



REBCO OIL TOOLS

EXCEEDING EXPECTATIONS ONE
TOOL AT A TIME

Tool String



SECTION I: TOOL STRING

PRODUCT DESCRIPTION: TOOL STRING

PRODUCT CODE(S): 100-104

A Wireline Tool String is made up of set Tools (Work String) to do specific Wireline operations down-hole. The Tools are attached to the Wire by means of a Rope Socket.

Below the Rope Socket a Swivel Joint is placed to avoid "torsion" or twisting of the Wire.

In order to overcome the friction of the Stuffing Box packing and well pressures, Stem is used as weight to lower the tool string down hole. The weight of the stem is also used to generate impact force when performing jarring action. The Jars enable the impact of the tool string in either direction, up or down, against any encountered obstruction down hole.

To intensify an impact force to the tool string, an Accelerator can be used. Finally, to obtain the flexibility to the tool string, a Knuckle Joint is placed above the selected tool to do a specific function as needed.

The following links list a selection of Tools which are used in a Typical Tool String; chosen by the Operator to suit the work to be performed.

Rebco can supply Tool Strings from 3/8" to 2 1/2" diameters, with Threaded Connections as well as QLS (Quick Lock System), Rebco Type 'RQLS' and/or **Rebco** Type 'RQLD' Connections.



SECTION I: TOOL STRING

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SECTION I: TOOL STRING

TYPICAL TOOL STRING:

1. Rope Socket - **Product Code 100**

Provides a means of connecting the tool string to the end of the Wireline.

Selection of Rope socket Type is related to the Size of Wire and type of work to be done.

2. Swivel Joint - **Product Code 104**

Minimizes the twisting of Wire when running and operating the Tool String downhole.

3. Stem (Weight Bar) - **Product Code 101**

Provides the weight to overcome the friction, pressures, and fluid viscosity acting on the Tool String. Provides the weight required for effective Jarring impact when necessary.

4. Jars - **Product Code 102**

Provide downward or upward impact. The manipulation of the Wireline by the Operator, the force of the impact is proportional to the weight of the Stem used.

5. Accelerator - **Product Code 102**

Provides additional stored energy of the Jar which increases the impact force.

NOTE: The Operator determines the position of the Accelerator in the Tool String for the maximum effect desired.

6. Knuckle Joint - **Product Code 103**

Provides flexibility to the Tool String.

The number of Knuckle Joints in the Tool String is determined by the Operator; to suit the type of work to be done.

To select a Tool String which suits your requirements, see Table 1.

Table 1: Rebco Wireline Tool String

TOOL STRING OD		THREADED CONNECTION	QLS CONNECTION	MAX OD FISHING NECK	
inches	mm			inches	mm
3/8	9.52	1/4" - 20 UNC	NONE	NONE	
1/2	12.70	3/8" - 16 UNC			
3/4	19.05	1/2" - 13 UNC		0.687	17.46
1	25.40	5/8" - 11 UNC		0.75	19.05
1 1/4	31.75	15/16" - 10 UNS	RQLS	1	25.4
1 1/2	38.10		RQLS and RQLD	1.187	30.18
1 3/4	44.45			1.375	34.93
1 7/8	47.63	1 1/16" - 10 UNS	RQLD	1.75	44.45
2	50.80				
2 1/8	53.98				
2 1/4	57.15			2.313	58.75
2 1/2	63.50	1 9/16" - 10 UNS			

QLS – Quick Lock System

RQLS - Single Shoulder, Light Duty

RQLD - Double Shoulder, Heavy Duty





SECTION I: TOOL STRING

Product Code: 100

Rebco ROPE SOCKETS provide means for connecting the Wireline to the Tool String.

Rebco offers variety of Rope Socket Types (Table - Availability), for specific applications and Wire types. Alloy Material is used to manufacture **Rebco** ROPE SOCKETS. Materials suitable for specific well conditions are available.

Type of Rope Sockets: Availability Table

TECHNICAL DATA										
TYPE			ASSEMBLY PART NUMBER	DESCRIPTION	WIRE TYPE					
Thread	QLS *				Single Strand	Multi Strand	Single Conductor	Swabbing	Capsulated Line	
	Single	Double								
		'AD'	1000003-	Spring, Disc, Support	X	None				
	'AS'		1000014-							
'AO'			1000020-							
		'BD'	1000103-	Cone and Sleeve	X	None				
	'BS'		1000114-							
'BO'			1000120-							
		'CD'	1000203-	Releasing Slips	None	X	None			
	'CS'		1000214-							
'CO'			1000220-							
		'CGD'	100020503-	Releasing Slips with Swivel Bottom	None	X	None			
	'CGS'		100020514-							
'CGO'			100020520-							
'D'			10003-	Dummy	N/A					
	'DS'		1000314-							
		'DD'	1000303-							
'GO'			1000520-	Single Conductor	None		X	None		
		'HD'	1000603-	Heavy Duty	X	X	None			
	'HS'		1000614-							
'HO'			1000620-							
'RC'			1001302-	Clamp	X	X	None		X	
'SA'			1001400-	1/2" to 9/16" Line	None				X	None
		'SD'	1001403-							
	'SS'		1001414-							

WIRE SIZE SELECTION TABLE:

*QLS - Quick Lock System
'RQLS' Single
'RQLD' Double, Heavy Duty
X - Available

Note: When ordering, specify Wire Type and Size, and Material required if critical.

WIRE SIZE		WIRE SIZE	
'A'	Decimal	'A'	Decimal
0	.105" - .108"	6	.250" (1/4")
1	.140"	7	.312" (5/16")
2	.160"	8	.092"
3	.150"	9	.125"
4	.187" (3/16")	10	Blank
5	.218" (7/32")	11	.062" - .082"



SECTION I: TOOL STRING

Type 'AO' Rope Sockets: 3/8" - 2 1/2"

Rebco Type 'AO' Rope Sockets are recommended to be used with .066" to .105" diameter Single Strand Wire.

The Wireline should be passed through the Body, Spring and Support, before being wrapped tightly around the groove of the Disc.

TECHNICAL DATA

NOMINAL SIZE	3/8"	1/2"	5/8"	3/4"	7/8"
ASSEMBLY NUMBER	10000200370	10000200500	10000200620	10000200750	10000200870

ENGINEERING DATA:

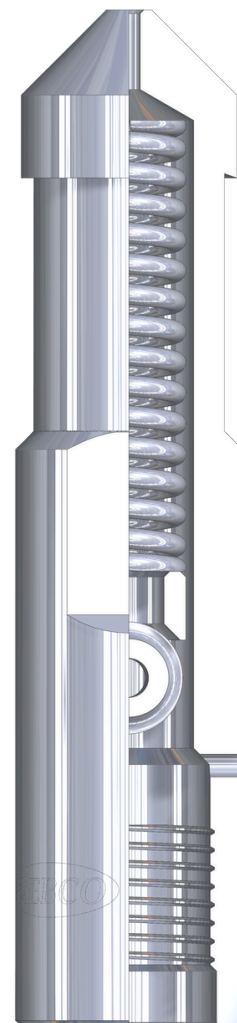
FISHING NECK OD	0.375	.500"	.500"	.687"	.750"
BOX THREAD CONNECTION	1/4" - 20	3/8" - 16	3/8" - 16	1/2" - 13	5/8" - 11
MAXIMUM OD	.38"	.50"	.63"	.75"	.88"
LENGTH	4.06"	4.50"	4.50"	3.12"	3.12"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy

TECHNICAL DATA

NOMINAL SIZE	1"	1 1/4"	1 1/2"	1 3/4"	1 7/8"
ASSEMBLY NUMBER	10000201000	10000201250	10000201500	10000201750	10000201870

ENGINEERING DATA:

FISHING NECK OD	1.000"	1.187"	1.375"	1.750"	1.750"
BOX THREAD CONNECTION	5/8" - 11	15/16" - 10	15/16" - 10	1 1/16" - 10	1 1/16" - 10
MAXIMUM OD	1.00"	1.25"	1.38"	1.75"	1.88"
LENGTH	6.88"	5.56"	5.56"	5.56"	5.56"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy



