Proportioning & Refill Systems
Better Water
For years, fire departments have been utilizing chemicals to improve the effectiveness of water, thereby creating greater knockdown efficiency and increased firefighter safety. The additives in this water are sold in high concentration and require mixing to form a solution at percentages dictated by the application, or as recommended by the manufacturer. Hundreds of these concentrates are available today, but the majority fall into four basic categories: Class A Foam, Class B Foam, Emulsifiers and Gels. Here’s an overview of what each one does for you.

Class A
Fire departments only recently are fully embracing the use of Class A foam. Designed for use on any Class A fire or three-dimensional fuel, Class A foam solution is a far superior firefighting agent than plain water . . . up to 3 to 4 times more effective! A look at the fire triangle will help explain why (Fig. 1).

Water
By absorbing heat, water attacks one leg of the triangle. A natural characteristic of water called surface tension “holds” water together resulting in larger droplets. This limits heat absorption for a given volume of water as a small percentage (outer 10% of droplet) actually removes heat while the majority (inner 90% of droplet) runs off the fuel source and “out the front door” (Fig. 2).

Water + Foam
Class A concentrate is simply a surfactant, similar to dishwashing soap, that reduces surface tension. When added to water, the resulting foam solution consists of many smaller droplets with much more surface area, allowing faster heat absorption. An example would be like cooling a glass of water with a single ice cube rather than crushed ice of the same volume. The crushed ice would cool it faster.

In addition to creating smaller droplets, reducing the surface tension allows water to penetrate the fuel faster and deeper, dramatically raising the moisture content (Fig. 3). This isolates the fuel leg of the triangle, increasing the resistance to burn. Finally, foam solution separates the fuel from oxygen with a vapor-securing barrier that provides excellent protection.

The proportion of Class A foam concentrate to water is dictated by use. A common rate for initial attack is 0.5%; overhaul 0.2% and exposure protection 1.0%. Application of the final solution can be achieved through a number of different mediums, including your standard nozzles, or specifically-designed aspirating nozzles.

Water + Foam + Air (CAFS)
Compressed Air Foam Systems (CAFS) is another technology making Class A foam even better. By injecting air into the solution, “bublets”, consisting of air surrounded by foam solution, are formed, which delivers a more efficient fire stream. The bubble structure is also much stronger and the additional energy from the air increases stream reach.

Ninety-seven percent of today’s fires are Class A-type fueled by modern synthetic materials. With flashover faster than ever, can you afford not to have: faster knockdowns, improved firefighter safety, less water usage, reduced rekindles, quicker company returns, excellent exposure protection, faster clean-up, less property damage, evidence preservation and limited environmental damage?
Class B
Designed for use on Class B-type fires or two-dimensional fuels, it forms a film over a contained fuel to extinguish and prevent re-ignition. Unlike Class A foam, manufacturers of Class B recommend the percentage of foam concentrate to water mixture based on the fuel to which it is applied. The most common proportioning rates are 1%, 3% and 6%. Some brands offer dual-usage concentrate, which may be applied on hydrocarbon and polar solvent fuels. Typically these will indicate two proportioning rates such as 1%X3%, 3%X3% or 3%X6%. Since high volumes of water and concentrate are typically utilized; cost, storage and logistical requirements are important to evaluate. The newer 1% versions may cost more per gallon of concentrate, but less per gallon of solution. They also require very accurate proportioning systems.

Other Concentrates
Emulsifiers are another type of additive used to provide long-term vapor suppression and aid in hydrocarbon recovery. Gels have proven to be excellent insulators and provide long-term exposure protection. Mixture rates for these can vary depending on application.

FoamPro Solutions
Regardless of the additive, FoamPro offers the ultimate proportioning system for your new or retrofit apparatus. Our flow-based, microprocessor-controlled technology allows concentrate to be delivered on demand. By injecting into the discharge side, proportioning performance is not affected by external factors such as nozzle, length of hose lay, nozzle elevation or incoming pressure to the water pump. Full-fire pump discharge performance is delivered to the outlet as the flowmeter doesn’t restrict water flow. Best yet, no other system operates as easily and accurately as FoamPro. At the push of a button or flip of a switch, the system automatically reads water flow and injects concentrate to your desired setting from 0.1% to 10.0%. Unlike other proportioning technologies, FoamPro’s patented pump control means you are assured of unmatched accuracy across the full performance range, eliminating needless waste of concentrate and dollars.

Renowned for its reliability, FoamPro has proven itself since 1989 in the harshest conditions on fire grounds worldwide. We continually develop new and improved high-tech proportioning systems by incorporating ideas and suggestions from the field. To assure quality and compliance, only FoamPro requires system designs to be subjected to intense third-party testing. Stringent electronic emission control is verified according to MIL-STD 461E. Designs are then put to grueling SAE and U.S. military specifications by independent evaluators for heavy-use, off-road mobile apparatus.

