



SECTION IV: PULLING TOOLS

2013

JP042613

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PULLING TOOLS were designed primarily to be used to retrieve sub-surface locking devices and other downhole Wireline Service Equipment from the tubing bore. These downhole tools have a fishing neck, or the pulling neck, machined near the upper end, for the Pulling Tool to engage and latch, hence retrieve it to the surface.

There are two types of Fishing Necks; Internal and External, hence there are two types of Pulling Tools: for the External Fishing Neck and the ones for the Internal Fishing Neck.

Both types of Pulling Tools are constructed so that they may be released from the sub-surface device in the tubing bore in the event that the device may be stuck and cannot be retrieved. This release feature is accomplished by a shearing pin installed in the Pulling Tool, once sheared; the design of the Pulling Tool releases the device.

The jarring action, to shear the pin, may be upward or downward, depending on the type of the Pulling Tool used. Thus, the name: **SHEAR UP** or **SHEAR DOWN** Pulling Tool.

Once the type (there are several types; pending on its function) of the **PULLING TOOL** is identified to be used to retrieve a sub-surface device, a **REACH** should be considered. **REACH** refers to the distance from the bottom of the core to the engaging surface of the dogs. That is, the Pulling Tool must engage or latch the Fishing Neck fully in order to be functional. This information is stated in the **ENGINEERING DATA** for each of the Pulling Tools, or it can be measured as shown in (see Fig 1).

Fig 1 - Measuring of Pulling Tool's Reach



For Internal Fishing Neck

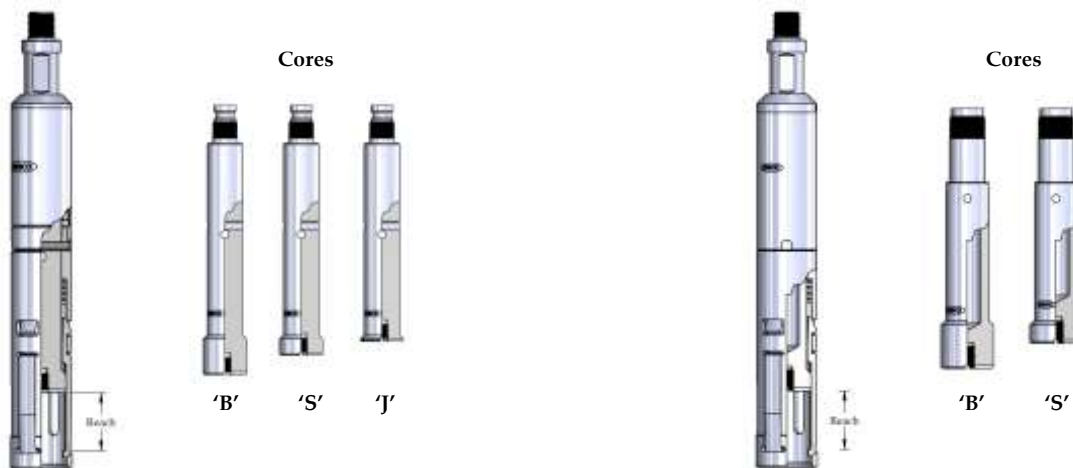
For External Fishing Neck

Rebco - Helpful Hint: How to choose the right Pulling Tool for the task:

1. Know the Fishing Neck Type on the Tool to be retrieved.
2. Reach is critical; the Fishing Neck needs to be engaged
3. Anticipate difficulty down-hole; choose Shear Up or Shear Down
 - The action of the Pulling Tools depends on shearing the **Shear Pin** in the Tool
 - **Shear Up Pulling Tools**; shear against the force on Dogs
 - **Shear Down Pulling Tools**; shear against the force on the Core, or Cylinder, for Internal Fishing Necks

Note: Pulling Tools: Shear Up Series '**ROTJU_**', '**ROTR_**', and Shear Down Series '**ROTJD_**', '**ROTS_**', require only the Core to be changed; to obtain the desired Reach; as shown in Fig 2.

Fig 2 - Comparative of 'ROTR_**' and '**ROTS_**' Pulling Tools**



Series Type: '**ROTRB**', '**ROTRS**' and '**ROTRJ**'

Series Type: '**ROTSB**', and '**ROTSJ**'

Chart: Pulling Tool Selection Guide

FISHING NECK TYPE TO ENGAGE	PULLING TOOL TYPE: SERIES			JAR TO RELEASE
	SHEAR UP	SHEAR DOWN	SPECIAL	
EXTERNAL	'ROTR_'		'RQ'	UP
	'ROTJU_'			
	'ROTB_'			
		'ROTS_'	'SQ'	DOWN
		'ROTJD_'		
		'RH'		
			'ROTSSJ'	DOWN w/Adapter
INTERNAL			'RMF'	MODE: Up/Down
	'ROTGR'			UP w/Adapter
	'ROTGRL'			
		'ROTGS'		DOWN
	'ROTGSL'			



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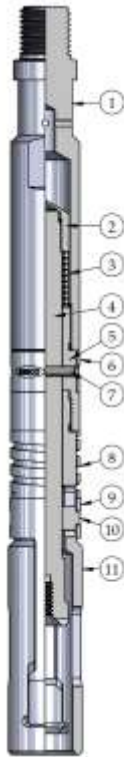
Product Code: 40

A - SHEAR DOWN PULLING TOOLS for EXTERNAL FISHING NECK:

Rebco offers two Types of designs for the Shear down Pulling Tools: 'ROTJD' and 'ROTS'

Both Pulling Tool types are designed to run and retrieve sub-surface equipment with external fishing neck. The tools can be released by jarring down.

Type 'ROTJDC' Pulling Tool (Short Reach) Assembly: 1 1/4" – 4.00"



NOMINAL SIZE	1 1/4"	1 3/8"
ASSEMBLY NUMBER	400703021250	400703021370

DET	PART NAME	QTY	PART NO	PART NO
1	TOP SUB	1	151181	151181
2	CORE CAP	1	150182	150182
3	CORE SPRING	1	900019	900019
4	CORE	1	150189	150189
5	SPRING RETAINER	1	151186	151186
6	SHEAR PIN COVER	1	151184	151184
7 *	SHEAR PIN	1	9110131112	9110131112
8	DOG SPRING	1	9000111	9000112
9 *	DOG	1	1511810	1531810
10 *	PAWL	2	150188	153188
11	SKIRT	1	1521811	1531811
REDRESS KIT (* Included as part of Kit)			4007030224125	4007030224137

ENGINEERING DATA:

MAXIMUM OD	1.29"	1.38"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10
FISHING NECK OD	1.187"	1.187"
BOTTOM THREAD (PRONG)	1/4" - 20	1/4" - 20
WILL ENGAGE FISHING NECK OD	.875"	1.000"
REACH	1.93"	1.83"
LENGTH	13.89"	13.99"
MATERIAL	Alloy	Alloy
WEIGHT lbs (kg)	3.4 (1.55)	3.7 (1.70)
ACCESSORIES	PINNING TOOL ASS'Y	16711002
	CORE WRENCH	167022



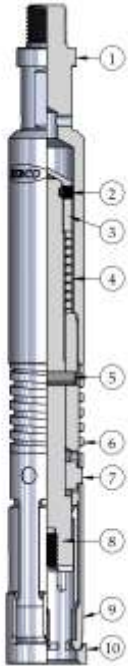
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Type 'ROTJDC' Pulling Tool (Short Reach) Assembly: Continued



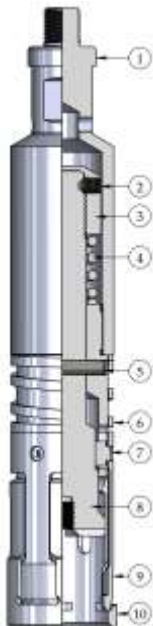
NOMINAL SIZE	1 1/2"	1 5/8"	2"	2 1/2"
ASSEMBLY NUMBER	400703021500	400703021620	400703022000	400703022500

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	154181	154181	156181	158181
2 *	SET SCREW	1	185506210312	185506210312	185507210250	185508210312
3	CORE CAP	1	154183	154183	156183	158183
4	CORE SPRING	1	900019	900019	900020	900017
5 *	SHEAR PIN	1	9110131112	9110131112	9110151500	9110151850
6	DOG SPRING	1	9000113	9000113	9000114	9000115
7 *	PAWL	Noted	154187 (2)	154187 (2)	156187 (3)	156187 (3)
8	CORE	1	154188	154188	156188	158188
9 *	DOG	1	1541810	1541810	156189	158189
10	SKIRT	1	154189	155189	1561810	1581810
REDRESS KIT (* Included as part of Kit)			4007030224150	4007030224150	4007030224200	4007030224250

ENGINEERING DATA:

MAXIMUM OD	1.42"	1.62"	1.86"	2.25"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	15/16" - 10	15/16" - 10
FISHING NECK OD	1.187"	1.187"	1.375"	1.375"
BOTTOM THREAD (PRONG)	1/4" - 20	1/4" - 20	1/2" - 13	1/2" - 13
WILL ENGAGE FISHING NECK OD	1.187"	1.187"	1.375"	1.750"
REACH	1.09"	1.09"	1.61"	1.26"
LENGTH	14.0"	14.0"	15.4"	15.8"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	3.9 (1.80)	4.3 (1.95)	6.8 (3.1)	10 (4.53)
ACCESSORIES	PINNING TOOL ASS'Y	16711004	16711004	16711004
	CORE WRENCH	167024	167024	167024

NOMINAL SIZE	3"	3"	4"
ASSEMBLY NUMBER	400703023000	400703023002	400703024000



DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	TOP SUB	1	160181	1601840	162181
2 *	SET SCREW	1	185509210500	185509210500	185509210500
3	CORE CAP	1	160183	160183	162186
4	CORE SPRING	1	9000118	9000118	9000119
5 *	SHEAR PIN	1	9111462340	9111462340	9111463300
6	DOG SPRING	1	9000116	9000116	9000117
7 *	PAWL	Noted	156187 (3)	156187 (3)	156187 (4)
8	CORE	1	180183	180183	162183
9 *	DOG	1	160189	160189	162189
10	SKIRT	1	1601810	1601810	1621810
11	SHEAR PIN COVER (NS)	1	None	None	162188
REDRESS KIT (* Included as part of Kit)			4007030224300	4007030224300	4007030224400

ENGINEERING DATA:

MAXIMUM OD	2.81"	2.81"	3.75"
PIN THREAD CONNECTION	15/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	1.750"	1.750"	2.313"
BOTTOM THREAD (PRONG)	5/8" - 11	5/8" - 11	1 1/4" - 12
WILL ENGAGE FISHING NECK OD	2.313"	2.313"	3.125"
REACH	1.53"	1.53"	2.31"
LENGTH	15.94"	15.94"	20.06"
MATERIAL	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	15.1 (6.9)	15.1 (6.9)	34.2 (15.5)
ACCESSORIES	PINNING TOOL ASS'Y	16711005	16711005
	CORE WRENCH	167025	167025



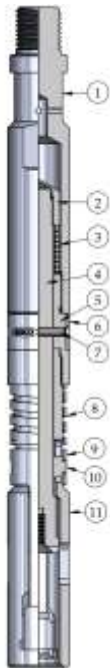
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Type 'ROTJDS' Pulling Tool (Medium Reach) Assembly: **1 1/4" – 4.00"**



NOMINAL SIZE	1 1/4"	1 3/8"
ASSEMBLY NUMBER	400703141250	400703141370

DET	PART NAME	QTY	PART NO	PART NO
1	TOP SUB	1	151181	151181
2	CORE CAP	1	150182	150182
3	CORE SPRING	1	900019	900019
4	CORE	1	165189	165189
5	SPRING RETAINER	1	151186	151186
6	SHEAR PIN COVER	1	151184	151184
7 *	SHEAR PIN	1	9110131112	9110131112
8	DOG SPRING	1	9000111	9000112
9 *	DOG	1	1511810	1531810
10 *	PAWL	2	150188	153188
11	SKIRT	1	1521811	1531811
REDRESS KIT (* Included as part of Kit)			4007030224125	4007030224137

