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DEALER STAMP

**MONIER**

**SCHIEDEL**

**ISOKERN®**



# Pumice - *naturally* better



APRIL 2008

  
**MONIER**

## Pumice - *naturally* better

Pumice is a natural insulator. This is the unique property that separates pumice from all other chimney materials.

The insulating properties of Pumice allow the flue gases in the chimney to quickly reach their optimum temperature enabling the heating appliance to reach its optimum performance shortly after lighting.

It also keeps the chimney warmer longer as the heat output of the appliance decreases - once again aiding performance and reducing the likelihood of condensation and soot build-up.

## The *natural* properties of pumice -

- Resistant to temperature change**  
Pumice does not expand or contract with temperature change. This reduces the possibility of cracking and structural damage that can occur with other products.
- High Insulation Properties**  
Pumice is a natural insulator, able to maintain the temperature of flue gases when other products have allowed the temperature to fall below the dew point.
- Lightweight**  
Pumice is strong yet lightweight allowing one person to lift and build the chimney units.



Pumice is a natural material sourced from the Hekla Volcano in Iceland.



Pumice is an excellent insulator, keeping flue gases warm while not transmitting heat to the outside.

### Pumice - The Energy Efficient Solution

With Schiedel you can be energy efficient and enjoy a real fire. The combination of advanced chimney technology and efficient wood burning appliances can give you the best of both worlds - an energy efficient home and the enjoyment of a real fire.

The Schiedel Energy Efficient solutions are designed to work with modern efficient appliances. The superior insulation in the chimney allows flue gases to escape freely to the atmosphere even at low temperatures.

Advanced chimney technology in action. Suitable for stoves, inserts and pellet boilers in masonry and timber frame construction.

#### What does Energy Efficiency & Document L mean for you?

In the drive for more efficient homes the latest revision of the Document L building regulation means that all new build developments must comply with stringent new rules, aimed at reducing carbon emissions from houses by 20%. By choosing an appropriate secondary heating appliance and an efficient chimney/flue system, you can help meet the Government's target without compromising on the cosy focal point that truly makes a house a home.

#### Lower your carbon count

Document L assumes two types of heating - primary central heating and secondary heating from room heaters. The SAP calculation used to determine the carbon emissions assumes the secondary heating to be electric.

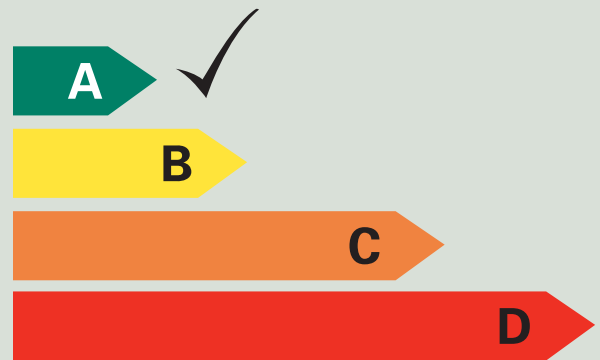
Electricity is a more carbon intensive energy source than wood, dual fuel (a mix of wood and solid fuel), gas or oil. This fact gives you the opportunity to make a carbon saving by substituting electricity with another fuel and an efficient appliance, open or glass fronted. By using a carbon efficient secondary heat source you can gain carbon credits to offset against other aspects of construction like insulation or glazing.

#### Chimney specification

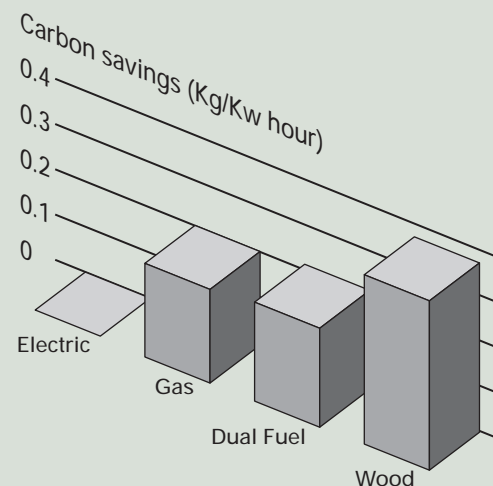
The carbon saving can be increased further by using a chimney that has a diameter of less than 200mm or one with a damper as this halves the assumed air flow in the chimney. Most modern appliances can work efficiently with a properly insulated chimney of less than 200mm. It is important to note that there is no benefit in using a flueless appliance, as the air flow will be assumed to be the same as a 200mm chimney.

#### Choosing your appliance at the planning stage is now crucial

Both primary and secondary heating MUST be specified at the design stage if the required carbon savings are to be realised. This is a big change in our thinking as the choice of appliance would usually have been left until building was complete or the house occupied. If the choice is not made before the build, the SAP programme will default to the worst case scenario.



