



PRODUCT CATALOG

DOWNHOLE TOOLS

CATALOG
EDITION

2024-V2-B
01

DOWNHOLE TOOLS

FOR SALE

COIL TUBING DOWNHOLE TOOLS

ARC, Anti-rotational internal Roll-on Connector



It is the connecting link between the smooth lower end of the CT and any other downhole tool that needs to be connected to the CT for well intervention job.

The end of the CT has a smooth wall, while any downhole tool has a connecting thread.

In its upper part, the connector has a three grooves for fixing (rolling) the CT. In the lower part, the Connector ends with a thread for attaching the downhole tool.

The O-rings below the grooves serve as a reliable barrier to seal the in-line working pressure.

Slot located along the grooves is a significant advantage of this particular model. CT internal welding seam placed inside this slot during connector installation, thus securely locks the connector from turning.

Part #	Max OD		Min ID		Make up length		Coil Tubing OD		Thread
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	
ARC-38.19-32.XXX-01.1	1.500	38.1	0.75	19.1	3.75	95.2	1.25	31.8	1.0" AMMT pin
ARC-38.19-38.XXX-01.1	1.500	38.1	0.75	19.1	3.75	95.2	1.50	38.1	1.0" AMMT pin
ARC-44.19-44.XXX-01.1	1.750	44.5	0.75	19.1	3.75	95.2	1.750	44.5	1.0" AMMT pin
ARC-51.25-51.XXX-01.5	2.000	50.8	1.00	25.4	3.75	95.2	2.000	50.8	1.5" AMMT pin
ARC-73.38-51.XXX-02.1	2.875	73.0	1.50	38.1	3.75	95.2	2.000	50.8	2-3/8 PAC pin
ARC-73.38-60.XXX-02.1	2.875	73.0	1.50	38.1	3.75	95.2	2.375	60.3	2-3/8 PAC pin

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XXX – CT wall thickness in the format of «340» which means 3.40 mm

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

DDC, Double Dimple Connector



it is a connecting tool for splicing the two ends of the CT. On both sides, the connector has a neck with dimple holes for mounting (pressing) the CT. O-rings serve as a reliable barrier for sealing the inner tube working pressure.

A standard MDT dimple tool is used for mounting on the CT.

Part#		DDC-38.19- XX.XXX-YY.YYY	DDC-44.22- XX.XXX-YY.YYY	DDC-51.25- XX.XXX-YY.YYY	DDC-60.38- XX.XXX-YY.YYY
Max OD, mm	A	38.1	44.45	50.8	60.3
Min ID, mm	B	19.5	22.0	25.4	38.1
Overall Length, mm	C	200.3			
Make Up Length, mm	D	95.2			
CT-1 OD, mm		According to client's request			
CT-1 wall thickness, mm		According to client's request			
CT-2 OD, mm		According to client's request			
CT-2 wall thickness, mm		According to client's request			

XX – CT-1 OD, mm

XXX – CT-1 wall thickness, in the format “340” means 3.40 mm

YY – CT-2 OD, mm

YYY – CT-1 wall thickness, in the format “318” means 3.18 mm

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS



It is a connecting link between two ends of splicing Coil Tubing.

There are three grooves on each end of the connector for fixing (rolling) the CT.

The O-rings between the grooves serve as a reliable barrier to seal the in-line working pressure.

Part #		DRC-38.19- XX.XXX-YY.YYY	DRC-44.22- XX.XXX-YY.YYY	DRC-51.25- XX.XXX-YY.YYY	DRC-60.38- XX.XXX-YY.YYY
Max OD, mm	A	38.1	44.45	50.8	60.3
Min ID, mm	B	19.1	22.0	25.4	38.1
Overall length, mm	C	200.3			
Make up length, mm	D	95.2			
CT1 OD, mm		As per client's specification			
CT1 wall, mm		As per client's specification			
CT2 OD, mm		As per client's specification			
CT2 wall, mm		As per client's specification			

XX – CT1 outer diameter

XXX – CT1 wall thickness in the format of «340» which means 3.40 mm

YY – CT2 outer diameter

YYY – CT2 wall thickness in the format of «318» which means 3.18 mm

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

EDC, External dimple connector



It is the connecting link between the smooth lower end of the CT and any other downhole tool that needs to be connected to the CT for well intervention job.

The end of the CT has a smooth wall, while any downhole tool has a connecting thread.

Holes matrix located in the upper housing of the connector. Set screws are installed in these holes in the preliminary pressed dimples. In the lower part, the Connector ends with a thread for attaching the downhole tool.

Installation of the external dimple connector is performed by a dimple tool with mechanical or hydraulic pressing. At the same time, two O-rings made of reliable FKM 90 material seals the internal space of the connector and the annulus.

Part #	EDC-43.19-32-01.1	EDC-54.25-38-01.5	EDC-60.25-44-01.5	EDC-73.38-44-02.1	EDC-73.38-51-02.1
Max OD, mm	43.2	54.0	60.3	73.0	73.0
Min ID, mm	19.1	25.4	25.4	38.1	38.1
Overall length, mm		207	230	230	230
Make up length, mm		156	179	166	166
CT OD, mm	31.8	38.1	44.45	44.45	50.8
Thread type	1.0" AMMT pin	1.50" AMMT pin	1.50" AMMT pin	2-3/8 PAC pin	2-3/8 PAC pin

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

ESC, External slip type connector



It is the connecting link between the smooth lower end of the CT and any other downhole tool that needs to be connected to the CT for well intervention job.

The end of the CT has a smooth wall, while any downhole tool has a connecting thread.

In the upper part of the housing, the connector has an internal collet with teeth pointing inwards. The connector is put on the prepared end of the CT and due to the tightening of the upper and lower housing, the collet is securely hooked to the outer smooth wall of the CT. At the same time, two O-rings made of reliable FKM 90 material seal the internal space of the connector from the annulus space.

The trapezoidal thread used together with high-quality metal ensures a reliable connection and safe conduct of well work.

The lower housing of the Connector has a standard working taper thread for downhole tools make up.

Part #	ESC-43.19-32-01.1	ESC-54.25-38-01.5	ESC-60.25-44-01.5	ESC-73.38-44-02.1	ESC-73.38-51-02.1
Max OD, mm	43.2	54.0	60.3	73.0	73.0
Min ID, mm	19.1	25.4	25.4	38.1	38.1
Overall length, mm		352	233.0	372.6	372.6
Make up length, mm		273	207.6	308.8	308.8
CT OD, mm	31.8	38.1	44.45	44.45	50.8
Thread type	1.0" AMMT pin	1.50" AMMT pin	1.50" AMMT pin	2-3/8 PAC pin	2-3/8 PAC pin

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

IDC, Internal dimple connector



It is the connecting link between the smooth lower end of the CT and any other downhole tool that needs to be connected to the CT for well intervention job.

The end of the CT has a smooth wall, while any downhole tool has a connecting thread.

In its upper part, the connector has a spherical recesses for fixing (pressing) the CT. In the lower part, the Connector ends with a thread for attaching the downhole tool.

Installation of the internal dimple connector is performed by a dimple tool with mechanical or hydraulic pressing. At the same time, two O-rings made of reliable FKM 90 material seals the internal space of the connector and the annulus.

Part #		IDC-38.19-38.XXX-01.1	IDC-43.19-44.XXX-01.1	IDC-51.25-50.XXX-01.5	IDC-51.38-51.XXX-02.1
Max OD, mm	A	38.1	42.9	50.8	73.0
Min ID, mm	B	19.1	19.1	25.4	38.1
Overall length, mm	C	200.3			
Make up length, mm	D	95.2			
CT OD, mm		38.1	44.5	50.8	50.8
CT wall, mm		As per client's specification			
Thread		1.0" AMMT pin	1.0" AMMT pin	1.5" AMMT pin	2-3/8 PAC pin

XXX – CT wall thickness in the format of «340» which means 3.40 mm

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

IRC, Internal Roll-on Connector



It is the connecting tool between the smooth lower end of the CT and any other downhole tool that needs to be connected to the CT for a well intervention job.

The end of the CT has a smooth wall, while any downhole tool has a connecting thread.

In its upper part, the connector has a grooves for fixing (rolling) the CT. In the lower part, the Connector ends with a thread for attaching the downhole tool.

Installation of the internal roll-on connector is performed by a mechanical tubing cutting tool with rolling wheels. At the same time, two O-rings made of reliable FKM 90 material seals the internal space of the connector and the annulus.

Part #		IRC-38.19-38.XXX-01.1	IRC-44.19-44.XXX-01.1	IRC-51.25-50.XXX-01.5	IRC-51.25-51.XXX-02.1
Max OD, mm	A	38.1	42.9	50.8	73.0
Min ID, mm	B	19.1	19.1	25.4	38.1
Overall length, mm	C	200.3			
Make up length, mm	D	95.2			
CT OD, mm		38.1	44.5	50.8	50.8
CT wall, mm		As per client's specification			
Thread		1.0" AMMT pin	1.0" AMMT pin	1.5" AMMT pin	2-3/8" PAC pin

XXX – CT wall thickness in the format of «340» which means 3.40 mm

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

Basic Tools

BBT, Boot basket



It is used to trap pieces of sludge that are too large to circulate out of the well to the surface during drilling, milling, or garbage collection.

The upstream flow has a high speed due to the small restriction of the annular space in the lower part of the Boot basket, and when the flow passes the upper part of the tool, the gap increases sharply, which leads to the fact that the slow flow can no longer lift large particles and they settle in the boot basket.

The boot basket should be positioned as close to the mill or bit as possible. Milling procedures are carried out in the normal mode with normal circulation. It is possible to use several boot baskets at the same BHA to increase the boot basket capacity.

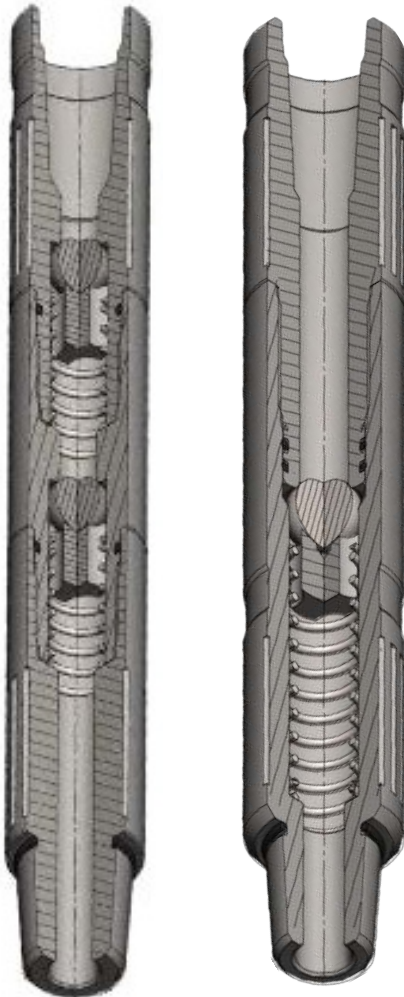
Upon client's request, it is possible to produce a basket of different lengths. The simple design of the tool allows you to quickly make a redress and at the same time has good strength characteristics for torsion and tension.

Part #		SBA-54.19-01.5	SBA-73.25-02.1
Tool body OD, mm	A	54.0	73.0
Min ID, mm	B	19.0	25.0
Overall length, mm	C		
Make up length, mm	D	1051.6	1331.0
Thread		1.5" AMMT	2-3/8" PAC

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

BCV, Ball Check Valve



A ball check valve is a downhole tool that is used for downhole operations and passes liquid only in one direction – down.

As a rule, it is lowered during well cleanout operations, as one of the tools for well control, as well as to prevent well fluid from entering the CT through the bottom of the BHA.

Borehole fluid may contain mechanical particles, as well as corrosive substances such as hydrogen sulfide or carbon dioxide. Therefore, it is undesirable for borehole fluid to enter the downhole tool and the CT. This tool serves as a barrier to unwanted penetration of borehole fluid into the CT.

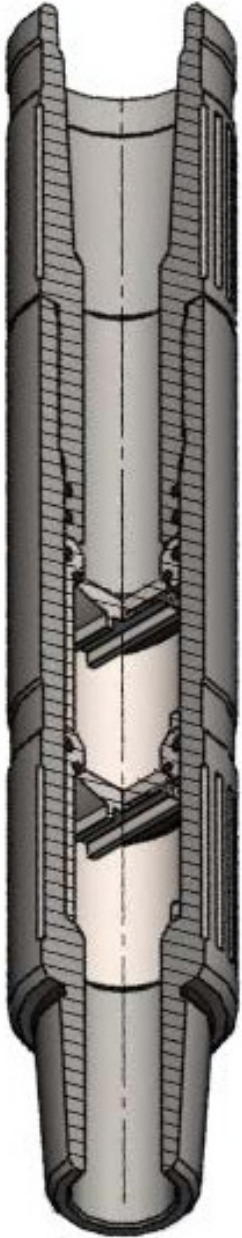
The ball check valve allows flow only from the CT into the annular space and has one or two reliable "ball-seat" pair that duplicate each other.

Unlike the Back Pressure Valve - BPV, the ball check valve – BCV is simpler in design, which reduces its cost. At the same time, the BCV does not have a through hole, unlike the BPV, and therefore, the BCV cannot be placed in the BHA above the instruments with activation balls.

