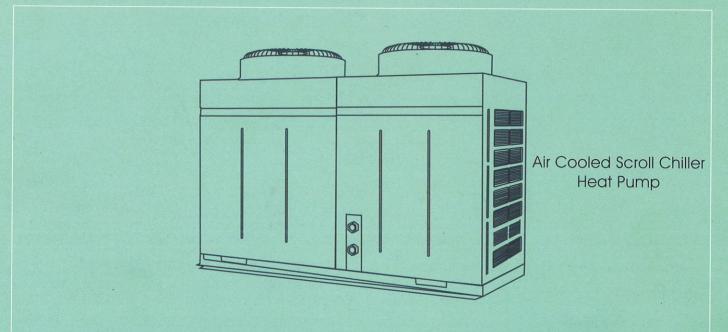


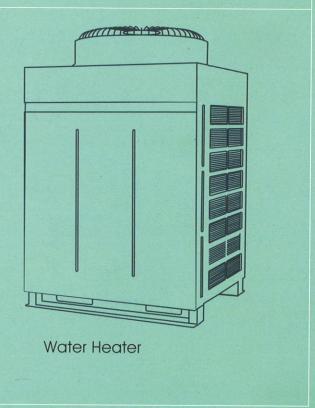
# GIVE YOUR BUSINESS A HIGHER EDGE.

Daikin Chillers offer high energy efficiency.





Water Cooled Scroll Chiller Heat Pump Heat Recovery Chiller

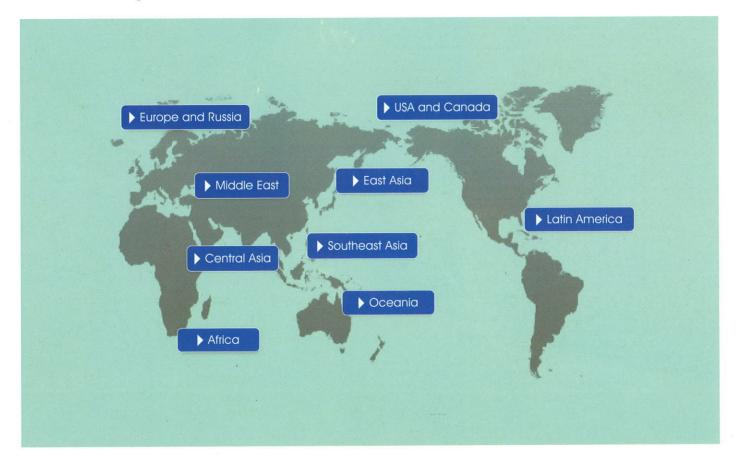


### ABOUT DAIKIN

Daikin is a leading innovator and provider of advanced, high quality airconditioning solutions for residential, commercial and industrial applications.

As World's No.1 Airconditioning Company, Daikin is committed to delivering airconditioning solutions that enhance the quality of life all around the world. A diverse multinational company, Daikin Industries Ltd. Active in airconditoning, chemicals and oil hydraulics, was established in 1924. With headquarters at Osaka, Japan, the Daikin family has more than 51,000 members, working across 60 production base units and 208 consolidated subsidiaries worldwide. As the world's sole manufacturer that develops a long line of products from refrigerants to air conditioners, Daikin advocates comfortable living on the strength of advanced technologies.

Daikin is present in USA, Europe and Russia, Middle East, Africa, Asia, Oceania and Middle - South America. We aim to serve our customers in each of these markets by providing optimal airconditioning products.



Daikin introduces in India a new range of modular scroll chillers for cooling and heating applications. These chillers ideally combine the advanced and mature chiller technology. In addition, these chillers features outstanding performance, high capacity, low sound level, easy installation, and flexible system management, helping Daikin take the lead in the global market.

# AIR COOLED SCROLL CHILLERS & HEAT PUMPS: UAL



#### **Environment Friendly**

The R410A causes no harm to the ozonosphere (ODP=0) Protects global ecosystem.

#### Low Sound Levels

Newly designed spiral blades makes the air flow in outdoor units smooth, significantly reducing the turbulence and lowering the air flow sound level.

Unique Night Mode brings down night noise greatly and ensures you a sound sleep.

#### Flexible Module Combination

 $1{\sim}16$  modules of different capacity can be combined as a set to meet load requirements of various applications.

The modular design of the unit allows the owner to invest in phased manner. The owner can increase the investment at any time with the development.

#### Compact Size

Compact size modules can be lifted without large lifting tools and can be conveniently installed on the roof, balcony or any possible outdoor space.

#### Reliable Operation

All units have undergone strict and long-term test, ensuring reliable operation. Modular design enables one by one start, reducing impact upon the grid when starting.

# High Static Pressure Fan (50Pa optional, only for UAL450 model)

The optional high static pressure fan makes it possible for outdoor unit to be connected to exhaust duct. This feature avoids short circuit of airflow, and ensures stable operation of the unit.



