FOAMPRO®

*Precision foam every time*

# *High-Flow Industrial Solutions*





www.foampro.com

FOAMPRO®
*Precision foam every time*

## CHOOSE THE INDUSTRY LEADER!

Leading the industry with proven reliability and accuracy, FoamPro systems provide fully-automatic foam proportioning, regardless of changes in flow or pressure. At the push of a button, our patented flow-based, microprocessor-driven technology reads water flow and automatically injects to your desired setting. With concentrate capacities to 300 gpm and choices of single- or multi-point injection, FoamPro has the ultimate foam management system for your industrial application. When large, high-value assets are at risk, FoamPro is the system you want for their protection!

## SPECIFY TOP PERFORMANCE

### Unsurpassed Features

No other proportioner delivers foam as easily and accurately as FoamPro. System designs incorporate the latest technological advancements to meet the rigorous demands of high-flow industrial firefighting. FoamPro offers the greatest choice of models, capacities, options and accessories to meet your specific application and requirements.

### Superior Performance – Increased Effectiveness

Unlike other proportioning technologies (jet ratio controller, balanced pressure, around-the-pump and nozzle eductors), true discharge side injection means performance is not affected by external factors such as nozzle, length of hose lay, nozzle elevation or incoming pressure to the water pump. More water and pressure is available at the nozzle as flowmeters do not restrict water flow.

### Unmatched Accuracy – Cost Savings

FoamPro systems are the most accurate proportioners on the market, within 5% or less! Venturi-based systems can be difficult to maintain accurate proportioning rates, especially throughout the entire flow range. To compensate, they proportion on the rich side to meet performance requirements. In contrast, FoamPro incorporates advanced microprocessor control technology that provides extremely accurate water flow measurement and precise foam injection. This pinpoint accuracy is maintained from minimum to maximum discharge, greatly reducing concentrate usage cost and logistical operations to resupply.

Is accuracy critical? Let's assume you are treating just 5000 gpm at 3% with older technology 30% inaccurate. Concentrate requirements would be 150 gpm plus 45 gpm inaccuracy! At $20 per gallon, additional cost is $900 per minute plus increased logistics! Multiply by incident time to determine your true cost.

## Ease of Use – Less Training

At the push of a button, FoamPro is the easiest system to use. The advanced microprocessor manages the complete system and instructs the concentrate pump to supply exact amounts of foam - automatically and on demand. In the heat of a battle, it is one less thing for the operator to monitor.


## Operator Updates

Ultra-bright digital displays provide the operator with real-time solution flow, injection percentage, total water and concentrate used during operation.

## System Testing

The FoamPro system can be tested and calibrated without consuming foam concentrate or putting the environment at risk. Using the calibrate/inject valve, the system is run with the concentrate measured and directed either back to the cell or to a separate holding tank.

## System Reliability

Only FoamPro designs have undergone and passed severe third-party testing to SAE and US Military standards for heavy-use, off-road mobile apparatus. In addition, thousands of units installed in the most extreme environments worldwide, prove themselves daily. All FoamPro systems meet or exceed National Fire Protection Association (NFPA) standards.

## Built for the Present, Designed for the Future

Today's 3% concentrates will soon be replaced by 1% concentrates. The advantages include: lower cost per gallon of solution; reduced freight, storage and handling; and the ability to treat more water with a given-size foam tank. With FoamPro, your proportioner will precisely inject at any proportioning rate, down to 0.1%, so you are prepared for any existing or future concentrate. Changes in concentrate type don't require expensive alterations to hardware or components. Simply recalibrate the system to the new concentrate and you're back in service.


# 3000 Series

## ON-DEMAND, SINGLE-POINT INJECTION SYSTEMS

Leading the industry with proven reliability and accuracy, FoamPro 3000 series single-point injection systems provide fully-automatic foam proportioning. With the simple push of the control module button, these hydraulically-powered, high-flow systems deliver precision foam on demand. Microprocessor drive technology continuously monitors water flow and automatically adjusts to flow and pressure changes. No in-line restrictions means greater firefighting power as more solution flow and pressure is delivered to the nozzle. Easily installed on new or existing apparatus, and with concentrate capacities ranging from 20-300 gpm and injection pressures to 250 psi, the 3000 series is ideal for applications requiring the same solution percentage at all foam capable discharges.