Part #		BCV-38.0-01.1	BPV-44.0-01.1
Max OD, mm	A	38.1	44.45
Min ID, mm	B	19.1	19.1
Overall length, mm	C	315	308
Make up length, mm	D	277	270
Thread		1.0" AMMT pin/box	1.0" AMMT pin/box

COIL TUBING DOWNHOLE TOOLS

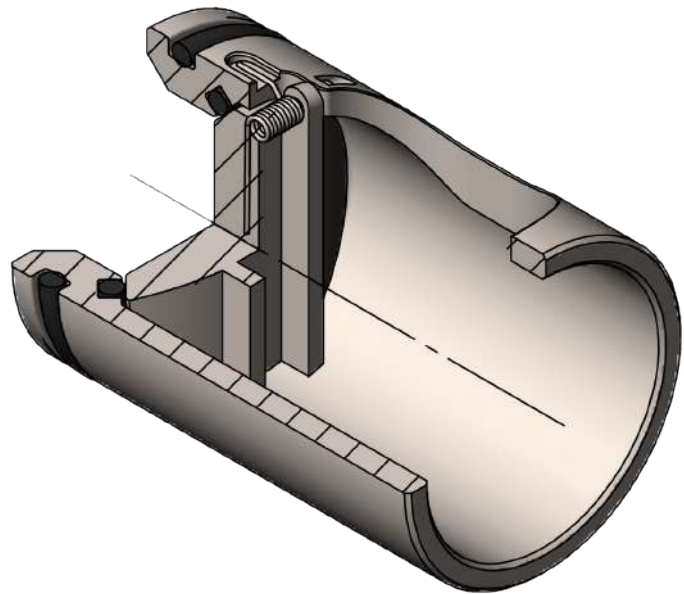
BPV, Back Pressure Valve



Double flapper back pressure valve this is a downhole tool, which is installed in the bore hole assembly (BHA) during well intervention and let the fluid flow only in one direction – downwards.

Main function of the BPV is a safety barrier for the well pressure control. BPV prevents the well fluid enters the Coil Tubing through the bottom of the Bore Hole Assembly (BHA).

Auxiliary duty of the BPV is to protect the Coil Tubing from the mechanical particles as well as possible aggressive well environment such as H₂S and CO₂ which can enter the CT and damage it from inside. BPV has two duplicate reliable cartridges with flapper valves. Normally BPV runs at each job.

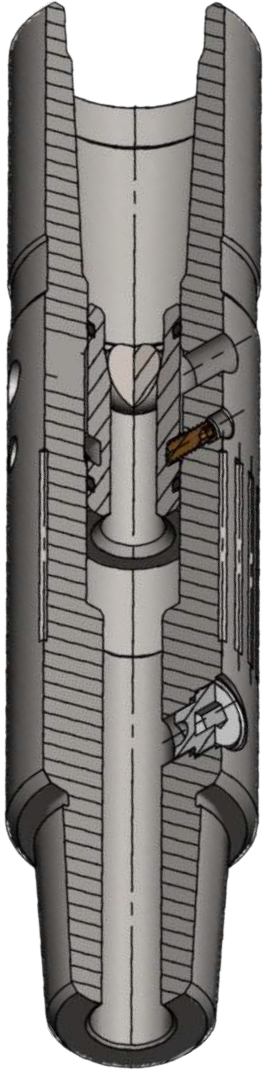


Part #		BPV-38.13-01.1	BPV-44.19-01.1	BPV-51.25-01.5	BPV-54.25-01.5	BPV-73.38-02.1
Max OD, mm	A	38.1	44.45	50.8	54.0	73.0
Min ID, mm	B	13.0	17.0	25.4	25.4	38.1
Overall length, mm	C	348	343	330.8	330.8	383.5
Make up length, mm	D	310	305	280.0	280.0	320
Thread		1.0" AMMT	1.0" AMMT	1.5" AMMT	1.5" AMMT	2-3/8 PAC

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

DCS, Dual Circulation Sub



is a downhole tool, run in the hole as part of the borehole assembly (BHA) during the Coil Tubing operations. Normally installed just below the hydraulic disconnect. A certain size steel ball need to be dropped inside the CT from the surface to perform an activation.

Ball is pumped down till the ball seat in the shifting piston. Since the ball located on the ball seat the downward flow is ceased and pressure accumulating above the ball. When pressure reaches a shear level, the shear screws are cut, piston moves down and opens the circulation holes.

For the cases when circulation is lost and the ball cannot be pumped down through the Coil Tubing, DCS completed with burst disc. In case of burst pressure overcome the membrane bursts and open small circulation hole to the annulus, which will allow to circulate the activation ball down.

Part #		DCS-44.11-01.1	DCS -54.14-01.5	DCS -73.18-02.1
Max OD, mm	A	44.45	54.0	73.0
Min ID, mm	B	11.0	14.0	17.5
Overall length, mm`	C	223.1	255.8	268.5
Make up length, mm	D	185.0	205.0	205.0
Activation Ball size, mm	E	12.7 MM (0.500")	15.9 MM (0.625")	19.1 MM (0.750")
Thread		1.0" AMMT pin/box	1.5" AMMT pin/box	2-3/8 PAC pin/box

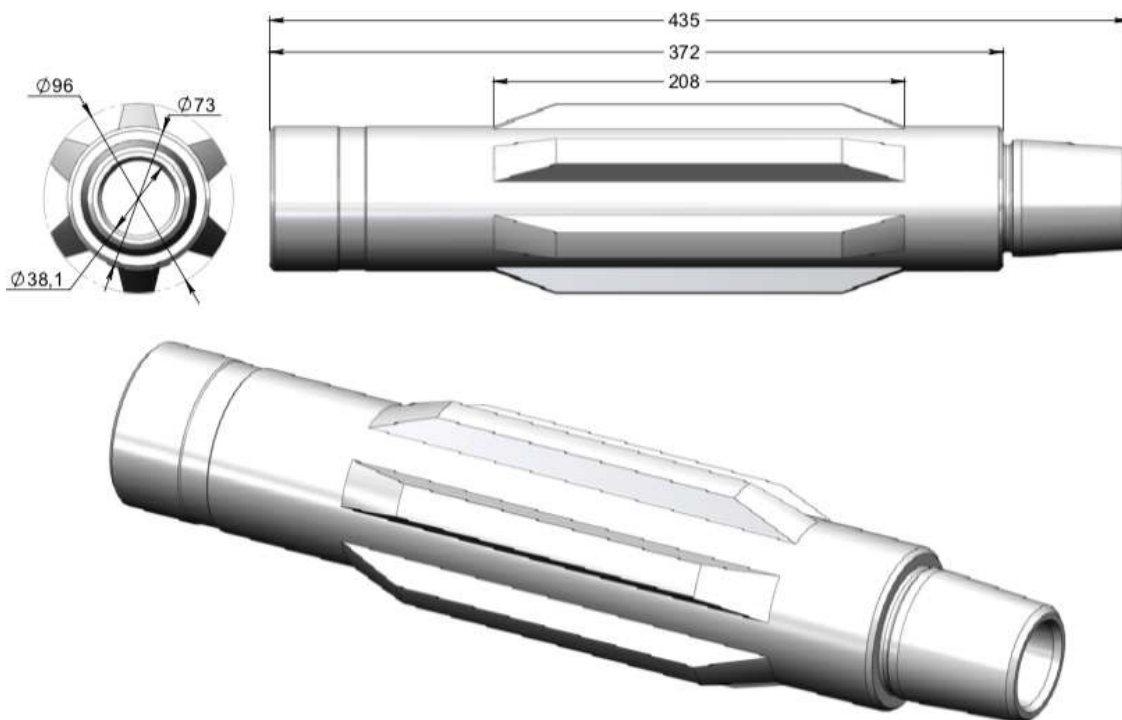
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COIL TUBING DOWNHOLE TOOLS

FBS, Fixed Blades Stabilizer

is a downhole tool designed for the well intervention jobs. It runs in hole as part of the borehole assembly (BHA) of other downhole tools in cases where it is necessary to center the BHA relative to the axis of the well. Quite often the well has an inclination, up to 90 degrees, while the BHA lies on the wall of the well.

Also residual bending of the CT cause the situation when CT BHA located eccentrically in the well. In such situation, some types of work, such as milling or perforation, require that the tool in the BHA (mill or perforator, respectively) be located in the center of the well. In such cases, a Centralizer (or also called Stabilizer) is used.



Part #		FBS-43.19-XX.Y-01.1	FBS-54.25-XX.Y-01.5	FBS-73.38-XX.Y-02.1
Blades' max OD, mm	A	XX	XX	XX
Tool body OD, mm	B	42.9	54.0	73.0
Min ID, mm	C	19.0	25.0	38.1
Overall length, mm	D			
Make up length, mm	E			
Thread		1.0" AMMT pin/box	1.5" AMMT pin/box	2-3/8 PAC pin/box

Where:

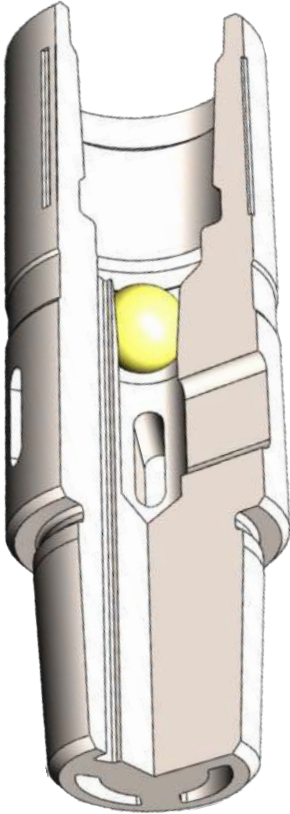
XX – maximum outer diameter of the blades, as per client's request;

Y – q-ty of the blades, as per client's request;

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

FDS, Flow Diverter Sub



This is a downhole tool used for well intervention as part of the borehole assembly (BHA) during the Coil Tubing operations. Inactivated Flow Diverter Sub (FDS) passes fluid from surface to the annulus and downwards.

A certain size steel ball need to be dropped inside the CT from the surface to perform an activation. Ball is pumped down and since the ball located on the ball seat the flow to the annulus is ceased and fully redirected downwards thru the side channels.

Thus, in activated mode the Flow Diverter Sub passes fluid from the surface downward to the BHA installed below the FDS. FDS normally installed above the tools which are sensitive for the pressure or pressure activated tools to prevent premature activation.

Part #		FDS-43.10-01.1	DCS -54.11-01.5	DCS -73.14-02.1
Max OD, mm (inch)	A	44.45 (1-3/4")	54.0 (2-1/8")	73.0 (2-7/8")
Min ID, mm (inch)	B	10	11	14
Overall length, mm (inch)	C	240	260	280
Make up length, mm (inch)	D	200	210	220
Activation Ball size, mm (inch)	E	11.1 mm (7/16")	17.462 mm (11/16")	23.813 mm (15/16")
Flow path to annulus, mm ² (inch ²)			201 mm ² (0.312 in ²)	380 mm ² (0.589 in ²)
Flow path downward, mm ² (inch ²)			201 mm ² (0.312 in ²)	380 mm ² (0.589 in ²)
Thread		1.0" AMMT pin/box	1.5" AMMT pin/box	2-3/8" PAC pin/box

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COIL TUBING DOWNHOLE TOOLS

HDI, Hydraulic disconnect



Is a downhole tool and run in hole as a part of borehole assembly (BHA), for workover and other well jobs.

The purpose of tools is to perform a controlled split of the BHA, disconnecting an upper part of the BHA (above HDI) from the lower part of the BHA – below the HDI.

A steel ball need to be dropped inside the Coil Tubing on the surface to activate (split) the HDI. The ball pumped down through the whole length of the CT and finally stops on the ball seat of the piston inside the HDI.

When the ball located on the ball seat the downward flow is ceased and pressure accumulating above the ball. When pressure reaches a shear level, the shear screws are cut and top and bottom housings of the HDI is disconnected.

HDI used at any job, where is a risk of BHA stuck in the well. In case of BHA stuck, controlled BHA disconnect using HDI has less risks compare to CT overpulling.

Part #		HDI-39.15-01.1	HDI-44.14-01.1	HDI-51.18-01.5	HDI-54.18-01.5	HDI-73.23-02.1
Max OD, mm	A	38.1	44.45	50.8	54.0	73.0
Min ID, mm	B	15.0	14.0	17.5	17.5	22.6
Overall length, mm	C	198.3	326.0	380.8	380.8	485.5
Make up length, mm	D	160.2	288.0	330.8	330.8	422.0
Activation Ball size, mm	E	19.1 mm (0.750")	15.9 mm (0.625")	19.1 mm (0.750")	19.1 mm (0.750")	22.2 mm (0.875")
Thread		1.0" AMMT	1.0" AMMT	1.5" AMMT	1.5" AMMT	2-3/8 PAC DSI

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

HVT, Hydraulic Vibrating Tools



A downhole tool that is run into the well to carry out the CT well intervention job. The tool vibrates during the liquid pumped through. Such vibration reduces the friction coefficient of the entire BHA and ensures its passage in the deeper interval of the horizontal well.

The large size of the tool can be used as a part of the casing shoe to ensure that the casing reaches a predetermined depth during the well completion.

Advantages of the Marlin Oil Tools vibration tool:

- Resistant to nitrogen environment;
- Resistant to acid and hydrogen sulfide;
- Short length;

Part #		HVT-44.0-01.1	HVT-54.0-01.5	HVT-73.0-02.1
Max OD, mm	A	44.45	54.0	73.0
Min ID, mm	B	0	0	0
Overall length, mm	C	368.1	410.8	483.5
Make up length, mm	D	330.0	360.0	420.0
Thread		1.0" AMMT	1.5" AMMT	2-3/8 PAC

it is possible to manufacture a vibrating tool with a through hole for activating the ball of the underlying downhole tools, in case of operation needs.

