

ICS

80-300mm Diameter Range
Twin Wall Insulated System Chimney for
Gas, Oil, Wood and Multi-fuel Applications



**UPDATED
RANGE!**

from diameters
80-300mm



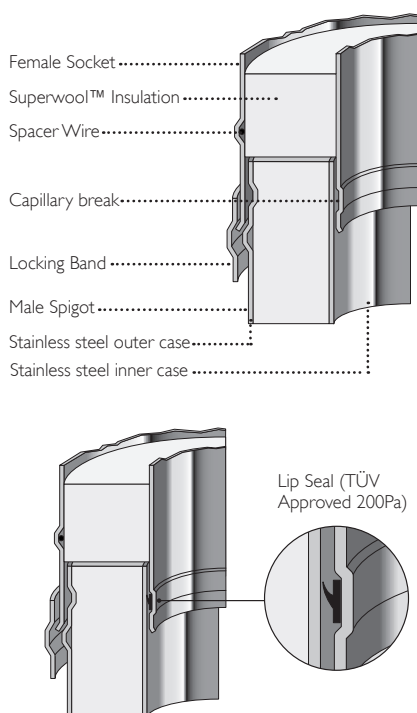
Application

ICS is a twin wall insulated chimney system for use on open and closed stoves, open fires, residential and small commercial multi-fuel appliances, with continuous operating temperatures up to 450°C and short firing up to 550°C.

ICS Plus ICS is converted into ICS Plus by adding a lip seal to each component with a male form on the liner (see ICS Plus diagram below). This creates a twin wall insulated chimney system designed for the new generation of condensing gas and oil appliances, with continuous operating temperatures up to 200°C, short firing up to 250°C, and positive pressure up to 200Pa at the appliance outlet.

Other ICS Ranges For larger commercial and industrial applications of ICS in diameters 350mm to 700mm please refer to our separate sales brochure. For higher pressure applications up to 5000Pa e.g. generators, combustion and process equipment, please see the commercial brochure.

Product Description



ICS PRODUCT FEATURES

- Simple push-fit jointing system, secured by locking band.
- Advanced corrosion resistant design and construction uses laser welded 316L stainless steel inner liners and stainless steel case. The only stainless steel system to have passed the internationally recognised GASTEC corrosion test.
- The jointing system increases rigidity and ensures easy draindown of any condensate in the flue.
- Capillary break prevents moisture being drawn through the joint.
- Because of the sleeve joint, the insulation in the pipe is able to be continuous over the length of the system ensuring no hot spots.
- The 25mm high efficiency Superwool™ blanket maintains flue gas temperature, maximising efficiency, improving flue draught on start up and minimises condensation.
- Low external case temperature.
- The assembly method allows the inner liner to expand and contract with temperature at the female end. The flue can withstand the temperatures of a soot fire without losing the integrity of the joints.
- Generous lead-in edges on liner and case for ease of jointing.

ICS PLUS PRODUCT FEATURES

- ICS Plus for condensing appliances is created by adding a lip seal gasket that can maintain positive pressure up to 200Pa. All the design and construction benefits of ICS apply.

Approvals



ICS is CE Certified to EN1856-1 TÜV 0036 CPR 9195 001 with designations:

ICS is CE Certified to EN1856-2 TÜV 0036 CPR 9195 041 with designations:

System Chimney EN1856-1		
T450 NI WV2 L50050 G60 T450 NI DV3 L50050 G60 60mm Distance to combustibles in a combustible shaft*	T450 NI WV2 L50050 G50 T450 NI DV3 L50050 G50 50mm Distance to combustibles in a non combustible shaft or in free air*	T200 PI WV2 L50050 O00 Zero distance to combustibles*
Connecting Flue Pipe EN1856-2		
T450 NI D V2 L50050 G100 M		

* For full information please see p.22 - Distance to combustibles section

- Kitemarked to BS4543 Parts 2 & 3 for gas, oil and solid fuel (Ø 80mm - 200mm inclusive)
- Manufactured under a Quality Management Scheme approved to BS EN ISO 9001
- 4 Hour Fire Rating to BS476 Part 20
- Certified for corrosion resistance on gas, oil and solid fuel by Gastec, MPA and TÜV
- HETAS listed for use on solid fuel applications.

Corrosion Resistance

Chimneys are subject to significant corrosion attack by flue gas condensates, particularly from solid fuel and condensing appliances. ICS is specifically designed and manufactured to resist this corrosion. It is the only stainless steel chimney system in the world to have passed the internationally recognised Gastec corrosion test.

Flue Size Selection Guide

The chimney size should be as recommended by the appliance manufacturer. Where there is a requirement for a flue diameter smaller than the appliance spigot, then the operational requirements of the appliance and the configuration of the flue must satisfy the flue sizing requirements of I3384-1 (single appliances) and I3384-2 (multi appliances). For more information contact the installer helpline (0191 416 6666). The information and sizes below are provided as a nominal guide only. Flue sizing for appliances, particularly commercial/industrial applications, will vary depending on siting details and appliance manufacturer's instructions and design criteria. These will override the sizing guide and reference must be made to appliance manufacture. For Inglenook and nonstandard openings, the diameter of the flue must be at least 15% of the cross sectional area of the fireplace opening.

	80 mm	100 mm	130 mm	150 mm	180 - 300mm
Gas - Atmospheric Boiler					
Input up to 25kW		•			
Input 25kW to 40kW			•		
Input 40kW to 60kW				•	
Gas - Commercial/Ind. Boiler					
Input 50kW to 70kW					•2
Gas Fires					
'Radiant' to BS7977-1 2002			•		
'Inset' to BS7977-1 2002			•1		•1
'Backboiler' to BS7977-2 2003			•		
Gas Water Heaters					
Input up to 25kW	•	•			
Input 25kW to 55kW			•		
Input 55kW to 60kW				•	
Input over to 60kW					•2
Gas Warm Air Unit					
Input up to 18kW		•			
Input 18kW to 35kW			•		
Input 35kW to 60kW				•	
Input over to 60kW					•2
Gas Stove/Cooker		•2	•2	•2	
Kerosene (28sec Class C2)					
Heating Boiler					
Output up to 25kW		•			
Output 25kW to 45kW			•		
Output 45kW to 70kW				•	
Kerosene Stove/Cooker		•3	•3	•3	
Kerosene Water Heater					
Input up to 41kW				•	
Kerosene Visual Effect Stove					
Output up to 17kW		•3	•3		

Notes:

- 1 Subject to appliance manufacturer's testing criteria.
- 2 Subject to manufacturer's input rating and chimney height.
- 3 Subject to manufacturer's output rating and chimney height.
- 4 Min 300mm depending on opening, chimney size and height.
- 5 Smokeless fuel only.
- SC Smokeless fuel or coal.

Technical Data

	ICS	ICS Plus
Fuel	Gas, Oil, Wood, Coal	Gas, Oil
Firing Temp	450°C	200°C
Short Firing Temp	550°C	250°C
Thermal Shock	1000°C	-
Mode of Operation	Zero & Negative Pressure	Positive Pressure
Pressure Capabilities	40Pa	200Pa
Fire Rating	4 Hour Fire Rating to BS 476 Part 20	
Outer Case (Standard)	Stainless Steel	
Outer Case (Option)	Galvanised	
Outer Case Thickness	0.6mm	
Seam	Laser or inert gas welded	
Liner	316L : 1.4404 : X2CrNiMo 17-12-2	
Liner Thickness (mm)	0.5mm	
Seam	Laser or inert gas welded	
Insulation	High Performance Mineral Fibre	
Insulation Thickness	25mm	
Average Thermal Resistance (200°C)	0.4m² kW	

	100 mm	130 mm	150 mm	180 mm	200 mm	230 mm	250 mm	300 mm
Gas Boiler - Forced Draught								
Input up to 25kW	•							
Input 25kW to 45kW		•						
Input 45kW to 50kW			•					
Input 50kW to 75kW				•				
Input 75kW to 100kW					•			
Input over to 100kW						•	•2	
Gas Fires								
'Inset' to BS7977-1 2002				•1				
'Decorative' BSEN 509:2000				•				
Gas Oil (35sec Class D)								
Heating Boiler								
Output up to 25kW	•							
Output 25kW to 45kW		•						
Output 45kW to 70kW			•					
Output 70kW to 100kW				•				
Output over 100kW					•3	•3	•3	
Solid Fuel								
Heating Boiler								
Input up to 20kW			•S	•SC				
Input 20kW to 30kW				•S	•SC	•SC		
Input 30kW to 60kW					•SC	•SC	•SC	
Open Fires (standard opening)								
500mm x 550mm					•200mm	•	•	
Avant Garde Feature Open Fires							•4	
Room Heaters		•S						
Wood Burning Stoves & Cookers Use only seasoned wood.		•1	•	•	•	•	•	
Inglenook/ non-standard opening Flue size dependant on cross-sectional area of fireplace opening.						•230mm	•	

Notes:

- 1 Subject to appliance manufacturer's testing criteria.
- 2 Subject to manufacturer's input rating and chimney height.
- 3 Subject to manufacturer's output rating and chimney height.
- 4 Min 300mm depending on opening, chimney size and height.
- 5 Smokeless fuel only.
- SC Smokeless fuel or coal.

System Design

OUTLET SITING

Flue terminations for solid fuel & oil are subject to EN15287-1 2007. Figures A and B illustrate recommendations for the most commonly encountered outlet terminations. Flue terminations for gas in domestic situations are governed by the BS5440-1 2008 Section 4.2. Figure C illustrates recommendations for the most common siting situations encountered. Adjacent taller structures may require increased height. The minimum flue projection through the roof is 600mm to the underside of the terminal.

