

Well Construction Catalog

Completions Solutions

648769-05

SLIDING SIDE DOOR

Product

Varel's Sliding Sleeves are downhole valves that can be installed in production tubing to establish communication between tubing and casing annulus. The sliding sleeves can be opened and closed using industry standard wireline or coil tubing methods as desired. These can be configured with shift up to open and shift down to close or vice versa depending upon the applications and requirements. These can also be designed with nipple profiles on the upper sub to facilitate flow-control equipment.

Features

- Field tested V-2 rated Non-Elastomeric Sliding Sleeves
- Can be used for injection, production and multiple zone control through single string
- Circulating inhibitors, fluid displacement between annulus, lifting gas applications
- Can accommodate flow control equipment for separation sleeve, chokes or blanking plug applications

- Elastomeric and Non-Elastomeric Options.
- Shift Up To Open / Down To Close or Shift Down to Open / Up to Close
- Industry standard Selective or No-Go Nipple Profiles
 Options



EXPANSION JOINT



Product

Varel's Expansion Joints compensate for tubing movement or stress on tubing during injection or production applications. It enables relative movement between two fixed assembles even after landing tubing hanger.

Features

- Can be pinned in open, closed or mid-stroke position
- · Can be used in stacked applications
- · Used for single or multiple string completions
- Pressure test at surface can be done before running to validate seal integrity

- · Available between different lengths
- Customizable seals configuration and material depending upon the application





LANDING NIPPLE



Product

Varel's Landing nipples with options of Selective or Non-Selective/No-Go Profiles can accommodate industry standard flow control accessories. It gives the option to run multiple nipples as desired for the completions applications for setting sub-surface flow controls.

Features

- · Used for setting flow control plugs for setting a packer
- Accommodating blanking plugs for testing or shut-in applications
- Hanging temporary gauges to record pressure/temperature data
- Hanging velocity safety valves
- Running Chokes or pump through plugs

- Available between Selective, Non-Selective and No-Go
 Profiles
- Different material options as needed for the completion or application
- Available profiles from 2 3/8 inch till 7.00 inch Tubing



POLISHED BORE RECEPTACLE

Product

Varel's PBR's compensate for tubing movement during different completions applications. It would also enable the circulation of lighter fluid for well production. This is designed specifically for completions that require a larger ID while also facilitating tubing movements.

Features

- Can be pinned in open, closed or mid-stroke position
- Fullbore seal for larger ID and passage of intervention tools
- Tubing above the anchored packer can be retrieved for redressing and re-running of the seal assembly
- Pressure test at surface can be done before running to validate seal integrity

- · Available between different lengths
- Adjustable Shear Release Mechanism
- Customizable seals configuration and material depending upon the application



FLOW COUPLING



Product

Flow Couplings are heavy wall connectors used in tubing strings and are designed to minimize the effect of internal erosive action caused by production fluids. Flow couplings are located just above and below of flow control equipments where turbulent flow problems are likely to occur. Extends life of production tubing and completion equipment by minimizing effect of internal and external erosion caused by turbulent flow. Installation is above and below the tool which has ID restrictions for flow e.g. small diameter nipple profiles, expansion joints, safety valves, gauges and gas lift mandrels.

Features

- Complies with API 5CT
- Manufactured with variety of different thread types (API/ Proprietary) and thread sizes
- Connection and body performance exceeds or matches with the production tubing

- Flow Couplings are provided in all sizes, weights and material specifications for standard services, H2S environment, and HP/HT conditions
- Flow couplings are manufactured from seamless mechanical tube in sizes ranging from 2 3/8 inch to 4 1/2 inch OD
- Any length, grade of material, and threading is available at the customer's request. Typical lengths are 3 foot and 6 foot



PUP JOINT



Product

Pup Joints are used to adjust the height of full length tubing or casing strings. They are also used to adjust the depth of down hole tools. Used as an integral member of tubing string. Used to space out the distance between Tubing and Casing components.

