

NEW! RAPID DELIVERY TSI SAMPLING SYSTEMS

TEXAS SAMPLING®
Pre-engineered sampling systems





TSI Sampling Express Pre-engineered sampling systems

Texas Sampling (TSI), founded in 1991, is a brand of Crane Instrumentation & Sampling. Certified to ISO9001, TSI manufactures closed-loop sampling systems for liquids, gases and liquefied gases, designed for use in industrial environments. We take pride in producing quality products that meet or exceed the customer's specifications and needs along with industry standards.

All TSI samplers are designed to provide;

- Emission free, environmentally safe sampling
- Operator safety via single handle ease of operation
- Representative sample with zero dead volume systems

Many of the worlds' largest chemical, petrochemical and oil and gas producers trust TSI with their grab sampling applications.

TSI is proud to launch Sampling Express.

TSI Sampling Express adds to the range of custom samplers, a range of pre-designed and pre-engineered systems which cover many of the worlds' most common sampling applications.

TSI Sampling Express provides;

- Sampling systems in drastically reduced lead times
- Design flexibility
- Complete documentation

This catalogue outlines the options available in TSI Sampling Express.

If you need assistance selecting the correct sampler, please contact our sales department at Bergschenhoek, Houston or your local representative.

We look forward to helping you with your sampling applications.

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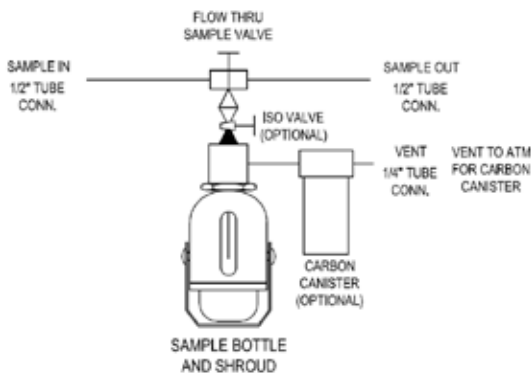
MD Flow Thru Sample System (K1)

Liquid Grab Sampler

MD Flow Thru Sample System (K1)



1. TYPICAL P & ID



2. FEATURES

- Closed sampling
- Easily operated with one valve
- Live load seat
- Continuous flow
- Process needle mates to seat of sample valve
- Replaceable process needle and process needle with PTFE coating
- Replaceable vent needle
- Shroud Assembly with viewing slot
- Removable sleeve

3. BENEFITS

- Safety for the operator, the environment and a representative sample
- Operator friendly
- Withstands temperature fluctuation
- Flow will continue both in bypass or sample position
- Zero dead volume
- Easy to remove needle assembly
- Virtually eliminates vent needle plugging that causes over-pressuring of sample bottles
- Allows the operator to see the sample as it is filling the bottle and protects the sample bottle
- Allows the customer a wide choice of sample bottles with different volumes

The MD - FlowThru System can be used for higher pressures and temperatures where a continuous flow loop is desired or viscous process is encountered.

Easy to install and operate, the sample dispenses into the sample bottle by merely opening a valve. The process pressure pushes the sample through the valve into the bottle via a needle.

The rising stem style sample valve allows the operator to control the flow of the sample being dispensed into the sample bottle.

SPECIFICATIONS

Material SS316, SS316L.

Shroud assembly with viewing slot and strap.

Needle assembly standard or internal needles Various needle ID's Available.

Flow Thru type sample valve 1/2" F NPT size with PTFE seats.

Operation Manual.

Connections 1/2" (process), 1/4" (Vent) compression fittings.

Optional carbon canister, SS316 including active carbon.

Optional Isolation sample valve provides additional safety for the operator.

Check valve included with FKM or FFKM O-rings.

Mounting system mounts on 304SS panel for pipe mounting, includes 2" pipe clamps.

MD Flow Thru Sample System (K1)

Option Selector

Shroud type:

Code	Volume	Cap Size	Bottle Material	Shroud P/N
01	1 OZ	DOP 20	Glass (B.R.)	2023692
02	2 OZ	DOP 20	Glass (B.R.)	2021111
04	4 OZ	DOP 22	Glass (B.R.)	2020554
08	8 OZ	DOP 24	Glass (B.R.)	2020759
16	16 OZ	DOP 28	Glass (B.R.)	2019972
32	32 OZ	DOP 33	Glass (B.R.)	2020564

Flow Thru Sample valve type:

Code	Valve	Seat	P/N
1	Flow thru MD/GP1/2"NPT	PTFE	2023333

Isolation valve:

Code	Iso valve	P/N
N	No	N/A
Y	Yes	2020228

Check valve type:

Code	On Vent	O-ring P/N
1	No	N/A
2	Yes	FKM 2008833 FFKM 2008834

p/n example

Type	Shroud	Needles	Flow Thru Valve	Isolation Valve	Check Valve	Carbon Canister	Language
MD-K1	01	C	1	Y	1	N	ENG

