

# Pump it with HMD Kontro

Product Range

## HMD Kontro



General Transfer GT



ZeroLoss™ Containment Shell



Vertical GSPV



High Pressure HPGS



Multi-Stage Pump GSPX



Petrochemical API 685 – GSP



General Service ASME / ISO GS



Low Flow GSPLF



VapourView® Gas-In-Liquid Detector



## HMD Kontro

**Sundyne HMD Kontro is the home of the sealless pump. As the first to develop the magnetic drive for pumping applications, over sixty years ago, we have honed and perfected this expertise to provide a comprehensive range of pumps that all offer the significant benefits of zero leakage.**

With a magnetic drive sealless pump, there is a greatly reduced danger of emissions or leaks. The pump is completely glandless so maintenance is minimal. The zero leakage design provides significant health and safety benefits and the ability to be both user and environmentally friendly.

The lifetime cost of a magnetic drive pump is significantly lower than a traditional sealed pump. No seals means low maintenance and significantly reduced operating costs. There are no seals to replace and no seal support system to specify, install or maintain. Of course, all this also means less downtime and less clean up for further savings.

Sundyne HMD Kontro are specialists in the provision of magnet drive centrifugal pumps.

For industries and applications where performance and environmental integrity are important, Sundyne HMD Kontro provides an extensive range to suit all your needs.

Using the very latest in magnet drive technology, Sundyne HMD Kontro is able to offer the widest selection of sealless pumps on the market, with the ability to adapt these to suit specific requirements.

Sundyne HMD Kontro Sealless Pumps is part of Accudyne Industries and is a truly international company with a network of channel partners and representatives, ready to meet your needs anywhere in the world.





### Application Information

Sundyne HMD Kontro pumps are particularly applicable to industries such as petroleum, chemical, gas, pharmaceutical and similar sectors where hazardous, toxic, fine, corrosive or aggressive liquid needs to be pumped and moved. The Sundyne HMD Kontro sealless pump is ideally suited to environments that are hot or caustic, such as those in petrochemical refineries. However, because of their inherent economy, they are equally suited to many other applications.

### Setting the Standard

Over the years, Sundyne HMD Kontro has worked alongside the relevant regulatory bodies to ensure that our pumps comply with the International standards you may need to meet. Examples of these include API 610, API 685 and ASME B73.3. Within our factory, all pumps are made under the requirements of ISO 9001:2008.

Whilst we offer a comprehensive range of standard pumps, described in detail here in this catalogue, we particularly specialise in adapting these to meet your exact requirements. Please do not hesitate to contact us for further information and/or assistance.



### Key Design Features

- **No seals:** To minimise maintenance, all of the associated costs and eliminate potential leaks.
- **Sealless design:** For total containment, essential for hazardous, aggressive or valuable product.
- **Interchangeability of components:** For maximum convenience and reduced stock holding, operator training etc.
- **High efficiency wet end:** To benefit maximum flow / head coverage.
- **Wide choice of materials:** To allow a choice of various metals in the construction of your pump.
- **Casing gasket fully confined:** Eliminating risk of blowout.
- **Universal connection options:** So that suction and discharge flange connections can be configured to your exact requirements.
- **Modular rotating element cartridge:** Providing the most efficient way to perform replacements and manage your spare part inventory.
- **International pressure vessel standard:** Designed and manufactured to ASME VIII, EN 13445 codes for confidence in operation.

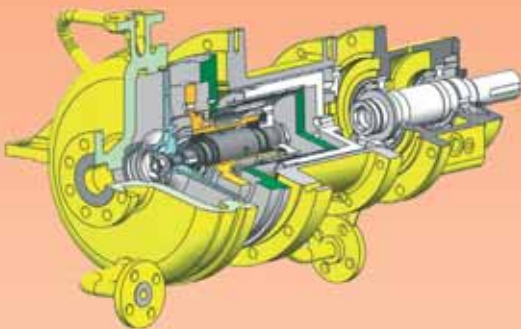
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# Sundyne HMD Kontro Overall Pump Parameters

At Sundyne HMD Kontro, since developing the first sealless, magnetic drive pump some sixty years ago; we have continued to push the parameters at which our pumps can now operate.

- **Temperature – Down to** -80°C / -110°F
- **Up to (Torque Ring Design)** 450°C / 840°F
- **Up to (Synchronous Design)** 315°C / 600°F
- **Flow Rates – Up to** 830m<sup>3</sup>/h / 3645 USgpm
- **Heads – Up to** 240m / 790ft
- **Viscosity** Maximum 200 cSt
- **Pressure** Up to 185 bar / 2680 psi
- **Solids** Up to 5%, w/w a particle size of less than 150 microns  
Up to 8% and less than 250 microns with filtration
- **Power (Maximum Motor Size)** 400kw / 530hp
- **Speed Range** 1450 – 3500 RPM
- **Full compliance with** ASME / ISO / API 685 (API 610)
- **Available Materials** 316 St St / Alloy 20 / Alloy C / ETFE  
Others available on request

If your operating parameters are higher than those shown or you have a particular requirement, we may well be able to engineer a bespoke solution for your application. Please contact us to discuss your requirements and we will do our very best to accommodate them.



