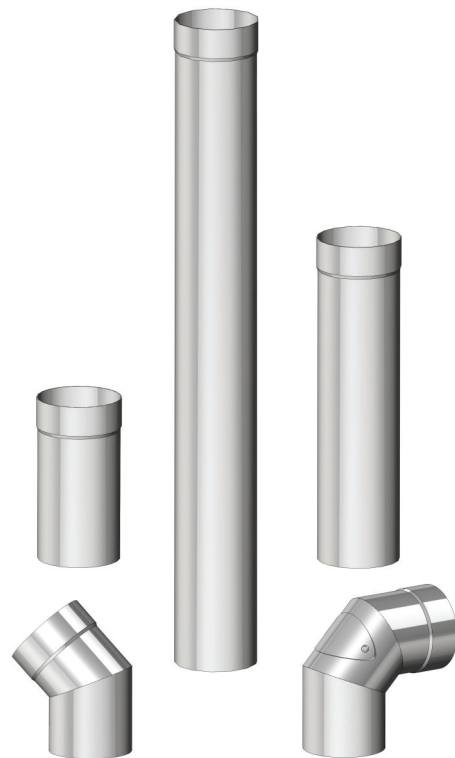
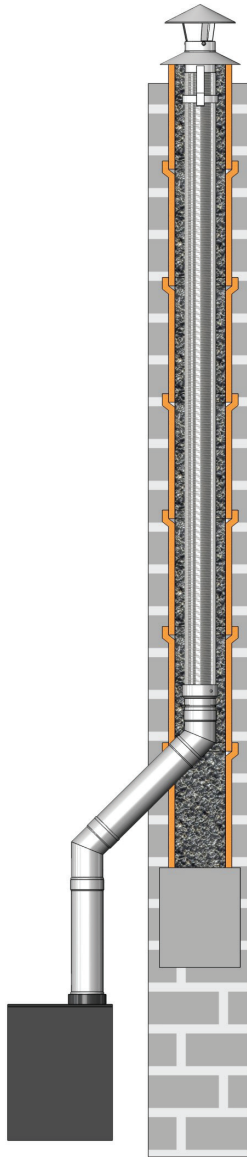




# SYSTEM 1

September 2014

## Single Wall Connecting Flue Pipe for Multi-Fuel Appliances



C € 0120



## Mi-Flues System 1 Single Wall Connecting Flue Pipe and Rigid Flue Liner

### INTRODUCTION

Mi-Flues System 1 is a 1mm thick 316 grade stainless steel single wall connecting flue pipe suitable for gas, oil, wood and multi-fuel appliances. It can also be used as a rigid flue liner.

It has been specifically engineered to give an authentic visual look, whilst at the same time being manufactured using the latest technology to ensure years of trouble free use.

The system is available in four standard diameters 125mm, 150mm, 180mm and 200mm.

System 1 is not suitable for condensing applications.

### PRODUCT DESCRIPTION

Mi-Flues System 1 316 grade stainless steel single wall is suitable for use on applications fired by gas, oil and solid fuel .

The longitudinal seam on all components is fully welded to prevent leakage and to ensure a uniform high quality of manufacture throughout.

Components have been designed to be installed quickly, safely and simply. Mi-Flues System 1 single wall flue is designed to be installed with the socket (female end) directed upwards.

By fitting the flue components together in this manner ensures debris and moisture will run internally down the flue.

### APPROVALS

Mi-Flues System 1 is manufactured and conforms to EN 1856-2 and has the following designation code: EN 1856-2 T600 N1 D Vm L50100 G(\*\*)

Note: \*\* 3 x diameter of the flue

### APPLICATION

Mi-Flues System 1 is a single wall connecting flue pipe suitable for multi-fuel appliances.

It is also suitable for relining existing chimneys. System 1 pipes are not insulated. Their use as an external flue is not permitted as they can generate excessive condensation and disrupt the draw due to cold outside temperatures.

