

ELETTA[®]

— FLOW MONITORS —

WE DELIVER RELIABLE FLOW SOLUTIONS

TO PARTICLE ACCELERATORS AND NUCLEAR INDUSTRY



Eletta started business in 1947

Eletta's Flow Meters and flow monitors, which are of originally patented design, are extremely robust and reliable and therefore well suited to be installed in critical and harsh Nuclear Power Industry environments and particle accelerators.

The patent is still the basis for the majority of the product range today. Annual production amounts to approximately 15,000 units, which are manufactured and shipped from our facility in Kungens Kurva, south of Stockholm.

Eletta's flowmeters offer excellent repeatability. They withstand the operating conditions for which they are designed and they last for decades. There are plenty of Eletta flow - meters from the 70s and 80s still in operation in factories around the world.

Eletta is proud to always strive for the best solutions regardless of what process requirements you may have. We believe in close cooperation and personal service.

Eletta's watchwords

Reliability - Longevity - Quality

- Long service life
- Priceworthy
- Sustainable
- Durable
- Secure
- Reliable
- Easy to install and mount.

Customer support

- Responsive
- Delivery on time
- Quick, simple and clear answers.
- Customized solutions
- Technical support and advice
- Identification of problems
- Focus on solutions.

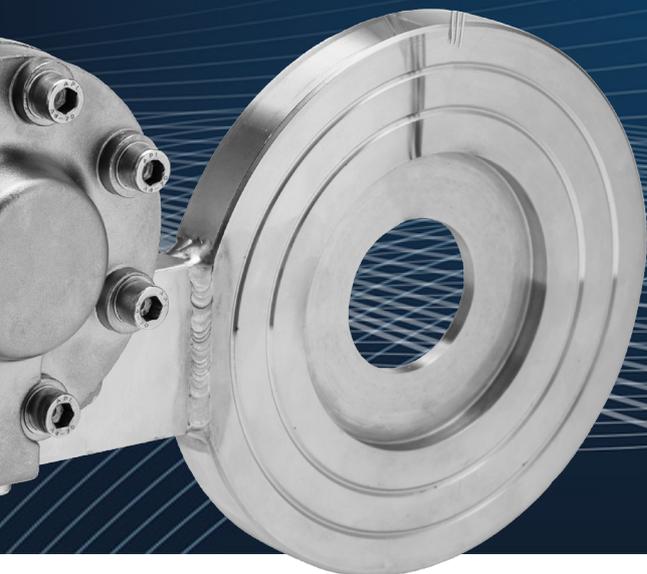


The material for Eletta's flow meters and flow monitors are carefully selected to cope with media and other operational requirements. Eletta Flow is certified according to ISO 9001 and ISO 14001 and manufactures Flow Monitors and Meters within three main groups:

Differential pressure – Flow Meters and Flow Monitors

Variable area - Flow Switches

Flap operated - Flow Switches



S - series

The S-series have a large and easy readable dial of 120 mm which is clearly visible even in a harsh and dusty industrial environment. It has two micro switch setpoints which are independently adjustable within the measuring range and they can be set for high and low flow alarms to protect expensive equipment in various piping systems. Different wetted parts material, e.g. brass or stainless steel are available to best suit customer media. Different materials like aluminum or stainless-steel enclosure are also available.



V - series

The V-series is a blind differential pressure flow switch fitted with one adjustable SPDT micro switch. The flow switching point can be easily set by user with a simple graduated wheel. V-series is highly repeatable, within <2%. V-series are insensitive to magnetic fields and perfectly suited for rough industrial applications. Different wetted parts material, e.g. brass or stainless steel are available to best suit customer media. Different materials like aluminum or stainless-steel enclosure are also available.



TIVG - series

The TIVG-S-series have a large and easy readable dial of 120 mm which is clearly visible even in a harsh and dusty industrial environment. It has two micro switch setpoints which are independently adjustable within the measuring range and they can be set for high and low flow alarms to protect expensive equipment in various piping systems. Wetted parts material is stainless steel with enclosure in aluminum alloy or stainless steel. It can be offered with flanges or threaded process connections.



R - series

The R-series is a differential pressure flowmeter giving a 4-20 mA signal proportional to flow without any active electronic component. The only electronic component is a ceramic potentiometer compatible with radiations environment. Resistive signal is sent to a transmitter installed in safe area. This transmitter will convert resistive signal to 4-20 mA signal, proportional to flow. Different wetted parts material eg brass or stainless steel are available to best suit customer media. Different materials like aluminum or stainless-steel enclosure are also available.



