

# Technical Information

## CYR52

Ultrasonic cleaning



### Application

The CYR52 ultrasonic cleaning unit is used to clean turbidity sensors that are installed in pipes.

### Your benefits

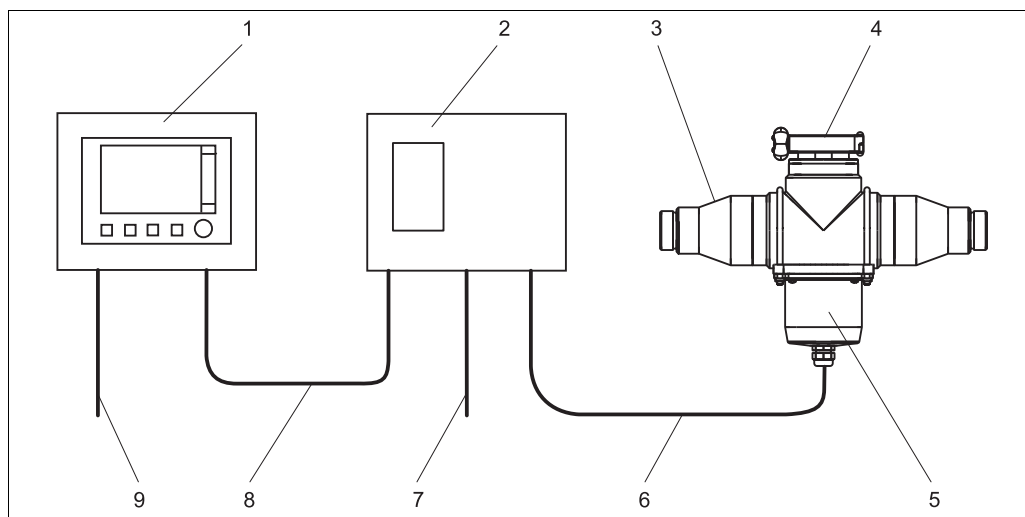
- The sensor remains always clean.
- No process interruption for sensor cleaning
- No contamination of the medium caused by sensor cleaning

## Function and system design

### Measuring arrangement

The complete ultrasonic cleaning system comprises:

- Ultrasonic generator
- Ultrasonic transducer
- Assembly or pipe with turbidity sensor
- Liquiline CM44x transmitter



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*Ultrasonic cleaning with Flowfit CUA252 assembly*

1 Liquiline CM44x transmitter

2 Ultrasonic generator

3 Flowfit CUA252 flow assembly

4 Clamp connection for turbidity sensor

5 Ultrasonic transducer

6 Power supply cable for ultrasonic transducer

7 Mains voltage cable for ultrasonic generator

8 Control cable

9 Mains voltage cable for transmitter

### Function

The cleaning effect is achieved by generating cavitation in liquid medium. Thus adhesive soiling on the sensor is dissolved and removed by the flow.

The ultrasonic transducer is mounted face to face with the turbidity sensor directly on the assembly or on the pipe.