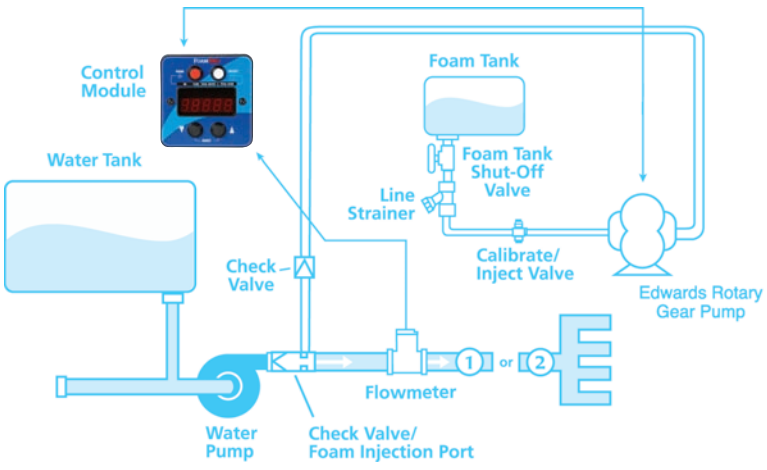
### Features & Benefits:

- Unmatched accuracy
- Fully-automatic proportioning, regardless of changes in flow or pressure
- Easy push-button operation requires less training
- On-demand, flow-based performance
- Unlimited operation placement options
- Easily manned by one firefighter from tanker supply, three from tote operation
- Test and calibrate without mixing concentrate with water
- Microprocessor monitoring to assure continuous, accurate injection of foam
- Ultra-bright digital display of:
  - -Water flow rate
  - -Injection percentage
  - -Total water used
  - -Total concentrate used
  - -Low concentrate warning
- Preset and adjustable injection percentage from 0.1 to 10.0%
- Off-board pickup for simplified resupply
- Incorporates all-bronze rugged Edwards rotary gear pumps offering:
  - -Bearings, not bushings, to extend pump life
  - -Timing gears means less rotor wear and maintained performance
  - -Dry run capability will not damage pump
  - -Solid stainless steel shafts, less corrosive
  - -Self-priming features
  - -Compatible with all concentrates and viscosities

### Options

MultiFlo – provides calibration and flow totals for up to four discharges
Advanced Feature Controller – offers “auto-on” programming
Remote Start/Stop
High Pressure Concentrate Pumps

## System Diagram



## Specifications for 3000 Series

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

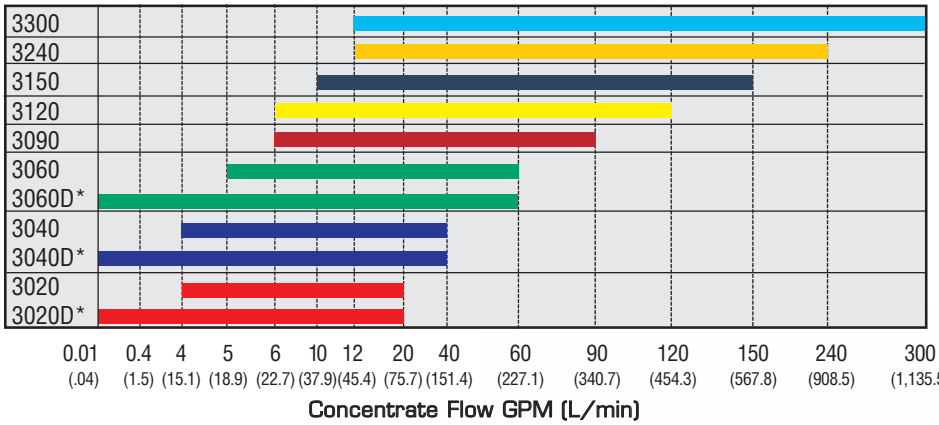
Maximum Operating Pressure PSI (BAR): 250 (17.2)
Maximum Operating Temperature °F (°C): 160 (71)
Maximum Amp Draw: 5

