

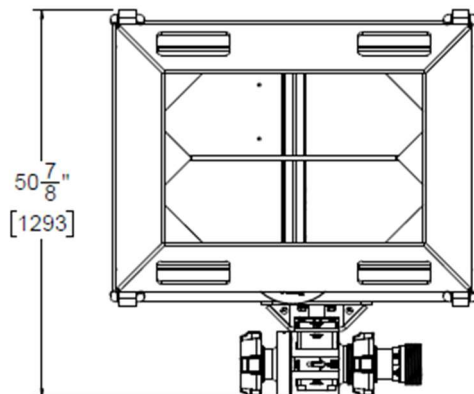
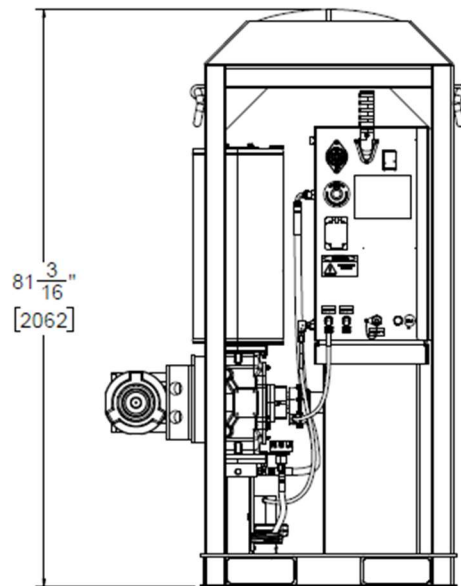
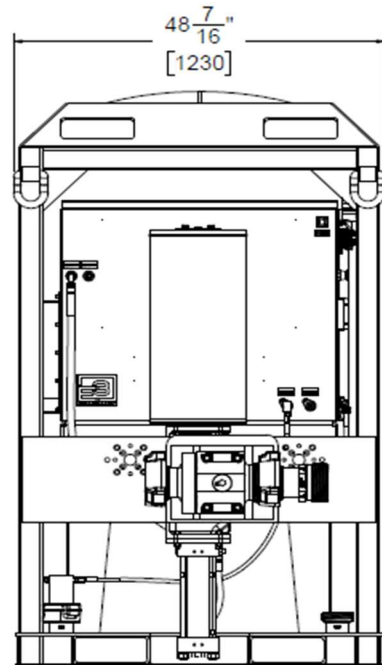
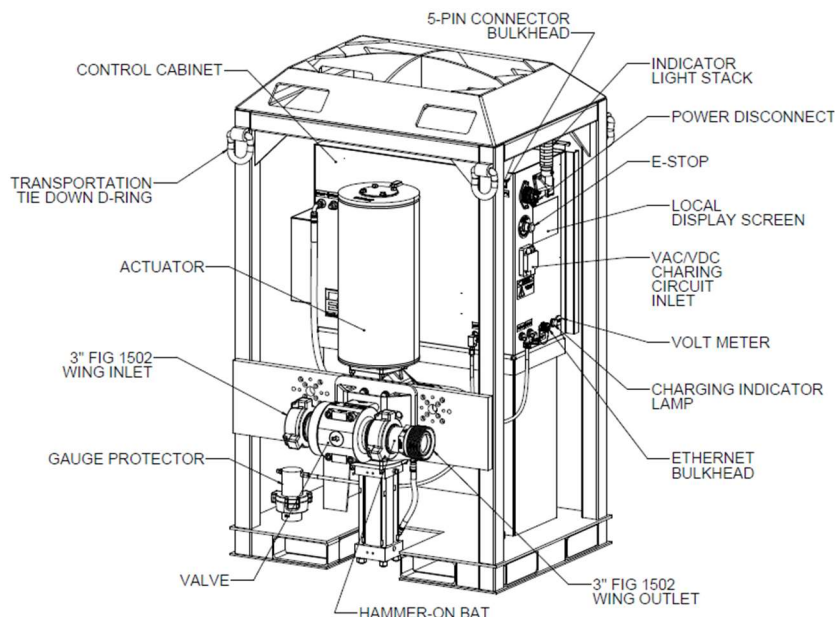


