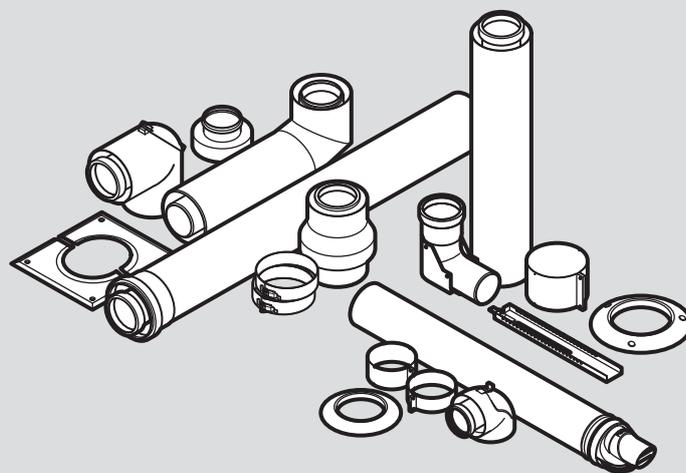




**ecoFIT sustain, ecoFIT pure,  
ecoTEC sustain, ecoTEC pro,  
ecoTEC plus, ecoTEC exclusive**

VU../VUW../VUI..



# Air/flue pipe installation manual

## Contents

<b>1</b>	<b>Safety</b> .....	<b>3</b>
1.1	Action-related warnings .....	3
1.2	Intended use .....	3
1.3	General safety information .....	3
1.4	UKCA/CE certification.....	5
1.5	Regulations (directives, laws, standards).....	5
<b>2</b>	<b>Notes on the documentation</b> .....	<b>6</b>
2.1	Observing other applicable documents .....	6
2.2	Storing documents.....	6
2.3	Validity of the instructions .....	6
<b>3</b>	<b>Certified air/flue systems and components</b> .....	<b>7</b>
3.1	System overview, 60/100 mm diameter – products until 2024 .....	7
3.2	System overview, 60/100 mm diameter – products from 2024.....	8
3.3	System overview, 80/125 mm diameter .....	9
<b>4</b>	<b>System conditions</b> .....	<b>10</b>
4.1	Route of the air/flue pipe in buildings .....	10
4.2	Location of the terminal .....	10
4.3	Disposing of condensate .....	10
4.4	Maximum pipe lengths.....	10
<b>5</b>	<b>Set-up</b> .....	<b>14</b>
5.1	Installation instructions for 60/100 mm diameter and 80/125 mm diameter.....	14
5.2	Horizontal wall/roof duct – 0020219517 – diameter 60/100 mm.....	15
5.3	Horizontal telescopic wall/roof duct – 0020219518 – diameter 60/100 mm.....	16
5.4	Connecting the product .....	17
5.5	Direct, rear, telescopic wall duct – 0020228140 – diameter 60/100 mm .....	17
5.6	Installing terminal sets for 60/100 mm diameter air/flue systems.....	18
5.7	Horizontal wall/roof duct – 303933 – 0010035512 – diameter 60/100 mm.....	22
5.8	Direct, rear wall duct – 303933 – 0010035512 – 60/100 mm diameter .....	24
5.9	Horizontal wall duct – 0010024718 – diameter 60/100 mm.....	24
5.10	Horizontal wall/roof duct – 0010039324 – 0010039327 – 60/100 mm diameter.....	28
5.11	Horizontal telescopic wall/roof duct – 0010039333 – diameter 60/100 mm.....	29
5.12	Connecting the product .....	30
5.13	Direct, rear, telescopic wall duct – 0010039336 – diameter 60/100 mm .....	31
5.14	Installing terminal sets for 60/100 mm diameter air/flue systems.....	32
5.15	Horizontal wall/roof duct – 303209 or 0010035777 – diameter 80/125 mm.....	38
5.16	Installing the vertical roof duct .....	39
5.17	Installing the flue gas pipe on the external wall.....	43
5.18	Installing the concentric connection, 60/100 mm diameter, to the air/flue system for negative pressure .....	48
5.19	Installing the sliding sleeve, elbows and extensions.....	50
<b>Index</b> .....		<b>55</b>

# 1 Safety

## 1.1 Action-related warnings

### Classification of action-related warnings

The action-related warnings are classified in accordance with the severity of the possible danger using the following warning symbols and signal words:

#### Warning symbols and signal words



#### **Danger!**

Imminent danger to life or risk of severe personal injury



#### **Danger!**

Risk of death from electric shock



#### **Warning.**

Risk of minor personal injury



#### **Caution.**

Risk of material or environmental damage

## 1.2 Intended use

The air/flue pipes described here are constructed using state-of-the-art technology in accordance with the recognised safety rules and regulations. Nevertheless, there is still a risk of injury or death to the system's end user or others or of damage to the products and other property in the event of improper use or use for which the products are not intended.

The air/flue pipes mentioned in these instructions must only be used in conjunction with the product types mentioned in these instructions.

Any other use that is not specified in these instructions, or use beyond that specified in this document, shall be considered improper use.

Intended use includes the following:

- observance of accompanying operating, installation and maintenance instructions for all system components
- installing and setting up the product in accordance with the product and system approval
- compliance with all inspection and maintenance conditions listed in the instructions.

## 1.3 General safety information

### 1.3.1 Risk caused by inadequate qualifications

The following work must only be carried out by competent persons who are sufficiently qualified to do so:

- Set-up
  - Dismantling
  - Installation
  - Start-up
  - Inspection and maintenance
  - Repair
  - Decommissioning
- ▶ Proceed in accordance with current technology.

### 1.3.2 Risk of poisoning due to escaping flue gas

Improperly installed flue pipework may cause flue gas to escape.

- ▶ Before starting up the product, check that the whole air/flue pipe is securely fastened and check it for tightness.

The flue pipework may become damaged by unforeseeable external influences.

- ▶ As part of the annual maintenance, inspect the flue system in terms of:
  - external faults such as brittleness and damage
  - safe pipe connections and secure fastenings

### 1.3.3 Risk of death from escaping flue gas

- ▶ Ensure that all inspection and test openings in the air/flue pipe that are within the building and can be opened are always closed for start-up and during operation.

Flue gas may escape from leaking pipes or damaged seals. Mineral-oil-based greases can damage the seals.

- ▶ Do not install any damaged pipes.
- ▶ Deburr and chamfer the ends of the pipes before installing them, and dispose of the shavings.
- ▶ Never use mineral-oil-based grease for the installation.
- ▶ To facilitate installation, use only water or commercially available soft soap. If a

lubricant is supplied with the product, use this lubricant.

Mortar residues, shavings, etc., in the flue gas route may prevent the flue gas from flowing outdoors as intended, and this flue gas may escape into the dwelling instead.

- ▶ After installation, remove all mortar residues, shavings, etc., from the air/flue pipe.

### 1.3.4 Risk of death from leaks in the flue gas route

Extensions that are not fixed to the wall or ceiling may become disengaged due to sagging or thermal expansion.

- ▶ Ensure that every extension is fixed to the wall or ceiling by means of a pipe clamp. The distance between two pipe clamps must not be greater than the length of the extension, and must not exceed 2 m.
- ▶ For changes of direction just upstream of the elbow, install another pipe clamp.

Condensate that collects inside the flue in certain areas can damage the flue pipework seals.

- ▶ Install the horizontal flue pipe to the product with a downward gradient.
  - Downward gradient to the product: 3°



#### Note

3° corresponds to a downward gradient of approx. 56 mm per metre of pipe length.

### 1.3.5 Risk of fire and damage to electronics caused by lightning

- ▶ If the building is equipped with a lightning protection system, incorporate the air/flue pipe into the lightning protection.
- ▶ If the flue pipework (parts of the air/flue pipe situated outside the building) contains metal materials, incorporate it into the potential equalisation system.

### 1.3.6 Risk of injury from ice formation

Where air/flue pipes penetrate the roof, the water vapour contained in flue gas may precipitate as ice on the roof or the roof structures.

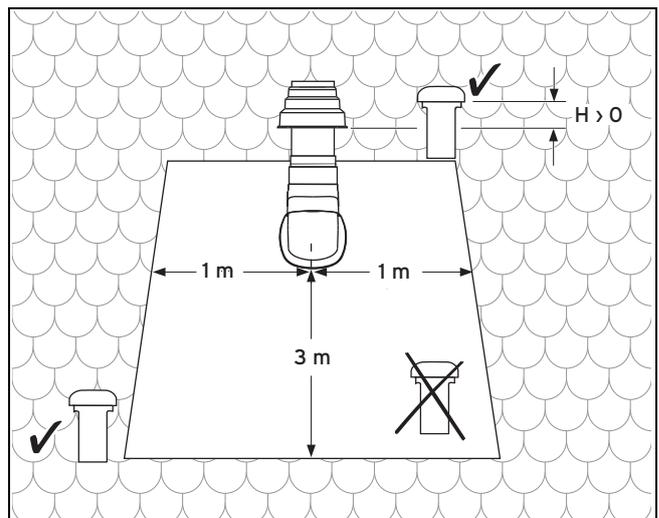
- ▶ Ensure that this ice formation does not slide from the roof.

### 1.3.7 Risk of damage to the structure of the building due to moisture

As a result of improper installation, water may penetrate the building and cause material damage.

- ▶ Observe the definitions in the directives for the planning and implementation of roofs with seals.

### 1.3.8 Product damage caused by adjacent channel vents



Extremely damp extract air escapes from the channel vents. This may condense in the air pipe and cause damage to the product.

- ▶ Observe the requirements for minimum clearances in accordance with the figure.

### 1.3.9 Requirements for the air/flue terminal

As a result of improper installation, water may penetrate the building and cause material damage.

- ▶ Observe the requirements for the air/flue terminal in the boiler's installation instructions.



## 1.4 UKCA/CE certification

The heat generators are certified as gas-fired boilers with associated flue systems in accordance with the Gas Appliances Regulation (EU) 2016/426. This set-up instructions are a component of the certification and are cited in the type test certificate. In compliance with the regulatory statutes of these set-up instructions, the proof of usability of the elements identified by Vaillant article numbers that are designed for the air/flue pipe is provided. If you do not use certified Vaillant air/flue pipe elements when installing the heat generators, this voids the UKCA/CE conformity of the heat generator. We therefore strongly recommend that you fit Vaillant air/flue systems.

## 1.5 Regulations (directives, laws, standards)

- ▶ Observe the national regulations, standards, directives, ordinances and laws.

## **2 Notes on the documentation**

### **2.1 Observing other applicable documents**

- ▶ You must always observe the installation instructions for the installed heat generator.

### **2.2 Storing documents**

- ▶ Pass these instructions and all other applicable documents on to the end user.

### **2.3 Validity of the instructions**

These instructions apply only for the heat generators named in the other applicable documents, hereinafter referred to as the "product".

### 3 Certified air/flue systems and components

#### 3.1 System overview, 60/100 mm diameter – products until 2024

	Article number	Air/flue systems, concentric
A	0020223472	Vertical roof duct (black, RAL 9005), with collar
B	303982	Vertical ridge roof duct
C	0020228140 <sup>1</sup>	Direct, rear-side, telescopic flue system
D	0020219517 <sup>1</sup>	Horizontal wall duct, 0.7 m
	0020219519 <sup>1</sup>	Horizontal wall duct, 1.7 m
E	0020219518 <sup>1</sup>	Horizontal telescopic wall duct (only available in black)
F	0010035512 <sup>2</sup>	Horizontal wall duct, 0.7 m for multi-storey buildings
G	0010024718 <sup>2</sup>	Horizontal wall duct, for balcony installation and for installing the variable terminal set (VTK) in multi-storey buildings
H	303933 <sup>1</sup>	Horizontal wall duct, 0.7 m

1) In accordance with the construction regulation, installation in buildings higher than 18 m (11 m in Scotland) is not permitted.

2) In accordance with the construction regulation, installation in buildings higher than 18 m (11 m in Scotland) is permitted.

The following table lists the air/flue systems that are permitted as part of the system certification, along with their certified components.

##### 3.1.1 Components

The following table lists the air/flue systems that are permitted as part of the system certification, along with their certified components.

Optional connection accessories	Article number	A	B	C	D	E	F	G	H
Extension (PP), concentric, 470 mm, 60/100 mm diameter	303902	X	X		X	X	X	X	X
Extension (PP), concentric, 970 mm, 60/100 mm diameter	303903	X	X		X	X	X	X	X
Extension (PP), concentric, 1970 mm, 60/100 mm diameter	303905	X	X		X	X	X	X	X
Extension (PP), concentric, 3960 mm, 60/100 mm diameter	0020138174 <sup>1</sup>	X	X		X	X	X	X	X
45° elbow (2 pcs), concentric	303911	X	X		X	X	X	X	X
87° elbow, concentric	303910	X	X		X	X	X	X	X
Pipe clamp (5 pcs), 100 mm diameter	303821	X	X		X	X	X	X	X
Adjustable pipe clamps (3 pcs), 100 mm diameter	303935	X	X		X	X	X	X	X
Sliding sleeve	303915	X	X		X	X	X	X	X
Pitched roof tile	009076 (black)	X							
Universal pitched roof tile	303980	X							
Flat roof penetration collar	009056	X							
Telescopic extension, 440-690 mm, 60/100 mm diameter	303906	X	X		X	X	X	X	X
Telescopic offset piece	303919	X	X						
Black terminal set for horizontal air/flue pipe	0020219537				X				
Variable terminal set (VTK), black	0020219529 <sup>2</sup>			X	X	X			
Variable terminal set (VTK), white	0020219530 <sup>2</sup>				X				
Extension for variable terminal set (VTK), 60 mm diameter, 1 m, black	0020219539 <sup>2</sup>			X	X	X			
Extension for variable terminal set (VTK), 60 mm diameter, 1 m, white	0020219540 <sup>2</sup>				X				
87° elbow for variable terminal set (VTK), black	0020219543 <sup>2</sup>			X	X	X			
87° elbow for variable terminal set (VTK), white	0020219544 <sup>2</sup>				X				
45° elbow (2 pcs) for variable terminal set (VTK), black	0020219551			X	X	X			
45° elbow (2 pcs) for variable terminal set (VTK), white	0020219552				X				
Deflector set, DN 60, PP, black	0020219533			X	X	X			
Deflector set, DN 60, PP, white	0020219534				X				

1) To reduce the pipe connections that need to be inspected, 4 m extensions are offered on request. (Special delivery with minimum purchasing quantity. No returns accepted.) The required downward gradient is also 3°. A height of 224 mm is therefore required for the 4 m extension. Take the height into consideration when selecting the installation site.

2) Delivery with pipe clamps

### 3.2 System overview, 60/100 mm diameter – products from 2024

	Article number	Air/flue systems, concentric
A	0020223472	Vertical roof duct (black, RAL 9005), with collar
B	303982	Vertical ridge roof duct
C	0010039324 <sup>1</sup>	Horizontal wall duct, 0.7 m
	0010039327 <sup>1</sup>	Horizontal wall duct, 1.7 m
D	0010039333 <sup>1</sup>	Horizontal telescopic wall duct
E	0010039336 <sup>1</sup>	Direct, rear telescopic wall duct
F	0010035512 <sup>2</sup>	Horizontal wall duct, 0.7 m, for multi-storey buildings
G	0010024718 <sup>2</sup>	Horizontal wall duct, for balcony installation and for installing the variable terminal set (VTK) in multi-storey buildings

1) In accordance with the construction regulation, installation in buildings higher than 18 m (11 m in Scotland) is not permitted.  
2) In accordance with the construction regulation, installation in buildings higher than 18 m (11 m in Scotland) is permitted.

#### 3.2.1 Components

The following table lists the air/flue systems that are permitted as part of the system certification, along with their certified components.

Optional connection accessories	Article number	A	B	C	D	E	F	G
Extension (PP), concentric, 470 mm, 60/100 mm diameter	303902	X	X	X	X		X	X
Extension (PP), concentric, 970 mm, 60/100 mm diameter	303903	X	X	X	X		X	X
Extension (PP), concentric, 1970 mm, 60/100 mm diameter	303905	X	X	X	X		X	X
Extension (PP), concentric, 3960 mm, 60/100 mm diameter	0020138174 <sup>1</sup>	X	X	X	X		X	X
45° elbow (2 pcs), concentric	303911	X	X	X	X		X	X
87° elbow, concentric	303910	X	X	X	X		X	X
Pipe clamp (5 pcs), 100 mm diameter	303821	X	X	X	X		X	X
Adjustable pipe clamps (3 pcs), 100 mm diameter	303935	X	X	X	X		X	X
Sliding sleeve	303915	X	X	X	X		X	X
Pitched roof tile	009076 (black)	X						
Universal pitched roof tile	303980	X						
Flat roof penetration collar	009056	X						
Telescopic extension, 440-690 mm, 60/100 mm diameter	303906	X	X	X	X		X	X
Telescopic offset piece	303919	X	X					
Black terminal set for horizontal air/flue pipe	0010039348			X	X	X		
Variable terminal set (VTK), black	0010039338 <sup>2</sup>			X	X	X		X
Variable terminal set (VTK), white	0010039340 <sup>2</sup>			X	X	X		
Variable terminal set for horizontal balcony installation, black	0010047863 <sup>2</sup>			X	X	X		X
Variable terminal set for horizontal balcony installation, white	0010047862 <sup>2</sup>			X	X	X		
Extension for variable terminal set (VTK), 60 mm diameter, 1 m, black	0010039350 <sup>2</sup>			X	X	X		X
Extension for variable terminal set (VTK), 60 mm diameter, 1 m, white	0010039352 <sup>2</sup>			X	X	X		
87° elbow for variable terminal set (VTK), black	0010039354 <sup>2</sup>			X	X	X		X
87° elbow for variable terminal set (VTK), white	0010039356 <sup>2</sup>			X	X	X		
45° elbow (2 pcs) for variable terminal set (VTK), black	0010039358 <sup>2</sup>			X	X	X		X
45° elbow (2 pcs) for variable terminal set (VTK), white	0010039360 <sup>2</sup>			X	X	X		
Deflector set, DN 60, PP, black	0010039343			X	X	X		
Deflector set, DN 60, PP, white	0010039345			X	X	X		

1) To reduce the pipe connections that need to be inspected, 4 m extensions are offered on request. (Special delivery with minimum purchasing quantity. No returns accepted.) The required downward gradient is also 3°. A height of 224 mm is therefore required for the 4 m extension. Take the height into consideration when selecting the installation site.  
2) Delivery with pipe clamps

### 3.3 System overview, 80/125 mm diameter

	Article number	Air/flue systems, concentric
A	303200	Vertical roof duct
B	303209 <sup>1</sup>	Horizontal wall/roof duct
	0010035777 <sup>2</sup>	Horizontal wall duct, stainless steel
C	0020042748 <sup>1</sup>	External wall connector
	0010039735 <sup>2</sup>	

1) In accordance with the construction regulation, installation in buildings higher than 18 (11 m in Scotland) is not permitted.  
2) In accordance with the construction regulation, installation in buildings higher than 18 (11 m in Scotland) is permitted.

#### 3.3.1 Components

The following table lists the air/flue systems that are permitted as part of the system certification, along with their certified components.

Optional connection accessories	Article number	A	B	C
<b>System, concentric (PP), 80/125 mm diameter</b>				
Connector (screw holes, 4 x)	303926	X	X	X
Connector with bayonet connection	0020147469	X	X	X
Extension (PP), concentric, 470 mm, 80/125 mm diameter	303202	X	X	X
Extension (stainless steel), concentric, 960 mm, 80/125 mm diameter	0010035778 <sup>1</sup>		X	
Extension (PP), concentric, 970 mm, 80/125 mm diameter	303203	X	X	X
Extension (PP), concentric, 1970 mm, 80/125 mm diameter	303205	X	X	X
45° elbow (2 pcs), concentric, 80/125 mm diameter	303211	X	X	X
87° elbow, concentric, 80/125 mm diameter	303210	X	X	X
Elbow (PP), concentric 87°, with inspection opening, for room-sealed operation	303217	X	X	X
Inspection opening (PP), 80/125 mm diameter, 0.25 m	303218	X	X	X
Pipe clamp (5 pcs), 125 mm diameter	303616	X	X	X
Sliding sleeve, 80/125 mm diameter	303215	X	X	X
<b>System, concentric (stainless steel), 80/125 mm diameter</b>				
External wall console, adjustable from 50 to 300 mm, stainless steel	0020042749			X
External wall pipe bracket (stainless steel), 50–90 mm	0020042751			X
Extension for external wall pipe bracket (stainless steel), 90–280 mm	0020042752			X
Extension (stainless steel), concentric, 0.5 m	0020042753			X
Extension (stainless steel), concentric, 1.0 m	0020042754			X
Extension that can be shortened (stainless steel), concentric, 0.5 m	0020042755			X
Elbow (stainless steel), concentric, 87°	0020042756			X
Elbows (stainless steel), concentric (2 pcs), 45°	0020042757			X
Elbows (stainless steel), concentric (2 pcs), 30°	0020042758			X
Inspection piece (stainless steel), 0.25 m, concentric	0020042759			X
Rain penetration collar (stainless steel) for roof penetration	0020042760			X
<b>Cross-system components</b>				
Pitched roof tile, black	009076	X		X
Universal pitched roof tile	303980	X		
Flat roof penetration collar	009056	X		X

1) In accordance with the construction regulation, installation on the external wall in buildings higher than 18 m (11 m in Scotland) is permitted

## 4 System conditions

### 4.1 Route of the air/flue pipe in buildings

The air/flue pipe should be as short as possible and run as straight as possible.

- ▶ Do not install several elbows or inspection elements immediately after each other.

As a result of standards relating to the hygiene of potable water, potable water lines must be protected against impermissible heating.

- ▶ Lay the air/flue pipe separately from the potable water lines.

It must be possible to check and, if required, clean the entire length of the flue gas route.

It should be possible to remove the air/flue pipe again with a minimal amount of effort (preferably no time-consuming mortising work in the living area, but screwed-in casing instead). If they are arranged in shafts, they are usually easy to remove.

### 4.2 Location of the terminal

The location of the flue system terminal must comply with the relevant applicable international, national and/or local regulations.

- ▶ Align the terminal of the flue system in such a way that ensures a secure outward flow and distribution of the flue gases and prevents these gases from re-entering the building through openings (windows, supply air openings and balconies).
- ▶ Observe the existing regulations with regard to the clearances to windows and ventilation openings.

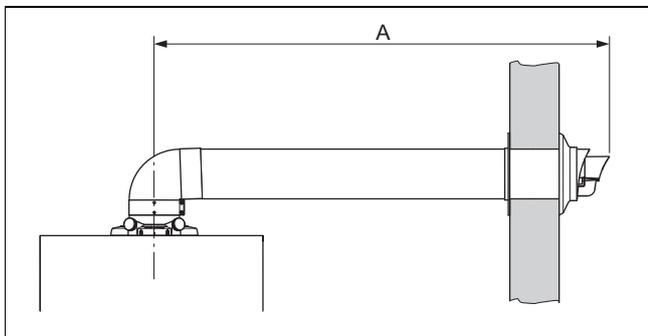
### 4.3 Disposing of condensate

Local regulations may stipulate the minimum quality of any condensate that may enter the public waste-water system. If required, a condensate neutraliser must be used.

- ▶ When disposing of the condensate into the public waste-water system, observe the local regulations.
- ▶ Only use corrosion-resistant piping material for removing condensate discharge.

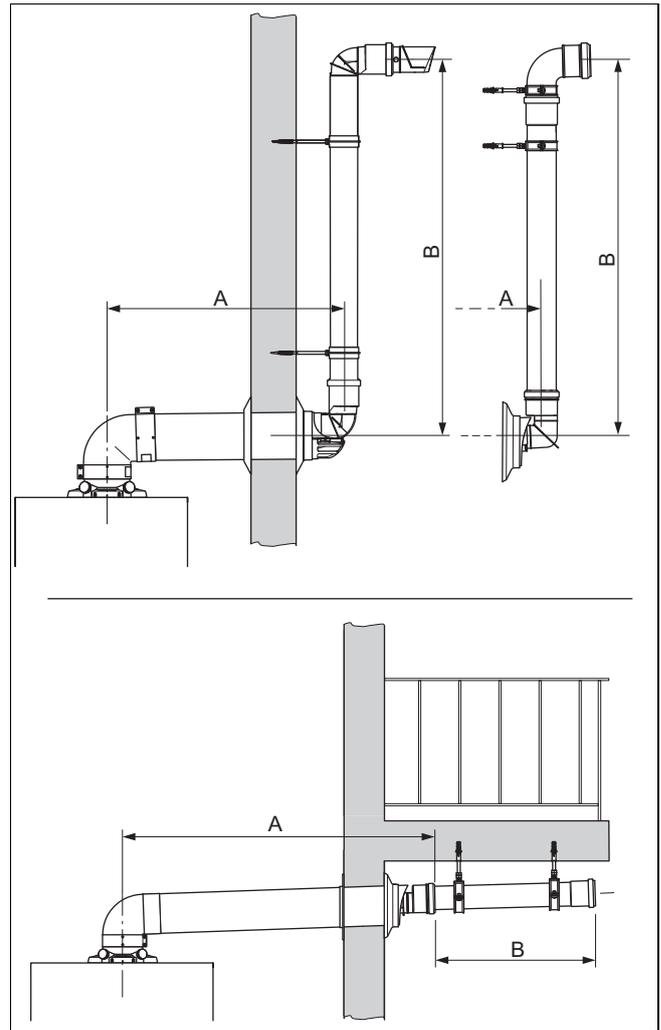
### 4.4 Maximum pipe lengths

#### 4.4.1 Maximum pipe length for horizontal wall duct



A Maximum pipe length

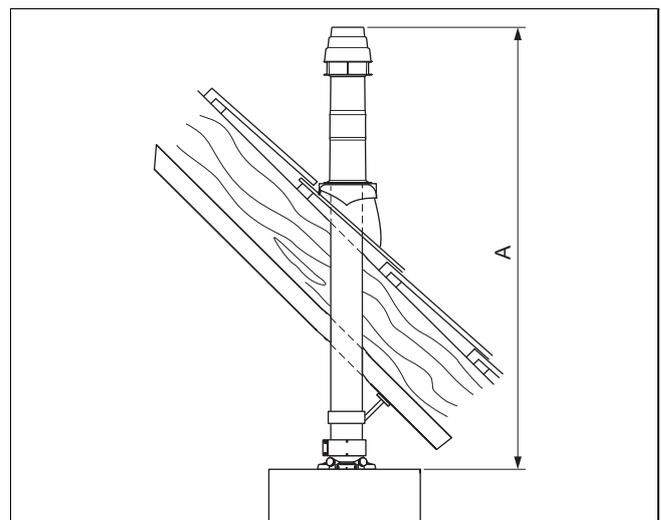
#### 4.4.2 Maximum pipe length of the horizontal wall duct with terminal set (60/100 mm diameter only)



A Maximum concentric pipe length

B Outdoor pipe length

#### 4.4.3 Maximum pipe length for vertical roof duct



A Maximum concentric pipe length

#### 4.4.4 Grouping the boilers

Group	Boiler type
A	VU 126/6-5 OVZ (H-GB) ecoTEC plus 412 VU 156/6-5 OVZ (H-GB) ecoTEC plus 415 VU 186/6-5 OVZ (H-GB) ecoTEC plus 418 VU 246/6-5 OVZ (H-GB) ecoTEC plus 424 VU 306/6-5 OVZ (H-GB) ecoTEC plus 430 VU 356/6-5 OVZ (H-GB) ecoTEC plus 435 VUW 256/6-3 (H-GB) ecoFIT pure 825 VUW 306/6-3 (H-GB) ecoFIT pure 830 VUW 356/6-3 (H-GB) ecoFIT pure 835 VUW 256/6-3 (H-GB) ecoFIT sustain 825 VUW 306/6-3 (H-GB) ecoFIT sustain 830 VUW 356/6-3 (H-GB) ecoFIT sustain 835 VU 126/6-3 (H-GB) ecoFIT pure 612 VU 156/6-3 (H-GB) ecoFIT pure 615 VU 186/6-3 (H-GB) ecoFIT pure 618 VU 256/6-3 (H-GB) ecoFIT pure 625 VU 306/6-3 (H-GB) ecoFIT pure 630 VU 126/6-3 OV (H-GB) ecoFIT pure 412 VU 156/6-3 OV (H-GB) ecoFIT pure 415 VU 186/6-3 OV (H-GB) ecoFIT pure 418 VU 256/6-3 OV (H-GB) ecoFIT pure 425 VU 306/6-3 OV (H-GB) ecoFIT pure 430 VU 356/6-3 OV (H-GB) ecoFIT pure 435 VU 156/6-3 (H-GB) ecoFIT sustain 615 VU 186/6-3 (H-GB) ecoFIT sustain 618 VU 306/6-3 (H-GB) ecoFIT sustain 630 VU 156/6-3 OV (H-GB) ecoFIT sustain 415 VU 186/6-3 OV (H-GB) ecoFIT sustain 418
B	VU 10CS/1-5 (N-GB) ecoTEC plus 610 VU 15CS/1-5 (N-GB) ecoTEC plus 615 VU 20CS/1-5 (N-GB) ecoTEC plus 620
C	VUW 20/26CS/1-5 (N-GB) ecoTEC plus 826
D	VU 25CS/1-5 (N-GB) ecoTEC plus 625 VUW 25/32CS/1-5 (N-GB) ecoTEC plus 832 VU 30CS/1-5 (N-GB) ecoTEC plus 630 VUW 30/36CS/1-5 (N-GB) ecoTEC plus 836 VU 35CS/1-5 (N-GB) ecoTEC plus 635 VUW 30/40CS/1-5 (N-GB) ecoTEC plus 840 VUI 30/40CS/1-5 (N-GB) ecoTEC plus 940
E	VUW 246/5-3 (H-GB) ecoTEC pro 24 VUW 286/5-3 (H-GB) ecoTEC pro 28 VUW 286/5-3 (P-GB) ecoTEC pro 28 VUW 306/5-3 (H-GB) ecoTEC pro 30
F	VU GB 226/5-3 A ecoTEC pro 22 H system A VU GB 266/5-3 A ecoTEC pro 26 H combi A
G	VUW 246/7-2 (H-GB) ecoTEC sustain 24
H	VUW 286/7-2 (H-GB) ecoTEC sustain 28
I	VUW 346/7-2 (H-GB) ecoTEC sustain 34
J	VU 256/5-7 (H-GB) ecoTEC exclusive 627 VUW 356/5-7 (H-GB) ecoTEC exclusive 835 VUW 436/5-7 (H-GB) ecoTEC exclusive 843

