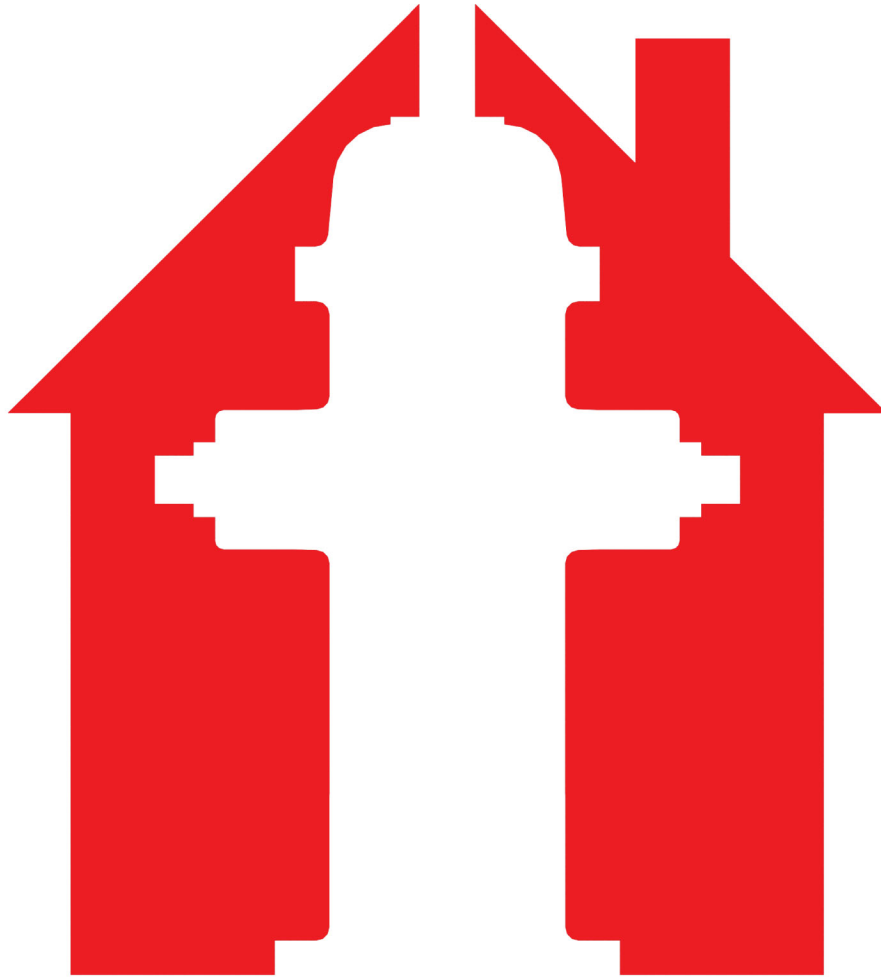


O&M INSTRUCTION MANUAL

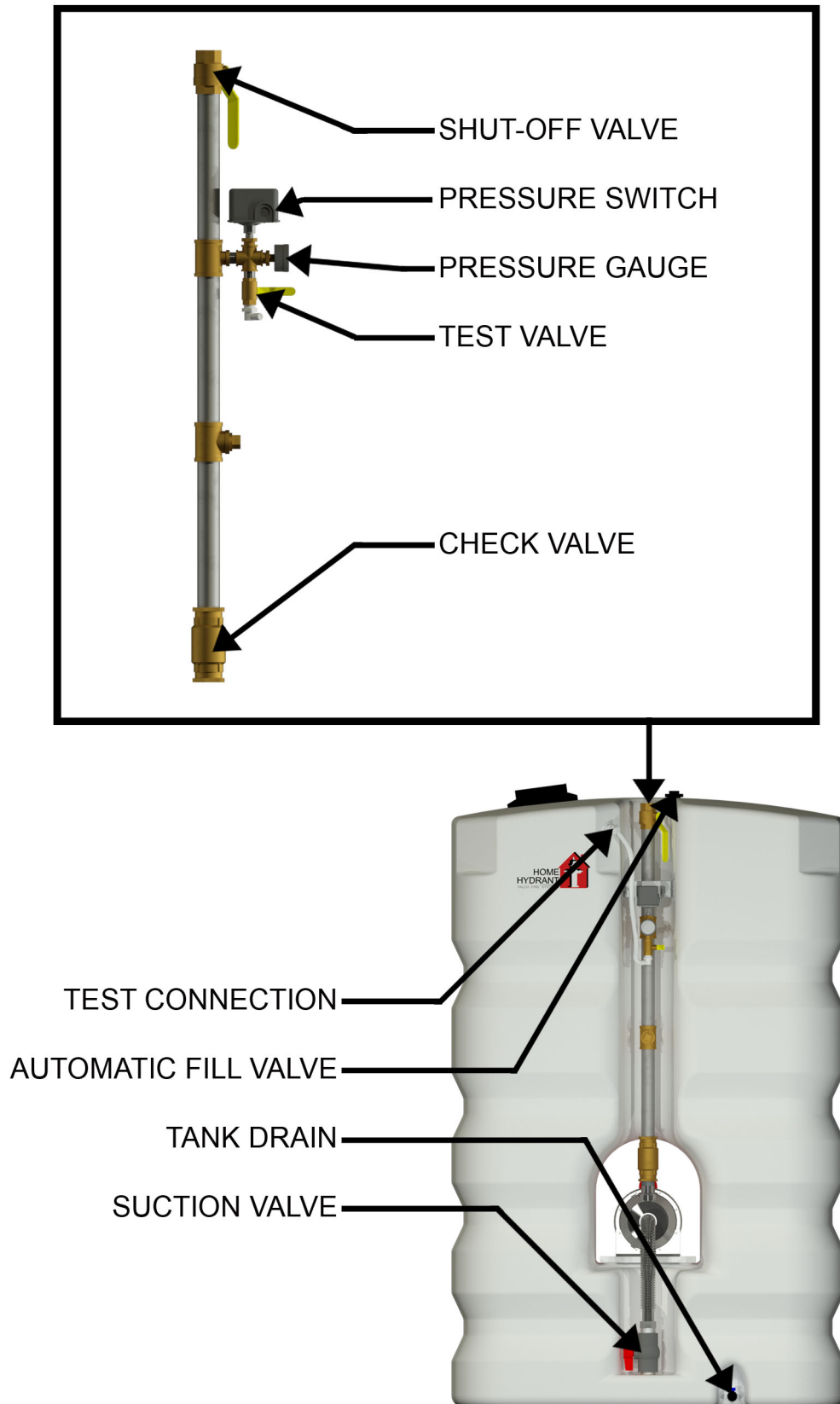
POTABLE WATER MODEL



HOME HYDRANT®
TALCO FIRE SYSTEMS

U.S. PATENTS #8,678,032 & #8,905,069

OVERALL VIEW OF HOME HYDRANT



CAUTION

The TALCO Home Hydrant must be installed in such a manner that the tank is readily accessible for regular maintenance or replacement in case of tank failure. Units shall be installed in a location that protects them from direct sunlight, inclement weather in general, and freezing temperatures in particular. Installation in a secured room is recommended to prevent vandalism or tampering with control settings. Not following the guidelines above may cause the unit to malfunction or fail prematurely.

Do not install the unit in a manner that requires removal of any wall or portion of the structure.

TALCO FIRE SYSTEMS will not be held liable for any cost that may be incurred due to removal or replacement of walls, doors, etc. in order to replace the tank or any equipment that may require service or replacement, or fail while in service due to improper installation; including, but not limited to, installation in an unprotected area.

NOTE: Home Hydrant electrical system components are not watertight and must be protected accordingly.

SAFETY INSTRUCTIONS

TO AVOID SERIOUS OR FATAL INJURY OR MAJOR PROPERTY DAMAGE, READ AND FOLLOW ALL SAFETY INSTRUCTIONS IN MANUAL AND ON PRODUCT.

THIS MANUAL IS INTENDED TO ASSIST IN THE INSTALLATION AND OPERATION OF THIS UNIT AND MUST BE KEPT WITH THE UNIT.

UNIT NOT DESIGNED FOR USE WITH HAZARDOUS LIQUIDS OR FLAMMABLE GASSES. THESE CAN CAUSE FIRE, BURNS, OR DEATH.

The following safety **SAFETY SYMBOLS** in the manual or on the product warn of **HAZARDS** that can cause death, personal injury, or property damage as described below.



Warns of **ELECTRICAL HAZARDS** that can cause death, serious personal injury, or major property damage.



