

DOPAK
Sampling Systems

The Worldwide
Standard in Sampling

DOPAK Inc
Bergschenhoek
Netherlands

Dopak Inc
Houston TX
USA

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INDEX

- ✓ Company presentation Dovianus
- ✓ Introduction to sampling
- ✓ Sampling Systems
- ✓ Consumables and spares
- ✓ Documents for DOPAK Sampling Systems
- ✓ Options for DOPAK Sampling Systems



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Dopak Inc

- ✓ Founded in 1926
- ✓ In sampling business since 1979
- ✓ CIRCOR Instrumentation Technologies (CIR)
- ✓ Office in Netherlands and Houston TX USA
- ✓ Worldwide local representatives
- ✓ ISO 9001 (2000) certified company
- ✓ ASME/(T)PED/ATEX standards



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Industries

- ✓ Bulk Chemicals (aromatics, olefins)
- ✓ Fine Chemicals
- ✓ Refineries
- ✓ Oils and gas
- ✓ LNG
- ✓ Pharmaceuticals
- ✓ Transport (shipping)
- ✓ Nuclear





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Products

DOPAK CLOSED VENT SAMPLING SYSTEMS FOR LIQUIDS, GASES AND LIQUIFIED GASES



Liquefied gas



Gas



Liquids



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Design requirements

- ✓ Specification
Pipe or instrumentation specification
- ✓ Criteria
Design/operating pressure temperature, viscosity, phase, particles. Product properties
- ✓ Representativity
Dead volume
System purge
External purge
Contamination
- ✓ Safety





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Objectives of sampling system

- ✓ Provide safety for the operator
No contact with the product to be sampled
Easy (one handle) operation
- ✓ Provide safety for the environment
No spillage, no fumes
- ✓ Provide a 100% representative sample



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Sample containers - Bottles

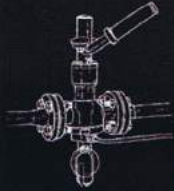


- ✓ Bottle closed with cap and septum
- ✓ Needle assembly/sleeve arrangement
- ✓ Closed vent
- ✓ Product at atmospheric pressure





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Sample containers - Cylinders



- ✓ Cylinder with valves and QC couplings
- ✓ Outage for liquids (external/internal)
- ✓ Closed vent / DESO QC
- ✓ Product at process pressure



Liquefied gas



Gas



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DPM series

Applications

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

Available Configurations

- [On/off](#)
- [System purge](#)
- [Back purge](#)
- [Needle purge](#)
- [Back/needle purge](#)
- [System purge and continuous needle purge](#)
- [In line, needle purge](#)



Liquids



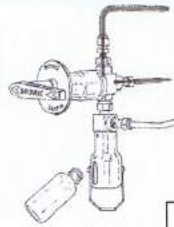
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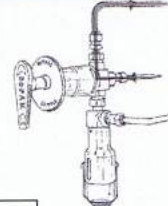
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OFF



PURGE

DPM
SYSTEM PURGE



SAMPLE



OFF



Liquids



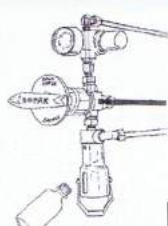
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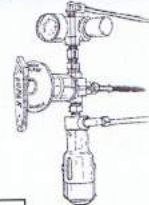
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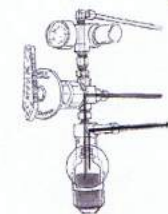


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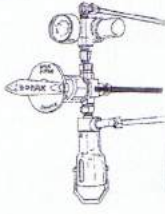


PURGE

DPM
BACK PURGE



SAMPLE



OFF



Liquids



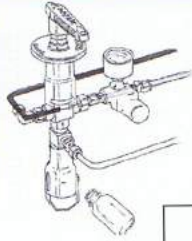
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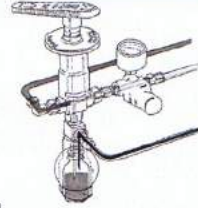
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OFF

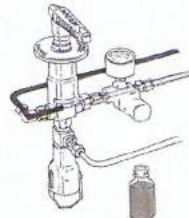
DPM
NEEDLE PURGE



PURGE



SAMPLE



OFF



Liquids



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DPJ series

Applications

Fixed volume
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 heating/cooling jacket
Solvent purge



Liquids



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DPT series

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](#)

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HD series

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](#)

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S23 series

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](#)
- [Welded/flanged](#)
- [Continuous needle purge](#)
- [Third coupled valve](#)
- [Cooling jacket](#)
- [HVP \(High Vapour Phase\)](#)
- High temperature

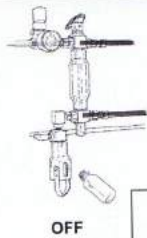
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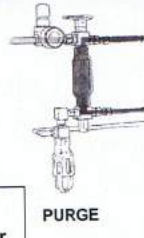


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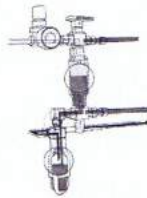


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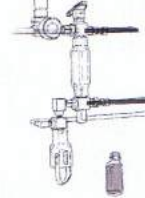
S23
Fixed volume sampler