- Greater energy efficiency
- Lower carbon emissions from burning wood
- Gain carbon credits to offset against other aspects of construction
- Meet the requirements of Document L and SAP



Carbon savings using other fuels compared to electricity

## Product Range

Schiedel Isokern products can be used for new chimneys and for the refurbishment of existing chimneys. The Isokern chimney systems provide a lightweight, easily installed and versatile chimney which can be used internally or externally. The systems are suitable for use with burning appliances in new and refurbished projects. They are ideal for Masonry, Timber Frame and Steel Frame construction. Isokern chimneys have been installed in Europe for over 60 years.



### DM (Double Module)

The Schiedel Isokern Double Module block system is a quality chimney system, used extensively in Scandinavia and other parts of Europe. The double wall system maintains flue gas temperatures while preventing heat transference to the outer casing. The separation of the inner and outer components also allows for thermal movement, reducing the risk of cracking and subsequent leaking or staining. It is simple and quick to build. The Double Module is available in 3 outer casing sizes - DM36, DM44 & DM54.



### Flue liners

The Schiedel Isokern flue liner range consists of over 17 different sizes. They can be used for newbuild, extensions and relining existing chimneys.



### Firechests

The Schiedel Isokern range of firechests are supplied as flat packs. They can be easily and quickly constructed to produce a neat and pre-formed fire opening ready for finishing. The Manor Firechest provides the opportunity to create fire openings up to 1.25m wide.



### Isokoat Flue sealing system

The Schiedel Isokoat system is an efficient and cost effective method of re-sealing a defective chimney shaft. The Isokoat material is applied to the chimney under pressure and forced into the cracks sealing them, re-pointing the joints and strengthening the walls. For further details see the separate Isokoat leaflet.



Our web site [www.isokern.co.uk](http://www.isokern.co.uk) contains full details of all our applications including installation instructions and downloadable drawings to suit most applications



### DM Double Module Chimney System

When the ease of construction and maximum insulation matter then the Double Module System comes into its own. The system is designed to be quick and easy to install.

The lightweight blocks are easy to handle. The outer and inner blocks are laid at the same time but with staggered joints for safety and stability. The double layer of pumice blocks separated by an air gap maximises the chimney insulation.

The Pumice Systems are suitable for wood - logs, pellets and chips, solid fuel, oil and gas.

There are 3 systems in different internal diameters to meet the requirements of different appliances and uses:

- **DM 36, 150mm internal diameter for smaller output inserts, stoves, pellet boilers and cookers**
- **DM 44, 180mm, 200mm and 225mm internal diameters for inserts, stoves and open fires**
- **DM 54, 300mm and 345mm internal diameters for Manor firechests and larger appliances - inserts and open fires**



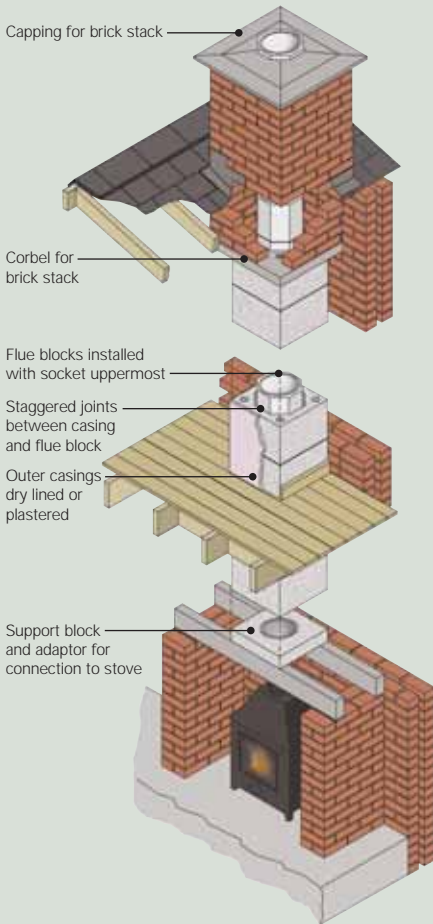
The diameter of the appliance outlet determines the diameter of the chimney required.



