



DIVERSIFIED STORAGE SYSTEMS
 (888) SILO-SYS (888) 745-6797

PD Tank Manual



Pictures above are for general layout purposes. Many detail features are left out or may be different from actual.

Silo Description

PD-TANK 2250™ is a specially designed portable vertical storage system for bulk powder products.

Some innovative features include: dual discharge systems (gravity or pneumatic), stable height-to-width ratio, low ground pressure (98 PSI) when fully loaded, oversize discharge piping for high speed unloading, integrated vent pipe to discharge pipe (no need for two hookup hoses), easy cleanout, level indicator option available, one valve operation and more practical than a guppy for long term storage applications.

Silo Specifications

| | |
|-------------------------------|------------------------|
| Silo Capacity (c.f.) | 2250 C.F. |
| Silo Capacity (Cement) | 88 - 94 tons* |
| Operating Pressure | 14.5 psig |
| Bottom Aeration | HV Flow-Cones (4) |
| Discharge Pipe | 5" Sch. 40 |
| Fill Pipe | 5" Sch. 40 |
| Vent Pipe | 4" Sch. 40 |
| Gravity Secondary Discharge | 10" w/ Butterfly Valve |
| Top Manway | 20" Press. dome Lid |
| Bottom Manway | 20" Press. dome Lid |
| High Level Indicator | Optional |
| Low Level Indicator | Optional |
| Standard Operating Pressure | 10 - 12 PSI |
| Over pressure relief settings | 15 PSI |
| Pressure Gauges (2) | 1-30 PSI |

* Cement can weigh between 88 - 94 lbs. per cubic foot depending on how aerated it is.

PD-TANK 2250™ storage system has "patent applied for" components and proprietary systems. These unique system designs are the property of Diversified Storage Systems.

Patent Pending

Many design details on this silo are proprietary to DSS

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SET UP:

Foundation:

The PD Tank has been designed with a wide base. It can be placed on a level compacted soil or a cement/pavement foundation. The foundation needs to withstand 100psi down force.

The PD tank weights 20,000lbs. You will need a crane to erect the tank. (size of the crane depends on the location, Please let crane company determine the correct size crane.)

The silo is 12' diameter

37' in length

The silo weights 20,000lbs

The PD tank has three lifting lugs on top. Connect all three to raise tank.



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Operation:

The PD Tank has three connection points.

1. The fill line:

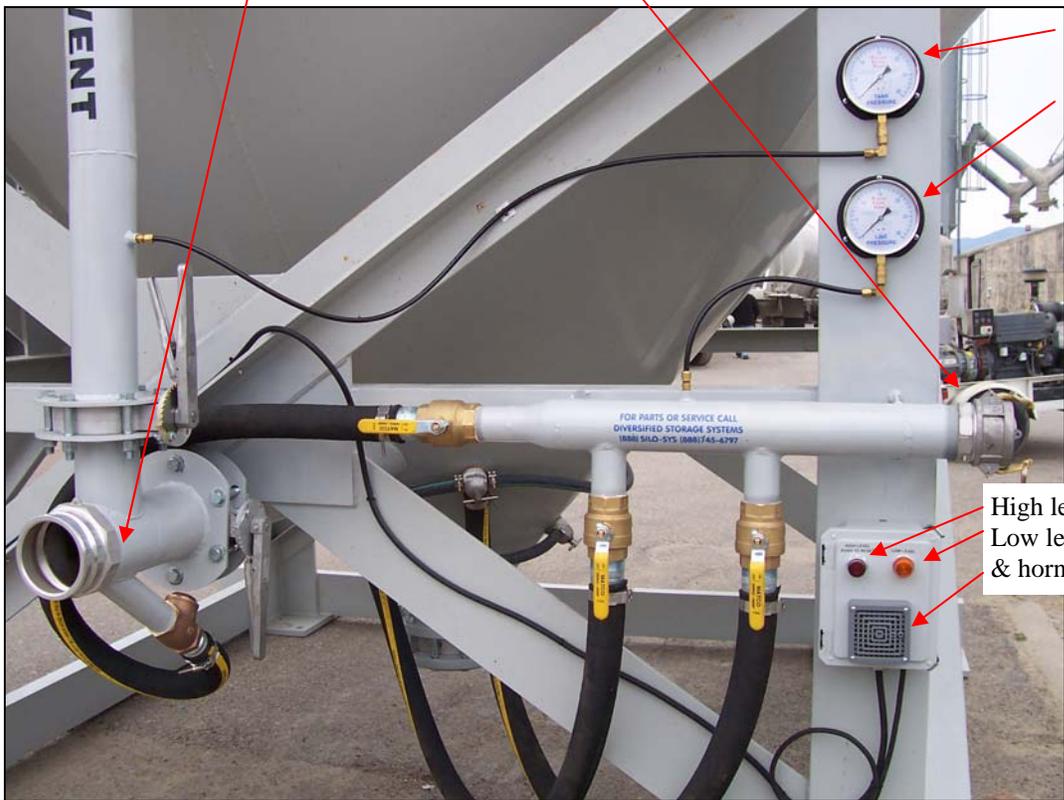
This is a 4" fill line with male camlock. Before filling make sure butterfly valve is open.

