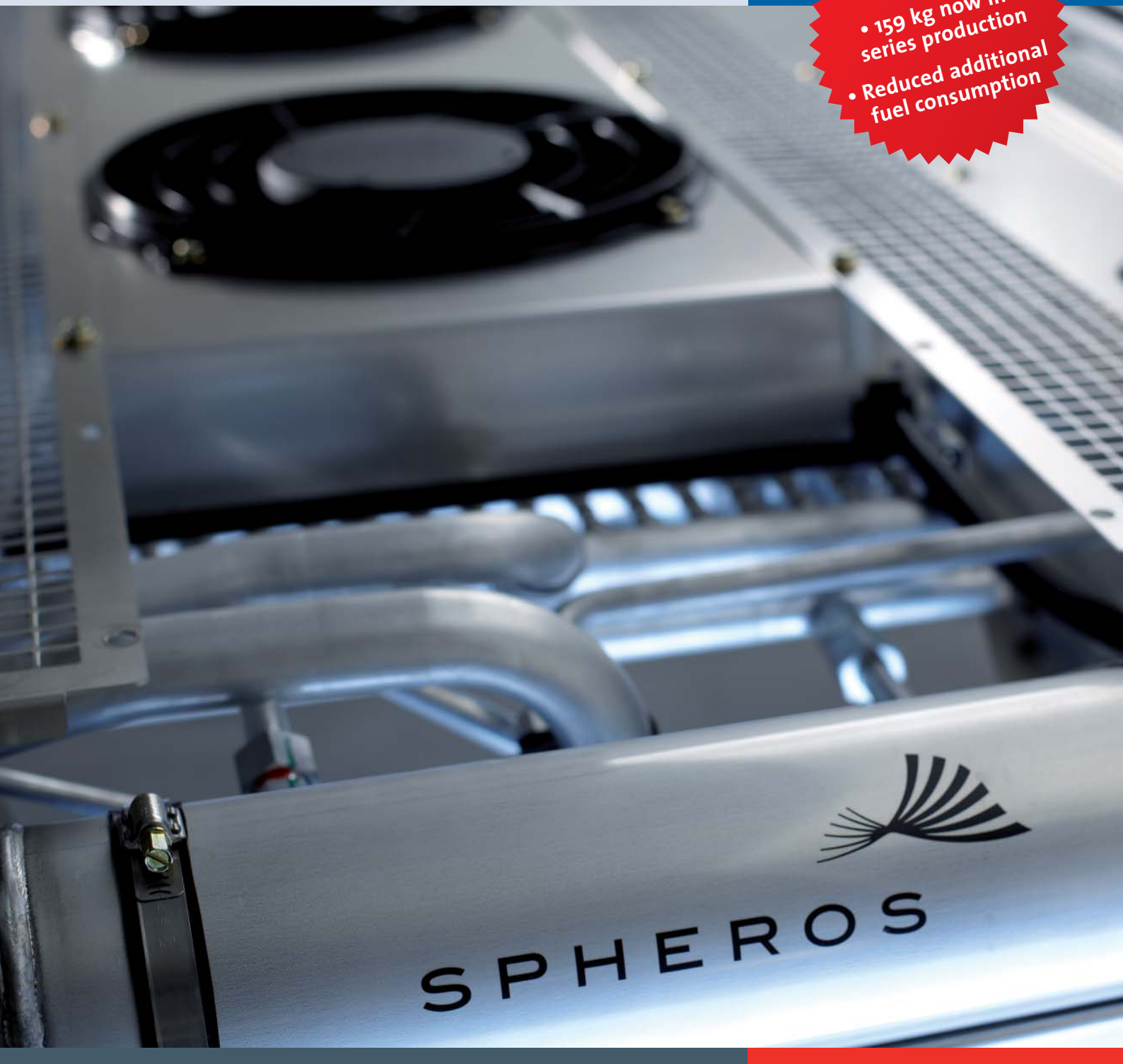
Aerosphere Alu

Alu power on the top

SPHEROS

- Super quiet new EC fan
- 159 kg now in series production
- Reduced additional fuel consumption



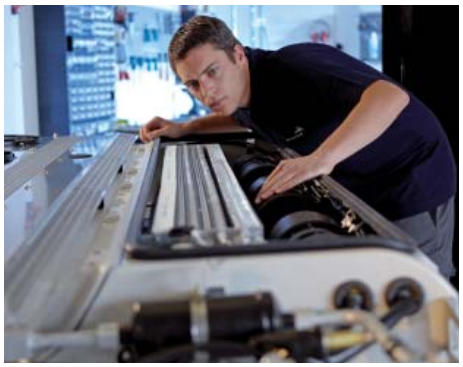
Something big from our manufactory

Not an off-the-shelf product

In times of haste and interchangeability it's a pleasure to find a product created by the skilful hands of people with sound knowledge and expertise. We have come to expect this in finely crafted shoes, but where larger technical components are concerned it is comforting to be able to say: it fits!