Each system may also be checked for performance and accuracy without injecting concentrate into the water stream, saving dollars and addressing Class B environmental concerns.

FoamPro offers the broadest performance range in the industry, with models delivering from 0.01 GPM to 300 GPM of concentrate! Various models and associated options are designed to meet unique requirements as encountered in municipal, wildland, marine, industrial, ARFF and CAFS applications.
1600 Series
(Class A Foam Only)

Ideal for use on:
• Brush rigs/Skid units
• Fast attack vehicles
• Municipal apparatus
• Compressed Air Foam Systems

Leading off the FoamPro line, the 1600 series is available in two models, differing only in capacity. Each system includes a Hypro twin plunger pump and DC (12 or 24 volt) motor assembly. Also included is a panel-mount operator control unit with operator instructions, flowmeter (your choice of 1-1/2” with 1” bore, 1-1/2” or 2”), strainer, foam injection check valve, complete shielded cable set and RFI/EMI suppression kit.

The system features fully automatic foam proportioning, regardless of changes in flow or pressure, and delivers unmatched accuracy over the entire flow range. It proportions continuously, with no stopping to refill the foam tanks.

Other features include:
• Discharge side injection
• No in-line restrictions
• Installs easily in new or existing apparatus
• Provides the smoothest proportioning available at ultra-low flows
• For use with all Class A concentrates
• Delivers 0.1 to 1.7 gpm (.38 to 6.4 L/min) of concentrate

Control module features:
• Injection percentage from 0.1% to 1.0%
• On/Off control
• Foam percentage selector
• Low concentrate warning indicator
Specifications for 1600 Series

| Foam Pump: | Hypro Twin Plunger Pump |
| Foam Output: | **1.0 gpm @ 200 psi** - (3.8 L/min @ 13.8 BAR) **1601**  
**1.7 gpm @ 200 psi** - (6.4 L/min @ 13.8 BAR) **1600** |
| Pump Motor: | 1/3 hp (.25 Kw) 12 and 24 volt DC |
| Maximum Operating Pressure: | 400 psi (27.6 BAR) |
| Maximum Operating Temperature: | 160°F (71°C) |
| Maximum Amp Draw: | 19 amps (1601) @ 12 volt DC  
30 amps (1600) @ 12 volt DC  
11 amps (1601) @ 24 volt DC  
15 amps (1600) @ 24 volt DC |

System Capacity

<table>
<thead>
<tr>
<th>Foam Concentration</th>
<th>1601 Maximum Water Flow GPM (L/min)</th>
<th>1600 Maximum Water Flow GPM (L/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2%</td>
<td>500 (1,893)</td>
<td>850 (3,218)</td>
</tr>
<tr>
<td>0.5%</td>
<td>200 (757)</td>
<td>340 (1,287)</td>
</tr>
<tr>
<td>1.0%</td>
<td>100 (379)</td>
<td>170 (644)</td>
</tr>
</tbody>
</table>

1600 Series Attack Capability

<table>
<thead>
<tr>
<th>Class A Foam Concentration</th>
<th>1601 Maximum Coverage per Critical Application Rate (Iowa Formula)</th>
<th>1600 Maximum Coverage per Critical Application Rate (Iowa Formula)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2%</td>
<td>50,000 cu. ft.</td>
<td>85,000 cu. ft.</td>
</tr>
<tr>
<td>0.5%</td>
<td>20,000 cu. ft.</td>
<td>34,000 cu. ft.</td>
</tr>
<tr>
<td>1.0%</td>
<td>10,000 cu. ft.</td>
<td>17,000 cu. ft.</td>
</tr>
</tbody>
</table>

Performance for 1600 Series

Optional low-level sensor & check valve pictured.
Class A and/or B Foam

2000 Series
(Class A and/or B Foam)

Ideal for use on:
- Municipal pumpers
- Wildland vehicles
- Marine and shipboard systems
- Compressed Air Foam Systems

The 2000 series is available in two models, differing only in capacity. Each system includes a Hypro triplex plunger pump and DC (12 or 24 volt) motor assembly. Also included are a microprocessor control/display unit, instruction placard, strainer, foam injection check valve, complete shielded cable set and RFI/EMI suppression kit. The system provides fully automatic foam proportioning, regardless of changes in flow or pressure, and offers convenient, push-button operation, making it the easiest system to use. The optional advanced feature controller offers “auto-on” programming which arms the proportioner when the fire pump is engaged.