COIL TUBING DOWNHOLE TOOLS

IDX, Indexing Tool



The indexing tool is designed to rotate below the installed downhole equipment. The tool is activated by increasing the flow rate of the working fluid by a set value, depending on the installed orifice. The angle and direction of rotation of the tool are always fixed and are 60°, the rotation is right. The tool can be used for fishing operations, for positioning the BHA in the well, or for rotating the BHA in cases where the use of a Mud Motor is not advisable.

When the flow rate of the working fluid is reach the sufficient pressure the activation piston moves down – the tool is activated and rotated. For the next activation, the activation piston must be re-cocked, for which the flow rate should be reduced or, at best, the pump should be shut down and the pressure in the system should be equalized (usually 2-5 minutes). The number of activation cycles within a job is not limited.

Part#	IDX-54-015
Max OD Ø, mm	54.0
Min ID Ø, mm	= orifice ID
Overall length, mm	1196
Make up length, mm	1145
Max working pressure, bar	680
Max working tension load, lbs	71 100
Max working Temperature °C	175
Thread	1.5" AMMT

COIL TUBING DOWNHOLE TOOLS

KNJ, Knuckle joint



is a downhole tool designed for the well intervention. It run in hole as part of the BHA with other downhole tools in cases where it is necessary apply flexibility to the borehole assembly..

Such flexibility may be necessary when passing difficult places in the well, for example, with sharp narrows, thresholds or other obstacles.

Part number		KNJ-40.13-01.1	KNJ -43.13- 01.1	KNJ -54.19 -01.5	KNJ -73.30-02.1
Max OD, mm	A	39.7	42.9	54.0	73.0
Min ID, mm	B	12.5	12.5	19.1	30.0
Overall length, mm	C				
Make up length, mm	D				
Thread		1.0" AMMT	1.0" AMMT	1.5" AMMT	2-3/8 PAC

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

MHA, Motorhead Assembly



is a downhole tool, run in the hole as part of the borehole assembly (BHA) during the Coil Tubing operations. It called “motorhead” as normally in the BHA installed above the Motor. But it also can be run in hole without the Motors in case if functionality of any part of the MHA can be required during the well intervention.

Generally MHA consists of the following tools:

BPV - back pressure valve.

HDI – hydraulic disconnect.

DCS – dual circulation sub

Part #		MHA-44.11-01.1	MHA -54.14-01.5	MHA -73.18-02.1
Max OD, mm	A	44.45	54.0	73.0
Min ID, mm	B	11.0	14.0	17.5
Overall length, mm	C	816	860.8	1007.5
Make up length, mm	D	778	810.0	944.0
HDI activation ball size, mm	E	15.9 MM (0.625")	19.1 MM (0.750")	22.2 MM (0.875")
DCS activation ball size, mm	F	12.7 MM (0.500")	15.9 MM (0.625")	19.1 MM (0.750")
Thread		1.0" AMMT	1.5" AMMT	2-3/8 PAC

Customized tool design is possible upon client’s request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

PDM, Positive Displacement Motor



is a downhole tool, run in the hole as part of the borehole assembly (BHA) during the Coil Tubing operations. Main purpose of the PDM is to transform the flow energy of the pumping fluid into the rotation of the bearing mandrel (lower part of the PDM). Usually applied for milling or clean out operations. But also can be run above mechanical tubing cutter and Ventury junk basket.

Every PDM consists of the bearing section and power section. In its turn the power section consist of:

Stator – housing with inner spiral surface; and

Rotor – shaft with outer spiral surface,

thus the pumping fluid passing through the powers section created a torque on the rotors, which transferred to the shaft and mandrel of the bearing section. Thus any tool installed below the motor will rotates in case of pumping fluid.

Provided below parameters are for conventional power sections.

Imperial units:

Size (OD) inch	Lobes	Stages	Overall length	Flow, GPM		RPM		Off bottom	Rotation	Max diff	Max torque	Thread
			Inch	min	max	min	max	psi	Rev/gal	psi	ft-lbs	
1,69	5/6	5.0	152	25	55	390	860	70	15,72	1 180	230	1" AMMT
2,13	5/6	6.0	141	20	60	260	770	60	12,78	1 410	340	1-1/2" AMMT
2.87	5/6	4.7	165	50	150	170	500	80	3.32	1110	910	2-3/8" PAC DSI

Metric units:

Size (OD) mm	Lobes	Stages	Overall length	Flow, L/min		RPM		Off bottom	Rotation	Max diff	Max torque	Thread
			m	min	max	min	max	bar	Rev/L	bar	N-m	
42.0	5/6	5.0	3.86	94	208	390	860	4,8	4,15	81	311	1" AMMT
54.0	5/6	6.0	3.57	75	227	260	770	4,1	3.38	97	461	1-1/2" AMMT
73.0	5/6	4.7	4.19	189	567	170	500	5,5	0.88	77	1 233	2-3/8" PAC DSI

Upon client's request our Motors can be equipped with different power sections:

- ! Different length of the power section;
- ! Different lobes and stages;
- ! Conventional of evenwall stators;
- ! Stators with elastomers or fully metal;
- ! Special elastomer, fully resistant to nitrogen, acid, high temperature (up to 392 °F), resistance to mechanical parts.

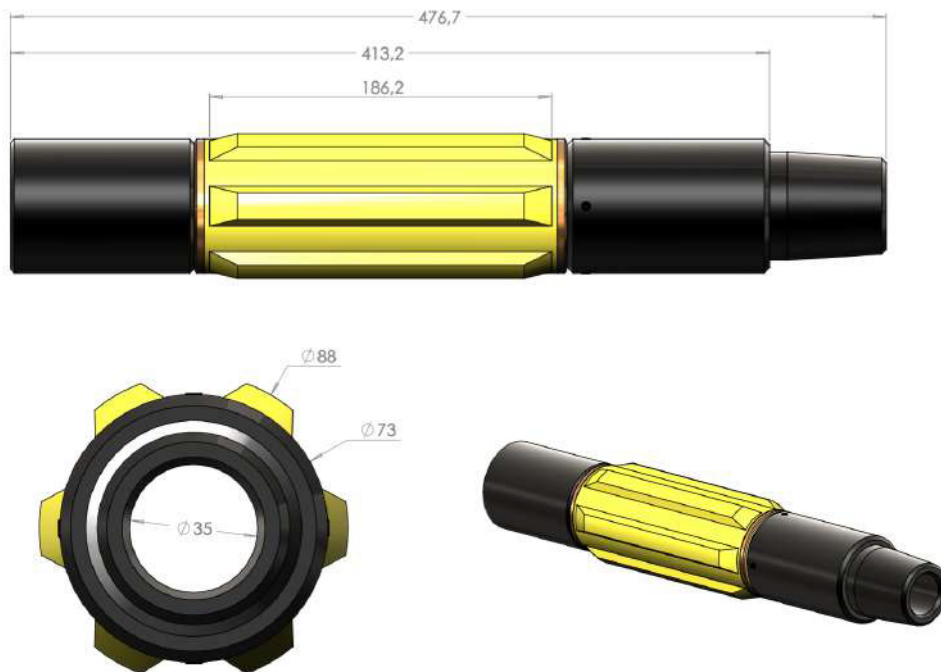
COIL TUBING DOWNHOLE TOOLS

RBS, Replaceable Blades Stabilizer

Replaceable blades stabilizer is a downhole tool designed for well intervention. It runs in hole as part of the borehole assembly (BHA in cases where it is necessary to center the BHA relative to the axis of the well.

Quite often the well has an inclination, up to 90 degrees, while the BHA lies on the wall of the well. Also residual bending of the CT cause the situation when CT BHA located eccentrically in the well. In such situation, some types of work, such as milling or perforation, require that the tool in the BHA (mill or perforator, respectively) be located in the center of the well. In such cases, a Centralizer (or also called Stabilizer) is used.

The benefit of the Stabilizer with replaceable blades is that one tool can cover a range of operations having a different size blades set.



Part #		RBS-43.19-XX.Y-01.1	RBS-54.25-XX.Y-01.5	RBS-73.38-XX.Y-02.1
Blades' max OD, mm	A	XX	XX	XX
Tool body OD, mm	B	42.9	54.0	73.0
Min ID, mm	C	19.0	25.0	38.1
Overall length, mm	D			
Make up length, mm	E			
Thread		1.0" AMMT pin/box	1.5" AMMT pin/box	2-3/8 PAC pin/box

Where:

XX – maximum outer diameter of the blades, as per client's request;

Y – q-ty of the blades, as per client's request;

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

SBA, Straight bar



this is a downhole tool for well intervention works. It runs as part of the BHA.

When run in hole Coil Tubing, has a residual deformation and has the shape of an arc. In this case, the lower end of the BHA, will rest against the wall of the well.

When the end of the BHA passes through the recession or expansion (for example, through the blow out preventer), it is likely that it will rest against the next step of expansion or recession.

To prevent such stops, it is necessary that the BHA of the tool is long enough, rigid and straight, and thus better centered. For this purpose, straight bars used in the BHA.

Part #		SBA-40.16-D-01.1	SBA-43.16-D-01.1	SBA-54.25-D-01.5	SBA-73.32-D-02.1
Tool body OD, mm	A	39.7	42.9	54.0	73.0
Min ID, mm	B	16.0	16.0	19.1	31.2
Overall length, mm	C				
Make up length, mm	D	900	900	900	900
Thread		1.0" AMMT	1.0" AMMT	1.5" AMMT	2-3/8" PAC

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

SJP, Sand Jet Perforator



is a downhole tool designed for the well intervention. It run in hole as part of the BHA with other downhole tools in cases where it is necessary to perforate the casing or tubing.

A gel-sand mixture is pumped through the Coil tubing, which comes out of the nozzles of the perforator at high speed in the form of a jet directed at the inner wall of the casing of the well.

The jet of the gel-sand mixture hits the casing column and perform abrasive cuts through the metal, cement stone and part of the rocks. The perforator nozzles are made of abrasive-resistant materials, which allows them to withstand significant abrasive loads.

The sand jet perforator can be made in basic design, when the nozzles are open for circulation all the time, or ball activated, when the nozzles are opened only after the ball is dropped, which allows you to pressure test BHA or work with tools below the perforator in the BHA.



Part #		SJP-44.11-X.Y-01.1	SJP-54.14-X.Y-01.5	SJP-73.17-X.Y-02.1
Tool body OD, mm	A	44.45	54.0	73.0
Min ID, mm	B	19.0	25.0	32.0
Overall length, mm	C			
Make up length, mm	D			
Q-ty of nozzles	X	X	X	X
Nozzle ID	Y	Y	Y	Y
Activation ball size, mm		12.7 MM (0.500")	15.9 MM (0.625")	19.1 MM (0.750")
Thread		1.0" AMMT pin/box	1.5" AMMT pin/box	2-3/8 PAC pin/box

Where:

X – is the number of nozzles, according to the customer's request;

Y – internal diameter of the nozzle, according to the customer's request;

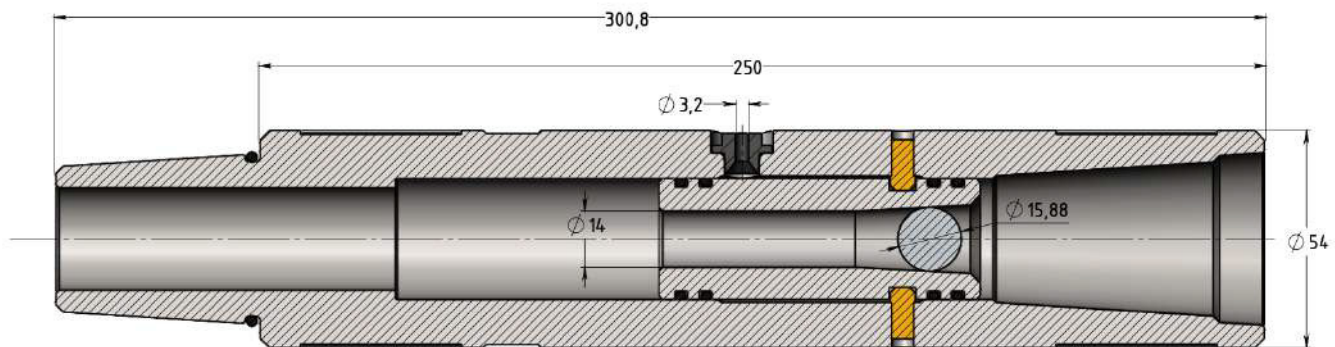
Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

SJP-H, Sand Jet Perforator, hydraulically activated

In a hydraulically activated perforator, the nozzles open only after the ball reaches the ball seat, which allows you to pressure test the BHA or work with lower-level tools in the BHA.

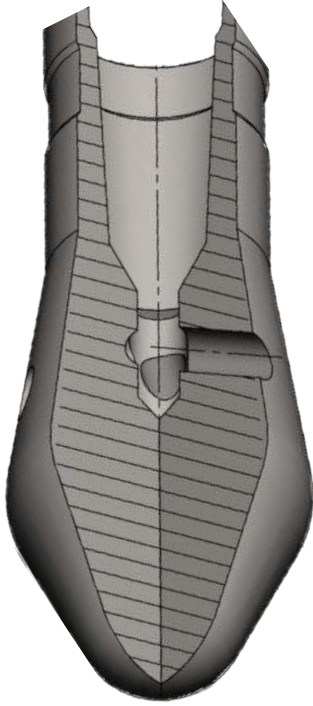
To activate the perforator and open the nozzles, it is necessary to drop a ball of a suitable size into the Coil Tubing. After landing the ball in the seat and further pressure injection, the brass shear screws are cut, the piston is shifted to the active state, after which perforation is possible.



