

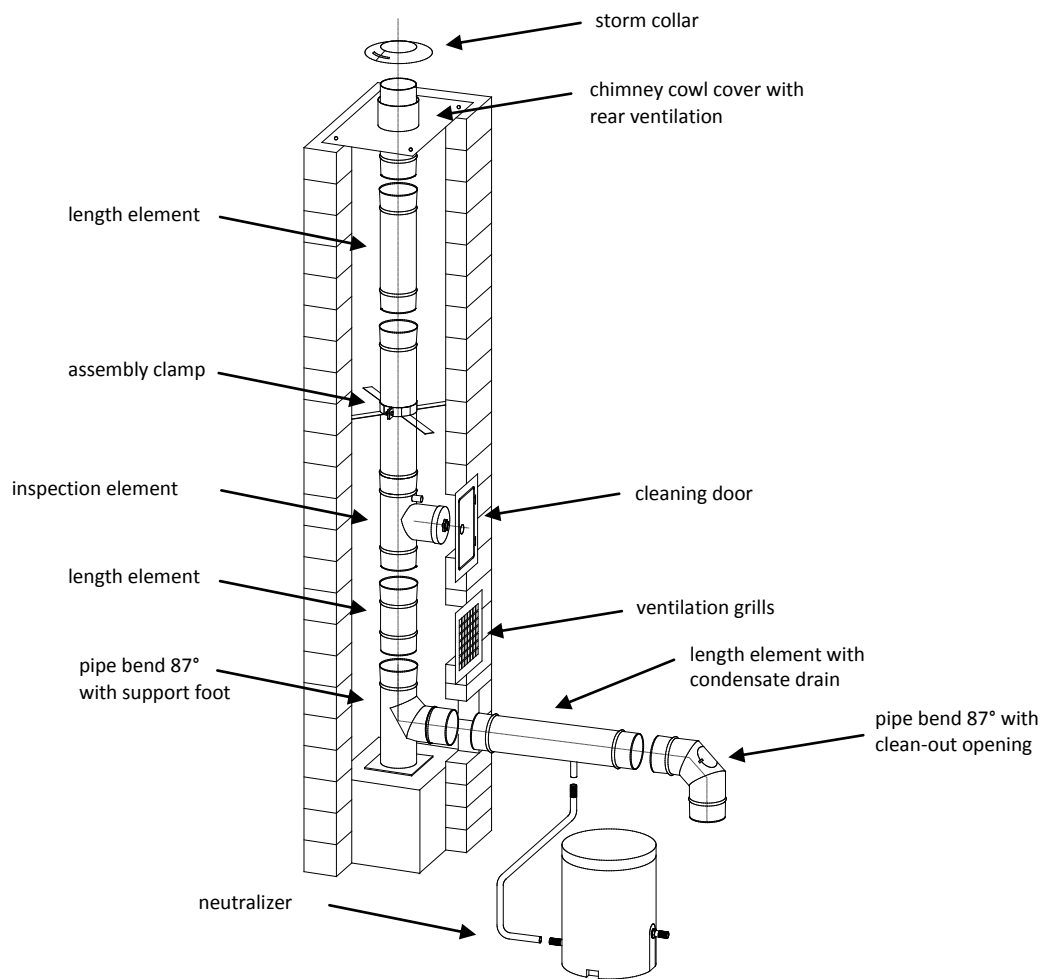


- certificated single wall flue system **TEC-EW-COMLETE**

CE-Certification number 0036 CPR 91323 013

(further information: see Declaration of Performance No. 91323 013 DoP 2015-02-23)

