FAMAT

sampling systems

safety | efficiency | simplicity

# PRODUCT TECHNICAL OVERVIEW

Sampling Valves

Tank Bottom Valves

Charging Valves

MADE IN SWISS

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FAMAT sampling is a Swiss engineering company specializes in designing and manufacturing valves and systems for powder and solids sampling in Chemical, Pharmaceutical, Petrochemical and Food Industries. :

For the Pharmaceutical, Bio-technological and Chemical industry, FAMAT SAMPLING supplies a complete range of products and services allowing the sampling of products in the best conditions of efficiency in terms of representativity of the samples, security, cleanliness and availibility.

With its impressive references in the Pharmaceutical and Chemical production business (Roche, Novartis, Merck, bioMérieux, Pfizer, BASF, GSK, Bayer, Monsanto).

FAMAT sampling is able to provide you the sampling solution you need.

FAMAT sampling has today offices, distributors or agents in most major countries in Europe, Middle-East, Asia and America. This global network allows us a close cooperation with our customers and end-users, to guarantee a full satisfaction at all levels of the supply chain.

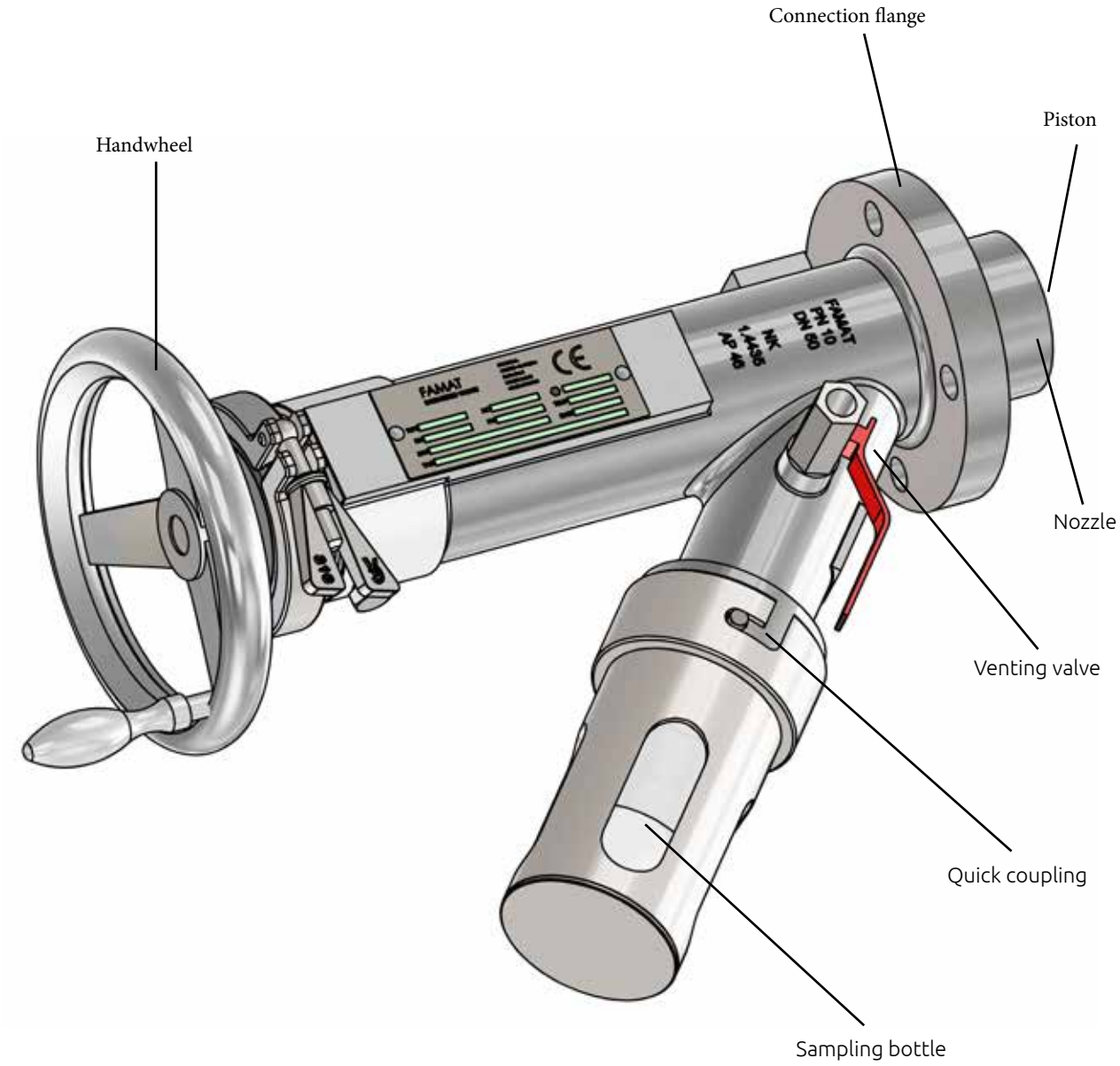
Founded in 1974, FAMAT sampling  is certified ISO 9001-2015. Its procedures guarantee the best services in compliance and on-time deliveries with most industries standard.

FAMAT sampling Quality System is also approved in accordance with requirements of European Pressure Equipment directive 2014/68/EU (PED).

Most of our products have been approved according the applicable standards for use in Explosive Atmosphere (2014/34/EU), low fugitive emission (ISO 15848-1), and fire safe design (ISO 10497 – API 607).

# FAMAT SAMPLING VALVE

MAIN COMPONENTS




SIMPLE DESIGN FOR MAXIMUM RELIABILITY & PERFORMANCE

# FAMAT PATENTED EPT®

## EXPANDING PISTON TECHNOLOGY

Almost all FAMAT sampling valves are based on our patented Expanding Piston Technology EPT®.

The patented system inside this piston allows the PTFE external coat to expand and insure a perfect tightness from vacuum up to full rating pressure 10 bar (145 psi).

The advantage of having an expandable piston inside the valve is to eliminate the need for O-rings that can be damaged during valve operation, and consequently generate contamination (dust) for production.

Another big advantage of our design is that in closed position, the piston is flush with the connection point, leaving no dead space.

- Sealing without gasket and seat
- Guaranteed bubble tight
- Dead zone free

1. Valve opened

2. Valve closing

3. Valve closed

4. Expansion of the piston (detail)

When the valve is in fully closed position (3), an additional 30° - 40° rotation applied to the handwheel activates the expansion of the piston (4), guaranteeing a perfect sealing of the piston inside the body.

# DESCRIPTION OF OPERATIONS

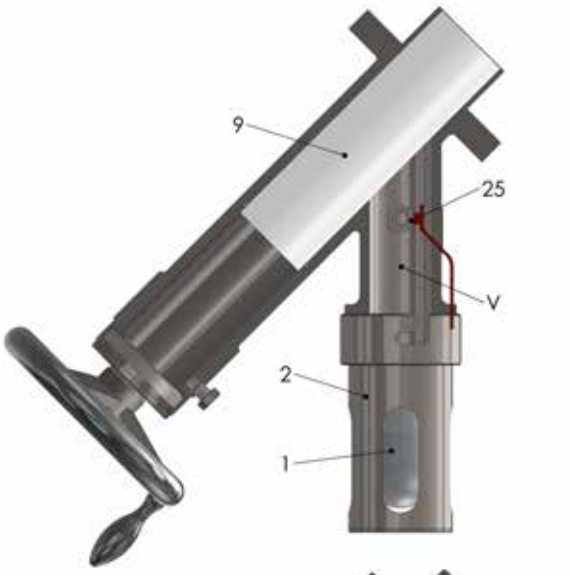



Fig.1

**CLOSED POSITION**

The piston is flush with the reactor or dryer, leaving no dead space (Fig.1).

A perfect seal is formed directly by the piston (9) against the body of the valve.

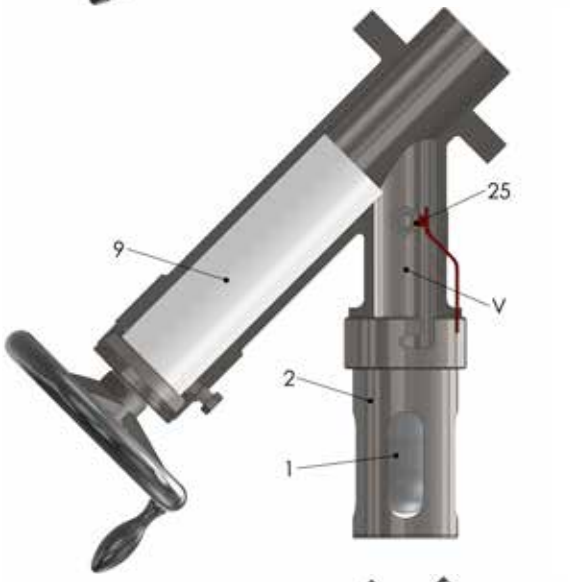



Fig.2

**SAMPLING PROCEDURE**

Turn the handwheel counter clockwise to lower the piston (9) to its open position.

While the product flows down into the sampling bottle (2), the operator can check the desired quantity of the product through the sight glass (1) (Fig.2).

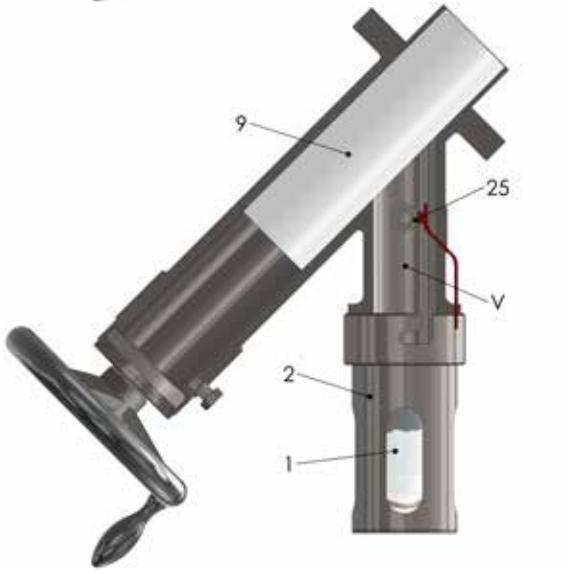



Fig.3

Turn the handwheel clockwise to bring back the piston (9) in its closed position.

A firm final turn of the handwheel will give reliable sealing and no dead space. Equalise the pressure (or vacuum) in the chamber (V) by opening the valve (25).

