



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

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SERVICE TOOLS are designed to have a 'Singular' or 'Multi-Functional' use in Wireline Operations. The Wireline Operator chooses a specific Tool to obtain desired result.

Section II: lists some of these Tools to assist the Wireline Operator to identify a specific Tool, however it does not represent the total availability of Tools that may be available to this Section. **Rebco** staff can assist you with any specific requirement.



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REBCO

Product Code: 105

Type 'A' Blind Box: 3/8" - 7"

Rebco Type 'A' Blind Box is a solid metal Tool used to jar obstructions downwards through the tubing string to a position where it can cause least inconvenience.

The Blind Box is also used as means of breaking the Wireline at the Rope Socket, thus allowing the Wireline to be retrieved with proper retrieving tools.

Blind Box can be ordered in any specific Size within Nominal Size (OD) range. See **Table 1** below.



Table 1: (PART NO. 10500 _)

OD RANGE				THREAD	FISHING NECK	LENGTH
inches		mm				
MIN	MAX	MIN	MAX			
.375	.500	9.5	12.7	1/4" - 20	none	5.00
				3/8" - 16		
.750	1.032	19.0	26.2	1/2" - 13	.687	8.88
1.062	1.468	27.0	37.3	5/8" - 11	.750	
1.500	1.730	38.1	43.9		1.000	
1.750	2.375	44.5	60.3	15/16" - 10	1.187	9.00
2.406	2.906	61.1	73.8		1.375	
2.937	4.328	74.6	109.9	1 1/16" - 10	1.750	
4.375	6.687	111.1	169.8		2.313	
					3.125	
Large Sizes		Custom order only: - Threads, FN and Length				

NOTES: How to Order

1. Part Number is 10500x.xx – 0 for less than 1.00"
2. All **Blind Boxes** are Part Numbered by 'OD' dimension to 2 decimal places +/- .005"

Metric Dimensions are to be marked to 2 decimal places Part Number is 10501xxx

1 inch = 2.540 cm



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Product Code: 106

Type 'A' Gauge Cutter: 1" - 7"

Rebco Type 'A' Gauge Cutter is a 'Multi-Functional' Tool. It is used for removing paraffin, corrosion and any other foreign matter from the inside surface (ID) of the Tubing string.

Also, it is used to gauge and tag any obstructions within the Tubing. Another common use is to find and tag Landing Nipples in the wells.

NOTE: It is recommended to run a **Gauge Cutter** before running sub-surface controls to ensure that the sub-surface controls will pass freely through the Tubing.

Gauge Cutter can be ordered in any specific Size within Nominal Size (OD) range. See **Table 1** below.

Table 1: (PART NO. 10600_)



OD RANGE		THREAD	FISHING NECK	LENGTH	
MIN	MAX				
.750	1.032	1/2" - 13	.688	5.94	
1.062	1.281	5/8" - 11	.750	6.00	
1.296	1.468		1.000	6.62	
1.500	1.730		1.187	8.00	
1.750	2.140	15/16" - 10	1.375	9.50	
2.156	2.375		1.750		
2.406	2.750	1 1/16" - 10	2.313		
2.760	2.906		3.125		12.00
2.937	3.468				
3.484	4.328				
4.375	5.906				
5.937	6.687				
Large Sizes		Custom order only: - Threads, FN and Length			

NOTES: How to Order

1. Part Number is **10600x.xxx** - 0 for less than 1.00"
2. All **Gauge Rings** are Part Numbered by 'OD' dimension to 3 decimal places +/- .002"

Metric Dimensions are to be marked to 3 decimal places Part Number is **10601xxxx**

1 inch = 2.540 cm



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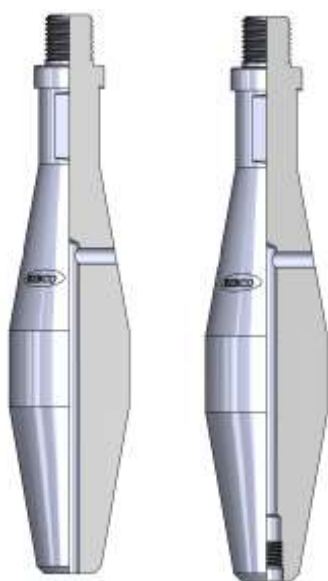
Product Code: 107

Type 'A' Tubing Swage: 1" - 7"

Rebco Type 'A' Tubing Swage is used to force out constricted areas in the Tubing ID, thus allowing a free passage of Wireline Tools and sub-surface controls.

The OD of the Tool is almost the size of the Tubing drift, with tapered upper and lower ends, and a center hole with lateral ports for fluid by-pass.

Tubing Swages can be ordered in any specific Size within Nominal Size (OD) range. See **Table 1** below.



Type 'A'

Type 'C'

Table 1: (PART NO. 10700_)

OD RANGE		THREAD	FISHING NECK	LENGTH
MIN	MAX			
.750	1.032	1/2" - 13	.688	7.30
			.750	
1.062	1.281	5/8" - 11	1.000	8.00
1.296	1.468			
1.500	1.730			
1.750	2.140	15/16" - 10	1.187	11.0
2.156	2.375			
2.406	2.750	1 1/16" - 10	1.750	
2.760	2.906			
2.937	3.468			
3.484	4.328			
4.375	5.906			
5.937	6.687		3.125	15.00
Large Sizes		Custom order only: - Threads, FN and Length		

NOTES: How to Order

1. Part Number is **10700x.xxx** - 0 for less than 1.00"
2. All **Tubing Swages** are Part Numbered by 'OD' dimension to 3 decimal places +/- .002"

Metric Dimensions are to be marked to 3 decimal places Part Number is **10701xxxx**

1 inch = 2.540 cm

NOTE: **Rebco** Type 'C' Tubing Swage (10702_) has additional Box Connection on the bottom. If Box Connection is other than Pin Connection, please specify.



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REBCO

Product Code: 108

Type 'A' Impression Block: 1" - 7"

Rebco Type 'A' Impression Block is used to take impressions of objects in the Tubing String.

A moulded Lead, held by pins through the tool, provides a smooth surface which is used to take an impression of an object (Fish) determining the shape and position before retrieving the same.

Impression Block can be ordered in any specific Size within Nominal Size (OD) range. See Table 1 below.



Table 1: (PART NO. 10800 _)

OD RANGE		THREAD	FISHING NECK	LENGTH
MIN	MAX			
.750	1.032	1/2" - 13	.688	6.03
1.062	1.281		.750	
1.296	1.468	5/8" - 11	1.000	
1.500	1.730		1.187	
1.750	2.140	15/16" - 10	1.375	6.56
2.156	2.375		1.750	
2.406	2.750		1 1/16" - 10	2.313
2.760	2.906	3.125		
2.937	3.468			
3.484	4.328			
4.375	5.906			
5.937	6.687			
Large Sizes		Custom order only: - Threads, FN and Length		

NOTES: How to Order

1. Part Number is 10800x.xxx - 0 for less than 1.00"
2. All Impression Blocks are Part Numbered by 'OD' dimension to 3 decimal places +/- .002"

Metric Dimensions are to be marked to 3 decimal places Part Number is 10801xxxx

1 inch = 2.540 cm

NOTE: Rebco can supply Accessories for re-pouring the Impression Blocks.



Pouring Ladle



Lead Filler (Block)

Accessory	Part No	Approximate Weight
Lead Filler (Block)	108081	12 lbs (5.44 kgs)
Pouring Ladle	108082	18.0 (8.16 kgs)

Reference: Melting Point of Lead (Pb) is 327.5° C (621.5° F)



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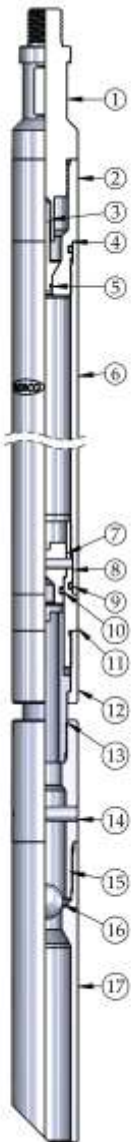
Section B. MAINTENANCE SERVICE TOOLS

Product Code: 168

Type 'CH' and Type 'CF' Hydrostatic Bailer Assembly: 1 3/16" – 3"

Rebco Hydrostatic Bailer is designed to remove the sand or debris from the well. The Bailer is sealed at the surface and run into the well with the Body chamber at atmospheric pressure. When the Bailer reaches the object to be bailed, downward action of the Jars will shear the Shear Pin, creating the inward surge of the well bore pressure, thus sucking in the debris. Once the bottom-hole pressure is equalized in the Body, a Ball seats itself, allowing the debris to be brought to surface.

