



# DATASHEET

## PINCH VALVE (PV)

# ARTeSYN<sup>®</sup>

# About the Pinch Valve

The ARTeSYN pinch valves enable reliable fluid control of tubing flow paths, regardless of their materials of construction. Applications range from simple transfer line control up to complex automated unit operations using either manual or pneumatic pinch valves. Intuitive tool-free clamp-on installation enables quick and reliable operation. The unique central pinch point in its specific encapsulated valve seat offers the highest closure reliability and consistency in flow output, even after multiple pinch cycles.

The ARTeSYN valves are available in a variety of sizes with specific valve seats which allow the fitting of regular and braided tubing from 6.4 mm (¼ in.), up to 25.4 mm (1 in.) internal diameter (ID). With a wide range of pinch valve sizes the product is suitable for various applications from upstream and downstream processing down to formulation and filling. The valve bodies are manufactured from high end 316L stainless steel ensuring it complies with the highest industry standards.



# Features & Benefits

## Features

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Intuitive, tool free installation

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Hemispherical closure

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Stem position visibility

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One hardware size, multiple tube materials

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Clamp over existing single-use tube

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Re-use valve body

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Manual or pneumatic valve options\*

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Optional supportive bracket

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## Benefits

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Operator ease of use

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Safe & reliable processing

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Highest closure resistance & reliability

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Consistent flow over pinching cycle

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Minimized tubing wear

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Easy verification of valve position for operators

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Versatility to use variety of tubing materials

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Eliminate unnecessary junctions

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Reduced validation effort

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Reduce consumable complexity & cost

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Reduced operator errors with automated fluid control

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Intregation onto existing hardware

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\*Further actuator options can be found on the [ARTeSYN Pneumatic Actuator Assemblies for Pinch Valves Datasheet](#)

# Applications

## Upstream



MEDIA AND BUFFER  
PREPARATION



CELL CLARIFICATION  
HARVEST



PERFUSION



FILTRATION



MIXING

## Downstream



FILTRATION



CHROMATOGRAPHY



BUFFER EXCHANGE



VIRUS  
INACTIVATION



CONCENTRATION



FRACTIONATION

A → B

TRANSFER



FINISH FILLING

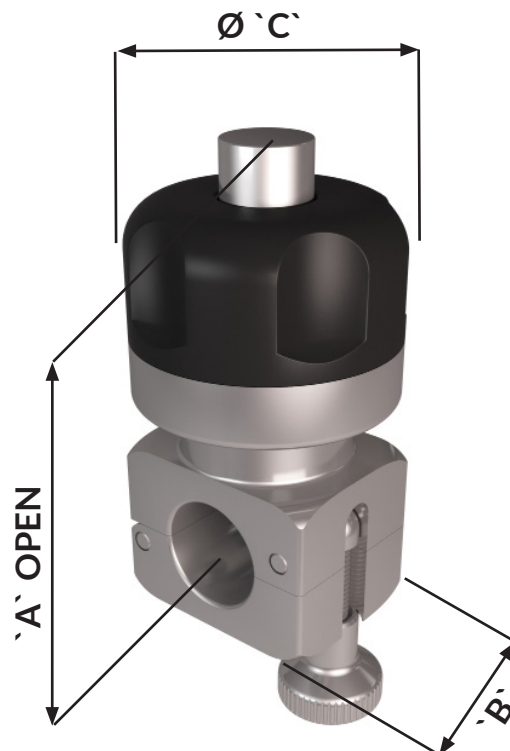


MIXING

# Critical Parameters

## Manual

Valve size	A	B	C	Weight
1/4 in. (6.4mm) x 7/16 in. (11.1mm)	2.3 in (59mm)	1 in (25mm)	1.5 in (38mm)	0.3 kg
1/4 in. (6.4mm) x 1/2 in. (12.7mm)	2.3 in (59mm)	1 in (25mm)	1.5 in (38mm)	0.3 kg
3/8 in. (9.5mm) x 5/8 in. (15.9mm)	2.4 in (61mm)	1 in (25mm)	1.5 in (38mm)	0.3 kg
1/2 in. (12.7mm) x 3/4 in. (19.1mm)	2.8 in (71mm)	1 in (25mm)	1.5 in (38mm)	0.3 kg
1/2 in. (12.7mm) x 7/8 in. (22.2mm)	2.8 in (71mm)	1 in (25mm)	1.5 in (38mm)	0.4 kg
3/4 in. (19.1mm) x 1 in. (25.4mm)	4.1 in (104mm)	1.5 in (38mm)	2.4 in (60mm)	0.9 kg
3/4 in. (19.1mm) x 1 1/8 in. (28.6mm)	4.1 in (105mm)	1.5 in (38mm)	2.4 in (60mm)	1.2 kg
1 in. (25.4 mm) x 1 3/8 in. (34.9mm)	5.2 in (132mm)	2.0 in (51mm)	3.0 in (76mm)	1.8 kg



