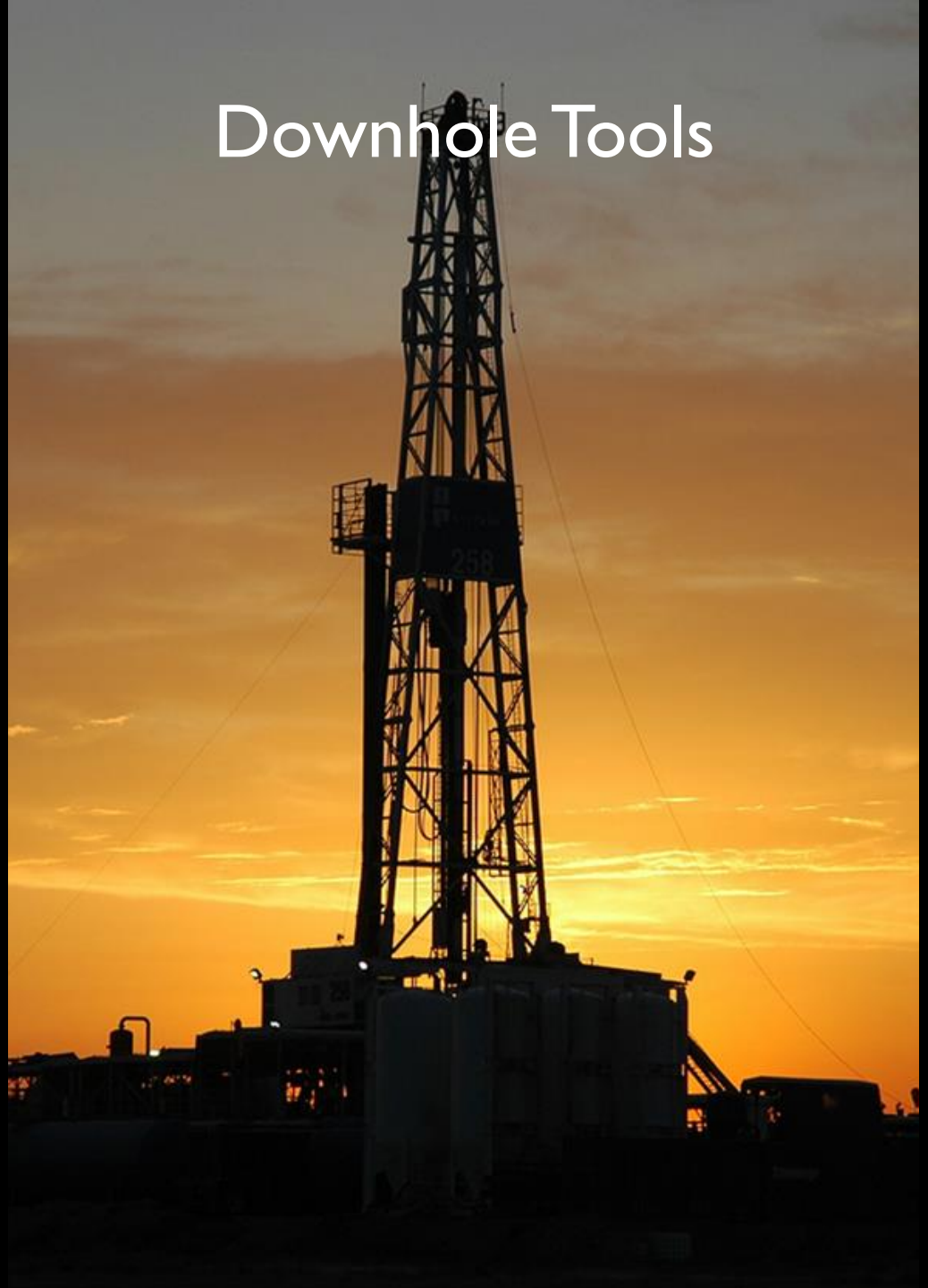




WP Petroleum (Shanghai) Ltd.

