



SECTION XV: EQUALIZING SUB-ASSEMBLIES	2021
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EQUALIZING SUB-ASSEMBLIES provide means of equalizing pressure across Sub-Surface Controls such as Locking Mandrels and Tubing Mandrels.



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A - Equalizing Sub-Assemblies Types:

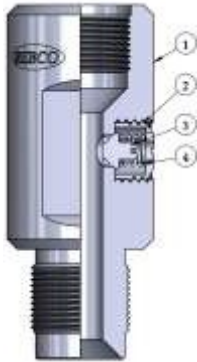
Product Code: 20

Type 'ROTB' and 'ROTH' Equalizing Sub: 2" – 3"

Rebco Type 'ROTB' and 'ROTH' Equalizing Subs are to be used with Sub-Surface Controls such as Locking Mandrels. Both Equalizing Subs are identical except the ID is larger in Type 'ROTH' Equalizing Sub.

These Sub-Assemblies are designed to allow pressure differentials to be equalized across the Lock Mandrels and Flow controls before attempting to retrieve them.

NOTE: These types of Equalizing Subs require running/pulling equalizing prongs.



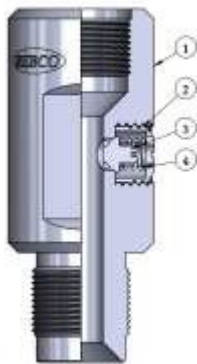
Type 'ROTB'

NOMINAL SIZE	2"	2 1/2"	3"
ASSEMBLY NUMBER	2001202000	2001202500	2001203000

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	BODY	1			
2	ORIFICE PLATE	1			
3	VALVE	1			
4	SPRING	1			

ENGINEERING DATA:

MAXIMUM OD	1.75"	2.12"	2.62"
MINIMUM ID	.53"	.72"	1.16"
EFFECTIVE AREA THRU ORIFICE PLATE	.003"	.003"	.003"
BOX THREAD CONNECTION	1 3/16" - 14	1 9/16" - 12	2" - 12
PIN THREAD CONNECTION	1 3/16" - 14	1 9/16" - 12	2" - 12
LENGTH	4.25"	4.25"	4.25"
WEIGHT lbs (kg)	2.0 (.91)	2.75 (1.25)	3.50 (1.59)
MATERIAL	Stainless	Stainless	Stainless



Type 'ROTH'

NOMINAL SIZE	2"	2 1/2"	3"
ASSEMBLY NUMBER	2006202000	2006202500	2006203000

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	BODY	1			
2	ORIFICE PLATE	1			
3	VALVE	1			
4	SPRING	1			

ENGINEERING DATA:

MAXIMUM OD	1.75"	2.12"	2.62"
MINIMUM ID	.69"	.87"	1.50"
EFFECTIVE AREA THRU ORIFICE PLATE	.006"	.006"	.006"
BOX THREAD CONNECTION	1 3/16" - 14	1 9/16" - 12	2" - 12
PIN THREAD CONNECTION	1 3/16" - 14	1 9/16" - 12	2" - 12
LENGTH	4.25"	4.25"	4.25"
WEIGHT lbs (kg)	2.0 (.91)	2.75 (1.25)	3.50 (1.59)
MATERIAL	Stainless	Stainless	Stainless

NOTE: Equalizing Subs are available in variety of Materials, suitable for down-hole conditions.



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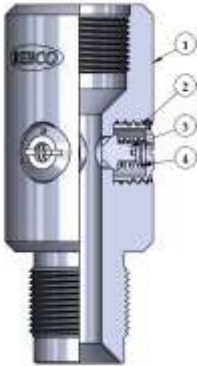


Type 'ROTF' Equalizing Sub: 2" – 3"

Rebco Type 'ROTF' Equalizing Subs are to be used with Sub-Surface Controls such as Locking Mandrels. Type 'ROTF' Equalizing Subs can be supplied with 2 or 3 Orifice Ports.

These Sub-Assemblies are designed to allow pressure differentials to be equalized across the Lock Mandrels and Flow controls before attempting to retrieve them.

NOTE: These types of Equalizing Subs require running/pulling equalizing prongs.



Type 'ROTF'

NOMINAL SIZE	2"	2 1/2"	3"
ASSEMBLY NUMBER	2025202000	2025202500	2025203000

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	BODY	1			
2	ORIFICE PLATE	3			
3	VALVE	3			
4	SPRING	3			

ENGINEERING DATA:

MAXIMUM OD	1.74"	2.12"	2.62"
MINIMUM ID	.53"	.72"	1.16"
EFFECTIVE AREA THRU ORIFICE PLATE	.011"	.011"	.011"
BOX THREAD CONNECTION	1 3/16" - 14	1 9/16" - 12	2" - 12
PIN THREAD CONNECTION	1 3/16" - 14	1 9/16" - 12	2" - 12
LENGTH	4.25"	4.25"	4.25"
WEIGHT lbs (kg)	2.0 (.91)	2.75 (1.25)	3.50 (1.59)
MATERIAL	Stainless	Stainless	Stainless

Product Code: 21

Type 'ROTC' Plug Bean Sub-Assembly: 2" – 3"

Rebco Type 'ROTC' Plug Bean Sub-Assembly is to be used with Sub-Surface Controls such as Locking Mandrels and Tubing Mandrels.

The Plug holds pressure from below only and provide the means of pumping through the Plug.

NOTE: DET A is not included in the Sub-Assembly; to be specified when ordering.