## Sundyne HMD Kontro Options

To enhance the performance of our sealless pumps still further, we offer a range of standard options to ensure that our pumps can meet your requirements. Examples of these are as follows:

- Close Coupled – Flange Mounted or Sub-Base Design
- Separate Mounted – Foot Mounted or Baseplate Design
- Casing Heating Jackets
- Coupling Housing Heating Jackets
- ZeroLoss Containment Shell
- VapourView
- Secondary Control – Via Leakage Restriction Device and Flanged Drain
- Secondary Containment – Via Gas Seal
- Solids Handling – In-line filter to Mono & Duplex Filters, Magnetic Filter

If there are other facilities or options that you require but are not listed here, please do not hesitate to contact us to discuss your requirements. We will rise to the challenge.

## Petrochemical Pumps – GSP

Meeting the needs of refineries worldwide



**API 685 (API 610)**

The GSP is a heavy-duty centreline-mounted process pump that complies with API 685 (API 610) refinery applications for sealless pumps. The GSP product covers a hydraulic range that is split between four frame sizes, Frames I, II, III & IV.

The pumps are offered with a range of synchronous magnet drives rated to match prime mover performance.

A corresponding range of torque ring drives is available for high temperature operation. Prime mover specifications of all denominations can be catered for.



- Conforms to API 685 for sealless pumps.
- Design ensures safe, leak free operation.
- Increased efficiency, low running costs.
- Minimal spares holding and maintenance.
- Maximises on-line process time.
- No costly seal support systems to maintain.
- Reduced installation costs.

Standard materials of construction are A-8 and S-5 with silicon carbide internal bearings and spiral wound gaskets available. Other material options are available on request including Duplex Stainless Steel, Alloy 20 and Alloy C276. Various flange options are available as standard.

### Options

- Casing drains flanged
- Jacketed pump casing
- Torque ring drive
- Secondary control / Secondary containment
- Coupling housing drain
- Large range of pump protection

### Specification (50Hz)

Flow Rate	690m <sup>3</sup> /h / 3000USgpm
Head	240m / 790ft
Minimum Temperature	-40°C / -40°F
Maximum Temperature	350°C / 660°F
Pressure	40bar / 580psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 5% w/w less than 150 microns
Speed Range	1450 - 3500 RPM
Industry Standards	API 685 (API 610)
Max Motor Size	200kW / 270hp
Standard Materials	S-5, A-8, D-1, D-2 (others are listed in Table H.1)
Number of Available Hydraulics	30

## Standing Up for API 685 – GSPV

A compact, vertical pump for space optimisation



The vertically mounted GSPV pump provides all of the benefits of a magnetic drive sealless pump in a compact package. Requiring minimum floor space, the GSPV meets all of the requirements of API 685, making it ideal for chemical and petrochemical, oil and gas applications, including those where space is at a premium, such as in offshore installations. Dimensionally the range conforms to BS4082, thus providing a sealless upgrade solution to existing installations.

- Modular design based on established GS components
- Designed to retrofit existing sealed designs
- Diffuser design optimises pump efficiency
- Simple path for sealless upgrade
- Diffuser design optimises pump efficiency and curve shape
- ASME VIII compliant

### Options

**Build Options:** High efficiency ZL containment shell

- Secondary control system
- Secondary containment system
- NACE compliant materials

**Instrumentation Options:** Power control monitor • RTD temperature sensing • Secondary housing monitoring (liquid or pressure) • VapourView®



### Specification (50Hz)

Flow Rate	235m <sup>3</sup> /h / 1035USgpm
Head	90m / 295ft
Minimum Temperature	-40°C / -40°F
Maximum Temperature	205°C / 400°F
Pressure	40bar / 580psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 5% w/w less than 150 microns
Speed Range	1450 - 3500 RPM
Industry Standards	API 685 (API 610)
Max Motor Size	75kW / 100hp
Standard Materials	S-5, A-8, D-1, D-2
Number of Available Hydraulics	9

## High Pressure Peace of Mind – HPGSP

Reliable and safe under high pressure



The HPGSP magnetic drive sealless pump is at the top end of our range of high pressure pumps for oil and gas, petrochemical and chemical industries. Capable of easily handling system pressures up to 185 bar and higher, dependent upon temperature extremes, these high pressure pumps are exceptionally versatile yet safe and secure. Built to API 685 specification, the separate mounted design is available in eleven hydraulic sizes and two basic frame sizes to suit power requirements.