Caution: The pressure should be bled-off before removing the bottom of the Bailer.



NOMINAL SIZE		1 3/16"	1 5/8"	1 3/4"	2"
ASSEMBLY NUMBER	Type 'CH' - Ball Bottom	168020611870	168020616200	168020617500	168020620000
	Type 'CF' - Flapper Bottom	168022511870	168022516200	168022517500	168022520000
	To convert: Remove DET 14 thru 17				
	Add Type 'CFM' Bottom	168022509118	168022509162	168022509175	168022509200

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	168061	1680611	1680621	1680621
2	VALVE HOUSING	1	168063	1680612	1680622	1680622
3	VALVE	1	168062	1680613	1680613	1680613
4 *	'O' - RING SEAL	1	911221111706	911221121706	911221121806	911221121806
5 *	'O' - RING SEAL	1	911221101006	911221101006	911221101006	911221101006
6	BODY	1	168064	1680614	1680624	1680624
7	PISTON	1	168065	1680625	1680625	1680625
8 *	SHEAR PIN	1	9110131012	9110141444	9110141468	9110141468
9 *	'O' - RING SEAL	1	911221111706	911221121706	911221121806	911221121806
10 *	'O' - RING SEAL	1	911221111106	911221121006	911221121006	911221121006
11	PISTON HOUSING	1	168066	1680616	1680626	1680626
12	SHEAR SUB CONNECTOR	1	168067	1680617	1680627	1680627
13	SHEAR SUB	1	168068	1680618	1680628	1680628
14	PIN	1	9111431187	9111461620	9111461750	9111461750
15	BALL SUB	1	168069	1680619	1680629	1680629
16	BALL	1	1831028	1832060	1832060	1832060
17	SHOE	1	1680610	1680620	1680630	1680645
REDRESS KIT (* Included as part of Kit)			168020624187	168020624162	168020624175	168020624200

ENGINEERING DATA:

MAXIMUM OD	BODY	1 3/16"	1 5/8"	1 3/4"	1 3/4"
	SHOE	1.88"	1.71"	1.75"	2.22"
PIN THREAD CONNECTION		5/8" - 11	15/16" - 10	15/16" - 10	15/16" - 10
FISHING NECK OD		1.000"	1.375"	1.375"	1.375"
LENGTH		73.62"	81.0"	80.88"	80.88"
MATERIAL		Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)		10.3 (4.67)	22.2 (10.07)	25.3 (11.48)	25.7 (11.66)

ACCESSORIES:

Type 'A' Wrench for Shear Sub	1670011	1670011	1670011	1670011
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NOTE: To convert Type 'CH' Hydrostatic Bailer (Ball Bottom) to Type 'CF' with Flapper Bottom remove DET 14-17 and ADD Type 'CFM' Flapper Bottom Sub-Assembly (see Page II-9)



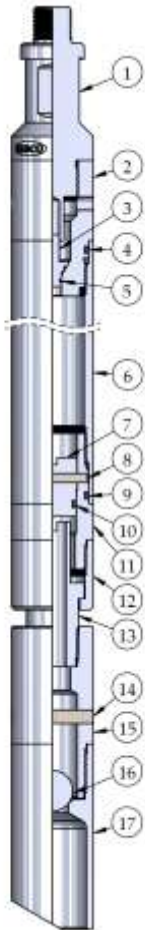
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Type 'CH' and Type 'CF' Hydrostatic Bailer Assembly: Continued



Type 'CH'
Ball Bottom



Type 'CF'
Flapper Bottom

NOMINAL SIZE	2 1/4"	2 1/2"	3"
Type 'CH' - Ball Bottom	168020622500	168020625000	168020630000
Type 'CF' - Flapper Bottom	16802252250	168022525000	168022530000
To convert: Remove DET 14 thru 17			
Add Type 'CFM' Bottom	168022509225	168022509250	168022509300

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	FISHING NECK	1	1680663	1680657	1680633
2	VALVE HOUSING	1	1680664	1680656	1680634
3	VALVE	1	1680632	1680632	1680632
4 *	'O' - RING SEAL	1	911221122406	911221122606	911221122906
5 *	'O' - RING SEAL	1	911221101406	911221101406	911221101406
6	BODY	1	1680665	1680653	1680635
7	PISTON	1	1680667	1680651	1680631
8 *	SHEAR PIN	1	9110141995	9110142295	9110142620
9 *	'O' - RING SEAL	1	911221122406	911221122606	911221122906
10 *	'O' - RING SEAL	1	911221121506	911221122106	911221122506
11	PISTON HOUSING	1	1680666	1680654	1680636
12	SHEAR SUB CONNECTOR	1	1680669	1680655	1680637
13	SHEAR SUB	1	1680668	1680652	1680641
14	PIN	1	9111462250	9111452500	9111463000
15	BALL SUB	1	1680670	1680658	1680642
16	BALL	1	1831108	1831116	18302132
17	SHOE	1	1680671	1680660	1680643
18	BALL SEAT	1	None	None	1680644
REDRESS KIT (* Included as part of Kit)			168020624225	168020624250	168020624300

ENGINEERING DATA:

MAXIMUM OD	BODY	2 1/4"	2 1/2"	3"
	SHOE	2.25"	2.50"	3.00"
PIN THREAD CONNECTION		1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD		1.750"	1.750"	2.313"
LENGTH		78.2"	80.25"	81.76"
MATERIAL		Alloy	Alloy	Alloy
WEIGHT lbs (kg)		41.6 (18.87)	41.6 (18.87)	65.1 (29.53)

ACCESSORIES:

Type 'A' Wrench for Shear Sub	1670011	1670011	1670011
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NOTE: To convert Type 'CH' Hydrostatic Bailer (Ball Bottom) to Type 'CF' with Flapper Bottom remove DET 14-17 and ADD Type 'CFM' Flapper Bottom Sub-Assembly (see Page II-9)



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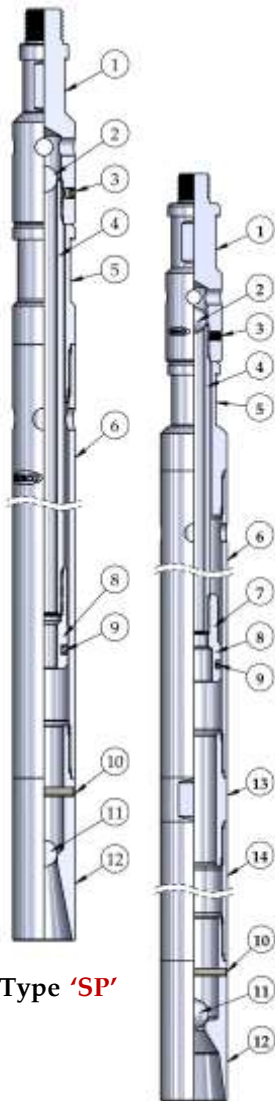
Product Code: 168

Type 'SP' Sand Pump (Bailer) Assembly: 1 1/2" – 3"

Rebco Type 'SP' Sand Pump (Bailer) is designed to remove the sand or debris from the well.

The Sand Pump (Bailer) is a pump type tool which operates on the principle of a conventional lift pump with piston. The optional bottom, ball or flapper (see following pages), allows the sand or debris to enter a barrel on up-stroke of the piston, thus trapping the same for easy removal at surface.

For large volume bailing operations, Type 'SP' Sand Pump can easily be converted to a Tandem Type, by adding a double Pin Sub and additional bottom Barrel.