NOMINAL SIZE	2"	2 1/2"	3"
SUB-ASSEMBLY NUMBER	2102202000	2102202500	2102203000

DET	PART NAME	QTY	PART NO	PART NO	PART NO
A	ADAPTER CROSS OVER		To be specified (Lock Mandrel used with)		
B	TYPE 'A' BEAN CAGE	1			
C	SPRING	1			
1	SECONDARY VALVE	1			
2	SPRING	1			
3	HOUSING	1			
4	PIN	1			

ENGINEERING DATA:

MAXIMUM OD - (DET 3) HOUSING	1.00"	1.25"	1.62"
BEAN CAGE (DET B) BOX THREAD	1 3/16" - 14	1 9/16" - 12	2" - 12
MATERIAL	Stainless	Stainless	Stainless

This Document describes the ROT Equipment; the intent is to relate the information to the user; there are no guarantees stated or implied as to the results and function of the Equipment.



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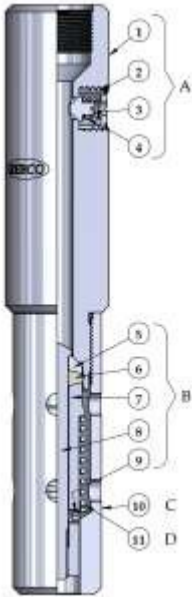
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Product Code: 21

Type 'ROTD' Bean Plug Sub-Assembly: 2" – 3"

Rebco Type 'ROTD' Bean Plug Sub-Assembly is to be used with Sub-Surface Controls such as Locking Mandrels and Tubing Mandrels.

The Plug holds pressure from below only and provide the means of pumping through the Plug.



NOMINAL SIZE	2"	2 1/2"	3"
SUB-ASSEMBLY NUMBER (DET - A,B,C,D)	2103202000	2103202500	2103203000

DET	PART NAME	QTY	PART NO	PART NO	PART NO
A	'ROTD' EQUALIZING SUB	1			
1	BODY	1			
2	ORIFICE PLATE	1			
3	VALVE	1			
4	SPRING	1			
B	'D' PLUG BEAN	1			
5	PACKING ADAPTER	1			
6 *	PACKING	1			
7	BODY	1			
8	CORE	1			
9 *	SET SCREW	1			
C - 10	BEAN CAGE	1			
D - 11	SPRING	1			
Redress Kit (* Included as Part of Kit) A - D					

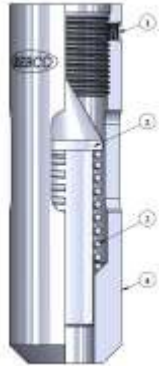
ENGINEERING DATA:

MAXIMUM OD	1.75"	2.12"	2.62"
ID	.53"	.72"	1.16"
BODY (DET A - 1) BOX THREAD	1 3/16" - 14	1 9/16" - 12	2" - 12
MATERIAL	Stainless	Stainless	Stainless
WEIGHT - lbs (kgs)	4.8 (2.2)	7.6 (3.5)	12.7 (5.7)

Product Code: 22

Type 'ROTT' Input Safety Valve Bottom Sub-Assembly: 2" – 3"

Rebco Type 'ROTT' Input Safety Valve Sub-Assembly bottom is to be used with Injection Safety Valves. Spring loaded bottom valve holds pressure from below only and provide the means of pumping through the Plug.



NOMINAL SIZE	2"	2 1/2"	3"
SUB-ASSEMBLY NUMBER	2215202030	2215202530	2215203030

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	SET SCREW	1			
2	VALVE	1			
3	SPRING	1			
4	CAGE	1			

ENGINEERING DATA:

MAXIMUM OD	1.50"	1.87"	2.38"
CAGE BOX THREAD	1 3/16" - 14	1 9/16" - 12	2" - 12
MATERIAL	Stainless/Alloy	Stainless/Alloy	Stainless/Alloy

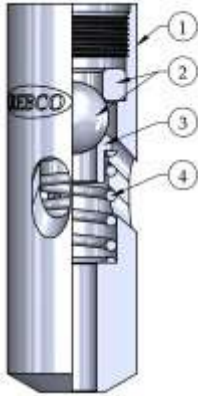


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Product Code: 21

Type 'ROTXR' Pump-Through Bottom Sub-Assembly:



Rebco Type '**ROTXR**' Pump-Through Bottom Sub-Assemblies are to be used with Lock Mandrels and Equalizing Valves (Valve type) according to the Nominal Size and Profile of the Landing Nipple.

Spring loaded Ball and Seat bottom holds pressure from below only and provide the means of pumping through the Plug. See [Section XVIII](#) - Pump-Through Plugs.

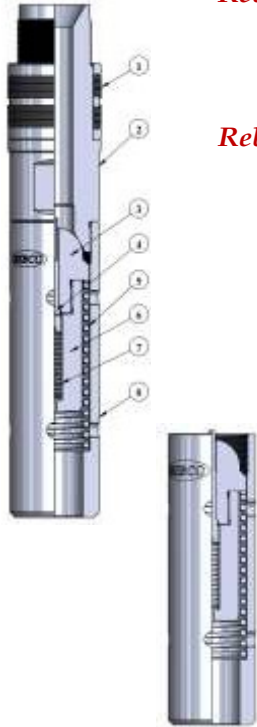
NOTE: When ordering Specify Lock Mandrel Size and Type to be used with, and Material to suit Down-hole conditions/requirement.

