

EXCEEDING EXPECTATIONS ONE TOOL AT A TIME

Test Tools and Check Valves



PRODUCT DESCRIPTION: TEST TOOLS and CHECK VALVES

Test Tools and Check Valves are generally used to test tubing, locate leaks, or set hydraulic-set packers. The Tools are designed to hold pressure from above only.

Rebco offers four types of Test Tools:

- Check Valves Type 'ROTFB-2' and 'ROTRB-2'
 To be set into compatible Landing Nipples with compatible packing seal bore.
- Non-Selective Test Tool Type 'ROTN'
 To be set into bottom No-Go Landing Nipples with compatible packing seal bore.
- Selective Test Tool Type 'ROTR' and 'ROTX'
 To be set in compatible Landing Nipples in the tubing string.
- Lock Mandrel and Valve Type 'CVR' 'CVRN' and 'CVX' 'CVXN' Check Valve (Standing Valve) Assembly
 To be set into Landing Nipples, and compatible profiles in the tubing string.
- 5. Lock Mandrel and Prong Type 'POR' 'PORN' and 'POX' 'POXN' Test Tool Plugs To be set into bottom No-Go Type Landing Nipples, and compatible Landing Nipple profiles in the tubing string.

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Type 'ROTFB-2' Equalizing Check Valve Assembly: 1.781" - 3.813"

Rebco Type 'ROTFB-2' Equalizing Check Valve (Standing Valve) is designed to prevent the fluid flow in one direction (downwards), while allowing full fluid flow in the opposite direction (upwards).

Type 'ROTFB-2' Equalizing Check Valve is to be set into Type 'ROTF' Nipple profile. The assembly is not locked in the Nipple profile. The No-Go, Part of the Packing Mandrel, prevents the downward movement. The Check Valve has built-in method of equalizing before pulling.

'ROTFB-2' Equalizing Check Valves are available in a variety of Materials, suitable for down-hole conditions.

Product Code: 12

| TECHNICAL DATA | | | | | | | |
|--------------------|---------------|--------------|--------------|--------------|--------------|--------------|--|
| NOMINAL SIZE | | | 2 3/8" (2") | | 2 7/8" | (2 1/2") | |
| NIPPLE - SEAL SIZ | ΖE | 1.781" | 1.812" | 1.875" | 2.250" | 2.313" | |
| ASSEMBLY NUME | BER | 122501217830 | 122501218130 | 122501218730 | 122501222530 | 122501223130 | |
| ENGINEERING DATA: | | | | | | | |
| MAXIMUM OD (NO-GO) | | 1.803" | 1.865" | 1.905" | 2.302" | 2.364" | |
| FISHING NECK O | D | 1.375" | 1.375" | 1.375" | 1.750" | 1.750" | |
| LENGTH | | 15.68" | 15.68″ | 15.68" | 17.38" | 17.38" | |
| MATERIAL * | | Norm Alloy | |
| RUNNING TOOL | Type 'ROTC-1' | 41022012370 | 41022012370 | 41022012370 | 41022012870 | 41022012870 | |
| PULLING TOOL | Type 'ROTSB' | 4014012000 | 4014012000 | 4014012000 | 4014012500 | 4014012500 | |
| | Type 'ROTJDC' | 400703022000 | 400703022000 | 400703022000 | 400703022500 | 400703022500 | |

^{*}Norm Alloy (NACE MR-01-75, 1980 Rev.)





Type 'ROTFB-2' Equalizing Check Valve Assembly:

| TECHNICAL DATA | | | | | |
|--------------------|---------------|---------------|--------------|--------------|--|
| NOMINAL SIZE | | | 3 1/2" (3") | | |
| NIPPLE - SEAL SIZ | ΖE | 2.562" | 2.750" | 2.813" | |
| ASSEMBLY NUME | BER | 122501225630 | 122501227530 | 122501228130 | |
| ENGINEERING DATA: | | | | | |
| MAXIMUM OD (NO-GO) | | 2.625" | 2.802" | 2.865" | |
| FISHING NECK O | D | 1.750" 2.313" | | 2.313" | |
| LENGTH | | 18.59" 18.54" | | 18.54" | |
| MATERIAL * | MATERIAL * | | Norm Alloy | Norm Alloy | |
| RUNNING TOOL | Type 'ROTC-1' | 41022012870 | 41022013500 | 41022013500 | |
| DULLING TOOL | Type 'ROTSB' | 4014012500 | 4014013000 | 4014013000 | |
| PULLING TOOL | Type 'ROTJDC' | 400703022500 | 400703023000 | 400703023000 | |