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

## System Capacity

| Foam Concentration | Maximum Water Flow GPM (LPM) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 3020 | 3040 | 3060 | 3090 | 3120 | 3150 | 3240 | 3300 |
| 1.0% | 2,000 (7,571) | 4,000 (15,140) | 6,000 (22,700) | 9,000 (34,069) | 12,000 (45,425) | 15,000 (56,781) | 24,000 (90,850) | 30,000 (113,563) |
| 3.0% | 666 (2,521) | 1,333 (5,046) | 2,000 (7,571) | 3,000 (11,356) | 4,000 (15,142) | 5,000 (18,927) | 8,000 (30,283) | 10,000 (37,854) |
| 6.0% | 333 (1,261) | 666 (2,521) | 1,000 (3,785) | 1,500 (5,678) | 2,000 (7,571) | 2,500 (9,464) | 4,000 (15,142) | 5,000 (18,927) |

## Performance for 3000 Series




*"D" models include an additional driven pump for extended low-end performance.

Optional flowmeter & check valve pictured.

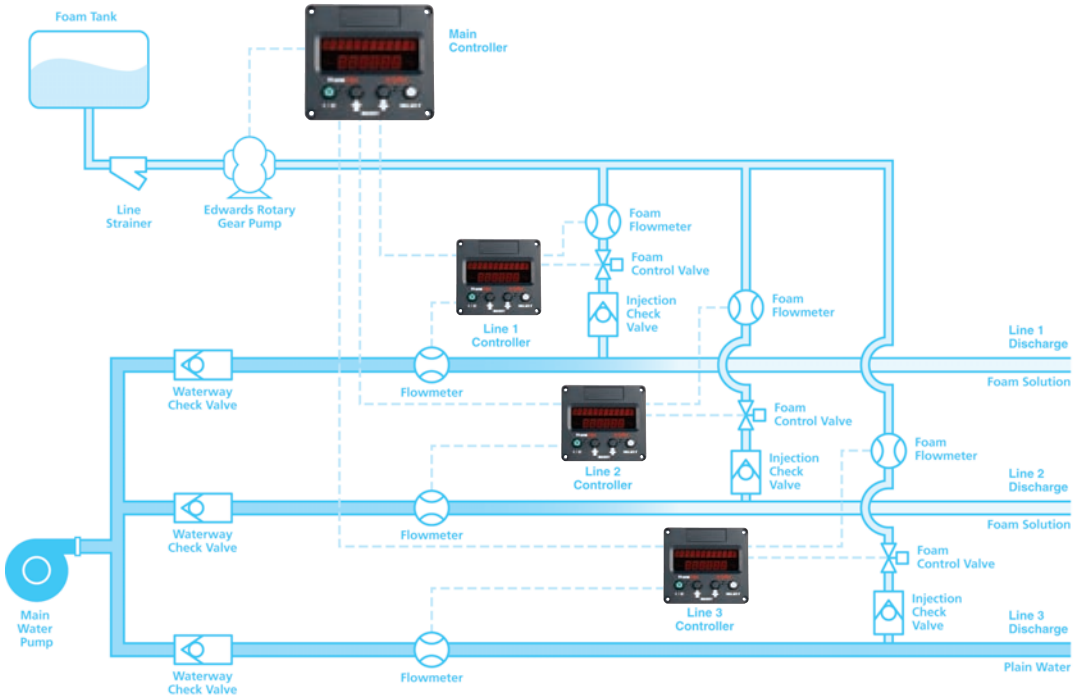
*"Only FoamPro designs have undergone and passed severe third-party testing to SAE and US Military standards for heavy-use, off-road mobile apparatus."*

# AccuMax™

AccuMax, the industry's first high-volume, multi-port foam injection system, sets new standards for industrial foam management systems. By incorporating the most advanced microprocessor-driven control and measurement technologies, the AccuMax series of proportioners are the most accurate and easiest to operate. 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. Easily installed on new or existing apparatus, and with concentrate capacities ranging from 60-300 gpm and injection pressures to 250 psi, the AccuMax series is ideal for applications requiring choice of plain water or foam percentage at each foam capable discharge.

