

# AIR**FLUSH**™

## Waterless urinal system

# INSTALLATION AND MAINTENANCE INSTRUCTIONS

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UK SALES, SPARES AND SUPPORT

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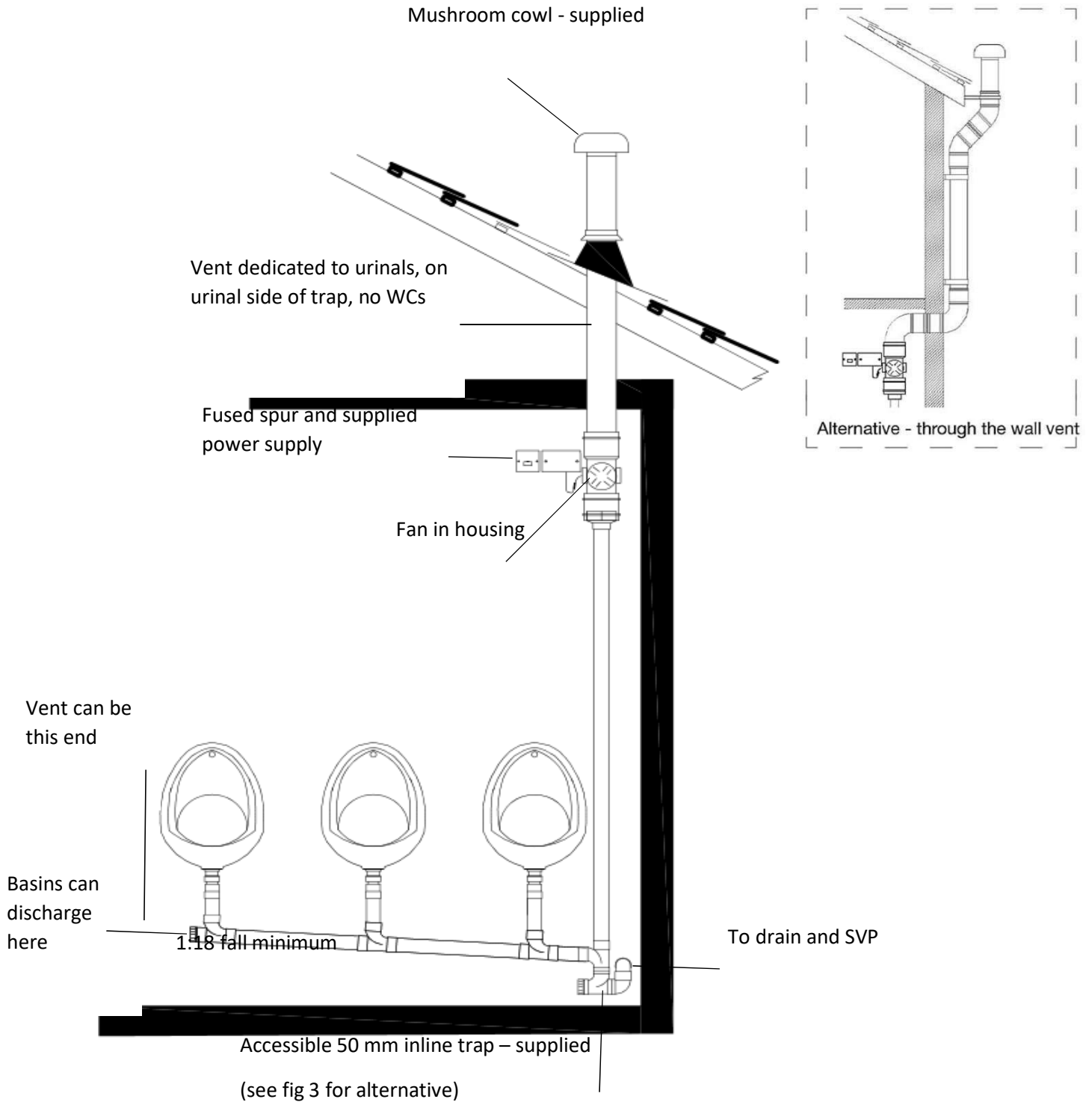
01686 412653

