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Closed-loop Sampling System





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Overview

Sampling system, also known as sampler, it is an equipment used for representative sample collection from process, pipeline and storage tank. Due to the growing complexity of the industrial processes, the need for products testing and analyzing increases continuously, and safety for sampling process is taken more and more consideration, simple primitive sampling system evolved into safe and reliable closedloop sampling system. FITOK closed-loop sampling system is separated into bottle configuration and cylinder configuration according to the container, the deference of this two configurations are container form and sealing type: Bottle configuration sampling system is sealed with a automatically sealed septum; Cylinder configuration is sealed by the needle valves equipped at both ends of the cylinder.

Advantage of FITOK Closed-loop Sampling System

- from the danger of searing and spraying.
- © Safer for the sample: Advanced sampling process, provided with functions and methods like sample circulation, system purge, bottle air replaced, etc. to ensure representative sample.
- © Safer for the environment: Closed sampling, no contact between sample and environment, avoided pollution to the environment. vent carbon adsorption, thereby realizing zero-release of pollution.
- © Easy operation: Particular valve linkage control, realizing one handle operation in the whole sampling process, to avoid misoperation; reliable container fixed design, no need to hold the container when sampling.
- © Economic: Advanced manufacturing technology and quality assurance system, ensure high and stable quality products, long service life, and low comprehensive cost
- O Low maintenance: Component meet general standard and with simple structure, make the maintenance more simple.
- © Customizability: Can be customized according to customer's request and working condition, custom-made for various applications or special features of a sampling system.

Bottle Configuration Sampling System

- O Configuration: The container consists of bottle, sealed septum and cap; the sampling loop consists of tubing, valves and fittings.
- Operating principle: When sampling, open sampling valve, samples can flow into the sample bottle under system pressure, while air required amount has been taken, turn off the sampling valve, the sampling process is complete.
- O General technical parameters:
 - System main body material: 316 SS (Can be customized)
 - Connections: 1/4" tube fitting, 1/2 NPT, NPS 1/2 Flange (Can be customized)
 - Orifice: 0.19" (4.8 mm) (Can be customized)
 - Maximum working pressure: 1450 psig (100 bar)
- Working temperature range: 0°F to 450°F (-18°C to 232°C) O Applicable working condition: High temperature, high pressure, high viscosity, strong corrosive, strong
- toxicity and dangerous liquid bane to the environment. O Mounting type: Direct-mounted, wall-mounted, support bracket, clamping slot, rail-style.

Cylinder Configuration Sampling System

- © Configuration: The container consists of a cylinder at both ends equipped with a needle valve and a guickconnect; the sampling loop consists of tubing, valves and fittings.
- © Operating principle: When sampling, samples flow through the sample cylinder via the sampling loop, When sampling liquefied gases or strong volatile liquid, a fixed amount of gas is transferred to the expansion chamber or flare system, when the required volume of sample is taken, turn off the needle valve at both ends, allows the sampling loop to be depressurized, then disconnected the cylinder from the sampling system, the sampling process is complete.
- O General technical parameters:
 - · System main body material: 316 SS (Can be customized) Connections: NPS 1/2 Flange (Can be customized)
 - Orifice: 0.19" (4.8 mm) (Can be customized)
 - Maximum working pressure: 1450 psig (100 bar)
- Working temperature range: 0°F to 450°F (-18°C to 232°C)
- O Applicable working condition: High temperature, high pressure, corrosive, strong toxicity, strong volatile and dangerous liquid gas mixture or gas which is bane to the environment.
- O Mounting type: Wall-mounted, support bracket, clamping slot, rail-style.

© Safer for the operator: Closed sampling, no direct contact between sample and operator, avoided from the harm such as poisoning or corrosion; Effective in pressure and temperature limited, ensure that sampling in the safe pressure and temperature range, avoided

and gases in the bottle are being vented through the vent port. Watching through the window on the protective sleeve, when the

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B-Bottle Configuration Sampling System

L Series-Liquid Sampling

SBLA1-On-off Configuration

Features

Sampling directly from process or system, low pressure application
 Pressure range: 0 to 145 psig (0 to 10 bar)

- O Closed sampling

Technical Specifications and Basic Configuration



Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- O Vent outlet carbon absorption
- O Mounting bracket
- $\hfill\square$ Diverse connection types and sizes
- O Various materials



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-off

Turn the handle of the sampling valve to "OFF" position. Remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. the sampling process is complete.

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2-sampling

Turn the handle of the sampling valve to "SAMPLE" position, allowing sample to flow into the sample bottle until the required amount has been taken.



SBLA2-Circulation Configuration

Features

- $\ensuremath{\mathbb{O}}$ Sampling directly from process or system, low pressure application
- Pressure range: 0 to 145 psig (0 to 10 bar)
- Closed sampling
- Sample circulation
- O Representative sample

Technical Specifications and Basic Configuration



Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- Protective enclosure
- $\hfill \heartsuit$ Vent outlet carbon absorption
- O Mounting bracket
- O Diverse connection types and sizes
- O Various materials







1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-sampling

Turn the handle of the sampling valve to "SAMPLE" position, allowing sample to flow into the sample bottle until the required amount has been taken.



2-Circulation

Turn the handle of the sampling valve to "BYPASS" position, allowing residual sample in the sampler to flow into the process line to ensure representative sampling.



4-off



SBLA3-Back Flow Configuration

Features

- $\ensuremath{\mathbb{O}}$ Sampling directly from process or system, low pressure application
- \odot Pressure range: 0 to 145 psig (0 to 10 bar)
- $\ensuremath{\mathbb{O}}$ Closed sampling
- $\ensuremath{\mathbb{O}}$ Back flow
- Representative sample

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
	Body, process / vent needle	- Nitrogen inlet
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	
	BF series 3-way ball valve	
Sampling Value	PTFE seat, FKM O-ring	
Sampling Valve	Max working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Sample inlet
Nitrogen Branch	Including pressure regulating valve, check valve and pressure gauge	
	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	Vent
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	
Operation	Manual	
Connections	1/4" tube fitting	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- $\ensuremath{\mathbb{O}}$ Vent outlet carbon absorption
- O Mounting bracket
- $\hfill\square$ Diverse connection types and sizes
- O Various materials



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-sampling

Turn the handle of the sampling valve to "SAMPLE" position, allowing sample to flow into the sample bottle until the required amount has been taken.

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2-back flow

Turn the handle of the sampling valve to "BACK" position, allowing nitrogen gas to flow through the sampler to force any residual sample into the process line to ensure representative sampling.



4-off



SBLA4-Air Replaced and System Purge Configuration I

Features

- $\ensuremath{\mathbb{O}}$ Sampling directly from process or system, low pressure application
- O Pressure range: 0 to 145 psig (0 to 10 bar)
- $\ensuremath{\mathbb{O}}$ Closed sampling
- System purge
- Sottle air replaced
- $\hfill \heartsuit$ Representative sample

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
Needle Assembly	Body, process / vent needle	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	
	BF series 3-way ball valve	
	PTFE seat, FKM O-ring	Nitrogen Sample
Sampling valve	Max working pressure: 1500 psig (103 bar)	inlet inlet
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Vent -
Nitrogen Branch	Including pressure regulating valve, check valve and pressure gauge	
	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	
Operation	Manual	
Connections	1/4" tube fitting	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- Protective enclosure
- O Vent outlet carbon absorption
- O Mounting bracket
- O Diverse connection types and sizes
- O Various materials





1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-sampling

Turn the handle of the sampling valve to "SAMPLE" position, allowing sample to flow into the sample bottle until the required amount has been taken.



5-off

Turn the handle of the sampling valve to "OFF" position. Remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. the sampling process is complete.

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2-air replaced

Turn the handle of the sampling valve to "PURGE" position, allowing nitrogen gas to replace the air in the sample bottle to ensure representative sample.



4-system purge

Turn the handle of the sampling valve to "PURGE" position, allowing nitrogen gas to flow through the sampler to ensure any residual sample is forced into the sample bottle.



10 Closed-loop Sampling System

SBLA5-Back Flow, Air Replaced and System Purge Configuration

Operations



- $\ensuremath{\mathbb{O}}$ Sampling directly from process or system, low pressure application
- \odot Pressure range: 0 to 145 psig (0 to 10 bar)
- O Closed sampling
- System purge
- $\ensuremath{\mathbb{O}}$ Back flow and bottle air replaced
- O Representative sample

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
Needle Assembly	Body, process / vent needle	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	Nitrogen
	BO series 4-way ball valve	-work
Compline Value	PTFE seat	
Sampling valve	Max working pressure: 2500 psig (172 bar)	
	Temperature range: -65°F to 300°F (-54°C to 148°C)	Sample
	Including pressure regulating valve, check valve and pressure gauge	inlet
Nitrogon Dronch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	vent
Nitrogen Branch	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	
Operation	Manual	
Connections	1/4" tube fitting	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- O Vent outlet carbon absorption
- Mounting bracket
- O Diverse connection types and sizes
- O Various materials





1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-air replaced

Turn the handle of the sampling valve to "PURGE" position, allowing nitrogen gas to replace the air in the sample bottle to ensure representative sample.



5-system purge

Turn the handle of the sampling valve to "PURGE" position, allowing nitrogen gas flow through the sampler to ensure any residual sample is forced into the sample bottle.

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2-back flow

Turn the handle of the sampling valve to "BACK" position, allowing nitrogen gas to flow through the sampler to force any residual sample into the process line to ensure representative sampling.



4-sampling

Turn the handle of the sampling valve to "SAMPLE" position, allowing sample to flow into the sample bottle until the required amount has been taken.



