

### The Guide to Ceramic Chimney Systems and Liners



DON'T FORGET TO REGISTER YOUR INSTALLATIONS AND START EARNING SCHIEDEL INSTALLER REWARDS See inside for more details

### The Schiedel Ceramic Range

In order to meet the new European Standards for Chimney products, specific leakage and performance criteria have to be met, which are much more stringent than in the past.

Schiedel have invested in the latest production technology and are proud to introduce a new range of high performance rebated ceramic flue liners, which are fully CE tested and approved and are fully compatible with the increasingly efficient modern appliances, as well as meeting the more traditional soot fire requirements.

These liners are now used throughout the Schiedel range of standard ceramic chimney products, which consists of:-

- Ceramic Chimney Liners
- Swift System Chimney
- Swift Air System Chimney for room sealed appliances

Schiedel has sourced the finest raw materials, blended in a unique formula to give a unique combination of temperature resistance and strength.

#### The natural properties of ceramic

#### Resistant to Thermal Shock

The liners are extremely durable and have been tested for resistance to soot fire as well as to condensate, and meet the latest CE standards and Construction Products Regulations (CPR).

#### Lightweight

Due to advanced manufacturing techniques, we have been able to reduce the wall thickness of the liner to produce the optimal lightweight but extremely robust product.

#### Smooth Inner Wall

The smooth inner liner allows gas, the product of combustion to freely exit the chimney. Straight lines ensure a consistent fill of insulation.

### Product Description

The Schiedel Ceramic Product Range consists of Chimney liners for the refurbishment of existing chimneys as well as System Chimneys for New Build Applications and System Chimneys with a built in ventilation channel for use in room sealed applications on energy efficient houses.



#### **CERAMIC FLUE LINERS**

The Schiedel range of Ceramic Flue Liners has been tested and approved to meet the latest European Standards and Construction Product Regulations (CPR) for both High Temperature and Low Temperature applications.



#### **SCHIEDEL SWIFT**

Schiedel Swift is a high quality modular System Chimney comprising of 3 layers. An outer block stone, an insulation wrap and a ceramic liner, CE approved for use on both high temperature and low temperature applications. The system can be installed internally or externally and is ideal for new Build applications.



#### **SCHIEDEL SWIFT AIR**

Schiedel Swift Air is a 3 layer Modular System Chimney with a built in channel for ventilation, which allows the system to be used with room sealed appliances, bringing the combustion air to the appliance from roof level, ensuring the right volume of combustion air is available to the appliance. This system is ideal for use in Energy efficient A rated New Build Homes.



#### **CHIMNEY POTS & ACCESSORIES**

Schiedel Chimney Pots and accessories are designed to bring simple, aesthetic solutions to the Chimney design, both within the fireplace and through to termination, with a range of styles to suit all homes.

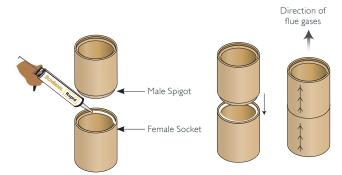
### Ceramic Flue Liners – Traditional Build

In order to meet the new European Standards for Chimney products, specific leakage and performance criteria have to be met, which are much more stringent than in the past.

Schiedel have invested in the latest production technology and are proud to introduce a new range of high performance rebated ceramic flue liners, which are fully CE tested and approved and are fully compatible with the increasingly efficient modern appliances, as well as meeting the more traditional soot fire requirements.

This new generation of rebated ceramic chimney liners is available as standard in the following diameter range: 160mm, 180mm, 200mm, 250mm, 300mm.

### Joint Detail



Liners are installed with the male spigot pointing downwards. Schiedel Rapid HT Cement should be applied to the inside of the female socket and any excess projecting into the flue should be wiped off as installation progresses.

#### RAPID HT CEMENT USAGE

Int Ø (mm)	No. Joints per tube
160	9
180	7
200	6
250	5
300	3



#### LIGHT EXPANDED CLAY AGGREGATE INSULATION RE-OUIREMENT FOR BACKFILL

Int Ø (mm)	Ext Ø (mm)	Chimney Void (mm)	Chimney Void (inches)	Bags per linear metre
160	190	235 × 235	9"×9"	0.48
160	190	235 × 350	9" × 14"	1.02
160	190	350 × 350	14'' × 14''	1.82
180	210	235 × 235	9"×9"	1.08
180	210	235 × 350	9" x 14"	1.62
180	210	350 × 350	14" × 14"	2.42
200	230	350 × 350	14" × 14"	2.15
200	230	350 × 460	14" × 18"	2.49
200	230	460 × 460	18" × 18"	4.20
250	290	350 × 350	14" × 14"	1.17
250	290	350 × 460	14" × 18"	1.94
250	290	460 × 460	18" × 18"	2.96
300	340	460 × 460	18" × 18"	2.60
300	340	460 × 575	18" × 23"	3.75
300	340	575 × 575	23" × 23"	5.25





Schiedel Ceramic Liners are CE Certified to EN 1457-1 & 2 TÜV 0780 CPD 131086 with the following designations:

High Temperature Applications	Low Temperature Applications
EN 1457-1	EN 1457-2
A1 N1 (T600 N1 G)	B4 N1 (T400 N1 WC O)
EN 13063-1	D4 N1 (T200 N1 WC O)*
T400 N1 D 3 G40 Ø160mm	EN 10363-2
T400 N1 D 3 G50 Ø200mm	T400 N1 W 2 O50
	T200 N1 W 2 O00

High Temperature Applications		
EN 13063-3		
T400 N1 D3 G40 Ø160mm		
T400 N1 D3 G50 Ø200mm		

 $<sup>^{\</sup>ast}$  When used on T200 rated low temperature systems, the liner system should be straight and fully ventilated.

For Room Sealed appliances

### Ceramic Flue Liners – Components

SAP Code All dimensions are exten	Description mal apart from the liner diameters, which are internal.	Weight (kg)
Rebated Liner		
A03 100374 - 100375 A05 100376 A07 100310 A08 100311	330mm high 160mm Ø 330mm high 180mm Ø 330mm high 200mm Ø 330mm high 250mm Ø 330mm high 300mm Ø	5.6 6.3 7.1 15.3 17.6
37.5° Bend		
121334 121335 121336 121337	160mm Ø 180mm Ø 200mm Ø 250mm Ø	8.3 9 10.5 17.9
45° Bend		
131622 131623 131624	160mm Ø 180mm Ø 200mm Ø	5.6 6.3 7.1
90° Tee		
100420 100421 100422	660mm high 160mm Ø 660mm high 180mm Ø 660mm high 200mm Ø	13.3 14.5 15.4
45° Tee		
100424 100425 100426	660mm high 160mm Ø 660mm high 180mm Ø 660mm high 200mm Ø	15.9 18.1 19.1
Inspection Pipe/Ir	nner Soot Door	
100428 100429 100430	660mm high 160mm Ø 660mm high 180mm Ø 660mm high 200mm Ø	13.6 14.9 16.7
Outer Soot Door	r	
100475 100475 100475	160mm Ø 180mm Ø 200mm Ø	10 10 10
Base Stone with I	Drain	
102684 102685 102686	170mm high 160mm Ø 170mm high 180mm Ø 170mm high 200mm Ø	12 14 16
Fireback		
130748 130749	Concrete 400mm Concrete 450mm	15 15

