

ENGINEERING
TOMORROW

Danfoss

Case study | VLT® HVAC Drive FC 102,
VLT® AQUA Drive FC 202, VLT® AutomationDrive FC 302

Round-the-clock reliability drives **competitive farming**

By introducing innovative climate control, health initiatives, feeding solutions and sustainable energy systems, the Van Asten Group has redefined livestock farming. Using systems developed by Stienen Bedrijfselektronica B.V. to manage risk and focus on reliability at every touchpoint, Van Asten has not only increased the consistent quality of its products but has created a template for the future of the industry. VLT® drives ensure reliability in water treatment, feeding systems and other critical equipment throughout its operations.

100%

uptime thanks to
robust drives with
IP55 enclosure and
ammonia-resistant
electronics



Marko van Asten
Director, Van Asten, NL

Taking farming to the **next level**

Marko van Asten is proud to be a pig farmer – and when you take a tour of his farm near the town of Sterksel, the Netherlands, you can see why: it's uncompromisingly clean and stocked with healthy, well-cared for animals destined for the quality - and cost-conscious Dutch and German markets.

His combination of sustainable entrepreneurship and a genuine passion for pig farming has proved to be a successful model for how modern farms can be run in an increasingly competitive international market. In fact, his company, the Van Asten Group, now has six locations in Holland and Germany – with an annual turnover of 70 million Euros.



▲
A robust IP55-rated VLT® drive controls the Stienen climate solution equipment.

The difference is in the control

But how does Marko do it differently, and how does he maintain the consistent quality and volume which has led to his success?

“Keeping our pigs healthy is vital for us,” says Marko, “and doing that requires careful management of everything from farm hygiene and feed quality to temperature and ventilation control,” says Marko van Asten.

To achieve this, the Van Asten Group has committed to some long-term investments:

- its own feeding equipment company, Weda Holland B.V. which is a pioneer in fermented feedstuffs
- a close partnership with expert technology company Stienen Bedrijfselektronica B.V., which specializes in creating healthy indoor climates for farming. Stienen provides a complete range of air control units, fans, alarm systems and management software

At Marko's farm we can see how innovative technology, incorporating over 70 Danfoss VLT® drives, reduces risk and maintains uptime in this 24/7 operation.

More hygiene, far fewer antibiotics

"In effect, we perform conventional farming," says Marko, "but by applying the strictest levels of hygiene and biosecurity to everything we do, we ensure our animals stay healthy and do not encounter the diseases which other farms have to contend with and medicate against."

With a unique colour coding for every department, employees change clothes and shower when moving from room to room, eliminating the potential risk of spreading disease. All floors are coated and cleaned to avoid bacteria blooms. Together these strategies form the basis of a risk management system, which has resulted in a reduced need for medication and better animal health than in comparable state-of-the-art pig farms. "Even with a reduction of up to 70% in antibiotics use, we deliver Specific Pathogen Free (SPF) animals to market – the industry health standard for healthy pigs - and we can be proud of that," says Marko.

The best climate for growth

Maintaining constant temperatures, humidity, and CO₂ levels in the stables is important to an animal's health. The farm in Sterksel utilizes a ground water system for cooling in the summer and heating during the winter to maintain an even temperature of 26-27°C for small piglets and 20°C for fully grown pigs.

As part of Van Asten's circular economy policy and commitment to reducing its CO₂ footprint, all farms generate their own electricity with roof-mounted solar PV systems. This makes them net producers of electric power. In addition, biogas plants, based on treated manure from the farms, generate both electricity and heat to warm the farms during winter. In Sterksel they are currently building a new cooperatively owned biogas plant. Other farms in the Van Asten Group already have their own biogas plants.

"Every day of the year, our kitchens produce two tanks of fresh feed that are fermented over a 24-hour period. With a production of 2,500 tonnes per week, uptime is crucial to our operation. That's why Weda chose Danfoss VLT® drives. Failure is simply not an option and, in our experience, Danfoss drives are the most reliable choice."

