FAMAT
ENGINEERED VALVES

PRODUCT TECHNICAL OVERVIEW

SAMPLING VALVES
TANK BOTTOM VALVES
CHARGING VALVES

SWISS QUALITY
ISO 9001 / 2008

FAMAT SA is a Swiss engineering company for 40 years in the development and manufacturing of valves applications for projects in:

A - INDUSTRIAL VALVES
- Water Works
- Power Generation
- Petro-Chemical
- Oil and Gas

B - SAMPLING VALVES
- Pharmaceutical and Chemical

For the Pharmaceutical, Bio-technological and Chemical industry, FAMAT SA 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, BIO-MERIEUX, PFIZER, BASF, GSK, BAYER, MONSANTO,...) FAMAT is able to provide you the sampling solution you need...

FAMAT SA 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 SA is certified ISO 9001-2008. Its procedures guarantee the best services in compliance and on-time deliveries with most industries standard.
FAMAT Quality System is also approved in accordance with requirements of European Pressure Equipment directive 97/23/EC, (PED).
Most of our products have been approved according the applicable standards for use in Explosive Atmosphere (94/9/EC-ATEX), low fugitive emission (ISO 15848-1), and fire safe design (ISO 10497 – API 607).

QUALITY CERTIFICATION & APPROVALS


LRQA

CERTIFICATE OF APPROVAL

FAMAT SA
Chemin des Jordils 40
CH 1025 SAINT SULPICE, Switzerland

ISO 9001:2008

Design, management of project, manufacture, procurement and supply of industrials valves.


Lloyd's Register

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 2032 no. 1267.

FAMAT SA
Chemin des Jordils, 40
1025 SAINT SULPICE
SWITZERLAND

Manufacture of industrial valves


Lloyd's Register

EC TECHNICAL FILE RECEIPT


DEKRA

Certificate


ITIS

API607 FIRE TEST QUALIFICATION CERTIFICATE


ITIS

ISO 15848-1 QUALIFICATION CERTIFICATE

PRODUCT RANGE

DN 50 SAMPLING VALVE

- 125A STANDARD
- 125TC TRICLAMP EASYCLEAN
- 125CC CRUST BREAKING
- 125AUT AUTOMATIC
- 125OEL HIGH CONTAINMENT
- 125M HIGH TEMPERATURE
- 125S SECURITY
- 125NIR NEAR INFRARED

DN25 SAMPLING VALVE

- 130C STANDARD
- 130TC EASYCLEAN
- 130CC CRUST BREAKING
- 130AUT AUTOMATIC
- 130OEL HIGH CONTAINMENT

DN15 SAMPLING VALVE

- 115G DN15 METAL SEATED SAMPLING VALVE

HORIZONTAL SAMPLING VALVE

- 125H DN50 HORIZONTAL SAMPLING VALVE
- 130H DN25 HORIZONTAL SAMLPING VALVE

TANK BOTTOM VALVE

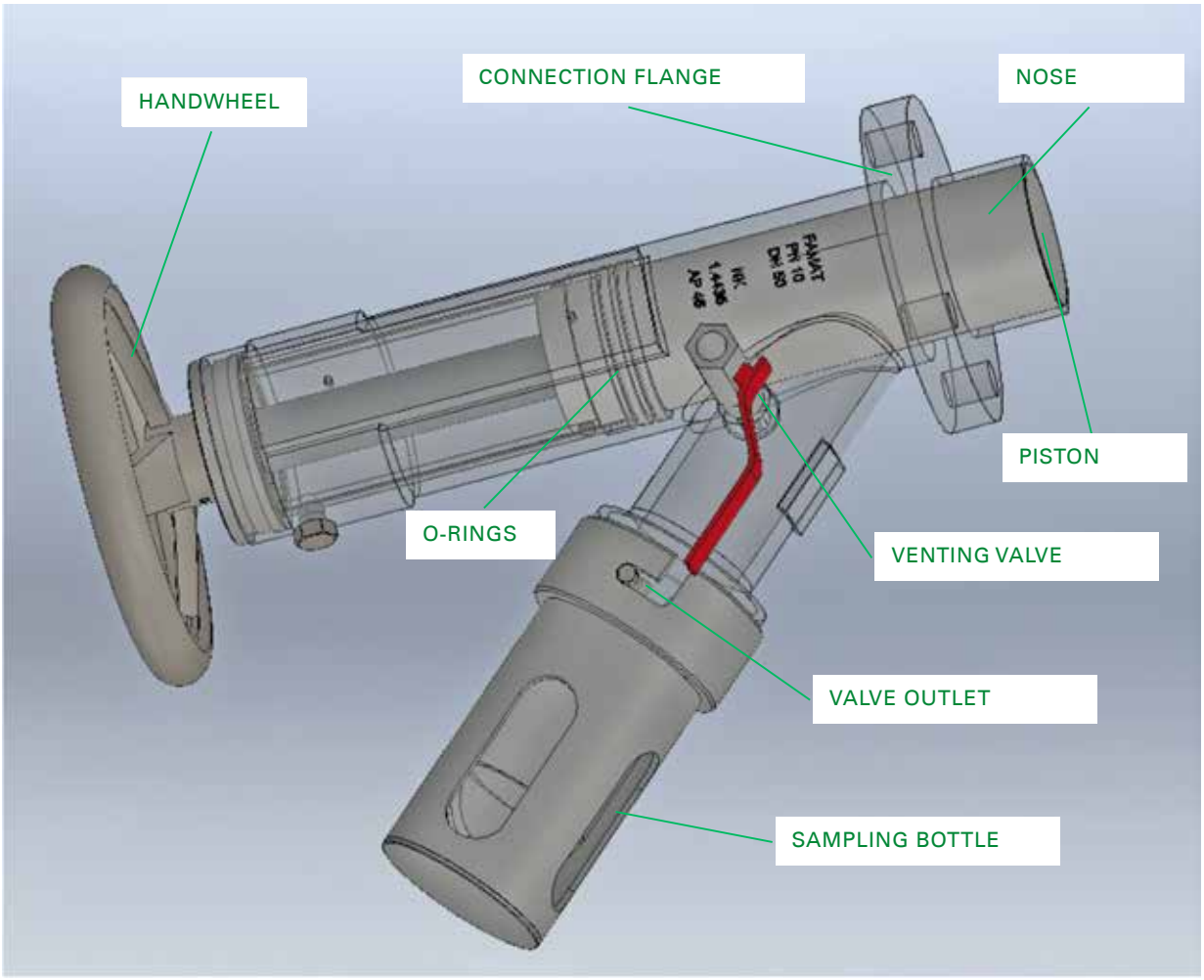
- 250A TANK BOTTOM VALVE DN 50
- 280AUT TANK BOTTOM VALVE DN 80

CHARGING VALVE

- 325 CHARGING VALVE DN 25

FAMAT SAMPLING VALVE

MAIN COMPONENTS



Simple design for maximum reliability & performance.

PATENTED FAMAT E.P. TECHNOLOGY

Almost all FAMAT valves are based on our patented "EXPANDING PISTON TECHNOLOGY".

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 will be flush with the connection point, leaving no dead space.

- **GASKET FREE**
- **GUARANTEED BUBBLE TIGHT**
- **DEAD ZONE FREE**

Valve opened

Closing the valve

Valve closed

DESCRIPTION OF OPERATIONS

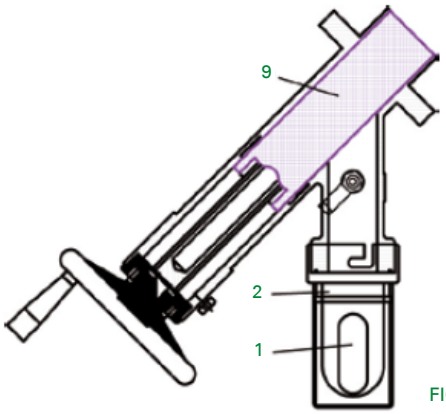


FIG. 1

CLOSED POSITION

The piston is a flush fit to 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.

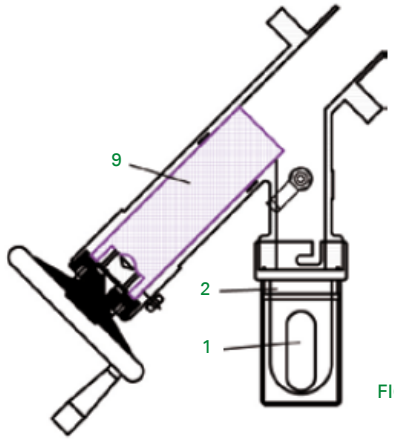


FIG. 2

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).

