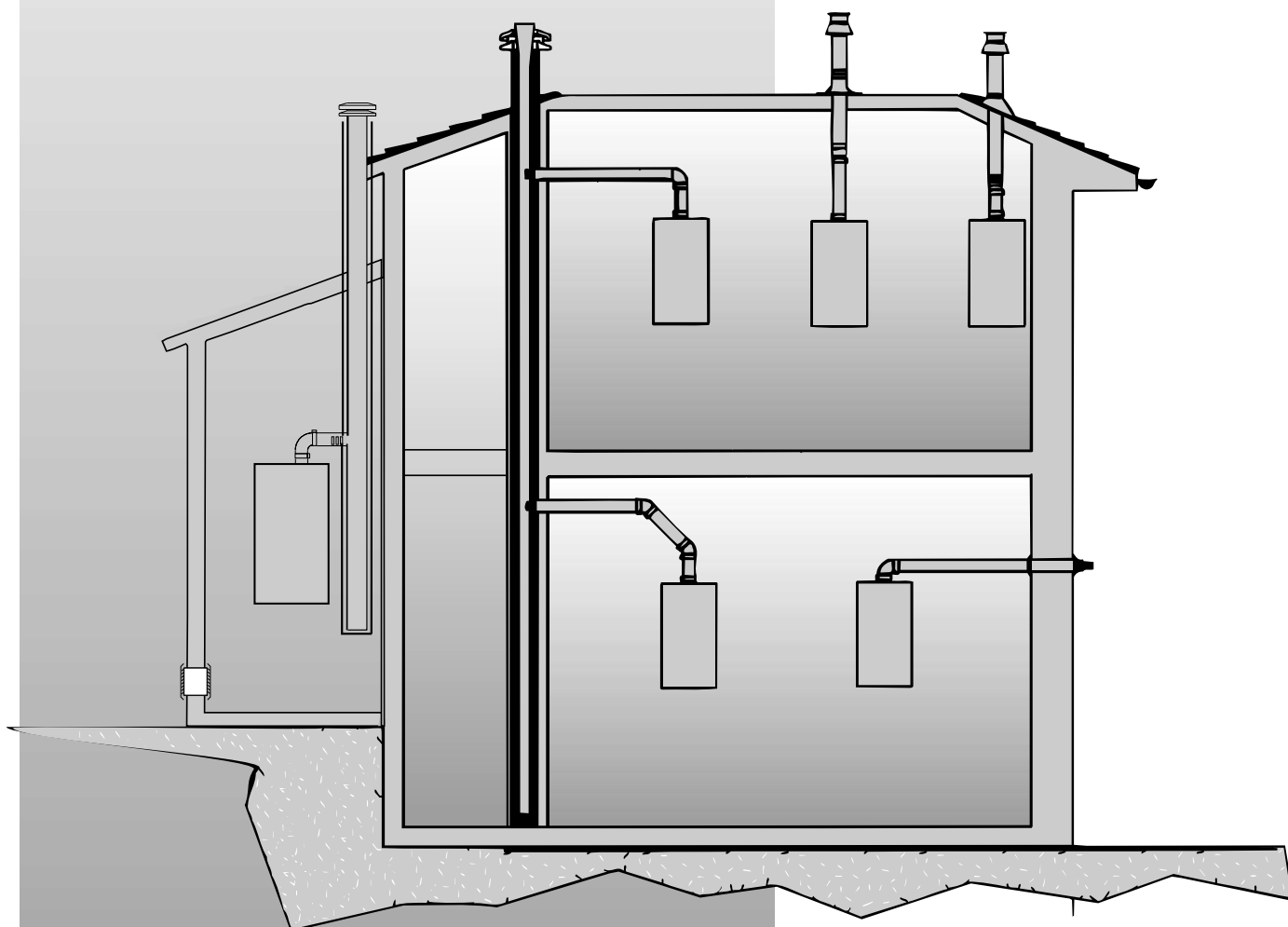


Flue Pipe Accessories

Wall-hung Gas Boilers
with Sealed Combustion
Chamber

*Manufactured within
the European Community*

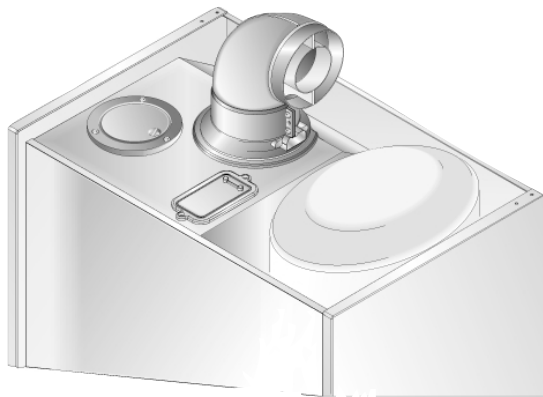




GENUS - EuroCombi Models



microGENUS - microCombi - microSYSTEM Models



GENUS 27 PLUS Model

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1.0 General Information

This catalogue contains all of the information needed for the proper installation and use of the exhaust discharge/air intake flue systems. Moreover, it provides a series of examples as a guide to determining the proper dimensions of the flue pipes. All the components for the various systems are certified and distributed by MTS (GB) Limited.

IMPORTANT!

The discharge and ventilation system must be made and installed in accordance with the provisions set forth by law and in compliance with the installation standards in effect in the respective country, as well as all local safety and health codes.

CE CERTIFICATION

The installer must only use components supplied by MTS (GB) Limited.

For proper installation of the discharge/intake flue systems, all the requirements stated in this manual must be met, with specific reference to the allowable maximum lengths and the need for the installation of a restrictor.

The CE certification refers not only to the boiler, but also to the flue pipes supplied by the manufacturer, for which the respective certification tests have been performed.

The use of components not supplied by the manufacturer places all liability on the installer.

1.1 Calculation Methods for Flues

Length Equivalency Method

This is a practical method for sizing the pipes for the intake venting of combustible air and the discharge of combustion by-products.

The principle that forms the basis of the method is that of assigning each component a resistance factor that corresponds to a length in metres of a rectilinear pipe and where said lengths of pipe share the same cross-sectional dimensions. This length in meters, which in this manual is called length equivalency (L_{eq}), is calculated as follows:

$$L_{eq} = \frac{\Delta R_{comp.}}{\Delta R_{pipe}} [m]$$

Where:

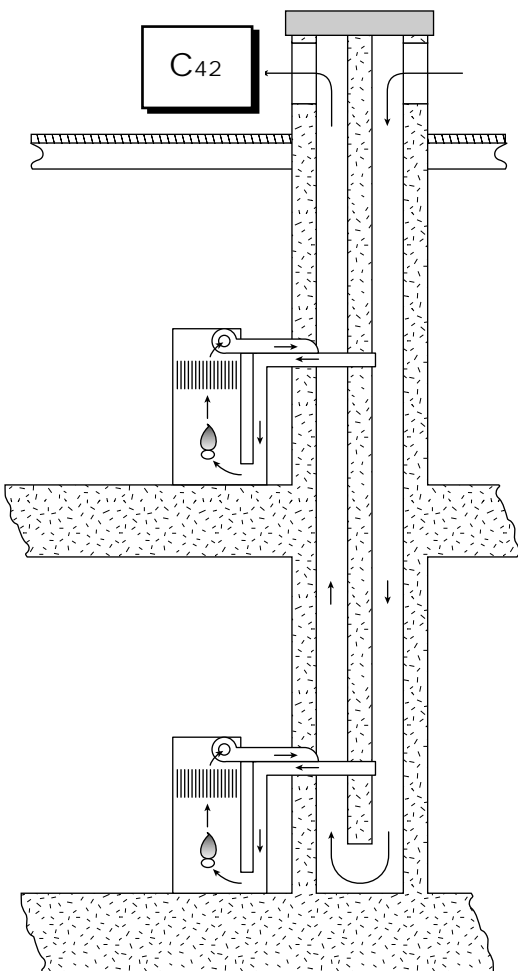
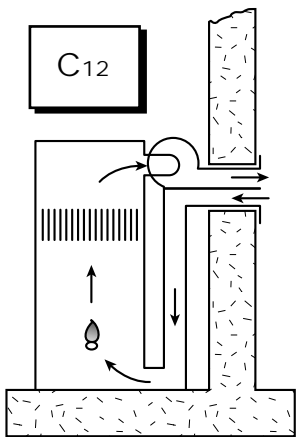
$\Delta R_{comp.}$ = resistance (loss of pressure) of the component under standard conditions.

ΔR_{pipe} = resistance (loss of pressure) of a pipe (with a pre-established diameter) measuring 1 metre under standard conditions.

A standard condition is assumed to be representative of the different operating conditions at play and is an experimental value for the capacities, fume temperature and air temperature for the various thermal power values.

1.2 Classification of Flues

These diagrams are indicative in nature and do not represent all of the possible installation types.



B064

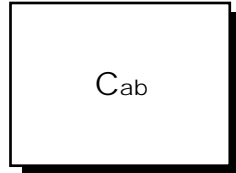
The classification follows a European model for categorising gas appliances depending on the type of discharge system used for the combustion by-products.

Type C Appliances with Forced Draft

These appliances have a combustion circuit (air intake, combustion chamber, heat exchanger and discharge of combustion by-products) which is airtight with respect to the room in which the appliance is installed.

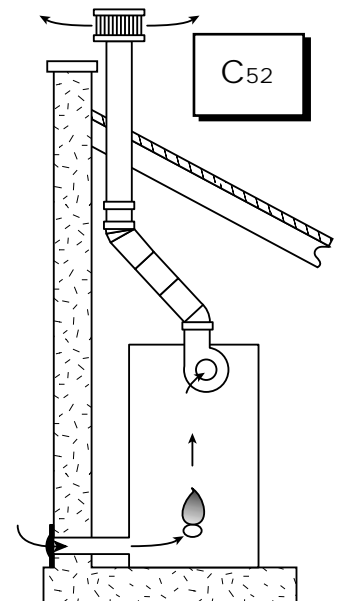
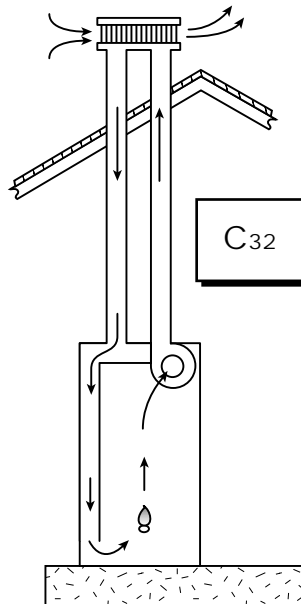
Interpretation of the Code

General Outline



Where:

- a** = Indicates the manner in which the combustion air is introduced and how the fumes are discharged;
- 1 For connections made by means of pipes with a horizontal end cap which, at the same time, admits fresh air for the burner and discharges the by-products of combustion to the outside by means of apertures which are concentric or close enough together that they are in the same wind conditions.
- 3 For connections made by means of pipes with a vertical end cap which, at the same time, admits fresh air for the burner and discharges the combustion by-products of combustion to the outside by means of apertures which are concentric or close enough together that they are subject to the same wind conditions.
- 4 Connection with two separate flue pipes or a coaxial flue to a shared flue system used by more than one appliance. This shared system consists of two separate or concentric flue pipes, one for the supply of air for combustion and the other for the discharge of the combustion by products.
- 5 Connection for separate flue pipes for the supply of air for combustion and for the discharge of combustion by products. These main pipes can emerge in areas with different pressures.
- b**= Indicates the position of the built-in fan with respect to the combustion chamber.
- 2 With a fan downstream of the unit.

