

The Casing Scraper is a spring type, mechanical casing scraper, featuring a large by-pass area between the blades to allow circulation of debris. The body is constructed of the highest quality steel, with individual self-sharpening blades using Inconel springs. This scraper removes mill scale, burrs, cement sheath, mud cake and any foreign matter from the inside wall of the casing. The process provides a smooth, clean surface for the effective sealing of production packers and test tools. The Casing Scraper operates well when reciprocated vertically. Normally, rotation is not necessary unless restrictions are encountered. In areas where packers or other tools are to be set, the scraper should be reciprocated through this area two or three times to ensure the casing wall is clean and smooth.

Features

- One-piece alloy steel body
- Full 360° coverage of casing wall
- Large by-pass area between the blades for circulation
- Corrosion resistant leaf springs ensure consistent blade tension
- All thrust and rotational loads are carried by the scraper body and not by the retaining screws
- Tough alloy self-sharpening steel blades are designed for extra-long wear
- Scrapers have an API Reg Box Down for installation above drill bits

Casing Scraper						
Size	Weight Range	I.D. Range		Blade Diameter		Thread Connection
		Min	Max	Collapsed	Extended	
in	lb/ft	in	in	in	in	
4-1/2	9.5 - 13.5	3.91	4.09	3.62	4.42	2-3/8 EUE Box Up 2-3/8 Reg Box Down
5	11.5 - 18	4.276	4.560	4.00	4.80	
5-1/2	13 - 26	4.548	5.044	4.5	5.28	2-7/8 EUE Box Up 2-7/8 Reg Box Down
6-5/8	17 - 34	5.595	6.135	5.38	6.34	3-1/2 EUE Box Up 3-1/2 Reg Box Down
7	17 - 38	5.920	6.538	5.71	6.72	
7-5/8	20 - 39	6.625	7.125	6.25	7.26	
8-5/8	20 - 49	7.511	8.191	7.25	8.41	4-1/2 API Reg Box Down Pin Up
9-5/8	29.3 - 53.5	8.535	9.063	8.20	9.29	
10-3/4	32.8 - 65.7	9.560	10.192	9.20	10.53	
mm	mm	mm	mm	mm	mm	
114.3	14.1 - 20.1	99.3	103.8	91.9	112.2	2-3/8 EUE Box Up 2-3/8 Reg Box Down
127	17.1 - 26.8	108.6	115.8	101.6	121.9	
139.7	19.3 - 38.7	115.5	128.1	114.3	134.1	2-7/8 EUE Box Up 2-7/8 Reg Box Down
168.3	25.3 - 50.5	142.1	155.8	136.6	161.0	3-1/2 EUE Box Up 3-1/2 Reg Box Down
177.8	25.3 - 56.5	150.4	166.1	145.0	170.6	
193.7	29.8 - 58.0	168.3	180.9	158.7	184.4	
219.1	29.8 - 72.9	190.8	208.0	184.1	213.6	4-1/2 API Reg Box Down Pin Up
244.5	43.6 - 79.6	216.8	230.2	208.2	235.9	
273	48.8 - 97.7	242.8	258.9	233.6	267.4	



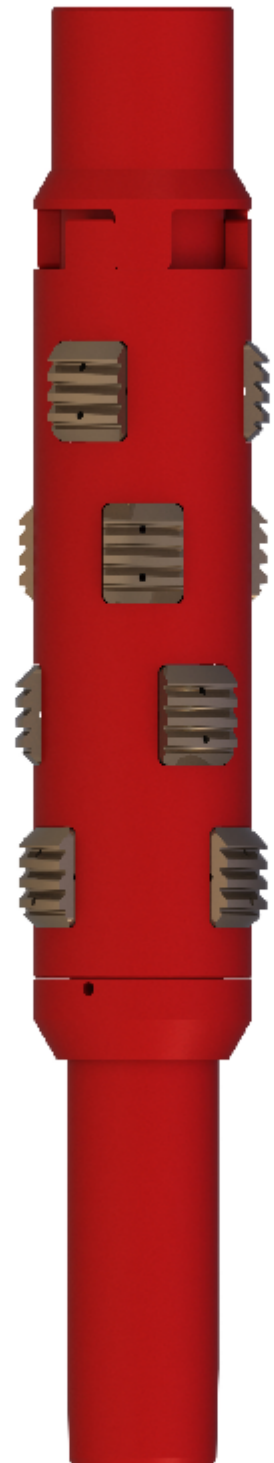
The Drift Lock Casing Scraper is unique in its design. It allows for the full internal diameter of the casing to be scraped clean of debris, and at the same time, it allows the user to validate a drift measurement of the wellbore.

