

[www.kytola.com](http://www.kytola.com)

**Kytola**  
INSTRUMENTS



## PRODUCT CATALOG



# Quality Products Made in Finland

We are happy to present our product catalogue with Kytola Instruments Oy's reliable and high quality flow measuring and monitoring instruments. Our legacy is based on long-term experience of designing and manufacturing tailor-made equipment for most industrial branches and for equipment and machine builders, OEM's. The key applications are found in pulp and paper, energy, chemical, mining, steel and food industries.

Our goal is to help all our customers to succeed and further improve their operational reliability by providing proven solutions to process and application challenges. We do this by designing and delivering accurate quality products that are made to endure the demanding conditions in industrial environments and perform reliably.

Our products are precision manufactured to help make your processes and systems more efficient. This catalog only shows a small portion of our capabilities. If you do not find exactly what you are looking for, please do not hesitate to contact us. We are known for being agile and solution-orientated. It is everyday business to us to customize our products to suit most needs and specifications.

Our products are designed and manufactured at our premises in Muurame, Finland. This facility also houses our corporate headquarters, research, development and testing centers. Having these departments within one location allows us to quickly react to specific customer product requirements and ever changing market needs and conditions.

We also stock select products in locations worldwide, which allows us to efficiently meet our customers' demand for short product lead-time together with superior customer service. Based on your process and system needs, our technical support specialists suggest instrumentation to help you with your specific application requirements. In other words: you present your needs and challenges and we provide a cost-efficient and tailored solution.

We look forward to serving you.

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## VARIABLE AREA FLOW METERS

Kytola flow meters are industrial quality products made in Finland. A country known for its harsh, unforgiving environment. So it's no mistake that our flow meters are sturdy, accurate and have high pressure capability.

Our flow meters come from our standard product lines and can be custom-designed to your specifications incorporating special materials of construction, connections, pressure ratings and calibration.





Machined acrylic block

### A

- Flow rate water up to 1.7 USGPM (6.5 LPM)
- Flow rate air up to 8.5 SCFM (220 NLPM)

### C

- Flow rate water up to 8.5 USGPM (30 LPM)
- Flow rate air up to 36 SCFM (1,000 NLPM)

### D

- Flow rate water up to 28 USGPM (100 LPM)
- Flow rate air up to 100 SCFM (2,500 NLPM)

Applications: liquid and gas flow measurement, water treatment, sealing water measurements



### BA

- High quality acrylic flow meter with a flow adjustment valve and rapid fittings for plastic hose.
- Flow rate air up to 16 SCFH (7.5 NLPM)

Applications: gas purging

For low gas flow rates



### E, EA

- Flow rate water up to 40 USGPH (2.5 LPM)
- Flow rate air up to 200 SCFH (90 LPM)

Applications: heat treatment ovens and automatic welding lines, purging and shield gas

Adjustable flow alarm



### L

- Flow rate water up to 50 USGPH (3 LPM)
  - Flow rate air up to 240 SCFH (110 NLPM)
- Applications: air purging, sealing water measurements

Many options



### KPM

- Excellent corrosion, heat and freeze resistance
- Flow rate water up to 50 USGPH (3 LPM)

Applications: water purging, contaminated water

Tube cleaner



Impact resistant

**H**

- Flow rate water up to 100 USGPM (375 LPM)
- Flow rate air up to 550 SCFM (14,200 NLPM)

Applications: process industry, chemical industry, water treatment plants, flow measurement in PVC piping.

KL

K & KE

KD



Quick-change flow tube

**K**

- Flow rate water up to 30 USGPM (120 LPM)
- Flow rate air up to 120 SCFM (3,000 NLPM)

Applications: sealing water measurements for vacuum pumps, lubrication oil measurements, gas flow measurements, flush water

VL

VE

VD



Quick-change flow tube

**V**

- Flow rate water up to 8.5 USGPM (32.5 LPM)
- Flow rate air up to 45 SCFM (1,100 NLPM)

Applications: sealing and cooling water measurements, lubrication oil measurements, gas flow measurements, flush water



## KLFH

- Flow rate water up to 27.5 USGPM (120 LPM)
- Flow rate air up to 120 SCFM (3,000 NLPM)

## VLFH

- Flow rate water up to 8.0 USGPM (30 LPM)
- Flow rate air up to 35 SCFM (900 NLPM)

Optional DN or ANSI flanges available in models K, V and T.



