



Trane Building Advantage

# Acoustic Solutions

Integrate Your System in the Environment

TRANE  
TECHNOLOGIES

# Customized Noise Reduction Solutions

Existing HVAC equipment can become a source of unacceptable noise. Even though the original sound level requirements may have been satisfied, the environment in which the chiller is operating may have changed. Typically, this is as a result of:

- New construction work around the installation
- More demanding operating conditions for the system
- The evolution of environmental noise regulations
- Reduced tolerance of noise pollution in the building

When a chiller's operation is no longer satisfactory, it is time to take remedial action. Trane has the capability to deliver a customized solution matched to the specific needs of the application be it commercial, clinical, hospitality or industrial.

## A Range of Solutions

Trane noise reduction solutions are based on a thorough assessment of the existing system, its operating environment and the noise reduction required. By evaluating the sources of sound emission, the most effective solution can be selected.

### Compressor sound enclosure

A purpose-designed enclosure can be fitted around the compressor to absorb and contain the noise it generates.

### Fan speed reduction

The disturbance of air by rapidly moving fans can be a significant contributor to noise levels. Special low noise and low speed fans can be fitted.

### Night-time settings

At night, noise is most disturbing but HVAC demands are often lower. Sound emissions can be reduced by cutting fan speed during the hours of darkness.

### Compressor discharge muffler

Just as a car's muffler lowers the noise of engine exhaust, purpose designed silencers can be fitted at the compressor discharge of an HVAC system. These use internal baffles to absorb the noise while minimizing restriction to optimize chiller performance.

### Acoustic wall sound barriers or complete equipment enclosure

These solutions can be viable alternatives when the above mentioned approaches are not feasible.

## Noise emission evaluation

Before making any recommendations for noise reduction, Trane will do a full evaluation of your chiller.

The review will include a full appraisal of the condition of the system and its location to ensure that the enhancements will provide maximum benefits.

## How quiet is quiet?

Reductions of noise emission typically range from 3 to 6 dB(A) depending on the chiller model, its operating conditions and location.

A reduction of 3 dB(A) is equivalent to a 50% reduction in noise emission while a reduction of 6 dB(A) means a reduction of 75%.

The actual gains can be quantified by carrying out before and after noise measurements.

All modifications made to upgrade the system and reduce its operating noise are carried out by a Trane factory authorized technician. This ensures that performance and reliability are never compromised.



## Applications

Trane noise reduction solutions are ideally suited to sites where noise levels negatively impact the comfort of occupants:

- Hospitals
- Hotels
- Commercial buildings
- Residential developments

## Next steps

If your HVAC system is not meeting the sound level requirements you need, then simply contact your local Trane office and request a visit to perform an evaluation.





# Trane Services

The real expertise of a manufacturer



- Systems approach
- Dependable installations
- Energy saving solutions
- Operating cost optimization
- Chiller plant management solutions
- Chilled water production solutions.

At Trane, we are committed to providing a comprehensive portfolio of HVAC solutions throughout your system lifecycle.



## Breakdown resolution

No one plans for breakdowns, but when they happen you need the right partner. Our expert Service Engineers use the latest diagnostic tools to guide you through your options to Repair, Renew, Replace or ReThink.



## Secure operations

At every point during the lifetime of your equipment - installation, commissioning, maintenance or breakdown - Trane can offer an effective solution with commissioning, first-aid kits and service agreements.



## System upgrade

Trane Building Advantage

Trane is committed to bringing the latest technological advantages to our customers through a wide portfolio of solutions which increase the Efficiency, Reliability and Sustainability of their HVAC plants. Our Service Engineers use their expertise together with the latest diagnostic tools to future-proof your system and make it "better than before".



## Equipment rental

For special events, exceptional needs or when you want to ReThink HVAC management, Trane Rental Services have the right solution. With our extensive fleet of equipment, we can perfectly match your temporary heating and cooling requirements.



## Contact us

With over 1000 of the best trained sales engineers and service technicians in the industry, Trane is in the best position to serve your needs. Just call us and we will help you configure the Trane Free Cooling solution for your HVAC system.



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit [trane.eu](http://trane.eu) or [tranetechnologies.com](http://tranetechnologies.com).