Basic Operating Modes Cooling Heating (Optional)

Model - UAL	210D5	210DR5	230D5	230DR5	230ER5	340DR5	450DR5
Туре	Cooling Only	Heat Pump	Cooling Only	Heat Pump	INVERTER* Heat Pump	Heat Pump	Heat Pump
Nominal Cooling Capacity (TR)	17	17	18.5	19.1	18.8	28.3	36.8
COP (Cooling) Including Condenser Fan Power	3.19	3.01	3.39	3.38	3.38	3.38	3.33
Nominal Heating Capacity (kW)	-	64		66	64	100	130
Rated Running Current Cooling (A)	35.5	37.2	36.9	36.8	38	54.4	73.6
Rated Running Current Heating (A)	-	38.2		36.7	39.2	55.8	73.6
Power Supply V/Ph/Hz	380 - 415 V / 3N~/ 50 Hz						
Refrigerant	R410A						
Water Flow Cooling (cmh)	10.3	10.3	11.2	11.7	11.4	17.2	22.4
Water Pressure Drop (kPa)	38	38	44	46	46	42	56
Unit Dimension (LxWXH) mm	1990 x 840 x 1840 2100					2100 x	1100 x 2300
Net Weight	520	540	520	515	565	870	990
Operating Weight kg	530	555	530	525	575	880	1000

#### Notes:

- 1. The specifications given in the table will be subject to the modifications on product design by the manufacturer,
- 2. Nominal cooling capacity condition: lwt 7°C, water flow 0.172 [m3/(h+kw)], outdoor temperature 35°C.
- 3. Nominal heating capacity condition: lwt 45°C, water flow 0.172 [m3/(h•kw)], outdoor dry-bulb temperature 7°C, wet-bulb temperature 6°C.
- 4.\* IPLV for 230ER5 = 4.36, Conditions for IPLV: leaving water temp. 7°C; 100% loading: Outdoor ambient temp. 35°C, 75% loading: Outdoor ambient temp. 31.5°C, 50% loading: Outdoor ambient temp. 24.5°C

# AIR SOURCE WATER HEATER -New Generation Hot Water Supply Method

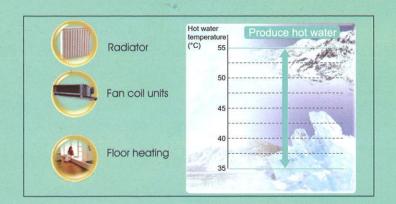
MHA air source water heater establishes the new benchmark in hot water market.

- Environmental friendly R410 refrigerant
- Wide range
- High efficiency design COP up to 4.59
- Intelligent control
- Modular design (1–16 units) for phased investment
- 30/40/80 kW option at 20 Deg C DBT
  ambient & 55 Deg C Hot Water Out Temperature
- · Unique "Spray Liquid" Compressor Design
- · Weekly Schedule Management



### Expand application of hot water units

MHA series ultra-low temperature heat pump hot water units, break the traditional bound of domestic hot water, it can also be used for fan coil units, radiator, floor heating and other hot water demands, according to different customer requirements.



#### Key Benefits:

Safety Separation of water and electricity, no electric shock danger, no harmful gas emissions,

safe to use.

Comfortable Central hot water system for buildings, bungalow, villas. Multiple water ports available for

multiple users. Big water flow scouring force, for more comfortable bath.

Energy Saving Operation cost is 1/5 of the electric water heater.

Environmental Low noise, no waste heat, waste water or waste gas emissions, reduces heat

Protection island effect

Flexibility Small investment; can be used with existing thermal storage tanks, gas and oil-fired

boilers in combination.

Whole Year Running throughout the year; unaffected by changes of weather Operation

Model - MHA	075B5	100B5	200B5		
Nominal Heating Capacity (kW)	30	40	80		
Nominal Hot Water Production Rate (LPH)	645	860	1720		
Nominal Power Input (kW)	6.83	8.71	18.22		
Water flow Cooling (cmh)	5.16	6.88	13.76		
Water Pressure Drop (kPa)	35	58	72		
Power Supply V/Ph/Hz	380 - 415 V / 3N~/ 50 Hz				
Operating Range	Environment Temperature -20 to 43 Deg C / Water Tank Water Temperature 25 to 55 Deg C				
Compressor/ Throttle type/ Refrigerant	Hermetic Scroll/ Electronic Expansion Valve/ R410A				
Unit Dimension (LxWXH) mm	990 x 88	0 x 1515	1990 x 880 x 1780		
Net Weight	220	250	500		
Operating Weight kg	225	255	510		

#### Note:

• The nominal heating capacity above is measured at, standard conditions of outdoor environment DB/WB temperature 20°C/15°C, initial water tank temperature 15°C, and final water temperature 55°C.

