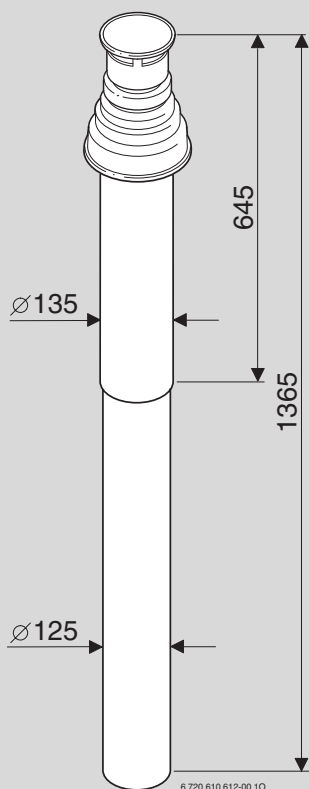


AZB 805/1

Vertical Flue Gas Ducting

Ø 80/125 mm

7 719 002 070



for Gas Condensing Boilers:

ZWB 7-29 CC1

ZB 7-28 CS1

ZSBR 7-28 ICS1

ZWBR 8-30 ICC2

ZBR 8-35 ICS1

ZWBR 11-37 ICC2

ZWB 7-27 HE combi

ZB 7-27 HE system

ZWBR 7-28 HE plus

ZWBR 11-35 HE plus

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Safety instructions

Proper functioning of this product is only guaranteed if these installation instructions are correctly followed. Subject to alteration. Installation must be carried out by an approved installer. Installation of the boiler must be carried out in accordance with the appropriate installation instructions.


If you smell fumes from the appliance

- ▶ Switch off appliance.
- ▶ Open windows and doors.
- ▶ Inform your heating engineer.

Fitting and modifications

- ▶ Fitting of the appliance or any controls to the appliance may only be carried out by a competent engineer in accordance with the Gas Safety (Installation and Use) Regulations 1998.
- ▶ Flue systems must not be modified in any ways other than as described in the fitting instructions.

Symbols



Notes are identified by the symbol shown on the left. They are bordered by horizontal lines above and below the text.

1 Use

1.1 General

The installation of a gas condensing boiler must be in accordance with the relevant British Standard, the relevant Building Regulations and any local rules.

The surface temperature of the fresh air duct is below 85°C. Therefore no minimum distances to combustible building materials are necessary. The regulations can deviate, however, and might prescribe minimum distances to combustible materials.

Flue ducting to C_{33x}:

The flue gas accessory is part of CE approval when discharging flue gas according to C_{33x}. For this reason, only the original flue gas accessories may be used.

1.2 Gas condensing boilers

The AZB 805/1 can be used in conjunction with the following gas condensing boilers:

Gas condensing boilers	Prod.-ID-No.
ZWB 7-29 CC1	CE 0085 BL 0507
ZB 7-28 CS1	
ZSBR 7-28 ICS1	
ZWBR 8-30 ICC2	
ZBR 8-35 ICS1	
ZWBR 11-37 ICC2	
ZWB 7-27 HE combi	
ZB 7-27 HE system	
ZWBR 7-28 HE plus	
ZWBR 11-35 HE plus	

Table 1

1.3 Combination with flue duct kits

The AZB 805/1 can be combined with the following flue duct kits:

Flue duct kits
AZB 807, elbow 90°
AZB 808, extension 990 mm
AZB 814, elbow 45°

Table 2

1.4 Standard specifications

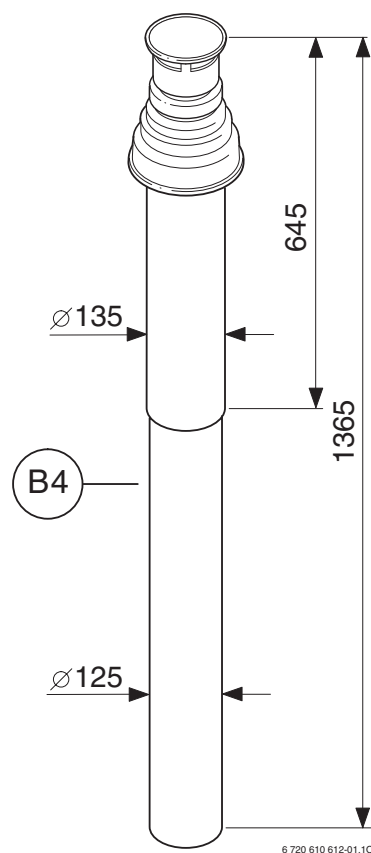


Fig. 1

B4: Vertical Flue Gas Ducting AZB 805/1

2 Fitting space requirements for gas condensing boiler

	B	C		B	C
ZWB 7-29 CC1 ZB 7-28 CS1 ZWB 7-27 HE combi ZB 7-27 HE system	440 mm	≥ 5 mm	ZSBR 7-28 ICS1 ZWBR 8-30 ICC2 ZBR 8-35 ICS1 ZWBR 11-37 ICC2 ZWBR 7-28 HE plus ZWBR 11-35 HE plus	512 mm	≥ 100 mm