#### 4.4.5 Maximum pipe lengths, 60/100 mm diameter

Flue system	Article number	Maximum concentric pipe length				
		Group (→ Section 4.4.4)				
		A	B	C	D	E
Horizontal wall/roof duct	0020219517 0020219518 0020219519 0010024718 0020228140 0010035512 <sup>1</sup> 0010039324 <sup>1</sup> 0010039327 <sup>1</sup> 0010039333 <sup>1</sup> 0010039336 <sup>1</sup> 303933	10 m plus 1 x 87° elbow	16 m plus 1 x 87° elbow	10 m plus 1 x 87° elbow	8 m plus 1 x 87° elbow	12 m plus 1 x 87° elbow
Variable terminal set	0020219529 0020219530 0010039338 0010039340 0010047863 0010047862	The maximum concentric pipe length that is specified above is reduced as follows: <ul style="list-style-type: none"> <li>– By 0.5 m with the variable terminal</li> <li>– By 0.5 m with each additional metre VTK pipe</li> <li>– By 0.5 m with each additional 87° elbow</li> <li>– By 0.5 m for every additional two 45° elbows</li> </ul>				
Vertical roof duct	0020223472 303982	10 m	12 m	10 m	8 m	16 m
<p>1 Cannot be used in conjunction with the variable terminal set (VTK). The inclusion of additional concentric elbows in the flue system reduces the pipe length as follows:</p> <ul style="list-style-type: none"> <li>– By 0.5 m for each 45° elbow</li> <li>– By 1.0 m for each 87° elbow</li> </ul>						

Flue system	Article number	Maximum concentric pipe length				
		Group (→ Section 4.4.4)				
		F	G	H	I	J
Horizontal wall/roof duct	0020219517 0020219518 0020219519 0010024718 0020228140 0010035512 <sup>1</sup> 0010039324 <sup>1</sup> 0010039327 <sup>1</sup> 0010039333 <sup>1</sup> 0010039336 <sup>1</sup> 303933	8 m plus 1 x 87° elbow	9 m plus 1 x 87° elbow	9 m plus 1 x 87° elbow	10 m plus 1 x 87° elbow	5.5 m plus 1 x 87° elbow
Variable terminal set	0020219529 0020219530 0010039338 0010039340 0010047863 0010047862	The maximum concentric pipe length that is specified above is reduced as follows: <ul style="list-style-type: none"> <li>– By 0.5 m with the variable terminal</li> <li>– By 0.5 m with each additional metre VTK pipe</li> <li>– By 0.5 m with each additional 87° elbow</li> <li>– By 0.5 m for every additional two 45° elbows</li> </ul>				
Vertical roof duct	0020223472 303982	12 m	10 m	10 m	11 m	8 m
<p>1 Cannot be used in conjunction with the variable terminal set (VTK). The inclusion of additional concentric elbows in the flue system reduces the pipe length as follows:</p> <ul style="list-style-type: none"> <li>– By 0.5 m for each 45° elbow</li> <li>– By 1.0 m for each 87° elbow</li> </ul>						

#### 4.4.6 Maximum pipe lengths, 80/125 mm diameter

Flue system	Article number	Maximum concentric pipe length				
		Group (→ Section 4.4.4)				
		A	B	C	D	E
Horizontal wall/roof duct	303209 0010035777	25 m plus 1 x 87° elbow	28 m plus 1 x 87° elbow	28 m plus 1 x 87° elbow	28 m plus 1 x 87° elbow	39 m plus 1 x 87° elbow
Vertical roof duct	303200	25 m	30 m	30 m	30 m	41 m
External wall connector	0020042748 0010039735	23 m Plus two 87° elbows	20 m plus 3 x 87° elbows	20 m plus 3 x 87° elbows	20 m plus 3 x 87° elbows	37 m plus 3 x 87° elbows

The inclusion of additional concentric elbows in the flue system reduces the pipe length as follows:

- By 1.0 m for each 45° elbow
- By 2.5 m for each 87° elbow

Flue system	Article number	Maximum concentric pipe length				
		Group (→ Section 4.4.4)				
		F	G	H	I	J
Horizontal wall/roof duct	303209 0010035777	29 m plus 1 x 87° elbow	23 m plus 1 x 87° elbow	28 m plus 1 x 87° elbow	31 m plus 1 x 87° elbow	32 m plus 1 x 87° elbow
Vertical roof duct	303200	31 m	23 m	28 m	31 m	34 m
External wall connector	0020042748 0010039735	27 m Plus two 87° elbows	21 m Plus two 87° elbows	26 m Plus two 87° elbows	29 m Plus two 87° elbows	30 m Plus two 87° elbows

The inclusion of additional concentric elbows in the flue system reduces the pipe length as follows:

- By 1.0 m for each 45° elbow
- By 2.5 m for each 87° elbow

## 5 Set-up

### 5.1 Installation instructions for 60/100 mm diameter and 80/125 mm diameter

#### 5.1.1 Installing the connector for the 80/125 mm diameter air/flue pipe

- ▶ Convert the products that you want to connect to the air/flue pipe (80/125 mm diameter) and that are equipped with the product connection (60/100 mm diameter) at the factory.
  - The installation instructions for the product describe how to install the 80/125 mm diameter connector for the air/flue pipe.

#### 5.1.2 Horizontal wall/roof duct

##### 5.1.2.1 Preparing the installation



**Danger!**  
**Risk of poisoning due to escaping flue gas.**

If you select an unsuitable installation site for the air/flue pipe, flue gas may be allowed to enter the building.

- ▶ Observe the existing regulations with regard to the clearances to windows and ventilation openings.

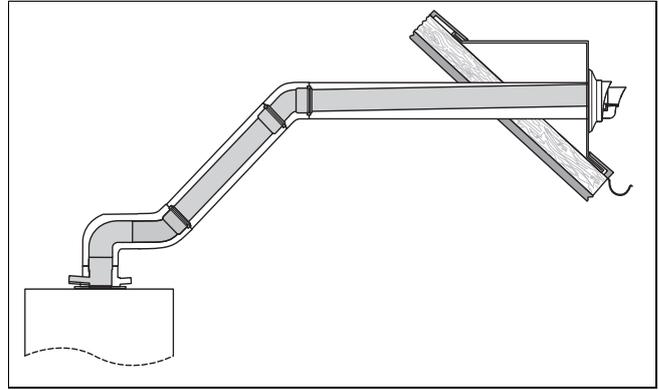


**Danger!**  
**Risk of poisoning due to escaping flue gas.**

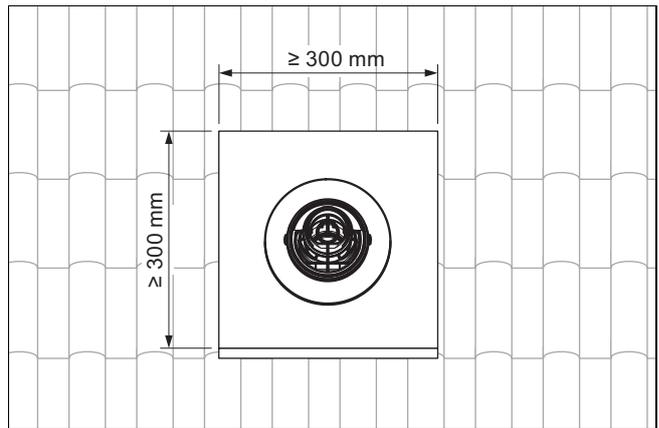
Condensate that collects inside the flue in certain areas can damage the flue pipework seals.

- ▶ Route the horizontal flue pipe with a downward gradient of 3° to the product; 3° corresponds to a downward gradient of approx. 56 mm per metre of pipe length.
  - ▶ In doing so, note that the air/flue pipe must be centred in the wall hole.
- 
- ▶ Determine the installation site for the air/flue pipe.
  - ▶ When installing the product near a light source, point out to the end user that they must clean the terminal regularly. Otherwise, due to the insects that the light may attract, the terminal may become dirty.

### Set-up example: Horizontal roof duct with dormer



### Minimum dimensions for the dormer



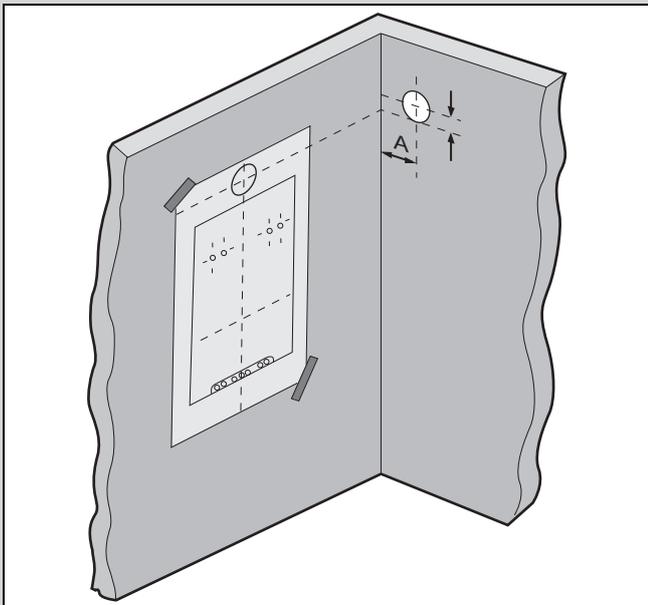
**Note**

The dormer is not provided by the manufacturer and must be created on-site.

- ▶ Determine the installation site for the boiler (→ Installation instructions for the boiler).
- ▶ Ensure that all clearances required for installation and maintenance are available and that the air/flue system can be installed in accordance with these instructions.
- ▶ Secure the mounting template that is supplied with the boiler to the wall.
- ▶ Use a plumb-bob or spirit level to check whether the central line of the mounting template is vertical.

The mounting template indicates the position for horizontal installation of the air/flue pipe when connecting it to the upper side of the boiler.

**Condition:** Top connection, air/flue pipe to the side

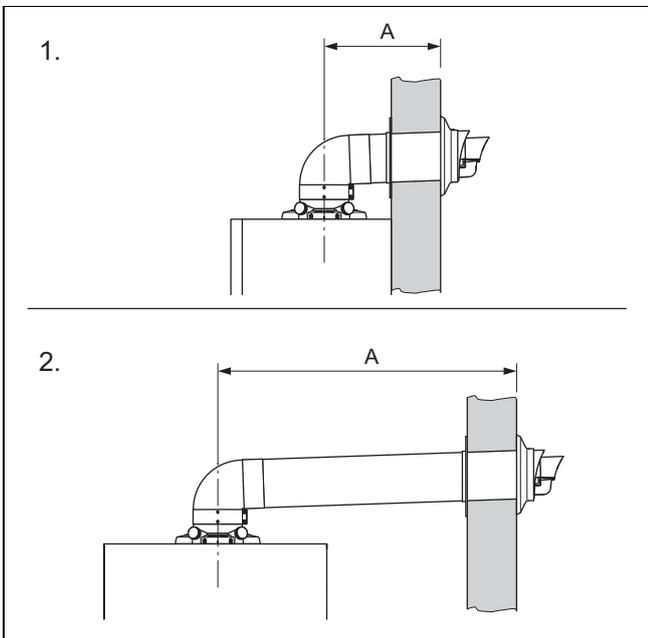


A = 125 mm

If you want to install the air/flue pipe laterally, you can determine the position of the wall duct by carefully offsetting the central line of the wall duct that is marked on the mounting template.

- ▶ Calculate the required gradient in accordance with the length of the flue pipework and then mark the position for the wall duct.

### 5.1.2.2 Determining the clearance to the external wall



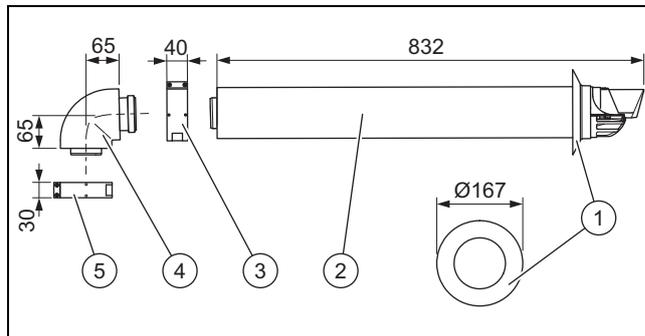
1. Upper flue pipe at the rear      A      Clearance to the external wall
2. Upper flue pipe to the side

- ▶ Measure the clearance (**A**) from outside of the wall to the centre of the connector.

- Distance A: At least 215 mm for a wall thickness of 90 mm
- Length of the concentric pipe: At least 150 mm

## 5.2 Horizontal wall/roof duct – 0020219517 – diameter 60/100 mm

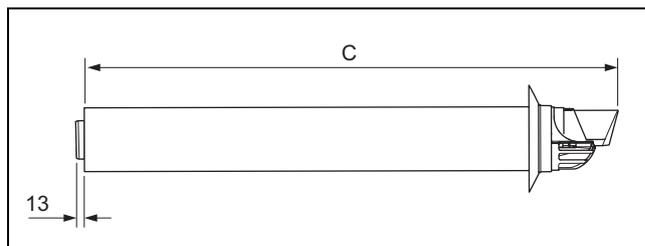
### 5.2.1 Scope of delivery 0020219517



- |   |                              |   |             |
|---|------------------------------|---|-------------|
| 1 | Collar, 100 diameter (2 pcs) | 3 | 40 mm clamp |
| 2 | Horizontal wall duct         | 4 | 87° elbow   |
|   |                              | 5 | 30 mm clamp |

### 5.2.2 Shortening the air/flue pipe

1. Determine the clearance to the external wall. (→ Section 5.1.2.2)



2. Shorten the flue pipe and the air pipe by the same amount when they are assembled.

Length	Article number
	0020219517 0020219519
C	Clearance to external wall A + 75 mm



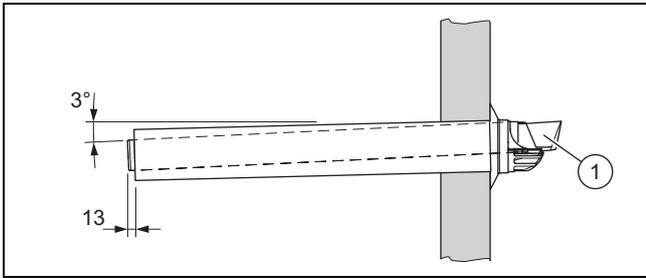
#### Note

Disassembling the flue pipe and the air pipe damages the latching lugs in the terminal.

**Condition:** Additional extensions and elbows required

- ▶ Install the extensions. (→ Section 5.19.2)
  - All of the sleeves for the flue pipe must point towards the terminal.
- ▶ Install the elbows (→ Section 5.19.3).

### 5.2.3 Installing the wall duct



1. Drill a hole.
  - Diameter: 125 mm

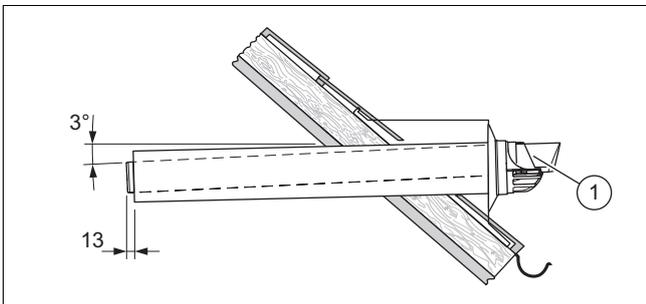


#### Note

If the wall duct can be accessed from the exterior of the building, you can drill the hole with a diameter of 110 mm and install the wall duct with the collar from outside.

2. Slide the air/flue pipe (1) with the flexible collar through the wall.
3. Pull the air/flue pipe back until the collar lies fully on the external wall.
4. Secure the air/flue pipe with mortar and leave the mortar to harden.
5. Install the collar on the inside of the wall.
6. Connect the wall/roof duct to the product using extensions, elbows and, if required, a sliding sleeve. (→ Section 5.4)

### 5.2.4 Installing the roof duct



- ▶ Insert the air/flue pipe (1) into the dormer.

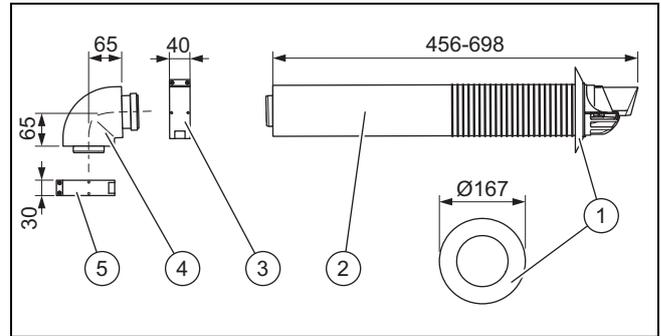
### 5.3 Horizontal telescopic wall/roof duct – 0020219518 – diameter 60/100 mm



#### Note

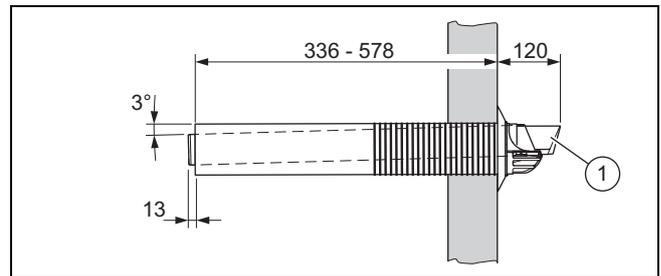
The telescopic wall/roof duct is only available in black.

### 5.3.1 Scope of delivery



- |   |                                 |   |             |
|---|---------------------------------|---|-------------|
| 1 | Collar, 100 diameter (2 pcs)    | 3 | 40 mm clamp |
| 2 | Horizontal telescopic wall duct | 4 | 87° elbow   |
| 5 | 30 mm clamp                     |   |             |

### 5.3.2 Installing the wall duct

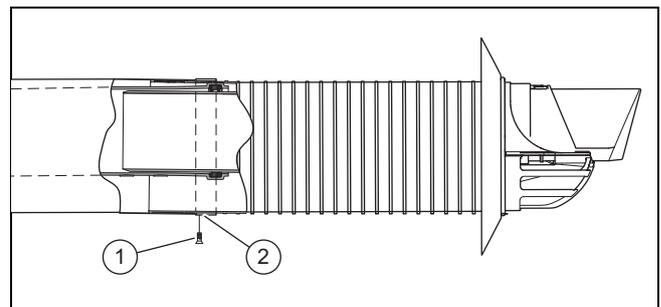


1. Drill a hole.
  - Diameter: 125 mm



#### Note

If the wall duct can be accessed from the exterior of the building, you can drill the hole with a diameter of 110 mm and install the wall duct with the collar from outside.



2. Determine the clearance to the external wall. (→ Section 5.1.2.2)
3. Set the telescopic wall duct to the correct length.
  - Note that the **TOP** symbol must point upwards on both ends.



#### Danger!

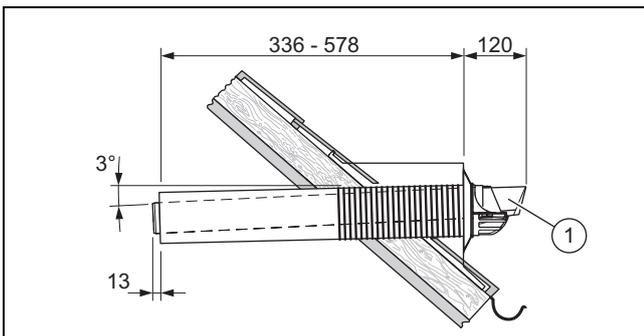
#### Risk of poisoning due to escaping flue gas.

Flue gas can escape if a flue pipe is damaged.

- ▶ Only use the self-tapping screw provided.

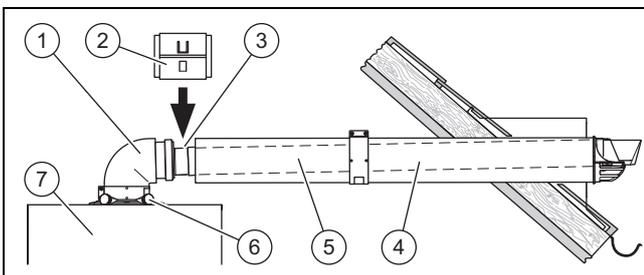
4. Secure the air pipes to each other by screwing the overlapping air pipes together using the supplied self-tapping screws on the underside (1).
5. Seal the gap in the telescopic air pipe using the supplied adhesive tape (2).
6. Slide the air/flue pipe (1) with the flexible collar through the wall.
7. Pull the air/flue pipe back until the collar lies fully on the external wall.
8. Secure the air/flue pipe with mortar and leave the mortar to harden.
9. Install the collar on the inside of the wall.
10. Connect the wall/roof duct to the product using extensions, elbows and, if required, a sliding sleeve. (→ Section 5.4)

### 5.3.3 Installing the roof duct



- ▶ Insert the air/flue pipe (1) into the dormer.

### 5.4 Connecting the product



1. Install the product (7) – see the installation instructions for the product.
2. Connect the 87° elbow (1) to the connector for the air/flue pipe (6).
3. Fit the sliding sleeve (3) with the sleeve as far as it will go onto the wall/roof duct (4) or the extension (5).
4. If required, install the extensions .
5. Connect the sliding sleeve to the 87° elbow.
6. Install the air pipe clamp (2) for the sliding sleeve.

#### 7. Alternatives 1:

**Condition:** Wall/roof duct without extension

- ▶ Install the sliding sleeve. (→ Section 5.19.1)

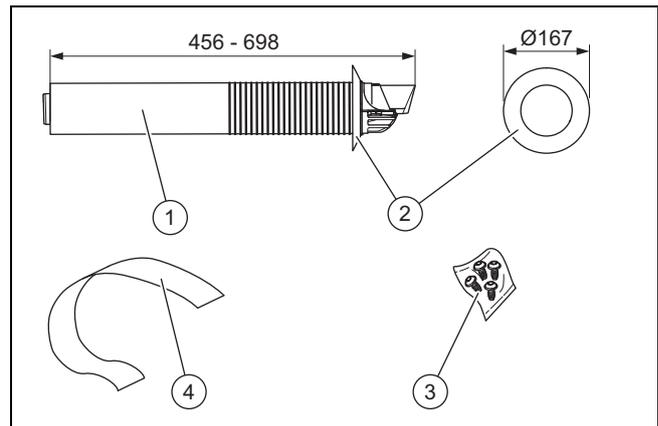
#### 7. Alternatives 2:

**Condition:** Wall/roof duct with extension

- ▶ Install the extensions. (→ Section 5.19.2)
- ▶ Install the elbows (→ Section 5.19.4).
- ▶ Install the sliding sleeve. (→ Section 5.19.1)
- ▶ Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)

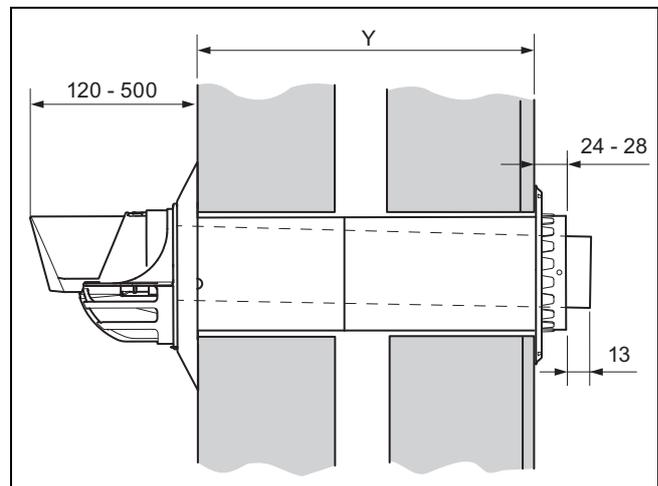
## 5.5 Direct, rear, telescopic wall duct – 0020228140 – diameter 60/100 mm

### 5.5.1 Scope of delivery



- |   |                      |   |                        |
|---|----------------------|---|------------------------|
| 1 | Telescopic wall duct | 3 | Locking screws (4 pcs) |
| 2 | Collar               | 4 | Sealing tape           |

### 5.5.2 Determining the pipe length and the location of the wall duct



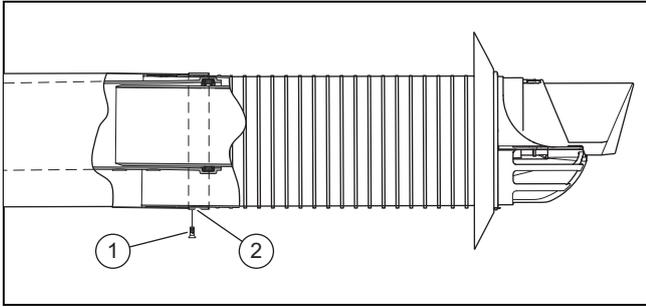
1. Determine the pipe length (→ Installation instructions for the boiler) and define the location of the wall duct.
2. Measure the clearance Y from the external wall to the installation surface for the boiler.
3. Set the required pipe length:
  - At least:  $Y + 24$  mm
  - Maximum:  $Y + 28$  mm
  - If you install the collar, add 12 mm to the total pipe length.
  - If the terminal is below a roof overhang or a horizontal surface, you can pull the wall duct up to 500 mm out of the wall in order to guarantee that the flue gases are extracted without any obstructions.



#### Note

Do not shorten the telescopic flue pipe. If the required pipe length cannot be achieved, use extensions or the horizontal wall/roof duct.

### 5.5.3 Securing the telescopic pipe



1. Set the telescopic wall duct to the correct length.
  - Note that the **TOP** symbols at both ends must point upwards.



#### **Danger!**

**Risk of poisoning due to escaping flue gas.**

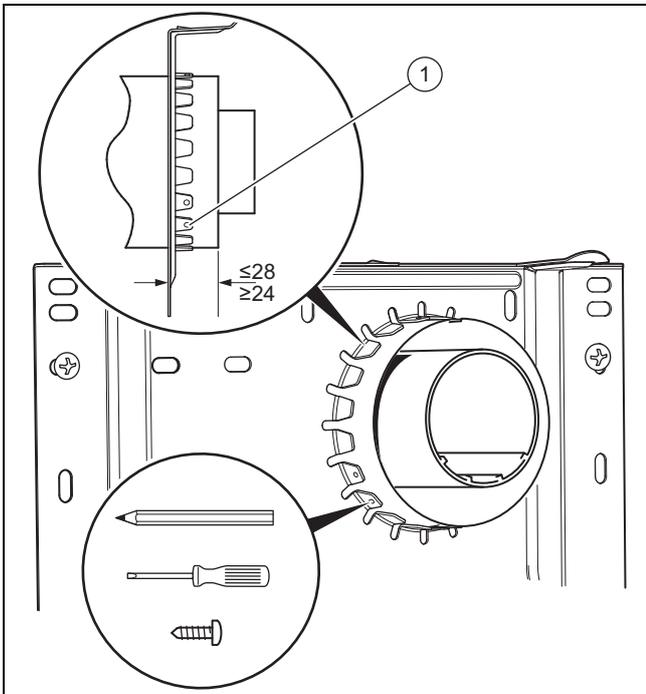
Flue gas can escape if a flue pipe is damaged.

► Only use the self-tapping screw provided.

2. Secure the air pipes to each other by screwing the overlapping air pipes together using the supplied self-cutting screws (1) on the underside.
3. Seal the gap on the telescopic air pipe using the supplied adhesive tape (2).

### 5.5.4 Installing the wall duct

1. Drill a hole.
  - Diameter: 110 mm
2. Push the air/flue pipe from outside and through the wall and the terminals.



3. Pull the wall duct out to the required depth.
4. Use the locking screws to secure the wall duct.

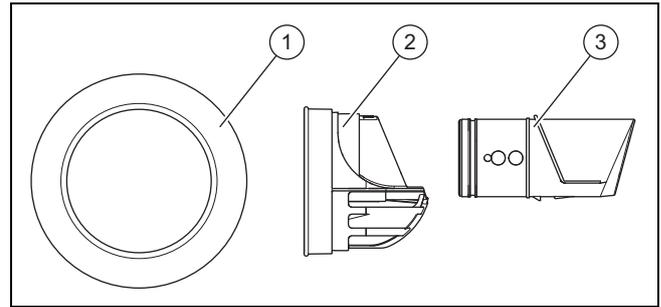
- Use at least three of the six holes (1) that are available in the terminals to secure the flue pipe.

5. Install the collar.
6. Before you install the boiler, check that the wall duct is safely secured in place.
7. Seal the installation gap using a suitable material (e.g. mortar).
8. Install the boiler (→ Installation instructions for the boiler).

### 5.6 Installing terminal sets for 60/100 mm diameter air/flue systems

#### 5.6.1 Black terminal set – 0020219537

##### 5.6.1.1 Scope of delivery



- |   |                |   |          |
|---|----------------|---|----------|
| 1 | Collar         | 3 | End pipe |
| 2 | Terminal piece |   |          |

##### 5.6.1.2 Installing the black terminal (change of colour)

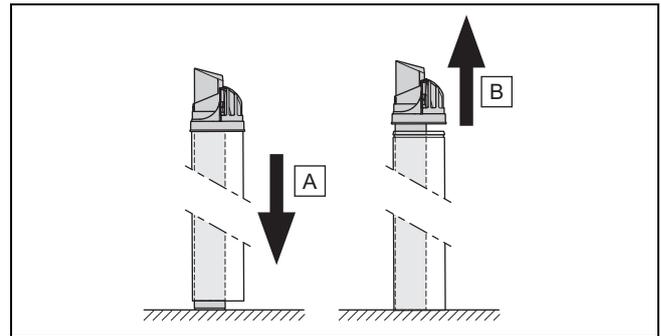


#### **Note**

You must install the terminal sets before installing the flue pipework.