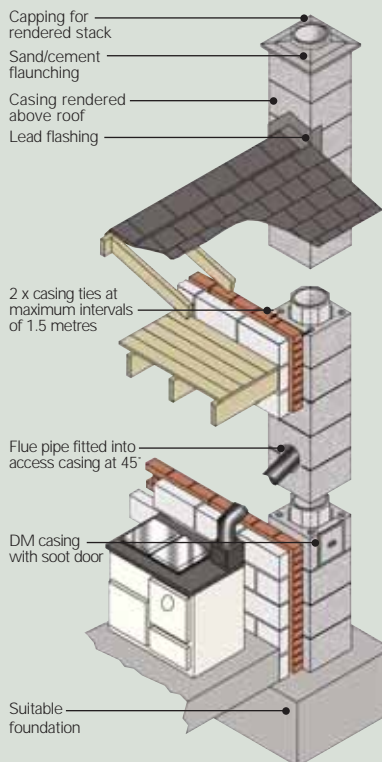
### Unique features of the Isokern DM chimney system:

- Quick and easy to assemble
- Lightweight materials, easy to handle
- Highly insulating pumice for better draw and minimum heat loss
- Staggered joints for maximum safety and stability
- Air gaps between outer casing and flue prevents surface staining
- Good resistance to temperature variations gives the maximum performance for your appliance
- CE certified to EN1858 with the designation T450, NI, D, 3, G(00).
- Irish Board of Agrément approval

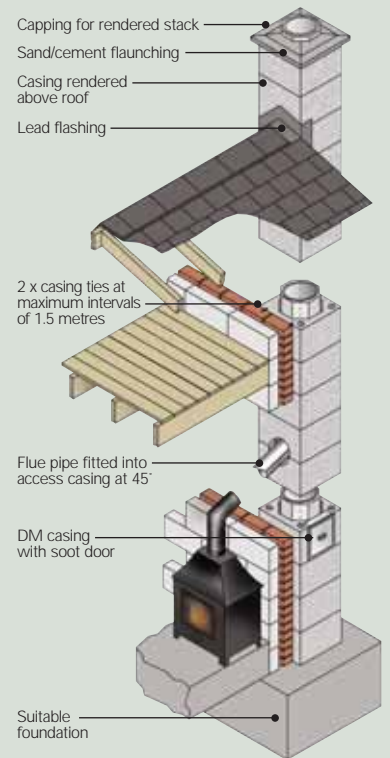
# DM 36 - for smaller output inserts, stoves, pellet boilers and cookers



Free standing stove in an alcove. System includes stove adaptor for ease of connection between the above and chimney.



Range with external chimney

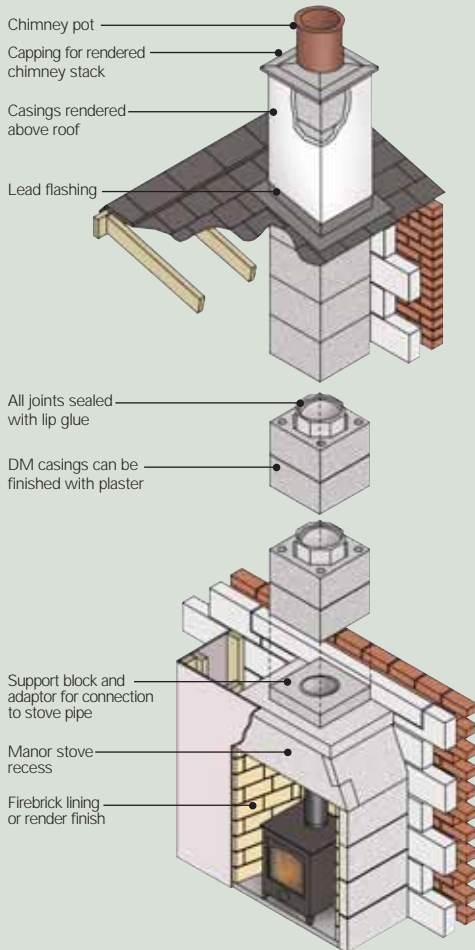


Free standing stove with external chimney with preformed stove entry kit

Downloadable drawings available from our web site [www.isokern.co.uk](http://www.isokern.co.uk)

### DM 36 - for smaller output inserts, stoves, pellet boilers and cookers

#### Standard Components



Product Code	Description
S-803636	360mm square casing 250mm high
S-803637	360mm square 250mm high access casing (150mm i/d access hole)
S-803641	360mm square 250mm high casing & soot door
S-803645	DM36 45° flue entry kit (four parts)
S-801501	150mm i/d 255x255 125mm high starter flue block
S-801525	150mm i/d 255x255 250mm high flue block
S-801516	150mm i/d 255x255 500mm high access flue block (177mm i/d access hole)
80113	570mm square 75mm high corbel for brickwork
80320	490mm square capping - render
80321	690mm square capping - brickwork
80143	150mm i/d 360x435 150mm high offset block (86mm, 30° offset)
40124	150mm i/d 360mm square 100mm high support block
U00150	150mm i/d (205mm o/d) stainless steel adaptor
I125150	125mm i/d (205mm o/d) stainless steel deceiver adaptor

