

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

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# **Approvals**



High Temperature Applications	High Temperature Applications
Connecting Flue Pipe BS EN1856-2 TÜV 0036 CPR 9195 029	<b>Chimney Liner</b> BS EN1856-2 TÜV 0036 CPR 9195 033
T600 N1 W V2 L50060 GXX NM T600 N1 W V2 L50100 GXX NM (XX = 3 x Ø Int. of Pipe)	T600 N1 D V2 L50060 G T600 N1 D V2 L50100 G

The Prima Smooth range is manufactured under the strict requirements of BS EN ISO 9001 Quality management scheme. Prima Smooth has corrosion certification from TÜV. Prima Smooth is listed by HETAS as a product suitable for solid fuel.

# Design Guide

### MANDATORY REQUIREMENTS

Connection to an appliance which is not connected to the fuel supply, should be carried out by a competent person. We recommend the use of HETAS approved installers for solid fuel applications. If installation is carried out by a non HETAS registered installer, the installation must be certified by a local Building Control inspector. 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.

The design guide must be read in conjunction with the detailed component installation instructions

For full design and installation details the key referral documents are:

- BS EN 1856-2: Connecting Flue Pipes and Chimney Liners
- BS EN 1859: Metal Chimneys Testing Methods
- BS EN 1443: Chimneys General Requirements
- BS EN 15287-1: Chimneys. Design, installation and commissioning of chimneys. Chimneys for non-room sealed heating appliances.
- Approved Document J: Combustion appliances and fuel storage systems (England & Wales)
- DFP Technical Booklet L: Combustion appliances and fuel storage systems (NI)
- Technical Handbook (Domestic & Non Domestic), Section 3 Environment (Scotland)
- Appliance Installation Instructions and related standards. Other standards covering specific
  applications will also be relevant and must be adhered to.

Planning permission for a System Chimney may be required, and reference should be made to the local Building Control Department.

Ensure all chimney components are available and check them to ensure there has been no damage. Do not use damaged components.

### Prior to Installation

#### **VENTILATION**

It is very important that sufficient air for combustion is provided to the room containing the appliance, to enable correct and efficient working of the system. Reference should be made to the appliance manufacturer's instructions

and recommendations are also given in the Building Regulations Document J.

### CARBON MONOXIDE ALARMS

The carbon monoxide alarms should comply with BS EN 50291:2001.

Where a new or replacement fixed solid fuel appliance is installed in a dwelling, a carbon monoxide alarm must be provided in the room where the appliance is located.

Please follow manufacturer's instructions with regard to siting and fixing or alternatively:-

- a) On the ceiling at least 300mm from any wall or if it is located on a wall, as high up as possible (above any doors
- and windows), but not within 150mm of the ceiling and
- b) between 1m and 3m horizontally from the appliance.

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

#### **HANDLING**

It is advised that suitable PPE should be used when handling the products.

### **DELIVERY TO SITE AND STORAGE**

Components should be carefully transported and off loaded. They should be inspected to ensure they have not been damaged, and should be stored off the ground and under cover so that they are protected from accidental damage and the adverse effects of weather. Particular care and attention should be taken to avoid surface damage to product with the high temperature painted finish.

# Connecting Flue Pipe

### APPLIANCE/CHIMNEY CONNECTION

When a single wall connecting flue pipe is used to connect an appliance to a Twin Wall Insulated System Chimney, the lower end of the chimney section must extend a minimum of 425mm below the ceiling. When connecting the appliance to the connecting flue pipe, the joint between the the connecting flue pipe and the appliance outlet must be securely caulked and sealed with non asbestos rope (or suitable alternative) and fire cement.

#### CONNECTING FLUE PIPE DIAMETER

Connecting Flue Pipe Diameter 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 EN13384-1.

#### 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, this distance is  $3 \times \emptyset$ Int of the pipe, i.e for  $\emptyset$ 125mm the distance is 375mm and for  $\emptyset$ 150mm the distance is 450mm to combustibles on both painted and non painted variants.

