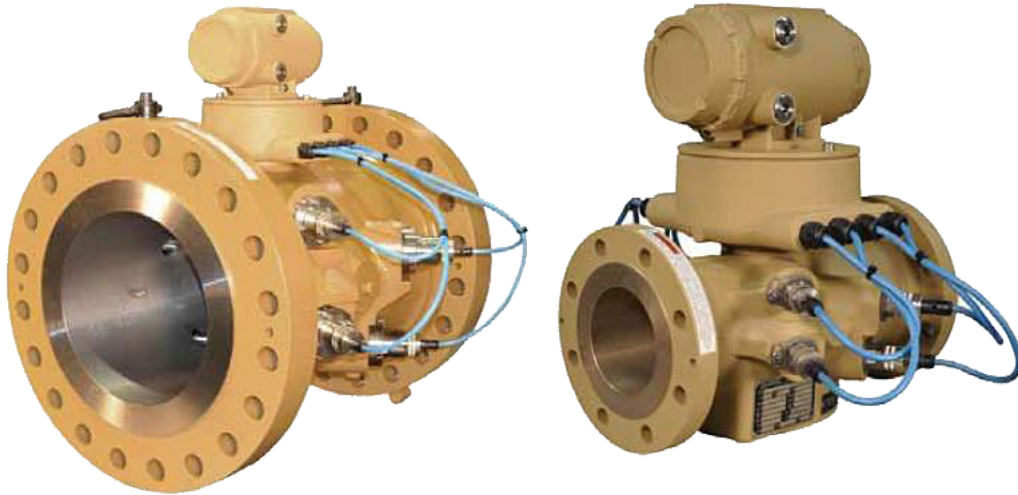


Rosemount™ Ultrasonic Flow Meters

Installation and Operating Instructions specific to the Pressure Equipment Directive



Safety and approval information

This Rosemount product complies with all applicable European directives when properly installed in accordance with the instructions in this manual. Refer to the EU declaration of conformity for directives that apply to this product. The EU declaration of conformity, with all applicable European directives, and the complete ATEX Installation Drawings and Instructions are available on the internet at www.emerson.com or through your local Emerson support center.

Information affixed to equipment that complies with the Pressure Equipment Directive, can be found on the internet at <http://www.emerson.com>.

For hazardous installations in Europe, refer to standard EN 60079-14 if national standards do not apply.

Other information

Full product specifications can be found in the product data sheet. Troubleshooting information can be found in the user manual. Product data sheets and manuals are available from the Emerson website at <http://www.emerson.com>.

Return policy

Follow Emerson procedures when returning equipment. These procedures ensure legal compliance with government transportation agencies and help provide a safe working environment for Emerson employees. Emerson will not accept your returned equipment if you fail to follow Emerson procedures. Return procedures and forms are available on our web support site at Emerson.com, or by phoning the Emerson Customer Service department.

Emerson Flow customer service

Email:

- Worldwide: [http://flow.support@emerson.com](mailto:flow.support@emerson.com)
- Asia-Pacific: [http://APflow.support@emerson.com](mailto:APflow.support@emerson.com)

Telephone:

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Mexico	+41 (0) 41 7686 111	France	0800 917 901	India	800 440 1468
Argentina	+54 11 4837 7000	Germany	0800 182 5347	Pakistan	888 550 2682
Brazil	+55 15 3413 8000	Italy	8008 77334	China	+86 21 2892 9000
		Central & Eastern	+41 (0) 41 7686 111	Japan	+81 3 5769 6803
		Russia/CIS	+7 495 981 9811	South Korea	+82 2 3438 4600
		Egypt	0800 000 0015	Singapore	+65 6 777 8211
		Oman	800 70101	Thailand	001 800 441 6426
		Qatar	431 0044	Malaysia	800 814 008
		Kuwait	663 299 01		
		South Africa	800 991 390		
		Saudi Arabia	800 844 9564		
		UAE	800 0444 0684		

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1 Introduction

1.1 Purpose

This document shall identify specific installation and operation instructions necessary to ensure compliance with the Essential Safety Requirements (ESR) of the European Economic Area Pressure Equipment Directive (PED) 2014/68/EU and the UK Pressure Equipment (Safety) Regulations 2016.

2 Scope

2.1 Document scope

This document applies to Rosemount Ultrasonic Flow Meters designed by Micro Motion, Inc. of Boulder, Colorado, USA, and manufactured by Emerson or an authorized agent.