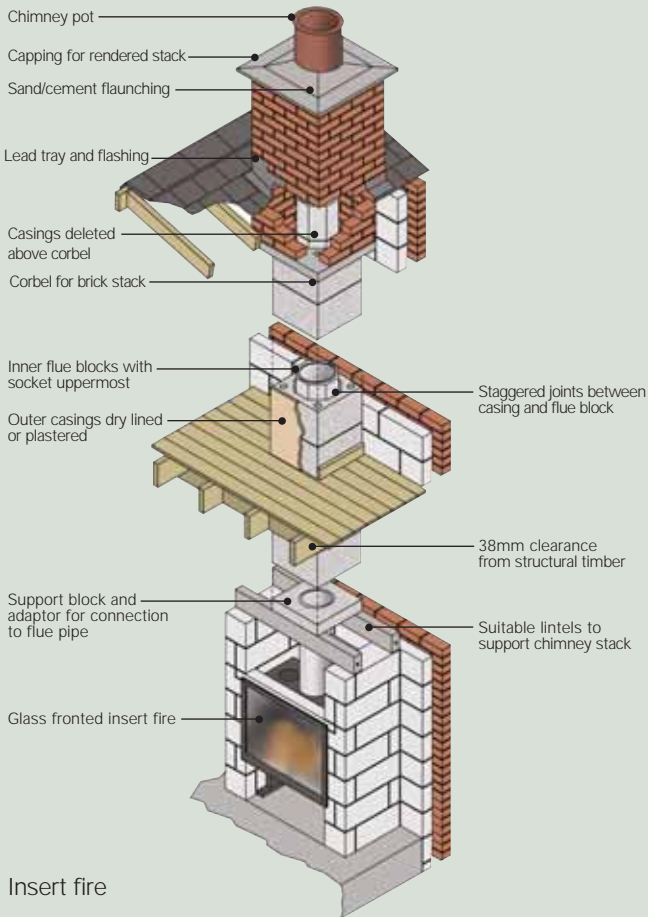
See web for full range of components or contact us on 01202 861650

Stove in prefabricated recess to simplify creation of alcove



# DM 44 - for inserts, stoves and small open fires

Available in 3 internal diameters 180mm, 200mm, 225mm. All inner blocks fit into the same external block.

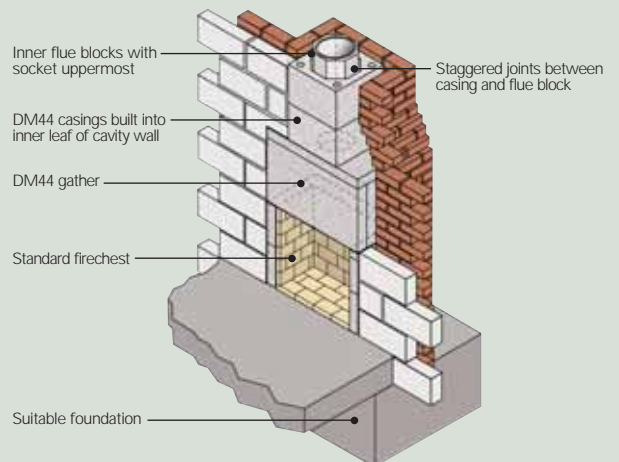
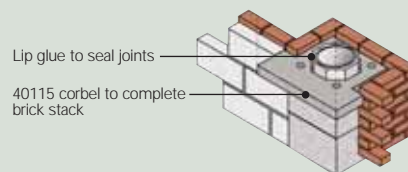
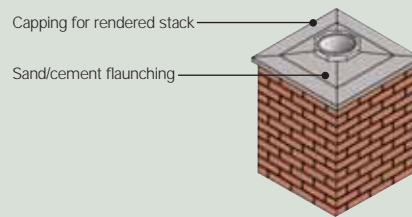


Insert fire

## Standard Components

Product Code	Description
S-44433	440mm square casing 300mm high
S-44437	440mm square 300mm high access casing (220mm i/d access hole)
S-44441	440mm square 300mm high casing & soot door
S-44445	DM44 45° flue pipe entry kit (4 parts)
S-44446	DM44 180mm i/d 45° flue pipe entry kit (4 parts)
	310x310 150mm high starter flue blocks
	Flue blocks 310x310 300mm high
	Flue Access Blocks 310x310 600mm high
	Corbels to support brickwork stack
	Cappings for render and brickwork
	100mm high support blocks
	100mm and 150mm offset blocks for bends
	Stainless steel adaptors
	Stainless steel deceiver adaptors