ENGINEERING DATA:

MAXIMUM OD	1.29"	1.38"	
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	
FISHING NECK OD	1.187"	1.187"	
BOTTOM THREAD (PRONG)	1/4" - 20	1/4" - 20	
WILL ENGAGE FISHING NECK OD	.875"	1.000"	
REACH	2.77"	2.58"	
LENGTH	13.89"	13.99"	
MATERIAL	Alloy	Alloy	
WEIGHT lbs (kg)	3.4 (1.55)	3.7 (1.70)	
ACCESSORIES	PINNING TOOL ASS'Y	16711002	16711002
	CORE WRENCH	167022	167022



NOMINAL SIZE	1 1/2"	1 5/8"	2"	2 1/2"
ASSEMBLY NUMBER	400703141500	400703141620	400703142000	400703142500

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	154181	154181	156181	158181
2 *	SET SCREW	1	185506210312	185506210312	185507210250	185508210312
3	CORE CAP	1	154183	154183	156183	158183
4	CORE SPRING	1	900019	900019	900020	900017
5 *	SHEAR PIN	1	9110131112	9110131112	9110151500	9110151850
6	DOG SPRING	1	9000113	9000113	9000114	9000115
7 *	PAWL	Noted	154187 (2)	154187 (2)	156187 (3)	156187 (3)
8	CORE	1	166188	166188	168189	170189
9 *	DOG	1	1541810	1541810	156189	158189
10	SKIRT	1	154189	155189	1561810	1581810
REDRESS KIT (* Included as part of Kit)			4007030224150	4007030224150	4007030224200	4007030224250

ENGINEERING DATA:

MAXIMUM OD	1.42"	1.62"	1.86"	2.25"	
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	15/16" - 10	15/16" - 10	
FISHING NECK OD	1.187"	1.187"	1.375"	1.375"	
BOTTOM THREAD (PRONG)	1/4" - 20	1/4" - 20	1/2" - 13	1/2" - 13	
WILL ENGAGE FISHING NECK OD	1.187"	1.187"	1.375"	1.750"	
REACH	1.84"	1.84"	2.26"	2.12"	
LENGTH	14.0"	14.0"	15.4"	15.8"	
MATERIAL	Alloy	Alloy	Alloy	Alloy	
WEIGHT lbs (kg)	3.9 (1.80)	4.3 (1.95)	6.8 (3.1)	10 (4.53)	
ACCESSORIES	PINNING TOOL ASS'Y	16711004	16711004	16711004	16711004
	CORE WRENCH	167024	167024	167024	167024



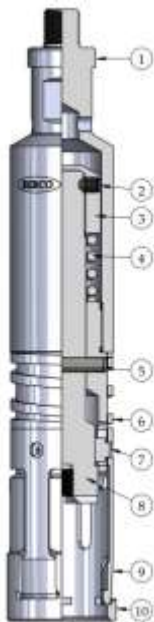
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Type 'ROTJDS' Pulling Tool (Short Reach) Assembly: Continued



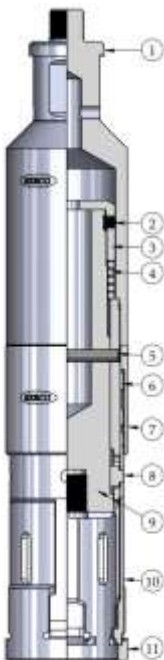
NOMINAL SIZE	3"	4"
ASSEMBLY NUMBER	400703143000	400703144000

DET	PART NAME	QTY	PART NO	PART NO
1	TOP SUB	1	160181	162181
2 *	SET SCREW	1	185509210500	185509210500
3	CORE CAP	1	160183	162186
4	CORE SPRING	1	9000118	9000119
5 *	SHEAR PIN	1	9111462340	9111463300
6	DOG SPRING	1	9000116	9000117
7 *	PAWL	3	156187	See Below
8	CORE	1	172181	
9 *	DOG	1	160189	
10	SKIRT	1	1601810	

PARTS: For 4" 'ROTJDS'		QTY	PART NO
7	SHEAR PIN COVER	1	162188
8 *	PAWL	4	156187
9	CORE	1	173181
10 *	DOG	1	162189
11	SKIRT	1	1621810
REDRESS KIT (* Included as part of Kit)		4007030224300	4007030224400

ENGINEERING DATA:

MAXIMUM OD	2.81"	3.75"	
PIN THREAD CONNECTION	15/16" - 10	1 1/16" - 10	
FISHING NECK OD	1.750"	2.313"	
BOTTOM THREAD (PRONG)	5/8" - 11	1 1/4" - 12	
WILL ENGAGE FISHING NECK OD	2.313"	3.125"	
REACH	2.27"	3.37"	
LENGTH	15.94"	20.06"	
MATERIAL	Alloy	Alloy	
WEIGHT lbs (kg)	15.1 (6.9)	34.2 (15.5)	
ACCESSORIES	PINNING TOOL ASS'Y	16711005	16711006
	CORE WRENCH	167025	167026



4" 'ROTJDS'



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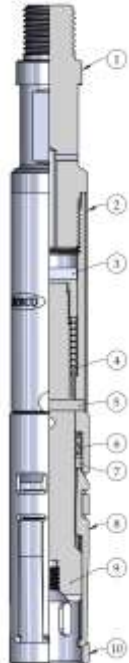
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Type 'ROTSB' Pulling Tool (Short Reach) Assembly: 1" – 4.00"

Rebco Type 'ROTSB' Pulling Tool is designed to run and retrieve sub surface equipment with external fishing neck. The tool can be released by jarring down.



NOMINAL SIZE	1"	1 1/4"	1 1/2"	1 1/2"
ASSEMBLY NUMBER	4014011000	4014011250	4014011500	4014011501

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	4014117	4014195	401442	401442
2	SHEAR PIN RETAINER	1	4014118	4014196	401425	401425
3	CORE NUT	1	4014120	4014194	401426	401426
4	CYLINDER SPRING	1	900087	900089	900091	900091
5 *	SHEAR PIN	1	9110130740	9110131110	9110131270	9110131270
6	DOG SPRING	1	900088	900090	900092	900092
7	WASHER	1	4013141	401369	401427	401427
8 *	DOGS	3	4013220	401370	401429	401429
9	CORE	1	4014121	401497	401430	401443
10	CYLINDER	1	4014119	401492	401428	401428
REDRESS KIT (* Included as part of Kit)			40140124100	40140124125	40140124150	40140124150

ENGINEERING DATA:

MAXIMUM OD	.927	1.25"	1.43"	1.43"
PIN THREAD CONNECTION	5/8" - 11	5/8" - 11	15/16" - 10	15/16" - 10
FISHING NECK OD	.687"	1.000"	1.187"	1.187"
BOTTOM THREAD (PRONG)	1/4" - 20	3/8" - 16	3/8" - 16	3/8" - 16
WILL ENGAGE FISHING NECK OD	.687"	1.000"	1.187"	1.187"
REACH	1.00"	1.22"	.69"	1.3"
LENGTH	10.3"	14.5"	11.88"	11.88"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	2.1 (.95)	2.8 (1.27)	4.1 (1.88)	3.6 (1.63)
ACCESSORIES	PINNING TOOL ASS'Y	16711002	16711003	16711003
	RELEASING TOOL	1670011	167004	167004
	CORE WRENCH	167026	167026	167023
	CORE NUT WRENCH	167013	167013	167012



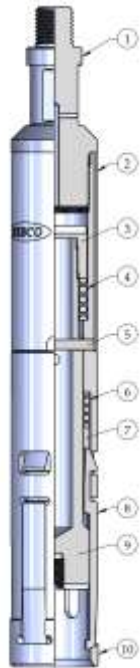
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Type 'ROTSB' Pulling Tool (Short Reach) Assembly: Continued



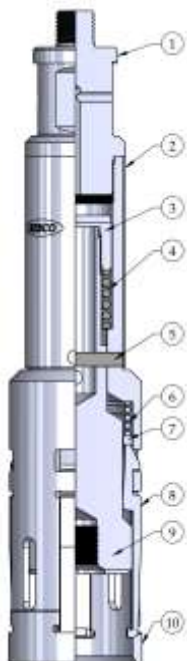
NOMINAL SIZE	2"	2 1/2"	3"	3"
ASSEMBLY NUMBER	4014012000	4014012500	4014013001	4014013000

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	41141	401414	401471	401450
2	SHEAR PIN RETAINER	1	40144	401415	401470	401451
3	CORE NUT	1	40143	401416	401453	401453
4	CYLINDER SPRING	1	900073	900065	900063	900063
5 *	SHEAR PIN	1	9110141625	9110141965	9110152568	9110152568
6	DOG SPRING	1	900084	900066	900085	900085
7	WASHER	1	40136	401312	401323	401323
8 *	DOGS	3	401398	401399	401474	401322
9	CORE	1	401413	401418	401455	401455
10	CYLINDER	1	401412	401417	401472	401452
REDRESS KIT (* Included as part of Kit)			40140124200	40140124250	40140124300	40140124300

ENGINEERING DATA:

MAXIMUM OD	1.77"	2.18"	2.73"	2.84"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	1.375"	1.375"	2.313"	2.313"
BOTTOM THREAD (PRONG)	1/2" - 13	1/2" - 13	5/8" - 11	5/8" - 11
WILL ENGAGE FISHING NECK OD	1.375"	1.750"	2.313"	2.313"
REACH	1.28"	1.28"	1.5"	1.38"
LENGTH	15.89"	16.36"	17.5"	17.5"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	7.6 (3.45)	10.8 (4.9)	19.2 (8.71)	19.2 (8.71)
ACCESSORIES	PINNING TOOL ASS'Y	16711004	16711004	16711005
	RELEASING TOOL	167003	167006	167007
	CORE WRENCH	167024	167024	167025
	CORE NUT WRENCH	167011	167011	167011

NOMINAL SIZE	3 1/2"	4"
ASSEMBLY NUMBER	4014013500	4014014000



DET	PART NAME	QTY	PART NO	PART NO
1	TOP SUB	1	401450	401450
2	SHEAR PIN RETAINER	1	401451	401451
3	CORE NUT	1	401453	401453
4	CYLINDER SPRING	1	900063	900063
5 *	SHEAR PIN	1	9110152635	9110152635
6	DOG SPRING	1	9000186	900086
7	WASHER	1	4014212	4013123
8 *	DOGS	Noted	4013156 (3)	4013124 (4)
9	CORE	1	401487	401479
10	CYLINDER	1	401465	401478
REDRESS KIT (* Included as part of Kit)			40140124350	40140124400

ENGINEERING DATA:

MAXIMUM OD	3.115"	3.670"	
PIN THREAD CONNECTION	1 1/16" - 10	1 1/16" - 10	
FISHING NECK OD	2.313"	2.313"	
BOTTOM THREAD (PRONG)	5/8" - 11	1 1/4" - 12	
WILL ENGAGE FISHING NECK OD	2.750"	3.125"	
REACH	1.75"	1.50"	
LENGTH	18.0"	18.0"	
MATERIAL	Alloy	Alloy	
WEIGHT lbs (kg)	19.7 (8.94)	25.6 (11.61)	
ACCESSORIES	PINNING TOOL ASS'Y	16711003	16711006
	RELEASING TOOL	167008	167009
	CORE WRENCH	167023	167026
	CORE NUT WRENCH	167011	167011



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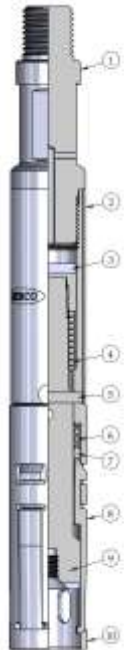
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JP042613

REBCO

Type 'ROTSS' Pulling Tool (Medium Reach) Assembly: 1" - 4.00"

Rebco Type 'ROTSS' Pulling Tool is designed to run and retrieve sub surface equipment with external fishing neck. The tool can be released by jarring down.