During deployment, the scraper blades groove profile, rotates the housing and blade assembly in a counter clockwise rotation, which positions the scraper blades into a collapse to drift orientation. In this position, the scraper blades will only collapse to the drift dimension that they are designed to gauge. The blades are designed to extend beyond the maximum allowable API casing ID for each weight of casing, to ensure full casing ID contact. As well, they are designed with sufficient overlap to ensure full circle scraping of the casing ID, while running in hole. Cycling the Drift Lock up and down will efficiently clean your desired interval, as well, it will ensure that your casing is free of impairments.

At any point during deployment, should the drift lock hang up on an impairment, simply pick up, rotate to the left, the blades will become unsupported to a fully collapsed engineered dimension. At which point, the user is able to travel through the impairment, to further scrape and gauge casing further downhole. The standard offering is setup, so that each weight range of casing is able to be gauged as per API drift specification. If the need arises, these tool can be setup for a minimum drift diameter, or with differing end connections, as specified by the end user.

Features

- **Full bore ID scraping**
- **Collapsible to required drift diameter**
- **Hardened faces for longevity of the components**
- **Full ID Tubing body**
- **No elastomers - temperature inert**





The Collar Locator/Drag Body may be assembled either as a drag assembly to provide friction between the tubing string and the casing wall or as a mechanical collar locator to correlate the tubing depth to a well log. Used as a drag assembly, the Collar Locator provides a simple reliable method of providing drag to facilitate the operation of rotational tools such as the rotational circulating valve, which is commonly used in selective injection operations. The drag pads are energized with acid resistant leaf springs to ensure reliable operation.

The Collar Locator may be converted to a collar locator simply by replacing the drag pads with locator keys. The design of the locator keys allows the keys to expand into the recess of an API casing collar as it passes through the collar. This results in a momentary increase in tubing force as the key is forced to collapse in order to move out of the collar recess. The keys are designed to give the most positive indication when the Collar Locator is moved upward through the collar. The action of the Collar Locator passing upward through a collar will be felt in the tubing string at surface. The Collar Locator is commonly run with service tools that require accurate positioning in the well.

The Collar Locator may be used either as a fixed locator (cannot turn on the mandrel and provides drag) or as a freely rotating locator that is free to rotate on the mandrel. To convert the Collar Locator to a freely rotating version, the top coupling on the locator is replaced with a standard tubing coupling.

Collar Locator					
Size	Casing Weight	O.D. Collapsed	O.D. Expanded	I.D.	Connection
in	lbs/ft	in	in	in	in
mm	kg/m	mm	mm	mm	mm
4-1/2	9.5 – 13.50	3.80	4.56		
114.3	14.1 – 20.1	96.8	115.8		
5-1/2	13 – 17	4.75	5.374	2.0	2-3/8 EUE
	19.3 – 25.3	120.6	136.5	50.8	60.30 EUE
	17 – 23	4.50	5.125		
	25.3 – 34.2	114.3	130.0		
139.7	13 – 17	4.75	5.374	2.5	2-7/8 EUE
	19.3 – 25.3	120.6	136.5		
	17 – 23	4.50	5.125		
	25.3 – 34.2	114.3	130.0		
7	17 – 23	5.88	6.75	63.5	73.0 EUE
	25.3 – 34.2	149.4	171.5		
177.8	26 – 32	6.25	6.88		
	38.7 – 47.6	158.8	174.7		

