

Company Profile





We offer high-quality sampling expertise worldwide



Dovianus is proud for its recognition as experts in sampling systems for the chemical, petrochemical and offshore industries worldwide. Our Dopak sampling systems set high international standards for closed loop and closed vent sampling systems. Dopak sampling systems offer safe working conditions for operators, they are safe for the environment and safe for the samples.

DOPAK® Sampling Systems

A brief history of Dovianus

Dovianus was founded in the Netherlands in 1926 as an instrumentation and equipment manufacturer. Recognizing the need for environmentally safer sampling systems in the late 1970s, we decided to focus on the development, production and marketing of Dopak sampling systems.

Safe for the operator
Safe for the environment
Safe for the sample

After more than a decade, Dovianus was already an important player in the international chemical and petrochemical industries worldwide. We soon realized that our customers would benefit more from our high-quality sampling expertise and sampling systems, if we also provide them with local support. Therefore Dovianus established Dopak Inc. in the United States in 1981 and created a network of highly qualified local representatives.

High-quality sampling expertise globally, with local support



Highly specialized products require expert support. Dovianus offers its customers global sampling expertise in combination with local support.

We continuously invest in research and innovations at our offices in the Netherlands and the United States, thus building on our sampling expertise. Our customers benefit from our global expertise, while receiving local support via our network of professional, highly qualified, local representatives.

Our local representatives are familiar with the challenges you face in your specific market. Therefore they can provide you with better advice and support.



*Rely on our high-quality sampling expertise.
Whatever you need, wherever you are.*





Dedicated to develop better, safer samplers

Safety plays a big role in the chemical and petrochemical industries. Processes are complex, products often dangerous and toxic. At Dovianus we understand this complexity and the need for high safety levels. Therefore we are dedicated to develop better, safer samplers for our customers.

Our highly qualified engineers are sampler specialists, understanding the importance of safety in sampling processes. They incorporate an intrinsic level of safety in their innovative designs for sampling systems.

Dopak sampling systems meet and exceed safety standards worldwide. Our sampling systems are safe for the operator, safe for the environment and safe for the sample.

No matter how complex your sampling process is, our engineering expertise allows us to meet your sampling requirements efficiently and cost-effectively. We offer safe, pre-configured sampling systems or engineered sampling systems to your precise specifications.



Dopak sampling systems meet and exceed safety standards worldwide

Dovianus equals high-quality samplers and expert operators



Delivering high-quality sampling systems and sampling expertise, requires continuous investments in research, our staff and our manufacturing and control equipment.

Our manufacturing staff is trained to maintain the highest standards of craftsmanship in sampling systems. Our staff uses the latest manufacturing and control equipment, including an array of CNC machining centers and lathes. We are continually upgrading our manufacturing program for faster processing and optimum stock control to meet growing demand.

Dopak sampling systems meet all your technical sampling and safety requirements.

Exceeding worldwide quality and safety standards objectively

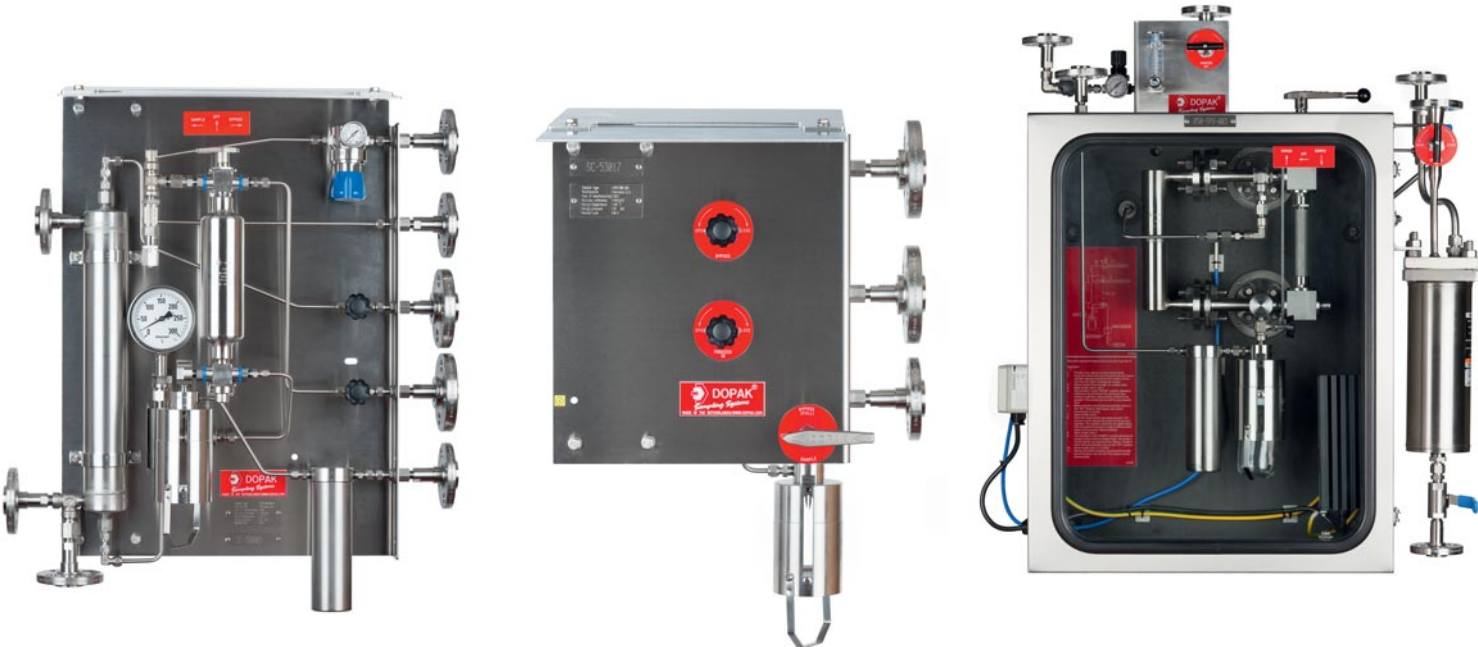
It is easy to say you meet and even exceed worldwide standards. Our customers know from experience that we deliver on our quality and safety promises. But to also demonstrate our quality standards objectively, we have introduced a strict quality program.

All Dopak samplers are subjected to measurements and quality checks throughout the production process. Each finished sampler is carefully inspected and tested in a final check. Critical components get an identification number, allowing us to trace them throughout their life span.

Subsequently we acquired the ISO 9001 certification for our factory.



Dovianus - Worldwide sampling expertise



Dopak - World class sampling systems





Closed Loop Sampling Systems

DOPAK® PRODUCT OVERVIEW

Crane Instrumentation & Sampling

DOPAK® Sampling Systems & Components




DOPAK® Sampling Systems & Components

Dovianus is an expert in sampling systems for the chemical, petrochemical and offshore industries worldwide. Our DOPAK® sampling systems set high international standards for closed loop and closed vent sampling systems. Our sampling systems offers safe working conditions for operators, are safe for the environment and safe for the samples.

DOPAK® Sampling Systems & Components

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DOPAK® Product Benefits

Safe Sampling

Safety is a crucial factor in the chemical, petrochemical and offshore industries. Industrial processes are often complex, products often dangerous and toxic. At Dovianus we understand this complexity and need for high safety levels. Therefore we are dedicated to develop better, safer samplers for our customers.



Benefits of DOPAK® Sampling Systems

- 1 Safe for the operator
- 2 Safe for the environment
- 3 Safe for the sample (representativity)
- 4 Easy one handle operation
- 5 Sustainable
- 6 Low maintenance
- 7 Virtually zero pollution/contamination
- 8 Eliminate spills

Dopak® Sampling Systems

Since the late 1970's, Dovianus focuses on the development, production and marketing of DOPAK® sampling systems. Our high-quality products and expertise are recognized and used by many leading companies in the chemical and petrochemical industry.

We continuously invest in, and build on our sampling expertise and the development of safe sampling systems. DOPAK® sampling systems meet or even exceed safety standards worldwide. Our sampling systems are safe for the operator, safe for the environment and safe for the sample. They protect the operator from coming into contact with the product. Spillage into the environment is avoided and volatile substances can't escape into the atmosphere, while the sample itself is protected from contamination and providing a representative sample.

DOPAK® Product Overview

Sampling in Bottles or Cylinders

There are two types of sample containers for the DOPAK® sampling systems: bottles sealed with cap and septum, and cylinders. What type of container you require, depends on the product properties and the type of sampling system you use.

Sampling in bottles - how it works

In general we advise to use a bottle for samples with a vapor pressure up to a maximum of typically 0.7 bar at ambient temperature. When using a bottle as sample container, the sample is drawn from the process and collected in the bottle at atmospheric pressure. The bottle is sealed with cap and septum for maximum closure. The sealed bottle is inserted into the sleeve until the septum is pierced by the needles of the needle assembly.

Once in position, the product can flow into the sample bottle via the process needle, while air and vapor are being vented by the vent needle. When the required amount has been taken, the operator stops the product flow and the bottle is pulled out of the sleeve. The septum reseals automatically.

In applications where a cap and septum cannot be used, an SBA (Sample Bottle Adapter) can be provided. In this configuration filling tubes are used instead of a needle assembly. This allows for semi-closed sampling.



Sampling in cylinders - how it works

A cylinder can resist vapor pressures of above 0.7 bar. When using a cylinder as sample container, the sample is drawn from the process and collected in the cylinder at process pressure. The sample cylinder has a needle valve and a quick connect coupling at both ends to connect to the sampling system.

