



OUTDOOR UNITS

Full DC Inverter

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/air can also be combined with hydronic indoor units, as AQUA UNIT, for air/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.



Code	Model	Configuration	*Nominal-max. heating capacity (A2W) [kW]	**Nominal-max. cooling capacity (A2W) [kW]
387007220	AEI1G30EMX	Mono	3.00 (0.93/3.32) (A2A)***	3.25 (1.37/3.60) (A2A)***
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
387007228	AEI1G110EMX3PH	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:

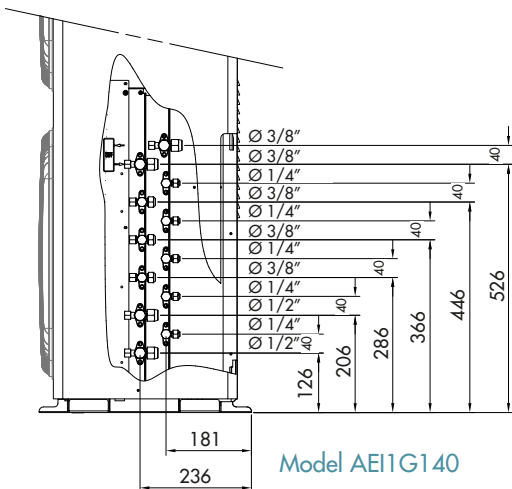
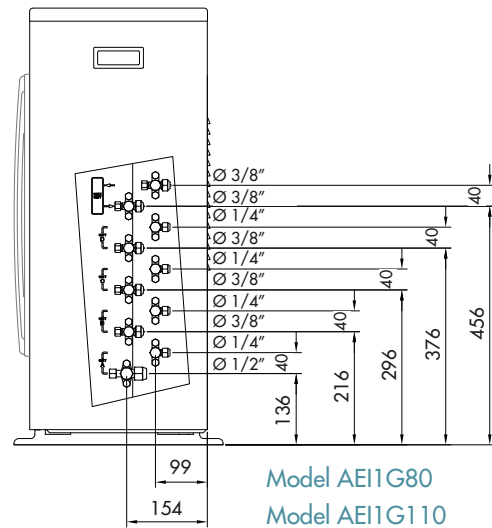
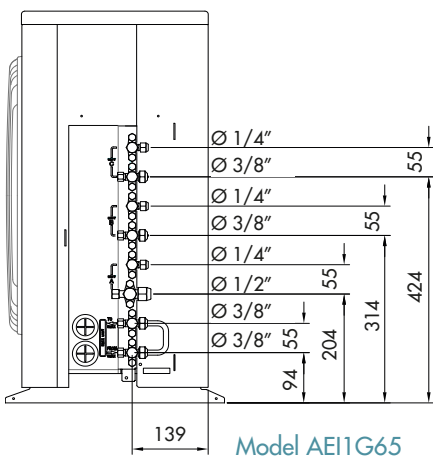
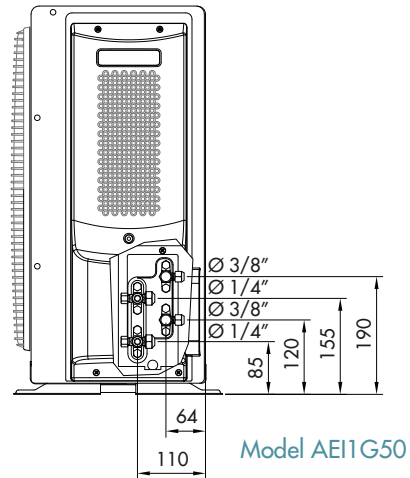
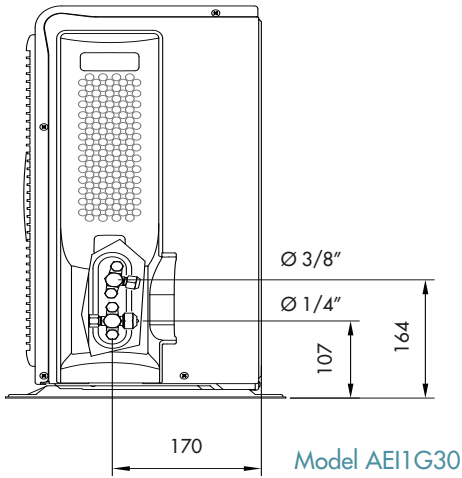
*Heating capacity with outdoor air temperature 7 °C, outlet water temperature 30/35 °C

