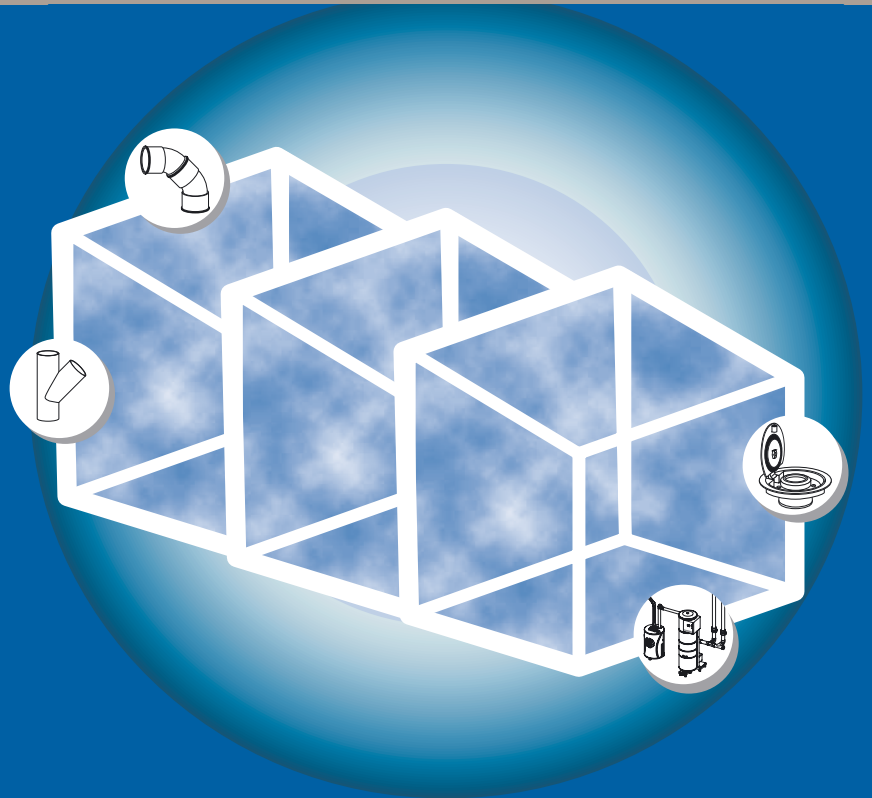


TUBO

the advanced
vacuum system.

TECHNICAL MANUAL 2006
TERTIARY SECTOR



CLEAN TECHNOLOGY FOR HEALTHY LIVING

 **AERTECNICA**
think clean





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Aertecnica was established in Cesena in 1985, when Daniele Golinucci was introduced to a central vacuum system for the first time and immediately saw the potential of the technology imported from the USA and almost unknown at that time in Italy.

The system was presented that same year at the SAIE in Bologna, where the first export contract was drawn up with a Portuguese distributor.

At the end of 1985 with Enzo Bucci joining the team it was possible to build and offer a totally original system.

A few years later Maurizio Martini joined to complete the team, bringing his skill in planning and introducing many exclusive innovations.

In 1992 the company moved to new premises to make room for the assembly, planning and sales divisions.

In the five years from 1993 to 1998, important goals were reached in various sectors: a patent was registered for the 'Air' vacuum socket, in the style of the most elegant electrical plaques used in homes today, and machines were developed for the tertiary sector.

In the marketing of its products the company changed from a system of distributors to one of wholesale dealers and launched its first advertising campaign aimed at the consumer.

In 1992 Aertecnica obtained certification of its product.

Aertecnica operates with two production lines: one for the residential market and one for the tertiary sector, commercial businesses, hospitals, hotels, etc.

The company exports its products to over 20 countries through local distributors.



On the American continent, a subsidiary company manages the development in the USA and Latin America.

In 1999, now producing machines solely of its own design, the company obtained the TÜV to certify the product and the system.

Today, the company's Environmental Management System aims to reduce the impact of the productive activities on the environment even more, with consequent energy savings, optimising the use of resources and reducing waste as far as possible.

A leader on the market since the early 1990's, Aertecnica has expanded its production over the years to meet every plant-engineering requirement in central vacuum systems.



Keeping the environments we live, work and spend most of our spare time in, free of dust and pollutants is very important and introduces a vital theme: that of our health.

In May 2003 Greenpeace presented the results of a study done in European homes on pollution caused by chemical substances present in dust.

The study stressed that we have reached the point where we must intervene if we want to reduce health risks caused by indoor pollution.

The fact that Greenpeace's arning was justified is also shown by studies done on the consequences of domestic pollution on some of the most common pathologies.

In the United States, allergies to dust and mites have reached such a high level that the symptoms have become the primary cause of absence at school.

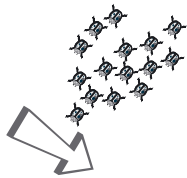
environments that were cleaned with a central vacuum system.

As well as being extremely efficient for cleaning the home, a vacuum system is essential for improving the quality of life for people suffering from dust allergies.

The vacuum system is much more powerful and faster than a portable vacuum cleaner, it eliminates dust, pollutants and mites from the environment, taking them out of the living area.

Furthermore, in large installations such as in communities, hotels, rest homes and rehabilitation centres, etc. the system cuts the costs of cleaning and can be used at any time, as it is silent.

Micro-organisms



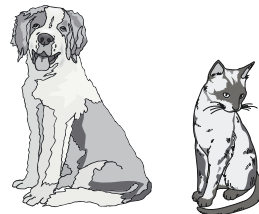
Pollen



Gases - vapours



Pets' hair



Smells



Smoke



The Division of Rheumatology, Allergy and Clinical Immunology of the University of California has carried out a study on the positive influence a vacuum system has on the quality of life for people suffering from allergies.

A substantial reduction in nasal symptoms and ailments, lacrimation and sleep disorders was observed after just 3 months of living in

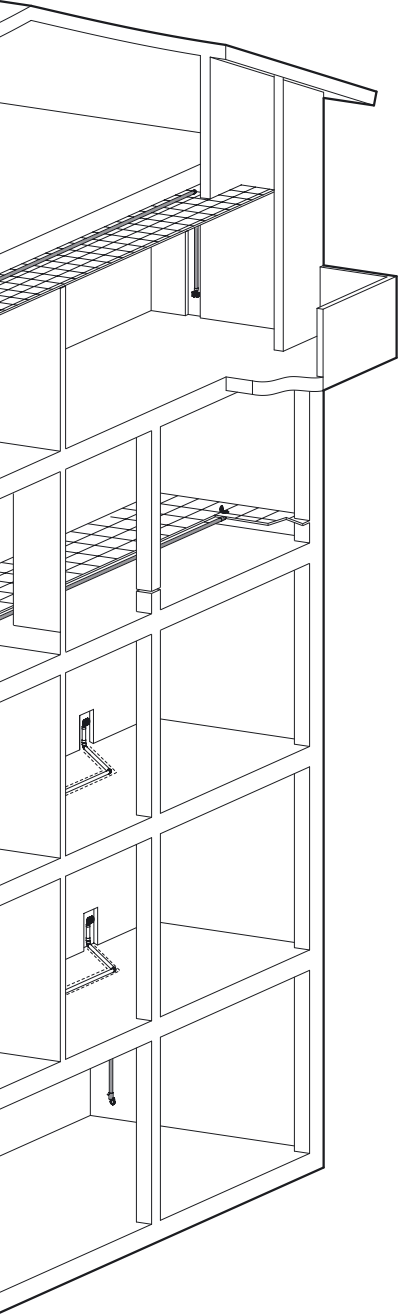


The central vacuum system



AN EFFICIENT SYSTEM

TUBÒ



The TUBÒ central vacuum system is the most efficient, hygienic and economic system for cleaning buildings.

The main elements of the system are:

the power unit located in a utility room,

the network of pipes embedded in the walls, floors and false ceilings,

the vacuum sockets where the operator inserts the flexible hose, and

the specific accessories that will be used during cleaning.

The portable vacuum cleaner

Blows the finest dust and pollutants back into the environment they were sucked out of, as they flow with air out of the back of the machine.

It is less practical, because it must be moved from room to room, up and down stairs and must be connected to the power socket.

The performance drops rapidly as the dust bag fills, reducing the suction power.

The dust bags are unhygienic and unpleasant to change.

It's noisy.

It takes up room where it's stored.

The cost of purchase is reduced, but the maintenance costs are high.

The central vacuum system

Doesn't let micro dust, mites and pollutants get back into the air, but pipes them out of the environment that is being cleaned.

It is practical, fast and safe: the operator only has to move a light hose that is inserted in the vacuum inlet, without using electrical power sockets.

It is much more powerful and its performance doesn't drop.

It only needs a few simple maintenance operations a few times a year.

It doesn't produce bad smells in the environment it's used in.

It's silent, so it can also be used when people are sleeping.

In hotels and other large buildings, its practical qualities and power let you recover the cost of the investment very quickly. The costs of maintenance are low and the savings in labour and materials of consumption (dust bags, filters...) means its maintenance costs are a fraction of that of a conventional vacuum cleaner.



Why Aertecnica?

Technical values

- **'Air' vacuum socket**
patented
- **'Air' socket frame**
patented
- **Chips conveying system**
patented
- **'Power Control'**
patent application
- **'Remote' display**
patent application
- **Dust bag with 'Easy Bag' tensioner**
patent application
- **Reversible motor fixing ring**
patent application
- **Air conveyor for outdoor exhaust**
patent application

Insurance

To protect the interests of its consumers, Aertecnica has drawn up a Products Liability insurance policy with a maximum coverage of 1,500,000.00 Euro per accident.

Certification

Aertecnica S.p.A is certified to:

UNI EN ISO 9001

Quality System

UNI EN ISO 14001

Environmental Management System



For pipes and fittings
Ø 50 - Ø 63



Ø 40 - Ø 80 - Ø 100



All the products are conform to CE regulations



member



member



Service Quality

Over the years the company has acquired a considerable experience in a wide variety of sectors in the tertiary field: industries, hotels, restaurants, hospitals, rest homes, schools, offices and gymnasiums...

This know-how, unique in the sector, is a sure guarantee for the planner in direct contact with the Technical Office where the people responsible for studying, verifying and testing the systems deal with dozens of interventions every day. The Aertecnica installers are kept up-to-date constantly so hundreds of operators, in every area, are always ready and trained to install the systems in a professional way and the user can easily appreciate the validity of the advice given by the planner and the advantages of the system.

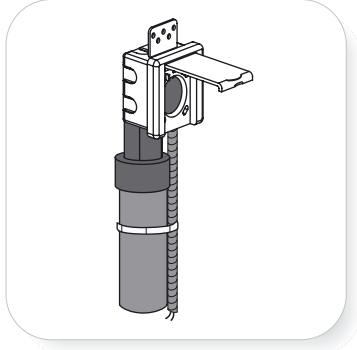
If an installer needs assistance due to the particular characteristics of a system, assistance is also available on site.

The Aertecnica service centres are always ready to help with expert personnel in every area.

The web site: www.aertecnica.it, which is continuously brought up to date, offers targeted services to integrate the work of the people collaborating with Aertecnica or simply providing information for those who want to know more on its vacuum systems.



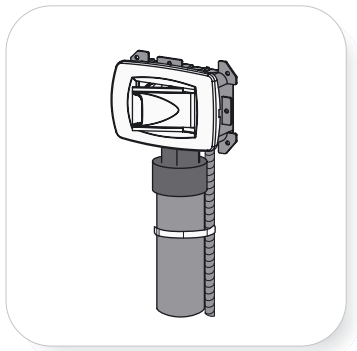
TUBO central vacuum system



EMBEDDED PIPE WITH 'SQUARE' SOCKET FRAME AND 'SQUARE' VACUUM SOCKET



ACCESSORIES TROLLEY



EMBEDDED PIPE WITH 'NEW AIR' SOCKET FRAME AND 'NEW AIR' VACUUM SOCKET



EMBEDDED PIPES

CENTRAL VACUUM SYSTEM



CONTROL DISPLAY

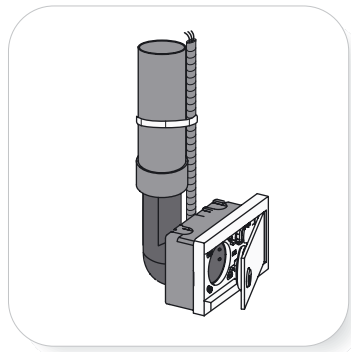




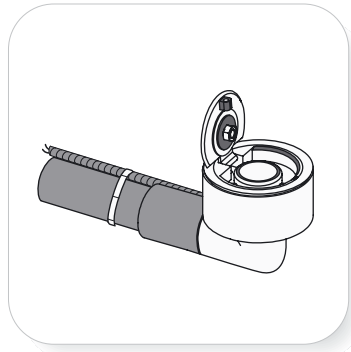
FALSE CEILING

FLOATING FLOOR

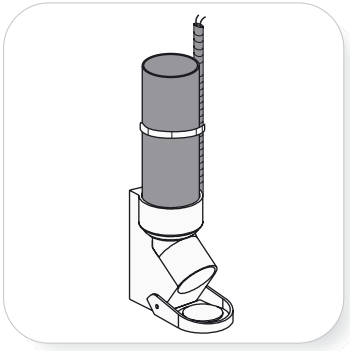
PIPES ON SURFACE



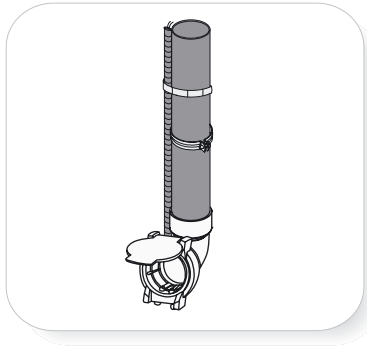
PIPE EMBEDDED IN FALSE CEILING WITH 'NEW AIR' SOCKET FRAME AND 'TECH' VACUUM SOCKET



PIPE EMBEDDED IN FLOATING FLOOR WITH 'FLOOR' VACUUM SOCKET



PIPE ON SURFACE WITH 'OPEN' VACUUM SOCKET



PIPE ON SURFACE WITH 'OPEN' SERVICE VACUUM SOCKET - Ø32



The 'tertiary' central vacuum system

1 - Analysis of the Building

USE OF THE BUILDING

- Areas for 'tertiary' use
- Areas for 'commercial' use

SURFACES TO BE VACUUMED

- Flooring: smooth flooring; textile floor

SPACE OCCUPIED BY FURNITURE

- Furniture or overall dimensions that affect the cleaning operations

TIME AVAILABLE FOR CLEANING

- Actual time for standard cleaning
- Actual time for quick cleaning

NUMBER OF OPERATORS

- Single operator
- Operators using system at same time

TOTAL ENVIRONMENTS TO SERVE

- Day zone
- Night zone
- Balconies, porticoes, external loggias
- Service areas: garages, separate environments from building

2 - Positioning of the vacuum sockets

- Near the doors
- At the bottom of the stairs
- In any zone not covered by furniture

3 - Positioning of the Power Unit

- On the bottom floor of the building
- In a technical or service room
- Depending on the length of the air outventing pipe

4 - Flexible hose

- Ø 32mm diameter
- 9m length

Remarks

- To make sure the vacuum system has the right dimensions for industrial use, and for technical solutions not included in the typologies indicated, please contact the Aertecnica Technical Department.



1.0

OPERATORS CALCULATION RULE

The application of the following rule makes it possible to calculate the number of operators necessary to do the cleaning in the areas subject to the calculation.

As for all rules based on empiric data, the result obtained must be considered as a general indication which can vary in each particular case.

TYPE OF SURFACE TO CLEAN	STANDARD CLEANING TIME (per sqm)	STANDARD SURFACE AREA CLEANED (hourly)	ACTUAL STANDARD TIME (hours)	ACTUAL REDUCED TIME (hours)
SMOOTH FLOORING	0,15 min.	400 m ²	2 - 3	0.5 - 1
TEXTILE FLOORING	0,24 min.	300 m ²		

KEYS

TYPE OF SURFACES TO CLEAN: distinguishes the *Smooth Floor* from the *Textile Floor*

AVERAGE CLEANING TIME: is a parameter of reference obtained from the data acquired on the real cleaning times. Indicates the *average cleaning time necessary for an operator to clean 1 sqm* of the corresponding surface.

AVERAGE CLEANED SURFACE: is a parameter obtained from the data acquired on the surface area cleaned. Indicates the *average surface area cleaned by an operator in one hour*.

STANDARD ACTUAL TIME: Indicates the actual time dedicated to the use of the vacuum system for an activity for which the cleaning time is standard

ACTUAL TIME SAVING: indicates the actual time dedicated to the use of the vacuum system for an activity in which the cleaning time is reduced.

The calculation formula that indicates the number of operators is obtained by this division::

$$\text{N. OF OPERATORS} = \frac{\text{SURFACE AREA} \times \text{STD CLEANING TIME}}{60} = \text{ACTUAL TIME}$$

When the area in consideration presents both floor typologies (smooth and textile) the result of each calculation should be added to the other.

In the following page the operator calculation rule is applied to two real examples of activities.



APPLICATION OF THE OPERATORS CALCULATION RULE

HOTEL

SURFACE AREA TO CLEAN	STANDARD TIME	ACTUAL STANDARD TIME
1500 m ² of smooth floor	0.15	2 hours
500 m ² of textile floor	0.24	

$$\text{n. of operators} = \frac{1500 \times 0,15}{60} : 2 = 225:60:2 = 1,875$$

$$\text{n. of operators} = \frac{500 \times 0,24}{60} : 2 = 120:60:2 = 1$$

$$\text{N. of operators} = 1,875 + 1 = 2,875 \quad \text{(3 operators)}$$

INDUSTRIAL CANTEEN

SURFACE AREA TO CLEAN	STANDARD TIME	ACTUAL REDUCED TIME
1500 m ² of smooth floor	0.15	0.5 hour
500 m ² of carpet	0.24	

$$\text{n. of operators} = \frac{1500 \times 0,15}{60} : 0,5 = 225:60:0,5 = 7,5$$

$$\text{n. of operators} = \frac{500 \times 0,24}{60} : 0,5 = 120:60:0,5 = 4$$

$$\text{N. of operators} = 7,5 + 4 = 11,5 \quad \text{(12 operators)}$$



1.1 Positioning the vacuum sockets

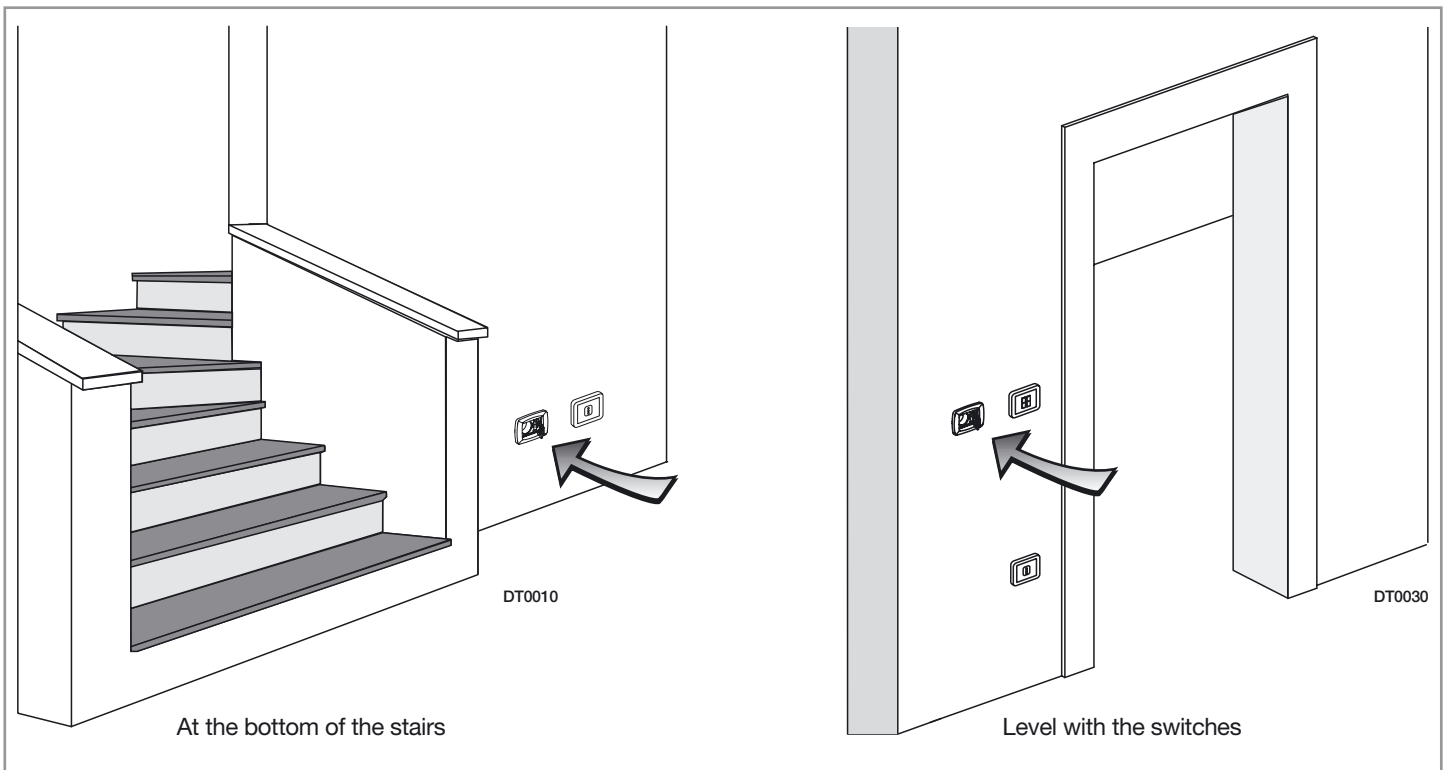
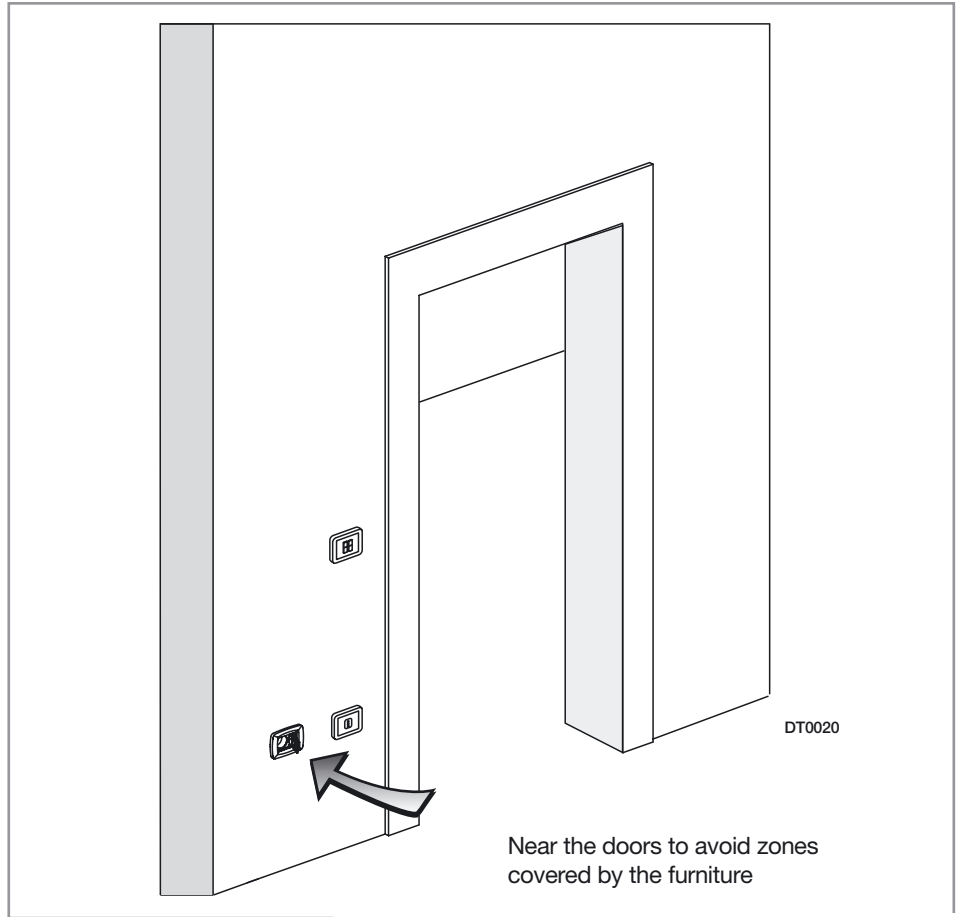
Where to position the sockets

The correct position of the vacuum sockets makes cleaning easier for the user, making it possible to reach every zone of the building with savings in the realisation of the system.

The length of the flexible hose

The main parameter for establishing the position of the vacuum inlets is the length of the flexible hose. The one recommended for the tertiary sector is 9 metres.

Thanks to the length of the flexible hose it is possible to reach different environments using the same vacuum socket.

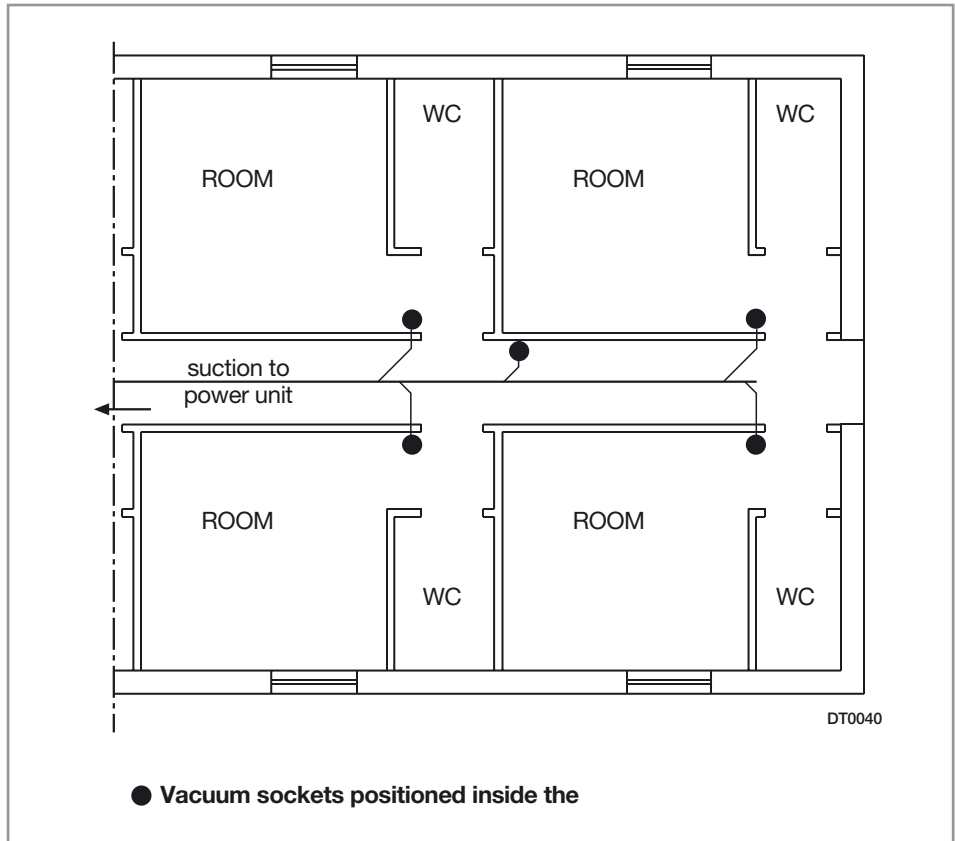


1.1

Example in the hotel sector

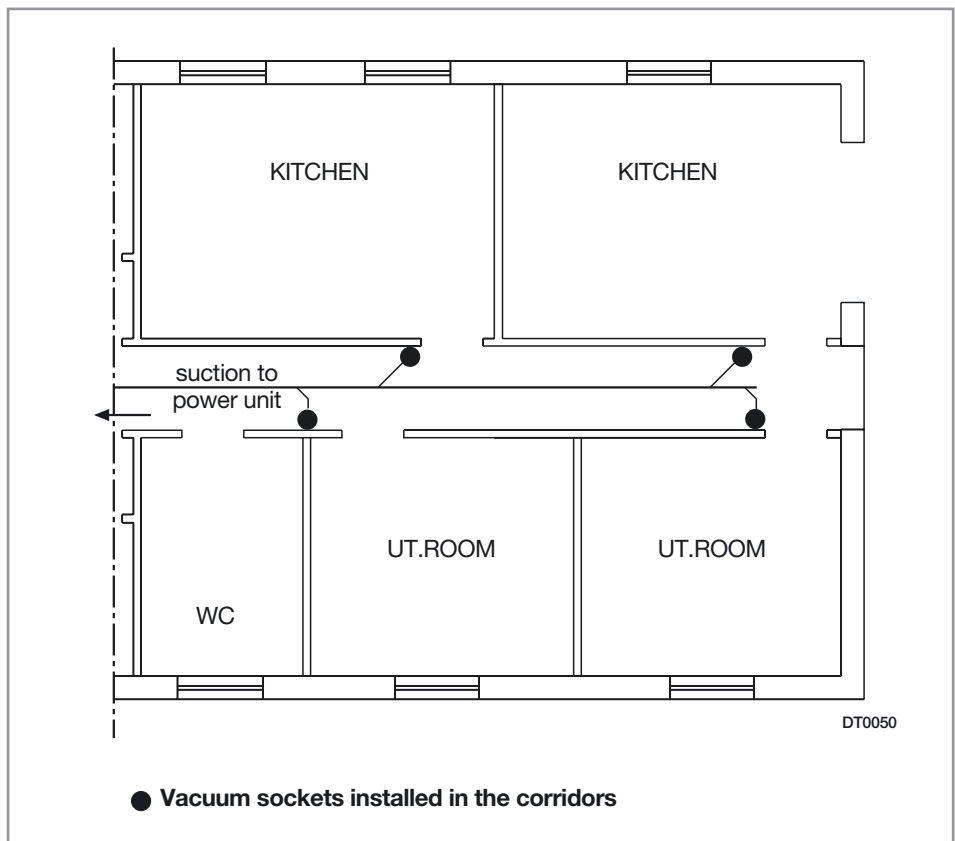
On the basis of its experience and the specific requirements of the sector, Aertecnica recommends positioning the vacuum sockets inside the rooms.

This makes cleaning the rooms possible without leaving the door open to guarantee privacy during the cleaning operations and without the flexible hose cluttering up the corridor.



Kitchens and utility rooms

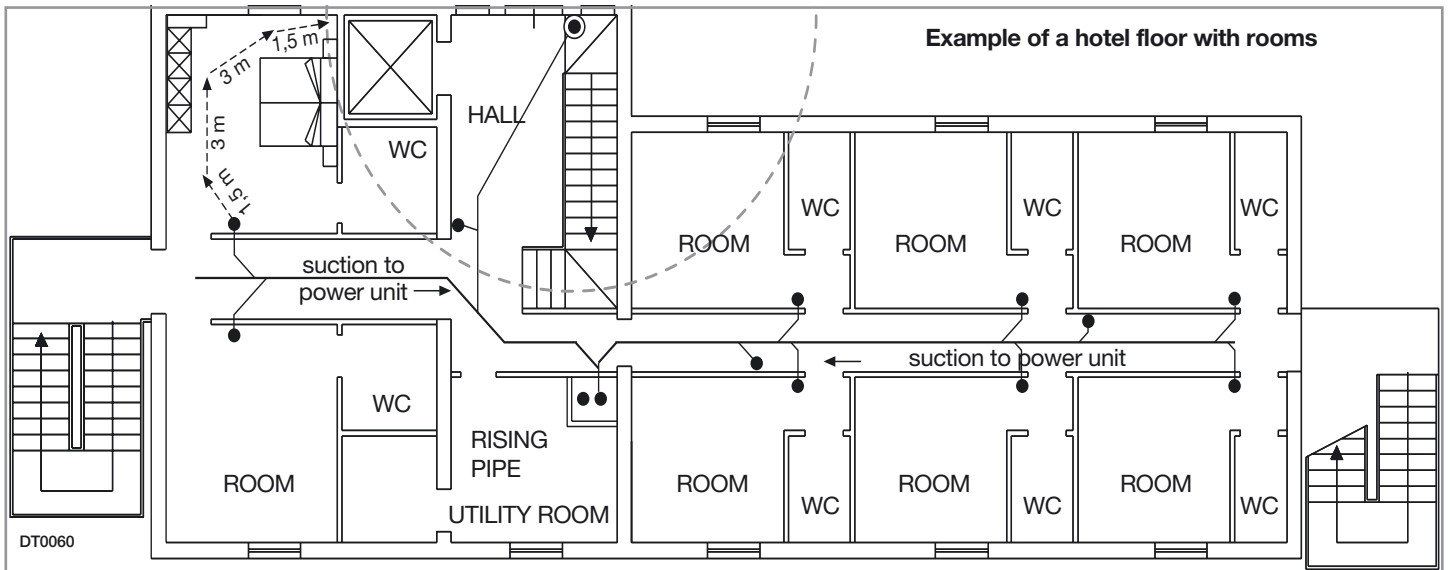
Fire regulations advise against installing sockets in kitchens.



1.2 Calculating the number of sockets

Instruments required

- 1 - 1:100 plan
- 2 - pencil and ruler
- 3 - compass



Analytical method

A - Using the length of the flexible hose as a reference (9 metres) take the overall dimensions including the furniture into consideration.

B - Use a compass and all of the 1:100 scale plans of the working plan of the building (if possible with the furnishings).

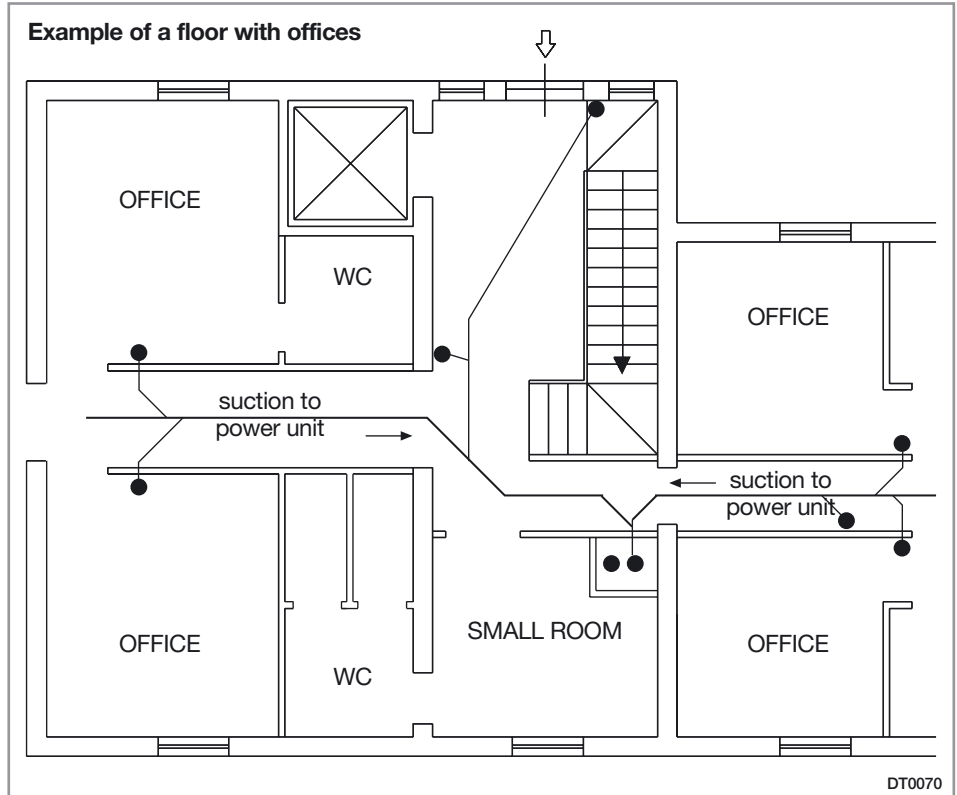
As the hose is 9m long, open the compass to 8/8.5 m (1:100 scale = 8/8.5 cm).

C - Position the first socket at the bottom of the stairs.

D - Draw a circle on the plan, positioning the centre on the point where the socket will be installed to establish the range of action of the same socket.

E - Position the next sockets considering the range of action of the first, leaving an overlap of the ranges of action for safety.

F - Use the ruler to check if the positioning is sufficient to cover all of the rooms.



Fast method

There is a formula for roughly calculating the number of vacuum sockets, even without the working plan which consists of calculating the surfaces that can be walked on in the building (including the service rooms) and dividing this figure by 40 sqm.

$$\text{n. of vacuum sockets} = \frac{\text{surface that can be walked on}}{40 \text{ sqm}}$$

Remark

In the example you will find a typical floor of a hotel with the position of the sockets in each room.



