

### Sirius Stove System

Complete Ecodesign stove and concentric, air-tight chimney flue system for a bungalow, log cabin or house.

Defra exempt for installation and use in Smoke Control Areas





# An all-in-one Stove package

Schiedel offers a unique all-in-one system: a perfect combination of DEFRA exempt stove in an easy to install package to add a stove and chimney to a newly built house or a bungalow, a self build project, or a luxury home at the drawing stage.

Our innovative and advanced clean burning technology provides an eco-friendly and pleasant warmth. Wood stoves achieve up to 84 % energy-efficiency – delivering more heat with less wood.

#### clearSkies

Both Sirius models have achieved the highest level in clearSkies certification



clearSkies certified appliances meet the minimum performance level for Ecodesign regulations – the minimum legal requirement for an appliance manufactured in the UK from 1st January 2022.

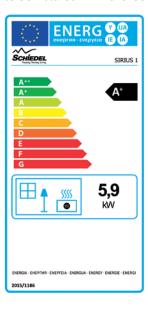
These criteria are the minimum energy efficiency of the appliance and the maximum levels of emissions permitted

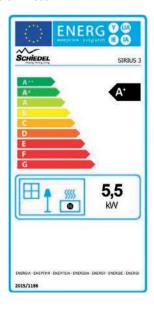
These new Ecodesign Regulations represent a significant tightening of these criteria over the current CE requirements.

#### **DEFRA** exempt

In addition to meeting the requirements of Ecodesign for efficiency and emissions, all clearSkies certified appliances at Level 3 or above will also have been verified by the scheme administrator as meeting the requirements for Defra exemption.

Therefore you can be assured that our Sirius 1 and Sirius 3G models exceed the minimum requirements and are future proofed as well as approved on the Defra website to be installed in Smoke Control Areas





## Wood burning stove system

#### Sirius 1 and 3G



180° degree view.

- Only one lever for regulating primary and secondary air.
- Elegant powder coated combustion-door handle.
- **Omfortable woodbox compartment** with front door.
- The touching point to open the door is marked with powder coated circle, preventing scratches in the varnish.



Sirius stove system advantages

#### STOVE-HIGHLIGHTS

Highly efficient up to 84%! More heat, less wood

Highest European and National Standards - EN 13 240, DIN+, 1.BlmSchV2, DiBt, 15a B-VG, NS 3058/3059

Easy to operate with Self closing door and interlock system for igniting or cleaning purpose

3 Windows for 180° view in the 3G model

Eco-friendly corpus paint resulting in environmentally friendly low smoke and low emission colour

Adjustable legs to adapt to uneven surfaces

#### SYSTEM HIGHLIGHTS

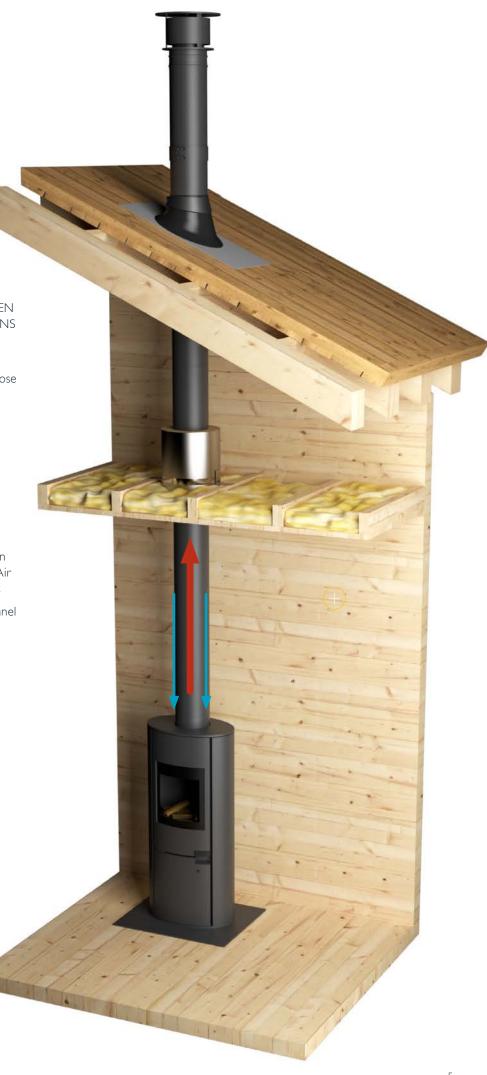
Combustion air independent from installation room, provided through Permeter Smooth Air Chimney from top, allows flexible placement