See web for full range of components or contact us on 01202 861650













Open fire using standard firechrest



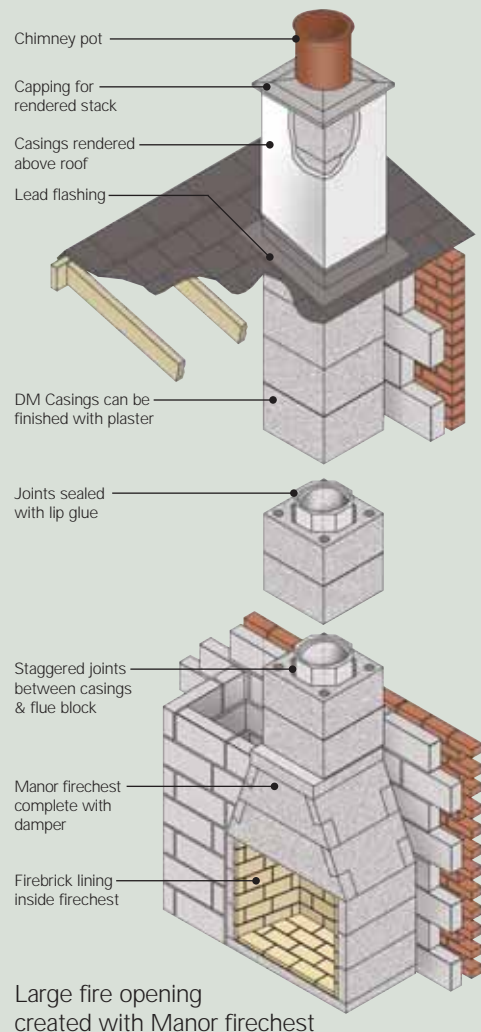
### DM 54 - for larger open fires and appliances



### Standard Components

Product Code	Description
 S-45433	545mm square casing 300mm high
 S-70002	300mm i/d 420x420 150mm high starter flue block
 S-70003	345mm i/d 420x420 150mm high starter flue block
 S-70230	300mm i/d 420x420 300mm high flue block
 S-70235	345mm i/d 420x420 300mm high flue block
 40111	800mm Square 75mm high Corbel for Brickwork
 40322	670mm Square Capping for Render
 40323	950mm Square Capping for Brickwork
 40133	300mm i/d 545x635 150mm high Offset Block (86mm, 30° Offset)
 40136	345mm i/d 545x635 150mm high Offset Block (86mm, 30° Offset)

See web for full range of components or contact us on 01202 861650



## DM Double Module - Technical Specifications

### Structural Timber Clearances

Where a chimney is required to pass through a structural floor, a sliding joint must be made using mineral wool or similar non-combustible material. A minimum 38mm clearance must be maintained between the outer face of the chimney and any structural timber or loose combustible material. Floor boards, skirting boards and other non-structural components may, however, be in contact with the chimney.

### Offsets

Bends can be achieved using purpose-made offset blocks. These blocks do not have a separate flue block. To maintain the correct matching of the joints the last flue block immediately below the first offset block should be trimmed to bring it to the same height as the top of the outer casing. Above the last offset block a starter flue block must be used. All offset blocks must be fully supported.

### Fixings

An external chimney must be tied to the structure at maximum intervals of 1.5m and at the point where it departs from the roof line. Ties should be Isokern stainless-steel ties and bolts for use between the casings; or suitable galvanised-steel straps and bolts around the casings.

### Lead Flashings/External Finish

There are two alternative methods to fix a flashing to the outer casings of a rendered stack:

Fold the flashing in over the edge of the casing protruding through the roof by approximately 10mm and fix accordingly. Scorch the protruding casings with a disc cutter or block saw to achieve a 10mm deep channel parallel with the roof. Fold the edge of the lead flashing into the channel and fix accordingly.

If the chimney is brick clad above the roof then traditional stepped flashing should be used. Proceed to normal building practice using a lead tray.

The lead tray should be turned up on the outside of the flue blocks by approximately 50mm.

Weep holes should be provided below the chimney capping to allow for any water vapour to escape between the inner flue blocks and outer casings. Finally traditional flashing is used to seal around the protruding flue block or chimney pot.

### Outer Surface

Casings should be dry lined or plastered internally. Externally they should be finished with waterproof render or brick cladding.

### Heights Above Roof/Reinforcement

DM Chimneys can be installed without reinforcement up to 1.4m above the roof line. All casing and flue block joints to be sealed with lip glue. Above 1.4m, or if wind exceeds 44ms, please consult Schiedel Isokern Chimney Systems.

DM outer casings include holes for reinforcement rods, these rods should be grouted with 3:1 sand: cement mix. In some cases, as with free-standing chimneys, it may be necessary to secure the reinforcement into the chimney foundation. In this way chimneys can be constructed up to 9m free-standing.

If the DM system is constructed inside a masonry chimney stack, (built from foundations not off a corbel unit) which is constructed so that the height of the chimney stack does not exceed 4.5 times its overall horizontal dimension in accordance with BS6461 Part 1 1984, reinforcement is not required. The DM casings should be tied to brickwork using wall ties.



