



TECHNICAL EDITION 2026
UNIFIED DOCUMENT

INSTALLATION GUIDE · CENTRAL VACUUM

RETRACTABLE HOSES **RETRAFLEX** & R-FLEX.

The complete guide, from site plan to final check. Hose storage run, stop, traditional network, power unit, locking and door fitting — brought together in a single document, in the order of the job site.

MORE POWERFUL. CLEANER. MORE DURABLE.

HOW TO READ THIS GUIDE.

This document brings together in a single guide the best of the Retraflex 2 manuals, the old Retraflex / Hide-A-Hose manual, the R-Flex guide and the AspiWall guides. It is written to be followed **in the order of the job site**, even by someone who has never installed a retractable hose.

A Retraflex or R-Flex installation is not an ordinary vacuum network. The hose is not stored in a cupboard : it is **drawn in and stored inside the PVC network itself**. This imposes precise rules on length, bend radius, fitting direction and internal cleanliness of the pipe. These rules are different — and stricter — than those of a standard traditional network.

◆ ASPIWALL PRIORITY RULE

In case of contradiction between the old manuals and this guide, **the AspiWall rules apply**. Some values from the old manuals (+1.5 m margin before the stop, inlet height "at electrical outlet height", ceiling height "1.30 to 1.40 m") have been deliberately replaced by the AspiWall values below. Do not use the old values.

THE TWO ZONES OF THE NETWORK

This is the most important point in the whole guide. A network for a retractable hose is always divided into two zones separated by the **stop (red stop)**. These two zones do not follow the same rules.

① BEFORE THE STOP — STORAGE ZONE

The PVC acts as a **storage sleeve** for the hose. Only special large-radius Retraflex bends (90°, 45°, 22.5°). No traditional elbow. The hose travels here at every use.

② AFTER THE STOP — TRADITIONAL NETWORK

The pipe becomes a : the hose never goes there. Traditional fittings are used (long-sweep 90°, 45°, T/Y) up to the manifold and the power unit.

The complete path, from the user's gesture to the motor, always follows this logic :

WALL INLET → STORAGE ZONE → **STOP** → TRADITIONAL NETWORK → MANIFOLD →
POWER UNIT

i TWO RANGES, ONE METHOD

This guide covers the **Retraflex Soft Touch** (soft textile cover, for private homes) and the **R-Flex Bleu Flash** (no fabric, easy to clean, for professional use). Installing the network, the stop and the fittings is identical for both. Only the hose changes.

THE ASPIWALL GOLDEN RULES.

If you were to remember only one page, this is it. Each rule is detailed further on in the guide.

ASPIWALL RULE	KEY POINT
Height — hose coming from the floor	Inlet centre at 80 cm above the finished floor.
Height — hose coming from the ceiling	Inlet centre at 140 cm above the finished floor.
Storage length / stop	Stop placed at hose length + 2 m of safety (never +1.5 m).
Before the stop	Only large-radius Retraflex bends 90°, 45°, 22.5°. No traditional elbow.
Number of bends	Maximum 4 large-radius 90° bends before the stop. As few as possible.
Never two 90° one after another	Do not chain two 90° bends ; space out the changes of direction.
Gluing	Glue only the male end of the pipe, never the female (no internal glue ridge).
PVC clips	Never clamp/crush the PVC : it must be able to move slightly sideways.
After the stop	Empty traditional network : long-sweep 90°, 45°, T/Y facing the power unit.
Main line	As direct as possible to the power unit, without unnecessary detours.
Antistatic pipe 50.8 mm	Never bend or heat : every change of direction with a fitting.
Tests before closing up	Seal + retraction + free sliding, network still accessible.

CONTENTS.

- 01** **UNDERSTANDING THE SYSTEM** — principle, retractable vs. traditional network, the two zones.
 - 02** **PLANNING THE INSTALLATION** — hose length, power unit choice, order of trades.
 - 03** **CHOOSING AND POSITIONING THE INLETS** — real coverage, working around furniture.
 - 04** **THE ASPIWALL HEIGHTS** — 80 cm from the floor, 140 cm from the ceiling.
 - 05** **THE STORAGE RUN (BEFORE THE STOP)** — PVC length, allowed bends, pipe cleanliness.
 - 06** **THE STOP (RED STOP)** — exact placement, role and safety.
 - 07** **AFTER THE STOP: THE TRADITIONAL NETWORK** — fittings, direction, manifold, several Retraflex, accessories.
 - 08** **FITTING THE INLET AND ROUGH-INS** — plasterboard, brick & plaster, concrete, renovation.
 - 09** **LOW-VOLTAGE WIRING 24 V** — inlets in parallel, conduit, cable slack.
 - 10** **FITTING THE POWER UNIT** — location, mounting, muffler, supply, S500 in series.
 - 11** **LOCKING MECHANISM & DOOR FITTING** — trigger, O-ring, mounting the faceplate and door.
 - 12** **TESTS BEFORE CLOSING UP** — seal, retraction, sliding, photos.
 - 13** **COMMISSIONING & FINAL CHECK** — test of each inlet, diagnosis, checklist.
 - 14** **USE & MAINTENANCE** — good practices and network lifespan.
-

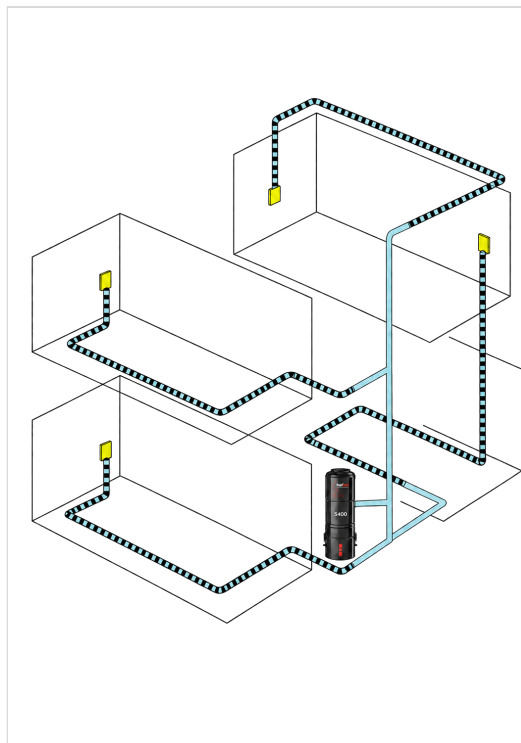
Appendices : summary tables (heights, stop lengths, bends) and hose lengths / indicative prices.

UNDERSTANDING THE SYSTEM.

Before drilling anything, you must understand where the air goes, where the dust goes, and above all where the hose goes. That is what separates a successful installation from a network that jams.

THE PRINCIPLE OF CENTRAL VACUUM

A **power unit** is installed in a dry technical room (garage, cellar, utility room), away from living spaces. It is connected to the suction points by a sealed network of **antistatic vacuum PVC Ø 50.8 mm**. A **low-voltage control wire** connects each inlet to the power unit and starts the motor. The dust is drawn all the way to the power unit, away from living spaces, where it is processed and collected : it does not come back into the room where you live.



Overall diagram — the same power that draws in the dust draws the hose back into the network.

RETRACTABLE OR TRADITIONAL NETWORK?

THE RETRACTABLE HOSE

The hose **lives inside the network**. You pull out the length you need from the wall inlet, vacuum, then the power unit draws the hose back into its PVC sleeve. Nothing to carry, nothing to store. This is the zone **before the stop**.

THE TRADITIONAL HOSE

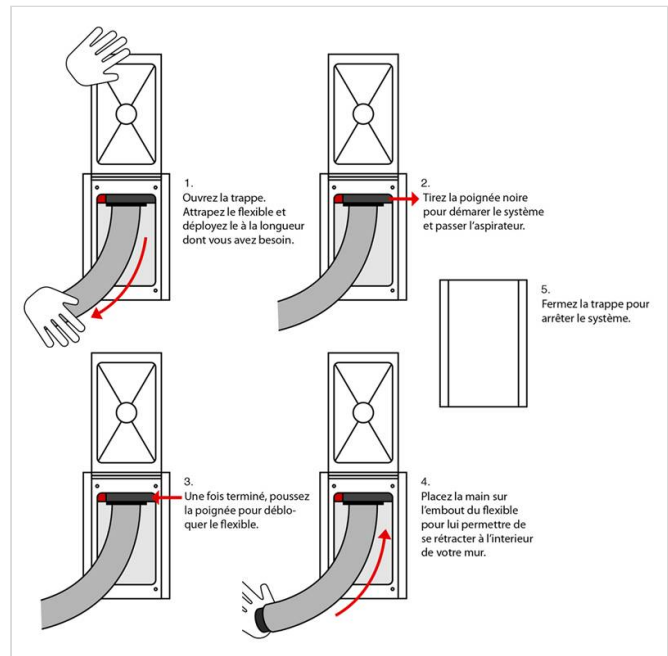
The hose is a separate pipe that you plug into an inlet, then put away by hand. The network stays **always empty**. This is the logic of the zone **after the stop** — and of existing standard installations.

◆ NEVER MIX THE TWO LOGICS IN THE SAME ZONE

A hose storage network is not sized like a traditional network, and vice versa. The stop is the physical boundary between the two : before it, everything is designed for the hose to slide ; after it, everything is designed for the air to flow to the power unit.



The wall inlet : the only element visible in the room.



The hose stored in its PVC network.

PLANNING THE INSTALLATION.

Planning is the key to a successful installation. A good network is decided on the plan, before the first glue joint — never by improvising on site.

