

# SECTION 5

## Distribution Packs

WADMU/3	Distribution Main Kit
WADF3	3" Distribution Fittings Kit for PE or uPVC pipe
WADF2/1	63mm Distribution Fittings Kit for PE or uPVC pipe
WADP	32mm Distribution Pipe Kit (x 50 metres)
WADPP2	63mm Distribution Main (x 50 metres)
WADS/4	Distribution Tapstand
WADA2	Distribution Adaption Kit
WADLR/3	Distribution Layflat Rapid Fittings Kit

### Shipping Specifications:

WADMU/3	2 boxes: 4.60 x 1.27 x 0.62m - GW: 444kgs EACH
WADF3	1.05 x 1.05 x 0.56m - GW: 112kgs
WADF2/1	0.50 x 0.60 x 0.60m - GW: 58kgs
WADP	1.05 x 1.05 x 0.25m - GW: 14kgs
WADPP2	1.50 x 1.50 x 0.30m - GW: 25kgs
WADS/4	1.00 x 0.40 x 0.11m - GW: 40kgs
WADA2	0.61 x 0.41 x 0.44m - GW: 68kgs
WADLR/3	1.33 x 0.92 x 0.87m - GW: 403kgs

## **Distribution Packs**

The distribution pack contains either 3" NB PVC pipes with push fit joints or coils of 90mm polythene pipe.

Included within the kit are the necessary fittings to connect onto either a water tank or pumping pack and 6 x 50 metre coils smaller polythene tube for connecting onto distribution frames.

The pipe diameters have been chosen so that a design of 4 litres per second in the main passes with minimum head loss.

It is important that these packs are stored out of direct sunlight since the fittings and pipe may distort and colour in this situation.

## Distribution Packs - installation Instructions

Main may be laid out in either a circle or straight line so as to provide 'T-off' points for the water collection frames at the required positions.

A ring main is ideal since it allows for flow in both directions thus minimising frictional losses.

The 32mm feed to the water collection frames should be kept to 50 metres where possible, also to minimise frictional losses.

Ideally the distribution main should be in a gravity fed situation so that the pipelines are laid as near as possible to a continuous slope. A minimum head of 2 metres should be available between the water level within the water tank and the water collection frame. If additional head is required the water tank may be situated on an earth platform.

The pipes should be buried in order to prevent damage and to keep the water cool.

Trenches should be around 300mm deep and the bottom of the trench should be lined with sand so that there are no sharp edges that could damage the pipe.

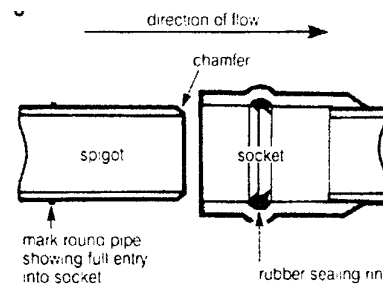
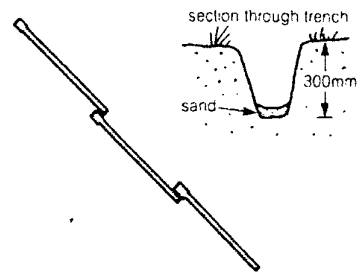
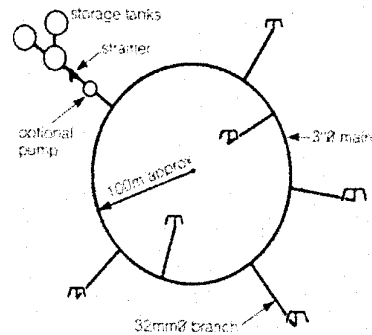
In cases where it is impossible to bury the pipes all changes of direction should be securely fixed, preferably by casting a concrete block around the pipe.

Pipes should be laid starting at the storage tank.

The spigot ends should be inspected and chamfered if necessary. The rubber ring must be correctly seated within the socket and facing the right way. The face marked front should be pointing towards the outer end of the socket.

Clean and lubricate both spigot and socket thoroughly, do not grease as this will damage the rubber ring. Push spigot into socket until ring is reached. Push firmly past the ring holding both pipes securely, it may be necessary to tap the end of the pipe with a hammer, if so protect with a block of wood. Twisting the pipe will also help entry into the socket.

