

Product Review



DOPAK® DEVELOPS AND
PRODUCES STATE-OF-THE-ART,
HIGHLY FUNCTIONAL SAMPLERS.
DOPAK® HAS BECOME THE
MOST RECOGNIZED AND RESPECTED
NAME IN THE INDUSTRY
THIS IS A RESULT OF SUPPLYING
AN INTERNATIONAL MARKET
IN THE CHEMICAL AND



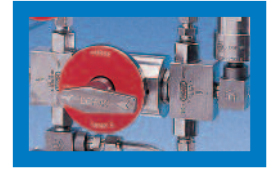
PETROCHEMICAL INDUSTRIES.
RECENT DEVELOPMENTS
HAVE LED TO NEW PRODUCTS
AND APPLICATIONS.
IN THE FUTURE DOPAK® SAMPLERS
WILL BE USED MORE FREQUENTLY
IN THE PHARMACEUTICAL,
FOOD AND BIOCHEMICAL INDUSTRIES
THROUGHOUT THE WORLD.



Introduction to Sampling

Due to the growing complexity of the industrial processes in general and more specific for processes in the (petro)chemical and pharmaceutical industries, the need for tests and analyses increases continuously.

The need for representative samples plays a critical role in ensuring product verification. Yet sampling directly from the process often includes the risks of exposure to the operator, as well as contamination and pollution to the environment. The DOPAK® sampling method reduces such risks with its patented design and simple method of operation.



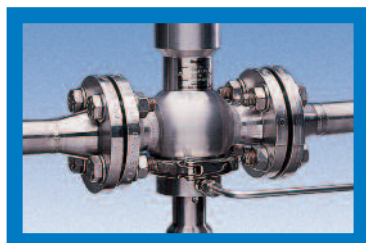
DOPAK Samplers

The DOPAK® sampling concept is widely used and accepted among the leaders in the chemical and petrochemical industry.

Our track record is easily explained because a DOPAK® sampler solves the problem of taking samples of toxic, dangerous and volatile substances.



With DOPAK® closed vent samplers, the operator is shielded better from contact with the product being sampled. Local spillage can be avoided. Volatile substances are prevented from escape into the atmosphere. Safety in the widest sense is highly improved.



Benefits

- Safer for the operator*
- Safer for the environment*
- Safer for the sample (representativity)*
- Easy operation*
- Economical*
- Low maintenance*
- Minimal pollution/contamination*
- Eliminate spills*



DOPAK® Sample Containers

DOPAK® offers two types of sample containers namely bottles, sealed with cap and septum and cylinders.

The type of container used is of influence on the type of sampling system.

Sampling in bottles

A sample is drawn from the process and arrives at atmospheric pressure in the sample container. The container consists of a bottle sealed with cap and septum which is inserted into the sleeve until the septum is pierced by the needles extending from the needle assembly.

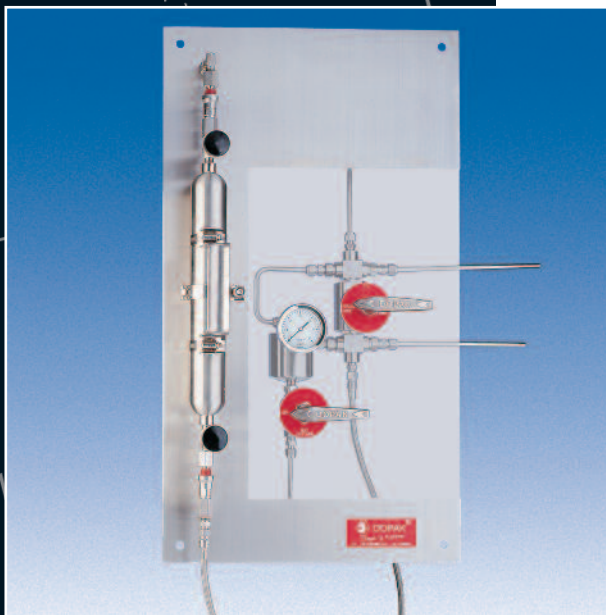
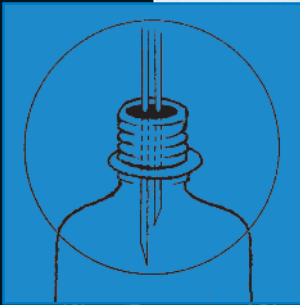
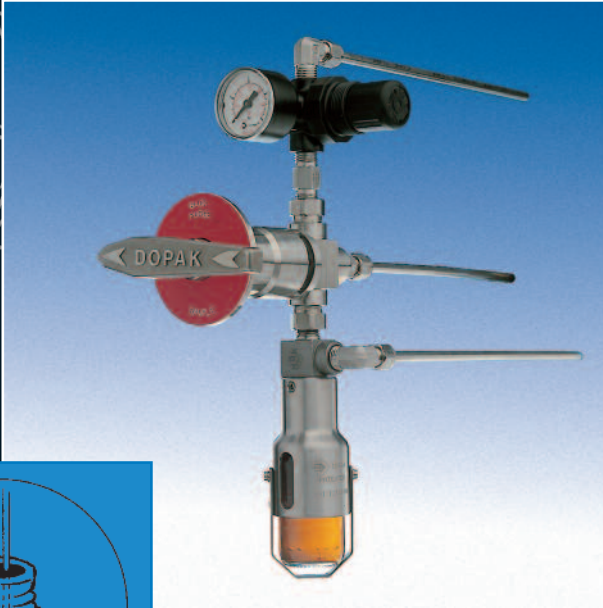
Once in position, the product can flow into the sample bottle via the process needle, while air and gases are being vented by the vent needle. When the required amount has been taken, the operator stops the product flow and the bottle is pulled out of the sleeve. The septum reseals automatically.

