

Vilpra Sauna chimney set

Installation and operation manual

v.2022-05



DW50-M
SW-M

Inner pipe material

Material thickness: 0,8 mm

Stainless steel grade EN 1.4301 (AISI 304)



Chimneys shall be designed, installed, and operated in accordance with the national legislation and the requirements set out in this manual. If requirements in national legislation and this manual vary, it is necessary to follow the more stringent requirements.

1. Contents of the package

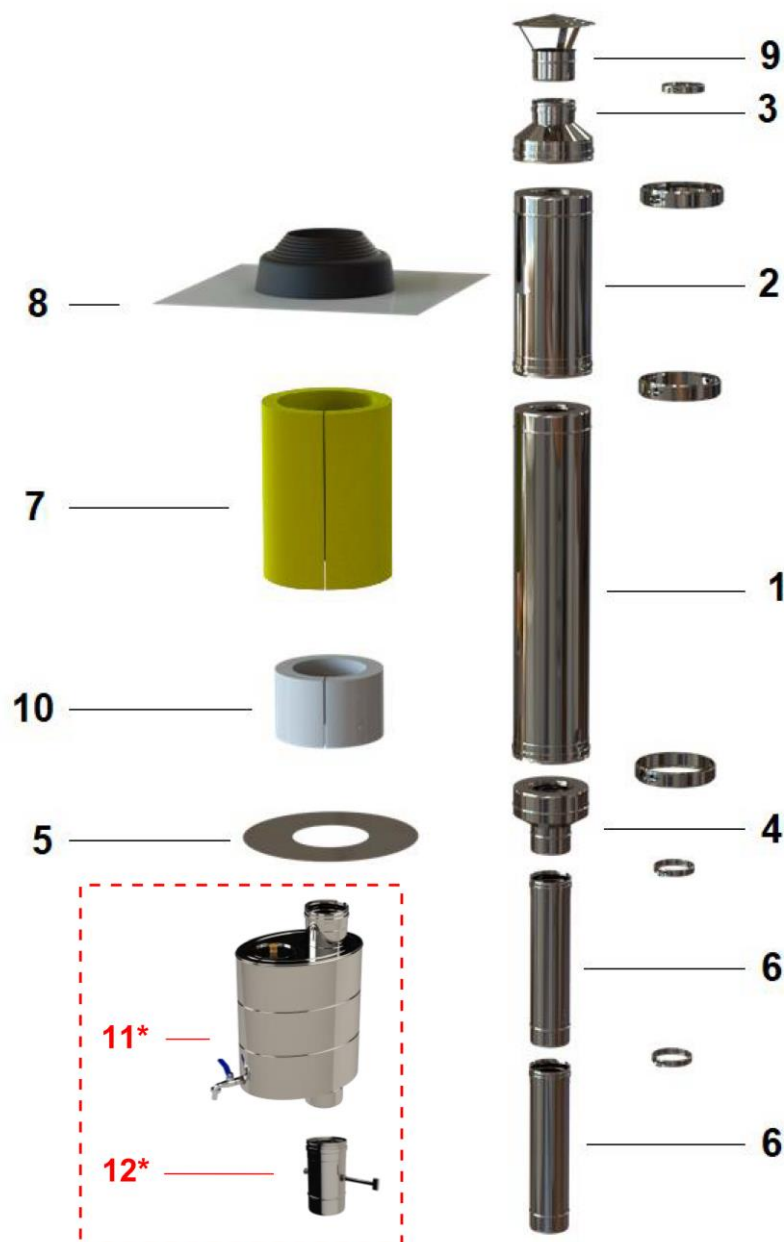




Figure 1. Contents of package

1. Double wall chimney, L-1 m (installed length 0,95 m)
2. Double wall chimney, L-0.5 m (installed length 0,45 m)
3. Top cover
4. Bottom cover
5. Decorative ring
6. Rigid round flue liner, L-0.5 m, used as connecting flue pipe (installed length 0,45 m) - 2 pcs.
7. Insulation for penetration Prorox s-50mm, h-500mm
8. Roof flashing kit AL+EPDM d.160-300 0°-45°
9. Rain cap
10. Insulation for penetration Superwool s-50mm, h-200mm, up to d.280mm
- 11* Tank for water heating (not included in the package, ordered separately). The tank can be mounted instead of a round flue liner (6)
- 12* Damper (not included in the package, ordered separately). The damper can be mounted instead of a round flue liner (6)

