

## APPLICATION

The Series 2023 is specially designed as a high-pressure reverse seating dump valve for separators and other process vessels. The body screws directly into the vessel connection. This places the inner valve inside the vessel, which allows any warm fluid present to retard freezing inside the valve body.

### **CAUTION:**

BEFORE DISASSEMBLY OR MAINTENANCE, ALL PRESSURES IN THE DEVICE MUST BE RELIEVED. FAILURE TO RELIEVE PRESSURES MAY RESULT IN PERSONAL INJURY OR DEVICE DAMAGE. THE RESULTING UNCONTROLLED VENTING OR SPILLING OF LINE FLUIDS MAY CAUSE PERSONAL INJURY, LOSS OF PROCESS CONTROL OR ENVIRONMENTAL CONTAMINATION.

## PREVENTIVE MAINTENANCE

### **Seat:**

- Check every six (6) months if in normal service (i.e. no sand or abrasives and a low-pressure drop). If in severe service (i.e. high-pressure drop or abrasive fluid) check every sixty days.

### **Valve Plug:**

- Check every six (6) months if in normal service (i.e. no sand or abrasives and a low-pressure drop). If in severe service (i.e. high-pressure drop or abrasive fluid) check every sixty days.

### **Valve Stem O-ring:**

- Check for wear every year.

### **Actuator:**

- Check diaphragm yearly. Replacement of o-rings will depend on frequency of valve cycling; check at least once per year.

### **Body:**

- Under normal conditions, the body should last years. However, under severe conditions (i.e. corrosion, sand and high-pressure drop), valve life could be numbered in days only. Inspect the body every time the actuator is removed.

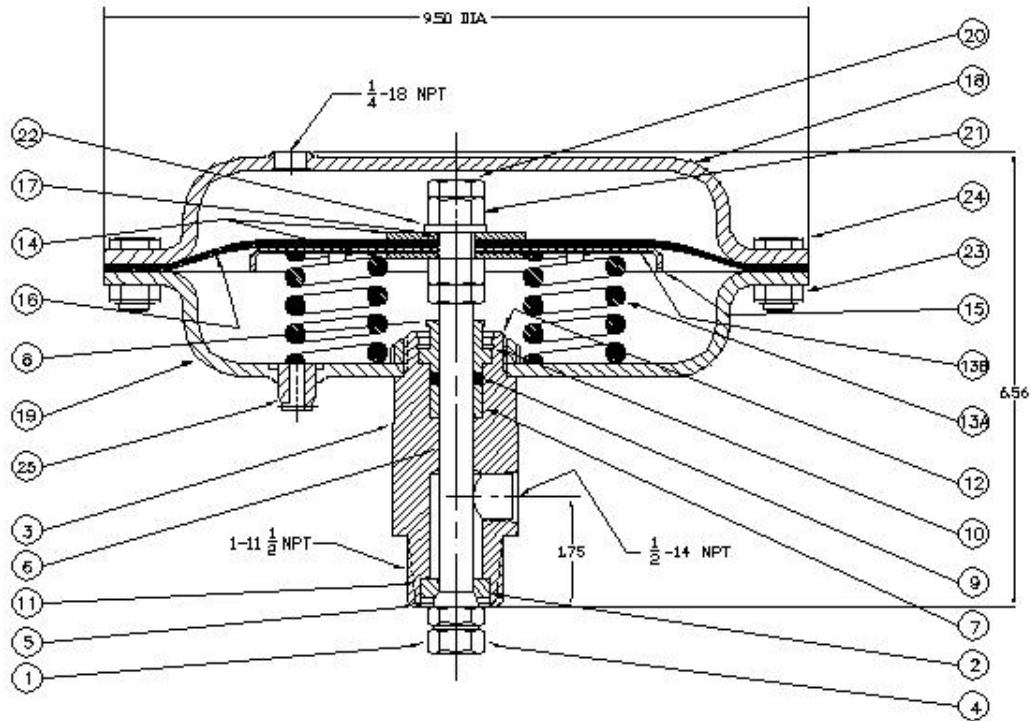
### **General Maintenance:**

- Whenever performing maintenance, always inspect the general condition of all exposed parts for signs of damage, wear and corrosion.
- When disassembling any portion of the valve, always check o-ring for damage or wear before reassembly.

