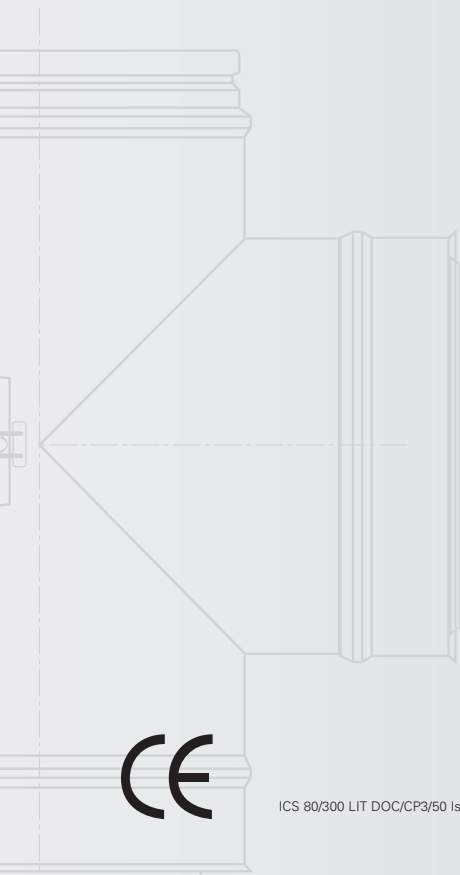


# SCHIEDEL

RITE-VENT



## ICS

**80 - 300mm internal diameter**

**Twin wall insulated chimney system  
for gas, oil, wood and multi-fuel.**

- **Stoves and open fires**
- **Residential & small commercial applications**  
(See Commercial brochure for larger diameters)
- **Atmospheric & condensing applications**
- **Oil and gas appliances up to 150kw**
- **Available in stainless steel, copper and  
paint finish**



ICS 80/300 LIT DOC/CP3/50 Issue 2 Nov 2006

A company of **LAFARGE**  
ROOFING

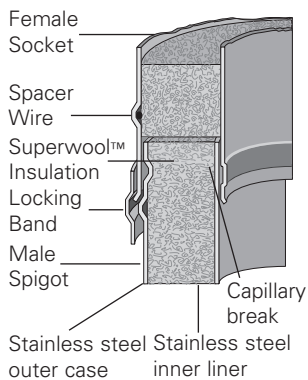
## Application

**ICS** is a twin wall insulated chimney system for use on 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 gasket to each component. 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 160°C, short firing up to 200°C, and positive pressure up to 200pa at the appliance outlet.

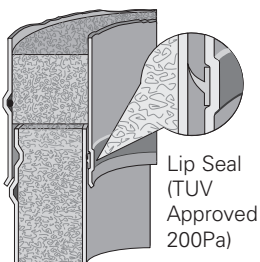
**Other ICS Ranges.** For larger commercial and industrial applications of ICS in diameters 355mm to 705mm please refer to our separate sales brochure. For higher pressure applications up to 5000Pa e.g. generators, combustion and process equipment, please see the commercial brochure.

## Product Description



### ICS

- Simple push-fit jointing system, secured by locking band.
- Advanced corrosion resistant design and construction uses laser welded 316L stainless steel inner liners and 304 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 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 minimising 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

ICS Plus for condensing appliances is created by adding a 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 TUV 0036 CPD 9195001 with designations T450 NI W V2 L50050 G75, T450 NI D V3 L50050 G75, T450 NI W V2 L50050 G50, T450 NI D V3 L50050 G50, T200 P1 W V2 L50050 025. Additionally, kitemarked to BS4543 Parts 2 & 3 in diameters 80, 100, 130, 150, 180 and 200mm for gas, oil, and solid fuel applications and is manufactured under the stringent requirements of BS EN ISO 9001:2000 Quality management scheme. ICS also has a 4 Hour fire-rating issued by a NAMAS approved test house in accordance with BS476 Part 20. The liner has corrosion certification from Gastec, MPA and TÜV.

ICS is also listed by HETAS as a chimney suitable for solid fuel.

## 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 DIN4705. For more information contact the installer helpline. 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 non-standard 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 - 400mm
<b>Gas - Atmospheric Boiler</b>					
Input up to 25kw		•			
Input 25kw to 40kw			•		
Input 40kw to 60kw				•	
<b>Gas - Commercial/Ind. Boiler</b>					
Input 50kw to 70kw					•2
<b>Gas Fires</b>					
'Radiant' to BS7977-1 2002			•		
'Inset' to BS7977-1 2002			•1		•1
'Backboiler' to BS7977-2 2003			•		
<b>Gas Water Heaters</b>					
Input up to 25kw	•	•			
Input 25kw to 55kw			•		
Input 55kw to 60kw				•	
Input over to 60kw					•2
<b>Gas Warm Air Unit</b>					
Input up to 18kw		•			
Input 18kw to 35kw			•		
Input 35kw to 60kw				•	
Input over to 60kw					•2
<b>Gas Stove/Cooker</b>		•2	•2	•2	
<b>Kerosene (28sec Class C2)</b>					
Heating Boiler					
Output up to 25kw		•			
Output 25kw to 45kw			•		
Output 45kw to 70kw				•	
<b>Kerosene Stove/Cooker</b>		•3	•3	•3	
<b>Kerosene Water Heater</b>					
Input up to 41kw				•	
<b>Kerosene Visual Effect Stove</b>					
Output up to 17kw		•3	•3		

## Technical Data

	ICS	ICS Plus
Fuel	Gas, oil, wood, coal	Gas, oil
Firing Temp	450° C	160° C
Short Firing Temp	550° C	200° 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	304 : 1.4301 : X5CrNi 18-10	
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 (50, 75, 100 available)	
Average Thermal Resistance (200°C)	0.508m <sup>2</sup> kw	

	100 mm	130 mm	150 mm	180 mm	200 mm	230 mm	250 - 400mm
<b>Gas Boiler - Forced Draught</b>							
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
<b>Gas Fires</b>							
'Inset' to BS7977-1 2002				•1			
'Decorative' BSEN 509:2000				•			
<b>Gas Oil (35sec Class D)</b>							
Heating Boiler							
Output up to 25kw	•						
Output 25kw to 45kw		•					
Output 45kw to 70kw			•				
Output 70kw to 100kw				•			
Output over 100kw					•3	•3	•3
<b>Solid Fuel</b>							
Heating Boiler							
Input up to 20kw			•S	•SC			
Input 20kw to 30kw				•S	•SC	•SC	
Input 30kw to 60kw					•SC	•SC	•SC
<b>Open Fires (standard opening)</b>							
500mm x 550mm					•		
					200 min		
<b>Avant Garde Feature Open Fires</b>							•4
<b>Room Heaters</b>			•S				
<b>Wood burning stoves and cookers</b>			•	•			
Use only seasoned wood.				200min			
<b>Inglenook/ non-standard opening</b>							
Flue size dependant on cross-sectional area of fireplace opening.						•	230min