1) System construction variant



2) Minimum distance to combustible materials

0.1	Used as exhaust gas line (oil, gas) Operation in positive pressure up to 200°C	EN 1856-1	T200 – P1 – W – V2 – L50060	O00 (= 0mm)	Ø 80 – 600
0.2	Used as exhaust gas line (oil, gas) Operation in high pressure up to 200°C	EN 1856-1	T200 – H1 – W – V2 – L50060	O50 (= 50mm) O75 (= 75mm) O100 (= 100mm)	Ø 80 – 300 Ø 350 – 450 Ø 500 – 600
0.3	Used as system chimney (solid fuel) Operation in negative pressure up to 400°C	EN 1856-1	T400 – N1 – D – V2 – L50060	G50 (= 50mm) G75 (= 75mm) G100 (= 100mm)	Ø 80 – 300 Ø 350 – 450 Ø 500 – 600
0.4	Used as exhaust gas line (oil, gas) Operation in positive pressure up to 400°C	EN 1856-1	T400 – P1 – W – V2 – L50060	O50 (= 50mm) O75 (= 75mm) O100 (= 100mm)	Ø 80 – 300 Ø 350 – 450 Ø 500 – 600

0.5	Used as exhaust gas line (oil, gas) Operation in high pressure up to 450°C	EN 1856-1	T450 – H1 – W – V2 – L50060	O50 (= 50mm) O75 (= 75mm) O100 (= 100mm)	Ø 80 – 300 Ø 350 – 450 Ø 500 – 600
0.6	Used as system chimney (solid fuel) with 25mm insulation , operation in negative pressure up to 600°C	EN 1856-1	T600 – N1 – D – V3 – L50060	G70 (= 70mm) G105 (= 105mm) G140 (= 140mm)	Ø 80 – 300 Ø 350 – 450 Ø 500 – 600
0.7	Used as exhaust gas line (oil, gas) Operation in positive pressure up to 600°C	EN 1856-1	T600 – P1 – W – V2 – L50060	O100 (= 100mm) O150 (= 150mm) O200 (= 200mm)	Ø 80 – 300 Ø 350 – 450 Ø 500 – 600
0.8	Used as exhaust gas line (oil, gas) Operation in high pressure up to 600°C <u>or</u> used as system chimney (solid fuel) operation in negative pressure up to 600°C	EN 1856-1	T600 – H1 – W – V2 – L50060	G100 (= 100mm) G150 (= 150mm) G200 (= 200mm)	Ø 80 – 300 Ø 350 – 450 Ø 500 – 600

3) Mounting and regulations

The installing has to be performed professionally according to the installing instructions respectively according to the valid national regulations.

In Germany in particular DIN V 18160-1, as well as the applicable rules of regional building (LBauO), firing regulations (FeuVO), relevant DIN standards and all other building- and safety regulations.

The required cross section has to be determined according to DIN EN 13384 and has to be rechecked by the executing specialist firm.



Before the installation the design of the system has to be clarified with the concerned district chimney sweeper. The suitability and safe usability of the exhaust system is to be certified by a competent district chimney sweeper before commissioning.

4) Site requirements

The exhaust gas line must be installed within into own longitudinally ventilated flue or channel. The fire safety requirements for the flues (L_A30 to L_A90) comply with the construction legislation (firing ordinance) of the respective federal state. With the exception of the necessary cleaning and inspection openings, the flue must not have any additional opening other than in the installation room of the CHP. (The inspection openings has to be certified by a competent district chimney sweeper before commissioning.) Several exhaust gas lines can be installed in a flue if the national regulations and construction legislation allow this.

The connection of the system elements must be carried out very carefully from the fireplace to the chimney top, so that the required tightness (pressure class) is achieved. The pressure class (P1 / H1) is checked by the competent local chimney sweep master.

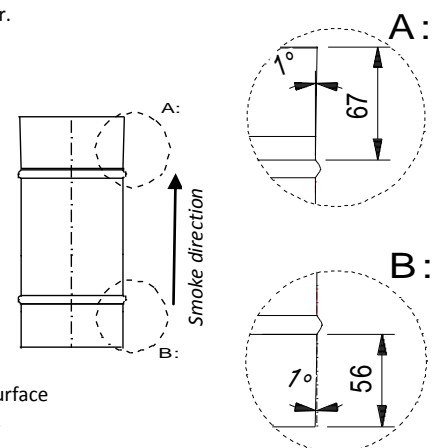
5) Construction of pipes

All components have to be mounted in a way, that the nozzle is above or rather in flow direction of the exhaust gas (see figure).