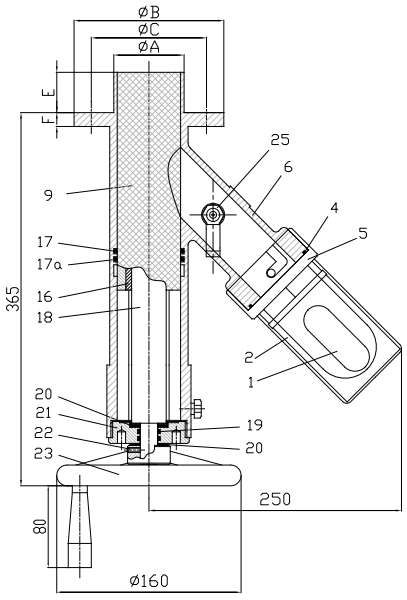
Remove the sampling bottle (2) on its quick coupling connection (Fig.3).

# 125A

## STANDARD VALVE

Type 125A is the standard DN50 sampling valve by FAMAT sampling. Used for sampling applications of powders, granules, pastes and liquids under process conditions in the pharmaceutical, chemical and food industries.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 125A |
| **NOMINAL SIZE** | DN 50 (2'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤3.2 µm |
| **APPL. STANDARD:** | PED, ATEX, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate with stainless steel protection |
| **WEIGHT** | 10kg / 22 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| **B101*** | 1* | Glass bottle* |
| | 2 | Protection |
| | 5 | Coupling |
| **Set JB*** | 4 | Coupling Gasket |
| | 17 | O-ring (2pcs) |
| | 19 | O-Ring (2pcs) |
| **P925*** | 6 | Body |
| | 9 | Piston |
| | 16 | Nut |
| | 18 | Screw |
| **Set JA*** | 20 | Washer 2 Pcs |
| **C601*** | 21 | Cover |
| | 22 | Pin |
| **V2301*** | 23 | Handwheel |
| **A2501*** | 25 | Venting Valve |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 125TC

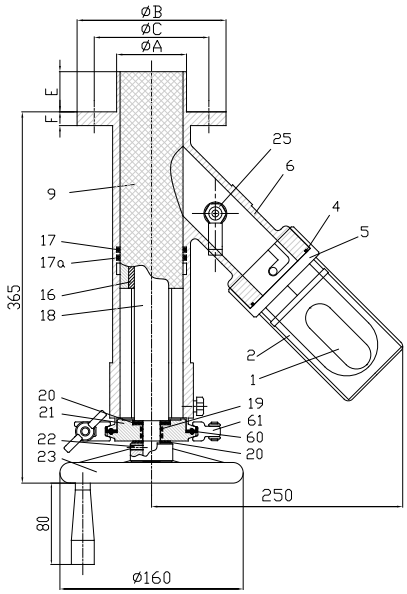
## TRI-CLAMP EASY-CLEAN VALVE

This sampling valve has one 2.5'' Tri-Clamp (TC) near the handwheel (Fig. 1). It is called easy-clean because the piston can be removed from the valve housing with minimal effort (Fig. 2), allowing full cleaning of inner surfaces of the valve's body between batches.

Fig.1

Fig.2

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 125TC |
| **NOMINAL SIZE** | DN 50 (2'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤3.2 µm |
| **APPL. STANDARD:** | PED, ATEX, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate with stainless steel protection |
| **WEIGHT** | 11kg / 24 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| | 1* | Glass bottle* |
| **B101*** | 2 | Protection |
| | 5 | Coupling |
| | 4 | Coupling Gasket |
| **Set JB*** | 17 | O-ring (2pcs) |
| | 19 | O-Ring (2pcs) |
| | 6 | Body |
| | 9 | Piston |
| **P925*** | 16 | Nut |
| | 18 | Screw |
| **Set JA*** | 20 | Washer 2 Pcs |
| | 22 | Pin |
| **V2301*** | 23 | Handwheel |
| **A2501*** | 25 | Venting Valve |
| * | 60 | Tri-clamp gasket |
| * | 61 | Tri-clamp connection |
| * | 65 | Cover |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

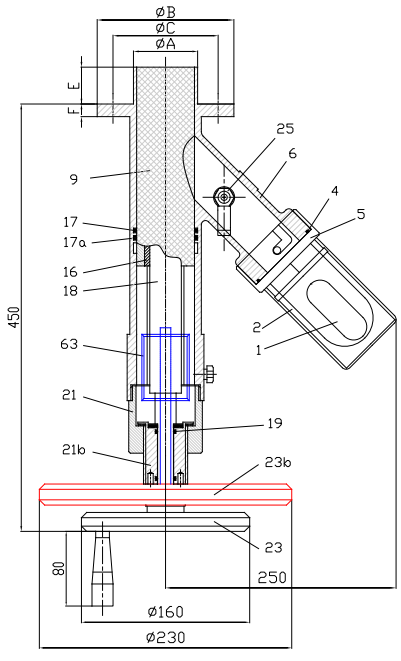
# 125CC

## CRUST BREAKING VALVE

This valve is used for products that could clog inside the dryer or vessel and block the piston. To eliminate the risk of this impeding product flow into the sampling valve, FAMAT sampling has developed the 125CC. With this type of valve, the piston will break the crust before the sample is taken.

1. Remove the security device
2. Turn the red handwheel clockwise to move the piston into the dryer to break the crust
3. Once the crust has been broken, proceed with the standard sampling by means of the black handwheel, to get the sample inside the bottle

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 125CC |
| **NOMINAL SIZE** | DN 50 (2") |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS.:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤3.2 µm |
| **APPL. STANDARD:** | PED, ATEX, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate with stainless steel protection |
| **WEIGHT** | 14kg / 31 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| | 1* | Glass bottle* |
| **B101*** | 2 | Protection |
| | 5 | Coupling |
| | 4 | Coupling Gasket |
| **Set JB*** | 17 | O-ring (2pcs) |
| | 19 | O-Ring (2pcs) |
| | 6 | Body |
| | 9 | Piston |
| * | 16 | Nut |
| | 18 | Screw |
| **Set JA*** | 20 | Washer 2 Pcs |
| * | 21 | Cover |
| | 22 | Pin |
| **V2301*** | 23 | Handwheel |
| **A2501*** | 25 | Venting Valve |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 125TC-OEL

## HIGH CONTAINMENT VALVE

This new compact OEL High-Containment sampling device (Fig.1) enables the removal of the sample under contained conditions. The OEL (Occupational Exposure Limits) describes the maximum concentration of a hazardous substance which can be tolerated in the air of the production room without any negative effect to the health of the operator (Fig.2).

*OEB (Occupational Exposure Band) : OEB4 1-10 µg/m³*

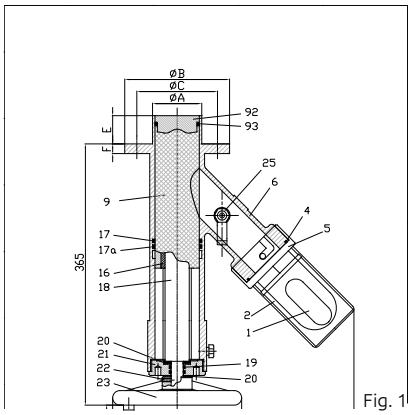



Fig. 1

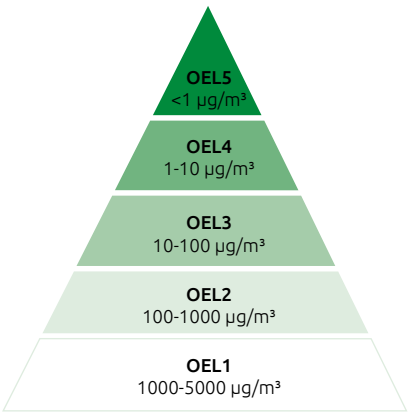
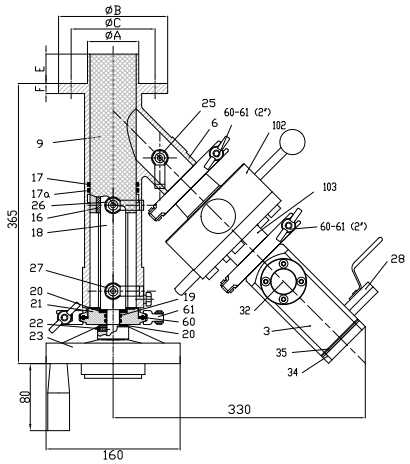



Fig. 2




| | TECHNICAL DATA |
|---|---|
| **MODEL** | 125 |
| **NOMINAL SIZE** | DN 50 (2'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS.:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤3.2 µm |
| **APPL. STANDARD:** | PED, ATEX, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 250 ml, glass Borosilicate with stainless steel protection |
| **HIGH CONTAINMENT VALVE** | Split butterfly valve, consisting of 2 separable half-valves, with locking system:<br>• 1 active module isolating the outlet of sampling valve<br>• 1 passive module, removable in closed position, isolating the sampling bottle |
| **H.C. VALVE MATERIALS:** | 316L, Hastelloy® |
| **WEIGHT** | 18kg / 40 LBS |

| SUB ASS. | PART | NAME |
|---|---|---|
| **B102-OEL*** | 3 | Glass bottle* |
| | 28 | Venting valve |
| | 32 | Sight Glass |
| | 34 | Bottle Head |
| | 35 | Bottle Gasket |
| **Set JB*** | 4 | Coupling Gasket |
| | 17, 17a | O-ring |
| | 19 | O-Ring (2pcs) |
| **P925*** | 6 | Body |
| | 9 | Piston |
| | 16 | Nut |
| | 18 | Screw |
| **Set JA*** | 20 | Washer 2 Pcs |
| * | 21 | Cover |
| * | 23 | Handwheel |
| **A2501*** | 25, 26, 27 | Venting Valve |
| **OEL*** | 102 | Active H.C. valve |
| | 103 | Passive H.C. valve |
| * | 60 | Tri-clamp gasket |
| | 61 | Tri-clamp connection |

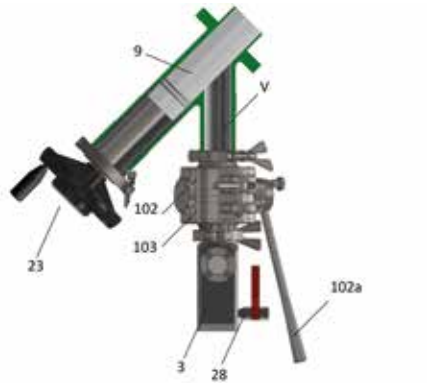
* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 125TC-OEL

## HIGH CONTAINMENT VALVE

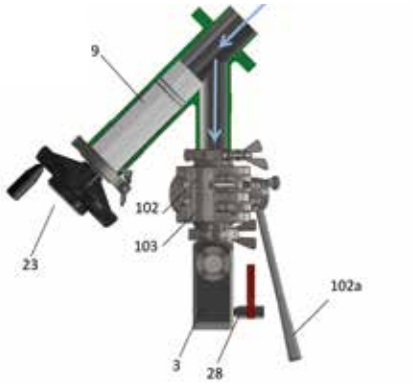
### 1. CLOSE POSITION

- The sampling valve remains closed and the piston (9) tightens without dead volume.
- Active (102) and passive (103) modules are joined and in closed position (lever 102a in closed position).
- The purging valve (28) is closed.



