

# Technical Information

## FAR53

### Spacer tube



Universal spacer tube for the process separation, suitable for high temperature applications

#### Application

- Process adapter for the Soliwave microwave barrier and the Solimotion flow indicator
- Reliable separation of device and process (with optional transmission window)

#### Properties

- Process temperatures up to +450 °C (+842 °F)
- Process pressure: 80 to 110 kPa (0.8 to 1.1 bar) absolute
- Process connection:
  - Without
  - Connection thread (R 2 acc. to EN 10226, 2 NPT acc. to ANSI/ASME or G 2 acc. to ISO 228-1)
- Length of spacer tube up to 2000 mm (78.74 in)
- Materials:
  - Spacer tube: Stainless steel 1.4571 (316Ti) or steel 1.0345 (P235GH)
  - Window transmission (optional): Aluminium oxide ceramics

#### Your benefits

- Effective separation (like temperature, dust and dirt) of the devices of the Soliwave microwave barrier and Solimotion flow indicator from the process
- Devices can be replaced during operation (hot-swap)
- Simple installation that is easily adapted to your individual application
- Ideally suited for applications with inner lining (e.g. chamotte) or vessels with outer insulation
- No wear on installed devices
- Special versions (dimensions and material) are available on request

---

## Performance characteristics

---

### Operating conditions

#### Process temperature

-40 to +450 °C (-40 to +842 °F)

#### Process pressure

(80 to 110 kPa (0.8 to 1.1 bar) absolute

#### NOTICE

- The maximum process temperature given is guaranteed for operation without noteworthy pressure strain (pressureless).
- The maximum allowable temperature at the device has to be observed in any case!

---

### Material

- Stainless steel 1.4571 (316Ti) or steel 1.0345 (P235GH)
- Transmission window (optional): Aluminium oxide ceramics

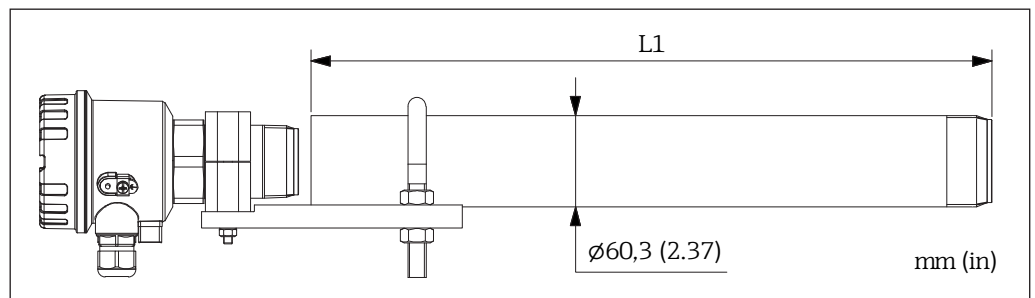
---

### Process connection

- Without
- R 2 acc. to EN 10226
- 2 NPT acc. to ANSI/ASME
- G 2 acc. to ISO 228-1

## Mechanical construction

### Design, dimensions



### Weight

The weight depends on version and process connection, for example:

- FAR53-AAACG31  
Spacer tube without process connection thread, length L1 = 200 mm (7.87 in),  
material steel 1.0345 (P235GH)  
Weight 5.3 kg (11.7 lbs)
- FAR53-XG2DL32  
Spacer tube with process connection thread R 2, EN 10226, length L1 = 2000 mm (78.74 in),  
material stainless steel 1.4571 (316Ti)  
Weight 22.2 kg (48.9 lbs)

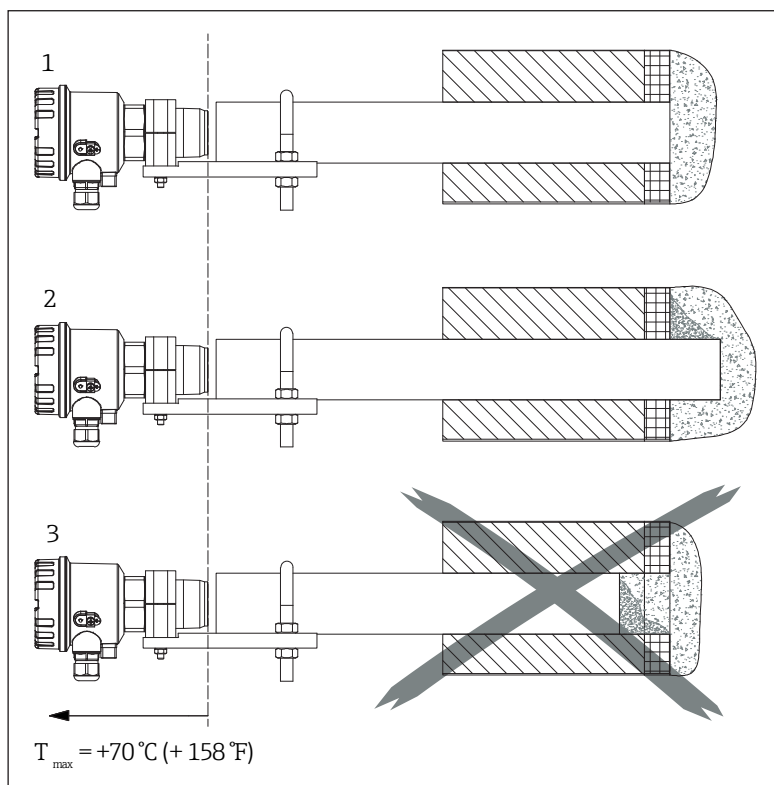
## Installation condition

### Orientation

- The spacer tube can be installed in any position.
- Enough space must be present for installation and removal of the adapter and devices.
- Due to the weight of the longer spacer tubes, they have to be supported in a suitable manner.