| TECHNICAL DATA | | | | | |
|--------------------|---------------|---------------------------|--------------|--------------|--|
| NOMINAL SIZE | | | 4 1/2" (4") | | |
| NIPPLE - SEAL SIZ | ZE | 3.688" | 3.750" | 3.813" | |
| ASSEMBLY NUME | BER | 122501236830 122501237530 | | 122501238130 | |
| ENGINEERING DATA: | | | | | |
| MAXIMUM OD (NO-GO) | | 3.74" | 3.80" | 3.87" | |
| FISHING NECK O | D | 3.125" 3.125" | | 3.125" | |
| LENGTH | | 16.46" | 16.46" | 16.46" | |
| MATERIAL * | | Norm Alloy | Norm Alloy | Norm Alloy | |
| RUNNING TOOL | Type 'ROTC-1' | 41022014500 | 41022014500 | 41022014500 | |
| PULLING TOOL | Type 'ROTSB' | 4014014000 | 4014014000 | 4014014000 | |
| | Type 'ROTJDC' | 400703024000 | 400703024000 | 400703024000 | |





Type 'ROTRB-2' Equalizing Check Valve Assembly: 1.781" - 3.813"

Rebco Type 'ROTRB-2' Equalizing Check Valve (Standing Valve)is designed to prevent the fluid flow in one direction (downwards), while allowing full fluid flow in the opposite direction (upwards).

Type 'ROTRB-2' Equalizing Check Valve seats on the bottom No-Go shoulder of Type 'ROTBR' Nipple profile. The No-Go shoulder prevents downward movement. The assembly is not locked in the Nipple profile. The Check Valve has built-in method of equalizing before pulling.

'ROTRB-2' Equalizing Check Valves are available in a variety of Materials, suitable for down-hole conditions.

| TECHNICAL DATA | | | | | | | |
|-------------------|---------------|--------------|--------------|--------------|--------------|--------------|--|
| NOMINAL SIZE | | | 2 3/8" (2") | | 2 7/8" | (2 1/2") | |
| NIPPLE - SEAL SIZ | ZE. | 1.781" | 1.812" | 1.875" | 2.250" | 2.313" | |
| ASSEMBLY NUMB | BER | 121301217830 | 121301218130 | 121301218730 | 121301222530 | 121301223130 | |
| ENGINEERING DATA: | | | | | | | |
| MAXIMUM OD | | 1.771" | 1.802" | 1.865" | 2.240" | 2.302" | |
| FISHING NECK O | D | 1.375" | 1.375" | 1.375" | 1.750" | 1.750" | |
| LENGTH | | 15.21" | 15.21" | 15.21" | 17.37" | 17.37" | |
| MATERIAL * | | Norm Alloy | |
| RUNNING TOOL | Type 'ROTC-1' | 41022012370 | 41022012370 | 41022012370 | 41022012870 | 41022012870 | |
| PULLING TOOL | Type 'ROTSB' | 4014012000 | 4014012000 | 4014012000 | 4014012500 | 4014012500 | |
| | Type 'ROTJDC' | 400703022000 | 400703022000 | 400703022000 | 400703022500 | 400703022500 | |

^{*}Norm Alloy (NACE MR-01-75, 1980 Rev.)





Type 'ROTRB-2' Equalizing Check Valve Assembly:

| TECHNICAL DATA | | | | | |
|-------------------|---------------|---------------|---------------|--------------|--|
| NOMINAL SIZE | | | 3 1/2" (3") | | |
| NIPPLE - SEAL SIZ | ΖE | 2.562" | 2.750" | 2.813" | |
| ASSEMBLY NUME | BER | 121301225630 | 121301227530 | 121301228130 | |
| ENGINEERING DATA: | | | | | |
| MAXIMUM OD | | 2.552" | 2.740" | 2.802" | |
| FISHING NECK O | D | 1.750" 2.313" | | 2.313" | |
| LENGTH | | 17.37" | 17.37" 18.54" | | |
| MATERIAL * | | Norm Alloy | Norm Alloy | Norm Alloy | |
| RUNNING TOOL | Type 'ROTC-1' | 41022012870 | 41022013500 | 41022013500 | |
| PULLING TOOL | Type 'ROTSB' | 4014012500 | 4014013000 | 4014013000 | |
| PULLING TOOL | Type 'ROTJDC' | 400703022500 | 400703023000 | 400703023000 | |



