

Better and fresher air for ITW Pronovia

AUTOMOTIVE • PRODUCTION HALLS



ITW Pronovia is an American company with a campus on the outskirts of Velká Bíteš, surrounded by family and apartment buildings.

ITW Pronovia, s.r.o. is part of the global corporation ITW (Illinois Tool Works Inc.). ITW is a leading global manufacturer with a presence in 57 countries and more than 49,000 employees, and its products are used in a wide range of industries, including the automotive industry.



ITW Pronovia installation in 2020

Pronovia was founded in 1992 and has been part of ITW since 2000. It specializes in the production of components for car manufacturers, including metal parts for airbags and plastic body parts. Our clients include the world's leading car manufacturers such as BMW, VW, Ford and others.

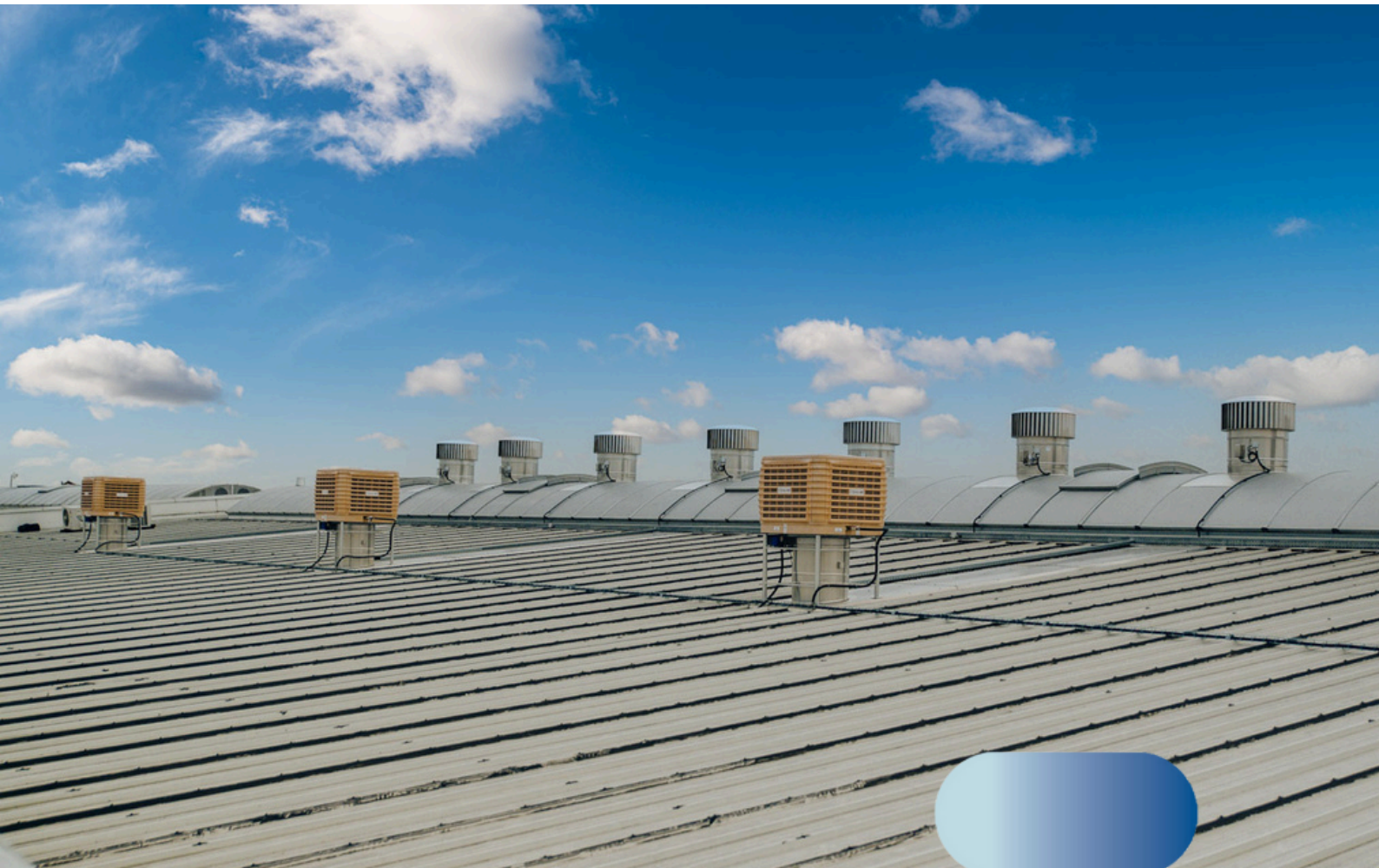
Their work is guided by the ITW business model, which emphasizes efficiency and flexibility. They use the 80/20 principle to simplify processes and focus on key innovations and adapting to the needs of both customers and employees. Therefore, the choice of a better working environment was a clear step in the company's development.

What did it look like there?

It is a large area containing three divisions focused on various production processes. The project was implemented from 2020 and was divided into two main parts, each of which had its own specific requirements and challenges.



ITW Pronovia installation in 2020



Specifics of the 1st phase of the project:

- An extensive campus on the outskirts of the city of Velká Bíteš.
- The implementation took place in two main divisions: Drawform and Body-fuel Components.
- Specific requirements for temperature reduction and elimination of oil mist. The COVID-19 pandemic and the increase in hygiene standards.



