

**VapourView<sup>®</sup>**  
Non-Intrusive 'Gas-in-Liquid' Detector

**HMD Kontro**



Sundyne HMD Kontro

VapourView®

# Providing a Continuous View on Vapour

**As the world leader in sealless magnetic drive, centrifugal pumps, Sundyne HMD Kontro encounters a wide variety of challenging applications and environments. Over the years, we have developed a suite of instruments capable of monitoring the health of a magnetic drive pump in a range of operating conditions.**

Recognising the importance of detecting gas within pumped liquids in order to avoid the risk of damage and dry running, Sundyne HMD Kontro is pleased to announce the launch of VapourView®. This innovative, non-intrusive instrument uses an ultrasonic signal to detect the presence of gas in a liquid stream from outside the confines of the pump pressure boundary.



## The Concern

The presence of gas in a liquid processed by a magnetic drive pump, whether caused by entrainment or cavitation, can trigger a range of problems that adversely affect magnetic coupling cooling and the internal bearing lubrication of the pump. Excessive levels of gas may, as a consequence, reduce the MTBF of a magnetic drive pump.

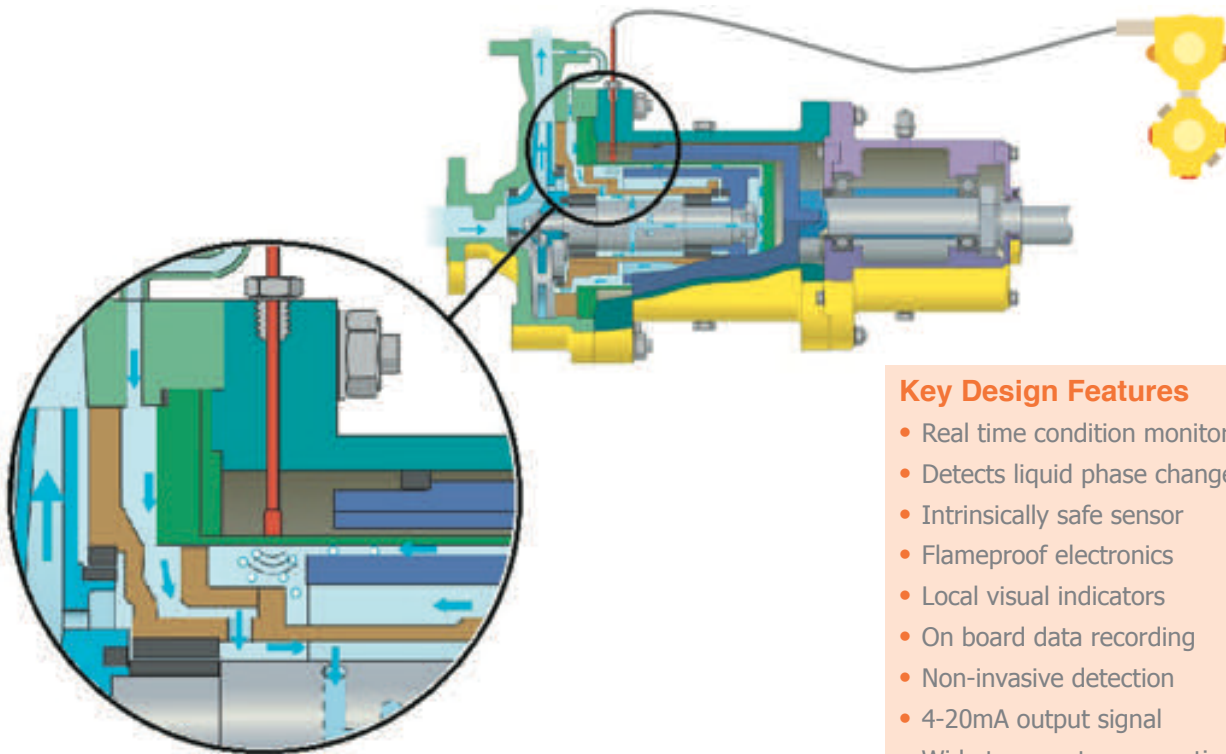
Furthermore, an incorrectly primed and vented pump, particularly on applications that feature high vapour pressure (volatile) liquids, can cause a partial dry run and inadequate lubrication of the internal bearings, risking potential premature failure.

At the extreme, subjecting a pump to these conditions has the potential to cause considerable damage, resulting in both component replacement cost and downtime.