The metallic sealing of the components of the EW-Complete system is achieved through the conically shaped plug ends. The advantage is that additional sealing gaskets are not needed. Thus, a high tightness at operating temperatures up to 600°C is achieved easily.

Connecting of elements:

Before connecting the length elements or moulded components together, make sure that the sealing surface is clean. For proper installation of a conical plug connection, the sliding and sealing agent must be used. Every surge is protected by a locking band.



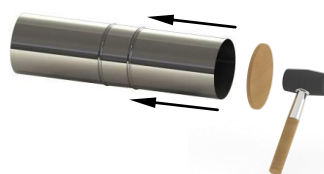
1. Length elements prior to connection



2. Apply a paper-thin layer of lubricant & sealant to the tapered end (ribbed end)



3. Push the elements into each other and press together firmly. Each element is pushed together individually and the using a suitable plate made of wood or plastic which is placed on the fitting end of the attached part, compressed together with three to four hammer blows to ensure a pressure-tight connection. This procedure is repeated for each element.



6) Cleaning opening

The position of the cleaning and inspection openings must (in Germany) comply with DIN V 18160 Part 1 or other applicable regulations and should be discussed with the competent authorized district chimney sweep during the planning phase.

7) Installation of the chimney system

INSTALLATION OF THE TUBULAR COLUMN:

Starting from the chimney orifice, the length element is firstly connected with the lowering cable using loops. The length elements are always installed with the wider tube ends pointing upwards. Lower length elements to over the chimney orifice and install the next element. Mounting clips are to be attached to the length elements every 3m. Additional mounting clips must be planned for every moulded component. For this, the lugs are bent upwards to suit the necessary inner dimension of the flue. After lowering the complete tubular column, the previously assembled connection component is attached to the tubular column. After attaching the last tube / inserting the tubular column in the prepared connecting pieces, the tightness of the entire system must be ensured by means of a centred vertical blow on the last tube. To this end, a suitable plate must be placed between the instrument used and the mouth piece.

INSTALLATION FOR INTERMEDIATE CLEANING:

An inspection element is to be installed if inspection of the line and flue is necessary in the attic.

INCLINED CHIMNEYS:

In the case of inclined flues / chimneys, the inspection elements and the intermediate pieces (not linear expansion) must comply with state regulations. Note: Corresponding measures to compensate for thermal linear expansion must be taken with high exhaust gas temperatures / extended distances prior to a slant.

INSTALLATION OF THE LOUVRE (with rear ventilation):

To ensure sufficient rear ventilation in the flue, a louvre (minimum clear cross section = required rear ventilation cross-section) must be fitted in the flue in the installation room of the CHP.

INSTALLATION OF THE CHIMNEY COWL COVER:

The chimney cowl must be so designed that the exhaust air is guided via the extended inner pipe and the flue is ventilated between the inner pipe and inner wall of the flue. The cowl cover is plugged onto the chimney cowl. The cowl cover must be permanently protected from moisture penetration. The weather protection fitting must be placed 30mm / minimum ring gap width above the air discharge piece in order to ensure rear ventilation.

8) Pressure test

It is advisable to perform a pressure test as per the guidelines before sealing the flue when operating with positive pressure. Arrange this pressure test with the competent authorized district chimney sweeper as this test is part of the acceptance procedure. As per DIN EN 1856 Part 1, the leak rate must not exceed $0,006l / (m^2s)$ (corresponds to H1) at a test pressure of 200 Pa.

9) Connecting pipe

The connecting pipe must be installed with a slope of at least 3 degrees to the boiler in order to optimally dissipate any condensate that may accumulate. If no condensate is allowed to enter the boiler, an element with condensate drain and siphon must be installed after the boiler connection.

10) Concluding instructions

All openings in the shaft outside the installation room (except for the air inlet opening) must be sealed in accordance with the building material requirements. Pay attention and ensure that no residues of mortar lead to a reduction of the cross section in the shaft. The Tecnovis connection line EW-Complete must be installed according to the supplied label in the area of the exhaust gas inlet.

Before the assembly the execution of the chimney system has to be clarified with the concerned district chimney sweeper!

Technical changes and mistake reserved.



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