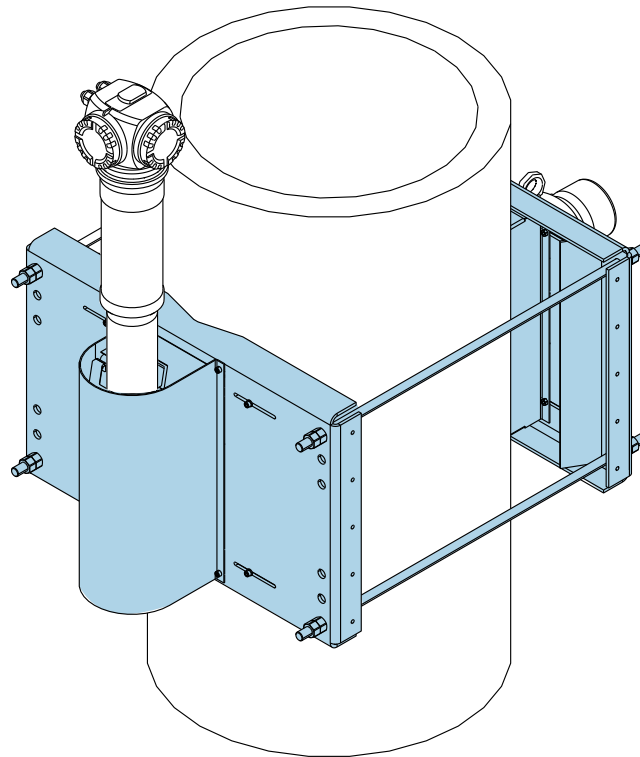


Special Documentation

FHG61

Clamping device for density measurement with protective guard

For pipes with diameters of 200 to 1000 mm



1 Document information

1.1 Document function





This document describes the individual components of the clamping device used to secure a radiometric measuring system to pipes with diameters of 200 mm to 1000 mm.

The radiometric measuring system comprises an FQG61 or FQG62 source container and the Gammapilot M FMG60.




Clamping devices with a clamping range of 200 to 420 mm can be ordered with an optional locking screw. This can be used as an additional means of locking the position of the GammapilotM FMG60.

1.2 Symbols used

1.2.1 Safety symbols

| Symbol | Meaning |
|--|--|
|  DANGER | DANGER! This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury. |
|  WARNING | WARNING! This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in serious or fatal injury. |
|  CAUTION | CAUTION! This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or medium injury. |
|  NOTICE | NOTE! This symbol contains information on procedures and other facts which do not result in personal injury. |



1.2.2 Symbols for certain types of information

| Symbol | Meaning |
|---|--|
|  A0011182 | Permitted Indicates procedures, processes or actions that are allowed. |
|  A0011184 | Forbidden Indicates procedures, processes or actions that are forbidden. |
|  A0011193 | Tip Indicates additional information. |