Due to system solution, no separate air channel adaptor/ bypass necessary.

#### IDEAL FOR TIMBER FRAME BUILDINGS SUCH AS LOG CABINS

Ceiling Box and Protect Box options for complete safety in timber framed buildings.

Exceptional small distances to combustibles



### Specifications / Approvals

	SIRIUS 1	SIRIUS 3G
Width	512mm	512 mm
Height	1218mm	1218 mm
Depth	392mm	392 mm
Output	5,9 kW	5,5 kW
Efficiency	84%	82 %
Energy efficiency	A+	A+
Weight	200 kg	210 kg
Air independent	✓	✓
Triple-air-connection	✓	✓

APPROVALS	
EN 13 240	✓
DIN+, BlmSchV 2, CE	✓
15a B-VG	✓
NS 3058 / 3059	✓
DEFRA EXEMPT	✓
CLEARSKIES LEVEL 5	✓



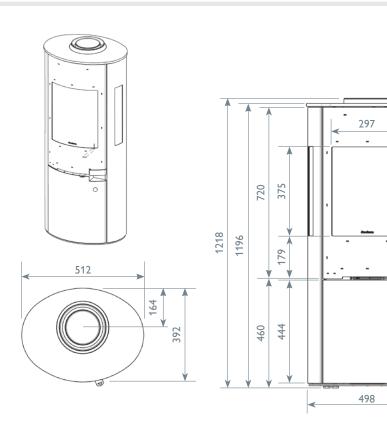
#### DEFRA EXEMPT

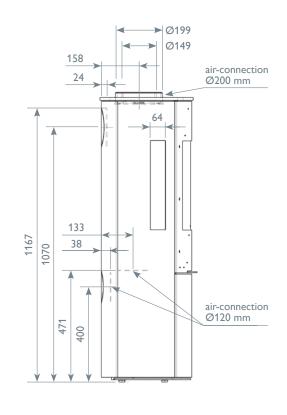
The Sirius is DEFRA exempt so it can be installed and used in Smoke Control Areas in the United Kingdom, when operated in accordance with the instruction and installation manuals and when any conditions are met.



#### **CLEARSKIES LEVEL 5**

Both Sirius models have achieved the highest level in clearSkies certification, which means that they exceed the minimum performance level for Ecodesign Regulations.





# Permeter Smooth Air chimney system

# Steel chimney with air supply offers great flexibility and flexible placement

All Sirius models are approved by the highest European standards for air independent use (Germany). This allows the combined usage with ventilation systems in modern buildings and guarantees a healthy indoor environment.

Schiedel Permeter Smooth Air chimney is constructed with a separate inlet-duct tensuring that the stove is supplied with the optimal amount of combustion air from the top of the pipe. The double insulated pipes avoid condensation.

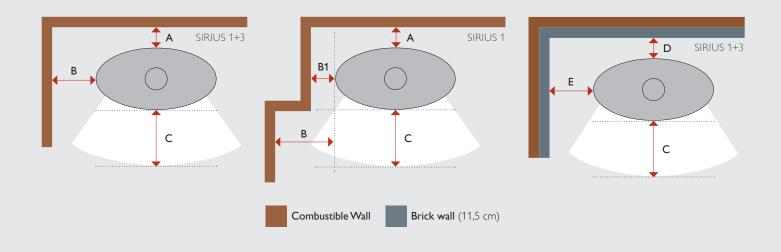
The chimney system can be delivered with 45 degrees bends, L-tubes and T-tubes to achieve best placement flexibility of the stove.