For Part Numbers and Engineering Data see [Section XVI](#) - PLUG CHOKES

DET	PART NAME	QTY
1	CAGE	1
2	BALL & SEAT SUB-ASSEMBLY	1 Set
3	SPRING RETAINER	1
4	SPRING	1

Product Code: 21

Type 'BB' Circulating Bottom Sub-Assembly: 1.78" - 2.81"



Rebco Type '**BB**' Circulating Bottom Sub-Assemblies for use in Type '**BF**' Landing Nipple are to be used with Lock Mandrels (See [Section XIV](#)) Type '**ROTS**', '**ROTW**', '**ROTG**', and '**ROTM**' with '**API**' Cross Over Mandrel or Packing Mandrel and Type '**BB**' Seal Unit according to the Nominal Size.

Rebco Type '**BB**' Circulating Bottom Sub-Assemblies for use in Type '**BR**' Landing Nipple are to be used with Lock Mandrels (See [Section XIV](#)) Type '**ROTZ**', and '**ROTK**' with '**API**' Cross Over Mandrel or Packing Mandrel and Type '**BB**' Seal Unit according to the Nominal Size.

Circulating Bottom Sub-Assembly holds pressure from below while allowing circulation from above. It can be held open to bypass fluid while running and pulling.

NOTE: When ordering Specify Lock Mandrel Size and Type to be used with, and Material to suit Down-hole conditions/requirement.

For Part Numbers and Engineering Data see [Section XVI](#) - PLUG CHOKES

DET	PART NAME	QTY
1	SEAL UNIT	1 Set
2	API Cross Over Mandrel	1
3	CIRCULATING VALVE	1
4	VALVE STEM	1
5	SPRING	1
6	RETAINER	1
7	SPRING	1
8	Type 'A' or 'B' CAGE	1



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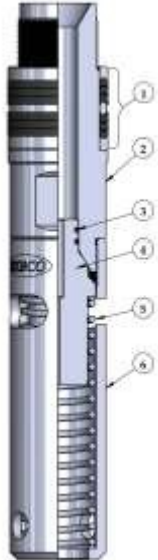


Product Code: 21

Type 'BT' Circulating Choke Bottom Sub-Assembly: 1.78" - 2.81"

Rebco Type '**BT**' Circulating Choke Bottom Sub-Assemblies for use in Type '**BF**' Landing Nipple are to be used with Lock Mandrels (See Section XIV) Type '**ROTW**', with '**API**' Cross Over Mandrel or Packing Mandrel and Type '**BB**' Seal Unit according to the Nominal Size.

Rebco Type '**BT**' Circulating Choke Bottom Sub-Assemblies for use in Type '**BR**' Landing Nipple are to be used with Lock Mandrels (See Section XIV) Type '**ROTZ**', with '**API**' Cross Over Mandrel or Packing Mandrel and Type '**BB**' Seal Unit according to the Nominal Size.



Circulating Choke Bottom Sub-Assembly restricts fluid flow in the tubing string. It permits circulation from above. The Flow Beans can be ordered to specific ID size by increments of 1/64".

NOTE: When ordering Specify Lock Mandrel Size and Type to be used with, and Material to suit Down-hole conditions/requirement.

For Part Numbers and Engineering Data see Section XVI - PLUG CHOKES

DET	PART NAME	QTY
1	SEAL UNIT	1 Set
2	API Cross Over Mandrel	1
3	'O' RING SEAL	2
4	Type 'BT' BEAN	1
5	SPRING	1
6	Type 'B' CAGE	1

NOTE: There are other Types of Bottoms available: Type '**BR**', '**BP**', please inquire.

B. Accessories: Used with Equalizing Sub-Assemblies

Beans: Available in 1/64" orifice Increments



Type 'AO'

Type 'BT'



Type 'K'
Equalizing Shear Plug



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Product Code: 20

Type 'ROTR' Equalizing Valve Sub-Assembly: 1.500" – 3.813"

Rebco Type 'ROTR' Equalizing Sub-Assembly is to be used with Type 'ROTR' and Type 'ROTRN' Lock Mandrels.

These Sub-Assemblies are designed to allow pressure differentials to be equalized across the Lock Mandrels and Flow controls before attempting to retrieve them from respective Landing Nipples.



NOMINAL SIZE	1.500"	1.710"	1.781"	1.875"
ASSEMBLY NUMBER	20132015030	20132017130	20132017830	20132018730

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	VALVE HOUSING	1				
2 *	BACK UP RING	4				
3 *	'O' RING SEAL	2				
4	VALVE	1				
5	VALVE CAP	1				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD – No-Go	1.495"	1.705"	1.776"	1.870"
BOX THREAD CONNECTION	1 1/8" - 16	1 1/8" - 16	1 3/8" - 14	1 3/8" - 14
PIN THREAD CONNECTION	1 1/8" - 16	1 1/8" - 16	1 3/8" - 14	1 3/8" - 14
LENGTH	8.12"	8.12"	8.12"	8.12"
WEIGHT lbs (kg)	2.3 (1.04)	2.4 (1.09)	2.8 (1.27)	2.9 (1.32)
MATERIAL*	Norm Alloy	Norm Alloy	Norm Alloy	Norm Alloy

To be used with Lock Mandrel	Type 'ROTR'	10132015030	10132017130	10132017830	10132018730
	Type 'ROTRN'	10131015030	10131017130	10131017830	10131018730
Sub-Assembly without Cap (DET 5)		20132015031	20132017131	20132017831	20132018731



