



Climate Solutions



A/C & REF. SPARES



GI & PU DUCTS



PROJECTS & SERVICES

Al Rayan is one of the leading suppliers for air conditioning and refrigeration genuine & OEM spare parts products catering entire Middle East & Africa based in Sharjah with branches in Dubai & Ajman, UAE since 1982.

What we do?

- 🔧 **Genuine HVAC & Refrigeration Spares**
- 🔧 **GI & PU Ducts & Accessories**
- 🔧 **HVAC & Chiller Projects**
- 🔧 **Swimming Pool Heat & Cool Solutions**
- 🔧 **Manufacturing & Overhauling of Gears**
- 🔧 **Maintenance & Services**



Spare Parts Products

The products and solutions developed by our partners plays a crucial role in these solutions. We work with the leading global companies like LG, Hitachi, Toshiba, York, Carrier, Trane, Copland, CMP, SCP, Johnson Controls etc.

Compressors | Crankshafts | Bearings | Pistons
Connecting Rods | Cylinder Heads and Components
Sleeves | Cylinder Liners | Crank Case Heaters
Fiber Gasket Kits | Compressor Oil | Refrigerants
Fiber Gaskets | Filters | Gasket Kits | Heaters | Liners
Metal Gaskets | Controls | Contactor | Motors
Motor Components | Module

Oil Pump Assemblies | Oil Pump Components
Oil Pump Housings | Oil Screens & Suction Screens
Piston Parts | Piston Rings | Pressure Relief Valves
Rod Bushings | Sensors | Shaft Seals | Sight Glasses
Solenoid Valves | Springs | Strainer | Terminal Studs
Terminal Kits & Components | Thrust Spacers (Washers)
Thermostatic & Electronic Expansion Valves
Valve Plate Components | Valve Plate Assemblies
Valve Plate Kits



GI & PU Ducts

We are one of the leading manufacturer & supplier of Metal and PU Ducts with its accessories in the UAE, using the latest high-tech equipment in production and Fabrication, electronic cutting and shaping machineries to support with tailor-made products to our clients



We Promise The Best Solution For Your Ducting Need keeping High Standards with Premium Quality Materials.

Facilities

We are backed by a dedicated team of professionals working day and night to manufacture and supply quality rich premium GI Ducts. To ensure that the quality of our products is not compromised, we manufacture them under the strict supervision of various concerned professionals. The ducts find extensive use in various construction, industrial and manufacturing sectors. Further, these are available in various dimensions and technical specifications such as the GI round ducts, rectangular ones and so on.

HVAC Projects

Al Rayan rates as the reputed HVAC turnkey contractor providing complete solution for Air Conditioning, Air cooling & Ventilation for Hotels, Restaurants, Office Spaces, Institutes, Hospital & Industrials projects

We specialize in clean room and cold room solutions. We also execute an energy audit to check on the operational efficiency of HVAC.



We provide complete solutions starting from Designing, Consultation, Supply, Installation, Testing & Maintenance.

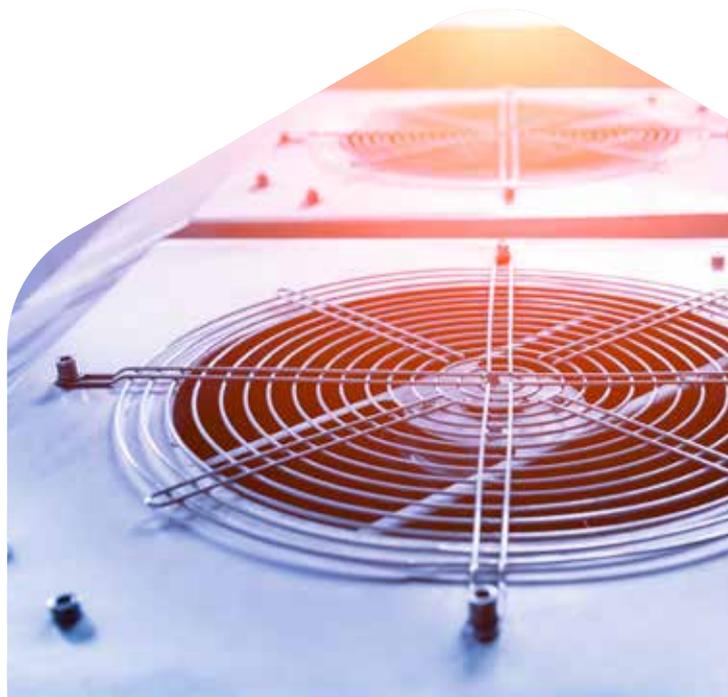
We are also tied up with leading OEM's in the industry like Emerson, Bluestar, Stulz, Carrier etc. and have HVAC consultants on board guiding our customers in choosing best machines as per their requirement.