## TLFH

- Flow rate water up to 105 USGPM (400 LPM)
- Flow rate air up to 450 SCFM (12 Nm<sup>3</sup>/min)

## TTFH

- Flow rate water up to 260 USGPM (1,000 LPM)



## TL

- Flow rate water up to 105 USGPM (400 LPM)
- Flow rate air up to 450 SCFM (12 Nm<sup>3</sup>/min)







2 – 12 tubes

**ExK**

- Flow rate water up to 40 USGPH (2.5 LPM)
- Flow rate air up to 200 SCFH (90 NLPM)

Applications: water and air purging, shield gas measurements, other gas and liquid measurements



Max 7 tubes

**VEx**

- Flow rate water up to 8.0 USGPM (30 LPM)
- Flow rate air up to 27.5 SCFM (700 NLPM)
- CRN approved

Applications: sealing and cooling water, lubrication oil and gas flow measurements





**MP**

- Flow rate water up to 100 GPH (400 LPH)
- Flow rate air up to 450 SCFH (12,000 NLPH)

Max pressure  
3,400 psi

Applications: liquid and gas flow measurement of aggressive media in high pressure and temperature



Available with flanges  
up to DN 15 / ANSI 1/2"



**MP WITH VALVE**

- Flow rate water up to 100 GPH (400 LPH)
- Flow rate air up to 450 SCFH (12,000 NLPH)

Panel  
installation



## CONSTANT FLOW REGULATORS

Constant flow regulators provide constant flow of liquids or gases regardless of pressure variations within a distribution system.

The use of a constant flow regulator can save machinery wear and money depending on the type of application. Kytola Instruments constant flow regulators are membrane type differential pressure controllers, which are easy to take apart for cleaning or maintenance.



## CONSTANT FLOW REGULATORS



Stainless steel construction

### 2851

- Flow rate water up to 45 USGPH (3 LPM)
- Flow rate air up to 240 SCFH (110 NLPM)
- Usually supplied with flow meter model L

Applications: control of seal waters, control of flush waters, water purging and air purging



High pressure

### 2914

- Maximum flow water 5.3 USGPM (20 LPM)
- Nominal flow water 3.7 USGPM (14 LPM)
- Usually supplied with flow meter model VL

Applications: control of seal waters, control of flush waters, batching of liquids and water purging

3630

3631



Adjustable alarm

### 3630 / 3631

- Maximum flow rate water up to 26 USGPH (1.6 LPM)
- Maximum flow rate air up to 120 SCFH (50 NLPM)

Applications: water purging for instruments, gas purging in  $\Delta p$  measurements and hydrostatic density measurements



## SEAL WATER FLOW METERS

Cooling and lubrication is essential for any type of seal. The SLM is designed for applications on pumps and mechanical seals where an uninterrupted seal water flow is required.

It has been proven that proper adjustment of flow and pressure will result in water and energy savings. The SLM is compatible with all seal types.





## SEAL WATER FLOW METERS



Built-in tube cleaner

### SLM

- Min 0.25 – 6 USGPH (0.025–0.4 LPM)
- Max 0.25 – 3.5 USGPM (1 – 13 LPM)

Applications: single and double mechanical seals, gland packings, double mechanical seals (SLMx-2), flushing and purge water applications



Original manufacturer

### SLMx-2

- Min 1 – 15 USGPH (0.05–1 LPM)
- Max 0.1 – 2 USGPM (0.5–8.0 LPM)



## OVAL GEAR FLOW METERS AND DISPLAYS

Kytola SR oval gear flow meters show the correct flow on the whole measurement range, even if oil temperature or viscosity changes. They provide continuous lubrication even if the gears jam.

SR oval gear flow meters have:

- 5-year warranty
- By-pass valve for service on the run
- Fail safe pulse sensor
- Aluminium body with customizable block size
- Choice of gear material
- Variety of sensor types



## OVAL GEAR FLOW METERS AND DISPLAYS



### SR SINGLE

- Min 2 PPM (1 LPM)
- Max 254 PPM (120 LPM)

