



Tailor-made solutions engineered for you

# Quality & Traceability



Sampling is at the heart of the quality system in the agrifood, cosmetics, pharmaceuticals and fine chemicals industries. Servinox addresses the concerns of industry players through a wide range of equipment recognised for its asepsis quality, ease of use and reliability.

Whether they are placed on a process line or tank, whether they are intended to collect clear, viscous, sticky, pasty, sugary or solid bearing fluids, all our sampling valves are based on a reinforced hygienic design enabling quality and/or bacteriological controls to be carried out in complete safety.

We have the expertise and tools to advise you in the choice and installation of your sampling and we are committed to our recommendations and their results.

## Equipment that is **PED compliant**

All our samplings are EC compliant and can be used in production environments subject to the 2014/68/UE European Pressure Equipment Directive (PED) (§4.3).

## Comply with the **USP Class VI standard**

For the pharmaceutical industries manufacturing and marketing health products in the United States, we offer USP Class VI certification which guarantees the biocompatibility of the plastics and elastomers used for our sampling.

## Equipment **sterilised** either by flame or during the **CIP/SIP** phases

With its hygienic design and fully washable in position, our sampling offers safe and secure product quality and traceability throughout its useful life.

## **PEML, PEMC & PEVL : Sample differe<sup>n</sup>t types of liquids**

Servinox offers a wide range of sampling compatible with all types of use and in particular with clear, sticky, viscous, pasty, sugary and/or solid bearing fluids.

## **PEMA, PEML & PEMC : The choice of working in manual or automatic mode**

Each version has its advantages: manual versions are used to collect samples independently and at any time while automatic versions ensure the traceability of the quality of the product by covering all process phases regularly and allowing in position cleaning (CIP/SIP).

## **PESH : Sampling by syringe dedicated to the most sensitive products**

In the PESH, everything has been designed to exclude risks of contamination (especially bacterial): sampling by syringe, no retention zone, single usage of the sampling points, self-repairing membrane, etc.

## **PEVL : Collect an accurate and constant quantity of the product**

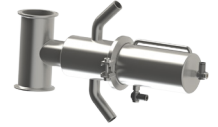
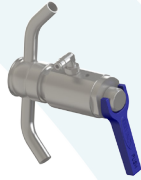
PEVL volumetric sampling is used to collect precise and identical volumes in the transfer line either manually or at regular intervals. PEVL is especially suited for milk reception both for identifying the risks of contamination and for controlling the fat level in the milk.

## **PEMA, PEML, PEMC & PEVL : ATEX certified automatic sampling**

« ATEX 2014/34/UE, zones 1 & 2, gas and dust» certification, thereby enabling utilisation in a potentially explosive atmosphere due to gases, vapours, mists or dusts.

## SAMPLING COMPARATIVE TABLE

designed and manufactured by SERVINOX



	Installation		Type of liquid		
	on tank	on process line	clear or low viscosity	sticky, sugary or low solidifying	solid bearing
<b>PEMS</b>	✓	✓	✓	✗	✗
<b>PEMA</b>	✓	✗	✓	✓	✗
<b>PEML</b>	✓	✓	✓	✓	✗
<b>PEMC</b>	✓	✗	✓	✓	✓
<b>PESH</b>	✓	✓	✓	✗	✗
<b>PEVL</b>	✗	✓	✓	✗	✗

	Operation		Hygienic characteristics		
	manual	automatic	adapted to bacteriological controls	flame sterilisation	CIP/SIP sterilisation
<b>PEMS</b>	✓	✗	✓	✓	✓ (by circulation)
<b>PEMA</b>	✓	✓	✓	✓	✓ (by circulation)
<b>PEML</b>	✓	✓	✓	✓	✓ (by circulation)
<b>PEMC</b>	✓	✓	✓	✓	✓ (by circulation)
<b>PESH</b>	✓	✗	✓ (by syringe)	✗	✓ (in place)
<b>PEVL</b>	✗	✓	✓	✗	✓ (by circulation)