**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. S Smokeless fuel only. SC Smokeless fuel or coal.

# System Design

## Outlet Siting

Flue terminations for solid fuel & oil are subject to BS7566 Parts 1, 2, 3 and 4. Figure A illustrates recommendations for the most commonly encountered outlet terminations. Flue terminations for gas in domestic situations are governed by the new BS5440-1 2000 Section 4.2. Figure B 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

Figure A

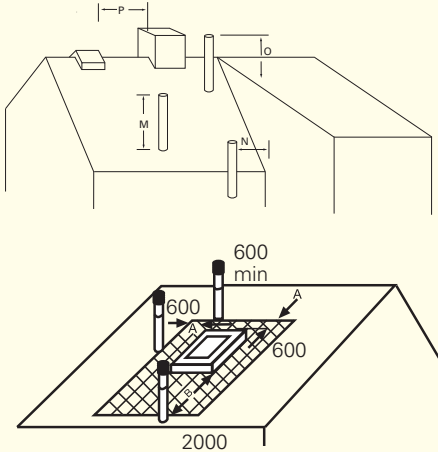
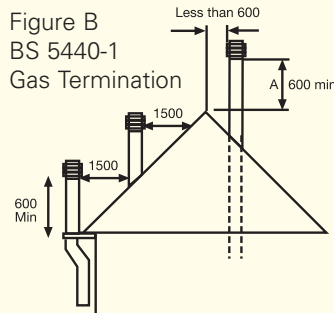
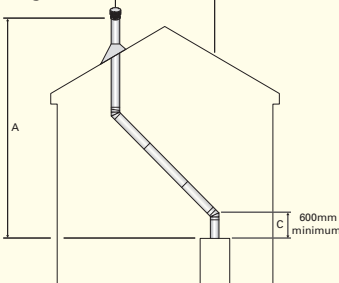


Figure B  
BS 5440-1  
Gas Termination



Location of Outlet		Pressure jet burner	Vapourising burner	Solid fuel
M	Above the highest point of an intersection with the roof	600mm	1000mm	1000mm
N	From a vertical structure to the side of the terminal	750mm	2300mm	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	1000mm
P	From a ridge terminal to a vertical structure on the roof	1500mm	should not be used	should not be used

Figure C



## 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:

**Gas:** An offset no greater than 45° to the vertical, with a run between the bends (B) not exceeding half the overall height of the chimney (A) should be maintained See Figure C.

**Oil - Solid Fuel:** An offset no greater than 30° to the vertical, with a run between the bends not exceeding 20% of the overall height of the chimney should be maintained.

In both instances a maximum of two bends in any one chimney run should be used. A vertical rise of 600mm should be allowed immediately above the appliance before any offsets. Reference for both guidelines can be found in the Building Regulations Doc J and relevant British Standards on installations.

## Terminal Types

For solid fuel appliances, BS7566 Parts 1, 2, 3 and 4 recommends use of an open terminal for chimneys up to 200mm diameter. Rain ingress should not be significant, but drain components can be fitted. Above 200mm a covered terminal can be used, and for all oil and gas installations. Mesh carries the risk of sooting and requires regular cleaning to avoid blockage particularly with oil and solid fuel.

## Provision for sweeping, cleaning and maintenance

Provision should be made for inspecting and cleaning the chimney. 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.

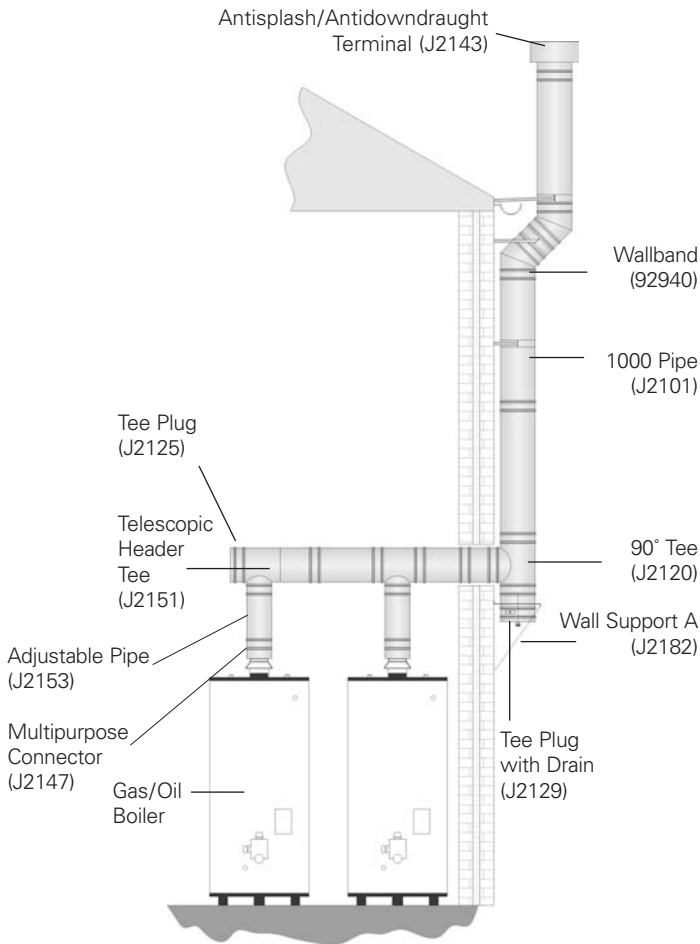
## Room Ventilation

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

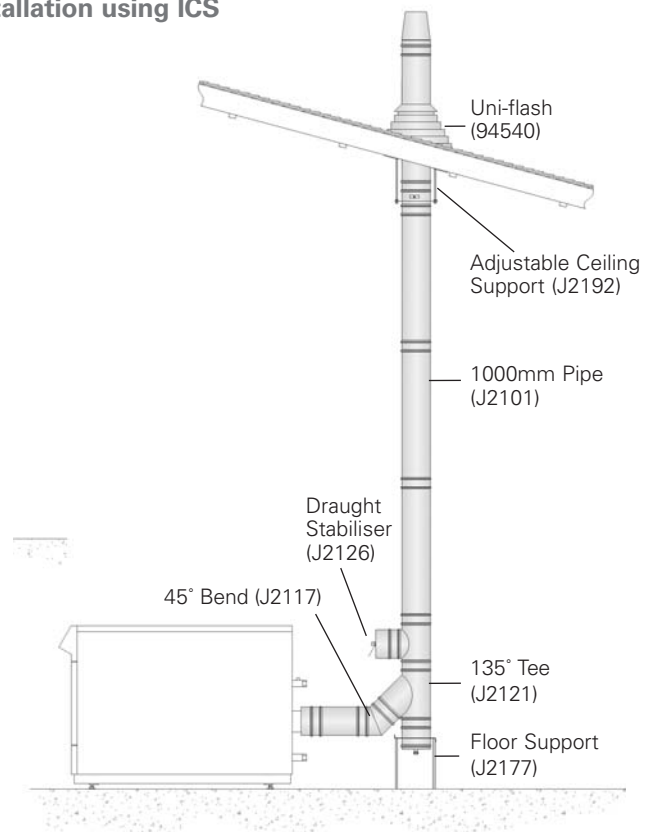
Schiedel Rite Vent can provide a full design & flue sizing advice service for commercial installations. The ICS range contains all the required components for commercial use including time-saving telescopic header tees for increasingly popular multi-boiler installations.

