

DURAPUMP

PERFORMANCE UNDER PRESSURE



INSTALLATION GUIDANCE NOTES
POLYTHENE UNDERGROUND TANKS
V10, V12, V18 SERIES
2018 EDITION



INSTALLATION INSTRUCTIONS

IMPORTANT NOTE

Installation of this Pumping Station must be undertaken only by suitably qualified and experienced personnel. Use only the appropriately certificated tradesmen for each major task - e.g. Registered Plumbers and NICEIC registered Electricians.

Having selected the site for the Pumping Station, check with all available maps and plans to ensure there are no concealed obstructions, existing pipes, cables, trunking, etc. that cross or impinge on the site. A physical survey should also be carried out.

Ask your Local Authority if in doubt.

NOTE: Installing a Pumping Station usually requires formal approval from the appropriate department of your Local Authority. It is the responsibility of the Landowner (or Site Management) - **not the Contractor or Pumping Station supplier** - to ensure that this consent is obtained in writing prior to commencing installation.

Pre-survey of the site will also reveal any potential difficulties with flooding caused by the water table itself, run-off drainage from surrounding areas, ground saturation in storm conditions, or tidal conditions (if appropriate).

Where it is necessary to install the Pumping Station in ground where there are potential flooding problems, care should be taken to ensure that the tank cannot be forced out of the ground by the upward pressure of any ground water in the excavation. It should be noted that tanks such as those used in packaged Pumping Stations will, when empty, float on as little as 50mm (2") of water, and the upward thrust of that tank fully immersed in water can be surprisingly high. For sites where the water table is above the bottom of the tank, the use of cement slurry as a bed will prevent the base of the tank from buckling. In any case, always ensure that:

- There is no damage to the tank. Inspect carefully for any damage from contact with sharp objects or by mishandling during transport to site or off-loading.
- The Pumping Station will be so positioned that the inlet pipeline connection is at least 700mm above the base of the tank.
- The tank is surrounded in concrete to the top.

ELECTRICS

Ascertain from which outlet the power supply for the Pumping Station will be supplied. Ideally this should be a dedicated fused outlet, capable of isolation in emergencies and must be adequate to meet the rated load of the station - see the detailed specification sheet which accompanies the Pumping Station.

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Dura Pump Limited Boughton Fair Lane, Moulton, Northamptonshire, NN3 7RT
Call 01604 648 800 **Email** sales@durapump.co.uk **Visit** www.durapump.co.uk
Registered Number 09575966 **VAT Registration No.** 214 1480 47

The following brands are part of Dura Pump

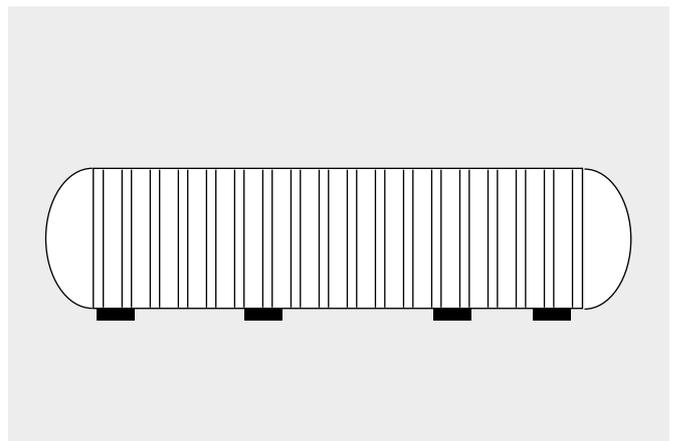
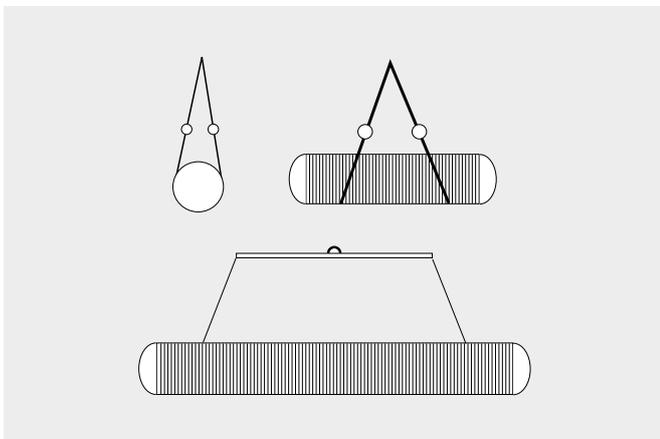
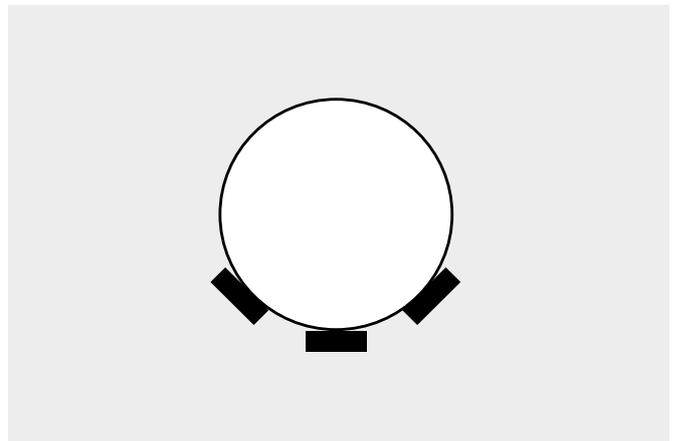
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TRANSPORTATION, UNLOADING AND STORAGE OF TANKS

