alp WATER COLLING SYSTEMS

"water cooling technology"

alperen® ENGINEERING

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About Us

Alperen Engineering Heating and Cooling Systems Industry&Trade Ltd.

Our company serves in the field of air conditioning of ventilation of spaces deemed as clean rooms such as operating rooms, intensive care units, laboratories and spaces in the electronics and food industry as well as meeting the requirements as to industrial air conditioning of ventilation of all indoor areas such as shopping malls, factories, hotels, offices, educational institutions and manufacturing plants.

Our company, for the first time in Turkey, has realized the production of custom-designed concrete cooling groups based on spot cooling the concrete as a result of the R & D activities conducted thereby. Our company carries out meticulously all steps germane to cost assessment, providing information, projecting, offering price quotes, manufacturing, installation, commissioning and service.

Our company, having launched the commercial operations thereof in January 2000, produces standard and hygienic air handling units, water chillers, concrete cooling groups, clean room air conditioning equipments, rooftop air conditioning systems air cleaning devices and realizes production of special orders.

Furthermore, our company, with the experienced staff thereof in its field, furnishes services such as sales, after sales service, project and contracting for air-conditioning products such as hygienic air conditioning systems, precision-controlled air-conditioning systems, package type air conditioning systems, central air conditioning systems, chiller systems, VRV air conditioning systems, split air conditioning systems, ventilation equipments, textile air ducts, polyurethane air ducts, galvanized & stainless steel air ducts, air cleaning equipments, hepa filters, coil filters, bag filters, carbon filters, fan coils, convectors, heat recovery equipments, dehumidifiers, air curtains and infrared and radiant heaters.

We aim to be closer and provide a better service by virtue of our meticulously prepared websites that are updated every moment. You can have information incident to our products, brands and models, perform computations of online capacity, can receive offer, place orders, purchase and request a delivery service thanks to sharing of information provided through our company via internet.

Our services and works are based on aesthetic appearance, high performance, affordable usage, robustness, durability, prompt service and your esteemed satisfaction.

We are constantly working with our technical services aiming at efficiency with minimum cost in our products in addition to our expert engineers closely following the latest innovations in the rapidly evolving fields of heating, cooling, ventilation and air-conditioning sectors and delivering same to you.

Our Products

- Standard Air Handling Units
- Hygienic Air Handling Units
- Package Type Hygienic Air Handling Units
- Dehumidification Units
- Precision-Controlled Air Conditioning Systems
- Laminar Air Flow Units
- VRV - VRF - VRS Air Conditioning Systems
- Rooftop Air Conditioning Systems
- Split Air Conditioning Systems
- Mono Block Air Conditioning Systems
- Water Cooling Systems
- Concrete Cooling Systems
- Fan Coil Systems
- Convector Systems
- Automatic Control Systems
- Ventilation Equipments
- Air Ducts
- Air filters

Alp Water Cooling Systems

Alp Chiller Groups

Chiller systems, which are also described as water heating-cooling systems, are the ideal high-tech devices produced to be used for heating and cooling purposes in residential and industrial areas. With their modern special package type designs, and ease and speed of installation, Alp chiller water cooling-heating groups are the products that can be used in both central individual systems. Our company that continues to bring together its products providing high efficiency with its consumers, without compromising energy saving, continues to enhance the comfort of your life, with the central heating and cooling products produced for both industrial and small areas. Alp chiller groups are produced in 23 different types, within the cooling capacity range of 20 kW - 920 kW. They operate with Eco-friendly R407C gas. They are produced with R22 gas, depending on your request. With their models equipped with hydronic kits, the chillers produced as long-lasting products by taking into account the needs of industrial spaces can be assembled easily and expeditiously.

Our air-cooled chiller groups having the feature of providing high efficiency besides their low noise levels have a system that minimizes the failure rate. All units are equipped with compressors with scroll, screw or piston, mounted on a heating-cooling circuit; differential water pressurestat; shell or tube evaporators with thermal-insulated plates, protected against frost with a heater; finned condensers produced of aluminum plates, with big heat-exchange surfaces and finned copper tubes; and fans with blade profiled propellers, intended for reducing the sound. Depending on your demand, it is easy to control the temperature, and to see which compressor is operated by which control, and when it is activated and deactivated. In addition, the device failures can be easily seen with the system codes by means of the error reporting system, through the control and microprocessor. If desired, MOD-BUS protocol connection to the automation systems can be provided.

