Kilsaran

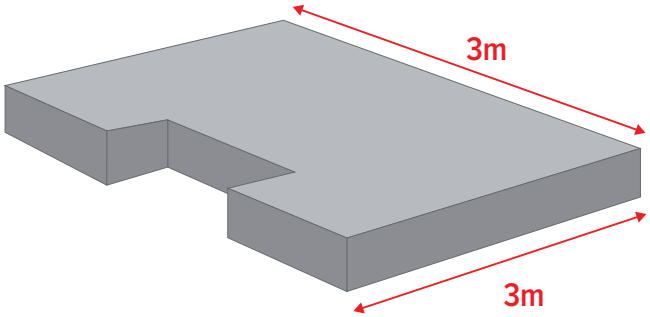
Silo User Guide & Site Requirements

Site Requirements

1 Ground Conditions

Kilsaran silos can only be delivered once the area upon which the silo is to be placed is prepared and capable of supporting the fully filled silo (approximately 35 metric tonnes).

A flat and level surface area of 9m2 (3m x 3m) of concrete foundation must be provided to ensure even bearing of silo feet. A 1.0m x 0.7m recessed area in the base can be beneficial to accommodate the placing of a mortar tub under the silo discharge chute. Please note It is the responsibility of the customer to design and construct the concrete foundation.



2 Access

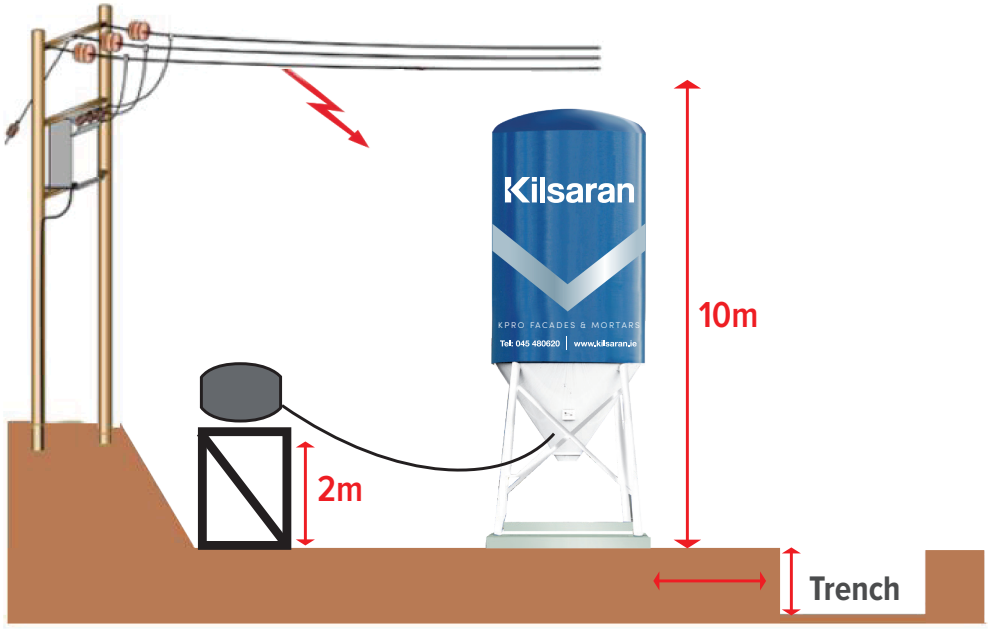
Silos can only be delivered to areas controlled by the customer and must never be placed in locations open to the general public. Select an area free from overhead wires or other headroom impediments when considering the best placement area for the silo. The silo requires a tipping height clearance of 10 metres.

Equally, clearance space around the silo is needed for a second silo or re-filling as required. The customer is responsible for the safe access for delivery/collection of the silo and for re-filling operations. The silo should be positioned a safe distance from overhead cables. Please note silos are delivered with either front or side facing mixers, ensure to notify our shipping department of your site requirements.

Silo User Guide & Site Requirements

Kilsaran
KPRO FAÇADES & MORTARS

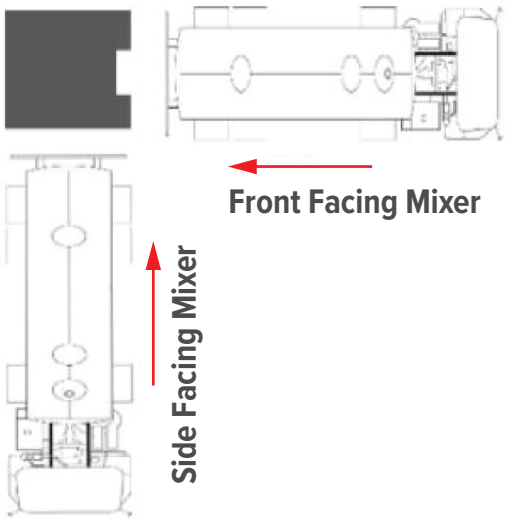
At a minimum Kilsaran KPRO silos must be at least a distance of (Trench/Excavation/Slope Depth) x 1.7 metres from the trench floor. For example, if there is a 2m deep excavation on site the minimum distance a silo can be located from it is (2 x 1.7) 3.4 metres.