**NatSol** the  
remote toilet  
specialists

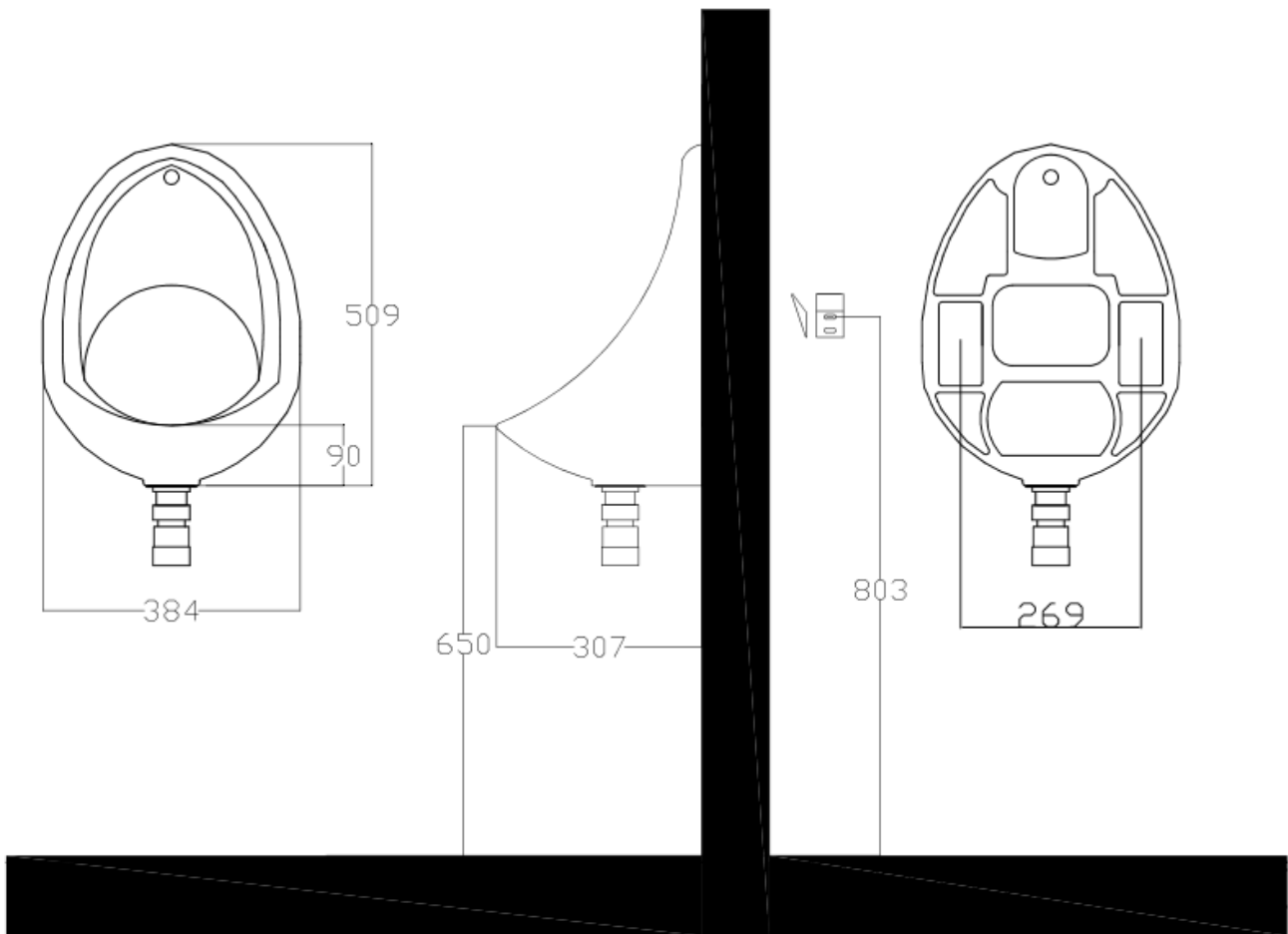


# INSTALLATION

Fig 1 – A typical installation. Each bowl hung as per fig 2 without individual traps