Other features include:
- Installs easily in new or existing apparatus
- No in-line restrictions
- Delivers unmatched accuracy over the widest range of flows
- Leading the industry in proven reliability
- Proportions continuously, with no stopping to refill
- Discharge side injection
- Provides the smoothest proportioning available at low flows
- Delivers 0.01 to 5.0 gpm (0.04 - 18.9 L/min)
- Achieves full pump capacity with all known Class A, Class B AFFF and most Class B AR-AFFF*

Control module features:
- Ultra-bright LED digital readout
- Injection percentage from 0.1% to 10.0%
- Displays separate totals for each foam concentrate
- Low concentrate warning
- Water flow rate
- Total water used
- Percent of foam concentrate
- Total concentrate used
- Dual foam capability and calibration

Options available:
- Concentrate Management Systems
- MultiFlo
- Remote Start/Stop for pump and roll applications
- Dual-Injection Selector
- Advanced Feature Controller

* See Note on Page 15
Specifications for 2000 Series

<table>
<thead>
<tr>
<th>Foam Pump:</th>
<th>Hypro Triplex Plunger Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foam Output:</td>
<td>2.6 gpm @ 150 psi - (9.84 L/min @ 10.3 BAR) 2001</td>
</tr>
<tr>
<td></td>
<td>5.0 gpm @ 150 psi - (18.9 L/min @ 10.3 BAR) 2002</td>
</tr>
<tr>
<td>Pump Motor:</td>
<td>1/2 hp (.40 Kw) 12 and 24 volt DC (2001)</td>
</tr>
<tr>
<td></td>
<td>3/4 hp (.56 Kw) 12 and 24 volt DC (2002)</td>
</tr>
<tr>
<td>Maximum Operating Pressure:</td>
<td>400 psi (27.6 BAR) (High pressure option available - up to 600 psi – 41.4 BAR)</td>
</tr>
<tr>
<td>Maximum Operating Temperature:</td>
<td>160°F (71°C)</td>
</tr>
<tr>
<td>Maximum Amp Draw:</td>
<td>40 amps (2001) @ 12 volt DC</td>
</tr>
<tr>
<td></td>
<td>56 amps (2002) @ 12 volt DC</td>
</tr>
<tr>
<td></td>
<td>21 amps (2001) @ 24 volt DC</td>
</tr>
<tr>
<td></td>
<td>30 amps (2002) @ 24 volt DC</td>
</tr>
</tbody>
</table>

System Capacity

<table>
<thead>
<tr>
<th>Foam Concentration</th>
<th>2001 Maximum Water Flow GPM (L/min)</th>
<th>2002 Maximum Water Flow GPM (L/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2%</td>
<td>1,300 (4,921)</td>
<td>2,500 (9,464)</td>
</tr>
<tr>
<td>0.5%</td>
<td>520 (1,968)</td>
<td>1,000 (3,785)</td>
</tr>
<tr>
<td>1.0%</td>
<td>260 (984)</td>
<td>500 (1,893)</td>
</tr>
<tr>
<td>3.0%</td>
<td>85 (322)</td>
<td>166 (628)</td>
</tr>
</tbody>
</table>

2000 Series Attack Capability

<table>
<thead>
<tr>
<th>Class A Foam Concentration</th>
<th>2001 Maximum Coverage per Critical Application Rate (Iowa Formula)</th>
<th>2002 Maximum Coverage per Critical Application Rate (Iowa Formula)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2%</td>
<td>130,000 cu. ft.</td>
<td>250,000 cu. ft.</td>
</tr>
<tr>
<td>0.5%</td>
<td>52,000 cu. ft.</td>
<td>100,000 cu. ft.</td>
</tr>
<tr>
<td>1.0%</td>
<td>26,000 cu. ft.</td>
<td>50,000 cu. ft.</td>
</tr>
</tbody>
</table>

Class B Foam Concentration

<table>
<thead>
<tr>
<th>Hydrocarbon @ 0.10 gpm/sq. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0%</td>
</tr>
<tr>
<td>3.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Polar Solvent @ 0.20 gpm/sq. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0%</td>
</tr>
</tbody>
</table>

Performance for 2000 Series

Optional low-level sensor, flowmeter & check valve pictured.
Extreme Class A and Class B firefighting power is at your fingertips with the FoamPro 3012 proportioner. This versatile system delivers unmatched, supercharged performance with concentrate flow from 0.1 to 12.0 GPM at 0–400 PSI, all from a single pump. High drafting capabilities allow off-board pickup for foam operations or tank refill, which is crucial for high flow situations or when changing concentrates. Unlike other pump designs that may pause in flow during operation, the pump’s triplex plungers are timed to discharge one after the other delivering smooth, continuous injection.

Hydraulic pump-drive technology produces immediate response from minimum flow to full capacity. The system includes the same industry-proven, ultra-bright LED digital display used on other FoamPro 2000 and 3000 series proportioners.

