

GENERAL RULES
FOR A PROPER

INSTALLATION



1. CHECK THE INSTALLATION AREA

The stove must be installed in such a way as not to compromise the stability and efficiency of the building.

The room intended for the installation of the stove must not be at risk of fire, nor used as a storage place for combustible material.

ROOMS INTENDED USE

The installation of our stoves is not permitted in bathrooms, toilets, bedrooms and studio apartments.

SUITABILITY VERIFICATION OF THE STOVE

The technical specifications of the stove must be analyzed by viewing its technical data sheet, and its compatibility with the energy needs of the room and/or coexistence with other appliances must be verified. Furthermore, national and local regulations must be checked for the possibility of installing the appliance.

LOAD CAPACITY OF THE INSTALLATION ROOM FLOOR

Based on the overall weight of the stove model and size, the suitability of the load-bearing capacity of the support surfaces and/or support points must be verified.

HEAT RADIATION ZONE

The installation of the stove must respect the safety distances from combustible materials which vary according to the model and which are reported in the "CLEARANCES" section of the manual and the technical data sheet.

2. VENTILATION IN COMPLIANCE WITH UNI 10683 (ITALY)

Ventilation openings:

- 1) cannot take air from sanitary voids or less than half a metre from the air intakes of sanitary voids (e.g. crawl spaces);
- 2) must be designed so that maintenance can be carried out;
- 3) must be protected without reducing the net useful section.

In the presence of combustion air ducting, from the external ventilation opening to the appliance, the connecting duct must have a diameter greater than or equal to the combustion air inlet pipe of the appliance.

The duct must have a diameter equal to the hole made in the wall; if a restriction is required, it must be made in correspondence with the appliance.

If it is necessary to use one or more bends and the distance from the appliance to the ventilation opening exceeds one metre in length, the diameter of the pipe must be increased.

DIRECT VENTILATION (EXTERNAL)

The ventilation opening must communicate directly with the room where the stove is installed.

The minimum section is 100 cm² (10cm x 10cm) or 13 cm diameter for closed hearth appliances.

Avoid it from being obstructed and protect it with a grille as long as it does not reduce the minimum section.

