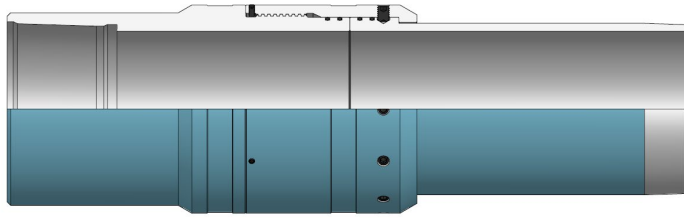


Instrumentation Orientation Swivel



Core Design manufacture and design several different types of swivels, both to be used above ground and below ground. The Instrumentation Orientation Swivel (IOS) is a swivel that is intended to be employed below ground in the wellbore.

The IOS will be installed in casing strings that contain multiple packers, hangers, or other tools that seal to the annular casing string in the well bore. These wells also contain instrumentation lines that must run through the sealed packer elements and along the entire length of the casing string.

As the liner is run into the well, all instrumentation lines are attached to the outside of the casing body. These lines are run in line with one another and are linearly attached using clamps to hold the lines from moving on the casing body. When the packer type tools are installed and torqued to position in the casing string, the instrumentation port holes on the packer element do not line up with the instrumentation lines currently clamped to the casing below it.

To eliminate this problem, an IOS tool is installed and torqued to position between the packer tool and the casing string below the packer tool. The IOS consists of a gas tight seal swivel and a set of set screws to lock in torque. The strength characteristics of the IOS are equal to or greater than that of the matting casing.

The IOS torque set screws are loosened to allow the IOS to swivel. Turn the upper portion of the OIS (which also turns the packer above) to line up the instrumentation lines on the casing to the port holes on the packer tool. Tighten the set screws to eliminate any further swivel movement of the IOS and packer. Now that the lines are aligned, install the instrumentation lines through the packer port holes to be attached to the next casing joint installed above it.

APPLICATION:

- Horizontal or vertical wells.
- To be used in casing strings using packers or seals and instrumentation lines.
- To keep instrumentation lines uniformly attached to the outside of casing string while connecting to makeup in place packers to casing strings.

FEATURES:

- Gas tight sealing.
- Easy tool rotation and locking features to orientate instrumentation lines on the rig floor.
- Strength and torque characteristics same as matting casing string.

BENEFITS:

- Compatible to any packer types and casing requirements.
- Economical tool to provide quick instrumentation installation and lineup.



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