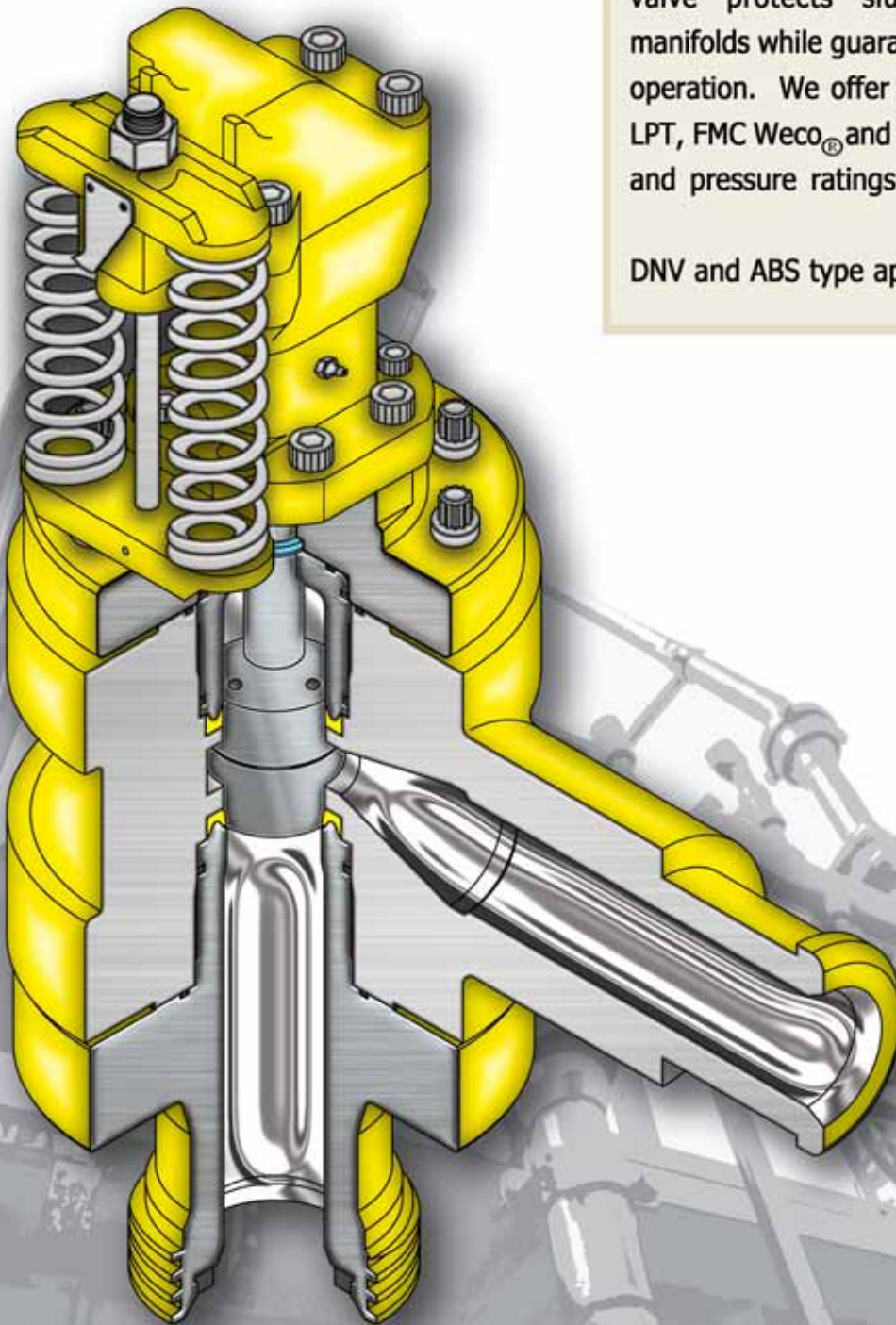


# MANUAL RESET RELIEF VALVES



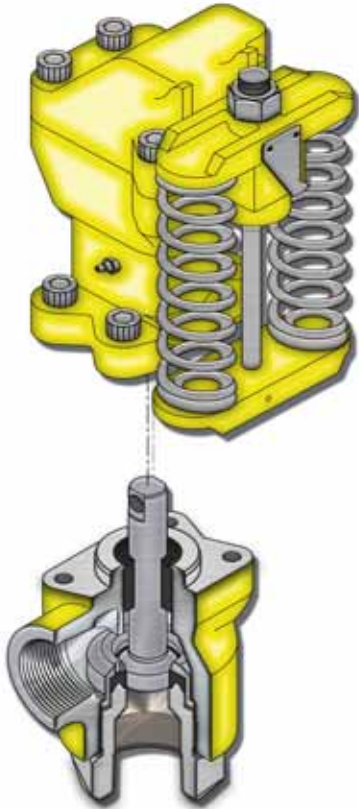
The OTECO Type RR manual reset relief valve protects slush pumps and mud manifolds while guaranteeing greater safety in operation. We offer 2" and 3" Type RR with LPT, FMC Weco<sup>®</sup> and Flanged end connections and pressure ratings from 400 to 8,000 PSI

DNV and ABS type approval for select models



<http://www.OTECO.com>





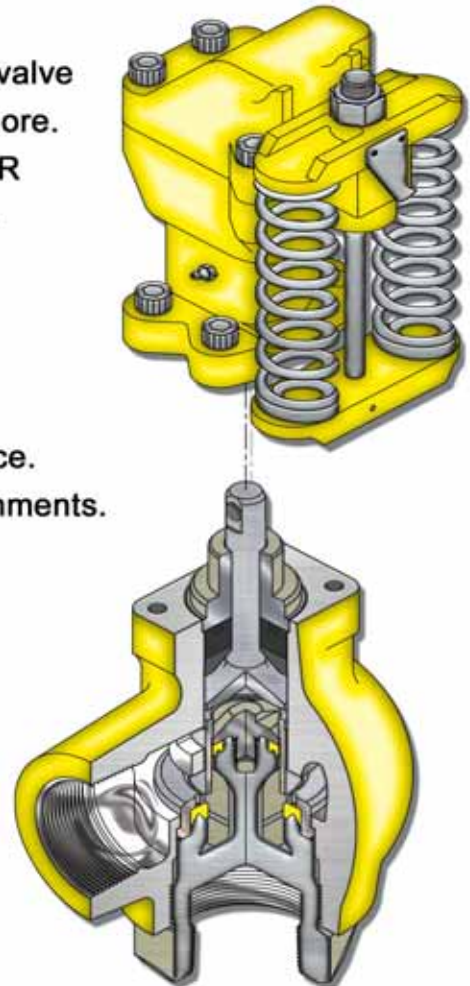
The OTECO 2" Type "RR" 400-5,000 PSI manual reset relief valve automatically snaps to a full open position when the preset pressure is exceeded or can be opened instantly and easily by pressing the manual release button. The pressure setting is indicated by a pointer and is adjustable over the entire operating range by turning a nut on top of the valve. The setting is not affected by vibration of valve operation. Type RR manual reset relief valve features:

