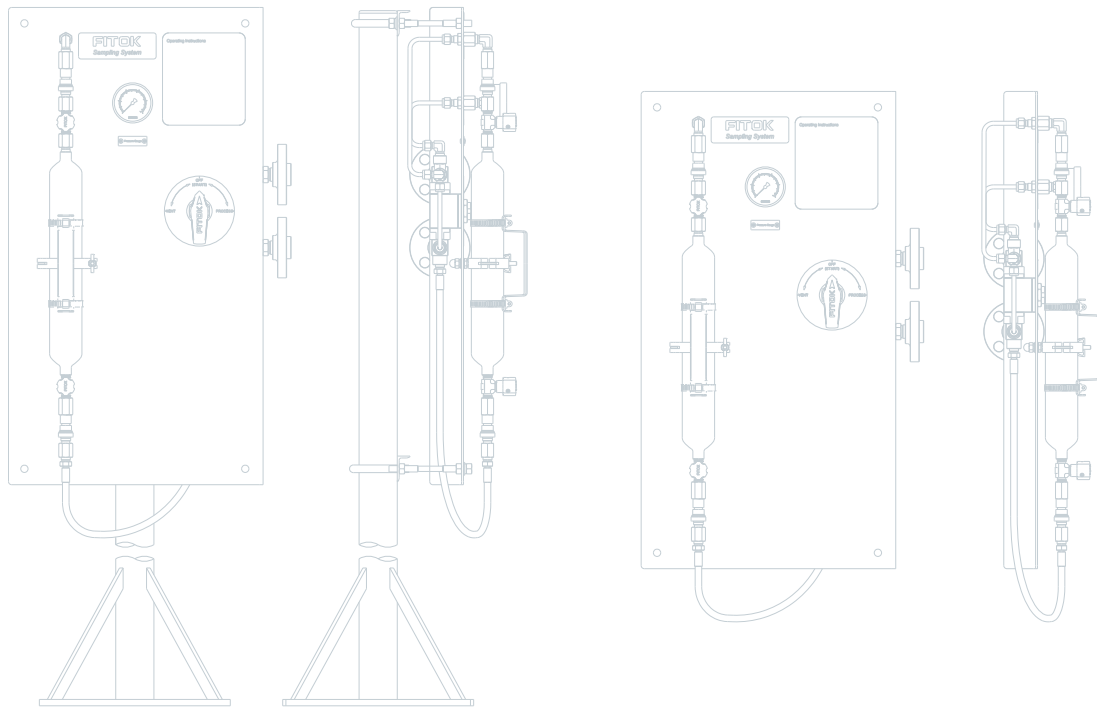


Cylinder Configuration Sampling Systems for Liquefied Gases



FITOK
Valves and Fittings

www.fitokgroup.com

CSF3 - Bypass Purge Type with Expansion Chamber

Bypass tipe pembersihan dengan ruang ekspansi

Features

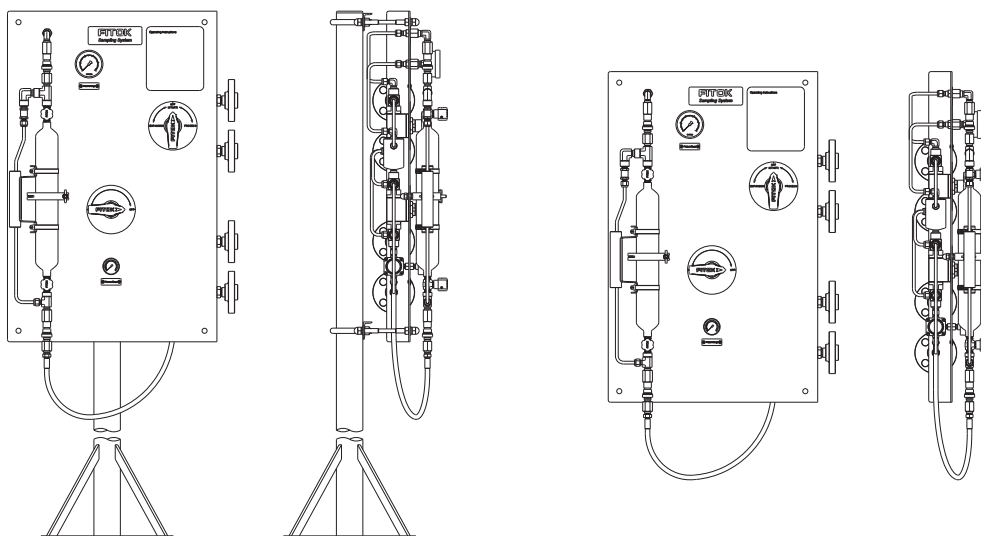
- Sampling from devices or process lines
- System purge and bypass purge
- Predefined sampling volume controlled by an expansion chamber to ensure safe sampling
- Easy operation with a single handle

