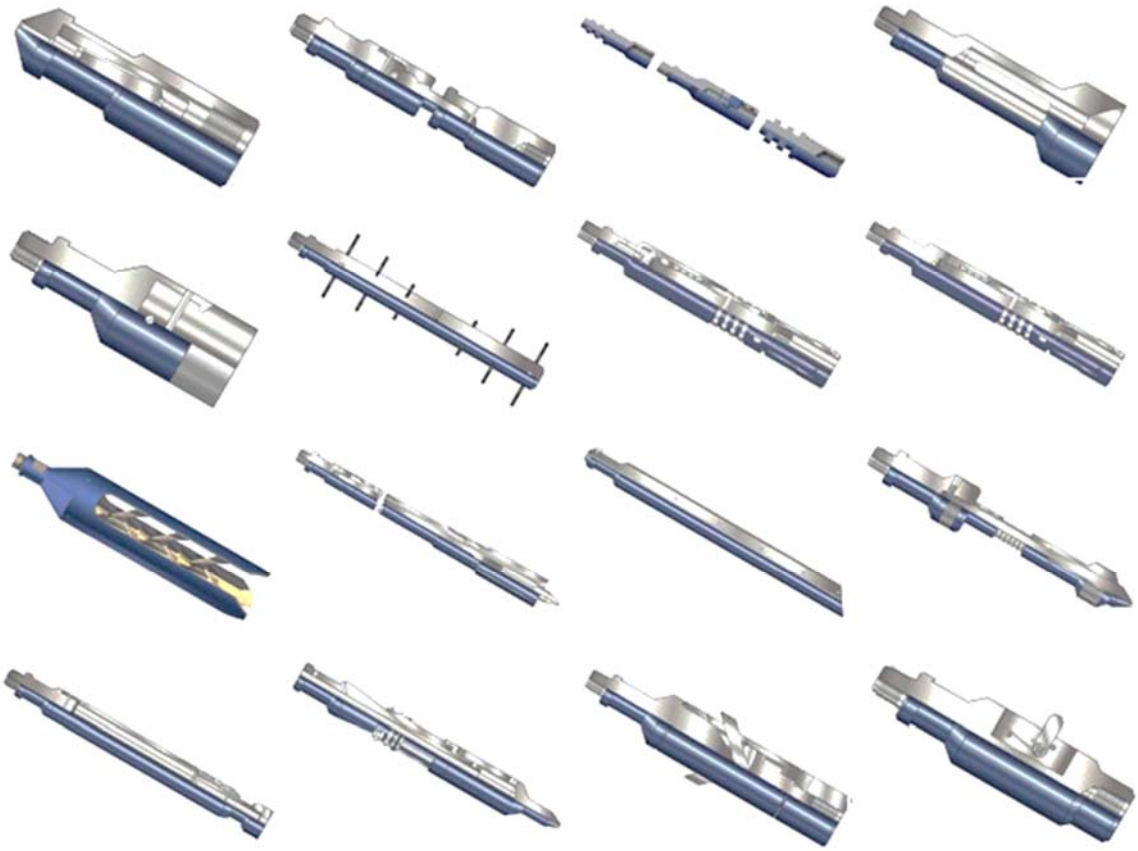
Slickline Downhole Basic Tools Data Sheets



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Rope Socket Pear Drop Type

The Pear Drop Rope Sockets are used to attach wireline to the tool string and are predominately used with wireline sizes from 0.092” to 0.160” dependent on size.

The Rope Socket assembly consists of a body with an external fishing neck, sleeve and a brass wedge (“pear drop”) which is grooved to accommodate the wire and comes complete with a securing grub screw

Applications

• Used as a method of connecting the Slickline to the tool string, from wire sizes from 0.108” up to 0.160”

Features

• Assembly consists of a body with external fishing neck, sleeve and brass wedge (pear drop)
• The pear drop is grooved to accommodate the wire and comes complete with a securing grub screw
• The more pull applied on the Slickline, the more the pear drop pulls into the sleeve giving a tighter grip on the Slickline

Benefits

• Pear drop sockets are ordered to suit the wire size being deployed
• Simple, low maintenance design

Rope socket				
Size (in.)	Max. OD (in.)	F/N OD (in.)	Thread Conn. Box (in. TPI)	Wire size (in.)
1-1/2	1.500	1.375	1-1/16 - 10 UN	0.092 / 0.108
1-7/8	1.875	1.750	15/16 - 10 UN	0.092 / 0.125
1-7/8	1.875	1.750	1-1/16 - 10 UN	0.092 / 0.125
2-1/8	2.125	1.750	1-1/16 - 10 UN	0.092 / 0.125
2-1/2	2.500	2.312	1-9/16 - 10 UN	0.092 / 0.125

Wireline Stem Weight Bars

The Wireline Stem/Weight Bars, sometimes referred to as 'sinker bars', are designed to serve two purposes.