- A high pressure version of our highly successful GSP pump
- Handles system pressures up to 185 bar
- Higher pressures possible dependent on temperature
- Exceptionally versatile, yet safe and secure
- Modular design based on established GS components

### Options

**Build Options:** Inducers for low NPSH • External filtration • Inducers • NACE compliant materials • Vertical (OH5) derivative

**Instrumentation Options:** Power control monitor • RTD temperature sensing • Secondary housing monitoring (liquid or pressure) • VapourView®

### Specification (50Hz)

Flow Rate	290m <sup>3</sup> /h / 1275USgpm
Head	150m / 490ft
Minimum Temperature	-100°C / -150°F
Maximum Temperature	260°C / 500°F
Pressure	185bar / 2680psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 5% w/w less than 150 microns
Speed Range	1450 - 3500 RPM
Industry Standards	API 685 (API 610)
Max Motor Size	75kW / 100hp
Standard Materials	S-5, A-8, D-1, D-2
Number of Available Hydraulics	11

# Making Low Flow More Efficient – GSPLF

Specifically for low flow duties



The GSPLF combines the proven technologies of Sundyne Barske Wheel hydraulics with the HMD Kontro sealless magnetic drive, optimising reliability and efficiency to ensure trouble-free plant operation. The GSPLF meets the requirements of API 685, making it ideal for heavy duty applications in oil and gas, chemical and petrochemical installations. An additional advantage is the flexibility inherent in the GSPLF diffuser and impeller, which can easily be upgraded should the duty need to be changed without replacing the pressure casing.

- Barske Wheel hydraulics for optimum efficiency in low specific speed (Ns) applications
- Single basic frame size to suit power requirements
- Barske Wheel design reduces radial and axial bearing loads
- Removable diffuser allows for re-rating of pumps to different process conditions without costly machining
- Suction tuned inducers for low NPSHa conditions

## Options

**Build Options:** Inducers for low NPSH • High efficiency ZeroLoss containment shell • Secondary control system • Secondary containment system • NACE compliant materials



## Vertical Option:

• OH4 derivative (LMV-801 casing dimensions) available now - ask us for details

## Instrumentation Options:

- Power control monitor • RTD temperature sensing
- Secondary housing monitoring (liquid or pressure)
- VapourView®

## Specification (50Hz)

Flow Rate	4 to 30m <sup>3</sup> /h / 18 to 132USgpm
Head	150m / 490ft
Minimum Temperature	-40°C / -40°F
Maximum Temperature	260°C / 500°F
Pressure	40bar / 580psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 5% w/w less than 150 microns
Speed Range	1450 - 3500 RPM
Industry Standards	API 685 (API 610)
Max Motor Size	75kW / 100hp
Standard Materials	S-5, A-8, D-1, D-2
Number of Available Hydraulics	14

# Process Pumps – GSA/ GSI

Superior standards count



A versatile range of general service pumps designed to cover a wide duty and application base using the minimum of pump models by maximising interchangeability of components. Available within the range is the GSA (ASME standard pump) and the GSI (ISO DIN standard pump). A GSL option is available for temperatures down to -100°C / -150°F.

The GSA (ASME) and GSI (ISO) product covers a hydraulic range that is split between three frame sizes, Frames 0, I, & II. The pumps are offered with a range of synchronous magnet drives rated to match prime mover performance, hence specifications of all denominations can be catered for.

- Sealless design for total product containment.
- Ideal for hydrocarbon, toxic, aggressive, hot and valuable product.
- Conforms to ASME and ISO standards.
- Modular high efficiency wet ends.
- Designed to ensure maximum flow/head coverage across all ranges.
- Choice of various metallic materials of construction.
- One fully confined casing / containment shroud / shell joint.

Standard construction is stainless steel with silicon carbide internal bearings. Options of Alloy 20, C or B with silicon carbide/carbon bearings and PTFE gaskets are available. Various flange options are available as standard.

## Options

- Casing drains flanged or screwed • Jacketed pump casing
- Coupling housing drain • Large range of pump protection
- Secondary control systems

## Specification (50Hz)

Flow Rate	320m <sup>3</sup> /h / 1420USgpm
Head	150m / 485ft
Minimum Temperature	-40°C (-100°C on request) / -40°F (-100°F on request)
Maximum Temperature	260°C / 500°F
Pressure	18.9bar / 274psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 5% w/w less than 150 microns
Speed Range	1450 – 3500 RPM
Industry Standards	ASME / ISO
Max Motor Size	55kW / 75hp
Standard Materials	316 St St, Alloy 20, Alloy C
Number of Available Hydraulics	33

## High System Pressure – HPGS

Accuracy under high pressure



Original equipment manufacturers worldwide have discovered the benefits of the HPGS pump when checking the density of fluids passed down a high-pressure pipeline. The pump is used on these skids to take a sample of the fluid out of the main product stream. The sample is then passed through the densitometer, which analyses the fluid, and is afterwards returned to the main pipeline.

The pump's ability to withstand system pressures up to 185 bar / 2680 psi together with its sealless construction, means that the HPGS eliminates the need for expensive callouts, downtime and repairs associated with mechanical seals.

- Sealless design for total product containment.
- Ideal in petrochemical and site utilities.
- Modular/Interchangeable high efficiency wet end.
- Provide maximum flow/head coverage across all product ranges.
- High efficiency magnetic couplings.
- Various metallic materials of construction available on request.
- System pressures up to 185bar / 2680psi.
- Ideal sampling unit for densitometer applications.