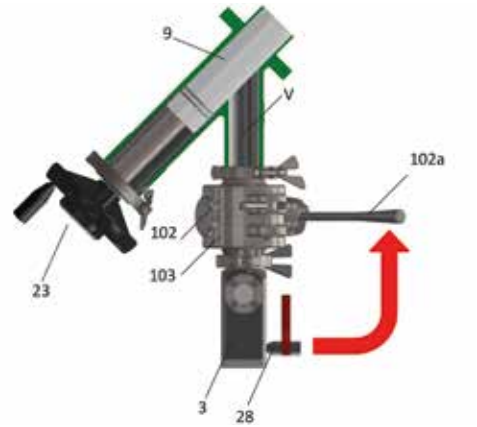

### 2. PRE-SAMPLING

- The handwheel (23) with an indicator position allows to adjust the sample flow inside the volume V. This space must be only half-filled (do not overfill).



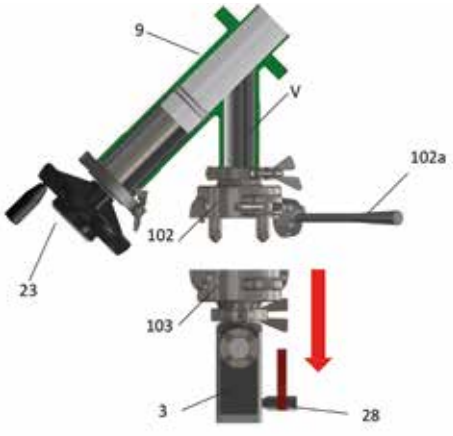

### 3. SAMPLING TRANSFER TO THE BOTTLE

- Open the purging valve (25) to equilibrate to atmospheric pressure in the outlet volume V. Make sure the sampling bottle is at atmospheric pressure before opening the joined active + passive modules.
- The joined active + passive modules (102+103) are opened with lever (102a), the product flows by gravity in the sampling bottle (3).
- The active module shall only be opened when locked together with the passive module.




### 4. REMOVAL OF THE SAMPLING

- Active + passive modules (102+103) are closed with lever (102a).
- The lever (103a) allows to separate the active and passive modules as follows:
  - outlet of sampling valve closed by the active module (102);
  - the sampling bottle closed by the passive module (103) can be removed;
  - the sample can be extracted from the sampling bottle in laboratory under secure conditions.



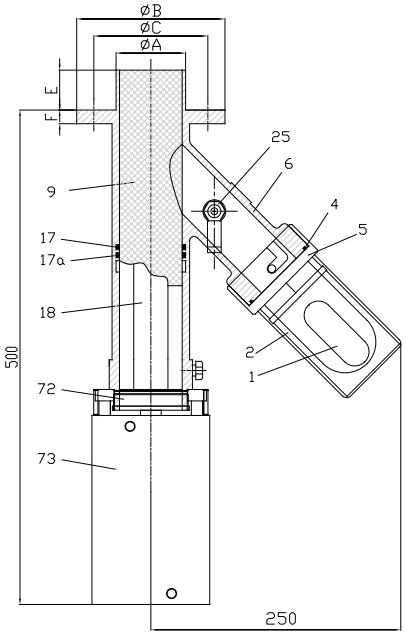
# 125AUT

## AUTOMATIC VALVE

Standard sampling valve with a double acting pneumatic actuator.

Proximity switch detects the open / closed position of the valve.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 125AUT |
| **NOMINAL SIZE** | DN 50 (2'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤3.2 µm |
| **APPL. STANDARD:** | PED, ATEX, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate with stainless steel protection |
| **ACTUATOR DESCRIPTION** | Double Acting Pneuamtic Actuator – Aluminium Body<br>Operating pressure: 6 to 10 bar<br>G 1/8'' air supply connections |
| **POSITION INDICATOR** | Inductive |
| **WEIGHT** | 13kg / 29 LBS |




| SUB ASS. | PART | NAME |
|---|---|---|
| **B101*** | 1* | Glass bottle* |
| | 2 | Protection |
| | 5 | Coupling |
| **Set*** | 4 | Coupling Gasket |
| | 17 | O-ring (2pcs) |
| | 6 | Body |
| * | 9 | Piston |
| **A2501*** | 25 | Venting valve |
| * | 29 | Pin |
| | 72 | Mounting flange |
| | 73 | Double acting actuator |

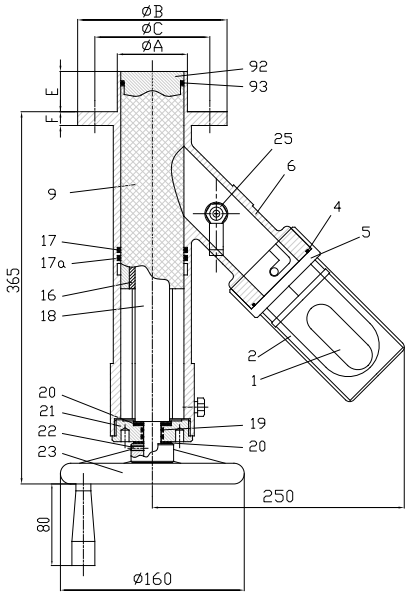
* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 125M

## HIGH TEMPERATURE VALVE

The 125M sampling valve is equipped with a metal piston (Stainless Steel, Hastelloy®) for sampling process up to 300°C (572° F). Unlike the PTFE or PEEK piston, the metal piston has a high temperature gasket around it. In order to keep the tightness, the gasket is retracting in a groove during the opening and closing operations of the valve. Only when the valve is completely closed by means of the final turn of the handwheel, the gasket will ensures sealing against the wall of the valve. Tightness from vacuum up to 10 bar (145 psi).

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 125M |
| **NOMINAL SIZE** | DN 50 (2'') |
| **MAX. TEMPERATURE:** | +260°C / +500°F (FDA)<br>+300°C / ++572°F (not FDA) |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤3.2 µm |
| **APPL. STANDARD:** | PED, ATEX, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Perfluorelastomer FFKM |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate with stainless steel protection |
| **WEIGHT** | 13kg / 29 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| | 3 | Glass bottle* |
| | 5 | Coupling |
| **B102*** | 32 | Sight Glass |
| | 34 | Bottle Head |
| | 35 | Bottle Gasket |
| | 4 | Coupling Gasket |
| **Set JH*** | 17 | O-ring (2pcs) |
| | 19 | O-Ring (2pcs) |
| | 93 | Gasket |
| | 6 | Body |
| | 9 | Piston |
| * | 16 | Nut |
| | 18 | Screw |
| **Set JA*** | 20 | Washer 2 Pcs |
| **C601*** | 21 | Cover |
| | 22 | Pin |
| **V2301*** | 23 | Handwheel |
| **A2501*** | 25 | Venting Valve |
| | 91 | Seat |
| | 92 | Nozzle |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 125S

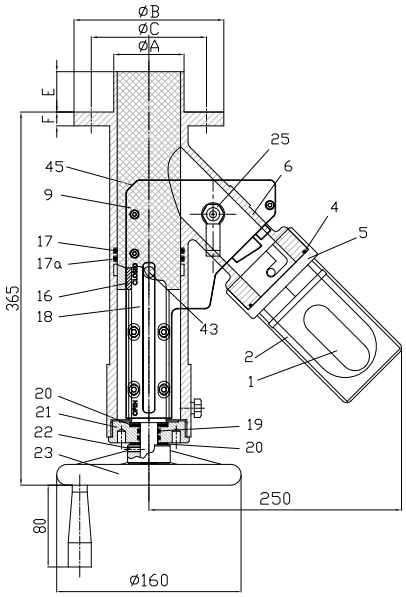
## SECURITY VALVE

The mechanical locking device secures the sampling procedure.

1. The sampling bottle can only be removed if the piston is completely closed.
2. The piston can only be opened if the sampling bottle is coupled to the outlet.

The sample is taken in the same way as the standard FAMAT sampling valve. The indicator shows the position of the piston. This indicator must read “closed” to allow the security lock to be moved to the open position. Only then the sampling bottle can be removed from its bayonet coupling. The piston is locked inside the valve until the sample bottle is refitted and the security lock is moved to “closed”.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 125S-2 |
| **NOMINAL SIZE** | DN 50 (2’’) |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C /+14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS :** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤3.2 µm |
| **APPL. STANDARD:** | PED ; ATEX ; FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium, etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate with stainless steel protection |
| **WEIGHT** | 16kg / 36 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| **B101*** | 1* | Glass Bottle* |
| | 2 | Protection |
| | 5 | Coupling |
| **Set JB*** | 4 | Coupling Gasket |
| | 17 | O-ring |
| | 17a | O-Ring |
| | 19 | O-Ring (2pcs) |
| * | 6 | Body |
| | 9 | Piston |
| | 16 | Nut |
| | 18 | Screw |
| **Set JA*** | 20 | Washer 2 Pcs |
| * | 21 | Cover |
| **V2301*** | 23 | Handwheel |
| **A2501*** | 25 | Venting Valve |
| | 91 | Locking Key |
| | 45 | Security box |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 125NIR

## VALVE WITH INFRA-RED PROBE

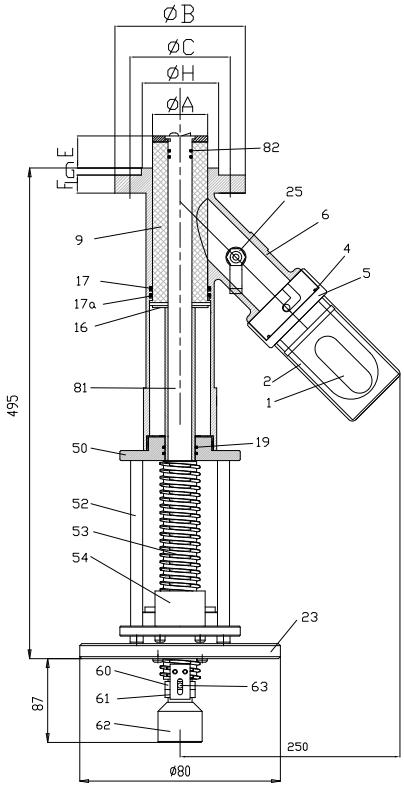
At the top of the piston, the 125NIR valve has a scraper which allows the installation of an optic fiber probe.

Once properly located, the probe enables to monitor several parameters such as temperature, humidity and/or composition of the product, before physically taking the sample. The signal is transmitted from the probe to an analyzer (spectrophotometer) by means of the optic fiber.

A second hole, for the cleaning system, is made on the scraper near the optic fiber probe.