Firstly they are the weight required to overcome forces created by well pressure and the size of cable used and secondly they are the mass required to deliver impacts when setting or pulling devices in the wellbore

Applications

• As with the conventional stem, however Lead Filled stem is heavier per ft. giving increased tool string weight when required without increasing length or OD

Features

• Provides the weight required to overcome forces created by well pressure and the size of the cable
• Creates the mass required to deliver impacts when setting or pulling devices in the wellbore
• Supplied with standard pin and box connections complete with fishing necks

Benefits

• Available in various diameter and lengths
• Overcomes well pressures

Wireline Stems			
Size (Inch)	**Max. OD (inch)**	**F/N OD (inch)**	**Thread Connection**
1-1/2	1.500	1.375	15/16-10 UN
1-7/8	1.875	1.750	1-1/16-10 UN
2-1/8	2.125	1.750	1-1/16-10 UN
2-1/2	2.500	2.312	1-9/16-10 UN

Wireline Knuckle Joint

The Knuckle Joint is designed to provide flexibility within the wireline tool string. One or more Knuckle Joints can be inserted into the tool string at the operator's discretion, to meet operational requirements

Applications

• Knuckle Joints are used to add flexibility within the tool string and are particularly effective within deviated well bores

Features

• Can be inserted into the tool string at operators discretion
• Works most effectively when situated below the jar to provide angular movement between the tool string and the running/pulling tool
• Available in various diameters

Benefits

• Provides flexibility within the wireline tool string
• Meets operational requirements

Wireline Knuckle Joints			
Size (inch)	**Max. OD (inch)**	**F/N OD (inch)**	**Thread Connection Pin X Box (in. TPI)**
1-1/8	1.125	0.875	5/8-11 UNC
1-1/4	1.250	1.187	15/16-10 UN
1-1/2	1.500	1.375	15/16-10 UN
1-7/8	1.875	1.750	1-1/16-10 UN
2-1/8	2.125	1.750	1-1/16-10 UN
2-1/2	2.500	2.312	1-9/16-10 UN

Wireline Swivel Joint

The Swivel Joint is a wireline accessory used to minimize the effect of line twist caused by subsurface devices being run. The Swivel Joint has a bearing incorporated into its design and is used to minimize rotation whilst running tubing or casing caliper surveys.

The Swivel Joint has a double fish neck feature and standard pin and box threads.

Applications

• The swivel joint is a tool string accessory that is incorporated to minimize the effect of any potential wire twist caused by downhole conditions or devices being run. The Swivel is commonly run when running braided cable

Features

• Ensures free rotation of downhole tool string assemblies
• Capable of withstanding high impact forces
• Suitable for use with the latest generation of high impact jars
• Reduces the build of torque in the tool strong

Benefits

• Free rotation even when the tool string is held in significant tension
• Minimizing the buildup of torque reduces potential damage being cause to the wireline stand

Swivel Joints		
Size (inch)	F/N OD (inch)	Connection Thread (inch TPI)
1.500	1.375	15/16-10 UN
1.875	1.750	1-1/16-10 UN
2.500	2.313	1-9/16-10 UN

Wireline Adapters

The Wireline Crossover are used to connect two tool string items with different threads.

Quick Lock Connection provide a fast safe and strong method of attaching and releasing tools by hand. The male half is mated with the female half, then rotated through 90 deg. Whereon a spring loaded spade in the female section engages a slot in the male section and locks the assembly in place. It is released by pushing upon the spring and rotating again through 90 deg.

Applications

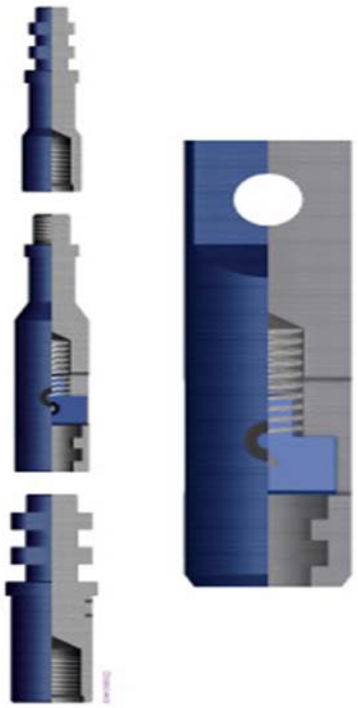
- Wireline crossovers are used to connect two tool string items with different threads and sizes
- Lift subs are used to make up the tool string in a safe manner

Features

- All crossovers are supplied with a fishing neck
- Can supply the following variations – pin to box, pin to pin or box to box

Benefits

- Flexible



Crossovers			
Max. OD (inch)	F/N OD(inch)	Thread Conn. Pin (in. TPI)	Thread Conn. Box (in. TPI)
1.750	1.750	1-1/16-10 UN	15/16-10 UN
2.312	1.750	1-1/16-10 UN	15/16-10 UN
2.312	2.312	1-1/16-10 UN	1-3/16-10 UN
2.312	2.312	1-1/16-10 UN	1-9/16-10 UN
1.750	1.750	1-3/16-10 UN	15/16-10 UN
2.312	2.312	1-3/16-10 UN	1-9/16-10 UN

Sucker Rod Threads & Quick Lock Connections			
Thread / QLS Yield Strength	Design Tensile* Strength	Design Shear* Strength	Ultimate
15/16-10 SRT	47584 lbs.	68475 lbs.	72966 lbs.
1-1/16-10 SRT	63910 lbs.	79888 lbs.	96600 lbs.
1-1/2 QLS	51128 lbs.	60258 lbs.	77700 lbs.
1-7/8 QLS & 2-1/8 QLS	77605 lbs.	74409 lbs.	119000 lbs.

Wireline Link Jar – Spang

The Wireline Link Jars, often referred to as “spang jars” or “mechanical jars”, are designed to act like a sliding hammer, utilizing the weight of the stem bars located immediately above, to convey powerful jarring impacts.

Upward and downward impacts (jarring actions) are achieved by controlling the direction and speed of the wireline at surface.