**Condition:** Terminal secured using screws

- Undo the lateral screws.



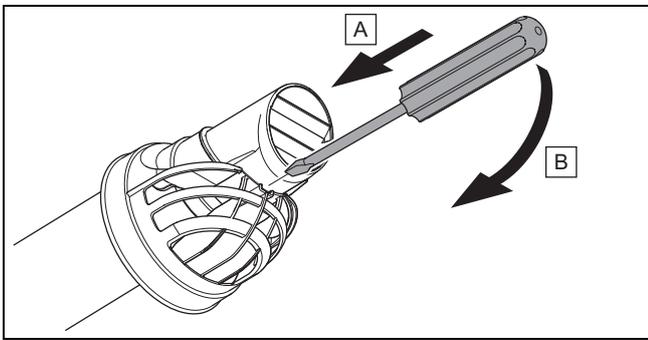
1. Detach the terminal with the flue pipe by pushing the air pipe to the floor.



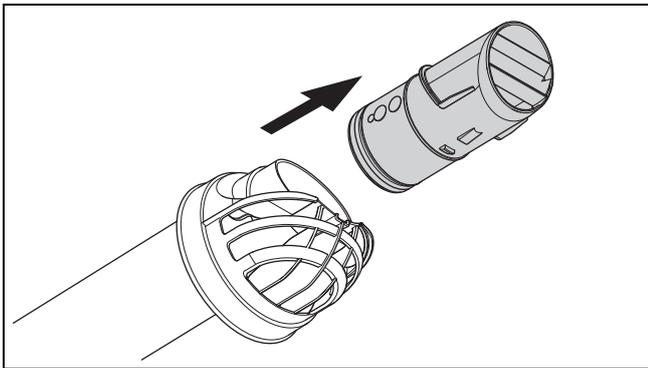
#### **Note**

You cannot reuse the terminal as detaching the terminal damages the latching lugs in the terminal.

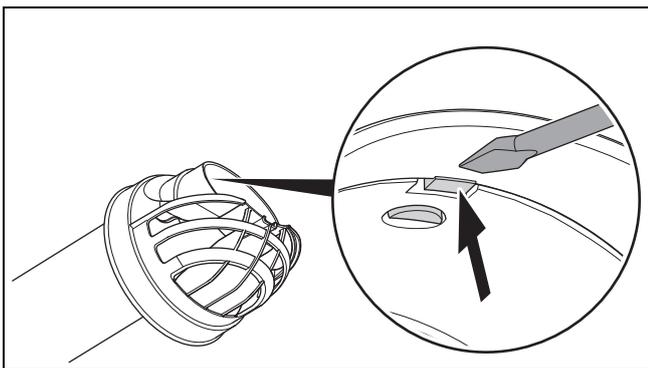
2. Pull the terminal from the air pipe together with the flue pipe.



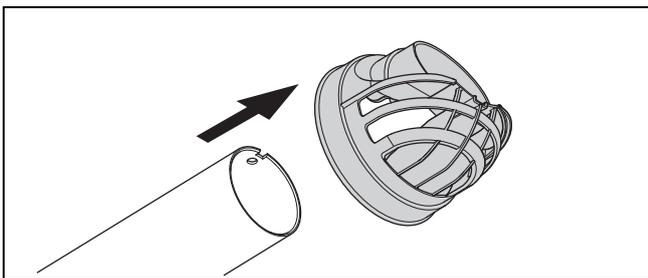
3. Release the catch between the opening piece and the end pipe.



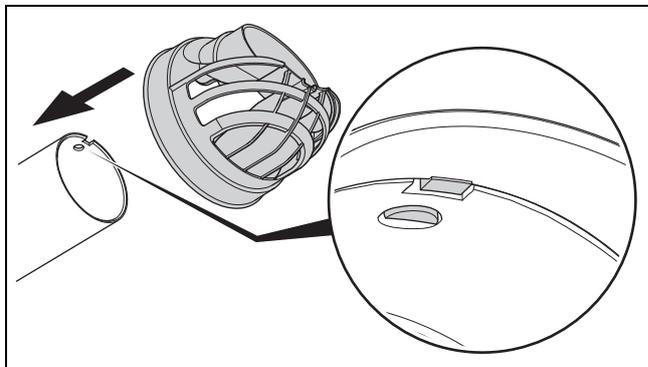
4. Pull the end pipe from the opening piece.



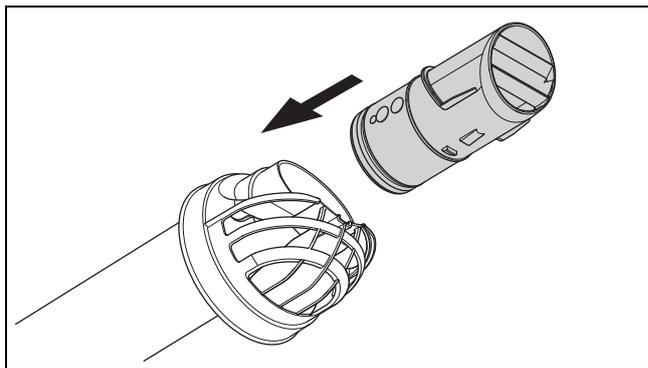
5. Release the catch between the opening piece and the flue pipe.



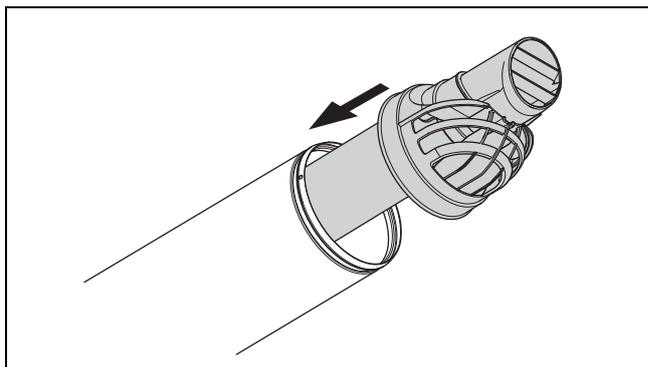
6. Pull the opening piece from the flue pipe.



7. Slide the new opening piece onto the flue pipe until you hear the opening piece click into place.



8. Slide the end pipe onto the opening piece until you hear the end pipe click into place.



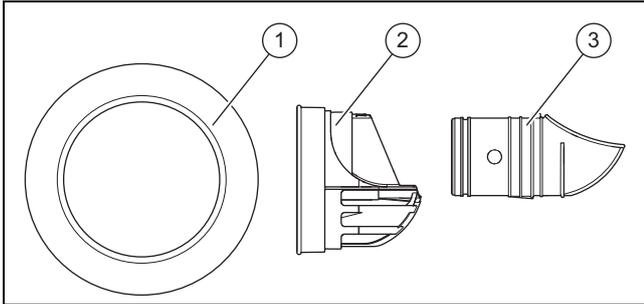
9. Slide the flue pipe with the new terminal into the air pipe until you hear the terminal click into place.

**Condition:** Terminal secured using screws

► Attach the terminal using the side screws.

## 5.6.2 Deflector set – 0020219533 / ...34 (not for 0010035512)

### 5.6.2.1 Scope of delivery



- |   |                |   |           |
|---|----------------|---|-----------|
| 1 | Collar         | 3 | Deflector |
| 2 | Terminal piece |   |           |

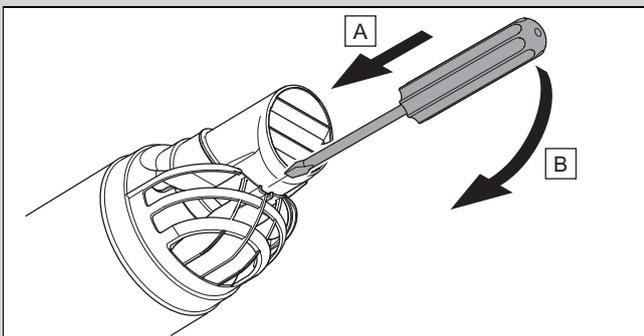
- Deflector set, DN 60, PP, black (article number 0020219533)
- Deflector set, DN 60, PP, white (article number 0020219534)

### 5.6.2.2 Installing the deflector set

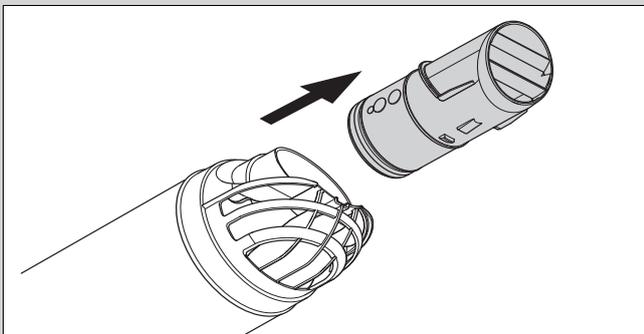
**Condition:** Replacing the deflector set (change of colour)

- ▶ In the event of a change of colour, replace the deflector set, including the collar (→ Section 5.6.1.2).
- ▶ Install the deflector, instead of the end pipe, on the terminal piece.

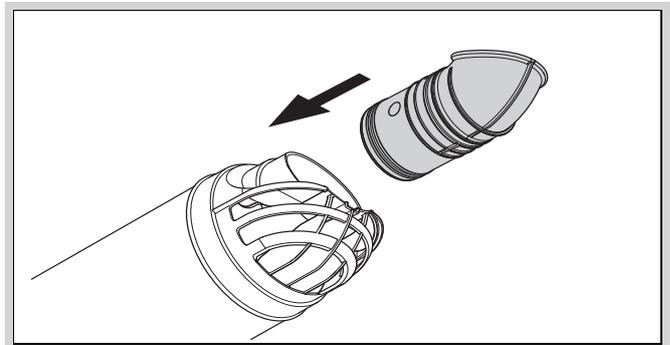
**Condition:** Replacing the end pipe only



- ▶ Release the catch between the terminal piece and the end pipe.

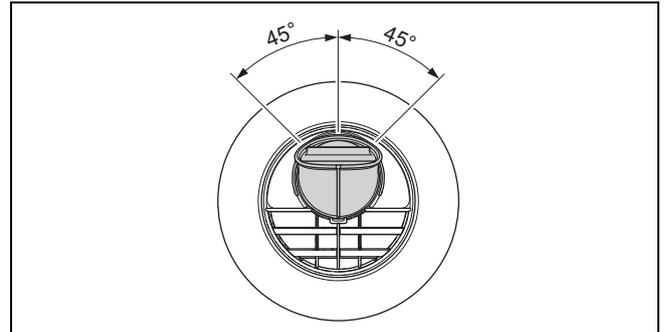


- ▶ Pull the end pipe from the terminal piece.



- ▶ Slide the deflector onto the terminal piece until you hear the deflector click into place.

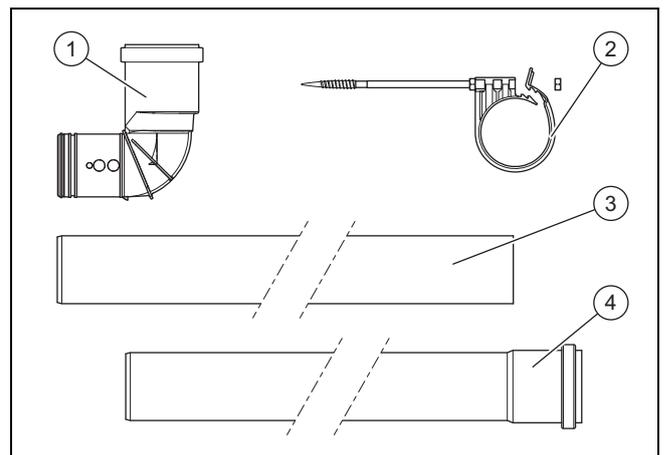
### 5.6.2.3 Adjusting the deflector



- ▶ Set the terminal to the required position.
  - The flue gas stream is directed upwards at an angle of approx. 45° when the deflector is set in the centre position.
  - If necessary, the deflector terminal can be rotated 45° anti-clockwise or clockwise. These setting options mean that the flue system can be further optimised.

## 5.6.3 Variable terminal set (VTK) – 0020219529 /...30

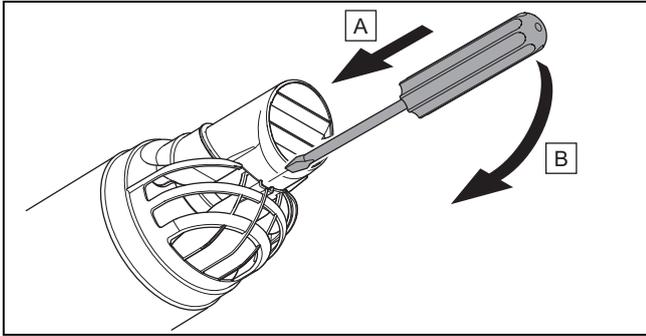
### 5.6.3.1 Scope of delivery



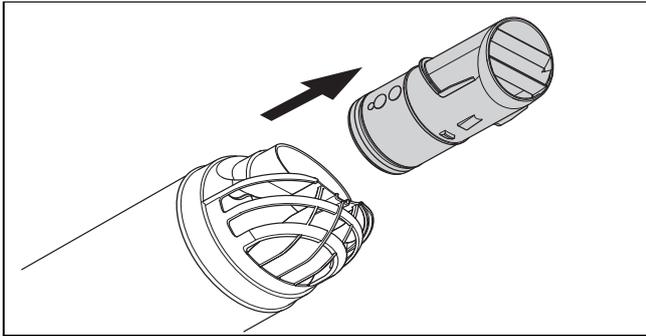
- |   |                   |   |                                |
|---|-------------------|---|--------------------------------|
| 1 | 87° elbow (2 x)   | 3 | Extension (1 m) without sleeve |
| 2 | Pipe clamps (3 x) | 4 | Extension (1 m) with sleeve    |

- Variable terminal set, black, article number 0020219529
- Variable terminal set, white, article number 0020219530

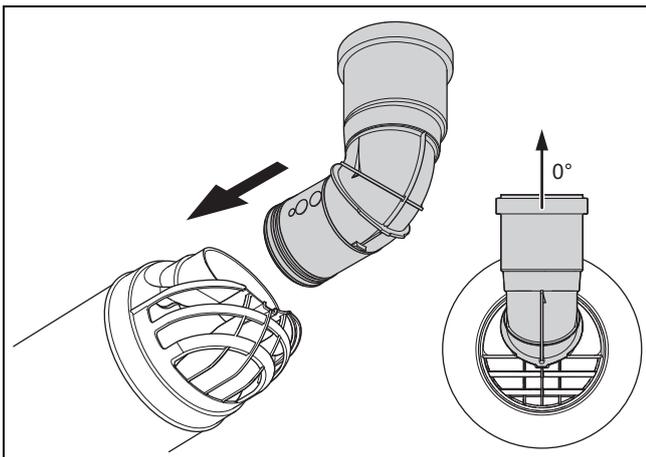
### 5.6.3.2 Installing the variable terminal set (VTK)



1. Release the catch between the opening piece and the end pipe.



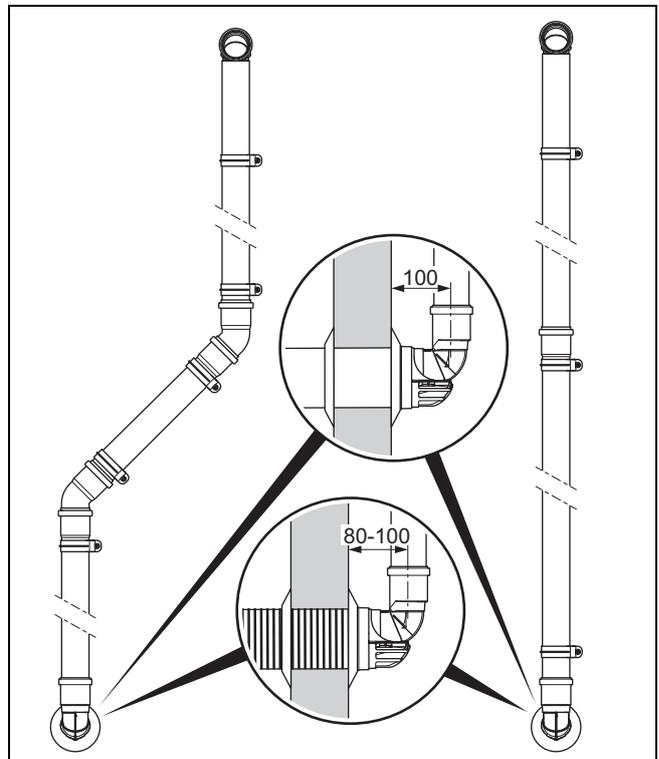
2. Pull the end pipe from the opening piece.



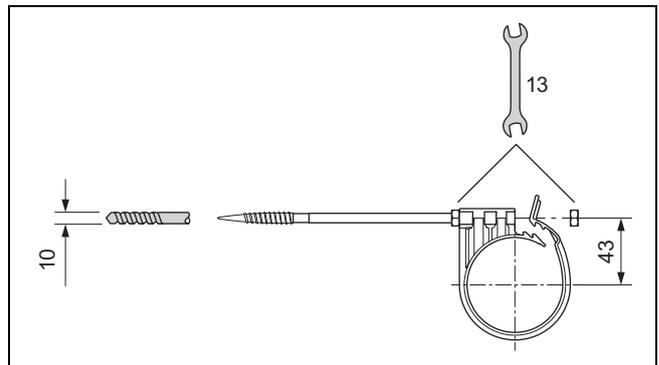
3. Slide the first 87° elbow onto the opening piece until you hear the 87° elbow click into place.

### 5.6.3.3 Installing extensions

1. Install the flue system from the 87° elbow to the flue outlet.
  - Begin with the extension with the sleeve. To be able to install the second 87° elbow with the end pipe, you must install the extension without a sleeve last.
  - Allow expansion space of 1 cm in each sleeve.
  - Ensure that all pipe joints are absolutely leak-tight.

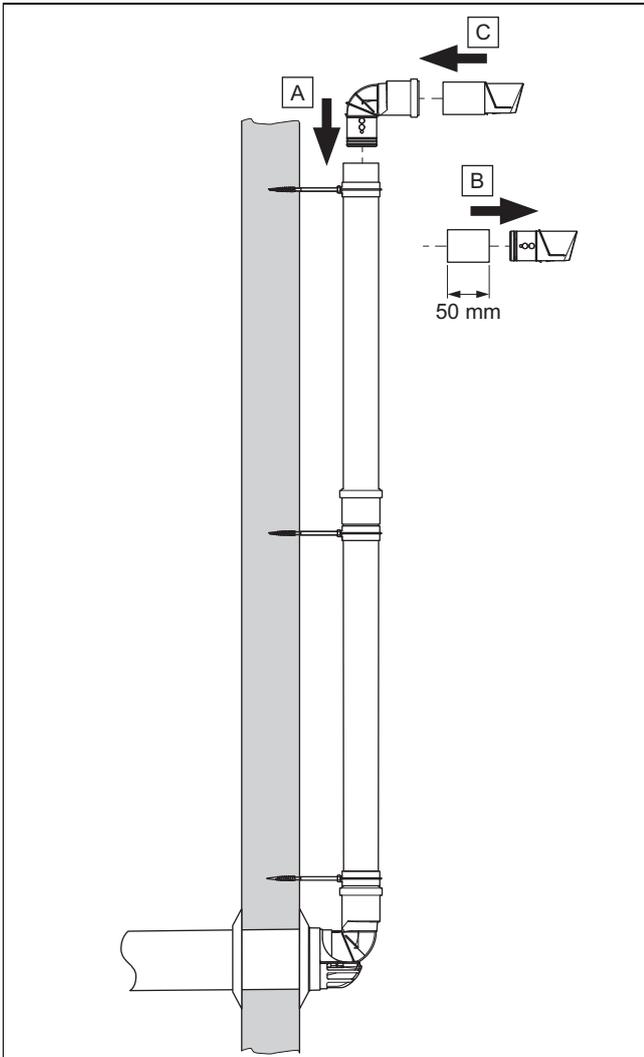


2. Secure the extensions to the wall using the pipe clamps.
  - Use one pipe clamp for each extension directly beside the sleeve.
  - Upstream of each elbow, install another pipe clamp on the extension.



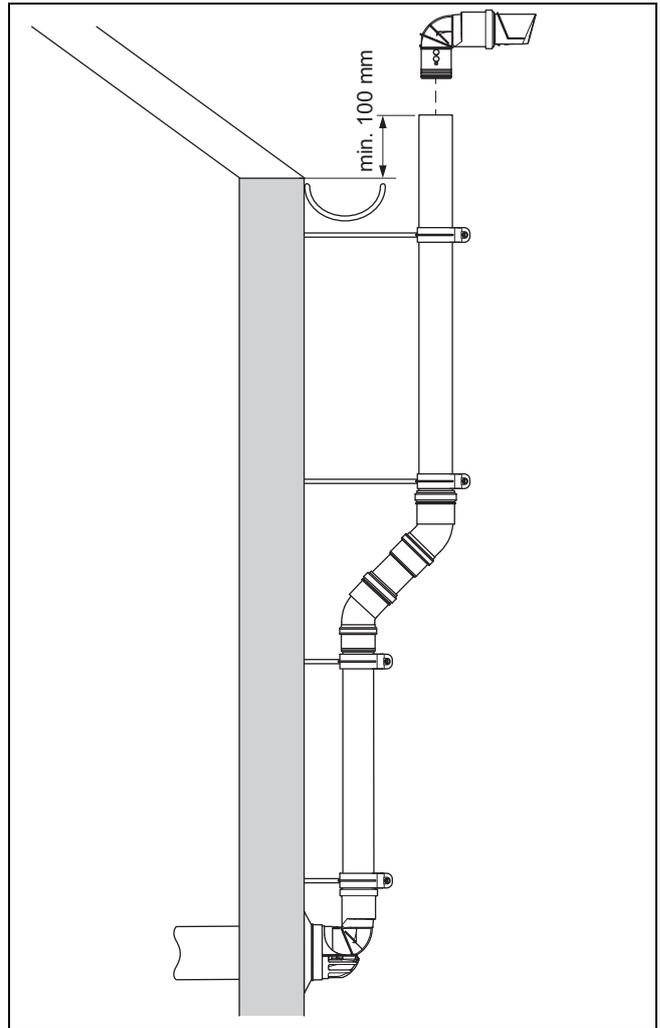
3. Drill the fastening holes away from the centre.

### 5.6.3.4 Installing the end pipe



1. Install the second 87° elbow into the last extension (step A).
2. To secure the end pipe, place a 50 mm extension piece over the end pipe (step B).
3. Insert the end pipe securely into the 87° elbow (step C).

### 5.6.3.5 Routing extensions for the variable terminal set around eaves

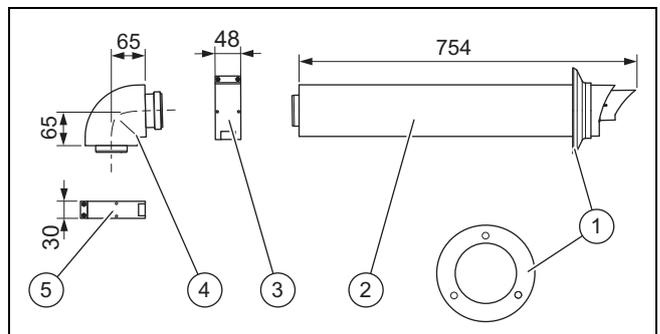


When installing the variable terminal set around eaves, additional M8 threaded rods are required for the pipe clamps. The threaded rods are commercially available.

- If required, install additional 45° elbows.

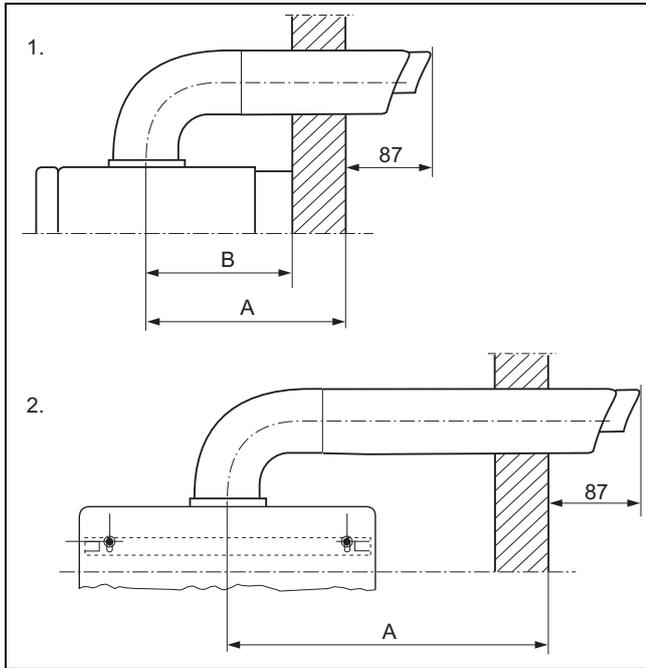
## 5.7 Horizontal wall/roof duct – 303933 – 0010035512 – diameter 60/100 mm

### 5.7.1 Scope of delivery



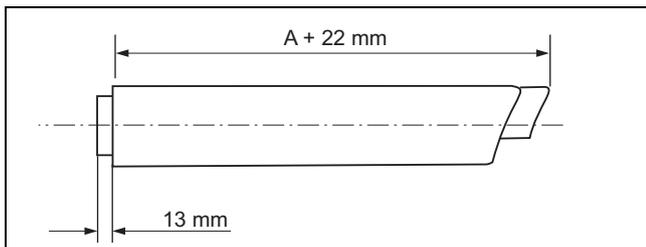
- |   |                              |   |             |
|---|------------------------------|---|-------------|
| 1 | Collar, 100 diameter (2 pcs) | 3 | 48 mm clamp |
| 2 | Horizontal wall/roof duct    | 4 | 87° elbow   |
|   |                              | 5 | 30 mm clamp |

## 5.7.2 Shortening the air/flue pipe



- |                            |   |  |
|----------------------------|---|--|
| 1. Flue system to the rear | A | Clearance to the external wall         |
| 2. Flue system to the side | B | Clearance to the internal wall: 125 mm |

1. Measure the clearance **(A)** from outside of the wall to the centre of the connector.

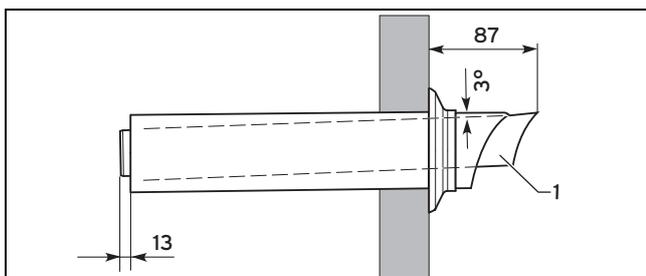


2. Remove the flue pipe from the air pipe.
3. Shorten the flue pipe and the air pipe by the same amount.

**Condition:** Additional extensions and elbows required

- ▶ Install the extensions. (→ Section 5.19.2)
  - All of the sleeves for the flue pipe must point towards the terminal.
- ▶ Install the elbows (→ Section 5.19.4).

## 5.7.3 Installing the wall duct



1. Drill a hole.

– Diameter: 125 mm

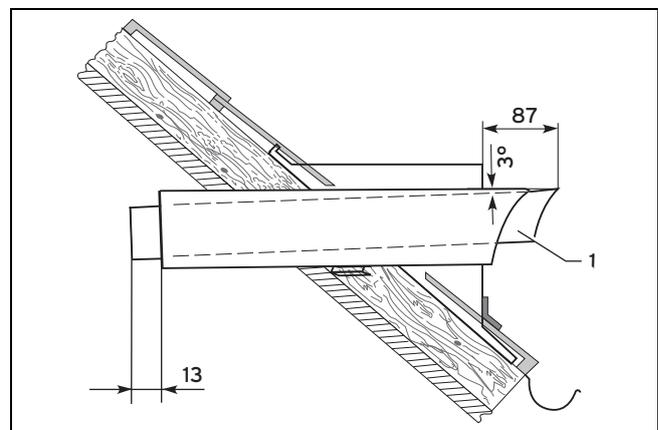


### Note

If the wall duct can be accessed from the exterior of the building, you can drill the hole with a diameter of 110 mm and install the collar from outside.

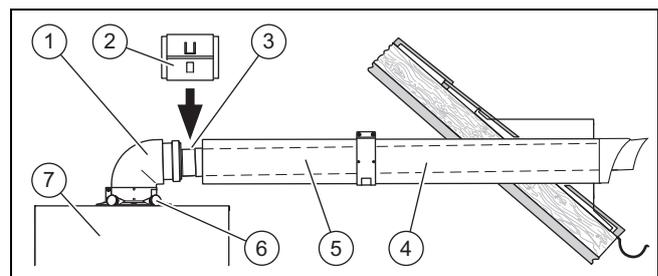
2. Slide the air/flue pipe **(1)** with the flexible collar through the wall.
3. Pull the air/flue pipe back until the collar forms a tight seal on the external wall.
4. Secure the air/flue pipe with mortar and leave the mortar to harden.
5. Install the collar on the inside of the wall.
6. Connect the wall/roof duct to the product using extensions, elbows and, if required, a sliding sleeve, see "Connecting the product".

## 5.7.4 Installing the roof duct



- ▶ Insert the air/flue pipe **(1)** into the dormer.

## 5.7.5 Connecting the product



1. Install the product **(7)** – see the installation instructions for the product.
2. Connect the 87° elbow **(1)** to the connector for the air/flue pipe **(6)**.
3. Fit the sliding sleeve **(3)** with the sleeve as far as it will go onto the wall/roof duct **(4)** or the extension **(5)**.
4. If required, install the extensions.
5. Connect the sliding sleeve to the 87° elbow.
6. Install the air pipe clamp **(2)** for the sliding sleeve.

