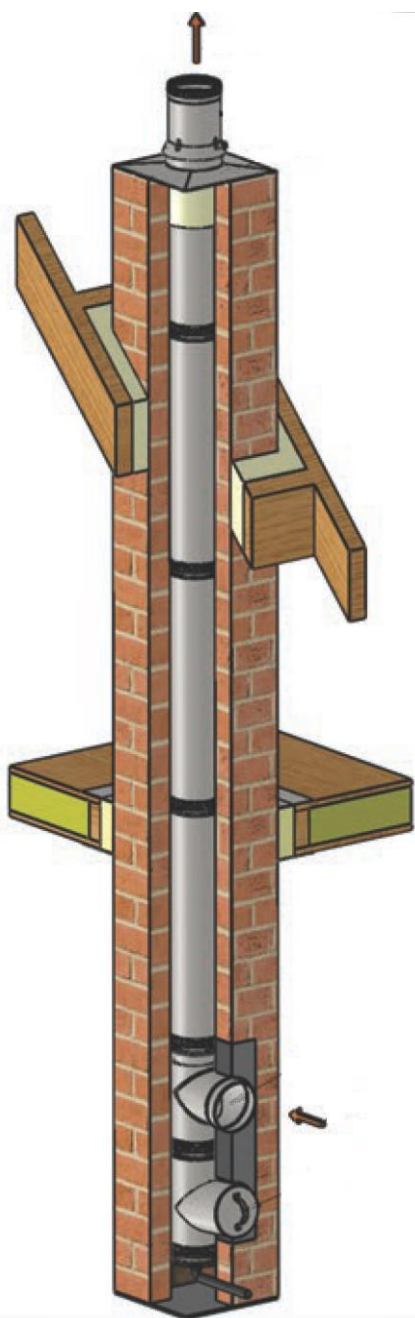
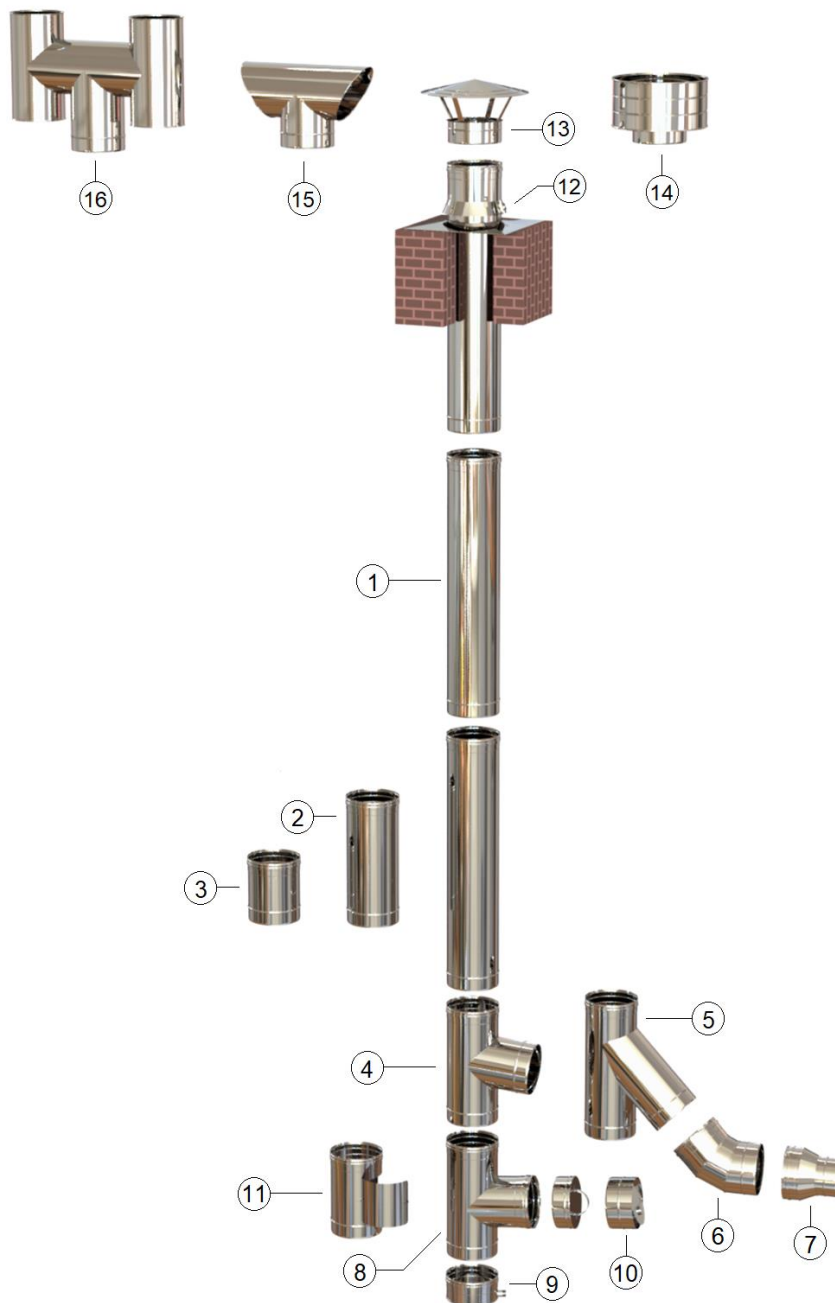