Warns of **NON-ELECTRICAL HAZARDS** that can cause personal injury or property damage.

IMPORTANT:

- 1.1 Inspect unit for damage. Report damage to carrier or distributor immediately.
- 1.2 Electrical supply must be a separate branch circuit with fuses or circuit breakers, wire sizes, etc. per national and local electrical codes.



Always disconnect electrical power when working on or handling pump controls.

- 1.3 Unit must be wired for 230V single phase 60hz power. Follow all national and local electrical codes. Size electrical supply accordingly.
- 1.4 Protect from freezing or flooding.

INSTALLATION:

DO NOT USE THE PUMP PIPING AS A MEANS OF LIFTING OR MOVING THE UNIT

- 2.1 When moving the unit over rough or uneven surfaces it is recommended that the unit is carefully laid on its back, pump and piping facing upwards. Using ratcheting straps, or other similar straps, wrap them around the indentations on each end of the tank. On the four corners at each ratcheting strap pass a rope or strap under the ratcheting strap and tie it in a loop to make a lifting handle. Ensure the ratcheting straps are tight so they do not slip off the tank during the moving operation. Use a pipe or 2x4 passed through the loop to pick unit up to move it. *(see example pictures on next page)*

SAFETY INSTRUCTIONS

INSTALLATION (cont.):

- 2.2 Connect 1-1/4" discharge piping to sprinkler system. All connecting piping must be supported independently of the Home Hydrant and be naturally aligned.



Do not force pipe connections into place in order to make them line up.

- 2.3 **Do not install check valve in discharge piping.** Duplicating the check valve installed on the Home Hydrant will cause unstable operation.
- 2.4 Install an isolation valve in sprinkler piping if allowed by local code.
- 2.5 Install Float Valve Assembly in hole provided in top of tank (Bulkhead fitting uses left-hand threads). Connect water supply to 3/4" bulkhead fitting (Right-hand threads). Install isolation valve in fill line if allowed by local code.
- 2.6 Pipe drain line from 1" overflow fitting located on end of tank near the top to a suitable drain location.



Failure to properly connect the overflow to a drain can result in serious property damage.

- 2.7 Connect electrical supply to pressure switch contacts as seen in fig. 1 (see next page).



DO NOT APPLY POWER.
Breaker should be in off position until all installation steps are completed.



Electrical connections to be completed by a qualified licensed electrical contractor.

Home Hydrant Carry Recommendations

The best way to move a Home Hydrant is just to push it into place. If that is not an option the pump and tank can be carefully carried on its back. Attempting to carry a Home Hydrant by the suction or discharge piping can lead to damage. DO NOT attempt to carry a Home Hydrant by the suction or discharge manifold.

Unit on its back with ratchet straps and loops at each corner.



Can be carried via the loops at each corner.



Tanks can also be carried with 2x4s or pipe.
(Lift with your legs, not your back!)



SAFETY INSTRUCTIONS

INSTALLATION (cont.):

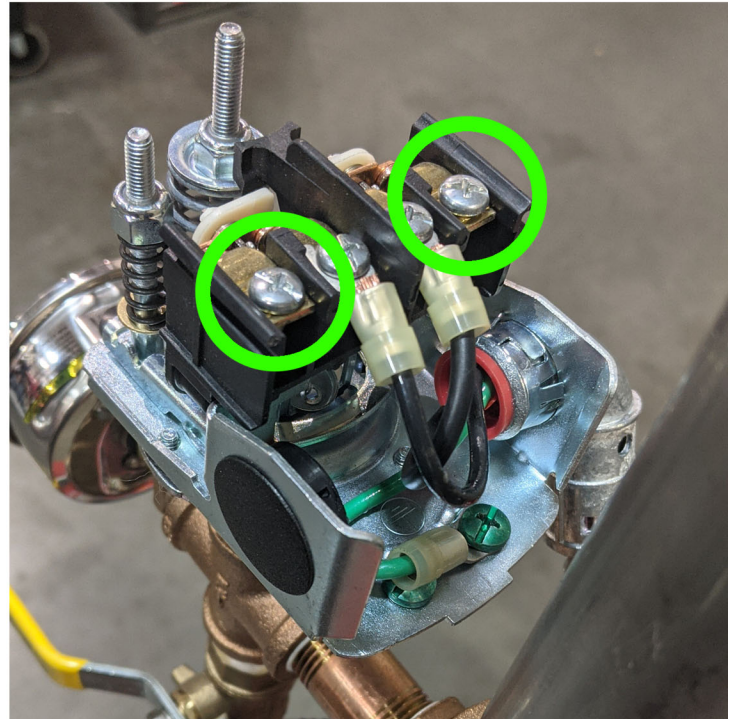


DO NOT APPLY POWER.