The pumps are offered with a range of synchronous magnet drives rated to match prime mover performance and hence specifications of all denominations can be catered for. Maximum use has been made of components from our range of ASME & ISO pumps to ensure optimum interchangeability of parts.

Standard construction is stainless steel with silicon carbide internal bearings. Options of other materials are available on request. Various flange options are available as standard.

### Options

Large range of pump protection.

### Specification (50Hz)

Flow Rate	275m <sup>3</sup> /h / 1210USgpm
Head	145m / 470ft
Minimum Temperature	-40°C / -40°F
Maximum Temperature	260°C / 500°F
Pressure	185bar / 2680psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 5% w/w less than 150 microns
Speed Range	1450 – 3500 RPM
Industry Standards	N/A
Max Motor Size	45kW / 60hp
Standard Materials	316 St St, Duplex St St
Number of Available Hydraulics	18

## Self Priming Pumps – SPGS

Ideal for off-loading liquids especially when containment is crucial



This range is designed, primarily, for the emptying of sumps and road / rail tankers. The SPGS product covers a hydraulic range that is split between two frame sizes, Frame 0 and Frame 1.

- Self-priming capability to ensure the safe transfer of liquid.
- Increased efficiency liquid ends for lower running costs.
- Many compatible spares with other GS range pumps.
- Ease of installation and on-site maintainability.
- Non-metallic ETFE lined available for corrosive liquids.

Standard construction is stainless steel with silicon carbide internal bearings. Options of Alloy 20 or Alloy C with PTFE gaskets are available. Various flange options are available as standard.

### Options

Large range of pump protection.



### Specification (50Hz)

Flow Rate	45m <sup>3</sup> /h / 200USgpm
Head	50m / 165ft
Minimum Temperature	-40°C / -40°F
Maximum Temperature	120°C / 248°F
Pressure	10bar / 145psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 5% w/w less than 150 microns
Speed Range	1450 – 3500 RPM
Industry Standards	N/A
Max Motor Size	22kW / 30hp
Standard Materials	316 St St, Alloy 20, Alloy C
Number of Available Hydraulics	5

## General Transfer Pumps – GT

A small sealless pump that's big on value



For general transfer duties, the GT pump has been specifically designed as a compact, cost-effective and minimum maintenance pump. The GT is sized below ASME / ISO dimensions and has a number of features, which make it one of the most highly competitive pumps in its class. Thanks to its simplicity of maintenance, space-saving design and interchangeability, the GT pump proves a very popular choice.

GT pumps are of a close coupled construction and can be supplied free-standing or baseplate-mounted. Prime mover specifications of all denominations can be catered for with a range of synchronous magnet drives rated to match.

- Sealless design for total product containment
- Low capital cost
- Compact modular design
- Low running costs
- Minimal downtime
- Supplied with ASME or ISO flanges

Standard construction is stainless steel with silicon carbide internal bearings. Options of Alloy 20 or Alloy C with PTFE gaskets are available.

### Options

- Casing drains flanged or screwed
- Jacketed pump casing
- Large range of pump protection.



### Specification (50Hz)

Flow Rate	26m <sup>3</sup> /h / 115USgpm
Head	38m / 125ft
Minimum Temperature	-40°C / -40°F
Maximum Temperature	260°C / 500°F
Pressure	18.9bar / 274psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 5% w/w less than 150 microns
Speed Range	1450 – 3500 RPM
Industry Standards	N/A
Max Motor Size	7.5kW / 10hp
Standard Materials	316 St St, Alloy 20, Alloy C
Number of Available Hydraulics	3

## Heat Transfer Pumps – CS

A unique solution for hot oil systems



Isolating the pump from the heat source has always been essential in a hot oil system – until now. Thanks to its unique torque ring, the CS pump from Sundyne HMD Kontro requires no cooling fluids or heat exchangers during operation. The pump is totally self venting and the magnetic coupling is immersed in the hot oil. Not only that, but the torque ring design offers a built-in soft start for viscous liquids, and the energy created adds to the efficiency of the system.

Simple to operate and maintain, cost-effective to run and capable of operating up to 450°C without cooling – all this makes the Sundyne HMD Kontro CS pump the ideal choice.

- Ideal for heat transfer liquids.
- Sealless design – total product containment.
- No product cooling required for temperatures up to 450°C.
- One joint casing/containment shroud/shell.
- Fully confined to eliminate 'blowout' risk.
- Torque ring drive positively contributes to the efficiency of the hot oil system.
- Built-in soft start feature.
- Ideal for viscous start up.

Standard construction is carbon steel with carbon internal bearings. Options of stainless steel with graphite gaskets are available. Various flange options are available as standard. The pumps are supplied with a range of torque ring drives rated to match prime mover performance and hence all denominations can be catered for.

The Torque Ring (induced) Drive, invented by HMD Kontro, enables the pumps to operate at high temperatures without cooling. All the pumps covered by this range are particularly suited to handling high temperature mediums.

