I.T.E.

ITALIAN TECHNICAL EQUIPMENT

SAMPLING SYSTEMS

DATASHEET

Campionatore di Processo
Sampling Systems

Mod.
S101-L

DESCRIZIONE / DESCRIPTION

Il Campionatore modello **S101-L** con dispositivo a doppia valvola inter-bloccata permette di ottenere un campione molto rappresentativo perché dotato di una singola leva di manovra unidirezionale a due posizioni.

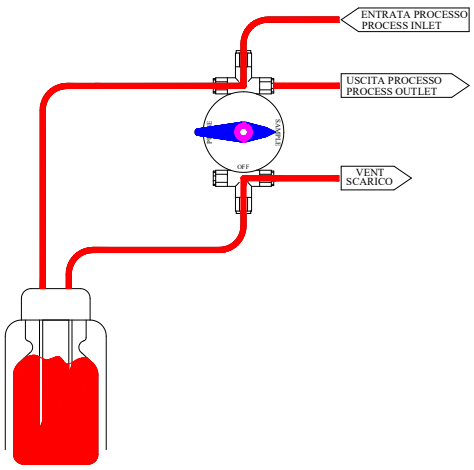
- " OFF " tutte le valvole sono chiuse
- " PURGE " il fluido di processo circola nella valvola.
- " SAMPLE " in questa posizione la valvola mette in comunicazione il processo con lo scarico passando attraverso la bottiglia di raccolta campione.

Mantenere questa posizione per il tempo necessario ad ottenere un campione rappresentativo.

The sampling unit model **S101-L** with inter-locked double valve enables to obtain a highly representative sample because it is fitted with one unidirectional control lever with two positions.

- " OFF " all valves are closed.
- " PURGE " the process fluid circulates in the valve.
- " SAMPLE " in this position the valve connects the process with the exhaust passing through the sample collection bottle.

Keep in position as long as a representative sample is obtained.

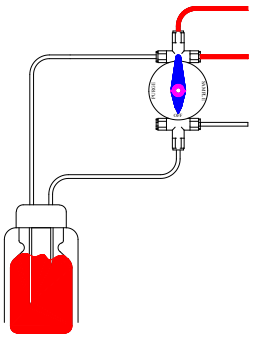


Funzionamento / Operating

0 - CHIUSO / OFF

Leva in posizione " OFF "
Applicare un nuovo septum alla bottiglia campione, inserire la bottiglia con il septum e il tappo all'interno del supporto fino a quando il septum viene perfortato dagli aghi. Bloccare la bottiglia con la apposita staffa. In questa posizione la valvola della linea di scarico è chiusa.

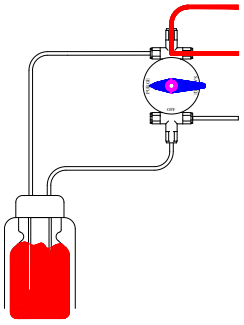
Lever in " OFF "
Apply a new septum to the sample bottle, insert the bottle with the septum and the cover inside the stand until the septum is punched by the needles. Block the bottle with the specific bracket. In this position the valve of the exhaust line is closed.



1 - PULIZIA SISTEMA / SYSTEM PURGE

Portare la leva in posizione " PURGE " il fluido di processo inizia a circolare nella valvola. Mantenere questa posizione per il tempo necessario a garantire un campione rappresentativo. In questa posizione la valvola della linea di scarico è chiusa.

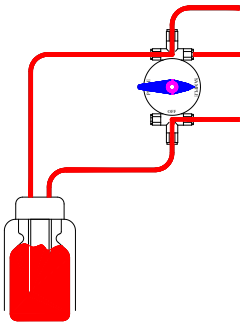
Bring the lever to "PURGE", the process fluid starts circulating inside the valve. Keep in position as long as a representative sample is obtained. In this position the exhaust valve is closed.



2 - CAMPIONAMENTO / SAMPLING

Portare la leva in posizione " SAMPLE ". In questa posizione in comunicazione il processo con lo scarico passando attraverso la bottiglia di raccolta campione. Mantenere questa posizione per il tempo necessario ad ottenere un campione rappresentativo. In questa posizione la valvola di ritorno in processo è chiusa.

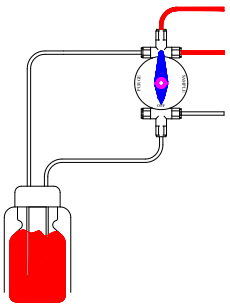
Bring the lever to " SAMPLE ". In this position the process is connected to the exhaust unit passing through the sample collection bottle. Keep in position as long as a representative sample is obtained. In this position the on-off valve in process is closed.

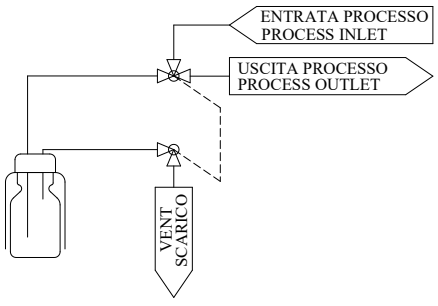


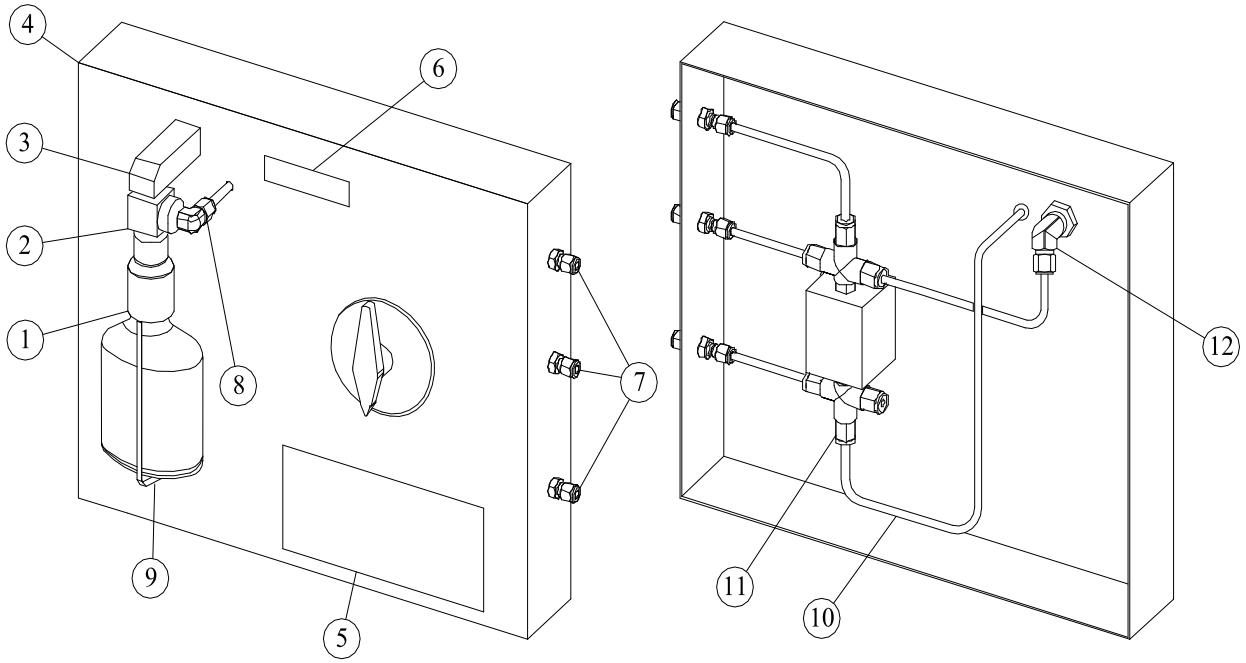
3 – CHIUSO / OFF

Portare la leva in posizione " OFF ". Rimuovere la staffa di bloccaggio ed estrarre la bottiglia dal relativo supporto il septum si risigillerà automaticamente. Tutte le valvole sono chiuse.