Other features include:
- Easy to use
- Industry’s highest capacity Class A/B system
- Variable displacement hydraulic pump
- Achieves full pump capacity with all known Class A and Class B concentrates

Control module features:
- Ultra-bright LED digital readout
- Injection percentage from 0.1% to 10.0%
- Displays separate totals for each foam concentrate
- Low concentrate warning
- Water flow rate
- Total water used
- Percent of foam concentrate
- Total concentrate used
- Dual foam capability and calibration

Options available:
- Concentrate Management Systems
- MultiFlo
- Remote Start/Stop
- Advanced Feature Controller
- Dual-Injection Selector
Specifications for Model 3012

<table>
<thead>
<tr>
<th>Foam Pump:</th>
<th>Hypro Triplex Plunger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foam Output GPM:</td>
<td>0.1-12.0</td>
</tr>
<tr>
<td>(L/min) @ 200 psi:</td>
<td>(0.38-45.4)</td>
</tr>
<tr>
<td>Maximum Operating Pressure PSI (BAR):</td>
<td>400 (28)</td>
</tr>
<tr>
<td>Maximum Operating Temperature °F (°C):</td>
<td>160 (71)</td>
</tr>
<tr>
<td>Pump Motor:</td>
<td>Hydraulic</td>
</tr>
<tr>
<td>Hydraulic Supply Oil Pressure PSI (BAR):</td>
<td>86.2</td>
</tr>
<tr>
<td>Hydraulic Supply Oil Flow GPM (L/min):</td>
<td>12 (45.4)</td>
</tr>
<tr>
<td>Maximum Amp Draw:</td>
<td>5</td>
</tr>
</tbody>
</table>

System Capacity

<table>
<thead>
<tr>
<th>Foam Concentration</th>
<th>Maximum Water Flow GPM (L/min)</th>
<th>Foam Concentration</th>
<th>Maximum Water Flow GPM (L/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2%</td>
<td>6,000 (22,771)</td>
<td>1.0%</td>
<td>1,200 (4,542)</td>
</tr>
<tr>
<td>0.3%</td>
<td>4,000 (15,140)</td>
<td>3.0%</td>
<td>400 (1,514)</td>
</tr>
<tr>
<td>0.5%</td>
<td>2,400 (9,084)</td>
<td>6.0%</td>
<td>200 (757)</td>
</tr>
</tbody>
</table>

Model 3012 Attack Capability

<table>
<thead>
<tr>
<th>Class A Foam Concentration</th>
<th>3012 Maximum Coverage per Critical Application Rate (Iowa Formula)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2%</td>
<td>600,000 cu. ft.</td>
</tr>
<tr>
<td>0.5%</td>
<td>240,000 cu. ft.</td>
</tr>
<tr>
<td>1.0%</td>
<td>120,000 cu. ft.</td>
</tr>
<tr>
<td>Class B Foam Concentration</td>
<td>Hydrocarbon @ 0.10 gpm/sq. ft.</td>
</tr>
<tr>
<td>1.0%</td>
<td>12,000 sq. ft.</td>
</tr>
<tr>
<td>3.0%</td>
<td>4,000 sq. ft.</td>
</tr>
<tr>
<td>6.0%</td>
<td>2,000 sq. ft.</td>
</tr>
<tr>
<td>Polar Solvent @ 0.20 gpm/sq. ft.</td>
<td>3.0%</td>
</tr>
<tr>
<td>6.0%</td>
<td>1,000 sq. ft.</td>
</tr>
</tbody>
</table>

Optional low-level sensor, flowmeter & check valve pictured.
3000 Series
(Class B Foam only)

Ideal for use on:
- Municipal pumpers
- Airport rescue and firefighting
- Aerial apparatus
- Class B foam application
- Compressed Air Foam Systems

The 3000 Series Single-Point Injection System is available in eight models with the difference being capacity. All are hydraulically-driven and incorporate an Edwards rotary gear pump. System components include a microprocessor control/display unit, instruction placard, hydraulic control block, pump and motor assembly, load-sensing hydraulic pump, filters, strainer, foam injection check valve, complete shielded cable set and RFI/EMI suppression kit.