1.3 Dimensioning the network of pipes

All the dimensions are understood to be with Flexible Pipe \varnothing 32 mm

Factor 1 - number of operators using the system at the same time

If the TUBÒ vacuum system is used by several operators at the same time, the network of pipes must be designed with a pipe diameter of a suitable size for the delivery of the required air flow.

The recommended combinations are indicated in the table.

Factor 2 - division of the system

The system must be divided vertically on the basis of the floors of the building, installing the rising pipes, and also horizontally on the basis of the zones of the building to be served, installing the trunk lines.

Factor 3 - the rising pipes

The rising pipes develop the system vertically, starting from the room where the central power unit is installed and rising to the floors above.

The rising pipes must be positioned at the centre of the floors and in a barycentric position with respect to the distribution of the zone to be served

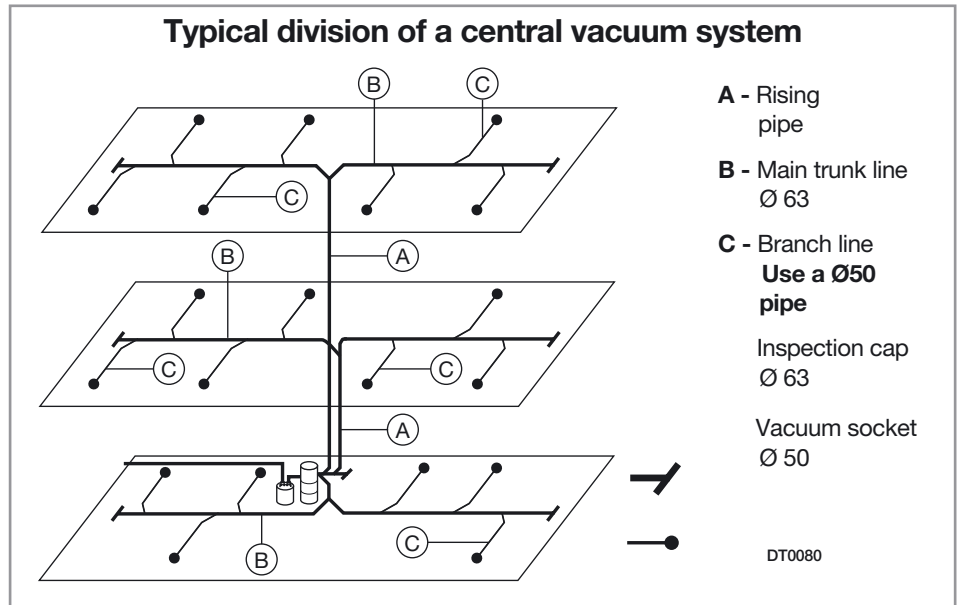
The diameter of the rising pipes can be 63-80-100 mm. We recommend fitting a ball valve of a suitable size to each rising pipe of the system.

Factor 4 - the trunk lines

The trunk lines are installed on each floor and zone by zone.

They develop horizontally starting from the rising pipe, in corridors and rooms.

The choice of the most suitable diameter is essential; if the pipe is too big in fact the correct internal speed of the air can't be guaranteed in the horizontal parts of the plant when the system is used at minimum power.



Dimensioning table of the network of pipes

N. of operators with flex. pipe \varnothing 32	Max quantity and distance of trunk lines		Max quantity and distance of rising pipes		
	\varnothing 50	\varnothing 63	\varnothing 63	\varnothing 80	\varnothing 100
1	30 m		20 m		
		70 m	30 m		
2	2x30 m		20 m		
		40 m	20 m		
3		2x70 m (1 Op. per line)	2x30 m (1 Op. per line)		
		2x40 m	2x20 m		
4		2x40 m		30 m	
		3x100 m (1 Op. per line)		30 m	
5		2x40 m	2x20 m		
		2x40 m		30 m	
6		4x70 m (1 Op. per line)	4x30 m (1 Op. per line)		
		4x100 m (1 Op. per line)		30 m	
7		3x40 m	3x20 m		
		3x40 m		2x30 m	
8		3x40 m			30 m
		5x70 m (1 Op. per line)	5x30 m (1 Op. per line)		
9		5x100 m (1 Op. per line)		2x30 m	
		5x100 m (1 Op. per line)			30 m
10		3x40 m	3x20 m		
		3x40 m		2x30 m	
11		3x40 m			30 m
		6x70 m (1 Op. per line)	6x30 m (1 Op. per line)		
12		6x70 m (1 Op. per line)		2x30 m	
		6x70 m (1 Op. per line)			30 m



1.3

Trunk lines are divided as follows:

main trunk line that connects the zone to its rising pipe - we recommend using a diameter of 63 mm for the entire length. If there is one single trunk line with a diameter of over 63 mm, we recommend positioning the compensation valve at the head of the line.

branch lines connecting the main trunk with the single vacuum sockets - the branch lines to the sockets have always a diameter of 50 mm with a maximum length of 10 m.

Remarke

Inspection screw-caps should be installed in the pipes every 15 metres (recommended in false ceilings).

Factor 5 - The position of the central power unit

Position the power unit as near as possible to the rising pipes, therefore in a central position with respect to the network of pipes.

If the power unit is more than 5 metres from the rising pipes, to prevent the flow slowing and the formation of dust residues we recommend:

- using one or more pipes with a diameter of 63 mm
- installing a compensation valve at the head, in the case of pipes with a diameter of 80 or 100 mm
- installing a screw cap so the duct can be serviced and cleaned occasionally.

Remarke

The working vacuum value of the vacuum modules and the Kompatta KT Unit is set by the manufacturer; modifying this value can change the suction power of the system, reducing the total declared number of operators who can clean at the same time.

N. of operators with flex. pipe Ø 32	Max quantity and distance of trunk lines		Max quantity and distance of rising pipes		
	Ø 50	Ø 63	Ø 63	Ø 80	Ø 100
7		4x40 m	4x20 m		
		4x40 m		2x30 m	
		4x40 m			2x30 m
		7x70 m (1 Op. per line)	7x30 m (1 Op. per line)		
		7x70 m (1 Op. per line)		2x30 m	
		7x70 m (1 Op. per line)			2x30 m
8		4x40 m	4x20 m		
		4x40 m		2x30 m	
		4x40 m			2x30 m
		8x70 m (1 Op. per line)	8x30 m (1 Op. per line)		
		8x70 m (1 Op. per line)		2x30 m	
		8x70 m (1 Op. per line)			2x30 m
9		5x40 m	5x20 m		
		5x40 m		3x30 m	
		5x40 m			2x30 m
		9x70 m (1 Op. per line)	9x30 m (1 Op. per line)		
		9x70 m (1 Op. per line)		3x30 m	
		9x70 m (1 Op. per line)			2x30 m
10		5x40 m	5x20 m		
		5x40 m		3x30 m	
		5x40 m			2x30 m
		10x70 m (1 Op. per line)	10x30 m (1 Op. per line)		
		10x70 m (1 Op. per line)		3x30 m	
		10x70 m (1 Op. per line)			2x30 m
11		6x40 m	6x20 m		
		6x40 m		3x30 m	
		6x40 m			2x30 m
		11x70 m (1 Op. per line)	11x30 m (1 Op. per line)		
		11x70 m (1 Op. per line)		3x30 m	
		11x70 m (1 Op. per line)			2x30 m
12		6x40 m	6x20 m		
		6x40 m		3x30 m	
		6x40 m			2x30 m
		12x70 m (1 Op. per line)	12x30 m (1 Op. per line)		
		12x70 m (1 Op. per line)		3x30 m	
		12x70 m (1 Op. per line)			2x30 m



1.4 Composition of a vacuum system

The table shows the standard and ideal compositions of a central vacuum system used simultaneously by up to 14 operators. In the case of solutions with different dimensions, please contact Aertecnica.

FLEXIBLE HOSE Ø 32 mm		VACUUM MODULES										KOMPATTA KT		DUST SEPARATORS		System Pipes	Silencer	Exhaust Pipes	Check Valve
N. of operators	m ²	Automatic adjustment		Manual adjustment				KT10 KT10A	KT20M KT20MA	KT20 KT20A	KT30 KT30A	LT90/B LT90/B-AP		LT150/B LT150/B-AP		PVC Ø50-Ø63	PVC Ø80	PVC Ø80	2" CHECK VALVE
		TR10S	TR20S	TR30S	TR40S	M20ES	T20ES					T30ES	T40ES	T60ES	Power supply				
1	<1000															PVC Ø50-Ø63	PVC Ø80		
1	<1000															PVC Ø50-Ø63	PVC Ø80		
1-2	<2000															PVC Ø50-Ø63	PVC Ø80		
1-2	<2000															PVC Ø50-Ø63	PVC Ø80		
2	<2000															PVC Ø50-Ø63	PVC Ø80		
2	<2000															PVC Ø50-Ø63	PVC Ø80		
2	<2000															PVC Ø50-Ø63	PVC Ø80		
3	<3000															PVC Ø50-Ø63 Ø80	METAL Ø80		
3	<3000															PVC Ø50-Ø63 Ø80	METAL Ø80		
3	<3000															PVC Ø50-Ø63 Ø80	METAL Ø80		
3	<3000															PVC Ø50-Ø63 Ø80	METAL Ø80		



1.5 Preparing a central vacuum system

The TUBÒ central vacuum system can be prepared as follows:

- under the floor
- in the false ceiling
- under a floating floor
- in partition walls
- on surface

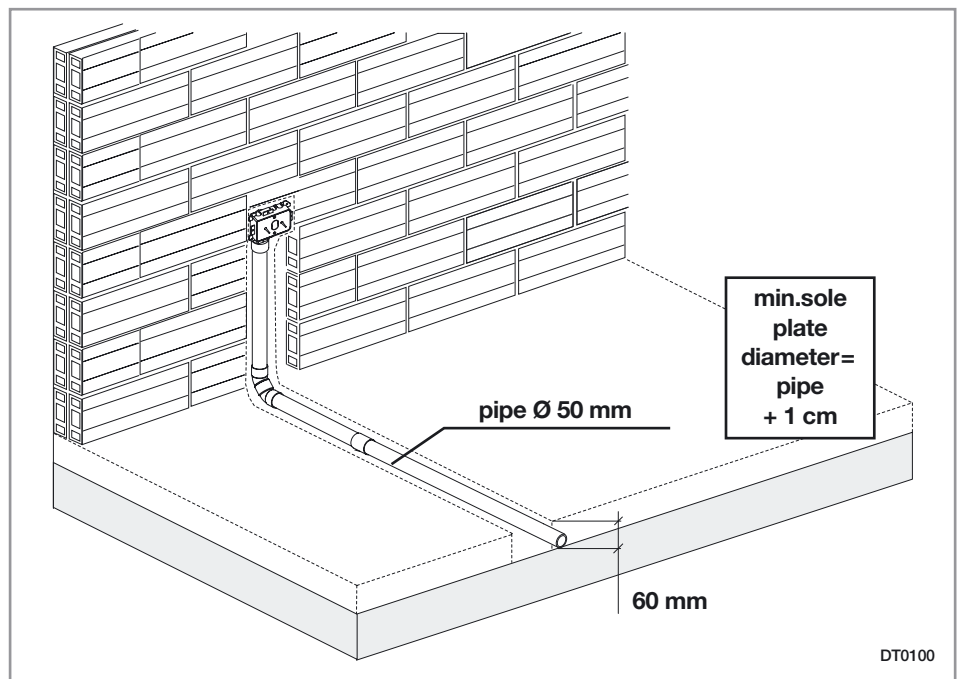
1.6 Installation under the floor

The minimum sole plate

For the installation of pipes, fittings and electrical lines under the floor, calculate the minimum thickness of the sole plate as follows:

Pipe diameter + 10 mm =
Minimum sole plate thickness

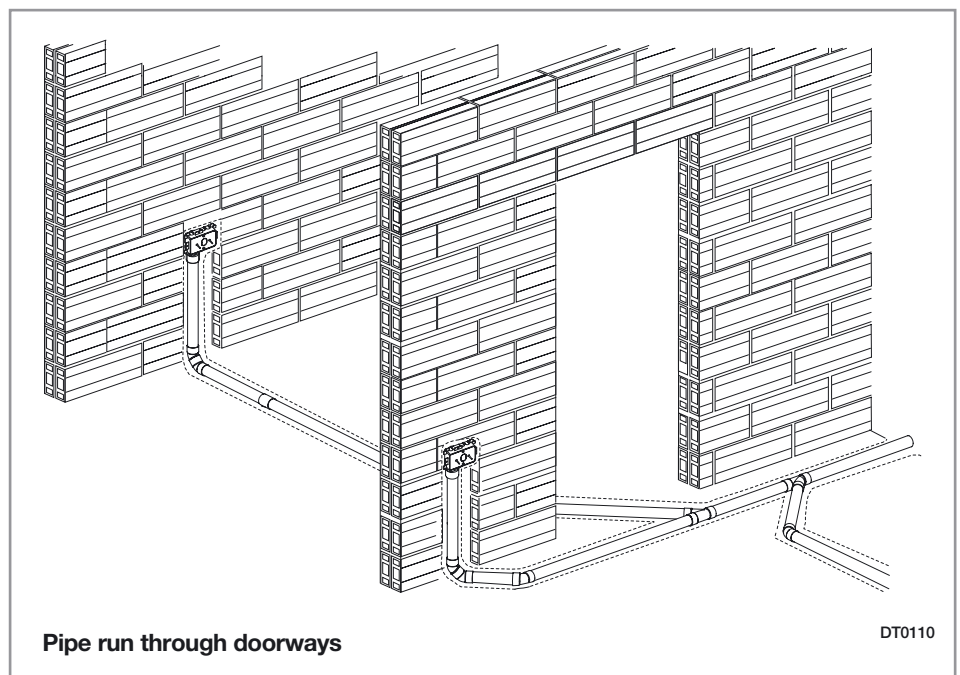
Ex. Pipe \varnothing 50 mm + 10 mm =
Minimum thickness required: 60 mm



The passage through doorways

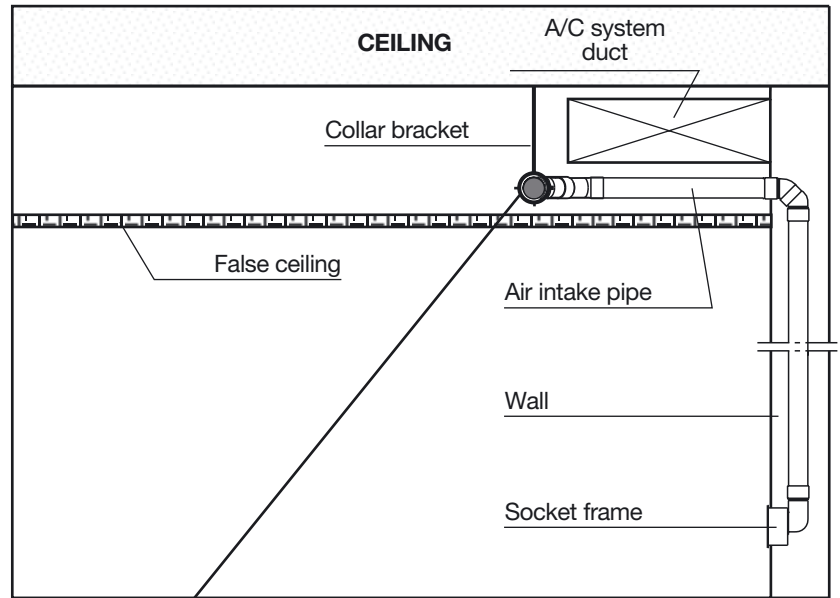
To avoid drilling a wall separating two rooms of the building, we recommend installing the pipes on the floor through the doorways.

Placing the vacuum socket close to the entrance door will also let you cleaning two rooms with a single socket

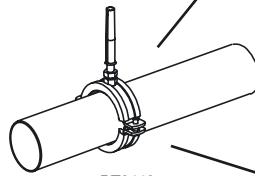


1.7 Installation in false ceiling

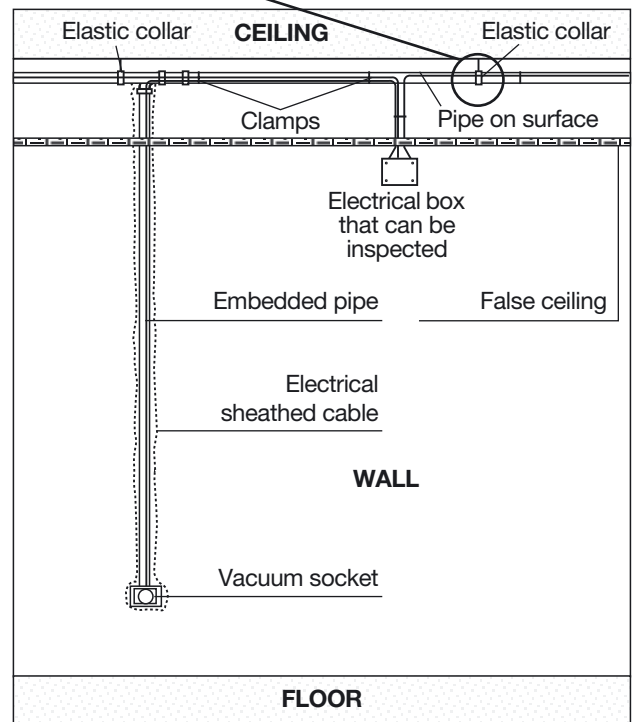
- In presence of ventilation/air conditioning systems, we recommend using special supports to avoid hindrances along the run.
- For the installation in false ceilings, we recommend using collars with a rubber inlay (especially along the trunk lines) to reduce noise caused by vibration transmission and to allow for any adjustment resulting from thermal expansion.
- We also recommend installing electrical boxes in the false ceiling so they can be opened and inspected without having to dismantle the ceiling panels.



DT0420



DT0440



DT0430



1.8 Installation under floating floor

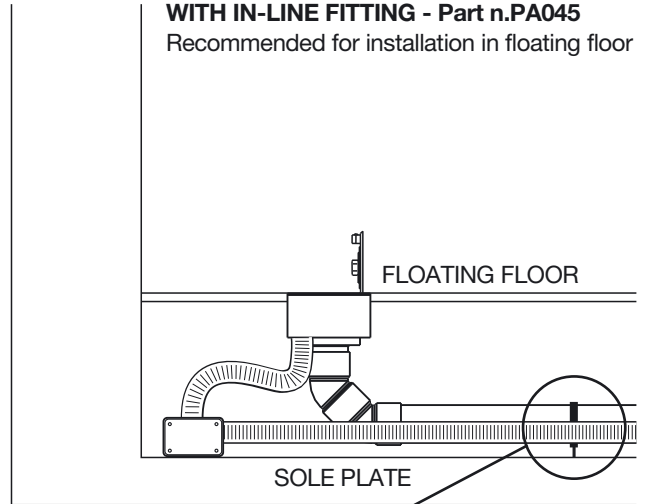
For this installation, we recommend using:

- a floor socket (mod. FLOOR) provided the floor must not be washed frequently as this would result in water infiltration in the pipes.

The socket frame mod. FLOOR is installed in large rooms without partition walls.

There are two different types of socket frame: with in-line fitting or with elbow fitting.

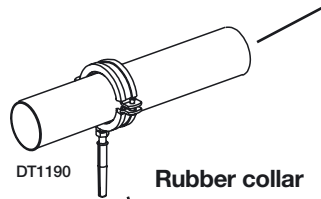
MOD. FLOOR WITH IN-LINE FITTING - Part n.PA045
Recommended for installation in floating floor



DT1180

Note

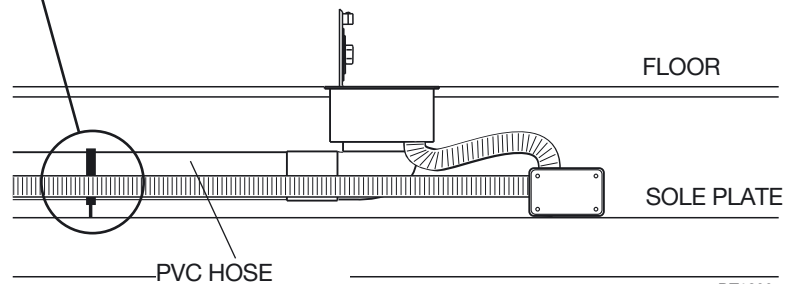
- 1 - During installation be very careful to place the socket frame flush with the floor.
- 2 - The use of these socket frames in floors frequently washed or in presence of liquids or oils is not recommended.



DT1190

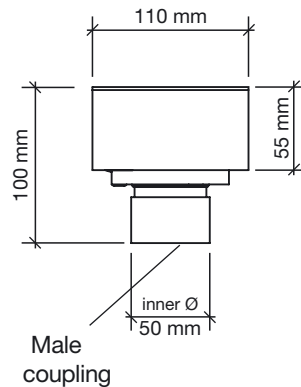
Rubber collar

MOD. FLOOR WITH ELBOW FITTING - Part n. PA040
Recommended for installation in sole plate



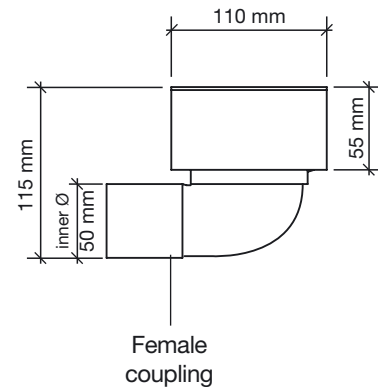
DT1200

FLOOR SOCKET FRAME WITH IN-LINE FITTING



Male coupling

FLOOR SOCKET FRAME WITH ELBOW FITTING



Female coupling

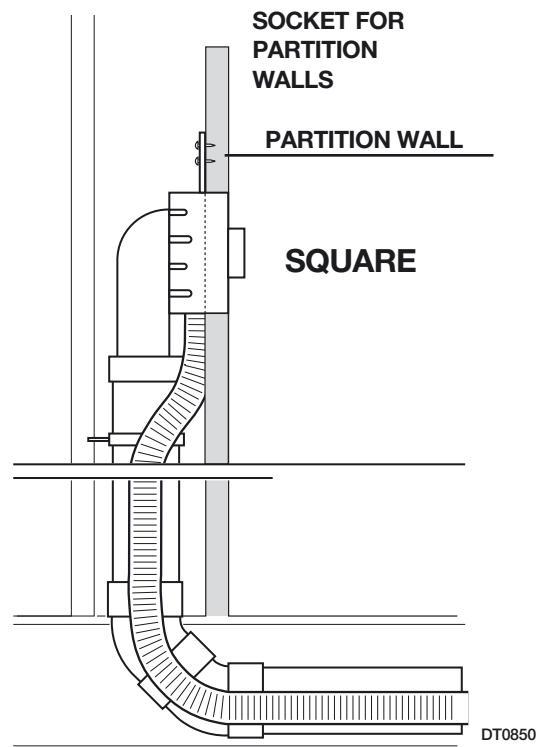
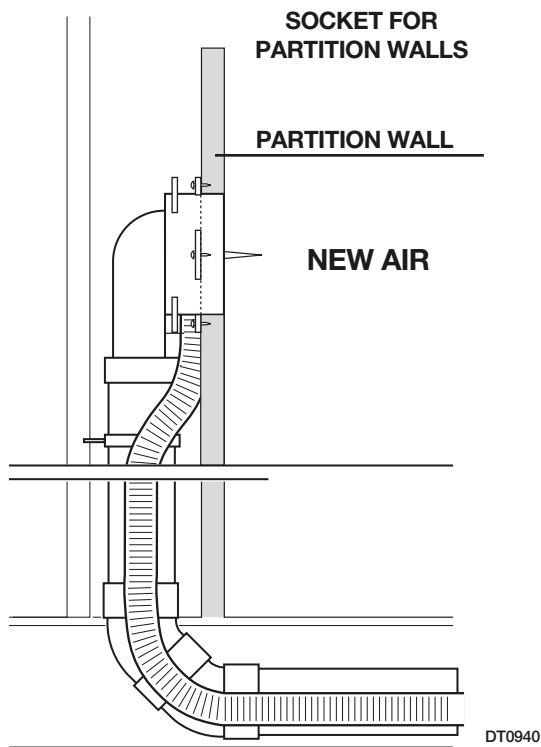
DT2040



1.9 Installation in partition walls

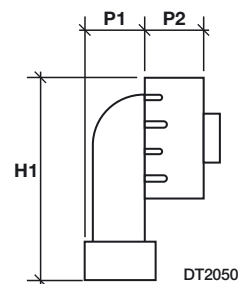
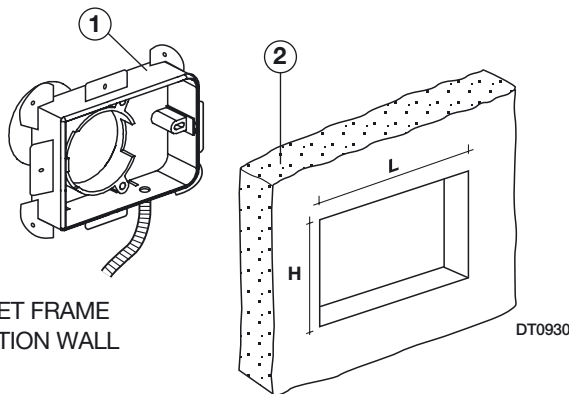
For this type of installation we recommend using:

- a wall vacuum socket (mod. NEW AIR - NEW AIR SIRIO-SQUARE)



HOLE DIMENSIONS

SOCKET FRAME DIMENSIONS



- 1 - SOCKET FRAME
- 2 - PARTITION WALL

	MOD. NEW AIR	MOD. SQUARE
L	105 mm	75 mm
H	75 mm	75 mm
P1	54 mm	54 mm
P2	33 mm	33 mm
H1	137 mm	137 mm

Note: The socket frame mod. New Air can be adapted to the wall thickness (1-2 cm)

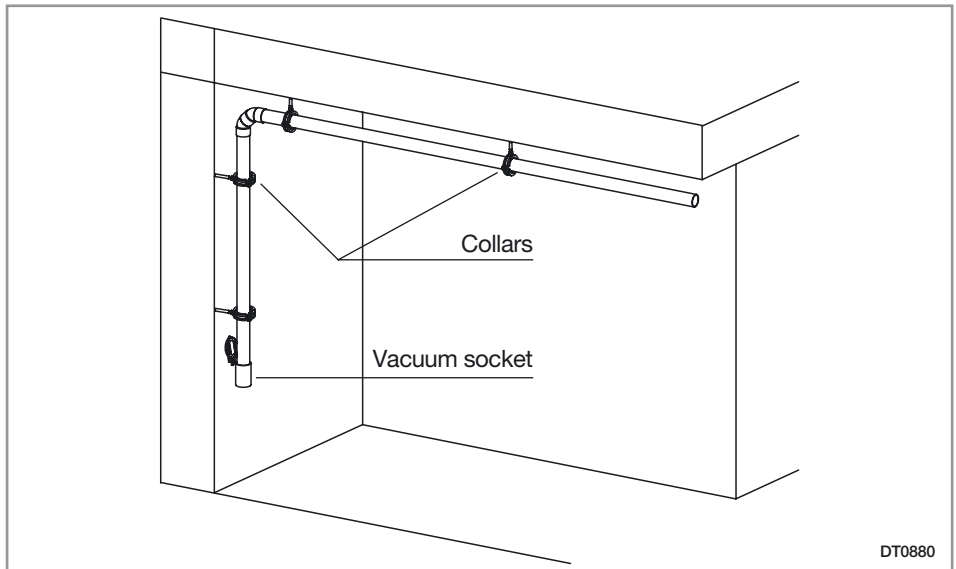


1.10 Surface installation

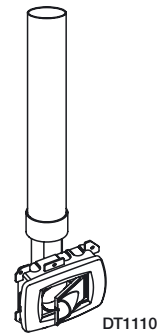
The network of pipes of the TUBÒ central vacuum system can be installed on surface in the two following cases:

- when the walls are made of reinforced concrete and pipes cannot be embedded in them
- when the building is already existing and preparing a new network of pipes would involve a radical change of the coatings.

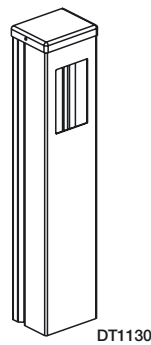
In the cases above, we propose using the following vacuum sockets:



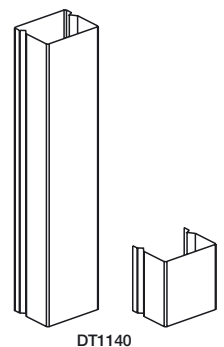
NEW AIR SERIES



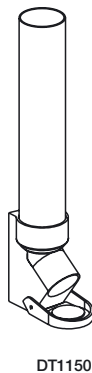
For the **NEW AIR** vacuum sockets, we can supply white covering turrets to be used in conjunction with special cable ducts



For the pipes for outdoor use with a diameter of 50 mm, we can supply a white covering duct of aluminium complete with joint

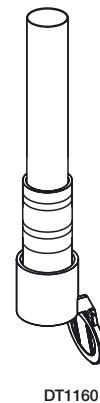


OPEN SERIES
for 50mm
PVC pipes



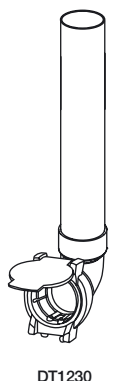
OPEN MOPLEN SERIES
for 63mm
PVC pipes

Note:
Considering the diameter of this socket, we recommend contacting Aertecnica



OPEN SERIES
for 32mm
PVC pipes

Service socket

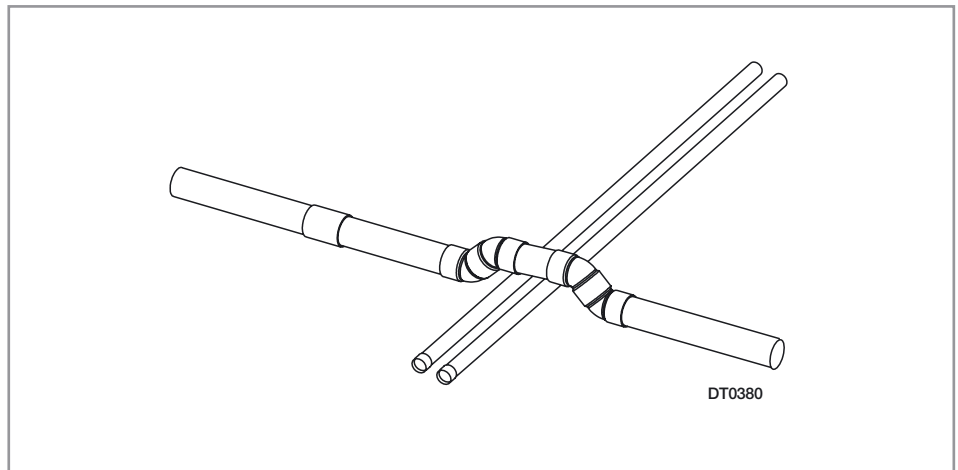


Planning and Dimensioning

1.11 Presence of other systems and hindrances

The pipes of the central vacuum system are usually installed together with the other systems to choose the most suitable runs and avoid useless changes of direction which could result in pressure drops and blockages.

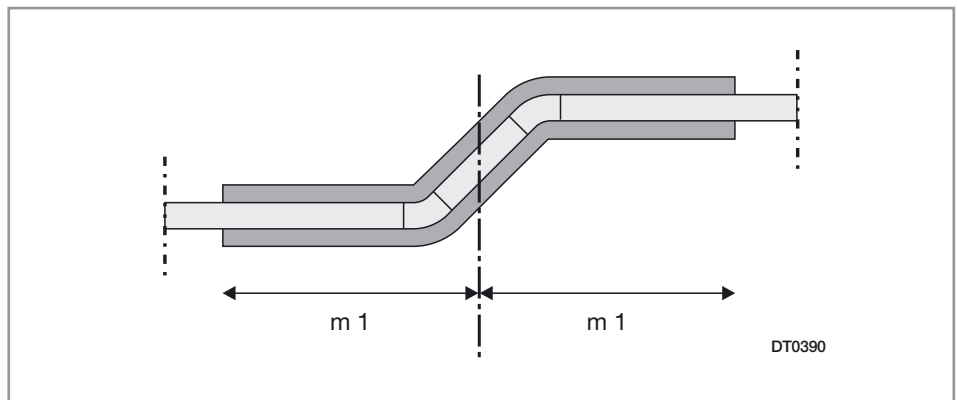
Usually the pipes of the central vacuum system are installed after plumbing and before wiring work.



1.12 Expansion joints

In constructions where expansion joints are present or when separate buildings need to be connected, we recommend using elastic S-shaped supports for the air intake pipes.

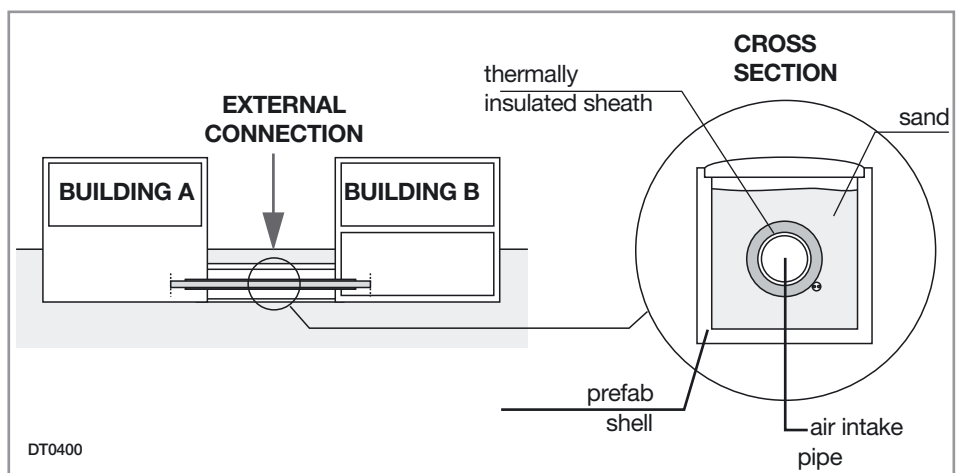
In these special points, pipes must be protected with a thick elastic and thermally-insulated sheath (20/30 mm) to allow for crosswise and longitudinal adjustments.



1.13 Connecting separate buildings

To connect separate buildings, the air intake pipe must be insulated to avoid any condensation from building up.

In the external connecting run, an embedded channel should be envisaged (ex. a prefab shell filled with sand) and the air intake pipe should be insulated with a sheath with a thickness of 20-30 mm of the type normally used for plumbing works .



SEE DRAWING TO THE SIDE



1.14 Fire regulations

If the pipe passes, or the vacuum sockets are installed in places that are subject to fire regulations, safety systems in accordance with the law must be used and the relevant regulations observed.

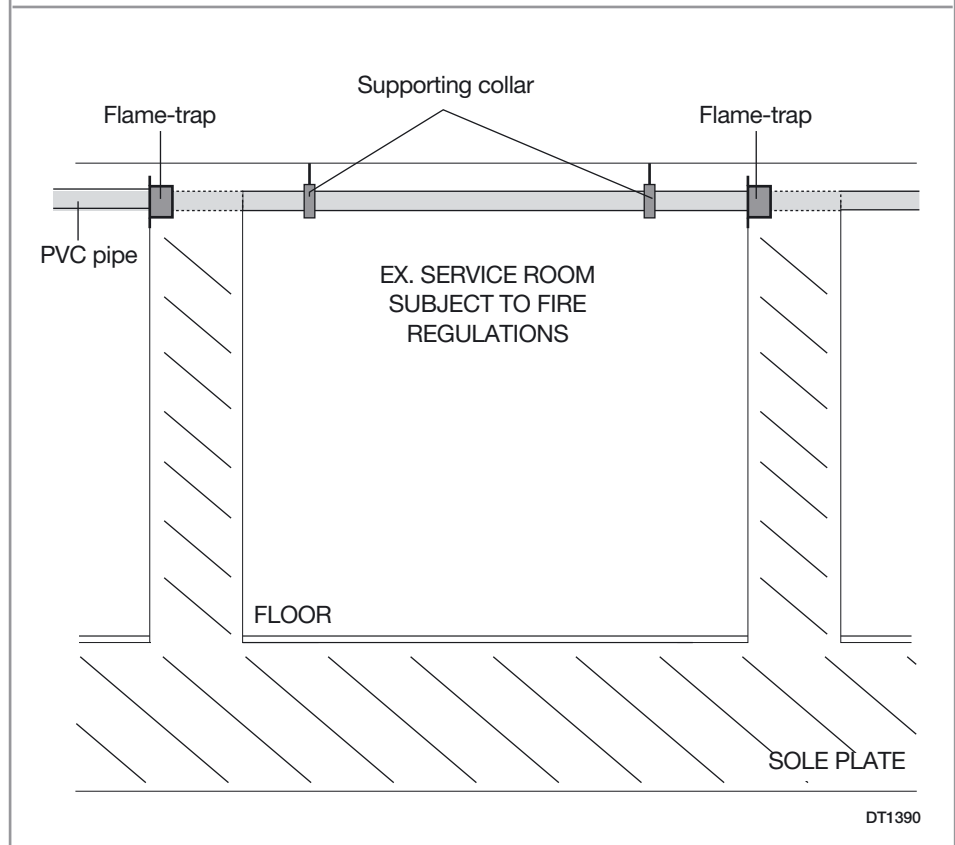
Aertecnica can supply special flame-traps with collar (part n. - VT110 - VT120 - VT130 - VT140 with diameters of 50, 63, 80, 100 mm).