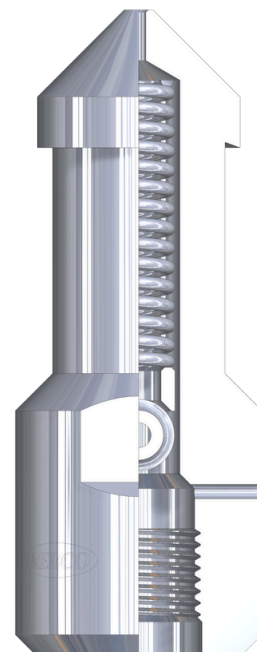


SECTION I: TOOL STRING

Type 'AO' Rope Sockets: continued

TECHNICAL DATA				
NOMINAL SIZE	2"	2 1/8"	2 1/4"	2 1/2"
ASSEMBLY NUMBER	10000202000	10000202120	10000202250	10000202500
ENGINEERING DATA:				
FISHING NECK OD	1.750"	1.750"	1.750"	2.313"
BOX THREAD CONNECTION	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10	1 9/16" - 10
MAXIMUM OD	2.00"	2.12"	2.25"	2.50"
LENGTH	5.56"	5.56"	5.56"	6.50"
MATERIAL	Alloy	Alloy	Alloy	Alloy

Note: 3/8" and 1/2" Type 'AO' Rope Sockets are offered with Set Screws Only





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Type 'AD' Rope Sockets: 1 1/2" - 2 1/2"

Rebco Type 'AD' Rope Sockets are recommended to be used with .066" to .125" diameter Single Strand Wire.

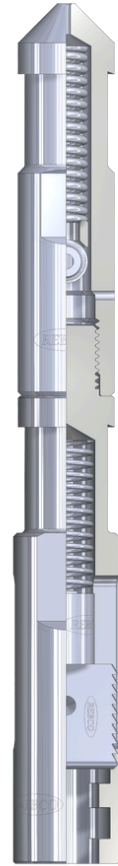
Type 'AD' Rope Sockets is made up of Type 'AO' Rope Socket Assembly and 'RQLD' Bottom Sub-Assembly.

TECHNICAL DATA

NOMINAL SIZE	1 1/2"	1 3/4"	1 7/8"
ASSEMBLY NUMBER	10000031500	10000031750	10000031870

ENGINEERING DATA:

FISHING NECK OD	1.375"	1.750"	1.750"
BOX CONNECTION	'RQLD'	'RQLD'	'RQLD'
MAXIMUM OD	1.38"	1.75"	1.88"
LENGTH	12.16"	12.16"	12.16"
MATERIAL	Alloy	Alloy	Alloy

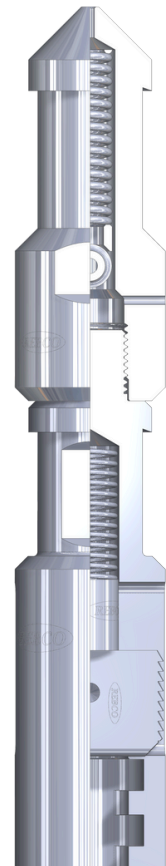


TECHNICAL DATA

NOMINAL SIZE	2"	2 1/8"	2 1/2"
ASSEMBLY NUMBER	10000032000	10000032120	10000032500

ENGINEERING DATA:

FISHING NECK OD	1.750"	1.750"	2.313"
BOX CONNECTION	'RQLD'	'RQLD'	'RQLD'
MAXIMUM OD	2.00"	2.12"	2.50"
LENGTH	12.16"	12.16"	12.16"
MATERIAL	Alloy	Alloy	Alloy





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Type 'BO' Rope Socket Assembly: 3/4" – 2 1/2"

Rebco Type 'BO' Rope Socket (Single Strand) is used to attach the wire to the tool string.

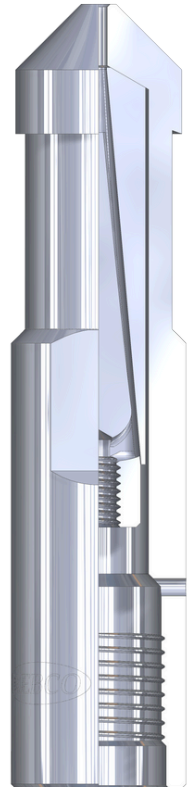
The wire should be passed through the Body and the Sleeve, wrap the wire around the groove of the Cone; tighten the Set Screw. Draw on Wire to pull the Sleeve into the Body.

TECHNICAL DATA

NOMINAL SIZE	3/4"	1"	1 1/4"	1 1/2"	1 3/4"
ASSEMBLY NUMBER	10001200750	10001201000	10001201250	10001201500	10001201750

ENGINEERING DATA:

FISHING NECK OD	.687"	1.000"	1.187"	1.375"	1.750"
BOX THREAD CONNECTION	1/2" - 13	5/8" - 11	15/16" - 10	15/16" - 10	1 1/16" - 10
MAXIMUM OD	.75"	1.00"	1.25"	1.38"	1.75"
LENGTH	3.12"	6.88"	5.56"	5.56"	5.56"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy

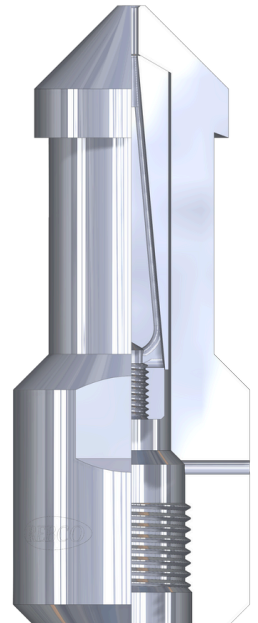


TECHNICAL DATA

NOMINAL SIZE	1 7/8"	2 1/8"	2 1/4"	2 1/2"	2 1/2"
ASSEMBLY NUMBER	10001201870	10001202120	10001202250	10001202500	10001202501

ENGINEERING DATA:

FISHING NECK OD	1.750"	1.750"	1.750"	2.313"	2.313"
BOX THREAD CONNECTION	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10	1 9/16" - 10	1 1/16" - 10
MAXIMUM OD	1.88"	2.12"	2.25"	2.50"	2.50"
LENGTH	5.56"	5.56"	5.56"	6.50"	6.50"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy



Note: Specify Wire Size when ordering. See Selection Table for Wire Sizes



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Type 'BD' Rope Sockets: 1 1/2" – 2 1/2"

Rebco Type 'BD' Rope Sockets are recommended to be used with up to .125" diameter Single Strand Wire.

Type 'BD' Rope Sockets is made up of Type 'BO' Rope Socket Assembly and 'RQLD' Bottom Sub-Assembly.

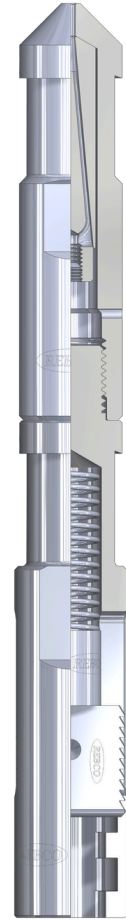
Alloy Material is used to manufacture Rebco ROPE SOCKETS.
Materials suitable for specific well conditions are available.
Specify Wire Size Required

TECHNICAL DATA

NOMINAL SIZE	1 1/2"	1 3/4"	1 7/8"
ASSEMBLY NUMBER	10001031500	10001031750	10001031870

ENGINEERING DATA:

FISHING NECK OD	1.375"	1.750"	1.750"
BOX CONNECTION	'RQLD'	'RQLD'	'RQLD'
MAXIMUM OD	1.38"	1.75"	1.88"
LENGTH	12.16"	12.16"	12.16"
MATERIAL	Alloy	Alloy	Alloy

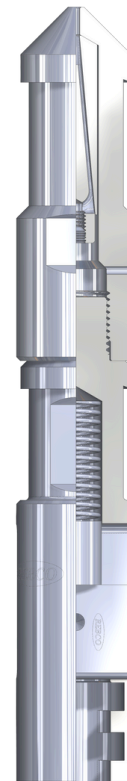


TECHNICAL DATA

NOMINAL SIZE	2 1/8"	2 1/2"
ASSEMBLY NUMBER	10001032120	10001032500

ENGINEERING DATA:

FISHING NECK OD	1.750"	2.313"
BOX CONNECTION	'RQLD'	'RQLD'
MAXIMUM OD	2.12"	2.50"
LENGTH	12.16"	12.16"
MATERIAL	Alloy	Alloy





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Type 'CO' Rope Sockets: 1 1/4" – 2 1/2"

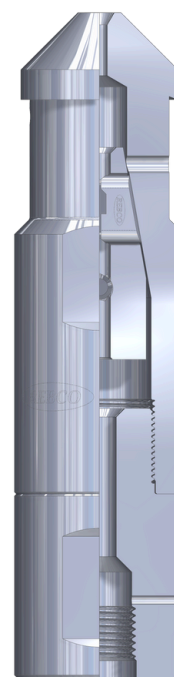
Rebco Type 'CO' Rope Sockets are designed for use with small, stranded lines up to 5/16" diameter.