## WATER COOLED SCROLL CHILLER:



#### **OPERATING MODES**

cooling mode

heating mode

heat recovery mode

Modular Concept - (Up to 16 modules in a set) for Design flexibility and inbuilt Redundancy

High COP - for Energy Efficient operation

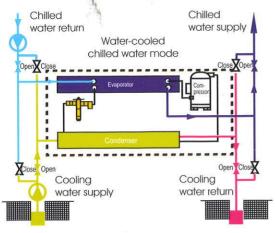
Environment Friendly - R 410A refrigerant (ODP = 0)

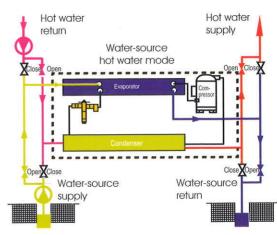
Shell and Tube Heat Exchangers - Maintenance Friendly Design

IP 54 Enclosure - Weather Proof Design

## DUAL MODE SWITCHOVER

The switchover between water-cooled chilled water and water-source hot water modes can be achieved easily by the opening and closing of valves in the water system to meet the annual demand for cooling or heating. The operation is more efficient and more eco-friendly.

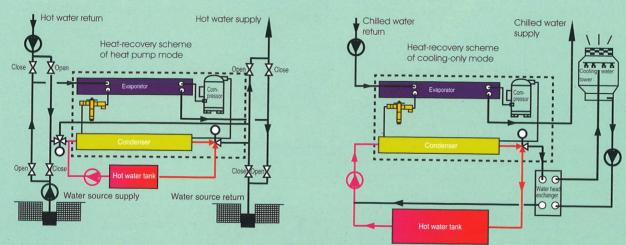




Note: The dashed box indicates the unit.

# HEAT RECOVERY APPLICATION

Units can be applied in heat-recovery occasions. By monitoring heat-recovery recycling water (condenser recycling water) temperature, signal output is provided to control the switch of cooling water and heat-recovery recycling water, and realize heat-recovery application.



Note: The dashed box indicates the unit. All the accessories out of the dashed box is not provided by factory



Model - UWL	030B5	040B5	
Nominal Cooling Capacity (kW)	102.9	131.5	
Cooling Power Consumption (kW)	25.1	31.6	
Nominal Heating Capacity (kW)	130.1	170	
Heating Power Consumption (kW)	29	38	
Unit Dimension (LxWXH) mm	1800 x 650 x 1600		
Evaporator Type	Shell and Tube		
Condenser Type	Shell and Tube		

#### Notes:

- Nominal cooling capacity is tested under the following condition: LWT of evaporator: 7°C, water flow factor:0.172[m3/(h·kW)]; EWT of condenser: 30°C, water flow factor: 0.215[m3/(h·kW)].
- Nominal heating capacity is tested under the following condition; LWT of evaporator: 45°C water flow factor: 0.172[m3/(h·kW)]; EWT of condenser: 15°C, water flow factor: 0.134[m3/(h·kW)].
- The switch of cooling/heating mode is realized by the valve of the hydraulic system. Factory doesn't offer it. It needs to be installed at site.
- WPD of evaporator and condenser don't include the external piping and components pressure drop.
- The parameters will change by design improvement without prior notice.













Hospital

Multi-storey Residential

Factory

**High-rise Apartment** 

Dormitory

Villas





Daikin focuses on airconditioning solutions and control systems. As specialists, it's all we do. No wonder, Daikin is recognised as an expert in airconditioning.



Daikin takes pride in providing its customers with efficient after sales support, including readily available spare parts warehoused in India.



Daikin has been providing airconditioning solutions for over 12 years in India. As one of the industry's more trusted names, Daikin is committed to the airconditioning market and has a manufacturing facility located in Rajasthan.



That's probably top of your list when buying an airconditioning system for your home or business. Daikin gives you peace of mind and reassurance with their quality and reliability of products.





The Daikin Edge Manufacturina Daikin is the only company in the world dedicated to manufacturing both airconditioning systems and refrigerants. Each element has been designed to work flawlessly with the next - delivering optimal performance - from the time a project begins till the moment of absolute comfort.



When you buy a Daikin airconditioning system you need to look beyond the initial purchase price. It pays to consider ongoing running costs in conjunction with the potential life of the product. Daikin systems offer superior build quality and energy efficiency.



**Efficiency** 

Daikin's continuous drive for improved efficiency has seen its advance technology being applied to provide a more comfortable environment and also being energy sensitive at the same time.



Daikin distributes its products through experienced dealers. This ensures that you receive a top quality product with expert support. Together this means the best airconditioning solution for your individual needs.



Daikin has a comprehensive range of products in both domestic and commercial segments. Designed to provide effective and quiet airconditioning, Daikin can customise a solution to meet every requirement.



Daikin continues to work towards a sustainable future and has received **Environmental Management System** certification to ISO14001. Daikin India is dedicated to preserving and protecting the environment through the production of energy efficient products.

### DAIKIN AIRCONDITIONING INDIA PVT. LTD.

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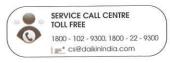
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As a continuing policy of product innovation at Daikin, the design and specifications are subject to change without prior notice. The visuals of the products in the catalogue are representative only, actual products might differ from the ones shown. Sales revenue includes revenue through sales of all Daikin Airconditioning Systems.



World's no.1 position based on internal assessment of total company sales revenue for 2012/13. "Product mentioned in this catalogue comply with RoHS regulations as per E-waste (Management & Handling) Rules, 2011 and should not be mixed with general household waste at the end of their useful life. For more details kindly visit our website www.daikinindia.com or contact our customer care centre at 1800 102 9300 / 1800 22 9300."