

# Powering the recovery and rebuild

## HVAC SOLUTIONS FOR HOTEL INDUSTRY

- Flexibility
- Sustainable Growth
- Health & well-being

### Johnson Controls - Hitachi Air Conditioning

**ADDRESS**  
New Pier Takeshiba South Tower  
1-16-1, Kaigan Minato-ku, Tokyo 105-0022, JAPAN  
Tel: +81-3-6721-5567  
[www.jci-hitachi.com](http://www.jci-hitachi.com)

HITACHI. CERTIFIED QUALITY

The specifications of this catalog may change without prior notice to allow Hitachi Cooling & Heating to incorporate the latest innovations for its customers. The information contained in this catalog is merely informative. Hitachi Cooling & Heating declines any responsibility in the broadest sense, for damage, direct or indirect, arising from the use and / or interpretation of the recommendations in this catalog.

Find the products Hitachi Cooling & Heating with the best service and conditions at your Hitachi Distributor.

Hotel-B-2303



Cooling & Heating





## **Table of contents**

- 
- 03** About us
  - 04** Market Trends & Customer Challenges
  - 05** Our Experience & Expertise
  - 05** Value Proposition
  - 07** Hitachi hotel HVAC solutions
  - 09** A full-scale HVAC solution provider
-



# About us

With over 70 years experience in air conditioning, Hitachi Cooling & Heating solutions deliver living harmony through 3 unique philosophies:

- End-to-end thinking which makes it quicker and easier to use our solutions
- Invention & re-invention – an innovation strategy that embraces the new and refines the old
- A focus on the comfort & well being of people who use indoor spaces

In 2015 the Johnson Controls-Hitachi Air Conditioning joint venture was established, combining two 100-year-old cultures and histories to create an exciting new company.

# Market Trend & Customer Challenges

The worldwide hotel market was severely impacted by the coronavirus pandemic during 2020 and 2021. Towards the end of 2021, following a global drive for vaccination and relaxing of travel restrictions, the travel market and hotels have experienced a gradual re-opening.

The hotel industry now faces unique challenges related to HVAC systems in the post pandemic world: finding and meeting the needs of new types of customers, lower staffing levels, higher energy prices & tougher sustainability goals, plus the need to optimize indoor air quality (IAQ).



HITACHI HVAC SOLUTIONS FOR HOTEL INDUSTRY

## Today's Challenges

### New types of customer

Need to attract a balance of domestic and returning international tourism

International business travel is recovering much more slowly, BUT new opportunities to serve other workers:

- 'Digital nomad' – travelling workers who want long-stay accommodation
- Home workers looking for a 'third space' between home and office
- Regular means different timings on room bookings and use of spaces such as lobbies for 'hot desking'

### Lower staffing levels, higher energy prices & sustainability goals

Reduced frontline & maintenance staffing; some furloughed or laid off have not returned

Focus on easy-to-maintain systems which also reduce hotel down-time

Adoption of (tougher) sustainability targets

Must find low-energy solutions that do NOT compromise guest comfort

### Optimizing IAQ, promoting well-being

Rising global awareness of IAQ issues – even pre-pandemic

Airborne virus is a concern to guests & staff; need to demonstrate action

Ventilation, filtration and air conditioning is an important aspect of indoor health

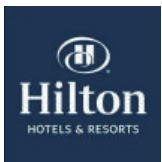
'Well-being' is a popular trend with related services including re-designed interior spaces, spas, health treatments and 'experiences'

OVERVIEW



# Our Experience & Expertise

With a global presence, we have deep industry expertise and end-to-end capabilities that make us a trusted partner for hotel industry leaders. We help them to deliver on the promise to their guests of a comfortable, and healthy environment by providing advanced technology and sustainable solutions.



# Our Value Proposition

Hitachi Cooling & Heating provides a full range of air conditioning solutions that are flexible for changing needs, support the sustainable growth of your business and enhance comfort and well-being for your guests.

## New types of customer

Do you have difficulty finding space for HVAC equipment or wish you could more easily re-configure it for changing needs?



### Flexibility

Integrate HVAC seamlessly into building plans or refurbishments with flexible solutions that can adapt to changing needs

## Lower staffing levels, higher energy prices & sustainability goals

Are your energy bills and maintenance costs increasing?



### Sustainable growth

Whether new build or a refurb, reduce energy costs, simplify maintenance and meet your sustainability goals

## Optimizing IAQ, promoting well-being

Are you investing in new or revamped spaces for improved guest comfort and experience?



### Health & well-being

Creating safe, comfortable and relaxing spaces for guests with Hitachi's 3R framework – right temperature, right feeling, and right purity





# Our HVAC solution for hotels

## Large conference hotel

### Guestrooms

**IDU**  
Ducted or Floor Concealed units  
Compactness and silent IU

**Controllers**  
Easily reset to default settings for new arrivals.



### Conference Rooms

**IDU**  
4-way Ceiling Cassette with Silent-Iconic panel for seamless design integration

**IAQ**  
ViroSense Z2 filter  
Total Heat Exchanger for ventilation

**Controllers**  
Wired remote controls with attractive design and easy to use



### Guestrooms, Restaurants & Gym

**Topflow VRF**  
One comprehensive solution delivers comfort and efficiency



### Independent Coffee Shop

Large single split system.  
Reliable, easy to maintain and cost-effective.