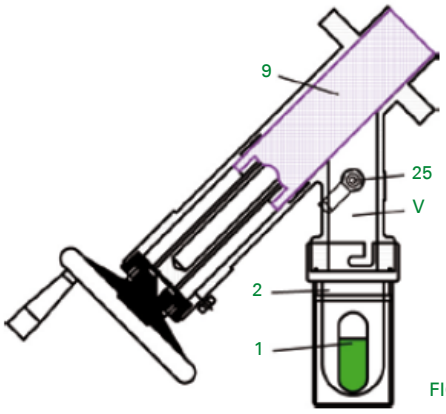


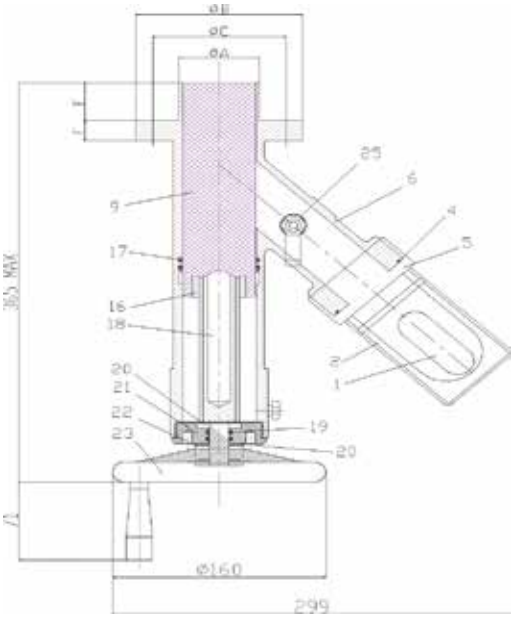
FIG. 3

Turn the handwheel clockwise to bring back the piston (9) in its closed position. A firm final turn of the hand-wheel will give reliable sealing and no dead space. Equalise the pressure (or vacuum) in chamber (V) by opening the valve (25). Remove the sampling bottle (2) on its quick coupling connection (FIG. 3).

125A
STANDARD

Type 125A is the standard DN50 sampling valve by FAMAT. 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:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 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 1.4435 (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)
	6	Body
P925*	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

125TC

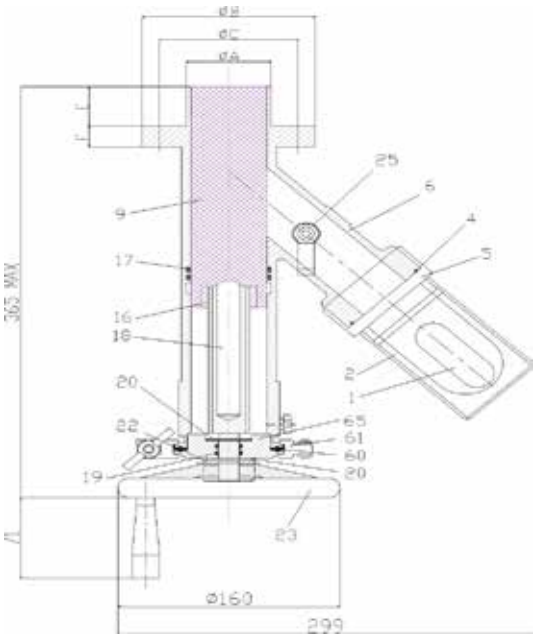
TRI CLAMP EASYCLEAN

This sampling valve has one Tri-Clamp (TC) 1.5" near the handwheel (FIG. 1). Called "EasyClean", the piston can be removed from the valve housing with a minimum of effort allowing full cleaning as shown on the picture (FIG. 2). This permits a complete cleaning of internals between batches .

FIG. 1

FIG. 2

	TECHNICAL DATA
MODEL	125TC
NOMINAL SIZE	DN 50 (2")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 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 1.4435 (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
B101*	1*	Glass Bottle*
	2	Protection
	5	Coupling
Set JB*	4	Coupling Gasket
	17	O-ring (2pcs)
	19	O-Ring (2pcs)
	6	Body
P925*	9	Piston
	16	Nut
	18	Screw
Set JA*	20	Washer 2 Pcs
	22	Pin
V2301*	23	Handwheel
A2501*	25	Venting Valve
*	60	Triclamp gasklet
*	61	Triclamp connection
*	65	Cover

* Recommended spare parts

125CC
CRUST BREAKING

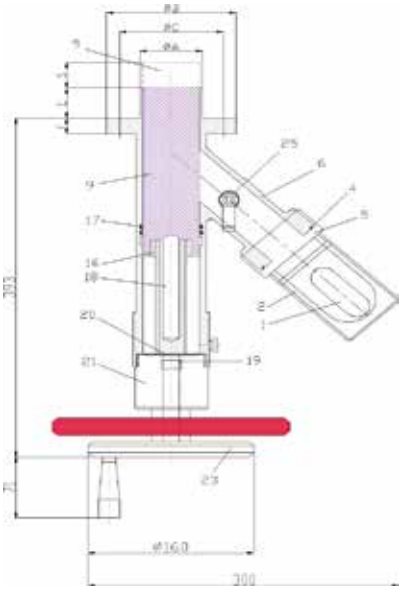
FIG. 1

FIG. 2

This valve is used for products which could clog inside the dryer or vessel and block the piston. To eliminate the risk of this impeding product flow in to the sampling valve, FAMAT has developed the 125CC (FIG. 1). With this kind of valve type, the crust will be broken by the piston 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 as shown on the picture (FIG. 2).
3. Once the crust has been broken, proceed with the standard sampling (page 4) with 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:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 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 1.4435 (316l), Hastelloy, Titanium etc
SEALS MATERIALS	Viton, Viton/FEP/PFA, Perfluo-relastomer FFKM; EPDM (All FDA)
SAMPLE UNIT	Bottle 150 ml, glass Borosilicate with stainless steel protection
WEIGHT	14kg / 31 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)
	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

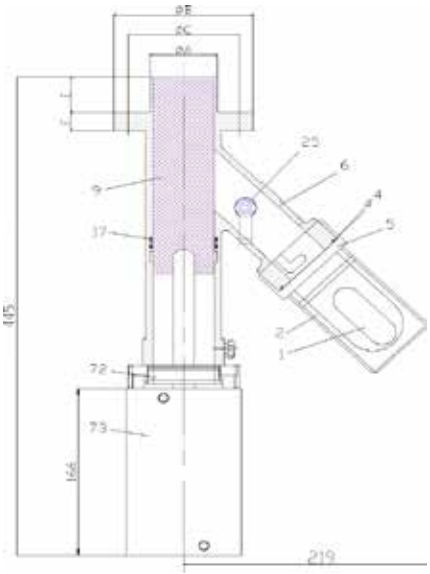
* Recommended spare parts

125AUT
AUTOMATIC

Standard sampling valve with a double acting pneumatic actuator (FIG. 1).
Proximity switch can be installed on valve to detect position.

FIG. 1

	TECHNICAL DATA
MODEL	125AUT
NOMINAL SIZE	DN 50 (2")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 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 1.4435 (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 Operating pressure: 0.6 to 12 bar Design Operating pressure: 6 bar G 1/8" air supply connections
PROXIMITY SWITCH	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

125OEL
HIGH CONTAINMENT

FIG. 1

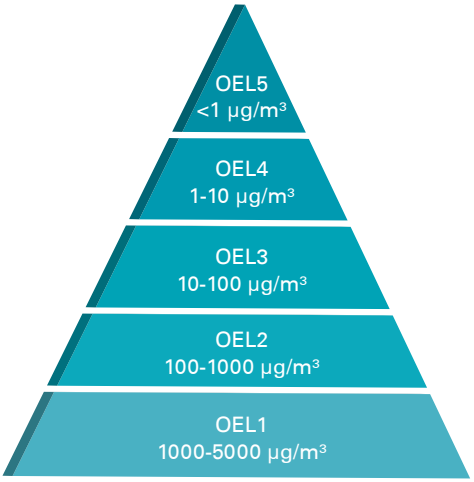


FIG. 2

This new compact OEL High-Containment sampling device (FIG. 1) allows the removal of a product sampled under contained conditions. The OEL (Occupational Exposure Limits) describes the maximum concentration of a drug substance which can be tolerated in the air of the production room without any negative effect to the health of the operators (FIG. 2).