## VapourView® Solution

Early detection of gas within the process liquid is critical to eliminate the risk potential - the patented VapourView® uses ultrasonic technology to achieve this.

The VapourView® instrument provides vital information to the end-user on the presence of gases in the pumps internal flow regime and forewarns of adverse conditions likely to affect bearing lubrication or magnetic coupling cooling. Early intervention by system engineers, who can undertake remedial action, will maximise the operating life of plant equipment.



## How it Works

VapourView® works by detecting a change of state in the internal flow regime, and does so instantaneously. This is a primary effect and is in contrast to the traditional Temperature and Power Control Monitoring methods, which only sense the delayed secondary effects on the flow conditions, with the inevitable time lag inherent in the process.

Specifically developed ultrasonic technology senses the early presence of gas in the product being pumped, enabling plant operators to intervene quickly to deal with what could be incorrectly primed or vented pump conditions, entrained process gas or incipient vapourisation. This mitigates damage and minimises unscheduled maintenance action so maximising the life of plant equipment in the long term.

The VapourView® instrument has been performance tested and is compliant with explosive atmosphere and electromagnetic compatibility requirements.

VapourView® is available for use on GSP and GSA pump ranges, frame sizes 1, 2 and 3. It is retrofitable to these pump types and will operate at temperatures between -40 and 180°C (-40 and 350°F).

## 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
- 4-20mA output signal
- Wide temperature operating range (-40°C to 180°C)
- IECEx /ATEX approved & EMC tested
- Higher MTBF / Higher MTBR
- Retrofitable to GSP Frames 1, 2 & 3 pumps (check with HMD)

## Benefits of VapourView®

- Complete sealless pump security
- Eliminates potential for dry running
- Ensures correct priming and venting
- Improved and consistent reliability
- Prevents catastrophic failure
- No unexpected repair costs
- Reduced cost of ownership
- Increased process and profitability
- Adaptable for many applications
- Suitable for hazardous environments
- Compatible with existing systems
- Complies with relevant standards



### VapourView® Hazardous Location Certification:

Pulser/Receiver Unit certification:

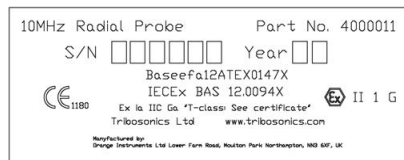
- ATEX certificate number:  
Baseefa12ATEX0137
- ATEX rating: II 2(1)G Ex d [ia Ga] IIC T6  
(Ta -40°C to 60°C) Gb IP66

Contains Intrinsically Safe Devices:

- ATEX certificate number:  
Baseefa12ATEX0139X

Sensor certification:

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



Sundyne Headquarters:

**Sundyne, LLC**  
14845 West 64th Avenue  
Arvada, Colorado 80007  
USA  
1-866-Sundyne  
Phone: 1 303 425 0800  
Fax: 1 303 940 2911  
www.sundyne.com

Sundyne China:

**Sundyne Industrial Equipment  
(Tianjin) Company Limited**  
Building 1, No. 879 Shen Fu Road  
XinZhuang Industrial Zone  
Min Hang District  
Shanghai, China 201108  
Phone: +86 21 5055 5005  
Fax: +86 21 5442 5265

Sundyne France:

**Sundyne International S.A.**  
13-15, Bld. Eiffel - B.P. 30  
21604 Longvic Cedex  
France  
Phone: +33 (0)3 80 38 33 00  
Fax: +33 (0)3 80 38 33 66

Sundyne Spain:

**Sundyne Marelli Bombas, S.R.L.**  
Ctra. Madrid-Toledo, Km.30.8  
45200 Illescas  
Toledo, Spain  
Phone: +34 925 53 45 00  
Fax: +34 925 51 16 00

Sundyne United Kingdom

**Sundyne HMD Kontro Sealless Pumps**  
Marshall Road  
Hampden Park Industrial Estate  
Eastbourne East Sussex, BN22 9AN  
United Kingdom  
Phone: +44 1323 452000  
Fax: +44 1323 503369

**Worldwide Sales Headquarters**

Unit 2 Harvington Business Park  
Brampton Road  
Hampden Park Industrial Estate  
Eastbourne East Sussex, BN22 9BN  
United Kingdom  
Phone: +44(0) 1323 452125

**For more information on the benefits that the VapourView® ultrasonic detector offers, contact:**

Vince Lee  
Tel +44 (0) 1323 452141 Email: vlee@sundyne.com

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