- The number of nozzles and their location in the housing - at the customer's request;
- The standard internal diameter of the nozzle is 0,125" but can be increased at the request of the customer;
- Non-standard execution of the tool is possible at the request of the customer in the shortest possible time.

COIL TUBING DOWNHOLE TOOLS

SSA, Sliding Sleeve Activator



this is a downhole tool for well intervention works. It is used to activate Sliding Sleeves during multistage fracturing operations.

The sliding sleeve is a part of the well completion, which runs in hole as part of the liner. Sliding sleeves are installed in the planned fracturing spot of the well.

In fact, the Sliding sleeve activator replaces the activation ball dropped into the well, with the only difference that the ball must be further milled or caught, and the activator simply goes down into the well to activate the sleeve on the Coil tubing and then gets out of the well on the same Coil tubing.

Part #		SSA-XX-01.1	SSA-XX-01.5	SSA-XX-02.1
Tool body OD, mm	A	XX	XX	XX
Overall length, mm	C			
Make up length, mm	D			
Thread		1.0" AMMT pin/box	1.5" AMMT pin/box	2-3/8" PAC pin/box

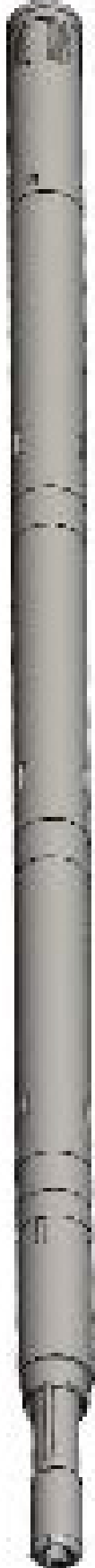
Where:

X – is the maximum outer diameter, as required by the customer;

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

STT, Hydraulic setting tool



It is a fully mechanical tool. Can be run on the coil tubing or tubing. Used for setting bridge plugs or cement retainers inside the well casing.

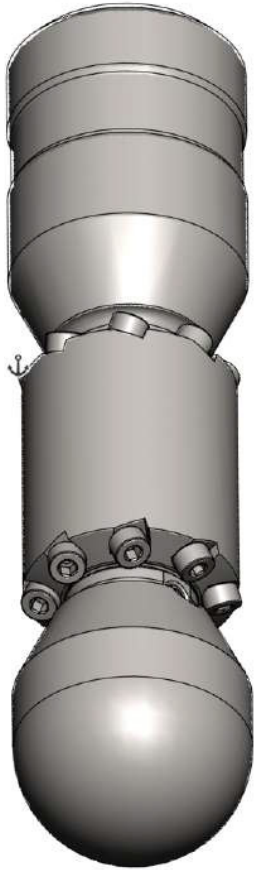
The tool is activated when ball sets in the piston. After landing the ball, a shear pressure applied above the ball, pistons moves down and set the bridge plug it in the well.

Part #		STT-73-02.2
Tool body OD, mm	A	73
Stages quantity	B	3
Overall length, mm	C	2 028 mm
Make up length, mm	D	1 895 mm
Piston move distance, mm		200 mm
Activation pressure, bar		200 bar
Surface of the 3 cylinders		65.54 mm ²
Activation ball size		12.7 mm
Thread		2-3/8" PAC DSI box

Customized tool design is possible upon client's request in the shortest time.

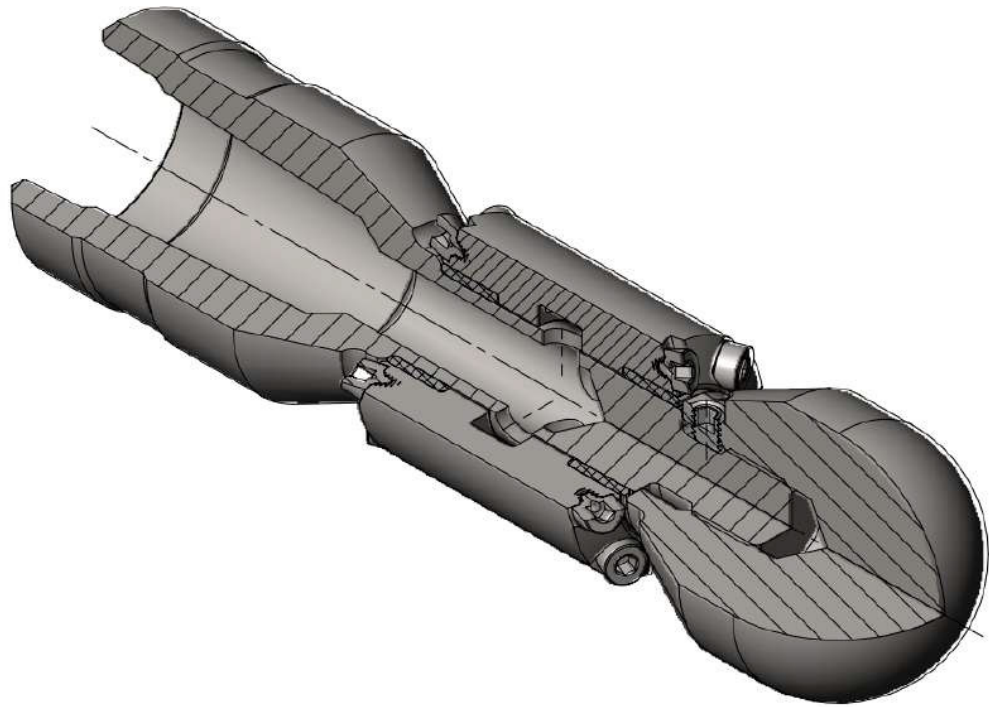
COIL TUBING DOWNHOLE TOOLS

SWN, Spinning Wash Nozzle



It is intended for downhole cleaning out operations to wash the inner surfaces of the well.

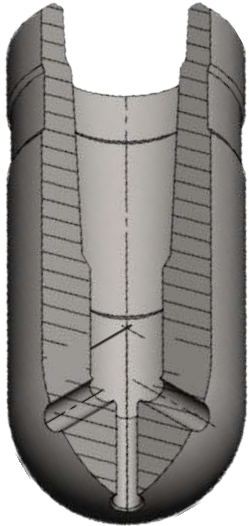
The principle of operation of the spinning wash nozzle is based on 360° rotation of the nozzles under the action of fluid pressure, as a result of which the fluid jet washes the tubing or casing wall. The nozzles are tilted 15° from the axis to ensure rotation. The jets are directed forward and backward. The rotation speed depends on the flow rate of the washing liquid.



Nº	Parameters	SWN-44.2-16-01.1
1	Make up length	176,5 mm
2	Max OD	44,45 mm
3	Nozzle ID	1,6 mm
4	Nozzle q-ty upword+downward 30°	16
5	Max working temstion, lbs	71 100
6	Max working temperature °C	175
7	Working pressure, bar	350 атм.

COIL TUBING DOWNHOLE TOOLS

WNZ, Wash nozzle



this is a downhole tool for well intervention works. It runs as part of the BHA.

From the very name of the tool, it follows that this tool is used for clean out operations. The nozzles restrict the passage for the clean out fluid, increasing the speed of the jet. The high-speed jet makes clean out more efficient by breaking up dense deposits.



Part #		WNZ-32.Y-05.3	WNZ-38.Y-01.1	WNZ -44.Y- 01.5	WNZ -54.Y -02.1	WNZ -73.Y -02.1
Tool body OD, mm	A	31.75	38.1	44.45	54.0	73.0
Min ID, mm	B	Y	Y	Y	Y	Y
Overall length, mm	C					
Make up length, mm	D					
Thread		1.125 -10 STUB ACME box	1.0" AMMT box	1.5" AMMT	2-3/8 PAC box	2-3/8 PAC box

Where:

Y – is the diameter of the clean out holes, according to the customer's request;

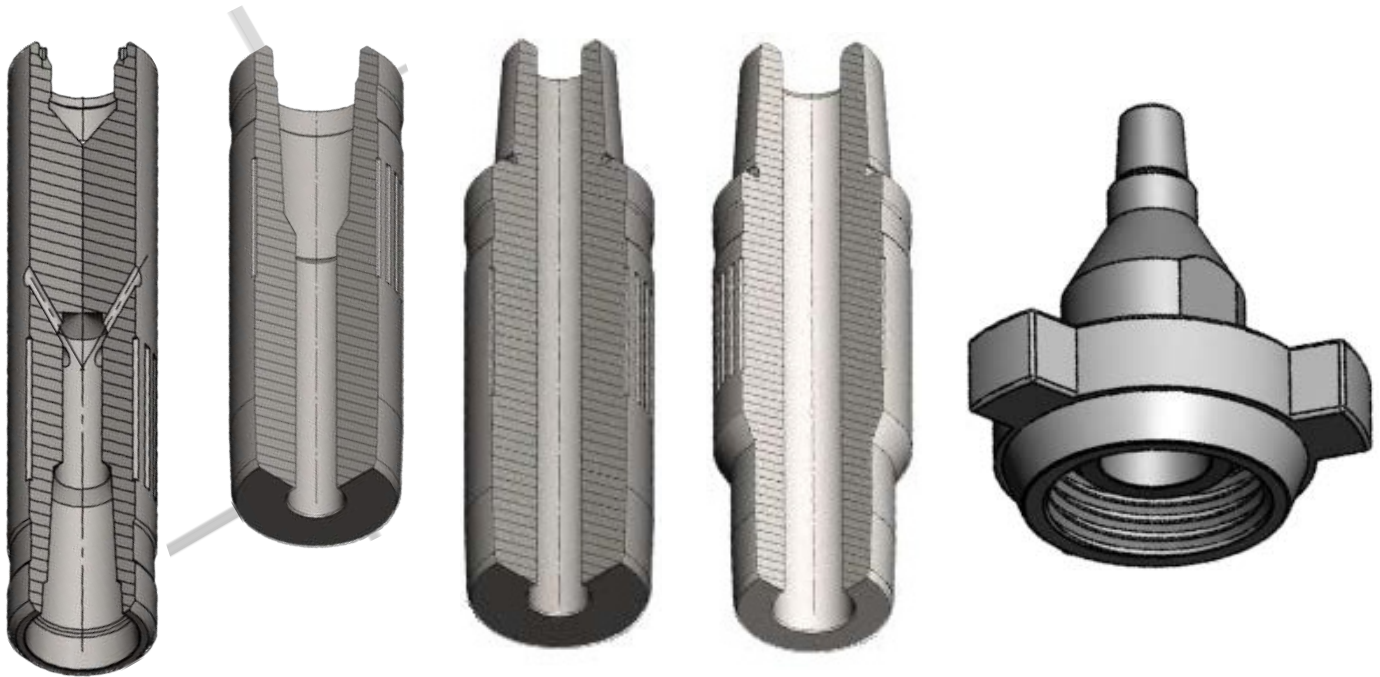
Also, upon request, the customer can specify the number, direction and inner diameter of the flushing holes.

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

XOV, Cross over

it is a downhole tool and is used to connect two tools or pipes with different threads. It is possible to produce cross overs of various designs, types and sizes of threads.



Part #		XOV-OD.ID-XX.Z-YY.Z
Tool body OD, mm	A	OD
Min ID, mm	B	ID
Overall length, mm	C	
Make up length, mm	D	
Code of thread 1		XX
Code of thread 2		YY
Thread	Z	Pin / Box

Example of the part number: XOV-54.19-01.5B-01.1P

Where:

- 54 – maximum outer diameter, mm
- 19 – minimum inner bore, mm
- 01.5 – thread code of the 1-1/2" AMMT
- B – internal thread (Box)
- 01.1 – thread code of the 1" AMMT
- P – external thread (Pin)

Customized tool design is possible upon client's request in the shortest time.

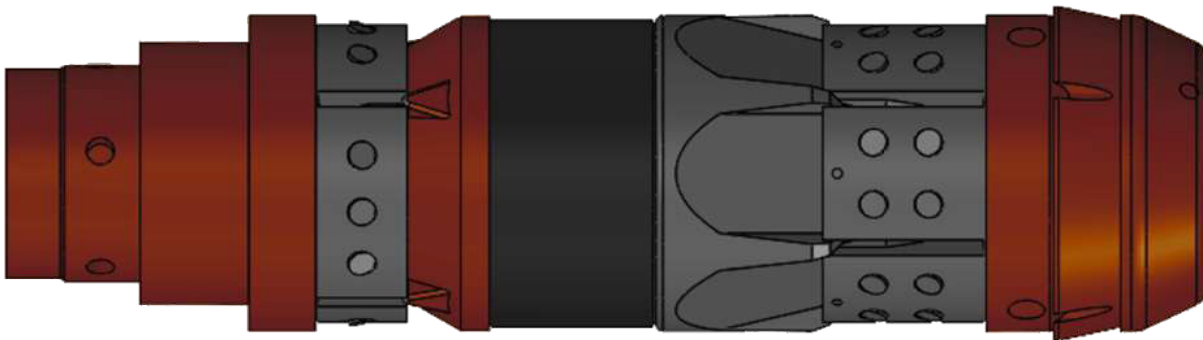
COIL TUBING DOWNHOLE TOOLS

CBP, Composite Bridge Plug

This equipment is designed for running and installation in oil and gas wells. Set is performed on a hydraulic Setting Tool (STT).

The bridge plug is installed to create a temporary barrier in the well and cut off the underlying intervals. If necessary, the packer plug is easily destroyed by milling with the standard milling BHA.

