RENEWABLE ENERGY SYSTEMS FOR MAXIMUM COMFORT

With iSERIES, you can build your dream home with:

- Heating and cooling of rooms with fan coils, direct-expansion units or using a combination of both
- Domestic hot water production with high-efficiency systems and energy recovery capability (EMIX and EMIX TANK models)
- Domestic hot water production with 3-way valve and DHW tank

MAIN FEATURES

HOW iSERIES WORKS

iSERIES is a system integrated into a heat hump that enables:

- heating
- cooling
- production of domestic hot water

What makes iSERIES unique is that it has both an outdoor unit and corresponding indoor units within the same system, which can exchange energy, either with the hydronic terminals or directly with the ambient air.

iSERIES combines two different technologies:

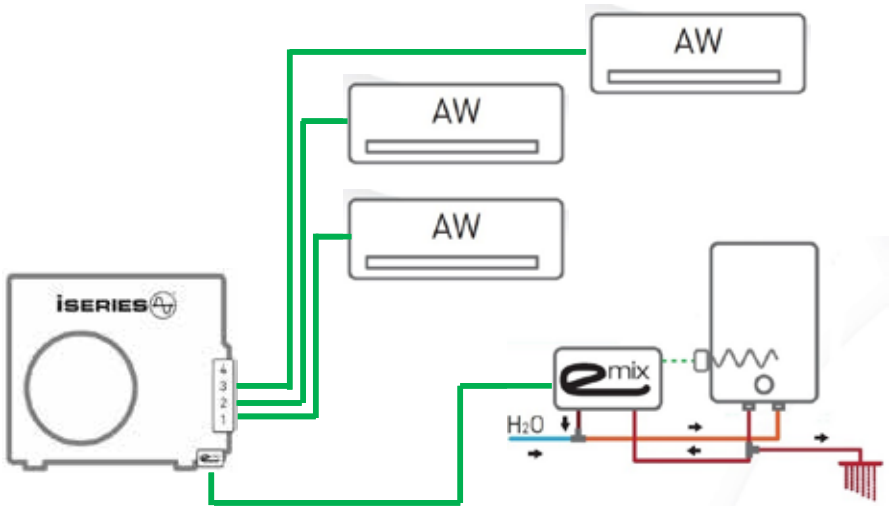
- Direct-expansion technology (Single and multi-split)
- Technology for heat exchange with water (radiant systems, fan coil units, radiators).

A2A **A2W**

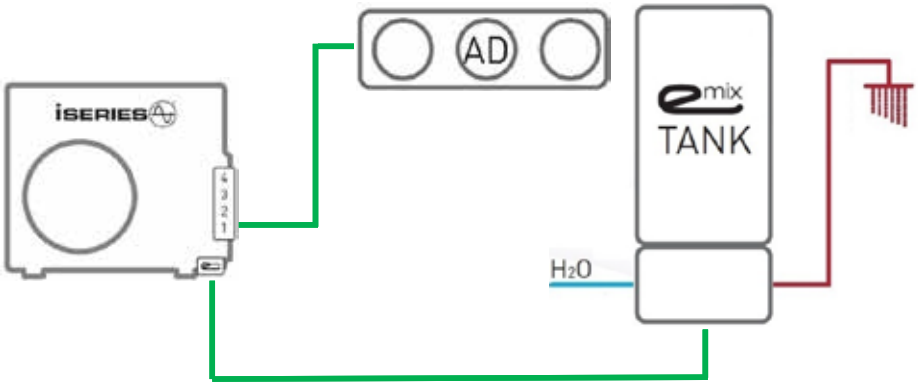
By adding specific indoor units, such as EMIX or EMIX TANK, domestic hot water can be produced at the same time as heating or cooling rooms and during heat recovery in cooling mode during the summer.

WHAT YOU CAN BUILD WITH iSERIES

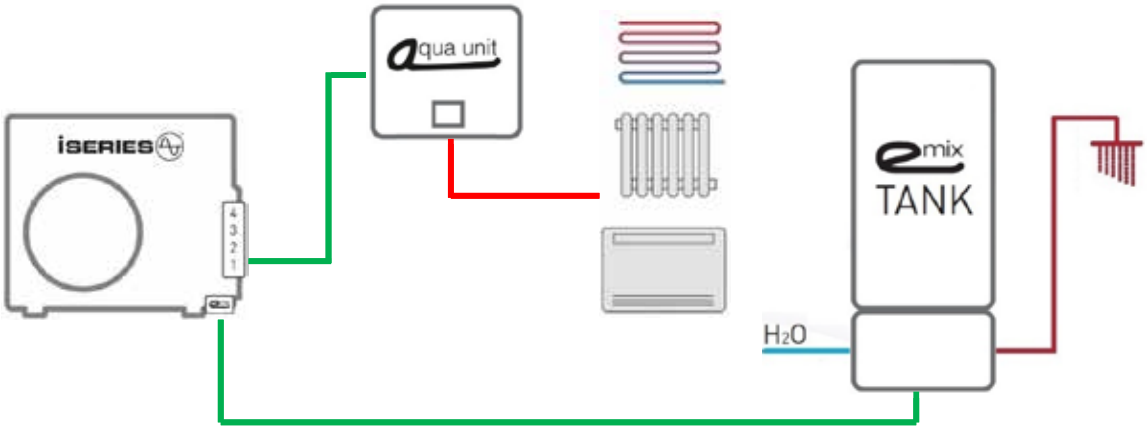
With iSERIES you can create a vast range of system solutions to meet all kinds of needs, be it for residential or small-scalecommercial use. For example, some of the possible and versatile combinations of indoor/outdoor units are listed below.



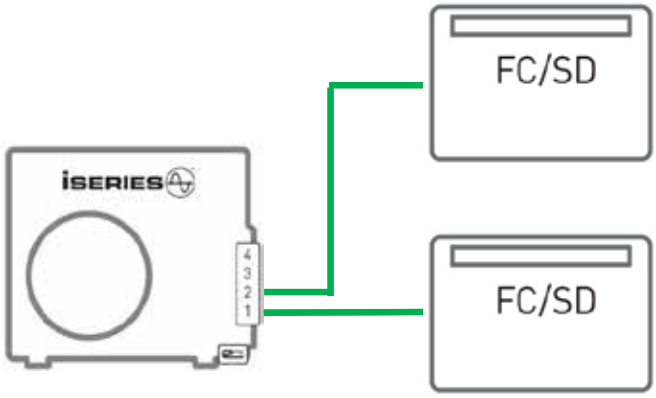
Multisplit system for residential installations with DHW production