Features

- Comes with variety of different thread types (API/ Proprietary) and thread size combinations
- Important to note that upset OD may not be present in some pup joints depending on thread type
- Complies with API 5CT
- · Reliable and proven

- Various sizes, different threading & different materials are available. OD will vary with tubing weight and thread type
- OD (inch) 2-3/8, 2-7/8, 3-1/2, 4, 4-1/2 inch
- ID (inch) 2.041 to 3.640 inch
- Weight (PPF) 4 to 19.20 ppf
- Length (ft) 2, 3, 4,6,8,10,12 FT
- Connection type as per requirement





Product

Perforated Pup joints are installed in completion string for bypass of flow if downhole gauges are ran for pressure/temperature monitoring. The holes are perforated while ensuring the joint integrity along with cross-sectional area at-least equivalent to relevant tubing internal diameter.

Features

- Comes with variety of different thread types
 (API/ Proprietary) and thread size combinations
- Complies with API 5CT
- Reliable and proven

- Various sizes, different threading & different materials are available.
- OD will vary with tubing weight and thread type.
- Connection type as per requirement



BLAST JOINTS



Product

A section of heavy walled tubing that is placed across any perforated interval through which the production tubing must pass, may be required in multiple zone completions. In addition to being heavier than normal completion components, the wall of a blast nipple / blast joint is often treated to resist the jetting action that may result in the proximity of the perforations. Extends life of production tubing and completion equipment by minimizing effect of internal and external erosion caused by turbulent flow and jetting of fluid at the perforation area.

Features

- Manufactured with variety of different thread types (API/ Proprietary) and thread Sizes
- Complies with API 5CT
- Reliable and consistent

- Thread Sizes Available at the customer's request
- Services H2S/CO2/Standard/Sour
- · Material Grades Available at the customer's request



PUMP OUT PLUG



Product

Varel's pump out plug is an autofill tubing plugging device connected at the end of the tubing against which pressure is applied to set hydraulic set packers. It avoids the need to rig up wireline/slickline for plug setting and suitable for deviated/horizontal wells that acts as limitation for running slickline for plug setting. After the desired pressure is achieved to set the hydraulic packer then required additional pressure is applied to shear out the pump open plug.

Features

- Field adjustable for different shear ratings to suit the application
- Autofill
- · Suitable for deviated/horizontal wells
- Ball seat is blown own giving full access for intervention tools
- · Reliable and proven

- Various sizes, different threading & different materials are available
- · Half Mule, Bell Guide options are available
- Customizable Shear rating



HYDRO TRIP SUB

Product

Varel's pump out plug is installed underneath a hydraulically actuated tool to enable required tubing pressures to activate the tool by a drop ball system. It avoids the need to rig up wireline/slickline for plug setting and suitable for deviated/ horizontal wells that acts as limitation for running slickline for plug setting. After the desired pressure is achieved to set the hydraulic packer, required additional pressure is applied shifting ball seat. After fully sheared, it will allow the ball to drop, which passes down the tubing through the full opening.

Features

- Field adjustable for different shear ratings to suit the application
- Autofill
- · Suitable for deviated/horizontal wells
- Reliable and proven

- Various sizes, different threading & different materials are available
- Customizable Shear rating



ADAPTER/CROSS-OVER



Product

SledgeHammer Adapter is a short tubular part with 'Box-Pin' thread configuration which is used to connect two tubular parts with same or different thread types and sizes. This also can be referred to as a "cross-over". Extends life of production tubing and completion equipment's by minimizing effect of internal and external erosion caused by turbulent flow. Installation is above and below of tool which has ID restrictions for flow e.g. small diameter nipple profiles, expansion joints, safety valves, gauges, and gas lift mandrels.

Features

- Connection and body performance exceeds or matches with the production tubing
- Wall thickness greater than tubing
- Manufactured with variety of different thread types (API/Proprietary) and thread sizes
- Complies with API 5CT
- Minimum of 3ft long
- · Reliable and easy installation

- Technical Specification & Sizes
- Thread sizes range from 2 3/8 inch to 7 5/8 inch
- Standard or Heavy Wall Weight (PPF)
- It can be made of different thread types from API thread to various proprietary threads (Premium Threads)
- Standard service and/or CO2 service and/or Sour service based on requested metallurgy
- Generic Material Grades: J-55, N-80, L-80, P-110, 13-CR, 1-CR



SEAL UNIT & SEAL UNIT &



Product

The seal units are designed to provide a secure seal at high pressures and temperatures. There are different types of seal units available, and others can be customized to suit specific needs being molded seals and premium seals. Seal unit extensions are also available upon request. Molded seals are recommended for applications where the seal will be going in and out of the sealbore, while premium seals are best for applications where the seal unit will remain in place.