Type 'SP'

Type 'SP' Tandem

NOMINAL SIZE	1 1/2"	1 3/4"	2"	2 1/8"
ASSEMBLY NUMBER	16814111500	16814111750	16814112000	16814112125

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	168116	168119	1681172	1681172
2	TOP BALL	1	1831056	1831056	1831056	1831056
3 *	SET SCREW	1	185506210250	185507210312	185507210375	185507210375
4	PLUNGER BARREL	1	1681117	1681117	1681117	1681117
5	TOP SUB	1	168112	1681111	1681150	1681112
6	TOP BODY (BARREL)	1	168118	1681118	1681151	1681119
7	SET SCREW - Optional	NS	None	None	None	None
8	PISTON	1	168114	1681113	1681114	1681159
9 *	'O' RING	1	911221121406	911221131706	911221132106	911221132406
10	RETAINER PIN	1	9111441500	9111441750	9111442000	9111442125
11	LOWER BALL	1	1831048	1831056	183110	183110
12	SHOE	1	168115	1681120	1681153	1681121
REDRESS KIT (* Included as part of Kit)			168141124150	168141124175	168141124200	168141124212

ENGINEERING DATA:

MAXIMUM OD	BODY	1.500"	1.750"	2"	2 1/8"
	SHOE	1.625"	1.750"	2.000"	2.125"
PIN THREAD CONNECTION		15/16" - 10	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD		1.187"	1.375"	1.750"	1.750"
LENGTH		70.4"	74.17"	74"	74"
MATERIAL		Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)		23.4 (10.61)	31.2 (14.15)	25.3 (11.48)	36.8 (16.7)

Tandem Type 'SP' Sand Pump (Bailer) Assembly:

NOMINAL SIZE	1 1/2"	1 3/4"	2"	2 1/8"
ASSEMBLY NUMBER - TANDEM	16814111501	16814111751	16814112001	16814112121

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1 - 12	PARTS are the SAME as SINGLE BARREL Type 'SP' Sand Pump					
13	CONNECTOR SUB	1	1681146	1681128	1681155	1681123
14	BODY (EXTENSION)	1	1681145	1681144	1681154	1681143
REDRESS KIT (* Included as part of Kit)			168141124150	168141124175	168141124200	168141124212

ENGINEERING DATA:

LENGTH	124"	128.2"	135"	135"
WEIGHT lbs (kg)	28.3 (12.8)	31.2 (14.15)	31.2 (14.15)	42.6 (19.32)



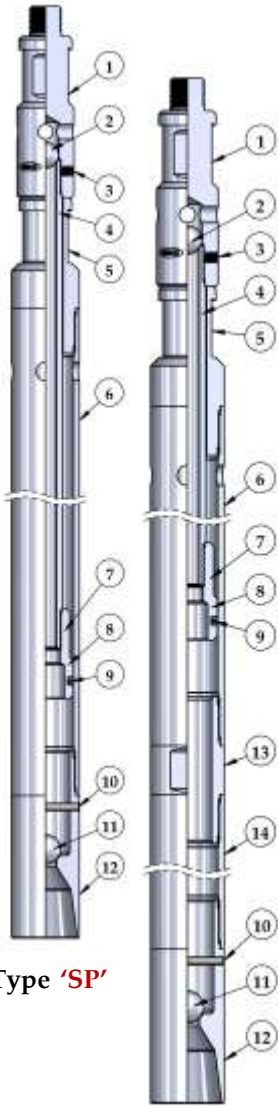
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Type 'SP' Sand Pump (Bailer) Assembly: Continued



Type 'SP'

Type 'SP' Tandem

NOMINAL SIZE	2 1/4"	2 1/2"	3"
ASSEMBLY NUMBER	16814112250	16814112500	16814113000

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	FISHING NECK	1	1681172	1681172	1681172
2	TOP BALL	1	1831056	1831056	1831056
3 *	SET SCREW	1	185507210375	185507210375	185507210500
4	PLUNGER BARREL	1	1681117	1681117	1681117
5	TOP SUB	1	168157	1681130	1681122
6	TOP BODY (BARREL)	1	168158	1681174	1681176
7	SET SCREW - Optional	NS	None	None	None
8	PISTON	1	1681159	1681132	1681124
9 *	'O' RING	1	911221132506	911221132606	911221132906
10	RETAINER PIN	1	9111442250	9111442500	9111443000
11	LOWER BALL	1	183110	183110	1832108
12	SHOE	1	1681160	1681136	1681125
REDRESS KIT (* Included as part of Kit)			168141124150	168141124175	168141124200

ENGINEERING DATA:

MAXIMUM OD	BODY	2 1/4"	2 1/2"	3"
	SHOE	2.250"	2.500"	3.000"
PIN THREAD CONNECTION		1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD		1.750"	1.750"	1.750"
LENGTH		74.8"	74.86"	75.37"
MATERIAL		Alloy	Alloy	Alloy
WEIGHT lbs (kg)		40.0 (18.14)	44.5 (22.2)	53.5 (24.27)

Tandem Type 'SP' Sand Pump (Bailer) Assembly:

NOMINAL SIZE	2 1/4"	2 1/2"	3"
ASSEMBLY NUMBER - TANDEM	16814112251	16814112501	16814113001

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1 - 12	PARTS are the SAME as SINGLE BARREL Type 'SP' Sand Pump				
13	CONNECTOR SUB	1	1681161	1681131	1681141
14	BODY (EXTENSION)	1	1681162	1681175	1681177
REDRESS KIT (* Included as part of Kit)			168141124225	168141124250	168141124300

ENGINEERING DATA:

LENGTH	136.28"	136.34"	137.4"
WEIGHT lbs (kg)	63.4 (28.76)	64.0 (29.0)	85.7 (38.9)

NOTE: To convert Type 'SP' Sand Pump Bailer (Ball Bottom) to Type 'SF' with Flapper Bottom remove DET 10-12 and ADD Type 'FM' Flapper Bottom Sub-Assembly (see Page II-9)

ASSEMBLY NUMBER REFERENCE: 1681425 _ SIZE



Type 'FM' Bottom



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REBCO

Product Code: 168

Type 'CD' Sampler (Drive Down) Bailer Assembly: 3/4" – 3"

Rebco Type 'CD' Sampler (Drive Down) Bailer is designed to take a sample of debris that settles (bridges) in the well. Examining the type of debris of the sample, the Operator can determine next course of wireline action.

Type 'CD' Sampler (Drive Down) Bailer is with **Ball Bottom Shoe**. Type 'CF' Sampler (Drive Down) Bailer is with **Flapper Bottom Shoe**. Standard sizes and lengths are shown below, however, *Specials* can be supplied to suit the requirements.



Type 'FM' Flapper Bottom



NOM SIZE OD	ASSEMBLY NUMBER		LENGTH	CONNECTION		
	Type 'CD' BALL BOTTOM	Type 'CF' FLAPPER BOTTOM		PIN THREAD	FISHING NECK	
	3/4"	16802030750				16802250750
1 1/4"	16802031251	16802251251	18 3/8"	15/16" - 10	1.187"	
	16802031250	16802251250	24"			
1 1/2"	16802031500	16802251500	48.44"		1.375"	
	16802031501	16802251501				
1 5/8"	16802031620	16802251620	36"			
	16802031621	16802251621	60"			
1 3/4"	16802031750	16802251750	36"			
	16802031751	16802251751	60"			
2"	16802032000	16802252000	36"			
2 1/8"	16802032120	16802252120				
2 1/4"	16802032250	16802252250	60"	1 1/16" - 10		1.750"
	16802032251	16802252251				
2 1/2"	16802032500	16802252500	36"			
	16802032505	16802252505	60"			
3"	16802033000	16802253000	36"			
	16802033005	16802253005	60"			

Product Code 168

Type 'FM' and Type 'HFM' Flapper Bottom Sub-Assemblies:



Type 'FM'

Type 'FM' Flapper Bottom Sub-Assembly for:

- Type 'SF' Sand Pump, Single and Tandem
- Type 'CF' Sampler (Drive Down)

Type 'HFM' Flapper Bottom Sub-Assembly for:

Type 'CF' Hydrostatic Bailer



Type 'HFM'



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REBCO

Product Code: 168

Type 'DB' Dump Bailer Assembly: 1 3/4" - 3"

Rebco Type 'DB' Dump Bailer is designed to carry any type of fluids or solids to be dumped on top of subsurface device in the well bore.

A large port, in the Top (Fill) Barrel, is used to fill the Dump Bailer. Once over the Subsurface device, the Shear Pin is sheared which allows the Shear Plunger to rupture the Shear Disc, thus, the liquids or solids are emptied.

If the volume needs to be increased, install a Connector Sub (DET 12) and Tandem Barrel (DET 11).