Ensure the joint is fully made by aligning the mark on the spigot with the end of the socket.



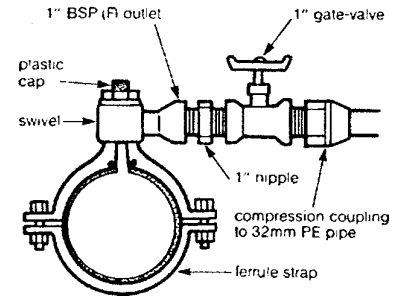
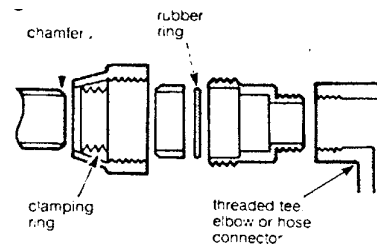
Compression joints are used to connect pipe to threaded fittings. These also contain a rubber ring and the coupling is made in the same manner, but the compression coupling is tightened so that the clamping ring is squeezed onto the pipe.

Threaded joints are made with PTFE tape.

The ferrule straps may be located anywhere along the pipe, the two halves should be assembled around the pipe with the outlet at the top.

- Ensure the rubber o-ring is located in the groove
- Secure the clamp to the pipe
- Unscrew the plastic cap and screw the cutter through the wall of the PVC pipe using the ferrule key

Ensure that the swivel assembly is pointing towards the water collection point.



Assemble the tap frame and place in required position (there are specific instructions relating to this product)

Connect the 32mm polythene main from the collection point to the ferrule strap using the compression couplings supplied. Do not over tighten the threaded and compression fittings, and use PTFE tape on all threads.

**Operational Problems:**

Little maintenance is required besides ensuring that water that is silty does not cause blockages to the water saver valves or the filters. The most likely cause for problems is that grit will lodge between the washer and its seating or that the washer itself will become worn. The valve can be dismantled for cleaning or replacing the washer.

### Erection of 3 tap Tapstand

1. Unpack and identify all items as shown on sketch.
2. Screw each of the leg pieces into the tripod base and tighten.  
NB: ensure that holding down plates are facing outwards - as shown on the sketch.
3. Wrap PTFE tape around each end of the male threaded nipples, hold the nipple in the left hand and the tape in the right hand with the tape at the back of the reel, wrap the tape clockwise around the nipple.
4. Screw and tighten one nipple into the top of the tripod base.
5. Screw one of the tee pieces onto this nipple and tighten.
6. Screw the remaining nipple into the top of this tee piece.
7. Wrap PTFE tape around the thread of the plug, and screw this into the top of the tee.
8. Wrap PTFE tape around the threads of each of the 20mm dia galvanised extension tubes and screw one end of each into the branches of the tees.
9. Screw 3 self closing valves onto each extension tube so that they face downwards.
10. Wrap PTFE tape around each of the threads of the riser tube and screw one end into the base tee.
11. Wrap PTFE tape around the male threads of each of the Guillimen couplings (assuming both are to be used) and screw them into each side of the tee.  
  
If only one tapstand is to be used, or it is the last in a series, then one Guillimen coupling should be replaced by the plug.
12. Screw the riser tube into the bottom of the tripod base assembly.
13. The tapstand may then be placed in it's chosen position, and anchored using the 3 anchor pegs.
14. A cap is supplied in case the water saver valves become inoperable.

## **Tapstand - Installation Instructions**

### **General Notes:**

The following pages provide guidance and suggestions on the methods of using and siting tapstands. They are by no means exhaustive and inevitably site conditions will prevail.

### **Recommendations for Location of Tapstand Base:**

Inevitably there will be a substantial amount of surplus water in the vicinity of a tapstand unless precautions are taken. Careful base preparation is a most important aspect and in siting a tapstand the following points should be considered:

1. Tapstands should be a minimum of 1 metre below the lowest level of water within the supply tank, so that a reasonable 'head' of water is available at the taps. At this pressure a flow of 10 litres/minute can be expected.
2. They should be placed on level ground.
3. A free draining site is preferable.
4. The preferred location should be in an open position, so that there is unrestricted access to each tap.