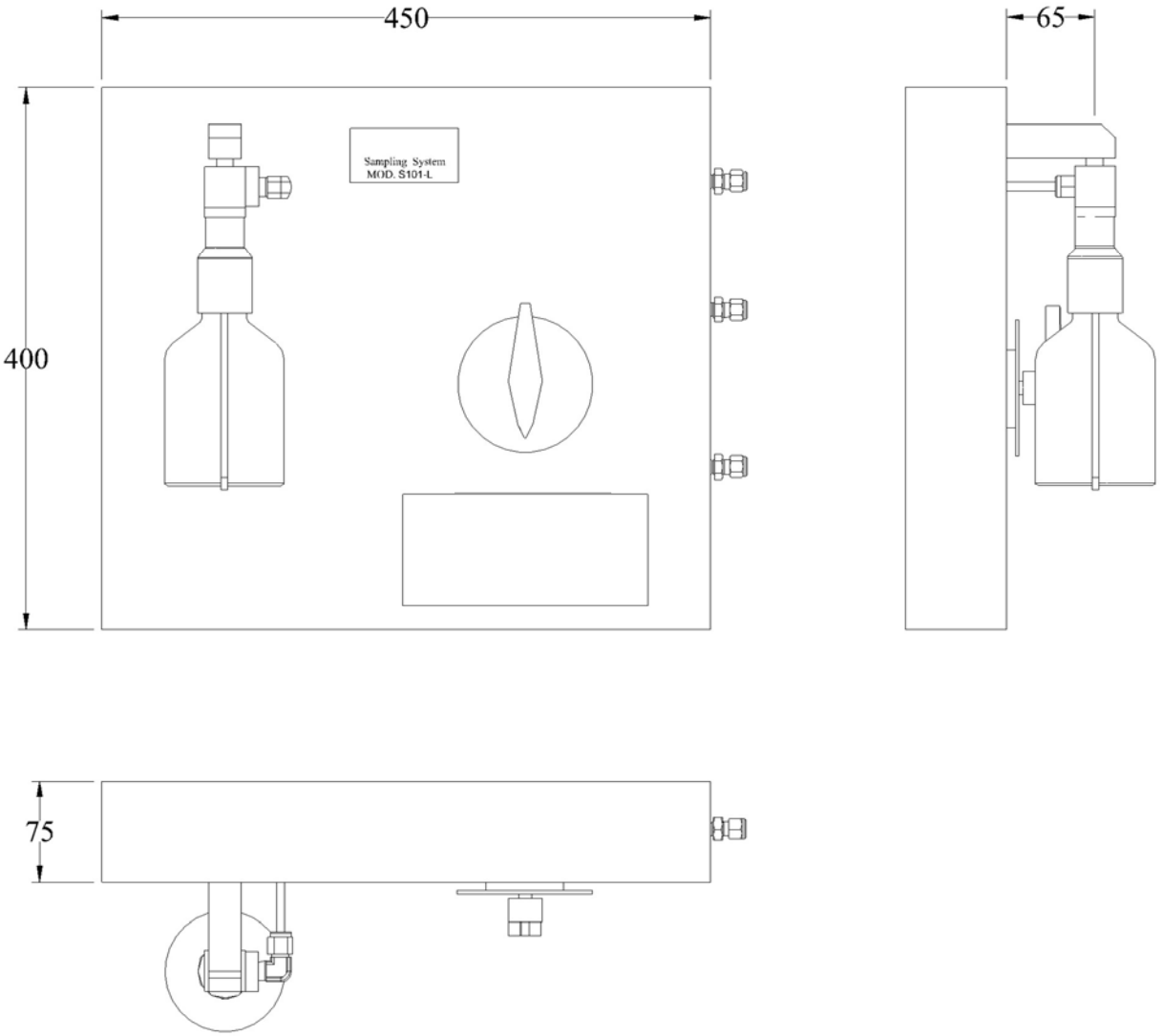
Bring the lever to " OFF ". Remove the locking bracket and pull out the bottle from the stand. The septum will seal back automatically. All the valves are closed.







Pos. Item	Descrizione Description		Dimensione Dimension	Quantità Quantity	Materiale Material
1	Supporto Bottiglia	Sleeve	1000 cc	1	316 L
2	Gruppo Aghi	Needle Assemblies	1.35 mm.	1	316 L
3	Curva Passaparete	Bulkhead Elbow	6 x 1/4" NPT-F	1	316 L
4	Piastra	Plate	450 x 450 sp. 3 mm	1	316 L
5	Targhetta Istruzioni	Instruction Label	150 x 300 sp. 1 mm	1	Trafolite
6	Targhetta di Identificazione	Identification Label	40 x 80 sp. 1 mm	1	316 L
7	Intermedio Passaparete	Bulkhead Union	6 mm.	3	316 L
8	Curva	Elbow	6 x1/4" NPT-M	1	316 L
9	Bottiglia Campione	Containers	1000 cc	1	Clear Glass
10	Tubing Senza Saldatura	Seamless Tubing	6 x 1 mm.	2 mt.	316 L
11	Valvola a Sfera Interbloccata	Interlocked Ball Valve	6 mm Tube Fittings	1	316 L
12	Curva	Elbow	6 x1/4" NPT-M	1	316 L



Targhetta di Identificazione - Identification Label

I.T.E. s.r.l.

SAMPLING SYSTEM

MOD. S101-L

DESCRIZIONE / DESCRIPTION

Il Campionatore modello **S203-L** con dispositivo a tripla valvola inter-bloccata permette di ottenere un campione molto rappresentativo perché dotato di una singola leva di manovra unidirezionale a tre posizioni.

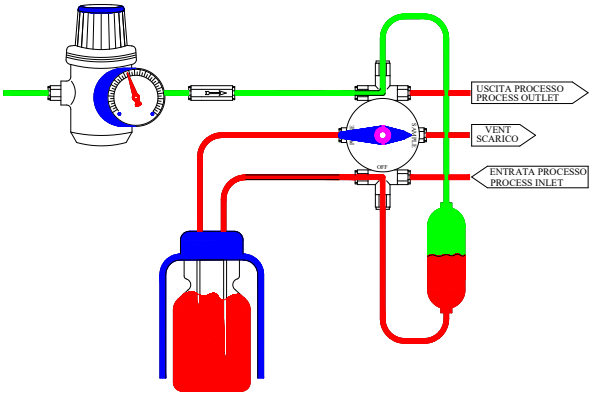
- " OFF " tutte le valvole sono chiuse
- " PURGE " il campione circola nel cilindro di campionamento.
- " SAMPLE " esclude il processo, apre la valvola di scarico, apre la valvola del gas inerte, il quale entra nel cilindro spingendo il campione nella bottiglia e scaricando quello in eccesso.

