

EWAQ-CWN/P/H

Air cooled scroll inverter chiller

Product manual

EWAQ016CAWN
EWAQ021CAWN
EWAQ025CAWN
EWAQ032CAWN
EWAQ040CAWN
EWAQ050CAWN
EWAQ064CAWN

EWAQ016CAWP
EWAQ021CAWP
EWAQ025CAWP
EWAQ032CAWP
EWAQ040CAWP
EWAQ050CAWP
EWAQ064CAWP

EWAQ016CAWH
EWAQ021CAWH
EWAQ025CAWH
EWAQ032CAWH
EWAQ040CAWH
EWAQ050CAWH
EWAQ064CAWH

Refrigerant: R-410A

Rev	00
Date	-
Supersedes	-

TABLE OF CONTENTS

EWAQ-CWN/P/H

1	Features	2
	EWAQ-CWN	2
	EWAQ-CWP	3
	EWAQ-CWH	4
2	Specifications	5
	Technical Specifications	5
	Technical Specifications	7
	Technical Specifications	8
	Electrical Specifications	10
	Electrical Specifications	11
3	Options	13
4	Capacity tables	14
	Cooling Capacity Tables	14
	Capacity Correction Factor	22
5	Dimensional drawings	23
6	Piping diagrams	31
7	Wiring diagrams	32
	Wiring Diagrams - Three Phase	32
8	External connection diagrams	36
9	Sound data	37
	Sound Power Spectrum	37
10	Installation	38
	Fixation and Foundation of Units	38
	Water Charge, Flow and Quality	39
11	Operation range	40
12	Hydraulic performance	41
	Static Pressure Drop Unit	41

1 Features

1 - 1 EWAQ-CWN

- Inverter chiller
- High part load efficiency for low running cost
- Minimal starting currents
- No buffertank required for standard applications
- Daikin scroll compressor
- Wide operation range
- Integrated hydronic module on request



Inverter



Scroll
compressor

1 Features

1 - 2 EWAQ-CWP

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Inverter



Scroll
compressor

1 Features

1 - 3 EWAQ-CWH

- Inverter chiller
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1



Inverter



Scroll
compressor

2 Specifications

2-1 Technical Specifications				EWAQ016C WN	EWAQ021C WN	EWAQ025C WN	EWAQ032C WN	EWAQ040C WN	EWAQ050C WN	EWAQ064C WN	
Cooling capacity	Rated		kW	16.80	21.00	25.20	31.50	42.00	50.40	63.00	
	Nom.		kW	16.8 (1)	21.0 (1)	25.3 (1)	31.6 (1)	42.1 (1)	50.5 (1)	63.2 (1)	
	Max.		kW	20.0	25.0	30.1	37.6	50.1	60.1	75.2	
Power input	Cooling	Nom.	kW	5.93 (1)	7.61 (1)	9.60 (1)	12.9 (1)	15.1 (1)	19.2 (1)	25.7 (1)	
Capacity control	Method			Inverter controlled							
	Minimum capacity		%	25							
	Maximum capacity		%	120							
EER				2.84	2.77	2.63	2.45	2.79	2.63	2.46	
ESEER				4.37	4.26	4.17	3.87	4.28	4.18	3.87	
Dimensions	Packed unit	Height	mm	1,860							
		Width	mm	1,394			1,707	2,377		2,997	
		Depth	mm	834				838			
	Unit	Height	mm	1,684							
		Width	mm	1,370			1,680	2,360		2,980	
		Depth	mm	774				780			
Weight	Packed unit		kg	295	348	434	624	794			
	Unit		kg	268	321	403	579	741			
Packing	Material			Carton / Wood / Plastic							
	Weight		kg	27			31	45	53		
Casing	Colour			Daikin White							
	Material			Polyester coated galvanised steel plate							
Water heat exchanger	Quantity			1				2			
	Type			Brazen plate							
	Filter	Diameter perforations		mm	1.0						
		Material			Brass						
	Water flow rate	Min.		l/min	23		36	46		72	
		Cooling	Nom.	l/min	48 (2)	60 (2)	72 (2)	90 (2)	120 (2)	145 (2)	181 (2)
			Max	l/min	72	90	108	136	181	217	271
	Water pressure drop	Cooling	Total	kPa	8	10	14	8	10	14	8
	Water volume			l	3			5	6		9
	Insulation material			Nitrile rubber based elastomeric foam							
Air heat exchanger	Type			Air cooled coil							
	Fin	Treatment			Hydrophilic and anti-corrosion resistant						
		Type			Non-symmetric waffle louvre						
	Fin pitch		mm	2							
Compressor	Quantity			1	2		3	4		6	
	Type			Hermetically sealed scroll compressor							
	Motor (INV)	Crankcase heater		W	33						
		Model			Inverter						
		Quantity			1				2		
	Motor (ON-OFF)	Crankcase heater		W	33						
Model			ON/OFF								
Quantity			0	1		2		4			
Fan	Quantity			1			2		4		
	Type			Axial							
	Air flow rate	Cooling	Nom.	m³/min	171	185	233	370		466	
			Rated	m³/h	10,260	11,100	13,980	22,200		27,960	
	Discharge direction			Vertical							
External static pressure	Max.		Pa	78							
Fan motor	Drive			Direct drive							
	Model			Brushless DC motor							
	Quantity			1			2		4		
Sound power level	Cooling	Nom.	dBA	78			80	81		83	