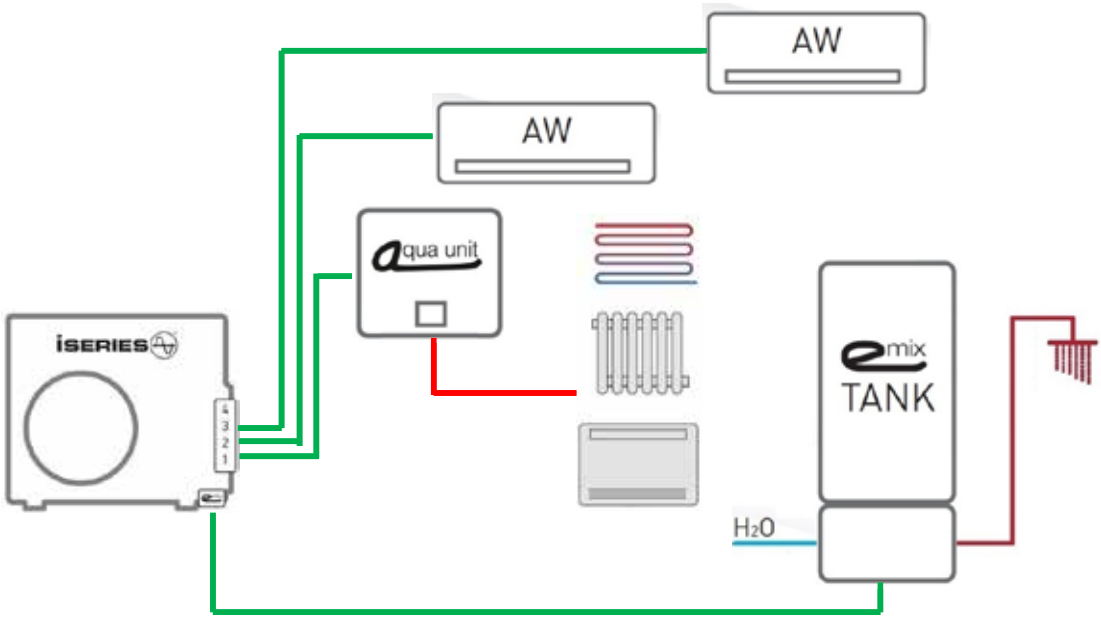
Single split system with DHW production



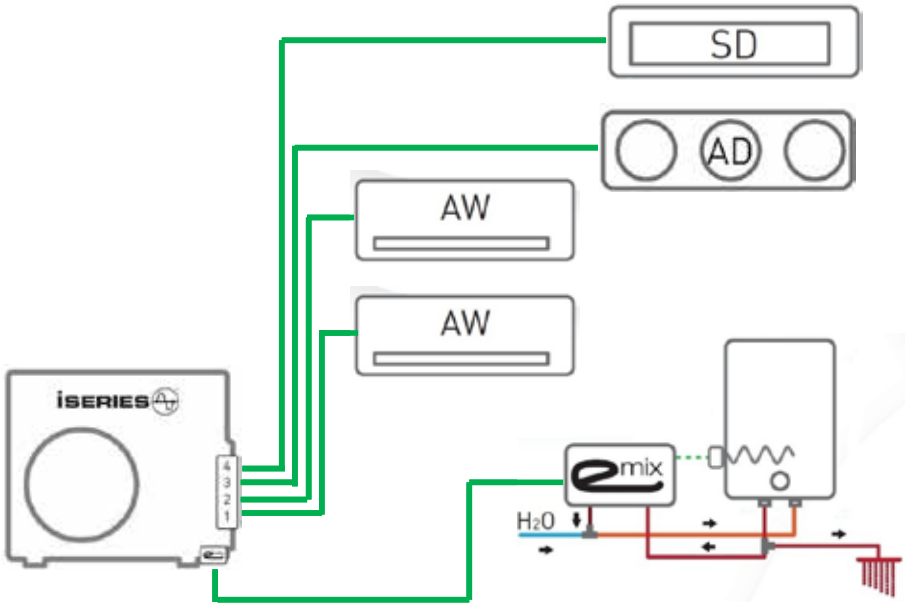
Hydronic system with DHW production



Single/multisplit system for computer rooms



Hydronic and multisplit system with DHW production

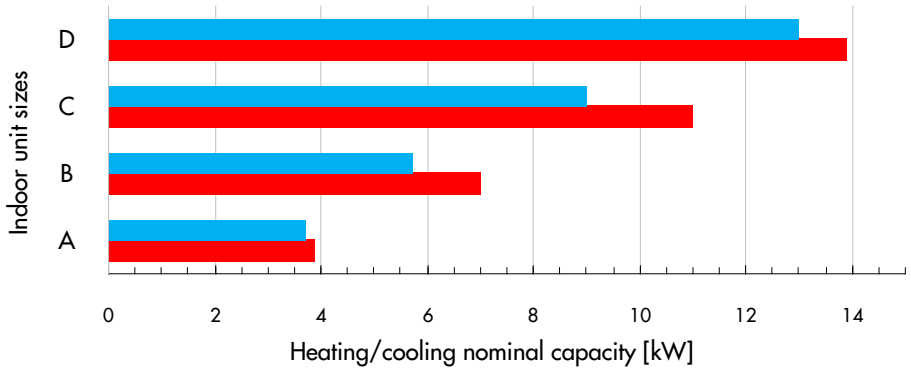


Multisplit system for commercial installations with DHW production

SIZES AND CAPACITY

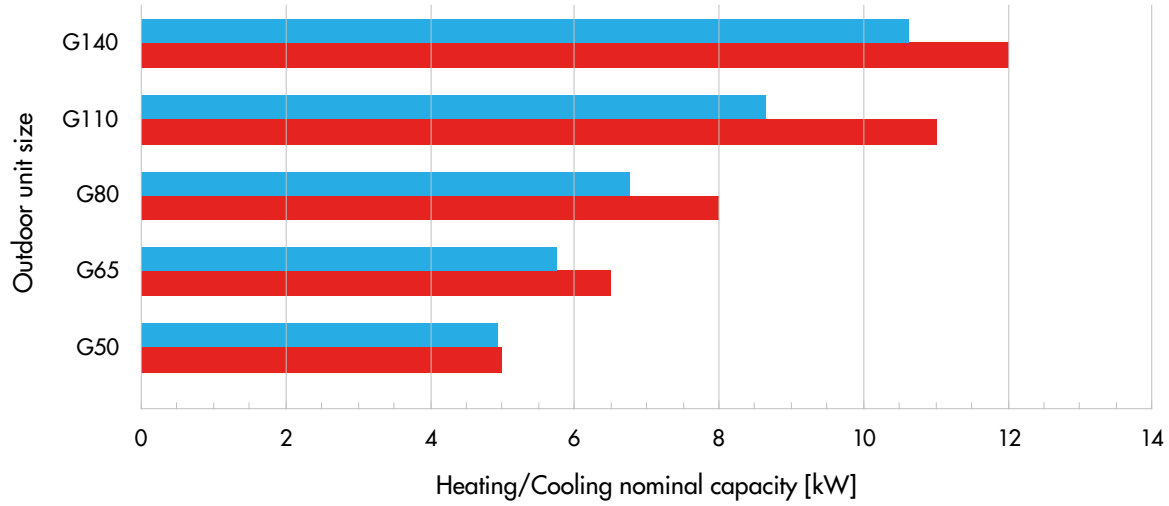
INDOOR UNITS

The graph below shows the nominal heating/cooling capacity of iSERIES indoor units.
Four reference sizes were defined based on the different output values, labelled A, B, C and D respectively. For example, a size A indoor unit represents a nominal heat capacity of 3.9 kW and a cooling capacity of 3.7 kW.