2. Hot Air inlet line:

This is the 3" line with male camlock. This line feeds air into the tank and into the cone fluidizers.

3. Product Discharge and vent line:

4" line with male camlock.



Tank pressure

Line pressure

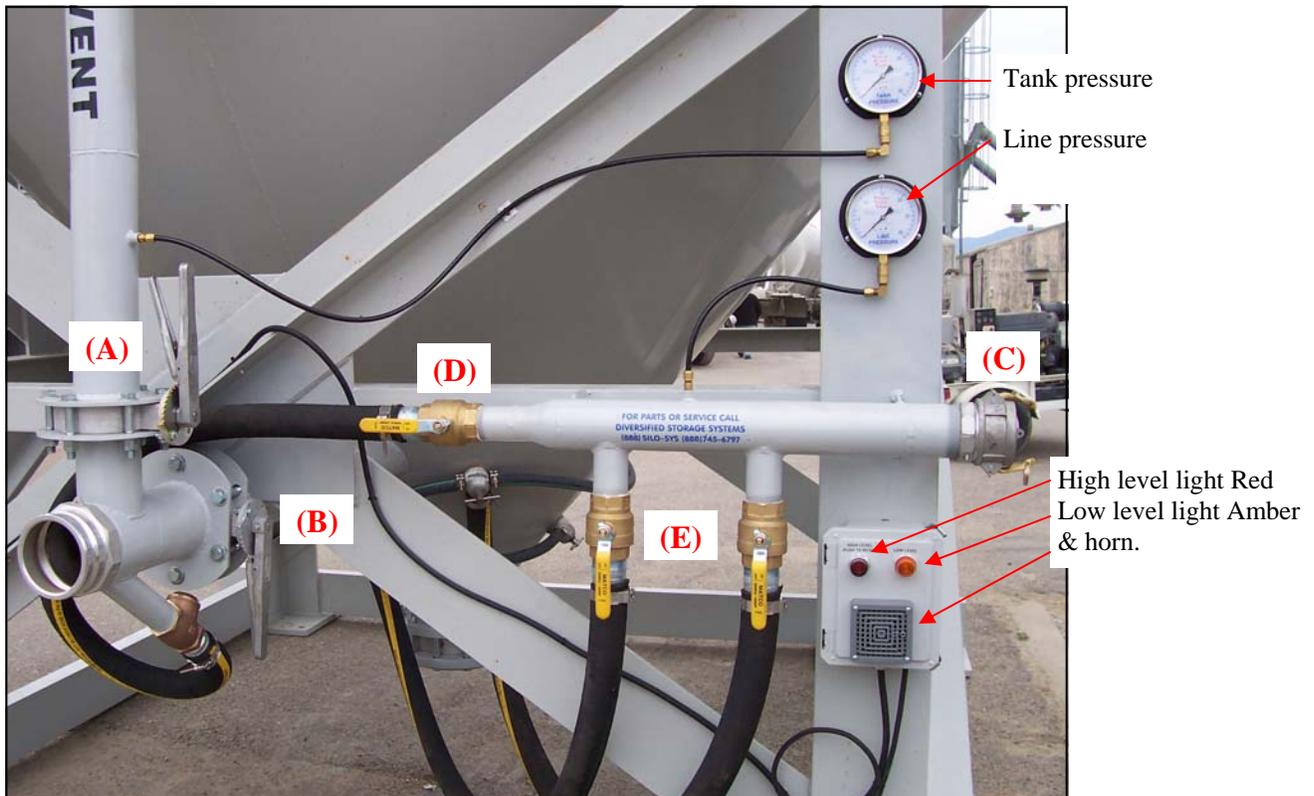
High level light Red
 Low level light Amber
 & horn.