Mantenendo il campionatore in posizione " SAMPLE " si pulisce tutto il sistema.

The sampling unit model **S203-L** with inter-locked triple valve enables to obtain a highly representative sample because it is fitted with one unidirectional control lever with three positions.

- " OFF " all valves are closed.
- " PURGE " the sample circulates in the sampling cylinder.
- " SAMPLE "interrupts the process, opens the exhaust valve, opens the inert gas valve, which enters the cylinder pushing the sample through the bottle and exhausting the excess quantity.

By keeping the Sampling unit in "SAMPLE" the entire system is cleaned

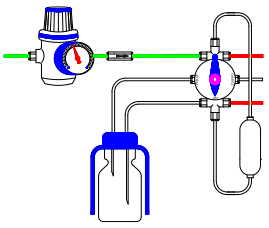


Funzionamento / Operating

0 - CHIUSO / OFF

Leva in posizione " OFF "
Applicare un nuovo septum alla bottiglia campione, inserire la bottiglia con il septum e il tappo all'interno del supporto fino a quando il septum viene perforato dagli aghi. Bloccare la bottiglia con la apposita staffa. In questa posizione la valvola della linea di scarico è chiusa.

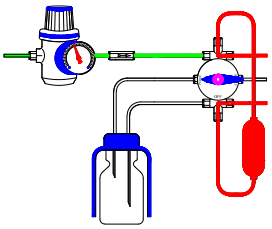
Lever in " OFF "
Apply a new septum to the sample bottle, insert the bottle with the septum and the cover inside the stand until the septum is punched by the needles. Block the bottle with the specific bracket. In this position the valve of the exhaust line is closed.



1 - PULIZIA SISTEMA / SYSTEM PURGE

Portare la leva in posizione " PURGE " il fluido di processo inizia a circolare nella valvola. Mantenere questa posizione per il tempo necessario a garantire un campione rappresentativo.

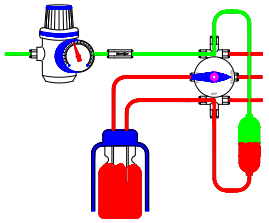
Bring the lever to "PURGE", the process fluid starts circulating inside the valve. Keep in position as long as a representative sample is obtained.



2 - CAMPIONAMENTO / SAMPLING

Portare la leva in posizione " SAMPLE ". In questa posizione isi esclude il processo, si mette in comunicazione il cilindro di campionamento con la bottiglia di raccolta campione e la linea di scarico. Il gas inerte spingerà il campione nella bottiglia e pulirà il campionatore. Mantenere questa posizione per il tempo necessario, la valvola della linea è aperta.

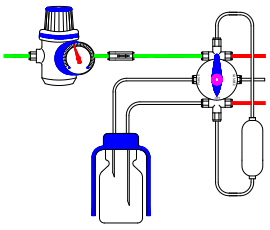
Bring the lever to " SAMPLE ". In this position the process is interrupted, the sanpling cylinder is connected to the sample collection bottel and the exhaust line. The inert gas will push the sample into the bottle and clean the sampling unit. Keep in position as long as necessary, the valve of the line is open.

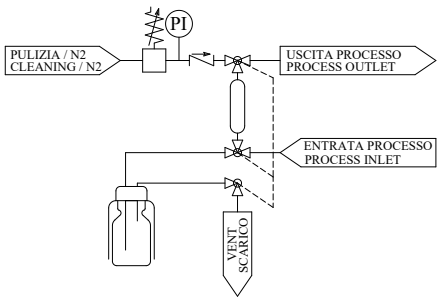


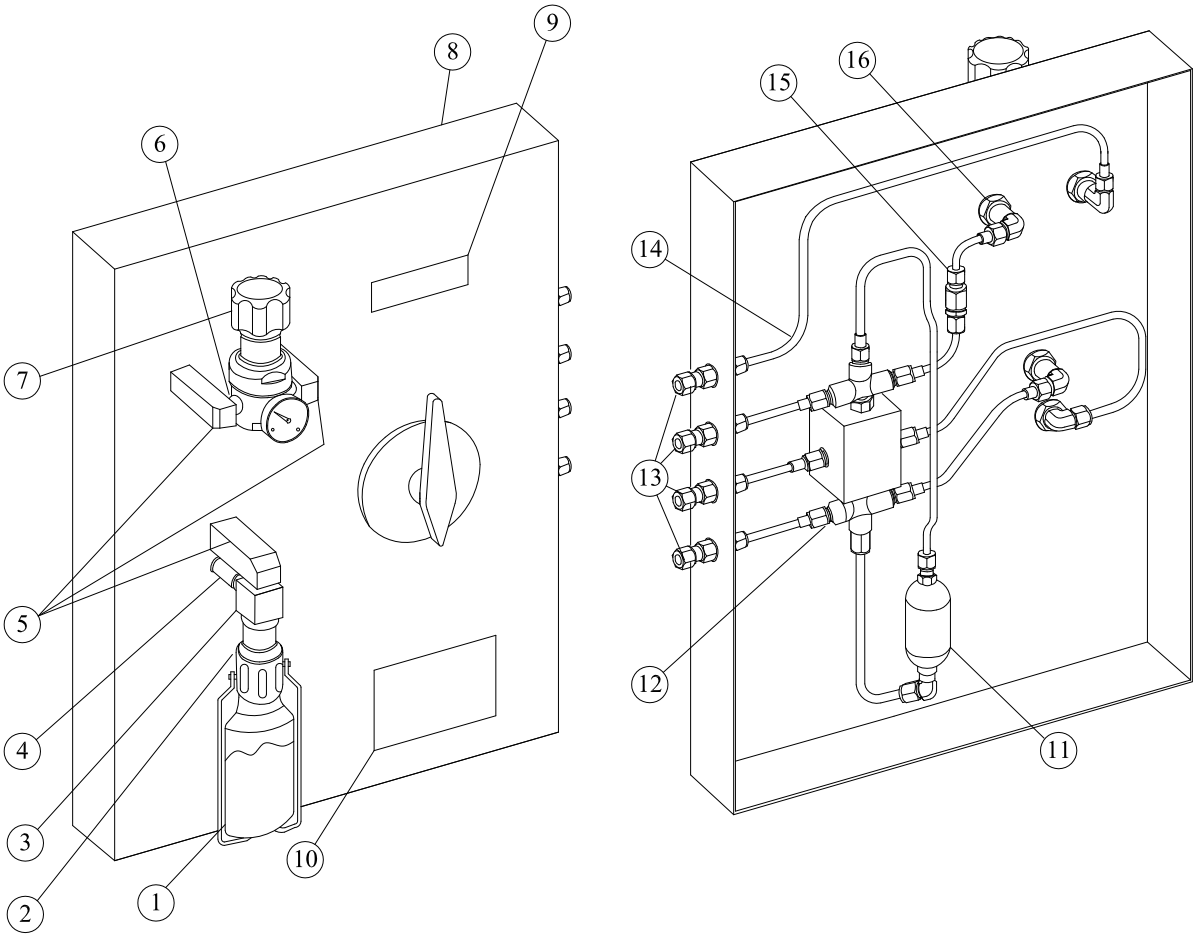
3 – CHIUSO / OFF

Portare la leva in posizione " OFF ". Rimuovere la staffa di bloccaggio ed estrarre la bottiglia dal relativo supporto il septum si risigillerà automaticamente. Tutte le valvole sono chiuse.