We always provide customized solutions to our client which help them in long run as cooling solutions differ from industry to industry and things can't work on pre defined standard formats.

As in, we first understand our customer requirement and guide them what kind of machines will be suitable for them like **Ductable, Packaged, VRV, VRF, Precision, Cassette AC** etc. We have hired some of the best consultants in the industry who do all the R & D before suggesting the best cooling solutions to our client and preparing the BOQ afterwards.

We do not make our customers run after OEM's for Pre Sales Query and After Sales Service, that's why we stand out over others and take care of complete turnkey projects.

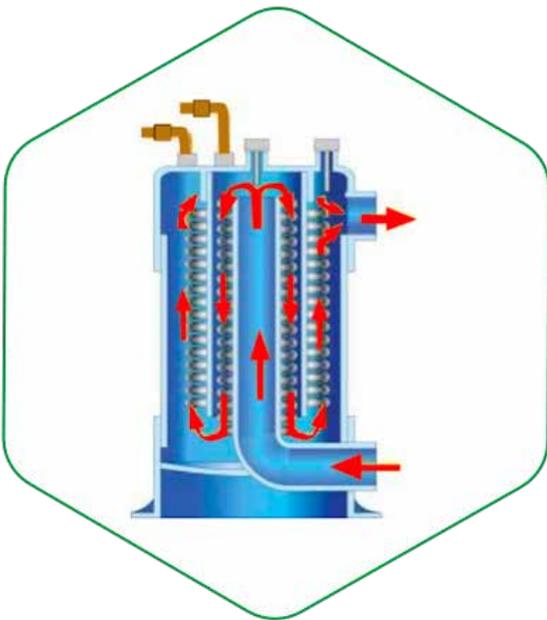
We, as one the leading HVAC companies in India into the business of providing Heating Ventilation and Air Conditioning (HVAC) solutions all kind of requirements for Commercial, Industrial Establishments, Pharmaceutical Labs & Hospitals/healthcare facilities Air Conditioning , Superior Residence Air Conditioning , We provide complete HVAC



Chiller Solutions

Our Heat and Chill pump can be used for heating or cooling swimming pool, spa or some other tank water cooling System. The heat and chill pump manufactured very highest international standard quality with advanced technologies to maximize the performance and minimize the consumption. In consideration of this, Our heat pumps have always been specifically designed to have higher COP at lower temperature when maximum energy is needed. All polar bear heat pumps will be available with environmentally friendly refrigerant.

HOW DO HEAT PUMP WORKS



Our Heat pump and chill pump principle, Heat pumps function like a reversed air conditioning cooling system. The heat pump fan draws ambient air through the outer evaporator air coil that acts as a heat collector. The air coil has a liquid refrigerant which absorbs available heat in the passing air transforming it into a gas which is compressed by a compressor. When the gas is compressed it intensifies and concentrates the heat. This intense hot gas is then pumped into the heat exchange condenser where the actual heat exchange takes place. As the pool water passes through the heat exchanger, the hot gas gives up its heat to the cooler pool water. Uses freely available air energy 4-5 times more effective than conventional electrical heaters. If heat energy is converted to KW you get 4-5 kW of heating/cooling output for every KW of power consumed, you get at least 4- 5KW of free power.

HIGHLY EFFICIENT

Adopt heat pump for heating and the energy comes from ambient air. So, its COP can reach 4.0 - 5.0. 70% can be saved compared with normal electrical heater.

SAFETY & ENVIRONMENT

Water and electricity are completely separate. ECO friendly gas, no fire, no electricity leakage, safer than fuel burner or electrical heater. Adopt R407-C, R410-A, R134-A, R22 as refrigerant according to the requirements of EU Montreal protocol.