LOCATION OF OUTLET

Fig. A

Outlet siting for Oil Appliances (<45kW)

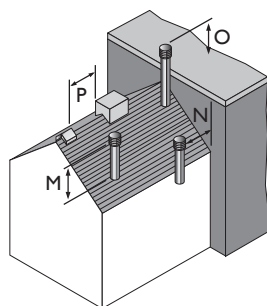
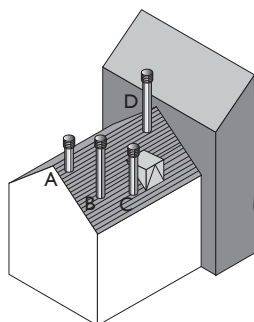


Fig. B

Outlet siting for Solid Fuel Appliances (<50kW)



Outlet siting for Oil Appliances (<45kW)

Location of outlet	Pressure Jet Burner	Vapourising Burner
M Above the highest point of an intersection with the roof	600mm	1000mm
N From a structure to the side of the terminal	750mm	2300mm
O Above a vertical structure which is less than 750mm (pressure jet burner) or 2300mm (vapourising burner) horizontally from the side of the terminal	600mm	1000mm
P From a ridge terminal to a vertical structure on the roof	1500mm	Should not be used

FLUE ROUTING

The chimney should remain as straight as possible through its vertical run to assist flow. Should it be necessary to offset a chimney run the following guidelines should be adhered to:

It is recommended that a vertical rise of 600mm should be allowed immediately above the appliance before any change of direction. Within a system, on all fuels, there should be no more than 4 changes of direction of maximum 45°.

90° Factory made bends or tees within the system may be treated as being equal to two 45° bends (see Document J of the Building Regulations issued October 1st 2010).

TERMINAL TYPES

On solid fuel appliances, an open termination is normally recommended. However in certain conditions, rain caps or anti-downdraught terminals may be used.

Rain caps and anti-downdraught terminals are available in two versions, with anti bird mesh and without mesh. Where a terminal with mesh is used, there is a risk of soot build up, and therefore regular cleaning is required to avoid blockage, particularly when using oil or solid fuel.

PROVISION FOR SWEEPING, CLEANING & MAINTENANCE

Provision should be made for inspecting and cleaning the chimney. 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 solid fuel applications. It is recommended that chimneys serving solid fuel appliances be swept as frequently as necessary but at least twice a year. Choose an access component suitable for your installation unless cleaning/inspection can be done through the appliance.

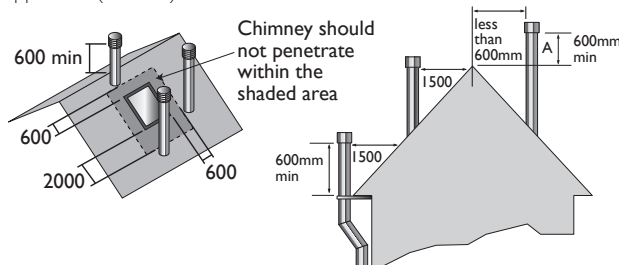
Outlet siting for Solid Fuel Appliances (<50kW)

Point where flue passes through weather surface (Notes 1, 2)	Clearance to flue outlet
A At or within 600mm of the ridge	At or within 600mm above the ridge
B 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
C Below (on a pitched roof) or within 2300mm horizontally to an openable rooflight, 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

1. The weather surface is the building external surface, such as its roof, tiles or external walls.
2. A flat roof has a pitch less than 10°.
3. The clearance for A or B, as appropriate, will also apply.
4. A vertical flue fixed to an outside wall should be treated as equivalent to an inside flue emerging at the nearest edge of the roof.

Fig. C

BS 5440-1 Outlet siting for Gas Appliances (<70kW)



ROOM VENTILATION

The room carrying the appliance should have an air vent either direct to an external air source or vented into a room that has an external vent direct to an air source. This is required to provide adequate air supply to allow the appliance and flue to operate efficiently. These requirements are specified in the Building Regulations (Document J) also by CIBSE and BS5440.

COMMERCIAL INSTALLATIONS

Schiedel Rite-Vent can provide a full design & flue sizing advice service for commercial installations. The ICS range contains all the required components for commercial use including time-saving telescopic header tees for increasingly popular multi-boiler installations.

PROVISION FOR CONDENSATE DISPOSAL

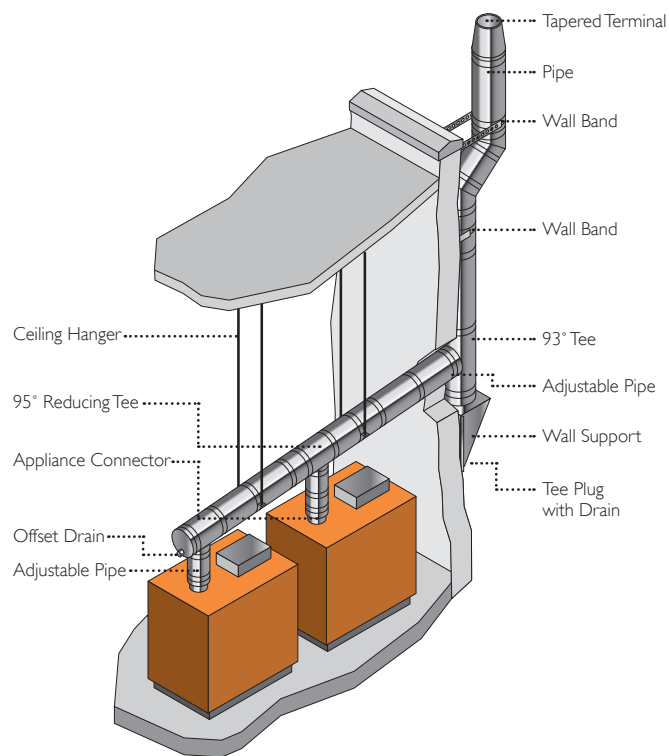
(subject to appliance manufacturer recommendations)

Normally solid fuel and atmospheric gas and oil appliances will not need a drain unless rain ingress is significant. Most condensing appliances however need provision for drainage. As a rule of thumb a condensing boiler produces 1 to 1.5 litres of condensate per hour per 10kW of input.

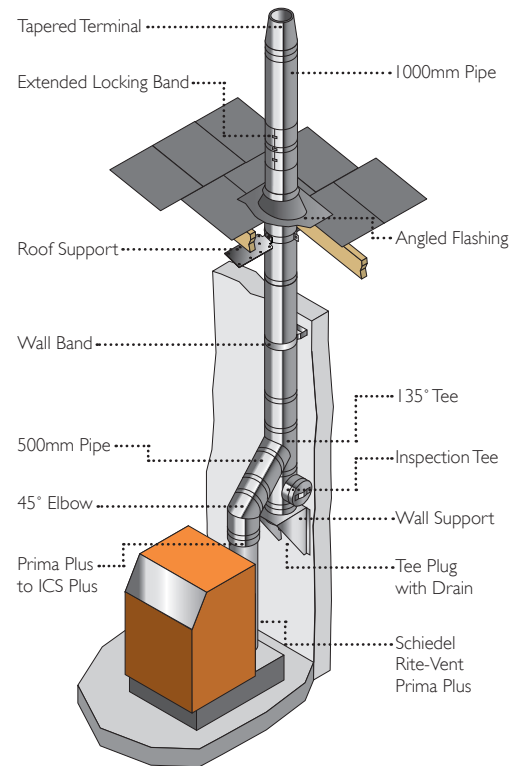
This is a significant amount of acidic liquid which must be drained from the system. Choose appropriate flue drainage components, normally fitted at the base of the stack and close to the appliance outlet.

On high efficiency or on condensing systems, a 3° slope on horizontal runs is advised, using the appropriate 87° bend and 93° tee.