Standard One Section



Tandem Two Sections

NOMINAL SIZE	1 3/4"	2 1/4"	2 1/2"	3"
ASSEMBLY NUMBER	16803011750	16803012250	16803012500	16803013000

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	1680363	1680321	1680350	1680371
2	TOP FILL BARREL	1	1680370	1680359	1680354	1680372
3	DISC SUB	1	1680365	1680360	1680355	1680373
4 *	'O' RING SEAL	1	911221121814	911221122314	911221122314	911221122314
5 *	SHEAR DISC	1	1680362	1680351	1680351	1680374
6	SHEAR PLUNGER	1	1680367	1680357	1680357	1680375
7 *	SHEAR PIN	1	9110131750	9110142250	9110142500	9110143000
8	FLOW SUB	1	1680369	1680361	1680356	1680376
9	ANVIL SUB	1	1680366	1680358	1680358	1680377
10 *	SET SCREW	1	185506210187	18558210250	18558210250	18558210375
13	SHEAR PIN SUB	1 (NS)	1680368	None	None	None

ASSEMBLY NUMBER - TANDEM	16803011751	16803012251	16803012501	16803013001
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ADD DET 11 AND 12						
11	TANDEM BARREL	1	1681144	1681161	1680352	1681177
12	CONNECTOR SUB	1	1681128	1681162	1680353	1681141
REDRESS KIT (* Included as part of Kit)			168030124175	168030124225	168030124250	168030124300

ENGINEERING DATA:

MAXIMUM OD	BODY	1 3/4"	2 1/4"	2 1/2"	3"
	ANVIL SUB (DET 9)	1.38"	2.00"	2.00"	2.50"
PIN THREAD CONNECTION		15/16" - 10	15/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD		1.375"	1.375"	1.750"	1.750"
LENGTH	Standard	73.06"	72.62"	72.3"	72.5"
	Tandem	134.5"	134.12"	133.8"	134"
MATERIAL		Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	Standard	18.6 (8.44)	34.5 (15.65)	33.1 (15.01)	64.2 (29.12)
	Tandem	34.25 (15.54)	55.2 (25.04)	58.1 (26.4)	92.2 (41.82)

Rebco Type 'DB' Dump Bailers can be manufactured and supplied to suit any required application. It is recommended to specify type of medium to be carried down hole.



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

Product Code: 168

Type 'SO' Swabbing Mandrel Assembly: for 2 3/8" – 5 1/2" Tubing

Rebco Type 'SO' Swabbing Mandrel is used to manipulate the well fluid within the tubing in an effort to create upward flow.

CAUTION: **Rebco** Type 'SO' Swabbing Mandrel is intended for light duty swabbing as required by Slickline operations. The Mandrel has no internal mechanism for "dumping" of the fluid in case of excessive weight pulled.

The availability of Assemblies is not limited to the Tubing properties shown below.



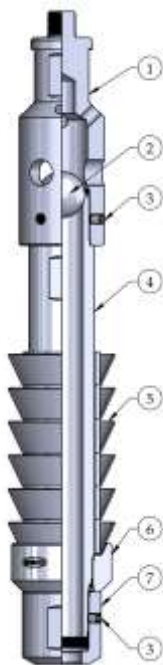
NOMINAL SIZE	2 3/8"	2 7/8"	3 1/2"
ASSEMBLY NUMBER	16814202000	16814202500	16814203500

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	FISHING NECK	1	168141	168141	168141
2	BALL	1	1832108	1832108	1832108
3	BALL CAGE	1	1681421	1681421	1681421
4	SWABBING CUPS	2	See Product Code 168		
5	MANDREL	1	1681422	1681424	1681423

ENGINEERING DATA:

MAXIMUM OD	FOR TUBING ID	1.995"	2.441"	2.995"
	FOR TUBING WEIGHT	4.6 - 4.7 lbs/ft.	6.4 - 6.5 lbs/ft.	9.3 lbs/ft.
	NO-GO *	1.906"	2.343"	2.906"
	BODY	1.75"	1.75"	1.75"
PIN THREAD CONNECTION		15/16" - 10	15/16" - 10	15/16" - 10
FISHING NECK		1.375"	1.375"	1.375"
LENGTH		23.3"	23.37"	24.8"
WEIGHT - lbs (kg)		9.0 (4.08)	9.2 (4.2)	10.3 (4.67)
MATERIAL		Alloy	Alloy	Alloy

- NO-GO is Drift Size for API Standard Weight Tubing



NOMINAL SIZE	4 1/2"	5 1/2"
ASSEMBLY NUMBER	16814204500	16814205500

DET	PART NAME	QTY	PART NO	PART NO
1	FISHING NECK BODY	1	1681425	1681425
2	BALL	1	1831148	1831148
3	SET SCREW	4	18558210375	18558210375
4	CUP MANDREL	1	1681426	1681426
5	SWABBING CUPS *	6 - 9	See Product Code 168	
6	BACK UP RING	1	1681427	1681428
7	END CAP	1	1681434	1681434

ENGINEERING DATA:

MAXIMUM OD	FOR TUBING ID	4.090"	4.950"
	FOR TUBING WEIGHT	9.5 lbs/ft.	15.5 lbs/ft.
	NO-GO *	3.75"	4.50"
	BODY	3.19"	3.19"
PIN THREAD CONNECTION		1 1/16" - 10	1 1/16" - 10
FISHING NECK		2.313"	2.313"
LENGTH		24.78"	24.68"
WEIGHT - lbs (kg)		27.3 (12.4)	28.2 (12.8)
MATERIAL		Alloy	Alloy

NOTE: See [PRODUCT CODE 168](#) for Selection of Cup Types
4 1/2" - 5 1/2" Mandrels can be adapted with a Sand Screen



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

Product Code: 117

Type 'A', 'AD' and Type 'BO', 'BD' Wax Knife and Wire Brush: for 3/4" - 7" Tubing

Rebco Wax Knives and Wire Brushes are used to clean out, wax build up, scale and any other debris in the tubing prior to running sub-surface devices.

Both tools are prepared by the operator to suit the application. The **Wax Knife**, utilizes the Slickline Wire, while the **Wire Brush** is prepared with Multi Strand wire held in place by supplied Set Screws.

NOTE: Pre drilled holes; Wax Knives (.125"), Wire Brushes (3/16" - 1/4") with Set Screws. Wire is not supplied.

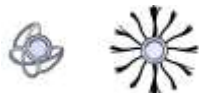


Type 'A'



Type 'B'

Top View



NOM SIZE OD	ASSEMBLY NUMBER				LENGTH	Threaded CONNECTION	
	Type 'A'	Type 'AD'	Type 'BO'	Type 'BD'		PIN THREAD	FISHING NECK
	Wax Knife Threaded	Wax Knife with 'QLS'	Wire Brush Threaded	Wire Brush With 'QLS'			
3/4"	117000750	None	11701200750	None	16"	1/2" - 13	.687"
1"	117001000	None	11701201000	None	18"	5/8" - 11	.750"
1 1/4"	117001250	11700031250	11701201250	11701031250	20"	15/16" - 10	1.187"
1 1/2"	117001500	11700031500	11701201500	11701031500			
1 3/4"	117001750	11700031750	11701201750	11701031750			
1 7/8"	117001870	11700031870	11701201870	11701031870			
2"	117002000	11700032000	11701202000	11701032000	36"	1 1/16" - 10	1.750"
2 1/8"	117002120	11700032120	11701202120	11701032120			
2 1/4"	117002250	11700032250	11701202250	11701032250	20"		
	117002251	11700032251	11701202251	11701032251	36"		
2 1/2"	117002500	11700032500	11701202500	11701032500	20"		
	117002501	11700032501	11701202501	11701032501	36"		
3"	117003000	11700033000	11701203000	11701033000	20"		
	117003001	11700033001	11701203001	11701033001	36"		
	117004500	11700034500	11701204500	11701034500	20"		
4 1/2"	117004501	11700034501	11701204501	11701034501	36"		
	117005500	11700035500	11701205500	11701035500	20"		
5 1/2"	117005501	11700035501	11701205501	11701035501	36"	2.313"	
	7"	117007000	11700037000	11701207000		11701037000	3.125"

Fishing Neck with 'QLS' not shown in the Assembly view

'QLS' (Quick Lock System) connections:

- 1 1/4" - with Rebco's 'RQLS', Single
- 1 1/2" and Larger - with Rebco's 'RQLD', Double

NOM SIZE OD - Sizes available for use in Tubing Size:

- 3/4" - 1" for Coil Tubing
- 1 1/4" for 1 1/2" - 2" Tubing
- 1 1/2" for 2" - 2 1/2" Tubing
- 1 3/4" - 1 7/8" for 3" - 3 1/2" Tubing
- 2" - 3" for 4 1/2" - 5 1/2" Tubing
- 4 1/2" - 7" for 5 1/2" - 7" Tubing



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

Section C. SPECIALTY SERVICE TOOLS

Product Code: 41

Type 'CX' Check Set Tool Assembly: 2" – 5 1/2"

Rebco Type 'CX' Check Set Tool is used to check the proper setting of 'ROTX' and 'ROTXN' Lock Mandrels in respective Landing Nipple profile.