Table 3

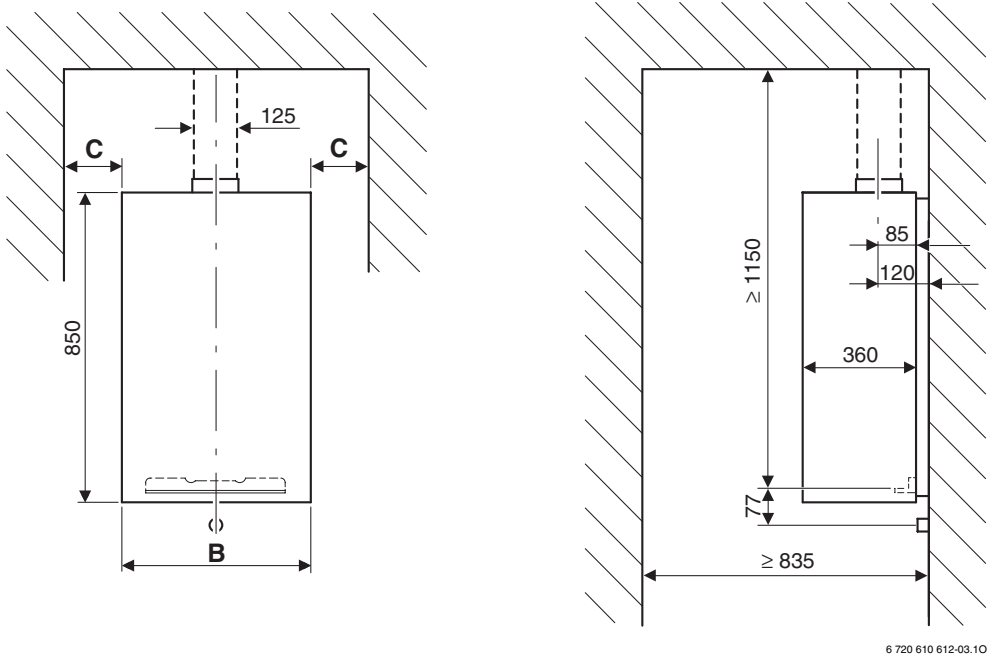


Fig. 2 Flat roof

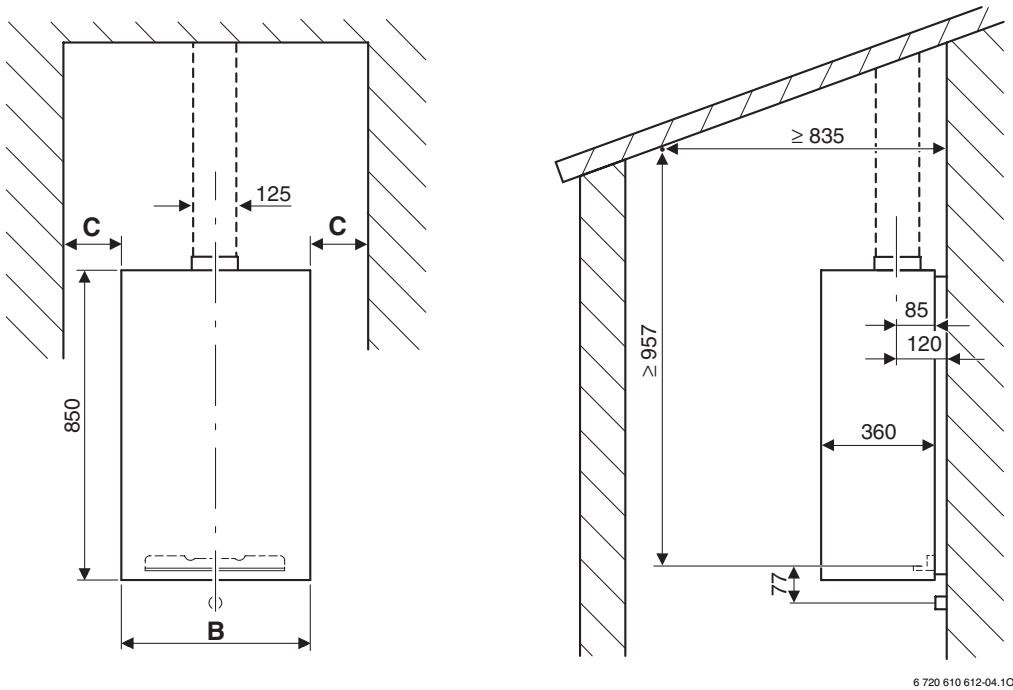


Fig. 3 Inclined roof

3 Examples of installation of vertical flue duct with roof exit

3.1 Straight flue ducting without elbows

	L_{\max}
ZWB 7-29 CC1 ZB 7-28 CS1 ZSBR 7-28 ICS1 ZWB 7-27 HE combi ZB 7-27 HE system ZWBR 7-28 HE plus ZWBR 8-30 ICC2 ZBR 8-35 ICS1	15 m
ZWBR 11-37 ICC2 ZWBR 11-35 HE plus	12 m

Table 4

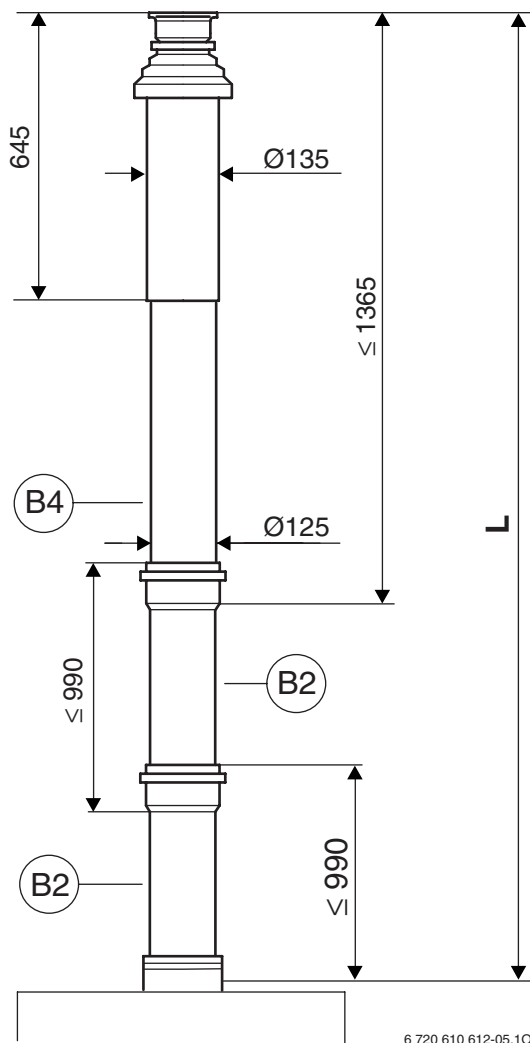


Fig. 4

Key to Fig. 4 and 5:

- B2: AZB 808
B4: AZB 805/1
B6: AZB 814

3.2 Straight flue ducting with two 45°-elbows

	L_{\max}
ZWB 7-29 CC1 ZB 7-28 CS1 ZSBR 7-28 ICS1 ZWB 7-27 HE combi ZB 7-27 HE system ZWBR 7-28 HE plus ZWBR 8-30 ICC2 ZBR 8-35 ICS1	13 m
ZWBR 11-37 ICC2 ZWBR 11-35 HE plus	10 m

Table 5

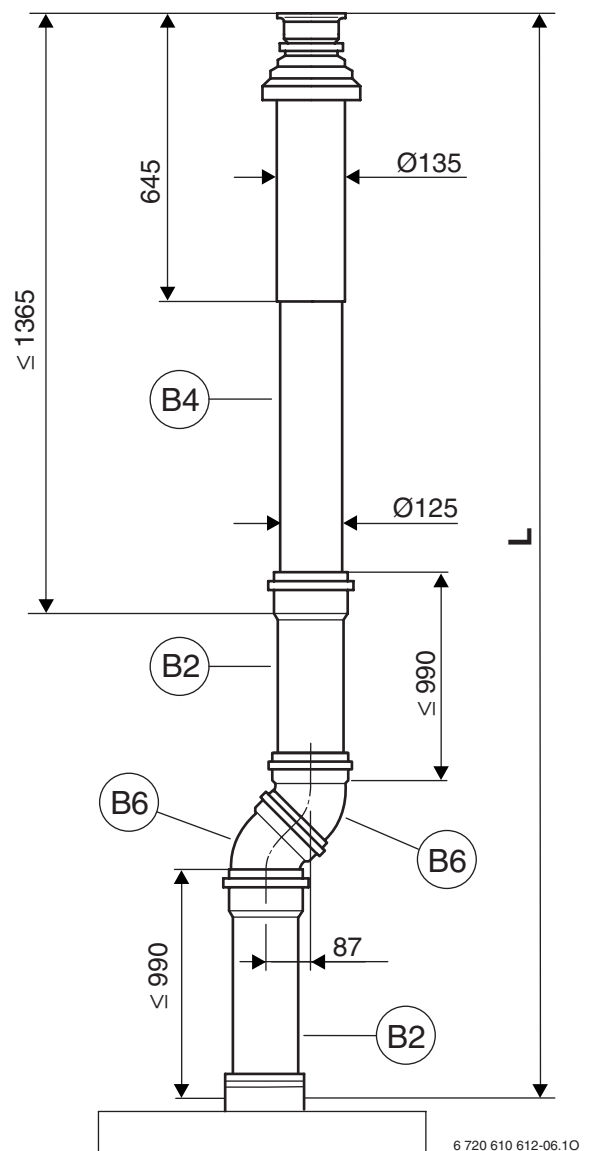


Fig. 5

3.3 Straight flue ducting with two 90°-elbows

	L_{\max}
ZWB 7-29 CC1 ZB 7-28 CS1 ZSBR 7-28 ICS1 ZWB 7-27 HE combi ZB 7-27 HE system ZWBR 7-28 HE plus ZWBR 8-30 ICC2 ZBR 8-35 ICS1	11 m
ZWBR 11-37 ICC2 ZWBR 11-35 HE plus	8 m