Drag Body					
Size	Casing Weight	O.D. Collapsed	O.D. Expanded	I.D.	Connection
in	lbs/ft	in	in	in	in
mm	kg/m	mm	mm	mm	mm
4-1/2	9.5 – 13.50	3.80	4.30		
114.3	14.1 – 20.1	96.8	109.5		
5-1/2	13 – 17	4.75	5.374	2.0	2-3/8 EUE
	19.3 – 25.3	120.6	136.5	50.8	60.30 EUE
	17 – 23	4.50	5.125		
	25.3 – 34.2	114.3	130.0		
139.7	13 – 17	4.75	5.374	2.5	2-7/8 EUE
	19.3 – 25.3	120.6	136.5		
	17 – 23	4.50	5.125		
	25.3 – 34.2	114.3	130.0		
7	17 – 23	5.88	6.75	63.5	73.0 EUE
	25.3 – 34.2	149.4	171.5		
177.8	26 – 32	6.25	7.12		
	38.7 – 47.6	158.8	180.8		
8-5/8	17 – 32	7.39	8.38	3.0	3-1/2 EUE
219.1	25.3 – 47.7	187.7	212.9	76.2	88.9 EUE

The K-Style Equalizing Valve is a high-pressure valve that converts a neutral set packer to a retrievable bridge plug. This tool transfers right-hand torque to a double-grip packer for setting on tubing. It releases the tubing from the packer and leaves a bridge plug in the well. To retrieve, the plug the valve is reengaged, the packer is equalized, and torque can then be applied to release the packer.

Features

- Pressure balanced equalizing system
- Large bypass area
- Reliable bonded seals
- Left-hand releasing automatic jay
- Bypass can be operated without releasing the packer
- Bypass is open during running and pulling
- Half-turn activation

K-Style Equalizing Valve					
Casing Size		O.D.		Connection	
in	mm	in	mm	in	mm
4-1/2	114.3	3.75	95.3	2.375	60.3
5	127.0	3.75	95.3	2.375	60.3
5-1/2	139.7	4.5	114.3	2.375	73
5-1/2	139.7	4.5	114.3	2.875	73
7	177.8	5.5	139.7	2.375	60.3
7	177.8	5.5	139.7	2.875	73
7-5/8	193.7	5.5	139.7	2.875	73
8-5/8	219.0	7.310	185.7	2.875	73
9-5/8	244.5	8.190	208.0	2.875	73



Three Turn Rotational Circulating Valve

Service Equipment

The Three-Turn Rotational Circulating Valve is a rotational pressure balanced valve that is opened or closed by three turns to the right or left respectively. This valve can be run with SST tools, straddle packers, inflatables, packers, etc. allowing communication between tubing and annulus.

Features

- Rated to 5,000 psi differential pressure
- Large ports allow fluids to pass through easily when circulating

Operation

- Three turns to the left to close
- Three turns to the right to open

Three-Turn Rotational Circulating Valve							
Size		O.D.		I.D.		Thread Connection	
in	mm	in	mm	in	mm	in	mm
4-1/2	114.3	3.75	95.2	1.90	48.2	2-3/8 EUE	60.3
7	177.8	5.0	127.0	2.25	57.1	2-7/8 EUE	73.0





The Tubing Swivel is used to provide a means of rotating the tubing while circulating with treating lines attached to the tubing. The Tubing Swivel is usually used for operating various service tools such as circulating valves, when used with selective acidizing tools. It is also suitable for any circulating operations requiring rotation. **It is not recommended for heavy drilling or milling operations.**

Tubing Swivel	
Load Rating	
Lbs	daN
100,000	44,500
135,000	60,000

SP Sand Pump

Service Equipment

The WELLFIRST SP Sand Pump is a tubing conveyed, high volume, pump device specifically designed for use in low fluid level wells, but equally successful in wells with full hydrostatic columns. The SP Sand Pump is used to remove sand and other debris from the wellbore by reciprocating the tubing.

