



The Advantage of Experience

As a certified manufacturer and provider of solutions for industrial flow metering and level measurement technology, MECON is committed to the highest environmental and safety standards. We consistently carry out our own development work and manufacture our entire product range exclusively in Germany. Our engineers and technicians are among the very finest.

As a relatively young company, we can boast an unusual wealth of experience as MECON was founded in 2002 as the successor to the long-standing company TURBOWERK MESSTECHNIK. Our mission is not only to expand upon that company's over 75 years of experience in new technologies and innovative product design, but also to use this experience as a foundation to advance to a new level of reliability and precision.

Our Duty to the Environment



Nature and the environment are among our greatest assets, and MECON is inherently committed to protecting these treasures. This can be seen in the extremely reliable and energy-efficient operation of our flow metering and level measurement systems.

In the development of our mechanical and electromagnetic flow meters and mechanical level indicators, we also strive continuously to optimize our processes in order to minimize environmental impact throughout the entire production and material chain. We also benefit here from the geographically central location of our company in the vicinity of the Rhine-Ruhr metropolitan region, which ensures short transportation routes and aids our efforts to achieve the lowest possible CO₂ emissions.

Standard or Custom-Made to Meet Every Need

MECON is synonymous with customized solutions. We develop, design and produce bespoke solutions precisely to the specifications of our customers. Whether handmade or manufactured by machine, MECON flow control systems combine high performance with flexibility while keeping operating costs low.

Wherever possible, we work cost-efficiently by adapting, expanding or calibrating existing technologies, even directly on site with our customers. Our extensive stocks of diverse components for flow meters and level indicators guarantee exceptionally fast delivery of even new and individual developments for highly specialized requirements.

We offer solutions for a wide range of industries, such as:

- ⊗ Water and waste water
- ⊗ Energy
- ⊗ Chemicals
- ⊗ Pharmaceuticals
- ⊗ Food products
- ⊗ Automotive
- ⊗ Maritime shipping
- ⊗ Stationary fire protection systems



On the following pages, we offer a general overview of our mechanical flow meters.

The indicated measuring ranges are based on the following parameters:

Liquids: Water (density 1 kg/l; viscosity 1 mPa.s; temperature 20 °C, pressure p_{abs} 1.013 bar)

Gases: Air (density 1.293 kg/l; viscosity 0.0181 mPa.s; temperature 0 °C, pressure p_{abs} 1.013 bar)

All meters are naturally also suitable for other liquids and gases, and corresponding models are available on request.



Service for Greater Reliability

Regular maintenance and, if necessary, competent repairs guarantee the continued reliability of your measurement instruments. MECON's customer service, or more accurately our trained technicians and engineers, make sure that all components in your MECON flow control systems continue to function at top quality over years and even decades.

In fact, many MECON systems require no maintenance at all. Especially in highly demanding applications, however, we recommend regular inspections by our specialists. We would of course be happy to answer your questions at any time.