#### CONNECTING FLUE PIPE ROUTE

Single wall connecting flue pipes should only be used to connect appliances to a Chimney. They should not pass through any roof space, partition, internal wall or floor, except to pass directly into a chimney through the wall of the chimney.

Connecting flue pipes should be located so as to avoid igniting combustible material.

On solid fuel appliances the maximum length of a connecting flue pipe is 2m. This distance is reduced to 1.5m if any of the acceptable alternative methods of connection are adopted as per BS EN15287-1. (See p.7-8 for full details.)

On appliances with a top outlet, it is recommended that a vertical run of at least 600mm should be allowed immediately above the appliance prior to any change of direction.

On appliances with a rear outlet, it is recommended that there is maximum of 150mm in the horizontal run however under certain conditions, as described in alternative methods in BS EN 15287-1, this may be increased to 450mm. (See p.7-8 for full details.)

Within a system (Chimney + Connecting Flue Pipe) 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 (as per Document J of the Building Regulations issued October 2010).

# Connecting Flue Pipe

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Within a system (Chimney + Connecting Flue Pipe) 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 (as per Document J of the Building Regulations issued October 2010).

#### INSPECTION

On solid fuel applications to conform to Building Regulations, provisions should be made to enable a chimney to be inspected and cleaned.

An inspection pipe, inspection elbow or a 90° or 135° Tee with tee cap can form a suitable inspection point (unless cleaning/inspection can be done through the appliance). 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.

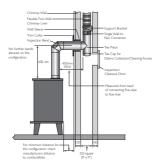
### BS EN 15287-1

### Acceptable alternative Methods of connection

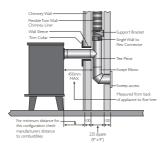
Where a horizontal connecting flue of more than 150mm is required to connect a solid fuel fired appliance to a chimney, an installation method as per the examples below may be used provided the following criteria is met:-

- a. The maximum length of horizontal connecting flue pipe does not exceed 450mm;
- b. A Defra exempt appliance or an appliance, which is limited to burning authorised smokeless fuel only, is installed;
- c. A calculation according to BS EN13384-1 has indicated safe operation of the proposed configuration, and the results of the calculation are left with the householder along with the appliance installation instructions;
- d. The appliance manufacturer agrees in writing to the proposed configuration;
- e. The chimney manufacturer agrees in writing to the proposed configuration;
- f. The total length of single wall connecting flue pipe is not more than 1.5m;
- g. The appropriate distances to combustible materials from both the appliance and the connecting flue pipe are maintained.

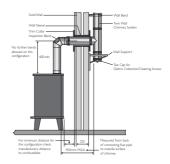
# Top Outlet Single Wall Connecting Flue Pipe into Re-lined Masonry Chimney



# Rear Outlet Single Wall Connecting Flue Pipe into Re-lined Masonry Chimney



### Top Outlet Single Wall Connecting Flue Pipe through Solid Wall into Twin Wall System Chimney



NB Where the connecting flue pipe from the appliance passes through any wall other than the existing chimney wall, the connecting flue pipe must be a System Chimney of twin wall insulated design.

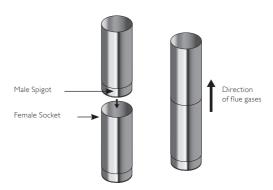
### JOINT DETAIL



### STANDARD SECTIONS (PIPES, TEES AND ELBOWS)

All flue gas bearing components must be installed with the male spigot pointing towards the appliance.

With the exception of the direct connection to the appliance, there is no requirement to apply sealant to the joints of the Prima Smooth system.



#### CONNECTING TO AN APPLIANCE

Connection to the appliance can be done using either an appliance connector or a standard pipe or inspection pipe. In both cases the male spigot should be pushed inside the appliance outlet. The joint between the connecting flue pipe and the appliance should be securely caulked and sealed using non asbestos fibre rope (or alternative) and fire cement.



