

963 Manual Bonnet

P Capable of withstanding typical washdown media, the 963 bonnet is a fully featured, compact, lightweight, yet rugged design. The 963 is packed with features that fulfill the most demanding requirements of today's critical bioprocessing systems.

Type: 963 & 963S

Size Range: 0.5–4" (DN15-DN100)

Service Pressure/Temperature:

Max Service Pressure:

150 psig (10.34 bar)

Max Service Temperature:

300°F (149°C)

External Temperature Limitations:

300°F (149°C)

Bonnet & Handwheel Material:

Glass reinforced polyethersulfone (PES)

FDA compliant to 21CFR 177.1660

Corrosion Resistance:

Resists alcohol, chloride and most caustic wash-downs.

For specific chemical resistance, consult factory.

Standard Features:

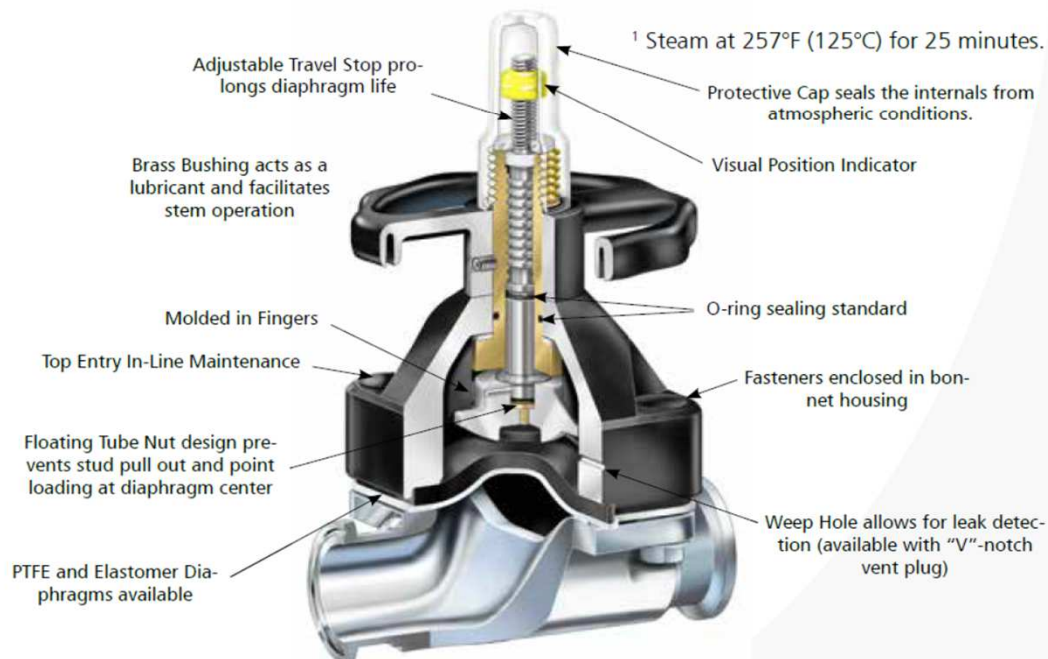
- Autoclavable¹
- Rising stem
- Adjustable travel stop
- Protective PPS cap
- Brass stem bushing
- Visual position indicator
- Permanent lubrication
- O-ring seals
- Stainless steel compressor
0.5 - 2" (DN15-DN50), bronze compressor
3 - 4" (DN80-DN100)
- Enclosed fasteners 0.5–3" (DN15–DN80)
- Hygienic internals: 0.5–4" (DN15-DN100)



Optional Features:

- Sealed bonnets: 963S
- Hygienic internals (M2): 3–4"
- Lockable: 0.5, 0.75, 1, 1.5, 2, 3, 4 in. sizes
- Available in blue, green, & yellow colored hand wheels (sizes 0.5, 0.75, 1, 1.5, 2")

Note: Bonnets manufactured 2010 and beyond with model number 963 and 963S and stainless compressor are autoclavable as standard. Bronze compressor versions are autoclavable only with S2-M2-M17 options.



VALVULAS Y PROCESOS 2007, S.L.