The flame-traps are made of REI 180 certified material; therefore this product is resistant to fire for 3 hours, in accordance with the strictest regulations on the subject.

Operation

The valve is installed and fixed inside the perimeter walls of the rooms subject to the fire regulations.

The PVC pipe goes through the valve and if a fire starts, the valve reacts to heat by closing the pipe and stopping the propagation of the flames out of the room.



1.15 PVC parts for pipe network

The pipes

For the tertiary sector, Aertecnica proposes quality and lasting PVC-pipes specially designed for central vacuum systems.

Available diameters:

ø 50	ø 63	ø 80	ø 100
------	------	------	-------

The fittings

PVC-components supplied in 4 different diameters: ø 50, ø 63, ø 80, ø 100 mm with couplings, elbows and 45° and 90° Y.

Remarque

Aertecnica guarantees the efficiency of the central vacuum system only in case of use of Aertecnica genuine parts

The certification



Pipes and fittings ø 50 and ø 63 mm are **PIIP/C** certified



Pipes and fittings ø 40, ø 80 and ø 100 mm are **IIP** certified



1.16 Metal exhaust pipe

Remarque

Air exhaust pipes for three-phase central vacuum systems MUST BE OF METAL due to the high temperatures reached.

Available diameters:

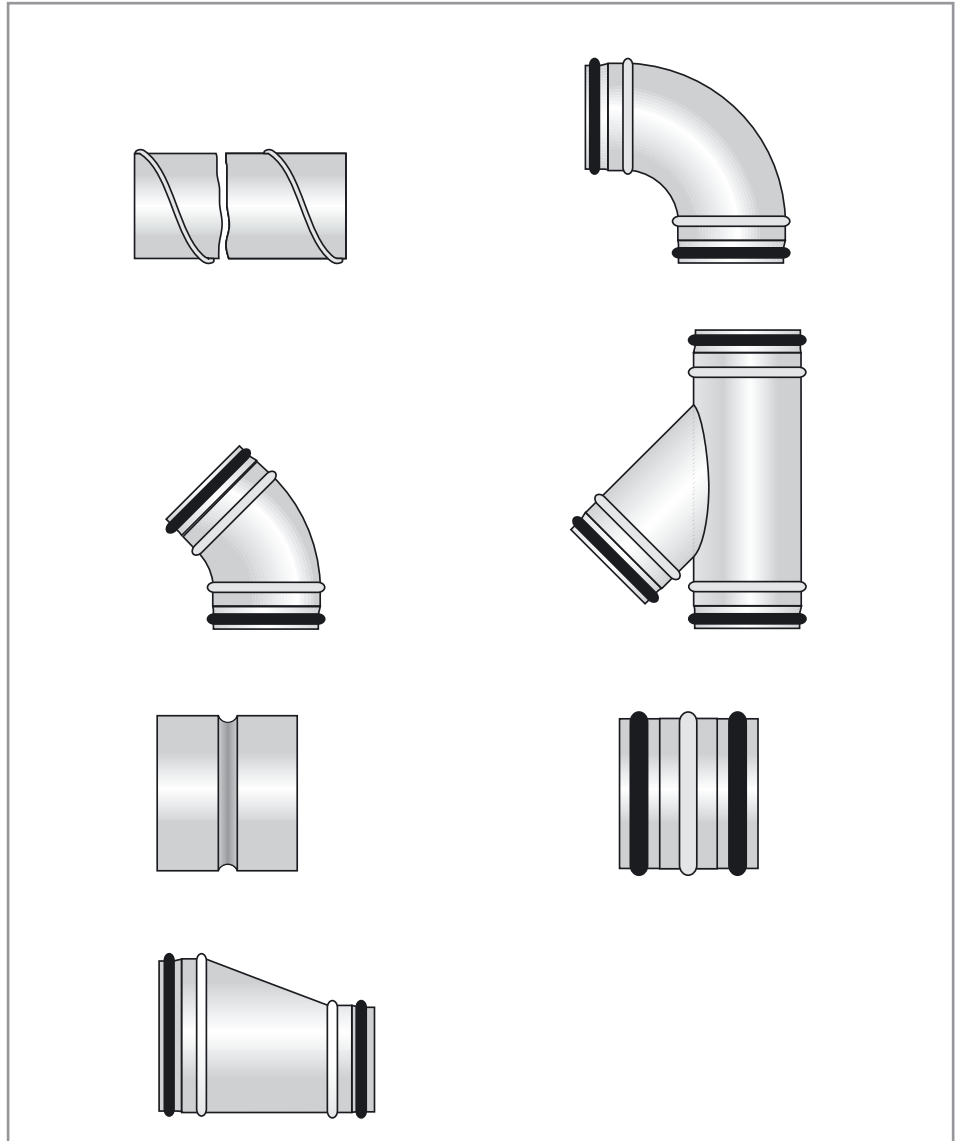
ø 80	ø 100	ø 160
------	-------	-------

PVC-pipes (Ø80) can be used only in the following cases:

with TR10S vacuum modules, or M20ES vacuum modules only in central vacuum systems with one vacuum module.

with the following Kompatta KT units:

- KT10 - KT10A
- KT20 - KT20A .



1.17 Air exhaust silencers

The silencer is an essential part of any central vacuum system.

It must be fitted to the exhaust pipe, close to the air grille and be chosen in relation to the diameter (Ø) of the exhaust pipe.

For exhaust lines longer than 6 metres, we recommend choosing a silencer with larger diameter than the system outlet diameter.

For the choice of the silencer, see the table in par. 1.4.



2.0 Choosing the vacuum sockets

Vacuum Sockets

NA606 - NA 608

SIRIO NEW AIR vacuum socket
white - ivory

NA603 - NA 604

SIRIO NEW AIR vacuum socket
with lock.

The flap of the vacuum socket can
only be opened with the key
supplied (PA551)

NA605 - NA 607

SIRIO NEW AIR CONFORT
vacuum socket

PA600

SQUARE vacuum socket
white

PA110 - PA 115

TECH Active vacuum socket-Ø 32
white - ivory

PA111 - PA116

TECH Active vacuum socket-Ø 40
white - ivory

PA160 - PA165

TECH Active vacuum socket-Ø 32
white - ivory with lock

PA161 - PA166

TECH Active vacuum socket-Ø 40
white - ivory with lock

PA510

FLOOR vacuum socket - Ø 32
of aluminium in satin finish
with micro-switch

PA516

FLOOR vacuum socket - Ø 32
of aluminium in satin finish
without micro-switch

PA551

Stainless steel key for New Air
vacuum sockets with lock and
Floor vacuum sockets

PA450

Active OPEN vacuum
socket - Ø 32, IP44, for
outdoor installation

PA460

MOPLEN vacuum
socket - Ø 32, IP65,
with micro-switch

PA465

MOPLEN vacuum
socket - Ø 32, without
micro-switch

PA455

OPEN vacuum socket -
Ø 32
for service



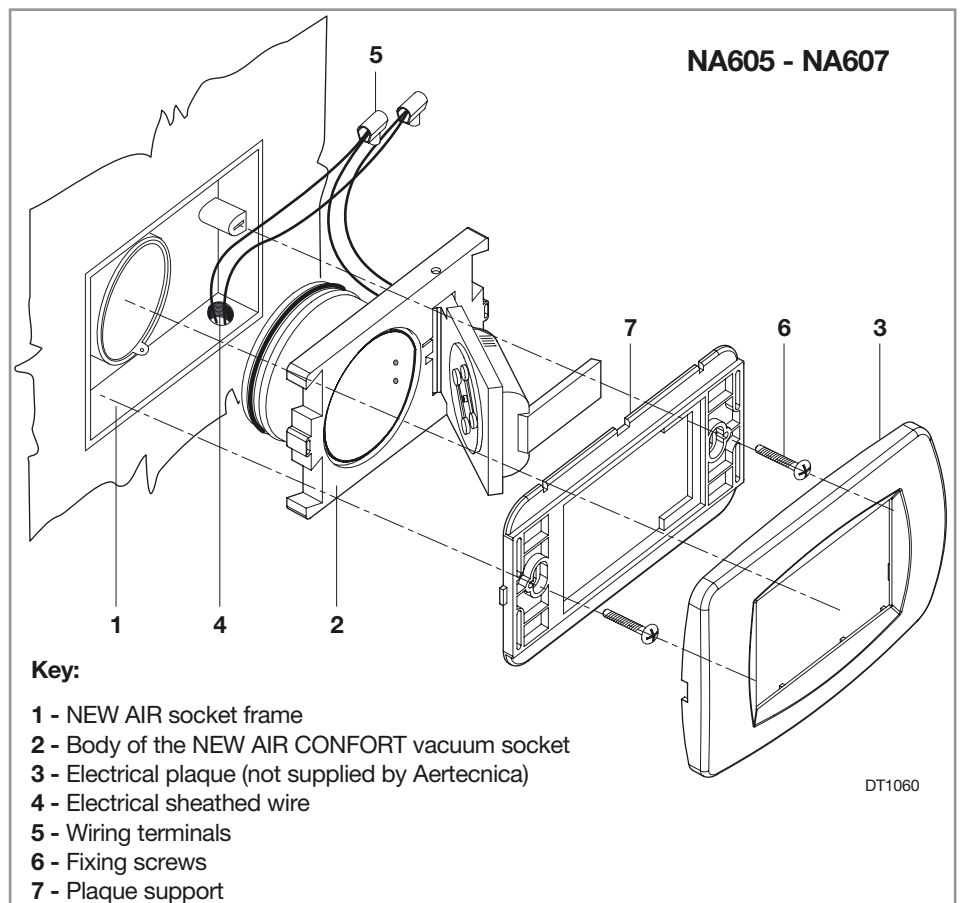
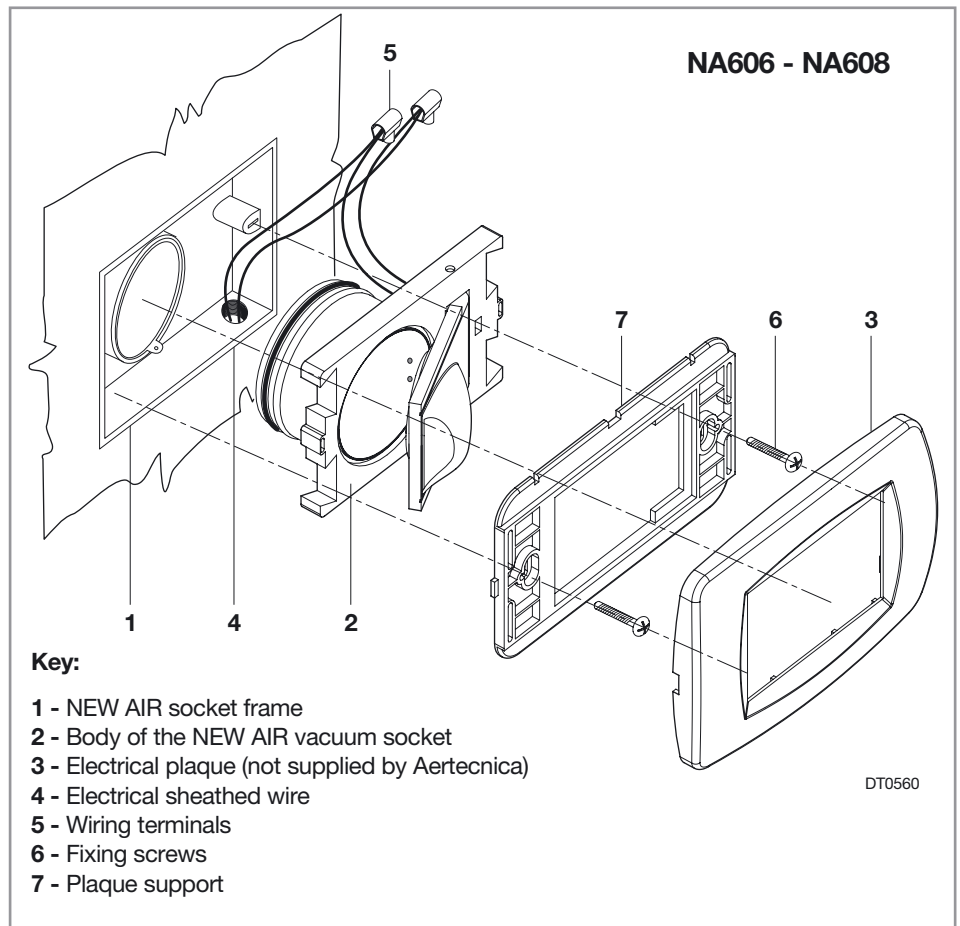
2.1 New Air series vacuum sockets

Installation instructions:

- When preparing the system make sure the socket frame is perfectly horizontal and flush with the wall.
- For easy and safe installation of the vacuum socket, apply the special grease (part n. AT250) on the OR seal.
- The socket has longitudinal holes, so the fixing screws can be adjusted if the socket frame isn't exactly straight.
- Overtightening the 2 screws could deform the socket causing pressure drops.
- Insert the cover plaque you prefer (ex: Bticino, Vimar, Gewiss, Legrand, Ave, ABB)

Remake

The consigner is responsible for purchasing and installing the electrical cover plaques with the exception of the Aertecnica New Air Sirio model.



2.2 Extension for New Air vacuum sockets

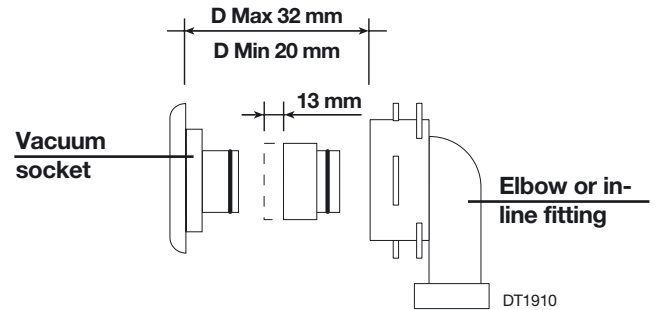
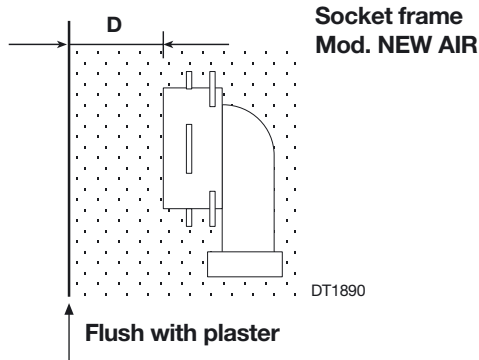
Vacuum Sockets

During the installation of the vacuum socket the extension (PA309) is required when the socket frame is sunken too far into the wall rather than being flush with the plaster.

In Depending on the depth of the socket frame with respect to the surface of the plaster, the extension can be coupled as described below:



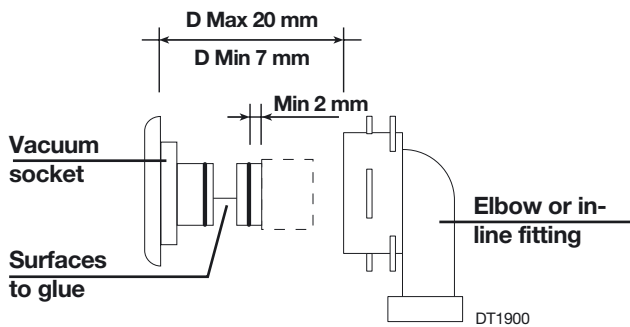
PA309



Extension Mod. NEW AIR
Note: Cut perpendicularly

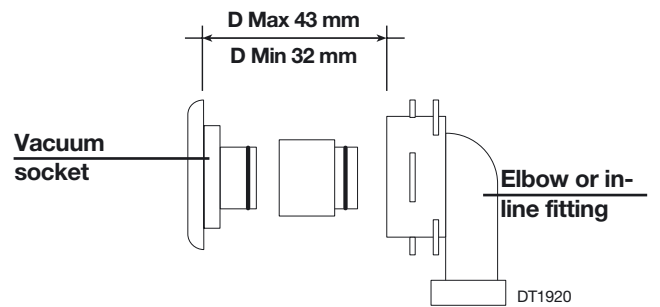
When "D" is between 20mm and 32 mm, fit the extension cutting 13mm of the same on the side opposite to the OR.

The extension has been designed to install the vacuum socket when the socket frame is sunken too far into the wall. When "D" is between 0 and 7mm, the difference can be adjusted by moving the vacuum socket.



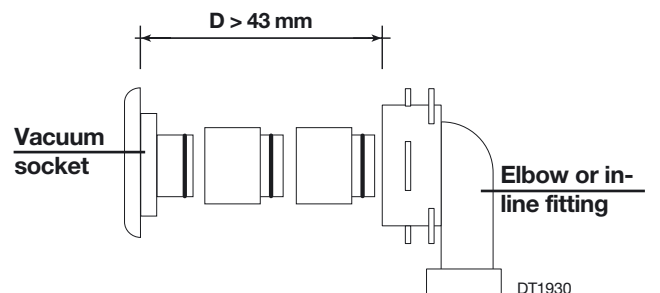
Extension Mod. NEW AIR
Note: Cut perpendicularly

When "D" is between 7mm and 20mm fit the extension in the socket from the OR side and cut at 2mm from the OR. Glue with mastic or cyanide acrylic resin.



Extension Mod. NEW AIR

When "D" is between 32mm and 43mm use the entire extension.



Extension Mod. NEW AIR

When "D" is above 43mm use 2 extensions or more.



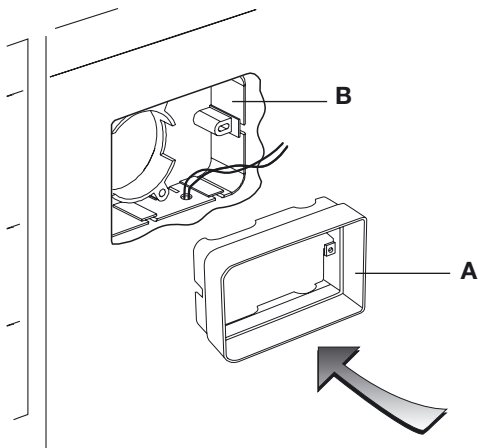
2.3 Installing the New Air cornice for plaster

During the installation of the vacuum socket the cornice (PA034) is required when the socket frame is sunken too far into the wall rather than being flush with the plaster.

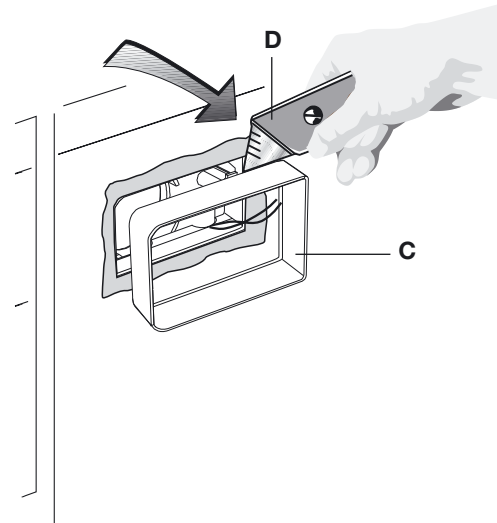
Depending on the depth of the socket frame with respect to the surface of the plaster, the cornice can be coupled as described below.



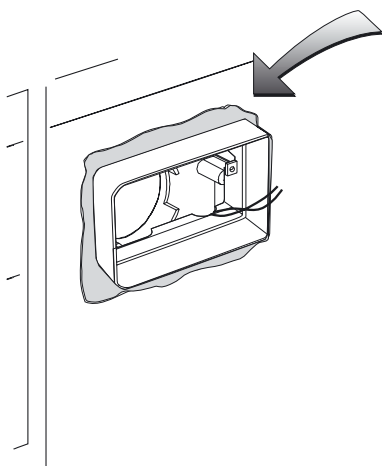
PA034



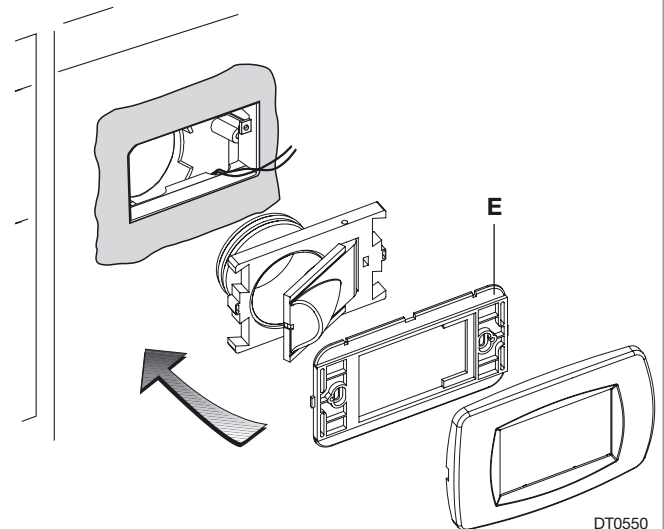
1 - Insert the cornice for plaster (A) in the New Air socket frame (B)



3 - Using the cutter (D) provided, cut the cornice protruding out of plaster (C) flush with the wall.



2 - Apply plaster all around the cornice.



4 - Install the New Air vacuum socket (E) following the installation instructions.

DT0550

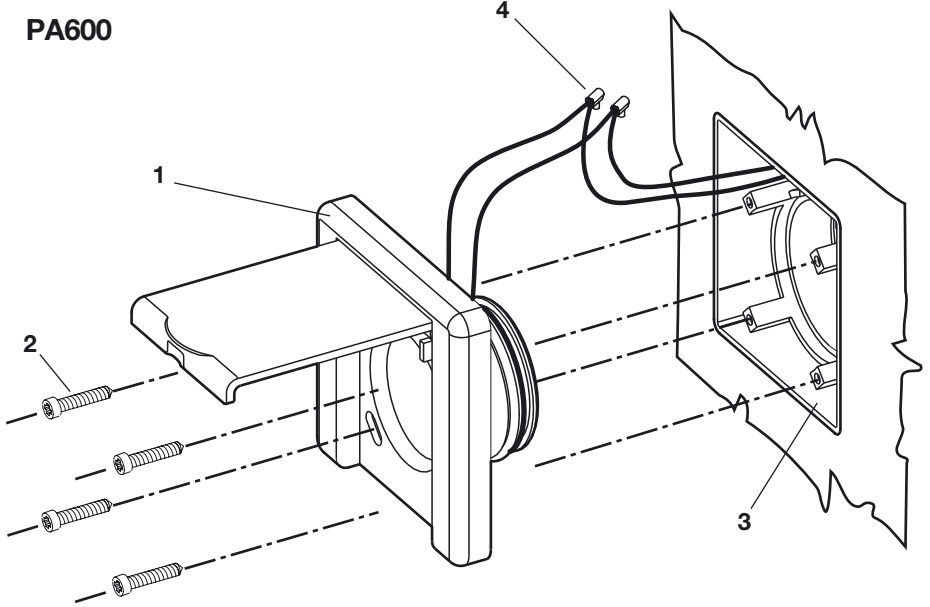


2.4 Square series vacuum sockets

Vacuum Sockets

Installation instructions:

- When preparing the system make sure the socket frame is perfectly horizontal and flush with the wall.
- For easy and safe installation of the vacuum socket, apply the special grease (part n. AT250) on the OR seal.
- The socket has longitudinal holes, so the fixing screws can be adjusted if the socket frame isn't exactly straight.
- Overtightening the screws could deform the socket causing pressure drops.



Key:

- 1 - Vacuum socket mod. SQUARE
- 2 - Self-threading screws
- 3 - Socket frame
- 4 - Wiring terminals



2.5 Extension for Square vacuum sockets

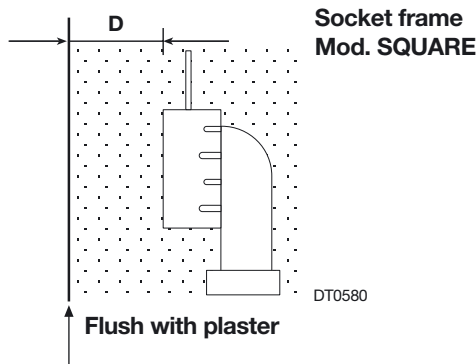
During the installation of the vacuum socket the extension (PA309) is required when the socket frame is sunken too far into the wall rather than being flush with the plaster.

Depending on the depth of the socket frame with respect to the surface of the plaster, the extension can be coupled as described below.

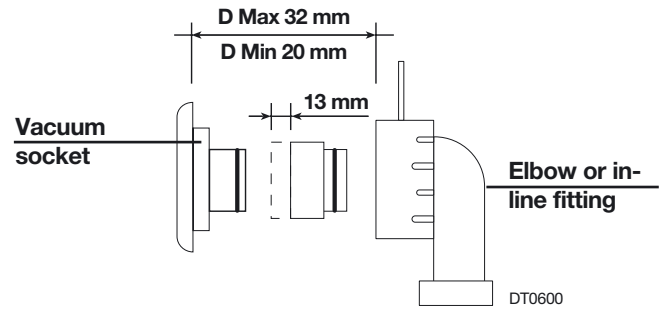


PA309

Vacuum Sockets

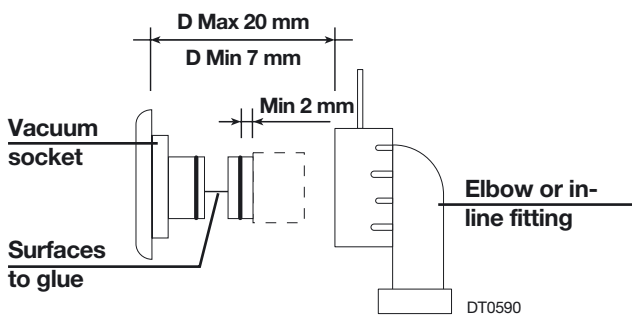


The extension has been designed to install the vacuum socket when the socket frame is sunken too far into the wall. **When "D" is between 0 and 7mm, the difference can be adjusted moving the vacuum socket.**



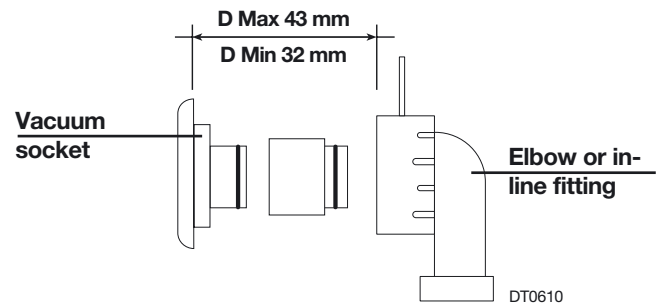
Extension Mod. SQUARE
Note: Cut perpendicularly

When "D" is between 20mm and 32mm, fit the extension cutting 13mm of the same on the side opposite to the OR.



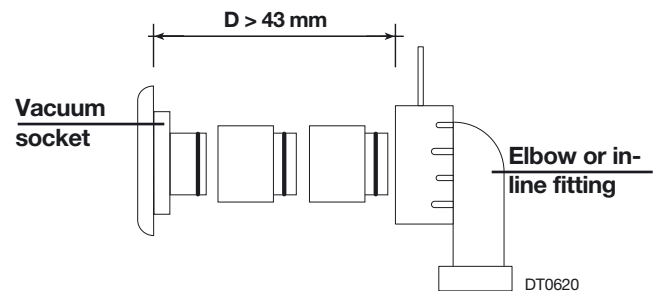
Extension Mod. SQUARE
Note: Cut perpendicularly

When "D" is between 7mm and 20mm fit the extension in the socket from the OR side and cut at 2mm from the OR. Glue with mastic or cyanide acrylic resin.



Extension Mod. SQUARE

When "D" is between 32mm and 43mm use the entire extension



Extension Mod. SQUARE

When "D" is above 43mm use 2 extensions or more.

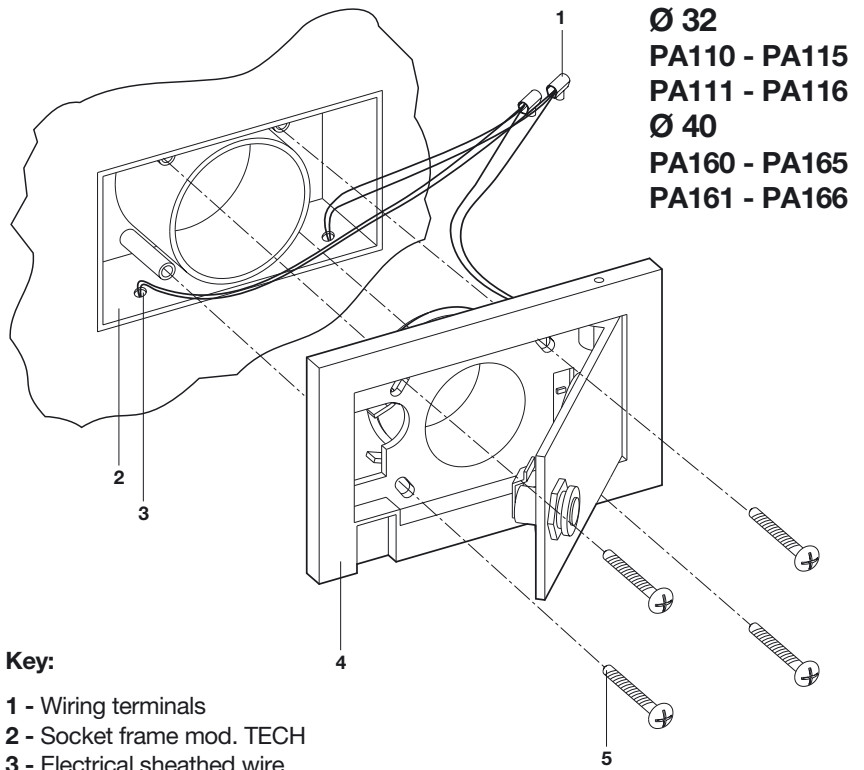


2.6 Tech series vacuum sockets

Vacuum Sockets

Installation instructions:

- When preparing the system make sure the socket frame is perfectly horizontal and flush with the wall.
- For easy and safe installation of the vacuum socket, apply the special grease (part n. AT250) on the OR seal.
- The socket has longitudinal holes, so the fixing screws can be adjusted if the socket frame isn't exactly straight.
- Overtightening the screws could deform the socket causing pressure drops.



- Key:**
- 1 - Wiring terminals
 - 2 - Socket frame mod. TECH
 - 3 - Electrical sheathed wire
 - 4 - TECH vacuum socket
 - 5 - Self-threading screws



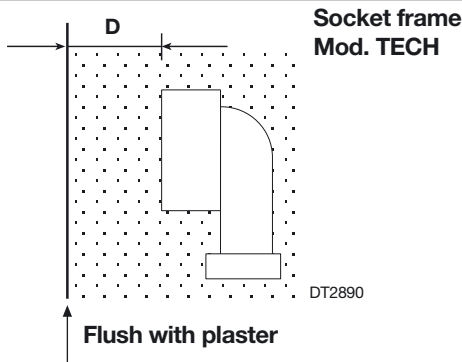
2.7 Extension for Tech vacuum sockets

During the installation of the vacuum socket the extension (PA311) is required when the socket frame is sunken too far into the wall rather than being flush with the plaster.

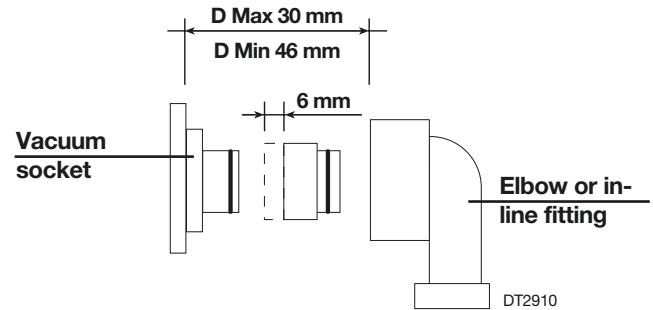
Depending on the depth of the socket frame with respect to the surface of the plaster, the extension can be coupled as described below.



PA311

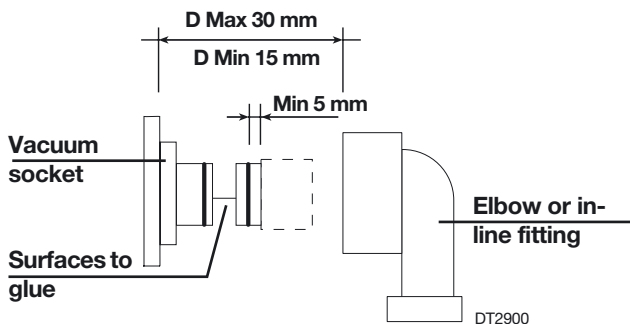


The extension has been designed to install the vacuum socket when the socket frame is sunken too far into the wall. **When "D" is between 0 and 15mm, the difference can be adjusted moving the vacuum socket.**



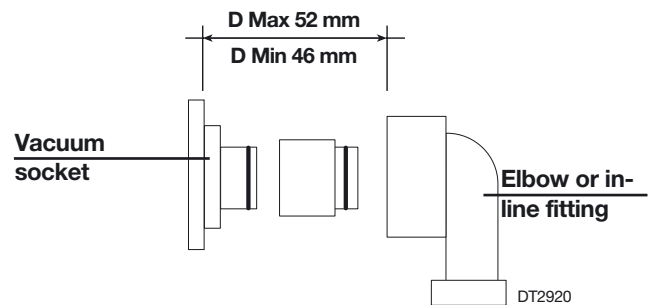
Extension Mod. TECH
Note: Cut perpendicularly

When "D" is between 30mm and 46 mm, fit the extension cutting 6mm of the same on the side opposite to the OR.



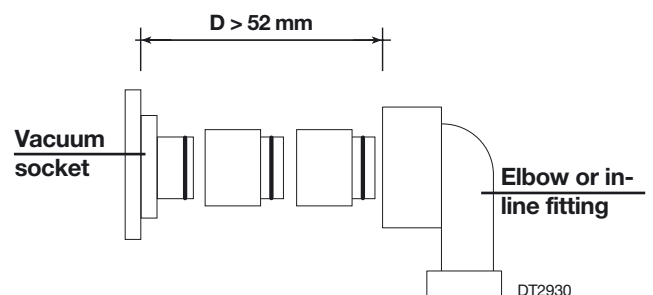
Extension Mod. TECH
Note: Cut perpendicularly

When "D" is between 15mm and 30mm fit the extension in the socket from the OR side and cut at 5mm from the OR. Glue with mastic or cyanide acrylic resin.



Extension Mod. TECH

When "D" is between 46mm and 52mm use the entire extension



Extension Mod. TECH

When "D" is above 52mm use 2 extensions or more.



2.8 Floor series vacuum sockets

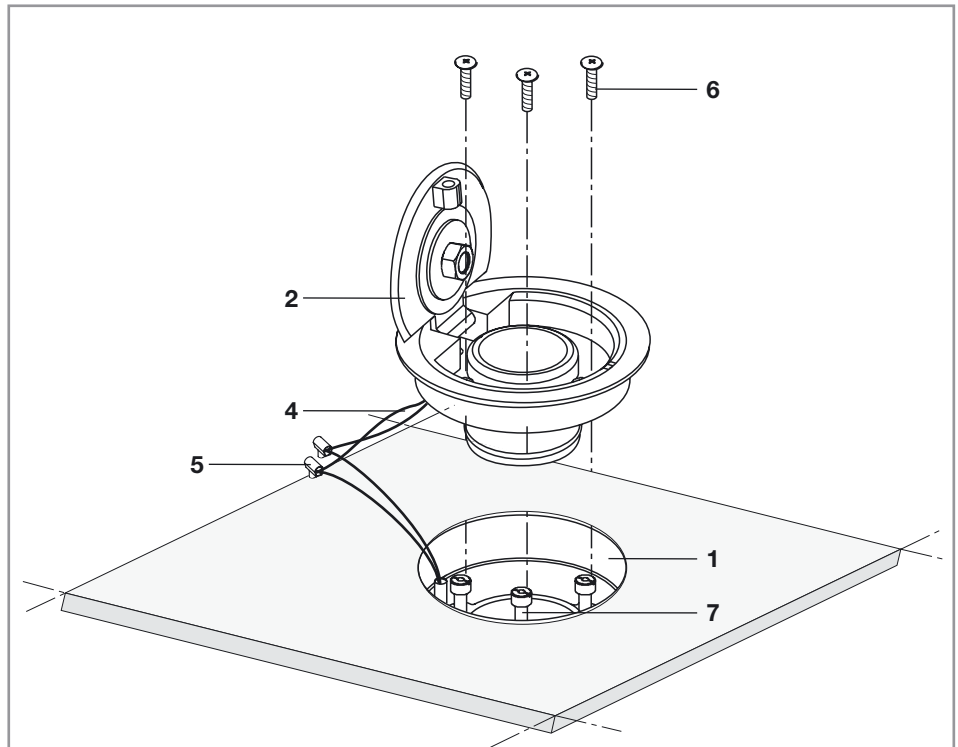
Vacuum Sockets

Installation instructions:

- When preparing the system make sure the socket frame is perfectly flush with the floor.
- For easy and safe installation of the vacuum socket, apply the special grease (part n.AT250) on the OR seal.
- The socket has 3 screws for adjusting the final position.
- In case of need, a special extension can be supplied.