**Typical Atmospheric Boiler Installation Using ICS**

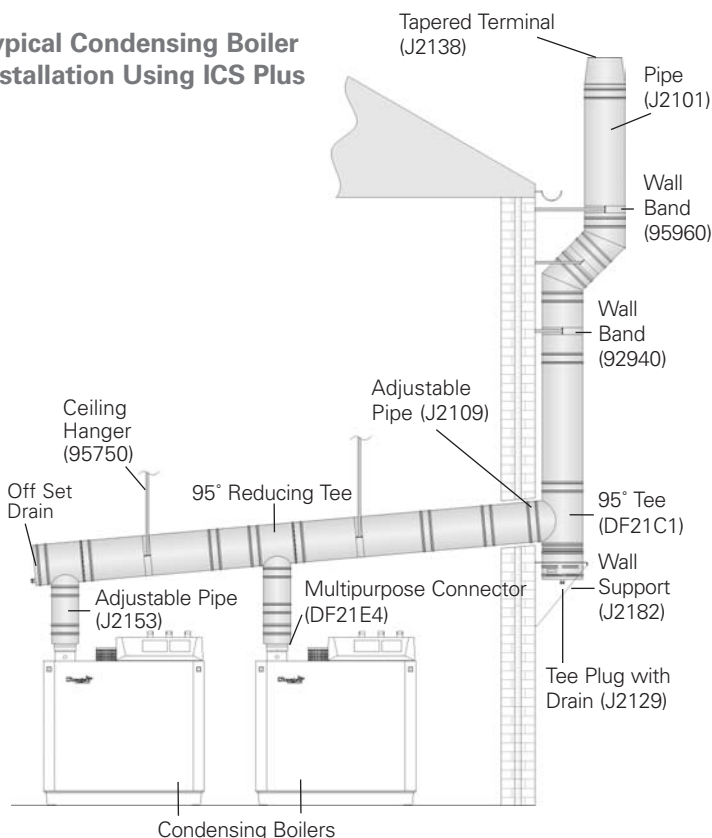


**Provision for condensate disposal** (subject to appliance manufacturer recommendations)  
 Normally solid fuel and atmospheric gas and oil appliances will not need a drain unless rain ingress is significant. Most condensing appliances however need provision for drainage. As a rule of thumb a condensing 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.  
 A 5° slope on horizontal runs is advised, using the appropriate 85° or 40° bend and 95° tee.

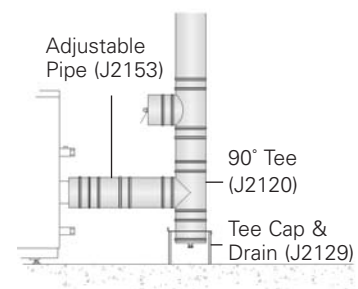
**Typical Pressure Jet Boiler Installation using ICS**



**Typical Condensing Boiler Installation Using ICS Plus**



**Alternative Arrangement using 90° Tee**





## Dimensions

The dimensions of the flue are:

Int Ø mm	80	100	130	150	180	200	230	250	300
Ext Ø mm	130	150	180	200	230	250	280	300	355

## Product Ordering

To identify fully the component required it is necessary to state the product code followed by diameter as follows.

- Quote the product code followed by the internal diameter. Eg. for a 150mm Int Ø ICS 45° bend, the full code would be J2117150.
- Codes starting with a number 9 are universal accessories common to a number of Schiedel Rite-Vent ranges and therefore require definition of the external diameter. eg. to specify a wall band 50mm to suit a 150mm Int Ø system, the external diameter is 200mm therefore the full code is 92940200.

### 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

**Copper** ICS & ICS Plus are available with a copper casing instead of the standard 304 stainless. Normally supplied unprotected so that the finish weathers down, this can be particularly beneficial to meet architectural styling requirements, suitability for listed buildings etc.

**Paint** ICS & ICS Plus can be supplied ready painted in any RAL colour.

## Starting Components

ICS J2147

**Multi-purpose Connector** ICS Plus DF21E4

Int Ø	80	100	130	150	180	200	230	250	300
-------	----	-----	-----	-----	-----	-----	-----	-----	-----

**Connector Prima Plus to ICS** ICS S068

Int Ø	80	100	130	150	180	200	230	250	300
-------	----	-----	-----	-----	-----	-----	-----	-----	-----

**Appliance Connector** ICS J2169

Int Ø	80	100	130	150	180	200	230	250	300
-------	----	-----	-----	-----	-----	-----	-----	-----	-----

**Adaptor - ICS to Prima Plus** ICS J2178

Int Ø	80	100	130	150	180	200	230	250	300
-------	----	-----	-----	-----	-----	-----	-----	-----	-----

**Increaser** ICS J2171 ICS Plus DF21E5

Int Ø	80	100	130	150	180	200	230	250	300
A	100	130	150	180	200	230	250	300	355
B	150	180	200	230	250	280	300	355	405

**Adaptor - ICS to Turboflex Plus** ICS J2179

Int Ø	80	100	130	150	180	200	230	250	300
-------	----	-----	-----	-----	-----	-----	-----	-----	-----

**Anchor Plate** ICS J2189

Int Ø	80	100	130	150	180	200	230	250	300
A	270	290	320	340	370	390	420	440	495

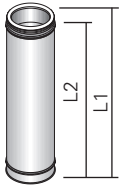
**Adaptor from SM to ICS** ICS J2155

SM Int Ø	127	152	178	203	254	304
ICS Int Ø	130	150	180	200	250	300

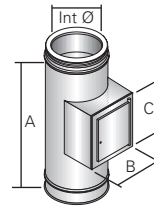
**Adaptor from ICS to SM** ICS J2180

ICS Int Ø	130	150	180	200	250	300
SM Int Ø	127	152	178	203	254	304

## Pipes

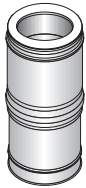


Int Ø	80	100	130	150	180	200	230	250	300
Part ref. ICS									
J2101	Length L1			Length L2					
J2102	1000mm			955mm					
J2103	500mm			455mm					
J2104	250mm			205mm					
	195mm			150mm					



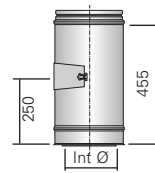
**Inspection Length - ICS** ICS J2111

Int Ø	80	100	130	150	180	200	230	250	300
A	292	292	292	292	292	292	411	411	411
B	114	114	114	114	143	143	202	202	202
C	173	173	173	173	173	173	292	292	292



