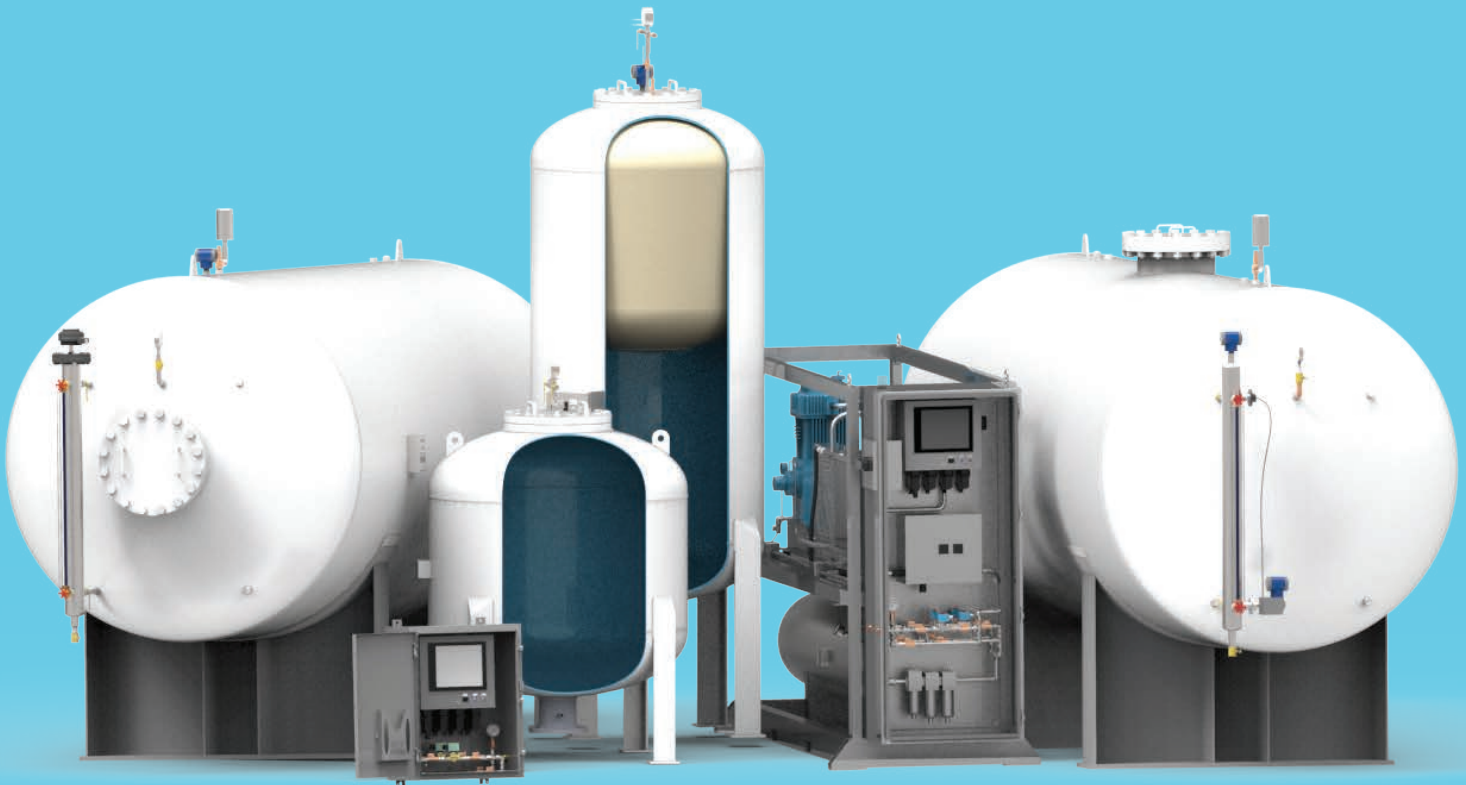


EVERY PROJECT IS UNIQUE.



HYDROPNEUMATIC SURGE & PRESSURE CONTROL SYSTEMS

AIR-OVER-WATER OR BLADDER SYSTEMS?

PULSCO helps you decide.

PULSCO takes into consideration the specific project needs before recommending one system over the other as we offer Air-Over-Water and Bladder Systems. In direct contrast, some manufacturers recommend only Bladder Systems or only Air-Over-Water Systems, often citing misinformation as fact, and usually promoting a narrow view.

AIR-OVER-WATER

BLADDER

DESIGN

Any volume size, pressure or orientation
Limited only by shipping restrictions and site limitations

Recommended for smaller volumes and facilities that have limited access to power or onsite maintenance personnel

A flexible bladder membrane prevents gas from being absorbed into fluid

AIR CHARGE

Provides local source of compressed air to recharge tank when needed

Package includes:
Motor/starter
Air receiver
Controller
Air control valving



Operates independently and without the need of an air compressor package

A source of compressed gas will be required for start up and maintenance as needed

LEVEL CONTROL

Skypark 740 & 750 Controllers allow for the automatic adjustment of air-to-water ratio within the tank



PULSCO recommends the Skypark 730 Controller and Bladder Monitoring Device to regulate the Bladder System



WATER LEVEL READING / FIELD CALIBRATION

Level sensor detects the water level of the vessel and automatically adjusts
External tank sight glass used for real time, accurate visual readings

Close approximation via an optional DPT Transmitter

Vessel water level maintenance requires Operator intervention

TYPICAL MAINTENANCE

Minimal maintenance of vessel exterior, controls and appurtenances
Air Compressor and instrumentation requires a periodic, 1 hour maintenance routine every 4 months for air, filters, and oil changes
Routine maintenance can be performed without isolating the tank

Minimal maintenance of vessel exterior, controls and appurtenances

Maintain leak free pipework and fittings

Bladder replacement requires labor, equipment and parts

For sewage applications - Anti-extrusion screen should be disassembled & cleaned twice a year

Tanks must be isolated and off-line during bladder changes

COST OF OWNERSHIP

Majority of total cost is dependent upon specifications regarding the pressure ratings and the capacity of the vessel
Larger initial capital expenditure based on Air Compressor package specifications

Moderately lower initial capital expenditure as the vessel and bladder accounts for the majority of total costs

The first bladder replacement service often equates to the initial total cost of an Air-Over-Water System

Direct Costs

Equipment
Shipping

Indirect Savings

Failure Prevention
Reduced System Downtime
Reduced System Maintenance