Features

- All seal units are designed for easy field redress, bonded seals and v-packing
- Premium seal units are v-packing seal systems of either elastomeric or plastic materials with a plastic and metal backup system
- Various backup material combinations can be used with each v-packing seal to make it suitable for different temperatures and pressures
- Customisable & reliable

- Thread Sizes Available at the customer's request
- Services H2S/CO2/Standard/Sour
- · Length Available at the customer's request



SEAL BORE EXTENSION



Product

Seal Bore Extension enables the longer sealing area or extracting of sealing area. Extends the polished surface below the packer.

Features

 Bottom packer threads with O-rings are typical for endof-packer attachments, maintaining both the ID and OD of packers

- Thread Sizes Available at the customer's request
- Services H2S/CO2/Standard/Sour
- · Material Grades Available at the customer's request
- Length 8/20/24-ft increments



MILLOUT EXTENSION



Product

Millout Extension is a tubular product that looks like pup joints or pup joint extensions, but it is not actually milled. Its inside diameter is larger than the bore ID of the mating packer it will be used with. This larger size allows the collet on the packer milling/retrieving tool to lock in place, allowing movement of the milling/retrieving tool as it moves downward during the milling process of the packer. Using the appropriate length of Millout extension ensures that no other components below the packer come into contact with the milling/retrieving tool.

Features

- Comes with variety of different thread types (API/ Proprietary) and thread size combinations (Pin x Pin / Box x Box / Box Pin)
- Each Millout Extension has larger ID than the mating Packer bore ID
- Easy to install & customised design

- Typically, the Millout Extension ID and OD surface finish is not critical
- The Millout Extensions can be setup as pup joint/pup joint extension if the design requirement meets the API Tubing/ Casing nominal IDs
- ID is required to be 3/8 inch (preferred), or more, larger than packer bore ID
- The preferred Millout extension length is 8 feet (96 inches). Shorter lengths are also available but are required to be verified for sufficient packer retrieving/ milling tool length.
- It can be made of different thread types ranges from API thread to various proprietary threads (Premium Threads)



BULLNOSE



Product

The Bullnose is a blanking device used at the end of the string. Its primary function is to prevent flow from entering the bottom end of the string, whilst its rounded nose design provides a positive guide while running in hole. Bull noses come in standard tool joint thread configurations and can be modified on location to best fit the application for which they are being used.

Features

- Fully round end of the tool
- Standard tool joint thread
- Maximum reliability and simple functionality

Options

• Various sizes, different threading & different materials are available. OD will vary with tubing weight and thread type



WIRELINE ENTRY GUIDE

Product

The Wireline Entry Guide is used for safe re-entry of wireline tools from the casing into the tubing string. The internal bevel guides the wireline or slick line tool string back into the tubing. Mule shoe guide is a standard guide for all the of completion equipment. Safe re-entry of wireline or slickline tools into the tubing string. Lowest component in the tubing string.

Features

- Rugged one piece construction
- Available in low alloy steel and premium materials
- Available in bevelled, full or half mule shoe configurations
- Reliable and easy to install

- Thread sizes range from 2 3/8 inch and onwards
- Service H2S/CO2/Standard/Sour
- Material Grades: J-55, N-80, L-80, P-110, 13-CR, 1-CR







Product

Grippy Cable Clamp is a cable clamp designed to fit over the coupling to convey and secure cables and control lines in and out of wellbores quickly, safely, and efficiently.

Features

- Each clamp has a four-point friction pad gripping system providing strong grip and preventing slipping
- Triple progressive contact pads on the channel improve gripping characteristics of the cable without compromising the integrity of the cable
- Two hinge pin flanges make contact with the tubular to further assist gripping on the pipe
- Tapered wedge-lock pin with dimples, when inserted, secures the clamp to the tubular
- The channel design allows a smooth transition of cable over the coupling
- The channel length aids in eliminating crimping of cable and damage from sharp edges
- · Galvanized to prevent corrosion

- Custom designs available for various cable configurations.
- · Mid-joint and dual channel clamps
- Sizes 2-3/8 inch to 9 5/8 inch
- Configured for both round and flat ESP cables, SSV's, DHSV's, chemical injection lines, smart well TEC's and fiber optics