OUTDOOR UNITS

Giving each indoor unit a size makes it quick and easy to work out the corresponding outdoor unit that it can be linked up to, based on a specific series of combinations between indoor units/outdoor units, so as to ensure that the system operates correctly, in line with the now widely used multisplit systems. Linking up indoor units/outdoor units naturally depends on the capacity of these units, as summarised in the graph below (for more specific data, please refer to individual data sheets).



Cooling capacity
Heating capacity

The values presented are based on the following operating conditions:
- A2A heating: t outside air = 7 °C, t ambient air = 20 °C
- A2A cooling: t outside air = 35 °C, t ambient air = 27 °C

iSERIES

iSERIES is a split system heat pump for heating, cooling and production of domestic hot water. The system is composed by a range of 6 outdoor units in R410A with Twin Rotary Full DC Inverter compressor. The models in configuration air to air can also be combined with hydronic indoor units, as AQUA UNIT, for air to water applications. The EMIX door, for EMIX and EMIX TANK connection, allows to achieve mixed applications with production of domestic hot water at the same time. The range is able to satisfy both residential and commercial needs and the working range varies from -20 °C to + 43 °C.

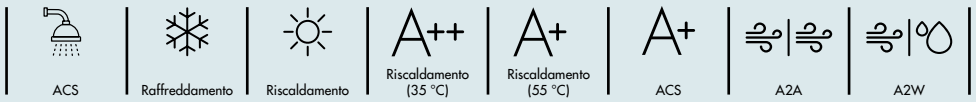

AEI1G50


AEI1G65


AEI1G80


AEI1G110

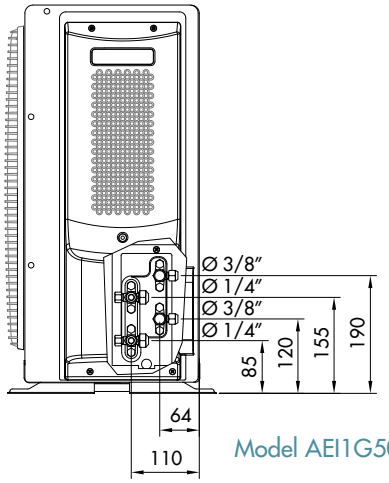

AEI1G140



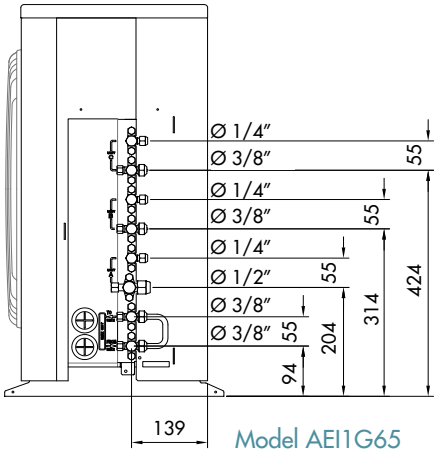
Code	Model	Configuration	*Nominal-max. heating capacity (A2W) [kW]	**Nominal-max. cooling capacity (A2W) [kW]
387007216	AEI1G50EMX	Dual	5.00 (0.95/6.00) (A2A)***	4.92 (0.84/5.90) (A2A)***
387007217	AEI1G65EMX	Tri	6.40-8.13	5.74-6.10
387007226	AEI1G65EMX3PH	Tri	6.40-8.13	5.74-6.10
387007233	AEI1G80BEMX	Quad	8.00-11.06	8.68-9.50
387007227	AEI1G80EMX3PH	Quad	8.00-11.06	8.68-9.50
387007234	AEI1G110BEMX	Quad	10.45-14.17	9.56-12.10
387007229	AEI1G140EMX	Penta	13.80-15.89	11.60-12.10
387007230	AEI1G140EMX3PH	Penta	13.80-15.89	11.60-12.10

Reference condition:
*Heating capacity with outdoor air temperature 7 °C, outlet water temperature 30/35 °C
**Cooling capacity with outdoor air temperature 35 °C, outlet water temperature 23/18 °C
***Cooling capacity with outdoor air temperature 35 °C, indoor air temperature 27 °C
Heating capacity with outdoor air temperature 7 °C, indoor air temperature 20 °C