**Adjustable Pipe**

Int Ø	80	100	130	150	180	200	230	250	300
Part ref. ICS									
J2108	Length								
J2152	165 - 195mm								
J2109	195 - 270mm								
J2153	270 - 375mm								
J2154	375 - 585mm								
	585 - 1005mm								



**Inspection Pipe - ICS** ICS J21A4

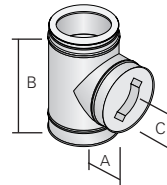
Int Ø	80	100	130	150	180	200	230	250	300

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



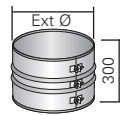
**Locking Band** ICS J2183

Int Ø	80	100	130	150	180	200	230	250	300



**Inspection Length - ICS Plus** ICS Plus DF21E6

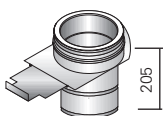
Int Ø	80	100	130	150	180	200	230	250	300
A	100	130	150	180	200	230	250	300	355
B	150	180	200	230	250	280	300	355	405
C	173	162	245	245	245	245	245	245	303



**Extended Locking Band** 95840

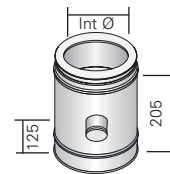
Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355

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



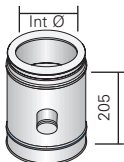
**Damper Pipe** ICS J2158

Int Ø	80	100	130	150	180	200	230	250	300



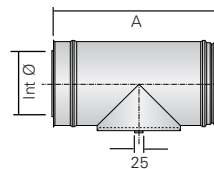
**Vertical Drain Pipe** ICS J21A5

Int Ø	80	100	130	150	180	200	230	250	300



**Measure Pipe** ICS J2195

Int Ø	80	100	130	150	180	200	230	250	300



**Horizontal Drain Pipe - ICS Plus** ICS Plus DF21E7

Int Ø	80	100	130	150	180	200	250
A	288	288	455	455	455	455	455

## Gasket to convert ICS to ICS Plus

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



**Silicone Gasket** S000

Int Ø	80	100	130	150	180	200	230	250	300

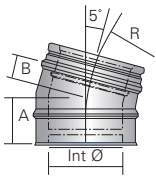


**Viton Gasket** V000

Int Ø	80	100	130	150	180	200	230	250	300

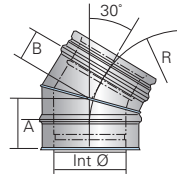
For use on oil applications. To comply with the requirements of EN1856-1 will become effective on installations from April 2006

## Bends



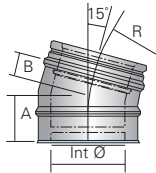
**5° Bend** ICS J21B1

Int Ø	80	100	130	150	180	200	230	250	300
A	83	83	84	84	85	85	86	87	88
B	57	44	45	45	46	46	47	48	49
R	1055	965	973	978	985	990	998	1003	1016



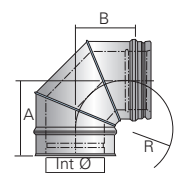
**30° Bend** ICS J2119

Int Ø	80	100	130	150	180	200	230	250	300
A	97	100	104	107	111	113	118	120	128
B	71	61	65	68	72	74	79	81	89
R	195	189	196	201	209	214	221	226	240



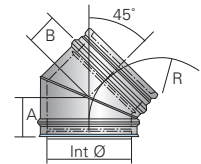
**15° Bend** ICS J2118

Int Ø	80	100	130	150	180	200	230	250	300
A	89	90	92	93	95	96	98	100	103
B	63	51	53	54	56	57	59	61	64
R	364	345	353	358	365	370	378	383	396



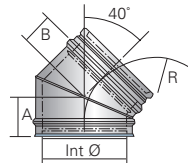
**90° Bend** ICS J2115

Int Ø	80	100	130	150	180	200	230	250	300
A	172	182	184	194	209	219	234	244	279
B	146	143	145	155	170	180	195	205	240
R	103	112	115	124	139	150	164	174	214



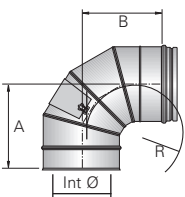
**45° Bend** ICS J2117

Int Ø	80	100	130	150	180	200	230	250	300
A	118	122	117	121	128	132	138	142	154
B	92	88	78	82	89	93	99	103	115
R	115	125	143	148	155	160	168	173	186



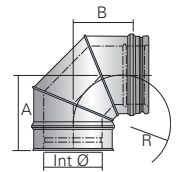
**40° Bend** ICS J21A9

Int Ø	80	100	130	150	180	200	230	250	300
A	114	118	113	116	122	125	131	135	145
B	88	79	74	77	83	86	92	96	106
R	122	132	156	161	169	174	181	186	200



**90° Inspection Bend - ICS** ICS J21A2

Int Ø	80	100	130	150	180	200	230	250	300
A	235	245	184	194	209	219	234	244	272
B	195	205	139	149	164	174	189	199	227

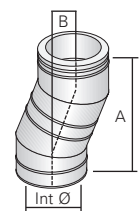


**85° Bend** ICS J21A8

Int Ø	80	100	130	150	180	200	230	250	300
A	165	175	176	185	199	208	222	231	263
B	140	136	137	146	160	169	183	192	224
R	105	115	116	126	141	151	166	176	216

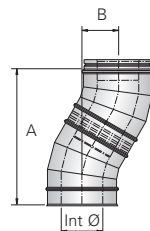
Please note the radius for the above omitted.  
Has not been calculated.

## Offsets



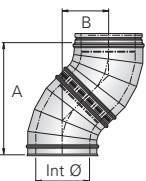
**Offsets for Double 15° Bend**

Int Ø	80	100	130	150	180	200	230	250	300
A	299	277	285	289	297	301	309	317	328
B	39	36	38	38	39	40	41	42	43



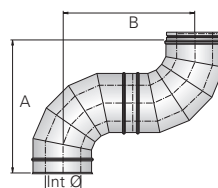
**Offsets for Double 30° Bend**

Int Ø	80	100	130	150	180	200	230	250	300
A	313	300	315	327	341	349	368	375	405
B	84	81	85	88	92	94	99	101	109



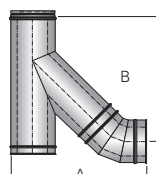
**Offsets for Double 45° Bend**

Int Ø	80	100	130	150	180	200	230	250	300
A	358	358	333	347	370	384	405	418	459
B	148	148	138	144	153	159	168	173	190



**Offsets for Double 90° Bend**

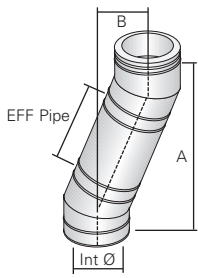
Int Ø	80	100	130	150	180	200	230	250	300
A	318	325	329	349	379	399	429	449	519
B	318	325	329	349	379	399	429	449	519