- + PSI, Bar & KPa pressure ranges available.
- + Operating range from 400 to 5,000 PSI (28-350 Bar).
- + Single piece subs for improved sealing and fewer parts.
- + Stainless steel piston and cadmium plated subs for improved corrosion resistance.
- + Standard and Sour Gas ( $H_2S$ ) service type available.
- + Single chucking, high precision HMC machined parts.
- + Line Pipe, Flanged and FMC Weco<sup>®</sup> Hammer Union end connections.
- + Gullite plated bonnet components & pistons.

The OTECO 3" Type "RR" 400-5,000 PSI manual reset relief valve has the same bonnet and all the features of our 2" model & more. Comparable to Cameron Type "B" valve, OTECO's 3" Type RR manual reset relief valve has benefits over other competitors.

features include:

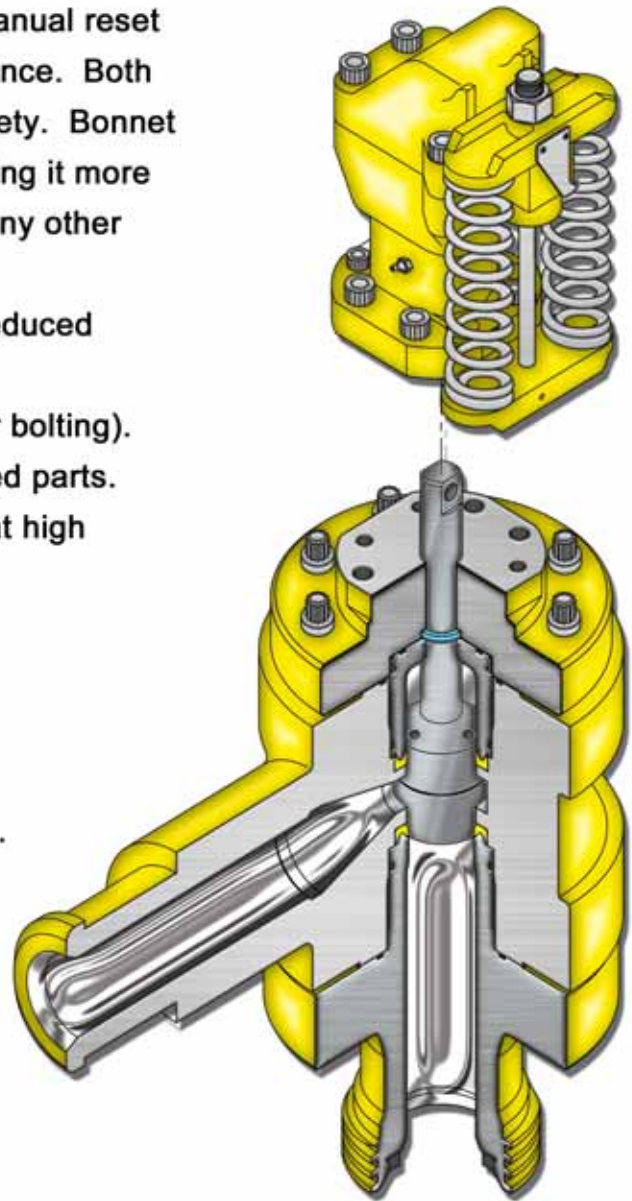
- + PSI, Bar & KPa pressure ranges available.
- + Operating range from 400 to 5,000 PSI (28-350 Bar).
- + 5 DNV Type Approved models.
- + Polyethylene seals for longer life and corrosion resistance.
- + Large selection of polymer seals for varying fluid environments.
- + Investment casting bonnet and parts for increased accuracy & repeatability.
- + Integral outlet end connections (no welding or bolting).
- + Single chucking, high precision HMC machined parts.
- + Line Pipe, Flanged and FMC Weco<sup>®</sup> Hammer Union end connections.
- + 10,000 PSI hydrostatic tested subs.
- + Standard and Sour Gas ( $H_2S$ ) service type available.



Weco<sup>®</sup> is a federally registered trademark by FMC Technologies.

