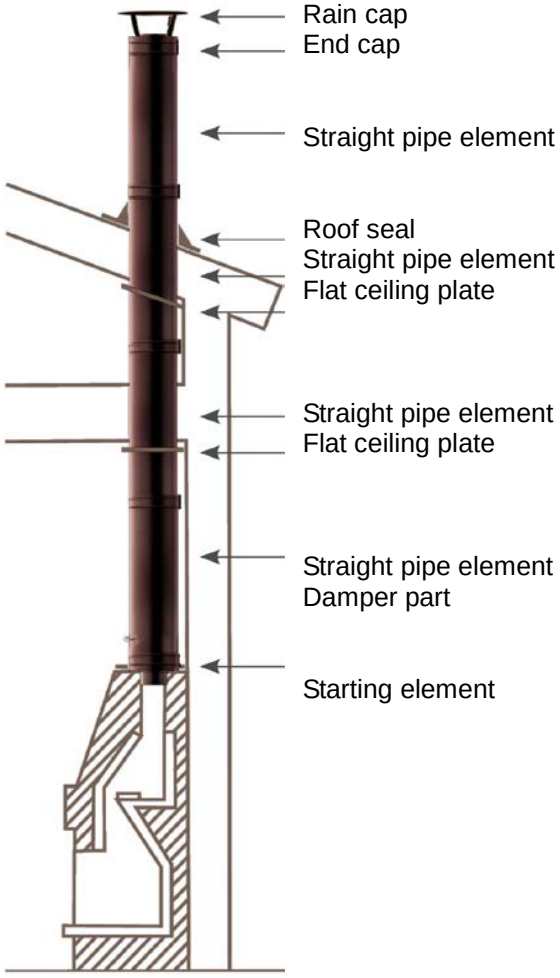
KASTOR

Kastor Oy, Tehtaankatu 5–7
11710 Riihimäki, Finland
www.kastor.fi



KASTOR KC MODULAR PIPE INSTALLATION MANUAL

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Save these instructions for later use.

Once the installation is completed, this manual should be given to the owner of the chimney or the person responsible for operating it.

Read these instructions before installation and use.

1. BEFORE YOU INSTALL

Inspect the delivery as soon as you receive it. Report any transport damages to the deliverer.

1.1. Inspection of the delivery

A normal delivery includes:

- the ordered chimney elements and CE decals (2)
- installation manual.

The equivalence of the delivery to the order document must be checked as soon as possible. Any missing, defective or wrong parts must be reported immediately to the supplier. When the missing or faulty parts are due to the supplier, he will deliver the required new parts as soon as possible to the assembly site. The manufacturer and supplier do not take responsibility for costs arising from indirect damage, delays, work stoppages etc.

1.2. Matters and regulations to be considered prior to installation

Remember to account for the E3 regulations of the Finnish building code or equivalent regulations in Your country of residence regarding the height of the chimney with regard to the highest part of the roof.

Check the following as well:

- The installation permits for the chimney are in order
- The chimney's length and its inner pipe's internal diameter are in accordance with the fireplace's manufacturer's instructions
- Prior to cutting the through holes, make sure there are no floor joists or wall supports in the way
- If the chimney needs to be piped sideways because of the fireplace's location, get the necessary additional parts prior to starting the installation
- Ensure beforehand by measuring that any extension pieces will not be going through floors or the roof.

1.3. Safety distances and protective casing

ATTENTION! Disregarding these instructions may cause fire hazards!

With regard to safety distances, the E3 regulations of the Finnish building code or equivalent regulations in Your country of residence must be adhered to.

Flammable parts of the building must be situated so far from the outer surface of the flue channel that their temperature cannot rise beyond +85^{o} Celsius (+185^{o} Fahrenheit), but with a minimum distance of 50 mm.

In flammable building parts, such as floors and ceilings, the through hole will be equipped with insulated piping and a 100 mm thick layer of non-flammable material such as fire wool or fibreglass/ceramic matting with a specific weight of at least 100 kg/cubic metre. When the Kastor K extra insulation cylinder is used, the additional insulation layer is not necessary.

Chimney safety distances:

If the flue channel borders a cupboard or other storage space, the protective casing against the chimney's mantle must not contain insulation and the casing must have a ventilated airing slot to prevent overheating in the storage space and chimney.

If there needs to be casing for some reason, the casing must be made of non-flammable material and have sufficient internal ventilation. We recommend conferring about the details with your local fire department's fire inspector.

The safety distance for non-insulated connection pipes and extension pipes is 1000 mm. This distance can be reduced by 50 % with a lightweight, single layer protection and by 75 % with a double layer. This protection can consist of either 1 mm thick metal sheeting or 7 mm thick fibre-reinforced cement panels (not gypsum panels with paper surface). Leave a ventilation gap of 30 mm between wall and protective layer and keep them detached from floor and ceiling.

Width and height of the protection are defined according to the 1000 mm rule mentioned above, so that the minimum distances from the bare pipe to flammable material are kept. The lower part of the insulated flue channel must extend at least **400 mm** downwards from the ceiling.

The reducer cone of a semi-insulated chimney can be right below the ceiling.

The safety distance is always measured from flammable material to the heating device or flue pipe. When the connection pipe is used, there must be at least 400 mm of insulated pipe segment below the ceiling.

1.4. Surface treatments

Usually, the mantle of a Kastor Chimney is stainless steel. It may also be painted at the installation site. The chosen paints and coatings must be suited to the estimated maximum temperatures and the stresses of outdoor weather. During correct use, the chimney mantle's temperature never rises beyond +80°C/+176°F.