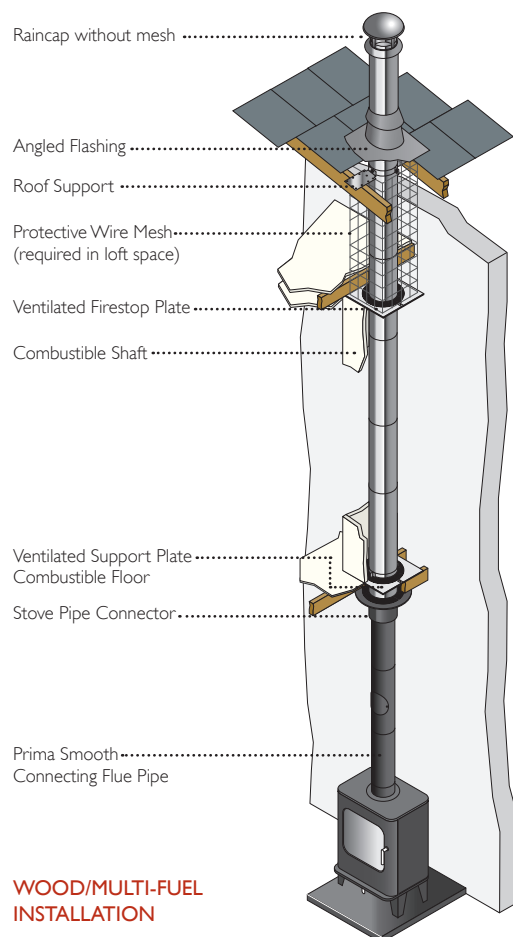
Typical Installations



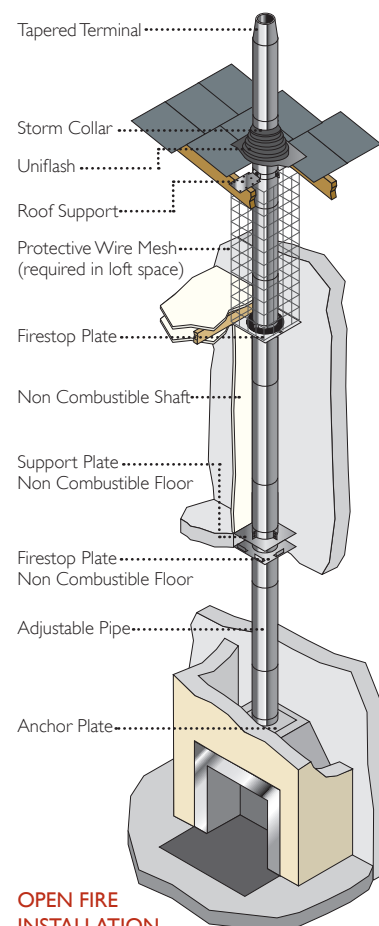
**TYPICAL CONDENSING BOILER
INSTALLATION USING ICS PLUS**



**TYPICAL
INSTALLATION USING ICS PLUS**

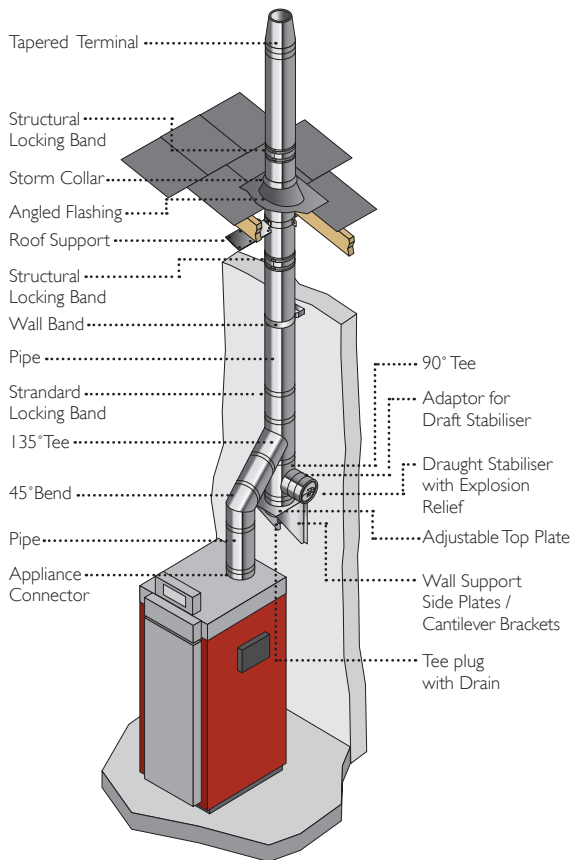


**WOOD/MULTI-FUEL
INSTALLATION**

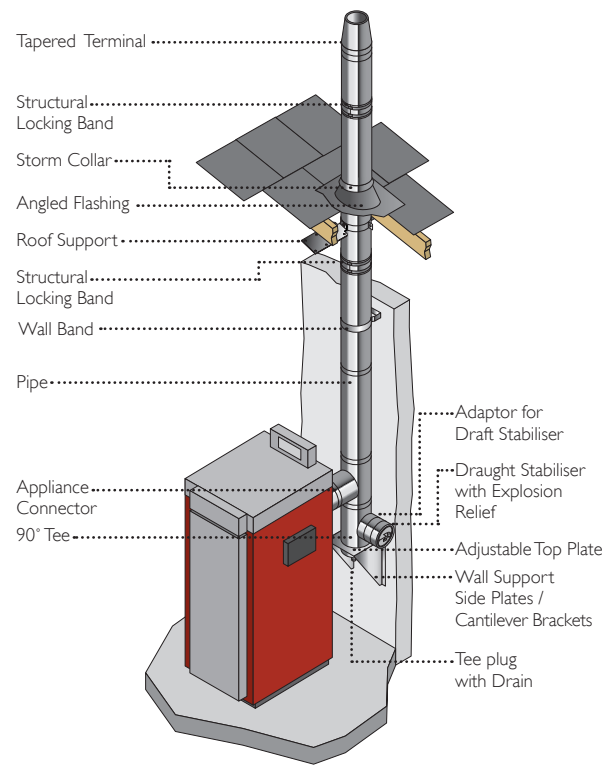


**OPEN FIRE
INSTALLATION**

Typical Installations



TYPICAL BIOMASS INSTALLATION FROM TOP OUTLET USING ICS SYSTEM CHIMNEY



TYPICAL BIOMASS INSTALLATION FROM REAR OUTLET USING ICS SYSTEM CHIMNEY WITH 90° TEE SOLUTION

Product Ordering

The SAP codes shown in the tables next to each component should be used to order materials.

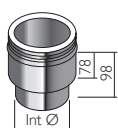
ICS Plus

ICS components are converted to ICS Plus components by adding a gasket to each component. When ordering ICS Plus, order the internal diameter sized gasket for each component. Some components are specifically manufactured for condensing appliances. The code for these are prefixed with 'DF'.

Finish

ICS & ICS Plus can be supplied painted in any RAL colour (additional costs apply).

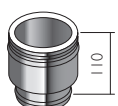
Starting Components



Appliance Connector

ICS J2147

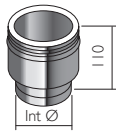
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	148384	148385	110916	111158	111468	111593	111960	112147	112636



Connector - Prima Plus to ICS

ICS S068

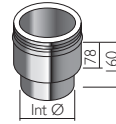
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	148399	148400	101178	101179	101180	101181	101360	101182	101183



Connector - Prima Smooth to ICS
Increasing Connector Prima Smooth to ICS*

ICS PS068

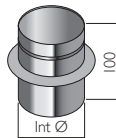
Int Ømm	80	100	125	125*	150	180	200	230	250	300
Ext Ømm	130	150	180	200	200	230	250	280	300	350
SAP Code	-	-	125388	145505	126291	134132	144449	-	-	-



Biomass Appliance Connector

ICS J21F8

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	-	-	125610	126139	-	-	-	-	-



Starting Connector

ICS J2169

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	148382	148383	110293	110509	110771	110921	111325	111519	112111



Adaptor - ICS to Prima Plus

ICS J2178

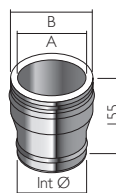
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	148397	148398	101192	101193	101194	101195	101361	101196	101197



Adaptor - ICS to TecnoFlex Plus Screw Fit

ICS J2179

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	130561	124814	111031	111281	111535	111743	112043	112255	112770



Increaser

ICS J2171

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	100	130	150	180	200	230	250	300	-
B	150	180	200	230	250	280	300	350	-
SAP Code	148386	148387	101892	101893	101894	101895	101896	101897	-

Biomass Base Starter Kits

STARTER PACK 1

with 135° Tee
for appliances
with top or rear outlet

Int Ømm	150
Ext Ømm	200
SAP Code	138252



ICS 45 Bend
+ Locking Band



ICS Wall Band
60mm



ICS 135° Tee
+ 2 Locking Bands



ICS Wall Band
Extensions Bracket



ICS 90° Tee
+ 2 Locking Bands



Roof Support



ICS Plug Tee
and Drain



Uniflashing



ICS Wall Support
Top Plate
+ Locking Band



Tapered Terminal
+ Locking Band

STARTER PACK 2

with 90° Tee
for appliances
with rear outlet only

Int Ømm	150
Ext Ømm	200
SAP Code	138253



ICS 90° Tee
+ 2 Locking Bands



ICS Wall Band
60mm



ICS 90° Tee
+ 2 Locking Bands



ICS Wall Band
Extensions Bracket



ICS Plug Tee
and Drain



Roof Support



Uniflashing

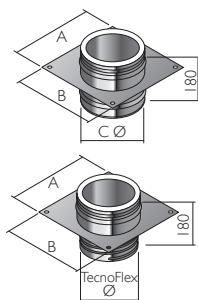


ICS Wall Support
Top Plate
+ Locking Band



Tapered Terminal
+ Locking Band

Starting Components (contd.)



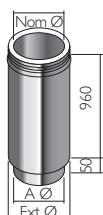
Anchor Plate - Plain

Anchor Plate - TecnoFlex Plus Screw Fit Connection

ICS J21D6

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	250	270	300	300	320	350	370	400	420
B	220	240	270	270	290	320	340	370	390
C Ø	80	100	125	150	180	200	230	250	300
TecnoFlex Plus Ø	80	100	125	155	180	200	230	250	300
SAP Code Plain	148380	148381	101002	101003	101004	101005	101336	101006	101007
SAP Code Flex			142630	142631	142632	142633			

Order code for Increaser Anchor Plate from 125 to 130mm is J21D6125130



Stove Starter Pipe

ICS J2175

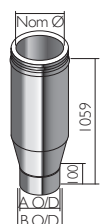
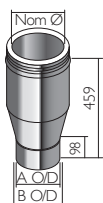
Int Ømm	80	100	130	150	180	200
Ext Ø	130	150	180	200	230	250
A Ø	-	-	125	150	175	200
SAP Code	-	-	125640	126204	126908	127506

SW-DW Adjustable Starter Pipe

Increasing SW-DW Adjustable Starter Pipe*

Int Ømm	80	100	130	130*	150	180	200
Ext Ø	130	150	180	200	200	230	250
A O/D	-	-	122.7	122.7	147.6	176.5	197.5
B O/D	-	-	130	130	154.5	183.5	204.5
SAP Code	-	-	133653	143702	133654	133655	133656

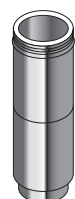
This component MUST only be fitted to stove pipe and NOT directly to appliance.



SW-DW Adjustable Starter Pipe 1200mm

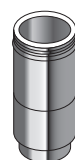
Int Ømm	80	100	130	150	180	200
Ext Ø	130	150	180	200	230	250
A O/D	-	-	122.8	147.7	176.6	197.6
B O/D	-	-	130	154.5	183.5	204.5
SAP Code	-	-	149567	149568	149569	149570

This component MUST only be fitted to stove pipe and NOT directly to appliance.



DW Adjustable Starter Section 1025mm Eff. Length

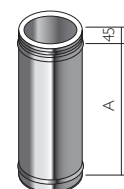
Int Ømm	80	100	130	150	180	200
Ext Ø	130	150	180	200	230	250
SAP Code Plain	-	-	152239	152240	152241	152242
SAP Code Black	-	-	-	152247	-	-



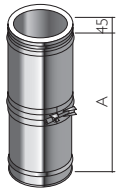
DW Adjustable Starter Section 600mm Eff. Length

Int Ømm	80	100	130	150	180	200
Ext Ø	130	150	180	200	230	250
SAP Code Plain	-	-	152243	152244	152245	152246
SAP Code Black	-	-	-	152248	-	-

Pipes

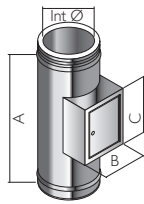


				A	955	750	455	205	150
Effective Length				Part ref. ICS	J2101	J21F9	J2102	J2103	J2104
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code 955	116493	117091	117623	117960	118311	118468	118713	113605	100706
SAP Code 750	-	-	-	126161	126877	-	-	-	-
SAP Code 455	113542	114693	115393	115902	116368	116715	117086	117321	100691
SAP Code 205	111569	111980	112593	112909	113364	114271	114610	114926	100677
SAP Code 150	111160	111471	111949	112244	112673	112961	113282	113516	100663

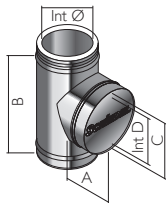


		A							
Adjustable Pipe		Part ref. ICS		J2154		J2153		J2109	
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code 585 - 1005	124592	124572	125622	126175	126888	127484	127976	128391	128899
SAP Code 375 - 585	148378	148379	116882	117207	117556	117873	118141	118305	118639
SAP Code 270 - 375	148376	148377	100715	100716	100717	100718	101289	100719	100720
SAP Code 195 - 250	148393	148394	114523	114975	115450	115885	116270	116481	117047

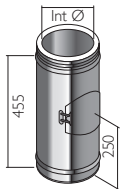
To change into ICS Plus a total of 3 gaskets are required on adjustable pipes.