Features

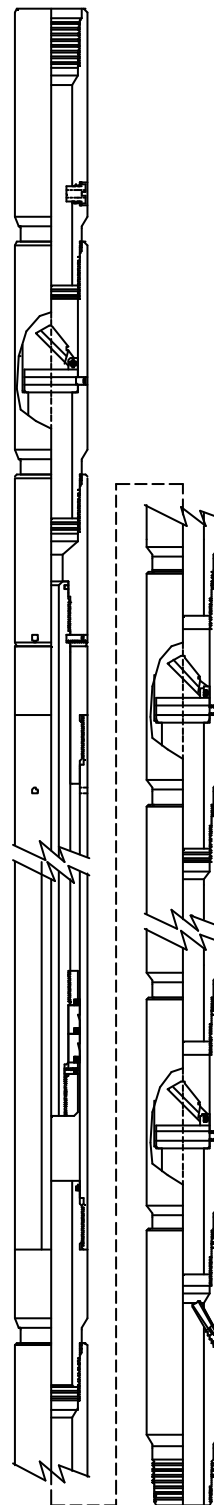
- **Indexpensive to Operate**
- **Simple Design**
- **Large hex Kelly for torque transmission**
- **High volume stroke for efficient operation**
- **High load and shock carrying capacity**

Benefits

- **Does not require circulation pumps or fluids**
- **Available in 5' and 10' stroke**
- **Debris containment during clean out**

Applications

- **Stimulation Clean Out**
- **Perforation Clean Out**
- **Low fluid well clean out**



SPECIFICATION GUIDE

SIZE (IN./mm)	MAX. O.D. (IN./mm)	MIN. I.D. (IN./mm)	THREAD CONNECTION BOX UP / PIN DOWN	PRODUCT NUMBER
2-3/8 60,33	3.150 80,01	.719 18,26	2-3/8" EU 8 RD	23SP.1001
2-7/8 73,03	3.781 96,04	.975 24,76	2-7/8" EU 8 RD	27SP.1001

RUNNING INSTRUCTIONS

Determine what type shoe, blade collar or bit will be run on bottom of the tubing string. Place jet sub and one flapper valve assembly directly above the bottom shoe. It is recommended at least one joint of tubing be run above the lower flapper valve, then a second flapper valve be run. If the amount of fill is known, run enough tubing to collect the debris, providing this will allow the sand pump to be operated in fluid (See example below). If desired, a third flapper may be run directly below the sand pump. The sand pump is now placed in the tubing string with an addition flapper valve above the sand pump. The drain sub is placed in the tubing string just above the fluid level is known to allow circulation of present well fluids. If high fluid levels are known to exist, the drain sub may be left out of the assembly and fluid may be pumped to surface.

TAILPIPE REQUIREMENT: When the amount of fill to be removed is known, the amount of tubing required below the SP Sand Pump may be calculated. Use the following formula to determine tubing required.

$$\frac{Csg.I.D.^2}{Tbg.I.D.^2} \times \text{feet of fill} = \text{Minimum Tailpipe required.}$$

EXAMPLE: There is 60 foot of fill in 5-1/2", 17.0 lb/ft. casing (I.D. is 18.796 in²). The tubing is 2-7/8", 6.5 lb/ft. (4.68 in²). [18.795 in² divided by 4.68 in² = 4.016 in² X 60' = 240.96 foot of tubing required.] It is recommended to run an additional 10% for any additional fill that may enter into the wellbore during cleanout operations.

OPERATION

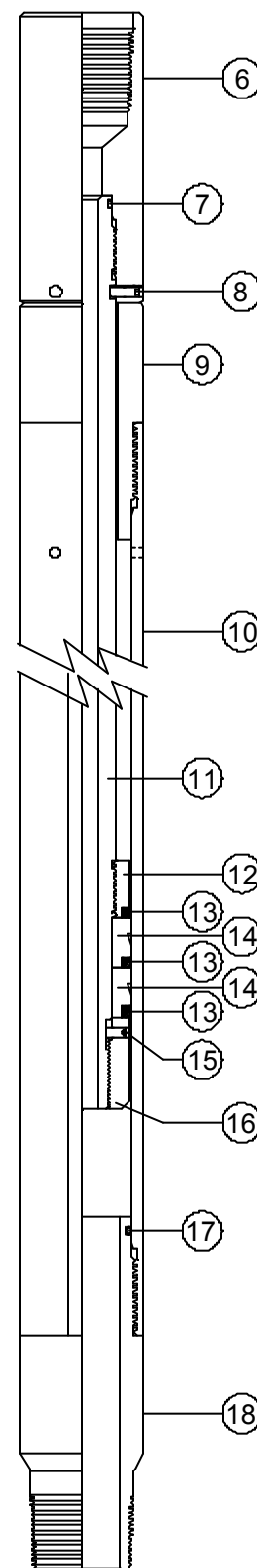
The WELLFIRST SP Sand Pump is operated by reciprocation of the tubing once the debris has been located. Picking up on the tubing string extends the Sand Pump, moving the packing inside the barrel. This action swabs the fluid and debris into the tubing past the flapper valves. Once the pumping action begins, continue to work the tubing to keep the fluid moving in the tubing string. If the fill has a chance to settle, it can pack off above the flapper valves and may not allow the pump to continue to operate. It is important to pick-up off bottom at least one joint periodically to prevent the tubing from being stuck in the debris being removed from the wellbore. Debris may be loosened by rotating while reciprocating the tubing to aid in removal of fill.

