

## Customer Success Story

### Hysan Place: An Eco-Friendly Transformation with Trane CenTraVac® Chiller to Enhance Environmental Sustainability for Energy Efficiency and Decarbonization

#### I. Project Overview

Hysan Place, a premier commercial complex located at the heart of Causeway Bay, adheres to its commitment to decarbonization and enhanced building energy efficiency leveraging an upgrade on its cooling system to optimize tenant and visitor comfort. To achieve this, they collaborated with [Trane Hong Kong](#) on the adoption of award-winning CVHM water-cooled centrifugal chiller – a model of Trane’s flagship eco-friendly [CenTraVac®](#) series that has been awarded the Green Product Certification – Platinum by the Construction Industry Council.

#### II. The Mission

Hysan Place is one of the flagship properties of Hysan Development Company Limited, offering a vertical shopping mall and 15-floor Grade A offices. Recognizing the importance of selecting a solution that would align with its sustainability goals and provide long-term value for its stakeholders, Hysan Place sought to achieve with Trane these goals:

- **Superior Comfort:** Ensuring a pleasant and productive cooling environment for tenants and visitors, by upgrading the chillers to seamlessly fit the existing space-constrained plant.



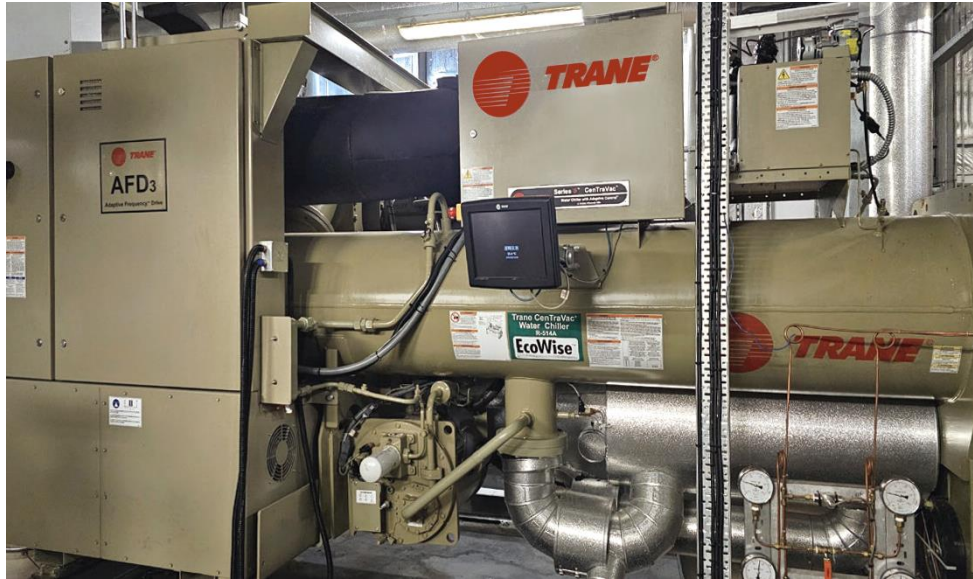
- **Enhanced Efficiency:** Reducing energy costs and maximizing system performance, with the chiller's full-load Co-efficient of Performance (COP) above 6.5 under the desired conditions of evaporator and condenser temperatures being controlled at 6-12°C and 32-37°C, respectively.
- **Prioritized Sustainability:** Minimizing the negative environmental impacts of business operations and promoting responsible resource consumption by integrating advanced technologies that reduce carbon footprints with eco-friendly practices, such as the use of hydrofluoroolefin (HFO) refrigerant R514A, to align with Hysan Development's advocacy for environmental sustainability.

### III. Trane's Solution

Trane has successfully upgraded the chiller plant at Hysan Place with a 300-refrigeration-ton (RT) CVHM chiller, a [Trane® CenTraVac® Water-Cooled Chiller](#) model that features a compact design, requiring minimal installation space, and delivers superior energy efficiency.

