www.kytola.com

Kytola INSTRUMENTS

PRODUCT CATALOG

Variable area flow meters
Constant flow regulators
Seal water flow meters
Oval gear flow meters
Measuring stations and displays
Oil lubrication flow monitoring systems
Flow alarm monitoring systems
Oil quality analyzers
Differential pressure meters
Check valves

Quality products from a trusted manufacturer

We are happy to present our product catalogue with Kytola Instrument 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.

Sales phone: +358 20 779 0690

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Kytola INSTRUMENTS

MANAGEMENT SYSTEM CERTIFICATION DNV ISO 9001 • ISO 14001

Kytola INSTRUMENTS

Quality products from a trusted manufacturer

VARIABLE AREA FLOW METERS

PLASTIC TUBE

A

Height
130 mm

Key Features:
- High quality acrylic flow meter
- Clear, easy to read scale
- Inductive low and/or high flow alarm (option)
- Maximum pressure 20 bar
- Maximum temperature 75°C

Applications:
- Water treatment
- Sealing water measurements
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 2–20 mL/min, max 0.5–6.5 L/min
- Air +20°C / 1.013 bar (abs)
  min 0.1–0.9 NL/min, max 20–220 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Body:
- Acrylic (PMMA)

Connections:
- G 3/8" (Adapters available for NPT)

C

Height
165 mm

Key Features:
- High quality acrylic flow meter
- Clear, easy to read scale
- Maximum pressure 20 bar
- Maximum temperature 75°C

Applications:
- Water treatment
- Sealing water measurements
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 0.5–5 L/min, max 5–30 L/min
- Air +20°C / 1.013 bar (abs)
  min 20–200 NL/min,
  max 100–1 000 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Body:
- Acrylic (PMMA)

Connections:
- G 3/4" (Adapters available for NPT)

D

Height
210 mm

Key Features:
- High quality acrylic flow meter
- Clear, easy to read scale
- Maximum pressure 20 bar
- Maximum temperature 75°C

Applications:
- Water treatment
- Sealing water measurements
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 7.5–40 L/min, max 10–100 L/min
- Air +20°C / 1.013 bar (abs)
  min 200–1 100 NL/min,
  max 500–2 500 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Body:
- Acrylic (PMMA)

Connections:
- G 1" (Adapters available for NPT)

BA

Height
~94 mm

Key Features:
- High quality acrylic flow meter
- Clear, easy to read scale
- Connections for plastic hose
- Needle valve
- Maximum pressure 10 bar
- Maximum temperature 75°C

Applications:
- Gas flows for analyzers
- Air purging for enclosures
- Gas purging for differential pressure measurements

Measuring Range:
- Air +20°C / 1.013 bar (abs)
  min 0.2–1.4 NL/min, max 0.5–7.5 NL/min

Body:
- Acrylic (PMMA)

Connections:
- Rapid fittings for outside diameter 6 mm and inner diameter 4 mm hose

Options: Please contact us for available options

VARIABLE AREA FLOW METERS

PLASTIC TUBE

E

Height
128 mm

Key Features:
- High quality acrylic flow meter
- Clear, easy to read scale
- Available in single-tube and multi-tube versions
- Flow adjustment valve
- Inductive low and/or high flow alarm (option)
- Maximum pressure 20 bar
- Maximum temperature 75°C

Applications:
- Water and air purging
- Shield gas measurements
- Other gas and liquid measurements

Measuring Range:
- Water +20°C
  min 2–16 mL/min, max 0.5–2.5 L/min
- Air +20°C / 1.013 bar (abs)
  min 0.1–0.8 NL/min, max 10–90 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Body:
- Acrylic (PMMA)

Connections:
- G 1/4" (Adapters available for NPT)

EA

Height
128 mm

Key Features:
- High quality acrylic flow meter
- Clear, easy to read scale
- Adjustable alarm
- Flow adjustment valve
- Various alarm sensor choices
- Maximum pressure 10 bar
- Maximum temperature 75°C

Applications:
- Heat treatment ovens
- Automatic welding lines

Measuring Range:
- Water +20°C
  min 2–16 mL/min, max 0.5–2.5 L/min
- Air +20°C / 1.013 bar (abs)
  min 0.1–0.8 NL/min, max 10–90 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Body:
- Acrylic (PMMA)

Connections:
- G 1/4" (Adapters available for NPT)

L

Height
132 mm

Key Features:
- Sturdy, industrial flow meter
- Clear, easy to read scale
- Flow adjustment valve
- Maximum pressure 20 bar
- Maximum temperature 80°C

Applications:
- Water and air purging
- Sealing liquid monitoring

Measuring Range:
- Water +20°C
  min 2–18 mL/min, max 0.5–3.5 L/min
- Air +20°C / 1.013 bar (abs)
  min 0.1–0.9 NL/min
  max 15–110 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Body:
- Acrylic (PMMA) or Grilamid (PA-12)