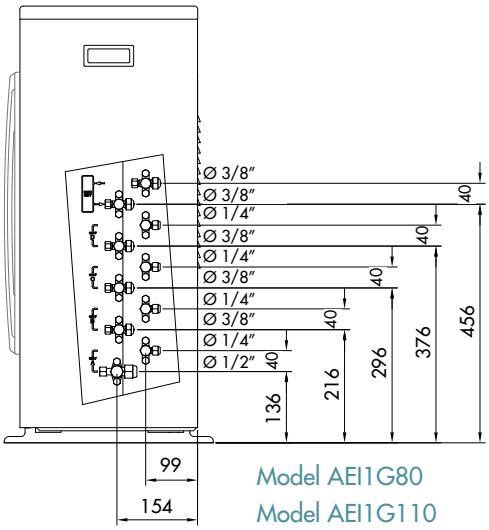
REFRIGERANT GAS CONNECTIONS



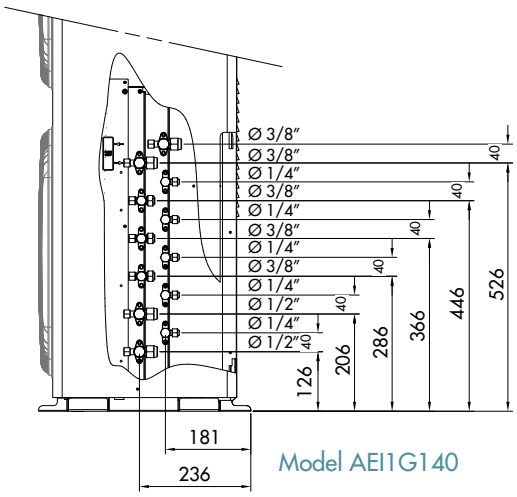
Model AEI1G50



Model AEI1G65



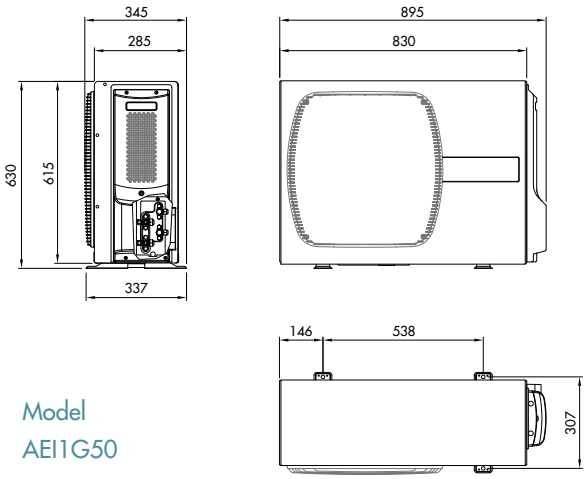
Model AEI1G80
Model AEI1G110



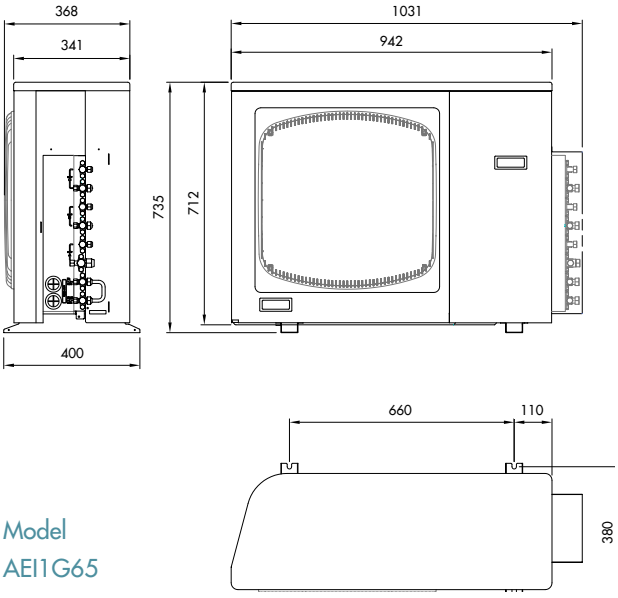
Model AEI1G140

Model	Weight (kg)
AEI1G50EMX	56
AEI1G65EMX	64
AEI1G65EMX3PH	64
AEI1G80BEMX	87
AEI1G80EMX3PH	87
AEI1G110BEMX	90
AEI1G140EMX	145
AEI1G140EMX3PH	145

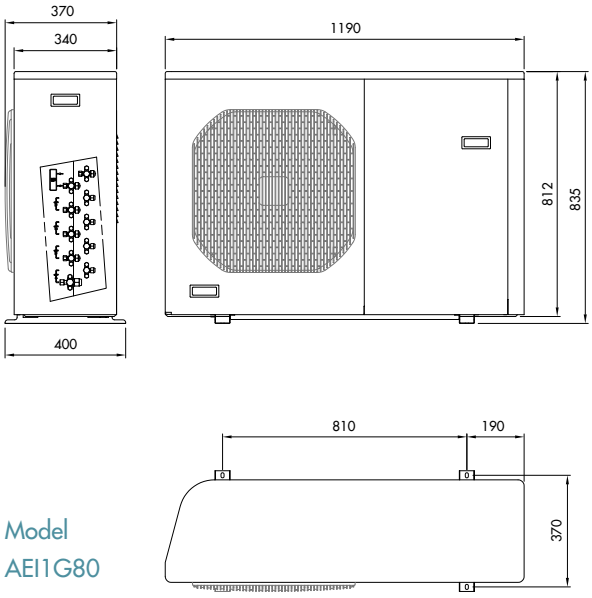
DIMENSIONAL DRAWINGS



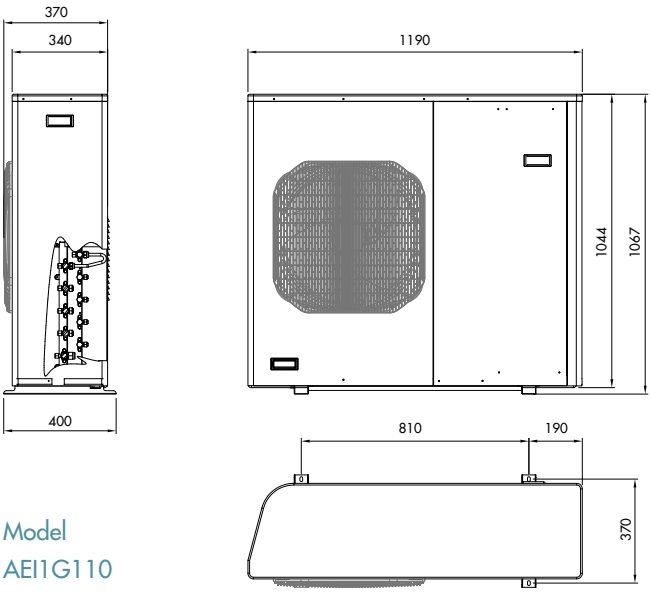
Model
AEI1G50



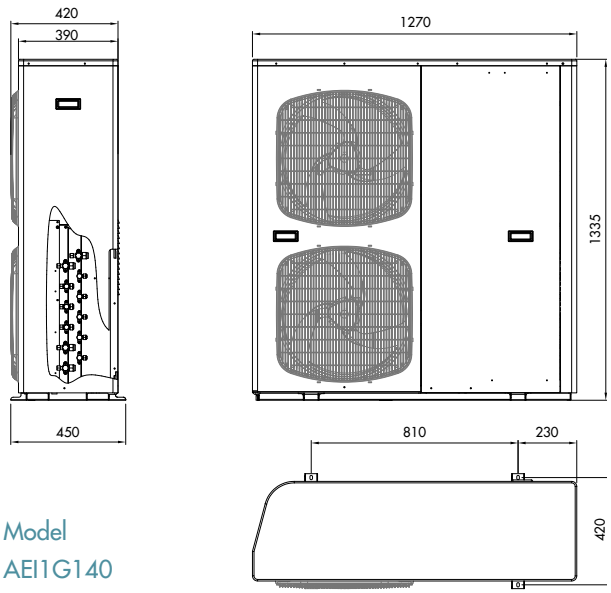
Model
AEI1G65



Model
AEI1G80



Model
AEI1G110



Model
AEI1G140

POSSIBLE MATCHINGS

SYSTEM CONFIGURATION	A2W	A2A / A2W	A2A
Model	**AEI1G50EMX**		
			A ●
			B ●
			A + A
			A + B
Model	**AEI1G65EMX/AEI1G65EMX 3PH**		
	AUBV	AUBV + A + A ●	B ●
	AUBV ●	AUBV + B ●	A + A ●
			A + B ●
			A + A + A
Model	**AEI1G80EMX/AEI1G80EMX 3PH**		
	AUCV	A + A + A ●	C ●
	AUCV ●	A + B ●	A + B ●
		AUBV + A + A + A ●	B + B
		AUBV + A + B ●	A + A + A ●
		AUCV + A + A ●	A + A + B ●
			A + A + A + A
Model	**AEI1G110BEMX**		
	AUCV	AUBV + A + A + A ●	D ●
	AUCV ●	AUBV + A + A + B ●	A + C ●
		AUBV + B + B ●	A + B ●
		AUBV + C ●	B + B ●
		AUCV + A + A + A ●	A + A + A ●
		AUCV + A + B ●	A + A + B ●
			A + B + B
			A + A + A + A ●
			A + A + A + B
Model	**AEI1G140EMX/AEI1G140EMX 3PH**		
	AUDV	AUCV + A + A + A ●	A + D ●
	AUDV ●	AUCV + A + A + B ●	B + C ●
		AUCV + A + A + A + A ●	B + D
		AUCV + A + A + A + B ●	C + C
		AUCV + B + B ●	A + A + D
		AUDV + A + B ●	A + A + C ●
		AUDV + A + A + A ●	A + A + A + C
			A + A + A + A ●
			A + A + A + B ●
			A + A + A + A + A ●
			A + A + A + A + B

