

Installation Instructions

For Ideal Standard

Shower Booster Pumps

S1.5 bar Twin, S2.0 bar Twin

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PRODUCT DESCRIPTION

Electric motor driven twin ended peripheral pump complete with an automatic control system, consisting of flow switches and electronic controls.

APPLICATION

Ideal Standard pumps are designed for pressure boosting applications in vented stored water systems, inlet pressures to the pump and ambient temperatures must not exceed the values given in the technical specifications.



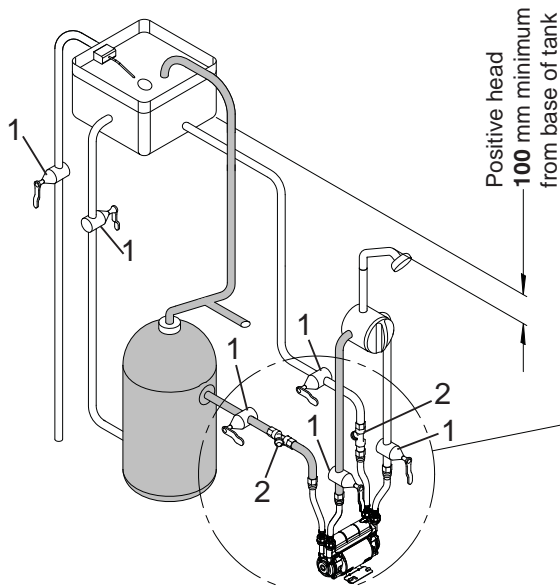
- **This pump set must not be used for any other application without the written consent of Ideal Standard and in particular must not be connected directly to the mains water supply.**
- **This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.**
Children should be supervised to ensure that they do not play with the appliance.

STORAGE

If this pump is not to be installed immediately on receipt, ensure that it is stored in a dry, frost and vibration free location in its original packaging.

**Please leave this instruction booklet with the pump as it contains
maintenance and safety information
(Original Instructions)**

TYPICAL INSTALLATION



Positive Duty Twin Pump System

Fig. 1

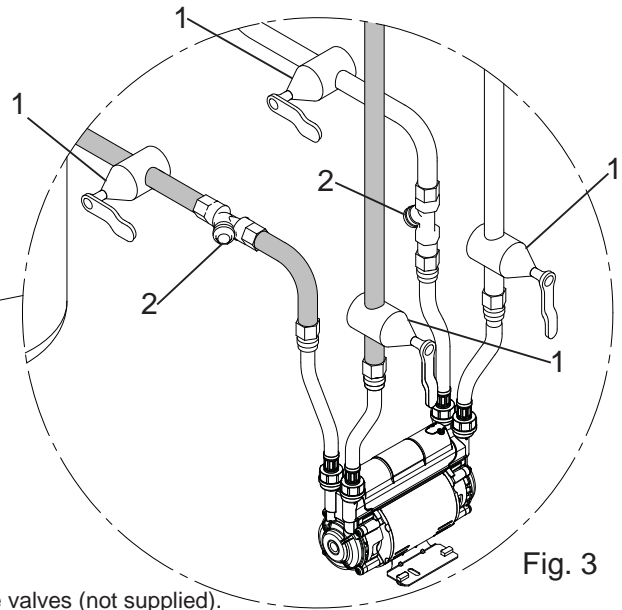


Fig. 3

Item 1 = Service valves (not supplied).

Item 2 = Inline suction strainers (not supplied).



The plumbing installation must comply with the following:

The Water Supply (Water Fittings) Regulations 1999.
BS6700 and building regulations.

Be installed by a competent person.

- **If in doubt consult Pump Assist.**

STEP 1 PUMP LOCATION (General)

WARNINGS:



- **The pump must not be located where the static inlet pressure to the pump is greater than permitted.**
- **Pump Location**
If possible site the pump in a location where in the unlikely event of a water leak, any spillage is contained or routed to avoid electrics or areas sensitive to water damage.
- **Care should be taken to protect pump from frost and freezing, particularly when located in a loft installation.**
- **The motor casing can become very hot under normal operating conditions, care should be taken to ensure it cannot be touched during operation.**

The pump must be installed so that the following conditions are met:

Locate the pump in a dry, frost free position where it cannot be sprayed with water. It should be positioned horizontally on its anti-vibration mounting feet and should not be screwed down. It should be positioned as close to the water source as possible, having a minimum flooded suction head of 0.5 metres at all times.

Ensure the water inlet supply is connected to the correct pump ports indicated by INLET arrow/s detailed on the pump rating label.

For the pump to function correctly, it must be installed in a positive head position, a gravity flow of approx. 0.8 litres per minute is required from the highest outlet to operate the built-in flow switch. This is normally achieved with a static head of 100 mm from base of header tank to highest position of the shower terminal fitting.

Before deciding where to position the unit, check to ensure the static inlet head of water above the pump does not exceed the values given in Figs. 3 or 4.

Typical pump locations are in an airing cupboard, or inside a vanity unit with a small purpose built dry and ventilated enclosure. The enclosure should have a minimum clearance of 80 mm (3 ") between the pump and housing on all sides. The enclosure should be secure and access should only be available by the use of tools.

The resilient anti-vibration mounting feet and flexible hoses which are supplied as standard, are a precaution to reduce noise transmission, however care must be taken when mounting the pump that any noise is not amplified through loose panels, pipework or other mounting medium.

The preferred pump location is at floor level next to the hot water cylinder or a level that is below the secondary tapping that feeds the pump. This will ensure the pump has access to an air free water supply which is important for trouble free operation (Fig. 3).