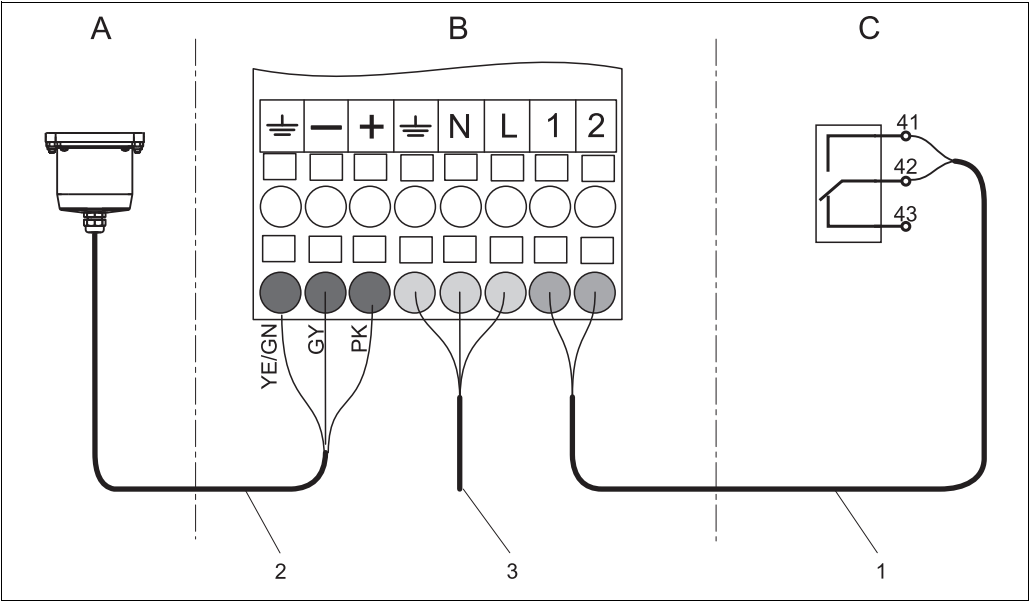
## Output

### Operating frequency of the ultrasonic cleaning

approx.. 40 kHz

# Power supply

Connection



Supply voltage

Depends on the order version:  
230 VAC / 50 Hz  
115 VAC / 60 Hz

**NOTICE**

The device does not have a mains switch

- ▶ The customer must provide a protected circuit breaker in the vicinity of the device.
- ▶ The circuit breaker must be a switch or a power-circuit breaker, and you must label it as the circuit breaker for the device.

Power consumption

max. 50 VA

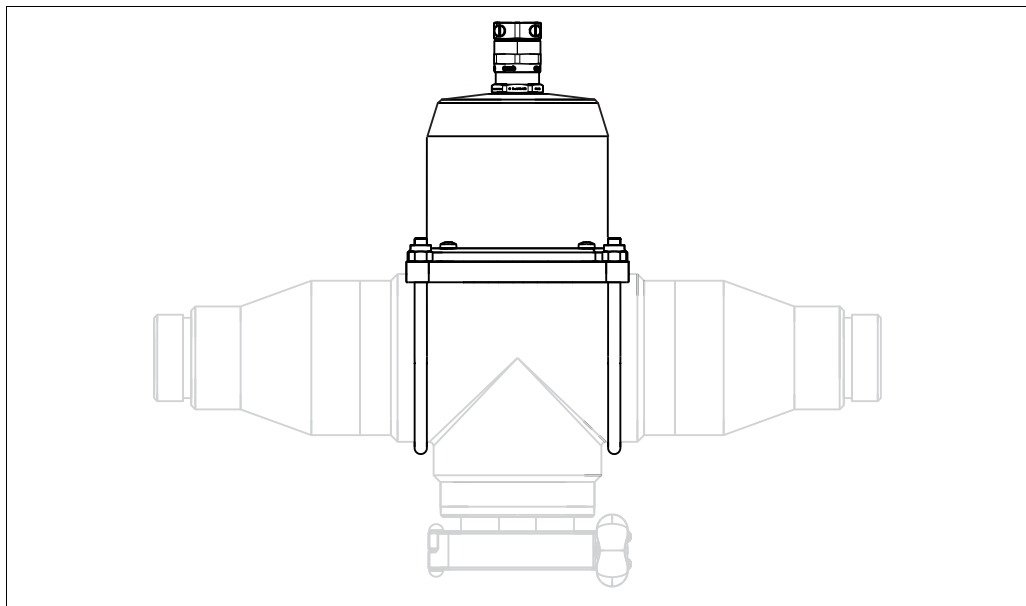
## Installation

### Installation conditions

The ultrasonic transducer is mounted face to face with the turbidity sensor.