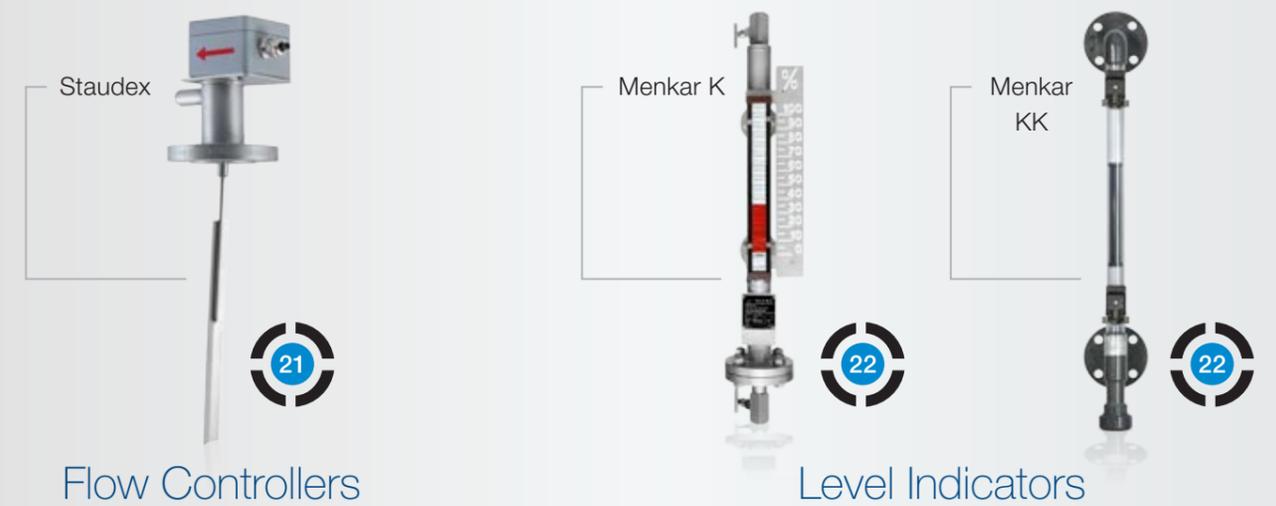
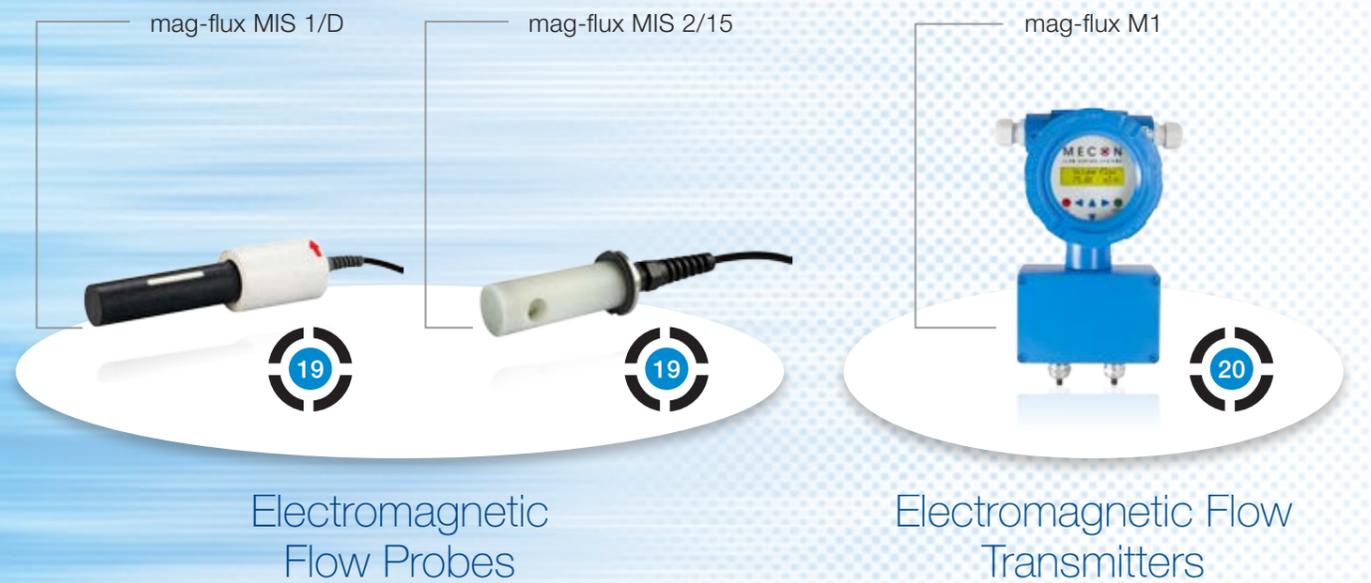
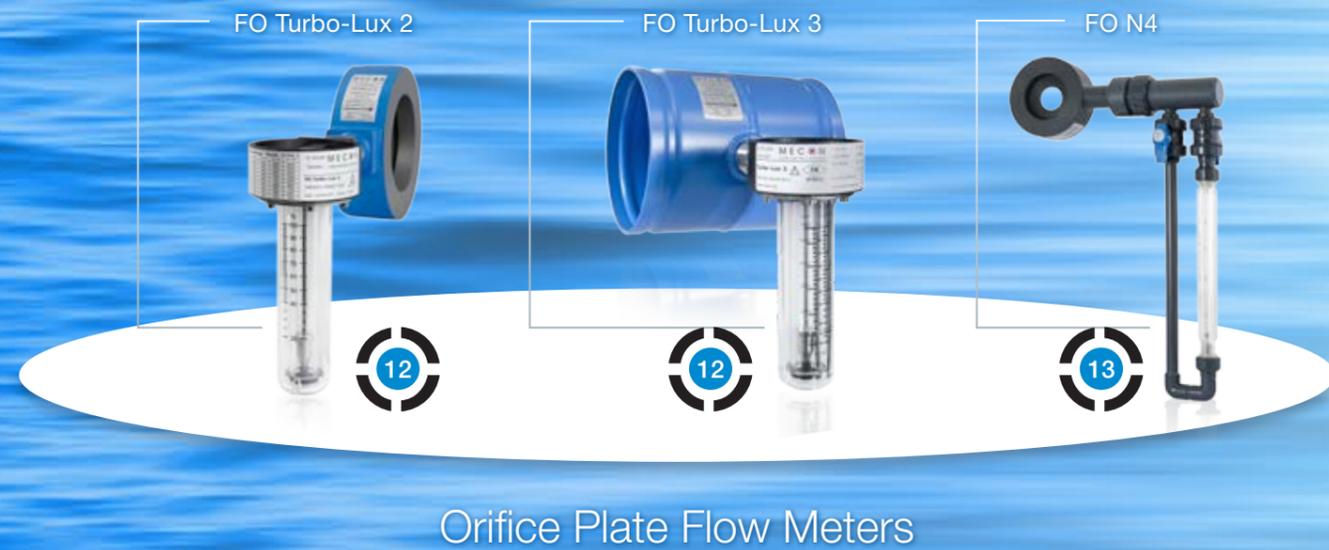
If you have specific questions that are not addressed in this brochure covering a selection of our extensive service spectrum, our customer service would be pleased to assist you.