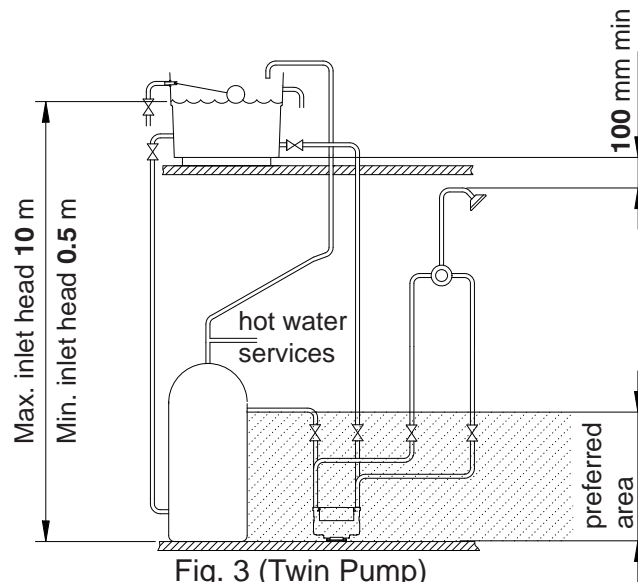


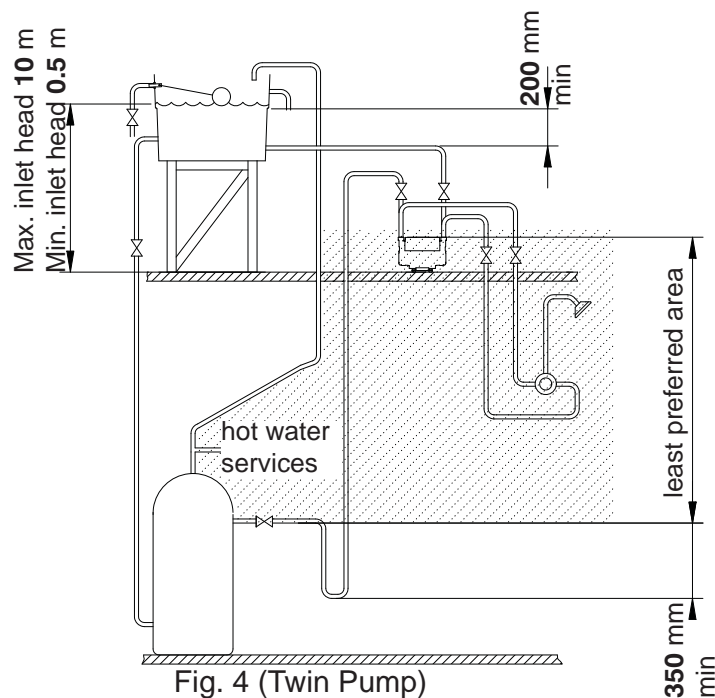
Fig. 3 (Twin Pump)

Preferred Pump Location (shaded area). Pump at a level below draw off tapping in cylinder.

If it is not possible to locate the pump in the preferred area due to site limitations and it is necessary to position the unit in the loft, or in a position above the secondary tapping that feeds the pump, then there is an increased risk of air locks. This risk must be eliminated.

The following measures are suggestions that may overcome the problem:

- 1) A "U" bend or downward loop in the supply pipe to the pump of 350 mm depth before rising to the pump, should ensure the cylinder vents its air up the expansion pipe not up the pump feed (Fig. 4).
- 2) An alternative to the above would be the installation of an automatic air vent situated at the top of a vertical pipe run, directly connected to the pump discharge. This will ensure any air collecting in the pump is automatically vented.



Least Preferred Pump Location (shaded area). Pump located above the hot cylinder can increase the risk of air locks.

Note: If installed in loft there must be a height of 200 mm from water surface to highest point of hot or cold inlet or outlet pipework at all times to prevent air locking.

STEP 2: PIPEWORK (General)

WARNINGS:



- Ensure pipework to and from pump is independently supported to prevent forces being transferred to inlet and outlet branches of pump.
- Do not introduce solder flux to pumps or pump parts manufactured from plastic. All solder joints should be completed and flux residues removed prior to pump connection.
- Do not allow contact with oil or cellulose based paints, paint thinners or strippers, acid based descalents or aggressive cleaning agents.
- Do not allow scale or debris to enter pump. Fit inline strainers to eliminate the problem in systems at risk.
- Always install isolating valves to both suction and delivery pipework.
- **Do not install a non-return valve, or devices which contain non-return valves, in the suction (inlet) pipework to the pump. The pump must be free to vent to the supply tanks at all times.**

It must be ensured that the water storage capacity is sufficient to meet the flow rates required by the pump and any other water using fittings and appliances, which may be operated simultaneously.

Cont ...

As a rule of thumb: assuming a cold water temperature of 10°C and a hot water temperature of 65°C.

- A 6-minute shower using 10 litres/min will consume 40 litres of hot water and 20 litres of cold. This means the total quantity of water used from the cold water storage tank will be 60 litres (40 + 20).
- A 10-minute shower using 15 litres/min will consume 100 litres of hot water and 50 litres of cold. This means the total quantity of water used from the cold water storage tank will be 150 litres (100 + 50).

The pipework feeds to the storage tank should be of adequate size to ensure replenishment rate of tank is sufficient to meet the needs of the pump.

Care should be taken in the design of pipework runs, to minimize the risk of air locks.

The pump (or pumps) should be supplied with balanced pressure hot and cold supplies.