### Options

- Jacketed pump casing
- Secondary control
- Coupling housing drain
- Coupling feed filtration
- Large range of pump protection.

### Specification (50Hz)

Flow Rate	264m <sup>3</sup> /h / 1163USgpm
Head	105m / 344ft
Minimum Temperature	-80°C / -112°F
Maximum Temperature	450°C / 842°F
Pressure	20bar / 290psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 1.5% w/w less than 100 microns
Speed Range	1450 – 3500 RPM
Industry Standards	N/A
Max Motor Size	90kW / 120hp
Standard Materials	Carbon Steel, 316 St St
Number of Available Hydraulics	26



## Multi-Stage Pump – GSPX

Higher differential pressures than our single stage models



High head performance is now available in a sealless compact package via the GSPX, a multi-stage derivative of the established HMD GSP range that delivers greater efficiencies in space, cost and servicing against multiple single stage pumps in series.

The GSPX uses a between bearings design (BB5) for the second and third stage impellers, and produces higher differential pressures than our single-stage sealless models, whilst offering all the robustness and advantages expected from Sundyne HMD Kontro.

Efficiency is further increased through an optimized diffuser design and optional ZeroLoss composite containment shell which eliminates coupling losses and heating of the process liquid.

- Multiple in-line stages in an end-suction configuration for compact package and ease of installation in plant.
- BB5 Barrel Style Design: API compliant, no tie bolts
- Sealless design – total product containment
- Interchangeable components: commonality with the GSP pump range maximises convenience and reduces stock holding

Based on our proven Frame 2 Magnetic Drive, the GSPX is available with two or three stages and two diffuser based hydraulic options.

### Options

- VapourView® ‘gas-in-liquid’ detection
- RTD temperature sensing
- Power control monitor
- Secondary housing monitoring
- Inducers for low NPSH
- External filtration
- NACE compliant materials
- ZeroLoss™

### Specification (50Hz)

Flow Rate	85m <sup>3</sup> /h / 375USgpm
Head	295m / 970ft
Minimum Temperature	-40°C / -40°F
Maximum Temperature	260°C / 50°F
Pressure	40bar / 580psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 5% w/w less than 100 microns
Speed Range	1450 RPM / 2900 RPM
Industry Standards	API 685
Max Motor Size	96kW / 130hp
Standard Materials	S-5, A-8, D-1, D-2
Number of Available Hydraulics	4

## Reduce Costs with a Sealless Suspended Pump – GSPVS

Magnetic drive expertise in a suspended pump

The GSPVS vertical suspended pump provides all of the benefits of a magnetic drive sealless pump in a compact package, using fewer parts with no seal systems for reduced cost operation. Composed of modules which can be joined to reach a total assembly length up to 5m / 16ft, the GSPVS is mounted on a base available to ANSI B16.5 or to customer specific requirements.



- Vertical suspended design
- Provides a sealless upgrade solution to existing installations.
- Decreased vibration extends life expectancy
- Greased for life ball bearings eradicates lubrication
- Suction strainer and labyrinth seals avoid contamination

### Options

- **Build Options:** NACE compliant materials.
- **Instrumentation Options:** Power control monitor



### Specification (50Hz)

Flow Rate	130m <sup>3</sup> /h / 560USgpm
Head	100m / 330ft
Minimum Temperature	-30°C / -22°F
Maximum Temperature	60°C / 140°F
Pressure	18.9bar / 274psi
Viscosity	Max 200cSt
Solids Capability	Maximum of 5% w/w less than 150 microns
Speed Range	1450 - 3500 RPM
Industry Standards	API 685 (API 610)
Max Motor Size	55kW / 75hp
Standard Materials	S-5, A-8, D-1, D-2
Number of Available Hydraulics	11



## Engineered Applications

Sundyne HMD Kontro has a strong reputation of working in partnership with our clients to ensure that we provide a safe and cost effective solution to your pumping problems.

Our reputation is built on providing what you, the customer, need to ensure that your processes and applications are operating safely, efficiently and at their maximum potential.





## Cut Your Losses™ New ZeroLoss Containment Shell

### New ZeroLoss™ Containment Shell Reduces Power Losses in the Pump to Zero

Excellent energy savings can now be made thanks to the introduction of the ZeroLoss™ containment shell for larger pumps. The elimination of eddy current losses can result in up to a 20% saving in power consumption, further enhancing the benefits and green credentials of magnetic drive technology from Sundyne HMD Kontro.

The advantage increases in proportion with the magnetic coupling size and is particularly appropriate for larger pumps, making the magnetic drive option even more attractive because through life costs are reduced further. Lower power consumption not only results in reduced running costs but also potentially provides lower initial capital costs, as smaller motors can be specified.

In addition, installation costs can be reduced as lower-rated cabling may be required, and there are space-savings from the ability to use a smaller base plate for the pump and motor combination.

Please request our dedicated ZeroLoss™ Containment Shell brochure and accompanying technical paper for further details and to see how ZeroLoss™ technology can make you even more efficient.