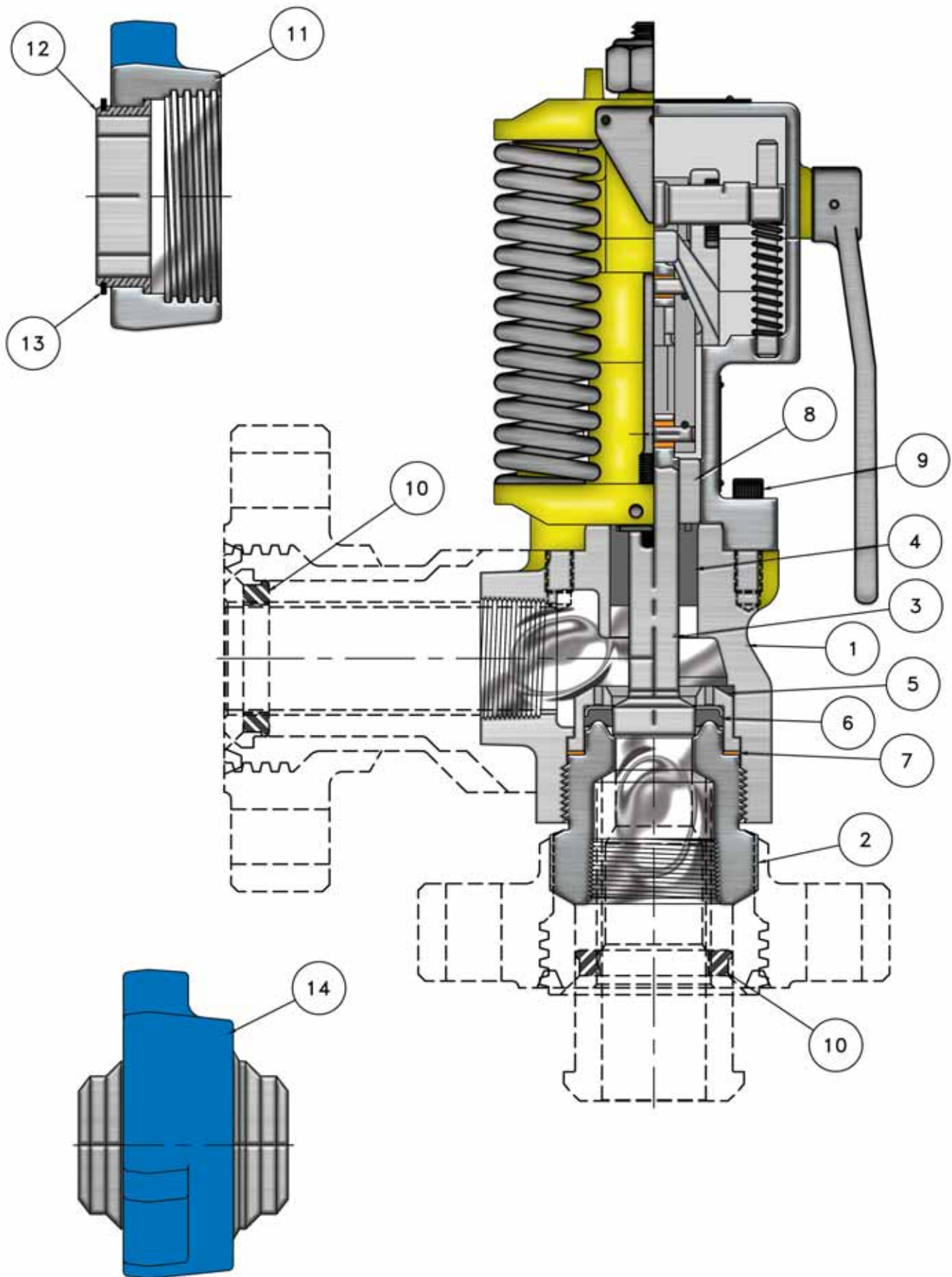
The OTECO 3" 3,000-8,000 PSI (206-552 Bar) manual reset relief valve sets the bar for strength and performance. Both top cover and sub are extra heavy flanged for safety. Bonnet base has been modified for strength & rigidity giving it more reliable operation. ABS Design Assessment & many other features including:

- + Single piece subs for improved sealing and reduced part count.
- + Integral outlet end connections (no welding or bolting).
- + Single chucking, high precision HMC machined parts.
- + Heavy duty bonnet ensures better operation at high pressures than competitors.
- + Polyethylene and flouropolymer main seals.
- + 2 ABS Design Assessed models.
- + Internal surfaces Xylan coated for corrosion resistance and longer life.
- + 3" Figure 1502 FMC Weco<sup>®</sup> end connections.
- + No load bearing threaded connections.
- + Standard and Sour Gas (H<sub>2</sub>S) service.
- + Hydraulically balanced piston.



## OTECO RESET RELIEF VALVE GENERAL INFORMATION

VALVE SIZE	MAX. PRESSURE		INLET & OUTLET END CONNECTIONS	FLOW AREA		Weight		TEMP. RATING	
	PSI	(Bar)		inch <sup>2</sup>	(cm <sup>2</sup> )	Lbs.	(kg)	Fahrenheit	(Celsius)
2"	5,000	(345)	2" LPT	1.8	(11.6)	50	(22.6)	-20 to 250	-29 to 121
2"	5,000	(345)	2" 1502 Weco	1.8	(11.6)	56	(25.4)	-20 to 250	-29 to 121
2"	5,000	(345)	2" Flanged	1.8	(11.6)	70	(31.7)	-20 to 250	-29 to 121
3"	5,000	(345)	3" LPT	4.2	(27.1)	105	(47.6)	-20 to 250	-29 to 121
3"	5,000	(345)	3" 1502 Weco	4.2	(27.1)	120	(54.4)	-20 to 250	-29 to 121
3"	5,000	(345)	3" Flanged	4.2	(27.1)	140	(63.5)	-20 to 250	-29 to 121
3"	8,000	(552)	3" 1502 Weco	4.9	(31.6)	325	(147.4)	-20 to 250	-29 to 121
3"	8,000	(552)	3" Flanged	4.9	(31.6)	367	(166.5)	-20 to 250	-29 to 121



See page 10 for complete assemblies list.

Only most common components are listed. Ask your Oteco sales representative for more options.