Breaker should be in off position until all installation steps are completed.

fig. 1

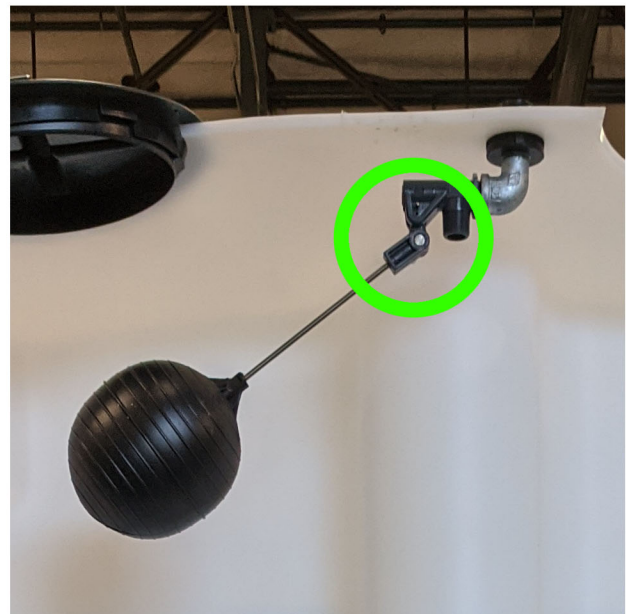
- 2.8 Remove the gray cover from the pressure switch. A dedicated 230V single-phase circuit is required for the fire pump. Incoming power should be connected to the two unoccupied pressure switch connections (green circles).



Talco residential fire pumps do not require the use of a neutral.

fig. 2

- 2.9 Fill the tank with water. Observe the tank for leaks as it fills. If a leak is observed, **stop filling the tank**. Repair the leak and then proceed.
- 2.10 The Float Valve Assembly (fig. 2) may need to be adjusted to shut off just below the level of the over-flow fitting. Gently bend the float rod for small adjustments or loosen the thumb-screw (green circle) and change assembly angle for larger adjustments.



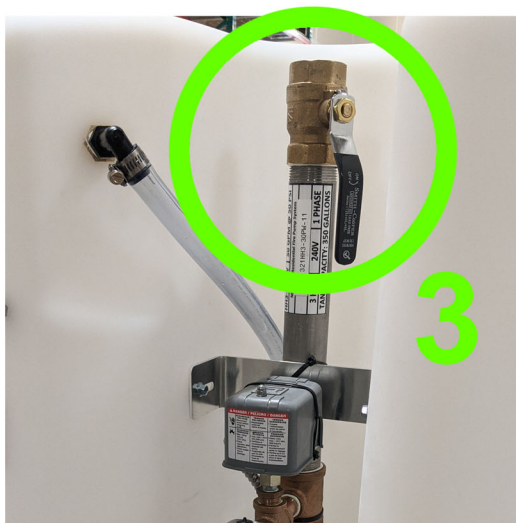
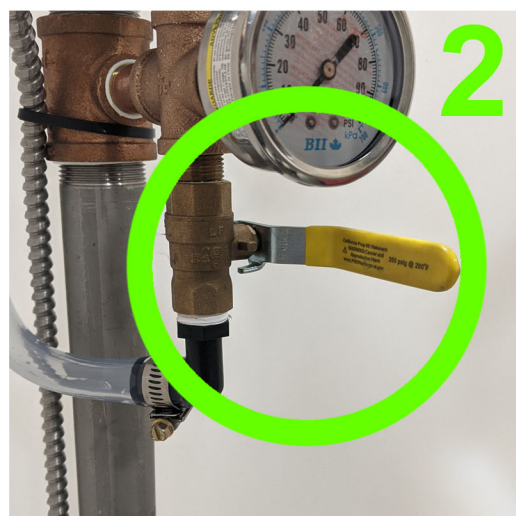
SAFETY INSTRUCTIONS

START-UP:



The pump will not operate properly until all air is removed from the pump casing.