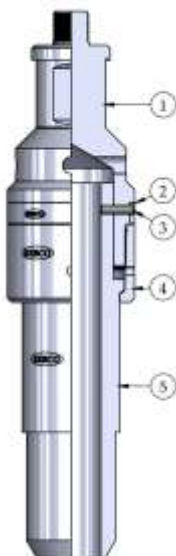


NOMINAL SIZE	2"	2 1/2"	3"	3 1/2"
For LOCK MANDREL SIZE	1.875"	2.313"	2.75"-2.87"	3.313"
ASSEMBLY NUMBER	4102181870	4102182310	4102183000	4102183310

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	41221	41225	41229	412218
2	SHEAR PIN RET	1	41222	41226	412210	412219
3 *	SHEAR PIN	1	9110131650	9110142099	9110142450	9110143020
4	CONNECTOR SUB	1	41223	41227	412211	412220
5	MANDREL	1	41224	41228	412212	412221
REDRESS KIT (* Included as part of Kit)			41021824187	41021824231	41021824300	41021824331

ENGINEERING DATA:

MAXIMUM OD	1.81"	2.25"	2.72"	3.25"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	1.375"	1.750"	2.313"	2.313"
LENGTH	14.63"	14.88"	15.04"	15.80"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT - lbs (kg)	4.8 (2.20)	7.1 (3.20)	11.1 (5.0)	13.6 (6.17)



NOMINAL SIZE	4 1/2"	5 1/2"
LOCK MANDREL SIZE	3.813"	4.562"
ASSEMBLY NUMBER	4102183810	4102184560

DET	PART NAME	QTY	PART NO	PART NO
1	FISHING NECK	1	412215	412232
2	SHEAR PIN RET	1	412216	412227
3 *	SHEAR PIN	1	9110143450	9110144200
4	CONNECTOR SUB	1	412217	412213
5	MANDREL	1	412231	412214
REDRESS KIT (* Included as part of Kit)			41021824381	41021824456

ENGINEERING DATA:

MAXIMUM OD	3.75"	4.50"
PIN THREAD CONNECTION	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	2.313"	2.313"
LENGTH	16.14"	16.95"
MATERIAL	Alloy	Alloy
WEIGHT - lbs (kg)	19.8 (9.0)	28.8 (13.05)



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

Product Code: 41 Continued

Type 'CR' Check Set Tool Assembly: 2" – 5 1/2"

Rebco Type 'CR' Check Set Tool is used to check the proper setting of 'ROTR' and 'ROTRN' Lock Mandrels in respective Landing Nipple profile.



NOMINAL SIZE	2 1/16"	2"	2"	2"
For LOCK MANDREL SIZE	1.710"	1.788"	1.875"	2.125"
ASSEMBLY NUMBER	4102131710	4102131780	4102131870	4102132120

NOMINAL SIZE	2 1/2"	2 1/2"	3"	3 1/2"
For LOCK MANDREL SIZE	2.188"	2.313"	2.562"	3.437"
ASSEMBLY NUMBER	4102132180	4102132310	4102132560	4102133430



NOMINAL SIZE	4 1/2"	4 1/2"	5 1/2"	5 1/2"
For LOCK MANDREL SIZE	3.688"	3.813"	4.313"	4.562"
ASSEMBLY NUMBER	4102133680	4102133810	4102134310	4102134560

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	412224	412224	412228	412232
2	SHEAR PIN RET	1	412225	412225	412226	412227
3 *	SHEAR PIN	1	9110143330	9110143330	9110143980	9110144200
4	CONNECTOR SUB	1	412229	412217	412222	412223
5	MANDREL	1	412230	412236	412231	412233
REDRESS KIT (* Included as part of Kit)			41021824368	41021824368	41021324431	41021824456

ENGINEERING DATA:

MAXIMUM OD	3.62"	3.62"	4.28"	4.50"
PIN THREAD CONNECTION	1 1/16' - 10	1 1/16' - 10	1 1/16' - 10	1 1/16' - 10
FISHING NECK OD	2.313"	2.313"	2.313"	2.313"
LENGTH	15.53"	15.92"	16.14"	17.18"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT - lbs (kg)	17.8 (8.05)	19.8 (9.0)	22.8 (10.35)	25.8 (11.7)

NOTE: For *Rebco* Type 'CX' and Type 'CR' Check Set Tools that are not listed, please inquire.



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

Product Code: 163

TUBING DRIFTS: Are Tools used to check the inside diameter of Tubing or other Cylindrical Tool (installed as part of Tubing completion) by pulling the precisely machined OD - **Drift**, or sometime known as "*rabbit*" through it.

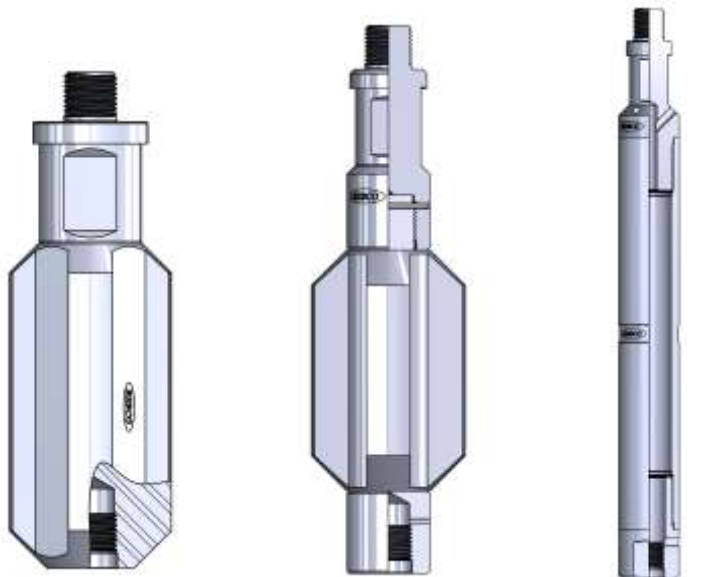
Rebco offers several Types of **Drift Tools**, not limited to the ones shown. If specific Type is required, please give us a full description.

Type '**FD**', Type '**FTD**' and Type '**TA**' Drifts

Rebco Type '**FD**' Drift is a 15" fluted bar stock with Threaded Connections, Pin to Box, and a Fishing Neck appropriate to the Nominal Size of the tool.

Rebco Type '**FTD**' is a **Drift Tool** with Threaded Pin to Box connections, and appropriate Fishing Neck. A Teflon® fluted sleeve (12") is used to minimize the scarring or damaging the coating of the Tubing ID.

Rebco Type '**TA**' Drift is a 12" Tube threaded with Pin to Box connections, and appropriate Fishing Neck.



Type '**FD**'
(1632503 _)

Type '**FTD**'
(163251503 _)

Type '**TA**'
(1631500 _)

When Ordering Specify:

OD - Outside Diameter, OD Size determines the Connections

Type - of Drift product required

Product Number, _ _ designates the Size which determines the Connection



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

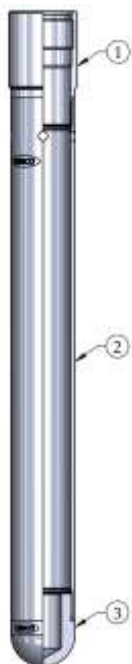
Product Code: 163

Type 'JB' Junk Basket – Valve Catcher: 2 3/8" – 4 1/2"

Rebco Type 'JB' Junk Basket - Valve Catcher is designed to be set in the No-Go type Landing Nipple directly below the Side Pocket Mandrel.

Used in gas operations when changing out gas dummy valves. Should the valve inadvertently fall, it is caught within the Catcher.

The Junk Basket is also installed above flow control devices to catch any debris which may fall down and around the device system.



NOMINAL SIZE	2 3/8"	2 7/8"	2 7/8"	3 1/2"	4 1/2"
ASSEMBLY NUMBER	163070118730	163070122530	163070123130	163070127530	163070138130
NIPPLE SEAL BORE SIZE	1.875"	2.250"	2.313"	2.750"	3.813"

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	163074	1630712	163071	163077	1630718
2	BASKET	1	163075	1630711	163072	163078	1630719
3	BULL PLUG	1	163076	1630710	163073	163079	1630720

ENGINEERING DATA:

MAXIMUM OD	1.87"	2.20"	2.30"	2.73"	3.75"
ID of the BASKET	1.44"	1.75"	1.87"	2.25"	2.99"
FISHING NECK ID	1.38"	1.81"	1.81"	2.31"	3.12"
LENGTH	36.0"	36.0"	36.0"	36.0"	36.0"
MATERIAL *	Norm Alloy	Norm Alloy	Norm Alloy	Norm Alloy	Norm Alloy
WEIGHT lbs (kg)	11.2 (5.08)	14.4 (6.53)	14.4 (6.53)	19.8 (8.98)	30.8 (13.97)

ACCESSORIES: PRODUCT CODE 40

RUNNING/PULLING TOOL (ROTGS)	40051418700	40051423100	40051423100	40051427500	40051436804
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* Norm Alloy is suitable for H₂S Service (NACE MR-01-75, Latest Revision)

Junk Baskets are available in other Sizes and Models not shown. Please inquire.



