

MATRIX INSTALLATION INSTRUCTIONS

Please read the Health & Safety section of the operations and installation manual before attempting to work on the system.

Note: The CLF tank should be stored with access covers in place to prevent accumulation of rainwater within the unit.

IMPORTANT

The siting of a treatment plant must be agreed with the Building Regulation department of the local authority prior to installation. Similarly, the discharge from a treatment plant will be subject to a Consent to Discharge approval, or an Exemption Certificate for treatment plants up to 5.0m³/Day from the Environment Agency, which must be obtained before installation. Consideration must also be given to the need for access for desludging the unit by tanker

MECHANICAL INSTALLATION

Note: Please refer to drawing CLFINSTAL, Drawings, section 8 of this manual.

The following instructions are offered for guidance only. **Viltra** can accept no responsibility for incorrect offloading or installation.

The contractor is responsible for offloading all items of equipment with due regard to the following:

DO NOT use chains or wire ropes.

DO NOT lift the tank if it contains any water.

DO NOT subject the tank to sharp impacts.

DO check that all items delivered correspond with the packing note.

The CLF unit is provided with lifting eyes or lifting slings on the outside of the tank. These are not intended for transportation of the units. The lifting hook should be connected to the tank lifting eyes by separate slings of equal length. **Ensure that the slinging angle does not exceed 60° at the hook in order to eliminate excessive compressive loads on the side of the unit.**

When working in deep excavation, make sure that all necessary safety precautions are taken to ensure the stability of the excavation and provide safe working conditions for site personnel. The only time anyone needs to be working at the bottom of the excavation is when levelling the base and ensuring that the first backfill is correctly placed.

MECHANICAL INSTALLATION (continued)

It is the responsibility of the installer to determine the thickness and strength of concrete required to suit the ground conditions, taking into account the buoyancy of the unit when being de-sludged, external forces exerted by the water table, backfill, traffic loading, etc.

The installation should be carried out in accordance with the requirements of the Construction and Building Regulations. An inspection chamber should be installed upstream of the Matrix CLF unit.

During the course of the installation, the following minimum equipment will be required:

Normal construction equipment and plant.

Concrete to C20P and semi dry to 30mm slump.

An adequate supply of water to fill the unit at the same rate as backfilling.

Dewatering equipment as necessary.

Set of lifting straps of correct length and adequate SWL.

Please Note : The foul drain to the treatment plant MUST have a traditional open soil/vent pipe at the head of the drain run. Air admittance valves, tile or ridge vents are NOT acceptable.

Excavate to the CLF tank dimensions allowing a minimum clearance of 150mm between the unit and the excavation sides. Excavate to the appropriate depth for the installation ie. depth of the unit plus 150mm minimum concrete thickness (actual thickness to suit ground conditions).

NOTE : The standard inlet invert depth for the CLF 1,2 & 3 is 550mm, all other models have a 600mm standard inlet invert. If the invert of the inlet drain is deeper than this C & L Fabrication Ltd must be made aware at time of order so that the unit can be manufactured to suit.

Lay and level the concrete base for the tank to a minimum of 150mm thickness. Lift the tank into position using slings, taking care not to damage any external flanges or pipework. Ensure correct orientation of the inlet and outlet pipework. Check that the tank is level in all directions. Commence backfilling with concrete in 500mm lifts, and at the same time, **fill each tank compartment with water starting with the media bay section**, ensuring that the progressive concrete and water levels are approximately equal (never exceed a difference of 200mm max). The concrete must be evenly distributed

around the unit, ensuring spigot connections are not covered at this stage. **Never partly or wholly fill the tank with water before surrounding it in concrete.**

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Section 3

MECHANICAL INSTALLATION (continued)

Note: Do not use vibrating pokers to compact the concrete.

Make all interconnecting pipework connections, ensuring a minimum pipe gradient of 1:70.

Continue placing the concrete in 500mm lifts, terminating at the shoulder of the unit. Allow an initial set of the concrete between lifts and wait at least 24 hours for the concrete to harden.

Ensure a cable duct is laid from the 110mm 'Air Inlet Duct' connection on the neck of the treatment plant, to the desired position of the Blower unit. This is for the airline only and is to ensure complete protection of the airline. There are NO electrical components within the treatment plant unless you have requested the option of a pumped discharge.

If the treatment plant is to be installed in a trafficked area guidance should be sought from C & L Fabrication Ltd before the treatment plant is ordered. Standard Matrix Treatment Systems are NOT suitable for vehicular applications.

ELECTRICAL INSTALLATION (Blower Unit)

In order that you achieve a safe and cost effective installation, it is not possible to state a specific installation configuration that would suit all sites. The selection of current protection devices must remain the responsibility of the installer. It is imperative that electrical installation of this equipment is entrusted to a fully qualified electrician.

The blower unit can be positioned wherever is most convenient bearing in mind the need to get a power supply to it and the airline from it to the treatment plant.

If a pumped discharge has been requested on the treatment plant, the cable from the pump can be fed back up the airline duct to the blower unit within which is the electrical connection for the pump. Most pumps come complete with 10 meters of cable. The blower unit is supplied with 10 meters of airline as standard.

The airline duct MUST be sealed with expanding foam when installation is complete or the blower warranty will be invalidated.

When installing the electrical supply to the CLF blower unit, the following points should be considered:

The supply to the CLF unit should be by means of a dedicated circuit with isolation and protection devices consistent with the requirements for fixed equipment and in

accordance with the latest regulations of the Institute of Electrical Engineers.

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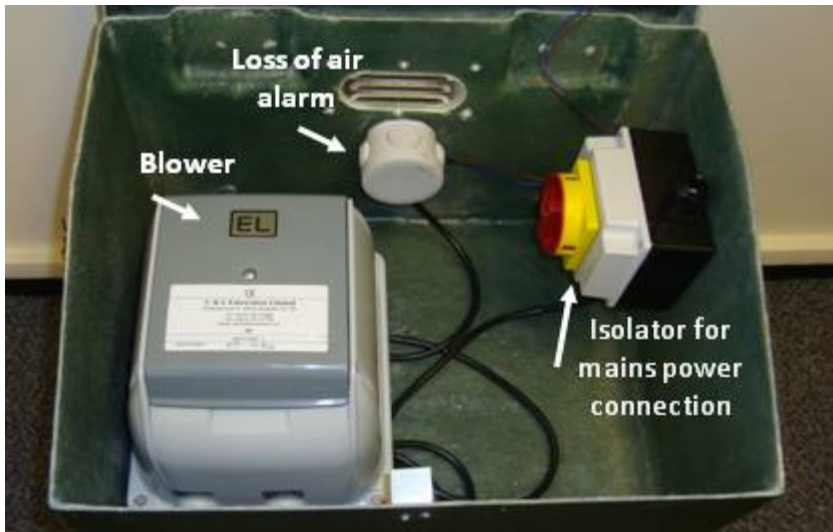
Section 3

ELECTRICAL INSTALLATION (continued)

2. The supply to the CLF unit should be independent of all protection devices other than the supply authority's fuse and that provided specifically for the CLF power supply. In particular, earth leakage devices provided for normal domestic protection must **not** form part of the supply circuit to the CLF Unit.



CLF1 to CLF4 Blower & Housing



Loss of air
alarm

Blower

Isolator for
mains power
connection