Type 'CO' Rope Sockets is made up of Body, Bottom Sub, Carriage, Slips and Set Screw.

The Slips are designed to cause the line to break under severe loading at a specific percentage of the full line tensile strength.

If during the downhole operations the Tool String gets stuck, the operator is assured that the line will break at the Rope Socket, rather than up-hole, allowing retrieval of the Wireline.

Type 'CD' Rope Sockets are available - with 'QLS' Rebco 'RQLD' bottom connection. Must be ordered by Wire Size in use and Slips (80% is most common).



TECHNICAL DATA

NOMINAL SIZE	1 1/4"	1 1/2"	1 3/4"
ASSEMBLY NUMBER	1000220125_	1000220150_	1000220175_

ENGINEERING DATA:

FISHING NECK OD	1.375"	1.375"	1.750"
BOX CONNECTION	15/16" - 10	15/16" - 10	1 1/16" - 10
MAXIMUM OD	1.25"	1.50"	1.75"
LENGTH	8.50"	8.50"	8.50"
MATERIAL	Alloy	Alloy	Alloy

TECHNICAL DATA

NOMINAL SIZE	1 7/8"	2 1/8"	2 1/2"
ASSEMBLY NUMBER	1000220187_	1000220212_	1000220250_

ENGINEERING DATA:

FISHING NECK OD	1.750"	1.750"	2.313"
BOX CONNECTION	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
MAXIMUM OD	1.88"	2.12"	2.50"
LENGTH	8.50"	8.50"	8.50"
MATERIAL	Alloy	Alloy	Alloy

* Assembly Number is determined by Wire Size, See Wire Size Chart



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Type 'CD' Rope Sockets: 1 1/2" – 2 1/2"

Rebco Type 'CD' Rope Sockets are designed for use with small, stranded lines up to 5/16" diameter.

Type 'CD' Rope Sockets is made up of Type 'CO' Rope Socket Assembly and 'RQLD' Bottom Sub-Assembly.

The Slips are designed to cause the line to break under severe loading at a specific percentage of the full line tensile strength.

If during the downhole operations the Tool String gets stuck, the operator is assured that the line will break at the Rope Socket, rather than up-hole, allowing retrieval of the Wireline.

Alloy Material is used to manufacture **Rebco** ROPE SOCKETS. Materials suitable for specific well conditions are available.

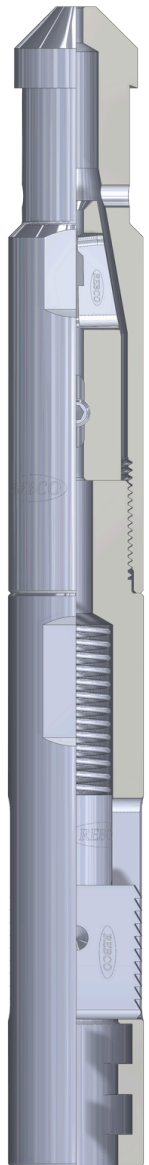
Must be ordered by Wire Size in use and Slips (80% is most common).

TECHNICAL DATA

NOMINAL SIZE	1 1/2"	1 7/8"	2 1/8"	2 1/2"
ASSEMBLY NUMBER	1000203150_	1000203187_	1000203212_	1000203250_

ENGINEERING DATA:

FISHING NECK OD	1.375"	1.750"	1.750"	2.313"
BOX THREAD CONNECTION	'RQLD'	'RQLD'	'RQLD'	'RQLD'
MAXIMUM OD	1.50"	1.88"	2.12"	2.50"
LENGTH	13.1"	13.1"	13.1"	13.1"
MATERIAL	Alloy	Alloy	Alloy	Alloy





SECTION I: TOOL STRING

Type 'D' Rope Sockets: 1 1/4" - 2 1/2"

Rebco Type 'D' Dummy Rope Sockets are available with threaded or 'RQLS'/'RQLD' Connections.

The advantage of this tool is that it can be attached to other types of tools with Pin connection for a variety of Wireline applications.

Alloy Material is used to manufacture Rebco ROPE SOCKETS. Materials suitable for specific well conditions are available.

Sizes not listed are also available, please enquire.



TECHNICAL DATA								
NOM SIZE	CONNECTION				ENGINEERING			
	THREADED	PART NUMBER	QLS	PART NUMBER	LENGTH		MAX OD	FN
					THREAD	QLS		
1 1/4"	15/16" - 10	100035	'RQLS'	10003145	5.56"	6.6"	1.25"	1.187"
1 1/2"	15/16" - 10	100036	'RQLD'	10003036	5.56"	6.6"	1.50"	1.375"
1 3/4"	1 1/16" - 10	100037	'RQLD'	10003037	5.56"	6.6"	1.75"	1.750"
1 7/8"	1 1/16" - 10	1000315	'RQLD'	100030315	5.56"	6.6"	1.88"	1.750"
2 1/8"	1 1/16" - 10	1000324	'RQLD'	100030324	5.56"	6.6"	2.12"	1.750"
2 1/2"	1 9/16" - 10	1000325	'RQLD'	100030325	6.50"	6.6"	2.50"	2.313"



SECTION I: TOOL STRING

Type 'GOS' Single Conductor Cable Head Assembly: 1 7/16" - 1 11/16"

Rebco Type 'GOS' Single Conductor Cablehead Assembly provides mechanical and Electrical Connections from the wireline cable to the tool string.

The Assembly has a Spring-Loaded Contact Plug..

Alloy Material is used to manufacture Rebco ROPE SOCKETS.
Materials suitable for specific well conditions are available.
Must be ordered by Wire Size in use.

TECHNICAL DATA						
NOMINAL SIZE	ASSEMBLY NO.	FISH NECK OD	MAX. OD	BOX THD CONNECTION	FOR CABLE SIZE	LENGTH
1 7/16"	100052014144009	1.00"	1.44"	1 3/16" - 12 Pin	1/8"	13.76"
	100052014144004				3/16"	
	100052014144005				7/32"	
	100052014144006				1/4"	
	100052014144007				5/16"	
	100052014144012				7/16"	
1 11/16"	100052014169009	1.375"	1.687"	1 3/16" - 12 Pin	1/8"	13.76"
	100052014169004				3/16"	
	100052014169005				7/32"	
	100052014169006				1/4"	
	100052014169007				5/16"	
	100052014169012				7/16"	

Sizes not listed are also available, please enquire.





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Type 'RC' Rope Socket Assembly: 1 1/2"

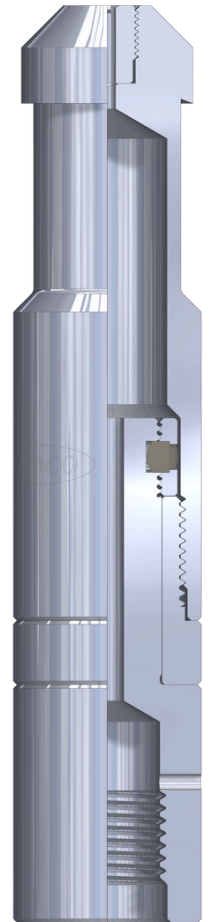
Rebco Type 'RC' Rope Socket is designed to connect a Capsulated Line to the Tool String. The wear bushing and swivel design, prevent damage to the wire.