Once in position, the product can flow through the sample cylinder. When sampling liquefied gases, partial filling of the cylinder should be ensured.

DOPAK® provides several possibilities to prevent the sample cylinder from being filled for 100% with liquid or liquefied gas. The operator closes the needle valves on the sample cylinder and allows the quick connect to be depressurized through a vent connection. Then the cylinder may be disconnected from the sampler.

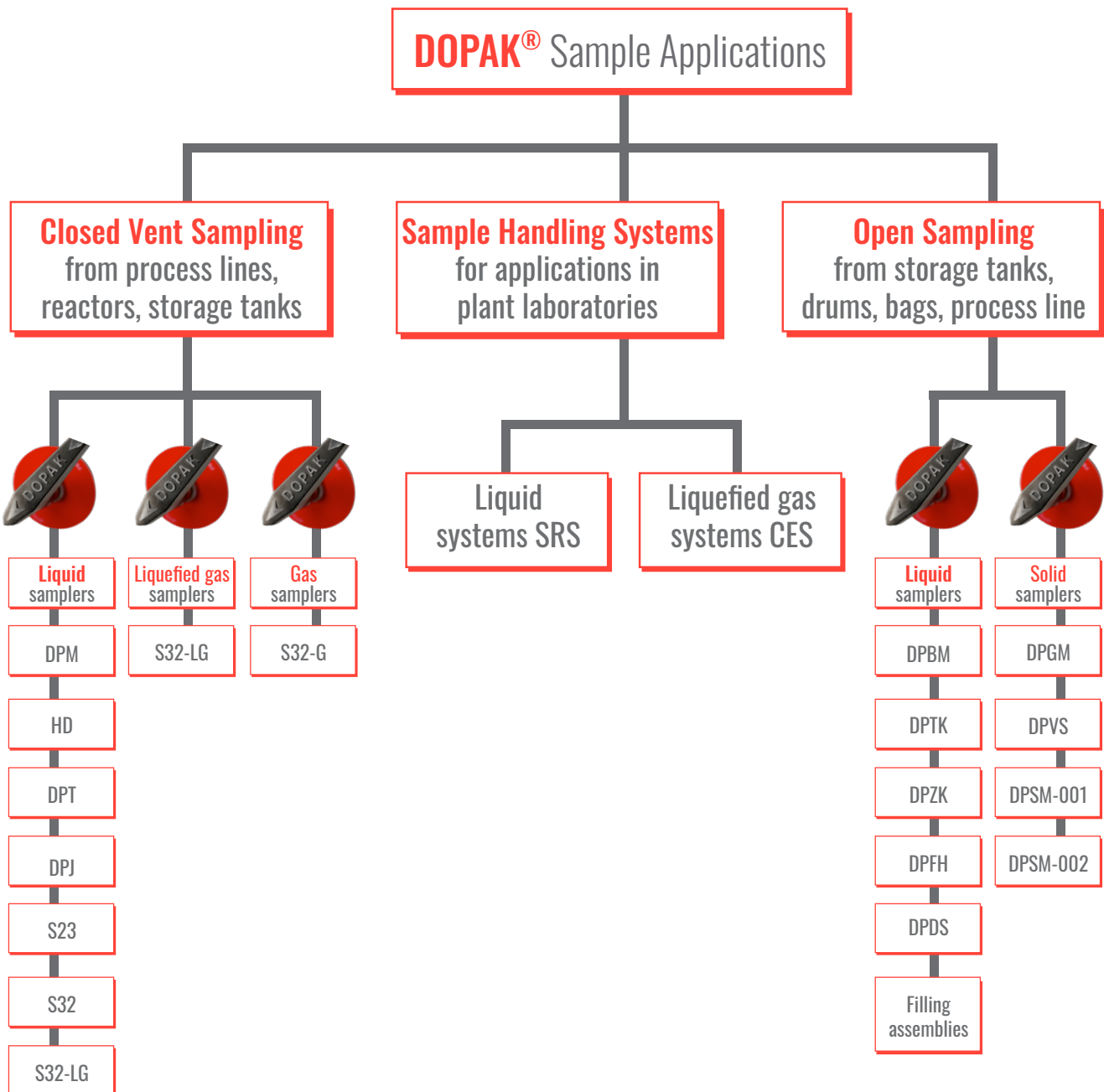


DOPAK® Product Overview

What Sampling System To Use?

If your technical and safety requirements are more or less standard, an adaptation of one of our pre-engineered sampling systems could be a solid solution with a quick delivery. These selected samplers are pre-designed and partly pre-assembled and therefore need no further detailed engineering. Please refer to our “DOPAK® Sampling Express” for further details.

For more demanding sampling, our engineers will design a customized sampling system to your precise specifications. What sampler model to use, depends on the properties of the medium being sampled and the conditions of the process involved.



DOPAK® Product Overview

Closed Vent Sampling Systems



DPM series

The DPM series can be used for taking samples of liquids with a low vapor pressure (< 0.7 bar), at relatively low operating pressures. Purge options are available.

Applications for use

- Liquids with a low vapor pressure ($P = < 0.7$ bar)
- Sampling at low operating pressure ($P = < 8$ bar)
- Corrosive, hazardous liquids
- Sampling from pipelines and tanks
- Zero emission sampling

Available Configurations

- On/off (A1, A2)
- System purge (A3)
- Back purge (A4)
- Needle purge (A5)
- Back and needle purge (A6)
- System purge and continuous needle purge (A7)
- Inline, needle purge (A8)
- Flow control / pressure reducing device
- Portable sampler c/w air driven membrane pump
- Vessel sampler c/w dip pipe with submerged pump

HD series

The HD series have process valves. They are used for taking samples of liquids with a low vapor pressure (< 0.7 bar), at relatively low operating pressure (< 8 bar).

Applications for use

- Liquids with a low vapor pressure ($P = < 0.7$ bar)
- Sampling at low operating pressure ($P = < 8$ bar)
- Corrosive, hazardous liquids
- Sampling from pipelines and tanks
- Fire-safe, antistatic valves

Available Configurations

On/off (B1, B2)

Info@dhialameen.com
www.dhialameen.com



Crane ChemPharma & Energy

DOPAK® Product Overview



DPJ Series

The DPJ series are based on piston valves. They are used for taking samples of liquids with higher viscosity. The outlet of the sample valve is purged to ensure clean sample value after sampling.

Applications for use

- Fixed volume sampling
- Liquids at vacuum conditions, low pressures (< 8 bar) and elevated pressures (> 8 bar)
- Corrosive, hazardous liquids
- Viscous liquids, slurries
- Sampling from pipelines, tanks, reactors
- Vacuum conditions
- High temperature (up to 650 °C)

Available Configurations

- Purge (C1)
- Fixed volume (C2)
- Fixed volume with cooling/heating jacket (C3)
- Solvent purge (C4)

DPT Series

The DPT series are based on inline valves. They are used for taking samples of liquids with low vapor pressures (< 0.7 bar) at relatively low operating pressures (< 8 bar).

Applications for use

- Inline liquid sampling
- Corrosive, hazardous liquids (PFA lined version is available)
- Viscous liquids, slurries
- Sampling from pipelines

Available Configurations

- Inline, on/off (H1)
- Inline, continuous needle purge (H2)



DOPAK® Product Overview

S23 Series

The S23 series are based on internally coupled valves. They are used for taking predefined quantities of liquid with low vapor (< 0.7 bar) pressures. These sampling systems allow for taking samples independently of the process pressure and have zero dead volume.

Applications for use

- Fixed volume sampling
- Liquid sampling at low (< 8 bar) and elevated (> 8 bar) pressures
- Corrosive, hazardous liquids
- Small sample volume is possible (starting at a minimum of 1 cc)
- One handle operation
- Zero dead volume

Available Configurations

- Threaded, welded or flanged connections (D1)
- Continuous needle purge (D2)
- Cooling/heating jacket (D3)
- Third coupled valve (D4)
- HVP (High Vapor Phase) (D5)
- High temperature (D6)
- No purge (D7)
- No purge, cooling/heating jacket (D8)



