



Valve Concepts, Inc.

FIELD CALIBRATION INSTRUCTIONS

1078 - FCI

04-13

Model 1078

Vacu-Gard® Tank Blanketing Valves

The following instructions are to be used to calibrate a 1078 blanketing valve that has already been installed on a vessel or tank.

Preparation:

1. Using parts supplied in the field test kit, assemble unit as shown in Figure 1 for **pressure** setup, or Figure 2 for **vacuum** setup.
2. Close block valve to shut off supply pressure to the inlet side of the blanketing valve.
3. Close block valve down stream of the blanketing valve and to the sensing port if unit has remote sensing.
4. Remove plug ((117)) slowly from blanket valve body ((108)) to allow any pressure that maybe trapped in the blanketing valve to vent to atmosphere. **NOTE: Do not re-install this plug until after calibration procedure is completed.**
5. For both remote sensing and dip tube sensing: Disconnect tubing and remove fitting where sensing line connects to the pilot body ((38)).
6. Disconnect the tubing that supplies pressure from the inlet of the blanketing valve body ((108)) to the inlet of the pilot filter ((202)). Remove both fittings.
7. On the drawings for Figure 1 and Figure 2 locate the three hose connections labeled as "A", "B" and "C". Connect the tube fittings from the three hoses as follows: connect end of hose "A" to the 3/8" NPT connection at the inlet port of the body; connect end of hose "B" to the inlet connection on the pilot filter; connect the end of hose "C" to the pilot sensing port connection.
8. Rotate the adjusting knob on regulator (1) counter clockwise (CCW) to remove all spring compression.
9. Rotate the adjusting knob on metering valve (2) (CW) to close needle valve.
10. Remove closing cap ((1)) from pilot assembly. Rotate adjusting screw ((2)) (CCW) to relieve all spring compression.

Calibration Procedure:

NOTE: The position of the Magnehelic gauge must be oriented vertically and the display dial must be level to provide accurate readings during testing.

FOR PRESSURE SET POINTS:

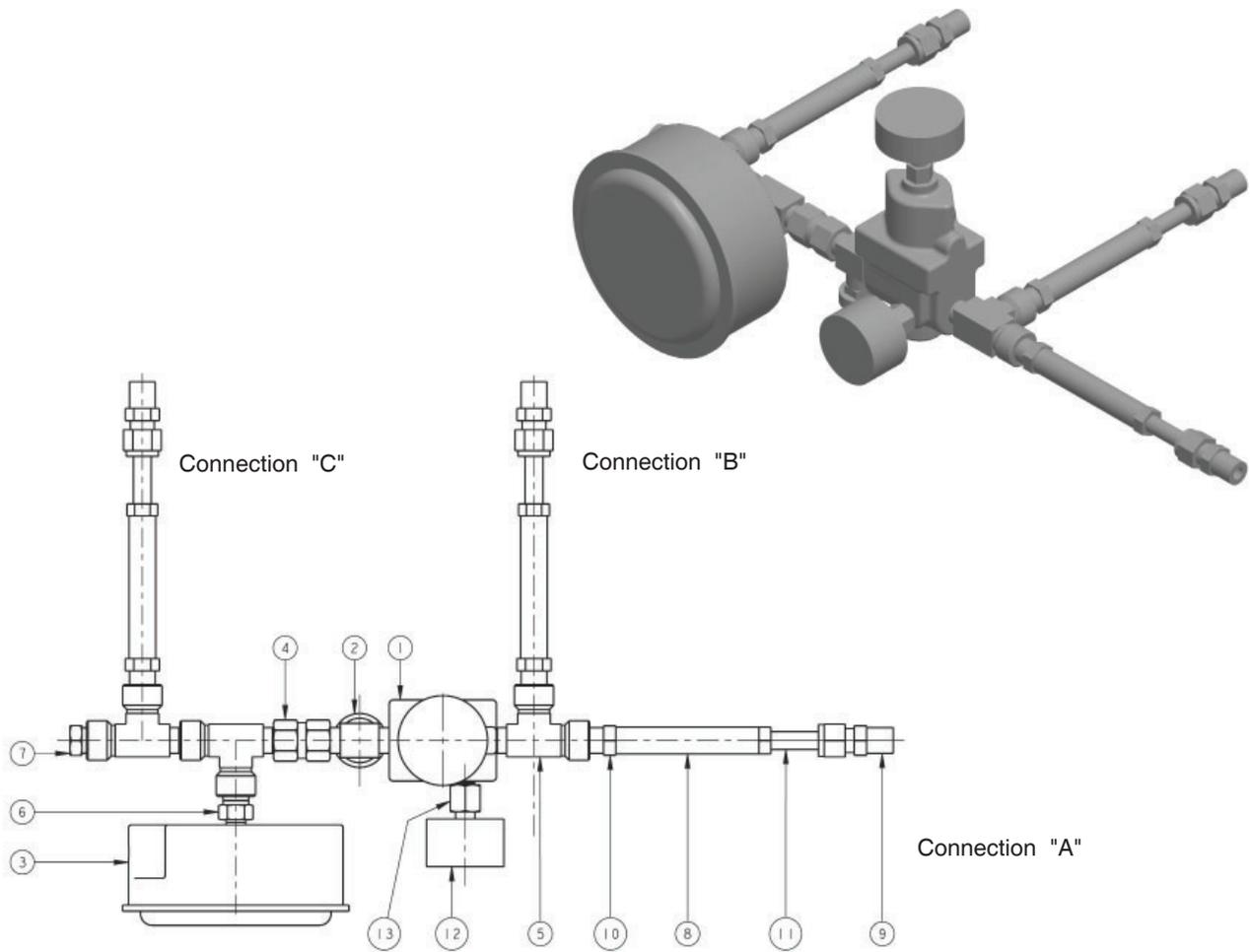
1. Slowly open inlet block valve to allow the supply pressure to the blanketing valve and the regulator (1). **NOTE: Inlet pressure must not exceed max inlet pressure as indicated on the 1078 metal name plate.**
2. Rotate adjusting knob on regulator (1) clockwise (CW) to obtain a set point 2 to 3 psig above the set point pressure also stamped on the 1078 metal name plate.
3. Check connections to assure there are no leaks. Tighten as necessary.