### Installation options

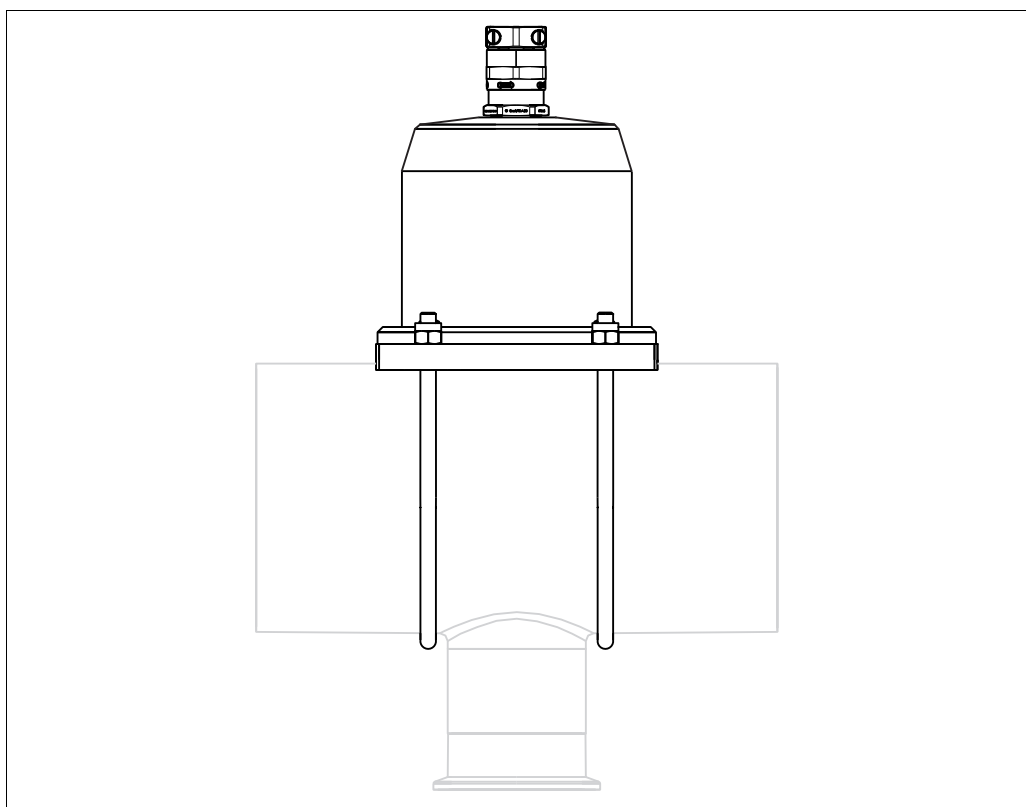
#### With Flowfit CUA252 flow assembly



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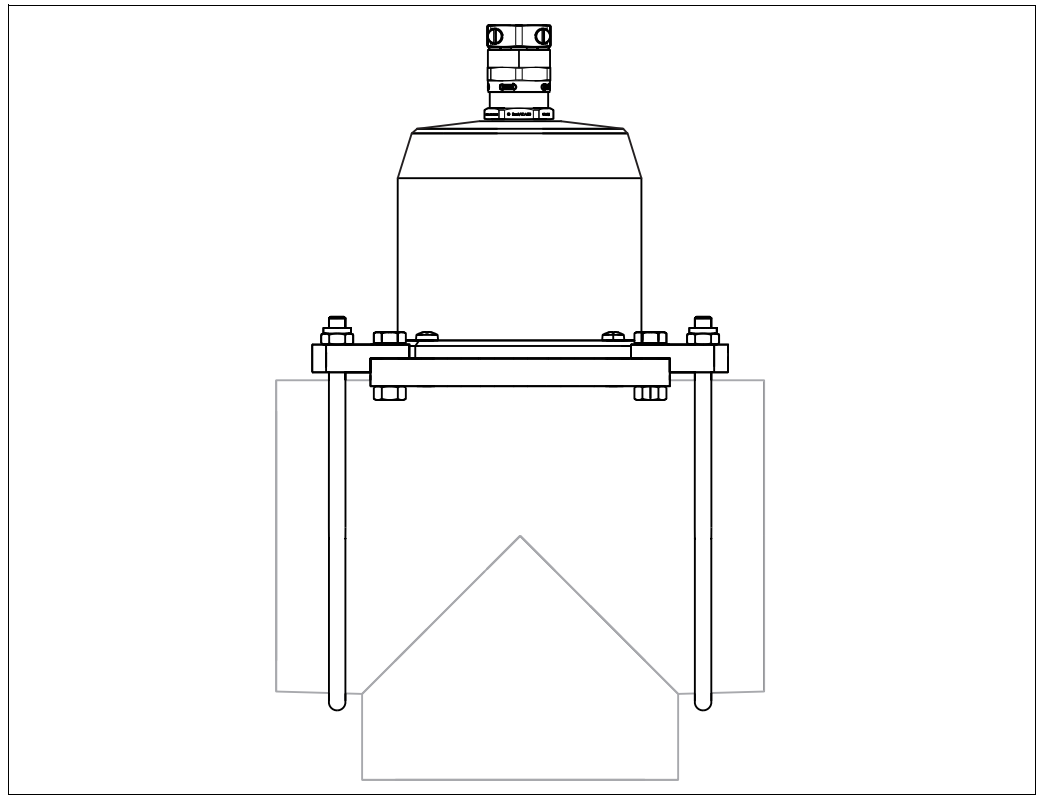
*Ultrasonic transducer on Flowfit CUA252 assembly*