See FIG. A and B

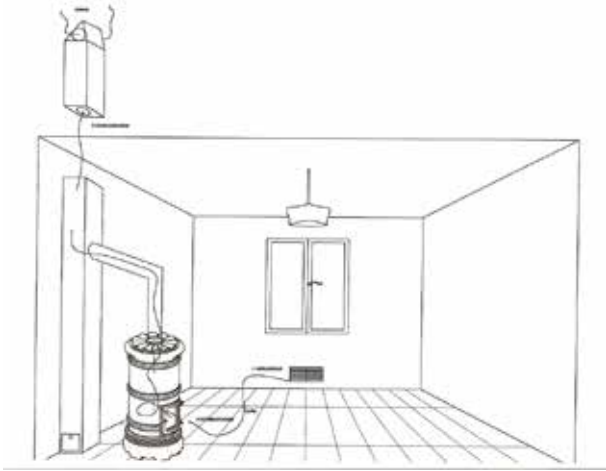


FIG. A

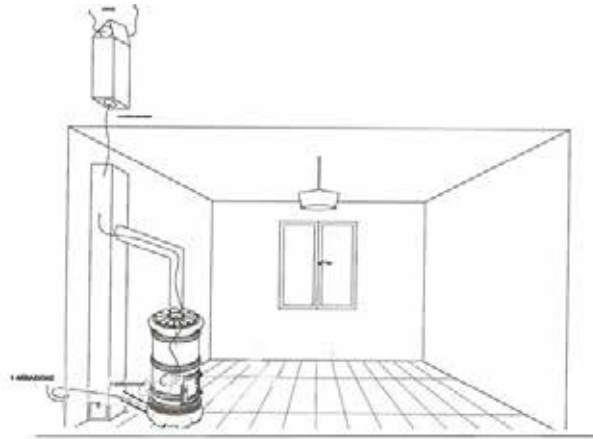


FIG. B

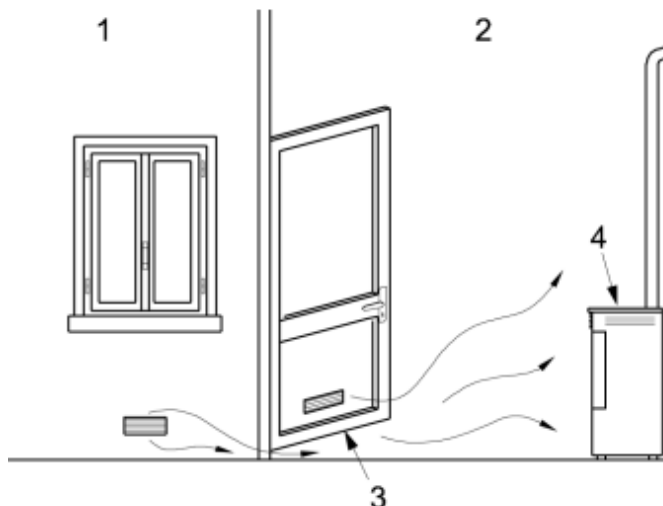
INDIRECT VENTILATION

Indirect ventilation is achieved through permanent openings towards adjacent rooms, communicating with the installation room, in which there are external ventilation openings. In the case of passage between several rooms, the size of the opening must be doubled at each passage or equal pressure must be verified between the rooms. See FIG. C

The adjacent ventilated room (in which the ventilation opening is present) must not be placed under negative pressure with respect to the external environment due to the presence of another appliance or suction device or CMV.

The adjacent ventilated room cannot be a bathroom, a toilet, a bedroom, a storage room for combustible materials, a room at risk of fire (garages, boxes) or a common part of the building (stairs, entrance).

FIG. C



Indirect Ventilation (figure C)

- 1) ventilated room;
- 2) installation room;
- 3) opening in the door (second passage);
- 4) heat generator.

RESIDENTIAL CONTROLLED MECHANICAL VENTILATION SYSTEMS (CMV)

In the presence of a CMV system in the room where the appliance is installed or in rooms communicating with it, the following is permitted:

- » sealed installation;
- » installation of closed hearth appliances with combustion air taken from outside, ensuring that a depression greater than -4 Pa (for example -5 Pa is not acceptable) does not occur with respect to the external environment.

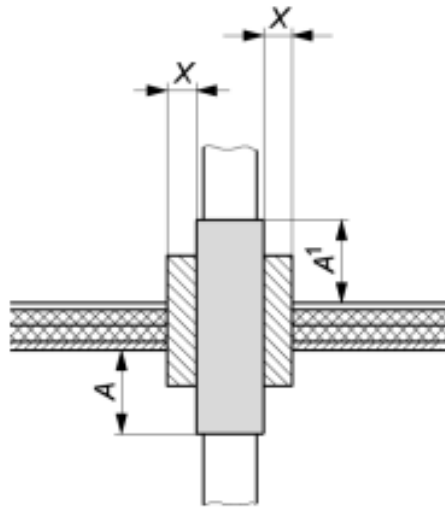
3. CHIMNEY FLUE

The “engine” of our stoves: the flue is a fundamental element for the optimal functioning of the stove.

General Rules:

- » The stove must be connected to a single chimney flue, suitable for ensuring adequate dispersion of combustion products into the atmosphere;
- » Collective flues are not permitted, nor are exhausts from hoods above cooking appliances, ranges or other appliances;
- » The evacuation of combustion products must take place on the roof;
- » Direct discharge into walls or shafts or into closed spaces, even in the open air, is prohibited;
- » The use of flexible extensible metal tubes (aluminium) is not permitted;
- » It is forbidden to pass through the outflow routes, even if oversized, other air addition channels and/or pipes for system use;
- » It is recommended to insert an insulated steel pipe (if in rock wool, minimum 2.5 cm thick, if in ceramic fibre, minimum 1.5 cm thick) even when the technical slot is inserted inside a wall. This will prevent the fumes from cooling, decreasing the draft and causing condensation. Even more so, good insulation will be necessary in the case of a passage in an open attic and/or adverse weather conditions, especially where there is a potential risk of frost;
- » The internal section must be uniform without narrowing or widening, possibly circular with smooth walls and with any curves (max 2) not exceeding 45° ;
- » The cross-section of the flue pipe must be equal to or greater than the diameter of the stove's smoke outlet. We recommend for our stoves an internal flue diameter of 160 to 180 mm and a height of no less than 3 m;
- » We recommend that the chimney flue be equipped with a condensation and soot collection chamber, ending with a sealed door, accessible for cleaning;
- » When crossing combustible or flammable materials (roofs, beading, walls, floors, partitions, coverings, etc.) it is advisable to use double-walled chimney system elements insulated to UNI EN standards and respecting the safety distances in the contact passages using certified protections; any thermal bridge must be avoided. See *FIG. D*