PURGE



SAMPLE



OFF



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S32 series

Applications

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

Available Configurations

[Back purge vacuum](#)
[Back purge venturi unit](#)
[Back/needle purge vacuum](#)
[Back/needle purge venturi unit](#)
[Fixed volume](#)
[Overflow vacuum](#)
[Overflow vacuum, venturi unit](#)



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S32-G series

Applications

Gas sampling

Available Configurations

[System purge](#)
[Bypass purge cylinder](#)
[Process to flare](#)



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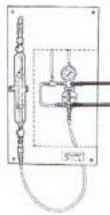
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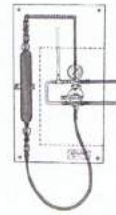
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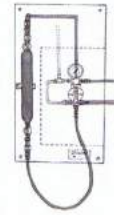
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OFF



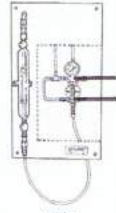
PURGE



OFF



VENT



OFF

S32-G
System Purge



Gas



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S32-LG series

Applications

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

Available Configurations

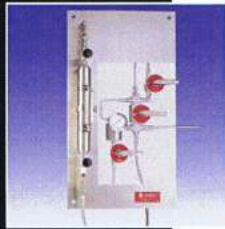
- [System purge](#)
- [Vent to flare](#)
- [Outage tube](#)
- [Purge expansion](#)
- [Bypass purge cylinder](#)



Liquefied gas



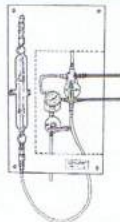
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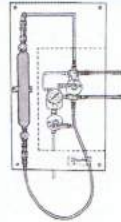
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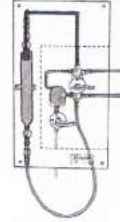
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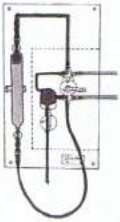
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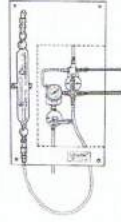
PURGE



EXPANSION



VENT



OFF

S32-LG
System Purge



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Consumables and Spares



BOTTLES



CAPS



SEPTA



NEEDLE ASSEMBLIES



SLEEVES



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Documents for sampling systems

- ✓ Drawings with part list
- ✓ Material certification 3.1.B.
- ✓ Test certificates (pressure, function, etc)
- ✓ Installation, operation and maintenance manuals
in local language
- ✓ Data sheets
- ✓ P&ID
- ✓ Welding documentation (WPS/PQR/WQR)
- ✓ Quality plans



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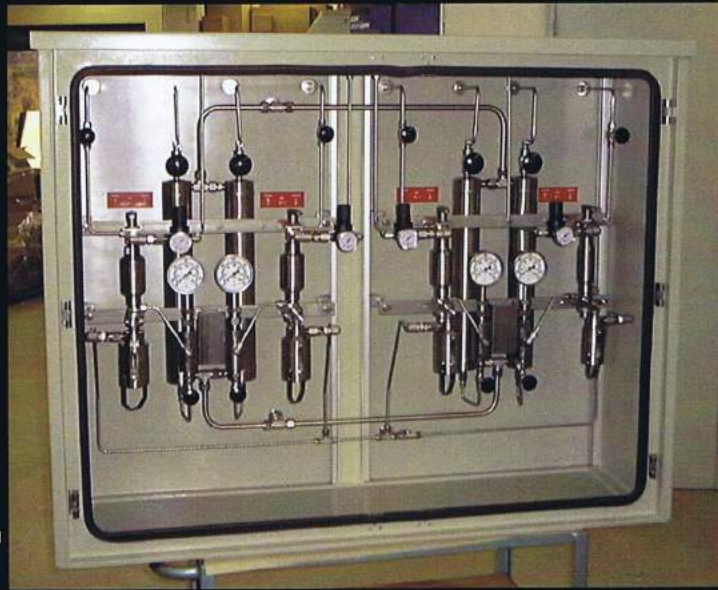
DOPAK Options for sampling systems

- ✓ Enclosures
- ✓ Coolers, temperature indicators
- ✓ Block and isolation valves
- ✓ Mounting plates, pipe stands
- ✓ Carbon canister (emission filters)
- ✓ Exotic materials (SS316 standard)
(HC, HB, I625, I825, Ti, PTFE, M400, A20)
- ✓ Spring return handles





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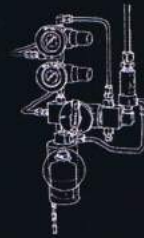
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DOPAK VS OTHER SAMPLING SYSTEM SUPPLIERS

✓ DOPAK Single piece needle assembly without O-rings, without small parts which are difficult to maintain



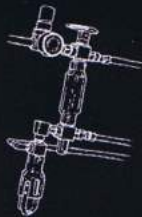
✓ DOPAK Sleeves with patented sliding guidance ring to ensure optimal piercing of the septum



✓ DOPAK uses standard "in the market available" valves
✓ DOPAK supplies a standard solution, engineered to customers need.



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Questions ?

Thank you for your attention

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