

PRIME Compact Puncher

Advanced electro-mechanical puncher technology

Applications

- To create openings between two tubulars for:
 - Pressure equalization
 - Cement squeeze
 - Fluid injection

Features and Benefits

- Multiple holes at single depth with minimum 10° offset
- Dual anchors for centralized tool position enabling optimum penetration angle
- Proven in many common metals
- Surface controlled with real time feedback (bit RPM, force on bit etc.)
- Combinable with other well intervention technologies enabling single-trip, multi-function solutions (punch & cut)

The PRIME™ Compact Puncher from Baker Hughes is an electro-mechanical puncher technology that can create openings between two strings of downhole tubing.

The system is highly configurable for a variety of different downhole environments. The system includes an orientation module that allows the puncher to not only orientate to the high side of the pipe for optimal flow conditions, but also enables multiple circulation holes to be made at the same depth aiding radial flow of fluid during circulation.

The process is autonomous once the parameters have been inputted but an engineer also maintains a degree of control over the procedure.

The punch head and anchor kits are configured based on the pipe size being punched, along with the

drilling-bit being either 25 mm or 12 mm in OD, creating up to 0.79² in. of flow per punch.

The PRIME Compact Puncher's feedthrough wiring supports the deployment of additional technology below enabling single-run, multi-function solutions e.g. punch and cut in a single run.

Well security

The anchor system of the puncher features an emergency close system, ensuring that in the event of power loss, the anchors always close and the tools will be safely pulled out of hole (POOH).

Deployment

The PRIME Compact Puncher can be deployed under gravity or when there is inclination it integrates with tractor drive sections for conveyance to depth and the PRIME Release Sub System, enabling both electrical and memory release.

| PRIME Compact Puncher specifications | | |
|--------------------------------------|---|-------------|
| | Imperial | Metric |
| Tool OD | 3.38 in. | 85 mm |
| Temperature rating | 350°F | 175°C |
| Pressure rating | 15,000 psi | 1,034 bar |
| Head size & pipe size | <ul style="list-style-type: none"> • 3.38 in. (85 mm) for 4.5 in. & 5 in. OD • 3.9 in. (99 mm) for 5.5 in. & 6 in. OD • 4.9 in. (125 mm) for 6.625 in. to 7.625 in. OD | |
| Hole diameter / flow area | 0.5 in. OD / 0.2 ² in. 1 in. OD / 0.79 ² in. | |
| Wall thickness | Up to 1.5 in. | Up to 38 mm |