Needles type:

Code	Process Needle OD	Part Number	Vent Needle OD	Part Number	O-ring
A	.083" SS316 UNCOATED	2020180	.083" SS316 UNCOATED	2019990	FKM
B	.109" SS316 UNCOATED	2020957	.083" SS316 UNCOATED	2019990	FKM
C	.148" SS316 UNCOATED	2021148	.083" SS316 UNCOATED	2019990	FKM
D	.203" SS316 UNCOATED	2021475	.083" SS316 UNCOATED	2019990	FKM
E	.083" SS316 UNCOATED	2020923	.083" SS316 UNCOATED	2020696	FFKM
F	.109" SS316 UNCOATED	2020958	.083" SS316 UNCOATED	2020696	FFKM
G	.148" SS316 UNCOATED	2021170	.083" SS316 UNCOATED	2020696	FFKM
H	.203" SS316 UNCOATED	2022031	.083" SS316 UNCOATED	2020696	FFKM

Carbon Canister:

Code		P/N
N	NO	N/A
Y	YES	2011643

Language:

Code	
ENG	English
FRA	Français
ITA	Italiano
GER	Deutsch
NED	Nederlands
SPA	Español



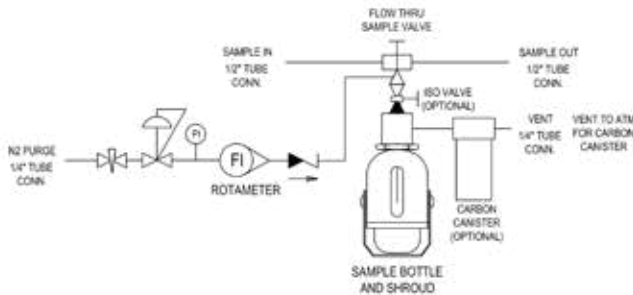
MD Flow Thru Sample System with Process Needle Purge (PNP) (K2)

Liquid Grab Sampler

MD Flow Thru Sample System with Process Needle Purge (PNP) (K2)



1. TYPICAL P & ID



2. FEATURES

- Closed sampling
- Easily operated with one valve
- Live load seat
- Continuous flow
- Process needle mates to seat of sample valve
- Replaceable process needle and process needle with PTFE coating
- Replaceable vent needle

3. BENEFITS

- Safety for the operator, the environment and a representative sample
- Operator friendly
- Withstands temperature fluctuation
- Flow will continue both in bypass or sample position
- Zero dead volume
- Easy to remove needle assembly
- Virtually eliminates vent needle plugging that causes over-pressuring of sample bottles
- Allows the operator to see the sample as it is filling the bottle and protects the sample bottle
- A wide choice of sample bottles with different volumes
- Removes sample from process needle, eliminates plugging and improves system reliability

The MD - FlowThru System with process needle purge (PNP) can be used for higher pressures and temperatures where a continuous flow loop is desired or viscous process is encountered.

Easy to install and operate, the sample dispenses into the sample bottle by merely opening a valve. Process pressure pushes the sample through the valve into the bottle via a needle.

The rising stem style sample valve allows the operator to control the flow of the sample being dispensed into the sample bottle.

The PNP components include nitrogen block valve, regulator, check valve, pressure gauge, and rotameter.

SPECIFICATIONS

Material SS316, SS316L.

Sleeve type sleeve with bottle retaining clip. See option selector for the available sleeves.

Needle assembly standard or internal needles. Process/vent needle ID: See option selector for the available size.

Flow Thru type sample valve 1/2" F NPT size with PTFE seats. **Operation Manual.**

Connections 1/2" (process), 1/4" (Vent) compression fittings.

Optional carbon canister, SS316 including active carbon.

Optional Isolation sample valve provides additional safety for the operator.

Check valve included with FKM or FFKM O-rings.

Process needle purge facility, consisting of a nitrogen block valve, regulator, check valve, pressure gauge and rotameter.

Mounting system mounts on 304SS panel for pipe mounting, includes 2" pipe clamps.

- Shroud Assembly with viewing slot
- Removable sleeve
- Process Needle Purge (PNP)
- N2 Rotameter on PNP

MD Flow Thru Sample System with Process Needle Purge (PNP) (K2)

Option Selector

Shroud type:

Code	Volume	Cap Size	Bottle Material	Shroud P/N
01	1 OZ	DOP 20	Glass (B.R.)	2023692
02	2 OZ	DOP 20	Glass (B.R.)	2021111
04	4 OZ	DOP 22	Glass (B.R.)	2020554
08	8 OZ	DOP 24	Glass (B.R.)	2020759
16	16 OZ	DOP 28	Glass (B.R.)	2019972
32	32 OZ	DOP 33	Glass (B.R.)	2020564

Flow Thru Sample valve type:

Code	Valve	Seat	P/N
1	Flow thru MD/GP 1/2"NPT	PTFE	2023333

Isolation valve: P/N

Code	Iso valve	
N	No	N/A
Y	Yes	2020228

Check valve type:

Code	On Vent	O-ring P/N
1	No	N/A
2	Yes	FKM 2008833 FFKM 2008834

p/n example

Type	Shroud	Needles	Flow Thru Valve	Isolation Valve	Check Valve	Carbon Canister	Language
MD-K2	01	C	1	Y	1	N	ENG

Needles type:

Code	Process Needle OD	Part Number	Vent Needle OD	Part Number	O-ring
A	.083" SS316 UNCOATED	2020180	.083" SS316 UNCOATED	2019990	FKM
B	.109" SS316 UNCOATED	2020957	.083" SS316 UNCOATED	2019990	FKM
C	.148" SS316 UNCOATED	2021148	.083" SS316 UNCOATED	2019990	FKM
D	.203" SS316 UNCOATED	2021475	.083" SS316 UNCOATED	2019990	FKM
E	.083" SS316 UNCOATED	2020923	.083" SS316 UNCOATED	2020696	FFKM
F	.109" SS316 UNCOATED	2020958	.083" SS316 UNCOATED	2020696	FFKM
G	.148" SS316 UNCOATED	2021170	.083" SS316 UNCOATED	2020696	FFKM
H	.203" SS316 UNCOATED	2022031	.083" SS316 UNCOATED	2020696	FFKM

Carbon Canister:

Code		P/N
N	NO	N/A
Y	YES	2011643

Language:

Code	
ENG	English
FRA	Français
ITA	Italiano
GER	Deutsch
NED	Nederlands
SPA	Español



TSI3 Manual Fixed Volume Sample System (Q1)

Liquid Grab Sampler

TSI3 Manual Fixed Volume Sample System (Q1)



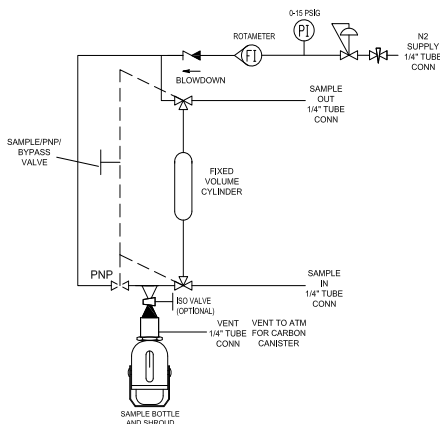
The TSI3 Fixed Volume Sample System is designed to take a specified amount of sample in low, vacuum and high pressure pipeline applications with a wide range of viscosities.

A customer defined fixed volume of sample is isolated from the process, then low-pressure nitrogen (or available motive force) is used to blow the sample down into the sample container.

Process Needle Purge removes any residual sample.

The entire operation of the TSI3 is performed with a single valve minimizing moving parts and maximizing service life. Process Needle Purging with pressurized nitrogen cleans the system after the sample has been collected eliminating plugging, allows the operator to check if the vent line is open and provides a clean, representative sample.

1. TYPICAL P & ID



2. FEATURES

- Easily operated with one valve
- Fixed volume chamber
- N2 rotameter on front of panel
- Replaceable process needle
- Replaceable vent needle

SPECIFICATIONS

Material wetted parts SS316, PTFE and FKM.

Shroud assembly with viewing slot and strap.

Needle assembly standard or internal needles.

Valve 5-way TSI3 sample valve, PTFE seats.

Operation Manual.

Connections 1/4" (process), 1/4" (Vent) compression fittings
Stainless steel.

Optional carbon canister, SS316 including active carbon.

Mounting system mounts on 304SS panel for pipe mounting, includes 2" pipe clamps.

Isolation sample valve provides additional safety for the operator.

Check valve included with FKM or FFKM O-rings.

- Shroud Assembly with viewing slot
- Removable sleeve
- Process Needle Purge (PNP)
- N2 Rotameter on PNP

3. BENEFITS

- Operator friendly
- Higher pressures are acceptable and sample bottle will not overflow
- The operator can monitor the fill level of the sample bottle
- Easy to remove needle assembly
- Virtually eliminates vent needle plugging that causes over-pressuring of sample bottles
- Allows the operator to see the sample as it is filling the bottle and protects the sample bottle
- A wide choice of sample bottles with different volumes
- Removes sample from process needle, eliminates plugging and improves system reliability

TSI3 Manual Fixed Volume Sample System (Q1)

Option Selector

Shroud + Cylinder:

Code	Volume	Cap Size	Bottle Material	Shroud P/N	Cylinder Fixed Volume	Cylinder P/N
01	1 OZ	DOP 20	Glass (B.R.)	2023692	20cc	2025050
02	2 OZ	DOP 20	Glass (B.R.)	2021111	40cc	2025051
04	4 OZ	DOP 22	Glass (B.R.)	2020554	90cc	2025052
08	8 OZ	DOP 24	Glass (B.R.)	2020759	180cc	2025053
16	16 OZ	DOP 28	Glass (B.R.)	2019972	360cc	2025054
32	32 OZ	DOP 33	Glass (B.R.)	2020564	675cc	2025055