**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

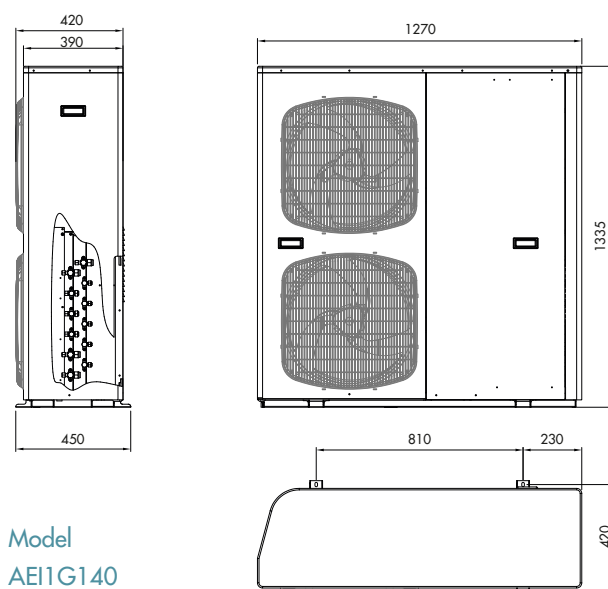
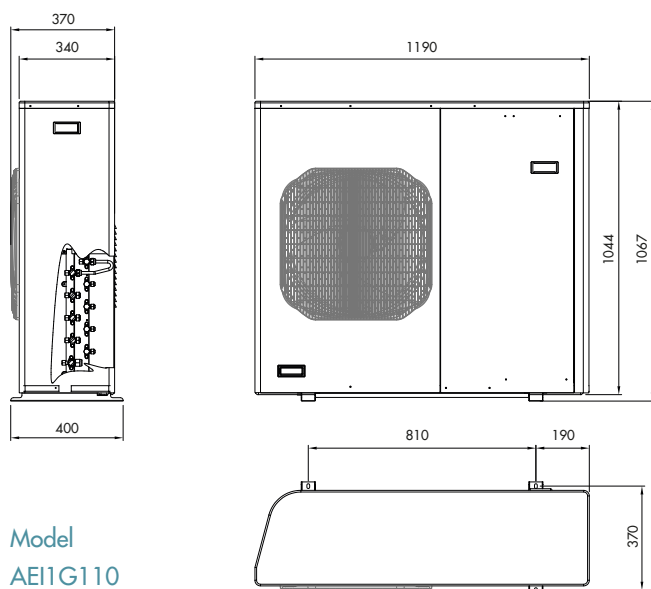
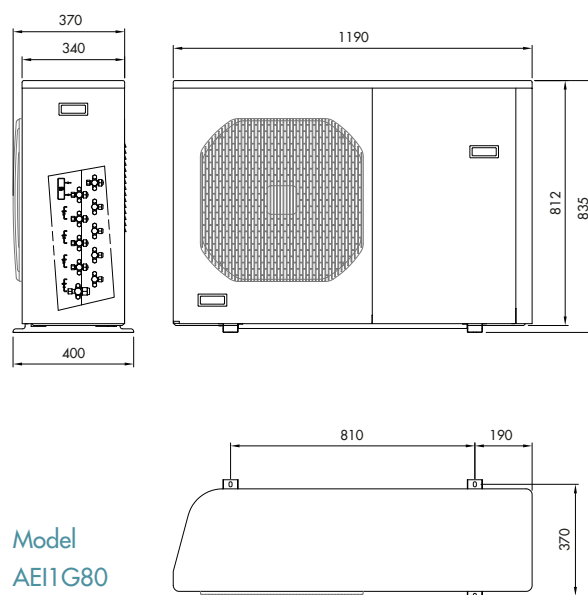
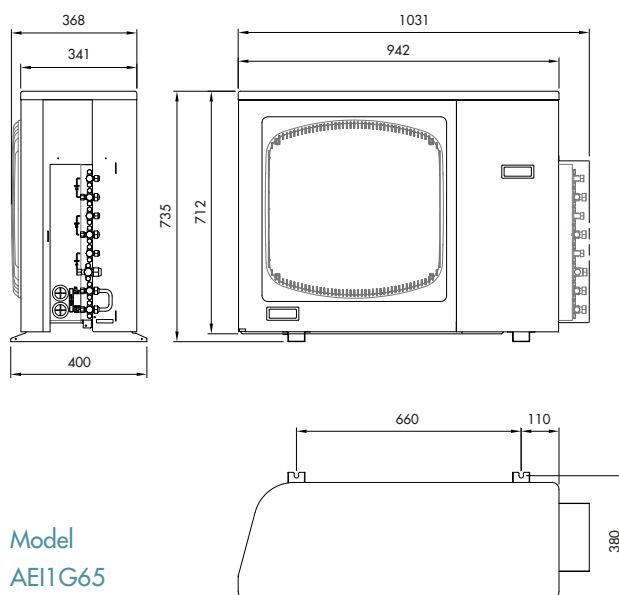
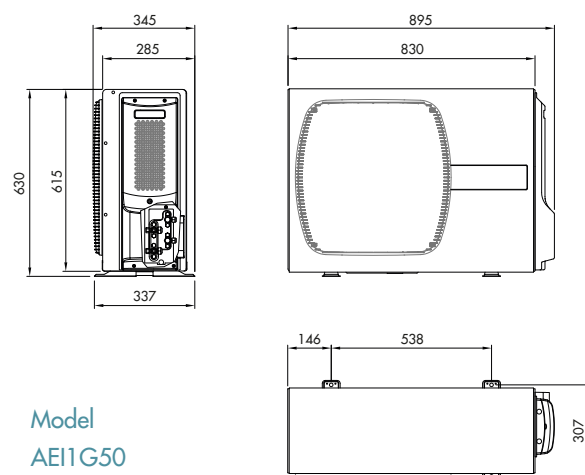
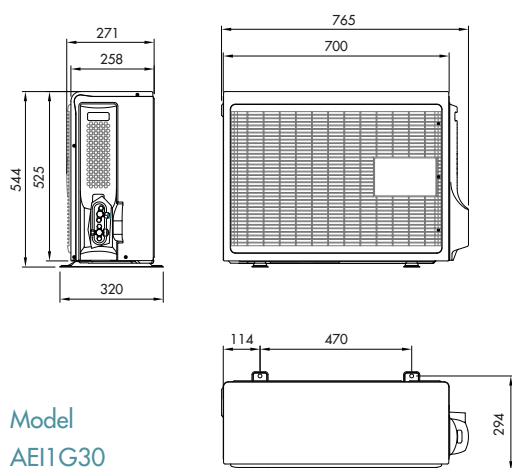
Heating capacity with outdoor air temperature 7 °C, indoor air temperature 20 °C