Alp Mini Chiller Groups

Alp enhances your life quality in also small places such as villas, houses, restaurants, and office, besides industrial areas. Application of central heating and cooling systems becomes economical, by means of the package chillers designed for small areas. It provides ease of use for also small spaces, thanks to its integrated accumulation tank, since any additional accumulation tank is not mounted on the exterior surface of the chiller. Alp chiller groups provide the consumers with both economy and comfort, by maintaining the balance of quality and price. Alp brings together consumers with its domestic products for easy-on-the pocket prices with Turkish guarantee, and keeps the customer satisfaction at the highest level with its quality after-sales services.

Alp Water Cooling Systems

Structure of Body

In Alp chiller groups, the body consists of powder coated reinforced profiles and body covers. High-strength and light service covers allowing easy intervention in the device are used.

Structure of Compressor

High efficiency compressors with semi-hermetic piston, as well as hermetic scroll and screw-type compressors are used in Alp chiller groups. All units other than mini-chiller groups are equipped with double compressors. As a standard, there are crankcase heater, suction and discharge valves, and electronic motor protection thermistor against overheating are available on the compressor.

Structure of Evaporator

Evaporator structures of Alp chiller groups are direct expansion shell and tube or plated heat exchanger models. Evaporator body is pressure resistant. In addition, it is insulated against corrosion and heat. Copper pipes have been designed in such a way as to allow easy removal and cleaning. Our evaporators are produced as with one or two circuits. Evaporator inlets and outlets are galvanized, and they have been designed to extent up to the outside of the device's body.

Structure of Condenser

Condenser structure of Alp chiller groups consists of aluminum fins and copper tubes. Condensers are tested under 40 atmospheric pressure, an then are placed in chillers.

Structure of Condenser Fans

Condenser fans used in Alp chiller groups are axial fans with integrated motor. Fans operate silently and efficiently, thanks to their vanes with aerodynamic structure

Structure of Cooling Circuit

Refrigeration cycles used in Alp chiller groups consist of one or two independent circuits. There are solenoid valve, dryer, sight glass, high-low pressure pressurestat, differential pressure switch, winter kit with pressostatic fan control, valves, and protection equipment such as vibration absorbers on each circuit.

Structure of Electrical Panel Board

Electrical panel boards used in Alp chiller groups are tested in accordance with EN 60204-1, and are produced as protected against outside weather conditions. Doors that can be opened to both sides are used for easy intervention. The panel boards consist of power and control circuits. There are compressor, contactors as fan and power circuits equipment, thermics, control relays, digital or microprocessor control system on the panel board.

Technical Specifications of Alp Chiller Groups

- Heating and cooling functions
- Modern and special package type design
- Low Sound Levels
- High efficiency
- Multi-scroll compressor application facilitating the capacity control (1-8 pcs)
- Ease of installation with the hydronic kit and water accumulation tank
- Practical solution that does not require pump and collector groups
- Production in accordance with industrial process applications
- Ability to operate from -15 °C to 46 °C exterior temperatures.
- High heat transfer, thanks to the heat exchanger with plate
- Differential pressure pressostat that does not require flow-switch
- Frost thermostat and automatic heater
- Mic-process control
- Full modulation or gradual running feature in the fans
- Ease of use with wired remote control
- In the groups operating with up to 15 kW among package chiller devices, ease of use in the interior spaces by using centrifuged fans, and the feature of discharge through the condenser air ducts.
- For package type chiller devices, package production can be made in such a way as to contain pump, accumulation tank, safety valve, valves, shrink tank, flow-switches, silt traps, and air relief cock.