LONG LIFE

Titanium heat exchanger in SS case shell makes it super strong and resistant against erosion caused by chlorine and salt. SS316 casing for titanium heat exchanger is an option.

COMPRESSOR

We use the reliable COPELAND scroll compressor. The simple design is with very few moving parts that enable it to operate at lower sound and vibration levels than reciprocating compressors.

WATER HEAT EXCHANGER

This is made of double spiraled titanium tubes encased in stainless steel body for additional protection against corrosive pool water. Titanium heat exchangers are superior to stainless steel and make the heat pump more efficient and cost effective.

EXTERNAL HEAT EXCHANGER

The tubes are made of copper and the fins in aluminum. The extra-large evaporator coils are designed to collect more heat from the outside air to ensure performance in even the most adverse conditions.



Pool Heating

Heat & Chill Pump - External Heat Exchanger

The tubes are made of copper and the fins in aluminum. The extra-large evaporator coils are designed to collect more heat from the outside air to ensure performance in even the most adverse conditions.

Features

Oversized air coil-higher COP and wider. Electrostatic coated air coil- corrosion protection. Titanium class AI double coil shell-tube heat exchanger-higher COP. Electrical expansion valve-higher COP and wider working temperature range Microprocessor controlled auto- charge defrost-high COP. Water proof display and keyboard for operation. Dual fan speed-low noise. Stainless steel cabinet on request. Compressor heater wider working temperature range. Quick connectors for easy and fast installation.



FAN

Large axial fans, with precision engineered blades are used to draw maximum ambient air and pass it on to the evaporator coils.

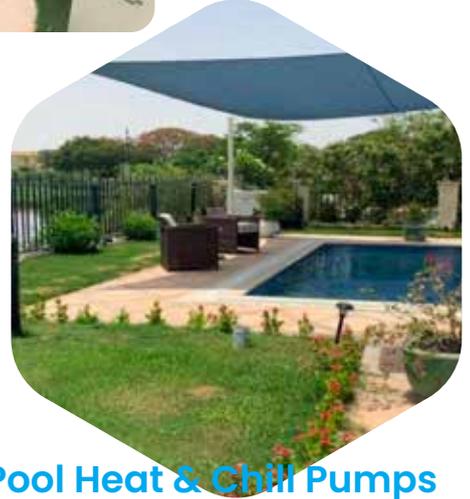


REFRIGERANT

We use the ecologically approved refrigerant R407-C, R410-A, R134-A, R22 depending on the client's requirement.

Technical Specifications

Model		PBH15HP	PBH20HP	PBH35HP	PBH50HP	PBH75HP
BTU/hr		18000	24000	42000	60000	90000
Heating Capacity	KW	7	9	22	26	34
Cooling Capacity	KW	5.5	7	17	22	28
Cooling Power Input	KW	2.1	2.85	2.85	3.9	18
Running Ams		8	12	13	15	3.9
Power Supply		220-240	220-240	220-240	220-240	380-420
COP		4.9	4.9	4.9	4.8	4.8
Compressor		1	1	1	1	1
Fan Quality		1	1	1	1	1
Fan Rotate Speed	RPM	850	850	830	850	950
Noice	dB(A)	40	48	58	58	58
Water Flow Rate	m ³ /hr	3	6	6	7.5	7.5
Water Pressure Drop (MAX)	KPa	8	8	8	10	10
Unit Net Dim. (L/W/H) mm		950x730x1080	1170x830x1240	1130x1065x1240	1170x1065x3100	1170x1108x1420



Technical Specifications – Swimming Pool Heat & Chill Pumps

Specification		ABEM100H	ABEM125HP	ABEM150HP	ABEM200HP	ABEM250HP
BTU/hr		120000	150000	180000	240000	300000
Heating Capacity	KW	45	55	70	92	115
Cooling Capacity	KW	35	45	60	82	105
Cooling Power Input	KW	10.3	17.8	24.7	41.6	56.2
COP		4.9	4.7	4.5	4.7	4.5
Compressor		2	2	3	3	3
Fan Quality		2	2	3	3	3
Fan Rotate Speed	RPM	830	830	830	870	920
Noice	dB(A)	61	62	62	65	67
Water Flow	m ³ /hr	18	30	32	40	50
Unit Net Dim. (L/W/H) mm		1450x730x1080	2170x830x1440	2170x1065x1930	2170x1065x2100	2850x1108x2220

Above Data is subject to modifications without notice for technical upgrade.