● With EMIX/EMIX TANK

● Mixed configuration: air/air for cooling and air/water for heating

AIR/AIR AND AIR/WATER SIMULTANEOUS OPERATION IS NOT POSSIBLE

TECHNICAL DATA

MODELS				G50EMX	G65EMX G65EMX3PH
Matchable units for Domestic Hot Water (DWH) production				EMIX TANK V2 200-300 liters EMIX V1 + DHW Tank External Tank + 3-way valve	
Matchable air/air indoor units				see technical datasheets	
Matchable air/water indoor units				NO	AUBV
AIR/WATER					
Performance according to EN 14511	Air +35 °C - Water 23/18 °C	Nominal-max. Cooling capacity	kW	-	5.74-6.10
		Nominal electric power input	kW_{el}	-	1.54
		Nominal EER		-	3.64
	Air +35 °C - Water 12/7 °C	Nominal Cooling capacity	kW	-	4.14
		Nominal electric power input	kW_{el}	-	1.89
		Nominal EER		-	2.12
	Air +7 °C - Water 30/35 °C	Nominal-max. Heating capacity	kW	-	6.40-8.13
		Nominal electric power input	kW_{el}	-	1.56
		Nominal COP		-	4.17
	Air -7 °C - Water 30/35 °C	Nominal Heating capacity	kW	-	5.10
		Nominal electric power input	kW_{el}	-	2.01
		Nominal COP		-	2.54
Air/water LOW temperature heating					
Perfomance according to ERP Ecodesign EN 14825	AVERAGE climate	Nominal Heating capacity	kW	-	6
		Seasonal energy efficiency η_s	%	-	153
		SCOP		-	3.90
		Energy efficiency class		-	A++
Air/water MEDIUM temperature heating					
Perfomance according to ERP Ecodesign EN 14825	AVERAGE climate	Nominal Heating capacity	kW	-	5.00
		Seasonal energy efficiency η_s	%	-	110
		SCOP		-	2.83
		Energy efficiency class		-	A+
AIR/AIR					
Performance according to EN 14511	Outdoor air +35 °C Indoor air 27 °C	Nominal (min./max.) Cooling capacity	kW	4.92 (0.84/5.90)	5.75 (1.57/7.65)
		Nominal electric power input	kW_{el}	1.47	1.58
		Nominal EER		3.35	3.64
		$Pdesign_c$/$Pdesign_h$	kW	5.4	6.5
		SEER		6.4	6.5
	Outdoor air +7 °C Indoor air 20 °C	Energy efficiency class		A++	A++
		Nominal (min./max.) Heating capacity	kW	5.00 (0.95/6.00)	6.5 (1.82/8.67)
		Nominal electric power input	kW_{el}	1.16	1.50
		COP		4.29	4.32
Performance according to ERP Ecodesign EN14825	AVERAGE climate	$Pdesign_c$/$Pdesign_h$	kW	4.3	6.4
		COP		4	4
		Energy efficiency class		A+	A+
DOMESTIC HOT WATER					
DHW Performance according to EN 16147	With 300 L tank	Load profile		XL	XL
		Energy efficiency class		A	A
		COP DHW		2.23	2.21
		ERP efficiency	%	90	90
	With Emix Tank 200 V2	Load profile		L	L
		Energy efficiency class		A	A
		COP DHW		2.57	2.51
		ERP efficiency	%	106	104
		Heating-up time from 10 °C to 48 °C	h:m	2:47	2:36
GENERAL SPECIFICATIONS					
Operation data		Outdoor temperature operating range	°C	-15/+43	-15/+43
		Indoor temperature operating range	°C	+10/+47	+10/+47
		Outdoor temperature operating range	°C	-15/+24	-15/+24
		Indoor temperature operating range	°C	+5/+27	+5/+27
		Power supply (Voltage/Phases/Frequency)	V/Ph/Hz	230/1+T/50-60	230/1+T/50-60 (1ph) 400/3+N+T/50 (3ph)
		Maximum electric consumption	kW/A	1.79/7.8	2,6/12 (1ph) 5,2/10x3 (3ph)
		Sound pressure	dB(A)	45	45
		Sound power	dB(A)	58	64
Components and refrigerant		Fan air flow rate	m^3/h	1700	2400
		Compressor type		Twin Rotary	
		Refrigerant type and GWP		R410A/2088 kg CO_2 eq.	
		Standard charge	kg/Ton-CO_2 eq.	1.3/2.71	2.7/5.63

Data declared in accordance with REGULATION (EU) N. 811/2013 of 18 February 2013 with regarde to the energy labelling of space heaters and combination heaters and with COMMISION REGULATION (EU) N. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regarde to ecodesign requirements for space heaters and combination heaters.