## 7. Alternatives 1:

**Condition:** Wall/roof duct without extension

- ▶ Install the sliding sleeve. (→ Section 5.19.1)

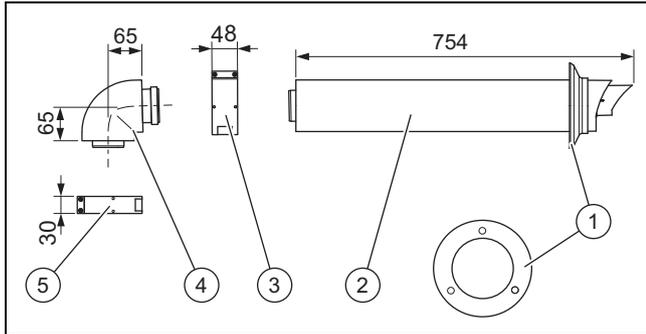
## 7. Alternatives 2:

**Condition:** Wall/roof duct with extension

- ▶ Install the extensions. (→ Section 5.19.2)
- ▶ Install the elbows (→ Section 5.19.4).
- ▶ Install the sliding sleeve. (→ Section 5.19.1)
- ▶ Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)

## 5.8 Direct, rear wall duct – 303933 – 0010035512 – 60/100 mm diameter

### 5.8.1 Scope of delivery



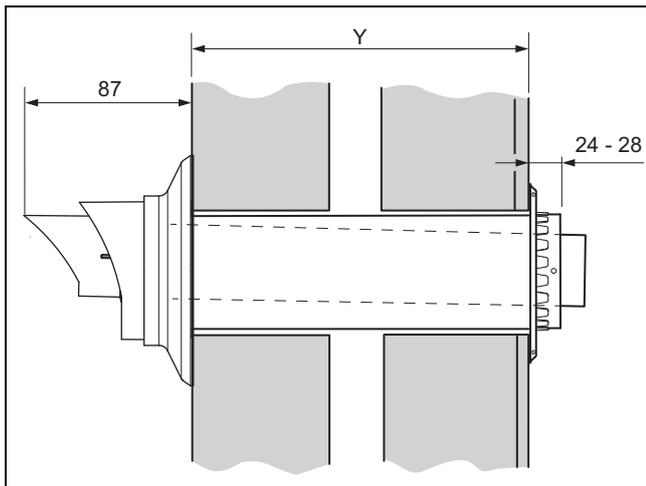
- |   |                              |   |             |
|---|------------------------------|---|-------------|
| 1 | Collar, 100 diameter (2 pcs) | 3 | 48 mm clamp |
| 2 | Horizontal wall/roof duct    | 4 | 87° elbow   |
|   |                              | 5 | 30 mm clamp |



#### Note

Not all components are required for the installation.

### 5.8.2 Determining the pipe length and the location of the wall duct

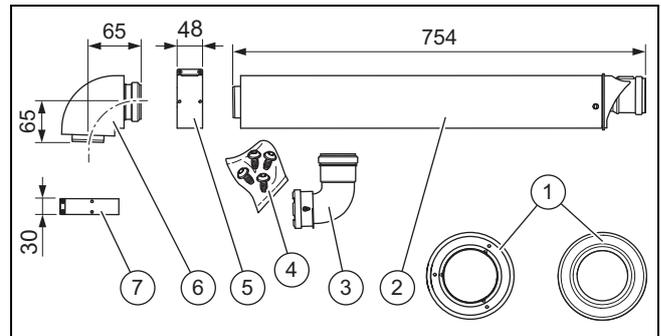


1. Determine the pipe length (→ Installation instructions for the boiler) and define the location of the wall duct.
2. Measure the clearance  $Y$  from the external wall to the installation surface for the boiler.
3. Set the required pipe length:

- At least:  $Y + 24$  mm
- Maximum:  $Y + 28$  mm
- If you install the collar outside, add 12 mm to the total pipe length.
- If the terminal is below a roof overhang or a horizontal surface, you can pull the wall duct up to 500 mm out of the wall in order to guarantee that the flue gases are extracted without any obstructions.

## 5.9 Horizontal wall duct – 0010024718 – diameter 60/100 mm

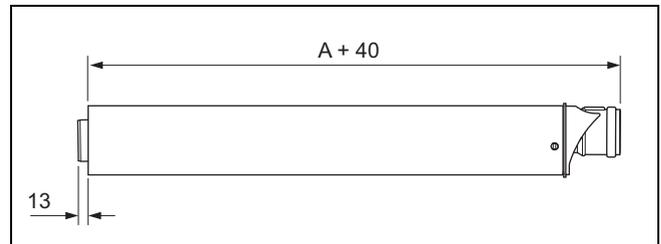
### 5.9.1 Scope of delivery 0010024718



- |   |  |   |                |
|---|--|---|----------------|
| 1 | Collar, 100 diameter (2 pcs)                     | 4 | Screws (4 pcs) |
| 2 | Horizontal wall/roof duct                        | 5 | 48 mm clamp    |
| 3 | 87° adapter for connecting the variable terminal | 6 | 87° elbow      |
| 7 | 30 mm clamp set (VTK)                            |   |                |

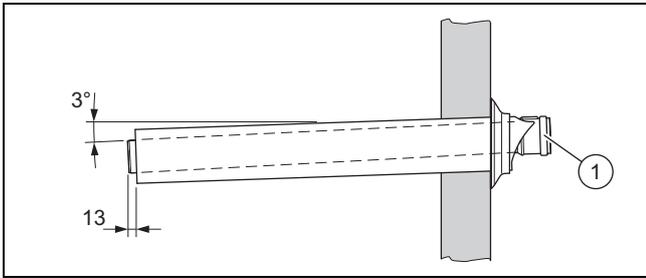
### 5.9.2 Shortening the air/flue pipe

1. Determine the clearance to the external wall. (→ Section 5.1.2.2)



2. Shorten the air/flue pipe to the required length.
  - If you install the collar outside, add 12 mm to the total pipe length
  - Shorten the air pipe at the opposite end to the terminal.
  - Shorten the flue pipe at the opposite end to the lock.
3. Deburr the sawn-off pipe end in order to prevent damage the seal when installing the flue pipe.
4. Slide the flue pipe into the air pipe.
  - Ensure that the flue pipe's recess snaps into place in the air pipe's latching lug.

### 5.9.3 Installing the wall duct



1. Drill a hole.
  - Diameter: 125 mm



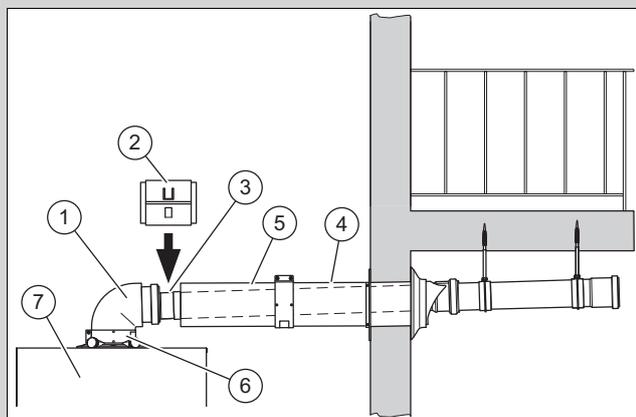
#### Note

If the wall duct can be accessed from the exterior of the building, you can drill the hole with a diameter of 110 mm and install the wall duct with the collar from outside.

2. Slide the air/flue pipe (1) with the flexible collar through the wall.
3. Pull the air/flue pipe back until the collar lies fully on the external wall.
4. Secure the air/flue pipe with mortar and leave the mortar to harden.
5. Install the collar on the inside of the wall.
6. Connect the wall/roof duct to the product using extensions, elbows and, if required, a sliding sleeve. (→ Section 5.19.1)

### 5.9.4 Connecting the product

Validity: Air/flue pipe, 60/100 mm diameter



1. Install the product (7) – see the installation instructions for the product.
2. Connect the 87° elbow (1) to the connector for the air/flue pipe (6).
3. Fit the sliding sleeve (3) with the sleeve as far as it will go onto the wall duct (4) or the extension (5).
4. If required, install the extensions .
5. Connect the sliding sleeve to the 87° elbow.
6. Install the air pipe clamp (2) for the sliding sleeve.

### 7. Alternatives :

Condition: Wall duct with extension

- ▶ Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)

### 5.9.5 Variable terminal set (VTK) – 0010039338

#### 5.9.5.1 Minimum clearances for the flue gas terminal

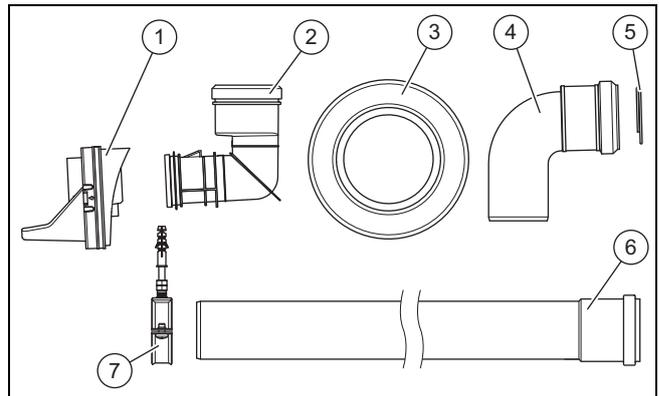
You must comply with the minimum clearances for the flue gas terminal that are defined in BS 5440, unless the boiler's manufacturer has given approval to use shorter minimum clearances that are not considered to be safety-critical.

Vaillant has reduced the minimum clearances for the flue gas terminal and specifies this in the installation instructions for the boiler. These are minimum clearances that are to be used for all types of installation, except for the installation of the variable terminal set (VTK).

If a variable terminal set is connected to horizontal flue pipework, terminal clearances are reduced for the air inlet. The terminal clearances on the "new" flue outlet at the end of VTK remain unchanged.

On the VTK, the minimum clearances for the air inlet A, B and C (→ Installation instructions for the boiler) to openings (e.g. a window) are reduced to 150 mm. This means that the terminal will be at the horizontal flue pipework when a variable terminal set is connected to the air inlet and can therefore be installed at a clearance of less than 300 mm from a window opening or a ventilation tile.

#### 5.9.5.2 Scope of delivery



- |   |                  |   |                       |
|---|------------------|---|-----------------------|
| 1 | Terminal piece   | 5 | Bird-guard grille     |
| 2 | Connection elbow | 6 | 1 m extension (2 pcs) |
| 3 | Collar           | 7 | Pipe clamps (3 pcs)   |
| 4 | Terminal elbow   |   |                       |

- Variable terminal set, black, article number 0010039338

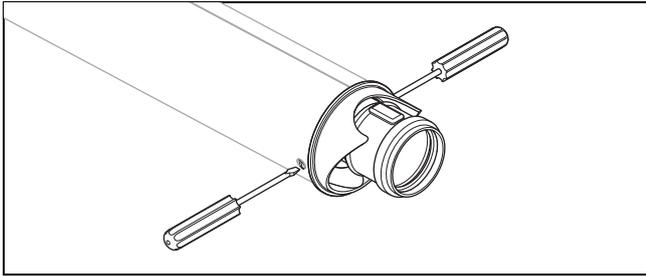


#### Note

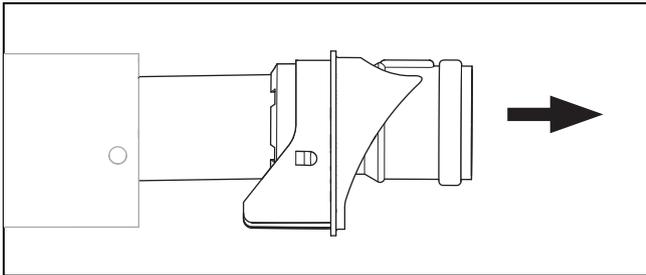
Components 1, 2 and 3 are not required for the installation.

### 5.9.5.3 Installing the variable terminal

1. If required, before starting the installation work, decommission the boiler and secure it against being inadvertently started up again.
2. Remove the wall duct from the terminal.



3. Use an 8 mm screwdriver to press the latching lugs inwards.

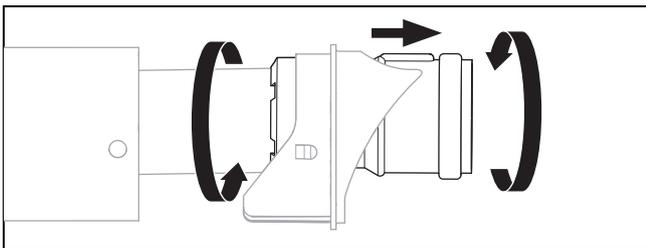


**Danger!**  
**Risk of poisoning due to escaping flue gas.**

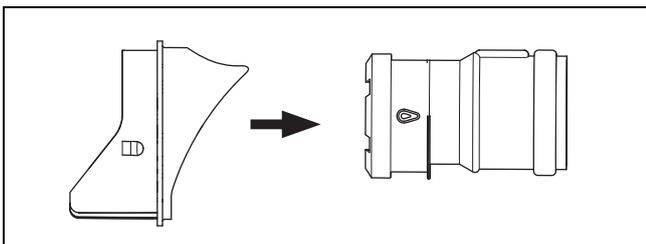
If you turn the flue pipe when removing the terminal from the air pipe, the subsequent flue pipe may come loose from the spacer.

- ▶ Ensure that the flue pipe does not twist when you remove it.

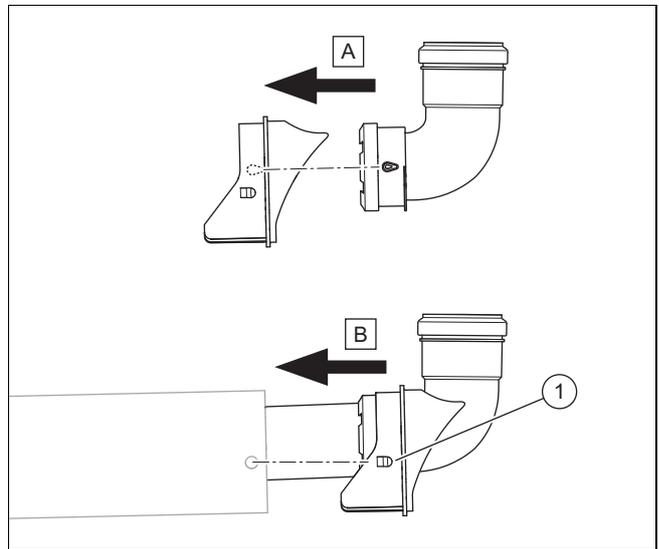
4. Pull the terminal out of the air pipe together with the flue pipe.



5. Release the catch between the terminal and the flue pipe by twisting the two components in opposite directions.
6. Remove the terminal from the flue pipe.



7. Pull the terminal piece out of the pipe adapter.



**Danger!**  
**Risk of poisoning due to escaping flue gas.**

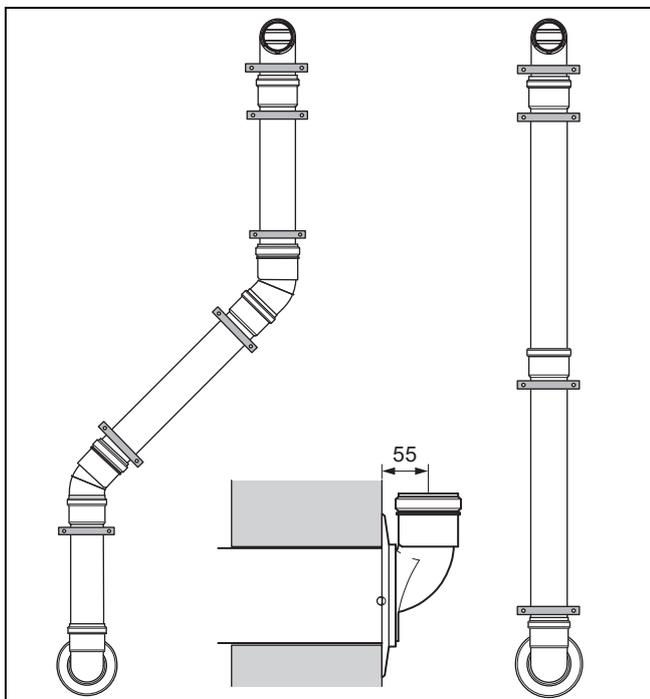
When disconnecting the pipes, flue gases may escape.

- ▶ Ensure that the latching lug on the upper side of the terminal securely snaps into place in the flue pipe's recess.
- ▶ Ensure that the seal is positioned correctly.

8. Push the 87° elbow into the pipe adapter and allow it to lock into place.
9. Push the variable terminal onto the flue pipe so that it snaps into place.
10. Slide the flue pipe, together with the terminal, back into the air pipe.
11. Carefully slide the flue pipe back into the sleeve of the pipe or elbow located behind it.
12. Make sure that the two latching lugs (1) snap into place.
13. Install the wall seal on the variable terminal.

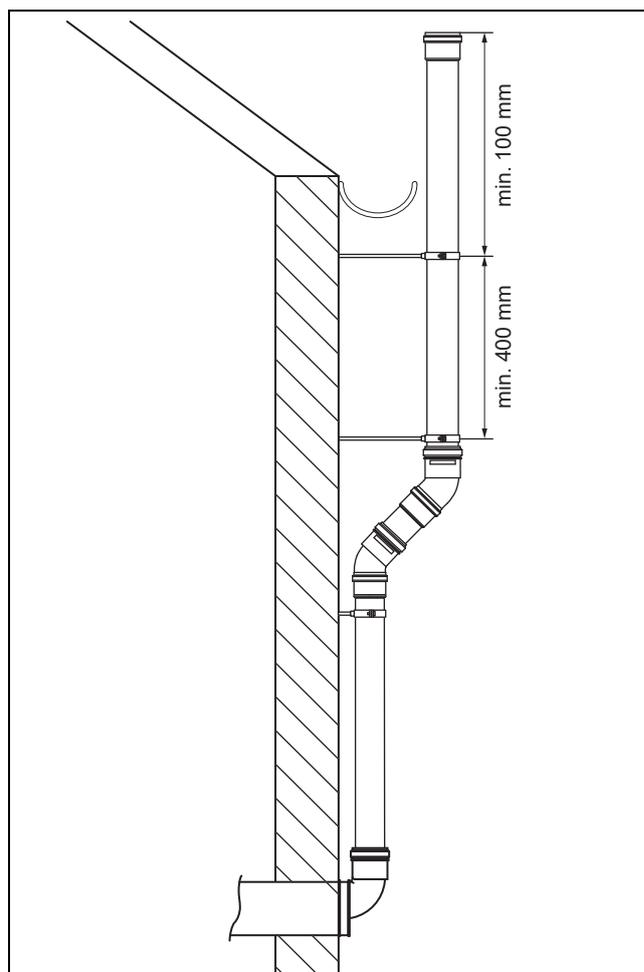
### 5.9.5.4 Installing extensions

1. Install the flue system from the wall connector to the flue outlet.
  - Allow expansion space of 1 cm in each sleeve.
  - Ensure that all pipe joints are absolutely leak-tight.



2. Secure the extensions to the wall using the pipe clamps.
  - Use one pipe clamp for each extension directly beside the sleeve.
  - Upstream of each elbow, install another pipe clamp on the extension.
  - Secure the 87° elbow with bird-guard grille using a separate pipe clamp.

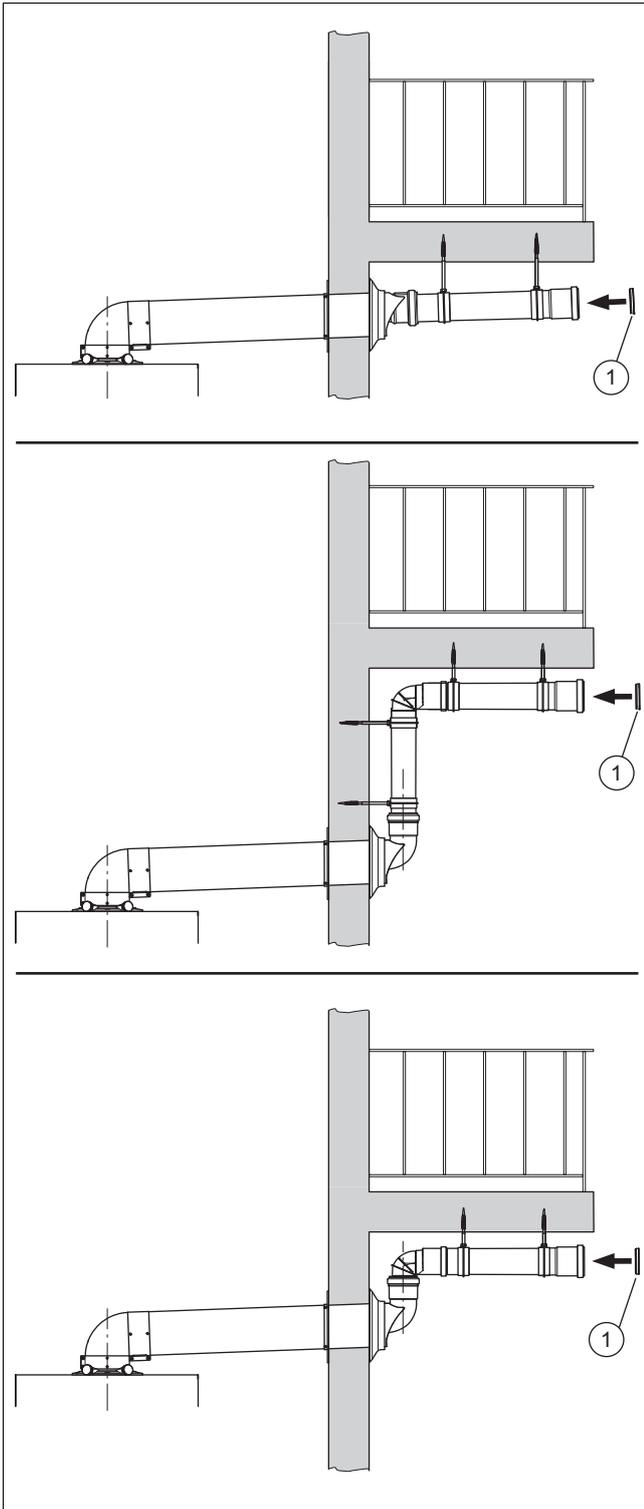
### 5.9.5.5 Routing extensions for the variable terminal set around eaves



When installing the variable terminal set around eaves, additional M8 threaded rods are required for the pipe clamps. The threaded rods are commercially available.

- ▶ If required, install additional 45° elbows.
- ▶ Install the bird-guard grille from the 87° elbow in the last extension.
  - If you are using the 87° elbow, insert the seal for the extension.

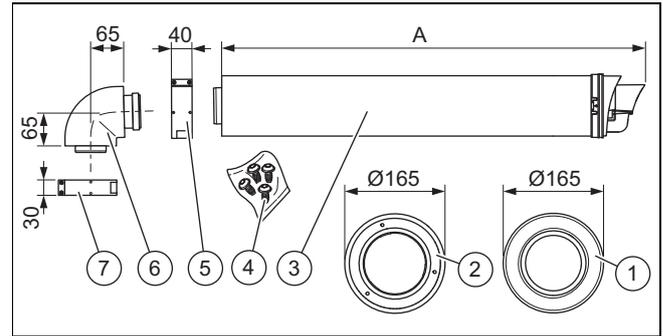
### 5.9.6 Installing the variable terminal set below the balcony



1. When installing with an offset: Install the variable terminal (→ Section 5.9.5.3).
2. Secure the extensions with the pipe clamps below the balcony or on the wall (→ Section 5.9.5.4).
3. Install the bird-guard grille (1) from the elbow of the VTK set in the sleeve for the last extension.

### 5.10 Horizontal wall/roof duct – 0010039324 – 0010039327 – 60/100 mm diameter

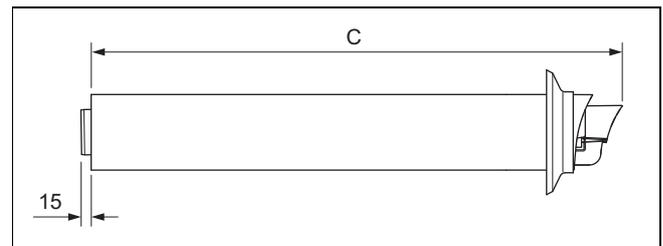
#### 5.10.1 Scope of delivery



- |   |   |   |                      |
|---|---|---|----------------------|
| A | 0010039324: 777 mm<br>0010039327: 1857 mm | 3 | Horizontal wall duct |
| 1 | Collar (outside) 100 diameter             | 4 | Locking screws       |
| 2 | Collar (inside) 100 diameter              | 5 | 40 mm clamp          |
|   |   | 6 | 87° elbow            |
|   |   | 7 | 30 mm clamp          |

#### 5.10.2 Shortening the air/flue pipe

1. Determine the clearance to the external wall. (→ Section 5.1.2.2)



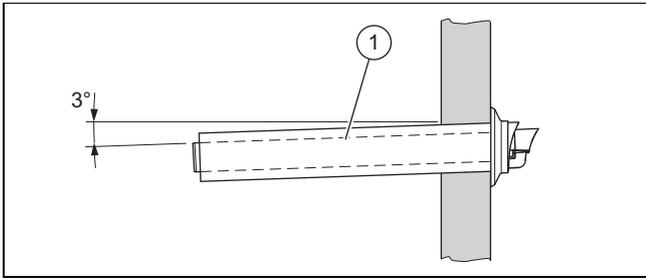
2. Shorten the flue pipe and the air pipe by the same amount when they are assembled.
  - Length C ≥ 237 mm

Length	Article number
	<b>0010039324</b> <b>0010039327</b>
C	Clearance to the outside of external wall A (→ Section 5.1.2.2) + 22 mm

**Condition:** Additional extensions and elbows required

- ▶ Install the extensions. (→ Section 5.19.2)
  - All of the sleeves for the flue pipe must point towards the terminal.
- ▶ Install the elbows (→ Section 5.19.3).

### 5.10.3 Installing the wall duct

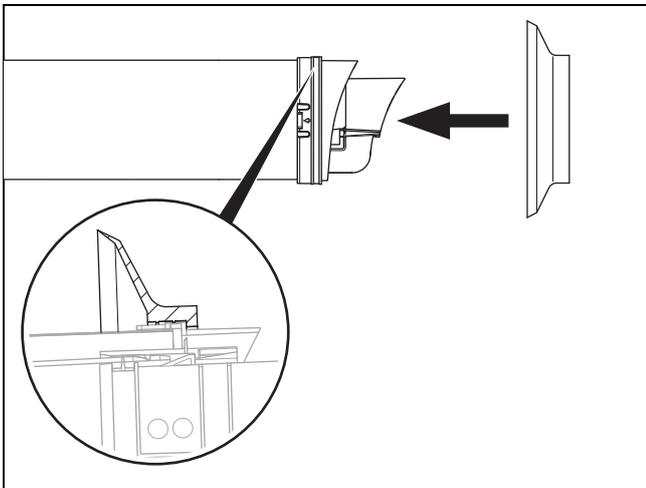


1. Drill a hole.
  - Diameter: 125 mm



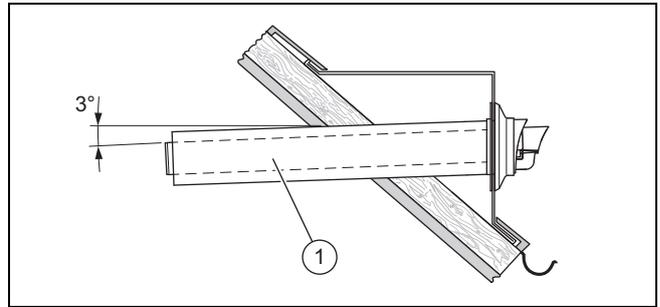
#### Note

If the wall duct can be accessed from the exterior of the building, you can drill the hole with a diameter of 110 mm and install the wall duct with the collar from outside.



2. Install the collar (outside) on the wall duct.
3. Label the upper side on the air pipe.
4. Slide the air/flue pipe with the flexible collar through the wall.
5. Pull the air/flue pipe back until the collar lies fully on the external wall.
6. Align the wall duct in such a way that the label points upwards.
7. Secure the air/flue pipe with mortar and leave the mortar to harden.
8. Install the collar (internal) on the inside of the wall.
9. Connect the wall/roof duct to the product using extensions, elbows and, if required, a sliding sleeve. (→ Section 5.12)

### 5.10.4 Installing the roof duct

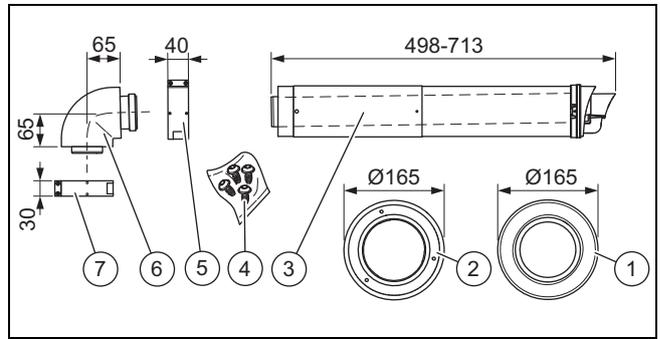


- ▶ Install the roof duct in the dormer in the same way as the wall duct (→ Section 5.10.3).

For information on preparing the installation, see (→ Section 5.1.2.1).