Please note Kilsaran KPRO silos can be delivered with their mixer outlets either front or side facing (see image). Prior to delivery please notify our shipping office of your site requirements regarding the orientation of the mixer outlet in conjunction with the silo delivery access point.

SIDE FACING MIXER

FRONT FACING MIXER



For orders contact: **T: 045 480 620** | **E: orders@kilsaran.ie**
For customer service and general enquiries: **T: 045 480 620** | **E: csteam@kilsaran.ie**
For product technical support: **T: 045 480 620** | **E: techsupport@kilsaran.ie**

3 Electrical Requirements

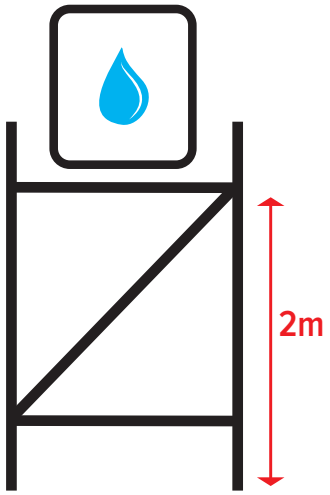
The following electrical supplies are required to operate Kilsaran KPRO silos:

- A 3 phase mains supply (450-415V neutral and earth).
- A total maximum load of 5kW.
- A 16A 4 pin/5 pin industrial socket from a 32A 3 phase motor rated M.C.B. type C or D.
- Electrical supply to the silo must be backed up by a 32mA RCD which is exclusively for the silo use.
- Electrical socket provided must be located within 5 metres of the silo.
- If no mains power is available on site a 3 phase generator with a minimum capacity of 20 kVA (fitted with a 32A 5 pin industrial socket 32 mA RCD type C or D) is sufficient.
- Note all silo installations must be carried out to current IEE Requirements for Electrical Installations (BS 7671).

4 Water Requirements

The following water supplies are required to operate Kilsaran KPRO silos:

- A clean 1000 litre water tank such as an intermediate bulk container (IBC), with a ¾ inch gate/ball valve, stored a minimum of 2 metres off ground level.
- A clean water supply free from dust, debris and contaminants.



Operating Instructions

1 Start-Up Procedure

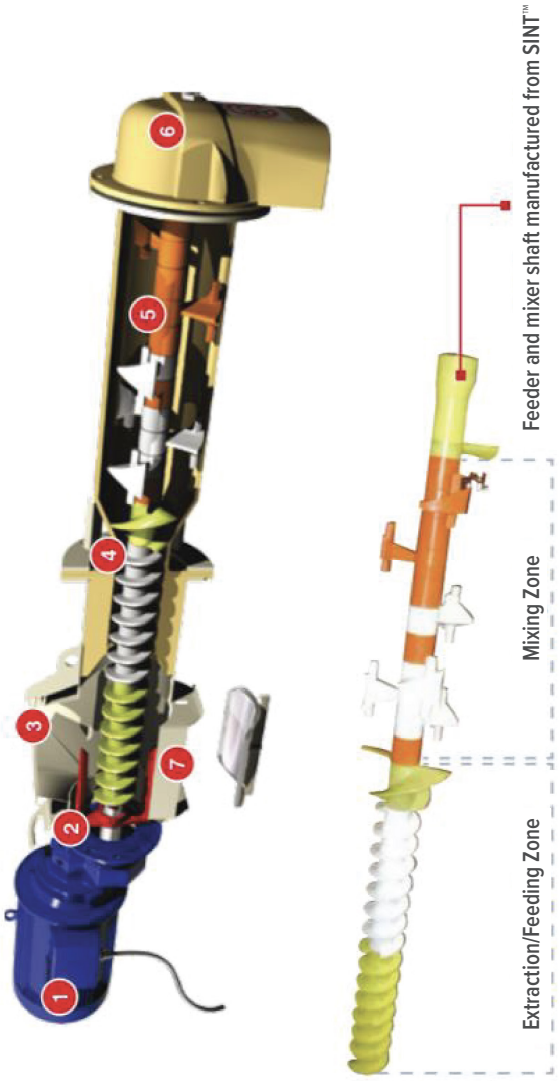
Upon delivery and every morning, the following steps should be followed:

1) Place mortar tub under the silo discharge chute.
2) Connect the control panel and power cables to the silo.
3) Connect water pipes ensuring fittings are secured.
4) Briefly run the mixer by pressing the green start button on the control panel, to ensure mixer motor is running in the correct direction.
5) Press the green start button to run the mixer and then open the silo butterfly valve to release the material into the mixing chamber. Always run butterfly valve to release the material into the mixing chamber.
6) Adjust the water addition as necessary using the water control valve located on the side of the control panel. Adjust the water setting until the required consistency (flow test value of 175mm ± 10) is achieved.

