HITACHI

# Yutaki Sand S Combi

Heating and domestic hot water (integrated or remote)



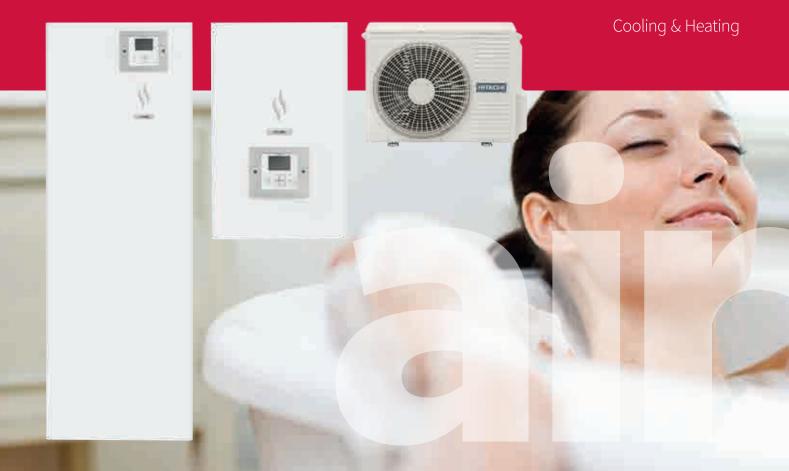








Air/water heat pump splits



# WHY CHOOSE A HITACHI HEAT PUMP?

#### **HOW DOES IT WORK?**

The outdoor unit of the **Yutaki heat pump extracts the heat energy contained in the ambient air**, and transfers it inside your accommodation as usable heat through the indoor unit.

#### THE COST-SAVING SOLUTION!

The Yutaki heat pump was designed to use 70% of free power (heat energy in the air) and only 30% of electricity.

#### **HERE'S WHAT YOU NEED TO KNOW!**

The power savings generated are directly proportional to the coefficient of operating performance (COP).

With the Yutaki S and S Combi, for every 1 kW of power consumed, up to 5.25 kW of heat energy is generated (under normal operating conditions). The Yutaki S and S Combi are among the best on the market!

#### **ECOLOGICALLY RESPONSIBLE COMMITMENT**

With its thermodynamic system, the **Yutaki heat pump produces more power than it consumes**.

### A TECHNOLOGY THAT REALLY PERFORMS!

Quiet and compact, these heat pumps currently represent **the best performing technology to equip your house**.

### **THINK ABOUT IT:**



5.25

HIGH COP
i.e. 1kW consumed

= 5.25 kW heating













# **MORE COMFORT**

- Operation guaranteed down to an outdoor temperature of -25°C (depending on model).
- The indoor unit is ultra-silent at only 37 dB(A) (depending on model).

Low sound pressure level (at 1 meter from the unit, decibels dependent on the model).



# **MORE ECONOMICAL**

Hitachi products combine performance with great economy and have some of the highest energy efficiency ratings.





A+





# **ECOLOGICAL**

Hitachi is committed to environmental protection through the introduction of the new R32 refrigerant in its heat pumps.

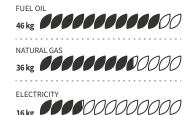
- Our new R32 models are 5 to 15% more efficient than the R410A.
- More environmentally responsible, R32 reduces the volume of refrigerant in our units by 30% while also delivering better performance.

Contrary to classic heating boilers, Hitachi heat pumps have no direct CO<sub>2</sub>emissions. (CO<sub>2</sub> only linked to the production of electricity).

Unique amongst heating systems, this is the only one capable of producing more power than it consumes.



Emission rate of CO<sub>2</sub> annually and by m<sup>2</sup>



Emission level of CO2 annually and by  $m^2$  of the structure for a 125  $m^2$  house built in 1980 in the Rhône region. Energy costs in accordance with www.developpement-durable, gouv.fr Depending on location and use of the compared systems. (Jan 2013, base 100).

#### **RANGE ELIGIBLE FOR FINANCIAL SUBSIDIES.\*\***





For more information about financial assistance, consult this website (energysavingtrust.org.uk/renewable-energy/installation/

- renewable-heat-incentive).

  \*\* In accordance with financial arrangements currently in place.

  (1) Compared to electric heater. Example provided as a guide. In accordance with installation conditions, use and

# A SUMMARY OF A TECHNOLOGY DESIGNED TO DELIVER PERFORMANCE

Discover all the benefits of the Yutaki S and S COMBI which combine **performance**, **savings**, **design and ease of use**.