DISTA	DISTANCES TO COMBUSTIBLES		SIRIUS 3G
А	With Permeter Smooth Air system	50mm	70 mm
В	With Permeter Smooth Air system	220mm	600 mm
B1	With Permeter Smooth Air system	150mm	_
С	Distance from glass	1000mm	1100mm
С	Distance from superimposed hearth	225mm	225mm
D	Distance to non combustible wall	50mm	50mm
Е	Distance from non combustible wall	100mm	200mm



For distances to combustibles from the chimney, or chimney through floor or shaft, please refer also to page 9

Exceptional small distances to combustibles in combination with Permeter Smooth Air Chimney.



# System overview

Product description	Modular, concentric flue system for operation with room sealed Wood appliances with continuous operating temperature up to 600 °C.
Installation	Inside a building
Fuel	Wood
Operating temperature	≤ 600 °C
Mode of operation	- negative pressure (N1 ≤ 40 Pa) - dry
Inner pipe material	EN 1.4404 (AISI 316L)
Outer case material	- galvanized steel, powder painted - 1.4301 (304) stainless steel
Outer case finish	- black (RAL 9005)
Insulation type	PMSA 25: 25 mm thick mineral wool tube, with aluminium lamination.
Insulation density	128 kg/m3
Thermal resistance	PMSA 25 = 0,37 m2K/W
Mean roughness	1,0 mm according to EN 13384-1
	Max free standing height is 2m.
Height above last structural support	Where height is >600mm above the last structural support, a locking band is required immediately below the roof support and on any pipe joints above it.
Distance between lateral supports	3,0 m

CE Certificate number EN 1856-1:	CE Designation EN 1856-1:
	T400 N1 D V3 L50050 G75
0036 – CPR – 91236 – 034	With Ceiling Box and Protect Box with in Bungalow
	T400 N1 D V3 L50050 G100
0036 - CPR - 91236 - 034	With Ventilated Firestop Plate in a combustible shaft with combustible floors

PERMETER SMOOTH AIR 25		
Internal diameter:	150 mm	
External diameter:	250 mm	
Inner liner thickness:	0,6 mm	
Outer wall thickness:	0,6 mm	
Weight:	7,7 kg/m	

### Prior to installation

#### Mandatory requirements

The PMSA system must be installed according to valid British/European Standards, national building regulations and Schiedel Installation Instructions of the manufacturer as indicated in the documentation.

Apart from the general instructions there are specific instructions in connection with the type of connected Wood appliance. Always refer to appliance installation instructions and related standards covering specific applications!

#### Chimney diameter

The chimney size should be as recommended by the appliance manufacturer. The operational requirements of the appliance and the configuration of the flue must satisfy the flue sizing requirements of EN13384-1 for single appliances.

#### Appliance-chimney connection

When connecting the appliance directly to a system chimney, the appropriate appliance connector must be used and the joint between the appliance spigot and the appliance connector must be securely caulked and sealed with non asbestos rope or suitable alternative. The connection to the appliance should be carried out only by a competent person.

#### Chimney route

The chimney should remain as straight as possible through its vertical run to assist flow. Before installing the chimney be sure that there are no beams or rafters mounted in the chimney vertical run.

#### Enclosure/Shaft

With the exception of the room containing the appliance, where the chimney passes through any part of the building where there is a risk of accidental human contact, i.e. a bedroom etc., or where there is a risk of contact with combustible materials, the chimney should be enclosed in an appropriate way. Please check requirements in national building and fire regulations. This can be achieved by boxing in the chimney in habitable rooms, or by the use of a protective wire mesh frame in roof spaces etc. In all cases the minimum distance to any combustible material, including loft insulation, must be respected and any enclosure should meet the requirements of national building and fire regulation.