To prevent loss of water pressure through pipework use 22 mm pipework throughout. Any bend requirements should be achieved by hand drawing the tube or by the use of the appropriate bend fittings. All pipework should be securely clipped.

Isolating valves (not supplied) should be fitted in the suction and delivery pipework to enable easy isolation and access to the pump.

When pump is to be installed in areas where there is a risk of debris or scale build up within the system, it is recommended that both hot and cold inlets are fitted with inline strainers, (these are not supplied with the kit).

Pipework Connections (Cold)

The pump must be supplied with a dedicated feed direct from the cold water storage tank.

The supply must be air free and connection of the feed pipe to the tank should be via a tank connector, positioned at a slightly lower level (25 mm minimum) than the feed pipe to the hot water cylinder.

Pipework Connections (Hot)

When a hot water cylinder or storage tank is used, ensure the pipework size from the cold water storage to the hot water storage is of adequate size and a minimum of 22 mm.

The pump must be supplied with a dedicated feed direct from the hot water cylinder or storage tank.

The supply must be air free and connection to the cylinder can be made by one of the methods shown in Fig. 5.

When the method of connection is to be made via the expansion pipe, the cold water storage cistern should be at least 1 metre above the top of the hot water cylinder.

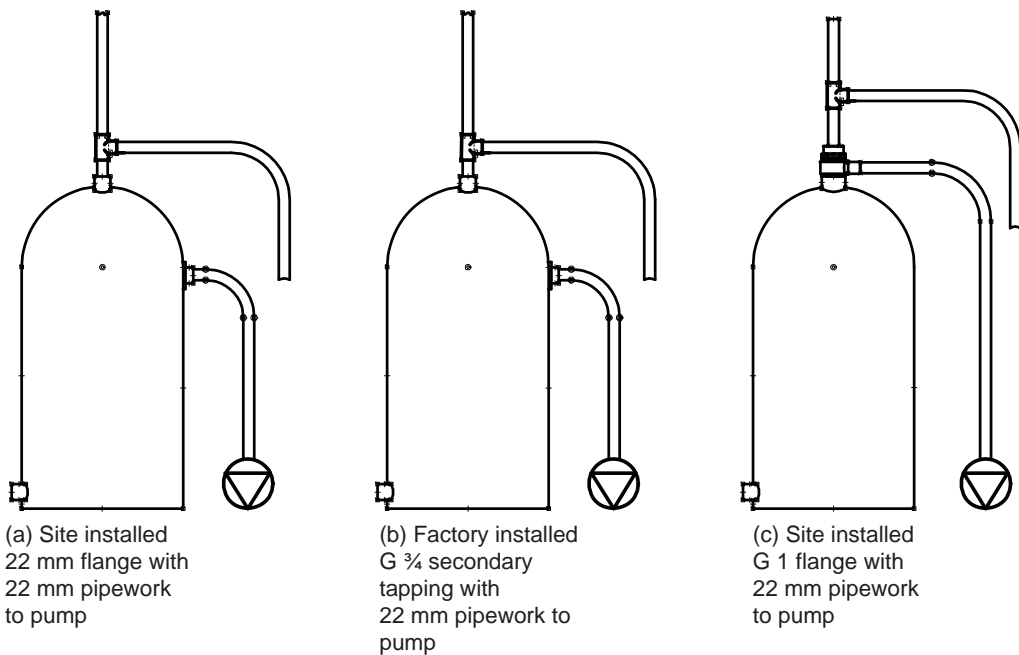


Fig. 5

Pipework Connections (Connection between pump and system outlet)

This should run as far as possible in 22 mm copper tube. Pipework should only be reduced to 15 mm copper at pump and if necessary when entering the terminal fittings. By this method the maximum performance of the pump will be maintained.

STEP 3: PUMP CONNECTIONS

WARNINGS:



- Do not use stainless steel, chrome or nickel plated pipe with the flexible hose push-in plumbing connections.
- Do not introduce solder flux into the joint or surrounding area as connectors will be attacked and may fail.
All solder joints should be completed and flux residues removed before final connection to push-in connections on the flexible hose.
- Do not allow contact with oil or cellulose based paints, paint thinners or strippers, acid based descalents or aggressive cleaning agents.
- Never operate pump with inlet and/or outlet isolating valves in the closed position. **Damage will occur!**

The pump is supplied with flexible hoses for connection to inlet and outlet pipework. It is recommended that only the Ideal Standard hoses supplied are used for making these connections.

Pumps supplied with flexible inlet and outlet hoses

Flexible pipes are supplied with this pump variant. The pump inlet and outlet ports are threaded G $\frac{3}{4}$ male. These ports are provided with a flat sealing face suitable for use with an appropriately sized flat faced fitting and fibre or rubber washer. Ensure a water tight seal is achieved when the pump is both stationary and running.

- 1) Hoses incorporating integral isolating valves should be applied to the inlet side of pump to satisfy servicing requirements.
- 2) Standard hoses with no integral isolating valve should be applied to the outlet side of pump.
- 3) Use correct tool for opening and closing integrated isolating valve to prevent damage. Please note these valves are of quarter turn design, rotate clockwise to close and anti-clockwise to open. Failure to comply to these instructions could lead to valve damage.