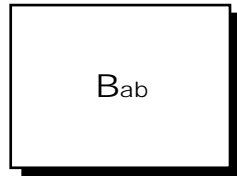


Type B Appliances with Forced Draft

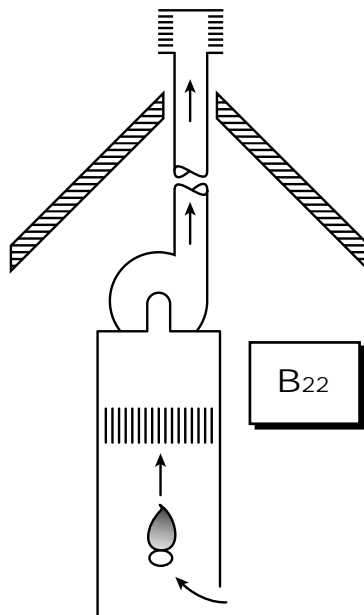
These units are designed to be connected to a flue that discharges the combustion by products to the outside of the room in which the unit is installed. The combustion air is taken directly from the room where the boiler is installed.

Interpretation of Code

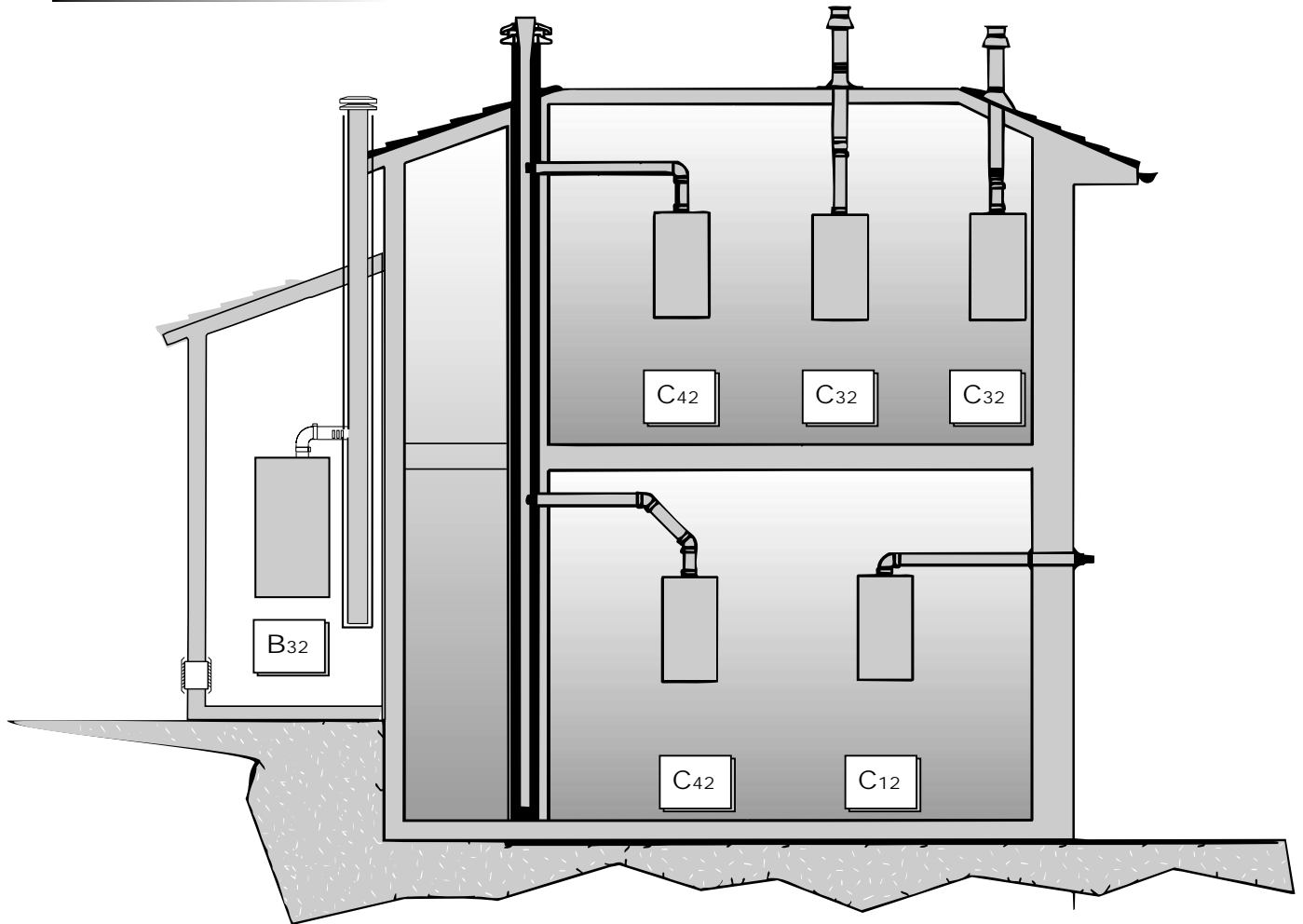
General Outline



- a** = Indicates the presence of draft switches or the lack thereof.
- 2 Unit which is not designed with a draft switch.
- b** = Indicates whether the appliances operates with a natural draft.
- 2 Unit equipped with a fan downstream of the combustion chamber/heat exchanger.



2.0 Coaxial Systems



For this type of exhaust discharge/air intake ventilation system, the components shown in the list for coaxial systems in section 2.2 are available. The values indicated below apply to the following models: MFFI and RFFI System, as well as for all models with a nominal thermal capacity.

Table of admissible maximum lengths and requirements regarding the use of restrictors

Discharge Type	Description	Maximum Pipe Length GENUS - EuroCombi			Restrictor on Discharge Side GENUS - EuroCombi		
		23 kW	27 kW	30 kW	23 kW	27 kW	30 kW
C12	Discharge/intake with horizontal coaxial pipes ø 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{max} =3m*	L _{tot} <0.5m ø 42 mm	L _{tot} <0.5m ø 42 mm	L _{tot} <0.5m ø 42 mm
		the terminal and curve are included					
C32	Discharge/intake with vertical coaxial pipes ø 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{max} =3m*	L _{tot} <0.5m ø 42 mm	L _{tot} <0.5m ø 42 mm	L _{tot} <0.5m ø 42 mm
		the terminal and curve are included					
C42	Discharge/intake connected to air/fume flue system ø 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{max} =3m*	L _{tot} <0.5m ø 42 mm	L _{tot} <0.5m ø 42 mm	L _{tot} <0.5m ø 42 mm
		the terminal and curve are included					
B32	Discharge/intake with coaxial pipes ø 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{max} =3m*	L _{tot} <0.5m ø 42 mm	L _{tot} <0.5m ø 42 mm	L _{tot} <0.5m ø 42 mm

* In calculating the maximum pipe length, the first 90° elbow is not taken into account, nor are C12 or C32 type vent caps for the purposes of discharge/intake.

Discharge Type	Description	Maximum Pipe Length microGENUS		Restrictor on Discharge Side microGENUS	
		23 kW	27 kW	23 kW	27 kW
C12	Discharge/intake with horizontal coaxial pipes ø 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{tot} <2m ø 43 mm L>2m no ring	L _{tot} <1m ø 41 mm L>1m no ring
		the terminal and curve are included			
C32	Discharge/intake with vertical coaxial pipes ø 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{tot} <2m ø 43 mm L>2m no ring	L _{tot} <1m ø 41 mm L>1m no ring
		the terminal and curve are included			
C42	Discharge/intake connected to air/fume flue system ø 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{tot} <2m ø 43 mm L>2m no ring	L _{tot} <1m ø 41 mm L>1m no ring
		the terminal and curve are included			
B32	Discharge/intake with coaxial pipes ø 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{tot} <2m ø 43 mm L _{tot} >2m no ring	L _{tot} <1m ø 41 mm L _{tot} >1m no ring

* In calculating the maximum pipe length, the first 90° elbow is not taken into account, nor are C12 or C32 type vent caps for the purposes of discharge/intake.

Discharge Type	Description	Maximum Pipe Length microCombi	Restrictor on Discharge Side microCombi
		23 kW	23 kW
C12	Discharge/intake with horizontal coaxial pipes \varnothing 60/100 mm	Lmax=4m* the terminal and curve are included	L _{tot} <2m \varnothing 43 mm L _{tot} >2m no ring
C32	Discharge/intake with vertical coaxial pipes \varnothing 60/100 mm	Lmax=4m* the terminal and curve are included	L _{tot} <2m \varnothing 43 mm L _{tot} >2m no ring
C42	Discharge/intake connected to air/fume flue system \varnothing 60/100 mm	Lmax=4m* the terminal and curve are included	L _{tot} <2m \varnothing 43 mm L _{tot} >2m no ring
B32	Discharge/intake with coaxial pipes \varnothing 60/100 mm	Lmax=4m*	L _{tot} <2m \varnothing 43 mm L _{tot} >2m no ring

* In calculating the maximum pipe length, the first 90° elbow is not taken into account, nor are C12 or C32 type vent caps for the purposes of discharge/intake.

Discharge Type	Description	Maximum Pipe Length GENUS 27 PLUS	Restrictor on Discharge Side GENUS 27 PLUS
		27 kW	27 kW
C12	Discharge/intake with horizontal coaxial pipes \varnothing 60/100 mm	Lmax=3m* the terminal and curve are included	L _{tot} <1m \varnothing 41 mm
C32	Discharge/intake with vertical coaxial pipes \varnothing 60/100 mm	Lmax=3m* the terminal and curve are included	L _{tot} <1m \varnothing 41 mm
C42	Discharge/intake connected to air/fume flue system \varnothing 60/100 mm	Lmax=3m* the terminal and curve are included	L _{tot} <1m \varnothing 41 mm
B32	Discharge/intake with coaxial pipes \varnothing 60/100 mm	Lmax=3m*	L _{tot} <1m \varnothing 41 mm

* In calculating the maximum pipe length, the first 90° elbow is not taken into account, nor are C12 or C32 type vent caps for the purposes of discharge/intake.

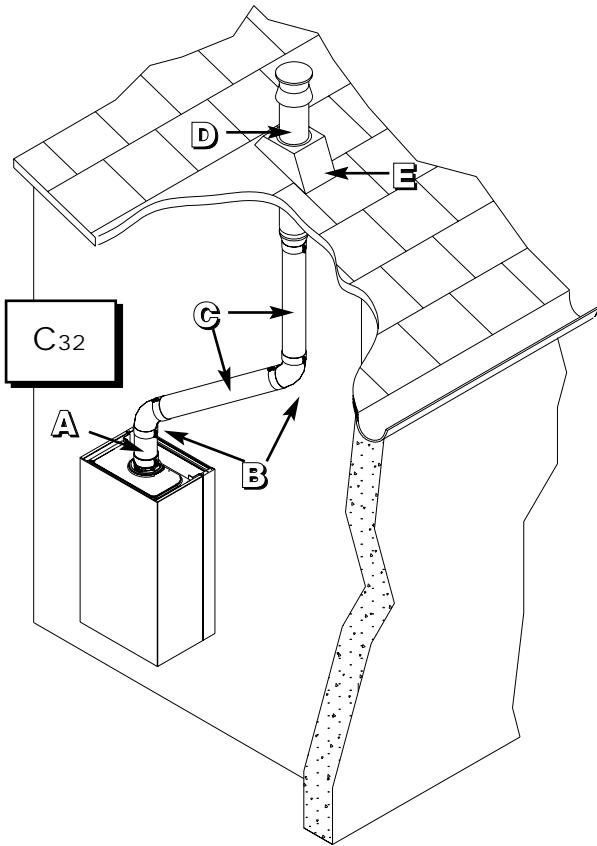
Discharge Type	Description	Maximum Pipe Length microSYSTEM		Restrictor on Discharge Side microSYSTEM	
		21 kW	28 kW	21 kW	28 kW
C12	Discharge/intake with horizontal coaxial pipes \varnothing 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{tot} <1m \varnothing 46 mm L>1m no ring	L _{tot} <1m \varnothing 41 mm L>1m no ring
		the terminal and curve are included			
C32	Discharge/intake with vertical coaxial pipes \varnothing 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{tot} <1m \varnothing 46 mm L>1m no ring	L _{tot} <1m \varnothing 41 mm L>1m no ring
		the terminal and curve are included			
C42	Discharge/intake connected to air/fume flue system \varnothing 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{tot} <1m \varnothing 46 mm L>1m no ring	L _{tot} <1m \varnothing 41 mm L>1m no ring
		the terminal and curve are included			
B32	Discharge/intake with coaxial pipes \varnothing 60/100 mm	L _{max} =4m*	L _{max} =4m*	L _{tot} <1m \varnothing 46 mm L>1m no ring	L _{tot} <1m \varnothing 41 mm L _{tot} >1m no ring

* In calculating the maximum pipe length, the first 90° elbow is not taken into account, nor are C12 or C32 type vent caps for the purposes of discharge/intake.