# ① A LOW-CONSUMPTION PUMP

This low-consumption pump adapts its flow rate to the needs of domestic heating, achieving cost-savings of up to 60% compared to a traditional pump.

# 2 A SOLUTION TO SUIT YOUR REQUIREMENTS

Even in the case of additional heating needs, three stage backup heaters ensure guaranteed levels of comfort for heating and domestic hot water are maintained.

## ③ REVERSIBLE FOR ALL YEAR ROUND COMFORT

Enjoy the dual function providing heating in the winter and cooling in the summer (underfloor heating or convector fans only).

# 4 INTEGRATED DOMESTIC HOT WATER (optional for Yutaki S)

Domestic hot water cylinders (200L to 260L) enable you to assure the hot water needs of a family of up to 6 people.

The cylinder has dual protection for outstanding durability: treated passivation film + magnesium anode.





WITH HITACHI,
PLACE YOUR
CONFIDENCE IN
THE EXPERTS

with  $60_{\text{YEARS}}$ 

OF EXPERIENCE IN AIR-CONDITIONING AND HEATING

## WITH 4.5 MILLION

HEATING SYSTEMS

MANUFACTURED

WORLDWIDE EACH YEAR



MANUFACTURER

**GUARANTEES** 





## (5) CLEAN WATER

The domestic hot water cylinder (200L or 260L) prevents the proliferation of bacteria thanks to its anti-Legionella function, even during extended periods of inactivity.

# **6** CONTROL SIMPLIFIED BY HITACHI

# Hitachi had a dream of simplicity! You will appreciate:

- The new intuitive interface.
- Weekly programmable timer
- Control of your space heating and hot water.
- The scope for managing a second heating zone.
- Heating management for your swimming pool.
- Electrical consumption reduced in standby mode.
- Management of your backup boiler.
- The control interface can also be used as a room thermostat (wired).

# TENERGY SAVINGS WITH INVERTER TECHNOLOGY

The compressor developed and manufactured by Hitachi incorporates inverter technology. This enables the heat pump to modulate its operating performance to meet the needs of residential heating precisely. Inverter technology reduces consumption by 30% compared to a traditional compressor, creating a reduction in your electricity bill.

## PREMIUM INSULATION ON THE DHW CYLINDER

NEOPOR technology offers significantly higher insulating properties compared to other insulating material. Ecological and efficient, Neopor needs less thickness (5mm) for better performance and reduced energy losses.

# 9 SIMPLIFIED CLEANING

The filter ball valve allows for easy cleaning without purging the system.



# **MADE-TO-MEASURE INSTALLATION**

## FOR NEW PROPERTIES & RETROFITS



### SIMPLIFIED INSTALLATION

The Yutaki S and S Combi can be used with all types of heating system: radiators, underfloor heating, convector fan...

#### **COMPACT AND SILENT**

Thanks to their compact size (Yutaki S 45 cm wide and Yutaki S Combi 60 cm wide), the internal module of the heat pump is as compact as a standard size kitchen cabinet. The internal unit also has a noise level similar to that of a premium refrigerator.

#### **COMFORT ALL YEAR ROUND**

The Yutaki S and S Combi provide heating and cooling for your accommodation, over one or more floors.

Whatever the temperature outdoors, your heat pump provides perfect heating comfort.

# WOULD YOU LIKE TO LEARN MORE ABOUT OUR HEAT PUMP MODELS?

Learn more about your Hitachi premium products at www.hitachi-hvac.co.uk

# CONTROL YOUR LEVEL OF COMFORT



#### **HI KUMO PRO**

The remote maintenance solution. Your maintenance company will have remote access to monitoring and controlling your heat pump, for a service which is second to none.

- Access to operating data in real time and the history, from over 80 settings.
- Alarm and troubleshooting assistance information.
- Remote control.



# WIRED ROOM TEMPERATURE SENSOR

(optional for 2nd zone)

Let your heat pump manage things for you

Your comfort is improved by the responsiveness of your control system.



# INTELLIGENT WIRELESS ROOM REMOTE CONTROL HANDSET

#### **Appreciate its simplicity**

- You manage the internal temperature of your home very simply indeed.
- You can add an extra wireless thermostat to control two different zones in your property.



# WIRED REMOTE CONTROL (included)

WIRED PROGRAMMABLE THERMOSTAT

Multiple range of functions. As well as essential functions, you will have access to:

- weekly programming: enables you to configure up to 5 different temperature ranges each day;
- the «holiday» function: assures an ideal temperature for your property while you are away from home, using setpoint temperatures that you set up before leaving;
- the frost protection function: protects your system in winter;
- your annual energy consumption levels are stored and displayed.