ASSEMBLY

1. Place kelly bushing (9) in vise.
 2. Slide kelly (11) into kelly bushing (9).
 3. Install kelly stop (12) onto lower end of kelly (11).
 4. Install first seal (cup up) (13), seal spacer (14), second seal (cup down) (13), seal spacer (14), third seal (cup down) (13).
 5. Install seal retainer (16) onto kelly (11) and install set screws (15).
 6. Install o-ring (7) on upper end of kelly (11).
 7. Install kelly crossover (6) onto kelly (11).
 8. Install set screws (8) in kelly crossover (6).
- NOTE: Make sure set screws are in groove of kelly (11).
9. Place barrel (9) in vise. Lubricate entire I.D. of barrel.
 10. Install o-ring (17) in lower barrel connection (18).
 11. Install lower barrel connection onto barrel (9).
 12. Lubricate seals (14) on kelly (11).
 13. Install kelly subassembly (6 thru 16) into barrel (10).
 14. Install kelly bushing (9) in barrel (10).

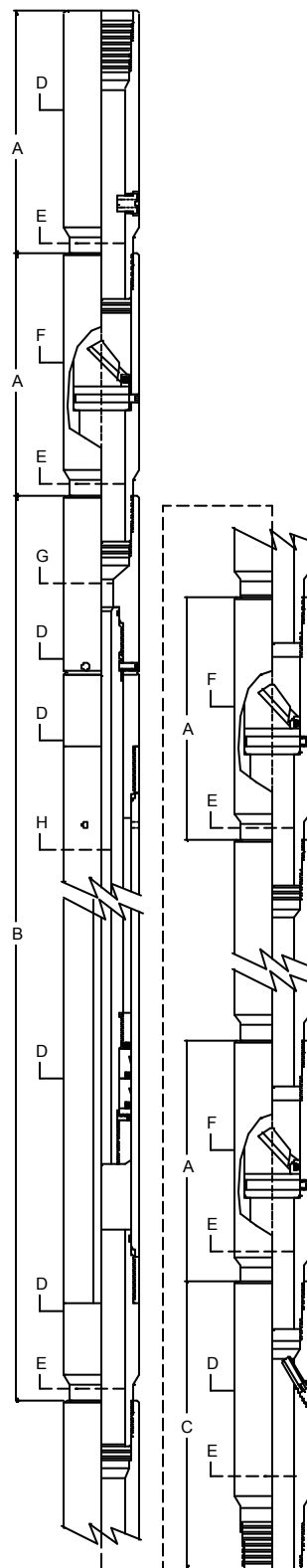
DISASSEMBLY

1. Place lower barrel connection (18) in vise.
2. Remove kelly bushing (9) from barrel (10).
3. Remove kelly subassembly (6 thru 16) from barrel (10).
4. Remove barrel (9) from lower barrel connection (18).
5. Remove o-ring (17) from lower barrel connection (18).
6. Place kelly bushing (9) in vise.
7. Remove set screws (15) from seal retainer (16).
8. Remove seal retainer (16) from kelly (11).
9. Remove seals (13) and seal spacers (14) from kelly (11).
10. Remove kelly stop (12) from kelly (11).
11. Remove set screws (8) from kelly crossover (6).
12. Remove kelly crossover (6) from kelly (11).
13. Remove o-ring (7) from kelly (11).
14. Remove kelly (11) from kelly bushing (9).
15. Clean and inspect all parts.
16. Replace any worn or damaged parts.