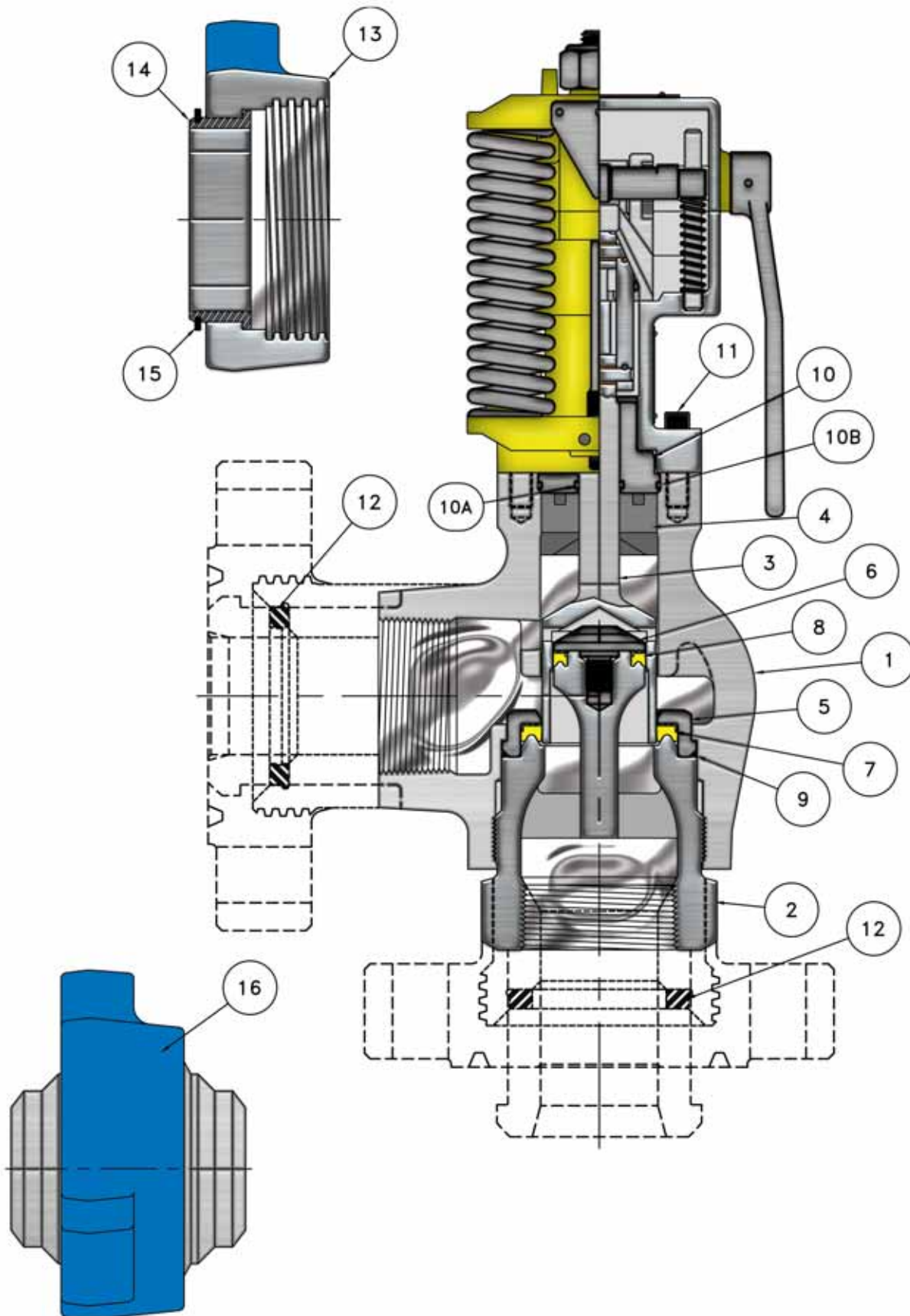
ITEM NO.	DESCRIPTION	OTECO PART NO.	WEIGHT	
			Lbs.	(kg)
1	BODY with 2" RRV LPT OUTLET, STANDARD	142100	12	(5.4)
	BODY with 2.06"-5,000# RJ FLANGED OUTLET, STANDARD	143055	41	(18.6)
	BODY with 2" FIGURE 1502 FEMALE OUTLET, SOUR GAS/STANDARD	142045	35	(15.9)
	BODY with 2" FIGURE 1502 MALE OUTLET, SOUR GAS/STANDARD	142046	35	(15.9)
2	SUB with 2.06"-5,000# RJ FLANGED INLET, STANDARD	142035	23	(10.4)
	SUB with 2" LPT INLET, STANDARD	142190	4	(1.8)
	SUB with 2" FIGURE 1502 FEMALE INLET, SOUR GAS/STANDARD	142036	9	(4.1)
	SUB with 2" FIGURE 1502 MALE INLET, SOUR GAS/STANDARD	142043	8	(3.6)
3	PISTON with BEARING ASSEMBLY, STANDARD	142110	1	(0.45)
	PISTON with BEARING ASSEMBLY, SOUR GAS	142028	1	(0.45)
4	CUSHION RING, (NBR) NITRILE, STANDARD	142130	0.5	(0.23)
	CUSHION RING, (ECO) HYDRIN, SOUR GAS	142132	0.5	(0.23)
5	OUTER RETAINER, STANDARD	142170	1	(0.45)
	OUTER RETAINER, SOUR GAS	143115	1	(0.45)
6	OUTER SEAL, (NBR) NITRILE, STANDARD	142180	0.5	(0.23)
	OUTER SEAL, (ECO) HYDRIN, SOUR GAS	142029	0.5	(0.23)
7	COPPER GASKET	142150	0.1	(.05)
8	STEM BUSHING	142140	0.1	(.05)
9	1/2"-13UNC SOCKET HEAD CAP SCREW, CADMIUM, STANDARD	143310	0.1	(.05)
	1/2"-13UNC SOCKET HEAD CAP SCREW, CADMIUM, SOUR GAS	143311	0.1	(.05)
10	2" FMC UNION SEAL RING 602/1002/1502, (NBR) NITRILE, STANDARD	301921	0.1	(.05)
	2" FMC UNION SEAL RING 602/1002/1502, (VIT) VITON, SOUR GAS	302062	0.1	(.05)
<b>FMC DETACHABLE NUT ASSEMBLY</b>				
11	2" FIGURE 1502 UNION NUT, STANDARD/DETACHABLE, STANDARD, DNV	302626	6	(2.7)
	2" FIGURE 1502 UNION NUT, STANDARD/DETACHABLE, SOUR GAS, CHARPY	302071	6	(2.7)
12	2" FIGURE 1502 UNION NUT, RETAINER RING SEGMENTS, STANDARD, DNV	302627	0.5	(0.23)
	2" FIGURE 1502 UNION NUT, RETAINER RING SEGMENTS, SOUR GAS	302517	0.5	(0.23)
13	2" FIGURE 1502 UNION NUT, RETAINER SNAP RING, ALL ASSEMBLIES	301924	0.1	(.05)
<b>FMC UNION WELDOLET ASSEMBLY (NOT INCLUDED WITH RRV ASSEMBLY)</b>				
14	2" FIGURE 1502 with 2" BUTT WELD SCH.XXS, STANDARD, DNV	302037	12	(5.4)
<b>REPAIR KITS</b>				
	MINOR REPAIR KIT, STANDARD	143223	1	(0.45)
	MINOR REPAIR KIT, SOUR GAS	143225	1	(0.45)
	MAJOR REPAIR KIT, STANDARD	143218	3	(1.4)
	MAJOR REPAIR KIT, SOUR GAS	143226	3	(1.4)

### Minor Repair Kit Contents

Description	Assembly #
CUSHION RING	ITEM 4
OUTER SEAL	ITEM 6
COPPER GASKET	ITEM 7

### Major Repair Kit Contents

Description	Assembly #
PISTON	ITEM 3
CUSHION RING	ITEM 4
OUTER RETAINER	ITEM 5
OUTER SEAL	ITEM 6
COPPER GASKET	ITEM 7
STEM BUSHING	ITEM 8



# 3" 5,000 PSI MANUAL RESET RELIEF VALVE

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See page 10 for complete assemblies list.

Only most common components are listed. Ask your Oteco sales representative for more options.