### Ceramic Flue Liners – Components





















130696

Chimney Notice Plate

SAP Code All dimensions are e	Description external apart from the liner diameters, which are internal.	Weight (kg)
Fire Gather		
130698 130699 131200 131201	200mm Ø 225mm Ø 250mm Ø 300mm Ø	110 110 130 130
Stove Starter	Block	
143247 143248 143249	$360 \times 500 \times 100$ mm high $160$ mm $\varnothing$ $360 \times 500 \times 100$ mm high $180$ mm $\varnothing$ $360 \times 500 \times 100$ mm high $200$ mm $\varnothing$	18 18 18
Lintel Head		
130770	Lintel Head 1500 x 150mm 75mm high	36
Adaptor from	Steel to Ceramic Liner	
132667 132668 132669	160mm Ø 180mm Ø 200mm Ø	1.5 1.5 2
Coping		
131196 130703	Small 550 × 550mm ∅ rendered stack Large 870 × 800mm ∅ brick stack	- -
Coping PF		
131197	Cpoing P/F 870 × 800mm Ø brick stack	-
Collars		
COA COA COA COA	160mm Ø 180mm Ø 200mm Ø 250mm Ø 300mm Ø	- - - -
Roll Top Pots		
129041 129042 129040	300mm high Buff 300mm high Terracotta 300mm high Black	10 10 10
Schiedel Rapid		
100020	Rapid HT Cement (310ml)	-
Light Expande	d Clay Aggregate	
130769	Light Expanded Clay Aggregate Backfill Insulation (50 litre)	19
Notice Plate		

### Ceramic Flue Liners – Installation Guidelines

#### **BUILDING REGULATIONS**

The construction and application of chimneys and flues is covered by Building Regulations in conjunction with the relevant European Standards. Whilst these differ in emphasis, they all mandate the safe application of the chimney no matter where and how used. These Regulations and Standards dictate the minimum criteria which it is necessary to apply if the chimney or flue is to function safely and correctly.

Building control approval is necessary for building new chimneys and in some cases for relining old chimneys particularly if some alteration or change of the heating appliance occurs. The appropriate Regulations and Standards are listed below.

#### England & Wales:

Building Regulations Approved Document J

#### Scotland:

Building Regulations Technical Standards

#### Northern Ireland:

Building Regulations Technical Booklet L

#### Republic of Ireland:

Building Regulations Technical Guidance Document J

#### **FLUE SIZING**

It is important to match the internal diameter of the flue with the outlet on the appliance. It should never be less than the outlet diameter of the appliance. The appliance manufacturer's chimney sizing recommendations should always be followed.

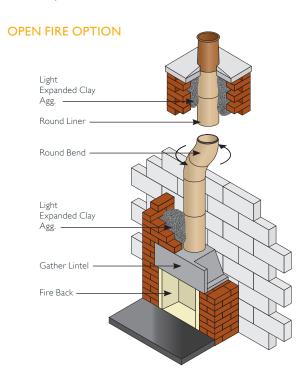
For open fires with a standard fire opening up to 500mm wide by 550mm high the minimum required flue diameter is 200mm round. For larger open fires, such as inglenooks, dog grate installations or special appliances and stoves designed to operate with a fire opening greater than 500mm × 550mm, the flue size should be at least 15% of the free unobstructed area of the fire opening (including sides if open). Many Decorative Fuel Effect gas fires (DFE's) that imitate a coal or log burning open fire require the same chimney arrangement as for solid fuel open fires and must be installed in accordance with respective local building regulations

#### **OPEN FIRE OPTION**

Construction begins by providing a suitable foundation and constructional hearth in accordance with local Building Regulations and site requirements.

Form the fire opening onto the constructional hearth. 100mm of brick or blockwork must be built around the sides and back of the firechest to comply with Building Regulations.

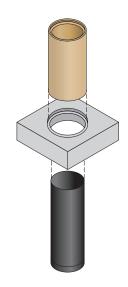
Apply Schiedel Rapid HT Cement onto a suitably formed fire gather. Position the flue liner onto the prefabricated gather, female rebate facing upwards. Arrows on each flue liner indicate the directional flow of flue gases. Continue to apply Schiedel Rapid HT Cement to each flue liner, cleaning any access material from the joints.



#### **RECESSED STOVE OPTION**

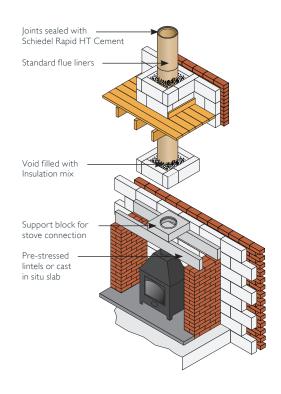
A suitable cast-in-situ concrete slab lintel must be provided above the fireplace recess. Alternatively you could use suitable pre stressed lintels, for this method a support plate is required under the support block. It is recommended to have a minimum of 600mm length of flue pipe before connecting to the chimney.

The support block is bedded onto the slab lintel using weak mix mortar. A stainless steel adaptor or a section of Prima Smooth connecting flue pipe is used to connect from the support block to the stove flue pipe. This adaptor is pushed up onto the support block spigot (fibre rope should be used to create a seal).



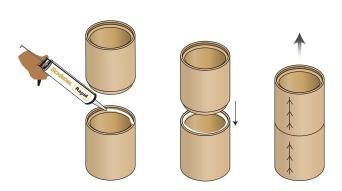
### Ceramic Flue Liners – Installation Guidelines

#### **RECESSED STOVE OPTION**



#### **ALL OPTIONS**

Apply Schiedel HT Cement onto the male rebate of the flue liner. (refer to table on page 3)



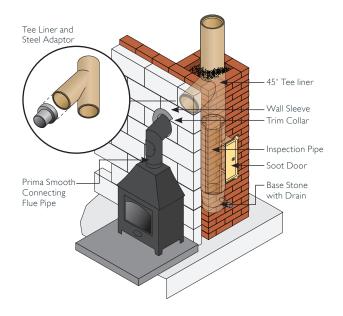
Position the flue liner on a suitably formed fire gather or support block with the female rebate facing upwards. Arrows on each flue liner indicate the directional flow of flue gases. Continue to apply high temperature cement to each flue liner, cleaning any access material from the joints.

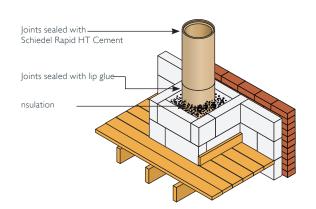
#### FREE STANDING STOVE OPTION

A soot door must be provided below the flue pipe entry to allow for inspection and removal of soot and debris. A suitable wall sleeve is to be used to seal the cavity wall. Any combustible insulation within the wall must be kept away from the single skin connecting flue pipe by at least  $1.5 \times its$  diameter.

(Example: diameter 150mm  $\times$  1.5 = 225mm distance).

The flue pipe is a push fit over the spigot on the adaptor. Seal off the gap between the flue pipe and wall sleeve with fire proof rope and closing plate.





Clad the flue liners with a minimum of 100mm suitable masonry. A minimum of 15mm light expanded clay aggregate insulation must be installed between the flue liners and masonry. Mix 20 parts light expanded clay aggregate to 1 Part cement and a small amount of water. Ensure it is well mixed before using, (refer to table on page 3)

### Ceramic Flue Liners – Installation Guidelines

If Bends are required in the chimney make sure adequate support is provided and always backfill with light expanded clay aggregate insulation mix. Liners can be cut between bends to achieve a required offset distance. A steel collar as well as high temperature cement must be used for any cut joints. A maximum of 2 complete offsets (4 bends) are allowed per chimney and the angle must not be greater than 45° from the vertical.

SUPPORTING AN OFFSET

The bends and liners that make up an offset must be supported adequately

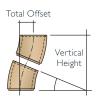
Diameter (mm)	Bends 30°	Length 330mm	Total Height	Total Offset
160	2	0	612	164
160	2	1	899	330
180	2	0	612	164
180	2	1	899	330
200	2	0	612	164
200	2	1	899	330
250	2	0	559	157
250	2	1	839	318
300	2	0	610	164
300	2	1	892	326

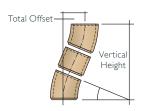
Diameter (mm)	Bends 37.5°	Length 330mm	Total Height	Total Offset
160	2	0	588	200
160	2	1	851	402
180	2	0	588	200
180	2	1	851	402
200	2	0	588	200
200	2	1	851	402
250	2	0	569	209
250	2	1	814	425

Diameter (mm)	Bends 45°	Length 330mm	Total Height	Total Offset
160	2	0	559	232
160	2	1	794	466
180	2	0	559	232
180	2	1	794	466
200	2	0	559	232
200	2	1	794	466
250	2	0	553	233
250	2	1	794	461

#### **OFFSET WITH 2 BENDS**

### OFFSET WITH 2 BENDS & LINER

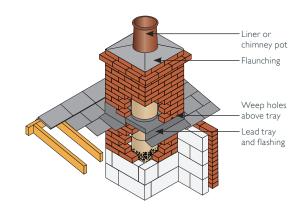




You must provide adequate clearance from combustible material in accordance with local Building Regulations. Combustible materials must be 200mm from the inner surface of flue liner or 40mm from the outside of the masonry chimney unless it is a floorboard, skirting board, dado or picture rail, mantel-shelf or architrave.