6-off



12 Closed-loop Sampling System

SBLA6-Air Replaced, Circulation and Needle Purge Configuration

Features

- $\ensuremath{\mathbb{O}}$ Sampling directly from process or system, low pressure application
- Pressure range: 0 to 145 psig (0 to 10 bar)
- $\hfill \bigcirc$ Closed sampling
- O Needle purge
- $\ensuremath{\mathbb O}$ Sample circulation and bottle air replaced
- $\ensuremath{\mathbb{O}}$ Representative sample

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
Needle Assembly	Body, process / vent needle	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	
	BF series 3-way ball valve	Sample outlet
Sampling Value	PTFE seat, FKM O-ring	
Sampling Valve	Max working pressure: 1500 psig (103 bar)	Nitrogen
	Temperature range: 0°F to 450°F (-18°C to 232°C)	
Nitrogen Branch	Including pressure regulating valve, check valve, pressure gauge and needle valve	® Vent -
	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve, ND series needle valve	
Operation	Manual	
Connections	1/4" tube fitting	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- Protective enclosure
- O Vent outlet carbon absorption
- O Mounting bracket
- $\hfill \bigcirc$ Diverse connection types and sizes
- O Various materials



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-sampling

Turn off the needle valve, turn the sampling valve handle to the "SAMPLE" position, allowing sample to flow into the sample bottle until the required amount has been taken, turn the sampling valve handle to "OFF" position.



5-off

Turn off the needle valve, remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. the sampling process is complete.

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2-circulation, air replaced

Open the needle valve, allowing the nitrogen gas to replace the air in the bottle, turn the sampling valve handle to "BYPASS" position, allowing residual sample to flow into the process line to ensure representative sampling.



4-needle purge

Open the needle valve, allowing nitrogen gas flow through the sampler to ensure any residual sample is forced into the sample bottle.



SBLB1-Flange On-off Configuration

Features

O Applicable for sampling from process and container

- $\hfill \bigcirc$ Pressure range: 0 to 145 psig (0 to 10 bar)
- Closed sampling
- ◎ Representative sample
- $\ensuremath{{\odot}}$ Sampling directly from process and container

Technical Specifications and Basic Configuration

,	
Material	316 SS
Sleeve	300 ml sleeve with bottle retaining clip
Needle Assembly	Body, process / vent needle
	Process / vent needle ID: 0.06" (1.5 mm)
Sampling Valve	BH series 2-way ball valve
	PTFE seats
	Max working pressure: 1500 psig (103 bar)
-	Temperature range: -20°F to 450°F (-28°C to 232°C)
Operation	Manual
Connections	Process connection: NPS 1/2 flange
Connections	Vent connection: 1/4" tube fitting

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- Scheme Lockable handle
- O Various materials
- Protective enclosure
- O Vent outlet carbon absorption



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-off

Turn the handle of the sampling valve clockwise for 1/4 turn, remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. the sampling process is complete.



2-sampling

Turn the handle of the sampling valve counterclockwise for 1/4 turn, allowing sample to flow into the sample bottle until the required amount has been taken.



SBLB2-In Line and Circulation Configuration

Features

In line sampling

- \odot Pressure range: 0 to 145 psig (0 to 10 bar)
- Closed sampling
- Sample circulation
- $\ensuremath{\textcircled{O}}$ Suitable for viscous liquid or liquid with few solid particles

Technical Specifications and Basic Configuration



Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Various materials
- O Protective enclosure
- © Vent outlet carbon absorption





1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-off

Turn off the sampling valve, remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. the sampling process is complete.

Operations

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2-sampling

Turn on the sampling valve, allowing sample to flow into the sample bottle until the required amount has been taken.



SBLB3-In Line, Air Replaced and Needle Purge Configuration

Features

In line sampling

- ◎ Pressure range: 0 to 145 psig (0 to 10 bar)
- O Closed sampling
- O Bottle air replaced
- O Representative sample
- $\ensuremath{\textcircled{O}}$ Suitable for viscous liquid or liquid with few solid particles
- Needle purge

Technical Specifications and Basic Configuration



Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Various materials
- O Protective enclosure
- O Vent outlet carbon absorption



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-sampling

Turn on the sampling valve, allowing sample to flow into the sample bottle until the required amount has been taken.



5-off

Turn off the needle valve, remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. the sampling process is complete.



2-air replaced

Turn on the needle valve, allowing nitrogen gas to replace the air in the sample bottle to ensure representative sample.



4-needle purge

Turn off the sampling valve, turn on the needle valve, allowing nitrogen gas to flow through the sampler to ensure any residual liquid is forced into the sample bottle.



SBLC1-Air Replaced and System Purge Configuration ${\rm II}$

Features

- $\ensuremath{\mathbb{O}}$ Sampling directly from process or system
- $\odot\,$ Pressure range: 0 to 145 psig (0 to 10 bar)
- Closed sampling
- System purge
- $\ensuremath{\mathbb{O}}$ Bottle air replaced
- O Representative sample
- $\ensuremath{\mathbb{O}}$ Suitable for high viscous liquid

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
Noodlo Assembly	Body, process / vent needle	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	Sample inlet
Sampling Value	Piston valve	
Sampling valve	PTFE packing	
Nitrogen Branch	Including pressure regulating valve, check valve, pressure gauge and needle valve	Nitrogen inlet
	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	® Vent
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve, ND series needle valve	
Operation	Manual	
Connections	Process connection: NPS 1/2 flange	
	Vent and nitrogen connection: 1/4" tube fitting	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- Solvent cleaning
- O Heating / Cooling
- O Various materials
- $\hfill \bigcirc$ Diverse connection types and sizes
- Protective enclosure
- Vent outlet carbon absorption



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-sampling

Turn the handle of the sampling valve counterclockwise to open the sampling valve, allowing sample to flow into the sample bottle until the required amount has been taken, turn off the sampling valve.



5-off

Turn off the needle valve, remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. the sampling process is complete.

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2-air replaced

Turn on the needle valve, allowing nitrogen gas to replace the air in the sample bottle to ensure representative sample, then turn off the needle valve.



4-system purge

Turn on the needle valve, allowing nitrogen gas to flow through the sampler to ensure any residual liquid is forced into the sample bottle.



SBLC2-Fixed Volume, Air Replaced and System Purge Configuration

Features

- ◎ Sampling directly from process or system
- \odot Pressure range: 0 to 1450 psig (0 to 100 bar)
- O Closed sampling
- $\ensuremath{\mathbb{O}}$ Bottle air replaced
- Sixed volume
- Representative sample
- Suitable for high viscous liquid
- System purge

Technical Specifications and Basic Configuration

Material	316 SS		
Sleeve	300 ml sleeve with bottle retaining clip]	
Needle Assembly	Body, process / vent needle	_	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)		
Sampling Value	Piston valve	-	
Sampling valve	PTFE packing	Sample in'	nlet
	Including pressure regulating valve, check valve, pressure gauge and needle valve		
Nitrogen Branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)		
5	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	Nitrogen	
	CO series check valve, ND series needle valve		
	BF series 2-way ball valve	Vent	
Dell Malve	PTFE seat, FKM O-ring		
Ball valve	Max working pressure: 1500 psig (103 bar)		
	Temperature range: 0°F to 450°F (-18°C to 232°C)]	
Operation	Manual		
Connections	Process connection: 1/2 male NPT		
	Vent and nitrogen connection: 1/4" tube fitting]	
Other	Sample chamber	1	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- Solvent cleaning
- O Heating / Cooling
- O Various materials
- $\ensuremath{\mathbb{O}}$ Diverse connection types and sizes
- O Protective enclosure
- O Vent outlet carbon absorption



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-pre-sampling

Turn the handle of the sampling valve counterclockwise to open the sampling valve, allowing sample to flow into the sampling chamber, the fixed volume chamber determines the amount of sample, turn off the sampling valve after pre-sampling completed.



5-off

Turn off the needle valve and ball valve, remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. the sampling process is complete.

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2-air replaced

Open the ball valve below the sample chamber and the needle valve in the nitrogen branch, allowing nitrogen gas to replace the air in the sample bottle, turn off the needle valve in the nitrogen branch after the replacement finished, then turn off the ball valve below the sample chamber.



4-sampling

Turn on the ball valve below the sampling chamber, then open the needle valve in the nitrogen branch, allowing nitrogen gas to force the sample to flow into the bottle and purge the sampler.



SBLC3-Heating/cooling, Fixed Volume, Air Replaced and System Purge Configuration

Features

- $\ensuremath{{\odot}}$ Sampling directly from process or system
- ◎ Pressure range: 0 to 1450 psig (0 to 100 bar)
- O Closed sampling
- O Bottle air replaced
- Sixed volume
- Representative sample
- $\ensuremath{\mathbb{O}}$ Suitable for high viscous liquid
- $\ensuremath{\mathbb O}$ Heating/Cooling jacket ensures sampling at the required temperature
- O System purge

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
	Body, process / vent needle	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	
Sampling Value	Piston valve	
Sampling valve	PTFE packing	 Sample inlat
	Including pressure regulating valve, check valve, pressure gauge and needle valve	
Nitrogen Branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	Heat exchange outlet
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	Nitrogen
	CO series check valve, ND series needle valve	
	BF series 2-way ball valve	(P) Vent
DellMaha	PTFE seat, FKM O-ring	
Ball Valve	Max working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 450°F (-18°C to 232°C)	
Operation	Manual	
Connections	process connection: 1/2 male NPT	
	Vent and nitrogen connection: 1/4" tube fitting	
	Heat exchange in/out connection: 1/2" tube fitting	
Other	Sample chamber, Heat exchanger	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- Solvent cleaning
- O Flow meter
- O Various materials
- O Diverse connection types and sizes
- Protective enclosure
- O Vent outlet carbon absorption



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-pre-sampling

Turn the handle of the sampling valve counterclockwise to open the sampling valve, allowing sample to flow into the sampling chamber, the fixed volume chamber determines the amount of sample, turn off the sampling valve after pre-sampling completed.



