

## PRODUCT CATALOGUE



**R134A**



**A CLASS ENERGY EFFICIENCY  
AIRCOOLED LIQUID  
CHILLERS AND HEAT  
PUMPS WITH AXIAL FANS,  
(INVERTER) SCREW COM-  
PRESSORS AND SHELL AND  
TUBE EXCHANGER.**

**FROM 242kW TO 1043kW (FROM 70 TON TO 298 TON)**

### GENERAL DESCRIPTION

The IKM CHAXT/Y/A 240 - 1045 units in A CLASS energy efficiency have extremely high efficiency levels due to reduced electrical absorption and a high efficiency of the compressor-exchanger combination. The latest generation Screw compressors and the new design optimized in every detail ensure the reach of the highest efficiency. Furthermore, accessories as the Inverter control on Screw compressors, on circulating pumps and EC Inverter on fans are also available for getting the highest efficiency at part load.

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.

IKM CHAXT/J/A 240 - 1045

On request, units can be supplied with R513A refrigerant.

### VERSIONS:

**IKM CHAXT/Y/A** - cooling only

**IKM CHAXT/Y/A/WP** - Reversible Heat Pump

### FEATURES:

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

**Screw compressors** with built-in oil separator, suction filter, crankcase heater, oil sight glass, thermal protection and stepless capacity steps.

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

**Condenser made** of copper tube and aluminum finned coils.

**Shell and tube** evaporator with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.

**Cooling circuit** shut-off valves on discharge and liquid line.

**Electronic expansion** valve.

**Electronic high** and low pressure gauges.

**R134a refrigerant.** On request R513A refrigerant.

**Electrical board includes:** main switch with door safety interlock, fuses, 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.

**Condensing Control** is included: electronic proportional device that ensures efficient and continuous functioning of the unit with outside air temperature down to 0 °C in cooling mode. It also allows to reduce the sound level especially at night. It consists of a fans speed controller with continuous speed regulation and high and low pressure transducers on cooling circuit.

**Functioning in heating** mode with outside air temperature down to -10 °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

**CC** - Condensing control down to -20 °C

**BT** - Cooling circuit shut-off valve on discharge line

**EC** - EC Inverter fans

**HR** - Desuperheater

**HRT/S** - Total heat recovery in series



# IKM HVAC AS

- HRT/P - **Total heat** recovery in parallel
  - XT - **Coil with** pre-coated fins
  - EW - **External water** connections
  - SP - **Inertial tank**
  - PU - **Single circulating** pump
  - PUI - **Inverter single** circulating pump
  - PD - **Double circulating** pump
  - PDI - **Inverter double** circulating pump
  - SPU - **Inertial tank** and single circulating pump
  - SPUI - **Inertial tank** and Inverter single circulating pump
  - SPD - **Inertial tank** and double circulating pump
  - SPDI - **Inertial tank** and Inverter double circulating pump
  - FE - **Antifreeze heater** for evaporator
  - FX - **Antifreeze heater** for evaporator and pipes
  - FB - **Antifreeze heater** for evaporator/tank
  - FQ - **Antifreeze heater** on evaporator/tank and pipes
  - FZ - **Antifreeze heater** for evaporator, single pump and pipes
  - FH - **Antifreeze heater** for evaporator, double pump and pipes
  - FU - **Antifreeze heater** for evaporator/tank, single pump and pipes
  - FD - **Antifreeze heater** for evaporator/tank, double pump and pipes
  - II - **Inverter on one** compressor and soft start for the other compressor
  - ID - **Inverter on** all compressors
  - SS - **Soft start**
  - WM - **Web Monitoring** - Wireless remote monitoring ( GPRS/EDGR/3G/TCP-IP)
  - 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
  - CP - **Potential free** contacts
- FACTORY FITTED ACCESSORIES:**
- MN - **High and low** pressure gauges
  - CR - **Remote control** panel
  - RP - **Coils protection** metallic guards
  - AG - **Rubber shock** absorbers
  - AM - **Spring shock** absorbers
  - FL - **Flow switch**