INSTALLATION MANUAL v. 2022-05

The flue liners and connecting flue pipes are used to convey the products of combustion from combustion appliances to the outside atmosphere. The flue liners can be used as flue liners for renovation or adaptation of existing chimneys and as flue liners of custom-built chimneys. The connecting flue pipe components are used for connecting the combustion appliance outlet and the chimney.



Typical flue liner installation scheme



Main flue liner and connecting flue pipe components

- 1. Flue liner, L-1,0 m
- 2. Flue liner, L-0,5 m
- 3. Flue liner, L-0,25 m
- 4. Tee 85°
- 5. Tee 45°

- 6. Elbow 45°
- 7. Increaser
- 8. Inspection with base plug
- 9. Drain plug lateral
- 10. Draught regulator

- 11. Inspection with lid
- 12. Roof plate
- 13. Rain cap
- 14. Spark catcher-deflector
- 15. Rain cap T
- 16. Rain cap H



1. Checking before installation

Before installing the flue liner and connecting flue pipe, a product verification must be carried out to assess whether all chimney products required according to the design specification are completed. Any product which is damaged or not as specified should be rejected



2. Joints

The following types of joints are available (see Annex 1 to this manual):
 1) Joints are secured using the Click lock system for 80, 100, 120, 130, 150, 160, 180, 200 diameter pipes.
 2) Pipes of other diameters are secured by riveting. Stainless steel rivets 4x8 are required for riveting. The following number of rivets is required for each joint.

Pipe diameter, mm	Number of rivets in the joint
80 -200	3
>200 - 300	4
>300 - 400	6
>400 - 600	8
>600	16

3) as an alternative, pipes with diameters of 80, 100, 110, 115, 130, 150, 160, 180, 200, 230, 250, 300, 350, 400, 450, 500 can be secured using H-12 mm locking bands.



3. Flue liner installation

The installation work should be started from a room, where a combustion appliance should be installed or is already installed. After evaluation of connection height of the combustion appliance outlet, a necessary opening should be prepared in the existing brick chimney for installation of drain plug, inspection and tee components.



3.1. According to the flow direction of flue gases (indicated on the product labeling stickers) join the drain plug, inspection and tee components. The joints shall be made according to the clause 2 of this manual. Install previously connected components into the existing brick chimney. Foresee the condensate drainage.



3.2. The installation work continues from the top of the chimney by installing flue liner sections to the existing masonry chimney. Take into consideration the flow direction of flue gases indicated on the product labeling stickers. The joints shall be made according to the clause 2 of this manual. To prevent the flue liner components from falling into the existing chimney, it is recommended to hold the components with a belt placed around the flue liner.



3.3. Install the flue liner components further into the existing chimney until they reach tee component installed in a room, where a heating device should be installed or is already installed.



3.4. Connect tee component and flue liner component mounted from the top.



3.5. The cavity between flue liner and bricks on the top of the chimney should be sealed from the top with non-flammable insulation material about 0.5 m. Place the base of the roof plate on the top.



3.6. Place the storm collar on top of the flue liner.



3.7. Rivet storm collar to the flue liner and tighten the screw. Subject to the requirements of legal acts, rain caps, spark catchers-deflectors can be mounted on the top of chimney.