*"The industry's first high-volume, multi-port foam injection system, sets new standards for industrial foam management systems."*

## System Diagram



## Features & Benefits:

- Up to ten individual discharge controls
- Each discharge offers choice of plain water
- Three preset default percentages
- Injection percentage easily adjusted during operation
- Unmatched accuracy
- Fully-automatic proportioning, regardless of changes in flow or pressure
- Unlimited operation placement options
- Simple push-button operation requires less training
- On-demand, flow-based performance
- Easily manned by one firefighter from tanker supply, three from tote operation
- Test and calibrate without mixing concentrate with water
- Easy calibration procedure saves hours
- Advanced diagnostics capability including a system self-check
- Microprocessor monitoring to assure continuous, accurate injection of foam
- Auto-on programming
- Master and individual outlet Ultra-bright digital display of:
  -Water flow rate
  -Injection percentage
  -Total water used
  -Total concentrate used
  -Low concentrate warning
  -Master pump pressure
- Off-board pickup for simplified resupply
- Incorporates all-bronze rugged Edwards rotary gear pumps offering:
  -Bearings, not bushings, to extend pump life
  -Timing gears means less rotor wear and maintained performance
  -Dry run capability will not damage pump
  -Solid stainless steel shafts, less corrosive
  -Self-priming features
  -Compatible with all concentrates and viscosities

## Options

Individual Control Pressure Readings
Low-Flow Controls for Small Handlines
High Pressure Concentrate Pumps

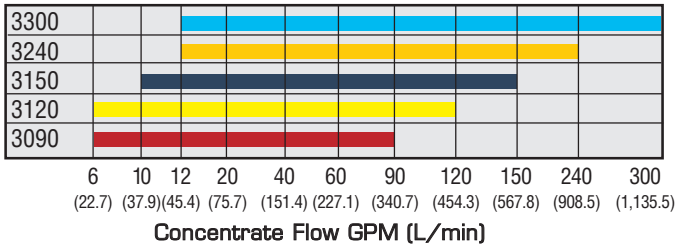
## Specifications for AccuMax

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

## System Capacity

| Foam Concentration | Maximum Water Flow GPM (LPM) | | | | |
|---|---|---|---|---|---|
| | 3090 | 3120 | 3150 | 3240 | 3300 |
| 1.0% | 9,000 (34,069) | 12,000 (45,425) | 15,000 (56,781) | 24,000 (90,850) | 30,000 (113,563) |
| 3.0% | 3,000 (11,356) | 4,000 (15,142) | 5,000 (18,927) | 8,000 (30,283) | 10,000 (37,854) |
| 6.0% | 1,500 (5,678) | 2,000 (7,571) | 2,500 (9,464) | 4,000 (15,142) | 5,000 (18,927) |

## Performance for AccuMax Series




AccuMax™
RAPID DEPLOYMENT FOAM SYSTEMS

# Are You Prepared To Handle An Ethanol Disaster?

## ETHANOL PRODUCTION AND TRANSPORTATION

U.S. ethanol production is in excess of six billion gallons per year and growing; ethanol plants are located in more than 20 states. Being corrosive, ethanol cannot be piped to the blending terminals. It must be transported by tank truck, rail car or barge. The chances are high that your community is responsible for protecting a major highway or railroad on which ethanol is transported or a refinery where ethanol is produced. Now, imagine that a disaster strikes. You need to be prepared to deal with it.

## SIZE UP THE HAZARD

From a Google search, you will see that these incidents can easily involve hundreds of thousands of gallons of fuel. If, like most departments, you haven't dealt with a Class B incident in a while, we are talking big water! How big? A good place to start is to dust off your copy of National Fire Protection Association (NFPA) 11, Standard for Low-, Medium- and High-Expansion Foam.

The standard spells out the minimum flow rate per square foot of surface area, along with the minimum duration of foam solution flow for various situations. For a given type of incident, you can determine the water flow rate, the total amount of water and how much concentrate you will need.