Isolation valve: P/N

Code	Iso valve	P/N
1	No	N/A
2	Yes	2020228

Check valve type:

Code	On Vent	O-ring P/N
N	No	N/A
Y	Yes	FKM 2008833 FFKM 2008834

Carbon Canister:

Code		P/N
1	NO	N/A
2	YES	2011643

p/n example

Type	Shroud + Cylinder	Needles	Isolation Valve	Check Valve	Carbon Canister	Language
TSI3-Q1	04	A	1	N	2	ENG

Needles type:

Code	Process Needle OD	Part Number	Vent Needle OD	Part Number	O-ring
A	.083" SS316 UNCOATED	2020180	.083" SS316 UNCOATED	2019990	FKM
B	.109" SS316 UNCOATED	2020957	.083" SS316 UNCOATED	2019990	FKM
C	.148" SS316 UNCOATED	2021148	.083" SS316 UNCOATED	2019990	FKM
D	.203" SS316 UNCOATED	2021475	.083" SS316 UNCOATED	2019990	FKM
E	.083" SS316 UNCOATED	2020923	.083" SS316 UNCOATED	2020696	FFKM
F	.109" SS316 UNCOATED	2020958	.083" SS316 UNCOATED	2020696	FFKM
G	.148" SS316 UNCOATED	2021170	.083" SS316 UNCOATED	2020696	FFKM
H	.203" SS316 UNCOATED	2022031	.083" SS316 UNCOATED	2020696	FFKM

Language:

Code	
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GER	Deutsch
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SPA	Español

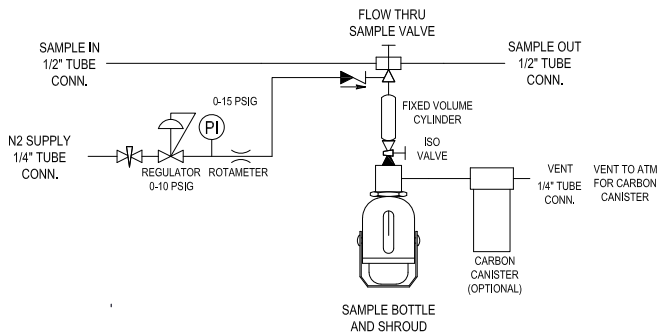


MDFV Fixed Volume Sample System (R1)

Liquid Grab Sampler MDFV Fixed Volume Sample System (R1)



1. TYPICAL P & ID



2. FEATURES

- Closed sampling
- Fixed volume chamber
- N2 rotameter on front of panel
- Replaceable process needle
- Shroud Assembly with viewing slot
- Removable sleeve
- Process Needle Purge (PNP)
- N2 Rotameter on PNP

3. BENEFITS

- Safety for the operator, the environment and a representative sample
- Higher pressures are acceptable and sample bottle will not overfill
- The operator can monitor the fill level of the sample bottle
- Easy to remove needle assembly
- Virtually eliminates vent needle plugging that causes over-pressuring of sample bottles
- Allows the operator to see the sample as it is filling the bottle and protects the sample bottle
- A wide choice of sample bottles with different volumes
- Removes sample from process needle, eliminates plugging and improves system reliability

The MD Fixed Volume Sample System is designed to take a specified amount of sample in high pressure applications and a wide variety of viscosities. Sample is deposited into a fixed volume chamber and isolated from the process using the MD sample valve. The sample is dispensed into the sample container with low pressure nitrogen (or available motive force). Multiple sample sizes are available.

SPECIFICATIONS

- **Material wetted parts** SS316, PTFE and FKM.
- **Shroud assembly** with viewing slot and strap.
- **Needle assembly** standard or internal needles.
- **Flow Thru** type sample valve 1/2" F NPT size with PTFE seats.
- **Operation** Manual.
- **Connections** 1/2" (process), 1/4" (Vent) compression fittings Stainless steel.
- **Optional Carbon Canister** SS316 including active carbon.
- **Mounting** system mounts on 304SS panel for pipe mounting, includes 2" pipe clamps.
- **Isolation sample valve** provides additional safety for the operator.
- **Check valve** included with FKM or FFKM O-rings.