This compact model, designed for easy access through standard double doors and disassembly for tight spaces, is an ideal solution for low-tonnage applications, retrofits, and replacements. Despite its size, the CVHM maintains Trane's legacy of high efficiency, reliability, and quiet operation. The CVHM chiller boasts advanced features such as Adaptive Frequency™ – the industry's most capable variable speed drives, a low-speed, direct-drive compressor, and a built-in harmonic filter to enhance power quality and system reliability.

Furthermore, the chiller utilizes new-generation HFO refrigerant R514A with a negligible global warming potential (GWP) of less than 2, making it the first ultra-low-GWP chiller adopted by Hysan properties. This aligns with Hysan Development's comprehensive whole life cycle facilities management plan for decarbonization and enhanced building energy efficiency.



#### IV. Key Outcomes

The implementation of Trane's CVHM chiller at Hysan Place has delivered exceptional results:

- **Enhanced Energy Efficiency:** The chiller's superior efficiency and energy-saving features have significantly reduced the building's energy consumption. The chiller achieves an actual full-load COP of 6.53, exceeding the Building Energy Code (BEC) 2021 requirement by as much as 14.6%.
- **Improved Sustainability:** Leveraging environmentally friendly R514A refrigerant, with GWP of below 2 – notably lower than R134a's GWP of 1430, the CVHM chiller minimizes its environmental impact and supports Hysan Place's commitment to sustainable building practices, contributing to the complex's achievement of the prestigious Leadership in Energy and Environmental Design (LEED) – Platinum rating.
- **Reliable Performance:** The CVHM chiller's robust design, featuring a single moving part supported by two bearings, and a semi-hermetic motor that prevents dust ingress and avoids high-temperature operations, has ensured long-term durability as well as reliable and consistent operation, minimizing maintenance requirements and downtime. Additionally, the chiller's integrated harmonic filter significantly reduces harmonic distortion, enhancing power quality and overall system reliability.

Through the successful adoption of Trane's CVHM chiller, Hysan Place has achieved its goals of enhanced comfort, sustainability, and energy efficiency, setting a benchmark for sustainable and efficient cooling solutions in Hong Kong's commercial landscape.

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## 客戶成功故事

### 特靈 CenTraVac® 冷水機助力希慎廣場實現環保轉型—— 透過提升能效及減碳達致增強環境可持續性

#### I. 項目概述

希慎廣場是一座位於銅鑼灣核心商業圈的頂級商廈，恪守業主希慎興業有限公司對減碳及提高建築物能源效益的承諾，致力透過升級冷水機系統不斷提升租戶及訪客的舒適度。為此，希慎興業與[特靈香港](#)合作，採用特靈 [CenTraVac®](#) 旗艦環保系列之 CVHM 水冷離心式冷水機——該型號產品屢獲殊榮，並已取得香港建造業議會頒發的鉑金級「綠色產品」認證。

#### II. 迎接任務

希慎廣場作為希慎興業的旗艦物業之一，設有垂直購物中心及 15 層高的甲級辦公大樓。鑑於可持續發展並為持份者創造長遠價值的重要性，希慎廣場與特靈尋求解決方案，以期共同實現以下目標：

- **卓越的舒適性**：升級冷水機組，突破機房在空間上的局限，與現有系統無縫銜接，確保為租戶及訪客提供一個高效、舒適的涼爽環境。
- **提高能源效益**：降低能源成本並最大限度地提高系統性能，在蒸發器和冷凝器溫度按規定分別控制在 6-12°C 及 32-37°C 範圍的條件下，冷水機的滿負荷效能系數（COP）高於 6.5。



