

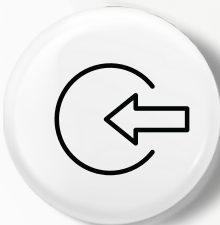
ULTRA HIGH PRESSURE FIRE SUPPRESSION SYSTEMS



PyroUHP is a next-generation solution for efficiently approaching, attacking and eliminating fire with unsurpassed effectiveness. Its products - PyroLance® and PyroBlitz®, which can be used in combination with Class A and Class B foams, deliver water flow above 1,400 PSI (over five times the pressure of traditional lines), ensuring safety and versatility that goes beyond traditional equipment.



Proven Success
in Military



Piercing Through
Wood, Brick,
Cement, Steel, etc.



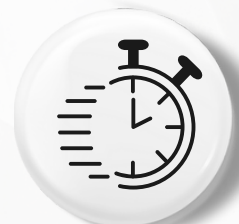
Rapid Intervention
on Structural Fires



Uses Water from
Alternate Sources



Rapid Gas Cooling &
Access to Confined
Spaces



Less Time, Less
Water to Fully
Extinguish



INTRODUCING



The PyroLance is an innovative ultra high-pressure extinguisher that can penetrate steel and concrete by shooting an ultra-high pressurized mist through a 1/8-inch opening, creating high velocity fog which reduces the introduction of oxygen. Minimizing oxygen, which is an essential element of starting and spreading fires, effectively kills the flame inside the confined spaces.



WHAT IS ACHIEVED



Active Control of Interior Fire Conditions from an Exterior Defensive Position



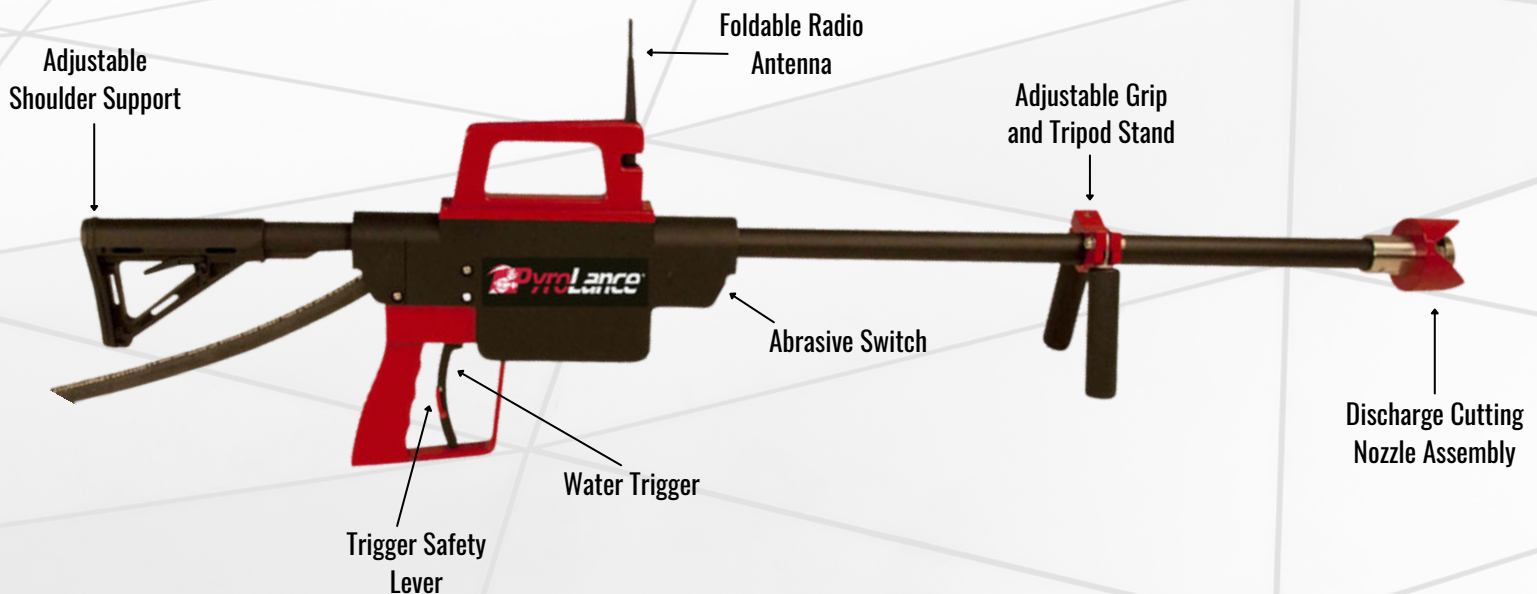
Reduced labour, reduced risk. PyroLance can be operated by 2 individuals.