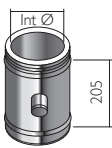
Inspection Length - ICS		ICS J2111							
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	-	-	292	292	292	292	411	411	411
B	-	-	114	114	114	114	202	202	202
C	-	-	173	173	173	173	292	292	292
SAP Code	-	-	113207	115319	115429	116120	117404	117515	117871



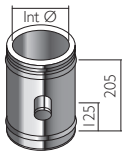
Inspection Length - ICS Plus		ICS Plus DF21E6							
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	125	135	150	160	175	185	180	210	238
B	255	275	305	325	355	375	375	375	375
C	145	155	170	180	195	205	205	205	205
Int D	130	150	180	200	230	250	250	250	250
SAP Code	148403	148404	100895	100896	100897	100898	101304	100899	100900



Inspection Pipe - ICS		ICS J21A4							
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	130550	124795	115391	115905	116364	116717	117046	117323	117693



Measure Pipe		ICS J2195							
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	148401	148402	101142	101143	101144	101145	101343	101146	101147

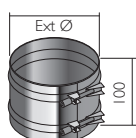


Vertical Drain Pipe		ICS J21A5							
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	148405	148406	101156	101157	101158	101159	101359	101160	101161



Locking Band		ICS J2183							
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	104464	104465	104420	104421	104468	104423	104424	104470	104471

Supplied with components as standard with female form.



Structural Locking Band		95850							
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	500	280	300	350
SAP Code	101124	101125	101126	101127	101128	101129	101130	101131	101132

For static loading information please see p.19

Gasket to convert ICS to ICS Plus

Fit into the groove form on all female socket (liners) and into grooves on adjustable pipe liner.



Silicon Gasket (Gas only)

S000

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	124582	120423	120421	120419	126611	127185	127750	119581	128693

For use on condensing gas applications with a pressure rating of up to 200Pa.



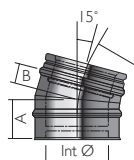
Viton Gasket (Gas & Oil)

V000

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	124618	124919	125721	119577	119575	127653	128059	128521	129009

For use on condensing gas and oil applications with a pressure rating of up to 200Pa.

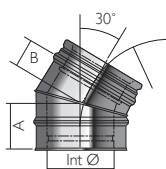
Bends



15° Bend

ICS J2118

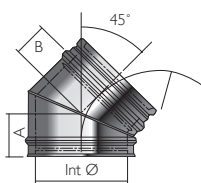
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	95	95	95	95	100	100	100	105	105
B	55	55	55	55	60	60	60	65	65
SAP Code	111089	111396	111830	112167	112623	112854	113177	113431	100734



30° Bend

ICS J2119

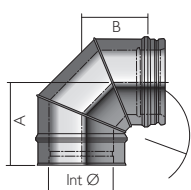
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	95	100	108	110	115	120	120	125	130
B	55	60	68	70	75	80	80	85	90
SAP Code	111091	111398	111793	112174	113242	113543	114518	114815	100748



45° Bend

ICS J2117

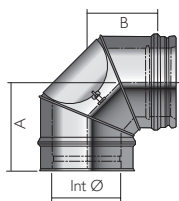
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	110	115	120	125	130	135	145	145	155
B	70	75	80	85	90	95	105	105	115
SAP Code	111522	111937	112487	112806	113246	114388	114968	115303	100762



90° Bend

ICS J2115

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	168	176	192	201	216	228	244	252	281
B	132	140	156	165	180	192	208	216	237
SAP Code	112105	112748	114190	114761	115710	116033	116429	117015	100817

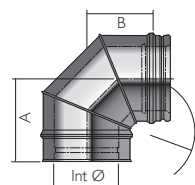


Inspection Bend

ICS J2IA2

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	-	136	152	161	176	188	204	212	237
B	-	180	196	205	220	232	248	256	281
SAP Code	-	148409	109585	109586	109587	109588	116425	109589	117563

COA: code on application

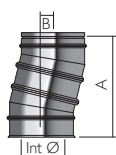


87° Bend

ICS J2IF3

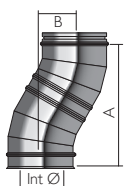
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	166	173	189	198	213	225	-	248	271
B	130	137	153	162	177	189	-	212	232
SAP Code	130566	124825	125614	126163	126879	127468	-	128377	128884

Offsets (made by assembling 2 bends)



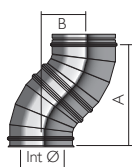
15° Offset

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	295	295	295	295	315	315	315	334	334
B	39	39	39	39	41	41	41	44	44



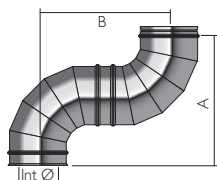
30° Offset

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	280	299	327	336	355	373	373	392	411
B	75	80	88	90	95	100	100	105	110



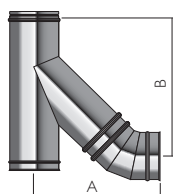
45° Offset

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	307	324	341	358	376	393	427	427	461
B	127	134	141	148	156	163	177	177	191



90° Offset

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	300	316	348	366	396	420	452	468	518
B	300	316	348	366	396	420	452	468	518

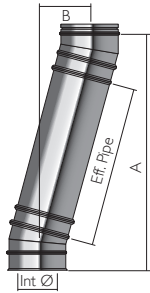


Offsets for 135° Tee & 45° Bend

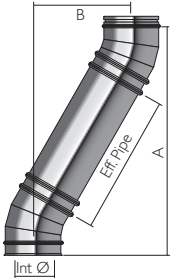
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	343	370	437	445	452	496	523	537	592
B	305	324	404	406	415	473	475	499	556

Typical Offsets (made by assembling 2 bends and a standard pipe section)

15° Offset with standard Pipe lengths

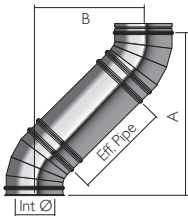


Int Ømm		80	100	130	150	180	200	230	250	300
Ext Ømm		130	150	180	200	230	250	280	300	350
Effective Pipe	A	1218	1218	1218	1218	1238	1238	1238	1257	1257
	B	286	286	286	286	288	288	288	291	291
Effective Pipe	A	735	735	735	735	755	755	755	774	774
	B	157	157	157	157	159	159	159	162	162
Effective Pipe	A	493	493	493	493	513	513	513	532	532
	B	92	92	92	92	94	94	94	97	97
Effective Pipe	A	445	445	445	445	465	465	465	484	484
	B	79	79	79	79	81	81	81	84	84



30° Offset with standard Pipe lengths

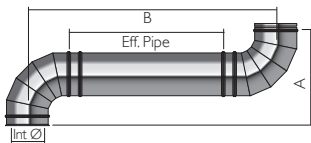
Int Ømm		80	100	130	150	180	200	230	250	300
Ext Ømm		130	150	180	200	230	250	280	300	350
Effective Pipe	A	1107	1126	1154	1163	1182	1200	1200	1219	1238
	B	553	558	566	568	573	578	578	583	588
Effective Pipe	A	674	693	721	709	765	765	765	784	793
	B	303	308	316	318	323	328	328	333	338
Effective Pipe	A	458	477	505	514	533	551	551	570	589
	B	178	183	191	193	198	203	203	208	213
Effective Pipe	A	414	433	461	470	489	507	507	526	545
	B	153	158	166	168	173	178	178	183	188



45° Offset with standard Pipe lengths

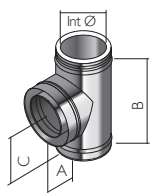
Int Ømm		80	100	130	150	180	200	230	250	300
Ext Ømm		130	150	180	200	230	250	280	300	350
Effective Pipe	A	982	999	1016	1033	1051	1068	1102	1102	1136
	B	802	809	816	823	831	838	852	852	866
Effective Pipe	A	629	646	663	680	698	715	749	749	783
	B	449	456	463	470	478	485	499	499	513
Effective Pipe	A	452	469	486	503	521	538	572	572	606
	B	272	279	286	293	301	308	322	322	336
Effective Pipe	A	417	434	451	468	486	503	537	537	571
	B	237	244	251	258	266	273	287	287	301

90° Offset with standard Pipe lengths



Int Ømm		80	100	130	150	180	200	230	250	300
Ext Ømm		130	150	180	200	230	250	280	300	350
Effective Pipe	A	296	315	345	366	415	414	445	464	518
	B	1251	1270	1300	1321	1370	1369	1400	1419	1473
Effective Pipe	A	296	315	345	366	415	414	445	464	518
	B	751	770	800	821	870	869	900	919	973
Effective Pipe	A	296	315	345	366	415	414	445	464	518
	B	501	520	550	571	620	619	650	669	723
Effective Pipe	A	296	316	345	366	415	414	445	464	518
	B	446	466	495	516	565	564	595	614	673

Tees

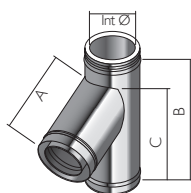


90° Tee

ICS J2120

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	145	155	170	180	195	205	220	230	258
B	250	270	305	325	355	375	405	425	480
C	145	155	170	180	195	205	220	230	258
SAP Code	112880	113386	114584	115231	116187	116706	117416	117805	100886

To change into ICS Plus a total of 2 gaskets are required on tee sections.