**TROUBLE DIAGNOSIS**

SYMPTOMS	PROBLEM	CORRECTIVE PROCEDURE
Valve leaks in the closed position.	Obstruction under plug or seat and plug are worn.	Remove valve from vessel. Open valve with air pressure. Inspect seat and plug for wear. Plug is usually first to be replaced
Diaphragm Housing leaks air from breather plug.	Worn out diaphragm or diaphragm plates have worked loose and need tightening.	Remove pressure from diaphragm housing and disassemble top. Replace diaphragm. If the nuts that hold diaphragm plates are loose, tighten.
Valve leaks. Valve is normally closed. Plug and seat are not worn. Plug is not obstructed.	Pressure drop too great across valve.	Check valve pressure drop table for limits on pressure drop.
Valve will not open. Flow over plug. Normally closed valve.	Pressure drop too great across valve seat.	Increase actuating air pressure to maximum of 35 psi. If this will not open the valve, then valve orifice is too large. Smaller size plug is required. Consult pressure drop table

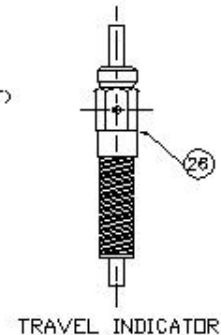
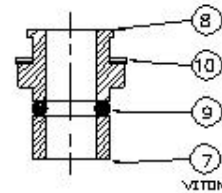
**PARTS LIST**  
**VALVE WITH NO.9 NON-ADJUSTABLE REVERSE ACTUATOR**



Item No.	STOCK NO.	MATERIAL	SERIES 2023 VALVE PARTS DESCRIPTION	QTY
1	SEE TRIM CHART 1-1		PLUG VALVE 316SS	1
2			SEAT VALVE 316SS	1
3	490202B100	1018 CSTL	BODY VALVE SCREWED NPT 0.5 X 1.0	1
4	490202B104	CSTL/ NYLN	NUT HEX SEALING 3/8-24	1
5	490202B105	302 SST	RING RETAINING SPRAL	1
6	490222A115	303 SST +316 SST	STEM VALVE	1
7	490202B101	TEPV	BUSHING W/PER	1
8	490202B102	KYNAR	RETAINER O-RING	1
*9	49020B108	+ VITON	O-RING STEM VALVE SIZE 204	1
10	490202B108	CSTL	RING RETAINING SPRAL	1
*11	490202B109	BLNA-N + VITON	O-RING SEAT VALVE SIZE 019	1
12	490227B109	LOW CSTL	NUT LOCK SLOTTED 1 1/2-12	1
13A	490202B103	A228 WIRE	SPRING	2
13B	490222C219		SPRING RETAINER	1
14	490202B107	1050 CSTL	WASHER	2
15	490222A116	LOW CSTL	PLATE DIAPHRAGM	1
*18	490222A126	BLNA-N	DIAPHRAGM ACTUATOR	1
*17	490222A133	BLNA-N + VITON	O-RING DIAPHRAGM SIZE D11	1
18	490222C224	CSTL	HOUSING DIAPHRAGM Up NO.9	1
18	490227B002	CSTL	HOUSING DIAPHRAGM Lo NO. 9	1
20	490202B099	CSTL	NUT HEX JAM 3/8-24	2
21	490202A118	CSTL	NUT HEX REG 3/8-24	2
22	490222A119	CSTL	WASHER LOCK SPRING 0.375	1
23	490222A182	CSTL	NUT HEX REG 3/8-18	12
24	490222A183	CSTL	SCREW CAP HEX 3/8-18 X 7/8	12
25	490222A120	CSTL	PLUG BREATHER 0.250 NPT	1
26	490222A123	316/DLRIN	INDICATOR TRAVEL	1

WHEN ORDERING REPLACEMENT PARTS, ALWAYS SPECIFY VALVE SERIAL NO. FOR REPLACEMENT & REPAIR KITS.....SEE CHARTS,PAGE 2

STEM SEAL REPAIR KITS  
(SEE STEM SEAL REPAIR KIT CHART)



TRIM CHART 1-1  
Includes Item 1 Plug & Item 2 Seat

HARD TRIM				
TRIM SET COMPONENTS	COMPONENT PARTS MATERIAL		STOCK ORIFICE SIZES	
			0.250	0.375
PLUG	+316	SST	490202B110	490202B120
SEAT	+316	SST	490202B111	490202B121

+Material Specifications for these trim parts conform to NACE Standard MR-0175.

COMPLETE TRIM REPLACEMENT KIT-  
Includes Items 1 Plug, 2 Seat Nut, 5 Retaining Ring & 11 Seat Seal

VALVE PLUG MATERIAL	VALVE SEAT MATERIAL	SEAT MATERIAL	STOCK ORIFICE SIZES	
			0.250	0.375
316 SST	316 SST	+VITON	490202B118	490202B118

+Material Specifications for these trim parts conform to NACE Standard MR-0175.

STEM SEAL REPAIR – Includes Items  
7 wiper Bushing, 8 O-Ring Retainer,  
9 Stem Seal and 10 Retainer Ring

MATERIAL SELECTION
VITON
490202B115

VALVE REPAIR –Includes Items  
7 Wiper Bushing, 8 O-Ring Retainer,9,11,17  
9 Stem Seal and 10 Retaining Ring & 16 Diaphragm.

MATERIAL SELECTION
VITON
490202B116

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Due to the constant Improvement at Norriseal Controls, prices and/or specifications are subject to change without notice and /or obligation.

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