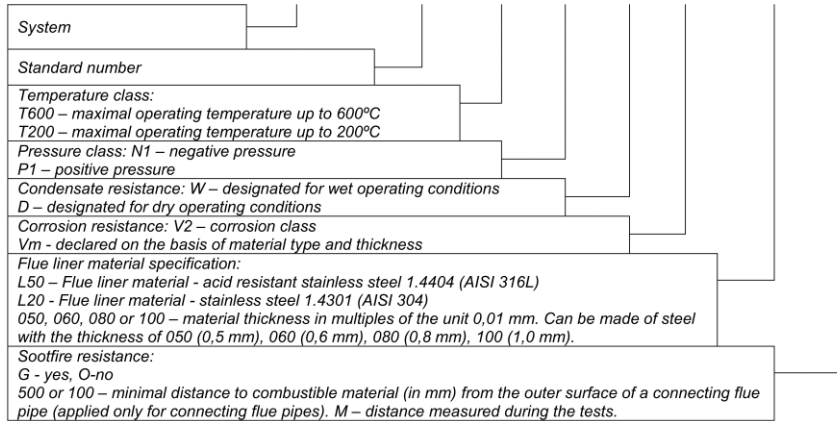
3.8. After installation of the flue liner into the brick chimney, the opening made for installation of tee and inspection components should be walled up. Additionally, a non-flammable insulation material should be installed between the masonry and crossing flue liner component.

4. Flue liner and connecting flue pipes SW ir SW-M designation

Flue liner and connecting flue pipes suitability for particular cases must be decided taking into consideration the documentation of the combustion appliance manufacturer, this installation manual and national legal acts.

*The actual minimum distance to combustible material from the outer surface of a connecting flue pipe (for flue liners isn't applied) must be defined according to the designation of the product, as described in their marking, and national legal acts. If the legal acts and chimney designation indicate different distances to the combustible materials it is necessary to follow a bigger distance.

Rigid round flue liner and connecting flue pipes system SW Without silicone seals	EN 1856-2	T600	N1	W	V2	L50050 L50060 L50080 L50100	G500M
Rigid round flue liner and connecting flue pipes system SW With silicone seals	EN 1856-2	T200	P1	W	V2	L50050 L50060 L50080 L50100	O100M
Rigid round flue liner and connecting flue pipes system SW-M Without silicone seals	EN 1856-2	T600	N1	D	Vm	L20050 L20060 L20080 L20100	G500M



4.1. System SW (without silicone seals) EN 1856-2 T600-N1-W-V2- L50xxx-G500M

This system of flue liners is designated to exhaust combustion products by natural draught (N1) from combustion appliances burning gas, liquid or solid fuel. Flue liner system is used for relining existing brick-built or concrete chimneys, which conform to the requirements of national legal acts, to protect them from destructive condensate influence. The system SW is sootfire resistant (G), it is designated for wet operating conditions (W), and its maximal working temperature (T600) is 600 °C. The flue liner is made of acid resistant stainless steel 1.4404 (L50). The components of this flue liner system, according to their designation as described in their marking, can be used as connecting flue pipes, connecting a combustion appliance to a chimney, and mounted at the distance not less than 500 mm to combustible materials, if national legal acts do not indicate a bigger distance

4.2. System SW (with silicone seals) EN 1856-2 T200-P1-W-V2-L50xxx-O100M

This system of flue liners is designated to exhaust combustion products by positive draught (P1) from combustion appliances burning gas or liquid fuel. Flue liner system is used for relining existing brick-built or concrete chimneys, which conform to the requirements of national legal acts, to protect them from destructive condensate influence. The system SW isn't sootfire resistant (O), it is designated for wet operating conditions (W), and its maximal working temperature (T200) is 200 °C. In order to reach sufficient tightness of flue liner system, silicone seals are being used in the joints of components. The flue liner is made of acid resistant stainless steel 1.4404 (L50). The components of this flue liner system, according to their designation as described in their marking, can be used as connecting flue pipes, connecting a combustion appliance to a chimney, and mounted at the distance not less than 100 mm to combustible materials, if national legal acts do not indicate a bigger distance.