CHOOSING THE HOSE LENGTH

The hose length determines the coverage of each suction point, but also the storage length of network to provide. At AspiWall, retractable hoses come in **9 m, 12 m, 15 m and 18 m**. The 12 m and 15 m lengths are the most requested and cover the majority of projects.

i AIRFLOW AND LENGTH

The longer the hose, the more the airflow drops over its whole length. To compensate, a more powerful unit is chosen. The power unit is therefore sized **together with** the choice of hoses, not afterwards.

CHOOSING THE POWER UNIT (S100 TO S500)

The power unit is chosen according to the surface area, the number of suction points and the hose length. The AspiWall rule : a power unit must never be overwhelmed by the network or the hoses — it is sized to use only about half of its capacity.

POWER UNIT	POSITIONING
S100	Entry level, small areas / few points.
S200 · S300	Typical homes, several suction points.
S400	Large areas, long hoses.
S500	Twin-motor (main body + booster) for the most demanding projects.

THE ORDER OF TRADES

Ideally, the AspiWall network is installed **before the other services**. Electrical, plumbing or heating conduits then run **above** the PVC, never crushing it.

- Install the vacuum network after the main plumbing runs where possible, and before the linings are closed up.
- Do not fasten anything directly onto the pipes, and check that no neighbouring installation hinders the hose from sliding.

- Photograph the whole network before closing floors, walls and ceilings.

◆ ASPIWALL ADVICE ON PLAN

For new construction or a heavy renovation, send your plans to AspiWall : inlet locations, hose lengths and the network route are validated before installation. With this support, installing it yourself remains perfectly accessible.

— PART 03

CHOOSING AND POSITIONING THE INLETS.

Real coverage matters more than the number of inlets. A badly placed inlet is unusable ; fewer points, well positioned, is better.

WHERE TO PLACE A SUCTION POINT

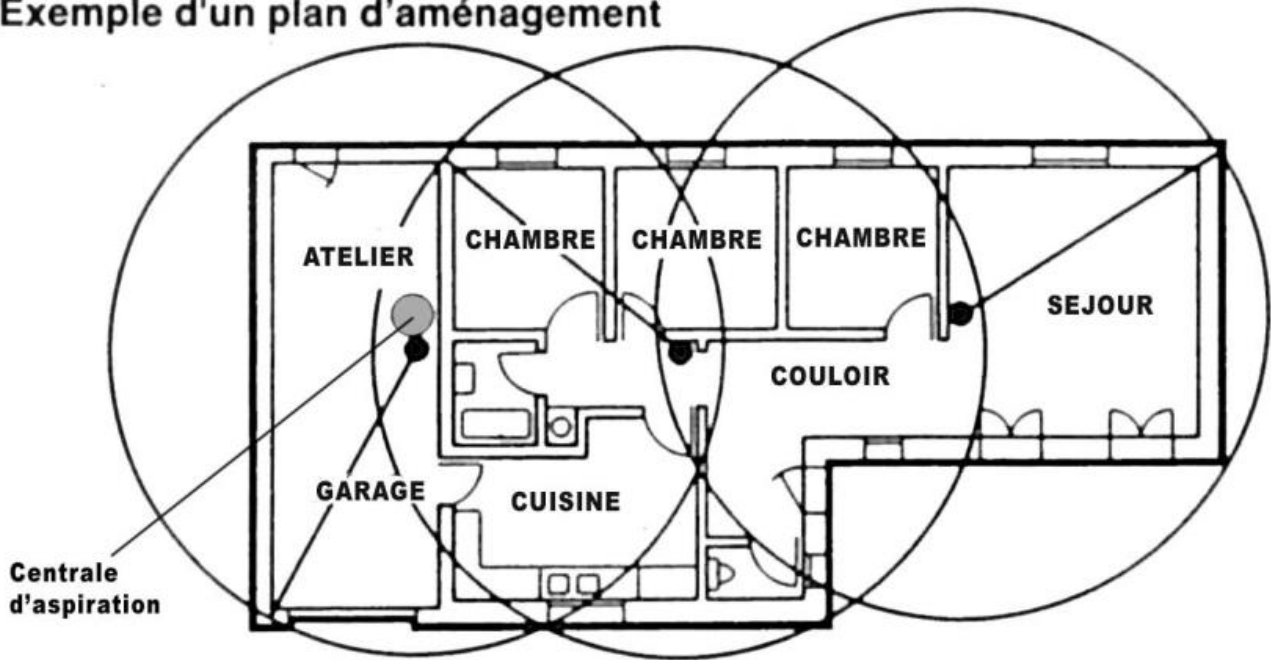
- Prefer **landings, hallways, entrance halls, stairwells** and walls near doors : a central point covers more than a point in a corner.
- Allow for **working around furniture** : a hose never works in a straight line. The real usable length is shorter than the hose length.
- Avoid locations hidden by an open door, a fixed piece of furniture or an appliance.

- A retractable inlet is discreet : it is placed at skirting height, one inlet per suction point.

✓ SIMPLE VALIDATION METHOD

With a cord at the usable hose length, start from each planned location and physically check the blind spots : behind doors, around kitchen islands, in the corners of bedrooms, at the foot of stairs and in the garage. It is the only reliable way to know whether the coverage is real.

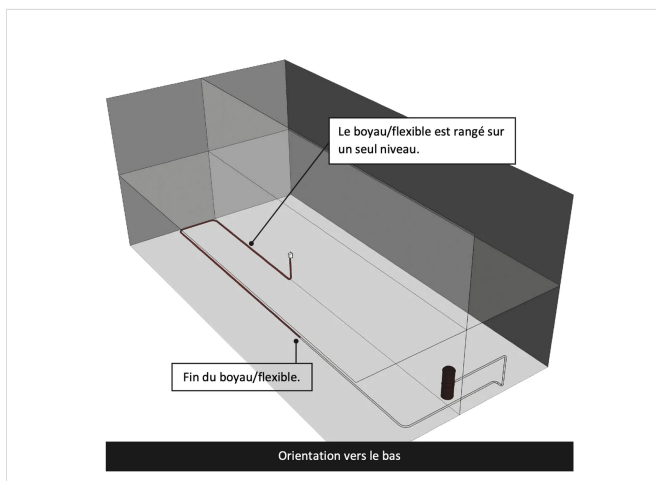
Exemple d'un plan d'aménagement



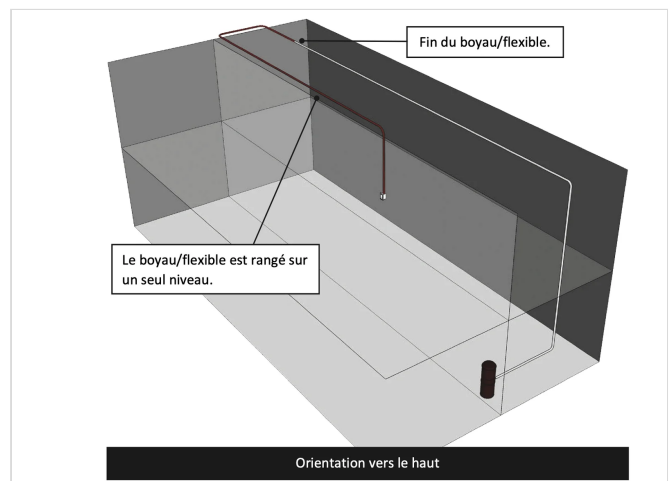
Draw the coverage zones on plan, then check them on site.

HOSE ORIENTATION: FLOOR OR CEILING

A retractable suction point is designed according to the direction from which the hose arrives at the inlet : the storage PVC **drops to the floor** (the hose comes from the floor) or **rises to the ceiling** (the hose comes from the ceiling). This choice directly determines the inlet height — see [Part 04, The AspiWall heights](#) (p. 11).



Hose coming from the floor (down orientation).



Hose coming from the ceiling (up orientation).

THE ASPIWALL HEIGHTS.

Two heights, two cases. These are fixed AspiWall values. They replace the old indications from the manuals (electrical outlet height, "1.30 to 1.40 m"), which must no longer be used.

DIRECTION THE HOSE ARRIVES FROM	HEIGHT OF THE INLET CENTRE (FINISHED FLOOR)
Hose coming from the floor (descending PVC)	80 cm
Hose coming from the ceiling (rising PVC)	140 cm

◆ ALWAYS MEASURE FROM THE FINISHED FLOOR

The dimension is taken relative to the finished floor covering (tiles, parquet, completed screed), **not** relative to the raw slab. In new construction, account for the thickness of screed and covering still to come before fixing the frame.

▮ WHY THESE HEIGHTS

The height ensures the hose enters and leaves the inlet at a correct angle to retract without forcing. An inlet too high when the hose comes from the floor, or too low when it comes from the ceiling, creates a difficult angle that hinders retraction — the most common mistake on old installations.

◆ A HEIGHT DESIGNED FOR COMFORT

At every use, you pull several metres of hose out of the inlet — up to 12, 15 or 18 m. The gesture is far more comfortable when the inlet is at a **comfortable height, close to the hip**, rather than near the floor : pulling out and drawing back 15 m of hose while bending down each time quickly becomes tiring. The system stays easy to use in all cases — these AspiWall heights simply save you from bending unnecessarily.



The 5 gestures : open, pull, lock, vacuum, retract.



Retractable wall inlet with its rough-in dimensions.

— PART 05 · BEFORE THE STOP

THE STORAGE RUN.

This is the zone where the hose lives. Everything here is designed so it slides and retracts without ever snagging : enough length, gentle bends, clean pipe. This is the most specific — and most demanding — part of the installation.