2. Technical information

2.1. Designation of Double wall Sauna system chimney DW50-M



Follow Designation 4 while installing and operating double wall Sauna system chimney DW50-M. This double wall Sauna chimney is designated to exhaust combustion products by natural draught (N1) from the sauna stove burning dry natural wood logs (moisture content $\leq 20\%$). The chimney is sootfire resistant (G), it is designated for dry operating conditions (D), and its maximal working temperature (T600) is 600 °C. Chimney is mounted leaving not less than 100 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, follow the information provided in a section 3.1.1 of this manual. The inner pipe is made of 0.8 mm thick stainless steel 1.4301 (L20), the thickness of mineral wool layer is 50 mm.

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EN 1856-1:2009 Double wall metal chimney system DW50-M elements intended to convey products of combustion from the heating appliance to the outside atmosphere
Designation 4: EN 1856-1 T600-N1-D-Vm-L20080-G100 (Ø 80-200) (Tested non-enclosed and with insulated floor penetration)
Compressive strength: up to 15 m
Flow resistance: According to EN 13384-1
Thermal resistance: NPD - no performance determined
Thermal shock resistance: Yes
Tensile strength: NPD - no performance determined
Non vertical installation: NPD - no performance determined
Components subject to wind load: Maximum spacing between lateral supports: 3,0 m Maximum freestanding height above last support: 2,5 m
Freeze thaw resistance: Yes

Double wall Sauna chimney DW50-M							
Designation 4	EN 1856-1	T600	N1	D	Vm	L20080	G100
Double wall system chimney / designation							
Standard number							
Temperature class: T600 – maximal operating temperature up to 600°C							
Pressure class: N1 – negative pressure							
Condensate resistance: D – designated for dry operating conditions							
Corrosion resistance: Vm - declared on the basis of material type and thickness							
Flue liner material specification: L20 - Flue liner material - stainless steel 1.4301 (AISI 304) Ø80 – material thickness in multiples of the unit 0,01 mm. Made of steel with the thickness of Ø80 (0,8 mm).							
Sootfire resistance: G - yes, 100 – minimal distance to combustible material (in mm) applied for diameters of inner pipe from 80 mm up to Ø200 mm							

2.2. Designation of single wall Sauna connecting flue pipe SW-M

This single wall connecting flue pipe system is designated to exhaust combustion products by natural draught (N1) from the sauna stove burning dry natural wood logs (moisture content $\leq 20\%$). The elements of this connecting flue pipe system are used to connect a sauna stove 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. The system SW-M is sootfire resistant (G), it is designated for dry operating conditions (D), and its maximal working temperature (T600) is 600 °C. The connecting flue pipe is made of 0.8 mm thick stainless steel 1.4301 (L20).

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EN 1856-2:2009 Rigid metal connecting flue pipes SW-M elements intended to convey products of combustion from the heating appliance to the outside atmosphere
EN 1856-2 T600-N1-D-Vm-L20080-G500M
Compressive strength: up to 20 m
Flow resistance: According to EN 13384-1
Thermal resistance: NPD - no performance determined
Thermal shock resistance: Yes
Tensile strength: 20 m
Non vertical installation: NPD - no performance determined
Freeze thaw resistance: Yes

Single wall Sauna connecting flue pipe SW-M	EN 1856-2	T600	N1	D	Vm	L20080	G500M
Standard number							
Temperature class: T600 – maximal operating temperature up to 600°C							
Pressure class: N1 – negative pressure							
Condensate resistance: D – designated for dry operating conditions							
Corrosion resistance: Vm - declared on the basis of material type and thickness							
Flue liner material specification: L20 - Flue liner material - stainless steel 1.4301 (AISI 304) 080 – material thickness in multiples of the unit 0,01 mm. Made of steel with the thickness of 080 (0,8 mm).							
Sootfire resistance: G - yes, 500 – minimum distance to combustible material (in mm) from the outer surface of a connecting flue pipe, M - distance measured during the tests.							