FIG. D



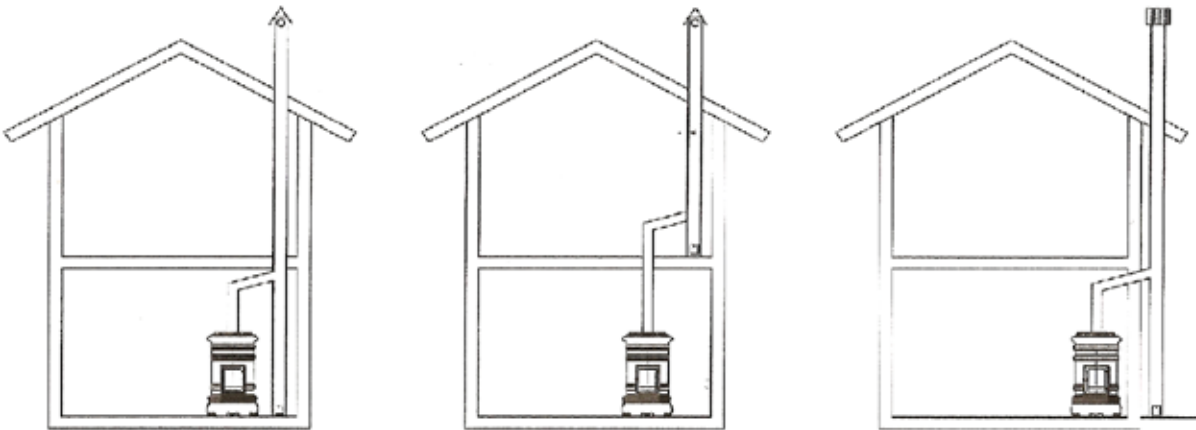
LEGEND

A
Insulated pipe length
mm 500

A1
Insulated pipe length
mm 500

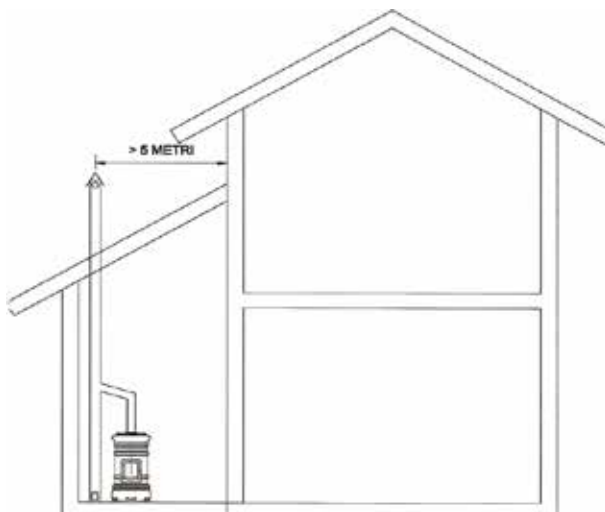
X
Clearance from
flammable material
mm 100

EXAMPLES OF CORRECT CHIMNEY FLUE INSTALLATION



If the chimney emerges onto a lower roof than a taller adjacent building, the distance must be >5 metres (FIG. 2 C).

FIG. 2 C



INTUBATED SYSTEMS

Intubated systems can be single or multiple.

They must consist of:

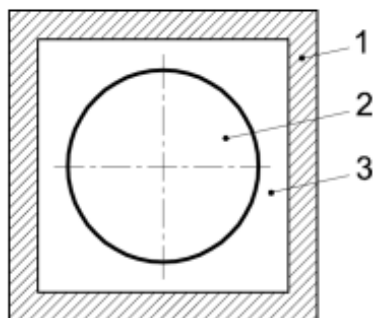
- » one or more ducts for tubing classified according to current regulations;
- » cavity;
- » existing or newly created technical slot or existing chimney.

TECHNICAL SLOT

Requirements:

- » no obstructions or restrictions;
- » sufficient section for insertion of one or more ducts;
- » no structural damage;
- » final protection from the entry of atmospheric agents.