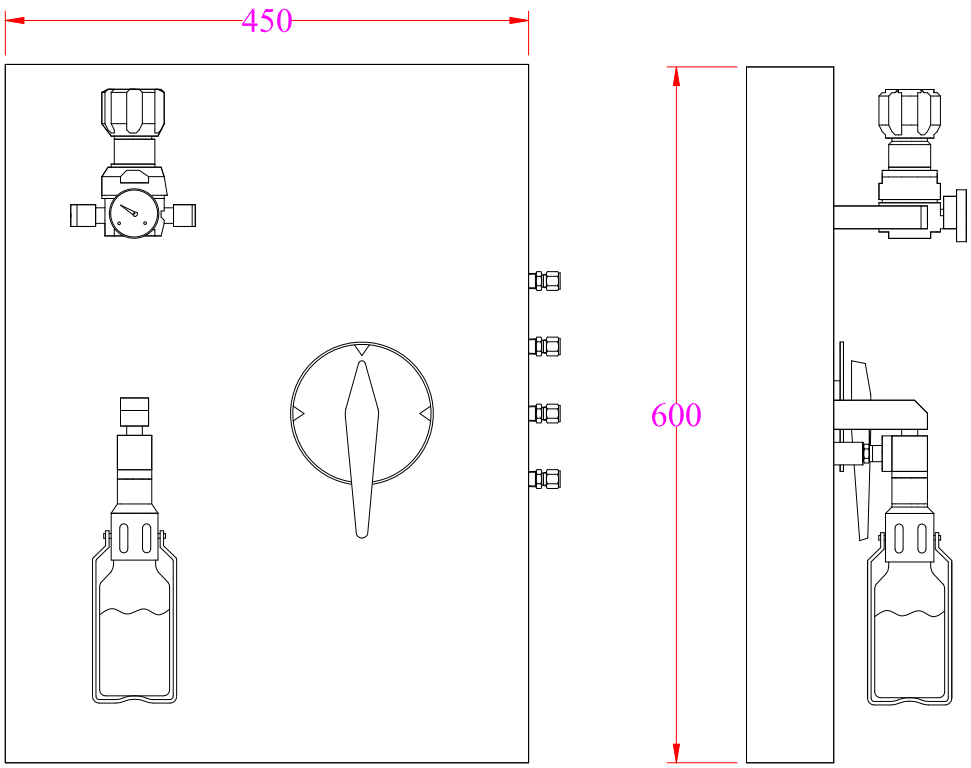
Bring the lever to " OFF ". Remove the locking bracket and pull out the bottle from the stand. The septum will seal back automatically. All the valves are closed.

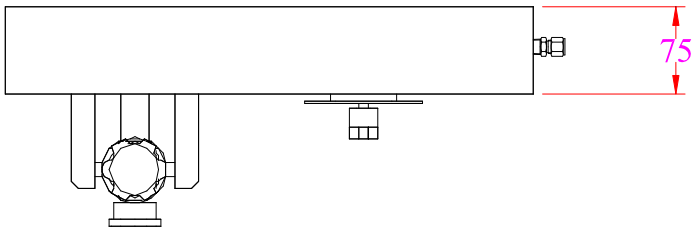






Pos. Item	Descrizione Description		Dimensione Dimension	Quantità Quantity	Materiale Material
1	Bottiglia Campione	Containers	60 cc	1	Clear Glass
2	Supporto Bottiglia	Sleeve	60 cc	1	316 L
3	Gruppo Aghi	Needle Assemblies	1/4" NPT-M/F - 1.35 mm.	1	316 L
4	Passaparete	Bulkhead	1/4" NPT-MxF	1	316 L
5	Curva Passaparete	Bulkhead Elbow	6 x 1/4” NPT-F	3	316 L
6	Nippli	Nipples	1/4" NPT-M	2	316 L
7	Regolatore di Pressione	Pressure Regolator	1/4" NPT-F	1	316 L
8	Piastra	Plate	600 x 450 sp. 3 mm	1	316 L
9	Targhetta di Identificazione	Identification Label	40 x 80 sp. 1 mm	1	316 L
10	Targhetta Istruzioni	Instruction Label	150 x 100 sp. 1 mm	1	Trafolite
11	Cilindro di Campionamento	Sample Cylinder	60 cc. - 1/4" NPT-F	1	316 L
12	Valvola a Sfera Interbloccata	Interlocked Ball Valve	6 mm	1	316 L
13	Intermedio Passaparete	Bulkhead Union	6 mm.	4	316 L
14	Tubing Senza Saldatura	Seamless Tubing	6 x 1 mm.	3 mt.	316 L
15	Valvola Antiritorno	Check Valve	6 mm.	1	316 L
16	Curva 90°	Elbow 90°	6 mm.	4	316 L





Targhetta di Identificazione - Identification Label

I.T.E. s.r.l.

SAMPLING SYSTEM

MOD. S203-L

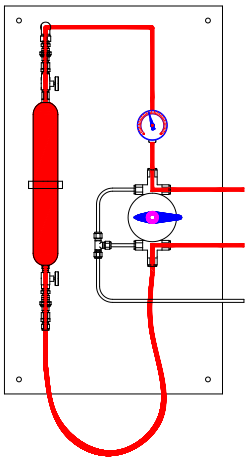
Campionatore di Processo
Sampling Systems

Mod.
S301-LG

Descrizione / Descritpion

Questo campionatore è dotato di sistema di pulizia del punto di prelievo e di un cilindro campionatore. Questo sistema permette di effettuare un prelievo incontaminato e in tutta sicurezza sia per l'operatore che per l'ambiente in quanto le manovre per la pulizia,il prelievo,la depressu-rizzazione vengono effetuate con un'unica leva di mano-vra unidirezionale che permette la gestione di diverse valvole tra loro interlacciate.

This sampling system is provided with a purging system for sampling point and a sampling cylinder. This system allows carrying out uncontaminated sampling in complete safety both for the operator and the environment, as purging, sampling, depressurizing cycles are performed with a single one-way operating lever, which allows managing various interfaced valves.