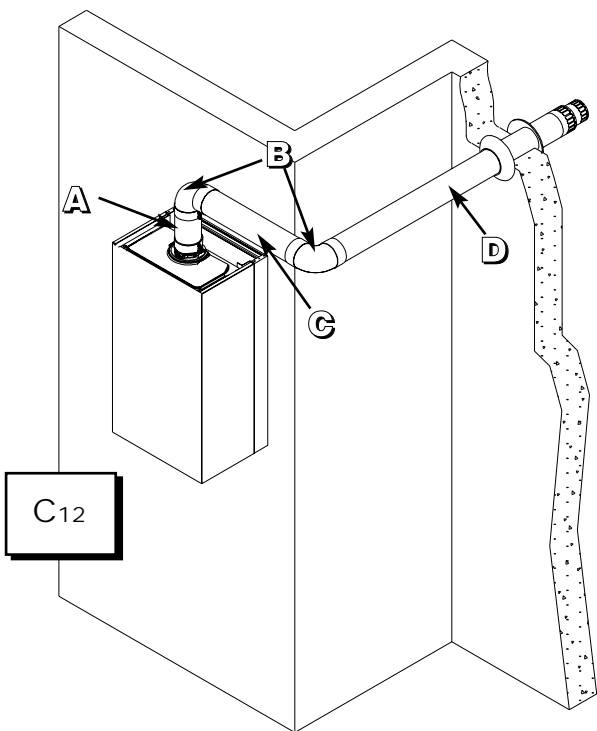
Discharge Type	Description	Maximum Pipe Length microSYSTEM		Restrictor on Discharge Side microSYSTEM	
		10 kW	15 kW	10 kW	15 kW
C12	Discharge/intake with horizontal coaxial pipes \varnothing 60/100 mm	L _{max} =5m*	L _{max} =5m*	L _{tot} <1m \varnothing 44 mm L>1m no ring	L _{tot} <1m \varnothing 41 mm L>1m no ring
		the terminal and curve are included			
C32	Discharge/intake with vertical coaxial pipes \varnothing 60/100 mm	L _{max} =5m*	L _{max} =5m*	L _{tot} <1m \varnothing 44 mm L>1m no ring	L _{tot} <1m \varnothing 41 mm L>1m no ring
		the terminal and curve are included			
C42	Discharge/intake connected to air/fume flue system \varnothing 60/100 mm	L _{max} =5m*	L _{max} =5m*	L _{tot} <1m \varnothing 44 mm L>1m no ring	L _{tot} <1m \varnothing 41 mm L>1m no ring
		the terminal and curve are included			
B32	Discharge/intake with coaxial pipes \varnothing 60/100 mm	L _{max} =5m*	L _{max} =5m*	L _{tot} <1m \varnothing 44 mm L>1m no ring	L _{tot} <1m \varnothing 41 mm L _{tot} >1m no ring

* In calculating the maximum pipe length, the first 90° elbow is not taken into account, nor are C12 or C32 type vent caps for the purposes of discharge/intake.

2.1 Installation Examples

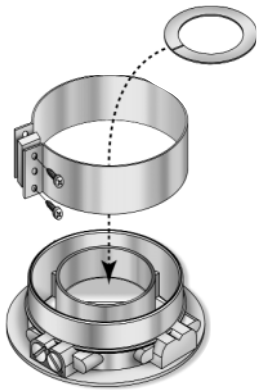


	No. of Units	Description	Code
A	1	Stub	705790
B	2	45° Elbow	705788
C	2	Coaxial Extension	705786
D	1	Roof Vent Cap	705765
E	1	Lead Cap Base	705781

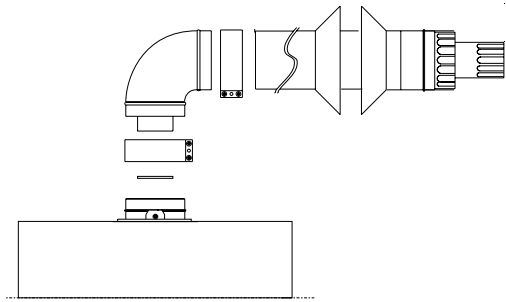


	No. of Units	Description	Code
A	1	Stub	705790
B	2	90° Elbow	705787
C	1	Coaxial Extension	705786
D	1	Coaxial Discharge Kit without Elbow	705783

Insertion of the restrictor on the discharge side



Flue connection for air intake and fume discharge



Model microGENUS
Model microCombi
Model microSYSTEM



GENUS - EuroCombi Models

Model GENUS 27 PLUS^F

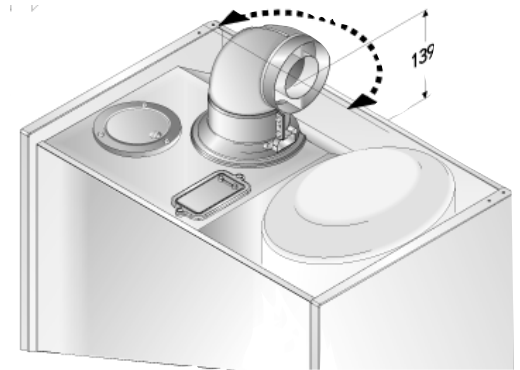
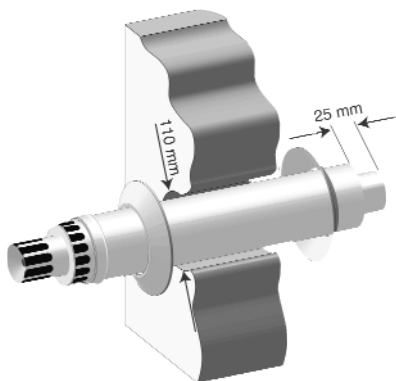


Illustration of the installation of the horizontal vent cap for coaxial system discharge



Cutting the flue pipe

If the installation requires the flue pipe to be shortened, cut the external \varnothing 100mm pipe and internal \varnothing 60mm pipe, ensuring that the original difference in length between the two (25mm) is kept.

2.2 List of Components

Key

Code

Qty

Design

Leq

DESCRIPTION OF
COMPONENT PARTS

Code = Item Part Number

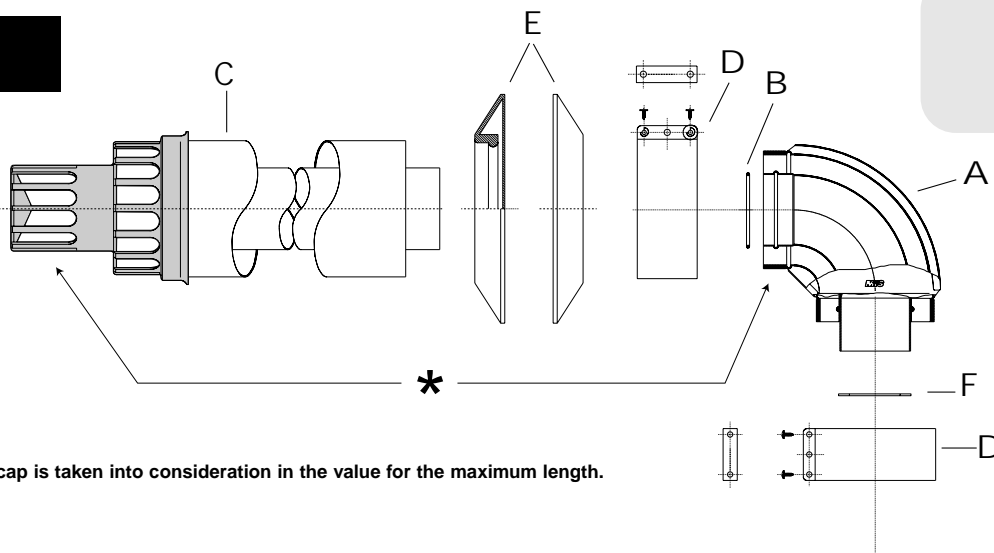
Qty = Quantity in
Package

Design = Schematic Drawing
of the Components

Leq = Length Equivalency
of the Component

705785

1



Leq = 0.75m*

* The end cap is taken into consideration in the value for the maximum length.

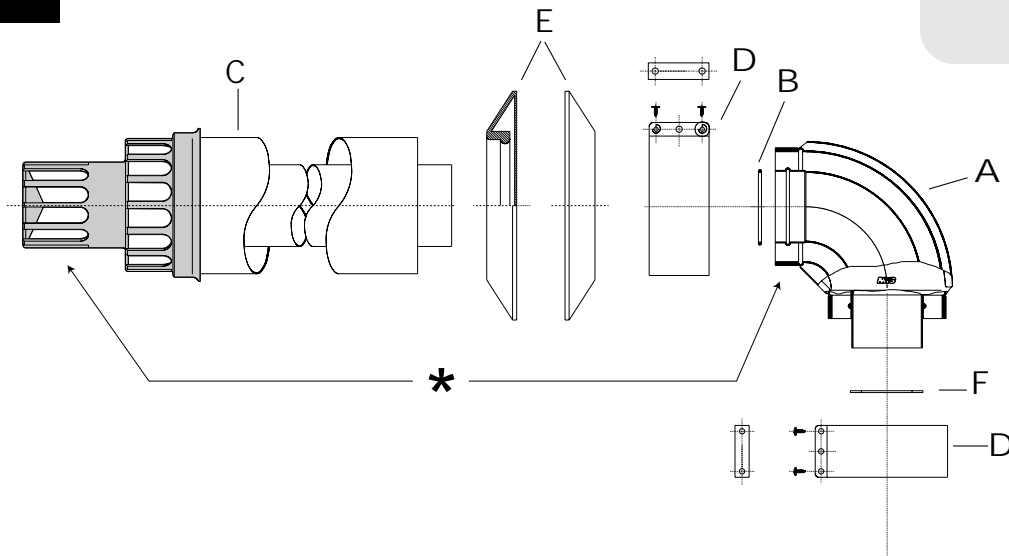
Standard Horizontal Coaxial Kit

- A n°1 90° Coaxial Elbow - \varnothing 60/100mm
- B n°2 Silicone O-ring - \varnothing 60mm
- C n°1 Coaxial Kit with Vent Cap - \varnothing 100/60 x 750mm
- D n°2 Clamp (\varnothing 100mm) with Seal and Screws
- E n°2 Wall Cover Plates (\varnothing 100mm) Made of EPDM
- F n°1 Restrictor (\varnothing 60mm) outer diam. of hole \varnothing 42mm
- n°1 Instruction Sheet

705958

1

Leq = 1 m*



* The end cap is taken into consideration in the value for the maximum length.

