

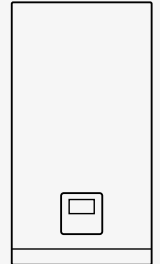
# Hydraulic module



- All hydraulic components in the outdoor unit, i.e. circulating pump, expansion vessel, safety and air vent valve, flow sensor, pressure gauge and water flow heater, are fitted as standard.
- Built-in controller, possibility to move the wired controller to another location
- Easy installation and simple maintenance

# KMK-60RY1, KMK-100 | 160RY3

## TECHNICAL SPECIFICATION



Model			KMK-60RY1	KMK-100RY3	KMK-160RY3
Names of compatible outdoor unit models			KHA-06RY1	KHA-08RY1 KHA-10RY1	KHA-12RY3 KHA-14RY3 KHA-16RY3
Water-side heat exchanger			plate	plate	plate
Water pump	type		adjustable DC inverter	adjustable DC inverter	adjustable DC inverter
	head	m H <sub>2</sub> O	9	9	9
Expansion vessel	volume	l	8	8	8
	initial pressure on the gas side	MPa	0,3	0,3	0,3
Safety valve		MPa	0,3	0,3	0,3
Flow switch		m <sup>3</sup> /h	0,36	0,36	0,60
Internal volume of the system, total		l	5	5	5
Power supply	voltage / number of phases / frequency	V/Ph/Hz	220÷240/1/50	380÷415/3/50	380÷415/3/50
	maximum operating current (MCA)	A	14,3	14,0	14,0
Auxiliary electric heater	electric power	kW	3	3/6/9	3/6/9
	capacity levels		1	3	3
Sound power level		dB(A)	38	42	43
Sound pressure level		dB(A)	28	30	32
Leaving water temperature (LWT)	cooling	°C	5÷25	5÷25	5÷25
	heating	°C	25÷65	25÷65	25÷65
	DHW	°C	30÷60	30÷60	30÷60
Room temperature range		°C	5÷35	5÷35	5÷35
Connection	water-side (external thread ET)	cal	1	1	1
	refrigerant liquid	mm	6,35	9,52	9,52
	refrigerant gas	mm	15,88	15,88	15,88
Dimensions	of the unit (W×H×L)	mm	420×790×270	420×790×270	420×790×270
	of the packaging (W×H×L)	mm	525×1050×360	525×1050×360	525×1050×360
Weight	net / in packaging	kg	37 / 43	37 / 43	39 / 45

The technical data above is compliant with the guidelines specified in the following standards: EN16147/2017; EN14511/2018; EN14825/2018; EU No.: 811/2013  
The sound power level in the heating mode was determined in accordance with EN 12102, under the conditions consistent with EN 14825;

DHW – domestic hot water LWT - leaving water temperature

# Outdoor units



- Compact design, independent hydraulic module, and flexible installation
- The cooling connection between the outdoor and indoor units is resistant to freezing, even during a prolonged power failure
- An additional charge of refrigerant is only required if the length of the cooling lines exceeds 15 m.
- Built-in drip tray with heater