SECTION II: SERVICE TOOLS

2013

JP042613

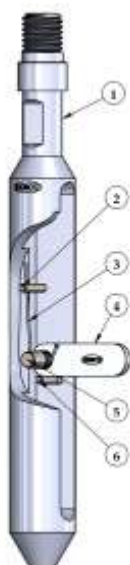
REBCO

Product Code: 163

Type 'AO' Tubing End Locator Assembly: 1/2" – 5 1/2"

Rebco Type 'AO' Tubing End Locator is used to locate the lower end of the tubing so that its depth may be measured accurately.

The Tubing End Locator consists of a slotted body in which spring loaded finger is retained by a pin. When the Tool emerges from the lower end of the tubing, the finger will fully extend to a perpendicular position and will not enter the tubing until the pin is sheared.

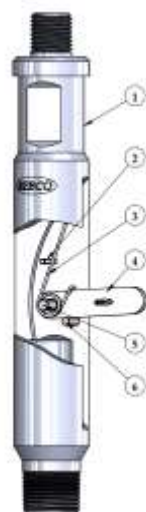


NOMINAL SIZE	1/2"	3/4"	7/8"	1"
ASSEMBLY NUMBER	16300204	16300208	16300201	16300202

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK BODY	1	163004	163006	163001	163002
2 *	STOP PIN	1	None	9111420654	9111420654	9111420994
3	SPRING	1	9000241	9000242	9000242	9000243
4	FINGER	1	163007	163008	163009	1630010
5 *	FINGER PIN	1	9111430500	9111440750	9111440750	9111440975
6 *	SHEAR PIN	1	9111410380	9110120654	9110120654	9110120940
REDRESS KIT (* Included as part of Kit)			1630020244	1630020246	1630020241	1630020242

ENGINEERING DATA:

MAXIMUM OD	.50"	.75"	.88"	1.00"
PIN THREAD CONNECTION	3/8' - 16	1/2' - 13	5/8' - 11	5/8' - 11
FISHING NECK OD	None	.687"	.75"	.75"
BOTTOM THREAD CONNECTION	None	None	None	None
EXTENDED DIAMETER with FINGER	.95"	1.50"	1.94"	2.02"
LENGTH	8.0"	8.50"	8.50"	8.50"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT - lbs (kg)	.20 (.10)	.60 (.27)	.65 (.29)	1.2 (.55)



NOMINAL SIZE	2" - 2 1/2"	3" - 3 1/2"	4 1/2"	5 1/2" - 7"
ASSEMBLY NUMBER	16300203	163002011	163002012	163002013

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK BODY	1	163003	1630011	1630012	1630013
2 *	STOP PIN	1	9111421700	9111421930	9111423000	9111423420
3	SPRING	1	9000179	9000179	9000179	9000179
4	FINGER	1	163005	1630016	1630017	1630018
5 *	FINGER PIN	1	9111441700	9111442000	9111443000	9111443460
6 *	SHEAR PIN	1	9110131313	9110131600	9110132700	9110133000
REDRESS KIT (* Included as part of Kit)			1630020243	16300202411	16300202412	16300202413

ENGINEERING DATA:

MAXIMUM OD	1.70"	2.00"	3.00"	3.46"
PIN THREAD CONNECTION	15/16' - 10	15/16' - 10	1 1/16' - 10	1 1/16' - 10
FISHING NECK OD	1.375"	1.375"	1.750"	2.313"
BOTTOM THREAD CONNECTION	1.375"	1.375"	1 1/16' - 10	1 1/16' - 10
EXTENDED DIAMETER with FINGER	3.05"	4.07"	4.59"	5.06"
LENGTH	11.5"	11"	11"	11"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT - lbs (kg)	4.4 (2.0)	6.6 (3.0)	14.0 (6.40)	19.6 (8.90)

NOTE: Sampler Tube with Ball or Flapper bottom available - Specify OD and Length when ordering



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

Product Code: 62

Type 'ROTAO' Mechanical Tubing Perforator Assembly: 2 3/8" – 4 1/2"

Rebco Type 'ROTAO' Mechanical Tubing Perforator is used to perforate the tubing wall mechanically by manipulating the use of the Wireline Tool String.

Once set, progressive upward jarring force, the **Punch (DET 4)** penetrates the Tubing wall, thus creating the hole. At cycle end, the Punch is withdrawn to its starting position, triggering the safety locking mechanism, the **Catch (DET 8)** to lock the Perforator for safe removal.

Caution: Downward Jarring will break the Punch.

2" Type 'ROTAO' Mechanical Tubing Perforator Assembly



NOMINAL SIZE		2" (2 3/8")	
ASSEMBLY NUMBER		62002024	62002025
Reference: TUBING	Size	2 3/8"	2 3/8"
	Weight - (lbs/ft.)	4 - 4.7	5.3 - 5.9
	Minimum Tubing Drift	1.906"	1.773"

DET	PART NAME	QTY	PART NO	PART NO
1	BODY	1	620041	620041
2 *	SHEAR PIN	2	9110130375	9110130375
3 *1	GUIDE BUSHING	1	620018	620018
4 *1	PUNCH	1	620042	620042
5	PUNCH HOLDER BODY	1	620045	620045
6	HOUSING BODY	1	620043	620044
7 *	CATCH	1	620015	620015
8 *	CATCH SPRING	1	900083	900083
9 *	PIN	1	18830416251	18830416251
10 *	SET SCREW	1	18556210375	18556210375
11 *	SHEAR PIN	1	9111441625	9111441625
12	SPRING GUIDE	1	620016	620016
13	SPRING	1	9000187	9000187
14	SPRING RETAINER	1	620017	620017
15 *	PIN	1	18810210001	18810210001
Re Dress Kit (* Included as Part of Kit)			62002024200	

ENGINEERING DATA:

MAXIMUM OD	BODY	1.84"	1.72"
	EXTENDED PUNCH	2.25"	2.141"
THREAD CONNECTION PIN - BOX		15/16" - 10	15/16" - 10
FISHING NECK OD		1.375"	1.375"
LENGTH	CLOSED	27.03"	27.03"
	EXTENDED	38.81"	38.81"
	STROKE	11.78"	11.78"
HOLE SIZE		3/8" (.375")	3/8" (.375")
MATERIAL		Alloy	Alloy
WEIGHT lbs (kg)		13.1 (5.90)	14.2 (6.50)

ACCESSORIES:

PROTECTIVE CASE (Not Shown)		620002200
ANCHOR TYPES	COLLAR STOP - 'CS'	See this Section Page II-22
	SLIP STOP - 'TS'	

*1 - it is recommended to have 3 of each as SPARES (DET 3 and 4)
Not part of Re Dress Kit



SECTION II: SERVICE TOOLS

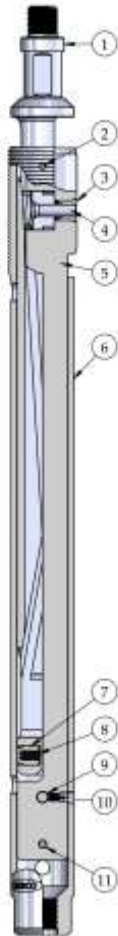
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REBCO

Type 'ROTAO' Mechanical Tubing Perforator Assembly: Continued

2 1/2" Type 'ROTAO' Mechanical Tubing Perforator Assembly



NOMINAL SIZE		2 1/2" (2 7/8")	
ASSEMBLY NUMBER		62002011	62002020
Reference: TUBING	Size	2 7/8"	2 7/8"
	Weight - (lbs/ft.)	7.9	6.4 - 6.5
	Minimum Tubing Drift	2.229"	2.347"

DET	PART NAME	QTY	PART NO	PART NO
1	BODY	1	620024	620024
2 *	SHEAR PIN	2	9110131500	9110131500
3 *1	GUIDE BUSHING	1	620025	620025
4 *1	PUNCH	1	620029	620029
5	PUNCH HOLDER BODY	1	620023	620023
6	HOUSING BODY	1	620027	620038
7 *	CATCH	1	620028	620028
8 *	CATCH SPRING	1	900083	900083
9 *	PIN	1	18830419371	18830419371
10 *	SET SCREW	1	18556210375	18556210375
11 *	SHEAR PIN	1	9111442000	9111442000
Re Dress Kit (* Included as Part of Kit)			62002024250	

ENGINEERING DATA:

