Closed Vent Sampling Systems for Liquids, Gases and Liquefied Gases

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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

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 LIQUIFIED GASES

Design requirements
- Specification
  Pipe or instrumentation specification
- Criteria
  Design/operating pressure, temperature, viscosity, phase, particles
- 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

Dopak
Bergschenhoek
Netherlands

Dopak Inc
Houston TX
USA

WWW.DOPAK.COM
Sample containers - Cylinders

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

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
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
**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
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
Consumables and Spares

- Bottles
- Caps
- Septa
- Needle Assemblies
- Sleeves
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

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, 1625, 1825, Ti, PTFE, M400, A20)
- Spring return handles
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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