#### With Flowfit CUA262 flow assembly

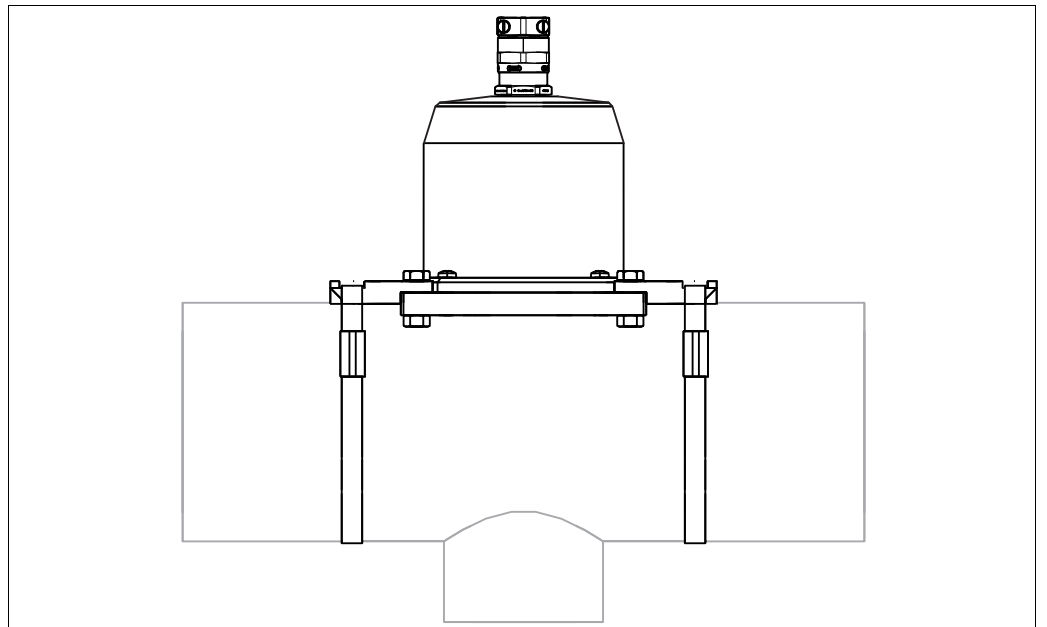


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*Ultrasonic transducer on Flowfit CUA262 assembly*

**With assembly CUS31***Ultrasonic transducer with assembly of CUS31*

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**Mounted on a pipe***Ultrasonic transducer mounted on a pipe*