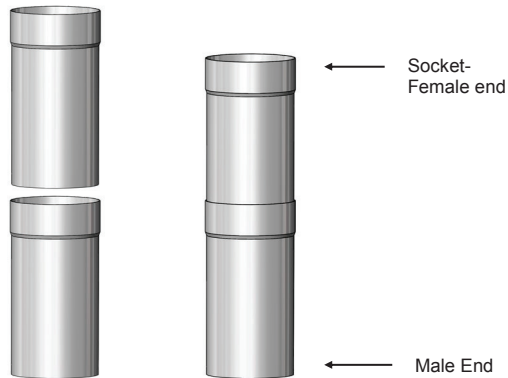
### COMPONENTS

Mi-Flues System 1 components have been designed to be installed quickly, safely and simply.

The system comprises of plain lengths, adjustable lengths, bends, bends with inspection/cleaning access, tees complete with cleaning inspection caps, cowls and support brackets.

### JOINTING SYSTEM

Mi-Flues System 1 allows for a 50mm overlap distance per joint. All sockets (female end) should be installed upwards, with the male end dropping into the socket. To install Mi-Flues system 1 components simply position the male end into the female socket end and seal with Mi-Flues high temperature sealant (rated to 1000°C) designed specifically for flues, stoves or fires, or similar rated fire cement.



### INSTALLATION

System 1 has been specifically designed for use as a connecting flue pipe to facilitate connection from the outlet of a multi-fuel appliance to the chimney.

Where appropriate it can be used to connect to either our twin wall System 2 product or in the case of an existing brick chimney, our System 35 Multi fuel flexible liner .

In all cases the product must be installed in accordance with Local Building Regulations Document J and the manufacturers installation instructions.

The diameter of the pipe used must be equal to or greater than the outlet of the appliance.

The diameter of pipe used should not be less than the diameter specified by the appliance manufacturer.

Mi-Flues **System 1** should be fitted at least three times the diameter of the pipe away from any combustible materials. For example 125mm pipe should be a minimum of 375mm away from any combustible material. All sockets (female end) should be upward, with the male end dropping into the socket .

This ensures that no condensate can escape and spoil the appearance of the finished installation.

#### Installation in a Masonry Chimney

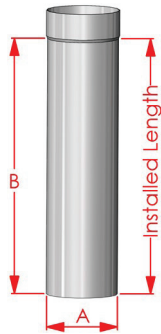
System 1 is also suitable for relining existing chimneys. If relining a masonry chimney it should firstly be cleaned to ensure free passage of the pipe.

The space between the flue and the masonry liner should be back filled to improve the performance of the chimney. Mi-Flues System 1 can be connected directly to the appliance and can also be used to reline a chimney when installed with the manufacturers installation instructions. When using as a rigid liner System 1 should be installed from the bottom up ensuring that all joints are adequately sealed. The weight of the System 1 rigid liner should be supported at the lower end of the chimney with the use of two rigid members (two metal beams—not supplied by Mi-Flues) and a half bracket (see page 4 for details).

## Mi-Flues System 1 Single Wall Connecting Flue Pipe and Rigid Flue Liner

### LENGTHS

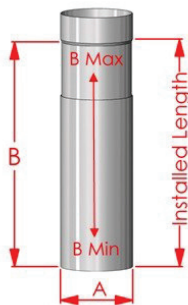
Lengths are available in 250mm, 500mm and 1000mm.



Dia(mm) 'A'	250(B)	500(B)	1000(B)
125	200	450	950
150	200	450	950
180	200	450	950
200	200	450	950

### ADJUSTABLE LENGTHS

An adjustable length is used to achieve an exact required length where a standard length is not suitable.