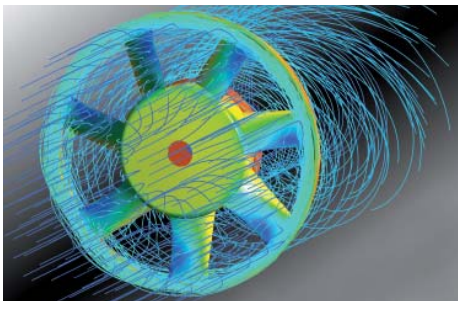
Made for a lifetime

The advantages of such working methods are familiar to us from high-quality footwear: it lasts longer! We have consciously expanded the vertical range of manufacture at our production facilities in order to satisfy our high quality standards. With a service life of 30,000 hours our blowers fulfil the exacting requirements for bus equipment. This return to old virtues of craftsmanship is what distinguishes our production facilities as a manufactory.



Wide vertical range of manufacture:
for success and reliability.

Our way of dealing with the elements



Top design, consequent to the last detail: For our new fans we made sure everything was done right from the development to testing stage.

Air: how does one move large volumes of air with minimum noise?

This is the key issue when it comes to exploiting the air movement potential for its cooling effect. We took a lesson from the aerospace industry and designed new fans to suit our requirements with the highest level of aerodynamic efficiency, coupled with speed stabilization to create the new Spheros effect: more air, quieter circulation! This commitment results in up to 6 dBA less noise and more than 10% greater efficiency.

Water: What do I have to gain from "IP68"

In the implementation of this latest EC technology we could not ignore the element of water. Water is so to speak the natural adversary on the bus roof, which we confront with our new fans in the hitherto unattained waterproof IP68 specification. In this way we achieve a significantly longer service life and minimum downtimes.

Heat: Why higher temperatures mean longer life

Quite simple: We developed our fans for temperature limits that at 95°C are never reached in practice Working with a wide margin of safety means we can expect considerably less problems in application. The result is highly reliable operation in all the world's climate zones.

Aluminium – pleasing not only to the eye!

The future is attractive and lightweight: our production model weighs only 159 kg.

Not exactly new. Not only because aluminium is an attractive and lightweight material it has long since gained a firm place in transport technology on land, water and in the air. When aluminium made a spectacular entry into the automotive industry nobody could have foreseen its current success.

Today, 20 years later, the material is firmly established in the automotive sector and is an obvious choice for the construction of large bus air conditioners.

Aluminium already accounts for 98% of the metals used in our cooling circuit. This enables us to achieve a sensationally low weight of 159 kg for series production. This is our yardstick for an attractive and lightweight future!

Material and workmanship: lightweight and fuel-saving.

Why not simply leave our large rooftop units running when the bus is parked?