DOPAK® Product Overview

S32 Series

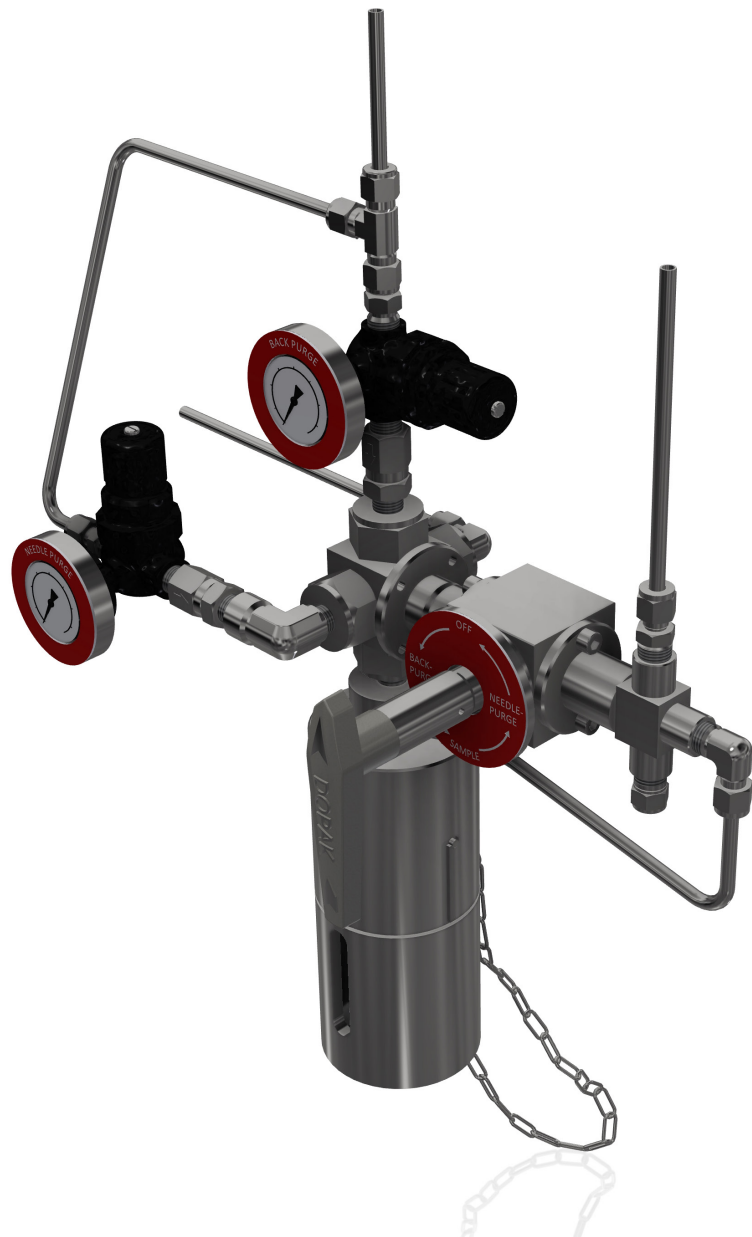
The S32 series are based on externally coupled valves. They are used for taking representative samples of liquids from reactors at vacuum conditions. Or for predefined quantities of liquids with low vapor pressures, independently of process pressure.

Applications for use

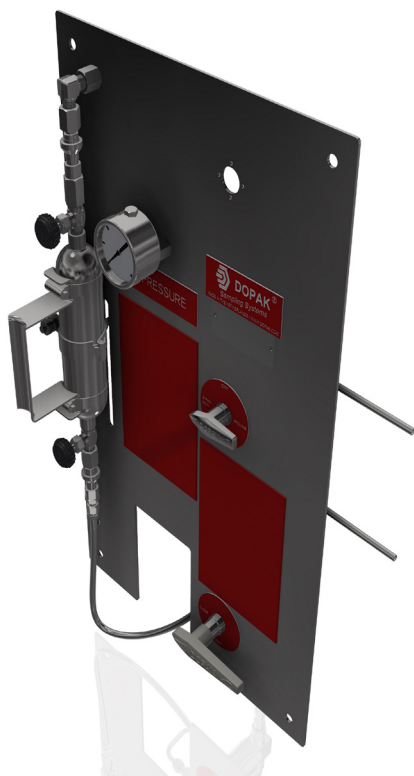
- Liquid sampling at low (< 8bar) and elevated (> 8bar) pressures
- Corrosive, hazardous liquids
- Sampling from process lines or from top of reactors below atmospheric conditions
- Viscous fluids, slurries
- One handle operation
- Zero dead volume

Available Configurations

- Back purge vacuum (E1)
- Back and needle purge vacuum (E2)
- Back purge venturi (E3)
- Back and needle purge venturi (E4)
- Fixed volume (E5)
- Overflow vacuum (E6)
- Overflow vacuum venturi (E7)



DOPAK® Product Overview



S32 - LG Series

The S32-LG series are based on externally coupled valves. They are used for taking representative samples of liquefied gases and liquids with high vapor phase in cylinders with internal or external outage. Purge options are available.

Applications for use

- Liquefied gas sampling
- Fixed external outage
- High vapor pressure liquids
- Zero quick connect vapor release
- One handle operation
- Zero dead volume

Available Configurations

- System purge (F1)
- Vent to flare (F2)
- Outage tube (F3)
- Purge expansion (F4)
- Bypass purge cylinder (F5)
- Outage tube with bypass purge cylinder (F6)
- Process to flare (F7)
- System purge with additional safety expansion cylinder (F8)

S32-G Series

The S32-G series are based on externally coupled valves. They are used for taking representative samples of gases in cylinders. Purge options are available.

Applications for use

- Gas sampling
- One handle operation
- Zero dead volume

Available Configurations

- System purge (G1)
- Bypass purge cylinder (G2)
- Process to flare (G3)



DOPAK® Product Overview



Sample Handling Systems

Sample Recovery System (SRS) (I1)

The Sample Recovery System recovers a liquid sample from the sample bottle without the risk of spillage or contamination.

Applications for use

- To safely recover a liquid sample from a sample bottle
- Plant laboratories

Cylinder Emptying System (CES) (J1)

The Cylinder Emptying System empties a cylinder containing (liquefied) gas without the risk of spillage or contamination.

Applications for use

- To safely empty a (liquefied) gas sample cylinder
- Plant laboratories

(Partly) Open Samplers

Liquids

Filling assemblies, DPBM, DPTK, DPZK, DPFH, DPDS, SBA series

Applications for use

- Liquids at atmospheric pressure
- Low hazardous liquids
- Sampling from storage tanks, drums and pipelines
- Fixed volume sampling

Solids

DPVS, DPGM, DPSM series

Applications for use

- Solid sampling at atmospheric pressure
- Sampling from bags
- Sampling granulates, powders, grease
- Fixed volume sampling



DOPAK® Product Overview



Consumables and Spare Parts

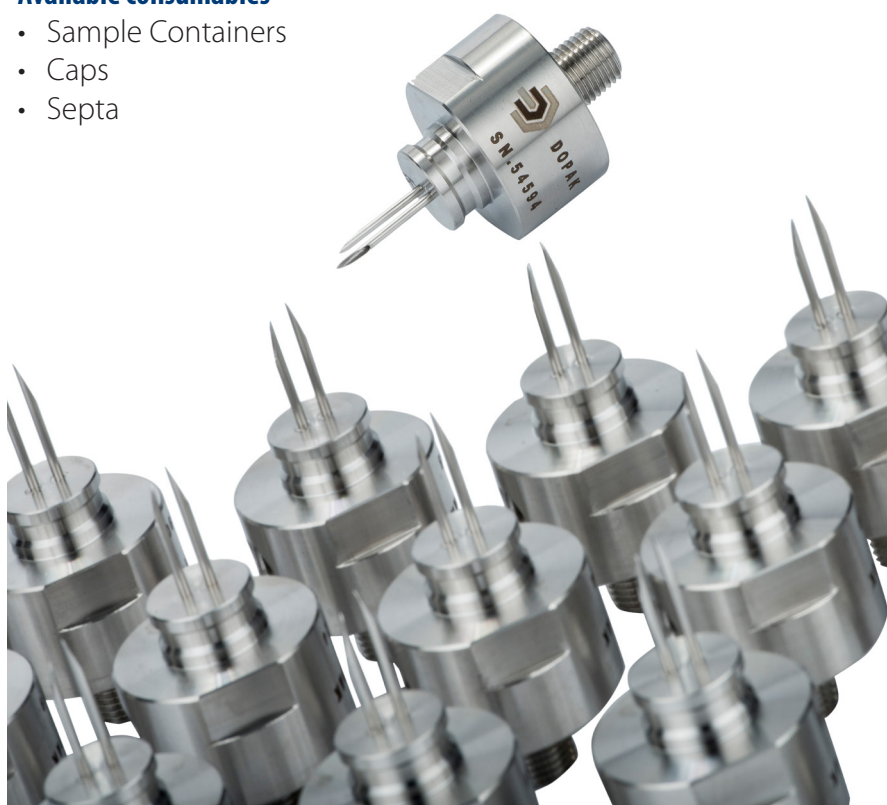
Any DOPAK® sampling system can be adapted to your needs with a wide variety of components and additional options.

Available consumables

- Sample Containers
- Caps
- Septa

Available spare parts

- Needle assemblies
- No Bottle No Flow (NBNF) needle assembly
- Sleeves
- Valves
- Enclosures
- (Spring Return) Handles
- Sample cylinders
- Gearbox
- Pressure gauge
- Pressure regulator
- Thermometer
- Heating / cooling jacket
- Carbon canister
- Flow meter
- Upstream single or double coil cooler
- Connection types
- Mounting plate, including brackets and pipe stand
- Electrical or steam heater
- Junction box
- Flexible hose



SAMPLING EXPRESS



An innovative step from the founders of closed sampling systems: Pre-Engineered Samplers.

Dopak Sampling Systems for liquids, gases and liquefied gases are respected in the international chemical and petrochemical industries. Dopak closed vent samplers allow you to safely take samples of toxic, dangerous and volatile substances, without any exposure to your operators or the environment.

Besides the engineered to order samplers Dopak also launches **pre-engineered** samplers. These selected samplers are pre-designed and partly pre-assembled and therefore need no further detailed engineering. The pre-engineered samplers are available in standard configurations with multiple options.