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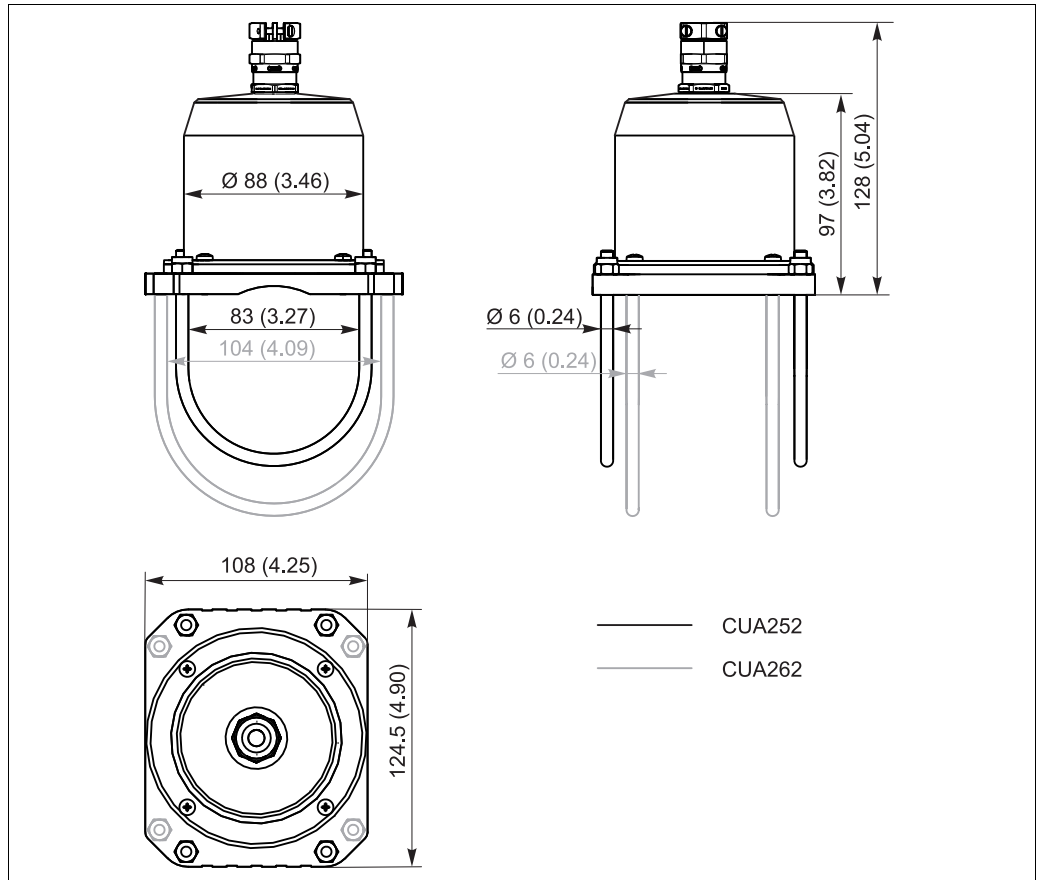
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## Environment

<b>Ambient temperature range</b>	Ultrasonic transducer:	0 to 60 °C (32 to 140 °F), non-freezing, non-condensing
	Ultrasonic generator:	-10 to +60 °C (+14 to 140 °F), non-condensing
<b>Storage temperature</b>	0 to 60 °C (32 to 140 °F)	
<b>Electromagnetic compatibility</b>	Interference emission and interference immunity as per EN 61326-1:2006, EN 61326-2-3:2006	
<b>Degree of protection</b>	Ultrasonic transducer:	IP 68
	Ultrasonic generator:	IP 66/67
<b>Humidity</b>	10 to 95 %, non-condensing	