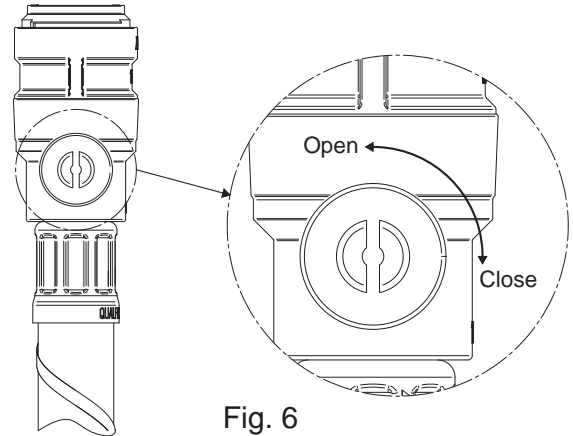


Fig. 6

4) **WARNING - pump must not run with valve closed.**

Hose to pump

The pump inlet and outlet ports have moulded fittings which are specifically designed for connection to the G $\frac{3}{4}$ female running nuts on the flexible hoses. The hose end running nut is fitted with a rubber sealing washer which is held captive within the nut assembly. Locate the hose into position and screw the nut fully onto the fitting by hand. Finally nip tight with pliers (4 to 5 Nm) for a water tight seal (**do not overtighten**).

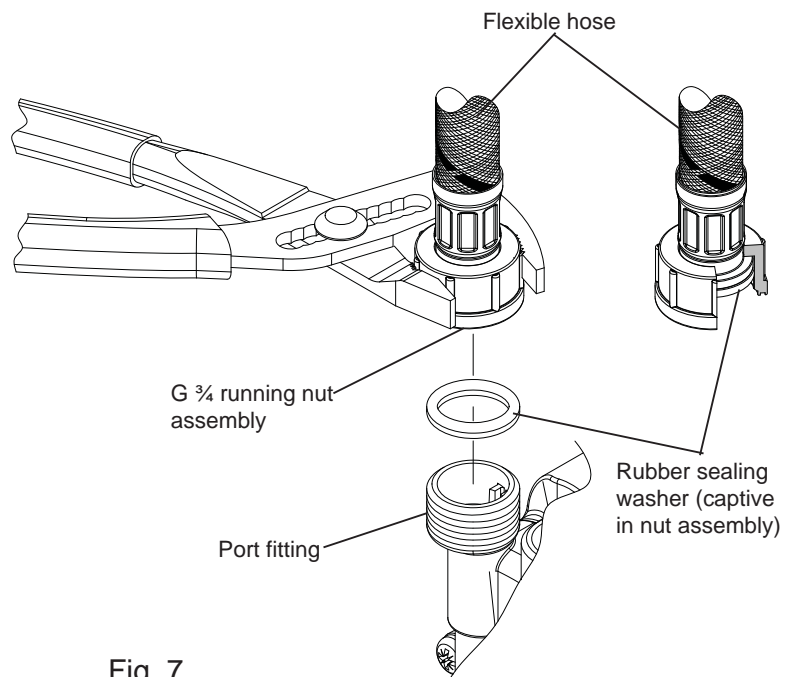


Fig. 7

Hose to pipework (Release and connection of push-in connectors)

1. The hoses are fitted with plastic push-in connectors, which must only be connected with the following:
 - a) 15 mm diameter copper pipe to BS EN 1057 - R250 (half hard) - Table 3.
 - b) 15 mm plastic pipe to BS 7291 part 1 and part 2 (Table 1), or part 3 (Table 1) plus internal support sleeve*.

* The internal bore of the plastic pipe must be supported against collapse with the pipe manufacturers recommended support sleeve (pipe insert).

 - c) Appropriate plumbing fitting that provides a leak tight connection.

Ensure the pipe is free from all score marks and deformities in the area of the insertion depth (Fig. 8) and cut the pipe square, removing all burrs and sharp edges to prevent damage to the sealing 'O'-ring.

2. Prior to inserting pipe into fitting, mark the insert depth on the wall of the pipe with a soft pencil at a distance of 31 mm from the end to be inserted (Fig. 8).

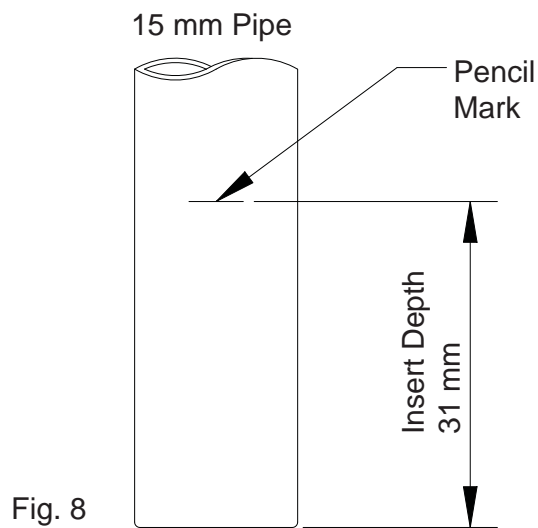


Fig. 8

3. Check in the mouth of the fitting that the 'O'-ring, nylon washer and collet are in position as shown in Fig. 9.
4. Push the pipe firmly into the fitting, until pencil mark is level with the top of the collet and the pipe stop resistance is felt. Pull on the pipe to check it is secure and correctly fitted.