The advantages are:

- Closed vent samplers with a quick delivery
- **Pre-engineered** sampling
- Multiple options
- High quality
- Drawings available now

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

dopak.com

Contents

DPM	System Purge Configuration c/w Mounting Plate (A3) selector
S23	With Threaded Connections c/w Mounting Plate (D1) selector
S32	Fixed volume configuration c/w Mounting Plate (E5) selector
S32 LG	System Purge Configuration (F1) selector
S32 G	System Purge Configuration (G1) selector
	Sample cylinder selector

Move to DOPAK® SAMPLING EXPRESS



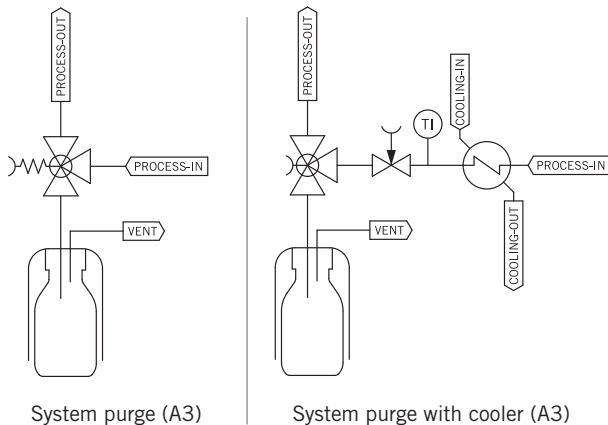
Dopak Pre-Engineered Liquid Grab Sampler

DPM System Purge Configuration c/w Mounting Plate (A3)

The ability to purge the sample point ensures optimal retrieval of a representative liquid sample. The DPM type sampler in system purge configuration allows the product to flow continuously through the three-way ball valve ensuring a fresh sample at recommended maximum operating pressure of 8 bar/115 psi. This liquid sampler c/w mounting plate offers one-handle operation, providing safety for the operator and zero emission.



1 TYPICAL P & ID



2 FEATURES / ADVANTAGES / PROPERTIES

- Sampling directly under process conditions
- Low pressure application (max. 8 bar/115 psi)
- Representative sampling
- Zero dead volume
- Closed sampling

3 SPECIFICATIONS

Part.no DPM-A3-MP

Material SS316, SS316L

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

Needle assembly Single piece VTO needle assembly or No Bottle No Flow (NBNF) with vent to outlet connection 1/4" F NPT.

Process/vent needle ID: See option selector for the available VTO's.

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

See option selector for the available ball valves.

Operation Manual, spring return or fixed return.
See option selector for the available handles.

Connections 1/4" F NPT.

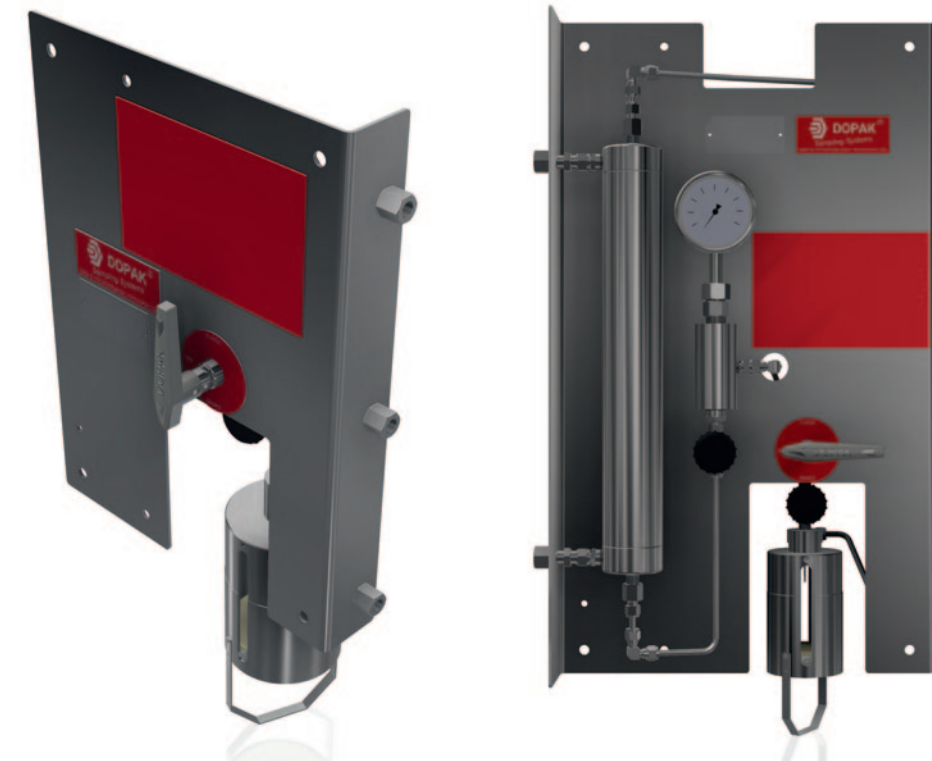
Cooler Standard single coil, process 1/4" tube, coolant 3/8" F NPT.

Complete with TI (temp. indicator) and a needle valve.

Mounting Wall mounting or pipe stand mounting.

DPM System Purge Configuration c/w Mounting Plate (A3)

SLEEVE TYPE					
Code	Volume	Cap size	Bottle material	Cap material	Sleeve p/n
1	60 cc	PP25	Glass	ALU	2002318
2	100 cc	PP28	Glass	ALU	2002424
3	300 cc	PP28	Glass	ALU	2007490
4	500 cc	PP28	Glass	ALU	2002451
5	1000 cc	PP28	Glass	ALU	2002471
6	50 cc	GL32	Borosilicate glass	PBTP	2002422
7	100 cc	GL45	Borosilicate glass	PBTP	2002432
8	250 cc	GL45	Borosilicate glass	PBTP	2002442
9	500 cc	GL45	Borosilicate glass	PBTP	2002462
10	1000 cc	GL45	Borosilicate glass	PBTP	2002473
11	60 cc	PP33	Polyethylene	PP	2002413
12	100 cc	PP28	Polyethylene	PP	2008025
13	150 cc	PP28	Polyethylene	PP	2006220
14	250 cc	PP28	Polyethylene	PP	2007478
15	500 cc	PP28	Polyethylene	PP	2002450
16	1000 cc	PP28	Polyethylene	PP	2004577
17	2 oz	PP20	Boston round glass	ALU	2002411
18	8 oz	PP24	Boston round glass	ALU	2002431
19	16 oz	PP28	Boston round glass	ALU	2002454
20	32 oz	PP33	Boston round glass	ALU	2002470

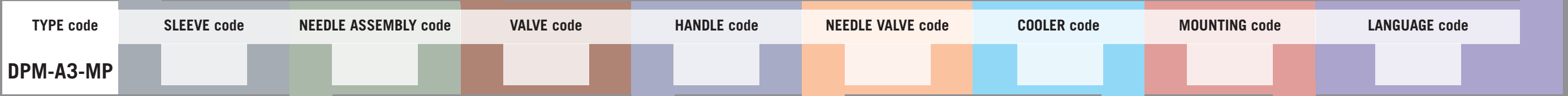


SAMPLER CODE EXAMPLE:

DPM-A3-MP | 10 | F | 1 | C | N | Y | PS | ENG

BALL VALVE TYPE							
Code	Valve	O-ring	SEAT	Ball Valve p/n	Pressure range design (valve)	Temperature range design (valve)	Operating (sampler)
1	W83	FKM	PTFE	2000315	18.3 bar @ 200°C / 265 psi @ 392°F	232°C @ 8.6 bar / 450°F @ 125 psi	Max. 8 bar / 115 psi
2	W83	FKM	PEEK	2001335	18.3 bar @ 200°C / 265 psi @ 392°F	232°C @ 8.6 bar / 450°F @ 125 psi	Max. 8 bar / 115 psi
3	W83	FFKM	PTFE	2000492	18.3 bar @ 200°C / 265 psi @ 392°F	232°C @ 8.6 bar / 450°F @ 125 psi	Max. 8 bar / 115 psi
4	W83	FFKM	PEEK	2001493	18.3 bar @ 200°C / 265 psi @ 392°F	232°C @ 8.6 bar / 450°F @ 125 psi	Max. 8 bar / 115 psi
5	H7165	-	PTFE	1468100	18.3 bar @ 165°C / 265 psi @ 330°F	177°C @ 17.0 bar / 350°F @ 247 psi	Max. 8 bar / 115 psi

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



NEEDLE ASSEMBLY TYPE		
VTO Process x Vent ID	VTO p/n	Code
1.35 x 1.35	1300900	A
2.00 x 1.35	1301000	B
3.00 x 1.35	1301200	C
4.00 x 1.35	1301400	D
6.00 x 1.35	1301500	E
NBNF 1.35x1.35 (FKM)	2017851	F
NBNF 3.00x1.35 (FKM)	2017852	G
NBNF 1.35x1.35 (FFKM)	2018546	H
NBNF 3.00x1.35 (FFKM)	2018547	I