Downhole Tools





WP Petroleum (Shanghai) Ltd.

Downhole Tools

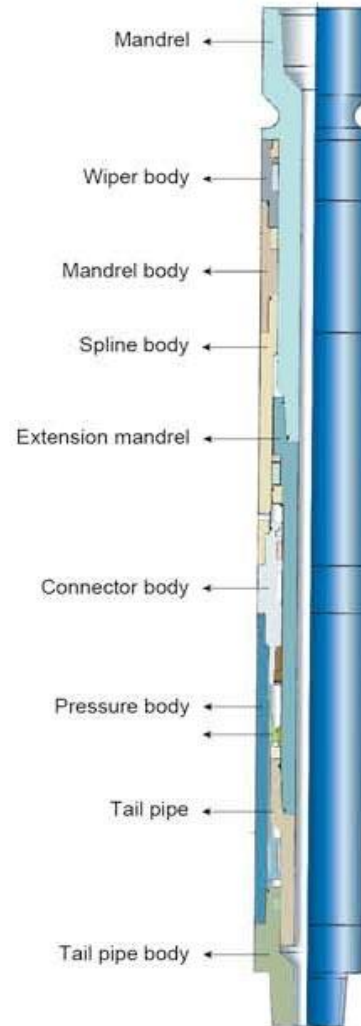
Drilling Jar
Integral Blade Stabilizer
Replaceable Sleeve Stabilizer
Rotary Reamer
Rotary Subs
Shock Absorber
Kelly Valve/Drill Pipe Safety Valve
IBOP
Drop-in Check Valves
Circulating Sub
Float Valves Sub
Overshot
Reverse Circulating Junk Basket
Bumper Sub
Junk Sub
Taper Tap
Die Collar
Fishing Magnet
Impression Block
Casing Scraper
Junk Mills



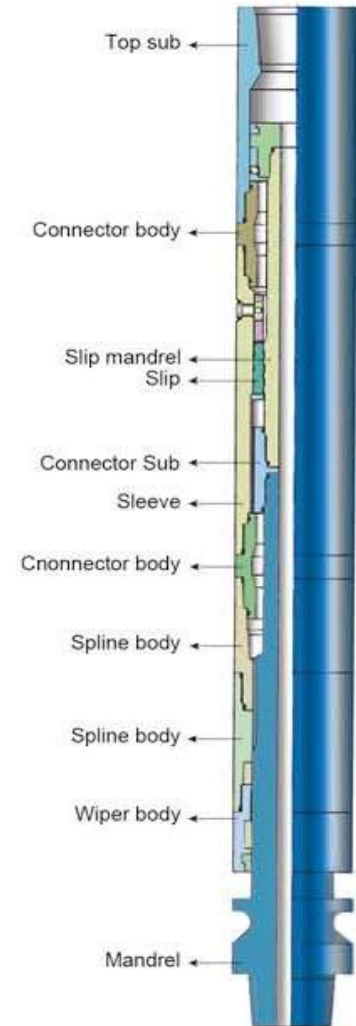
Hydraulic & Mechanical Drilling Jar

The drilling jar connecting with drill tool and working with drill strings is a downhole stuck freeing tool in drilling operation. When drill tool is happened to be stuck in downhole, the stuck drill tool can be released by in time starting the drilling jar to provide continuous up jarring or down jarring . It is a desire tool for directional well, complicated well and deep well.

