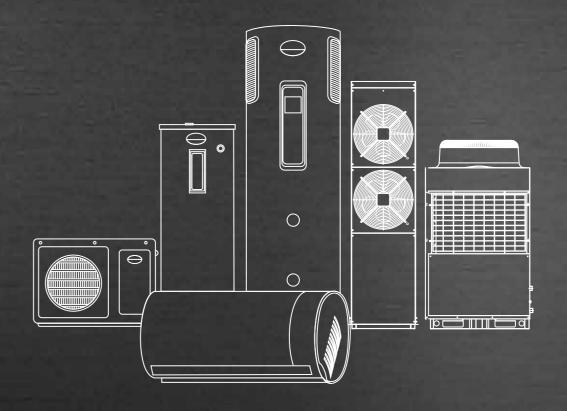


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India's widest range of Heat Pumps.



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AOS/CWH_R0/10/21

World's No.1 Water Heater manufacturer

Index

A. O. Smith \ Heat Pump's Functioning

CAHP 1.5HP 3HP 3HP 1 1 3 - 1 4





A Legacy of Innovating the **Impossible**

Our humble beginnings root back to 1874 with a small machine workshop and today, we are the leaders in manufacturing residential and commercial water heating products. Headquartered in Milwaukee, Wisconsin, today our 11,400+ employee team is active in the USA, Canada, Mexico, China, India, the UK, the Netherlands, and Turkey with our sales and distribution networks active in 60+ countries. Over the years, we've patented the glass-lined water heater and our line of products features are the best-known brands in North America, China, and India.

We have a team of experts, who have made us one of the leaders in the global water technology sector, with a focus on new product development, global expansion, strategic acquisitions and partnerships. No wonder, our brand tagline says 'Innovation has a name.'

In India, our journey began in 2008 and since then we've been at the forefront of innovations. We established an impressive manufacturing facility in June 2010 at Harohalli, Bengaluru and from that time there has been no looking back.



| 874 Started operations



1889_1906

Foray's into the bicycle industry and over the years became North America's largest automobile frame manufacturer



936-1954

Patented the glass line technology and introduced the first glass-lined commercial water heater





1995

Joint venture in China



)15

Entry in Water Purification-Pioneers in introducing the Hot Water feature



2008

Started operations in India



2019

Launched a new range of residential Water Heaters in India



2010

Factory set up in Harohalli, Bengaluru 2010 - Water Heater Manufacturing begins



2020

Launched industry-defining products in Water Heaters and Water Purifier series in India

How do heat pump water heaters work?

The technology inside the heat pump is similar to any domestic refrigerator, which uses a vapour compression cycle. The main components in the heat pump are the compressor, the expansion valve and two heat exchangers (an evaporator and a condenser).

The mechanism is such that heat pumps consume far lesser electricity compared to any other type of water heater.

Working of the Heat Pump

- Step-I / Refrigerant in the evaporator is colder than the heat source. This causes the heat to move from the heat source (in this case the outside air) to the refrigerant, which then evaporates.
- **Step-2** / This vapour moves to the compressor and reaches a higher temperature and pressure.
- **Step-3** The hot vapour now enters the condenser and gives off heat as it condenses.
- **Step-4** The refrigerant then moves to the expansion valve, reduces the temperature and pressure, and returns to the evaporator.

Benefits

- Saves up to 75% on heating costs
- Quick payback & ROI
- Hot water assurance round the year
- Longest product life
- Reduced carbon emissions
- Silent operations
- Negligible maintenance costs

Common Applications

- Hotels
- Resorts
- Serviced Apartments
- Hospitals
- Hostels (School & College)
- Restaurants & Kitchens
- Manufacturing Facilities

Compressor Ambient Air Evaporator Expansion Valve

A. O. Smith **Heat Pump Benefits**



LES

The Intelligent Adaptive Energy
Saving technology analyzes
the water usage pattern to
automatically heat up the water
and optimize energy consumption



Blue Diamond Glass Coating

Corresponds to longer life to your tank by its corrosion resistance and reduced scaling accumulation technology



Absolutely Safe The Power of

Safety features to ensure the protection of the Heat Pump under all conditions:

- 1. Compressor overheating discharge protection
- 2. Abnormal operation protection (Relay and electronic expansion valve)
- 3. High & low voltage protection
- 4. Refrigerant leakage protection
- 5. High water temperature protection (Temperature sensor)
- 6. High-temperature limit protection switch (ECO switch)
- 7. Temperature & pressure relief valve



LED Display with Self Diagnosis

Real-time display of temperature control, timers and error code for a trouble-free service



Multiple Heating Mo

User can choose between Efficiency, Hybrid Turbo, Max and Instant Heating Mode



High Performance

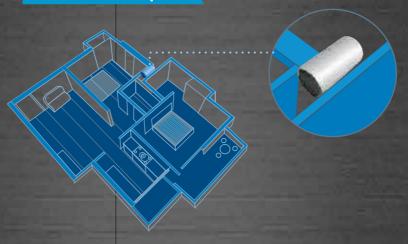
Can achieve up to 65°C in heat pump mode



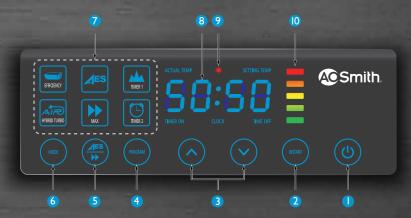
Features

- Heat pump water temperature 55°C,
- Maximum water temperature 75°C
- Input 200w, COP 2.6
- Patented AES energy-saving system
- RI34a Green refrigerant
- Timer setting
- Remote control
- Two elements back up (2kW & 3kW) for quick recovery
- Wall-mounted

Installation Blueprint



Wireless Remote



Convenience to access your water heater with Touch Control and Remote Control.

I. Power ON/OFF Butto

Switches On/Off the water heater and displays the temperature in few seconds

2. Instant Heating Butto

Heats instantly to reach a preset temperature

3. Increase/Decrease Button

Regulates the preset temperature

4. Program Button

Sets up the timer clock and the heating temperature

5. AES/MAX Button

Adapts heating cycle automatically resulting in optimal water usage and energy saving. Max function ensures higher hot water output

6. Mode Indicato

Interchanges different heating modes

7. Indicato

Indicates the mode in which the water heater is working

8. Digital Indicators

Displays the temperature, clock and timer settings

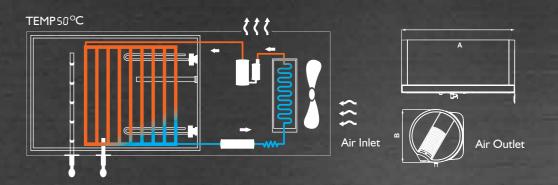
9. Heating Indicate

Glows to indicate the functioning of the water heater

10. Display of Hot Water

Five lighting blocks display the hot water distribution at different levels in the tank

Line Diagram



| Model | HPW-60A2 | HPW-80A2 |
|--|-------------|-------------|
| Rated volume [L] | 60 | 80 |
| Rated voltage [V] / Rated frequency [Hz] | 220 / 50 | 220 / 50 |
| Rated input power [W] / Rated current [A] | | |
| Efficiency mode | 200 | 200 |
| Hybrid turbo mode | 2200 / 10 | 2200 / 10 |
| MAX mode | 3000 / 13.7 | 3000 / 13.7 |
| Heating capacity [W] | | |
| Efficiency mode | 540 | 540 |
| Hybrid turbo mode | 2540 | 2540 |
| MAX mode | 3000 | 3000 |
| Inner tank rated pressure bar | 8 | 8 |
| Range of water temperature [°C] | 35-75 | 35-75 |
| Environment range of energy-saving mode [°C] | 10-44 | 10-44 |
| Dimensions [A x B] [mm] | 837 x 473 | 992 x 473 |
| Net weight [kg] | 42 | 45 |

HPI-D Series

High End Residential Heat Pump



Features

- Heat pump water temperature 65°C
- Maximum water temperature 75°C
- Heat pump input 460w, COP 3.8
- Patented AES energy-saving system
- Two elements back up for quick recovery (3kW & 2+1kW)
- Timer setting
- Wired button control
- R134a Green refrigerant
- Instant mode (3000 W)