3" SINGLE RAPTR™ TECHNICAL SPECIFICATION REMOTE AUTOMATED PRESSURE TECHNOLOGY on RIG

Doc No.	E3-DOC-000001
Issue Date	10-16-2025
Revision Date	N/A
Current Version	0

Unit Specifications

Max. Allow Working Pressure Rating	15,000psi
Pressure Accuracy	99.9%
Close Time	3.5 sec
Open Time	0.4 sec
Power Source, Primary Battery, Charging	24VDC, 90-264 VAC Single Phase
Standard Power Connection	3 Pin
Standard Choke Size	5/8"
Number of Mud Pressure Transducers	3
Number of Valves	1
Number of Actuators	1
Height of Skid	81 3/16"
Width of Skid	48 7/16'
Depth of Skid	50 7/8"
Weight	2,900lbs
Tempetrure Range	-20F – 200F
Remote Monitoring & Valve Control	HMI Touchscreen
Max Recommended HMI Cable Length	500'
Programmable Pressure Setting	Yes
Recommended Set Pressure to Reset Pressure	2,500psi [Minimum Delta]
Standard Data Output Frequency	1.0 sec
Capability to Adjust Data Output Fequency	Yes [Custom Program]
Electronic Drilling Recorder Tie-In Capable	Yes
Additional Iron	Not Included
Recommended Placement on Drill Site	Backyard
Min. Press Sensor Distance from Mud Pumps	30' [Linear Pipe]

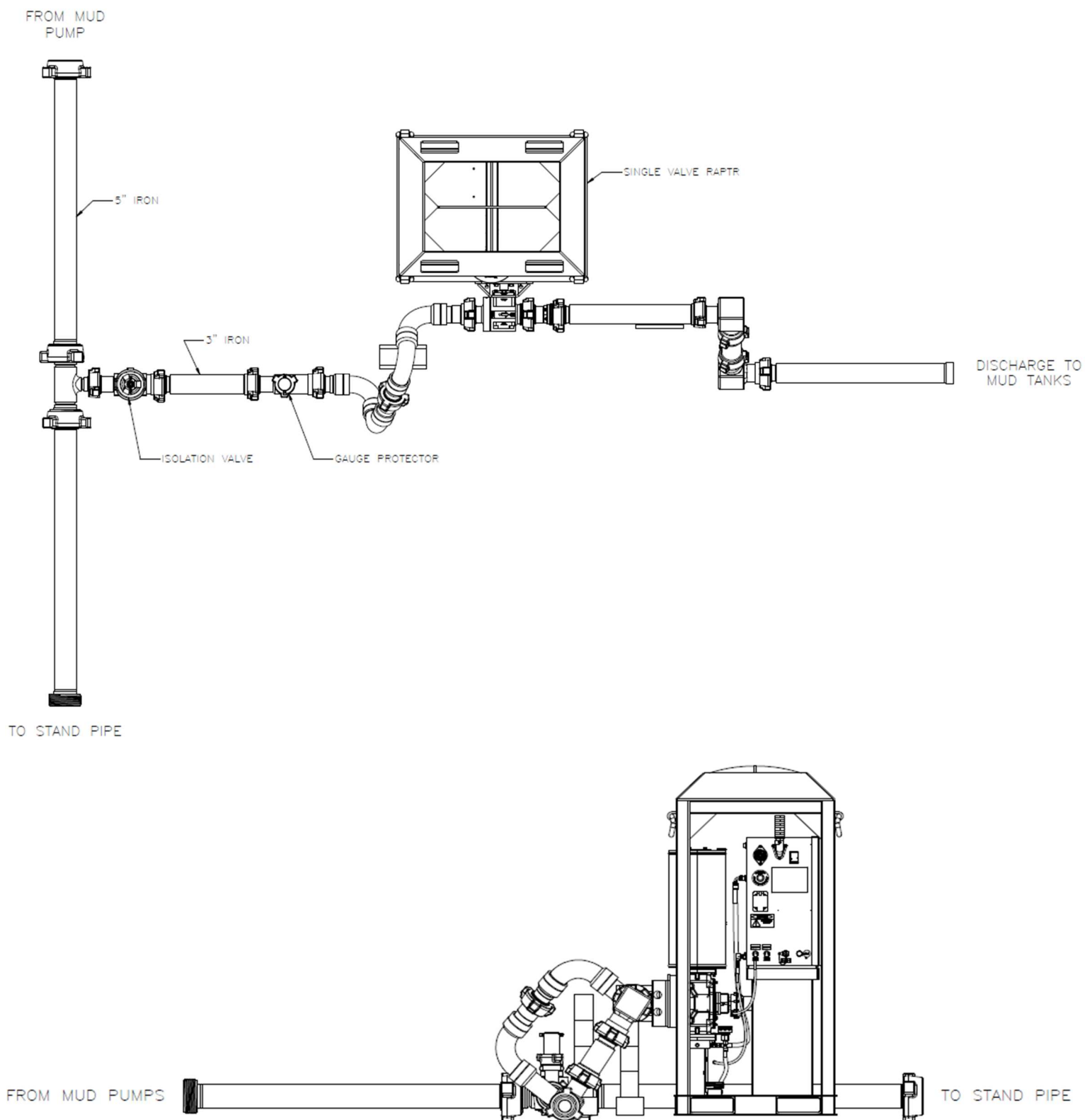




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SAMPLE RIG-UP:



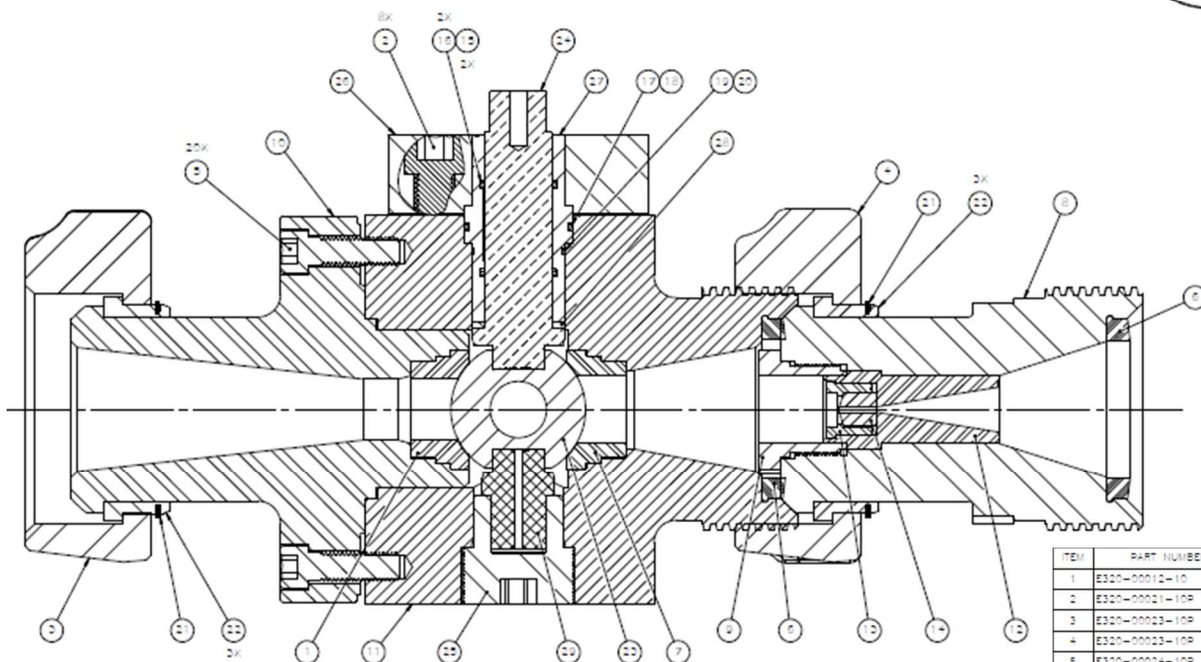
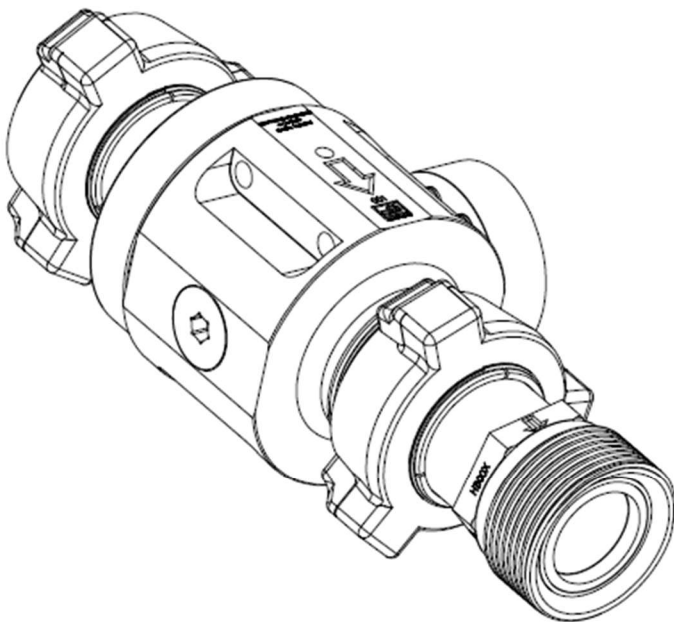


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Valve Specifications

Size	3"
Type	Ball
System Max. Allow Working Pressure Rating	15,000psi
Length	24"
Weight	249lbs
Connection Type	1502 hammer union
Orientation	Vertical



