

# Danfoss Turbocor Compressors Solutions for the Hospitality Industry

The hospitality industry is changing. Customers demand ever higher levels of comfort. Price pressures come from online services. Staffing challenges continue to increase, just to name a few. Comfort is indeed an important part of this equation. In recent interviews with hotel managers, we learned that the following attributes have become paramount for comfort systems:

1. Quiet operation
2. Assurance of comfort
3. Remote monitoring capability
4. Energy efficiency (especially at part load)
5. Compact size

## Sound:

**Problem** – Quiet operation is essential. A growing number of hotels offer “100% Satisfaction” guarantees. If customers complain, they don’t pay. These “giveaways” are treated as an expense with a separate line item for which the hotel manager is held accountable. The leading reasons for the “giveaways” are noise and discomfort.

**Solution** – Centralized chiller plants are a great step in achieving quiet guest rooms, but only if the chiller plant doesn’t contribute to background sound levels. Turbocor compressors are the quietest in the industry.

We recently participated in an installation where a Turbocor compressor replaced a noisy screw compressor installation. Previously, rooms near the equipment room couldn’t even be rented. In the new installation, the manager verified that you couldn’t hear the unit run standing right next to it let alone outside the mechanical room. Suddenly, sound complaints disappeared, and more rentable spaces were available.



## Comfort/Reliability:

**Problem** – The second frequent complaint is room comfort, which translates in large part to system reliability. When air conditioning is lost, the complaint phone starts to ring very quickly.

**Solution** – Because the Turbocor compressor, the heart of the air conditioning system, is a centrifugal compressor with only one moving part, reliability increases. Turbocor compressors are simpler, and as any experienced HVAC technician will tell you, simpler is better. The Turbocor compressor is reliable and built to last. Assurance of a dependable, reliable cooling system is what hotel managers are looking for and that’s what Danfoss Turbocor compressors deliver.

## Remote Monitoring:

**Problem** – In many hotels, there is frequently only one highly technically trained HVAC person on staff, the Chief Engineer. When that person is off duty or at a remote location, technical support decreases significantly. It may take hours to respond to problems or even to answer a question on system status. Hotels need systems where monitoring and troubleshooting can be done remotely, especially for vital components like the compressor.

**Solution** – We recently demonstrated the Turbocor capability for remote alarming and system monitoring to a major hotel chain’s Vice President of Engineering and his staff. They were amazed. Because the Turbocor compressor is essentially a computer that thinks it’s a compressor, a retrofitted chiller now can provide cost effective remote monitoring and diagnostics using the existing facilities management system (FMS) that until recently was only a dream. Right next to the unit, from home, or literally half a world away, the maintenance staff can receive and evaluate information such as kW power level, amp draw and compressor FPM, faults and logs, just to name a few.

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### Energy Efficiency:

**Problem** – After staffing costs, the number two expense for most hotels is utilities. Hotels run on margins so tight that a reduction in utility expense can make a major difference in profitability. Therefore, system efficiency, especially at part loads, is extremely important. It is well known that hotel cooling systems tend to run at part load most of the time because of weather, guest occupancy rates, and event scheduling.

**Solution** – A major advantage of the Turbocor compressor is extremely attractive part load efficiency. Compared to conventional compressors, Integrated Part Load Values (IPLV) of a Turbocor compressor can provide nearly 50% better performance. Hotel operators can readily see this impact on their utility bills and transfer the savings directly to the bottom line.

### Compact Size:

**Problem** – Customers tell us that, in an attempt to keep down the initial cost of construction, most properties are cheated out of having the right size equipment room. This situation is common. Equipment is jammed into a space that makes it difficult to work on it, let alone replace it.

**Solution** – Because Turbocor compressors are ideally suited to compact crowded equipment rooms, space is conserved and equipment maintenance is easier, faster and safer. Again, savings that transfer directly to the bottom line.

### Other Benefits

Hotel engineers like the fact that Turbocor can generally be adapted to either use the existing refrigerant or cost efficiently convert an existing system to R-134a, reducing the expense of costly equipment replacement. This can prove to be a huge savings for existing mechanical rooms especially where access and rigging are difficult.

Experience has shown that Turbocor compressors can cut compressor maintenance costs in half compared to traditional “oiled” systems. There are no annual oil inspections, no oil changes, no oil-filters, and no expensive teardowns. In addition, Turbocor compressors redefine “soft start,” pulling less than 2 amps at startup versus 500 to 600 amps with a 75 ton, 460 volt X-line starter for screw compressors. Hotel operators notice that the compressor only weighs 265 pounds. Two workers can lift it without the need for a crane. Add it up: reliability, quiet operation, efficiency and remote monitoring. These are major advantages associated with selecting a Turbocor retrofit compressor.

Turbocor is an exciting technology that provides profitable solutions to the hospitality industry. To learn more, visit our Web site at [www.turbocor.com](http://www.turbocor.com).



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