# **Foam Proportioners**



GODIVA



# Why should you be using a Foam Proportioning System?

#### **Class A Fires**

Water extinguishes ordinary combustible fuels, but when that water is mixed with a Class A foam it does it more effectively and faster. The finished foam wets and penetrates combustible fuels allowing the fire to be extinguished up to 3 times faster than plain water.

#### **Class B Fires**

Water is generally ineffective when the fuel source is a flammable or combustible liquid. The water sinks below the fuel source and allows the fire to continue to burn. A foam proportioning system that is capable of delivering alcohol-resistant (Class B) foams permits the finished foam to cover the fuel source's surface and starve it of oxygen.

#### Foam concentrate enhances the fire extinguishing properties of water.

- Saturates the fuel source (Class A), Encapsulates the fuel source (Class B)
- Decreases the fuel's exposure to oxygen
- Creates a barrier between the fuel and fire

#### But water is free!

Wrong. Your department may not be charged for water usage, but using water does have a cost. Studies have shown that up to 80% of plain water used on fires fails to penetrate the fuel and is wasted. Fighting fires with plain water means your apparatus has to stay on scene up to five times longer, your fire fighters are exposed to **more** risk, the structure suffers **more** water damage, and **more** contaminated water is introduced to the environment.

#### But foam concentrate is expensive!

Expensive is a relative term, but there is indeed a cost associated with foam. However, it has been established that finished foam is approximately 300% more effective than plain water while only using less than 6% foam concentrate. This equals less time on scene - and saved time is money saved.

### You should be using SmartFOAM!

SmartFOAM is a direct injection foam proportioning system that has been engineered to work smarter for you. SmartFOAM's six configurable presets eliminate the need to remember the proper foam injection rate for a specific fire ground scenario. Simply press the preset button with the text indicating your desired scenario. Each preset is fully configurable at the department level so it can be customised for your standard operating procedures.

SmartFOAM takes the guesswork out of setup and allows you to focus on fighting fire.

- Intuitive interface
- Advanced safety interlocks
- Best in class color display

SmartFOAM safeguards itself so that it is ready when you are.

- · Prevents mixing of A and B foam types
- On screen maintenance minders
- Full system data logging

#### SmartFOAM is the most flexible foam system in the fire service.

- Six customisable presets
- Selectable user interface
- Full range of foam pump options from 6.44 L/min to 49.21 L/min
- Capable of controlling two foam pumps

# **SmartFOAM**

### Easiest to use and most flexible foam proportioning system in the fire industry

SmartFOAM is a true high performance discharge-side foam proportioning system in a cost effective and compact package. SmartFOAM's full function digital control and Class1 water flow sensor provides computer controlled accurate foam proportioning in percentages from 0.1% to 9.9%. The operator presses one button for precise foam delivery every time.

- Simple push button operation SmartFOAM's six configurable presets mean that perfect foam delivery is simply a single touch away.
- Full range of pump options

Select any of our standard foam pumps from 6.5 L/min to 25 L/min. Pair any two pumps together to create a multipoint injection system or increase the rate to 50 L/min.



#### Easy calibration

On-screen tutorials walk you through the water flow and foam flow calibrations.

#### Enhanced protection and warnings

SmartFOAM protects and warns against empty/low foam conditions and prevents mixing of A and B foam types. All warnings and information are in plain text so you don't have to decipher a cryptic code when your tension is already high enough.

#### Superior fault tolerance

The SmartFOAM system operates in a highly accurate closed-loop mode. If the foam flow sensor malfunctions, the SmartFOAM system will continue to operate in an open-loop mode. Comprehensive operating tables are used in open-loop mode to calculate foam flow rates to keep the system functional.

#### Automatic flow based proportioning

The SmartFOAM system measures water and foam concentrate flow and automatically self-adjusts to deliver a consistent foam concentrate injection rate. Operation is unaffected by various nozzles, hose lengths, intake or discharge pressures.

#### Fully compatible

The SmartFOAM system is recommended for use with standard and aspirating nozzles.

#### Discharge side injection

Single or dual waterway check valve assemby options that virtually eliminate foam contamination of the fire pump and water tank.



# Class A only Pumps (1.7 and 2.1)

The heart of the SmartFOAM 1.7 and 2.1 systems is an electric motor driven rotary dual piston, plunger pump. The pump is constructed of anodized aluminum and stainless steel and is compatible with most Class "A" foam concentrates. The pump is close coupled to the electric motor thereby eliminating maintenance of an oil filled gearbox. A relief valve mounted on the foam pump and constructed of brass, protects the foam pump and foam concentrate discharge hoses from over pressurisation and damage.



### Class A and B Pumps (3.3, 5.0, and 6.5)

The heart of the SmartFOAM 3.3, 5.0, and 6.5 systems is an electric motor driven rotary gear pump. The pump is constructed of bronze and stainless steel and is compatible with almost all foam concentrates. The pump is close coupled to the electric motor thereby eliminating maintenance of an oil-filled gearbox. A relief valve mounted on the foam pump and constructed of stainless steel, protects the foam pump and foam concentrate discharge hoses from over pressurisation and damage.



