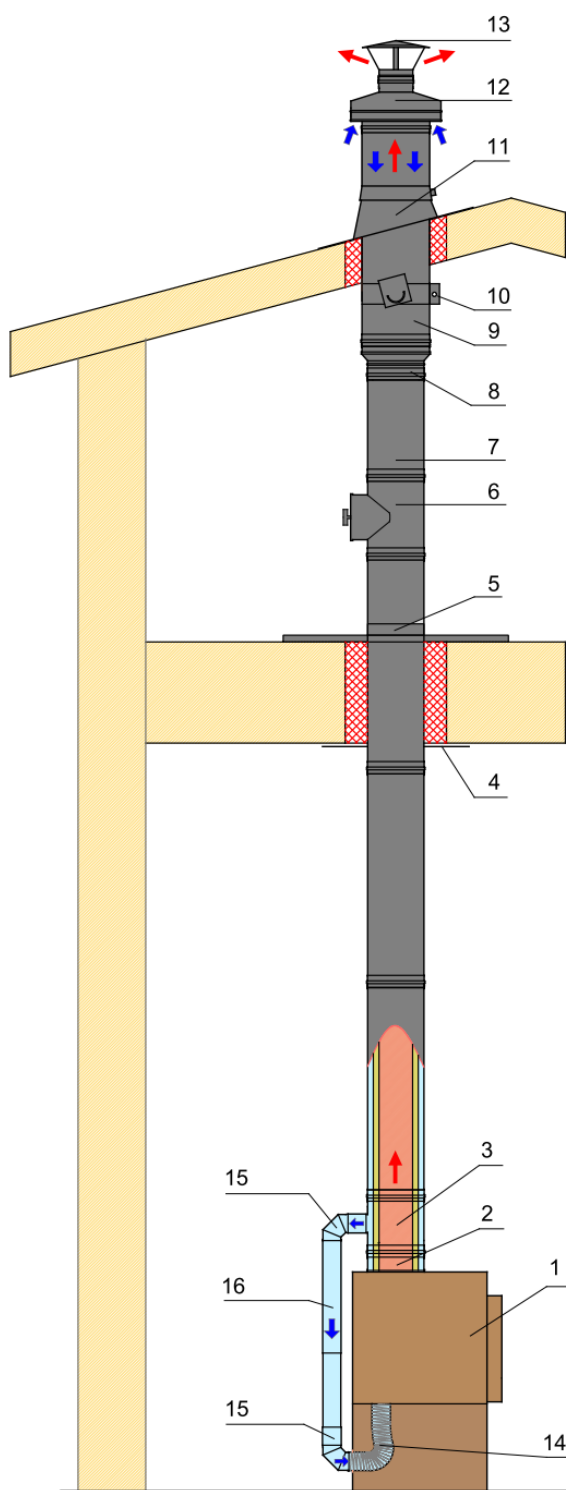


TRIPLE WALL CHIMNEY SYSTEM TW25 and TW25-M INSTALLATION MANUAL v. 2022-12



Typical triple wall chimney installation scheme

1. Checking before installation

Before installing the chimney, a product verification must be carried out in order 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. Chimney installation

The triple wall chimney must be installed in accordance with the Typical triple wall chimney installation schemes. The installation of the triple wall chimney starts from the bottom cover of the triple wall chimney, which is connected to the heating appliance, based on the methods of connecting the triple wall chimney to the heating appliance presented in this manual (muffs may be required for connection, which are ordered separately). Next, other components of the triple wall chimney are installed according to the Typical triple wall chimney installation scheme. Supports, wall brackets, ceiling supports, rafter supports are used for fixing the chimney. Triple wall cap with air inlet must be fitted at the top of the chimney. Rain cap, spark catcher-deflector, etc. can be mounted on the top cover, but it is necessary to consider whether this does not contradict the legal requirements.

3. Joining the chimney components

Triple wall chimney joints are secured by locking bands, which cover the joint. The flow direction of combustion products is indicated on the product marking stickers.



4. Compressive strength

- when inner pipe nominal diameter d_n from 80 to 200 mm – 15 m triple wall chimney sections.
- when inner pipe nominal diameter d_n is 250 mm – 10 m triple wall chimney sections.