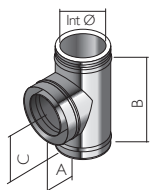


135° Tee

ICS (Dry System) J2121
ICS Plus (Wet System) DF2121

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	-	262	298	322	358	382	419	443	509
B	-	327	375	403	445	474	516	544	622
C	-	262	298	322	358	382	419	443	509
SAP Code ICS (Dry)	-	114914	116671	117052	117406	100856	118345	118527	100858
SAP Code ICS + (Wet)	-	124794	125612	126146	126865	127451	127968	128359	128861

To change into ICS Plus a total of 2 gaskets are required on tee sections.

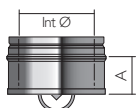


93° Tee

J21F2

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	-	162	178	189	206	216	233	244	264
B	-	278	309	329	359	379	405	455	490
C	-	166	178	189	206	216	233	257	268
SAP Code	-	124827	125651	126217	126922	127523	127997	128433	128933

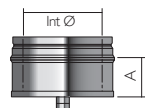
To change into ICS Plus a total of 2 gaskets are required on tee sections.



Tee Plug

ICS J2125

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	35	32	38	41	44	44	48	48	48
SAP Code	148395	148396	101106	101107	101108	101109	101342	101110	101111



Tee Plug with Drain

ICS J2129

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	35	32	38	41	44	44	48	48	48
SAP Code	148407	148408	101030	101031	101032	101033	101338	101034	101035

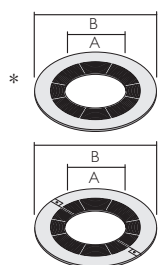


Draught Stabiliser Econ. Draught Stabiliser with Explosion Relief

ICS J2126

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code Econ.	-	124800	101204	101205	101206	101207	101208	101209	101210
SAP Code with Ex R.	-	-	148410	148411	148412	-	-	148413	-

Firestop Components



Combustible Floor

Round Ventilated Firestop Plate - 1 Piece*

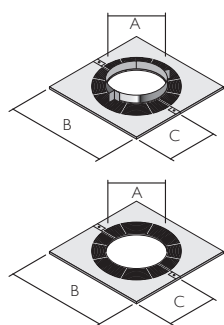
9423

Round Ventilated Firestop Plate - 2 Piece

9424

Int Ømm	80	100	130	150	180	200	230	250
Ext Ø	130	150	180	200	230	250	280	300
A	133	153	183	203	233	253	283	303
B	330	350	380	400	430	450	480	500
SAP Code 1PC Plain	125501	125902	126661	127227	127772	128213	128639	128715
SAP Code 1PC Black	125499	125900	126659	127225	127770	128211	128637	128713
SAP Code 1PC White	125500	125901	126660	127226	127771	128212	128638	128714
SAP Code 2PC Plain	125504	125905	126664	127230	127775	128216	128642	128718
SAP Code 2PC Black	125502	125903	126662	127228	127773	128214	128640	128716
SAP Code 2PC White	125503	125904	126663	127229	127774	128215	128641	128717

*One piece firestop available for use exclusively with stove starter pipe



Combustible Floor

Ventilated Support Plate - 2 Piece

95260

Rectangular Ventilated Firestop Plate - 2 Piece

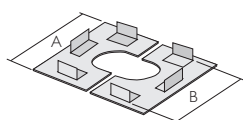
94250

Int Ømm	80	100	130	150	180	200	230	250
Ext Ø	130	150	180	200	230	250	280	300
A	133	153	183	203	233	253	283	303
B	330	350	380	400	430	450	480	500
C	165	175	190	200	215	225	240	250
SAP Code Support P	125507	125908	126667	127234	127778	128219	128645	128721
SAP Code Firestop P	125506	125907	126666	127232	127777	128218	128644	128720

Non Combustible Floor

Firestop Plate

94670

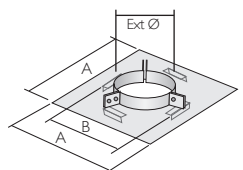


Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
A	300	300	330	350	380	400	430	450	500
B	230	250	280	300	330	350	380	400	450
SAP Code	125489	125891	126624	127200	127755	128197	128625	128698	129131

Non Combustible Floor

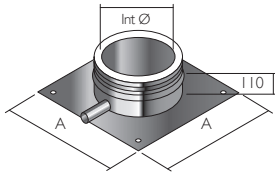
Support Plate

95680



Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
A	300	300	330	350	380	400	430	450	500
B	230	250	280	300	330	350	380	400	450
SAP Code	125495	125896	126646	127210	127762	128203	128631	128705	129138

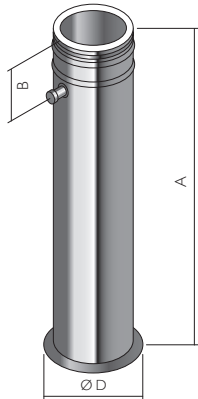
Support Components



Base Support Plate with Drain

ICS J2191

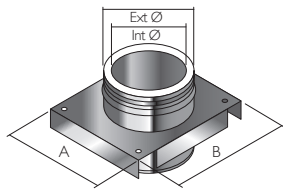
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	230	250	280	300	330	350	380	400	450
SAP Code	148390	148391	104557	104558	100989	100990	101322	104559	104560



Base Drain Plug Support

Refer to SAP code

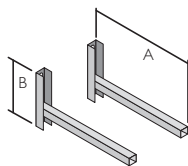
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
A	1045	1045	1045	1045	1045	1045	1045	1045	1045
B	160	160	160	160	160	160	160	160	160
Ø D	176	196	226	246	276	296	326	346	401
SAP Code	-	-	100994	100995	100996	100997	101330	100998	100999



Adjustable Top Plate

J21D3

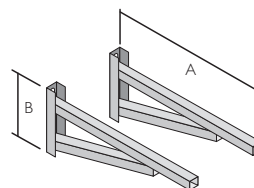
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
A	188	208	238	258	278	285	315	335	385
B	256	276	306	326	356	353	383	403	453
SAP Code	130555	124805	125636	126194	126900	127496	127984	128406	128910



Cantilever Support
Type 325 - 95420001
Type 475 - 95420002

Type	325	475
Int Ø Range	80 - 150	80 - 300
A	325	475
B	242	242
SAP Code	101742	101743

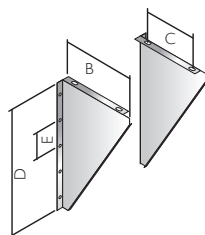
Used in combination with Adjustable Top Plate.



Cantilever Support
Type 570 - 95420003

Type	570
Int Ø Range	80 - 300
A	570
B	330
SAP Code	101744

Used in combination with Adjustable Top Plate.



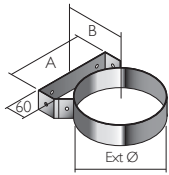
Wall Support Side Plates

J21D2

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
B	215	235	265	285	315	335	365	385	440
C	145	165	195	215	245	265	295	315	370
D	470	470	470	470	470	470	470	470	470
E	100	100	100	100	100	100	100	100	100
SAP Code	101042	101043	101044	101045	101046	101047	101339	101048	101049

Used in combination with Adjustable Top Plate.

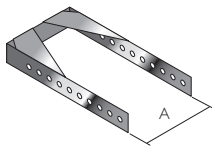
Support Components (contd.)



Wall Band (60mm)

92930

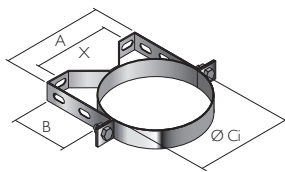
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
A	128	148	178	198	228	248	278	298	350
B	125	135	150	160	175	180	200	210	235
SAP Code	125497	125898	126648	127213	127764	128205	128633	128707	129140



Adjustable Back Bracket for Wall Band 60 - 300mm

95950

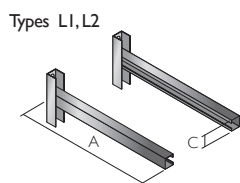
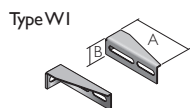
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
A	131	151	181	201	231	251	281	301	351
SAP Code	125488	125890	126623	127199	127754	128196	128624	128697	129130



Structural Wall Band (50mm)

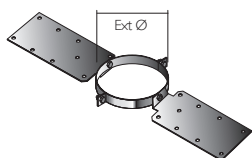
95430

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
A	138	158	188	208	238	258	288	308	358
B	116	126	141	151	166	176	191	201	225
Ø Ci	131	151	181	201	231	251	281	301	350
X	100	120	150	170	200	220	250	270	320
SAP Code	101263	101264	101265	101266	101267	101268	101402	101269	101270



Structural Wall Band Extension
WI - 95440001
LI - 95440004
L2 - 95440005

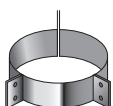
Type	WI	LI	L2
Adj.	55 - 100	100 - 250	100 - 440
A	130	300	450
B	36	-	-
C	-	32	32
SAP Code	101735	143846	143847



Roof Support

94640

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
SAP Code	100960	100961	100962	100963	100964	100965	100966	100967	129146



Guy Wire Bracket

95900

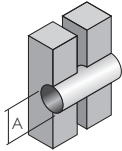
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
SAP Code	100639	100640	100641	100642	100643	100644	128627	100646	129134



Ceiling Hanger

95750

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
SAP Code	110118	110199	110392	112037	112279	112503	128623	112870	129129

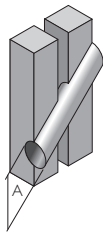


Wall Sleeve 90°

Masonry - 94980
Timber Frame - 94810

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
A Masonry	180	200	230	250	280	300	330	350	400
A Timber F	250	270	300	320	350	370	400	420	470
SAP Code Masonry	125493	COA	126642	127206	127760	128201	COA	128703	129137
SAP Code Timber F	125496	125897	126647	127212	127763	128204	128632	128706	129139

COA: code on application

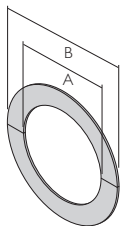


Wall Sleeve 45°

Masonry - 94620
Timber Frame - 94910

Int Ømm	80	100	130	150	180	200	230	250
Ext Ø	130	150	180	200	230	250	280	300
A Masonry	180	200	230	250	280	300	330	350
A Timber F	250	270	300	320	350	370	400	420
SAP Code Masonry	125492	125894	126641	127205	127759	128200	128629	128702
SAP Code Timber F	125494	125895	126643	127207	127761	128202	128630	128704

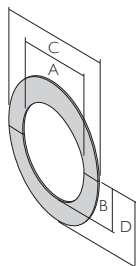
Supplied as a 1m long mitred tube to be cut to length on site.



