

Extreme Equipment Sales & Rentals
PowerDrive 9 7/8" Hole Size Configurations
 Revision 1.0



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 Applicability: 9 7/8" PowerDrive
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BACKGROUND INFORMATION

There are two PowerDrive configurations that are being used to drill a 9 7/8" hole size. Traditionally, a PD 675 Bias Unit (BU) is paired with a 675 Control Collar (CC). Over time, many clients started utilizing 8" motors, MWD and DC's to improve strength and stiffness in this challenging hole section. This size mismatch required crossovers and increased the risk of cracking, especially at the portholes and upper connection where the stiffness transition between 6 3/4" and 8" is the most severe. As a solution, a new extension sub was designed to allow a 675 BU to be paired with an 825 CC as another option. This bulletin will briefly summarize each configuration.

9 7/8" HOLE SIZE CONFIGURATIONS AVAILABLE

Both configurations utilize a PD 675 BU which can either be an X6 (PDX6BU-CA) or Orbit (PDORB6-AF). The bit box of the BU is a 6 5/8" Reg connection. The upper connection of the BU is 5 1/2" FH box.

An extension sub is used to adapt the BU to the proper CC. If using a traditional 675 CC, a 5 1/2" FH Pin x 4 1/2" IF Pin extension sub is used. If using an 825 CC, a 5 1/2" FH Pin x NC61 Pin extension sub is used.

Both the 675 and 825 CC's are box x box. The upper connection of the 675 CC is 4 1/2" IF, whereas the 825 CC is 6 5/8" Reg.

With multiple configurations to choose from depending on availability, this gives the client the opportunity to fine tune the BHA based on the well design or drilling conditions. In general, the 825 collar configuration will improve strength and stiffness and will hold steady in tangent or lower DLS sections. If more DLS is needed, the traditional 675 collar configuration may be better.

Configuration	Bit Conn	BU Upper Conn	BU Ext Sub Conn's	CC Conn's	Comments
675 BU with 675 CC	6 5/8" Reg B	5 1/2" FH B	5 1/2" FH P x 4 1/2" IF P	4 1/2" IF B x B	Typical application. Use when need higher DLS. 675 CC is available stablized or slick.
675 BU with 825 CC	6 5/8" Reg B	5 1/2" FH B	5 1/2" FH P x NC61 P	NC61 B x 6 5/8" Reg B	Special application. Use when need to improve strength/stiffness. 825 CC's only come slick. Always select a 675 tool when running hydraulics b/c only the BU size matters.

A few things to note if using the 825 CC configuration:

- The 825 CC only comes slick and does not have a fishing neck. Fishing and contingency plans must be discussed with customers and the risks weighed against the potential benefit.
- The 825 CC uses a PD 900 flow kit with identical flow ranges to the PD 900. This can be confusing because the OST sheet (tool paperwork sent to rig) will have PD 900 as the tool size due to the flow kit. **Only the BU matters for the hydraulics. Be sure to always select the 675 tool size for either X6/Orbit on the pressure calculator of the PowerDrive App.**