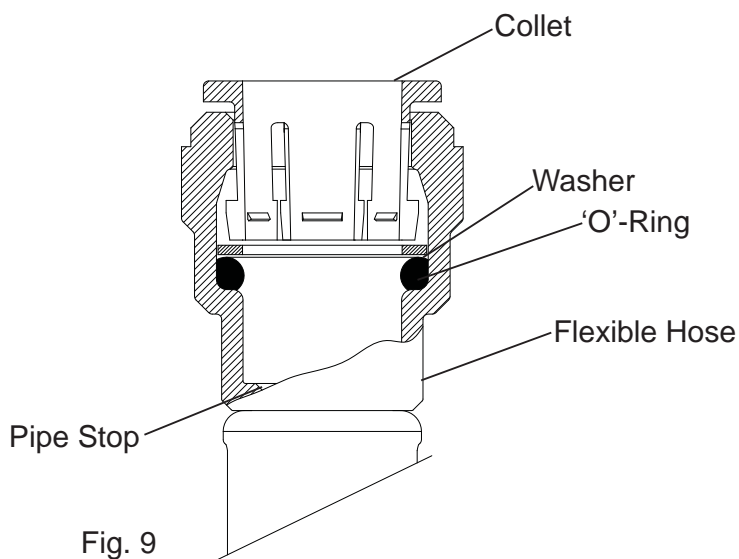
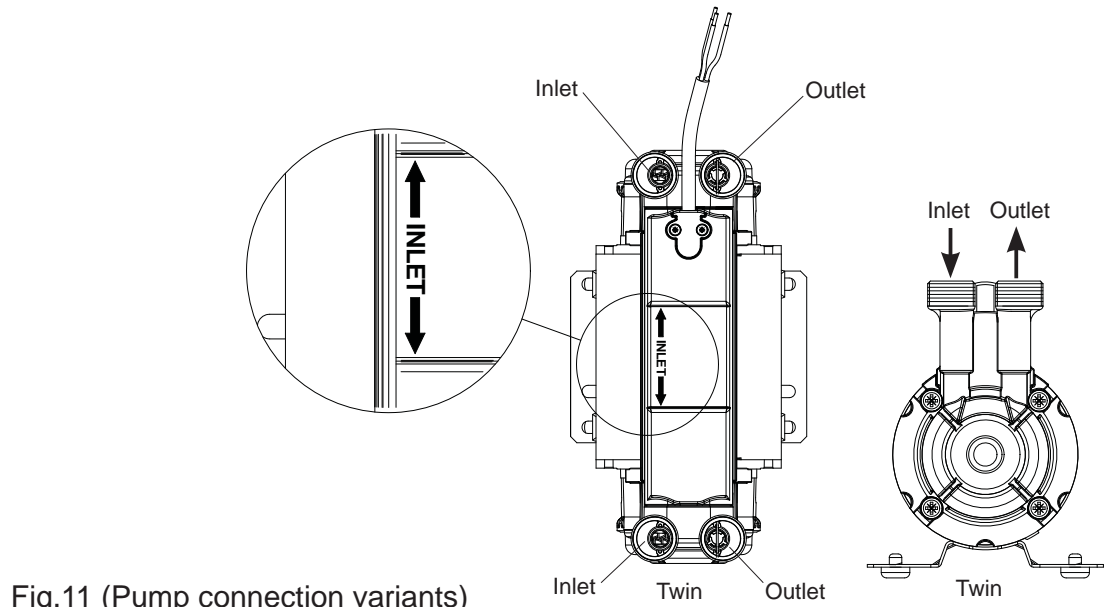
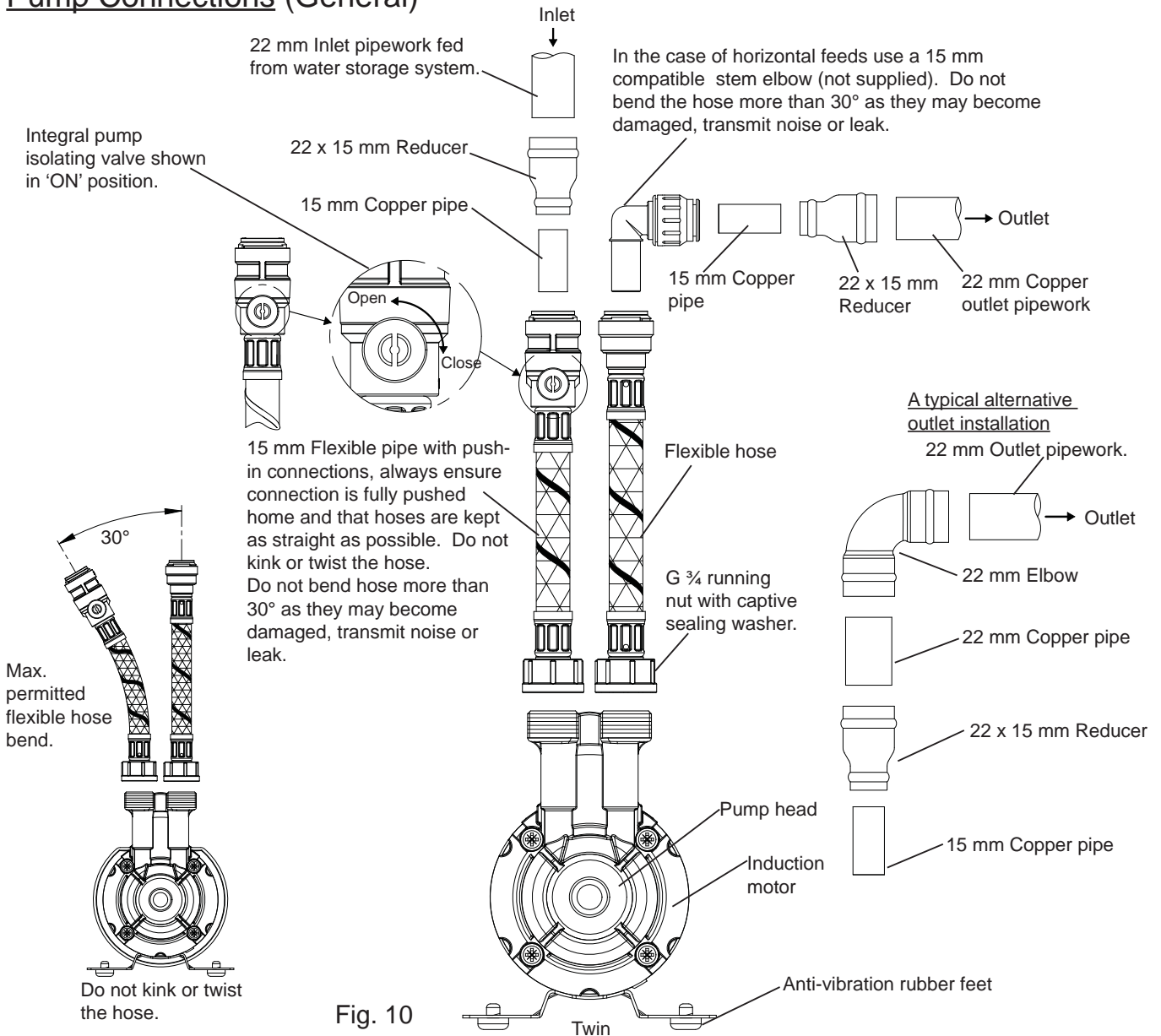