### Hotel HVAC management solution

- CSNET manager with Modbus direct connection
- airCloud Pro App and software for remote maintenance

## Resort hotel

### Wellness Centre including spa & gym

**IDUs**  
4-way Ceiling Cassette with Silent-Iconic panel for seamless design integration and intelligent sensors for advanced comfort features Ultra-quiet indoor units. Elevated panel available for quickest and easiest maintenance

**IAQ**  
ViroSense Z2 filter for cassettes ViroSense AQtiv-Ion



### Remote Service Centre

Large single split system.  
Reliable, easy to maintain and cost-effective



### Indoor Swimming Pool

**Water-cooled Screw Chiller**  
for removing humidity



### Hotel HVAC management solution

- CSNET manager with Modbus direct connection
- airCloud Pro App and software for remote maintenance
- Bacnet, KNX, and lonworks compatibility

### Guestrooms, Restaurants & Wellness Centre

**Topflow VRF**  
One comprehensive solution delivers comfort and efficiency



### Banqueting Hall

**Air-cooled scroll chiller** for high efficiency in large spaces



### Guestrooms

**IDU** for guest rooms  
Ducted or Concealed units  
compactness and silent IU

**Controllers**  
Wired remote controls with attractive design and easy to use





# Our HVAC solution for hotels

## City hotel

### Guestrooms

**IDU**  
Ducted or Floor  
Concealed units  
Compactness and silent IU

**Controllers**  
Wired remote controls  
with attractive design  
and easy to use

### Guestrooms, Restaurant & Lounge

**Topflow VRF**  
One comprehensive  
solution delivers comfort  
and efficiency

### Hotel HVAC management solution

- CSNET manager with Modbus direct connection
- airCloud Pro App and software for remote maintenance
- Bacnet, KNX, and Lonworks compatibility

### Independent Shop

Large single split system.  
Reliable, easy to maintain  
and cost-effective

### Restaurant, Lounge & Lobby

**IDUs**  
4-way Ceiling Cassette  
Ultra-quiet Ducted units

**IAQ**  
ViroSense Z2 filter for cassettes  
ViroSense AQtiv-Ion Kit for Ducted units  
Total Heat Exchanger for ventilation

# A full-scale HVAC solution provider

**VRF** | a flexible solution for spaces throughout the hotel



### guest rooms

- Quiet rooms
- Clean air
- Easy control

### Hitachi Solutions

**Range of IAQ solutions** including filters and ionizers provide cost-effective ways to improve air quality in guest rooms without installing separate equipment. Gentle cool fits perfect for guest room where comfort is the top priority. SmoothDrive is also a great technology for adapting changes on demand variation scenarios for guest rooms.



### kitchens

- Oil-proof cabinet
- Oil-proof controller
- Easy-to wash filter

**Ceiling suspended units and ducted units** can direct airflow up to 8m away, making them ideal for kitchens where cooler air needs to be dispersed over a wide area



### restaurants, bars & lounges

- Higher rates of air flow and air-renewal
- Avoid direct airflow on guests

**Automatically direct airflow away from people** to avoid creating draughty spaces in restaurants, bars and lounges. Requires compatible 4-way Cassette with Twin-Sense panel



### gyms & spas

- High air-flow rate
- Ventilation may be needed
- Automatic control of AC based on occupancy to save energy

**Total Heat Exchanger** is a 2-way ventilation unit that expels dirty indoor air and brings fresh air indoors, while using heat recovery to reduce energy consumption. So as for DX-KITS which could be used as air renewal equipment, too.



### lobbies

- Adequate zoning to ensure even temperature distribution
- High ceiling mode for our Indoor units avoids temperature stratification and guarantees comfort.
- FrostWash and elevated panel (silent iconic) as advantage for maintain high ceiling spaces.
- High ceiling mode for our Indoor units avoids temperature stratification and guarantees comfort.

Build HVAC networks of up to 160 indoor units across 64 independent control zones with H-LINK wiring and modular VRF solutions



### meeting rooms

- Adequate zoning to ensure even temperature distribution
- Automatic control of AC based on occupancy to save energy

**Twin-Sense Panel with CrowdSense** automatically adjusts loading to account for occupation density in the area covered by each indoor unit. Smooth drive is a great feature to adapt for load demand changes.