1. Tanks must be held down during transportation using nylon straps, do **NOT** use cables or chains to hold tanks.
2. Do **NOT** over tighten straps as this may cause deformation of the tank shell.
3. Tanks are best lifted by crane and webbing lifting straps - do **NOT** use chains or wire ropes in contact with the tank.
4. We recommend the use of a lifting beam for tanks longer than 8 meters.
5. Smaller tanks may be lifted with other suitable site equipment but greater care is needed to control the lift and to ensure the tank is not damaged.
6. Move tanks only by lifting and setting, do **NOT** drag or roll.
7. Do **NOT** drop or roll tanks from truck.
8. Place tanks carefully onto a smooth level even surface, free from rocks, large stones or other debris that could cause point loads.
9. Chock tanks using tyres, sandbags or similar to prevent rolling.



10. In high winds conditions, consideration should be given to strapping down the tanks to prevent damage.

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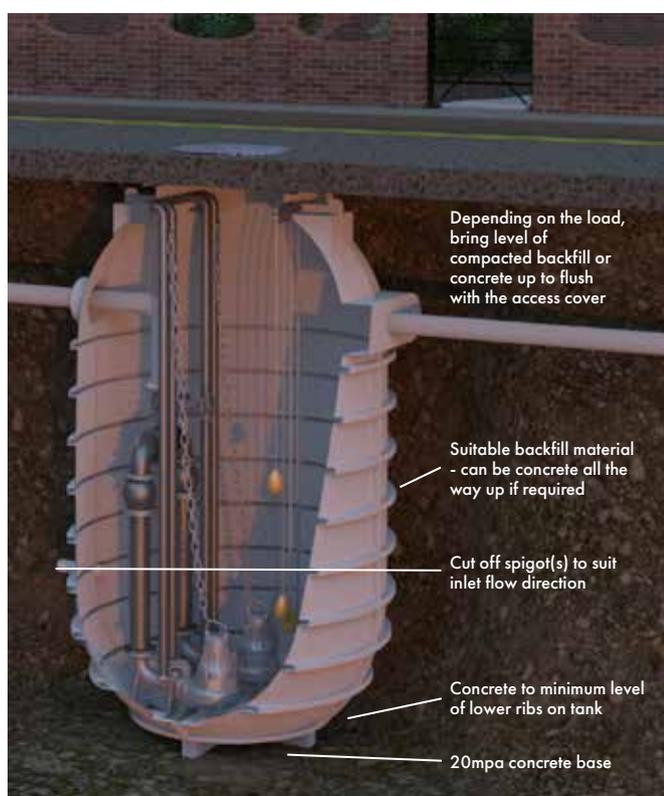
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INSTALLATION GUIDANCE NOTES

The following installation check list should not be regarded as site-specific. It is not definitive, as each installation /site is unique in some way. Please therefore also refer to the detailed specification sheet which accompanies the Pumping Station and read it in conjunction with these guidance notes.



1. Check the depth (invert) of the inlet pipe as this will determine the excavation depth –see tank inlet specification. In any case the minimum height from the bottom of the tank to the underside of the inlet pipe must be 600mm (24”).
2. The maximum size of the excavation hole should be 300mm (12”) more than that of the tank.
3. Lay a minimum of 100mm (4”) of 20mpa concrete in the bottom of the excavation hole if there is no potential water ingress or flooding problem.
4. Whilst the base cement or concrete is still slurry – and using suitable lifting equipment – lower the Pumping Station gently onto the base,

ensuring that no stones or other sharp objects are allowed to fall in at the same time, or damage to the tank may result.

5. Once the tank is roughly in place, check for level and position, and adjust / prop as necessary before leaving it for the slurry to set, ensuring that the top of the excavation is covered with a tarpaulin or suitable PE sheeting to protect it from rain or wildlife.
6. Fill the tank with water up to and over the first rib - or in any case, at least 300 - 400mm (12 - 16”) in depth.
7. Ensuring the tank is secure on its base – and will not move laterally – pour concrete up to at least the level of the first reinforcing rib on the tank – see note to Step 8 below.