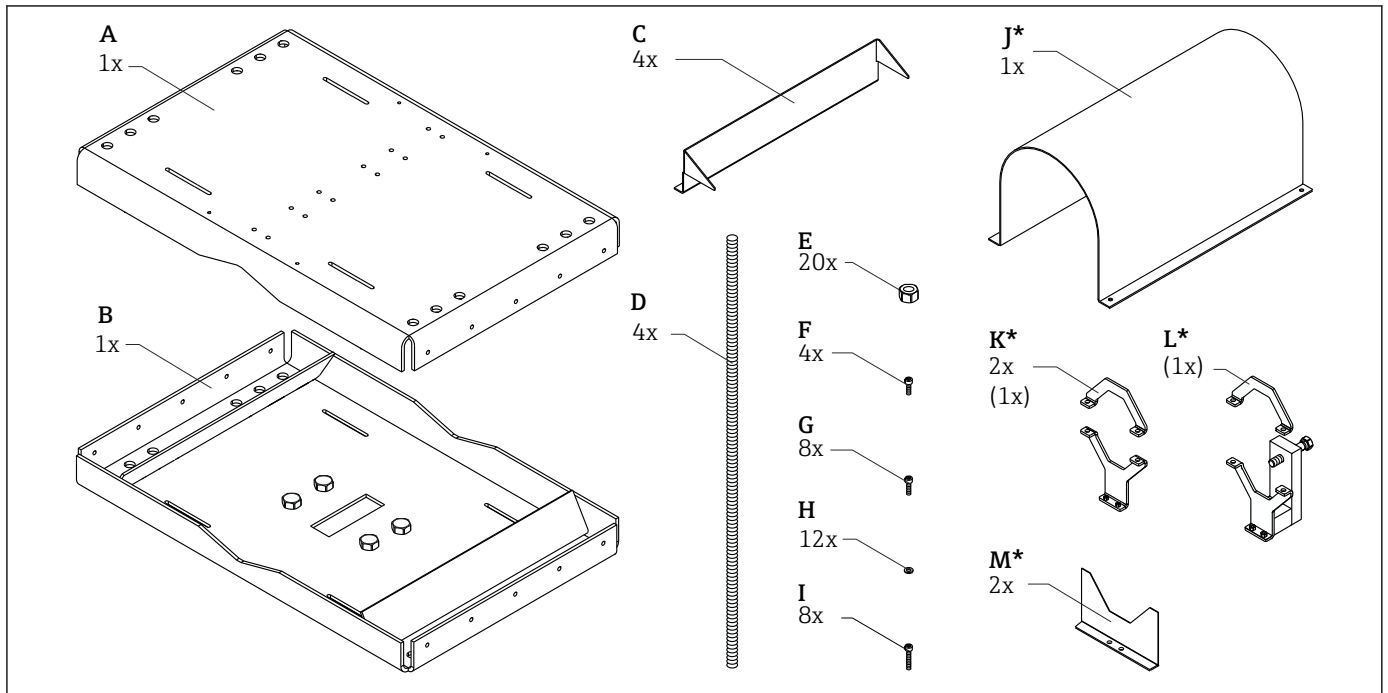
1.2.3 Symbols in graphics

| Symbol | Meaning |
|----------------|-----------------|
| 1., 2., 3. ... | Series of steps |
| A, B, C, ... | Item numbers |

1.2.4 Tools list

| Symbol | Meaning |
|---|---|
|  | AF24 mm, AF18 mm (only for version with locking screw) |
|  | AF5 mm |

2 Components

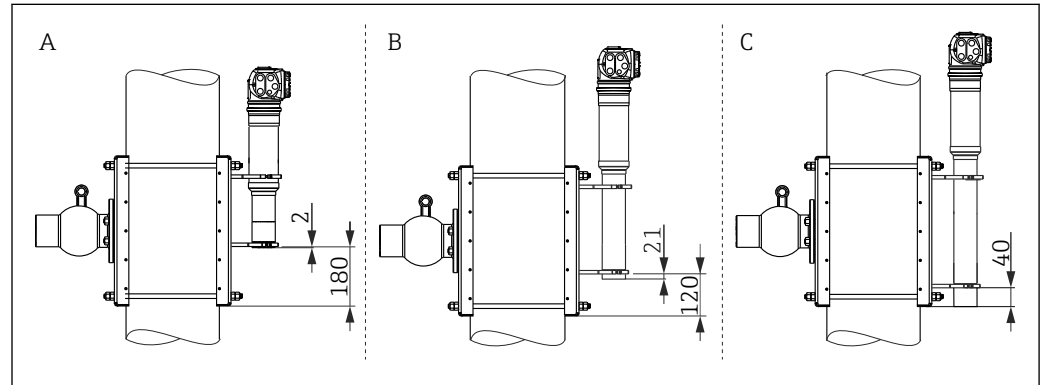


| Position | Component part | Material | Comments |
|----------|----------------------------------|---------------|------------------------|
| A | Holding plate FMG60 | 316L (1.4404) | |
| B | Holding plate FQG61, FQG62 | 316L (1.4404) | |
| C | Protective guard | 316L (1.4404) | |
| D | Threaded rods DIN976-1 M16 | A4 | |
| E | Nut DIN EN ISO4032 M16 | A4 | |
| F | Screw DIN EN ISO4762 M6x12 | A4 | |
| G | Screw DIN EN ISO4762 M6x16 | A4 | |
| H | Washer ISO7089 Ø6 | A4 | |
| I | Screw DIN EN ISO4762 M6x20 | A4 | |
| J | Protection cover | 316L (1.4404) | |
| K | Bracket FMG60 | 316L (1.4404) | * depending on version |
| L | Bracket FMG60 with locking screw | 316L (1.4404) | * depending on version |
| M | Protective cover | 316L (1.4404) | * depending on version |

3 Mounting position

- Preferred mounting position of the Gammapilot M FMG60 with terminal head at the top.
If this is not possible, support the Gammapilot M FMG60 to prevent it from slipping.
- Preferred mounting position of source container FQG61, FQG62 with lifting eye at the top.