### mid-sized banqueting spaces

- Ducted solutions that blend into interior design features
- Variable occupation density depending on the type of event hosted, requiring a HVAC solution that can efficiently adjust in real-time
- High capacity solutions needed for large open spaces

Range of **ducted indoor units** with different capacities and adjustable ESP settings

# A full-scale HVAC solution provider

**VRF** | a flexible solution for spaces throughout the hotel

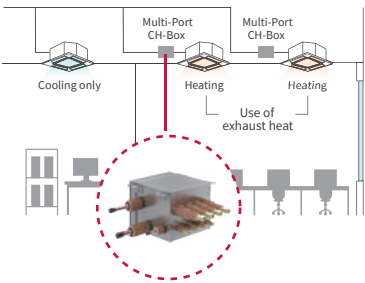


## Flexibility

VRF equipment is compact compared to conventional ‘packaged’ HVAC units. Piping lengths are also longer so VRF can install in the roof and not the case for PAC. The modular nature and our wide variety system types provide great flexibility for hotels.

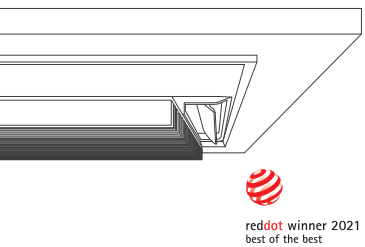
## Compact Heat Recovery Systems

For simultaneous cooling & heating, our patented CH-Box eliminates condensation while being small from just 19×30×21cm in size, helping realize higher ceilings in guest rooms, noise-free operation and requires no maintenance. Three-pipe system helps to realize ultimate flexibility and personalized comfort by transferring excess energy from one zone to another while achieve saving energy and highly improving efficiency for the system.



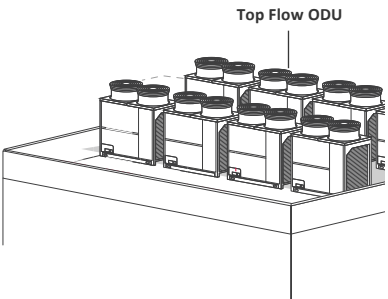
## Premium Design

Our unique Silent-Iconic cassette panel combines the benefits of smaller ceiling plenums for non-ducted systems with the visually silent appearance of a ducted unit. Streamlined 4-way air outlets appear as slits, minimizing their visual impact, looking contemporary and minimalist.



## Modular Flexibility

200m piping runs support installation of ODUs further away from guest areas, minimizing noise and enabling them to be hidden. Modular system can be added to over time, so you can finish a hotel refurb floor-by-floor based on operational needs or defer installation costs in multi-use buildings where spaces are not yet let to other tenants.



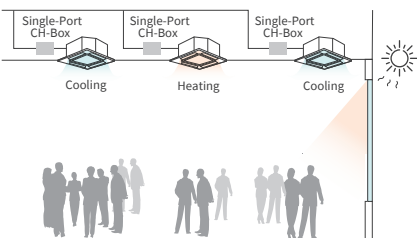
## Sustainable Growth

Resuming business post-pandemic while also investing in future growth is a common requirement in today’s hospitality industry. Consider Hitachi VRF solutions as a way of reducing future energy bills through both designed-in efficiency of the solution and intelligent management that proactively reduces power consumption and requires less maintenance.

## Efficiency designed-in

**SEER** up to 8.33 and **SCOP** up to 5.06 (Top Flow VRF)

**Heat Recovery** configurations enable waste heat to be re-used in areas of the hotel which are naturally cooler due to their facing aspect, saving energy bills and improving temperature consistency through the building

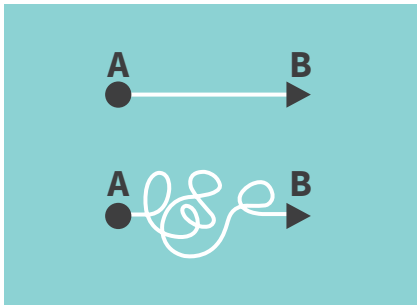


## Less is more

**Less outdoor capacity needed** with unit capacities up to 120HP and 130% IDU to ODU connection ratio, for rooms with low simultaneity.

**Easier installation with H-LINK wiring:** connect units together in any order using the shortest or easiest path

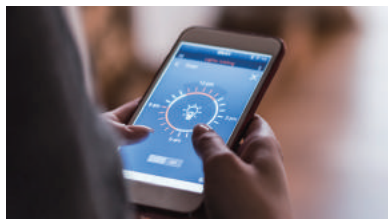
**Faster configuration and maintenance with airCloud Tap** – copy & paste settings to multiple ODUs from a phone and download operational data faster



## Smart Energy Management

**Eco Genius** – an Active Set-Point Management tool built into airCloud Pro software which enables optimization of cooling & heating based on off-peak energy pricing

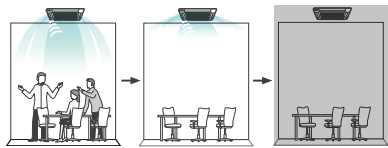
Software and hardware controllers can place caps on power consumption during peak pricing periods and offer modes to moderate capacity



## Intelligent operation

For areas with light traffic during parts of the day, (e.g. lounges, restaurants, gyms), **Auto-Save** enables individual units to automatically reduce output when spaces are vacant and shutdown after a prolonged period of vacancy. Available on a range of indoor units with optional motion sensor kit.