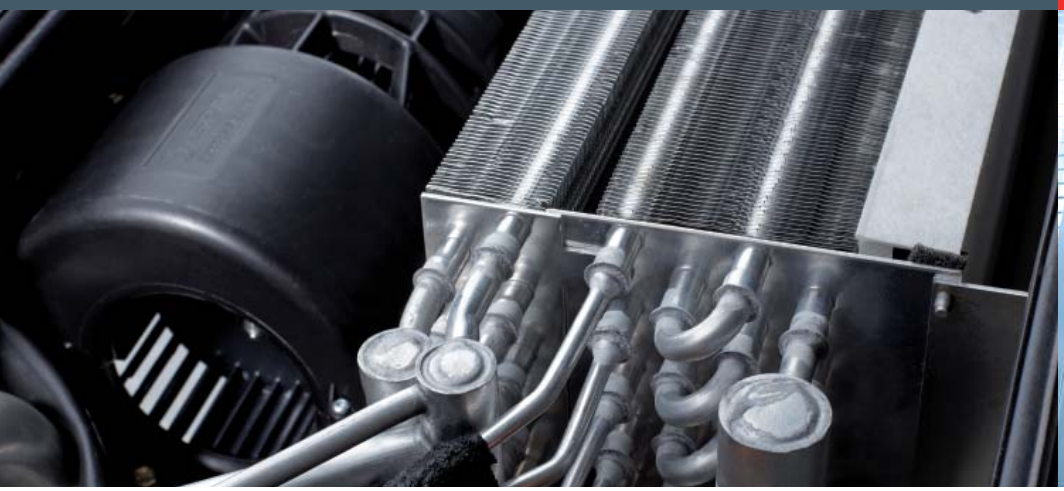
An instinct for the future

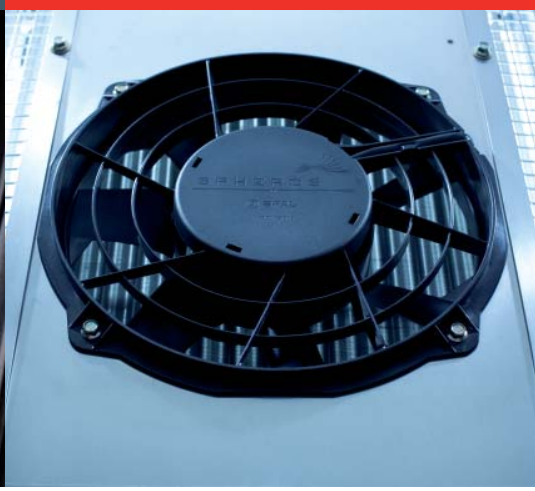
Progress upright

In a concept study – which already awakened great interest at the IAA – we presented a solar-powered parking ventilator which can be used for charging the vehicle battery and ventilating the vehicle interior.

This substantially reduces the time- and energy-consuming air conditioning of a bus before the start of a journey. When parked, the bus interior is heated up only half as much by the sun, the air conditioning system requires significantly less energy to cool the bus and pleasant inside temperatures are achieved much faster.

Side effect: longer service life and substantially lower fuel consumption. That is the future!





Broad expertise leads to new solutions

Our products are the result of a long journey of experience and the ever new ideas of generations of experts at our worldwide sites who contribute their expertise to ongoing development. The Aerosphere Alu is the outcome of a dynamic cooperation. Its success is attributable not only our qualified team, but also to a good rapport with our customers and suppliers. This continuous development has enabled us, among other things, to considerably reduce the weight, noise level and additional fuel consumption of the Aerosphere Alu.

Facts for your benefit

The new Aerosphere Alu

- Weight: 159 kg, series production stage
- Reliability: 30,000 hours service life
- Exclusively developed EC fan: super quiet and 10% more efficient
- Reduced increase in fuel consumption
- Brushless and long-lived axial and radial fan
- Significantly reduced service- and LCC costs

Low service and maintenance costs, together with reduced additional fuel consumption cuts LCC costs.

The Aerosphere Alu series

Technical data	Standard	Hot country
Cooling capacity (kW) maximum	32	39
Cooling capacity (kW) nominal*	24	30
Heat output (kW)	38	32
Air circulation, free blowing (m³/h)	6,300 (6 EC fans)	8.400 (8 EC fans)
Refrigerant (CFC-free)	R 134 A	R 134 A
Rated voltage (V)	24	24
Weight (kg)	approx. 159	approx. 200
Dimensions L x W x H (mm)	2,800 × 2,200 / 2,090 × 210	3,320 × 2,200 / 2,090 × 210

* at T_A = 35 °C; T_{VD} = 27 °C

Blue Bus Climate

Our commitment for sustainability

As a commercial enterprise and leading developer and manufacturer of bus air conditioning systems, Spheros has always taken its responsibility towards society and the environment very seriously. In particular, in the development and introduction of technologically advanced product concepts, we always place great emphasis on the aspect of sustainability.

With commitment we are working on new, resource-saving and efficient concepts, in order to become even better and make a contribution to a secure and worthwhile future.

Ident Nr. 027106111A · 10/09 · All rights to modifications and corrections reserved · Printed in Germany · © Spheros GmbH 2009

Spheros GmbH
PO Box 1371 D-82198 Gilching
Tel. +49 (0)8105 7721-0 · Fax +49 (0)8105 7721-119
www.spheros.de · info@spheros.de

SPHEROS