#### Inspection openings

According to national regulations, provisions should be made to enable a chimney to be inspected and cleaned. Respective national building code and requirements of appropriate standards should be observed. We recommend consulting a competent chimney sweep on the arrangement of the inspection opening. To aid cleaning, sufficient distance should be left between changes of direction to permit the safe passage of cleaning brushes within the system.

#### Distance to combustibles

On Wood applications, where there is a risk of soot fire, it is essential that the correct distance to combustible material is maintained. Permeter Smooth Air is available with two different insulation thicknesses where these versions have different required distance to combustibles.

PERMETER SMOOTH AIR 25		
Temperature rating:	T400 Protect Box	T400 Ventilated Firestops
Installed fully ventilated:	75 mm	100mm
Installed through insulated floor/roof H ≤ 200 mm:	75 mm	100mm

### System design guide

#### Loading bearing Information

Α	Max. installation height from base or intermediate support	8 m
В	Max. distance between lateral supports	3 m
С	Max height above last support	2 m
×	Max offset distance between 2 bends	1 m

#### Support components

Prior to installation the number and position of support components should be established according to the load bearing information and max. allowed distances between supports.

The weight of a chimney system requires an independent support. Only minimal weight should be borne by the appliance (e.g. vertical connecting flue section, up to the floor passage). The chimney can be supported from floor level by using a telescopic rear support, or from first floor level by using a ceiling box fixed between two ceiling joists. In longer vertical runs wall bands should be used to support the chimney, fixed to the wall/roof structure.

They can be used in combination with the wall band extension components to provide for adjustment to various distances from the wall. Wall bands are non-load bearing and provide lateral support only.

#### **Terminals**

Terminals are supplied complete with a locking band. Once the terminal has been pushed into place, the adjustment bolts on the locking band clips should be tightened to ensure that the terminal is properly secured to the previous pipe.

#### Free standing height above the roof

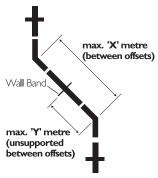
Max free standing height is 2m. Where height is >600mm above the last structural support, a locking band is required immediately below the roof support and on any pipe joints above it. Where the free-standing height should exceed 2,0 m above the last support or above the roof, a guy wire bracket must be used in conjunction with guy wires or rigid stays.

#### Lightning protection

Stainless steel flue gas system can be damaged by a lightning strike. If a building has a lightning conductor or earthing circuit make sure that flue gas system is incorporated to it.

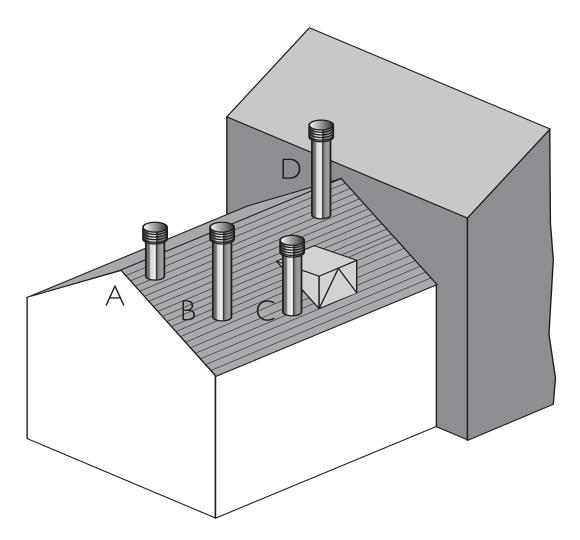
#### Maximum offset info.

