

“FIRE & RESCUE SERVICES UNDER PRESSURE-

TIME TO GO WITH THE FLOW?”

(Extract from a discussion paper for Fire & Rescue Services to consider the use of Flowmeters to produce more effective and efficient outcomes and improve Fire-fighter safety).

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The fitting of flow meters to delivery and input sides of pumping appliances provides a cost-effective solution to water management on the fireground. Flow meters provide pump operators with reliable, accurate and timely information as to how much water is being delivered/received and what additional capacity is available to supply further jets/pumps. The fitting of Data Loggers to pumping appliances allows for all information regarding flow to be remotely uploaded onto a database for use by the Officer-in-Charge or nominated Water Officer to support Incident Command decisions on the availability of water supplies and number of additional resources required at the incident.

Traditionally, operational fire-fighters have been taught to request a specific **pressure** and for the pump operator to attempt to deliver that pressure at the branch by making mental calculations as to pressure losses due to friction in delivery hose and pressure changes due to “head”. This process is open to mistakes through miscalculation, takes no account of the amount of flow produced at the branch, nor does it deliver the optimum flow for any given branch. Hence, water delivered onto any fire has not been at the most efficient or effective, resulting in many negative outcomes such as incidents taking longer than necessary to extinguish, greater run-off of contaminated water entering watercourses, more Carbon emissions entering the atmosphere due to the fire burning for longer, more resources than necessary being required at incidents for water management, etc.

Well-managed water supplies at incidents, both by pump operators and officers, can result in fewer pumping appliances being mobilised, thereby reducing costs.

Flowmeters are currently in use in an increasing number of UK FRS’s and have been fitted to all pumping appliances in Greater Manchester FRS since 1993. They provide pump operators and officers with options to use a number of branch combinations from any single pump and deliver different flow rates from each, whilst also ensuring the safety of fire fighters by reducing the risk of injury from jet reaction. As the pump operator is able to see the flow at each delivery (in Litres Per Minute) there is an instant indication when flow ceases (for example: debris on the delivery hose) and actions can immediately be taken to ascertain any problem and rectify it, thereby mitigating risks to branch operators.

As the current financial climate increasingly impacts upon the FRS, this paper seeks to provide opportunities for FRS’s to consider the installation of flowmeters to their new or existing pumping fleets to ensure FRS’s can manage water supplies on the fireground to best effect and ultimately, improve service delivery whilst reducing longer term costs.

For a full copy of this paper, please contact John Harding at +44 (0)7879 667 436 or Tim Carew of TSI Flowmeters Ltd at +353 (0)87 235 2107 and www.tsi.ie