**Offsets for 135° Tee and 45° Elbow**

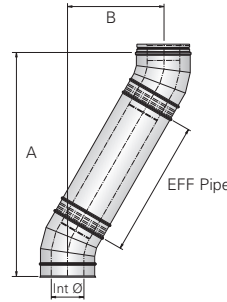
Int Ø	80	100	130	150	180	200	230	250	300
A	416	444	473	507	559	593	644	678	773
B	299	317	343	367	403	428	463	487	554





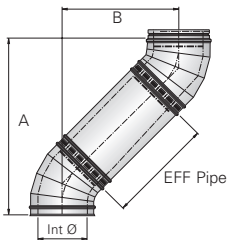
**Double 15° Bend C/W Pipe Length**

Int Ø mm		80	100	130	150	180	200	230	250	300
955 EFF Pipe	A	1221	1200	1208	1211	1219	1223	1231	1239	1251
	B	287	284	285	285	286	287	288	289	290
455 EFF Pipe	A	738	717	725	728	736	740	748	756	768
	B	157	154	155	156	157	157	158	159	161
205 EFF Pipe	A	497	475	483	487	495	499	507	515	526
	B	92	90	91	91	92	93	94	95	96



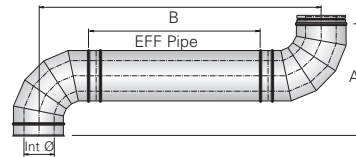
**Double 30° Bend C/W Pipe Length**

Int Ø mm		80	100	130	150	180	200	230	250	300
955 EFF Pipe	A	1140	1127	1142	1153	1168	1176	1195	1202	1232
	B	562	558	562	565	569	571	576	578	586
455 EFF Pipe	A	707	694	709	721	735	743	762	769	799
	B	312	308	312	315	319	321	326	328	336
205 EFF Pipe	A	491	478	493	504	519	526	545	553	582
	B	187	183	187	190	194	196	201	203	211



**Double 45° Bend C/W Pipe Length**

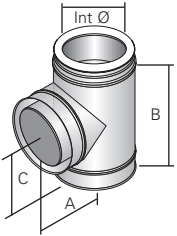
Int Ø mm		80	100	130	150	180	200	230	250	300
955 EFF Pipe	A	1034	1034	1009	1022	1046	1060	1080	1094	1135
	B	824	824	814	819	829	835	843	849	866
455 EFF Pipe	A	680	680	655	668	692	706	726	740	781
	B	470	470	460	465	475	481	489	495	512
205 EFF Pipe	A	503	503	478	491	515	529	550	563	604
	B	293	293	283	288	298	304	313	318	335



**Double 90° Bend C/W Pipe Length**

Int Ø mm		80	100	130	150	180	200	230	250	300
955 EFF Pipe	A	299	319	323	343	373	393	423	443	499
	B	1254	1274	1278	1298	1328	1348	1378	1398	1454
455 EFF Pipe	A	299	319	323	343	373	393	423	443	499
	B	754	774	778	798	828	848	878	898	954
205 EFF Pipe	A	299	319	323	343	373	393	423	443	499
	B	504	524	528	548	578	598	628	648	704

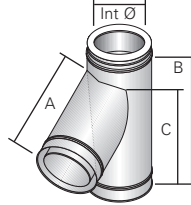
## Tees



ICS J2120  
ICS Plus DF2120

90° Tee	Int Ø	80	100	130	150	180	200	230	250	300
A		145	155	170	180	195	205	220	230	258
B		255	275	305	325	355	375	405	425	480
C		145	155	170	180	195	205	220	230	258

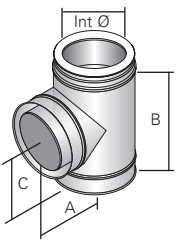
To change into ICS Plus a total of 2 gaskets are required on tee sections.



ICS J2121  
ICS Plus DF2121

135° Tee	Int Ø	80	100	130	150	180	200	230	250	300
A		238	262	298	322	358	382	419	443	509
B		304	332	375	403	445	474	516	544	622
C		238	262	298	322	358	382	419	443	509

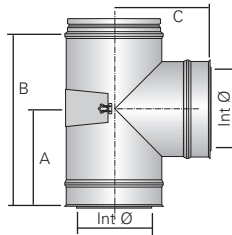
To change into ICS Plus a total of 2 gaskets are required on tee sections.



ICS Plus DF21C1

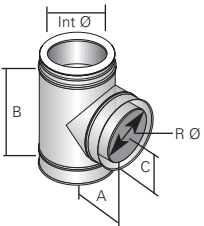
95° Tee	Int Ø	80	100	130	150	180	200	230	250
A		151	162	178	189	206	216	233	244
B		259	288	309	329	359	379	405	455
C		151	166	178	189	206	216	233	257

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



ICS J21A3

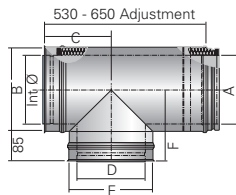
90° Tee C/W Inspection Point - ICS	Int Ø	80	100	130	150	180	200	230	250	300
A		145	155	170	180	195	205	220	230	258
B		255	275	305	325	355	375	405	425	480
C		145	155	170	180	195	205	220	230	258



ICS J2131

90° Reducing Tee	Int Ø	R Ø	A	B	C
200		130	205	305	170
		150	205	325	180
		180	205	355	195
250		130	230	305	170
		150	230	325	180
		180	230	355	195
300		130	258	305	170
		150	258	325	180
		180	258	355	195
	200	258	375	205	
	250	258	425	230	

To order quote J2131 followed by main mm Ø followed by branch mm Ø



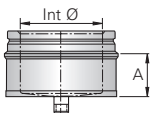
ICS J2151

Telescopic Tee - ICS	Part Number	Int Ø	Ext Ø	A	B	C	D	E	F
J2151200200		200	250	199	249	190	200	249	210
J2151250250		250	300	249	299	215	250	299	235
J2151300200		300	355	299	354	190	200	250	262



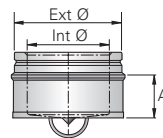
ICS J2126

Draught Stabiliser Section	Int Ø	80	100	130	150	180	200	230	250	300



ICS J2129

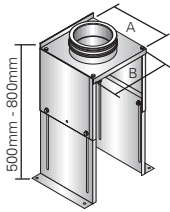
Tee Plug with Drain	Int Ø	80	100	130	150	180	200	230	250	300
A		35	32	38	41	44	44	48	48	115



ICS J2125

Tee Plug	Int Ø	80	100	130	150	180	200	230	250	300
A		35	32	38	41	44	44	48	48	115

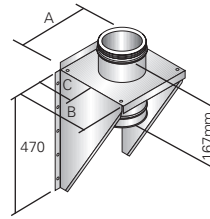
## Support Components



**Telescopic Floor Support** ICS J2177

Int Ø	80	100	130	150	180	200	230	250	300
A	220	240	270	290	320	340	370	390	445
B	200	220	250	270	300	320	350	370	425

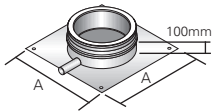
500mm minimum. Adjustable to 800mm maximum.



