



TRANE®

Trane AFD rooftop solutions

Optimize your HVAC efficiency



Reduce your rooftop unit energy consumption

Businesses operate in an environment where energy costs rise continuously. At the same time, productivity and environmental goals become more and more demanding. The rooftop that maintains the comfort of your facility needs energy to operate. With Trane AFD retrofit solutions there is a simple and efficient way to reduce the energy it consumes.

A rooftop unit does not run constantly at full load and adjusts its capacity to the needs of the building. Compressors are loaded or unloaded accordingly.

The indoor fan that distributes conditioned air to the selected building zones operates at full speed regardless of the requirements.

With Trane AFD retrofit solutions, the indoor airflow is automatically matched to the actual capacity needed to make the building comfortable.



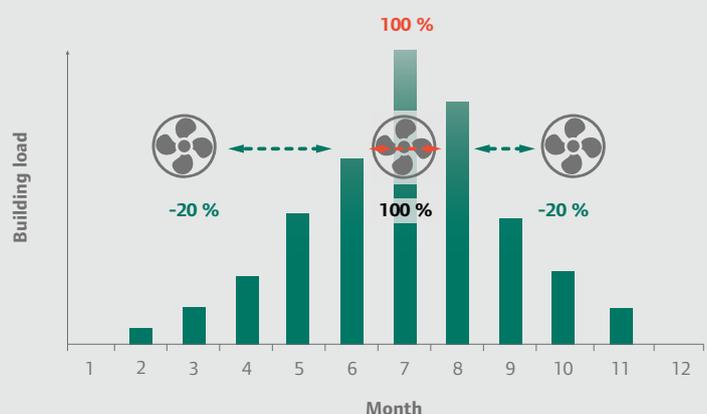
Operating principle

The indoor fan is driven by an electronic controller that adjusts its speed.

As the building load reduces, the rooftop unit is unloaded and the fan speed is reduced.

As the building load increases and the rooftop unit is running at full load, the fan speed is restored at nominal speed.

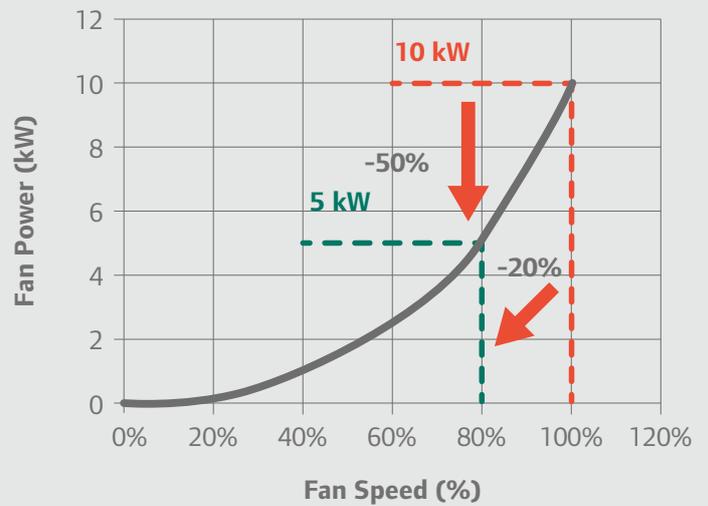
To avoid air stratification, the fan speed is restored automatically whenever heating is activated.



Typical AFD application savings relative to building cooling load

System benefits

- Reduction of rooftop energy consumption. As per fan law the energy varies with the cube of the speed, so that a 20 % speed reduction means a reduction of over 50% in energy consumed.
- 5 dB(A) reduction in noise level when the rooftop unit is unloaded or in ventilation only mode
- Extension of air filter life
- Less stress on drive due to soft start
- Rapid return on investment.



Fan optimization

Applications

Trane AFD retrofit solution is ideally suited to applications where the load varies over the year. Typical applications include:

- Supermarkets
- Warehouses
- Commercial buildings.

Unoccupied zones only need ventilation and AFD retrofit also reduces the airflow in these areas to generate further energy savings.

Trane AFD retrofit is a simple but highly effective means of reducing energy consumption.

Local authorities may offer financial incentives to promote and install energy saving solutions.

In these cases, the financial savings are becoming even more attractive.

Energy savings evaluation

Trane can provide assistance in running load simulations taking into account the specific requirements of your building. These will help determine whether you can fully benefit from the savings generated by Trane AFD retrofit solutions.



High Performance Buildings

Your Mission. Realized.

Efficient systems

Controls

Services

Services portfolio

Trane Elite Start™



- Validate installation
- Engineering checklist for optimal start-up
- Verify and record design operational parameters

Trane Select™ Agreements



- Comprehensive service contracts for HVAC systems
- Improve reliability and efficiency
- Improve cost of ownership

Trane Extended Start



- Foundation for high performance buildings
- Benchmarking baseline parameters
- Monitor and adjust system critical parameters

Trane Controls Services



- Solutions for sustainable high performance buildings
- Maintain system fitness
- Optimize system performance

Genuine Parts and Repair Services



- Comprehensive OEM parts
- State-of-the-art logistics
- Factory authorized technicians

Trane Building Advantage



- Extract key data from your system to make informed decisions
- Achieve optimum operation of your existing equipment
- Use targeted interventions with the latest technology to update your system

Trane Chiller Health Check Program



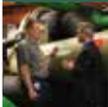
- Inspect chiller operating conditions
- Evaluate basic and critical parameters
- Recommend upgrade and improvement solutions

Trane Intelligent Services



- Remote monitoring with professional advantage
- Address key operational challenges
- Critical alarm management and event log

Trane Service Agreements



- Planned maintenance
- Minimize downtime and extend equipment life
- Reduce operating costs

Trane Rental Services



- Temporary cooling solutions
- Reliable equipment and fast service
- All building purposes



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