2 - Piece Trim Collar 90°

9599

Int Ømm	80	100	130	150	180	200	230	250
Ext Ø	130	150	180	200	230	250	280	300
A	134	154	184	204	234	254	284	304
B	280	300	330	350	380	400	430	450
SAP Code Plain	125719	126338	127040	127644	128057	128512	128649	129007
SAP Code Black	125720	126339	127041	127645	128058	128513	128650	129008

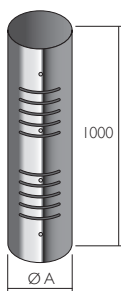


2 - Piece Trim Collar 45°

9579

Int Ømm	80	100	130	150	180	200	230	250
Ext Ø	130	150	180	200	230	250	280	300
A	134	154	184	204	234	254	284	304
B	94	108	130	144	165	179	200	214
C	280	300	330	350	380	400	430	450
D	192	206	227	242	263	277	298	312
SAP Code Plain	125717	126335	127035	127639	128055	128510	128647	129004
SAP Code Black	125718	126336	127036	127640	128056	128511	128648	129005

Loft Guard



Loft Guard

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
Ø A	-	-	300	320	350	370	-	-	-
SAP Code	-	-	137464	137464	137465	137465	-	-	-

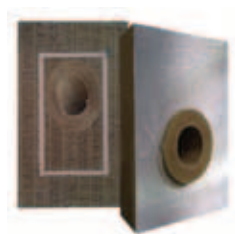
Pass Through Systems (for timber framed and air tight houses)

Ignis-Protect



IGNIS-PROTECT 90° Version

SAP Code	Thickness (mm)	Height (mm)	Width (mm)	Pallet Quantity
I01841	150	700	565	12
I01842	200	700	565	9
I01843	250	700	565	6
I01844	300	700	565	4
I01845	350	700	565	4
I01846	400	700	565	2



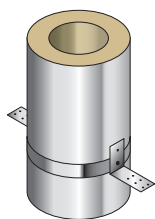
IGNIS-PROTECT 45° Version

SAP Code	Thickness (mm)	Height (mm)	Width (mm)	Pallet Quantity
I49530	100	1020	565	18
I49531	150	1020	565	12
I49532	200	1020	565	9
I49533	250	1320	565	6
I49534	300	1320	565	4
I49535	350	1320	565	4
I49536	400	1320	565	2
I44032	450	1320	565	2
I44033	466	1320	565	2
I44034	500	1320	565	2

COA: code on application

For more information on IGNIS-PROTECT 90° and 45° please refer to p.23

Protect Box and accessories



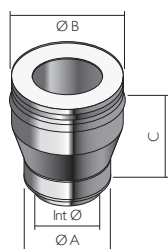
Protect Box

SAP Code	I21342
----------	--------



EPDM Seal

SAP Code	I36939
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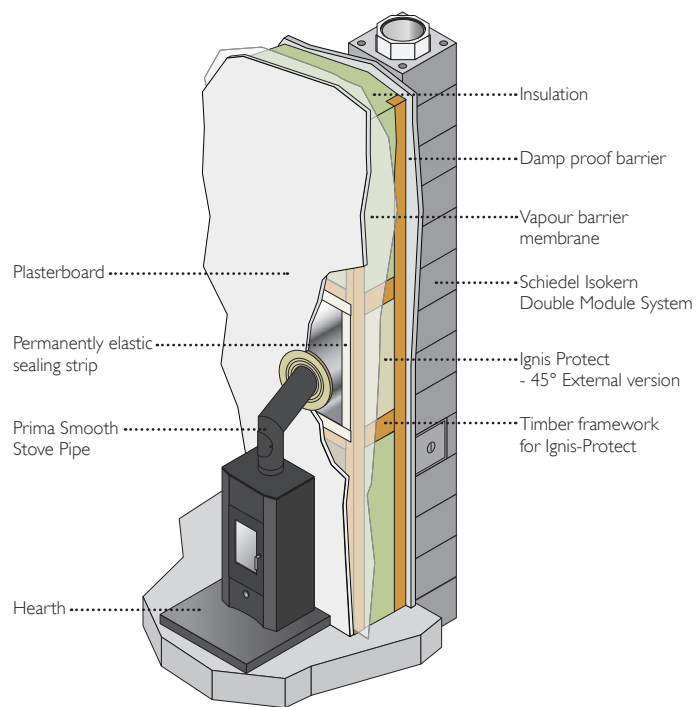


ICS25 - ICS50 Adaptor

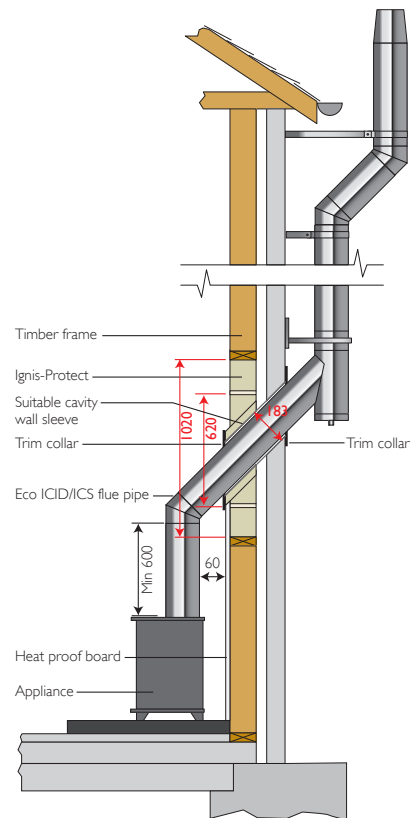
Int Ømm	130	150
Ø A	180	201
Ø B	251	251
C	195	195
SAP Code	I14280	I14484

For more information on PROTECT BOX please refer to p.24

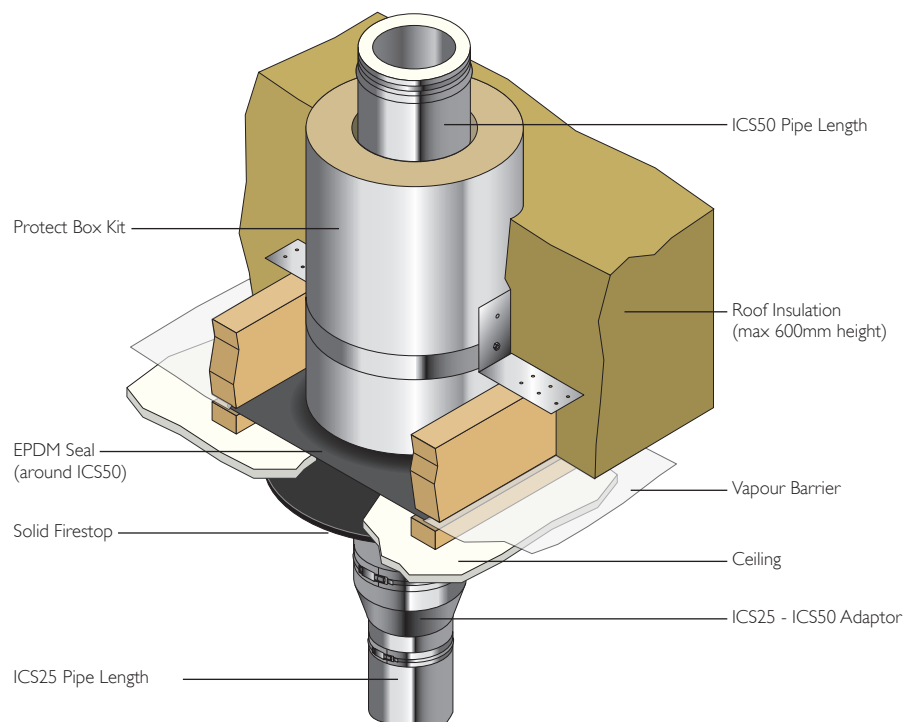
Typical Installations



**IGNIS-PROTECT
45° VERSION**

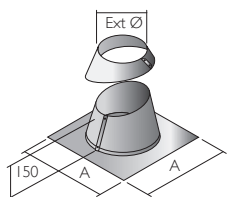


**IGNIS-PROTECT
ICS ON TRADITIONAL TIMBER FRAME WALL**



**PROTECT BOX
IN SITU**

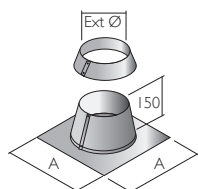
Flashings



Angled Flashing Kit 5° - 45°

95510

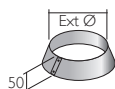
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
A	610	610	610	700	700	700	800	800	860
SAP Code	125487	125889	126621	127197	127753	128195	128622	120884	129128



Flat Flashing Kit

95530

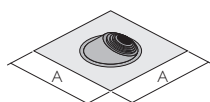
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
A	610	610	610	610	610	610	610	610	800
SAP Code	125490	125892	126625	127201	127756	128192	128626	128699	129132



Storm Collar

95560

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	350
SAP Code	106136	106138	106140	106141	106142	106143	100975	106144	106145

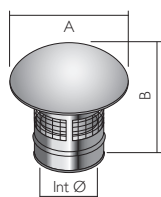


Uniflash

Product Code	94540001	94540002	94540003
Ext Ømm	80 - 100	150 - 300	250 - 450
A	500	685	800
SAP Code	112198	112197	114341

Universal EPDM rubber/aluminium flashing. Just pull the required diameter tab on the rubber seal.

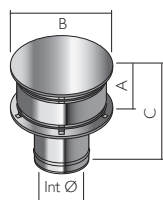
Terminals



Raincap

with 15mm mesh ICS J2137
without mesh ICS J2156

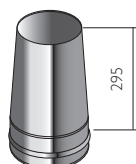
Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	266	266	266	362	362	362	362	362	490
B	210	213	219	213	217	220	225	229	271
SAP Code with mesh	112769	113085	113534	114970	115364	115702	116037	116222	117060
SAP Code without	112499	112795	113183	114575	115005	115242	115729	115942	116792



Anti-splash Anti-draught Terminal (Gastec Approved)

with 15mm mesh ICS J2144
without mesh ICS J2143

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
A	-	-	130	175	200	200	250	275	330
B	-	-	254	304	359	409	459	509	609
C	-	-	220	265	290	290	340	365	420
SAP Code with mesh	-	-	114904	115166	116258	116970	117466	118025	118645
SAP Code without	-	-	114352	114830	115893	116496	117167	117700	118432



Insulated Tapered Terminal

ICS J2138

Int Ømm	80	100	130	150	180	200	230	250	300
Ext Ømm	130	150	180	200	230	250	280	300	350
SAP Code	120565	148392	101214	101215	101216	101217	114420	114704	115212

Installation

These notes should be read in conjunction with the detailed ICS Installation Instructions.