NOMINAL SIZE	1 1/2"	2"	2 1/2"	3"
ASSEMBLY NUMBER	4014141500	4014142000	4014142500	4014143001

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	401442	41141	401414	401450
2	SHEAR PIN RETAINER	1	401425	40144	401415	401451
3	CORE NUT	1	401426	40143	401416	401453
4	CYLINDER SPRING	1	900091	900073	900065	900063
5 *	SHEAR PIN	1	9110131270	9110141625	9110141965	9110152633
6	DOG SPRING	1	900092	900084	900066	9000186
7	WASHER	1	401427	40136	401312	401323
8 *	DOGS	3	401444	401398	401399	401322
9	CORE	1	401430	401435	401434	401454
10	CYLINDER	1	401445	401412	401417	401472
REDRESS KIT (* Included as part of Kit)			40141424150	40141424200	40141424250	40141424300

ENGINEERING DATA:

MAXIMUM OD	1.43"	1.77"	2.18"	2.73"	
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	15/16" - 10	1 1/16" - 10	
FISHING NECK OD	1.187"	1.375"	1.375"	2.313"	
BOTTOM THREAD (PRONG)	3/8" - 16	1/2" - 13	1/2" - 13	5/8" - 11	
WILL ENGAGE FISHING NECK OD	1.187"	1.375"	1.750"	2.313"	
REACH	1.78"	2.03"	1.75"	1.50"	
LENGTH	13.1"	15.89"	16.36"	17.5"	
MATERIAL	Alloy	Alloy	Alloy	Alloy	
WEIGHT lbs (kg)	4.2 (1.91)	7.6 (3.45)	10.8 (4.9)	19.2 (8.71)	
ACCESSORIES	PINNING TOOL ASS'Y	16711003	16711004	16711004	16711005
	RELEASING TOOL	167004	167003	167006	167007
	CORE WRENCH	167023	167024	167024	167025
	CORE NUT WRENCH	167012	167011	167011	167011

NOMINAL SIZE	3"	3 1/2"	4"
ASSEMBLY NUMBER	4014143000	4014143500	4014144000



DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	TOP SUB	1	401450	401450	401450
2	SHEAR PIN RETAINER	1	401451	401451	401451
3	CORE NUT	1	401453	401453	401453
4	CYLINDER SPRING	1	900063	900063	900063
5 *	SHEAR PIN	1	9110152633	9110152635	9110152635
6	DOG SPRING	1	9000186	9000186	900086
7	WASHER	1	401323	4014212	4013123
8 *	DOGS	Noted	401322 (3)	4013156 (3)	4013124 (4)
9	CORE	1	401454	401464	401480
10	CYLINDER	1	401452	401465	401478
REDRESS KIT (* Included as part of Kit)			40141424300	40141424350	40141424400

ENGINEERING DATA:

MAXIMUM OD	2.84"	3.115"	3.670"	
PIN THREAD CONNECTION	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10	
FISHING NECK OD	2.313"	2.313"	2.313"	
BOTTOM THREAD (PRONG)	5/8" - 11	5/8" - 11	1 1/4" - 12	
WILL ENGAGE FISHING NECK OD	2.313"	2.750"	3.125"	
REACH	1.50"	1.75"	1.50"	
LENGTH	17.5"	18.0"	18.0"	
MATERIAL	Alloy	Alloy	Alloy	
WEIGHT lbs (kg)	19.2 (8.71)	19.7 (8.94)	25.6 (11.61)	
ACCESSORIES	PINNING TOOL ASS'Y	16711005	16711003	16711006
	RELEASING TOOL	167007	167008	167009
	CORE WRENCH	167025	167023	167026
	CORE NUT WRENCH	167011	167011	167011



SECTION IV: PULLING TOOLS

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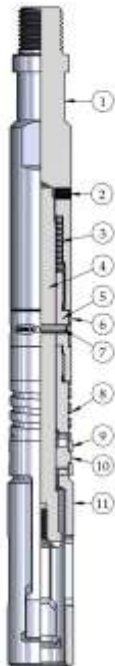
REBCO

B - SHEAR UP PULLING TOOLS for EXTERNAL FISHING NECK:

Rebco offers two Types of designs for the Shear up Pulling Tools: 'ROTJU' and 'ROTR'

Both Pulling Tool types are designed to run and retrieve sub-surface equipment with external fishing neck. The tools can be released by jarring up.

Type 'ROTJUC' Pulling Tool (Short Reach) Assembly: 1 1/4" – 4.00"



NOMINAL SIZE	1 1/4"	1 3/8"
ASSEMBLY NUMBER	400716021250	400716021370

DET	PART NAME	QTY	PART NO	PART NO
1	TOP SUB	1	175181	175181
2 *	SET SCREW	1	185506210312	185506210312
3	CORE SPRING	1	900019	900019
4	CORE	1	150189	150189
5	SPRING RETAINER	1	151186	151186
6	SHEAR PIN COVER	1	151184	151184
7 *	SHEAR PIN	1	9110131112	9110131112
8	DOG SPRING	1	9000111	9000112
9 *	DOG	1	1511810	1531810
10 *	PAWL	2	150188	153188
11	SKIRT	1	1521811	1531811
REDRESS KIT (* Included as part of Kit)			4007160224125	4007160224137

ENGINEERING DATA:

MAXIMUM OD	1.29"	1.38"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10
FISHING NECK OD	1.187"	1.187"
BOTTOM THREAD (PRONG)	1/4" - 20	1/4" - 20
WILL ENGAGE FISHING NECK OD	.875"	1.000"
REACH	1.93"	1.83"
LENGTH	13.9"	14.0"
MATERIAL	Alloy	Alloy
WEIGHT lbs (kg)	3.4 (1.55)	3.6 (1.63)
ACCESSORIES	PINNING TOOL ASS'Y	16711002
	CORE WRENCH	167022



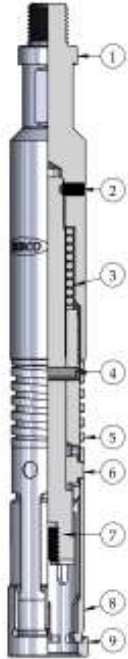
SECTION IV: PULLING TOOLS

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REBCO

Type 'ROTJUC' Pulling Tool (Short Reach) Assembly: Continued



NOMINAL SIZE	1 1/2"	1 5/8"	2"	2 1/2"
ASSEMBLY NUMBER	400716021500	400716021620	400716022000	400716022500

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	174181	174181	176181	178181
2 *	SET SCREW	1	185506210312	185506210312	185507210500	185508210500
3	CORE SPRING	1	900019	900019	900020	900017
4 *	SHEAR PIN	1	9110131112	9110131112	9110151500	9110151850
5	DOG SPRING	1	9000113	9000113	9000114	9000115
6 *	PAWL	Noted	154187 (2)	154187 (2)	156187 (3)	156187 (3)
7	CORE	1	154188	154188	156188	158188
8 *	DOG	1	1541810	1541810	156189	158189
9	SKIRT	1	154189	155189	1561810	1581810
REDRESS KIT (* Included as part of Kit)			4007160224150	4007160224150	4007160224200	4007160224250

ENGINEERING DATA:

MAXIMUM OD	1.42"	1.62"	1.86"	2.25"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	15/16" - 10	15/16" - 10
FISHING NECK OD	1.187"	1.187"	1.375"	1.375"
BOTTOM THREAD (PRONG)	1/2" - 13	1/2" - 13	1/2" - 13	1/2" - 13
WILL ENGAGE FISHING NECK OD	1.187"	1.187"	1.375"	1.750"
REACH	1.09"	1.09"	1.61"	1.26"
LENGTH	14.06"	14.06"	15.4"	15.8"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	3.9 (1.80)	4.3 (1.95)	6.8 (3.1)	10 (4.53)
ACCESSORIES	PINNING TOOL ASS'Y	16711004	16711004	16711004
	CORE WRENCH	167024	167024	167024



NOMINAL SIZE	3"	4"
ASSEMBLY NUMBER	400716023000	400716024000

DET	PART NAME	QTY	PART NO	PART NO
1	TOP SUB	1	180181	182181
2 *	SET SCREW	1	185509210500	185509210500
3	CORE SPRING	1	9000118	9000119
4	SHEAR PIN	1	9111462340	9111463300
5 *	DOG SPRING	1	9000116	9000117
6	PAWL	Noted	156187 (3)	156187 (4)
7 *	CORE	1	180183	162183
8	DOG	1	160189	162189
9 *	SKIRT	1	1601810	1621810
10	SHEAR PIN COVER (NS)	1	None	162188
REDRESS KIT (* Included as part of Kit)			4007160224300	4007160224400

ENGINEERING DATA:

MAXIMUM OD	2.81"	3.75"	
PIN THREAD CONNECTION	15/16" - 10	1 1/16" - 10	
FISHING NECK OD	1.750"	2.313"	
BOTTOM THREAD (PRONG)	5/8" - 11	1 1/4" - 12	
WILL ENGAGE FISHING NECK OD	2.313"	3.125"	
REACH	1.53"	2.312"	
LENGTH	15.94"	20.06"	
MATERIAL	Alloy	Alloy	
WEIGHT lbs (kg)	15.1 (6.9)	34.2 (15.5)	
ACCESSORIES	PINNING TOOL ASS'Y	16711005	16711006
	CORE WRENCH	167025	167026



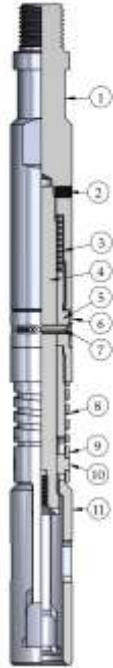
SECTION IV: PULLING TOOLS

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REBCO

Type 'ROTJUS' Pulling Tool (Medium Reach) Assembly: 1 1/4" – 4.00"

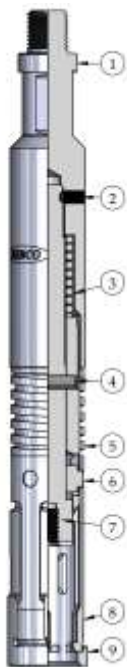


NOMINAL SIZE	1 1/4"	1 3/8"
ASSEMBLY NUMBER	400716141250	400716141370

DET	PART NAME	QTY	PART NO	PART NO
1	TOP SUB	1	175181	175181
2 *	SET SCREW	1	185506210312	185506210312
3	CORE SPRING	1	900019	900019
4	CORE	1	165189	165189
5	SPRING RETAINER	1	151186	151186
6	SHEAR PIN COVER	1	151184	151184
7 *	SHEAR PIN	1	9110131112	9110131112
8	DOG SPRING	1	9000111	9000112
9 *	DOG	1	1511810	1531810
10 *	PAWL	2	150188	153188
11	SKIRT	1	1521811	1531811
REDRESS KIT (* Included as part of Kit)			4007160224125	4007160224137

ENGINEERING DATA:

MAXIMUM OD	1.29"	1.38"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10
FISHING NECK OD	1.187"	1.187"
BOTTOM THREAD (PRONG)	1/4" - 20	1/4" - 20
WILL ENGAGE FISHING NECK OD	.875"	1.000"
REACH	2.68"	2.58"
LENGTH	13.9"	14.0"
MATERIAL	Alloy	Alloy
WEIGHT lbs (kg)	3.4 (1.55)	3.6 (1.63)
ACCESSORIES	PINNING TOOL ASS'Y	16711002
	CORE WRENCH	167022



NOMINAL SIZE	1 1/2"	1 5/8"	2"	2 1/2"
ASSEMBLY NUMBER	400716141500	400716141620	400716142000	400716142500

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	174181	174181	176181	178181
2 *	SET SCREW	1	185506210312	185506210312	185507210500	185508210500
3	CORE SPRING	1	900019	900019	900020	900017
4 *	SHEAR PIN	1	9110131112	9110131112	9110151500	9110151850
5	DOG SPRING	1	9000113	9000113	9000114	9000115
6 *	PAWL	Noted	154187 (2)	154187 (2)	156187 (3)	156187 (3)
7	CORE	1	166188	166188	168189	170189
8 *	DOG	1	1541810	1541810	156189	158189
9	SKIRT	1	154189	155189	1561810	1581810
REDRESS KIT (* Included as part of Kit)			4007160224150	4007160224150	4007160224200	4007160224250

