

Vertical Zone Valve Box Assembly SPECIFICATION

Zone Valve

Valves are full port, double seal, ball-type with three-piece bronze/brass body and a chrome plated brass ball. Valves consist of the following:

- Designed for a maximum working pressure of 600 psig WOG or vacuum service to 29" Hg.
- Valve body has reinforced PTFE ball seat and reinforced PTFE stem seals
- Valve stem is blowout proof

The valves fully comply and meet all requirements of **NFPA 99**.

- All valve materials are compatible with USP oxygen, nitrous oxide, medical air, carbon dioxide, helium, nitrogen, argon and mixtures thereof
- Valves are provided with type K copper tube extensions for making connection to system piping outside the box
- Valves are three piece design, fully serviceable in the line
- Valves are supplied cleaned and prepared for oxygen service
- A 1/4 turn of the handle is required to operate the valve from OPEN to CLOSED position
- All valves meet the Cv factors as required by NFPA 99

Valve Ports: All valve assemblies have a total of three 1/8" NPT ports with pipe plugs.

- One port is used as a provision for connection of a gauge, located on the terminal outlet side of the valve to register pipeline pressure or vacuum
- A second port, also located on the terminal outlet side, can accept a DISS connection of a gas sensor
- A third port is located upstream of the valve and can be used either for a DISS connection of a gas sensor, or for purging during the brazing process

Zone Box Design

The zone valve box is constructed of 18-gauge, galvanized steel with white epoxy powder coat finish.

- Valve box requires a rough wall opening of 14-1/4" wide x 4" deep
- Provided with two 18-gauge galvanized steel mounting brackets, adjustable from 3/8" thick to 1-1/2" thick drywall, for ease of installation
- Design allows for the configuration of up to 4 valves within the rough-in box assembly
- Gas flow is from the top of the box, in the left stub and out the right stub
- Valves are securely attached to the box
- Polyethylene foam allows for ease of valve replacement and reorientation of valves within the rough-in box
- Supplied with color-coded gas identification labels
- Gas identification labels are also available online for printing

Zone Box Door



The zone valve box assembly has a sliding, opaque door with pull ring and clear gauge window.

- Capable of sliding horizontally to facilitate installation requirements
- In an emergency, the door will SNAP OUT by pulling the pull ring forward without exposing sharp edges
- Zone Valve Box door is treated with Biomaster (see table on page 2 for details)
- The assembly door has a label that reads:

**-CAUTION-
CLOSE VALVES ONLY IN EMERGENCY**

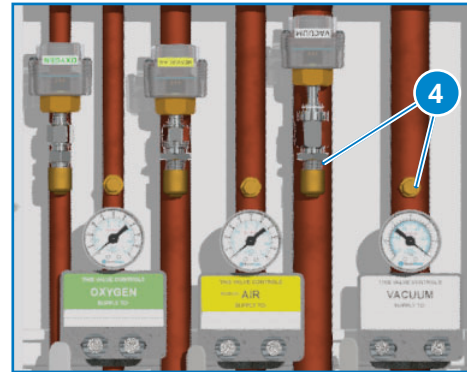
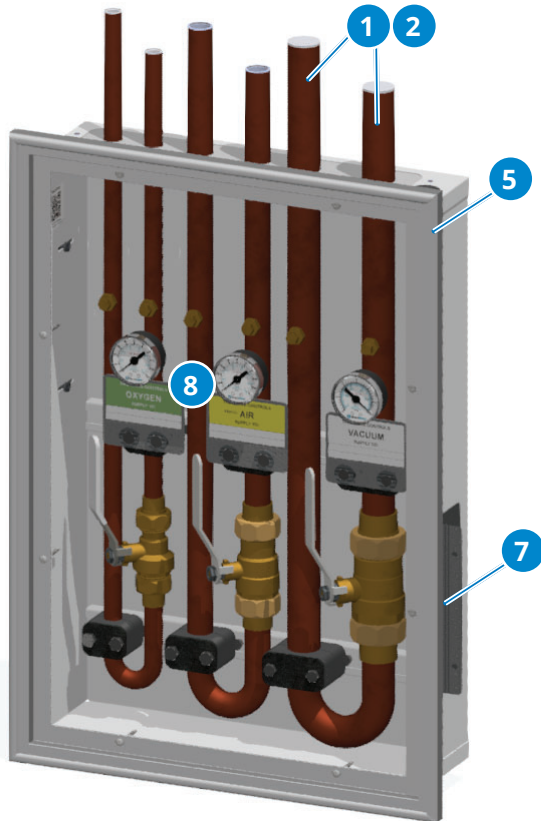
Trim Frame

The zone valve box is provided with an anodized aluminum trim frame.

- Designed for high impact resistance
- Capable of adjusting to variations in wall thickness up to 1" below flush

Compliance

- Ball valves conform to MSS SP-110
- The Type K copper tube extensions conform to ASTM B88, UNS No. C12200, and H58 temper
- Complete valve assembly (valve and tube extensions) cleaned for oxygen service per CGA Pamphlet G-4.1
- The gauges conform to ANSI B40.1



Biomaster Testing Results

Printed samples coated with Biomaster were successfully tested to ISO 22196:2011 standards and shown to reduce:

Bacteria	Reduction
Staphylococcus aureus	Reduction by $\geq 99.90\%$ bacterial growth
Escherichia coli	Reduction by $\geq 99.91\%$ bacterial growth

Disclaimer: Use of this product does not protect user from disease-bearing and food-borne pathogens.