Connections:
- G or NPT 1/4"

KPM

Height
~272 mm
max

Key Features:
- Solid, compact construction
- Clog resistant flow adjustment valve
- Built-in tube cleaner
- All models are alarm-ready
- Excellent corrosion and heat resistance
- Maximum pressure 20 bar
- Maximum temperature 100° C

Applications:
- Industrial water purging
- Contaminated water

Measuring Range:
- Water +20°C
  min 0.025–0.4 L/min, max 0.05–1 L/min

Body:
- POM or PVDF

Connections:
- G/NPT 1/4" or 3/8" or 10 mm compression fitting

Options: Please contact us for available options

VARIABLE AREA FLOW METERS — PLASTIC TUBE

HV

Height
210 mm
max

Key Features:
- Sturdy, industrial flow meter
- Clear, easy to read scale
- Good corrosion resistance
- Threaded or socket type connections
- Inductive low and/or high flow alarm (option)
- Maximum pressure 10 bar @ 20°C
- Maximum temperature 50°C @ 2 bar

Applications:
- Process and chemical industries
- Water treatment plants
- Agricultural applications
- Flow measurement in PVC piping
- Reverse osmosis

Measuring Range:
- Water +20°C
  min 0.02–0.11 m³/h, max 0.3–1.8 m³/h
- Air +20°C / 1.013 bar (abs)
  min 0.015–0.07 Nm³/min,
  max 0.2–0.9 Nm³/min

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G/NPT 1/2" or 20 mm socket type connection

HK

Height
282 mm
max

Key Features:
- Sturdy, industrial flow meter
- Clear, easy to read scale
- Good corrosion resistance
- Threaded or socket type connections
- Inductive low and/or high flow alarm (option)
- Maximum pressure 10 bar @ 20°C
- Maximum temperature 50°C @ 2 bar

Applications:
- Process and chemical industries
- Water treatment plants
- Agricultural applications
- Flow measurement in PVC piping
- Reverse osmosis

Measuring Range:
- Water +20°C
  min 0.3–1.2 m³/h, max 1– 4.75 m³/h
- Air +20°C / 1.013 bar (abs)
  min 0.14–0.6 Nm³/min,
  max 0.3–2.5 Nm³/min

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G/NPT 3/4" or 25 mm socket type connection

HT

Height
395 mm
max

Key Features:
- Sturdy, industrial flow meter
- Clear, easy to read scale
- Good corrosion resistance
- Threaded or socket type connections
- Inductive low and/or high flow alarm (option)
- Maximum pressure 10 bar @ 20°C
- Maximum temperature 50°C @ 2 bar

Applications:
- Process and chemical industries
- Water treatment plants
- Agricultural applications
- Flow measurement in PVC piping
- Reverse osmosis

Measuring Range:
- Water +20°C
  min 0.5–3 m³/h, max 4–22 m³/h
- Air +20°C / 1.013 bar (abs)
  min 0.35–2 Nm³/min,
  max 2–14 Nm³/min

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G/NPT 1¼" or 50 mm socket type connection

KL

Height
310 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- No flow adjustment valve
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Water treatment
- Oil measurements
- Sealing water measurements of vacuum pumps

Measuring Range:
- Water +20°C
  min 7.5–40 L/min, max 10–120 L/min
- Air +20°C / 1.013 bar (abs)
  min 200–1 200 NL/min,
  max 400–3 000 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1”

K

Height
310 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- Flow adjustment valve on outlet
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Water treatment
- Oil measurements
- Sealing water measurements of vacuum pumps

Measuring Range:
- Water +20°C
  min 7.5–40 L/min, max 10–120 L/min
- Air +20°C / 1.013 bar (abs)
  min 200–1 200 NL/min,
  max 400–2 800 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1”

KD

Height
310 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- Flow adjustment valve on inlet
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Measuring and monitoring gas flows

Measuring Range:
- Air +20°C / 1.013 bar (abs)
  min 200–1 200 NL/min,
  max 400–3 000 NL/min

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1”

KLFH

Height
406 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Water treatment
- Oil measurements
- Sealing water measurements of vacuum pumps

Measuring Range:
- Water +20°C
  min 7.5–40 L/min, max 10–120 L/min
- Air +20°C / 1.013 bar (abs)
  min 200–1 200 NL/min,
  max 400–3 000 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- DN25 or DN40 flanges
- ANSI 1” or 1½” flanges

Options: Please contact us for available options

VARIABLE AREA FLOW METERS

PLASTIC TUBE

TL

Height
373 mm

Key Features:
- Sturdy, industrial flow meter
- Clear, easy to read scale
- Protected flow tube
- Inductive low and/or high flow alarm (option)
- Maximum pressure 20 bar
- Maximum temperature 80°C (120°C)