THE PVC LENGTH FOLLOWS THE HOSE LENGTH

The storage network must be at least as long as the hose, with a safety margin. The AspiWall rule is simple and fixed :

PIPE LENGTH BEFORE THE STOP = HOSE LENGTH + 2 M

HOSE LENGTH	STOP POSITION (FROM THE INLET)
Hose 9 m	Stop at 11 m
Hose 12 m	Stop at 14 m
Hose 15 m	Stop at 17 m
Hose 18 m	Stop at 20 m

DO NOT KEEP THE OLD MARGINS

The old manuals indicated +1.5 m (e.g. 13.5 m for a 12 m hose) or other values. **They are abandoned.** A **+2 m** safety margin is applied systematically. Measuring tip : count the PVC lengths (2 m each) without counting the large-radius bends — the length they add becomes extra margin.

ONLY LARGE-RADIUS RETRAFLEX BENDS

Before the stop, only the large-radius bends specific to retractable hoses are used. They are designed so the hose passes without snagging. **No tight traditional elbow is allowed in this zone.**



RETRAFLEX BEND 90°
large radius



RETRAFLEX BEND 45°
large radius



RETRAFLEX BEND 22.5°
large radius



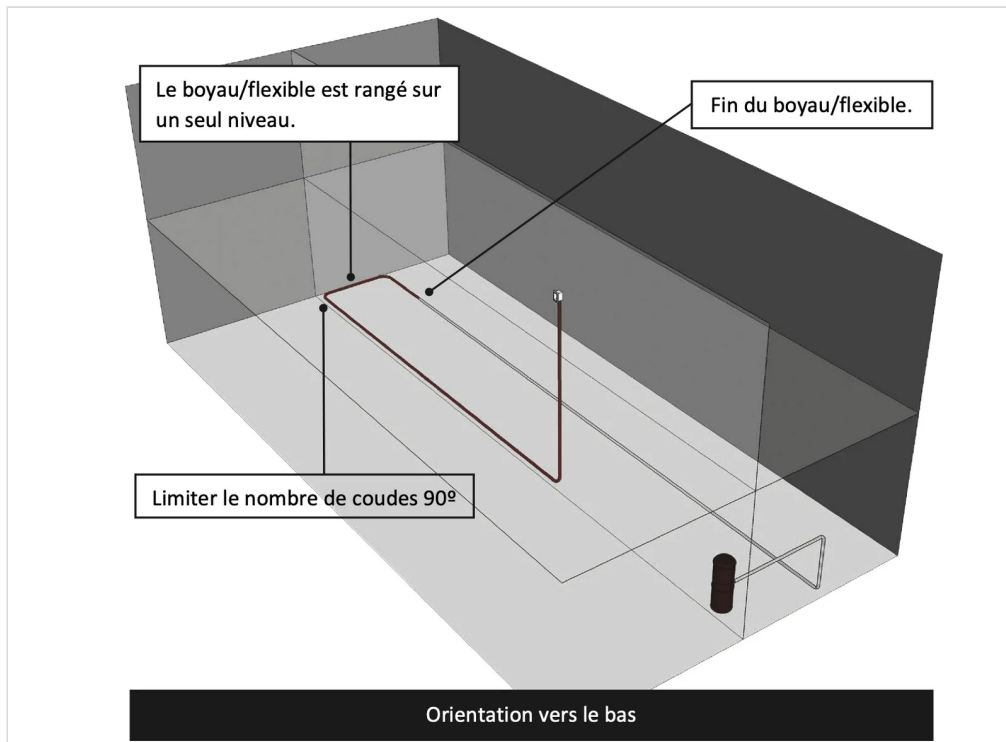
THE STOP · RED STOP

marks the end
of the storage
zone

These large-radius bends are used **up to the stop**. The stop (red stop) closes the storage zone : beyond it, you switch to the traditional network. Its exact placement and safety role are detailed in [Part 06, The stop](#) (p. 18).

- **Maximum 4 large-radius 90° bends** before the stop — and as few as possible : each 90° bend increases the force needed to pull the hose out of the wall.

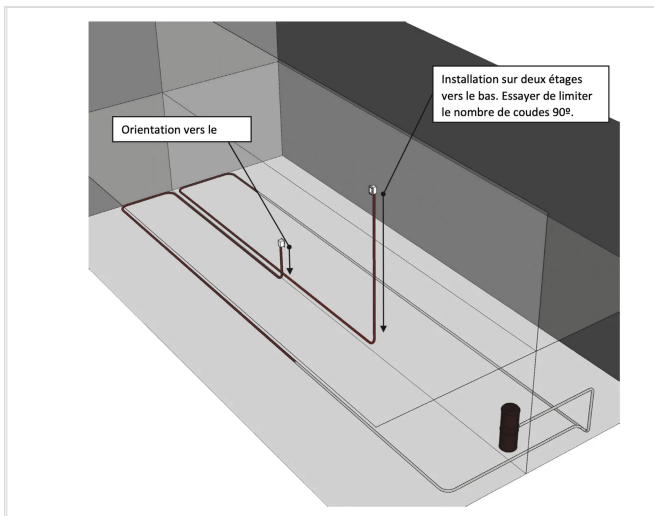
- **Avoid two 90° bends one after another** (consecutive). Space out the changes of direction as much as possible.
- A 90° → 22.5° sequence is often useful to work around an obstacle smoothly.
- Small bends (traditional 45° or 90°) are only allowed **after** the stop, never before.



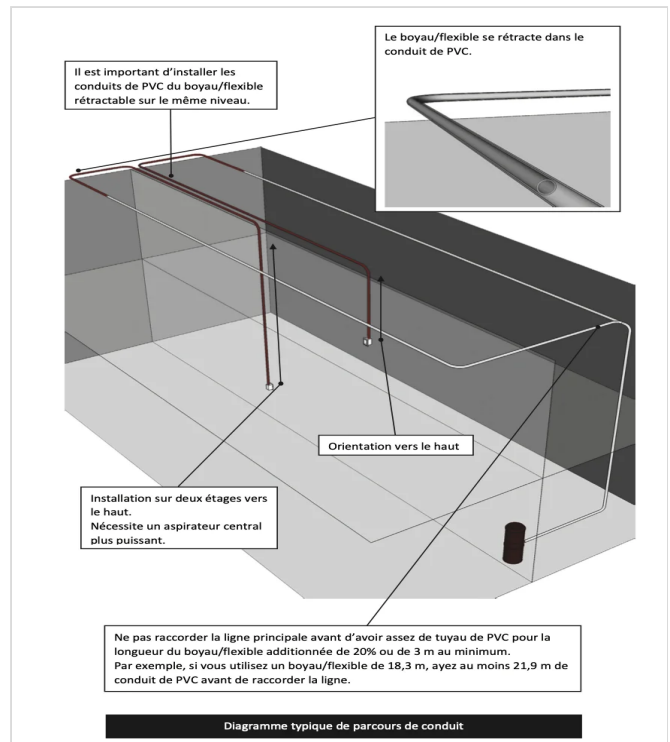
Limit and space out 90° bends : the hose retracts all the more easily.

A HOSE STORED ON A SINGLE PLANE

The hose must be stored on **a single plane** (for example flat on the slab, or in the same suspended ceiling). A network that rises and falls in "waves" creates dips where the hose forces and eventually jams.



Descent to a lower floor, storage on one plane.



Typical route diagram of the storage pipe.

◆ A LOGICAL ROUTE

You generally start from the wall with the inlet, drop to the floor, then follow the perimeter of the room with **as many straight runs as possible**. The route must stay as direct as possible, without unnecessary detours. A clean layout eases the hose's return and limits crossings with the other services.

LAY THE PVC WITHOUT EVER CRUSHING IT

- **Never over-tighten the clips.** The PVC must be able to move **slightly sideways**. A crushed or ovalised pipe blocks the hose's retraction.
- The pipe is laid **flat and level** : no slope needs to be provided in the storage zone.
- **The PVC is never bent** : it must not be curved or heated. Every change of direction is made with a large-radius bend of 90°, 45° or 22.5°.
- The **antistatic PVC 50.8 mm** limits dust adhesion and promotes a clean passage of the hose, hair and pet hair.

GLUING CLEANLY — THE MALE-END RULE

Internal pipe cleanliness is vital : the slightest glue ridge or burr can snag and damage the hose sock at every pass.

01 GLUE ONLY THE MALE END

Apply glue **only to the male end of the pipe**, never to the female part of the coupling or bend. Gluing the female forms an internal ridge when pushed together — a ridge that catches dust, hair and pet hair.

02 MARK AT 2 CM

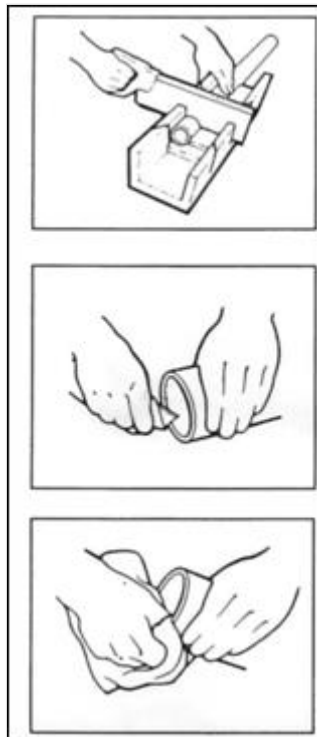
Draw a mark about 2 cm from the pipe edge before inserting it. The mark confirms the pipe is fully seated, with no gap between the fitting's grooves and the PVC edge.