Applications

• Spang Jars or Mechanical Jars are used in both standard intervention operations and can be used in fishing operations. The jars, combined with the added weight of the stem, give a high impact force downhole when setting or pulling flow control devices. The operator can manipulate the jars using the directional control lever in the Wireline unit

Features

• Designed to act like a sliding hammer by utilizing the weight of the steam bars to convey a powerful jarring action
• Jarring actions are controlled by the direction and speed of the wireline at surface
• Available in various diameters and stroke lengths

Benefits

• Controlled jarring actions

Wireline Link Jars				
Size (inch)	Max. OD (inch)	F/N OD (inch)	Thread Conn. Pin X Box (in. TPI)	Stroke
1	1.000	0.875	5/8-11 UNC	20
1-1/4	1.250	1.187	15/16-10 UN	30
1-1/2	1.500	1.375	15/16-10 UN	20
1-1/2	1.500	1.375	15/16-10 UN	30
1-7/8	1.875	1.750	1-1/16-10 UN	20
1-7/8	1.875	1.750	1-1/16-10 UN	30
2-1/8	2.125	1.750	1-1/16-10 UN	30
2-1/2	2.500	2.312	1-9/16-10 UN	24

Wireline Tube Jar

The Tubular Wireline Jars are designed to act like a siding hammer, utilizing the weight of the stem bars located immediately above, to convey powerful jarring impacts.

Upward and downward impacts (jarring actions) are achieved by controlling the direction and speed of the wireline at surface

Applications

• Tubular Jars are most commonly used during fishing operations where the possibility of Wire or other debris could impede the jar action of conventional mechanical jars. As the Tubular jar action is contained within an outer housing, there is less chance of losing jarring action whilst downhole

Features

• Used effectively during fishing operations when the jarring action could be impeded by wire, debris etc.
• Used effectively when the tool string is being deployed during large tubing and casing
• Available in various diameters and stroke lengths

Benefits

• The jarring action is contained within an outer body allowing its effective use in wellbores that may contain debris

Wireline Tubular Jars				
Size (inch)	Max. OD (inch)	F/N OD (inch)	Thread Conn. Pin X Box (in. TPI)	Stroke
1-1/4	1.250	1.187	15/16-10 UN	30
1-1/2	1.500	1.375	15/16-10 UN	20
1-1/2	1.500	1.375	15/16-10 UN	30
1-7/8	1.875	1.750	1-1/16-10 UN	20
1-7/8	1.875	1.750	1-1/16-10 UN	30
2-1/8	2.125	1.750	1-1/16-10 UN	20
2-1/8	2.125	1.750	1-1/16-10 UN	30

Wireline Hydraulic Jar

The Wireline Hydraulic Jar are used for jarring when difficulty is face to obtain good jarring action with Mechanical Jars, particularly due to deviated wells or wells with highly viscous fluids. These jars provide only up stroke and are run between stem and Mechanical Jar.

Applications

• Hydraulic Jars are used for jarring when difficulty is faced when attempting to obtain a good jar action with mechanical jars, particularly when in deviated wells or wells that contain highly viscous fluids. Hydraulic jars only provide an upwards jarring stroke and are run above the mechanical jars and below the stem

Features

• Delivers a controlled upward impact load during wireline operations
• The closed hydraulic system makes it possible for the jarring action to be controlled
• Available in various diameters and supplied with standard pin by box connections complete with fishing necks

Benefits

• Controls the jarring action from very light impact to substantial force

Wireline Hydraulic Jars				
Size (inch)	Max. OD (inch)	F/N OD (inch)	Thread Conn. Pin X Box (in. TPI)	Stroke
1-1/8	1.125	0.875	5/8-11 UNC	6.750
1-1/4	1.250	1.187	15/16-10 UN	9.250
1-1/2	1.500	1.375	15/16-10 UN	9.187
1-3/4	1.750	1.375	1-1/16-10 UN	10.000
2-1/8	2.125	1.750	1-3/16-10 UN	11.625

Wireline Spring Jar

The Spring Jar is designed to impact a very high impact load to a tool string without excessive jarring action, With a reasonably short tool string, an upward pull on the wireline compresses the jar spring until such time as the inner ring has moved up enough to allow the balls to move in from the external ring allowing the jar to 'fire'.

Applications

• Spring Jars provide an upward jarring action and are commonly run with mechanical jars on either standard intervention operations, or fishing operations. Spring jars are run above the mechanical jars and below the stem

Features

• Design to impact a tool string with a greater load without excessive jarring actions

Benefits

• Reduces excessive jarring actions

Wireline Spring Jars				
Size (inch)	**Max. OD (inch)**	**F/N OD (inch)**	**Thread Conn. Pin X Box (in. TPI)**	**Setting**
1-3/4	1.750	1.375	1-1/16-10 UN	400-700
2-1/8	2.125	1.750	1-3/16-10 UN	400-700

Gauge Cutters

The Gauge Cutter are run in hole before running sub surface equipment. Gauge/Paraffin Cutters are used to check if sub surface equipment can pass freely thru tubing & there are no obstructions and to locate top of nipple. The bottom of Gauge/Paraffin Cutter is suitable to cut paraffin, scale and any other obstacles in tubing.

Applications

- Gauge Cutters are run in hole before running sub surface equipment
- Gauge Cutters are used to check if sub surface equipment can pass freely thru tubing & there are no obstructions and to locate top of nipple
- The bottom of Gauge Cutter is suitable to cut paraffin, scale and any other obstacles in tubing.