Int Ø	150
$\times$ (m)	1
Y (m)	1





### Outlet siting



	Point where flue passes through weather surface (Notes 1, 2)	Clearance to flue outlet
Α	At or within 600mm of the ridge	At or within 600mm above the ridge
В	Elsewhere on the roof (whether pitched or flat)	At least 2300mm horizontally from the nearest point on the weather surface and: a) at least 1000mm above the highest point of intersection of the chimney and the weather surface; or b) at least as high as the ridge
С	Below (on a pitched roof) or within 2300mm horizontally to an openable roof-light, dormer window or other opening (Note 3)	At least 1000mm above the top of the opening
D	Within 2300mm of an adjoining or adjacent building, whether or not beyond the boundary (Note 3)	At least 600mm above any part of the adjacent building within 2300mm

#### Delivery to site and storage

Components should be carefully transported and off loaded. Ensure all chimney components are available and check them to ensure there has been no damage. Components should be stored and protected on site from accidental damage. Do not use damaged components!

#### Handling

It is advised that suitable personal protective equipment should be used when handling the products. Use only clean gloves! Stainless steel components may only be processed with stainless steel tools!





### Installation instructions

#### Appliance connection



1. Make sure the concentric outlet on the stove is installed correctly, according to the installation manual for the stove. Apply high temperature liquid sealant on the inner and outer ring of the stove outlet to provide a gas tight connection.



2. Place the concentric adapter and push the protruding liner onto the stove connector. If necessary, the adapter can be cut at the bottom to get the desired distance between the pipe and the stove top plate.



3. The outer case of the adapter should not be in direct contact with the top plate of the stove. There should be at least 5 mm clearance ensured.

The weight of a chimney system is considerable and requires independent support. Minimal weight should be borne by the appliance or concentric stove connector. Please refer to section » passage through the floor for further reference.

#### Installation – which way up?

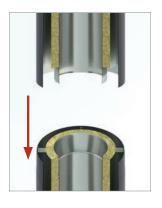
All flue gas carrying components must be installed with the direction arrow on the product label pointing to termination with the external male spigot of the case uppermost.

#### Jointing system

All joints in the PMSA chimney range are made by means of a simple push fit jointing method. This is achieved by the engineered spigot and socket system having a pronounced lead-in-edge to ease assembly.

#### Thermal expansion

All PMSA elements are designed to allow for thermal expansion of the liner within each joint, so there is no requirement for any additional expansion joints.







Install first chimney inspection pipe with test point depending on the height of the floor a proper pipe length should be used to span the distance between the stove adapter and a ceiling box installed to the bottom level of the floor level above.

#### Inspection

To conform to Building Regulations, an inspection length must be used directly above the appliance adaptor to allow for cleaning access. To aid cleaning, sufficient distance should be left between changes of direction to permit the safe passage of cleaning brushes within the system. This is particularly important on Wood applications. It is recommended that chimneys serving Wood appliances be swept as frequently as necessary, but at least twice a year.

### Installation instructions

#### Passage through a combustible floor

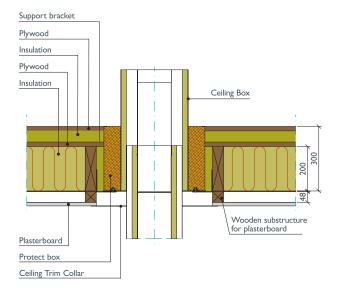
The chimney from first floor level up can be supported by using a ceiling box fixed between the ceiling joists.

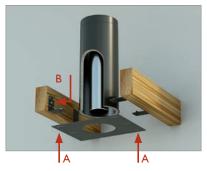
The ceiling box includes retractable pipe which can span the distance of max. 800 mm. When installing the first pipe section be sure the distance between the top end of the pipe and ceiling box is less than 800 mm.

Before continuing to assemble chimney sections, ensure sections are pushed together firmly.

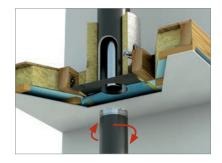
The ceiling box can be installed between ceiling joists with a clearance between 470-560 mm, which can be adjusted with brackets attached on both sides of the ceiling box base plate.

Make sure the ceiling box is installed centred between joists and that min. required distance to combustibles is ensured.