MDFV Fixed Volume Sample System (R1)

Option Selector

Shroud + Cylinder type:

Code	Volume	Cap Size	Bottle Material	Shroud P/N	Cylinder Fixed Volume	Cylinder P/N
01	1 OZ	DOP 20	Glass (B.R.)	2023692	20cc	2025050
02	2 OZ	DOP 20	Glass (B.R.)	2021111	40cc	2025051
04	4 OZ	DOP 22	Glass (B.R.)	2020554	90cc	2025052
08	8 OZ	DOP 24	Glass (B.R.)	2020759	180cc	2025053
16	16 OZ	DOP 28	Glass (B.R.)	2019972	360cc	2025054
32	32 OZ	DOP 33	Glass (B.R.)	2020564	675cc	2025055

Flow Thru Sample valve type:

Code	Valve	Seat	P/N
1	Flow thru MD/GP 1/2"NPT	PTFE	2023333

Carbon Canister:

Code		P/N
1	NO	N/A
2	YES	2011643

Language:

Code	
ENG	English
FRA	Français
ITA	Italiano
GER	Deutsch
NED	Nederlands
SPA	Español

p/n example

Type	Shroud	Needles	Flow Thru Valve	Check Valve	Carbon Canister	Language
MDFV-R1	04	F	1	Y	2	ENG

Needles type:

Code	Process Needle OD	Part Number	Vent Needle OD	Part Number	O-ring
A	.083" SS316 UNCOATED	2020180	.083" SS316 UNCOATED	2019990	FKM
B	.109" SS316 UNCOATED	2020957	.083" SS316 UNCOATED	2019990	FKM
C	.148" SS316 UNCOATED	2021148	.083" SS316 UNCOATED	2019990	FKM
D	.203" SS316 UNCOATED	2021475	.083" SS316 UNCOATED	2019990	FKM
E	.083" SS316 UNCOATED	2020923	.083" SS316 UNCOATED	2020696	FFKM
F	.109" SS316 UNCOATED	2020958	.083" SS316 UNCOATED	2020696	FFKM
G	.148" SS316 UNCOATED	2021170	.083" SS316 UNCOATED	2020696	FFKM
H	.203" SS316 UNCOATED	2022031	.083" SS316 UNCOATED	2020696	FFKM

Check valve type:

Code	On Vent	O-ring P/N
N	No	N/A
Y	Yes	FKM 2008833 FFKM 2008834



LSL High Vapor Pressure Liquid System with return (S1)

Liquefied Gas Grab Sampler LSL High Vapor Pressure Liquid System with return (S1)



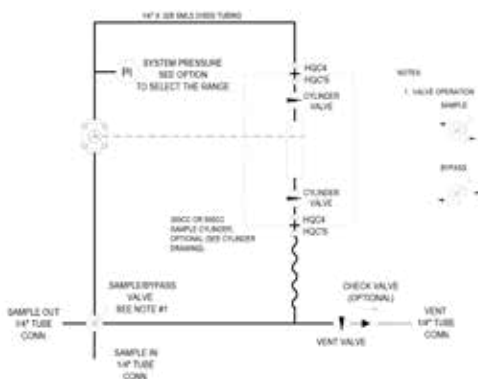
The LSL (S1) is designed to take samples of high vapor pressure liquids for sample points with a process return. Two different types of sight glasses can be selected to enhance the LSL system.

The sight glass is used to verify that there is process flow through the sample system, ensuring that a representative sample is taken.

Secondly, the sight glass is used to visually verify that there is an outage in the sample cylinder to ensure proper vapor space for expansion.

Any residual process remaining in the cylinder after analysis can be flushed back into the process, minimizing the need to clean the cylinder between samples.

1. TYPICAL P & ID



SPECIFICATIONS

Material SS304, SS316, SS316L.

Cylinder Type DOT or TPED standards. Quick connect type stem and body, FKM or FFKM O-rings. Sample cylinder needs to be ordered separately.

Valve Four-way ball valve with PTFE seats, FKM or FFKM O-rings.

Operation Manual.

Connections 1/4" compression fittings. Stainless steel.

Optional Carbon Canister SS316 including active carbon.

Pressure gauge Included.

Optional Cooler standard single coil, process 1/4" tube, coolant 3/8" F NPT. Complete with temperature indicator (TI) and a needle valve.

Mounting on SS304 panel for pipe mounting, includes 2" pipe clamps.

2. FEATURES

- Easy Operation
- Optional sight flow indicator
- System Pressure Gauge
- Cylinder Saddles
- Double end shut off Quick Connects
- Sample return line

3. BENEFITS

- Minimum number of valves (two) required to operate
- Allows visual checking of the sample flow and the level of the sample in the sample cylinder
- Indicates the loop pressure for venting the loop and disconnecting the sample cylinder
- Easy mounting of the sample cylinder
- Provides double blocks on open connections of the sampling system after the sample cylinder is removed
- No residual process remaining in the cylinder. The medium can be flushed back into the process

LSL High Vapor Pressure Liquid System with return (S1)

Option Selector

Sight Flow Indicator:		
Code	P/N	Max. Pressure
A	2015148	870 PSI / 60 BAR
B	2024120	1450 PSI / 100 BAR

Check valve type:			
Code	On Vent	O-ring P/N	
N	No	N/A	
Y	Yes	FKM 2008833	FFKM 2008834