Table 6

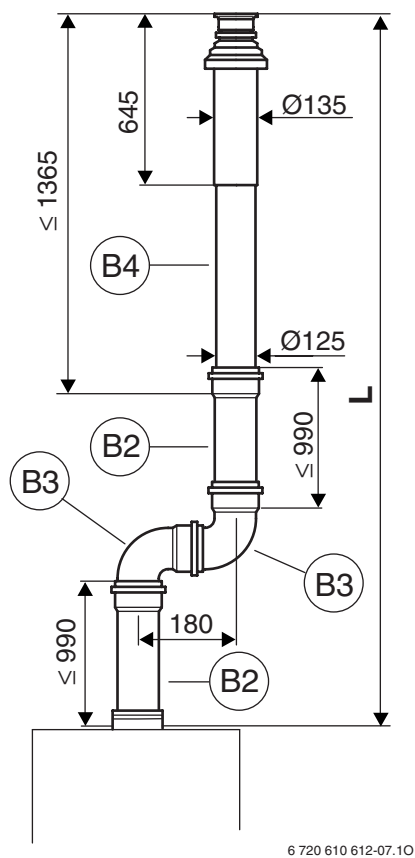


Fig. 6

Key to Fig. 6, 7 and 8:

- B2: AZB 808
- B3: AZB 807
- B4: AZB 805/1

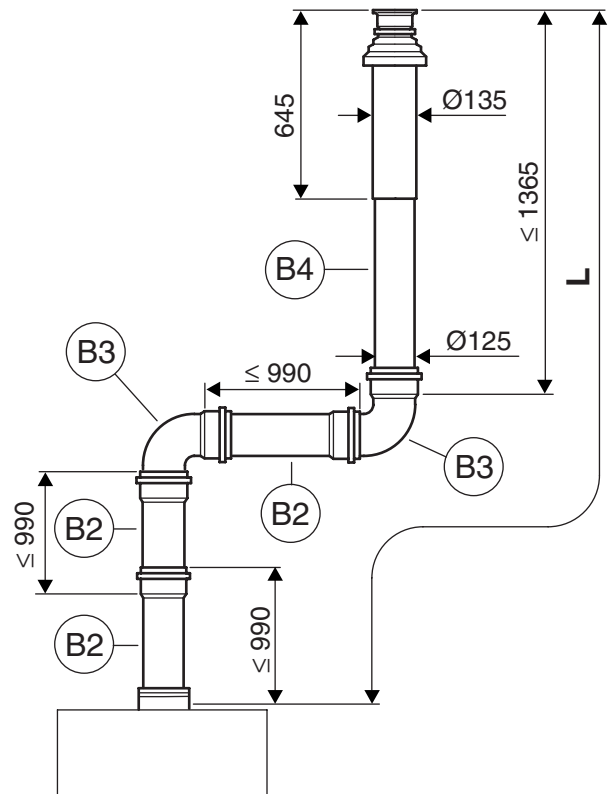


Fig. 7

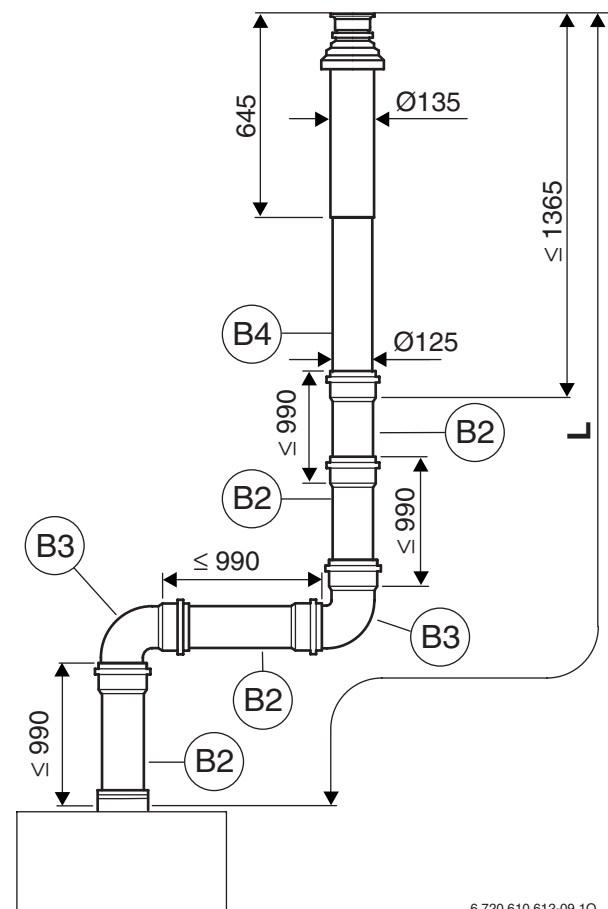


Fig. 8

3.4 Flue ducting with more than two elbows

The equivalent pipe length, L_e , is calculated from the sum of the straight lengths of the horizontal and vertical flue ducting (L_{horiz} , L_{vert}) and the equivalent lengths of the elbows. The equivalent length of every elbow fitted must be included.

The overall equivalent pipe length must be less than the maximum equivalent pipe length: $L_e \leq L_{e,max}$.

For vertical flue ducting to C_{33x} the following equivalent lengths apply:



Vertical flue ducting to C_{33x}		Equivalent lengths of additional elbows	
Boiler	$L_{e,max}$ [m]	 [m]	 [m]
ZWB 7-29 CC1 ZB 7-28 CS1 ZSBR 7-28 ICS1 ZWB 7-27 HE combi ZB 7-27 HE system ZWBR 7-28 HE plus ZWBR 8-30 ICC2 ZBR 8-35 ICS1	15	2	1
ZWBR 11-37 ICC2 ZWBR 11-35 HE plus	12		

Table 7 Pipe lengths for C_{33x}

$L_{e,max}$: maximum equivalent overall pipe length

Example: ZWB 7-29 CC1

For a vertical flue system with a vertical length of 4 m, a horizontal length of 0.5 m, four 45°-elbows and two 90°- elbows, the equivalent pipe length is calculated as follows:

	Length/ Number		Sectional equivalent length		Total
Straight length L_{vert}	4 m	x	1	=	4 m
Straight length L_{horiz}	0.5 m	x	1	=	0.5 m
Elbow 90°	2	x	2 m	=	4 m