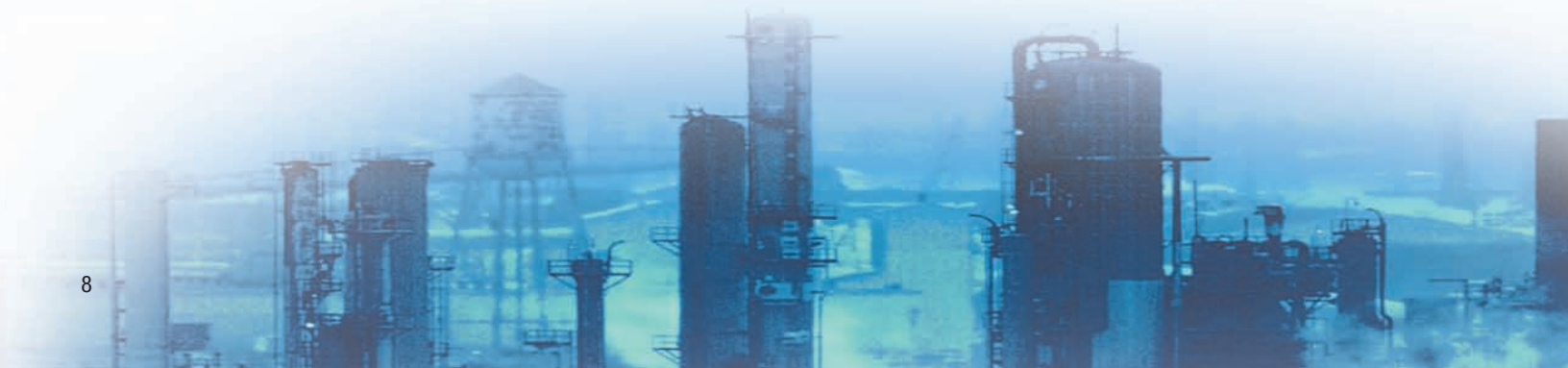
## DETERMINE YOUR FLOW REQUIREMENTS

For alcohol-spill fires in diked areas, the minimum application rate is 0.16 gallons per minute (gpm) per square foot for a minimum duration of 30 minutes. Consider a 200-foot x 200-foot spill: doing the math, we need to apply 6,400 gpm of foam solution. Doing that for 30 minutes will require 192,000 gallons of water.

NFPA 11 standards are minimum recommendations. Increase these flow rates and durations by at least 50 percent, preferably more.

You are probably thinking that with the help of your mutual-aid departments you could provide these flows. The problem is how do you treat that amount of water with foam concentrate?

*"If your department is charged with protecting major highways, rail lines or ports, you face the potential for a major ethanol incident. When that happens, you need BIG WATER and BIG FOAM – FAST!"*



## SIZING THE FOAM SYSTEM

Class A and AFFF foams will not work on ethanol fires. What is needed is an AR-AFFF, the AR standing for "Alcohol-Resistant." Since ARFF trucks carry only AFFF, they are not a viable option in these circumstances.

Most AR concentrates must be proportioned at 3.0 percent or higher. So, with the higher proportioning rates and larger water flows, we are not talking just big water, but also big foam!

Take the minimum application rate of 6,400 gpm in our example and assume we use a 3.0 percent AR-AFFF concentrate, you will need to proportion 192 gpm of concentrate. Now, build in the 50-plus percent safety margin, and the proportioning requirements go well out of reach. Here is where most departments' capabilities to handle a major ethanol disaster begin to come up short.

## WHAT ARE THE OPTIONS?

Departments can consider adding Class B capability on the majority of their apparatus or having specialty equipment specific for Class B incidents. Most departments will choose the latter. These options include jet ratio controllers, foam trailers and industrial-type apparatus.

In choosing what is best for your department, you must consider several factors. First, you will be flowing a lot of water and want to simplify/optimize hose and pumping requirements. Second, you will be moving a lot of foam concentrate, therefore, you will want a system that efficiently utilizes your resources. Third, you need to consider your department's budget constraints by balancing the initial investment with the ongoing operational costs and logistics.

One of the biggest factors impacting your costs will be the accuracy of the proportioning system. Consider two systems: one runs up to 5 percent rich, whereas another typically runs 30 percent rich. In our example, where 5,760 gallons of concentrate would be required, the actual consumption would be 6,048 and 7,488 gallons, respectively. At $30 per gallon, the extra 1,440 gallons will cost you $43,200 due to inaccuracy!