### SW-DW ADJUSTABLE STARTER SECTION

The protruding male spigot of the adaptor slides down inside the female socket of the Prima Smooth pipe and the socket of the Prima Smooth pipe slides within the conical section of the starter adaptor, to a maximum length of 75mm into the cone with a minimum of 15mm to ensure a secure connection. This maximum length of 75mm will leave sufficient space within the adaptor to allow for thermal expansion of the single wall pipe and also to allow for the connecting flue pipe to be removed without cutting, if the appliance has to be moved for servicing.



### ADAPTOR FROM PRIMA SMOOTH TO ICID PLUS

This component is used to convert from Prima Smooth Connecting Flue Pipe to the ICID System Chimney. The protruding liner of the adaptor should be pushed down inside the female socket of the connecting flue pipe, with the male collar pointing upwards.



#### ADAPTOR FROM PRIMA SMOOTH TO ICS

This component is used to convert from Prima Smooth Connecting Flue Pipe to the ICS System Chimney. The protruding liner of the ICS should be pushed down inside the female socket of the Prima Smooth.



#### ADAPTOR FROM PRIMA SMOOTH TO TECNOFLEX PLUS

This component is used to convert from Prima Smooth Connecting flue pipe to TecnoFlex Plus. The end of the TecnoFlex Plus should be trimmed to allow the adaptor to be screwed in a clockwise direction onto the TecnoFlex Plus. Care should be taken to ensure that the TecnoFlex Plus liner is fully engaged into the inner sleeve of the adaptor, thereby protecting the cut edges of the TecnoFlex Plus.



### **INCREASER**

This component is used to increase from one diameter to the next diameter (e.g.) 125mm to 150mm. The component is fitted in the same way as a standard pipe length.



### **ADJUSTABLE PIPE**

### (Length 200mm with 70mm adjustment)

The adjustable pipe allows for an appliance to be removed for cleaning and servicing. It should be positioned immediately below the adaptor from Prima Smooth to TecnoFlex Plus, Eco ICID or ICS. It is fitted by sliding the male spigot 50mm inside the preceding pipe. The 50mm mark is indicated by a bead on the male spigot. The joint is then secured by using the cover band, which is supplied with the article. When the appliance has to be moved, remove the adj. pipe cover band and slide the adj. pipe down inside the previous pipe until the socket is clear of the spigot of the adaptor above it. The appliance can then be removed safely. It is refitted after servicing by sliding the adjustable pipe back up to fully engage with spigot of the adaptor above it and the cover band should then be refitted and fastened tightly in place.



### **ADJUSTABLE PIPE**

### (Length 500mm with 50mm-370mm adjustment)

The standard adjustable pipe is installed by sliding the male spigot a minimum of 50mm and a max of 370mm into the preceding pipe. The locking band, which is provided with each adjustable pipe is then fastened in place using the nut and bolt.



### INSPECTION LENGTH

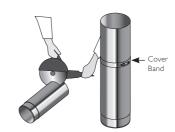
The inspection lengths are components providing the facility for flue inspection and cleaning. They are installed as per a standard pipe section.



### **CUTTING OF FIXED LENGTH**

Where required fixed lengths may be cut on site to achieve a non standard pipe length. Only the female end of the pipe should be cut using appropriate cutting tools. The cut female socket end should then be de-burred to allow the male spigot of the next component to slide smoothly into the cut female socket. The pipes are then installed in the usual way with the male spigot of the next component being inserted into the cut female end of the pipe.

The cut edge can be protected and covered using the Cover Band ref. PS029 (Steel Finish), PSB029 (Black) to give a more aesthetic appearance.



### TRIM COLLAR (90° & 45° VARIANTS)

One piece trim collars are fitted around the Prima Smooth pipe where it protrudes through the wall (see Fig. 1). They should be fastened to the wall using an adequate method of fixing.