Elbow 45°	4	x	1 m	=	4 m
Equivalent pipe length L_e					12.5 m
Maximum equivalent overall pipe length $L_{e,max}$					15 m
$L_e \leq L_{e,max}$					o.k.

Table 8

At 12.5 m, the equivalent pipe length is shorter than the maximum equivalent overall length of 15 m. This flue system is therefore acceptable.

Example: ZWBR 11-35 HE plus

For a vertical flue system with a vertical length of 6 m, two 45°-elbows and two 90°-elbow, the equivalent pipe length is calculated as follows:

	Length/ Number		Sectional equivalent length		Total
Straight length L_{vert}	6 m	x	1	=	6 m
Straight length L_{horiz}	0 m	x	1	=	0 m
Elbow 90°	2	x	2 m	=	4 m
Elbow 45°	2	x	1 m	=	2 m
Equivalent pipe length L_e					12 m
Maximum equivalent overall pipe length $L_{e,max}$					12 m
$L_e \leq L_{e,max}$					o.k.

Table 9

At 12 m, the equivalent pipe length is equal the maximum equivalent overall length of 12 m. This flue system is therefore acceptable (borderline case).

4 Mounting

4.1 Notes on fitting

- The vertical flue duct (AZB 805/1) can be extended at any point between the heat exchanger and the flue terminal assembly (B4) using the flue duct kits AZB 807, 808 or 814.
- For details of the maximum permissible flue pipe length, refer to the installation examples starting on page 5.
- The vertical air/flue duct should be fitted with an upward incline of 3% (3 cm per metre) in the direction of flow of the flue gases.
- In damp rooms, the air pipe should be insulated.