ITEM NO.	DESCRIPTION	OTECO PART NO.	WEIGHT	
			Lbs.	(kg)
1	BODY with 3" LPT OUTLET, STANDARD	143100	39	(17.7)
	BODY with 3" LPT OUTLET, SOUR GAS	143189	39	(17.7)
	BODY with 3.125"-5,000# RJ FLANGED OUTLET, STANDARD, CHARPY	143019	57	(25.9)
	BODY with 3" FIGURE 1502 FEMALE OUTLET, STANDARD	143191	47	(21.3)
	BODY with 3" FIGURE 1502 MALE OUTLET, STANDARD	143192	47	(21.3)
2	SUB with 3" LPT INLET, STANDARD	143190	12	(5.4)
	SUB with 3" LPT INLET, SOUR GAS	143188	12	(5.4)
	SUB with 3.125"-5,000# RJ FLANGED INLET, STANDARD	142038	30	(13.6)
	SUB with 3" FIGURE 1502 FEMALE INLET, STANDARD	143014	20	(9.1)
	SUB with 3" FIGURE 1502 FEMALE INLET, SOUR GAS	143021	20	(9.1)
3	PISTON with BEARING ASSEMBLY, STANDARD	143110	2	(0.9)
	PISTON with BEARING ASSEMBLY, SOUR GAS	143007	2	(0.9)
4	CUSHION RING, (NBR) NITRILE, STANDARD	143130	0.5	(0.23)
	CUSHION RING, (ECO) HYDRIN, SOUR GAS	142131	0.5	(0.23)
5	OUTER RETAINER, STANDARD	143170	2	(0.9)
	OUTER RETAINER, SOUR GAS	143006	2	(0.9)
6	INNER RETAINER, STANDARD	143160	0.5	(0.23)
	INNER RETAINER, SOUR GAS	143010	0.5	(0.23)
7	OUTER SEAL, (UHMWPE) POLYETHYLENE, STANDARD	302686	0.1	(.05)
	OUTER SEAL, (ECO) HYDRIN, SOUR GAS	143009	0.1	(.05)
	OUTER SEAL, (HNBR) HYDROGENATED NITRILE	143181	0.1	(.05)
8	INNER SEAL, (UHMWPE) POLYETHYLENE, STANDARD	302687	0.1	(.05)
	INNER SEAL, (ECO) HYDRIN, SOUR GAS	143008	0.1	(.05)
9	SUB to BODY "O"-RING, (NBR) NITRILE, STANDARD	143150	0.1	(.05)
	SUB to BODY "O"-RING, (VIT) VITON, SOUR GAS	143151	0.1	(.05)
10	STEM BUSHING	143140	2	(0.9)
10A	STEM to STEM BUSHING "O"-RING, (NBR) NITRILE, STANDARD	302752	0.1	(.05)
10B	STEM BUSHING to BODY "O"-RING, (NBR) NITRILE, STANDARD	302750	0.1	(.05)
11	1/2"-13UNC SOCKET HEAD CAP SCREW, CADMIUM, STANDARD	143310	0.1	(.05)
	1/2"-13UNC SOCKET HEAD CAP SCREW, CADMIUM, SOUR GAS	143311	0.1	(.05)
12	3" FMC UNION SEAL RING 602/1002/1502, (NBR) NITRILE, STANDARD	301862	0.1	(.05)
	3" FMC UNION SEAL RING 602/1002/1502, (VIT) VITON, SOUR GAS	302542	0.1	(.05)
<b>FMC DETACHABLE NUT ASSEMBLY</b>				
13	3" FIGURE 1502 UNION NUT, STANDARD/DETACHABLE, STANDARD, DNV	302625	12	(5.4)
	3" FIGURE 1502 UNION NUT, STANDARD/DETACHABLE, SOUR GAS, CHARPY	302540	12	(5.4)
14	3" FIGURE 1502 UNION NUT, RETAINER RING SEGMENTS, STANDARD, DNV	302628	0.5	(0.23)
	3" FIGURE 1502 UNION NUT, RETAINER RING SEGMENTS, SOUR GAS	302541	0.5	(0.23)
15	3" FIGURE 1502 UNION NUT, RETAINER SNAP RING, ALL ASSEMBLIES	301515	0.1	(.05)
<b>FMC UNION WELDOLET ASSEMBLY (NOT INCLUDED WITH RRV ASSEMBLY)</b>				
16	3" FIGURE 1502 with 3" BUTT WELD SCH.XXS, STANDARD, DNV	302036	25	(11.3)
<b>REPAIR KITS</b>				
	MINOR REPAIR KIT, STANDARD	143215	1	(0.45)
	MINOR REPAIR KIT, SOUR GAS	143219	1	(0.45)
	MAJOR REPAIR KIT, STANDARD	143216	3	(1.4)
	MAJOR REPAIR KIT, SOUR GAS	143217	3	(1.4)

