

# Sustainable cooling solutions: Iconic Tunnel Stays Cool and Preserves the Environment

## CATEGORY:

Thermal Comfort

## THE CONTEXT:

The Channel Tunnel connects Folkestone, Kent, in the United Kingdom with Coquelles, Pas-de-Calais, in northern France. Without round-the-clock cooling, the heat generated by high-speed trains passing through the 50.5km-long tunnel under the English Channel would drive indoor temperatures above 35°C, which is the maximum that can be reached while still running services in optimal condition. The new system ensures that ambient temperatures stay at or around 25°C. Two chillers began operation in 2016 in Sangatte, France. The remaining units at Shakespeare Cliff, U.K., have been operational since October 2017.

## SUSTAINABLE COOLING SOLUTION:

- The network was originally supplied by eight York Titan chillers running on R-22. Four chillers, each with 2,000 tons of cooling capacity were installed at in Dover with the other four, each with 1,700 tons of cooling capacity, installed at Sangatte on the French coast.
- Eurotunnel replaced its cooling system with four Trane Series E™ CenTraVac™ large-capacity (2,600 kW to 14,000 kW) chillers using Honeywell Solstice® zd (R-1233zd) refrigerant.
- R-1233zd refrigerant enables customers to reduce their carbon footprint without sacrificing performance. Its GWP of 1 is lower than any other non-flammable solution in the market and is 99.9 percent lower than R-22, the previous refrigerant used in the Tunnel.



## BENEFITS:

- The combination of the highly efficient Trane chillers with R-1233zd refrigerant let Eurotunnel blend energy savings with environmental conservation. Eurotunnel's bold decision to use the latest generation refrigerants is paying off already
- Since the new system began operation, energy use has dropped by 33 percent.
- In 2017, Eurotunnel saved 4.8 GWh electricity which is equal to the energy needed to run 1,000 typical homes, and achieved savings of approximately €500,000.
- 9% carbon footprint decrease compared to earlier system
- 5 consecutive UK Carbon Trust Standard certifications for sustainability efforts

**TOPIC:**

- Energy Efficiency
- Refrigerants

**GENERAL INFORMATION**

**NAME OF THE COMPANY:** Honeywell

The Honeywell logo, consisting of the word 'Honeywell' in a bold, red, sans-serif font.

**CONTACT PERSON:**

Lee Hermitage  
Tunca Sekban

**HYPERLINK TO LEARN MORE ABOUT THE SUSTAINABLE COOLING SOLUTION:**

[https://www.honeywell-refrigerants.com/europe/?document=solstice-zd\\_eurotunnel-infographic\\_en&download=1](https://www.honeywell-refrigerants.com/europe/?document=solstice-zd_eurotunnel-infographic_en&download=1)