	Compliance			
	standard version	version on request	membranes	membranes on request
<b>PEMS</b>	2014/68/UE <sup>1</sup>	-	FDA, CE <sup>3</sup>	USP Class VI
<b>PEMA</b>	2014/68/UE <sup>1</sup>	ATEX <sup>2</sup>	FDA, CE <sup>3</sup>	USP Class VI
<b>PEML</b>	2014/68/UE <sup>1</sup>	ATEX <sup>2</sup>	FDA, CE <sup>3</sup>	USP Class VI
<b>PEMC</b>	2014/68/UE <sup>1</sup>	ATEX <sup>2</sup>	FDA, CE <sup>3</sup>	USP Class VI
<b>PESH</b>	2014/68/UE <sup>1</sup>	-	FDA, CE <sup>3</sup> , USP Class VI	-
<b>PEVL</b>	2014/68/UE <sup>1</sup>	ATEX <sup>2</sup>	FDA, CE <sup>3</sup>	-

<sup>1</sup>European Pressure Equipment Directive ; art 4.3

<sup>2</sup>ATEX certification only possible in the automatic version

<sup>3</sup>EC : 1935/2004/CE

Servinox makes every effort to update its documents in line with improvements to its products..

**Simplified sampling valve  
with membrane  
for tank or process line  
and low viscosity liquids**

# PEMS<sup>®</sup>



Membrane :



Optional  
Membrane :



## OVERVIEW :

The PEMS sampling valve is used to take a sample of clear or low viscosity liquid from a process line or tank in order to carry out quality and/or bacterial controls. Valve sealing is obtained by a membrane. The hygienic design guarantees there is no retention zone (an ideal place for bacteria to develop) and is easy to clean. Its hygienic qualities, as well as its easy assembly and maintenance, make it a reference on the market.

## KEY BENEFITS :

- ▲ Hygienic design with flared body
- ▲ Low acquisition and usage cost
- ▲ Modular opening
- ▲ Easy to use and easy maintenance

## APPLICATIONS :

- ▲ Sampling on the tank or transfer line of a clear or low viscosity liquid (non sticky, non sugary and non solidifying)
- ▲ Equipment especially suited to sampling of products subject to quality and/or bacterial controls

## TECHNICAL SPECIFICATIONS:

**Sizes:** DN 6 and DN 10

**Intake connection:** To weld

**Outlet connection:** Smooth

**CIP connection (optional):** Smooth, Clamp

**Service pressure:** From 0.1 to 6.0 bar

**Service temperature:** from 0 °C to 120 °C

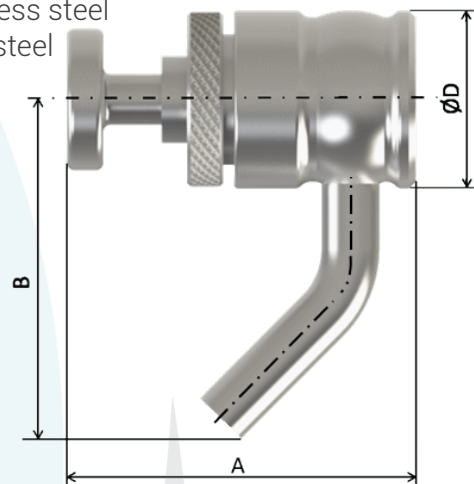
**CIP/SIP support:** Up to a temperature of 130 °C for 20 to 30 minutes

**Materials:**

- Parts in contact with the product: 1.4404 (316L) stainless steel
- Other parts: 1.4307 (304L) or 1.4404 (316L) stainless steel
- Sealing: VMQ membrane (Silicone)

## DIMENSIONS IN MM :

Sizes	A	B	D
<b>DN 6</b> (angled outed)	49	52	24,5
<b>DN 10</b> (angled outed)	70	57	34,5



## OPTIONS :

- Additional intake for passage of CIP liquid
- VMQ (Silicone) or stainless steel cap(s)
- Other intake connections: smooth nozzle to weld, micro-clamp, clamp, female/male (DIN/SMS), thread 1/4, 3/8, 1/2...
- Other outlet connections: micro-clamp, thread 1/4, 3/8, 1/2...
- Other membranes: EPDM (Ethylene Propylene Diene Monomer), NBR (Nitrile rubber), FKM (Fluorocarbon rubber, eq. Viton®), FFKM (Perfluoroelastomer, eq. Kalrez®)
- Membrane USP Class VI compliant
- Customised equipment: please contact us

## GUARANTEE :

**12 months** from the date of shipment (except in the case of special conditions)

## COMPLIANCE :

- Ducting and tank accessories compliant with European PED 2014/68/UE §4.3
- Elastomer membranes compliant with FDA CFR 21.177.2600 and 1935/2004/EC ruling
- Optional: Membranes **USP Class VI** compliant

SERVINOX follows the recommendations of international guidelines and standards relative to hygienic design and construction, in particular those of the EHEDG and 3-A.