For guest rooms, **Setback Mode** enables interlock with a hotel key card so that AC is activated based on room occupancy, whilst also setting a baseline temperature to be maintained when guests are out





# A full-scale HVAC solution provider

**VRF** | a flexible solution for spaces throughout the hotel



## Sustainable Growth

Resuming business post-pandemic while also investing in future growth is a common requirement in today's hospitality industry. Consider Hitachi VRF solutions as a way of reducing future energy bills through both designed-in efficiency and intelligent management that proactively reduces power consumption and maintenance costs.

### Efficient Ventilation

Ventilation enables better air quality but at the same time it can increase energy bills by reducing the efficiency of an AC system. Our **Total Heat Exchanger** - a 2-way ventilation unit - can reduce your annual electricity consumption up to 36%\* if replacing a ventilation fan. It does this by using heat recovery to bring outdoor air closer to the required indoor air temperature.

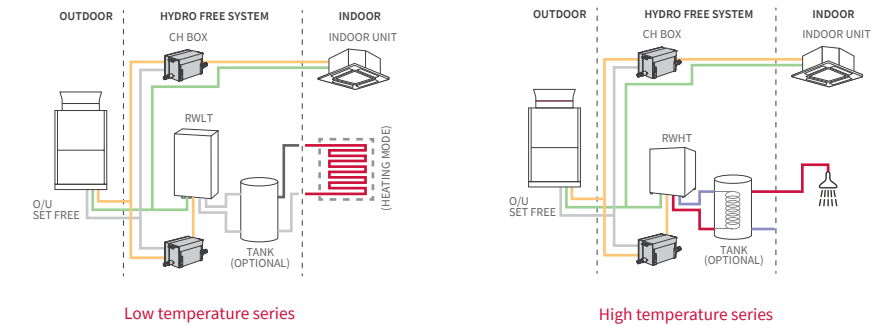
\*Simulation; Tokyo, operation 8am-18pm, office, 135m<sup>2</sup>, Econofresh\*800, Indoor temperature 25C, based on weather data Feb 16, 2020, Cooling/Heating operation



### Hydrofree for free domestic hot water production

Hydro Free unit can be installed in a VRF Heat Pump or Heat Recovery system using the refrigerant loop to provide domestic hot water to various parts of a hotel, whether guest rooms or kitchens, for example.

- Can connect to a hot water storage tank for onward use as domestic hot water in guest bathrooms, commercial kitchens, or even in floor heating and radiators
- Suitable for refurb and modernization projects – easily connects to existing tanks and/or under-floor heating or radiators
- Could be used as a free secondary hot water source.
- Water output ranging from 7C to 45C (regular model) or up to 80C (High Temperature model)
- Reduces operating costs and improves energy efficiency compared with a traditional electric water heater or gas boiler
- Ultra compact design can be installed on a wall; weighs from just 30-129kg
- All internal components are easily reachable with access to all piping connections underneath the unit
- Hydro Free High Temperature module uses a second compression cycle to boost water temperature up to 80C only when needed – saving energy and removing the need for a direct electricity-powered heating filament



## Health & Well-being

Whether guests are visiting for relaxation, a business trip or staycationing, more than ever hotels are expected to provide a comfortable environment while also taking reasonable precautions to reduce transmission of viruses and germs. Hitachi's 3R philosophy is a useful framework for considering HVAC solutions that can contribute to the health and well-being of hotel guests.

### Right temperature

Precise and accurate temperature control with the following features available..

- **SmoothDrive** uses Hitachi's patented direct capacity control technology and drives direct load control. It uses intelligent trend analysis to directly deliver the precise amount of cooling or heating to meet demand at any given moment, improving temperature stability compared with other VRF systems
- In heating mode **FeetWarm** prevents cold floors by detecting a temperature drop on the floor from a sensor in the ceiling cassette and directing warm air to the floor level
- In cooling mode **FloorSense** prevents over-cooling of the floor by detecting floor temperature and adjusting airflow
- With **GentleCool**, users have control over how discharged air reaches a preferred temperature setting, avoiding cool draft and ensuring a smoother cooling down effect.



### Right feeling

Control airflow for guest comfort with **Direct/In-Direct airflow control** options. Ideal for spa treatment rooms, restaurants and lounges.

A motion sensor divides the room into 4 areas and can detect human presence in each of them, directing air towards or away from people according to the selection option.

Available with Twin-Sense cassette panel.



### Right purity

**ViroSense S filter** now fitted as standard on all VRF cassette and some ceiling suspended units, providing > 99% inhibition of viruses (exc. SARS-CoV-2) and bacteria.

**ViroSense Z2 filter** available as an optional upgrade on 4-way cassettes, with proven SARS-CoV-2 inhibition of >99.9%.

**AQtiv-Ion Kit** for ducted units. Generates negative ions and emits through AC airflow, which bind to pollutants sending them harmlessly to the floor. >99.9% inhibition of SARS-CoV-2.