## Recommendations for Base Construction

### A. Concrete Base

By far the best type of base for anchoring tapstands can be constructed of concrete. It should be a minimum of 100mm thick and sized as follows:

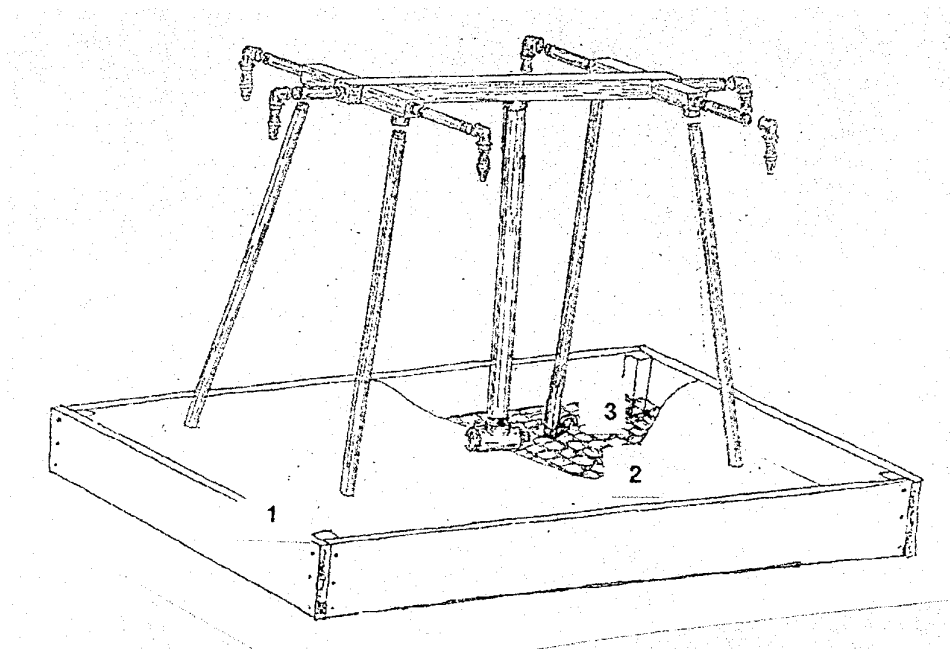
Dimensions for 6 tapstand base 1.80m x 1.50m

Dimensions for 3 tapstand base 1.80m x 1.50m

Shuttering can be constructed from timber and nailed together so as to form a rectangle.

Proceed as follows:

1. Remove loose objects, stones etc from base and level roughly by eye.
2. Hammer in a corner post as a datum, protruding 100mm from highest ground level position (a stake 25mm x 25mm is adequate).
3. Mark out the position of the corners and hammer 3 more takes into place.
4. Use a straight edge and spirit level to obtain a constant height for each corner.
5. Hammer two stakes on one side, a further 20mm into the ground.
6. Place 4 flat faced stones in position where the tapstand legs meet the ground (They should be about 50-60mm thick).
7. Position reinforcing wire mesh over the base at this level.
8. Place tapstand on top of stones and pack as necessary to make level.
9. Mix concrete and spread on to base providing a smooth sloping finish.