HANDLE TYPE	
Handle	Code
Standard	A
S.R. 0-180	B
S.R. 90-0-90	C
F.R. 90-0-90	D

NEEDLE VALVE		
Code	Yes	Needle valve p/n
Y	Yes	2007048
N	No	-

COOLER		
Code	Yes	Cooler p/n
Y	Yes	2011648
N	No	-

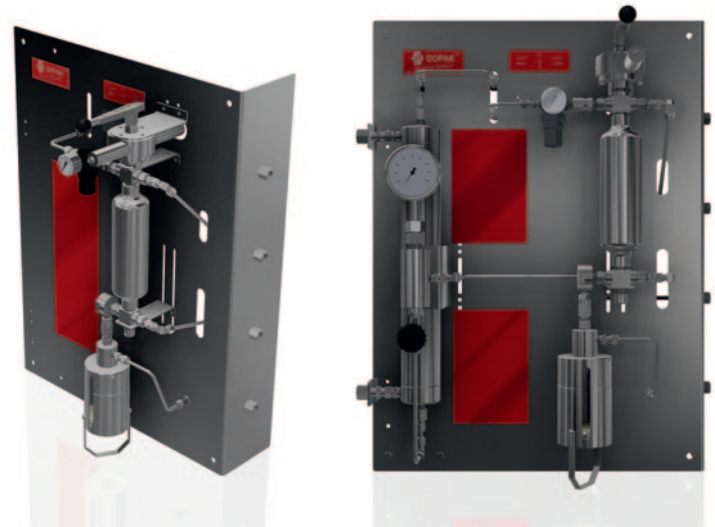
MOUNTING TYPE		
Code	Mounting	p/n
WM	Wall mounting	-
PS	Pipe stand	2016533



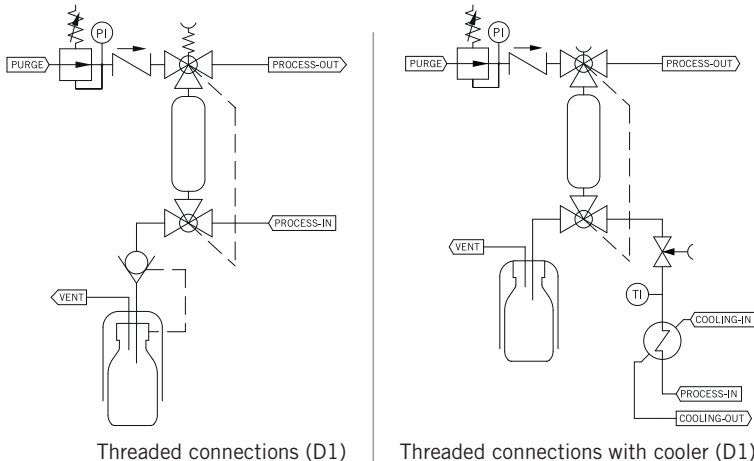
Dopak Pre-Engineered Liquid Grab Sampler

S23 With Threaded Connections c/w Mounting Plate (D1)

The ability to purge the sample point ensures optimal retrieval of a representative liquid sample. The S23 type sampler with threaded connections provides a system purge and needle purge in addition to a fixed sample volume. This liquid sampler c/w mounting plate offers one-handle operation by multiple valves, allowing for sampling independent of the process conditions. These features provide sample accuracy, safety for the operator and zero emission.



1 TYPICAL P & ID



2 FEATURES / ADVANTAGES / PROPERTIES

- Sampling independent of process conditions
- High pressure and vacuum applications
- Representative sampling
- Zero dead volume
- Closed sampling
- One handle operation of two valves
- Fixed volume sampling
- Purging of the sampler

3 SPECIFICATIONS

Part.no S23-D1-MP

Material SS316, SS316L

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

Needle assembly Single piece VTO needle assembly or No Bottle No Flow (NBNF) with vent to outlet connection 1/4" F NPT.

Process/vent needle ID: See option selector for the available VTO's.

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

See option selector for the available ball valves.

Operation Manual, spring return or fixed return.
See option selector for the available handles.

Connections 1/4" F NPT, regulator, gauge and check valve included.

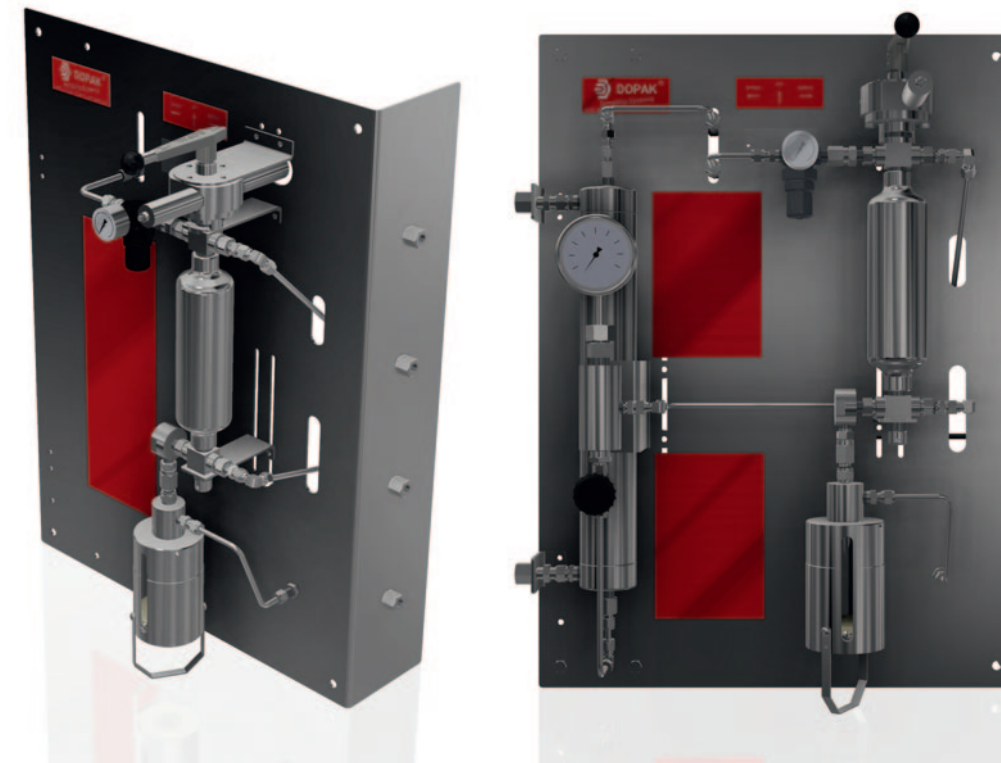
Cooler Standard single coil, process 1/4" tube, coolant 3/8" F NPT.

Complete with TI (temp. indicator) and a needle valve.

Mounting Wall mounting or pipe stand mounting.

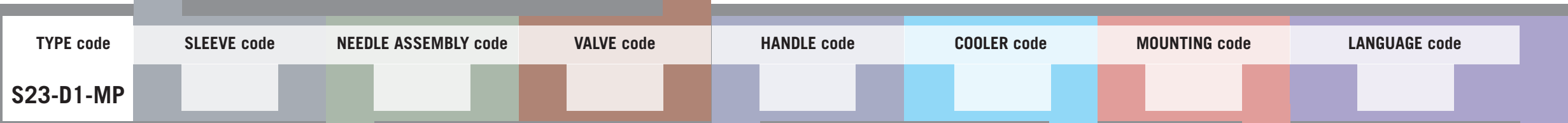
S23 With Threaded Connections c/w Mounting Plate (D1)

SLEEVE TYPE						
Code	Volume	Cap size	Bottle material	Cap material	Sleeve p/n	Sample chamber
1	60 cc	PP25	Glass	ALU	2002318	50 cc
2	100 cc	PP28	Glass	ALU	2002424	90 cc
3	300 cc	PP28	Glass	ALU	2007490	250 cc
4	500 cc	PP28	Glass	ALU	2002451	400 cc
5	1000 cc	PP28	Glass	ALU	2002471	900 cc
6	50 cc	GL32	Borosilicate glass	PBTP	2002422	50 cc
7	100 cc	GL45	Borosilicate glass	PBTP	2002432	90 cc
8	250 cc	GL45	Borosilicate glass	PBTP	2002442	200 cc
9	500 cc	GL45	Borosilicate glass	PBTP	2002462	400 cc
10	1000 cc	GL45	Borosilicate glass	PBTP	2002473	900 cc
11	60 cc	PP33	Polyethylene	PP	2002413	50 cc
12	100 cc	PP28	Polyethylene	PP	2008025	90 cc
13	150 cc	PP28	Polyethylene	PP	2006220	130 cc
14	250 cc	PP28	Polyethylene	PP	2007478	200 cc
15	500 cc	PP28	Polyethylene	PP	2002450	400 cc
16	1000 cc	PP28	Polyethylene	PP	2004577	900 cc
17	2 oz	PP20	Boston round glass	ALU	2002411	50 cc
18	8 oz	PP24	Boston round glass	ALU	2002431	200 cc
19	16 oz	PP28	Boston round glass	ALU	2002454	400 cc
20	32 oz	PP33	Boston round glass	ALU	2002470	900 cc



SAMPLER CODE EXAMPLE:
S23-D1-MP | 13 | A | 1 | B | Y | PS | ITA

BALL VALVE TYPE							
Code	Valve	O-ring	SEAT	Ball valve p/n	Check valve p/n	Pressure range design (valve)	Temperature range design (valve)
1	W83	FKM	PTFE	1405300	2000699	100 bar @ 40°C / 1450 psi @ 104°F	177°C @ 25 bar / 350°F @ 360 psi
2	W83	FKM	PEEK	2000515	2000699	100 bar @ 177°C / 1450 psi @ 350°F	177°C @ 100 bar / 350°F @ 1450 psi
3	W83	FFKM	PTFE	2000512	2003335	100 bar @ 40°C / 1450 psi @ 104°F	232°C @ 8.6 bar / 450°F @ 125 psi
4	W83	FFKM	PEEK	2011491	2003335	100 bar @ 202°C / 1450 psi @ 395°F	232°C @ 34 bar / 450°F @ 495 psi