Other features include:
- Provides fully automatic foam proportioning, regardless of changes in flow or pressure
- Discharge side injection: no foam goes through the fire pump
- Convenient, push-button operation makes it the easiest system to use
- No in-line restrictions
- Delivers unmatched accuracy over the widest range of flows
- Installs easily in new or existing apparatus
- Leads the industry with proven reliability
- Achieves full pump capacity with all known Class B concentrates

Control module features:
- Ultra-bright LED digital readout
- Injection percentage from 0.1% to 10.0%
- Displays separate totals for each foam concentrate
- Low concentrate warning
- Water flow rate
- Total water used
- Percent of foam concentrate
- Total concentrate used

Options available:
- MultiFlo
- Remote Start/Stop
- Advanced Feature Controller
Specifications for 3000 Series

<table>
<thead>
<tr>
<th>Foam Concentration</th>
<th>3020</th>
<th>3040</th>
<th>3060</th>
<th>3090</th>
<th>3120</th>
<th>3150</th>
<th>3240</th>
<th>3300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Foam Output GPM (LPM):</td>
<td>4.0 (15.1)</td>
<td>4.0 (15.1)</td>
<td>5.0 (18.9)</td>
<td>6.0 (22.7)</td>
<td>6.0 (22.7)</td>
<td>10.0 (37.9)</td>
<td>12.0 (45.4)</td>
<td>12.0 (45.4)</td>
</tr>
<tr>
<td>Maximum Foam Output GPM (LPM):</td>
<td>20 (75.7)</td>
<td>40 (151.4)</td>
<td>60 (227.1)</td>
<td>90 (340.7)</td>
<td>120 (454.3)</td>
<td>150 (567.8)</td>
<td>240 (908.5)</td>
<td>300 (1,135.6)</td>
</tr>
<tr>
<td>Maximum Hydraulic Oil Pressure PSI (BAR):</td>
<td>2,260 (155.9)</td>
<td>2,780 (191.7)</td>
<td>3,360 (231.7)</td>
<td>3,180 (219.3)</td>
<td>4,100 (282.7)</td>
<td>3,700 (255.1)</td>
<td>3,900 (268.9)</td>
<td>4,350 (299.9)</td>
</tr>
<tr>
<td>Maximum Hydraulic Oil Flow GPM (LPM):</td>
<td>12.5 (47.3)</td>
<td>12.5 (47.3)</td>
<td>17.4 (65.9)</td>
<td>25 (94.6)</td>
<td>31 (117.4)</td>
<td>36 (136.2)</td>
<td>61 (230.9)</td>
<td>51 (193.0)</td>
</tr>
</tbody>
</table>

Maximum Operating Pressure PSI (BAR): 250 (17.2)
Maximum Operating Temperature °F (°C): 160 (71)
Maximum Amp Draw: 5

For all “D” Models, refer to 2000 Series for performance of secondary foam pump.

Optional low-level sensor, flowmeter & check valve pictured.
AccuMax, the first high-volume, multi-port foam injection system for Class B applications, provides fully automatic foam proportioning, regardless of changes in flow or pressure.

A simple push of the master control "ON" button activates the system’s electronics and engages the hydraulically-driven concentrate pump. Each individual outlet allows the operator to choose between plain water or solution. If foam is required, proportioning rates can be adjusted with each outlet control module. The master microprocessor manages all foam requirements as it receives data from flowmeters and individual discharge controls. This information, based on water flow and injection percentage, directs the system to deliver precise amounts of foam concentrate. Full pump performance is achieved because the system has no venturi or ratio-type restrictions.

AccuMax incorporates components that have been proven for years in the most demanding environments. That’s why our high-flow systems are designed to perform at those crucial times when you need to protect your oil refinery, petrochemical, aircraft or other critical property. When your large, high-value assets are at risk, AccuMax is the system you want for their protection!
Features & Benefits:
- Up to ten individual discharge controls
- Each discharge offers choice of plain water, 1%, 3% or 6% solution
- Provides fully automatic foam proportioning, regardless of changes in flow or pressure
- Push-button operation makes it the easiest system to use
- On-demand, flow-based performance
- Unrestricted water flow allows full water performance delivered to discharge outlet
- Calibrate and test without mixing concentrate with water
- Achieves full pump capacity with all known Class B concentrates
- Easy calibration procedure saves hours
- Advanced diagnostics capability includes a system self-check
- No flushing required
- Low flow options
- Microprocessor monitoring to assure continuous, accurate injection of foam
- Digital display of water flow rate, total water and concentrate used, percent of concentrate being injected, low concentrate warning
- Edwards Manufacturing all-bronze rotary gear pumps incorporate: bearings, instead of bushings to extend pump life; solid stainless steel shafts; timing gears to reduce rotor wear; self-priming features to allow off-board pickup and handle any viscosity of foam; and dry run capability without pump damage.