The Capsulated Line is inserted through the wear bushing, and the Body. The clamp is tightened to the line and pulled into the Rope Socket.

A connector sub is slipped over the bottom sub, a retainer is screwed and secured by a set screw.

The bottom sub and the connector sub are made up to the Body.

Alloy Material is used to manufacture **Rebco** ROPE SOCKETS.
Materials suitable for specific well conditions are available.
Must be ordered by Wire Size in use.



TECHNICAL DATA

NOMINAL SIZE	ASSEMBLY NO.	FISH NECK OD	MAX. OD	BOX THD CONNECTION	FOR CABLE SIZE	LENGTH
1 1/2"	100130215001	1.375"	1.50"	15/16"-10 Pin	1/8"	7.285"
1 1/2"	100130215002	1.375"	1.50"	15/16"-10 Pin	1/4"	7.285"

Sizes not listed are also available, please enquire.



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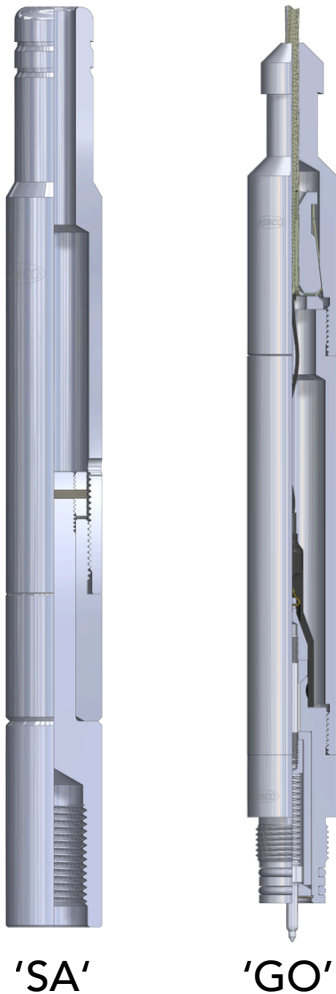
Type '**CGO**' Rope Socket Assembly: 1 1/2" - 1 7/8"

Rebco Type '**CGO**' Rope Sockets are designed for use with small stranded lines, up to 1/4" diameter. Similar in design as **Rebco** Type '**CO**' Rope Sockets, the Tool has an additional swivel bottom.

Additional Types of Rope Sockets available:

Type '**GO**' Rope Socket Assembly: 1000520_
Single Conductor Cable Head

Type '**SA**' Rope Socket Assembly: 1001400_
Swabbing Rope Sockets for Babbitt fill





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Type 'HO' Heavy Duty Rope Socket Assembly – Threaded Connection: 1 1/2" – 2 1/2"

Rebco Type 'HO' Heavy Duty Rope Socket is designed for Heavy Duty Wireline Work.

The wire should be passed through the body and the clamp Sub-Assembly. The unique design will trap the wire; held in place by socket screws.

The diameter of the Wire to be used determines the Assembly Number. To Select the wire diameter, see the selection table.

Alloy Material is used to manufacture **Rebco** Rope Sockets. Materials suitable for specific well conditions are available.

Must be ordered by Wire Size in use.



TECHNICAL DATA

NOMINAL SIZE	1 1/2"	1 3/4"	1 7/8"	2 1/8"	2 1/2"
ASSEMBLY NUMBER	10006201500_	10006201750_	10006201870_	10006202120_	10006202500_

ENGINEERING DATA:

MAXIMUM OD	1.50"	1.75"	1.88"	2.12"	2.50"
FISHING NECK OD	1.375"	1.750"	1.750"	1.750"	2.313"
LENGTH	13.1"	14.75"	14.75"	14.75"	14.75"
BOTTOM CONNECTION	15/16" - 10	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy



SECTION I: TOOL STRING

Type '**HD**' Heavy Duty Rope Socket Assembly – '**QLS**' Connection: 1 1/2" – 2 1/2"

Rebco Type '**HD**' Heavy Duty Rope Socket is designed for Heavy Duty Wireline Work.

Type '**HD**' Rope Socket is made up of Type '**HO**' Rope Socket Assembly with an '**RQLD**' Bottom Sub-Assembly.

The wire should be passed through the body and the clamp Sub-Assembly. The unique design will trap the wire; held in place by socket screws.

Alloy Material is used to manufacture Rebco Rope Sockets. Materials suitable for specific well conditions are available.

Must be ordered by Wire Size in use.

TECHNICAL DATA

NOMINAL SIZE	1 1/2"	1 3/4"	1 7/8"	2 1/8"	2 1/2"
ASSEMBLY NUMBER	10006031500_	10006031750_	10006031870_	10006032120_	10006032500_

ENGINEERING DATA:

MAXIMUM OD	1.50"	1.75"	1.88"	2.12"	2.50"
FISHING NECK OD	1.375"	1.750"	1.750"	1.750"	2.313"
LENGTH	17.45"	19.1"	19.1"	19.1"	19.1"
BOTTOM CONNECTION	'RQLD'	'RQLD'	'RQLD'	'RQLD'	'RQLD'
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy





SECTION I: TOOL STRING

Type 'HO' Swivel Joint Assembly: 1" – 2 1/2"

Rebco Type 'HO' Swivel Joint was designed to minimize the twisting of the Wireline when running the Tools down hole.

Type 'HO' Swivel Joint is with Threaded Connection.

Alloy Material is used to manufacture Rebco Swivel Joints Materials suitable for specific well conditions are available.

Must be ordered by Wire Size in use.

Product Code: 104

TECHNICAL DATA

NOMINAL SIZE	1"	1 1/4"	1 1/2"	1 3/4"	1 7/8"
ASSEMBLY NUMBER	10406201000	10406201250	10406201500	10406201750	10406201870

ENGINEERING DATA:

FISHING NECK OD	.750"	1.187"	1.375"	1.750"	1.750"
PIN-BOX THREAD CONNECTION	5/8" - 11	15/16" - 10	15/16" - 10	1 1/16" - 10	1 1/16" - 10
MAXIMUM OD	1.00"	1.25"	1.50"	1.75"	1.88"
LENGTH	6.46"	10.88"	10.88"	10.85"	10.85"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy

ACCESSORIES

WRENCH for BALL CONNECTOR	1670011	1670010	1670010	1670010	1670010
---------------------------	---------	---------	---------	---------	---------



TECHNICAL DATA

NOMINAL SIZE	2"	2 1/8"	2 1/2"	2 1/2"
ASSEMBLY NUMBER	10406202000	10406202120	10406202500	10406202501

ENGINEERING DATA:

FISHING NECK OD	1.750"	1.750"	2.313"	2.313"
PIN-BOX THREAD CONNECTION	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10	1 9/16" - 10
MAXIMUM OD	2.00"	2.12"	2.50"	2.50"
LENGTH	10.85"	10.85"	11.25"	11.25"
MATERIAL	Alloy	Alloy	Alloy	Alloy

ACCESSORIES

WRENCH for BALL CONNECTOR	1670010	1670010	1670010	1670010
---------------------------	---------	---------	---------	---------





SECTION I: TOOL STRING

Type 'HD' Swivel Joint Assembly: 1 1/2" – 2 1/2"

Rebco Type 'HD' Swivel Joint was designed to minimize the twisting of the Wireline when running the Tools down hole.

Type 'HD' Swivel Joint is with 'QLS' - 'RQLD' Connection.

Alloy Material is used to manufacture Rebco Swivel Joints. Materials suitable for specific well conditions are available.

Must be ordered by Wire Size in use.

TECHNICAL DATA

NOMINAL SIZE	1 1/2"	1 3/4"	1 7/8"	2 1/8"	2 1/2"
ASSEMBLY NUMBER	10406031500	10406031750	10406031870	10406032120	10406032500

ENGINEERING DATA:

FISHING NECK OD	1.375"	1.750"	1.750"	1.750"	2.313"
'QLS' CONNECTION	'RQLD'	'RQLD'	'RQLD'	'RQLD'	'RQLD'
MAXIMUM OD	1.50"	1.75"	1.88"	2.12"	2.50"
LENGTH	14.53"	14.75"	14.75"	14.75"	16.5"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy

ACCESSORIES

WRENCH for BALL CONNECTOR	1670011	1670010	1670010	1670010	1670010
---------------------------	---------	---------	---------	---------	---------

* **ACCESSORY:** Wrench for the Ball Connector See **PRODUCT CODE 167**





SECTION I: TOOL STRING

Product Code: 101

Rebco STEMS (Weight Bar): provide added weight to the Wireline Tool String, to counteract the wellbore pressure and effectiveness of the impact delivered by Jars ([Product Code 102](#)).