Servinox makes every effort to update its documents in line with improvements to its products.

**Flush sampling valve  
with membrane  
for process or storage tank  
and liquids with low viscosity**

# PEMA<sup>®</sup>



Optional :



Membrane :



Optional  
membrane :



## OVERVIEW :

The PEMA sampling valve is used to take a sample of clear or low viscosity liquid from a tank in order to carry out quality and/or bacterial controls.

The valve has a connection dedicated to the passage of CIP liquid thereby enabling the sampling chamber to be cleaned. Valve sealing is obtained by a membrane.

The hygienic design guarantees there is no retention zone (an ideal place for bacteria to develop) and is easy to clean. Its hygienic qualities, as well as its easy assembly and maintenance, make it a reference on the market.

## KEY BENEFITS :

- ▲ Hygienic design with totally flared body
- ▲ Easy to use and easy maintenance
- ▲ Sterilisation by SIP/CIP circulation

## APPLICATIONS :

- ▲ Sampling on tank of a clear or low viscosity liquid (manual version)
- ▲ Sampling on tank of a sticky, sugary, low solidifying, low viscosity or clear liquid (automatic version)
- ▲ Equipment especially suited to sampling of products subject to quality and/or bacterial controls

## TECHNICAL SPECIFICATIONS :

**Sizes:** DN 6 and DN 10

**Intake connection:** To weld

**Outlet connection:** Smooth with VMQ cap (Silicone)

**CIP connection:** Smooth with VMQ cap (Silicone)

**Service pressure:** From 0.1 to 6.0 bar

**Service temperature:** From 0 °C to 120 °C

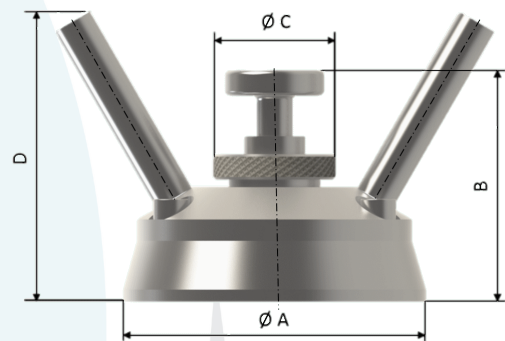
**CIP/SIP support:** Up to a temperature of 130 °C for 20 to 30 minutes

### Materials:

- Parts in contact with the product: 1.4404 (316L) stainless steel
- Other parts: 1.4301 (304L) stainless steel
- Sealing: VMQ membrane (Silicone)

## DIMENSIONS IN MM :

Sizes	A	B	C	D	E
DN 6	60	44	24	54	61
DN 10	80	64	35	64	74



## OPTIONS :

- Tank mounting by flange to weld
- Automatic version
- Automatic version «ATEX 94/9/EC zones 1 & 2, gas and dust» certified
- Valve without CIP connection if flame sterilisation
- Stainless steel caps on outlets with threaded nozzles
- Special connections on request
- Other membranes: EPDM (Ethylene Propylene Diene Monomer), NBR (Nitrile rubber), FKM (Fluorocarbon rubber, eq. Viton®), FFKM (eq. Kalrez®)
- Membrane USP Class VI compliant
- Customised equipment: please contact us
- 

## GUARANTEE :

**12 months** from the date of shipment (except in the case of special conditions)

## CONFORMITÉS :

- Tank accessories compliant with European **PED 2014/68/UE, §4.3**
- Optional: Compliant « **ATEX 2014/34/UE**, zones 1 & 2, gas & dust» for the automatic versions
- Elastomer membranes compliant with **FDA CFR 21.177.2600** and **1935/2004/EC** ruling
- Optional: Membranes **USP Class VI** compliant

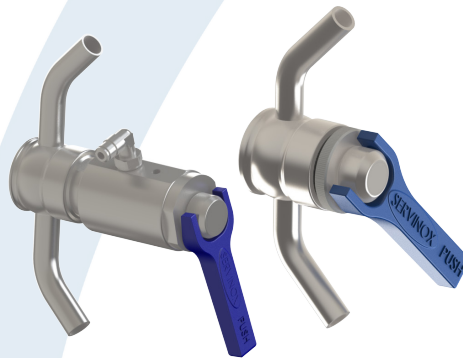
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**Sampling valve  
with membrane & lever  
for tank or process line  
and low viscosity liquids**

# PEML<sup>®</sup>



Optional :



Optional  
membrane :



## OVERVIEW :

The PEML sampling valve is used to take a sample of clear, low viscosity or sticky liquid from a process line or tank in order to carry out quality and/or bacterial controls.