5-sampling

Turn on the ball valve below the sampling chamber, allowing sample to flow into the bottle, then open the needle valve in the nitrogen branch, allowing nitrogen gas to force the sample to flow into the bottle and purge the sampler.

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2-air replaced

Open the ball valve below the sample chamber and the needle valve in the purge line, allowing nitrogen gas replace the air in the sample bottle, turn off the needle valve in the purge line after the replacement finished, then turn off the ball valve below the sample chamber.



4-heat exchange

Allow a heating fluid to flow through the heat jacket until the sample temperature meets the required temperature.



6-off

Turn off the needle valve and ball valve, remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. the sampling process is complete.



SBLC4-Solvent Purge, Air Replaced and System Purge Configuration

Features

- ◎ Sampling directly from process or system
- O Pressure range: 0 to 145 psig (0 to 10 bar)
- Closed sampling
- ◎ Bottle air replaced and solvent purge
- Representative sample
- Suitable for high viscous liquid
- ◎ Solvent purge and system purge function

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	-
Needle Assembly	Body, process / vent needle	-
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	- Sample inlet
Sampling Value	Piston valve	
Sampling valve	PTFE packing	Solvent inlet
	Including pressure regulating valve, check valve and pressure gauge	
Nitrogen Branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	
	BF series 3-way ball valve	
Dellater	PTFE seat, FKM O-ring	
Ball Valve	Max working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Nitrogen inlet
Operation	Manual	
Connections	Process connection: 1/2 male NPT	
Connections -	Vent / nitrogen / solvent inlet: 1/4" tube fitting	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Heating / Cooling
- O Protective enclosure
- ◎ Vent outlet carbon absorption
- O Diverse connection types and sizes
- O Various materials



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



4-system purge

Turn the handle of the ball valve to "PU-RGE" position, allowing nitrogen gas to force any residual liquid into the sample bottle.



7-system purge

Turn the handle of the ball valve to "PU-RGE" position, allowing nitrogen gas to force any residual solvent into the sample bottle.



ent finished.



5-off

8-off

Nitrogen

inlet

Turn the handle of the ball valve to "OFF" position, remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically.

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Turn the handle of the ball valve to "PURGE" position, allowing nitrogen gas to replace the air in the sample bottle, turn the handle of the ball valve to "OFF" position when the replacem-



Turn the handle of the ball valve to "OFF" position, , remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. Place a new the sample bottle.



3-sampling

Turn the handle of the sampling valve counterclockwise to open the sampling valve, allowing sample to flow into the sample bottle until the required amount has been taken, turn off the sampling valve.



6-solvent purge

Turn the handle of the ball valve to "CLEAN" position, allowing the solvent to flow into the sample bottle.



SBLD1-Fixed Volume, Circulation and System Purge Configuration

Features

- ◎ Sampling directly from process or system
- \odot Pressure range: 0 to 1450 psig (0 to 100 bar)
- O Closed sampling
- Sixed volume
- Sample circulation
- System purge
- Representative sample
- $\ensuremath{\mathbb O}$ Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS
Sleeve	300 ml sleeve with bottle retaining clip
Needle Assembly	Body, process / vent needle
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)
	BF Series linkage ball valve (Rod linkage)
Concelling Makes	PTFE seat, FKM O-ring
Sampling valve	Max working pressure: 1500 psig (103 bar)
	Temperature range: 0°F to 450°F (-18°C to 232°C)
	Including pressure regulating valve, check valve and pressure gauge
Nitrogen Branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)
	CO series check valve
Operation	Manual
Connections	1/4" tube fitting
Other	Fixed volume cylinder

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- Vent outlet carbon absorption
- O Mounting bracket
- $\ensuremath{\mathbb{O}}$ Diverse connection types and sizes
- O Various materials
- O Diverse orifice sizes



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-sampling

Turn the sampling valve handle to the "SAMPLE" position, allowing nitrogen gas to force the sample to flow into the bottle and to purge the sampler.

FITOK



2-Circulation

Turn the sampling valve handle to "BYPASS" position, allowing sample to fill the fixed volume cylinder, persist for a period of time to allow residual sample in the sampler to flow into the process line to ensure representative sampling.



4-off



SBLD2-Fixed Volume, Circulation, Air Replaced and System Purge Configuration

Features

- $\ensuremath{\mathbb{O}}$ Sampling directly from process or system
- \odot Pressure range: 0 to 1450 psig (0 to 100 bar)
- $\ensuremath{\mathbb{O}}$ Closed sampling
- © Fixed volume
- Bottle air replacedSystem purge
- System purge
- Representative sampleLinkage ball valve design, easy operation
- Sample circulation

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
Needle Assembly	Body, process / vent needle	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	
	BF Series linkage ball valve (Rod linkage)	
Compline Make	PTFE seat, FKM O-ring	Nitrogen Sample
Sampling valve	Max working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Į Į
	Including pressure regulating valve, check valve and pressure gauge and needle valve	Sample
Nitrogen Branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	Vent Control inlet
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve, ND series needle valve	
Operation	Manual	
Connections	1/4" tube fitting	
Other	Fixed volume cylinder	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- Protective enclosure
- ◎ Vent outlet carbon absorption
- O Mounting bracket
- O Diverse connection types and sizes
- O Various materials



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-sampling

Turn the sampling valve handle to the "SAMPLE" position, allowing nitrogen gas to force the sample to flow into the bottle and to purge the sampler.

FITOK



2-fixed volume, circulation and air repalced Turn the sampling valve handle to "BYPASS" position, allowing sample to fill the fixed volume cylinder, persist for a certain period to allow residual sample to flow into the process line, open the needle valve, allowing nitrogen gas to replace the air in the sample bottle, to ensure representative sampling.



4-off



SBLD3-Heating/Cooling, Circulation, Fixed Volume and System Purge Configuration

Features

- ◎ Sampling directly from process or system
- $\hfill \bigcirc$ Pressure range: 0 to 1450 psig (0 to 100 bar)
- O Closed sampling
- Fixed volumeSample circulation
- System purge
- © Representative sample
- ◎ Heating/Cooling jacket ensures sampling at the required temperature
- © Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
Noodlo Accombly	Body, process / vent needle	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	
	BF Series linkage ball valve (Rod linkage)	Nitrogen k Sample outlet
	PTFE seat, FKM O-ring	
Sampling valve	Max working pressure: 1500 psig (103 bar)	Heat exchange
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Heat exchange
	Including pressure regulating valve, check valve and pressure gauge	
Nitrogen Branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	Vent Sample inlet
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	
Operation	Manual	
Connections	Process/vent/nitrogen: 1/4" tube fitting	
Connections	Heat exchange connection: 1/2" tube fitting	
Other	Heat exchanger, fixed volume cylinder	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- $\ensuremath{\mathbb{O}}$ Lockable handle
- O Mounting plate
- Protective enclosure
- O Vent outlet carbon absorption
- Mounting bracketDiverse connection
- types and sizes
- O Various materials



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-heat exchange

Turn the handle to "OFF" position, allow a heating fluid flows through the heat jacket until the sample temperature meet the required temperature.



5-off

Turn the sampling valve handle to "OFF" position, remove the bottle retaining clip and pull the bottle out from the sleeve, the septum reseals automatically. the sampling process is complete.

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Closed-loop Sampling System 33



2-circulation and fixed volume

Turn the sampling valve handle to "BYPASS" position, allowing sample to fill the fixed volume cylinder, persist for a period of time to allow residual sample in the sampler to flow into the process line to ensure representative sampling.



4-sampling

Turn the sampling valve handle to the "SAMPLE" position, allowing nitrogen gas to force the sample to flow into the bottle and to purge the sampler.



SBLE1-Back Flow and Vacuum Configuration

Features

- Sampling directly from process or system
- ◎ Applicable for zero-pressure or vacuum process
- $\ensuremath{\mathbb{O}}$ Closed sampling
- $\ensuremath{\mathbb{O}}$ Back flow
- Representative sample
- O Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
Needle Assembly	Body, process / vent needle	Nitrogen inlet
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	
	BF Series linkage ball valve (Gearbox linkage)	
Sampling Value	PTFE seat, FKM O-ring	Vacuum connection
sampling valve	Max working pressure: 1500 psig (103 bar)	₽ VŻ
	Temperature range: 0°F to 450°F (-18°C to 232°C)	
	Including pressure regulating valve, check valve and pressure gauge	Sample inlet
Nitrogen Branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	
Operation	Manual	
Connections	1/4" tube fitting	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- ◎ Vent outlet carbon absorption
- Mounting bracket
- O Diverse connection types and sizes
- O Various materials



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-sampling

Turn the sampling valve handle to "BACK" position, allowing nitrogen gas to flow through the sampler to force any residual sample into the process line to ensure representative sampling.

FITOK



2-back flow

Turn the sampling valve handle to "BACK" position, allowing nitrogen gas to flow through the sampler to force any residual sample into the process line to ensure representatl've sampling.



4-off



SBLE2-Back Flow, Air Replaced, Vacuum and System Purge Configuration

Features

- ◎ Sampling directly from process or system
- ◎ Applicable for zero-pressure or vacuum process
- Closed sampling
- $\ensuremath{{\odot}}$ Back flow and bottle air replaced
- Representative sample
- ◎ Linkage ball valve design, easy operation
- System purge

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300l sleeve with bottle retaining clip	Nitrogen inlet
Needle Accombly	Body, process / vent needle	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	
	BF/BO Series linkage ball valve (Gearbox linkage)	
Compling Make	PTFE seat	Vacuum
sampling valve	Max. working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 300°F (-18°C to 148°C)	
	Including pressure regulating valve, check valve and pressure gauge	Sample inlet
Nitrogen Branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	
Operation	Manual	
Connections	1/4" tube fitting	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- Protective enclosure
- O Vent outlet carbon absorption
- Mounting bracket
- $\ensuremath{\bigcirc}$ Diverse connection types and sizes
- O Various materials



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-back flow

Turn the handle of the sampling valve to "BACK" position, allowing nitrogen gas to flow through the sampler to force any residual sample into the process line to ensure representative sampling.



