

# COPPERHEAD AND COPPERHEAD EXTREME

Drillable bridge and frac plugs



**Rated up to 15,000 psi**  
[103 MPa]



**Rated up to 400 degF**  
[204 degC]

## APPLICATIONS

- Vertical, deviated, and horizontal wells
- Zone isolation during multistage stimulation to use

## FEATURES

- Eliminates presetting and withstands multiple pressure reversals to reduce rig time and costs
- Nondegradable aluminum material
- Unique activation system to maintain a superior seal even under multiple pressure and temperature cycles
- Proprietary slip design to keep wickers from chipping or cracking in hard steel casing and slipping in softer steel casing
- Element backup system to keep rubber element locked in place with no extrusion
- Rotational lock mechanism to prevent slipping or spinning during removal
- Positive engagement clutch to prevent spinning of bottom sub on top of the next plug in multiple-plug drill out

Copperhead\* drillable bridge and frac plugs are most commonly used to isolate zones during multistage stimulation. The Copperhead Extreme\* HPHT drillable bridge and frac plug can be used even in high-pressure and hightemperature reservoirs that are likely to have high fracturing pressures. The plugs are set using wireline, coiled tubing, or threaded pipe.

The bridge plug has a solid core that allows it to hold pressure from both directions. The frac plug features a oneway, internal check valve that is closed with a ball while the zone above the plug is fractured. The plug can be run with the ball in place, the ball can be dropped from surface when the plug is in position, or a caged-ball configuration can be used. The check valve allows free flow of fluids from below the plug after the stimulation operation is completed.

Plug components can be quickly drilled out with the Copperhead plug mill into small, consistently sized cuttings that are easily circulated out of the well.



*Copperhead drillable bridge and frac plug.*



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## Copperhead Plug Specifications

| Casing Size, in [mm] | Casing Weight, lbm/ft [kg/m] | Max. OD, in [mm] | Pressure Rating, psi [MPa] | Temperature Rating, degF [degC] |
|----------------------|------------------------------|------------------|----------------------------|---------------------------------|
| 2.875 [73]           | 6.5 [9.69]                   | 2.25 [57.15]     | 10,000 [69]                | 350 [175]                       |
| 2.875 [73]           | 7.9–8.7 [11.76–12.95]        | 2.125 [53.98]    | 10,000 [69]                | 350 [175]                       |
| 3.5 [88.9]           | 9.3–10.3 [13.84–15.33]       | 2.72 [69.09]     | 10,000 [69]                | 350 [175]                       |
| 3.5 [88.9]           | 12.95 [19.27]                | 2.562 [65.08]    | 10,000 [69]                | 350 [175]                       |
| 4.5 [114.3]          | 11.6–15.1 [17.26–22.47]      | 3.625 [92.08]    | 10,000 [69]                | 350 [175]                       |
| 5.5 [139.7]          | 15.5 [23.07]                 | 4.39 [111.51]    | 7,000 [48]                 | 350 [175]                       |
| 5.5 [139.7]          | 17–23 [25.30–34.23]          | 4.39 [111.51]    | 10,000 [69]                | 350 [175]                       |
| 7 [177.8]            | 20–26 [29.76–38.69]          | 6.0 [152.40]     | 10,000 [69]                | 350 [175]                       |
| 7 [177.8]            | 26–35 [38.69–52.08]          | 5.75 [146.05]    | 10,000 [69]                | 350 [175]                       |

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| Casing Size, in [mm] | Casing Weight, lbm/ft [kg/m] | Max. OD, in [mm] | Pressure Rating, psi [MPa] | Temperature Rating, degF [degC] |
|----------------------|------------------------------|------------------|----------------------------|---------------------------------|
| 4.5 [114.3]          | 15.1 [22.47]                 | 3.44 [87.34]     | 13,000 [90]                | 400 [204]                       |
| 4.5 [114.3]          | 16.6–18.9 [24.7–27.1]        | 3.44 [87.34]     | 15,000 [103]               | 400 [204]                       |
| 5 [127]              | 18–21.4 [26.78–31.84]        | 3.875 [98.43]    | 15,000 [103]               | 400 [204]                       |
| 5 [127]              | 23.2–24.2 [34.52–36.01]      | 3.77 [95.76]     | 15,000 [103]               | 400 [204]                       |
| 5.5 [139.7]          | 26 [38.69]                   | 4.25 [108.00]    | 15,000 [103]               | 400 [204]                       |