MODELS				G80BEMX G80EMX3PH	G110BEMX	G140EMX G140EMX3PH
Matchable units for Domestic Hot Water (DWH) production				EMIX TANK V2 200-300 liters		
				EMIX V1 + DHW Tank		
				External Tank + 3-way valve		
Matchable air/air indoor units				see technical datasheets		
Matchable air/water indoor units				AUCV	AUCV	AUDV
AIR/WATER						
Performance according to EN 14511	Air +35 °C - Water 23/18 °C	Nominal-max. Cooling capacity	kW	8.68-9.50	9.56-12.10	11.60-12.10
		Nominal electric power input	kW_{el}	2.37	2.64	3.20
		Nominal EER		3.65	3.62	3.63
	Air +35 °C - Water 12/7 °C	Nominal Cooling capacity	kW	4.90	6.50	8.30
		Nominal electric power input	kW_{el}	2.30	3.16	3.79
		Nominal EER		2.13	2.06	2.19
	Air +7 °C - Water 30/35 °C	Nominal-max. Heating capacity	kW	8.00-11.06	10.45-14.17	13.80-15.89
		Nominal electric power input	kW_{el}	1.92	2.58	3.44
		Nominal COP		4.15	4.05	4.01
	Air -7 °C - Water 30/35 °C	Nominal Heating capacity	kW	6.30	7.30	10.50
		Nominal electric power input	kW_{el}	2.47	3.29	4.1
		Nominal COP		2.55	2.22	2.56
Air/water LOW temperature heating						
Perfomance according to ERP Ecodesign EN 14825	AVERAGE climate	Nominal Heating capacity	kW	7	8	12
		Seasonal energy efficiency η_s	%	153	150	167
		SCOP		3.90	3.83	4.24
		Energy efficiency class		A++	A++	A++
Air/water MEDIUM temperature heating						
Perfomance according to ERP Ecodesign EN 14825	AVERAGE climate	Nominal Heating capacity	kW	6	7	11
		Seasonal energy efficiency η_s	%	110	110	112
		SCOP		2.83	2.83	2.87
		Energy efficiency class		A+	A+	A+
AIR/AIR						
Performance according to EN 14511	Outdoor air +35 °C Indoor air 27 °C	Nominal (min./max.) Cooling capacity	kW	6.87 (1.60/9.62)	8.65 (1.8/11.5)	10.60 (2.60/13.70)
		Nominal electric power input	kW_{el}	1.86	2.46	3.12
		Nominal EER		3.70	3.51	3.40
		$Pdesign_c$/$Pdesign_h$	kW	9.00	10.60	13.60
		SEER		6.70	6.60	5.11
	Outdoor air +7 °C Indoor air 20 °C	Energy efficiency class		A++	A++	A++
		Nominal (min./max.) Heating capacity	kW	8.00 (1.7/11.2)	11.00 (1.9/13.5)	12.00 (3.10/15.5)
		Nominal electric power input	kW_{el}	1.90	2.59	2.18
		COP		4.22	4.24	5.50
Performance according to ERP Ecodesign EN14825	AVERAGE climate	$Pdesign_c$/$Pdesign_h$	kW	7.70	9.40	11.50
		COP		4.10	4.10	4.13
		Energy efficiency class		A+	A+	A+
DOMESTIC HOT WATER						
DHW Performance according to EN 16147	With 300 L tank	Load profile		XL	XL	XL
		Energy efficiency class		A	A	A
		COP DHW		2.23	2.14	2.12
		ERP efficiency	%	87	87	86
	With Emix Tank 200 V2	Load profile		XL	XL	XL
		Energy efficiency class		A	A	A
		COP DHW		2.78	2.57	2.71
		ERP efficiency	%	116	106	112
		Heating-up time from 10 °C to 48 °C	h:m	3:04	2:47	2:08
GENERAL SPECIFICATIONS						
Operation data		Outdoor temperature operating range	°C	-15/+43		
		Indoor temperature operating range	°C	+10/+47		
		Outdoor temperature operating range	°C	-15/+24		
		Indoor temperature operating range	°C	+5/+27		
		Power supply (Voltage/Phases/Frequency)	V/Ph/Hz	230/1+T/50-60 (1ph) 400/3+N+T/50 (3ph)	230/1+T/50-60 (1ph)	230/1+T/50-60 (1ph) 400/3+N+T/50 (3ph)
		Maximum electric consumption	kW/A	3.3/15 (1ph) 5.2/10x3 (3ph)	4.4/20 (1ph)	4.4/20 (1ph) 5.2/10x3 (3ph)
		Sound pressure	dB(A)	45	45	45
		Sound power	dB(A)	64	65	65
Components and refrigerant		Compressor type		Twin Rotary		
		Fan air flow rate	m^3/h	3000	3500	3500
		Refrigerant type and GWP		R410A/2088 kg CO_2 eq.		
		Standard charge	kg/Ton-CO_2 eq.	2.9/6.05	3.38/7.05	4.4/9.18

The equipment described in this catalogue contains HFC-410A-type flourinated greenhouse gases. These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014

TECHNICAL DATA

AIR TO AIR CONFIGURATION

Heating

LAT: Leaving air temperature
Qh: Heat capacity
COP: Coefficient of performance

Cooling

LAT: Leaving air temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

G50EMX model

Heating

LAT [°C]	Outdoor air temperature - Dry Bulb (Wet Bulb) - °C									
	-10 (11)		-7 (-8)		2 (1)		7 (6)		12 (11)	
	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP
20	3.70	2.68	3.90	2.91	3.70	2.57	6.00	3.35	6.70	3.86

Cooling

LAT [°C]	Inlet outdoor air temperature °C	
	35	
	Qc [kW]	EER
27 (19)	5.90	3.15

G65EMX/G65EMX3PH models

Heating

LAT [°C]	Outdoor air temperature - Dry Bulb (Wet Bulb) - °C									
	-10 (11)		-7 (-8)		2 (1)		7 (6)		12 (11)	
	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP
20	5.30	2.25	5.90	3.09	5.60	2.94	8.70	3.22	9.10	3.50

Cooling

LAT [°C]	Inlet outdoor air temperature °C	
	35	
	Qc [kW]	EER
27 (19)	7.70	3.32

G80BEMX/G80EMX3PH models

Heating

LAT [°C]	Outdoor air temperature - Dry Bulb (Wet Bulb) - °C									
	-10 (11)		-7 (-8)		2 (1)		7 (6)		12 (11)	
	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP
20	6.50	2.36	6.80	2.45	6.10	2.36	11.20	3.27	11.60	3.55

Cooling

LAT [°C]	Inlet outdoor air temperature °C	
	35	
	Qc [kW]	EER
27 (19)	9.60	3.74

G110BEMX/G110EMX3PH models

Heating

LAT [°C]	Outdoor air temperature - Dry Bulb (Wet Bulb) - °C									
	-10 (11)		-7 (-8)		2 (1)		7 (6)		12 (11)	
	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP
20	7.50	2.40	8.30	2.36	9.40	2.64	12.50	3.07	13.20	3.45

Cooling

LAT [°C]	Inlet outdoor air temperature °C	
	35	
	Qc [kW]	EER
27 (19)	11.50	3.36

G140EMX/G140EMX3PH models

Heating

LAT [°C]	Outdoor air temperature - Dry Bulb (Wet Bulb) - °C									
	-10 (11)		-7 (-8)		2 (1)		7 (6)		12 (11)	
	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP
20	8.20	2.29	10.10	2.76	10.90	2.46	15.50	3.10	16.30	3.51

Cooling

LAT [°C]	Inlet outdoor air temperature °C	
	35	
	Qc [kW]	EER
27 (19)	13.70	2.60

AIR TO WATER CONFIGURATION

Heating

LWT: Leaving water temperature
Qh: Heat capacity
COP: Coefficient of performance

Application data
Water inlet/outlet temperature difference = 5 °C, 8 °C for LWT = 55 °C

Cooling

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency auto

Application data
Water inlet/outlet temperature difference = 5 °C

G65EMX/G65EMX3PH models

Heating

LWT [°C]	Outdoor air temperature - Dry Bulb (Wet Bulb) - °C									
	-7 (-8)		-2 (-3)		2 (1)		7 (6)		12 (11)	
	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP
35	5.10	2.54	5.29	3.21	6.05	3.45	6.40	4.17	7.58	4.66
45	4.60	2.02	4.95	2.29	5.53	2.57	6.50	3.10	7.22	3.47
55	4.00	1.59	4.59	1.54	4.76	1.86	5.19	2.19	5.95	2.70

Cooling

LWT [°C]	Inlet outdoor air temperature °C	
	35	
	Qc [kW]	EER
7	4.14	2.12
18	5.74	3.64

G80BEMX/G80EMX3PH models

Heating

LWT [°C]	Outdoor air temperature - Dry Bulb (Wet Bulb) - °C									
	-7 (-8)		-2 (-3)		2 (1)		7 (6)		12 (11)	
	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP
35	6.30	2.55	7.09	2.89	7.80	3.34	8.00	4.15	11.46	4.62
45	5.70	2.03	6.38	2.48	7.20	2.79	8.00	3.12	10.02	3.64
55	4.90	1.60	4.99	1.99	5.49	2.10	7.08	2.32	7.78	2.71