*- Marko van Asten
Director, Van Asten, NL*



▲ Roof-mounted solar panels



▲ Weda fermented wet feeding system



▲ Exegy corrosion-free heat exchangers installed by Inno+ as part of the advanced climate and heat recovery system.

Erwin Stienen, CEO,
Stienen Bedrijfslektronica B.V.



“Stienen works very closely with Van Asten to develop continuous improvements in its process and products. It’s vital to us that our solutions are risk-free in terms of operation – especially in the aggressive environments of a working farm. One failure in supplying air, feed, or power can have a lethal impact on thousands of animals. Since 2009, we have put our trust in VLT® drives from Danfoss for our ventilation systems, water treatment, feeding systems and other critical equipment. And the reliability of the drives is excellent – we have had no critical breakdowns. The robust Danfoss IP55 design with class 3C3 coated electronics makes all the difference.”

– Erwin Stienen, CEO,
Stienen Bedrijfslektronica B.V.



VLT® AQUA Drives control the groundwater-cooled climate control system



Rooftop-mounted Inno+ air scrubbers on the exhaust air systems remove ammonia, dust and offensive smells, to ensure high air quality outdoors

A breath of fresh air – inside and out

Stienen Bedrijfelektronica is also responsible for the systems that maintain the quality of fresh air and oxygen in the stables. To create a healthy ventilated space with mechanical ventilation, they have installed specifically developed controllers for fans, air inlets and curtains. These prevent any problems with drafts, cold air and respiratory problems. The unique corrosion-free


heat exchanger units from Stienen heat or cool the inlet air to maintain the correct temperature in the stables – regardless of the outside temperature.

But it's not just inside the farm that the air quality is good. Inno+ Solution's air scrubbers on the exhaust air systems remove ammonia, dust and offensive smells a fact that is highly appreciated by the neighbors of Van Asten's farms!



Well-ventilated, hygienic stables support good animal health





The headquarters for Van Asten farm's 300 employees is situated nearby the family home.

A new generation of farmers

As we complete the farm tour, we make our way across the yard to Marko's family home.

"My father set up our first farm back in 1974, so you could say that pig farming is in my blood. But it was only back in 2008, when I joined the family-owned

business after a career in finance, that I really developed a passion for what we do. The challenge of taking pig farming to the next level of sustainability, both in terms of economy and the environment is what motivates us and our 300 employees at Van Asten," says Marko.

Stienen Bedrijfselektronica B.V.

Stienen Bedrijfselektronica B.V. Founded in 1977, Stienen Worldwide climate solutions is a global supplier delivering healthy climates to a variety of farms with a complete range of

housing computers, air control units, fans, alarm systems, and management software.

<https://www.stienenbe.com/en/>

EXEGY BV

Exegy is specialized in production of polyethylene heat exchangers, corrosion resistant suitable for

aggressive environment with high levels of ammonia and H₂S.

<https://www.exegy.nl/en/>

Weda Holland B.V.

Weda Holland B.V. is the exclusive importer of Weda feeding equipment in the Netherlands and Belgium. It supplies high-quality total solutions for feeding systems, both dry and liquid, to the agricultural and industrial

sectors. From design to production, installation, maintenance and service, Weda Holland B.V. delivers quality and innovation.

<https://www.wedaholland.nl/>

Van Asten Group

Van Asten Group is a leading producer of high-level piglets, breeding gilts and fattening pigs for the Dutch and German markets. They focus on health, quality and value. Highly market oriented, Van Asten believes in sustainable entrepreneurship, with vets and feed specialist working together towards a common goal.

- LEAN processes
- 6 locations in Holland and Germany
- 300 staff at Van Asten Group: 200 employees and 100 contractors
- Annual turnover: 70M€

<https://www.vanastenfokvarkens.nl/>

Inno+ B.V.

Inno+ is the world's leading partner in the field of climate technology and air conditioning for intensive livestock farming, reducing ammonia, odour, and fine particulates for every climate control and air conditioning need.

<https://www.inno-plussystems.com/>