Language:	
Code	
ENG	English
FRA	Français
ITA	Italiano
GER	Deutsch
NED	Nederlands
SPA	Español

p/n example

Type	Pressure Gauge	Sight Flow Indicator	Valve	Check Valve	Language
LSL-S1	600	A	1	Y	ENG

Pressure Gauge type:		
Code	Range	Pressure Gauge P/N
30	0-2 bar / 0-30 psi	2020273
60	0-4 bar / 0-60 psi	2002853
100	0-7 bar / 0-100 psi	2020275
160	0-10 bar / 0-160 psi	2002598
200	0-14 bar / 0-200 psi	2020277
300	0-20 bar / 0-300 psi	2020278
600	0-40 bar / 0-600 psi	2002601
1000	0-70 bar / 0-1000 psi	2000334
1500	0-100 bar / 0-1500 psi	2000983

4-Way Ball Valve Type:						
Code	Valve	Seat	O-ring	Ball Valve P/N	HQC'S Stem P/N	HQC'S Body P/N
1	H7911	PTFE	FKM	2008510	2006354	2006353
2	H7911	PTFE	FFKM	2021514	2006739	2006738

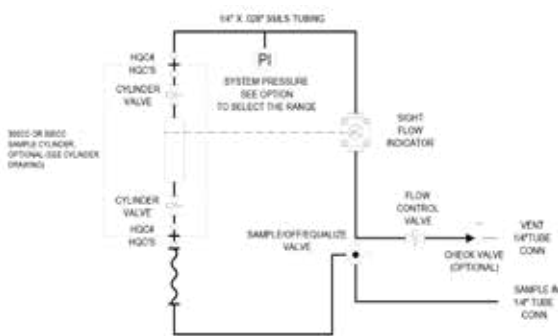


LRL High Vapor Pressure Liquid System without return (S2)

Liquefied Gas Grab Sampler LRL High Vapor Pressure Liquid System without return (S2)



1. TYPICAL P & ID



2. FEATURES

- Easy Operation
- Sight flow indicator
- System Pressure Gauge
- Cylinder Saddles
- Double end shut off Quick Connects

3. BENEFITS

- Minimum number of valves (two) required to operate
- Allows visual checking of the sample flow and the level of the sample in the sample cylinder
- Indicates the loop pressure for venting the loop and disconnecting the sample cylinder
- Easy mounting of the sample cylinder and firmly secured at the sampling system for safe operation
- Provides double blocks on open connections of the sampling system after the sample cylinder is removed

The LRL (S2) sampling system is specially designed for high vapor pressure liquid applications where no sample return line is available.

Two different types of sight glasses can be selected used to enhance the LSL system.

The sight glass is used to verify that there is process flow through the sample system, ensuring that a representative sample is taken.

Secondly, the sight glass is used to visually verify that there is an outage in the sample cylinder to ensure proper vapor space for expansion.

SPECIFICATIONS

Material SS304, SS316, SS316L.

Cylinder Type DOT or TPED standards. Quick connect type stem and body, FKM or FFKM O-rings. Sample cylinder needs to be ordered separately.

Valve Three-way ball valve with PTFE or PEEK seats, FKM or FFKM O-rings.

Operation Manual.

Connections 1/4" compression fittings.

Pressure gauge Included. See option selector for the available pressure gauges.

Optional Cooler standard single coil, process 1/4" tube, coolant 3/8" F NPT. Complete with temperature indicator (TI) and a needle valve.

Mounting on SS304 panel for pipe mounting, includes 2" pipe clamps.

LRL High Vapor Pressure Liquid System w/o return (S2)

Option Selector

Sight Flow Indicator:		
Code	P/N	Max. Pressure
A	2015148	870 PSI / 60 BAR
B	2024120	1450 PSI / 100 BAR

Check valve type:			
Code	On Vent	O-ring P/N	
N	No	N/A	
Y	Yes	FKM 2008833	FFKM 2008834

Language:	
Code	
ENG	English
FRA	Français
ITA	Italiano
GER	Deutsch
NED	Nederlands
SPA	Español

p/n example

Type	Pressure Gauge	Sight Flow Indicator	Valve	Check Valve	Language
LRL-S2	600	A	2	N	ENG

Pressure Gauge type:		
Code	Range	Pressure Gauge P/N
30	0-2 bar / 0-30 psi	2020273
60	0-4 bar / 0-60 psi	2002853
100	0-7 bar / 0-100 psi	2020275
160	0-10 bar / 0-160 psi	2002598
200	0-14 bar / 0-200 psi	2020277
300	0-20 bar / 0-300 psi	2020278
600	0-40 bar / 0-600 psi	2002601
1000	0-70 bar / 0-1000 psi	2000334
1500	0-100 bar / 0-1500 psi	2000983