03 A CLEAN CUT

Use a **RIDGID pipe cutter** for clean, straight, burr-free cuts (see the AspiWall tool below). With another tool, deburr carefully. **Avoid sandpaper inside the pipe** : it creates micro-grooves that hold dust, hair and pet hair.

04 INSPECT THE INSIDE

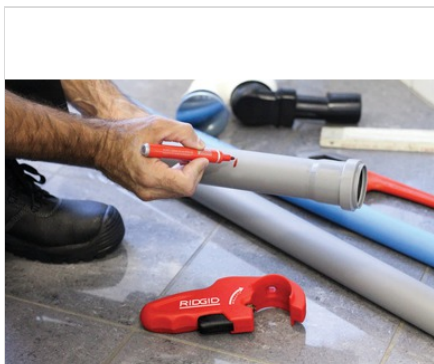
Before connecting a length, check that the inside is smooth, and the pipe round and undamaged.



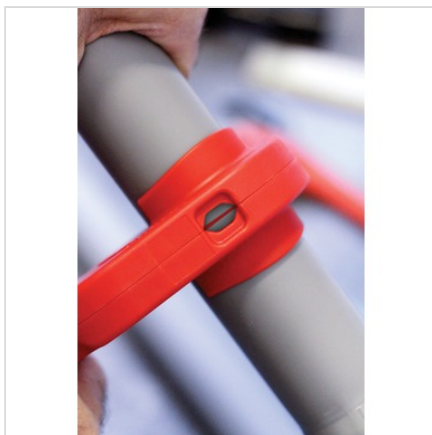
Preparation and gluing — glue on the male end, never inside the female.

THE ASPIWALL CUTTING TOOL

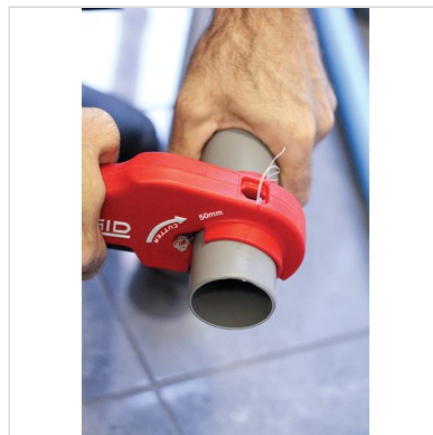
To cut the 50.8 mm PVC, AspiWall uses the **RIDGID P-TEC 5000 plastic pipe cutter**. It is the best ally of a clean retractable network : in this storage zone, the slightest burr or ridge snags the hose sock at every pass.



RIDGID P-TEC 5000 — cuts in six rotations.



Straight, clean cut with no internal burr.



Open-bore design for the 50 mm pipe.

◆ THE TOOL RECOMMENDED BY ASPIWALL

RIDGID P-TEC 5000 — this is the **50 mm** model (ref. 40868), the one matching the vacuum PVC network Ø 50.8 mm. It cuts plastic pipes (PE, PP, PVC). The PTEC 3240 model (32–40 mm) is not suitable for the AspiWall network.

- **Clean, automatic deburring** : the cut leaves only a thin strand of plastic, unlike the burrs of a hacksaw — no need for a second tool.
- **Automatic chamfering** : immediate and easy connection to the other parts.
- **Straight and fast cut** : six rotations or fewer, four times faster than a saw, with a sight window to stay straight.
- That is exactly what the storage zone requires : a perfectly smooth pipe interior.

Product page : ridgid.eu/be/en/plastic-pipe-cutters

THE STOP (RED STOP).

The stop is the physical marker that separates the two zones of the network. It is both an end point for the hose and a safety feature. Its location is never approximate.



The stop (red stop) is placed at the end of the storage run.



Coupling / stop ring of the retractable network.

WHERE TO PLACE THE STOP

The stop is placed exactly at **hose length + 2 m**, measured from the wall inlet along the pipe. For a 12 m hose it is therefore fitted at about 14 m of pipe ; for a 15 m, at 17 m (see the table in [Part 05, The storage run](#) (p. 12)).

TWO ROLES, ONE MARKER

AN END POINT

The red stop halts the hose exactly at the intended spot, at the end of its storage run. The hose cannot go further : it always retracts to the right position.

A SAFETY FEATURE

Should a hose ever break, it remains easy to recover : it cannot shoot further into the network, beyond the stop. The stop protects the whole traditional network behind it.

◆ WHAT CHANGES AT THE STOP

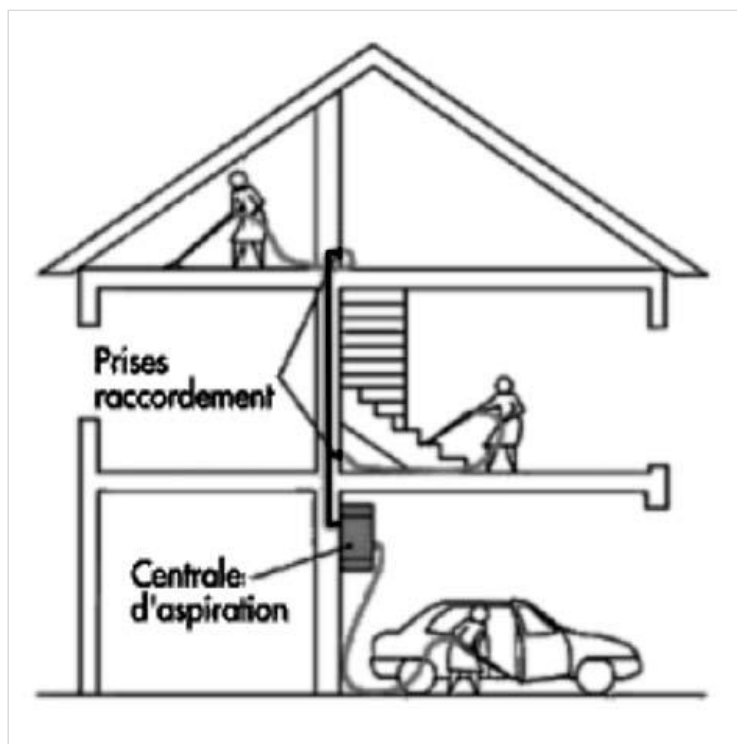
Before the stop : the PVC is a storage sleeve — large-radius Retraflex bends only, clean pipe, never crushed.

After the stop : the PVC becomes a standard vacuum line — you switch back to traditional fittings and the hose never goes there. This is the subject of [Part 07, The traditional network](#) (p. 19).

— PART 07 · AFTER THE STOP

THE TRADITIONAL NETWORK.

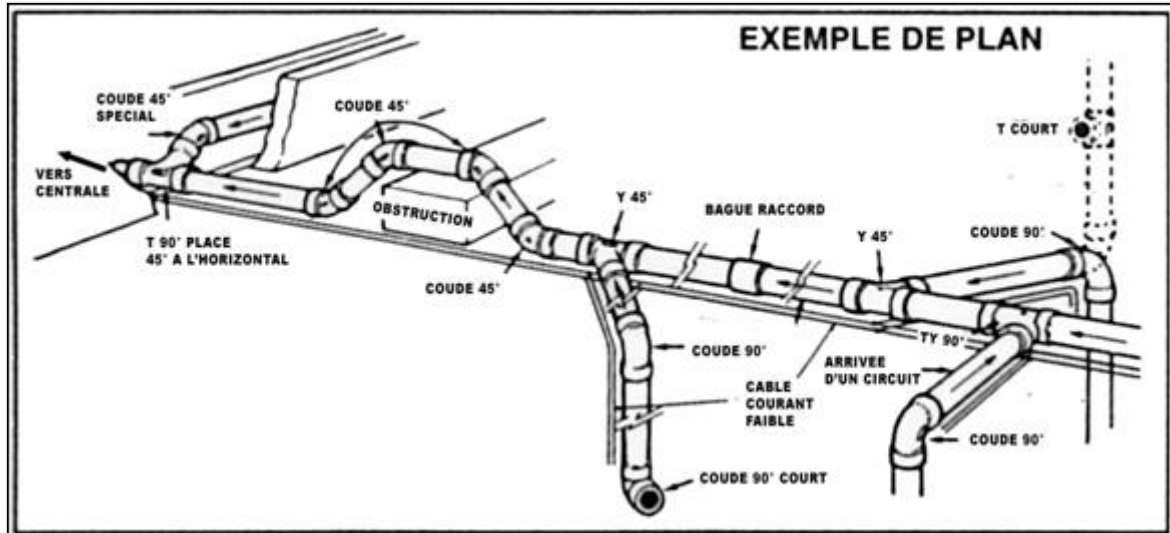
Past the stop, the network becomes a standard vacuum installation again : an empty pipe that carries the air to the power unit. This part deserves a detailed explanation — it links each suction point to the motor, and a fitting or direction error is paid for in loss of power.



After the stop, each point joins the main line, then the power unit.

A MAIN LINE AS DIRECT AS POSSIBLE

The **main line** links the furthest point to the power unit. The other points join it via **short branches**. The goal is constant : reduce pressure losses and the risk of blockage. Short network, suitable fittings, correct suction direction, clean pipe interior.



Example plan : a direct main line, short branches.

CHOOSING THE RIGHT FITTING, IN THE RIGHT DIRECTION

The same diameter is not enough : geometry matters. A poorly chosen fitting creates turbulence, holds an object or promotes a blockage. Here are the fittings of the traditional network.