TECHNİCAL SPECİFİCATİONS OF ALP CHİLLER GROUPS

TYPE		ALP C20	ALP C30	ALP C40	ALP C50	ALP C60	ALP C80	ALP C90	ALP C100	ALP C120	ALP C130	ALP C140	ALP C150	ALP C170	ALP 190	ALP C230	ALP C280	ALP C320	ALP C370	ALP C460	ALP C550	ALP C690	ALP C730	ALP C920
Cooling Capacity	Kw	21.4	33.2	42.3	55.2	65.4	80.0	97.4	110.2	120.6	130.7	143.6	152.0	171.7	194.7	233.2	282.2	329.4	372.7	463.9	552.2	692.4	736.6	923.7
	Kcal/h	18404	28552	36373	47400	56200	68800	83700	94800	1003720	112400	123496	130720	147.662	167400	200600	242692	283200	320522	398954	474892	595464	633476	794382
Compressor Power	Kw	8.3	10.7	13.6	17.8	21.9	27.2	32.7	35.6	38.6	43.8	47.8	51.4	56.6	65.4	76.6	94.0	111.2	130	158	195	237	260	316
Total Compressor	Ad.	1	1	1	1	1	1	1	2	1	2	1	2	1	2	2	2	2	2	2	3	3	4	4
Capacity Control	St.	-	-	-	-	-	1	1	2	1	2	1	2	1	2	2	2	2	100-75-50-25	100-75-50-25	100-75-50-25	100-75-50-25	100-75-50-25	100-75-50-25
	Opt.	1	1	1	1	1	1+1	1+1	2	1+1	2	1+1	2	1+1	2	2	2	2	2	2	2	2	2	2
Total Power	Kw/Amp.	7.7/13.4	12.3/21.2	15.6/27.1	20.9/45.4	25/51.3	31.9/69.5	37.4/77.0	40.3/84	43.2/89.9	48.4/95.8	53/93.2	58/102.0	61.6/113.2	77.4/129.4	88.6/161.8	104/184.4	123.2/226.4	136.6/240.4	164.6/288.2	201.6/358.5	243.6/423.8	266.6/469.2	322.6/567.7
Eveporator	Shell and Tube																							
Water Check Out Diameter	İnç	2"	2"	2"	2"	3"	3"	3"	3"	3"	4"	4"	4"	4"	4"	5"	5"	5"	5"	5"	5"	6"	6"	6"
Condenser	Air Cooled																							
Condenser Air Flow	m^3/h	30000	30000	36000	42000	44000	54000	54000	54000	55000	57000	64000	71000	76000	80000	80000	81000	82000	84000	92000	96000	111000	117000	122000
Fan Diameter	mm.	Ø 400	Ø 450	Ø 500	Ø 500	Ø 500	Ø 500	Ø 500	Ø 500	Ø 500	Ø 500	Ø 800	Ø 800	Ø 800	Ø 800	Ø 800	Ø 800	Ø 800	Ø 800	Ø 800	Ø 800	Ø 800	Ø 800	Ø 800
	Ad.	4	4	4	4	4	6	6	6	6	6	3	4	3	4	6	6	6	4	4	4	4	4	4
The total fan power	Kw	2.0	2.6	3.0	3.0	3.0	4.5	4.5	4.5	4.5	4.5	5.0	6.6	5.0	6.6	10.0	10.0	10.0	6.6	6.6	6.6	6.6	6.6	6.6
Refrigerant**	R 407 C																							
	Kg.	9	9	10	14	15	20	22	25	24	30	26	40	31	45	48	53	60	68	72	74	79	83	89
Sound Level	dBA	73	73	74	76	76	77	77	78	78	78	78	79	79	79	80	80	82	75	79	75	79	75	79
Length	mm.	2300	2300	2400	2400	2400	3050	3050	3250	3050	3250	3950	3250	3950	3250	4150	4150	4150	2700	2700	2700	2700	2700	2700
Depth	mm.	1500	1500	1600	1600	1600	1600	1600	1800	1600	1800	1600	2100	1600	2100	2100	2100	2100	2200	2200	2200	2200	2200	2200
Height	mm.	1400	1400	1500	1500	1500	1500	1500	1500	1500	1500	1750	2050	1750	2050	2050	2050	2050	2600	2600	2600	2600	2600	2600
Weight	Kg.	700	700	790	850	890	1150	1180	1355	1395	1450	1485	1750	1790	1930	2350	2400	2500	2570	2600	2630	2670	2790	3260

The values gives in the table may show variations in thhe stage of production.
An information data could be demanded from our compan for the equipments of definite values or in different capacity.