## Mechanical construction

### Dimensions ultrasonic transducer

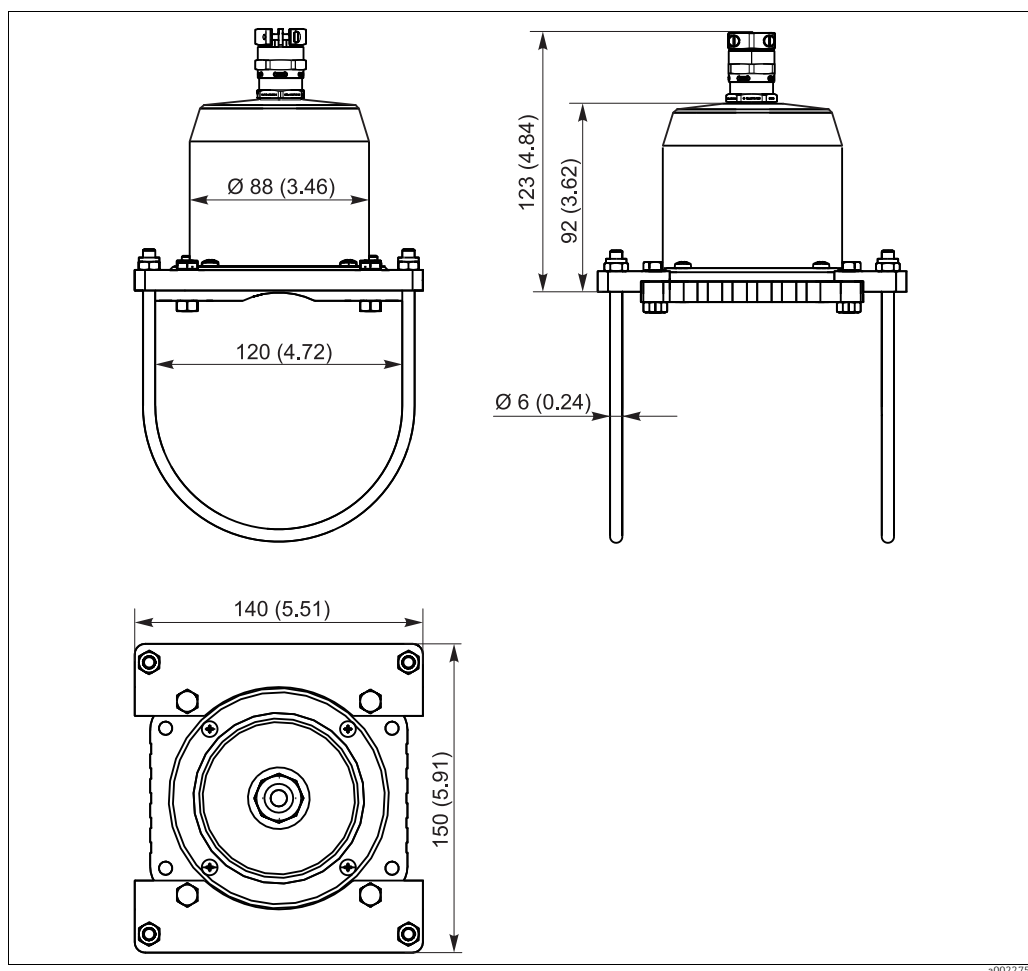


Dimensions in mm (inch) for CUA252 and CUA262

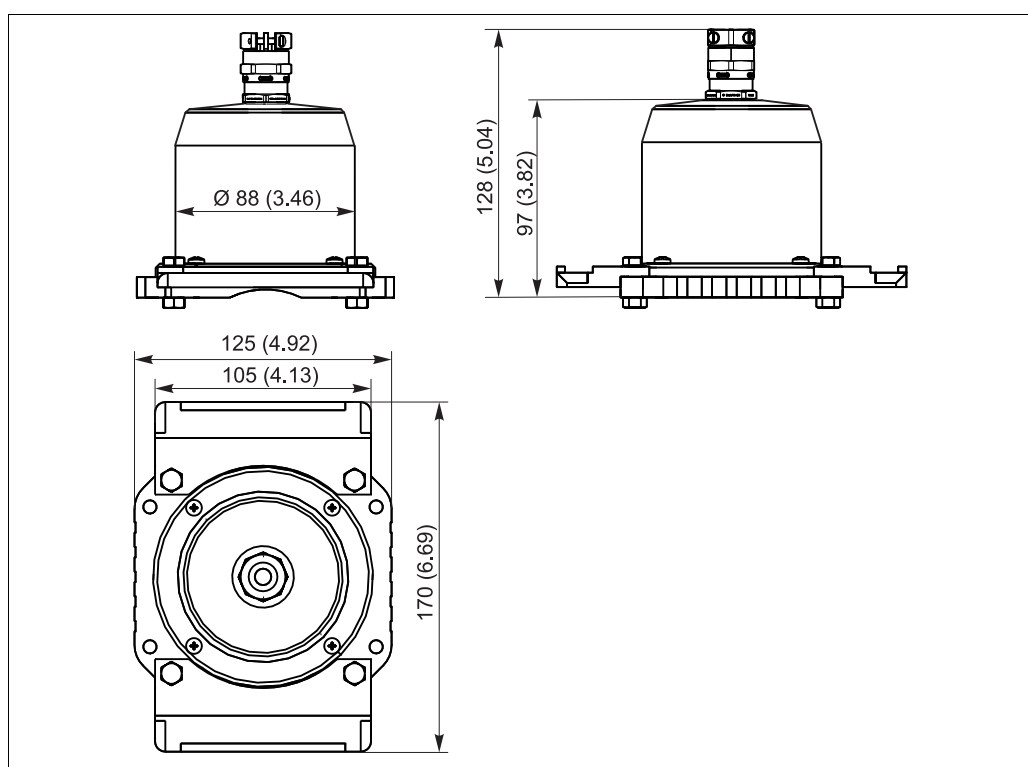
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In the case of the ultrasonic transducer factor in a clearance of approx. 100 mm (4 inch) above the cable gland for the power supply cable.



