DACS to show New Line of MagFans at IPPE 2024

With the new line of MagFans DACS introduce a multitude of improvements

On average, across all duty points, the new MagFan 3 and MagFan 5 are about 10% more efficient than their predecessors, the MagFan and MagFan Plus, and as evidenced by the Bess Lab reports the new MagFans are undisputed world leaders in fan efficiency.

But there is much more to it than the efficiency improvements.
Whether you choose the three-blade MagFan 3 or the five-blade MagFan 5 you get a fan capable of delivering very high airflows even at extreme static pressures and maintaining very high airflow ratios – and deliver that raw performance and extreme efficiency year after year after year, without any maintenance other than ordinary cleaning.

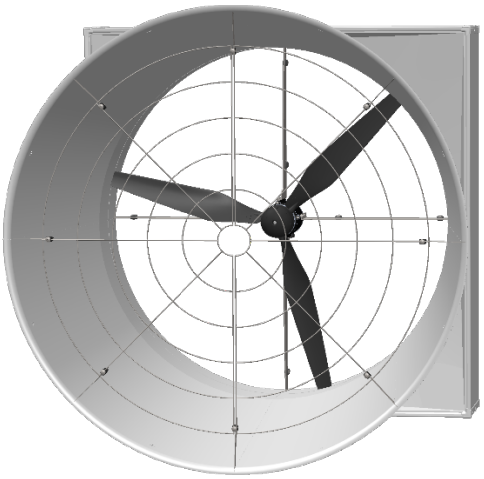
These improvements have been achieved through careful design of all components, and attention to even the smallest of details. Slight revisions to the orifice, the netting, the brackets, new impeller blades and a more compact, high efficiency driveline helped in achieving these goals. But the fan as such has not changed, and these new versions are 100% backwards compatible with the previous versions, meaning you can upgrade all existing fans to benefit from the new and improved technology.

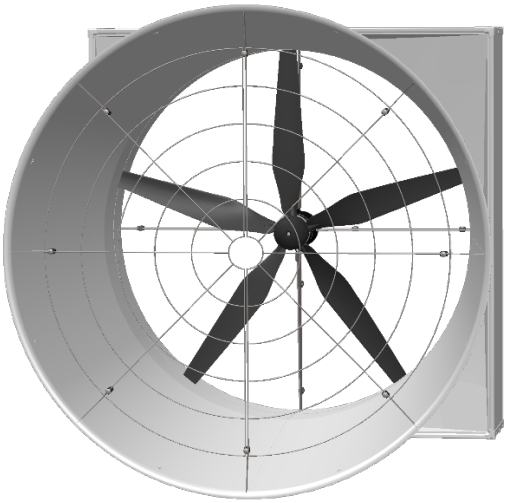
Equally important, due to the new impeller design, the fans now cover a wider operation range, with minimum speed settings of 160 rpm and maximum speeds of up to 900 rpm. This allows for a much more precise airflow control, and the redesigned impeller maintains full headwind stability even at very low rpm operation.

Unique, protected features

The new MagFans introduce a long list of first in the business features, and no less than three new patents have been applied for:

- Increased performance and efficiency across the entire range. First fan ever to do over 30cfm/W at 30,000 cfm/0.1”, thoroughly tested at Bess Lab.
- A choice of 3 blade and 5 blade impellers for superior efficiency and extreme performance even at pressures exceeding 100Pa/0.4”
- New, slender blade design (design pat. pend.) makes the blade stiff, yet totally impact resistant and leads to increased efficiency at all duty points.
- A new high tech polymer blade material, impervious to all common chemicals, eliminates water absorption and material fatigue.
- Class leading headwind resilience.
- Milled aluminum rear hub for added strength and easier installation, with keyless compression lock for a tight fit and easy installation.
- A world’s first compact Anti-Reverse hub (pat. pend.), for added motor protection and effortless identification and restart after power interruptions.





Optimized simplicity – reduced footprint

- One compact high output Permanent Magnet motor fits all fans. Upgraded to IP66/IP4X with Gore-Tex breather plug and running significantly cooler than any other motor on the market.
- IP66/IP4X class three phase and single-phase input drives, covering all voltages from 160V to 500V 50/60Hz, without changing motor configuration.
- High torque pure sine wave motor control allows for smooth operation from idle to max rpm. Twice the torque of other PM motors of equivalent frame size at low rpm and three to four times as much torque as BLDC/EC motors of equivalent frame size at low rpm.
- CE, UL/CUL motors and frequency drives as standard. Drives meet or exceed industrial EMC standards. Very low THD – no transponder/RFID interference
- Special cold-running grease with antioxidants and double contact rubber seal bearings deliver a calculated service life exceeding 100,000 hrs at maximum output.

Another key point in the development was to simplify the packing list. Jens Dybdahl, head of R&D at DACS, explains:

“The fewer components we have on a packing list the faster we can pack the goods and get them to you. And when you receive the consignment, the less different components you have the easier it is to check the delivery and the simpler it is to assemble the fans – and if you keep a stock of fans, the less parts you need to stock the more free cash and labor you have for other more valuable purposes.

We managed to reduce the component list by 30% and that in combination with further improvements of our packaging system has allowed us to ship more products safer, using less space and less non-renewable packing materials. We now ship 165 MagFans in a 40ftHC quite easily – at least double if not triple of the quantity per container, compared to our closest competitors” Jens Dybdahl concludes.

For more information, contact Jens Dybdahl, DACS A/S: jd@dacs.dk or visit www.dacs.dk

The new MagFans are on display at the DACS booth #B30043.