Features

- Short bar with a machined bore extending up the center
- Elongated windows for fluid by pass
- Upset gauge ring on the bottom is sized for application
- Large bevel cut to provide a scraping edge
- Industry standard thread connection complete with finishing neck

Benefits

- Gauge and scrape clean paraffin, wax and other debris from inside the wall of the completion tubing string
- Ensures there is no impeding matter before running

Tubing Gauge / Paraffin Cutters		
OD Range (inch)*	**F/N OD (inch)**	**Thread Connection Pin (in. TPI)**
0.905 – 1.575	0.875	5/8-11 UNC
1.655 – 2.265	1.375	15/16-10 UN
2.323 – 2.520	1.375	15/16-10 UN
2.598 – 2.953	1.750	1-1/16-10 UN
2.992 – 3.900	2.312	1-1/16-10 UN
5.750 – 6.151	2.312	1-9/16-10 UN

Blind Box

The Blind Box are used when heavy downward jarring is required to dislodge a fish or push something down the hole. Bottom surface of Blind Box is flat and hardened to reduce wear and damage.

Applications

• Blind Boxes are used when heavy downward jarring is required to dislodge a fish or push something down the hole
• The Bottom surface of Blind Box is flat and hardened to reduce wear and damage

Features

• Solid bar with a flat hardened bottom end and a standard thread connection with fishing neck on top

Benefits

• Jars an obstruction downward through the tubing strong to a position which cause the least inconvenience
• Breaking the wireline at the rope socket, allowing the wire to be retrieved

Blind Boxes		
OD Range (inch)*	**F/N OD (inch)**	**Thread Connection Pin (in. TPI)**
1.187 – 1.250	1.187	15/16-10 UN
1.625 – 1.375	1.375	15/16-10 UN
2.625 – 2.750	1.750	1-1/16-10 UN
3.500 – 4.625	2.312	1-9/16-10 UN
5.250 – 5.750	2.312	1-9/16-10 UN

Impression Block

The Impression Block are used during fishing operations to check the shape / size of the top of fish and to determine tool appropriate for fishing operation. Lead is filled within body of Impression Block and a pin is fixed thru body of Impression Block and lead to stabilize lead within body.

Applications

• Impression Blocks are used during fishing operations to check the shape / size of the top of fish and to determine the appropriate tool for the fishing operation. Lead is filled within body of Impression
• Block and a pin is fixed thru body of Impression Block and lead to stabilize lead within body

Features

• Steel Cylinder with an open bottom end filled with soft lead
• Top end has an industry standard thread connection complete with fishing neck
• Available in various diameters

Benefits

• Allows the operator to take an impression of unknown objects in the tubing string
• This impression helps the operator select the tool for the next operation

Impression Blocks		
OD Range (inch)*	F/N OD (inch)	Thread Connection Pin (in. TPI)
1.000 – 1.230	0.875	5/8-11 UNC
1.375 – 1.410	1.187	15/16-10 UN
1.750 – 2.250	1.375	15/16-10 UN
2.625 – 2.812	1.750	1-1/16-10 UN
3.500 – 4.625	2.312	1-9/16-10 UN
5.500 – 5.750	2.312	1-9/16-10 UN

Wireline Magnet

The Skirted Magnet is designed to retrieve ferrous debris from the top of tools in the well. The Skirted Magnet consists of a top sub body complete with fishing neck and pin connection, magnet and skirt.

Applications

• The skirted and bar fishing magnets are used to retrieve any ferrous debris that may be obstructing complete entry into the wellbore, or hindering the retrieval of a sub-surface device

Features

• Skirt is manufactured from nonmagnetic material
• Prevents debris being dislodged during retrieval
• Prevent hindrance during running and pulling by keeping the magnet of the tubing wall

Benefits

• Retrieves debris from the top of the tools in the well

Wireline Fishing Magnet			
Size OD (inch)	**F/N OD (inch)**	**Thread Connection Pin (in. TPI)**	**To pull (lbs.)**
1.50	1.375	15/16-10 UN	11 – 14
1.75	1.375	15/16-10 UN	15 – 20
2.25	1.375	15/16-10 UN	25 – 50
2.65	1.375	15/16-10 UN	50 – 75
3.65	1.750	1-1/16-10 UN	150 – 250

Fluted Centralizer

The Fluted Centralizer is designed to centralize wireline tool strings inside the tubing, during operations in deviated wells.

Applications

• The Fluted Centralizer is used to centralize the tool string when in the wellbore.
• As it is fluted, a full bore centralizer can be run as fluid bypass is achieved by the flutes.
• Can be used as a drift if required

Features

• Centralizes the wireline tool strings inside the tubing
• Available in various diameters and supplied with industry standard connections complete with fishing neck

Benefits

• Full bore Centralizers can be run in fluid as bypass is achieved by the flutes

Fluted Centralizers			
Size(inch)	**Max. OD (inch)**	**F/N OD (inch)**	**Thread Connection Pin X Box (in. TPI)**
1-1/2	1.50	1.187	15/16-10 UN
2-1/2	2.50	1.750	1-1/16-10 UN
3-1/2	3.50	2.312	1-1/16-10 UN
6	6.00	2.312	1-9/16-10 UN

GR Adapter

The Shear Up Adapter GS Pulling Tools are used to unlock and pull various down hole equipment with Internal Fishing Necks. These tools are designed to shear with Jar Down action. With addition of GU Adapter, complete assembly is changed to GR Shear Up Tool.