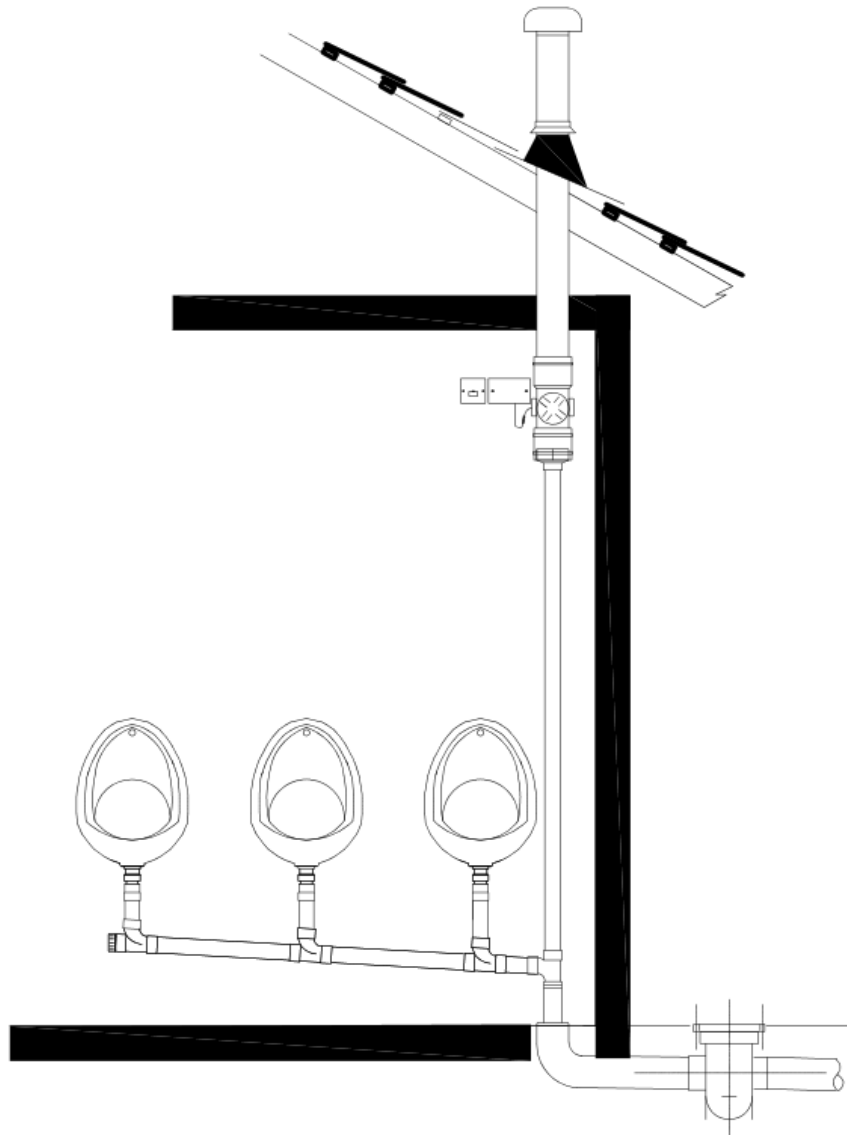
**Fig 2 – Bowl dimensions  
and bracket height**



