

HMD Kontro



VapourView®
Pump Protection System
Protect Your Sundyne Sealless
Magnetic Drive Pump From Dry
Running, Cavitation & Other
Harmful Operating Conditions



- No unplanned maintenance and downtime ✓
- Eliminates potential for dry running ✓
- Higher MTBF and MTBR ratings ✓
- Ensures correct priming and venting ✓
- Easy to install and operate ✓
- Prevents catastrophic failure ✓
- Reduced cost of ownership ✓
- Increased uptime and profitability ✓



VapourView

An Inside View To Your Pump's Health

The Sundyne VapourView Pump Protection System provides an innovative solution for monitoring your pump's internal health and provide early warning, so you can stay a step ahead of harmful gas build-up and vapor formation, which can cause cavitation, entrainment or even pump failure.

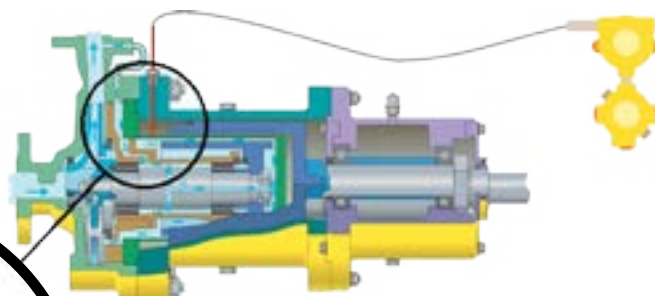
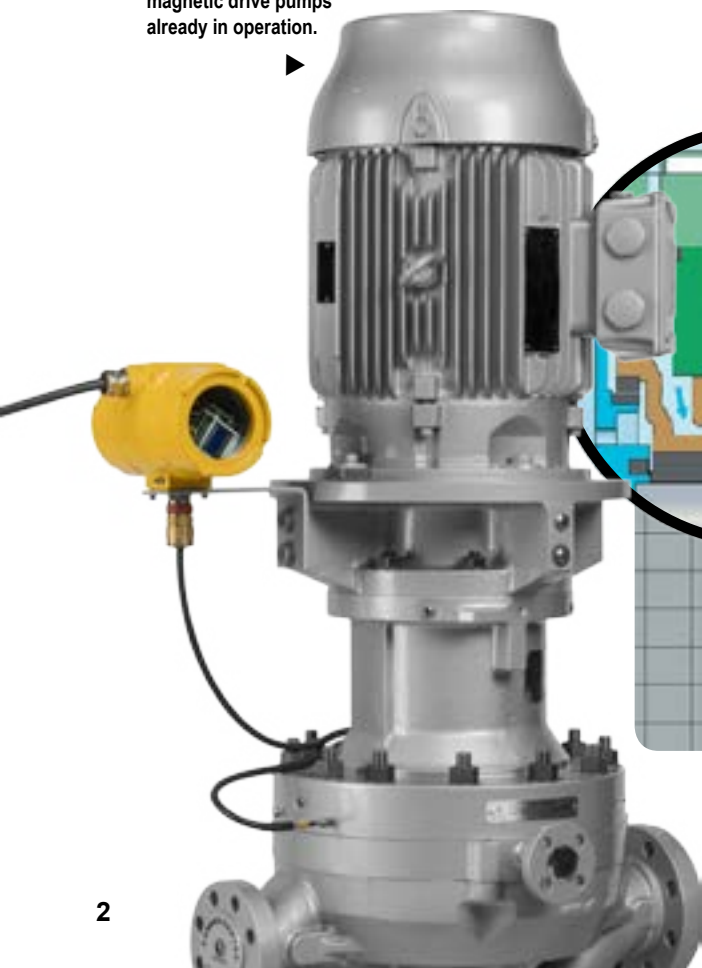
By leveraging ultrasonic technology, the VapourView system continuously monitors for the presence of gases within your pump's internal lubrication and cooling flow path. By delivering vital data to the operator, VapourView will help them intervene early to prevent damage from occurring to the pump.

Field studies have shown that a Sundyne magnetic drive pump fitted with the VapourView Pump Protection System is up to 50% more reliable in comparison to other pumps.

Available to order as an optional accessory for our line of API 685 sealless magnetic drive pumps, the VapourView Pump Protection System can also be retrofitted to your existing Sundyne sealless magnetic drive pumps already in operation.

Key Design Features

- Real time condition monitoring
- Detects liquid phase change
- Intrinsically safe sensor
- Flameproof electronics
- Local visual indicators
- On-board data recording
- Non-invasive detection
- 4-20 mA output signal
- Suitable for hazardous operating environments
- Wide temp operating range (-40°C to 180°C) (-104°F to 356°F)
- Complies with relevant standards
- EMC tested – cUL and ATEX / IECEx approved versions
- Retrofittable to GSP Frames 1, 2 & 3 pumps



▲ The sensor probe is available in a variety of lengths to fit the various sealless pump ranges and frame sizes.