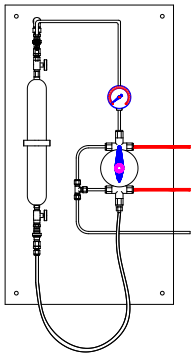


Funzionamento / Operating

0 - CHIUSO / OFF

Installare il cilindro di campionamento e connettere il raccordo flessibile alla parte inferiore del cilindro stesso Aprire le valvole a spillo del cilindro di campionamento.

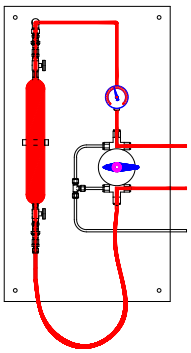
Install the sampling cylinder and connect the connecting hose to the cylinder lower side. Open the sampling cylinder needle valves.



1 - PULIZIA SISTEMA / SYSTEM PURGE

Portare la leva in posizione " PROCESS" il fluido di processo inizia a circolare nel cilindro di campionamento. Mantenere questa posizione per il tempo necessario a garantire un campione rappresentativo.

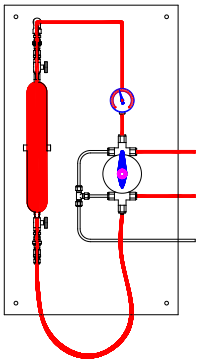
Bring the lever to "PROCESS", the process fluid starts circulating inside the sampling cylinder. Keep in position as long as a representative sample is obtained.



2 - CHIUSO / OFF

Portare la leva in posizione "OFF" chiudere le due valvole a spillo del cilindro di campionamento.

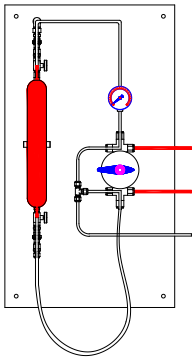
Bring the lever to "OFF". Close the two needle valves of the sampling cylinder.



3-DEPRESSURIZZAZIONE/DEPRESSURISE

Portare la leva in posizione "DEPRESSURISE In questa posizione si mette in comunicazione il cilindro di campionamento con la linea di scarico. Le linee di connessione verranno cosi depressurizzate, mentre il cilindro di campionamento rimane in pressione.

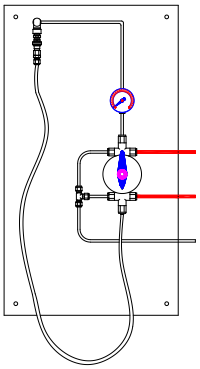
Bring the lever to "DEPRESSURISE". In this position the sampling cylinder communicates with the discharge line. The connection lines are depressurised, whereas the sampling cylinder remains in pressure.

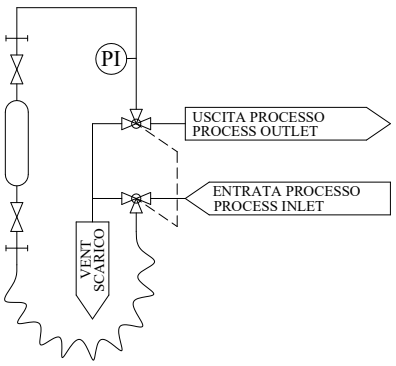


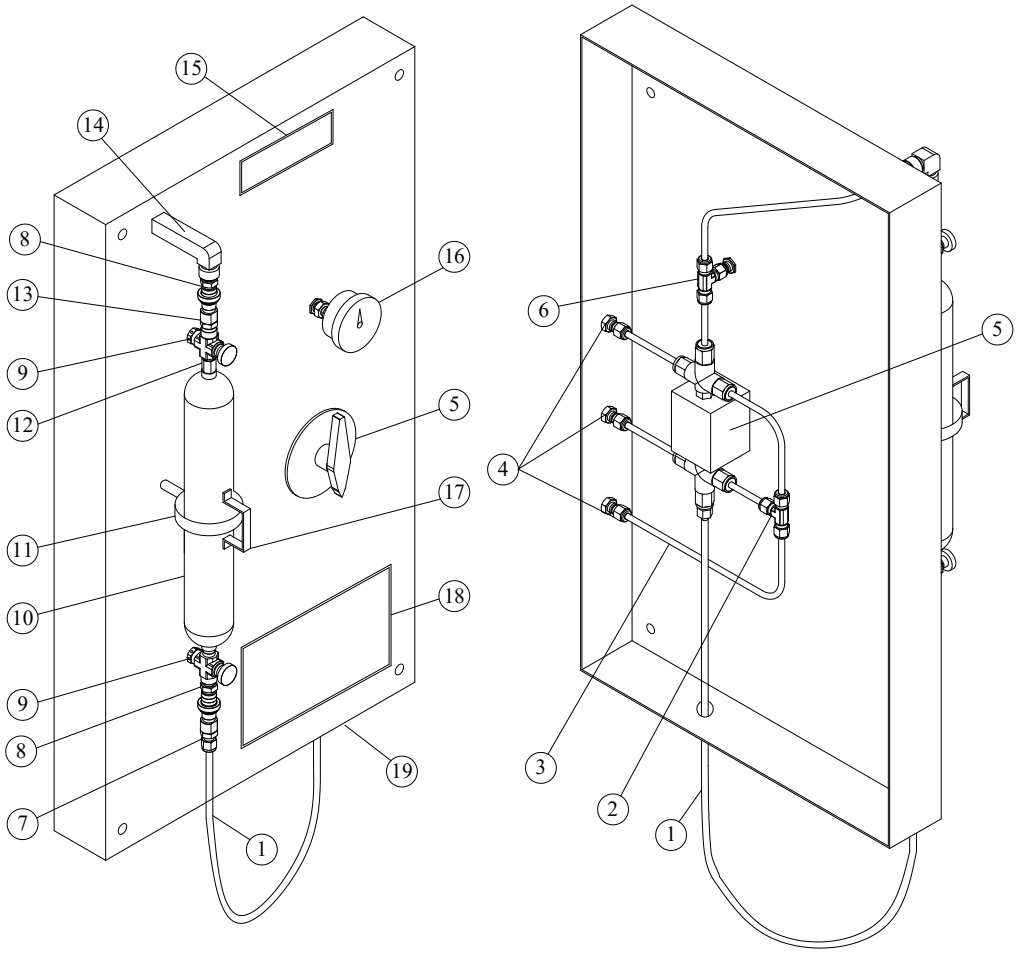
4 - CHIUSO / OFF

Portare la leva in posizione "OFF". Scollegare il raccordo flessibile. Rimuovere il cilindro di campionamento e collegare il tubo flessibile all'attacco ad innesto rapido