Thanks to our partners specialized in laboratory instrumentation, we are able to provide any specific solution for the customer processes.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 125NIR |
| **NOMINAL SIZE** | DN 50 (2") |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤3.2 µm |
| **APPL. STANDARD:** | 97/23/EC (PED ); 94/9/EC ; FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate with stainless steel protection |
| **WEIGHT** | 15kg / 33 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| | 1* | Glass Bottle* |
| **B101*** | 2 | Protection |
| | 5 | Coupling |
| | 4 | Coupling Gasket |
| | 17 | O-ring |
| **Set JH*** | 17a | O-Ring |
| | 19 | O-Ring (2pcs) |
| | 6 | Body |
| | 9 | Piston |
| * | 16 | Nut |
| **Set JA*** | 20 | Washer 2 Pcs |
| * | 23 | Handwheel |
| **A2501*** | 25 | Venting Valve |
| | 50 | Cover |
| | 52 | Reinforcement |
| | 53 | Screw M40 |
| | 54 | Anti-rotation |
| | 60 | Angle adjustment |
| | 61 | Nut |
| | 62 | Probe Fixing |
| | 63 | Blocking Screw |
| | 81 | Probe |
| | 82 | O-Ring (2pcs) |

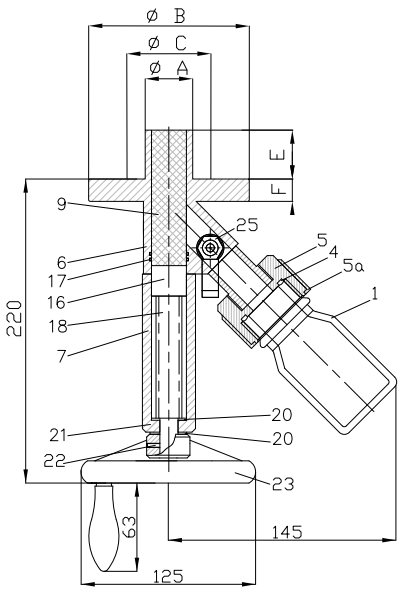
* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 130C

## STANDARD VALVE

Type 130C is the standard DN25 sampling valve by FAMAT sampling. The same concept of the 125A valve has been applied in a smaller version, to best suit smaller reactors, and machines.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 130C |
| **NOMINAL SIZE** | DN 25 (½'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤1.6 µm |
| **APPL. STANDARD:** | PED, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate |
| **WEIGHT** | 4kg / 9 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| **B107*** | 1 | Glass bottle* |
| * | 4 | Coupling Gasket |
| | 5 | Coupling |
| | 6 | Body |
| **P932*** | 9 | Piston |
| | 16 | Nut |
| | 18 | Screw |
| | 6 | Body |
| | 7 | Tube |
| * | 17 | O-rings (2pcs) |
| * | 20 | Washer (2pcs) |
| **V2301*** | 23 | Handwheel |
| **A2501*** | 25 | Venting valve |

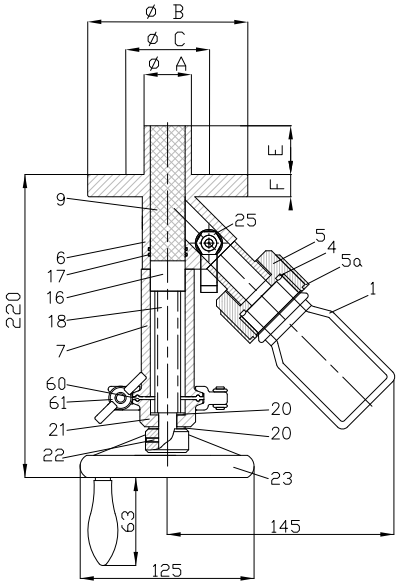
* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 130TC

## TRI-CLAMP EASY-CLEAN VALVE

The same easy-clean technology present in 125TC is adapted to our DN25 valve.
The easy disassembly of the piston is a great advantage in rapid batch changes, typical of small size production plants.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 130TC |
| **NOMINAL SIZE** | DN 25 (½'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤1.6 µm |
| **APPL. STANDARD:** | PED, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluo-relastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate |
| **WEIGHT** | 4kg / 9 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| **B107*** | 1 | Glass bottle* |
| * | 4 | Coupling Gasket |
| | 5 | Coupling |
| **P932*** | 9 | Piston |
| | 16 | Nut |
| | 18 | Screw |
| | 6 | Body |
| | 7 | Tube |
| * | 17 | O-rings (2pcs) |
| * | 20 | Washer (2pcs) |
| **V2301*** | 23 | Handwheel |
| **A2501*** | 25 | Venting valve |
| | 60 | Tri-Clamp Gasket |
| | 61 | Tri-Clamp connection |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

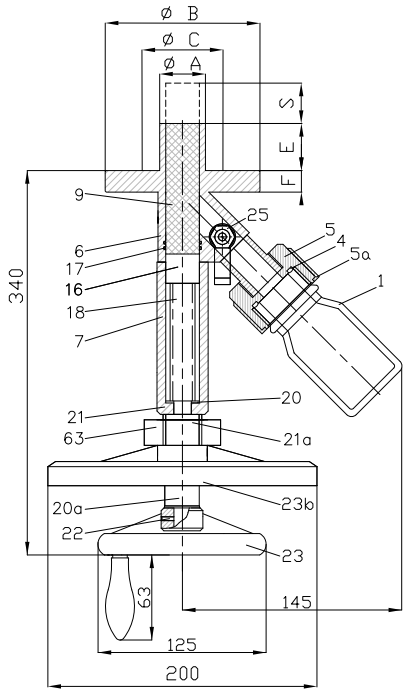
# 130CC

## CRUST BREAKING VALVE

The 130CC valve has been developed by FAMAT sampling for situations in which the product is not flowing smoothly and could clog the sampling valve bore.

By moving the bigger handwheel, the piston enters into the vessel to break any possible deposit of material thus allowing the ease of flow of the product.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 130CC |
| **NOMINAL SIZE** | DN 25 (½'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤1.6 µm |
| **APPL. STANDARD:** | PED, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate |
| **PISTON C. B. LENGTH.** | 25mm |
| **WEIGHT** | 5kg / 11 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| **B107*** | 1 | Glass bottle* |
| * | 4 | Coupling Gasket |
| | 5 | Coupling |
| | 6 | Body |
| | 9 | Piston |
| **P932*** | 16 | Nut |
| | 18 | Screw |
| | 6 | Body |
| | 7 | Tube |
| * | 17 | O-rings (2pcs) |
| * | 20 | Washer (2pcs) |
| **V2301*** | 23 | Handwheel |
| * | 2b | Handwheel CC |
| **A2501*** | 25 | Venting valve |

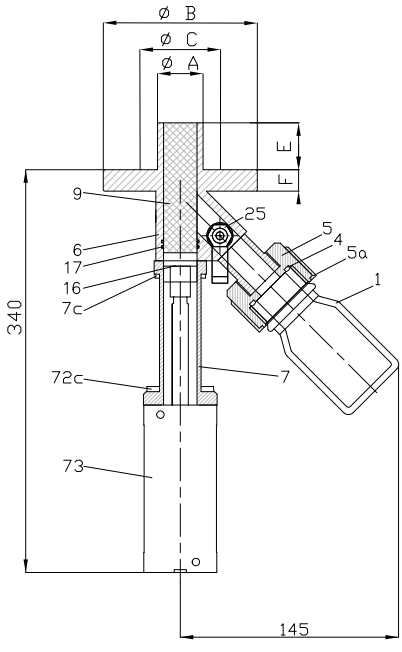
* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 130AUT

## AUTOMATIC VALVE

Standard DN25 sampling valve with a double acting pnaumatic actuator (Fig. 1).
Proximity switch can be installed on the valve body.
Valve can also be provided with easy-clean TC connection.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 125AUT |
| **NOMINAL SIZE** | DN 25 (½'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤1.6 µm |
| **APPL. STANDARD:** | PED, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150 ml, glass Borosilicate |
| **ACTUATOR DESCRIPTION** | Double Acting Pneuamtic<br>Actuator - Aluminium Body<br>Operating pressure: 6 to 10 bar<br>Design Operating pressure: 6 bar<br>G 1/8" air supply connections |
| **POSITION INDICATOR** | Inductive |
| **WEIGHT** | 6kg / 13 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| **B107*** | 1 | Glass bottle* |
| | 5 | Coupling |
| * | 4 | Coupling Gasket |
| * | 17 | O-rings (2pcs) |
| | 6 | Body |
| | 7 | Tube |
| | 7c | Screw |
| * | 9 | Piston |
| | 16 | Nut |
| **A2501*** | 25 | Venting valve |
| | 72c | Screws |
| | 73 | Double acting actuator |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 130TC-OEL

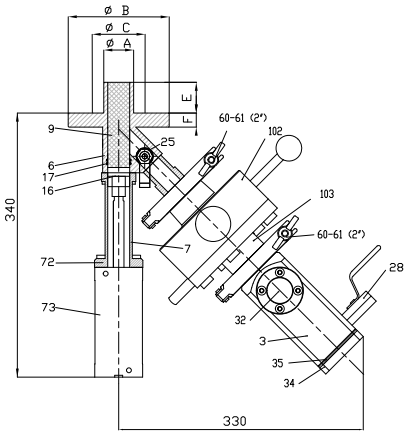
## HIGH CONTAINMENT VALVE

This new compact OEL High-Containment sampling device enables the removal of the sample under contained conditions. The OEL (Occupational Exposure Limits) describeS the maximum concentration of a hazardous substance which can be tolerated in the air of the production room without any negative effect to the health of the operator.

Available in automatic or manual operation.