### Minor Repair Kit Contents

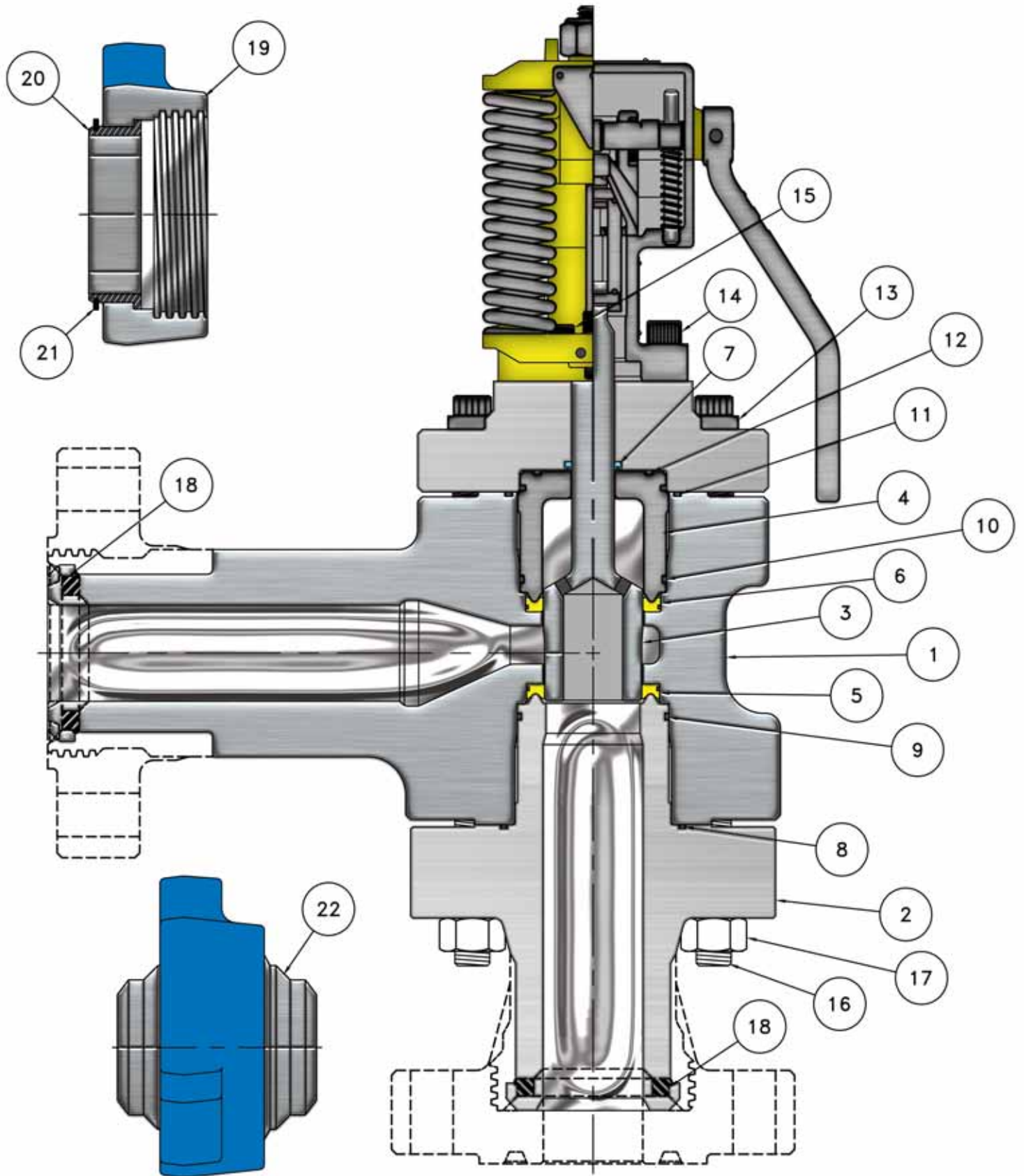
Description	Assembly #
CUSHION RING	ITEM 4
OUTER SEAL	ITEM 7
INNER SEAL	ITEM 8
"O"-RING	ITEM 9

### Major Repair Kit Contents

Description	Assembly #	Description	Assembly #
PISTON	ITEM 3	OUTER SEAL	ITEM 7
CUSHION RING	ITEM 4	INNER SEAL	ITEM 8
OUTER RETAINER	ITEM 5	"O"-RING	ITEM 9
INNER RETAINER	ITEM 6	STEM BUSHING	ITEM 10

OTECO, Inc. - P.O. Box 1849 - Houston, Texas USA 77251 - Phone 713-695-3693 Fax 713-695-3520

Web Address: [www.oteco.com](http://www.oteco.com) Email Address: [sales@oteco.com](mailto:sales@oteco.com)





# 3" 8,000 PSI MANUAL RESET RELIEF VALVE

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See page 10 for complete assemblies list.

Only most common components are listed. Ask your Oteco sales representative for more options.

ITEM NO.	DESCRIPTION	OTECO PART NO.	WEIGHT	
			Lbs.	(kg)
1	BODY with 3" FIGURE 1502 FEMALE OUTLET, STANDARD	143083	160	(72.6)
	BODY with 3" FIGURE 1502 MALE OUTLET, STANDARD	143081	160	(72.6)
	BODY with 3.06"-10,000# RJ FLANGED OUTLET, STANDARD	143086	181	(82.1)
2	SUB with 3" FIGURE 1002 FEMALE INLET, STANDARD	143196	59	(26.8)
	SUB with 3" FIGURE 1502 FEMALE INLET, STANDARD	143199	59	(26.8)
	SUB with 3.06"-10,000# FLANGED INLET, STANDARD	143198	80	(36.3)
3	PISTON with BEARING ASSEMBLY, STANDARD	143185	4	(1.81)
4	SEAL RETAINER, SOUR GAS/STANDARD	143035	4	(1.81)
5	LOWER SEAL, (UHMWPE) POLYETHYLENE, STANDARD	302686	0.1	(.05)
6	MIDDLE SEAL, (UHMWPE) POLYETHYLENE, STANDARD	302689	0.1	(.05)
7	UPPER SEAL, (F1504) FLOUROTRELL, STANDARD	302636	0.1	(.05)
8	SUB FACE to BODY SEAL, "O"-RING #247, (NBR) NITRILE 90D, STANDARD	302428	0.1	(.05)
9	SUB O.D. TO BODY SEAL, "O"-RING #240, (NBR) NITRILE 90D, STANDARD	302427	0.1	(.05)
10	RETAINER to BODY SEAL, "O"-RING #239 (NBR) NITRILE 90D, STANDARD	302634	0.1	(.05)
11	BODY to TOP FLANGE SEAL, "O"-RING #245, (NBR) NITRILE 90D, STANDARD	302610	0.1	(.05)
12	RETAINER to TOP FLANGE SEAL, "O"-RING #233, (NBR) NITRILE 90D, STANDARD	302611	0.1	(.05)
13	7/8"-9UNC FLANGED 12 POINT BOLT, STANDARD	302613	0.5	(0.23)
14	5/8"-11UNC SOCKET HEAD CAP SCREW, CADMIUM, STANDARD	302470	0.5	(0.23)
15	1/2"-13UNC SOCKET HEAD CAP SCREW, CADMIUM, STANDARD	302495	0.5	(0.23)
16	1"-8UNC STUD, CADMIUM, STANDARD	302472	0.5	(0.23)
17	1"-8UNC HEX NUT, CADMIUM, STANDARD	302471	0.5	(0.23)
18	3" FMC UNION SEAL RING 602/1002/1502, (NBR) NITRILE, STANDARD	301862	0.1	(.05)
<b>FMC DETACHABLE NUT ASSEMBLY</b>				
19	3" FIGURE 1502 UNION NUT, STANDARD/DETACHABLE, STANDARD, DNV	302625	12	(5.4)
	3" FIGURE 1502 UNION NUT, STANDARD/DETACHABLE, SOUR GAS, CHARPY	302540	12	(5.4)
20	3" FIGURE 1502 UNION NUT, RETAINER RING SEGMENTS, STANDARD, DNV	302628	0.5	(0.23)
	3" FIGURE 1502 UNION NUT, RETAINER RING SEGMENTS, SOUR GAS	302541	0.5	(0.23)
21	3" FIGURE 1502 UNION NUT, RETAINER SNAP RING, ALL ASSEMBLIES	301515	0.1	(.05)
<b>FMC UNION WELDOLET ASSEMBLY (NOT INCLUDED WITH RRV ASSEMBLY)</b>				
22	3" FIGURE 1502 with 3" BUTT WELD SCH.XXS, STANDARD, DNV	302036	25	(11.3)
<b>REPAIR KITS</b>				
	MINOR REPAIR KIT, STANDARD	143227	1	(0.45)
	MAJOR REPAIR KIT, STANDARD	143221	5	(2.27)