2 Daily Cleaning

To ensure the silo mixing station continues to operate efficiently and effectively, please observe the following cleaning and shut down procedure at the close of each day, or if the mixer is to be left unused for periods of more than 1 hour, and prior to the silo being collected from site.

1. Place a mortar tub under the mixer outlet chute.
2. Close the silo butterfly valve completely to stop the supply of material to the mixer.
3. Press the Green Start button on the silo panel to start the mixer and to empty out any remaining material in the mixing tube.
4. Allow mixer to run for approximately 5 minutes until the mixing water is running clear.
5. If using high strength bedding mixes the above steps should be carried out after each use.



3 Weekly Cleaning

In addition to the above daily cleaning procedures, please ensure to carry out the following on a weekly basis:

1. Disconnect power and water supplies.
2. Remove mixer head (6), chute and screw (5) and thoroughly clean using water and tools, ensuring not to damage the mixer liner or other parts.
3. Reassemble the mixing tube ensuring the mixer head is securely mounted and tightened.
4. Reconnect both power and water supply.
5. Press the GREEN START button to ensure mixer is working correctly.

Kilsaran
KPRO FAÇADES & MORTARS

Care of Equipment

1 General

Following silo delivery our silo technician will set up the silo and induct your chosen site operatives on the safe and correct use of the silo mixing station. This person(s) are responsible for the correct use and maintenance of the silo whilst it is on site.

The area underneath and adjacent to the silo must be kept clean and clear to avoid damage to the mixer chute due to material build up causing tubs and vehicles to strike the mixer outlet.

The company/persons who ordered the silo are liable for any damages to the silo and associated equipment and costs whilst it is on their site.

Damages to instrumentation, switches, operating panel, silo and mixer could interfere with the normal operation of the Silomix™ system. It is vital that the silo mixing station and all associated equipment is treated with care at all times and in particular when mobile plant/vehicles are collecting or returning mortar bins to and from the silo.

Any damages to the silo mixing station and/or associated equipment must be reported to Kilsaran immediately. Damages caused due to mistreatment, improper use or actions of site personnel will be charged for.

Silos and associated equipment are delivered to site clean and fully operational. To avoid additional charges being applied to your account, the silo and all associated equipment must be clean and fully operational at the time of collection and removal from site.

2 Hot Weather

During spells of hot weather if the mixer is left un-used for periods of time greater than one hour the material in the wet chamber of the mixer can stiffen and begin to set. To avoid overloading of the mixer motor, close off the butterfly valve on the silo and run any remaining material out of the mixer tube after each mortar tub fill.

3 Cold Weather

Freezing water may seriously damage the silo control panel and water fittings. In periods of low temperatures when there are long interruptions between mortar tub refills and following cleaning of the mixer please ensure to fully drain all water fittings and hoses. This can be done by:

1. Turning off water supply to the silo.
2. Uncouple/disconnecting silo water intake hose from the panel.
3. Uncouple/disconnecting mixer water intake hose from the panel and mixing tube.
4. Opening all water drain taps at the bottom of the silo operating panel.
5. Pressing and holding the ‘Drain’ button on the operating panel.
6. Allowing all water to drain off completely from the operating panel.

Please Note: A copy of these guidelines must be forwarded to any person(s), including subcontractors, who may use or operate the silo mixing station.

Trouble Shooting

FAULT/ISSUE	CAUSE	SOLUTION
Motor tries to turn but trips out main isolator.	Hardened material in mixer tube.	- Disconnect power cable from control panel. - Strip and clean mixer. - Switch off isolator switch. - Open control panel and press FR1/FR2 reset button.
Mortar mix is too dry.	- Not enough water. - Blocked water filters. - Air lock in system. - Water inlet to mixer is blocked.	- Disconnect power cable from control panel. - Open water valve. - Remove filters and clean. - Bleed system. - Remove hose and clean inlet.
Mortar mix is too wet.	- Too much water added. - Build up of material around dosing screw. - Dosing screw worn.	- Disconnect power cable from control panel. - Reduce water volume. - Strip and clean mixer. - Replace dosing screw.