MANDATORY REQUIREMENTS

Connection to an appliance which is not connected to the fuel supply, may be carried out by a competent person. However, connection to an appliance that is connected to the fuel supply must be carried out by a GAS SAFE (gas) or OFTEC (oil) registered installer. We recommend the use of HETAS approved installers for solid fuel applications.

The flue system must be installed to comply with Building Regulations Document J (in England, Wales & Northern Ireland). Separate Building Regulations apply in Scotland. The installation must also comply with BS EN15287 Parts 1 & 2 and BS5440 pt 1: 2000 for gas flues up to 70kW.

JOINTING

Pipes, bends, tees and flue gas carrying components are joined together by a simple push fit. The joint is then secured by fitting a locking band. The male spigot should be uppermost and pointing in the direction of the terminal as indicated on the product label. All components with a female form will be supplied with a locking band.

Gaskets must be used for ICS Plus (ordered separately and are required for high efficiency and condensing applications) and should be fitted dry and lubrication applied to the internal of the female liner socket.

Joints are not permitted within wall and ceiling spaces. Any flue pipe (i.e. single wall) connection to the chimney must be made in the same room as the appliance. The chimney must project at least 425mm below the ceiling. Where a chimney passes through a wall, a wall sleeve must be used to prevent damage to the chimney and the building.

ADJUSTABLE LENGTH

The ICS range of adjustable pipes provides flexibility during installation. Assembly is achieved by the removal of the insulation (if necessary) to the desired length, and is then secured using the jointing band supplied. The adjustable length is not loadbearing, therefore adequate support must be provided immediately above.

CONNECTION TO APPLIANCE

Use the appropriate appliance connector, sealing with fire rope and fire cement or high temperature sealant on solid fuel appliances and the appropriate lip seal in the case of condensing appliances. The inner liner should not project below the appliance outlet spigot and can be cut to length if required.

APPLIANCE REMOVAL

Use of an adjustable length immediately above the appliance enables removal of the appliance later without dismantling the full system.

PAINTING

If required to be painted, simply clean the surface with a solvent cleaner (White Spirit), apply a coat of primer and a top coat of high temperature paint e.g. enamel. Extreme care must be taken when cleaning with solvent to ensure that it does not come into contact with the insulation within the cavity or gasket if fitted.

ENCLOSURES/SHAFTS

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 stored in a cupboard or in the roof-space, the chimney must be enclosed in an appropriate way to meet Building 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 according to the table on p.2, and any enclosure should be ventilated using the appropriate ventilated fire stops (see p.14).

SUPPORT COMPONENTS

The weight of a chimney system is considerable and requires independent support. Minimal weight should be taken by the appliance. The weight of the chimney can be supported from floor level using a Base support plate or Telescopic floor support; from the wall by using wall support top plates together with side plates or cantilever brackets; or from first floor level using a support plate and clamp fixed to the floor/ceiling joist.

Wall brackets and roof brackets are not load bearing and provide lateral support only.

Refer to load bearing tables on p.22 for full details of maximum loadings.

STRUCTURAL LOCKING BAND

Where the flue is free standing above the roof and its height exceeds 1.5m beyond the last support or the roof, a guy wire bracket must be used, and every 1.5m thereafter. Alternatively, a height of up to 3m can be achieved unsupported with the use of a structural locking band at the joint immediately below and every joint above the roof level.

Installation (contd.)

DISTANCE TO COMBUSTIBLES

In accordance with building regulations it is essential that the correct distance to combustible material is maintained. On solid fuel applications, where there is a risk of soot fire, a distance of 60mm to combustibles must be maintained within a combustible floor and within a combustible shaft (see Fig.1). There is no need to line the area within the floor cavity with plasterboard; however the ventilated fire stop plate and ventilated support plate must be used.

On gas and oil applications, a distance of 50mm to combustibles must be maintained within a combustible floor and within a combustible shaft. The ventilated fire stop plate and ventilated support plate must be used.

Where the chimney penetrates a non combustible floor and where a non combustible shaft is used, a distance of 50mm to the shaft is sufficient. In this case, non ventilated fire stops and non ventilated support plates may be used at first floor level with a ventilated fire stop being used where the chimney penetrates into the roof space.

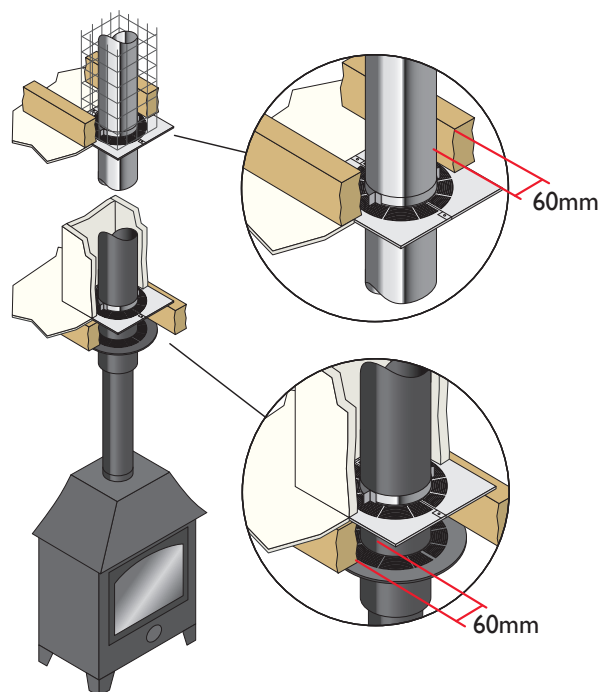
On condensing appliances, where temperatures will not exceed 200°C, the tested and approved distance to combustibles is zero mm.



For a direct link to the ICS Installation Instructions scan the QR code.

Fig. 1

Distance to combustibles from outer case of chimney



TYPICAL INSTALLATION OF ICS25 THROUGH A COMBUSTIBLE FLOOR & SHAFT

Load Bearing Data

MAXIMUM LOAD BEARING (metres of pipe)

Internal Dia. (mm)	80-130	150-180	200-250	300
Base Drain Section	22	18	18	18
Drain Plug Support	18	18	18	18
Adjustable Top Plate + Locking Band	15	15	15	15
Telescopic Floor Support	18	18	18	18
Pair of Side Plates (see diagram A)	15	15	15	15
Pair of Side Plates (see diagram B)	10	10	10	10
Cantilever Support	22	18	18	18
Extension Support (Anchor Plate)	1.5	1.5	1.5	1.5
Ventilated Support Plate (All types)	12	12	9	-
Support Plate	12	12	9	-
Ceiling Hanger	1.5	1.5	1.5	1.5
Wall Band 50/60mm	3	3	3	3
Adjustable Wall Band 60-300mm	3	3	3	3
Structural Wall Band	4	4	4	4
Extension for Structural Wall Band	4	4	4	4
Guy Wire Bracket	1.5	1.5	1.5	1.5
Roof Support (above truss)	6	6	6	5
Roof Support (below truss)	4	4	4	3
90° Tee + Locking Band	22	18	18	18
93° Tee + Locking Band	22	18	18	18
135° Tee + Locking Band	15	10	10	10
Inspection Tee (Round)	22	18	18	18
Inspection Tee (Rectangular)	22	18	18	18

APPROXIMATE WEIGHT OF PRODUCTS (kg)

Internal Dia. (mm)	Length (mm)			
	1000	500	250	195
80	4.32	2.13	1.09	0.85
100	5.14	2.53	1.29	1.01
130	6.35	3.14	1.60	1.24
150	7.18	3.54	1.86	1.41
180	8.40	4.14	2.11	1.65
200	9.22	4.55	2.31	1.80
230	10.44	5.13	2.62	2.03
250	11.24	5.53	2.81	2.19
300	15.08	7.58	3.44	2.47

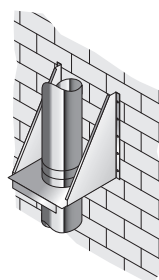


Diagram A

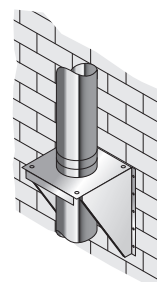


Diagram B

Ignis-Protect

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



In order to meet the latest European building regulations, specific leakage and performance criteria have to be met, which are much more stringent than in the past. These criteria are key in relation to chimney products passing through combustible walls.

Schiedel Chimney Systems have invested heavily to provide tested and approved solutions to resolve these challenges and are proud to introduce their latest cutting edge product.

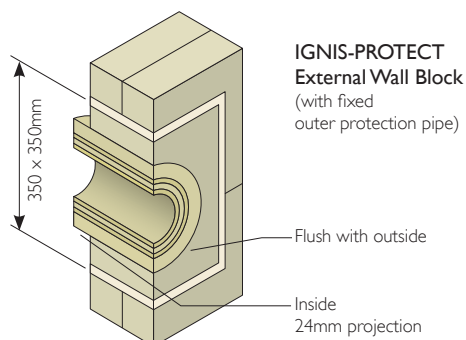
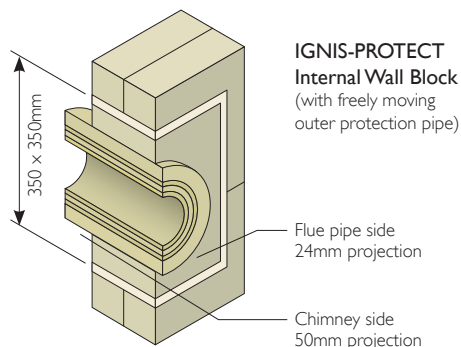


Protected in accordance with
European patent specification
EP I 878 849 B1



IGNIS-PROTECT,
Winner of Best Product Award
Hearth & Home Exhibition 2015.