Temperatures in some rooms and heating devices can rise quite high. For instance, the temperature above a sauna stove may be +250°C/482°F. The surface temperature of a steel fireplace at the connection point to the flue channel may rise up to +400°C/752°F and the connection pipes of heating devices may heat up to +300°C/572°F.
If a surface treatment is desired for these situations, you must use heat-resisting paint (minimum of +500°C/932°F).
In dry indoor surroundings, the Kastor Chimney can be clad with another metal mantle (stainless steel, copper, brass etc.) for visual effect, but this must not interfere with inspection and maintenance. Where necessary, sufficient cooling must be ensured by arranging air circulation between the two mantles.

1.5. Basic installation sets and their parts

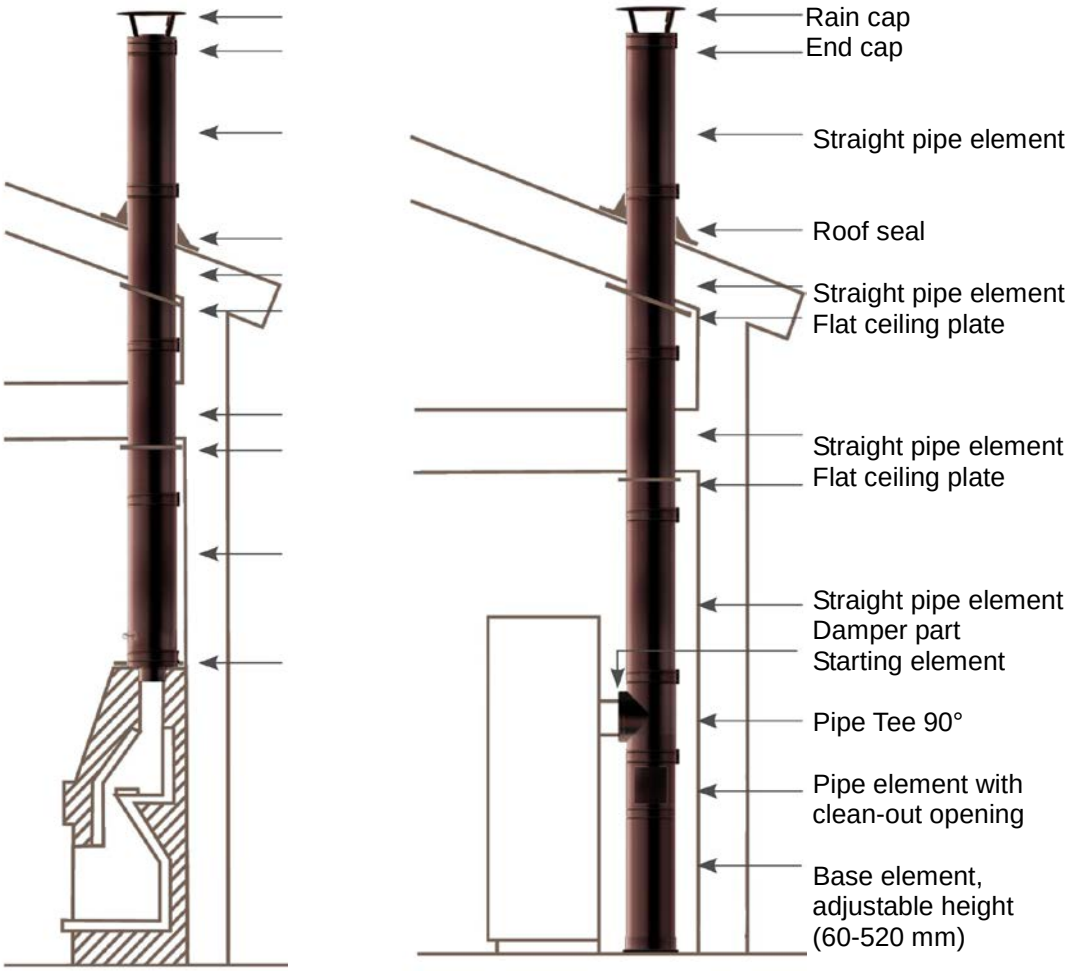


Illustration 1. Basic installation sets and their parts

2. INSTALLATION

A Kastor Chimney consists of separate elements that can be connected together. It can be installed in a finished or semi-finished building. The roof piercing is best done in a finished roof to ensure that the piercing is in the right spot.

Kastor Chimneys are delivered in parts. Push them inside each other and fix them with a tie ring. The tie ring's and chimney mantle's grooves must be aligned before tightening.

The CE mark decal is attached close to the lower part of the chimney or an easily visible part of it. The installer fills in the installation date and his/her signature. The other decal is appended to the house's documents and filled with the same information.

Before you start the installation, read chapter 5: Important factors, rules and regulations.

2.1. Foundation

The foundation must be immovable, horizontal and sufficiently stable. They must also withstand the weight of the Kastor Chimney and stresses caused by other factors. The chimney may also be based on the fireplace, if it has been designed to bear a chimney's weight and the chimney can be sufficiently stable on it. The chimney must always be vertically installed.

Possible installation configurations:
– Behind the fireplace, from the floor with support parts
– From the top of the fireplace with support parts
– On the building's outside wall with supports to the wall
– On the building's outside wall on a cast concrete or other stable base.