Rebco offers variety of Stem Types (Table - Availability), for specific applications.

Alloy Material is used to manufacture **Rebco** STEMS. Materials suitable for specific Well conditions are available.

Type of STEMS: Availability Table

TECHNICAL DATA				
TYPE			ASSEMBLY PART NUMBER	DESCRIPTION
Thread	QLS *			
	Single	Double		
		'AD'	1010003-	Solid Bar
	'AS'		1010014-	
'A'			10100-	
		'BD'	1010103-	Lead Filled
	'BS'		1010114-	
'BO'			1010120-	
		'ED'	1010203-	Roller Stem
	'ES'		1010214-	
'EO'			1010220-	
		'TD'	1011503-	Tungsten Filled
	'TS'		1011514-	
'TO'			1011520-	

QLS - Quick Lock System

'RQLS' Single Shoulder

'RQLD' Double Shoulder, Heavy Duty

Rebco - Helpful Hint: How to Determine the Required Stem Weight

Example: 1 1/2" Diameter Stem

As a general rule of thumb, a minimum of 5 feet of stem (approximately 29.2 lbs) is used for well pressures up to 1,000 psi. For each additional 1,000 psi of pressure, add 2 feet of stem (approximately 11.0 lbs).

Formulas for Estimating Stem Weight (lbs/ft):

(a) Approximate formula based on diameter (D in inches):

$$(D^2 \times 8) \div 3 = \text{lbs/ft}$$

(b) More accurate formula based on radius (r in inches):

$$\text{Weight (lbs/ft)} = 10.68 \times r^2$$

- r is the radius of the stem in inches

- Density of steel is assumed to be 490.06 lbs/ft³

- To convert from lbs/ft to kg/m, multiply by 1.487

Note: Refer to the Density/Weight Comparison of Metals chart for other materials used in stem manufacturing on the page below.

METAL	Density Lbs/ft ³	WEIGHT		Example 1 1/2" X 5 ft.
		Kgs/m ³	Lbs/ft ³	
Steel	490.06	7,850	489.84	29.2 lbs
Lead Fill	708	11,340	707.62	35.8 lbs
Tungsten Fill	976	19,600	1,223.04	58.15 lbs



SECTION I: TOOL STRING

Type 'A' Stem (Weight Bar): **3/8" – 2 1/2"**

Rebco Type 'A' Solid Bar Stems are with Threaded Connections – (1 1/4" - 2 1/2" Sucker Rod Type) 3/8" and 1/2" Diameter Stem is used for Velocity String Type completions

Note: All **Rebco** Tools have machined Flats for safer use.

TECHNICAL DATA				
ASSEMBLY PART NUMBER	NOMINAL SIZE (OD)	ENGINEERING DATA		
		LENGTH	THREAD CONNECTIONS	FISHING NECK
101000372	3/8"	24"	1/4" - 20 UNC	None
101000373		36"		
101000375		60"		
101000502	1/2"	24"	3/8" - 16 UNC	None
101000503		36"		
101000505		60"		
101000752	3/4"	24"	1/2" - 13 UNC	.687"
101000753		36"		
101000755		60"		
101001002	1"	24"	5/8" - 11 UNC	.750"
101001003		36"		
101001005		60"		
101001252	1 1/4"	24"	15/16" - 10 UNS	1.187"
101001253		36"		
101001255		60"		
101001502	1 1/2"	24"	1 1/16" - 10 UNS	1.375"
101001503		36"		
101001505		60"		
101001752	1 3/4"	24"	1 1/16" - 10 UNS	1.750"
101001753		36"		
101001755		60"		
101001872	1 7/8"	24"	1 1/16" - 10 UNS	1.750"
101001873		36"		
101001875		60"		
101002122	2 1/8"	24"	1 1/16" - 10 UNS	2.313"
101002123		36"		
101002125		60"		
101002502	2 1/2"	24"	1 9/16" - 10 UNS	2.313"
101002503		36"		
101002505		60"		
101002512		24"		
101002513		36"		
101002515		60"		

Alloy material is used to manufacture **Rebco** Stems; for severe conditions more suitable materials are available.





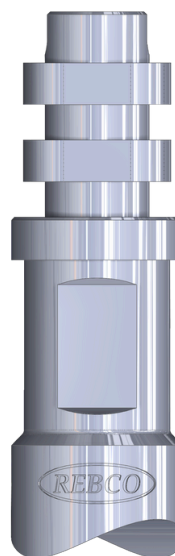
SECTION I: TOOL STRING

Type 'AD' Stem (Weight Bar): 1 1/2" – 2 1/2"

Rebco Type 'AD' Stems are with integral QLS (Quick Lock System) Connections -

Rebco Type 'RQLD'

TECHNICAL DATA				
ASSEMBLY PART NUMBER	NOMINAL SIZE (OD)	ENGINEERING DATA		
		LENGTH	'QLS' CONNECTIONS	FISHING NECK
10100031502	1 1/2"	24"	'RQLD'	1.375"
10100031503		36"		
10100031505		60"		
10100031752	1 3/4"	24"		1.750"
10100031753		36"		
10100031755		60"		
10100031872	1 7/8"	24"		
10100031873		36"		
10100031875		60"		
10100032122	2 1/8"	24"		
10100032123		36"		
10100032125		60"		
10100032502	2 1/2"	24"		2.313"
10100032503		36"		
10100032505		60"		



ACCESSORIES: Useful Tools to service integral 'QLS' Connections

- Rebco Type 'RQLS' and 'RQLD'

QLS SIZE	DESCRIPTION			
	INSTALLATION TOOL		RELEASE TOOL	
1 1/4"	PART NUMBER	1040142	PART NUMBER	1040119
1 1/2" – 2 1/8"		1040118		
2 1/2"		104011		104012

For more detailed description of QLS see [SECTION VII](#).

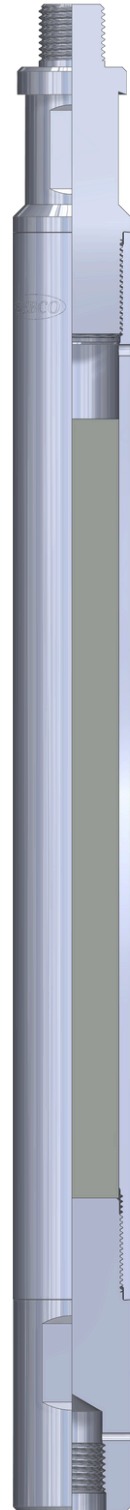


SECTION I: TOOL STRING

Type 'BO' Lead Filled Stem (Weight Bar): 1 1/4" – 2 1/2"

Rebco Type 'BO' Lead Filled Stems are with Threaded Connections – (Sucker Rod Type)

TECHNICAL DATA					
ASSEMBLY PART NUMBER	NOMINAL SIZE (OD)	ENGINEERING DATA			
		LENGTH	THREAD CONNECTIONS	FISHING NECK	
10101201252	1 1/4"	24"	15/16" - 10	1.187"	
10101201253		36"			
10101201255		60"			
10101201502	1 1/2"	24"		1.375"	
10101201503		36"			
10101201505		60"			
10101201752	1 3/4"	24"	1 1/16" - 10	1.750"	
10101201753		36"			
10101201755		60"			
10101201872	1 7/8"	24"			
10101201873		36"			
10101201875		60"			
10101202122	2 1/8"	24"			2.313"
10101202123		36"			
10101202125		60"			
10101202502	2 1/2"	24"		1 9/16" - 10	
10101202503		36"			
10101202505		60"			
10101202512		24"			
10101202513		36"			
10101202515		60"			