REFRIGERANT GAS CONNECTIONS



Model	Weight (kg)
AEI1G30EMX	35
AEI1G50EMX	56
AEI1G65EMX	64
AEI1G65EMX3PH	64
AEI1G80BEMX	87
AEI1G80EMX3PH	87
AEI1G110BEMX	90
AEI1G110EMX3PH	90
AEI1G140EMX	145
AEI1G140EMX3PH	145

DIMENSIONAL DRAWINGS



POSSIBLE MATCHINGS

SYSTEM CONFIGURATION	 A2W	 /  A2A A2W	 A2A
Model	AEI1G30EMX		
			A
			●
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/AEI1G110EMX 3PH		
	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				G30EMX	G50EMX	G65EMX G65EMX3PH
Matchable units for Domestic Hot Water (DWH) production				-	EMIX TANK V2 200-300 liters	
				-	EMIX V1 + DHW Tank	
				NO	External Tank + 3-way valve	
Matchable air/air indoor units				see technical datasheets		
Matchable air/water indoor units				NO	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						
Performance 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						
Performance 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 Outdoor air +7 °C Indoor air 20 °C	Nominal (min./max.) Cooling capacity	kW	3.25 (1.37/3.60)	4.92 (0.84/5.90)	5.75 (1.57/7.65)
		Nominal electric power input	kW _{el}	0.82	1.47	1.58
		Nominal EER		3.96	3.35	3.64
		Pdesign _c /Pdesign _h	kW	3.6	5.4	6.5
		SEER		6.2	6.4	6.5
		Energy efficiency class		A++	A++	A++
		Nominal (min./max.) Heating capacity	kW	3.00 (0.93/3.32)	5.00 (0.95/6.00)	6.5 (1.82/8.67)
		Nominal electric power input	kW _{el}	0.62	1.16	1.50
		COP		4.82	4.29	4.32
Performance according to ERP Ecodesign EN14825	AVERAGE climate	Pdesign _c /Pdesign _h	kW	3.2	4.3	6.4
		COP		4.4	4	4
		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	2.21
		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			
	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	230/1+T/50-60	230/1+T/50-60 (1ph) 400/3+N+T/50 (3ph)	
	Maximum electric consumption	kW/A	1.55/6.9	1.79/7.8	2,6/12 (1ph) 5,2/10x3 (3ph)	
	Sound pressure	dB(A)	45	45	45	
	Sound power	dB(A)	57	58	64	
	Fan air flow rate	m³/h	1000	1700	2400	
Components and refrigerant	Compressor type		Single Rotary	Twin Rotary		
	Refrigerant type and GWP		R410A/2088 kg CO ₂ eq.			
	Standard charge	kg/Ton-CO ₂ eq.	0.81/1.69	1.3/2.71	2.7/5.63	

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

MODELS				G80BEMX G80EMX3PH	G110BEMX G110EMX3PH	G140EMX G140EMX3PH
Matchable units for Domestic Hot Water (DHW) 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						
Performance 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						
Performance 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
		P _{design,c} /P _{design,h}	kW	9.00	10.60	13.60
		SEER		6.70	6.60	5.11
		Energy efficiency class		A++	A++	A++
	Outdoor air +7 °C Indoor air 20 °C	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
		P _{design,c} /P _{design,h}	kW	7.70	9.40	11.50
Performance according to ERP Ecodesign EN14825	AVERAGE climate	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) 400/3+N+T/50 (3ph)	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) 5.2/10x3 (3ph)	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	m³/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	

TECHNICAL DATA

AIR/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

G30EMX 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	2.70	2.43	2.80	2.61	2.70	2.40	3.30	3.51	4.50	4.10

Cooling

LAT [°C]	Inlet outdoor air temperature °C	
	35	
	Qc [kW]	EER
27 (19)	3.60	2.84

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/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 ratio

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/G110EMX3PH 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	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 PRATICAL 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 AE11G80EMX outdoor unit and the corresponding system diagrams are shown below.