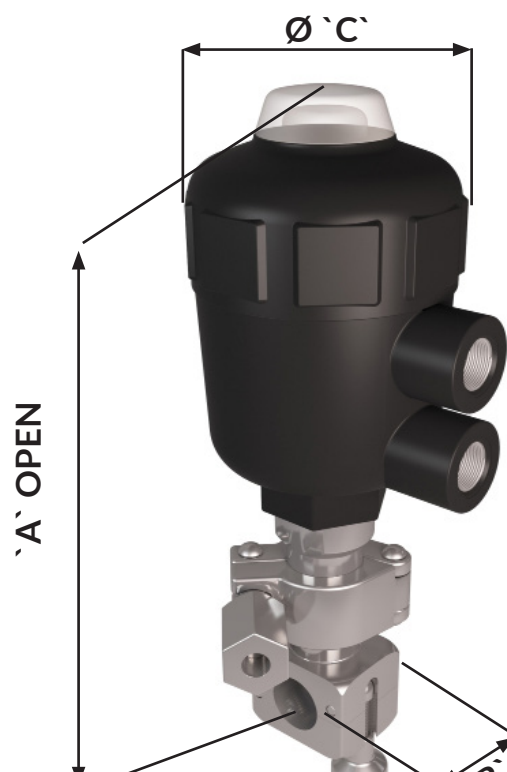
# Critical Parameters

## Pneumatic

Valve size	A	B	C*	Weight
1/4 in. (6.4mm) x 7/16 in. (11.1mm)	6.3 in (160mm)	1 in (25mm)	2.0 in (50mm)	0.8 kg
1/4 in. (6.4mm) x 1/2 in. (12.7mm)	6.3 in (160mm)	1 in (25mm)	2.0 in (50mm)	0.8 kg
3/8 in. (9.5mm) x 5/8 in. (15.9mm)	6.3 in (160mm)	1 in (25mm)	2.0 in (50mm)	0.8 kg
1/2 in. (12.7mm) x 3/4 in. (19.1mm)	6.3 in (160mm)	1 in (25mm)	2.4 in (63mm)	0.9 kg
1/2 in. (12.7mm) x 7/8 in. (22.2mm)	6.3 in (160mm)	1 in (25mm)	2.4 in (63mm)	0.9 kg
3/4 in. (19.1mm) x 1 in. (25.4mm)	7.5 in (190mm)	1.5 in (38mm)	3.1 in (63mm)	1.9 kg
3/4 in. (19.1mm) x 1 1/8 in.(28.6mm)	7.5 in (190mm)	1.5 in (38mm)	3.1 in (63mm)	1.9 kg
1 in. (25.4 mm) x 1 3/8 in. (34.9mm)	8.9 in (227mm)	2.0 in (51mm)	4.0 in ( 80mm)	3.0 kg

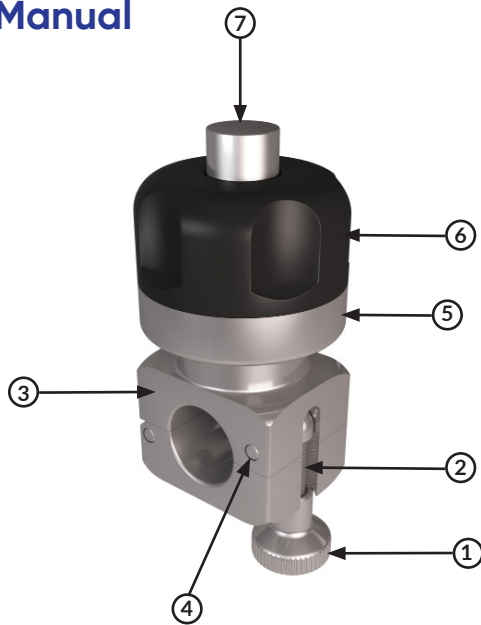
### \*Actuator size

Input	Position Feedback	Actuator Operating Pressure	Actuator Max Pressure	Air Port
Air	Position Indicator only	6 bar/85-90 psi	10 bar/ 150 psi	G 1/4" for all sizes