Fit appropriate lead dpc's and flashings in accordance with the relevant regulations. It is recommend that the lead tray should be dressed up the outside of the flue liners to avoid a weak joint. Weep holes should be provided above the tray for moisture drainage.

Terminate the chimney to the correct height in accordance with local Building Regulations. The chimney can be finished by flaunching (1:3 cement/sharp sand) around a suitable chimney pot. Approved rain caps can be used to help prevent water entering the flue.



#### AFTER COMPLETION

After installation is complete tests and checks should be carried out in accordance with local Building Regulations. A chimney notice plate must be completed and permanently fixed in the dwelling, ideally near the electrical consumer unit. The checklist and notice plate are available from Schiedel.

#### **USE AND MAINTENANCE**

The chimney should be swept at least twice a year, once before the heating season and once after the heating season. You may need to sweep during the heating season depending upon use.

Always follow the appliance manufacturer's operating instructions. Always burn approved fuels or dry seasoned wood. Avoid burning unseasoned wood and slow burning of solid fuels as this can produce excessive soot and condensation which can in turn cause soot fires and damage. If correctly installed, operated and maintained these systems should last the life of the dwelling.

### The Schiedel Swift Chimney System Concept

The Schiedel Swift Chimney System is a ceramic chimney system designed in modular units which can be quickly assembled on site, significantly reducing the chimney construction time.

The chimney system can be adapted to suit all types of appliances including open fires, multi-fuel stoves, boilers and other bespoke applications.

#### **Key Features**

- Designed for speed of construction
- Suitable for Timber Frame, Steel Frame and Masonry construction. Solutions have been specifically designed to meet the requirement of timber framed construction.
- Modular units for easy assembly on site.
- Suitable for all fuels gas, oil, solid fuels and biomass.
- Schiedel Rapid HT Cement is provided in tubes for ease of application.
- Superior Insulation The consistency of the insulation maintains the temperature of the flue gases allowing them to pass freely up the chimney. Back filling of insulation is not required.
- The use of a chimney tray is always recommended.
- The high quality fireclay flue liner complies with the European Standard EN1457-1 & 2

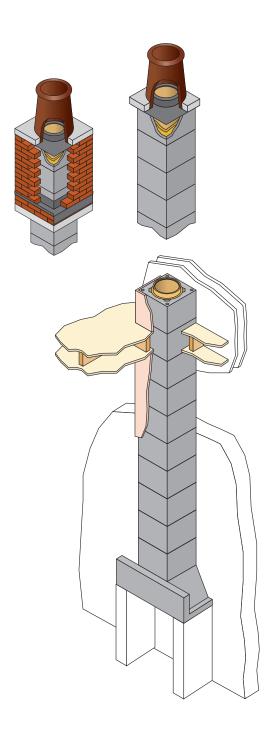


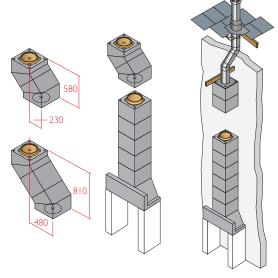
### Schiedel Swift - Open Fires

#### **INTERNAL OPEN FIRE**

(Timber frame, steel frame and masonry construction)

Single chimney for timber frame, steel frame or masonry constructions. Available with a corbel for 3 brick wide (675mm) brick or rendered stack, or as a Plain Swift without the corbel stack (360mm square). Strengthening bars only required if chimney is taller than 1.2m.





#### **BEND & OFFSETS**

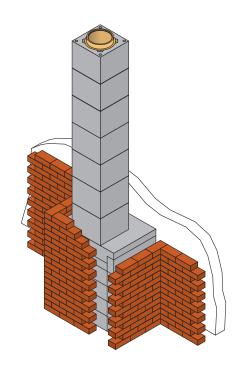
It is recommended that a chimney be constructed as a straight chimney. Were a bend is required, for example to move the chimney into a corner in the first floor, a Schiedel Swift bend kit can be used.

The Breast Bend The breast bend kit will allow the flue to be offset to variable lengths, subject to the diameter being used. (See offset chart page 8)

The Roof Space Offset Kit A combination of both Schiedel Swift and Schiedel Twin wall stainless steel flue allows an offset in the roof space without the need for constructional support.

#### **EXTERNAL OPEN FIRE / FREE STANDING STOVE**

Suitable for a single chimney where the chimney is on the outside of the building. A bend kit can be used to offset the chimney to one side.



### Schiedel Swift - Stoves & Boilers

The Schiedel Swift is also an ideal solution for stoves, cookers and central heating boilers. Neat and simple solutions suit a variety of installations.

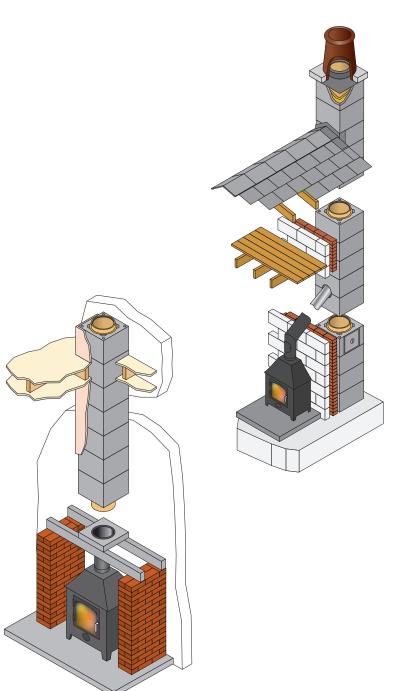
These options offer all the benefits of the Open Fire solutions with tailor made components to simplify construction. The accessories on the stoves, cookers and boiler systems include preformed junction pipes and inspection doors for ease of maintenance. For stoves, cookers and boilers the system is available in 160mm, 180mm and 200mm internal flue diameters.

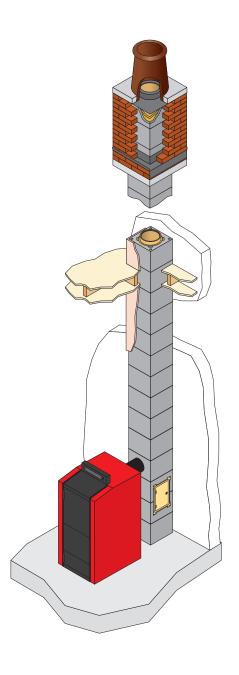
#### **INTERNAL RECESSED STOVE**

Chimney system to suit oil burning and solid fuel stoves.