# KHA-06|08|10RY1, KHA-12|14|16RY3

## TECHNICAL SPECIFICATION

Model		KHA-06RY1	KHA-08RY1	KHA-10RY1	KHA-12RY3	KHA-14RY3	KHA-16RY3
Heating A7W35 ΔT=5, R.H. 85%	nominal heat capacity (range)	kW 6,20 (2,73÷7,41)	8,30 (3,36÷9,11)	10,00 (3,81÷10,30)	12,10 (5,58÷14,60)	14,50 (5,92÷15,50)	16,00 (6,43÷16,80)
	electric energy consumption (range)	kW 1,24 (0,53÷1,56)	1,60 (0,61÷1,80)	2,00 (0,71÷2,09)	2,44 (1,04÷3,11)	3,09 (1,12÷3,37)	3,56 (1,27÷3,79)
	COP (range)	W/W 5,00 (5,32÷4,76)	5,20 (5,54÷5,07)	5,00 (5,39÷4,93)	4,95 (5,38÷4,69)	4,70 (5,27÷4,59)	4,50 (5,08÷4,43)
Heating A2W35 ΔT=5, R.H. 85%	nominal heat capacity	kW 5,50	7,10	8,20	9,30	11,40	13,00
	electric power consumption	kW 1,39	1,73	2,02	2,35	3,12	3,71
	COP	W/W 3,95	4,10	4,05	3,95	3,65	3,50
Heating A-7W35 ΔT=5, R.H. 85%	nominal heat capacity (range)	kW 6,10(1,48÷6,21)	7,10(1,82÷7,27)	8,25(2,05÷8,31)	10,00(3,97÷11,00)	12,00(4,57÷12,70)	13,30(4,99÷13,90)
	electric energy consumption (range)	kW 2,00 (0,48÷2,17)	2,18 (0,53÷2,26)	2,62 (0,61÷2,61)	3,33 (1,26÷3,89)	4,29 (1,48÷4,55)	4,93 (1,68÷5,19)
	COP (range)	W/W 3,05(3,06÷2,86)	3,25(3,44÷3,21)	3,15(3,37÷3,11)	3,00(3,14÷2,83)	2,80(3,10÷2,79)	2,70(2,97÷2,67)
Cooling A35W18 ΔT=5	nominal cooling capacity	kW 6,55	8,40	10,00	12,00	13,50	14,90
	electric power consumption	kW 1,34	1,66	2,08	3,00	3,75	4,38
	EER	W/W 4,90	5,05	4,80	4,00	3,60	3,40
Cooling A35W7 ΔT=5	nominal cooling capacity	kW 7,00	7,40	8,20	11,60	12,70	14,00
	electric power consumption	kW 2,33	2,19	2,48	4,22	4,98	5,71
	EER	W/W 3,00	3,38	3,30	2,75	2,55	2,45
Seasonal energy efficiency rating for room heating	LWT at 35°C (temperate climate zone)	klasa A+++	A+++	A+++	A+++	A+++	A+++
	LWT at 55°C (temperate climate zone)	klasa A++	A++	A++	A++	A++	A++
SCOP	LWT at 35°C	4,95	5,21	5,19	4,81	4,72	4,62
	LWT at 55°C	3,52	3,36	3,49	3,45	3,47	3,41
Power supply	voltage / number of phases / frequency	V/Ph/Hz 220÷240/1/50	220÷240/1/50	220÷240/1/50	380÷415/3/50	380÷415/3/50	380÷415/3/50
	maximum operating current (MCA)	A 14	16	17	10	11	12
Sound level	sound power level (acc. to EN 12102)	dB 58	59	60	64	65	68
	acoustic pressure (1m)	dB 45	46	49	50	51	55
Outside air temperature range	cooling	°C -5÷43	-5÷43	-5÷43	-5÷43	-5÷43	-5÷43
	heating	°C -25÷35	-25÷35	-25÷35	-25÷35	-25÷35	-25÷35
	CWU	°C -25÷43	-25÷43	-25÷43	-25÷43	-25÷43	-25÷43
Compressor type	twin rotary	DC	DC	DC	DC	DC	DC
Cooling system	liquid / gas line diameters	mm 6,35 / 15,88 cal 1/4 / 5/8	9,52 / 15,88 3/8 / 5/8	9,52 / 15,88 3/8 / 5/8	9,52 / 15,88 3/8 / 5/8	9,52 / 15,88 3/8 / 5/8	9,52 / 15,88 3/8 / 5/8
	permissible system length / permissible height difference	m 2÷30 / 20	2÷30 / 20	2÷30 / 20	2÷30 / 20	2÷30 / 20	2÷30 / 20
	connection method	socket	socket	socket	socket	socket	socket
	charge	g/m 20	38	38	38	38	38
Additional refrigerant	length without charge	m <15	<15	<15	<15	<15	<15
	symbol (GWP) / refrigerant amount	kg R32 (675) / 1,5	R32 (675) / 1,5	R32 (675) / 1,65	R32 (675) / 1,84	R32 (675) / 1,84	R32 (675) / 1,84
Dimensions	of the unit (W×H×L)	mm 1008×712×426			1118×865×523		
	of the packaging (W×H×L)	mm 1065×800×485			1180×890×560		
Weight	net / in packaging	58 / 64	77 / 88	77 / 88	112 / 125	112 / 125	112 / 125

The technical data above is compliant with the guidelines specified in the following standards: EN14511; EN14825; EN50564; EN12102; (EU) No. 811:2013; (EU) No. 813:2013; OJ 2014/C 207/02:2014. The SCOP seasonal heating efficiency was determined for temperate climate conditions.  
The sound power level in the heating mode was determined in accordance with EN 12102, under the conditions consistent with EN 14825;