# Ground Source Heat Pump
# Geothermal Heat Pump
# Brine to Water Heat Pump

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# Ground Source Heat Pump/ Geothermal Heat Pump for House heating

Sundez 2013 new brine to water heat pump allows you to combine a water based heating system with a modern heat producing device. It saves energy consumption up to 80% compared with electric heaters.

The ultra quiet design makes the whole compressor and heat pump system on a floating plate, leads to a compete isolation from the heat pump bottom, and reduce vibration and noise at the most extent. That is to say, Sundez new brine to water heat pump is ideal for indoor installation.

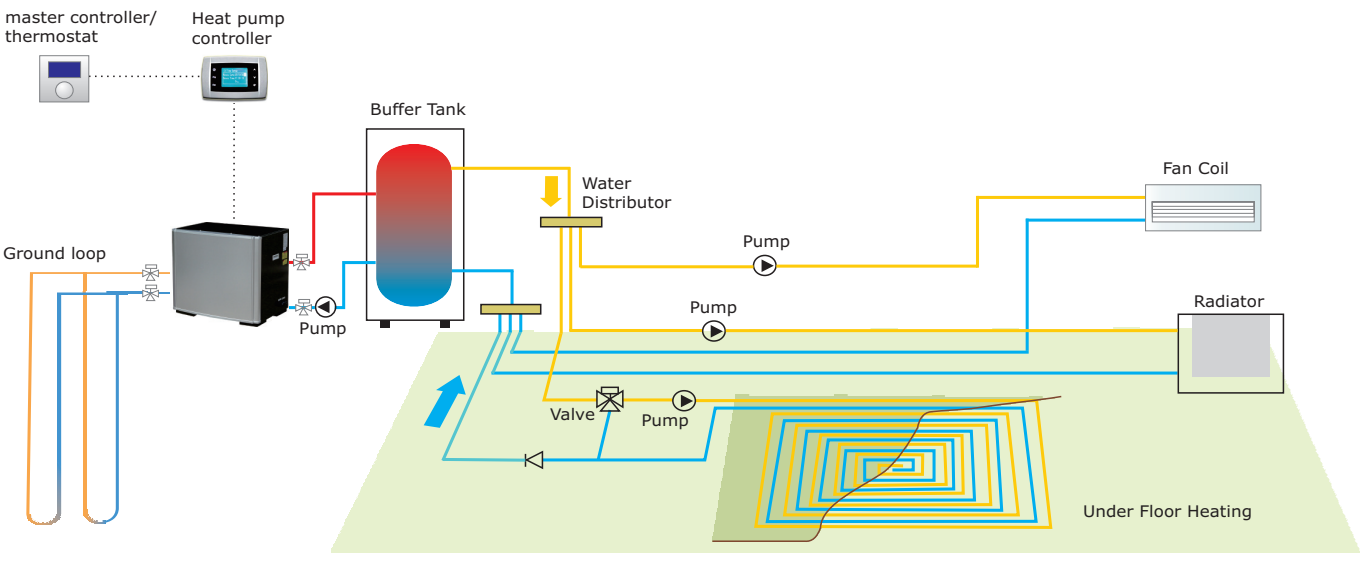
The big controller screen with blue LED backlight and simple operation gives the best experience to users.

**Two colours for your choice:**

Silver front panel + black casing

Silver front panel + white casing

## ● Installation Example



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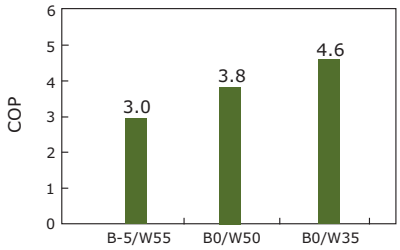
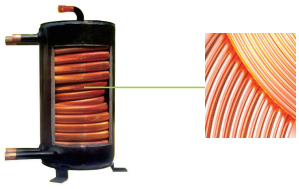
## High Efficiency

1. High COP (take model SDBW-60 for example)




2. Big heat exchangers to extract more heat from the ground.

- Excellent tube-in-shell heat exchanger as condenser, especially designed for R410A heat pump system.



Copper tubes with surface treatment to enlarge heat exchange area.

- Tube-in-tube heat exchanger, copper tubes inside with enlarged heat exchange area.

Copper tubes with enlarged heat exchange area treatment.

## Intelligent Control


- Touch key
- Big screen
- clear display

1. Extremely simple operation.
2. With timer function.
3. Can work with master controller or room thermostat.
4. Anti-frozen function for cooling mode.
5. With auxiliary electric heating function.
6. With control terminal for heating circulation pump and ground source side circulation pump.
7. With setable anti-frozen protection for ground source side according to user's climate.
8. With all kinds of protections for compressor.