3. Installation instructions

The chimney installation must be done only by a competent person. The installer should check that all components required to complete the installation are available. The diameter of the chimney shall not be smaller than flue socket diameter of the stove, it is optimal when diameters are equal. Typical installation of the chimney is given in Figure 2.

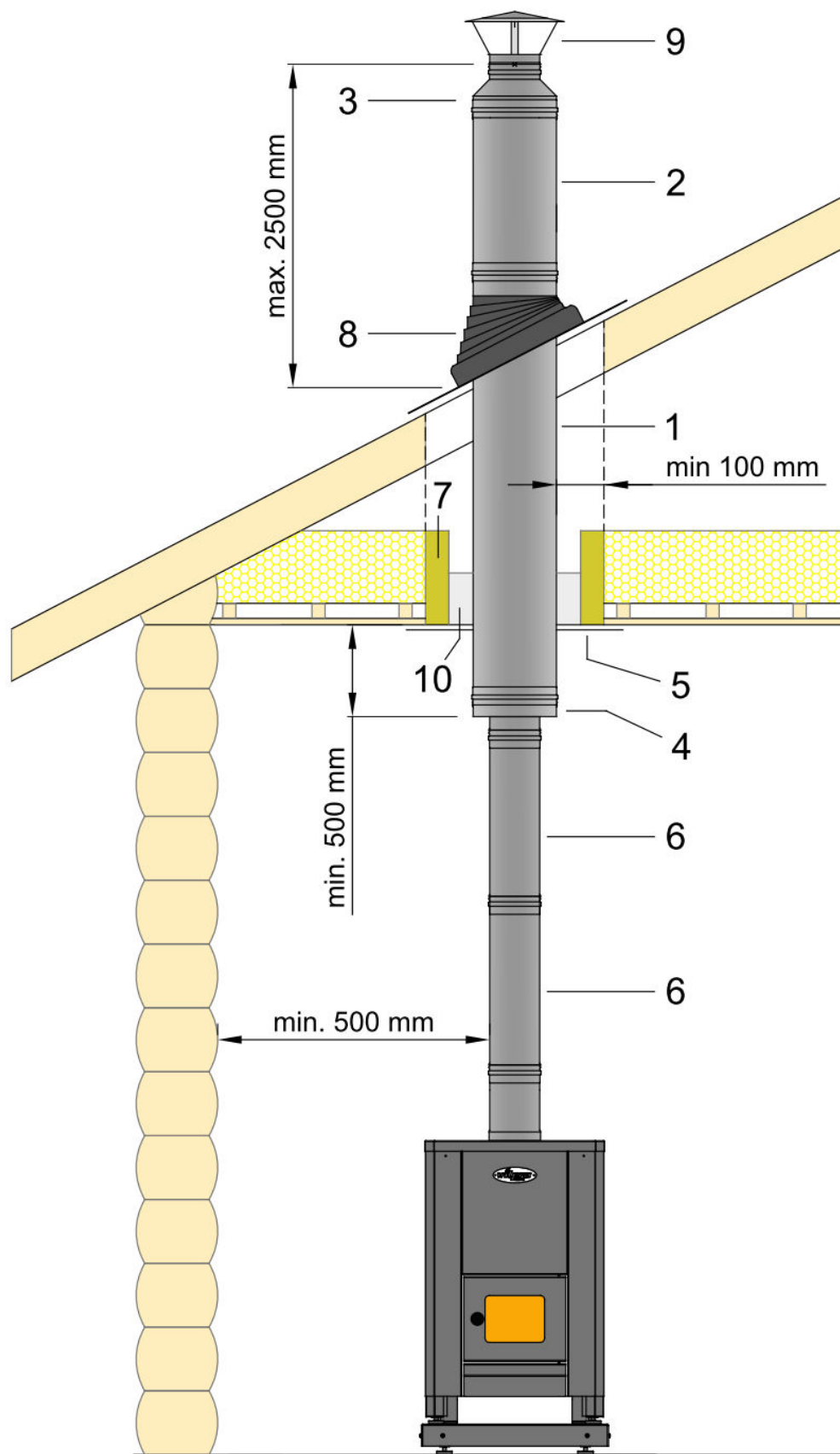


Figure 2. Typical installation of the chimney

Note. Indication numbers of chimney components shown in this Figure are given in Figure 1.

3.1. Distance to combustible material

3.1.1. Double wall Sauna system chimney DW50-M

This double wall chimney is tested non-enclosed and with insulated floor penetration. Chimney is installed leaving not less than 100 mm between the outer surface of a chimney and combustible materials, if national legal acts do not indicate a bigger distance. When installing the chimney next to combustible constructions (e.g. walls), ≥ 100 mm distance to combustible materials must always be maintained. A gap between the combustible construction (e.g. wall) and chimney must be ventilated. In a case the chimney passes through 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 building construction is not larger than 200 mm, a gap from the outer wall of the chimney to combustible materials is fully filled with insulation materials indicated in Picture 3. If the thickness of combustible construction is from 200 mm to 500 mm, a gap of 200 mm height in the lower part of construction between the chimney and combustible materials is fully filled with insulation materials indicated in the Picture 3, the rest part is filled with an insulation material indicated in Picture 3, but air gap of 50 mm must be left around the chimney.

