

Point of Use Valves (BPU Series)

Sterile, Aseptic and Sanitary Valves for Critical Process Systems



For Biotechnological, Pharmaceutical, Food and Beverage Process Systems

WHY CHOOSE THE CARTEN BPU SERIES?

TECHNICAL SPECIFICATIONS

Point of Use valves are an essential valve offering in the Biotech, Pharma, Food and Beverage industries. Carten's BPU Series is used in many processes for draining, diverting, sampling from and transfering to alternaitve systems with minimum impact on critical process systems.

The BPU Series design goes beyond the standard goal of providing the cleanest, safest point of use valve on the market. Featuring the same three part design as Carten's BTV Series, Carten's Point of Use valve boasts the same superior

drainability and maintenance friendly design. It has no hold up volume or pooling, and can be provided with an optional configuration for sample control.

This innovative design ensures a high flow capacity suitable for bioreactors, fermenters, process lines, WFI systems, formulation tanks, sterile holding tanks and more. The BPU Series allows redirection of outlet over 360-degrees at any time and allows change-out to other valve configurations at any time to accommodate late-stage

engineering changes or operating facility process changes.

Product Features

- Lowest hold up volume in the industry
- Fully Cleanable/drainable
- Lightweight Design- Compare to ZDT
- Same High Flow as Carten TOV Valve
- 360-degree- Multiple Orientation
- Ease of Maintenance- Quick-release clamp topworks
- SIP/CIP port available

Typical Applications

- Formulation Tanks
- Sterile Holding Tanks
- General Purpose Storage Tanks
- Bioreactors/Fermentors
- WFI Systems (Storage Tanks, POU sites)
- Process Lines

Nominal Size	DN15	DN20	DN25	DN40	DN50	DN80	DN100	DN150		
End Connections	Triclamp (Other options available on request)									
Body Material	ASTM A479/A276 316L (S31603)									
Bonnet Material	ASTM A479/A276 316L (S31603)									
Diaphragm Material	EPDM, Silicon or Viton									
Pressure Rating	10 Bar CWP150 (150psi)									
Operating Temperature Range	0°C to 135°C (32°F to 275°F)									
Surfach Finish	SFO-SF6									
Operating Modes	Pneumatic and Manual									
Quality and Compliance	EN 10204 3.1 Certified Materials Latest Edition of the US Pharmacopea Class VI Certified as per the Pressure Equipment Directive 97/23/EC									
Diaphragm Material		Stea	ım	-	Liquid Media Min Max					
EPDM	Constant 135°C (275°F)				-10°C (1		90°C (194°F)			



An Asset in Carten's Research and Development Centre

Carten Ireland have on-site thermal cycling test capabilities. Our thermal cycling test module has programmable SIP features enabling Carten to perform and replicate specific process conditions. Carten collaborates with our customers to provide detailed process data for valve performance under customer process conditions. This involves testing the sealing structure of the diaphragm in our Carten's Diaphragm, Tank Outlet and Ball Valves. Through this process the media, the cycle number and deviation can be independently stipulated. For further details on Carten's Research and Development facility and on testing capabilities for our customers contact sales@cartencontrols.com

BPU Series Point of Use Valves

ADVANTAGES OF THE CARTEN BPU SERIES



Self Draining No Hold Up Volume

The valve bottom, walls and outlet all blend into a smooth flowing surface to provide the lowest dead space in this industry.

Orientation- Any Direction at Any Time

This Point of Use valve can be rotated 360° to align to new piping systems and arrangements.

Light Weight Design

The BPU series is provided with a light weight design - relative to heavy block design ZDT valves.

BPE Compliance

BPE Compliant design includes Mating, Dimensions and Materials of Constuction (MOC)

Interchangeable Topwork Design

Not only are the topworks interchangeable for the TOV and BPU Series are and so reduces the necessity for high volumes of replacement stock in storeroom.... the topworks can also be changed in a matter of minutes from manual to pneumatic to alter the use and need for the BPU valve.

High Flow Design Vs Weir Diaphragm Designs

The Pedestal mounted design of our BTV and BPU Series gives Carten valves a higher flow rate than that in the weir ZDT valve design. This gives our customers better flow but also the possibility of reducing the footprint, weight and cost of the valve for install in the skid/process vessel.

Competitive Price and Performance

Carten-Fujikin provides the lowest total cost of ownership for its BPU valve product range. The BPU valve series provides a competitively priced product with the high performance capability demanded by the Biotech, Pharmaceutical, Food and Drink industries. Carten-Fujikin's quality and technical support ensures all customers receives efficient value and reliability in mission critical process systems.