Applications:
- Flush water applications
- Lubrication oil measurement for gear boxes
- Sealing water measurement for vacuum pumps

Measuring Range:
- Water +20°C
  min 7.5–55 L/min, max 50–400 L/min
- Air +20°C / 1.013 bar (abs)
  min 0.3–1.9 Nm³/min, max 1–12 Nm³/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 2”

TLFH

Height
317 mm

Key Features:
- Sturdy, industrial flow meter
- Clear, easy to read scale
- Protected flow tube
- Inductive low and/or high flow alarm (option)
- Maximum pressure 16 bar
- Maximum temperature 80°C (120°C)

Applications:
- Water treatment
- Flush water applications
- Sealing water measurement for vacuum pumps

Measuring Range:
- Water +20°C
  min 7.5–55 L/min, max 50–400 L/min
- Air +20°C / 1.013 bar (abs)
  min 0.3–2 Nm³/min, max 1–12 Nm³/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- DN 50 or ANSI 2” flanges

Options: Please contact us for available options

VARIABLE AREA FLOW METERS

PLASTIC TUBE

VL

Height
202 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- No flow adjustment valve
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Sealing and cooling water measurements
- Flush water applications
- Lubrication oil measurements
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 0.4–2 L/min, max 5–30 L/min
- Air +20°C / 1.013 bar (abs)
  min 15–75 NL/min, max 150–900 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1/2”

VE

Height
~246 mm
max

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- Flow adjustment valve on outlet
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Sealing and cooling water measurements
- Flush water applications
- Lubrication oil measurements
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 0.4–2 L/min, max 5–30 L/min
- Air +20°C / 1.013 bar (abs)
  min 15–70 NL/min, max 150–700 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1/2”

VD

Height
218 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- Flow adjustment valve on inlet
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Sealing and cooling water measurements
- Flush water applications
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 0.4–2 L/min, max 7.5 – 32.5 L/min
- Air +20°C / 1.013 bar (abs)
  min 15–75 NL/min, max 100–1100 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1/2”

VLFH

Height
320 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Sealing and cooling water measurements
- Flush water applications
- Lubrication oil measurements
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 0.4–2 L/min, max 5–30 L/min
- Air +20°C / 1.013 bar (abs)
  min 15–75 NL/min, max 150–900 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

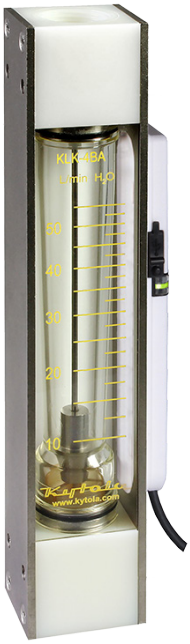
Connections:
- DN15 or DN25 flanges
- ANSI 1/2” or 1” flanges

Options: Please contact us for available options

VARIABLE AREA FLOW METERS

K SMART WITH MA OUTPUT

KLxS



Height
310 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- No flow adjustment valve
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

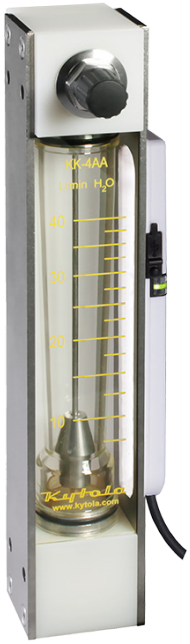
Applications:
- Water treatment
- Oil measurements
- Sealing water measurements of vacuum pumps

Measuring Range:
- Water +20°C
  min 7.5–40 L/min, max 10–120 L/min
- Air +20°C / 1.013 bar (abs)
  min 200–1 200 NL/min,
  max 400–3 000 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1”

KxS



Height
310 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- Flow adjustment valve on outlet
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Water treatment
- Oil measurements
- Sealing water measurements of vacuum pumps

Measuring Range:
- Water +20°C
  min 7.5–40 L/min, max 10–120 L/min
- Air +20°C / 1.013 bar (abs)
  min 200–1 200 NL/min,
  max 400–2 800 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1”

KDxS

Height
310 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- Flow adjustment valve on inlet
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Measuring and monitoring gas flows

Measuring Range:
- Air +20°C / 1.013 bar (abs)
  min 200–1 200 NL/min,
  max 400–3 000 NL/min

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1”

mA transmitter VA Smart

Local alarm LEDs

Green (blinks):
within set limits

Yellow:
high flow alarm

Red:
low flow alarm

Options: Please contact us for available options

VLxS

Height
202 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- No flow adjustment valve
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Sealing and cooling water measurements
- Flush water applications
- Lubrication oil measurements
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 2–9 L/min, max 5–30 L/min
- Air +20°C / 1.013 bar (abs)
  min 80–300 NL/min, max 150–900 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1/2”

