

**Installation and Operating Instructions for:
ME981 Series Flow Indicating Check Valves
and
ME982 Series Non-Indicating Flow Check Valves**

!!!WARNING!!!

READ AND UNDERSTAND ALL INSTRUCTIONS INCLUDED WITH THIS INSTRUCTION MANUAL. RELIEVE ALL PRESSURE FROM SYSTEM BEFORE SERVICING VALVE

!WARNING!

Failure to follow these instructions or to properly install and maintain this equipment could result in an explosion and/or fire causing property damage and personal injury or death.

Marshall Excelsior equipment must be installed, operated, and maintained in accordance with federal, state, and local codes and MEC instructions. The installation in most states must also comply with NFPA 58 or ANSI K61.1 standards.

Only personnel trained in the proper procedures, codes, standards, and regulations of the LP-Gas or anhydrous ammonia industries should install and service this equipment.

Introduction

Scope of the Manual

This instruction manual covers installation and maintenance for ME982 series back check valves used in LP-Gas and Anhydrous Ammonia bulk plant transfer area vapor and liquid lines.

The ME981 series is identical to the ME982 Series but have built-in flow indicator.

Description

Back check valves allow flow in only one direction and are normally closed. When flow in the direction of the arrow starts, the valve poppet opens. When flow stops or reverses, the valve poppet closes. Back check valves are installed on stationary storage tanks and vapor or liquid transfer lines. The valves are frequently used in conjunction with globe and angle valves.



ME981-16



ME982-16



ME981-16-2F

The soft-seated construction gives tight shutoff. Piping can be blown down easily for maintenance or repair without experiencing leakage.

Specifications

!CAUTION!

If the valve is to be used in service, other than LP-Gas or Anhydrous Ammonia, contact the factory to determine if the valve materials are suitable for the particular service.

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ME981 AND ME982 SERIES

SEAT CONSTRUCTION	CONTAINER OR INLET CONNECTION	OUTLET CONNECTION	WATER FLOW CAPACITY, GPM (L/MIN) AT 10 PSIG (0.69 bar) DIFFERENTIAL PRESSURE	PART NUMBER	
				DUCTILE IRON	
				WITHOUT FLOW INDICATOR	WITH FLOW INDICATOR
SOFT SEAT	1 1/4" NPT	1 1/4" NPT	180(681)	ME982-10	ME981-10
	2" NPT	2" NPT	380 (1438)	ME982-16	ME981-16
	3" NPT	3" NPT	880 (3331)	ME982-24	ME981-24

Installation

!CAUTION!

Flow through the back check valve must be in the same direction as the flow arrow stamped on the valve nameplate.

Manually operate the back check valve's poppet before installation to assure parts were not damaged in shipment or blocked with dirt or foreign material.

Use pipe dope on the male threads of the pipeline. Polytetrafluoroethylene (PTFE) tape or PTFE pipe dope compound is recommended for the male threads of the larger valves such as the ME981-16, ME981-24, ME982-16, and ME982-24.

Make certain flow is in the direction of the arrow on the nameplate (flow entering from the inlet of the valve). The ME981 and ME982 Series prevent flow from the other direction.

If installed in horizontal piping, the valve should be positioned with the nameplate at the top. If installed in vertical piping, the inlet of the unit should be pointed down to assist the spring in closing the poppet.

Because no breakoff fitting can protect unsupported piping from damage, the piping containing the valve must be adequately anchored to protect against physical damage.

Test the valve for proper operation after installation and before placing the system into full service. To test, pressurize the system through the back check valve and bleed pressure from the valve inlet piping. Rapid pressure build-up indicates that the valve has malfunctioned.

Replacing Internal Parts

Only parts manufactured by Marshall Excelsior Co., should be used for the repair of ME981 and ME982 Series Back Check Valves. Be sure to give the complete model number of the ME981 or ME982 valve when corresponding with your local distributor.

ME981 and ME982 valves that have been disassembled for repair must be tested for proper operation before being returned to service.

Installation of ME981-901K

When installing a ME981-901K Indicator Kit, follow these instructions:

1. Apply Loctite #271 to threads in Body.
2. Install Mounting Bracket [26] onto Body.
3. Install (2) Mounting Bracket Screws [28] into Body and tighten.
4. Install Mounting Screws [27] thru Mounting Bracket [26] into Indicator Assembly [25].

ME981 AND ME982 SERIES

Parts List for All ME981 and ME982 Assemblies		
Ref #	Description	Qty.
1	Valve	1
2	Pivot Stem	1
3	Spring Bearing	1
4	Spring	1
5	Gland	1
6	Nylon Bearing	1
7	O-Ring, #2-023	1
8	Face Screw	2
9	Body	1
10	Flange	2
11	Valve Seat Holder	1
12	Pivot Arm	1
13	Valve Washer	1
14	Nut	1
15	Cotter Pin	1
16	Valve Seal	1
17	Graphite Seal	1
18	Pivot Bearing	1
19	Nameplate	1

Parts List for All ME981 and ME982 Assemblies			
Ref #	Description	Qty.	
20	1/4" NPT Plug	1	
21	Needle Magnet	1	
22	Graphite Seal - Flange	ME981-10 and ME982-10	1
	Graphite Seal - Flange	ME981-16 and ME982-16	1
	Flange Gasket	ME981-24 and ME982-24	1
23	O-Ring	ME981-10 and ME982-10	2
		ME981-16 and ME982-16	2
		ME981-24 and ME982-24	1
24	Flange Bolt	ME981-10 and ME982-10	8
		ME981-16 and ME982-16	8
		ME981-24 and ME982-24	16

Additional Parts for ME981 Series (with Indicator)		
Ref #	Description	Qty.
25	Indicator Assembly	1
26	Mounting Bracket	1
27	Mounting Screw	3
28	Mounting Bracket Screw	2