Ultra-high Pressure water mist technology allows for minimal water to be used



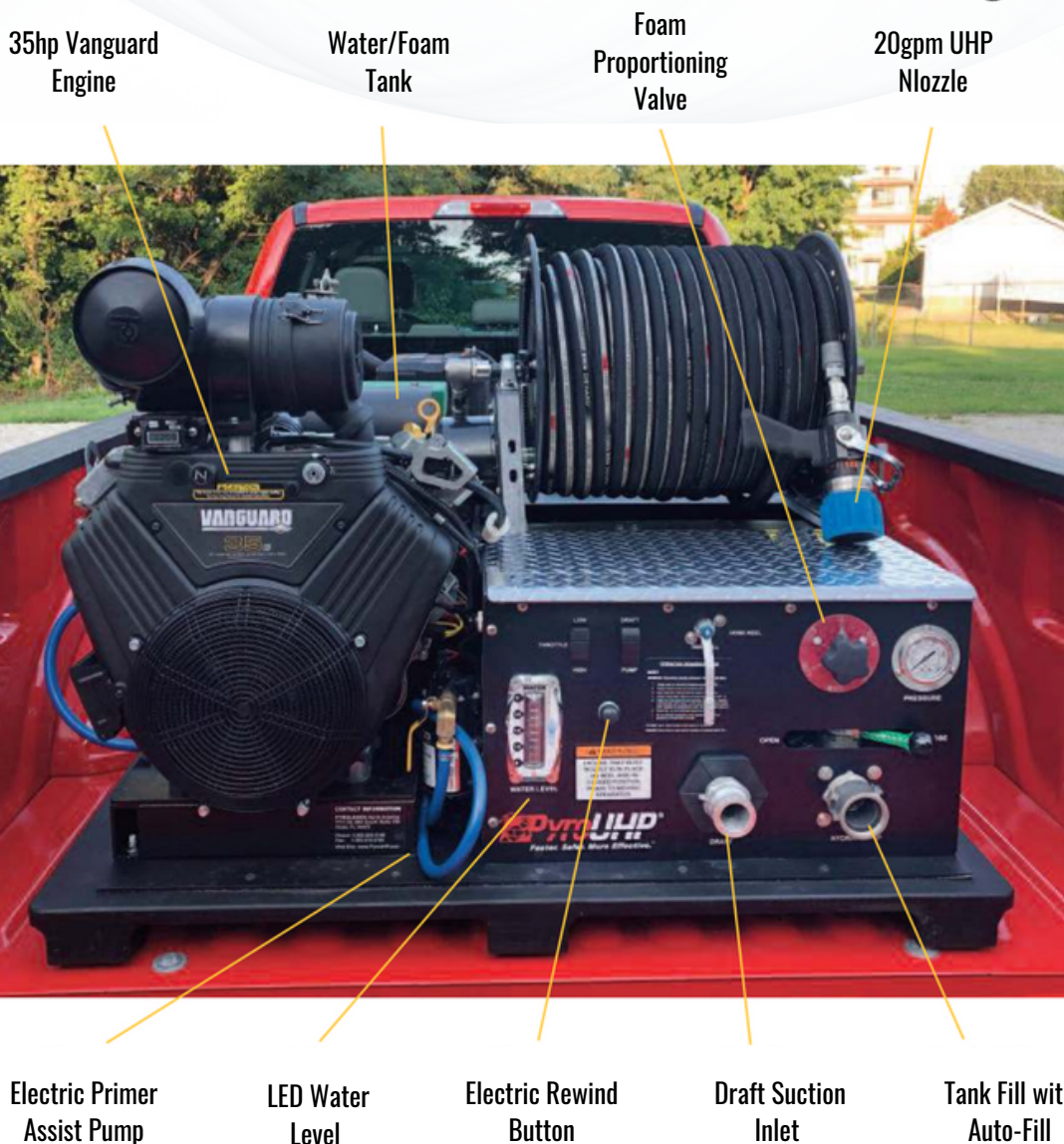
Micro droplets allow absorption of heat, extinguishing the fire with incredible speed while reducing collateral damage.



