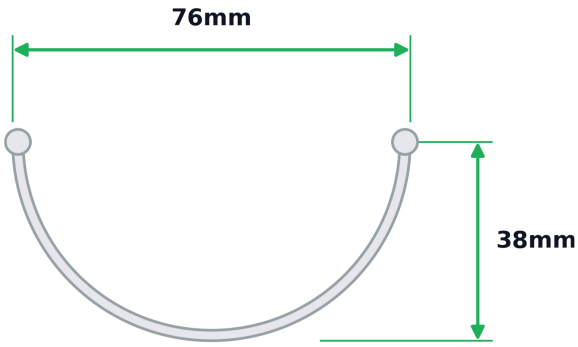
76MM HALF-ROUND RAINWATER SYSTEM

Miniflow Gutter Installation Guide

Step-by-step instructions for fitting Aquaflow Miniflow gutter and 50mm round downpipe to sheds, greenhouses, summerhouses, porches, canopies and other small roofs.



GUTTER PROFILE



Miniflow Profile

Manufactured in PVC-U with a co-extruded UV-stabilised outer layer. Available in white, black and grey. Designed for use with 50mm round unsealed downpipe.

500mm
Maximum gutter bracket spacing

3mm / m
Recommended fall towards the outlet (max 1:350)

1m
Maximum downpipe bracket spacing

0°C
Do not install below this temperature

The Miniflow system meets BS EN 607, BS EN 12200-1, BS EN 1462 and BS EN 681-1. Install in accordance with these instructions and/or BS EN 12056-3.

Before you start

A few minutes of preparation makes the job quicker and gives a watertight result first time.

Tools you will need

- Drill / driver or screwdriver
- Tape measure, pencil and spirit level
- String line and a temporary nail
- Fine-toothed hand saw (6–8 teeth per cm)
- File for removing swarf and burrs
- Silicone lubricant for seals
- Ladder with a stay or stand-off

Screws and fixings

Fix every bracket and fitting with **25mm × 5mm zinc-plated or sherardised round-head screws**, using **all** of the fixing holes.

- **Do not** use countersunk screws — they can crack the plastic.
- **Never** use nails in any circumstances.
- If the shed or building has no fascia, fix a treated timber batten first (see Step 1).

Cutting gutter and downpipe

Cut with a hand saw of 6–8 teeth per cm, held at a shallow angle, using slow steady strokes. File off any swarf or burrs, then clean all cuttings from the gutter and pipe ends — debris will damage seals and cause leaks.

Lubricate all gutter and downpipe seals with a good-quality silicone lubricant for ease of installation. **Do not** use washing-up liquid or detergent, which will degrade the seal.

Ladders. Never rest a ladder directly on the gutter. Use a ladder stay or position the ladder to avoid contact — direct load can damage the gutter, brackets and fittings.

Temperature. Do not install Miniflow below 0°C. Cold PVC-U is brittle and may break when snapped into brackets.

Treated timber. Battens or fascias treated with creosote or similar preservative must be left to dry for at least 48 hours before installation. Avoid contact with bituminous liquids.

Batten or rafter wedges?

There are two ways to fix Miniflow where there is no fascia. **We recommend the batten method** shown in this guide. Where a batten cannot be fixed, angled wedges screwed to the rafter ends will square up the fixing face — but wedges push the gutter away from the roof edge, so fast run-off can overshoot it. Always keep the gutter as high and tight to the roofline as the wedges allow.

Part 1 — Fitting the gutter

The gutter is supported entirely by the outlet, unions and support brackets, so every fitting must be fully screwed to the fascia or batten.



1 Fix a timber batten under the roof edge

Most sheds and greenhouses have no fascia board. Screw a treated timber batten to the side of the shed or gable framing, set so the bracket line will sit tight under the roof edge. Keeping the gutter close under the roofline is critical to catching all the run-off.

If the building already has a fascia board, skip this step and fix directly to it.



2 Fix the running outlet

Decide where the downpipe will drop — either at the end of the gutter run (as shown) or mid-run — and position the outlet there. Fix it to the fascia or batten using 25mm × 5mm round-head screws through every fixing hole.

An outlet at the end of the run gives 0.80 l/s capacity; at the centre of the run it gives 1.20 l/s.



3 Set the fall with a string line

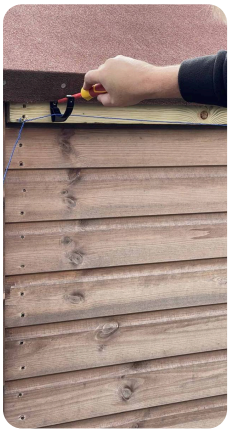
Fix a temporary nail at the high end of the fascia or batten, just below the roofline. Run a string line from the nail to the outlet with a fall of about **3mm per metre** (never steeper than 1:350). A 4m shed needs just 12mm of fall.

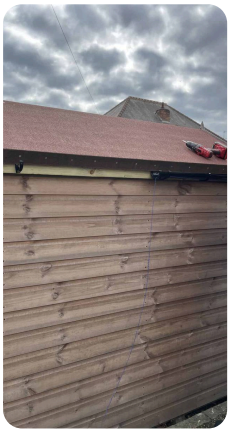
Keep the fall gentle — too much and the far end of the gutter drops below the roof edge and misses the run-off.