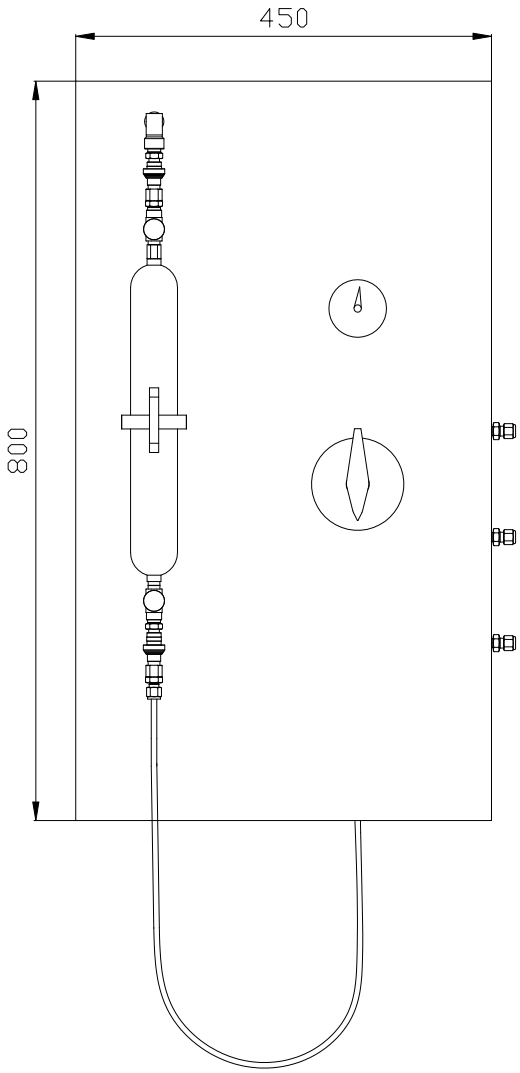
Bring the lever to "OFF". Disconnect the connecting hose. Remove the sampling cylinder and connect the connecting hose to the quick coupling.

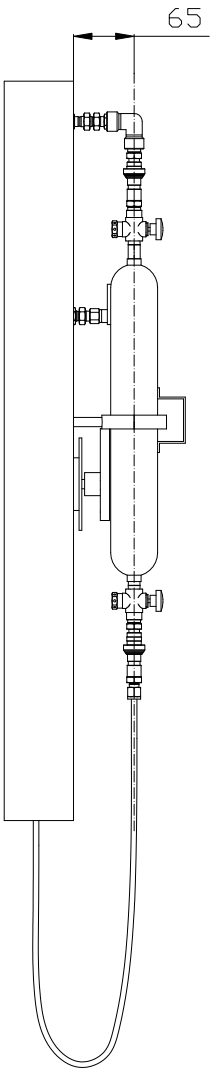


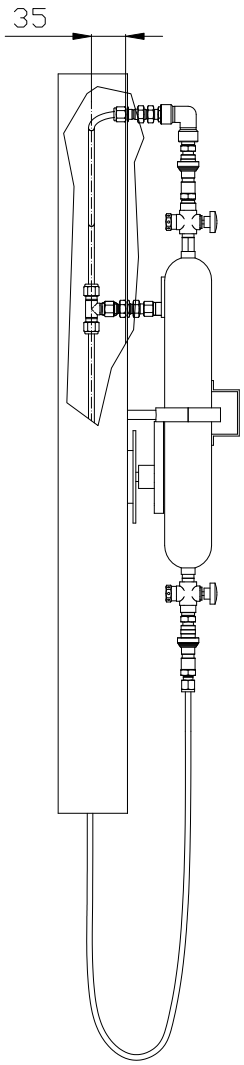


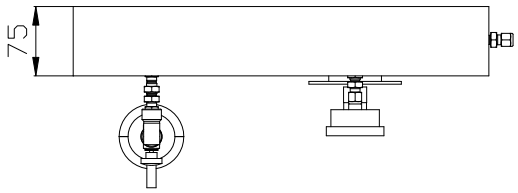


Pos. Item	Descrizione Description		Dimensione Dimension	Quantità Quantity	Materiale Material
1	Tubo Flessibile	Metal Flexible House	6 mm. Tube Adapters	1	316 L
2	Tee	Tee	6 x 6 x 6 mm	1	316 L
3	Tubing Senza Saldatura	Seamless Tubing	6 x 1 mm	2m	316 L
4	Intermedio Passaparete	Bulkhead Union	6 mm	3	316 L
5	Valvola a Sfera Interbloccata	Interlocked Ball Valve	6 mm Tube Fittings	1	316 L
6	Tee Passaparete	Bulkhead Tee	6 x 6 x1/4” NPT-F	1	316 L
7	Innesto Rapido - Corpo	Quick Connects - Bodie	6 mm Tube Fittings	1	316 L
8	Innesto rapido - Radice e Protector	Quick Connects - Stem and Protector	1/4" NPT-M	2	316 L
9	Valvola a Spillo	Needle Valve	1/4" NPT-M/F	2	316 L
10	Cilindro di Campionamento	Sample Cylinder	1/4" NPT-M	1	316 L
11	Supporto Cilindro	Cylinder Support	Ø 51 mm	1	316 L
12	Tubo di Troppopieno	Outage Tube	1/4" NPT-M/F	1	316 L
13	Innesto rapido - Corpo e Protector	Quick Connects - Body and Protector	1/4" NPT-M	1	316 L
14	Curva Passaparete	Bulkhead Elbow	6 x1/4" NPT-F	1	316 L
15	Targhetta di Identificazione	Identification Label	20 x 80 sp. 1 mm	1	316 L
16	Manometro a Molla Bourdon	Bourdon Tube Pressure Gauges	1/4" NPT-M	1	Trafolite
17	Maniglia Cilindro	Carrying Handle Cylinder	Ø 51 mm	1	316 L
18	Targhetta Istruzioni	Instruction Label	100 x 300 sp. 1 mm	1	Trafolite
19	Piastra	Plate	450 x 800 sp. 3 mm	1	316 L









Targhetta di Identificazione - Identification Label

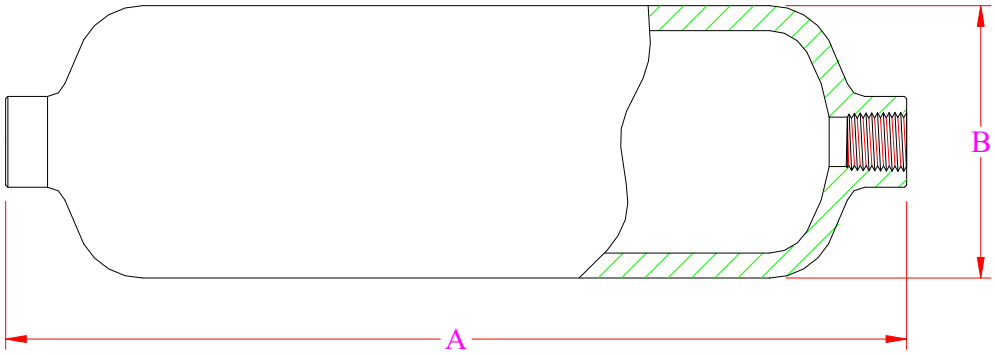
I.T.E. s.r.l.