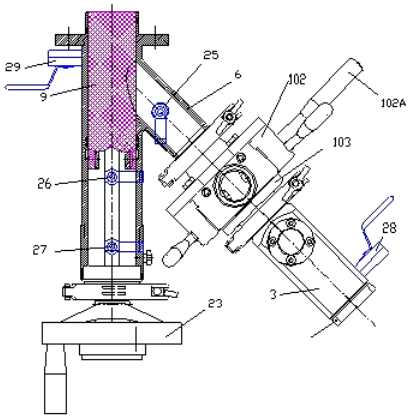
(OEL) level range: 1-10µg / m3 (without aspiration)

	TECHNICAL DATA
MODEL	125
NOMINAL SIZE	DN 50 (2")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 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 1.4435 (316l), Hastelloy, Titanium etc
SEALS MATERIALS	Viton, Viton/FEP/PFA, Perfluorelastomer 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: 1 active module isolating the outlet of sampling valve 1 passive module, removable in closed position, isolating the sampling bottle. Max pressure: Active valve: closed 6 bar, opened 0.2 bar Max Pressure Passive valve: closed 0.2 bar, opened 0.2 bar
H.C. VALVE - MATERIALS:	Inductive
WEIGHT	18kg / 40 LBS

125OEL
HIGH CONTAINMENT

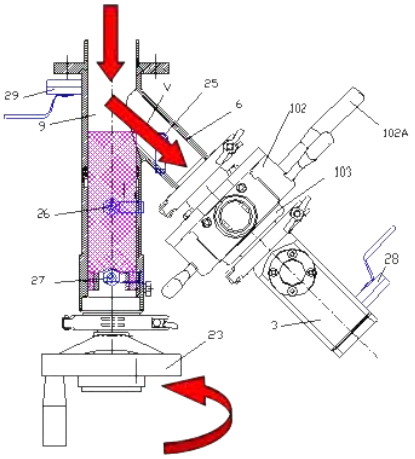
1 - CLOSE POSITION

- The sampling valve remains closed piston 9 tightens without dead volume.
- Active (102) and passive (103) module are joined and in closed position (lever 102a in closed position).
- All cleaning valves (25, 26, 27, 28 and 29) are closed.



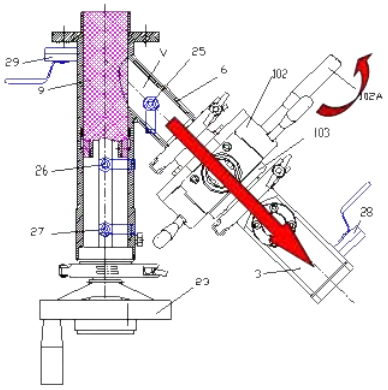
2 - PRE-SAMPLING

- 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).
- The piston (9) will be closed.



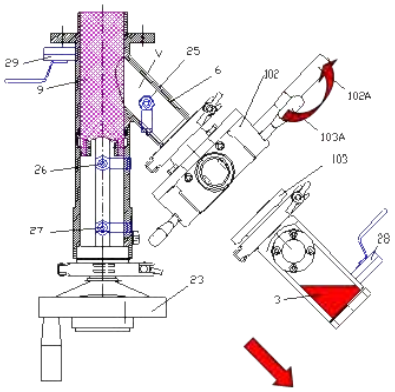
3 - SAMPLING TRANSFER IN BOTTLE

- 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 activemodule (102) (max. allowable pressure 6 bar).
- Sampling bottle closed by the passive module (103) (max. allowable pressure 0.2 bar), can be removed.
- The sample can be extracted from the sampling bottle in laboratory under secure conditions.



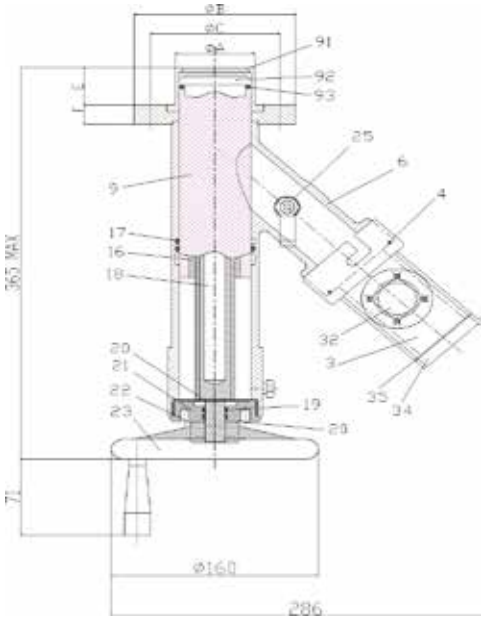
FAMAT
ENGINEERED VALVES

125M
HIGH TEMPERATURE

The 125M sampling valve (FIG. 1) is equipped with a metallic 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. To avoid any damage when closing the piston, the gasket is receding into the piston and seals against the valve cylinder wall making contact only after the final sealing turn of the handwheel. Tightness from vacuum up to 10 bar (145 psi).

FIG. 1

	TECHNICAL DATA
MODEL	125M
NOMINAL SIZE	DN 50 (2")
MAX TEMPERATURE:	+260°C / +500°F (FDA) +300°C / ++572°F (NOT FDA)
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 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 1.4435 (316l), Hastelloy, Titanium etc
SEALS MATERIALS	High temp, Perfluorelastomer FFKM
SAMPLE UNIT	Bottle 150 ml, glass Borosilicate with stainless steel protection
WEIGHT	13kg / 29 lbs



SUB ASS.	PART	NAME
B102*	3	Bottle
	5	Coupling
	32	Sight Glass
	34	Bottle Head
	35	Bottle Gasket
Set JH*	4	Coupling Gasket
	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	Nose

* Recommended spare parts

125S-2
SECURITY

The mechanical locking device secures the sampling procedure.

1. The sampling bottle (container) can only be removed if the piston is completely closed.
2. The piston can only be opened if the sampling bottle (container) is coupled on the outlet.

The sample is taken in the same way as the standard Famat sample valve. The indicator shows the position of the piston. This indicator has to show "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:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 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 1.4435 (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

125NIR

NEAR INFRA - RED

FIG. 1

At the top of the piston, the 125NIR valve (FIG. 1) has a scraper which allows installation of a fiberoptic probe (FIG. 1).
This probe, ideally located, permit to monitor several parameters such as temperature, humidity... and / or composition of the product before taking physically the sample, transmitted by fiberoptic to the connector.
A second hole, on the scraper, is made nearby the fiberoptic probe for the cleaning system (Nitrogen) as shown on the picture.
The measuring probe (not shown on picture) can be cleaned through a nozzle with Nitrogen.

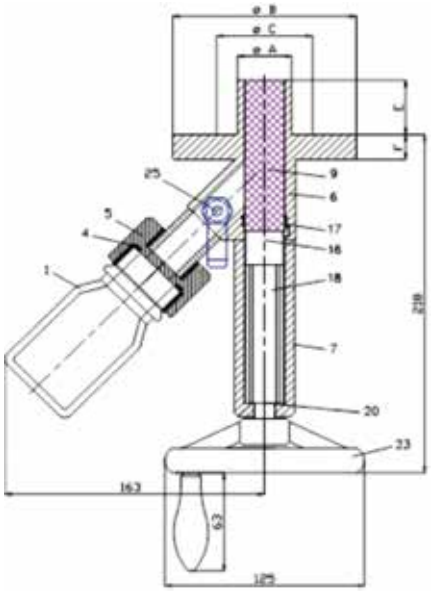
Thanks to our partners specialized in laboratory instrumentation, we are able to provide any specific solution for the customer processes.

	TECHNICAL DATA
MODEL	125NIR
NOMINAL SIZE	DN 50 (2")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 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 1.4435 (316l), Hastelloy, Titanium etc
SEALS MATERIALS	Viton, Viton/FEP/PFA, Perfluo-relastomer FFKM; EPDM (All FDA)
SAMPLE UNIT	Bottle 150 ml, glass Borosilicate with stainless steel protection
WEIGHT	15kg / 33 lbs

130C
STANDARD

Type 130C is the standard DN25 sampling valve by Famat. 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 (1")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	97/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (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

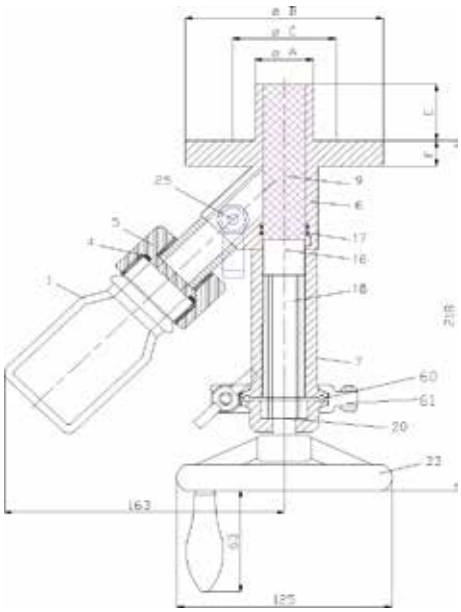
* Recommended spare parts

130TC

TRI CLAMP EASYCLEAN

For cleaning internals between batches. The same Easyclean technology present in 125TC is adapted to our DN25 valve. The easy disassembly of the piston is a great advantage in rapid batch exchanges, typical and small size production plant.