Int Ø	125	150	180	200
A mm	129	154	184	204
B mm	275	300	330	350
C mm	181	215	259	287
D mm	376	412	454	483



90° Trim Collar



Fig. 1

45° Trim Collar

### LOWERING PIPE

The lowering pipe is used to take the weight of up to  $15 \times 1$ m pipe lengths as they are lowered down the existing chimney stack. Rope, which is supplied by the installer, should be fastened to the lowering brackets and the lowering pipe then lowered gently down the chimney stack with the standard pipe lengths being added one at a time up to the maximum load of 15m



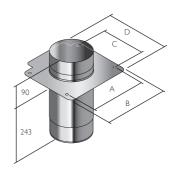
# Chimney Lining Components

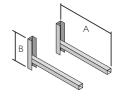
### SUPPORT PLATE

The Support Plate is used as a base support or as an intermediate support to take the weight of up to 15m of Prima Smooth, when used as a chimney liner.

It is used in conjunction with cantilever brackets. The spigot below the plate is constructed from adjustable pipe to allow for thermal expansion within the system. The plate is notched at the back to allow the plate to slide into the correct position as required using the full length of the cantilever bracket. The support plate is then attached to the cantilever brackets using the bolts provided through the fixing slots in the top plate.

Int Ø	125	150	180	200
A mm	185	210	240	260
B mm	221	246	276	296
C mm	105	130	160	180
D mm	190	215	245	265





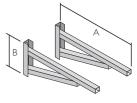
Types 325, 475

### **CANTILEVER SUPPORT**

Once the position of the support has been established within the chimney stack, secure the cantilever brackets to the wall using expansion bolts to ensure adequate attachment and support.

Туре	325	475	570
Ø Range	125-150	125-200	125-200
А	325	475	570
В	242	242	330

Cantilever Support Adjustment Dimension Table					
Int Ø	125	150	180	200	
C max					
Type 325	165	140	110	90	
Type 457	315	290	260	240	
Type 570	410	385	355	335	
C min					
Type 325	60	60	60	60	
Type 457	60	60	60	60	
Type 570	60	60	60	60	



Type 570



# Chimney Lining Components

### **EXPANSION JOINT**

The expansion joint must be used at the top of the masonry stack to close off the stack and to allow for thermal expansion within the chimney system. It is provided as a closure plate with a removable adjustable pipe section. The previous pipe section should terminate 200mm below the top of the chimney stack. The top of the masonry stack should be prepared with a layer of cement. Then the adjustable pipe length slides down a minimum of 50mm into the proceeding pipe length, with the expansion joint plate bedding down firmly into the cement at the top of the masonry stack. The joint between the plate and the adjustable pipe length should be sealed using an appropriate high temperature sealant. Once securely in place, the plate should be flaunched to make weatherproof.

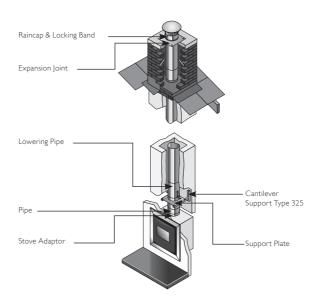


### **RAINCAP**

The raincap is of standard Prima Plus design. The male spigot is pushed down inside the female form of the expansion joint, which incorporates the standard Prima Plus female form. The joint is then secured using a Prima Plus standard locking band, which is purchased separately.



# Typical Liner Installation



# Offset Dimensions

(Made by assembling 2 Bends)

Offsets 30°				
Int Ø	125	150	180	200
Α	276	276	276	276
В	74	74	74	74



Offsets 45°				
Int Ø	125	150	180	200
А	333	333	333	333
В	138	138	138	138



30° Offset using Inspection Bend				
Int Ø	125	150	180	200
А	407	407	407	407
В	74	74	74	74
С	100	100	100	100



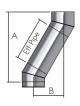
45° Offset using Inspection Bend					
Int Ø	125	150	180	200	
А	415	415	415	415	
В	138	138	138	138	
С	94	94	94	94	



# Offset Dimensions

(Made by assembling 2 Bends and a Standard Pipe Section)

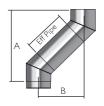
30° Offset with standard Pipe lengths						
	Nom Ømm	125	150	180	200	
Effective Pipe 950	А	1099	1099	1099	1099	
	В	549	549	549	549	
Effective Pipe 450	А	666	666	666	666	
	В	299	299	299	299	
Effective Pipe 200	Α	449	449	449	449	
	В	174	174	174	174	



