

Installing instructions



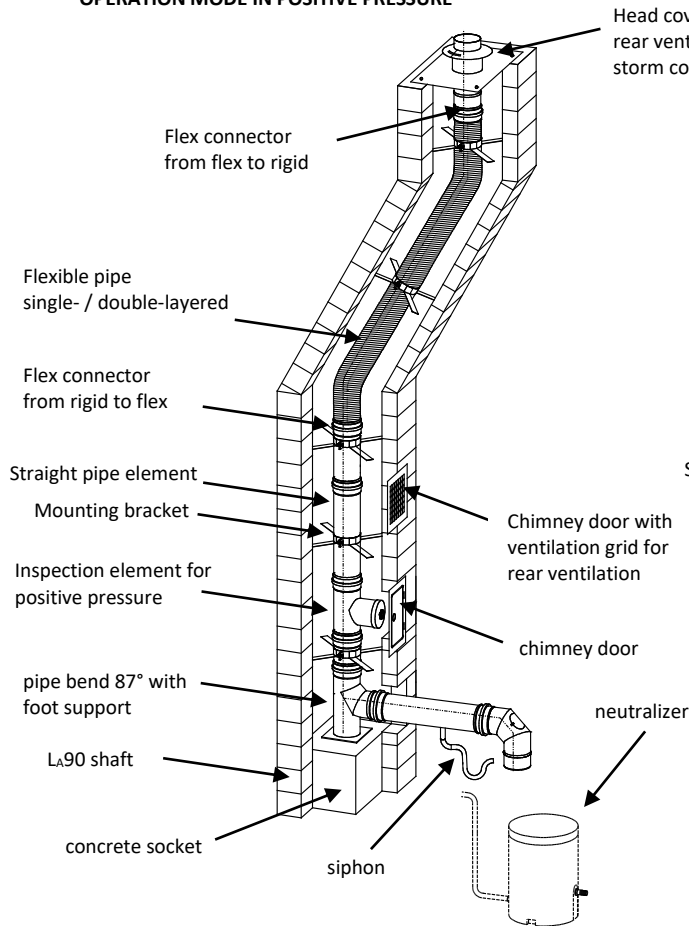
- certificated single wall flue system **TEC-FLEX**

CE-Certification number 0036 CPR 91323 017

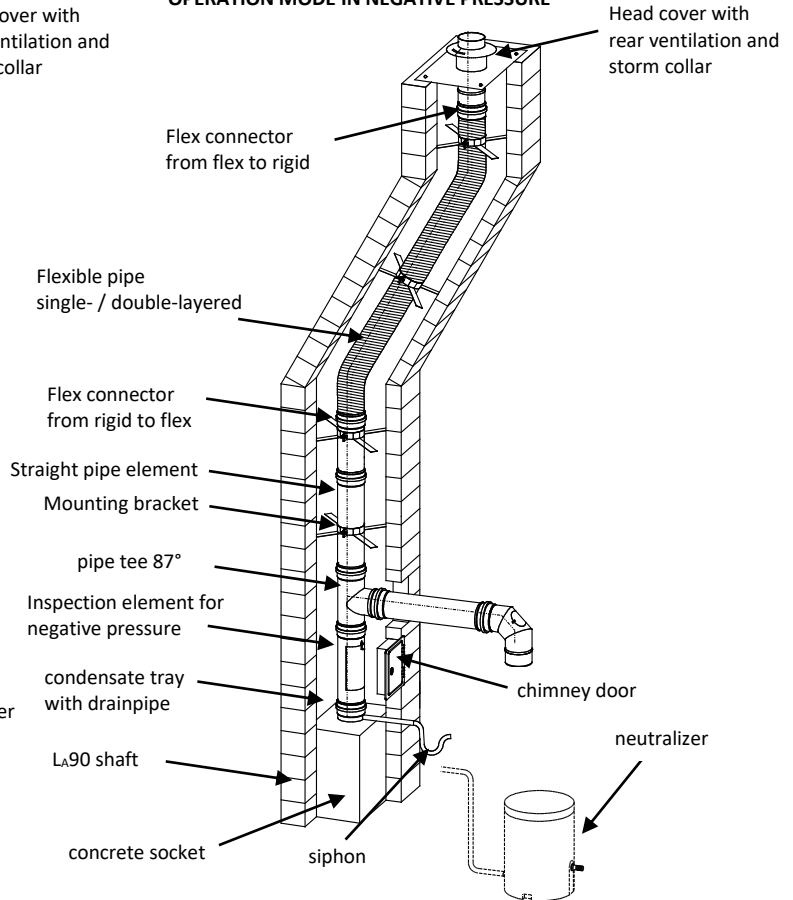
(further information: see Declaration of Performance No. 91323 017 DoP 2024-05-15)