DIMENSIONAL DATA

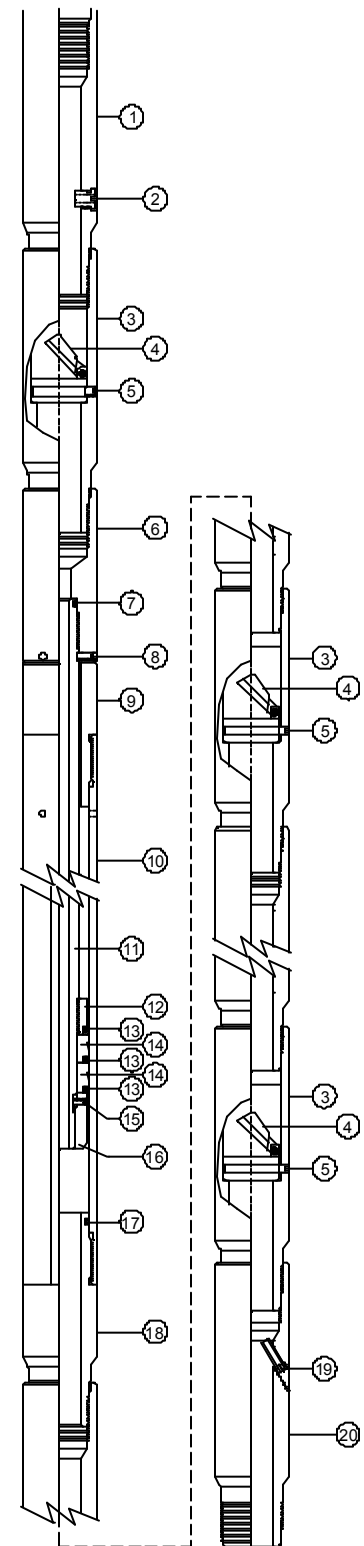
PRODUCT NUMBER	DIMENSIONS (IN./mm)			
	A	B	C	D
23SP.1001	10.100 256,54	80.475 2044,07	12.000 304,80	3.150 80,01
27SP.1001	9.940 252,48	80.450 2043,43	12.000 304,80	3.781 96,04
PRODUCT NUMBER	DIMENSIONS (IN./mm)			
	E	F	G	H
23SP.1001	1.844 46,84	1.150 29,21	1.500 38,10	.719 18,26
27SP.1001	2.469 62,71	3.750 95,25	1.219 30,96	.975 24,76



PARTS LIST

ITEM NO.	DESCRIPTION	2-3/8"	2-7/8"
		23SP.1001	27SP.1001
1	DRAIN SUB	23SP01	27SP01
2	DRAIN PLUG	45LS14M (2)	45LS14M (2)
3	TRAP SUB	23SP02 (4)	27SP02 (4)
4	FLAPPER VALVE	23SP17 (4)	23SP17 (4)
5	SET SCREW*	HA1011HD (4) 3/8-24 X 3/8"	HA1011HD (4) 3/8-24 X 3/8"
6	KELLY CROSSOVER	23SP08	27SP08
7	O-RING*	050-90-218	050-90-222
8	SET SCREW*	003-C5-012 (2) 5/16-18 X 3/4"	003-C5-012 (2) 5/16-18 X 3/4"
9	KELLY BUSHING	23SP05	27SP05
10	BARREL - 5 FOOT	23SP04-5	27SP04-5
	BARREL - 10 FOOT	23SP04-10	27SP04-10
11	KELLY - 5 FOOT	23SP11-5	27SP11-5
	KELLY - 10 FOOT	23SP11-10	27SP11-10
12	KELLY STOP	23SP07	27SP07
13	POLYPAC SEAL*	23SP12 (3)	27SP12 (3)
14	SEAL SPACER	23SP09 (2)	27SP09 (2)
15	SET SCREW*	HA1006 (2) 5/16-18 X 3/4"	HA1006 (2) 5/16-18 X 3/4"
16	SEAL RETAINER	23SP10	27SP10
17	O-RING*	050-90-228	050-90-232
18	LOWER CONNECTION	23SP06	27SP06
19	JET	23SP14 (2)	23SP14 (2)
20	JET SUB	23SP03	27SP03

*Common repair parts. Note: Only three flapper valve shown on drawing.
NOTE: Parts list are for 5' stroke.