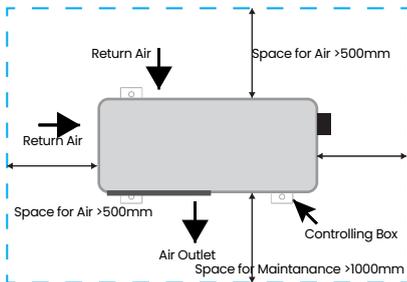


Installation

Location for installation of units is outdoor with free air movement for higher efficiency. Choose good place with ventilation. Keep proper space around the unit for installation and maintenance. See illustration here must be drainage channel around the unit for condensing water. Parallel connection must be carried out if several units installed together.

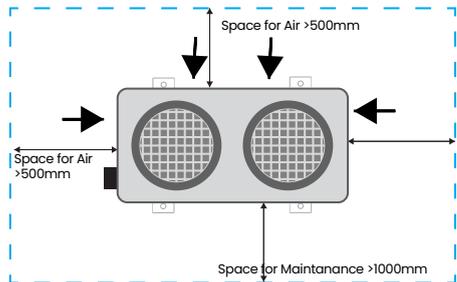
INSTALLATION FOR SIDE DISCHARGE UNITS

Model: ABEM25HP, ABEM35HP



INSTALLATION FOR SIDE DISCHARGE UNITS

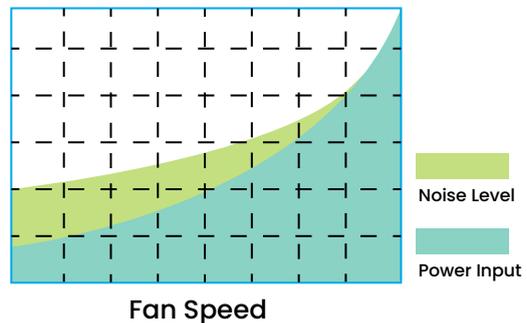
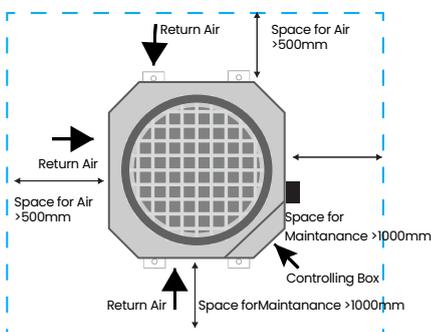
Model: ABEM150HP, ABEM200HP



INSTALLATION FOR SIDE DISCHARGE UNITS

Model: ABEM15HP, ABEM20HP, ABEM35HP

There must be no obstacle on the top of these units as the air direction is vertical.



Cool & Domestic Chillers

We are specialized in providing supply and installation of commercial cold rooms and refrigeration equipments through its office and workshop based in Sharjah & Ajman of United Arab Emirates. Al Rayan is managed by professionals having wide experience in the refrigeration and air-conditioning fields. We also undertaken Annual Maintenance Contract for refrigeration and air conditioning equipments.

Technical Specification

MODEL	ABEM15CT	ABEM20CT	ABEM30CT	ABEM50CT	ABEM75CT	ABEM100CT	ABEM125CT	ABEM150CT	PBR200CT	
Cooling Capacity BTU	18000	24000	36000	60000	90000	120000	150000	180000	240000	
Compressor (Optional)	Scroll	Scroll	Scroll	Scroll	Optional	Optional	Optional	Optional	Optional	
Heat Exchanger (Evaporator)	Optional	Shell & Tube Or Plate Heat Exchanger								
Water Flow Rate	3.75	3.75	7.5	12.5	15.5	24	30	36	48	
Condenser Coil	Copper Tubes with fins Aluminum									
Refrigerant Type (Optional)	R407c/R410a									
Chiller Water Connection (Inch)	1	1	1.5	1.5	1.5	2	2	2.5	2.5	
Unit Voltage	220	220	220	380	380	380	380	380	380	
Weight Kgs	150	170	250	270	300	450	550	750	900	
Cooling Capacity KW/H	6	8	11	18	27	35	45	53	70	
Running KW	1.5	2	3	5	7.5	10	12	15	20	
Fan Motor Axial	1	1	1	1	1	2	2	2	3	
LPHW Water Connection mm	40	40	50	50	50	50	50	65	63	
Gross Weight	80	120	150	180	200	220	250	300	350	
Dimensions mm	L	720	800	900	1000	1190	1420	1490	1890	2400
	W	700	750	750	950	1000	1200	1450	1400	1800
	H	820	900	900	1000	1200	1200	1200	1250	1600