We offer you:

- ⊗ Customer support by telephone
- ⊗ Installation and configuration
- ⊗ Repair
- ⊗ Cleaning and maintenance service
- ⊗ Calibration service
- ⊗ Troubleshooting, diagnosis and problem-solving
- ⊗ Spare parts delivery

More detailed information can be found at www.mecon.de





Variable Area Flow Meters



FVA Trogflux

- ◆ Inexpensive alternative to plastic
- ◆ Simple installation and handling
- ◆ Shatterproof
- ◆ High corrosion resistance
- ◆ Low pressure loss



FVA Trogflux	
Measuring ranges	Liquids: 6.5 - 25,000 l/h Gases: 140 - 480,000 l/h
Measuring accuracy according to VDI/VDE 3513-2 (qG=50%)	Liquids: 2.5 Gases: 2.5
Pressure limit	Max. 10 bar
Temperature range	Trogamid: -10 °C - 60 °C Polysulfone: -10 °C - 90 °C
Mounting direction	Vertically upwards
Process connection	DIN ISO 228: G 1/4 - G 2 ANSI B.1.20.1: NPT 1/4" - NPT 2" Bonded socket joint: 20 - 63 mm Hose fitting: LW 10 - LW 50
Materials	Measuring cone: Trogamid, polysulfone Float: Stainless steel, PVC, PVDF, aluminum
Options	Contact(s)



short version

FVA Trogflux short version	
Measuring ranges	Liquids: 2.0 - 1,600 l/h Gases: 45 - 25,000 l/h
Measuring accuracy according to VDI/VDE 3513-2 (qG = 50%)	Liquids: 4.0 Gases: 4.0
Pressure limit	Max. 10 bar
Temperature range	-10 °C - 60 °C
Mounting direction	Vertically upwards
Process connection	DIN ISO 228: G 1/4 - G 1 ANSI B.1.20.1: NPT 1/4" - NPT 1" Bonded socket joint: 20 - 32 mm Hose fitting: LW 10 - LW 25
Materials	Measuring cone: Trogamid Float: Stainless steel, PVC, PVDF, aluminum
Options	Contact(s)



FVA Tubux M30

- ◆ Robust glass design
- ◆ Large selection of process connections
- ◆ Suitable for high temperatures
- ◆ Optional ATEX design available



FVA Tubux	
Measuring ranges	Liquids: 0.1 - 25,000 l/h Gases: 1.0 - 480,000 l/h
Measuring accuracy according to VDI/VDE 3513-2 (qG = 50%)	Liquids: 1.6 Gases: 2.5
Pressure limit	Max. 10 bar
Temperature range	-10 °C - 150 °C
Mounting direction	Vertically upwards
Process connection	DIN ISO 228: G 1/4 - G 2 ANSI B.1.20.1: NPT 1/4" - NPT 2" Bonded socket joint: 20 - 63 mm Flange DIN EN 1092-1: DN 10 - DN 80 Flange ANSI B16.5: 1/2" - 3" Hose fitting: LW 10 - LW 50
Materials	Measuring cone: Borosilicate glass Float: Stainless steel, PVC, PVDF, aluminum
Options	Contact(s), splitter protection
Approvals	ATEX approval (optional)