Big water flow

Big foam requirements


*"Typical municipal apparatus are not equipped with foam proportioning systems large enough to handle these types of incidents. Mobile and self-contained, the AccuMax Rapid Foam Deployment System transforms standard municipal apparatus into industrial strength weapons. Prepare your department today with the ultimate ethanol attack apparatus."*

# AccuMax™

## RAPID DEPLOYMENT FOAM SYSTEMS

The FoamPro® AccuMax™ Rapid Deployment Foam System (RDFS) is the ultimate mobile high-flow foam proportioning unit. Integrated and self-contained, this state-of-the-art proportioning package delivers industrial strength firefighting power with unmatched performance and flexibility. Older manually-operated proportioners, such as jet ratio controllers, require: extensive setup with multiple suction hoses, more foam concentrate and logistical management, flow/pressure calculations by operator and placement in specific locations. With time your worst enemy and safety top priority, the AccuMax RDFS revolutionizes big foam attacks with unparalleled operational efficiency. This high-tech and simple-to-operate system delivers many safe, time-saving benefits including:

### 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

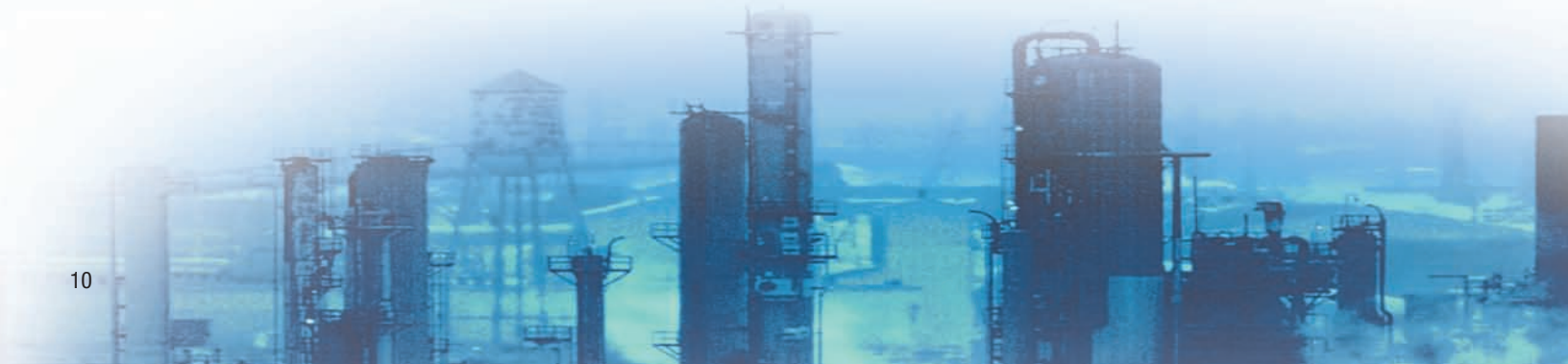
### High Foam Supply Capability
- Directly from tanker or totes
- Flexible foam supply locations