MAXIMUM FOAM SOLUTION FLOW						
Injection Rate Percentage %	Flow rate in L/min					
	1.7AHP	2.1A	3.3	5.0	6.5	Twin 6.5
0.1	6,435	7,949	12,492	18,927	24,605	49,210
0.2	3,218	3,975	6,242	9,464	12,303	24,605
0.3	2,146	2,650	4,164	6,310	8,203	16,402
0.5	1,287	1,590	2,498	3,785	4,921	9,842
1.0	644	795	1,249	1,893	2,461	4,921
3.0			416	632	821	1,639
6.0			208	314	209	821

### Foam System Specifications:

Foam pump options	1.7 piston pump, dual plunger / 2.1 piston pump, dual plunger / 3.3, 5.0, 6.5 rotary gear positive displacement		
Maximum operating pressure	27.5 BAR (1.7AHP), 27.6 BAR (3.3), 17.2 BAR (2.1, 5.0), 13.8 BAR (6.5)		
Maximum current draw (12V)	40 Amps (1.7AHP, 2.1), 60 Amps (3.3, 5.0), 90 Amps (6.5)		
Maximum current draw (24V)	20 Amps (2.1), 30 Amps (3.3, 5.0), 45 Amps (6.5)		
Operating current draw (12V)	30 Amps (1.7AHP), 25 Amps (2.1), 30 Amps (3.3, 5.0), 40 Amps (6.5)		
Operating current draw (24V)	13 Amps (2.1), 15 Amps (3.3, 5.0), 20 Amps (6.5)		
Foam concentrate output L/min	1.7AHP - 6.5 L/min, 2.1A - 8 L/min, 3.3 - 12 L/min, 5.0 - 19 L/min, 6.5 - 25 L/min, Twin 6.5 - 50 L/min		

## **SmartFoam Accessories**

### **EZ-Fill Foam Reservoir Refill System**

EZ-Fill is an easy-to-operate fixed-mount 12 or 24 volt drive 19 L/min foam tank refill pump system. EZ-Fill features push-button smart-switch technology. Just press the "Fill" or "Flush" button and the unit will operate either filling the foam concentrate reservoir or running through a flush cycle. The unit is self-priming and will automatically shut off after 60 seconds or when the foam concentrate reservoir is full. The system can be ordered for either a single-tank or dual-tank foam concentrate reservoir system.

- Electronic three-way valve switches the system from "Fill" to the "Flush" function and back again.
- Configured wiring harness for easy installation.
- **Configurations include** dual foam concentrate reservoir refill for Class "A" and "B" foams.
- **Cam-lock quick connect suction hose** designed for pail drafting operations. Suction hose is equipped with integral strainer to prevent intake of unwanted debris.
- Class1 Smart-Switch panel control takes up less valuable pump panel real estate compared to other brands.
- **Push button control** Smart-Switch automatically stops foam pump after 60 seconds or when the foam reservoir is full.



### Air Dual Tank Selector (ADT)

The Air Dual Tank (ADT) valve is an air operated foam tank selector valve that enables selection of foam concentrate dependent on fireground operational demands.

- The ADT is an integral part of the foam pump and provides an electrical interlock for the low tank level sensors and concentrate injection rate.
- A panel mounted selector toggle switch with indicator lights controls foam concentrate tank selection and shows which foam concentrate tank is in use.



# **SmartFoam Accessories**

### Manual Dual Tank Selector (MDTII)

The Manual Dual Tank (MDT II) selector valve is available for the SmartCAFS and SmartFOAM systems with dual tanks. The MDT II is a panel mounted, manually operated selector that provides selection of foam concentrate dependent on fire ground operational demands. The MDT II also provides an electrical interlock for the low tank level sensors and concentrate injection rate. The MDT II is not suitable for top mount operator panel installations and some side operator panels due to gravity feed requirements of foam concentrate to the foam pump.



### Manual Single Tank Selector (MST)

Single tank SmartCAFS and SmartFOAM systems can be configured with a Manual Single Tank (MST) selector, which provides a flush function connection to the foam system electronic controls.



## SmartFoam/CAFS Accessories

#### **Low Pressure Strainer**

A low pressure foam concentrate strainer is mounted at the nlet of the foam pump. The strainer protects the pump from debris that might accumulate in the foam concentrate tank.

- Composite non-metallic housing with stainless steel mesh strainer element and includes a service shut-off valve.
- Offers 1/2" NPT (13 mm) threads, with a fitting to connect a 1/2" (13 mm) ID foam concentrate suction hose.
- Low pressure devices are designed for installations where the strainer IS NOT subject to HIGH pressure flushing water.



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GODIVAO HALE



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