If none of these is suitable, contact the fire department and Kastor Oy. In evaluating the foundation's support needs, the chimney's total weight according to the table below, when installing on top of the fireplace its weight and the total single point load on the floor. You will need to find out from the fireplace's manufacturer how much load the fireplace can bear.

The weights of the chimneys:

KC-100	about 10 kg/m
KC-130	about 11 kg/m
KC-150	about 13 kg/m
KC-180	about 14 kg/m
KC-225	about 17 kg/m

On attaching the triangular wall support KC-01 to the wall, you need to make sure the wall can bear the stress (ask its structural engineer) and that the KC-01 is sufficiently sturdily attached to bear the load.

The wall piercing segment or the horizontal connection pipe of the fireplace must not be installed in such a way that the chimney exerts any forces on them. They are not supporting structures. The triangular wall support can be mounted with its sharp end pointing upwards or downwards. The chimney's weight must not rest on a pipe bend element. It must be supported in another manner.

2.2. Supports and snow insulation for the Kastor Chimney

The Kastor Chimney is supported as follows while adhering to safety distances:
Indoor installation: The chimney rests on the fireplace or on the floor. If the room is of average height (less than 4 metres), the ceiling and roof piercings with their accessories (note safety regulations) will provide sufficient lateral support. If the unsupported height exceeds 4 metres, the chimney must be supported with braces or the wall supports KC-386 or KC-389. If the non-insulated connection pipe is extended with a non-insulated extension pipe, the unsupported free height must not exceed two metres.

Above the roof: The chimney must be supported with braces or a support beam, if its free-standing height exceeds 3 metres.
Exterior installation: The chimney rests either on the triangular wall support KC-01 or a sturdy cast concrete foundation or similar. The chimney is braced to the wall with **wall supports** KC-386 or KC-389, which are installed in at least every other chimney element. The section jutting above the roof is braced as described above. The wall supports are fixed to the wall in such a way that both the wall structure and the attachment can withstand the stresses caused by the chimney (check with the building's structural engineer).

If there is a risk of snow and ice accumulating on the roof and stressing the chimney and any installed rubber roof seal or flashing kit, it must be protected with a snow barrier.

See installation examples in chapter 2.10.1 and 2.10.2

2.3. Chimney height dimensioning and extensions

The Modular Chimney's maximum structural height is 30 metres. By structural height we mean the chimney's own height.

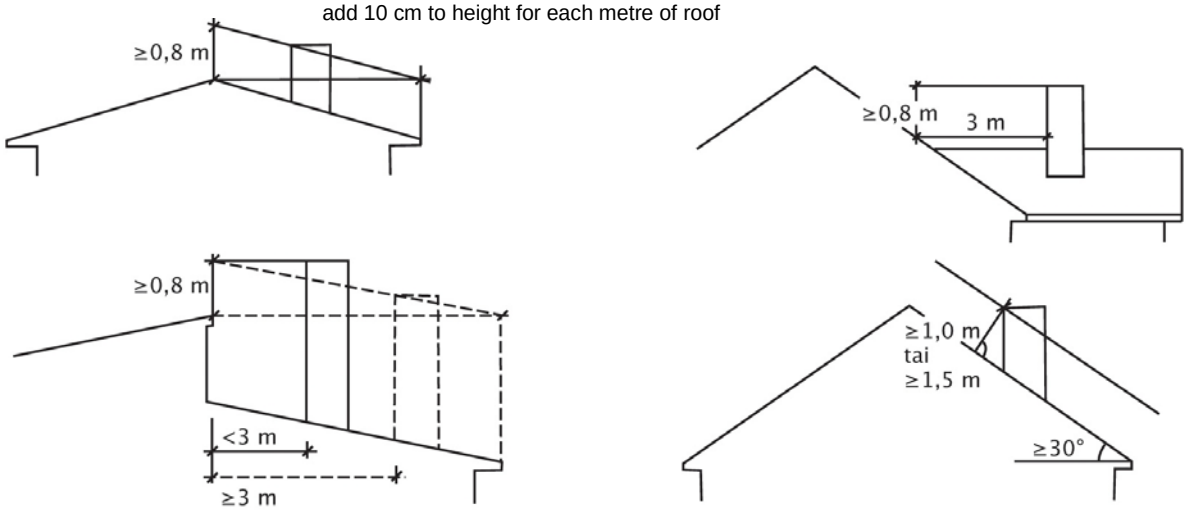
Remember to account for the E3 regulations of the Finnish building code or equivalent regulations in Your country of residence regarding the height of the chimney with regard to the highest part of the roof!

When the chimney rests with a non-insulated connection pipe on top of the fireplace, its maximum total structural height counting the connection pipe is 5 metres.

The fireplace's structure also affects the chimneys maximum height (see chapter 2.1 Foundation). If the chimney includes a pipe bend element KC-17, the maximum height above it is 5 metres. Remember the bracing. See chapter 2.9.9 Pipe bend element KC-17.

The chimney's maximum height is determined by the roof's inclination and shape, the fireplace's draught requirements and environmental factors (e.g. location in a valley, on a slope, next to a large tree etc.). This height must be confirmed with the responsible officials and the fireplace's manufacturer. At times it can happen that the chimney's minimum height will not produce adequate draught conditions. In such a case it is easy to extend the chimney's height by adding an extension segment beneath the KC-32 end cap. Check for the need for additional bracing (See chapter 2.2 Supports).