Bridge plug collets have an easily drilled design. They are also made of composite with ceramic cylinders. The reliability of this technology has been confirmed in field work.



Casing size (in.)	Casing Weight (lb/ft)	Plug OD (in.)	Plug ID (in.)	Plug OAL (in.)	Pressure Rating (bar)	Temperature Rating (C!)
5.500"	17-23	4.38"	1.26"	16.6"	700	70
					550	95
5.000"	18-21.4	3.90"	1.00"	15.7"	700	120
4.500"	11.-15.1	3.66"	1.00"	15.3"	700	120

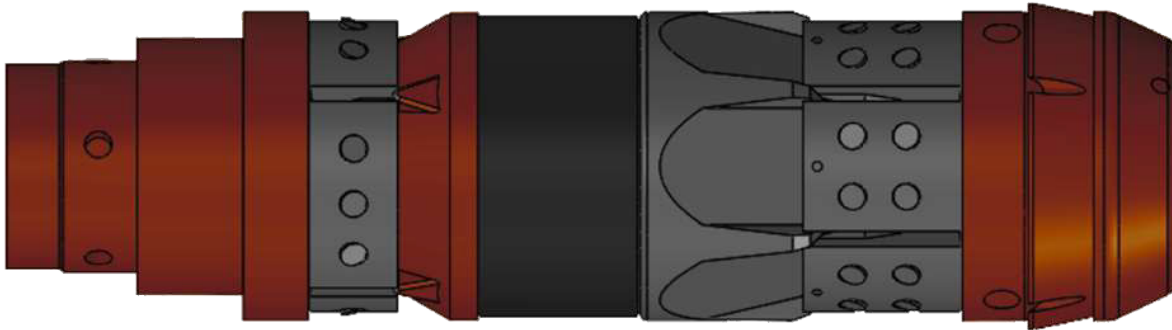
COIL TUBING DOWNHOLE TOOLS

SBP, Solvable Bridge Plug

This equipment is designed for running and installation in oil and gas wells. Set is performed on a hydraulic Setting Tool (STT).

The bridge plug is installed to create a temporary barrier in the well and cut off the underlying intervals. Over the time, the bridge plug fully dissolves in downhole conditions.

Bridge plugs collets and the sealing element are made of completely soluble materials. The reliability of this technology has been confirmed in field work.



Casing size (in.)	Casing Weight (lb/ft)	Plug OD (in.)	Plug OAL (in.)	Pressure Rating (bar)	Temperature Rating (C!)
5.500"	17-23	4.38"	16.6"	700	70
				550	95
5.000"	18-21.4	3.90"	15.7"	700	120
4.500"	11-15.1	3.66"	15.3"	700	120

COIL TUBING DOWNHOLE TOOLS

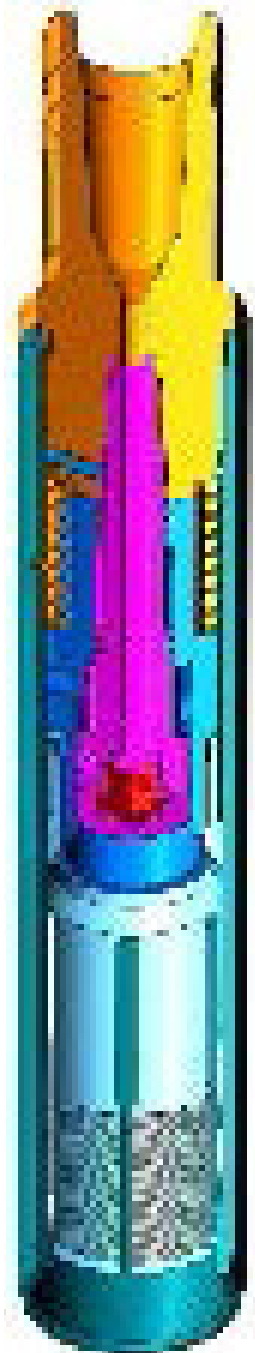
Fishing Tools

FRO, Flow Release Overshot

This is a downhole tool used in well intervention for fishing operations. The overshoot has a replaceable collet to catch a smooth surface. The collets covers a range of fish outer diameters from 1.0" to 2-1/8"

The bottom of the overshoot can be completed with guide leap upon client's request.

The collet securely grabs the fish and holds it in the process of lifting it out of the well. If the captured object could not be released from the well, then the overshoot can be released from it by applying pressure to the coil tubing.



Part number	FRO-69-01.5	FRO-89-01.5
Max OD, mm (inch)	69	89
Overall length, mm (inch)	449	544
Make up length, mm (inch)	449	544
Min catch Ø, mm	20.4	44.5
Max catch Ø, mm	54.0	73.0
Thread	1.5" AMMT box	2-3/8" PAC DSI box
Max working load, kg (lbs)	77 700	108 400

Slip catch range,	Part number	Part number
0,803 - 0,929	FRO-69-01.5-06-10.001	
0,929 - 1,055	FRO-69-01.5-06-09.001	
1,055 - 1,181	FRO-69-01.5-06-08.001	
1,181 - 1,307	FRO-69-01.5-06-07.001	
1,307 - 1,433	FRO-69-01.5-06-06.001	
1,433 - 1,559	FRO-69-01.5-06-05.001	
1,559 - 1,685	FRO-69-01.5-06-04.001	
1,685 - 1,811	FRO-69-01.5-06-03.001	
1,811 - 1,937	FRO-69-01.5-06-02.001	
1,937 - 2,063	FRO-69-01.5-06-01.001	
2,063 - 2.125	FRO-69-01.5-06.001	

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

FRS, Flow release Spear, slick catch



A Flow release spear for a slick cath is a downhole tool that is used to fish and extract objects with an internal smooth cylindrical surface from the well, for example, pipes, subs, etc. When the spear nose enters the pipe, the teeth of the collet are securely fixed in the pipe, so that it is possible to apply a pulling force to the spear to extract it together with a pipe.

The main feature of the hydraulically released spear is the ability to detach it from the fish, if the limit values for the tension of the CT are reached, and the fish is not removed from the well;

To release the spear, it is necessary to apply such a flow rate of liquid to it that would create an activation pressure. Activation in this case means the diameter of the collet is reduced, so that it can be removed from the fish.

Before starting work, it is necessary to select an activation orifice that would be large enough not to create activation pressure inside the tool at the desired clean out rate, and small enough to create activation pressure at the maximum planned flow rate of the working fluid.

Part #	FRS-44-01.1	FRS-54-01.5	FRS-71-02.2
Max OD, mm	44.45	54.00	71.00
Overall length, mm		425.3	485.0
Make up length, mm		425.3	485.0
Min catch ID, mm	25.4	31.75	41.28
Max catch ID, mm	44.5	50.8	71.5
Thread	1.0" AMMT box	1.5" AMMT box	1.5" AMMT box
Max working tension, lbs		64 600	115 700

COIL TUBING DOWNHOLE TOOLS



Catch range, mm		Collet Part # For FRS-44-01.1	Collet Part # For FRS-54-01.5	Collet Part # For FRS-71-02.2
min	max			
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
			-	-
31,750	34,925	-	FRS-54-01.5-00.006	-
33,325	36,500	-	FRS-54-01.5-00.006-01	-
34,925	38,100	-	FRS-54-01.5-00.006-02	-
36,500	39,675	-	FRS-54-01.5-00.006-03	-
38,100	41,275	-	FRS-54-01.5-00.006-04	-
39,675	42,850	-	FRS-54-01.5-00.006-05	-
41,275	44,450	-	FRS-54-01.5-00.006-06	FRS-71-01.5-00.006
42,850	46,025	-	FRS-54-01.5-00.006-07	FRS-71-01.5-00.006-01
44,450	47,625	-	FRS-54-01.5-00.006-08	FRS-71-01.5-00.006-02
46,025	49,200	-	FRS-54-01.5-00.006-09	FRS-71-01.5-00.006-03
47,625	50,800	-	FRS-54-01.5-00.006-10	FRS-71-01.5-00.006-04
49,200	52,375	-	-	FRS-71-01.5-00.006-05
50,800	53,975	-	-	FRS-71-01.5-00.006-06
52,375	55,550	-	-	FRS-71-01.5-00.006-07
53,975	57,150	-	-	FRS-71-01.5-00.006-08
55,550	58,725	-	-	FRS-71-01.5-00.006-09
57,150	60,325	-	-	FRS-71-01.5-00.006-10
58,725	61,900	-	-	FRS-71-01.5-00.006-11
60,325	63,500	-	-	FRS-71-01.5-00.006-12
61,900	65,075	-	-	FRS-71-01.5-00.006-13
63,500	66,675	-	-	FRS-71-01.5-00.006-14
65,075	68,250	-	-	FRS-71-01.5-00.006-15
66,675	69,850	-	-	FRS-71-01.5-00.006-16

COIL TUBING DOWNHOLE TOOLS

FRS.GS, Flow release Spear, for GS profile



A Flow release spear for a GS profile is a downhole tool that is used to fish and extract from the well Hydraulic Disconnect (HDI) of Marlin Oil Tools' design. When the spear nose enters the pipe, the GS collet securely fixed in the HDI bottom sub, so that it is possible to apply a pulling force to the spear to extract it together with a fish.

The main feature of the hydraulically released spear is the ability to detach it from the fish, if the limit values for the tension of the CT are reached, and the fish is not removed from the well;

To release the spear, it is necessary to apply such a flow rate of liquid to it that would create an activation pressure. Activation in this case means the diameter of the collet is reduced, so that it can be removed from the fish.

Before starting work, it is necessary to select an activation orifice that would be large enough not to create activation pressure inside the tool at the desired clean out rate, and small enough to create activation pressure at the maximum planned flow rate of the working fluid.

Part #	FRS.GS-44-01.1	FRS.GS -54-01.5	FRS.GS -71-02.2
Max OD, mm	44.45	54.00	71.00
Overall length, mm		491.3	561.0
Make up length, mm		491.3	561.0
Fish	HDI-44-01.1	HDI-54-01.5	HDI-73-02.2
Thread	1.0" AMMT box	1.5" AMMT box	1.5" AMMT box
Max working tension, lbs		27.000	41.800

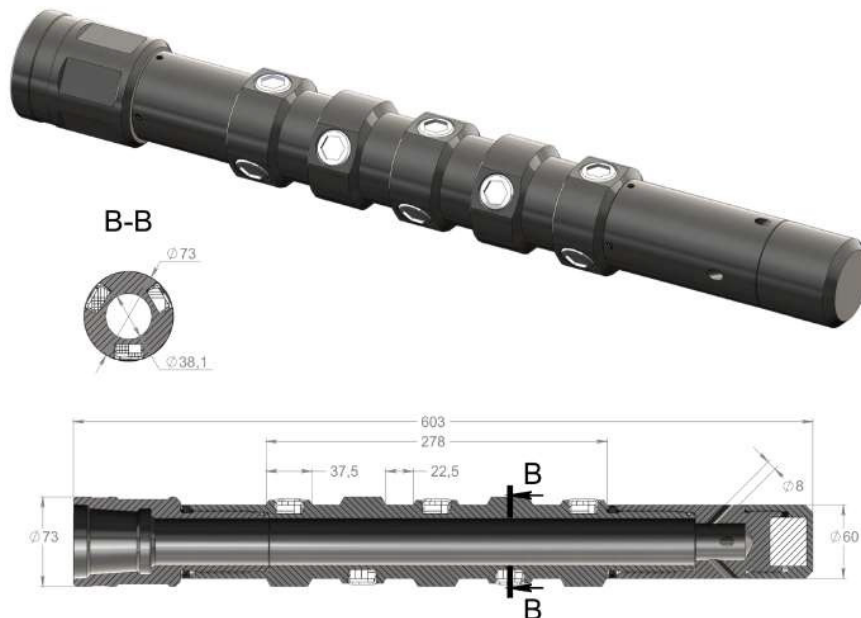
COIL TUBING DOWNHOLE TOOLS

MGN, Downhole Magnet - radial

A borehole magnet is a downhole tool that is used to clean oil and gas wells from small metal debris, such as chips and scale. Such metal debris can form and accumulate in the well during the operation of metal tools, as well as during milling operations.

Also, a borehole magnet can be an effective solution for extracting small metal parts that have fallen into the well. Foreign metal objects in the well, as well as metal debris, are potential causes of complications or accidents in the operation of the well. Therefore, well cleaning is an important step to prepare for any well work.

Borehole magnets can have different designs, and the magnetic surface can be located both along the tool body and from the end. The downhole magnet "Marlin" has an internal passage hole, which allows you to flush the well simultaneously with the operation of the magnet. At the request of the customer, it is possible to manufacture any connecting threads.



Part #		MGN-43.19-X.Y-01.1	MGN-54.25-X.Y-01.5	MGN-73.32-X.Y-02.1	MGN-95.38-X.Y-02.1
Tool body OD, mm	A	42.9	54.0	73.0	95.0
Min ID, mm	B	19.0	25.0	32.0	38.1
Overall length, mm	C				
Make up length, mm	D				
Thread		1.0" AMMT pin/box	1.5" AMMT pin/box	2-3/8 PAC pin/box	2-3/8 PAC pin/box

Where:

X – is the number of magnet levels, according to the customer's request;

Y – the number of magnets in one level, according to the customer's request;

Customized tool design is possible upon client's request in the shortest time.