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WATER COOLING PIPES DIAMETER

Dt = 5 °C			
Heating Range		Diameter	Diameter
Kcal/h		Inch	mm
180	1.620	1/2"	ø15
1.620	3.600	3/4"	ø20
3.600	6.840	1"	ø25
6.840	14.400	1 1/4"	ø32
14.400	21.240	1 1/2"	ø40
21.240	38.160	2"	ø50
38.160	85.500	2 1/2"	ø65
85.500	132.480	3"	ø80
132.480	223.200	4"	ø100
223.200	393.480	5"	ø125
393.480	635.400	6"	ø150
635.400	1.440.000	8"	ø200
1.440.000	2.520.000	10"	ø250

Dt = 6 °C			
Heating Range		Diameter	Diameter
Kcal/h		Inch	mm
216	1.944	1/2"	ø15
1.944	4.320	3/4"	ø20
4.320	8.208	1"	ø25
8.208	17.280	1 1/4"	ø32
17.280	25.488	1 1/2"	ø40
25.488	45.792	2"	ø50
45.792	102.600	2 1/2"	ø65
102.600	158.976	3"	ø80
158.976	267.840	4"	ø100
267.840	472.176	5"	ø125
472.176	762.480	6"	ø150
762.480	1.728.000	8"	ø200
1.728.000	3.024.000	10"	ø250

Dt = 4 °C			
Cooling Range		Diameter	Diameter
Kcal/h		Inch	mm
144	1.296	1/2"	ø15
1.296	2.880	3/4"	ø20
2.880	5.472	1"	ø25
5.472	11.520	1 1/4"	ø32
11.520	16.992	1 1/2"	ø40
16.992	30.528	2"	ø50
30.528	68.400	2 1/2"	ø65
68.400	105.984	3"	ø80
105.984	178.560	4"	ø100
178.560	314.784	5"	ø125
314.784	508.320	6"	ø150
508.320	1.152.000	8"	ø200
1.152.000	2.016.000	10"	ø250

Dt = 1 °C			
Cooling Range		Diameter	Diameter
Lt/s		Inch	mm
0.01	0.09	1/2"	ø15
0.09	0.20	3/4"	ø20
0.20	0.38	1"	ø25
0.38	0.80	1 1/4"	ø32
0.80	1.18	1 1/2"	ø40
1.18	2.12	2"	ø50
2.12	4.75	2 1/2"	ø65
4.75	7.36	3"	ø80
7.36	12.40	4"	ø100
12.40	21.86	5"	ø125
21.86	35.30	6"	ø150
35.30	80.00	8"	ø200
80.00	140.00	10"	ø250

WATER HEATING PIPES DIAMETER

Dt = 20 °C			
Heating Range		Diameter	Diameter
Kcal/h		Inch	mm
0	4.320	1/2"	ø15
4.320	9.360	3/4"	ø20
9.360	18.000	1"	ø25
18.000	38.160	1 1/4"	ø32
38.160	56.160	1 1/2"	ø40
56.160	100.800	2"	ø50
100.800	228.240	2 1/2"	ø65
228.240	352.800	3"	ø80
352.800	594.000	4"	ø100
594.000	1.048.320	5"	ø125
1.048.320	1.696.320	6"	ø150
1.696.320	3.790.080	8"	ø200
3.790.080	6.710.400	10"	ø250

Dt = 1 °C			
Heating Range		Diameter	Diameter
Lt/s		Inch	mm
0.00	0.06	1/2"	ø15
0.06	0.13	3/4"	ø20
0.13	0.25	1"	ø25
0.25	0.53	1 1/4"	ø32
0.53	0.78	1 1/2"	ø40
0.78	1.40	2"	ø50
1.40	3.17	2 1/2"	ø65
3.17	4.90	3"	ø80
4.90	8.25	4"	ø100
8.25	14.56	5"	ø125
14.56	23.56	6"	ø150
23.56	52.64	8"	ø200
52.64	93.20	10"	ø250