5-system purge

Turn the sampling valve handle to "PURGE" position, allowing nitrogen gas to flow through the sampler to ensure any residual liquid is forced into the sample bottle.

FITOK



2-air replaced

Turn the sampling valve handle to "BACK" position, allowing nitrogen gas to replace the air in the sample bottle to ensure representative sample.



4-sampling

Turn the sampling valve handle to "SAMPLE" position to connect the needle assembly outlet and vacuum source, so as to create low vacuum condition in the bottle, and let the sample flow into the bottle until the required amount is taken.



6-off



SBLE3-Back Flow and Venturi Configuration

Features

- ◎ Sampling directly from process or system
- ◎ Applicable for zero-pressure or vacuum process
- $\ensuremath{\mathbb{O}}$ Closed sampling
- ◎ Back flow
- O Representative sample
- © Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
Noodlo Assombly	Body, process / vent needle	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	
	BF Series linkage ball valve (Gearbox linkage)	
	PTFE seat, FKM O-ring	Vent
Sampling valve	Max working pressure: 1500 psig (103 bar)	ļ Ļ
	Temperature range: 0°F to 450°F (-18°C to 232°C)	
Nitrogen Branch	Including pressure regulating valve, check valve and pressure gauge	
	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	
Venturi	Allowing a vacuum to be created in the outlet, resul- ting in pressure difference between sampler inlet and vent, so that the liquid can flow into the sampler	
Operation	Manual	
Connections	1/4" tube fitting	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- Lockable handle
- O Mounting plate
- O Protective enclosure
- O Vent outlet carbon absorption
- O Mounting bracket
- O Diverse connection types and sizes
- O Various materials



Nitrogen inlet

Sample inlet

-PI

Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-sampling

Turn the sampling valve handle to the "SAMPLE" position, allowing nitrogen gas to flow through the venturi unit to create low vacuum condition in the bottle, and let the sample flow into the bottle until the required amount is taken.

FITOK



2-back flow

Turn the handle of the sampling valve to "BACK" position, allowing nitrogen gas to flow through the sampler to force any residual sample into the process line to ensure representative sampling.



4-off



SBLE4-Back Flow, Air Replaced, Venturi and System Purge Configuration

Features

- ◎ Sampling directly from process or system
- ◎ Applicable for zero-pressure or vacuum process
- O Closed sampling
- $\ensuremath{\mathbb O}$ Back flow and bottle air replaced
- O Representative sample
- $\ensuremath{\textcircled{}}$ Linkage ball valve design, easy operation
- System purge

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
Needle Assembly	Body, process / vent needle	
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)	N
	BF/BO Series linkage ball valve (Gearbox linkage)	
Compliant Makes	PTFE seat	Vent
Sampling valve	Max working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 300°F (-18°C to 148°C)	
	Including pressure regulating valve, check valve and pressure gauge	
Nitrogen Branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	
Venturi	Allowing a vacuum to be created in the outlet, resul- ting in pressure difference between sampler inlet and vent, so that the liquid can flow into the sampler	
Operation	Manual	
Connections	1/4" tube fitting	



Accessories and Options

- O Lockable handle
- O Mounting plate
- Protective enclosure
- ◎ Vent outlet carbon absorption
- O Mounting bracket
- O Diverse connection types and sizes
- O Various materials



Nitrogen inlet

Sample inlet

Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-air replaced

Turn the handle to "PURGE" position, allowing nitrogen gas to replace the air in the sample bottle to ensure representative sample.



5-system purge

Turn the sampling valve handle to "PURGE" position, allowing nitrogen gas to flow through the sampler to ensure any residual liquid is forced into the sample bottle.

FITOK



2-back flow

Turn the handle of the sampling valve to "BACK" position, allowing nitrogen gas to flow through the sampler to force any residual sample into the process line to ensure representative sampling.



4-sampling

Turn the sampling valve handle to the "SAMPLE" position, allowing nitrogen gas to flow through the venturi unit to create low vacuum condition in the bottle, and let the sample flow into the bottle until the required amount is taken.



6-off



SBLE5-Vacuum, Overflow, Fixed Volume, Back Flow and System Purge Configuration

Features

- ◎ Sampling directly from process or system
- O Applicable for zero-pressure or vacuum process
- O Closed sampling
- O Fixed volume
- O Back flow and overflow
- O Representative sample
- O Linkage ball valve design, easy operation
- O System purge

Technical Specifications and Basic Configuration

Material	316 SS			
Sleeve	300l sleeve with bottle retaining clip			
Needle Assembly	Body, process / vent needle			Vacuum connection
Needle Assembly	Process / vent needle ID: 0.06" (1.5 mm)			
	BF Series linkage ball valve (Gearbox linkage)			
Sampling Value	PTFE seat and FKM O-ring			Sample inlet
Sampling valve	Max. working pressure: 1500 psig (103 bar)			T
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Nitrogen inlet		
	Including pressure regulating valve, check valve and pressure gauge			·····
Nitrogen Branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)			
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)			Ver
	CO series check valve]	
Operation	Manual			
Connections	1/4" tube fitting			
Other	Overflow chamber, fixed volume cylinder and ball valve			

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Ball valve

indication panel

Sampling valve

indication panel

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- ◎ Vent outlet carbon absorption
- O Mounting bracket
- O Diverse connection types and sizes
- O Various materials



Operations



1-off

Place a new septum on the sample bottle, insert the bottle with cap and septum into the sleeve until the septum is pierced by the needles. Adjust the bottle to a suitable height and then buckle up the bottle retaining clip.



3-pre-sampling

Turn the sampling valve handle to "PURGE " position, under the vacuum condition, the residual sample in the sampler will flow into the overflow chamber, and the sample in the process line flows into the sample chamber to ensure representative sampling.



5-back flow

Turn the sampling valve handle and the ball valve handle to "PURGE" position, allowing nitrogen gas to force any residual sample into the process line.



2-vacuum

Turn the ball vale handle above the overflow chamber to "VACUUM" position, allowing a vacuum to be created in the overflow chamber. Then turn the ball vale handle to "OFF" position.



4-sampling

Turn the sampling valve handle to "SAMPLE" position, allowing nitrogen gas to force the sample to flow into the bottle and to purge the sampler.



6-off



C-Cylinder Configuration Sampling System

S Series-Liquefied Gas Sampling

SCSF1-Expansion Chamber Configuration

Features

- Sampling directly from process or system
- O Pressure range: 0 to 1450 psig (0 to 100 bar)
- Closed sampling
- O Representative sample
- Sample circularion
- © Equipped with pressure relief system, safer for sampling
- O Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS	
	500 ml cylinder	
Sample Cylinder	ND series needle valve	
	QC4 series quick connect	
	BF Series linkage ball valve (Gearbox linkage)	
	PTFE seat and FKM O-ring	
Sampling valve	Max. working pressure: 1500 psig (103 bar)	Sample outlet
	Temperature range: 0°F to 450°F (-18°C to 232°C)	
Expansion Chamber	45 ml (with pressure gauge), spread gas medium from the cylinder to the expansion chamber	
	PS Series	
	PTFE-Lined, 304 SS Braided	
Hose	Max. Pressure: 3000 psig (207 bar)	
	Working Temp.: -65°F to 400°F (-53°C to 230°C)	
Vent Branch	Ball valve	
Operation	Manual	
Connections	NPS 1/2 flange	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- O Vent outlet carbon absorption
- O Mounting bracket O Diverse connection
- types and sizes
 - O Various materials



Operations





1-off

4-vent

Install the sample cylinder and connect the flexible hose to the bottom side of the sample cylinder, open the needle valves at both end of the sample cylinder.

2-sampling Turn the sampling valve handle to "PROCESS" position, allowing sample to flow into the system and to fill the sample cylinder, persist for a certain period of time to ensure representat-I've sample.





Turn off the needle valves at both ends of the sample cylinder, turn on the ball valve below the expansion chamber, the sample in the expansion chamber and the system is being vented to the vent line, then turn off the ball valve.

5-off Turn the sampling valve handle to "OFF" position, disconnect the flexible hose and remove the sample cylinder, then connect the flexible hose to the top quick connect, the sampling process is completed.

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Ō \bigcirc Sample outlet Sample inlet 💵 🚺 Vent

3-expansion

Turn the handle of the sampling valve to "EXPANSION" position to connect the sample cylinder and the expansion chamber, persist for a certain period of time to make sure the sample flow into the expansion chamber.



SCSF2-Expansion Chamber Purge Configuration

Features

- $\ensuremath{\bigcirc}$ Sampling directly from process or system
- \odot Pressure range: 0 to 1450 psig (0 to 100 bar)
- $\ensuremath{\mathbb{O}}$ Closed sampling
- $\ensuremath{\mathbb{O}}$ Sample circulation and expansion chamber purge
- $\ensuremath{\mathbb{O}}$ Equipped with pressure relief system, safer for sampling
- $\ensuremath{\mathbb{O}}$ Linkage ball value design, easy operation

Technical Specifications and Basic Configuration

Vaterial	316 SS
	500 ml cylinder
Sample Cylinder	ND series needle valve
	QC4 series quick connect
	BF Series linkage ball valve (Gearbox linkage)
	PTFE seat and FKM O-ring
ampling Valve	Max. working pressure: 1500 psig (103 bar)
	Temperature range: 0°F to 450°F (-18°C to 232°C)
	Including pressure regulating valve, check valve and pressure gauge and needle valve
Nitrogen branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)
	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)
	CO series check valve, ND series needle valve
Expansion Chamber	45 ml (with pressure gauge), spread gas medium from the cylinder to the expansion chamber
	PS Series
	PTFE-Lined, 304 SS Braided
Hose	Max. Pressure: 3000 psig (207 bar)
	Working Temp.: -65°F to 400°F (-53°C to 230°C)
Vent Branch	Ball valve
Operation	Manual
Connections	NPS 1/2 flange

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- Vent outlet carbon absorption
- Mounting bracket
- Diverse connection types and sizes
- O Various materials



Operations

1-off

mple cylinder.