**Total Heat Exchanger** - a 2-way ventilation unit that expels dirty indoor air and brings fresh air indoors with airflow capacity options from 150-5,000 m<sup>3</sup>/hr covering small or large spaces



# A full-scale HVAC solution provider

## VRF SOLUTIONS



### Top Flow VRF

Hotels with adequate roof space  
Looking to maximize energy savings

**Key Specs & Features**

- Scalable modular system
- Up to IDU 130% connection capability
- Single ODU cabinet up to 24HP and modular combinations up to 96HP
- SEER up to 8.33 and SCOP up to 5.06
- Heat Recovery option for best energy efficiency in seasonal climates and buildings with large variations in ambient conditions
- airCloud Tap available for faster service & maintenance



### SideSmart VRF

(Notes: Available in part of EU countries)

Hotels where outside space is very limited but can use ground, balcony or indoor equipment rooms with louvred ventilation

**Key Specs & Features**

- Scalable modular system
- Single ODU cabinet up to 18HP
- 40% smaller footprint than TopFlow VRF - from just 420mm deep and 1050mm wide
- EER up to 4.51
- Designed for indoor equipment rooms with 60Pa ESP setting enabled. Hot air is discharged from the side enabling more effective dispersal



### Indoor Units

Wide variety of indoor units including concealed, floor, ceiling suspended, cassette, ducted and wall mounted

- More than 100 models to choose from
- Award-winning **Silent-Iconic** cassette panel for better interior design but without the cost and installation complexity of ducted units
- Intelligent sensors enabling advanced comfort features like **CrowdSense** which automatically adjusts loading to account for occupation density, **FeetWarm** and **FloorSense** which prevent cold air at the floor level
- For areas with light traffic during parts of the day, (e.g. lounges, restaurants, gyms), **Auto-Save** enables individual units to automatically reduce output capacity when spaces are vacant and shutdown after a prolonged period of vacancy.
- With GentleCool, users have control over how discharged air reaches a preferred temperature setting, avoiding cool draft and ensuring a smoother colling down effect.



### Indoor Air Quality

Ventilation units, filters and ionizers enabling upgrades in indoor air quality without excessively increasing running costs

- **ViroSense S filter** now fitted as standard on all VRF cassette and some ceiling suspended units, providing > 99% inhibition of viruses (exc. SARS-CoV-2) and bacteria
- **ViroSense Z2 filter** available as an optional upgrade on 4-way cassettes, with proven SARS-CoV-2 inhibition of >99.9%
- **AQtiv-Ion Kit** for ducted units. Generates negative ions and emits through AC airflow, which bind to pollutants sending them harmlessly to the floor. >99.9% inhibition of SARS-CoV-2
- **Total Heat Exchanger** - a 2-way ventilation unit that expels dirty indoor air and brings fresh air indoors with airflow capacity options from 150-5,000 m<sup>3</sup>/hr covering small or large spaces. Uses heat recovery to bring outdoor air closer to the required indoor air temperature, reducing energy consumption





# A full-scale HVAC solution provider

## VRF SOLUTIONS

### Physical Controllers

#### Central Controllers

- Operate up to 160 indoor units across 64 independent control zones
- Visualize energy consumption, errors and program 140+ settings
- Synchronize time/date with individual controllers in guestrooms

#### Room Controllers

- Stylish room controllers, ergonomically designed for better haptics
- Hotel Setback temperature with interlock to key card
- Temperature limit setting: prevent excessive use
- airCloud Tap compatible: engineers can copy/paste commissioning settings for all guestroom controllers using their phone via NFC

#### Wireless Controllers

Handheld remotes ideal for bungalows and beach resorts.  
Our latest Room Controllers include an integrated IR receiver so no need to purchase separately



### IoT Controls

#### airCloud Pro

- Smartphone app and browser-based PC software
- Requires airCloud Pro Gateway adapter to connect HVAC system to the internet
- Enables remote management of HVAC system by offsite personnel, who can manage multiple sites/hotels through a single interface
- Visualization of energy consumption by zone
- Error & filter cleaning notifications for each IDU
- Eco Genius - an Active Set-Point Management tool built into airCloud Pro. It enables building managers to optimize cooling & heating based on off-peak energy pricing
- CS-Net

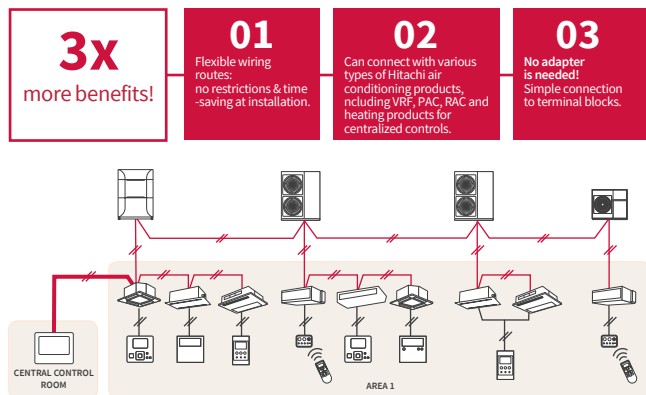


### H-LINK Wiring

- Hitachi's proprietary wiring system enables all units and controls to form a single network, regardless whether they are distributed across one or more refrigerant systems.
- Easier installation with H-LINK wiring: connect one or more refrigeration systems via any IDU or ODU – simply connect from one unit to the next on the shortest or easiest path
- Connect Hitachi Prime systems to the same control network as a Hitachi Prime system

#### Connection to BMS

Connect and integrate to a modbus management system by using our CSNET manager, having direct modbus compatibility.