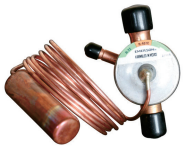
## Reliable

1. Comprehensive and careful protection & functions to protect safe operation, such as over high/low system pressure, phase sequence, anti-freezing protection for evaporator etc.

2. Famous brand Toshiba R410A compressor.

- R410A with high efficiency
- Low vibration
- Low noise

3. Emerson thermostatic expansion valve with reliable function and long life.



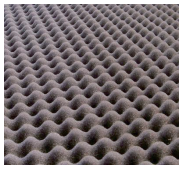
- Especially for R410A system
- Wide openings
- Accurate throttling

4. The condenser and evaporator are designed for R410A, bearing high pressure, also with outstanding feature for anti-corrosion.

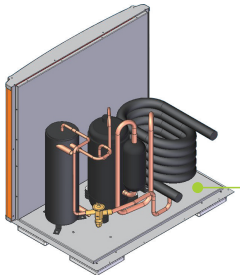
## Strict Noise Control

- Noise down to 30dB(A)

1. Double layers noise absorption material attached fully inside the casing. The harder layer can absorb high frequency noise, and the softer layer can absorb lower frequency noise.



2. Isolation design for the compressor system. The whole compressor system is on a floating plate, isolated from the casing and the bottom plate, supported by the completely soft rubber feet. Such a design isolates most of the vibration from the compressor system to the bottom plate and the floor.



The floating plate

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## Datasheet

| Model | SDBW | 30 | 45 | 60 | 90 |
|---|---|---|---|---|---|
| Power Supply | V/ph/Hz | 220~240/1/50 | 220~240/1/50 | 220~240/1/50 | 220~240/1/50 |
| Max. heating water temperature | DegC | 55 | 55 | 55 | 55 |
| Brine heat source temperature range | DegC | -5~25 | -5~25 | -5~25 | -5~25 |
| Heating capacity at B0/W35 * | KW | 3.1 | 4.3 | 6.2 | 9.0 |
| COP at B0/W35 * | | 4.5 | 4.6 | 4.5 | 4.5 |
| Heating capacity at B0/W50 ** | KW | 2.8 | 4.0 | 5.7 | 8.2 |
| COP at B0/W50 ** | | 3.5 | 3.8 | 3.7 | 4.0 |
| Heating capacity at B-5/W55 *** | KW | 2.5 | 3.6 | 5.3 | 6.2 |
| COP at B-5/W55 *** | | 2.9 | 3.0 | 3.0 | 2.8 |
| Norminal power consumption at B0/W35 | KW | 0.69 | 0.93 | 1.38 | 2.0 |
| Rated Current at B0/W35 | A | 3.2 | 4.3 | 6.4 | 9.3 |
| Starting Current | A | 30.0 | 32.0 | 35.0 | 51.0 |
| Refrigerant | | R410a | R410a | R410a | R410a |
| Compressor Style | | Rotary | Rotary | Rotary | Rotary |
| Condenser | | tube-in-shell | tube-in-shell | tube-in-shell | tube-in-shell |
| Evaporator | | tube-in-tube | tube-in-tube | tube-in-tube | tube-in-tube |
| Heating water flow rate | $m^3/h$ | 0.69 | 0.84 | 1.2 | 1.8 |
| Water pressure drop, condenser | Kpa | 24 | 24 | 24 | 29 |
| Brine flow rate | $m^3/h$ | 1.4 | 1.7 | 2.5 | 3.7 |
| Water pressure drop, evaporator | Kpa | 27 | 27 | 28 | 29 |
| Heating water inlet/outlet dimension | Inch | 3/4" | 3/4" | 3/4" | 1" |
| Brine flow inlet/outlet dimension | Inch | 3/4" | 3/4" | 3/4" | 1" |
| Running noise | dBA | 30 | 30 | 31 | 31 |
| Net dimension including rubber feet HxWxL | mm | 625×440×685 | 625×440×685 | 625×440×685 | 625×440×685 |
| Net weight | Kg | 52 | 53 | 55 | 62 |
| Packing dimension | mm | 685×500×785 | 685×500×785 | 685×500×785 | 685×500×785 |
| Packing weight | Kg | 60 | 61 | 63 | 70 |

- Test Condition: B0/W35: brine inlet temperature 0DegC, heating water outlet 35DegC.

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