Notes:

As per client's requirement, refrigerant gas can be changed, accordingly, the technical specification will also change Higher capacity chiller can make as per customer specification Specification mentioned are subject to change for product improvement. Chiller capacity will change as per the water consumption & ambient temperature.

” Industrial Chillers

Al Rayan is a market leader in the supply, service and maintenance of commercial refrigeration, air-conditioning and process cooling equipment and spares. Over the years we have built up a highly skilled and trained workforce of refrigeration engineers and technicians dedicated to delivering a depth of knowledge and expertise that is second to none whether it's freezers, chillers, air conditioning units, refrigeration units or cold rooms.

Plastic Gears

Our plastic gears are composed of base materials for wear resistance, reinforcing fibers for high forces, and embedded solid lubricants that eliminate the need for external oil and grease. Our plastic gears are also low friction, lightweight, and resistant to dirt, dust, corrosion and chemicals.

Worm Gears

A worm gear is a gear consisting of a shaft with a spiral thread that engages with and drives a toothed wheel. Basically, a worm gear is a screw butted up against what looks like a standard spur gear with slightly angled and curved teeth. We are pioneers in producing worm gears.

Int & Ext Splines

With a variety of machining options including hobbing, shaping and broaching, Al Rayan is adept at cutting both internal and external involute and straight-sided splines on workpieces. We work with metals such as gray cast iron, alloy steel, aluminum and stainless steel.

Sprockets Pulleys

Our sprockets and pulleys are trusted by dozens of customers in an array of applications. Our sprockets and pulleys which come in either metric or standard and in a range of sizes and configurations are manufactured to the closest specifications with minimum tooth-to-groove clearance.

Manufacturing & Overhauling of Industrial Gears

We have a specialized division of manufacturing all types of gears for Industrial and Marine applications. Our facilities can provide a failure analysis, reverse engineering components or recommend required improvements for maintaining the performance of your existing gears.

Spiral Bevel Gear Set: Spiral bevel gears have curved oblique teeth that contact each other gradually and smoothly from one end of the tooth to the other, meshing with a rolling contact similar to helical gears.

Helical Gears: Helical gears are similar to spur gears except that their teeth are cut at an angle to the hole (axis) rather than straight and parallel to the hole like the teeth of a spur gear.

Production Capabilities

- ⊗ Spur, Helical & herringbone Gears
- ⊗ Straight Tooth Bevel Custom Gearing
- ⊗ In-house heat treating and Metallurgical expertise
- ⊗ Carburizing though hardening & Stress relieving carburizing

Spur Gears

Spur gears are a cylindrical shaped toothed component used in industrial equipment to transfer mechanical motion, control speed, power and torque. These gears are cost-effective, durable, reliable and provide a positive, constant speed drive to facilitate daily industrial operations.

Helical Gears

Helical gears are one type of cylindrical gears with slanted tooth trace.- Compared to spur gears, they have the larger contact ratio and excel in quietness and less vibration and able to transmit large force. A pair of helical gears has the same helix angle but the helix hand is opposite.

Bevel Gears

Bevel gears have a conical form and can be used to transmit rotational power through shafts that are typically at an angle of 90 degree to each other. This functionality is useful in a wide range of applications from cordless hand-tools to automotive transmissions and outboard motors.

Herringbone Gears

The herringbone gear consists of two sets of gear teeth on the same gear, one right and one left hand. Having both hands of gear teeth causes the thrust of one set to cancel out the thrust of the other. Thus, another advantage of this gear type is quiet, smooth operation at higher speeds.

Our Organizations:

Al Rayan A/c & Refrigeration Equipment Trading – Sharjah

Al Rayan A/c & Refrigeration Equipment Trading – Ajman

Al Rayan Engineering & Turning – Sharjah

Abdul Majid Jalal A/c & Refrigeration Equipment Trading – Dubai

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