5. Wind load resistance. Wall bracket separation distance

For outdoor installation, the triple wall chimney is mounted to the wall using wall brackets and can be placed on a intermediate support with console.

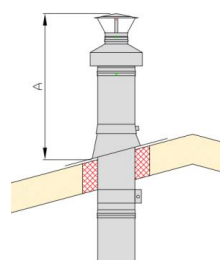
The maximum distance between wall brackets:

- when nominal diameter of the inner pipe d_n from 80 to 200 mm – 3,0 m.
- when nominal diameter of the inner pipe d_n 250 mm - 2,5 m.

6. Wind load resistance. Maximum free-standing length

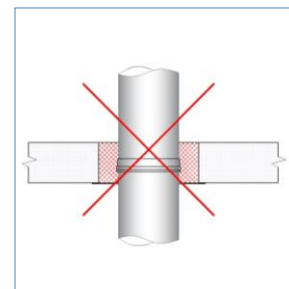
The maximum free-standing length of the chimney (A) must be:

- when nominal diameter of the inner pipe d_n from 80 to 200 mm – 2,5 m.
- when nominal diameter of the inner pipe d_n 250 mm - 1,0 m.



7. Wrong position of the joints of chimney sections

The joints of chimney sections in locations where it passes through a floor, roof or wall are not allowed.



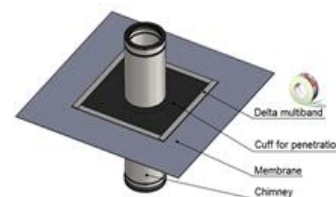
1.	Heating appliance	9.	TW air-flue chimney section insulated
2.	TW bottom cover	10.	Rafter support
3.	TW section with air supply	11.	Roof flashing kit
4.	Decorative plate	12.	TW cap with air inlet for insulated section
5.	Ceiling support	13.	Rain cap
6.	TW inspection with plug	14.	Adjustable flexible duct
7.	TW air-flue chimney section	15.	Duct elbow
8.	TW-TW insulated adapter	16.	Adjustable duct

8. Installation of a single wall connecting air duct

The single wall connecting air duct must be installed according to the Typical triple wall chimney installation schemes. Initially, the adjustable flexible air duct is connected to the air supply pipe of the heating appliance (adapters may be required for the connection, which are ordered separately), and the joint is secured by locking band. After that, air duct elbows, rigid air duct elements, and adjustable ducts can be installed towards the connection with the air supply branch of the triple wall section with air supply, depending on the selected installation scheme. The adjustable duct consists of two parts: lower and upper. Before assembly, in order not to damage the paint layer, the parts of the adjustable duct and their pipes are soaked with soapy water. The lower part of the adjustable duct is inserted inside the upper part so that the parts of the duct overlap each other by at least 100 mm. The required length of the assembled Adjustable duct is fixed by securing the locking band of the parts of the adjustable duct. All rigid duct connections are secured by locking bands, and the flexible duct with locking bands.

9. Installation of the cuff for penetration

Cuffs for penetration must be used to seal the membranes in the building structures (vapor barrier, diffusive membrane). When installing the cuff for penetration, an opening of appropriate diameter is made in the membrane so that the distance from the membrane to the outer pipe of the chimney is not less than the declared distance from the chimney to the combustible material. Cuff for penetration of appropriate size is placed on the chimney and placed on top of the membrane. Using an adhesive tape Delta Multi Band the cuff for penetration and the membrane are glued together around the perimeter of the cuff for penetration.



10. Triple wall system chimney TW-25 and TW-25M designation

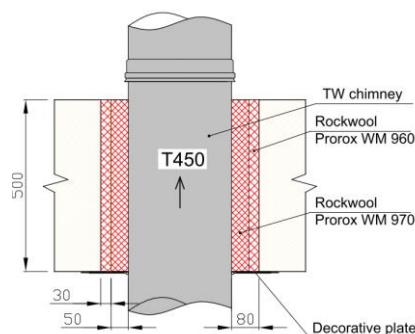
System chimney suitability for particular cases must be decided taking into consideration the documentation of the heating appliance manufacturer, this installation manual and national legal acts.

