

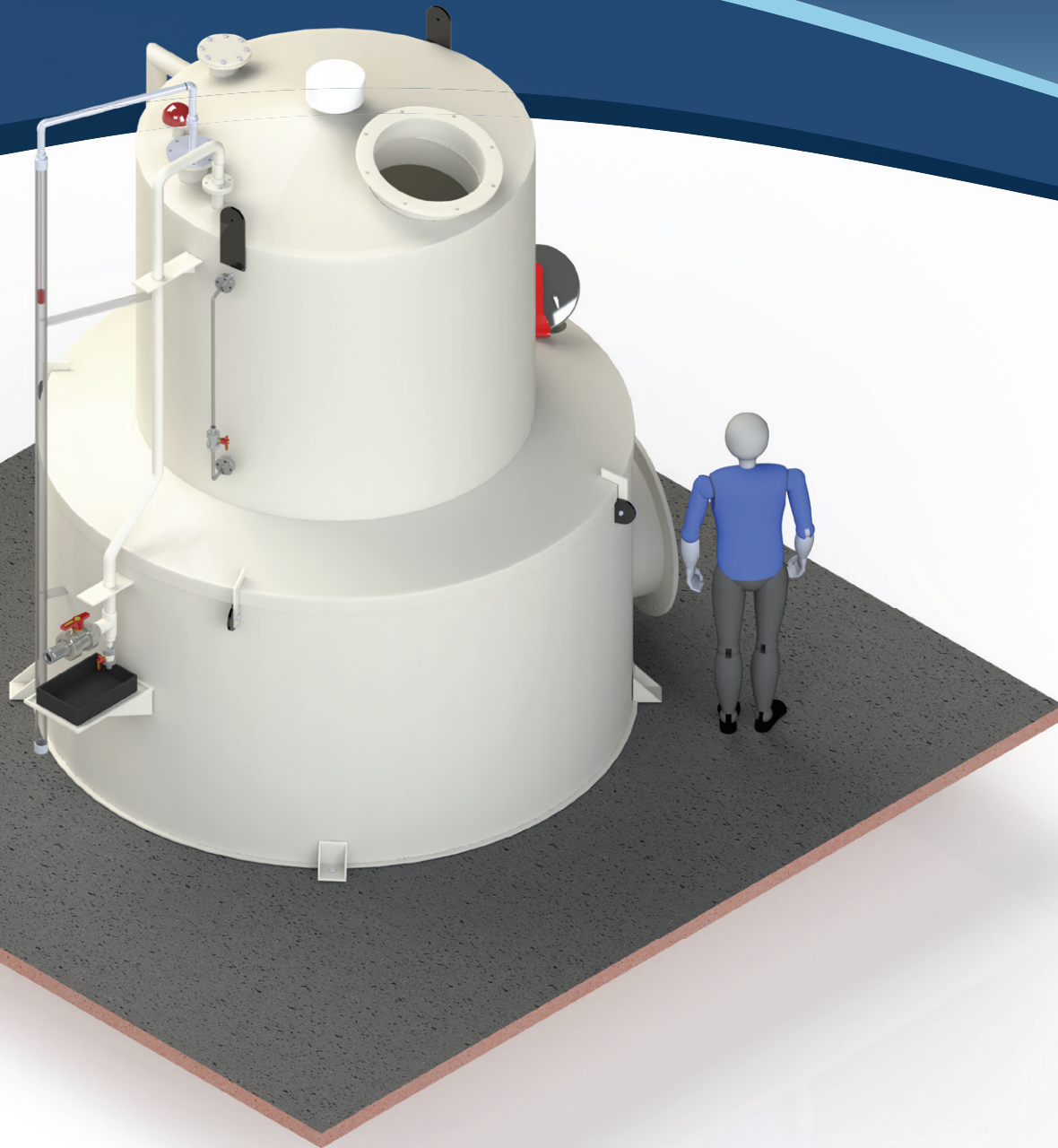
SILOTANK

Mini-tank

Safe Bunded liquid storage solutions
1000 Litre to 100,000 Litre

TANKS DESIGNED TO LAST

OVERVIEW



The Minitank...a bunded tank designed to make storage of chemicals simple and secure.

Protecting personnel and the environment from contamination is in everyone's interest. Silotank has over 20 years experience in this field and is one of the leading manufacturers in Europe employing the latest production techniques and using only quality materials.