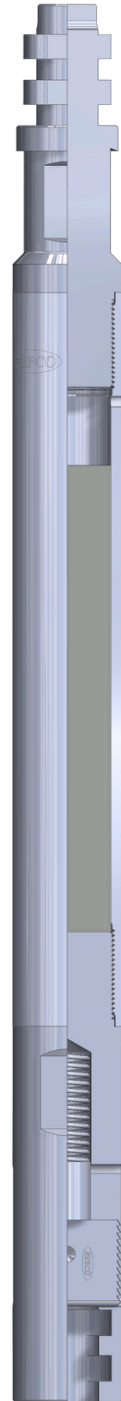


SECTION I: TOOL STRING

Type '**BD**' Lead Filled Stem (Weight Bar): **1 1/2" – 2 1/2"**

Rebco Type '**BD**' Lead Filled Stems are with integral QLS (Quick Lock System) - **Rebco** Type '**RQLD**'

TECHNICAL DATA				
ASSEMBLY PART NUMBER	NOMINAL SIZE (OD)	ENGINEERING DATA		
		LENGTH	'QLS' CONNECTIONS	FISHING NECK
10101031502	1 1/2"	24"	'RQLD'	1.375"
10101031503		36"		
10101031505		60"		
10101031752	1 3/4"	24"		1.750"
10101031753		36"		
10101031755		60"		
10101031872	1 7/8"	24"		
10101031873		36"		
10101031875		60"		
10101032122	2 1/8"	24"		
10101032123		36"		
10101032125		60"		
10101032502	2 1/2"	24"		2.313"
10101032503		36"		
10101032505		60"		





SECTION I: TOOL STRING

Type 'EO' Roller Stem (Weight Bar): 1 1/4" – 2 1/2"

Rebco Type 'EO' Roller Stems are with Threaded Connections – (Sucker Rod Type)

TECHNICAL DATA

ASSEMBLY PART NUMBER	NOMINAL SIZE (OD)	ENGINEERING DATA				
		LENGTH	THREAD CONNECTIONS	FISHING NECK	NUMBER ROLLERS	ROLLER OD *
10104201252	1 1/4"	24"	15/16" - 10	1.187"	2	1.50"
10104201253		36"			3	
10104201255		60"			4	
10104201502	1 1/2"	24"		1.375"	2	1.75"
10104201503		36"			3	
10104201505		60"			4	
10104201752	1 3/4"	24"	1 1/16" - 10	1.750"	2	2.20"
10104201753		36"			3	
10104201755		60"			4	
10104201872	1 7/8"	24"			2	2.75"
10104201873		36"			3	
10104201875		60"			4	
10104202122	2 1/8"	24"		2.313"	2	
10104202123		36"			3	
10104202125		60"			4	
10104202502	2 1/2"	24"			2	3.25"
10104202503		36"			3	
10104202505		60"			4	





SECTION I: TOOL STRING

Type 'ED' Roller Stem (Weight Bar): 1 1/4" – 2 1/2"

Rebco Type 'ED' Roller Stems are with integral QLS (Quick Lock System) - Rebco Type 'RQLD'

TECHNICAL DATA

ASSEMBLY PART NUMBER	NOMINAL SIZE (OD)	ENGINEERING DATA				
		LENGTH	'QLS' CONNECTIONS	FISHING NECK	NUMBER ROLLERS	ROLLER OD *
10104031502	1 1/2"	24"	RQLD'	1.375"	2	1.75"
10104031503		36"			3	
10104031505		60"			4	
10104031752	1 3/4"	24"		1.750"	2	2.20"
10104031753		36"			3	
10104031755		60"			4	
10104031872	1 7/8"	24"			2	
10104031873		36"			3	
10104031875		60"			4	
10104032122	2 1/8"	24"			2	2.75"
10104032123		36"			3	
10104032125		60"			4	
10104032502	2 1/2"	24"		2.313"	2	3.25"
10104032503		36"			3	
10104032505		60"			4	

* Material, OD of Rollers, No. of Rollers and Configuration can be changed to suit. Please specify





SECTION I: TOOL STRING

Product Code: 102

Rebco JARS are the main work Tools of a Wireline Tool String; it is through their proper manipulation that all wire line sub-surface operations are possible.

Type '**AO**', '**AD**' and '**AS**' Link Jar Assembly: 3/4" – 2 1/2"

Rebco offers three types of Link Jars:

1. Type '**AO**' - Threaded Connections
2. Type '**AD**' - 'QLS' Connections with 'RQLD'
3. Type '**AS**' - QLS' Connections with 'RQLS'

Link Jars consist of two interlocking steel links with a Fishing Neck and Pin-Box connection. The interlocking steel links can be extended or collapsed by manipulating the Wireline at the surface to produce upward or downward jarring. The intensity of jarring impact depends on the weight of the Wireline Stem (**PRODUCT CODE 101**) installed above the Jar, and the stroke of the Jar as well as the wellbore conditions.

TECHNICAL DATA								
MAX OD	STROKE	ASSEMBLY NO		FN OD	CONNECTION		LENGTH	
		THREADED	'QLS'		THREAD	'QLS'	CLOSED	OPEN
3/4"	6.0"	10200200756					14.0"	26.0"
	10.0"	10200200751	NONE	.687"	1/2" - 13	NONE	18.0"	38.0"
1"	7.0"	10200201007					14.2"	28.5"
	10.0"	10200201001	NONE	1.000"	5/8" - 11	NONE	18.2"	38.4"
	14.0"	10200201014					26.0"	42.0"
1 1/4"	20.0"	10200201252	10200141252				43.54"	62.87"
	30.0"	10200201253	10200141253	1.187"	15/16" - 10	'RQLS'	53.54"	82.87"
1 1/2"	20.0"	10200201502	10200031502				43.54"	62.87"
	30.0"	10200201503	10200031503	1.375"	15/16" - 10	'RQLD'	53.54"	82.87"
1 3/4"	20.0"	10200201752	10200031752				43.50"	62.74"
	30.0"	10200201753	10200031753	1.750"	1 1/16" - 10	'RQLD'	53.50"	82.74"
1 7/8"	20.0"	10200201872	10200031872				43.50"	62.74"
	30.0"	10200201873	10200031873	1.750"	1 1/16" - 10	'RQLD'	53.50"	82.74"
2 1/8"	20.0"	10200202122	10200032122				43.54"	62.63"
	30.0"	10200202123	10200032123	1.750"	1 1/16" - 10	'RQLD'	53.54"	82.63"
2 1/2"	20.0"	10200202502	10200032502	2.313"	1 1/16" - 10	'RQLD'	45.50"	62.49"
		10200202512			1 9/16" - 10			
	30.0"	10200202503	10200032503		1 1/16" - 10	'RQLD'	55.50"	82.49"
		10200202513			1 9/16" - 10			

Parts: To service integral QLS Connections
- **Rebco** Type 'RQLS' and 'RQLD'

QLS SIZE	PART NAME		
	SPRING - 1	GUIDE - 2	LOCK - 3
	PART NUMBER	PART NUMBER	PART NUMBER
1 1/4"	900016	104011	104015
1 1/2"			1040110
1 3/4"			1040122
1 7/8"			1040115
2 1/8"			1040128
2 1/2"			1040131



SECTION I: TOOL STRING

Type 'BO' and 'BD' Hydraulic Jar Assembly: 1 1/4" – 2 1/8"

Rebco Hydraulic Jar is used to apply high impact force. The closed hydraulic system within the jar makes it possible for the jarring impact to be controlled.

The intensity of the impact is proportionate to the full force on the Wireline and to the weight of Stem. To activate the jars for next jarring impact, setting down the weight of the tool string, the internal metering of the hydraulic fluid sets the jars for activating force.

Hydraulic fluid can be substituted to suit the needs of the operator; **caution:** should prevail to achieve the same end result.