*OEB (Occupational Exposure Band) : OEB4 1-10 µg /m³.*

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 130OEL |
| **NOMINAL SIZE** | DN 25 (½'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤1.6 µm |
| **APPL. STANDARD:** | PED, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluo-relastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 200 ml, glass Borosilicate with stainless steel protection |
| **HIGH CONTAINMENT VALVE** | Split butterfly valve, consisting of 2 separable half-valves, with locking system:<br>• 1 active module isolating the outlet of sampling valve<br>• 1 passive module, removable in closed position, isolating the sampling bottle |
| **HIGH CONTAINMENT VALVE MATERIALS:** | Wetted parts 316L (or Hastelloy®)<br>Gaskets: EPDM white (or Viton, Kalrez) |
| **WEIGHT** | 11kg / 24 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| **B102-OEL*** | 3 | Protection box |
| | 28 | Venting valve |
| | 32 | Sight Glass |
| | 34 | Bottle Head |
| | 35 | Bottle Gasket |
| * | 17 | O-ring |
| * | 6 | Body |
| | 9 | Piston |
| | 16 | Nut |
| * | 20 | Washer 2 Pcs |
| **A2501*** | 25 | Venting Valve |
| **A2501*** | 28 | Venting Valve |
| **OEL*** | 102 | Active H.C. valve |
| | 103 | Passive H.C. valve |
| * | 60 | Tri-clamp gasket |
| | 61 | Tri-clamp connection |
| | 72 | Rear Tube |
| | 73 | Double A. actuator |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

SIMPLE DESIGN AND FAST DISASSEMBLY FOR CLEANING

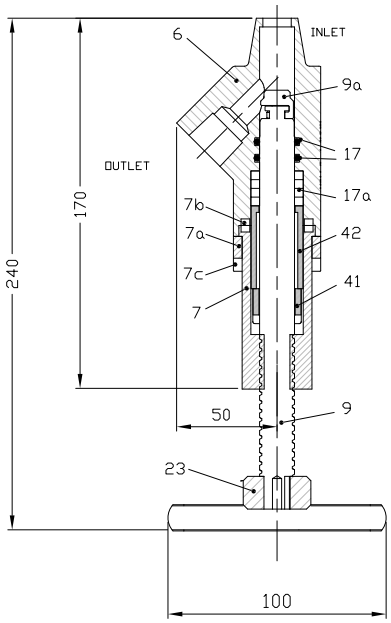
# 115G

## GAZ SAMPLING VALVE

- Metal piston type
- High temperature (up to 300°C) and high pressure service
- TA LUFT certified TUV SUD up to 300°C
- Fugitive emission ISO 15848
- Fire safe certified TUV SUD
- API 607
- Stem triple tighness (double FFKM and adjustable graphite packing)
- Threaded or flanged connection

| | TECHNICAL DATA | |
|---|---|---|
| **MODEL** | 115G | |
| **NOMINAL SIZE** | DN 15 (¼") | |
| **MAX. TEMPERATURE:** | +300°C / +572°F | |
| **MIN. TEMPERATURE:** | -10°C / +14°F | |
| **PRESSURE CLASS:** | std: PN10<br>Up to class #1500 | |
| **DESIGN PRESSURE:** | 10 bar / 145 psi / 250 bar | |
| **OPERATING PRESSURE:** | vacuum to 10 bar /145 psi | |
| **INT. ROUGHNESS.:** | Ra ≤0.8 µm | |
| **EXT. ROUGHNESS:** | Ra ≤1.6 µm | |
| **APPL. STANDARD:** | ISO 10497; ISO 15848; PED; FDA | |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. | |
| **SEALS MATERIALS** | FFKM | |
| **SAMPLE CONNECTION** | ½ NPT, other on request | |
| **WEIGHT** | 0.5kg / 1.1 lbs | |
| **SUB ASS.** | **PART** | **NAME** |
| | 6 | Body |
| | 7 | Tube |
| | 7a | Flange |
| | 7b | Pin |
| | 7c | Screw |
| | 9 | Piston |
| * | 9a | Piston Head |
| * | 17 | O-ring (2pcs) |
| * | 17a | Packing |
| | 23 | Handwheel |
| | 41 | Packing Plate |
| | 42 | Pressure washer |
| | 23 | Handwheel |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.





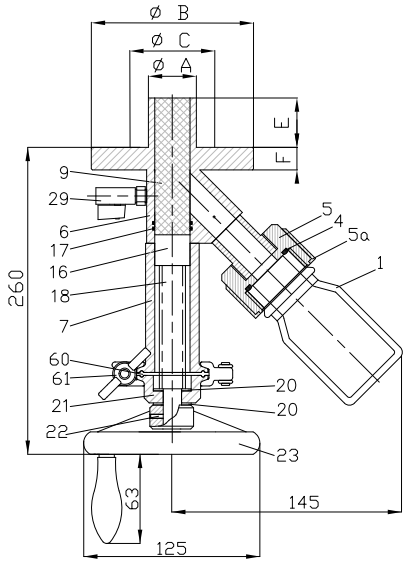
# 115TC

## TRI-CLAMP EASY-CLEAN VALVE

The same easy-clean technology present in 125TC is adapted to our DN15 valve.

The easy disassembly of the piston is a great advantage in rapid batch changes, typical of small size production plants.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 115TC |
| **NOMINAL SIZE** | DN 15 (¼") |
| **MAX. TEMPERATURE:** | +300°C / +572°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | 10 bar / 145 psi / 250 bar |
| **OPERATING PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS.:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤1.6 µm |
| **APPL. STANDARD:** | PED ; FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluo-relastomer FFKM; EPDM (All FDA) |
| **SAMPLE UNIT** | Bottle 150ml, glass Borosilicate |
| **WEIGHT** | 4kg / 9 lbs |



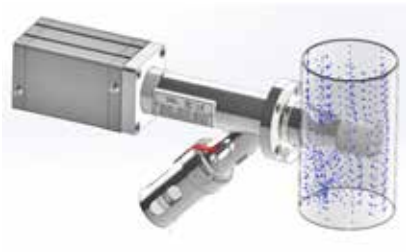

| SUB ASS. | PART | NAME |
|---|---|---|
| **B107*** | 1 | Glass bottle* |
| * | 4 | Coupling Gasket |
| | 5 | Coupling |
| | 6 | Body |
| * | 9 | Piston |
| | 16 | Nut |
| | 18 | Screw |
| | 6 | Body |
| | 7 | Tube |
| * | 17 | O-rings (2pcs) |
| * | 20 | Washer (2pcs) |
| **V2301*** | 23 | Handwheel |
| **A2501*** | 29 | Venting valve |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 125HS

## HORIZONTAL SAMPLING VALVE DN50

- Intrusive sampler without dead space
- Applicable for vertical pipe
- Adjustable piston length, according to customer request
- 75 ml sampling with each single operation
- Automatic version available on demand

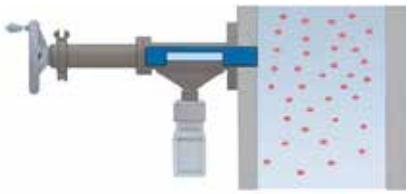


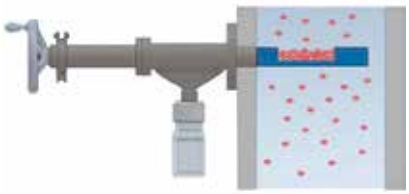
| | TECHNICAL DATA |
|---|---|
| MODEL | 125HS |
| NOMINAL SIZE | DN 50 (2") |
| MAX. TEMPERATURE: | +180°C / +356°F |
| MIN. TEMPERATURE: | -10°C / +14°F |
| PRESSURE CLASS: | PN10 |
| DESIGN PRESSURE: | 10 bar / 145 psi |
| OPERATING PRESSURE: | vacuum to 2 bar /29 psi |
| INT. ROUGHNESS: | Ra ≤0.8 µm |
| EXT. ROUGHNESS: | Ra ≤3.2 µm |
| APPL. STANDARD: | PED, FDA |
| BODY MATERIAL | Stainless steel 316L, Hastelloy®, Titanium etc. |
| SEALS MATERIALS | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| SAMPLE UNIT | Bottle 150 ml, glass Borosilicate with stainless steel protection |
| WEIGHT | 9 kg / 20 lbs |

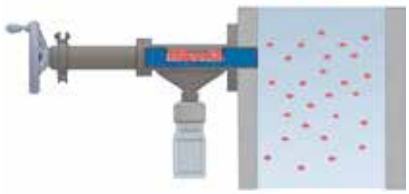
# 130HS

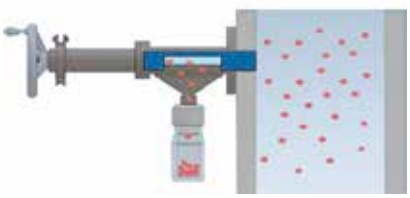
## HORIZONTAL SAMPLING VALVE DN25

- Intrusive sampler without dead space
- Applicable for vertical pipe
- Adjustable piston length, according to customer request
- Piston tightness without gasket, thanks to FAMAT SAMPLING patented EPT® (on demand)
- 25 ml sampling with each single operation
- Automatic version available on demand









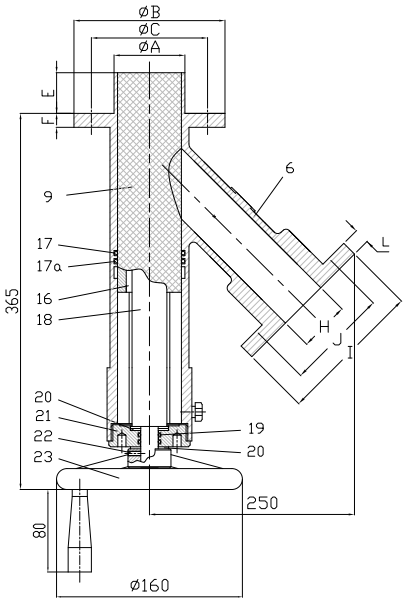
| | TECHNICAL DATA |
|---|---|
| MODEL | 130H |
| NOMINAL SIZE | DN 25 (1") |
| MAX. TEMPERATURE: | +180°C / +356°F |
| MIN. TEMPERATURE: | -10°C / +14°F |
| PRESSURE CLASS: | PN10 |
| OPERATING PRESSURE: | vacuum to 2 bar /29 psi |
| INT. ROUGHNESS: | Ra ≤0.8 µm |
| EXT. ROUGHNESS: | Ra ≤1.6 µm |
| APPL. STANDARD: | 94/9/EC ; FDA |
| BODY MATERIAL | Stainless steel 316L, Hastelloy®, Titanium etc. |
| SEALS MATERIALS | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| SAMPLE UNIT | Bottle 100 ml, glass Borosilicate |
| WEIGHT | 7 kg / 16 lbs |

# 250A

## TANK BOTTOM VALVE

The same EPT ® technology of FAMAT sampling valves is adopted for the tank bottom valves.
Their versatility and proven reliability make them the perfect solution for many applications in the pharmaceutical field.
The automatic version (250AUT) is also available on request.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 250A |
| **NOMINAL SIZE** | DN 50 (2'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤3.2 µm |
| **APPL. STANDARD:** | PED, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **WEIGHT** | 14 kg / 31 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| **Set JB*** | 4 | Coupling Gasket |
| | 17 | O-ring |
| | 17a | O-ring |
| | 19 | O-Ring (2pcs) |
| **P925*** | 6 | Body |
| | 9 | Piston |
| | 16 | Nut |
| | **18** | Screw |
| **Set JA*** | 20 | Washer 2 Pcs |
| * | 21 | Cover |
| **V2301*** | 23 | Handweel |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 280AUT

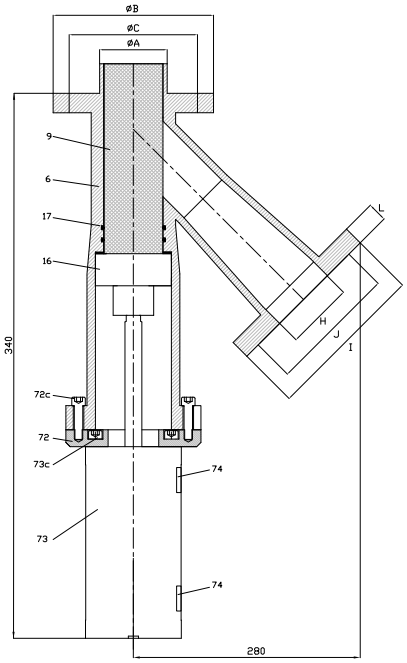
## TANK BOTTOM VALVE

The 3'' DN80 tank bottom valve has been developed specifically for the pharmaceutical and chemical industries.