Fig. 9

5. To release the joint, push pipe firmly into the fitting, hold the collet down and gently remove pipe. If the system has been filled with water care should be taken to isolate the pump and towels used to absorb spilled water.

If you have any concern either about using push-in fittings or should the joint leak on final test, isolate the water supplies and contact Pump Assist on 0844 98 000 97.

Pump Connections (General)



The pump should not be screwed down, ensure anti-vibration feet and flexible hoses are used.

STEP 4 ELECTRICAL INSTALLATION



- The electrical installation must be carried out in accordance with the current national electrical regulations and installed by a competent person.
- In the interests of electrical safety a 30 mA residual current device (R.C.D.) should be installed in the supply circuit. This may be part of a consumer unit or a separate unit.
- Before starting work on the electrical installation ensure the power supply is isolated.
- This appliance must be earthed.
- The motor and wiring must not be exposed to water.
- Do not allow the supply cord to contact hot surfaces, including the motor shell, pump body or pipework. The cord should be safely routed and secured by cable clips.

The motor fitted to this pump is suitable for a 230/1/50Hz supply. It is thermally protected by an integral auto resetting thermotrip for your safety and rated for the duty listed in the technical specification section.

Electrical Connection

The motor is provided with a factory fitted supply cord. This must be permanently connected to the fixed wiring of the mains supply. Means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

A suitable method of connection would be via a double pole switched, fused connection unit complying with BS 1363-4, protected with a 5 Amp fuse.

The connection unit should be mounted in an easily accessible position and should be labelled if confusion is possible, to allow easy identification of the pump isolating switch.

Earthing

This appliance must be earthed via the supply cord, which is factory connected to the earth point located in the terminal box.

Copper or metallic pipework must have supplementary earth bonding where the continuity has been broken by flexible hoses or plastic components. Adjacent suction and delivery pipes should be fitted with earthing clamps to BS 951 and connected with earthing wire size 4 mm² (Fig. 12).

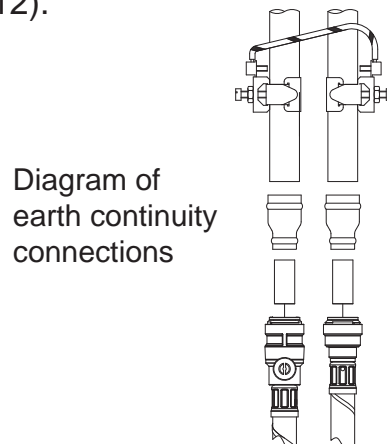


Fig. 12

Certain installations may require additional earthing arrangements such as equipotential bonding. Reference should be made to the relevant regulations concerning this subject to ensure compliance.

Wiring of connection unit



WARNING: This appliance must be earthed.


The wires in the mains lead (supply cord) are coloured in accordance with the following code:

Green and Yellow: Earth

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your connection unit proceed as follows:

The wire which is coloured green and yellow must be connected to the terminal in the connection unit which is marked with the letter E or by the earth symbol:  or coloured green or green and yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Internal Wiring



Do not remove terminal box cover. No user serviceable parts inside terminal box. Any service work involving the removal of the terminal box cover must only be undertaken by Pump Assist or by one of their approved repairers, or similarly qualified persons in order to avoid a hazard.

There are no user serviceable electrical items within the pump.

Supply Cord Replacement



If the supply cord is damaged, it must be replaced by Pump Assist or by one of their approved repairers, or similarly qualified persons in order to avoid a hazard.

Supply Cord Extension

The pumps are fitted with a supply cord to the following specification:-

HO5VV-F3 G 0.75 mm² - 6 Amp rated cable.

If the supply cord is to be extended, a cord of the same specification should be used. Any connections or junction boxes used should be specifically suited for the application and installed in accordance with the manufacturers instructions.

STEP 5 COMMISSIONING

WARNINGS:



- **The motor casing can become very hot under normal operating conditions, care should be taken to ensure it cannot be touched during operation.**
- **Do not run pump without guards and terminal box lid correctly fitted.**
- **The pump chamber must be full of water at all times. Seal damage will result if the pump runs dry.**



1. System Flushing

The pump and flexible hoses incorporate push-in connectors and plastic components that must not come into contact with solder flux, acid-based descalents or aggressive cleaning agents. The pipework system should be flushed out prior to the pump being connected to ensure any contaminants/chemical residues and foreign bodies are removed from elsewhere in the system.