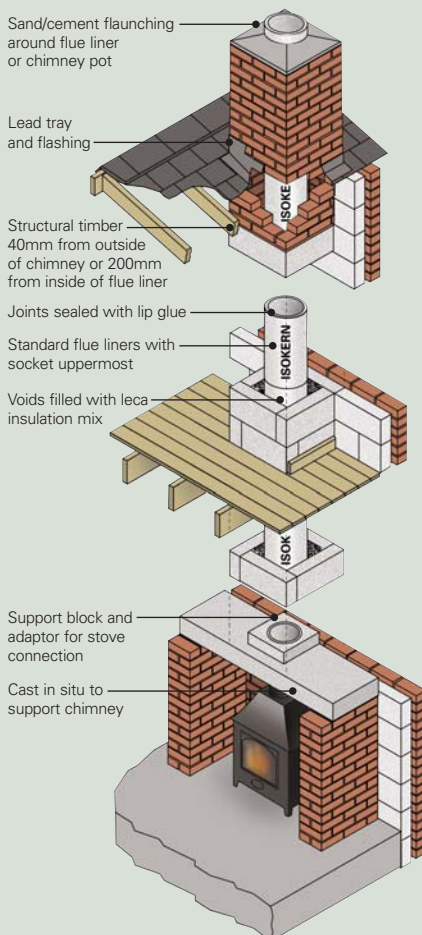
### Liner System - for new and existing chimneys

The pumice range also includes a range of 18 liners in diameters from 130mm to 1000mm

## The insulated flue liner for traditional build

Suitable for use with inserts, stoves, pellet stoves (outlet temperature minimum 150°C), cookers, open fires and Manor firechests

- Lightweight materials, easy to handle and cut
- Highly insulating pumice for better draw and minimum heat loss
- 600mm and 1000mm lengths mean fewer joints and fast to install
- 18 flue sizes available
- Good resistance to temperature variations gives the maximum performance for your appliance
- CE certified to EN1857 with the designation T450, N2, D, 3, G.
- Irish Board of Agrément approval



Free standing stove

### Round Liners

Product Code	Description
10013	130mm i/d 600mm high Rebated liner (180mm o/d)
10015	150mm i/d 600mm high Rebated liner (200mm o/d)
S-10317	170mm i/d 600mm high liner (205mm o/d)
10017	175mm i/d 600mm high Rebated liner (235mm o/d)
10020	200mm i/d 600mm high Rebated liner (250mm o/d)
10022	225mm i/d 600mm high Rebated liner (285mm o/d)
S-10025	250mm i/d 600mm high liner (310mm o/d)
10030	300mm i/d 600mm high Rebated liner (360mm o/d)
10035	350mm i/d 600mm high Rebated liner (416mm o/d)
S-10040	400mm i/d 1000 mm high Rebated liner (470mm o/d)
S-10045	450mm i/d 1000 mm high Rebated liner (530mm o/d)
S-10050	500mm i/d 1000 mm high Rebated liner (590mm o/d)
S-10060	600mm i/d 1000 mm high Rebated liner (706mm o/d)
S-10070	700mm i/d 650 mm high liner (842mm o/d)
S-10080	800mm i/d 1000 mm high Rebated liner (962mm o/d)
S-10090	900mm i/d 650 mm high liner (1804mm o/d)
S-10100	1000mm i/d 650 mm high liner (1204mm o/d)
S-20015	150/260mm oval 600 mm high liner (200/310mm o/d)

### T Liners

Product Code	Description
T4510015	150mm T rebated liner 45 deg
T4510017	175mm T rebated liner 45 deg
T4510020	200mm T rebated liner 45 deg

### Liner Support Blocks (for connection to appliances)

Product Code	Description
C40120	150mm i/d 310mm square 75mm high
C40122	170/175mm i/d 310mm square 75mm high
C40121	200mm i/d 350mm square 75mm high
40127	225mm i/d 440mm square 100mm high
40150	250mm i/d 440mm square 100mm high

### Access Blocks

Product Code	Description
10415	150mm i/d (also for 170mm) 215mm square 205mm high rebated access block
10420	200mm i/d (also for 175mm) 280mm square 280mm high rebated access block
10422	225mm i/d 310mm square 310mm high rebated access block

## Liner System - for new and existing chimneys

### Standard Components



**Description**  
Stainless steel adaptors (for connection to liners)  
Available for 125mm, 150mm, 175mm, 200mm, 225mm and 250mm internal diameters



Stainless steel deceiver adaptors (for connection to liners)  
Available for 100mm, 125mm, 150mm, 175mm, and 200mm internal diameters