### Crucial installation details

1. The AIRFLUSH trap must be accessible for maintenance. The standard kit includes an in-line 50 mm trap which is ideal for most situations. An even more robust solution uses a rodable 110 mm back inlet gulley trap e.g. Polypipe p/n UG427 with UG433 sealed access cover. See fig 3.
2. The AIRFLUSH fan should be installed in a dedicated vent pipe and connected so that air is extracted from the urinal side of the AIRFLUSH trap. The mushroom cowl must be fitted to reduce downdrafts and exclude rain. Installation should follow the guidance for soil and vent pipes in the Building Regulation Approved Document i.e. the terminal must extend at least 900 mm above any opening into the building that is within 3 m.
3. Waste pipes must be at least 50 mm and installed at 1:18 minimum fall to prevent build up of scale.
4. As with any urinal installation, poor attention to detail and finishing of floors and walls around urinals will lead to odour problems. All surfaces should be cleanable and impervious in accordance with current standards.
5. Do **NOT** use urinal blocks.
6. If in any doubt (after carefully reading these instructions) call NatSol Ltd on 01686 412653

**Fig 3 – Robust outlet detail with 110 mm trapped back inlet gulley (not supplied) outside room.**



### **Waste**

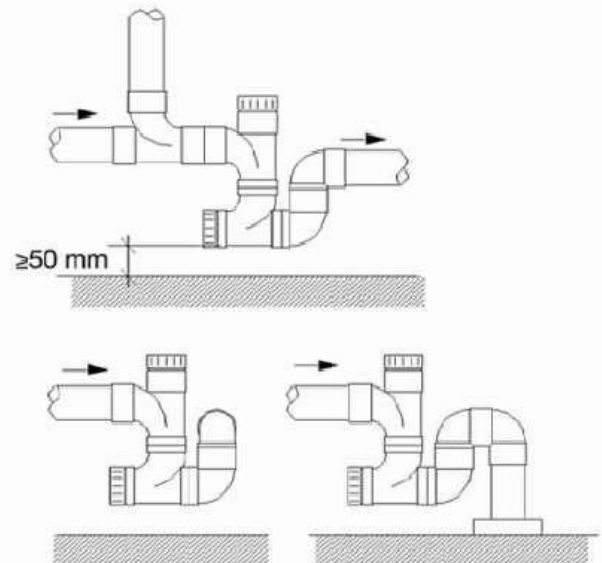
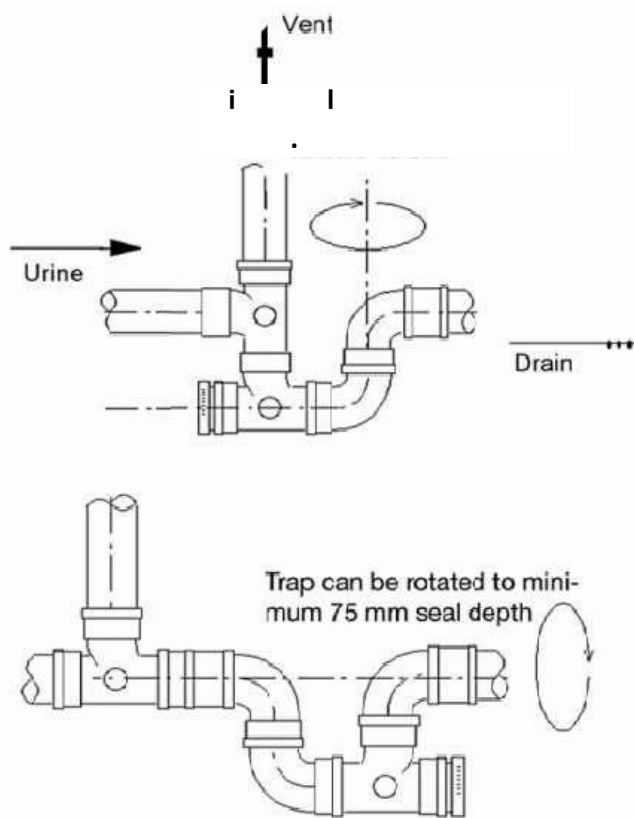
The 50 mm waste should have a minimum fall of 1:18 to the trap. All waste pipework must be solvent weld. The urinals are supplied with a push fit adaptor already fitted to the waste outlet. A 50 mm solvent weld fitting should be **DRY FITTED** to this adaptor to allow easy decoupling for maintenance. **DO NOT ATTEMPT TO SOLVENT WELD THE FITTING TO THIS ADAPTOR.** Pipework should be solvent welded to the fitting as normal. Where a lower urinal is to be installed this should be at the outlet end to maximise available falls.