TECHNICAL DRAWING OF A SLOT WITH SINGLE TUBE

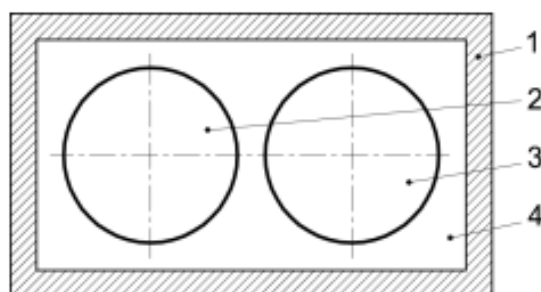


LEGEND

- 1)** Technical slot
- 2)** Intubated duct
- 3)** Cavity

The passage of a combustion air duct connected to the same appliance is permitted in the technical slot with the appliance's intubated smoke evacuation duct.

TECHNICAL SLOT DRAWING FOR MULTI-PURPOSE USE



LEGEND

- 1)** Technical slot
- 2)** Insulated duct for smoke evacuation
- 3)** Duct for combustion air
- 4)** Cavity

The distance between the pipes must not be less than 2 cm.

PROTECTION AGAINST ACCIDENTAL CONTACT

Where there is a risk of accidental human contact, outside the installation room, the temperature of the chimney/flue wall exposed to contact must be checked.

Below is the table with the values that must not be exceeded:

» Bared metal	70° C
» Painted metal	80° C
» Porcelain steel metal	78° C
» Ceramic clay	85° C
» Cement	80° C

IN CASE OF A CHIMNEY FIRE

If, despite all your precautions, your chimney catches fire, stay calm.

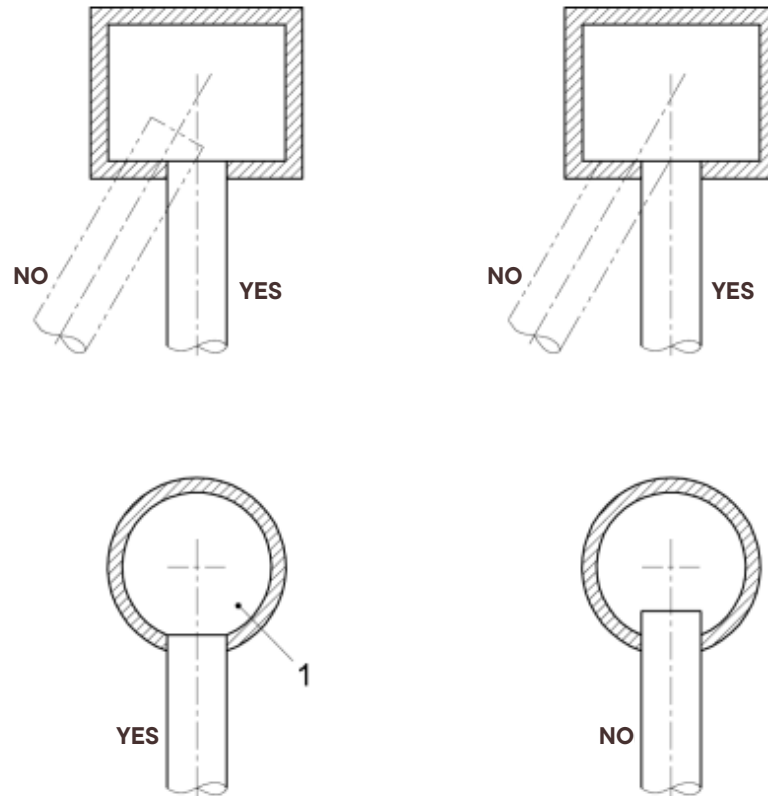
- » The first piece of advice, if you fear you cannot manage the situation or you cannot bring the situation back to normal quickly, is always to call the Firefighters;
- » Do not throw water from the roof into the chimney;
- » Once you have brought the situation back under control, also check externally that the sparks coming out of the chimney have not created problems and air the house thoroughly.

4.