## VapourView®

The innovative, non-intrusive VapourView® uses an ultrasonic signal to detect the presence of gas in a liquid stream from outside the confines of the pump pressure boundary. This provides vital information to the end-user on the presence of gases in the pump's internal flow regime and forewarns of adverse conditions. Early intervention by system engineers, who can undertake remedial action, will maximise the operating life of plant equipment.



## Pumps & Printers

### Why Buy Future Expense?

A sealed pump is like a PC printer! You know the scenario. You can buy a printer for your PC at a very low price, BUT the replacement ink cartridges cost a fortune!

A sealed pump is similar. The capital cost may be low but the ongoing expense of the replacement seals is very expensive. In addition, you also have to pay for:

- Labour to change the seals.
- Inventory costs of the seals.
- Maintenance of the seal support system.
- Disposal of barrier fluids.
- Increased instrumentation.
- Higher utility costs.
- And much more.



With a sealless pump there is no consumable and hence very minimal future expense.

### Why Buy a Pump That Leaks?!?

#### No Leaks – No Concerns, Sealed Pumps Will Leak.

Inherently, a pump that uses seals is designed to leak. It is the action of the pumped liquid that creates the final barrier between the seal and the pump shaft. As a result, there are also inherent problems:

- Health & safety issues.
- Environmental risks.
- Complex seal support systems.
- Need to dispose of barrier fluid.
- Ongoing purchase of new seals.

A sealless pump completely eliminates all of the above and all inherent problems.

## Challenge Us

### Tell Us Your Pump Problems

While sealless pumps make an economic proposition for many applications, they are particularly suited to harmful and hazardous liquids because the product is completely contained.

Contact us about the applications or existing pump situations that cause you problems or pose a risk to your staff or the wider environment.

With over 100,000 pumps installed, we have probably handled the product before and can provide a solution. We look forward to hearing from you.

Tel: +44 (0) 1323 452000

Email: [info@hmdkontro.com](mailto:info@hmdkontro.com)



# Pump Protection

## Monitoring & Measuring

### Peace of Mind

The sealless pump offers the ultimate solution to preventing leakages and fugitive emissions. All pumps however, can also become operationally sensitive owing to unstable process conditions. Protection is therefore recommended on all applications to alert the operator to system failure conditions, such as cavitation, low flow, dead heading, no flow, empty suction vessel and similar.

Monitoring and measuring the performance of your pump, and reacting to its needs, will prolong its life. The following systems can assist:

- **Power Control Monitoring**  
A microprocessor-based digital load monitor protects against under and overload conditions caused by dry running, low flow, cavitation or magnetic decoupling etc.
- **Temperature Detection**  
RTD (PT 100) or thermocouple sensors permanently located at the pressure containment shell, monitoring variations of the temperature inside the magnetic coupling.
- **Flow and Liquid Detection**  
Liquid or flow sensor mounted at the suction or discharge connection will prevent pump start-up should the pump not be primed and stop the pump, should the system be allowed to run dry.
- **Pressure Monitoring**  
Differential pressure switch piped across the suction and discharge connections.
- **Liquid Sensing Probe**  
This instrument is usually installed in conjunction with secondary control. It provides an early warning of containment shroud/shell failure before dangerous quantities of spillage can fill the coupling housing.
- **Secondary Control / Containment Systems**  
Devices detailed above may be fitted in order to prevent a major failure from happening in the first place. However, for some processes the added benefit of secondary control or containment is regarded as essential. Sundyne HMD Kontro is able to provide its pumps with secondary control devices to severely restrict any leakage into the immediate locality. Mechanical devices are fitted to the drive shaft assembly that