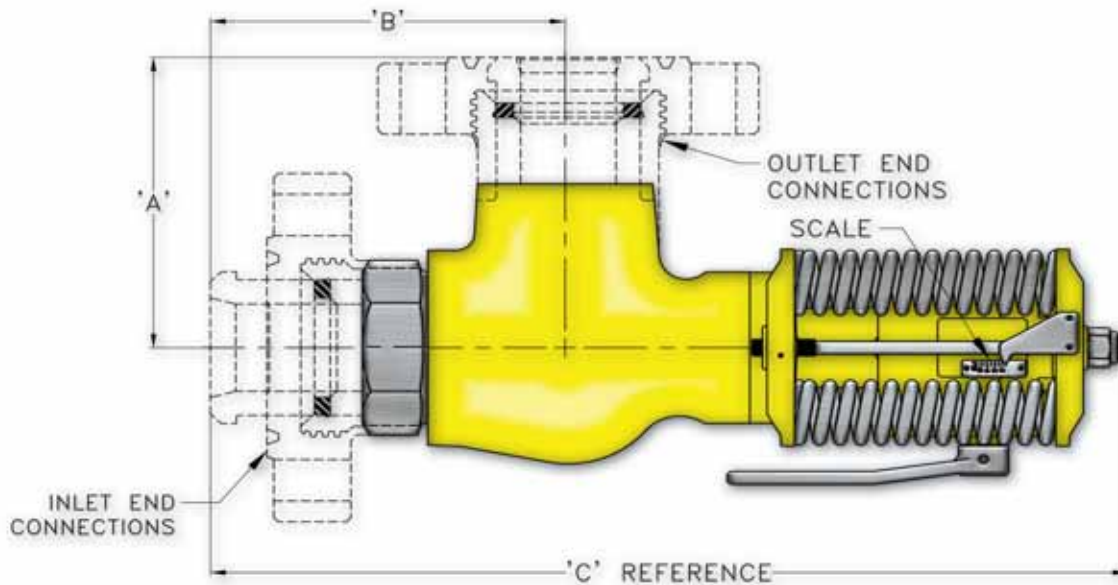
### Minor Repair Kit Contents

Description	Assembly #
OUTER SEAL	ITEM 5
MIDDLE SEAL	ITEM 6
UPPER SEAL	ITEM 7
(5) "O"-RINGS	ITEM 8-12
UNION SEAL*	ITEM 18
SPIRAL PINS	NOT SHOWN

### Major Repair Kit Contents

Description	Assembly #	Description	Assembly #
PISTON	ITEM 3	SPRING SPIRAL	NOT SHOWN
OUTER SEAL	ITEM 5	CRANK	NOT SHOWN
MIDDLE SEAL	ITEM 6	CRANK PIVOT	NOT SHOWN
UPPER SEAL	ITEM 7	LINK PIN	NOT SHOWN
(5) "O"-RINGS	ITEM 8-12	UPPER LINK	NOT SHOWN
UNION SEAL*	ITEM 18	LOWER LINK	NOT SHOWN
SPIRAL PINS	NOT SHOWN		

\* DOUBLE FEMALE ASSEMBLY REQUIRES EXTRA UNION SEAL.



### MOST COMMON ASSEMBLIES LIST AND GENERAL INSTALLATION

2" TYPE "RR" 400-5,000 PSI RESET RELIEF VALVES	OTECO PART NO.	MEASUREMENTS Inch (cm)		REFERENCE
		'A'	'B'	'C'
2"RRV 400-1,500 PSI W/2" LPT INLET & OUTLET, STANDARD	130215	3-1/8" (7.9)	4-3/8" (11.1)	16-3/4" (42.6)
2"RRV 400-1,500 PSI W/2.06"-5,000# RJ FLANGED INLET & OUTLET, STANDARD	130212	7-3/4" (19.7)	6" (15.2)	18-5/16" (46.5)
2"RRV 750-2,500 PSI W/2" LPT INLET & OUTLET, STANDARD	130225	3-1/8" (7.9)	4-3/8" (11.1)	16-3/4" (42.6)
2"RRV 1,500-5,000 PSI W/2" LPT INLET & OUTLET, STANDARD	130250	3-1/8" (7.9)	4-3/8" (11.1)	16-3/4" (42.6)
2"RRV 1,500-5,000 PSI W/2" LPT INLET & OUTLET, SOUR GAS	130355	3-1/8" (7.9)	4-3/8" (11.1)	16-3/4" (42.6)
2"RRV 1,500-5,000 PSI W/2.06"-5,000# RJ FLANGED INLET & OUTLET, STANDARD	130211	7-3/4" (19.7)	6" (15.2)	18-5/16" (46.5)
2"RRV 1,500-5,000 PSI W/2" FIG.1502 FEMALE INLET & MALE OUTLET, STANDARD	130279	7-3/4" (19.7)	6-1/8" (15.6)	18-7/16" (46.8)
2"RRV 1,500-5,000 PSI W/2" FIG.1502 FEMALE INLET & MALE OUTLET, SOUR GAS	130252	7-3/4" (19.7)	6-1/8" (15.6)	18-7/16" (46.8)
2"RRV 1,500-5,000 PSI W/2" FIG.1502 MALE INLET & FEMALE OUTLET, SOUR GAS	130256	7-3/4" (19.7)	8" (20.3)	20-3/8" (51.8)
2"RRV 1,500-5,000 PSI W/2" FIG.1502 FEMALE INLET & OUTLET, SOUR GAS	130365	7-3/4" (19.7)	6-1/8" (15.6)	14-1/2" (36.80)

Scale ranges available in Bar and KPa.