1 MATCHING

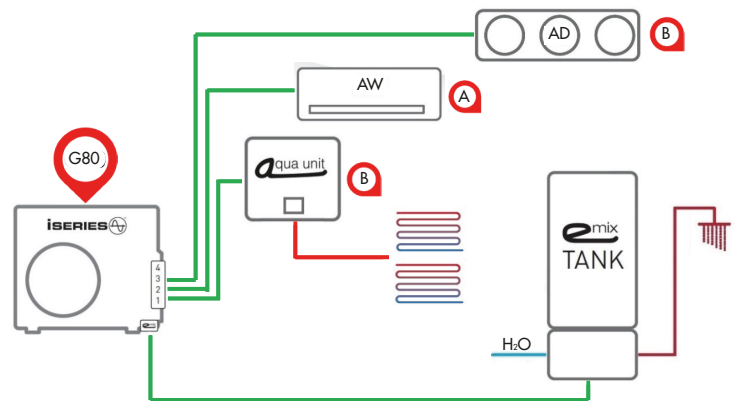
G80 outdoor unit in winter mode with size B hydronic module (AUBV) and in summer mode with two size A and size B direct-expansion units. Domestic hot water production with EMIX TANK.

 A2W	 A2A / A2W	 A2A
AUCV	A + A + A ●	C ●
AUCV ●	A + B ●	A + B ●
	AUBV + A + A + A ●	B + B
	<u>AUBV + A + B ●</u>	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

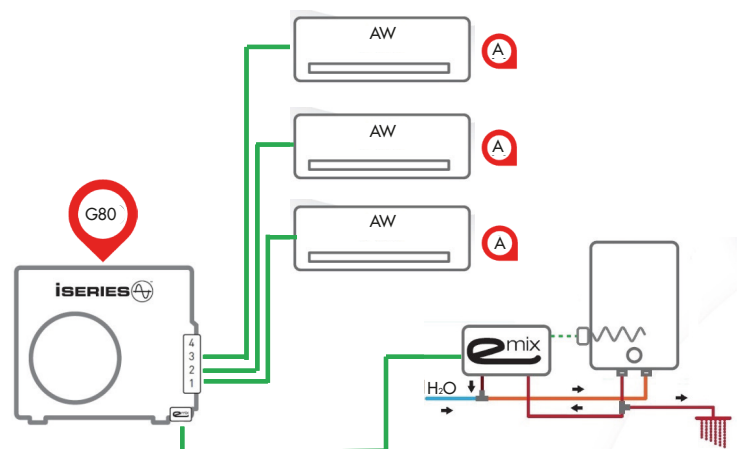
G80 outdoor unit in summer/winter mode with three size A direct-expansion units. Domestic hot water production with EMIX.

 A2W	 A2A / A2W	 A2A
AUCV	A + A + A ●	C ●
AUCV ●	A + B ●	A + B ●
	AUBV + A + A + A ●	B + B
	AUBV + A + B ●	<u>A + A + A ●</u>
	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

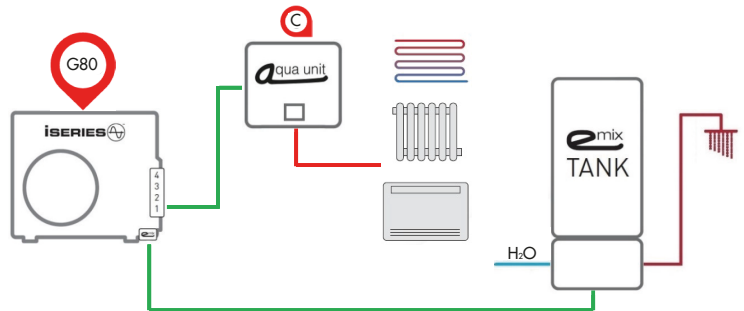
G80 outdoor unit in winter mode (and possibly summer mode) with size C hydronic module (AUCV). Domestic hot water production with EMIX TANK.

 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

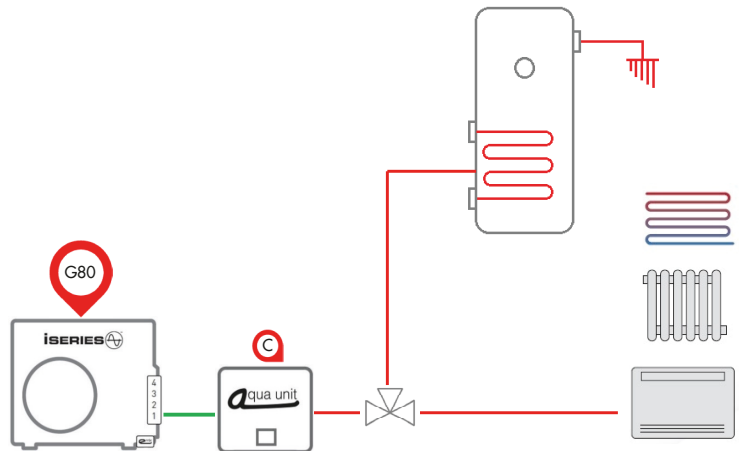
G80 outdoor unit in winter mode (and possibly summer mode) with one only size C hydronic module (AUCV). Domestic hot water production with diverter valve and third-party tank.