Applications

• The Shear Up Adaptor is used to convert a standard GS pulling tool from a jar down to release toll, into a jar up to release tool.
• The Shear pin in the GS must be removed once the GU Adaptor is installed

Features

• Fitted with industry standard connections and fishing necks
• Internal Sucker Rod connection to allow installation on to a GS Pulling tool

Benefits

• Available to suit as GS Pulling Tools

Shear Up Adapter GU			
Size	**Actual OD (inch)**	**F/N OD (inch)**	**Thread Connection**
1-1/2	1.470	1.187	15/16-10
2	1.812	1.375	15/16-10
2-1/2	2.250	1.750	15/16-10
3, 3-1/2, 4	2.718	2.312	1-1/16-10

GS Pulling Tool

The Pulling Tool Type GS Pulling Tools are used to unlock and pull various down hole equipment with Internal Fishing Necks. These tools are designed to shear with Jar Down action. With addition of GU Adapter, complete assembly is changed to GR Shear Up Tool.

Applications

• The GS Pulling tool is used to engage and pull sub surface flow control devices that are fitted with an Internal Fishing Neck

Features

• Fitted with industry standard connections and fish necks
• Jar down to release functionality
• Can be converted to a jar up to release tool by installing a GU Shear Up Adaptor

Benefits

• Larger sizes GS' are fitted with a pinning ring for ease of pinning

GS Pulling Tools						
Size	**Prong**	**F/N ID**	**GS**	**F/N OD**	**Top**	**Reach**
1-1/2 – 1-3/4	1/2-13	1.060	1.470	1.187	15/16-10	1.62
2	1/2-13	1.380	1.750	1.375	15/16-10	1.62
2-1/2	5/8-11	1.810	2.160	1.750	15/16-10	1.62
3	5/8-11	2.310	2.720	2.312	1-1/16-10	1.62
3-1/2	1-3/8-12	2.620	3.110	2.312	1-1/16-10	1.62
4	2-1/8-12	3.120	3.620	2.312	1-1/16-10	1.62
5	2-1/2-10	4.000	4.500	3.125	1-1/16-10	1.82
7	3-5/8-10	5.250	5.880	3.125	1-1/16-10	1.86

JU Running/Pulling Tool

The 'JU' Series Pulling Tool is designed to engage external fishing necks on Sub-surface devices within the well-bore

The Pulling Tool Type JU (Jar Up) Pulling Tools are used to shear and release tools and are available with C, S Core options. The cores of JU & JD are same.

Applications

- The 'JU' Series Pulling tool is used to latch and pull any subsurface device that is fitted with an external fishing neck
- Jar up to release functionality

Features

- Available with 3 different core lengths:
  - "C" being a long core with a short reach
  - "S" being an intermediate core with a medium reach
  - "L" being a short core with a long reach
- Supplied with industry standard connections and fishing necks

Benefits

- Different core lengths give the operator flexibility to use one tool for various different applications

JU Pulling Tools, Type JUC						
Size (inch)	Max. OD(inch)	F/N OD (inch)	Pulls Neck OD (inch)	Connecting Thread Pin	Prong Connecting Thread Box	Reach (inch)
1-1/4	1.250	1.187	1.937	15/16-10	1/4-20	1.937
1-1/2	1.422	1.187	1.187	15/16-10	1/2-13	1.093
2	1.859	1.375	1.375	15/16-10	1/2-13	1.437
2-1/2	2.250	1.375	1.750	15/16-10	1/2-13	1.312
3	2.812	1.750	2.312	15/16-10	5/8-11	1.437
4	3.750	2.312	3.125	1-1/6-10	1-1/4-12	3.375

JD Running/Pulling tool

The 'JD' Series Pulling Tool is designed to engage external fishing necks on sub-surface devices within the well-bore.

Pulling Tool Type JD (Jar down) Pulling Tools are used to shear and release tools and are available with C, S Core options. The cores of JU & JD are same.

Applications

- The 'JD' Series Pulling tool is used to latch and pull any subsurface device that is fitted with an external fishing neck
- Jar down to release functionality

Features

- Available with 3 different core lengths:
  - "C" being a long core with a short reach
  - "S" being an intermediate core with a medium reach
  - "L" being a short core with a long reach
- Supplied with industry standard connections and fishing necks

Benefits

- Different core lengths give the operator flexibility to use one tool for various different applications

JD Pulling Tools, Type JDC

Size (inch)	Max. OD (inch)	F/N OD (inch)	Pulls Neck OD (inch)	Connecting Thread Pin	Prong Connecting Thread Box	Reach (inch)
1-1/4	1.291	1.187	0.875	15/16-10	1/4-20	1.937
1-3/8	1.375	1.187	1.000	15/16-10	N/A	1.875
1-1/2	1.422	1.187	1.187	15/16-10	1/2-13	1.093
2	1.859	1.375	1.375	15/16-10	1/2-13	1.437
2-1/2	2.250	1.375	1.750	15/16-10	1/2-13	1.312
3	2.796	1.750	2.312	15/16-10	1/2-13 and 5/8-11	1.437
3	2.796	1.750	2.312	15/16-10	5/8-11	0.687
4	3.750	2.312	3.125	1-1/6-10	1-1/4-12	2.312

“R” Running / Pulling Tool

The R Pulling Tool is designed to engage external fishing necks on Sub-surface devices within the well-bore. R pulling tools are available with four different core lengths, sized to acJD Running/Pulling tool rJD Running/Pulling tooly standard fishing necks.

