

Installing instructions

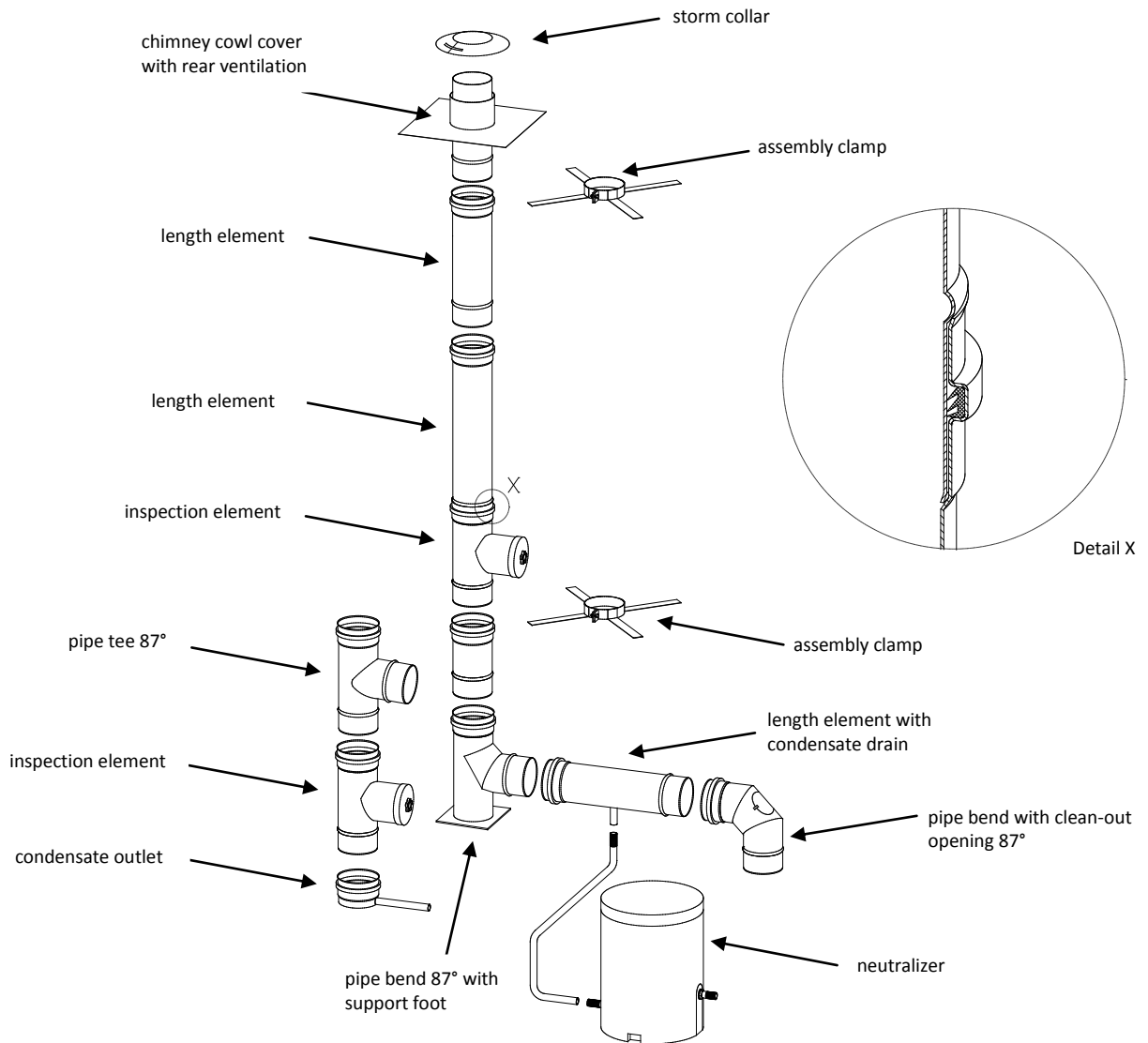


- certificated single wall flue system **TEC-EW-HIGH**

CE-Certification number 0036 CPR 91323 015

(further information: see Declaration of Performance No. 91323 015 DoP 2015-08-24)

