

PRODUCT CATALOGUE



R410A



**A CLASS ENERGY EFFICIENCY
AIRCOOLED LIQUID CHILLERS
AND HEAT PUMPS WITH AXIAL
FANS, SCROLL COMPRESSORS
AND PLATE EXCHANGER.**

FROM 150kW TO 555kW (FROM 43 TON TO 158 TON)

GENERAL DESCRIPTION

The IKM CHAXT/K/AF 150/P - 555/P liquid Chillers and Heat Pumps are characterized by A CLASS energy efficiency. The units are characterized by multi-compressor design on double cooling circuit, to reach high energy performances, reduction of current at start-up, elimination of inertial tanks and excellent silent functioning.

The use of components built in large series makes them highly reliable and the management of an high number of compressors allows increased life span with reduction of machine stopping risks and easier maintenance operations. A wide range of accessories, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series. The Heat Pump versions are designed for hot water production up to 55°C.

VERSIONS:

IKM CHAXT/K/AF - cooling only

IKM CHAXT/K/AF/WP - Reversible Heat Pump

FEATURES:

Self-supporting galvanized steel frame protected with additional protection achieved via polyester powder painting.

Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.

Axial fans directly coupled to an electric motor with external rotor.

Condenser made of copper tubes and aluminium finned coils.

Evaporator AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch. On the Heat Pump units it is always installed an antifreeze heater.

Cooling circuit shut-off valve on liquid line in 240/P - 555/P models.

Electronic expansion valve.

Electronic high and low pressure gauges.

R410A refrigerant.

Electrical board includes: main switch with door safety interlock, fuses or magnetothermic switches, thermal protection relays for compressors and thermocontacts for fans.

Electrical board with dedicated components sizing and ventilation system for unit operation at high outdoor ambient temperature.

Functioning in heating mode with outside air temperature down to -15 °C.

Microprocessor control and regulation system.

Operating outdoor ambient air temperature up to 55 °C.

FACTORY FITTED ACCESSORIES:

IM - Automatic circuit breakers

SL - Unit silencing

RFM - Cooling circuit shut-off valve on discharge line

RFL - Cooling circuit shut-off valve on liquid line

CT - Condensing control down to 0 °C

CC - Condensing control down to -20 °C

BT - Low water temperature kit

EC - EC Inverter fans

DS - Desuperheater

RT - Total heat recovery

TX - Coil with pre-coated fins

EW - External water connections

PS - Single circulating pump

FACTORY FITTED ACCESSORIES:

- PSI** - Inverter single circulating pump
- PD** - Double circulating pump
- PDI** - Inverter double circulating pump
- FE** - Antifreeze heater for evaporator
- SS** - Soft start
- IS** - Modbus RTU protocol, RS485 serial interface
- ISB** - BACnet MSTP protocol, RS485 serial interface
- ISBT** - BACnet TCP/IP protocol, Ethernet port
- ISL** - LonWorks protocol, FTT-10 serial interface
- IAV** - Remote set-point, 0-10 V signal
- IAA** - Remote set-point, 4-20 mA signal
- IAS** - Remote signal for second set-point activation
- IDL** - Demand limit from digital input

LOOSE ACCESSORIES:

- MN** - High and low pressure gauges
- CR** - Remote control panel
- RP** - Coils protection metallic guards
- AG** - Rubber shock absorbers
- AM** - Spring shock absorbers