Type 'BO' - Threaded Connection



TECHNICAL DATA

NOMINAL SIZE (OD)	ASSEMBLY PART NUMBER	ENGINEERING DATA			
		MAX OD	CONNECTIONS	FISHING NECK	LENGTH
1 1/4"	10201201250	1.25"	15/16" - 10	1.187"	29.0"
1 1/2"	10201201500	1.50"	15/16" - 10	1.375"	29.5"
1 3/4"	10201201750	1.75"	1 1/16" - 10	1.750"	32.64"
1 7/8"	10201201870	1.88"			36.1"
2 1/8"	10201202120	2.12"		2.313"	
2 1/2"	10201202500	2.50"		1 9/16" - 10	2.313"
	10201202501				



SECTION I: TOOL STRING

Type 'BD' - QLS Connection

TECHNICAL DATA					
NOMINAL SIZE (OD)	ASSEMBLY PART NUMBER	ENGINEERING DATA			
		MAX OD	CONNECTIONS	FISHING NECK	LENGTH
1 1/4"	10201141250	1.25"	'RQLS'	1.187"	30.63"
1 1/2"	10201031500	1.50"	'RQLD'	1.375"	31.12"
1 3/4"	10201031750	1.75"		1.750"	34.27"
1 7/8"	10201031870	1.88"			37.75"
2 1/8"	10201032120	2.12"			
2 1/2"	10201032500	2.50"		2.313"	38.38"

Type 'BO' and Type 'BD' Hydraulic Jar - Re Dress (Service) Kits:

TECHNICAL DATA		
NOMINAL SIZE (OD)	SERVICE KIT	
	Type 'BOK'	Type 'BDK' *
1 1/4"	102012024125	102011424125
1 1/2"	102012024150	102010324150
1 3/4"	102012024175	102010324175
1 7/8"	102012024187	102010324187
2 1/8"	102012024212	102010324212
2 1/2"	102012024250	102010324250

* NOTE: Type 'BDK' also includes QLS Parts





SECTION I: TOOL STRING

Type 'CO' and 'CD' Knuckle Jar Assembly: 1 1/4" – 2 1/2"

Rebco Knuckle Jar is similar in design to the Knuckle Joint ([Product Code 103](#)), the difference being is that the Knuckle Jar in addition to its flexibility is used as a Tubular Jar ([Product Code 102](#)).

Typically, Knuckle Jar is used with BHP work and light duty Wireline applications.

Rebco offers Knuckle Jars with 2", 4", 6", and 8" Stroke and double Fishing.

TECHNICAL DATA						
ASSEMBLY PART NUMBER	MAX OD	STROKE LENGTH (Inches)	ENGINEERING DATA			
			FISHING NECK	THREAD CONNECTIONS	LENGTH (Inches)	
					Closed	Open
10202201252	1 1/4"	2	1.187"	15/16" - 10	12.8	14
10202201254		4			14.8	18
10202201256		6			16.8	22
10202201258		8			18.8	26
10202201502	1 1/2"	2	1.375"	15/16" - 10	12.25	14
10202201504		4			14.25	18
10202201506		6			16.37	22
10202201508		8			18.37	26
10202201752	1 3/4"	2	1.750"	1 1/16" - 10	12.96	14.96
10202201754		4			14.96	18.96
10202201756		6			16.96	22.96
10202201758		8			18.96	26.96
10202201872	1 7/8"	2	1.750"	1 1/16" - 10	12.96	14.96
10202201874		4			14.96	18.96
10202201876		6			16.96	22.96
10202201878		8			18.96	26.96
10202202124	2 1/8"	4	1.750"	1 1/16" - 10	14.96	18.96
10202202126		6			16.96	22.96
10202202504	2 1/2"	4	2.313"	1 1/16" - 10	12.96	14.96
10202202506		6		1 9/16" - 10	14.96	18.96
10202202514		4			16.96	22.96
10202202516		6			18.96	26.96



Rebco Type 'CO' Knuckle Jar

Closed



Open

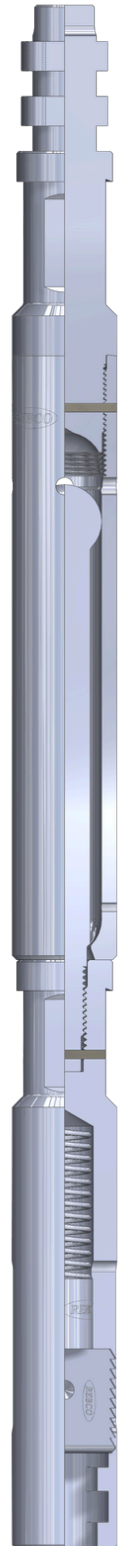


SECTION I: TOOL STRING

Type 'CO' and 'CD' Knuckle Jar Assembly:

TECHNICAL DATA						
ASSEMBLY PART NUMBER	MAX OD	STROKE LENGTH (Inches)	ENGINEERING DATA			
			FISHING NECK	CONNECTION	LENGTH (Inches)	
					Closed	Open
10202031504	1 1/2"	4	1.375"	'RQLD'	19.75	23.38
10202031506		6			21.75	27.75
10202031874	1 7/8"	4	1.750"	'RQLD'	19.75	23.75
10202031876		6			21.75	27.75
10202032124	2 1/8"	4	1.750"	'RQLD'	19.94	23.94
10202032126		6			21.94	27.94
10202032504	2 1/2"	4	2.313"	'RQLD'	20.44	24.44
10202032506		6			22.44	28.44

Rebco Type 'CS' Knuckle Jar with 'RQLS' connection is available



Rebco Type 'CD'
Knuckle Jar



SECTION I: TOOL STRING

Type 'DO' and 'DD' Tubular Jar Assembly: 1/2" – 2 1/2"

Rebco Tubular Jar consists of a perforated tube for fluid by-pass, and a mandrel connected to the fishing neck. A telescoping mandrel is extended or collapsed within the tube by manipulating the Wireline at the surface, thus jarring action is produced. As in Type 'AO' Link Jars, the intensity of jarring impact depends on the weight of Stem and wellbore conditions.

Rebco offers Tubular Jars with various Stroke lengths, Tool String Connections, and added feature of the double Fishing Neck.

Type 'DO' - Threaded Connection

TECHNICAL DATA

NOMINAL SIZE (OD)	STROKE	ASSEMBLY PART NUMBER	ENGINEERING DATA				
			MAX OD	CONNECTION	FISHING NECK	LENGTH	
1/2 "	6 "	10203200500	.50"	3/8" - 16	NONE	13.5"	
3/4 "	6.0"	10203200750	.75"	1/2" - 13	.687"	14.0"	
	10.0"	10203200751				18.0"	
1 "	6.0"	10203201000	1.00"	5/8" - 11	.750"	14.2"	
	10.0"	10203201001				18.0"	
	14.0"	10203201002				26.0"	
1 1/4"	20.0"	10203201252	1.25"	15/16" - 10	1.187"	32.12"	
	30.0"	10203201253				42.12"	
1 1/2"	20.0"	10203201502	1.50"		1.375"	35.48"	
	24.0"	10203201524				39.48"	
	30.0"	10203201503				45.48"	
1 3/4"	20.0"	10203201752	1.75"	1 1/16" - 10	1.750"	35.48"	
	30.0"	10203201753				45.48"	
1 7/8"	20.0"	10203201872	1.88"			36.52"	
	24.0"	10203201824				40.52"	
	30.0"	10203201873				46.52"	
2 1/8"	20.0"	10203202122	2.12"				43.54"
	30.0"	10203202123					53.54"
2 1/2"	20.0"	10203202502	2.50"		2.313"	34.22"	
		10203202512		1 9/16" - 10			
	30.0"	10203202503		1 1/16" - 10		44.22"	
		10203202513		1 9/16" - 10			





SECTION I: TOOL STRING

Type '**DD**' - QLS Connection

TECHNICAL DATA						
NOMINAL SIZE (OD)	STROKE	ASSEMBLY PART NUMBER	ENGINEERING DATA			
			MAX OD	CONNECTION	FISHING NECK	LENGTH
1 1/4"	20.0"	10203141252	1.25"	'RQLS'	1.187"	33.88"
	30.0"	10203031253				43.87"
1 1/2"	20.0"	10203031502	1.50"	'RQLD'	1.375"	38.48"
	24.0"	10203031524				42.48"
	30.0"	10203031503				48.48"
1 3/4"	20.0"	10203031752	1.75"		1.750"	37.23"
	30.0"	10203031753				47.25"
1 7/8"	20.0"	10203031872	1.88"			38.27"
	24.0"	10203031824				42.28"
	30.0"	10203031873				46.52"
2 1/8"	20.0"	10203032122	2.12"			48.27"
	30.0"	10203032123				55.29"
2 1/2"	20.0"	10203032502	2.50"		2.313"	38.13"
		10203032512				





SECTION I: TOOL STRING

Type 'SO' and 'SD' Spring Jar Assembly: 1 1/2" – 2 1/2"

Rebco Spring Jar is a telescoping up-stroke Jar installed below the Stem.