1) System construction variant



2) Minimum distance to combustible materials

0.1	Used as exhaust gas line (oil, gas) with EPDM-gasket, up to 120°C Operation mode in positive pressure.	EN 1856-1	T120 – P1 – W – V2 – L50060	O00 (= 0mm)	Ø 80 – 600
0.2	Used as exhaust gas line (oil, gas) optional with EPDM-gasket, up to 120°C Operation mode in negative pressure.	EN 1856-1	T120 – N1 – W – V2 – L50060	O00 (= 0mm)	Ø 80 – 600
0.3	Used as exhaust gas line (oil, gas) with silicone-gasket, up to 200°C Operation mode in positive pressure.	EN 1856-1	T200 – P1 – W – V2 – L50060	O00 (= 0mm)	Ø 80 – 600
0.4	Used as exhaust gas line (oil, gas) optional with silicone-gasket, up to 200°C Operation mode in negative pressure.	EN 1856-1	T200 – N1 – W – V2 – L50060	O00 (= 0mm)	Ø 80 – 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

Used as a positive pressure exhaust gas line:

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. If the rear ventilation cross section is also used for combustion air supply, the required minimum cross section of the shaft for the fireplace to be connected must be determined. 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 components of the TECNOVIS exhaust system EW-HIGH are sealed by inserting the special three-lip seal, thus achieving pressure tightness up to 200Pa.

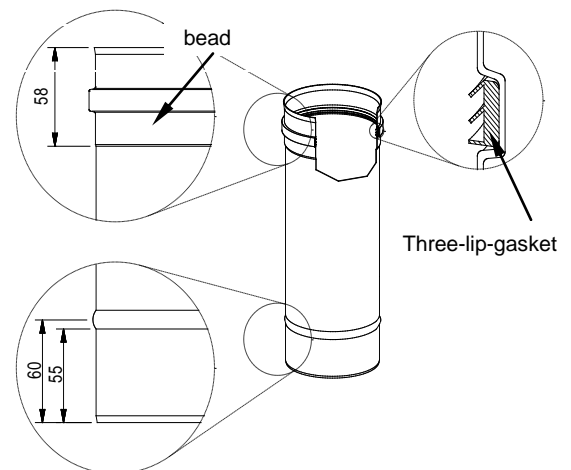
Connecting the elements:

Before plugging the length elements or moulded parts together the special three-lip seal is inserted into the preformed bead. Care must be taken to ensure that the lip seal is inserted into the female side bead according to the drawing (see picture). After inserting, moist the seal lightly with silicone spray to ensure easy sliding of the pipes.

All components must be mounted so that the female side of the inner tube points upwards or in the flow direction of the exhaust gases. In the case of the horizontal part, in particular with pulsating exhaust gas flow (e.g. motors), each impact must be secured by means of a clamping band. If the 87° elbow forms the base of the vertical exhaust system, which is usually the case when using in overpressure (e.g. for condensing boilers), then the 87° bend with support leg should be installed.

As a design variant, usually in low pressure operation:

Installation of the condensate tray (with discharge tube) on which the inspection piece is installed. The intermediate height up to the T-connection (87° - 45°) is carried out with corresponding length elements. Set the T-connection to the correct connection height and connect the connection line. The connection line must be laid from the boiler to the vertical part with an inclination of at least 3°.



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 authorised district chimney sweeper during the planning phase.

7) Installing 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.

INSTALLING 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 (note 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.

INSTALLING 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 30 mm/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 EW 1856 Part 1, the leak rate must not exceed 0,006l / (m²s) (corresponds to H1) at a test pressure of 200pa.

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.