

The ISO-Silo™



The **flexible**
storage solution for
dry bulk materials

Innovation from

inBulk
TECHNOLOGIES



a new concept for 'on-site' storage of dry bulk materials



The ultimate storage and pneumatic transfer system.

The ISO-Silo is a combined storage silo and pneumatic transfer system designed and supplied for quick installation without the need for foundations.



flexible storage for construction sites that can be monitored remotely



Metered output

ISO-Silo's can provide a 'metered' output of material and can be fitted with a mechanical feeding device such as a screw conveyor for conveying short distances. The ISO silo is a pressure vessel which is designed to at least the same pressure rating as the road tanker unloading into it, normally 2 barg. On completion of filling by pneumatic truck, the ISO-Silo can be pressurised to become a pneumatic conveying system that can convey either powders and granular materials to their point of use, thus avoiding additional transporting system that would be required with conventional silos.

Low cost storage

As an extension of our ISO-Veyor Technology, the ISO-Silo has been designed to provide an excellent means of low cost on-site storage for both powder and granular materials.

We have designed this system in response to our client's requirements for low cost additional storage to cover peaks in demand, without requirement for purchasing traditional silos, which can be both costly and require planning consent.

ISO Flexibility

The ISO-Silo is built within a standard ISO frame which allows transportation by conventional road trailers. It comes complete with a pre-cast concrete base in two sections, which secures the unit in place. The base is designed with a large surface area to reduce ground load and is also designed to prevent overturning due to wind.

Only three major lifts are involved with its installation. All equipment is at ground level therefore no access to the top of the silo is necessary.

Three external connections are required after installation – electrical supply (single phase), air supply and discharge pipeline. To operate the system an air supply of 2 barg, 340m³/hr volume is required to pressurise the silo and transfer the product to the process feed hopper(s). A separate 7 barg supply is also required (0.002m³/min) for solenoid valve operation.

Once in position the silo is filled by ISO-Veyors or conventional road tanker via the inlet pipe which is supplied with a Unicone coupling and automated butterfly valve. On connection the operator performs a one switch operation to allow filling to take place.

Level probes

To enable the truck operator to know when the silo is full, level probes can be fitted at the highest acceptable material level. Level probes can also be fitted to demonstrate [●] full, [●] full and so on.

Self Cleaning Filter

The ISO Silo comes with an innovative 'self cleaning' filter, which operates under pressure during truck unloading. The filter is substantially smaller (1/3 normal size) than filters used on conventional silos because air flow is regulated in line with the discharging truck. By restricting the air flow through the filter, the surge of airflow at the end of the truck unloading can also be avoided.

rapid deployment can be within a few hours



Benefits of the ISO-Silo

- Combined storage silo and pneumatic transfer system
- Available in 30ft (37m³) or 40ft (48m³) dimensions
- Designed for rapid mobilisation/de-mobilisation
- No foundations necessary
- No need for access to the top of the silo – all controls at ground level
- Units supplied with integral plc control system
- No planning consent necessary if used as a temporary structure
- The average cost of erecting permanent storage silos can be considerable, planning consent is also required and all flexibility is lost
- All equipment is at ground level and minimum space is occupied
- Can be used as a conventional silo with convenient filling from road tankers
- Comes complete with integral plc system for easy operation
- Temporary base for short installation times

1 **Universal Fill Line:** Utilises standard 4' Storz connections for maximum flexibility.

2 **Reverse Jet cartridge filter:** Automatically cleans when fill cycle is complete.

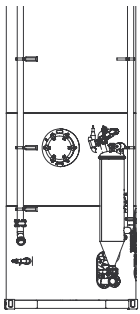
3 **Telemetry:** Tanker fill permit and low level probes
- Avoids likelihood of the silo being overfilled.
When contents reach a preagreed level, the probe signals that the silo needs refilled.

4 **Robust Frame:** ISO Silo has been designed for maximum strength and durability.

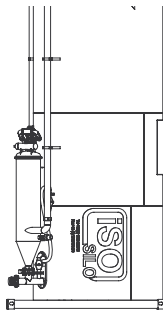
5 **Concrete Pad:** copy here



the technical capabilities for **all your needs**



NOTE:
TARE WEIGHT APPROX 6400KG
APPROX VOLUME 46 M3
NOT FOR MANUFACTURE

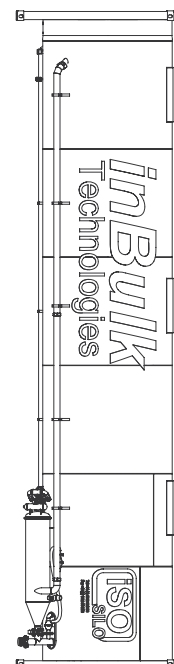


Technical Specifications:

Dimensions:	40ft x 2475mm Dia = 48m ³ Volume
Services required:	Services required – Compressed air supply at 2 barg volume, 350m ³ /hour. Control voltage 110V. Control air 7 barg volume, .002m ³ /min (Solenoid operation).
Installation:	Rapid installation (48 hours).
Compression:	No foundations necessary.
Site requirements:	ISO-Silo can come complete with a precast concrete base (2 sections, combined weight 15T). Only three major lifts involved with the installation (2 x base, 1 x silo). No access necessary to the top of the silo. All equipment at ground level.
Telemetry:	Units supplied with integral plc control system. Integral self-contained dust filtering system. No planning permission necessary, can be considered as a temporary facility.
Finance:	Available on lease or as a capital purchase.

Standards and Approvals

- Structural validation: The ISO Silo has been designed to BS EN 1991-4:2006 EUROCODE 1, Actions on Structures - Part 4 Silos and Tanks.
- Designed and manufactured in accordance to: ISO:1496/3 and UIC Rail Approval and also inline with CSC international convention for safe containers.
- Pressure Vessels have been designed to ASME PART 8, DIVISION 1.





Use of the ISO-Silo is subject to meeting local design codes and assessment on the specific material to be handled.

for **further details** or enquiries please contact

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