Blast Joints are used in a tubing string to cover the area across a flowing set of perforations that could cause abrasive damage to the outside of the tubing string. Flow Couplings are identical to Blast Joints, but their purpose is to minimize abrasion damage caused by flow turbulence inside of the tubing string. This type of turbulence usually occurs before and after a change in diameter within the tubing string, such as occurs across a wireline retrievable safety valve. This product is available in several different materials. As standard joints are made from high strength low alloy steel, but are also available in low alloy steels suitable for H₂S service and in higher alloys for high corrosion applications. They are available with API or premium connections and can be manufactured in any length up to 20 feet (6 m).

Features

- Reduces possibility of tubing failure due to abrasion
- Available in a wide variety of materials, connections, and lengths to meet the requirements of nearly any application
- OD is made to be compatible with the type of tubing used
- Full tubing drift size

Applications

Any application in which localized wear due to abrasion of fluids, solids, or gases, either internally or externally, could potentially be a problem.

Blast Joint with API EUE Connections					
EUE Tubing Size		O.D.		Standard Lengths	
in	mm	in	mm	ft	m
2-3/8	60.3	3.061	77.7	2, 4, 6, 8, 10	0.5, 1, 2, 3
2-7/8	73.0	3.688	93.7		
3-1/2	88.9	4.500	114.3		
4-1/2	114.3	5.563	141.3		



The Coal Buster Clean Out Tool is designed to remove coal fluids, fine debris and solids from oil and gas wellbores. The tool is ideal for one-trip clean out in horizontal wells that have plugged or debris in horizontals that cannot be circulated clean because of low bottom hole fluid levels. The unique debris trapping system is designed to hold high fluid hydraulics and seal off 100% of the fluids filled into the pipe chamber. A filtration system in the top of the fill chamber minimizes valve plugging or sticking to allow maximum performance of the pump-to-surface (PTS) pumping tool.

The Coal Buster Clean Out Tool is run on the bottom of the tubing string with a predetermined length of fill chamber. A pump-to-surface assembly is installed in the vertical section of the well- bore along with running and pulling accessories as required. The tool is lowered to the debris area and light weight applied. The pump-to-surface assembly is then functioned to operate and the pipe lowered each stroke to accommodate fill picked up in the wellbore. The tools are then pulled and well is back in production.

Features

- **Clean out tool designed to work in low fluid level wells**
- **Dove tail sealed valve holds fluids and debris even in the horizontal wellbores**
- **The pumping system can be intensified with more than one pump**
- **Filtration system enhances tool performance**
- **Tools can be rotated to break up hard pack fill**

Coal Buster Clean Out Tool				
Casing	Tubing	Chamber O.D.	Pump O.D.	Fluid Volume Per Stroke / 90% eff.
114.3 mm	60.3 mm	95 mm	79 mm	13.5 L/stk
4-1/2 in	2-3/8 in	3-3/4 in	3-1/8 in	3.56 US gal
139.7 mm	73 mm	114.3 mm	95 mm	21.3 L/stk
5-1/2 in	2-7/8 in	4-1/2 in	3-3/4 in	5.6 US gal
177.8 mm	88.9 mm	146 mm	114.3 mm	26.1 L/stk
7 in	3-1/2 in	5-3/4 in	4-1/2 in	6.89 US gal



Retrieving Head

Service Equipment

The retrieving Head is used to retrieve the AR-10 Retrievable Bridge Plug. This retrieving head permits washover operations to remove sand and debris from the top of the bridge plug.



Retrieving Head				
Size	A	B	C	D
in	in	in	in	in
2-3/8 EUE	22.8	2-3/8 EUE	3.380	3.750
2-7/8 EUE	28.3	2-7/8 EUE	4.525	5.745
mm	mm	mm	mm	mm
60.3	580	60.3	85.8	95.2
73.0	720	73.0	114.9	145.9



The PI-J Valve is a heavy-duty component that, when used in conjunction with a right-hand set/right-hand release double-grip production packer, converts the packer into a temporary bridge plug. The bridge plug can be used for isolation during fracturing, acidizing, cementing. The plug can also be used for isolation during wellhead changes or pressure tests. Casing leaks can also be found by running the bridge plug in conjunction with a left-hand set/left-hand release double-grip packer. A PI-J Retrieving Head is run in conjunction with the plug to allow for successful retrieval.