 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**.

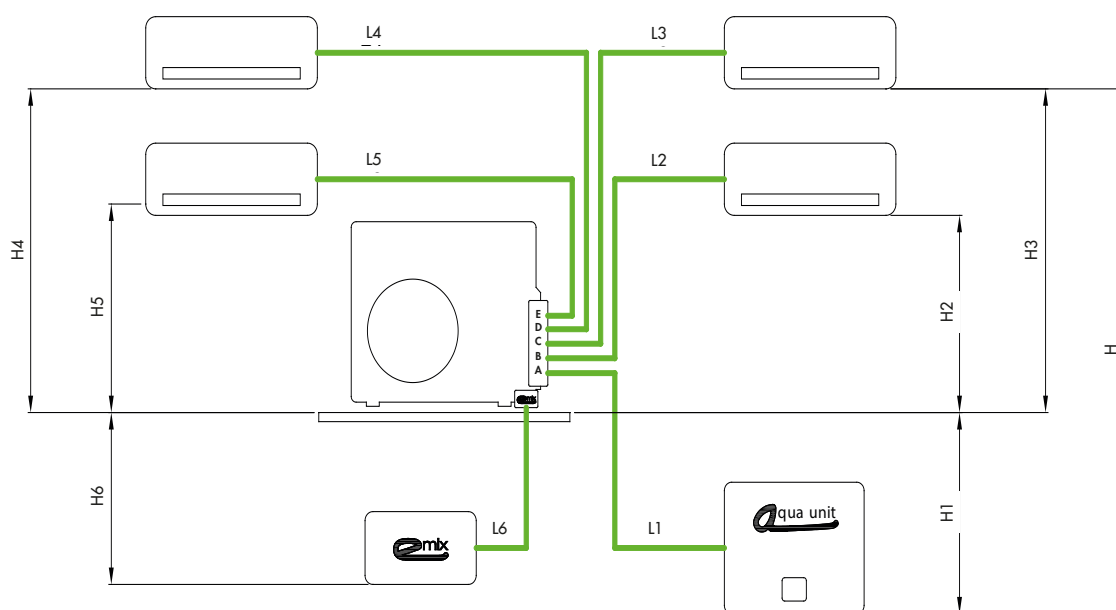


TABLE SHOWING DATA FOR REFRIGERANT GAS PIPE LENGTHS

	Configuration	STANDARD CHARGE		ADDITIONAL CHARGE		MINIMUM LENGHT
		L tot [m]	L n [m]	L tot [m]	L n [m]	L min [m]
AEI1G30EMX	Single	7.5		15		5
AEI1G50EMX	Single	7.5	-	20	-	5
	Dual	15	12	30	25	5
AEI1G65EMX	Single	20	-	35	-	5
	Dual	30	25	45	30	5
	Tri	30	20	45	25	5
AEI1G80EMX	Single	30	-	50	-	5
	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

