

Flexim FLUXUS® CA

Compressed Air Flow
Measurement Solutions

Non-Intrusive | Accurate | Reliable



FLEXIM


EMERSON™



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The smart solution for measuring compressed air

Non-Intrusive Compressed Air Flow Measurement

Compressed air accounts for as much as 10% of industrial consumption of electricity. However, often less than 10% of this energy is converted to usable energy delivered to the end-users.

Measuring the compressed air flow precisely in all conditions is the key to improving the energy efficiency of compressed air systems while reducing costs.

Using state-of-the-art technology, non-intrusive ultrasonic flow meters provide the best measurement solutions.

Non-Intrusive

- It has never been so convenient to install a flow meter, as all the conventional steps, such as shutting down processes, cutting pipes, welding flanges, are no longer necessary.

No Risks of Secondary Contamination of Compressed Air

- In many cases the compressed air that comes into contact with products or people at the end use of a process needs to be of very high quality. Using a non-intrusive ultrasonic flow meter is the best option for such situations, as the compressed air is never touched by flow meters.

No Risks of Potential Leakage

- Leaks can waste up to 30% of the useful energy in compressed air systems. Compared to inline flow meters, the non-intrusive ultrasonic flow meter gives zero chance of potential leakage, as the pipe system is always intact.

Zero Wear and Tear

- Without moving parts, and with no contact to the moving airflow, non-intrusive ultrasonic flow meters have absolutely no wear and tear, which reduces the total costs of ownership significantly.

Maintenance-free

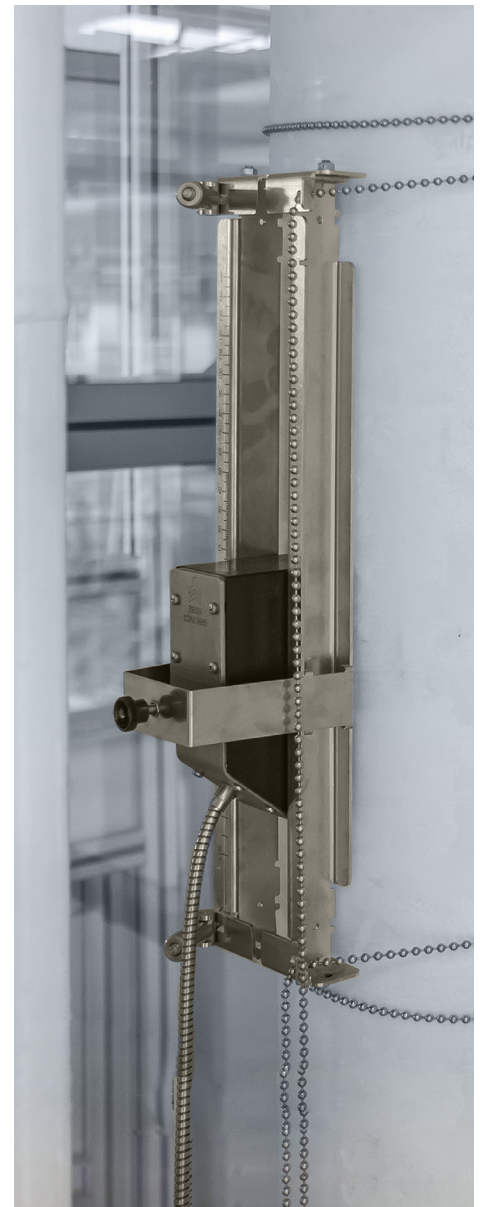
- Old clamp-on ultrasonic flow meters need to have their transducers regularly greased. Emerson has overcome such challenges, meaning that Flexim flow meters are truly install-and-forget, where regular maintenance can be a thing of the past.

Application Versatility

Consumption Metering

Leak Detection

Line Balancing



Whilst being widely used in compressed air systems, conventional technologies such as thermal mass, differential pressure and vortex flow meters have inevitable disadvantages, such as process shut-down during installation, high installation and maintenance costs, pressure drop, poor turndown ratios, etc.

Non-intrusive FLUXUS® CA ultrasonic flow meters overcome all these technical challenges and provide the best measurement solutions for compressed air.

Unique, versatile and robust with unbeatable features

Competent for Low Pressure Systems

- Thanks to FLUXUS® CA cutting-edge technology, compressed air systems can be measured at pressures as low as 45 psi. On plastic pipes it can even be measured down to atmospheric pressure.

High Sensitivity to Extremely Low Flow

- Flexim flow meters are able to detect flow down to 0.03 ft/s, which truly provides plant operators the unique opportunity to detect even a slight leakage of compressed air systems.

Covering full Pipe Ranges

- Besides the most common pipes sizes from 0.6 to 10 inches, FLUXUS® CA are capable of measuring even smaller or larger pipes (customized system solutions), maximizing the customer's value.