NOMINAL SIZE	2.000"	2.125"	2.188"	2.313"
ASSEMBLY NUMBER	20132020030	20132021230	20132021830	20132023130

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	VALVE HOUSING	1				
2 *	BACK UP RING	4				
3 *	'O' RING SEAL	2				
4	VALVE	1				
5	VALVE CAP	1				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD – No-Go	1.995"	2.120"	2.183"	2.308"
BOX THREAD CONNECTION	1 3/8" - 14	1 3/8" - 14	1 3/4" - 12	1 3/4" - 12
PIN THREAD CONNECTION	1 3/8" - 14	1 3/8" - 14	1 3/4" - 12	1 3/4" - 12
LENGTH	8.12"	8.12"	8.12"	8.12"
WEIGHT lbs (kg)	3.0 (1.36)	3.1 (1.40)	4.0 (1.85)	4.2 (1.90)
MATERIAL*	Norm Alloy	Norm Alloy	Norm Alloy	Norm Alloy

To be used with Lock Mandrel	Type 'ROTR'	10132020030	10132021230	10132021830	10132023130
	Type 'ROTRN'	10131020030	10131021230	10131021830	10131023130
Sub-Assembly without Cap (DET 5)		20132020031	20132021231	20132021831	20132023131

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



**SECTION XV:
EQUALIZING SUB-ASSEMBLIES**

2021



Type 'ROTR' Equalizing Valve Sub-Assembly: Continued



NOMINAL SIZE	2.562"	2.750"	2.813"	2.875"
ASSEMBLY NUMBER	20132025630	20132027530	20132028130	20132028730

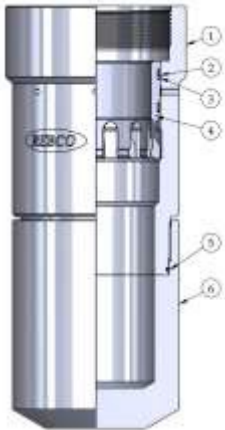
DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	VALVE HOUSING	1				
2 *	'O' RING SEAL	2				
3 *	BACK UP RING	4				
4	VALVE	1				
5 *	'O' RING SEAL	1				
6	VALVE CAP	1				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD – No-Go	2.557"	2.745"	2.808"	2.869"
BOX THREAD CONNECTION	2" - 12 SLB	2 1/4" - 12 SLB	2 1/4" - 12 SLB	2 1/4" - 12 SLB
PIN THREAD CONNECTION	2" - 12 SLB	2 1/4" - 12 SLB	2 1/4" - 12 SLB	2 1/4" - 12 SLB
LENGTH	8.12"	9.12"	9.12"	9.12"
WEIGHT lbs (kg)	5.7 (2.60)	6.2 (2.80)	6.2 (2.80)	6.2 (2.80)
MATERIAL*	Norm Alloy	Norm Alloy	Norm Alloy	Norm Alloy

To be used with Lock Mandrel	Type 'ROTR'	10132025630	10132027530	10132028130	10132028730
	Type 'ROTRN'	10131025630	10131027530	10131028130	10131028730
Sub-Assembly without Cap (DET 6)		20132025631	20132027531	20132028131	20132028731

NOMINAL SIZE	3.437"	3.688"	3.813"
ASSEMBLY NUMBER	20132034330	20132036830	20132038130



DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	VALVE HOUSING	1			
2 *	'O' RING SEAL	2			
3 *	BACK UP RING	4			
4	VALVE	1			
5 *	'O' RING SEAL	1			
6	VALVE CAP	1			
REDRESS KIT (* Included as part of Kit)					

ENGINEERING DATA:

MAXIMUM OD – No-Go	3.431"	3.682"	3.807"
BOX THREAD CONNECTION	2 3/4" - 12 SLB	3 1/16" - 12 SLB	3 1/16" - 12 SLB
PIN THREAD CONNECTION	2 3/4" - 12 SLB	3 1/16" - 12 SLB	2 3/4" - 12 SLB
LENGTH	8.63"	8.63"	8.63"
WEIGHT lbs (kg)	10.6 (4.81)	11.0 (4.99)	12.0 (5.44)
MATERIAL*	Norm Alloy	Norm Alloy	Norm Alloy

To be used with Lock Mandrel	Type 'ROTR'	18132034330	18132036830	18132038130
	Type 'ROTRN'	18131034330	18131036830	18131038130
Sub-Assembly without Cap (DET 6)		20132034331	20132036831	20132038131

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

NOTE: Equalizing Sub-Assemblies are available in variety of Materials, suitable for down-hole conditions.



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Product Code: 24

Type 'ROTPR' Equalizing Prong and Valve Sub-Assembly: 1.781" – 4.813"

Rebco Type 'ROTPR' Equalizing Prong and Valve Sub-Assembly, when attached to Type 'ROTR' and/or 'ROTRN' Lock Mandrel Assembly, converts the Lock Mandrel to a Plug Choke, with equalizing device, capable of holding pressure differentials from above or below.



NIPPLE SEAL BORE			1.781"	1.875"	2.000"	2.125"
SUB-ASSEMBLY NUMBER			24111317830	24111318730	24111320030	24111321230
DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	EQUALIZING PRONG	1				
2	HOUSING (NO-GO)	1				
3	FEMALE ADAPTER	2				
4 *	'V' PACKING	12				
5	MALE ADAPTER	2				
6	DOUBLE FEMALE ADAPTER	1				
7	PACKING NUT	1				
8	VALVE CAP	1				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD (NO-GO)	1.776"	1.870"	1.995"	2.120"
BOX THREAD CONNECTION	1 3/8" - 14	1 3/8" - 14	1 3/8" - 14	1 3/8" - 14
PRONG FISHING NECK SIZE	1.187"	1.187"	1.187"	1.187"
PRONG LENGTH	22.4"	22.4"	22.4"	22.4"
LENGTH	24.71"	24.71"	24.71"	24.71"
'V' PACKING OD	.818"	.818"	.818"	.818"
PRONG RUNNING / PULLING TOOL	4014011500	4014011500	4014011500	4014011500
MATERIAL *	Norm Alloy	Norm Alloy	Norm Alloy	Norm Alloy
WEIGHT lbs (kg)	6.2 (2.81)	8.8 (3.99)	9.0 (4.08)	9.1 (4.13)