2 Specifications

2

2-1 Technical Specifications					EWAQ016C WN	EWAQ021C WN	EWAQ025C WN	EWAQ032C WN	EWAQ040C WN	EWAQ050C WN	EWAQ064C WN	
Operation range	Air side	Cooling	Max.	°CDB	43							
			Min.	°CDB	-5							
	Water side	Cooling	Max.	°CDB	20							
			Min.	°CDB	-10 (3)							
Refrigerant	Type				R-410A							
	GWP				2,087.5							
	Circuits	Quantity			1				2			
	Control				Electronic expansion valve							
Refrigerant charge	Per circuit			kg	7.60		9.60		7.60		9.60	
				TCO ₂ eq	15.9		20.0		15.9		20.0	
Water circuit	Air purge valve				Yes							
	Drain valve / fill valve				Yes							
	flowswitch				Yes							
	Minimum water volume in the system for cooling			l	33 (4)				66 (4)			
	Nominal water pressure drop	Cooling			kPa	12 (5)	17 (5)	23 (5)	24 (5)	19 (5)	28 (5)	29 (5)
	Piping			inch	1-1/4"				1-1/2"			
	Piping connections diameter			inch	1-1/4" (female)				2" (female)			
	Safety valve			bar	3							
	Shut off valve				Yes							
	Total water volume			l	4.2 (6)		5.8 (6)		7.9 (6)		11.0 (6)	
Refrigerant oil	Type				Synthetic (ether) oil							
Defrost method				Reversed cycle								
Safety devices	Item	01		High pressure switch								
		02		Overcurrent relay								
		03		Inverter overload protector								
		04		Fuse								
PED	Category				Category II							
	Most critical part	Name		Accumulator								
		Ps*V	Bar*l		335		385		335		385	
Cooling	Cdc (Degradation cooling)				0.90							
General	Supplier/ Manufacturer details	Name and address			Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium							
		Name or trademark			Daikin Europe N.V.							
	Product description	Air-to-water heat pump			Yes							
		Brine-to-water heat pump			No							
		Heat pump combination heater			No							
		Low-temperature heat pump			Yes							
		Supplementary heater integrated			No							
Water-to-water heat pump			No									
Space cooling	A Condition (35°C - 27/19)	EERd		2.84	2.77	2.63	2.46	2.77	2.63	2.46		
		Pdc	kW	16.8	21.0	25.3	31.6	42.1	50.5	63.2		
	B Condition (30°C - 27/19)	EERd		3.98	3.75	3.58	3.32	3.76	3.59	3.32		
		Pdc	kW	12.1	15.6	18.9	23.8	31.3	37.8	47.7		
	C Condition (25°C - 27/19)	EERd		5.48	5.13	4.91	4.50	5.15	4.92	4.50		
		Pdc	kW	7.79	10.0	12.1	15.4	19.9	24.2	30.9		
	D Condition (20°C - 27/19)	EERd		6.77	6.35	6.37	6.31	6.42	6.43	6.34		
		Pdc	kW	5.36	5.15	5.39	6.96	10.3	10.8	13.9		
ηs,c			%	168	163	165	154	164	165	154		
Standard rating conditions used				Low temperature application								
Power consumption in other than active mode	Crankcase heater mode	PCK		W	0.041	0.074		0.104		0.148		0.208
	Off mode	POFF		W	0.041	0.074		0.104		0.148		0.208
	Standby mode	Cooling	PSB	W	0.041	0.074		0.104		0.148		0.208
	Thermostat-off mode	PTO	Cooling	W	0.016			0.019		0.032		0.038