Orfeo Català, nr. 9

Pol. Ind. Sud

08440 - CARDEDEU

SPAIN

TEL: 00 34 93 755 20 56

FAX: 00 34 93 755 17 75

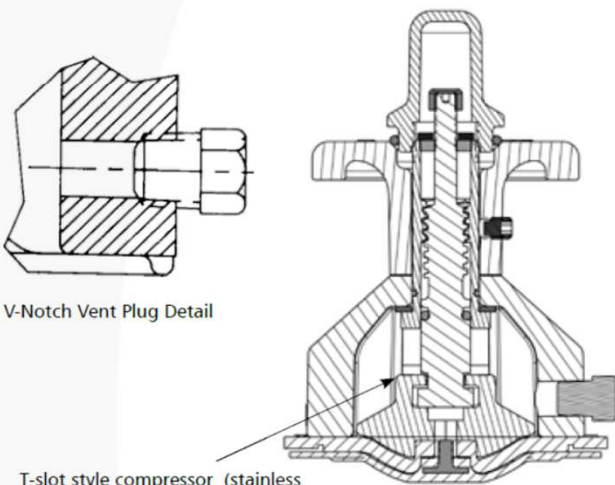
e-mail: jpicallo@vypsl.es

VAT: ESB64719958

963 Manual Bonnet

P Sealed Bonnet Option:

A sealed bonnet provides a secondary containment area for process fluids if the diaphragm should ever fail. A v-notch vent plug is provided to serve as a leak detector and prevents the release of process fluids into the atmosphere. Sealed bonnets are an available option on 963 manual bonnets.



V-Notch Vent Plug Detail

T-slot style compressor (stainless steel compressor version only)

Sealed Bonnet - V-Notch Vent Plug

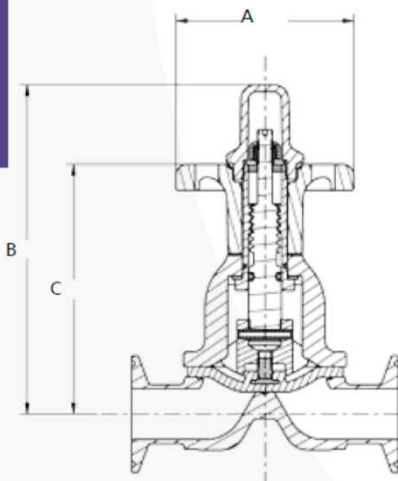
Colored Hand Wheel Option:

The colored hand wheel option available in blue, green, and yellow will help you organize your operation and maintenance practices to:

- Organize your preventative maintenance work flow
- Segregate your valves by suite or process
- Simplify your work instructions (close the yellow valve)



Topworks



Weights and Dimensions for 963 Manual Bonnets

Valve Size		A		B		C		Bonnet Weight	
Inch	DN	Inch	mm	Inch	mm	Inch	mm	lb	kg
0.50	15	3.00	76,2	3.62	92,1	2.75	70,0	0.6	0,27
0.75	20	3.00	76,2	4.63	117,5	3.5	88,8	0.9	0,41
1.00	25	3.00	76,2	5.50	139,8	4.17	106,0	1.3	0,59
1.50	40	5.50	139,7	8.30	210,9	5.20	132,3	3.9	1,77
2.00	50	5.50	139,7	8.90	226,2	5.80	147,4	5.3	2,41
2.50 ¹	65	7.75	196,8	11.61	294,9	7.53	191,3	NA	NA
3.00	80	7.75	196,8	11.61	294,9	7.53	191,3	11.7	5,32
4.00	100	10.15	257,8	14.90	378,6	10.24	260,2	16.2	7,36

¹ The 2.5 in. (DN65) valve is a 3 in. (DN80) body and topworks with 2.5 in. (DN65) end connections.

VALVULAS Y PROCESOS 2007, S.L.

Orfeó Català, nr. 9

Pol. Ind. Sud

08440 - CARDEDEU

SPAIN

TEL: 00 34 93 755 20 56

FAX: 00 34 93 755 17 75

e-mail: jpicallo@vypsl.es

VAT: ESB64719958

970 Stainless Steel Manual Bonnet

P Resistant to standard washdown protocols, the 970 stainless steel bonnet is the compact, auto-clavable solution for Pharmaceutical/ Bioprocessing applications.