The PEML valve is available in manual or automatic versions. The valve has a connection dedicated to the passage of CIP liquid thereby enabling the sampling chamber to be cleaned. The drive head has 2 open positions: open position maintained and open with automatic spring loaded closure.

The increased hygienic design («flush membrane» - flared body) type guarantees there is no retention zone (an ideal place for bacteria to develop) and is easy to clean. Sealing is by a hung-type membrane on the drive head.

## KEY BENEFITS :

- ▲ Specially designed for sticky and/or low pressure manometer liquids
- ▲ Hygienic design with flared body
- ▲ Sterilisation by CIP/SIP circulation
- ▲ Operating security (automatic spring loaded closure)
- ▲ Easy assembly and maintenance
- ▲ Available in manual and automatic versions

## APPLICATIONS :

- ▲ Sampling on tank or line carrying sticky, sugary, low solidifying, low viscosity or clear liquids
- ▲ Equipment especially suited to sampling of products subject to quality and/or bacterial controls



## TECHNICAL SPECIFICATIONS :

**Sizes:** DN 6 and DN 10

**Intake connection:** To weld

**Outlet connection:** Smooth with VMQ cap (Silicone)

**CIP connection:** Smooth with VMQ cap (Silicone)

**Service pressure:** From -1 to 6 bar for the DN6 size and from -1 to 5 bar for the DN10 size

**Service temperature:** From 1 °C to 120 °C

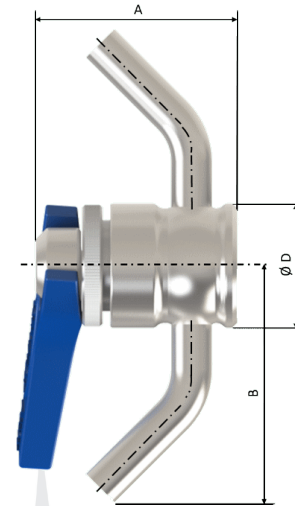
**CIP/SIP support:** Up to a temperature of 130 °C for 20 to 30 minutes

### Materials:

- Parts in contact with the product: 1.4404 (316L) stainless steel
- Sealing: VMQ membrane (Silicone)
- Other parts: 1.4307 (304L) stainless steel
- Lever: PA + FG (Glass-filled polyamide)

## DIMENSIONS IN MM :

Sizes	A	B	D
<b>DN 6</b> (angled outed)	51	49	24,5
<b>DN 10</b> (angled outed)	52	68	34,5



## OPTIONS :

- Automatic version (single acting cylinder)
- Automatic version with opening detection
- Automatic version (without opening detection) «ATEX 2014/34/UE, zones 1 & 2, gas and dust» certified
- Non-blocking opening (dead man)
- Valve without CIP connection if flame sterilisation
- Stainless steel lever
- Stainless steel caps
- Other membranes: EPDM (Ethylene Propylene Diene Monomer), FKM (Fluorocarbon rubber, eq. Viton®), NBR (Nitrile rubber)
- Membrane USP Class VI compliant
- All types of connections on request (intakes and outlets)
- Customised equipment: please contact us

## GUARENTEE :

**12 months** from the date of shipment (except in the case of special conditions)

## COMPLIANCE :

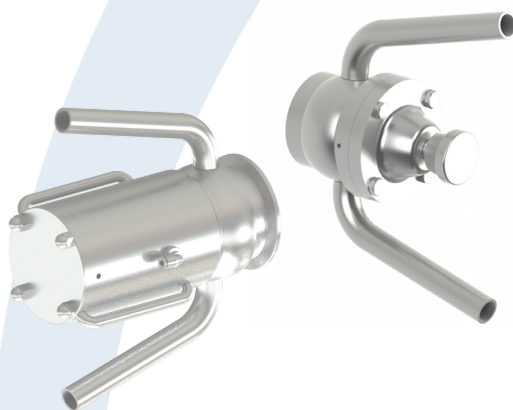
- Ducting and tank accessories compliant with European **PED 2014/68/UE, §4.3**
- Optional: Compliant « **ATEX 2014/34/UE**, zones 1 & 2, gas & dust» for the automatic versions without opening detection
- Membranes compliant with **FDA CFR 21.177.2600** and **1935/2004/EC** ruling
- Optional: Membrane **USP Class VI** compliant