R pulling tools are categorized for easy reference; the first letter designates the direct of shear release, ‘R’ being jar up to release. The second letter designates the effective reach, which depends upon the core length

Applications

• The ‘R’ Series Pulling tool is used to latch and pull any subsurface device that is fitted with an external fishing neck
• Jar up to release functionality

Features

• Available with 3 different core lengths:
  • “B” being a long core with a short reach
  • “S” being an intermediate core with a medium reach
  • “J” being a short core with a long reach
• Supplied with industry standard connections and fishing necks

Benefits

• Different core lengths give the operator flexibility to use one tool for various different applications

R Pulling Tools, Type					
Size (inch)	**Max. OD (inch)**	**F/N OD (inch)**	**Pulls Neck OD(inch)**	**Top Thread**	**Reach (inch)**
1-1/4	1.220	1.000	1.000	5/8-11	1.219
1-1/2	1.430	1.188	1.188	15/16-10	1.264
1-3/4	1.484	1.188	1.188	15/16-10	1.050
2	1.770	1.375	1.375	15/16-10	1.219
2-1/2	2.180	1.375	1.750	15/16-10	1.203
3	2.740	2.312	2.312	1-1/16-10	1.297
3-1/2	3.110	2.312	2.750	1-1/16-10	1.350
4	3.670	2.312	3.125	1-1/16-10	1.490

“S” Running / Pulling Tool

The S Pulling Tool is designed to engage external fishing necks on Sub-surface devices within the well-bore.

S pulling tools are available with three different core lengths, sized to accommodate the different reach lengths on industry standard fishing necks.

S pulling tools are categorized for easy reference; the first letter designates the direct of shear release, ‘S’ being jar down to release. The second letter designates the effective reach, which depends upon the core length

Applications

• The S Series Pulling tool is used to latch and pull any subsurface device that is fitted with an external fishing neck
• Jar down to release functionality

Features

• Available with 3 different core lengths:
  • “B” being a long core with a short reach
  • “S” being an intermediate core with a medium reach
  • “M” is designed for use in Gas-Lift operations
• Fitted with industry standard connections and fishing necks

Benefits

• Different core lengths give the operator flexibility to use one tool for various different applications

S Pulling Tools, Type SB					
Size (inch)	Max. OD (inch)	F/N OD (inch)	Pulls Neck OD (inch)	Top Thread	Reach (inch)
1-1/4	1.220	1.000	1.000	5/8-11	1.280
2-1/2	1.437	1.188	1.188	15/16-10	0.688
2-1/2	1.437	1.188	1.188	15/16-10	1.297
2	1.766	1.375	1.375	15/16-10	1.219
2-1/2	2.188	1.375	1.750	15/16-10	1.281
3	2.734	2.312	2.312	1-1/16-10	1.380
3	2.844	2.312	2.312	1-1/16-10	1.500
3-1/2	3.115	2.312	2.750	1-1/16-10	1.690
4	3.670	2.312	2.750	1-1/16-10	1.500

X Running Tool

The X Running Tool is designed to deploy and set sub surface flow control devices equipped with X and XN lock mandrels, landing in corresponding selective or no-go landing nipples.

Applications

• Used to run and set Otis X and XN Lock Mandrels

Features

• The tool can be run in either Selective or Non-Selective position

Benefits

• Fishing neck fitted with industry standard connections

"X" Running Tools			
Actual OD (inch)	**To suit Nipple Bore**	**F/N OD (inch)**	**Thread Connection**
1.720	1.875	1.375	15/16-10 UN
2.171	2.313	1.750	15/16-10 UN
2.687	2.750	2.313	1-1/16-10 UN
2.843	2.875	2.313	1-1/16-10 UN
3.250	3.313	2.313	1-1/16-10 UN
3.750	3.813	2.313	1-1/16-10 UN
4.500	4.562	3.125	1-1/16-10 UN

B Shifting Tool

The B Positioning (Shifting) Tool is designed to move the inner sleeve to their open or closed position in the type XA, RA, XO and XD Sliding Side-Door circulating sleeve.

Applications

• The B Shifting Tools are designed to shift the XA, RA, XO and XD Sliding side door sleeves

Features

• Designed to release itself only after the sleeve has reached the full extent of its travel
• Supplied with industry standard connections and fishing necks
• Fitted with a shear pin to allow the keys to collapse should the tool not engage the profile

Benefits

• Self release design
• Conforms to industry standards

"B" Shifting Tools			
SSD ID (inch)	OD (Keys Retracted) (inch)	F/N OD (inch)	Thread Connection Pin X Box (in.
1.875	1.84	1.375	15/16-10 UN
2.125	1.97	1.375	15/16-10 UN
2.188	2.17	1.750	15/16-10 UN
2.313	2.16	1.750	15/16-10 UN
2.562	2.53	1.750	15/16-10 UN
2.750	2.73	2.313	1-1/16-10 UN
2.813	2.72	2.313	1-1/16-10 UN
3.125	3.06	1.750	15/16-10 UN
3.313	3.25	2.313	1-1/16-10 UN
3.437	3.38	2.313	1-1/16-10 UN
3.688	3.66	3.125	1-1/16-10 UN

Sand Pump Bailer

The Sand Pump Bailer is designed to remove sand and other debris, which may have settled on top of any sub-surface control within the well, preventing retrieval of the control by regular wireline operations.