Remake

We recommend not installing this socket on floors frequently washed or in presence of oils or liquids.



Key:

- 1 - FLOOR socket frame
- 2 - FLOOR vacuum socket
- 3 - Socket fitting
- 4 - Electrical connection
- 5 - Wiring terminals
- 6 - Fixing screws
- 7 - Adjustable screws for socket adjustment

- Ø 32
PA510
PA516
- Ø 40
PA530
PA536



2.9 Open series vacuum sockets

PA450

Vacuum socket for outdoor use with micro-switch.

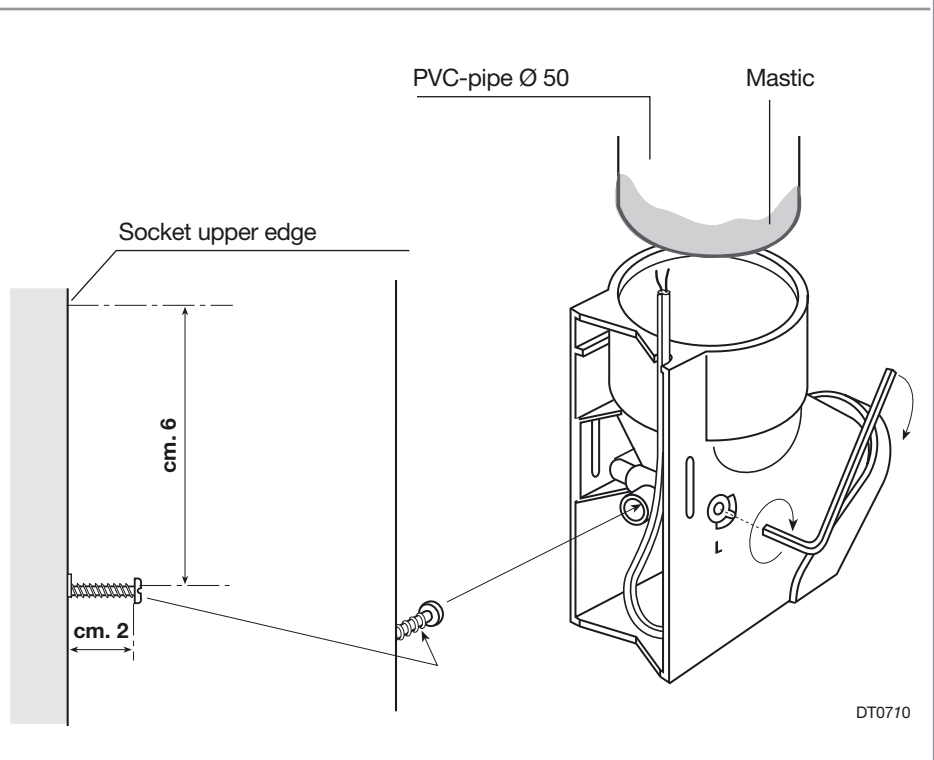
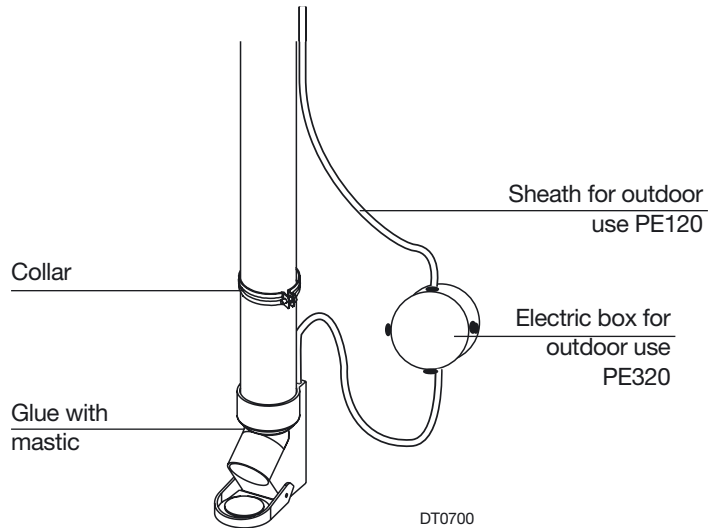
Remake

This socket has a fitting with a diameter of 50 mm.

Installation instructions:
When installing an OPEN vacuum socket, we recommend placing the collar for the PVC-pipe close to the same socket.

- 1 - Drill the wall where the socket will be installed, insert an expansion bolt and tighten as shown in the picture to the side.
- 2 - Insert the vacuum socket on the head of the screw as shown and lock in position with the Allen wrench provided.
- 3 - Smear the bottom of the PVC pipe Ø 50 with some mastic.
- 4 - Insert the pipe into the socket.
- 5 - Proceed with the electrical connection to the sockets line.

PA450



2.9

PA460 Ø32

PA470 Ø40

MOPLÉN vacuum socket for outdoor use with micro-switch.

PA465 Ø32

PA475 Ø40

MOPLÉN vacuum socket for outdoor use without micro-switch.

Remake

This socket has a fitting Ø 63 mm and can be installed using a PVC pipe Ø 63 mm or an ALUMINIUM pipe Ø 60 mm as described below. For the use of this socket, we recommend contacting Aertecnica.

Open vacuum socket and PVC-pipe Ø 63 mm

1 - Place the vacuum socket on to the PVC-pipe Ø 63 "B" by interposing the special Radior sleeve Ø 63 "A", and the clamps "C" (not included in the supply).

2 - For the electrical connection, use the wire supplied and an electric box for outdoor use.

Open vacuum socket and ALUMINIUM pipe Ø 60 mm

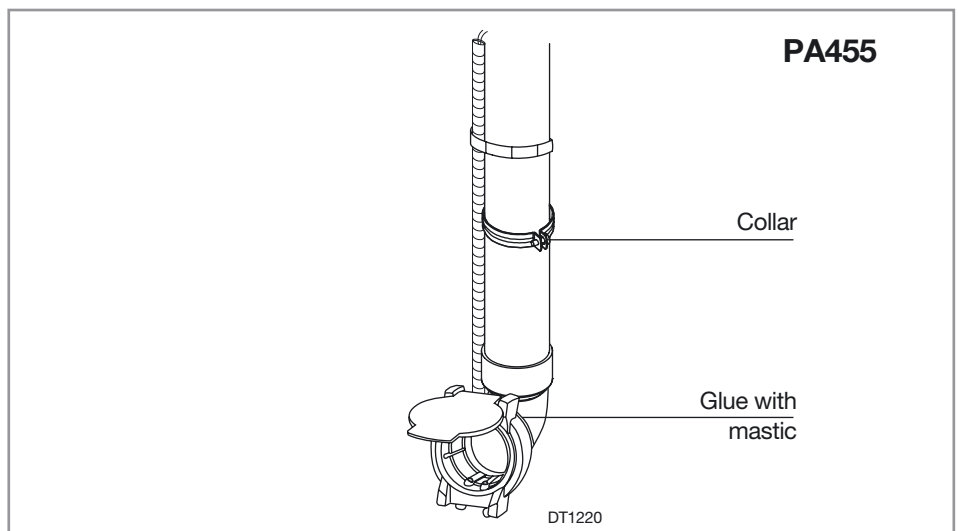
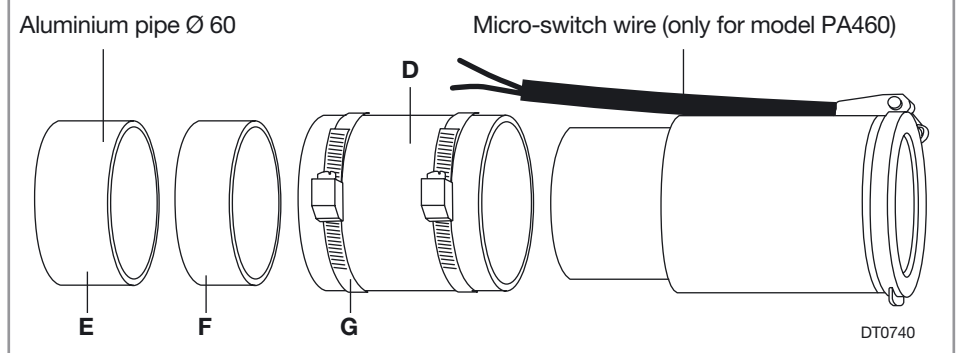
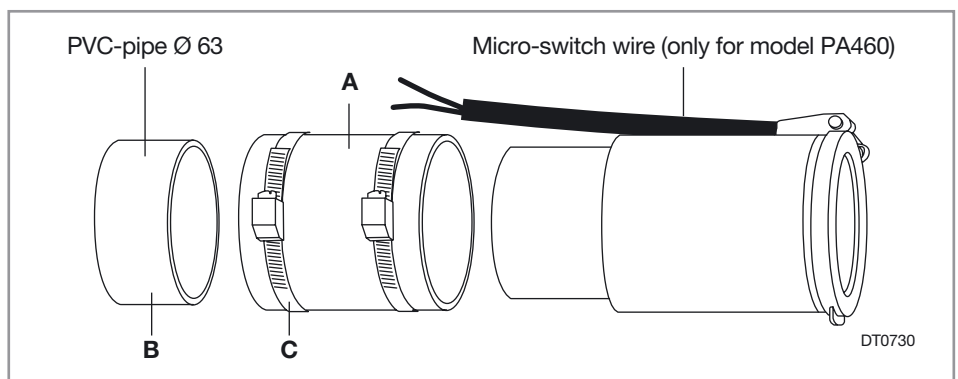
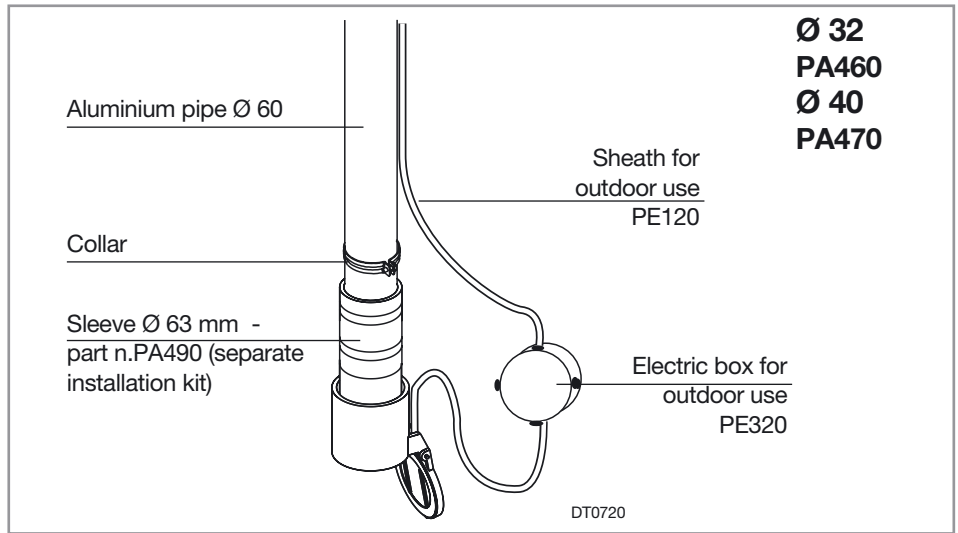
1 - Place the vacuum socket on to the ALUMINIUM pipe Ø 60 "E" by interposing the adapting bushing "F" and the special Radior sleeve Ø 63 "D", complete with clamps "G" (not included in the supply but available in a separate kit - part n. PA490).

2 - Press the adapting bushing "F" into pipe "E".

3 - For the electrical connection, use the wire supplied and an electrical box for outdoor use.

PA455

OPEN service vacuum socket (Ø 32).

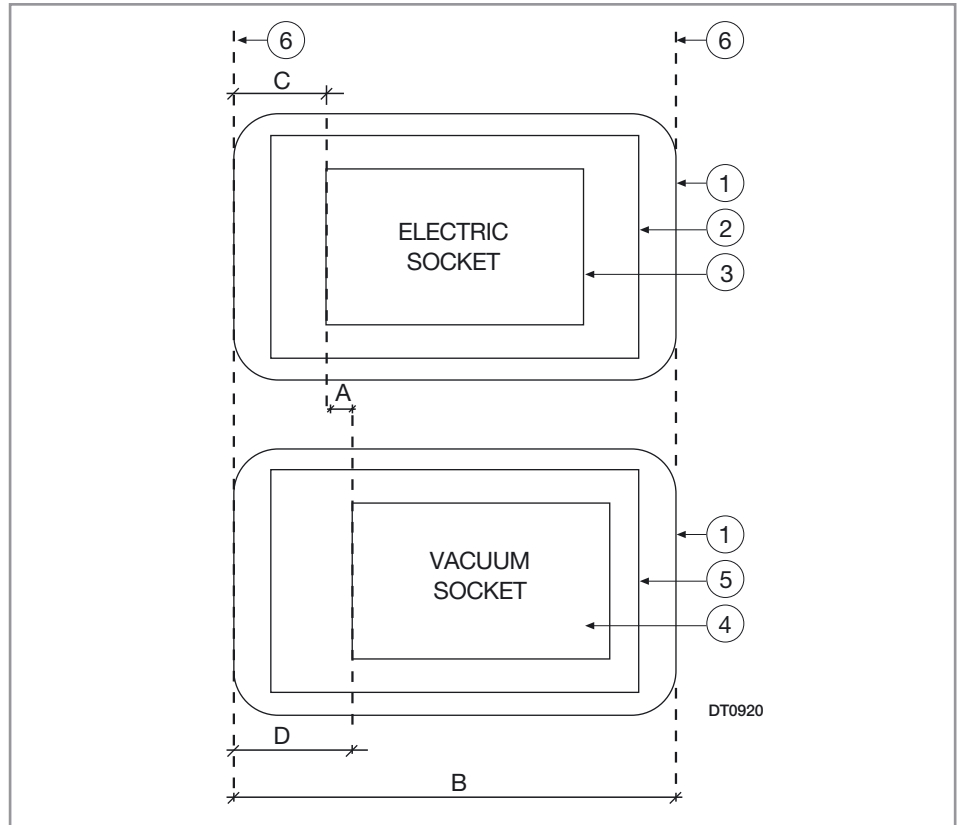


2.10 Aligning the cover plaques

Installation instructions:

For the models in the table, to find the perfect alignment of cover plaques of the vacuum socket and the electrical socket, you should change the alignment of the electric box of the socket frame.

- 1 - Electric plaque
- 2 - Electric plaque support
- 3 - Electric box
- 4 - Air - New Air socket frame
- 5 - Aertecnica adapting cover plaque support
- 6 - Imaginary cover plaque alignment line



	A	B	C	D
BTICINO INTERNATIONAL	3 mm	118 mm	10 mm	13 mm
BTICINO LIGHT	4 mm	115 mm	9 mm	13 mm
VIMAR PLANA	2 mm	120 mm	11 mm	13 mm
LEGRAND MOSAIC	2 mm	123 mm	13 mm	15 mm
LEGRAND CROSS	3 mm	123 mm	12 mm	15 mm
LEGRAND VELA TONDA	3 mm	124 mm	13 mm	16 mm
LEGRAND VELA QUADRA	2 mm	121 mm	11 mm	13 mm
BTICINO AXOLUTE QUADRA	1 mm	126 mm	15 mm	16 mm
BTICINO AXOLUTE TONDA	1 mm	125 mm	14 mm	15 mm
VIMAR EIKON	2 mm	120 mm	12 mm	14 mm
ABB ELOS	1 mm	122 mm	12 mm	14 mm

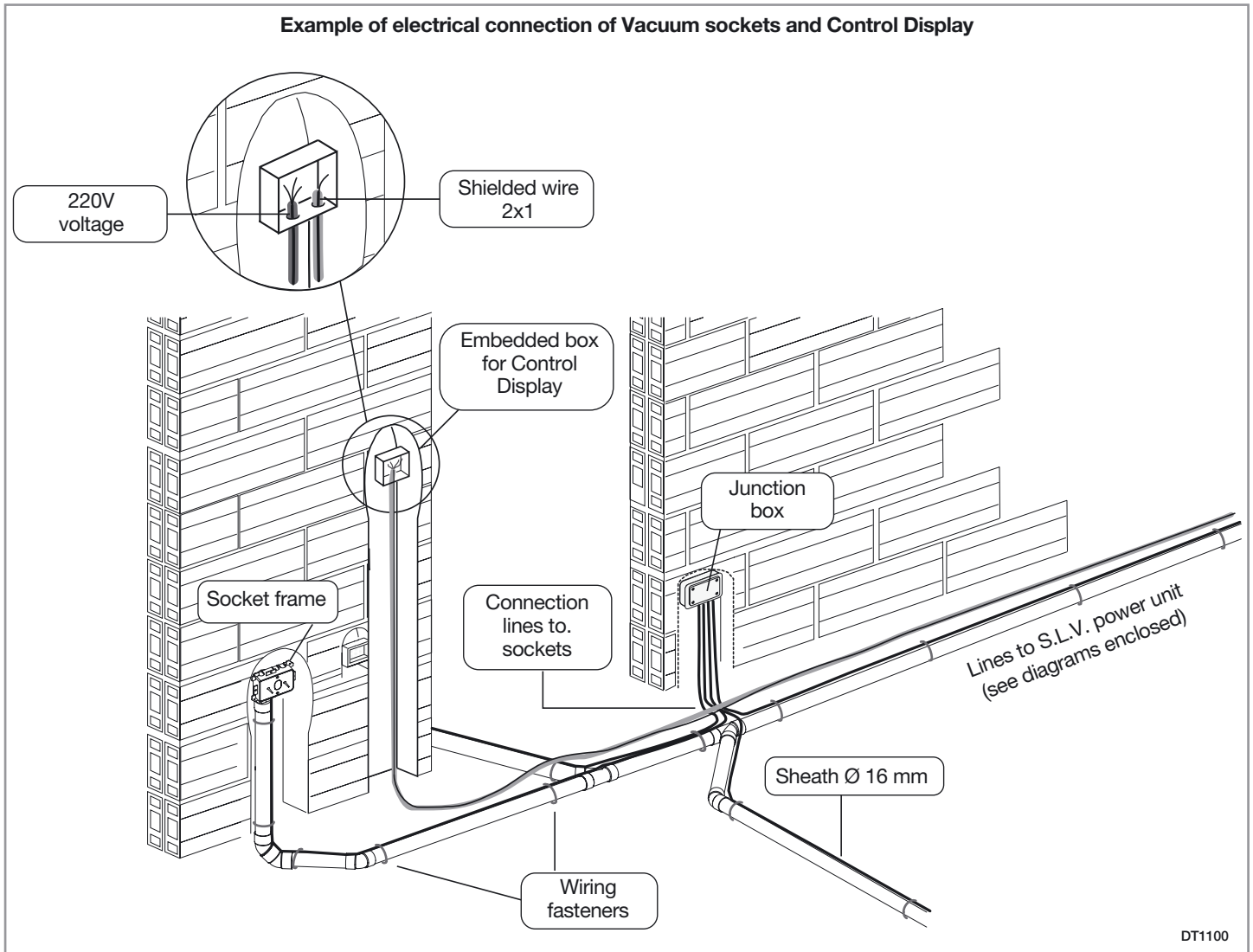
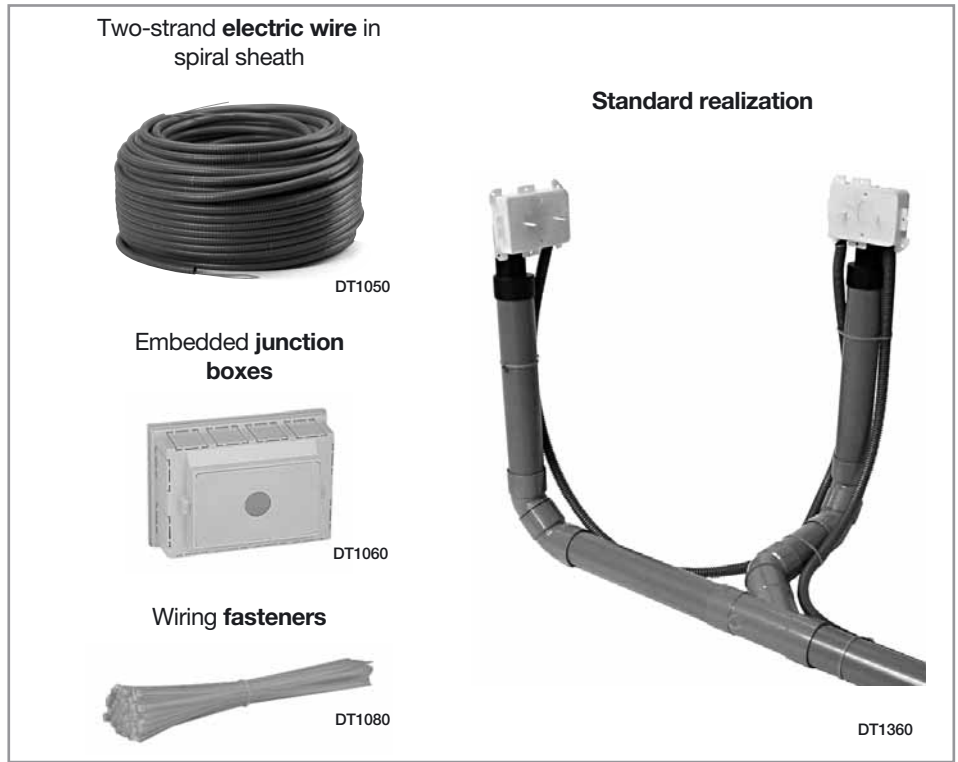


3.0 Electrical connection

Electrical connection of the vacuum sockets

The electric system for the connection of the sockets must be in parallel and the sockets can be connected in sequence to each other. The system should be designed and installed avoiding connections of over 10/12 m and without interruptions. A 12V electrical line commands the on/off function of the central vacuum system.

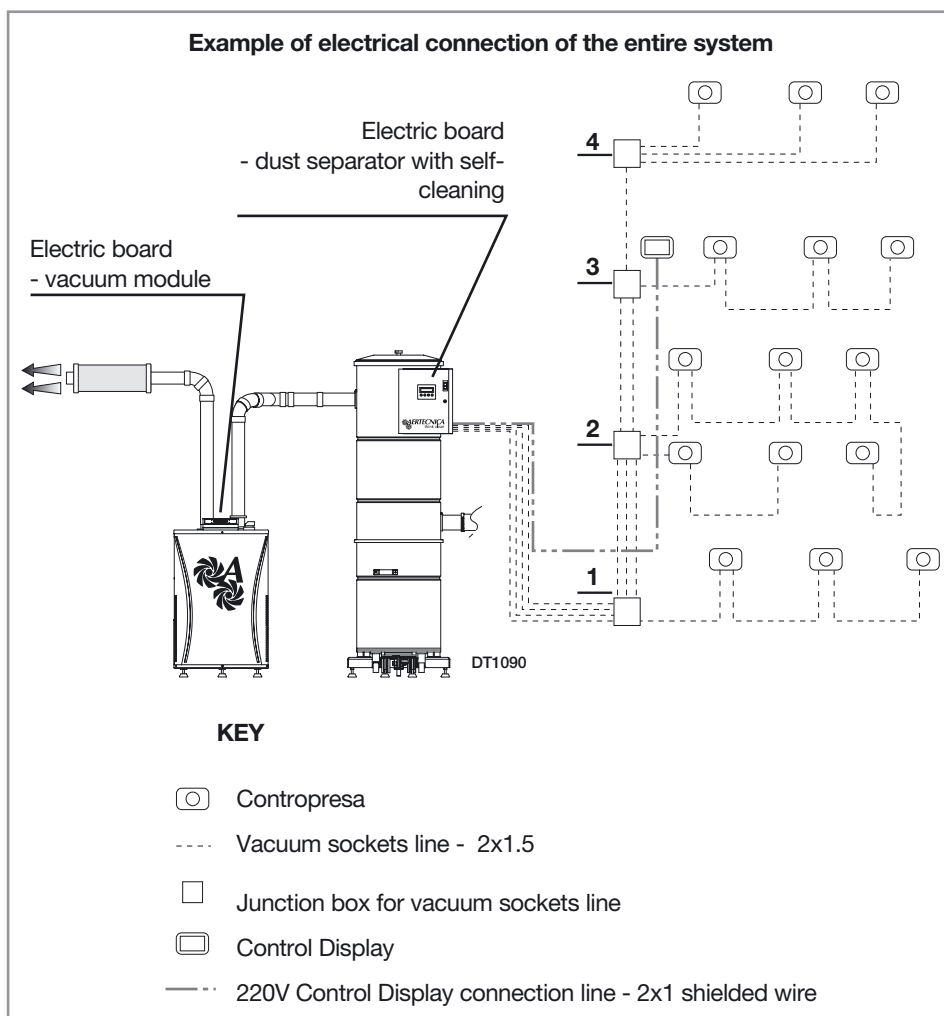
Electrical Connection



3.0

Connection to the mains of the central vacuum system

The electrical connections for supplying power and the serial connections between the different peripheral devices of the central vacuum system (dust separator, vacuum modules, junction boxes, Control Display) are shown in the picture to the side.



Electrical Connection



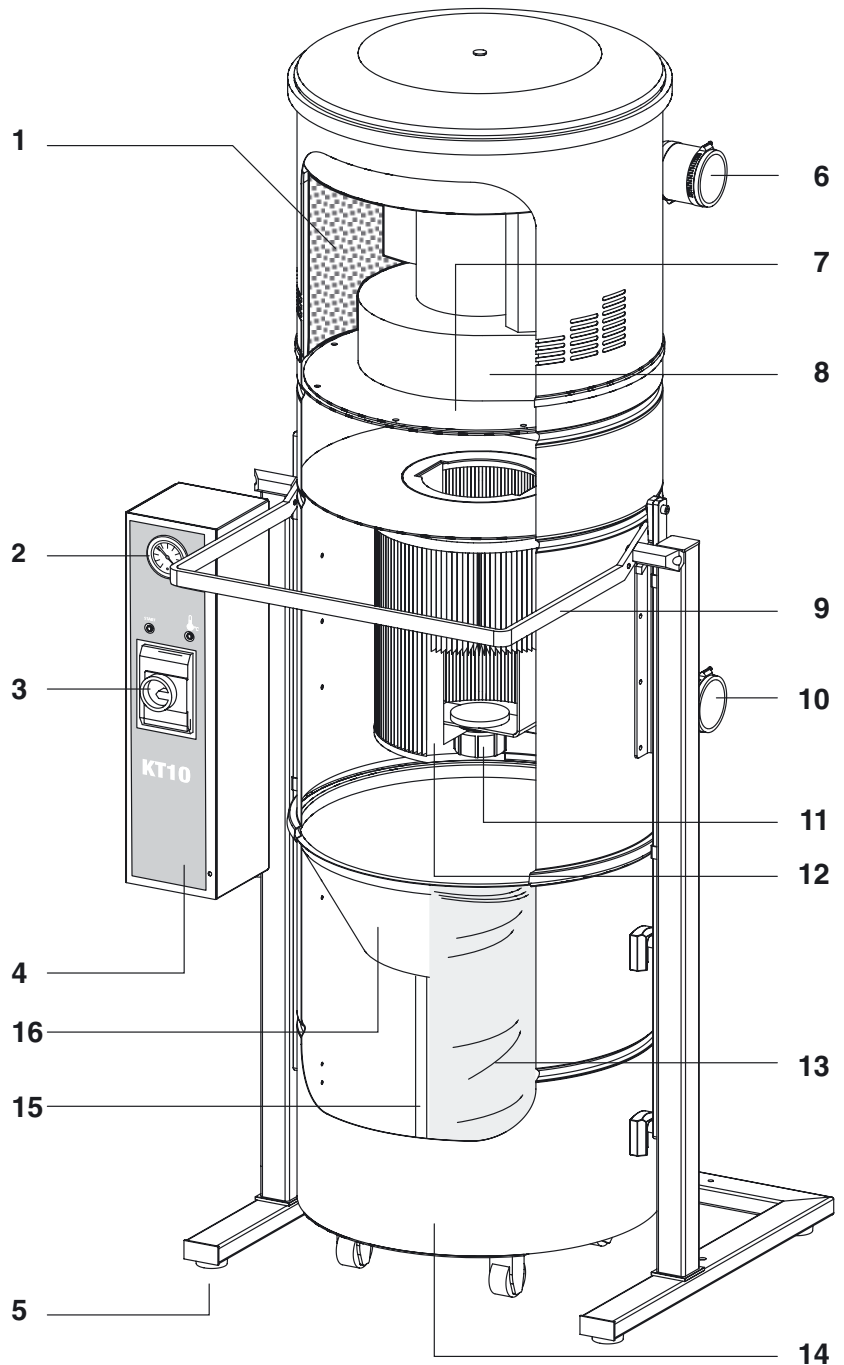
4.0 Kompatta KT power unit

NEW

4.1 Mod. KT10 - KT20M - KT20 - KT30

KEY

- 1 - Motor compartment sound-proof sponge
- 2 - Working vacuum indicator
- 3 - Main switch
- 4 - Electric board
- 5 - Anti-vibration feet
- 6 - Adjustable air outlet
- 7 - Motor support
- 8 - Blower with side channel
- 9 - Dust container opening/closing lever
- 10 - Adjustable dust inlet
- 11 - Filter cartridge fixing knob
- 12 - Polyester filter cartridge
- 13 - Dust bag
- 14 - Dust container
- 15 - Bag tensioner
- 16 - Conveying cone with seal

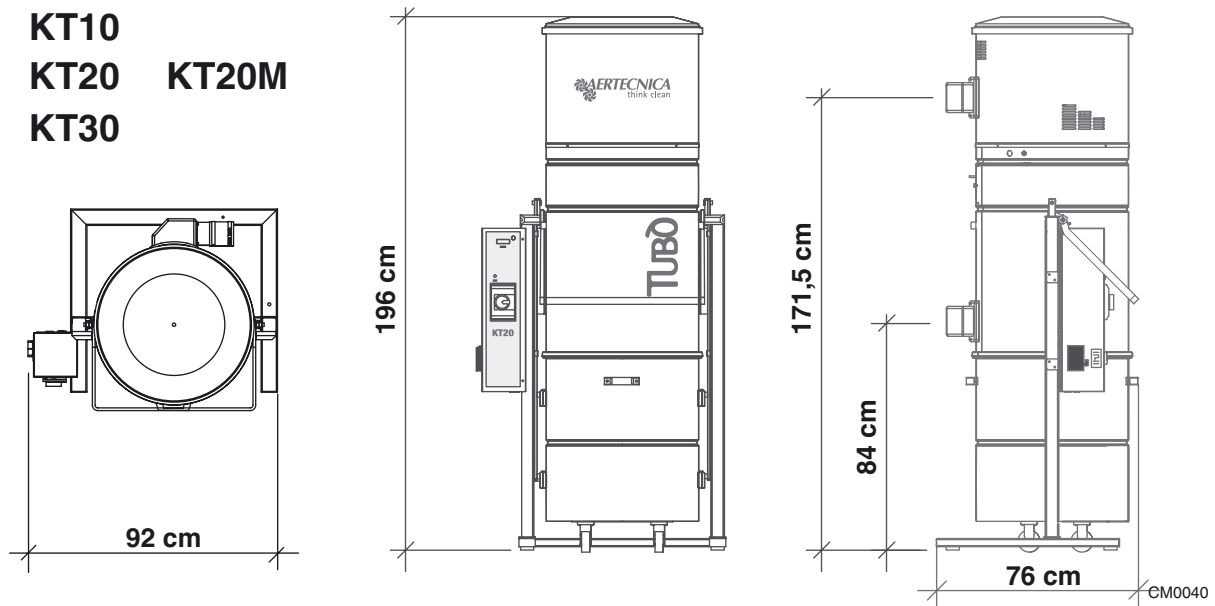


Kompatta KT



4.2 Specifications

MODEL	KT10	KT20M	KT20	KT30
Simultaneous operators	1	2	2	3
Voltage	400 V	230 V	400 V	400 V
Max power	2.2 kW	2.55 kW	2.55 kW	4.6 kW
Current absorption during work	6.5 A	11.2 A	6.5A	9.2 A
Motor revs	2900 rpm	3500 rpm	3500 rpm	3500 rpm
Frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Max air flow	300 m ³ /h	360 m ³ /h	360 m ³ /h	650 m ³ /h
Air flow during work	200 m ³ /h	275 m ³ /h	275 m ³ /h	560 m ³ /h
Max vacuum	4000 mmH ₂ O	4000 mmH ₂ O	4000 mmH ₂ O	4500 mmH ₂ O
Sockets line voltage	12 V	12 V	12 V	12 V
Filter cartridge surface area	5 m ²	5 m ²	5 m ²	5 m ²
Filter cartridge material	polyester	polyester	polyester	polyester
Dust container capacity	150 lt	150 lt	150 lt	150 lt
Self-cleaning system	NO	NO	NO	NO
Sound pressure level dB(A)	<70	<70	<70	<70



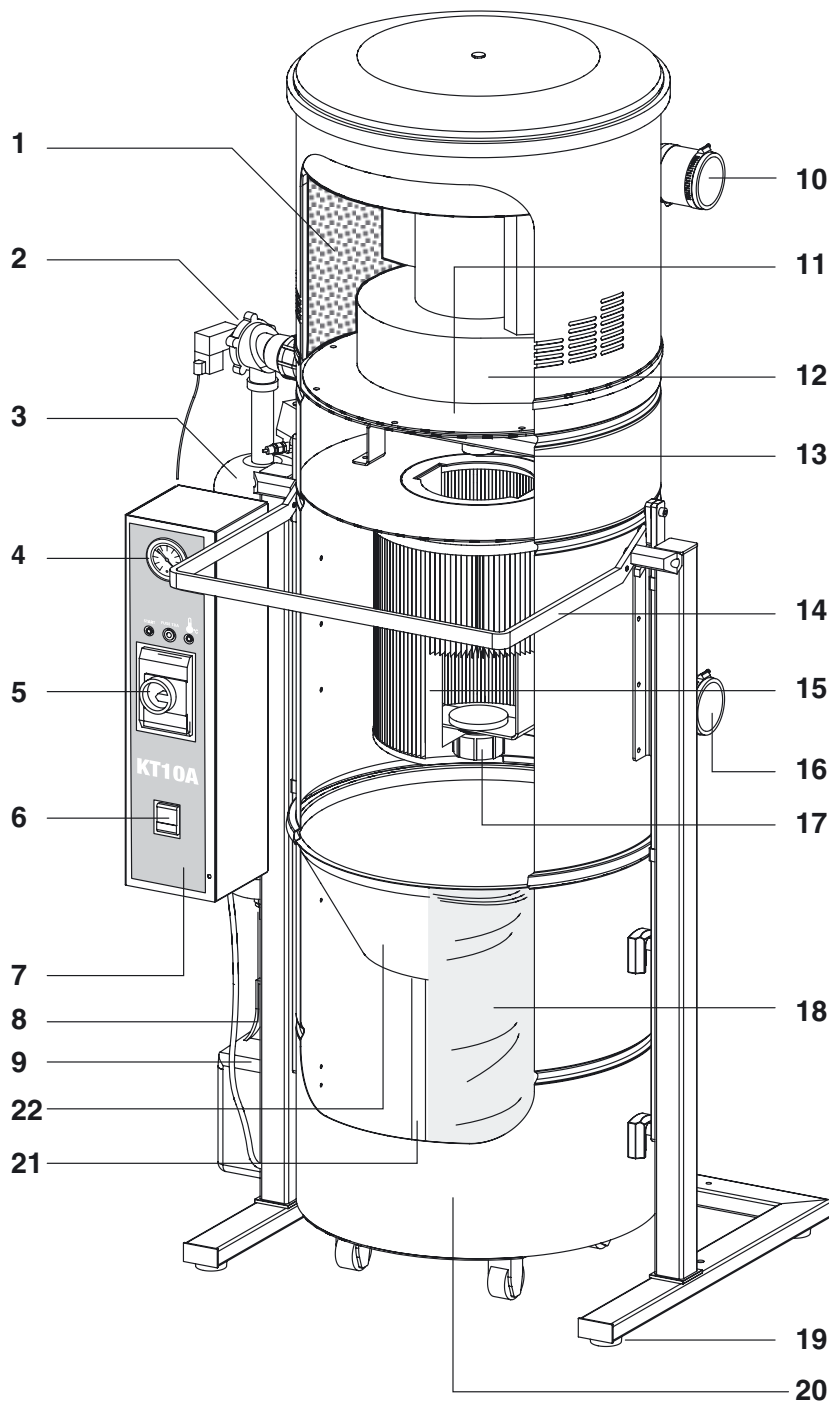
MODEL	KT10	KT20M	KT20	KT30
Air outlet height (mm)	1715	1715	1715	1715
Dust inlet height (mm)	840	840	840	840
Inlet and outlet diameter (mm)	80	80	80	80
Power unit body diameter (mm)	560	560	560	560
Net weight (kg)	132	132	132	152



4.3 Mod. KT10A - KT20MA - KT20A - KT30A

KEY

- 1 - Motor compartment sound-proof sponge
- 2 - Solenoid valve for self-cleaning system
- 3 - Tank for filter self-cleaning system
- 4 - Working vacuum indicator
- 5 - Main switch
- 6 - Self-cleaning timer
- 7 - Electric board
- 8 - Condensation drain device
- 9 - Air compressor for filter self-cleaning
- 10 - Adjustable air outlet
- 11 - Motor support
- 12 - Blower with side channel
- 13 - Self-cleaning nozzle
- 14 - Dust container opening/closing lever
- 15 - Polyester filter cartridge
- 16 - Adjustable dust inlet
- 17 - Polyester filter cartridge
- 18 - Dust bag
- 19 - Anti-vibration feet
- 20 - Dust container
- 21 - Bag tensioner
- 22 - Conveying cone with seal



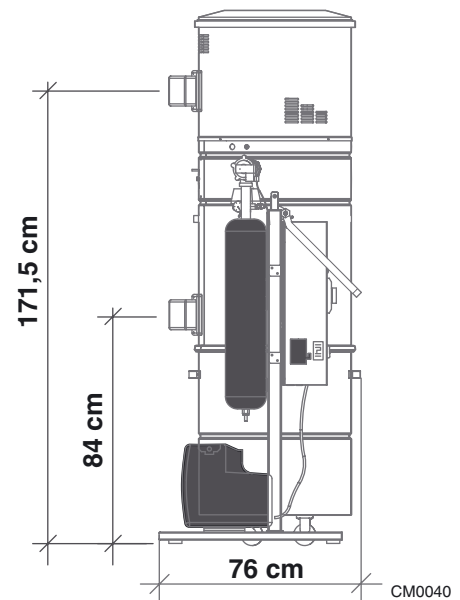
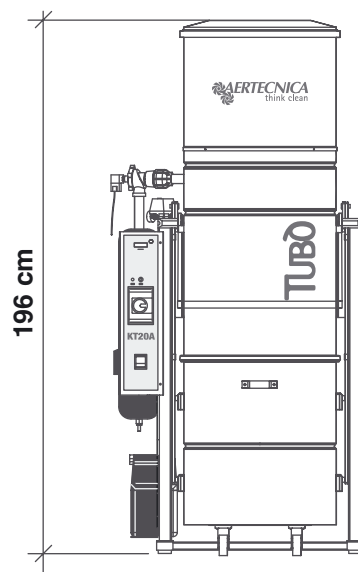
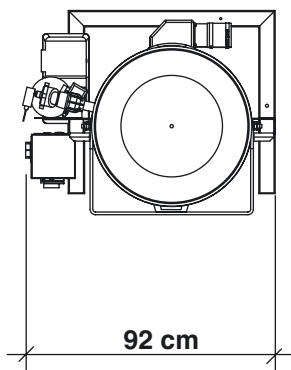
Kompatta KT



4.4 Specifications

MODEL	KT10A	KT20MA	KT20A	KT30A
Simultaneous operators	1	2	2	3
Voltage	400 V	230 V	400 V	400 V
Max power	2.2 kW	2.55 kW	2.55 kW	4.6 kW
Current absorption during work	6.5 A	11.2 A	6.5 A	9.2 A
Motor revs	2900 rpm	3500 rpm	3500 rpm	3500 rpm
Frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Max air flow.	300 m ³ /h	360 m ³ /h	360 m ³ /h	650 m ³ /h
Air flow during work	200 m ³ /h	275 m ³ /h	275 m ³ /h	560 m ³ /h
Max vacuum	4000 mmH ₂ O	4000 mmH ₂ O	4000 mmH ₂ O	4500 mmH ₂ O
Sockets line voltage	12 V	12 V	12 V	12 V
Filter cartridge surface area	5 m ²	5 m ²	5 m ²	5 m ²
Filter cartridge material	polyester	polyester	polyester	polyester
Dust container capacity	150 lt	150 lt	150 lt	150 lt
Self-cleaning system	YES	YES	YES	YES
Sound pressure level dB(A)	<70	<70	<70	<70

KT10A
KT20A KT20MA
KT30A



MODEL	KT10A	KT20MA	KT20A	KT30A
Air outlet height (mm)	1715	1715	1715	1715
Dust inlet height (mm)	840	840	840	840
Inlet and outlet diameter (mm)	80	80	80	80
Power unit body diameter (mm)	560	560	560	560
Net weight (Kg)	150	150	150	170



4.5 Control panel

On the Kompatta KT line it is possible to display:

- **A** - the parameter of the working vacuum (in mbar).