3-Way Ball Valve Type:						
Code	Valve	O-ring	Seat	Ball Valve P/N	HQC Stem P/N	HQC Body P/N
1	H7165	FKM	PTFE	1468100	2006354	2006353
2	H7165	FFKM	PTFE	1468100	2006739	2006738
3	W83	FKM	PTFE	2000315	2006354	2006353
4	W83	FFKM	PTFE	2000492	2006739	2006738

Maximum operating pressure for H7165 is 500 psi / 34.5 bar



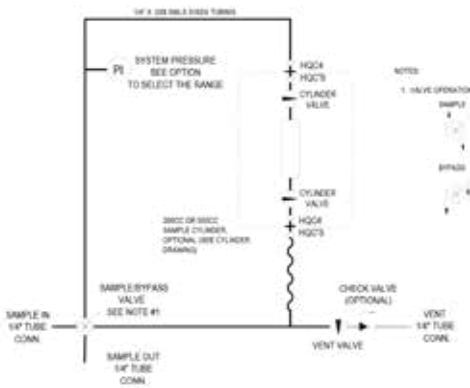
LSG Gas System with return (T1)

Gas Grab Sampler

LSG Gas System with return (T1)



1. TYPICAL P & ID



2. FEATURES

- Easy Operation
- System Pressure Gauge
- Cylinder Saddles
- Double end shut off Quick Connects
- Sample return line

3. BENEFITS

- Minimum number of valves (two) required to operate
- Indicates the loop pressure for venting the loop and disconnecting the sample cylinder
- Easy mounting of the sample cylinder and firmly secured at the sampling system for safe operation
- Provides double blocks on open connections of the sampling system after the sample cylinder is removed
- No residual process remaining in the cylinder. The medium can be flushed back into the process

The LSG (T1) sample system is designed for taking samples of gases or vapor in applications where a process return is available.

The sample cylinder is filled from the top to flush any liquids or condensed vapors back to the process to ensure a representative sample.

A pressure gauge is incorporated in the design to indicate that process pressure is seen in the sample system during sample collection.

SPECIFICATIONS

Material SS304, SS316, SS316L.

Cylinder Type DOT or TPED standards. Quick connect type stem and body, FKM or FFKM O-rings. Sample cylinder needs to be ordered separately.

Valve Four-way ball valve with PTFE seats, FKM or FFKM O-rings. See option selector for the available O-rings.

Operation Manual.

Connections 1/4" compression fittings.

Pressure gauge Included.

Optional Cooler standard single coil, process 1/4" tube, coolant 3/8" F NPT. Complete with temperature indicator (TI) and a needle valve.

Mounting on SS304 panel for pipe mounting, includes 2" pipe clamps.

LSG Gas System with return (T1)

Option Selector

Check valve type:			
Code	On Vent	O-ring P/N	
1	No	N/A	
2	Yes	FKM 2008833	FFKM 2008834

Language:	
Code	
ENG	English
FRA	Français
ITA	Italiano
GER	Deutsch
NED	Nederlands
SPA	Español

p/n example

Type	Pressure Gauge	Valve	Check Valve	Language
LSG-T1	600	A	2	ENG

Pressure Gauge type:		
Code	Range	Pressure Gauge P/N
30	0-2 bar / 0-30 psi	2020273
60	0-4 bar / 0-60 psi	2002853
100	0-7 bar / 0-100 psi	2020275
160	0-10 bar / 0-160 psi	2002598
200	0-14 bar / 0-200 psi	2020277
300	0-20 bar / 0-300 psi	2020278
600	0-40 bar / 0-600 psi	2002601
1000	0-70 bar / 0-1000 psi	2000334
1500	0-100 bar / 0-1500 psi	2000983
2000	0-140 bar / 0-2000 psi	2020282

4-way ball valve type:						
Code	Valve	O-ring	Seat	Ball valve P/N	HQC Stem P/N	HQC Body P/N
A	H7911	FKM	PTFE	2008510	2006354	2006353
B	H7911	FFKM	PTFE	2021514	2006739	2006738

LRG Gas System without return (T2)

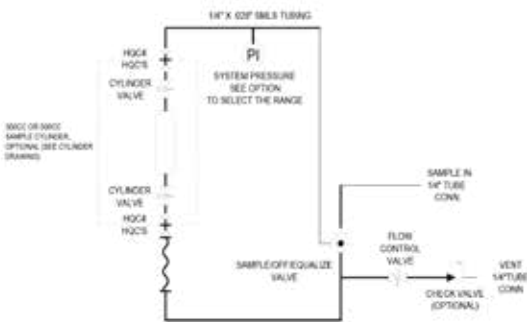
Gas Grab Sampler

LRG Gas System without return (T2)



The LRG (T2) sample system is designed for taking samples of gases or vapor in applications where no process return is available. The sample cylinder is filled from the top. A pressure gauge is incorporated in the design to indicate the process pressure is in the sample system during sample collection. The sample flow can be regulated by means of a control valve.