FVA Minix

- ◆ Specially designed for measuring low and extremely low flow rates
- ◆ Manual flow rate regulation by needle valve
- ◆ Suitable for panel mounting and installation in rows
- ◆ Robust design utilizing various materials

FVA Minix	
Measuring ranges	Liquids: 0.1 - 500 l/h Gases: 2.0 - 8,000 l/h
Measuring accuracy according to VDI/VDE 3513-2 (qG = 50%)	Liquids: from 1.6 Gases: from 2.5
Pressure limit	Max. 10 bar
Temperature range	-10 °C - 70 °C
Mounting direction	Vertically upwards
Process connection	DIN ISO 228: G 1/4 / G 1/2 ANSI B.1.20.1: NPT 1/4" / NPT 1/2" Hose fitting: LW 10/LW 13
Materials	Measuring cone: Borosilicate glass Float: Stainless steel, aluminum

Variable Area Flow Meters



The RE Series

- Robust all-metal design with impact-resistant enclosure cover
- Also suitable for aggressive and flammable media
- Suitable for high pressure and temperature
- Float movement unaffected by soiling



RE 251 – with
Magnetic spring
contact(s)

RE 250

- Also available with stainless steel display unit for demanding applications
- Available in four versions (stainless steel, PTFE and Hastelloy®, titanium)
- Optionally available with heating and cooling jackets

	RE 251
Measuring ranges	Liquids: 0.5 - 100,000 l/h Gases: 15 - 3,000,000 l/h
Measuring accuracy according to VDI/VDE 3513-2 (qG=50 %)	Liquids: 1.6 Gases: 2.0
Pressure limit	Max. 400 bar
Temperature range	-40 °C - 200 °C
Mounting direction	Vertically upwards
Process connection	Female thread: DIN ISO 228: G 1/4 - G 2 Female thread: ANSI B.1.20.1: NPT 1/4" - NPT 3" Flange DIN EN 1092-1: DN 15 - DN 150 Flange ANSI B16.5: 1/2" - 6"
Materials	Lining: Stainless steel Float: Stainless steel
Options	Magnetic spring contact(s)

	RE 250
Measuring ranges	Liquids: 0.5 - 100,000 l/h Gases: 15 - 3,000,000 l/h
Measuring accuracy according to VDI/VDE 3513-2 (qG=50 %)	Liquids: 1.6 Gases: 2.0
Pressure limit	Max. 400 bar
Temperature range	-40 °C - 350 °C
Mounting direction	Vertically upwards
Process connection	Female thread: DIN ISO 228: G 1/4 - G 3 Female thread: ANSI B.1.20.1: NPT 1/4" - NPT 3" Flange DIN EN 1092-1: DN 15 - DN 150 Flange ANSI B16.5: 1/2" - 6"
Materials	Lining: Stainless steel, PTFE, Hastelloy®, titanium Float: Stainless steel, PTFE, Hastelloy®, titanium
Options	Inductive contact(s) Analog current output 4-20 mA HART® protocol PROFIBUS® interface
Approvals	ATEX approval (optional)

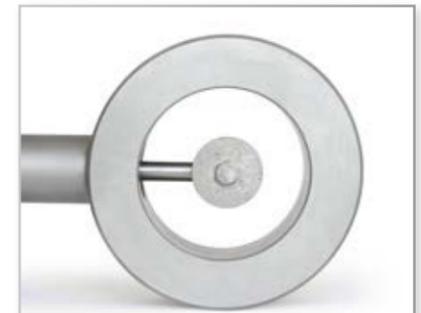
Baffle Plate Flow Meters



FI Gardex

- Usable in any flow direction
- Suitable for high temperature and pressure
- Simple installation thanks to flange-less connection
- Robust design
- Can be optionally equipped with magnetic spring contact(s), inductive contact(s) and 4 – 20 mA electrical transmitter