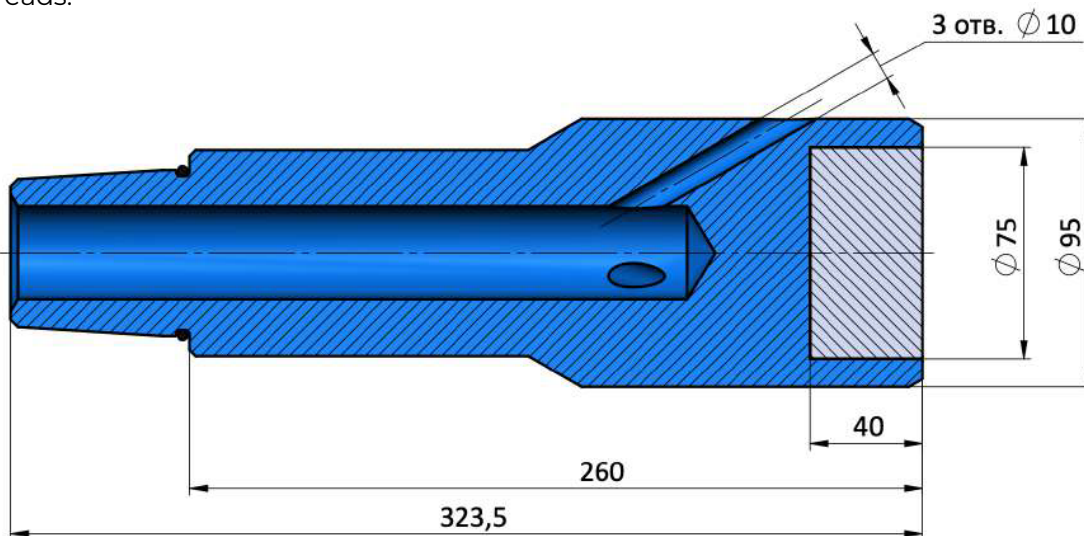
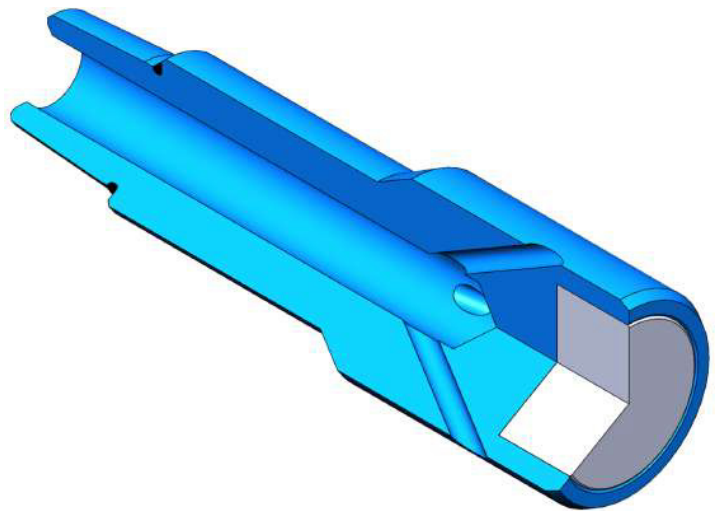
COIL TUBING DOWNHOLE TOOLS

MGN, Downhole Magnet – flat bottom

A borehole magnet is a downhole tool that is used to clean oil and gas wells from small metal debris, such as chips and scale. Such metal debris can form and accumulate in the well during the operation of metal tools, as well as during milling operations.

Also, a borehole magnet can be an effective solution for extracting small metal parts that have fallen into the well. Foreign metal objects in the well, as well as metal debris, are potential causes of complications or accidents in the operation of the well. Therefore, well cleaning is an important step to prepare for any well work.

Borehole magnets can have different designs, and the magnetic surface can be located both along the tool body and from the end. The downhole magnet "Marlin" has an internal passage hole, which allows you to flush the well simultaneously with the operation of the magnet. At the request of the customer, it is possible to manufacture any connecting threads.



Part #		MGN-43.19-X.Y-01.1	MGN-54.25-X.Y-01.5	MGN-73.32-X.Y-02.1	MGN-95.38-X.Y-02.1
Tool body OD, mm	A	42.9	54.0	73.0	95.0
Min ID, mm	B	19.0	25.0	32.0	38.1
Overall length, mm	C				
Make up length, mm	D				
Thread		1.0" AMMT pin/box	1.5" AMMT pin/box	2-3/8 PAC pin/box	2-3/8 PAC pin/box

Where:

- X – is the number of magnet levels, according to the customer's request;
- Y – the number of magnets in one level, according to the customer's request;

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

SCC, Screw Cable Catcher



The screw cable catcher is used to catch and extract the cable from the well. The tool is used in fishing operations as part of an BHA with a indexing tool that performs right rotation. A screw groove is made on the tool, into which the cable is wound when rotating. Special catch slots are made on the screw to prevent the cable from sliding when lifting the layout. The shape of the slots has protruding teeth for deformation of the cable braid and its fixation.

The screw body of the tool is designed exclusively for the cable extraction operation. In order to avoid deformation of the tool and complications in operation, it is not recommended to exceed the set maximum permissible loads on the tool.

It is recommended to use it in conjunction with a hydraulic indexing tool. It is allowed to use with a mud motor, if the permissible loads are met.

Part #		SCC-82-02.2
Tool body OD, mm	A	82
Min ID, mm	B	20
Overall length, mm	C	900
Make up length, mm	D	900
Thread		2-3/8" PAC DSI box

COIL TUBING DOWNHOLE TOOLS

VJB, Ventury Junk Basket

The Venturi junk basket is used to clean the well of solid debris in cases where it's particles are too heavy to be removed from the well by circulation.

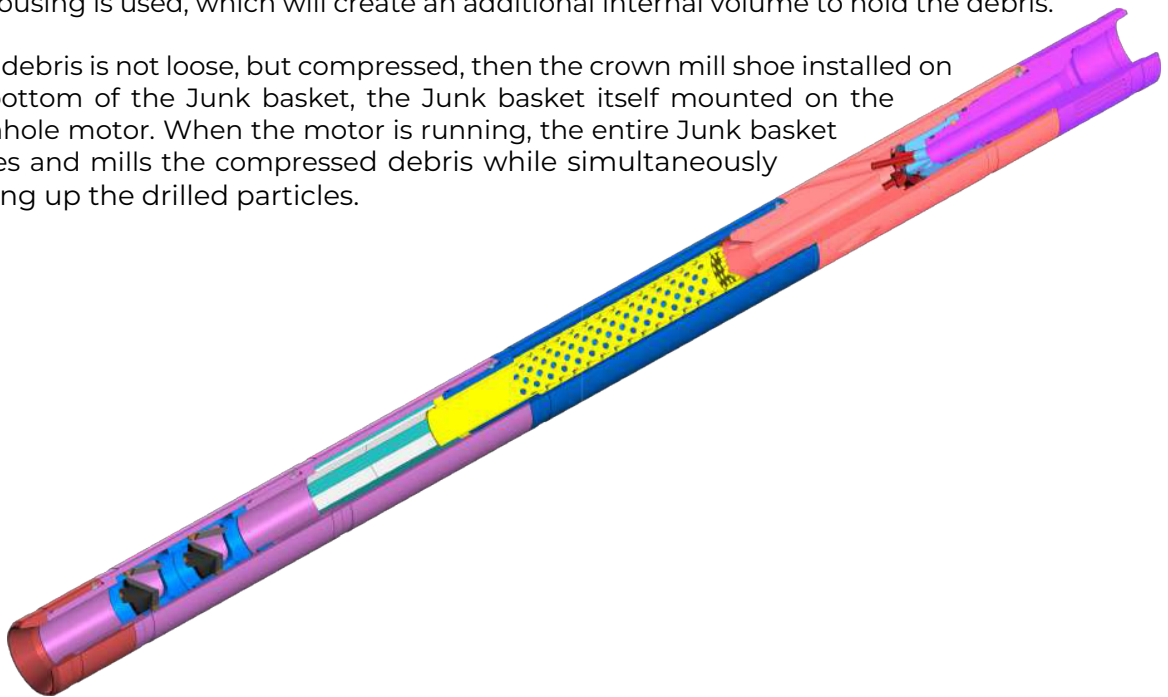
At the top of the tool, the flow passes through the nozzles, creating a "Venturi" effect at the lower inlet of the tool. Due to this, the mixture of particles and well fluid are sucked into the basket.

When this flow passes through the filter, a large particles (>3 mm in diameter) remain inside the filter, and the liquid returns to the annulus and rises with the circulation flow.

Below the filter, inside the basket, there are cartridges with flapper valves that prevent debris from falling out of the filter when the circulation stops. Optionally, it is possible to install a magnet inside the tool, which will allow to reliably capture even small metal particles.

If it is necessary to increase the volume of debris collected per one run in hole, an extension of the housing is used, which will create an additional internal volume to hold the debris.

If the debris is not loose, but compressed, then the crown mill shoe installed on the bottom of the Junk basket, the Junk basket itself mounted on the downhole motor. When the motor is running, the entire Junk basket rotates and mills the compressed debris while simultaneously sucking up the drilled particles.



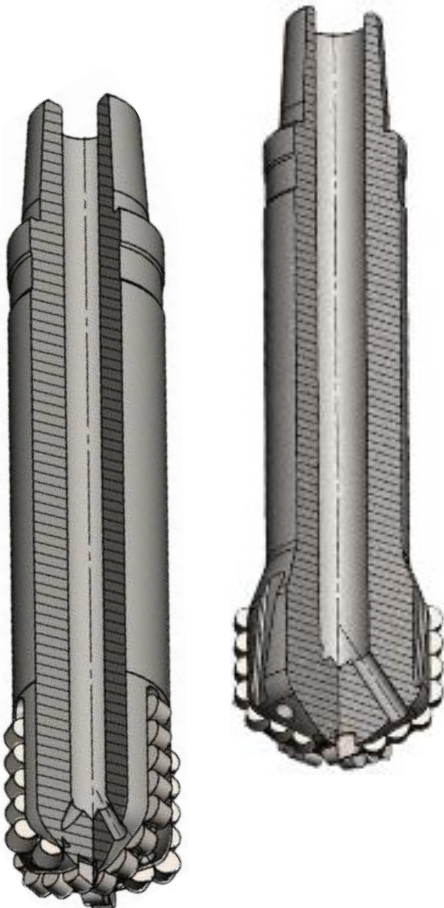
Part #		VJB-54.3-01.5	VJB-67.3-01.5	VJB-73.3-02.1	VJB-80.3-02.1
Tool body OD, mm	A	54.0	67.0	73.0	80.0
Filter mesh, mm	B	3.0	3.0	3.0	3.0
Overall length, mm	C				
Make up length, mm	D				
Min. pump rate, L/min		46.8	46.8	46.8	46.8
Max. pump rate, L/min		319	450	506	506
Thread		1.5" AMMT	1.5" AMMT	2-3/8" PAC	2-3/8" PAC

Customized tool design is possible upon client's request in the shortest time.

COIL TUBING DOWNHOLE TOOLS

Mills and Lead Impression Blocks

CCM, Cement mill



this is a mill designed to work in the well. Current design is a best for cement mill out, although can be used for milling other obstacles. Using a mill, it is possible to grind and wash out any object from the well if the hardness of this object is less than the hardness of the mill's cutter. Such an item can be either equipment intentionally run into the well, for example, a bridge-plug, or emergency lost equipment. Rotation of the mill performed by a downhole motor.

The mill has several flushing holes through which the drilling fluid circulates. The drilling fluid removes the particles of the milled object from the well, and also cools the cutting edge of the mill.

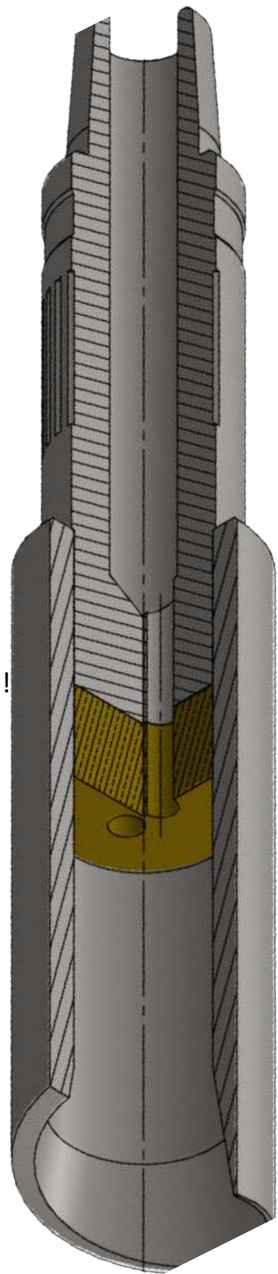
The mill consists of the body and carbide inserts welded inside. The service life of the carbide inserts depends on the milling mode, the hardness and abrasiveness of the milled object. If the carbide inserts is worn out, then Marlin Oil Tools can provide redress services.

Part #		CCM-A-B-01.1	CCM-A-B-01.5	CCM-A-B-02.1
Mill head OD, mm	A	A	A	A
Blades quantity	B	B	B	B
Overall length, mm	C			
Make up length, mm	D			
Body OD, mm	E	43.0	54.0	73.0
Thread		1.0" AMMT pin	1.5" AMMT pin	2-3/8 PAC pin

Mill can be made in various designs.

COIL TUBING DOWNHOLE TOOLS

GLM, Guide Leap Mill



This is a downhole tool designed to work in a well. The current design is best suited for milling the heads of elongated ends of the broken CT;

After milling the head of the broken CT with this mill, the reliability of overshot capture for catching CT increases;

The mill has a guide leap, which easily directs the end of the CT inside the mill to the place where the tungsten carbide welded;

There are several flushing holes in the center through which the drilling fluid circulates. The drilling fluid removes the milled particles from the well, and also cools the cutting edge of the mill.