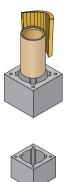
#### FREE STANDING STOVE

### Chimney system for gas, oil and biomass boilers.





## Schiedel Swift – Components





















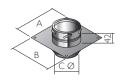
COA: code on application

SAP Code	Description	Weight (kg)
	external apart from the liner diameters, which are internal.  k (incl Liner & Insulation)	( 6)
COA COA	360 x 360 x 325mm high 160mm Ø 360 x 360 x 325mm high 180mm Ø 360 x 360 x 325mm high 200mm Ø	29 30 31
Chimney Bloc	k	
100353 100353 100353	$360 \times 360 \times 325$ mm high $160$ mm Ø $360 \times 360 \times 325$ mm high $180$ mm Ø $360 \times 360 \times 325$ mm high $200$ mm Ø	29 30 31
Rebated Liner		
100374 100375 100376	333mm high 160mm ∅ 333mm high 180mm ∅ 333mm high 200mm ∅	6 6 7
Insulation		
133296 100379 100380	1 Per Chimney Block 160mm Ø 2 Per Chimney Block 180mm Ø 2 Per Chimney Block 200mm Ø	0.5 0.3 0.3
Bend Kit		
COA COA	160mm Ø 180mm Ø 200mm Ø	58 60 62
90° Tee		
100420 100421 100422	660mm high 160mm ∅ 660mm high 180mm ∅ 660mm high 200mm ∅	13.3 14.5 15.4
45° Tee		
100424 100425 100426	660mm high 160mm ∅ 660mm high 180mm ∅ 660mm high 200mm ∅	15.9 18.1 19.1
Inspection Pip	pe/Inner Soot Door	
100428 100429 100430	660mm high 160mm ∅ 660mm high 180mm ∅ 660mm high 200mm ∅	13.6 14.9 16.7
Outer Soot D	200r	
100475 100475 100475	160mm Ø 180mm Ø 200mm Ø	10 10 10
Base Stone wi	ith Drain	
102684 102685 102686	170mm high 160mm ∅ 170mm high 180mm ∅ 170mm high 200mm ∅	12 14 16
Fireback		
130748 130749	Concrete 400mm Concrete 450mm	15 15

### Schiedel Swift – Components



# Roof Space Offset Kit (Conversion from Swift to Steel Systems)



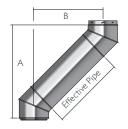
Anchor Plate			DN8A0D6
Int Ømm	150	180	200
Ext Ømm	200	235	256
A mm	360	355	375
B mm	360	335	356
Cmm	158	178	198
SAP Code Plain	134012	126774	127344



45° Bend			DN8A017
Int Ømm	150	180	200
Ext Ømm	200	235	256
A mm	83	91	95
B mm	74	82	86
SAP Code Plain	126036	126791	127371
SAP Code Black	126034	126789	127367



45° Offset			
Int Ømm	150	180	200
Ext Ømm	200	235	256
A mm	268	295	309
B mm	111	122	128



45°Bend offset with standard Pipe lengths					
Int Ømm		150	180	200	
Ext Ømm		200	235	256	
Effective Pipe 950	A	947	974	988	
	В	790	801	807	
Effective Pipe 450	Α	593	621	634	
	В	436	448	453	



960mm Effective Length			DN8A001
Int Ømm	150	180	200
Ext Ømm	200	235	256
SAP Code Plain	126058	126808	127392
SAP Code Black	126056	126809	127388



460mm Effective Length			DN8A002
Int Ømm	150	180	200
Ext Ømm	200	235	256
SAP Code Plain	126039	126793	127376
SAP Code Black	126037	126794	127372

# Roof Space Offset Kit (Conversion from Swift to Steel Systems)



Adjustable Pipe 50-230mm		1	Piece - DN8A009
Int Ømm	150	180	200
Ext Ømm	200	235	256
SAP Code Plain	126071	126819	127402
SAP Code Black	126064	126815	COA



Roof Support			94640
Int Ømm	150	180	200
Ext Ømm	200	235	256
SAP Code Plain	100963	128126	128610



Storm Collar			95560
Int Ømm	150	180	200
Ext Ømm	200	235	256
SAP Code Plain	106141	128106	128590
SAP Code Black	127209	128105	COA



Uniflash	
Ext Ømm	658
A	150-300
Product Code	94510002
SAP Code	112197
Universal EPDM rubber/aluminium flashing. Just pull the required diameter tab on the rubber seal.	



Raincap		without mesh DN8A142	
Int Ømm	150	180	200
Ext Ømm	200	235	256
A mm	266	362	362
B mm	90	217	220
SAP Code Plain	125837	126574	127153
SAP Code Black	125839	126575	COA

#### **BUILDING REGULATIONS**

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Building Regulations Technical Booklet L

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#### **FLUE SIZING**

It is important to match the internal diameter of the flue with the outlet on the appliance. It should never be less than the outlet diameter of the appliance. The appliance manufacturer's chimney sizing recommendations should always be followed.

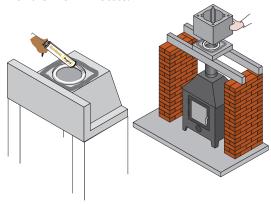
For open fires with a standard fire opening up to 500mm wide by 550mm high the minimum required flue diameter is 200mm round. For larger open fires, such as inglenooks, dog grate installations or special appliances and stoves designed to operate with a fire opening greater than 500mm × 550mm, the flue size should be at least 15% of the free unobstructed area of the fire opening (including sides if open). Many Decorative Fuel Effect gas fires (DFE's) that imitate a coal or log burning open fire require the same chimney arrangement as for solid fuel open fires and must be installed in accordance with respective local building regulations.

#### **FOUNDATIONS**

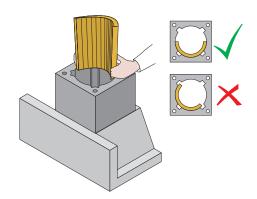
Construction begins by providing a suitable foundation and constructional hearth in accordance with Building Regulations and site requirements.

#### **CHIMNEY CONSTRUCTION**

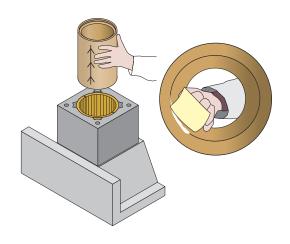
1. The first chimney block is set on a bed of mortar on top of the prefabricated gather or support block, depending on your appliance. Schiedel Rapid HT Cement is applied to the recess into which the liner will locate.



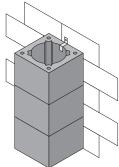
2. Bend and place the insulation into the chimney block. Care should be taken to ensure the slots in the mineral wool are compressed inwards. It is important the insulation is fitted as below to ensure consistent insulation around the flue pipe.



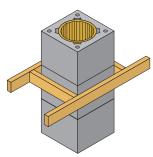
3. Place the flue liner into the chimney block, with the female rebate facing upwards. Arrows on each flue liner indicate the directional flow of flue gases. Continue to apply high temperature cement to each flue liner, cleaning any access material from the joints.



**4.** The chimney blocks should be tied every metre to a structural wall with the supplied masonry/steel frame ties. Standard timber frame ties (not included) should be used in timber frame construction.

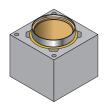


5. Where the chimney passes through floor or ceiling joists, these need to be trimmed out leaving a gap of 40mm for timber and 30mm for concrete. This gap is then filled with noncombustible material.

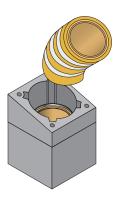


#### **BEND KIT**

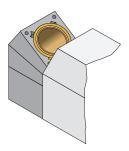
1. Build the chimney to the point where the bend is required. The steel locking band should be placed around the liner in the chimney block before the bend.



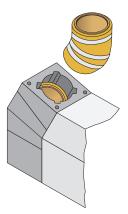
2. Place the first chimney bend block on top of the standard chimney block. Insert the first insulated flue bend.



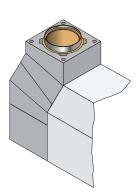
**3.** Add the second chimney bend block with the angled edge face down. Make sure the block is properly supported.



**4.** Place the straight edge of the third chimney bend block on top. Insert the insulated ceramic return bend into the bend block



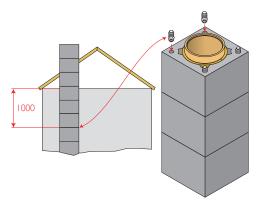
**5.** Position the final bend block angle edge down to return the kit to the horizontal. The steel locking band should be placed around the liner in the chimney block before continuing to add more blocks.



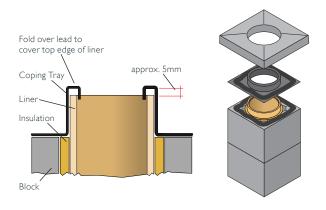
#### **RENDERED STACK**

1. Continue to build the chimney as a single block to the stack. Special plastic connectors are inserted in all 4 corners of the chimney block to provide stability against wind loading. These should be used from a point 1 metre below the last point of lateral support.