LONG-SWEEP 90°

change of direction on the network



BEND 45°

preferred — gentler



T / Y 90°

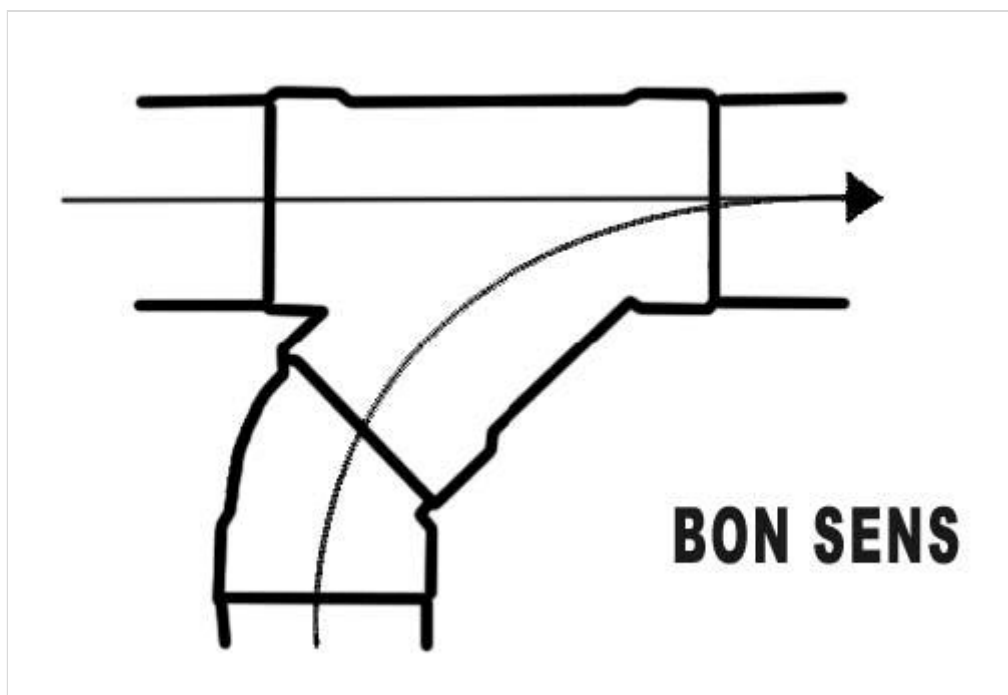
facing the power unit

- **Long-sweep 90°** : for any 90° change of direction on the network.
- **Bend 45°** : preferred whenever the route allows, to soften the changes of direction.

- **T / Y 90°** : always oriented in the airflow direction towards the power unit.

◆ THE DIRECTION RULE

The air must enter a branch **without hitting a wall or turning back**. Orient the leg of the T or Y towards the power unit. This is the rule that guarantees the air from each point flows straight to the motor.



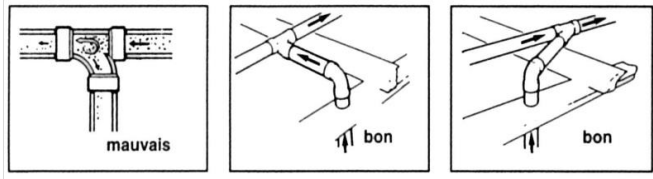
The correct airflow direction in a branch.

AVOIDING GRAVITY DROPS

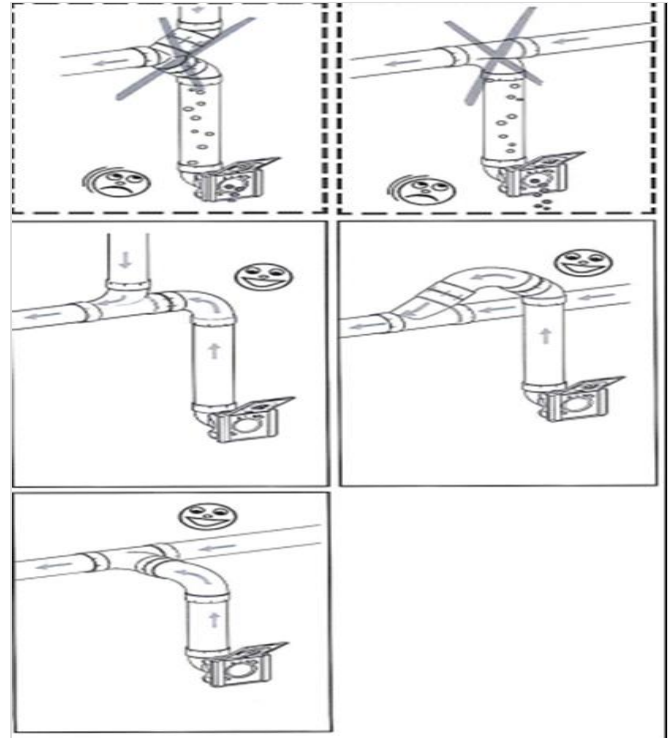
When a point's branch drops vertically **directly below** the main line, debris can fall into it by gravity while that point is not vacuuming. It stays there until the next use.

- Do not create a vertical branch directly below the main line.
- Take the branch off **from the side or above** the main line depending on the configuration.
- Use the correct T/Y direction and keep a connection slope that avoids debris free-falling.

- Check the airflow direction before any final gluing.



T : wrong / right connection.



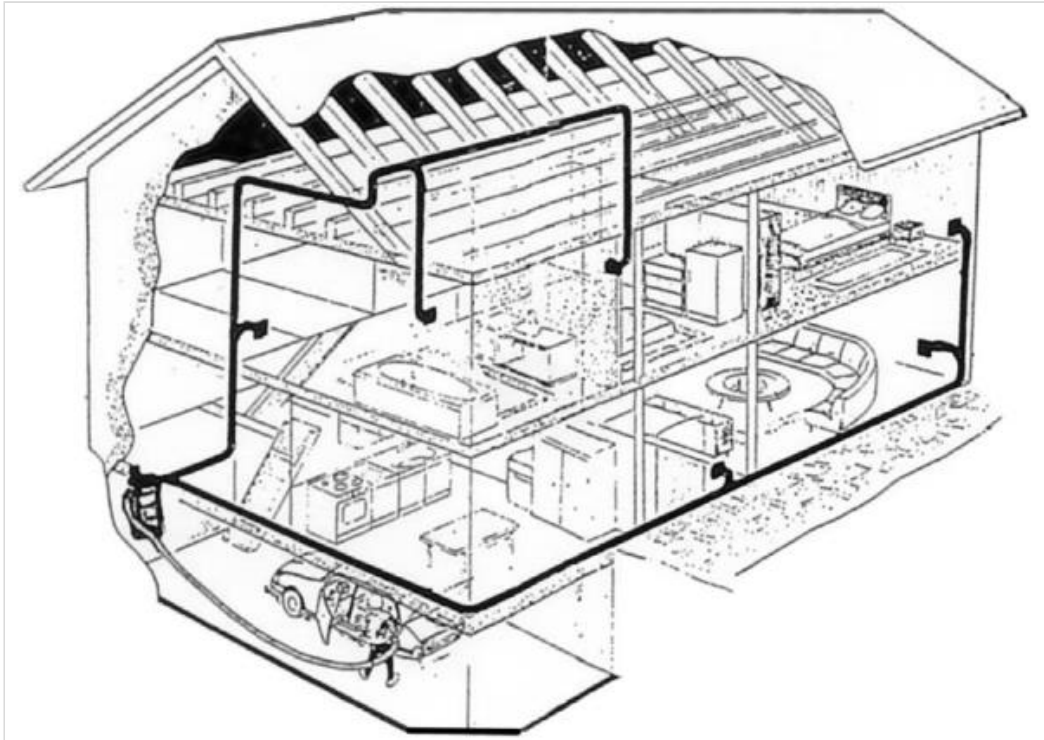
Correcting a gravity branch.

CONNECTING SEVERAL RETRAFLEX ON THE NETWORK

In a house with several retractable points, **each hose has its own storage run and its own stop**. It is only **after their respective stops** that the feeds join, on a common **manifold**, before running to the power unit.

◆ THE MANIFOLD

The manifold is the point where the empty lines from each stop meet (and the other vacuum-connected accessories of the house). Upstream of each stop : an individual storage zone. Downstream of the manifold : a single main line to the power unit. Never mix a storage run with the main line.



Cutaway view : several points, one manifold, one power unit.

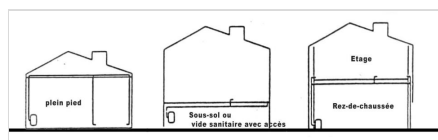
CONNECTING ACCESSORIES ON THE EMPTY NETWORK

The traditional network (after the stop) can also receive **accessories** connected to the vacuum. They connect to the empty part of the network, with the traditional fittings and the correct direction towards the power unit — **never on the storage zone of a hose**.

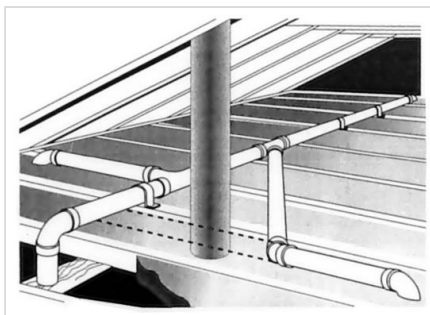
CHOOSING THE ROUTE ACCORDING TO THE CONSTRUCTION

The route adapts to the type of building. In all cases : direct path, regular fixings, protected pipe.