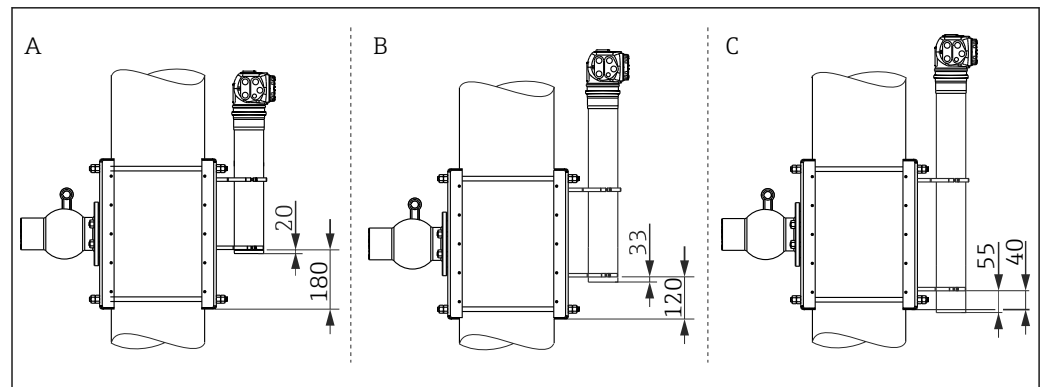
3.1 FMG60 without water cooling jacket or collimator



A0036404

- A NaI crystal
- B Scintillator 200 mm
- C Scintillator 400 mm

3.2 FMG60 with water cooling jacket or collimator



A0036405

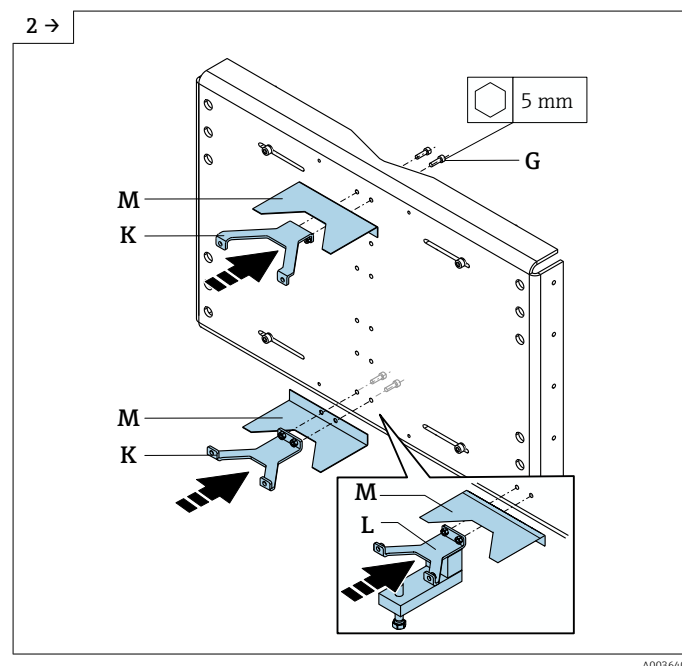
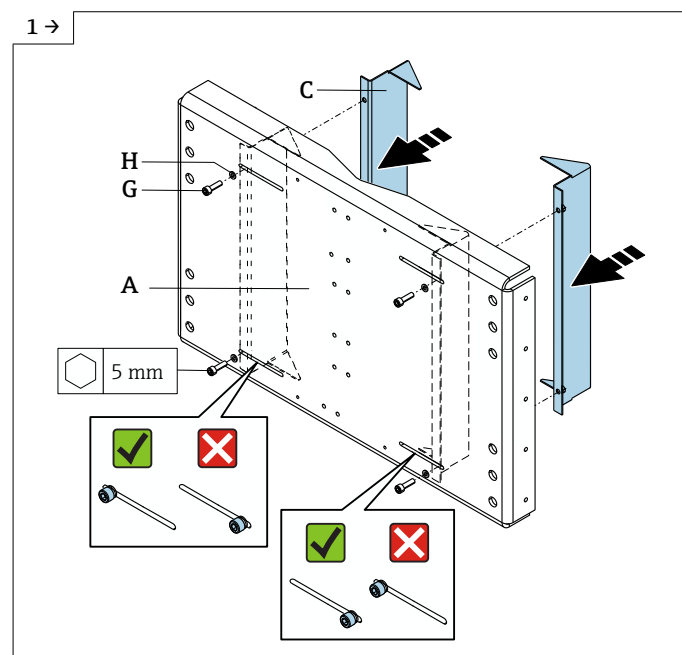
- A NaI crystal
- B Scintillator 200 mm
- C Scintillator 400 mm