Basic Configuration

Wetted Material	316 SS	
Cylinder Assembly	500 ml cylinder	
	ND Series needle valves	
	QC4 Series quick-connects	
	CV Series check valves	
Sampling Valve	BF Series ball valves (gearbox linkage): PTFE seat and FKM O-ring Max. working pressure: 1500 psig @ 70°F (103 bar @ 20°C) Temperature range: 0°F to 450°F (-18°C to 232°C)	
Nitrogen Branch	Nitrogen regulator	
	CV Series check valves	
	Pressure gauge	
Expansion Chamber	100ml, to control the predefined sampling volume to 80% of the cylinder volume	
Other Accessories	PS Series metal hoses	
	Pressure gauge	
Connections	NPS 1/2 flange	

Note: Products of other specifications are available upon request.

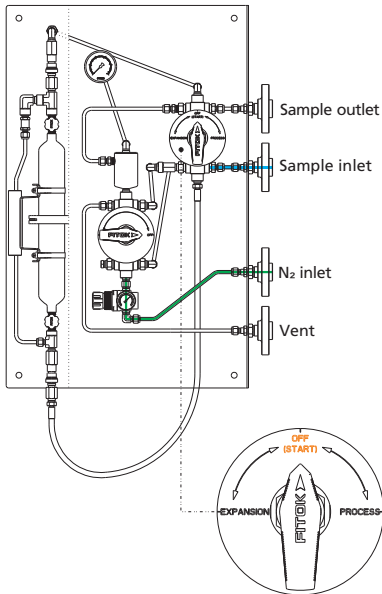
Typical Installation Mode



Operation

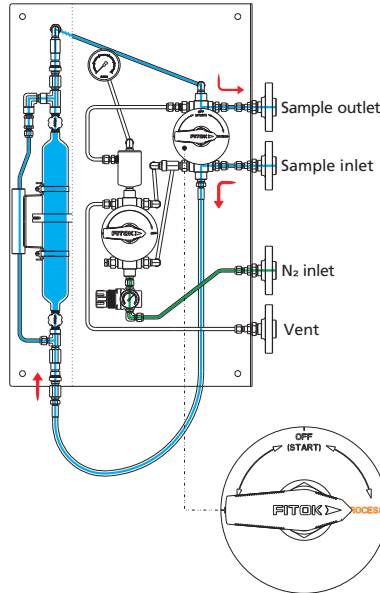
1 - Preparation

Install the sample cylinder and connect the hose to the bottom side of the cylinder. Open the needle valves at both ends of the cylinder.