#### HI KUMO®

Stay connected with your Hi Kumo® from Hitachi:

- Remote control of your heat pump via smartphone, tablet, PC;
- the full range of functions can be accessed easily:
- **control** temperatures, ventilation;
- weekly programming;
- holiday function ;
- assistant function: program your heating configuration in advance simply by answering 3 questions;
- **SMART TIP function**: in a single click, lower your setpoint temperatures and save up to 7% on energy costs.



### TAHOMA BY SOMFY®

Experience Somfy® domestic control with all of your Hitachi products and all compatible elements in your home:

- remote control of your home using your smartphone, tablet or PC;
- manage more than 100 items of compatible equipment using just 1 application;
- your TAHOMA box from Somfy® enables you to control your heat pump, your roller blinds, your gates, your garage door, your lighting ...



### YUTAKI S AND S COMBI

HITACHI

|   | R32 REFRIGERANT R410A REFRI |                                |                                       |   |                               |                               | LOA REFRIGERA                 | NT             |                 |
|---|-----------------------------|--------------------------------|---------------------------------------|---|-------------------------------|-------------------------------|-------------------------------|----------------|-----------------|
| HEATING AND HOT WATER / HEATING ONLY MODULES —  | TAKI S                      | RWM-2.0NRE                     | RWM-2.5NRE                            | RWM-3.0NRE  | RWM-4.0NE                     | RWM-5.0NE                     | RWM-6.0NE                     | RWM-8.0NE      | RWM-10.0N       |
|   | JTAKI S<br>COMBI UNIT       | RWD-2.0NRWE-<br>(200/260)S / K | RWD-2.5NRWE-<br>(200/260)\$ / K       | RWD-3.0NRWE-<br>(200/260)S / K                              | RWD-4.0NWE-<br>(200/260)S / K | RWD-5.0NWE-<br>(200/260)S / K | RWD-6.0NWE-<br>(200/260)S / K |                |                 |
| Nominal capacity /max. heating (7°c ext/35°c water)   | kW                          | 4.3/6.5                        | 6/8.6                                 | 8/11  | 11/15.2                       | 14/16.7                       | 16/17.8                       | 20/25.5        | 24/32           |
| Nominal capacity /max. heating (-7°c ext/35°c water)  | kW                          | 4.5/5.3                        | 5.3/6.2                               | 5.8/7.5   | 9.7/10.6                      | 11.5/12                       | 12/13                         | 14.2/17.9      | 16.5/21         |
| Nominal capacity /max. heating (-7°c ext/55°c water)  | kW                          | 4/4.2                          | 4.7/5                                 | 5/5.5   | 8.7/9.7                       | 9.7/11.2                      | 10.5/12                       | 12.5/14.5      | 15.5/17.3       |
| Nominal capacity cooling (35°c ext/7°c water) (reversible)  | kW                          | 4                              | 5.3                                   | 6.5   | 7.2                           | 9.5                           | 10.5                          | 14             | 17.5            |
| Electrical backup heater (3 stages)   | kW                          | 3                              | 3                                     | 3   | 6                             | 6                             | 6                             | 9              | 9               |
| Electrical backup heater DHW Yutaki S COMBI   | kW                          | 3                              | 3                                     | 3   | 3                             | 3                             | 3                             | -              | -               |
| Net weight/Yutaki S   | kg                          | 35                             | 36                                    | 37  | 46                            | 48                            | 48                            | 60             | 62              |
| Net weight (200L/260L)/Yutaki S COMBI   | kg                          | 120/135                        | 120/135                               | 121/136   | 120/130                       | 122/132                       | 122/132                       | -              | -               |
| Dimensions (HxWxD)/Yutaki S and S COMBI   | mm                          | 712 x                          | 450 x 275//1750 x                     | 600 x 733   | 890 x 520                     | x 360//1750 x 6               | 500 x 733                     | 890 x 6        | 70 x 360        |
| Sound power   | dB(A)                       | JB(A) 37                       |                                       |   | 39                            |                               |                               | 47             |                 |
| DHW cylinder volume/DHW cylinder material/Yutaki S COMBI  | L                           |                                |                                       | 20  | 0 or 260L/Stainles            | ss steel                      |                               |                |                 |
| Expansion vessel  | L                           |                                | 6                                     |   |                               | 6                             |                               |                | 10              |
| Water flow rate (min/nom/max)   | m³/h                        | 0.5/0.77/1.9                   | 0.6/1.03/2                            | 0.6/1.29/2.1  | 1/1.89/2.9                    | 1.1/2.41/3                    | 1.2/2.75/3                    | 2/3.44/4.5     | 2.2/4.13/4.     |
| Minimum water volume in the system  | L                           |                                | 28                                    | ,,  | 38                            | 46                            | 55                            | 76             | 79              |
| Power supply  |                             |                                | 230V/1Ph/50H:                         | 7   | <del>`</del>                  | /50Hz or 400V/3               |                               |                | Ph/50Hz         |