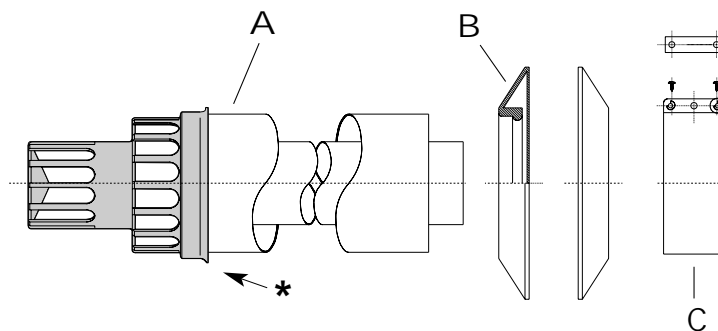
Standard Horizontal Coaxial Kit (1000mm)

- A n°1 90° Coaxial Elbow - ø 60/100mm
- B n°2 Silicone O-rings - ø 60mm
- C n°1 Coaxial Kit with Vent Cap - ø 100/60 x 1000mm
- D n°2 Clamp (ø 100mm) with Seal and Screws
- E n°2 Wall Cover Plates (ø 100mm) Made of EPDM
- F n°1 Restrictor (ø 60mm) outer diam. of hole ø 42mm
- n°1 Instruction Sheet

705783

1

Leq = 0.75m*



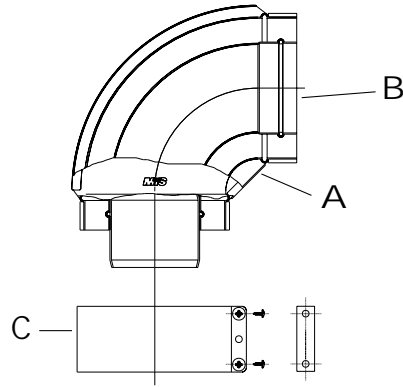
* The end cap is taken into consideration in the value for the maximum length.

Standard Horizontal Coaxial Kit without Elbow

- A n°1 Coaxial Kit with Vent Cap - ø100/60x750mm
- B n°2 Wall Cover Plates (ø 100mm) Made of EPDM
- C n°1 Clamp (ø 100mm) with Seal and Screws
- n°1 Instruction Sheet

705787

1



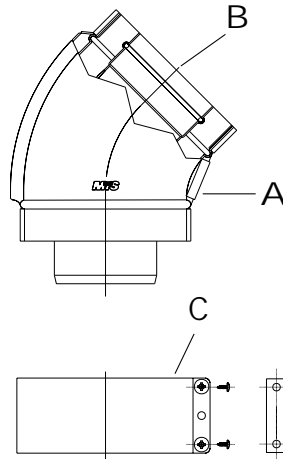
Leq = 0.8m

90° Coaxial Elbow

- A n°1 90° Double Elbow - \varnothing 100/60mm
- B n°2 Silicone O-ring - \varnothing 60mm
- C n°1 Clamp (\varnothing 100mm) with Seal and Screws

705788

2



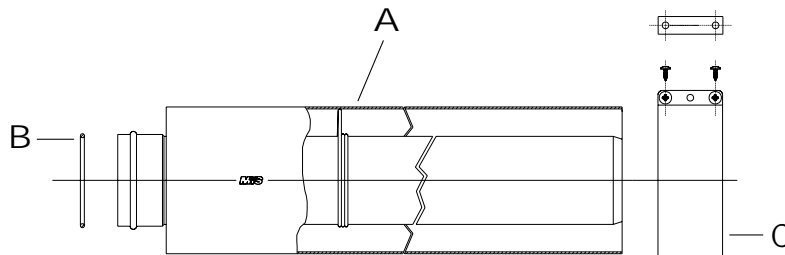
Leq = 0.5m

45° Coaxial Elbow

- A n°2 45° Double Elbow - \varnothing 100/60mm
- B n°4 Silicone O-ring - \varnothing 60mm
- C n°2 Clamps (\varnothing 100mm) with Seal and Screws

705786

1



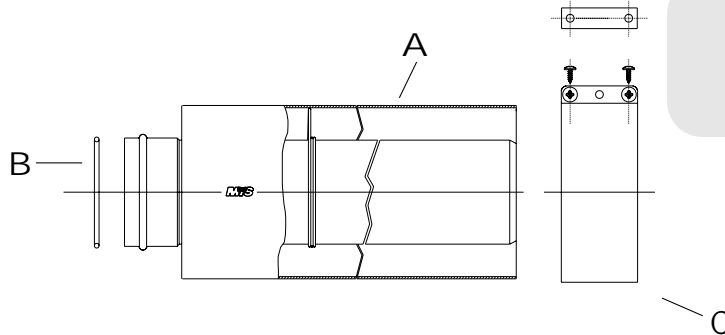
Leq = 1m

Coaxial Extension - 1000mm

- A n°1 Coaxial Pipe (\varnothing 60/100x1000mm) with centring spring.
- B n°1 Silicone O-ring - \varnothing 60mm
- C n°1 Clamp (\varnothing 100mm) with Seal and Screws

705790

1

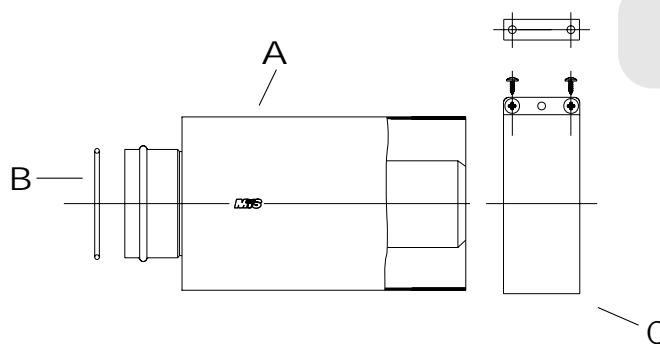


Coaxial Extension 500mm

- A n°1 Coaxial Pipe (\varnothing 60/100x500mm) with centring spring.
- B n°1 Silicone O-ring - \varnothing 60mm
- C n°1 Clamp (\varnothing 100mm) with Seal and Screws

705812

1

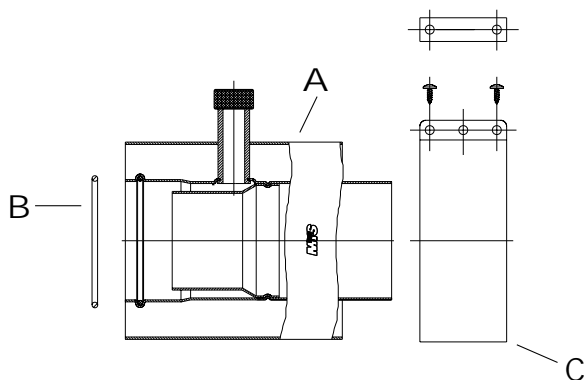


Coaxial Extension - 160mm

- A n°1 Coaxial Extension (\varnothing 60/100x160 mm)
- B n°1 Silicone O-ring - \varnothing 60mm
- C n°1 Clamp (\varnothing 100mm) with Seal and Screws

705792

1

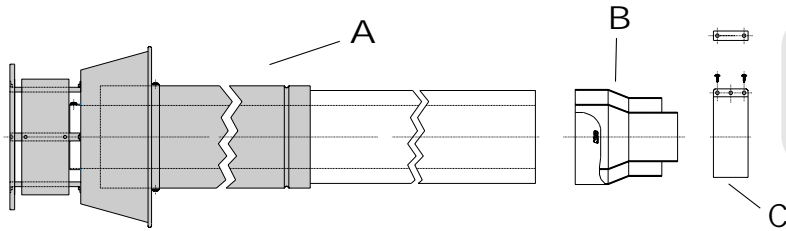


Coaxial Stub (\varnothing 60/100mm) with Condensate Trap

- A n°1 Coaxial Stub (\varnothing 60/100x160mm)
- B n°1 Silicone O-ring - \varnothing 60mm
- C n°1 Clamp (\varnothing 100mm) with Seal and Screws

705764

1



Leq = *

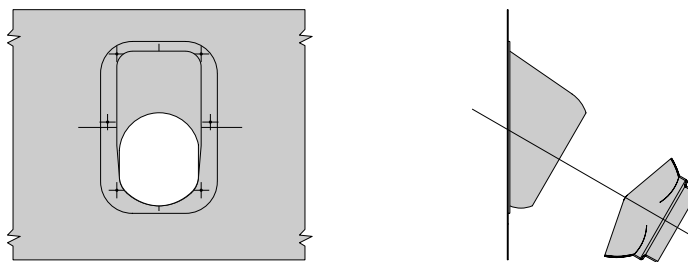
* The end cap is taken into consideration in the value for the maximum length.

Standard Vertical Flue with Black Terminal

- A n°1 Approved Roof Kit (ø 130mm black, ø 118mm RAL 9003, ø 80mm unfinished)
- B n°1 Conical Reducer: 118/110mm - 60/80mm (ø 60 male)
- C n°1 Clamp (ø 100mm) with Seal and Screws
n°2 Self-tapping Screws

705781

1

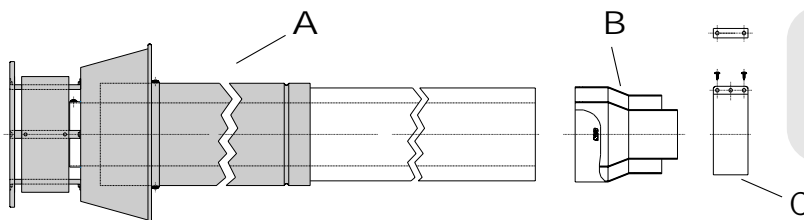


Lead Flashing Black Base Cap

- n°1 Lead Flashing Cap Base (600x600mm)

705765

1



Leq = *

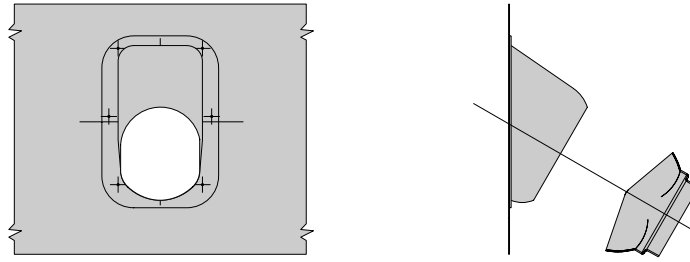
* The end cap is taken into consideration in the value for the maximum length.

Standard Vertical Flue with Red Terminal

- A n°1 Approved Roof Kit (ø 130mm red, ø 118mm RAL 9003, ø 80mm unfinished)
- B n°1 Conical Reducer: 118/110mm - 60/80mm (ø 60mm male)
- C n°1 Clamp (ø 100mm) with Seal and Screws (44 H)
n°2 Self-tapping Screws

705724

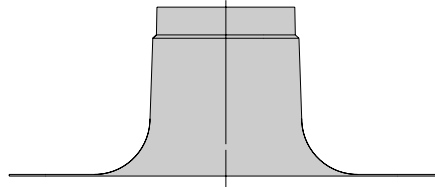
1



Lead Flashing Red Base Cap
n°1 Lead Flashing Base Cap (600x600mm)