ENGINEERING DATA:

MAXIMUM OD	1.42"	1.62"	1.86"	2.25"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	15/16" - 10	15/16" - 10
FISHING NECK OD	1.187"	1.187"	1.375"	1.375"
BOTTOM THREAD (PRONG)	1/2" - 13	1/2" - 13	1/2" - 13	1/2" - 13
WILL ENGAGE FISHING NECK OD	1.187"	1.187"	1.375"	1.750"
REACH	1.84"	1.84"	2.26"	2.12"
LENGTH	14.06"	14.06"	15.4"	15.8"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	3.9 (1.80)	4.3 (1.95)	6.8 (3.1)	10 (4.53)
ACCESSORIES	PINNING TOOL ASS'Y	16711004	16711004	16711004
	CORE WRENCH	167024	167024	167024



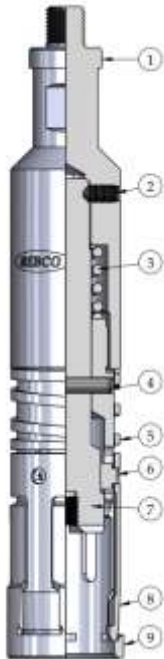
SECTION IV: PULLING TOOLS

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REBCO

Type 'ROTJUS' Pulling Tool (Medium Reach) Assembly: 1 1/4" – 4.00"



NOMINAL SIZE	3"	4"
ASSEMBLY NUMBER	400716143000	400716144000

DET	PART NAME	QTY	PART NO	PART NO
1	TOP SUB	1	180181	182181
2 *	SET SCREW	1	185509210500	185509210500
3	CORE SPRING	1	9000118	9000119
4 *	SHEAR PIN	1	9111462340	9111463300
5	DOG SPRING	1	9000116	9000117
6 *	PAWL	Noted	156187 (3)	156187 (4)
7	CORE	1	172181	173181
8	DOG	1	160189	162189
9 *	SKIRT	1	1601810	1621810
10	SHEAR PIN COVER (NS)	1	None	162188
REDRESS KIT (* Included as part of Kit)			4007160224300	4007160224400

ENGINEERING DATA:

MAXIMUM OD	2.81"	3.75"
PIN THREAD CONNECTION	15/16" - 10	1 1/16" - 10
FISHING NECK OD	1.750"	2.313"
BOTTOM THREAD (PRONG)	5/8" - 11	1 1/4" - 12
WILL ENGAGE FISHING NECK OD	2.313"	3.125"
REACH	2.27"	3.37"
LENGTH	15.94"	20.06"
MATERIAL	Alloy	Alloy
WEIGHT lbs (kg)	15.1 (6.9)	34.2 (15.5)
ACCESSORIES	PINNING TOOL ASS'Y	16711005
	CORE WRENCH	167025

Type 'ROTR' Pulling Tool series are Shear Up design for external Fishing Neck.

Rebco offers a wide range of sizes within this group of Pulling Tools. These Tools are offered with three basic reaches to retrieve the Sub-Surface devices with external Fishing Neck.

Three types of Tools with reach designation:

Type 'ROTRB' - Short Reach

Type 'ROTRS' - Medium reach

Type 'ROTRJ' - Long Reach



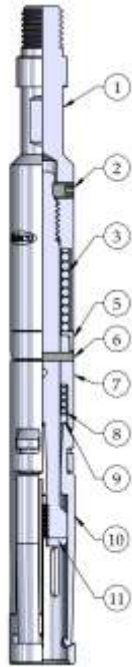
SECTION IV: PULLING TOOLS

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REBCO

Type 'ROTRB' Pulling Tool (Short Reach) Assembly: 1" - 4"



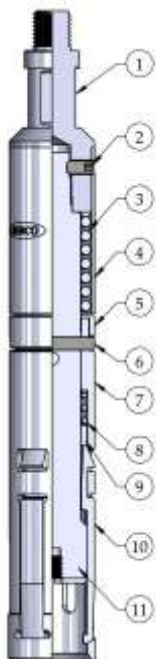
NOMINAL SIZE	1"	1 3/16"	1 1/4"	1 1/2"	1 1/2"
ASSEMBLY NUMBER	4013011000	4013011180	4013011250	4013011501	4013011500

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	401379	401371	401378	401392	401392
2 *	SET SCREW	1	18556210312	18556210312	18556210312	18558210312	18558210312
3	CYLINDER SPRING	1	900096	900098	900099	9000100	9000100
4	SLEEVE	1	None	None	None	None	None
5	SHEAR PIN CAP	1	401381	401373	401366	401391	401391
6 *	SHEAR PIN	1	9110120808	9110131000	9110131032	9110141250	9110141250
7	CYLINDER	1	401383	401375	401368	4013130	401389
8	DOG SPRING	1	900097	900094	900090	900092	900092
9	WASHER	1	401384	401376	401369	401427	401427
10 *	DOGS	3	401385	401377	401370	401444	401444
11	CORE	1	401380	401372	401365	401393	401393
REDRESS KIT (* Included as part of Kit)			40130124100	40130124118	40130124125	40130124150	40130124150

ENGINEERING DATA:

MAXIMUM OD	.97"	1.19"	1.22"	1.48"	1.43"
PIN THREAD CONNECTION	5/8" - 11	5/8" - 11	5/8" - 11	15/16" - 10	15/16" - 10
FISHING NECK OD	.750"	.875"	1.000"	1.187"	1.187"
BOTTOM THREAD (PRONG)	10/24"	10/24"	3/8" - 16	3/8" - 16	3/8" - 16
WILL ENGAGE FISHING NECK OD	.750"	.875"	1.000"	1.187"	1.187"
REACH	1.36"	1.30"	1.31"	1.05"	1.26"
LENGTH	9.77"	12.8"	13.30"	12.2"	12.2"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	1.2 (.54)	2.5 (1.13)	2.8 (1.30)	4.0 (1.81)	4.0 (1.81)
ACCESSORIES	PINNING TOOL ASS'Y	16711001	16711001	16711003	16711003
	RELEASING TOOL	167002	167003	167004	167004
	CORE WRENCH	167021	167022	167023	167023

NOMINAL SIZE	2"	2 1/2"	3"	3 1/2"	4"
ASSEMBLY NUMBER	4013012000	4013012500	4013013000	4013013500	4013014000



DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	4013111	4013107	4013118	4013118	4013119
2 *	SET SCREW	1	18557210375	18557210375	18559210500	18559210500	18559210875
3	CYLINDER SPRING	1	9000101	9000102	9000103	9000103	9000104
4	SLEEVE	1	4013115	4013116	None	None	None
5	SHEAR PIN CAP	1	40132	40138	4013103	4013103	4013121
6 *	SHEAR PIN	1	9110151480	9110151840	9110162400	9110162400	9110163420
7	CYLINDER	1	4013100	4013101	4013102	4013155	4013122
8	DOG SPRING	1	900084	900066	900085	900085	900086
9	WASHER	1	40136	401312	401323	4014212	4013123
10 *	DOGS	3	401398	401399	401322	4013156	4013124 (4)
11	CORE	1	4013114	4013108	4013105	4013193	4013129
REDRESS KIT (* Included as part of Kit)			40130124200	40130124250	40130124300	40130124350	40130124400

ENGINEERING DATA:

MAXIMUM OD	1.77"	2.18"	2.74"	3.11"	3.67"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	1.375"	1.375"	2.313"	2.313"	2.313"
BOTTOM THREAD (PRONG)	1/2" - 13	1/2" - 13	5/8" - 11	5/8" - 11	1 1/4" - 12
WILL ENGAGE FISHING NECK OD	1.375"	1.750"	2.313"	2.750"	3.125"
REACH	1.29"	1.28"	1.38"	1.38"	1.56"
LENGTH	16.40"	16.36"	16.06"	15.87"	18.0"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	8.0 (3.63)	11.4 (5.17)	16.6 (7.53)	18.6 (8.40)	32.2 (14.61)
ACCESSORIES	PINNING TOOL ASS'Y	16711004	16711004	16711005	16711005
	RELEASING TOOL	167005	167006	167007	167009
	CORE WRENCH	167024	167024	167025	167025



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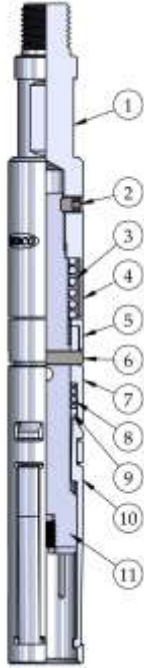
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REBCO

Type 'ROTRS' Pulling Tool (Medium Reach) Assembly: 1" - 4"

NOMINAL SIZE	1"	1"	1 1/4"	1 1/2"	1 3/4"
ASSEMBLY NUMBER	4013141000	4013141180	4013141250	4013141501	4013141750

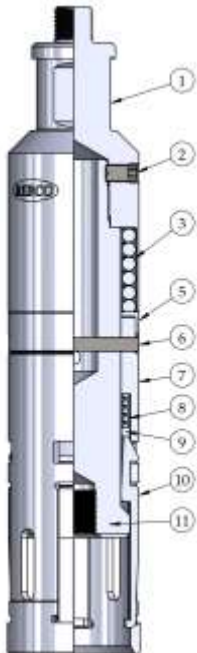


DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	4013136	4013136	401378	401392	401392
2 *	SET SCREW	1	18556210312	18556210312	18556210312	18558210312	18558210312
3	CYLINDER SPRING	1	9000105	9000105	900099	9000100	9000100
4	SLEEVE	1	4013142	4013142	None	None	None
5	SHEAR PIN CAP	1	4013137	4013137	401366	401391	401391
6 *	SHEAR PIN	1	9110130734	9110130750	9110131032	9110141250	9110141250
7	CYLINDER	1	4013139	4013219	401368	401389	4013149
8	DOG SPRING	1	900088	900088	900090	900092	900092
9	WASHER	1	4013141	4013141	401369	401427	401427
10 *	DOGS	3	4013140	4013220	401370	401444	401444
11	CORE	1	4013138	4013138	4013127	401390	401390
REDRESS KIT (* Included as part of Kit)			40131424100	40131424118	40131424125	40131424150	40130124150

ENGINEERING DATA:

MAXIMUM OD	.89"	.89"	1.22"	1.43"	1.56"
PIN THREAD CONNECTION	1/2" - 13	1/2" - 13	5/8" - 11	15/16" - 10	15/16" - 10
FISHING NECK OD	.687"	.687"	1.000"	1.187"	1.187"
BOTTOM THREAD (PRONG)	1/4" - 20	1/4" - 20	3/8" - 16	3/8" - 16	3/8" - 16
WILL ENGAGE FISHING NECK OD	.687"	.687"	.687"	1.187"	1.187"
REACH	1.00"	2.00"	2.12"	1.79"	1.22"
LENGTH	8.61"	12.8"	13.30"	12.2"	12.2"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	1.2 (.54)	1.2 (.54)	2.8 (1.30)	4.0 (1.81)	4.0 (1.81)
ACCESSORIES	PINNING TOOL ASS'Y	16711002	16711002	16711003	16711003
	RELEASING TOOL	167001	167001	167004	167004
	CORE WRENCH	167022	167022	167023	167023

NOMINAL SIZE	2"	2 1/2"	3"	3 1/2"	4"
ASSEMBLY NUMBER	4013142000	4013142500	4013143000	4013143500	4013144000



DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	4013111	4013107	4013118	4013118	4013119
2 *	SET SCREW	1	18557210375	18557210375	18559210500	18559210500	18559210875
3	CYLINDER SPRING	1	9000101	9000102	9000103	9000103	9000104
4	SLEEVE	1	4013115	4013116	None	None	None
5	SHEAR PIN CAP	1	40132	40138	4013103	4013103	4013121
6 *	SHEAR PIN	1	9110151480	9110151840	9110162400	9110162400	9110163420
7	CYLINDER	1	4013100	4013101	4013102	4013155	4013122
8	DOG SPRING	1	900084	900066	900085	900085	900086
9	WASHER	1	40136	401312	401323	4014212	4013123
10 *	DOGS	3	401398	401399	401322	4013156	4013124 (4)
11	CORE	1	4013112	4013109	4013106	4013154	4013120
REDRESS KIT (* Included as part of Kit)			40131424200	40131424250	40131424300	40131424350	40131424400