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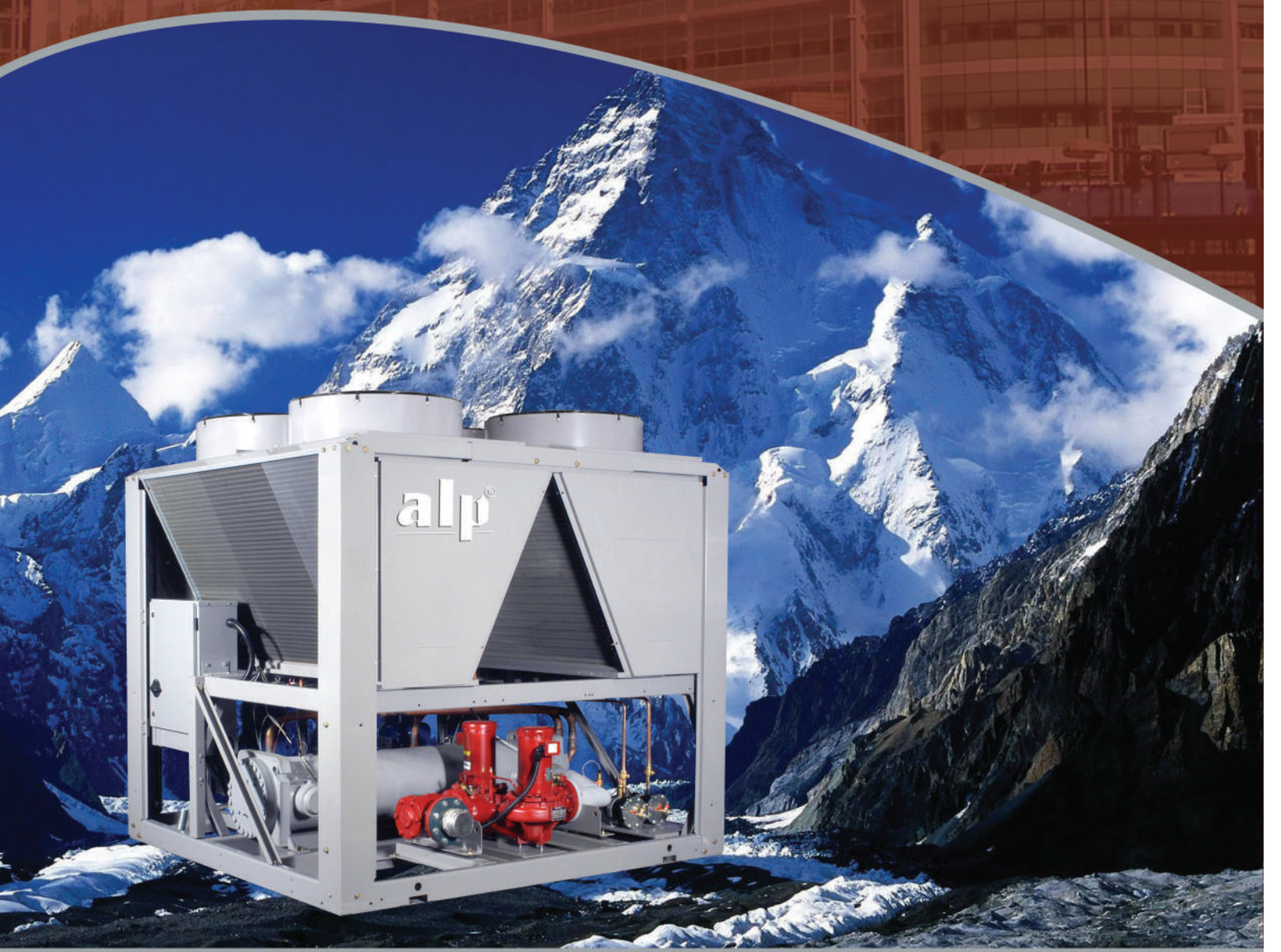

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