Chemical containment is about managing risk - the minitank system enables overflow /spillages to be detected and contained. It also enables either the filling or emptying to be properly managed.

Each minitank is made to the customer's requirements - ie. position of nozzles, size to fit plinth or room etc.

The client needs to provide a smooth and level plinth, the Minitank arrives and is positioned into place, pipeworks are connected up, a final test on the system is conducted (usually with water*) and then you are ready to operate.

**(beware of sulphuric acids and other exothermic reacting chemicals to water)*

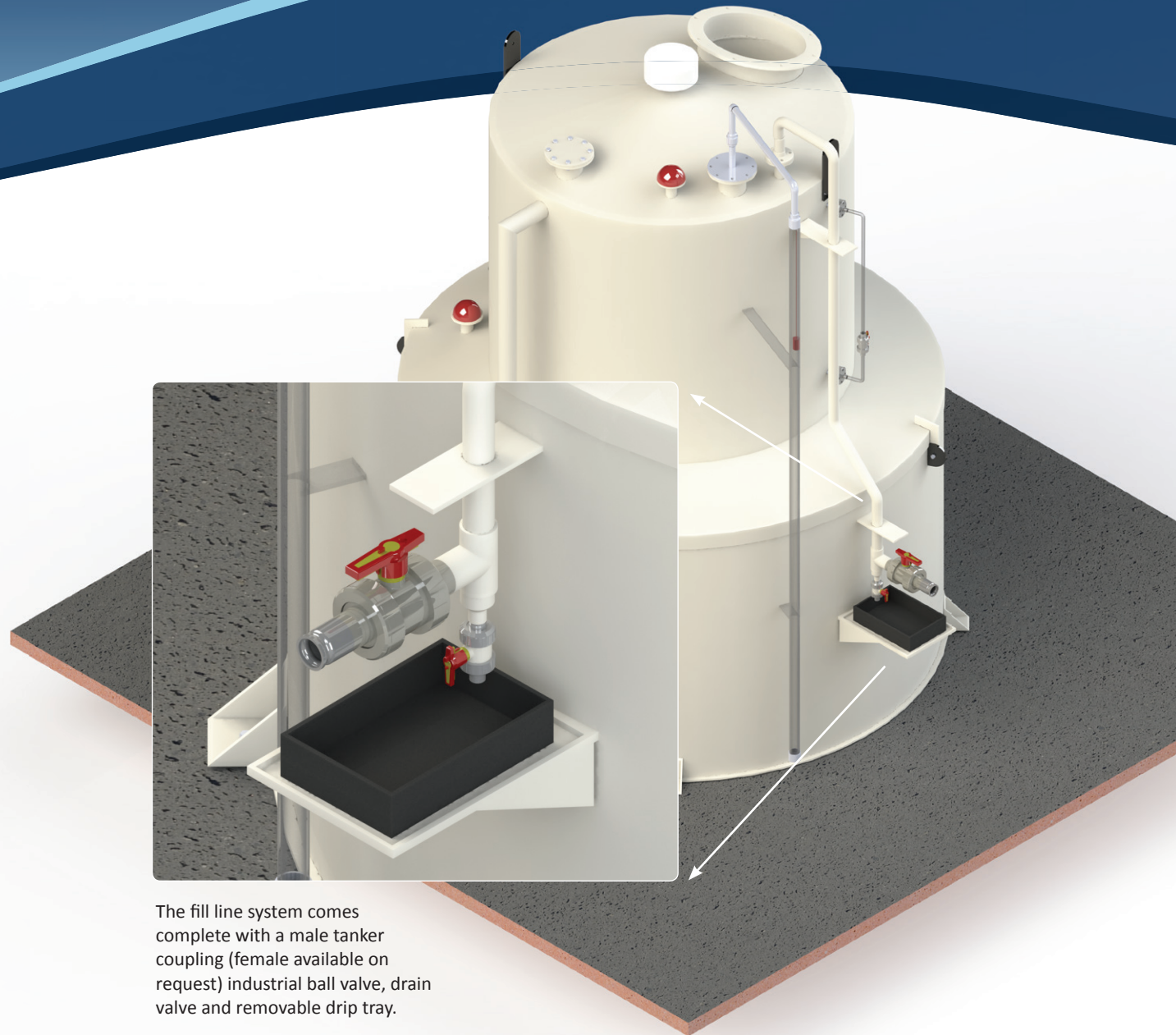


THE OPTIONS

As the client, you have the ability to specify your requirements. Most of our minitanks incorporate some of the following options:

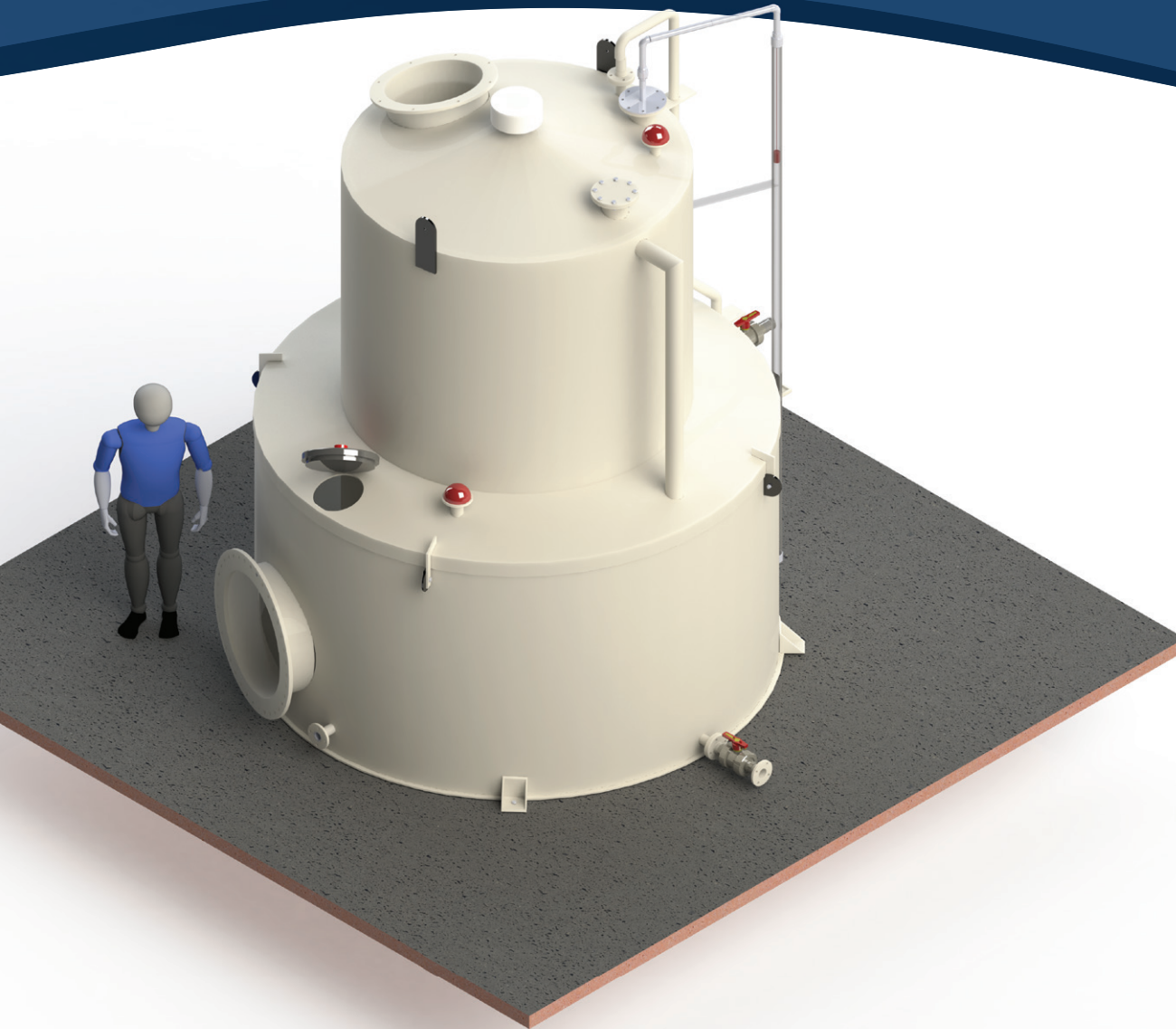
Access ladders and platforms
Bund alarm ports
Connections for third party devices (e.g Ultrasonics)
Drains
Fill line (including tanker connection and drain point)
Heating (Trace or Immersion)
Insulation
Lifting & Securing points (SWL marked)
Personnel Access and Inspection Ports
Nameplate
Outlet control system
Overflow system
Remote level monitoring
Spare ports
Testing (Spark/Hydrostatic) complete with Certification
Ventilation & Odour Control Systems
Visual Level Indication (Cat & Mouse/Pneumatic level/ Clear tube level)

Speak with our technical sales team on **028 90626256**.