Product Description



PRODUCT FEATURES

- Suitable for SW and DW connecting flue pipes passing through interior or exterior walls made of combustible materials
- Available in two versions:
For exterior walls (with aluminum laminate on inside face)
For interior walls (without aluminum laminate and with an extended removable core)
- Available in both 90° and 45° versions
- For flue gas temperature up to:
450 °C for SW connecting flue pipes (T450)
600 °C for DW connecting flue pipes (T600)
- Max. 100 °C surface temperature during soot fire
- Monolithic component made of mineral wool, density 120 kg/m³, building material class A1
- Internal face finished with aluminum laminate
- External face made with textured surface to facilitate facade rendering
- Removable pipe sections DN 125, 130, 150, 180, 200 mm
- IGNIS-PROTECT can be used without any additional protection
- Available in a range of standard wall thicknesses between 100mm -500mm

Approvals

DIBt

Zulassungs Nr. Z-7.4-3372 Deutsches Institut für Bautechnik

- Z-7.4-3372 relating to T450 designated products
- Z-7.4-3402 relating to T600 designated products

Protect Box

Engineered to meet the key challenges of modern houses...

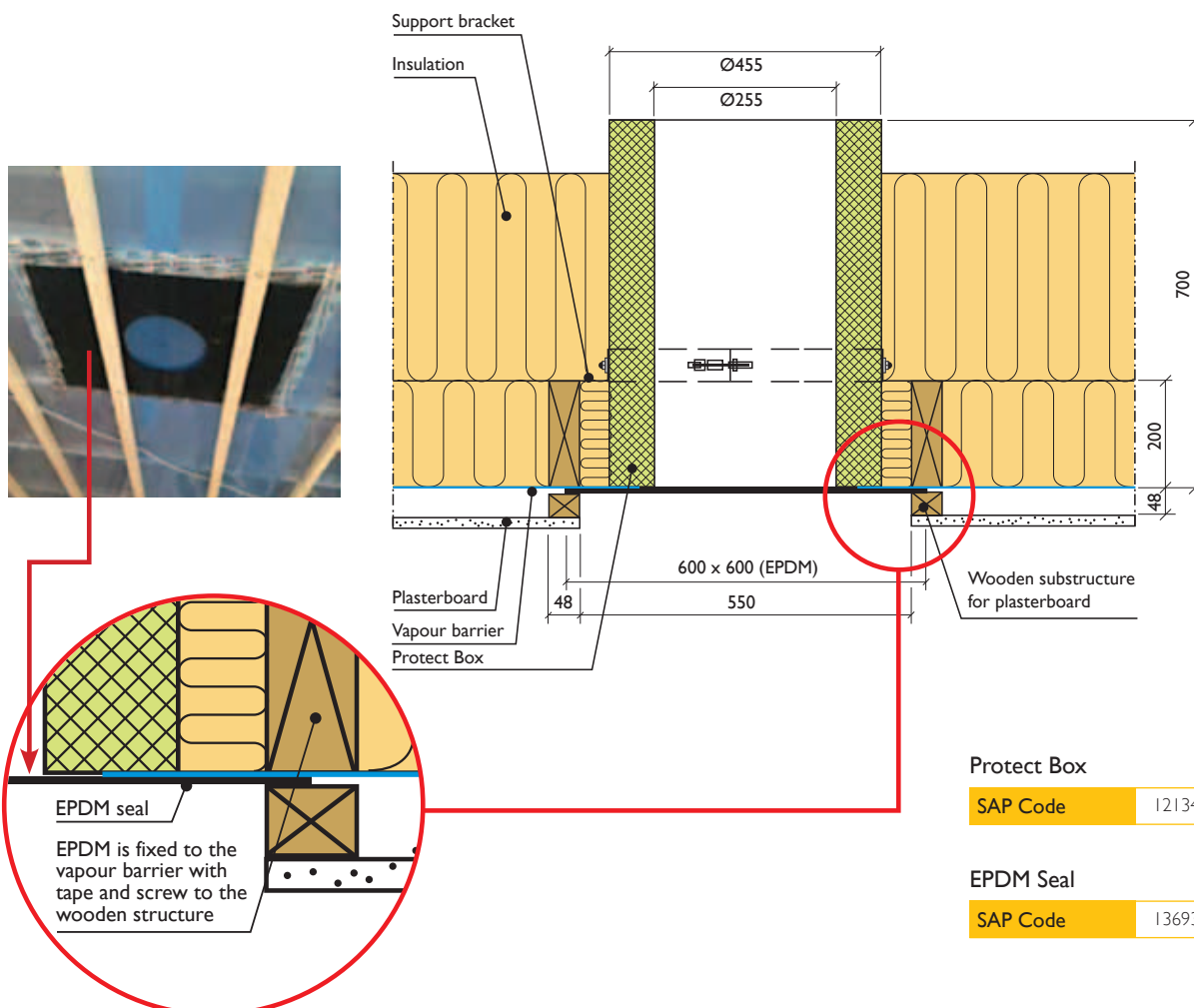
- *Ever more air tight construction*
- *Increasing depth of loft insulation*

Schiedel Protect Box is the proven solution to safeguard distance to combustible materials in low energy and passive houses.



PRODUCT FEATURES

- Designed to meet blower door test.
- Constructed using a high temperature resistant Rockwool insulation with an aluminium laminate outer surface to give **zero** distance to combustibles.
- An EPDM kit is available to allow for the chimney to pass through an air tight membrane at ceiling level in a cold roof construction or at roof level in a warm roof construction.
- Standard height 700 mm to meet new roof insulation requirements.



Protect Box

SAP Code 121342

EPDM Seal

SAP Code 136939

After Installation

TESTING BEFORE USE

This is carried out using a flue flow test as described in BS EN 15287 parts 1 & 2, with reference to the appropriate appliance type.

MAINTENANCE

It is essential that the flue way be kept clear at all times in the interest of good practice and health, safety and appliance performance. The system should be checked regularly during the appliance maintenance.

(Refer to appliance manufacturer's instructions).

PRODUCT GUARANTEE

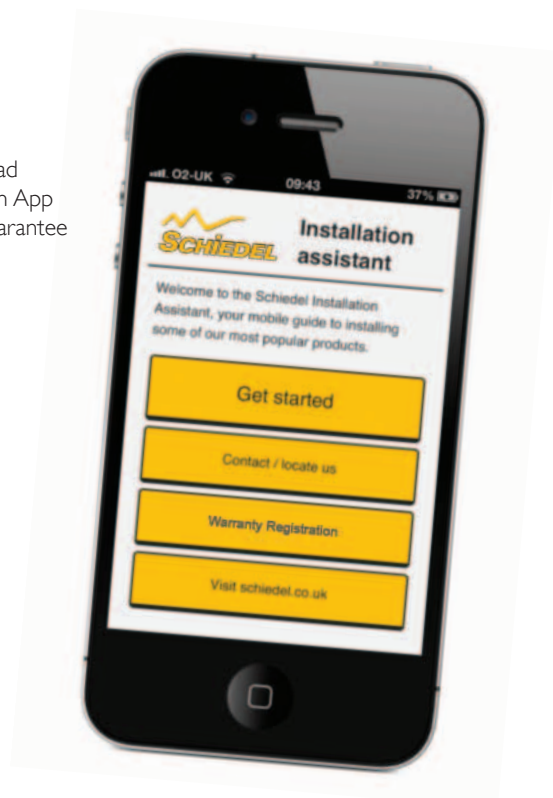
Under normal operating conditions and providing the system is installed correctly, it should last the lifetime of the appliance which is normally 10 years. ICS carries a 10 year conditional guarantee.

The conditions are that the chimney is:

- Correctly sized and installed
- Properly maintained
- Burning only approved fuels in accordance with the Schiedel Rite-Vent and appliance manufacturer's instructions.

For recommended fuels listings, please refer to the HETAS guide (www.hetas.co.uk), or appliance manufacturer's instructions. Warranty registration details are provided with installation instructions for completion and registration with Schiedel Rite Vent.

Scan QR code to download Schiedel Mobile Installation App incorporating Product Guarantee Registration Function



INSTALLER HELPLINE
+44 (0) 191 500 9224

More information on **www.schiedel.co.uk**

Every effort is made to ensure accuracy at time of going to press. However, as part of our policy of continual product development, we reserve the right to alter specifications without prior notice. All installation drawings are graphical representations. Building regulations and relevant British standards must be adhered to.

Complementary products and services from Schiedel Chimney Systems



ICID PLUS

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.

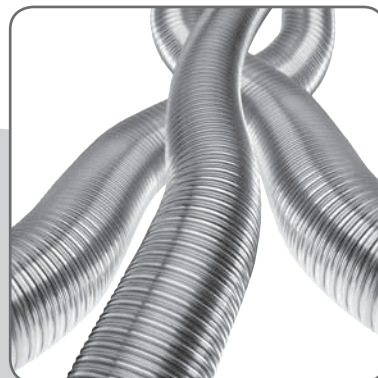
- Easy twist lock connection
- Effective insulation
- 100-200mm Internal diameter range



PRIMA SMOOTH

Single Wall Stainless Steel Connecting Flue Pipe for use on wood and multi-fuel applications.

- 316L Grade stainless steel
- Available in matt black or steel finish
- Excellent aesthetics
- Lightweight
- 125-200mm Diameter range



TECNOFLEX PLUS

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

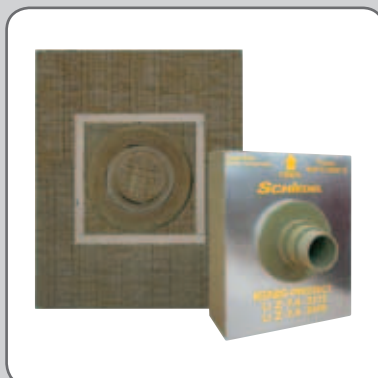
- Twin skin TecnoFlex Plus available in 316L or 904L options for oil, wood, multi-fuel & open fires
- 80-300mm Diameter range



PRIMA PLUS

Single Wall Stainless Steel Flue System.

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



IGNIS-PROTECT

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



DM & LINERS

Pumice System Chimneys, Firechests and Liners.

full details at **www.schiedel.co.uk**

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HETAS TRAINING

See website for course prospectus and application form downloads or scan the QR code for a direct link.