2 Specifications

2-2 Technical Specifications				EWAQ016C WP	EWAQ021C WP	EWAQ025C WP	EWAQ032C WP	EWAQ040C WP	EWAQ050C WP	EWAQ064C WP	
Cooling capacity	Rated		kW	16.8	21.0	25.2	31.5	42.0	50.4	63.0	
	Nom.		kW	17.0 (1)	21.2 (1)	25.5 (1)	31.8 (1)	42.3 (1)	50.7 (1)	63.3 (1)	
	Max.		kW	20.2	25.2	30.3	37.8	50.3	60.3	75.3	
Power input	Cooling	Nom.	kW	5.81 (1)	7.47 (1)	9.45 (1)	12.7 (1)	15.1 (1)	19.0 (1)	25.5 (1)	
Capacity control	Method		Inverter controlled								
	Minimum capacity		%	25							
	Maximum capacity		%	120							
EER				2.93	2.84	2.70	2.50	2.80	2.67	2.48	
ESEER				4.85	4.70	4.57	4.10	4.40	4.36	4.05	
Dimensions	Packed unit	Height	mm	1,860							
		Width	mm	1,394		1,707	2,377		2,997		
		Depth	mm	834			838				
	Unit	Height	mm	1,684							
		Width	mm	1,370		1,680	2,360		2,980		
		Depth	mm	774			780				
Weight	Packed unit		kg	307	359	446	649	818			
	Unit		kg	280	332	414	604	765			
Packing	Material		Carton / Wood / Plastic								
	Weight		kg	27		31	45	53			
Casing	Colour		Daikin White								
	Material		Polyester coated galvanised steel plate								
Water heat exchanger	Quantity		1				2				
	Type		Brazen plate								
	Filter	Diameter perforations	mm	1.0							
		Material		Brass							
	Water flow rate	Min.	Nom.	l/min	23		36	46		72	
		Cooling	Max.	l/min	48 (2)	60 (2)	72 (2)	90 (2)	120 (2)	145 (2)	181 (2)
			Total	kPa	72	90	108	136	181	217	271
	Water pressure drop	Cooling	Total	kPa	8	10	14	8	10	14	8
	Water volume		l	3			5	6		9	
	Insulation material		Nitrile rubber based elastomeric foam								
Air heat exchanger	Type		Air cooled coil								
	Fin	Treatment	Hydrophilic and anti-corrosion								
		Type	Non-symmetric waffle louver								
	Fin pitch		mm	2							
Compressor	Quantity		1	2		3	4		6		
	Type		Hermetically sealed scroll compressor								
	Motor (INV)	Crankcase heater	W	33							
		Model		Inverter							
		Quantity		1			2				
	Motor (ON-OFF)	Crankcase heater	W	33							
		Model		ON/OFF							
Quantity		0	1		2		4				
Fan	Quantity		1			2		4			
	Type		Axial								
	Air flow rate	Cooling	Nom.	m ³ /min	171	185	233	370	466		
	Discharge direction		Vertical								
	External static pressure	Max.	Pa	78							
Fan motor	Drive		Direct drive								
	Model		Brushless DC motor								
	Quantity		1			2		4			
Sound power level	Cooling	Nom.	dBA	78		80	81		83		
Operation range	Air side	Cooling	Max.	°CDB	43						
		Min.	°CDB	-5							
	Water side	Cooling	Max.	°CDB	20						
		Min.	°CDB	-10 (3)							