Cooling

LWT [°C]	Inlet outdoor air temperature °C	
	35	
	Qc [kW]	EER
7	4.90	2.13
18	8.68	3.65

G110BEMX model

Heating

LWT [°C]	Outdoor air temperature - Dry Bulb (Wet Bulb) - °C									
	-7 (-8)		-2 (-3)		2 (1)		7 (6)		12 (11)	
	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP
35	7.30	2.22	8.14	2.80	9.14	3.29	10.45	4.07	12.15	4.70
45	7.50	1.97	8.73	2.28	9.95	2.61	9.59	3.02	11.94	3.37
55	5.80	1.49	6.24	1.93	7.03	2.02	9.67	2.31	8.85	2.41

Cooling

LWT [°C]	Inlet outdoor air temperature °C	
	35	
	Qc [kW]	EER
7	6.50	2.06
18	9.56	3.62

G140EMX/G140EMX3PH models

Heating

LWT [°C]	Outdoor air temperature - Dry Bulb (Wet Bulb) - °C									
	-7 (-8)		-2 (-3)		2 (1)		7 (6)		12 (11)	
	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP	Qh [kW]	COP
35	10.50	2.56	10.14	2.78	11.20	3.21	13.80	4.01	14.65	4.62
45	9.50	1.96	10.20	2.22	11.05	2.58	13.40	3.00	14.15	3.28
55	8.30	1.48	7.73	1.90	8.65	2.00	9.10	2.15	11.15	2.38

Cooling

LWT [°C]	Inlet outdoor air temperature °C	
	35	
	Qc [kW]	EER
7	8.30	2.19
18	11.60	3.63

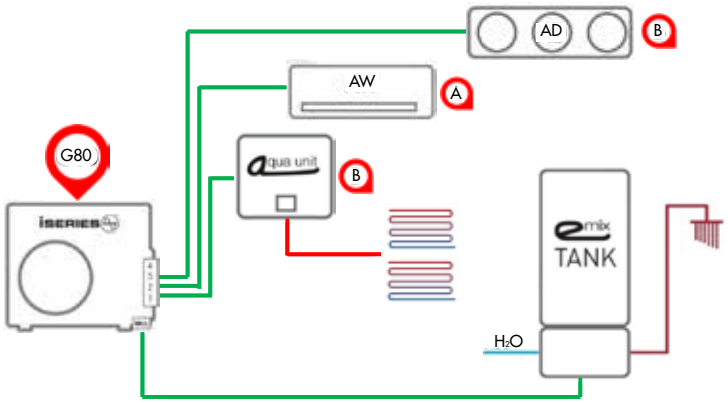
POSSIBLE MATCHINGS AND PRACTICAL EXAMPLES

The product information sheet for each outdoor unit lists the matchings that can be used when designing systems with iSERIES. By way of example, the matchings that can be made with the AEI1G80EMX outdoor unit and the corresponding system diagrams are shown below.

1 MATCHING

G80 outdoor unit in winter mode with size B hydronic module (AUBV) and in summer mode with two size A and size B direct-expansion units. Domestic hot water production with EMIX TANK.

A2W	A2A / A2W	A2A
AUCV	A + A + A ●	C ●
AUCV ●	A + B ●	A + B ●
	AUBV + A + A + A ●	B + B
	AUBV + A + B ●	A + A + A ●
	AUCV + A + A ●	A + A + B ●
		A + A + A + A



● With EMIX/EMIX TANK

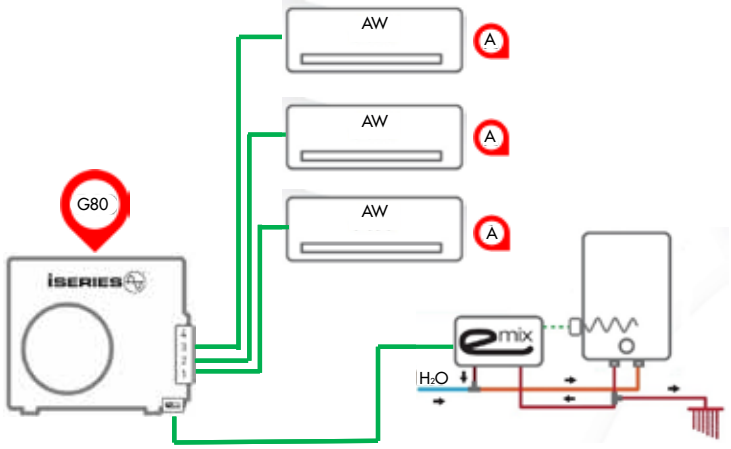
● Mixed configuration: air/air for cooling and air/water for heating

SIMULTANEOUS OPERATION IS NOT POSSIBLE

2 MATCHING

G80 outdoor unit in summer/winter mode with three size A direct-expansion units. Domestic hot water production with EMIX.

A2W	A2A / A2W	A2A
AUCV	A + A + A ●	C ●
AUCV ●	A + B ●	A + B ●
	AUBV + A + A + A ●	B + B
	AUBV + A + B ●	A + A + A ●
	AUCV + A + A ●	A + A + B ●
		A + A + A + A



● With EMIX/EMIX TANK

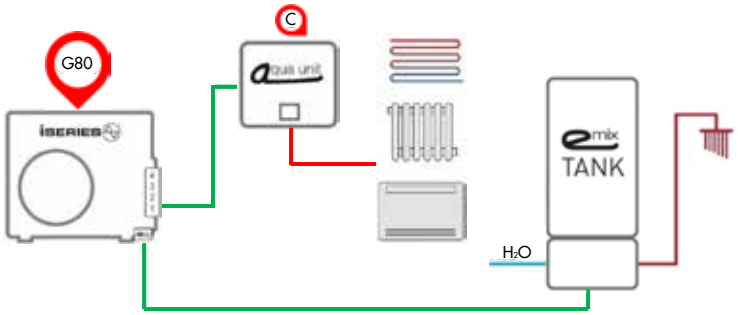
● Mixed configuration: air/air for cooling and air/water for heating

SIMULTANEOUS OPERATION IS NOT POSSIBLE

3 MATCHING

G80 outdoor unit in winter mode (and possibly summer mode) with size C hydronic module (AUCV). Domestic hot water production with EMIX TANK.