ITEM	PART NUMBER	DESCRIPTION
1	E320-00012-10	UPSTREAM SEAT, BALL VALVE, 15K
2	E320-00001-10P	7/8"-9 X 0.25 SOCKET HEAD CAP SCREW
3	E320-00003-10P	3"-1502 HD HAMMER UNION NUT
4	E320-00003-10P	3"-1502 HD HAMMER UNION NUT
5	E320-00004-10P	5/8"-11 X 0.00 SOCKET HEAD CAP SCREW
6	E320-00005-10P	4M EXTRUSION SEAL
7	E320-00002-10	15K BV DOWN STREAM SEAT
8	E320-00006-10	15K BALL VALVE OUTLET TAIL - FEMALE
9	E320-00007-10	THROTTLE RETAINING NUT
10	E320-00009-10	TAIL PIECE, MALE
11	E320-00008-10	VALVE BODY, 2 PIECE VALVE, DOWNSTREAM SIDE, 15K
12	E320-00112-10	THREADED THROTTLE HOUSING
13	E320-00113-10	THROTTLE INSERT RETAINER
14	E320-00114-10	THROTTLE HOUSING INSERT
15	E320-10001-10P	STEM BEARING ID O-RING
16	E320-10002-10P	STEM BEARING ID BACKING RING
17	E320-10004-10P	STEM BEARING LARGE OD O-RING
18	E320-10005-10P	STEM BEARING LARGE OD BACKING RING
19	E320-10011-10P	SMALL OD STEM BEARING O-RING
20	E320-10012-10P	SMALL OD STEM BEARING BACKING RING
21	E320-10024-10P	RETAINER RING, 3" 1502
22	E320-10025-10P	RETAINER SEGMENT, 3" 1502 NUT
23	E320-00114-10	BALL, 15K
24	E320-00001-10	PC4 STEM
25	E320-00003-10	CAP, TRUNNION BEARING
26	E320-00007-10	BOHNIT
27	E320-00013-10	STEM BEARING
28	E320-00015-10	STEM THRUST WASHER
29	E320-00032-10	TRUNNION

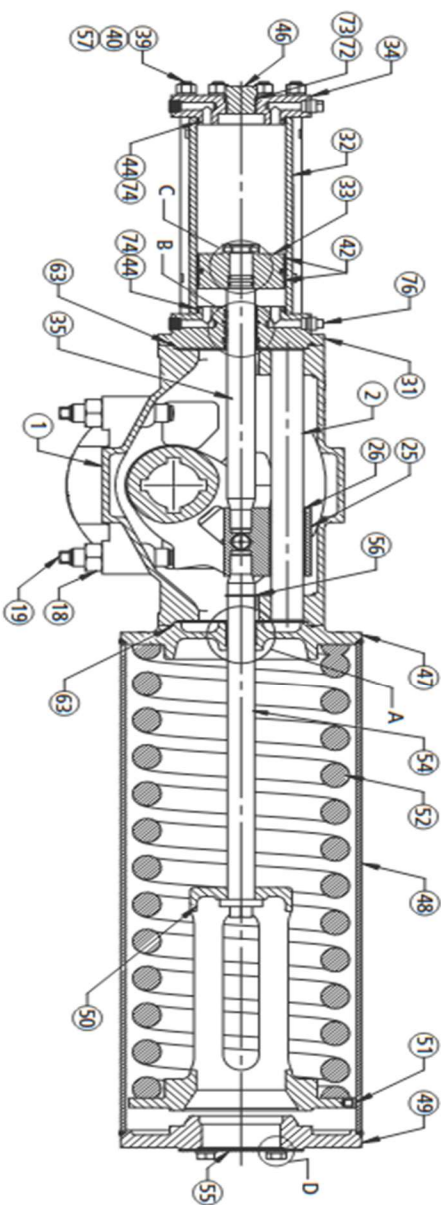
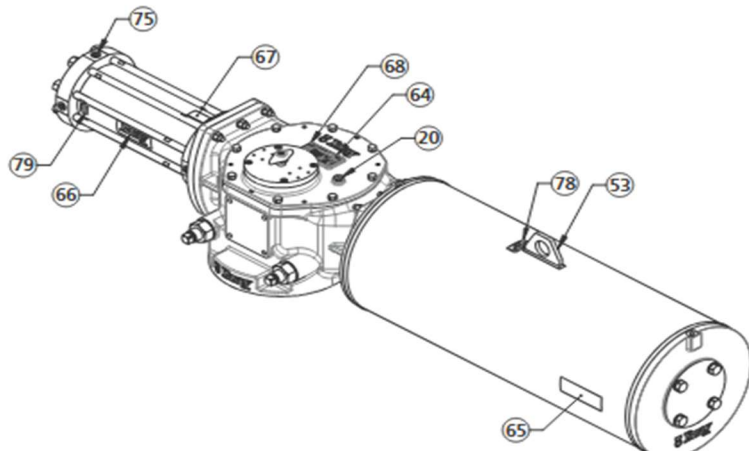


