



## Break Tanks for Fire & Domestic Water Service

HT-1162

Break Tanks are water storage tanks installed upstream of a domestic (potable) and fire water pump system to interrupt or “break” the connection between the pump and the water source.

The tank’s built-in air gap effectively separates a building’s water supply from the city’s water lines. Sometimes called surge tanks, these rectangular or cylindrical water tanks also eliminate pressure fluctuations in the water supply and provide a steady suction pressure for the pump.

Break tanks are most used:

- As a means of back-flow prevention between the city water supply source and the pump suction,
- To eliminate instability in the water supply source pressure,
- To provide a stable and relatively constant suction pressure at the pump, and/or
- To provide water storage to augment a water source that cannot provide the maximum flow rate required.

The National Fire Protection Association NFPA 22 Water Storage Tanks has specific sizing, operation, and equipment requirements for Break Tanks when used in conjunction with a pump for fire protection purposes.

When used for domestic water or in dual-service applications, a break tank not only prevents back-flow but ensures there is enough water to supply the system during regular or peak demand.

For high rise building projects, break tanks can also be used as intermediate tanks in order to divide a boosting system into a series of manageable pressure zones.

They ensure that a surge from the starting and stopping pumps doesn’t affect the water mains distribution.

**Designed to meet the demanding building guidelines and safety requirements for supply of fire protection and domestic water**

# Design Guide

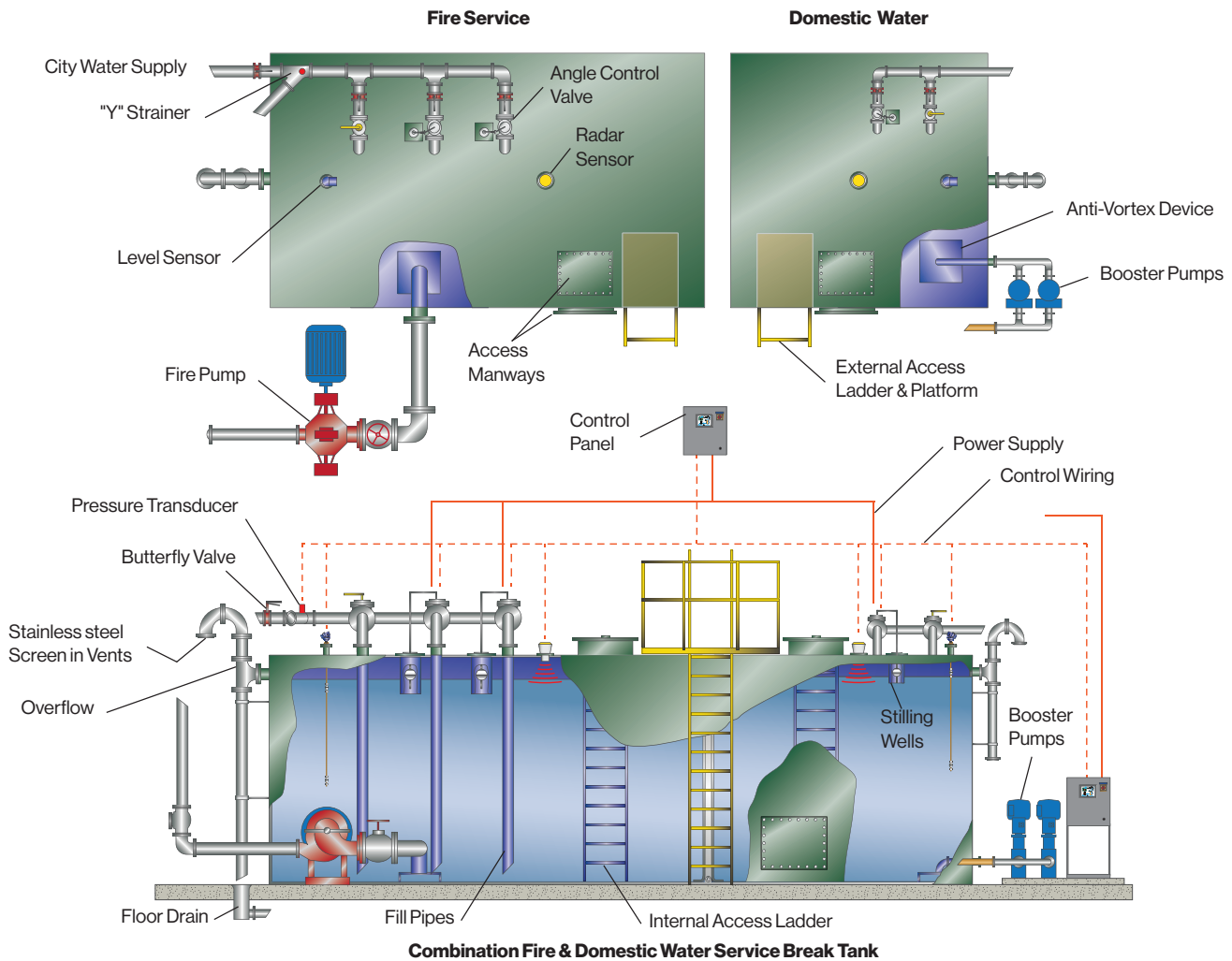
Highland Break Tanks are available in rectangular or cylindrical designs. They are constructed of carbon steel or stainless steel with assorted volumes and dimensions available. NSF, UL, and AWWA compliant linings and coatings are factory applied and form a hard, inert barrier to protect both the interior and exterior surfaces of the tank.

Our interior liner is UL approved to comply with NSF/ANSI 61 Drinking Water System Components, Health Effects — the nationally recognized standard for the safe storage of potable water.

## Accessories/Options Include:

- Top and side manways
- Pump supply connection with 90° interior elbow and anti-vortex plate

- Combination overflow/vent connection with overflow pipe and protective screen
- Galvanized interior ladder
- OSHA-compliant exterior ladder and platform with fall protection system
- Double-wall partition for dual-service applications
- Shop-fabricated pour foam insulation system
- Sight glass assembly
- Float fill valves
- Solenoid control valves
- Electronic level sensors with stilling wells
- Level monitoring alarm/control panel High-LINK® electronic gauging and monitoring system
- Stamped engineering calculations



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