|   | A                           |                                | 14.6                                  |   | 2307/1711                     | 30.5                          |                               | -              | - 1/30112       |
| Cable size (mm²)/may length (m)   |                             |                                | 3 x 2.5/14                            |   |                               | 3 x 6/28                      |                               | _              | _               |
| Max. current with heater  Cable size (mm²)/max length (m)  Max. current with backup heater + cylinder immersion/Yutaki \$                     | <b>S</b> A                  |                                | 28.9/27.1                             |   |                               | 45.5/44.8                     |                               |                | -               |
| Option/Yutaki S Combi   | A                           |                                |                                       |   |                               |                               | 24                            | -              | -               |
|   | ,                           |                                | 3 x 6/28                              |   | 3 X                           | 10/30//3 x 10/3               | D*1                           |                | -               |
| Max. current with heater  | A                           | -                              | -                                     | -   | 10.3                          |                               |                               | 15.3           |                 |
| Cable size (mm²)/max length (m)   |                             | -                              | -                                     | -   |                               | 5 x 2.5/20                    |                               | 5 x            | 4/14            |
| Max. current with heater  Cable size (mm²)/max length (m)  Max. current with backup heater + cylinder immersion/Yutaki soption/Yutaki s Combi | A A                         | •                              | -                                     | -   |                               | 25.4/24.7                     |                               | 3              | 0.4             |
| Cable size (mm²)/max. length (m)/Yutaki S/Yutaki S Combi  |                             | -                              | -                                     | -   |                               | 5 x 6/30                      |                               | 5 x :          | 10/29           |
| Hydraulic heating connections (male/male valves supplied)   | inches                      | 3                              | 1"                                    |   |                               |                               | 1"1/4                         |                |                 |
| DHW hydraulic connections/Yutaki S Combi  | inches                      | 3                              | 3/4"                                  |   |                               | 3/4"                          |                               | -              | -               |
| Outlet temperature range of water (heating mode)  | °C                          |                                |                                       |   | 20/60°c                       |                               |                               |                |                 |
| Outlet temperature range of water (DHW mode)/Yutaki S Comb  | oi °C                       |                                | 30/55                                 |   | ,                             | 30/60                         |                               | -              | -               |
| PREMIUM OUTDOOR UNITS   |                             | RAS-2WHVRP                     | RAS-2.5WHVRP                          | RAS-3WHVRP  | RAS-4WH(V)<br>NPE             | RAS-5WH(V)<br>NPE             | RAS-6WH(V)<br>NPE             | RAS-<br>8WHNPE | RAS-<br>10WHNPE |
| Nominal power input heating (7°C ext/35°C water)  | kW                          | 0.77                           | 1.21                                  | 1.6   | 2,2                           | 2.97                          | 3.5                           | 4.65           | 5.59            |
| COP/SCOP at 35°C  |                             | 5.25/4.6                       | 4.8/4.5                               | 4.6/4.5   | 5/4.8                         | 4.71/4.48                     | 4.57/3.9                      | 4.3/3.88       | 4.29/3.6        |
| Nominal power input cooling (35°C ext/7°C water)  | kW                          | 1.17                           | 1.54                                  | 2.14  | 2.18                          | 2.95                          | 3.72                          | 4.48           | 4.08            |
| EER (reversible model)  | KVV                         | 4                              | 3.6                                   | 3.35  | 3.54                          | 3.54                          | 3.31                          | 3.12           | 2.81            |
| Seasonal energy efficiency rating heating ns (35°C)/energy efficiency   | class (1) %                 | 183                            | 179                                   | 175   | 189/188                       | 177/176                       | 155/154                       | 152            | 143             |
|   |                             | 135                            | 132                                   | 125   | 138/137                       | 135/135                       | 127/127                       | 122            | 118             |
| Seasonal energy efficiency rating heating ns (55°C)/energy efficiency   |                             | 188                            | 182                                   | 178   | 191/191                       | 178/178                       |                               | 154            | 144             |