ENGINEERING DATA:

MAXIMUM OD	1.77"	2.18"	2.74"	3.11"	3.67"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	1.375"	1.375"	2.313"	2.313"	2.313"
BOTTOM THREAD (PRONG)	1/2" - 13	1/2" - 13	5/8" - 11	5/8" - 11	1 1/4" - 12
WILL ENGAGE FISHING NECK OD	1.375"	1.750"	2.313"	2.750"	3.125"
REACH	2.07"	2.07"	2.20"	2.13"	2.46"
LENGTH	16.40"	16.36"	16.06"	15.87"	18.0"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	7.6 (3.45)	10.8 (4.9)	16.4 (7.44)	16.4 (7.44)	32.0 (14.51)
ACCESSORIES	PINNING TOOL ASS'Y	16711004	16711004	16711005	16711005
	RELEASING TOOL	167005	167006	167007	167009
	CORE WRENCH	167024	167024	167025	167025



SECTION IV: PULLING TOOLS

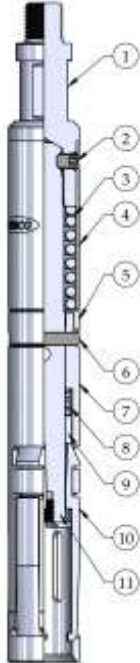
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Type 'ROTRJ' Pulling Tool (Long Reach) Assembly: 1 1/4" - 4"

NOMINAL SIZE	1 1/4"	1 1/2"	1 3/4"	2"	2 1/2"
ASSEMBLY NUMBER	4013071250	4013071500	4013071750	4013072000	4013072500

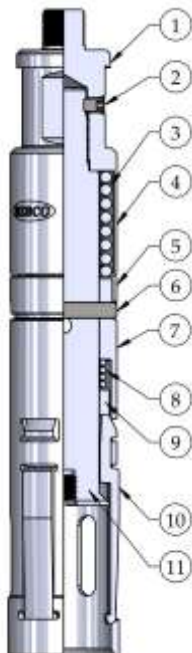


DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	TOP SUB	1	401378	401392	401392	4013111	4013107
2 *	SET SCREW	1	18556210312	18558210312	18558210312	18557210375	18557210375
3	CYLINDER SPRING	1	900099	9000100	9000100	9000101	9000102
4	SLEEVE	1	None	None	None	4013115	4013116
5	SHEAR PIN CAP	1	401366	401391	401391	40132	40138
6 *	SHEAR PIN	1	9110131032	9110141250	9110141250	9110151480	9110151840
7	CYLINDER	1	401368	401389	4013149	4013100	4013101
8	DOG SPRING	1	900090	900092	900092	900084	900066
9	WASHER	1	401369	401427	401427	40136	401312
10 *	DOGS	3	401370	401444	4013150	401398	401399
11	CORE	1	4013134	4013143	4013143	4013113	4013110
REDRESS KIT (* Included as part of Kit)			40131424125	40131424150	40130724150	40131424200	40131424250

ENGINEERING DATA:

MAXIMUM OD	1.22"	1.430"	1.562"	1.77"	2.18"
PIN THREAD CONNECTION	5/8" - 11	15/16" - 10	15/16" - 10	15/16" - 10	15/16" - 10
FISHING NECK OD	1.000"	1.187"	1.187"	1.375"	1.375"
BOTTOM THREAD (PRONG)	3/8" - 16	3/8" - 16	3/8" - 16	1/2" - 13	1/2" - 13
WILL ENGAGE FISHING NECK OD	1.000"	1.187"	1.187"	1.375"	1.750"
REACH	1.84"	2.55"	2.55"	2.63"	2.63"
LENGTH	13.30"	12.2"	12.2"	16.40"	16.36"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	2.8 (1.30)	4.0 (1.81)	4.0 (1.81)	8.0 (3.63)	11.4 (5.17)
ACCESSORIES	PINNING TOOL ASS'Y	16711003	16711003	16711003	16711004
	RELEASING TOOL	167004	167004	1670010	167005
	CORE WRENCH	167023	167023	167023	167024

NOMINAL SIZE	3"	3 1/2"	4"
ASSEMBLY NUMBER	4013073000	4013073500	4013074000



DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	TOP SUB	1	4013118	4013118	4013119
2 *	SET SCREW	1	18559210500	18559210500	18559210875
3	CYLINDER SPRING	1	9000103	9000103	9000104
4	SLEEVE	1	None	None	None
5	SHEAR PIN CAP	1	4013103	4013103	4013121
6 *	SHEAR PIN	1	9110162400	9110162400	9110163420
7	CYLINDER	1	4013102	4013155	4013122
8	DOG SPRING	1	900085	900085	900086
9	WASHER	1	401323	4014212	4013123
10 *	DOGS	3	401322	4013156	4013124 (4)
11	CORE	1	4013135	4013194	4013205
REDRESS KIT (* Included as part of Kit)			40131424300	40131424350	40131424400

ENGINEERING DATA:

MAXIMUM OD	2.74"	3.11"	3.67"
PIN THREAD CONNECTION	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	2.313"	2.313"	2.313"
BOTTOM THREAD (PRONG)	5/8" - 11	5/8" - 11	1 1/4" - 12
WILL ENGAGE FISHING NECK OD	2.313"	2.750"	3.125"
REACH	2.69"	2.2"	2.80"
LENGTH	16.06"	15.87"	18.0"
MATERIAL	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	16.6 (7.53)	18.6 (8.40)	32.2 (14.61)
ACCESSORIES	PINNING TOOL ASS'Y	16711005	16711005
	RELEASING TOOL	167007	167009
	CORE WRENCH	167025	167026



SECTION IV: PULLING TOOLS

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C - PULLING TOOLS for INTERNAL FISHING NECK:

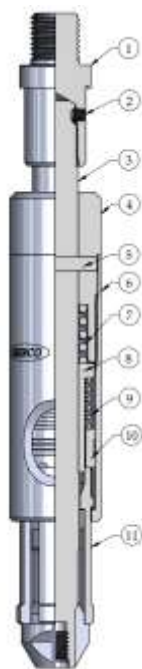
Rebco offers two Types of **Pulling Tools** for Internal Fishing Neck: '**ROTGS**' and '**ROTGSL**'

Both Pulling Tool types are designed to run and retrieve Sub-Surface equipment with internal fishing neck. The tools can be released by jarring down.

Type '**ROTGS**' Pulling Tool Assembly: 1.25" – 7.00"

Rebco Type '**ROTGS**' Pulling Tool is designed to run and retrieve Sub-Surface equipment with internal fishing neck. The tool can be released by jarring down.

NOTE: Some Nominal Sizes have smaller OD for "*Slim-Line*" applications.



NOMINAL SIZE	1 1/4"	1 1/2"	2"	2"
ASSEMBLY NUMBER	40051412500	40051415000	40051417800	40051418700

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	4005140	400590	400542	400542
2 *	SET SCREW	1	18556210187	18556210187	18556210250	18556210250
3	CORE	1	4005139	400591	4005370	4005370
4	TOP SUB	1	4005314	4005306	4005382	4005369
5 *	SHEAR PIN	1	9110131050	9110131239	9110141600	9110141600
6	CYLINDER	1	4005313	4005309	4005245	4005312
7	CORE SPRING	1	900071	900075	900073	900073
8	SPRING RETAINER	1	4005134	400595	400539	400539
9	DOG SPRING	1	900072	900076	900074	900074
10	DOG RETAINER	1	4005137	400596	4005202	4005202
11 *	DOGS	Noted	4005138 (3)	400597 (3)	400538 (4)	400538 (4)
REDRESS KIT (* Included as part of Kit)			40051424125	40051424150	40051424178	40051424187

ENGINEERING DATA:

MAXIMUM OD	1.16"	1.47"	1.75"	1.81"
PIN THREAD CONNECTION	5/8" - 11	15/16" - 10	15/16" - 10	15/16" - 10
FISHING NECK OD	1.000"	1.187"	1.375"	1.375"
BOTTOM THREAD (PRONG)	3/8" - 16	1/2" - 13	1/2" - 13	1/2" - 13
WILL ENGAGE FISHING NECK ID	.88"	1.06"	1.38"	1.38"
REACH	1.08"	1.62"	1.62"	1.62"
LENGTH	7.95"	11.75"	12.6"	12.6"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	1.3 (.59)	3.2 (1.45)	5.2 (2.36)	5.4 (2.45)
ACCESSORY	PINNING TOOL ASS'Y	167115	167116	167118



SECTION IV: PULLING TOOLS

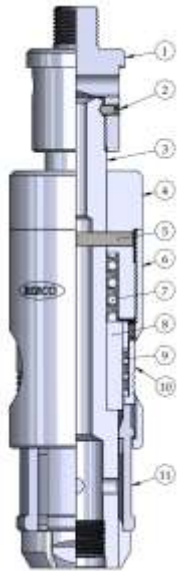
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Type 'ROTGS' Pulling Tool Assembly: Continued

NOMINAL SIZE	2 1/2"	2 1/2"	3"	3 1/2"	4"
ASSEMBLY NUMBER	40051421800	40051423100	40051427500	40051431202	40051436804

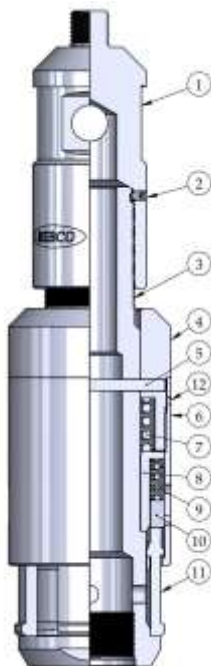


DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	400551	400551	400553	400553	400553
2 *	SET SCREW	1	18556210250	18556210250	18556210375	18556210375	18556210375
3	CORE	1	4005379	4005379	4005359	4005555	4005557
4	TOP SUB	1	4005375	4005376	4005357	4005541	4005539
5 *	SHEAR PIN	1	9110141910	9110142000	9110142495	9111452710	9111453210
6	CYLINDER	1	4005310	4005311	4005262	4005550	4005546
7	CORE SPRING	1	900065	900065	900063	900063	900063
8	SPRING RETAINER	1	4005123	400549	40195	4005518	4005538
9	DOG SPRING	1	900077	900077	900078	900079	900064
10	DOG RETAINER	1	4005204	4005203	4005205	4005526	4005535
11 *	DOGS	4	400552	400552	4005264	4005267	4005261
REDRESS KIT (* Included as part of Kit)			40051424218	40051424231	40051424275	40051424312	40051424368

ENGINEERING DATA:

MAXIMUM OD	2.16"	2.25"	2.72"	3.12"	3.62"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	1.750"	1.750"	2.313"	2.313"	2.313"
BOTTOM THREAD (PRONG)	5/8" - 11	5/8" - 11	5/8" - 11	1 3/8" - 12	2 1/8" - 12
WILL ENGAGE FISHING NECK ID	1.81"	1.81"	2.31"	2.62"	3.12"
REACH	1.62"	1.62"	1.62"	1.62"	1.62"
LENGTH	12.85"	12.85"	13.04"	13.25"	13.25"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	8.3 (3.76)	9.0 (4.08)	14.2 (6.44)	16.4 (7.44)	21.2 (9.61)
ACCESSORY	PINNING TOOL ASS'Y	167112	167112	167113	167113

NOMINAL SIZE	5"
ASSEMBLY NUMBER	40051445600



DET	PART NAME	QTY	PART NO
1	FISHING NECK	1	4005364
2 *	SET SCREW	1	18556210375
3	CORE	1	4005365
4	TOP SUB	1	4005366
5 *	SHEAR PIN	1	9110154235
6	CYLINDER	1	4005367
7	CORE SPRING	1	900036
8	SPRING RETAINER	1	4005363
9	DOG SPRING	1	900082
10	DOG RETAINER	1	4005326
11 *	DOGS	4	4005324
12	SET SCREW	1	Optional
REDRESS KIT (* Included as part of Kit)			40051424456