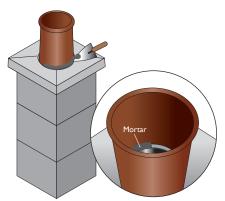
Reinforcement bars should be used instead of the plastic connectors for chimney stacks over 1.2m high. (see p. 17)



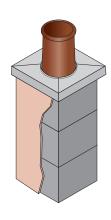
2. Place the coping on a bed of mortar on top of the DPC coping tray.



**3.** Place the chimney pot on the coping ensuring the space between the pot and coping is sealed with mortar or other non-porous material

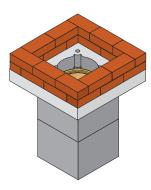


4. Finally apply an exterior waterproof render.



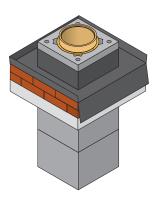
#### **BRICK STACK**

1. A corbel is required for brick or block cladding. This give a stack of  $675 \text{mm} \times 675 \text{mm}$  or 3 bricks by 3 bricks.

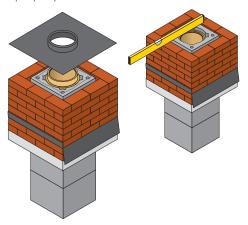


2. Continue to build the chimney block on the corbel. Keep the cavity between the block and outer skin clear of mortar. A chimney tray is recommended for brick clad stacks. Fit the chimney tray over the chimney block and let it rest on the bricks as shown with the apron on the slope side. Wall weeps should be put into the brick joints to ventilate and remove any trapped moisture.

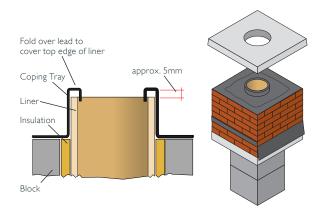
Chimney Trays are an additional option and can be produced to specific requirements.



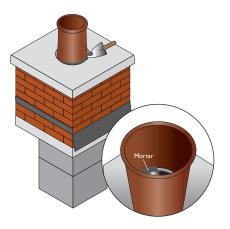
3. Before placing the coping tray into position, ensure the chimney block and the outer skin are at the same level at the top of the stack. Place the coping tray into position on a bed of mortar and ensure the gap between chimney block and outer skin is sealed properly.



**4.** Place the coping on a bed of mortar on top of the DPC coping tray.



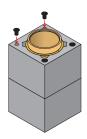
5. Place the chimney pot on the coping ensuring the space between the pot and coping is sealed with mortar or other non-porous material. Also inside the chimney pot seal the space between the pot and expansion plate with mortar or other non-porous material.



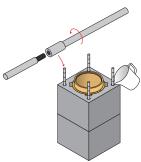
#### **REINFORCING BARS**

Reinforcement bars should be used instead of the plastic connectors for chimney stacks over 1.2m high. The bars must start 1m below the last point of lateral support.

1. Start by inserting the plastic stoppers into the holes on the block before the first one with bars.



2. Screw the bars together and inset equal lengths into the 4 holes. The liquid grouting mortar should be poured into the reinforcing channels. Keep the reinforcing bars centred.



#### AFTER COMPLETION

After installation is complete tests and checks should be carried out in accordance with document J of the Building Regulations. A chimney notice plate must be completed and permanently fixed in the dwelling, ideally near the electrical consumer unit. The checklist and notice plate are available from Schiedel.

#### **USE AND MAINTENANCE**

The chimney should be left for at least 72 hours before use, then start only with small fires for the first week and gently increase thereafter.

The chimney should be swept at least twice a year, once before the heating season and once after the heating season. You may need to sweep during the heating season depending upon use. The brush should be a medium density polypropylene bristle type and should be the same diameter as the flue. Steel brushes must not be used to sweep the flues.

Always follow the appliance manufacturer's operating instructions. Always burn approved fuels or dry seasoned wood. Avoid burning unseasoned wood and slow burning of solid fuels as this can produce excessive soot and condensation which in turn cause soot fires and damage. If correctly installed, operated and maintained these systems should last the life of the dwelling.

### Schiedel Swift Air Chimney System Concept

Manufactured to EN13063-1: 2003-8

In an A rated house the combustion air required for wood burning appliance like a stove burning logs or wood pellets must be supplied directly to the stove from outside the house. These appliances are called room sealed as they are manufactured not to take air from the room. The Schiedel Swift Air provides all the benefits of the Schiedel Swift and in addition neatly and simply delivers the external air to the stove.

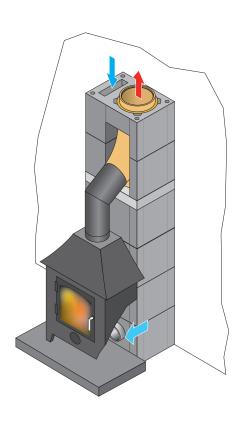
The alternative to Schiedel Swift Air is low level or under floor ducting ideally with air supplies from opposite sides of the house.

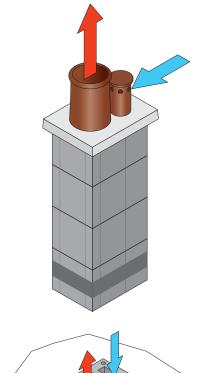
The Schiedel Swift Air solution avoids this by ducting the air through an external air shaft in the chimney.

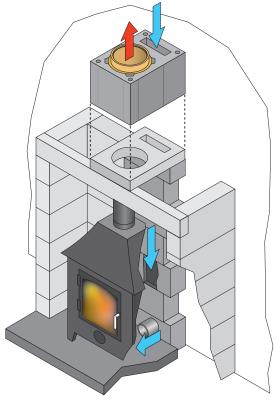
Available in 150mm, 180mm and 200mm internal flue diameters. The size of the chimney block is the same for each flue diameter - 500mm  $\times$  360mm  $\times$  330mm high.