Type: 970

Size Range: 0.5–2" (DN15-DN50)

Max Service Pressure:

0.5–1" (DN15-25): 200 psig (13.8 bar)

1.5–2" (DN40-50): 175 psig (12.1 bar)

Max Service Temperature:

See page D-9

Bonnet Material:

316 Stainless Steel

Handwheel Material:

Glass reinforced polyethersulfone (PES)

FDA compliant to 21CFR 177.1660

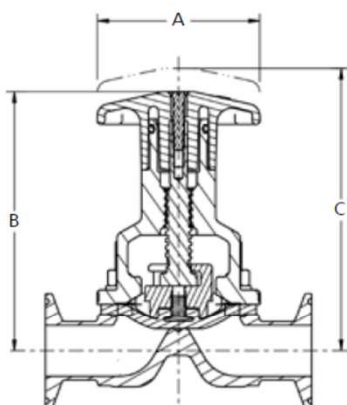
Corrosion Resistance:

Resists alcohol, chloride and most caustic wash-downs. For specific chemical resistance, consult factory.

Standard Features:

- Easy assembly and disassembly
- Rising handwheel
- Adjustable travel stop*
- Visual position indicator
- O-ring splash seal
- Stainless steel stem
- Bronze compressor/
Stainless Steel Optional

* Patent # 6,241,213



Valve Size		Bonnet Weight	
Inch	DN	lb.	kg.
0.50	15	0.97	0,44
0.75	20	1.23	0,56
1.00	25	1.67	0,76
1.50	40	5.00	2,27
2.00	50	6.50	2,95

Valve Size		A		B		C	
Inch	DN	Inch	mm	Inch	mm	Inch	mm
0.50	15	2.75	69,9	3.69	93,7	3.90	99,1
0.75	20	2.75	69,9	4.11	104,4	4.32	109,7
1.00	25	2.75	69,9	4.74	120,3	4.95	125,7
1.50	40	5.25	133,3	6.05	153,6	6.53	165,9
2.00	50	5.25	133,3	6.05	153,6	6.53	165,9

Note: Handwheel diameter and assembly heights are from body centerline to top of bonnet assembly.

¹ Tri Clamp, TC x BW, Short Tangent BW

² Extended BW Forging

³ ISO/DIN

VALVULAS Y PROCESOS 2007, S.L.

Orfeó Català, nr. 9

Pol. Ind. Sud

08440 - CARDEDEU

SPAIN

TEL: 00 34 93 755 20 56

FAX: 00 34 93 755 17 75

e-mail: jpicallo@vypl.es

VAT: ESB64719958

Bio-Tek® Manual Bonnet

P The Bio-Tek is a compact, lightweight solution ideal for Bioprocessing applications and utilized frequently as a sample or drain port in Pharmaceutical process systems and Pure-Flo fabrications.

Type: 18 & 18S

Size Range: 0.25", 0.375", 0.5"
(DN6-DN15)

Service Pressure/Temperature:
150 psi at 220°F (10.34 bar, 104°C)
Maximum external temperature: 300°F (149°C)

Bonnet Materials:

Model 18

- Bonnet: 316 Stainless Steel
- Spindle: Stainless Steel
- Compressor: Stainless Steel
- Handwheel: PES

Model 18S

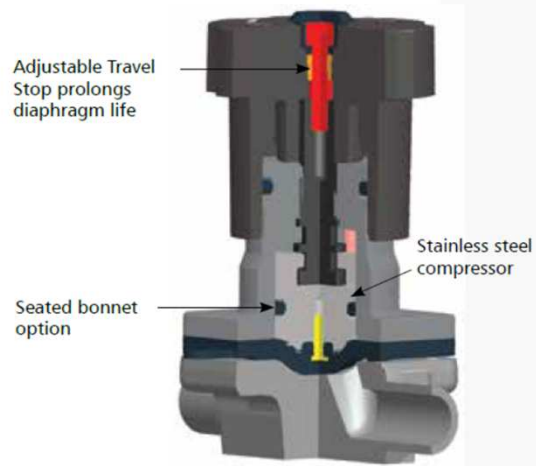
- Bonnet: 316 Stainless Steel
- Spindle: Stainless Steel
- Compressor: Stainless Steel
- O-rings: Fluoropolymer, FDA compliant
- Handwheel: PES