Good access to the trap is essential to allow sludge removal. The standard arrangement uses a running tubular trap with access for sludge removal. This trap is offered in two versions for adapting to the individual installation.

Basins can also discharge into the urinal collection pipe. The flow of warm soapy water will help to keep the pipe and trap clear. In hard water areas the trap may need cleaning more frequently. Do **NOT** use urinal blocks.

**Fig 4 – The 82 or 110 above ground traps assembled from standard soil fittings, are suitable where the trap can be concealed in a service duct with easy access for cleaning.**

**Fig 5 – Some 50 mm trap arrangements. The outlet can be rotated to suit the actual layout.**



### Vent

Although an existing soil pipe can be used for the drain connection, the AIRFLUSH must have a separate dedicated vent. The vent is typically a 110 mm pipe and can exit through a roof or wall as shown in figs 1 and 3. The mushroom cowl must be fitted to reduce downdrafts and exclude rain.

Installation should follow the guidance for soil vent pipes in the Building Regulations Approved Document. For instance, the terminal must extend at least 900 mm above any opening into the building that is within 3 m. This is to ensure that odour from vents doesn't enter the building.

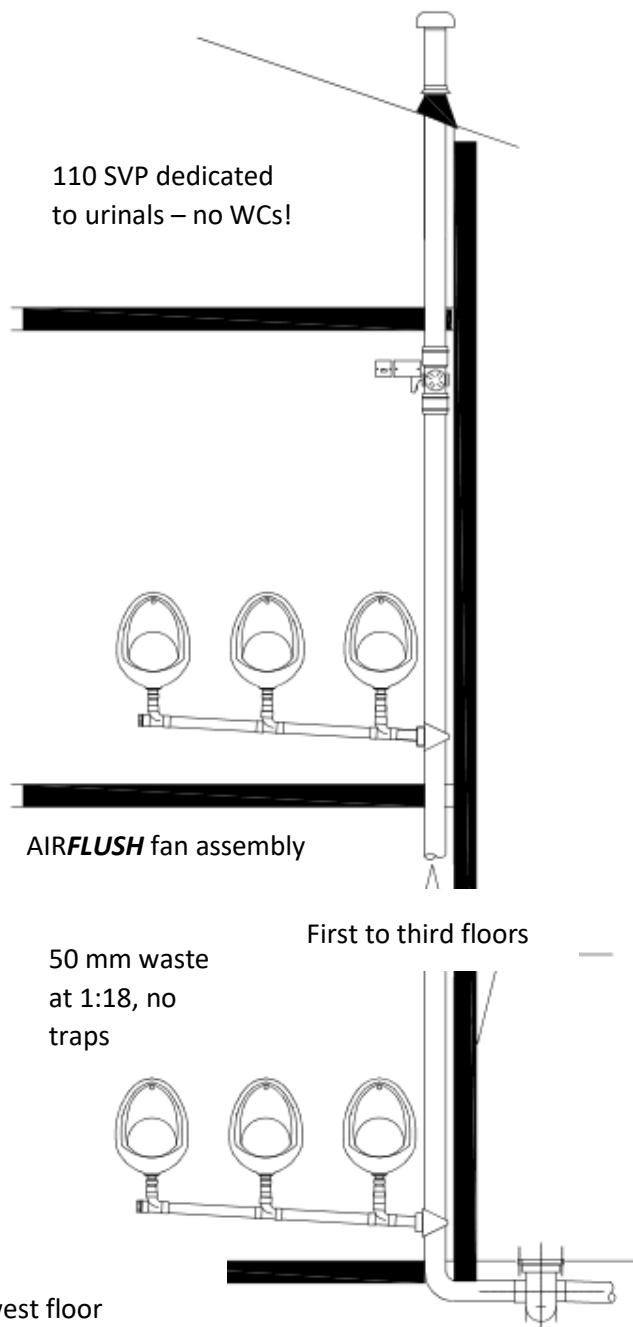
### Fan

The fan housing is fitted in the vertical 100 mm vent stack as shown in the diagrams. Fitting should be in such a way as to allow maintenance access to both the access cap and electrical connections. To deter vandalism the fan and the power supply should be mounted out of view, typically above a false ceiling or in a service duct.