#### TWO OPTIONS ARE AVAILABLE

- Recess Stove
- Free Standing Stove or Boiler



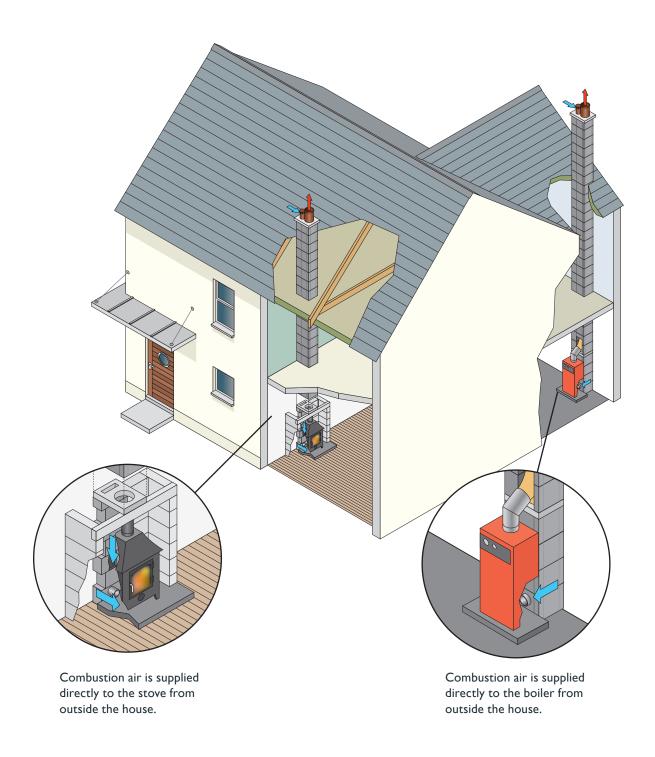




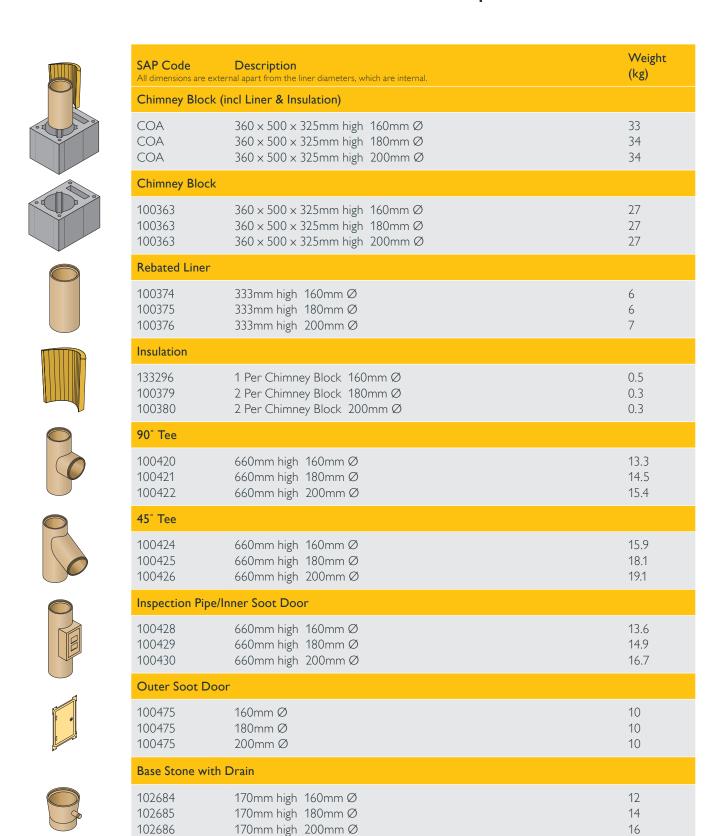
### Schiedel Swift Air in an Energy Efficient House

The heated air circulates within the house. The stove and the boiler do not take air from inside the house so no warm air is lost through the chimneys.

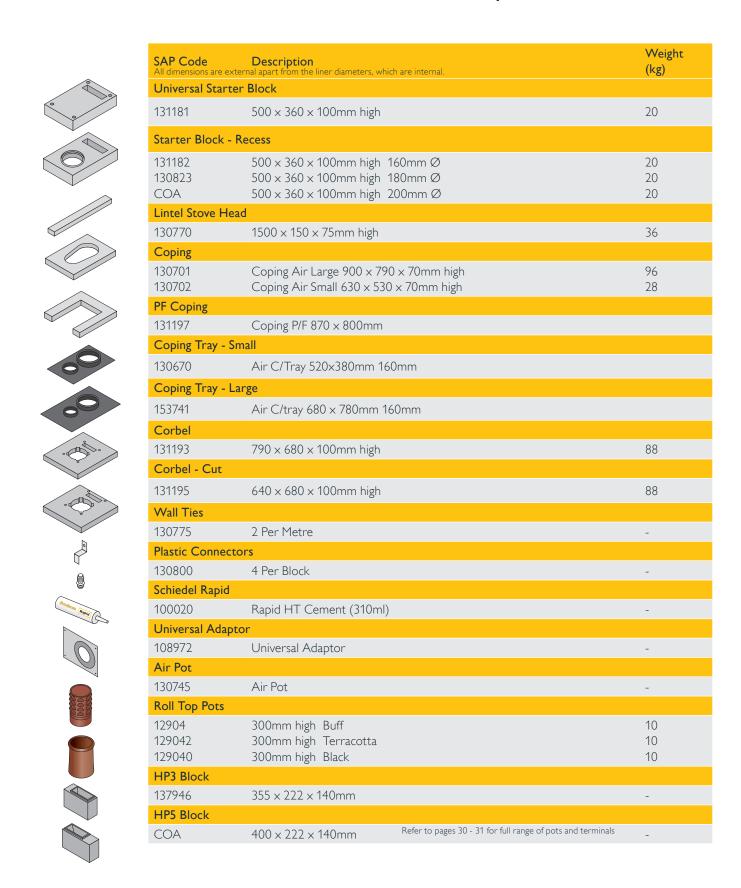
- Schiedel, enabling energy efficiency.



### Schiedel Swift Air Components



### Schiedel Swift Air Components



#### **BUILDING REGULATIONS**

The construction and application of chimneys and flues is covered by Building Regulations in conjunction with the relevant European Standards. Whilst these differ in emphasis, they all mandate the safe application of the chimney no matter where and how used. These Regulations and Standards dictate the minimum criteria which it is necessary to apply if the chimney or flue is to function safely and correctly.

Building control approval is necessary for building new chimneys and in some cases for relining old chimneys particularly if some alteration or change of the heating appliance occurs. The appropriate Regulations and Standards are listed below.

#### England & Wales:

Building Regulations Approved Document J

#### Scotland:

Building Regulations Technical Standards

#### Northern Ireland:

Building Regulations Technical Booklet L

#### Republic of Ireland:

Building Regulations Technical Guidance Document J

#### **FLUE SIZING**

It is important to match the internal diameter of the flue with the outlet on the appliance. It should never be less than the outlet diameter of the appliance. The appliance manufacturer's chimney sizing recommendations should always be followed.

For open fires with a standard fire opening up to 500mm wide by 550mm high the minimum required flue diameter is 200mm round or 175mm square. For larger open fires, such as inglenooks, dog grate installations or special appliances and stoves designed to operate with a fire opening greater than 500mm × 550mm, the flue size should be at least 15% of the free unobstructed area of the fire opening (including sides if open). Many Decorative Fuel Effect gas fires (DFE's) that imitate a coal or log burning open fire require the same chimney arrangement as for solid fuel open fires and must be installed in accordance with respective local building regulations

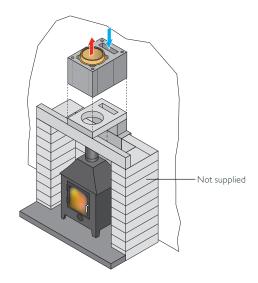
#### **FOUNDATIONS**

Construction begins by providing a suitable foundation and constructional hearth in accordance with Building Regulations and site requirements.

#### **RECESSED STOVE OPTION**

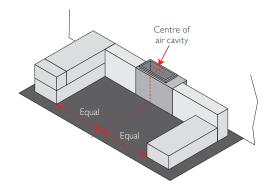
The Schiedel Air System is a specially designed balanced flue that connects a Room Sealed Appliance to fresh air and enables combustion gases to escape safely. Therefore, in the majority of installations there is no need for air vents to be provided for the appliance.

1. The recess height and width are open to personal choice depending on the size of the heating appliance. The components provided allows for an opening of H1200mm × W900mm. If a wider opening is required you will need to source a longer lintel which must be certified to span the width of the recess and support 2,100kg. An additional lintel may be added to make the recess deeper as required.



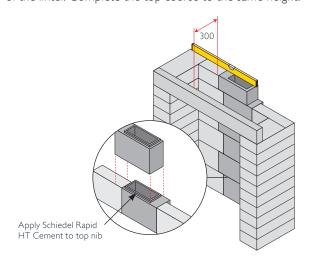
2. Lay a damp proof course. Place the air block on a mortar bed and start to build the recess. The air block is 140mm deep, either use a block this deep or build a standard block flush with the front of the air block and leave a gap to the rear.

Mark the centre of air cavity on the front of the air block and place in centre of recess. The air block can be built tight against the wall. If timber frame construction, attach the plasterboard before constructing the recess and the chimney.



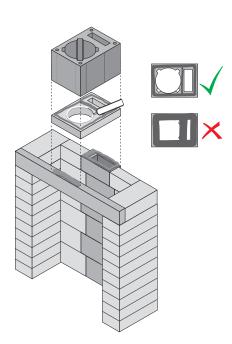
3. Build up the Air Block, (HP3), in line with standard block, alternating on each row to ensure the block will 'tie in' and form a staggered joint. Ensure the joints are completely sealed and the air cavity is kept clear of access mortar.

Once the desired height is reached add the lintel to the front of the recess. If necessary cut the top air block to sit level with top of the lintel. Complete the top course to the same height.