4-purge

rging.



Install the sample cylinder and conn-

ect the flexible hose to the bottom

side of the sample cylinder, open the

needle valves at both end of the sa-

2-sampling

Turn the sampling valve handle to "PROCESS" position, allowing sample to flow into the system and to fill the sample cylinder, persist for a certain period of time to ensure representative sample.



Turn off the needle valves at both

ends of the sample cylinder, open

the ball valve and the nitrogen bra-

nch needle valve, allowing nitrogen

gas to purge the expansion room,

turn off the ball valve and the nitr-

ogen branch needle valve after pu-



5-off

Turn the sampling valve handle to "OFF" position, disconnect the flexible hose and remove the sample cylinder, then connect the flexible hose to the top quick connect, the sampling process is completed.







3-expansion

Turn the handle of the sampling valve to "EXPANSION" position to connect the sample cylinder and the expansion chamber, persist for a certain period of time to make sure the sample flow into the expansion chamber.



SCSF3-Expansion Chamber, Bypass and System Purge Configuration

Features

- ◎ Sampling directly from process or system
- O Pressure range: 0 to 1450 psig (0 to 100 bar)
- Closed sampling
- O Representative sample
- © Sample circulation and system purge
- © Equipped with pressure relief system, safer for sampling
- © Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS	
	500 ml cylinder	
Sample Cylinder	ND series needle valve]
	QC4 series quick connect]
	CV series check valve]
	BF Series linkage ball valve (Gearbox linkage)	
C I'	PTFE seat and FKM O-ring	
Sampling Valve	Max. working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Sample outl
	Including pressure regulating valve, check valve and pressure gauge	
Nitrogen branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	Sample inle
nitrogen brunen	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	1 7 1 1
Expansion Chamber	45 ml (with pressure gauge), spread gas medium from the cylinder to the expansion chamber	Nitrogen in
	PS Series	Vent
Hose	PTFE-Lined, 304 SS Braided	
	Max. Pressure: 3000 psig (207 bar)	
	Working Temp.: -65°F to 400°F (-53°C to 230°C)	1
Other	BF Series linkage ball valve (Gearbox linkage)	1
Operation	Manual	1
Connections	NPS 1/2 flange	1

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- O Vent outlet carbon absorption
- O Mounting bracket O Diverse connection
- types and sizes
- O Various materials



Operations





2-sampling

tive sample.

1-off

Install the sample cylinder and connect the flexible hose to the bottom side of the sample cylinder, open the needle valves at both end of the sample cylinder.





4-purge

Turn off the needle valves at both ends of the sample cylinder, turn the purge valve handle to "PURGE" position, allowing nitrogen gas to flow through the quick connectors and bypass line to purge the expansion chamber and the system, turn the purge valve handle to "OFF" position after purging.

5-off Turn the sampling valve handle to

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Turn the sampling valve handle to

"PROCESS" position, allowing sample to flow into the system and to fill the sample cylinder, persist for a certain period of time to ensure representa-

3-expansion

Turn the handle of the sampling valve to "EXPANSION" position to connect the sample cylinder and the expansion chamber, persist for a certain period of time to make sure the sample flow into the expansion chamber.

"OFF" position, disconnect the flexible hose and remove the sample cylinder, then connect the flexible hose to the top quick connect, the sampling process is completed.



SCSF4-Expansion Chamber and Outlet to Flare Configuration

Features

○ Sampling directly from process or system

- O Pressure range: 0 to 1450 psig (0 to 100 bar)
- O Closed sampling
- © Representative sample
- ◎ Applicable for sampling from process or system without process out connection
- © Equipped with pressure relief system, safer for sampling
- © Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS	
Sample Cylinder	500 ml cylinder	
	ND series needle valve	Flare
	QC4 series quick connect] 7 8
	BF Series linkage ball valve (Gearbox linkage)	
Compelies a Malue	PTFE seat and FKM O-ring	
Sampling Valve	Max. working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Sample inlet
Expansion Chamber	45 ml (with pressure gauge), spread gas medium from the cylinder to the expansion chamber	
	PS Series	
llese	PTFE-Lined, 304 SS Braided	1
позе	Max. Pressure: 3000 psig (207 bar)	
	Working Temp.: -65°F to 400°F (-53°C to 230°C)	
Flare Branch	Ball valve	
Vent Branch	Ball valve]
Operation	Manual]
Connections	NPS 1/2 flange]

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- Lockable handle
- O Mounting plate
- O Protective enclosure
- O Vent outlet carbon absorption
- O Mounting bracket O Diverse connection
- types and sizes O Various materials



Operations



\bigcirc -Ş

2-pre-sampling

Install the sample cylinder and connect the flexible hose to the bottom side of the sample cylinder, open the valves at both end of the sample cylinder.

1-off





4-expansion

Turn off the flare branch ball valve, turn the sampling valve handle to "EXPANSION" position to connect the sample cylinder and the expansion chamber, persist for a certain period of time to make sure the sample flow into the expansion chamber.

5-vent Turn off the needle valves at both ends of the sample cylinder, turn on the discharge ball valve below the expansion chamber, the sample in the expansion chamber and the system is being vented to the vent line,

FITOK



Turn the sampling valve handle to "PROCESS" position, allowing sample to flow into the system and to fill the sample cylinder.



then turn off the discharge ball valve.



3-sampling

Open the flare branch ball valve, allowing sample to flow thought the sample cylinder, persist for a certain period of time to ensure representative sample.



6-off

Turn the sampling valve handle to "OFF" position, disconnect the flexible hose and remove the sample cylinder, then connect the flexible hose to the top quick connect, the sampling process is completed.



SCSF5-Outage Tube Configuration

Features

- $\ensuremath{\mathbb{O}}$ Sampling directly from process or system
- \odot Pressure range: 0 to 1450 psig (0 to 100 bar)
- O Closed sampling
- Representative sample
- Sample circulation
- \odot Outage tube within cylinder keep the cylinder safe
- © Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration



Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- $\ensuremath{\mathbb{O}}$ Protective enclosure
- Vent outlet carbon absorption

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- types and sizes
- Various materials



Operations

1-off

inder.

4-vent



Install the sample cylinder and conn-

ect the flexible hose to the bottom

side of the sample cylinder, open the

valves at both end of the sample cyl-



2-sampling

Turn the sampling valve handle to "PROCESS" position, allowing sample to flow into the system and to fill the cylinder, the outage tube ensures a predefined sampling volume, persist for a certain period of time to ensure representative sample.





5-off

Turn the sampling valve handle to "VENT" position to connect the sampling system to vent system, discharge the sampling system pressure. Turn the sampling valve handle to "OFF" position, disconnect the flexible hose and remove the sample cylinder, then connect the flexible hose to the top quick connect, the sampling process is completed.





3-off

Turn the sampling valve handle to "OFF" position, turn off the needle valves at both ends of the sample cylinder.



SCSF6-Outage Tube, Bypass and System Purge Configuration

Features

- ◎ Sampling directly from process or system
- © Pressure range: 0 to 1450 psig (0 to 100 bar)
- Closed sampling
- Representative sample
- ◎ Sample circulation and system purge
- ◎ Outage tube within cylinder keep the cylinder safe
- © Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS	
	500 ml cylinder	
Sample Cylinder	ND series needle valve	
	QC4 series quick connect	
	CV series check valve	
	BF Series linkage ball valve (Gearbox linkage)	
Concelling Makes	PTFE seat and FKM O-ring	
Sampling valve	Max. working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Sample outlet
	Including pressure regulating valve, check valve and pressure gauge	
Nitrogen branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	
J	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	Nitrogen inlet
	CO series check valve	
Outage tube	Limited to 85% liquid filling of sample cylinder	
	PS Series	
	PTFE-Lined, 304 SS Braided	
позе	Max. Pressure: 3000 psig (207 bar)	
	Working Temp.: -65°F to 400°F (-53°C to 230°C)	
Operation	Manual	
Connections	NPS 1/2 flange	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- O Vent outlet carbon absorption
- O Mounting bracket O Diverse connection
- types and sizes
- O Various materials



Operations

1-off

inder.

4-purge

system.



Install the sample cylinder and conn-

ect the flexible hose to the bottom side of the sample cylinder, open the

valves at both end of the sample cyl-



2-sampling

Turn the sampling valve handle to "PROCESS" position, allowing sample to flow into the system and to fill the cylinder, the outage tube ensures a predefined sampling volume, persist for a certain period of time to ensure representative sample.



Turn the sampling valve handle to

"PURGE" position, allowing nitrogen

gas to flow through the quick conn-

ectors and bypass line to purge the



5-off

Turn the sampling valve handle to "OFF" position, disconnect the flexible hose and remove the sample cylinder, then connect the flexible hose to the top quick connect, the sampling process is completed.







3-off

Turn the sampling valve handle to "OFF" position, turn off the needle valves at both ends of the sample cylinder.