Handwheel Material:
PES (Polyethersulphone)

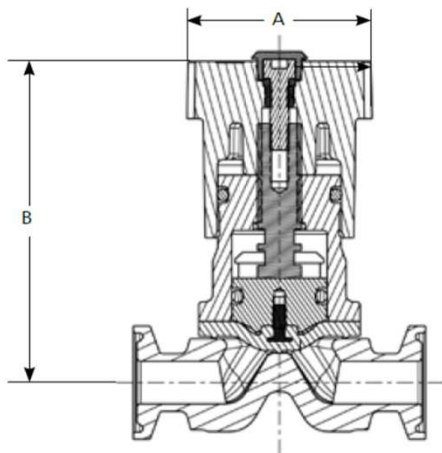
Standard Features:

- Adjustable travel stop
- Autoclavable

Note: This bonnet is available for Bio-Tek type bodies only.



Dimensions for Bio-Tek Bonnet



Valve Size		A		B Open	
Inch	DN	Inch	mm	Inch	mm
0.25, 0.375, 0.5	6, 10, 15	1.62	41,2	2.82	71,6

VALVULAS Y PROCESOS 2007, S.L.

Orfeó Català, nr. 9

Pol. Ind. Sud

08440 - CARDEDEU

SPAIN

TEL: 00 34 93 755 20 56

FAX: 00 34 93 755 17 75

e-mail: jpicallo@vypsl.es

VAT: ESB64719958

913 Stainless Steel Manual Bonnet

P Satisfying the most stringent biopharm processing requirements, the 913 is available with many standard and optional features. Stainless steel construction and the availability of a sealed option make the 913 bonnet an excellent choice for critical applications requiring reliability, corrosion resistance and secondary product containment.

Type: 913 & 913S

Size Range: 0.5"–4" (DN15-DN100)

Max Service Pressure:

0.5–1" (DN15-25): 200 psig (13.8 bar)

1.5–2" (DN40-50): 175 psig (12.1 bar)

3–4" (DN80-100): 150 psig (10.3 bar)

Max Service Temperature:

See Page D-9

Bonnet and Handwheel Material:

Stainless Steel

Corrosion Resistance:

Resists alcohol and most caustic washdowns.

For specific chemical resistance, consult factory.

Standard Features:

- Adjustable travel stop
- Protective cap
- Brass stem bushing
- Visual position indicator
- Permanent lubrication
- O-ring seals
- Bronze compressor
- Hygienic internals

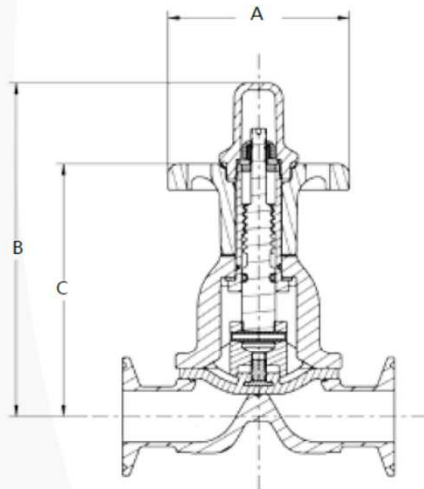


Optional Features:

- Sealed bonnets: 913S
- Adjustable opening stop
- Lockable
- Extended handwheel

Autoclavable Options:

- 913 (Unsealed)
- 913S (Sealed)



Valve Size		A		B		C		Weight	
Inch	DN	Inch	mm	Inch	mm	Inch	mm	lb	kg
0.50	15	3.00	76,2	3.62	92,1	2.75	70,0	0.72	0,33
0.75	20	3.00	76,2	4.63	117,5	3.5	88,8	1.8	0,82
1.00	25	3.00	76,2	5.50	139,8	4.17	106,0	2.3	1,05
1.50	40	5.50	139,7	8.30	210,9	5.20	132,3	7.8	3,55
2.00	50	5.50	139,7	8.90	226,2	5.80	147,4	8.4	3,82
2.50 ¹	65	7.75	196,8	11.61	294,9	7.53	191,3	13.0	5,90
3.00	80	7.75	196,8	11.61	294,9	7.53	191,3	19.0	8,64
4.00	100	10.15	257,8	14.90	378,6	10.24	260,2	32.0	14,55

¹ The 2.5 in. (DN65) valve is a 3 in. (DN80) body and topworks with 2.5 in. (DN65) end connections.