	TECHNICAL DATA
MODEL	130TC
NOMINAL SIZE	DN 25 (1")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	97/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (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	TriClamp Gasket
	61	Triclamp connection

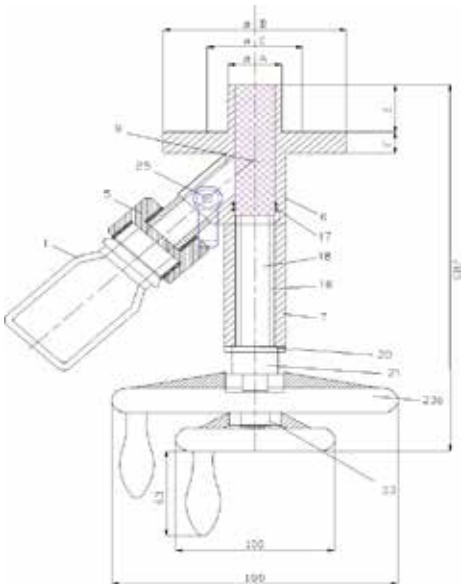
* Recommended spare parts

130CC

CRUST BREAKING

For all the situation in which the product is not easily flowing and could clug the sampling valve bore, 130CC has been developed by FAMAT. By moving the bigger handwheel, the piston is entering inside the vessel breaking eventual material deposit and allowing the product flow.

	TECHNICAL DATA
MODEL	130CC
NOMINAL SIZE	DN 25 (1")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	97/23/EC (PED); 94/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (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
P932*	9	Piston
	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

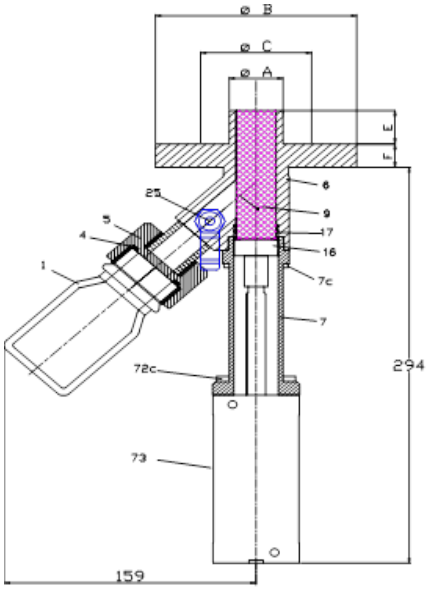
* Recommended spare parts

130AUT
AUTOMATIC

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 Easyclean TC connection.

FIG. 1

	TECHNICAL DATA
MODEL	125AUT
NOMINAL SIZE	DN 25 (1")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	97/23/EC (PED); 94/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (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 Actuator– Aluminium Body Operating pressure: 0.6 to 12 bar Design Operating pressure: 6 bar G 1/8" air supply connections
PROXIMITY SWITCH	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

130OEL
HIGH CONTAINMENT

FIG. 1

Simple design and fast disassembly for cleaning

This new compact OEL High-Containment sampling device (FIG. 1) allows the removal of a product sampled under contained conditions. The OEL (Occupational Exposure Limits) describe the maximum concentration of a drug substance which can be tolerated in the air of the production room without any negative effect to the health of the operators. Available in automatic or manual operation.

(OEL) level range : 1-10µg / m3 (without aspiration)

	TECHNICAL DATA
MODEL	130OEL
NOMINAL SIZE	DN 25 (1")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	94/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (316l), Hastelloy, Titanium etc
SEALS MATERIALS	Viton, Viton/FEP/PFA, Perfluorelastomer 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: 1 active module isolating the outlet of sampling valve 1 passive module, removable in closed position, isolating the sampling bottle. Max pressure: Active valve: closed 6 bar, opened 0.2 bar Max Pressure Passive valve: closed 0.2 bar, opened 0.2 bar
H.C. VALVE • MATERIALS:	Wetted parts 1.4404/316L (or Hastelloy) Gaskets: EPDM white (or Viton, Kalrez)
WEIGHT	11kg / 24 lbs

115G

METAL SEATED SAMPLING VALVES

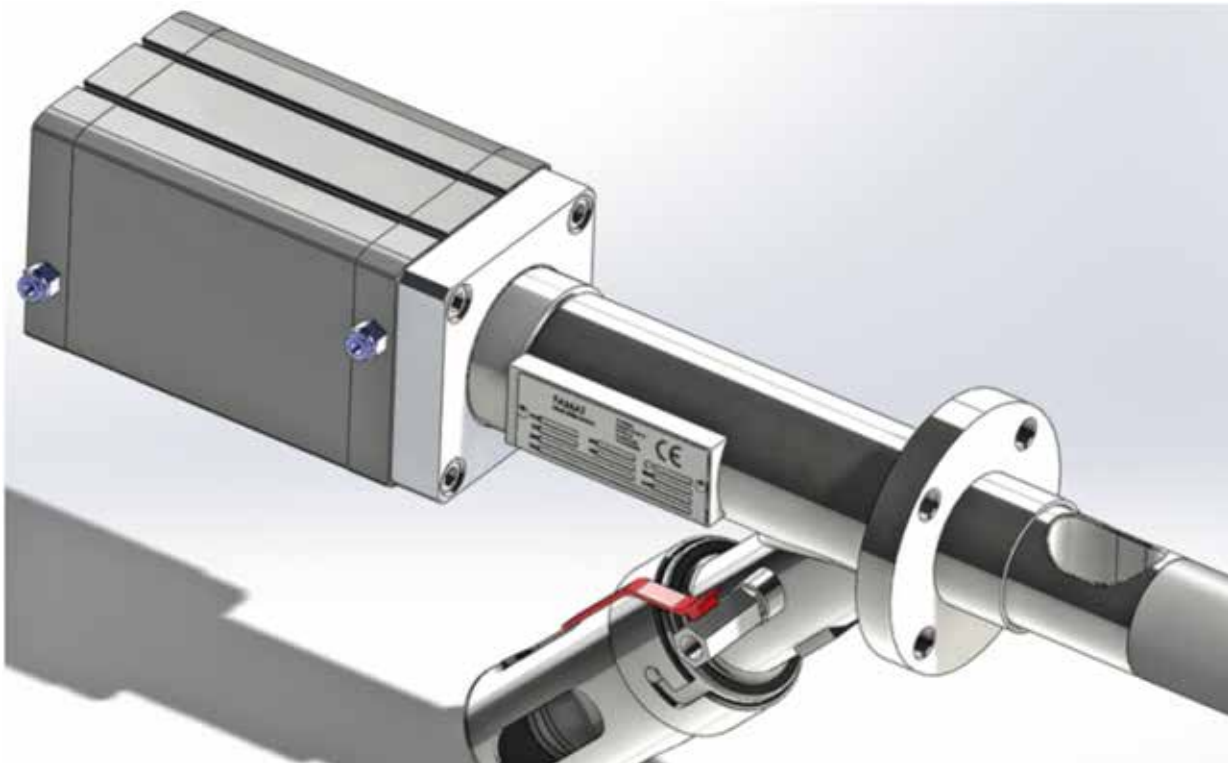
- ☑ Metallic piston type.
- ☑ High temperature and high pressure service.
- ☑ TA LUFT certified TUV SUD up to 300°C
- ☑ (fugitive emission ISO 15848)
- ☑ Fire safe certified TUV SUD
- ☑ (API 607)
- ☑ Triple stem seals (double FFKM and adjustable graphite packing)
- ☑ Threaded or flanged connection

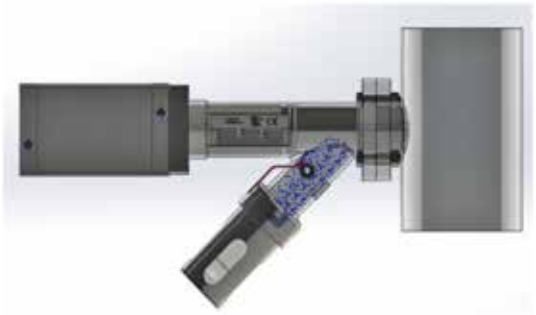
	TECHNICAL DATA
MODEL	115G
NOMINAL SIZE	DN 25 (1/2")
MAX TEMPERATURE:	+300°C / +572°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	std: PN10 Up to cla<ss #1500
DESIGN PRESSURE:	10 bar / 145 psi / 250 bar
OPERATING PRESSURE:	From full vacuum up to 10 bar / 145 psi
INT. ROUGHNESS.:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	ISO 10497 – ISO 15848); 94/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (316l), Hastelloy, Titanium etc
SEALS MATERIALS	Viton, Viton/FEP/PFA, Perfluorelas-tomer FFKM; EPDM (All FDA)
SAMPLE CONNECTION	½ NPT, other on request
WEIGHT	0.5kg / 1.1 lbs

125HS

HORIZONTAL SAMPLING VALVE DN50

- Intrusive sampler without dead space
- Applicable for vertical pipe
- Adjustable piston length according customer request
- Manual or actuated version
- 75 ml sampling with each single operation.