NEEDLE ASSEMBLY TYPE		
VTO Process x Vent ID	VTO p/n	Code
1.35 x 1.35	1300900	A
2.00 x 1.35	1301000	B
3.00 x 1.35	1301200	C
4.00 x 1.35	1301400	D
6.00 x 1.35	1301500	E
NBNF 1.35x1.35 (FKM)	2017851	F
NBNF 3.00x1.35 (FKM)	2017852	G
NBNF 1.35x1.35 (FFKM)	2018546	H
NBNF 3.00x1.35 (FFKM)	2018547	I

HANDLE TYPE	
Handle	Code
Standard	A
S.R. 0-180	B
S.R. 90-0-90	C
F.R. 90-0-90	D

MOUNTING TYPE		
Code		p/n
WM	Wall mounting	-
PS	Pipe stand	2016533

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

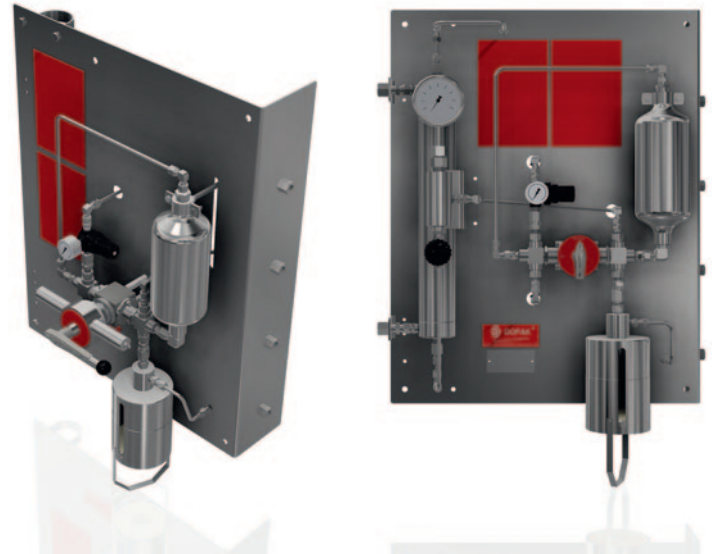
COOLER		
Code	Yes	Cooler p/n
Y	Yes	2011648
N	No	-



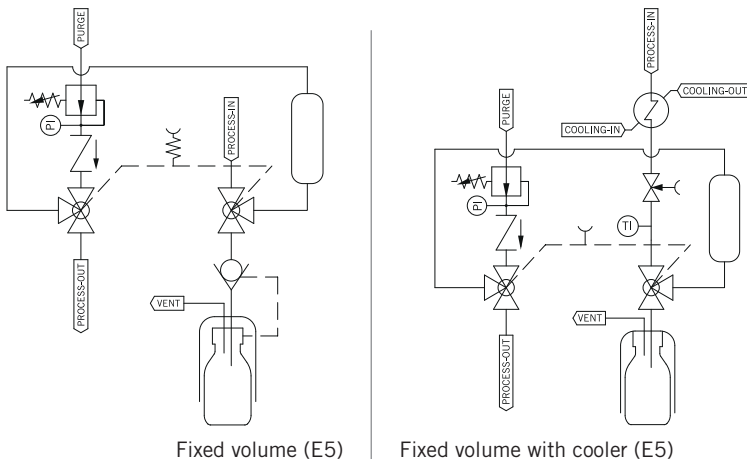
Dopak Pre-Engineered Liquid Grab Sampler

S32 Fixed volume configuration c/w Mounting Plate (E5)

The ability to purge the sample point ensures optimal retrieval of a representative liquid sample. The S32 type sampler provides a system purge and needle purge in addition to a fixed sample. This liquid sampler c/w mounting plate offers one handle operation by multiple valves, allowing for sampling independent of the process conditions with accuracy, safety for the operator and zero emission.



1 TYPICAL P & ID



2 FEATURES / ADVANTAGES / PROPERTIES

- Sampling independent of process conditions
- High pressure and vacuum applications
- Representative sampling
- Zero dead volume
- Closed sampling
- One handle operation of two valves by means of a gearbox
- Fixed volume sampling
- Purging of the sampler

3 SPECIFICATIONS

Part.no S32-E5-MP

Material SS316, SS316L

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

Needle assembly Single piece VTO needle assembly or No Bottle No Flow (NBNF) with vent to outlet connection 1/4" F NPT.

Process/vent needle ID: See option selector for the available VTO's.

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

See option selector for the available ball valves.

Operation Manual, spring return or fixed return.
See option selector for the available handles.

Connections 1/4" F NPT, regulator, gauge and check valve included.

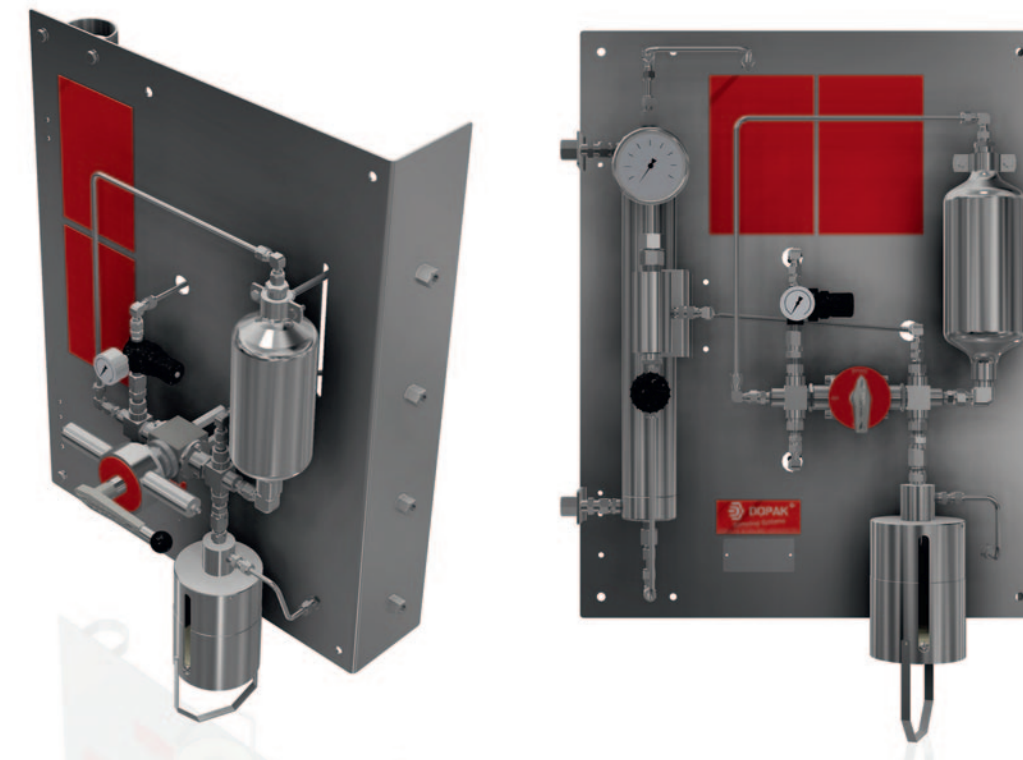
Cooler Standard single coil, process 1/4" tube, coolant 3/8" F NPT.

Complete with TI (temp. indicator) and a needle valve.

Mounting Wall mounting or pipe stand mounting.

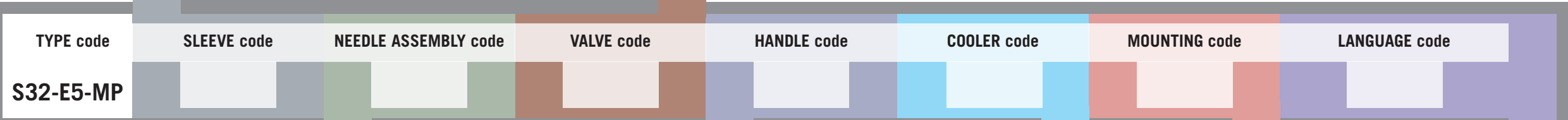
S32 Fixed volume configuration c/w Mounting Plate (E5)

SLEEVE TYPE						
Code	Volume	Cap size	Bottle material	Cap material	Sleeve p/n	Sample chamber
1	60 cc	PP25	Glass	ALU	2002318	50 cc
2	100 cc	PP28	Glass	ALU	2002424	90 cc
3	300 cc	PP28	Glass	ALU	2007490	250 cc
4	500 cc	PP28	Glass	ALU	2002451	400 cc
5	1000 cc	PP28	Glass	ALU	2002471	900 cc
6	50 cc	GL32	Borosilicate glass	PBTP	2002422	50 cc
7	100 cc	GL45	Borosilicate glass	PBTP	2002432	90 cc
8	250 cc	GL45	Borosilicate glass	PBTP	2002442	200 cc
9	500 cc	GL45	Borosilicate glass	PBTP	2002462	400 cc
10	1000 cc	GL45	Borosilicate glass	PBTP	2002473	900 cc
11	60 cc	PP33	Polyethylene	PP	2002413	50 cc
12	100 cc	PP28	Polyethylene	PP	2008025	90 cc
13	150 cc	PP28	Polyethylene	PP	2006220	130 cc
14	250 cc	PP28	Polyethylene	PP	2007478	200 cc
15	500 cc	PP28	Polyethylene	PP	2002450	400 cc
16	1000 cc	PP28	Polyethylene	PP	2004577	900 cc
17	2 oz	PP20	Boston round glass	ALU	2002411	50 cc
18	8 oz	PP24	Boston round glass	ALU	2002431	200 cc
19	16 oz	PP28	Boston round glass	ALU	2002454	400 cc
20	32 oz	PP33	Boston round glass	ALU	2002470	900 cc