The new design has been created and successfully tested for a service up to 50 bar (class #300). The product is in compliance with PED requirement (Cat. II Equipment).

- Maintenance free.
- Piston at flush with the vessel wall.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | 280AUT |
| **NOMINAL SIZE** | DN 80 (3'') |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10<br>PN50 (ASME #300) |
| **DESIGN PRESSURE:** | 50 bar / 725 psi |
| **OPERATING PRESSURE:** | vacuum to 50 bar /525 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤1.6 µm |
| **APPL. STANDARD:** | PED, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | FFKM (FDA) |
| **WEIGHT** | 29 kg / 64 lbs |




| SUB ASS. | PART | NAME |
|---|---|---|
| | 6 | Body |
| * | 9 | Piston |
| | 16 | Nut |
| * | 17 | O-rings (2pcs) |
| A2501* | 25 | Venting valve |
| | 72c | Screws |
| | 73 | Double acting actuator |
| | 73c | Screw |
| | 74 | Limit switch |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# 325A

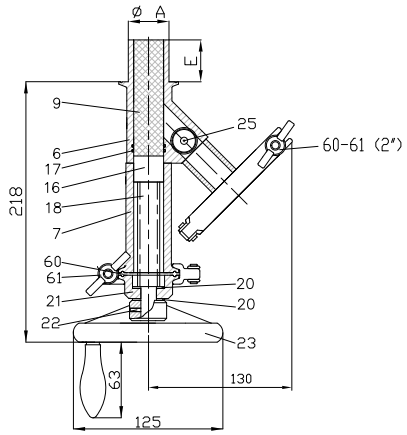
## CHARGING VALVE

FAMAT sampling charging valve has been developed to load vessels and reactors.

The ETP® applied to this charging valve brings two advantages: the expanding piston itself, which ensures the tightness and the pushing action operated by the piston, which move the load inside the vessel avoiding any loss of product.

As per picture beside, the valve can be equipped with a hygienic butterfly valve, to completetly isolate the supply line.

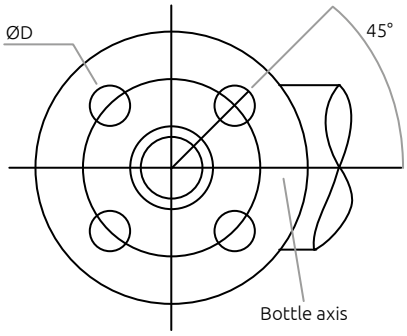
| | TECHNICAL DATA |
|---|---|
| **MODEL** | 325A |
| **NOMINAL SIZE** | DN 25 (1") |
| **MAX. TEMPERATURE:** | +180°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | vacuum to 10 bar /145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤1.6 µm |
| **APPL. STANDARD:** | PED, FDA |
| **BODY MATERIAL** | Stainless steel 316L, Hastelloy®, Titanium etc. |
| **SEALS MATERIALS** | Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA) |
| **WEIGHT** | 5 kg / 11 lbs |

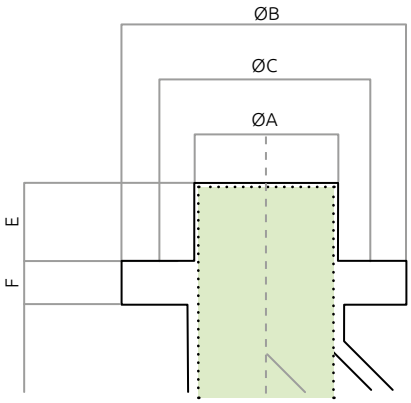


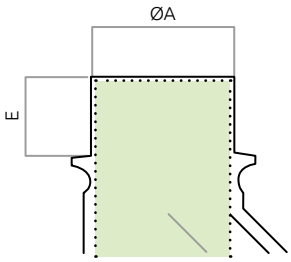

| SUB ASS. | PART | NAME |
|---|---|---|
| * | 17 | O-ring (2pcs) |
| | 6 | Body |
| | 7 | Tube |
| | 9 | Piston |
| P932* | 16 | Nut |
| | 18 | Screw |
| * | 20 | Washer 2 Pcs |
| | 21 | Cover |
| * | 22 | Pin |
| V2330* | 23 | Handwheel |
| | 25 | TC Connection |
| | 26 | Tri-clamp connection |

* Recommended spare parts
Note: the size of the connection flanges is detailed at page 28.

# STANDARD CONNECTION FLANGES




| VALVE SIZE | CODE | FLANGE TYPE | A | B | C | NB | D | E | F |
|---|---|---|---|---|---|---|---|---|---|
| DN25 (1'') | FD | DIN/EN 1092 DN25 PN 10 | 34 | 115 | 85 | 4 | 14 | 35 | 16 |
| | FA | ASME/ANSI B16.5 1'' #150 | 34 | 107.9 | 79.4 | 4 | 15.9 | 35 | 16 |
| | TC | Tri-Clamp ISO 2852 1.½'' | 34 | | | | | 35 | |
| DN50 (2'') | FD | FAMAT STANDARD (DIN) | 61 | 125 | 100 | 4 | 13 | 35 | 18 |
| | ND | DIN/EN 1092 DN50 PN 10 | 61 | 165 | 125 | 4 | 18 | 35 | 21 |
| | FA | FAMAT STANDARD (ASME) | 61 | 127 | 98.4 | 4 | 15.9 | 35 | 18 |
| | NA | ASME/ANSI B16.5 2'' #150 | 61 | 152.4 | 120.6 | 4 | 19 | 35 | 18 |
| | TC | Tri-Clamp ISO 2852 2.½'' | 60 | | | | | 35 | |
| DN80 (3'') | ND | DIN/EN 1092 DN80 PN 10 | 80 | 200 | 160 | 8 | 18 | 35 | 30 |
| | NA | ASME/ANSI B16.5 3'' #150 | 80 | 190 | 152.4 | 4 | 19 | 35 | 23 |
| | TC | Tri-Clamp ISO 2852 3'' | 80 | | | | | 35 | |

- Valve can be adapted with special flange following customer requirements.
- Nozzle lenght and diameter can be also adapted on demand.

NO NOZZLE

O-RING NOZZLE

SPECIAL NOZZLE

PLEASE CONTACT US SHOULD YOU NEED ANY OTHER SPECIAL CUSTOMIZATION

# METAL MATERIAL OPTIONS

| MATERIAL GRADE | AISI GRADE | EN GRADE | TYPE | CORROSION RESISTANCE |
|---|---|---|---|---|
| 1.4404 | 316 L | X2 Cr Ni Mo 17 12 2 | Cr-Ni-Mo austenitic St. St. | Excellent resistance to atmosphere and to wide variety of salts, organic acids and foodstuff. Resistant to intergranular corrosion (thanks to low carbon content). |
| 1.4435 | 316 L | X2 Cr Ni Mo 18 14 3 | Cr-Ni-Mo austenitic St. St. | The higher molybdenum addition makes the material 1.4435 more resistant to corrosion from acids and chloride. |
| 1.4539 | 904 L | X1 Ni Cr Mo Cu 25205 | Ni-Cr-Mo-Cu austenitic Super St. St. | Its resistance to all types of corrosion (pitting, crevice, intergranular and stress corrosion) is superior to that of the 316L series. |
| 1.4571 | 316 Ti | X6 CrNiMoTi 17-12-2 | Ti-stabilized Cr-Ni-Mo austenitic St. St. | Same as 316L. Titanium makes this steel more resistant to intergranular corrosion and improves machinability. |
| 2.4602 | C22 | $NiCr_{21}Mo_{14}W$ | Cr/Ni/Mo/W Super alloy | Good resistance to pitting, stress and crevice corrosion, also under reducing and oxidising conditions. Suitable for high temperature. |

# SEALS MATERIALS OPTIONS

| | ACRONYM | NAME | TEMP. RANGE | FDA | COLOR | APPLICATION |
|---|---|---|---|---|---|---|
| STANDARD | FFKM | Perfluoro Elastomer | -10°C +200°C | YES | White | Standard seal for parts in contact with process product. |
| | | | -10°C +300°C | NO | Black | Seal for extreme high temperature service. Option not available for pharma application. |
| | PTFE | Politetrafluoro-ethylene | -100°C +180°C | YES | White | Standard material for piston (with or without glass fiber reinforcement). |
| OPTIONAL | EPDM | Ethylene propylene diene monomer rubber | -40°C +120°C | YES | Black | Butterfly Valve Seal. |
| | FKM | Fluoroelastomers (Viton®) | -10°C +120°C | NO | Black | Seal for parts not in contact with process product. Option not available for pharmaceutical application. |
| | VMQ | Silicon | -40°C +180°C | YES | White / Translucent | Bottle GL45 Connection gasket. Optional. |
| | PEEK | Polyether ether ketone | -60°C +240°C | YES | Gray / Brown | Option material for Piston, when higher resistance is required. |

PLEASE CONTACT US SHOULD YOU NEED ANY OTHER SPECIAL CUSTOMIZATION

# PISTON OPTIONS

| MATERIAL CODE | DESCRIPTION |
|---|---|
| **PTFE + Glass Fiber STANDARD** | • The standard FAMAT sampling Piston Material.<br>• FDA approved material. The good chemical resistance, together with the excellent mechanical properties, make this the preferable solution for most application.<br>• FDA approvals is available. |
| **PTFE (Virgin)** | • Pure PTFE is a suitable alternative when the process condition does not allow the use of glass fiber reinforced PTFE.<br>• Mechanical resistance is lower than the reinforced version. Not recommended for abrasive or sticky product. May require a most frequent replacement of piston.<br>• FDA and USP Class VI approvals are available. |
| **PEEK** | • PEEK provides higher mechanical properties.<br>• Solution for sticky or abrasive product, when the standard piston is not resistant enough.<br>• Good corrosion resistance and compatibility with most process substances are also other advantages of this solution.<br>• FDA approval is available. |

SCRAPER

A Scraper in Stainless Steel or Hastelloy® protects the head of the piston from damages is the solution for abrasive or sticky products.

METAL PISTON

Metal piston is the solution for high temperature service (up to 300°C), where the normal coat cannot resist.