ENGINEERING DATA:

MAXIMUM OD	4.50"
PIN THREAD CONNECTION	1 1/16" - 10
FISHING NECK OD	3.125"
BOTTOM THREAD (PRONG)	2 1/2" - 10
WILL ENGAGE FISHING NECK ID	4.00"
REACH	1.62"
LENGTH	18.1"
MATERIAL	Alloy
WEIGHT lbs (kg)	39.8 (18.05)
ACCESSORY	PINNING TOOL ASS'Y
	167110



SECTION IV: PULLING TOOLS

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Type 'ROTGS' Pulling Tool Assembly: Continued



NOMINAL SIZE	6"	7"	7"
ASSEMBLY NUMBER	40051456200	40051458700	40051459600

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	FISHING NECK	1	4005584	4005270	4005270
2 *	PIN	1	18840421251	18810407501	18810407501
3	NUT	1	4005579	4005188	4005188
4	RETAINER RING	1	4005580	4005353	4005344
5 *	SET SCREW	2	18555210500	18555210500	18555210500
6 *	SHEAR PIN	1	9110164625	9110165090	9110165090
7	TOP SUB	1	4005575	4005351	4005194
8	CORE SPRING	1	9000192	900080	900080
9	DOG SPRING	1	9000193	900081	900081
10	SPRING RETAINER	1	4005581	4005190	4005190
11	DOG RETAINER	1	4005583	4005192	4005192
12	CYLINDER	1	4005578	4005352	4005189
13 *	DOGS	12	4005582	4005191	4005191
14	CORE	1	4005574	4005193	4005193
REDRESS KIT (* Included as part of Kit)			40051424562	40051424587	40051424587

ENGINEERING DATA:

	5.56"	5.83"	5.88"
MAXIMUM OD	5.56"	5.83"	5.88"
PIN THREAD CONNECTION	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	3.125"	3.125"	3.125"
BOTTOM THREAD (PRONG)	2 3/4" - 10	3 5/8" - 10	3 5/8" - 10
WILL ENGAGE FISHING NECK ID	4.75"	5.38"	5.38"
REACH	1.78"	1.86"	1.86"
LENGTH	20.7"	21.25"	21.25"
MATERIAL	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	48.5 (22.0)	64.2 (29.12)	66.2 (30.03)

Select Type 'ROTGS' Pulling Tool to retrieve Sub-Surface devices that have internal type of Fishing Neck

QUICK REFERENCE CHART:

NOM. SIZE	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4" - 4 1/2"	5" - 5 1/2"		
ASS'Y NO.	40051412500	40051415000	40051417800	40051418700	40051421800	40051423100	40051427500	40051431202	40051436804	40051445600
Ref: FN ID	.88"	1.06"	1.38"	1.81"	2.31"	2.62"	3.12"	4.00"		
TO PULL	1.250" 1.375"	1.500" 1.625" 1.710"	1.781"	1.875" 1.905" 2.000" 2.125"	2.188"	2.313" 2.380" 2.500" 2.562"	2.750" 2.813" 2.875" 3.000"	3.125" 3.250" 3.313" 3.437"	3.688" 3.813" 3.875" 4.000" 4.125" 4.313"	4.562" 4.688" 4.750" 4.813"
LOCK GUIDE (Seal Bore)										



SECTION IV: PULLING TOOLS

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Type 'ROTGSL' Pulling Tool Assembly: 2.00" – 4.00"

Rebco Type 'ROTGSL' Pulling Tool is designed to retrieve Type 'ROTD' Collar Lock Mandrel, see **PRODUCT CODE 10**. The tool can be released by jarring down.

NOTE: Type 'ROTGSL' Pulling Tool has extended Core (longer reach), and it should be used only to retrieve Type 'ROTD' Collar Lock Mandrel.



NOMINAL SIZE	2"	2 1/2"	3"	4"
ASSEMBLY NUMBER	4005140817800	4005140821800	4005140827500	4005140836804

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	400542	400551	400553	400553
2 *	SET SCREW	1	18556210250	18556210250	18556210375	18556210375
3	CORE	1	4005372	4005381	4005361	4005558
4	TOP SUB	1	4005369	4005375	4005357	4005539
5 *	SHEAR PIN	1	9110141600	9110141910	9110142495	9111453210
6	CYLINDER	1	4005245	4005310	4005262	4005546
7	CORE SPRING	1	900073	900065	900063	900063
8	SPRING RETAINER	1	400539	4005123	40195	4005538
9	DOG SPRING	1	900074	900077	900078	900064
10	DOG RETAINER	1	4005202	4005204	4005205	4005535
11 *	DOGS	4	400538	400552	4005264	4005261
REDRESS KIT (* Included as part of Kit)			40051424187	40051424218	40051424275	40051424368

ENGINEERING DATA:

MAXIMUM OD	1.81"	2.16"	2.72"	3.62"
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"
BOTTOM THREAD (PRONG)	1/2" - 13	5/8" - 11	5/8" - 11	2 1/8" - 12
WILL ENGAGE FISHING NECK ID	1.38"	1.81"	2.31"	3.12"
REACH	3.50"	3.50"	3.62"	3.02"
LENGTH	14.5"	14.75"	15.04"	14.15"
MATERIAL	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	5.6 (2.54)	3.4 (3.86)	14.4 (6.53)	22 (9.98)
ACCESSORY	PINNING TOOL ASS'Y	167118	167112	167113

Retrieving Sub-Surface devices with Internal Fishing Necks; there are many occasions where a need for Shear Up to release Pulling Tool is an advantage. Type 'ROTGU' Shear-Up Adapter used with Type 'ROTGS' and Type 'ROTGSL' Pulling Tools converts the combined Tools to Type 'ROTGR'/'ROTGRL' Pulling Tool Assembly respectively.

Type 'ROTGR' Pulling Tool ('ROTGS'/'ROTGU') can be released by upward jarring action.

NOTE: When the Type 'ROTGR' tool is used, only the Shear Pin in the Shear-Up Adapter can be used. The Shear Pin must be removed from the 'ROTGS' portion of the Tool. This Shear Pin (in the Type 'ROTGS' Tool) cannot be sheared when the 'ROTGU' Shear-Up Adapter is attached to the Type 'ROTGS' Pulling Tool.



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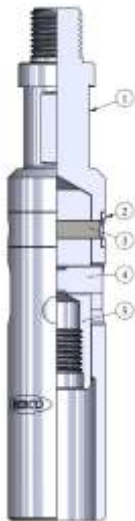
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Type 'ROTGU' Shear-Up Adapter Tool Assembly: 1.12" – 7.00"

Rebco Type 'ROTGU' Shear-Up Adapter is used with Type 'ROTGS' Pulling Tool when the need for jar up is required to release the Sub-Surface device.

See Type 'ROTGR' Pulling/Running Tool Assembly (PRODUCT 40).

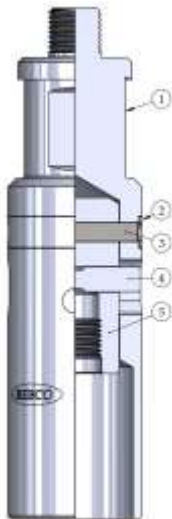


NOMINAL SIZE	1 1/8"	1 1/4"	1 1/2"	2"	2"
ASSEMBLY NUMBER	40051611200	40051612500	40051615000	40051617800	40051618700

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	4005301	4005131	400598	4005243	400581
2	BAND	1	4005302	4005129	400599	4005242	400580
3 *	SHEAR PIN	1	9111441000	9111441000	9111441060	9111451605	9111451670
4	RETAINER PIN	1	4005128	4005128	4005100	400579	400579
5	CORE NUT	1	4005130	4005130	4005101	400582	400582
6 *	SET SCREW (Not Shown)	1	18556210187	18556210187	18558210312	18558210312	18558210312
REDRESS KIT (* Included as part of Kit)			40051624112	40051624125	40051624150	40051624178	40051624187

ENGINEERING DATA:

MAXIMUM OD	1.10"	1.15"	1.47"	1.75"	1.81"
PIN THREAD CONNECTION	5/8" - 11	5/8" - 11	15/16" - 10	15/16" - 10	15/16" - 10
FISHING NECK OD	.750"	1.000"	1.187"	1.375"	1.375"
CORE NUT THREAD	5/8" - 11	5/8" - 11	15/16" - 10	15/16" - 10	15/16" - 10
LENGTH	7.50"	7.69"	9.37"	9.37"	9.37"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	1.22 (.55)	1.58 (.72)	2.5 (1.13)	3.6 (1.63)	3.8 (1.72)



NOMINAL SIZE	2 1/2"	2 1/2"	3" *	3" - 4"
ASSEMBLY NUMBER	40051621800	40051623100	40051627530	40051631202

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	4005118	400584	4005275	4005112
2	BAND	1	4005117	400585	4005273	4005113
3 *	SHEAR PIN	1	9111451990	9111452100	9111452565	9111452565
4	RETAINER PIN	1	4005116	400586	4005272	4005114
5	CORE NUT	1	400582	400582	4005274	4005115
6 *	SET SCREW (Not Shown)	1	18558210312	18558210312	18558210500	18558210500
REDRESS KIT (* Included as part of Kit)			40130124218	40130124231	40051624300	40051624300

ENGINEERING DATA:

MAXIMUM OD	2.12"	2.25"	2.72"	2.72"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	1.750"	1.750"	2.313"	2.313"
CORE NUT THREAD	15/16" - 10	15/16" - 10	1 1/16" - 10	1 1/16" - 10
LENGTH	9.88"	9.87"	10.31"	10.31"
MATERIAL	Alloy	Alloy	Norm Alloy	Alloy
WEIGHT lbs (kg)	5.4 (2.45)	6.2 (2.81)	9.4 (4.26)	9.4 (4.26)

NOTE: * 3" 'ROTGU' Shear Up Adapter (40051627530) is a Special Tool for H₂S Service



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Type 'ROTGU' Shear-Up Adapter Tool Assembly: Continued



NOMINAL SIZE	5"	7"	7"
ASSEMBLY NUMBER	40051645600	40051658700	40051659600

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	FISHING NECK	1	4005385	4005292	4005385
2	BAND	1	4005240	4005290	4005240
3 *	SHEAR PIN	1	9111453300	9111463300	9111453300
4	RETAINER PIN	1	4005238	4005238	4005238
5 *	SET SCREW	1	18558210500	18558210500	18558210500
6	CORE NUT	1	4005384	4005291	4005291
7 *	BALL	1	None	1834010	1834010
8	SKIRT	1	None	4005294	4005293
REDRESS KIT (* Included as part of Kit)			40051624456	40051624587	40051624587

ENGINEERING DATA:

	3.60"	5.83"	5.88"
MAXIMUM OD	3.60"	5.83"	5.88"
PIN THREAD CONNECTION	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	3.125"	2.313"	2.313"
CORE NUT THREAD	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
LENGTH	15.19"	15.66"	15.66"
MATERIAL	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	19.6 (8.89)	34.8 (15.79)	34.8 (15.79)

Type 'ROTGR' Pulling Tool Assembly: 1.25" – 7.00"

Rebco Type 'ROTGR' Pulling Tool is a combination tool made up of the Type 'ROTGS' Pulling Tool and Type 'ROTGU' Shear-Up Adapter.

NOTE: Do not place a SHEAR PIN in the Type 'ROTGS' Pulling Tool section of the Type 'ROTGR' Pulling Tool Assembly.