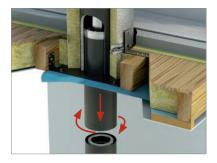


- **5.** Position the ceiling box to the middle between the ceiling beams, flat with the lower side of the beams.
- A. Adjust the side brackets to the beams and tighten the M10 bolts firmly.
- **B.** Use  $4 \varnothing 6$  mm bolts on each bracket to fix the ceiling box to the beams.



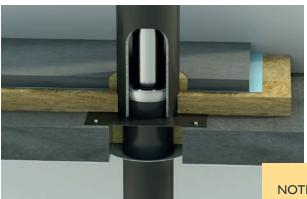
**6.** Insert lowering pipe into the ceiling box and lock it in place with a fast turn of the pipe. A twist-lock mechanism ensures the pipe remains in place.

Protect Box is lowered into place around the ceiling box and fastened onto the joists.



7. After installation of the stove, the stove adapter and chimney pipe (see pictures 1-3), release/unlock the lowering pipe by fast turn. Lower the pipe and push it down to fit both pipes together firmly.

#### Passage through a concrete floor



8. Ceiling box can also be used as an anchor plate to support the chimney from concrete floor level up. For installation of a chimney a round hole should be prepared through the floor with the diameter D ext + min. 60 mm.

Ceiling box should be positioned to the centre above the hole and anchored to the concrete floor through the drill holes prepared in all sides of ceiling box base plate.

**NOTE:** Although supporting structure is non-combustible the attention needs to be drawn to insulation layer under the finished floor which needs to be made of mineral fibre boards surrounding the chimney at the required distance to combustibles.

### Support components

#### Passage through ceiling structure using Protect Box

Where chimney penetrates the outside insulation layer of the house (e.g. ceiling) these are normally much thicker than with floor structures between habitable floors, so special attention must be drawn to distance to combustibles – see table on page 6.

Schiedel recommends using Protect box, a special insulation pipe which prevents combustible structure or insulating materials (e.g. paper flocks) to get in contact with chimney's outer skin. It can span insulation thickness's of up to 600 mm.



#### Offset (optional)

In most cases, pipes are installed vertically from bottom to top, but conflict with roof rails or alike can occur, so an offset should be used to avoid obstacle. Check national regulation on required inspection openings when installing offsets to assist cleaning.

A locking band should be mounted on each joint to strengthen installed length. Wall bands should be installed in locations as shown in the picture to support stability of the chimney.



#### Wall bands

Wall bands are non load bearing and provide lateral support only. They are used in intermediate chimney sections where non supported chimney length exceed max. allowed lengths. Refer to the load bearing tables on page 10 for full details.



#### Passage through the roof

Roof structure represent the upper most position for fixing the chimney before transition to the free standing part. We recommend using a roof support bracket which is supplied as a kit, complete with two side plates for fixing to the roof trusses and a band to give lateral support to the chimney as it passes through the roof. Special attention should be drawn to distance to combustible between the outer case of the chimney and the wooden beams.



#### Section above the roof

A chimney penetration should be protected accordingly. We recommend to use our Uniflash which is available in respective roof angle ranges.

For external applications (above the roof) a bead of silicone may be applied.

Bead of silicone sealant to be applied on external pipes.



### Support components



#### Structural locking band

A structural locking band (supplied separately) should be used in sections above the roof where structural support is required. Max free standing height is 2m. Where height is >600mm above the last structural support, a locking band is required immediately below the roof support and on any pipe joints above it.



#### Guy wire bracket

Where the free-standing height should exceed 2,0 m above the last support or above the roof, a guy wire bracket must be used in conjunction with guy wires or rigid stays. Please contact Schiedel technical service for advice on details of installation.

#### **Terminal**

The terminal used is designed to ensure sufficient air supply to the Sirius stove, which has been approved as a room sealed appliance.



### After installation

#### CE chimney plate

After installation a chimney plate must be applied. This is the responsibility of the installer.

#### Maintenance and cleaning

Chimneys should be regularly inspected and cleaned according to the national chimney sweep regulation. Only stainless steel or plastic brushes are allowed to be used for cleaning to avoid corrosion on the flue liner.