MAXIMUM OD	BODY	2.12"	2.20"
	EXTENDED PUNCH	2.688"	2.781"
THREAD CONNECTION PIN - BOX		15/16" - 10	15/16" - 10
FISHING NECK OD		1.375"	1.375"
LENGTH	CLOSED	29.62"	29.62"
	EXTENDED	44.31"	44.31"
	STROKE	14.69"	14.69"
HOLE SIZE		3/8" (.375")	3/8" (.375")
MATERIAL		Alloy	Alloy
WEIGHT lbs (kg)		24.7 (11.20)	23.0 (10.6)

ACCESSORIES:

PROTECTIVE CASE (Not Shown)		620002250
ANCHOR TYPES	COLLAR STOP - 'CS'	See this Section Page II-22
	SLIP STOP - 'TS'	

*1 - it is recommended to have 3 of each as SPARES (DET 3 and 4)
Not part of Re Dress Kit



SECTION II: SERVICE TOOLS

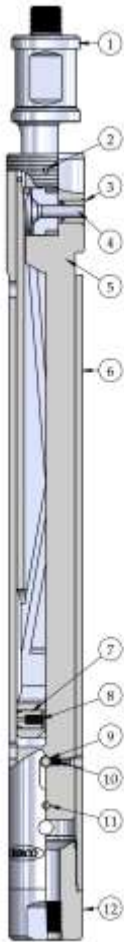
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REBCO

Type 'ROTAO' Mechanical Tubing Perforator Assembly: Continued

3 1/2" Type 'ROTAO' Mechanical Tubing Perforator Assembly



NOMINAL SIZE		3 1/2"	
ASSEMBLY NUMBER		6200201	6200206
Reference: TUBING	Size	3 1/2"	3 1/2"
	Weight - (lbs/ft.)	7.7 - 9.2	10.2 - 12.7
	Minimum Tubing Drift	2.797"	2.625"

DET	PART NAME	QTY	PART NO	PART NO
1	BODY	1	62006	62006
2 *	SHEAR PIN	2	9110130812	9110130812
3 *1	GUIDE BUSHING	1	62008	62008
4 *1	PUNCH	1	62004	62004
5	PUNCH HOLDER BODY	1	62005	62005
6	HOUSING BODY	1	62001	620040
7 *	CATCH	1	62007	62007
8 *	CATCH SPRING	1	900083	900083
9 *	PIN	1	18830425001	18830425001
10 *	SET SCREW	1	18556210312	18556210312
11 *	SHEAR PIN	1	9111452562	9111452562
12	BOTTOM SUB	1	62002	62002
Re Dress Kit (* Included as Part of Kit)			62002024300	

ENGINEERING DATA:

MAXIMUM OD	BODY	2.69"	2.81"
	EXTENDED PUNCH	3.344"	3.344"
THREAD CONNECTION PIN - BOX		1 1/16" - 10	1 1/16" - 10
FISHING NECK OD		2.313"	2.313"
LENGTH	CLOSED	33.50"	33.50"
	EXTENDED	51.81"	51.81"
	STROKE	18.31"	18.31"
HOLE SIZE		7/16" (.437")	7/16" (.437")
MATERIAL		Alloy	Alloy
WEIGHT lbs (kg)		38.0 (17.2)	42.2 (19.14)

ACCESSORIES:

PROTECTIVE CASE (Not Shown)		620002300
ANCHOR TYPES	COLLAR STOP - 'CS'	See this Section Page II-22
	SLIP STOP - 'TS'	

***1 - it is recommended to have 3 of each as SPARES (DET 3 and 4)
Not part of Re Dress Kit**



SECTION II: SERVICE TOOLS

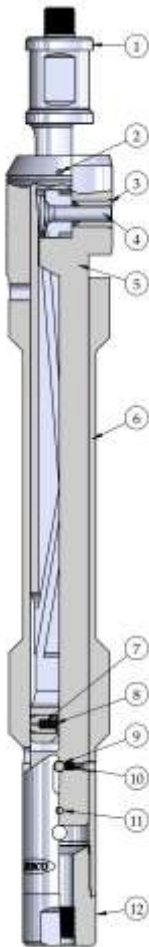
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REBCO

Type 'ROTAO' Mechanical Tubing Perforator Assembly: Continued

4 1/2" Type 'ROTAO' Mechanical Tubing Perforator Assembly



NOMINAL SIZE		4 1/2"	
ASSEMBLY NUMBER		62002046	62002045
Reference: TUBING	Size	4 1/2"	4 1/2"
	Weight - (lbs/ft.)	11.6	12.6
	Minimum Tubing Drift	3.927"	3.833"

DET	PART NAME	QTY	PART NO	PART NO
1	BODY	1	62006	62006
2 *	SHEAR PIN	2	9110141250	9110141250
3 *1	GUIDE BUSHING	1	620074	620074
4 *1	PUNCH	1	620075	620075
5	PUNCH HOLDER BODY	1	620069	620069
6	HOUSING BODY	1	620092	620070
7 *	CATCH	1	620028	620028
8 *	CATCH SPRING	1	900083	900083
9 *	PIN	1	18830425001	18830425001
10 *	SET SCREW	1	18556210312	18556210312
11 *	SHEAR PIN	1	9111452562	9111452562
12	BOTTOM SUB	1	62002	62002
Re Dress Kit (* Included as Part of Kit)			62002024400	

ENGINEERING DATA:

MAXIMUM OD	BODY	3.66"	3.75"
	EXTENDED PUNCH	4.40"	4.37"
THREAD CONNECTION PIN - BOX		1 1/16" - 10	1 1/16" - 10
FISHING NECK OD		2.313"	2.313"
LENGTH	CLOSED	31.83"	31.83"
	EXTENDED	46.47"	46.47"
	STROKE	14.64"	14.64"
HOLE SIZE		1/2" (.500")	1/2" (.500")
MATERIAL		Alloy	Alloy
WEIGHT lbs (kg)		54.6 (24.8)	56.2 (25.5)

ACCESSORIES:

PROTECTIVE CASE (Not Shown)		620002400
ANCHOR TYPES	COLLAR STOP - 'CS'	See this Section Page II-22
	SLIP STOP - 'TS'	

*1 - it is recommended to have 3 of each as SPARES (DET 3 and 4)
Not part of Re Dress Kit



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

Anchor Type Stops Assemblies for Tubing Perforator: 2 3/8" – 4 1/2"

Rebco Type 'CS' and/or Type 'TS' Anchor Stops are designed to screw directly into the base of the Tubing Perforator, and as a unit, to be set at desired depth.

Product Code: 62

Type 'CS' Collar Stop Anchor Assemblies:

Rebco Type 'CS' Collar Stop Anchor is used in the Tubing as a Stop; screwed directly to the bottom of the Tubing Perforator, to be set and pulled as a unit.



NOMINAL SIZE	2" (2 3/8")	2 1/2" (2 7/8")	3 1/2"	4 1/2"
ASSEMBLY NUMBER	6202142000	6202142500	6202143500	6202144500

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK BODY	1	62024	62023	62022	62021
2	COLLET	1	110258	1102511	1102514	1102517
3	COLLET EXPANDER	1	110259	1102512	1102515	1102518
4 *	PINS	2	18810307501	18810307501	18810307501	18810310001
5 *	SPRINGS	2	900055	900053	900052	900054
REDRESS KIT (* Included as part of Kit)			110252024237	110252024287	110252024350	110252024450

ENGINEERING DATA:

MAXIMUM OD	1.75"	2.19"	2.75"	3.75"
PIN THREAD CONNECTION	15/16" - 10	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	1.375"	1.750"	2.313"	2.313"
LENGTH	10.72"	11.31"	11.81"	11.61"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	3.5 (1.59)	4.4 (2.0)	6.0 (2.72)	8.8 (4.0)

Special Collet OD for 3 1/2" Collar Stop Anchor that will pass through 2.750" Nipple is available

Product Code: 62

Type 'TS' Slip Stop Anchor Assemblies:

Rebco Type 'TS' Slip Stop Anchor is used in the Tubing as a Stop; screwed directly to the bottom of the Tubing Perforator, to be set and pulled as a unit.