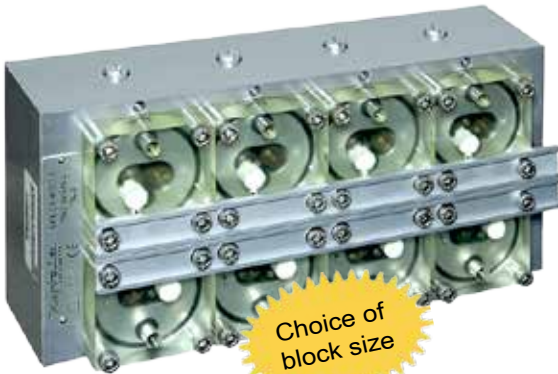
Viscosity independent



### SR-x SINGLE WITH SERVICE VALVE

- Min 0.2 PPM (0.1 LPM)
- Max 12 PPM (6 LPM)

Service valve



### SRx-x MULTI-CHANNEL

- Min 0.2 PPM (0.1 LPM)
- Max 12 PPM (6 LPM)
- Multi-block 4, 6 or 8 channels
- Panel mounting option

Choice of block size

SR and 2950 applications: lubrication oil measurement, industrial oil flow monitoring, process control



### 2950

- Min 0.2 PPM (0.1 LPM)
- Max 211 PPM (100 LPM)

Alternative sensors



### 6210

- Min 0.2 PPM (0.1 LPM)
- Max 60 PPM (30 LPM)

Applications: chemical dosing, industrial flow monitoring, process control

Corrosion resistant

## OVAL GEAR FLOW METERS AND DISPLAYS

Model OVAL D measuring station is designed to monitor oil flow rates measured by Model SR oval gear meters in oil lubrication systems.

The OVAL Min-E local display unit is designed to monitor and display flow rates and flow alarms measured by Kytola oval gear meters or other flow meters with pulse outputs.





## OVAL GEAR FLOW METERS AND DISPLAYS



### SRO

- Min 2.6 USGPM (10 LPM)
- Max 53 USGPM (200 LPM)
- Transparent cover for ease of monitoring

High flow rate



### SRP

- Flow ranges from 0.5 to 40 USGPM (from 0.25 to 150 LPM) depending on viscosity
- Max pressure up to 8700 psi (600 bar)
- Max temperature up to 266°F (130°C)
- Excellent for batching

High pressure and temperature

Applications: lubrication oil monitoring, industrial oil flow monitoring, and process control



### OVAL D

- 16, 32, 48 or 64 measuring points
- Modbus RTU communication
- 24/7/365 alarming for high flow, low flow, very low flow
- Alarm relays, inhibits and groups

USB for local setup



### OVAL MIN-E

- Single or multi-channel models
- Attached on SRx-x block or separately
- Alarm relay, mA output
- Multi-level configuration



Robust housing

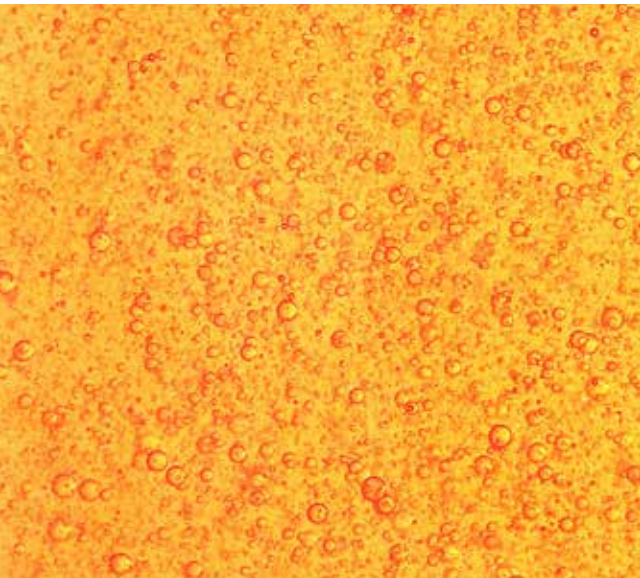
## OIL LUBRICATION FLOW MONITORING SYSTEMS

### 24/7/365 Reliability

Bearing failures are caused by lubrication issues. The issues can range from the result of poor lubrication, the wrong type of lubricant or contamination of the lubricant by water, air, dirt or particles. The right lubrication solution provides the opportunity to increase profitability by reducing costs to operate machinery, improve reliability and extend service intervals while optimizing manpower resources.

Kytola Instruments provides a full range of lubrication solution services including design and installation of automatic lubrication systems, servicing of existing systems, lubricant analysis, testing and training.

We can assist you in determining optimum lubrication. Our knowledge and team of specialists can help your decision making process to ensure that you receive the best turnkey lubrication system for your application.