PLEASE CONTACT US SHOULD YOU NEED ANY OTHER SPECIAL CUSTOMIZATION

# OUTLET OPTIONS

## COUPLINGS

BAYONET COUPLING

Standard connection for DN50 Valve.

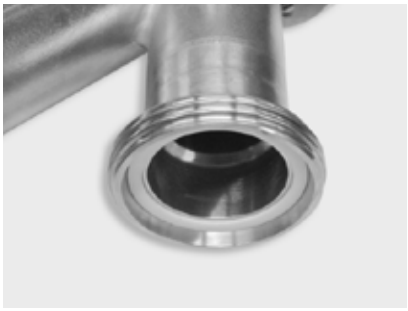
Suitable for all standard type of bottles.

GL 45 CONNECTION COUPLING

The GL45 connection is standard for DN25 valve. The PTFE body with internal VMQ (silicone rubber) gasket guarantees maximum sealing.

TRI-CLAMP COUPLING

Tri-clamp connection. Available for all valves.



FOOD COUPLING

FLANGED CONNECTION COUPLING

## COVERS

BAYONET BOTTLE & BODY COVER

PLEASE CONTACT US SHOULD YOU NEED ANY OTHER SPECIAL CUSTOMIZATION

# OTHER OPTIONS

HYGENIC BUTTERFLY VALVE

Once installed on the valve it allows to isolate the bottle and/or the valve outlet from external contamination.

| | TECHNICAL DATA |
|---|---|
| **SIZE** | 1.½ " – 2" |
| **MAX. TEMPERATURE:** | +120°C / +356°F |
| **MIN. TEMPERATURE:** | -10°C / +14°F |
| **PRESSURE CLASS:** | PN10 |
| **BODY MATERIAL** | Stainless steel 1.4404 (316L) |
| **GASKET** | EPDM / Viton (FKM) |
| **WEIGHT** | 0.6 kg / 1.3 lbs |

PROXIMITY SWITCH

To indicate the open / closed position of the valve.

STAINLESS STEEL HANDWHEEL

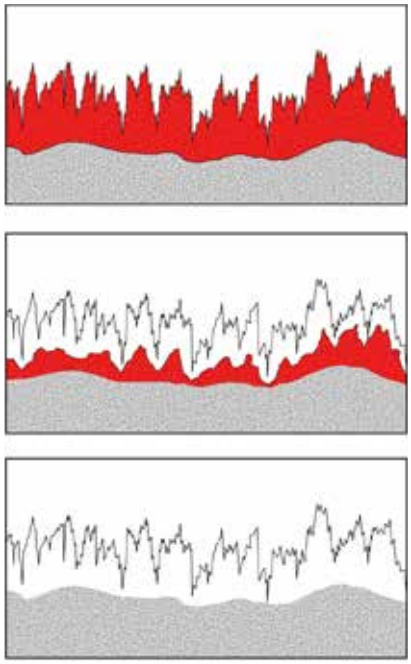
Option for corrosive environnent installation.

HANDWHEEL WITH TURN INDICATOR

Thermoplastic handwheel with indicator of number of turns. It allows to control the opening of the valve.

PLEASE CONTACT US SHOULD YOU NEED ANY OTHER SPECIAL CUSTOMIZATION

# SURFACE FINISH



Standard surface finish for valve internal surface is Ra = 0.8 µm.

All surface in contact with the product are completely machined.

No rough surface in contact with the product.

On request, with high precision machining and lapping operation, the internal surface of the valve may reach the very low roughness value of Ra = 0.4 µm.

Electropolishing can also be applied, to improve the surface profile and guarantee the maximum hygienic results.

# External roughness

On request value between Ra= 0.8 µm and Ra= 0.4 µm can be reached with mechanical polishing.

PLEASE CONTACT US SHOULD YOU NEED ANY OTHER SPECIAL CUSTOMIZATION

# CLEANING IN PLACE (CIP)

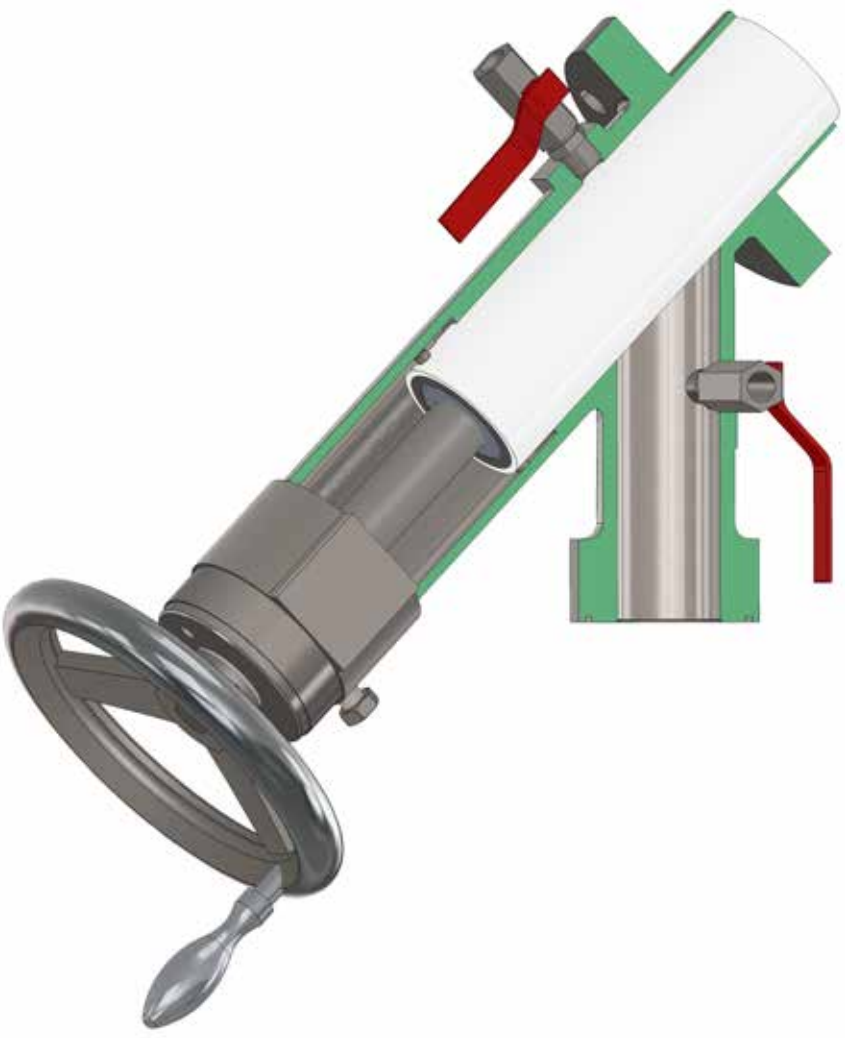
FAMAT sampling Valve can be equiped with cleaning in place feature, to guarantee the perfect cleaning of internal parts of the valve in all condition.

Thanks to a cleaning connection, the cleaning media can be put inside the valve, and remove all residual.

All internal part of the valve can be accessed by cleaning media.

In addition to these features, the TC connection (easy-clean) permit a rapid disassembly of the valve for complete cleaning.

The cleaning connection may be through valves in polished stainless steel with G ¼'' connection, or TC ½'' connection.



PLEASE CONTACT US SHOULD YOU NEED ANY OTHER SPECIAL CUSTOMIZATION

# BOTTLE B101

This is the standard solution for valve DN50. Available as option also on DN25 valve.
The bottle is in borosilicate glass with a metal protection that prevents from damage.
The windows in the metal protection allow to see the product.
The material of the bottle body in contact with the product can be selected following the application.
ATEX approval for most application.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | B101 |
| **SIZE** | 150 ml |
| **APPLICABLE TO:** | - Sampling DN50<br>- Sampling DN25<br>- Horizontal sampling |
| **MAX. TEMPERATURE:** | +150°C / +302°F |
| **MIN. TEMPERATURE:** | -40°C / -40°F |
| **PRESSURE CLASS:** | PN10 |
| **DESIGN PRESSURE:** | 10 bar / 145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **EXT. ROUGHNESS:** | Ra ≤1.6 µm |
| **APPL. STANDARD:** | ATEX |
| **BODY MATERIAL** | Stainless steel 1.4435 (316L), Hastelloy®, Titanium etc. |
| **PROTECTION MATERIALS** | Stainless Steel 304 |
| **WEIGHT** | 0.5 kg / 1.1 lbs |

# BOTTLE B101 OPTIONS

B101TC
Tri-clamp connection.

TCS
Security lock for tri-clamp.

B101S
Security Locking, to avoid accidental disassembly of the bottle.

PLEASE CONTACT US SHOULD YOU NEED ANY OTHER SPECIAL CUSTOMIZATION

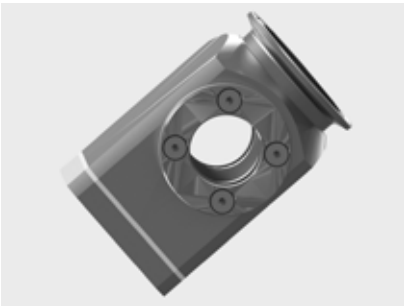
# BOTTLE B102

When maximum shock resistance is required, the bottle B102 is the best option for the valve DN50. The bottle has a solid metallic body, with glass windows. The material of the bottle body in contact with the product can be selected following the application.

ATEX & FDA approval for most application.

| | TECHNICAL DATA |
|---|---|
| **MODEL** | B102 |
| **SIZE** | 150ml<br>(Optional 250ml / 500ml) |
| **APPLICABLE TO:** | - Sampling DN50<br>- Sampling DN25<br>- Horizontal sampling |
| **MAX. TEMP (Continuous):** | +260°C / +300°F |
| **MIN. TEMPERATURE:** | -40°C / -40°F |
| **DESIGN PRESSURE:** | 10 bar / 145 psi |
| **INT. ROUGHNESS:** | Ra ≤0.8 µm |
| **BODY MATERIAL** | Stainless steel 1.4435 (316L), Hastelloy®, Titanium etc. |
| **GASKET** | PTFE |
| **WEIGHT** | 1 kg / 2.2 lbs |

# BOTTLE B102: 4 OPTIONS



B102TC

Tri-clamp connection.

TCS

Security lock for tri-clamp.

B102S

Security ocking, to avoid accidental disassembly of the bottle.

B102PU

Bottle with purge connection (PU), for cleaning or vacuum connection.

Also available with ¼'' TC purge.

PLEASE CONTACT US SHOULD YOU NEED ANY OTHER SPECIAL CUSTOMIZATION

# BOTTLE B105

Standard glass bottle for laboratory use.

The modified design of the connection surface improves the sealing performance.

The standard series is composed by glass botlle + connection.

The S series is composed by glass bottle + connection + protective metal cage.