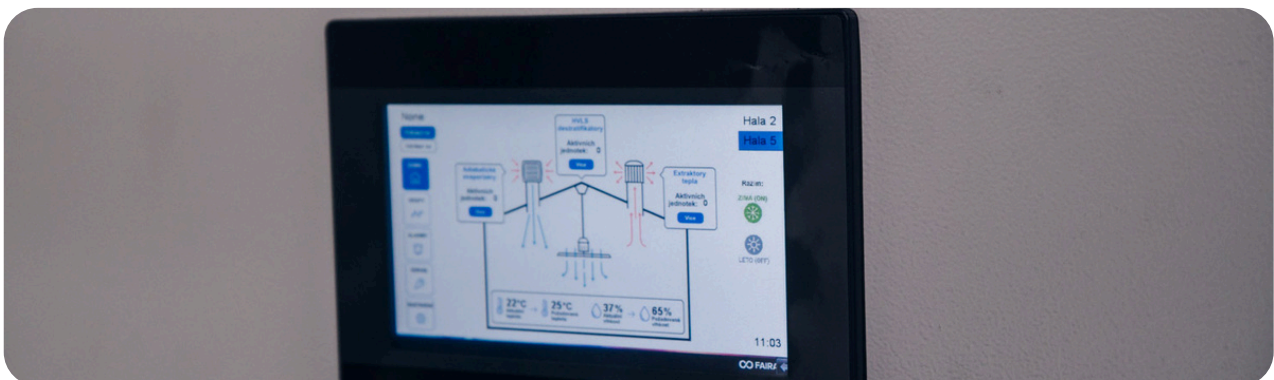
ITW Pronovia installation in 2020

Drawform Division:

- Focus on metalworking and pressing.
- Delivery: 10 pcs of extractors and 10 pcs of destratifiers
- Volume: 27,000 cubic meters
- Goal: Lowering the temperature in production areas and eliminating oil mist.
- Implementation began at the beginning of Q2 2020 and was completed within a few months.

Body-fuel Components Division:

- Conversion of warehouse space to production space.
- Delivery: 10 pcs of extraction units, 7 pcs of adiabatic evaporators, 6 pcs of destratification units
- Volume: 80,000 cubic meters
- Energy balance: 17.5 kW
- Goal: Installation of UV emitters for air disinfection. Combination of installation in a sandwich roof with a trapezoidal sheet metal covering and part of the technology installed in a conical polycarbonate skylight.



Result:

Our solution significantly reduced energy consumption compared to conventional solutions (160 kW versus less than 20 kW). The continuous supply of fresh air and its distribution contributed to the improvement of hygiene standards and the overall comfort of workers, even during the COVID-19 pandemic.

ITW Pronovia installation in 2021

ITW Pronovia Production Expansion Phase 2:

- Delivery of 2 pcs of adiabatic units, 2 pcs of air extractors and 2 pcs of destratification units for a smaller hall.
- Conversion of the original mold warehouse into production premises.

ITW Pronovia installation in 2023

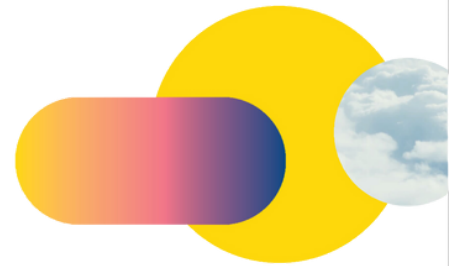
Newly built production hall, 2nd phase of the project:

- Delivery of 2 pcs of adiabatic units, 2 pcs of air extractors and 2 pcs of destratification units to the newly built hall due to expansion of production.



ITW Pronovia collaborated with us on four projects, two of which were large and two smaller. Repeated cooperation testifies to high customer satisfaction with our services and solutions. Our systems are "infinitely" expandable and allow staging without the need to oversize central units, which ensures an efficient and economically advantageous solution for our clients.

Used technology:



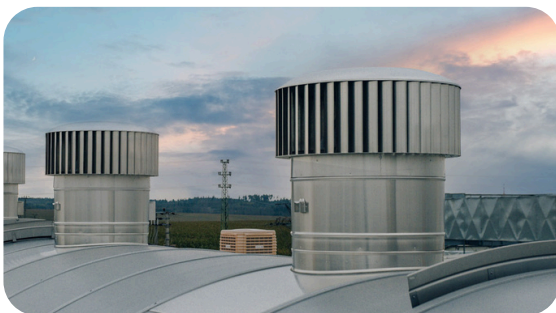
HVLS destratifier

- It will improve the transport of cooled air,
- lowers the feeling temperature by 4 °C,
- will reduce cooling costs by up to 20%,
- disrupts temperature layers (at 2 meters = + 2°C),
- equalizes the temperature between the ceiling
- and the floor at 2-3 °C,
- saves up to 40% on heating.



Adiabatic coolers

- Reduces the temperature up to 28°C,
- reduces electricity consumption energy up to 80%,
- cools only with water,
- supplies 100% fresh air,
- 7x more efficient than air conditioning.



Heat extractor

- It reduces the concentration of pathogens microorganisms,
- reduces the temperature load by up to 5 °C,
- removes moisture, VOCs, CO2, etc.,
- reduces ventilation costs by up to 99%.