704830

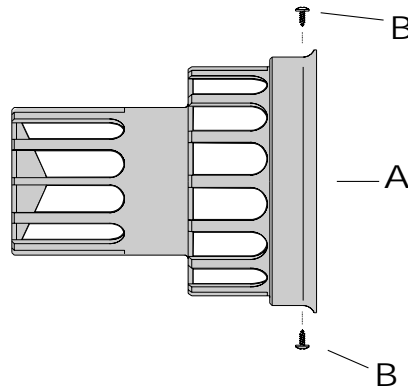
1



Vent Base Cap for Flat Roof
n°1 Vent Base Cap.(Black) for Flat Roof

705811

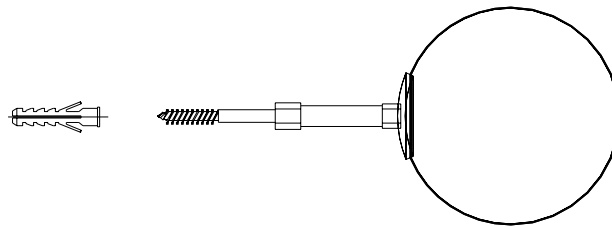
1



Coaxial Vent Cap
A n°1 Vent Cap
B n°3 Self-tapping Screws

705778

3

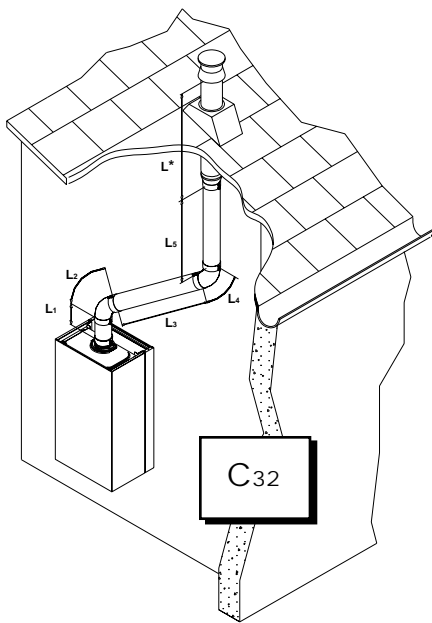



Wall Bracket Kit
n°3 Universal Wall Mounting Brackets (80/120mm)

2.3 Calculation Guidelines

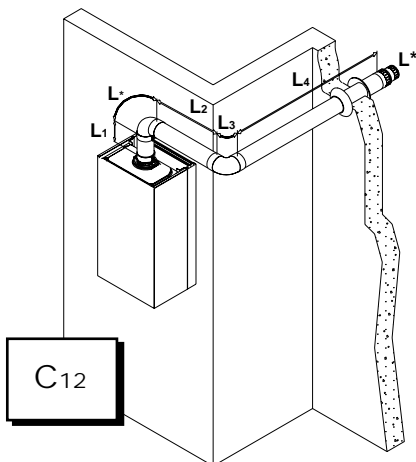
- Design the discharge layout;
- Measure the length of the straight sections;
- Determine the length equivalency values for all of the components;
- Calculate the value for the total length;
- Compare this value with that for the maximum allowable pipe length.


Let's examine two cases.



705812	L_1	= 0.2m +	
705788	L_2	= 0.5m +	
705786	L_3	= 1.0m +	
705788	L_4	= 0.5m +	
705790	L_5	= 0.5m	
$L_{eq\ tot}$		= 2.7m	
			<div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 10px;">$2.7 < L_{max} = 4m$</div> <div style="text-align: center;">  OK </div> </div>

L^* Taken in consideration in the maximum length.



705812	L_1	= 0.2 m +	
705790	L_2	= 0.5 m +	
705787	L_3	= 0.8 m +	
705783	L_4	= 0.75m +	
$L_{eq\ tot}$		= 1.25m	
			<div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 10px;">$1.25 < L_{max} = 4m$</div> <div style="text-align: center;">  OK </div> </div>

L^* Taken in consideration in the maximum length.

3.0 Twin Pipe

The diagram shows the most common situations for twin pipe systems.

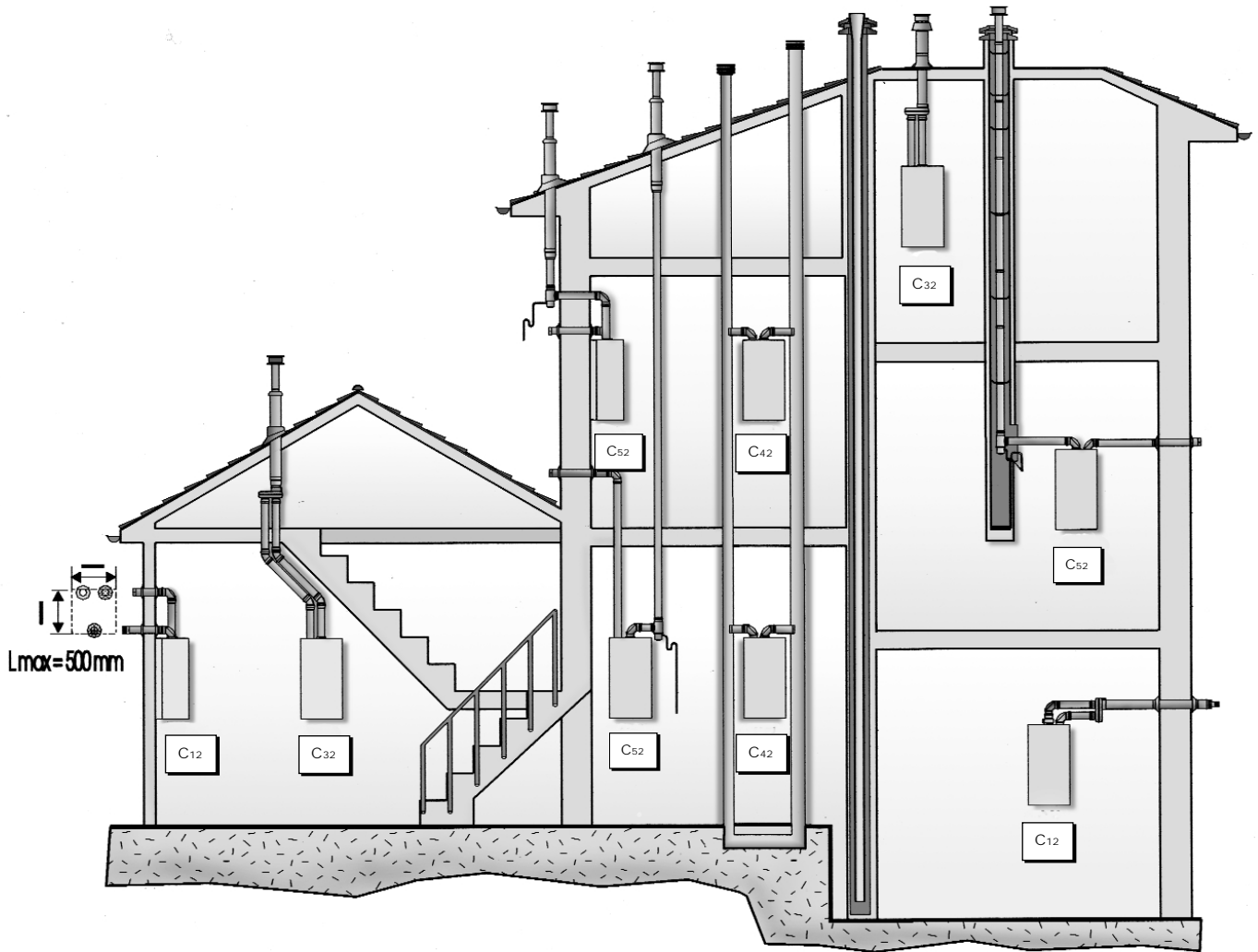


Table of admissible maximum lengths and requirements regarding the use of restrictors

Discharge Type	Description	Maximum Pipe Length GENUS - EuroCombi			Restrictor on Discharge Side GENUS - EuroCombi			Risk of Condense Forming
		23 kW	27 kW	30 kW	23 kW	27 kW	30 kW	
C12	Discharge/intake using twin pipes \varnothing 80 mm	Lmax 54m	Lmax 46m	Lmax 50m	L<5m \varnothing 42 mm	L<5m \varnothing 42 mm	L<7.5m	LF>4.5m Length exhaust pipe + vent cap
C32	Discharge/intake using twin pipes \varnothing 80 mm	Lmax 54m	Lmax 46m	Lmax 50m	L<5m \varnothing 42 mm	L<5m \varnothing 42 mm	L<7.5m	LF>4.5m Length exhaust pipe + vent cap
C42	Discharge/intake connected to a twin pipe flue system \varnothing 80mm	Lmax 54m	Lmax 46m	Lmax 50m	L<5m \varnothing 42 mm	L<5m \varnothing 42 mm	L<7.5m	LF>4.5m Length exhaust pipe + vent cap
C52	Discharge/intake with piping under different wind conditions \varnothing 80mm	Lmax 17m	Lmax 17m	Lmax 18m	always \varnothing 42 mm	always \varnothing 42 mm	always \varnothing 45 mm	LF>4.5m Length exhaust pipe + vent cap

Discharge Type	Description	Maximum Pipe Length microGENUS		Restrictor on Discharge Side microGENUS		Risk of Condense Forming
		23 kW	27 kW	23 kW	27 kW	
C12	Discharge/intake using twin pipes \varnothing 80 mm	Lmax 43m	Lmax 62m	L<11m \varnothing 43 mm L>11m no ring	L<38m \varnothing 41 mm L>38m no ring	LF>4.5m Length exhaust pipe + vent cap
C32	Discharge/intake using twin pipes \varnothing 80 mm	Lmax 43m	Lmax 62m	L<11m \varnothing 43 mm L>11m no ring	L<38m \varnothing 41 mm L>38m no ring	LF>4.5m Length exhaust pipe + vent cap
C42	Discharge/intake connected to a twin pipe flue system \varnothing 80mm	Lmax 43m	Lmax 62m	L<11m \varnothing 43 mm L>11m no ring	L<38m \varnothing 41 mm L>38m no ring	LF>4.5m Length exhaust pipe + vent cap
C52	Discharge/intake with piping under different wind conditions \varnothing 80mm	Lmax 40m	Lmax 54m	L<11m \varnothing 43 mm L>11m no ring	L<34m \varnothing 41 mm L>34m no ring	LF>4.5m Length exhaust pipe + vent cap

Discharge Type	Description	Maximum Pipe Length microCombi	Restrictor on Discharge Side microCombi	Risk of Condense Forming
		23 kW	23 kW	
C12	Discharge/intake using twin pipes \varnothing 80 mm	Lmax 43m	L<11m \varnothing 43 mm L>11m no ring	LF>4.5m Length exhaust pipe + vent cap
C32	Discharge/intake using twin pipes \varnothing 80 mm	Lmax 43m	L<11m \varnothing 43 mm L>11m no ring	LF>4.5m Length exhaust pipe + vent cap
C42	Discharge/intake connected to a twin pipe flue system \varnothing 80mm	Lmax 43m	L<11m \varnothing 43 mm L>11m no ring	LF>4.5m Length exhaust pipe + vent cap
C52	Discharge/intake with piping under different wind conditions \varnothing 80mm	Lmax 43m	L<11m \varnothing 43 mm L>11m no ring	LF>4.5m Length exhaust pipe + vent cap

Discharge Type	Description	Maximum Pipe Length GENUS 27 PLUS		Restrictor on Discharge Side GENUS 27 PLUS		Risk of Condense Forming	
		27 kW		27 kW			
C12	Discharge/intake using twin pipes ø 80 mm	Lmax 12m		L>5m ø 47 mm		L _F >5.4m Length exhaust pipe + vent cap	
C32	Discharge/intake using twin pipes ø 80 mm	Lmax 12m		L>5m ø 47 mm		L _F >5.4m Length exhaust pipe + vent cap	
C42	Discharge/intake connected to a twin pipe flue system ø 80mm	Lmax 12m		L>5m ø 47 mm		L _F >5.4m Length exhaust pipe + vent cap	
C52	Discharge/intake with piping under different wind conditions ø 80mm	Lmax 12m		L>5m ø 47 mm		L _F >5.7m Length exhaust pipe + vent cap	

Discharge Type	Description	Maximum Pipe Length microSYSTEM		Restrictor on Discharge Side microSYSTEM		Risk of Condense Forming	
		21 kW	28 kW	21 kW	28 kW	21 kW	28 kW
C12	Discharge/intake using twin pipes ø 80 mm	Lmax 34m	Lmax 62m	L<25m ø 46 mm L>25m no ring	L<38m ø 41 mm L>38m no ring	L _F >4.5m	L _F >11 m
C32	Discharge/intake using twin pipes ø 80 mm	Lmax 34m	Lmax 62m	L<25m ø 46 mm L>25m no ring	L<38m ø 41 mm L>38m no ring	L _F >4.5m	L _F >11 m
C42	Discharge/intake connected to a twin pipe flue system ø 80mm	Lmax 34m	Lmax 62m	L<25m ø 46 mm L>25m no ring	L<38m ø 41 mm L>38m no ring	L _F >4.5m	L _F >11 m
C52	Discharge/intake with piping under different wind conditions ø 80mm	Lmax 31m	Lmax 54m	L<22m ø 46 mm L>22m no ring	L<34m ø 41 mm L>34m no ring	L _F >4.8m	L _F >11 m