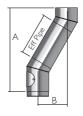
# Offset Dimensions

(Made by assembling 2 Bends and a Standard Pipe Section)

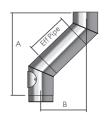
45° Offset with standard Pipe lengths						
	Nom Ømm	125	150	180	200	
Effective	А	1005	1005	1005	1005	
Pipe 950	В	810	810	810	810	
Effective	А	651	651	651	651	
Pipe 450	В	456	456	456	456	
Effective	А	474	474	474	474	
Pipe 200	В	279	279	279	279	



30° Offset using Inspection Bend					
	Nom Ømm	125	150	180	200
Effective Pipe 950	А	1230	1230	1230	1230
	В	549	549	549	549
Effective Pipe 450	А	797	797	797	797
	В	299	299	299	299
Effective Pipe 200	А	580	580	580	580
	В	174	174	174	174



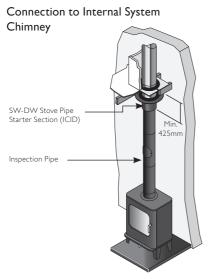
45° Offset using Inspection Bend					
	Nom Ømm	125	150	180	200
Effective Pipe 950	А	1087	1087	1087	1087
	В	810	810	810	810
Effective Pipe 450	А	733	733	733	733
	В	456	456	456	456
Effective Pipe 200	Α	556	556	556	556
	В	279	279	279	279



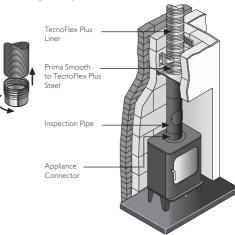
Offsets for 135° Tee & 45° Bend installation					
Int Ø	125	150	180	200	
А	348	386	432	458	
В	315	348	424	430	



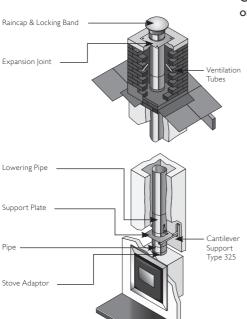
# Typical Installation



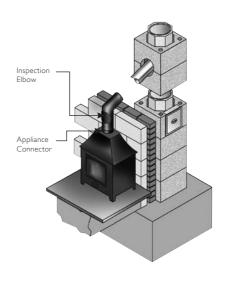
# Connection to Flex through Fireplace Recess



# Chimney Liner on Inset Fire

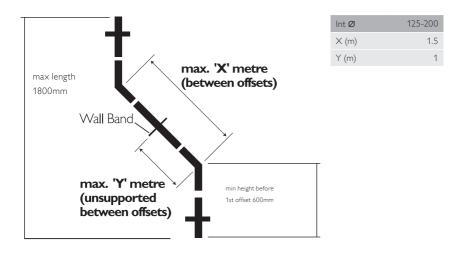


# Connection to Modular Pumice or Ceramic System Chimney



## Max Offset Info

(In Same Plane)



# Component Weights

Approximate Weights of Finished Goods(Kg)					
Prima Smooth 0.6 mm					
Internal Diameter Length(mm)	1000	500	250		
125mm	1.82	0.91	0.46		
150mm	2.28	1.14	0.57		
180mm	2.72	1.36	0.68		
200mm	3.02	1.51	0.76		
Prima Smooth 1 mm					
125mm	3.03	1.5	0.77		
150mm	3.8	1.9	0.95		
180mm	4.54	2.27	1.13		
200mm	5.04	252	1.26		

### After Installation

#### TESTING AND COMMISSIONING PRIOR TO FIRST 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.

### APPLIANCE OPERATION

If the appliance is slumbered overnight or for longer periods then it is advisable to run the appliance at controlled high fire condition for a period of at least 30 minutes. Prolonged slumbering of the appliance is a contributing factor to a system chimney failure. It is important to maintain sufficiently high flue gas temperatures in order to avoid condensate and acid corrosion problems, and to ensure complete combustion of the fuel.