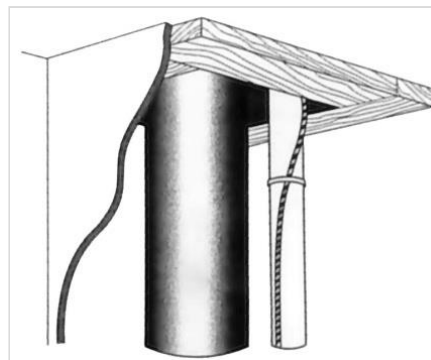
SITUATION	RECOMMENDED INSTALLATION
Slab on grade	Lay the network in a bed of sand after compaction ; protect the conduits (sleeve / mechanical protection).
Inaccessible crawl space	Lay the conduits before closing the floor ; mark the pipes protruding from the slab.
Accessible crawl space	Installation possible after the slab, regular fixings, direct path.
Cellar / attached garage	Exposed network fixed under the slab ; floors reached via cupboard, conduit, double partition or reservation.



Single-storey, cellar, upper floor.



Passage under the slab.



Descent / rise to a floor.

— PART 08

FITTING THE INLET AND ROUGH-INS.

The rough-in is the part embedded in the wall ; the inlet (or faceplate) is mounted on it after finishing. Its finished position must be planned **before** plastering — that is when everything is decided.

THE FRAME AND THE ROUGH-IN

01 FIX THE FRAME LEVEL

Fix the frame to the stud or support, perfectly level. A crooked rough-in gives a crooked inlet, impossible to fix after finishing.

02 ENGAGE THE PIPE FITTING

The pipe fitting slides into the frame and adjusts to the wall-board thickness. Behind a retractable inlet, it is paired with its short bend : allow the necessary depth (the assembly requires about 10 cm behind the inlet).

03 GLUE THE PIPE INTO THE FITTING

Insert and glue the pipe up to the fitting's shoulder (glue on the male end). Check that it is fully seated.

04 FIT THE MUD COVER

Install the temporary cover (mud cover) : it protects the inside during plastering and serves as a finished-level template.

◆ REFERENCE THE FINISH, NOT THE RAW WALL

The face of the rough-in is positioned relative to the **finished wall covering**, never to the bare block. A rough-in set too deep complicates fitting the inlet and can compromise the seal.

ADAPTING THE ROUGH-IN TO THE SUBSTRATE

PLASTERBOARD

The frame is fixed to the framing (stud). The pointed tabs of the frame hold the rough-in in the board during assembly. Observe the board thickness according to the inlet model.

BRICK & PLASTER

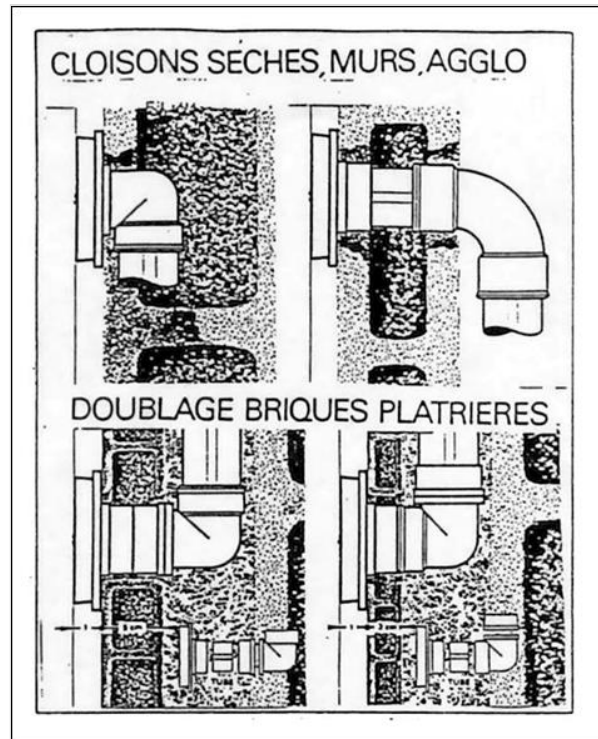
Chase out the recess in the masonry. **Important rule : the plaster thickness must not cover the frame's yellow plate ; the plaster should reach halfway up it.** This is what ensures the finished inlet sits flush.

CONCRETE

Provide the reservation **before pouring** and protect the conduit against rubble. The pipe must not be crushed or fouled with laitance inside. Mark and cap the stub-ups protruding from the slab.

RENOVATION (EXISTING WALL)

Use the cover as a template to cut the hole. Insert the frame vertically, then straighten it behind the partition. Fold / trim the fixing tabs according to the proximity of a stud, then push the tabs in to hold the frame during assembly.

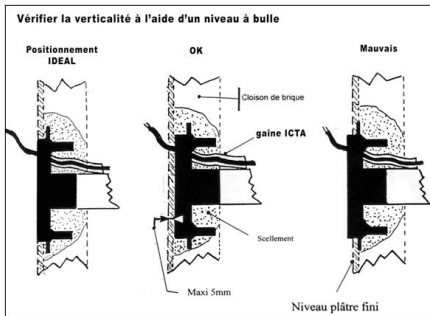


Rough-in according to the wall type.

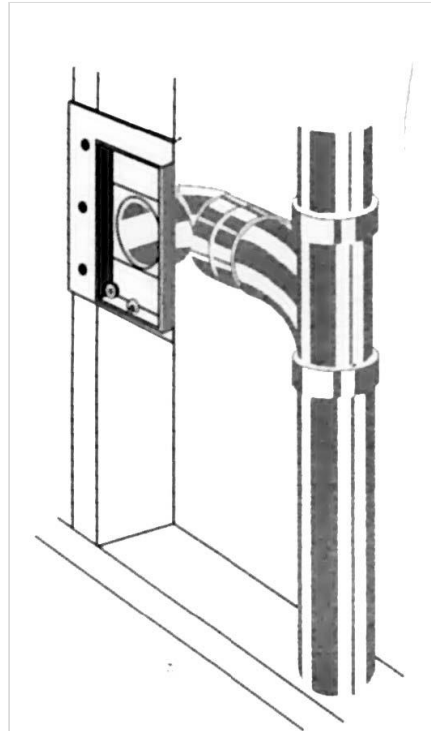
VERTICALITY, RESERVATION AND CABLE

- Check **verticality with the level** and fix the rough-in firmly : it must not move during plastering.
- Leave about **20 cm of low-voltage cable** available outside the rough-in to connect the inlet after finishing.
- **Temporarily cap** the conduit to keep site dust and rubble out.

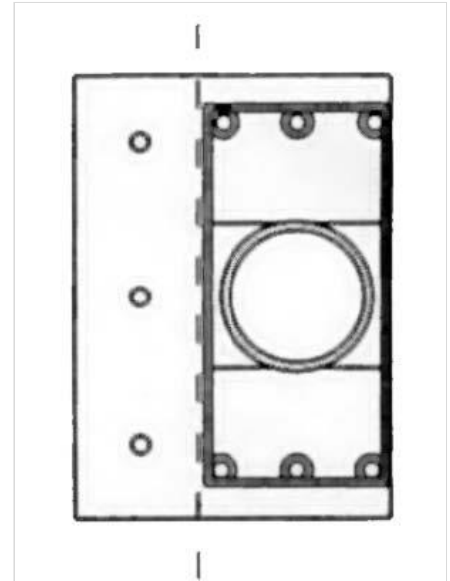
- Photograph the exact position before closing the wall.



Check verticality (ideal / OK / to avoid).



Reservation and available cable.



Rough-in, front view.

SEAL

After mounting, a closed inlet must **not** let air in. A single leaking inlet reduces the performance of the whole network.

— PART 09

LOW-VOLTAGE WIRING.

The low-voltage cable does not carry dust : it controls the starting of the power unit. It is a simple circuit, but it tolerates no inaccessible connection.

ALL INLETS IN PARALLEL

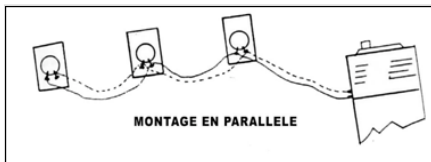
Each inlet is connected to the power unit, and all inlets are wired **in parallel**. The essential point is the continuity of the circuit between all the inlets and the power unit.

- The cable can run alongside the PVC or take a more direct path : **it does not have to follow the PVC route** and can run in a dedicated conduit to the power unit.
- Avoid more than two wires under one terminal : use an accessible junction box if needed.
- **No connection may become inaccessible** in a slab or closed wall.
- Do not run the cable through door openings.

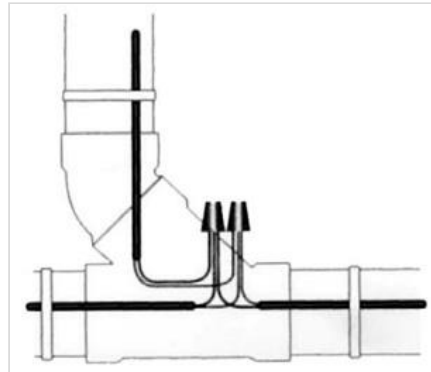
- In masonry crossings and recessed zones, protect the cable in a **16 mm conduit**.
- Leave about **20 cm of slack** at each rough-in.

i CONTROL ONLY

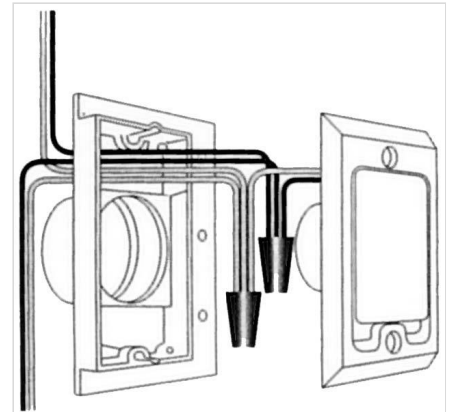
The low-voltage circuit only triggers the power unit. The power unit's mains supply (230 V) remains a completely separate circuit. On the usual control terminals, the order of the two wires does not matter — but check the diagram of the installed model.