| Reversible seasonal energy efficiency ratio ns (35°C)/energy efficienc  |                             | 138                            | <del></del>                           | 127   | <del>`</del>                  |                               | 155/155                       |                | 120             |
| Reversible seasonal energy efficiency ratio ns (55°C)/energy efficienc  |                             | 138                            | 134<br>132/136                        | 121   | 139/139                       | 136/136                       | 128/128                       | 124            | 120             |
| Seasonal energy efficiency ratio nwh (200L cycle L/260L cycle )   |                             | C1 /4C                         | · · · · · · · · · · · · · · · · · · · | C7/F4   | CA/40                         | 130/134                       | 67/50                         | 72/50          | 74/00           |
| Sound power level/ sound pressure 1m  | dB(A)                       | 61/46                          | 63/47                                 | 67/54   | 64/49                         | 65/50                         | 67/50                         | 73/59          | 74/60           |
| Air flow rate   | m³/h                        |                                | 2436                                  |   | 4800                          | 5400                          | 6000                          | 7620           | 8040            |
| Dimensions (H x L x D)  | mm                          |                                | 629 x 799 x 300                       |   |                               |                               | 380 x 950 x 370               |                |                 |
| Net weight  | kg                          |                                | 15                                    | 44  |                               | 103                           |                               | 137            | 139             |
| Power supply  |                             |                                | 230V/1Ph/50H                          |   | 230V/1Ph                      | /50Hz or 400V/3               | sPn/50Hz                      | 400V/3         | Ph/50Hz         |
| Max. current  | A                           | 10.4                           | 12.9                                  | 15.8  |                               | 30.5                          |                               | -              | -               |
| E≅ Cable size (mm²)/max length (m)  |                             | 3 x 2.5/28                     | 3 x 2.5/24                            | 3 x 4/21  |                               | 3x 6/30                       |                               | -              | -               |
| Max. current  | A                           | -                              | -                                     | -   | 14                            | 14                            | 16                            |                | 24              |
| Cable size (mm²)/max length (m)   |                             |                                |                                       | 5 x 2.5/14  |                               |                               | 5 x 6/26                      |                |                 |
| Int/Ext connection (shielded)   | mm <sup>2</sup>             |                                | 2 x 0.75                              |   |                               | 2 x 0.75                      |                               | 2 x            | 0.75            |
| Diameter of refrigeration pipes (Liq - Gas)   | inches                      | 3 1/4"                         | 1/2"*                                 | 1/4" 5/8" from 3<br>to 27m*<br>3/8" 5/8" from 27<br>to 50m* |                               | 3/8" - 5/8"                   |                               | 3/8" - 1"1/8   | 1/2" - 1"1/8    |
| Max. Length/Height difference   | m                           |                                | 50/20                                 |   |                               | 75/20                         |                               | 70             | )/20            |
| Initial charge of pre-charged refrigerant/Additional charge   |                             | n 1.2 for 10m/15               | · · · · · · · · · · · · · · · · · · · | 1.3 for 10m/32  | 3.3 for 15m/60                | 3.4 for :                     | 15m/60                        | 5 for 15m/65   | <del>,</del>    |
|   |                             |                                |                                       | +10~+46//-20~+25//-20                                       |                               |                               |                               |                |                 |
| Cooling/Heating/DHW operating ranges  | °C                          | 71                             | - 11 - 11                             |   |                               | R410A                         |                               |                |                 |
| Cooling/Heating/DHW operating ranges Refrigerant  | •€                          | +1                             | R32                                   |   |                               |                               | R410A                         |                |                 |

#### JOHNSON CONTROLS - HITACHI AIR CONDITIONING EUROPE SAS

**Your installation technician, a source of expertise, a professional** He will know how to select products suited to your needs, to perform installation to state-of-the-art standards and to provide after-sales support through a maintenance contract.

### hitachi-hvac.co.uk





The commercial guarantees offered by Hitachi relate to the components used in our machines. Without reservation, they apply to an installation that complies with our technical specifications and they are contingent upon regular maintenance of equipment items by skilled personnel. The frequency of maintenance work is linked to the conditions of use of the hardware and to prevailing legislation. Contact your installation technician for advice.

Registered address Bldg 7, Foundation Park, Roxborough Way, Maidenhead, SL6 3UD