Drilling Jar



The drilling (up) jar is as shown in block drawing enclosed



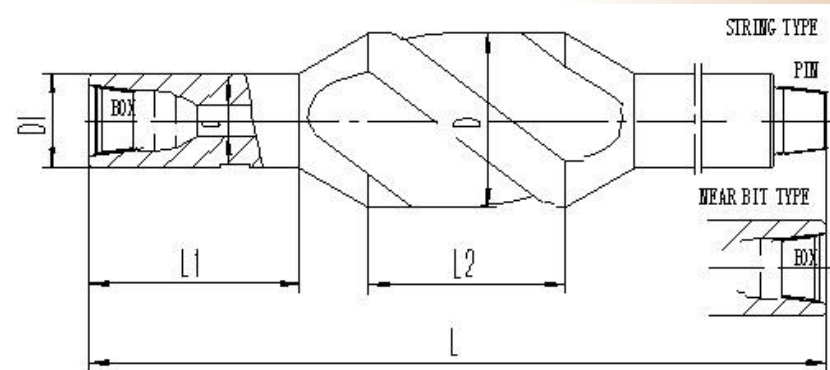
drilling (down) jar is shown in block drawing enclosed



Integral Blade Stabilizer

The integral blade stabilizer has a single piece body made of 4145 H modified alloy steel, fully heat treated to 285-341 Brinell hardness and 40 ft x lb minimum impact strength. Integral stabilizers are available in either open design or tight design, near bit or string type. Connections are gauged to API standards. And their Stress relief grooves are cold rolled. Connections are phosphatized or plated copper, coated and equipped with thread protectors.

Integral Blade Stabilizer



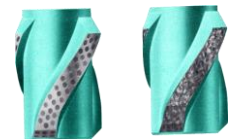
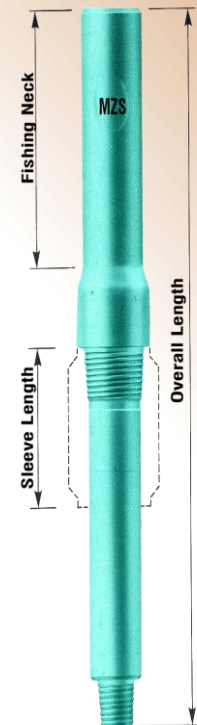
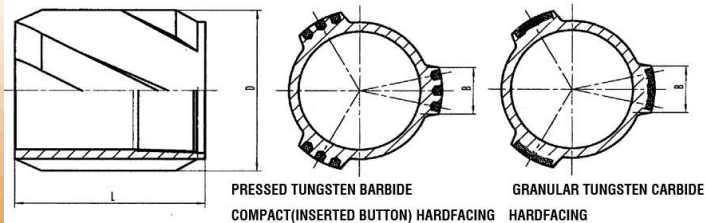
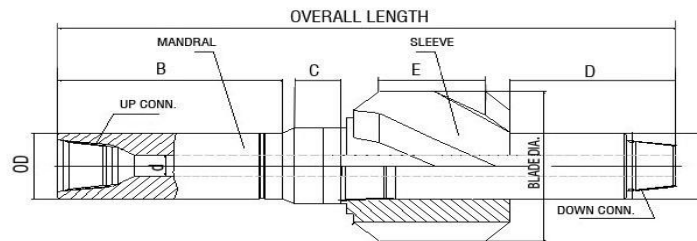


Replaceable Sleeve Stabilizer

The Replaceable Sleeve Stabilizer consists of a one piece body, on which a sleeve is simply made up by tongs or sleeve breaker, on the rig floor. It provides versatility and easy sleeve replacement to adapt to different formations and hole sizes. The Replaceable Sleeve Stabilizer is made of 4145 H modified alloy steel, fully heat treated to 285-341 Brinell hardness and 40 ft x lb minimum impact strength. Connections are gauged to API standards. And their Stress relief grooves are cold rolled. Connections are phosphatized or plated copper, coated and equipped with thread protectors.

The Replaceable Sleeve Stabilizer is available in string or near-bit design. Central upset allows several center joint reconditioning.