Attn.! When the chimney does not pierce the roof close to the top, add 10 cm to height for each metre of roof



Drawing from Finnish E3 building code chimney height in relation with the roof's highest point.
1.0 m = non-flammable roofing 1.5 m = felt or wood shingle roofing

2.4. Chimney height adjustment

The basic height comes from a suitable number of modules. This is then fine-tuned as follows:

The non-insulated connection pipe or the support segment (KC-03) is cut down to the required length using a metal saw or an angle grinder. The cut end must be exactly perpendicular to the length of the segment. The non-insulated connection pipe can be extended with a non-insulated extension pipe. A chimney resting on the floor may be raised for instance with a cast concrete block beneath it, if possible, or some other sufficiently stable support. The chimney must not be extended at its upper end with a mere length of piping.
The support segment (KC-03) can be shortened by cutting the excessive length off its upper end.

2.5. Attaching modules to each other and to fireplaces

At the lowest end of the insulated chimney comes a starting element that is suited to the fireplace's connection method.

Modules are connected to each other as follows:
A module's internal pipe's wider upper end (the female end) points always upwards. The module above it is lowered onto the lower one in a straight position while making sure that the pipes and insulation settle tightly and straight against each other. Once the whole chimney has been assembled, the internal pipe modules are tightened against each other by hitting them lightly with a hammer of about 1.5 kg or equivalent on a piece of plank laid across the top. Attention! This must be done before the end cap is installed.

The external mantles must also settle straight and tightly into place. They are connected to each other with tie rings. There are grooves and raised parts on the tie rings that fit into equivalent grooves and raised parts on the pipe mantles. The tie rings are tightened using the screws supplied with them. Do not tighten them too much! The locking part of the tie ring can be turned towards the wall for a cleaner look.

If you need to detach the modules from each other, proceed as follows:
Raise the mantle and insulation from the module by enough to make the connection of the internal pipes visible. Then tap at the internal pipe sideways with a bit of wood until the pipe detaches. Be careful not to use excessive force.

When the fireplace is connected to the chimney using a connection pipe and possibly an extension pipe:
Kastor manufactures connection pipes for its fireplaces that fit these chimneys directly. There are adaptor parts for stone ovens with top and back connections.
For the fireplaces of other manufacturers Kastor produces adaptors to measure. In some cases the fireplaces come equipped with body-fit sleeves for the chimney, for instance tile and soapstone products and some oil and pellet burners. Natural gas boilers require a condensation water removal segment, which is also part of our line.

2.6. Sealing the roof and elements above the roof

The piercing of the roof must be performed with care to prevent leaks. The roof can be sealed using a rubber KC roof seal or a flashing kit with storm collar, which are available for various degrees of incline. The cover sheeting beneath the roof must also be sealed. The sheeting cannot be attached directly to the chimney mantle. It is attached to a protective cylinder placed around the chimney using, for instance, a urethane based sealing glue compound. New wooden buildings always sag somewhat and this must be accounted for in making the seals and in maintaining their integrity.
See chapter 5.6 Safety distances and protective casing.

2.7. Piercings of walls and structures

A Kastor chimney can also be taken through walls and structures using the necessary modules and special parts. Before the chimney's final route is defined, it is particularly important to examine the house's structures and make sure that the piercings are not complicated by structures and safety distance requirements. The segment going through the wall must not be subject to any stresses from the chimney or the house's other structures. The chimney's height and the number/lengths of modules must be chosen and installed in such a way that no connection between modules will fall within a ceiling or the upper edge of the roof. This is particularly important when the rubber KC roof seal is

used. In the horizontal direction the length of a piercing can be at most 1000 mm, and this is subject to the chimney's length and the draught conditions.
See chapter 5.6 Safety distances and protective casing.

2.8. Special cases

Oil and natural gas burners:
- the chimney has no rain cap
Natural gas burners:
- the removal of condensation water must be arranged using the necessaru special components
Anthracite burners:
- metal chimneys are not suited for this application
Chippings burners:
- Large demand for draught, the adjustments must be correct (chimney fires)
Windy conditions:
- sufficient bracing and additional protection against the entering of rain water
Two fireplaces:
- can be attached to the same chimney, if they burn the same fuel and are on the same floor and in the same apartment. Aditionally, both fireplaces must have their own dampers. The chimney must be big enough to accommodate both fireplaces being used simultaneously.
Snow loads:
- install snow barriers to prevent sliding snow from damaging the chimney
The building has mechanical ventilation, the room is under low pressure, air conditioning or similar:
- install roof exhaust van
Horizontal draughts:
- not permitted, with the exception of short connection pipes or piercings. Always ensure sufficient draught.

2.9. Module specific instructions

2.9.1. Starting element KC-37 and KC-37GW

Always the lowest element when the chimney begins from the top of the fireplace. When it is installed behind the device, the place for the starting element is immediately behind the device.
See installation examples, chapter 2.11.1. and 2.11.2.

2.9.2. End cap KC-32

Always installed on top of the highest extension module.

2.9.3. Straight pipe elements KC-13, KC-14 and KC-15

The straight pipe elements KC-13 (1000 mm), KC-14 (500 mm), KC-15 (250 mm) are straight modules, of which a sufficient number is installed between starting element KC-37 and end cap KC-32 to make up a chimney length that is in accordance with regulations.

Remember to dimension and arrange the module so that their connections do not end up within a ceiling or roof piercing. Straight pipe elements are always installed with their 'female end' pointing upwards and attached to each other with a tie ring. Straight pipe elements must not be shortened!