4 Fix the bracket furthest from the outlet

Position the gutter support bracket at the far end of the run, on the string line, and fully fix it with 25mm × 5mm round-head screws. Then stretch the line taut between the outlet and this bracket to establish a straight gutter line to work to.





5 Fix the remaining brackets

Fix the rest of the brackets along the line, using every screw hole. Bracket spacing must **not exceed 500mm**. Where two gutter lengths meet, fit a union (joint bracket) at the junction, and make sure every fitting is supported by a bracket within 100mm on either side.

Below a steep or slate roof, or in areas prone to heavy snow, reduce the bracket spacing.





6 Snap the gutter into the brackets

Push the **rear edge** of the gutter up hard under the rear retaining clip of each fitting. Then pull the front edge of the gutter out and down with one hand and the front edge of the bracket out and down with the other, pushing the front clip over the gutter edge with your thumbs until it snaps into place.

Repeat at every bracket, union and outlet along the run.



7 Check the thermal expansion allowance

Once each length is snapped in, check that its end is **not inserted beyond the "expansion allowance" line** marked inside the outlet, union or stop end. PVC-U moves with temperature — a 2m length expands by around 2.4mm for a 20°C rise — and this gap lets it move without distorting or pulling out of the fittings.

In very hot weather the daily movement is greater, so be especially careful with the allowance on summer installs.



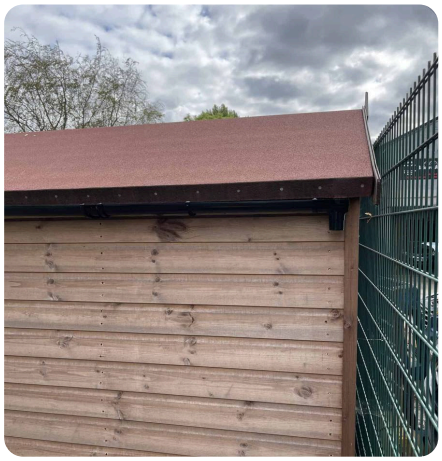


8 Fit the stop end and check the run

Clip a stop end onto the open end of the gutter (lubricate the seal first). Sight along the run to check it sits tight under the roof edge with a steady fall to the outlet, and that every bracket is fully clipped over the front edge.

Where a run changes direction, use an angle fitting — remember that bends reduce the flow capacity of the gutter.







Part 2 — Fitting the downpipe

Miniflow uses 50mm round unsealed downpipe. Work from the top down and allow around 10mm at the bottom of each pipe section for thermal movement.

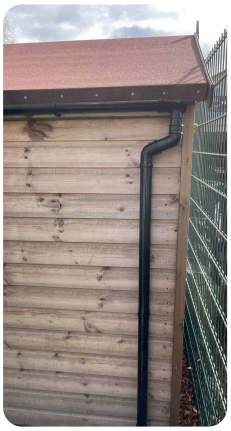


9 Make the offset from outlet to wall

Fabricate an offset using a top and bottom offset bend joined by a short length of pipe cut to suit the soffit or roof overhang. Insert a piece of pipe at least as long as the socket depth into the top offset bend and push it tightly up under the running outlet.

Secure the bottom offset bend to the wall with a pipe bracket using 25mm × 5mm round-head screws, so the whole assembly is a solid fit under the outlet.





10 Fit the downpipe

Working from the top, push the downpipe into the bottom offset bend. Place the bottom end into a downpipe connector (or shoe) and secure it to the wall with a pipe bracket, leaving a **10mm thermal movement allowance** at the top of the socket.

Fit further lengths and fittings the same way, keeping the movement allowance at every joint.



11 Bracket the pipe and fit the shoe

Secure the pipe with a bracket at every fitting or socket, and along the pipe as needed so that supports are **no more than 1m apart**. Finish with a shoe at the bottom to throw the water clear of the wall, or into a gully or water butt.

Fix brackets to the wall, never to the pipe with screws through it — the pipe must be free to move.

Optional — Fitting a water butt diverter

A rainwater diverter lets you collect run-off in a water butt. When the butt is full, water simply carries on down the pipe as normal.

A Cut a section out of the downpipe

Position the butt beside the downpipe. Mark and cut a section out of the downpipe **level with the top of the butt**, using a fine-toothed saw. File and clean the cut ends.

B Fit the diverter body

Push the diverter body over the pipe run — it has sockets at both ends, so it bridges the gap you have cut.

C Connect the hose to the butt

Screw the hose fitting into the diverter body and run the hose to the water butt. Once the butt is full, the water level in the diverter rises and flow continues down the downpipe.



Finishing off

Once the installation is complete, run water into the gutter and check every joint, the outlet and the downpipe for leaks under working conditions. Clear leaves and debris from the gutter and outlet at least once a year to keep the system flowing.

Need help?

For non-standard applications, larger roofs or advice on bracket spacing in exposed or heavy-snow locations, please contact Kalsi Plastics (UK) Ltd. Full technical data, flow capacities and compliance information are given in the Miniflow Technical Data Sheet.