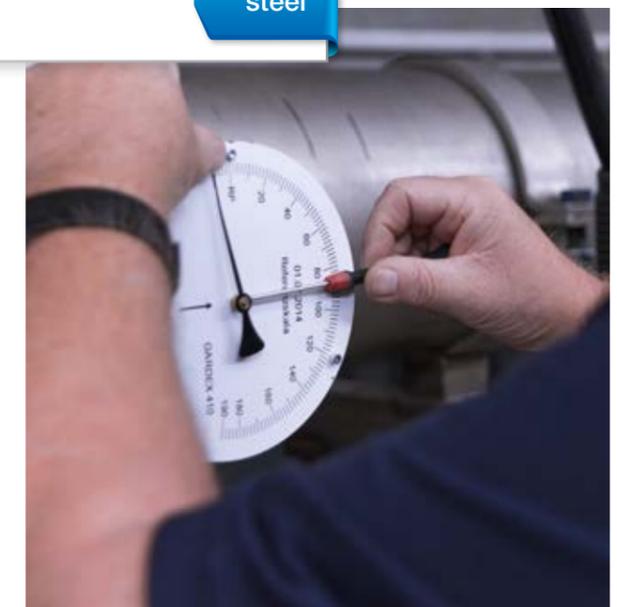
	FI Gardex
Measuring ranges	Liquids: 2.0 - 2,261 m ³ /h Gases: 60 - 68,065 m ³ /h
Measuring accuracy	± 2.0 % of full-scale value
Pressure limit	Max. 25 bar
Temperature range	-20 °C - 250 °C
Mounting direction	Any
Process connection	DIN EN 1092-1: DN 25 - DN 400 ANSI B16.5: 1" - 16"
Options	Magnetic spring contact(s) Inductive contact(s) Analog current output 4-20 mA



stainless steel



steel



More information about our new product mag-flux T4 can be found on page 18.

Orifice Plate Flow Meters

The Turbo-Lux Series

- Designed for use in test pipes of stationary fire-fighting systems
- Suitable for any point of installation, mounting position and flow direction (in compliance of the directional arrow)
- Stable flow indicator
- High reading accuracy
- Insensitive to vibrations
- Minimal installation complexity (pre-mounted display part)
- Available from stock

FO Turbo-Lux 2

Adapter flange version with display in %



FO Turbo-Lux 2	
5 flow ranges	420 - 18,000 l/min
Measuring accuracy	± 2.5 % of full-scale value
Pressure limit	PN 16
Temperature range	4 °C - 50 °C
Mounting direction	Any
Process connection	DIN EN 1092-1: DN 80 - DN 250
Options	Centering assembly
Approvals	VdS approval 2344, 2100-29



Version 6" & 8"

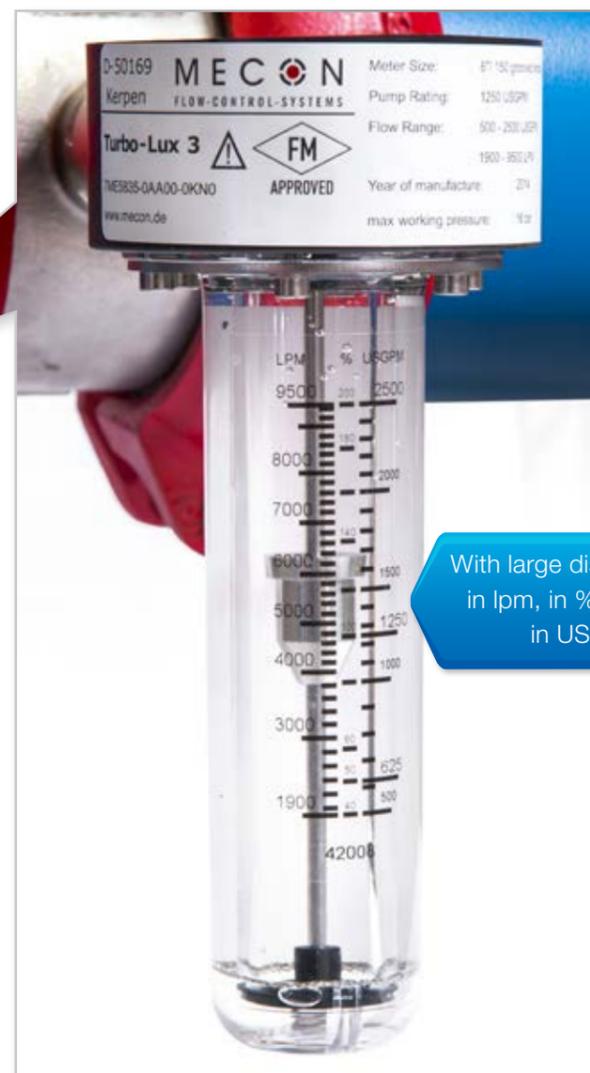
FO Turbo-Lux 3

Grooved-ends version



Version 2", 3" und 4"