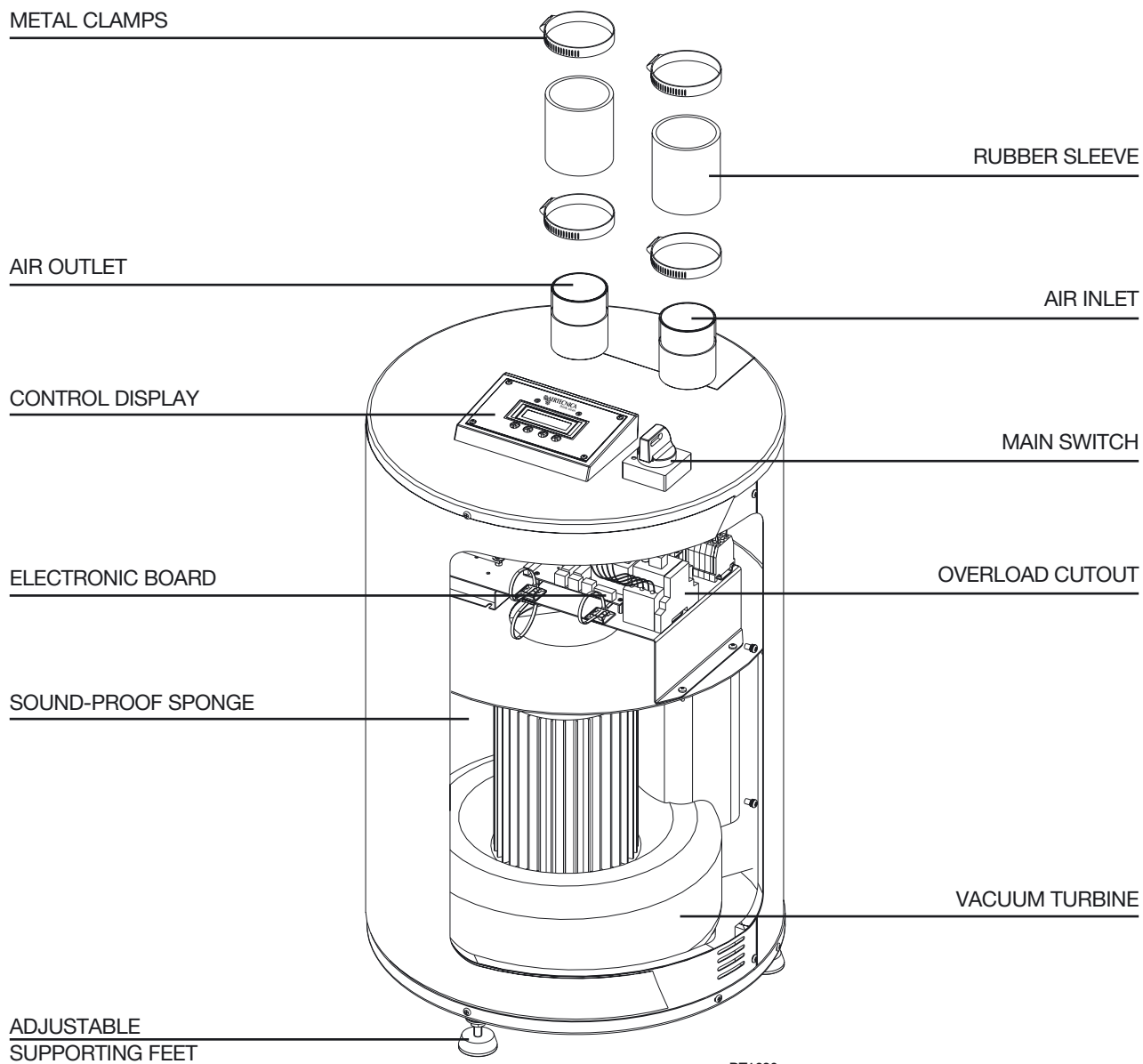
- **B** - a block due to a fault or anomaly of the inverter (luminous indicator) with the code indicating the type of anomaly.

In the Kompatta KT models with Self-cleaning system:

there is a programming timer that lets you set the self-cleaning cycles of centralized system



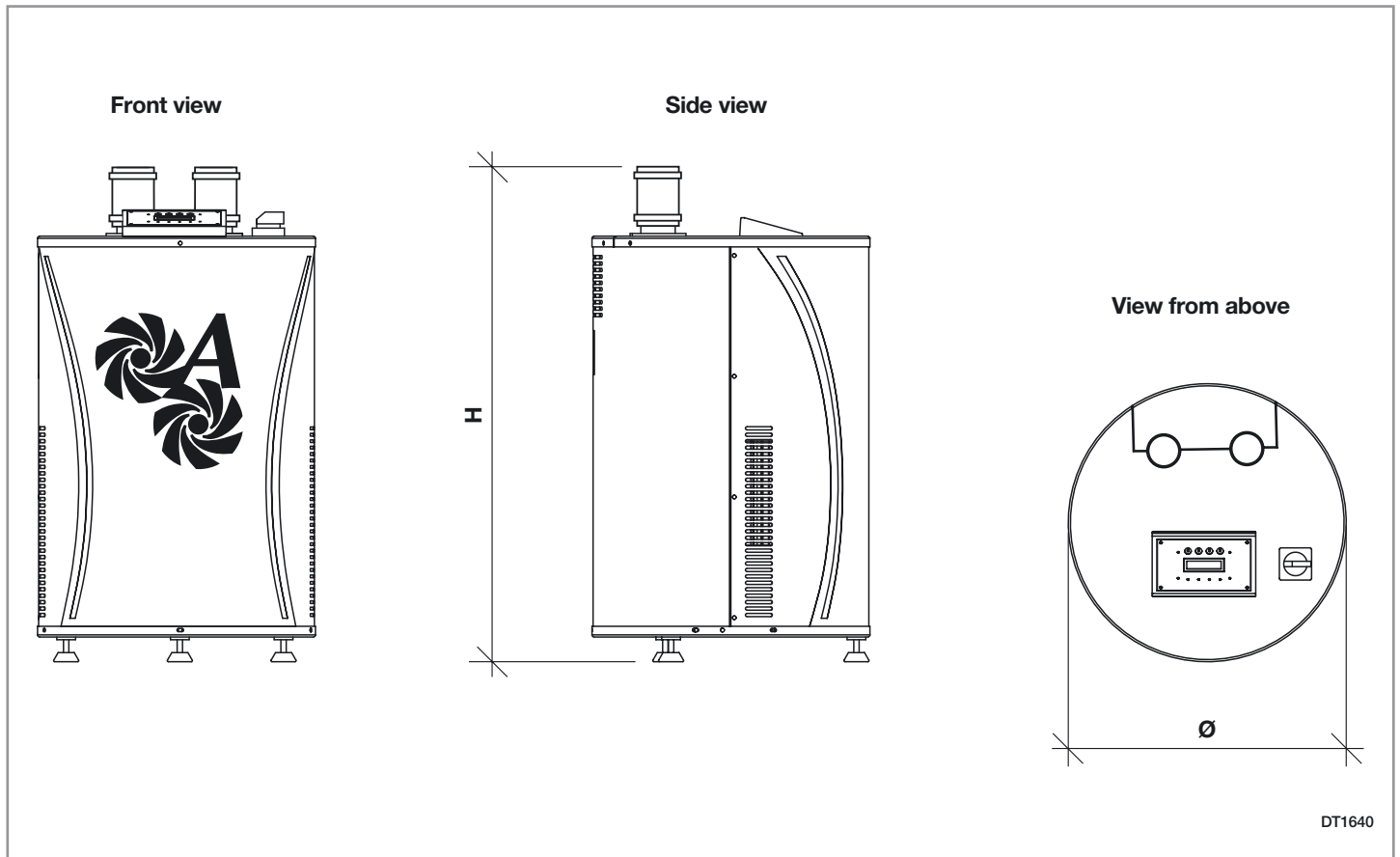
5.0 Vacuum modules



Vacuum Modules



5.1 Vacuum module dimensions



DT1640

Vacuum Modules

Model	Vacuum module with manual pressure adjustment				Vacuum module with automatic pressure adjustment				
	TR10S	TR20S	TR30S	TR40S	M20ES	T20ES	T30ES	T40ES	T60ES
Height (H)	780 mm	950 mm	950 mm	950 mm	780 mm	780 mm	950 mm	950 mm	950 mm
Diameter Ø	520 mm	660 mm	660 mm	660 mm	520 mm	520 mm	660 mm	660 mm	660 mm

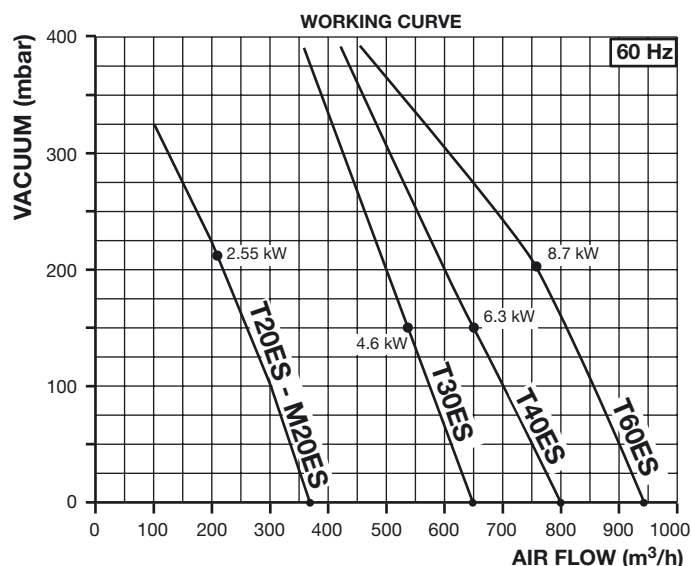
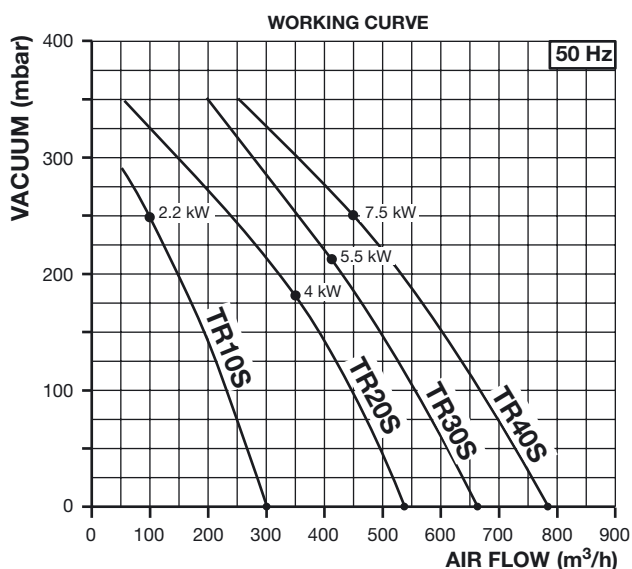


5.2 Specifications

Vacuum modules with manual pressure adjustment					
Model	TR10S	TR20S	TR30S	TR40S	
Simultaneous operators	1	2	3	4	
Voltage	400 V	400 V	400 V	400 V	
Motor power	2.2 kW	4 kW	5.5 kW	7.5 kW	
Current absorption during work	6.5 A	9.2 A	12.2 A	15.1 A	
Motor revs	2900 rpm	2900 rpm	2900 rpm	2900 rpm	
Frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	
Soft Start	NO	NO	NO	NO	
Inverter	NO	NO	NO	NO	
System Vacuum Adjustment	MAN	MAN	MAN	MAN	
Max air flow	300 m ³ /h	540 m ³ /h	670 m ³ /h	780 m ³ /h	
Air flow during work	200 m ³ /h	425 m ³ /h	550 m ³ /h	660 m ³ /h	
Max vacuum	4000 mmH ₂ O	4500 mmH ₂ O	4500 mmH ₂ O	5000 mmH ₂ O	
Sockets line voltage	12 V	12 V	12 V	12 V	
Inlet and outlet diameter	63 mm	80 mm	100 mm	100 mm	
Net weight	46 kg	71 kg	85 kg	93 kg	
Serial line for Control Display	YES	YES	YES	YES	
Sound pressure level in dB (A)	<70	<70	<70	<70	

Vacuum modules with automatic pressure adjustment					
Model	M20ES	T20ES	T30ES	T40ES	T60ES
Simultaneous operators	2	2	3	4	6
Voltage	230 V	400 V	400 V	400 V	400 V
Motor power	2.55 kW	2.55 kW	4.6 kW	6.3 kW	8.7 kW
Current absorption during work	11.2 A	6.5 A	9.2 A	12.2 A	15.1 A
Frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Motor revs	3500 rpm	3500 rpm	3500 rpm	3500 rpm	3500 rpm
Soft Start	YES	YES	YES	YES	YES
Inverter	YES	YES	YES	YES	YES
System Vacuum Adjustment	AUT	AUT	AUT	AUT	AUT
Max air flow	360 m ³ /h	360 m ³ /h	650 m ³ /h	810 m ³ /h	950 m ³ /h
Air flow during work	275 m ³ /h	275 m ³ /h	560 m ³ /h	680 m ³ /h	840 m ³ /h
Max vacuum	4000 mmH ₂ O	4000 mmH ₂ O	4500 mmH ₂ O	5000 mmH ₂ O	5000 mmH ₂ O
Sockets line voltage	12 V	12 V	12 V	12 V	12 V
Inlet and outlet diameter	60 mm	60 mm	80 mm	100 mm	100 mm
Net weight	48 kg	48 kg	72.5 kg	86 kg	95 kg
Serial line for Control Display	YES	YES	YES	YES	YES
Sound pressure level in dB (A)	<70	<70	<70	<73.3	<74.5

Vacuum Modules



5.3 Control panel

The display on the vacuum module shows:

- the amperes absorbed by the motor
- the maximum time the vacuum module is used continuously
- the hours of work of the vacuum module
- the temperature in the motor chamber
- the working vacuum in mm H₂O

The control panel on the vacuum module lets you set:

- the working vacuum
- the activation of the 2nd - 3rd module
- the activation of the inverter
- any other programmable functions



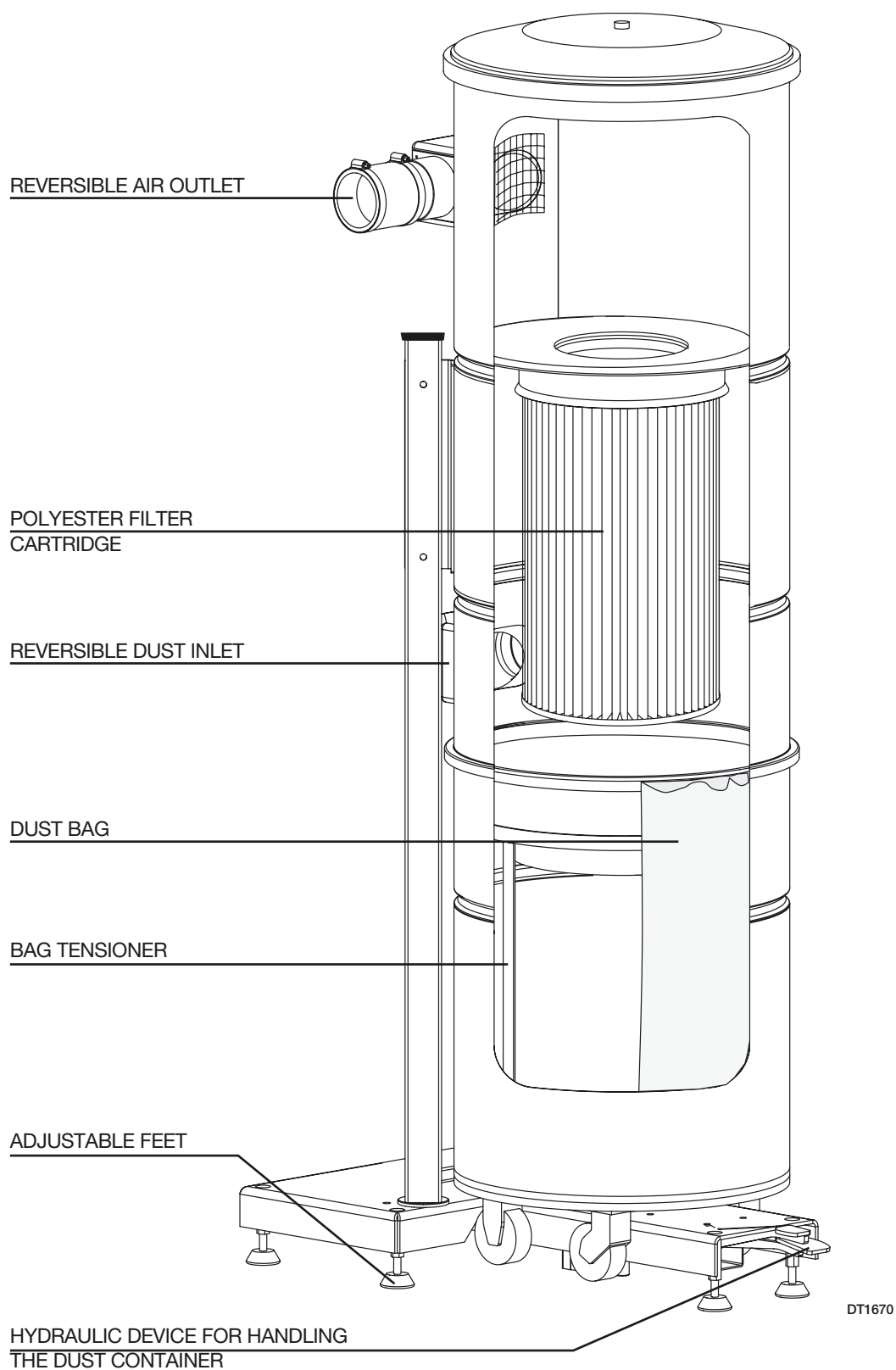
Remake

The working vacuum value of the vacuum modules is set by the Manufacturer (1400 mmH₂O). Modifying this value can change the suction power of the vacuum cleaning system, reducing or increasing the total declared number of operators who can clean at the same time.



6.0 Dust separators

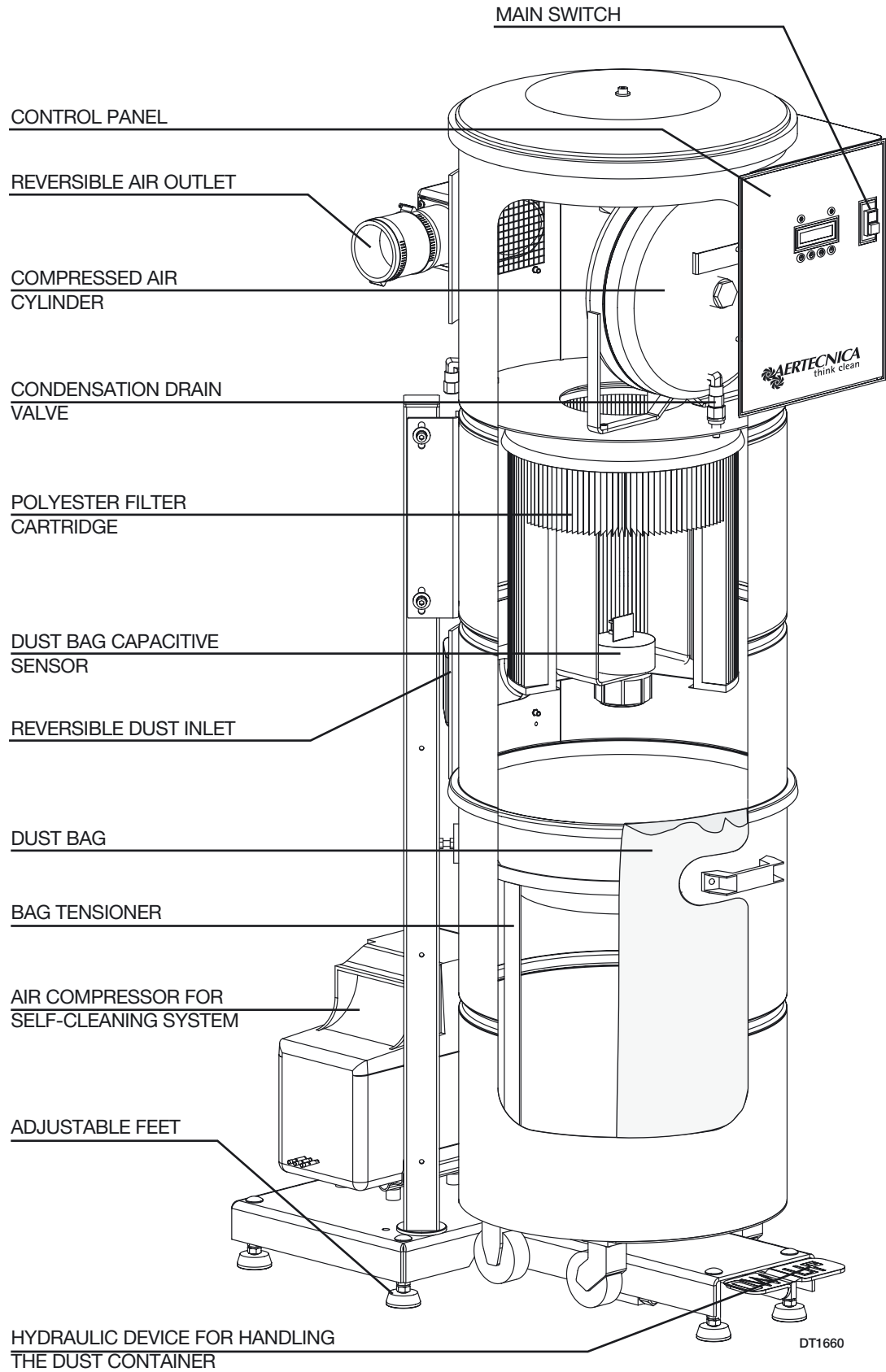
6.1 Dust separators LT 90/B - LT 150/B



Dust separators



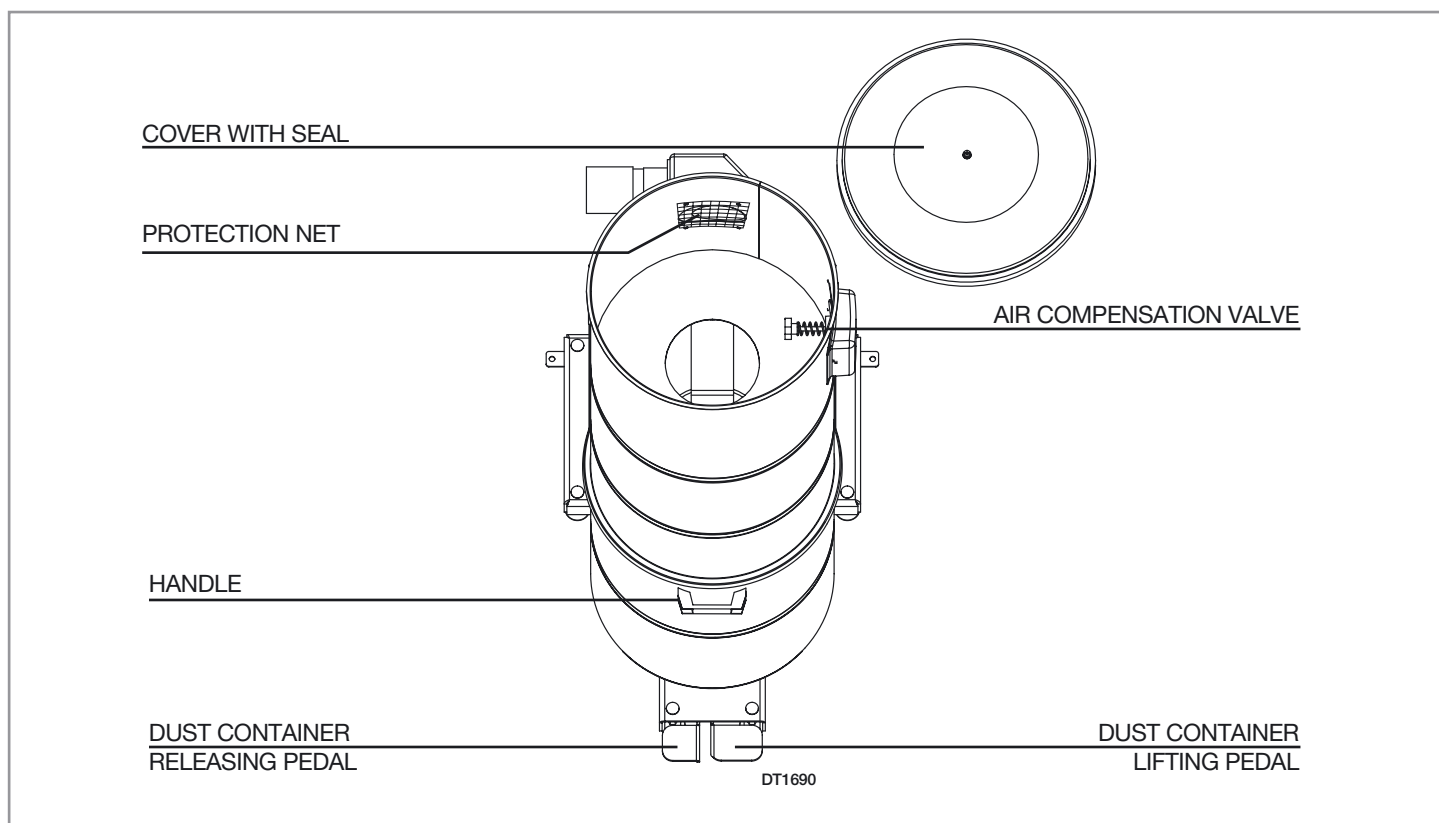
6.2 Dust separators LT90/B AP - LT150/B AP



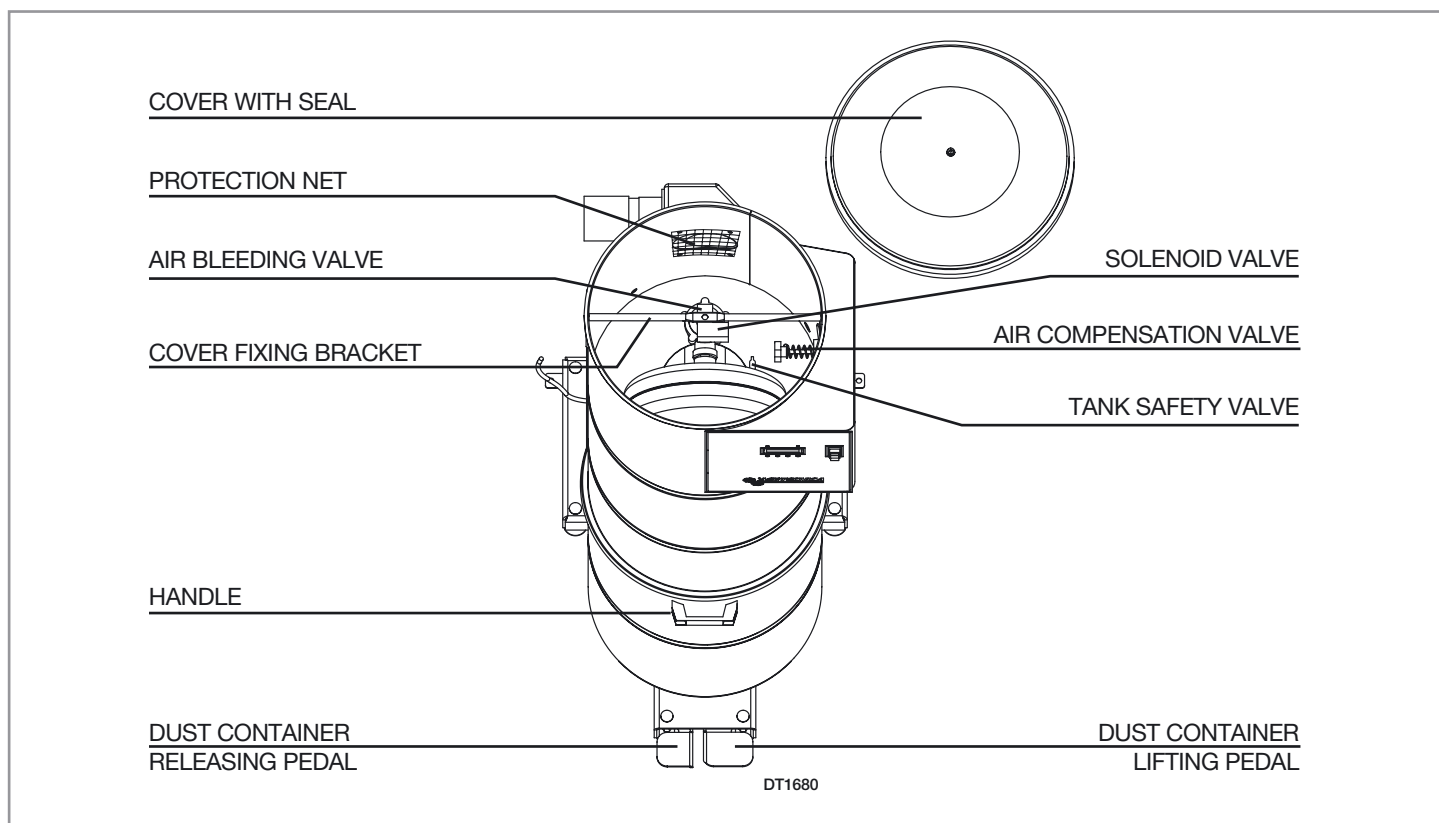
Dust separators



6.3 Dust separators LT 90/B - LT 150/B



6.4 Dust separators LT90/B AP - LT150/B AP

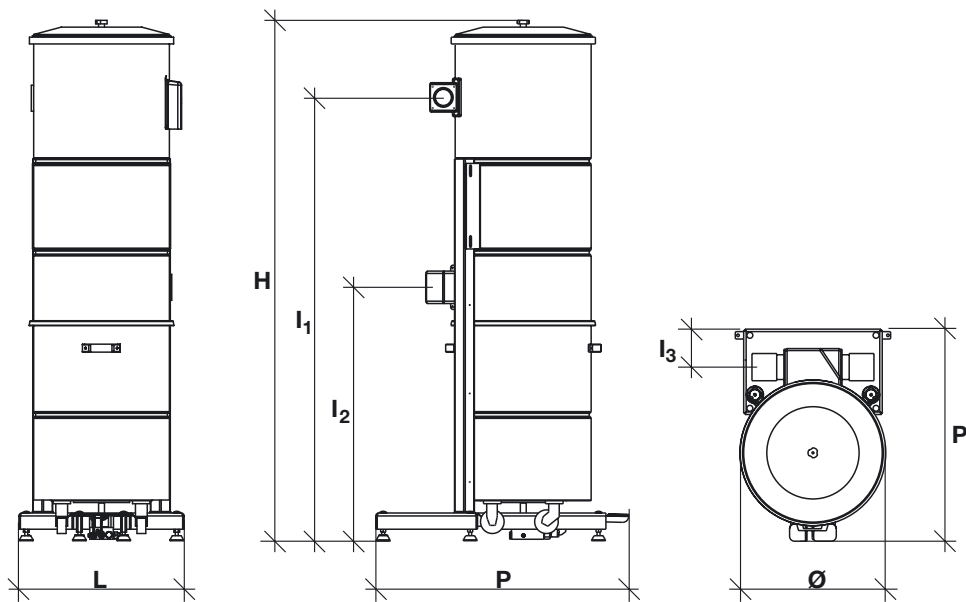


Dust separators



6.5 Specifications LT90/B - LT150/B

Model	LT 90/B	LT 150/B
Voltage	-	-
Frequency	-	-
Phases	-	-
Power	-	-
Current absorption during work	-	-
Dust container capacity	90 litres	150 litres
Self-cleaning system tank capacity	-	-
Max working pressure	-	-
Filter cartridge surface area	5 m ²	7.3 m ²
Filter cartridge material	polyester	polyester
Filtering capacity	3-5 micron	3-5 micron
Sound pressure level in dB (A)	<70	<70



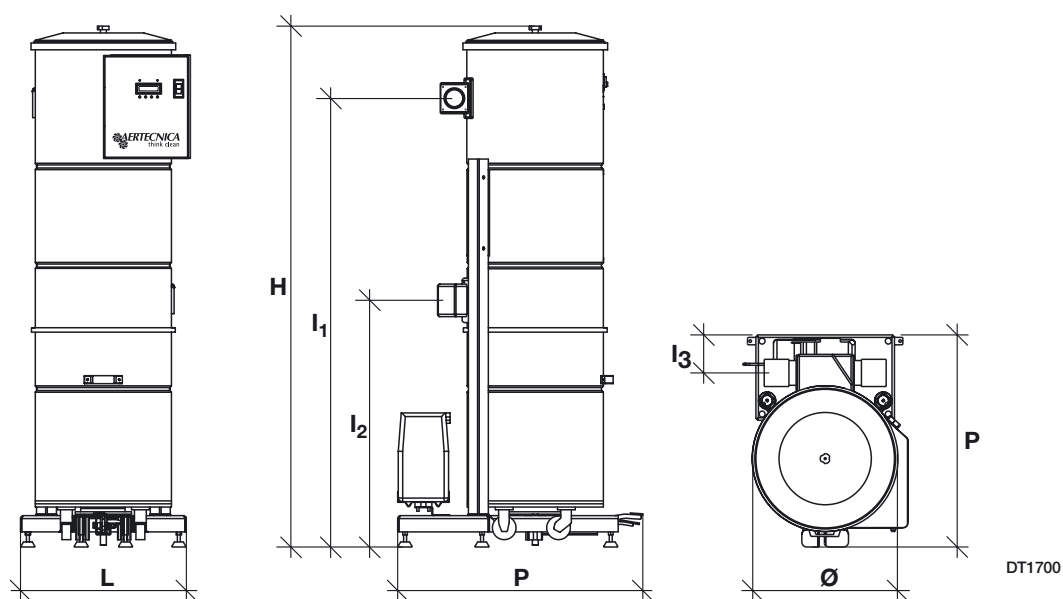
Model	LT 90/B	LT 150/B
Width (L)	550 mm	580 mm
Depth (P)	850 mm	850 mm
Height (H)	1750 mm	1750 mm
Diameter (Ø)	460 mm	560 mm
Inlet and outlet diameter	80 mm	100 mm
Air outlet height (I ₁)	1500 mm	1500 mm
Dust inlet height (I ₂)	870 mm	870 mm
(I ₃)	224 mm	153 mm
Net weight	70 kg	96 kg



6.6 Specifications LT90/B-AP - LT150/B-AP

ff

Model	LT 90/B AP	LT 150/B AP
Voltage	230 V	230 V
Frequency	50 Hz	50 Hz
Phases	1	1
Power	0.8 kW	0.8 kW
Current absorption during work	5 A	5 A </td
Dust container capacity	90 litres	150 litres
Self-cleaning system tank capacity	9 litres	9 litres
Max working pressure	3.8 bar	3.8 bar
Net weight	88 kg	110 kg
Filter cartridge surface area	5 m ²	7.3 m ²
Filter cartridge material	polyester	polyester
Filter cartridge diameter	320 mm	320 mm
Filter cartridge height	510 mm	510 mm
Filtering capacity	3-5 micron	3-5 micron
Sound pressure level in dB (A)	<70	<70



Model	LT 90/B AP	LT 150/B AP
Width (L)	550 mm	580 mm
Depth (P)	850 mm	850 mm
Height (H)	1750 mm	1750 mm
Inlet and outlet diameter	80 mm	100 mm
Diameter (Ø)	460 mm	560 mm
Air outlet height (l ₁)	1500 mm	1500 mm
Dust inlet height (l ₂)	870 mm	870 mm
(l ₃)	224 mm	153 mm



6.7 Control panel

DUST SEPARATORS LT90/B AP - LT150/B AP

The display of the dust separator shows:

- how full the dust bag is as a percentage (using ultrasound technology)
- the saturation of the filter cartridge as a percentage (through a differential pressure switch)
- the pressure of the compressed air cylinder, in the self-cleaning phase (only for models with the self-cleaning system).
- the working vacuum in mm H₂O.