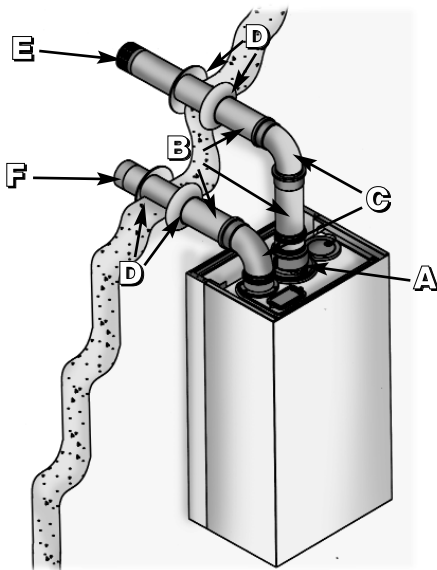
Discharge Type	Description	Maximum Pipe Length microSYSTEM		Restrictor on Discharge Side microSYSTEM		Risk of Condense Forming	
		15 kW		15 kW			
C12	Discharge/intake using twin pipes ø 80 mm	Lmax 78 m		L<30m ø 41 mm L>30m no ring		L _F >2.5m Length exhaust pipe + vent cap	
C32	Discharge/intake using twin pipes ø 80 mm	Lmax 78 m		L<30m ø 41 mm L>30m no ring		L _F >2.5m Length exhaust pipe + vent cap	
C42	Discharge/intake connected to a twin pipe flue system ø 80mm	Lmax 78 m		L<30m ø 41 mm L>30m no ring		L _F >2.5m Length exhaust pipe + vent cap	

NB: $L = L_A + L_F$: The maximum extension is given by the sum of the length of the air intake section and that of the fume discharge section.

C 52 types must comply with the following requirements:

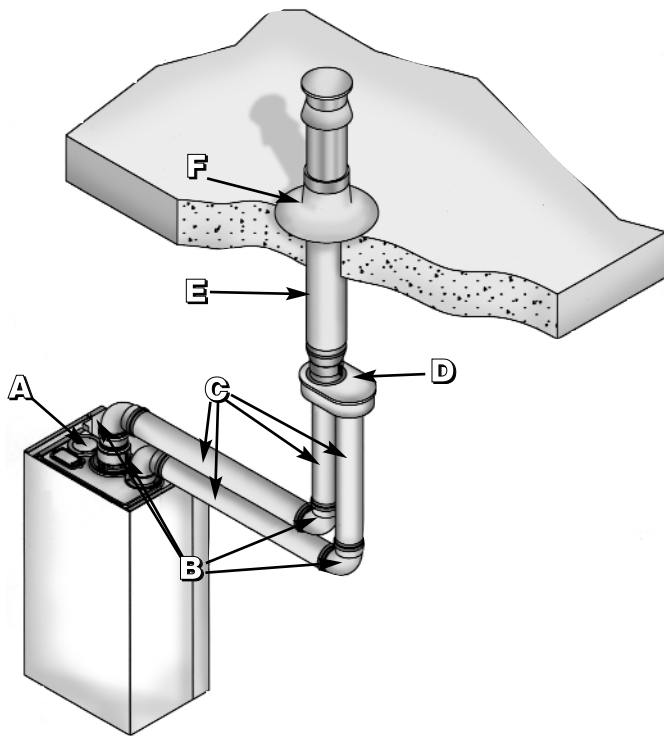
- The exhaust pipe vent cap must extend at least 0.5 m above the ridge of the roof if it is located on a side other than that for the air intake (this is not obligatory if the exhaust and air intake pipes are located on the same side of the building);
- The exhaust and air intake pipes must have the same diameter of \varnothing 80 mm;
- The maximum pipe length of the exhaust flue may include a 1 metre section for intake and 16 metres for discharge.

3.1 Installation Examples



GENUS. model shown

	No. of Units	Description	Code
A	1	Adapter for Twin Pipe Systems	705757
B	3	\varnothing 80 Pipe	705761
C	2	\varnothing 80 Elbow (MF90)	705758
D	4	\varnothing 80 Cover Plate	705784
E	1	\varnothing 80 Stainless Steel Vent Cap	705113
F	1	Intake Vent Cap	704738

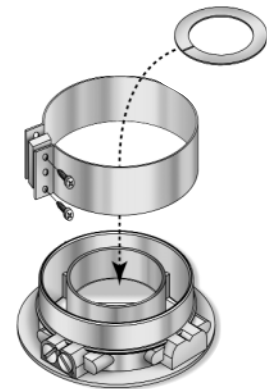


GENUS. model shown

	No. of Units	Description	Code
A	1	Adapter for Twin Pipe Systems	705757
B	4	ø80 Elbow (MF90)	705758
C	4	ø80 Pipe	705761
D	1	ø80 Flue Bridge	705767
E	1	Vent Cap/Roof Discharge	705764
F	1	Lead Vent Cap Base	704830

Installation of the restrictor on the air intake side

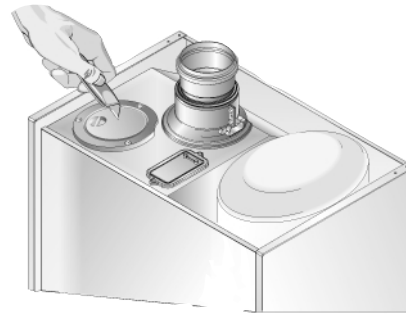
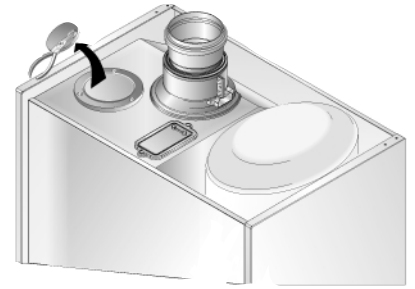
Removal of the air intake cap



GENUS - EuroCombi Models

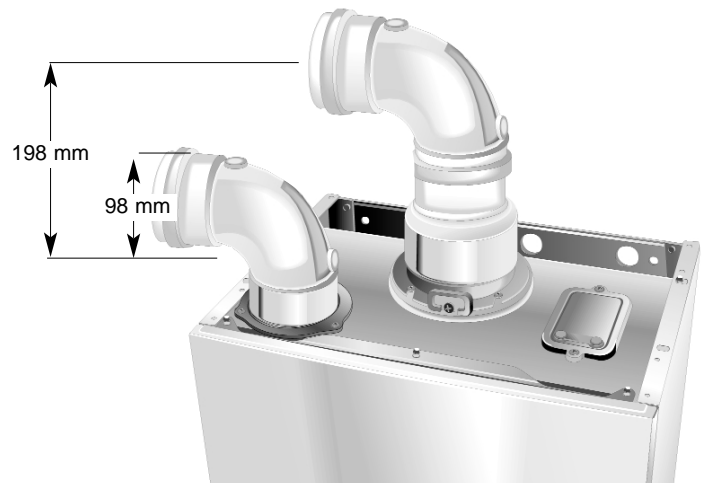
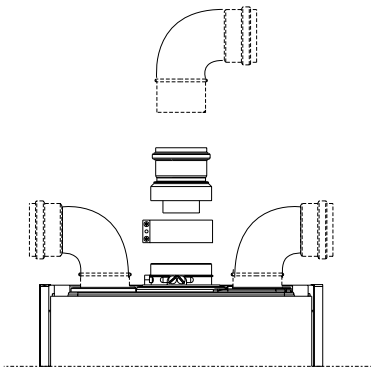


Model microGENUS
Model microCombi
Model microSYSTEM



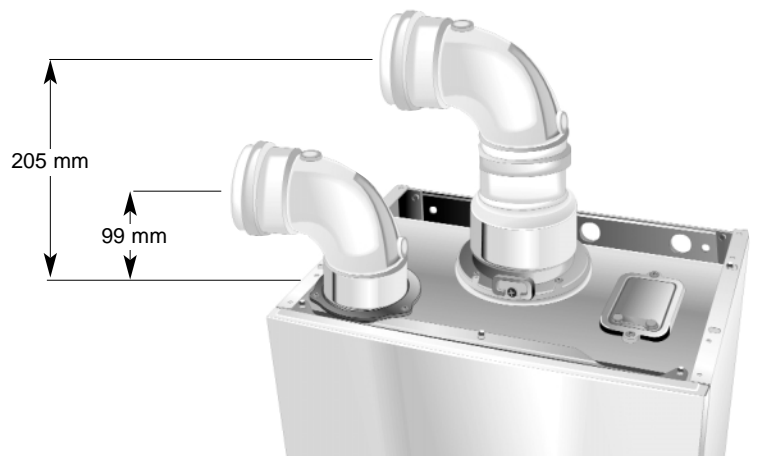
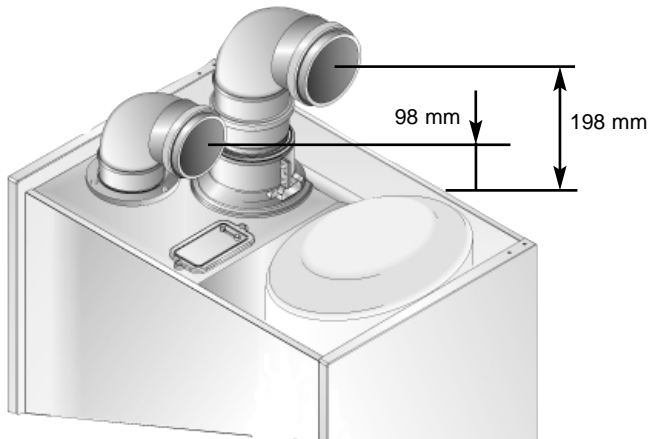
Model GENUS 27 PLUS

**Connection of the flues for
air intake and fume discharge**



GENUS - EuroCombi Models

Model GENUS 27 PLUS



Model microGENUS
Model microCombi
Model microSYSTEM

3.2 List of Components

Key

Code

Qty

Design

Leq

DESCRIPTION OF
COMPONENT PARTS

Code = Item Part Number

Design = Schematic Drawing of the Components

Qty = Quantity in Package

Leq = Length Equivalency of the Component

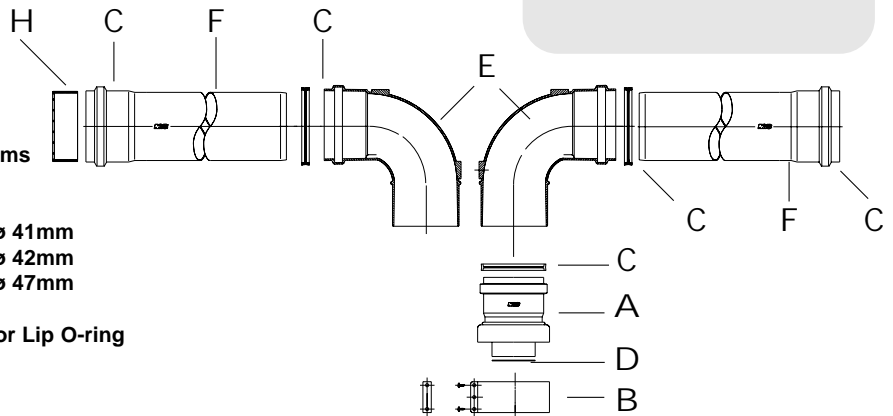
706026

1

Leq = 3.3m*

Twin Pipe Flue Kit

- A n°1 Adaptor (ø 60/80mm) for Twin Pipe Systems
- B n°1 Clamp (ø 100mm) with Seal and Screws
- C n°5 Silicone Lip O-rings - ø 80mm
- D n°1 Restrictor (ø 60mm) outer diam. of hole ø 41mm
- n°1 Restrictor (ø 60mm) outer diam. of hole ø 42mm
- n°1 Restrictor (ø 60mm) outer diam. of hole ø 47mm
- E n°2 90° MF Elbow (ø80) with large radius
- F n°2 Pipe (ø 80mm) x 1000mm with housing for Lip O-ring
- H n°1 End Piece for Vent
- n°1 Instruction Sheet



705757

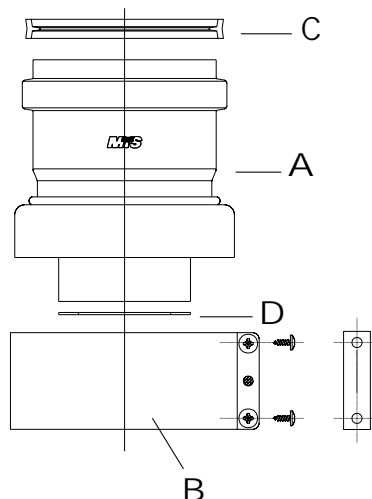
1

Leq = *

* The adaptor is taken into consideration in the value for the maximum length.