FO Turbo-Lux 3	
Nominal pump rating	50 - 3,000 USGPM
14 flow ranges	20 - 6,000 USGPM 75 - 22,500 lpm
Measuring accuracy	± 2.0 % of full-scale value (FM) ± 2.5 % of full-scale value (VdS)
Pressure limit	PN 16 (232 psi)
Temperature range	4 °C - 50 °C (39 °F - 122 °F)
Mounting direction	Any
Process connection	2" - 8" grooved ends
Approvals	FM approval class 1046 VdS approval 2344, 2100-29



With large display in lpm, in % and in USGPM



FO N4

- Suitable for use in swimming pool systems and in water treatment
- Satisfies the requirements for treating and disinfecting swimming and bathing pools (DIN 19 643)
- Inexpensive plastic design
- Any mounting position and flow direction possible
- Minimal installation required
- Direct visualization of the flow in the bypass flow tube
- Optionally available with contact(s)

FO N4	
Measuring ranges	Liquids: 0.6 - 1,600 m³/h
Measuring accuracy	± 2.0 % of full-scale value
Pressure limit	Max. 10 bar
Temperature range	0 °C - 60 °C
Mounting direction	Any
Process connection	DIN EN 1092-1 (PN10): DN 25 - DN 400 ANSI B16.5: 1" - 16"
Options	Contact(s)

Flap Flow Meters

FI Prima/FI Intra

- ☉ Very robust and maintenance-friendly design
- ☉ Serves for monitoring and indicating liquid flows in closed pipelines
- ☉ Both versions suitable for vertical and horizontal installation
- ☉ Available in gray cast iron, gray cast iron with hard rubber lining and stainless steel
- ☉ Also suitable for high temperatures



FI Prima

- ☉ For turbid and opaque liquids
- ☉ With magnetically operated mechanical indicator
- ☉ Optionally available with inductive contact for flow rate monitoring

	FI Prima
Measuring ranges	0.5 - 160 m³/h
Display accuracy	5.0 % of full-scale value
Pressure limit	Max. 16 bar
Temperature range	0 °C - 250 °C
Mounting direction	Vertically and horizontally
Process connection	DIN EN 1092-1: DN 25 - DN 150 ANSI B16.5: 1" - 6"
Options	Inductive contact

FI Intra

- ☉ For transparent liquids
- ☉ With hard glass or borosilicate glass pane for direct readings

	FI Intra
Measuring ranges	0.5 - 160 m³/h
Display accuracy	5.0 % of full-scale value
Pressure limit	Max. 16 bar
Temperature range	0 °C - 150 °C
Mounting direction	Vertically and horizontally
Process connection	DIN EN 1092-1: DN 25 - DN 150 ANSI B16.5: 1" - 6"

Electromagnetic Flow Meters

Our electromagnetic flow meters offer an extremely robust and long-lasting solution for nearly any flow measurement application. As a result of our high-precision hydraulic calibration procedures the measuring accuracy of our electromagnetic flow sensors in combination with our transmitter mag-flux M1 is < 0.5%.

All instruments of the mag-flux series are built as pulsed, constant field systems offering the following advantages:

- ☉ No moving parts
- ☉ Minimal maintenance
- ☉ No wear
- ☉ No pressure loss



Electromagnetic Flow Sensors



mag-flux A

- ☞ Solid, fully welded steel design
- ☞ Measurement tube inner diameter starting at 15 mm (0.591")
- ☞ Pressure ratings up to 250 bar
- ☞ Various lining types available
- ☞ Available in compact and remote designs

mag-flux A	
Error of measurement	± 0.4 % ± 1 mm/s of the measured value
Repeat accuracy	± 0.15 % of the measured value
Operational conditions	Minimum conductivity: 50 µS/cm* Min. flow rate: 0.25 m/s Max. flow rate: 10 m/s
Temperature ranges	Soft rubber lining: 0 °C - 90 °C Hard rubber lining: 0 °C - 90 °C PTFE lining: -20 °C - 180 °C
Sensor material	Stainless steel
Electrodes material	Stainless steel, Hastelloy® C4, titanium, tantalum, platinum, Monel
Process connection	DIN EN 1092-1: DN 15 - DN 1200 ANSI B16.5: 1/2" - 24" AWWA: 28" - 48" Table: DN 15 - DN 1200 JIS: DN 15 - DN 1200