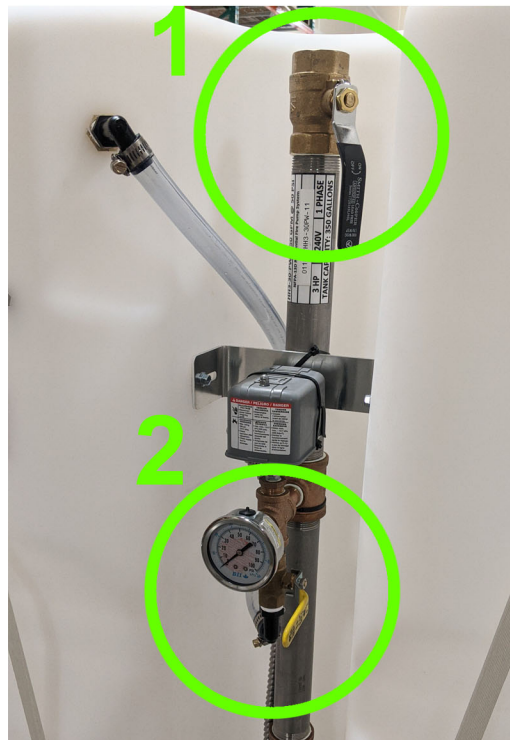
- 3.1 Open the pump volute air bleed valve located on the discharge check valve (1). This will allow any air in the pump case to escape and prime the pump (Suction valve has to be open). Close valve when the air has cleared and water comes out. Now open the test valve at the top of the manifold (2) to allow all air to clear from the discharge manifold. Close the test valve once all the air has cleared.
- 3.2 Open the discharge ball valve at the very top of the discharge manifold and allow water to fill the top pipe section (3). Close the discharge ball valve.
- 3.3 Energize the pump by turning on the appropriate breaker in the house electrical panel.
- 3.4 Observe the discharge pressure gauge and watch for peak pressure. The pump should start immediately and build pressure. If the pump fails to quickly build pressure, makes excessive noise, or vibrates turn it off immediately and see the “TROUBLESHOOTING” section for help.
- 3.5 Once the pump has reached its operating pressure it should shut off. Slowly open the discharge ball valve, the pump should reactivate. Allow the pump to slowly fill the system. Once the system is charged to the maximum pressure noted earlier and the pump cycles off, fully open the valve. The system is now ready for automatic operation.



SAFETY INSTRUCTIONS

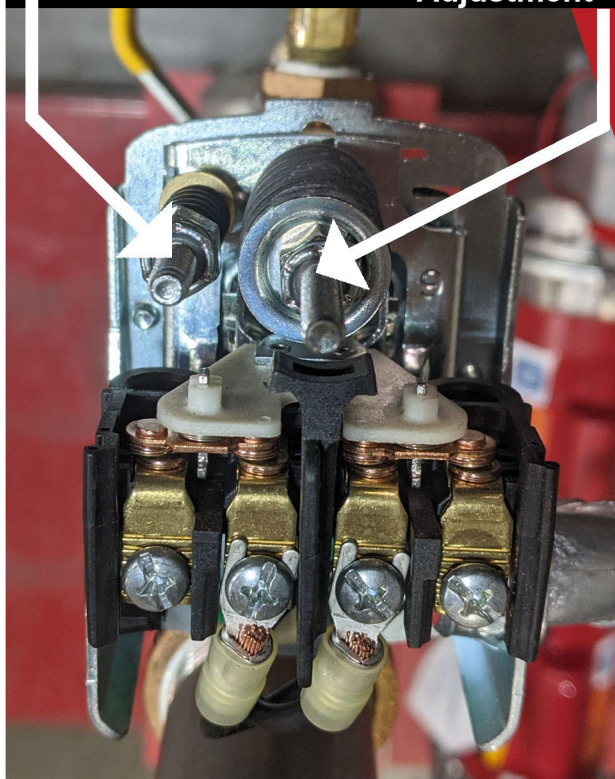
TESTING:

- 4.1 Initial testing is required to verify proper operation. Monthly (at a minimum) testing is required to ensure the ongoing reliability of the pumping unit. Testing can be performed at any time.
- 4.2 Close the system discharge valve (1) to isolate the water tank from the sprinkler system. Open the system test valve (2). The pump should start. Allow the pump to run with the valve open for 1-3 minutes.
- 4.3 Close system test valve then slowly open the system discharge valve. The pump will continue to run until the bladder tank repressurizes and then shut off. Your system is now ready for automatic operation.