Portable in FM Class I, Div. 2

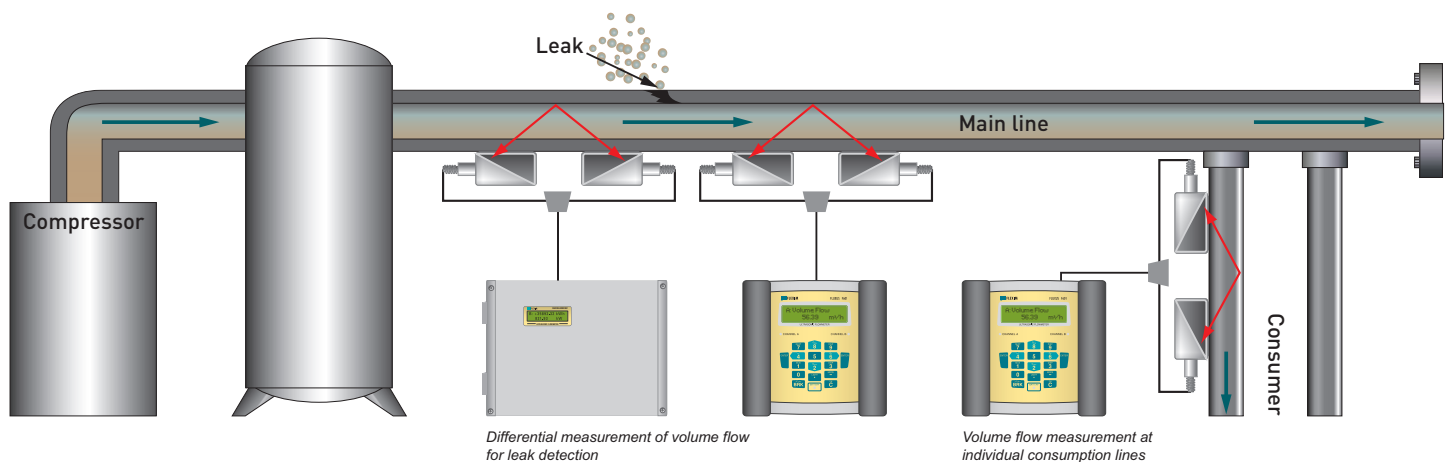
- The easy-to-perform temporary measurement is one of the outstanding advantages of clamp-on flow meters. As the pioneer in this field, Flexim is far beyond the industrial convention, uniquely offering portable flow meters suitable for FM Class I, Div. 2.

Powerful, flexible, reliable and well suited to all kinds of assignments

With both portable and fixed measurement systems, FLUXUS® CA makes an easy job of any compressed air flow measurement.

- for energy audits compliant with ISO 50001 or EN16247
- for metering the consumption of compressed air
- for checking and verifying existing flow meters
- for leak detection of either the whole system or a subsection
- for balancing pipe networks within plants and production environments
- for individual measurement of virtually any compressed air branch
- for monitoring compressor efficiency

All measurement data can be transferred to central control systems through the integrated field bus systems.



TECHNICAL FACTS

FLUXUS® CA:	Portable or permanent measuring device for non-intrusive flow measurement of compressed air and other industrial gases (clamp-on flow measurement according to the transit-time difference method, temperature measurement using clamp-on or inline temperature sensors)
Quantities of Measurement:	Operating flow rate, standard flow rate, mass flow, flow velocity
Fluid:	Compressed Air, Nitrogen, Oxygen, Argon
Flow Velocity:	0.03 to 115 ft/s
Repeatability:	0.15% of reading \pm 0.03 ft/s
Accuracy:	$\pm 0.5\%$ of reading \pm 0.03 ft/s (field calibrated) $\pm 1 \dots 3\%$ of reading \pm 0.03 ft/s (out of the box - application dependent) For the flow measurement of gases / compressed air in metal pipes a minimum pressurization level of 45 psi is necessary. For plastic pipes no minimum pressurization level is necessary.
Pipe Diameter Range:	0.6 inch ... 10 inch
Data Logger Capacity:	>100,000 measured values
Loggable Values:	all physical quantities, totalized values and diagnostic values
Outputs:	Active and passive switchable current output, binary outputs
Inputs:	Temperature input (Pt100/Pt1000), current input
Communication Protocols:	Modbus RTU, M-Bus, BACnet MS/TP, RS485
Explosion Protection:	FM Class I, Div. 2 or ATEX zone 2 (optional)

* under reference conditions and with $v > 0.5$ ft/s

** if reference uncertainty better than $< 0.2\%$

Further Information can be found at the acc. G601 CA Energy and G704 CA Technical Specifications at www.Emerson.com



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