- 1 Corner post
- 2 Wire mesh
- 3 Peg

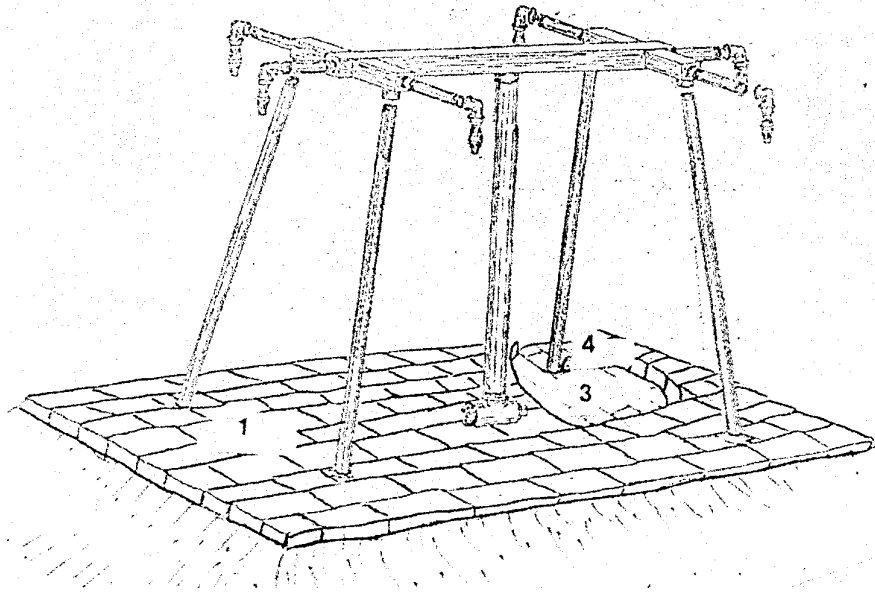
## B. Brick Base

Using local materials an acceptable clay brick base can be constructed. The following areas of level ground will be required:

Dimensions for 6 tapstand base 1.80m x 1.50m

Dimensions for 3 tapstand base 1.80m x 1.50m

1. Clear loose objects from the site area.
2. Pave the required area with a layer of bricks.
3. Place the tapstand in position, ensuring that it is level.
4. Hammer the pegs firmly through the anchor plates into the ground in the direction shown on the drawing.
5. Lay a further layer of bricks on top of the first layer so that a smooth paved area is formed.
6. Pack loose soil, clay or cement against the base sides so that the brick base is retained in position. There is no need to fill in the gaps between the bricks, since they will act as drainage channels.



- 1 Final paving
- 2 Soil bund
- 3 Under paving
- 4 Peg

### C. Soil Base

It is not preferable to mount tapstands directly onto bare soil, since poor drainage will quickly destabilise the unit.

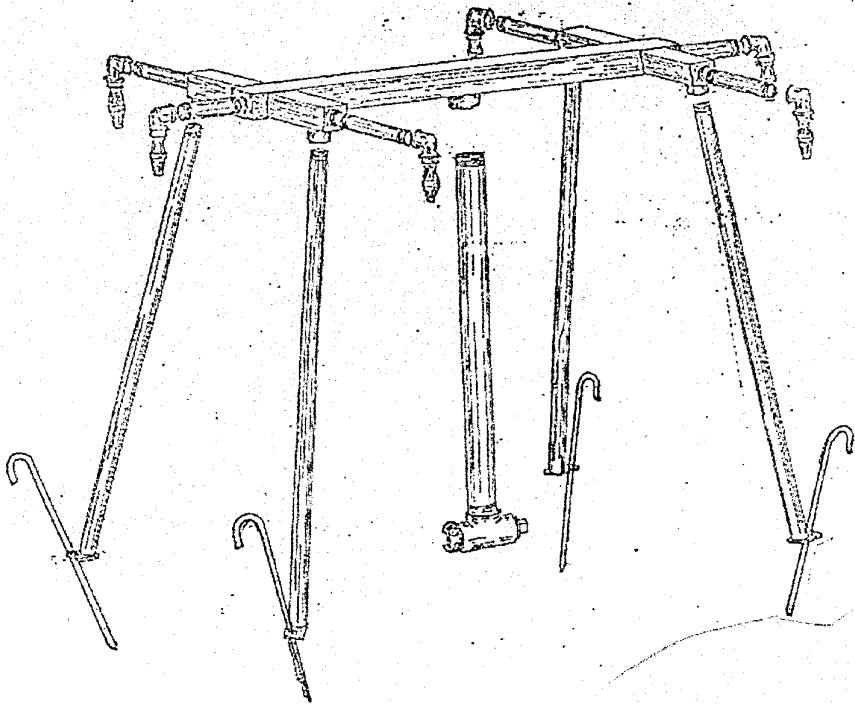
Standing water will also encourage flies in warm conditions, and be liable to freezing in cooler conditions, thereby giving the facility a poor appearance.