Filling the tank:

1. Confirm Valve to tank **(B)** is closed
2. Attach a vent line to the discharge line. **(the tank needs to be vented into a dust collector/silo with dust collector).**
3. Open vent line **(B)** & confirm that tank has no pressure.
4. Hook the truck hose to the product fill line.
5. Make sure butterfly valve on fill line is open.
6. Open butterfly valve to vent line **(A)**
7. Confirm butterfly valve **(B)** to tank is closed.

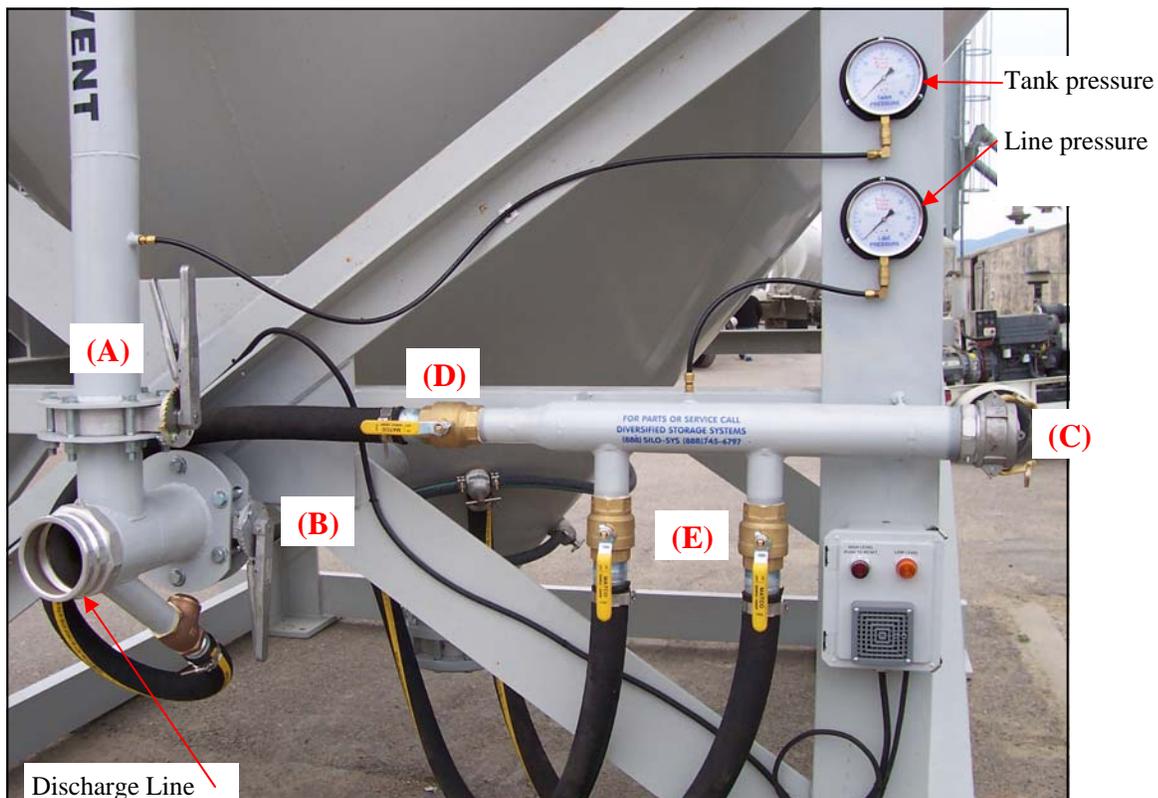
The silo has a hi level light & horn.
 Once the horn is sounded it means the tank is full and filling needs to be stopped.
 The red light will illuminate and pressing it will turn the horn off.

The tank may have an amber low level light. It will illuminate once the tank reaches that low level.