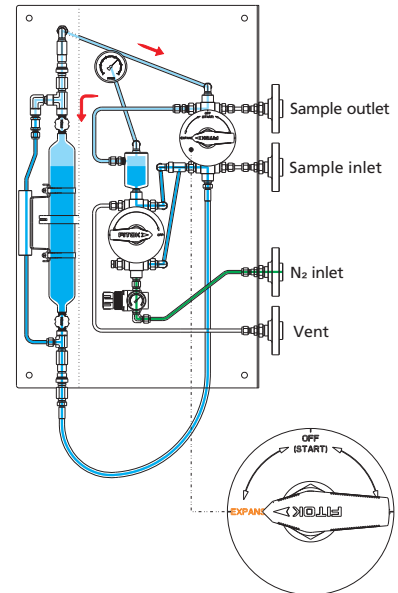
2 - Pre-sampling

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



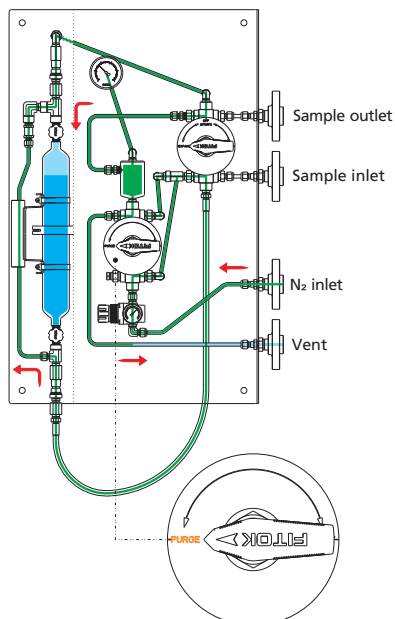
3 - Expansion

Turn the handle to the "EXPANSION" position, connecting the cylinder with the expansion chamber. Hold for a period of time to transfer a portion of sample to the expansion chamber. Close the needle valves at both ends of the cylinder.



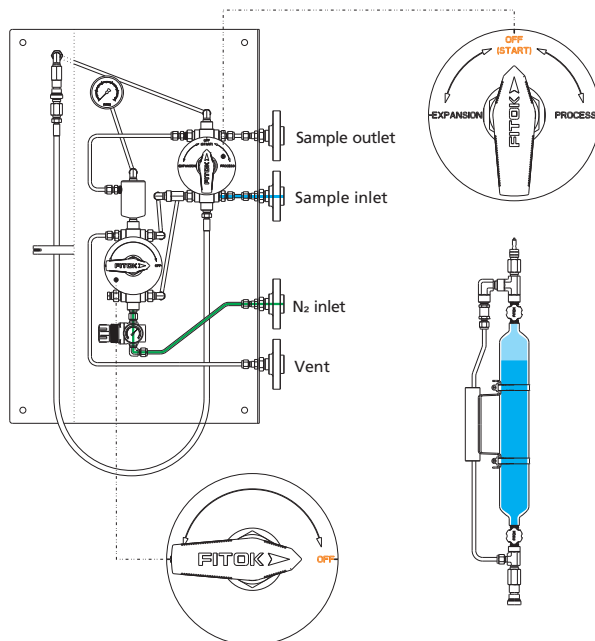
4 - Purge

Turn the handle of the valve on the purge line to the "PURGE" position, allowing Nitrogen to flow through the quick-connects and bypass to push the residual sample out of the system.



5 - Off

Turn the handle to the "OFF" position and disconnect the hose. Remove the cylinder and connect the hose to the top quick-connect to complete the sampling process.