Test Centre

Carten-Fujikin Europe has constructed a state-of the-art test facility that allows the repetition of industrial installation condition, to ensure every valve is fit for purpose. In-house capabilities include Steam-In-Place thermal cycling capability to match ASME BPE and industry standards, replication of Clean-In-Place (CIP) flow, verification of valve drainability, and fluid control. Our in-house capability allows the reproduction of exact customer specification - tailored pressure profiles, sterilisation temperature and duration, cooldown process parameters and more can be replicated to match installed condition to ensure confidence in all product.

Engineering Support and Design

Carten-Fujikin supports its BPU series through engineering services including modular design, flow analysis and calculations based on customer requests.

Global Support

The FCG distributuion network supports global supply of product through its distribution partners and direct global network. This enables fast time to market and responsiveness for customer product demands and delivery and post purchasing needs and customer support.

BPU Series Product Description

1

BPU

2

50: DN50 2" 50 65 65: DN65 21/2" Main Tube/Pipe 80: DN80 80 3" Size 100: DN100 4" 100 150 150: DN150 6" Pipe ASME BPE Connection 3A DIN D Standard 1: Tube Connection Type 2: Clamp A: One B: Two No. of Outlets C: Three D: Four E: Five 15: DN15 1/2" 20: DN20 3/4" 25: DN25 1" Valve Size(s) 40: DN40 1 1/2" 50: DN50 2" 65: DN65 21/2" 3" 80: DN80 A: 88 ° Outlet B: 45 ° Orientation C: 90 ° 1: Yes SIP/CIP Port 2: No A: Multi Drainability **B:** Horizontal Position C: Vertical EPDM SILICON Diaphragm VITON Pneumatic 11 Control Type Manual (With Visual Indicator) Topworks Stainless Steel Material Resin (Plastic) A: ASTM A479/A276 (Bar Material of Stock) Valve E: EN 10222-5 (Forging) SF1 (20µin/0.51µm) MP SF2 (25µin/0.64µm) SF3 (30µin/0.76µm) 14 Surface Finish SF4 (15µin/0.38µm) FP SF5 (20µin/0.51µm) SF6 (25µin/0.64µm) Instrument (Available on Request) Options

Additional 16 Requirements

No. Meaning

2

3

5

10

12

13

15

1 Valve Series

Description

Bio Point of Use Tank Valve

BPU - 50 A2 A 15 A 1 B - ECU A1

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OTHER PRODUCTS AVAILABLE

BNW SERIES DIAPHRAGM VALVES



- ASME BPE Compliant Design and Dimensions
- SIP500 Rated Life Durability (ASME BPE rating)
- No Re-torquing Required
- Compact, Light Weight Stainless Steel Top Works
- Reduced Polymer Cold Flow Sealing Design
- Reduced TCO for Process Systems
- Range of Instrumentation Available
- 3-Way Zero Dead T (ZDT) leg configurations
- SIP & CIP Capability

BPV SERIES PINCH VALVES

- Quick Release and Control Versions
- Reusable Highly Durable Valve
- Interchangable Fittings
- For Use with Multiple Compounds
- For Use with Multiple Brands
- Rapid Changeout of Tubing, Line Size
- Lightweight Handwheel/Actuator
- No Particulate Generation
- Instrumentation Ready

BSV SERIES SAMPLING VALVES

- Drainable even from inclined ports
- Retrofits existing sensor ports
- Cleans and sterilises in place
- Install or move in seconds, maintenance friendly
- Sanitary, dead space free design

BSP SERIES SIPTUBE VALVES

- Install in existing ports
- process system
- 316L Stainless Steel construction

BTV SERIES TANK OUTLET VALVES

- No hold up volume or pooling
- Self Draining at any orientation
- Higher Cv/ Superior Flow
- SIP/CIP Port
- Cost Efficient
- Maintenance Friendly
- No Delivery Delays -Weld Component Sent in Advance

SBV SERIES SANITARY BALL VALVES

- In-Line Maintenance
- Blow-out Proof Stem
- Cavity and Non-Cavity Filled Options
- 2-Way and 3-Way Configurations
- Bidirectional Sealing
- Anti-static features (on request)

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• Cleanable- and Sterilisable In-Place (CIP/SIP) while in operation

• Simplistic design for reliability and fast, easy maintenance • Body lengths up to 16 inches for sampling deep within the

• Suitable for process inoculating, media feeding and sampling

Natural body insulation protects processes during sterilisation





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THE CARTEN-FUJIKIN RANGE



Bellows Valves Ball Valves Check Valves Diaphragm Valves Tank Valves Sampling Valves Hybrid Single Use Pinch Valves Ceramic Valves Integrated Gas Sticks and Systems