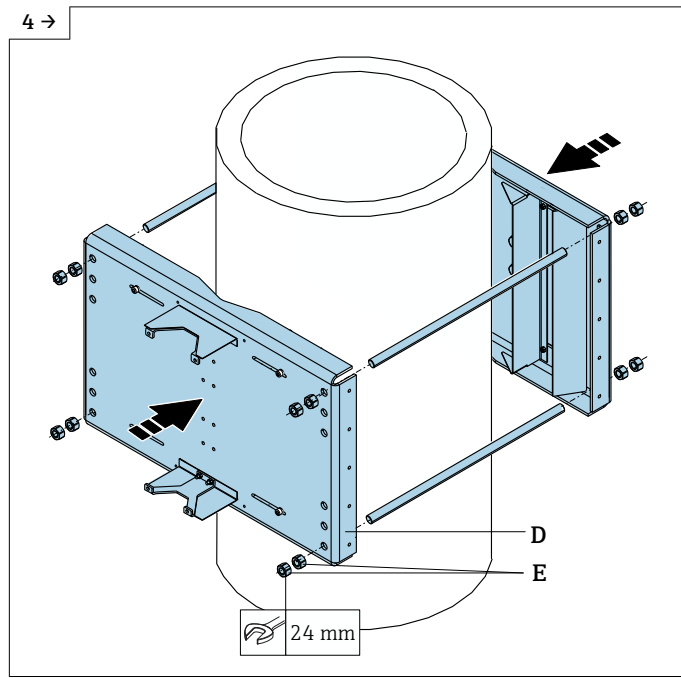
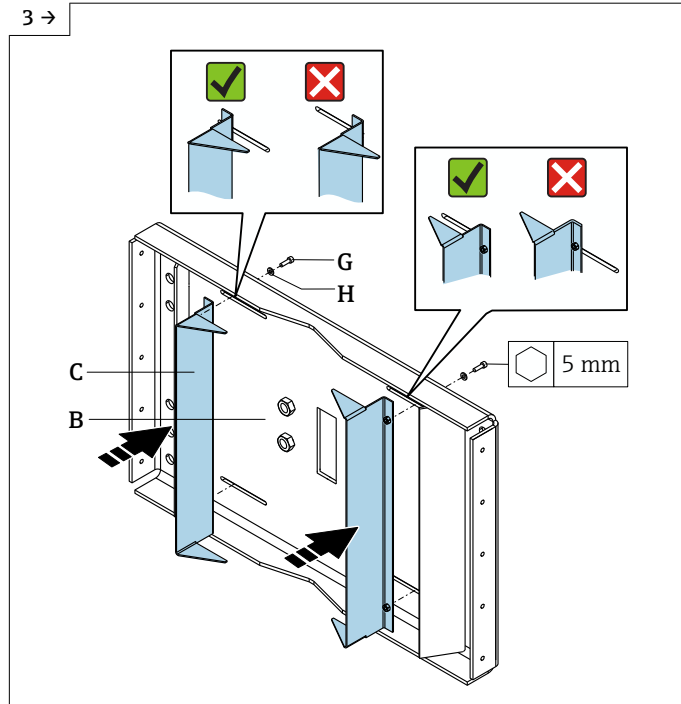
4 Installation

