 (758.4)	17.0 (10,967)	3,000 - 18,500 (207 - 1,276)	325 (163)

**Note:** Standard material is 4140-4145 (or similar low-alloy steel) 125ksi MYS material. Other materials may be provided upon request. Alternate rupture disc ranges may be provided upon request, as needed for application.