Triple wall system chimney TW-25	EN 1856-1	T450	N1	W	V2	L50050 L50060 L50080 L50100	G80
Triple wall system chimney TW-25M	EN 1856-1	T450	N1	D	Vm	L20050 L20060 L20080 L20100	G80

System chimney / designation	
Standard number	
Temperature class: T450 – maximal operating temperature up to 450°C	
Pressure class: N1 – negative pressure	
Condensate resistance: W – designated for wet operating conditions D – designated for dry operating conditions	
Corrosion resistance: V2 – corrosion class Vm – declared on the basis of material type and thickness	
Flue liner material specification: L50 – Flue liner material - acid resistant stainless steel 1.4404 (AISI 316L) L20 – Flue liner material - stainless steel 1.4301 (AISI 304) 050, 060, 080 or 100 – material thickness in multiples of the unit 0,01 mm. Can be made of steel with the thickness of 050 (0,5 mm), 060 (0,6 mm), 080 (0,8 mm), 100 (1,0 mm).	
Sootfire resistance: G – yes 80 – minimal distance to combustible material (in mm)	

11. Installation of the chimney passing through the building constructions

The actual minimum distance to combustible material from the outer surface of a chimney must be defined according to the designation of the chimney, as described in their marking, and national legal acts. If the legal acts and chimney designation indicate different admissible distances to the combustible materials it is necessary to follow a bigger distance.



These systems were tested non-enclosed and with insulated floor penetration. The minimal distance declared by the manufacturer of these systems to combustible materials (mm) is 80 mm. When mounting the chimney next to combustible constructions (e.g. walls), ≥80 mm distance to combustible materials must always be maintained. A gap between the combustible wall and chimney must be ventilated. In a case the chimney passes through the combustible building constructions (e.g. floor, roof), they must be equipped with holes of adequate size, which would allow to maintain a safe distance from a surface of the chimney to combustible materials.

When a thickness of passed through construction is not larger than 500 mm, a gap from the outer wall of the chimney to combustible materials is fully filled with insulation materials indicated in the drawing.

10.1 TW-25 system

EN 1856-1 T450-N1-W-V2-L50xxx-G80

This triple wall chimney system is designated to exhaust combustion products by natural draught (N1) from the heating appliances burning gas, liquid or solid fuel. The air required for combustion can be supplied through the channel between the middle and outer pipe. This chimney system is designated for internal and external use. The system is sootfire resistant (G), suitable for operation in wet conditions (W), and its maximal working temperature (T450) is 450 °C. Chimney is mounted leaving not less than 80 mm between the outer surface of a chimney and combustible materials, if national legal acts do not indicate a bigger distance. The system is tested non-enclosed and with insulated floor penetration, therefore, when the chimney passes through the building constructions, one must follow the information provided in a section of this manual titled "Installation of the chimney passing through the building constructions". The inner pipe is made of stainless steel 1.4404 (L50), the thickness of mineral wool layer is 25 mm. The tightness of the air channel (duct) does not exceed 0,5 l/s·m² when tested at a positive pressure of 50 Pa. Single-wall duct elements (adjustable duct, rigid duct, duct elbow, adjustable flexible duct, etc.) are installed at a distance of at least 80 mm from combustible materials.

10.2 TW-25M system

EN 1856-1 T450-N1-D-Vm-L20xxx-G80

This triple wall chimney system is designated to exhaust combustion products by natural draught (N1) from the heating appliances burning gas, liquid fuel (sulphur content ≤ 0,2 mass %) or firewood (moisture content ≤ 20 %). This chimney system is designated for internal and external use. The system is sootfire resistant (G), it is designated for dry operating conditions (D), and its maximal working temperature (T450) is 450 °C. Chimney is mounted leaving not less than 80 mm between the outer surface of a chimney and combustible materials, if national legal acts do not indicate a bigger distance. The system is tested non-enclosed and with insulated floor penetration, therefore, when the chimney passes through the building constructions, one must follow the information provided in a section of this manual titled "Installation of the chimney passing through the building constructions". The inner pipe is made of stainless steel 1.4301 (L20), the thickness of mineral wool layer is 25 mm. The tightness of the air channel (duct) does not exceed 0,5 l/s·m² when tested at a positive pressure of 50 Pa. Single-wall duct elements (adjustable duct, rigid duct, duct elbow, adjustable flexible duct, etc.) are installed at a distance of at least 80 mm from combustible materials.