Discharge the tank:

1. Hook the hose from discharge line to receiving silo.
2. Make sure butterfly valve on fill line is closed
3. Close butterfly valve to vent line (A)
4. Close butterfly valve to tank. (B)
5. Hook the blower line to the inlet (C)
6. Open the fluidizer valves (E) before starting the blower. So you do not deadhead the blower.
7. Start the blower and pressure up the tank to **8psi**.
8. Open discharge valve (B).
9. Crack the chase air line (D) a little.
10. The tank pressure can then operate in the 8-10psi range.
11. Adjust valve (D) until tank is discharging at 8-10psi. If tank pressure goes beyond 10 psi open valve (D) more, if it goes below 8 psi close valve (D) more.





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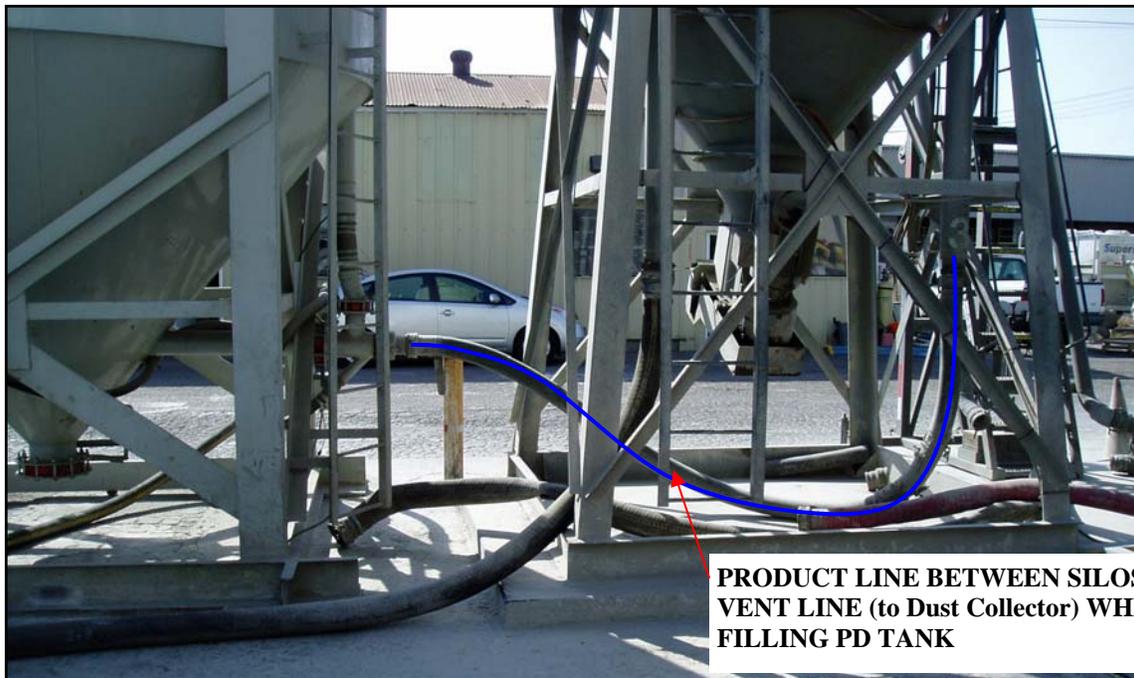
Parts List

| Description | DSS Part # |
|---|------------|
| 2" Ball Valve F/F Brass | VA2-2 |
| 0-30 PSI dry gauge | GA4 |
| 1 port fluidizer assembly | FUSF1 |
| 3 port fluidizer assembly | FUSF3 |
| 4" cast iron butterfly valve | VA4C |
| 5" cast iron butterfly valve | VA5C |
| 2"-6" locking plate assembly | VAPT26-1 |
| 4"-6" handle assembly | VAPT46 |
| 10" cast iron butterfly valve | VA10C |
| 8"-10" locking plate assembly | VAPT10-7 |
| 8"-10" handle assembly | VAPT10-6 |
| 14psi +/- 1 pressure relief valve 2" f/ pipe thread | VAPR2-14A |
| 3" male camlock x female threads | CL3A |
| 3" dust cap camlock | CL3DC |
| 4" male camlock x male thread | CL4F |
| 4" dust cap camlock | CL4DC |
| AC grille horn | ELP-1 |
| 8 pin terminal socket | ELRL-10 |
| DPDT 120vac general purpose relay | ELRL-8 |
| Bin level indicator | ELBN-2 |
| Red light push button | EL8-10 |
| Amber light | EL8-7 |
| 2" hot hose | H2H |



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