

## Vehicle Fire Fighting Control System

### Introduction

Airports (commercial and military), refineries and other hazardous facilities use crash rescue vehicles equipped with AFFF (Aqueous Film Forming Foam) as a primary fuel fire fighting agent. AFFF is mixed with water on the vehicles typically in ratios from 1 to 6%.



Traditionally, ratio control has been achieved by mechanical means which do not provide precise ratio control, and are subject to wear. Newer pumps and discharges create changing pressure régimes which create significant variations in ratio with the mechanical control systems.

New foaming agents are extremely expensive, and consequently precise ratio control is very desirable: higher than the target ratio creates excessive AFFF usage and reduces the capacity of the vehicle, while lower than the target ratio will produce ineffective fire fighting properties in the foam.

### Foam Boss ®© System

MAAK has developed a computerized foam control system utilizing magnetic flow meters to accurately measure AFFF and mixed solution flows. The computer precisely controls the solution ratio by the control of a custom designed foam valve. AFFF is added to the water by means of an Around-The-Pump (ATP) eductor vacuum system, which does not require any additional pump to create AFFF flow.



The system has been designed to work on a wide range of vehicles and can accommodate flow ranges from 100LPM to over 8,000LPM, while controlling ratios from as low as 0.1% to 8%. The system can operate without any visual display, or can include up to 2 graphic LCD touchscreen interfaces which provide operating information, diagnostics and access to system configuration parameters. The system is designed for operation in rugged crash truck vehicles and can operate from 12 and 24VDC power.

More than 40 systems have been installed in vehicles in US, Canada, Australia, Korea, UK, Oman and Saudi Arabia.