VExS

Height
~246 mm
max

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- Flow adjustment valve on outlet
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Sealing and cooling water measurements
- Flush water applications
- Lubrication oil measurements
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 2–9 L/min, max 5–30 L/min
- Air +20°C / 1.013 bar (abs)
  min 60–260 NL/min, max 150–700 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1/2”

VDxS

Height
218 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Large selection of materials
- Flow adjustment valve on inlet
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Sealing and cooling water measurements
- Flush water applications
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 2–9 L/min, max 7.5 – 32.5 L/min
- Air +20°C / 1.013 bar (abs)
  min 80–280 NL/min, max 100–1100 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1/2”

mA transmitter VA Smart

Local alarm LEDs

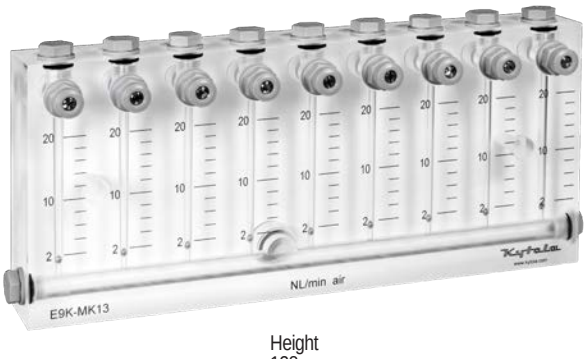
Green (blinks):
within set limits

Yellow:
high flow alarm

Red:
low flow alarm

Options: Please contact us for available options

ExK



Height
128 mm

Key Features:
- High quality acrylic flow meter
- Clear, easy to read scale
- Available in single tube and multi-tube versions (max 12 tubes)
- Flow adjustment valve
- Maximum pressure 20 bar
- Maximum temperature 75°C

Applications:
- Water and air purging
- Shield gas measurements
- Other gas and liquid measurements

Measuring Range:
- Water +20°C
  min 2–16 mL/min, max 0.5–2.5 L/min
- Air +20°C / 1.013 bar (abs)
  min 0.1–0.8 NL/min, max 10–90 NL/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Body:
- Acrylic (PMMA)

Connections:
- G 1/2” common inlet, G 1/4” separate outlets (adapters available for NPT)

VEx

Height
~263 mm
max

Key Features:
- Sturdy, industrial flow meter with protected flow tubes
- Available in single tube and multi-tube versions (max 7 tubes)
- Clear, easy to read scale
- Flow adjustment valves on outlet
- Inductive low flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Sealing and cooling water measurements
- Flush water applications
- Lubrication oil measurements
- Gas flow measurements

Measuring Range:
- Water +20°C
  min 0.4–2 L/min, max 5–30 L/min
- Air +20°C / 1.013 bar (abs)
  min 15–70 NL/min, max 150–700 NL/min
- Oil 220 cSt: 100% flow min 0.14 L/min, max 7 L/min
- Oil 150 cSt: 100% flow min 0.2 L/min, max 10 L/min
- Other water and air ranges, and scales for alternative liquids and gases also available

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G/NPT 3/4” common inlet, G/NPT 1/2” separate outlets

Options: Please contact us for available options

MP

MP-O

Height
140 mm

MP-W

Height
145 mm

Key Features:
- Stainless steel wetted parts
- High pressure and temperature resistance
- Withstands aggressive media
- Flow adjustment valve (Model MP-W)
- Panel mounting (Model MP-W)
- Maximum pressure
  100 bar (MP-W), 235 bar (MP-O)
- Maximum temperature 150°C without alarms

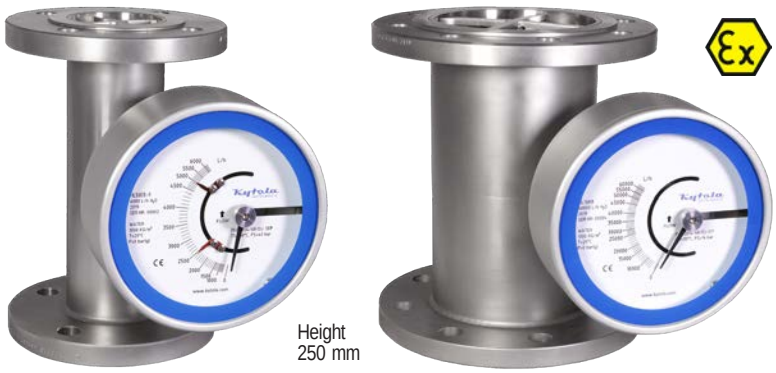
Applications
- Chemical and petrochemical industries
- Power plants
- General flow measurements