4.3. System SW-M (without silicone seals) EN 1856-2 T600-N1-D-Vm-L20xxx-G500M

This system of flue liners is designated to exhaust combustion products by natural draught (N1) from combustion appliances burning gas, liquid fuel (sulphur content ≤ 0,2 mass %) or firewood (moisture content ≤ 20 %). Flue liner system is used for relining existing brick-built or concrete chimneys, which conform to the requirements of national legal acts, to protect them from destructive condensate influence. The system SW-M is sootfire resistant (G), it is designated for dry operating conditions (D) (when the inner chimney pipe surface temperature during operation is above the dew point temperature), and its maximal working temperature (T600) is 600 °C. The flue liner is made of stainless steel 1.4301 EN 10088 (L20). The components of this flue liner system, according to their designation as described in their marking, can be used as connecting flue pipes, connecting a combustion appliance to a chimney, and mounted at the distance not less than 500 mm to combustible materials, if national legal acts do not indicate a bigger distance

5. Compressive strength of flue liners and connecting flue pipes

When dn from 80 to 200 mm – 20 m flue liner sections.
When dn from 210 to 550 mm – 15 m flue liner sections.
When dn from 600 to 900 mm – 10 m flue liner sections.

6. Non-vertical installation

If the length of non-vertically mounted connecting flue pipe is exceeding 2,0 m, additional supports must be used. The distance between additional supports should not exceed 2,0 m. Minimal connecting flue pipe inclination to horizontal shall be ≥3°.



7. Flue liners and connecting flue pipes shall be designed, installed and operated in accordance with the national legislation and the requirements set out in this installation manual. If requirements in national legislation and this installation manual vary, it is necessary to follow the more stringent requirements.

Health and safety precautions.

Metal Parts. Care should be taken to avoid the possibility of personal injury when installing this chimney system. Where appropriate equipment to protect against sharp edges and any other hazards where necessary.

Occupational safety. During installation and exploitation, strictly follow the requirements of occupational safety. During installation use a personal protective equipment.

Exploitation of a chimney system. The flue liners and connecting flue pipes shall be exploited according to their designation. It is not recommended to burn waste of wood industry, which contains cohesive materials; the cohesive materials emit aggressive materials when burning. It is strictly prohibited to fire materials unsuitable for burning (litter, plaster, rubber, etc.). It is prohibited to keep and store chemical materials (such as aerosol, paint, dissolvent, cleaning materials, glue, varnish, petrol and etc.) in the boiler-rooms, as certain concentrations of these materials can be sucked in together with combustion air. These materials can cause chimney as well as boiler corrosion. In enterprise such as hairdressers, dye-house or woodwork shop, cleaning shops and etc., heating appliance should be installed in separate room that combustion air would be free of the materials mentioned before.

Chimneys should be cleaned not less than once every three months during a heating season, and before a heating season. Special tools made of stainless steel or polymeric materials should be used to clean chimneys.

To evaluate the state of the chimney and supporting elements during the operation it is required to perform external inspections at least every six months. Detected loose screws of bearing elements shall be tightened.

We draw your attention to the fact that uncleaned chimneys are dangerous to the exploitation of a building, as it may cause fire.

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ANNEX 1

Types of joints between flue liner or connecting flue pipe components

<p>Click lock system</p> <p>The components of a flue liner are put on each other on the indicated places (matched markings) and get fixed with a turn to the opposite directions with respect to each other</p>	
<p>Riveting</p> <p>The components of a flue liner or connecting flue pipes are connected to each other by means of spigot and socket joints which gives a depth of the insert joint of 50 mm. The joints are secured with 4x8 stainless steel rivets. The number of rivets required for each connection is specified in item 2 of this manual. First drill a hole using a Ø4.2 mm stainless steel drill bit, then rivet the joint with a rivet.</p>	
<p>H-12 mm locking bands</p> <p>The components of a flue liner or connecting flue pipes are connected to each other by means of spigot and socket joints which gives a depth of the insert joint of 50 mm. Joints are secured by locking bands H-12 mm, which cover the joint. Please note that the locking band must be fitted properly on the joint (see Locking band cross-section). Do not fit the locking band upside-down. Having fitted the locking band properly, tighten it using a hex key (size no. 5).</p>	<p>Locking band cross-section</p>