SCSF7-Outage Tube and Outlet to Flare Configuration

Features

◎ Sampling directly from process or system

- © Pressure range: 0 to 1450 psig (0 to 100 bar)
- Closed sampling
- O Representative sample
- ◎ Applicable for sampling from process or system without process out connection
- ◎ Outage tube within cylinder keep the cylinder safe
- © Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS	
Sample Cylinder	500 ml cylinder	
	ND series needle valve	
	QC4 series quick connect	
	BF Series linkage ball valve (Gearbox linkage)	
Compline Make	PTFE seat and FKM O-ring	Flare
Sampling Valve	Max. working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Sample inlet
Outage tube	Limited to 85% liquid filling of sample cylinder	
	PS Series	
llese	PTFE-Lined, 304 SS Braided	
HOSE	Max. Pressure: 3000 psig (207 bar)	
	Working Temp.: -65°F to 400°F (-53°C to 230°C)	
Operation	Manual	
Connections	NPS 1/2 flange	1

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- O Vent outlet carbon
- absorption

- O Mounting bracket O Diverse connection
- types and sizes
- O Various materials



Operations





1-off

4-vent

Install the sample cylinder and connect the flexible hose to the bottom side of the sample cylinder, open the valves at both end of the sample cylinder.



¢ (2)Flare Ì Sample inlet



5-off

Turn the sampling valve handle to "VENT" position to connect the sampling system to flare system, discharge the sampling system pressure.

Turn the sampling valve handle to "OFF" position, disconnect the flexible hose and remove the sample cylinder, then connect the flexible hose to the top quick connect, the sampling process is completed.





3-off

Turn the sampling valve handle to "OFF" position, turn off the needle valves at both ends of the sample cylinder.

cylinder, the outage tube ensures a predefined sampling volume, persist for a certain period of time to ensure representative sample.



G Series-Gas Sampling

SCGG1-Circulation Configuration

Features

- ◎ Sampling directly from process or system
- © Pressure range: 0 to 1450 psig (0 to 100 bar)
- Closed sampling
- Sample circulation
- Representative sample
- © Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration



Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- O Mounting plate
- O Protective enclosure
- O Vent outlet carbon
- absorption
- O Mounting bracket
- O Diverse connection
- types and sizes
- O Various materials



Operations



Install the sample cylinder and conn-

ect the flexible hose to the bottom

side of the sample cylinder, open the

valves at both end of the sample cyl-

2-sampling

Turn the sampling valve handle to "PROCESS" position, allowing sample to flow into the system and to fill the sample cylinder, persist for a certain period of time to ensure representative sample.



4-vent

1-off

inder.

Turn the sampling valve handle to "VENT" position to connect the sampling system to vent system, discharge the sampling system pressure.



5-off

Turn the sampling valve handle to "OFF" position, disconnect the flexible hose and remove the sample cylinder, then connect the flexible hose to the top quick connect, the sampling process is completed.







Turn the sampling valve handle to "OFF" position, turn off the needle valves at both ends of the sample cylinder.



SCGG2-Bypass and System Purge Configuration

Features

- ◎ Sampling directly from process or system
- \odot Pressure range: 0 to 1450 psig (0 to 100 bar)
- Closed sampling
- O Representative sample
- igodot Sample circulation and system purge
- $\ensuremath{\mathbb{O}}$ Linkage ball value design, easy operation

Technical Specifications and Basic Configuration

Material	316 55
	500 ml cylinder
Sample Cylinder	ND series needle valve
	QC4 series quick connect
	CV series check valve
	BF Series linkage ball valve (Gearbox linkage)
	PTFE seat and FKM O-ring
Sampling Valve	Max. working pressure: 1500 psig (103 bar)
	Temperature range: 0°F to 450°F (-18°C to 232°C)
	Including pressure regulating valve, check valve and
Nitrogon branch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)
Nitrogen branch	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)
	CO series check valve
	PS Series
	PTFE-Lined, 304 SS Braided
Hose	Max. Pressure: 3000 psig (207 bar)
	Working Temp.: -65°F to 400°F (-53°C to 230°C)
Operation	Manual
Connections	NPS 1/2 flange

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Lockable handle
- Mounting plate
- O Protective enclosure
- Vent outlet carbon absorption

FITOK

- Mounting bracketDiverse connection
- types and sizes Various materials
- Quickconnect Needle valve Bypass Sample cylinder Sampling valve

Operations





2-sampling

ive sample.

1-off

Install the sample cylinder and connect the flexible hose to the bottom side of the sample cylinder, open the valves at both end of the sample cylinder.



. ₽

4-purge

Turn the sampling valve handle to "PURGE" position, allowing nitrogen gas to flow through the quick connectors and bypass line to purge the system. 5-off Turn the sampling valve handle to "OFF" position, disconnect the flexible hose and remove the sample cylinder, then connect the flexible hose to the top quick connect, the sampling process is completed.





3-off

Turn the sampling valve handle to "OFF" position, turn off the needle valves at both ends of the sample cylinder.

Turn the sampling valve handle to "PROCESS" position, allowing sample to flow into the system and to fill the sample cylinder, persist for a certain period of time to ensure representat-





SCGG3-Outlet to Flare Configuration

Features

- ◎ Sampling directly from process or system
- O Pressure range: 0 to 1450 psig (0 to 100 bar)
- O Closed sampling
- © Representative sample
- ◎ Applicable for sampling from process or system without process out connection
- O Linkage ball valve design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS	
Sample Cylinder	500 ml cylinder	
	ND series needle valve	
	QC4 series quick connect	
	BF Series linkage ball valve (Gearbox linkage)	Sample inlet
Consulin a Malua	PTFE seat and FKM O-ring	
Sampling valve	Max. working pressure: 1500 psig (103 bar)	Flare
	Temperature range: 0°F to 450°F (-18°C to 232°C)	
	PS Series	
	PTFE-Lined, 304 SS Braided	
Hose	Max. Pressure: 3000 psig (207 bar)	1 T /
	Working Temp.: -65°F to 400°F (-53°C to 230°C)	
Operation	Manual	
Connections	NPS 1/2 flange	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- Lockable handle
- O Mounting plate
- O Protective enclosure
- Vent outlet carbon absorption
- O Mounting bracket O Diverse connection
- types and sizes
- O Various materials



Operations

1-off

inder.

4-vent





2-sampling

Turn the sampling valve handle to Install the sample cylinder and connect the flexible hose to the bottom "PROCESS" position, allowing sample to flow into the system and to fill the side of the sample cylinder, open the valves at both end of the sample cylsample cylinder, persist for a certain period of time to ensure representative sample.





5-off

Turn the sampling valve handle to "VENT" position to connect the sampling system to flare system, discharge the sampling system pressure.

Turn the sampling valve handle to "OFF" position, disconnect the flexible hose and remove the sample cylinder, then connect the flexible hose to the top quick connect, the sampling process is completed.

FITOK



3-off

Turn the sampling valve handle to "OFF" position, turn off the needle valves at both ends of the sample cylinder.



Sample Recovery System

SR Series

SRB-Sampling Bottle Samples Recovery System

Features

- O Applicable for sample recovering from sampling bottle
- O Closed recovering
- O Without overflowing
- Sinkage ball value design, easy operation

Technical Specifications and Basic Configuration

Material	316 SS	
Sleeve	300 ml sleeve with bottle retaining clip	
Needle energiele	Body, process / vent needle	
Needle assembly	Process / vent needle ID: 0.06" (1.5 mm)/ 0.12" (3 mm)	
	BF Series linkage ball valve (Gearbox linkage)	
	PTFE seat and FKM O-ring	
Analyze valve	Max. working pressure: 1500 psig (103 bar)	
	Temperature range: 0°F to 450°F (-18°C to 232°C)	Vent
	Including pressure regulating valve, check valve and pressure gauge	↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
Nitro oon bronch	Max working pressure of pressure regulating valve: 300 psig (20.7 bar)	Analyze Connection
Nitrogen branch	Pressure regulating range: 10 psig to 100 psig (0.7 bar to 7 bar)	
	CO series check valve	
Operation	Manual	
Connections	1/4 female NPT	

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

O Diverse connection types and sizes

O Various materials

SRC-Sampling Cylinder Samples Recovery System

Features

- O Applicable for sample recovering from Sampling cylinder
- Closed recovering
- O Without overflowing

Technical specifications and basic configuration

Material	316 SS
	500 ml cylinder
Sampling cylinder	ND series needle valve
	QC4 series quick coupling
	BF Series linkage ball valve (Gearbox linkage
Analyze valve	PTFE seat and FKM O-ring
2	Max. working pressure: 1500 psig (103 bar)
	Temperature range: 0°F to 450°F (-18°C to
	Including pressure regulating valve, check va pressure gauge and needle valve
Nitrogen branch	Max working pressure of pressure regulating 300 psig (20.7 bar)
	Pressure regulating range: 0.7 bar to 7 bar (10 psig to 100 psig)
	CO series check valve, ND series needle valve
	PS Series
Metal flexible	PTFE-Lined, 304 SS Braided
nose	Max. Pressure: 207 bar (3000 psig)
	Working Temp.: -65°F to 400°F (-53°C to 20
Operation	Manual
Connections	1/4 female NPT

Remarks: The above is a basic specification only, other specifications are available upon requests. If you need other detailed information please contact FITOK group or authorized agent.

Accessories and Options

- O Diverse connection types and sizes
- O Various materials







Spare Parts and Tools

Sample Bottle

Bottle

Materia

Soda Lime Glass

Soda Lime Glass have good corrosion resistance to most chemicals, and can resist slight mechanical shock. Working temperature 104°F (40°C), Maximum temperature 248°F (120°C).

O Amber calcium sodium glass

Amber calcium sodium glass have good corrosion resistance to most chemicals, it can resist slight mechanical shock. And can protect the sample from ultraviolet ray, it is a good container for photosensitive samples. Working temperature 104°F (40°C), Maximum temperature 248°F (120°C).

O Borosilicate glass

Borosilicate glass has a high resistance to acid and high concentration of acid mixture, chlorine, bromine, iodine, and organic matter. It is widely used under 752°F (400°C). Maximum temperature: 932°F (500°C).

O Polyethylene

Polyethylene is one kind of organic plastic which has many advantages and is widely used in industrial production. It present a translucent or opaque state, and has certain elasticity, not easily broken. The highest heat resistance temperature is 230°F (110°C), short time heat resistance temperature up to 248°F (120°C).