Wired Button Control



I. Power ON/OFF Button

Switches On/Off the water heater and displays the temperature in few seconds

2. Instant Heating Button

Heats instantly to reach a preset temperature

3. Increase/Decrease Button

Regulates the preset temperature

4. Program Buttor

Sets up the timer clock and the heating temperature

. AES

Adapts heating cycle automatically resulting in optimal water usage and energy saving

6. Mode button

Interchanges different heating modes

7. Indicators

Indicates the mode in which Water heater is working

8. Digital Indicators

Displays the Temperature, Clock and Timer settings

Heating Indicator

Glows to indicate the functioning of water heater

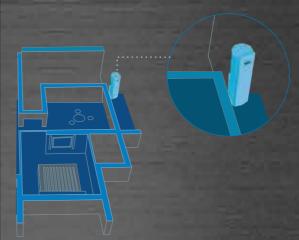
10. Display of hot wate

Five lighting blocks display the hot water distribution at different levels in the tank

11. Circulation Pump

Controls the re-circulation pump of the building to ensure 24/7 Hot water and to eliminate water wastage (Sold seperately)

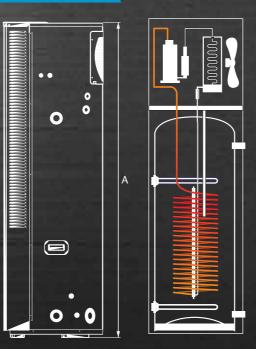
Installation Blueprint



Benefits

- I. Energy Saving Heating: Extracts heat from the atmosphere to heat up the water
- 2. Instant Heating: Instantly heats up the water and reaches the preset temperature
- 3. AES (Adaptive energy-saving system): Adapts heating cycle automatically resulting optimal water usage and energy saving
- 4. Hot water Quantity Display: Indicates the amount of hot water available in the tank
- 5. Intelligent defrosting: The automatic defrosting resists freezing of exchanger
- 6. Wired button control: Convenience to access your water heater with Wired Touch Control
- 7. Blue Diamond Glass coating: Corresponds to longer life to your tank by it's corrison resistance and reduced scaling accumulation technology
- 8. Anode rod protection: Reduces corrison and protects the inner tank
- 9. High-efficiency Energy Saving Insulation: Reduces heat loss with its insulated layer of polyurethane foam

Line Diagram



| MODEL | HPI-40DI.0BE | HPI-50DI.0E |
|---|--------------|-------------|
| Rated volume [L] | 150 | 180 |
| Voltagene / Frequency [V/Hz] | 220 / 50 | 220 / 50 |
| Rated Input power (Efficiency Mode) (W) | 460 | 460 |
| Rated current (A) | 13.6 | 13.6 |
| Rated output power (Efficiency Mode) [W] | 1750 | 1750 |
| Maximum power of quick | | |
| heating [A] | 13.6 | 13.6 |
| Water temperature range [°C] | 35-75 | 35-75 |
| Ambient temperature range | | |
| for Efficiency [°C] | 7-43 | 7-43 |
| Tank rated pressure (bar) | 10 | 10 |
| Dimension A [mm] | 1660 | 1850 |
| Diameter of Tank | Ø520 | Ø520 |
| Weight of Tank (kg) | 87 | 92 |

HPA-80/120 Split type

Residential and Commercial Heat Pump

Features

- Heat pump water temperature 65°C
- Maximum water temperature 75°C
- Patented AES energy-saving system
- Two elements back up (3kw & 2+1kw) or quick recovery
- Timer setting



Wired Button Control



Switches On/Off the water heater and displays the temperature in few seconds

Heats instantly to reach a preset temperature

3. Increase/Decrease Button

Regulates the preset temperature

Sets up the timer clock and the heating temperature

Adapts heating cycle automatically resulting in optimal water usage and energy saving

6. Mode button

Interchanges different heating modes

Indicates the mode in which Water heater is working

Displays the Temperature, Clock and Timer settings

Glows to indicate the functioning of water heater

Five lighting blocks display the hot water distribution at different levels in the tank