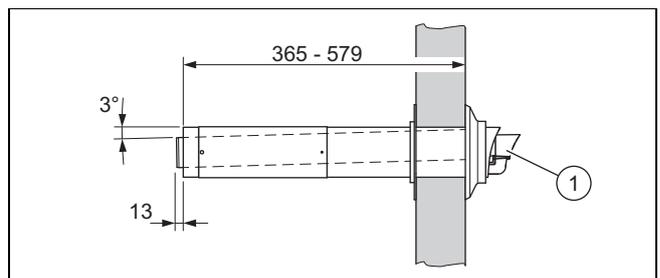
### 5.11 Horizontal telescopic wall/roof duct – 0010039333 – diameter 60/100 mm

#### 5.11.1 Scope of delivery



- |   |                                 |   |                |
|---|---------------------------------|---|----------------|
| 1 | Collar (outside) 100 diameter   | 4 | Locking screws |
| 2 | Collar (inside) 100 diameter    | 5 | 40 mm clamp    |
| 3 | Horizontal telescopic wall duct | 6 | 87° elbow      |
|   |                                 | 7 | 30 mm clamp    |

#### 5.11.2 Installing the wall duct



1. Drill a hole.
  - Diameter: 125 mm

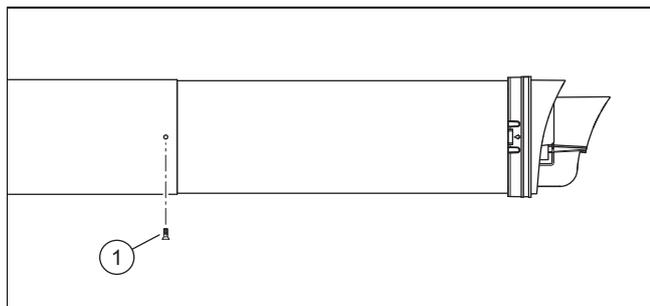


#### Note

If the wall duct can be accessed from the exterior of the building, you can drill the hole with a diameter of 110 mm and install the wall duct with the collar from outside.

2. Determine the clearance to the external wall. (→ Section 5.1.2.2)
3. Set the telescopic wall duct to the correct length.

- Note that the **TOP** symbol must point upwards on both ends.

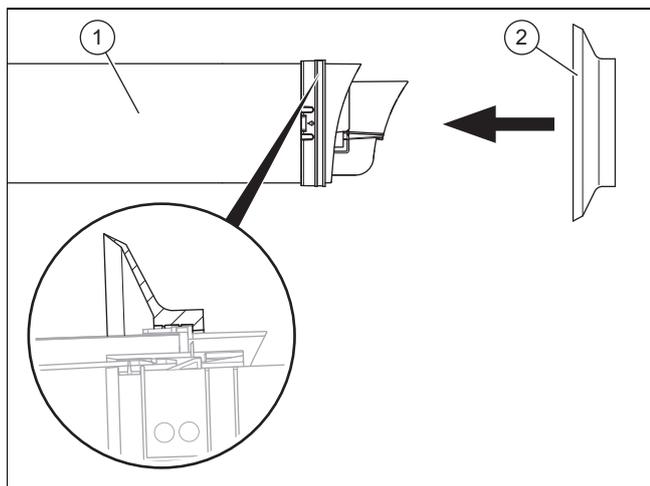


**Danger!**  
**Risk of poisoning due to escaping flue gas.**

Flue gas can escape if a flue pipe is damaged.

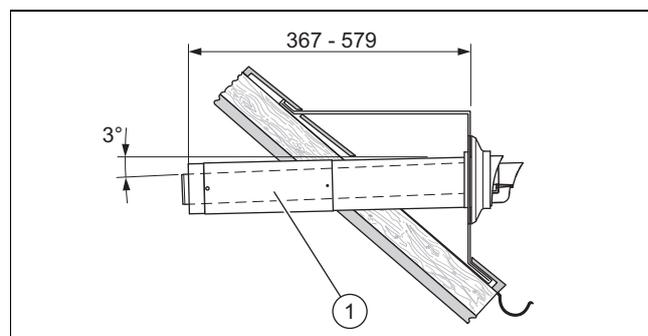
- ▶ Only use the self-tapping screw provided.

- Secure the air pipes to each other by screwing the overlapping air pipes together using the supplied self-tapping screws on both sides (1).



- Install the collar (external) (2) on the wall duct.
- Slide the air/flue pipe (1) with the flexible collar (external) through the wall.
- Pull the air/flue pipe back until the collar lies fully on the external wall.
- Align the wall duct in such a way that the label points upwards.
- Secure the air/flue pipe with mortar and leave the mortar to harden.
- Install the collar (internal) on the inside of the wall.
- Connect the wall/roof duct to the product using extensions, elbows and, if required, a sliding sleeve. (→ Section 5.12)

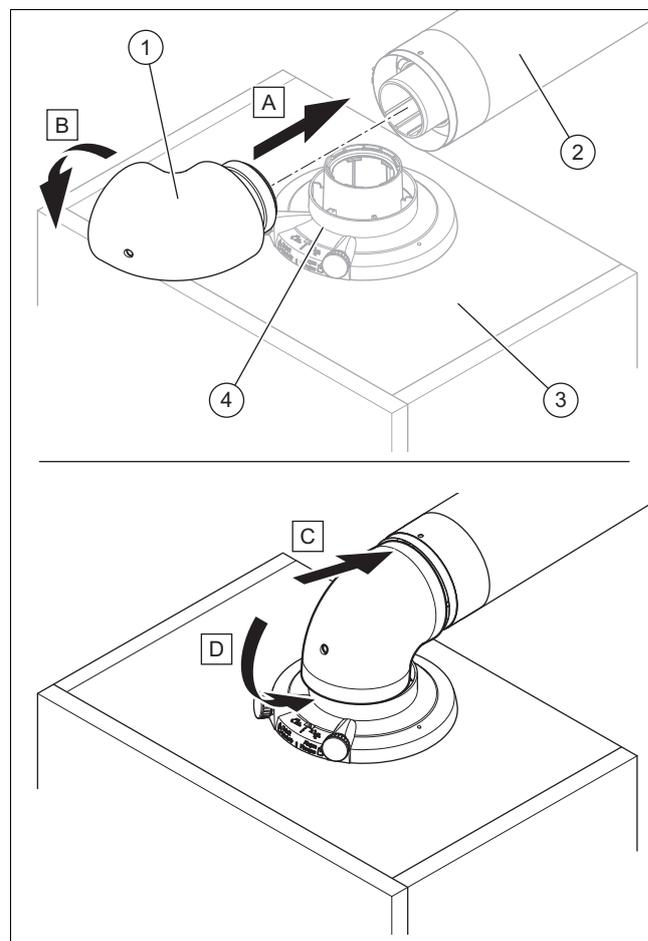
### 5.11.3 Installing the roof duct



- ▶ Install the roof duct in the dormer in the same way as the wall duct (→ Section 5.11.2).

For information on preparing the installation, see (→ Section 5.1.2.1).

### 5.12 Connecting the product



- Install the product (3) – see the installation instructions for the product.
- If required, replace the connector (4) for the air/flue pipe, see the installation instructions for the product.

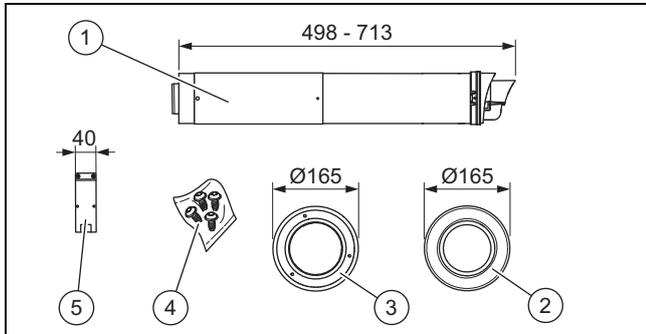
**Condition:** Wall/roof duct with extension

- ▶ Install the extensions. (→ Section 5.19.2)
  - ▶ Install the elbows (→ Section 5.19.3).
- Slide the connection elbow twisted (1) to the side by 90° into the horizontal air/flue pipe (2).
  - Twist the connection elbow by 90° downwards.
  - Slide the connection elbow into the connector for the air/flue pipe.

6. If there is sufficient space available, you can use the sliding sleeve as an alternative to connect the air/flue pipe. (→ Section 5.19.1)
7. Install all air pipe clamps and secure the air pipe clamp using the locking screws. (→ Section 5.19.5)

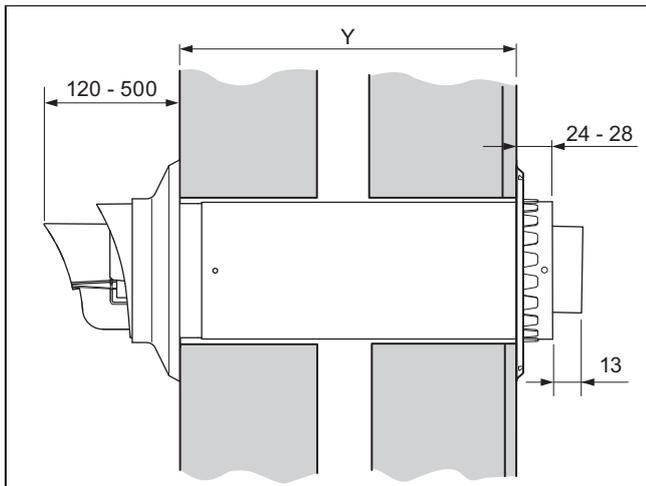
## 5.13 Direct, rear, telescopic wall duct – 0010039336 – diameter 60/100 mm

### 5.13.1 Scope of delivery



- |   |                      |   |                |
|---|----------------------|---|----------------|
| 1 | Telescopic wall duct | 4 | Locking screws |
| 2 | Collar (outside)     | 5 | 40 mm clamp    |
| 3 | Collar (internal)    |   |                |

### 5.13.2 Determining the pipe length of the wall duct



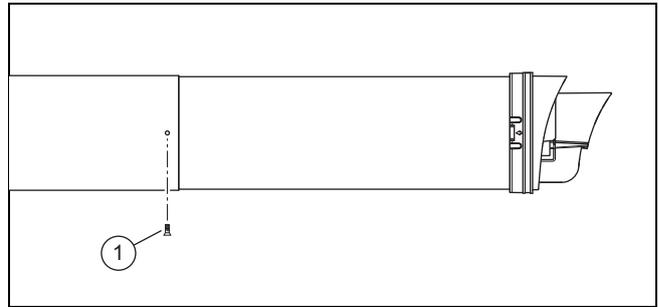
1. Measure the clearance Y from the external wall to the installation surface for the boiler.
2. Set the required pipe length:
  - At least:  $Y + 24$  mm
  - Maximum:  $Y + 28$  mm
  - If the terminal is below a roof overhang or a horizontal surface, you can pull the wall duct up to 500 mm out of the wall in order to guarantee that the flue gases are extracted without any obstructions.



#### Note

Do not shorten the telescopic flue pipe. If the required pipe length cannot be achieved, use extensions or the horizontal wall/roof duct.

### 5.13.3 Securing the telescopic pipe



1. Set the telescopic wall duct to the correct length.
  - Note that the **TOP** symbols at both ends must point upwards.



#### Danger!

**Risk of poisoning due to escaping flue gas.**

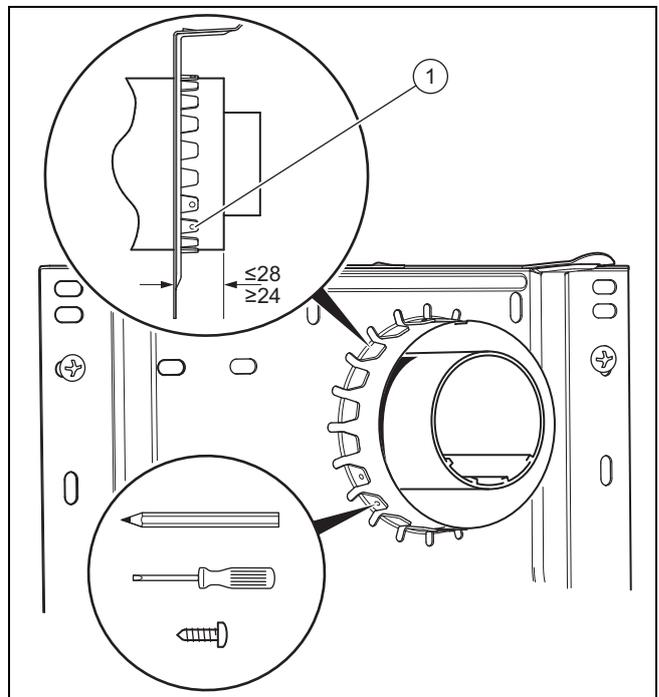
Flue gas can escape if a flue pipe is damaged.

► Only use the self-tapping screw provided.

2. Secure the air pipes to each other by screwing the overlapping air pipes together using the supplied self-tapping screws (1) on both sides.

### 5.13.4 Installing the wall duct

1. Drill a hole.
  - Diameter: 110 mm
2. Push the air/flue pipe from outside and through the wall and the terminals.



3. Pull the wall duct out to the required depth.
4. Use the locking screws to secure the wall duct.

- Use at least three of the six holes **(1)** that are available in the terminals to secure the flue pipe.

5. Install the collar.
6. Before you install the boiler, check that the wall duct is safely secured in place.
7. Seal the installation gap using a suitable material (e.g. mortar).
8. Install the boiler (→ Installation instructions for the boiler).

## 5.14 Installing terminal sets for 60/100 mm diameter air/flue systems



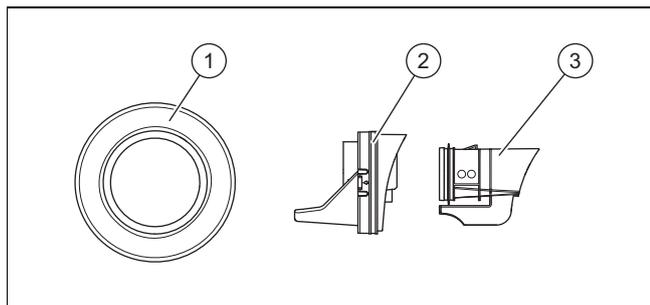
### Caution. Risk of material damage due to low temperatures

In the case of temperatures below 0 °C and in unheated rooms, the flexibility of the terminal piece and the end pipe is reduced.

- ▶ Install the end pipe terminal piece with particular care.

### 5.14.1 Black terminal set – 0010039348

#### 5.14.1.1 Scope of delivery

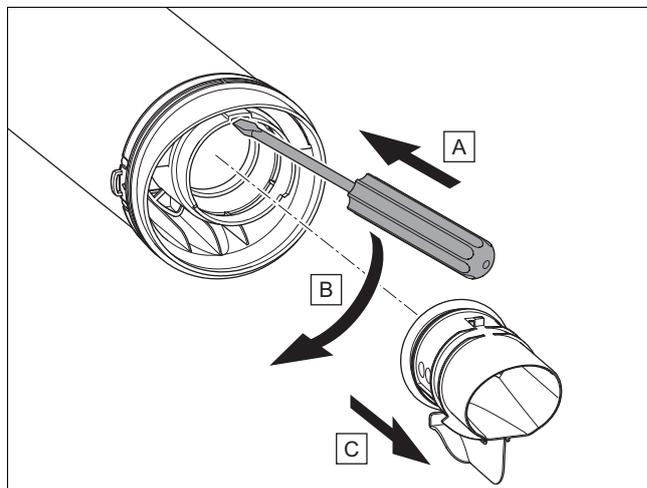


- |   |                |   |          |
|---|----------------|---|----------|
| 1 | Collar         | 3 | End pipe |
| 2 | Terminal piece |   |          |

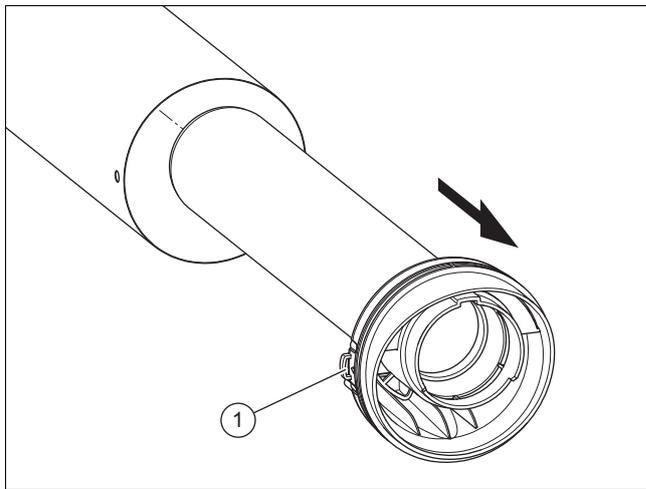
#### 5.14.1.2 Installing the black terminal



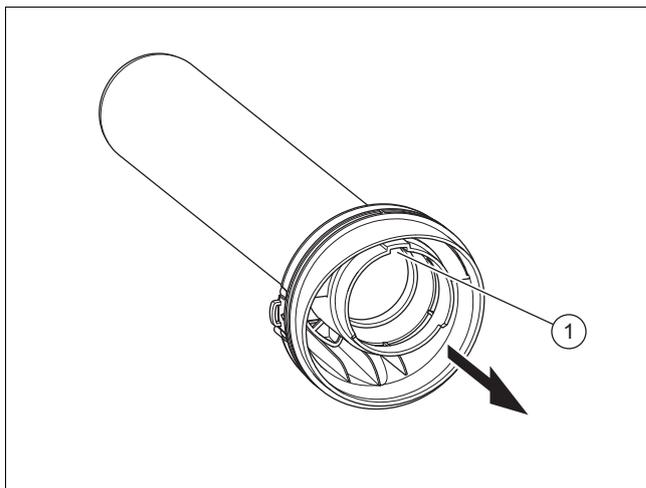
**Note**  
You must install the terminal sets before installing the flue pipework.



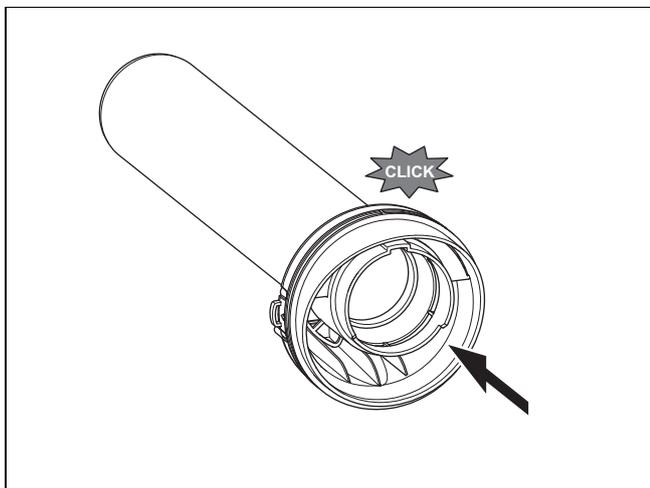
1. Undo the end pipe's lock using a flat-blade screwdriver and pull it out to the front.



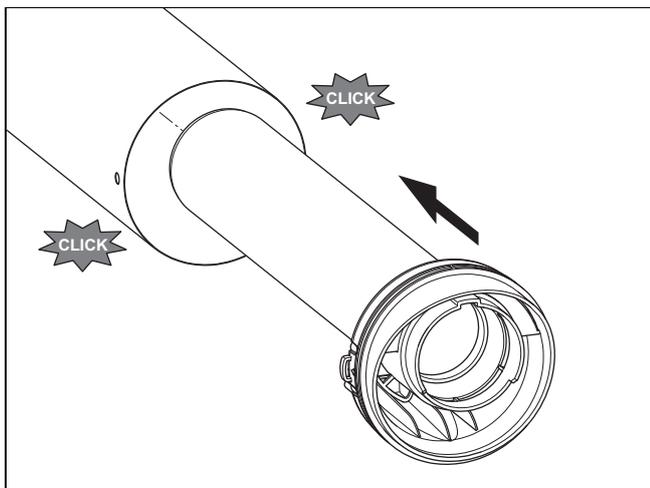
2. Pry open the snap-on connections **(1)** on both sides using a flat-blade screwdriver and use the terminal piece to pull the flue pipe out of the air pipe.



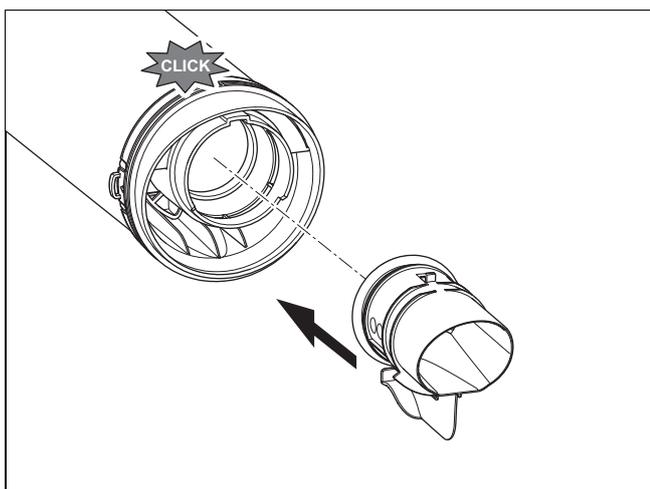
3. Undo the flue pipe **(1)** from the terminal piece using a flat-blade screwdriver.
  - Ensure that the flue pipe is not damaged.



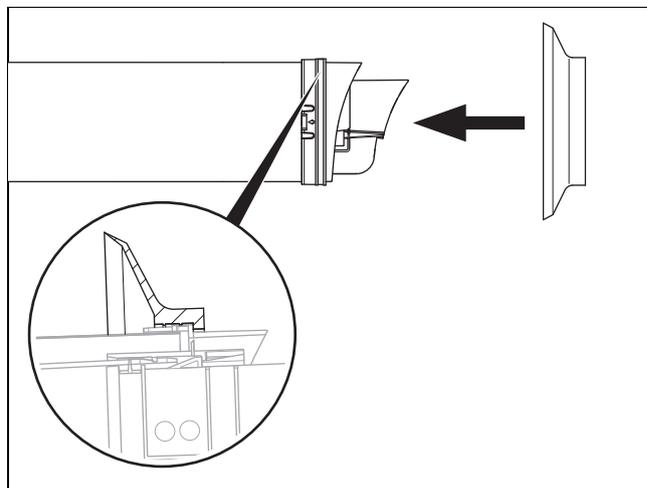
4. Slide the new terminal piece onto the flue pipe until you hear the terminal piece click into place.



5. Slide the flue pipe with the new terminal piece into the air pipe until you hear the terminal piece click into place.



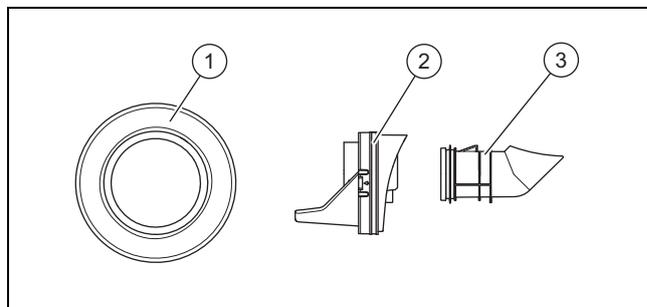
6. Slide the end pipe onto the terminal piece until you hear the end pipe click into place.



7. Install the collar on the wall duct.  
 8. Install the horizontal wall duct (→ Section 5.10) or (→ Section 5.11) or (→ Section 5.13).  
 9. Connect the product. (→ Section 5.12)

### 5.14.2 Deflector set – 0010039343 / ...45

#### 5.14.2.1 Scope of delivery



- |   |                              |   |                                      |
|---|------------------------------|---|--------------------------------------|
| 1 | Collar (for 0010039343 only) | 2 | Terminal piece (for 0010039343 only) |
|   |                              | 3 | Deflector                            |

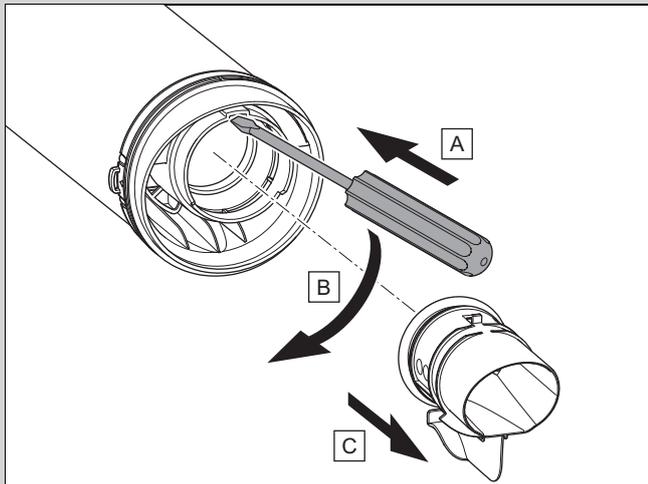
- Deflector set, DN 60 PP, black (article number 0010039343)
- Deflector set, DN 60, PP, white (article number 0010039345)

#### 5.14.2.2 Installing the deflector set

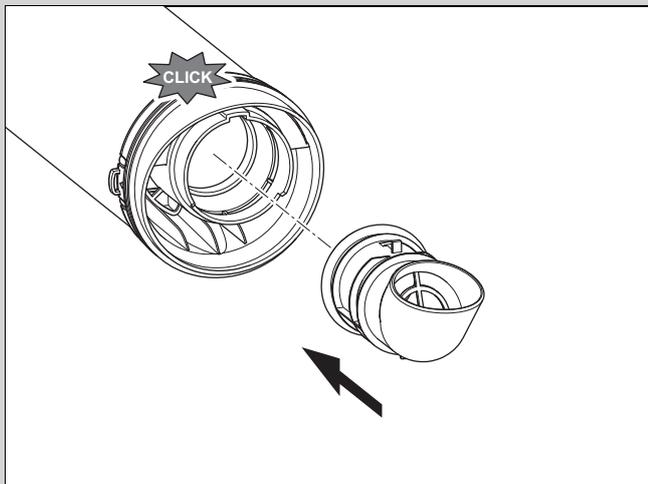
**Condition:** Replacing the deflector set (change of colour)

- ▶ In the event of a change of colour, replace the terminal piece, including the collar (→ Section 5.14.1.2).
- ▶ Install the deflector, instead of the end pipe, on the terminal piece.

Condition: Replacing the end pipe only

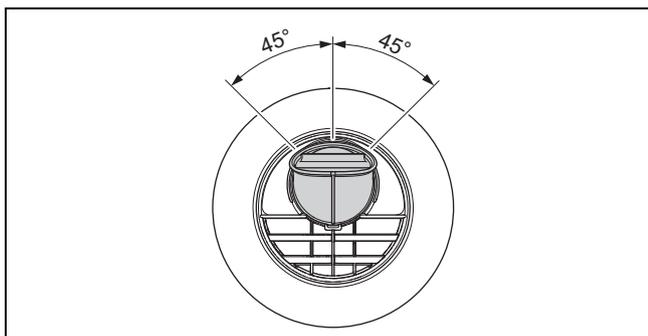


- ▶ Undo the end pipe's lock (1) using a flat-blade screwdriver and pull it out to the front.



- ▶ Slide the deflector onto the terminal piece until you hear the deflector click into place.

### 5.14.2.3 Adjusting the deflector



- ▶ Set the terminal to the required position.
  - The flue gas stream is directed upwards at an angle of approx. 45° when the deflector is set in the centre position.
  - If necessary, the deflector terminal can be rotated 45° anti-clockwise or clockwise. These setting options mean that the flue system can be further optimised.

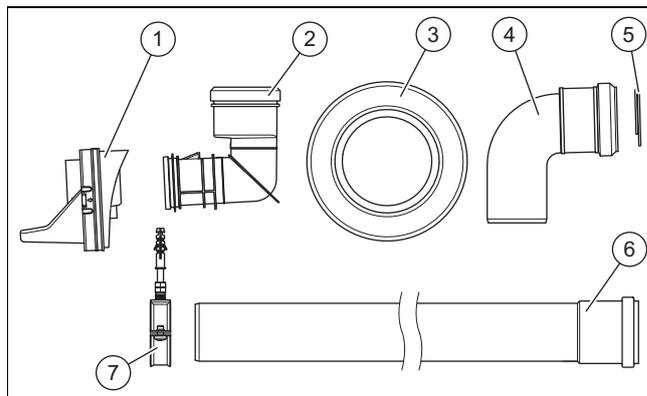
## 5.14.3 Installing the variable terminal set – 0010039338 /...40 (VTK)

### 5.14.3.1 Minimum clearances for the flue gas terminal

If a variable terminal set is connected to horizontal flue pipework, terminal clearances are reduced for the air inlet. The terminal clearances on the "new" flue outlet at the end of VTK remain unchanged.

On the VTK, the minimum clearances for the air inlet A, B and C (→ Installation instructions for the boiler) to openings (e.g. a window) are reduced to 150 mm. This means that the terminal will be at the horizontal flue pipework when a variable terminal set is connected to the air inlet and can therefore be installed at a clearance of less than 300 mm from a window opening or a ventilation tile.