Measuring Range:
- Water +20°C
  min 1–10 L/h, max 40–400 L/h
- Air +20°C / 1.013 bar (abs)
  min 60–320 NL/h, max 1 000–12 000 NL/h

Connections:
- G/NPT/Rc 1/4" or 1/2" depending on range

ML

Height
300 mm



Height
250 mm

Key Features:
- Stainless steel wetted parts
- High pressure and temperature resistance
- Pressure class
  - EN flanges PN40 or PN16, depending on range
  - ANSI flanges class 150 or class 300, depending on range
  - Female threads 40 bar
- Maximum temperature 110°C without alarms

Applications
- Chemical and petrochemical industries
- Power plants
- General flow measurements

Measuring Range:
- Water +20°C
  min 100 – 1 000 L/h, max 6 000 – 60 000 L/h

Connections:
Depending on range:
- DN25...DN100 flanges
- ANSI/ASME 1"...4" flanges
- G/NPT threads 1"...2"

Options: Please contact us for available options

CONSTANT FLOW REGULATORS

2851

Height
132 mm

Key Features:
- Provides constant flow of liquids or gases regardless of pressure variations
- High performance, reliable operation
- Clear, easy to read scale
- Stainless steel construction
- Can be used with Model L flow meter

Applications:
- Control of sealwater or flushwater
- Water or air purging

Flow Range:
- Water +20°C
  min 15–80 mL/min, max 0.5–3.0 L/min
- Air +20°C / 1.013 bar (abs)
  min 0.5–2.5 NL/min,
  max 15–110 NL/min
- Air scale has always to be calibrated according to the actual inlet pressure and temperature.

Maximum differential pressure
- 20 bar

Body:
- AISI 316

Connections:
- G or NPT 1/4”

2914

Height
~300 mm

Key Features:
- Provides constant flow of liquids regardless of pressure variations
- Needle valve for flow adjustment
- High performance, reliable operation
- Clear, easy to read scale
- Stainless steel construction
- Can be used with Model VL flow meter

Applications:
- Control of sealwater and flushwater
- Water purging
- Batching of liquids

Flow Range:
- Water +20°C
  max 20 L/min

Maximum differential pressure
- 12 bar (20 bar on request)

Body:
- AISI 316

Connections:
- G or NPT 1/2”

3630

Height
132 mm

Key Features:
- Provides constant flow of liquids or gases regardless of pressure variations
- High performance, reliable operation
- Clear, easy to read scale
- Aluminium or stainless steel construction
- Supplied with Model L flow meter

Applications:
- Water or air purging
- Gas purging in Δp measurements
- Hydrostatic density measurements

Flow Range:
- Water max 1.5 L/min
- Air max 60 NL/min at 6 barg
- Air scale has always to be calibrated according to the actual inlet pressure and temperature.

Maximum differential pressure
- 10 bar

Body:
- AISI 316 or aluminium

Connections:
- G or NPT 1/4”

3631

Height
~160 mm

Key Features:
- Provides constant flow of liquids or gases regardless of pressure variations
- Adjustable alarm
- High performance, reliable operation
- Clear, easy to read scale
- Aluminium or stainless steel construction
- Supplied with Model L flow meter

Applications:
- Water purging for instruments
- Air purging in level measurements
- Gas purging in Δp measurements

Flow Range:
- Water max 1.5 L/min
- Air max 60 NL/min at 6 barg
- Air scale has always to be calibrated according to the actual medium, inlet pressure and temperature.

Maximum differential pressure
- 10 bar

Body:
- AISI 316 or aluminium

Connections:
- G or NPT 1/4”

Options: Please contact us for available options

SEAL WATER FLOW METERS

SLM

Height
~272 mm
max

Key Features:
- Solid, compact construction
- Clog resistant flow adjustment valve
- Built-in tube cleaner
- All models are alarm-ready
- Compatibility with all seal types
- Corrosion resistant materials

Applications:
- Single and double mechanical seals
- Gland packings
- Quench seals
- Flushing and purge water applications

Measuring Range:
- Water +20°C
  min 0.025–0.4 L/min, max 1–13 L/min
- Other water ranges also available

Body:
- POM or PVDF

Connections:
- 10 mm hose barb connectors, standard
- Other type of connectors also available

SLMx-2

Height
~272 mm
max

Key Features:
- Solid, compact construction
- Clog resistant flow adjustment valve
- Built-in tube cleaner
- All models are alarm-ready
- Corrosion resistant materials

Applications:
- Double mechanical seals

Measuring Range:
- Water +20°C
  min 0.05–1.0 L/min, max 0.5–8.0 L/min
- Other water ranges also available