NIPPLE SEAL BORE			2.188"	2.313"	2.562"	2.750"
SUB-ASSEMBLY NUMBER			24111321830	24111323130	24111325630	24111327530
DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	EQUALIZING PRONG	1				
2	HOUSING (NO-GO)	1				
3	FEMALE ADAPTER	2				
4 *	'V' PACKING	12				
5	MALE ADAPTER	2				
6	DOUBLE FEMALE ADAPTER	1				
7 *	'O' RING SEAL	1				
8	PACKING NUT	1				
9	VALVE CAP	1				
12 *	PORT PLUGS (Not Shown)	3				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD (NO-GO)	2.183"	2.308"	2.557"	2.745"
BOX THREAD CONNECTION	1 3/4" - 12	1 3/4" - 12	2" - 12 SLB	2 1/4" - 12 SLB
PRONG FISHING NECK SIZE	1.375"	1.375"	1.375"	1.375"
PRONG LENGTH	24.75"	24.75"	23.46"	25.0"
LENGTH	27.34"	27.34"	25.74"	28.0"
'V' PACKING OD	.937"	.937"	1.250"	1.250"
PRONG RUNNING / PULLING TOOL	4014012000	4014012000	4014012000	4014012000
MATERIAL *	Norm Alloy	Norm Alloy	Norm Alloy	Norm Alloy
WEIGHT lbs (kg)	8.5 (3.85)	8.7 (3.95)	16.9 (7.6)	17.8 (8.07)

* Norm Alloy is suitable for H₂S Service (NACE MR-01-75, Latest Revision)

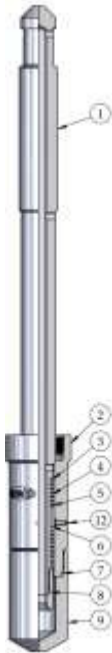


**SECTION XV:
EQUALIZING SUB-ASSEMBLIES**

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Type 'ROTPR' Equalizing Prong and Valve Sub-Assembly: Continued



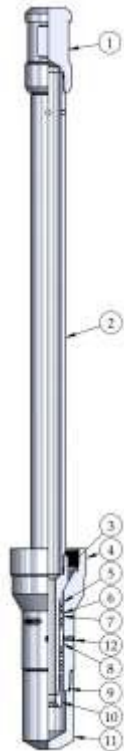
NIPPLE SEAL BORE	2.813"	2.875"	3.437"
SUB-ASSEMBLY NUMBER	24111328130	24111328730	24111334330

DET	PART NAME	QTY	PART NO	PART NO	PART NO
1	EQUALIZING PRONG	1			
2	HOUSING (NO-GO)	1			
3	FEMALE ADAPTER	2			
4 *	'V' PACKING	12			
5	MALE ADAPTER	2			
6	DOUBLE FEMALE ADAPTER	1			
7 *	'O' RING SEAL	1			
8	PACKING NUT	1			
9	VALVE CAP	1			
NS *	PORT PLUGS (Not Shown)	3			
REDRESS KIT (* Included as part of Kit)					

ENGINEERING DATA:

MAXIMUM OD (NO-GO)	2.808"	2.870"	3.431"
BOX THREAD CONNECTION	2 1/4" - 12 SLB	2 1/4" - 12 SLB	2 3/4" - 12 SLB
PRONG FISHING NECK SIZE	1.375"	1.375"	1.750"
PRONG LENGTH	25.0"	25.0"	36.0"
LENGTH	28.0"	28.0"	38.5"
'V' PACKING OD	1.250"	1.250"	1.500"
PRONG RUNNING / PULLING TOOL	4014012000	4014012000	4014012500
MATERIAL *	Norm Alloy *	Norm Alloy *	Norm Alloy *
WEIGHT lbs (kg)	17.9 (8.12)	18.0 (8.16)	19.3 (8.75)

* Norm Alloy is suitable for H₂S Service (NACE MR-01-75, Latest Revision)



NIPPLE SEAL BORE	3.688"	3.813"	4.125"	4.313"
SUB-ASSEMBLY NUMBER	24111336830	24111338130	24111341230	24111343130

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1				
2	PRONG EXTENSION	1				
3	PACKING PRONG	1				
4	HOUSING (NO-GO)	1				
5	FEMALE ADAPTER	2				
6 *	'V' PACKING	12				
7	MALE ADAPTER	2				
8	DOUBLE FEMALE ADAPTER	1				
9 *	'O' RING SEAL	1				
10	PACKING NUT	1				
11	VALVE CAP	1				
12 *	PORT PLUGS (SS)	3				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD (NO-GO)	3.682"	3.807"	4.119"	4.307"
BOX THREAD CONNECTION	3 1/16" - 12 SLB	3 1/16" - 12 SLB	3 1/4" - 12 SLB	3 1/4" - 12 SLB
PRONG FISHING NECK SIZE	2.313"	2.313"	2.313"	2.313"
PRONG LENGTH	34.84"	34.84"	34.84"	34.84"
LENGTH	37.15"	37.38"	38.1"	38.83"
'V' PACKING OD	1.500"	1.500"	2.313"	2.313"
PRONG RUNNING / PULLING TOOL	4014013000	4014013000	4014013000	4014013000
MATERIAL *	Norm Alloy *	Norm Alloy *	Norm Alloy *	Norm Alloy *
WEIGHT lbs (kg)	26.2 (11.9)	26.6 (12.1)	38.8 (17.6)	40.1 (18.19)