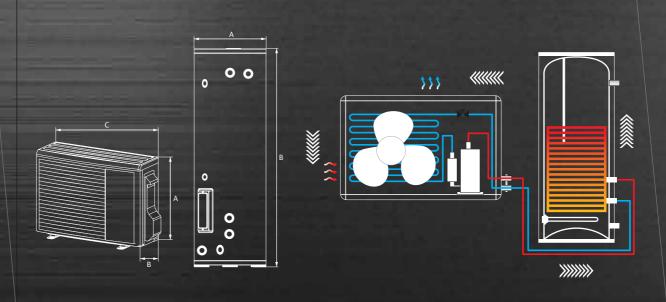
11. Circulation Pump

Controls the re-circulation pump of the building to ensure 24/7 Hot water and to eliminate water wastage (Sold seperately)

Benefits

- g: Extracts heat from the atmosphere to heat up the water
- Instantly heats up the water giving a better bathing experience
- 3. AES (Adaptive energy-saving system): Adapts heating cycle automatically resulting optimal water usage and energy saving
- 4. Hot water Quantity Display: Indicates the amount of hot water available in the tank
- The automatic defrosting resists freezing of exchanger
- Convenience to access your water heater with Wired Touch Control
- g: Corresponds to longer life to your tank by it's corrison resistance and reduced scaling accumulation technology
- Reduces corrison and protects the inner tank
- 9. High-efficiency Energy Saving Insulation: Reduces heat loss with its insulated layer of polyurethane foam

Line Diagram



| ODEL | HPA-80CI.5A | HAP-120D2.0A |
|--|--------------|--------------|
| ated volume [L] | 300 | 450 |
| oltagene / Frequency [V/Hz] | 220~ / 50 | 220~ / 50 |
| ated Input / Current [W/A] | | |
| Efficiency Mode | 1010/4.6 | 1380/6.5 |
| Hybrid Turbo Mode | 2010/9.1 | 2380/11 |
| Output(W)COP | 3.6 | 4.2 |
| Efficiency Mode | 3640 | 5800 |
| Hybrid Turbo Mode | 4640 | 6800 |
| Vater temperature range [°C] | 35~75 | 35-75 |
| mbient temperature range or Efficiency [°C] | 7~43 | 7~43 |
| ank rated pressure (bar) | 10 | 10 |
| xternal unit dimension A [mm] | 560 | 740 |
| B [mr | n] 320 | 350 |
| C [mr | n] 835 | 820 |
| ank dimension A [mr | n] Ø610 | Ø710 |
| B [mr | n] 1640 | 1660 |
| eight of external unit (kg) | 37 | 55 |
| eight of tank (kg) | 98 | 133 |
| efrigerant/Quantity | R134a/940(g) | R134a/1400(g |

CAHP-1.5HP DI

Residential and Commercial Heat Pump



Features

- Heat pump water temperature
 65°C maximum
- Energy-saving,, fast heating, electric back up and standard modes
- LED display
- R134a green refrigerant
- Integrate design for outdoor installation
- Available in 300 & 450 Litre storage

Wired Button Control



I. Power ON/OFF Buttor

Switches On/Off the water heater and displays the temperature in few seconds

2. Instant Heating Button

Heats instantly to reach a preset temperature

3. Increase/Decrease Button

Regulates the preset temperature

4. Program Buttor

Sets up the timer clock and the heating temperature

5. AFS

Adapts heating cycle automatically resulting in optimal water usage and energy saving

6. Mode button

Interchanges different heating modes

7. Indicators

Indicates the mode in which Water heater is working

8. Digital Indicator

Displays the Temperature, Clock and Timer settings

9) Heating Indicator

Glows to indicate the functioning of water heater

10. Display of hot wat

Five lighting blocks display the hot water distribution at different levels in the tank

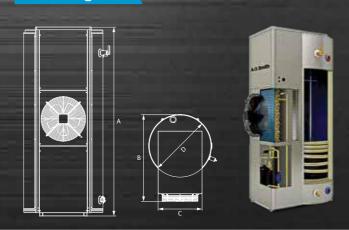
11. Circulation Pump

Controls the re-circulation pump of the building to ensure 24/7 Hot water and to eliminate water wastage (Sold seperately)

Benefits

- I. Energy Saving Heating: Extracts heat from the atmosphere to heat up the water
- Instant Heating: Instantly heats up the water giving a better bathing experience
- AES (Adaptive energy-saving system): Adapts heating cycle automatically resulting optimal water usage and energy saving
- Hot water Quantity Display: Indicates the amount of hot water available in the tank
- 5. Intelligent defrosting: The automatic defrosting resists freezing of exchanger
- 6. Wired button control: Convenience to access your water heater with Wired Touch Control
- Blue Diamond Glass coating: Corresponds to longer life to your tank by it's corrison resistance and reduced scaling accumulation technology
- B. Anode rod protection: Reduces corrison and protects the inner tank
- 9. High-efficiency Energy Saving Insulation: Reduces heat loss with its insulated layer of polyurethane foam