The service life of the tungsten carbide depends on the milling mode, hardness and abrasiveness of the milled object. If the equipment is worn out, then Marlin Oil Tools can provide services for the mill redress.

At the request of the customer, it is possible to manufacture various geometries of the milling cutter body, as well as the design of TC.

!

Part #		GLM-A.B-01.1	GLM-A.B-01.5	GLM-A.B-02.1
Max OD, mm	A	A	A	A
Min ID, mm	B	B	B	B
Overall length, mm	C			
Make up length, mm	D			
Tool body OD, mm		44.45	54.0	73.0
Thread		1.0" AMMT pin	1.5" AMMT pin	2-3/8 PAC pin

COIL TUBING DOWNHOLE TOOLS

JKM, Junk mill



this is a downhole tool for well intervention jobs. Using a mill, it is possible to grind and wash out any object from the well if the hardness of this object is less than the hardness of the mill's cutter. Such an item can be either equipment intentionally run into the well, for example, a bridge-plug, or emergency lost equipment. Rotation of the mill performed by a downhole motor.

The mill has several flushing holes through which the drilling fluid circulates. The drilling fluid removes the particles of the milled object from the well, and also cools the cutting edge of the mill.

The mill consists of the body and carbide welded on the body. Can be used Crushed carbide and Inserts of various designs; The service life of the carbide weldment depends on the milling mode, the hardness and abrasiveness of the milled object. If the carbide has been worn out, Marlin Oil Tools can provide redress services.

The carbide can be welded in various designs, below are the main features:

- Flat bottom;
- Concave bottom;
- Convex bottom;
- Top carbide surfacing;
- Side carbide surfacing;

Part #		JKM-**US-A-B-01.1	JKM-**US-A-B-01.5	JKM-**US-A-B-02.1
Mill head OD, mm	A	A	A	A
Blades quantity	B	B	B	B
Overall length, mm	C			
Make up length, mm	D			
Body OD, mm	E	43.0	54.0	73.0
Thread		1.0" AMMT pin	1.5" AMMT pin	2-3/8 PAC pin

** – letters indicating the geometry of the Mill's bottom weldment, for example:

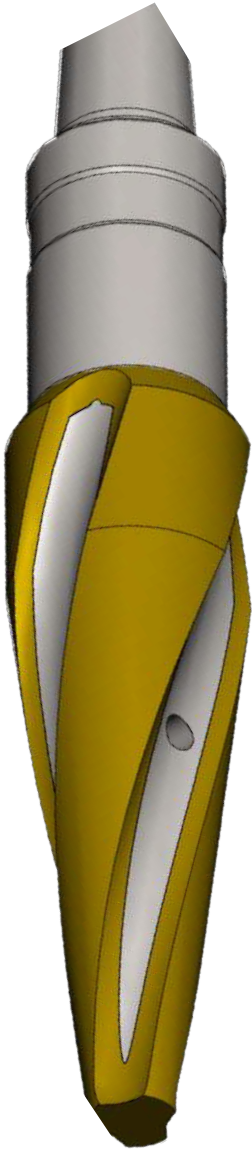
- FB – flat bottom;
- CC – concave;
- CV – convex;

U – letter indicating presence of top weldment;

S – letter indicating presence of side weldment;

COIL TUBING DOWNHOLE TOOLS

PM, Tapered mill



this is a downhole tool for well intervention jobs. Using a mill, it is possible to grind and wash out any object from the well if the hardness of this object is less than the hardness of the mill's cutter. Such an item can be either equipment intentionally run into the well, for example, a bridge-plug, or emergency lost equipment. Rotation of the mill performed by a downhole motor.

The mill has several flushing holes through which the drilling fluid circulates. The drilling fluid removes the particles of the milled object from the well, and also cools the cutting edge of the mill.

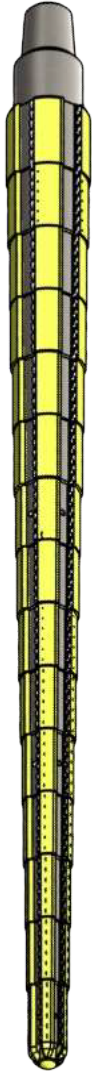
The mill consists of the body and carbide welded on the body. Can be used Crushed carbide and inserts of various designs; The service life of the carbide weldment depends on the milling mode, the hardness and abrasiveness of the milled object. If the carbide has been worn out, Marlin Oil Tools can provide redress services.

Tapered mill mainly used for increasing ID of the restrictions in the well. Geometry of the mill's head such as: length of the cone, minimal OD, maximal OD, can be made up on Client's request.

Part #		TPM-A.B-C-D-01.1	TPM-A.B-C-D-01.5	TPM-A.B-C-D-02.1
Mill head max OD, mm	A	A	A	A
Mill head min OD, mm	B	B	B	B
Mill head Length, mm	C	C	C	C
Blades quantity	D	D	D	D
Overall length, mm	E			
Make up length, mm				
Body OD, mm		43.0	54.0	73.0
Thread		1.0" AMMT pin	1.5" AMMT pin	2-3/8 PAC pin

COIL TUBING DOWNHOLE TOOLS

STM, Step mill



this is a downhole tool for well intervention jobs. Using a mill, it is possible to grind and wash out any object from the well if the hardness of this object is less than the hardness of the mill's cutter. Such an item can be either equipment intentionally run into the well, for example, a bridge-plug, or emergency lost equipment. Rotation of the mill performed by a downhole motor.

The mill has several flushing holes through which the drilling fluid circulates. The drilling fluid removes the particles of the milled object from the well, and also cools the cutting edge of the mill.

The mill consists of the body and carbide welded on the body. Can be used Crushed carbide and inserts of various designs; The service life of the carbide weldment depends on the milling mode, the hardness and abrasiveness of the milled object. If the carbide has been worn out, Marlin Oil Tools can provide redress services.

Step mill used for increasing ID of the restrictions in the well but compare to Tapered mill, it has less friction surface which allows to mill out more harder materials and apply higher weight on bit without stalling the downhole motor.



Part #		STM-A.B-C-D-01.1	STM -A.B-C-D-01.5	STM -A.B-C-D-02.1
Mill head max OD, mm	A	A	A	A
Mill head min OD, mm	B	B	B	B
Mill head Length, mm	C	C	C	C
Blades quantity	D	D	D	D
Overall length, mm	E			
Make up length, mm				
Body OD, mm		43.0	54.0	73.0
Thread		1.0" AMMT pin	1.5" AMMT pin	2-3/8 PAC pin

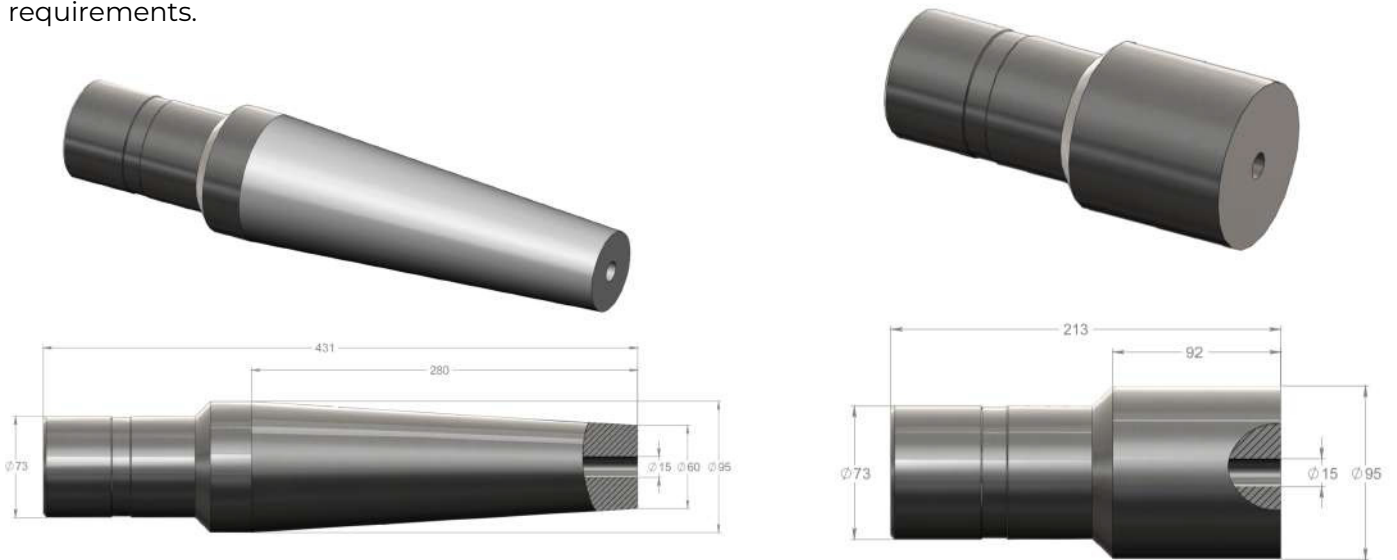
COIL TUBING DOWNHOLE TOOLS

LIB, Lead Impression Block

is a downhole tool designed to work in a well, mainly during fishing operations. The lower part of the LIB is made of lead. After run in hole and contacting a fish we can get a print on the lead surface. Based on the type of print, it will be possible to draw conclusions about the fish in the well and choose the most effective fishing tool.

The seal has a central flushing hole directed downwards, which can be used to clean off sediments from top of the fish before making a print.

Usually, the LIB is used once, for one run into the well. After that, Marlin Oil Tools can provide a redress services of the lead layer. The shape and size of the body and lead coating of the LIB, as well as the presence and direction of the flushing holes can be of different geometries according to Customer requirements.



Tapered LIBs tables:

Part #		LIB-TP-A.B-C-01.1	LIB-TP-A.B-C-01.5	LIB-TP-A.B-C-02.1
Taper max OD, mm	A	A	A	A
Taper min OD, mm	B	B	B	B
Taper Length, mm	C	C	C	C
Overall length, mm	D			
Make up length, mm	E			
Body OD, mm		43.0	54.0	73.0
Thread		1.0" AMMT pin	1.5" AMMT pin	2-3/8 PAC pin

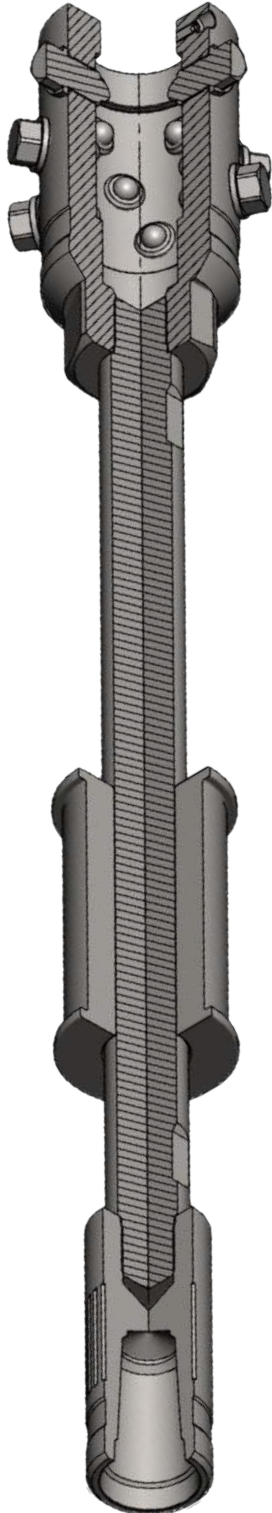
Flat Bottom LIBs tables:

Part #		LIB-FB-A-01.1	LIB-FB-A-01.5	LIB-FB-A-C-02.1
max OD, mm	A	A	A	A
Overall length, mm	B			
Make up length, mm	C			
Body OD, mm		43.0	54.0	73.0
Thread		1.0" AMMT pin	1.5" AMMT pin	2-3/8 PAC pin

COIL TUBING DOWNHOLE TOOLS

Hand tools and surface equipment

GPT, Grub screw connector Preparation Tool



Is a hand tool used to make up and remove grub screw connector at the Coil Tubing end.

The tool has reliable design and includes:

- Dimple block
- Back hammer
- Thread box.