* Norm Alloy is suitable for H₂S Service (NACE MR-01-75, Latest Revision)



<h2 style="margin: 0;">SECTION XV: EQUALIZING SUB-ASSEMBLIES</h2>	2021
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Type 'ROT-PR' Equalizing Prong and Valve Sub-Assembly: Continued



NIPPLE SEAL BORE	4.562"	4.813"
SUB-ASSEMBLY NUMBER	24111345630	24111348130

DET	PART NAME	QTY	PART NO	PART NO
1	FISHING NECK	1		
2	PRONG EXTENSION	1		
3	PACKING PRONG	1		
4	HOUSING (NO-GO)	1		
5	FEMALE ADAPTER	2		
6 *	'V' PACKING	12		
7	MALE ADAPTER	2		
8	DOUBLE FEMALE ADAPTER	1		
9 *	'O' RING SEAL	1		
10	PACKING NUT	1		
11	VALVE CAP	1		
12 *	PORT PLUGS (SS)	3		
REDRESS KIT (* Included as part of Kit)				

ENGINEERING DATA:

MAXIMUM OD (NO-GO)	4.556"	4.808"
BOX THREAD CONNECTION	3 3/4" – 12 SLB	4" – 12 SLB
PRONG FISHING NECK SIZE	3.125"	3.125"
PRONG LENGTH	38.98"	38.98"
LENGTH	42.52"	42.52"
'V' PACKING OD	2.313"	2.313"
PRONG RUNNING / PULLING TOOL	4014014000	4014014000
MATERIAL *	Norm Alloy *	Norm Alloy *
WEIGHT lbs (kg)	43.0 (19.4)	45.6 (20.9)



NIPPLE SEAL BORE	5.875"
SUB-ASSEMBLY NUMBER	24111358730

DET	PART NAME	QTY	PART NO
1	FISHING NECK	1	
2	PRONG EXTENSION	1	
3	PACKING PRONG	1	
4	FEMALE ADAPTER	2	
5	MALE ADAPTER	2	
6 *	EQUALIZING PORT - SS	3	
7	DOUBLE FEMALE ADAPTER	1	
8 *	'V' PACKING	12	
9	PACKING NUT	1	
10	HOUSING (NO-GO)	1	
REDRESS KIT (* Included as part of Kit)			

ENGINEERING DATA:

MAXIMUM OD (NO-GO)	5.870"
BOX THREAD CONNECTION	5 1/16" – 8 SLB
PRONG FISHING NECK SIZE	3.125"
PRONG LENGTH	52.62"
LENGTH	32.84"
'V' PACKING OD	1.500"
PRONG RUNNING / PULLING TOOL	4014014000
MATERIAL *	Norm Alloy *
WEIGHT lbs (kg)	54.1 (24.5)

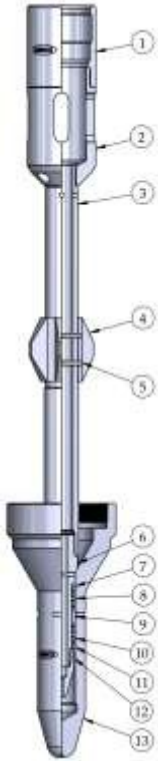
* Norm Alloy is suitable for H₂S Service (NACE MR-01-75, Latest Revision)



<h2 style="margin: 0;">SECTION XV: EQUALIZING SUB-ASSEMBLIES</h2>	2021
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REBCO

Type 'ROTPR' Equalizing Prong and Valve Sub-Assembly: Continued



NIPPLE SEAL BORE	5.963"
SUB-ASSEMBLY NUMBER	24111359630

DET	PART NAME	QTY	PART NO
1	FISHING NECK	1	
2	CAGE	1	
3	EXTENSION	1	
4	CENTRALIZER	1	
5 *	RETAINER PIN	2	
6	PACKING PRONG	1	
7	UPPER FEMALE ADAPTER	1	
8	MALE ADAPTER	2	
9	DOUBLE FEMALE ADAPTER	1	
10 *	'V' PACKING	12	
11	LOWER FEMALE ADAPTER	1	
12	PACKING NUT	1	
13	HOUSING (NO-GO)	1	
REDRESS KIT (* Included as part of Kit)			

ENGINEERING DATA:

MAXIMUM OD (NO-GO)	5.958"
BOX THREAD CONNECTION	5 1/16" – 8 SLB
PRONG FISHING NECK SIZE	3.12"
PRONG LENGTH	38.98"
LENGTH	42.52"
'V' PACKING OD	2.313"
PRONG RUNNING/PULLING TOOL (Type 'ROTGS')	40051436804
MATERIAL *	Norm Alloy *
WEIGHT lbs (kg)	53.8 (24.2)

* Norm Alloy is suitable for H₂S Service (NACE MR-01-75, Latest Revision)



<h2 style="margin: 0;">SECTION XV: EQUALIZING SUB-ASSEMBLIES</h2>	2021
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Type 'ROTX' Equalizing Valve Sub-Assembly: 1.500" – 4.562"

Rebco Type 'ROTX' Equalizing Sub-Assembly is to be used with Type 'ROTX' and Type 'ROTXN' Lock Mandrels.

These Sub-Assemblies are designed to allow pressure differentials to be equalized across the Lock Mandrels and Flow controls before attempting to retrieve them from respective Landing Nipples.