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

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

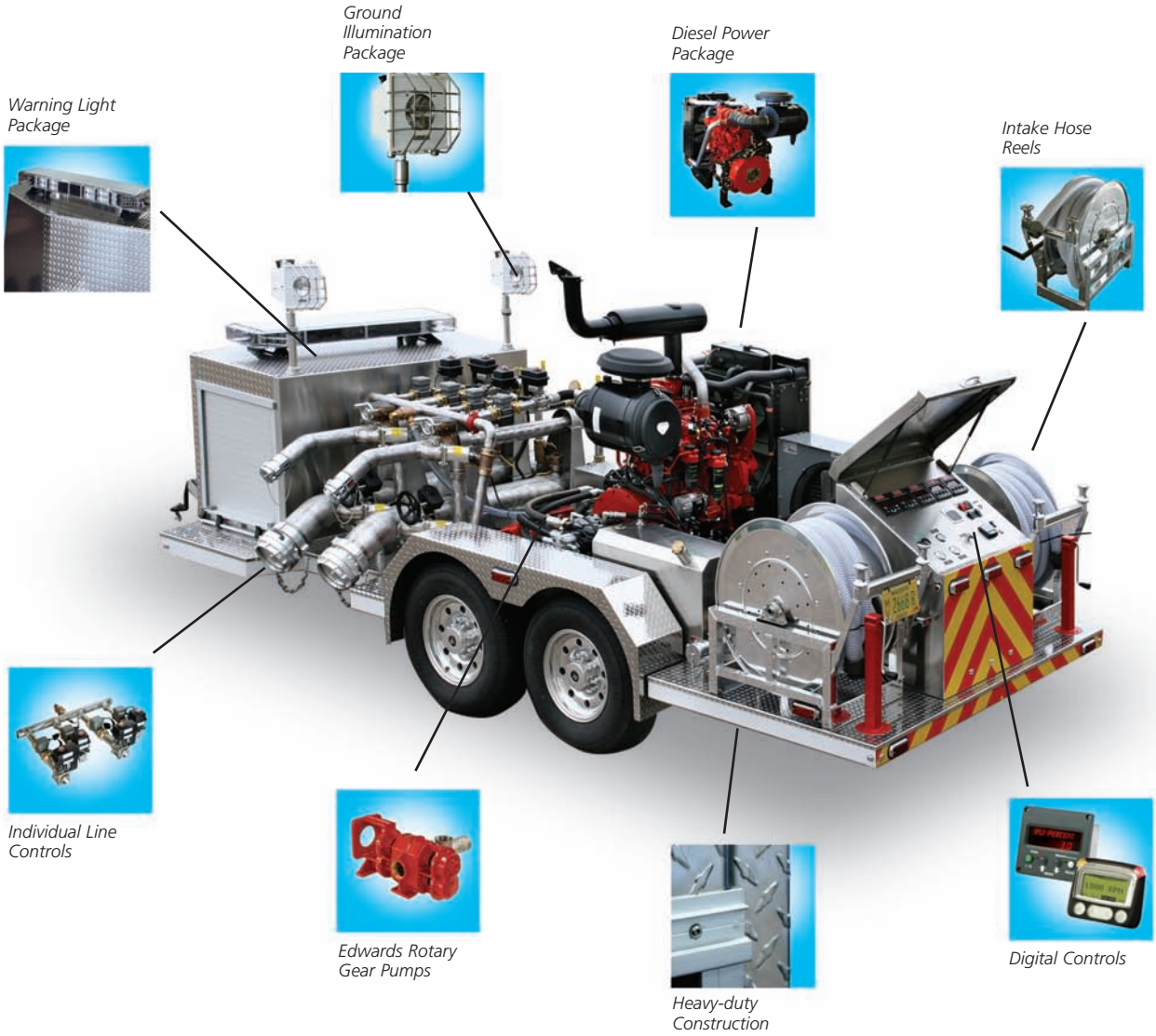
### Applications
- High-risk bulk fuel storage
- Refineries
- Petrochemical plants
- Ethanol processing, transportation and storage
- Airfield Rescue and Firefighting and bulk storage
- Sea Ports
- Industrial facilities

*"This high-tech and simple-to-operate system delivers many safe and time-saving benefits that revolutionize big foam attacks."*



# Customize To Your Specifications

(Typical Configuration Shown)




## RDFS Features & Benefits:

- Flowmeter-equipped schedule 40 stainless steel discharge piping sized to application
- Stainless steel suction piping sized to specification
- Class 5 hitch assembly for easy towing
- Meets or exceeds current and proposed NFPA 1901, Chapter 27 Trailer Standards
- Rugged and slip-resistant stainless steel diamond plate decking
- Stainless tubular superstructure resists corrosion
- Convenient rear-mounted and covered stainless steel operator's panel equipped:
  - Engine operation controls and monitors gauges
  - Proportioner master and individual discharge controls
- Configurable scene and trailer lighting package options
- Storage compartments including roll-up doors and slide-out trays
- Adjustable trailer leveling and stabilization packages
- Optional diesel engine make, model and power ratings
- Numerous pre-engineered engine control and gauge packages
- Fuel cell and hydraulic component packages
- Suction hose reel(s) allowing storage and simple change of concentrate supply
- Twin axels rated at 6000 lbs. each
- Optional 3000 Series single-point injection proportioners

System Capacity – see AccuMax or 3000 series performance charts.


## 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

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375 Fifth Avenue NW • New Brighton, MN 55112
Phone: (651) 766-6300 • 800-533-9511 • Fax: (651) 766-6614
**www.foampro.com**

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