

Mini-fan by Micronel AG



Quietly efficient

*— Once again vehicle fan specialist
Micronel has proved its great expertise.
Produced with high-tech engineering
and the highest degree of Swiss quality,
the company's new meridian fan is a
product that sets new standards.
Standards relied on not least by BMW.*

A lot of volume very quiet



The new BMW 5 Series is the best in its class. Technically it is at the cutting edge of modern engineering design. For the famous Bavarian brand, this dynamic vehicle is one of the most important they have ever produced. It will generate a large part of all sales turnover. Equal to the task, the 5 Series offers state of the art technology and a fantastic driving experience.

It's an experience that is made possible only with numerous technical units and components. Playing its part with one of these clever technical components is the renowned Swiss mini-fan and blower manufacturer Micronel.

While physically it may be a small part – a meridian radiator fan just 40 by 40 millimetres in size and only 16 grams in weight – it is nevertheless bursting with technical know-how.

Developed under strict premises set by German instrument manufacturer VDO Siemens, today the F40 ventilates the BMW 5 Series' GPS navigation and on-board computer.

For such an exclusive job, Micronel had to ensure that its product could reliably meet the tough conditions of automotive applications – for the fan's entire lifespan of over 50,000 hours. In terms of the 5 Series, that means it will keep going for 1.5 million kilometres at an average speed of 30 km/h. The F40 fan will therefore last longer than the life of many a car.

VDO Siemens also demanded a tacho-signal to record rotary speed plus a particularly high airflow

rate and volume. They required the fan to provide highly efficient cooling for the unit to be ventilated, while remaining physically small in size. When in use, the whole GPS navigation component and fan needed to run almost without a sound. It was to be no easy task!

These challenges were solved with no less than two masterstrokes. First, Micronel engineers gave the F40 a sliding bearing instead of the traditional ball bearing. In contrast to a ball bearing, this has the advantage that a sliding bearing is extremely shockproof and impact-resistant, is very quiet and because it produces very little friction keeps working well for a very long time. Micronel is currently the only producer of mini-fans that has succeeded in controlling the drops of lubricant within a sliding bearing. The second great masterstroke is that, thanks to its unique new profile, the specially developed aerodynamic meridian wing produces much less turbulence and swirling air.

All in all, with its new generation of meridian fans Micronel has created a product that not only exceeds the requirements laid down by VDO Siemens, but that is also superior to those of its competitors. Micronel fans thus rate as some of the best products in the motor industry and are therefore a worthy match for the BMW brand.



Technical information:

Fan model:	F40	Air capacity:	155 l/min
Dimensions:	40x40x10 mm	Noise level:	18 db (A)
Voltage:	12V DC	Signal:	Tacho

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