▲ Digital Control System data recorded by a VapourView user (Sealless pump on Pre-treater Stripper Reflux – Hydrocarbons) Potential gas event noted at **POINT 1**. This event passed, then generally a high mA signal in relation to the product temperature occurs at **RANGE 2**.

Output Signals

System Condition	LCD Display	LED Signal	*Proportional DCS Signal (mA)	*Trip Switch DCS Signal (mA)
All liquid	Ok	-	20	20
Gas present	Gas PtoP0000	Red (steady) ●	20 > DCS > 12	12**
All gas	STOP	Red (flashing) ●	12 > DCS > 4	4
System loading	LOADING	-	-	-
System error	ERROR	-	-	-

How It Works

VapourView works by instantaneously detecting a change of state within the pump's process fluid and delivering an alert to the operator. Traditional Temperature and Power Control Monitoring methods only sense the secondary effects of a gas build-up inside the pump; and in many cases, pump damage would already have occurred before these types of detectors even register a change.

Using specially developed ultrasonic technology, the VapourView system finds the telltale signs of gas concentrations within the pump:

- Large bubbles** – which have dissimilar acoustic impedance between gas and liquid
- Small bubbles** – which attenuate the sonic energy via scattering and absorption

When VapourView senses bubbles in the fluid being pumped, it transmits a warning to the operator, enabling them to intervene quickly. Whether the pump suffers from incorrect priming or venting, entrained process gas or incipient vaporization, early detection makes all the difference between a catastrophic failure and continued operation.

Hazardous Location Certification:

- ATEX certificate number: Baseefa12ATEX0137
- ATEX rating: II 2(1)G Ex d [ia GA] Ilc T6
(Ta -40°C to 60°C) (Ta -104°F to 140°F) Gb IP66

Contains Intrinsically Safe Devices:

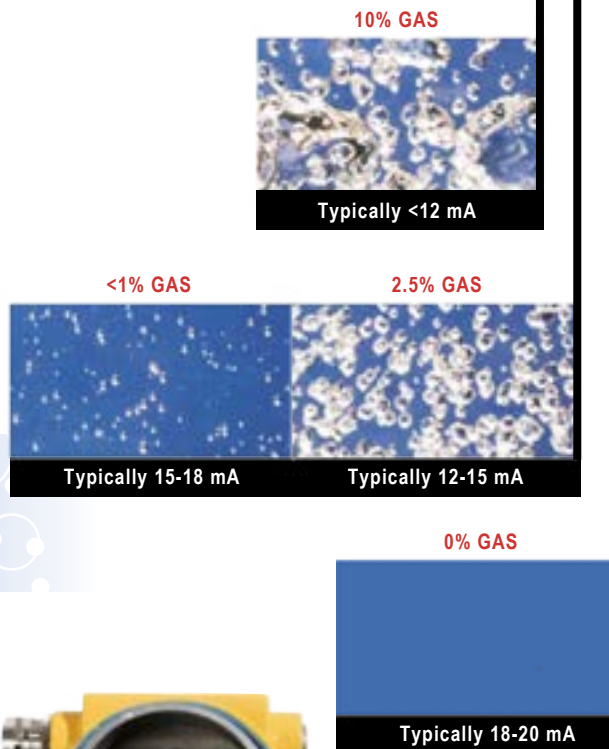
- ATEX certificate number: Baseefa12ATEX0139X

Sensor Certification:

- Baseefa12ATEX0147X
- II 1G Ex ia Ilc Ga "T-class See certificate"

cUL Classification:

- Class I: Group B, C, D
- Class II: Group E, F, G
- Class III: Type 4X



(Guidance value only. Actual value is relational to the application.)





Electrical Specifications

The signal from the VapourView Pump Protection System is output through a pair of 4-20 mA current loop wires, allowing for easy interface with most digital control systems. The unit itself is powered by a dedicated 24 Vdc supply, which has an external ground point on its enclosure.

The two power leads are separate from the signal leads, while a fifth lead provides an alarm reset switch. The signal can be configured to be proportional to gas content, or it can be used as a trip switch to prevent dry-running of the pump. Long term data logging is programmable via the on-board microSD card.

Note: *VapourView is not suitable for 2 wire signal loop powered installations.*

COMPRESSORS

PUMPS

GENUINE PARTS

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Terminal	Color	Function
1	Brown	4-20mA Loop Return
2	Red	4-20mA Loop Out
3	Orange	24Vdc

Terminal	Color	Function
4	Yellow	Ground
5	Green	Alarm Reset
6	Unused	N/A



For more information regarding how the VapourView Pump Protection System will improve your process, visit www.sundyne.com or contact your local Sundyne Channel Partner.



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