**Wall Support** J2182

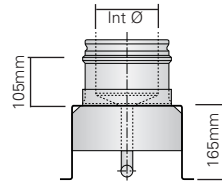
Int Ø	80	100	130	150	180	200	230	250	300
A	200	220	250	270	300	320	350	370	425
B	220	240	270	290	320	340	370	390	445
C	115	125	140	150	165	175	190	200	228

For Top Plate only order: ICS J2182.Ø 01



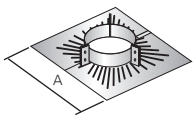
**Base Support Plate with Drain** ICS J2191

Int Ø	80	100	130	150	180	200	230	250	300
A	230	250	280	300	330	350	380	400	455



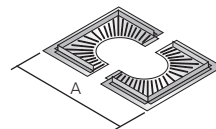
**Drain Plug & Support** ICS J2130

Int Ø	80	100	130	150	180	200	230	250	300
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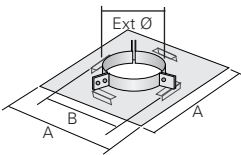
**Support Plate 2 Piece** Solid Fuel 95740  
Gas & Oil 95710

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355
A	380	400	430	450	480	500	530	550	605



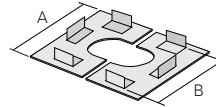
**Firestop** Solid Fuel 94730  
Gas & Oil 94740

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355
A	380	400	430	450	480	500	530	550	605



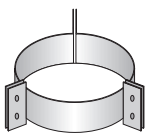
**Support Plate - Non Combustible Floor** 95680

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355
A	300	300	330	350	380	400	430	450	505
B	230	250	280	300	330	350	380	400	455



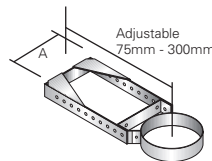
**Fire Stop Plate - Non Combustible Floor** 94670

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355
A	300	300	330	350	380	400	430	450	505
B	230	250	280	300	330	350	380	400	455



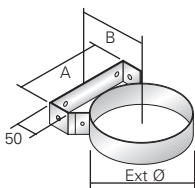
**Guy Wire Bracket** 95900

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355



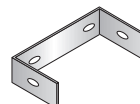
**Wall Bracket 300mm Adjustable** 95960

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355
A	131	151	181	201	231	251	281	301	356



**Wall Bracket 50mm** 92940

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355
A	128	148	178	198	228	248	278	298	353
B	115	125	140	150	165	175	190	200	228



**Wall Bracket Extension 50-100mm** 95920

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355

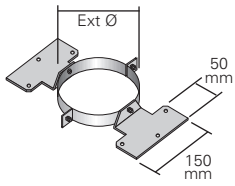
To be used with 92940 for solid fuel application.



**Ceiling Hanger** 95750

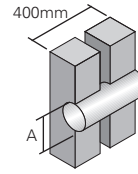
Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355

## Support Components cont'd



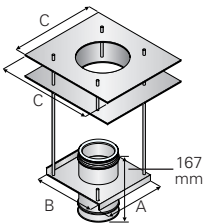
**Roof Support** 94640

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355
A	131	151	181	201	231	251	281	301	356



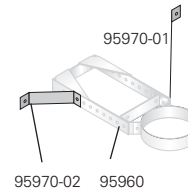
**Wall Sleeve** 94980

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355
A	180	200	230	250	280	300	330	350	405



**Adjustable Ceiling Support** ICS J2192

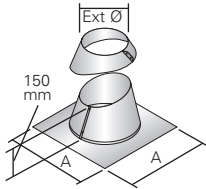
Int Ø	80	100	130	150	180	200	230	250	300
A	200	220	250	270	300	320	350	370	425
B	220	240	270	290	320	340	370	390	445
C	530	550	580	600	630	650	680	700	755



**Anti-Swing Stay (pair)**

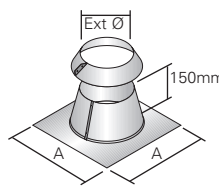
Short - 95970-02  
Long - 95970-01

## Flashings



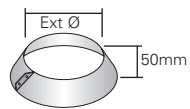
**Angled Flashing Kit 5° - 45°** 95510

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355
A	610	610	610	700	700	700	800	800	860



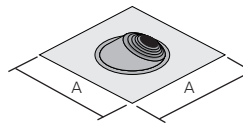
**Flat Flashing Kit** 95530

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355
A	610	610	610	610	610	610	610	610	800



**Storm Collar** 95560

Int Ø	80	100	130	150	180	200	230	250	300
Ext Ø	130	150	180	200	230	250	280	300	355

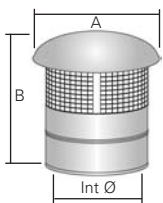


**Uniflash**

Product Code	94540001	94540002	94540003
Ext Ø (mm)	80-200	150-300	250-450
A	500	685	800

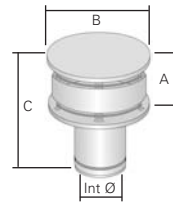
Universal EPDM rubber/aluminium flashing.  
Just pull the required diameter tab on the rubber seal.

## Terminals



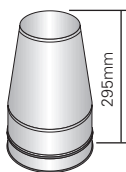
**Raincap** with mesh ICS J2137  
without mesh ICS J2156

Int Ø	80	100	130	150	180	200	230	250
A	266	266	266	362	362	362	362	362
B	243	243	253	263	278	288	303	313



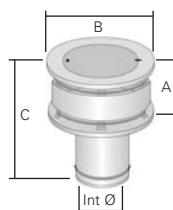
**Anti-Splash  
Anti-Downdraught  
Terminal (Gastec Approved)** with mesh ICS J2144  
without mesh ICS J2143

Int Ø	130	150	180	200	230	250	300
A	130	175	200	200	250	275	330
B	254	304	359	409	459	509	609
C	220	265	290	290	340	365	420



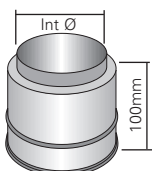
**Insulated Tapered Terminal** ICS J2138

Int Ø	80	100	130	150	180	200	230	250	300
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**Cleanout Terminal  
Swing Open Top** with mesh ICS J2181  
without mesh ICS J2199

Int Ø	130	150	180	200	230	250	300
A	130	175	200	200	250	275	330
B	254	304	359	409	459	509	609
C	220	265	290	290	340	365	420



**Stub Terminal** ICS J2172

Int Ø	80	100	130	150	180	200	230	250	300
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# Installation

## 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 CORGI (gas) or OFTEC (oil) registered installer.

The flue system must be installed to comply with Building Regulations Document J (in England, Wales & Northern Ireland) Regulations for Scotland. The installation must also comply with BS7566 pts 1,2,3,4 for oil flues and BS5440 pt 1: 2000 for gas flues up to 70kw.