4.2 Roof-exit clearances

4.2.1 Flat roof

	Combustible building material	Non-combustible building material
X	≥ 1500 mm	≥ 500 mm

Table 10

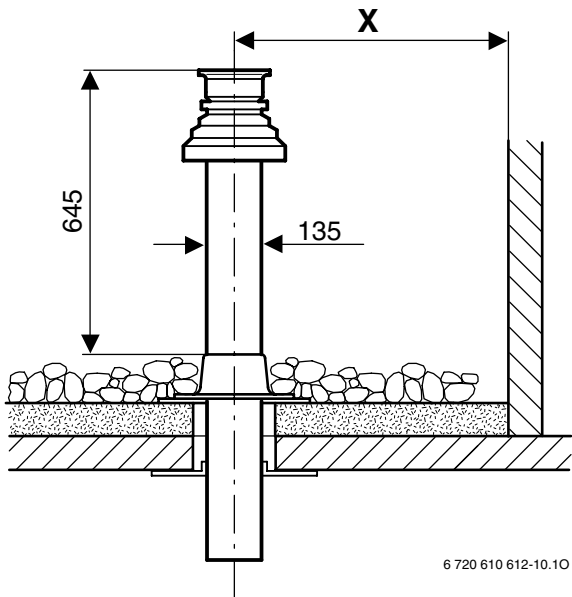


Fig. 9

4.2.2 Inclined roof

A	≥ 400 mm, in areas with frequent heavy snow falls ≥ 500 mm
α	≤ 60°, in areas with frequent heavy snow falls ≤ 50°

Table 11

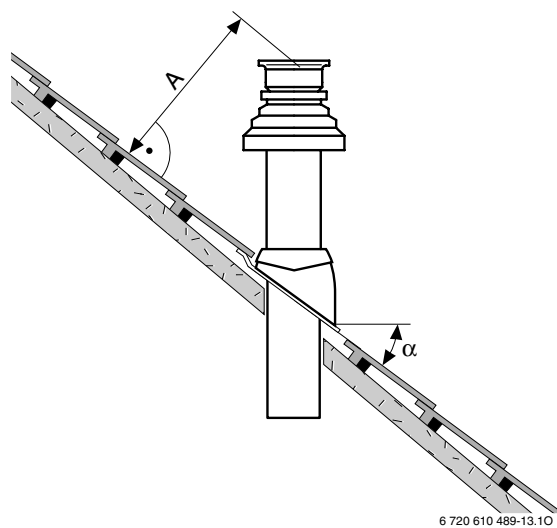
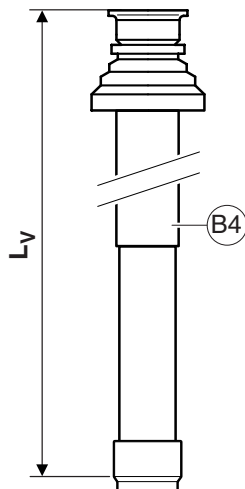


Fig. 10

4.3 Fitting the flue ducting

- Determine the length L_V of the double pipe.



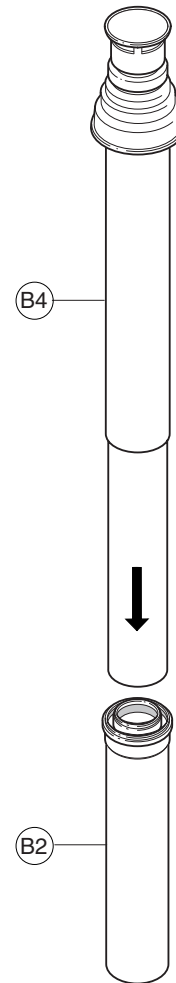
6 720 610 489-014.1O

Fig. 11

B4: AZB 805/1

- Cut off the double pipe at a right angle, deburr the cut edges and clean.
- Lightly grease the seals on the sleeves with a solvent-free grease (e. g. Vaseline).

- Slide the flue gas accessories, lightly twisting, into each other to the stop in the sleeve.



6 720 610 612-11.1o

Fig. 12

B2: AZB 808

B4: AZB 805/1



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