In applications where a cap and septum cannot be used, DOPAK® offers a seal ring in top of the sleeve, in combination with a filling assembly.

Sampling in cylinders

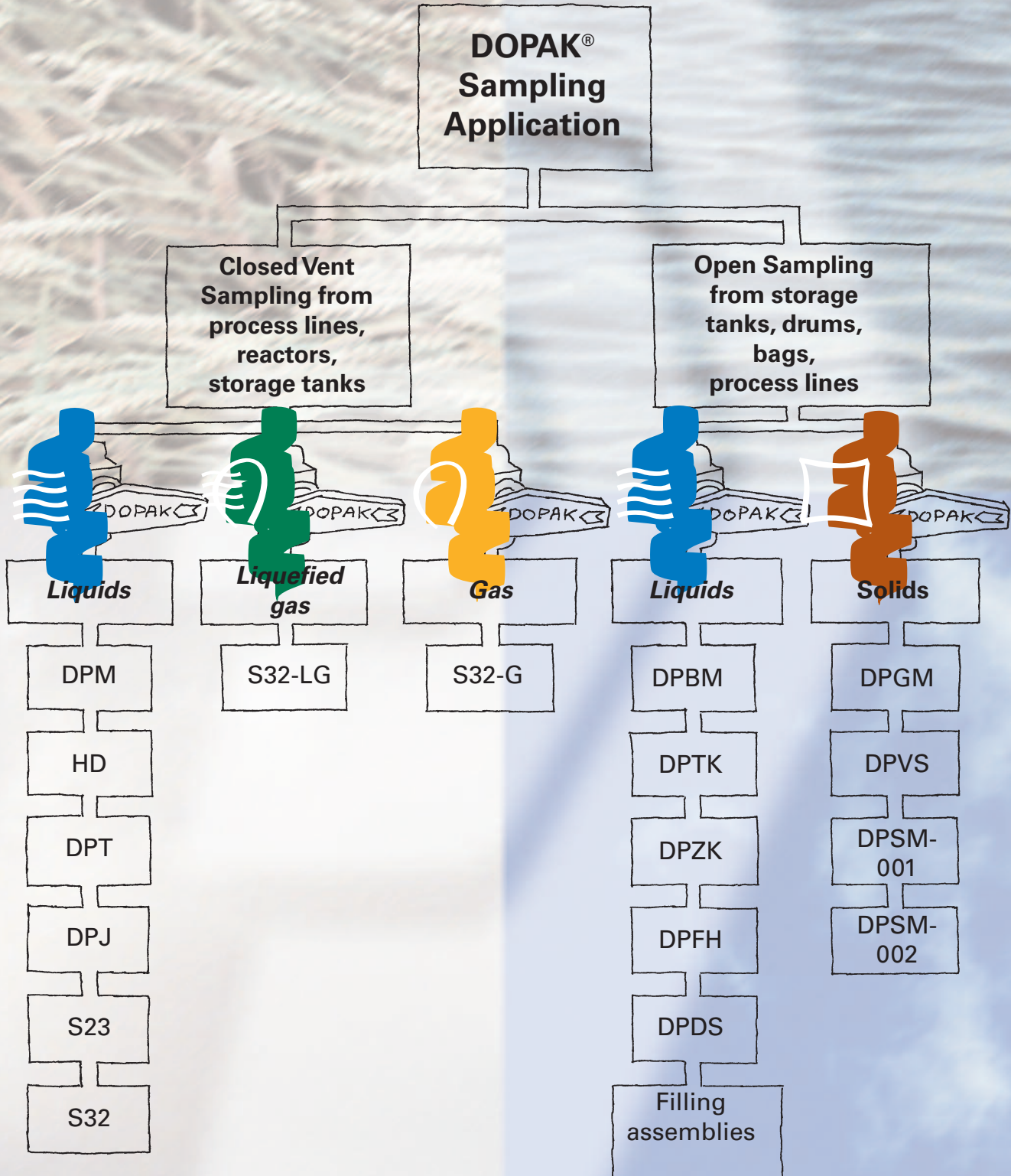
A sample is drawn from the process and arrives at process pressure in the sample container. The container consists of a cylinder at both ends equipped with a needle valve and a quick connect coupling. The cylinder is connected to the sampler.