2. Water Supply

Always ensure that water storage capacity is adequate to meet the demand. Ensure the pump chamber is full of water before starting the pump. Failure to do this could result in seal damage. To ensure dry running does not occur the pump must be primed as described in priming section. **Do not run pump dry.**

3. Priming

The pump must be primed (filled with water) before starting. Turn on water supply, prime and vent the pump by opening the outlet valve to allow pump to fill and vent. In the case of twin pumps, both pump chambers must be independently primed.

4. Pre-Start Check

Always ensure the pump is in a positive head position with flooded suction. A gravity flow of approx. 0.8 litres/min from the highest outlet is required to operate the integral flow switch.

5. Starting

- a) Switch on power and open terminal fitting. Pump should start and stop upon demand.
- b) Open and close all outlets in turn associated with the pump, allowing water to flow from each outlet until all air is purged. As each outlet is opened and closed, the pump will start and stop respectively.
- c) Any tap or control valve within the system when opened and closed will now turn the pump on/off. Check system for leaks, if clear the system is now operating correctly.
- d) Carefully check pump and pipework for leaks whilst pump running and stationary before leaving the installation unattended.

For Further Technical Support

Phone the Pump Assist team on 0844 98 000 97. Our staff are trained to help and advise you over the phone or arrange for a service engineer to call.

MAINTENANCE

WARNINGS:



- **Do not remove the terminal box cover. No user serviceable parts inside.**
- **Care should be taken to protect pump from frost and freezing, particularly when located in a loft installation.**
- **Pump Location**

If possible site the pump in a location where in the unlikely event of a water leak, any spillage is contained or routed to avoid electrics or areas sensitive to water damage.



1. No routine maintenance is required, but provision should be made for easy access to the pump to allow repairs due to normal wear and tear.
2. There are no user serviceable parts available for the pump. any service work involving the repair or replacement of parts for the pump must be carried out by Pump Assist, or by one of their approved repairers, or similarly qualified persons. This is in order to avoid a hazard.
3. Disconnect electrical supply before working on pump.
4. Turn off water supplies to the pump and release pressure by opening water outlets before attempting maintenance.
5. When the installation is fitted with inline strainers (not supplied with kit), these may require periodical cleaning. The frequency of this operation is dependent upon installation conditions.
The strainer is located in the inlet pipework to the pump (see pump connection section). The gauze filter is removed as follows:-
 - a) Isolate pump electrically.
 - b) Release all system pressure.
 - c) Isolate water supply.
 - d) Remove screwed hexagonal plug from strainer body (see pump connection section).
 - e) Remove and clean stainless steel gauze filter.
 - f) Re-assemble gauze and secure plug tightly.
 - g) After maintenance is completed, refer to commissioning section for instructions on re-starting pump.
6. As water is heated scale deposits are released in areas of hard water (usually south of a line between the Wash and Bristol Channel), scale can cause the mechanical seal to stick if left without use for long periods. We recommend the pump is run for at least 5 minutes every four weeks to “exercise” all working parts. Run on cool water. See technical specification for note on water temperature. This particularly applies to guest bathrooms used infrequently.

Cleaners, Disinfectants and Descalents



On installations where chemical disinfectants or descalents are periodically used, the compatibility of the chemical solution regarding the pump must be considered.

Acid based descalents and aggressive cleaning agents must not come into contact with the pump. The pump must be removed from the system prior to the use of these products. The system should be flushed to remove all chemicals before the pump is re-connected.

If in any doubt as to the suitability of the chemical solutions, please contact our Pump Assist helpline.

TECHNICAL SPECIFICATION

Model		S1.5 bar Twin	S2.0 bar Twin
Electrical	Power supply Volts/phase frequency	230/1/50	230/1/50
	Enclosure	IP22	IP22
	Type of motor	Induction	Induction
	Power consumption	385 Watts	420 Watts
	Full load current	1.7 Amps	1.8 Amps
	Rating	Int (S3) 30 mins on/30 mins off @ 9 l/min (Both ends pumping)	Int (S3) 30 mins on/30 mins off @ 9 l/min (Both ends pumping)
	Max. No Starts per hour	60	60
Mechanical	Max inlet head	10 metres	10 metres
	Max head (closed valve)	15 metres	19 metres
	Max working pressure*	300 kPa (3.0 bar)	300 kPa (3.0 bar)
	Max ambient air temperature	40 °C	40 °C
	Max water temperature**	65 °C	65 °C
	Min water temperature	4 °C	4 °C
Dimensions	Length	231 mm	231 mm
	Width	132 mm	132 mm
	Height (excluding flexible hoses)	166 mm	166 mm
	Gross Weight (packed)	4 Kg	4 Kg

Ideal Standard reserve the right to amend the specification in line with its policy of continuous development of its products.

Note: For information on other voltages/frequencies which are not shown, consult any supplementary instruction sheet supplied, or the rating label attached to the pump.

*Note: Max working pressure is the maximum pressure that can be applied to the pump internal casing under any installation conditions.

**Note: In normal circumstances the temperature of stored water should never exceed 65°C. A stored water temperature of 60°C is considered sufficient to meet all normal requirements and will minimize deposition of scale in hard water areas.



Maximum permissible water temperature 65°C.

NOISE

The equivalent continuous A-weighted sound pressure level at a distance of 1 metre from the pump does not exceed 70 dB(A).