Replaceable Sleeve Stabilizer

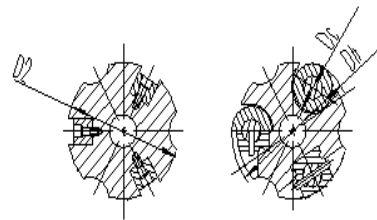
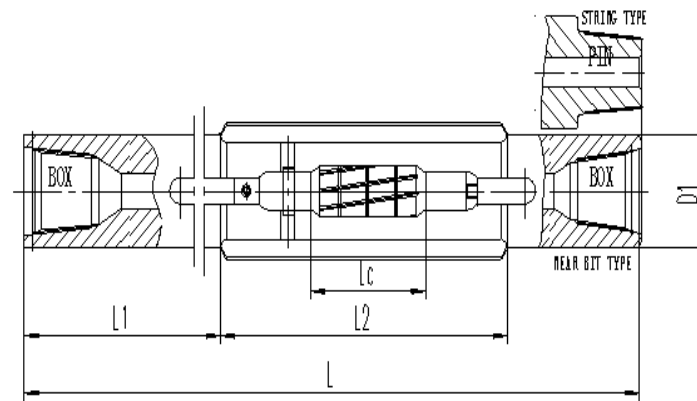




Rotary Reamer

The rotary reamer is designed for every reaming operation but particularly for stabilization purposes when drilling in very abrasive formations. The rotary reamer is a versatile tool which will fit hole sizes ranging from 5-7/8" to 28". In addition, by simple replacement of cutters, each body will suit a variety of abrasive formations.

Rotary Reamer

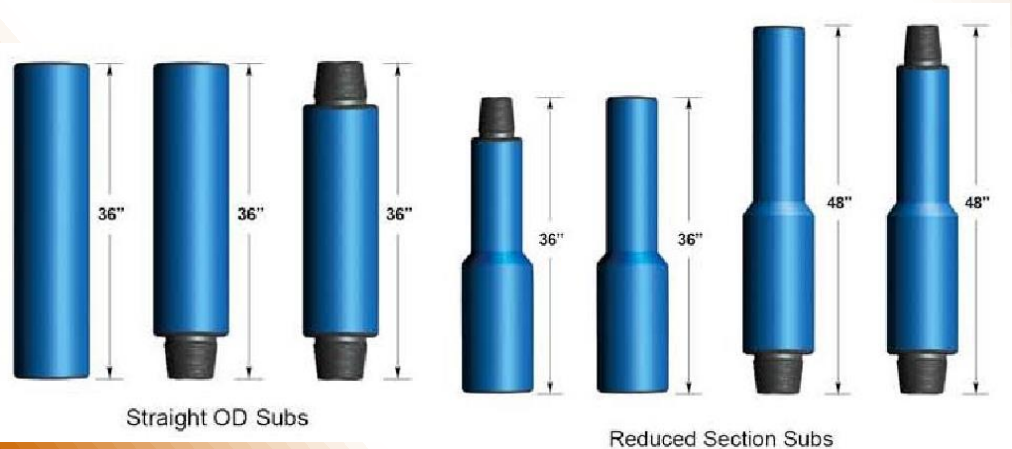
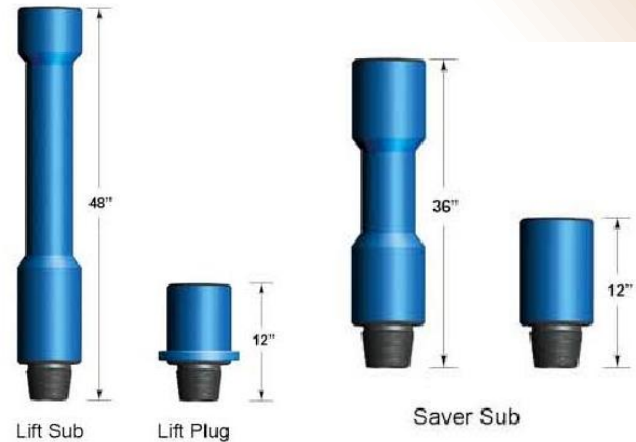




Rotary Subs

Lift Sub, Lift Plug, Saver Sub, X-over

Rotary Subs are made from 4145 H modified quenched and tempered material to API specifications, and carry the API monogram. They can be used to crossover from connection size to another or as the disposable component used to extend the connection life of a more expensive drill stem member.