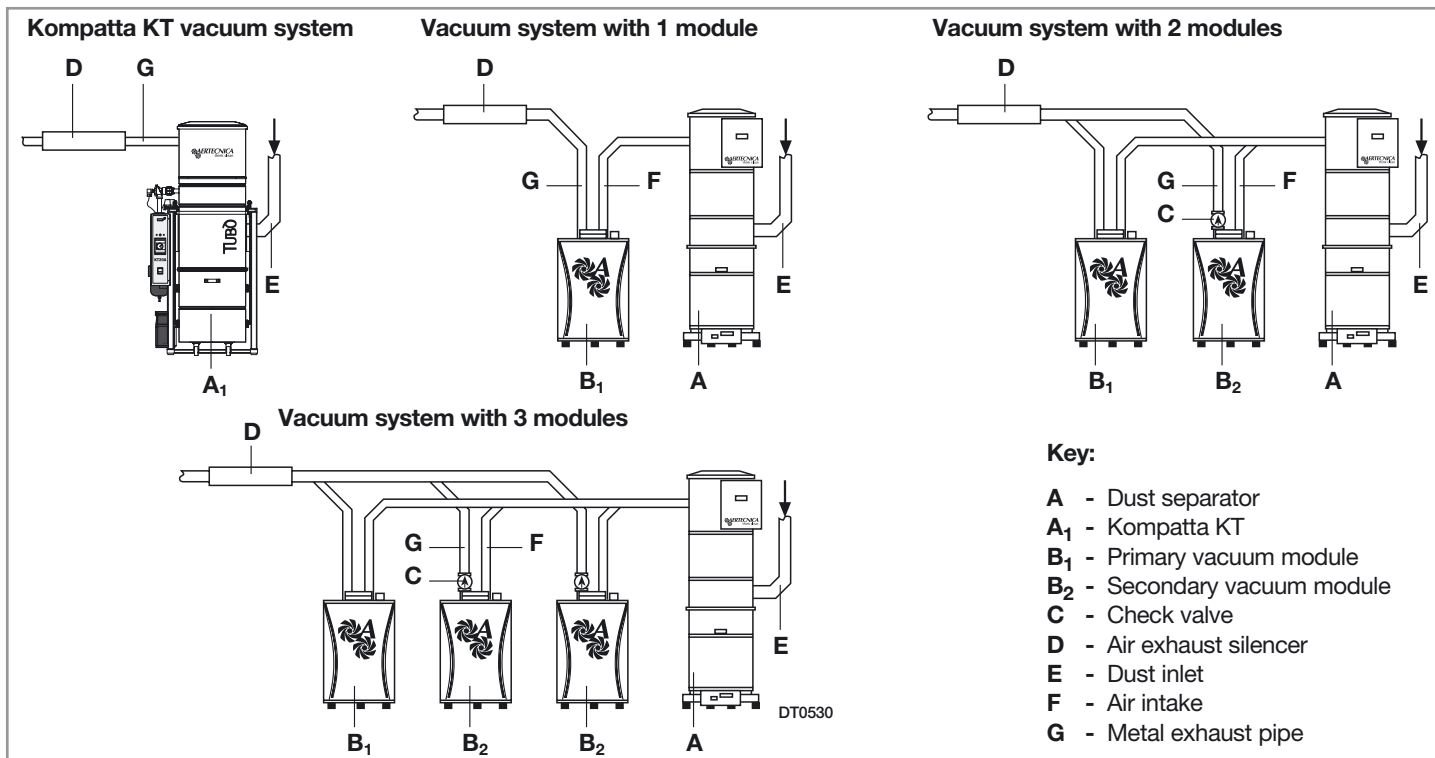
The control panel lets you set:

- the percent capacity of the dust container
- the percent saturation of the filter cartridge
- the pressure of the compressed air cylinder, in the self-cleaning phase (only for models with the self-cleaning system)
- the timer of the self-cleaning system



7.0 Central vacuum system installation

7.1 Room dimensions

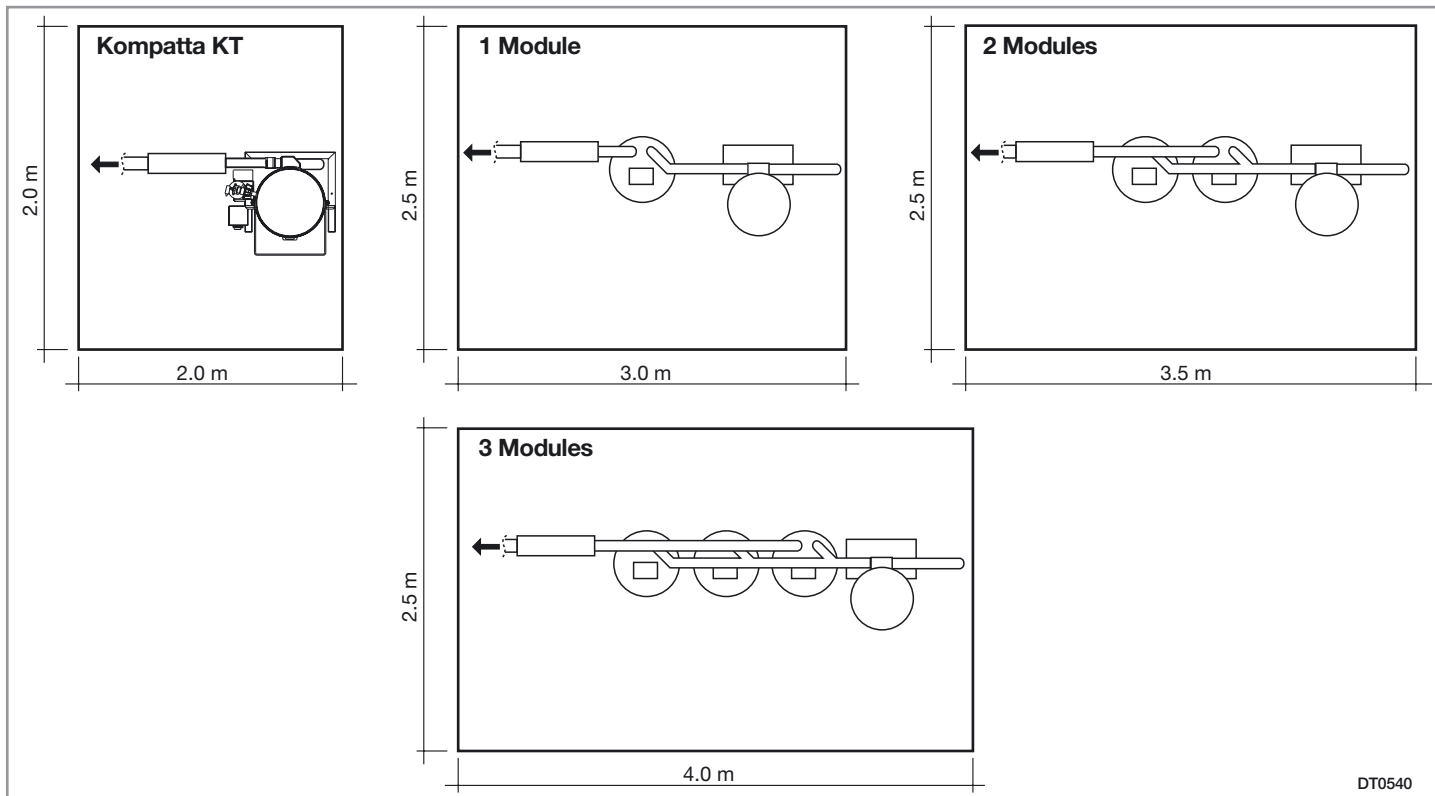


Pipes and fittings are not supplied as part of the system

Nota bene

Due to the high temperatures reached, the exhaust pipe must be of metal.

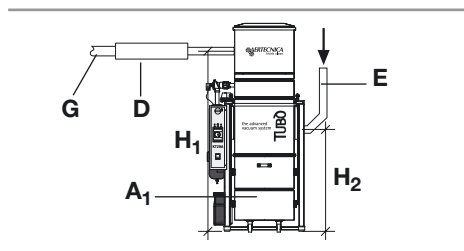
Recommended dimensions of the technical room



7.1.1 Vacuum system for 1 operator

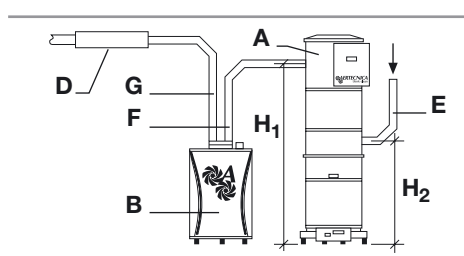
Standard solutions (S) and Recommended solutions (I)

Kompatta KT



SOLUTION A		
COMPONENTS	MOD.	Q.TY
A ₁ Kompatta KT	KT10 (S) - KT10A (I)	1
C Check valve	-	-
D PVC silencer	Ø 80 mm	1
E Dust inlet	Ø 80 mm	
G PVC exhaust pipe	Ø 80 mm	
H ₁ Air intake height	1715 mm	
H ₂ Dust inlet height	840 mm	

1 Vacuum module + 1 Dust separator

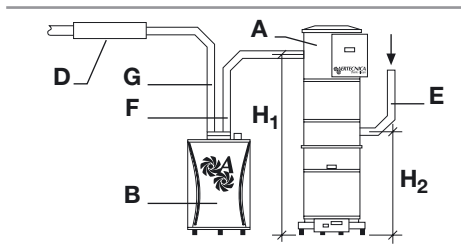


SOLUTION B		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT 90/B (S) - LT90/B-AP (I)	1
B Vacuum module	TR10S	1
C Check valve	-	-
D PVC silencer	Ø 63/80 mm	1
E Dust inlet	Ø 80 mm	
F Air intake	Ø 63 mm	
G PVC exhaust pipe	Ø 63-80 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	



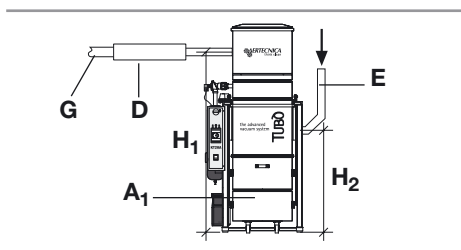
7.1.2 Vacuum system for 1-2 operators

1 Vacuum module +
1 Dust separator



SOLUTION A		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT 90/B (S) - LT90/B-AP (I)	1
B Vacuum module	M20ES	1
C Check valve	-	-
D PVC silencer	Ø 63/80 mm	1
E Dust inlet	Ø 63 mm	
F Air intake	Ø 63 mm + aum. Ø 63-80 mm	
G PVC exhaust pipe	Ø 63-80 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	

Kompatta KT

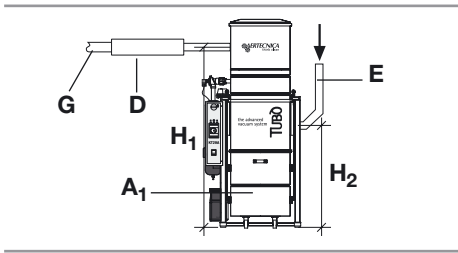


SOLUTION B		
COMPONENTS	MOD.	Q.TY
A ₁ Kompatta KT	KT20M (S) - KT20MA (I)	1
C Check valve	-	-
D PVC silencer	Ø 80 mm	1
E Dust inlet	Ø 80 mm	
G PVC exhaust pipe	Ø 80 mm	
H ₁ Air intake height	1715 mm	
H ₂ Dust inlet height	840 mm	



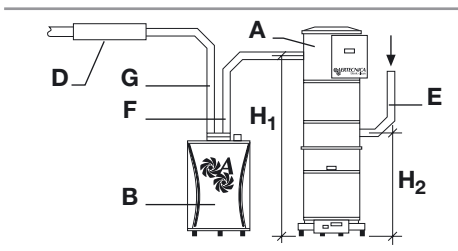
7.1.3 Vacuum systems for 2 operators

Kompatta KT



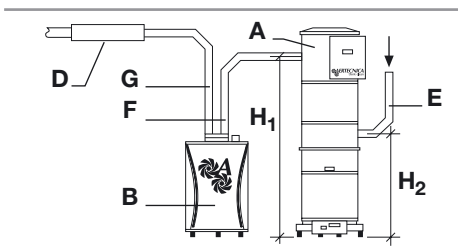
SOLUTION A		
COMPONENTS	MOD.	Q.TY
A ₁ Kompatta KT	KT20 (S) - KT20A (I)	1
C Check valve	-	-
D PVC silencer	Ø 80 mm	1
E Dust inlet	Ø 80 mm	
G Metal exhaust pipe	Ø 80 mm	
H ₁ Air intake height	1715 mm	
H ₂ Dust inlet height	840 mm	

1 Vacuum module + 1 Dust separator



SOLUTION B		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT 90/B AP	1
B Vacuum module	TR20S	1
C Check valve	-	-
D Metal silencer	Ø 80 mm	1
E Dust inlet	Ø 80 mm	
F Air intake	Ø 80 mm	
G Metal exhaust pipe	Ø 80 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	

1 Vacuum module + 1 Dust separator

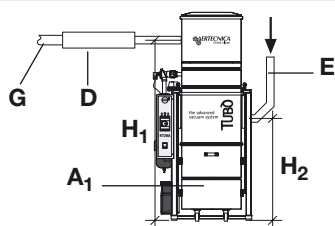


SOLUTION C		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT 90/B	1
B Vacuum module	T20ES	1
C Check valve	-	-
D Metal silencer	Ø 63 mm	1
E Dust inlet	Ø 80 mm	
F Air intake	Ø 63 mm + aum. Ø 63-80 mm	
G PVC exhaust pipe	Ø 63 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	



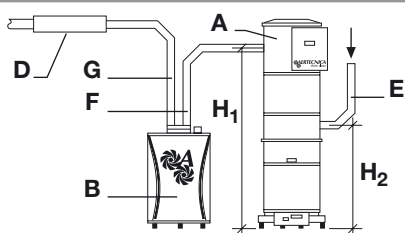
7.1.4 Vacuum systems for 3 operators

Kompatta KT



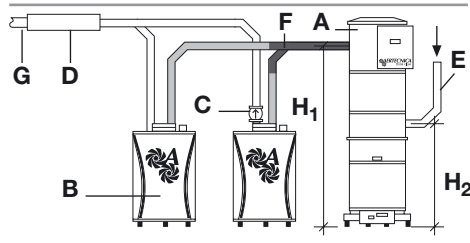
SOLUTION A		
COMPONENTS	MOD.	Q.TY
A ₁ Kompatta KT	KT30 (S) - KT30A (I)	1
C Check valve	-	-
D PVC silencer	Ø 80 mm	1
E Dust inlet	Ø 80 mm	
G PVC exhaust pipe	Ø 80 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	

1 Vacuum module + 1 Dust separator



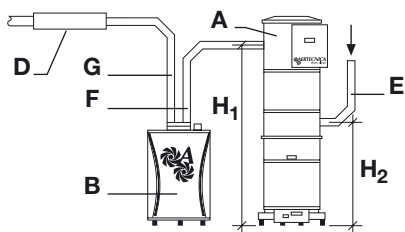
SOLUTION B		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT90/B (S) - LT90/B-AP (I)	1
B Vacuum module	T30ES	1
C Check valve	-	-
D Metal silencer	Ø 80 mm	1
E Dust inlet	Ø 80 mm	
F Air intake	Ø 80 mm	
G Metal exhaust pipe	Ø 80 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	

2 Vacuum modules + 1 Dust separator



SOLUTION C		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT90/B (S) or LT150/B (I)	1
B Vacuum module	T20ES + TR10S	2
C Check valve	for mod. TR10S	1
D Metal silencer	Ø 80 mm	1
E Dust inlet	Ø 80 mm	
F Air intake		
G Metal exhaust pipe	Ø 80 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	

1 Vacuum module + 1 Dust separator

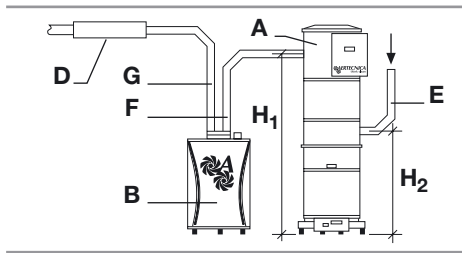


SOLUTION D		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT90/B (S) - LT90/B-AP (I)	1
B Vacuum module	TR30ES	1
C Check valve	-	-
D Metal silencer	Ø 80 mm	1
E Dust inlet	Ø 80 mm	
F Air intake	Ø 80 mm	
G Metal exhaust pipe	Ø 80 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	



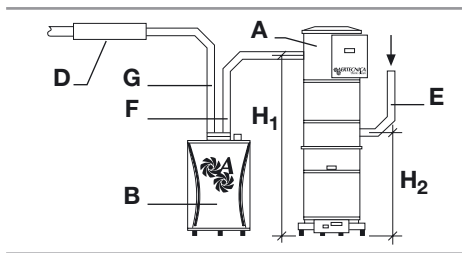
7.1.5 Vacuum systems for 4 operators

1 Vacuum module +
1 Dust separator



SOLUTION A		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT150/B	1
B Vacuum module	T40ES	1
C Check valve	-	0
D Metal silencer	Ø 100 mm	1
E Dust inlet	Ø 100 mm	
F Air intake	Ø 100 mm	
G Metal exhaust pipe	Ø 100 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	

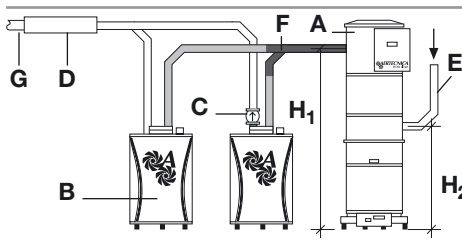
1 Vacuum module +
1 Dust separator



SOLUTION B		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT150/B	1
B Vacuum module	TR40S	1
C Check valve	-	0
D Metal silencer	Ø 100 mm	1
E Dust inlet	Ø 100 mm	
F Air intake	Ø 100 mm	
G Metal exhaust pipe	Ø 100 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	

7.1.6 Vacuum systems for 5 operators

2 Vacuum modules +
1 Dust separator

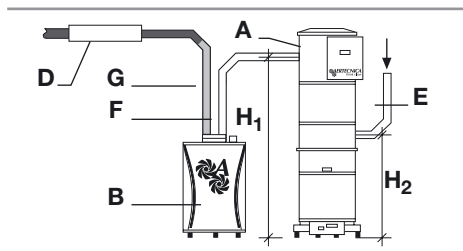


SOLUTION A		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT150/B	1
B Vacuum module	T30ES + TR20S	1
C Check valve	for mod. TR 20S	1
D Metal silencer	Ø 100-160 mm	1
E Dust inlet	Ø 100 mm	
F Air intake	Ø 100 mm Ø 80 mm	
G Metal exhaust pipe	Ø 100-160 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	



7.1.7 Vacuum systems for 6 operators

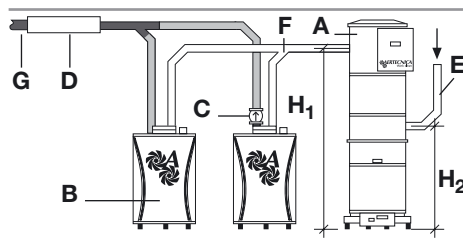
1 Vacuum module +
1 Dust separator



SOLUTION A		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT150/B	1
B Vacuum module	T60ES	1
C Check valve	-	-
D Metal silencer	Ø 100-160 mm	1
E Dust inlet	Ø 100 mm	
F Air intake	Ø 100 mm	
G Metal exhaust pipe	Ø 100 mm Ø 160 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	

7.1.8 Vacuum systems for 7 operators

2 Vacuum modules +
1 Dust separator

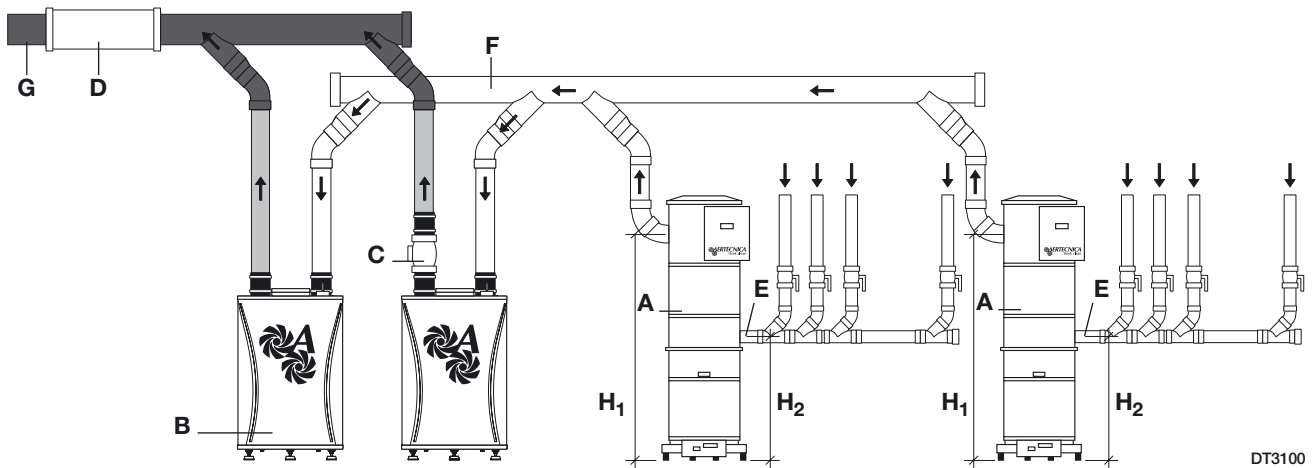


SOLUTION A		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT150/B	1
B Vacuum module	T40ES + TR30S	2
C Check valve	for mod. TR 30S	1
D Metal silencer	Ø 160 mm	1
E Dust inlet	Ø 100 mm	
F Air intake	Ø 100 mm	
G Metal exhaust pipe	Ø 100 mm Ø 160 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	



7.1.9 Vacuum systems for 8 operators

2 Vacuum modules +
2 Dust separators

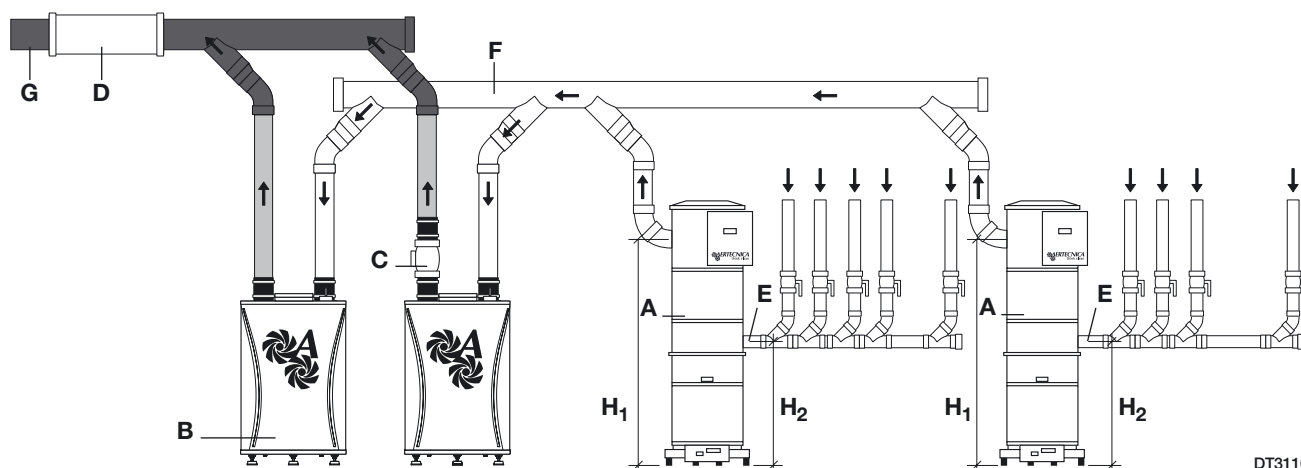


SOLUTION A		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT150/B AP + LT150/B AP	2
B Vacuum module	T60ES + TR20S	2
C Check valve	for mod. TR 20S	1
D Metal silencer	Ø 160 mm	1
E Dust inlet	Ø 100 mm	
F Air intake	Ø 160 mm	
G Metal exhaust pipe	Ø 160 mm — Ø 100 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	



7.1.10 Vacuum systems for 9 operators

2 Vacuum modules +
2 Dust separators

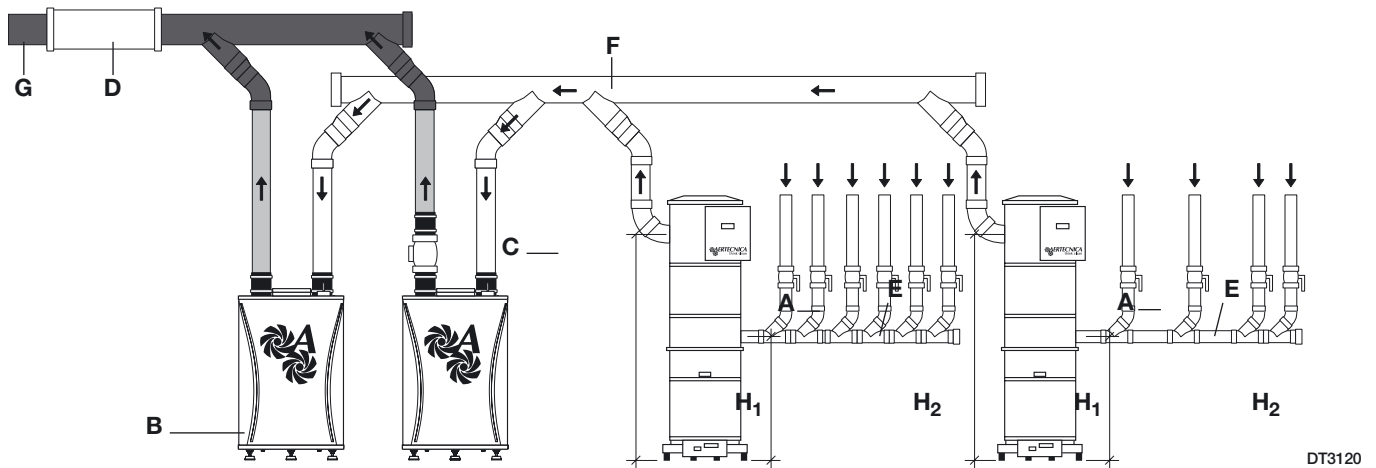


SOLUTION A		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT150/B AP + LT150/B AP	2
B Vacuum module	T60ES + TR30S	2
C Check valve	for mod. TR 30S	1
D Metal silencer	Ø 160 mm	1
E Dust inlet	Ø 100 mm	
F Air intake	Ø 160 mm	
G Metal exhaust pipe	Ø 160 mm — Ø 100 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	



7.1.10 Vacuum systems for 10 operators

2 Vacuum modules +
2 Dust separators

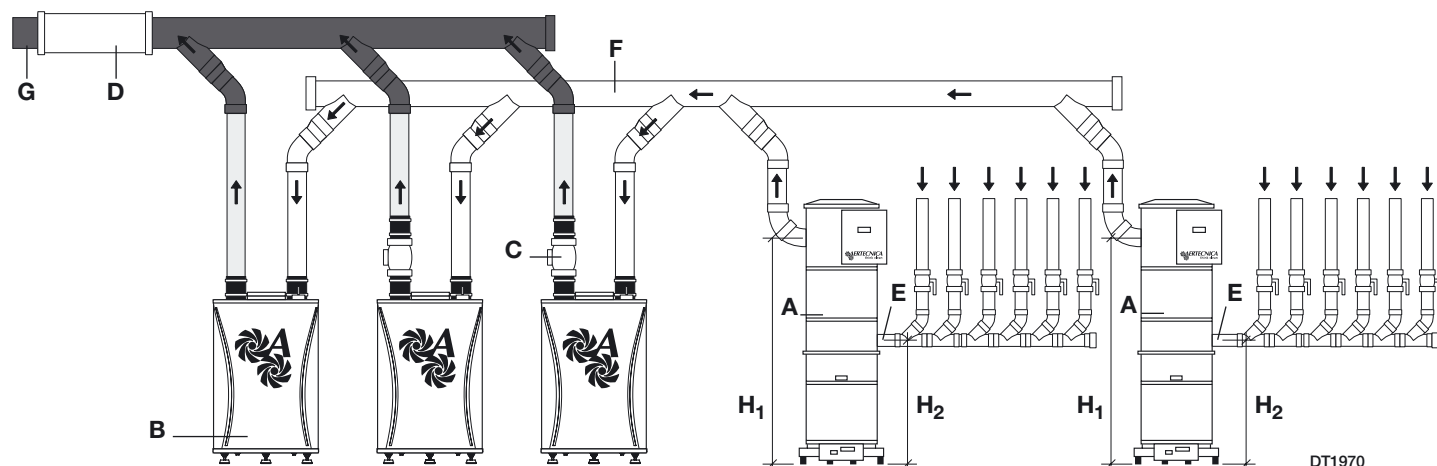


SOLUTION A		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT150/B AP + LT150/B AP	2
B Vacuum module	TR40S + T60ES	3
C Check valve	for mod. TR 40S	2
D Metal silencer	Ø 160 mm	1
E Dust inlet	Ø 100 mm	
F Air intake	Ø 160 mm	
G Metal exhaust pipe	Ø 160 mm ———— Ø 100 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	



7.1.10 Vacuum systems for 12 operators

3 Vacuum modules +
2 Dust separators



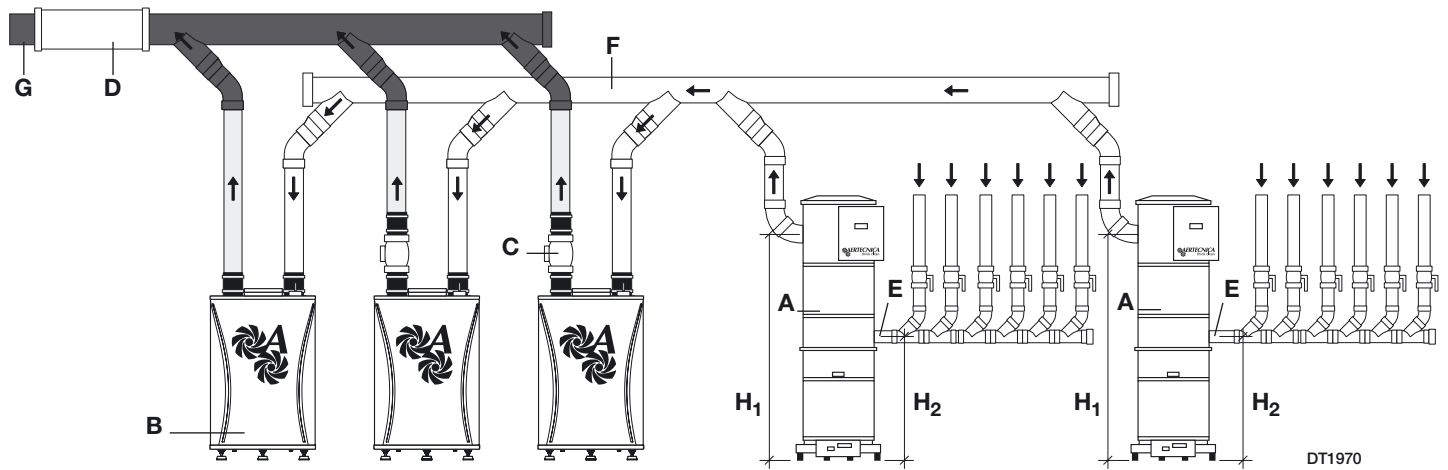
For 12 operators

SOLUTION A		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT150/B AP + LT150/B AP	2
B Vacuum module	T60ES + TR30S + TR30S	3
C Check valve	for mod. TR 30S	2
D Metal silencer	Ø 160 mm	1
E Dust inlet	Ø 100 mm	
F Air intake	Ø 160 mm	
G Metal exhaust pipe	Ø 160 mm Ø 100 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	