TROUBLE SHOOTING GUIDE

Symptoms	Probable Cause	Recommended Action
Pump will not start.	Insufficient gravity flow. Water supply. Filter blocked. Electrical supply. Faulty reed switch/PCB. Integral motor thermotrip activated.	Check gravity flow of water is available to the terminal fittings of approx. 0.8 l/min. If NO... check water level in the supply tank and all stopcocks are open. Remove and clean system filters (if fitted). Check wiring connections in fused switched spur. Check all switches are 'on'. Check correct fuse fitted. Check circuit breaker is set. Consult Pump Assist for test procedure. Wait for thermotrip to auto reset and check duty point and run time is within specification (see technical specification).
No hot water.	Air locked water feed. Boiler is switched off. All hot water has been used. Faulty thermostatic mixer valve.	Vent hot water pump of air. Check cold feed to hot water cylinder. Check water level in cold water tank is satisfactory and that all stopcocks are open. Check boiler is switched 'on'. Check cylinder thermostat. Check immersion heater. Check cylinder contains hot water. Check tank volume is adequate. Consult makers instructions.
Pump starts when outlets are off.	Leak in system.	Check tap washers, ball valve washers, pipe joints.
Pump runs on when all terminal outlets are closed.	Leak in system. Faulty reed switch or P.C.B.	Check tap washers, w/c valve washers, pipe joints. Consult Pump Assist for test procedure.
Reduced flow/performance.	Blocked inlet strainers. Blocked shower head spray plate. Blocked pipework or pump.	Clean inlet strainers if fitted (see maintenance section). Clean in accordance with manufacturers instructions. Isolate pump electrically and hydraulically, locate blockage and remove.

ENVIRONMENT PROTECTION

Your appliance contains valuable materials which can be recovered or recycled.

At the end of the products' useful life, please leave it at an appropriate local civic waste collection point.

GOOD PRACTICE

Always flush system prior to installing a new or serviced pump.

Always ensure both sides of the pump (if applicable) are primed (filled with water) before starting the pump. **DO NOT RUN PUMP DRY.**

Always ensure the pump is in a positive head position with a flooded suction.

Always ensure anti-vibration feet are used.

Ensure pump is sited in dry ventilated position.

Do not allow pump to freeze.

Abide by the Water Supply (Water Fittings) Regulations 1999.

Always install isolating gate valve to both suction and delivery pipework.

Ensure earth continuity between suction and delivery pipes.

Always ensure pump wiring conforms with the current national electrical regulations and installed by a competent person.

Carefully check pump and pipework for leaks before leaving the installation unattended.

Do not install a non-return valve, or devices which contain non-return valves, in the suction (inlet) pipework to the pump. The pump must be free to vent to the supply tanks at all times.

THE IDEAL STANDARD GUARANTEE

Congratulations on purchasing an Ideal Standard pump.

We are confident this pump will provide many years of trouble free service as all our products are manufactured to the very highest standard.

All our pumps are guaranteed to be free from defects in materials or workmanship for 2 years from the date of purchase.

Please note that to validate your extended warranty we will require the following information:

1. Full pump serial number (including last 3 digits) which can be found on the pump rating label and the back page of the installation instructions.
2. Your name/address/telephone/e-mail.
3. The date of installation.
4. Your installer's name/address/telephone/e-mail.

Within the guarantee period we will repair, free of charge, any defects in the pump resulting from faults in material or workmanship, repairing or exchanging the whole unit as we may reasonably decide.

Not covered by this guarantee: Damage arising from improper use, unauthorised repair, normal wear and tear and defects which have a negligible effect on the value or operation of the pump.

Reasonable evidence must be supplied that the product has been purchased within the guarantee term prior to the date of claim (such as proof of purchase or the pump serial number).

This guarantee is in addition to your statutory rights as a consumer. If you are in any doubt as to these rights, please contact your local Trading Standards Department.

In the event of a claim please telephone **‘Pump Assist’** or return the pump and flexible hoses with the accessories removed e.g pipes etc. If you have any doubt about removing a pump, please consult a professional.

0844 98 000 97

Proof of purchase should accompany the returned unit to avoid delay in investigation and dealing with your claim.

You should obtain appropriate insurance cover for any loss or damage which is not covered by Stuart Turner Ltd in this provision.

Please record here for your records.

TYPE NO.	SERIAL NO.	DATE PURCHASED



DECLARATION OF CONFORMITY

2006/42/EC

BS EN ISO 12100-1, BS EN ISO 12100-2, BS EN 809

2006/95/EC

BS EN 60335-1, BS EN 60335-2-41, EN 50366

2004/108/EC

BS EN 55014-1, BS EN 55014-2, BS EN 55022, BS EN 61000-3-2, BS EN 61000-3-3,
BS EN 61000-4-2, BS EN 61000-4-3, BS EN 61000-4-4, BS EN 61000-4-5, BS EN 61000-4-6,
BS EN 61000-4-11

IT IS HEREBY CERTIFIED THAT THE STUART ELECTRIC MOTOR DRIVEN PUMP AS
SERIAL NUMBER BELOW, COMPLIES WITH THE ESSENTIAL REQUIREMENTS OF THE
ABOVE E.E.C. DIRECTIVES.

(_____)

RESPONSIBLE PERSON
AND MANUFACTURER

STUART TURNER LIMITED
HENLEY-ON-THAMES, OXFORDSHIRE
RG9 2AD ENGLAND.

Signed..... Customer Relationship Manager

Stuart Turner are an approved company to BS EN ISO 9001:2000



Stuart Turner Ltd, Henley-on-Thames, Oxfordshire RG9 2AD ENGLAND

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