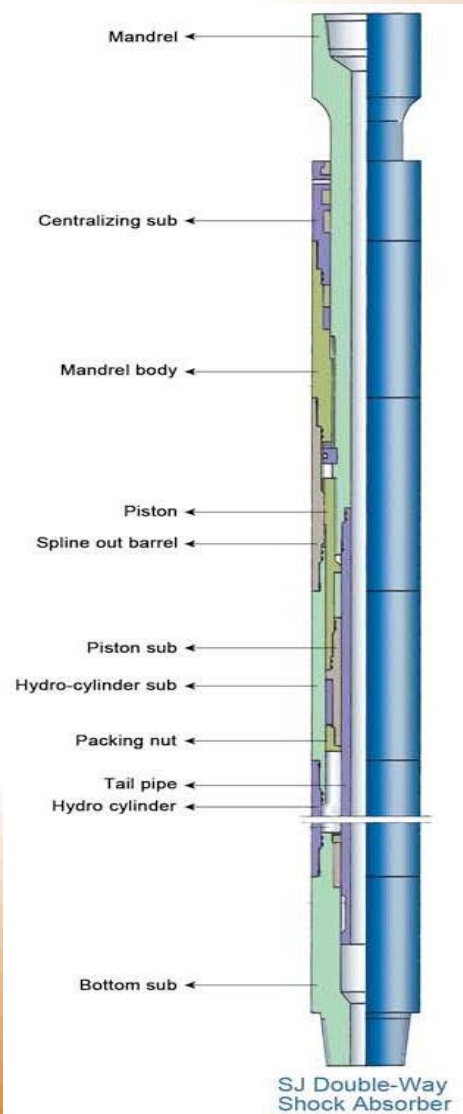




Double Way Shock Absorber

The Double Way Shock Absorbers are used to simultaneously slow down or eliminate the vertical or horizontal shock from drill string. It can reduce the damage due to shocking to drill bit, drilling tool and surface drilling tool so as to enhance drilling speed and reduce drilling cost.

Shock Absorber

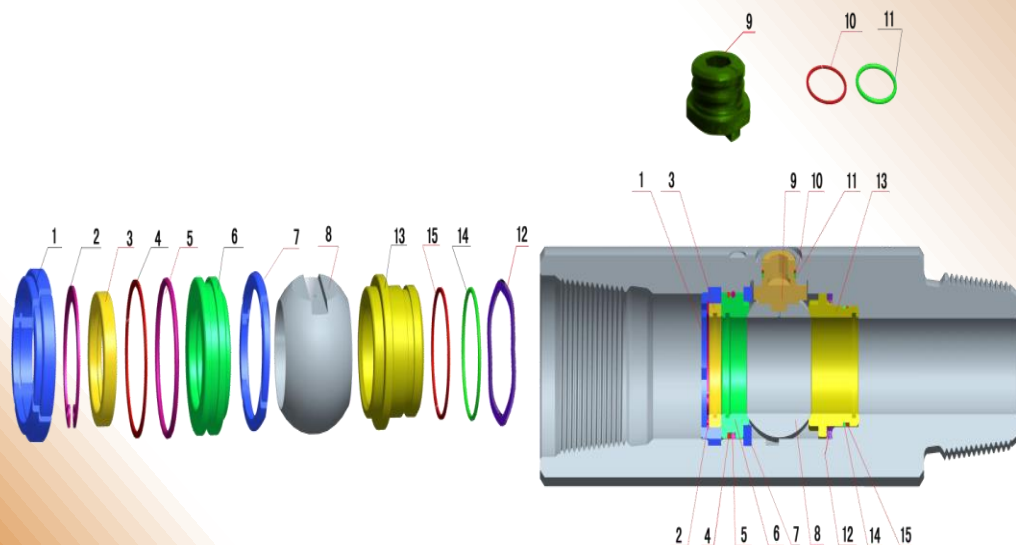




Kelly Valve/ Drill Pipe Safety Valve

The Kelly Valve/Drill Pipe Safety Valve is a full opening valve that provides positive pressure control of the fluids in the drill string. The valve seals in both directions with metal to metal seals. Available in 10,000 psi working pressure as standard, 15,000 psi working pressure is available in certain sizes upon request.