The impact force can be predetermined at surface by the Operator with the Calibration Unit shown below.

Rebco offers Spring Jars with Threaded or QLS Connections.

Type 'SO' - Threaded Connection

TECHNICAL DATA

NOMINAL SIZE (OD)	ASSEMBLY PART NUMBER	ENGINEERING DATA			
		MAX OD	CONNECTION	FISHING NECK	LENGTH
1 1/2"	10214201500	1.50"	15/16" - 10	1.375"	35.68"
1 3/4"	10214201750	1.75"	1 1/16" - 10	1.750"	37.55"
1 7/8"	10214201870	1.88"			
2 1/8"	10214202120	2.12"			
2 1/2"	10214202500	2.50"	1 9/16" - 10	2.313"	38.65"
	10214202501				38.90"





SECTION I: TOOL STRING

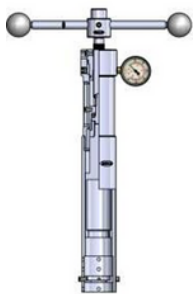
Type '**SD**' - QLS Connection

TECHNICAL DATA					
NOMINAL SIZE (OD)	ASSEMBLY PART NUMBER	ENGINEERING DATA			
		MAX OD	CONNECTION	FISHING NECK	LENGTH
1 1/2"	10214031500	1.50"	'RQLD'	1.375"	42.38"
1 3/4"	10214031750	1.75"		1.750"	43.40"
1 7/8"	10214031870	1.88"			
2 1/8"	10214032120	2.12"			
2 1/2"	10214032500	2.50"		2.313"	44.00"

ACCESSORIES: Shown Tools are necessary to set the Jars for desired Impact. Tools are priced separately. Order by PART NUMBER shown.

TOOL	SIZE	PART NUMBER
CALIBRATION UNIT	1 1/2" - 2 1/8"	10202161
	2 1/2"	10202162
ADJUSTMENT WRENCH	1 1/2"	1021433
	1 3/4" - 2 1/8"	1021434
	2 1/2"	1021451
RELEASE WRENCH	1 1/2"	1021413
	1 3/4" - 2 1/8"	1021435
	2 1/2"	1021449
		1021450

NOTE: See **Rebco** 'DOM' (Design and Operating Manual) for proper Service and Setting of **Rebco** Type '**SO**' and Type '**SD**' Jars.



Calibration Unit



Adjustment Wrench



Release Wrench





SECTION I: TOOL STRING

Product Code: 102

Type 'EO' and 'ED' Accelerator Assembly: 1 1/2" – 2 1/2"

Rebco Accelerator is designed to be used with various Jars. The Accelerator assists in maintaining a constant pull as the Jars open, and upon release, the impact is intensified.

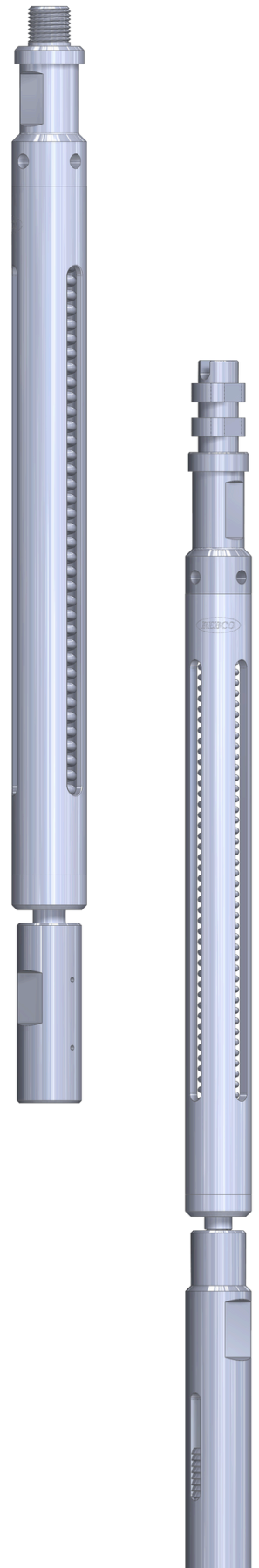
Rebco offers Accelerator with Threaded and QLS Connections.

Type 'EO' -Threaded Connection

TECHNICAL DATA					
NOMINAL SIZE (OD)	ASSEMBLY PART NUMBER	ENGINEERING DATA			
		MAX OD	CONNECTION	FISHING NECK	LENGTH
1 1/2"	10204201500	1.50"	15/16" - 10	1.375"	22.66"
1 3/4"	10204201750	1.75"	1 1/16" - 10	1.750"	
1 7/8"	10204201870	1.88"			
2 1/8"	10204202120	2.12"		27.44"	
2 1/2"	10204202500	2.50"	1 9/16" - 10		2.313"
	10204202501				

Type 'ED' - QLS Connection

TECHNICAL DATA					
NOMINAL SIZE (OD)	ASSEMBLY PART NUMBER	ENGINEERING DATA			
		MAX OD	CONNECTION	FISHING NECK	LENGTH
1 1/2"	10204031500	1.50"	'RQLD'	1.375"	27.45"
1 3/4"	10204031750	1.75"		1.750"	
1 7/8"	10204031870	1.88"			32.36"
2 1/8"	10204032120	2.12"			
2 1/2"	10204032500	2.50"			





SECTION I: TOOL STRING

Product Code: 103

Type 'AO' and 'AD' Knuckle Joint Assembly: 3/8" – 2 1/2"

Rebco Knuckle Joint has a ball type swivel joint to provide flexibility in the Wireline Tool String. Normally, it is used on the end of the Wireline Tool String to allow for angular movement between the tool string and the Running or Pulling Tool.

Rebco offers Knuckle Joints with Threaded and QLS Connections, and Double Fishing Neck.

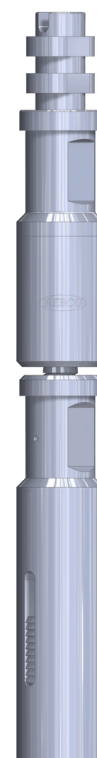
Type 'AO' - Threaded Connection

TECHNICAL DATA					
NOMINAL SIZE (OD)	ASSEMBLY PART NUMBER	ENGINEERING DATA			
		MAX OD	CONNECTION	FISHING NECK	LENGTH
3/8"	10300200375	.38"	1/4" - 20	NONE	4.0"
1/2"	10300200500	.50"	3/8" - 16	NONE	3.81"
3/4"	10300200750	.75"	1/2" - 13	.687"	6.19"
7/8"	10300200875	.88"		.750"	
1"	10300201000	1.00"	5/8" - 11		1.187"
1 1/4"	10300201250	1.25"	15/16" - 10	1.375"	
1 1/2"	10300201500	1.50"		1 1/16" - 10	1.750"
1 3/4"	10300201750	1.75"			
1 7/8"	10300201870	1.88"			
2 1/8"	10300202120	2.12"	2.313"		11.0"
2 1/2"	10300202500	2.50"			11.44"
	10300202501		1 9/16" - 10	11.84"	



Type 'AD' - QLS Connection

TECHNICAL DATA					
NOMINAL SIZE (OD)	ASSEMBLY PART NUMBER	ENGINEERING DATA			
		MAX OD	CONNECTION	FISHING NECK	LENGTH
1 1/2"	10300031500	1.50"	'RQLD'	1.375"	15.94"
1 3/4"	10300031750	1.75"		1.750"	10.12"
1 7/8"	10300031870	1.88"			15.94"
2 1/8"	10300032120	2.12"		2.313"	
2 1/2"	10300032500	2.50"			



Rebco Type 'AS' Knuckle Joint with 'RQLS' connection is available