

Flow Lock Sub

The Flow Lock Sub™ is part of an open-hole multistage completion that allows circulation through the completion string until setting of hydraulic equipment above it is required.

After a ball is dropped from surface and circulated down to the Flow Lock Sub, increasing the system pressure will shift the internal components of the Flow Lock Sub and close the circulating bypass ports. Hydraulic equipment above may be set, and pressure integrity is maintained above and below the Flow Lock Sub, even if the ball rolls off the seat.



Features

- Ball-activated sleeve seals off the casing ID from the annulus
- Once sealed, the Flow Lock Sub seals from above and below the sub
- Compatible with a range of ball ODs
- Field adjustable activation pressure

Benefits

- Once the flow path is closed, it is locked closed, even without the activation ball in place
- Provides a reliable method to set pressure activated components in the wellbore

Applications

- Open-hole completions that require setting of pressure-activated tools, such as packers

Technical data

| Size in. (mm) | Configuration | Weight Range lb/ft (kg/m) | Length ¹ in. (mm) | Max O.D. in. (mm) | Ball Seat I.D. in. (mm) | Body I.D. in. (mm) | Ball Size Range to Activate in. (mm) | Flow Area in. ² (cm ²) | Temperature rating °F (°C) |
|------------------|-------------------|--------------------------------|---------------------------------|----------------------|--------------------------------|-----------------------|--|--|----------------------------------|
| 4.500 (114.3) | One-Piece Body | 11.6 - 13.5 (17.26 - 20.09) | 14.5 (368.3) | 5.250 (133.35) | 1.25 (31.75) | 3.826 (97.18) | 1.375 - 2.000 (34.93 - 50.80) | 1.59 (10.25) | 350 (176.67) |
| | | 13.5 - 15.1 (20.09 - 22.47) | 14.5 (368.3) | 5.500 (139.70) | 1.25 (31.75) | 3.826 (97.18) | 1.375 - 2.000 (34.93 - 50.80) | 1.59 (10.25) | 350 (176.67) |
| | Two-Piece Body | 11.6 - 15.1 (17.26 - 22.47) | 19.5 (495.3) | 5.600 (142.24) | 1.25 (31.75) | 3.808 (96.72) | 1.375 - 2.000 (34.93 - 50.80) | 1.59 (10.25) | 350 (176.67) |
| | | 15.1 (22.47) | 20.1 (510.5) | 5.750 (146.05) | 1.25 (31.75) | 3.808 (96.72) | 1.375 - 2.000 (34.93 - 50.80) | 1.59 (10.25) | 350 (176.67) |
| 5.500 (139.7) | Two-Piece Body | 18.9 (28.13) | 19.5 (495.3) | 5.600 (142.24) | 1.15 - 1.25 (29.21 - 31.75) | 3.586 (91.08) | 1.375 - 2.000 (34.93 - 50.80) | 1.59 (10.25) | 350 (176.67) |
| | | 17.0 - 23.0 (25.30 - 34.23) | 25.5 (647.7) | 6.600 (167.64) | 1.25 (31.75) | 4.778 (121.41) | 1.375 - 2.000 (34.93 - 50.80) | 1.59 (10.25) | 350 (176.67) |

¹ Length will vary with end connection selected.

² Ball Seat I.D. may be altered per customer request.