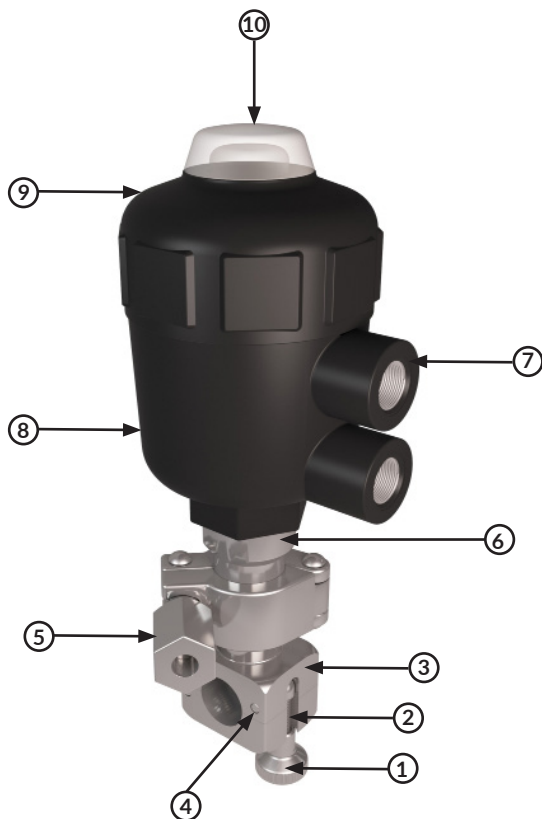
# Materials of Construction

## Manual



Item no.	Description	Material
1	Lock knob	Stainless steel 316 L
2	Swing arm	Stainless steel 18-8
3	Valve body	Stainless steel 316 L
4	Body pins	Stainless steel 316 L
5	Lower handle	Stainless steel 316 L
6	Handle	Polyetherimide (PEI)
7	Stem	Stainless steel 316 L

## Pneumatic



Item no.	Description	Material
1	Lock knob	Stainless steel 316 L
2	Swing arm	Stainless steel 18-8
3	Valve body	Stainless steel 316 L
4	Body pins	Stainless steel 316 L
5	Assembly Clamp	Stainless steel 304
6	Actuator Body	Stainless steel 316 L
7	Air Ports	Stainless steel 304
8	Actuator housing	Polyamide(PA)
9	Actuator cap	Polyamide(PA)
10	Indicator lens	Polycarbonate (PC)

# Ordering Information

## Valves Hardware

Tubing Type (ID x OD)	Manual Valve Part Number	Pneumatic Valve Part Number*
1/4 in. (6.4mm) x 7/16 in. (11.1mm)	PVS0250X043716	PVS0250X043719
1/4 in. (6.4mm) x 1/2 in. (12.7mm)	PVS0250X050016	PVS0250X050019
3/8 in. (9.5mm) x 5/8 in. (15.9mm)	PVS0375X062516	PVS0375X062519
1/2 in. (12.7mm) x 3/4 in. (19.1mm)	PVS0500X075016	PVS0500X075019
1/2 in. (12.7mm) x 7/8 in. (22.2mm)	PVS0500X087516	PVS0500X087519
3/4 in. (19.1mm) x 1 in. (25.4mm)	PVS0750X100016	PVS0750X100019
3/4 in. (19.1mm) x 1 1/8 in. (28.6mm)	PVS0750X112516	PVS0750X112519
1 in. (25.4 mm) x 1 3/8 in. (34.9mm)	PVS1000X137516	PVS1000X137519

\*Further actuator options can be found on the ARTeSYN Pneumatic Actuator Assemblies for Pinch Valves Datasheet



# Accessories

## Brackets

Additional bracket's purpose is to simplify integration onto existing hardware.

Description	Matching Valve Size	Valve Version	Part Number
Mini sanitary 1/2 in. clamp with rod bracket	1/4 in., 3/8 in., 1/2 in., 3/4 in.	Pneumatic Only	ARTD001031
Sanitary 1 1/2 in. clamp with rod bracket	1 in.	Pneumatic Only	ARTD001030
Universal bracket	All	All	ARTGA005515



## Handles

Optional handle is to ease operating open & close state of the manual valve.

Description	Matching Valve Size	Valve Version	Part Number
PEI 38 Series Manual Pinch Valve Handle Adapter	1/4 in., 3/8 in., 1/2 in.	Manual Only	PVU38HA
PEI 60 Series Manual Pinch Valve Handle Adapter	3/4 in.,	Manual Only	PVU60HA
PEI 76 Series Manual Pinch Valve Handle Adapter	1 in.	Manual Only	PVU76HA



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