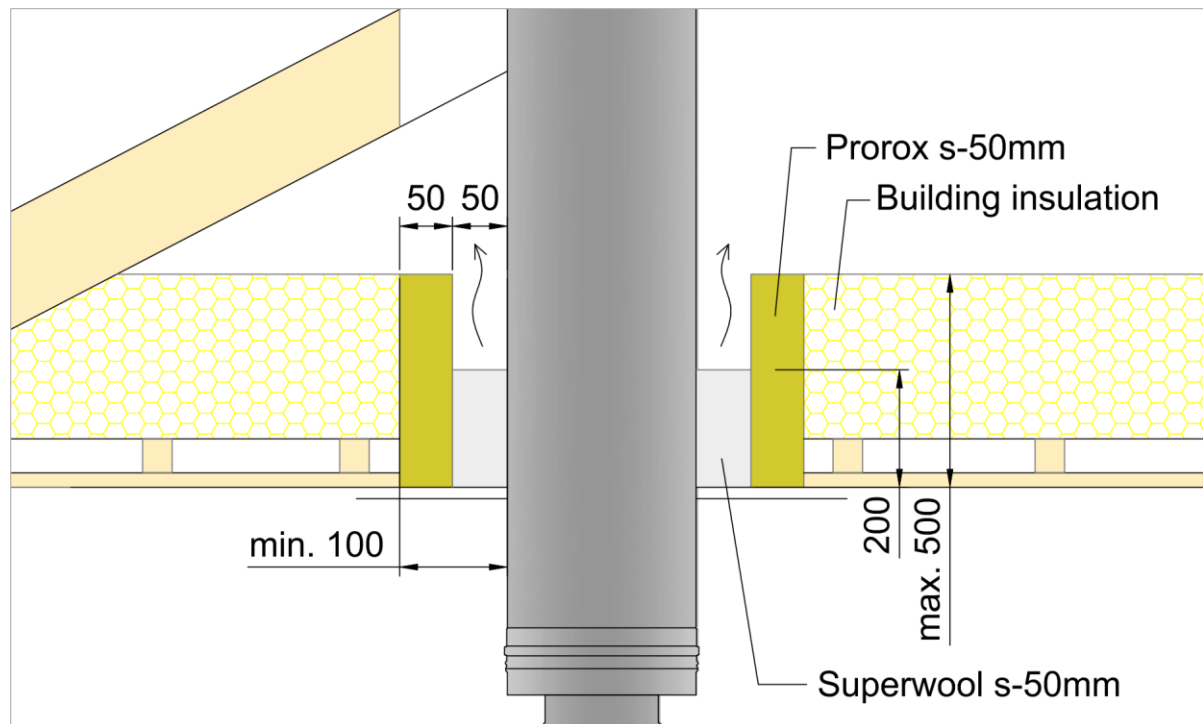


Figure 3. Installation of the chimney passing through the floor

3.1.2. Single wall Sauna connecting flue pipe SW-M

The elements of single wall Sauna connecting flue pipe system SW-M are used to connect a sauna stove 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.

3.2. Joints

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

Double wall chimney and connecting flue pipe elements shall be installed considering the flow direction of combustion products indicated on the product marking stickers.

3.2.1. Double wall Sauna system chimney DW50-M

Double wall chimney elements are connected to each other by means of spigot and socket joints which gives a depth of the insert joint of 50 mm. Double wall chimney joints are secured by locking bands, which cover the joint. Please note that the locking band must be fitted properly on the joint of the chimney sections (see Figure 4). Do not fit the locking band upside-down. Having fitted the locking band properly, tighten it using a hex key (size no. 5).