7.1.10 Vacuum systems for 14 operators

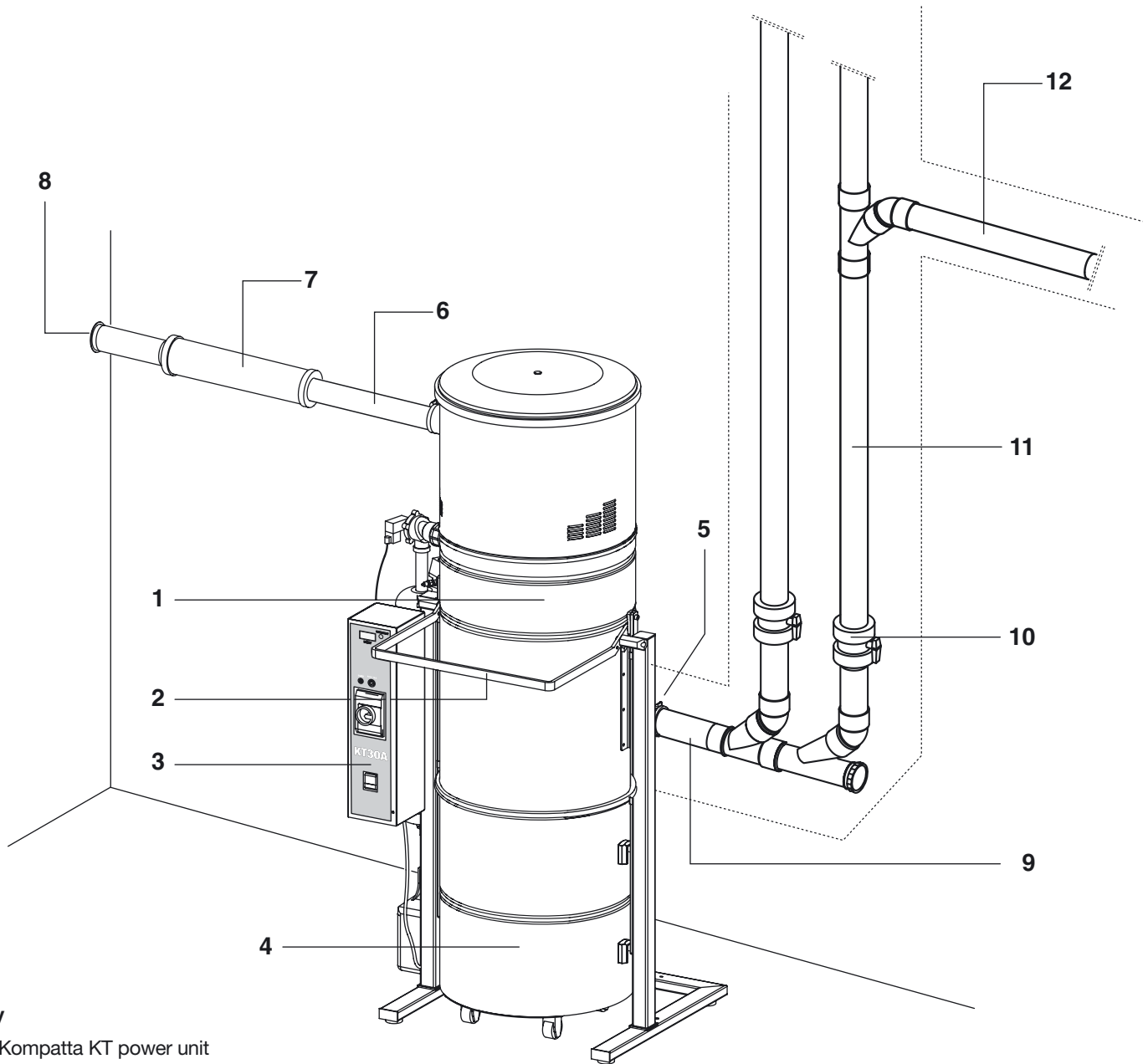
3 Vacuum modules +
2 Dust separators



SOLUTION A		
COMPONENTS	MOD.	Q.TY
A Dust separator	LT150/B AP + LT150/B AP	2
B Vacuum module	T60ES + TR40S + TR40S	3
C Check valve	for mod. TR 40S	2
D Metal silencer	Ø 160 mm	1
E Dust inlet	Ø 100 mm	
F Air intake	Ø 160 mm	
G Metal exhaust pipe	Ø 160 mm — Ø 100 mm	
H ₁ Air intake height	1500 mm	
H ₂ Dust inlet height	870 mm	



7.2 Example with a Kompatta KT system

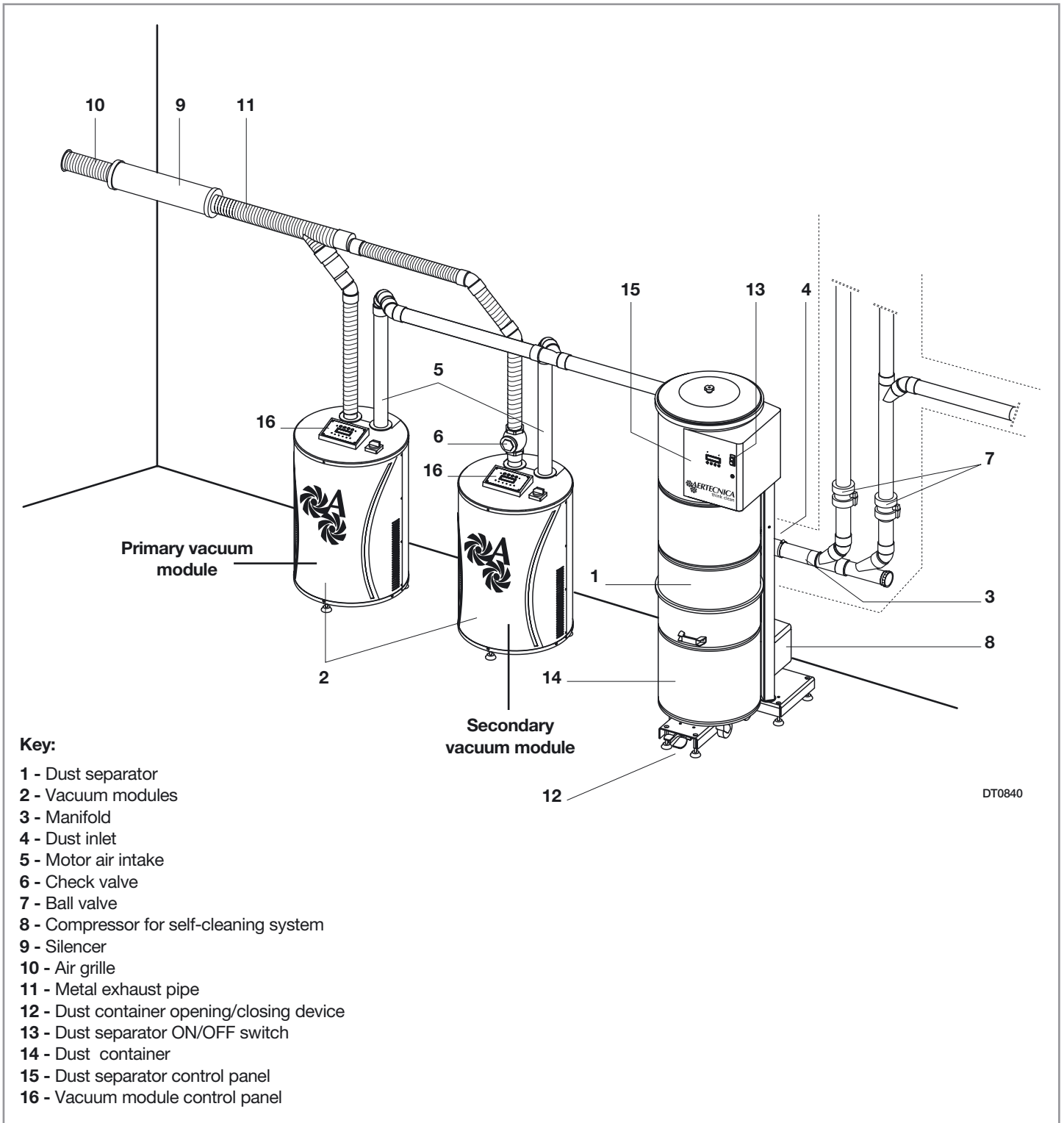


Key

- 1 - Kompatta KT power unit
- 2 - Dust container opening/closing lever
- 3 - Electric board
- 4 - Dust container
- 5 - Reversible dust inlet
- 6 - Air outlet
- 7 - Silencer
- 8 - Air grille
- 9 - Manifold
- 10 - Dust line shut-off ball valve
- 11 - Rising pipe
- 12 - Trunk line

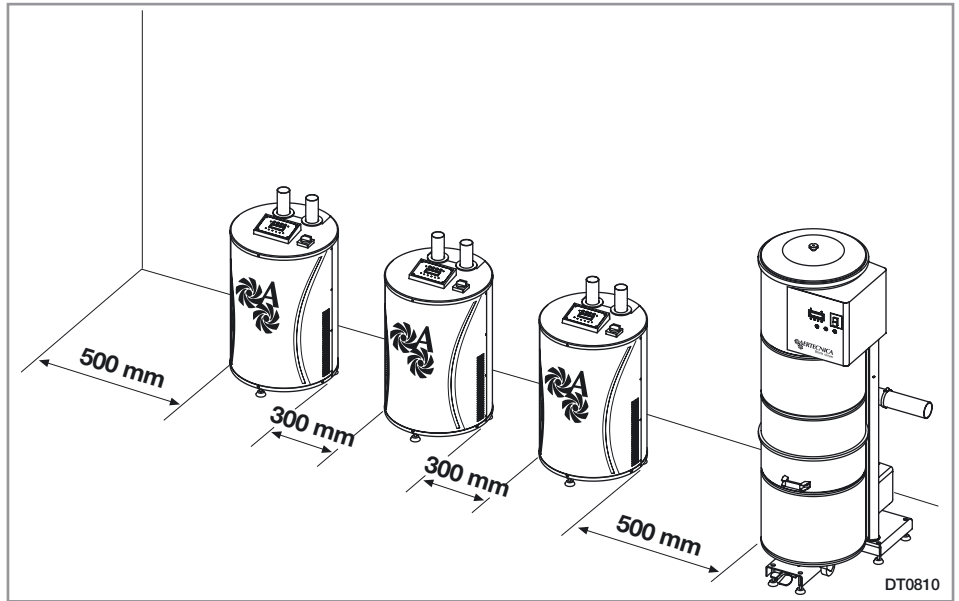


7.3 Example of a system with 1 and 2 modules

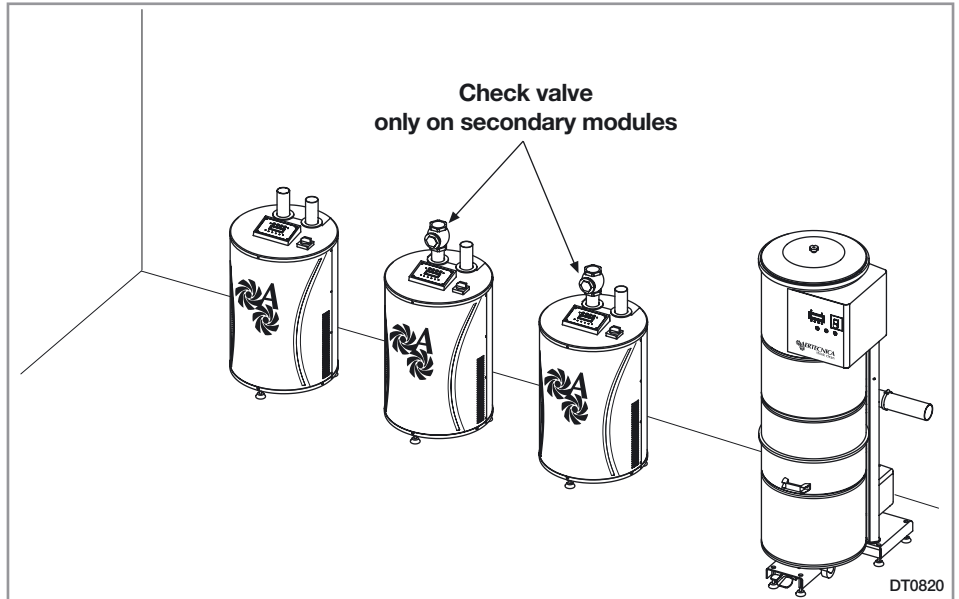


7.4 Connecting a system with 3 modules

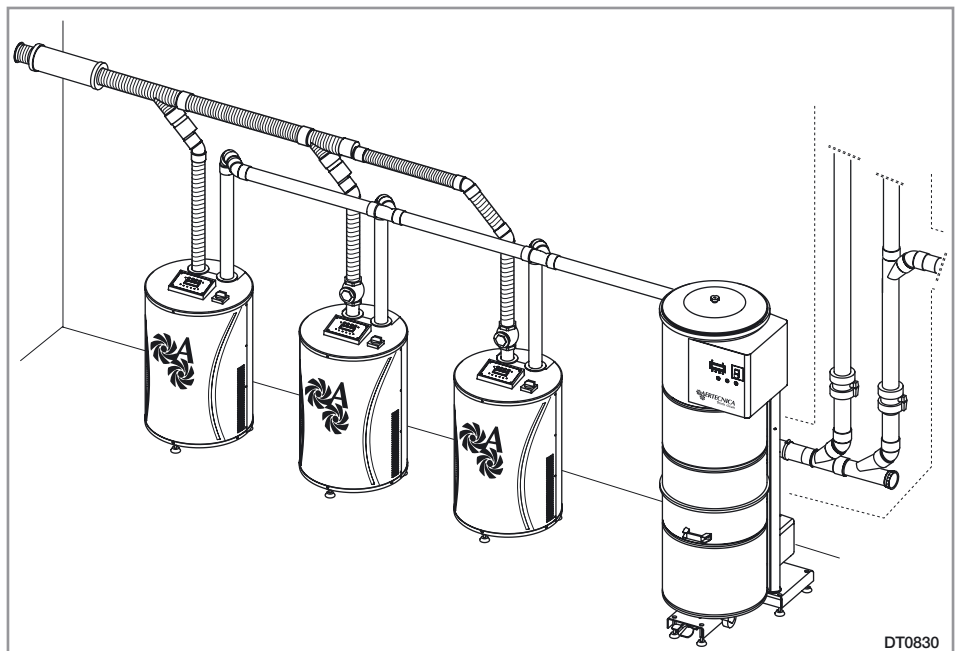
1 - Position the vacuum modules and the dust separator in the envisaged installation site.



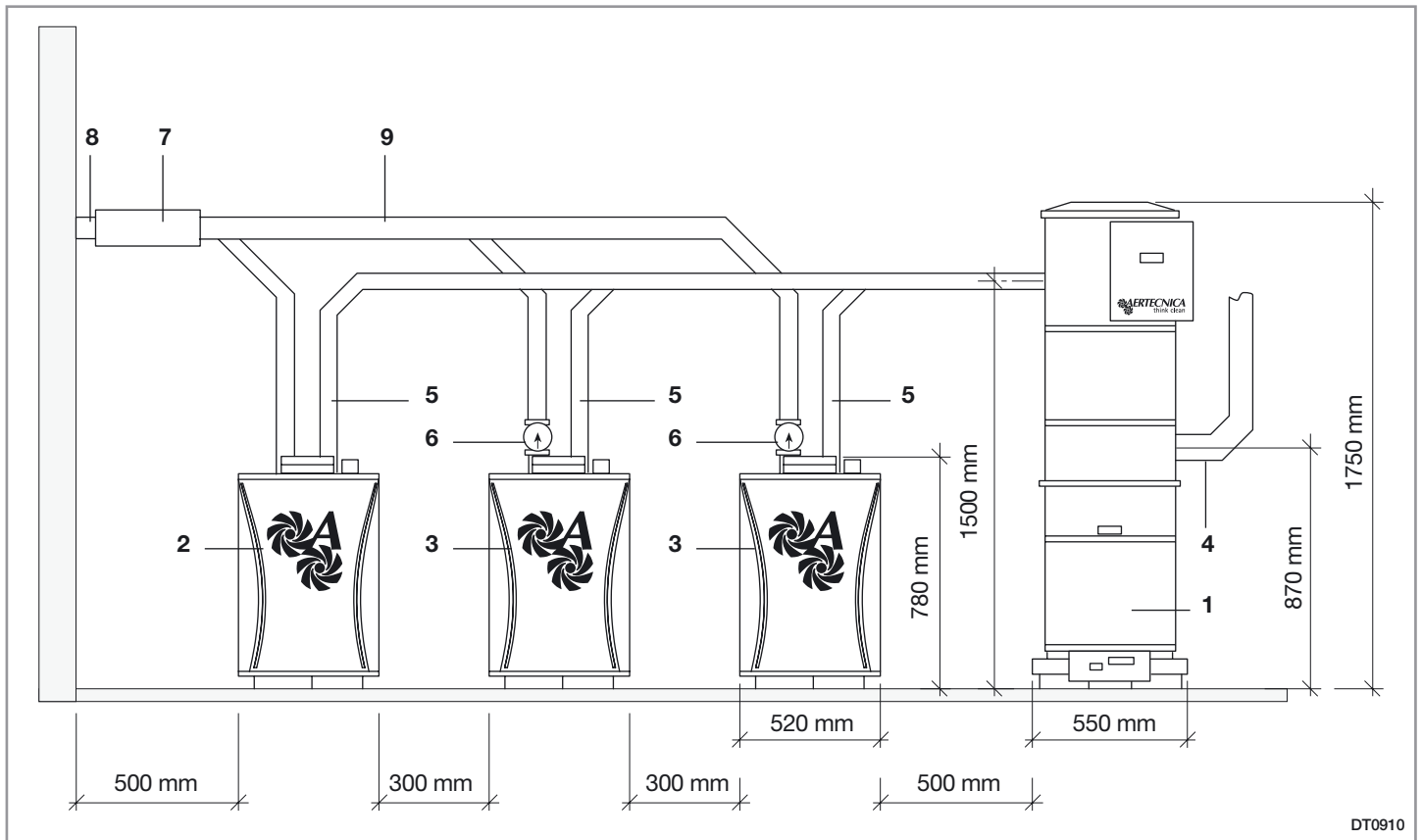
2 - Connect the check valves (for vacuum systems with 2/3 modules) to the air outlet and screw in the relevant fittings.



3 - Connect the motor air intake pipes to the dust separator.



7.5 Distances of the system components



DT0910

Key:

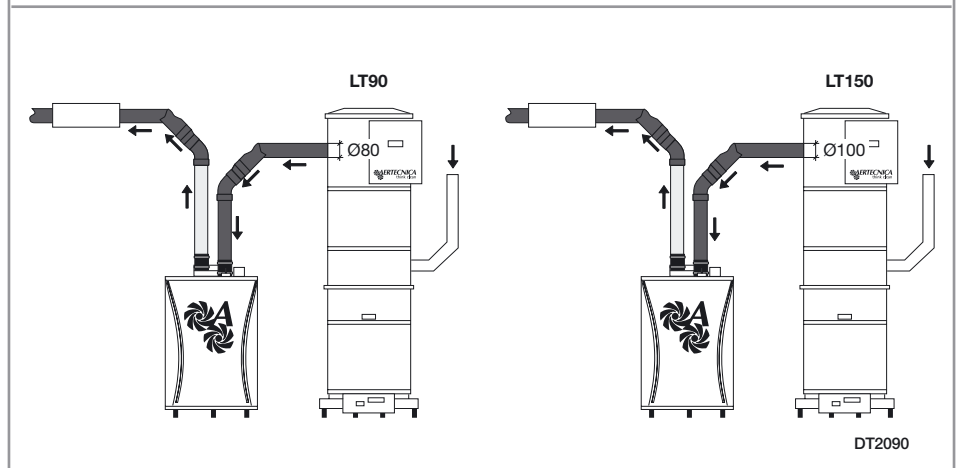
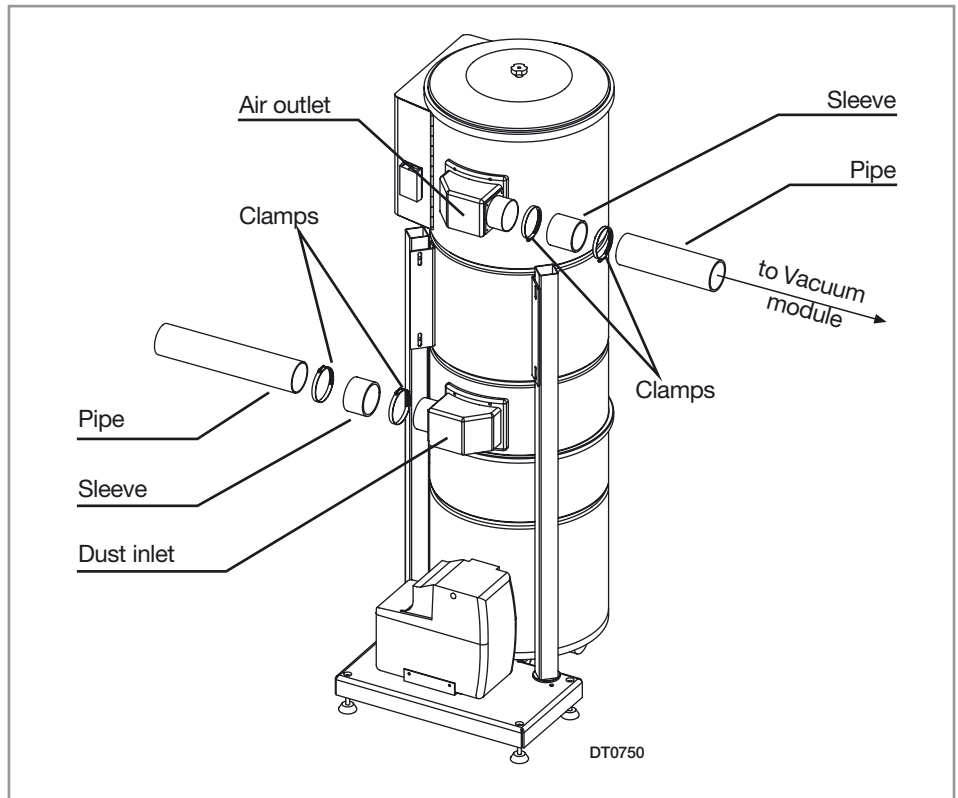
- 1 - Dust separator
- 2 - Primary vacuum module
- 3 - Secondary vacuum module
- 4 - Dust inlet
- 5 - Motor air intake
- 6 - Check valve
- 7 - Silencer
- 8 - Air grille
- 9 - Exhaust pipe



7.6 Dust inlet and air outlet

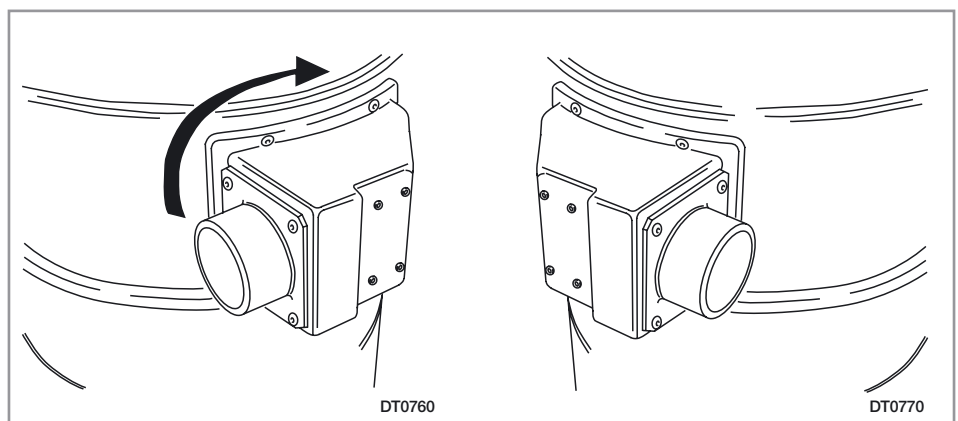
Dust separator model: LT 90/B - LT 150/B

The dust inlet and air outlet pipes must be connected to the relevant fittings with the special sleeves and clamps supplied with the dust separator.



7.7 Positioning the inlet and outlet fittings

The fittings can be positioned either to the right or the left depending on the position of the vacuum module and of the dust pipe.



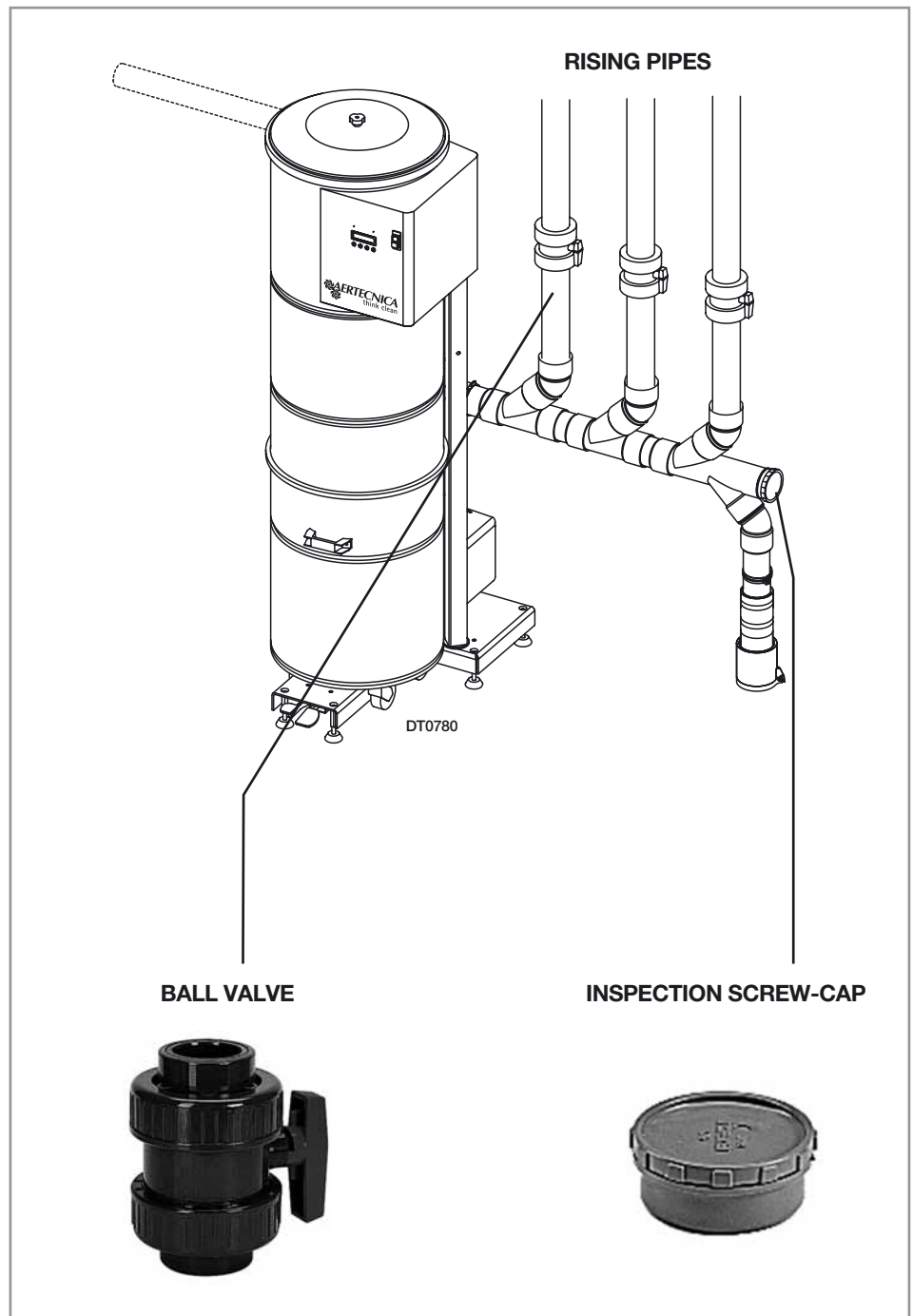
7.8 Dust manifold

The minimum diameter of the collecting manifold must be suitable for the number of operators for which the central vacuum system has been designed.

Ex: 4 operators =
minimum diameter of the manifold = 80 mm

Ex: 6 operators =
minimum diameter of the manifold = 100 mm

The manifold unites all main trunk lines and/or rising pipes. Every pipeline connected to the manifold must be fitted with a special ball valve to shut off the relevant zone or floor.

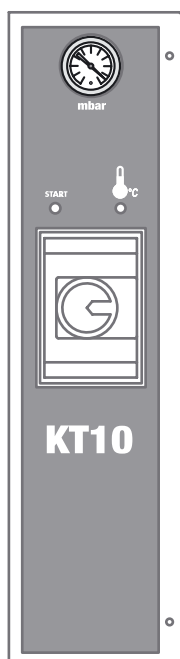


8.0 Control panels

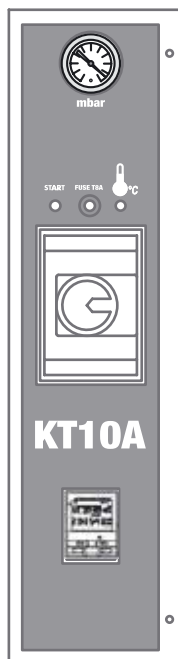
8.1 Control panel - Kompatta KT

Kompatta KT10 power unit

Kompatta KT10A power unit



Main Switch



Main Switch



GREEN LIGHT
Indicates that the motor is running



GREEN LIGHT
Indicates that the motor is running



RED LIGHT
Indicates that the power unit is blocked due to an excessive temperature in the motor chamber



RED LIGHT
Warns of a blockage of the power unit due to an excessive temperature in the motor chamber



ANALOG DISPLAY
Shows the working vacuum parameter (in mbar)



COMPRESSOR FUSE
Protects the compressor from electrical overloads



ANALOG DISPLAY
Shows the working vacuum parameter (in mbar)



SELF-CLEANING TIMER
Lets you program the self-cleaning cycle.



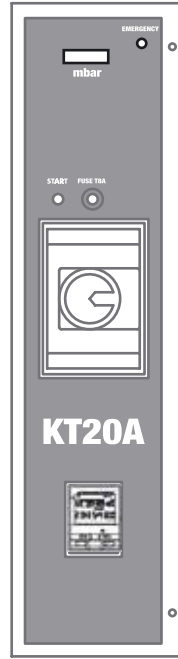
8.1

Kompatta power unit: KT20M - KT20 -KT30

Kompatta power unit: KT20MA - KT20A -KT30A



Main Switch



Main Switch



GREEN LIGHT
Indicates that the motor is running



GREEN LIGHT
Indicates that the motor is running



DIGITAL DISPLAY
Indicates the working vacuum parameter (in mbar) and the inverter fault code



COMPRESSOR FUSE
Protects the compressor from electrical overloads



DIGITAL DISPLAY
Indicates the working vacuum parameter (in mbar) and the inverter fault code



INVERTER BLOCK INDICATOR
Indicates that the power unit is blocked due to an inverter fault or anomaly



INVERTER BLOCK INDICATOR
Indicates that the power unit is blocked due to an inverter fault or anomaly



SELF-CLEANING TIMER
Lets you program the self-cleaning cycle



8.2 Control panel - Vacuum Module



DT0090



Green light ON
Indicates that the vacuum module is running correctly



Key to quit the set function or to reset a blocked vacuum module



Key to scroll through the program menu downwards or to the side



Red light ON
Indicates that the vacuum module is blocked



Key to confirm the set function or to continue setting the parameters



Key to scroll through the program menu downwards or to the side

Red light flashing
Warns of a fault or anomaly of the vacuum module

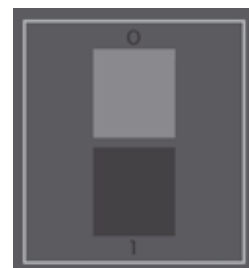


8.3 Control panel - Dust Separator



DT0970

Main Switch



Green light ON
Indicates that the self-cleaning system has been activated



Red light ON
Warns that the dust separator is blocked

Red light flashing
Warns of a failure of the dust separator



Key to quit the set function or to reset a blocked dust separator



Key to confirm the set function or to continue setting the parameters



Key to scroll through the program menu downwards or to the side

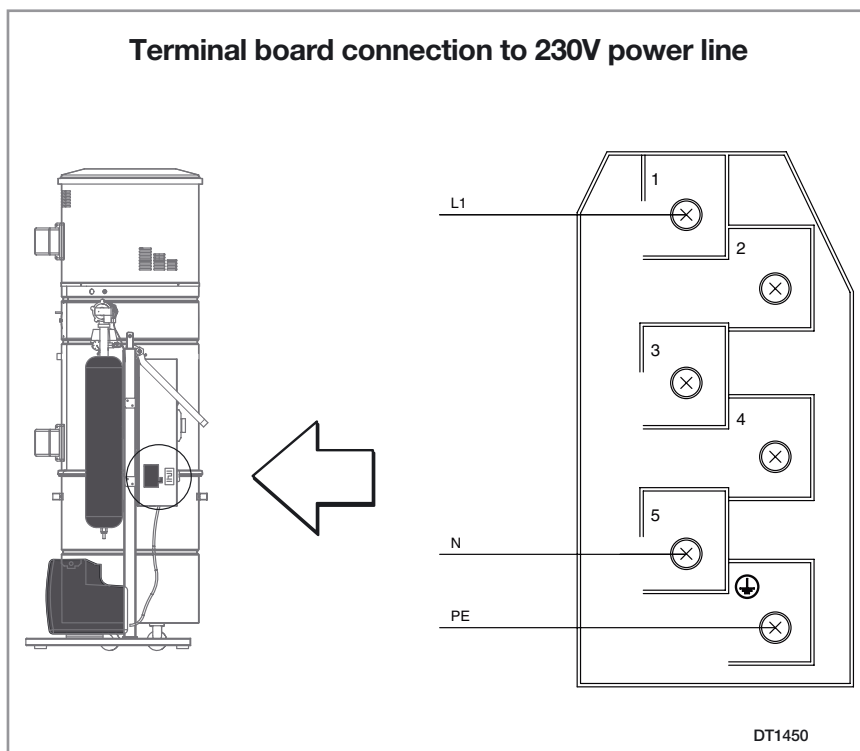


Key to scroll through the program menu downwards or to the side

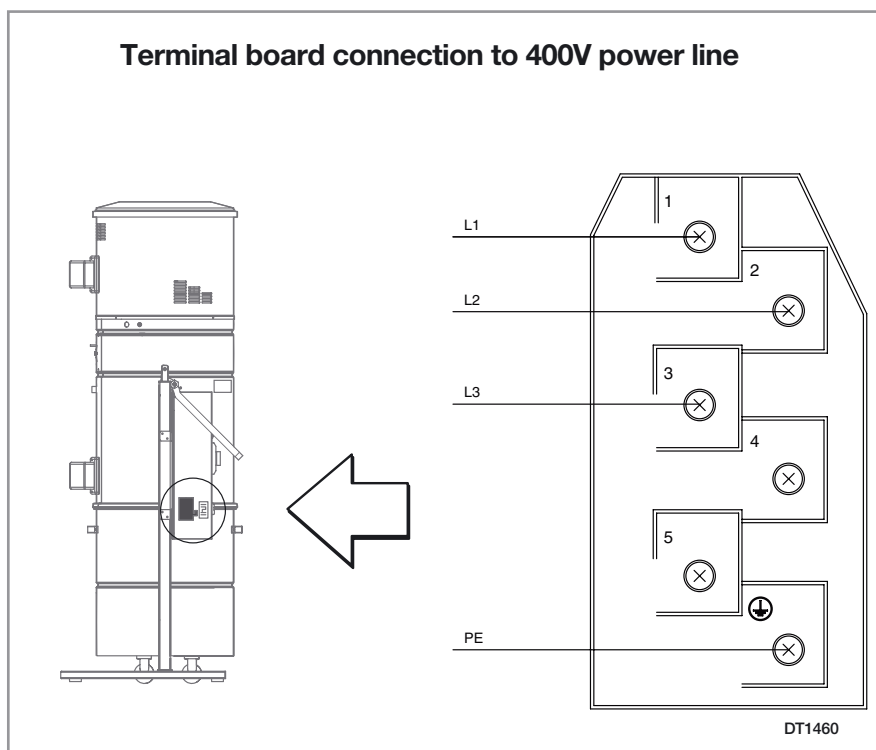


8.4 Power supply connection - Kompatta KT

Kompatta KT20M - KT20MA power supply connection

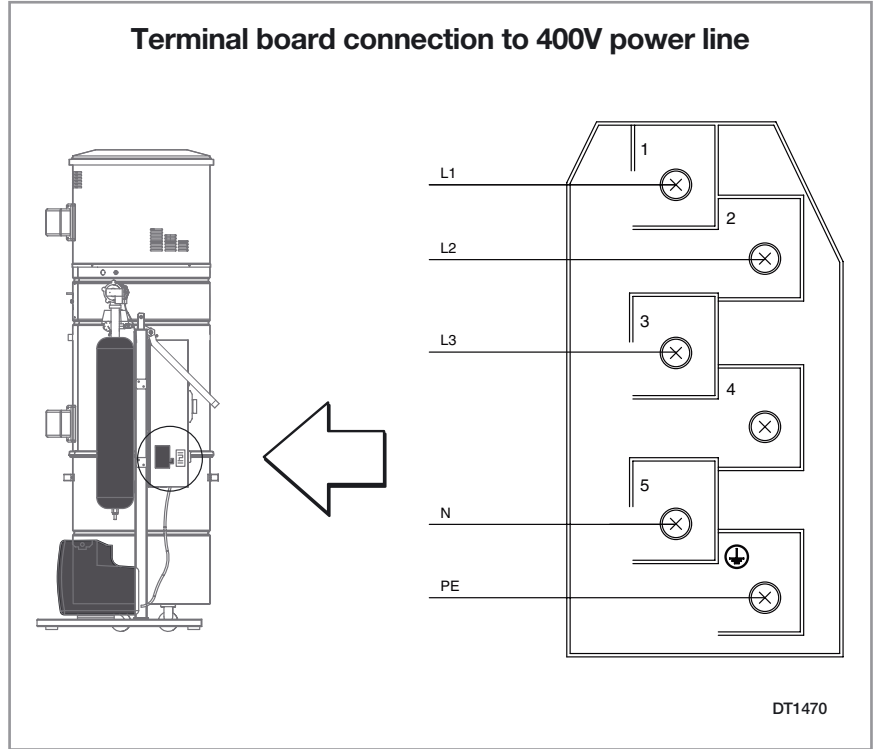


Kompatta KT10 - KT20 - KT30 power supply connection



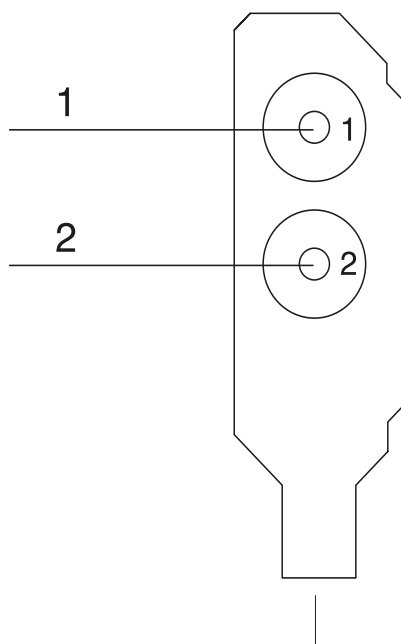
8.4

Kompatta KT10A - KT20A - KT30A power supply connection

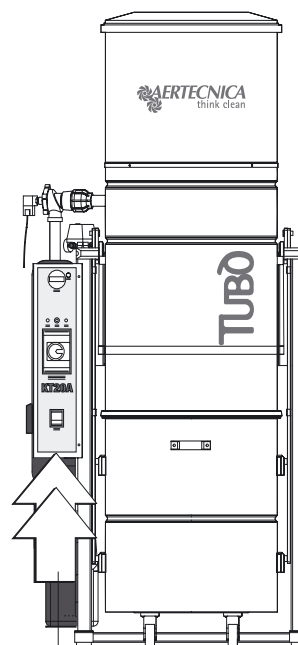


8.4.1 Sockets & compressor line - Kompatta KT

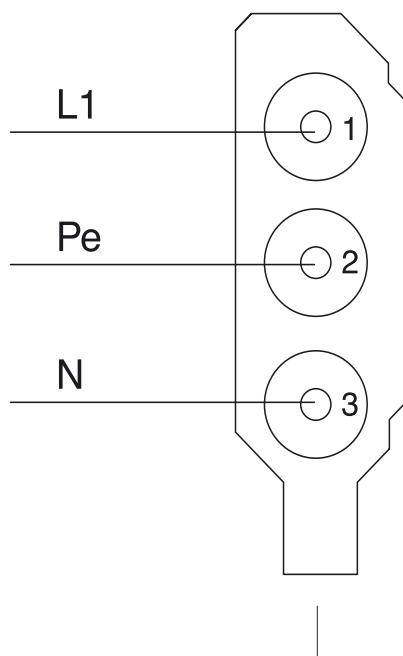
LS Sockets line: Connection to the sockets line from each floor to the electric board