Specifications for AccuMax

<table>
<thead>
<tr>
<th>Foam Concentration</th>
<th>3090</th>
<th>3120</th>
<th>3150</th>
<th>3240</th>
<th>3300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Foam Output GPM (LPM):</td>
<td>6.0 (22.7)</td>
<td>6.0 (22.7)</td>
<td>10.0 (37.9)</td>
<td>12.0 (45.4)</td>
<td>12.0 (45.4)</td>
</tr>
<tr>
<td>Maximum Foam Output GPM (LPM):</td>
<td>90 (340.7)</td>
<td>120 (454.3)</td>
<td>150 (567.8)</td>
<td>240 (908.5)</td>
<td>300 (1,135.6)</td>
</tr>
<tr>
<td>Maximum Operating Pressure PSI (BAR):</td>
<td>250 (17.2)</td>
<td>250 (17.2)</td>
<td>250 (17.2)</td>
<td>250 (17.2)</td>
<td>250 (17.2)</td>
</tr>
<tr>
<td>Maximum Operating Temperature °F (°C):</td>
<td>160 (71)</td>
<td>160 (71)</td>
<td>160 (71)</td>
<td>160 (71)</td>
<td>160 (71)</td>
</tr>
<tr>
<td>Maximum Hydraulic Oil Pressure PSI (BAR):</td>
<td>3,180 (219.3)</td>
<td>4,100 (282.7)</td>
<td>3,700 (255.1)</td>
<td>3,900 (268.9)</td>
<td>4,350 (299.9)</td>
</tr>
<tr>
<td>Maximum Hydraulic Oil Flow GPM (LPM):</td>
<td>25 (94.6)</td>
<td>31 (117.4)</td>
<td>36 (136.2)</td>
<td>61 (230.9)</td>
<td>51 (193.0)</td>
</tr>
<tr>
<td>Maximum Amp Draw:</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

System Capacity

<table>
<thead>
<tr>
<th>Foam Concentration</th>
<th>3090</th>
<th>3120</th>
<th>3150</th>
<th>3240</th>
<th>3300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Foam Output GPM (LPM):</td>
<td>6.0 (22.7)</td>
<td>10.0 (37.9)</td>
<td>12.0 (45.4)</td>
<td>24.0 (90.8)</td>
<td>30.0 (113.6)</td>
</tr>
<tr>
<td>Maximum Foam Output GPM (LPM):</td>
<td>90 (340.7)</td>
<td>120 (454.3)</td>
<td>150 (567.8)</td>
<td>240 (908.5)</td>
<td>300 (1,135.6)</td>
</tr>
<tr>
<td>Maximum Operating Pressure PSI (BAR):</td>
<td>250 (17.2)</td>
<td>250 (17.2)</td>
<td>250 (17.2)</td>
<td>250 (17.2)</td>
<td>250 (17.2)</td>
</tr>
<tr>
<td>Maximum Operating Temperature °F (°C):</td>
<td>160 (71)</td>
<td>160 (71)</td>
<td>160 (71)</td>
<td>160 (71)</td>
<td>160 (71)</td>
</tr>
<tr>
<td>Maximum Hydraulic Oil Pressure PSI (BAR):</td>
<td>3,180 (219.3)</td>
<td>4,100 (282.7)</td>
<td>3,700 (255.1)</td>
<td>3,900 (268.9)</td>
<td>4,350 (299.9)</td>
</tr>
<tr>
<td>Maximum Hydraulic Oil Flow GPM (LPM):</td>
<td>25 (94.6)</td>
<td>31 (117.4)</td>
<td>36 (136.2)</td>
<td>61 (230.9)</td>
<td>51 (193.0)</td>
</tr>
<tr>
<td>Maximum Amp Draw:</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Performance for AccuMax Series
The expansion of ethanol fuel-producing facilities and transportation of such products has the concern of firefighting professionals worldwide. Extinguishment tests reveal only alcohol-resistant type concentrates proportioned at 3% or 6% are effective! By treating high volume water flows supplied by one or more pump engines, the AccuMax RDFS transforms standard municipal department apparatus into heavy-duty industrial firefighting weapons.

**Extreme Accuracy**
- Eliminates lean mixture—increases safety
- Eliminates rich mixtures—costly concentrate not wasted
- Reduces logistical requirements

**Full Capacity With One Foam Suction Hose**
- Fewer lines to manage
- Requires less space, increases traffic lanes
- Minimizes setup and tear-down time

**High Foam Supply Capability**
- Directly from tanker or totes
- Flexible foam supply locations

**Precise Incremental Solution Adjustment**
- Optimizes fire stream
- Increases performance

**Fully Automatic, On-Demand Proportioning**
- Increases safety
- Position at safer distance

**Applications**
- High-risk bulk fuel storage
- Refineries
- Petrochemical plants
- Ethanol processing, transportation and storage*
- Airfield Rescue and Firefighting and bulk storage
- Sea Ports
- Industrial facilities

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*The expansion of ethanol fuel-producing facilities and transportation of such products has the concern of firefighting professionals worldwide. Extinguishment tests reveal only alcohol-resistant type concentrates proportioned at 3% or 6% are effective! By treating high volume water flows supplied by one or more pump engines, the AccuMax RDFS transforms standard municipal department apparatus into heavy-duty industrial firefighting weapons.
Specifying a FoamPro System

Your maximum and minimum flows and pressures for all discharges supplied with foam.