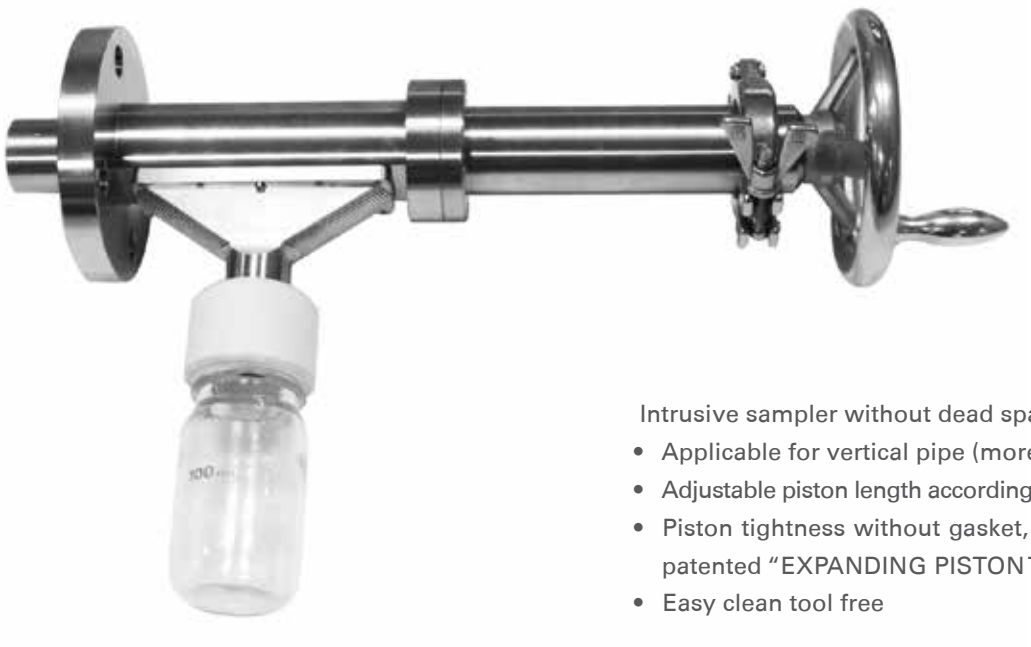




	TECHNICAL DATA
MODEL	125HS
NOMINAL SIZE	DN 50 (2")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	10 bar / 145 psi
OPERATING PRESSURE:	From full vacuum up to 2 bar / 29 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤3.2 µm
APPL. STANDARD:	94/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (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

130H

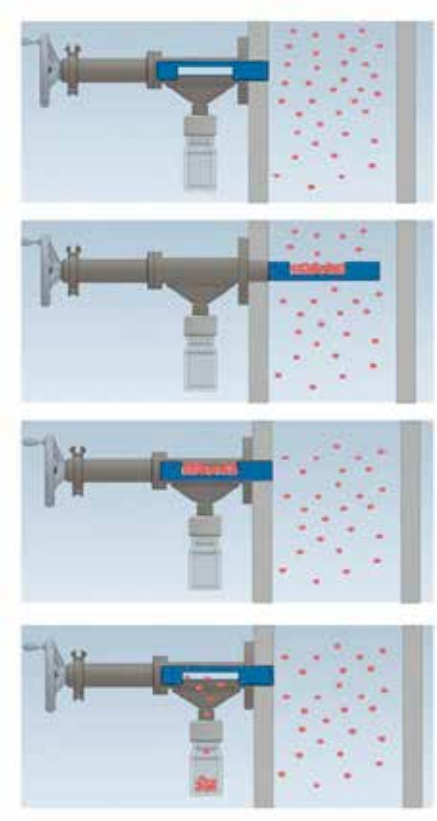
HORIZONTAL
SAMPLING VALVE DN25



Intrusive sampler without dead space

- Applicable for vertical pipe (more on request)
- Adjustable piston length according customer request
- Piston tightness without gasket, thanks to FAMAT patented "EXPANDING PISTON TECHNOLOGY"
- Easy clean tool free

Automatic version avalable on request



	TECHNICAL DATA
MODEL	130H
NOMINAL SIZE	DN 25 (1")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	94/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (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 technology of FAMAT sampling valve, can be adapted to Tank Bottom valve.
The versatility of the valve, combined with the proven reliability, will make this valve the perfect solution for many application in pharmaceutical business.

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:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤3.2 µm
APPL. STANDARD:	94/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (316l), Hastelloy, Titanium etc
SEALS MATERIALS	Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA)
WEIGHT	14 kg / 31 lbs

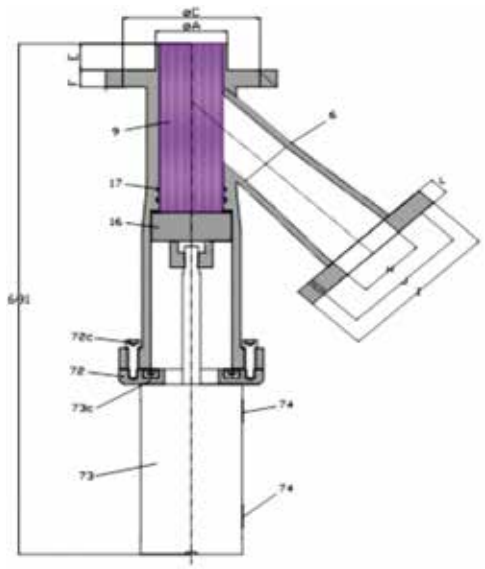
280AUT
TANK BOTTOM VALVE

A new development of FAMAT, is the 3" DN80 tank bottom valve, developed specifically for pharma and chemical industry.
The new design has been created and succesfully tested for a service up to 50 bar (class #300). The product is in compliance with PED requriement (Cat. II Equipment).
The valve can be modified as per customer requirements.

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

On Request Manual version can be available.

	TECHNICAL DATA
MODEL	280AUT
NOMINAL SIZE	DN 80 (3")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10 PN50 (ASME #300)
DESIGN PRESSURE:	10 bar / 145 psi
OPERATING PRESSURE:	From full vacuum up to 50 bar / 145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	94/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (316l), Hastelloy, Titanium etc
SEALS MATERIALS	Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All 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

325A
CHARGING VALVE

FAMAT charging valve has been developed to load vessels and reactors.
On top of the advamntage of expanding piston, when used as a charging valves, the piston has the advantage of pushing all the load inside the vessel, without any loss of product.
As per above picture, the valve can be equiped with an hygenic butterfly valve to completely isolate the supply line.

	TECHNICAL DATA
MODEL	325A
NOMINAL SIZE	DN 25 (1")
MAX TEMPERATURE:	+180°C / +356°F
MIN TEMPERATURE:	-20°C / -4°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	0-10 bar / 0-145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	94/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (316l), Hastelloy, Titanium etc
SEALS MATERIALS	Viton, Viton/FEP/PFA, Perfluorelastomer FFKM; EPDM (All FDA)
WEIGHT	5 kg / 11 lbs

PISTON OPTIONS

MATERIAL CODE	DESCRIPTION
PTFE + Glass Fiber STANDARD	• The standard FAMAT Piston Material. • Suitable for almost all process condition, FDA approved. The good chemical resistance, together with the good mechanical properties, make this the preferable solution for most application. • Temperature range is from -20°C to +180°C • 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. . • Mechanical resistance is lower than the reinforced version. Not recommended for abrasive or sticky product. May require a most frequent replacement of piston. • Temperature range is from -20°C to +180°C • FDA and USP Class VI approvals are available
PEEK	• PEEK provides Higher mechanical properties • Solution for sticky or abrasive product, when the standard piston is not enough resistant • Good corrosion resistance and compatibility with most process substances are also other advantages of this solution. • Temperature range is from -20°C to +180°C • FDA and USP Class VI approvals are available

SCRAPER

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

METALLIC PISTON:

Metallic piston (available on 135A Valve) is the solution for high temperature service (up to 300°C), where the normal coat can not resist.