| TECHNICAL DATA | | | | | |
|-------------------|---------------|---------------------------|--------------|--------------|--|
| NOMINAL SIZE | | | 4 1/2" (4") | | |
| NIPPLE - SEAL SIZ | ΖE | 3.688" | 3.750" | 3.813" | |
| ASSEMBLY NUME | BER | 121301236830 121301237530 | | 121301238130 | |
| ENGINEERING DATA: | | | | | |
| MAXIMUM OD | | 3.678" | 3.740" | 3.802" | |
| FISHING NECK O | D | 3.125" 3.125" | | 3.125" | |
| LENGTH | | 16.46" 16.46" | | 16.46" | |
| MATERIAL * | | Norm Alloy | Norm Alloy | Norm Alloy | |
| RUNNING TOOL | Type 'ROTC-1' | 41022014500 | 41022014500 | 41022014500 | |
| PULLING TOOL | Type 'ROTSB' | 4014014000 | 4014014000 | 4014014000 | |
| PULLING TOOL | Type 'ROTJDC' | 400703024000 | 400703024000 | 400703024000 | |



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Type 'ROTN' (Non-Selective) Test Tool Assembly: 2"-5 1/2"

Rebco Type 'ROTN' Non-Selective Test Tool is designed to prevent the fluid flow in one direction (downwards), while allowing fluid flow in the opposite direction (upwards).

Type 'ROTN' Non-Selective Test Tool seats on the bottom No-Go shoulder of the Landing Nipple profile. The No-Go shoulder prevents downward movement. The assembly is not locked in the Nipple profile. The Test Tool has built-in method of equalizing before retrieving.

Type 'ROTN' Non-Selective Test Tool can be used in variety of Landing Nipples with the bottom No-Go and compatible packing bores.

Sizes not listed, and Materials to suit the well conditions are available.

Product Code: 14

| TECHNICAL DATA | | | | | |
|-------------------|---------------|--------------|--------------|--------------|--------------|
| NOMINAL SIZE | | 2 |)" | 2 1 | /2" |
| NIPPLE - SEAL SIZ | E | 1.781" | 1.875" | 2.188" | 2.313" |
| ASSEMBLY NUMBER | | 14102017830 | 14102018730 | 14102021830 | 14102023130 |
| ENGINEERING DATA: | | | | | |
| MAXIMUM OD - N | lo-Go | 1.775" | 1.870" | 2.182" | 2.307" |
| PACKING OD - MA | AX. | 1.79″ | 1.89" | 2.21" | 2.33" |
| FISHING NECK OF |) | 1.187" | 1.375" | 1.375" | 1.375″ |
| MATERIAL * | | Norm Alloy | Norm Alloy | Norm Alloy | Norm Alloy |
| RUNNING / | Type 'ROTSB' | 4014011500 | 4014012000 | 4014012000 | 4014012000 |
| PULLING TOOL | Type 'ROTJDC' | 400703021500 | 400703022000 | 400703022000 | 400703022000 |

^{*}Norm Alloy (NACE MR-01-75, 1980 Rev.)





Type 'ROTN' (Non-Selective) Test Tool Assembly:

| TECHNICAL DATA | | | | | |
|--------------------|---------------|--------------|--------------|--------------|--------------|
| NOMINAL SIZE | | | 3 1 | /2″ | |
| NIPPLE - SEAL SIZ | E | 2.562" | 2.750" | 2.813" | 2.875" |
| ASSEMBLY NUMB | ER | 14102025630 | 14102027530 | 14102028130 | 14102028730 |
| ENGINEERING DATA: | | | | | |
| MAXIMUM OD - No-Go | | 2.557" | 2.745" | 2.807" | 2.870" |
| PACKING OD - MA | λX. | 2.58" | 2.77" | 2.83 | 2.89" |
| FISHING NECK OF | | 1.375" | 1.750" | 1.750" | 1.750" |
| LENGTH | | 12.73" | 13.18" | 13.18" | 13.18" |
| MATERIAL * | | Norm Alloy | Norm Alloy | Norm Alloy | Norm Alloy |
| RUNNING / | Type 'ROTSB' | 4014012000 | 4014012500 | 4014012500 | 4014012500 |
| PULLING TOOL | Type 'ROTJDC' | 400703022000 | 400703022500 | 400703022500 | 400703022500 |