Body:
- POM or PVDF

Connections:
- 10 mm hose barb connectors, standard
- Other type of connectors also available

Options: Please contact us for available options

OVAL GEAR FLOW METERS FOR OIL

SR1 SINGLE
WITH FLOW ADJUSTMENT VALVE

SR1-1

Height
73 mm

SR1-15

Height
160 mm

Key Features:
- Large viscosity range 30–1 000 cSt
- Independent of oil viscosity changes
- Pulse output
- Sturdy construction
- Flow adjustment valve
- Service valve (SR1-1...SR1-6)
- Maximum pressure 10 bar (20 bar on request)
- Maximum temperature 80°C

Applications:
- Lubrication oil monitoring
- Industrial oil flow monitoring
- Process control

Measuring Range:
- Oil
  SR1-1...SR1-6:
  min 0.1–1.5 L/min, max 0.5–6 L/min
  SR1-15...SR1-120:
  min 1–15 L/min, max 10–120 L/min

Body:
- Aluminium

Connections:
- SR1-1...SR1-6: G or NPT ½"
  SR1-15...SR1-120: G/NPT 1" or 1 ½" depending on range

SRx MULTI-CHANNEL
WITH FLOW ADJUSTMENT VALVE

Height
125 mm

Key Features:
- 4, 6 or 8 channels
- Large viscosity range 30–1 000 cSt
- Independent of oil viscosity changes
- Pulse outputs
- Sturdy construction
- Flow adjustment valves
- Service valves
- Maximum pressure 10 bar (20 bar on request)
- Maximum temperature 80°C

Applications:
- Lubrication oil monitoring
- Industrial oil flow monitoring
- Process control

Measuring Range:
- Oil min 0.1–1.5 L/min, max 0.5–6 L/min

Body:
- Aluminium

Connections:
- G or NPT 1/2" outlets

2950
WITHOUT FLOW ADJUSTMENT VALVE

Height
109 mm
max

Key Features:
- Large viscosity range 30–1 000 cSt
- Independent of oil viscosity changes
- Pulse output
- No flow adjustment valve
- Maximum pressure 10 bar (20 bar on request)
- Maximum temperature 80°C

Applications:
- Lubrication oil monitoring
- Industrial oil flow monitoring
- Process control

Measuring Range:
- Oil min 0.1–1.5 L/min, max 5–70 L/min

Body:
- Aluminium

Connections:
- G or NPT 1/4", 3/4", 1" depending on range

SRO
WITHOUT FLOW ADJUSTMENT VALVE

Ø135 mm

Key Features:
- Large viscosity range 30–1 000 cSt
- Independent of viscosity and temperature changes
- Pulse output
- Accuracy ±0.5% of reading
- Maximum pressure 10 bar (20 bar on request)
- Maximum temperature 80°C

Applications:
- Lubrication oil flow monitoring
- Industrial flow monitoring
- Process control

Measuring Range:
- Oil min 10–120 L/min max 20–200 L/min

Body:
- Aluminium

Connections:
- G or NPT 1½"

Options:
- Alternative sensors

Options: Please contact us for available options

OVAL GEAR FLOW METERS FOR CHEMICALS

6210P

Ø108 mm
max

Key Features:
- Large viscosity range 30–1 000 cSt
- Independent of viscosity changes
- Chemical resistant materials
- Pulse output
- No flow adjustment valve
- Maximum pressure 10 bar
- Maximum temperature 40°C

Applications:
- Polymer injection
- Flocculent flow control
- Viscous chemical dosage

Measuring Range:
- Min 0.1–1.5 L/min, max 2–30 L/min

Body:
- Polypropylene

Connections:
- G 1/4" or 3/4" depending on range (Adapters available for NPT)

Options: Please contact us for available options

MEASURING STATIONS AND DISPLAYS

KLD SMART TOUCHSCREEN DISPLAY

SINGLE OR 8-CHANNEL MODELS

Height
120 mm

Height
140 mm

Key Features:
- Touchscreen display
- Flow measurement
- Totalizer counter and batching
- Multiple flow units
- Multiple flow alarm levels
- Visible alarm indication
- Pulse or mA input
- mA output
- Alarm relay

Applications:
- Lubrication oil flow monitoring
- Industrial flow monitoring
- Process control
- Batching

Technical Specifications:
- Single or 8-channel models
- Kytola coil, NAMUR, NPN or PNP sensor inputs
- Modbus RTU (RS-485), Ethernet (Modbus TCP)

Enclosure:
- Steel, IP65

Supply Voltage:
- 24 VDC/0.4 A

OVAL D2 MEASURING STATION

FOR 1 – 64 CHANNELS

Height
250 mm

Key Features:
- Painted or stainless steel enclosure
- Clear display
- Communication with upper level systems
- Alarm relays: high flow, low flow, very low flow and one programmable
- Alarm inhibits
- Alarm groups