### 5.14.3.2 Scope of delivery



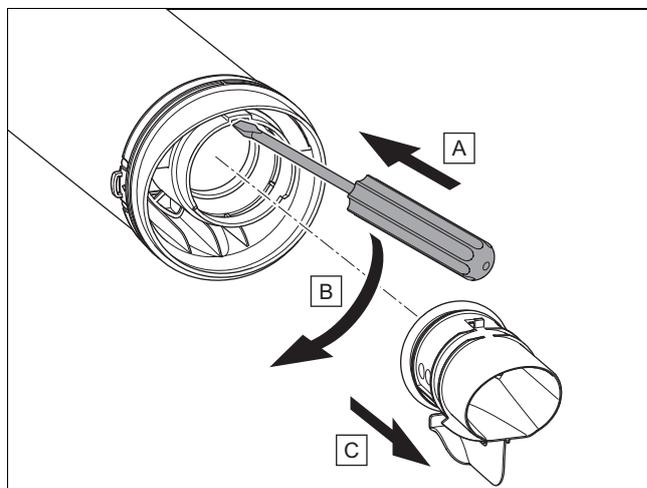
- |   |                                      |   |                       |
|---|--------------------------------------|---|-----------------------|
| 1 | Terminal piece (for 0010039338 only) | 4 | Terminal elbow        |
| 2 | Connection elbow                     | 5 | Bird-guard grille     |
| 3 | Collar (for 0010039338 only)         | 6 | 1 m extension (2 pcs) |
| 7 | Pipe clamps (3 pcs)                  |   |                       |

- Variable terminal set, black, article number 0010039338
- Variable terminal set, white, article number 0010039340

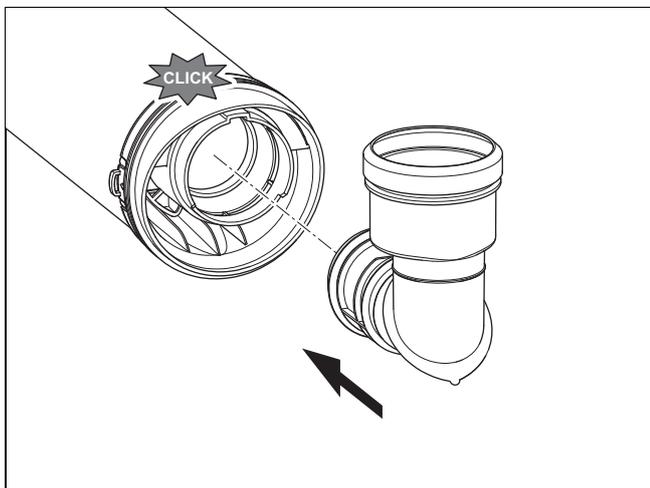
### 5.14.3.3 Installing the variable terminal set (VTK)

Condition: For 0010039338 only

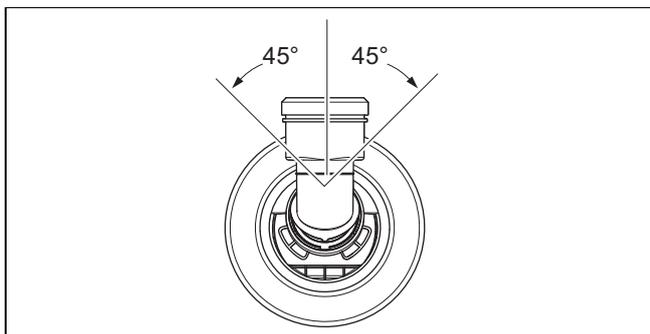
- ▶ Replace the terminal piece.



1. Undo the end pipe's lock using a flat-blade screwdriver and pull it out to the front.



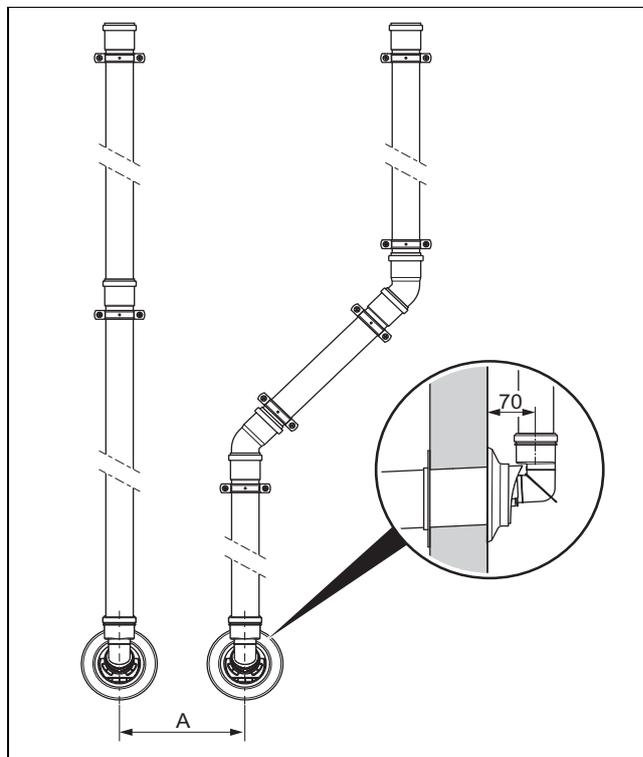
2. Slide the connection elbow onto the terminal piece until you hear it click into place.



3. Set the variable terminal to the required position.
  - If required, the variable terminal can be rotated 45° anti-clockwise or clockwise. These setting options mean that the flue system can be further optimised.
4. Install the horizontal wall duct as described (→ Section 5.10) or (→ Section 5.11).

#### 5.14.3.4 Installing extensions

1. Install the flue system from the wall connector to the flue outlet.
  - Start with the lowest extension.
  - Allow expansion space of 1 cm in each sleeve.
  - Ensure that all pipe joints are absolutely leak-tight.
  - Maintain a minimum clearance of 0.5 mm between the flue gas terminal and the air inlet.



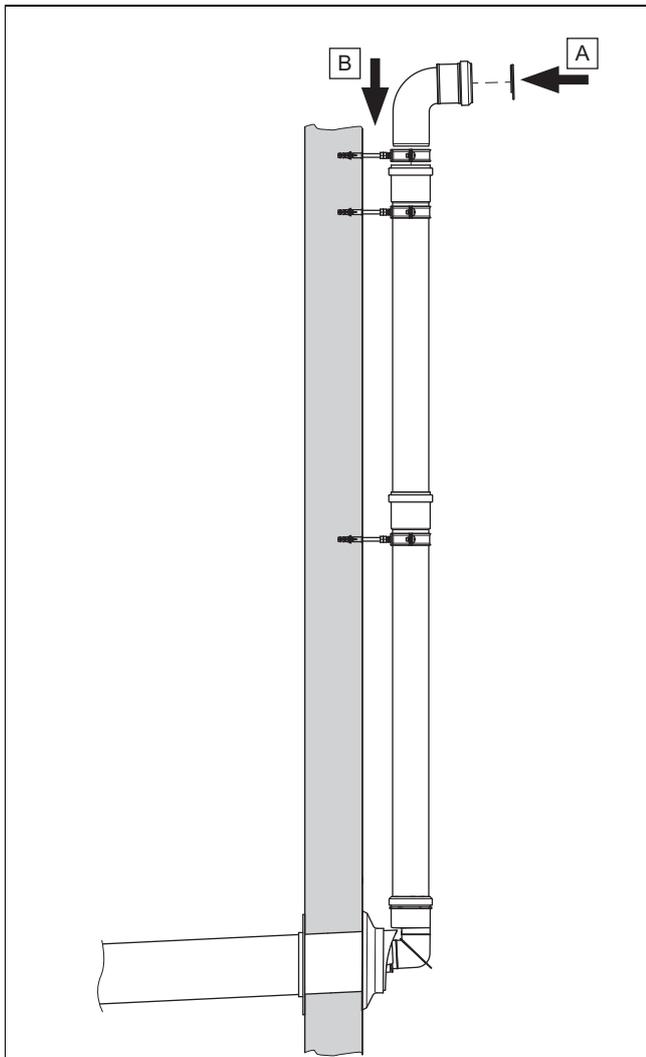
2. Secure the extensions to the wall using the pipe clamps.
  - Use one pipe clamp for each extension directly beside the sleeve.
  - Upstream of each elbow, install another pipe clamp on the extension.



#### Note

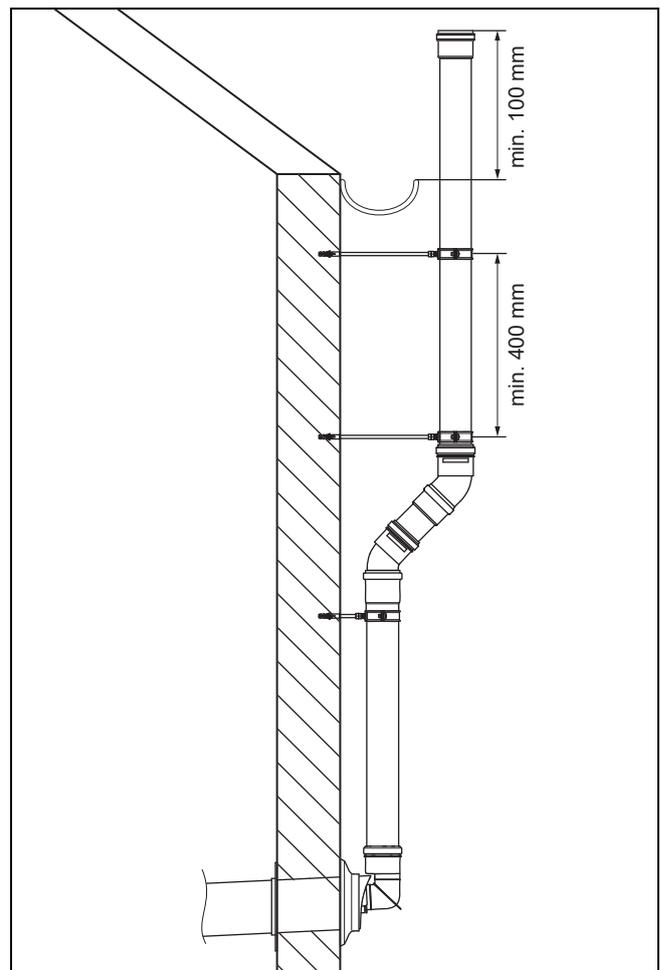
If all flue gas terminals are at least 1 m away from the air inlets, the distance (**A**) between two wall ducts must be less than 300 mm.

### 5.14.3.5 Installing the terminal elbow



1. Install the bird-guard grille in the groove of the seal seat (step A). If a seal is present, remove this in advance.
2. Install the terminal elbow into the last extension (step B).
3. Use another pipe clamp to secure the terminal elbow with the bird-guard grille.

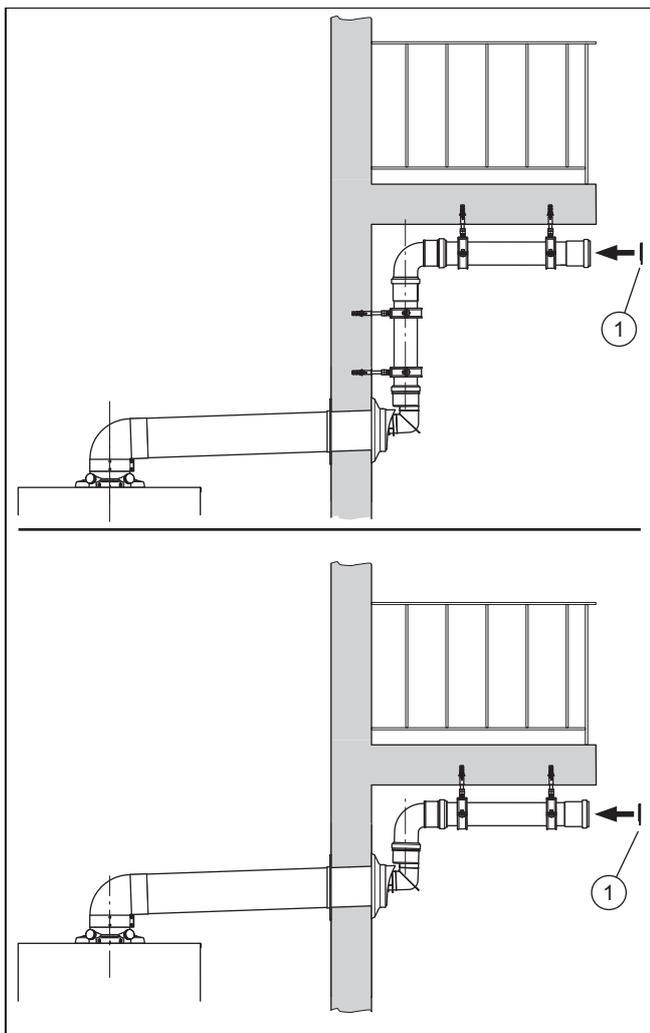
### 5.14.3.6 Routing extensions for the variable terminal set around eaves



When installing the variable terminal set around eaves, additional M8 threaded rods are required for the pipe clamps. The threaded rods are commercially available.

- ▶ If required, install additional 45° elbows.
- ▶ Install the bird-guard grille from the terminal elbow in the last extension.
  - If a seal is present, remove the seal.
  - If you use the terminal elbow, install the terminal elbow. (→ Section 5.14.3.5)
- ▶ Connect the product. (→ Section 5.12)

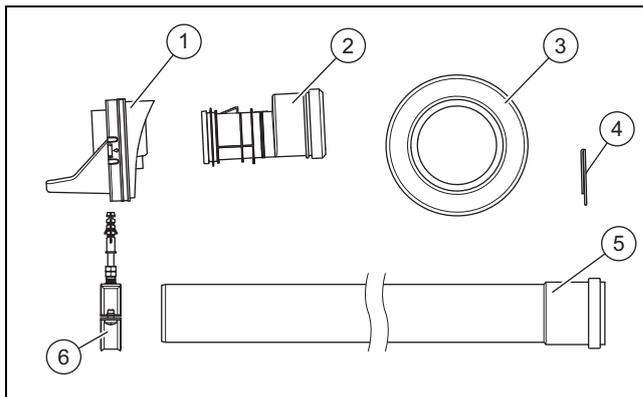
### 5.14.3.7 Installing the variable terminal set below the balcony



1. When installing with an offset: Install the variable terminal (→ Section 5.14.3).
2. Secure the extensions with the pipe clamps below the balcony or on the wall (→ Section 5.14.3.4).
3. Install the bird-guard grille (1) from the terminal elbow of the VTK set in the sleeve for the last extension.
  - If a seal is present, remove the seal.
4. Connect the product (→ Section 5.12).

### 5.14.4 Variable terminal set (VTK) 0010047862/..63 for installing below the balcony

#### 5.14.4.1 Scope of delivery



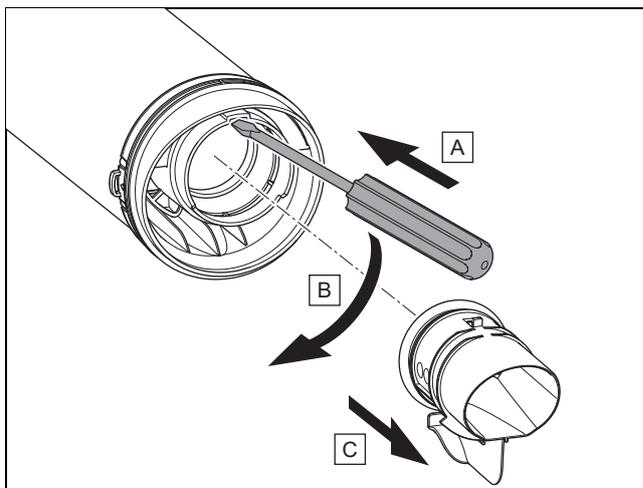
- |   |                                      |   |                       |
|---|--------------------------------------|---|-----------------------|
| 1 | Terminal piece (for 0010047863 only) | 4 | Bird-guard grille     |
| 2 | Straight balcony adapter             | 5 | 1 m extension (2 pcs) |
| 3 | Collar (for 0010047863 only)         | 6 | Pipe clamps (3 pcs)   |

- Variable terminal set, black, article number 0010047863
- Variable terminal set, white, article number 0010047862

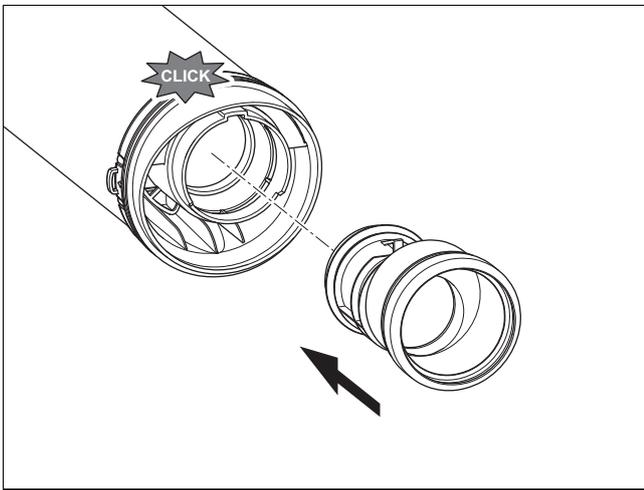
#### 5.14.4.2 Installing the variable terminal set (VTK)

**Condition:** For 0010047863 only

- ▶ Replace the terminal piece.

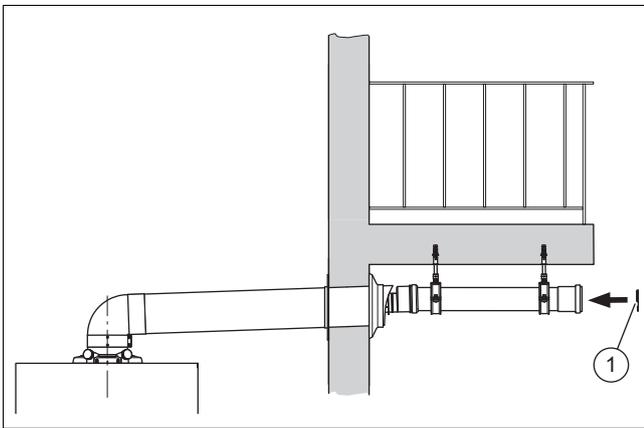


1. Undo the end pipe's lock using a flat-blade screwdriver and pull it out to the front.



2. Install the straight balcony adapter until you hear it click into place.
3. Install the horizontal wall duct (→ Section 5.10) or (→ Section 5.11).

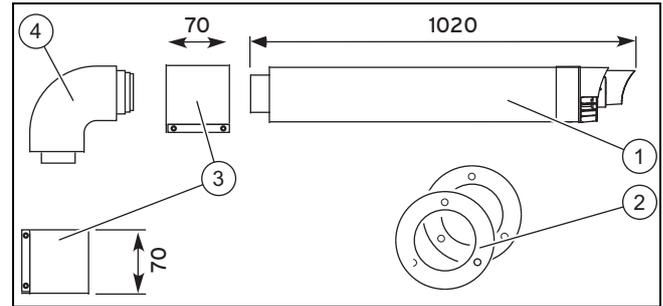
#### 5.14.4.3 Installing the end pipe



1. Secure the extensions with the pipe clamps below the balcony (→ Section 5.14.3.4).
  - Depending on the clearance between the wall duct and the underside of the balcony, additional M8 threaded rods are also required. The threaded rods are commercially available.
2. Install the bird-guard grille (1) from the terminal elbow of the VTK set in the sleeve for the last extension.
  - If a seal is present, remove the seal.
3. Connect the product (→ Section 5.12).

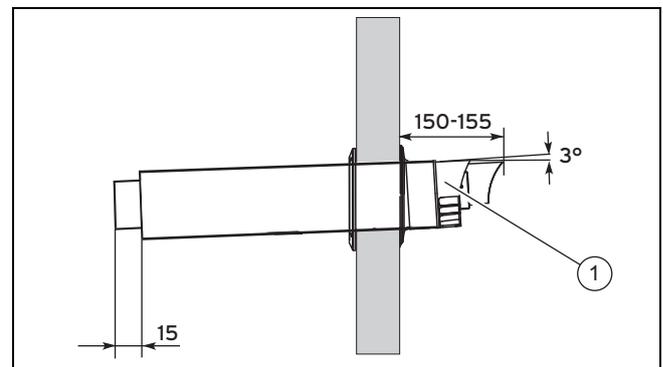
### 5.15 Horizontal wall/roof duct – 303209 or 0010035777 – diameter 80/125 mm

#### 5.15.1 Scope of delivery



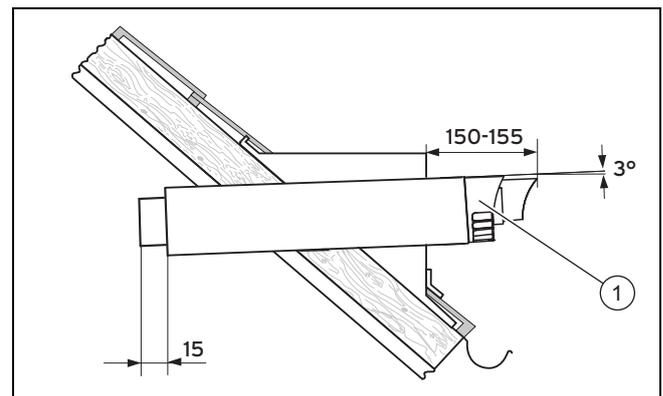
- |   |                              |   |                     |
|---|------------------------------|---|---------------------|
| 1 | Horizontal wall/roof duct    | 3 | 70 mm clamp (2 pcs) |
| 2 | Collar, 125 diameter (2 pcs) | 4 | 87° elbow           |

#### 5.15.2 Installing the wall duct



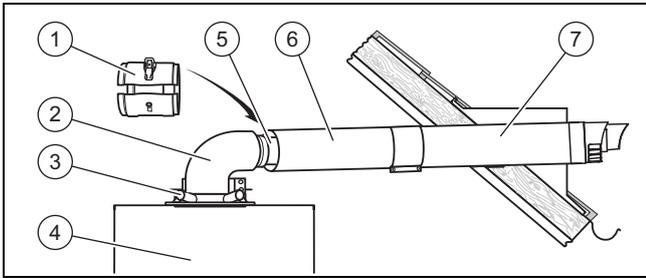
1. Drill a hole.
  - Diameter: 130 mm
2. Insert the air/flue pipe (1) into the wall opening.
3. Secure the air/flue pipe with mortar and leave the mortar to harden.
4. Install the collar on the inside and outside of the wall.

#### 5.15.3 Installing the roof duct



- Insert the air/flue pipe (1) into the dormer.

## 5.15.4 Connecting the product



1. Install the product (4) – see the installation instructions for the product.
2. If required, replace the connector for the air/flue pipe (3), see the installation instructions for the product.
3. Connect the connection elbow (2) to the connector for the air/flue pipe (3).
4. Insert the sliding sleeve (5) with the sleeve as far as it will go in the wall/roof duct (7) or the extension (6).
5. If required, install the extensions .
6. Connect the sliding sleeve to the connection elbow.
7. Install the air pipe clamp (1) for the sliding sleeve.

### 8. Alternatives 1:

**Condition:** Wall/roof duct without extension

- ▶ Install the sliding sleeve. (→ Section 5.19.1)

### 8. Alternatives 2:

**Condition:** Wall/roof duct with extension

- ▶ Install the extensions. (→ Section 5.19.2)
- ▶ Install the elbows (→ Section 5.19.3).
- ▶ Install the sliding sleeve. (→ Section 5.19.1)
- ▶ Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)

## 5.16 Installing the vertical roof duct

### 5.16.1 Installation instructions



#### Danger!

**Risk of poisoning due to escaping flue gas and risk of material damage due to the roof duct shearing off.**

Snow and ice sliding down pitched roofs may break off the vertical roof duct where it exits the roof.

- ▶ In regions where heavy snow falls/extensive ice formation can be expected, install the vertical roof duct close to the ridge or install a snow guard mesh above the roof duct.

The vertical roof ducts can be shortened under the roof. However, to ensure that the fixing bracket is secured tightly, the lengths must still be sufficient.

- ▶ Shorten the flue pipe and the air pipe by the same amount.

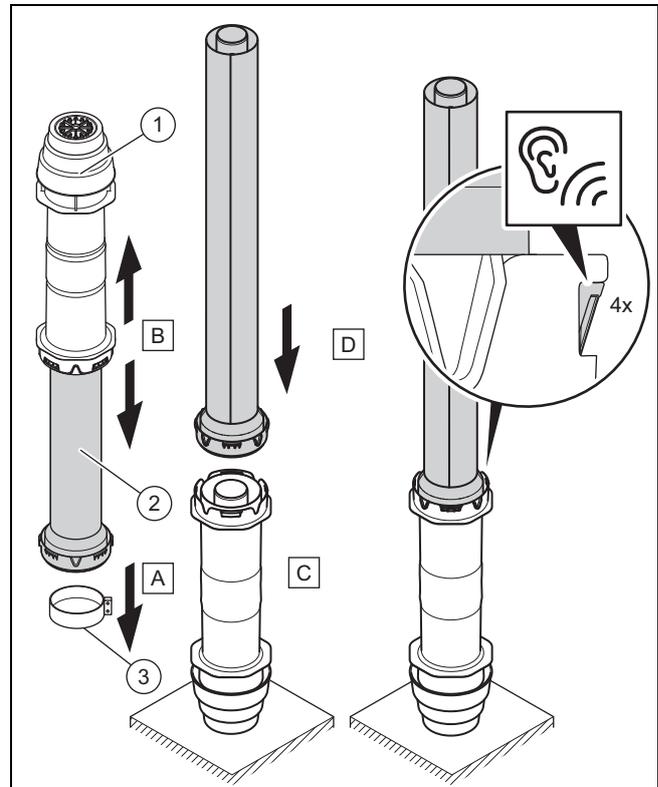
## 5.16.2 Installing the vertical roof duct – 0020223472 – 60/100 mm diameter

### 5.16.2.1 Assembling the vertical roof duct



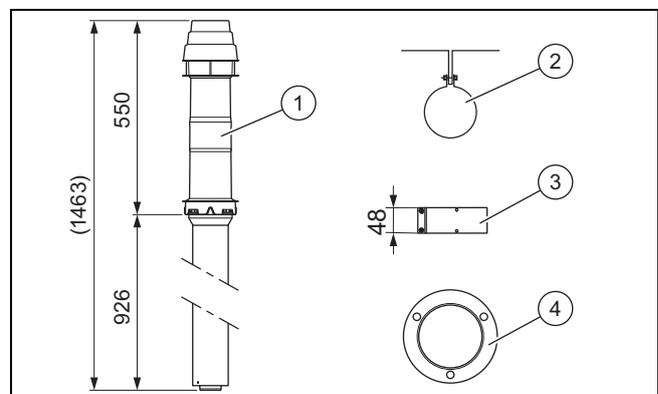
#### Note

In its as-delivered condition, the lower pipe of the vertical roof duct is pushed into the upper pipe.



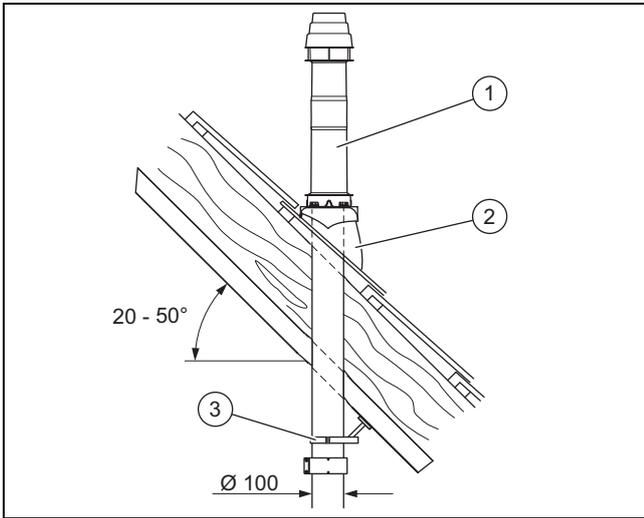
1. Remove the clamp fitting (3) from the inside of the flue pipe (2) (step A).
2. Separate the flue pipe (2) from the terminal piece (1) by pulling them apart (step B).
3. Turn the terminal piece over and set it on the floor (step C).
4. Slide the flue pipe (2) downwards onto the terminal piece (1) until all four fastenings click into place (step D).

### 5.16.2.2 Scope of delivery – 0020223472 (black, with collar)



- |   |                    |   |                      |
|---|--------------------|---|----------------------|
| 1 | Vertical roof duct | 3 | 48 mm air pipe clamp |
| 2 | Fixing bracket     | 4 | Collar               |

### 5.16.2.3 Installing the pitched-roof duct



1. Determine the installation site of the roof duct so that there is sufficient distance behind the product in order to connect the product to the heating installation.
2. Insert the pantile (2).
3. Insert the roof duct (1) through the pantile from above and push it down until the cover plate is seated firmly.
4. Align the roof duct vertically.
5. Secure the roof duct to the roof construction using the fixing bracket (3).
6. Connect the roof duct to the product using extensions, elbows and, if required, a sliding sleeve. If you do not insert a sliding sleeve, you must always install the 40 mm clamp directly on the product.

#### 7. Alternatives 1:

**Condition:** Roof duct with extension

- ▶ Install the extensions. (→ Section 5.19.2)
- ▶ Install the elbows (→ Section 5.19.4).
- ▶ Install the sliding sleeve. (→ Section 5.19.1)
- ▶ Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)

#### 7. Alternatives 2:

**Condition:** Roof duct without extension

- ▶ Install the sliding sleeve. (→ Section 5.19.1)

### 5.16.2.4 Installing the flat-roof duct

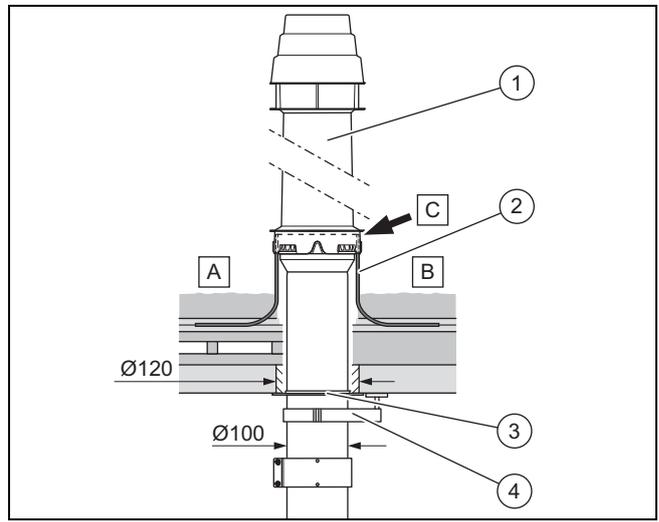


#### Caution.

#### Risk of damage to the structure of the building.

As a result of improper installation, water may penetrate the building and cause material damage.

- ▶ Observe the definitions in the directives for the planning and implementation of roofs with seals.