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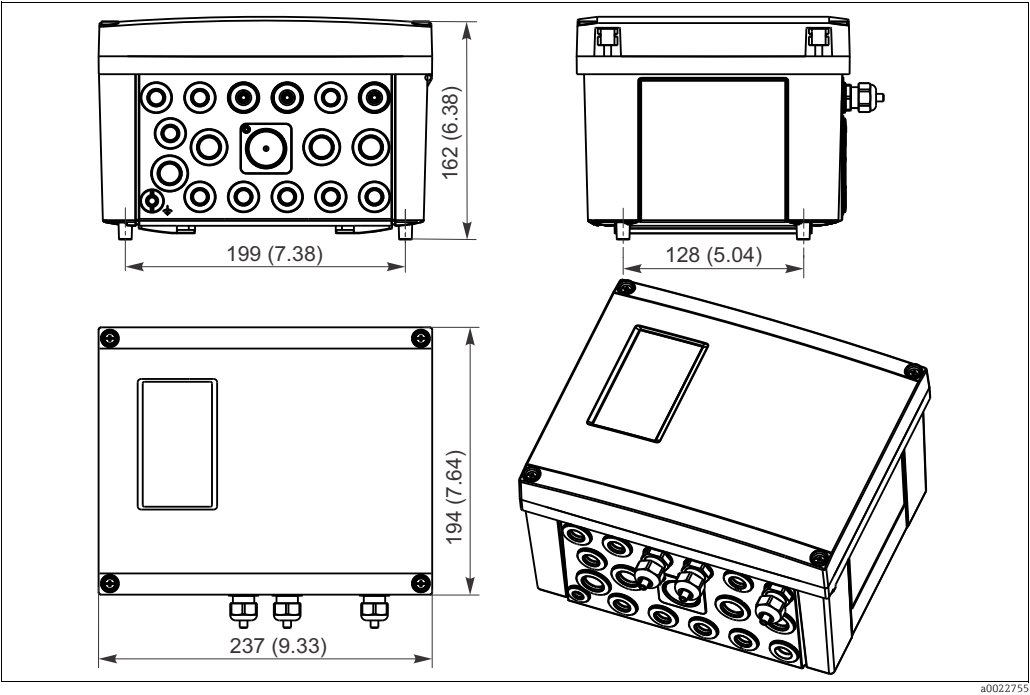
*Dimensions in mm (inch) for assembly of CUS31*

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*Dimensions in mm (inch) for pipe mounting*