1) System construction variant

OPERATION MODE IN POSITIVE PRESSURE



OPERATION MODE IN NEGATIVE PRESSURE



2) Minimum distance to combustible materials

0.1 single-layered inner pipes (0,08mm) 0.6 double-layered inner pipes (2x 0,08mm)	Used as flexible metal inner pipe (solid fuel) Operation mode in negative pressure up to 400°C	EN 1856-2	T400 - N1 - W - V2 - L50008	G Minimum distance: (= 50mm)	Ø80 - 300
0.2 single-layered inner pipes (0,08mm) 0.7 double-layered inner pipes (2x 0,08mm)	Used as flexible metal inner pipe (solid fuel) Operation mode in negative pressure up to 600°C	EN 1856-2	T600 - N1 - W - V2 - L50008	G Minimum distance: (= 100mm)	Ø80 - 300
0.3 single-layered inner pipes (0,08mm) 0.8 double-layered inner pipes (2x 0,08mm)	Used as flexible metal inner pipe (oil and gas) with sealant of silicone Operation mode in positive pressure up to 120°C	EN 1856-2	T120 - P1 - W - V2 - L50008	O Minimum distance: (= 50mm)	Ø80 - 300
0.4 single-layered inner pipes (0,08mm) 0.9 double-layered inner pipes (2x 0,08mm)	Used as flexible metal inner pipe (oil and gas) with sealant of silicone Operation mode in positive pressure up to 200°C	EN 1856-2	T200 - P1 - W - V2 - L50008	O Minimum distance: (= 50mm)	Ø80 - 300
0.5 single-layered inner pipes (0,08mm) 0.10 double-layered inner pipes (2x 0,08mm)	Used as flexible metal inner pipe (oil and gas) Operation mode in negative pressure up to 200°C	EN 1856-2	T200 - N1 - W - V2 - L50008	O Minimum distance: (= 50 mm)	Ø80 - 300

0.11 rigid inner pipes (0,60mm)	Used as rigid metal inner pipe (solid fuel) Operation mode in negative pressure up to 400°C	EN 1856-2	T400 - N1 - W - V2 - L50060	G Minimum distance: (= 50mm)	Ø80 - 600
0.12 rigid inner pipes (0,60mm)	Used as rigid metal inner pipe (solid fuel) Operation mode in negative pressure up to 600°C	EN 1856-2	T600 - N1 - W - V2 - L50060	G Minimum distance: (= 100mm)	Ø80 - 600
0.13 rigid inner pipes (0,60mm)	Used as rigid metal inner pipe (oil and gas) with EPDM-gasket Operation mode in positive pressure up to 120°C	EN 1856-2	T120 - P1 - W - V2 - L50060	O Minimum distance: (= 50mm)	Ø80 - 600
0.14 rigid inner pipes (0,60mm)	Used as rigid metal inner pipe (oil and gas) with silicone-gasket Operation mode in positive pressure up to 200°C	EN 1856-2	T200 - P1 - W - V2 - L50060	O Minimum distance: (= 50mm)	Ø80 - 600
0.15 rigid inner pipes (0,60mm)	Used as rigid metal inner pipe (oil and gas) Operation mode in negative pressure up to 200°C	EN 1856-2	T200 - N1 - W - V2 - L50060	O Minimum distance: (= 50mm)	Ø80 - 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.

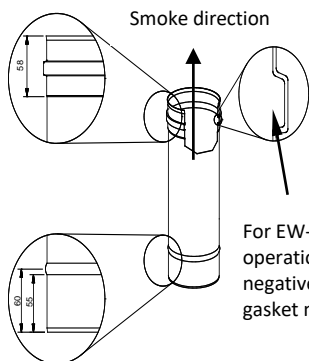
Before starting work:

The chimney must be checked and cleaned if necessary. Loose components must be removed before mounting. It must be ensured that the required cross-section is present over the entire length of the chimney.

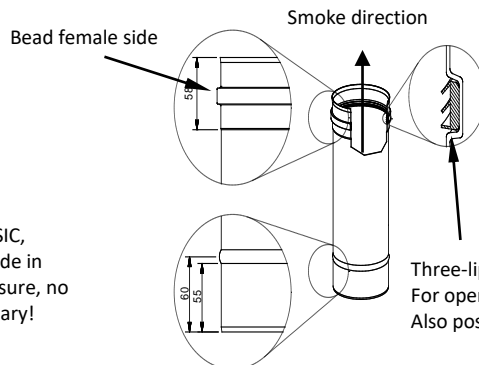
5) Construction of pipes

You can choose between elements with 1000mm, 500mm or 250mm length. All components have to be mounted in a way, that the nozzle is above or rather in flow direction of the exhaust gas. Through placing a silicone-gasket (up to a max. flue gas temperature of 200°C) or an EPDM-gasket (up to a max. flue gas temperature of 120°C) into the bead during manufacturing, the system is pressure tight.

Length element (rigid flue pipe EW-CLASSIC)



Length element (rigid flue pipe EW-HIGH)



The flow direction of the flexible pipes is indicated with an arrow, shown on the pipes.

6) Construction of pipes

The installation of the flexible pipe is made from the shaft mouth. For this purpose, the required length of the flexible tube is previously determined and tailored. The spacers are placed on the flexible tube before insertion into the shaft. In addition to the upper and lower attachment, spacers are spaced at a distance of $\leq 1,5$ m. In a slanted guide spacers are also be arranged before and after each kink. The distance between the spacers and the kink should be approx. 10 cm. After retracting the flexible pipe, please check that the flexible pipe is centered and that the minimum clearances to the shaft walls are maintained. If an overpressure operation is provided for the exhaust system, then the sealant is injected into the male between the flexible tubes and the transition pieces and results after curing a non-detachable socket connection. The rear ventilation of the shaft required for the discharge of the exhaust gases by overpressure can be achieved by ventilating over the entire length or by a combustion air intake from the mouth via the annular gap between the exhaust pipe and the shaft.

7) Detail: Connection rigid on flex

The flexible pipe is screwed into the flexible connector, the fixing clamps are mounted at a distance of approx. 1.5 m from the flexible pipe. Subsequently, the flexible pipe incl. flex connector is drawn from the end cap into the shaft or chimney and inserted into the cleaning. With the sealing compound the flex connector is now ejected.

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 P1) at a test pressure of 200Pa.

9) Mounting air inlet grid

In order to ensure a sufficient rear ventilation of the shaft, an air inlet grid (free minimum cross section = required ventilation cross-section) must be fitted in the flue in the installation room of the CHP.

10) 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. For long connecting lines, it is advisable to isolate them, in order to avoid a cooling largely.

10) Concluding instructions

All openings in the shaft 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 exhaust pipe TEC-FLEX 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 errors are reserved.



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