



# Rapid response in Munich

**Munich isn't just the place where the famous Oktober Fest is held every year, but also where 58 new super compact Mercedes Benz Atego firefighting vehicles with an Iveco Magirus body have found a home.**

**Ann-Marie Knecht reports from Germany.**



*Joerg Fiebach, Head of Engineering at Munich Fire Brigade, says the firefighters are highly satisfied with their Euro5-certified trucks.*

**W**ith its 1.4 million inhabitants, Munich is Germany's third largest city, and the fire brigade consists of 1,500 full-time firefighters with an additional 800 volunteers. The professionals, who are on call 24 hours a day, are spread over 10 fire stations in the city while the volunteers are based in 22 different locations around Munich.

In 1995 the fire brigade bought a series of 29 fire trucks for the professional firefighters – rapid response vehicles for general purpose applications. They were all the same and were kitted out with standard equipment. Joerg Fiebach, Head of the Engineering Department of Munich Fire Service, explains that today volunteers and professionals are now (administratively) viewed identically, which is having a knock-on effect. "We are now in the process of replacing the whole fleet, and we have also acquired new trucks for the volunteer firefighters. The reason for this is that it enables us to offer a standardised response to the public. Another benefit is that we can swap the trucks used by the professionals for the volunteer trucks after a certain lifespan, in order to get the most life out of the vehicle."

The delivery is spread out over three years, and just before Christmas 2009 the first 20 vehicles were delivered, following some stringent tests by the brigade on two prototypes. "We really

wanted to find out any defects and ascertain if there was any space for improvement," he adds.

The final delivery will be made in the spring of 2011, and Fiebach emphasises that the fleet has so far been performing well above the mark up.

One of the reasons that the trucks have been found to perform so well, believes Munchi FS, lies in the transmission system. The brigade was extremely specific about this feature, because it often faces a heavily congested city centre. The brigade carried out extensive comparison tests between Automated Manual Transmission (AMT) and fully automatic transmission systems. It was felt by the testing committee that AMT did not perform as well as the fully automatic transmission, because shifting and acceleration was unfavourable. Allison Transmission's 3000R Series came best out of the test, because it provided continuous power shifting to the wheels without interruption of traction – enabling smooth starts and fast acceleration. The transmission system also enables easier "convoy" formation on a call out, because it provides additional vehicle braking, while extending service brake life.

Fiebach explains that whilst other manufacturers also offered automatic transmission systems, the Allison system came out more cost-effective during the tender process.

Gerhard Voigt, OEM Account Manager at Allison in Germany is exceptionally pleased with the order. "The outstanding reliability and durability of our systems will result in less downtime, only minor maintenance requirements and thus reduced maintenance and repair costs."

The other reason this vehicle really stands apart from others is its compactness. The brigade specified a very small turning radius of just 14.5 metres, and a vehicle width of only 2.44 metres. These criteria were extremely important due to the space restrictions caused by the many parked vehicles in the inner city.

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## VEHICLES IN FOCUS

## Franco-US alliance of slides

For French heavy-duty slide manufacturer Chambrelan the announcement that KME Fire Apparatus – one of the largest fire truck builders in the US – had installed RA7 and RA5 range of heavy duty sliding systems across a number of its rescue vehicles, was a momentous one.

In terms of commercial and custom designed vehicles, KME Fire Apparatus manufactures a range of chassis with a selection of specified bodies to match and are considered to be the leading supplier of fire and rescue vehicles in the US. Andrew Yenser, Rescue Product Manager explains: "We were looking for quality and strength; something that was easy to fit and easy to maintain. That's when Chambrelan's RA5 and RA7 came to our attention. Their reliability and strength means, as vehicle builders, we can offer additional components to our customers which otherwise wouldn't have been possible before."

But like many imported products to the US, extensive safety tests needed to be passed and the evaluation process at KME was no exception. Yenser explains: "Before we can bring new products to our vehicles – in this instance heavy duty slides – a committee of sales representatives, vehicle purchasers and engineers have to agree on a number of issues. The committee reviews the kind of materials the slides are made of, takes a look at the mechanics and of course makes sure supply isn't going to be a problem."

"What this means in real terms is a deeper understanding of the needs of the vehicle builder. By offering products directly to emerging markets we can maintain a healthy price point, whilst at the same time guaranteeing supply. This has been one of Chambrelan's greatest strengths over the last year or so; with the downturn vehicle builders didn't want to carry stock, but needed slides at short notice. As manufacturers we were able to deliver to their tight deadlines," adds Jeremy Binnington, Head of Chambrelan UK, Chambrelan's announcement to supply to America directly comes hot on the heels of the company's decision to launch a UK arm, headed by Binnington. "Although Chambrelan has been providing its slides to vehicle builders indirectly for years there has been a change in supply, meaning we're approaching the UK market directly."



*Left to right: the vehicle carries the minimum for primary emergency response; Allison Transmission's 3000R.*

This is one of the first trucks that has been built according to the new German DIN standard for firefighting vehicles, in terms of fulfilling the demands for compactness. Previously, vehicles had to have a minimum distance between the axles of 3,900mm, and a weight of 14 tonnes.

Munich's new vehicle weighs well below that, at just 13 tonnes and 200 kilos, with an axle distance of 3,610mm. "A normal truck

can go up to a width of 2.55 metres, and we could have reduced the width even more. However, this would have compromised stability at higher speeds," explains Fiebach.

The truck is regarded as a rapid response vehicle and should therefore carry equipment on board that enables the brigade to deliver primary emergency response at any incident. "We already had experience with compact fire vehicles, and during discussions with the specification committee we determined which equipment was essential to carry onboard as well as the bare minimum of features. In general these tend to get damaged. We didn't choose an all terrain transmission or four-wheel drive – unlike many German brigades – because we don't face extremely steep and/or narrow streets. We kept the equipment to a bare minimum, and stuck to it. We can always order extra tools if we need them, but in general we tend to stick to our budget and we like to keep the size and the weight of the vehicle down."

The DIN standard specifies the minimum of what should be carried onboard. There is room in the cab for eight firefighters, and the water tank has a capacity of 1,600 litres of water, plus 200 litres of Class A and B foam. The pumps have been built onto the rear, and there is space for a range of equipment for RTCs, including hydraulic scissors and spreaders; HazMat suits; spill kits; emergency medical equipment; and protective clothing.

The generators on the new fleet are no longer fixed on the vehicle either, as switching the generator on at the same time of the pump sometimes caused problems with the hydraulics.

Another improvement on the new fleet is the fact that there is now more space in the cab to put on breathing apparatus. In the old vehicles there was a cupboard in the cab, which didn't leave enough space for the crew to comfortably don their BA. The new cab has plenty of space for this purpose, and the environmental credentials are in order as well. "The City Council is very ambitious when it comes to environmental standards for its vehicles. It tells us to do the maximum for the environment, and therefore we decided to buy the whole fleet in Euro5, as this will be the norm in 2011 – we like to maintain the highest standard."

The firefighters of Munich are very satisfied with their new vehicles, says Fiebach. "The personnel can really see the progression we have made in the last 15 years. They love the concept and the fact that these vehicles are so flexible and low in height. The percentage of weight on the front axle is high though, at least 34%. We see this as a great benefit, as vehicles with limited weight on the front axle are difficult to drive safely. These drive brilliantly and the transmission is excellent. We hope we can keep them in service for 20 years."



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