

Air Cooled Water Chillers

Cooling capacity : 176 - 648 kW
R410A

Hermetic Scroll Compressors



Klimalco s.p.a Air Treatment Experts

Outdoor Installation



1. General Description

Air Cooled Water Chillers



The Klimallco LKAC-RTD large series are packaged air cooled water chillers for cooling applications and outdoor installation. They are available in 14 models with nominal capacities ranging from 176 to 648 kW.

These series are ideal in combination with Klimallco fan coil or air handling units for air conditioning office buildings, hotels, hospitals shopping centers, restaurants, etc., or for supplying chilled water for industrial applications.

Optimized design for R410A refrigerant.

Casing: Galvanized steel plate with polyester coating.

Assembly: Fully bolted/welding free.

Compressor: SCROLL / TANDEM SCROLL.

Air heat exchanger: Cross fin coil Internally grooved copper tubes and louvered aluminium fins. Direct drive propeller.

Fan: Low rpm, quiet operation.

Water heat exchanger: Shell and tube type.

Safety and functional devices:

- High and low pressure switch.
- Phase sequence - phase failure - reverse phase and voltage monitoring device.
- Evaporator low temperature protection.
- Electronic microprocessor control with digital display.
- Differential water pressure switch.
- High and low pressure transmitters.
- Electronic expansion valve, ensuring constant suction gas superheat, at all operating conditions.

Technical Specifications

LKAC-RTD 050-095

Type		LKAC - 050 RTD	LKAC - 055 RTD	LKAC - 060 RTD	LKAC - 070 RTD	LKAC - 080 RTD	LKAC - 090 RTD	LKAC - 095 RTD
Nominal Cooling capacity	kw	176	199	207	250	287	311	324
	RT	50	56	59	71	82	88	92
EER	Btu/h	601.145	676.991	705.784	852.559	978.266	1.058.676	1.103.973
		2,81	2,84	2,91	2,89	2,84	2,91	2,89
Construction	Material/Color	Galvanised steel / Grey (RAL 7042)						
Compressor		Hermetic Scroll						
Quantity		2+2	4	2	4	2+2	3	4
Capacity Steps		4	4	2	4	4	3	4
Absorbed power	kw	56,0	63,2	64,4	79,8	90,9	96,6	102,0
Nominal Operating Current	A	104,3	110,9	109,7	138,3	156,8	164,6	175,2
Maximum Operating Current	A	148,0	160,0	165,2	194,0	227,8	247,8	261,6
Condenser		High capacity cross finned coil with internally grooved tubes and lower fins						
Evaporator		Shell and tube						
Quantity		1						
Water Content	lit	40,0	50,0	50,0	45,0	95,0	95,0	90,0
Max. operating pressure	Water side bar	10						
	Refrigerant side bar	30						
Connections		3"	DN 100	DN 100	DN 100	DN 125	DN 125	DN 125
Nominal Water Supply	lit/h	30,330	34,156	35,609	43,014	49,357	53,414	55,699
Water Pressure Drop	kpa	55,0	40,0	44,0	49,0	29,0	34,0	34,0
Minimum System Water Content	lit	882	993	1035	1250	1435	1553	1619
Fans								
Quantity		4	4	4	4	6	6	6
Speed	rpm	890						
Total Air Flow	m3/h	79.200	79.200	79.200	79.200	118.800	118.800	118.800
Absorbed power	kw	6,8	6,8	6,8	6,8	10,2	10,2	10,2
Nominal Operating Current	A	13,6	13,6	13,6	13,6	20,4	20,4	20,4
Maximum Operating Current	A	14,8	14,8	14,8	14,8	22,2	22,2	22,2
Electrical characteristics		400V/3Ph/50Hz						
Total Absorbed Power	kw	62,8	70,0	71,2	86,6	101,1	106,8	112,2
Nominal Operating Current	A	117,9	124,5	123,3	151,9	177,2	185,0	195,6
Maximum Operating Current	A	162,8	174,8	180,0	208,8	250,0	270,0	283,8
Compressor carter resistance power	W	4x100	4x100	2x100	4x100	4x100	3x100	4x100
Power cables cross section per phase	mm ²	120	120	150	150	240	2x150	2x150
Fuses	A	3x200	3x200	3x200	3x250	3x300	3x300	3x300
Voltage operating limits	V	360-440V						
Refrigerant circuit								
Number of circuits		2	2	2	2	2	3	2
Expansion device		Electronic expansion valves						
Refrigerant type		R410A						
Sound level at 5m	dba	71	71	72	75	74	75	74
Dimensions	Width	mm	2.200	2.200	2.200	2.200	2.200	2.200
	Length	mm	3.200	3.200	3.200	3.200	3.900	3.900
	Height	mm	2.400	2.400	2.400	2.400	2.400	2.400
Shipping weight	kg	1.565	1.720	1.540	1.820	2.400	2.290	2.450