Eletta – Your partner in nuclear applications

Eletta Flow Monitors and Meters from Sweden have been used in the particle accelerator laboratories for both medical and research purposes and related industry worldwide since decades.

With a reliable and safe duty in protecting magnets from overheating by supervising the cooling water system, the Eletta Flow Monitors have served their purpose from the start in the early 70's. We have installations which are over 50 years old and still work perfectly well, without any maintenance or re-calibration. The flexible mounting of the instruments helps to avoid unnecessary problems during installation.

The flow monitors shut the system down in case of a sudden interruption of the water flow. Due to its simple and robust design the reliability is undoubtedly extremely high for these calibrated safety devices. The response time for an alarm from the instruments can be calculated in microseconds and can thereby very quickly secure expensive equipment in the event of a fault in the system. Eletta's products have some unique characteristics which make them extremely well suited for applications in particle accelerators and other sensitive environments:

- **Insensitive to magnetic fields.**

Some of our products are entirely mechanical and are equipped with microswitches which are used for the alarm function. Also they have no reed switches or galvanometers which can be affected by magnetic fields or radiations.

- **Resistant to local radiation.**

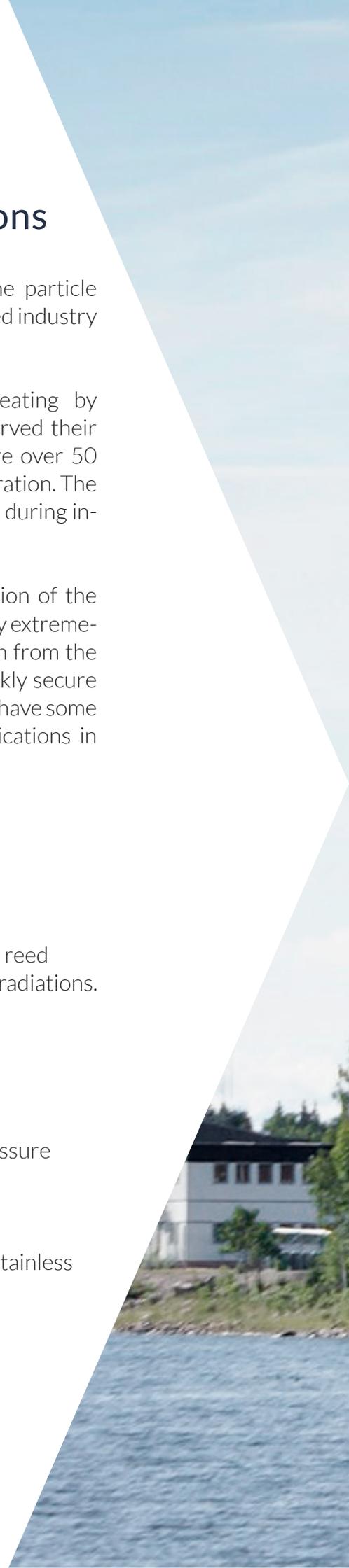
No components are made of sensitive material.

- **No moving parts.**

All flow monitors and -meters are built according to the differential pressure principle using an orifice plate.

- **Resistant to additives in the water.**

The design combined with special materials such as canigen plating or stainless steel make them very durable.



RELIABLE HIGH
QUALITY
FLOW MONITORS





Our products have been designed to cope with...

Radiations

High magnetic fields

Harsh environments

Approvals and certificates worldwide.

Eletta Flow Monitors have been in service at the cooling water circuits of various nuclear applications since many decades. Due to their inherent immunity to magnetic interference and low susceptibility to radiation, our different models have always been the preferred products in these critical applications by the nuclear sector users. Whether it is a synchrotron anywhere around the world, undertaking research or producing medical isotopes, or a nuclear power generation plant, one can easily find scores of Eletta Flow Monitors installed there.

We are happy to announce that Eletta Flow is registered as a pre-qualified supplier of Instrumentation and associated products, in the Achilles Utilities, Northern and Central Europe (Achilles-UNCE) for various nuclear customers.

Tests have been made on our products resulting in reliable and stable products. Eletta offers a wide range of approvals and certificates worldwide.



REFERENCES

Around the world you have access to our unique know-how and product range. Proximity to our customers is crucial for effective solutions. To meet demand, we have a worldwide presence through our resellers and sales specialists....