2 Specifications

2

2-2 Technical Specifications				EWAQ016C WP	EWAQ021C WP	EWAQ025C WP	EWAQ032C WP	EWAQ040C WP	EWAQ050C WP	EWAQ064C WP	
Refrigerant	Type		R-410A								
	GWP		2,087.5								
	Circuits	Quantity	1				2				
	Control		Electronic expansion valve								
Refrigerant charge	Per circuit		kg	7.60		9.60		7.60		9.60	
			TCO ₂ eq	15.9		20.0		15.9		20.0	
Water circuit	Air purge valve		Yes								
	Drain valve / fill valve		Yes								
	flowswitch		Yes								
	Minimum water volume in the system for cooling		l	33 (4)				66 (4)			
	Nominal water pressure drop	Cooling	kPa	12 (5)	17 (5)	23 (5)	24 (5)	19 (5)	28 (5)	29 (5)	
	Piping		inch	1-1/4"				1-1/2"			
	Piping connections diameter		inch	1-1/4" (female)				2" (female)			
	Safety valve		bar	3							
	Shut off valve		Yes								
	Total water volume		l	4.2 (6)		5.8 (6)		7.9 (6)		11.0 (6)	
Refrigerant oil	Type		Synthetic (ether) oil								
Safety devices	Item	01	High pressure switch								
		02	Overcurrent relay								
		03	Inverter overload protector								
		04	Fuse								
PED	Category		Category II								
	Most critical part	Name		Accumulator							
		Ps*V	Bar*l	335		385		335		385	
Cooling	Cdc (Degradation cooling)		0.90								
General	Supplier/ Manufacturer details	Name and address		Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium							
		Name or trademark		Daikin Europe N.V.							
	Product description	Air-to-water heat pump		Yes							
		Brine-to-water heat pump		No							
		Heat pump combination heater		No							
		Low-temperature heat pump		Yes							
		Supplementary heater integrated		No							
Water-to-water heat pump		No									
Space cooling	ηs,c	%	184	178	180	163	168	172	161		
Standard rating conditions used			Low temperature application								
Power consumption in other than active mode	Crankcase heater mode	PCK	W	0.041	0.074		0.104	0.148		0.208	
	Off mode	POFF	W	0.041	0.074		0.104	0.148		0.208	
	Standby mode	Cooling	PSB	W	0.041	0.074		0.104	0.148		0.208
	Thermostat-off mode	PTO	Cooling	W	0.016		0.019	0.032		0.038	

2-3 Technical Specifications				EWAQ016C WH	EWAQ021C WH	EWAQ025C WH	EWAQ032C WH	EWAQ040C WH	EWAQ050C WH	EWAQ064C WH	
Cooling capacity	Rated		kW	16.8	21.0	25.2	31.5	42.0	50.4	63.0	
	Nom.		kW	17.0 (1)	21.2 (1)	25.5 (1)	31.8 (1)	42.3 (1)	50.7 (1)	63.3 (1)	
	Max.		kW	20.2	25.2	30.3	37.8	50.3	60.3	75.3	
Power input	Cooling	Nom.	kW	5.81 (1)	7.47 (1)	9.45 (1)	12.7 (1)	15.1 (1)	19.0 (1)	25.5 (1)	
Capacity control	Method		Inverter controlled								
	Minimum capacity		%	25							
	Maximum capacity		%	120							
EER				2.93	2.84	2.70	2.50	2.80	2.67	2.48	
ESEER				4.69	4.58	4.47	4.06	4.27	4.26	3.98	

2 Specifications

2-3 Technical Specifications				EWAQ016C WH	EWAQ021C WH	EWAQ025C WH	EWAQ032C WH	EWAQ040C WH	EWAQ050C WH	EWAQ064C WH	
Dimensions	Packed unit	Height	mm	1,860							
		Width	mm	1,394			1,707	2,377		2,997	
		Depth	mm	834				838			
	Unit	Height	mm	1,684							
		Width	mm	1,370			1,680	2,360		2,980	
		Depth	mm	774				780			
Weight	Packed unit	kg	310	363	449	656	826				
	Unit	kg	283	336	417	612	774				
Packing	Material	Carton / Wood / Plastic									
	Weight	kg	27			31	45	53			
Casing	Colour	Daikin White									
	Material	Polyester coated galvanised steel plate									
Water heat exchanger	Quantity	1				2					
	Type	Brazen plate									
	Filter	Diameter perforations	mm	1.0							
		Material	Brass								
	Water flow rate	Min.	l/min	23			36	46	72		
		Cooling	Nom.	l/min	48 (2)	60 (2)	72 (2)	90 (2)	120 (2)	145 (2)	181 (2)
			Max	l/min	72	90	108	136	181	217	271
	Water pressure drop	Cooling	Total	kPa	8	10	14	8	10	14	8
	Water volume	l		3			5	6	9		
	Insulation material	Nitrile rubber based elastomeric foam									
Air heat exchanger	Type	Air cooled coil									
	Fin	Treatment	Hydrophilic and anti-corrosion								
		Type	Non-symmetric waffle louver								
	Fin pitch	mm	2								
Compressor	Quantity	1		2		3	4	6			
	Type	Hermetically sealed scroll compressor									
	Motor (INV)	Crankcase heater	W	33							
		Model	Inverter								
		Quantity	1				2				
	Motor (ON-OFF)	Crankcase heater	W	33							
		Model	ON/OFF								
Quantity		0	1	2		4					
Fan	Quantity	1			2		4				
	Type	Axial									
	Air flow rate	Cooling	Nom.	m ³ /min	171	185	233	370	466		
	Discharge direction	Vertical									
	External static pressure	Max.	Pa	78							
Fan motor	Drive	Direct drive									
	Model	Brushless DC motor									
	Quantity	1			2		4				
Sound power level	Cooling	Nom.	dBA	78		80	81	83			
Operation range	Air side	Cooling	Max.	°CDB	43						
			Min.	°CDB	-5						
	Water side	Cooling	Max.	°CDB	20						
			Min.	°CDB	-10 (3)						
Refrigerant	Type	R-410A									
	GWP	2,087.5									
	Circuits	Quantity	1				2				
	Control	Electronic expansion valve									
Refrigerant charge	Per circuit	kg	7.60		9.60	7.60	9.60				
		TCO ₂ eq	15.9		20.0	15.9	20.0				