A Cold roof

B Warm roof

C Position of the internal flue pipe seal

1. Determine the installation site for the roof duct.
2. Insert the flat roof penetration collar (2).
3. Glue the flat roof penetration collar firmly in place.
4. Insert the roof duct (1) through the flat roof penetration collar from above and push it down until seated firmly.
5. Align the roof duct vertically.
6. Put the cover plate (3) on.
7. Secure the roof duct to the roof construction using the fixing bracket (4).
8. Connect the roof duct to the product using extensions, elbows and, if required, a partition. If you do not insert a partition, you must always install the 48 mm clamp directly on the product.

#### 9. Alternatives 1:

**Condition:** Roof duct with extension

- ▶ Install the extensions. (→ Section 5.19.2)
- ▶ Install the elbows (→ Section 5.19.4).
- ▶ Install the sliding sleeve. (→ Section 5.19.1)
- ▶ Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)

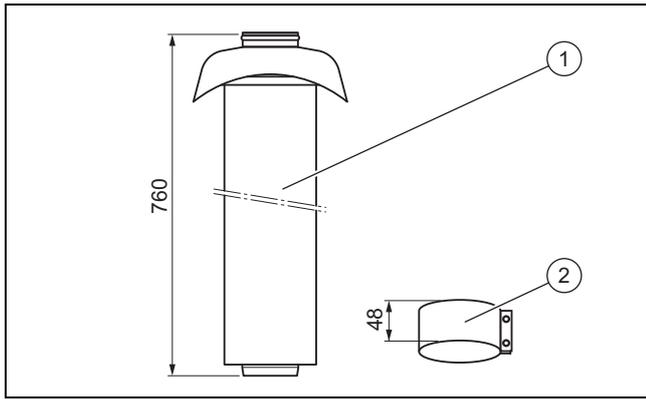
#### 9. Alternatives 2:

**Condition:** Roof duct without extension

- ▶ Install the sliding sleeve. (→ Section 5.19.1)

### 5.16.3 Ridge tiles for roof duct, 60/100 mm diameter

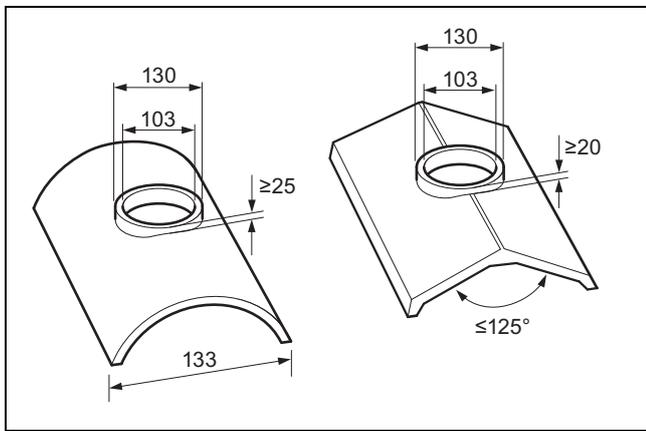
#### 5.16.3.1 Scope of delivery – 303982 (black)



1 Ridge tile terminal, black  
2 48 mm air pipe clamp

#### 5.16.3.2 Ridge roof duct

According to the specifications from the tile manufacturer, a suitable ridge tile must be installed.



Suitable ridge tiles are manufactured by:

Repcor Roof Tiles Limited

49 Maurice Gaymer Road

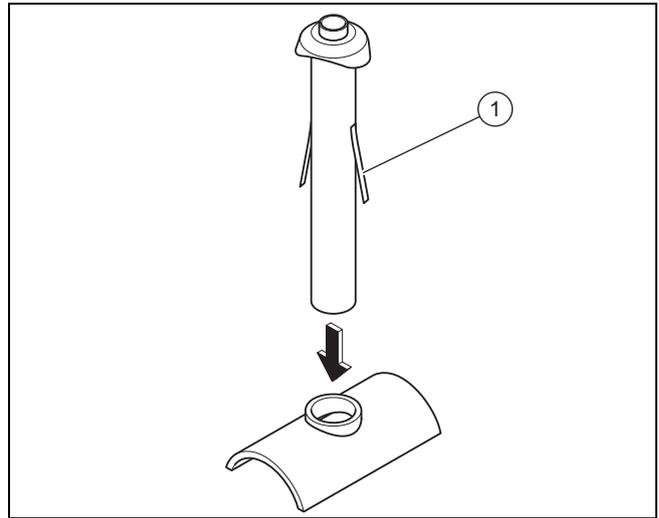
Attleborough

Norfolk, NR17 2QZ

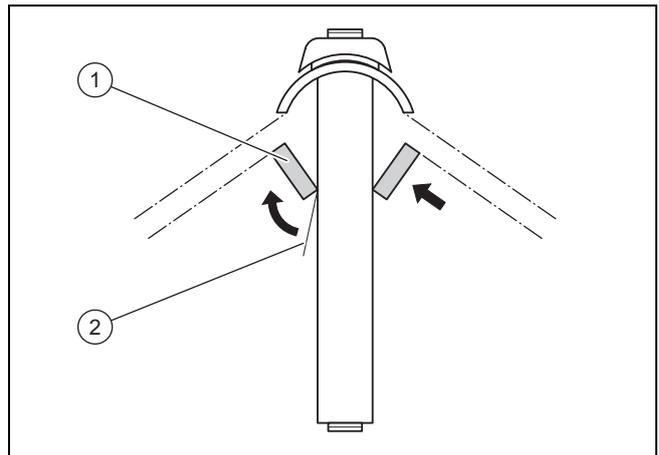
enquiries@repcoroftiles.co.uk

Tel: +44 (0) 808 1333001

### 5.16.3.3 Installing the ridge tile terminal



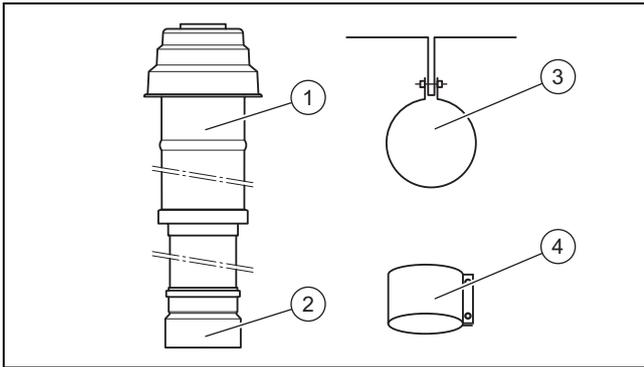
1. Install the ridge tile in accordance with the specifications from the tile manufacturer.
2. Insert the ridge tile terminal into the ridge tile.
3. Align the ridge tile terminal in such a way that the two fixing tabs (1) are at a right angle to the course of the ridding. This ensures that the combustion air can be extracted from between the ridge tile and the air hood above the ridge tile.



4. Bend the two fixing tabs (2) on one bar (1).
5. Use nails or screws to secure the fixing tabs.
6. Install the boiler (→ Installation instructions for the boiler).
7. Install the extensions. (→ Section 5.19.2)
8. Install the elbows (→ Section 5.19.4).
9. Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)
10. Connect the ridge tile terminal and the boiler to extensions and elbows.

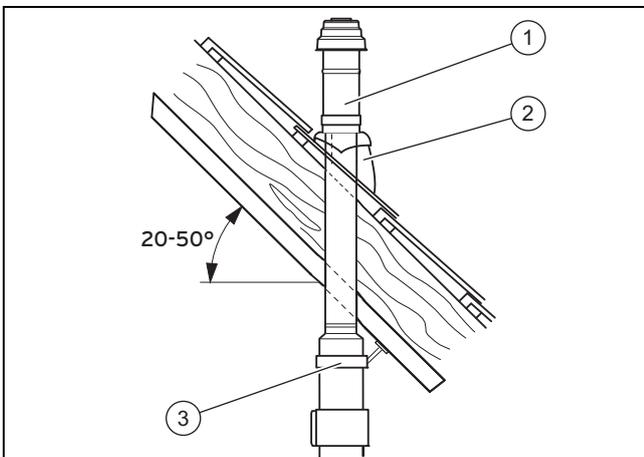
## 5.16.4 Installing the vertical roof duct – 303200 – 80/125 mm diameter

### 5.16.4.1 Scope of delivery



- |   |                                    |   |                      |
|---|------------------------------------|---|----------------------|
| 1 | Vertical roof duct                 | 3 | Fixing bracket       |
| 2 | Adapter (air) for 110/125 diameter | 4 | 70 mm air pipe clamp |

### 5.16.4.2 Installing the pitched-roof duct



- Determine the installation site of the roof duct in such a way that there is sufficient distance behind the product in order to connect the product to the heating installation.
- Insert the pantile (2).
- Insert the roof duct (1) through the pantile from above and push it down until it is seated firmly.
- Align the roof duct vertically.
- Secure the roof duct to the roof construction using the fixing bracket (3).
- Connect the roof duct to the product using extensions, elbows and, if required, a sliding sleeve.
  - If you do not insert a sliding sleeve, you must always install the 70 mm clamp directly on the product

#### 7. Alternatives 1:

**Condition:** Roof duct with extension

- ▶ Install the extensions. (→ Section 5.19.2)
- ▶ Install the elbows (→ Section 5.19.4).
- ▶ Install the sliding sleeve. (→ Section 5.19.1)
- ▶ Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)

#### 7. Alternatives 2:

**Condition:** Roof duct without extension

- ▶ Install the sliding sleeve. (→ Section 5.19.1)

### 5.16.4.3 Installing the flat-roof duct

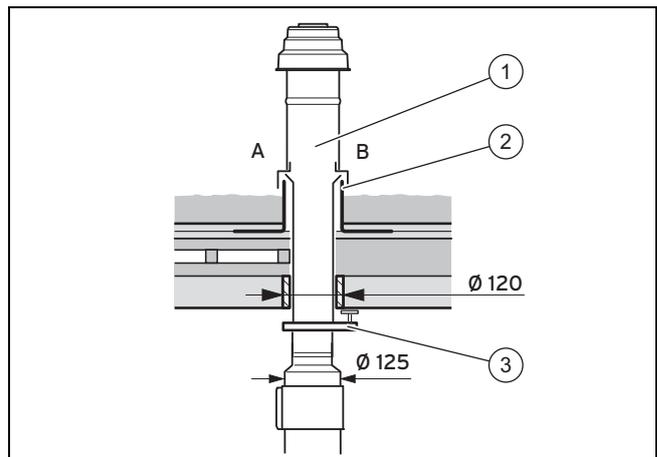


#### Caution.

**Risk of damage to the structure of the building.**

As a result of improper installation, water may penetrate the building and cause material damage.

- ▶ Observe the definitions in the directives for the planning and implementation of roofs with seals.



- A Cold roof                      B Warm roof

- Determine the installation site for the roof duct.
- Insert the flat roof penetration collar (2).
- Glue the flat roof penetration collar firmly in place.
- Insert the roof duct (1) through the flat roof penetration collar from above and push it down until seated firmly.
- Align the roof duct vertically.
- Secure the roof duct to the roof construction using the fixing bracket (3).
- Connect the roof duct to the product using extensions, elbows and, if required, a sliding sleeve.
  - If you do not insert a sliding sleeve, you must always install the 70 mm clamp directly on the product.

#### 8. Alternatives 1:

**Condition:** Roof duct with extension

- ▶ Install the extensions. (→ Section 5.19.2)
- ▶ Install the elbows (→ Section 5.19.4).
- ▶ Install the sliding sleeve. (→ Section 5.19.1)
- ▶ Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)

#### 8. Alternatives 2:

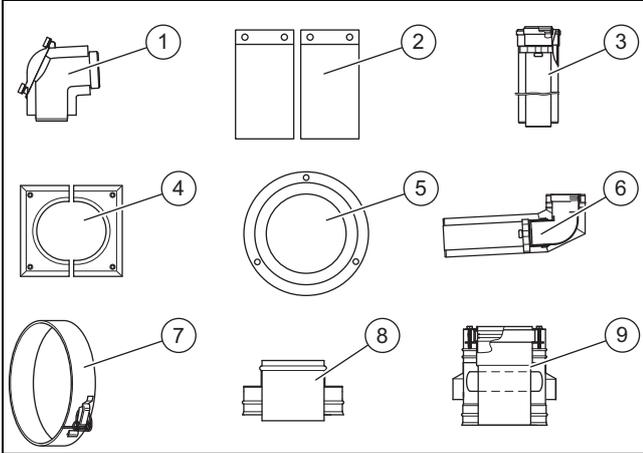
**Condition:** Roof duct without extension

- ▶ Install the sliding sleeve. (→ Section 5.19.1)

## 5.17 Installing the flue gas pipe on the external wall

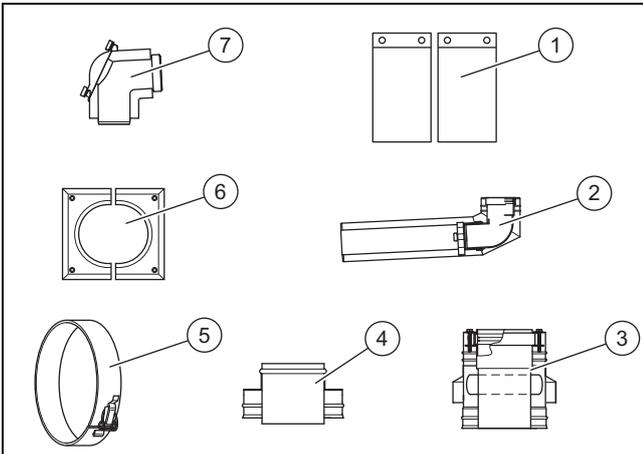
To install the flue gas pipe on the external wall, you must first drill the hole in the external wall and install the external wall console. Then install the line on the external wall and the horizontal section with the unit connection.

### 5.17.1 Scope of delivery of basic elements for external wall installation – 0020042748



- |   |   |   |  |
|---|---|---|--|
| 1 | Inspection elbow, 80/125 mm diameter    | 6 | Wall duct elbow 87°, 80/125 mm diameter, stainless steel |
| 2 | 70 mm air pipe clamp (2 pcs)            | 7 | Stainless steel air pipe clamp (2 pcs)                   |
| 3 | Extension 0.5 m, 80/125 mm diameter     | 8 | Terminal piece, stainless steel                          |
| 4 | Split collar (outside), stainless steel | 9 | Air intake piece, stainless steel                        |
| 5 | Collar (internal)                       |   |  |

### 5.17.2 Scope of delivery of basic elements for external wall installation – 0010039735



- |   |  |   |   |
|---|--|---|---|
| 1 | 70 mm air pipe clamp (2 pcs)                             | 4 | Terminal piece, stainless steel         |
| 2 | Wall duct elbow 87°, 80/125 mm diameter, stainless steel | 5 | Stainless steel air pipe clamp (2 pcs)  |
| 3 | Air intake piece, stainless steel                        | 6 | Divided collar, stainless steel (2 pcs) |
|   |  | 7 | Inspection elbow, 80/125 mm diameter    |

### 5.17.3 Observing the static dimensions

Before starting the installation, determine the route of the flue system and the number and position of the wall consoles and external wall pipe brackets.

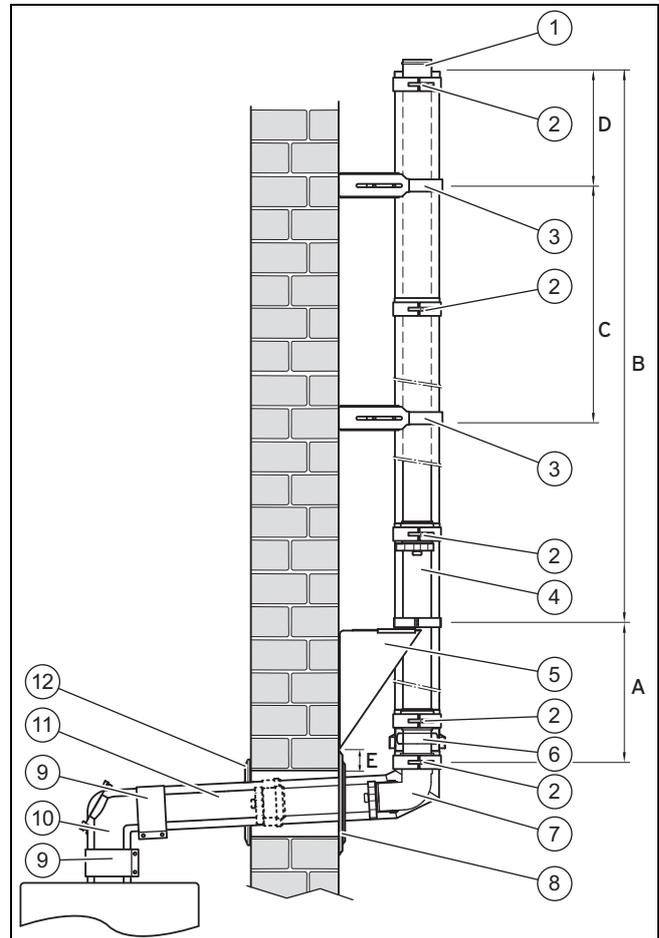


#### Danger!

#### Risk of injury due to falling parts.

Exceeding the static dimensions may lead to mechanical damage to the flue system. In extreme cases, parts may become loose from the wall and fall, thus endangering persons.

- ▶ During installation, observe the static dimensions.
- ▶ Secure at least every second extension to the external wall using a pipe clamp.
- ▶ On façades with thermal insulation composite systems, use fixing elements that are permitted for this, if required, in order to securely connect the flue pipework to the structure.



- |   |                            |    |  |
|---|----------------------------|----|--|
| 1 | Terminal piece             | 7  | Wall duct elbow                          |
| 2 | Air pipe clamp             | 8  | Collar, divided                          |
| 3 | External wall pipe bracket | 9  | Internal air pipe clamp                  |
| 4 | Extension                  | 10 | Inspection elbow                         |
| 5 | External wall console      | 11 | Internal extension (for 0020042748 only) |
| 6 | Air intake piece           | 12 | Collar                                   |

- A Max. 2 m (distance between the wall duct elbow and the external wall console)
- B Max. 22 m (height above the external wall console)
- C Max. 2 m (distance between the pipe brackets)
- D Max. 1.5 m (height above the uppermost pipe bracket)
- E Min. 50 mm (distance between the hole in the wall and the external wall console)



**Danger!**  
**Risk of injury due to falling parts.**

As of a vertical height of 2 m, an external wall console is required to support the vertical supporting forces so that the flue pipework is not damaged by excessive loads.

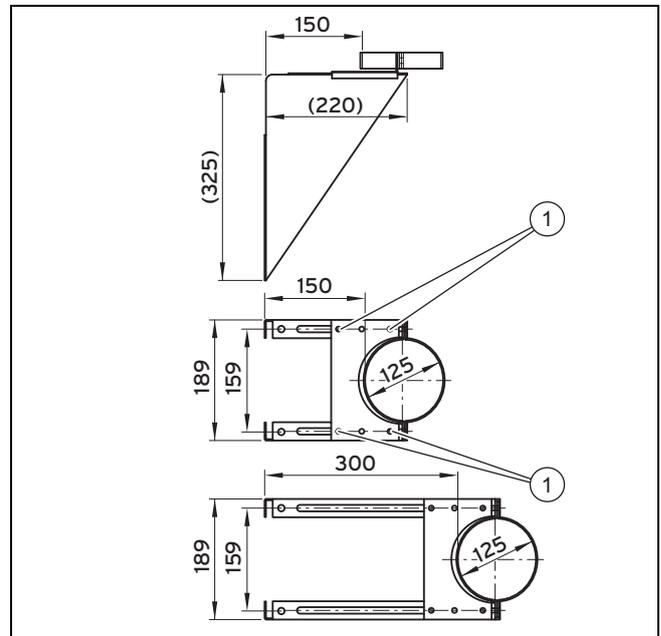
- ▶ Install a second external wall console after an offset.



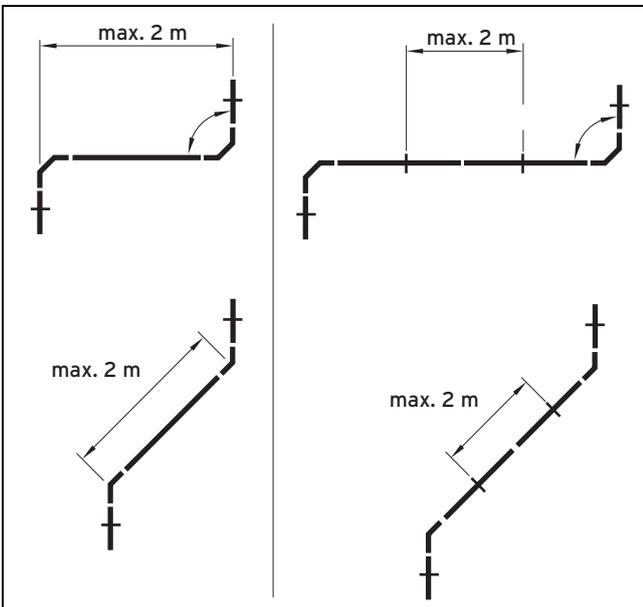
**Danger!**  
**Risk of injury due to falling parts.**

The part of the flue pipework that protrudes above the roof must be sufficiently rigid. You must not install any offset between the two uppermost pipe brackets on the external wall. An offset reduces the tensile strength of the flue system in strong winds and can lead to rotation or loosening of the flue system.

- ▶ Do not install an offset between the two upper external wall pipe brackets.



1. Drill a hole into the external wall.
  - Core diameter: 150 mm
2. Preinstall the external wall console, which consists of two brackets and a mounting plate.
  - Install the external wall console at least 50 mm above the hole in the wall so that the wall collar can be installed on the flue pipe.
3. If there is a wall clearance of 50 mm to 150 mm, install the support plate on the short side; if there is a wall clearance of 150 mm to 300 mm, install the retaining plate on the long side of the external wall console.
4. Set the required wall clearance and tighten the four bolts (1) in a position where they can be installed.
5. Install the wall console at least 50 mm above the hole in the wall so that the wall collar can be installed on the flue pipe.

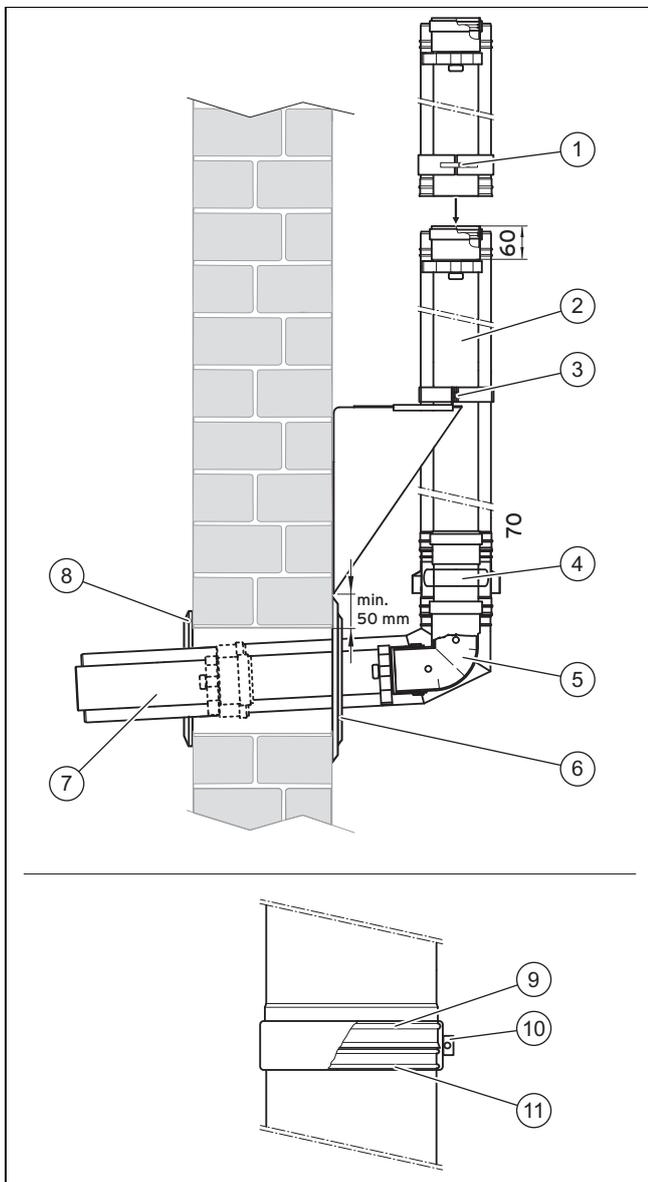


**5.17.4 Installing the flue pipework on the external wall**



**Note**

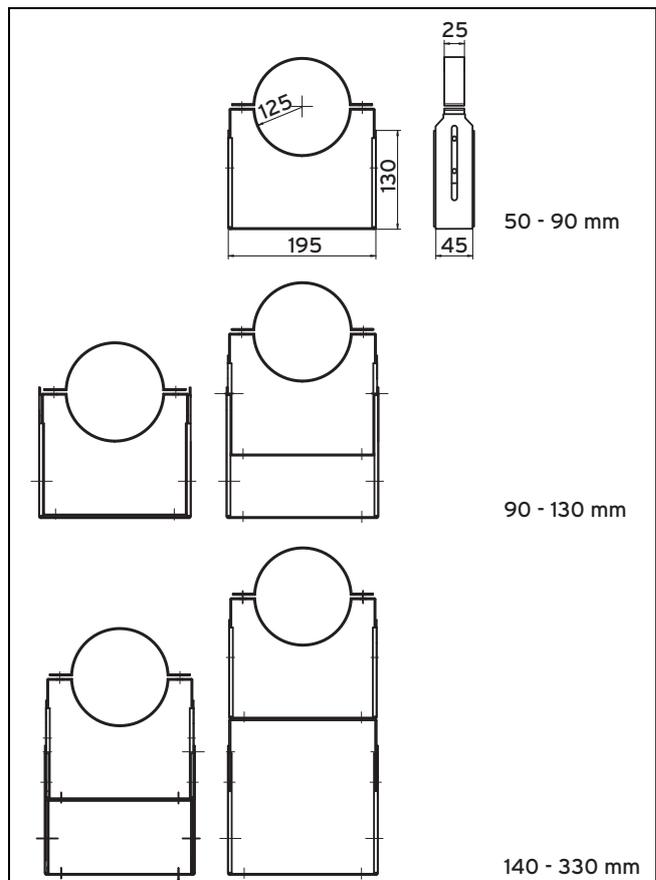
If required, observe the existing roof overhang. If required, use the pantiles for a pitched roof. The flue pipework must maintain a distance of 20 cm from windows and other wall openings.



- |   |                            |    |  |
|---|----------------------------|----|--|
| 1 | Air pipe clamp             | 7  | Internal extension (for 0020042748 only) |
| 2 | External wall extension    | 8  | Collar                                   |
| 3 | External wall console clip | 9  | Outer bead                               |
| 4 | Air intake piece           | 10 | Clamping device                          |
| 5 | Wall duct elbow            | 11 | Outer bead                               |
| 6 | Collar, divided            |    |  |

6. Preinstall the wall duct elbow, the air intake piece and an external wall extension.
  - The air intake port must lie at least 1.0 m above the surface of the terrain so that the air intake port cannot be blocked by snow.
  - The air intake piece can be located at any height. You can find restrictions in the "Pipe lengths" table.
  - However, the air intake piece must always be arranged vertically so that no rainwater can get into the air intake ports.
  - The sleeve of the flue pipework must always point in the direction of the flue gas terminal.
7. In each case, hang an air pipe clamp (1) on an external wall extension (2) and the air intake piece (4).
8. Slide the air intake piece and the wall duct elbow (5) together until they reach the stop, along with the external wall extension and the air intake piece.

9. Place the air pipe clamp over the two external beads (9, 11) and tighten the clamping device (10).
10. Insert the wall duct elbow (5) with air intake piece and external wall extension into the wall opening.
11. Place the clip of the external wall console (3) around the external wall extension and tighten the two clamping screws.
12. If required, shorten the extension (7) to the required length.
13. Place the extension on the wall duct elbow from the inside.
14. Fill the gap between the air pipe and the breakthrough from inside and outside with mortar. Leave the mortar to harden.
15. Screw the collar (8) from inside.
16. Screw the collar (6) from outside.
17. Secure the pipe brackets to the external wall at a max. distance of 2 m.



18. For the adjustment range of 90 mm to 160 mm, remove the external bracket.
  - The adjustment range of the external wall pipe brackets ranges from 50 mm to 90 mm. For larger wall clearances, extensions are required for the external wall pipe brackets. This allows you to reach a wall clearance of 300 mm.
19. Screw the external wall pipe brackets directly to the lower section of the extension for the external wall pipe brackets.
20. Install the sections of flue pipework and, if required, the inspection opening and the elbows and the terminal.

- The terminal is made from stainless steel on the flue gas side. This means that the flue gas terminal is also resistant to UV radiation.
- The distance from the terminal to the roof area must be at least 40 cm, and for product outputs above 50 kW, it must be at least 100 cm.

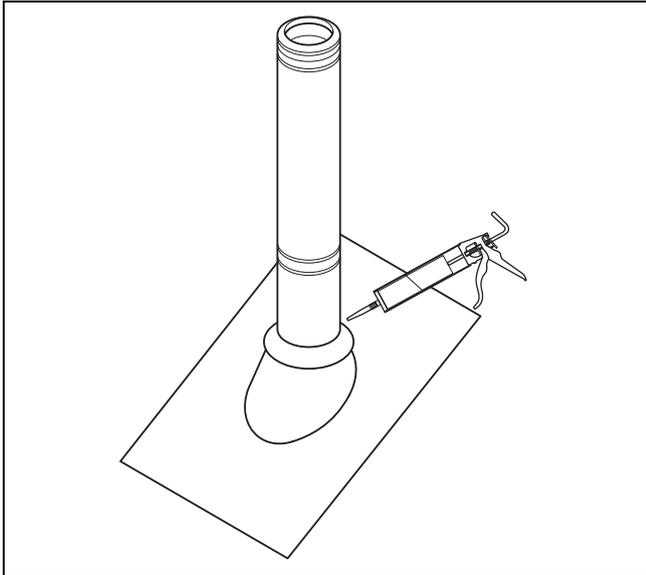
21. Tighten all wall fastenings and air pipe clamps.