2.9.4. Adapter semi-insulated to full insulated KC-37B

This adapter is attached to the lower end of a fully insulated pipe element to change its diameter, so that it will fit semi-insulated pipe elements.

2.9.5. Semi-insulated pipe elements KC-13–32 and KC-14–32

Like normal pipe elements, but with smaller insulation and diameter.

2.9.6. Semi-insulated starting element KC-37–32

Like normal starting element.

2.9.7. Pipe tee KC-317

When the chimney is installed behind the fireplace or outside the wall the device is attached with a pipe tee and its attachment elements. From the pipe tee the chimney is always extended with straight pipe elements. The pipe tee can also be delivered with a clean-out opening, if the horizontal stretch starting from it is so long that it cannot be swept otherwise. The starting element attaching to the pipe tee is connected tightly to the device using an adapter piece.

2.9.8. Wall piercing stretches

Use straight pipe elements KC-13, KC-14 and KC-15

Long horizontal stretches of chimney are strictly forbidden unless the chimney is equipped with a ventilator. These stretches (max. 1000 mm without ventilator) may only be used for piercing a wall when the chimney is located on the outer wall or in another room.

One end of the wall piercing stretch is attached to a starting element KC-37 or KC-37GW and any necessary adapter to the heating device and the other end attaches to the pipe tee as described for the KC-317.

If the wall piercing stretch goes to a masonry fireplace, the flue pipe must extend to the internal surface of the furnace. About 5 mm of expansion room must be left between masonry and pipe, which is insulated with non-flammable rock wool or ceramic insulation. Use a metal saw or similar to remove the mantle and insulation off the part of the pipe element that extends into the fireplace's masonry. The pipe element's insulation must be set snugly against the fireplace's surface. ATTENTION! See chapter 1.3 Safety distances and protective casing.

2.9.9. Pipe bend element KC-17

The pipe bend element has a 30 degree bend, which allows you to move the chimneys route sideways by installing two pipe bends on top of each other. This is used for instance for bypassing roof girders. The extent of the sideways move can be increased by adding a suitably sized straight pipe element between the pipe bends. The move must be braced well from above and below. Note that the safety distance to flammable is 50 mm.

2.9.10 Damper part KC-432 and KC-436

The damper part is used when a damper is needed in the insulated pipe. It is installed in the chimney at a height that makes it easy to use. In masonry fireplaces the damper is usually right above the fireplace (above starting element KC-37). In factory built masonry fireplaces the manufacturer provides an internal pipe, to which the starting element is connected. The damper part is always installed with the 'female' end pointing upwards and attached to other modules with a tie ring.

ATTENTION! The damper part must not be installed outdoors where there is a chance of moisture.

2.9.11. Damper part J130S141 and J103S142

These damper parts are used with non-insulated connection pipes. The damper part's location is between the connection pipe and the starting element. It is installed so that the wider opening points upwards.

2.9.12. KC Extra insulation cylinder

The insulation cylinder is recommended for use as a fire prevention measure in piercing roofs and walls made of flammable material together with the internal ceiling rings KC-150R, KC-151R, KC-152R and KC-153R. The alternative would be to install a 100 mm wool layer around the pipe element. The cylinder is 500 mm long and contains a 50 mm layer of insulation, which is sufficient with the tin cylinder.

To install it, make a hole that is 105 mm wider than the pipe element's mantle. The pipe is supported at the piercing with an internal ceiling ring (KC-150R – KC-153R depending on roof incline angle) with a width of 76 mm.

In case of a sauna stove, 50 mm of insulation (e.g. fire wool) must be added outside the cylinder.

2.9.13. Pipe element with clean-out opening KC-10

This pipe element is used when the chimney cannot be swept from above or below. For instance, if the chimney's upper end is so much higher than the roof that it cannot be swept from above. The element is installed with its 'female' part pointing upwards at a height that allows for comfortable sweeping and attached with a tie ring.

2.9.14. Support element KC-03

When the chimney starts off from the floor or the ground outside, its lowest element is the support, which is usually located right below the clean-out opening. It is attached to the floor with suitable screws. It can be shortened by sawing and is equipped with an outlet for condensation water. The support's height can be adjusted precisely to suit the fireplace's flue gas opening by sawing off the excess length from above.

2.9.15. Base KC-09

The base is used in conjunction with the triangular wall support KC-01 when the chimney is installed outdoors.

2.9.16. Wall support KC-01

The triangular wall support is used when the chimney is installed against the wall without ground support. The wall support is attached to the wall in such a manner that the wall structure and attachment can carry the load of the whole chimney (inquire with structural engineer). The wall support is always delivered detached from its wall mountings and the base KC-09 and assembled at the installation site. The support's consoles can be installed with the sharp end pointing upwards or downwards.

2.9.17. Wall brace KC-386 and KC-389

The wall brace is used when the chimney is outdoors against the wall or indoors in a room so high that it needs lateral support. The wall brace holds the chimney only sideways and must not be made to carry any of the chimney's weight. It is attached to the wall with attachments suited to the wall material. Wall braces must be installed at least every three metres. Their distance from the wall is adjustable.