NOMINAL SIZE	1 1/4"	1 1/2"	2"	2"	2 1/2"
ASSEMBLY NUMBER	40051312500	40051315000	40051317800	40051318700	40051321800

DET	ASSEMBLY	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	SHEAR UP ADAPTER	1	40051612500	40051615000	40051617800	40051618700	40051621800
2	PULLING TOOL	1	40051412500	40051415000	40051417800	40051418700	40051421800

ENGINEERING DATA:

	1.16"	1.47"	1.75"	1.81"	2.16"
MAXIMUM OD	1.16"	1.47"	1.75"	1.81"	2.16"
PIN THREAD CONNECTION	5/8" - 11	15/16" - 10	15/16" - 10	15/16" - 10	15/16" - 10
FISHING NECK OD	1.000"	1.187"	1.375"	1.375"	1.750"
BOTTOM THREAD (PRONG)	3/8" - 16	1/2" - 13	1/2" - 13	1/2" - 13	5/8" - 11
WILL ENGAGE FISHING NECK ID	.88"	1.06"	1.38"	1.38"	1.81"
REACH	1.08"	1.62"	1.62"	1.62"	1.62"
LENGTH	14.03"	17.62"	18.54"	18.54"	19.07"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	2.88 (1.31)	5.7 (2.59)	8.8 (3.99)	9.2 (4.17)	13.7 (6.21)



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Type 'ROTGR' Pulling Tool Assembly: Continued



NOMINAL SIZE	2 1/2"	3"	3 1/2"	4"	5"
ASSEMBLY NUMBER	40051323100	40051327500	40051331202	40051336804	40051345600

DET	ASSEMBLY	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	SHEAR UP ADAPTER	1	40051623100	40051631204	40051631202	40051631204	40051645600
2	PULLING TOOL	1	40051423100	40051427500	40051431202	40051436804	40051445600

ENGINEERING DATA:

MAXIMUM OD	2.25"	2.72"	3.12"	3.62"	4.50"
PIN THREAD CONNECTION	15/16" - 10	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	1.750"	2.313"	2.313"	2.313"	3.125"
BOTTOM THREAD (PRONG)	5/8" - 11	5/8" - 11	1 3/8" - 12	2 1/8" - 12	2 1/2" - 10
WILL ENGAGE FISHING NECK ID	1.812"	2.31"	2.62"	3.12"	4.00"
REACH	1.62"	1.62"	1.62"	1.62"	1.62"
LENGTH	19.07"	19.42"	19.65"	19.65"	25.16"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	15.2 (6.89)	23.6 (10.70)	25.8 (11.70)	30.6 (13.88)	59.4 (26.94)



NOMINAL SIZE	6"	7"	7"
ASSEMBLY NUMBER	40051356200	40051358700	40051359600

DET	ASSEMBLY	QTY	PART NO	PART NO	PART NO
1	SHEAR UP ADAPTER	1	40051660000	40051658700	40051659600
2	PULLING TOOL	1	40051456200	40051458700	40051459600

ENGINEERING DATA:

MAXIMUM OD	5.56"	5.83"	5.88"
PIN THREAD CONNECTION	1 1/16" - 10	1 1/16" - 10	1 1/16" - 10
FISHING NECK OD	3.125"	3.125"	3.125"
BOTTOM THREAD (PRONG)	2 3/4" - 10	3 5/8" - 10	3 5/8" - 10
WILL ENGAGE FISHING NECK ID	4.75"	5.38"	5.38"
REACH	1.78"	1.86"	1.86"
LENGTH	27.3"	27.53"	27.53"
MATERIAL	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	68.5 (31.07)	99.0 (44.91)	101 (45.81)



Type 'ROTGRL' Pulling Tool Assembly: 2.00" - 4.00"

Rebco Type 'ROTGRL' Pulling Tool is a combination tool made up of the Type 'ROTGSL' Pulling Tool and Type 'ROTGU' Shear-Up Adapter.

NOMINAL SIZE	2"	2 1/2"	3"	4"
ASSEMBLY NUMBER	4005130818700	4005130821800	4005130827500	4005130836804

DET	ASSEMBLY	QTY	PART NO	PART NO	PART NO	PART NO
1	SHEAR UP ADAPTER	1	40051618700	40051621800	40051631204	40051631204
2	PULLING TOOL	1	4005140818700	4005140821800	4005140827500	4005140836804

ENGINEERING DATA:

MAXIMUM OD	1.81"	2.16"	2.72"	3.62"
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"
WILL ENGAGE FISHING NECK ID	1.38"	1.81"	2.31"	3.12"
LENGTH	20.4"	20.9"	21.4"	22.7"
MATERIAL	Alloy	Alloy	Alloy	Alloy



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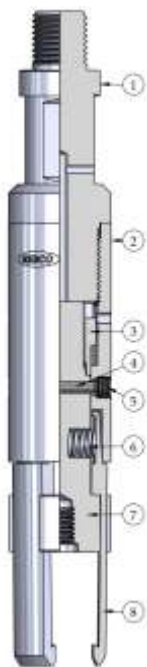
REBCO

D - SPECIAL FUNCTION PULLING TOOLS:

Rebco offers additional Types of **Pulling Tools** with unique designs and specific function. These Pulling Tool types are designed to run and retrieve Sub-Surface equipment with external fishing neck.

Type '**ROTBB**' Pulling Tool Assembly: 2.00" – 3.00"

Rebco Type '**ROTBB**' Pulling Tool is a Shear-Up Pulling Tool with exposed dogs, and a smaller diameter of the shear pin. These features are advantageous when retrieving devices that may have obstructions such as wire around its external fishing neck, and in the event that the Pulling Tool needs to be released, the shear pin can be sheared more readily than the skirted type of Pulling Tools.



NOMINAL SIZE	2"	2 1/2"	3"
ASSEMBLY NUMBER	4001012000	4001012500	4001013000

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	TOP SUB	1	41141	40017	400131
2	CYLINDER	1	400172	400110	400132
3	CORE NUT	1	40012	40018	400133
4 *	SHEAR PIN	1	9110131250	9110131625	9110132187
5 *	SET SCREW	2	185508210250	185508210250	185508210250
6	DOG SPRING	Noted	9000202 (3)	9000202 (3)	9000202 (6)
7	DOG	3	40016	400112	400135
8	CORE	1	400173	40019	400134
REDRESS KIT (* Included as part of Kit)			40010124200	40010124250	40010124300

ENGINEERING DATA:

MAXIMUM OD	1.78"	2.25"	2.81"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	1 1/16" - 10
FISHING NECK OD	1.375"	1.750"	2.313"
BOTTOM THREAD (PRONG)	1/2" - 13	1/2" - 13	1/2" - 13
WILL ENGAGE FISHING NECK OD	1.375"	1.750"	2.313"
REACH	1.44"	1.44"	1.44"
LENGTH	11.14"	11.25"	11.25"
MATERIAL	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	4.2 (1.91)	6.8 (3.08)	11.0 (4.99)
ACCESSORY:	Core Nut Wrench	167173	167174
	Special Core (Note 1)	40011	40013

Note: 1. A Special Core (DET 8) is available for the Type '**ROTBB**' Pulling Tool to pull Slip type Lock Mandrels (PRODUCT 10).

The Core can go inside the Fishing Neck of the Slip Lock and rest on the upper end of the tapered mandrel. This allows downward jarring force to be exerted on the tapered mandrel to move it down out of the slips and thereby unlock the slip type mandrel.



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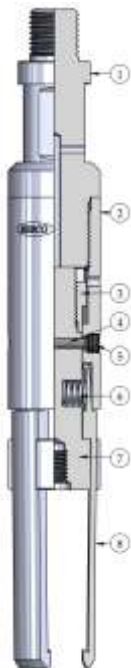
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Type 'ROTBE' Pulling Tool Assembly: 2.00" – 3.00"

Rebco Type 'ROTBE' Pulling Tool is identical to the Type 'ROTBB' Pulling Tool except that the Dogs are longer, therefore longer reach.



NOMINAL SIZE	2"	2 1/2"	3"
ASSEMBLY NUMBER	4001042000	4001042500	4001043000

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	TOP SUB	1	41141	40017	400131
2	CYLINDER	1	400172	400110	400132
3	CORE NUT	1	40012	40018	400133
4 *	SHEAR PIN	1	9110131250	9110131625	9110132187
5 *	SET SCREW	2	185508210250	185508210250	185508210250
6	DOG SPRING	Noted	9000202 (3)	9000202 (3)	9000202 (6)
7	DOG	3	400113	400120	400137
8	CORE	1	400173	40019	400134
REDRESS KIT (* Included as part of Kit)			40010124200	40010124250	40010124300

ENGINEERING DATA:

MAXIMUM OD	1.78"	2.25"	2.81"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	1 1/16" - 10
FISHING NECK OD	1.375"	1.750"	2.313"
BOTTOM THREAD (PRONG)	1/2" - 13	1/2" - 13	1/2" - 13
WILL ENGAGE FISHING NECK OD	1.375"	1.750"	2.313"
REACH	2.62"	2.62"	2.62"
LENGTH	12.63"	12.16"	12.16"
MATERIAL	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	4.6 (2.10)	7.1 (3.20)	11.3 (5.10)
ACCESSORY: Core Nut Wrench	167173	167174	167175

Smaller Nominal Sizes of Type 'ROTBB' and Type 'ROTBE' Pulling Tools are available.

Type 'RH' Heavy Duty Pulling Tool Assembly: 1 1/4" – 4.00"

Rebco Type 'RH' Heavy Duty Pulling Tool uses a collet (360°) type latching around the external Fishing Neck which allows for heavier jarring action.



Three Types of 'RH' Pulling Tools are offered: Designated (Named) by the Reach

- 'RHS' - Short Reach
- 'RHM' - Medium Reach
- 'RHL' - Long Reach

The tool can be released by jarring down against the bottom of the Core.

NOTE: It is important to choose appropriate **Reach** (Core required), as the Tool will not shear against the **Cylinder**.



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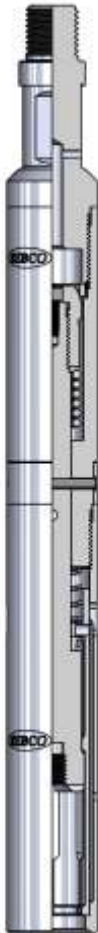
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REBCO

Type 'RHS' Heavy Duty Pulling Tool (Short Reach) Assembly:

1 1/4" - 4.00"

ASSEMBLY PART NUMBER	NOM SIZE	TO PULL FN SIZE	REACH	ENGINEERING DATA			
				MAX OD	PIN THREAD	FISHING NECK OD	LENGTH
401306141250	1 1/4"	.875"	.95"	1.29"	15/16" - 10	1.187"	15.39"
401306141620	1 1/2"	1.187"	1.09"	1.62"			16.65"
401306142000	2"	1.375"	1.16"	1.88"		1.375"	15.60"
401306142500	2 1/2"	1.750"	1.35"	2.30"		1.750"	17.40"
401306143000	3"	2.313"	1.36"	2.88"	1 1/16" - 10	2.313"	18.60"
401306143500	3 1/2"	2.750"		3.62"			
401306144000	4"	3.125"		1.54"		3.80"	



Type 'RHM' Heavy Duty Pulling Tool (Medium Reach) Assembly:

1 1/4" - 4.00"

ASSEMBLY PART NUMBER	NOM SIZE	TO PULL FN SIZE	REACH	ENGINEERING DATA			
				MAX OD	PIN THREAD	FISHING NECK OD	LENGTH
401306091250	1 1/4"	.875"	1.53"	1.29"	15/16" - 10	1.187"	15.39"
401306091620	1 1/2"	1.187"		1.62"			16.65"
401306092000	2"	1.375"	1.52"	1.88"		1.375"	15.60"
401306092500	2 1/2"	1.750"		2.30"		1.750"	17.40"
401306093000	3"	2.313"	1.53"	2.88"	1 1/16" - 10	2.313"	18.60"
401306093500	3 1/2"	2.750"		3.62"			
401306094000	4"	3.125"		2.03"		3.80"	

Type 'RHL' Heavy Duty Pulling Tool (Long Reach) Assembly:

1 1/4" - 4.00"

ASSEMBLY PART NUMBER	NOM SIZE	TO PULL FN SIZE	REACH	ENGINEERING DATA			
				MAX OD	PIN THREAD	FISHING NECK OD	LENGTH
401306081250	1 1/4"	.875"	1.55"	1.29"	15/16" - 10	1.187"	15.39"
401306081620	1 1/2"	1.187"	2.07"	1.62"			16.65"
401306082000	2"	1.375"	2.52"	1.88"		1.375"	15.60"
401306082500	2 1/2"	1.750"	2.65"	2.30"		1.750"	17.40"
401306083000	3"	2.313"	2.66"	2.88"	1 1/16" - 10	2.313"	18.60"
401306083500	3 1/2"	2.750"		3.62"			
401306084000	4"	3.125"		2.80"		3.80"	



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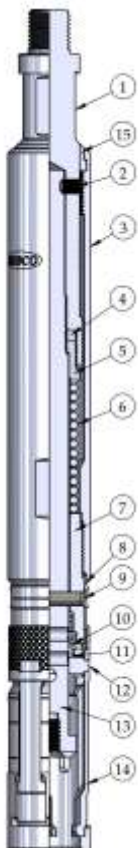
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REBCO

Type 'RMF' Pulling Tool Assembly: 2.00" – 3.00"

Rebco Type 'RMF' Pulling Tool is a Multi-Functional Tool design, sometimes called a 'Universal Tool'. The Tool is used to run and retrieve Wireline set devices with external Fishing Necks.