## Joining

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 should be fitted dry and lubrication applied to the internal of the female liner socket.

Avoid making joints 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 150mm below the ceiling.

## 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

Always use an appliance connector, sealed using fire rope and fire cement or high temperature sealant. 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.

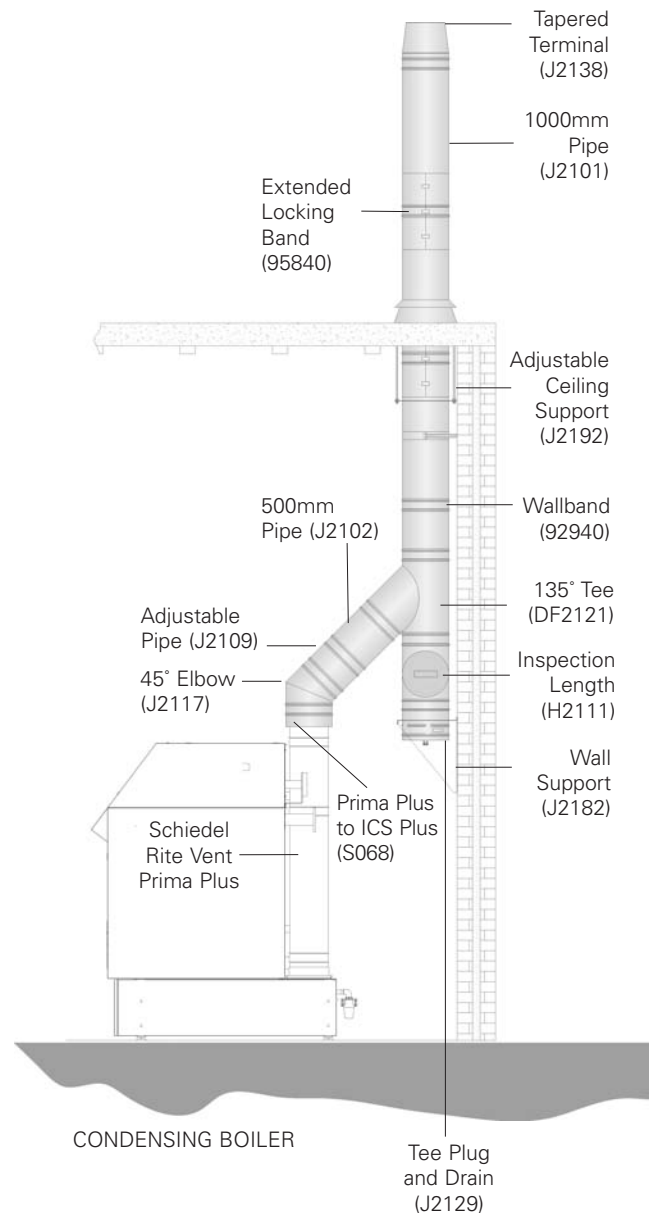
## Painting

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.

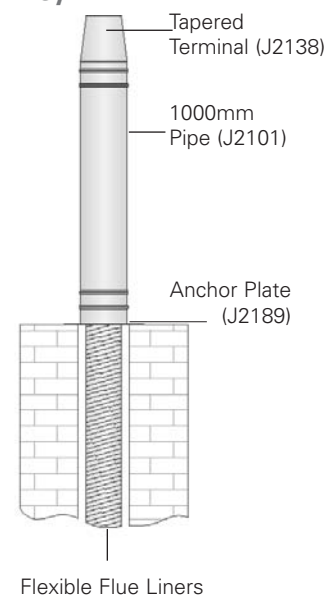
## Recommended distances to combustibles

In accordance with building regulations it is essential that the required distance to combustible materials is maintained throughout the chimney system. For gas and oil this is 50mm and for solid fuel 75mm. ICS support components provide this as standard.

## Typical Installation using ICS Plus



## Detail of Connection to Flue Liner at Top of Chimney





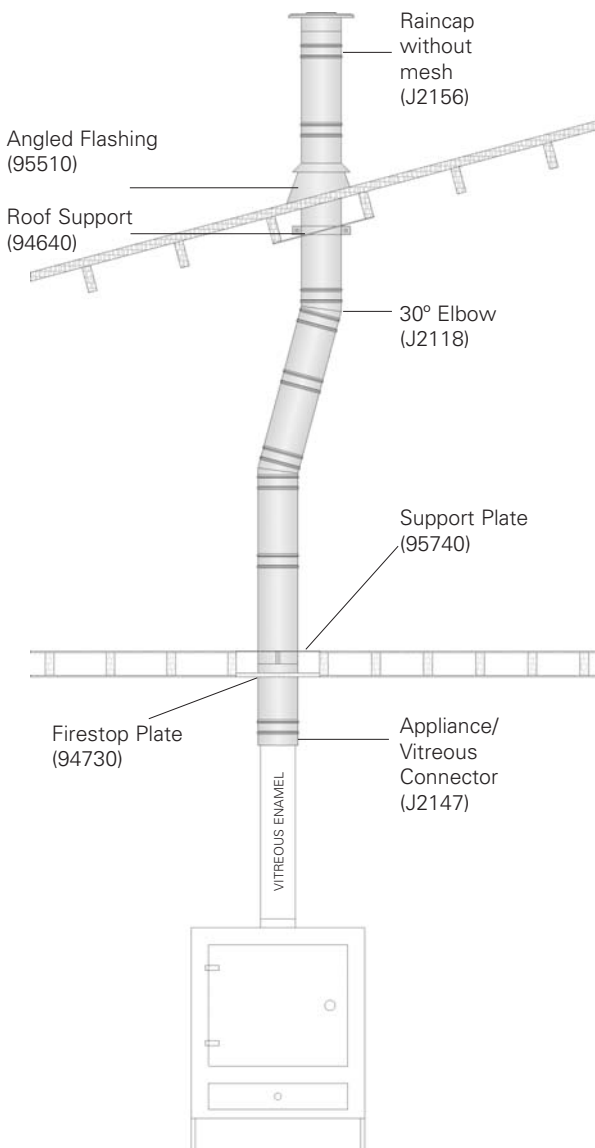
**Support Components**

The weight of a chimney system is considerable and requires independent support. Minimal weight should be taken by the appliance. A wall support at the base of the stack will support up to 10m of chimney, or in an inverted position, up to 15m. Wall supports can then be used as an intermediate support every 10m thereafter.