2.9.18. Attachment ring for bracing wires KC-42

This part is used when the chimney is taken so far above the roof that its free-standing height is over 3 metres. It must also be used when there are more than three pipe elements (e.g. An element with clean-out opening) above the chimney's fixed support. The ring accommodates three bracing wires. When bracing wires are used, they must go in three directions to achieve the necessary lateral support. The bracing can also be implemented with stiff, sufficiently thick iron rods, angle irons etc. When the chimney is beyond the wall, stiff braces are used, so that bracing from the roof side is sufficient. In attaching bracing wires on a wooden building one must keep in mid that new log buildings always sag somewhat over time, which can lead to a loosening of the braces.

2.9.19. Internal ceiling rings KC-150R, -151R, -152R, -153R

Used in piercings for support and clean holes. Attached to the ceiling with screws or suitable glue. Available for various ceiling inclination degrees and pipe diameters. When ordering, the number KC-15x gives the ceiling inclination, while the pipe diameter (100, 130, 150,180 mm) must be mentioned separately. See the table below:

Internal ceiling ring	Suited for inclination degrees	Available for pipe diameter Ø
KC-150R	0 – 15^{o}	100, 130, 150, 180 mm
KC-151R	16 – 30^{o}	100, 130, 150, 180 mm
KC-152R	31 – 40^{o}	100, 130, 150, 180 mm
KC-153R	41 – 45^{o}	100, 130, 150, 180 mm

2.9.20. Connection pipe S-30

The non-insulated connection pipe is used when the pipe does not need to start out insulated from the top of the device, for instance in sauna stoves and other stoves. The pipes are dimensioned for chimneys and device flue openings of various sizes. The connection pipes can be shortened by sawing and lengthened using extension pipes (see next chapter). When using non-insulated connection pipe, its minimum safety distance of 1000 mm must be accounted for. When the pipe needs to be shortened by sawing, it is essential that the cut is perpendicular to the length of the pipe. The chimney is attached to the pipe's upper end so that the flue pipe at the lower end of starting element KC-37 goes inside the connection pipe. When the damper part J130S141 or J103S142 is used, it must be located between the non-insulated pipe and the starting element.

2.9.21. Extension pipe S-31

The extension pipe is used to lengthen the non-insulated connection pipe when more than 1000 mm of non-insulated piping is needed. The extension pipe comes with a jointing sleeve for joining the pipes together. The length of the non-insulated piping can be adjusted by sawing off the excessive length (see the chapter on height adjustment). The cut must always be perpendicular to the length of the pipe. The combined length of connection pipe S-30 and extension pipe S-31 must not exceed 2000 mm.

2.9.22. Masonry plate S-32

The masonry plate is used when the insulated pipe is connected directly to the top of the fireplace or when a masonry chimney is extended with the modular chimney. The masonry plate gives the necessary support to ensure that the connection between masonry and modular chimney is stable. It has holes in the corners for attachment, which is implemented with the most suitable method, such as cotter bolts. The bolts must not be tightened too much to avoid splitting the masonry. In extending a masonry chimney, one should cast a base on top of it as a support for the masonry plate. The masonry plate and its support must be precisely horizontal!

2.9.23. Adapter

The adapter is used for connecting the chimney to a device with a flue opening of a size and shape that differs from the chimney's pipe. The adapter is made to measure to fit snugly around the outside of the device's flue pipe. For pressure boilers the connection is tightened with ceramic string. The connection must be gas tight. In designing the connection and its attachment, the sweepability of chimney and furnace must be kept in mind.

2.9.24. Rain cap KC-33

The rain cap is installed directly onto the end cap. It must be removable for sweeping. The rain cap is only used in connection with solid fuels.

2.9.25. Wind-proof rain cap KC-93

For use in locations that experience unusually strong winds. The rain cap is only used in connection with solid fuels. This one includes the end cap.

2.9.26. KC Rain collar (chimney root seal)

The rain collar is suited for roofs with an incline of 0-45° covered with felt or tin and many plate or tile roofs, if their profile does not prevent a good attachment of aluminium and glue.

On a metal-sheeted roof we recommend using a ridge flashing sheet (KC Roof ridge cylinder flashing extension sheet 1250 mm x 800 mm, stainless steel). The sheet must reach from the ridge to the top of the back edge of the rain collar, using the necessary amount of extension sheets. The ridge flashing must extend at least 50 mm onto the top of the rain collar's back edge.

If the roof piercing goes through the seam of a machine-seamed roof, the ridge flashing needs to be made by a qualified roofing firm.

The rain collar is glued to the roof (using, for instance, Würth or Sikaflex glue/sealing compound or an equivalent product). The roof must be completely dry before you glue the chimney root's sealing into place. It is not enough that the surface feels dry. It must be internally dry, as well. The glue manufacturer's instructions regarding temperatures must also be accounted for.

Installation steps:

1. A suitable hole for the chimney is opened into the rubber collar as follows:
   - Cut a knife mark into the front of the ripping tab at the correct spot for the chimney's external diameter:

Chimney (internal diameter)	External diameter	**Marking for the ripping spot**	**Without marking, counting from inner ring**
100	220	**225**	**1**
130	250	**250**	**2**
150	270	**275**	**3**
180	300	**300**	**4**
225	335	**350**	**5**