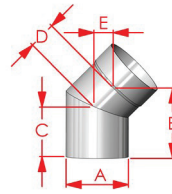


Diameter (mm) (A)	ADJ Short (B) Min—Max
125	255-370
150	255-370
180	255-370
200	255-370

### ADJUSTABLE LENGTH INSTALLATION

To install an adjustable length, adjust the telescopic component to the required length, keeping caution that the overlap between the two pipes must never be less than 80mm. Seal telescopic joint using Mi-Flues high temperature sealant (rated to 1000°C) or fire cement. Once adjusted to the required length, secure the telescopic length with the use of an Mi-Flues wall bracket located directly above the overlap.

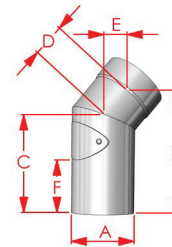
### 45 ° Bend



Used to provide a 45° change of direction or can be used in pairs to create an offset. Two by 45° bends can be used to create a 90° bend.

Dia (A)	(B)	(C)	(D)	(E)
125	143	100	55	40
150	155	110	60	42
180	165	118	70	45
200	175	125	70	50

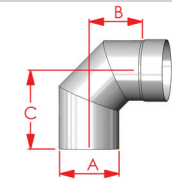
### 45 ° BEND & DOOR



This component provides access for cleaning and inspection. It is used to provide a 45° change of direction. Manufactured with a non corrosive stainless steel access door with high temperature gasket and corrosion proof re-usable locking nuts.

Dia. (A)	(B)	(C)	(D)	(E)	(F)
125	200	165	55	40	69
150	200	160	60	43	70
180	235	185	67	48	99
200	250	200	70	50	120

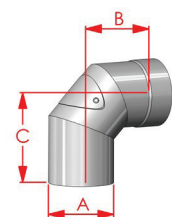
### 90 ° BEND



Used to provide a 90° change of direction. It may be taken to be equal to two 45° bends.

Diameter (A)	(B)	(C)
125	105	162
150	120	170
180	145	195
200	148	198

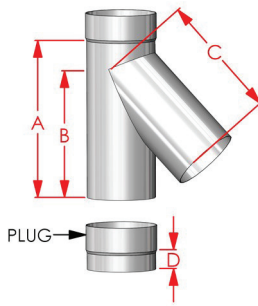
### 90 ° BEND & DOOR



Used to provide a 90° change of direction and includes a non corrosive stainless steel access door to facilitate cleaning of the chimney system. It may be taken to be equal to two 45° bends. (For dimensions see above table for 90° bend)

# Mi-Flues System 1 Single Wall Connecting Flue Pipe and Rigid Flue Liner

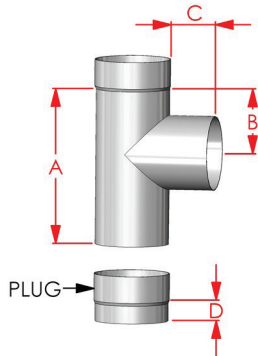
## 45° TEE



A 45° Tee is used to create a bend in a flue run. It can be used to change a chimney run from a horizontal to a vertical run when used with a 45° bend. This component minimises the resistance to flow because of the angle created with the vertical axis. This component comes complete with a removable inspection cap.

Diameter	(A)	(B)	(C)	(D)
125	281	235	240	35
150	334	270	270	35
180	364	298	307	35
200	418	335	332	35

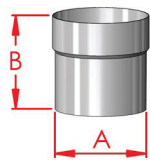
## 90° TEE



A 90° Tee is used to create a bend in a flue run. It is used to change a chimney run from a horizontal run to a vertical run. This component comes complete with a Removable inspection cap. It may also be used for the fitting of a draught stabilizer device.

Diameter	(A)	(B)	(C)	(D)
125	233	93	80	35
150	260	106	80	35
180	281	116	80	35
200	308	130	80	35

## START OFF ADAPTOR



Mi-Flues System 1 Start Off Adaptor is used on smaller fitting diameter spigots, where the standard size component diameter will not fit the appliance. This adaptor is available to ensure Mi-Flues System 1 pipes can be fitted. When making the joint between the appliance outlet and the System 1 pipe Mi-Flues high temperature sealant (rated to 1000° C) or fire cement should be applied. Tapered reducing adaptors are also available on request.