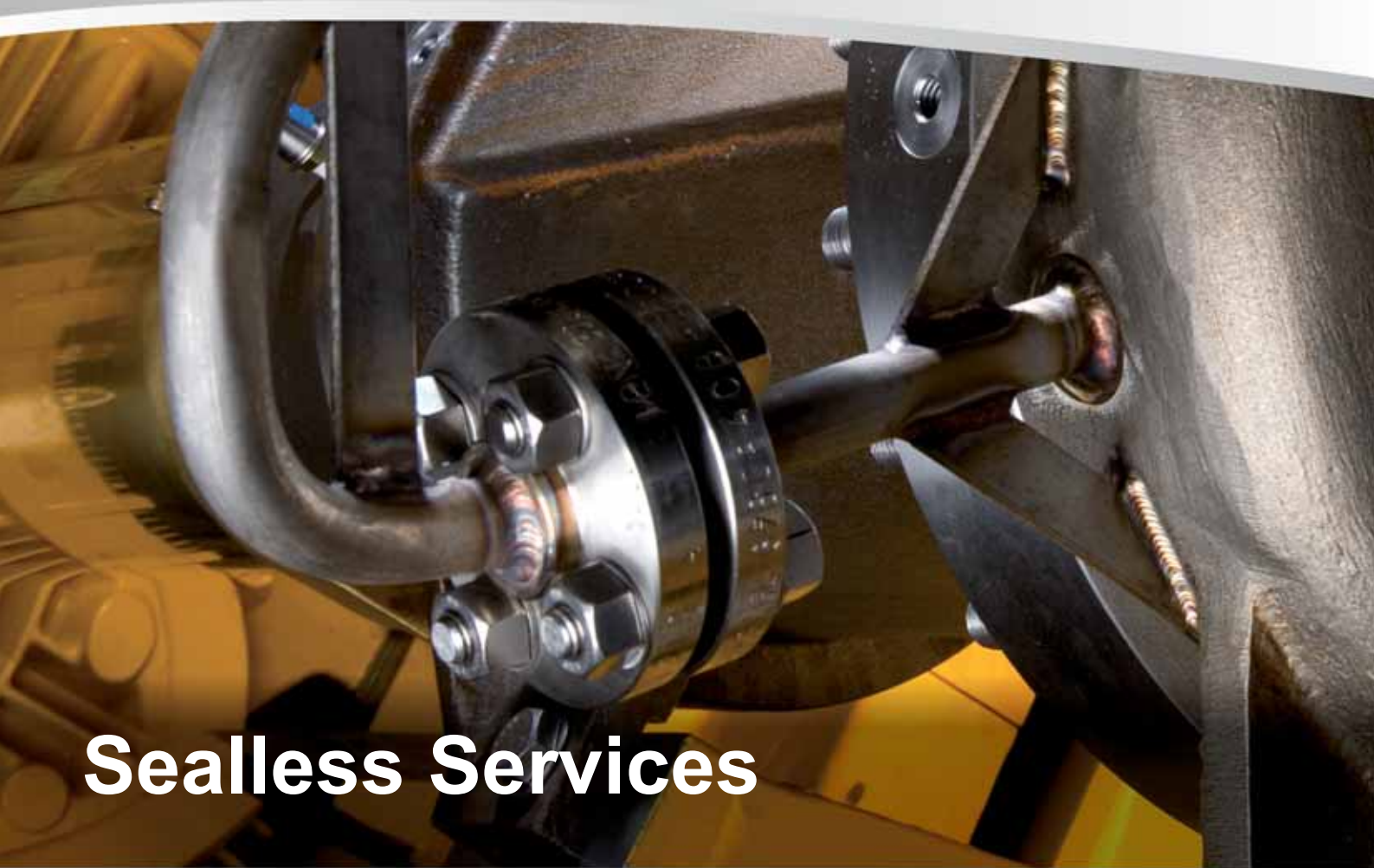
are activated in the unlikely event of containment shroud/shell failure, together with this the pump coupling housing is fitted with gaskets to eliminate any leakage across the joining faces.

- **Motor Thermistors**  
To prevent a damaging temperature build-up in the event of failure of system or pump, thermistors have been embedded in the stator. These can be linked to a control panel where, in the event of a failure, the pump can be automatically switched off or an alarm sounded.
- **Automatic Recirculation Control**  
An automatic recirculation valve associated with the pump discharge connection. This will provide a permanent bypass in the event of system flow fluctuations or closed discharge valve, but will not protect against dry running.