EnviZion[®] Manual Bonnet

E ITT's breakthrough technology, the EnviZion valve, sets a new standard for the future of hygienic diaphragm valves. The EnviZion valve is designed specifically to help customers install, operate, and maintain their valves more efficiently. This unique design provides a significant reduction in total cost of ownership while supporting the industries' goals to increase productivity, improve reliability and enhance cleanability.

Type: ZH, ZHS (sealed)

Size Range: .5-2 inch (DN15-50)

Max Service Temperature:
See page D-9

Bonnet Material: Stainless steel

Handwheel/Bonnet Cover: FDA
21CFR177.1660 compliant PES

Corrosion Resistance:
Resistant to common industry washdowns. For specific chemical resistance, consult factory.

Standard Features:

- Autoclavable
- Thermal compensation system
- Safety lock-pin
- Travel stop
- Visual position indication
- Weep hole

Patents can be found at:
www.engvalves.com/Special-Pages/Pat/

Topworks



NO LOSS OF SEAL INTEGRITY
DURING THERMAL CYCLING



MINIMIZE RISK
OF CONTAMINATION



MAINTAINS SEAL:
NO LEAKAGE



NO TOOLS
REQUIRED

VALVULAS Y PROCESOS 2007, S.L.

Orfeo Català, nr. 9

Pol. Ind. Sud

08440 - CARDEDEU

SPAIN

TEL:

00 34 93 755 20 56

FAX:

00 34 93 755 17 75

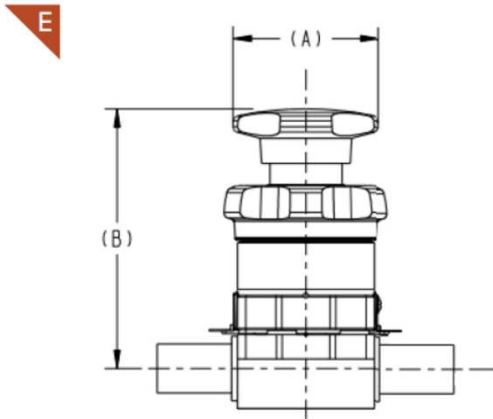
e-mail:

jpicallo@vypl.es

VAT:

ESB64719958

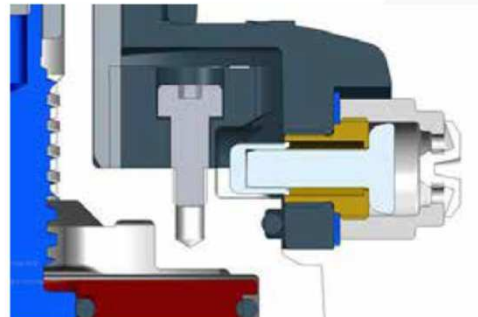
EnviZion® Manual Bonnet



Valve Size		A		B		Bonnet Weight	
Inch	DN	Inch	mm	Inch	mm	Lbs	kg
0.50	15	2.05	52,1	4.04	102,5	1.3	0.6
0.75	20	2.95	74,9	5.30	134,6	3.5	1.6
0.75R	20	2.05	52,1	4.04	102,5	3.5	1.6
1.00	25	2.95	74,9	5.30	134,6	3.5	1.6
1.50	40	3.89	98,8	7.09	180,1	7.3	3.3
2.00	50	3.89	98,8	7.69	195,4	8.5	3.8

EnviZion Bonnet Guard (EBG) Tamper Resistant / Submersible Option:

- Modified Plunger design maintains "drop in" feature for assembly
- Plunger cover seals & isolates plunger
 - Tool required to remove
- Autoclave capable stainless steel cover with small hex socket
- Umbrella vent seal to avoid pressurization if diaphragm fails
- Sealed hand wheel screw



VALVULAS Y PROCESOS 2007, S.L.

Orfeó Català, nr. 9
Pol. Ind. Sud
08440 - CARDEDEU
SPAIN

TEL: 00 34 93 755 20 56
FAX: 00 34 93 755 17 75
e-mail: jpicallo@vypl.es
VAT: ESB64719958