| TECHNICAL DATA | | | | | |
|-------------------|---------------|--------------|--------------|--------------|--------------|
| NOMINAL SIZE | | | 4 1/2" | | 5 1/2" |
| NIPPLE - SEAL SIZ | E | 3.688" | 3.813" | 4.125" | 4.562" |
| ASSEMBLY NUMB | ER | 14102036830 | 14102038130 | 14102041230 | 14102045630 |
| ENGINEERING DATA: | | | | | |
| MAXIMUM OD - N | lo-Go | 3.682" | 3.807" | 4.119" | 4.557" |
| PACKING OD - MA | AX. | 3.70" | 3.83" | 4.14" | 4.58" |
| FISHING NECK OF |) | 2.313" | 2.313" | 2.313" | 2.313" |
| LENGTH | | 14.91" | 14.87" | 14.91" | 15.75" |
| MATERIAL * | | Norm Alloy | Norm Alloy | Norm Alloy | Norm Alloy |
| RUNNING / | Type 'ROTSB' | 4014013000 | 4014013000 | 4014013000 | 4014013000 |
| PULLING TOOL | Type 'ROTJDC' | 400703023000 | 400703023000 | 400703023000 | 400703023000 |



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Rebco Oil Tools, Inc. Calgary, Alberta, Canada



Type 'ROTR' and Type 'ROTX' Selective Test Tool Assembly: 2" – 3 1/2"

Rebco Type 'ROTR' and Type 'ROTX' Selective Test Tool is designed to locate and set in compatible Landing Nipples in the tubing string and hold applied pressure from above.

Type 'ROTR' and Type 'ROTX' Selective Test Tools are used to test tubing, locate leaks and other practical functions.

The tool is run to a point below the desired compatible nipple, pulling up through the nipple releases the locking keys to set the tool. Pressure from above may then be applied. The process can be repeated with next nipple up the tubing string, thus eliminating number of Wireline trips.

Product Code: 14

| TECHNICAL DATA | | | | | |
|--|---------------------|----------------|----------------|--|--|
| NOMINAL SIZE | | 2 7/8" | 3 1/2" | | |
| LANDING NIPPLE | PROFILE | 'ROTR' 'ROTRN' | 'ROTR' 'ROTRN' | | |
| LANDING NIFFLE | SEAL SIZE | 2.313" | 2.562" | | |
| ASSEMBLY NUMBER | | 14182023100 | 14132025600 | | |
| ENGINEERING DATA: | | | | | |
| OD - with KEYS EXPAN | NDED | 2.62" | 2.89″ | | |
| OD - NO-GO | | 2.307" | 2.557" | | |
| PACKING OD | | 2.313" | 2.562" | | |
| FISHING NECK OD | | 1.375" | 1.375" | | |
| BOTTOM THREAD | | 1" LP | 1" LP | | |
| LENGTH | | 24.75" | 26.0" | | |
| MATERIAL | | Alloy | Alloy | | |
| PRESSURE RATING | Type 'ROTR' Nipple | 18,500 psi | 19,000 psi | | |
| from ABOVE | Type 'ROTRN' Nipple | 17,000 psi | 18,000 psi | | |
| RUNNING/PULLING TOOL Type 'ROTSSJ' (PRODUCT 40) | | 401414072000 | 401414072000 | | |



Type 'ROTR' STT



Type 'ROTR' and Type 'ROTX' Selective Test Tool Assembly:

Rebco Type 'ROTX' Selective Test Tool selectively locates and lands in 'ROTX' Landing Nipples and/or Type 'ROTX' Sliding Sleeve of the same size within a tubing string. The No-Go shoulder, also allows the Tool to be set into the 'ROTXN', No-Go Landing Nipple.