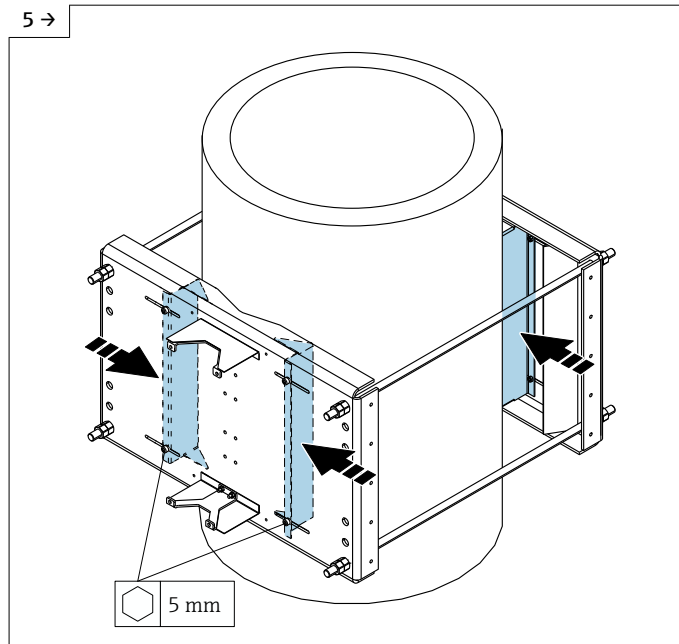
4.1 Mounting instructions

- Two people are required for installation.
- We recommend the use of hoists, as the individual components and measuring devices are very heavy.
- Always mount the clamping device first and then the measuring devices.
- Note the mounting position of the Gammapiilot M FMG60 (section 3).
- Shorten any protruding threaded rods to avoid injury.
- In the case of the FQG61 and FQG62, ensure that the lifting eye bolt is aligned.

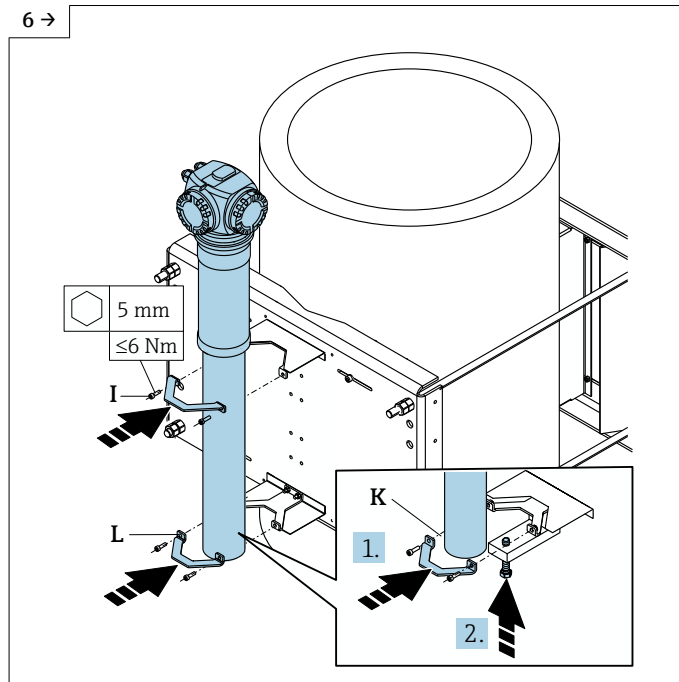
4.2 Procedure





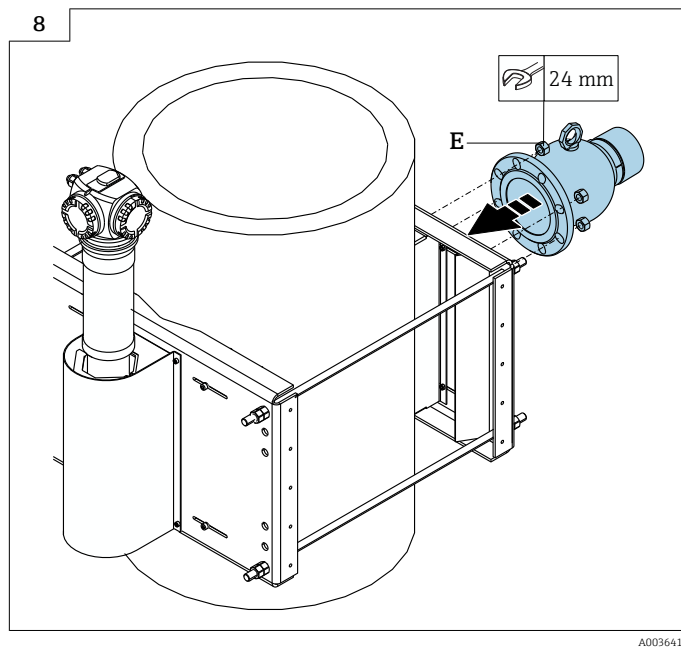
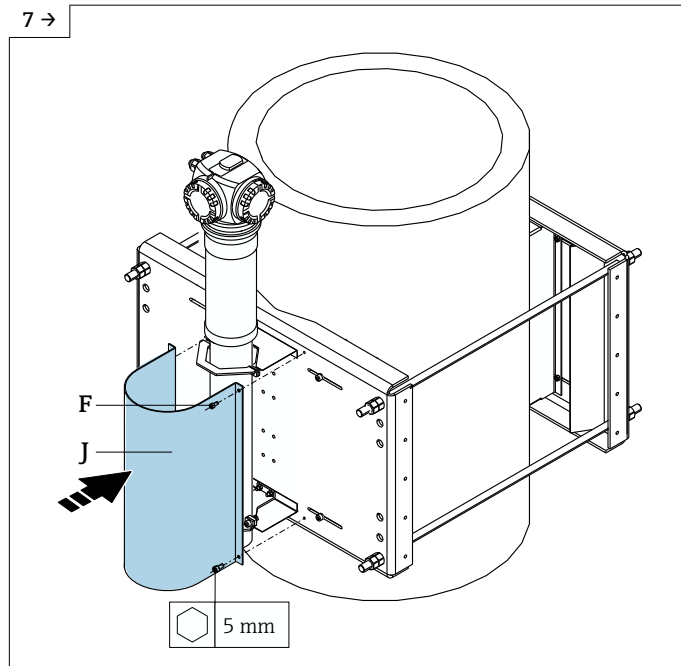