Kelly Valve/ Drill Pipe Safety Valve

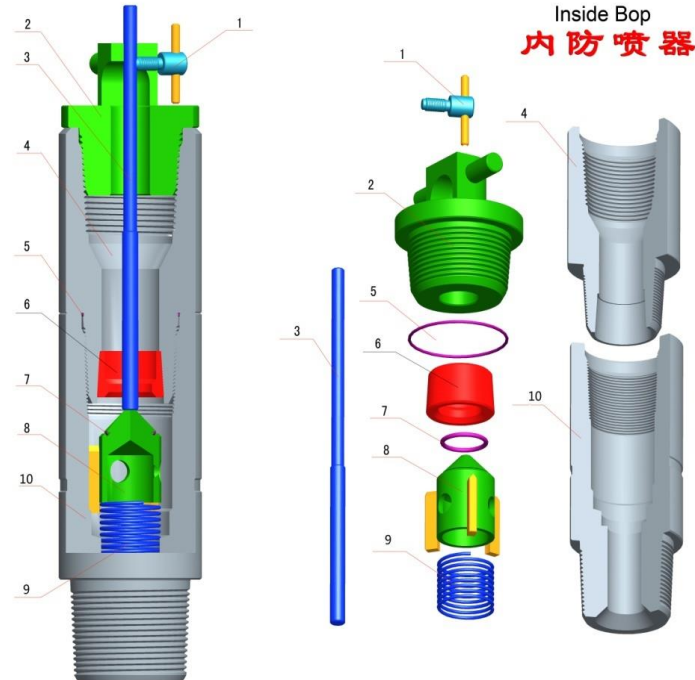




Inside Blowout Preventer (IBOP)

The Inside Blowout Preventer (IBOP) is a check valve designed to control or prevent a backflow condition when the Kelly or Top Drive is disconnected from the drill pipe. It controls the backflow through the inside of the drill pipe itself, preventing damage to the swivel, drilling hose, standpipe and circulation equipment.

Inside Blowout Preventer (IBOP)





Drop-In Check Valves

Drop-In Check Valves prevent return flow during a kick and are suitable for most drilling situations in which return flow through the drill string is a risk and normal operation requires the benefits of a full-bore sub. By preventing upward flow through the drill pipe, but allowing fluid to be pumped downward to circulate the well, the valves provide the driller with the means to control the drill pipe pressures when required, significantly improving and simplifying well control.

When blowout is going to be happened, the thread connections of the Kelly is screw out immediately and put the check valve is into the drill pipe and then pumped downward to the required place. Thus the blowout can be prevented.

Drop-In Check Valves



Check Valve



Landing Sub



Circulating Sub

The circulating sub is connected between wellhead pipe string and ground circulating system. When casing is running or finished running, the circulating sub is connected to make fluid circulation. According to the application, the circulating sub is connected between Kelly and casing or between casing and hose. The former is used for fluid circulation during connecting of casing. The later generally is used after connecting of casing.

Circulating Sub



Circulating Sub
With Drill Pipe Thread



Circulating Sub
With Hammer Union Thread



THE BOG

Float Valves Sub

Float Valve Sub is an important tool in petroleum exploration and drilling engineering. The float valve sub is connected at upper part of drill bit. the float valve assembly in sub is near the bit connecting thread and the float valve sub also can be necessary position of drill string. The main application is, when connecting with single piece pipe, to prevent mud returning. When blowout takes place, blowout in drill string will be avoided because nozzle is closed automatically by valve cap for float valve assembly .

Float Valves Sub



Model F
Float valve



Model G
Float valve



Model F float sub



Model G float sub



Releasing and Circulating Overshot

The Releasing and Circulating Overshot is an external catch fishing tool designed to retrieve tubular items from the well bore. It is rugged, economical, and easy to use. The overshot come with a wide range of available accessories. These fishing tools have proven to be the most versatile and reliable in the field.