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**Sampling valve with membrane  
for critical liquids  
for process or storage tank  
and sticky or solid bearing liquids**

# PEMC<sup>®</sup>



Optional :



Membrane :



Optional  
Membrane :



## OVERVIEW :

The PEMC sampling valve is used to take a sample of liquid from a tank, whether clear, viscous, sticky or solid bearing, in order to carry out quality and/or bacterial controls.

The PEMC valve is available in manual or automatic versions. Sealing is by a hung-type membrane on the drive head. The hygienic design with flush membrane (flared body) guarantees there is no retention zone (an ideal place for bacteria to develop) and is easy to clean.

The valve has a connection dedicated to the passage of CIP liquid thereby enabling the sampling chamber to be cleaned.

## KEY BENEFITS :

- ▲ Specially designed for liquids with high viscosity or containing solid particles
- ▲ Hygienic design with flared body
- ▲ Sterilisation by CIP/SIP circulation
- ▲ Available in manual and automatic versions

## APPLICATIONS :

- ▲ Sampling on tank of all types of liquids, including sticky and/or solid bearing ones
- ▲ Equipment especially suited to sampling of products subject to quality and/or bacterial controls

## TECHNICAL SPECIFICATIONS :

**One size:** DN 15

**Intake connection:** To weld

**Outlet connections:** Smooth

**CIP connection:** Smooth

**Service pressure:** From 0 to 6 bar

**Service temperature:** From 1 °C to 120 °C

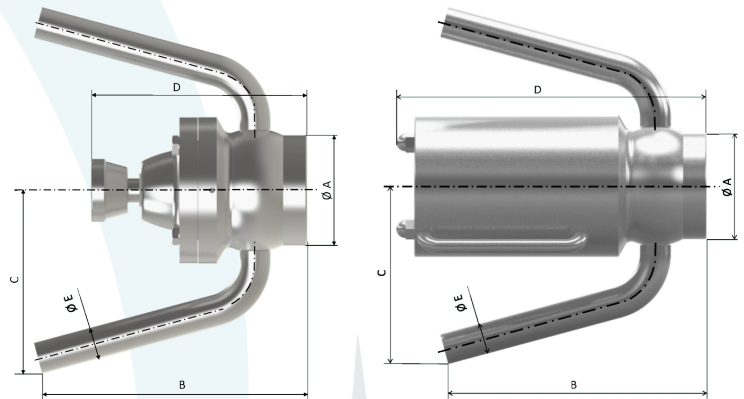
**CIP/SIP support:** Up to a temperature of 130 °C for 20 to 30 minutes

### Materials:

- Parts in contact with the product: 1.4404 (316L) stainless steel
- Sealing: VMQ membrane (Silicone)
- Other parts: 1.4404 (316 L) or 1.4307 (304 L) stainless steel

## DIMENSIONS IN MM :

Size	DN 15 manual	DN 15 automatic
A	59,5	59,5
B	143,5	143,5
C	99	99
D	117	172,5
E	Ø 17,2 x 1,6	Ø 17,2 x 1,6



## OPTIONS :

- Automatic version (single acting cylinder)
- Automatic version «ATEX 94/9/EC zones 1 & 2, gas and dust» certified
- Valve without CIP connection (if flame sterilisation)
- Other membranes: NBR (Nitrile rubber), EPDM (Ethylene Propylene Diene Monomer), FKM (Fluorocarbon rubber, eq. Viton®)
- Membrane USP Class VI compliant
- Special connections on request
- Customised equipment: please contact us

## GUARANTEE :

**12 months** from the date of shipment (except in the case of special conditions)

## COMPLIANCE :

- Ducting and tank accessories compliant with European PED 2014/68/UE, §4.3
- Optional: Compliant « ATEX 2014/34/UE, zones 1 & 2, gas & dust» for the automatic versions
- Membranes compliant with FDA CFR 21.177.2600 and 1935/2004/EC ruling
- Optional: Membrane USP Class VI compliant

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Hygienic sampling valve  
by syringe  
for tank or process line  
and clear liquids

# PESH<sup>®</sup>



Membrane :



## OVERVIEW :

The PESH sampling valve is used to take a sample of clear or low viscosity liquid from a tank or transfer circuit in order to carry out quality and/or bacterial controls.