A0036412

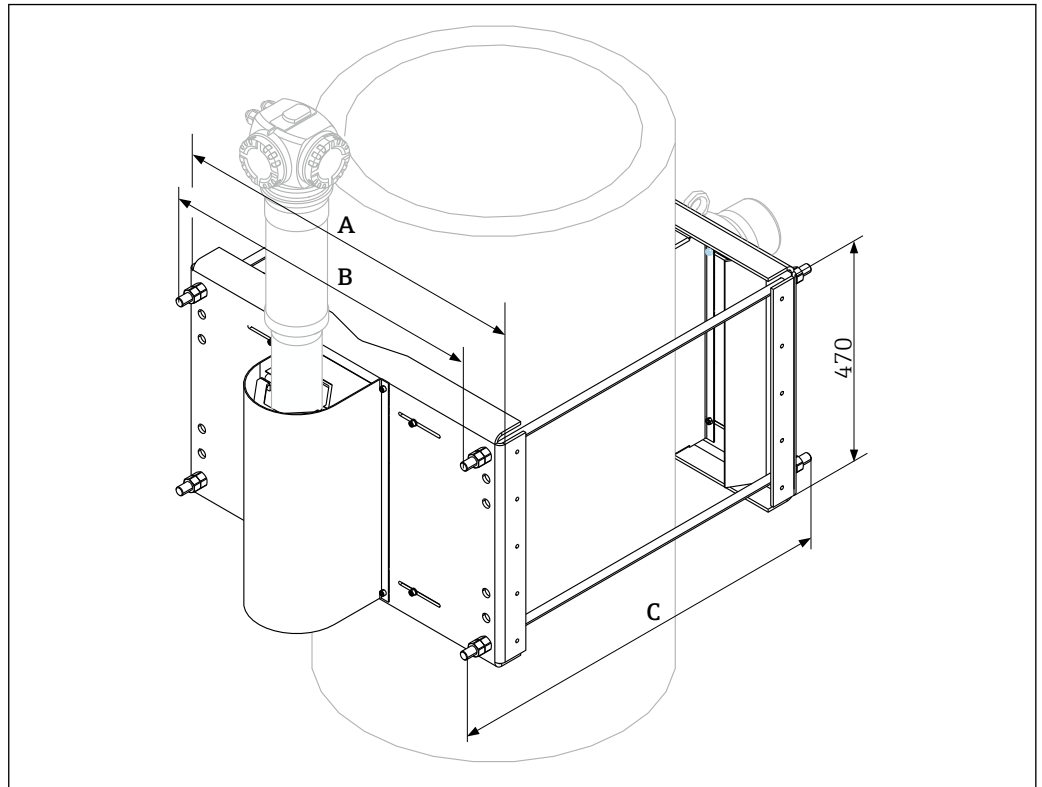


A0036413

- For versions with locking screw: Use the locking screw to adjust the Gammapiilot M FMG60 so that the exact distances (see section 3) are maintained and fixed.



5 Dimensions and weight



A0036406

1 Engineering unit: mm

| Clamping area | A | B | C | Weight |
|---------------|-----|-----|-----|--------|
| 200 to 420 | 544 | 480 | 600 | 46 kg |
| 400 to 600 | 650 | 510 | 750 | 60 kg |
| 600 to 800 | 700 | 570 | 750 | 70 kg |
| 800 to 1000 | 700 | 620 | 800 | 80 kg |



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