INTRODUCING **PYROBLITZ**



Once the interior conditions have been brought under control, a firefighter can enter the fire site armed with the PyroBlitz UHP (Ultra High Pressure extinguisher) to finish off the fire. PyroBlitz multiplies the extinguishing power of each drop, quickly bringing down the temperature and fully extinguishing a burn in less time & with less water than non-UHP systems.



LOW PRESSURE VS UHP



**HIGH VOLUME/LOW PRESSURE
(30-300GPM/50-150PSI)**

**LOW VOLUME/HIGH PRESSURE
(10-20GPM/1100-1400PSI)**

SET UP

Lay flat 1.5"-1.75" hose is harder to deploy and must lay correctly (not charged) prior to entering a structure. This adds time to extinguishing efforts

3/4" ridged hose is easier to maneuver by one to 2 firefighters. No need to strategically lay hose reducing time it takes to reach the structure.

Additional exertion is placed on the firefighter prior to suppression efforts reducing their endurance during suppression

Reduced exertion resulting in lengthened endurance during suppression activities

During pump and roll operations, a minimum of 50' must be extended. Charged 1.5" handlines are dragged making it harder to control vehicle in a forward motion.

Rigid and lightweight hose is extended to any length and charged simultaneously with a continuous charged line. Firefighter is in control.

FIRE CONTROL

Multi person function (up to 4) is needed for maneuvering charged hose lines

Single to 2 person operation maximizes endurance and team efficiency

Longer times for thermal reduction (having less surface due to larger droplets flowing through the heated gases and flames)

Faster thermal reduction using droplets 64 times smaller than conventional low pressure. Faster water expansion + more surface contact + high velocity = quicker cooling up

Required larger compartment opening (window, door) for transitional interior attack offering more oxygen to the fire through hydraulic ventilation. Visibility is also decreased making it harder to source the heat and flames.

Piercing offers quick access transitional attack cutting through many surfaces offering a 3D fog effect to source the heat, follow the flow path of fire and reduce heated gases quicker. Increased visibility.

Water usage is high due to nozzle flows operating at 30-150 GPM. This consumes stored water quickly increasing the need to stop and refill frequently.

UHP operates between 8-20 GPM resulting in less refills increasing operational efficiency.

POST-INCIDENT INVESTIGATIONS

Water damage is extreme reducing the likelihood of locating fire origin during post fire investigations.

Minimal water damage due to less water run-off. Flame is contained faster reducing smoke stains and charred fuels.

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APPARATUS SIZE AND COST

Optimal size rapid attack vehicle for booster tanks using low pressure pumps is 300 Gallon resulting in a 1-2 ton chassis. In addition, these trucks need a large hose bed to store lay flat hose often resulting in a longer truck body.

As low as 50 Gallon booster can be accomplished for smaller operations using UHP. Optimal rapid attack vehicle is a ¼ ton using 200 gallon booster tank having up to 8 times the range compared to conventional trucks. The booster reel reduces the length of body substantially.

Fast response vehicles run in the range of \$250,000-\$400,000. These vehicles are limited often to harder surfaces making it difficult to reach tight areas.

Rapid Intervention Vehicles run from \$100,000-\$200,000. The value of these smaller vehicles increases as they can enter into closer proximity to tight areas on softer surfaces achieving tasks quicker.

APPLICATIONS

Limited access due to the larger size of equipment required to run low pressure systems.

UHP requires minimal space for equipment allowing access to smaller areas quickly opening the possibilities to a vast number of applications such as marine fire attack, aviation apparatus, industrial confined settings, etc.

ENVIRONMENT

Low pressure/high contaminated water flows increase damage to vegetation and aquatic areas as GPM increases.

UHP low flow operations reduce the amount of water used by as much as 90% resulting in less damage to vegetation and aquatic areas.

The percentage of chemical used is considerably higher when fighting fire of any size resulting in contamination and possible reclamation activities post fire events.

UHP is so effective using water only having high velocity and 3 dimensional fog technology results in far less to no need for chemical applications.

FIREFIGHTER HEALTH

Increased heat and chemical exposure are inevitable during low pressure. The lag time to reduce heat exposes firefighters to the risk of skin surface burns. Heat and perspiration also open pores more that absorb more toxins and possible carcinogens into the body.

Less exposure to heat through exterior attack or quicker operations.
Less exposure to chemicals. The extinguishment requires less time and labour resulting in less firefighters exposed to the volatile environments.