*refers to water



mag-flux S

- ☞ Extremely compact and light design
- ☞ Easy installation thanks to flange-less connection (sandwich design)
- ☞ Ideal solution for all plastic lines
- ☞ Stainless steel rings permanently connected to the measurement sensor
- ☞ No additional grounding measures required
- ☞ Available in compact and remote designs

mag-flux S	
Error of measurement	± 0.4 % ± 1 mm/s of the measured value
Repeat accuracy	± 0.15 % of the measured value
Operating conditions	Minimum conductivity: 50 µS/cm* Min. flow rate: 0.25 m/s Max. flow rate: 10 m/s
Temperature ranges	-15 °C - 60 °C
Sensor material	PVC, PVDF (grounding ring mat. no. 1.4301)
Electrodes material	Stainless steel (others on request)
Process connection	Flange-less connection (sandwich): DIN EN 1092-1 DN 15 - DN 100 ANSI B16.5: 1" - 4"



mag-flux F5

- ☞ Particularly well suited for measuring extremely low flow rates
- ☞ Measurement tube of highly corrosion- and temperature-resistant zirconium oxide
- ☞ Measurement tube inner diameter starting at 2 mm (0,078")
- ☞ Large selection of process connections and materials

mag-flux F5	
Error of measurement	± 0.4 % ± 1 mm/s of the measured value
Repeat accuracy	± 0.15 % of the measured value
Operating conditions	Minimum conductivity: 20 µS/cm* Min. flow rate: 0.25 m/s Max. flow rate: 10 m/s
Temperature ranges	Process connection made of metal: 0 °C - 150 °C Process connection made of PVDF: 0 °C - 120 °C
Sensor material	Zirconium oxide
Electrodes material	Platinum 99.9 % sintered
Process connection	Thread: DIN, NPT, BSP Flange: ANSI B16.5 (Tri-) Clamp/DIN 11851 Special connections on request Materials: Stainless steel, Hastelloy® C4, PVDF, titanium

*refers to water



mag-flux F4

- ☞ Extremely compact and light design
- ☞ For very narrow installation spaces
- ☞ Specially designed for extremely low flow rates
- ☞ Measurement tube of highly corrosion- and temperature-resistant zirconium oxide

mag-flux F4	
Error of measurement	± 0.4 % ± 1 mm/s of the measured value
Repeat accuracy	± 0.15 % of the measured value
Operating conditions	Minimum conductivity: 20 µS/cm* Min. flow rate: 0.25 m/s Max. flow rate: 10 m/s
Temperature range	-15 °C - 60 °C
Sensor material	Zirconium oxide
Electrodes material	Platinum 99.9 % sintered
Process connection	Flange-less connection Sensor with inner diameter 2 mm and 4 mm

Electromagnetic Flow Sensors

mag-flux T4

- Designed for use in test pipes of stationary fire-fighting water systems and for foaming agent-/foaming agent-water mixture extinguishing system
- Fully welded steel design for robust, error-free operation
- Fast signal processing with 16-bit microcontroller
- Permanently pre-configured measurement ranges
- Easy installation thanks to coupling connection
- Short inlet and outlet sections
- Simple electrical connection thanks to M12 plug
- 4-20 mA output
- Fixed parameter set
- Short delivery time



mag-flux T4	
Error of measurement	± 0.5 % of the measured value from 1 m/s to 10 m/s ± 0.4 % of the measured value + 1 mm/s to 1 m/s
Repeat accuracy	± 0.15 % of the measured value from 0.5 m/s to 6 m/s
Operating conditions	Minimum conductivity: 50 µS/cm*, min. flow rate: 0.1 m/s, max. flow rate: 10 m/s
Temperature limit	4 °C - 50 °C
Sensor material	Stainless steel
Electrodes material	Stainless steel
Process connection	Coupling connection: 50/2" - 250/10", Thread connection: G 1/2 - G 1 1/2 DIN EN 1092-1: DN 15 - DN 250, ANSI B16.5: 1/2" - 10"
Approvals	VdS 2344, 2100-29

*refers to water

Electromagnetic Flow Probes

- The inexpensive flow measurement option
- Usable for almost all nominal diameters and materials
- Simple installation, even in existing pipelines
- Fast replacement possible at any time
- Can even be installed or replaced under operating conditions
- Protection class IP 68/NEMA6

mag-flux MIS 1/D



mag-flux MIS 1/D is extremely unaffected by soiling

	MIS 1/D
Nominal widths	DN 200 (8") - DN 2000 (80")
Measuring accuracy	Error of measurement: ± 3.0 % of the measured value
Temperature limit	Max. 60 °C
Operating conditions	Minimum conductivity > 20 µS/cm* (for cable length 5 m) Min. flow rate: 1 m/s Max. flow rate: 5 m/s
Process connection	Mounting socket
Materials	Connection material: Steel, stainless steel, PVC, PP Sensor material: PVC Electrodes material: Stainless steel