The Test Tool is designed to hold pressure differential from above only. Installed or retrieved by standard Wireline procedure, the Tool can be set in the Landing Nipple, or repeatedly moved to the next higher Nipple of the same size. The pressure is equalized across the Test Tool by picking up the Drop with a Pulling Tool attached to the Fishing Neck.

| | TI | ECHNICAL | DATA | | |
|-------------------------------|------------------------------|----------------|----------------|----------------|----------------|
| NOMINAL SIZE | | 2" | 2 7/8" | 3 1/2" | 3 1/2" |
| LANDING NIPPLE | PROFILE | 'ROTX' 'ROTXN' | 'ROTX' 'ROTXN' | 'ROTX' 'ROTXN' | 'ROTX' 'ROTXN' |
| EANDING MITTEE | SEAL SIZE | 1.875" | 2.313" | 2.750" | 2.813" |
| ASSEMBLY NUMBER | ₹ | 14182018700 | 14182023100 | 14182027500 | 14182028100 |
| ENGINEERING DATA: | | | | | |
| OD - with KEYS EXP | ANDED | 2.20" | 2.62" | 3.10" | 3.16″ |
| OD - NO-GO | | 1.870" | 2.307" | 2.745" | 2.803" |
| PACKING OD - MAX. | | 1.875" | 2.313" | 2.750" | 2.813" |
| FISHING NECK OD | | 1.375" | 1.375" | 1.750" | 1.750" |
| BOTTOM THREAD | | 23.08" | 24.50" | 26.12" | 26.12" |
| LENGTH | | 3/8" NPT | 1" LP | 1" LP | 1" LP |
| MATERIAL | | Alloy | Alloy | Alloy | Alloy |
| PRESSURE RATING from ABOVE | Type 'ROTX' | 10,000 psi | 10,000 psi | 9,000 psi | 9,000 psi |
| (Set in Nipple) | Type 'ROTXN' | 8,000 psi | 8,000 psi | 8,000 psi | 8,000 psi |
| | PULLING TOOL J' (PRODUCT 40) | 401414072000 | 401414072000 | 401414072500 | 401414072500 |



Type 'ROTX' STT



Modified Type 'PORN' and Type 'POXN' Test Tool Plug Assembly

Modified Test Tool Plug Assembly holds pressure from above only. For this reason the 'V' Packing on the Lock Mandrel and the Prong face upwards.

The Lock Mandrel is run with or without Keys into NON SELECTIVE Nipple (Bottom No-Go).

A. Running with Keys:

- Use appropriate Running Tool.
- Use Check Set Tool to ensure proper setting of the Lock Mandrel.
- Run the Prong into the Lock Mandrel with appropriate 'ROTSB' Pulling Tool size. The Prong will seat itself, in the No-Go Sub attached to the Lock Mandrel, stopping by the bottom No-Go on the Prong

B. Running without the Keys:

- The position of the Fishing Neck and Expander Sleeve, (Parts of the Lock Mandrel) can be open or closed. For this reason the Prong can be inserted into the Plug and the whole assembly run on appropriate 'ROTSB' Pulling Tool size.

C. Pulling the Plug Assembly without the Keys:

- When pulling the Plug Assembly with appropriate 'ROTSB' Pulling Tool size, it is not uncommon that the Plug (Lock Mandrel with the Prong) is recovered together. If there is any sand or scale to hold the Plug, the Prong will be recovered first, and the Lock Mandrel is retrieved with appropriate 'ROTGS' Pulling Tool size.

D. Pulling the Plug Assembly with the Keys:

- Use appropriate 'ROTSB' Pulling Tool size to pull the Prong first.
- Use appropriate 'ROTGS' Pulling Tool size to pull the Lock Mandrel.

<u>NOTE</u>: The advantage of the Modified Test Plug (with extra-long Prong) use is that it minimizes the risk of being stuck beneath sand or scale after pressure testing the Tubing.

When ordering: Specify the Type and Size of the Lock Mandrel and desired Length of the Prong.





Type 'CVR' - 'CVRN' and 'CVX' - 'CVXN' Check Valve (Standing Valve) Assembly

Check Valve Assembly holds pressure from <u>above only</u> while allowing the pressure and fluid by-pass from below.

The Check Valve Assembly is run/pull into the well as any other 'Equalizing Valve Type Plug Choke' within the Nominal Size and compatible profile type. (See Section XVI)

Product Code: 14

<u>NOTE</u>: The equalizing ports of the modified Equalizing Valve Sub can be enlarged to suit.

When ordering: please state the Size, Profile type and material required.



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