SMOKE CHANNEL

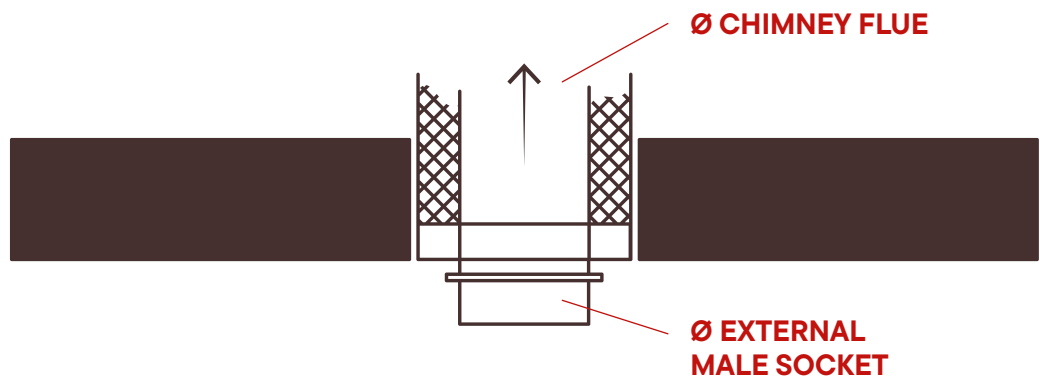
- » The stove must be connected to the flue pipe using a fitting (at 87° or 135°). Furthermore, it must not have more than two 90° bends and must have a horizontal length of no more than 2 metres with a slope of 5%;
- » The flue pipe must not pass through rooms where the installation of combustion appliances is prohibited (bedrooms, bathrooms, toilets, garages, etc.) or where there is a risk of fire;
- » It must be installed in such a way as to ensure space for normal thermal expansion;
- » No counter slope sections are permitted;
- » The use of flexible extensible aluminium pipes is not permitted.

TECHNICAL DRAWING OF A SLOT WITH SINGLE TUBE



EXAMPLES OF CONNECTING THE SMOKE DUCT TO THE CHIMNEY WITH SUITABLE CONNECTION

FIG. 1
Ceiling chimney
flue connection



Adjust the size of the external MALE socket of the flue pipe to the size of the FEMALE socket of the stove smoke duct.

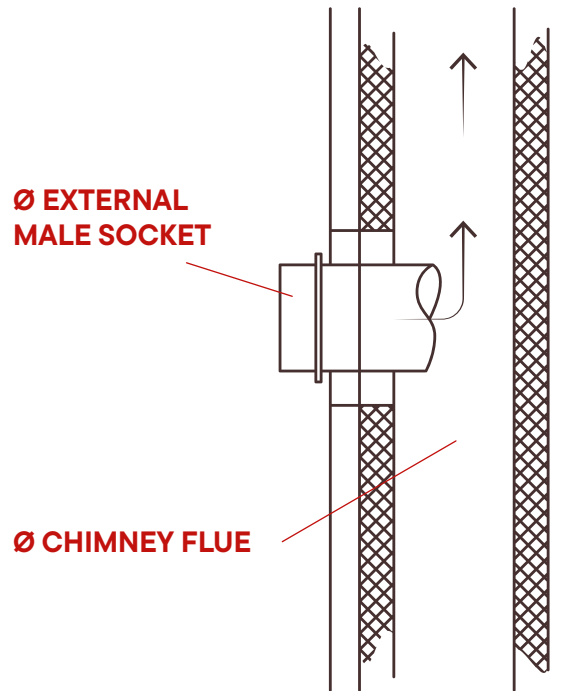
Example:

a flue pipe with a diameter (internal) of 15 cm and a stove smoke duct diameter of 12 cm: it must have an adapter that reduces the diameter (from 15 to 12 cm) and the EXTERNAL MALE SOCKET will be 12 cm.

If the diameter of the flue pipe is the same as the diameter of the smoke duct, the external socket will have the same diameter and must be MALE.

FIG. 2

Horizontal flue connection to the wall with external socket



Adjust the size of the external MALE socket of the flue pipe to the size of the FEMALE socket of the stove smoke duct.

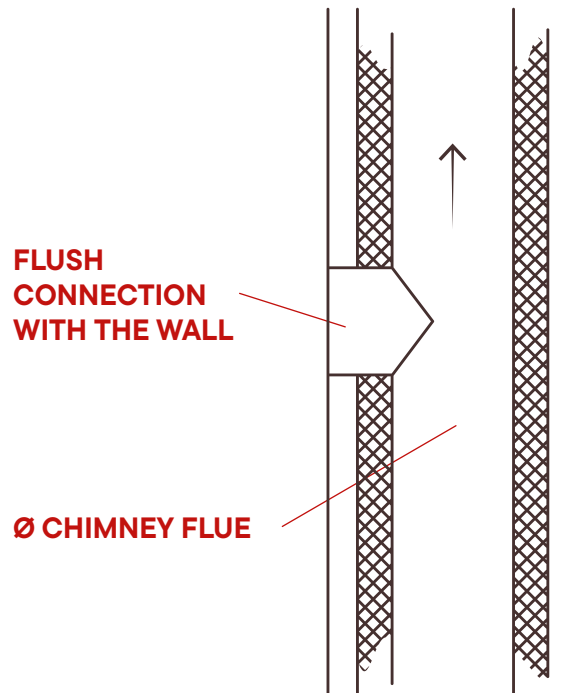
Example:

a flue pipe with a diameter (internal) of 15 cm and a stove smoke duct diameter of 12 cm: it must have an adapter that reduces the diameter (from 15 to 12 cm) and the EXTERNAL MALE SOCKET will be 12 cm.