The increased hygienic design guarantees there is no retention zone (an ideal place for bacteria to develop), and is easy to clean.

The sampling is done using a syringe, through a self-repairing membrane. A numbered grid, situated on the front of the equipment, is used to identify the zones already used and those still available for taking a sample.

## KEY BENEFITS :

- ▲ Sampling by syringe
- ▲ Hygienic design, with flush mounting possibility (eq. NA Connect<sup>®</sup>)
- ▲ Indexing for utilisation of one hole per sample, to avoid any risk of contamination via the sampling point
- ▲ Easy maintenance with only the membrane to change

## APPLICATIONS :

- ▲ Process tanks or transfer lines containing bacteriologically sensitive clear liquids
- ▲ Equipment especially suited to sampling of products subject to quality and/or bacterial controls

#### TECHNICAL SPECIFICATIONS :

**Connection:** Clamp with external diameter of 50.5 mm

**Mounting on, minimum OD 1" connection** (internal diameter of 22.1 mm)

**Service pressure:** From -1 to 10 bar for OD 1"

**Service temperature:** From 1 °C to 130 °C

**CIP/SIP support:** Up to a temperature of 140 °C for 20 to 30 minutes

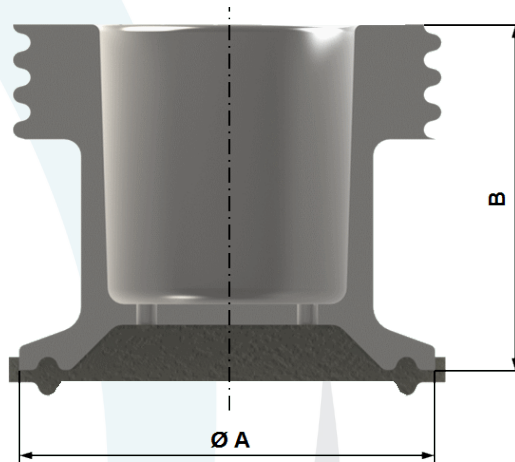
**Indexed grid:** 15 holes with a diameter of 2.5 mm

#### Materials:

- 1.4404 (316L) stainless steel
- Membrane: VMQ (Silicone)

#### DIMENSIONS IN MM :

Sizes	A	B
TU	50,5	42



#### OPTIONS :

- Supply of the NA Connect® flange or equivalent

#### GUARANTEE :

12 mois à partir de la date d'expédition (*sauf conditions particulières*)

#### COMPLIANCE :

- Ducting and tank accessories compliant with European PED 2014/68/UE, §4.3
- Elastomer membrane compliant with FDA CFR 21.177.2600 and 1935/2004/EC ruling and USP Class VI

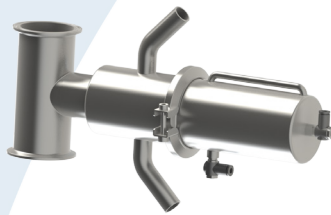
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Non contractual document and pictures, subject to change with no prior notice.

Only the commercial offer and the technical manual supplied with the equipment may be used for technical and legal purposes.

**In line volumetric  
sampling valve  
for liquids with low viscosity**

**PEVL<sup>®</sup>**



Optional :



Gaskets :



**OVERVIEW :**

The PEVL volumetric sampling valve is used to sample automatically and sequentially a sample of a constant volume of clear or low viscosity liquid on a transfer line.

The PEVL has pneumatic control and comprises a body equipped with a sampling chamber, a sampling piston and a drive cylinder. With each movement of the drive cylinder, the sampling piston samples in the transfer line a quantity of the product corresponding to the volume trapped in the calibrated neck of the piston. When the piston returns to its initial position, the sample is transferred to the sample vessel via the outlet tube. The sampling chamber is cleaned by connecting the valve to the CIP installation or by injecting a sterilising liquid.