Once in position, the product can flow through the sample cylinder. When sampling liquefied gases, a fixed amount of liquid is transferred to the expansion chamber to ensure partial filling of the cylinder. The operator closes the needle valves on the sample cylinder and allows the quick connect to be depressurised to a vent connection. The cylinder may be then disconnected from the sampler.



Introduction to sampling

DOPAK® offers a wide variety of standard models and sizes for easy adaptation to current installations. The choice of a sampler model depends upon the nature of the material being sampled and the conditions of the process involved.

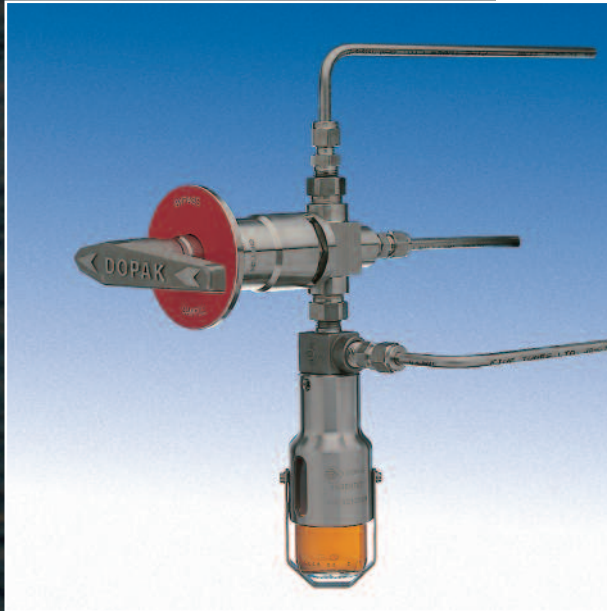


Closed Vent Samplers

DPM Series

DOPAK® Sampling System to take representative samples of fluids with low vapour pressures at low process pressures.

Purge options are available.



Applications

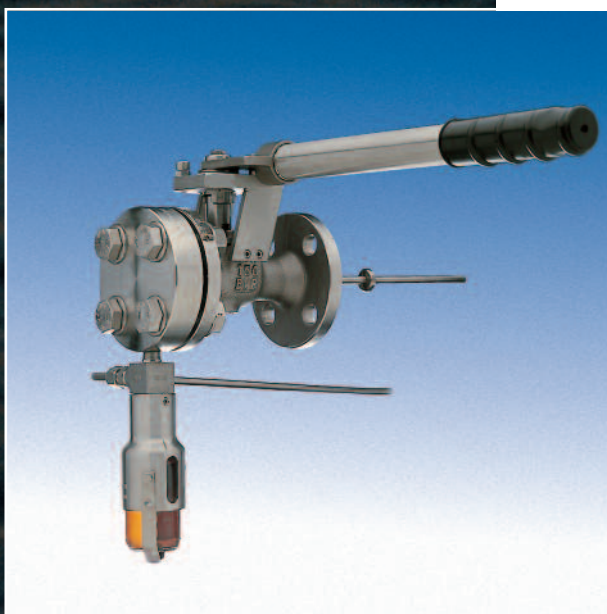
- Liquids at lower pressure
- Sampling with low vapour pressures
- Corrosive, hazardous liquids
- Viscous fluids, slurries
- Sampling from pipelines and tanks

Available Configurations

- On/off
- System purge
- Back purge
- Needle purge
- Back and needle purge
- System purge and continuous needle purge
- In line, needle purge

HD Series

DOPAK® Sampling System to take representative samples of fluids with low vapour pressures at low process pressures by using process valves.