NOMINAL SIZE	1.500"	1.625"	1.875"	2.313"
ASSEMBLY NUMBER	20182015030	20182016230	20182018730	20182023130

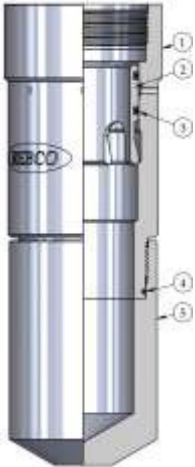
DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	VALVE HOUSING	1				
2	VALVE	1				
3 *	'O' RING SEAL	2				
4	VALVE CAP	1				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD – No-Go	1.495"	1.620"	1.870"	2.307"
BOX THREAD CONNECTION	1 1/8" - 16	1 1/8" - 16	1 3/8" - 14	1 3/4" - 12
PIN THREAD CONNECTION	1 1/8" - 16	1 1/8" - 16	1 3/8" - 14	1 3/4" - 12
LENGTH	8.12"	8.12"	8.12"	8.25"
WEIGHT lbs (kg)	2.9 (1.32)	2.6 (1.18)	3.1 (1.41)	4.4 (2.0)
MATERIAL*	Norm Alloy*	Norm Alloy*	Norm Alloy*	Norm Alloy*

To be used with Lock Mandrel	Type 'ROTX'	10182015030	10182016230	10182018730	10182023130
	Type 'ROTXN'	10181015030	10181016230	10181018730	10181023130
Sub-Assembly without End Cap(DET4)		20182015031	20182016231	20182018731	20182023131

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



NOMINAL SIZE	2.750"	2.813"	2.875"	3.313"
ASSEMBLY NUMBER	20182027530	20182028130	20182028730	20182033130

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	VALVE HOUSING	1				
2	VALVE	1				
3 *	'O' RING SEAL	2				
4 *	'O' RING SEAL	1				
5	VALVE CAP	1				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD – No-Go	2.745"	2.808"	2.870"	3.307"
BOX THREAD CONNECTION	2 1/4" - 12 SLB	2 1/4" - 12 SLB	2 1/4" - 12 SLB	2 3/4" - 12 SLB
PIN THREAD CONNECTION	2 1/4" - 12 SLB	2 1/4" - 12 SLB	2 1/4" - 12 SLB	2 3/4" - 12 SLB
LENGTH	8.02"	8.02"	8.02"	8.02"
WEIGHT lbs (kg)	6.2 (2.80)	6.3 (2.85)	6.4 (2.90)	4.9 (2.22)
MATERIAL*	Norm Alloy*	Norm Alloy*	Norm Alloy*	Norm Alloy*

To be used with Lock Mandrel	Type 'ROTX'	10182027530	10182028130	10182028730	18182033130
	Type 'ROTXN'	10181027530	10181028130	10181028730	18181033130
Sub-Assembly without End Cap(DET4)		20182027531	20182028131	20182028731	20182033131

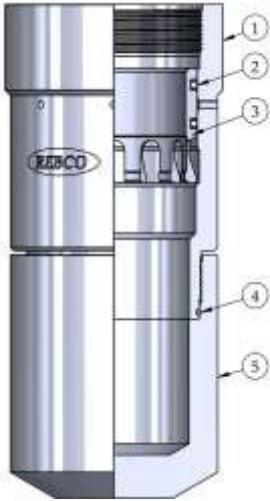
*Norm Alloy (NACE MR-01-75, 1980 Rev.)



<h2 style="margin: 0;">SECTION XV: EQUALIZING SUB-ASSEMBLIES</h2>	2021
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REBCO

Type 'ROTX' Equalizing Valve Sub-Assembly: 1.500" – 4.562" Continued



NOMINAL SIZE	3.813"	4.562"
ASSEMBLY NUMBER	20182038130	20182045630

DET	PART NAME	QTY	PART NO	PART NO
1	VALVE HOUSING	1		
2 *	'O' RING SEAL	2		
3	VALVE	1		
4 *	'O' RING SEAL	1		
5	VALVE CAP	1		
REDRESS KIT (* Included as part of Kit)				

ENGINEERING DATA:

MAXIMUM OD – No-Go	3.807"	4.556"
BOX THREAD CONNECTION	3 1/16" - 12 SLB	4" - 12 SLB
PIN THREAD CONNECTION	3 1/16" - 12 SLB	4" - 12 SLB
LENGTH	8.63"	10.42"
WEIGHT lbs (kg)	11.8 (5.35)	20.5 (9.30)
MATERIAL*	Norm Alloy*	Norm Alloy*

To be used with Lock Mandrel	Type 'ROTX'	18182038130	18182045630
	Type 'ROTXN'	18181038130	18181045630
Sub-Assembly without End Cap(DET5)		20182038131	20182045631

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

Note: Type 'ROTX' Equalizing Sub-Assemblies are available in variety of Materials.

Lock Mandrels - see [PRODUCT CODE 10, 17 and 18](#)



<h2 style="margin: 0;">SECTION XV: EQUALIZING SUB-ASSEMBLIES</h2>	2021
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Product Code: 24

Type 'ROTPX' Equalizing Prong and Valve Sub-Assembly: 1.500" – 4.562"

Rebco Type 'ROTPX' Equalizing Prong and Valve Sub-Assembly, when attached to Type 'ROTX' and/or 'ROTXN' Lock Mandrel Assembly, converts the Lock Mandrel to a Plug Choke, with equalizing device, capable of holding pressure differentials from above or below.