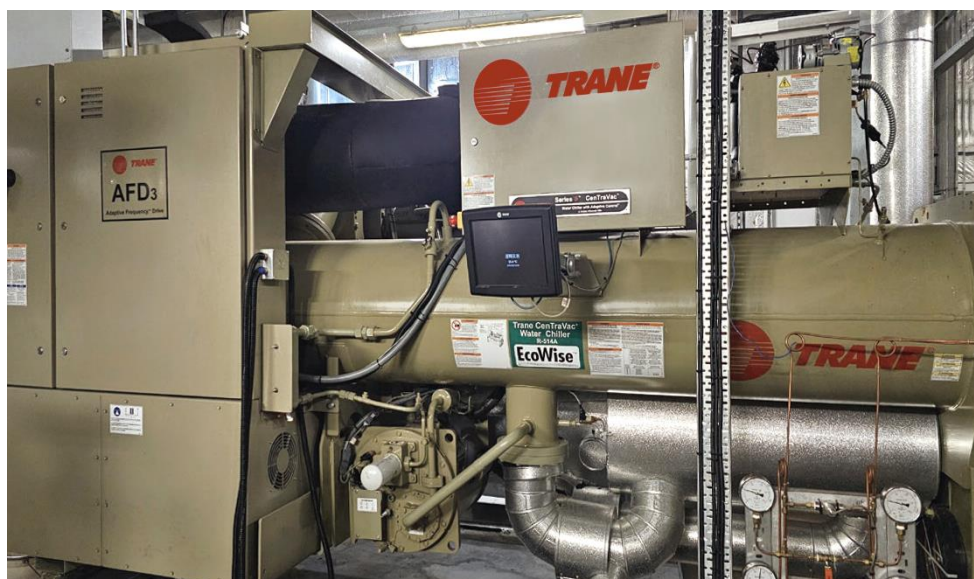
- **優先考慮可持續性**：將可減少碳足跡的先進技術與環保措施相結合，例如使用氫氟烯烴（HFO）製冷劑 R514A，以配合希慎興業有關環境可持續發展的倡導，從而降低業務營運對環境的負面影響，並推廣對環境任負責任的資源消耗方式。

### III. 特靈方案

特靈成功升級希慎廣場的冷水機組，安裝一台 300 冷噸（RT）的 CVHM 冷水機，這是一款 [特靈® CenTraVac® 水冷式冷水機](#) 型號，設計精巧，安裝所需空間極小，而且能效卓越。

該緊湊型冷水機採用標準的雙門設計，可輕鬆開關並在狹小空間內完成拆卸，是低噸位冷水機應用、改造及更換的理想解決方案。儘管體積不大，但 CVHM 仍保持特靈一貫的高效、可靠及靜音運行的特點。CVHM 冷水機擁有先進的功能，例如 Adaptive Frequency™——業界最強變速驅動器、低速直驅壓縮機和內置諧波濾波器，這些有助提升電力質量及系統可靠性。

此外，CVHM 冷水機採用新一代 HFO 製冷劑 R514A，其全球暖化潛能值（GWP）可忽略不計，小於 2。這是希慎物業中首例採用 GWP 超低的冷水機的個案，旨在配合希慎興業實施公司為全面減碳及提高建築物能源效益而制定的設備全生命周期管理計劃。



## IV. 主要成果

特靈 CVHM 冷水機組在希慎廣場的應用取得了非凡的成效：

- **能源效益提升**：建築物能耗因 CVHM 冷水機的卓越效率及節能特性而大幅降低——實際滿負荷 COP 為 6.53，較《建築物能源效益守則》2021 年版的規定超出多達 14.6%。
- **可持續性增強**：CVHM 冷水機採用的環保製冷劑 R514A 的 GWP 小於 2（遠低於 R134a 的 1430），將對環境的影響降至最低，助希慎廣場實現可持續建築實踐的承諾，為希慎廣場取得享有盛譽的能源與環境設計先鋒（LEED）鉑金級認證作出貢獻。
- **性能穩固可靠**：CVHM 冷水機的設計堅固，具有以雙軸承支撐單個運動部件的特點，配備的半封閉電機可防止灰塵進入及避免高溫操作，確保長久耐用以及運行的可靠度和穩定性，最大限度地減少了維修需求及停機時間。此外，該冷水機的集成式諧波濾波器可顯著減少諧波失真，從而提高電力質量及整體的系統可靠性。

希慎廣場透過成功採用特靈的 CVHM 冷水機，實現了提高用戶舒適度、可持續性及能源效益的目標。該項目為香港商業領域提供了一個可持續且高效的製冷解決方案的典範。

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In case of any discrepancy or inconsistency between the English version and this Chinese translation, the English version shall prevail.

如中英兩個版本有任何抵觸或不相符之處，概以英文版本為準。