#### Carbon monoxide detector

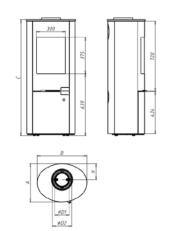
It is essential that a Carbon monoxide detector is installed in room or dwelling where a Wood appliance is installed. This should comply with EN 50291.

Please follow manufacturer's instructions with regards to siting and fixing on the ceiling at least 300 mm from any wall or if it is located on a wall, as high up as possible (above any doors and windows), but not within 150 mm of the ceiling between 1 m and 3 m horizontally from the appliance

N.B Provision of a carbon monoxide detector should not be regarded as a substitute for correct installation and regular servicing.

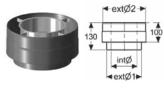
### Product overview





Sirius stove		
Model	Sirius 1	Sirius 3G
SAP Code	157041	158239
Int Ø (mm)	150	150
А	392	392
В	512	512
С	1196	1196
D1	149	149
D2	199	199
×	164	164
Weight	200kg	210kg

Glass hearth	
SAP Code	POA
Int Ø (mm)	
Ext Ø1 (mm)	
Ext Ø2 (mm)	

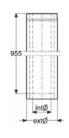


Concentric stove connector (Sirius)	
SAP Code	157842
Int Ø (mm)	150
Ext Ø1 (mm)	200
Ext Ø2 (mm)	250



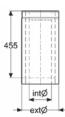
Inspection pipe	2
SAP Code	172735
Int Ø (mm)	150
Ext Ø1 (mm)	250
L (mm)	455





PMSA 25 Pipe element 1000 mm	
SAP Code	142696
Int Ø (mm)	150
Ext Ø1 (mm)	250
Ext Ø2 (mm)	955





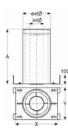
PMSA 25 Pipe element	
500 mm	
SAP Code	142700
Int Ø (mm)	150
Ext Ø1 (mm)	250
L (mm)	455



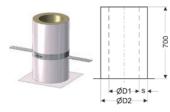


PMSA 25 Pipe element 250 mm	
SAP Code	142704
Int Ø (mm)	150
Ext Ø1 (mm)	250
L (mm)	205





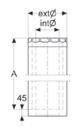
Ceiling box	
SAP Code	157154
XxY (mm)	460×350
Int Ø (mm)	150
Ext Ø1 (mm)	300
A (mm)	550



Protect box	
SAP Code	121343
Int Ø (mm)	150
Ø D1 (mm)	305
Ø D2 (mm)	460
s (mm)	75

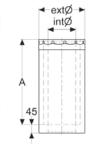
### Product overview





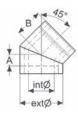
Lowering pipe for ceiling box 1000 mm	
SAP Code	157150
Int Ø (mm)	150
Ext Ø1 (mm)	250
A (mm)	950





Lowering pipe for ceiling box 500 mm	
SAP Code	157166
Int Ø (mm)	150
Ext Ø1 (mm)	250
A (mm)	455





PMSA 25 elbow 45°	
SAP Code	142732
Int Ø (mm)	150
Ext Ø1 (mm)	250
A (mm)	67
B (mm)	157





Structural locking band	
SAP Code	110286
Int Ø (mm)	250
Ext Ø1 (mm)	250



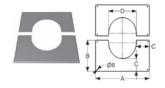


Roof plate 0°-	5° PMSA 25
SAP Code	111891
Nom. diameter	150
Ext Ø mm	250
D mm	259
A mm	500
B mm	275
Cmm	120.5





Roof plate 5°-	20° PMSA 25
SAP Code	111892
Nom. diameter	150
Ext Ø mm	250
D mm	259
A mm	500
B mm	275
C. mm	120.5

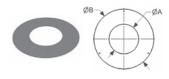


Roof plate 20°-	- 35° PMSA 25
SAP Code	111994
Nom. diameter	150
Ext Ø mm	250
D mm	259
A mm	500
B mm	290
Cmm	120.5