# A full-scale HVAC solution provider

## Utopia Prime | a cost-effective solution for independent areas or separate buildings



- Utopia Prime is a 1:1 split system with capacities up to 14kW
- Choice of Ducted, Cassette or Ceiling Convertible indoor units
- Available as Heat Pump, Prime can connect to every VRF IU



#### independent shops & cafes

Independently operated spaces which may have separate energy billings and operating hours

- Areas not operated by the hotel and which may have separate utility billings
- Space might be tenanted later than the hotel so a low-cost retrofit solution is preferred



#### isolated spaces

Separate smaller buildings, for example small gyms, lounges or cafes in resort hotels

- Not feasible to run refrigerant piping from main buildings
- Spaces may change use and therefore require retrofit



#### refurbs & retrofits

When it's not practical to install VRF due to cost or lack of space to install piping across multiple rooms

- Historical or converted buildings where installation of VRF piping is not possible
- Retrofits to areas which previously did not require air conditioning



#### server/equipment room

Rooms for computer servers and other electronic equipment

- Require a stable, cool temperature
- May be installed in addition to another HVAC system as a back-up
- Isolated from main HVAC system in the event of servicing or faults

#### Hitachi Solutions

Utopia Prime includes a choice of indoor units including 4-way Cassette, Ducted and Floor/Ceiling convertibles for different tenant needs

With H-LINK wiring and an adapter, even isolated spaces using Utopia Prime can be connected to a Hitachi VRF network, providing seamless central control

Utopia Prime Floor/Ceiling convertibles require minimal installation work making them suitable for some refurb scenarios

Utopia Prime is an excellent choice for cooling applications in server rooms. The capacity of its indoor units can be 115% higher than outdoor units. With the cooling operation range of -15°C / +46°C (BS), the system achieves even better cooling performance in low humidity applications.



# A full-scale HVAC solution provider

**Utopia Prime** | a cost-effective solution for independent areas or separate buildings



## Flexibility

Utopia Prime is 1:1 split system that can be used when installation of multi-room VRF pipework or ducts is not possible or unnecessary. This includes isolated spaces, independently operated areas of hotels, or refurb and retrofits which may be changing the use of a space post-pandemic.

### Compact units for single or multi-storey buildings

Outdoor units can be installed at ground level, small ledges or roofs of low-rise buildings, weight from just 19kg weight and 236×580mm footprint.

Outdoor units can be placed up to 30m above or below indoor units, making them suitable for multi-storey accommodation buildings up to 8 or 9 floors.



### Flexible ducting routes

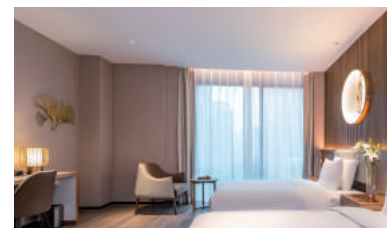
Hotel accommodation and service areas are more likely to have recesses and areas where AC ducts can't be routed. Utopia Prime's wide external static pressure (ESP) range from 30Pa allow longer ducts with more turns to be installed without impacting air pressure, increasing the flexibility of placement between indoor and outdoor units.



### Indoor units for every space

Choose from a range of indoor units:

- 4-way cassettes for large open spaces like gyms and cafes
- Multiple choices of indoor units are available for Prime series.
- Low profile ducted units from just 190mm height for premium guest accommodation
- Ceiling units for low-cost retrofits



### Fire alarm connection

Outdoor unit includes a PCB connector for wiring connection to a fire alarm and enabling automatic shutdown to prevent the spread of smoke.



## Sustainable Growth

Many hotels are looking to re-design spaces to attract guests. Utopia Prime has lower up-front investment than a VRF system but can still deliver operational energy cost and maintenance savings compared with many other split-systems or packaged units.

### Compressor control for energy efficiency

Efficient DC motors and inverter compressor control enables more precise adjustments in output to use just enough energy to maintain the desired temperature.



### Preventative maintenance

Small details in Utopia Prime units add up to a big difference in maintenance costs.

- Hydrophilic aluminum coating prevents water and mineral deposits on the heat exchanger, helping to maintain long-term energy efficiency
- Automatic refrigerant level monitoring
- Internal drain pan reduces the risk of blockage from dust and debris
- Automatic blockage detection triggers shutdown rather than risking water damage to buildings
- Easy to remove and wash indoor unit filters without requiring a HVAC technician



### Guest room energy saving

Integrate hotel key card system into operation of the AC for guestrooms to enable auto on/off operation based on occupancy.