Diameter (A)	121.5	146.5	176.5	196.5
B	130	130	130	130

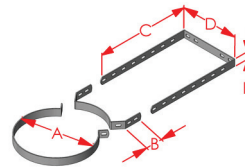
## COWL

A cowl is the top rain cap for a chimney. Its purpose is to stop the infiltration of rain or snow to the inside of the chimney. It does not impede the movement of the products of combustion. It is pushed down into the last length of the installation and sealed using Mi-Flues high temperature sealant (rated to 1000°C). This cowl is also available with a solid fuel bird guard protection.



Dia (A)	(B)
125mm, 150mm, 180mm, 200mm	90

## SUPPORT COMPONENT—WALL BRACKET



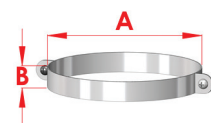
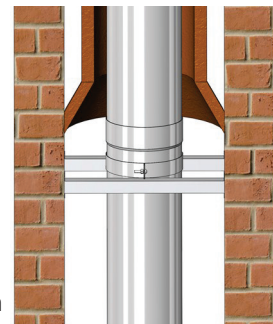
Used to provide lateral support for the System 1 components. This component is adjustable between 60mm—250mm of a wall face.

Each bracket comes individually packaged with the following included:  
 Wall Section x 1, Joiner Section x 1  
 Clamping Section x 1, M6x25mm Hex Head Bolt x 2  
 M6x12mm Hex Head Bolt x 4, M6 Nut x 6

Diameter (A)	125	150	180	200
B	45	45	45	45
C	258	258	258	258
D	152	152	152	152
E	20	20	20	20

## SUPPORT COMPONENT—HALF BRACKET

When using as a rigid liner System 1 should be installed from the bottom up ensuring that all joints are adequately sealed. The weight of the System 1 rigid liner should be supported at the lower end of the chimney with the use of two rigid members (two metal beams—not supplied by Mi-Flues) and a half bracket as shown. Each half bracket comes bubble wrapped and labelled. Included are the required two screws and two nuts for assembling.



Diameter (A)	125	150	180	200
B	20	20	20	20

### Safety / Installation / Regulations

#### Connection to the appliance

System 1 is designed to fit straight into the appliance outlet spigot without the need for an adaptor.

System 1 should only be used to make the connection between the appliance outlet spigot and the chimney. It should not pass through any roof space, partition wall or floor, except to pass directly into a chimney through a wall of the chimney (see installation illustration on page 6).

All System 1 joints should be sealed with Mi-Flues high temperature sealant (rated to 1000°C) or fire cement should be applied.

#### Connection to System 2 twin wall chimney

When a System 1 flue pipe is joined to our System 2 twin wall insulated chimney which penetrates a ceiling, the System 2 chimney should protrude 425mm below the ceiling on a 125mm diameter chimney and three times the diameter for 150mm, 180mm and 200mm .

Connecting flue pipe components should extend a distance of 600mm off a solid fuel appliance.

This connection can be sealed using Mi-Flues high temperature sealant (rated to 1000°C) or a fire cement and the connection must be made in the same room as the appliance itself.

#### Bends in Connecting Flue pipes

Top Outlet Appliance—The connecting flue pipe should have no more than two bends in its length with an angle no greater than 45° when measured from the vertical.

Where possible the connecting flue pipe should rise vertically straight.

Rear Outlet Appliance—Connection to a rear outlet appliance may be made using the 90° Tee where the removable tee cap will be accessible.

The maximum horizontal distance from the outlet of the spigot should be no more than 150mm on solid fuel appliances, subject to the appliance manufacturers installation

#### Connection to Flexible liner within a brick chimney

Connection to Mi-Flues System 35 flexible flue liner can be made either from directly under the chimney where the appliance is positioned within a fireplace or through the side of the chimney using a System 35 adaptor (see illustration on front cover).