SAMPLING SYSTEM

MOD. S301-LG

Cilindri di Campionamento e Accessori

Sample Cylinders and Accessories

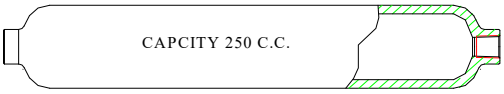


SC-75DE-4F-SS

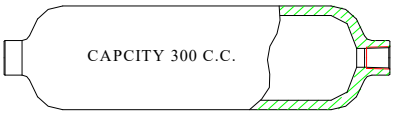
I.T.E. stainless steel sample cylinders provide safe containment for storage and transportation of both liquids and gases. Applications include hydrocarbon sampling in refineries, gas sampling in chromatography, and condensate sampling in fossil fuel. ANSI/ASME B1.20.1 internal pipe threads are machined into both ends of each cylinder to engage external pipe connections of I.T.E valves, rupture disc units, or fittings.

Stainless steel sample cylinders are hot spun from seamless Type 316 tubing for integrity and corrosion resistance. The process provides a smooth internal flow transition through the neck to minimize pockets which can trap previous samples. Without the need for welding, the interior surface is free of any imperfections. As a result, less contamination will adhere to the interior surface when the cylinder is cleaned.

SC-150DE-4F-SS

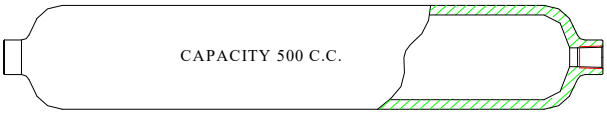


SC-250DE-4F-SS

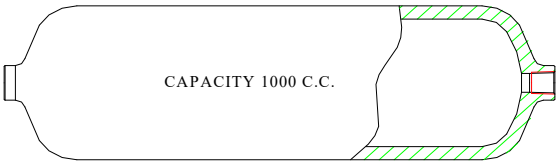


SC-300DE-4F-SS

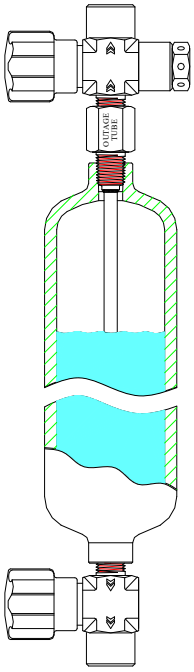
Material	Internal Volume C.C.	Sampling Cylinder Model No.	Dimensions A mm.	Dimensions B mm.
Stainless Steel 316L	75	SC-75DE-4F-SS	125	38
	150	SC-150DE-4F-SS	170	48
	250	SC-250DE-4F-SS	260	48
	300	SC-300DE-4F-SS	200	60
	500	SC-500DE-4F-SS	312	60
	1000	SC-1000DE-4F-SS	290	89



SC-500DE-4F-SS



SC-1000DE-4F-SS



Purpose

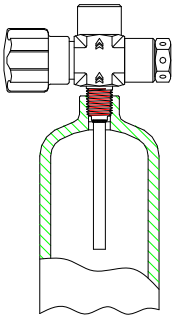
Outage tubes provide a vapor space of the desired volume in cylinders containing liquefi ed gases, so that liquid in the cylinder can expand if the temperature increases. Without enough vapor space, a small temperature increase can cause the liquid to expand and increase the pressure dramatically.
See local regulations and other appropriate guidelines for safe fi lling limits for your application.

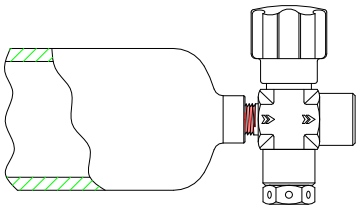
Use

Outage is the vapor space in the cylinder expressed as a percentage of the total volume of the cylinder.

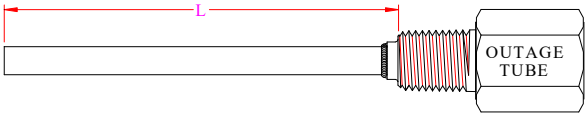
% outage = (vapor space/total volume) x 100

The cylinder is held vertically with the outage tube at the top, as shown. The length of the outage tube determines the amount of vapor space. Sampling methods and the use of the outage tube are described in technical publications such as ASTM D1265, Standard Practice for Sampling Liquefi ed Petroleum (LP) Gases (Manual Method).



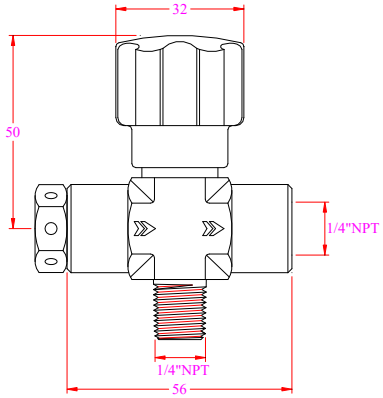


Outage Tube Length



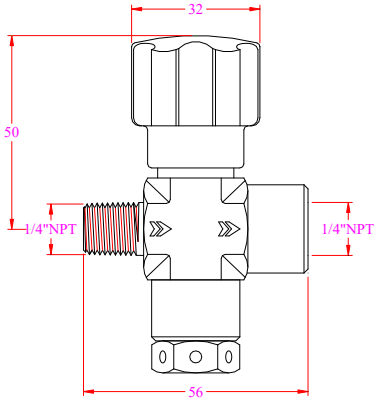
Tube OD	Sampling Cylinder Model No.	Minimum Outage %			
		20	30	40	50
		Tube Length "L" mm.			
6 mm.	SC-75DE-4F-SS	20	30	40	50
	SC-150DE-4F-SS	28	42	56	70
	SC-250DE-4F-SS	48	72	96	120
	SC-300DE-4F-SS	36	54	72	90
	SC-500DE-4F-SS	58	87	116	145
	SC-1000DE-4F-SS	52	78	104	130

Valvola a Spillo Articolo No. 01 - Needle Valve Article No. 01



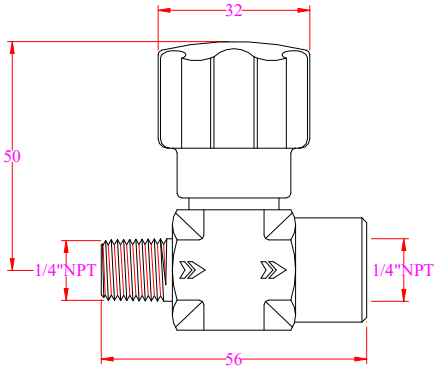
Corpo **Body**	ASTM A 182 TP 316L
Maniglia **Handle**	Alluminium
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-M/F a 90° con disco di rottura 1/4" NPT-M/F at 90° with rupture disc units

Valvola a Spillo Articolo No. 02 - Needle Valve Article No. 02



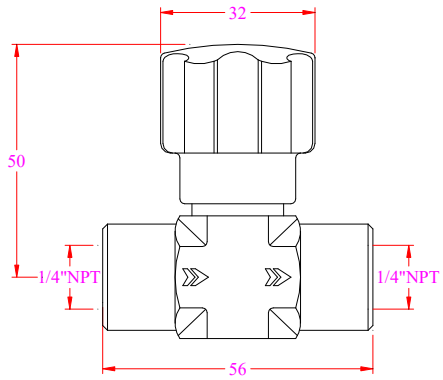
Corpo **Body**	ASTM A 182 TP 316L
Maniglia **Handle**	Alluminium
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-M/F a 180° con disco di rottura 1/4" NPT-M/F at 180° with rupture disc units