# OIL LUBRICATION FLOW MONITORING SYSTEMS

## INSTALLATION PANELS



- The Oval D panels with SR Oval gear flow meters are ideal for oil flow monitoring in large processes where hundreds, or even thousands, of lubrication points are used. The panel has a sturdy stainless steel construction, especially designed to withstand the harsh conditions in process industry.
- Stainless steel
- With or without plexiglass door
- Mounting on hood wall or floor mounting stand
- Connections, shut-off valves, flushing etc., according to customer's requirements



## OVAL D MEASURING STATION

- Your perfect solution to monitor our SR oval gear flow rates in a centralized lubrication system. The Oval D is 100% reliable for bearing lubrication; the control station monitors the oil flow accurately under all conditions, including start-up.
- In excess of 100 measuring stations and thousands of measuring points in one serial line
- Can be connected to Kytola KVM Control monitoring software or to customer's PLC or DCS
- Suitable for harshest conditions



## SR OVAL GEAR METERS

- The Model SR is designed and developed for lubrication oil measurement in demanding industrial environments. These meters have a by-pass valve that enables service on the run without need for down-time. They are superior in continuously lubricating the bearing, even if gears jam.



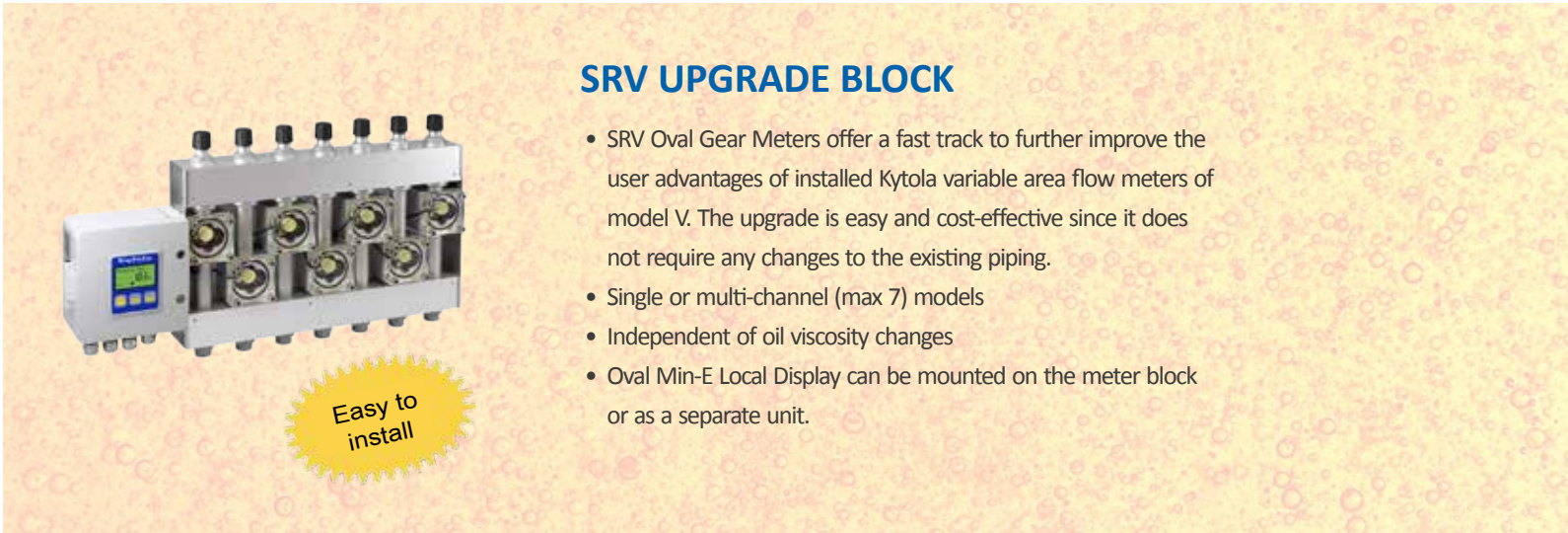


## OIL LUBRICATION FLOW MONITORING SYSTEMS



### OVAL MIN-E LOCAL DISPLAY

- For single point and small size lubrication systems
- Designed to monitor and display flow rates and flow alarms measured by our SR oval gear meters or other flow meters with pulse output. It can operate as a local display or be connected to Kytola KVM control monitoring software or a customer's PLC/DCS.
- Instant and cumulative flow measurement
- Alarm handling and disabling for each channel
- Visual color indication of flow alarm type



### SRV UPGRADE BLOCK

- SRV Oval Gear Meters offer a fast track to further improve the user advantages of installed Kytola variable area flow meters of model V. The upgrade is easy and cost-effective since it does not require any changes to the existing piping.
- Single or multi-channel (max 7) models
- Independent of oil viscosity changes
- Oval Min-E Local Display can be mounted on the meter block or as a separate unit.