Applications

• The Pump Bailer is used to remove sand and other deposits which may be impeding access for retrieval of a downhole device
• Working on the same principle of the bicycle pump, the pump bailer is manipulated by the operator, sucking debris into the bailer chamber
• The debris is retained within the body by means of either a flapper or a ball

Features

• Various shoe sizes and types are available
• Supplied with industry standard pin connection complete with fishing neck

Benefits

• Removes sand and other debris which may have settled on top of any sub surface control within the well

Sand Pump Bailer			
Size	**F/N OD (inch)**	**Thread Connection Pin**	**Guide Shoe OD (inch)***
1-1/4	1.187	15/16-10 UN	1.250
1-1/2	1.375	15/16-10 UN	1.50
1-3/4	1.375	15/16-10 UN	1.75
2	1.375	15/16-10 UN	2
2-1/2	2.313	1-1/16-10 UN	2.5
3	2.313	1-1/16-10 UN	3

Sample Bailer

The Sample / Drive Down Bailer is designed to acquire samples of debris causing an obstruction in the well.

Unlike standard pump bailers, the Sample Bailer is also very effective in retrieving heavy substances

Applications

• The Sample Bailer is used when it is require to retrieve a sample of downhole material such as scale or sand that is causing an obstruction within the well bore

Features

• To acquire samples of debris causing obstruction in the well
• The ball or flapper opens when the bailer enters the debris and closes as it exists, effectively trapping the debris inside

Benefits

• Unlike the standard pump bailer, it is very effective in retrieving heavy substances

Sample Bailer		
Size (inch)	**F/N OD (inch)**	**Thread Connection Box (in. TPI)**
1.5	1.375	15/16-10 UN
1.75	1.375	15/16-10 UN
2	1.750	1-1/16-10 UN
2.5	2.312	1-1/16-10 UN
3	2.312	1-1/16-10 UN
4	2.312	1-1/16-10 UN

Hydrostatic Bailer

The Piston Hydrostatic Bailer is designed to remove debris which has settled on top or around a subsurface control within the well, preventing retrieval by regular wireline operations.

A hydrostatic bailer is used when debris cannot be removed with a normal pump bailer assembly.

Applications

• Hydrostatic Bailers have an atmospheric chamber which is sealed at surface and then run into the wellbore. Once on depth, downwards jarring shears the pin on the piston. This creates a draw in effect, which draws in the sand, scale etc. onto the bailer chamber
• The debris is contained within the bailer by means of a ball

Features

• Consists of a chamber sealed at surface atmospheric pressure, complete with a relief plug at the top and shear piston on the bottom
• Supplied with industry standard connections and fishing necks

Benefits

• Can remove debris when over pump bailer assembly cannot

Hydrostatic Bailer		
Size (inch)	**F/N OD (inch)**	**Thread Connection Box (in. TPI)**
1.5	1.375	15/16-10 UN
1.75	1.375	15/16-10 UN
2	1.750	1-1/16-10 UN
2.5	2.312	1-1/16-10 UN
3	2.312	1-1/16-10 UN
4	2.312	1-1/16-10 UN

Wireline Cutter

The Wireline Cutter is required when a slickline or stranded wireline must be cut in the well.

The Wireline Cutter is run down under its own weight guided by the line and when it strikes the stuck tool, it cuts the wire and wedges it into its body. Subsequently the cutter will be retrieved along with the cut wire

Applications

• The Rotary Wireline Cutter is used when Slickline or Braided Wire is required to be cut downhole
• The cutter is run under its own weight on the wire until it strikes the stuck tool where it cuts the wire and wedges itself onto the wire thus being completely retrievable

Features

• Fitted with industry standard connections and fishing necks
• Available for both Slickline and Braided line
• Available in standard and interface versions

Benefits

• No risk of accidental cutting at interface
• Will not cut against the tubing
• Wire cutting and retrieval are carried out in one operation

Wireline Cutters	
Size OD (inch)	**F/N OD (inch)**
1.500	1.375
1.875	1.375

GO Devil

The Go Devil is designed to cut and retrieve wireline from a stuck tool string.

It is manufactured from a solid length of bar and has an integral wireline socket head with a milled slot and guide to accommodate and retain the wire.

Applications

• The Go Devil is used in Fishing operations when the wire is required to be cut. With a slot manufactured into the whole length of the body, the wire slots into it and is retained by screws. This allows the Go Devil to slide down the wire, effecting a cut at the rope socket leaving a clean fishing neck

Features

• Cut and retrieve wireline from a stuck tool string
• Manufactured from a solid length of bar and has an integral wireline socket head with a milled slot and guide to accommodate and retain the wire
• Provide two Go-Devils to suit different situations – when the rope socket is clean and when the rope socket is fouled by debris

Benefits

• Flexible depending on the environment

Go Devil		
Size (inch)	**Max. OD (inch)**	**F/N OD (inch)**
1-1/2	1.500	1.375
1-7/8	1.875	1.750

Solid Wire Finder

The Solid Wire Finder is designed to locate and ball the upper end of the broken wireline in the wellbore during fishing operations.