Application Questionnaire for Selection of FITOK Sampling System

I. Customer Information		Customer Name		End User	
II. Project Information		Project Name		Site Location	
III. Technical Parameters					
No.	Section	Specification			
1	Process Data	Sample/fluid name and composition			
2		Tag number			
3		Fluid phase state	<input type="radio"/> Liquid	<input type="radio"/> Gas	<input type="radio"/> Liquefied gas
4		Design pressure	<input type="radio"/> psig	<input type="radio"/> bar	
5		Operating pressure*1	<input type="radio"/> psig	<input type="radio"/> bar	
6		Saturated vapor pressure*2	<input type="radio"/> psig	<input type="radio"/> bar	
7		Design temp.	<input type="radio"/> °C	<input type="radio"/> °F	
8		Operating temp.*3	<input type="radio"/> °C	<input type="radio"/> °F	
9		Particles*4	<input type="checkbox"/>	Size and Content	_____ μm, _____ %
10	Materials of Construction	Wetted material	<input type="radio"/> 316SS (Std.) <input type="radio"/> Alloy 400 <input type="radio"/> Hastelloy C-276 <input type="radio"/> Others_____		
11		O-ring material	<input type="radio"/> FKM (Viton)(Std.) <input type="radio"/> FFKM (Kalrez) <input type="radio"/> EPDM <input type="radio"/> Others_____		
12		Valve seat material	<input type="radio"/> PTFE (Std.) <input type="radio"/> PEEK <input type="radio"/> PCTFE <input type="radio"/> Others_____		
13	Connection Type	Inlet/outlet type and size	Inlet _____ Outlet _____		
14		Vent type and size	Vent _____		
15		Nitrogen port type and size	Nitrogen port _____		
16	Sample Container	Container type	<input type="radio"/> Bottle <input type="radio"/> Cylinder		
17	Bottle	Bottle volume	<input type="radio"/> 50 ml <input type="radio"/> 60 ml <input type="radio"/> 100 ml <input type="radio"/> 150 ml <input type="radio"/> 250 ml <input type="radio"/> 300 ml <input type="radio"/> 500 ml <input type="radio"/> 1000 ml <input type="radio"/> 2 oz <input type="radio"/> 4 oz <input type="radio"/> 8 oz <input type="radio"/> 16 oz <input type="radio"/> 32 oz <input type="radio"/> Others_____		
18		Needle assembly size: process needle ID (mm) x vent needle ID (mm)	<input type="radio"/> 1.4 x 1.4 (Std.) <input type="radio"/> 2.0 x 1.4 <input type="radio"/> 2.0 x 2.0 <input type="radio"/> 3.0 x 1.4 <input type="radio"/> 3.0 x 3.0 <input type="radio"/> 4.0 x 1.4 <input type="radio"/> 6.0 x 1.4		
19		Bottle material	<input type="radio"/> Soda-lime glass (Std.) <input type="radio"/> Amber glass <input type="radio"/> Borosilicate glass <input type="radio"/> Polyethylene <input type="radio"/> Polypropylene <input type="radio"/> Others_____		
20		Septum material	<input type="radio"/> PTFE coated silicone(Std.) <input type="radio"/> EPDM <input type="radio"/> Silicone rubber <input type="radio"/> FKM <input type="radio"/> PTFE coated butyl <input type="radio"/> Natural rubber <input type="radio"/> Others_____		
21		Cap material	<input type="radio"/> Polypropylene <input type="radio"/> PBT (Polybutylene terephthalate) <input type="radio"/> Aluminium		
22	Cylinder	Cylinder volume	<input type="radio"/> 75 ml <input type="radio"/> 150 ml <input type="radio"/> 300 ml <input type="radio"/> 500 ml <input type="radio"/> 1000 ml <input type="radio"/> 2250 ml <input type="radio"/> Others_____		
23		Cylinder material	<input type="radio"/> 316L (Std.) <input type="radio"/> 304L <input type="radio"/> Alloy 400 <input type="radio"/> Others_____		<input type="checkbox"/> PTFE coated



Application Questionnaire for Selection of FITOK Sampling System

24	Accessories	Enclosure type and material	<input type="checkbox"/>	<input type="radio"/> Standard <input type="radio"/> Insulated <input type="radio"/> Heated by electric <input type="radio"/> Heated by steam	<input type="radio"/> 304SS (Std.) <input type="radio"/> 316SS <input type="radio"/> Others _____	
25		Panel	<input type="checkbox"/>	Material	<input type="radio"/> 316SS <input type="radio"/> 304SS <input type="radio"/> Others _____	
26		Pipe stand	<input type="checkbox"/>	Material	<input type="radio"/> 304SS <input type="radio"/> CS20 <input type="radio"/> Others _____	
27		Cooler	<input type="checkbox"/>	Cooling inlet/outlet type and size		Inlet _____ Outlet _____
28		Steam tracing	<input type="checkbox"/>	Steam inlet/outlet type and size		Inlet _____ Outlet _____
29		Others* ⁵				
30		P&ID	Please provide comments or sketch if applicable.			
31	Documentation	<input type="checkbox"/> Material Certification EN10204:2004-3.1		<input type="checkbox"/> Inspection & testing report		
32		<input type="checkbox"/> Others, please specify:				

- Remarks:**
- *1 Fix volume sampling system is recommended when inlet pressure > 150psig (10.3bar).
 - *2 Cylinder configuration sampling system is recommended when vapor pressure > 10psia (0.69bar).
 - *3 Cooler is recommended when sample temperature > 140°F (60°C).
 - *4 Filter is recommended when particle size >100μm.
 - *5 If other accessories (such as: check valve, carbon canister, spring return handle and etc.) are needed, please specify.
- 6 Single choice Optional