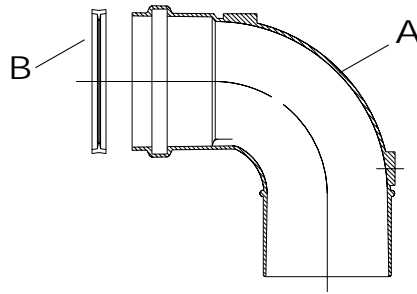
Adapter (ø 60/80mm) for Twin Pipe Systems

- A n°1 Adaptor (ø 60/80mm) for Twin Pipe Systems
- B n°1 Clamp (ø 100mm) with Seal and Screws
- C n°1 Silicone Lip O-ring - ø 80mm
- D n°1 Restrictor (ø 60mm) outer diam. of hole ø 42mm
- n°1 Instruction Sheet



705758

2



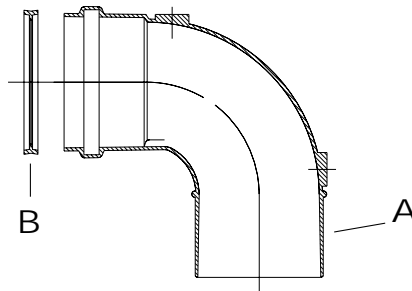
Leq = 1.3m

90° MF Elbow - ø80mm - for Twin Pipe System

- A n°2 90° MF Elbow (ø80mm) with large radius and Lip O-ring Seal
- B n°2 Mounted Silicone Lip O-ring - ø 80mm

705759

20



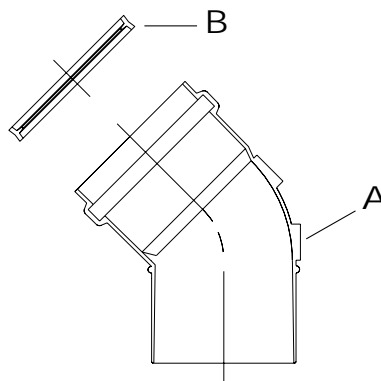
Leq = 1.3m

90° MF Elbow - ø80mm - for Twin Pipe System

- A n°20 90° MF Elbow (ø80mm) with large radius and Lip O-ring Seal
- B n°20 Mounted Silicone Lip O-ring - ø 80mm

705760

2



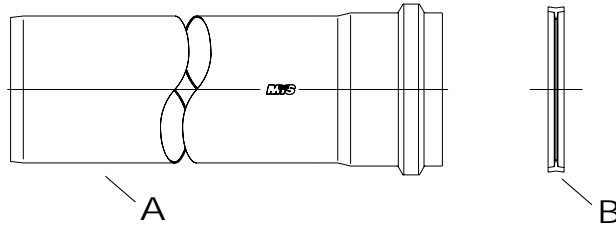
Leq = 1m

45° MF Elbow - ø80mm - for Twin Pipe System

- A n°20 45° MF Elbow (ø80mm) with large radius and Lip O-ring Seal
- B n°20 Mounted Silicone Lip O-ring - ø 80mm

705761

1



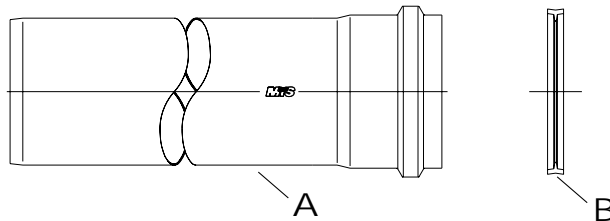
Leq = 1m

ø80mm Pipe (1000mm) - for Twin Pipe System

- A n°1 ø 80mm Pipe (1000mm) with Lip O-ring Seal
- B n°1 Silicone Lip O-ring - ø 80mm

705762

10



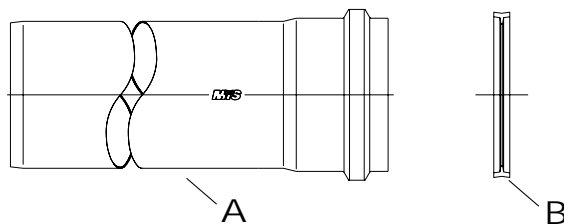
Leq = 1m

ø80mm Pipe (1000mm) - for Twin Pipe System

- A n°10 ø80mm Pipe (1000mm) with Lip O-ring Seal
- B n°10 Silicone Lip O-ring - ø 80mm

705770

10



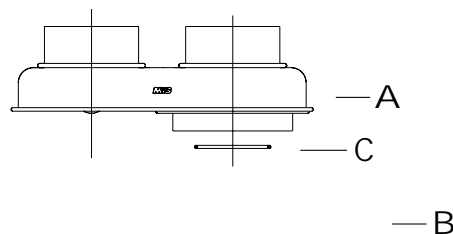
Leq = 0.5m

ø80mm Pipe (500mm) - for Twin Pipe System

- A n°10 ø80mm Pipe (500mm) with Lip O-ring Seal
- B n°10 Silicone Lip O-ring - ø 80mm

705767

1



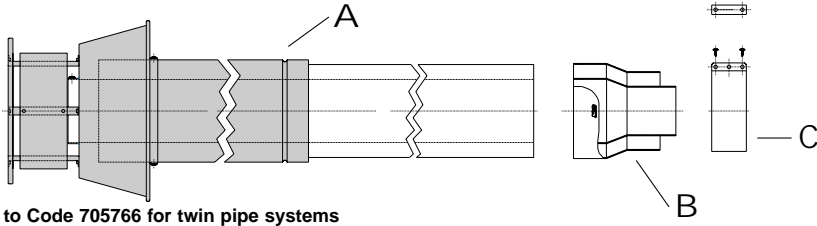
Leq = 10m

ø80 Pipe Bridge - for Twin Pipe System

- A n°1 Pipe Splitter (80/80 mm) with male type base (ø 100mm)
- B n°1 Clamp (ø 100mm) with Seal and Screws
- C n°1 Silicone O-ring - ø 60mm
- n°1 Instruction Sheet

705764

1



$Leq = *$

Must be connected to Code 705766 for twin pipe systems

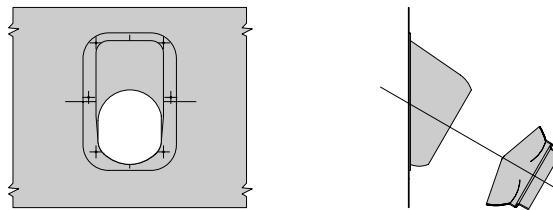
Standard Vertical Flue Kit with Black Terminal

- A n°1 Approved Roof Kit (ø 130mm black, ø 118 RAL 9003, ø 80mm unfinished)
- B n°1 Conical Reducer: 118/110mm-60/80mm (ø60mm male)
- C n°1 Clamp (ø 100mm) with Seal and Screws(44 H)
n°2 Self-tapping Screws
n°1 Instruction Sheet

* The end cap is taken into consideration in the value for the maximum length.

705781

1

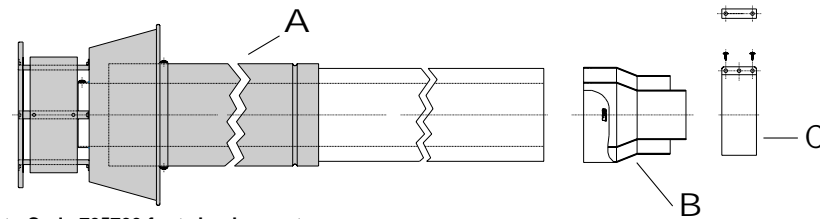


Lead Flashing Black Base Cap

n°1 Lead Flashing Cap Base (600x600mm)

705765

1



$Leq = *$

Must be connected to Code 705766 for twin pipe systems

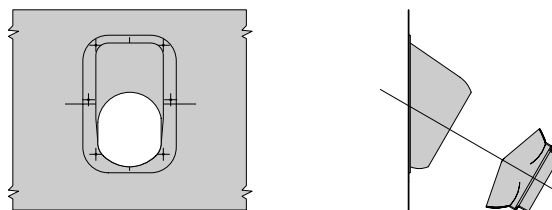
Standard Vertical Flue Kit with Red Terminal

- A n°1 Approved Roof Kit (ø 130mm red, ø 118mm RAL 9003, ø 80mm unfinished)
- B n°1 Conical Reducer: 118/110mm - 60/80mm (ø 60m male)
- C n°1 Clamp (ø 100mm) with Seal and Screws
n°2 Self-tapping Screws
n°1 Instruction Sheet

* The end cap is taken into consideration in the value for the maximum length.

705724

1

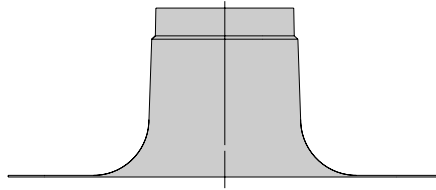


Lead Flashing Red Base Cap

n°1 Lead Flashing Cap Base (600x600mm)

704830

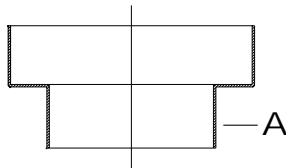
1



Vent Cap Base for Flat Roof
n°1 Vent Cap Base (Black) for Flat Roof

705766

1



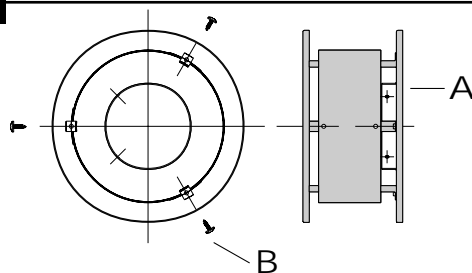
Must be connected to Code 705764 or 705765 for twin pipe systems

∅ 118/80 Pipe Reducer

A n°1 ∅ 118/80mm Pipe Reducer
n°2 Self-tapping Screws

705160

1

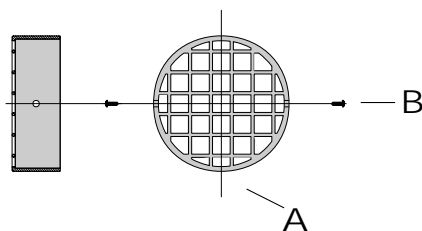


∅ 80 Vent Cap for Horizontal Termination

A n°1 ∅ 80mm Vent Cap for Horizontal Termination with Black Paint Finish
B n°3 Self-tapping Screws