A2W	A2A / A2W	A2A
AUCV	A + A + A ●	C ●
AUCV ●	A + B ●	A + B ●
	AUBV + A + A + A ●	B + B
	AUBV + A + B ●	A + A + A ●
	AUCV + A + A ●	A + A + B ●
		A + A + A + A



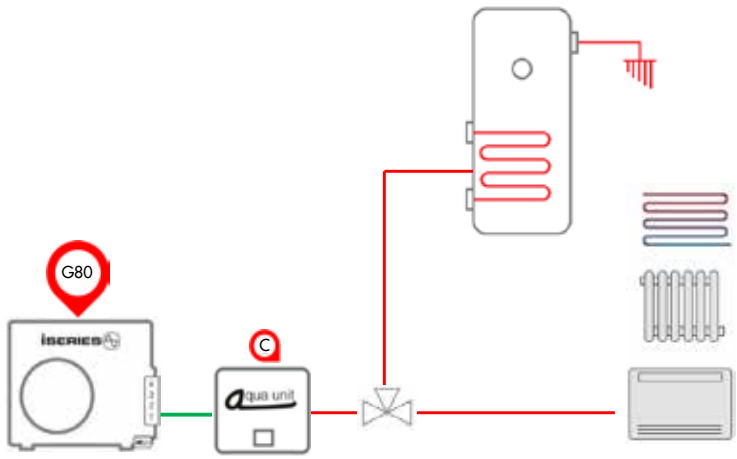
● With EMIX/EMIX TANK
● Mixed configuration: air/air for cooling and air/water for heating

SIMULTANEOUS OPERATION IS NOT POSSIBLE

4 MATCHING

G80 outdoor unit in winter mode (and possibly summer mode) with one only size C hydronic module (AUCV). Domestic hot water production with diverter valve and third-party tank.

A2W	A2A / A2W	A2A
AUCV	A + A + A ●	C ●
AUCV ●	A + B ●	A + B ●
	AUBV + A + A + A ●	B + B
	AUBV + A + B ●	A + A + A ●
	AUCV + A + A ●	A + A + B ●
		A + A + A + A



● With EMIX/EMIX TANK
● Mixed configuration: air/air for cooling and air/water for heating

SIMULTANEOUS OPERATION IS NOT POSSIBLE

REFRIGERANT PIPE LENGTHS

For the iSERIES system to operate correctly, the refrigerant gas lines must adhere to the sizes and height differences shown in the table on the next page.

HOW TO PERFORM A PROPER CHECK?

1 Choose the configuration for the outdoor unit based on the number of indoor units to be fitted (include AQUA UNIT and EMIX/EMIX TANK).

2 Check that the total length of the pipes (tot L) is less than or equal to the reference length listed in the table in the STANDARD CHARGE column. If the restriction is not adhered to, carry out a further check using the values shown in the ADDITIONAL CHARGE column. In this instance, an additional refrigerant charge calculated following the guidelines specified on the next pages should be provided.

3 Similarly, check that the maximum length of each pipe (Ln) falls within the restrictions set.

4 Check the limits set for the minimum length, the maximum height difference between the indoor units and the maximum height difference between the indoor units and outdoor unit (including AQUA UNIT and EMIX/EMIX TANK).

5 Pay close attention to length L6 in the diagram which represents the length of the EMIX/EMIX TANK pipe: the maximum length allowed is **10 m.**

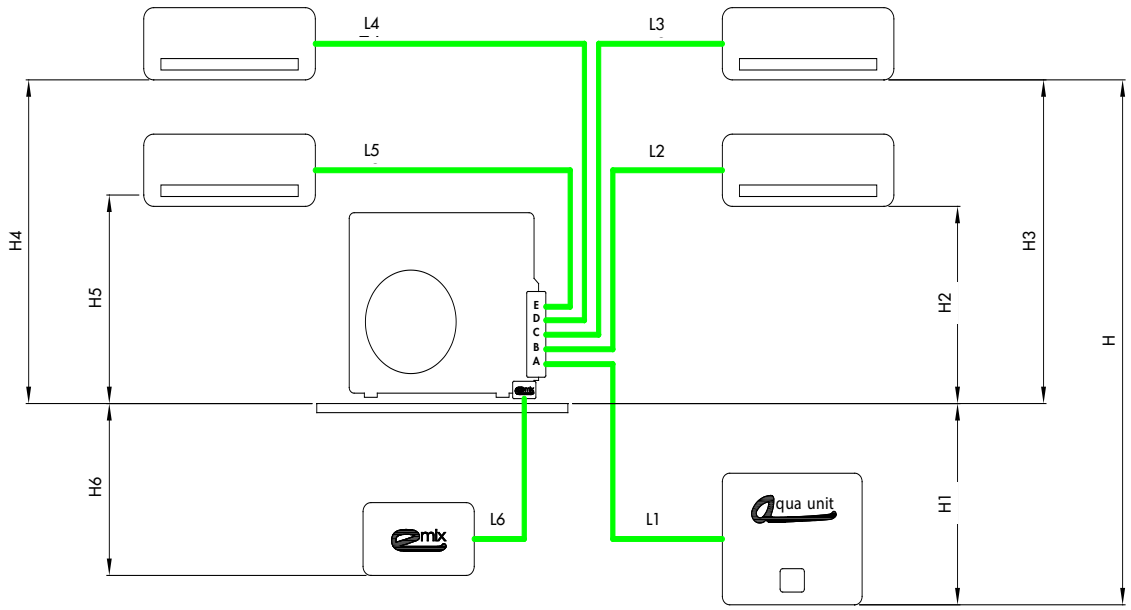


TABLE SHOWING DATA FOR REFRIGERANT GAS PIPE LENGTHS

	Configuration	STANDARD CHARGE		ADDITIONAL CHARGE		MINIMUM LENGHT
		L tot [m]	L n [m]	L tot [m]	L n [m]	L min [m]
AEI1G50EMX	Dual	15	12	30	25	5
AEI1G65EMX	Dual	30	25	45	30	5
	Tri	30	20	45	25	5
AEI1G80EMX	Dual	40	30	65	30	5
	Tri	40	30	65	30	5
	Quad	40	30	65	30	5
AEI1G110EMX	Single	30	-	50	-	5
	Dual	40	30	65	30	5
	Tri	40	30	65	30	5
	Quad	40	30	65	30	5
AEI1G140EMX	Single	40	-	50	-	5
	Dual	40	30	100	30	5
	Tri	40	30	100	30	5
	Quad	40	30	100	30	5
	Penta	40	30	100	30	5

L tot = maximum total pipe lenght (L1 + L2 + L3...)
L n = maximum pipe lenght for unit (n = 1,2,3...)

Additional gas charge
For pipes 1/4" - 3/8" = 15 g/m
For pipes 1/4" - 1/2" = 20 g/m
For EMIX pipes 3/8" = 15 g/m

Maximum height difference - outdoor unit/indoor unit (H1, H2, H3, H4, H5, H6) = 10 m
Maximum height difference between indoor units (H) = 5 m

OPERATING LIMITS

- Maximum conditions in Cooling Mode
  Outdoor temperature: 43 °C D.B.
  Indoor temperature: 32 °C D.B./23 °C W.B.
- Minimum conditions in Cooling Mode
  Outdoor temperature: -15 °C D.B.
  Indoor temperature: 10 °C D.B./6 °C W.B.
- Maximum conditions in Heating Mode
  Outdoor temperature: 24 °C D.B./18 °C W.B.
  Indoor temperature: 27 °C D.B.
- Minimum conditions in Heating Mode
  Outdoor temperature: -20 °C D.B.
  Indoor temperature: 5 °C D.B.