Overshot





Junk Basket

The Reverse Circulating Junk Basket (RCJB) is a junk retrieval tool designed to remove all types of objects from the bottom of the well bore. This superior tool removes such items as slips, hand tools, bit cones, and any other small pieces of junk from the well. The RCJB uses reverse circulation to aid junk recovery.

Reverse Circulating Junk Basket



Type B Mill Shoe



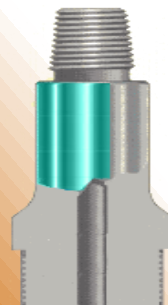
Type C Mill Shoe



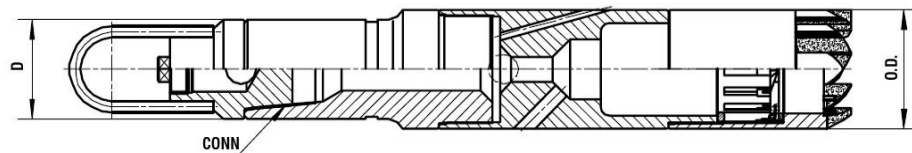
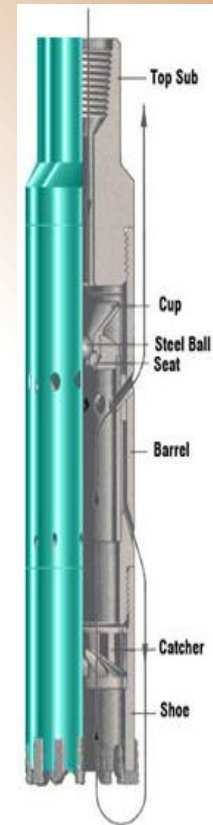
Type D Junk Basket Magnet.



Finger Shoe.



Top Sub Pin.

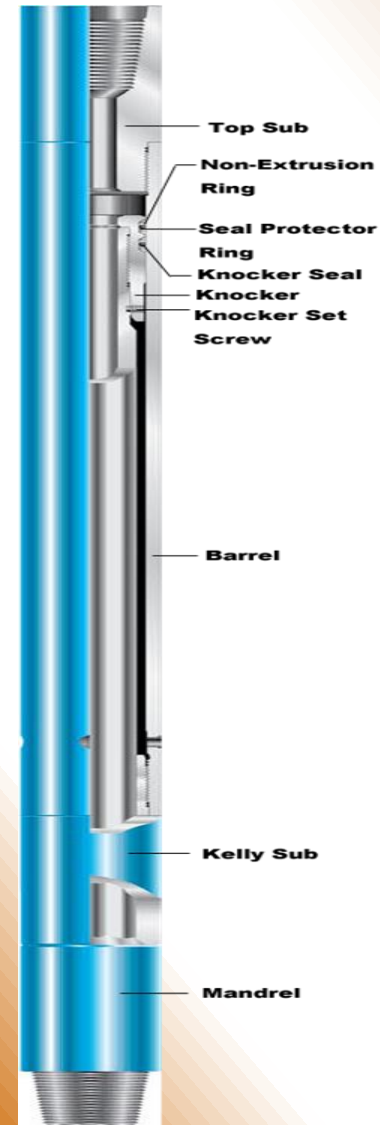




Bumper Sub

Fishing Bumper Sub is a highly dependable accessory tool. Suitable for all fishing operations, it has proven to be especially successful in surviving harsh down-hole applications. The tool design allows full torque and unrestricted fluid circulation at all times. Standard stroke is 20 inches; other stroke lengths are available on request.

Bumper Sub





Junk Sub

Junk Sub, which are normally run just above the drill bit, have a cup for catching objects too heavy to be completely circulated out of the hole. This is particularly advantageous in junk milling operations. By running a Bowen Type Junk Sub above a scraper, operators can get quicker, cleaner scraping jobs.

