

## Accessories

### Crossovers



### Packers



## Crossover

Crossover Subs are primarily used for a couple of purposes. They are used for crossing over from the size of a single connection to the other. Crossover sub is also used for prolonging the life of the more expensive components of the drill stems. Crossover sub is available primarily in 3 forms. The connections of the Subs are available in 3 forms in the following types of configurations:

The Box - box

Box - pin

Pin - pin

The threaded connections of the Subs are protected by a coating of a durable surface of phosphate that prevents the reduction of the galling when the initial make up takes place. Subs are manufactured according to the specifications that are provided by the American Petroleum Institute API.

Crossover Subs are primarily the accessories that are required for the oil rig drill strings. Crossover circulating sub is stocked or manufactured by a number of companies according to the requirements of the customers or the particular job in question. Subs are featured with a side port or an inline port to help in the effective circulation of the fluids. Most of the connections are cut according to the certifications and ground gauges. They are machined from heat treated alloy for strength and greater durability.

Crossover sub helps in connecting one cross over size to the other or is used as the disposable component for extending the connection of an expensive drill stem member. Crossover Subs are also treated with heat. Subs sometimes require neck down transition zones for minimum drilling strength. Subs are also available in the non magnetic orientation, weeper as well as the tool connection sub varieties.



## Packers

External casing packer adopts expansive tubing as the sealing elements and the combination valve as seat seal, mainly used in the well completion of complicated oil, gas and water wells to realize various purposes for the well plugging and bridge plug, having the outstanding functions on the improvement of the quality of oil, gas and water well cementation and completion. With easy operation, credible performance and strong fitness, it is an important well completion tool.

Casing packer is a large bore single grip tool used to isolate damaged casing and for production or injection. It can be run in tension or compression and can be used as a liner hanger when equipped with a right hand release sub. Coarse, deep wickered slips allow the packer to set in open hole or scaly casing. For open hole set, casing packers can be equipped with two elongated packing elements to assure a positive seal.