Special size available on demand.


| | TECHNICAL DATA |
|---|---|
| **MODEL** | B105 |
| **SIZE** | 100 ml, 250 ml, 500 ml, 1000 ml<br>(other sizes on request) |
| **THREAD SIZE** | GL 45 |
| **MAX. TEMP (Continuous):** | +180°C / +356°F |
| **MIN. TEMPERARTURE** | -40° / -40°F |
| **MAX. PRESSURE:** | 6 bar |
| **GASKET** | PTFE |
| **WEIGHT** | 1 kg / 2.2 lbs |

# OPTION B105TC: 2 OPTIONS

B105TC
Tri-clamp connection.

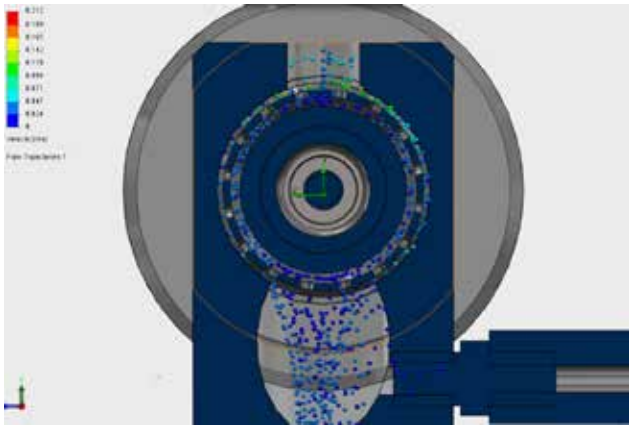
TCS
Security lock for tri-clamp.

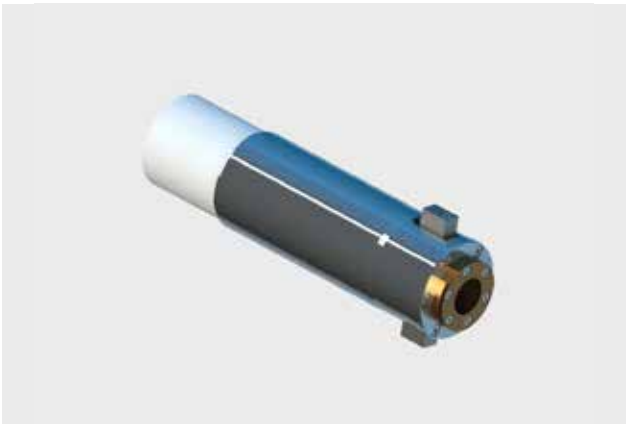
PLEASE CONTACT US SHOULD YOU NEED ANY OTHER SPECIAL CUSTOMIZATION

# CUSTOM SAMPLING SOLUTIONS

FAMAT sampling not only supplies valves, but can provide a custom designed product that fully integrates in the production process.

- Process Analysis
- Identification of sampling solution
- Study of feasibility
- Design of sampling valve and accessories
- Integration of solution in process / machines
- Realization of valves
- Supervision of commissioning / start-up





# QUALITY CERTIFICATIONS & APPROVALS

Certificate of Approval

This is to certify that the Management System of:

FAMAT SA

Chemin des Jordils 50, 1025 Saint-Sulpice, Switzerland

has been approved by LRQA to the following standards:

ISO 9001:2015

Gilles Bessiere - Area Technical Manager

Issued by: LRQA France SAS

for and on behalf of: Lloyd's Register Quality Assurance Limited

Current issue date: 1 March 2018
Expiry date: 28 February 2021
Certificate identity number: 10153006

Original approval(s):
ISO 9001 – 21 August 1995

Approval number(s): ISO 9001 – 0027775

The scope of this approval is applicable to:
Design, management of project, manufacture, procurement and supply of industrials valves.

EC CERTIFICATE OF CONFORMITY

in accordance with the requirements of the Pressure Equipment Directive 97/23/EC and the Pressure Equipment Regulations 1999, UK Statutory Instrument 1999 no. 2001 and 2002 no. 1267.

FAMAT SA
Chemin des Jordils, 40
1025 SAINT SULPICE
Switzerland

Manufacture of industrial valves

EC TECHNICAL FILE RECEIPT

API607 FIRE TEST QUALIFICATION CERTIFICATE

ISO 15848-1 QUALIFICATION CERTIFICATE

# CODING SYSTEM

| VALVE BODY | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SERIES | | MODEL | | INLET CONNECTION | | MATERIAL | | SEALING | | ACCESSORIES CONNECTION | |
| Code | Description | Code | Description | Code | Description | Code | Description | Code | Description | Code | Description |
| **115** | Sampling valve DN15 | **A** | Standard (125) | **FD** | FAMAT DIN | **89** | 1.4435 316 L | **JB** | FFKM-w & FEP (125A) | **BC** | Bayonnet |
| **130** | Sampling valve DN25 | **C** | Standard (130) | **FA** | FAMAT ANSI | **19** | 2.4602 HC22 | **JC** | FFKM-w (125A) | **TC** | Tri-Clamp |
| **124** | Sampling valve DN40 | **TC** | Easy Clean | **ND** | Standard DIN | **97** | 1.4408 316 | **JD** | FKM (125A) | **GL** | Threaded (GL45, ...) |
| **125** | Sampling valve DN50 | **CC** | Crust Breaking | **NA** | Standard ANSI | **01** | 1.4404 316 L | **JF** | FFKM-w & FEP (125TC) | **PP** | Thread (PP28) |
| **325** | Charging valve DN25 | **M** | High T° Metal piston | **TC** | Tri-Clamp | **05** | 1.4571 316 Ti | **JG** | FFKM-b (125M) | **DN** | DIN Flanged |
| **350** | Charging valve DN50 | **AUT** | Automatic | **NPT** | NPT Thread | **06** | 1.4539 904 L | **JH** | FFKM-w (125M) | **AN** | ANSI Flanged |
| **225** | Tank Bottom valve DN25 | **G** | Gaz (115) | | | | | **JI** | FFKM-w & FEP (125AUT-BC) | **FC** | Food Coupling |
| **250** | Tank Bottom valve DN50 | **HS** | Horizontal | | | | | **JJ** | FFKM-w (125TC) | | |
| **280** | Tank Bottom valve DN80 | **S** | Security | | | | | **JO** | FFKM-w & FEP (125A-TC) | | |
| | | **SP** | Special Design | **SF** | Special Fange | **SM** | Special Material | **SG** | Special Gaskets | **SC** | Special Coupling |

Valve configuration

125A-FD-89-JB-BC_N5_OR_CIP

Options/variants

Every code is seperated by a "-"
If options/variants have to be added, a separator "_" must be used.

| OPTIONS / VARIANTS | | | | | |
|---|---|---|---|---|---|
| BODY | | DRIVE | | PISTON | |
| Code | Description | Code | Description | Code | Description |
| **N0** | No Nose | **VI** | Stainless steel handwheel | **P20** | Pure PTFE piston |
| **N1** | Nose length 0 – 10 | **VA** | Hand wheel with Indicator | **P51** | PEEK 1000 piston |
| **N2** | Nose length 10 – 35 | **VS** | Special Handwheel | **P57** | PTFE+C piston |
| **N3** | Nose length 35 – 50 | **FC1** | Limit switch | **RAC** | Scraper on piston |
| **N4** | Nose length 50 – 70 | **FC2** | 2 x Limit Switch | | |
| **N5** | Nose length 70 – 80 | **FCS** | Special Limit Switch | | |
| **N6** | Nose length 80 – 100 | CONFIGURATION | | OTHER | |
| **N7** | Nose length 100 – 125 | Code | Description | Code | Description |
| **ND** | Special Nose Diameter | **BV1** | Butterfly Valve | **RB** | Ball Bearings |
| **NS** | Special Nose (not listed above) | **BV2** | 2 x Butterfly Valve | **SFL** | PTFE Bellow |
| **OR** | O-ring on nose | **CIP** | Cleaning in place | **PNxx** | Special Design Pressure |
| **HT** | High Temperature | **SIP** | Sterilization in place | **SPM** | Special Material |
| **LT** | Low Temperature | **OEL4** | High Containment OEB4 | | |
| **HJ** | Heating Jacket | **OEL5** | High Containment OEB5 | | |
| | | **PTC** | Purge tri-clamp | | |
| | | **PTW** | Purge tri-clamp welded | | |
| | | **PSP** | Purge Special design | | |

# CODING SYSTEM

| BOTTLE TYPE | | | | | | | |
|---|---|---|---|---|---|---|---|
| SERIES | | MODEL | | MATERIAL | | BOTTLE CAPACITY | |
| Code | Description | Code | Description | Code | Description | Code | Description |
| **B101** | Bottle 150ml<br>Protection box | **BC** | Bayonet<br>connection | **01** | 1.4404<br>316 L | **0050** | Capacity<br>50ml |
| **B102** | Bottle<br>Protection box | **TC** | Tri-clamp<br>connection | **89** | 1.4435<br>316 L | **0100** | Capacity<br>100ml |
| **B105** | Thread adapter | **TCS** | Tri-clamp connection<br>with security-locker | **19** | 2.4602<br>HC22 | **0150** | Capacity<br>150ml |
| **B105S** | Thread adapter<br>Protection box | | | **55** | 3.7035<br>Ti Gr.2 | **0250** | Capacity<br>250ml |
| **Bxxxx** | Glass bottle<br>xxxx ml | | | | | **0300** | Capacity<br>300ml |
| **BxxxxSL** | Glass bottle<br>silicone coated | | | | | **0500** | Capacity<br>500ml |
| | | | | | | **1000** | Capacity<br>1000ml |
| | | | | | | **xxxx** | Capacity<br>xxxxml |

Every code is seperated by a "-"
If options/variants have to be added, a separator "_" must be used.

| OPTIONS / VARIANTS | |
|---|---|
| Code | Description |
| **GL45** | Thread |
| **GL32** | Thread |
| **PP28** | Thread |
| **CT** | Customer thread |
| **S** | Security-lock<br>Verrou de sécurité<br>Sicherheitsschließfach |
| **FC** | Proximity switch<br>Capteur de présence<br>Präsenzsensor |
| **PU-EOL** | Purge<br>Purge<br>Spülungventil |
| **PTC-EOL** | Tri-clamp connection screwed 1/2»<br>Connexion tri-clamp 1/2» visée<br>Geschraubter 1/2» Tri-Clamp Anschluss |
| **SP** | Special<br>Special<br>Speziell |

# CONTACTS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SWITZERLAND

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info@famat-sampling.com
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Nearest train station: Martigny (14km)

https://famat-sampling.com/cat

# AT A GLANCE

We allow our customers to keep production running and ensure product quality by 100% reliable and representative sampling with quality and reliability equipment that meets expectations.

A comprehensive package of customers services completes our proposition.

# EXPERTS IN VALVE TECHNOLOGY SINCE 1974

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2020-08