NOMINAL SIZE	2"	2 1/2"	3"
ASSEMBLY NUMBER	4016202000	4016202500	4016203000

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	FISHING NECK	1	40181	40182	40183
2 *	SET SCREW	1	18507210250	18507210250	185508210250
3	CONNECTING CYLINDER	1	40184	40185	40186
4	LOCK NUT	1	40187	40188	40189
5	CORE NUT	1	401810	401811	401812
6	CORE SPRING	1	90005	90006	90007
7	CYLINDER	1	401816	401817	401818
8	SHEAR PIN RETAINER	1	401819	401820	401821
9 *	SHEAR PIN	1	9110151560	9110151870	9110152290
10	DOG SPRING	1	90008	90009	900010
11	SPRING RETAINER	1	401825	401826	401827
12 *	PAWL	3	401828	401829	401830
13	CORE	1	401831	401832	401833
14	DOG	1	401834	401835	401836
15	BUSHING	1	401837	None	None
REDRESS KIT (* Included as part of Kit)			40162024200	40162024250	40162024300

ENGINEERING DATA:

MAXIMUM OD		1.86"	2.25"	2.80"
PIN THREAD CONNECTION		15/16" - 10	15/16" - 10	1 1/16" - 10
FISHING NECK OD		1.375"	1.375"	1.750"
BOTTOM THREAD (PRONG)		1/2" - 13	1/2" - 13	5/8" - 11
WILL ENGAGE FISHING NECK OD		1.375"	1.750"	2.313"
REACH	SHORT REACH	1.25"	1.30"	1.38"
	MEDIUM REACH	2.05"	2.10"	2.20"
	LONG REACH	2.60"	2.60"	2.70"
LENGTH	SHEAR-UP MODE	19.46"	20.25"	21.41"
	SHEAR-DOWN MODE	22.40"	23.63"	23.77"
MATERIAL		Alloy	Alloy	Alloy
WEIGHT lbs (kg)		9.4 (4.3)	12.4 (5.6)	18.6 (8.4)
ACCESSORY: Pinning Tool Assembly		16711004	16711004	16711005



Shear-Down Mode



Shear-Up Mode

The Tool can be run in the Shear-Up to release or Shear-Down to release mode. Single Core can be adjusted to the desired Reach: Short, Medium or Long Reach.



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REBCO

Pulling Tools for *Rebco* Type 'RQLD' Connections

Type 'RQ' Pulling Tool (Shear Up) Assembly: 2.00" – 3.00"

Rebco Type 'RQ' Pulling Tool is a Special Tool design to fish tools with *Rebco* Type 'RQLD' Fishing Necks.



ASSEMBLY PART NUMBER	NOM SIZE	TO PULL FN SIZE	ENGINEERING DATA				
			FISHING NECK	PIN THREAD	MAX OD	LENGTH	WEIGHT lbs (kgs)
4013122000	2"	1.375"	1.375"	15/16" - 10	1.77"	16.4"	7.4 (3.36)
4013122500	2 1/2"	1.750"	1.750"	15/16" - 10	2.18"	16.36"	10.4 (4.72)
4013123000	3"	2.313"	2.313"	1 1/16" - 10	2.74"	16.06"	18.6 (8.44)

ACCESSORIES for Type 'RQ' and 'SQ' Pulling Tools

ACCESSORY	NOMINAL SIZE		
	2"	2 1/2"	3"
	PART NO	PART NO	PART NO
Pinning Tool	16711004	16711004	16711005
Releasing Tool	167003	167006	167007

Type 'SQ' Pulling Tool (Shear Down) Assembly: 2.00" – 3.00"

Rebco Type 'SQ' Pulling Tool is a Special Tool design to fish tools with *Rebco* Type 'RQLD' Fishing Necks.



ASSEMBLY PART NUMBER	NOM SIZE	TO PULL FN SIZE	ENGINEERING DATA				
			FISHING NECK	PIN THREAD	MAX OD	LENGTH	WEIGHT lbs (kgs)
4014122000	2"	1.375"	1.375"	15/16" - 10	1.776"	15.89"	7.0 (3.18)
4014122500	2 1/2"	1.750"	1.750"	15/16" - 10	2.188"	16.36"	9.8 (4.45)
4014123000	3"	2.313"	2.313"	1 1/16" - 10	2.843"	17.5"	17.7 (8.0)



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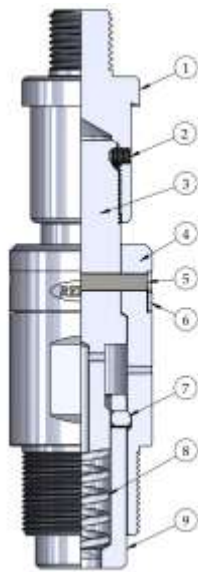
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REBCO

Type 'ROTSD' Double Shear Down Adapter Sub-Assembly: 2.00" – 4.00"

Rebco Type 'ROTSD' Double Shear Down Adapter Sub-Assembly is designed to be used with Rebco Type 'ROTS' (Shear Down) Pulling Tools.

The Adapter allows the Pulling Tools to function as before with the exception that the Tools can be released by jarring down on either the Core or the Cylinder of the Pulling Tools. Moreover, the Short Core in the Pulling Tool increases the reach.



NOMINAL SIZE	2"	2 1/2"	3"
SUB-ASSEMBLY NUMBER	4014202000	4014202500	4014203000

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	FISHING NECK	1	400542	400551	400553
2 *	SET SCREW	1	18556210250	18556210250	18556210375
3	CORE EXTENSION	1	4014127	4014132	4014141
4	HOUSING	1	4014128	4014134	4014140
5 *	SHEAR PIN	1	9110141500	9110141880	9110142380
6	RETAINER RING	1	4014125	4014131	4014137
7 *	LOCK SEGMENT	2	4014126	4014130	4014139
8	SPRING	1	9000135	9000136	9000137
9	LOCKING SLEEVE	1	4014129	4014133	4014138
REDRESS KIT (* Included as part of Kit)			40142024200	40142024250	40142024300

ENGINEERING DATA:

MAXIMUM OD	1.75"	2.18"	2.75"
PIN THREAD CONNECTION	15/16" - 10	15/16" - 10	1 1/16" - 10
FISHING NECK OD	1.375"	1.750"	2.313"
BOTTOM THREAD	1 3/8" - 12	1 3/4" - 12	2 1/8" - 12
LENGTH	8.1"	8.3"	8.7"
MATERIAL	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	3.0 (1.35)	4.7 (2.10)	8.3 (3.75)



SECTION IV: PULLING TOOLS

2013

JP042613

REBCO

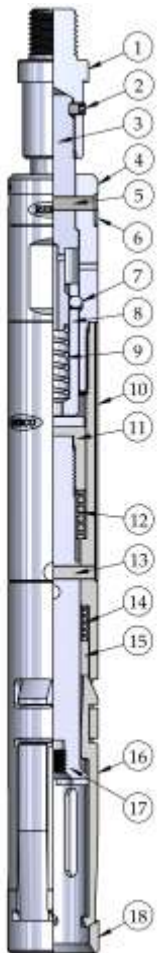
Type 'ROTSSJ' Running and Pulling Tool Assembly: 2.00" – 4.00"

Rebco Type 'ROTSSJ' Double Shear Down Pulling Tool is designed to run and retrieve sub-surface equipment with external fishing neck.

Double Shear Down Adapter ('ROTDSD' – PRODUCT 40) is used with Type 'ROTS' Pulling Tools, the Adapter allows the Pulling Tools to function as before with the exception that the tools can be released by jarring down on either the Core or the Cylinder of the Pulling Tool.

This design allows the Type 'ROTS' Pulling Tools to have reach capabilities that are equivalent to the Type 'ROTR' Pulling Tools with the addition of a short Core.

CAUTION: Shear Pin (DET 13) is not to be used.



NOMINAL SIZE	2"	2 1/2"	3"	3 1/2"	4"		
ASSEMBLY NUMBER	40141407200	40141407250	40141407300	40141407350	40141407400		
DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1	400542	400551	400553	400553	400553
2 *	SET SCREW	1	18556210250	18556210250	18556210375	18556210375	18556210375
3	CORE EXTENSION	1	4014127	4014132	4014141	4014141	4014141
4	HOUSING	1	4014128	4014134	4014140	4014140	4014140
5 *	SHEAR PIN	1	9110141500	9110141880	9110142380	9110142380	9110142380
6	RETAINER RING	1	4014125	4014131	4014137	4014137	4014137
7 *	LOCK SEGMENT	2	4014126	4014130	4014139	4014139	4014139
8	LOCKING SLEEVE	1	4014129	4014133	4014138	4014138	4014138
9	SPRING	1	9000135	9000136	9000137	9000137	9000137
10	SHEAR PIN RETAINER	1	40144	401415	401451	401451	401451
11	CORE NUT	1	40143	401416	401453	401453	401453
12	CYLINDER SPRING	1	900073	900065	900063	900063	900063
13	SHEAR PIN (Ref Only)	1	9110141625	9110141965	9110152568	9110152635	9110152635
14	DOG SPRING	1	900084	900066	900085	9000186	900086
15	WASHER	1	40136	401312	401323	4014212	4013123
16	DOG	3	401398	401399	401322	4013156	4013124 (4)
17	CORE	1	4014124	4014135	4014136	4014210	4014211
18	CYLINDER	1	401412	401417	401452	401465	401478
REDRESS KIT (*Included as part of Kit)			401414072420	401414072425	401414072430	401414072435	401414072440

ENGINEERING DATA:

MAXIMUM OD	1.77"	2.12"	2.84"	3.115"	3.670"
PIN THREAD CONNECTION	15/16" - 10	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"	2.313"
BOTTOM THREAD (PRONG)	1/2" - 13	1/2" - 13	5/8" - 11	5/8" - 11	1 1/4" - 12
WILL ENGAGE FISHING NECK OD	1.375"	1.750"	2.313"	2.750"	3.125"
REACH	2.57"	2.61"	2.7"	2.51"	2.68"
LENGTH	18.51"	19.29"	20.6"	21.12"	21.11"
MATERIAL	Alloy	Alloy	Alloy	Alloy	Alloy
WEIGHT lbs (kg)	8.3 (3.76)	12.1 (5.49)	22.1 (10.02)	23.1 (10.5)	26.6 (12.06)
ACCESSORIES	PINNING TOOL ASS'Y	16711004	16711004	16711005	16711005
	RELEASING TOOL	167003	167006	167007	167008
	CORE WRENCH	167024	167024	167025	167025
	CORE NUT WRENCH	167011	167011	167011	167011

- Note:**
1. Pinning Tool Assembly should be used to help in tightening the Core Nut (DET 11) with the Core Nut Wrench.
 2. Shear Pin (DET 13) should not be used; shown as Reference Only.