METALLIC 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 foodstuffs. Thanks to low carbon content resistant to intergranular corrosion.
1.4435	316 L	X2 Cr Ni Mo 18 14 3	Cr-Ni-Mo austenitic St. St.	Same as 316L. The higher molybdenum addition, makes 1.4435 more resistant to corrosion in reducing acids and chloride containing media
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	316Ti	X6 CrNiMoTi 17-12-2	Ti-stabilized Cr-Ni-Mo austenitic St. St.	Same as 316L .Titanium makes this steel resistant to intergranular corrosion. Improved machinability
2.4602	-	NiCr21Mo14W	Cr/Ni/Mo/W Super alloy	Good resistance to pitting, stress and crevice corrosion, also under reducing and oxidising conditions. Good resistance in reducing and oxidising substances, also with higher temperatures

SEALS MATERIALS OPTIONS

SIGLE	NAME	TEMP. RANGE	FDA	COLOR	APPLICATION
FFKM	Perfluoro Elastomer	20 °C +200°C	YES	White	Standard Seal for parts in contact with process product
		-20 °C +300°C	NO	Black	Seal for extreme high temperature service . Not pharma application
EPDM	Ethylene propylene diene monomer rubber	-50 °C +120°C	YES	White	Butterfly Valve Seal. Optional for all valves
FKM	Fluoroelastomers	-20 °C +120°C	NO	Black	Seal for parts not in contact with process product. Option for not pharma application
VMQ	Silicon	-40 °C +180°C	YES	White/Translucent	Bottle GL45 Connection gasket. Optional for all valves
PTFE	Politetrafluoro ethylene	100 °C +180°C	YES	White	Standard material for Piston (with or without glass fiber reinforcement)
PEEK	polyether ether ketone	-60 °C +240°C	YES	Gray / Brown	Option material for Piston, when higher resistance is required

NOTE Information and technical data must be considered as indicative Only.
PLEASE CONTACT FAMAT FOR ANY SPECIAL OPTION NOT INCLUDED IN THE ABOVE TABLES.

BOTTLE B101

This is the Standard solution for valve DN50. Avalable as option also on DN25 Valve.
The bottle is in borosilicate glass with a metallic protection which prevent from damage .
The windows in metallic protection allows to visually examine the product.
The material of the bottle body in contact with the fluid can be selected for the application.
ATEX & FDA approval, make it suitable for most application.

	TECHNICAL DATA
MODEL	B101
SIZE	150ml
APPLICABLE TO:	- Sampling DN50 - Sampling DN25 - Horizontal sampling
MAX TEMP (Continuous):	+120°C / +248°F
MAX TEMP (Short Period):	+180°C / +356°F
MIN TEMPERATURE:	-40°C / -40°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	10 bar / 145 psi
TEST PRESSURE	15 bar / 218 psi
OPERATING PRESSURE:	From full vacuum up to 10 bar / 145 psi
INT. ROUGHNESS.:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	94/9/EC (ATEX) ; FDA
BODY MATERIAL	Stainless steel 1.4435 (316l), Hastelloy, Titanium etc
PROTECTION MATERIALS	Stainless Steel 304
WEIGHT	0.5 kg / 1.1 lbs

B101 BOTTLE OPTIONS

B101 TC
tri clamp conenction available on request.
Also with security TC locking (B101TCS).

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

Other Specialconnection available on request

BOTTLE B102

When maximum shock resistance is required, the bottle B102 is the best option for Valve DN50. The bottle has a solid metallic body, with glass windows.
The material of the bottle body in contact with the fluid can be selected for the application ATEX & FDA approval, make it suitable for most application.

	TECHNICAL DATA
MODEL	B101
SIZE	150ml (Optional 80ml / 200ml)
APPLICABLE TO:	- Sampling DN50 - Sampling DN25 - Horizontal sampling
MAX TEMP (Continuous):	+180°C / +356°F
MAX TEMP (Short Period):	+220°C / +428°F
MIN TEMPERATURE:	-40°C / -40°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	10 bar / 145 psi
OPERATING PRESSURE:	From full vacuum up to 10 bar / 145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	94/9/EC ; FDA
BODY MATERIAL	Stainless steel 1.4435 (316l), Hastelloy, Titanium etc
GASKET	PTFE
WEIGHT	1 kg / 2.2 lbs

B102 BOTTLE OPTIONS

B102 TC
tri clamp conenction available on request. Also with security TC locking (B102TCS)

Other Special connection available on request

B102 PU
Bottle with purge connection for cleaning or aspirationconnection. Also available with ½" TC purge (B102 PTC)

B102S
Security Locking, to avoid accedental disassembly of the bottle

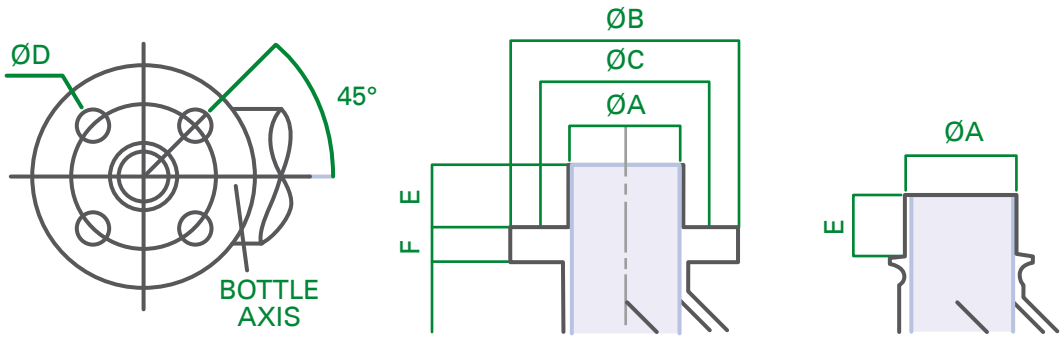
BOTTLE B107/B105

Standard glass bottle for laboratory use. The modified design of connection surface, improve sealing performance.
Special size available on request.

	TECHNICAL DATA
MODEL	B107/ B105
SIZE	100 ml (other sizes on request)
APPLICABLE TO:	- Sampling DN50 (B105) - Sampling DN25 (B107) - Horizontal sampling (B107)
THREAD SIZE	GL 45
MAX TEMP (Continuous):	+180°C / +356°F
MAX TEMP (Short Period):	+180°C / +356°F
MIN TEMPERATURE:	-40°C / -40°F
MAX PRESSURE:	10 bar (recommended up to 6bar)
GASKET	PTFE
WEIGHT	0.2 kg / 0.45 lbs

Other special bottles (dimensions, material, shape...) available on request.

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	Triclamp ISO 2852 2″	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	Triclamp ISO 2852 2.1/2″	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	Triclamp ISO 2852 3″	80					35	

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

NO NOSE

With this solution the piston is expanding directly in the nose

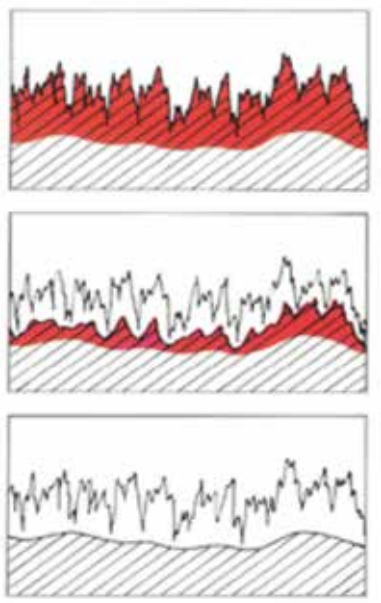
O-RING IN NOSE

An o-ring on the nose can be installed at the edge of the nose.

SPECIAL NOSE

Nose with special shape to fit any special installation

SURFACE FINISH



Standard surface finish for valve internal surface is Ra = 0.8 µm
All surface in contact with fluid are completely machined. No rough surface in contact with fluid.
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
When required, electropolishing can be applied to improve the surface profile and guarantee the maximum hygienic results.