# A full-scale HVAC solution provider

**Utopia Prime** | a cost-effective solution for independent areas or separate buildings

## Health & Well-being

Although hotel guests have heightened awareness of air quality and virus transmission, they are also looking for comfort and relaxation. Utopia Prime enables hotels to control temperature and airflow while minimizing noise. Ducted system with build in ionizer kit, is compatible with indoor air quality treatment function.

### Fresh air inlet function

Optional 1-way ventilation port on indoor units. Sucks outside air into the unit via a pipe, and blends it with conditioned air enabling poorly-ventilated areas



### Ultra-quiet 26dB ducted units

For noise-sensitive areas including guest accommodation, spas and relaxation rooms, select our ultra-quiet ducted units from just 26dB-33dB on low-high fan speeds



### Advanced airflow control with 4-way cassette

- Horizontal-vertical powered louvre adjustment for complete flexibility in airflow direction
- For rooms with high ceilings, for example lobby areas, a special mode can be enabled automatically adjusting airflow to compensate (requires PC-ARFG2E wired controller)



# A full-scale HVAC solution provider

**Utopia Prime SOLUTIONS**

## Utopia Prime

- For isolated spaces and separate accommodation buildings in a hotel including resort villas
- Independently operated shops & cafes within hotels
- Refurb and retrofit projects, including changing the use of hotel spaces, or where it's not practical to install VRF due to cost or lack of space for piping

## Key Specs & Features

- 1:1 split system or simultaneous control (twin up to 4 units) with capacities up to 14kW
- Heat Pump



## Indoor Units

Choose from 3 types of indoor unit based on the type of hotel space.

- **4-way Cassettes** are ideal for large open spaces with higher ceilings including lobbies, lounges and ports facilities.
- Effective from heights of up to 5.5m with high ceiling operation mode
- 4-direction air flow with horizontal-vertical powered louvre adjustment



- **Ducted** units for premium spaces where seamless integration into interiors is important.
- Low height profile from just 190mm
- Near-silent operation from just 26dB; ideal for guest accommodation



- **Ceiling Convertible** units can be mounted on the wall at floor level or the ceiling.
- No need for ducting or for running piping through a false ceiling
- Cost-effective way of adding AC to a hotel space that's changing use.



## Indoor Air Quality

- **Optional 1-way ventilation port** on indoor units. Sucks outside air into the unit via a pipe, and blends it with conditioned air enabling poorly-ventilated areas
- **Total Heat Exchanger** - a 2-way ventilation unit that expels dirty indoor air and brings fresh air indoors with airflow capacity options from 150-5,000 m3/hr covering small or large spaces

## Controllers

Choice of wall-mounted controller with large LCD display or handheld remote control



## Integrate with a Hitachi VRF System

Connect to a Hitachi VRF system using the Utopia Prime H-LINK Adapter



# A full-scale HVAC solution provider

**CHILLERS** | reliable & efficient solution for large spaces



- Air cooled and Water Cooled models available with Scroll, Screw or Centrifugal compressor technology
- Proven high-quality Hitachi compressor inside
- Available as Heat Pump or Cooling Only
- From 11kW to 1,808kW capacity per unit



lobbies

- Can be difficult to efficiently cool or heat due to frequently-opened doors, often large glass walls and high ceilings
- Possibility for significant energy savings with a more efficient HVAC solution



banqueting & conference centers

Variable occupation density depending on the type of event hosted, requiring a HVAC solution that can efficiently and precisely adjust accordingly



spas & indoor swimming pools

High-humidity environments which if not properly managed will lead to building damage and odors

## Hitachi Solutions

Water-cooled chiller solutions with IPLV of up to 9.93 for incredible energy efficiency

Variable Frequency Drive (VFD) technology and an electronic expansion device with 500-step flow resolution, enable precise capacity matching from 25-100% load

Modular air-cooled inverter chiller solution can be used in combination with air handling units to dehumidify and if necessary, re-heat spaces of varying size



## Flexibility

Our range of air and water-source chillers enable flexibility in how capacity is scaled up or down as hotel usage requirements change, space-saving designs, and adaptable water temperature parameters to optimize efficiency under high or low load.

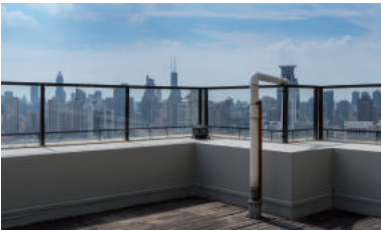
## Scalable capacity

Suitable for open spaces from a few hundred square meters to over 10,000m<sup>2</sup>. Up to 16 **Air-Cooled Modular Inverter Chillers** can be connected to provide capacity from 65kW to >2,000kW while being easy to re-size the system by adding or removing modules.