Applications:
- Lubrication oil monitoring
- Industrial oil flow monitoring
- Process control

Technical Specifications:
- Maximum 64 measuring channels
- Modbus RTU (RS-485)
- USB port for local configuration
- Kytola coil, NAMUR sensor inputs

Enclosure:
- Painted or stainless steel, IP65

Supply Voltage:
- 24 VDC/0.6 A or
  110–240 VAC / 50–60 Hz

Options: Please contact us for available options

OIL LUBRICATION FLOW MONITORING SYSTEMS

INSTALLATION PANELS

OVAL D2 with painted steel enclosure

OVAL D2 with stainless steel enclosure

Key Features:
- Sturdy stainless steel construction
- Withstands the harsh conditions in process industry
- With or without plexiglass door
- Mounting on hood wall or floor mounting stand
- OVAL D2 station and SR meters assembled
- Connections, shut-off valves, flushing etc., according to customer's requirements

Applications:
- Pulp and paper machines
- Tissue machines
- Steel mills

SR OVAL GEAR METERS

Key Features:
- Single or multi-channel (4, 6, 8) model
- Large viscosity range 30—1 000 cSt
- Independent of oil viscosity changes
- Pulse outputs
- Sturdy construction
- Flow adjustment valves
- Service valves on selected models
- Maximum pressure 10 bar (20 bar on request)
- Maximum temperature 80°C

Applications:
- Lubrication oil flow monitoring
- Industrial oil flow monitoring
- Process control

Measuring Range:
- Min 0.1–1.5 L/min, max 10–120 L/min

OVAL D2 MEASURING STATION

Height 250 mm

Key Features:
- Painted or stainless steel enclosure
- Communication with upper level systems
- Alarm relays: high flow, low flow, very low flow and one programmable
- Alarm inhibits and groups

Applications:
- Lubrication oil flow monitoring
- Industrial oil flow monitoring
- Process control

Technical Specifications:
- Up to 64 measuring channels
- Modbus RTU (RS-485) communication
- USB port for local configuration
- Kytola coil or NAMUR sensor inputs

KLD SMART TOUCHSCREEN DISPLAY

Height 120 mm

Height 140 mm

Key Features:
- Touchscreen display
- Flow measurement
- Totalizer counter and batching
- Multiple flow units
- Multiple flow alarm levels
- Visible alarm indication
- Pulse or mA input
- mA output
- Alarm relay

Applications:
- Lubrication oil flow monitoring
- Industrial flow monitoring
- Process control
- Batching

Technical Specifications:
- Single or 8-channel models
- Kytola coil, NAMUR, NPN or PNP sensor inputs
- Modbus RTU (RS-485), Ethernet (Modbus TCP)

KVM SUITE CONTROL ROOM SOFTWARE

Key Features:
- Easy on-site start-up and commissioning
- User friendly operation
- Reliable operation and runtime control

Applications:
- Lubrication oil monitoring
- Industrial oil flow monitoring
- Process control

Options: Please contact us for available options

FLOW METER VExA

Height
~255 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tubes
- Clear, easy to read scale
- Flow adjustment valves on outlet
- Inductive low flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C

Applications:
- Lubrication oil flow monitoring in pulp & paper, steel and other industries

Measuring Range:
- Oil 220 cSt
  100% flow min 0.14 L/min, max 7 L/min
- Oil 150 cSt
  100% flow min 0.2 L/min, max 10 L/min

Flow Tubes:
- Grilamid (PA-12)

Connections:
- Single tube: G or NPT 1/2”
- Multi-tube: G or NPT 3/4” common inlet, G or NPT 1/2” separate outlets

FLOW METER KA

Height
310 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Flow adjustment valve on outlet
- Inductive low and/or high flow alarm (option)
- Maximum pressure 30 bar
- Maximum temperature 80°C (120°C)

Applications:
- Lubrication oil flow monitoring in pulp & paper, steel and other industries

Measuring Range:
- Oil 220 cSt
  100% flow min 9 L/min, max 24 L/min
- Oil 150 cSt
  100% flow min 12 L/min, max 33 L/min

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 1”

FLOW METER TLA

Height
373 mm

Key Features:
- Sturdy, industrial flow meter with protected flow tube
- Clear, easy to read scale
- Inductive low and/or high flow alarm (option)
- Maximum pressure 20 bar
- Maximum temperature 80°C (120°C)

Applications:
- Lubrication oil flow monitoring in pulp & paper, steel and other industries

Measuring Range:
- Oil 220 cSt
  100% flow min 27 L/min, max 130 L/min
- Oil 150 cSt
  100% flow min 32 L/min, max 170 L/min