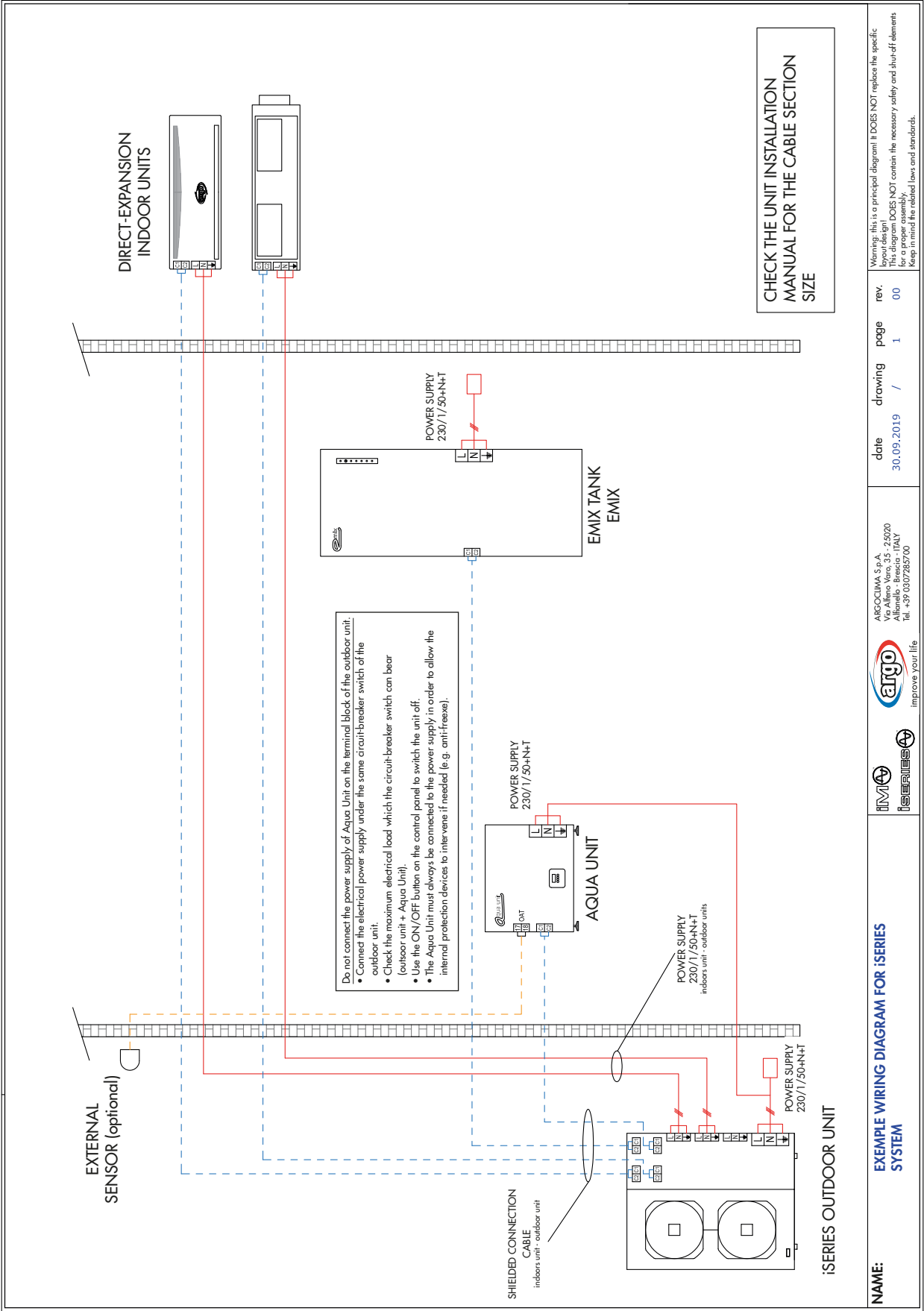
Maximum height difference between indoor units (H) = 5 m