In the event that there is no alternative, a flat area should be cleared and compacted of the following size:

Dimensions for 6 tapstand base 1.80m x 1.50m

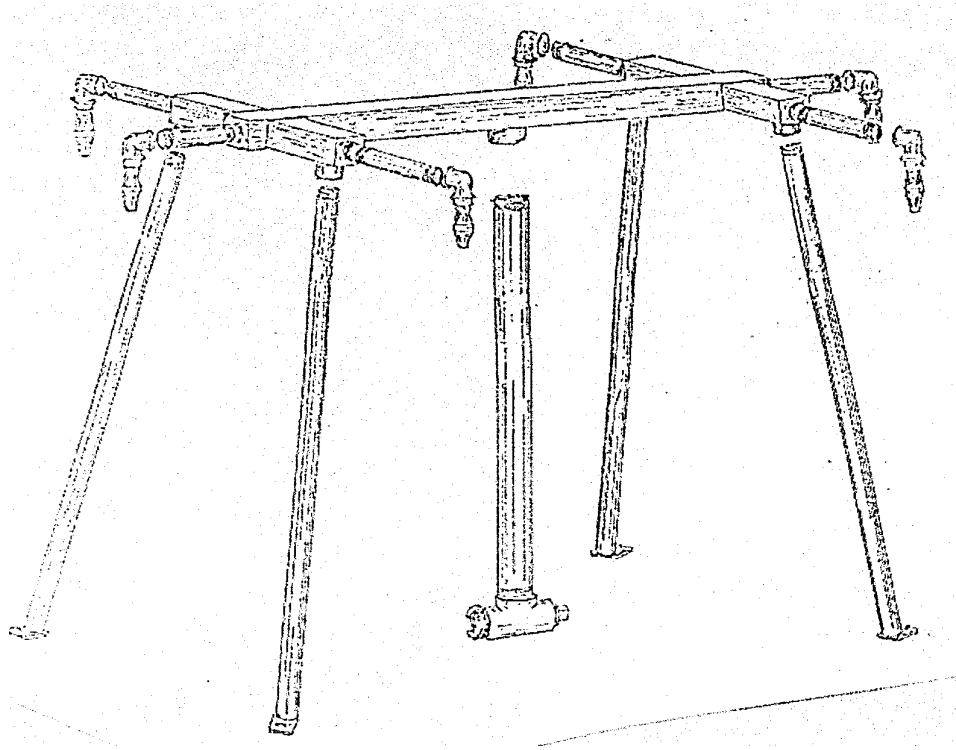
Dimensions for 3 tapstand base 1.80m x 1.50m

1. Clear base area as above
2. Locate tapstand in a level position.
3. Hammer securing pegs through the anchor plates into the ground in the direction show in the drawing.
4. Form drainage ducts (approximately 150mm x 150mm) under each tap to prevent puddling under the frame.



## Erection of the 6 Tap Tapstand

1. Unpack and identify all the items shown in the sketch.
2. Screw each of the legs into the corner sockets of the main frame ensuring the anchorage plates face outwards - as shown on the sketch. (The screw thread allows some adjustment for levelling)
3. Wrap PTFE tape around the threads of each of the 6 galvanised extension tube and screw one end of each into the frame. Hold the tube in the left hand and the tape in the right hand with the tape at the back of the reel, wrap the tape clockwise around the tube.
4. Screw the 6 self closing taps onto the extension tubes so that they face downwards.
5. Next wrap PTFE tape around each of the threads of the riser tube and screw one end into the base tee.
6. Wrap PTFE tape around the threads of each of the Guillimen couplings (assuming both are to be used) and screw them into each side of the tee.  
If only one tapstand is to be used, or it is the last in series, then one Guillimen coupling should be replaced by the plug.
7. Screw the riser tube into the socket in the base of the main.
8. The tapstand may then be placed in it's chosen position and anchored using the four anchor pegs.
9. 2 Galvanised caps are provided in case of saver valve failure.