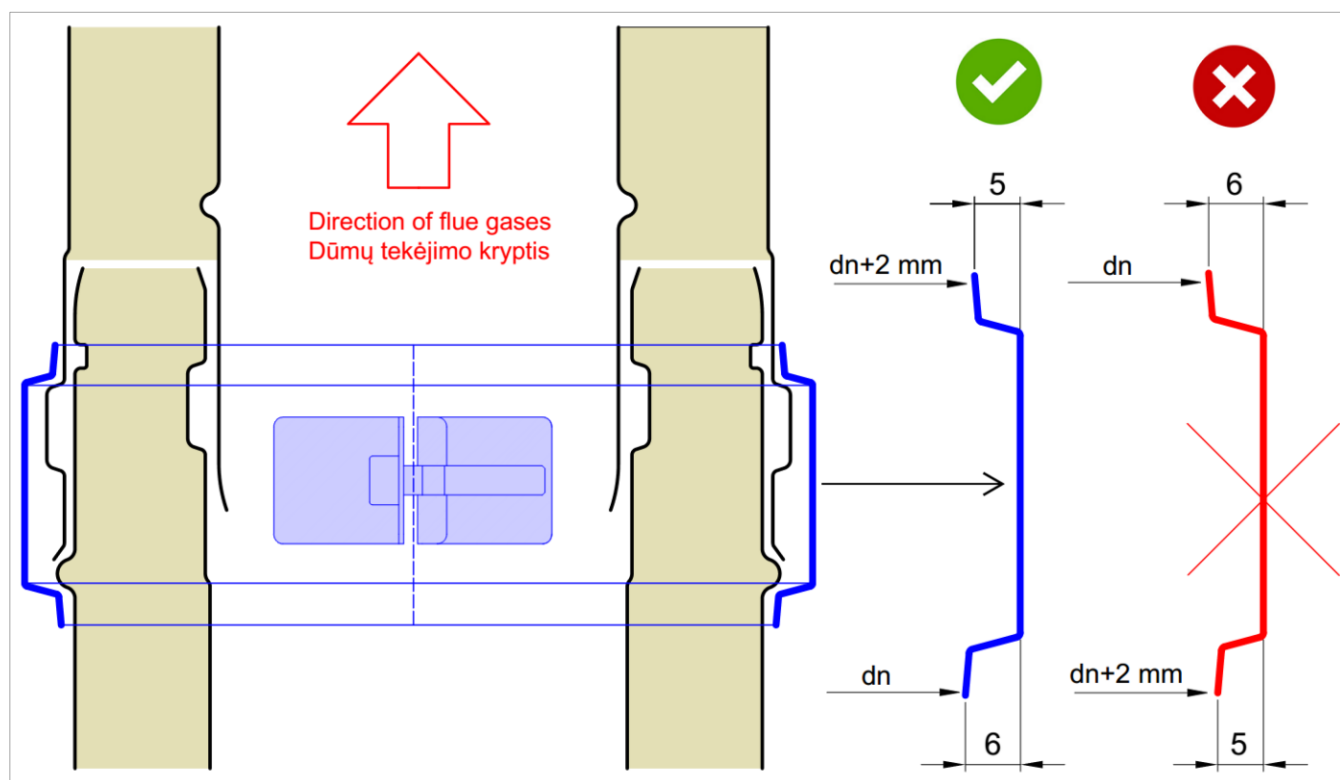


Figure 4. Installation of locking band

3.2.2. Single wall Sauna connecting flue pipe SW-M

Connecting flue pipe elements 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). (see Figure 5).

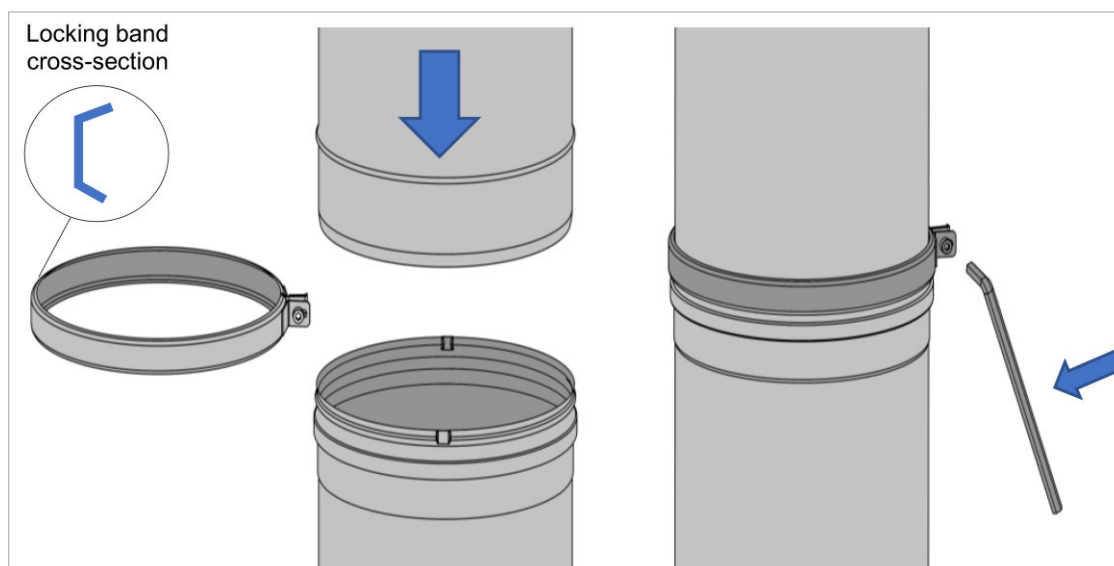


Figure 5. Jointing of single wall connecting flue pipe elements

3.3. Location of chimney outlet

The location of the chimney outlet shall be in accordance with national regulations and nationally accepted rules.

3.4. Accidental human contact

Where the chimney there is a risk of accidental human contact causing burning, the chimney shall be covered with a shield or a net.

4. Usage of a chimney

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.

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

The chimney elements shall be used according to their designation. It is not allowed 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 (garbage, plaster, rubber, etc.).

Chimneys should be swept 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 for sweeping the chimneys.

To evaluate the state of the chimney and supporting elements during the operation it is required to perform inspections at least every six months.

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