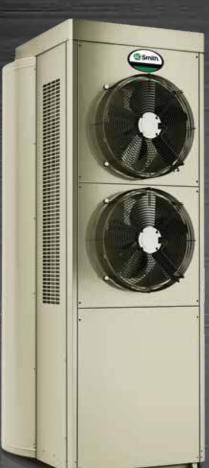
Line Diagram



| MODEL | | | CAHP1-5D1-80-6 | CAHP1-5D-120-6 | CAHP1-5D-120-12 |
|------------------------------------|------------------------|--------|---|----------------|------------------|
| Model Type | | / | Outdoor integrated heat pump water heater | | water heater |
| HP Rated Power W | | W | CO 10 11 | 875 | |
| HP Rated heating capaci | ity | W | W 3680 | | |
| COP | | W/W | 4.20 | | |
| Electrical Heating Capacity | | W | 6000 | 6000 | 12000 |
| Maximum Operation | 400V / 3N / 50Hz | А | / | / | 37.5 |
| Current | 230V / IN / 50Hz | Α | 38.7 | 38.7 | 71.9 |
| Hot Water Delivering | Efficiency | L/h | | 105 | |
| Rate ($\Delta T = 30^{\circ} c$) | High Demand | L/h | 277 | 277 | 449 |
| Refrigerant | | / | | RI34a | |
| Refrigerant charge quan | tity | g | 940 | | |
| Tank capacity | | L | 300 | 455 | 455 |
| Net Weight | | Kg | 161 | 194 | 194 |
| Operation Weight | eration Weight | | 461 | 649 | 649 |
| Water Temp in efficienc | y mode | °C | | 65 | |
| Operation Temperature | e Range | °C | 37~75 | | |
| Ambient Temperature f | or HP | °C | 7~43 | | |
| Unit Operation Noise | | dB (A) | 54 | | |
| Air Outlet Noise | | dB (A) | 58 | | |
| Demison (LxWxH) mm | | mm | 910x610x1700 | 1012x713x1700 | 1012x713x1700 |
| Anode | | / | Aluminum Rod | | |
| Control Mode | | / | Led wire Display (Standard 10m, Optional Maxium 20 m) | | nal Maxium 20 m) |
| Operation Mode | | / | Efficiency, High Demand, Standard | | andard |
| Other Control Function | S | / | Timer, Fault Alarming, Water pump controlling, AES HP | | |
| Power Supply Specification | ns | / | 230V~50Hz 230V~50Hz 230 400V3N~50H; | | |
| Connection Size \sim Inlet | : / Outlet / T&P Valve | / | NPT 3/4 (Female Thread) | | |
| Drain Valve | | / | NPT 3/4 (Female Thread) | | |

CAHP-3HP DI

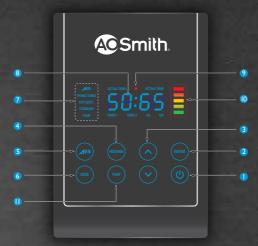
High End Residential and Commercial Heat Pump



Features

- Heat pump water temperature 65°C maximum
- Energy-saving, fast heating, electric back up and standard modes
- Smart control to avoid cold water mixing
- LED display
- RI34a green refrigerant
- Integrate design for outdoor installation

Wired Button Control



I. Power ON/OFF Button

Switches On/Off the water heater and displays the temperature in few seconds

2. Instant Heating Button

Heats instantly to reach a preset temperature

3. Increase/Decrease Button

Regulates the preset temperature

4. Program Button

Sets up the timer clock and the heating temperature

. AES

Adapts heating cycle automatically resulting in optimal water usage and energy saving

6. Mode button

Interchanges different heating modes

'. Indicators

Indicates the mode in which Water heater is working

8. Digital Indicators

Displays the Temperature, Clock and Timer settings

9) Heating Indicator

Glows to indicate the functioning of water heater

10. Display of hot wate

Five lighting blocks display the hot water distribution at different levels in the tank