- 1 Space Saving Design:** Gas inlets and outlets positioned vertically to reduce wall space required, a savings of 50% or more.
- 2 Braze Point Reduction:** Vertical design eliminates elbows, reducing the number of braze points required, saving valuable installation time.
- 3 Multiple Installations:** Install two assemblies side by side for up to 8 valve installations, further reducing required wall space and featuring mounting brackets for precision alignment.
- 4 Alarm Sensor Installation:** Add area alarm sensors easily within the assembly using 1/8" brass NPT ports. Eliminate sensor installations in the ceiling or costly piping to the alarm panel. Add sensors on either side of the valve, source or patient.
- 5 Anodized Aluminum Trim Frame:** Aesthetically pleasing, anodized aluminum trim frame features high impact resistance and toughness. Capable of adjusting to variations in wall thickness up to 1" below flush.
- 6 Window with Biomaster Additive:** The clear, durable copolyester window is treated with Biomaster, an additive successfully tested to ISO 22196:2011 standards. Helps facilities combat bacterial growth in the patient environment space.
- 7 Rugged Box:** Back box made from galvanized steel with epoxy powder coat for extra durability and moisture resistance. Includes 18 gauge galvanized steel mounting bracket adjustable from 3/8" to 1-1/2" thick drywall for ease of installation.
- 8 Gauges and Labels:** Easily identifiable bourdon tube pressure/vacuum gauges made from solid steel with polycarbonate faceplate for durability. Gauges and color-coded gas labels easily readable through clear window.

Model Number Chart



BeaconMedaes Vertical Zone Valve Box Parent Model Number Chart			
Variable	Definition	Allowable Value	Description
A	Size	1	Single
		2	Double
		3	Triple
		4	Quad
B	Valve Size	A	1/2"
		B	3/4"
		C	1"
C	Language	ENG	English
		SPN	Spanish

Example: VZVB4-AAAB-ENG
Quad Vertical Zone Valve Box, 1/2"x1/2"x1/2"x3/4" valves, English decals

Vertical Zone Valve Box Assembly Part Numbers

Vertical Valve Box Assemblies		
Item Number	Valve Size	Model Number
Single Vertical Zone Valve Box		
4107223606	1/2"	VZVB1-A-ENG
4107223607	3/4"	VZVB1-B-ENG
4107223608	1"	VZVB1-C-ENG
Double Vertical Zone Valve Box		
4107223609	1/2" x 1/2"	VZVB2-AA-ENG
4107223610	1/2" x 3/4"	VZVB2-AB-ENG
4107223611	1/2" x 1"	VZVB2-AC-ENG
4107223612	3/4" x 3/4"	VZVB2-BB-ENG
4107223613	3/4" x 1"	VZVB2-BC-ENG
4107223614	1" x 1"	VZVB2-CC-ENG
Triple Vertical Zone Valve Box		
4107223615	1/2" x 1/2" x 1/2"	VZVB3-AAA-ENG
4107223616	1/2" x 1/2" x 3/4"	VZVB3-AAB-ENG
4107223617	1/2" x 1/2" x 1"	VZVB3-AAC-ENG
4107223618	1/2" x 3/4" x 3/4"	VZVB3-ABB-ENG
4107223619	1/2" x 3/4" x 1"	VZVB3-ABC-ENG
4107223620	1/2" x 1" x 1"	VZVB3-ACC-ENG
4107223621	3/4" x 3/4" x 3/4"	VZVB3-BBB-ENG
4107223622	3/4" x 3/4" x 1"	VZVB3-BBC-ENG
4107223623	3/4" x 1" x 1"	VZVB3-BCC-ENG
Quad Vertical Zone Valve Box		
4107223624	1/2" x 1/2" x 1/2" x 1/2"	VZVB4-AAAA-ENG
4107223625	1/2" x 1/2" x 1/2" x 3/4"	VZVB4-AAAB-ENG

Gauges / Sensor Installation Kit		
Item Number	Description	System
4107655177	0-30" Hg Vacuum Gauge	Vacuum, WAGD
4107655178	0-100 PSIG Pressure Gauge	O2, Medical Air, N2O, CO2, Mixtures
4107655179	0-300 PSIG Pressure Gauge	Nitrogen, Instrument Air, O2 (100 psig), Air (100 psig), CO2 (100 psig)
4107401625	Remote Sensor Installation Kit for Zone Valve Box	

Notes:

1. Order gauges (sold separately) for zone valve application.
2. When installing sensors inside of zone valve box, order one remote sensor kit per gas/valve.

Additional Labels: One Sheet per Label Type	
Item Number	Description
4107655174	Standard Gas Label Sheet, English, NFPA/ISO 1 Ea: O2, N2O, CO2, Medical Air, WAGD, Instrument Air, Vacuum, AGSS, Nitrogen
4107655285	Combination Gas Label Sheet, English, NFPA/ISO 1 Ea: Instrument Air, CO2/O2, O2 100 psi, O2/CO2, Medical Air, He/O2, CO2 100 psi, O2/He, Argon, Helium, O2

Note: To print additional labels, visit www.beaconzvb.com

Vertical Zone Valve Box Assembly Dimensions