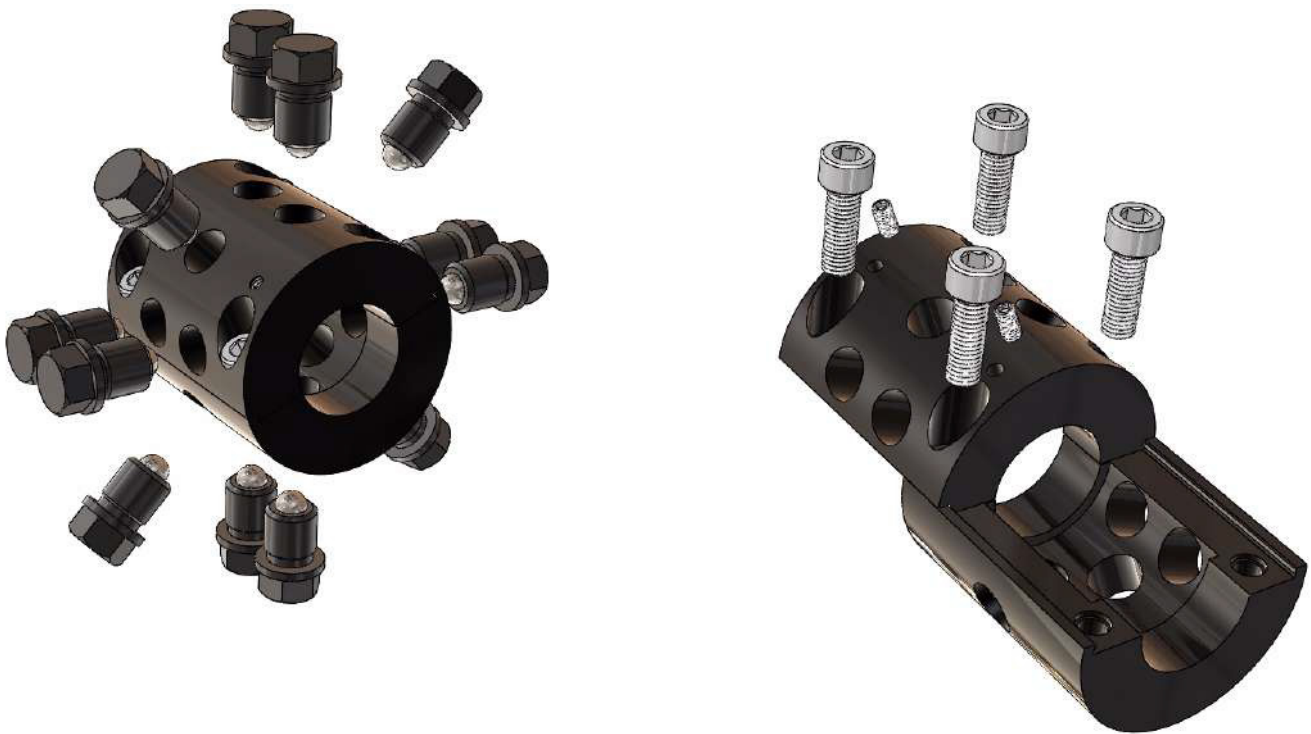
so, it is possible to quickly and conveniently mount or disassemble the connector on the coil tubing.

COIL TUBING DOWNHOLE TOOLS

MDT, Mechanical Dimple Tool

is a hand tool which used to rig up a dimple connector to the end of the Coil Tubing

The tool has a reliable design. Due to the fact that the dimple tool consists of two halves, it is possible to mount the connector even if its diameter is larger than the diameter of the Coil Tubing.



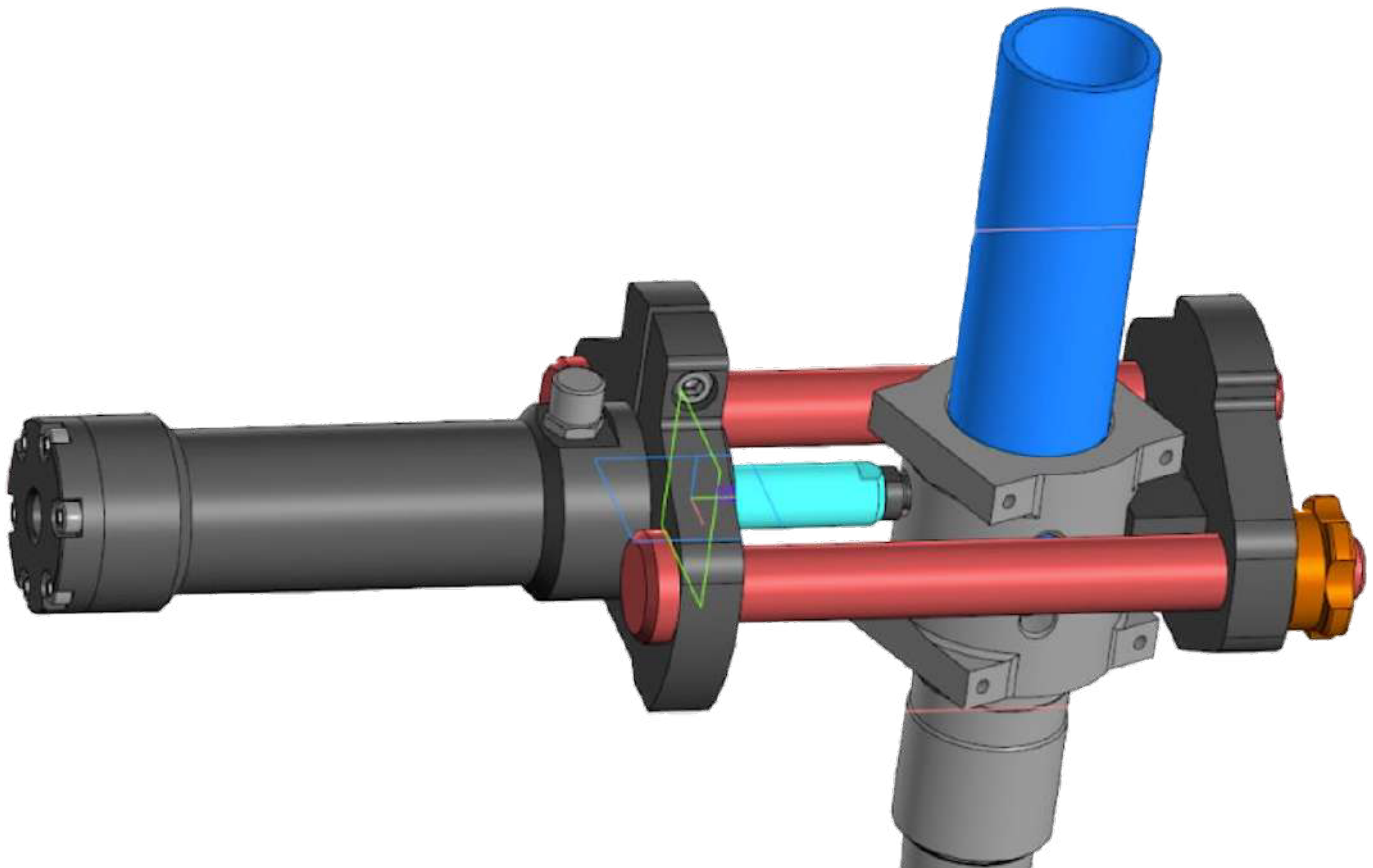
Part #		MDT-38-3	MDT-44-3	MDT-50-3
Coil Tubing OD, mm	A	38.1	44.45	50.8
Bolt rows quantity	B	3	3	3

COIL TUBING DOWNHOLE TOOLS

HDT, Hydraulic Dimple Tool

it is a hand tool and is used to press the dimple connector at the end of the CT.

It is used in combination with a 700 bar manual hydraulic pump; it is advisable to use a hydraulic pressing tool, when pressing connectors into the CT, the wall thickness of which is higher than 5.5 mm. For a smaller wall thickness, it is sufficient to use a manual mechanical dimple tool MDT;



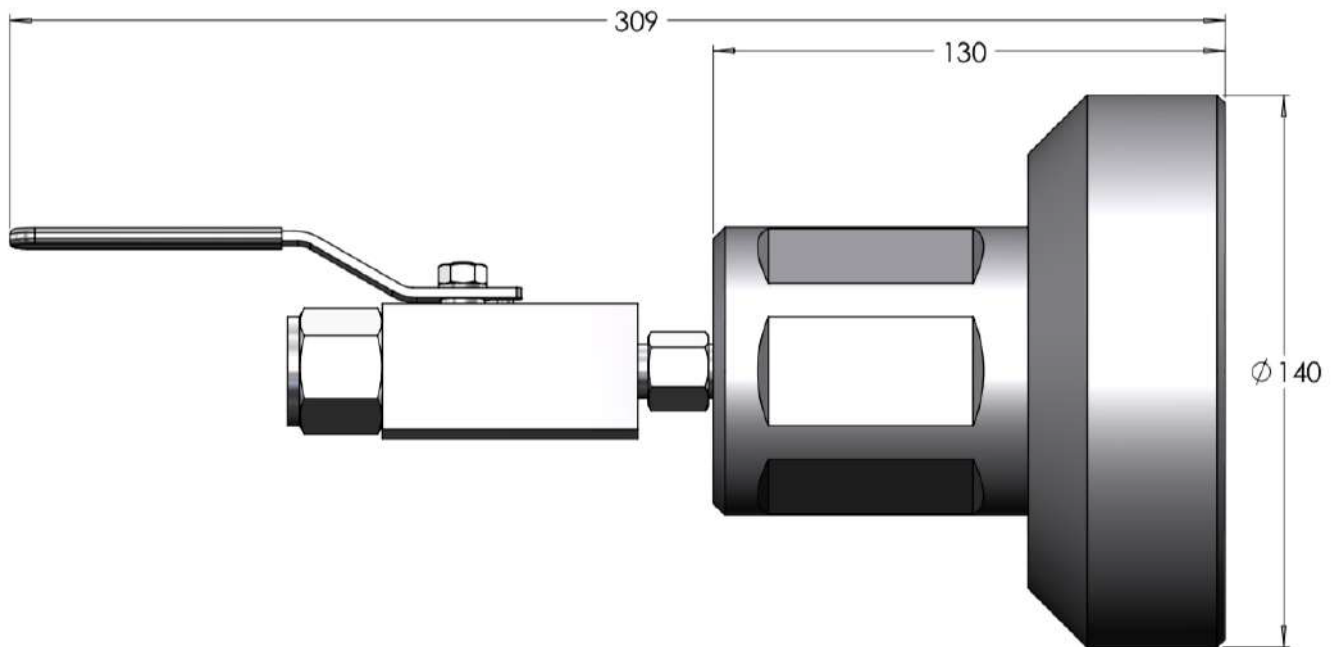
COIL TUBING DOWNHOLE TOOLS

PTP, Pull Test Plate

this is a hand tool used during a wellsite works to test the reliability of connectors rig up on the Coil tubing.

The pull test is carried out as follows: the plate is mounted onto the connector thread, the injector pulls the CT and rests the plate against the lower end of the lubricator. If the connector can withstand the required tension, its installation is considered reliable.

Pressure test is carried out as follows: the plate is screwed onto the thread of the connector, the drain valve of the plate is closed and the pump supplies pressure to the CT. If there is no leak between CT and Connector, then the installation of the connector is considered sealed.



Part #		PTP-140-01.1	PTP-140-01.5	PTP-140-02.1
Pull Test Plate OD, mm	A	140	140	140
Thread	B	1.0" AMMT box	1.5" AMMT box	2-3/8 PAC box

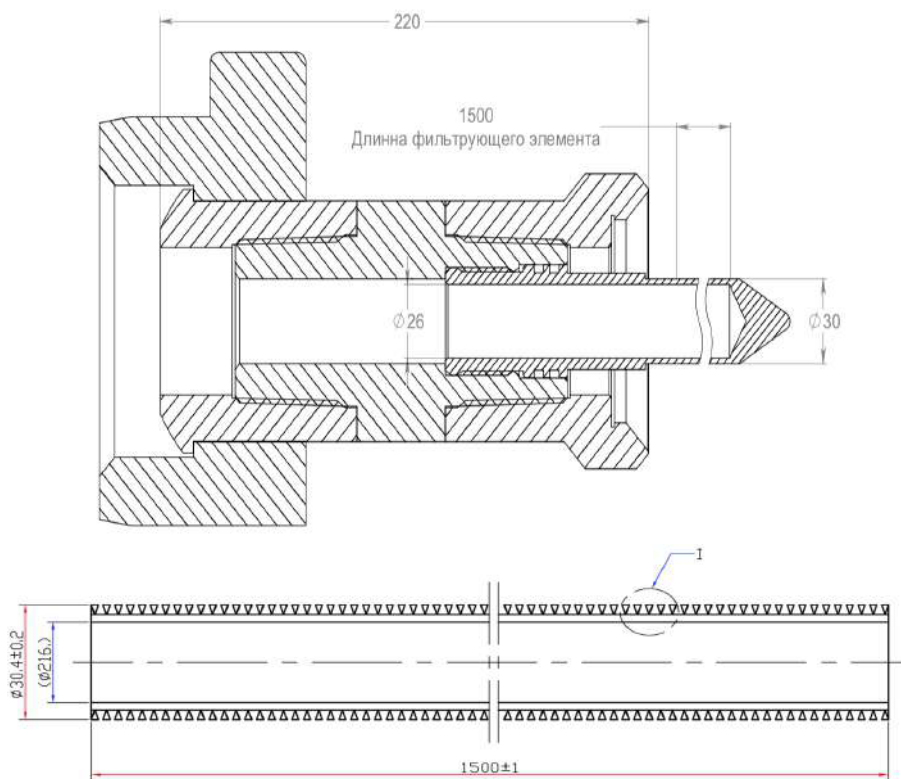
Upon client's request the pull test plate can be manufactured with any required OD.

COIL TUBING DOWNHOLE TOOLS

SFF, Surface Filter

Surface filter, used to filter the flow of liquid from mechanical particles. The filter consists of a wire wound and welded to the frame, so that the gap between the thread is less than the permissible size of the particles. Thus, when the flow passes through the filter, the particles remain on the wire.

It is installed in the pipeline running from the pump to the well. The fineness of the filtration depends on the membrane used, but it is mainly 0.25 mm; 0.5 mm; 0.9 mm; At certain well jobs, the liquid injected into the well need to be filtered from mechanical particle, since some downhole tools are very sensitive to mechanical impurities. Such tools include: downhole mud motor, especially with Metal-to-Metal power section, downhole gas separator, etc.



Part #		SFF-500-1500-9.11
Filtration fineness, microns	A	500
Filter element length, mm	B	1500
Thread	C	2" 1502 W/T



THANK YOU!

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