Valvola a Spillo Articolo No. 03 - Needle Valve Article No. 03



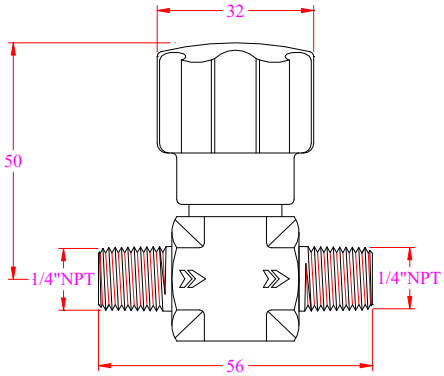
Corpo **Body**	ASTM A 182 TP 316L
Maniglia **Handle**	Alluminium
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-M/F a 180° 1/4" NPT-M/F at 180°

Valvola a Spillo Articolo No. 04 - Needle Valve Article No. 04



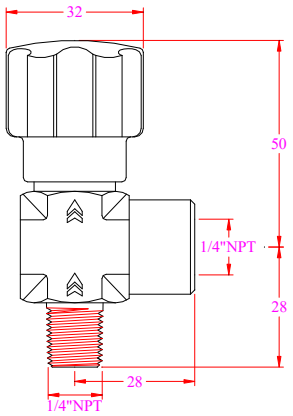
Corpo **Body**	Stainless Steel 316L
Maniglia **Handle**	Alluminium
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-F/F 1/4" NPT-F/F

Valvola a Spillo Articolo No. 05 - Needle Valve Article No. 05



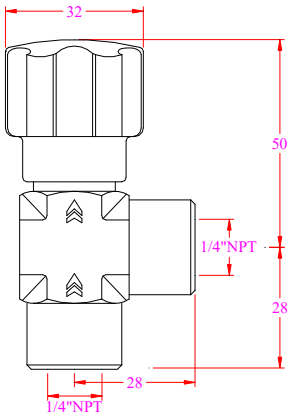
Corpo **Body**	Stainless Steel 316L
Maniglia **Handle**	Alluminium
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-M/M a 180° 1/4" NPT-M/M at 180°

Valvola a Spillo Articolo No. 06 - Needle Valve Article No. 06



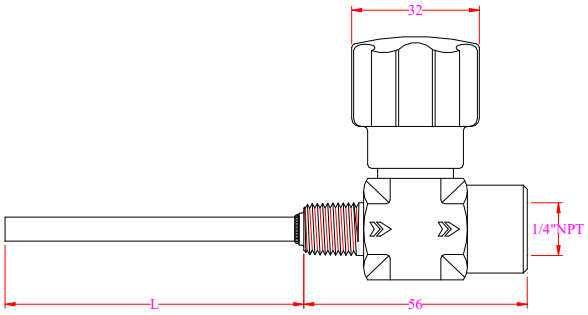
Corpo **Body**	Stainless Steel 316L
Maniglia **Handle**	Alluminium
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-M/F a 90° 1/4" NPT-M/F at 90°

Valvola a Spillo Articolo No. 07 - Needle Valve Article No. 07



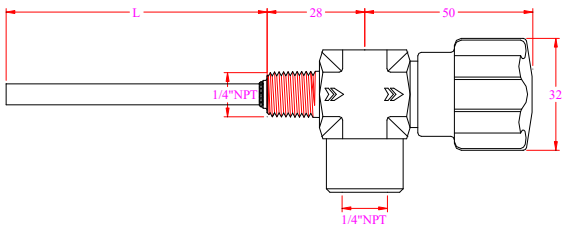
Corpo **Body**	ASTM A 182 TP 316L
Maniglia **Handle**	Alluminium
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-F/F a 90° 1/4" NPT-F/F at 90°

Valvola a Spillo Articolo No. 08 - Needle Valve Article No. 08



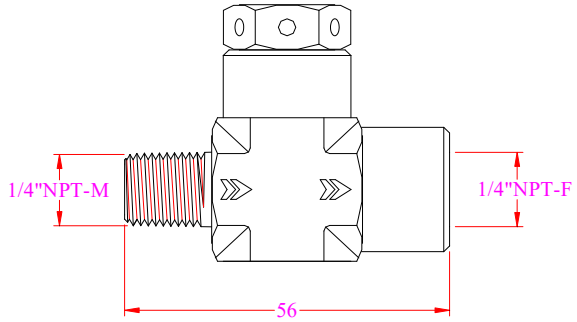
Corpo **Body**	ASTM A 182 TP 316L
Maniglia **Handle**	Alluminium
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-M/F a 180° con Outage 1/4" NPT-M/F at 180° with Outage

Valvola a Spillo Articolo No. 09 - Needle Valve Article No. 09



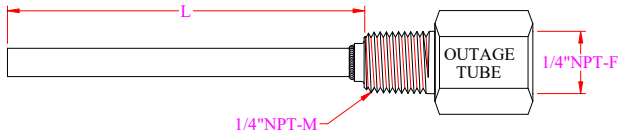
Corpo **Body**	ASTM A 182 TP 316L
Maniglia **Handle**	Alluminium
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-M/F a 90° con Outage 1/4" NPT-M/F at 90° with Outage

Disco di Rottura Articolo No. 10 - Rupture Disc Units Article No. 10



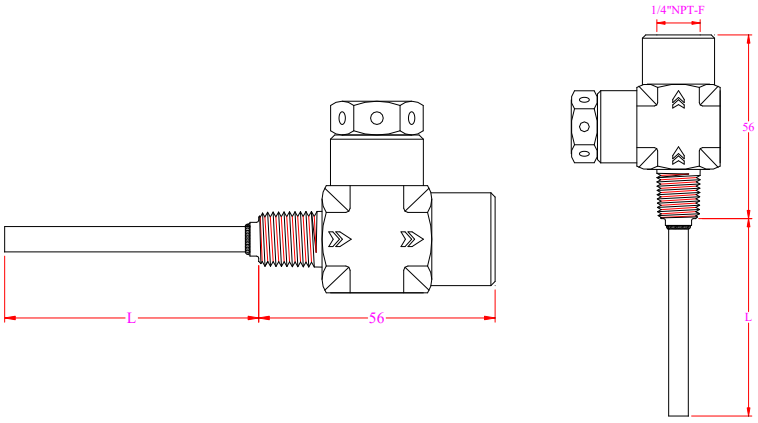
Corpo **Body**	Stainless Steel 316L
Maniglia **Handle**	/
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-M/F a 180° 1/4" NPT-M/F at 180°

Outage Tube Article No. 11



Corpo **Body**	Stainless Steel 316L
Maniglia **Handle**	/
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-M/F 1/4" NPT-M/F

Otage Tube con Disco di Rottura Articolo No. 12 - Outage Tube with Rupture Disc Units Article No. 12



Corpo **Body**	Stainless Steel 316L
Maniglia **Handle**	/
Guarnizione **Packing**	PTFE
Attacchi **Connections**	1/4" NPT-M/F 1/4" NPT-M/F