The fill line system comes complete with a male tanker coupling (female available on request) industrial ball valve, drain valve and removable drip tray.

THE DESIGN



Your minitank system will be designed either to BS EN 12573:2000 (Thermoplastic tank indoors), DVS2205:2012 (Thermoplastic tank outdoors) or to BS4994:1987 (GRP and Dual Laminate - indoors/outdoors) depending on the requirements.

Factors that need to be engineered into the construction may include but are not limited to the following: -

Ambient temperatures

Crystallisation temperature of liquid and need for heating/insulation

Cyclical loading

Delivery and operational temperature of liquid

Design life

Flammability of liquid and need for anti-static coatings

Flange type

Industry specific requirements e.g Wimes, Thames Water Spec, Shell etc.

Internal and external pressures

Manual handling regulations

Method of fill

Personnel loadings

Seismic loadings

Snow loadings

Transportation forces

Ullage requirements

Venting, odour control and air space requirements

Wind loadings



THE MATERIALS

Silotank's recommendations are not biased by limitations in our manufacturing technologies or available materials. We have the ability to optimise the method of construction depending on criteria such as storage volume, loadings, pressure, shape and other requirements.

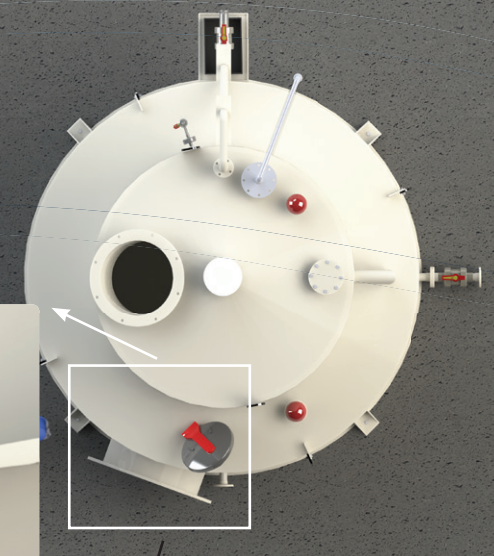
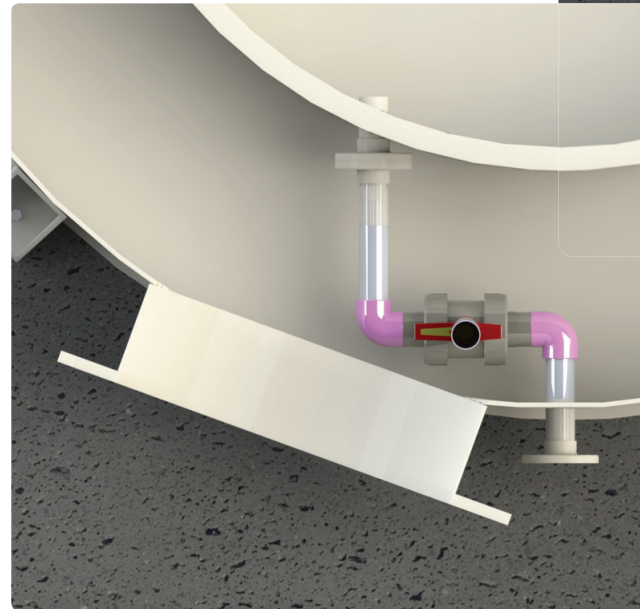
Minitanks are made either in thermoplastic materials, GRP/GRVE, or as a combination of both (Dual Laminate) utilising handlay and helical filament winding technology.

Dual laminates are usually used for larger systems where the thermoplastic liner provides the chemical resistance whilst the external GRP layer provides the structural strength.