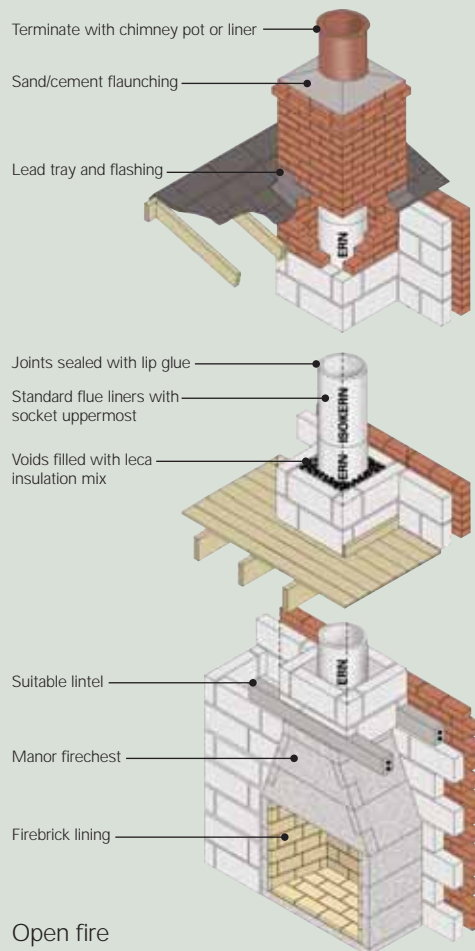


Collars  
Available for 150mm, 175mm, 200mm, 225mm, 255mm and 300mm internal diameters



Bends  
15°, 30°, & 45° available in all diameters

See web for full range of components  
or contact us on 01202 861650



## Accessories for all systems

### Chimney Topguards



Product Code	Description
RGC1	Chimney Topguard Buff 125-250mm i/d
RGT1	Chimney Topguard Terracotta 125-250mm i/d
RGTL300	Chimney Topguard Terracotta 300mm i/d
RGTL350	Chimney Topguard Terracotta 350mm i/d

### Firebricks



Product Code	Description
179	Firebrick slips 25mm thick - colour buff
179	Firebrick slips 50mm thick - colour buff
50382	Firebrick mortar
FB450	450mm clay fireback

### Terracotta Chimney Pots



Product Code	Description
CP150	150mm i/d 450mm high roll top
CP200	200mm i/d 450mm high roll top
CP220	225mm i/d 300mm high roll top
CP225	225mm i/d 450mm high roll top
CP250	250mm i/d 450mm high roll top
CP300	300mm i/d 450mm high roll top
CP350	350mm i/d 450mm high roll top
CP400	400mm i/d 450mm high roll top

### Leca Insulation



Product Code	Description
50301	50 Litre Bag of Leca (0.05m³)

### Liner System - Technical Specification

#### Structural Timber Clearances

A minimum of 38mm clearance must be maintained between the structural timber and the outer surface of the brick/block chimney or 200mm from the outer surface of the flue liner. Floor boards, skirting boards, and other non-structural components may be in contact with the chimney.

#### Offsets

Offsets can be achieved by using our pre-formed bends in 15, 30 or 45 degree angles. Lip glue must be used on all joints. An additional steel collar should be used to wrap around any cut joints between bends.

#### Flashing and Trays

Stepped flashing and trays should be fitted as per normal building practice. Lead trays should be turned up on the outside of the flue liners by approximately 50mm.

#### Heights above Roof

Chimneys should generally terminate at least 600mm above the ridge or 1000mm above the highest point of intersection with the roof. Masonry chimney stacks should not exceed 4.5 times their narrowest horizontal dimension above the roof.

#### Relining

Isokern pumice liners are ideal for relining an existing masonry chimney.

The first liner has notches on its base to allow a rope to be secured under it. This enables the liners to be lowered down the chimney. Liners are joined together using steel collars and lip glue. The rope controls the rate of descent until the first liner reaches its position on the gather or support block, then the knot will be loosened and the rope removed. A leca mix is poured down the chimney to surround the liners giving them support and insulation.

A separate instruction leaflet on relining is available.



## Firechests

**The ideal solution for creating open fires. The finished appearance is down to individual taste using one of the many fireplace surrounds on the market.**

The Schiedel Isokern firechest complements the Isokern chimney systems which are designed to create a complete system, avoiding many of the variable factors that lead to draught problems and smoky fireplaces.