**IKM CHAXT/K/AF 40/P - 155/P**

MODEL			240	290	330	380	425	530	640	775	880	1045
Cooling	Cooling Capacity (1)	KW	242	288	331	381	427	529	640	775	882	1043
		TON	68.8	81.9	94.1	108	121	150	182	220	251	297
	Absorbed power (1)	kW	89.1	104	124	145	159	195	238	284	336	382
	Cooling Capacity (2)	kW	263	313	359	413	464	574	696	839	959	1136
		TON	74.8	89.0	102	117	132	163	198	239	273	323
	Absorbed power (2)	kW	82	96	114	131	146	179	219	256	305	352
EER (2)		3.21	3.26	3.15	3.15	3.18	3.21	3.18	3.28	3.14	3.23	
Cooling (EN14511)	Cooling capacity (2)	kW	262	312	358	412	463	573	694	837	956	1132
		TON	74.5	88.7	102	117	132	163	197	238	272	322
	Absorbed power (2)	kW	83	97	115	132	147	180	221	258	308	356
	EER (2)		3.16	3.22	3.11	3.12	3.15	3.18	3.14	3.24	3.10	3.18
	EUROVENT Class		A	A	A	A	A	A	A	A	A	A
Heating	Heating capacity (3)	kW	272	324	372	428	480	594	721	869	993	1176
		TON	77.3	92.1	106	122	137	169	205	247	282	334
	Absorbed power (3)	kW	81	95	113	130	144	177	217	253	302	348
	COP (3)		3.36	3.41	3.29	3.29	3.33	3.36	3.32	3.43	3.29	3.38
Heating (EN14511)	Heating capacity (3)	kW	273	325	373	430	482	596	723	872	996	1180
		TON	77.6	92.4	106	122	137	170	206	248	283	336
	Absorbed power (3)	kW	83	97	116	133	147	181	222	259	309	356
	COP (3)		3.29	3.34	3.23	3.23	3.27	3.29	3.26	3.36	3.22	3.31
Compressor	Quantity	n°	2	2	2	2	2	2	2	2	2	2
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	Stepless									
Evaporator	Water flow	l/s	12.57	14.95	17.15	19.73	22.17	27.42	33.25	40.09	45.82	54.28
		gpm	199	237	272	313	351	435	527	635	726	860
	Pressure drops	kPa	30	26	49	44	34	28	42	34	39	48
		ft WG	10.0	8.7	16.3	14.7	11.3	9.3	14.0	11.3	13.0	16.0
Water connections	DN	125	125	150	150	150	150	150	200	200	200	
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50									
	Max. running current	A	201	237	261	301	337	393	485	580	664	720
	Max. starting current	A	263	281	337	361	405	504	596	785	827	855
Unit with tank and pump	Pump available static pressure	kPa	130	150	155	140	175	160	165	145	120	160
		ft WG	43.3	50.0	51.7	46.7	58.3	53.3	55.0	48.3	40.0	53.3
	Tank water volume	l	2000	2000	2000	2000	2000	2000	3000	3000	---	---
Water connections	DN	100	100	100	125	125	150	150	150	200	200	
Sound pressure	Transport weight (5)	dB(A)	76	76	76	76	77	76	77	77	77	78
	Operating weight (5)	dB(A)	73	73	73	73	74	73	74	74	74	75
Weights	Transport weight	Kg	3562	3609	3719	4127	4820	5311	6437	7583	7683	8656
	Operating weight	Kg	3690	3740	3850	4390	5070	5540	6790	8070	8170	9230

DIMENSIONS			240	390	330	380	425	530	640	775	880	1045
L	STD	mm	4400	4400	5000	5550	6200	6700	8900	11100	11100	11100
	WP	mm	5550	5550	5550	7750	7750	8900	10050	13400	13400	13400
W	STD-WP	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD-WP	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2500

### 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.
  5. Unit without tank and pump.
- N.B.** Weights of WP versions are specified on technical brochure.

### DIMENSIONAL & CLEARANCE AREA

IKM CHAXT/Y/A 240 - 1045

500	1800	1000	1800
-----	------	------	------

 Electrical board side