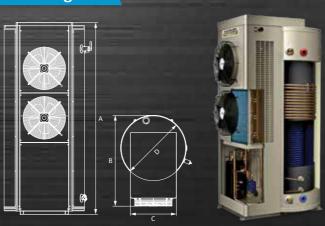
11. Circulation Pump

Controls the re-circulation pump of the building to ensure 24/7 Hot water and to eliminate water wastage (Sold seperately)

Benefits

- I. Energy Saving Heating: Extracts heat from the atmosphere to heat up the water
- 2. Instant Heating: Instantly heats up the water giving a better bathing experience
- AES (Adaptive energy-saving system): Adapts heating cycle automatically resulting optimal water usage and energy saving
- . Hot water Quantity Display: Indicates the amount of hot water available in the tank
- . Intelligent defrosting: The automatic defrosting resists freezing of exchanger
- . Wired button control: Convenience to access your water heater with Wired Touch Control
- . Blue Diamond Glass coating: Corresponds to longer life to your tank by it's corrison resistance and reduced scaling accumulation technology
- 3. Anode rod protection: Reduces corrison and protects the inner tank
- 9. High-efficiency Energy Saving Insulation: Reduces heat loss with its insulated layer of polyurethane foam

Line Diagram



| MODEL | | | CAHP3.0-120-6 | CAHP3.0-120-12 | |
|---|------------------|--|---|----------------|--|
| Model Type | | | Outdoor integrated heat pump water heate | | |
| HP Rated Power | | kW | 2.22 | | |
| HP Rated heating capa | city | kW | 8 | | |
| COP | | W/W | | | |
| Electrical Heating Capacity | | W | 6000 12000 | | |
| Maximum Operation | 400V / 3N / 50Hz | А | 15.8 | 31.5 | |
| Current | 230V / 1N / 50Hz | А | 47.1 | 78.5 | |
| Hot Water Delivering | Efficiency | А | 230 | 230 | |
| Rate (ΔT-30°c) | High Demand | А | 401 | 573 | |
| Refrigerant | | / | R134a | | |
| Refrigerant charge quantity | | g | 1850 | | |
| Tank capacity | | L | 455 | | |
| Net Weight | | Kg | 229 | | |
| Operation Weight | | Kg | 684 | | |
| Water Temp in efficiency mode | | °C | 65 | | |
| Operation Temperature Range | | °C | 35~75 | | |
| Ambient Temperature for HP | | °C | 7~43 | | |
| Unit Operation Noise | | dB (A) | 59 | | |
| Air Outlet Noise | | dB (A) | 62 | | |
| Demison (LxWxH) mm | | mm | 995 x 785 x 1700 | | |
| Anode | | / | Aluminum Rod | | |
| Control Mode | | / | Led wire Display (Standard 10m, Optional Maxium 20 m) | | |
| Operation Mode | | / | Efficiency, High Demand, Standard | | |
| Other Control Functions | | / | Timer, Fault Alarming, Anti freezing, Water pump controlling | | |
| Power Supply Specifications | | / | 230V~50Hz and 400V/3N/50Hz | | |
| Connection Size ~ Inlet / Outlet / T&P valve / Drain valve | | / | 3/4 Inch (Female Thread) | | |

CAHP-5HP/10HP

Residential & Commercial Heat Pump



Features

- Energy-saving
- Power off memory
- Auxiliary heater control system
- Refrigerant: R410a
- LCD Display
- Operated centerally controlled

Common Applications

Commercial: Restaurant/Kitchens

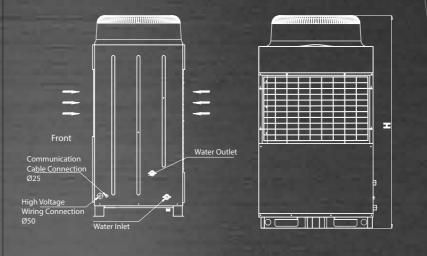
Institutional: Hospitals, Hotels, Schools, Hostels, Resorts

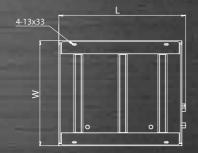
Residential: Villas, Apartments, Guesthouses