### Electrical connections

Connection to the mains must be carried out by a competent electrician in compliance with current IEE regulations. The DC power supply can be surface or flush mounted in a suitable back-box. The mains power cord should be connected to a fused spur so that the cord is not exposed. A 3A fuse should be fitted. The 2 m long DC lead has an integral plug for connection to the fan. If the lead is longer than required simply secure the excess with the releasable tie-wrap.

**Fig 6 – Multi-storey installation**



**Buildings of more than one storey**

Multi-storey installations (up to four floors) require a 110 mm vent pipe and 12V fan. The preferred arrangement for multi-storey installation uses a single 110 serviceable trap at the bottom of the vent stack. 110 mm traps can also be used for single-storey installations for an even more robust installation.

**High usage applications**

Where usage is high (e.g. motorway service stations and airports) we strongly recommend using an 82 or 110 mm urinal collection pipe and trap, either inline (fig 4) or a rodable back inlet bottle-gulley (e.g. Polypipe p/n UG427 with UG433 sealed access cover as in fig 3). All access covers must be completely airtight to contain odour.

Ideally such larger pipes would be concealed in a service duct or corridor. For specialist applications contact NatSol Ltd.

# MAINTENANCE

## IMPORTANT

If replacement is necessary only use genuine **AIRFLUSH** parts available exclusively from NatSol Ltd.

## Maintenance

As with flushed urinals, the bowls should be wiped once a day with mild detergent and warm water. Where usage is heavy, more frequent cleaning is normal for any urinal.

Once a week each urinal should be flushed with about 2 litres of warm water and a little mild detergent (e.g. washing up liquid) to keep pipes clear. The trap should be cleaned out before it blocks. Typically, for high usage installations, this might be monthly but where usage is lower this might be every six months. Do **NOT** use urinal blocks.

## Troubleshooting

The three failure modes for any urinal system are leakage, odour and blockage. The **AIRFLUSH** is designed to minimise the risk of all of these.

- ✓ **Leakage**  
Leakage of urine from pipe fittings should be obvious and must be fixed as it is a common source of odour. Air leakage, for example where the waste connects to a floor drain, may be less obvious but can cause odours.
- ✓ **Odour**  
The source of any odour problem should be isolated. Is it coming from the actual urinal bowl, floor gully, unhygienic wall, or floor? If the odour is coming from the urinal, check that the fan is operating and that the vent is unrestricted. If using a gully trap check the seal of the lid.
- ✓ **Blockage**  
Assuming correct installation and normal use, the only point of blockage should be the trap at the drain end of the system. This has a screwed access cap to allow sludge to be drained into a shallow tray. This is why the trap must remain accessible.

The **AIRFLUSH** urinal system is ideally suited to sites with multiple urinal bowls and heavy usage, although it can also offer an excellent solution for single bowl installations.

It owes its success to the following main details.

- ✓ Because individual traps are prone to blockage and leakage (a maintenance liability), the **AIRFLUSH** system uses a single, easily cleaned trap at the drain end. The trap needs to be accessible for maintenance.
- ✓ The **AIRFLUSH** system uses an ultra-low power, long life DC fan to maintain a gentle flow of air down the urinal bowls because without individual traps convection currents could cause odour. The power consumption of the fan is similar to that of mains powered urinal controllers, i.e. about 3W. In case of power or fan failure, the airflow will only be provided by 'stack effect' so slight odour may be noticed. Check operation of fan.
- ✓ Waste pipes must be at least 50 mm and installed at 1:18 minimum fall to prevent build-up of scale.