2 Specifications

2

2-3 Technical Specifications				EWAQ016C WH	EWAQ021C WH	EWAQ025C WH	EWAQ032C WH	EWAQ040C WH	EWAQ050C WH	EWAQ064C WH	
Water circuit	Air purge valve			Yes							
	Drain valve / fill valve			Yes							
	flowswitch			Yes							
	Minimum water volume in the system for cooling		l	33 (4)				66 (4)			
	Nominal water pressure drop	Cooling	kPa	12 (5)	17 (5)	23 (5)	24 (5)	19 (5)	28 (5)	29 (5)	
	Piping		inch	1-1/4"				1-1/2"			
	Piping connections diameter		inch	1-1/4" (female)				2" (female)			
	Safety valve		bar	3							
	Shut off valve			Yes							
Total water volume		l	4.2 (6)			5.8 (6)	7.9 (6)		11.0 (6)		
Refrigerant oil	Type			Synthetic (ether) oil							
Safety devices	Item	01		High pressure switch							
		02		Overcurrent relay							
		03		Inverter overload protector							
		04		Fuse							
PED	Category			Category II							
	Most critical part	Name		Accumulator							
		Ps*V	Bar*l	335		385	335		385		
Cooling	Cdc (Degradation cooling)			0.90							
General	Supplier/ Manufacturer details	Name and address		Daikin Europe N.V. - Zandvoordestraat 300, 8400 Oostende, Belgium							
		Name or trademark		Daikin Europe N.V.							
	Product description	Air-to-water heat pump			Yes						
		Brine-to-water heat pump			No						
		Heat pump combination heater			No						
		Low-temperature heat pump			Yes						
Supplementary heater integrated			No								
Water-to-water heat pump			No								
Space cooling	ηs,c	%	178	173	176	161	163	168	158		
Standard rating conditions used				Low temperature application							
Power consumption in other than active mode	Crankcase heater mode	PCK	W	0.041	0.074		0.104	0.148		0.208	
	Off mode	POFF	W	0.041	0.074		0.104	0.148		0.208	
	Standby mode	Cooling PSB	W	0.041	0.074		0.104	0.148		0.208	
	Thermostat-off mode	PTO	Cooling W	0.016			0.019	0.032		0.038	

2-4 Electrical Specifications				EWAQ016C WN	EWAQ021C WN	EWAQ025C WN	EWAQ032C WN	EWAQ040C WN	EWAQ050C WN	EWAQ064C WN	
Unit	Starting current	Max	A	0.0 (7)	77.7	78.7	88.7	99.8	101.9	120.7	
	Current	Zmax	Text	0,22	0,27		0,24	0,25		0,22	
	Running current	Max	A	22.2	25.3	26.4	35.2	47.4	49.6	67.2	
	Minimum Ssc value				1,141	853		840	1,706		1,679
	Recommended fuses			A	25	32		40	50	63	80
Power supply	Name			W1							
	Phase			3N~							
	Frequency		Hz	50							
	Voltage		V	400							
	Voltage range	Min.	%	-10							
Max.		%	10								

2 Specifications

2-4 Electrical Specifications			EWAQ016C WN	EWAQ021C WN	EWAQ025C WN	EWAQ032C WN	EWAQ040C WN	EWAQ050C WN	EWAQ064C WN
Cable requirements	Power supply	Required number of conductors	4 + GND						
	Remote control	Quantity of wires	2						
		Maximum running current	Minimum cable section 0,75 mm ²						
	Cooling/Heating output	Quantity of wires	2						
		Maximum running current	A	0,3					
	Operation ON/OFF output	Quantity of wires	2						
		Maximum running current	A	0,3					
	Error output	Quantity of wires	2						
		Maximum running current	A	0,3					
	Pump ON/OFF output	Quantity of wires	2						
		Maximum running current	A	0,3					