External surface of valves, is usually within a range from Ra= 3.2µm to Ra= 1.6 µm
On request value between Ra= 0.8 µm and Ra= 0.4 µm can be reached with special process developed by FAMAT, which combines electropolishing with mechanical surface treatment.

OUTLER OPTIONS

BAYONET
Standard connection for DN50 Valve.
Suitable for all standard type of bottles.

GL 45 CONNECTION
The GL45 conenction is standard for DN25 valve. The PTFE body with internal VMQ (silicone rubber) gasket guarantee maximum sealing.

SMALL BAYONET
Smaller version of bayonet conenction, adapted for DN 25 valve.

TRI-CLAMP
Tri clamp connection. Available for all valves.

FOOD COUPLING

FLANGED CONNECTION

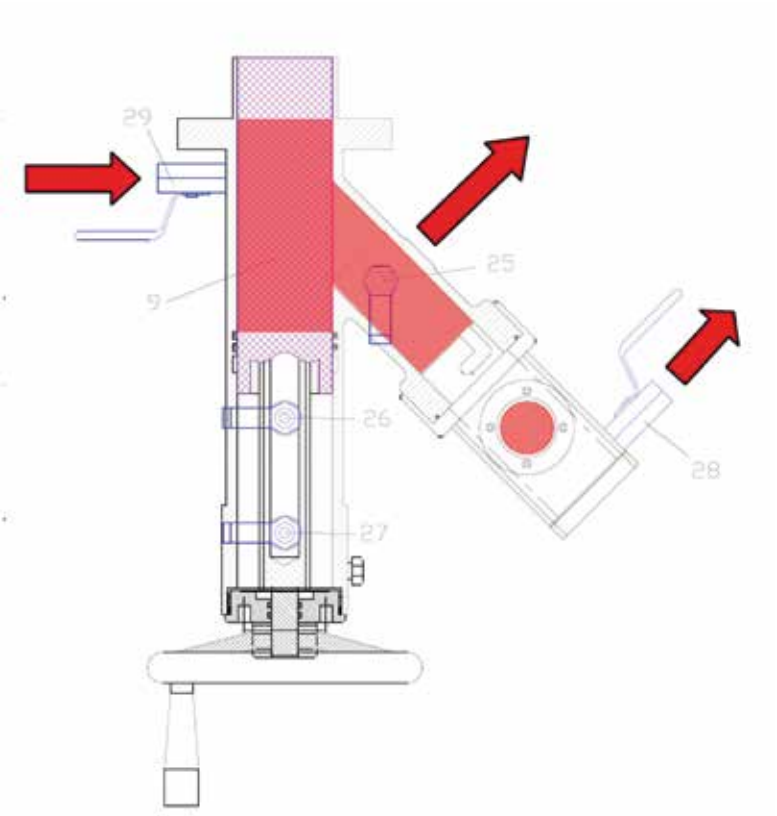
CLEANING IN PLACE (CIP)

FAMAT Valve can be equipped 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 (EASYCLEAN) permit a rapid disassembly of the valve for complete cleaning.

The cleaning connection may be through valves in polished stainless steel with G 1/8" connection, or TC ½" connection.



OTHER OPTIONS

HYGENIC BUTTERFLY VALVE

Installed on Valve allows to isolate bottle and/ or valve outlet from external contamination.

	TECHNICAL DATA
SIZE	1.1/2″ – 2″
MAX TEMPERATURE:	+120°C / +356°F
MIN TEMPERATURE:	-40°C / -40°F
PRESSURE CLASS:	PN10
DESIGN PRESSURE:	10 bar / 145 psi
TEST PRESSURE:	15 bar / 218 psi
OPERATING PRESSURE:	From full vacuum up to 10 bar / 145 psi
INT. ROUGHNESS:	Ra ≤0.8 µm
EXT. ROUGHNESS:	Ra ≤1.6 µm
APPL. STANDARD:	94/9/EC (ATEX) ; FDA
BODY MATERIAL	Stainless steel 1.4404 (316L)
GASKET	EPDM
WEIGHT	0.6 kg / 1.3 lbs

STAINLESS STEEL HANDWHEEL

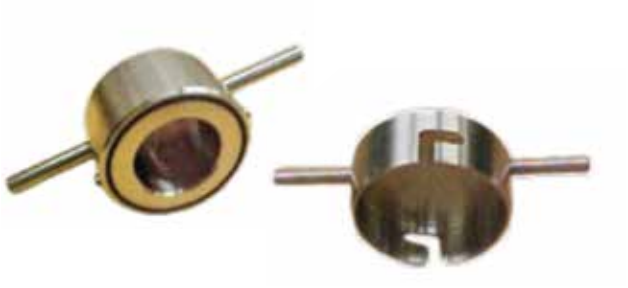
Option for corrosive environnent installation

HANDWHEEL WITH TURN INDICATOR

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

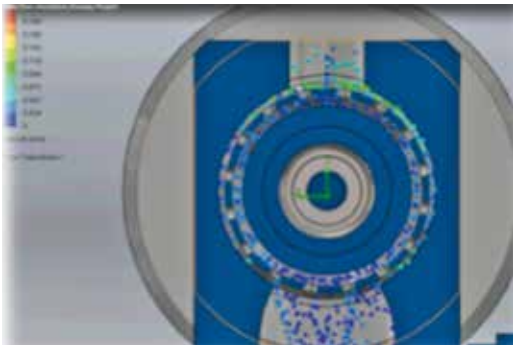
PROXIMITY SWITCH

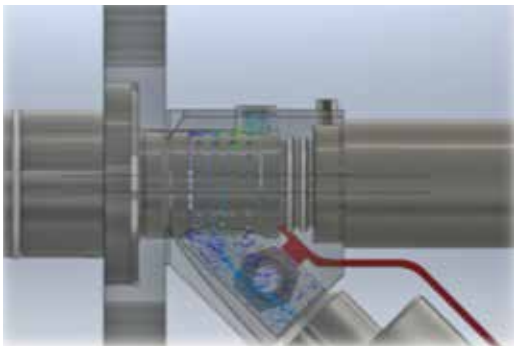
To indicate position of valve



BAYONET BOTTLE & BODY COVER

CUSTOM SAMPLING SOLUTIONS

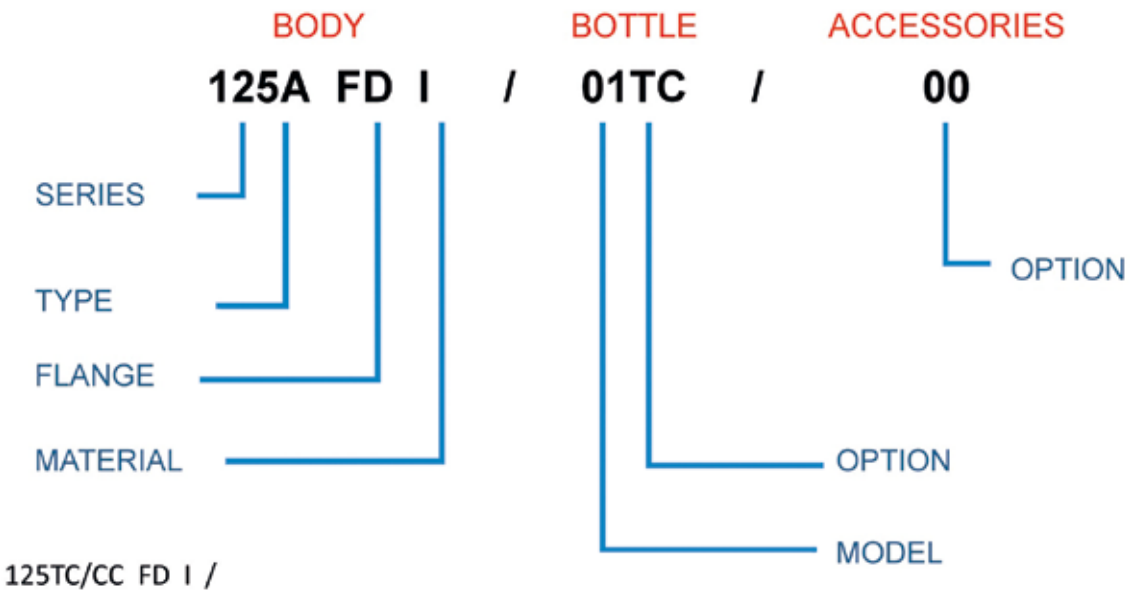




Famat not only supplies valves, but can provide a custom designed product that fully integrates in the production process.