### 5.17.5 Installing the rain penetration collar



**Note**

If the flue system is routed through a roof overhang, the rain penetration collar must be installed on the flue system.



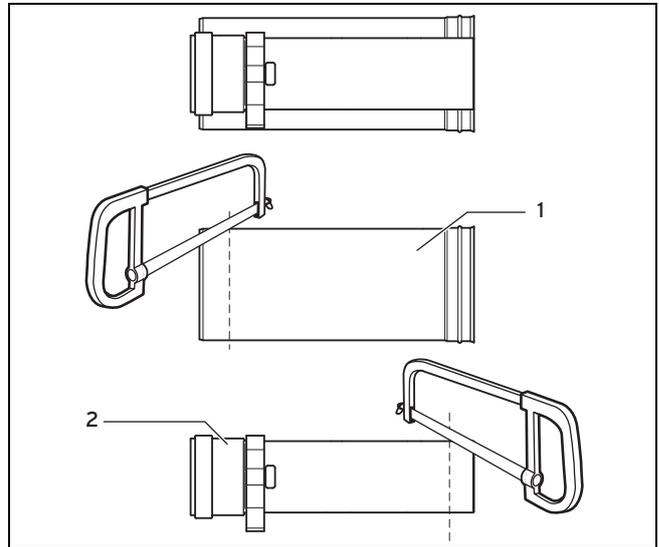
1. Position the rain penetration collar.
2. Tighten the clamping screw.
3. Seal the gap between the rain penetration collar and the flue system using a UV-resistant material so that it is permanently elastic.

### 5.17.6 Installing an extension that can be shortened

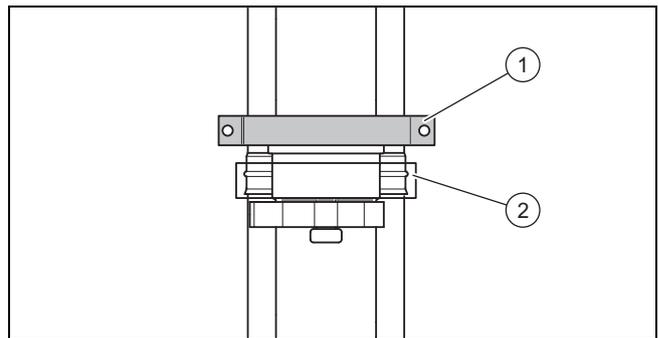


**Note**

In the case of an extension that can be shortened (article number 0020042755), the spacer for centring the flue pipe in the external pipe is not connected to the external pipe. The external pipe does not have a bead on the insert side because this side is shortened.



1. To shorten the extension, pull the flue pipe (1) out from the external pipe (2).
2. Shorten the flue pipe and external pipe by an equal amount.
  - Shorten the flue pipe and external pipe at the side facing away from the sleeve. The spacer must remain locked on the flue pipe.
3. Slide the flue pipe back into the external pipe.



1 External wall pipe bracket      2 Clamp



**Warning.**

**Risk of injury due to falling parts.**

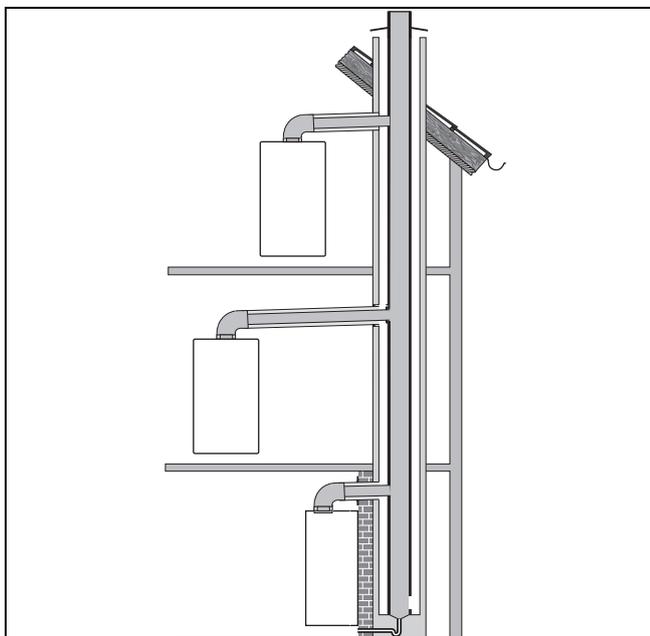
The external pipe of the extension that can be shortened does not have a bead on the underside. The clamp cannot stabilise the pipework system.

- ▶ Install an additional external wall pipe bracket so that the system cannot be disconnected and become loose as a result of the wind load.

4. Install an additional external wall pipe bracket directly above the extension that can be shortened.







Markings have been assigned to the air/flue system in accordance with EN 1443 and these indicate that the system complies with the fundamental requirements of the construction products directive. The air/flue system is not approved as part of the boiler.

The air/flue gas chimney must be designed and approved for negative pressure mode by the manufacturer.

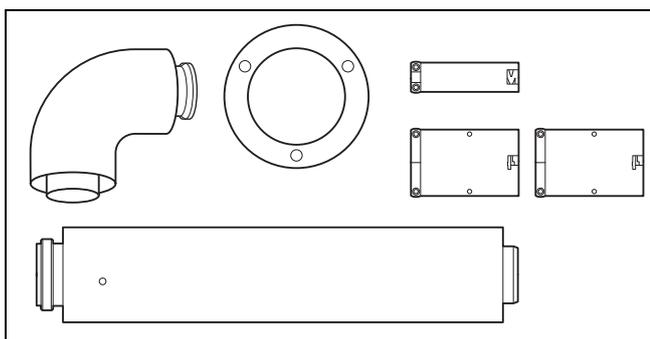
The air/flue gas chimney's data plate is marked for operation with condensing boilers and a flue gas temperature of at least 120 °C.

- ▶ Take into consideration the regulations with regard to fire resistance.

The Vaillant ecoTEC gas-fired wall-hung boilers that are mentioned in these installation instructions are approved for the use of common flue systems for C43 units.

The length of the air/flue pipe must not exceed 1.4 m and three elbows. This corresponds to a maximum length of 3.4 m for the C43 connection.

### 5.18.2 Components that are suitable for connection



- 87° elbow (article number 303910)
- Extensions
  - 470 mm (article number 303902)
  - 970 mm (article number 303903)
  - 970 mm (article number 303905)
- Air pipe clamps (article number 303821)

### 5.18.3 Installing a connection to the air/flue system



#### Caution. Risk of damage to the product.

There must not be any excess pressure in the vertical part of the flue system, because, in this case, the burner may pulse and the product may become damaged. The product is not suitable for this mode of operation and has not been checked.

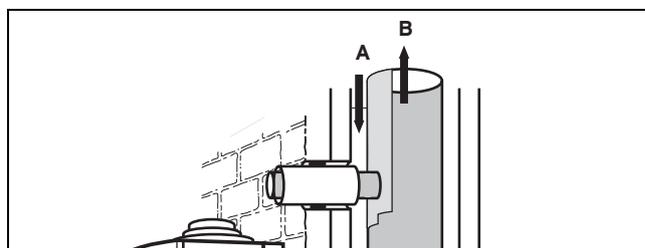
- ▶ Provide evidence of the functional reliability of the vertical flue pipework in accordance with EN-13384 using the specifications for flue gas temperature and flue gas mass flow rate from the installation instructions for the product.



#### Caution. Risk of damage to the structure of the building.

The static function and fire-protective function of the shaft wall may be impaired by fastenings.

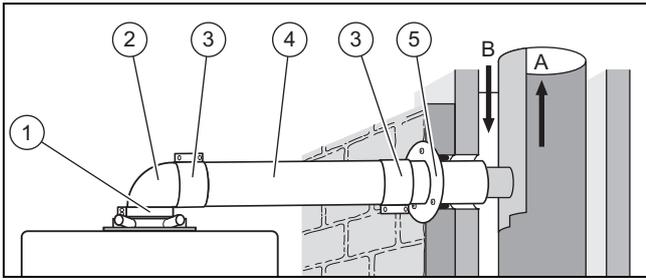
- ▶ Do not attach any fastenings using screws, wall plugs, etc. directly to the shaft wall of the air/flue system.
- ▶ Do not attach fastenings to primary walling or sideways to the wall.
- ▶ Observe the specifications provided by the manufacturer of the air/flue system.



A Air B Flue gas

- ▶ On the air/flue system, establish a connection for open-flued operation.
  - For the connection height for the product (including the connector for the air/flue pipe and inspection elbow), see the installation instructions for the product.

### 5.18.4 Connecting the product to the air/flue system



1. Install the product (→ Installation instructions for the product).
2. Slide the collar (5) onto the air pipe.
3. Install the extension (4) and the elbow (2) between the connector for the flue pipework.
4. Install the 40 mm air pipe clamp (1). When doing so, ensure that it is aligned centrally.
5. Install the 70 mm air pipe clamps (3). When doing so, ensure that they are aligned centrally.
6. Connect all of the pipe joints with air pipe clamps (1).

**Condition:** Additional extensions and elbows required

- ▶ Install the extensions. (→ Section 5.19.2)
- ▶ Install the elbows (→ Section 5.19.4).
- ▶ Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)

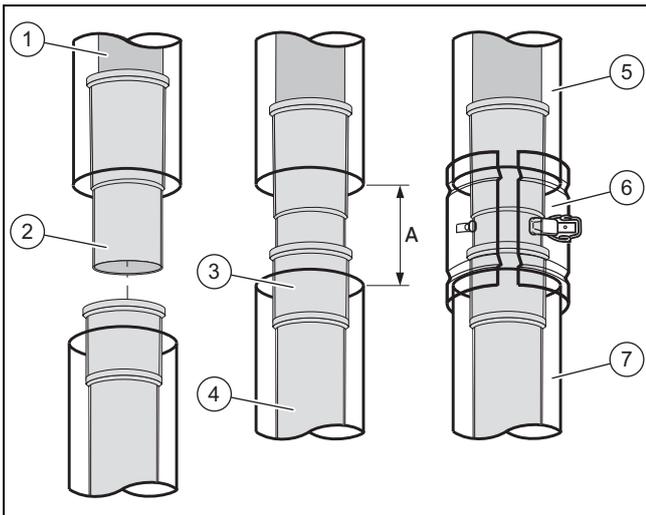
## 5.19 Installing the sliding sleeve, elbows and extensions

### 5.19.1 Installing the sliding sleeve



#### Note

The sliding sleeve provides for straightforward installation and disconnection of the air/flue pipe to/from the product.



1. Slide the sliding sleeve (2) onto the flue pipe (1) as far as it goes.
2. Pull the sliding sleeve (2) back far enough from the flue pipe (1) so that the inserting end of the sliding sleeve sits in the sleeve (3) of the flue pipe (4).

	60/100 mm diameter	80/125 mm diameter
A	100–110 mm	82–90 mm

3. Connect the air pipes (5, 7) with the air pipe clamp (6).
4. Use a locking screw to secure both sides (→ "Installing the air pipe clamps" section).

### 5.19.2 Installing extensions



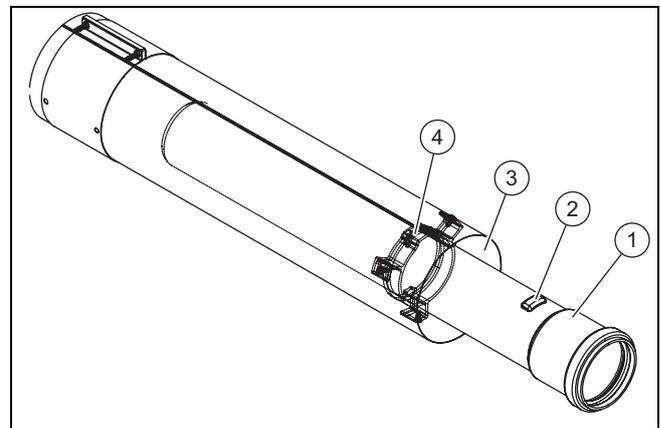
#### Danger!

**Risk of poisoning due to escaping flue gas.**

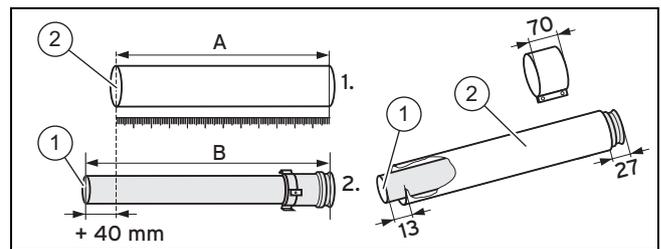
The flue pipes of the air/flue pipe may move as a result of thermal expansion and may then become disconnected.

- ▶ Lock the flue pipe in the spacer of the air pipe.

#### 5.19.2.1 Installing 60/100 mm diameter extensions

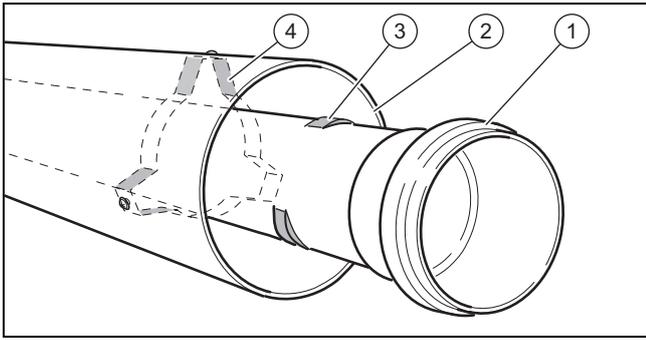


1. Turn the flue pipe (1) to a position that enables the ridge (2) on the plastic pipe to be pushed through the spacer (4).
2. Pull the pipe quickly and firmly over the detent.

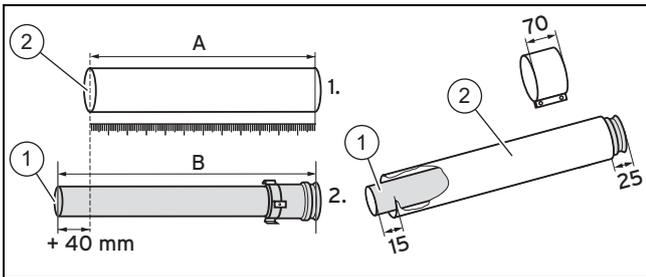


3. First, measure the required air pipe length\* (A) and then calculate from that the corresponding flue gas pipe length (B) in each case:
  - Length of the flue pipe: Length of the air pipe + 40 mm
  - Minimum length of air-pipe extension: 80 mm.
4. Shorten the pipes, e.g. with a saw.
5. After shortening it, lock the flue pipe (1) inside the air pipe (2) again: Push the flue pipe back into the air pipe. Turn the flue pipe as far as it will go.

### 5.19.2.2 Installing 80/125 mm diameter extensions (PP)

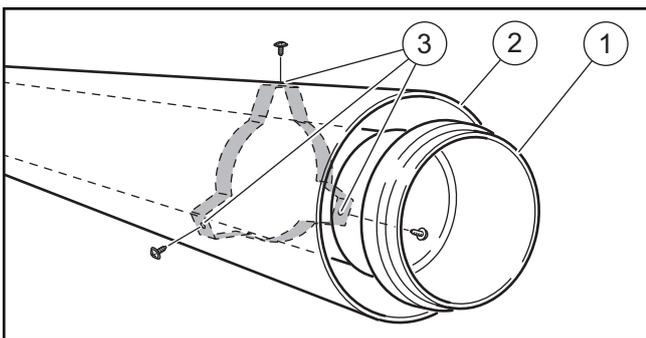


1. Turn the flue pipe (1) to a position that enables the ledges (3) on the plastic pipe to be pushed through the spacer (4).
2. Pull the flue pipe out of the air pipe (2).

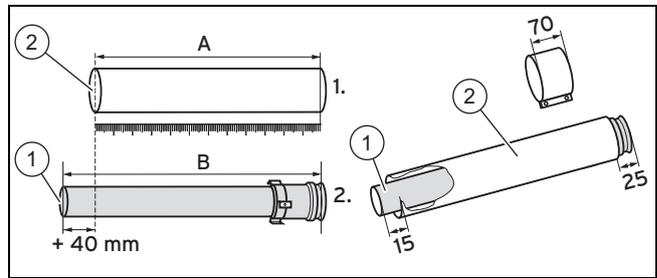


3. First, measure the required air pipe length\* (A) and then calculate from that the corresponding flue pipe length (B) in each case:
  - Length of the flue pipe: Length of the air pipe + 40 mm
  - \* Minimum length of air-pipe extension: 100 mm.
4. Cut the pipes with a saw, tin snips, etc.
5. After shortening, lock the flue pipe (1) inside the air pipe (2) again.

### 5.19.2.3 Installing 80/125 mm diameter (stainless steel) extensions



1. Unscrew the screws (3).
2. Pull the flue pipe (1) out of the air pipe (2).



3. First, measure the required air pipe length\* (A) and then calculate from that the corresponding flue pipe length (B) in each case:
  - Length of the flue pipe: Length of the air pipe + 40 mm
  - \* Minimum length of air-pipe extension: 100 mm.
4. Cut the pipes using tin snips, a saw, etc., suitable for stainless steel.
5. After shortening, lock the flue pipe (1) inside the air pipe (2) again.

### 5.19.3 Correctly aligning the elbows



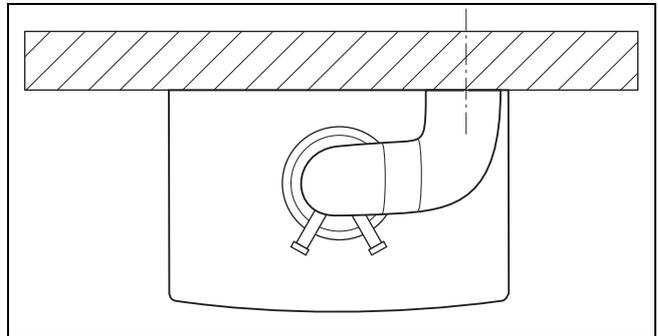
#### Danger!

**Risk of poisoning due to escaping flue gas.**

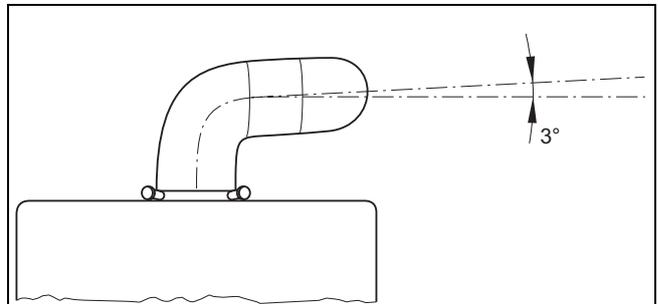
Unnecessary loads on the connections may cause leaks.

- Align the elbows correctly.

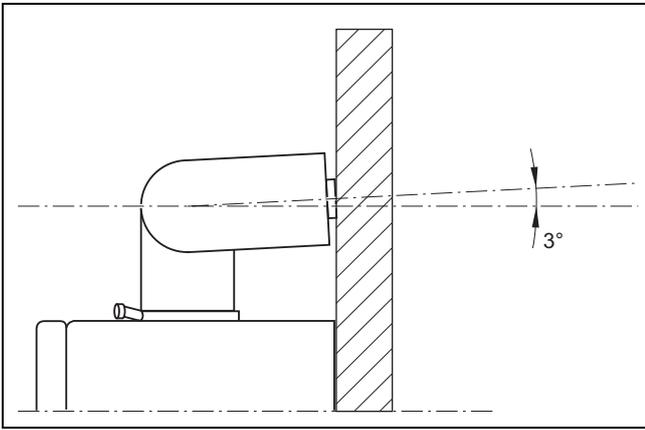
- Observe the following illustrations when using two 87° elbows.



Arrangement of the 2 x 87° elbows – View from above



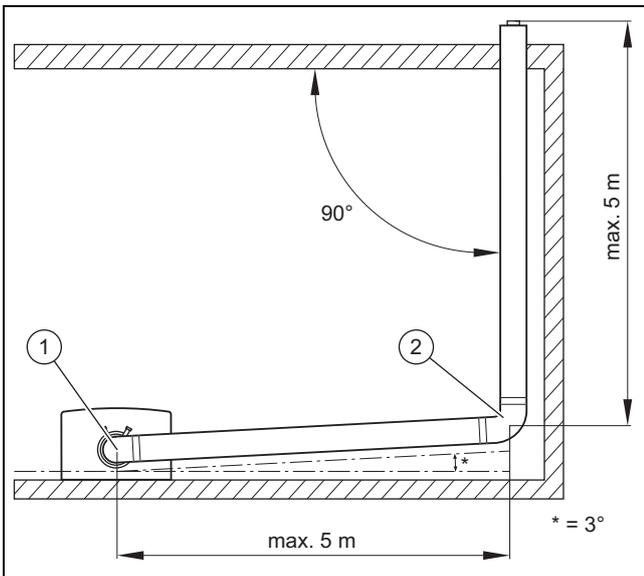
Arrangement of the 2 x 87° elbows – View from the front



Arrangement of the 2 x 87° elbows – View from the side

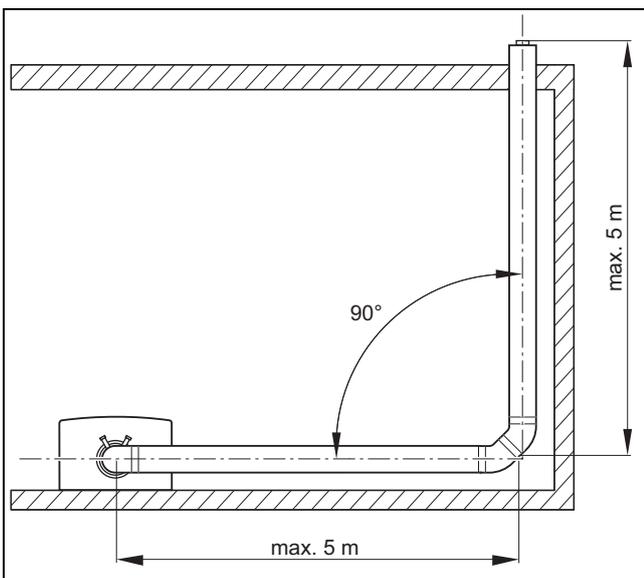
- ▶ When using elbows to route long flue pipework in a corner, observe the following figures.

#### Connecting extensions with 87° elbows



- ▶ To ensure that you can guide a second 87° elbow (2) at a right angle through the wall, install the elbow (1) on the top of the boiler, at a 3° rotation.

#### Connecting extensions with 45° elbows

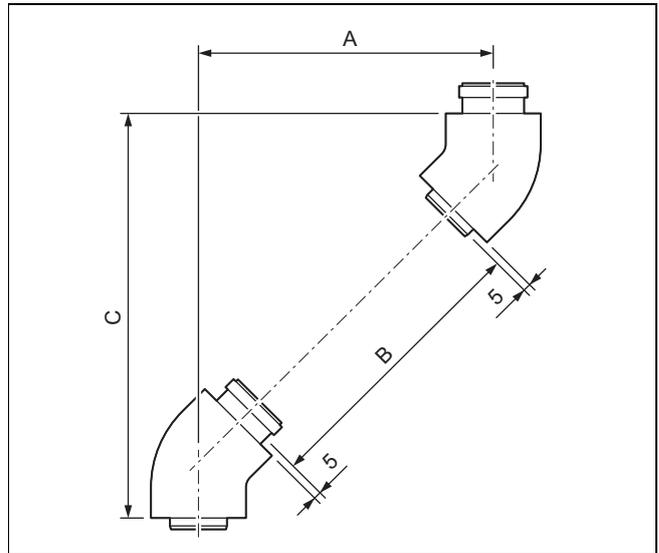


- ▶ Install an 87° elbow at an angle of 3° between the wall and the air/flue pipework or use two 45° elbows.

- ▶ Connect all of the pipe joints with air pipe clamps. (→ Section 5.19.5)

### 5.19.4 Calculating the offset dimensions for the air/flue pipework

#### 5.19.4.1 Calculating the offset dimensions of 45° elbows (air/flue pipework)



- A Offset
- B Length of the air pipe
- C Height

Validity: Air/flue pipe, 60/100 mm diameter

#### Formula

$$B = (A \times 1.41) - 130 \text{ mm}$$

$$C = A + 120 \text{ mm}$$

$$\text{Length of the flue pipe} = B + 40 \text{ mm}$$

#### Restrictions

	Offset (A)
Without extension	90 to 100 mm
With extension	160 to 800 mm
not possible	106 to 154 mm

#### Example

Required offset (A): 450 mm

$$B = 450 \text{ mm} \times 1.41 - 130 \text{ mm} = 504 \text{ mm}$$

$$C = 450 \text{ mm} + 120 = 570 \text{ mm}$$

$$\text{Length of the flue pipe} = 504 + 40 \text{ mm} = 544 \text{ mm}$$

Validity: Air/flue pipe, 80/125 mm diameter

#### Formula

$$B = (A \times 1.41) - 130 \text{ mm}$$

$$C = A + 120 \text{ mm}$$

$$\text{Length of the flue pipe} = B + 40 \text{ mm}$$

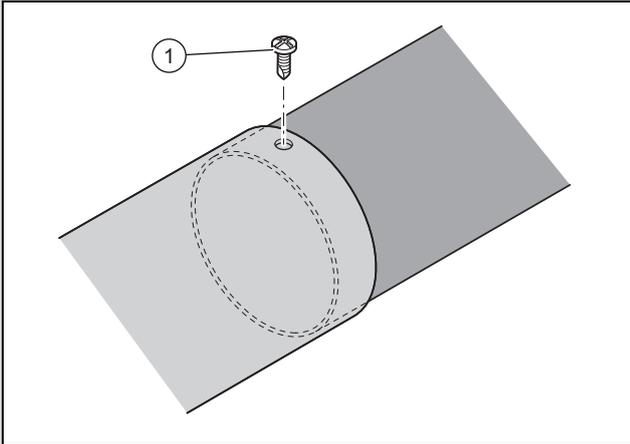
#### Restrictions

	Offset (A)
Without extension	85 to 100 mm
With extension	170 to 730 mm
not possible	101 to 169 mm



### 5.19.6 Securing the telescopic extension

Validity: Air/flue pipe, 60/100 mm diameter



**Danger!**  
**Risk of poisoning due to escaping flue gas.**

Flue gas can escape if the flue pipe is damaged.

- ▶ Ensure that the flue pipe is not damaged when tightening screwed connections.

1. Slide the air pipes above each other.
2. Use the locking screws (1) to screw the air pipes.

## Index

<b>A</b>	
Adjusting the deflector.....	20, 34
Air/flue system.....	48, 50
Air/flue system, installing a connection .....	49
Assembling the vertical roof duct, 60/100 mm diameter .....	39
<b>B</b>	
Balcony.....	28, 37
Black terminal.....	18
<b>C</b>	
Change of colour .....	18, 20, 33
Channel vent, minimum clearances .....	4
Clearance from the external wall.....	15
Competent person.....	3
Connector.....	44
Correctly aligning the elbows .....	51
<b>D</b>	
Deflector set .....	20, 33
Determining the pipe length of the direct, telescopic 60/100 mm diameter wall duct .....	17, 24
Disposing of condensate .....	10
Documents .....	6
<b>E</b>	
Eaves .....	22
End pipe .....	18, 22, 37–38
Extensions.....	21
<b>F</b>	
Flue gas route .....	3
<b>G</b>	
Grease.....	3
<b>H</b>	
Horizontal roof duct, installing .....	17
Horizontal wall duct, installing .....	16, 29
Horizontal wall/roof duct, preparing the installation.....	14
<b>I</b>	
Ice formation.....	4
Installing the 60/100 mm diameter flat-roof duct .....	40
Installing the 60/100 mm diameter pitched-roof duct .....	40
Installing the 80/125 mm diameter connector .....	14
Installing the 80/125 mm diameter flat-roof duct .....	42
Installing the 80/125 mm diameter pitched-roof duct .....	42
Installing the air pipe clamps .....	53
Installing the external wall console.....	44
Installing the sliding sleeve.....	50
Intended use.....	3
<b>L</b>	
Lightning.....	4
<b>M</b>	
M8 threaded rods .....	22
<b>O</b>	
Offset dimensions.....	52
External wall installation .....	47
Opening.....	3
Opening piece .....	18
<b>P</b>	
Pipe length, direct, telescopic wall duct.....	31
Pipe lengths.....	10
<b>Q</b>	
Qualification.....	3
<b>R</b>	
Rain penetration collar .....	46
Regulations .....	5
Ridge tiles.....	41
<b>S</b>	
Seal .....	3
Securing the telescopic extension.....	54
Securing the telescopic pipe .....	18, 31
Shortening the air/flue pipe .....	15, 24, 28
Static dimensions, flue pipework on the external wall.....	43
<b>T</b>	
Terminal	
Black.....	18
Terminal elbow .....	36
<b>U</b>	
UKCA/CE certification .....	5
<b>V</b>	
Variable terminal set.....	20, 25, 34, 37

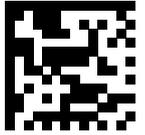
**Supplier**

**Vaillant Group UK Ltd.**

Nottingham Road ■ Belper ■ Derbyshire ■ DE56 1JT ■ Great Britain

Telephone 0330 100 3143

info@vaillant.co.uk ■ www.vaillant.co.uk



8000026412\_01

**Publisher/manufacturer**

**Vaillant GmbH**

Berghauser Str. 40 ■ D-42859 Remscheid ■ Deutschland, Germany

Tel. +49 2191 18 0 ■ Fax +49 2191 18 2810

info@vaillant.de ■ www.vaillant.de

© These instructions, or parts thereof, are protected by copyright and may be reproduced or distributed only with the manufacturer's written consent.

Subject to technical modifications.