NIPPLE SEAL BORE			1.500"	1.625"	1.875"	2.313"
SUB-ASSEMBLY NUMBER			24111815031	24111816231	24111818731	24111823131

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	EQUALIZING PRONG	1				
2	HOUSING (NO-GO)	1				
3	FEMALE ADAPTER	2				
4 *	'V' PACKING	12				
5	MALE ADAPTER	2				
6	DOUBLE FEMALE ADAPTER	1				
7	PACKING NUT	1				
8	VALVE CAP	1				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD (NO-GO)	1.495"	1.620"	1.870"	2.307"
BOX THREAD CONNECTION	1 1/8" - 16	1 1/8" - 16	1 3/8" - 14	1 3/4" - 12
PRONG FISHING NECK SIZE	1.000"	1.000"	1.375"	1.375"
PRONG LENGTH	26.0"	26.0"	23.38"	23.46"
LENGTH	29.87"	29.87"	26.46"	26.56"
'V' PACKING OD	.630"	.630"	.938"	1.250"
PRONG RUNNING / PULLING TOOL	400703021375	400703021375	4014012000	4014012000
MATERIAL *	Norm Alloy	Norm Alloy	Norm Alloy	Norm Alloy
WEIGHT lbs (kg)	6.0 (2.72)	6.2 (2.81)	8.8 (3.99)	13.1 (5.94)

* Norm Alloy is suitable for H₂S Service (NACE MR-01-75, Latest Revision)



NIPPLE SEAL BORE			2.750"	2.813"	2.875"	3.313"
SUB-ASSEMBLY NUMBER			24111827530	24111828130	24111828730	24111833130

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	EQUALIZING PRONG	1				
2	HOUSING (NO-GO)	1				
3	FEMALE ADAPTER	2				
4 *	'V' PACKING	12				
5	MALE ADAPTER	2				
6	DOUBLE FEMALE ADAPTER	1				
7 *	'O' RING SEAL	1				
8	PACKING NUT	1				
9	VALVE CAP	1				
NS *	PORT PLUGS (SS)	3				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD (NO-GO)	2.745"	2.808"	2.870"	3.307"
BOX THREAD CONNECTION	2 1/4" – 12 SLB	2 1/4" – 12 SLB	2 1/4" – 12 SLB	2 3/4" – 12 SLB
PRONG FISHING NECK SIZE	1.375"	1.375"	1.375"	1.375"
PRONG LENGTH	25.18"	25.18"	25.18"	25.18"
LENGTH	28.13"	28.13"	28.13"	28.13"
'V' PACKING OD	1.500"	1.500"	1.500"	1.500"
PRONG RUNNING / PULLING TOOL	4014012000	4014012000	4014012000	4014012000
MATERIAL *	Norm Alloy *	Norm Alloy *	Norm Alloy *	Norm Alloy *
WEIGHT lbs (kg)	21.4 (9.6)	21.6 (9.8)	21.9 (9.9)	22.4 (10.16)

* Norm Alloy is suitable for H₂S Service (NACE MR-01-75, Latest Revision)

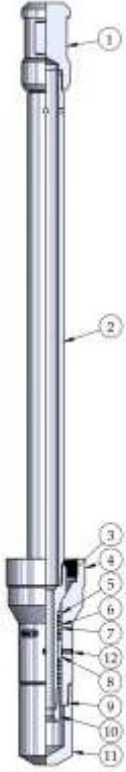
This Document describes the ROT Equipment; the intent is to relate the information to the user; there are no guarantees stated or implied as to the results and function of the Equipment.



<h2 style="margin: 0;">SECTION XV: EQUALIZING SUB-ASSEMBLIES</h2>	2021
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Type 'ROTPX' Equalizing Prong and Valve Sub-Assembly: Continued



NIPPLE SEAL BORE			3.688"	3.813"	4.313"	4.562"
SUB-ASSEMBLY NUMBER			24111836830	24111838130	24111843130	24111845630

DET	PART NAME	QTY	PART NO	PART NO	PART NO	PART NO
1	FISHING NECK	1				
2	PRONG EXTENSION	1				
3	PACKING PRONG	1				
4	HOUSING (NO-GO)	1				
5	FEMALE ADAPTER	2				
6 *	'V' PACKING	12				
7	MALE ADAPTER	2				
8	DOUBLE FEMALE ADAPTER	1				
9 *	'O' RING SEAL	1				
10	PACKING NUT	1				
11	VALVE CAP	1				
12 *	PORT PLUGS (SS)	3				
REDRESS KIT (* Included as part of Kit)						

ENGINEERING DATA:

MAXIMUM OD (NO-GO)	3.682"	3.807"	4.307"	4.556"
BOX THREAD CONNECTION	3 1/16" – 12 SLB	3 1/16" – 12 SLB	3 1/4" – 12 SLB	3 3/4" – 12 SLB
PRONG FISHING NECK SIZE	2.313"	2.313"	3.125"	3.125"
PRONG LENGTH	34.84"	34.84"	39.04"	39.04"
LENGTH	37.15"	36.95"	41.2"	41.23"
'V' PACKING OD	1.500"	1.500"	2.313"	2.313"
PRONG RUNNING / PULLING TOOL	4014013000	4014013000	4014014000	4014014000
MATERIAL *	Norm Alloy *	Norm Alloy *	Norm Alloy *	Norm Alloy *
WEIGHT lbs (kg)	26.2 (11.9)	26.6 (12.1)	42.1 (19.1)	55.6 (25.22)

* Norm Alloy is suitable for H₂S Service (NACE MR-01-75, Latest Revision)

Equalizing Sub-Assemblies are available in variety of Materials to suit Well Conditions.