**4.** Lay a bed of mortar on lintel and air block. Place starter block on top of lintel and back wall, align the rectangular hole to the back so it matches with hole in the air block. Ensure that the joint between the air block and the support block is sealed with mortar. Run a bead of high temperature cement around the flue aperture on the support block.

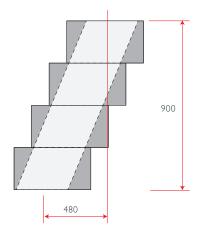
Place the first chimney block on the support block. Wipe away any excess and mortar, particularly in the air chamber as you do not want to restrict the flow of air.



#### **OFFSETS**

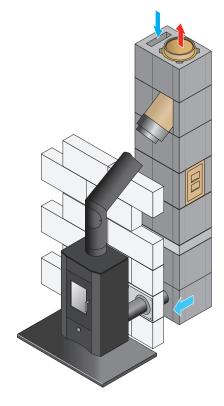
There is no bend kit available for the Schiedel Air System however, an offset can be obtained by using the HP5 block within the stove recess. Each HP5 block has an offset of 120mm.

#### TYPICAL OFFSET USING HP5 BLOCKS

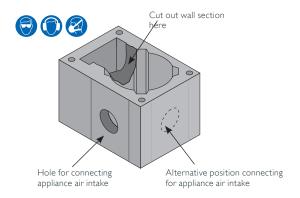


#### FREE STANDING STOVE OPTION

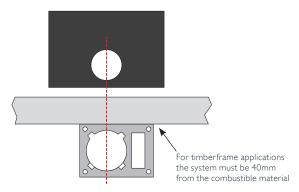
With a Free Standing stove, the chimney will not be positioned above the appliance. It is then necessary to provide a cleaning access and debris removal area. If it is a condensing appliance, a base stone can be used to collect the condensate. Provision should be made for the proper disposal of condensate.



- 1. Core drill a suitable diameter hole in accordance with the appliance manufacturer's instructions.
- 2. Cut out a section of wall between the air gap and the flue section in the first block no smaller than the cross-sectional area of the air channel. This allows the air intake to be placed at front or side of the block.

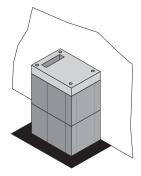


3. Ensure the exhaust outlet of the appliance is aligned with the junction pipe of the chimney.

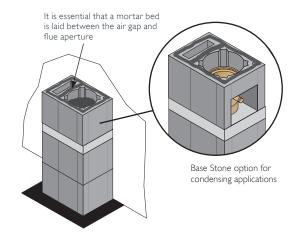


**4.** Lay a damp proof course. Lay a bed of mortar and place the chimney block with the removed section into desired position. Add the required number of additional chimney blocks (refer to table on page 25) depending on how high the connecting tee needs to be to suit your appliance.

Place the universal starter block on a bed of mortar on top of this chimney block. Line up the air gap in the block with the air gap in the support block.

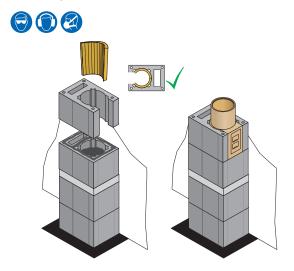


**5**. Apply a bed of mortar to the top of the universal starter block and place another chimney block.



**6.** Fill in the bottom half of the chimney shaft with mortar so as to allow for the inspection pipe to sit into. This will mean only having to cut one chimney block to accommodate the inspection pipe.

For condensing appliances you will need to use a base stone in place of the mortar to allow for the condensate to be drained off and disposed of.



7. Place the next cut chimney block on a bed of mortar. (A cardboard cutting template is supplied on the front of the inspection door)

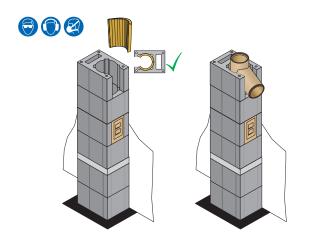
It is essential that a mortar bed is laid between the air gap and flue aperture. bend the insulation around the inside of the chimney block. Once fitted, cut the insulation along the ventilation channel.

8. Put a bead of high temperature cement around the bottom rebate of the inspection pipe, place it in the chimney block (socket uppermost).

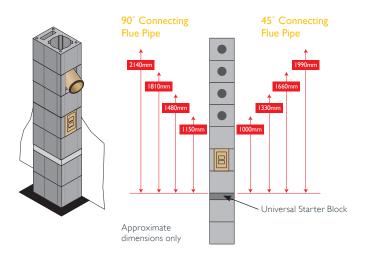
- 9. Place a standard chimney block on a bed of mortar. Bend and insert insulation. Next place the final cut block on a bed of mortar. (A cardboard cutting template is supplied on the front of the inspection door)
- 10. Bend and place the insulation around the inside of the cut block and cut along the ventilation channel. Apply high temperature cement to the socket end of junction pipe and place into block.

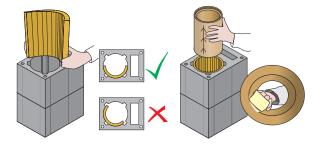
12. Bend the two pieces of insulation into the block. It is important the insulation is fitted as inset illustration to avoid the insulation going into the moulded recess within the chimney block.

Place the flue liner into the chimney block, with the female rebate facing upwards. Arrows on each flue liner indicate the directional flow of flue gases. Continue to apply high temperature cement to each flue liner, cleaning any access material from the joints.

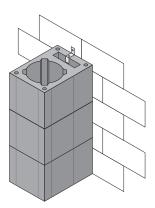


**11.** Add a standard block on a bed of mortar. Fit insulation around the junction pipe.

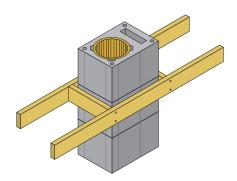




13. The chimney blocks should be tied every metre to a structural wall with the supplied masonry/steel frame ties. Standard timber frame ties should be used in timber frame construction.



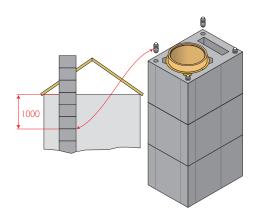
14. Where the chimney passes through floor or ceiling joists, these need to be trimmed out leaving a gap of 40mm for timber and 30mm for concrete. This gap is then filled with noncombustible material.



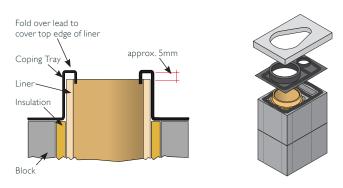
#### **RENDERED STACK**

1. Continue to build the chimney as a single block to the stack. Special plastic connectors are inserted in all 4 corners of the chimney block to provide stability against wind loading. These should be used from a point 1 metre below the last point of lateral support.

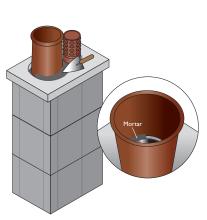
Reinforcement bars should be used instead of the plastic connectors for chimney stacks over 1.2m high. (see p. 27)



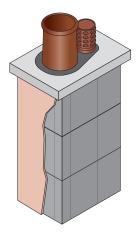
2. Place the coping on a bed of mortar on top of the DPC coping tray.



**3.** Place the chimney pot on the coping ensuring the space between the pot and coping is sealed with mortar or other non-porous material

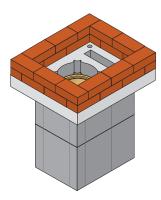


4. Finally apply an exterior waterproof render.



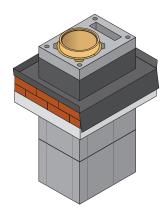
#### **BRICK STACK**

1. A corbel is required for brick or block cladding. This give a stack of  $790 \text{mm} \times 680 \text{mm}$  (3 bricks by 3.5 bricks).