12. Accidental human contact with the chimney

When accidental human contact of a chimney is possible, the chimney shall be covered with a hood or a mesh!

13. Chimney plate

The installer who has installed the chimney and connected it to the heating appliance must fill in the chimney plate in accordance with the manufacturer's instruction on how to complete the data of the chimney plate

14.



Chimneys 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.

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

Product storage. Chimneys must be stored in the original packaging in a clean and dry place.

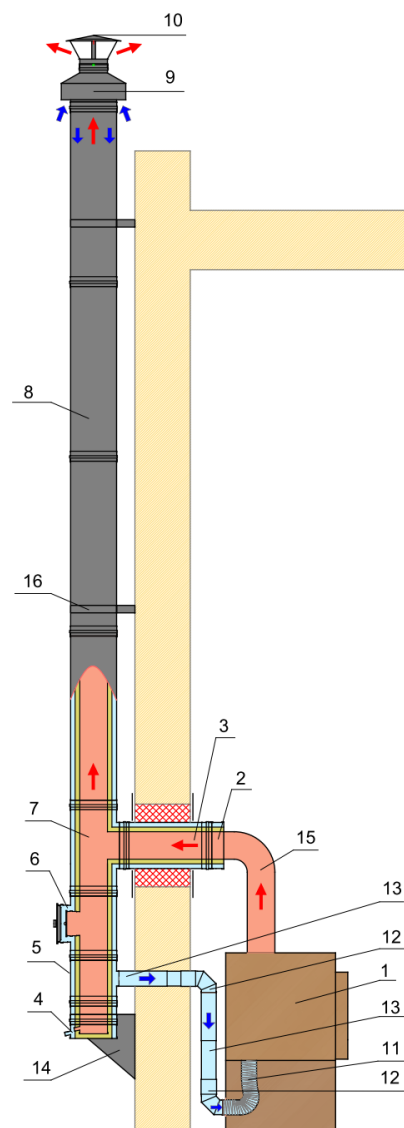
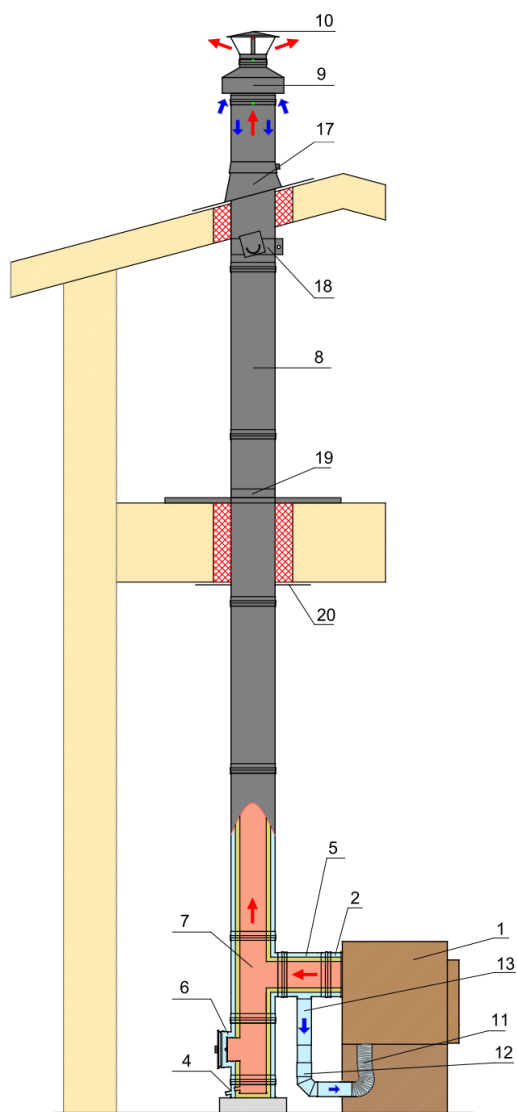
Exploitation of a chimney system. The concentric air/flue system chimney shall be exploited according to their designation, indicated in the sections 8.1 - 8.2 of this manual. It is prohibited to keep and store chemical materials (such as aerosol, paint, dissolvent, cleaning materials, glue, varnish, 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 a year. Special tools made of stainless steel or polymeric materials should be used to clean chimneys.