LKAC-RTD 100-185

Type		LKAC - 100 RTD	LKAC - 120 RTD	LKAC - 130 RTD	LKAC - 135 RTD	LKAC- 160 RTD	LKAC- 175 RTD	LKAC- 185 RTD
Nominal Cooling capacity	kw	337	414	449	486	553	621	648
	RT	96	118	127	138	157	176	184
	Btu/h	1.147.163	1.411.568	1.529.550	1.655.959	1.886.656	2.117.352	2.207.945
EER		2,87	2,91	2,87	2,89	2,94	2,91	2,89
Construction	Material/Color	Galvanised steel / Grey (RAL 7042)						
Compressor		Hermetic Scroll						
Quantity		3+3	4	4+4	6	3+3	6	8
Capacity Steps		6	4	8	6	6	6	8
Absorbed power	kw	107,3	128,8	143,0	153,0	173,1	193,2	204,0
Nominal Operating Current	A	186,9	219,4	249,2	262,9	296,0	329,1	350,5
Maximum Operating Current	A	265,5	330,4	354,0	392,4	444,0	495,6	523,2
Condenser		High capacity cross finned coil with internally grooved tubes and louver fins						
Evaporator		Shell and tubes						
Quantity		1						
Water Content	lit	90,0	135,0	135,0	135,0	125,0	220,0	220,0
Max. operating pressure	Water side bar	10						
	Refrigerant side bar	30						
Connections		DN 125	DN 150	DN 150	DN 150	DN 150	DN 200	DN 200
Nominal Water Supply	lit/h	57,878	71,218	77,171	83,549	95,188	106,827	111,398
Water Pressure Drop	kpa	37,0	29,0	34,0	39,0	50,0	37,0	40,0
Minimum System Water Content	lit	1683	2070	2243	2429	2767	3105	3238
Fans								
Quantity		6	8	8	9	9	12	12
Speed	rpm	890						
Total Air Flow	m ³ /h	118.800	158.400	158.400	178.200	178.200	237.600	237.600
Absorbed power	kw	10,2	13,6	13,6	15,3	15,3	20,4	20,4
Nominal Operating Current	A	20,4	27,2	27,2	30,6	30,6	40,8	40,8
Maximum Operating Current	A	22,2	29,6	29,6	33,3	33,3	44,4	44,4
Electrical characteristics		400V/3Ph/50Hz						
Total Absorbed Power	kw	117,5	142,4	156,6	168,3	188,4	213,6	224,4
Nominal Operating Current	A	207,3	246,6	276,4	293,5	326,6	369,9	391,3
Maximum Operating Current	A	287,7	360,0	383,6	425,7	477,3	540,0	567,6
Compressor carter resistance power	W	6x100	4x100	8x100	6x100	6x100	6x100	8x100
Power cables cross section per phase	mm ²	2x150	2x185	2x185	2x240	2x240	2x300	2x300
Fuses	A	3x400	3x400	3x400	3x500	3x500	3x600	3x600
Voltage operating limits	V	360-440V						
Refrigerant circuit								
Number of circuits		3	2	4	3	3	3	4
Expansion device		Electronic expansion valves						
Refrigerant type		R410A						
Sound level at 5m	dbA	76	76	75	75	76	77	76
Dimensions	Width	mm	2.200	2.200	2.200	2.200	2.200	2.200
	Length	mm	3.900	5.200	5.200	5.850	5.850	7.800
	Height	mm	2.400	2.500	2.500	2.500	2.500	2.500
Shipping weight	kg	2.330	3.010	3.450	3.780	3.830	4.520	4.820

Notes

Nominal conditions are as follows :

1. Entering/leaving chilled water temperature 12/7°C, ambient 35°CDB (cooling)
2. Electrical installation specifications are purely indicative and non-binding, all connections to the system and the electrical installation must be in full accordance with all applicable national and local codes.

CE KLIMALLCO's units comply with the European regulations, that guarantee the safety of the product.



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KLIMALLCO's quality management system is certified according to **ISO 9001:2015** and **ISO 14001:2015** for:
Design, manufacturing and trading of air conditioning equipment.

Technical Data
2019