- 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

CODIFICATION



BODY							
SERIES		**MODEL (1)**		**FLANGE**		**MATERIAL (3)**	
Code	Desr.	Code	Desr.	Code	Desr.	Code	Desr.
115	Sampling Valve DN 15	A	Standard (2)	FD	FAMAT DIN	I	1.4435(316L)
130	Sampling Valve DN 25	B	Standard updt1 (2)	FA	FAMAT ANSI	C22	hast C22
125	Sampling Valve DN 50	C	Standard updt2 (2)	ND	DIN Norm	TIT	Titan
135	Metal Sampling Valve DN50	D	Standard updt3 (2)	NA	ASME/ANSI Std.	1.4539	1.4539 (904L)
225	Tank Bottom Valve DN25	TC	EasyClean	TC	Tri Clamp	1.4571	1.4404 (316Ti)
250	Tank Bottom Valve DN50	CC	Crust Breaking	SP	Special Flange	316L	1.4404 (316L)
280	Tank Bottom Valve DN80	M	High Temp.				
325	Charging Valve DN25	AUT	Automatic				
350	Charging Valve DN50	OEL	High-Containment				
		NIR	Near Infra Red				
		G	Gas				
		H	Horizontal				
		S	Security				

1. Two model codes needs to be combined it must be used a "-" as separator:
   Es 125CC-TC The option has been listed in alphabetic order
2. The standard valve is identified by a letter, which change when the design is updated
3. For material not listed, the code will be the material grade

CODIFICATION (CONTINUE)

BOTTLE			
MODEL		**ACCESSORIES/ OPTIONS (1)**	
Code	Desc.	Code	Desc.
00	No Bottle	TC	Tri-Clamp
01	Type B101.	PU	Purge
02	Type B102	RL	Food Coupling
03	HCB Bottle SS	FD	FAMAT DIN
04	HCB Bottle PEEK	FA	FAMAT ANSI
05	Type B105 (Bayonet)	ND	DIN Norm
05M	Type B107/B105M (GL45)	NA	ASME/ANSI Std.
09	Type SB102		

ACCESSOIRES / OPTIONS	
Code	Desc. (1)
00	Standard
OR	O-ring on nose
RAC	Scraper
N1	Nose length 0 – 10
N2	Nose length 10 – 35
N3	Nose length 35 – 50
N4	Nose length 50 – 70
N5	Nose length 70 – 80
N6	Nose length 80 – 100
ND	Special Nose Diameter
NSP	Special Nose (not listed above)
FC	Limit switch (Fin course)
PK	PEEK Piston
CIP	Cleaning in Place
SIP	Sterilization in Place
VI	Inox Handwheel
VA	Arrow Handwheel
BV	Butterfly Valve
BVA	Butterfly Valve Automatic

CONTACTS

Please do not hesitate to contact us
for any inquiry or information.

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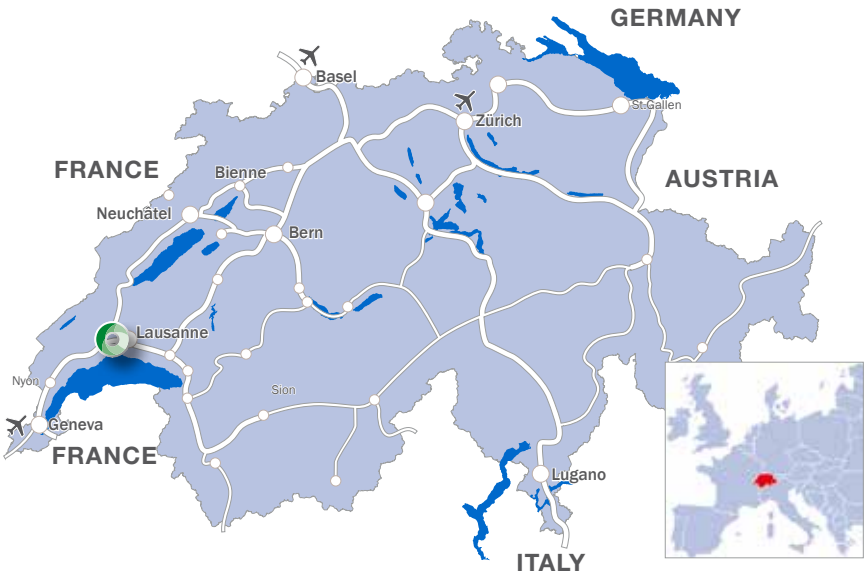
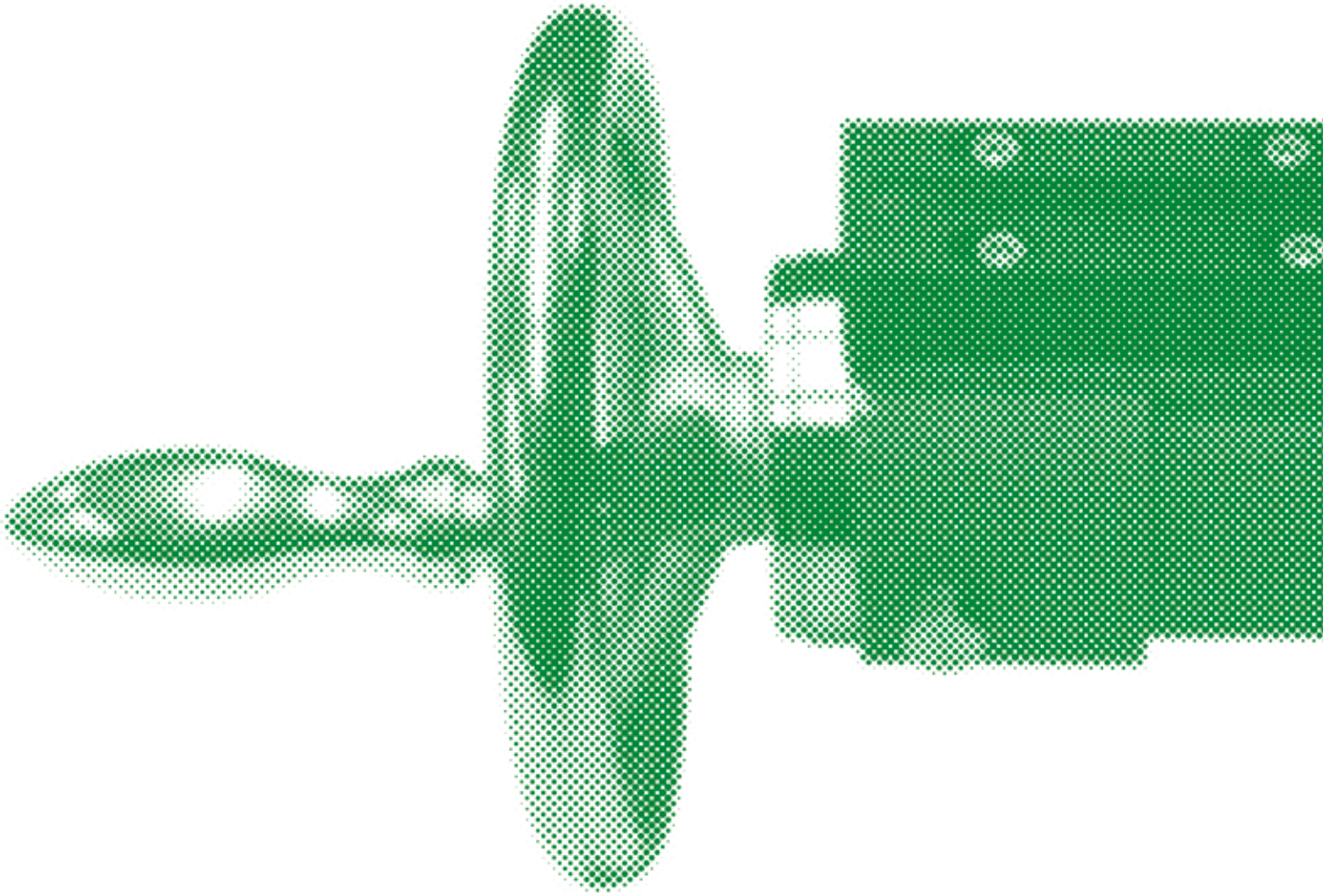


ACCESS
Nearest airport: Geneva Airport (53 Km)
Nearest train station: Morges (5.5 Km)
Nearest highway: A1
Exit: UNIL – EPFL, St-Sulpice (4 Km)



FAMAT
ENGINEERED VALVES

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