

# FIRE & RESCUE

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## NEW VEHICLES FOR LFB



The delivery of 126 Mercedes-Benz Atego trucks with fully-automatic Allison transmissions to London Fire Brigade is nearing completion after two years, and the service has already ordered 62 additional vehicles.

The new vehicles have all been converted to dual-purpose ladder fire

engines with crew cabs made by Magirus. They join a fleet of more than 450 fire engines, command, and support vehicles managed and maintained by Babcock International Group.

LFB specified the Allison 3000 Series fully-automatic transmission instead of the standard automated transmission because of its performance advantage over a dry clutch. With Allison's Continuous Power Technology, engine torque is nearly doubled at launch by the company's patented torque converter. Gear changes occur without power interruption, ensuring maximum efficiency between engine and transmission.

The new fire engines have a laden weight of approximately 11,500kg and the 7.7-litre engine produces a maximum of 1,100Nm of torque and 272hp (200 kW). The Allison 3000 Series is suitable for engine output up to 1,695Nm and 450hp (336 kW). It is engineered to adapt and operate efficiently in a variety of applications, with the choice of close- or wide-ratio gearing, two engine-driven power take-off provisions, and fifth-generation advanced electronic controls. There is also an optional integral output retarder for better braking.

'The Allison transmission was specified partly because of its responsiveness and controllability, and partly because it has proven itself to be such a reliable solution for LFB's operations,' said Neil Corcoran, Babcock's engineering and technical manager for the LFB fleet. 'The Allison transmission has minimal maintenance requirements, particularly with regard to the integral hydraulic retarder and the power take-off drive. And, of course, dependability of equipment is essential in emergency services.'

## PUMPER BREAKS RECORDS

Ferrara's high-capacity Super Pumper has received UL confirmation for a flow capacity of 6,256gpm (23,681 lpm) from draft at a discharge pressure of 125psi (8.6 bar), exceeding the record for pump performance.

The increased flow capability means fire departments will no longer be limited to the standard industrial rating of 100% capacity at only 100psi (7 bar) net discharge pressure. Breaking the 100-psi ceiling was made possible by the unit's new HPV6000 pump from US Fire Pump. According to Ferrara, with four 8-inch (20.3cm) and one 12-inch (30.4cm) intake connections, the ability to be remotely supplied from mega hydrants is now feasible.

The Ferrara Super Pumper offers a triple-deck gun system with a main gun providing 8,000gpm (30,283 lpm) and a dual rear 2,000gpm (7,570 lpm) configuration. All three monitors are controlled by wireless remote control, which ensures fire-ground safety and efficiency during the application of large streams. Other features include a rear-mount pump configuration that protects from potential supply and discharge lines and facilitates the establishment of supply lines to the pump as well as providing a quieter operating environment.

The vehicle carries a foam concentrate tank with a 900-gallon (3,406 litres) capacity as well as a 300gpm (1,135 lpm) multi-point direct injection foam system that reduces increased flow restrictions.

Ferrara's Super Pumper meets the higher flow requirements that industrial hazard firefighters are facing at petrochemical processing and refining plants, and is also ideal for municipalities with large fire load facilities such as warehouse districts, shopping centres, shipping docks, tunnels, and tank farms, or for mass disaster response requirements.

The vehicle is well suited to industrial facilities where space is an issue thanks to a shorter, more maneuverable 4.7m wheelbase and an overall length of just over 10m. The latest test was documented and witnessed by both UL and the Louisiana State Fire Marshal's Office.



## HOPE TECHNIK'S FIREFIGHTING ROBOT – TAKING ON THE DANGER OF CONFINED SPACES

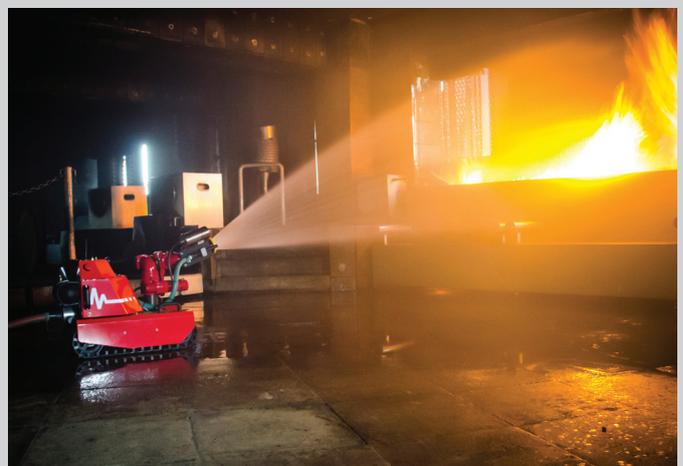
The latest development in the fight against high-rise fires in Singapore's urban landscape is not a large firefighting engine, it's a robot.

Designed by bespoke engineering firm Hope Technik, the firefighting robot is an unmanned ground vehicle (UGV). It is a portable emergency responder robot that assists firefighters in fighting high-rise fires, especially in highly dangerous environments where it is not safe for people to enter.

Measuring just under a metre long, half a metre wide and just 60cm in height, the robot weighs less than 80kg. This makes it light enough for two firefighters to carry while climbing stairs and small enough to be stowed in a compact, first-response firefighting vehicle that can negotiate tight urban spaces.

Hope Technik's project manager Ng Kiang Loong explained that the robot is a result of the company's effort to develop technology to extinguish fires while ensuring the safety of firefighters. 'At the end of the day, we want our firefighters to be able to return to their families safe and sound. The firefighting robot allows them to do their job while mitigating the potential dangers they face during a firefighting operation.'

The firefighting robot is designed to reduce the risks to firefighters. It is equipped with a thermal imaging camera that can detect hot zones in a room autonomously without being impeded by smoke. The scenes captured by the robot's camera are



then transmitted live to the operator's control unit, allowing firefighters to assess the fire scene and guide the robot remotely from a safe distance.

To combat small yet potentially lethal fires in confined spaces, the firefighting robot has the flexibility to discharge foam from its 7.5-litre on-board foam solution tank or water through its water monitor. Water is drawn from a fire hydrant by connecting a hose to the rear of the robot.

The robot is also capable of traversing uneven surfaces. It has a top speed of up to one metre per second and an operational power capacity of one hour.