AERIUS. The intelligent form of gas metering
Precise standard volume – at any temperature, at any altitude.
AERIUS stands for the future of gas metering – with a variety of options for modern automatic meter reading and standard interfaces for integration into all AMR networks operating with wired or wireless M-Bus.

Its integrated communication makes AERIUS ideal for use as part of an automatic reading system (AMR). The wired or wireless M-Bus interface and the optical infrared interface allow reading in only a few seconds. Meter readings to the EN 13757 M-Bus standard guarantee automatic and secure data flow – and create the perfect database for automatic meter reading and Smart Metering.

Whether for integration into an existing infrastructure or setting up a new smart system, AERIUS is smoothly compatible, also with components from other manufacturers. For improved measuring quality, for transparency through direct standard volume output, for clear processes and fair billing.

Diehl Metering supplies everything for automatic reading of water, thermal energy, gas and electricity plus energy and other services – all from one source. Our many years of national and international experience enable us to find individual solutions for the economic and ecological requirements of our age. We create the direct path for your data – from meter to billing.

Metering solutions
- Water metering
- Thermal energy metering
- Gas metering
- Electricity metering

Meter reading solutions
- Mobile reading
- PLC
- Fixed network reading

Service solutions
- Meter management
- Data management
- Billing
- Process efficiency
AERIUS.
Precision – at any temperature, at any altitude

The AERIUS static gas meter sets new standards in gas metering precision. Its microthermal measuring principle determines pressure- and temperature-converting standard volume. With its integrated communication, AERIUS is also ready for automatic reading and Smart Metering – for reliable operation, transparent gas billing and satisfied end consumers.

Whether in the heights of the mountains or the depths of the lowland valleys, in hot regions up to 55 °C or cold areas down to -25 °C, in high summer or deepest winter: The AERIUS static gas meter measures standard volume direct – and so determines the actual consumption.

The volume of gas is naturally dependent on temperature and geodesic and atmospheric pressure. These factors can make the measurements of conventional diaphragm gas meters inaccurate, because conversion using mean annual values of temperature, air pressure and altitude leads to approximate values and calculating errors. These measuring inaccuracies are naturally transferred to the billing process.

AERIUS solves this problem with its microthermal measuring principle, which needs no moving parts. The direct output of pressure- and temperature-converting standard volume allows accurate billing. The microthermal measuring principle has proved itself in industrial applications for many years – in flow and climate measurement and in the medical and automotive sectors. AERIUS makes this technology also available for household and commercial use and is MID approved by the PTB.

AERIUS is equipped as standard with integrated M-Bus communication over radio or cable, which makes it the ideal meter for rapid automatic and fair billing of gas consumption.

A decision on monthly billing by the European legislators is only a matter of time. AERIUS enables you to create the foundation for future-orientated gas metering and smart energy data management now. It provides the basis for offering your customers fully transparent consumption and improved services.
We ensure the safety, quality and precision of our gas meters through factors such as a unique and modern real gas test bench and the high qualifications of our staff.

Tailor-made and future-orientated solutions are Diehl Metering’s answer to legislative requirements and specific international and market features. The aim is an ongoing extension of the AERIUS product line.

Out of respect and high regard for people we promote long-term partnerships, networked expertise and joint success. We attach importance to credibility – and practise this through transparent communication with our customers and partners.

In 2010 Diehl Metering opened its centre of excellence for gas metering – and can now supply meters for water, thermal energy, gas and electricity from one source.

Diehl Metering develops and produces AERIUS in its own works. The close cooperation with worldwide partners in development, production and sales ensures the ongoing development of the centre of excellence – and an expanding product line.

Principle of microthermal measurement in AERIUS.
AERIUS. Intelligent in detail:

The AERIUS electronic gas meter uses a CMOS semiconductor sensor positioned in a bypass construction. The sensor is based on a microthermal measuring principle with a heater flanked by two temperature sensors. The gas is heated by this heater, which provides a uniform temperature distribution through the gas flow. This creates a temperature difference between the two temperature sensors. The resulting measuring signal is processed into a flow rate in a microprocessor and a volume is generated in m³.