a division of fgh

Statement of Fire Cistern Warranty

I. CISTERN INTENT

The following warranty is consistent with NFPA-1231. Standard on Water Supplies for Suburban and Rural Fire Fighting. The Warranty is specific to the materials and installation when provided by or inspected by the manufacturer, Superior Concrete, or a licensed agent of the manufacturer. It is the sole responsibility of the owner of the cistern to determine and monitor the level of water in the tank. Testing is the exclusive responsibility of the local firefighting agency, or those appointed by them. It is noted that the fire department having jurisdiction is responsible for determining the minimum water supply needed for a structure under its authority.

Superior Concrete's Fire Cistern is designed to be trouble-free and last a lifetime. We warrant our products to have been manufactured in a workmanlike manner and in accordance with our standard specifications for this product, unless otherwise indicated in our quotation and/or acknowledgment (See "Statement of Conditions"). If the installed Cistern is found to be defective within a period of five (5) years from the date of installation, and said defect is our responsibility due to faulty manufacture or installation (if done by Superior or a licensed agent), we will replace or repair the defective Cistern. After repair or replacement, the balance of time remaining on the warranty will be honored. Costs associated with the repair and/or replacement of the defective Cistern will be limited to the cost of materials required to complete the repair or replace the Cistern. The costs associated with the defect discovery process may be covered by this warranty depending on the specifics of the application.

II. TANK PLACEMENT AND CONDITIONS

The excavation subgrade must be a transit leveled, minimum 6" layer of ¾" washed stone set onto the appropriate soil stabilization fabric. It will be the responsibility of the design consultant to determine the stone thickness and to ensure that local soils will support the chambers without differential settlement. The **excavation must be pumped and kept dry** during the installation. The **crane (provided by the buyer)** must be large enough to place the sections without damaging them in any way. ***Grease must be applied to both the gasket and the receiving joint. Care must be taken to insure that the gasket remains seated in its groove around the entire perimeter of the male end of the casting, and that the gasket is completely within the female end of the other casting before mechanical devices can***

be used to draw the pieces together. The **joints must be kept clean** of any foreign material while the sections are being drawn together. The tank **must be backfilled prior to filling with water for testing.** The tank should be backfilled by starting at each end of the tank and then working toward the middle of the tank. **Clean granular backfill material** and appropriate placement methods must be used to avoid any damage or shifting of the sections. Differential backfill height on opposite sides of the tank should not exceed two feet. The tank is **not suitable for potable water storage** without specific modifications. **Superior Concrete will provide a technical advisor** during the tank installation. It is the responsibility of the buyer to provide the necessary manpower and crane to do the work involved in setting the tank. On site assistance by Superior of any kind does not relieve the Buyer of his responsibilities as detailed here.

III. PIPING AND PIPING INSTALATION

Piping is designed to allow for 1000gpm for 75% of the cistern capacity.

Vent Pipe will be 8" Schedule 40 Steel Pipe. The pipe will be connected to the cistern utilizing a monolithically cast in threaded coupling. The pipe will have a bug resistant screened opening and will be positioned to minimize condensation buildup. The height of the vent pipe is to be determined by approved submittal drawings.

Fill Pipe will be 4" schedule 40 steel Pipe. The pipe will be connected to the cistern utilizing a monolithically cast in threaded coupling. The fill pipe will terminate above the tank with a Siamese fitting with two 2.5" National Standards Female Threads with plastic caps. The height of the fill pipe is to be determined by approved submittal drawings.

The suction pipe will be 8" schedule 40 steel pipe. The pipe will be connected to the cistern utilizing a wall sleeve and linkseal. Above the tank the pipe will remain 8" until a 90-degree long sweep establishes a horizontal direction. The height of the suction pipe above the cistern is to be determined by approved submittal drawings. The pipe will then be reduced to a final 4 ½" National Hose male Thread. Inside the cistern the suction pipe will extend to six inches of the floor of the cistern.

There will be a ¼" thick by 4'x4' anti-vortex plate coupled to the suction pipe. The anti-vortex plate will be secured to the floor of the cistern on all four corners. The anti-vortex plate will have a minimum clearance of 6" from any wall of the cistern.

A Neenah R-1744 32" frame and cover with a type D locking device shall be used in accordance with local requirements.

IV. CISTERN DESIGN

Cistern Loading is designed to be H-20 rated (with 1' to 8' of cover) over the entire tank exclusive of penetrations. A two-inch layer of ridged insulation is recommended for frost protection for tanks with less than 4' of cover.

Antifloatation design, structural drawings, and appropriate keyway and inserts will be provided by Superior Concrete for an antifloatation collar to be cast in place by the contractor. The determination for this item is site specific and its requirement is the responsibility of local governing firefighting agency and consultants.

Riser sections to grade will be H-20 rated and consistent with the structural design of the tank.

V. PRECAST CONCRETE

A controlled environment will be used to cast all sectional modules of the cistern. Only certified manufactures demonstrating sufficient quality control will be used for the production of cistern modules.

VI. TESTING

The owner will perform leakage tests only when the cistern is backfilled per manufacturer's installation instructions. As per **NFPA 22**, the tank will be filled and left to stabilize for 48 hours. The liquid level loss will be monitored over the next 72 hours to determine liquid volume loss. The loss due to porosity and evaporation will be calculated and deducted to determine any net leakage. There will be no measured leakage of the tank once it is placed in service.

Superior Concrete does not guarantee watetightness of Buyer installed pipe penetrations, risers, frames and covers or any modifications or additions made by the Buyer or his subcontractors.

*Where not specifically stated above, Superior Concrete's Light Weight Tank's specification and installation specifications will govern. The owner and the seller must sign below for the fully stated information in this warranty to be valid.

PROJECT

NAME_____ LOCATION_____

STATE_____ TOWN_____

BUYER_____ DATE_____

SUPERIOR CONCRETE REPRESENTATIVE_____DATE_____