**KEY BENEFITS :**

- ▲ Sampling of a constant volume at regular intervals (automatic)
- ▲ Hygienic design, with the possibility of mounting a cleaning valve in line
- ▲ Sampling volume factory calibrated, from 1 ml to 40 ml
- ▲ Possibility of undertaking up to 600 samples per hour
- ▲ Easy maintenance due to the presence of a single membrane
- ▲ Sterilisation by CIP/SIP circulation

**APPLICATIONS :**

- ▲ Sampling on the transfer line of a clear or low viscosity liquid
- ▲ Equipment especially suited to sampling of products subject to quality and/or bacterial controls

Watch the product video : <http://www.youtube.com/watch?v=L8LREBRvJ60>



## TECHNICAL SPECIFICATIONS :

### SMS Sizes (ØA) :

- Model 1: Sample volume from 1 to 5 ml
- Model 2: Sample volume from 6 to 40 ml

**SMS pipe mounting:** 51 mm (2"); 63.5 mm (2 ½ "); 76 mm (3"); 104 mm (4")

**Diameter of the outlet tubes:** 10 mm (model 1), ISO DN15 (model 2)

**Pipe mounting:** Clamp

**Outlet connection:** Smooth

**Pneumatic connection:** 6 mm polyamide tube on push-in fittings

**Service pressure:** From 0.1 to 6.0 bar

**Service temperature:** From 1 °C to 120 °C

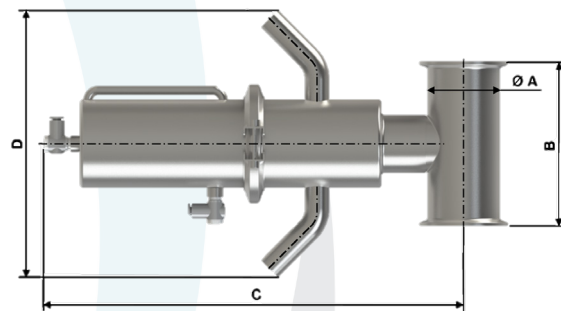
**CIP/SIP support:** Up to a temperature of 121 °C for 20 to 30 minutes

### Materials:

- Parts in contact with the product: 1.4404 (316L) stainless steel
- Other parts: 1.4404 (316L) stainless steel, PTFE (polytetrafluoroethylene, eq. Teflon®) filled
- Sealing: EPDM (Ethylene Propylene Diene Monomer), Perbunan®

## DIMENSIONS IN MM :

Sizes	A	B	C	D
<b>Model 1</b>	Depending on DN piping	142	250	150
<b>Model 2</b>	Depending on DN piping	142	355	220



## OPTIONS :

- Automatic version «ATEX 2014/34/UE zones 1 & 2, gas and dust» certified
- Automatic valve for direct CIP liquid supply
- Magneto inductive detection (on cylinder) of sampling
- Other connections: female, male, flange
- Version without CIP/SIP connection
- Customised equipment: please contact us

## GUARANTEE :

**12 months** from the date of shipment (except in the case of special conditions)

## COMPLIANCE :

- Ducting and tank accessories compliant with European **PED 2014/68/UE**, §4.3
- Optional: Compliant «ATEX 94/9/EC, zones 1 & 2, gas & dust» for the automatic versions
- Elastomer gaskets compliant with **FDA CFR 21.177.2600** and **1935/2004/EC** ruling

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# SERVINOX

## 3 RANGES FOR 3 PRIORITIES...

Servinox, through its 3 main areas of expertise, invites the players in all sectors of industry to embark on a real momentum for progress:

**Safety**  
& Protection



**Quality**  
& Traceability



**Efficiency**  
& Environment



## ... AND SOLUTIONS FOR SPECIFIC PROBLEMS.

Because the demands of industry players have evolved and shall continue to do so, Servinox is pleased to make available its research for enhancing performance.

« Tailor-made solutions engineered for you »

The dynamism of our company is reflected by our teams and their ongoing research for solutions, each one of which can be adjusted to a specific activity (agrifood, cosmetology, pharmaceuticals, etc.) and using regularly updated modelling, design, manufacturing, control and testing tools.

This ensures we have the skills and capacity to work on your specific problems, regardless of the momentum or phase of your activity.