4. Rotate the adjusting knob on metering valve (2) (CW) slowly until the Magnehelic gauge reflects the desired set point pressure, also stamped on the 1078 metal nameplate. **NOTE:** *The restriction orifice (7) downstream of the needle valve will stabilize the pressure reading.*
5. Rotate the adjusting screw ((2)) on the pilot assembly (CW) until the valve begins to open - (outlet pressure vents to atmosphere). Rotate the knob on the metering valve (2) in small increments (open and close) to determine the sensing pressure set point where the 1078 valve opens and closes. Rotate the pilot valve adjusting screw accordingly so the outlet of the blanketing valve is closed at the desired set point. **NOTE:** *The sensing pressure should be no more than 1/2 inch wc less than the set point when the outlet opens and should remain open until set point pressure is re-established.*
6. Rotate the jam nut ((3)) (CW) to secure the adjusting screw ((2)) in position. Re-install the closing cap ((1)) over the adjusting screw ((2)).
7. Close block valve to shut off the supply pressure to the inlet side of the blanket valve. Loosen and remove "A", "B" and "C" hose / fitting connections to remove the field test kit. Re-install the outlet plug ((117)) removed previously in "Preparation" Step 4.
8. Re-install fittings and tubing between body ((108)) inlet connection and inlet connection of pilot body((38)). Re-connect fitting and tubing to the sensing port connection. See Section IV of 1078-IOM for start up instructions.

FOR VACUUM SET POINTS:

1. Slowly open inlet block valve to allow the supply pressure to the blanketing valve and the regulator (1). **NOTE:** *Inlet pressure must not exceed max inlet pressure as indicated on the 1078 metal name plate.*
2. Rotate adjusting knob on metering valve (2) clockwise (CW) until fully closed; then rotate the adjusting knob (CCW) 2 to 3 full revolutions.
3. Rotate the regulator adjusting knob (CW) to increase the vacuum reading on the gauge to the desired set point, see metal name plate. **NOTE:** *If enough vacuum pressure cannot be produced, rotate the adjusting knob on the metering valve (CCW) as needed.*
4. Check connections to assure there are no leaks. Tighten as necessary.
5. Rotate the adjusting screw ((2)) on the pilot assembly (CW) until the valve begins to open - (outlet pressure vents to atmosphere). Rotate the knob on the metering valve (2) in small increments (open and close) to determine the sensing pressure set point where the 1078 valve opens and closes. Rotate the pilot valve adjusting screw ((2)) accordingly so the outlet of the blanketing valve is closed at the desired set point. **NOTE:** *Sensing pressure should be no more than 1/2 inch wc less than the set point when the outlet opens and should remain open until set point pressure is re-established.*
6. Rotate the jam nut ((3)) (CW) to secure the adjusting screw ((2)) in position. Re-install the closing cap ((1)) over the adjusting screw ((2)).
7. Close block valve to shut off the supply pressure to the inlet side of the blanket valve. Loosen and remove "A", "B" and "C" hose / fitting connections to remove the field test kit. Re-install the outlet plug ((117)) removed previously in "Preparation" Step 4.
8. Re-install fittings and tubing between body ((108)) inlet connection and inlet connection of pilot body((38)). Re-connect fitting and tubing to the sensing port connection. See Section IV of 1078-IOM for start up instructions.