If the diameter of the flue pipe is the same as the diameter of the smoke duct, the external socket will have the same diameter and must be MALE.

FIG. 3

Horizontal chimney flue connection to the wall with chimney flue size larger than the size of the stove's smoke duct

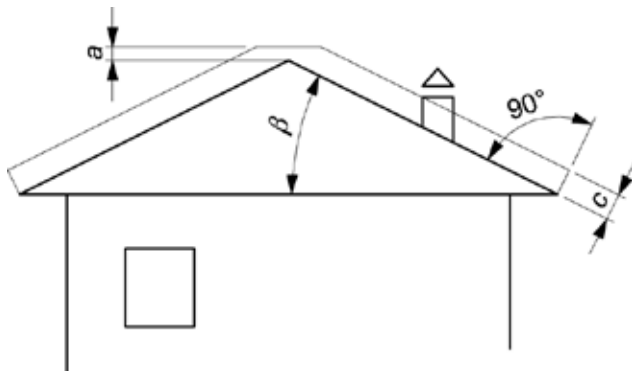


If the diameter of the flue is greater than the diameter of the smoke duct, the connection will be flush with the wall.

5. CHIMNEY POT

The chimney pot is located on the top of the flue and is used to expel smoke. The fundamental characteristics of the chimney pot are:

- » Have a useful exit section no less than double the minimum section of the flue (e.g. flue section 200 cm², sum of exit holes section > 400 cm²);
- » It must prevent, through good construction, the entry of rain and snow into the flue. In very windy areas, a windproof chimney is recommended;
- » In the case of flue pipe lining, the insulated pipe must continue up to the opening holes in the chimney;
- » Prevent multiple flue systems from flowing into the same chimney (FIG. 2 D);
- » If the chimney cannot be positioned on the ridge of the roof, it must at least be positioned in such a way as to guarantee the dispersion of the fumes, outside the reflux area in order to avoid the formation of back pressure in the chimney which would prevent the free discharge of the fumes into the atmosphere (FIG. 2 E);
- » Respect the table for the outlet height beyond the reflux zone.

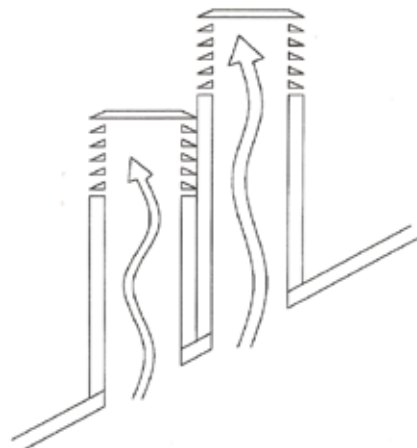


β	Slope	Reflux zone (c)
$\leq 25^\circ$	$\leq 47\%$	1.000 mm
$\geq 26^\circ$ $\leq 35^\circ$	$\geq 48\%$ $\leq 70\%$	1.300 mm
$\geq 36^\circ$ $\leq 45^\circ$	$\geq 71\%$ $\leq 100\%$	1.600 mm
$> 45^\circ$	$> 100\%$	2.000 mm

Note: in the case of multi-pitched roofs, the calculation must be carried out taking into consideration the greatest slope.

FIG. 2 D

YES



NO

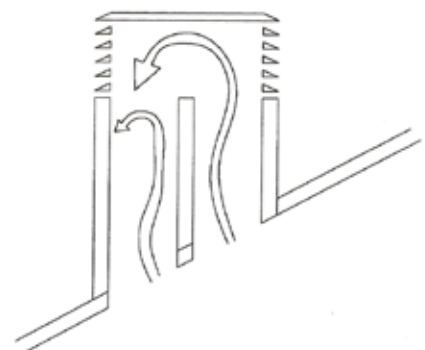


FIG. 2 E