O Polypropylene

Polypropylene is a kind of translucent materials, can take the place of polyethylene. Compared with polyethylene, it has better heat resistance, the highest temperature resistance is 275°F (135°C). It is widely used for medical clinical disinfection container.

Datasheet and Ordering Information

Material	Order Cede	Volume (ml/cc)			Size in. (mm)		Match Size
	Order Code	Standard	Max	Real	Diameter	Height	in. (mm)
	G1	1	2	1	0.47" (12)	1.535" (39)	0.47" (12)
	G2	2	2	1	0.47" (12)	1.535" (39)	0.47" (12)
	G60	60	64	60	1.535" (39)	3.66" (93)	0.59" (15)
Soda Lime Glass	G100	100	114	111	2.047" (52)	3.82" (97)	1.1" (28)
	G300	300	337	331	2.795" (71)	5.315" (135)	1.1" (28)
	G500	500	509	502	3.03" (77)	7.01" (178)	1.26" (32)
	G1000	1000	1050	1040	3.976" (101)	8.15" (207)	1.77" (45)

1. For sample bottle of other material, the volume follow the soda lime glass, the ordering number: Calcium sodium-G;

Amber calcium sodium glass-AG; Borosilicate glass-BG Polyethylene-PT; Polypropylene-PP; Identifying model: code+volume like AG300 means 300 ml amber calcium sodium glass bottle.

2. The soda lime glass, amber calcium glass, borosilicate glass bottle can be coated to strength the ability of mechanical shock resistance, to avoid glass flying when emergency, Identifying model: code + volume+T, for example G300T means 300ml soda lime glass bottle with coated.

Bottle Cap

Ordering Information

Order Code	Material	Match Size in. (mm)
AL12	Aluminum	0.47" (12)
AL15	Aluminum	0.59" (15)
AL28	Aluminum	1.1" (28)
AL32	Aluminum	1.26" (32)
AL45	Aluminum	1.77" (45)

FITOK

Bottle Septum

Material

O Natural Rubber

Natural rubber has excellent mechanical properties and elasticity, and has a high resistance to tear. It is easy aged under the environment of light and ozone. Given its mild chemical properties, it can resist most chemical corrosion in a short period of time.

© EPDM(Ethylene-Propylene-Diene Monomer)

EPDM has good mechanical properties, elasticity, anti-aging and corrosion resistance. Silicon Rubber

Silicone rubber has good mechanical properties and elasticity, the most prominent feature is its heat resistance and oxidation resistance, almost no aging, and insoluble in almost any non fat solvents.

- O Butvl rubber with PTFE coating
- Silicon Rubber with PTFE Coating
- Combines of PTFE corrosion resistance and heat resistance of silicone rubber. O Fluorous Rubber
- Fluorine rubber has high temperature resistance and corrosion resistance, and can solve the isolated problem for most of samples.

Specification

Material	Seal	Max Tem. °F (°C)	Aging resistance	Corrosion resistance	Max. needle size in. (mm)
Natural Rubber	А	248 (120)	С	С	0.236" (6)
EPDM	А	257 (125)	А	В	0.236" (6)
Silicon Rubber	В	428 (220)	А	В	0.118" (3)
Butyl rubber with PTFE coating	В	293 (145)	А	А	0.118" (3)
Silicon Rubber with PTFE Coating	В	428 (220)	А	А	0.118" (3)
Fluorous Rubber	С	482 (250)	А	А	0.118" (3)
A: Excellent B: Good C: Normal					

Ordering Information

Material	Order Code	Match Size in. (mm)	Thickness in. (mm)
	T12×3	0.47" (12)	0.118" (3)
	T15×3	0.59" (15)	0.118" (3)
Natural Rubber	T28×3	1.1" (28)	0.118" (3)
	T32×3	1.26" (32)	0.118" (3)
	T45×4	1.77" (45)	0.157" (4)

For bottle septum of other material, the size please follow the natural rubber's, the ordering number: natural rubber-T; EPDM-E; silicone rubber-V; Butyl rubber with PTFE-IP; silicone rubber with PTFE-VP, Fluorous rubber-F;

Identifying model: code + size. For example, IP28X3 means 28X3mm Butyl rubber with PTFE Coating bottle septum

The ordering number of bottle cap and septum depends on the bottle volume, different bottle volume matches different cap and septum, for details please refer to the bottle, cap, septum match size. Normally bottle cap and septum are disposable items, please change the cap and septum before re-sampling.

Combines the corrosion resistance of PTFE and the flexibility of butyl rubber. PTFE contact with samples, butyl rubber for seal.



Other Spare Parts

Ball Valve

Features for BF&BFH Series

- ◎ Forged body with end connectors
- O Body materials: 316 SS, 316L SS, 904L SS, and alloy 400
- ◎ Seat materials: PTFE, PCTFE and PEEK
- O Packing materials: fluorocarbon FKM and PTFE
- O End connections:
- 1/8 to 1/2 female NPT 1/4" to 1/2" and 6 mm to 12 mm tube fitting
- Orifice size: 0.19" (4.8 mm)
- O Maximum working pressure: BF Series: 6000 psig (414 bar) BFH Series: 10 000 psig (689 bar)
- ◎ Working temperature: 0°F to 450°F (-18°C to 232°C)



Features for BO Series

- ◎ 1-piece forged body, top entry
- O Body materials: 316 SS, 316L SS, 304 SS, 321 SS, 304L SS, 904L SS, alloy 400, and brass
- ◎ Seat materials: PTFE and UHMWPE
- © Flow patterns: 2-way, 3-way, 4-way, 5-way, 6-way and 7-way
- O End Connections:

1/8 to 1/2 female thread

- 1/16" to 3/4" and 3 mm to 18 mm tube fitting
- Orifice sizes: 0.05" (1.3 mm) to 0.41" (10.3 mm)
- O Maximum working pressure: 3000 psig (207 bar)
- ◎ Working temperature: -65°F to 300°F (-54°C to 148°C)

Needle Valve

Features for ND Series

- One-piece forged body
- O Body materials: 316 SS, 316L SS, 304 SS, 304L SS, Alloy 400 and brass, other material please contact with manufacture
- Orifice (mm): 2, 4, 6.4
- O Maximum working pressure: 3000 psig (20.7 Mpa)
- ◎ Working temperature: -20°F to 450°F (-28°C to 232°C)
- O Designed handle to prevent contaminants from entering into the valve
- ◎ Non-rotating stem, soft stem tip
- ◎ End connections type and size:
- 1/8" to 1/2", M10 to M20 thread
- 1/4" to 1/2", 3 mm to 12 mm tube fitting



Stainless Steel Braided Hose Assemblies

Features for PS Series

- O Lightweight construction for easy handling and installation
- © Core tube material: smooth virgin PTFE
- Overbraid material: 304 stainless steel
- O Maximum working pressure: 3000 psig (207 bar)
- O Hose sizes: 1/4" to 1"
- ◎ Working temperature: -65°F to 400°F (-53°C to 204°C)
- O End connections:
- 1/8 to 1 thread
- 1/8" to 1" and 6 mm to 22 mm tube fitting
- Standard and custom-length available

Quick-Connects

Features for OC Series

- O Maximum working pressure: 3000 psig (207 bar)
- O Working temperature:
- -10°F to 400°F (-23°C to 204°C) with Fluorocarbon FKM seal -10°F to 250°F (-23°C to 121°C) with Buna N seal
- O Materials: stainless steel or brass
- © End connections: 1/8 to 1/2 NPT, 1/8" to 1/2" and 6 mm to 12 mm tube fitting and 1/4" to 1/2" hose connectors
- © Reliable, leak-tight O-ring seals for vacuum or pressure systems
- O Mix-interchangeable with other main brands
- © Single-end shutoff, double-end shutoff, and full-flow quick-connects available
- O Simple push-to-connect coupling for quick and easy operation
- O Sturdy locking mechanism with large contact area to ensure reliable stem retainment

Pressure Reducing Regulator

Features for PR Series

- O Maximum inlet pressure: 500, 3000 psig
- ◎ Outlet pressure ranges: 0~25, 0~50, 0~100, 0~250, 0~500 psig
- ◎ Flow coefficient (Cv):
- 500 psig Inlet pressure: 0.15
- 3000 psig Inlet pressure: 0.06
- ◎ Working temperature: -40°F~+165°F (-40°C~+74°C)
- O Leak rate:
- Internal: Bubble-tight
- External: $\leq 2x10^{-8}$ atm \cdot cc/sec He
- © Convoluted diaphragm provides accurate pressure adjustment
- O Metal-to-metal diaphragm seal
- O Spring loaded pressure reducing regulator
- O A filter installed in inlet
- O Panel mounting available















Check Valve

Features for CO Series

- $\tilde{\tilde{O}}$ Compact, one piece body
- Maximum working pressure: 3000 psig (207 bar)
- O Working temperature: -10°F to 375°F (-23°C to 190°C)
- © Cracking pressure: 1/3 to 25 psig (0.02 to 1.7 bar)
- $\ensuremath{\mathbb{O}}$ Body materials: stainless steel, brass, carbon steel, and alloy
- $\ensuremath{\mathbb{O}}$ End connections:
- 1/4 to 1/2 NPT

1/4 to 1/2 BSPT



Sample Cylinders

Features for SC Series

- O Maximum working pressure: 5000 psig (345 bar)
- ◎ Volume varies from 40 to 3785 cm³
- \odot 304L, 316L stainless steel and alloy 400, resist intergranular corrosion
- Seamless tubing body provides consistent wall thickness, size and capacity
- $\odot\,$ Cylinder inlet ends are 1/8, 1/4 and 1/2 female NPT connections
- Heavy wall end connections provide strength and are flaring-resistent
- Full-penetration gas tungsten arc-weld construction provides leak-tight sample containment



Tools for Tubing and Tube Fitting

Hand Tube Benders

Features for HTB Series

- Can bend stainless steel or copper tubing, the outside diameter ranges from 1/4" to 1/2" and 6 mm to 12 mm.
- Roll dies reduce bending force and tube ovality, as com-



Tube Deburring Tools

- Solution of the state of the
- For deburring 1/4" to 1 1/4" and 6 mm to 35 mm outside diameter tubing.