OPERATING LIMITS

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

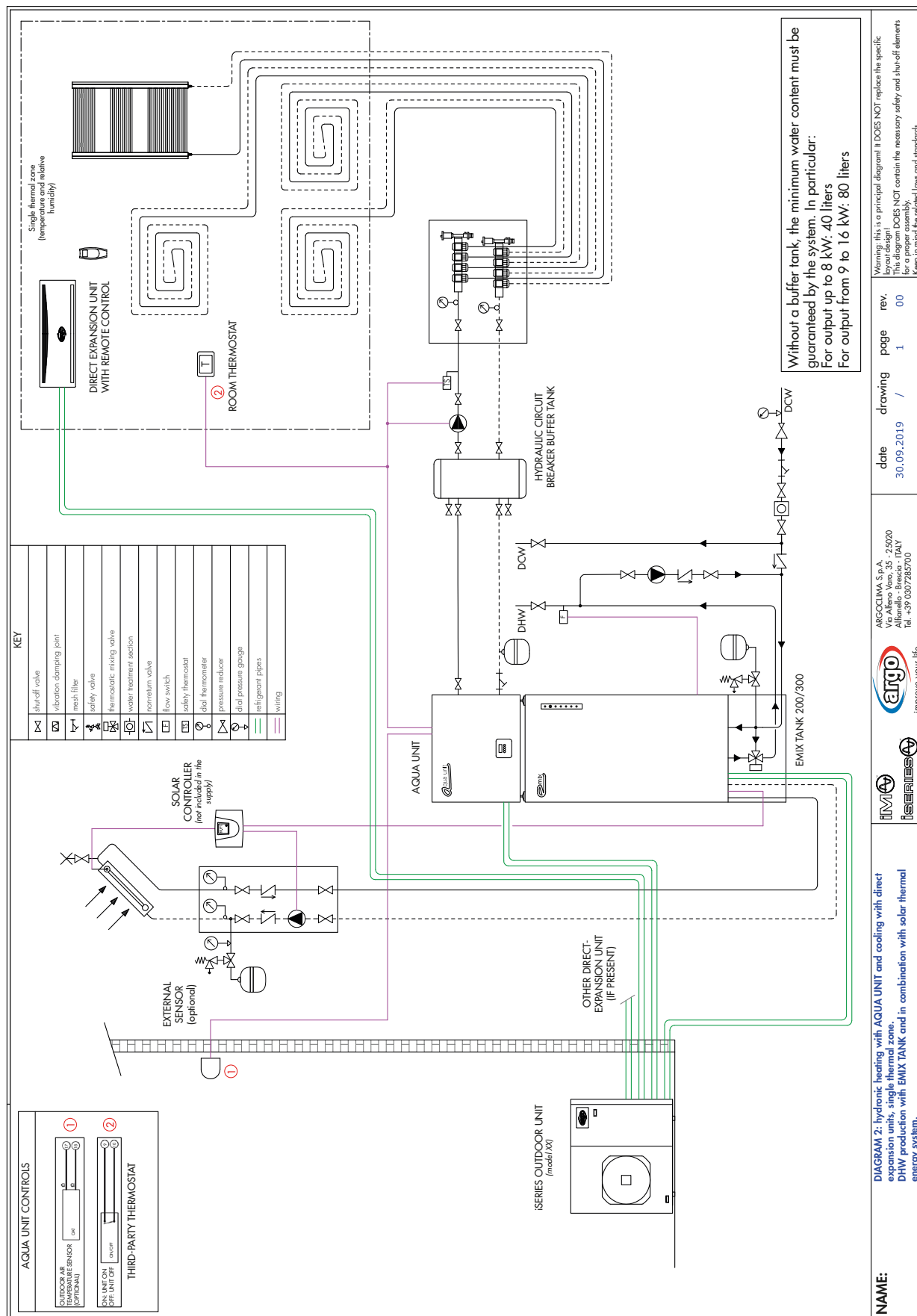
iSERIES

EXAMPLE WIRING DIAGRAM



iSERIES

INSTALLATION EXAMPLES



NAME:

DIAGRAM 2: hydronic heating with AQUA UNIT and cooling with direct expansion units, single thermal zone.
DHW production with EMIX TANK and in combination with solar thermal energy system.

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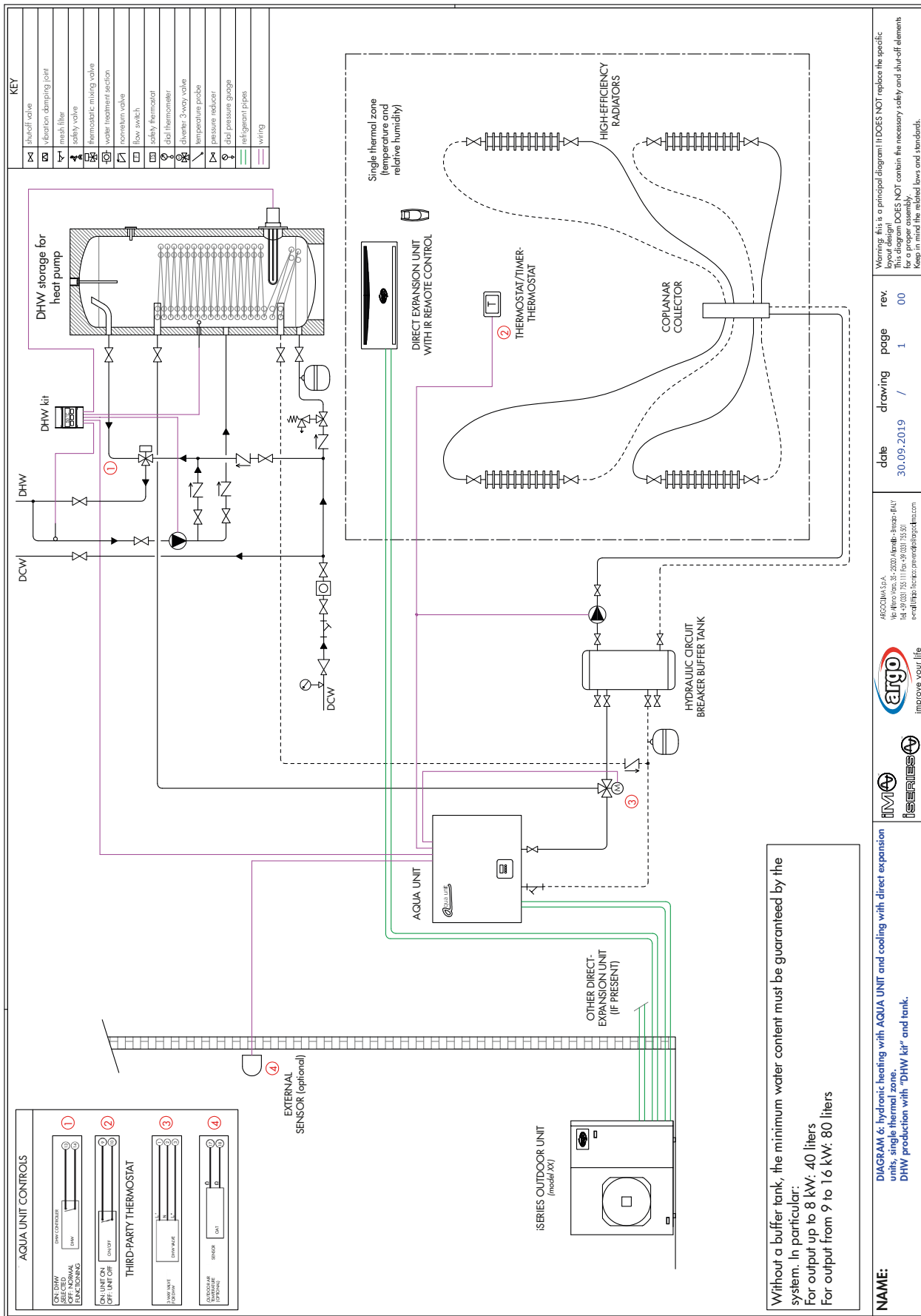
date 30.09.2019