Wiring in parallel.



Cable at a branch.



Connecting the cable to the inlet.

FITTING THE POWER UNIT.

The power unit is the heart of the system. Two rules prevail : it is **carried by the wall, never by the PVC**, and its last fitting stays **removable** for maintenance.

CHOOSING AND PREPARING THE MOUNTING AREA

Install the power unit in a dry, ventilated and accessible room : garage, cellar or technical room. The location must allow opening the canister, changing the bag and accessing the filter depending on the model.

CLEARANCE	VALUE
Around the power unit (service + ventilation)	30 cm
Under the canister (removal and maintenance)	40 cm recommended
Distance to the dedicated socket	1 m max.

⚠ DO NOT BOX IN THE POWER UNIT

A narrow, unventilated cupboard complicates maintenance and hinders cooling and air discharge. Before drilling, simulate maintenance : open the canister clips and check that bag, canister and filters stay accessible **without dismantling the network**.

i WARM OUTGOING AIR IS NORMAL — AND USEFUL

AspiWall power units are fitted with **large motors** : it is entirely normal for the air to come out warm at the air outlet. This is not a fault. It is even a **plus** : this mild heat helps **ventilate and freshen** the technical room — cellar, garage or utility room — where the power unit is installed.

MOUNT AND CONNECT

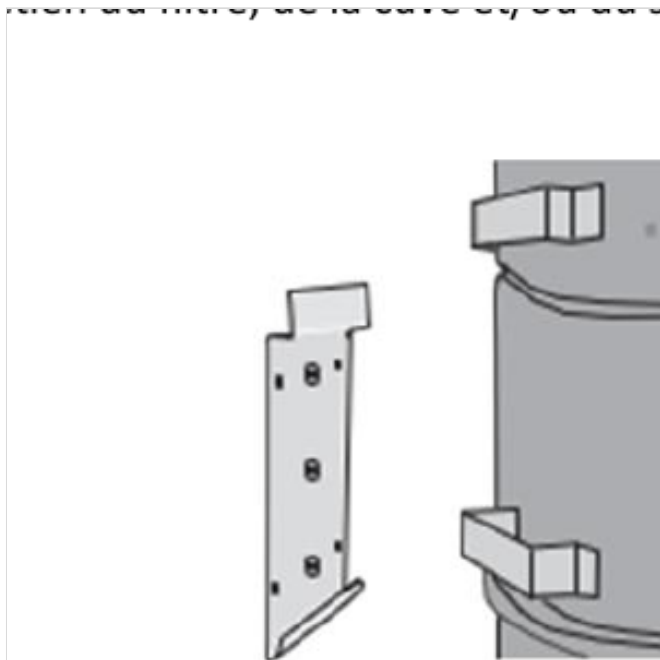
Solid support, suitable screws, plate perfectly level.

It must be fully engaged in its support and **carried by the wall, never by the PVC.**

The pipe must neither push nor pull the power unit.

04 REMOVABLE FINAL FITTING

The last fitting on the power unit **is not glued** : use the rubber sleeve and the clamps. This is what allows dismantling for maintenance.



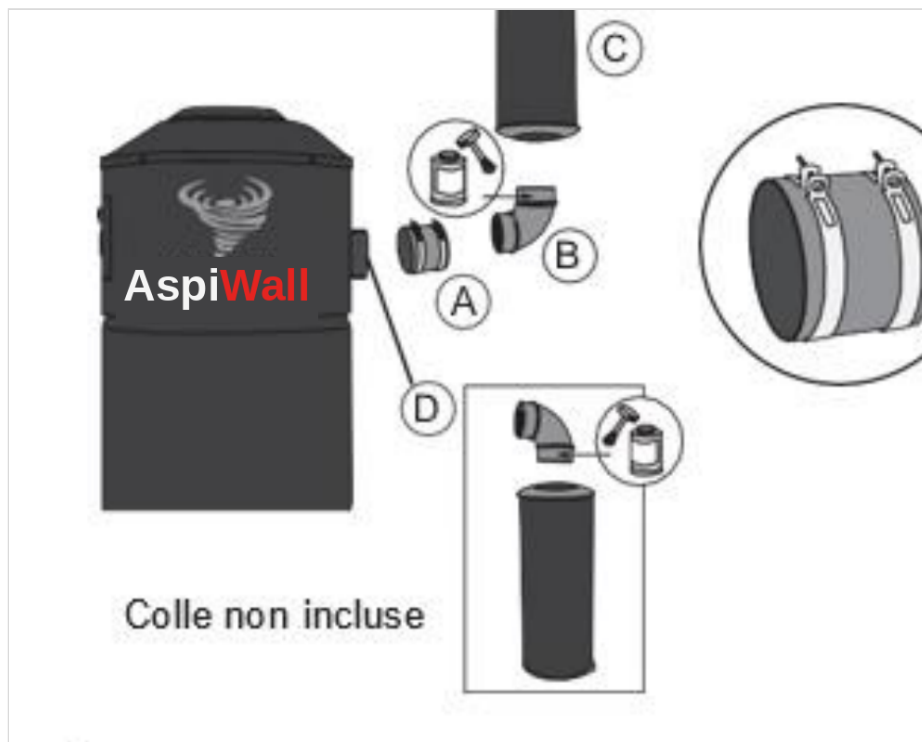
Mounting plate and hanging of the power unit.



Final fitting : sleeve + clamps, not glued.

♦ AIR INLET AND MUFFLER

Any unused air inlet must be **capped with the supplied plug**. Fit the muffler on the air outlet and keep its **outlet always clear** (at least 30 cm free if pointing downwards). On the S200/S300/S400, the air inlet can be moved from left to right per the manual ; the S100 and S500 do not follow this change.



Muffler assembly : A rubber sleeve · B 90° bend · C muffler · D air outlet.

SUPPLY AND CONTROL

Provide a socket less than 1 m away, earthed, on a **dedicated circuit**. For the S100 to S400 : 220/240 V - 10 A. No extension lead, no modification of the cord. For the control, strip about 0.5 cm of each conductor, press the pushbutton, insert the wire then release ; repeat for the second terminal.

ELECTRICS — WIRING REGULATIONS

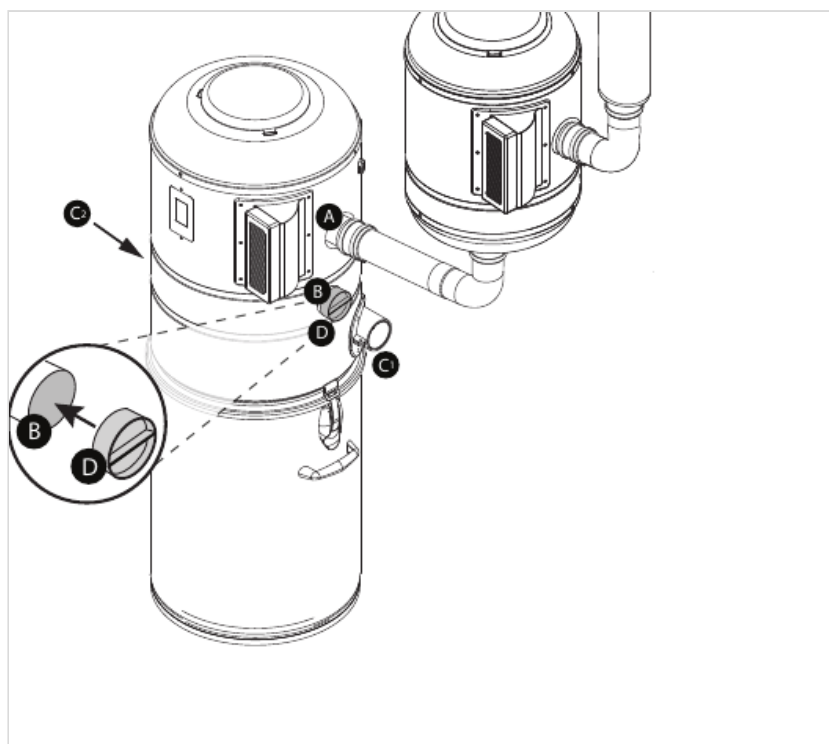
The socket, earthing and protection must comply with the wiring regulations (RGIE/AREI). If in doubt, call in a qualified electrician.

THE CASE OF THE S500 (TWIN-MOTOR, SERIES ASSEMBLY)

The S500 differs from the S100 to S400 : it consists of a **main body** (with canister and filtration, a single air inlet on the left) and a **booster** (secondary motor unit), mounted **in series**. Observe the dimensions of the two supports, then connect the network to the main body, the link to the booster, and the booster muffler.

REFERENCE (S500 SERIES ASSEMBLY)	DIMENSION
Height of main support	154.94 cm
Height of booster support	208.28 cm
Vertical gap between supports	58.10 cm
Horizontal offset	43.18 cm

- S500 supply : dedicated circuit **220/240 V - 15 A**, earthed, without extension lead.
- On the S500 in series : **nothing to cap** — a single air inlet (left) feeds the main body, its outlet goes to the booster.
- In operation, the metal air-outlet ducts become hot : simply keep heat-sensitive materials away and the service access clear.



S500 series assembly : link from the main body to the booster.