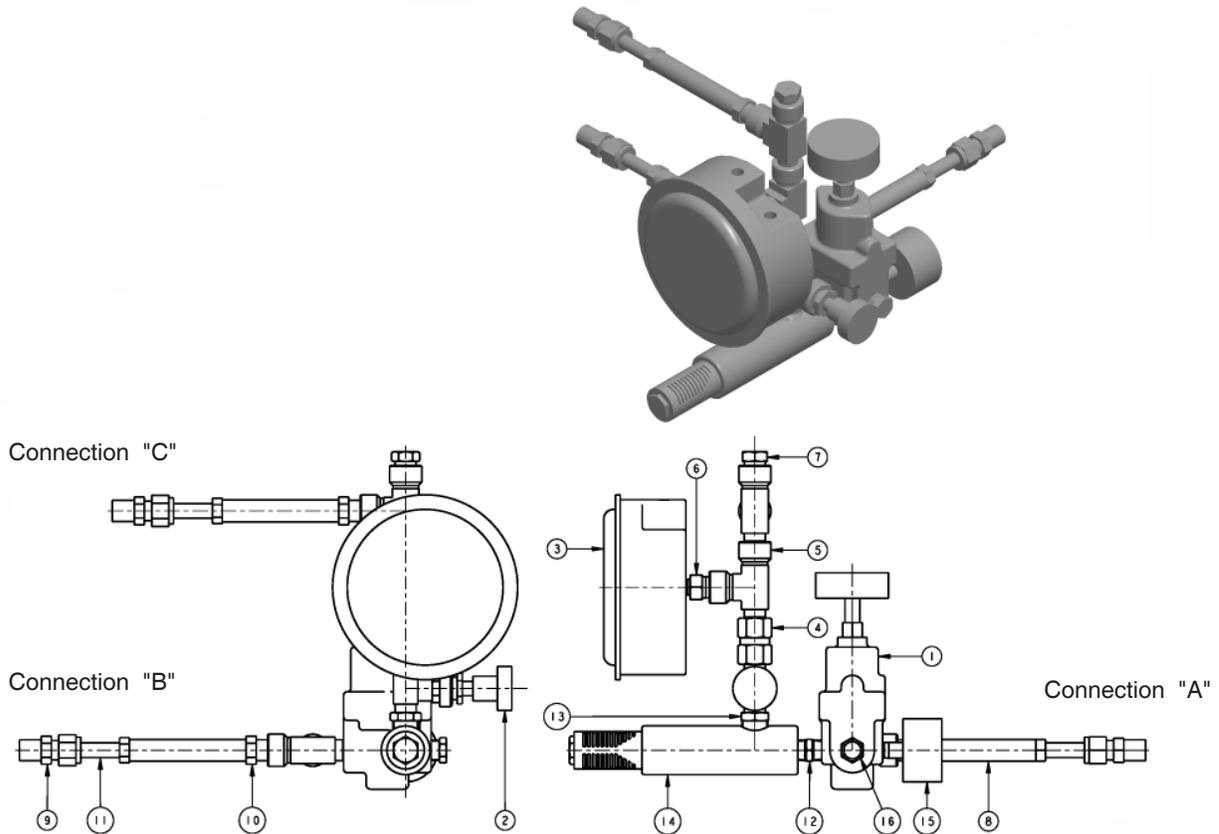
Figure 1



Pressure setup - Use High Pressure port on item (3) and plug the remaining high pressure port.

Item No.	Part Description	Item No.	Part Description
1	Pressure Regulator	8	Hose
2	Metering Valve	9	Straight Connector
3	Pressure Gauge	10	Push-Lok Hose Fitting
4	Hex Coupling	11	Push-Lok Hose Fitting
5	Street Tee	12	Gauge
6	Nipple	13	Adapter
7	Orifice		

Figure 2



Vacuum setup - Use Low Pressure port on item (3) and plug the remaining low pressure port.

Item No,	Part Description	Item No,	Part Description
1	Pressure Regulator	9	Straight Connector
2	Metering Valve	10	Push-Lok Hose Fitting
3	Gauge	11	Push-Lok Hose Fitting
4	Hex Coupling	12	Hex Nipple
5	Street Tee	13	Reducing Bushing
6	Reducing Nipple	14	Vacuum Nozzle
7	Orifice Fitting	15	Gauge
8	Hose	16	Mud Dauber

Model 1078 CODER FOR 04/02/13
PILOT OPERATED VACU-GARD® Field Calibration Kit

CK 1 Table 1 **0 0 0 0 0 0 0 0 B 0 0 0 0 0 0**

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TABLE 1 English Gauge Ranges							
0 - 5" wc	0 - 10" wc	0 - 15" wc	0 - 1 psig	0 - 5 psig	0 - 20 psig	0 - 5" wc Vac	0 - 10" wc Vac
CODE	CODE	CODE	CODE	CODE	CODE	CODE	CODE
3	6	7	8	9	H	A	C
Metric Gauge Ranges							
0 - 15 mbar	0 - 25 mbar	0 - 40 mbar	0 - 80 mbar	0 - 350 mbar	0 - 2 bar	0 - 15 mbar Vac	0 - 25 mbar Vac
R	S	T	U	V	W	Y	Z