The wire can then be engaged by a wireline grab and retrieved

Applications

• The Solid Wire Finder is used to locate and ball up the broken end of Wire, during fishing operations, in preparation for retrieval

Features

• One piece design
• Supplied with industry standard connections and Fishing Necks
• Available in various sizes

Benefits

• The wire can then be engaged by a wireline grab and retrieved

Wireline Wirefinder		
Size (inch)	**F/N OD (inch)**	**Thread Connection Pin (in. TPI)**
1.500	1.375	15/16-10 UN
2.000	1.375	15/16-10 UN
2.500	1.375	15/16-10 UN
3.000	1.750	1-1/16-10 UN
4.000	1.750	1-1/16-10 UN

Wire Grab

The Wire Grab is designed to retrieve a broken wireline during fishing operations, after a split skirt wirefinder has been deployed to locate and ball the upper end of the wire in the well bore.

Applications

• The Wireline Grab is normally run after a Wire Finder
• The Wireline Grab is used to grab the ball of wire that is left in the hole
• The Barbs tangle into the wire. The more the grab is pulled up, the tighter the wire grips the barbs

Features

• The wire grab consists of a top complete with fishing neck and pin connection and a body with two or three bendable prongs
• Each prong has several pointed barbs welded on the inner side to form hooks
• The flexible design allows the operator to bend the grab prong ends to suit the inside diameter of the tubing

Benefits

• The flexible design helps to prevent the wire grab from bypassing the broken line

Wireline Grabs				
Size(inch)	Max. OD(inch)	F/N OD (inch)	Thread Conn. Pin X Box (in. TPI)	No. of prong
1-1/2	1.437	1.187	15/16-10 UN	2
2 – 2-1/2	1.843	1.375	15/16-10 UN	2
3	2.718	2.312	1-1/16-10 UN	3
4 – 5-1/2	2.875	2.312	1-1/16-10 UN	3

Shock Absorber

The Shock Absorber is designed to dampen impact shock loads that can occur during wireline deployment and so prevent damage to sensitive instrumentation being run on the tool string

Applications

• The Wireline Shock Absorber is used to reduce the shock to sub surface instruments such as pressure / temperature gauges, caused due to the impacts of jarring

Features

• Consists of a main body, top sub, bottom sub, inner mandrel and absorber strings
• The lower spring is heavier than the upper one to sustain the tool weight
• Floating action of the mandrel against the spring dampens the shock loads
• Supplied in stainless steel

Benefits

• Dampen impact shock loads during deployment
• Prevent damage to instrumentation being run in the tool string

Wireline Shock Absorber			
Size	**F/N OD (inch)**	**Top Connection Pin**	**Bottom Connection Box**
1.50	1.375	15/16-10 UN	¾ - 16 UNF
1.75	1.375	15/16-10 UN	¾ - 16 UNF

Spring Centralizer

The Adjustable Spring Centralizer is designed to centralize tool strings and gauges during slickline operations, in the production tubing and exiting into the casing.

Applications

• The Adjustable Spring Centralizer is designed to centralize sub surface tools in various tubingShock AbsorberD's
• EspecShock Absorbere when running tools out of the Production string and into the casing strings

Features

• Flexible design
• Comes with industry standard pin by pin box connections complete with fishing necks

Benefits

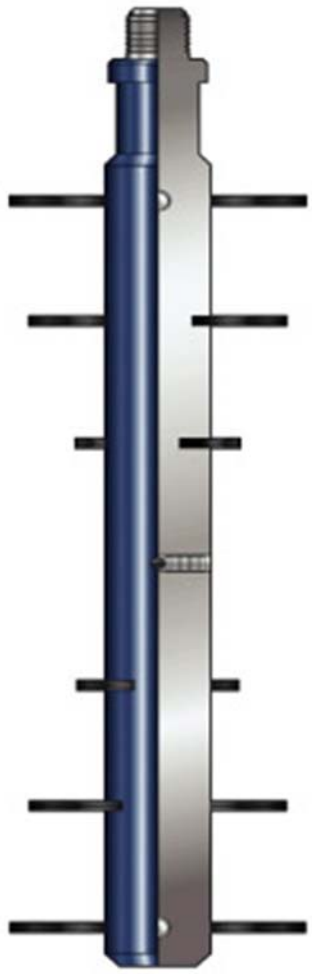
• One centralizer can be used for multiple Internal Diameters of pipe

Bow Spring Centralizer		
OD range (inch)	**F/N OD (inch)**	**Top Connection (in. TPI)**
2 – 7	1.755	15/16-10 UN

Scratcher / Brush

The Wireline Scratcher / Brush is designed to loosen and remove paraffin wax and scale deposits from inside the wall of the completion bore.

This operation is usually carried out with the well flowing through a reduced choke, to remove the loose wax or solids



Applications

• The Wireline Scratchers and Brushes are used to clean any deposits that may have accumulated on the tubing walls. They are also particularly effective at cleaning lSpring Centralizert may hSpring Centralizer with debris, hindering the setting of sub surface devices

Features

• Wire installation can be done in two ways to suit operation
• Wire locked in place with grub screws
• Available in various diameters and supplied with industry standard connections complete with fishing neck

Benefits

• Loosens and removes paraffin wax, scale deposits from inside the wall of the completion bore
• Can be carried out while the well is flowing which does not hinder operations
• Flexible wire installation to suit the type of operation

Scratchers		
Thread Connection Pin (inch TPI)	F/N OD (inch)	Size (inch)
5/16-10 UN	1.187	1-1/2 – 2-1/16
15/16-10 UN	1.375	2 – 2-1/2
1-1/16-10 UN	1.750	2 – 2-1/2
1-1/16-10 UN	1.750	3-1/2