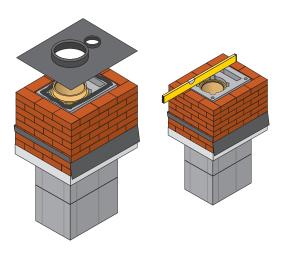


2. Continue to build the chimney block on the corbel. Keep the cavity between the block and outer skin clear of mortar. A chimney tray is recommended for brick clad stacks. Fit the chimney tray over the chimney block and let it rest on the bricks as shown with the apron on the slope side. Wall weeps should be put into the brick joints to ventilate and remove any trapped moisture.

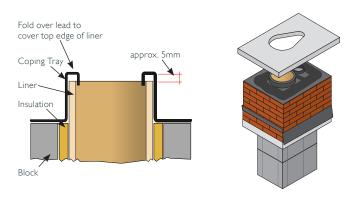
Chimney Trays are an additional option and can be produced to specific requirements.



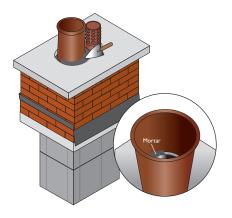
3. Before placing the coping tray into position, ensure the chimney block and the outer skin are at the same level at the top of the stack. Place the coping tray into position on a bed of mortar and ensure the gap between chimney block and outer skin is sealed properly.



**4.** Place the coping on a bed of mortar on top of the DPC coping tray.



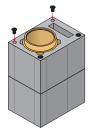
5. Place the chimney pot on the coping ensuring the space between the pot and coping is sealed with mortar or other non-porous material. Also inside the chimney pot seal the space between the pot and expansion plate with mortar or other non-porous material.



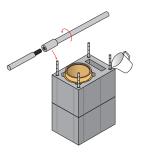
#### **REINFORCING BARS**

Reinforcement bars should be used instead of the plastic connectors for chimney stacks over 1.2m high. The bars must start 1m below the last point of lateral support.

**1.** Start by inserting the plastic stoppers into the holes on the block before the first one with bars.



2. Screw the bars together and inset equal lengths into the 4 holes. The liquid grouting mortar should be poured into the reinforcing channels. Keep the reinforcing bars centred.



#### AFTER COMPLETION

After installation is complete tests and checks should be carried out in accordance with document J of the Building Regulations. A chimney notice plate must be completed and permanently fixed in the dwelling, ideally near the electrical consumer unit. The checklist and notice plate are available from Schiedel.

#### **USE AND MAINTENANCE**

The chimney should be left for at least 72 hours before use, then start only with small fires for the first week and gently increase thereafter.

The chimney should be swept at least twice a year, once before the heating season and once after the heating season. You may need to sweep during the heating season depending upon use. The brush should be a medium density polypropylene bristle type and should be the same diameter as the flue. Steel brushes must not be used to sweep the flues.

Always follow the appliance manufacturer's operating instructions. Always burn approved fuels or dry seasoned wood. Avoid burning unseasoned wood and slow burning of solid fuels as this can produce excessive soot and condensation which in turn cause soot fires and damage. If correctly installed, operated and maintained these systems should last the life of the dwelling.

## Chimney Pots & Accessories

	SAP Code All dimensions are exte	Description ernal unless otherwise stated	Weight (kg)
	Roll Top Pots		
	129041 129373 129753 130155 COA COA 129042 129374	300mm high Buff 375mm high Buff 450mm high Buff 600mm high Buff 750mm high Buff 900mm high Buff 300mm high Terracotta 375mm high Terracotta	10 12.7 15.4 20.4 25.4 30.3 10 12.7
	129754 130156 130447 130658 129040 129372 129752 130154 130446 130657	450mm high Terracotta 600mm high Terracotta 750mm high Terracotta 900mm high Terracotta 300mm high Black 375mm high Black 450mm high Black 600mm high Black 750mm high Black	15.4 20.4 25.4 30.3 10 12.7 15.4 20.4 25.4 30.3
	Cannon Head Po	ots	
	COA 129729 130135 COA 129728 130136 COA 129727 130134	300mm high Buff 450mm high Buff 600mm high Buff 300mm high Terracotta 450mm high Terracotta 600mm high Terracotta 300mm high Black 450mm high Black 600mm high Black	10.6 12.7 50.4 10.6 12.7 50.4 10.6 12.7 50.4
~~	Rook		
	129929 129930 129928	500mm high Buff 500mm high Terracotta 500mm high Black	16.8 16.8 16.8
	130138 130139 130137	600mm high Buff 600mm high Terracotta 500mm high Black	25.4 25.4 25.4
	Octagon Pot 340		
	130149 130150 130148 130441 130442 130440	600mm high Buff 600mm high Terracotta 600mm high Black 750mm high Buff 750mm high Terracotta 750mm high Black	29.6 29.6 29.6 33.5 33.5 33.5
	Octagon Pot 300		
	130152 130153 130151 130444 130445 130443	600mm high Buff 600mm high Terracotta 600mm high Black 750mm high Buff 750mm high Terracotta 750mm high Black	26.7 26.7 26.7 31.3 31.3 31.3

### Chimney Pots & Accessories

SAP Code All dimensions are exter	<b>Description</b> rnal unless otherwise stated	Weight (kg)
Hood Top		
127067 127073 127072	190mm high Buff 190mm high Terracotta 190mm high Black	12 12 12
Mushroom Top		
127075 127076 127074	190mm high Buff 190mm high Terracotta 190mm high Black	10 10 10
Flue Ventilator		
127078 127079 127077	190mm high Buff 190mm high Terracotta 190mm high Black	10 10 10
GC2 Insert		
COA 127066 127065	190mm high Buff 190mm high Terracotta 190mm high Black	14 14 14
Plain Ridge		
COA COA	450mm Buff 450mm Terracotta 450mm Black	8 8 8
Roll Top Ridge		
COA COA	450mm Buff 450mm Terracotta 450mm Black	11 11 11
Capped Angle Ric	dge	
COA COA	450mm Buff 450mm Terracotta 450mm Black	10 10 10
Club Crested Rid	ge	
COA COA	300mm Buff 300mm Terracotta 300mm Black	7 7 7
Firebrick		
112562 115281 130769	230 ×114 × 25mm 230 ×114 × 50mm 230 ×114 × 76mm	1.4 2.8 4.2
Reinforcing Bars		
130801	1 metre each	-
Chimney Holder		
100514		-

### Complementary Products and Services from Schiedel Chimney Systems



The NEW highly Insulated Twin Wall System Chimney for traditional stoves, pellet stoves, biomass appliances, mini/micro CHP and condensing boilers capable of withstanding positive pressure.

- · Easy twist lock connection
- Effective insulation
- 100-200mm Internal diameter range



#### **PRIMA PLUS**

Single Wall Stainless Steel Flue System

- Prima Plus available 0.6mm or 1mm options for domestic multi-fuel stoves
- Prima Plus for large residential & commercial condensing gas & oil appliances & chimney relining
- 80-300mm Diameter range



#### TECNOFLEX PLUS

For relining existing chimneys to take gas, oil, wood, multi-fuel appliances and open fires.

- Twin skin TecnoFlex Plus available in 316L or 904L options for oil, wood, multi-fuel & open fires
- 80-300mm Diameter range



Twin Wall Insulated System Chimney for gas, oil and multi-fuel applications.

- Simple push-fit jointing system
- High efficiency Superwool insulation blanket
- Capillary break prevents moisture being drawn
- 80-300mm Diameter range



#### **IGNIS-PROTECT**

Designed specifically for Air Tight, Energy Efficient and Timber Framed Buildings

- Suitable for SW and DW connecting flue pipes passing through interior or exterior walls made of combustible materials

  • Available in both 90° and 45° version



#### **DM & LINERS**

Pumice System Chimneys, Firechests and Liners.

- Pumice is a natural insulator, able to maintain the temperature of flue gases
- Lightweight allowing one person to lift and build the chimney units
- Pumice expands and contracts less with temperature change than other chimney systems.



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#### SCHIEDEL INSTALLER REWARDS

Exciting news from Schiedel Chimney Systems! Whenever you register an installation with our easy to use, online guarantee registration portal, you will now accrue points based on the number of installations and installation type to redeem for Love2Shop vouchers!



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