Straight Thermoplastic Minitanks

Polypropylene (PP)	Black & Beige
High Density Polyethylene (HDPE)	Black only

**Dual laminate and GRP tanks external colour can be pigmented to the clients requirement, an additional cost may be incurred.*

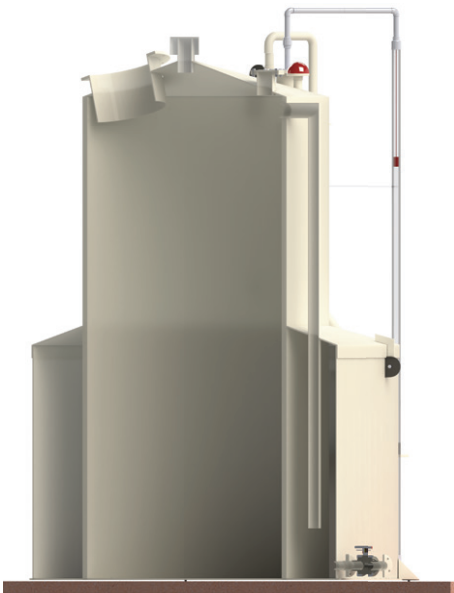


Outlet pipework - client to connect up on site after tank has been lowered into the bund. The S shape permits expansion and contraction.

Dual Laminate & GRP Minitanks

Polypropylene lined GRP	BS 4800 10-A-07 Grey *
Unchlorinated Polyvinylchloride (uPVC) lined GRP	BS 4800 10-A-07 Grey *
Chlorinated Polyvinylchloride (cPVC) lined GRP	BS 4800 10-A-07 Grey *
Glass Reinforced Polyester Resin (GRP)	BS 4800 10-A-07 Grey *
Glass Reinforced Vinyl Ester Resin (GRVE)	BS 4800 10-A-07 Grey *
eCTFE lined GRP	BS 4800 10-A-07 Grey *
PVDF lined GRP	BS 4800 10-A-07 Grey *
Other exotic plastics	

CHEMICALS STORED



When you store chemicals you need to be sure that the materials used in the construction of the tank are suitable. Silotank verifies the use of materials with the chemists at leading material suppliers around Europe.

Material recommendation datasheets can be issued from the material manufacturer to give you added reassurance.

A note of caution, within the chemical storage industry, other tank manufacturers encourage materials of construction which will give a cheaper tank. However, no letter of recommendation from the material manufacturers are provided by these companies and the stated design life is seldom achieved.

A prime example of this is the storage of Sodium Hypochlorite at concentrations greater than 10%. The material manufacturers insist that uPVC sheet be used as the chemical barrier which Silotank duly comply with. Nevertheless, some tank suppliers within the industry buying from the same manufacturers as Silotank will supply the tank in HDPE. HDPE will last for a short period of time, however embrittlement at welds will occur and eventually the tank will be condemned.

Ensure your bulk chemical storage facilities are fit for purpose - insist on material recommendation sheets from the material providers.

Examples of liquids stored:

- Acetic Acid
- Aluminium Chloride
- Aluminium Sulphate
- Ammonia
- Citric Acid
- Ether Sulphate
- Ferric Chloride
- Ferric Nitrate
- Ferric Sulphate
- Formic Acid
- Hydrochloric Acid
- Hydrofluorosilicic Acid
- Nitric Acid
- Orthophosphoric Acid
- Polyaluminium Chloride
- Potassium Acetate
- Potassium Hydroxide
- Sodium Bisulphite
- Sodium Hydroxide
- Sodium Hypochlorite



EXAMPLES OF FINISHED JOBS



20,000 Litre Dual Laminate Minitank, cPVC/GRP tank c/w PP bund - Ballinasloe WTW, Ireland. Tank is storing 98% Sulphuric acid.



2,500 Litre Polypropylene Minitank, PP tank c/w pp bund including access platform - Forstall WTW, South East Water, England. Tank is storing 23% Sodium Bisulphite.



15,000 Litre Dual Minitank, uPVC/GRP tank and pp bund - Kilroot Power Station, Northern Ireland. Tanks are storing 12-15% Sodium Hypochlorite.



35,000 Litre Polypropylene Minitank, PP tank c/w PP bund - PAS Grantham McCain Foods, Lincolnshire, England. Tank is storing 33% Sodium Hydroxide.



SILOTANK *TANKS DESIGNED TO LAST*



Silotank | Pembroke Loop Road | Springbank Industrial Estate | Dunmurry | Belfast | BT17 0QL | Northern Ireland

T: +44 (0) 28 9062 6256 **F:** +44 (0) 28 9062 6224 **E:** info@silotank.com **W:** www.silotank.com

Silotank is a trading name of Digestors, Silos & Tanks Ltd. Company reg: NI0022419. VAT: GB517231374