



**TRANE®**



# *Trane Acoustic Solutions*

*Integrate Your System in the Environment*



# 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.



# High Performance Buildings

Your Mission. Realized.

Efficient Systems

Controls

Services

Turnkey Solutions

## Services Portfolio

### Trane Elite Start™



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

### Trane Select™ Agreements



- Comprehensive service agreements 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 Care™ Services



- System enhancement service solutions
- Reliability – Energy – Environmental Solutions
- Improve comfort and operating efficiency

### 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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