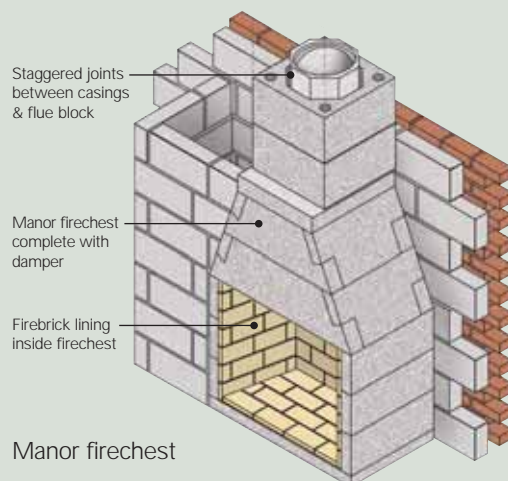
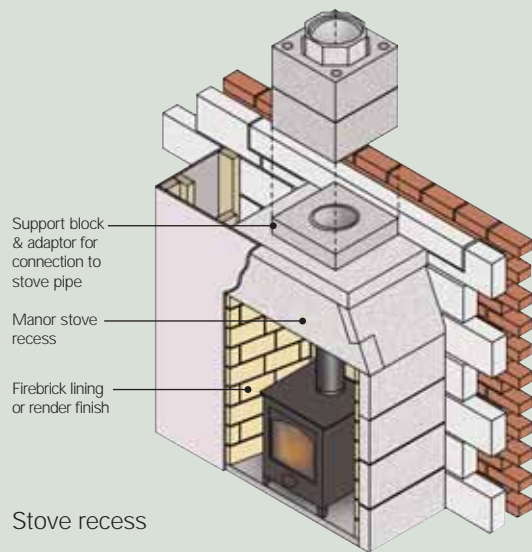
The Isokern firechest range is cast using lightweight, highly insulating pumice. The components interlock like pieces of a three dimensional jigsaw to form a sturdy, robust fireplace recess and gather. The joints are sealed using lip glue jointing compound. Starting from a suitable foundation and constructional hearth, assembly of the complete firechest and gather could take less than one hour.

### The Firechest Range

The range includes firechests with fire openings from 500 to 1250mm. We now also have a special manor recess designed for stoves. Each firechest is packed on a pallet with detailed assembly instructions. The firechest is load bearing and will carry up to 2600kg of chimney above, although you may exceed this weight with the use of additional lintels.

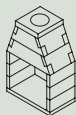
### Damper

A flue damper is available for the Delta 500 and the larger Manor firechests from the 950 upwards. In multi-fuel and wood burning installations the flue damper can be used to control the draft in the flue and avoid excessive heat loss when the fireplace is not being used. This is reflected in the SAP calculation for Document L. The inclusion of the damper will halve the chimney ventilation rate in the SAP calculation. It must not be installed with gas fires.



### Firechests and Gathers

#### Manor Firechests



Code	Model	Opening Width	Opening Height	External Width	External Height	External Depth	Flue Size
80036	Manor 950	940mm	810mm	1090mm	1795mm	640mm	300mm
80042	Manor 1100	1080mm	810mm	1230mm	1995mm	640mm	350mm
80048	Manor 1200	1200mm	810mm	1350mm	1795mm	640mm	350mm
82048	Manor 1250	1250mm	960mm	1346mm	1761mm	710mm	350mm

#### Manor Gathers



Code	Internal Width	External Width	External Height	External Depth	Flue Size
85036	940mm	1090mm	910mm	640mm	300mm
85042	1080mm	1230mm	1110mm	640mm	350mm
85048	1200mm	1350mm	910mm	640mm	350mm

#### Stove Recess



Code	Opening Width	Opening Height	External Width	External Height	External Depth
88036	940mm	1080mm	1090mm	1585mm	640mm

#### Standard Firechest



Code	Internal Width	External Width	Height	External Depth	Flue Size
85022	690mm	850mm	660mm	450mm	225mm

#### Standard Liner Gather



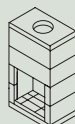
Code	Internal Width	External Width	Height	External Depth	Flue Size
85020	690mm	850mm	600mm	450mm	225mm

#### DM44 Gather



Code	Internal Width	External Width	Height	External Depth	Flue Size
85021	690mm	850mm	600mm	450mm	225mm

#### Standard Deltafire



Code	Opening Width	Opening Height	External Width	External Height	External Depth	Flue Size
80610	510mm	540mm	685mm	1500mm	440mm	225mm
80600	510mm	540mm	685mm	1455mm	440mm	225mm

#### Concrete Gathers



Code	Internal Width	External Width	Height	External Depth	Flue Size
C15	600mm	800mm	225mm	450mm	200mm
C17	800mm	1000mm	300mm	550mm	250mm



#### Flue Sizing

Each firechest has been tested to establish the optimum flue size required to give best possible performance. The recommended flue sizes are shown in the range table. The minimum flue height required is 4.5m above the fireplace opening.

#### Regulations and Requirements

Current building regulations require 100mm of solid non-combustible masonry to be built around the sides and back of the firechest. An adequate combustion air supply must be provided in accordance with our instructions or document J of the building regulations. The inside of the firechest should be lined with firebrick slips. Schiedel Isokern supply buff coloured firebricks. The finished fireplace opening size will be reduced when the bricks are installed.