### Installation instructions

For utilization of the Soliwave microwave barrier, take care that the spacer tubes for transmitter and transceiver are positioned directly opposite of each other (see relevant Technical Information as well).



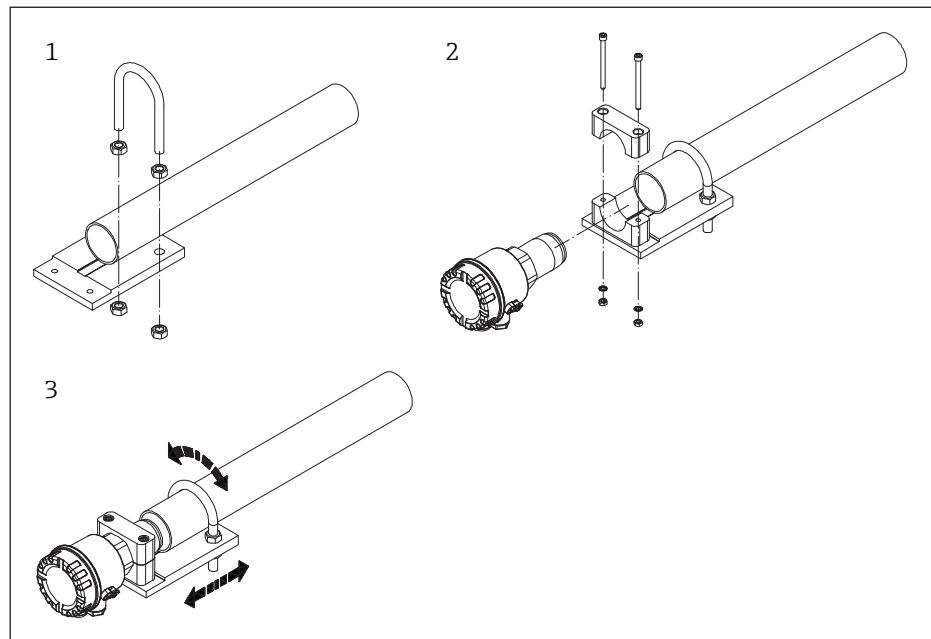
The spacer tube should be mounted in such a way, that it is flush with the inner vessel wall (1). Alternatively, the spacer tube can protrude slightly into the process (2), as long as he stands no risk of being damaged by falling media. A recessed position (3) must be avoided, because media can accumulate there, impairing the function of the devices.

## Installation

### Installation instructions

The Soliwave microwave barrier and the Solimotion flow indicator are fixed to the mounting plate via a mounting bracket. The plate in turn is secured on the spacer tube by a u-bolt.

1. Secure mounting plate on the installed spacer tube; tighten nuts lightly
2. Install the devices of the Soliwave microwave barrier or the Solimotion flow indicator in the mounting bracket
3. Adjust the position axially and radially, taking care that the gap between the device and the spacer tube is at a minimum; tighten the nuts of the u-bolt



### NOTICE

- The installation via mounting bracket and u-bolt allows for optimal axial adjustment of the Soliwave microwave barrier, the transmitter FQR57 and the transceiver FDR57 can be moved by  $\pm 10$  mm along their longitudinal axis.
- Due to the weight of the longer spacer tubes, they have to be supported in a suitable manner.

## Ordering information

### Product structure

Detailed ordering information is available from the following sources:

- In the Product Configurator on the Endress+Hauser website: [www.endress.com](http://www.endress.com) → Select your country → Products → Select measuring technology, software or components → Select the product (picklists: measurement method, product family etc.) → Device support (right-hand column): Configure the selected product → The Product Configurator for the selected product opens.
- From your Endress+Hauser Sales Center: [www.addresses.endress.com](http://www.addresses.endress.com)

<b>010</b>	<b>Process connection</b>
AAA	Without
VF2	Thread 2 NPT, ANSI/ASME
WG2	Thread G 2, ISO 228-1
XG2	Thread R 2, EN 10226
<b>020</b>	<b>Tube length L1</b>
CG	200 mm (7.87 in)
CI	300 mm (11.81 in)
CJ	400 mm (15.75 in)
CK	500 mm (19.69 in)
CL	600 mm (23.62 in)
CM	700 mm (27.56 in)
CN	800 mm (31.50 in)
CP	900 mm (35.43 in)
DA	1000 mm (39.37 in)
DG	1500 mm (59.06 in)
DL	2000 mm (78.74 in)
<b>030</b>	<b>Transmission window</b>
1	Without
3	Aluminium oxide ceramics
<b>040</b>	<b>Material</b>
1	Steel 1.0345 (P235GH)
2	Stainless steel 1.4571 (316Ti)



Special versions (dimensions and material) are available on request.



---

中国E+H技术销售 [www.ainstru.com](http://www.ainstru.com)  
电话: 18923830905  
邮箱: [sales@ainstru.com](mailto:sales@ainstru.com)