### 3" TYPE "RR" 400-5,000 PSI RESET RELIEF VALVES

3"RRV 750-2,500 PSI W/3" LPT INLET & OUTLET, STANDARD	130325	5" (12.7)	5-5/8" (14.3)	21" (53.3)
3"RRV 1,500-5,000 PSI W/3" LPT INLET & OUTLET, STANDARD	130350	5" (12.7)	5-5/8" (14.3)	21" (53.3)
3"RRV 1,500-5,000 PSI W/3" LPT INLET & OUTLET, SOUR GAS	130358	5" (12.7)	5-5/8" (14.3)	21" (53.3)
3"RRV 1,500-5,000 PSI W/3" FIG.1002 FEMALE INLET & OUTLET, STANDARD	130366	7-3/4" (19.7)	7-3/8" (18.7)	22-5/8" (57.5)
3"RRV 1,500-5,000 PSI W/3" FIG.1502 FEMALE INLET & MALE OUTLET, STANDARD	130367	8-3/4" (22.2)	7-3/8" (18.7)	22-5/8" (57.5)
3"RRV 1,500-5,000 PSI W/3" FIG.1502 FEMALE INLET & MALE OUTLET, SOUR GAS	130376	8-3/4" (22.2)	7-3/8" (18.7)	22-5/8" (57.5)
3"RRV 1,500-5,000 PSI W/3" FIG.1502 FEMALE INLET & OUTLET, STANDARD	130363	7-3/4" (19.7)	7-3/8" (18.7)	22-5/8" (57.5)
3"RRV 1,500-5,000 PSI W/3" FIG.1502 FEMALE INLET & OUTLET, SOUR GAS	130383	7-3/4" (19.7)	7-3/8" (18.7)	22-5/8" (57.5)
3"RRV 1,500-5,000 PSI W/3.125"-5,000# RJ FLANGED INLET & OUTLET, STANDARD	130348	8-3/4" (22.2)	8-1/4" (21)	23-1/2" (59.7)
3"RRV 1,500-5,000 PSI W/3.125"-5,000# RJ FLANGED INLET & OUTLET, SOUR GAS	130349	8-3/4" (22.2)	8-1/4" (21)	23-1/2" (59.7)

DNV Type Approval Certificate for 130348, 130357, 130363, 130362, 130367

Scale ranges available in Bar and KPa.

### 3" 3,000-8,000 PSI RESET RELIEF VALVES

3"RRV 3,000-8,000 PSI W/3" FIG.1502 FEMALE INLET & OUTLET, STANDARD	131385	14-3/8" (36.5)	11-7/8" (30.2)	29-1/4" (74.3)
3"RRV 3,000-8,000 PSI W/3" FIG.1502 FEMALE INLET & MALE OUTLET, STANDARD	131380	14-3/8" (36.5)	11-7/8" (30.2)	29-1/4" (74.3)
3"RRV 3,000-8,000 PSI W/3" FIG.1502 MALE INLET & FEMALE OUTLET, STANDARD	131382	14-3/8" (36.5)	11-7/8" (30.2)	29-1/4" (74.3)
3"RRV 3,000-8,000 PSI W/3.06"-10,000# RJ FLANGED INLET & OUTLET, STANDARD	131386	14-3/8" (36.5)	13-1/4" (33.7)	30-5/8" (77.8)

ABS Certificate of Design Assessment for 131380, 131382

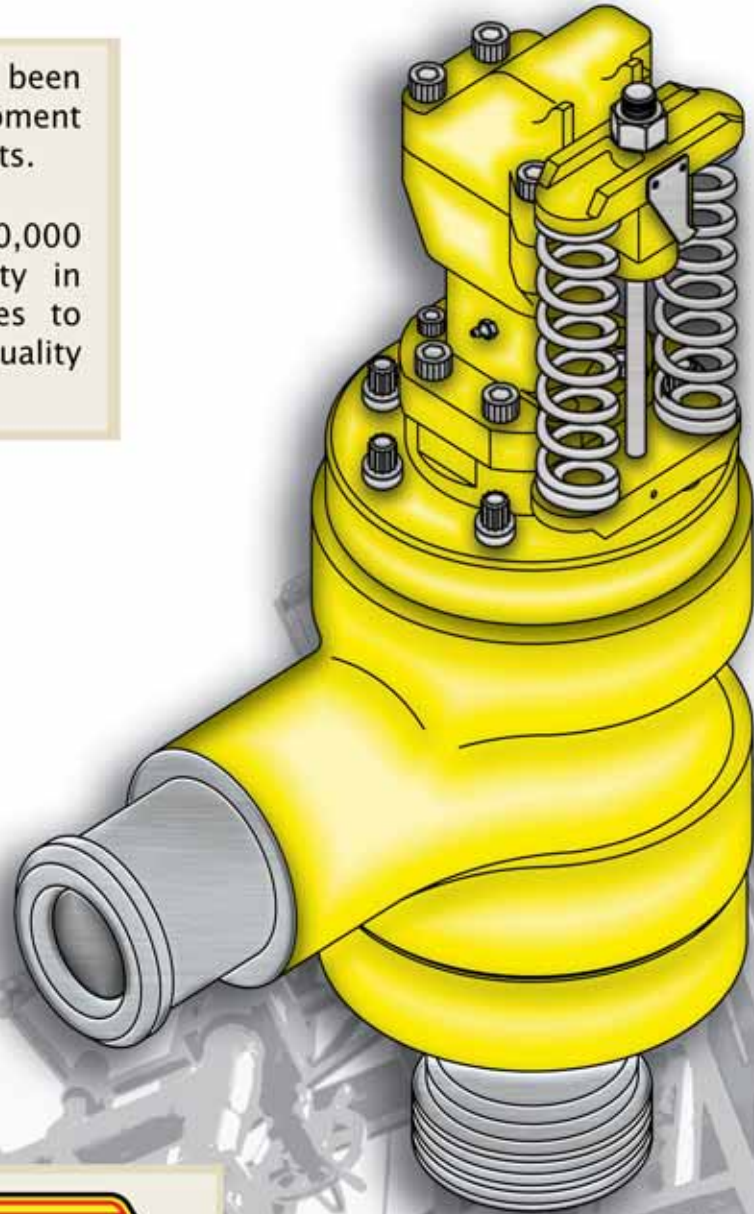
Sour Gas (H<sub>2</sub>S) assemblies available upon request.





For over 60 years OTECO, Inc. has been providing high quality oilfield equipment to the worldwide oil and gas markets.

Operating from our modern 120,000 square foot manufacturing facility in Houston, Texas, OTECO continues to provide products to the high quality standards for which we are known.



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