LOCKING & DOOR FITTING.

Once the walls are finished, the faceplate (the mechanism) and its door are mounted on the rough-in. This is also where you understand the hose locking, which governs safe everyday use.

MOUNTING THE FACEPLATE ON THE ROUGH-IN

01 PREPARE THE TABS

The pointed tabs of the frame hold the rough-in during assembly. In new build they are sometimes cut off during plastering : a few finishing nails pushed horizontally into the frame's side holes replace them.

02 LUBRICATE THE O-RING

Apply a lubricant to the O-ring to ease insertion and ensure the seal.

03 CONNECT THE CONTROL

Connect the two wires of the switch on the faceplate to the low-voltage cable (wire-nut / terminal connections depending on the model).

04 INSERT AND SCREW THE FACEPLATE

Engage the faceplate in the frame, align the four holes and fix with the four screws supplied in the trim kit.

05 FIT THE DOOR

Fit the door by aligning its hinge with that of the faceplate, then press it into place. The door closes the inlet and contributes to the system's seal.

◆ THE DOOR IS PART OF THE SEAL

The inlet doors are needed to seal the network. As long as a door is not fitted (for example during testing), the corresponding opening must be temporarily capped, otherwise the network "takes in air" and the suction test is distorted.

THE HOSE LOCKING MECHANISM

At the inlet, the hose is locked and released by a **black trigger**. It holds the hose out during vacuuming and releases it for retraction.

▮ TWO SAFETY GESTURES TO RESPECT

- **Never pull the hose when the black trigger is engaged.**
- **Always push the trigger back (reset) before extending or retracting the hose.**

Failure to respect these two gestures is the leading cause of premature wear of the hose and the mechanism.

▮ STARTING : AT THE INLET OR WIRELESS

By default, suction starts at the inlet as soon as the hose is locked, and stops when you let it retract and close the door. Optionally, a **radio remote** on the handle allows switching on/off from a distance. AspiWall advice : wait until the system is running to assess the real need before adding the remote — it can always be installed later.

— PART 12

TESTS BEFORE CLOSING UP.

A defect is fixed in minutes while the network is accessible — and in hours once walls, floors and ceilings are closed. Never close a network without having tested it.

SEAL TEST

Once the network is in place, carry out a seal test — yourself by temporarily connecting a vacuum source, or with AspiWall on site. Cap all untested openings (the inlet doors not yet fitted) to seal the system.

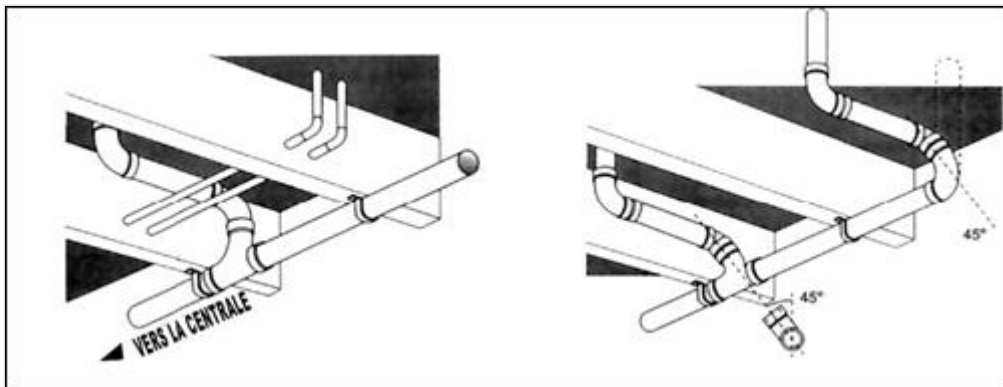
✓ SEAL CRITERION

Using a portable vacuum source, compare the vacuum at the inlet and at the power unit : the difference must not exceed a few centimetres of water column. A large difference indicates a leak, a badly closed inlet or a blockage.

RETRACTION AND SLIDING TEST

- Use a **shop vacuum** to test the hose retracting into its storage network.
- Switch off suction and **pull the hose by hand** to check it slides freely, without any tight spot or blockage.

- A tight spot almost always reveals a crushed pipe, a bend too tight, a glue ridge or storage on two planes : correct before closing.



Dry-fit and checks before final gluing.

◆ BEFORE CLOSING THE WALL

Test the continuity of the low-voltage cable, photograph the position of each rough-in and of the pipe passage, and keep a wide view then a close-up of each branch. These photos are valuable for any future work.

— PART 13

COMMISSIONING & FINAL CHECK.

The job is only finished once every inlet has been tested. A methodical check immediately detects a leak, an uncapped inlet or a badly connected control.

THE COMMISSIONING SEQUENCE

01 NETWORK CLOSED

All inlets are fitted or temporarily capped.

02 LOW-VOLTAGE CONTROL

The two control wires are connected to the power unit.

03 MAINS SUPPLY

The power unit is connected to its dedicated circuit, in line with its manual.

04 TEST OF EACH INLET

Deploy the hose (or operate the control) and check starting and stopping at each point.

05 SUCTION TEST

Compare the power at the different inlets and listen for abnormal whistling.

06 VISUAL CHECK

Inspect fittings, crossings, branches and accessible fixings.

▮ FIRST RUN

For commissioning, do **not** vacuum water, hot ashes or plaster dust. Let the power unit run for a few minutes and check the stability of the start-up and the absence of abnormal mechanical noise (and, for the S500, the stability of the main body and the booster).

FINAL CHECK CHECKLIST

NETWORK & ZONES

- Stop placed at hose + 2 m.
- Before the stop : only large-radius Retraflex bends, max 4×90°.
- No traditional elbow in the storage zone.
- No two 90° one after another ; hose stored on a single plane.
- After the stop : T/Y facing the power unit.
- No downward branch traps debris.
- Pipes cut straight, deburred ; no internal glue ridge.
- PVC not crushed, clips not fully tightened.

INLETS, WIRING & POWER UNIT

- Heights respected : 80 cm (floor) / 140 cm (ceiling).
- Rough-ins at the right level relative to the finish.
- 24 V cable protected in masonry zones, connections accessible.
- Each inlet starts and stops the power unit.
- No closed inlet whistles ; consistent power everywhere.
- Power unit carried by the wall, final fitting removable.
- Unused inlet capped ; muffler clear.
- Supply compliant (earth, dedicated circuit, no extension lead).
- The customer keeps this guide + the power unit manual.

QUICK DIAGNOSIS

SYMPTOM	PRIORITY CHECKS
The power unit starts on no inlet	Mains supply ; breaker ; connection of the two control wires ; contacts per the manual.
One inlet does not start	Inlet contacts ; loose wires ; cable cut up to the last branch ; inlet mechanism.
Weak suction everywhere	Bag / canister full ; clogged filter ; inlet left open ; leak ; blockage near the power unit.
Weak suction in one zone	Blockage / leak on the branch ; gravity branch ; misoriented fitting ; stuck object.
The hose retracts poorly	Crushed pipe or over-tight clips ; too many 90° or 90° one after another ; storage on two planes ; internal glue ridge.
Permanent whistling	Inlet / door closing badly ; displaced O-ring ; non-sealed fitting.

— PART 14

USE & MAINTENANCE.

A well-designed network is durable and simple to maintain, provided the power unit's limits are respected.

- Handle the hose with care ; reset the trigger before each extension or retraction.
- Use the accessory suited to the type of floor or surface.
- Empty the canister or replace the bag according to the frequency of use and the power unit's indications.
- Clean or replace the filter only according to the model's manual.
- Do not vacuum water with a "dust only" power unit ; do not vacuum long or rigid objects that could jam.
- In case of a sudden loss of power, stop and diagnose rather than force.

i MOST PROBLEMS HAVE A SIMPLE CAUSE

A saturated bag or filter, a badly closed inlet, a leak on a fitting or an object stuck in a poor-radius zone explain the vast majority of performance drops. Always start with these simple causes.

SUMMARY TABLES.

ASPIWALL HEIGHTS

CASE	HEIGHT (CENTRE, FINISHED FLOOR)
Hose coming from the floor	80 cm
Hose coming from the ceiling	140 cm

STORAGE LENGTH & STOP

HOSE	PIPE BEFORE STOP	STOP POSITION
9 m	9 m + 2 m	11 m
12 m	12 m + 2 m	14 m
15 m	15 m + 2 m	17 m
18 m	18 m + 2 m	20 m

BENDS ALLOWED PER ZONE

ZONE	ALLOWED BENDS	RULES
Before the stop (storage)	Retraflex large radius 90°, 45°, 22.5°	Max 4×90°, never one after another, as few as possible. No traditional elbow.
After the stop (network)	Long-sweep 90°, 45°, T/Y	Prefer 45° ; T/Y facing the power unit, direct route.

AVAILABLE HOSE LENGTHS

LENGTH	RETRAFLEX SOFT TOUCH (PRIVATE)	R-FLEX BLEU FLASH (PRO)
9 m	Available	Available
12 m	Best seller · in stock	Best seller · in stock
15 m	In stock	In stock
18 m	Available	Available

The 12 m and 15 m lengths cover the majority of projects. The Retraflex Soft Touch offers a soft textile cover ; the R-Flex, without fabric, is easier to clean for professional use.

◆ IN DOUBT BEFORE CLOSING A NETWORK?

AspiWall supports the design of the route, the checking of an installation and repairs, throughout Belgium. Take photos of the whole and contact AspiWall **before** any doubtful final gluing.

+32 470 71 22 22 · info@aspi-wall.be · www.aspiwall.be