Particle accelerator references:

References in Europe

- ALBA - Spain
- ANKA - Germany
- BESSY - Germany
- CEA Saclay - France
- CERN - Switzerland
- DIAMOND LIGHT - United Kingdom
- DESY - Germany
- DLS - United Kingdom
- ESRF - France
- ESS - Sweden
- FAIR - Germany
- GANIL - France
- Garching - Germany
- Greifswald, Germany
- GSI - Germany
- IKP - Germany
- JYVÄSKYLA Lab - Finland
- Forschungszentrum Jülich - Germany
- KVI - The Netherlands
- MEDAUSTRON - Austria
- PSI - Switzerland
- Synchrotron Soleil - France
- SVEDBERG Lab - Sweden
- Trieste Scpa - Italy
- University of Jyväskylä Accelerator lab - Finland

References in Asia and Africa

- NSRRC - Taiwan
- BERC - China
- iThemba Labs - South Africa
- VECC, Variable Energy Cyclotron Centre - India.

References in America

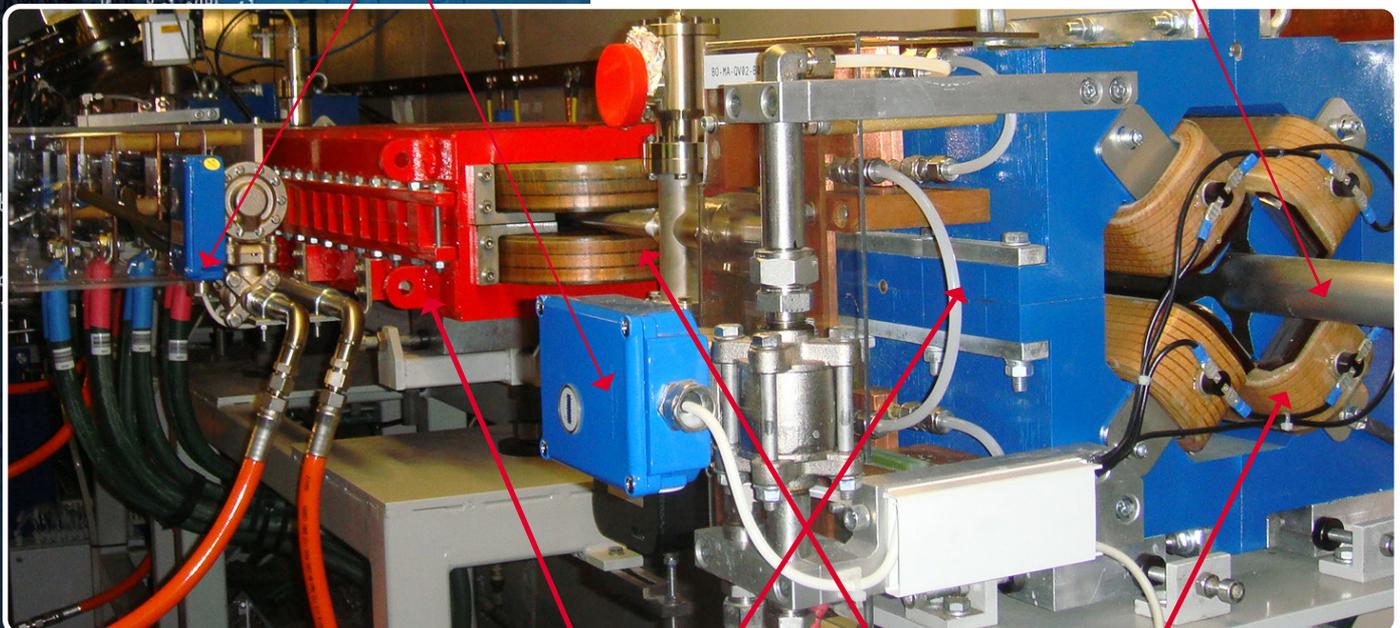
- National Argonne Laboratory - USA
- CLS - Canada



Our classic V and S flow monitors have been used with success and have offered extreme reliability for decades on particle accelerators, where instruments have to survive to radioactivity created around the beam of accelerated particles. They are typically installed on electromagnets which are used to curve, concentrate or change direction of particles. Those electromagnets are including a copper cavity coil where demineralized water is circulating to cool down. Our flowmonitors are installed on the output of this coil to confirm demineralized water flow is present or not. This application is critical as a no detection of low flow can destroy very costly electromagnet. In the other hand a false detection will stop immediately the beam. Those 2 occurrences can be very costly. Aim of our flowmeters is to give immediate alarm in case of low flow and no false alarm. It is much more than 10 000 units which have been used by CERN and some are still in use after 50 years.

V series giving on/off signal confirming demineralized water is circulating inside copper coil or not.

Beam line with particles circulating under vacuum.



Electromagnet.

Copper coils, with demineralized water circulating for cooling down.

WE BRING RELIABLE FLOW MONITORS AND FLOW METERS
TO YOUR BUSINESS



www.eletta.com