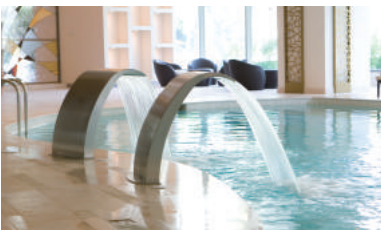
## Space-saving & flexible installation

**Air-Cooled Modular Inverter Chillers** do not require a chiller plant room or condenser side piping. They have a footprint of just 1.37\*1.2m and require only 0.5m between units, making them suitable for rooftop placement in a variety of layouts from “L” shape for corner spaces to “U” or “Z” shape placement around obstacles or architectural features.



## Wide temperature adjustment range

**Variable Speed Water-Cooled Chillers** can work with a wide range of water temperatures, maximizing efficiency in different climates and loading factors. Supports chilled water output range from 4-15°C with 0.5°C adjustment accuracy, and condenser output range from 22-40°C



## Heating & cooling in any weather

**Air-Cooled Modular Inverter Chillers** can operate in ambient temperatures from -15°C (or -25°C for Low Ambient model) to 43°C and include a smart defrosting mode for cold climates.





# A full-scale HVAC solution provider

CHILLERS | reliable & efficient solution for large spaces

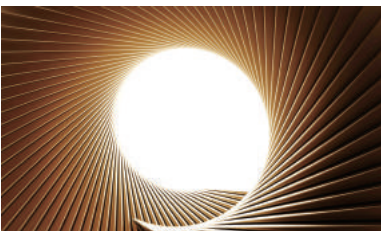


## Sustainable Growth

The operating costs of a chiller in a hotel will reach at least 10x the initial cost of the equipment, so accurately meeting the required cooling or heating load can provide significant energy savings over the lifetime of the unit. In hotels this load can fluctuate significantly throughout the day, whether because of event spaces with different occupant densities, or changing ambient conditions outside impacting hotel lobby areas.

### Designed for efficiency

Air-Cooled Modular Inverter Chillers feature a heat exchanger with internal copper tube threads to increase heat transfer area, and an electronic expansion valve with 500-step flow resolution for precise capacity matching from 25-100% load. These technologies help to achieve an IPLV of 6.06 / COP 3.0.



### SEER up to 4.71, SCOP up to 3.54

Variable Speed Water-Cooled Chillers have 15-100% stepless capacity control range, so they can efficiently meet the needs of changing cooling demands through the day.



### Servicing without downtime

Air-Cooled Modular Inverter Chillers can function independently of each other, so if one unit is being serviced another can run as normal, which means servicing and maintenance doesn't need to impact hotel event schedules



### 40+ years building compressors

With over 200,000 twin screw compressors sold since 1979, the latest compressors in our **water-source screw chillers** include multiple failure safeguards including a pressure-differential driven oil system which removes the need for an oil pump and a semi-hermetic structure with a built-in refrigerant-cooled motor.



# A full-scale HVAC solution provider

CHILLER SOLUTIONS



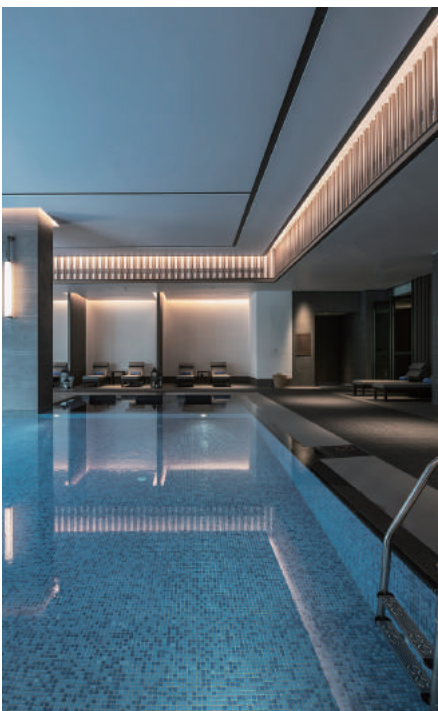
### Samurai M and Samurai S Chillers with scroll and inverter rotary compressors

- Hotels with roof space
- Hotels with conferencing or banqueting facilities, large lobby areas or indoor swimming pools
- Looking for a scalable solution with flexibility to meet changing needs and expansion
- Looking for cooling or cooling & heating solution



#### Key Specs & Features

- Scalable modular system
- SEER up to 4.71, SCOP up to 3.54
- Fixed flow temp and variable flow temp
- Heat Pump and Cooling Only options



### Samurai L Chiller with screw compressor

- Hotels with large banqueting or conference halls looking for maximum possible energy efficiency
- Air cooled, water cooled and condenser less with screw compressors
- Hotels where outside space is limited but an indoor plant room is available



#### Key Specs & Features

- Equipped with Hitachi twin-screw compressor and offer continuous capacity control from 25% to 100%
- Precise temperature control
- Scalable modular design
- Wide operation range, chilled water from -10°C and hot water up to 55°C
- Two operating modes: standard mode and high efficiency mode
- Partial heat recovery