#### MULTI-FUEL APPLICATIONS

Multi-Fuel refers to an appliance which may be used to burn either seasoned wood, or approved solid fuels. These fuels should not be mixed, as this increases the risk of deposits being built up in the liner.

### **MAINTENANCE**

Each chimney must be designed to allow for easy inspection; sweeping should be carried out by competent persons. On solid fuel applications a list of HETAS registered sweeps can be found at www.hetas.co.uk. Chimney flue cleaning and inspection require the use of appropriate tooling — under no circumstances should chemical cleaners or mild steel tools be used to sweep stainless steel chimneys. Cleaning/inspection of any chimney system should be carried out at least once a year, along with maintenance of the appliance, but it is recommended that chimneys serving solid fuel appliances be swept at least twice a year, at the end of the heating season to remove any deposits, which may have built up during the season, and prior to the start of the next heating season to ensure that the flue way is clear of any blockages such as birds nests etc. We would advise that monthly checks are carried out to ensure that there is no build up of any deposits in the flue way of the connecting flue pipe or system chimney.

### MAINTENANCE OF PAINTED PRODUCT

Painted product can be dusted down with a lint free cloth or gently cleaned with warm soapy water when the system is cold. Schiedel does not recommend the use of solvents for cleaning purposes.

### **FUEL STORAGE AND USAGE**

Where solid fuels are being used, correct storage is critical and fuels must be kept dry. Wood must be seasoned prior to use, with a maximum moisture content of 20%. Only approved fuels should be used. Refer to HETAS list for details on **www.hetas.co.uk**. The fuel used must be suitable for the appliance - please refer to manufacturer's instructions.

### Notice Plate

### Notice Plate for Prima Smooth Product

The Notice plate should be marked up in indelible ink and securely fixed in an unobtrusive but obvious position within the building such as:

- Next to the electricity consumer unit.
- Next to the chimney installation described.
- Next to the water supply stop-cock. See example alongside:



### Product Guarantee

Under normal operating conditions and providing the system is installed correctly, it should last the lifetime of the appliance, which normally is 10 years. Prima Smooth carries a 10 year conditional guarantee. The conditions are that the system is:-

- Correctly sized and installed in accordance with the manufacturer's instructions, current Building Regulations and relevant British and European standards.
- Maintained correctly by a qualified and competent person and maintenance records kept updated for both appliance and system chimney.
- Used in combination with an appliance burning only approved fuels in accordance with Schiedel Chimney Systems and the appliance manufacturer's instructions.
- The product registration form must have been filled in by an appropriately qualified installer (see p.3 for details), and returned to Schiedel Chimney Systems Ltd.

For recommended fuels listings, please refer to the HETAS Guide www.hetas.co.uk

In the event of a fault developing in the product due to defective materials or faulty manufacture Schiedel Chimney Systems undertake to replace the product only. Schiedel Chimney Systems cannot accept liability nor take any responsibility for the installation, building or redecorating costs or any other consequential losses arising. If any complaint is found to be a result of faulty installation, non-compliance with or abuse contrary to these conditions, the cost of site investigation is chargeable.

# Product Registration

Please visit our website, Schiedel.co.uk or head directly to SchiedelRewards.co.uk to register your guarantee. The online system allows you to set up an account, with the added bonus of points per installation, which can be redeemed for Love2Shop Rewards.



# The Schiedel Installation App

Download the app today, as it offers a number of very useful guides on all aspects of installing an appliance using Schiedel Chimney Systems, including:

- Quick and straightforward reference for installers.
- Video breakdowns of each stage of the installation process, from connection to the appliance through to termination.
- Highlighting the safety critical areas where the chimney penetrates the floors, ceilings, roof and walls.
- Incorporates frequently asked questions information at each stage of the installation process, in line with building regulations.
- An easy-to-use system for downloading full product information and installation instructions.
- Register your Guarantee in the App.



### Schiedel Installer Rewards

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

Once you have reached a minimum of 25 points, you can begin to redeem them for £25 Love2Shop vouchers.

So head on over to the portal and start to register your installations to take full advantage of our Lifetime Guarantee on Flex and ICID, and also to start earning points!



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