IKM CHAXT/K/AF 150/P - 555/P

MODEL			150/P	160/P	180/P	205/P	240/P	270/P	305/P
Cooling	Cooling Capacity (1)	KW	150	161	181	205	239	271	304
		TON	42.7	45.8	51.5	58.3	68.0	77.1	86.4
	Absorbed power (1)	kW	61.3	70.5	75.4	81.9	118	130	137
	Cooling Capacity (2)	kW	197	220	245	271	300	329	361
		TON	56.0	62.6	69.7	77.1	85.3	93.5	103
	Absorbed power (2)	kW	62	69	76	83	95	105	111
EER (2)		3.18	3.19	3.22	3.27	3.16	3.13	3.25	
Cooling (EN14511)	Cooling capacity (2)	kW	196	219	244	270	299	328	360
		TON	55.7	62.3	69.4	76.8	85.0	93.3	102
	Absorbed power (2)	kW	63	70	77	84	96	105	112
	EER (2)		3.11	3.13	3.17	3.21	3.11	3.12	3.21
EUROVENT Class		A	A	A	A	A	A	A	
Heating	Heating capacity (3)	kW	214	239	266	295	325	359	391
		TON	60.8	68.0	75.6	83.9	92.4	102	111
	Absorbed power (3)	kW	65	73	81	88	99	109	119
COP (3)		3.29	3.27	3.28	3.35	3.28	3.29	3.29	
Heating (EN14511)	Heating capacity (3)	kW	215	240	267	296	327	360	393
		TON	61.1	68.2	75.9	84.2	93.0	102	112
	Absorbed power (3)	kW	67	75	83	90	102	112	122
	COP (3)		3.21	3.20	3.22	3.29	3.21	3.21	3.22
EUROVENT Class		A	A	A	A	A	A	A	
Compressor	Quantity	n°	3+3	3+3	3+3	3+3	4+4	4+4	4+4
	Refrigerant circuits	n°	2	2	2	2	2	2	2
	Capacity steps	n°	6				8		
Evaporator	Water Flow	l/s	9.41	10.51	11.71	12.95	14.33	15.72	17.25
		gpm	149	167	186	205	227	249	273
	Pressure drops	kPa	45	49	44	42	50	39	46
		ft WG	15.0	16.3	14.7	14.0	16.7	13.0	15.3
Water connections	DN	80	80	80	80	80	80	80	
Electrical characteristics	Power supply	V/ph/Hz	400/3/50						
	Max. running current	A	152	166	187	199	224	241	258
	Max. starting current	A	276	299	354	367	357	409	426
Unit with pump	Pump available static pressure	kPa	155	135	205	185	180	185	170
		ft WG	51.7	45.0	68.3	61.7	60.0	61.7	56.7
Water connections	DN	100	100	100	100	100	100	100	
Sound pressure	STD version (4)	dB (A)	69	71	72	72	72	72	73
	With SL accessory (4)	dB (A)	66	68	69	69	69	69	70
Weights	Transport weight	kg	1854	2171	2289	2317	2437	2680	2690
	Operating Weight	kg	1870	2190	2340	2460	2710	2720	2690

IKM CHAXT/K/AF 150/P - 555/P

MODEL			315/P	365/P	400/P	455/P	500/P	555/P
Cooling	Cooling Capacity (1)	KW	316	366	400	453	500	555
		TON	89.9	104	114	129	142	158
	Absorbed power (1)	kW	155	170	191	209	239	277
	Cooling Capacity (2)	kW	396	435	485	538	609	692
		TON	113	124	138	153	173	197
	Absorbed power (2)	kW	124	137	154	169	192	220
EER (2)		3.19	3.18	3.15	3.18	3.17	3.15	
Cooling (EN14511)	Cooling capacity (2)	kW	394	433	484	536	607	690
		TON	112	123	138	152	173	196
	Absorbed power (2)	kW	126	139	155	171	194	222
	EER (2)		3.13	3.12	3.12	3.13	3.13	3.11
EUROVENT Class		A	A	A	A	A	A	
Heating	Heating capacity (3)	kW	431	473	526	586	663	754
		TON	123	135	150	167	189	214
	Absorbed power (3)	kW	129	143	162	176	202	231
	COP (3)		3.34	3.31	3.25	3.33	3.28	3.26
Heating (EN14511)	Heating capacity (3)	kW	433	475	528	588	665	756
		TON	123	135	150	167	189	215
	Absorbed power (3)	kW	133	147	165	181	206	236
	COP (3)		3.26	3.23	3.20	3.25	3.23	3.20
	EUROVENT Class		A	A	A	A	A	A
Compressor	Quantity	n°	5+5	5+5	6+6	6+6	6+6	6+6
	Refrigerant circuits	n°	2	2	2	2	2	2
	Capacity steps	n°	8		10			
Evaporator	Water Flow	l/s	18.92	20.78	23.17	25.70	29.10	33.06
		gpm	300	329	367	407	461	524
	Pressure drops	kPa	49	49	33	41	34	32
		ft WG	16.3	16.3	11.0	13.7	11.3	10.7
Water connections	DN	80	80	150	150	150	150	
Electrical characteristics	Power supply	V/ph/Hz	400/3/50					
	Max. running current	A	274	324	358	391	446	500
	Max. starting current	A	407	492	525	558	623	678
Unit with pump	Pump available static pressure	kPa	155	125	185	170	160	145
		ft WG	51.7	41.7	61.7	56.7	53.3	48.3
	Water connections	DN	100	100	100	100	150	150
Sound pressure	STD version (4)	dB (A)	74	74	73	74	75	75
	With SL accessory (4)	dB (A)	71	71	70	71	72	72
Weights	Transport weight	kg	2869	3004	3512	3642	4420	4458
	Operating Weight	kg	2900	3040	3560	3690	4480	4520

DIMENSIONS			150/P	160/P	180/P	205/P	240/P	270/P	305/P	315/P	365/P	400/P	455/P	500/P	555/P
L	STD	mm	4000	4000	4000	4000	5000	5000	5000	5000	5000	6200	6200	7200	7200
W	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100

NOTES

1. Chilled water from 12 to 7 °C, ambient air temperature 46 °C.
 2. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
 3. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B.** Weights of WP versions are specified on technical brochure.

DIMENSIONAL & CLEARANCE AREA

IKM CHAXT/K/AF 150/P - 555/P

500	1800	1000	1800
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 Electrical board side