Dimensions ultrasonic generator



<b>Weight</b>	Ultrasonic transducer:	0.72 kg (1.59 lbs), with 3 m cable
	Ultrasonic generator:	2.2 kg (4.85 lbs)
<b>Materials</b>	Ultrasonic transducer	
	Cover:	PE
	Floor:	Aluminum
	Cable:	TPE-U mix; 3xLi9Y 0.75; sheath: Ø 6.6 mm
		Minimum bending radius: 66 mm (2.6 inch) when cable can move freely
		33 mm (1.3 inch) when cable cannot move freely
	Ultrasonic generator	
	Housing:	PC-FR
	Housing seal:	EPDM
	Cable glands:	Polyamide


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## Ordering information

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<b>Product page</b>	<p>You can create a valid and complete order code online using the Configurator tool:</p> <p>Enter the following addresses in your browser to access the product page: <a href="http://www.endress.com/cyr52">www.endress.com/cyr52</a></p>
<b>Product configurator</b>	<p>On the right-hand side of the product page, you will find the navigation area:</p> <ol style="list-style-type: none"><li>1. Under "Device Support", click "Configure your selected product". ↳ The Configurator opens in a new window.</li><li>2. Configure the device according to your requirements by selecting all options. ↳ This ensures that you will receive a valid and complete order code.</li><li>3. Export the order code as a PDF or Excel file. To do so, click on the relevant button at the top of the selection window.</li></ol>
<b>Scope of delivery</b>	<p>The scope of delivery of the ultrasonic cleaning system comprises:</p> <ul style="list-style-type: none"><li>■ 1 Ultrasonic generator</li><li>■ 1 Ultrasonic transducer</li><li>■ Mounting material depending on the order version</li><li>■ 1 Set of Operating Instructions BA01300C/07/EN</li></ul>

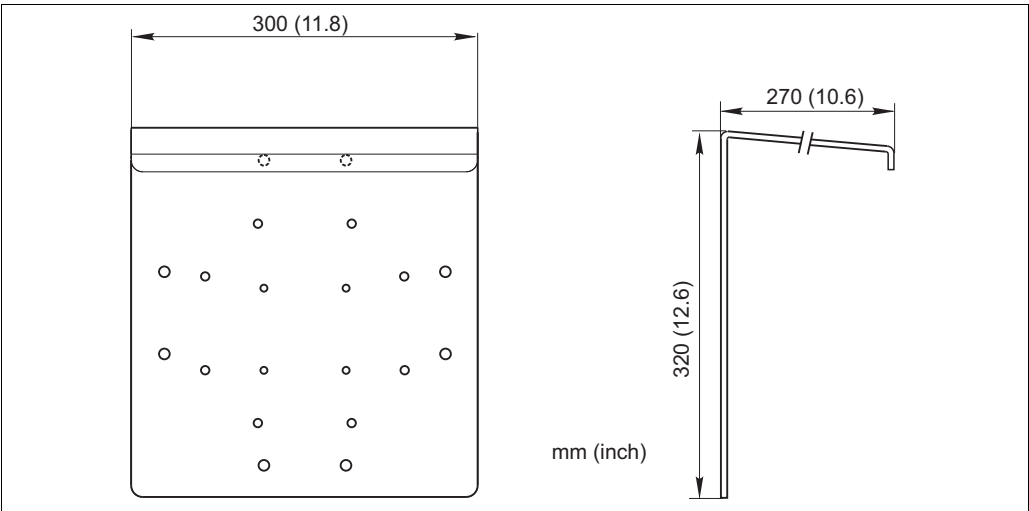
Accessories

 The most important accessories available at the time this document went to print are listed below. Contact your Service Department or sales center for accessories that are not listed here.

Installation accessories	Description	Order number
	Mounting paste for CYR52	71242140
	Mounting kit for CUA252	71242141
	Mounting kit for CUA262	71242142
	Mounting kit for flow assembly CUS31 E/S	71242143
	Mounting kit, variable	71242145
	Post mounting kit for securing the ultrasonic generator to horizontal and vertical posts and pipes	71096920

The CYY101 weather protection cover for field devices is absolutely essential

- Material: stainless steel 1.4301 (AISI 304)
- Order No. CYY101-A



Weather protection cover for field devices

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[www.addresses.endress.com](http://www.addresses.endress.com)

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