Tanks must not be subjected to buoyant forces during installation, taking account of ground water levels and surface water run-off, and their accumulation in the tank pit, even if tanks are anchored. The excavation should be maintained dry by pumping or whatever suitable means until the concrete surround is cured.

8. Make all pipework connections for inlet and discharge pipework. Note that the Pump Chamber should be vented from one of the 110mm spigot pipe connections below the access cover. A 110mm cable duct is required between the pump chamber and the control panel location and should be connected to one of the 110mm spigot pipe connections just below the manhole cover. A draw cord should be installed and secured in the duct during installation. Check that the pipework connections to and from the tank are secure and leak free, and ensure that all unused connections are plugged and properly sealed.

NOTE: Local regulations and site conditions will determine whether concrete should be used further up than the first rib, or simply a suitable backfill material (e.g. sand or pea-shingle which will compact easily). **It is recommended that no backfilling is undertaken until formal approval of the installation has been obtained from the Building Inspector.**

9. Finish around the tank top at ground level, ensuring the area is adequately protected from access by vehicles or wildlife (e.g. secure fencing) - see specification sheet for details of cover (lid) used and its load rating.

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10. If the tank is sited in a driveway it must be surrounded in concrete, and a reinforced concrete slab (min. 200mm thick) must be used to spread the load away from the tank on to a firm surround.

EXTRA INLET INSTALLATION

Step 1



Drill 140mm for 110mm diameter pipe with whole saw and clean off burr.

Step 2



Insert tank wall seal into hole.

Step 3



Once the wall seal is in place the pipe can be inserted into the seal. The seal can be sprayed with soapy water to ease pipe installation.

Note: Larger size wall seals are available.

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PRE COMMISSIONING CHECK LIST

SITE ADDRESS: _____

SITE CONTACT: _____

SITE CONTACT NUMBER: _____

SITE CHECK LIST

The checklist shown will need to be completed and returned before the pump station can be commissioned. We recommend you read through carefully prior to installation. For an electronic copy of this checklist contact operations@durapump.co.uk for assistance.

Please sign below to confirm actions complete prior to attendance on site, return this to us by email mail@durapump.co.uk. Commissioning cannot be carried out unless all boxes are ticked.

ITEM	YES	NO
Rising main (discharge pipework) and gravity lines are connected to the tank.	<input type="checkbox"/>	<input type="checkbox"/>
Gravity drainage lines have been flushed through to remove any building debris.	<input type="checkbox"/>	<input type="checkbox"/>
Sump is clean of debris and dry. (i.e. not full of water).	<input type="checkbox"/>	<input type="checkbox"/>
Cable ducts (100mm) with draw wires are in place between the control panel location and the tank.	<input type="checkbox"/>	<input type="checkbox"/>
There is a position for the control panel to be mounted and has electrical supply connected.	<input type="checkbox"/>	<input type="checkbox"/>
The distance from control panel to bottom of sump is less than 10 meters. Please note: Standard pumps and floats have 10m cables. Additional cabling and junction boxes are the responsibility of the contractor, but can be supplied at extra cost. Please discuss prior to visit.	<input type="checkbox"/>	<input type="checkbox"/>
Normal earthing is acceptable i.e. no earth spikes are required.	<input type="checkbox"/>	<input type="checkbox"/>
A water supply to commission the pumping station and for run testing the pump station is available.	<input type="checkbox"/>	<input type="checkbox"/>
Guide rail brackets, galvanised steel guide rails and internal discharge pipes are fixed into tank.	<input type="checkbox"/>	<input type="checkbox"/>
Finished access opening size is correct to tank opening size to ensure pump can be installed correctly. Finished concrete slab opening should NOT be reduced in size to that of the tank opening otherwise pumps may not fit.	<input type="checkbox"/>	<input type="checkbox"/>
Electrical Supply to commission the pumping station and for run testing the pump voltage 240v or 415v (.....Volts) with c/w Isolator and 3mtrs of cable tails this is the responsibility of the contractor.	<input type="checkbox"/>	<input type="checkbox"/>
Upon arrival to site there is safe vehicle access to and around the area we are working.	<input type="checkbox"/>	<input type="checkbox"/>
Do our engineers need to undertake a site induction? If 'yes' is there a set time? (Time:)	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS

Should the above boxes be ticked and the works not carried out, there will be an extra charge for a return visit. If you are unsure the site is ready please discuss with our Office on 01604 648800.

REQUESTED DATE FOR SITE VISIT. (MINIMUM 10-15 WORKING DAYS NOTICE REQUIRED)

CLIENT: _____

SIGNED: _____

NAME: _____

POSITION: _____

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