SAMPLER CODE EXAMPLE:
S32-E5-MP | 6 | D | 1 | B | Y | PS | ENG

BALL VALVE TYPE						
Code	Valve	O-ring	SEAT	Ball valve p/n	Pressure range design (valve)	Temperature range design (valve)
1	W83	FKM	PTFE	2000315	100 bar @ 40°C / 1450 psi @ 104°F	177°C @ 25 bar / 350°F @ 360 psi
2	W83	FKM	PEEK	2001335	100 bar @ 177°C / 1450 psi @ 350°F	177°C @ 100 bar / 350°F @ 1450 psi
3	W83	FFKM	PTFE	2000492	100 bar @ 40°C / 1450 psi @ 104°F	232°C @ 8.6 bar / 450°F @ 125 psi
4	W83	FFKM	PEEK	2001493	100 bar @ 202°C / 1450 psi @ 395°F	232°C @ 34 bar / 450°F @ 495 psi
5	H7165	-	PTFE	1468100	34 bar @ 67°C / 493 psi @ 153°F	177°C @ 17 bar / 350°F @ 247 psi



NEEDLE ASSEMBLY TYPE		
VTO Process x Vent ID	VTO p/n	Code
1.35 x 1.35	1300900	A
2.00 x 1.35	1301000	B
3.00 x 1.35	1301200	C
4.00 x 1.35	1301400	D
6.00 x 1.35	1301500	E
NBNF 1.35x1.35 (FKM)	2017851	F
NBNF 3.00x1.35 (FKM)	2017852	G
NBNF 1.35x1.35 (FFKM)	2018546	H
NBNF 3.00x1.35 (FFKM)	2018547	I

HANDLE TYPE	
Handle	Code
Standard	A
S.R. 0-180	B
S.R. 90-0-90	C
F.R. 90-0-90	D

MOUNTING TYPE		
Code	Mounting	p/n
WM	Wall mounting	-
PS	Pipe stand	2016533

COOLER		
Code	Yes/No	Cooler p/n
Y	Yes	2011648
N	No	-

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



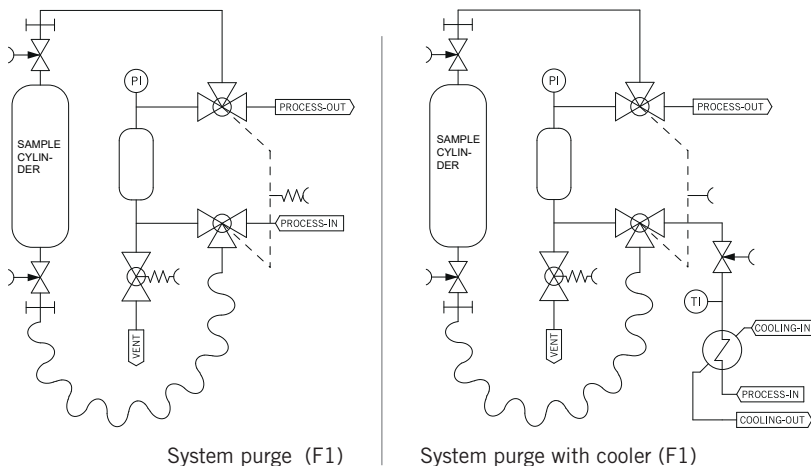
Dopak Pre-Engineered Liquefied Gas Grab Sampler

S32-LG System Purge Configuration (F1)

The ability to purge the sample point ensures optimal retrieval of a representative liquefied gas sample. The S32-LG type sampler in system purge configuration provides sampling in a sample cylinder with a predefined filling rate. The predefined filling rate is achieved by using an expansion chamber. This liquefied gas sampler offers one-handle operation by multiple valves. These features provide sample accuracy, safety for the operator and the possibility of zero emission. This sampler type is suitable for liquefied gas and liquid with high vapor phase.



1 TYPICAL P & ID



3 SPECIFICATIONS

Part.no S32-F1-MP

Material 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. See option selector 'Sample Cylinder' for the available cylinders and quick connect couplings.

Expansion chamber 20% of sample cylinder volume.

Valves Three-way ball valves with PTFE or PEEK seats, FKM or FFKM O-rings.

See option selector for the available ball valves.

Operation Manual, spring return or fixed return.

See option selector for the available handles.

Connections 1/4" F NPT.

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

Cooler Standard single coil, process 1/4" tube, coolant 3/8" F NPT.

Complete with TI (temp. indicator) and a needle valve.

Mounting Wall mounting or pipe stand mounting.

2 FEATURES / ADVANTAGES / PROPERTIES

- Sampling in a cylinder with predefined filling rate
- Representative sampling
- Zero dead volume
- Closed sampling
- One-handle operation of two valves by means of a gearbox
- Purging of the sampler
- No direct connection between vent line and process lines
- Depressurisation of quick connect couplings
- No outage tube needed onto the sample cylinder

S32-LG System purge configuration (F1)

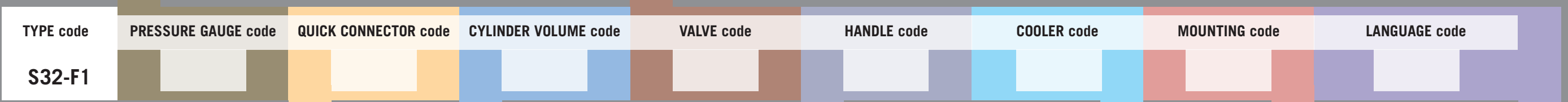


PRESSURE GAUGE TYPE		
Code	Range	Pressure gaug p/n
1	0-1 bar / 0-15 psi	2004306
1.6	0-1.6 bar / 0-23 psi	2006582
2.5	0-2.5 bar / 0-40 psi	2001668
4	0-4 bar / 0-60 psi	2002853
6	0-6 bar / 0-60 psi	2002600
10	0-10 bar / 0-90 psi	2002598
16	0-16 bar / 0-230 psi	2000982
25	0-25 bar / 0-400 psi	2001899
40	0-40 bar / 0-600 psi	2002601
60	0-60 bar / 0-900 psi	2000970
70	0-70 bar / 0-1000 psi	2000334
100	0-100 bar / 0-1450 psi	2000983



SAMPLER CODE EXAMPLE:
S32-F1 | 100 | K | 500 | 3 | C | N | PS | ENG

BALL VALVE TYPE						
Code	Valve	O-ring	SEAT	Ball valve p/n	Pressure range design (valve)	Temperature range design (valve)
1	W83	FKM	PTFE	2000315	100 bar @ 40°C / 1450 psi @ 104°F	177°C @ 25 bar / 350°F @ 360 psi
2	W83	FKM	PEEK	2001335	100 bar @ 177°C / 1450 psi @ 350°F	177°C @ 100 bar / 350°F @ 1450 psi
3	W83	FFKM	PTFE	2000492	100 bar @ 40°C / 1450 psi @ 104°F	232°C @ 8.6 bar / 450°F @ 125 psi
4	W83	FFKM	PEEK	2001493	100 bar @ 202°C / 1450 psi @ 395°F	232°C @ 34 bar / 450°F @ 495 psi
5	H7165	-	PTFE	1468100	34 bar @ 67°C / 493 psi @ 153°F	177°C @ 17 bar / 350°F @ 247 psi



QUICK CONNECTOR TYPE			
O-Ring	Stem p/n	Body p/n	Code
FKM	1790800	1601800	V
FFKM	2000730	2003627	K

CYLINDER VOLUME			
Code	Cylinder	Chamber	Exp. chamber p/n
150	150 cc	30 cc	1780000
300	300 cc	60 cc	1726100
500	500 cc	100 cc	1725600
1000	1000 cc	200 cc	1727700

HANDLE TYPE	
Code	Handle
A	Standard
B	S.R. 0-180
C	S.R. 90-0-90
D	F.R. 90-0-90

COOLER		
Code	Yes	Cooler p/n
Y	Yes	2011648
N	No	-

MOUNTING TYPE		
Code	Mounting	p/n
WM	Wall mounting	-
PS	Pipe stand	2016533

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



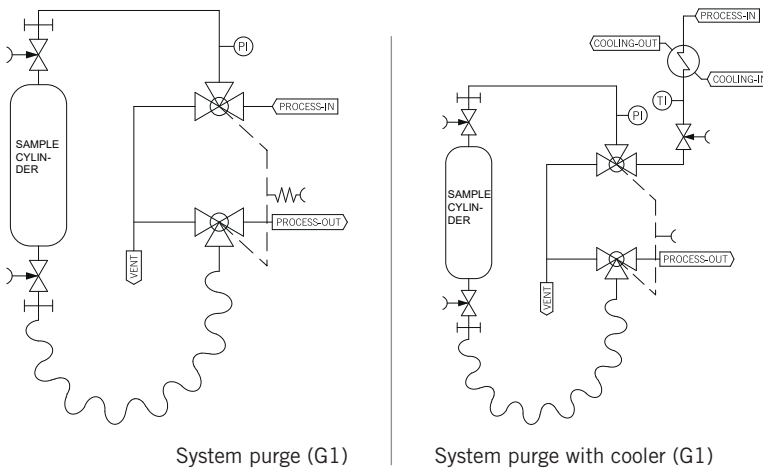
Dopak Pre-Engineered Gas Grab Sampler

S32-G System Purge Configuration (G1)

The ability to purge the sample point ensures optimal retrieval of a representative gas sample. The S32-G type sampler in system purge configuration provides a system purge in addition to sampling in a sample cylinder. The sampler offers the ability to depressurise the quick connect couplings before disconnecting the sample cylinder. This gas sampler provides one-handle operation by multiple valves. These features ensure sample accuracy, safety for the operator and zero emission.



