# Trane<sup>®</sup> Intellipak I Commercial Packaged Rooftop Units

Available with Trane eFlex variable-speed compressor and eDrive direct-drive plenum fan technologies

### The industry-leading rooftop is still on top

### Efficiently and reliably maintaining a comfortable distance ahead of the competition.

Improvements in efficiency, reliability and comfort: three important benefits you can expect from the addition of Trane<sup>®</sup> eFlex<sup>™</sup> variable-speed compressor and Trane eDrive<sup>™</sup> direct-drive plenum fan technologies to the industry-leading line of IntelliPak<sup>™</sup> I commercial packaged rooftop units—an addition that keeps these exceptional rooftop units on top of the competition.

#### On top ... with more energy efficiency

- High efficiency at full-load operation and part-load operation eFlex technology allows compressors and refrigeration system components to precisely match cooling demand levels while minimizing compressor cycling for optimized energy efficiency. Unlike single-speed compressors and digital scroll compressors which only operate at maximum rpm—eFlex compressors allow their motors to unload and provide optimal efficiency advantages, especially under part-load conditions. Additional enhancements include premium-efficiency eDrive direct-drive plenum fan technology, high full-load efficiency air-cooled solutions and evaporative condensing—which can provide full-load efficiency solutions of up to 14 EER or more. The result is optimized solutions to meet full-load or part-load efficiency requirements, now with the added benefit of an industry-leading variable partload efficiency rating of up to 16.9 IEER.
- Interior Permanent Magnet (IPM) motor—eFlex variable-speed compressors incorporate a new IPM motor: a high-efficiency design that consumes less electrical power than previous models without sacrificing output power.



Trane eFlex variable-speed compressor • Superior compressor modulation— Single-speed compressors' on/off cycling requires a large amount of electrical current to take their motors from an at-rest state to full-speed operation. Continuous operation of the eFlex variable-speed compressor under all conditions—but at reduced speeds under part-load conditions—yields total rooftop energy savings of as much as 20 to 40 percent when compared to other rooftop solutions. In an IntelliPak I rooftop unit, this results in cooling capacity that can be fully modulated from 100 percent all the

way down to 15 percent on all unit sizes.



#### On top ... with more occupant comfort

• Minimizes temperature swings—Trane eFlex variable-speed compressor technology means an IntelliPak I system can modulate its output to more precisely maintain a user-selected temperature, rather than cycling on and off in response to the user-selected temperature being exceeded or met. The result is an interior space that's more comfortable, with extremely consistent off-the-coil leaving air temperatures.

#### On top ... with more reliable operation

- Longer component life—Every time an at-rest electrical device is energized, its architecture is subjected to significant stresses. Over time, these repeated stresses can contribute to the device's decline in performance and eventual failure. Trane eFlex variable-speed compressor technology greatly minimizes on/off cycling, reducing component stresses and helping to prolong compressor life.
- Advanced diagnostic capabilities—The Trane eFlex variablespeed compressor can provide vital information about its operational condition, giving building owners and technicians the ability to analyze and address root causes of minor performance changes before significant abnormal operation occurs, avoiding component damage and reducing system downtime.



# Trane eFlex variable-speed technology

Evolutionary design. Revolutionary performance.

#### Trane eFlex vs. alternative compressor designs

Compressor System Type	Efficiency	Capacity Modulation	Coil Temp. Control	Control Complexity	Cost
Trane eFlex	Best	Better	Better	High	High
On/Off	Good	Poor	Poor	Low	Low
On/Off with Hot Gas Bypass	Poor	Best	Best	Medium	Medium
Ported/ 2-Stage	Good	Good	Good	Low	Medium
Pulse Width Scroll	Poor	Better	Better	High	High
Manifolded Set	Good	Good	Good	Low	Medium

#### Unit EER comparison



When comparing current compressor technologies, Trane® eFlex<sup>™</sup> variable-speed technology offers definite advantages especially in compressor performance. This chart shows Trane eFlex variable-speed compressor technology's clear superiority in overall efficiency, as well as excellent performance in capacity modulation and coil temperature control.

The second chart clearly illustrates the efficiency advantages of Trane eFlex variable-speed compressor technology across a broad spectrum of system performance, from full-load (100 percent capacity) operation through varying degrees of part-load operation-which represents real-world scenarios in which most HVAC systems operate. An Integrated Energy Efficiency Rating—IEER—represents this combination of full- and part-load operation, which is typical of the load a packaged unit would experience in a cooling season. Ultimately, IEER is an ideal indicator of overall energy consumption at the kW meter for your equipment.

## Visit trane.com/ipak1 to learn more about Trane Intellipak I commercial packaged rooftop units.



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.com* or *tranetechnologies.com*.

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