Example: Maximum: One deck gun: 500 gpm (1893 L/min) at 150 psi (10.3 BAR)
Minimum: One 1-1/2" line flowing 35 gpm (132.5 L/min) (mop-up), = 35 gpm (132.5 L/min) at 100 psi (6.9 BAR)

Determine the maximum and minimum foam concentrate levels that must be provided.

Example: Maximum: 1.0% AFFF
Minimum: 0.5% Class A

Determine the size of the proportioner needed.

Example: Maximum Concentrate Requirement =

\[
\text{maximum flow} \times \text{maximum concentration}
\]

500 gpm (1893 L/min) x 1.0% = 5.0 gpm (18.9 L/min)

Example: Minimum Concentrate Requirement =

\[
\text{minimum flow} \times \text{minimum concentration}
\]

35 gpm (132.5 L/min) x 0.5% = 0.18 gpm (.68 L/min)

Therefore, the FoamPro system must be capable of delivering 0.18 to 5.0 gpm (.68 - 18.9 L/min) of concentrate. According to the performance curve, the Model 2002 will meet these requirements.

Determine if the FoamPro flowmeter tee for the plumbing size being used will cover the range of flows in the first step.

Example: A 3" diameter pipe will be used to supply these discharges. The 3" flowmeter will accurately read between 30 gpm (113.6 L/min) and 1,150 gpm (4,353 L/min). The required range is 35 gpm to 500 gpm (132.5 - 1,893 L/min). Therefore, one flowmeter in a 3" tee will handle the requirements. If the flows should exceed the capacity of the flowmeter tee, then the installation would require two or more appropriate size flowmeters and a MultiFlo.

### FLOWMETER TEE

<table>
<thead>
<tr>
<th>Assy. Part Number</th>
<th>Size</th>
<th>Maximum Accuracy Flow Range</th>
<th>Maximum Operating Flow Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>2660-0030*</td>
<td>1-1/2&quot;</td>
<td>5-110 gpm (19-416 L/min)</td>
<td>3-145 gpm (11.4-549 L/min)</td>
</tr>
<tr>
<td>2660-0031</td>
<td>1-1/2&quot;</td>
<td>10-320 gpm (37.9-1,211 L/min)</td>
<td>3-380 gpm (11.4-1,438 L/min)</td>
</tr>
<tr>
<td>2660-0032</td>
<td>2&quot;</td>
<td>15-520 gpm (56.8-1,968 L/min)</td>
<td>5-625 gpm (19-2,366 L/min)</td>
</tr>
<tr>
<td>2660-0033</td>
<td>2-1/2&quot;</td>
<td>20-750 gpm (75.7-2,839 L/min)</td>
<td>8-900 gpm (30.3-3,407 L/min)</td>
</tr>
<tr>
<td>2660-0034</td>
<td>3&quot;</td>
<td>30-1150 gpm (113.6-4,353 L/min)</td>
<td>12-1380 gpm (45.4-5,224 L/min)</td>
</tr>
<tr>
<td>2660-0035</td>
<td>4&quot;</td>
<td>55-1980 gpm (208.2-7,495 L/min)</td>
<td>20-2380 gpm (75.7-9,009 L/min)</td>
</tr>
</tbody>
</table>

* 1" I.D. Bore.

**NOTE:** FoamPro systems will pump all known Class A and Class B Aqueous Film Forming Foam (AFFF) to capacity. Many brands of Alcohol Resistant-Aqueous Film Forming Foam (AR-AFFF) exhibit higher viscosity characteristics due to chemical composition and polymers. As viscosity increases, diminished flow may affect pump performance. Because of numerous variables including pump design, foam cell configuration, inlet piping/components and system layout; please contact FoamPro for application-specific recommendations when foam viscosities of 2000 cps or higher are used.
FoamPro, the industry leader in foam proportioning systems, offers two refill systems that make the perfect accessory to complete foam operations on your apparatus. The Power-Fill is an electronically-controlled, pre-plumbed, self-priming, concentrate refill system that will save you time and increase the safety of your firefighters. With the simple push of a button or switch, our refill systems quickly reload on-board foam cells without messy spillage. Most importantly, Power-Fill safely eliminates awkward and strenuous lifting of concentrate containers and allows easier transfer from totes.

These systems will fill even the largest tanks quickly and efficiently, depending on viscosity. The system’s non-corrosive pump, with high drafting capabilities, is compatible with all concentrates and viscosities currently used. To fit your specific application, two systems are available: truck-mounted 12-volt and portable 110-volt for station use. Best of all, either system is easily retrofitted to any existing vehicle!