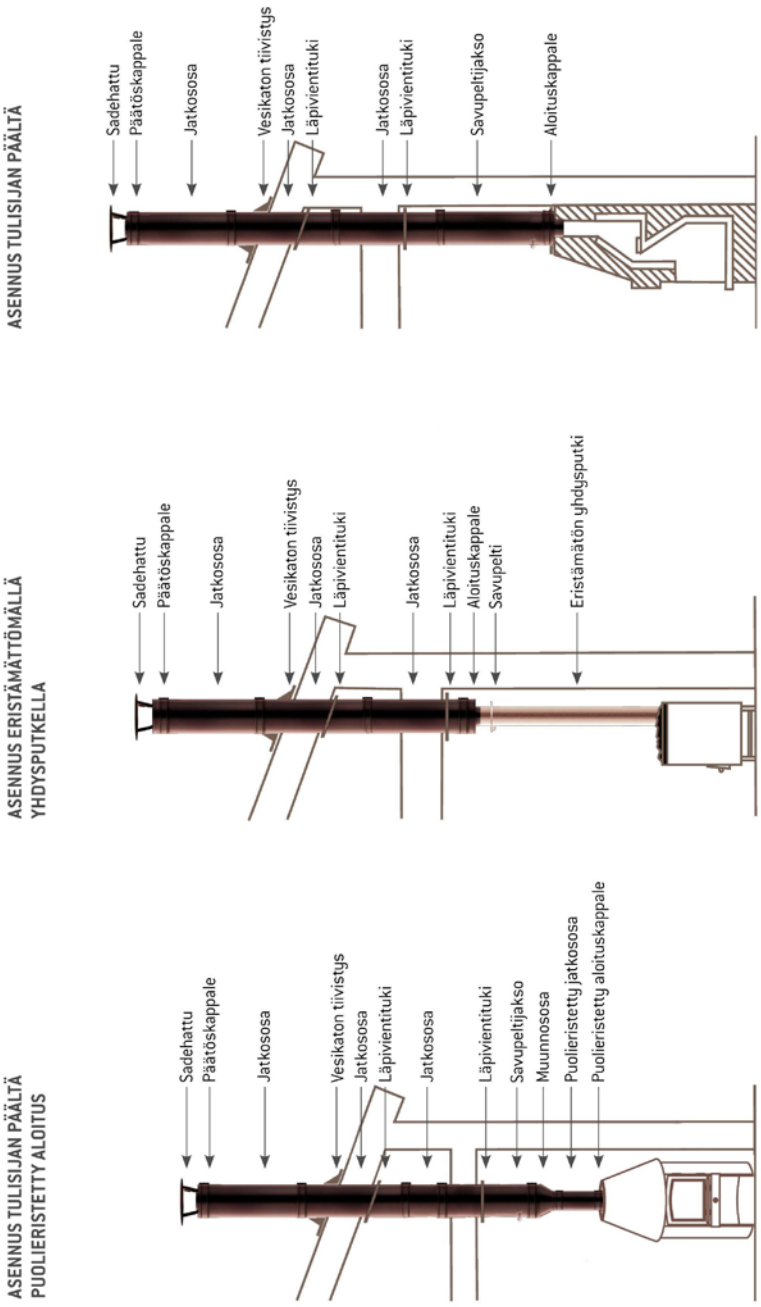
   - Pull by the ripping tab to remove a piece that leaves a smaller hole than needed.
   - Stretch the rain collar carefully over the chimney mantle.
2. Check that the rain collar settles evenly on the roof according to its incline. On a tile roof, the collar is pressed against the roof to make it bend into the correct shape and installed by at least 50 mm underneath the upper tile and by the same amount on top of the lower tile.
3. Make sure it does not overlap the lower tile's border and cut it to size, if necessary.
4. Glue the parts of the rain collar that contact the roof into place with glue/sealing compound.
5. The rubber's upper end is sealed against the chimney with a clip (included in the package).

2.9.27. KC Roof flashing kit (incl. Storm collar)

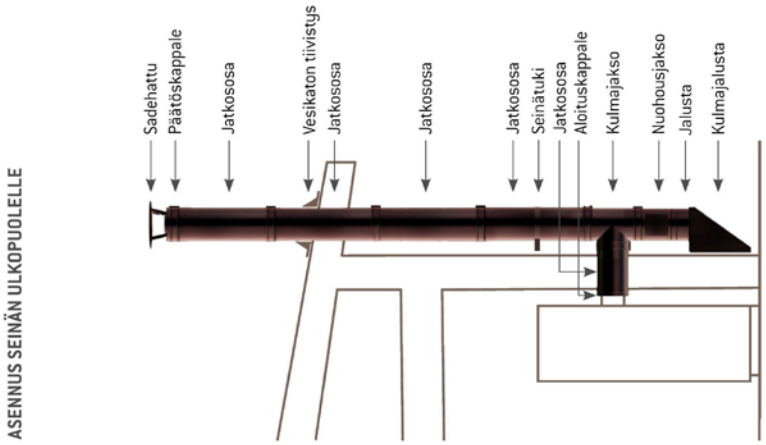
The flashing kit is available for various roof inclinations (5 – 15^{o}, 16 – 25^{o}, 26 – 35^{o}, 36 – 45^{o}). The flashing kit must always be combined with a storm collar.