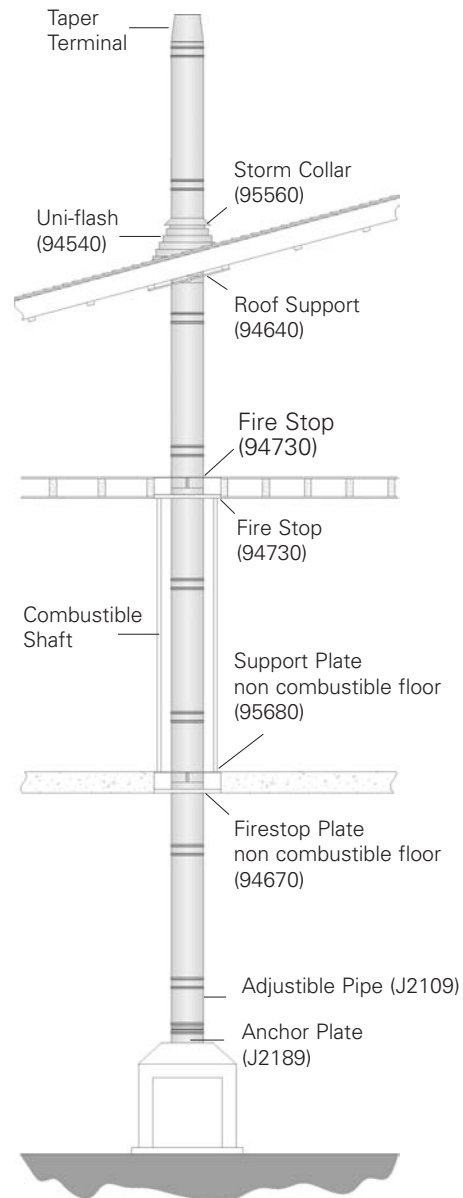
Alternatively, on internal systems the weight is held by using a support plate and clamp fixed on top of the first floor/ceiling joist. A Firestop plate is also required fixed to the ceiling below. In a domestic house, when passing through the second floor the only requirement is two firestop plates because the system is adequately supported at first floor level.

**Typical Installations**

**Multifuel Stove**



**Open Fire**



Refer to load bearing table on page 15 for full details of maximum loadings.

Wall brackets and roof brackets are not load bearing and give lateral support only. Wall brackets should be fitted every 3m and at any offsets to ensure the system is rigidly supported.

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 4m can be achieved unsupported with the use of an extended locking band at the joint immediately below and every joint above the roof level.

## After Installation

### Testing before use

This is done by means of flue flow test as described in BS5440:Part 1-2000. It can be summarised as follows:- After a visual and physical check of the joints in the system, and ensuring an adequate air supply for combustion has been provided, close all doors and windows in the room in which the appliance is to be installed. It will be necessary to introduce heat to the flue system for a minimum of 10 mins. and possibly up to 30 mins. using a blow torch or similar. Position a smoke pellet (providing a performance of 5m<sup>3</sup> of smoke in 30 secs. burn time) at the intended of the appliance. The test is satisfactory if there is no significant spillage from the appliance position, no seepage over the length of the system, and discharge only from the terminal. If these conditions are not met, the test has failed and all faults must be rectified and the system retested before connection of the appliance to the fuel supply. In the event of any further problems, reference to BS5440:Part 1-2000 must be made.

### Life Expectancy

Under normal operating conditions and providing the system is installed correctly, it should last the lifetime of the appliance which is normally 10 to 12 years. ICS carries a 10 year conditional warranty.

## Load Bearing Data (metres of pipe)

Internal Diameter (mm)	80-130	150-180	200-300
Floor Support (Adj)	22	18	18
Wall Support	10	10	10
Wall Support (Inv)	15	15	15
90° Tee	22	18	18
135° Tee	15	10	10
Inspection Length	22	18	18
Support Plate	12	12	9

The conditions are that the chimney is:

- correctly sized + 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, or by contacting the Solid Fuel Association (Tel: 0845 601 4406) or appliance manufacturer's instructions. Warranty registration details are provided with installation instructions for completion and registration with Schiedel Rite-Vent.

### Maintenance

It is essential that the flue way be kept clear at all times in the interest of good practise and health, safety and appliance performance. The system should be checked regularly during the appliance maintenance. (Refer appliance manufacturer's instructions).

### Approx Weight of Products (kg)

Int Dia	Length	1000mm	500mm	250mm	195mm
80mm		4.32	2.13	1.09	0.85
100mm		5.14	2.53	1.29	1.01
130mm		6.35	3.14	1.60	1.24
150mm		7.18	3.54	1.86	1.41
180mm		8.40	4.14	2.11	1.65
200mm		9.22	4.55	2.31	1.80
230mm		10.44	5.13	2.62	2.03
250mm		11.24	5.53	2.81	2.19
300mm		13.73	6.76	3.44	2.68

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.



**INSTALLER HELPLINE**  
**+44 (0) 191 416 6666**

More information on [www.rite-vent.co.uk](http://www.rite-vent.co.uk)



**ICS**

Twin wall insulated chimney system for gas, oil, wood and multifuel appliances and open hearths

Residential and commercial applications.  
80-705mm internal diameters.

For atmospheric, condensing and pressure appliances.

Wet or dry flue and chimney operating conditions.

**Other products in the Schiedel Rite-Vent range**



**B Vent**

Twin wall gas venting system.  
Residential & small commercial applications.  
75-150mm internal diameters.  
Gas appliances up to 60kw input.



**K Vent**

Twin wall insulated venting system for oil (28 sec) and gas appliances.  
Residential and small commercial applications.  
100-150mm internal diameters.  
Oil appliances up to 45kw output.  
Gas appliances up to 60kw input.  
Interfits with B Vent gas vent.



**ICID**

Quick assembly twin wall insulated chimney system for gas, oil, wood and multifuel appliances and open hearths.  
Residential and small commercial applications.  
125-300mm internal diameters.  
Quick assembly twist-lock joint.  
For class 1 chimneys, atmospheric and condensing appliances.



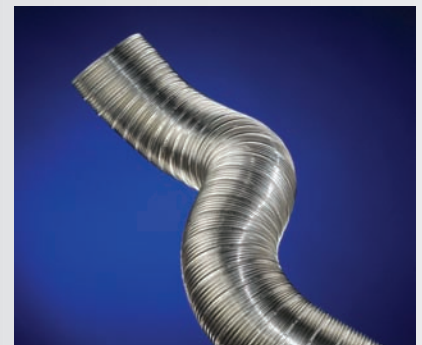
**Prima**

Single wall stainless steel flue system.  
80-755mm diameter range.  
Prima Plus 1mm for domestic multi fuel stoves.  
Prima Plus for large residential and commercial condensing gas and oil appliances and chimney relining.  
Prima SW for commercial warm air heaters, gas and oil venting and particle/fume extraction.



**Flue Boxes**

For installing gas fires and back boilers.  
Connection to single and twin skin flexible liners, B Vent, ICS or ICID.  
Fast fix spigot for flex connection avoids much of the building work.  
Single skin and twin skin air-insulated versions.



**Flexible Liners**

For relining existing chimneys to take gas, oil, wood, multifuel appliances and open fires.  
Single skin Wonderflex and Triplelock for gas and oil (28 sec).  
Twin skin Turboflex Plus for oil, wood, multifuel and open fires.  
80-400mm diameter range.



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