704738

1

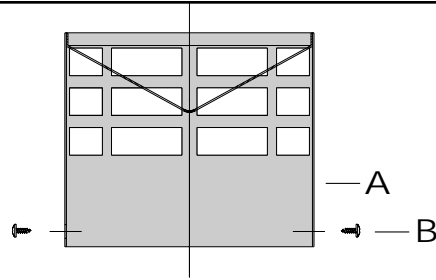


Intake Vent Cap

A n°1 Intake Vent Cap
B n°2 Self-tapping Screws

705113

1

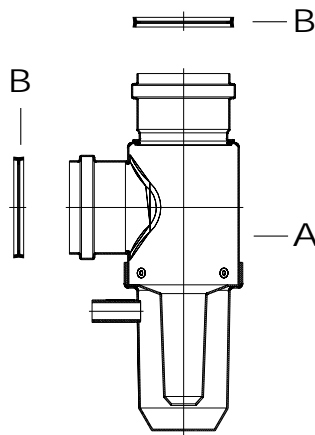


∅ 80mm Stainless Steel Vent Cap

- A n°1 ∅ 80mm Stainless Steel Vent Cap
- B n°2 Self-tapping Screws

705774

1



Leq=1.3m

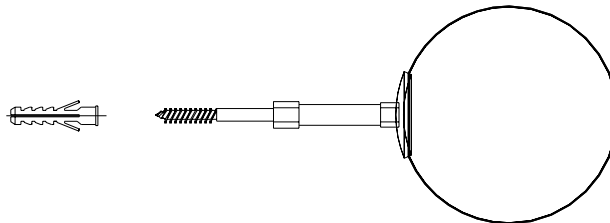
Must be connected to Code 705775

∅ 80mm Condensate Discharge T

- A n°1 ∅ 80mm Condensate Discharge T (FF) with Built-in Trap
- B n°2 Silicone Lip O-ring (∅ 80mm)
- n°1 Rubber Hose for Trap (length of 1.5)
- n°1 Hose Clamp
- n°1 Instruction Sheet

705778

3

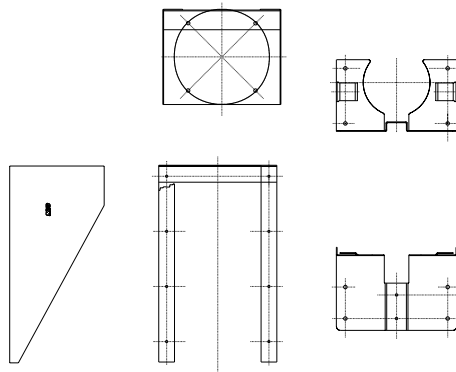


Wall Bracket Kit

- n°3 Universal Wall Mounting Brackets (80/120mm)

705775

1



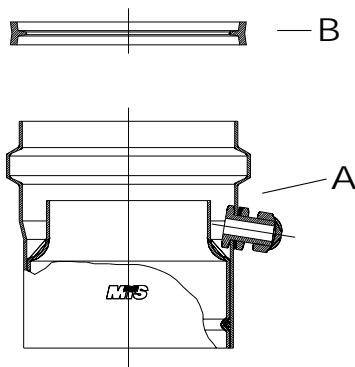
Must be connected to Code 705774

Wall Bracket for ø 80mm Condensate Discharge T

- A n°1 Wall Bracket for ø 80mm Condensate Discharge T with screws and socket head screws for centering
- B n°4 Wall Anchor

705798

1

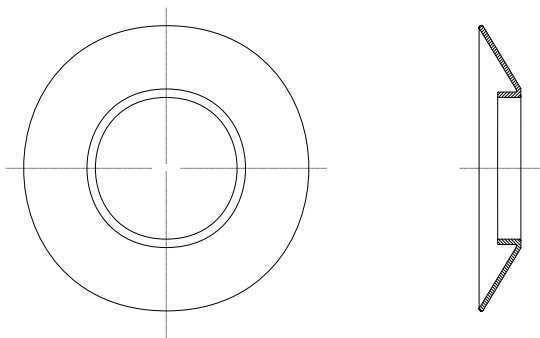


Stub (ø 80mm) with Condensate Collector

- A n°1 Stub (ø 80mm) with Condensate Collector
- B n°1 Silicone O-ring - ø 80mm

705784

2



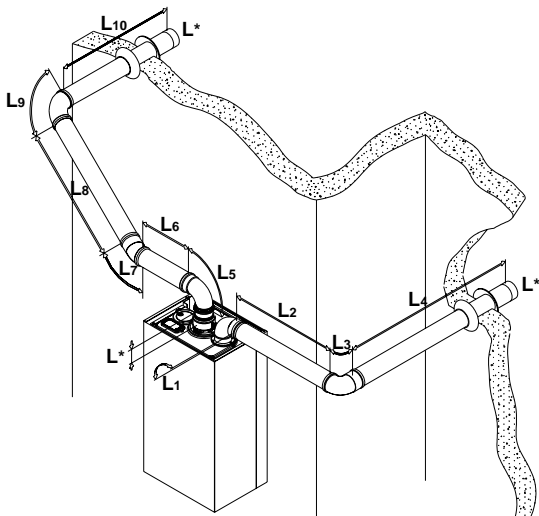
ø 80mm Cover Plate

- n°2 Silicone Wall Cover Plate (ø 80mm)

3.3 Calculation Guidelines

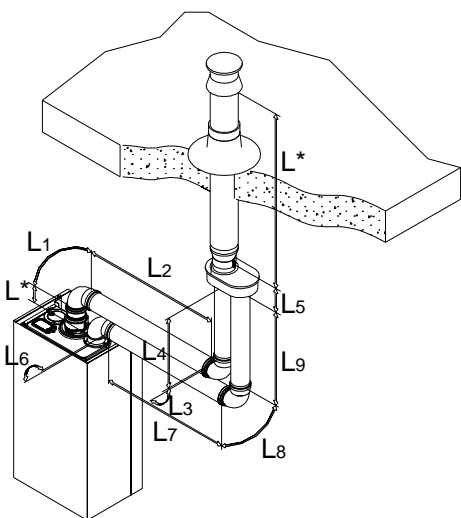
- Design the discharge layout;
- Measure the length of the straight sections;
- Determine the length equivalency values for all of the components;
- Calculate the value for the total length;
- Compare this value with that for the maximum allowable pipe length.

Let's examine two cases.



L* Taken in consideration in the maximum length.

705758	L ₁	=	1.3 m +	
705761	L ₂	=	1.0 m +	
705758	L ₃	=	1.3 m +	
705761	L ₄	=	1.0 m +	
705758	L ₅	=	1.3 m +	
705770	L ₆	=	0.5 m +	
705760	L ₇	=	1.0 m +	
705761	L ₈	=	1.0 m +	
705760	L ₉	=	1.0 m +	
705761	L ₁₀	=	1.0 m +	
		L_{eq^{tot}}	= 10.4 m	10.4 < L_{max} = 54m



L* Taken in consideration in the maximum length.

705758	L ₁	=	1.3 m +	
705761	L ₂	=	1.0 m +	
705758	L ₃	=	1.3 m +	
705761	L ₄	=	1.0 m +	
705767	L ₅	=	10.0 m +	
705758	L ₆	=	1.3 m +	
705761	L ₇	=	1.0 m +	
705758	L ₈	=	1.3 m +	
705761	L ₉	=	1.0 m +	
		L_{eq^{tot}}	= 19.2 m	19.2 < L_{max} = 54m

4.0 List of Insulated Components

Key

Code	Dis.	Leq
Qty		
DESCRIPTION OF COMPONENT PARTS		

Code = Item Part Number

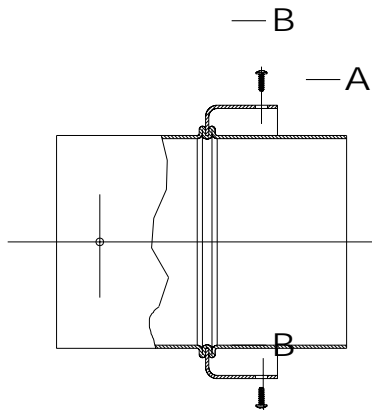
Qty = Quantity in Package

Design = Schematic Drawing of the Components

Leq = Length Equivalency of the Component

705769

1



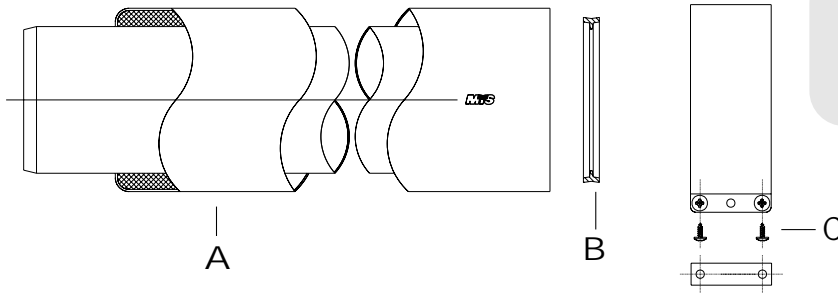
∅ 80mm Adapter for Insulated Pipes

A n°1 ∅ 80mm Adapter for Insulated Pipes

B n°2 Self-tapping Screws

705771

1

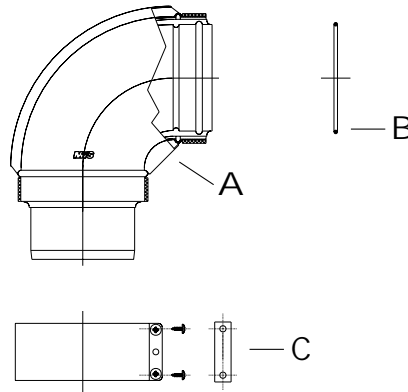


Insulated Pipe Length - 1000mm

- A n°1 Insulated Pipe Length (ø 80/100x1000mm)
- B n°1 Silicone Lip O-ring - ø 80mm
- C n°1 Clamp (ø 100mm) with Seal and Screws
- n°1 Instruction Sheet

705772

1

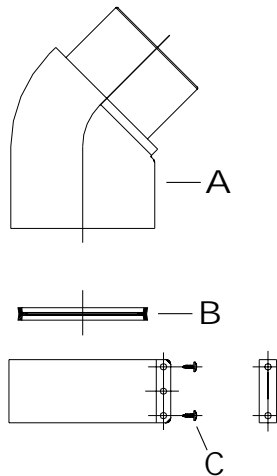


90° Insulated Elbow (ø80/100mm)

- A n°1 90° Insulated Elbow
- B n°1 Silicone O-ring - ø 80mm
- C n°1 Clamp (ø 100mm) with Seal and Screws

705773

1



45° Insulated Elbow (ø80/100mm)

- A n°2 45° Insulated Elbow
- B n°2 Silicone O-ring - ø 80mm
- C n°2 Clamp (ø 100mm) with Seal and Screws

4.1 List of Components for Flue Pipes

key

Code	Design	Leq
Qty		
DESCRIPTION OF COMPONENT PARTS		

Code = Item Part Number

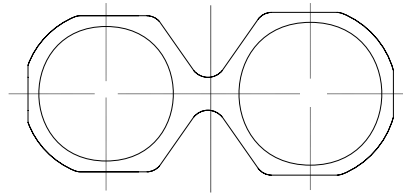
Qty = Quantity in Package

Design = Schematic Drawing of the Components

Leq = Length Equivalency of the Component

705776

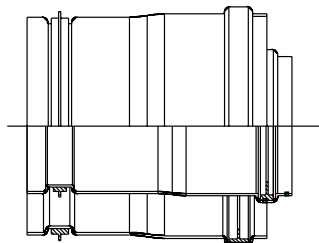
10



Pipe Locking Springs
n°10Stainless Steel Pipe Locking Springs

705931

1



3CE Systems Kit

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