### KVM CONTROL ROOM SOFTWARE

- The KVM Control monitoring program is an online application for the Kytola oil lubrication monitoring system. It provides online flow and alarm information from model SR oval gear flow meters. It is easy to install and offers reliable user-friendly operation. In excess of 100 measuring stations can be connected to the host computer via a serial communication line.
- Easy on-site start-up and commissioning
- User friendly operation
- Reliable operation and runtime control



## OIL LUBRICATION FLOW MONITORING SYSTEMS

### VExA FLOW METER



- Sturdy, industrial flow meter with protected flow tubes
- Large selection of flow ranges
- Flow adjustment valves on outlet
- Alarm-ready
- High visibility float with a variety of alarm types

Quick-change tube

### KA FLOW METER



- Sturdy, industrial flow meter with protected flow tube
- Large selection of flow ranges
- Flow adjustment valve on outlet
- 1" NPT (BSP) connections

Alarm-ready

### TLA FLOW METER



- Sturdy, industrial flow meter with protected flow tube
- Large selection of flow ranges
- 2" NPT (BSP) or DN 50 / ANSI 2" flange connections
- Variety of alarm types

High flow rate

### NK ALARM AMPLIFIER



- Designed for use with inductive proximity sensors according to DIN1 9234 (NAMUR).
- 24 V DC, 110 V AC or 220V AC
- Output: one change over switch, 230 VAC, 5 A
- For max 30 sensors

Indicator LEDs



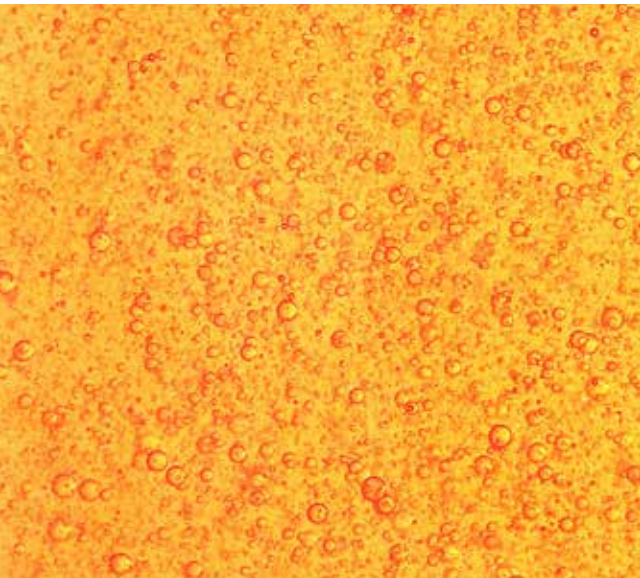
## OIL ANALYZERS

Oilan A4 is an online oil water content analyzer which instantly shows changes in the lubrication oil water content. It measures the absolute water content in oil (ppm) above the saturation point.

Oilan A4 is an excellent instrument for supporting preventative maintenance. It detects water leaks in their early stages and helps to prevent expensive failures and down time of the lubricated machinery and equipment.

Oilcol oil color analyzer is an online instrument based on visible light absorbance (transmittance) to indicate the ASTM D1500 color value of oil.

As the measurement is performed online, the response is continuous, which can be crucial in order to detect sudden changes in oil quality and to react before failure of equipment occurs.