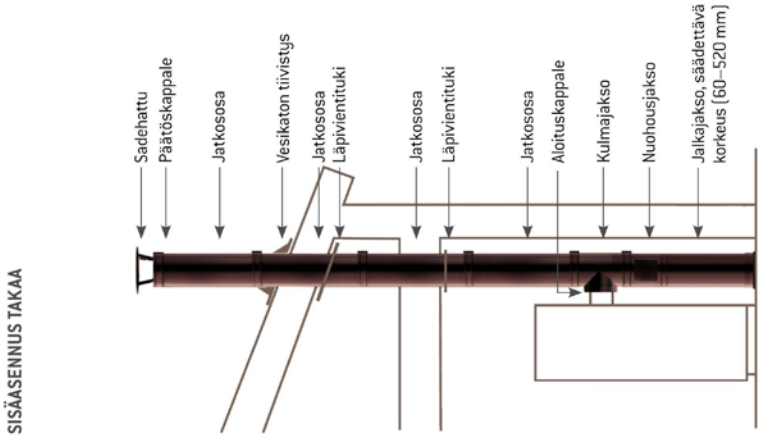
Metal sheet roof:
Attach to roof surface with roofing nails and extend with extension sheets up to the ridge. The storm collar is attached 20 mm above the flashing cylinder, its attachment tightened and cemented onto the chimney surface. The flashing kit is not attached to the chimney in any way to allow the chimney some freedom of movement. Beneath the roof, internal ceiling rings are used as supports for the chimney.

2.10.1. Installation examples 1

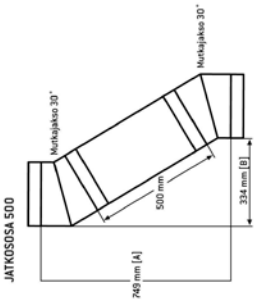


2.10.2. Installation examples 2





MALLI	JATKOSOSAN PITUUS [A] (mm)	SIVUTTAIS-SIIRTYMÄ [B] (mm)	NOUSU (mm)	MUTKA-JAKSON KULMA
SIVUTTAISSIIRTYMÄ				
2 x MUTKAJAKSO	–	116	371	30 °
2 x MUTKAJAKSO + JATKOSOSA 250	250	209	532	30 °
2 x MUTKAJAKSO + JATKOSOSA 500	500	334	749	30 °
2 x MUTKAJAKSO + JATKOSOSA 1000	1000	584	1182	30 °



3. USING THE CHIMNEY

Make sure that the chimney is swept regularly and check it visually at least once a year. The lifespan of the chimney is most affected by the material burned in the furnace and the way it is burned.

4. CHIMNEY MAINTENANCE

Good chimney maintenance includes regular check-ups at sufficiently frequent intervals, i.e. monthly, and, if needed, with the help of the chimney sweeper. If the chimney has been unused for a long period, make sure before you use it that it is in good condition and not blocked (for instance by a bird nest).
A Kastor Chimney should be swept with a stainless and acid-proof steel or nylon brush. For easier sweeping install the KC-10 Pipe element with clean-out opening wherever necessary. Useful locations are, among others, undersides, horizontal connections and the roof, if the chimney is so high that it cannot be swept standing on the roof.

5. IMPORTANT FACTORS, RULES AND REGULATIONS

Kastor Chimneys have been designed for use only as a flue channel for the flue gases emitted by fireplaces that are used according to regulations. Emissions that differ from the regulations (e.g. heat, pollutants) may damage the chimney. To prevent damage to the flue channel, avoid burning plastics or material that includes plastic (possible creation of hydrochloric acid, for instance). Various glues may also contain plastic or other pollutants, which is why glued pieces must not be burned in the fireplace.

Always check that the fireplace and its accessories are in a condition that ensures clean flue gas. The condition of the chimney must be checked regularly, i.e. once a month!

In addition to these instructions and official regulations, the instructions given by the fireplace's manufacturer must also be heeded, as well as the limits set by the output of fireplaces to various types of chimneys. The temperature of flue gases as they exit the fireplace must not exceed 600°C/1112°F for more than short periods. Sauna stoves can at times produce flue gases that are this hot.

It must also be noted that according to building codes), chimneys must not have extensive horizontal draughts without assurance of a good draft for instance with a roof exhaust van. The matters presented in these instructions are valid only for parts manufactured by Kastor Oy. Kastor Oy does not take responsibility for cases in which parts from other manufacturers were attached to our systems.

If anything is unclear, we urge you to inquire about them from your local fire inspector or the manufacturer. According to official regulations chimney fires, even extinguished ones, must always be reported to the fire department.

The chimney must be inspected after every chimney fire due to the high temperatures it causes.

Warning: Neglecting these instructions or official regulations may lead to damage in the chimney and fires or other hazardous situations.

5.1. Warranty

Kastor products are of high quality and reliability. Kastor grants a warranty of 10 years for manufacturing defects on its Chimneys. The warranty does not extend to damage caused by incorrect use or disregard of these instructions. See chapter 3.

5.2. Technical data

The Kastor Chimney has been CE certified according to the requirements for metal chimneys in SS-EN 1856-1:

Certificate CE 0036 CDP 90286 001
KASTOR CHIMNEY -
EN 1856-1 T600 N1 D V3 L50060 G50
EN 1856-1 T600 N1 W V2 L50060 O50

EN 1856-1	product standard
T600	temperature class
N1	pressure class
D/W	condensation class
V3/V2	corrosion class
L50060	material class
G50	chimney fire class, safety distance to flammable structures

T600 Temperature class:
The temperature of flue gases in the chimney may not exceed 700°C/1292°F.

D/W usage classes:

The Kastor KC has been certified for the flue gases of both dry (D, wood and pellet operated) and wet (W, gas and thin oil operated) fireplaces and furnaces.

L50060 Material type and thickness:
Stainless, acid-proof steel, 1 mm.

G Chimney fire class:
The Kastor KC does withstand chimney fires.

The safety distance to flammable structures:
50 mm