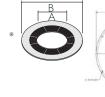


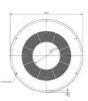


Roof plate 35°-	45° PMSA 25
SAP Code	112287
Nom. diameter	150
Ext Ø mm	250
D mm	259
A mm	500
B mm	300
C mm	120.5



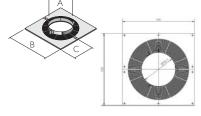
Ceiling trim collar PMSA 25	
24SAP Code	111344
Nom. diameter	150
Ø A mm	258
Ø B mm	457



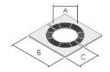


Round ventilated firestop	
SAP Code	173118
Nom. diameter	150
Ø A mm	252
Ø B mm	500

### Product overview



Ventilated support plate	
SAP Code	173120
Nom. diameter	150
Ø A mm	241
B mm	400
C mm	265



Square ventilated firestop	
SAP Code	173128
Nom. diameter	150
Ø A mm	251.6
Ø B mm	661



Wall band (adjustable) PMSA 25	
24SAP Code	111520
Nom. diameter	150
Ext Ø mm	200
A mm	247
B mm	70



Roof bracket PMSA 25	
SAP Code	100965
Nom. diameter	150
Ext Ø mm	250





Uniflash 150-300	
SAP Code	112197
Α	685





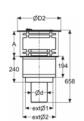
Guy wire bracket PMSA 25	
SAP Code	110668
Nom. diameter	150
Ext Ø mm	250





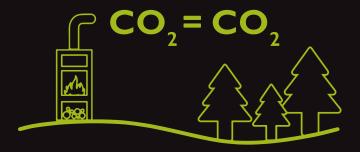
Storm Collar PMSA 25	
SAP Code	110460
Nom. diameter	150
Ø A mm	250
Ø B mm	390





Anti splash terminal PMSA 25	
SAP Code	116577
Int Ø (mm)	150
Ext Ø1 (mm)	250
Ext Ø2 (mm)	300
A (mm)	230
ØD2 (mm)	400

### Heating with wood



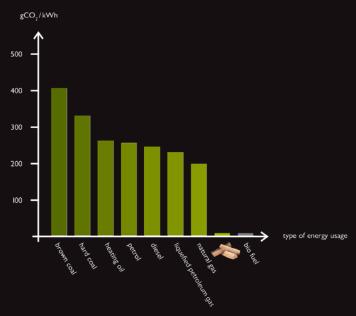
#### Renewable resource

Wood is a renewable resource that burns only as much carbon dioxide (CO2) as it releases from natural decomposition in the forest or as much as the tree captured from the atmosphere during its growth.

#### High energy value

Firewood has a high energy value. For example, take oak: whilst it has a residual wood moisture content of approx. 15–20%, its calorific value adds up to 4.2 kVVh per kilogram.





#### Low emission factor

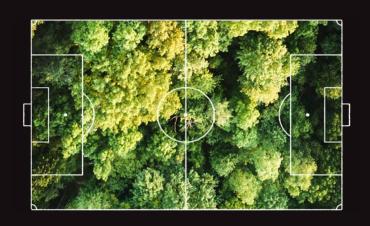
The impact of air pollution on our health and environment is so significant that it is considered to be the second biggest environmental concern after climate change.

Firewood has a low emission factor in comparison with other energy sources, with a very low primary energy coefficient of 0.2.

#### European forest is growing

30% of annual forest growth remains in the forest. The area of European forests is increasing by the size of a football field every minute, increasing the potential for carbon capture in the coming decades.

30% of the annual forest increment remains in the forest.





## The spark in all of us

The spark in all of us is an internal north star and constant driver of all our ideas and actions. An irrepressible force of nature that constantly pushes us forward and helps us to leave old things behind.

It is the source of our inspiration to make things better, smarter, more sustainable and stay ahead of the game. The spark of our inspiration also jumps over to the people we deal with: our partners, our customers.









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