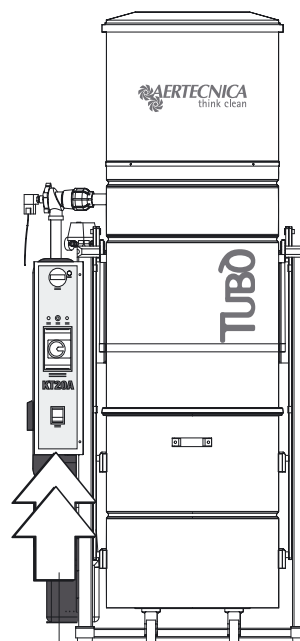
LP



AC Compressor: Connection of the Compressor to the electric board



AC



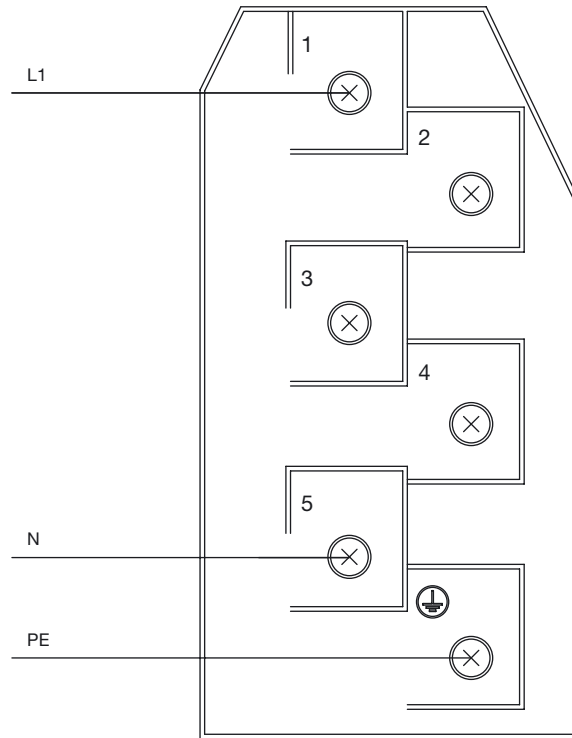
DT1490



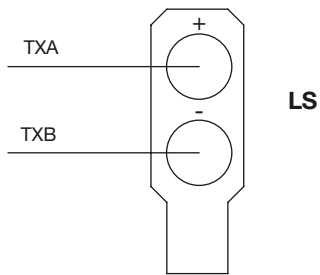
8.5 Terminal board connection - Vacuum module

Vacuum module M20ES

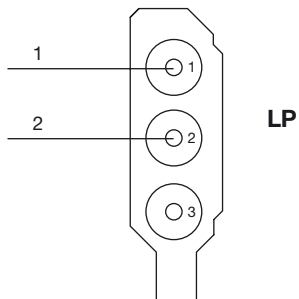
Terminal board connection to 230V line



LS Vacuum module serial line



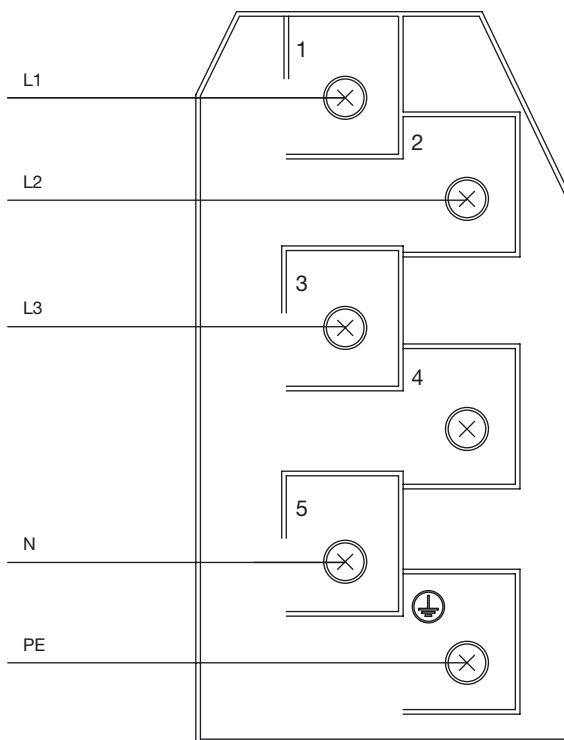
LS Sockets line: Connection to the sockets line from each floor



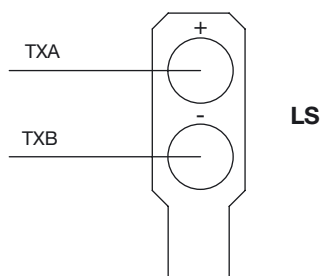
8.5

Vacuum module T20ES - T30ES - T40ES - T60ES and TR10S - TR20S - TR30S - TR40S

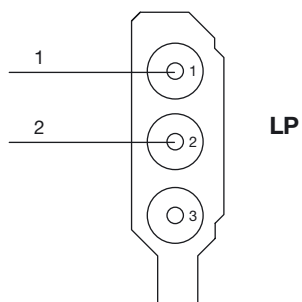
Terminal board
connection to 400V line



LS Vacuum module serial line



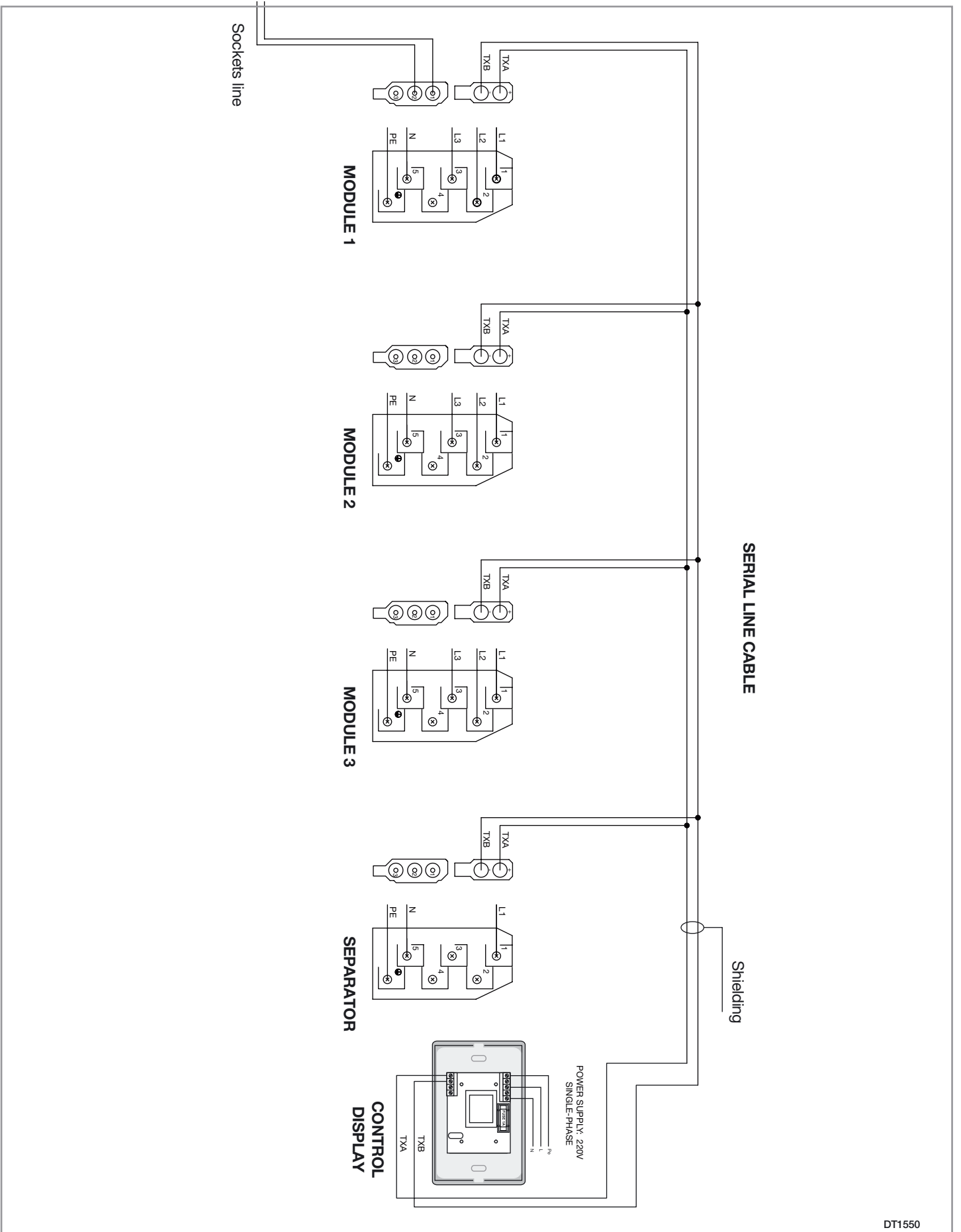
LS Sockets line: Connection to the sockets line from each floor



DT1540



8.5.1 Serial line connection

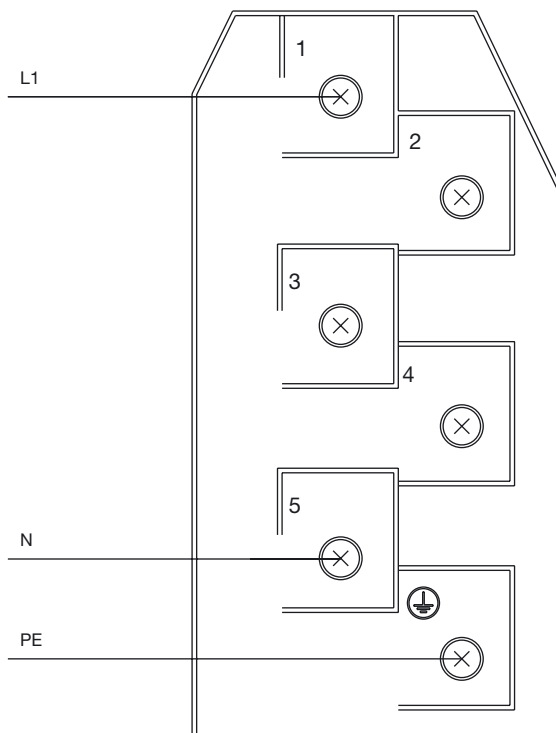


DT1550

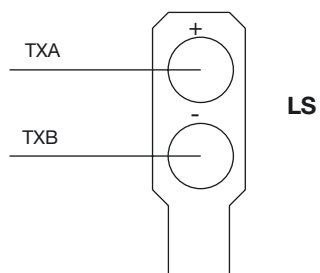


8.6 Terminal board connection - Dust separator

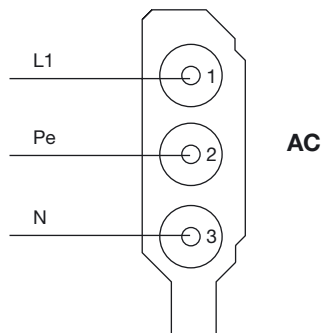
Terminal board connection to 230V line



LS Dust separator serial line



AC Compressor: Compressor electrical connection



DT1570



8.7 Control Display

This component that can be installed in various zones of the building, has been designed to visually check the state of the system at any time. If the vacuum cleaning system runs regularly, the display will show the message "SISTEMA OK" (SYSTEM OK).

In case of troubles, the display will warn of the anomalies found.

Electrical connection

The Control Display has an input voltage of 220V and is mounted inside an electrical box (ex. Mod.503).

It is connected to power unit by a serial port with a shielded data transmission cable (2x1 mm).

Displayed parameters

The Control Display can display the following parameters:

- the amperes absorbed by the motor
- the maximum time the system is used continuously
- the hours of work of the system
- the temperature in the motor chamber
- the working vacuum in mmH₂O
- how full the dust bag is as a percentage (if connected to the self-cleaning system through a peripheral device)
- the saturation of the filter cartridge as a percentage (if connected to the self-cleaning system through a peripheral device)

Remake

The 220V line must be connected separately with respect to the shielded serial line.

Remake

THE CONTROL DISPLAY CANNOT BE USED WITH THE KOMPATTA KT UNITS

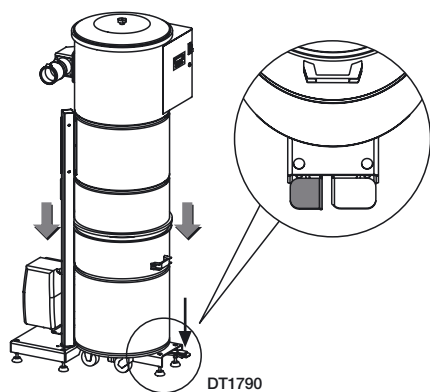


DT0980

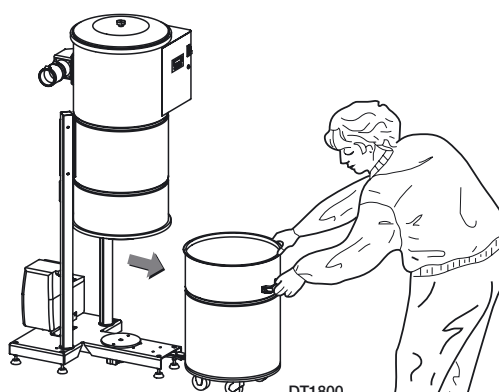


9.0 Dust separator maintenance

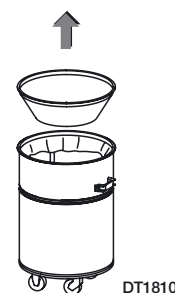
9.1 Changing the dust bag



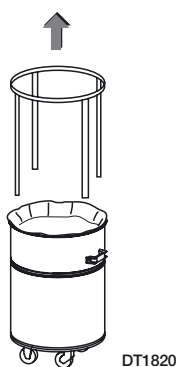
1 - Unlatch the bottom module stepping down on the left pedal (the small one).



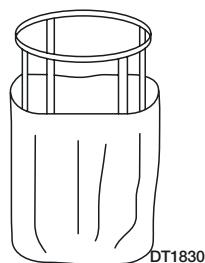
2 - Remove the bottom module using the special handles and letting it slide on its castors.



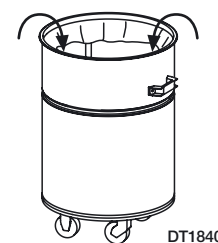
3 - Raise the cone with seal and clean with a damp cloth.



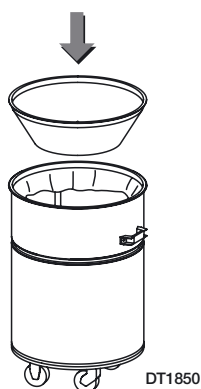
4 - Take out the bag tensioner; remove the old bag and throw it away



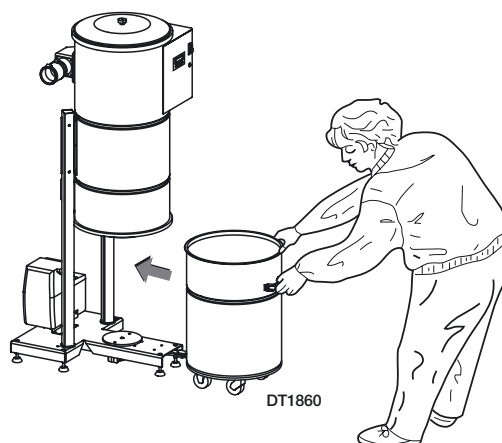
5 - Fit a new bag outside the bag tensioner and place both into the dust container.



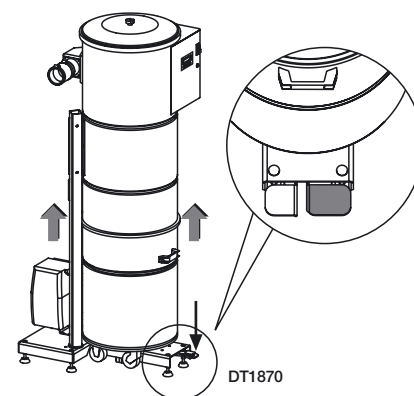
6 - Fold the edges of the bag inwards.



7 - Refit the cone with seal and make sure that the seal remains in position while re-latching the module.



8 - Re-position the bottom module using the special handles and letting it slide on its castors.



9 - Re-latch the bottom module stepping down on the right pedal (the big one) and moving the lever up and down until the module is locked in position.

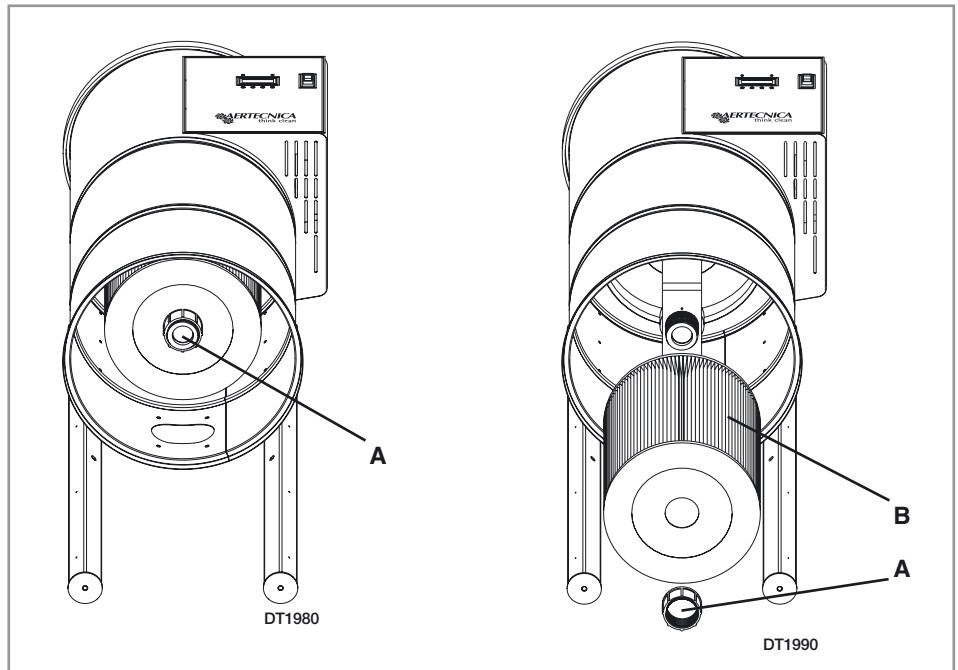


9.2 Changing the filter cartridge

The filter cartridge is positioned inside the main body.

To change the cartridge, follow the instructions below:

- 1 - Disconnect the machine from the electrical power supply.
- 2 - Open the machine and remove the dust container.
- 3 - Unscrew cap (A).
- 4 - Remove the old cartridge and fit a new one (B).
- 5 - Re-tighten the cap and re-position the dust container.
- 6 - In the models with self-cleaning system, clean the ultrasound sensor with a damp cloth.



9.3 Cleaning the filter cartridge

Before cleaning the filter cartridge, fit a spare cartridge.

Remove and clean the filter cartridge using the central vacuum system and the crevice nozzle supplied.

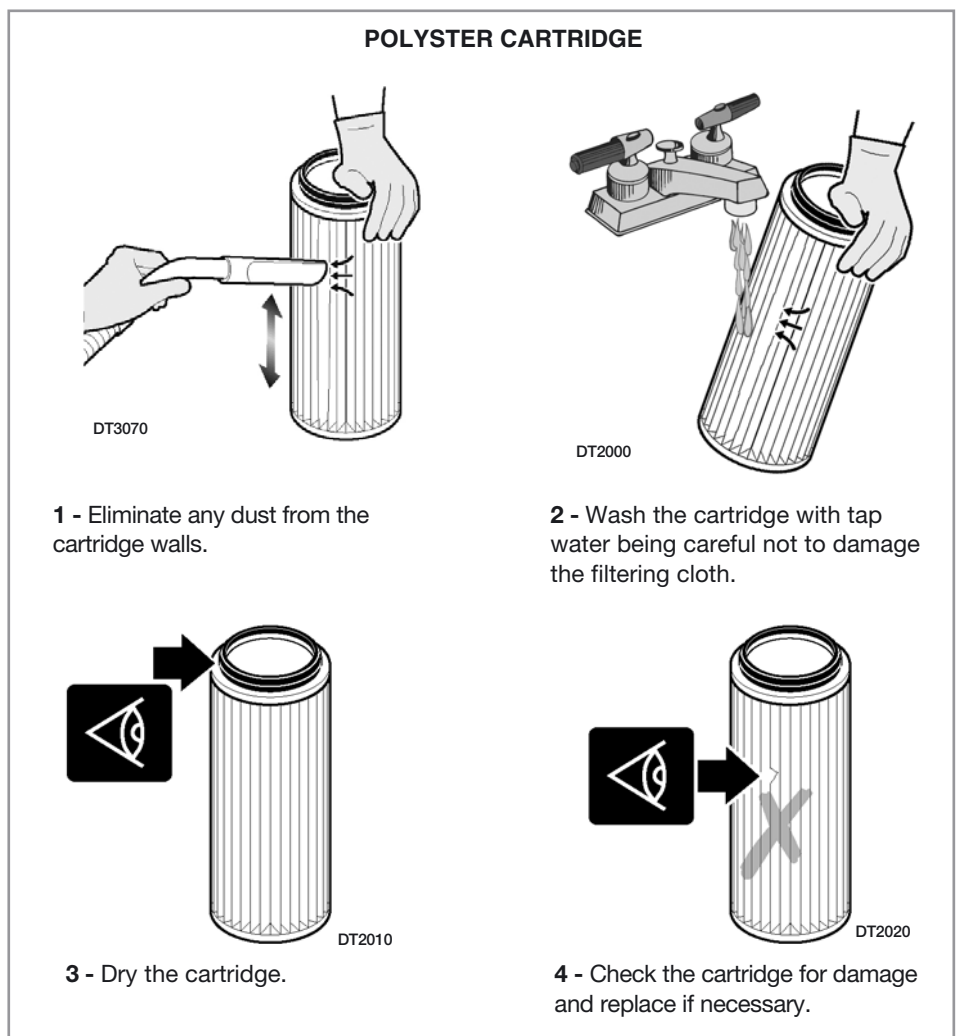
During cleaning, pay attention not to damage the filtering cloth.

If, during cleaning, the cloth gets damaged, the cartridge must be replaced.

We recommend cleaning the cartridge for max 5 times.

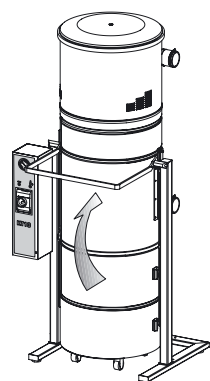
Remake

Do not operate the central vacuum system without a filter cartridge. Not observing this precaution may result in serious damage to the turbine.



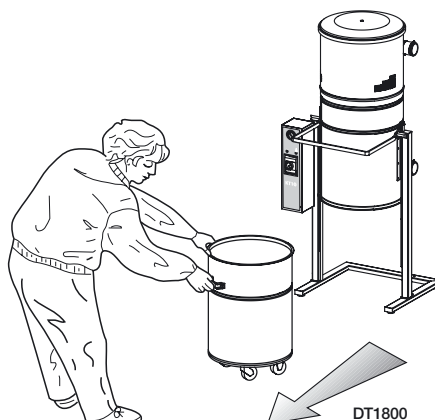
9.4 Kompatta KT maintenance

9.5 Changing the dust bag



DT1790

1 - Unlatch the dust container by moving the relevant handle upwards.



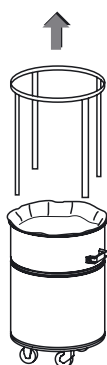
DT1800

2 - Remove the bottom module using the special handles and letting it slide on its castors.



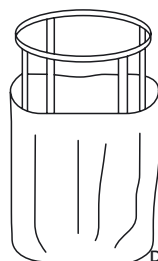
DT1810

3 - Raise the cone with seal and clean with a damp cloth.



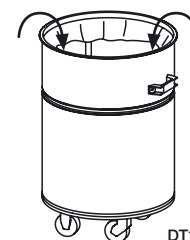
DT1820

4 - Take out the bag tensioner; remove the old bag and throw it away.



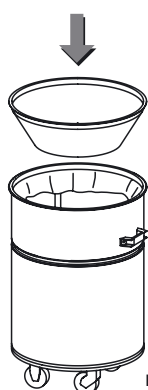
DT1830

5 - Fit a new bag outside the bag tensioner and place both into the dust container.



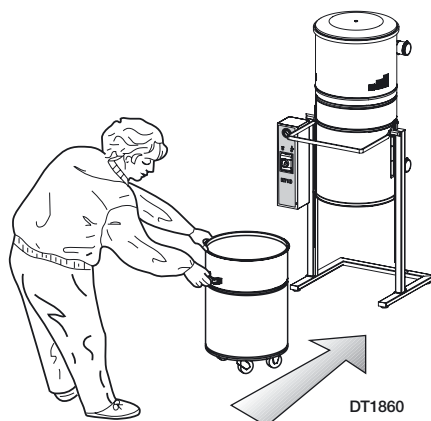
DT1840

6 - Fold the edges of the bag inwards.



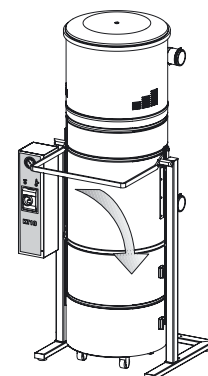
DT1850

7 - Refit the cone with seal and make sure that the seal remains in position while re-latching the module.



DT1860

8 - Re-position the dust container using the special handles and letting it slide on its castors.



DT1870

9 - Re-latch the dust container by moving the relevant handle downwards.

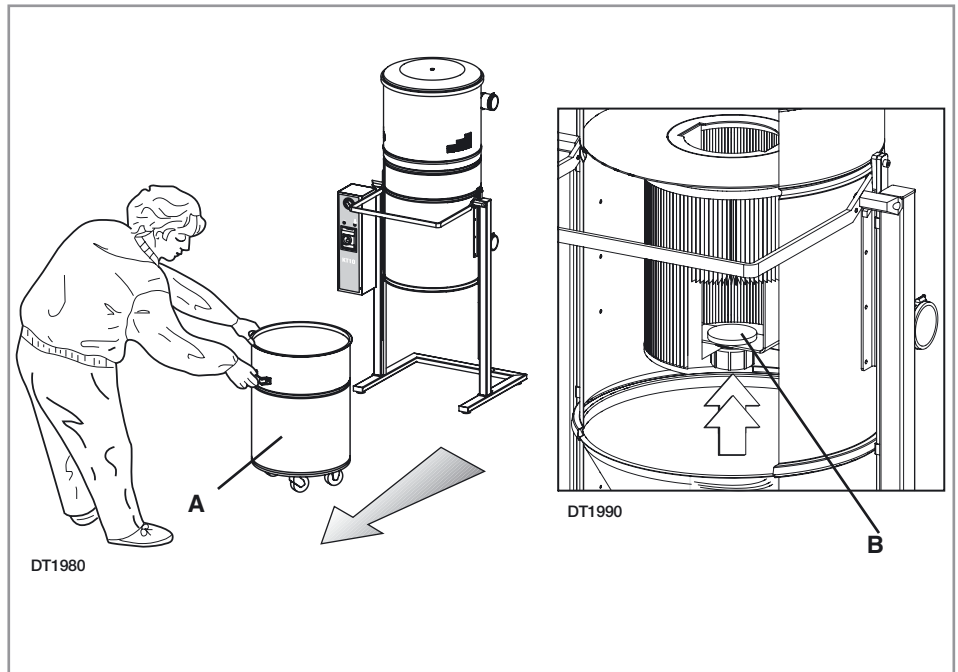


9.6 Changing the filter cartridge

The filter cartridge is positioned inside the main body.

To change the cartridge, follow the instructions below:

- 1 - Disconnect the machine from the electrical power supply.
- 2 - Open the machine and remove the dust container (A).
- 3 - Unscrew cap (B).
- 4 - Remove the old cartridge and fit a new one.
- 5 - Re-tighten the cap and re-position the dust container.



9.7 Cleaning the filter cartridge

Before cleaning the filter cartridge, fit a spare cartridge.

Remove and clean the filter cartridge using the central vacuum system and the crevice nozzle supplied.

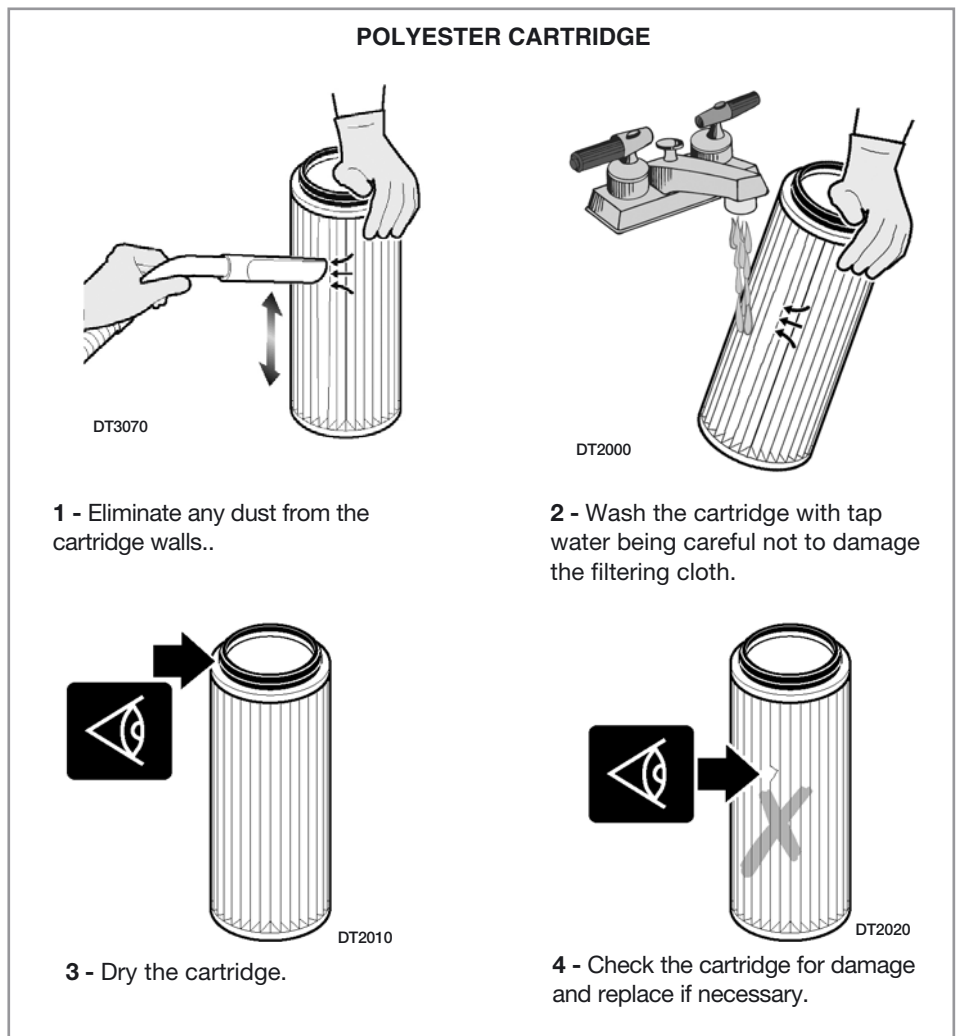
During cleaning, pay attention not to damage the filtering cloth.

If, during cleaning, the cloth gets damaged, the cartridge must be replaced.

We recommend cleaning the cartridge for max 5 times.

Remake

Do not operate the central vacuum system without a filter cartridge. Not observing this precaution may result in serious damage to the turbine.



1 - Eliminate any dust from the cartridge walls..

2 - Wash the cartridge with tap water being careful not to damage the filtering cloth.

3 - Dry the cartridge.

4 - Check the cartridge for damage and replace if necessary.



FORM FOR REQUESTING A COST ESTIMATE

DATE:

NAME IN FULL:

CORPORATE NAME:

QUALIFICATION:

ADDRESS:

POST CODE:

TOWN:

COUNTRY:

TEL.:

FAX:

E-MAIL:

WEB:

- INTENDED USE OF THE BUILDING:

- INDICATIVE SURFACE AREA in m²

- MATERIAL TO BE VACUUMED

 DUST OTHER (specify)
.....

- PIPE NETWORK INSTALLATION

 EMBEDDED IN FLOOR IN FLOATING FLOOR IN FALSE CEILING (space available cm) ON SURFACE

- N. OF SIMULTANEOUS OPERATORS

- VACUUM SOCKET MODEL

 NEW AIR SQUARE TECH FLOOR OPEN

- PLANS ENCLOSED - SCALE :

(indicate where you wish to install the power unit)

NOTES:
.....
.....
.....



AERTECNICA S.p.A.
Via Cerchia di S. Egidio, 760 - 47023 Cesena (FC) Italy
Tel. +39 0547 637311 - Fax +39 0547 631388
info@aertecnica.it
www.aertecnica.it