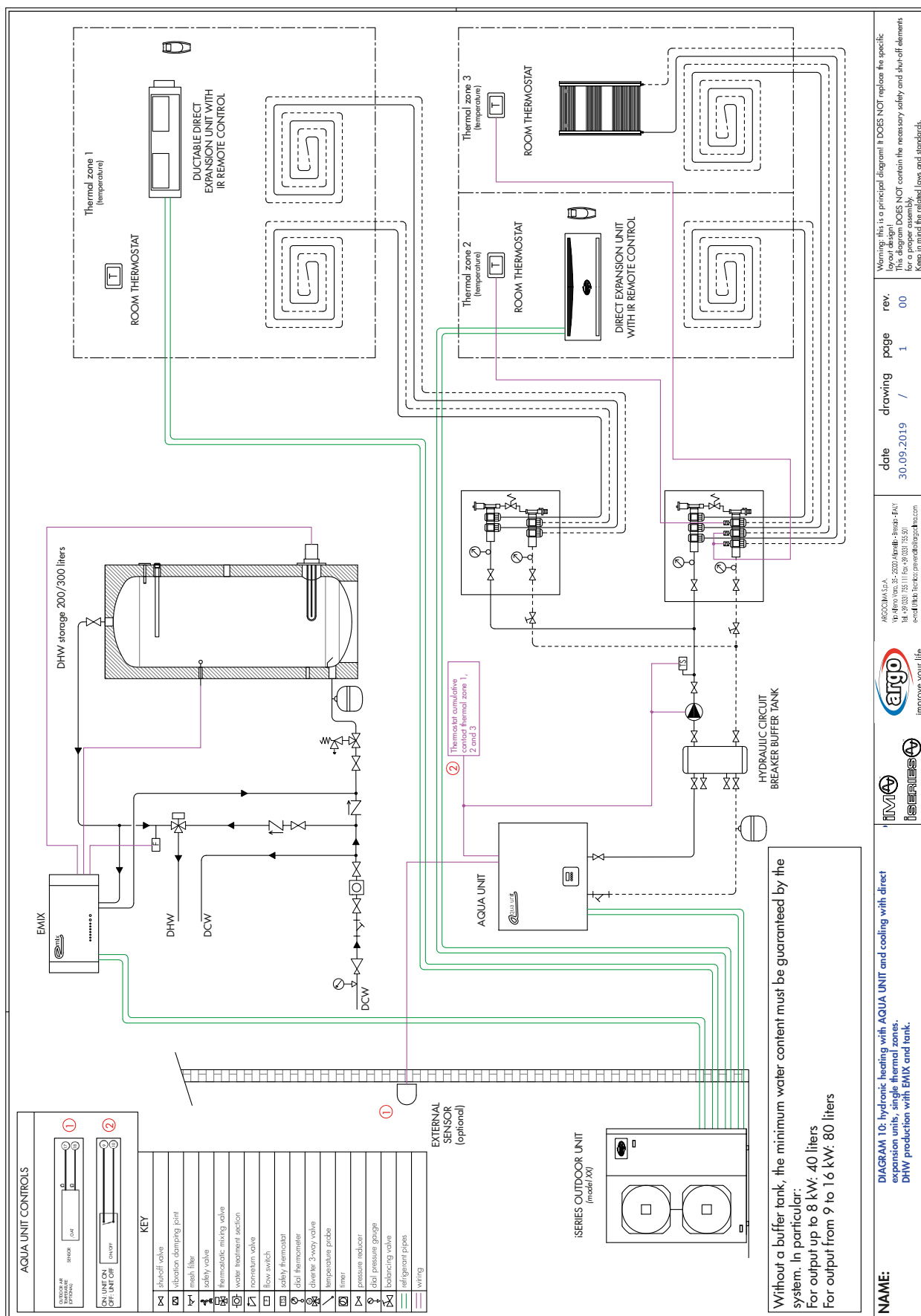
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INSTALLATION EXAMPLES





NAME: **DIAGRAM 10: hydronic heating with AQUA UNIT and cooling with direct expansion units, single thermal zones.**
DHW production with EMIX and tank.

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date 30.09.2019

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INSTALLATION EXAMPLES

