Closed Vent Sampling Systems for Liquids, Gases and Liquefied Gases

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Dopak Inc
Bergschenhoek
Netherlands

Dopak Inc
Houston TX
USA

WWW.DOPAK.COM
**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

**Industries**
- Bulk Chemicals (aromatics, olefins)
- Fine Chemicals
- Refineries
- Oils and gas
- LNG
- Pharmaceuticals
- Transport (shipping)
- Nuclear
Products
DOPAK CLOSED VENT
SAMPLING SYSTEMS
FOR LIQUIDS, GASES
AND LIQUEFIED GASES

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
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

Sample containers - Bottles

- Bottle closed with cap and septum
- Needle assembly/sleeve arrangement
- Closed vent
- Product at atmospheric pressure
**Sample containers - Cylinders**

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

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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
- Inline, needle purge
**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
**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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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

S32-G series

Applications
Gas sampling

Available Configurations
System purge
Bypass purge cylinder
Process to flare
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

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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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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.

Questions?

Thank you for your attention.

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