Remarks: for more information, please refer to FITOK relative product catalogues or contact FITOK group or authorized agent.

Pressure Gauge

Features for GA Series

- © 63 mm and 100 mm dial sizes are available
- \odot The accuracy is according to ASME B40.1, EN 837-1, JIS B7505
- \odot High pressure measurement up to 100 Mpa
- 14x1.5, 20x1.5 Male Metric Thread, 1/4", 1/2" Male NPT, 1/4", 3/8", 1/2", 6 mm, 10 mm, 12 mm tube adapter or other fitting types and sizes are availale
- \odot The degree of protection is IP65
- ◎ Hermetically sealed construction
- $\ensuremath{\mathbb O}$ Tube adapter align the dial to the desired position
- O Lower Mount, Center-Back Mount and Lower-Back Mount are provided
- O Design is liquid fillable



Tube Cutters

- For cutting stainless steel, copper, and aluminum tubing.
- For cutting 1/8" to 2 5/8" and 3 mm to 65 mm outside diameter tubing.



Manual Presetter Tools

Features for MPT Series

◎ For 1/4" to 1" and 6 mm to 25 mm tube fittings





Warning

- 1. Before the installation, be sure relief or empty the pressure.
- 2. Be used beyond the design pressure/temperature rating is prohibited
- 3. If any leaking or blocking in sampling system, shut off the isolate valve immediately and let professionals do the repair or replacement.
- 4. For sample bottle configuration sampling system, each sampling volum shall not exceed the sampling needle.
- 5. For sampling system without nitrogen purging, the system may remain a small amount of sample after sampling, please follow the operation instruction strictly, do not use the sample system abusively
- 6. For pipe welding, to prevent the welding slag drops in the system and causes system block and valve damage, the pipeline shall be purged before system installation.
- 7. If nitrogen gas purge is not available, other alternative inert gas can be use according to the working condition.

Technical Specification Sheet

(Necessary information for Closed-loop sampling system selection and enquiry)

Technical Parameter						
Medium Name:		Medium J	physical phase: 🗌	Liquid 🗌 Liquefi	ed Gas 🗌 Gas	
Inlet Pressure:	Outlet Pressure:	Medium te	mperature:	Medium visic	osity:	
Solid particle in sample:	Yes No Particle	e CBM.:	Partic	le Density:	%	
Sample Parameter						
🗌 Standard liquid	Liquid need to be pu	ırged	Liquid need to	be recycled		
Liquefied Gas	Liquefied Gas need to	be purged	Liquefied Gas ı	need to be circulate	Ł	
Standard gas	Gas need to be purge	ed	Gas need to be	e circulated		
Acid medium	□ Non-acid medium					
Sampling bottle volume:		Sampling cylind	er volume:			
Material of medium co	ontact surfaces					
🗌 316 SS 🛛 🗌 316L	SS 🗌 304L SS	🗌 304 SS	PTFE	🗌 Other		
Connection type and s	ize					
Inlet type:		Inlet size:				
Outlet type:		Outlet size:				
Nitrogen connection type:		Nitrogen conne	ection size:			
Vent type:		Vent size:				
Other						
Sample recovery port pres	sure: Recove	ery port check val	ve: 🗌 Yes 🗌 No	Recover to: 🗌 Fire	🗌 Ground 🔲 Air	
Sample cooling: 🗌 Yes 🛛 No Heating: 🗋 Steam 🗌 Electricity 🗌 No						
Protective enclosure: 🗌 Yes 🛛 No 🗌 Type						
Installation Type: 🗌 Wall r	mounted 🗌 Bracket	Other				
ted/draft drawing/ other special requirement:						

Technical Parameter					
Medium Name:		Medium	physical phase:] Liquid 🛛 🗌 Liquefied	d Gas 🗌 Gas
Inlet Pressure:	Outlet Pressure:	Medium te	mperature:	Medium visico	sity:
Solid particle in sample:	Yes No Part	icle CBM.:	Parti	icle Density:	%
Sample Parameter					
🗌 Standard liquid	ndard liquid 🗌 Liquid need to be purged		Liquid need to be recycled		
Liquefied Gas	s 🗌 Liquefied Gas need to be purged		Liquefied Gas need to be circulated		
Standard gas	□ Gas need to be purged		□ Gas need to be circulated		
Acid medium	Non-acid medium_				
Sampling bottle volume:		Sampling cylind	er volume:		
Material of medium co	ontact surfaces				
□ 316 SS □ 316L	SS 🗌 304L SS	□ 304 SS	PTFE	Other	
Connection type and s	ize				
Inlet type:	Inlet type: Inlet size:				
Outlet type:	utlet type: Outlet size:				
Nitrogen connection type: Nitrogen connection size:					
Vent type: Vent size:					
Other					
Sample recovery port pressure: Recovery port check valve: Yes No Recover to: Fire Ground Air					
Sample cooling: 🗌 Yes 🔅 No Heating: 🗋 Steam 📄 Electricity 🗌 No					
Protective enclosure: 🗌 Yes 🔹 🗋 No 🔅 Type					
Installation Type: 🗌 Wall mounted 🗌 Bracket 🗌 Other					
oted/draft drawing/ other special requirement:					

Technical Parameter				
Medium Name:	Medium	physical phase: 🗌 Liquid 🗌 Liquefied Gas 🗌 Gas		
Inlet Pressure:	Outlet Pressure: Medium te	emperature: Medium visicosity:		
Solid particle in sample:	□ Yes □ No Particle CBM.:	Particle Density: %		
Sample Parameter				
Standard liquid	Liquid need to be purged	Liquid need to be recycled		
Liquefied Gas	Liquefied Gas need to be purged	Liquefied Gas need to be circulated		
Standard gas	□ Gas need to be purged	Gas need to be circulated		
Acid medium	Non-acid medium			
Sampling bottle volume:	Sampling cylind	der volume:		
Material of medium	contact surfaces			
□ 316 SS □ 316	L SS 🗌 304L SS 🗌 304 SS	PTFE Other		
Connection type and	size			
Inlet type: Inlet size:				
Outlet type:	Outlet size:			
Nitrogen connection type: Nitrogen connection size:				
Vent type: Vent size:				
Other				
Sample recovery port pressure: Recovery port check valve:YesNo Recover to:FireGroundAir				
Sample cooling: 🗌 Yes 🔹 No Heating: 🗋 Steam 📄 Electricity 📄 No				
Protective enclosure: 🗌 Yes 👘 No 👘 Type				
Installation Type: 🗌 Wall mounted 🛛 Bracket 🗌 Other				
Noted/draft drawing/ other special requirement:				

Technical Parameter					
Medium Name:		Medium p	hysical phase: 🗌 I	Liquid 🗌 Liquefied	Gas 🗌 Gas
Inlet Pressure:	Outlet Pressure:	Medium ter	nperature:	Medium visicos	ty:
Solid particle in sample:	Yes No Particle CB	M.:	Partic	le Density:	%
Sample Parameter					
Standard liquid	Liquid need to be purged	ł	Liquid need to be recycled		
Liquefied Gas	☐ Liquefied Gas need to be purged		Liquefied Gas need to be circulated		
Standard gas	☐ Gas need to be purged		□ Gas need to be circulated		
Acid medium	□ Non-acid medium				
Sampling bottle volume:	Sa	mpling cylinde	r volume:		
Material of medium co	ontact surfaces				
□ 316 SS □ 316L	SS 🗌 304L SS	□ 304 SS	PTFE	Other	
Connection type and s	ize				
Inlet type:	Ir	nlet size:			
Outlet type:	Outlet size:				
Nitrogen connection type: Nitrogen connection size:					
Vent type: Vent size:					
Other					
Sample recovery port pressure: Recovery port check valve: Yes No Recover to: Fire Ground Air					
Sample cooling: 🗌 Yes 🔹 No Heating: 🗋 Steam 📄 Electricity 📄 No					
Protective enclosure: Yes No Type					
Installation Type: 🗌 Wall mounted 🗌 Bracket 🗌 Other					
oted/draft drawing/ other special requirement:					

Technical Parameter				
Medium Name:	Medium	physical phase: 🗌 Liquid 🗌 Liquefied Gas 🗌 Gas		
Inlet Pressure:	Outlet Pressure: Medium te	emperature: Medium visicosity:		
Solid particle in sample:	□ Yes □ No Particle CBM.:	Particle Density: %		
Sample Parameter				
Standard liquid	Liquid need to be purged	Liquid need to be recycled		
Liquefied Gas	Liquefied Gas need to be purged	Liquefied Gas need to be circulated		
Standard gas	Gas need to be purged	□ Gas need to be circulated		
□ Acid medium	Non-acid medium			
Sampling bottle volume:	Sampling cylind	der volume:		
Material of medium	contact surfaces			
🗌 316 SS 🔤 316	L SS 🗌 304L SS 🗌 304 SS	PTFE Other		
Connection type and	size			
Inlet type:	Inlet size:			
Outlet type:	Outlet size:			
Nitrogen connection type: Nitrogen connection size:				
Vent type:	Vent size:			
L				
Other				
Sample recovery port pressure: Recovery port check valve:YesNo Recover to:FireGroundAir				
Sample cooling: 🗌 Yes 🔹 No Heating: 🗋 Steam 📄 Electricity 📄 No				
Protective enclosure: 🗌 Yes 🔹 🗋 No 🔅 Type				
Installation Type: 🗌 Wall mounted 🛛 Bracket 🗌 Other				
Noted/draft drawing/ other special requirement:				