3 Installation

3.1 Meter installation

Rosemount Ultrasonic Flow Meters are supplied as components to be installed in the end user's piping system. It is the responsibility of the end user of the equipment to ensure compliance with the Essential Safety Requirements of the Directive and Regulations quoted in [Purpose](#) of this document. Relevant parts of the directive ESR are listed below.

PED ESR reference	ESR requirement	Compliance requirement
2.3	Provisions to ensure safe handling and operation: <ul style="list-style-type: none"><li data-bbox="760 772 1078 1052">• The method of operation specified for pressure equipment must be such as to preclude any reasonably foreseen risk in the operation of the equipment. Particular attention must be paid, where appropriate, to the following.	

PED ESR reference	ESR requirement	Compliance requirement
	Closures and openings	<p>Rosemount Gas Ultrasonic Flow Meters:</p> <ul style="list-style-type: none"> • During removal and replacement of transducers the end user shall ensure that the meter has been properly isolated and the internal pressure has been safely vented. • If changing the transducers under line pressure by means of the Rosemount supplied extractor tool; the instructions for use given in the manual supplied with each extractor tool must be strictly complied with. <p>Rosemount Liquid Ultrasonic Flow Meters:</p> <ul style="list-style-type: none"> • Refer to the Rosemount Ultrasonic Flow Meter Installation, Maintenance and Troubleshooting manuals for detailed procedures. • Rosemount Liquid Ultrasonic Flow Meters are supplied with transducers which are extractable while the line is pressurized.

PED ESR reference	ESR requirement	Compliance requirement
	<ul style="list-style-type: none"> • Devices to prevent physical access while pressure or a vacuum exists. • Surface temperature • Decomposition of unstable fluids 	<ul style="list-style-type: none"> • The end user shall ensure that the meters are installed in a properly designed system with access limitation in place if required. • It is the responsibility of the end user to assess the expected surface temperature in service, and if necessary, take the necessary precautions to avoid personnel coming into contact with the equipment. • It is not envisaged that, for the designed service, the equipment shall come into contact with unstable fluids. However, the end user should assess the risk and take any steps considered necessary.
2.4	<p>Means of examination:</p> <ul style="list-style-type: none"> • Pressure equipment must be designed and constructed so that all necessary examinations to ensure safety can be carried out. 	<ul style="list-style-type: none"> • Rosemount Ultrasonic Flow Meters are designed so that all critical parts can be examined without the need to remove the unit from service. The end user should refer to the operations and maintenance instructions supplied with each meter. It is not considered that the process medium for which the equipment is designed will give rise to severe corrosion/erosion problems. It is the end user's responsibility to monitor any change in the process medium that may cause concern.
2.5	<p>Means of draining and venting:</p> <ul style="list-style-type: none"> • To avoid harmful effects such as water hammer, vacuum collapse, corrosion and uncontrolled chemical reactions. 	<ul style="list-style-type: none"> • It is the responsibility of the end user to ensure that the equipment is installed in a well-designed piping system to avoid such hazards.

PED ESR reference	ESR requirement	Compliance requirement
2.6	Corrosion or other chemical attack	<ul style="list-style-type: none"> It is not expected that the process medium for which the meters are designed will give rise to severe corrosion problems. It is the end user's responsibility to monitor any change in the process medium that may cause concern.
2.7	Wear	<ul style="list-style-type: none"> It is not expected that the use of the meter for fluid measurement will give rise to any abnormal wear problems. It is the responsibility of the end user to install any necessary filtration upstream of the meter to maintain the condition of the process medium.
2.10	Protection against exceeding the allowable limits of the pressure equipment	<ul style="list-style-type: none"> The Rosemount Ultrasonic Flow Meters must be installed in a well-designed piping system with adequate protection against excessive pressure.
2.12	External fire	<ul style="list-style-type: none"> The Rosemount Ultrasonic Flow Meters have no special accessories for fire damage limitation. It is the responsibility of the end user to provide adequate fire-fighting facilities on-site.
7.3	Pressure limiting devices, particularly for pressure vessels	<ul style="list-style-type: none"> The Rosemount Ultrasonic Flow Meters are not pressure vessels and have no integral pressure limiting devices. It is the responsibility of the end user to ensure that the meters are installed in a well-designed system so that momentary pressure surges are limited to under 10% of the meters maximum allowable pressure.

For more information: [Emerson.com](https://www.emerson.com)

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