*refers to water

mag-flux MIS 2/15



	MIS 2/15
Nominal widths	DN 200 (8") - DN 2000 (80")
Measuring accuracy	Error of measurement ± 3.0 % of the measured value
Temperature limit	Max. 100 °C
Operating conditions	Minimum conductivity: > 20 µS/cm* (for cable length 5 m) Min. flow rate: 1 m/s Max. flow rate: 10 m/s
Process connection	Mounting socket
Materials	Connection material: Steel, stainless steel, PVC, PP Sensor material: PVC Electrodes material: Stainless steel

Electromagnetic Flow Transmitters

mag-flux M1

- ◆ Multilingual, menu-based user interface
- ◆ Head rotates by 180°
- ◆ Fast signal processing
- ◆ Self-monitoring function
- ◆ Analog output and digital outputs for pulses, device status, limit values, flow direction, frequency output
- ◆ Password protection against unauthorized access
- ◆ Optional add-on module for HART® communication available



	mag-flux M1
Measuring frequency	3.125 Hz/ 6.25 Hz/ 12.5 Hz/ 25 Hz
Power supply	115/230 V AC 50/60 Hz, 15VA 24V DC, 15W
Protection class	IP 67 (EN60529)
Outputs (electrically isolated)	Analog: 0/4 - 20 mA Pulse/frequency: 0 - 1 kHz, passive (open collector, max. 30 V, 60 mA) Status: passive, (open collector, 30 V, 60 mA)
Temperature limit	-20 °C to + 60 °C (for compact version depending on process-/ambient temperature)
Mounting	Compact version (transmitter mounted on sensor) Remote version (transmitter connected to the sensor by shielded cable)
Options	HART® communication, Operating module with local display

mag-flux A compact



mag-flux S compact



Flow Controllers



Staudex

- ◆ Robust and simple design
- ◆ Suitable for use in open channels
- ◆ Response point set by default to 0.4 to 0.6 m/s depending on mounting orientation and flow direction
- ◆ Usable in pipelines from DN 32 - DN 500 and in open channels
- ◆ Not susceptible to overloading by vibrations, impacts, backflow or high flow speeds
- ◆ Available for pressure ranges up to 40 bar
- ◆ Suitable for all flow directions

	Staudex
Contact response	0.4 - 0.6 m/s (default setting)
Measuring accuracy	Repeatability ± 2.0 %
Pressure limit	Max. 40 bar
Temperature range	-30 °C - 120 °C
Mounting direction	Any
Process connection	DIN EN 1092-1: DN 25 ANSI B16.5: 1"
Options	Output switch

Level Indicators

The Menkar Series

- ☉ For use in open and closed containers of any shape
- ☉ Good readability even at large distances
- ☉ Easy installation
- ☉ Any number and arrangement of contacts is possible, limited only by the contact housing dimensions



Menkar K

- ☉ Extremely robust metal design
- ☉ Universally suitable for almost all types of liquids
- ☉ Suitable for high temperature and pressure
- ☉ Powerful magnetic coupling system without mechanical translation elements
- ☉ Low-maintenance
- ☉ Large measurement and display range over 5000 mm in split design
- ☉ Available with local display

	Menkar K
Measuring ranges	300 mm - 5,000 mm
Measuring accuracy	Resolution: ± 5 mm With magnetic flapper display: ± 10 mm
Pressure limit	Max. 320 bar
Temperature range	-20 °C - 398 °C
Mounting direction	Vertically upwards
Process connection	DIN EN 1092-1: DN 15 und DN 50 ANSI B16.5: 1/2" - 2"
Options	Magnetic flapper display Contact(s) Electrical transmitter



Menkar KK

- ☉ Inexpensive alternative to plastic
- ☉ Maintenance-free

	Menkar KK
Measuring ranges	300 mm - 2,000 mm
Measuring accuracy	Resolution: ± 5.0 mm
Pressure limit	Max. 16 bar
Temperature range	0 °C - 60 °C
Mounting direction	Vertically upwards
Process connection	DIN EN 1092-1: DN 25 ANSI B16.5: 1"
Options	Contact(s) Electrical transmitter