#### Structural Considerations

As System 1 does not rely on Locking Bands to secure the joint, it is critical that the system is installed between two fixed and secured points (appliance outlet and chimney inlet).

Where an offset is installed, each bend must be adequately braced using suitable support components to restrict any movement of the joint.

#### Height of Connecting flue pipe

Excessive runs of single wall connecting flue pipe should be avoided and limited to no more than a maximum of 1.8 metres.

### Safety / Installation / Regulations

#### Distance to Combustible Materials

Mi-Flues System 1 should be fitted at least three times the diameter of the connecting flue pipe away from any combustible materials.

#### Chimney Plate

On completion of installation a chimney plate should be completed. The chimney plate provides information regarding the Manufacturer, designation, nominal size, distance to combustibles, Installer name, installation date, chimney location and thermal distance.

It is to be completed by the Installer and securely fixed in an unobtrusive but obvious position within the building such as next to the electricity or gas consumer unit, next to the chimney or hearth or next to the water supply stop cock.

#### Cleaning / Maintenance

Adequate provision should be made for inspecting and cleaning the chimney system. Access components are available in the product range (bends with doors and tees) and should be installed to suit the installation, unless sweeping can be undertaken through the appliance.

The chimney should be inspected regularly and cleaned at least twice a year, depending on usage and type of fuel used. This should be carried out with the use of a brush which should not be made from black steel.

The chimney should be maintained to ensure that the construction remains in good condition.

Any components showing signs of deterioration which may affect performance should be replaced under professional advice, any evidence of leakage identified by smoke staining should be rectified immediately.

#### Handling and Storage

All System 1 components are labelled. Fitting instructions appear on the label where applicable. These labels should be removed from the product prior to installation and relevant information transferred to chimney plate. Products should be stored in a dry suitable storage location.

The product is easy to handle, but care should be taken when holding, fitting or assembling any part of the system.

Users are advised to use suitable precautions such as gloves, eye/face protection, protective clothing etc to avoid injury.

Installers should be aware of the possibility of disturbing asbestos when working in older properties. This should be dealt with in accordance with the strict guidance documents. Particular attention should be taken to ensure suitable PPE is used when applying certain fireclays which can be of a caustic nature, as well as when using any other substances which may be harmful.

#### Life Expectancy

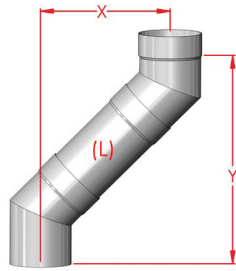
Under normal operating conditions, and providing the system is installed and maintained correctly, Mi-Flues System 1 should provide many years service and is provided with a 10 year life expectancy.



# Mi-Flues System 1 Single Wall Connecting Flue Pipe and Rigid Flue Liner

## OFFSET CHART

This offset chart uses the recommended Mi-Flues System 1 45° bends. Within a run of system 1 flue no more than two bends should be used. Two bends are used to create one offset.



System 1 Offset Chart					
		Diameter			
(L)	Offset	125mm	150mm	180mm	200mm
0	X	119	126	135	140
	Y	285	303	327	338
250	X	264	271	280	285
	Y	430	448	472	483
500	X	436	447	457	462
	Y	607	625	648	660
1000	X	794	801	811	815
	Y	961	978	1002	1013
Adjustable Length					
	X Min	299	306	316	320
	X Max	377	384	393	398
	Y Min	466	483	507	518
	Y Max	539	556	580	591

System 1 Technical Data	
Fuel—Solid Fuel, Oil and Gas	
Material	1mm 316 stainless steel
Min. Distance to combustibles	3 times diameter of the flue