In order 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.

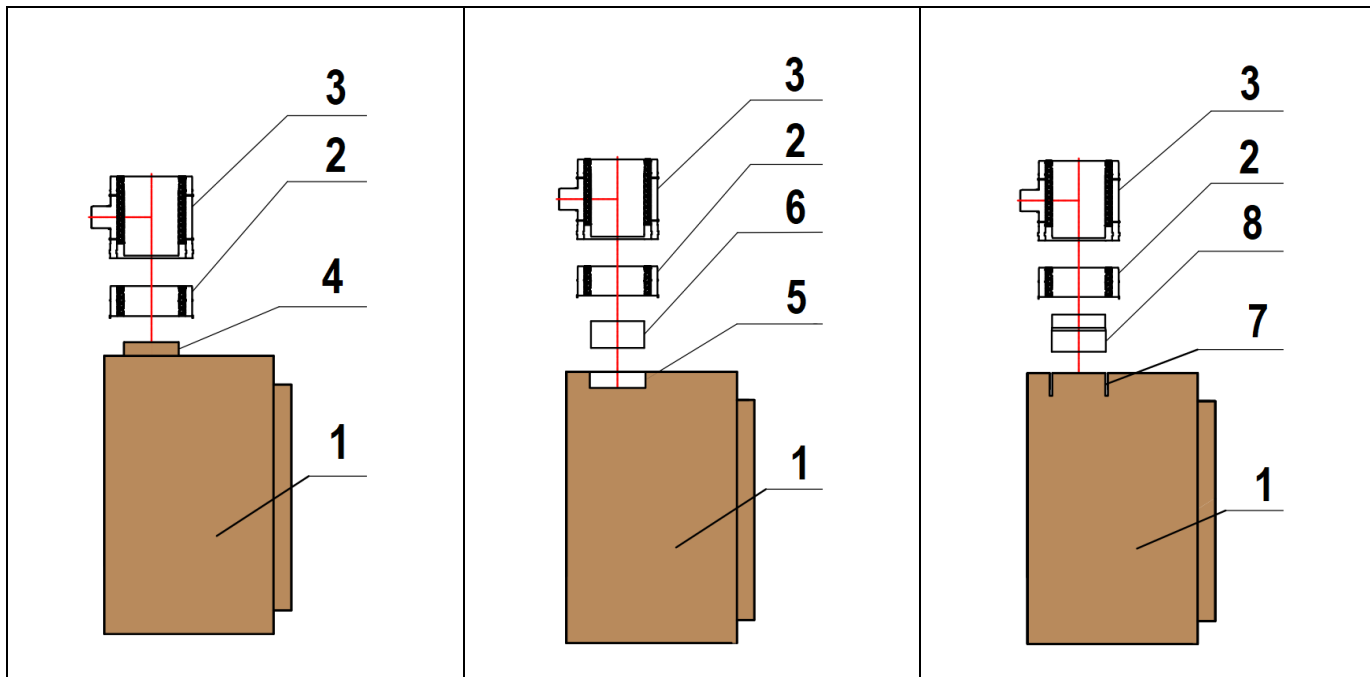
We draw your attention to the fact that uncleaned chimneys are dangerous to the exploitation of a building, as it may cause fire.

15. Additional Typical triple wall chimney installation schemes



1.	Heating appliance	11.	Adjustable flexible duct
2.	TW bottom cover	12.	Duct elbow
3.	TW air-flue chimney section	13.	Adjustable duct
4.	TW drain lateral	14.	TW intermediate support + Console
5.	TW section with air supply	15.	SW section + SW elbow
6.	TW inspection with plug	16.	Wall bracket
7.	TW tee 90°	17.	Roof flashing kit
8.	TW air-flue chimney section	18.	Rafter support
9.	TW cap with air inlet	19.	Ceiling support
10.	Rain cap	20.	Decorative plate

16. Options of connecting a tripple wall chimney to a heating device



1.	Heating appliance
2.	TW bottom cover
3.	TW section with air supply
4.	Spigot flue outlet outside
5.	Socket flue outlet inside
6.	Muff - / -
7.	Spigot flue outlet inside
8.	Muff + / -

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