**Truck-Mounted System**

The system operates by attaching a suction hose to a pre-plumbed panel connection using a cam-lock fitting. The pick-up wand is then placed in the concentrate container. The operator simply pushes a button to engage the 12-volt pumping system, which automatically fills and stops when the tank is full. An indicator light notifies the operator that the operation is complete. Even though the system recognizes a full cell, the manual override feature will engage the concentrate pump momentarily, allowing the operator to fully empty the container. System is equipped with fresh water-flush capabilities.

**System includes:**
- High-capacity concentrate pump
- Continuous-duty 12-volt motor
- Electronic microprocessor control
- Flush valve
- Indicator lights
- Panel plates
- Stainless fittings and cap
- 1” concentrate pick-up wand
- Check valves
**Portable System**

The portable system is a remote operation that utilizes pre-plumbed, on-board piping. Connection of the discharge hose to the foam inlet is made with a cam-lock fitting. The pick-up wand on the suction side of the pump is placed in the concentrate container. To initiate refill, operator depresses momentary switch to engage the 110-volt pump. The tank is automatically filled and provides visual indication when complete. Carrying handle allows ease of transportation within the station or in the field.

**System includes:**
- High-capacity concentrate pump
- Continuous-duty 110-volt motor with carrying handle
- GFI electrical cord with momentary switch
- Panel plate
- Indicator light
- Stainless fittings and cap
- 1” concentrate pick-up wand
- Check valve

**Combined Features and Benefits:**
- Increased firefighter safety
- Saves time for team members
- Indicators provide system status
- Conveniently-mounted connections and controls
- Easily handles all concentrates
- Automatic system incorporates flush mode
- Compatible with all size totes and containers
- System reliability from a proven industry leader

Note: To avoid contamination, apparatus with multiple concentrate cells require a pumping system for each tank.
SELECT ACCESSORIES AND OPTIONS

A. Dual-Injection Selector (Requires MultiFlo)
Allows choice of two different concentrate injection points. Ideal for high/low pressure fire pumps or high-flow (aerial/deluge), low-flow applications.

B. Electronic Concentrate Management System
Electronically-operated valve allows choice between two different concentrates. Flush mode prevents mixing, and interface with control head provides calibration and storage of performance results of each concentrate.

C. Manual Concentrate Management System
Manually-operated valve allows choice between two different concentrates. Flush mode prevents mixing, and interface with control head provides calibration and storage of performance results of each concentrate.

D. Remote Start/Stop
Separately-mounted switch interfaces with digital control head allowing remote activation of the proportioner. Designed for in-cab pump & roll operations.

E. MultiFlo Interface
Provides calibration and flow totals for up to four different discharges.
F. Advanced Feature Controller
Provides programmable choice of activation of proportioning manually by push of ON button or automatically ON with engagement of fire pump. Ideal for CAFS and SOP’s directing foam use.

G. System Schematic Placards
(Single or Dual-Tank)
Attractive placard designed for the operator’s panel, depicting single or dual-tank systems.

H. System Rating Placards
Attractive placard designed for the operator’s panel, listing system ratings.

I. Flowmeter and Tee
(Required 2000, 3000 & AccuMax™ Series)

J. Main Waterway Check Valve
Prevents backflow to the fire pump. Electroless nickel plated with S.S. components or all stainless steel construction, rated for 450 psi with NPT thread size of 1-1/2", 2", 2-1/2", 3" and 4". Includes tapped injection and drain ports.

K. Low-Level Tank Sensor (Required)
Provides signal to display, notifying operator of low concentrate condition in foam cell. Available in top/bottom or side mount.

L. Manifold Assembly
All stainless steel manifold incorporating flowmeter, check valve, injection and drain ports. Victaulic connections in 1-1/2", 2", 2-1/2", 3" and 4" reduce installation time.

M. Concentrate Cell
Polypropylene concentrate tanks with one-way vented cap available in 8, 12 or 20 gallon capacities.

N. AccuMax Individual Line Controller
For each controllable discharge, maximum of eight. Sized 3/4", 1-1/4" and 1-1/2" to flow from 6 to 150 GPM of concentrate. Includes foam controls, driver, cable and LED digital display head.

O. Solid State Contactor
Electronically-controlled DC power switch superior to mechanical solenoids. Longer life and remote start/stop capability.
What does a FoamPro Certified Dealer mean to you?

- They understand your needs and applications.
- Knowledgeably answer your questions and assist you in selecting a proportioning system.
- In-service education on the proper operation and maintenance of the system.
- Follow-up, post delivery support for guaranteed satisfaction and operation.
- Trained technicians to ensure a proper installation in compliance with NFPA standards, including full system calibration.

Who is a FoamPro Certified Dealer?

Look for the company displaying the decal like the one above or call 1-800-533-9511 for the nearest Certified FoamPro Dealer.

Download complete preferred specifications at:

www.foampro.com

Active Member and Supporter