NOMINAL SIZE	2" (2 3/8")	2 1/2" (2 7/8")	3 1/2"	4 1/2"
ASSEMBLY NUMBER	6215142000	6215142500	6215143500	6215144500

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	EXPANDER MANDREL	1	62151	62152	62153	62154
2	SLIPS	3	164002	164006	1640010	1640020
3	RETAINER RING	1	110259	1102512	1102515	1640018
4	SLIP CARRIER	1	164003	164007	1640011	1640019

ENGINEERING DATA:

MAXIMUM OD - SET IN PLACE	1.998"	2.492"	3.05"	3.75"
PIN THREAD CONNECTION	15/16" - 10	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	1.375"	1.750"	2.313"	2.313"
LENGTH - SET IN PLACE	14.25"	14.15"	16.05"	17.8"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	6.2 (2.81)	7.5 (3.40)	12.5 (5.67)	16.7 (7.57)



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

Section D. SPECIALTY SERVICE TOOLS

Product Code: 110

Type 'FO' Collar Stop Tool Assembly: 1 1/4" – 4 1/2"

Rebco Type 'FO' Collar Stop Tool is designed to locate in the collar recess of the API upset and non-upset Tubing.

The Collar Stop is lowered in the tubing to the desired depth; by lifting upwards, the springs are tripped, allowing the Collar Stop Collet to expand into the collar recess. Downward jarring on the Fishing Neck will free the Running Tool and at the same time force the body to lock the Collet in place.

The special feature of **Rebco's** Type 'FO' Collar Stop is that there is no welding. The Collet is machined from one piece of stock material.



NOMINAL SIZE	1 1/4"	1 1/2"	2 3/8"	2 7/8"
ASSEMBLY NUMBER	11025201	11025202	11025203	11025204

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK BODY	1	110251	110254	110257	1102510
2	COLLET	1	110252	110255	110258	1102511
3	COLLET EXPANDER	1	110253	110256	110259	1102512
4 *	PIN	2	18810203751	18810205001	18810307501	18810307501
5 *	SPRING	2	9000197	9000198	900055	900053
REDRESS KIT (* Included as part of Kit)			1102520125	1102520150	1102520237	1102520287

ENGINEERING DATA:

MAXIMUM OD	RUNNING POSITION	1.09"	1.31"	1.75"	2.19"
	SET POSITION	1.62"	1.88"	2.38"	2.81"
LENGTH	RUNNING LENGTH	13 3/4"	13 3/4"	14 1/8"	14 1/8"
	SET LENGTH	10.17"	10.19"	10.66"	10.61"
FISHING NECK		1.000"	1.000"	1.375"	1.750"
MIN ID		.47"	.62"	.88"	1.12"
WEIGHT - lbs (kg)		1.16 (.53)	1.3 (.60)	2.6 (1.10)	3.8 (1.72)
MATERIAL		Alloy	Alloy	Alloy	Alloy
RUNNING TOOL	TYPE 'F'	41251	41251	41252	41252
	TYPE 'ROTSB'	4014011250	4014011250	4014012000	4014012500
PULLING TOOL		TYPE 'ROTJDC'	400703021370	400703021370	400703022000



NOMINAL SIZE	3 1/2" *	3 1/2"	4 1/2"
ASSEMBLY NUMBER	11025205	11025206	11025207

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	FISHING NECK BODY	1	1102513	1102513	1102516
2	COLLET	1	1102527	1102514	1102517
3	COLLET EXPANDER	1	1102515	1102515	1102518
4 *	PIN	2	18810307501	18810307501	18810310001
5 *	SPRING	2	900052	900052	900054
REDRESS KIT (* Included as part of Kit)			1102520350	1102520350	1102520450

ENGINEERING DATA:

MAXIMUM OD	RUNNING POSITION	2.68"	2.75"	3.75"
	SET POSITION	3.38"	3.38"	4.25"
FISHING NECK		2.313"	2.313"	2.313"
MIN ID		1.62"	1.62"	1.62"
WEIGHT - lbs (kg)		5.3 (2.40)	5.7 (2.60)	8.2 (3.72)
MATERIAL		Alloy	Alloy	Alloy
RUNNING TOOL	TYPE 'F'	41253	41253	41253
	TYPE 'ROTSB'	4014013000	4014013000	4014013000
PULLING TOOL		TYPE 'ROTJDC'	400703023000	400703023000

- **Special** OD Collar Stop to go through 2.750" Seal Bore Nipple



SECTION II: SERVICE TOOLS

2013

JP042613

REBCO

Product Code: 164

Type 'SS' Tubing Slip Stop Assembly: 1 1/4" – 4 1/2"

Rebco Type 'SS' Tubing Slip Stop is designed to be set in the API or Premium Tubing.

The Slip Stop is lowered in the tubing to the desired depth; a rapid downward movement expands the Slips and sets the Stop. Downward jarring drives the serrated Slips against the tubing wall and releases the Running Tool.



NOMINAL SIZE	1 1/4"	1 1/2"	1 3/4"	2 3/8"
ASSEMBLY NUMBER	16414141250	16414141500	16414141750	16414142000

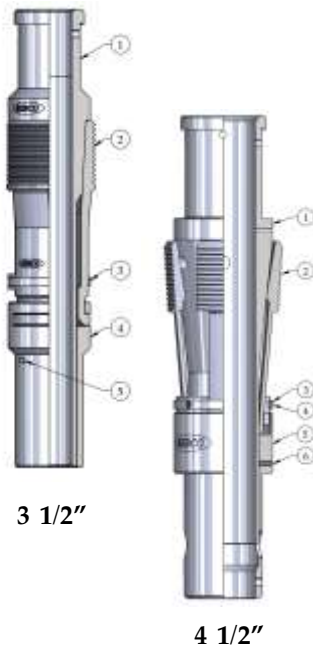
DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	EXPANDER MANDREL	1	1640029	1640022	1640022	1640001
2	SLIPS	3	1640030	1640023	1640026	1640002
3	RETAINER RING	1	1640032	1640025	1640025	1640004
4	SLIP CARRIER	1	1640031	1640024	1640024	1640003
5 *	SHEAR PIN	1	9110120500	9110131000	9110131000	9110131000
REDRESS KIT (* Included as part of Kit)			164141424125	164141424150	164141424150	164141424200

ENGINEERING DATA:

MAXIMUM OD	RUNNING POSITION	1.23"	1.56"	1.69"	1.83"
	SET POSITION	1.47"	1.66"	1.79"	1.998"
LENGTH	RUNNING LENGTH	16.1"	16.1"	16.1"	16.94"
	SET LENGTH	13.6"	13.6"	13.6"	14.25"
Reference: For Tubing ID		1.380" - 1.410"	1.610" - 1.650"	1.751"	1.867" - 1.995"
FISHING NECK		.875"	1.187"	1.187"	1.375"
MIN ID		.44"	.62"	.62"	.70"
WEIGHT - lbs (kg)		2.4 (1.09)	3.2 (1.45)	3.4 (1.54)	5.5 (2.49)
MATERIAL		Alloy	Alloy	Alloy	Alloy
RUNNING TOOL	TYPE 'F'	4125201	41251	41251	4125200
	TYPE 'ROTSB'	4014011250	4014011501	4014011501	4014012000
PULLING TOOL		TYPE 'ROTJDC'	400703021250	400703021500	400703021500
			400703021500	400703021500	400703022000

RUN

SET



3 1/2"

4 1/2"

NOMINAL SIZE	2 7/8"	3 1/2"	4 1/2"
ASSEMBLY NUMBER	16414142500	16414143500	16414144500

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	EXPANDER MANDREL	1	164005	164009	1640013
2	SLIPS	Noted	164006 (3)	1640010 (3)	1640017 (4)
3	RETAINER RING	1	164008	1640012	1640016
4	SLIP CARRIER	1	164007	1640011	(DET 5)
4 *	SCREWS	4	None	None	185200110250
5	SLIP CARRIER	1	None	None	1640014
5 * / 6 *	SHEAR PIN	1	9110131000	9110131000	18570241250
REDRESS KIT (* Included as part of Kit)			164141424250	164141424350	164141424450

ENGINEERING DATA:

MAXIMUM OD	RUNNING POSITION	2.25"	2.71"	3.62"
	SET POSITION	2.49"	3.06"	4.38"
LENGTH	RUNNING LENGTH	16.38"	17.98"	21.06"
	SET LENGTH	13.65"	15.23"	17.8"
Reference: For Tubing ID		2.44"	2.750" - 2.992"	3.6" - 4.38"
FISHING NECK		2.313"	2.313"	3.125"
MIN ID		1.62"	1.62"	2.35"
WEIGHT - lbs (kg)		6.9 (3.13)	11.5 (5.20)	16.7 (7.57)
MATERIAL		Alloy	Alloy	Alloy
RUNNING TOOL	TYPE 'F'	4125250	4125350	4125450
	TYPE 'ROTSB'	4014013000	4014013000	4014014000
PULLING TOOL		TYPE 'ROTJDC'	400703023000	400703023000
			400703023000	400703024000