Flow Tube:
- Grilamid (PA-12) or PES

Connections:
- G or NPT 2” (DN 50 or ANSI 2” flanges)

Options: Please contact us for available options

FLOW ALARM MONITORING SYSTEMS

ALARM AMPLIFIER NK – GROUP ALARM

Height
180 mm
max

Key Features:
- Connections for 1–30 NAMUR sensors, dependent upon model
- Function indicator LEDs in front panel
- Potential free change-over switch
- Common group alarm, if one or more sensor alarms

Applications:
- Indication of low flow alarm in oil lubrication systems
- Indication of low or high flow alarm in sealing and cooling water systems
- Gas flow alarm
- Typically used with models V, K and TL

Supply:
- 24 VDC, 115 VAC or 230 VAC, dependent upon model

Output:
- One change-over switch, 230 VAC, 5 A

Inputs:
- Inductive proximity sensors according to NAMUR norm (EN 60947)

SUBSTATION ALARM I/O – INDIVIDUAL ALARM

Height
200 mm

Key Features:
- Painted steel enclosure
- Low flow alarm indication from Kytola variable area flow meters
- Communication with upper level systems

Applications:
- Lubrication oil flow monitoring
- Industrial oil flow monitoring
- Process control
- For use with models VExA, KA and TLA

Technical Specifications:
- Connections for 1 – 48 NAMUR sensors
- Modbus RTU protocol
- Serial interface RS485

Enclosure:
- Painted steel, IP65

Supply:
- 24 VDC ±25%

Inputs:
- Inductive proximity sensors according to NAMUR norm (EN 60947)

OIL QUALITY ANALYZERS

OILCOL OIL COLOR ANALYZER

Height
90 mm

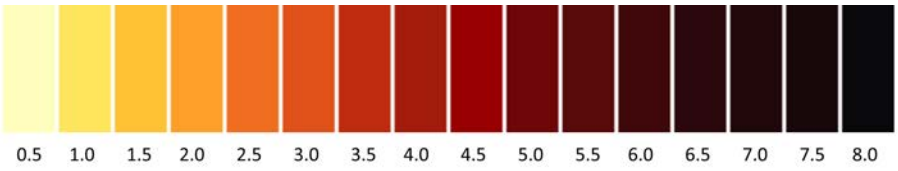
Key Features:
- Online oil color analyzer
- ASTM D1500 color scale
- Online measurement with a response time of 4 s
- Sturdy construction
- Serial communication (Modbus)
- 4 – 20 mA output
- Monitoring with Kytola software

Applications:
Wide variety of liquid petroleum products:
- Lubricating oils
- Heating oils
- Diesel fuel oils
- Mineral insulating oils
- Hydraulic oils

Technical Specifications:
- Measuring range ASTM D1500 scale from 0.5 to 8.0
- Accuracy ±0.3 (as the ASTM scale step is 0.5)
- Oil viscosity 0–500 cSt
- Oil and ambient temperature –20°C...+60°C (–20°C...+70°C with air cooling option)
- Maximum pressure 20 bar

Enclosure:
- Aluminium

Connection:
- 10 mm or 3/8” compression fitting



ASTM D1500 color scale

DIFFERENTIAL PRESSURE METERS

DPA

Height
137 mm

Key Features:
- Clear, easy to read scale
- Red metering liquid provides good contrast
- Robust construction
- Metering liquid does not blow out during momentary overloads
- Due to the construction metering liquid does not evaporate during overloads

Applications:
- Air conditioning strainers
- Blowers
- Dust filters
- Pressurized enclosures
- Draught measurement in furnaces
- Laboratories

Measuring Range:
- Min 0–100 Pa, max 0–500 Pa

Body:
- Acrylic (PMMA)

Connection:
- For 4–6 mm inside diameter hose

DPP

Height
317–447 mm

Key Features:
- Clear, easy to read scale
- 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

Measuring Range:
- Min 0–1 kPa, max 0–2 kPa

Body:
- Acrylic (PMMA)

Connection:
- For 4–6 mm inside diameter hose

CHECK VALVES

2680A / 2680B

2680A

Height
46–70 mm

2680B

Height
55–75mm

Key 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

Opening Pressure:
- 0.15—0.25 bar

Body:
- AISI 316

Connection:
- G 1/4”—G 1”
  2680A: male inlet, female outlet
  2680B: female inlet and outlet

CV

Height
59–81 mm

Key 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 liquid systems

Opening Pressure:
- 0.25 bar

Body:
- AISI 316

Connection:
- Inlet for 10 mm hose, outlet G 1/4”–1/2”
  (Inlet for 3/8’’ hose, outlet NPT 1/4”–1/2”)

Options: Please contact us for available options

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.

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