Pressure Differential Adjustment

Cut-in/Cut-out Adjustment



PRESSURE SWITCH ADJUSTMENT:

The pressure switch has been factory wired and adjusted. In the unlikely event adjustment of the pressure switch is required please note the following:

- A) The large spring affects both the cut-in and cut-out points equally. Turn the adjusting nut clockwise to equally raise the pressure for both.

Note: If the cut-out pressure has been raised above the maximum pressure of the pump the system will not shut off.

- B) The small spring controls the differential between cut-in and cut-out pressure. This is factory set for a 20PSI differential. Turn the adjusting nut clockwise to increase.

Note: We do not recommend changing this setting.



HAZARDOUS VOLTAGE: Disconnect power before working on the motor or the pressure switch.

SAFETY INSTRUCTIONS

COMBINATION POTABLE WATER AND FIRE SUPPRESSION UNITS

Potable water fire suppression systems utilize a hydro-pneumatic tank installed in the discharge piping. It is recommended that an isolation valve be installed to secure the tank from the system in order for the tank maintenance to be performed. It is also recommended that a means to drain the tank be installed while it is isolated so that the air charge can be checked annually or if it is believed the tank has failed. The hydro-pneumatic tank will require an air charge of approximately 2 PSI below the cut-in pressure setting of the pump. Air charge is put in with no water pressure in the tank.

See example below:

Switch Cut-On	Tank Air Pre-Charge	
20 PSI	18 PSI	With the pre-charge of air in the tank slowly open the isolation valve to the tank so as to not shock the tank.
30 PSI	28 PSI	
40 PSI	38 PSI	

TROUBLESHOOTING:

1) PUMP WONT START:

- A) Check for incoming power. Check the circuit breakers feeding the pump and reset as necessary.
- B) Check pressure switch operation, cut-in/cut-out setting may be too low.
- C) Motor overloads have tripped due to excessive load caused by debris in the pump or other cause of binding.

2) PUMP WONT SHUT OFF:

- A) Make sure pump is making adequate discharge pressure and/or adjust pressure switch cut-in/cut-out setting.
- B) Check for air in pump. Bleed system of air.

3) MOTOR RUNS BUT PUMP MAKES NOISE:

- A) Check for debris in the pump case.
- B) Check to make sure there is adequate water from the supply.

TALCO FIRE SYSTEMS

Limited Warranty

All goods are warranted to be free of defects in material and workmanship for a period of one year from start-up or (18) months from the date of shipment, whichever comes first. Except as specifically indicated, TALCO makes no warranties, expressed or implied, oral or written, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose.

THIS WARRANTY IS SPECIFICALLY SUBJECT TO THE FOLLOWING:

1. The limited warranty is limited to replacement or repair of defective materials and workmanship at the discretion of TALCO.
2. Equipment sold, but not manufactured by TALCO, is subject to the manufacturer's warranty only. TALCO makes no warranties, either expressed or implied, for goods manufactured by others.
3. The limited warranty is conditioned on the purchaser giving TALCO notice within five days of discovery of any alleged defect. Notice should be directed to TALCO FIRE SYSTEMS, by mail: 6040 NE 112th Ave, Portland OR, 97220; by fax: (503) 688-1234; or via E-mail: admin@talcofire.com.
4. The limited warranty shall be considered null and void if any product or part of the packaged system has been repaired or altered in any way by others without prior authorization from TALCO. Fitting leaks and electrical damage are considered the responsibility of the installing contractor.
5. TALCO shall not be liable for any incidental or consequential loss, damage or expense arising directly or indirectly from the use of any goods subject to this limited warranty, nor shall TALCO be liable for any damages or charges for labor or expense in making repairs or adjustments to the goods. TALCO shall not be liable for any damages or charges sustained in the adaptation or use of its engineering data or services.
6. This warranty shall not apply to any goods subject to misuse due to common negligence or accident, nor to any goods manufactured by TALCO which are not operated in accordance with TALCO printed instructions.
7. The liability of TALCO is limited to material replacements FOB Portland, Oregon.
8. All shipments are FOB TALCO dock and it will be the responsibility of the purchaser to check the goods when they are received and report to the Freight Company any damage that might have occurred.