1. TYPICAL P & ID



SPECIFICATIONS

Material SS304, SS316, SS316L.

Cylinder Type DOT or TPED standards. Quick connect type stem and body, FKM or FFKM O-rings. Sample cylinder needs to be ordered separately.

Valve Three-way ball valve with PTFE or PEEK seats, FKM or FFKM O-rings.

Operation Manual.

Connections 1/4" compression fittings.

Pressure gauge Included.

Optional Cooler standard single coil, process 1/4" tube, coolant 3/8" F NPT. Complete with temperature indicator (TI) and a needle valve.

Mounting on SS304 panel for pipe mounting, includes 2" pipe clamps.

2. FEATURES

- Easy Operation
- System Pressure Gauge
- Cylinder Saddles
- Double end shut off Quick Connects

3. BENEFITS

- Minimum number of valves (two) required to operate
- Indicates the loop pressure for venting the loop and disconnecting the sample cylinder
- Easy mounting of the sample cylinder and firmly secured at the sampling system for safe operation
- Provides double blocks on open connections of the sampling system after the sample cylinder is removed

LRG Gas System without return (T2)

Option Selector

Check valve type:			
Code	On Vent	O-ring P/N	
1	No	N/A	
2	Yes	FKM 2008833	FFKM 2008834

Language:	
Code	
ENG	English
FRA	Français
ITA	Italiano
GER	Deutsch
NED	Nederlands
SPA	Español

p/n example

Type	Pressure Gauge	Valve	Check Valve	Language
LRG-T2	600	D	1	ENG

Pressure Gauge type:		
Code	Range	Pressure Gauge P/N
30	0-2 bar / 0-30 psi	2020273
60	0-4 bar / 0-60 psi	2002853
100	0-7 bar / 0-100 psi	2020275
160	0-10 bar / 0-160 psi	2002598
200	0-14 bar / 0-200 psi	2020277
300	0-20 bar / 0-300 psi	2020278
600	0-40 bar / 0-600 psi	2002601
1000	0-70 bar / 0-1000 psi	2000334
1500	0-100 bar / 0-1500 psi	2000983

3-way ball valve type:						
Code	Valve	O-ring	Seat	Ball valve P/N	HQC Stem P/N	HQC Body P/N
A	H7165	FKM	PTFE	1468100	2006354	2006353
B	H7165	FFKM	PTFE	1468100	2006739	2006738
C	W83	FKM	PTFE	2000315	2006354	2006353
D	W83	FFKM	PTFE	2000492	2006739	2006738

Maximum operating pressure for H7165 is 500 psi / 34.5 bar

Sample Cylinder

Sample Cylinder



An extensive range of sample cylinders is available, suited for sample collection, safe transport and chromatographic lab analysis. The sample cylinders are available in different volumes. Cylinders are used for samples with high vapour phase liquids, gas and liquefied gas.

Standard sample cylinders are equipped with a needle valve on each side of the cylinder, a set of quick connect couplings and a carrying handle.

Depending on which type of sampling system the cylinders are used, an outage tube can be fitted onto the sample cylinder.

1. BASIC SPECIFICATIONS

Body material: SS316 (L)

Cylinder Type DOT or TPED* standards. Quick connect type stem and body, FKM or FFKM O-rings. See option selector "Sample Cylinder" for the available cylinders and quick connect couplings.

Valves Straight needle valves with regulating stem tip.

Material: SS316

Optional outage tube 80% filling rate.

Standard volumes: See option selector "Sample Cylinder".

*: TPED certified cylinder only. For transport of dangerous goods by road, rail and inland waterway according to European Directive 2010/35/EU: Cylinder shall also be equipped with TPED certified needle valves. Consult factory for more information.

Sample Cylinder

Option Selector

Cylinder Code Example

Type	Cylinder	Quick connector	Outage tube
CYL-TSI	C	1	N

Cylinder type:		
Code:	Sample cylinder	Sample cylinder P/N
A	300 CC DOT	1727800
B	300 CC TPED*	2005926
C	500 CC DOT	1731300
D	500 CC TPED*	2005927

Quick Connector type:			
Code	O-ring	Stem P/N	Body P/N
1	FKM	2006354	2006353
2	FFKM	2006739	2006738

Outage tube:			
Code		300CC P/N	500CC P/N
Y	YES	2007343	2007344
N	NO	N/A	N/A

Cylinder Design Pressures

Cylinder Certification	O-ring Material	Pressure		Temperature	
		BAR	PSI	Deg C	Deg F
DOT	FKM	124	1800	204	400
DOT	FFKM	124	1800	232	450
TPED	FKM	100	1450	204	400
TPED	FFKM	100	1450	232	450

TPED certified cylinder only. For transport of dangerous goods by road, rail and inland waterway according to European Directive 2010/35/EU: Cylinder shall also be equipped with TPED certified needle valves. Consult factory for more information.

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