## Mi-Flues System 1 Product Designation

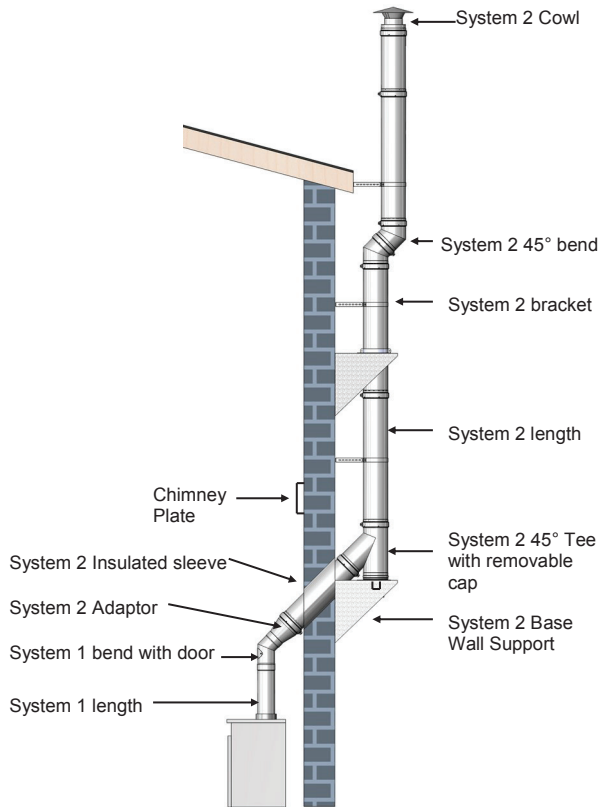
Mi-Flues System 1 products carry the following designation code:

**EN 1856-2 T600 N1 D Vm L50100 G (\*\*)**

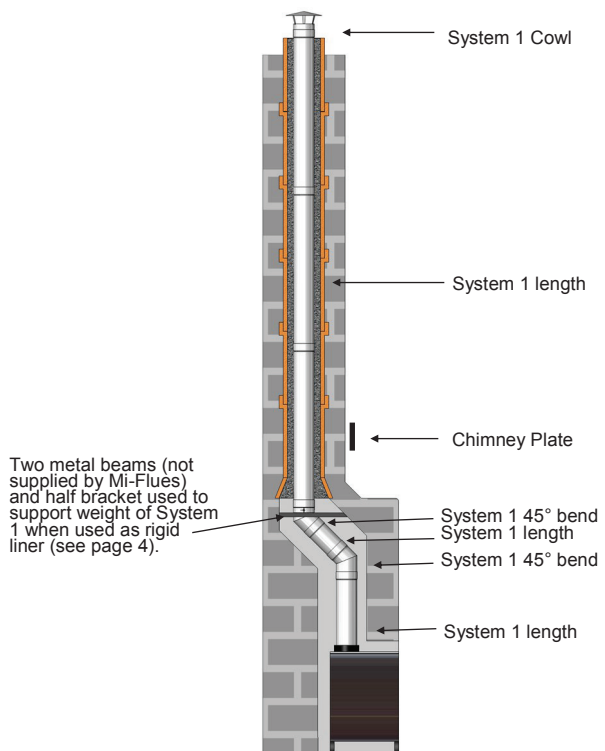
Note: \*\* 3 x diameter of the flue

System 1	EN1856-2	T600	N1	D	Vm	L50100	G(**)
Standard	Temperature Level	Pressure Level	N, P or H	Condensate Resistance	W:Wet or D:Dry	Corrosion Resistance (durability against corrosion)	Material specification
							Sootfire resistance and distance to combustibles
							G:Yes or O:No / distance to combustibles in mm
							NM (Not Measured) or M (Measured)

## System 1 connection to System 2 twin wall insulated stainless steel chimney



## System 1 used as Rigid Flue Liner



All flue systems must be installed according to current Building Regulations. Mi-Flues has adopted a policy of continuous product review, and in the interests of development and improvement the Company reserves the right to vary the appearance and performance of any of its products without prior notice. Correct at time of print (September 2014). For updates please check our website.