Operation

- The PI-J plug is run in conjunction with a double-grip packer. The packer is run to the desired depth.
- The packer is set using normal setting procedures.
- The retrieving head is released by adding compression and then picking up on the tubing holding left-hand torque.
- The equalizing valve will automatically close as the retrieving head is disengaged.
- The plug is retrieved by lowering the retrieving head down to the packer (circulation may be required to remove debris on top of the plug).
- The retrieving head will automatically re-latch onto the PI-J valve and open the equalizing valve.
- Pressure is then equalized above and below the packer.
- Once pressure is equal, the packer can be unset using normal unsetting procedures.

Features

- Pressure balanced, positive valve operation virtually eliminates any chance of valve being accidentally opened.
- Rugged design allows for the valve to be opened or closed to set/unset packers numerous times in a single run.
- Valve is adapted to any double-grip retrievable packer, which allows it to be used with customer owned stock.

Available Sizes

in	mm
2.375	60.3
2.875	73.0

Splined Expansion Joint

Retrievable Packers & Accessories



The Splined Expansion Joint is designed for single or dual string completions to accommodate tubing movement to prevent undue stress on the tubing string and packer. The Type A expansion joint incorporates heavy-duty splines that allow the operator to rotate the string through the expansion joint at any point throughout the stroke. The Expansion Joint may be shear pinned at one-foot intervals throughout its full stroke length. Standard lengths are two, four six, and ten feet. Non-standard lengths are available on advance order.

The Expansion Joint is available in a wide variety of body, seal materials, and thread connections to meet virtually all environments.

Features

- Full length heavy-duty spline system
- Shear easily adjustable throughout stroke length
- 10,000 psi pressure rating (most sizes)
- Solid one-piece mandrel
- Available in materials for H₂S or CO₂ service
- Easily serviced and re-dressed

Splined Expansion Joint							
Tubing Size	Max O.D.	Min I.D.	Thread Connection	Available Stroke	Pressure Rating	Tensile Rating	Torque Rating
in	lbs/ft	in		ft	psi	lb	ft/lb
mm	kg/m	mm		m	kg/cm ²	kg	kg/m
2-3/8	3.750	1.930	2-3/8 EUE (Box Up, Pin Down)	2, 4, 6, 10	10,000	30,000	2,000
60.3	95.3	49.0				13,608	277
2-7/8	4.500	2.441	2-7/8 EUE (Box Up, Pin Down)			120,000	2,500
73.0	114.3	62.0				54,432	346
3-1/2	5.300	3.000	3-1/2 EUE (Box Up, Pin Down)	0.6, 1.2, 1.8, 3.1	703.07	130,000	3,500
88.9	134.6	76.2				58,968	484
4-1/2	6.531	3.875	4-1/2 EUE (Box Up, Pin Down)			170,000	5,000
114.3	165.9	98.4				77,112	691

The Hydrostatic Fluid Control Valve is a pressure-activated valve used to provide surface control over fluids. Because it supports the hydrostatic head in the tubing, it is particularly suited to injection wells with low reservoir pressures.

Features

- Operates using differential pressures and is not dependent on well depth
- Prevents loss of expensive chemical in low fluid level wells
- Utilizes chemical and wear resistant seals to ensure problem free operation
- Sand line retrieval
- Protects sensitive formations by holding displacement fluids in tubing
- Built-in equalizing
- Tungsten carbide seat (less wear on parts)
- Surface controlled by tubing pressure
- Meters precise volumes of liquids

Applications

This valve is usually used in conjunction with a selective stimulation tool or straddle type packer to provide fluid control when selectively acidizing low fluid level wells. Also used for selective scale removal and chemical treatments.

Hydrostatic Fluid Control Valve					
Tubing Size		Max O.D. (No-Go)		Seating Nipple I.D.	
in	mm	in	mm	in	mm
2-3/8	60.325	1.865	47.371	1.812	46.025
			48.971	1.875	47.625