## VapourView®

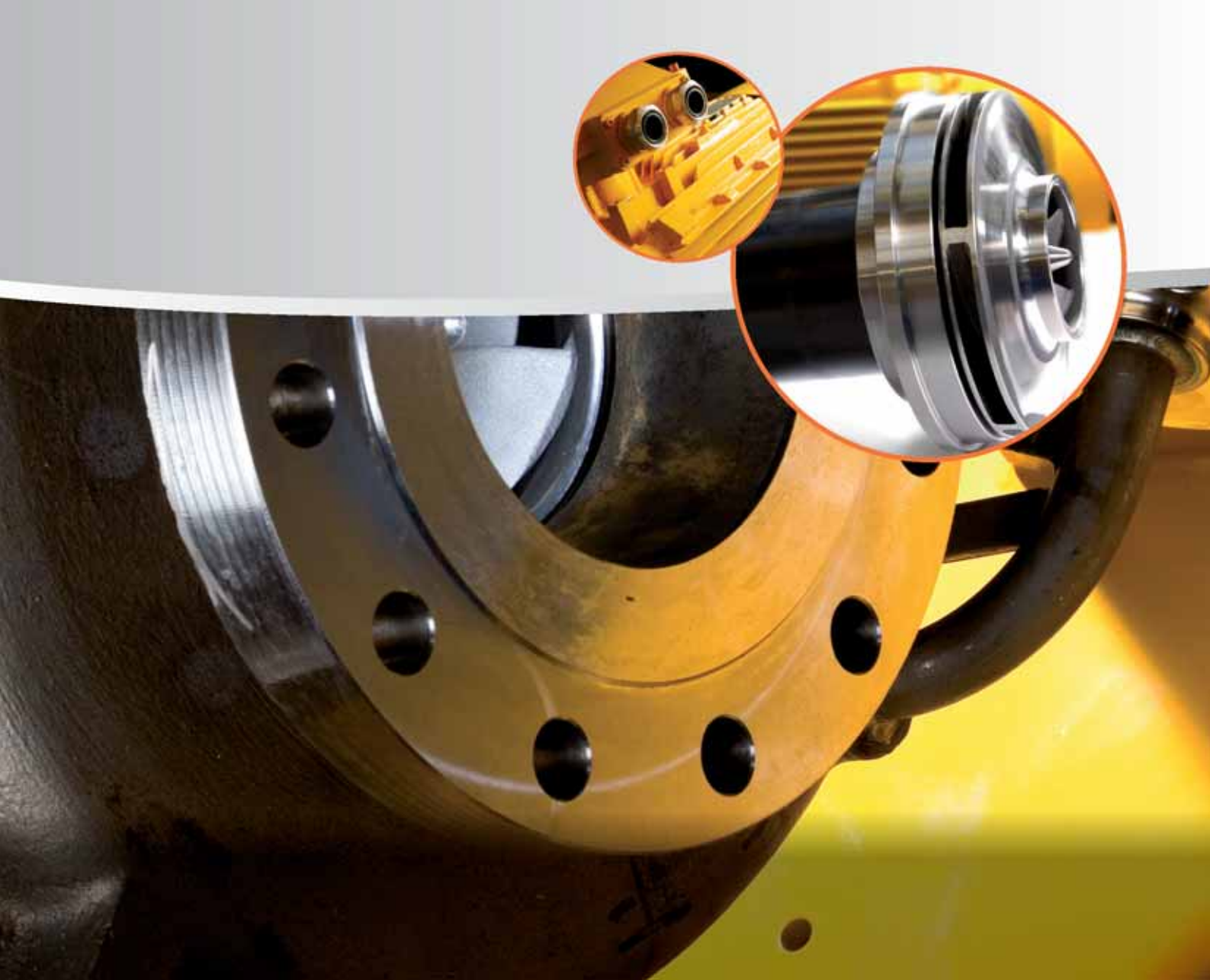
The innovative, non-intrusive VapourView® uses an ultrasonic signal to detect the presence of gas in a liquid stream from outside the confines of the pump pressure boundary. This provides vital information to the end-user on the presence of gases in the pump's internal flow regime and forewarns of adverse conditions. Early intervention by system engineers, who can undertake remedial action, will maximise the operating life of plant equipment.





# Sealless Services

- **New Pump Supply**  
Sundyne HMD Kontro Customer Service teams are fully trained to provide all the necessary help and assistance in the selection and supply of new pumps. Whatever your needs, we can assist you with all aspects of specifying the right pump for your application.
- **Pump Installation**  
Engineers are available to assist with the correct commissioning of your Sundyne HMD Kontro pump. All aspects of commissioning are undertaken to ensure that the pump operates at its peak performance and to the specification detailed in the purchase order.
- **Pump Training Plan**  
Training schools are regularly provided to assist customers' personnel with understanding all aspects of their Sundyne HMD Kontro pumps. These can be held either at the customers' facility, a Sundyne HMD Kontro regional centre or at a local base. Training can be specifically aimed at the particular needs and requirements of the client / personnel attending.
- **Spare Parts Inventory Control**  
We will be pleased to advise on suitable inventory levels of spare parts for pumps located on any particular plant or location. Sundyne HMD Kontro can also hold 'customer specific' spare parts at regional centres worldwide to provide a fast response.
- **Pump Commissioning**  
Commissioning a new plant can be a stressful time. Sundyne HMD Kontro trained personnel are available to assist the process by carrying out pre start-up checks and monitoring the starting procedure, to ensure that the pump is operating correctly and to specification.
- **Pump Maintenance**  
Planned preventative maintenance regimes contribute towards a trouble free operating life. Our service facilities are available to undertake this work and relieve you of the worry of finding suitable engineers and the time to maintain your Sundyne HMD Kontro pumps to their correct standard.



- **Pump Breakdown**

Unfortunately breakdowns do occur, for all sorts of reasons. The Sundyne HMD Kontro team of skilled engineers are on hand to get the pump back up and running in the minimum of time and inconvenience. We have fully equipped workshops strategically placed around the world to give the fastest assistance possible. Limiting your downtime and minimising inconvenience.

- **Root Cause Analysis**

Understanding what has caused a pump to malfunction can be a difficult task. At Sundyne HMD Kontro we have many years experience in establishing the root cause of pump failures. Our skilled personnel are always available to help determine the cause and provide recommendations as to correct remedial actions to prevent repeat problems.

- **Pump Replacement**

Sundyne HMD Kontro sealless pumps have a reputation for surviving the test of time. When a pump needs replacing, our trained engineers can advise on a suitable replacement to give the same performance characteristics using the latest in magnet and hydraulic technology, even if your particular model may not still be in production.

**For further details on all the HMD Kontro products please ask our channel partner or representative local to you or contact Sundyne HMD Kontro directly.**



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Sundyne HMD Kontro Product Range  
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