1 TYPICAL P & ID



2 FEATURES / ADVANTAGES / PROPERTIES

- Sampling in a cylinder at process pressure
- Representative sampling
- Zero dead volume
- Closed sampling
- One handle operation of two valves by means of a gearbox
- Purging of the sampler
- No direct connection between vent line and process lines
- Depressurisation of quick connect couplings

3 SPECIFICATIONS

Part.no S32-G1-MP

Material 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. See option selector 'Sample Cylinder' for the available cylinders and quick connect couplings.

Valves Three-way ball valves with PTFE or PEEK seats, FKM or FFKM O-rings. See option selector for the available ball valves.

Operation Manual, spring return or fixed return. See option selector for the available handles.

Connections 1/4" F NPT.

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

Cooler Standard single coil, process 1/4" tube, coolant 3/8" F NPT.

Complete with TI (temp. indicator) and a needle valve.

Mounting Wall mounting or pipe stand mounting.

S32-G System purge configuration (G1)



PRESSURE GAUGE TYPE		
Code	Range	Pressure gauge p/n
1	0-1 bar / 0-15 psi	2004306
1.6	0-1.6 bar / 0-23 psi	2006582
2.5	0-2.5 bar / 0-40 psi	2001668
4	0-4 bar / 0-60 psi	2002853
6	0-6 bar / 0-60 psi	2002600
10	0-10 bar / 0-90 psi	2002598
16	0-16 bar / 0-230 psi	2000982
25	0-25 bar / 0-400 psi	2001899
40	0-40 bar / 0-600 psi	2002601
60	0-60 bar / 0-900 psi	2000970
70	0-70 bar / 0-1000 psi	2000334
100	0-100 bar / 0-1450 psi	2000983



SAMPLER CODE EXAMPLE:
S32-G1 | 40 | V | 150 | 2 | C | N | PS | ENG

BALL VALVE TYPE						
Code	Valve	O-ring	SEAT	Ball valve p/n	Pressure range design (valve)	Temperature range design (valve)
1	W83	FKM	PTFE	2000315	100 bar @ 40°C / 1450 psi @ 104°F	177°C @ 25 bar / 350°F @ 360 psi
2	W83	FKM	PEEK	2001335	100 bar @ 177°C / 1450 psi @ 350°F	177°C @ 100 bar / 350°F @ 1450 psi
3	W83	FFKM	PTFE	2000492	100 bar @ 40°C / 1450 psi @ 104°F	232°C @ 8.6 bar / 450°F @ 125 psi
4	W83	FFKM	PEEK	2001493	100 bar @ 202°C / 1450 psi @ 395°F	232°C @ 34 bar / 450°F @ 495 psi
5	H7165	-	PTFE	1468100	34 bar @ 67°C / 493 psi @ 153°F	177°C @ 17 bar / 350°F @ 247 psi



QUICK CONNECTOR TYPE			
O-Ring	Stem p/n	Body p/n	Code
FKM	1790800	1601800	V
FFKM	2000730	2003627	K

CYLINDER VOLUME	
Cylinder	Code
150 cc	150
300 cc	300
500 cc	500
1000 cc	1000

HANDLE TYPE	
Code	Handle
A	Standard
B	S.R. 0-180
C	S.R. 90-0-90
D	F.R. 90-0-90

COOLER		
Code	Yes/No	Cooler p/n
Y	Yes	2011648
N	No	-

MOUNTING TYPE		
Code	Mounting Type	p/n
WM	Wall mounting	-
PS	Pipe stand	2016533

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



Dopak Pre-Engineered 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 SPECIFICATIONS

Part.no SAM-CYL

Body material SS316 (L)

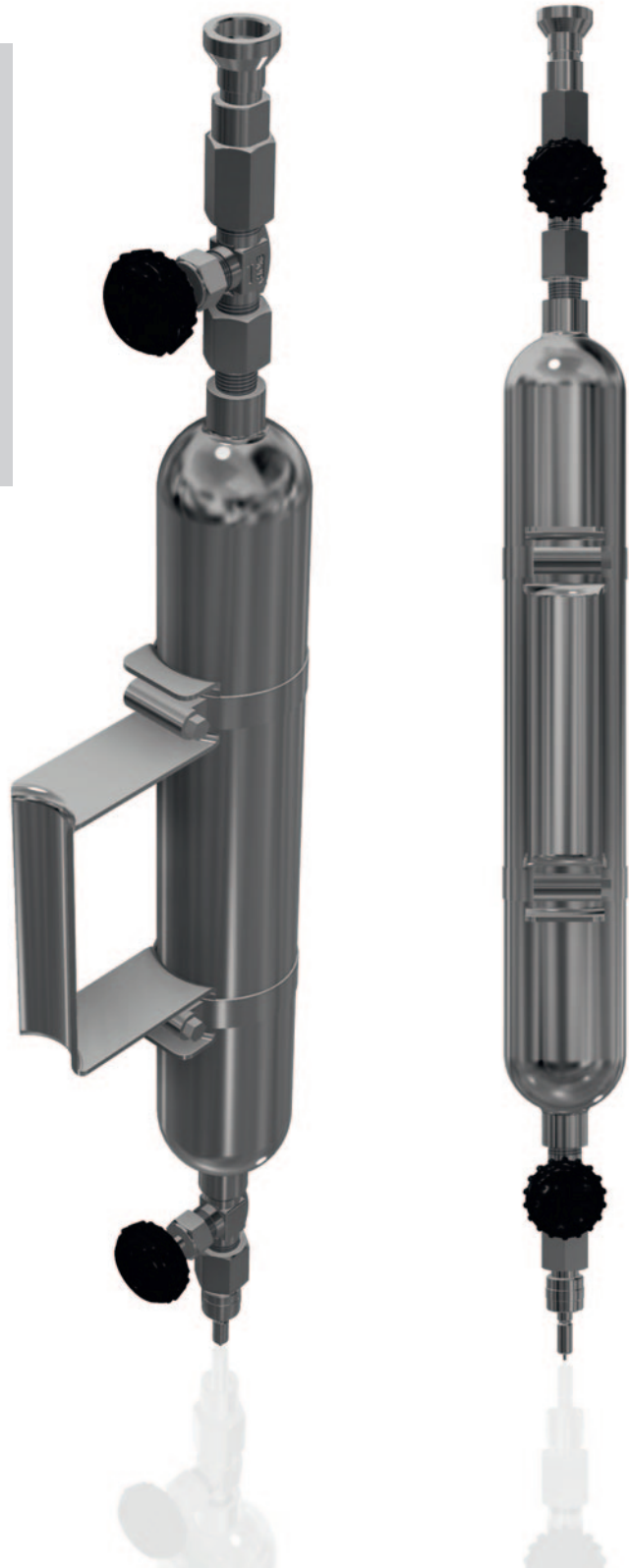
Cylinder type DOT or TPED* standards. Quick connect type stem and body, FKM or FFKM O-rings. See option selector "Sample Cylinder" for the available cylinders and quick connect couplings.

Valves Straight needle valves with regulating stem tip. Material: SS316.

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.



CYLINDER TYPE		
Code	Sample cylinder	Sample cylinder p/n
A	150 cc TPED*	2005925
B	150 cc DOT	1732100
C	300 cc TPED*	2005926
D	300 cc DOT	1727800
E	500 cc TPED*	2005927
F	500 cc DOT	1731300
G	1000 cc TPED*	2012240
H	1000 cc DOT	2022706



Cylinder CODE EXAMPLE:
SAM-CYL | D | Y | 1

TYPE code CYLINDER code OUTAGE TUBE code QUICK CONNECTOR code
SAM-CYL

OUTAGE TUBE code	
Code	
Y	Yes
N	No

QUICK CONNECTOR TYPE

Pressure range design Quick Connector	Temperature range design Quick Connector	Stem p/n	Body p/n	O-Ring	Code
100 bar @ 144°C / 1450 psi @ 291°F	204°C @ 34 bar / 399°F @ 493 psi	1790800	1601800	FKM	1
100 bar @ 144°C / 1450 psi @ 291°F	232°C @ 22 bar / 450°F @ 319 psi	2000730	2003627	FFKM	2



*) 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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Al-Saadi Street - opposite the Central Library

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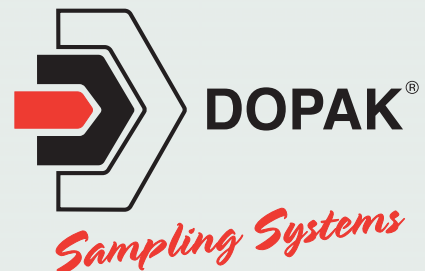
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