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Actuator Specifications

Type	Hydraulic
Pressure Rating	1637 psig
Length	61.5"
Weight	519 lbs
Orientation	Vertical



Item	Description	Material	Qty
1	Yoke Housing	Ductile Iron	1
2	Guide Rod Alloy	Steel	1
3	Housing Cover	Ductile Iron	1
4**	Bushing (Yoke)	PTFE Bronze	2
5*	O-Ring (Yoke)	Buna-N	2
6*	O-Ring (Cover)	Buna-N	1
7	Top Cover	Ductile Iron	1
8*	O-Ring (Top Cover)	Buna-N	1
9**	Flanged Bushing	PTFE Bronze	1
10*	O-Ring (Accessory Drive)	Buna-N	1
11	Accessory Drive	Stainless Steel	1
12	Hex Bolt	Steel	8
13	Spring Washer	Spring Steel	8
14	Set Screw, Socket Head	Steel	2
15	Dowel Pin	Hardened Steel	4
16	Socket Head Caps Screw	Steel	4
17	Socket Head Caps Screw, Low Head	Steel	1
18	Seal Nut	Steel	2
19	Stop Bolt	Steel	2
20	Breather Vents Carbon	Steel	1
21	Yoke	Ductile Iron	1
22**	Slider Block	Bronze	2
22a**	Roller	Steel	2
23	Yoke Pin	Alloy Steel	1
24	Retainer Plate	Plastic	2
25	Guide Block	Carbon Steel	1
26**	Bushing (Guide Rod)	PTFE Bronze	2
27**	Bushing (Yoke Pin)	PTFE Bronze	2
28	Cap Screw, Flat Head, Hex Socket	Steel	8
29	Position Indicator	Plastic	1
30	Cap Screw, Flat Head, Hex Socket	Steel	1
31	Adaptor, Pressure Module	Carbon Steel	1
32	Barrel	Carbon Steel	1
33	Piston	Alloy Steel	1
34	End Cap, Pressure Module	Carbon Steel	1
35	Piston Rod	Alloy Steel	1
36*	Guide Ring, Piston Rod	Phenolic Resin	2
37*	Lip Seal	Polyurethane	1
38*	Sealing Set, Piston Rod	PTFE & Buna-N	1
39	Tie Rod	Alloy Steel	8
40	Nut, Tie Rod	Steel	8
41*	O-Ring (Piston Rod)	Buna-N	1

Item	Description	Material	Qty
42*	Guide Ring, Piston	Phenolic Resin	2
43*	Sealing Set, Piston	PTFE & Buna-N	1
44*	O-Ring (Barrel)	Buna-N	2
45	Set Screw, Piston Lock	Steel	2
46	End Plug	Steel	1
47	Adaptor, Spring Module	Carbon Steel	1
48	Pipe Carbon	Steel	1
49	End Cap, Spring Module	Carbon Steel	1
50	Spring Guide	Carbon Steel	1
51	Button	Plastic	9
52	Spring, Compression	Alloy Steel	1
53	Lifting Lug	Carbon Steel	1
54	Spring Rod	Alloy Steel	1
55	End Cover	Carbon Steel	1
56	Retainer Ring	Stainless Steel	1
57	Spring Washer	Spring Steel	12
58	Hex Bolt	Steel	4
59*	O-Ring (End Cover)	Buna-N	1
60	Stud / Hex Bolt (Module)	Steel	12
61	Nut (Module)	Steel	12
62	Spring Washer (Module)	Spring Steel	12
63*	O-Ring (Module)	Buna-N	2
64	Name Plate	Stainless Steel	1
65	Label, Caution	Metallized Polyester	1
66	Label, Logo	Metallized Polyester	2
67	Label, Configuration	Metallized Polyester	1
68	Rivets	Stainless Steel	4
69**	Bushing (Adaptor)	PTFE Bronze	1
70*	Wiper	Polyurethane	1
71*	Backup Ring (Piston Rod)	PTFE	2
72*	O-Ring (End Plug)	Buna-N	1
73*	Backup Ring (End Plug)	PTFE	1
74*	Backup Ring (Barrel)	PTFE	2
75	Pipe Plug	Carbon Steel	4
76	Protective Plug	Plastic	2
78	Label, Lifting	Metallized Polyester	1
79	Label, Venting	Metallized Polyester	1