Applications

- Liquids at lower pressure
- Sampling with low vapour pressures
- Corrosive, hazardous liquids
- Viscous fluids, slurries
- Sampling from pipelines and tanks
- Fire safe/antistatic valves

Available Configurations

- On/off



DPJ Series

DOPAK® Sampling System to take representative samples of fluids with higher viscosities by using piston valves. Outlet of sample valve will be purged to ensure zero dead volume.



Applications

- Fixed volume sampling
- Corrosive, hazardous liquids
- Viscous fluids, slurries
- Sampling from pipelines, tanks, reactors
- Vacuum conditions
- Liquids at low and elevated pressures
- High temperature

Available Configurations

- Purge
- Fixed volume
- Fixed volume with cooling/heating jacket
- Solvent purge

DPT Series

DOPAK® Sampling System to take representative samples of fluids with low vapour pressures at low process pressures by using in line valves.



Applications

- In line liquid sampling
- Corrosive, hazardous liquids
- Viscous fluids, slurries
- Sampling from pipelines

Available Configurations

- In line, on/off
- In line, continuous needle purge



S23 Series

DOPAK® Sampling System with internally coupled valves to take predefined quantities of fluids with low vapour pressures independent of process pressures with zero dead volume.



Applications

- Fixed volume sampling
- Liquid sampling at low and elevated pressures
- Corrosive, hazardous liquids
- Sampling from pipelines and pump around loop from reactors
- Small 1cc sampling

Available Configurations

- Threaded connections
- Welded/flanged connections
- Continuous needle purge
- Cooling/heating jacket
- Third coupled valve
- HVP (High Vapour Phase)
- High temperature

S32 Series

DOPAK® Sampling System with externally coupled valves to take representative samples of fluids from reactors at vacuum conditions or predefined quantities of fluids with low vapour pressures independent of process pressures.



Applications

- Liquid sampling at low and elevated pressures
- Corrosive, hazardous liquids
- Sampling from process lines or from top of reactors below atmospheric conditions
- Viscous fluids, slurries

Available Configurations

- Back purge vacuum
- Back purge venturi
- Back and needle purge vacuum
- Back and needle purge venturi
- Fixed volume
- Overflow vacuum
- Overflow vacuum venturi



S32-LG Series

DOPAK® Sampling System with externally coupled valves to take representative samples of liquefied gases in cylinders with internal or external outage. Purge options are available.



Applications

- Liquefied gas sampling
- Fixed external outage
- High vapour pressure liquids
- Zero quick connect vapour release

Available Configurations

- System purge
- Vent to flare
- Outage tube
- Purge expansion
- Bypass purge cylinder
- Process to flare
- Outage tube with bypass purge cylinder
- System purge with additional safety expansion cylinder



S32-G Series

DOPAK® Sampling System with externally coupled valves to take representative samples of gases in cylinders. Purge options are available.



Applications

- Gas sampling

Available Configurations

- System purge
- Bypass purge cylinder
- Process to flare



(Partly) Open Samplers

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



Applications

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

Available Configurations

- DPBM
- DPTK
- DPZK
- DPFH
- DPDS
- Filling assemblies



Solids

DPVS, DPGH, DPSM series.



Applications

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

Available Configurations

- DPGM
- DPVS
- DPSM





DOPAK® proves its worth
in your process analysis



Certification applies to
Dovianus BV, Bergschenhoek,
The Netherlands.



Dopak Inc.

4540 S. Pinemont, Suite 118
Houston, Texas 77041, USA

Phone (713) 460-8311

Fax (713) 460-8578

E-mail info@dopak.com

Dovianus BV

Leeuwenhoekweg 24
P.O. Box 76
2660 AB Bergschenhoek
The Netherlands

Phone +31 10 524 20 00

Fax +31 10 524 20 29

E-mail info@dopak.nl

www.dopak.com