## OIL ANALYZERS



Easy to install

### OILAN A4 WATER IN OIL ANALYZER

- Measures the absolute water content in oil (ppm)
- Measuring range up to 5,000 (20,000) ppm, accuracy  $\pm 30$  ppm
- Serial communication, 4–20 mA output
- Quick-connect couplings
- Clear display and alarm indication
- Suitable for mineral oils and some synthetic oils with oil viscosity of 10–680 cSt

Applications: paper machine oil lubrication systems, ship propulsion, oil rig propulsion, steel mills, and mining



No lab analyses

### OILCOL OIL COLOR ANALYZER

- ASTM D1500 scale from 0.5 to 8.0
- Accuracy  $\pm 0.3$  (as the ASTM scale step is 0.5)
- Serial communication, 4–20 mA output
- Clear display and alarm indication
- Suitable for liquid petroleum products: lubricating, heating, diesel fuel, mineral insulating and hydraulic oils

Applications: petrochemical industry, offshore and marine, pulp and paper, steel mills, mining, and power plants



## DIFFERENTIAL PRESSURE METERS



### DPA

- Clear and easy to read
- Acrylic body
- Red metering liquid provides good contrast
- Robust construction
- Metering liquid does not blow out or evaporate during overloads



### DPP

- Clear and easy to read
- Acrylic body
- Red metering liquid provides good contrast
- Robust construction

Applications: air conditioning strainers, blowers, dust filters, pressurized enclosures, laboratories, flow rate and velocity measurement, annealing furnaces



## CHECK VALVES



### 2680A

- Opening pressure 2.2—3.6 psi
- Connections:  
BSP 1/4" —BSP 1"  
male inlet, female outlet



### 2680B

- Opening pressure 0.15—0.25 bar
- Connections:  
BSP 1/4" —BSP 1"  
female inlet and outlet



### CV

- Opening pressure 3.6 psi
- Connections:  
inlet for 10 mm hose, outlet BSP 1/4"—1/2"  
(inlet for 3/8" hose, outlet NPT 1/4"—1/2")

#### Check valve features:

- Robust stainless steel construction
- Protects measurement equipment
- Closes if flow stops or reverses
- Can be mounted in any position
- Easily removed
- Withstands corrosive media

Applications: liquid feed lines, gas feed lines, pressurized sealing water systems

## COMPLIMENTARY PRODUCT LINES

### EUROSWITCH PRESSURE SWITCHES, LEVEL AND TEMPERATURE SENSORS

Euroswitch's main strength is its capability and creativity in developing a new product each time, made to the customer's exact specifications. Their success is their innovative approach in facing up to new challenges, optimizing production standards and increasing the competitiveness of the whole system.

Euroswitch's know-how is expressed in its range of catalogue products – level, pressure, temperature, rotation and flow sensors, pressure switches, vacuum switches, thermostats, thermal contacts and flow meters – and in the development of sensors and other components, such as differential transducers and pressure switches, for special applications. Extensive knowledge of the technology and applications of pressure switches have enabled Euroswitch to achieve a higher standard of excellence than other companies in the industry.

An ISO 9001-2008 manufacturer belonging to the MONT.EL Group located in Italy means that each new project can be analysed as a whole and by coordinating all the available resources, converted rapidly into a finished product.



Level Pressure Switches



Model 41 with cable



IMDX Electromagnetic Level Sensor



P31 Electromagnetic Level Sensor

## COMPLIMENTARY PRODUCT LINES

### KLAY INSTRUMENTS PROCESS TRANSMITTERS

Klay Instruments is a Dutch manufacturer of process instrumentation. Founded in 1978, Klay has built up a history in development, production and sales of process instrumentation. Their company is ISO 9001-2008 certified.

Klay produces a wide range of pressure and level transmitters in all “stainless steel” design. Both “analog” and “Intelligent” series are available with HART Protocol and Profibus PA. Many certificates are available, such as ATEX Ex, EHEDG food approvals, marine type approvals such as DNV, RINA and Lloyds. All industrial process connections are available more than 50.

Besides their pressure and level transmitters they also produce level switches, such as the all “stainless steel” tuning fork, level switch, “Vibra-Switch”. Also a range of pressure switches and PT-100 temperature sensors are produced. All instruments are designed and produced in their factory in the Netherlands.



Model 2000



Model 2000 Valve



Model 8000 PMC



Model 8000 W33

## Start-up Assistance

Kytola offers a comprehensive commissioning and start-up package with in-depth training to operators.

Kytola assistance ensures a smooth start up and efficient use of the Oval Flow lubrication monitoring system from the very first moment.

## Maintenance and Service Agreement

Kytola is dedicated to contribute to the maximum runnability of its customer's machinery.

By signing a Maintenance and Service agreement with Kytola, one ensures best possible operation of their Kytola products and systems.



**Kytola**  
INSTRUMENTS

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