Industrial: Factories, Laundries



Line Diagram





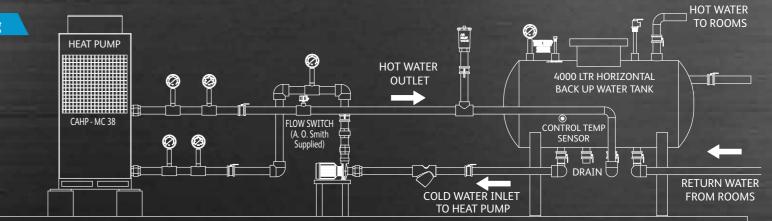
Technical Specification

| MODEL | CAHP-MC-38 (10HP) | CAHP-MC-19 (5HP) |
|------------------------------|----------------------|---------------------|
| Power Supply | 380V 3N ~ 50Hz | 380V 3N ~ 50Hz |
| Voltage Range | 380V +/- 10% | 380V +/- 10% |
| Rated Heating Capacity(1) | 38 kW | 19.8 kW |
| Rated Water Flow(I) | 6.5 CMH | 3.4 CMH |
| Rated Power Input (1) | 10.3 kW | 6.02 kW |
| Rated Operation Current(1) | 18.6 A | 11.0A |
| Maximum Power Input | 13.2 kW | 6.8 kW |
| Maximum Operation Current | 23.3 A | 11.7 A |
| Operation Noise (2) | 65 dB(A) | 60 dB(A) |
| Refrigerant / Quantity | R410a / 6.2kg | R410a / 2.8kg |
| Refrigerant Side High Side | 4.2 Mpa | 4.4 Mpa |
| Design Pressure Low Side | 3.1 Mpa | 3.1 Mpa |
| Water Side Design Pressure | 1.0 Mpa | 1.0 Mpa |
| Water Side Pressure Drop (3) | 45 kPa | 73 kPa |
| Water Connection Size | DN40 (R1 1/2") | DN32 (R1 1/4") |
| Waterproof Class | IPX4 | IPX4 |
| Net Weight | 287 kg | 170 kg |
| Dimensions (L x W x H) | 1020 x 846 x 1840 mm | 719 x 761 x 1160 mm |

Note

- (1) Rated condition: Ambient temperature 20/15oC (dry/wet bulb), water temperature 47/52oC (inlet/outlet).
- (2) Sound pressure value at one meter. | (3) Measured at the rated water flow.

Schematic Drawing



Our Clientele - Prestigious and Diverse

For over 70 years, our innovative products have been the choice of business owners as well as property managers in numerous industries across the world. While the wide range of products meets our patrons' specific needs, the unmatched quality and energy-efficient solutions provide complete satisfaction. What's more, the world-class service comes up with optimal solutions and take care of issues methodically.

Hospitals



Institutions





India's
most trusted
water heater brand

3 TIMES IN A ROW 2018, 2019 & 2020

Workspace





Industrial







Luxury Residential







Hotels







Service **Excellence**

A. O. Smith comes with the assurance of the highest quality of service. We strongly believe in customer delight through our 3 P's - Product, Pre and Post-sales services. We have a vast network to cater to varying industries, ranging from Hotels, Hospitals, Manufacturing units, Airports and High-end villas across the country. We have created an ecosystem to provide a service par excellence to ensure an uninterrupted supply of quality hot water. We promise - whenever and wherever you need us, we'd just be a call away.

Our 4-step Service Support Approach



Sizing and Selection

We consult our clients and provide technical support by

- I Calculating the heat load requirements for the site
- 2 Sizing and Selection of the best-suited product
- 3 System Designing and Space Allocation



Training Support fo Channel Partners

The authorized PAN India network of channel partners are regularly trained by A.O. Smith experts



Regional Service Team

Regional service teams are dedicated for each zone to solve any concern from channel partners



Central Service Team at HO

The Central Team supports with training, availability of spare parts & provides clarification on technical queries

All service cases are attended to and monitored by the regional sales team as well for better communication with clients.

The above-stated approaches are curated keeping in mind that the clientele enjoys the same amount of pleasure it did while purchasing our product.

We focus on providing the most cogent and beneficial after-sales support to attain maximum clientele satisfaction and reaffirming their trust and loyalty to our brand and offerings.

India's widest range of Heat Pumps.