Junk Sub





Die Collar

Die Collars are simple, rugged, dependable external catch fishing tools.

Operation

Run the Die Collar in the hole to the top of the stuck fish. Apply less than one point of weight and rotate the die collar until the tapered threads have engaged the fish. Stop rotation and pull the fish from the hole.

Die Collars are furnished in two types: Type "A" and Type "B." Type "A" Die Collars have a smooth end on the large diameter end, the guide is integral with the die collar.

Die Collar



Type A Die Collar



Type B Die Collar
With Lipped Guide



Oversize Guide



Taper Tap

The Taper Tap is an internal catch fishing tool designed to retrieve tubular members from the well bore. It is the most economical tool of its kind for freeing fish. The Taper Tap is manufactured from high alloy steel and special heat treated. The hardened cutting teeth (wickers) are carbo-nitrided and machined on a shallow taper to provide an excellent grip for light duty pick-up jobs. Plain watertight wickers are furnished as standard equipment. Fluted wickers are also available on request.

Taper Taps are furnished either plain or threaded for skirts.

Taper Tap

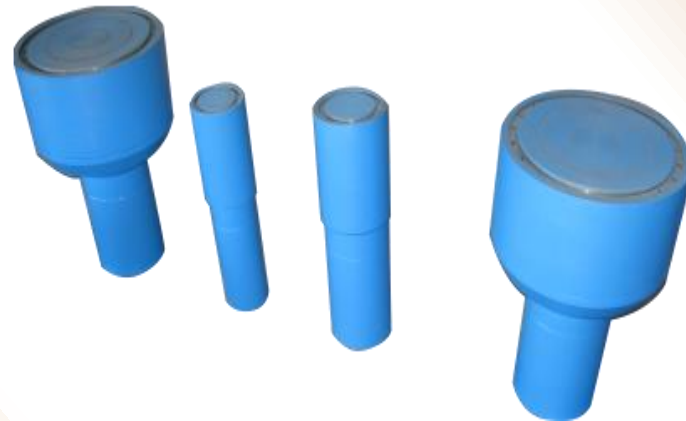




Fishing Magnet

The Fishing Magnet is a junk retrieval tool designed to effectively remove metal particles, shavings, and debris from the bottom of the well bore. The process of retrieving small, oddly shaped objects is one of the most frequent and most difficult fishing jobs. Typically, these objects are the result of bit failures that leave cones and cutters in the hole, or are an accumulation of mill cuttings, or are simply accidental droppings of unbillable objects into the hole. In these cases, the fish is nearly always an odd-shaped object that cannot be engaged in the normal manner. Fishing magnets successfully remove these small objects from the hole bottom. The tool's design incorporates generous circulation holes that wash away the cuttings and other debris that otherwise would prevent contact with the magnet. Fishing magnets can be run on either wire line or pipe.

Fishing Magnet





Impression Blocks

Impression Blocks, which consist of a soft lead insert in the lower end of a steel housing, are used in fishing operations. They are designed to enable the operator to determine the configuration of the top of the fish and to locate its position in the well bore. Its use enables the operator to more precisely assess the fishing conditions and select the proper tool or tools needed to successfully complete the fishing operation.

Impression Block





Casing Scraper

The Casing Scraper is designed to remove scale, mud cake, cement sheath, embedded bullets, and other foreign material from inside of the casing wall.

Maintaining a clean casing I.D. is vital to the efficient operation of down-hole tools used in drilling the well. The resulting smooth surface properly prepares the casing for subsequent down-hole operation such as packer setting and squeeze tools.

Casing Scraper





Junk mills

Junk mills are produced for high strength heat treated alloy. All mills are available as bit type or with optional fishing neck and hard surface wear pads. Large circulation ports and ample fluid channels provide cooling and efficient removal of cuttings.

Junk mills



Flat Bottom
Junk Mill



Concave
Junk Mill



Offset
Junk Mill



Bladed
Junk Mill



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