

**QUALITY**  
**TRUST**  
**INTEGRITY**



**HMA FIRE**

HMAFIRE.COM | 844.855.FIRE(3473)

# SMALLER DROPS. MORE SURFACE AREA. BIGGER IMPACT.

Working with NASA and Orbital Technologies Corporation (our original parent company), HMA Fire researched and developed propulsion systems that blasted spacecraft beyond the stratosphere and formulated propellants to fuel them. Throughout that process, we developed an understanding of high pressure fluid flows through nozzles dealing with extremely high temperatures and rapid cooling. As we further developed this technology for the space industry, it became obvious that it had a more down-to-earth (but no less awe inspiring)

Using a piston plunger pump, our UHP system applies 1400 psi to the water, breaking the droplets down to 1/64th the size thereby creating more than 10 times the surface area. These droplets are light enough to be drawn into the fire's flow path, making the water far more effective and efficient. Independent testing has shown UHP is as effective at heat absorption as a conventional 1 3/4" handline flowing at 150 GPM.

## OPTIMIZED DROPLET SIZE

The Laws of Thermodynamics state that only the outer shell of a water droplet can be utilized to absorb heat. This correlates to only 10-20% of a conventional water droplet being used and the remaining water being wasted. Bump up the pressure to 1200 psi, and the water droplet becomes 1/64th the size of conventional water droplets. Optimized water droplets. Optimized heat absorption.

## REDUCED WATER USAGE

Fire usually affects only a small portion of the structure. Water and smoke are responsible for the greatest amount of damage. UHP fire suppression utilizes at least a fifth of the water, leaving significantly less damage.

## RAPID FIRE ATTACK

Fires today are burning 8x faster than they did 20 years ago making a rapid fire attack more important than ever before. Our mobile units allow you to get water to the fire faster, protecting both life and property in a more time efficient manner.

## INCREASED SURFACE AREA

Ultra high pressure fire suppression systems break down the water droplet into 64 smaller droplets. This creates 10x the surface area. More surface area. Bigger impact with the fire.

## FASTER TEMPERATURE DECREASE

Testing has shown that using ultra high pressure fire suppression and proper attack patterns, upper-layer room temperatures can be decreased by more than 1,000 °F in seconds, faster than any conventional system.

## IMPROVED SAFETY

Our 3/4" hydraulic hand lines make pushing yourself to the limit a thing of the past. Using our smaller handline will enable you to get to the fire quicker and apply the water quicker, improving the safety of the occupants and your fellow firefighters.

FOLLOW US ON





# WE DEVELOPED A FIRE SUPPRESSION SYSTEM FOR THE MODERN FIRE ENVIRONMENT

Through extensive testing from Underwriter's Laboratory (UL) Firefighter Research Safety Institute, it was found that fires no longer behave like they did 20 years ago. Fires are burning hotter and eight times faster with 233% more chemical signatures in the smoke due to increased use of synthetic materials. HMA Fire's UHP systems are designed for the modern fire environment with firefighters in mind. Our systems allow you to get to the fire quicker, apply water quicker and bring the fire under control. With only 4-5 minutes to make a rescue, every second counts.\*

\*Information regarding the modern fire environment was gathered from UL's Firefighter Research Safety Institute.



**FIRES ARE BURNING 8X FASTER**  
THAN 20 YEARS AGO. RESPOND QUICKER WITH OUR UHP SYSTEMS.



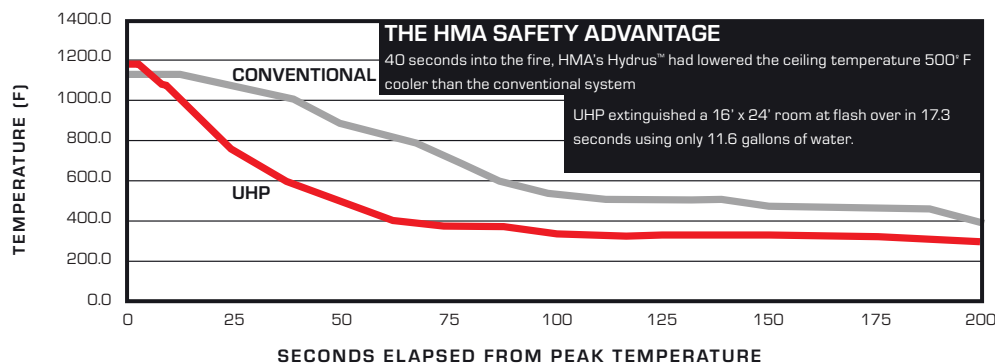
**FIRES ARE BURNING HOTTER**  
OUR UHP SYSTEM EXTINGUISHES THAT CHALLENGE.



## VALIDATED BY SCIENCE. PROVEN BY FIREFIGHTERS.

Ultra high pressure fire suppression has been proven effective through testing and validation. At several Air Force bases, in collaboration with the United States Air Force Fire Research Group (USAFFRG), HMA Fire UHP fire suppression systems were able to extinguish 380 gallons of JP-8 fuel spread over 3,500 square feet in fewer than 32 seconds using only 13 gallons of suppressant. Additional tests were conducted at Cannon, Eglin and Vandenberg Air Force bases. At the time of testing and to this day, the HMA Fire UHP fire suppression systems outperformed all other available equipment. See our flow rate sheet for more information.

### AVERAGE CEILING TEMPERATURE STRUCTURE TESTS



**Schedule a product demonstration today!**  
**Call 844.855.FIRE(3473)**

### STANDARD PRODUCT LINE



Hydrus™ 20 Skid Unit\*



Hydrus™ Droplet\*



Hydrus™ UTV EMS\*



Hydrus™ UTV\*

\* More information provided on our product specification sheet.



# HMA FIRE

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"I WAS AN ABSOLUTE SKEPTIC UNTIL I FOUGHT A HALLWAY AND ROOM FIRE USING ULTRA HIGH PRESSURE. I AM CONVINCED THIS IS A BETTER USE OF TAX PAYER RESOURCES AT A FRACTION OF THE COST OF SOME OF OUR LARGER APPARATUS. MY GOAL IS TO AVOID THAT TIME IT TAKES FOR AN ENGINE TO SIT ON THE FRONT PAD FILLING A CAB WITH SIX FIREFIGHTERS WHILE A HOME IS BURNING. A RAPID RESPONSE AND QUICK WATER DELIVERY EVEN IF ITS FROM A BACK YARD OF A HOME FIRE WILL KEEP EMERGENCIES SMALL AND MANAGEABLE."

*FIRE CHIEF RAY REYNOLDS*  
CITY OF NEVADA, IOWA

## HMA FIRE TODAY

From our headquarters in Fall River, Wisconsin, HMA Fire continues to be at the forefront of developing technologies and apparatus that make fighting fires safer and more efficient. Our current focus is on the introduction of suppression systems that integrate with every apparatus and every platform.

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