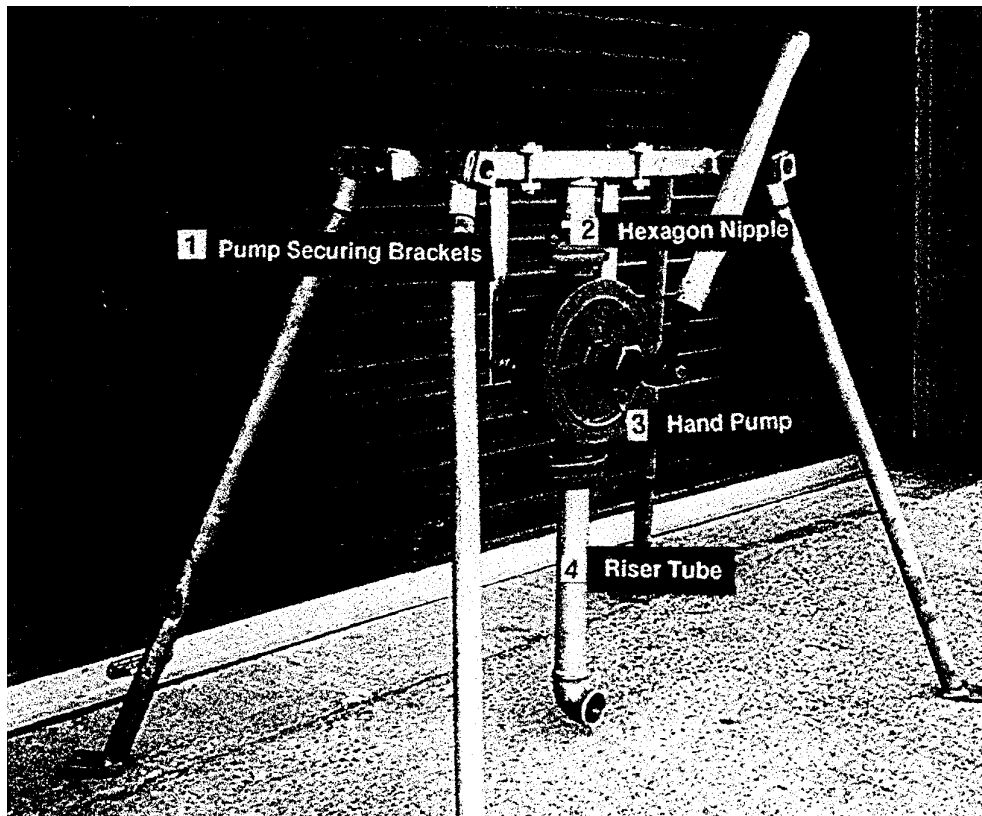
### Rotary Hand Pump and Fittings Kit (for 6 Tap Tapstand)

This kit may be supplied where there is insufficient pressure of water to provide maximum flow to the water saver valves.

It allows for a hand pump to be positioned on the rising main, which can be operated by one person whilst others are draining water.

1. The tapstand must be securely anchored preferably onto a concrete base.
2. The riser tube supplied with the kit should be discarded.
3. Wrap PTFE around the threads of the hexagon nipple and screw into socket underneath tapstand.
4. Loosely attach pump securing brackets to each side of the tapstand frame - as shown in the drawing.
5. Screw hand pump into position below hexagon nipple, and line up so that slotted holes in brackets line up with securing holes in pump body.
6. Wrap PTFE tape or hemp around threads of 30cm riser tube and screw on tee piece and couplings as per instructions for 6 tapstand.
7. Screw riser into base of hand pump.

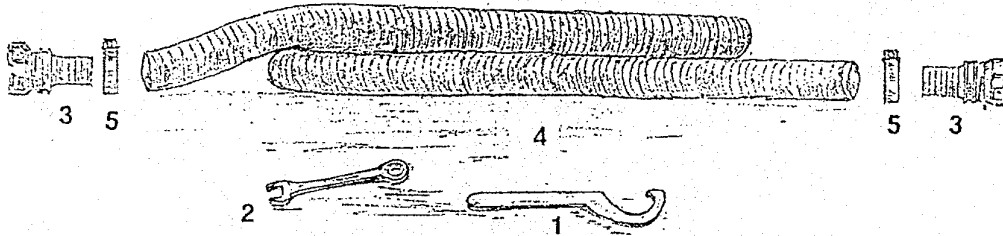
A separate manual/parts list relating to the hand pump is included within the Rotary Hand pump and Fittings Kit.



## Connection Kit - Assembly Information

For convenience, the hoses and couplings are supplied separately. They may be fitted together as follows:

1. Place the hose clip over the hose and tighten so that it is a loose fit.
2. Gently and evenly heat the inside of the hose. Boiling water, or a flame from a cigarette lighter will do.
3. Without delay, push to Guillimen couplings into the hose and tighten the hose clips.



- 1 Guillimen spanner x 2
- 2 11mm Combination spanner (for hose clips) x 1
- 3 Guillimen coupling x 50mm hose x 2
- 4 50mm Reinforced hose x 6m
- 5 50mm Heavy duty hose clips x 2