2

2-5 Electrical Specifications				EWAQ016C WP	EWAQ021C WP	EWAQ025C WP	EWAQ032C WP	EWAQ040C WP	EWAQ050C WP	EWAQ064C WP
Compressor				-						
Unit	Starting current	Max	A	0.0 (7)	80.0	81.0	91.0	103.0	105.0	124.0
	Current	Zmax	Text	0,22	0,27		0,24	0,25		0,22
	Running current	Max	A	24.0	27.1	28.2	37.0	50.4	52.6	70.2
	Minimum Ssc value				1,141	853	840	1,706		1,679
	Recommended fuses			A	25	32	40	63		80
Power supply	Name			W1						
	Phase			3N~						
	Frequency		Hz	50						
	Voltage		V	400						
	Voltage range	Min.	%	-10						
Max.		%	10							
Cable requirements	Power supply	Required number of conductors	4 + GND							
	Remote control	Quantity of wires	2							
		Maximum running current	Minimum cable section 0.75 mm ²							
	Cooling/Heating output	Quantity of wires	2							
		Maximum running current	A	0,3						
	Operation ON/OFF output	Quantity of wires	2							
		Maximum running current	A	0,3						
	Error output	Quantity of wires	2							
		Maximum running current	A	0,3						
	Pump ON/OFF output	Quantity of wires	2							
		Maximum running current	A	0,3						

2-6 Electrical Specifications				EWAQ016C WH	EWAQ021C WH	EWAQ025C WH	EWAQ032C WH	EWAQ040C WH	EWAQ050C WH	EWAQ064C WH
Compressor				-						
Unit	Starting current	Max	A	0.0 (7)	79.9	81.7	91.7	103.7	106.3	125.1
	Current	Zmax	Text	0,22	0,27		0,24	0,25		0,22
	Running current	Max	A	24.4	27.5	29.4	38.2	51.3	54.0	71.6
	Minimum Ssc value				1,141	853	840	1,706		1,679
	Recommended fuses			A	32		40	63		80

2 Specifications

2

2-6 Electrical Specifications			EWAQ016C WH	EWAQ021C WH	EWAQ025C WH	EWAQ032C WH	EWAQ040C WH	EWAQ050C WH	EWAQ064C WH	
Power supply	Name		W1							
	Phase		3N~							
	Frequency		Hz	50						
	Voltage		V	400						
	Voltage range	Min.	%	-10						
		Max.	%	10						
Cable requirements	Power supply	Required number of conductors		4 + GND						
	Remote control	Quantity of wires		2						
		Maximum running current		Minimum cable section 0,75 mm ²						
	Cooling/Heating output	Quantity of wires		2						
		Maximum running current	A	0,3						
	Operation ON/OFF output	Quantity of wires		2						
		Maximum running current	A	0,3						
	Error output	Quantity of wires		2						
		Maximum running current	A	0,3						
	Pump ON/OFF output	Quantity of wires		2						
		Maximum running current	A	0,3						

Notes

- (1) Cooling: entering evaporator water temp. 12°C; leaving evaporator water temp. 7°C; ambient air temp. 35°C
- (2) Condition: Ta 35°C - LWE 7°C (DT = 5°C)
- (3) Water can be used above 5°C. Between 0°C and 5°C a 30% glycol solution (propylene or ethylene) has to be used. Between 0°C and -10°C a 40% glycol solution (propylene or ethylene) has to be used (see installation manual and information related to OPZL option)
- (4) Excluding water volume in the unit. In most applications this minimum water volume will have a satisfying result. In critical processes or in rooms with a high heat load though, extra water volume might be required. Refer to operation range for more info.
- (5) This is PD between inlet & outlet connections of unit. It includes the water side heat exchanger pressure drop.
- (6) Including piping + PHE; excluding expansion vessel
- (7) No peak current because of inverter compressor

3 Options

3 - 1 Options

EWYQ-CW
EWAQ-CW

Option availability	Single circuit	EW(A/Y)Q*CAW*				Availability	Model name Character position			Numeric option code
		016	021	025	032		11	12	13	
-	Standard hydraulic package Filter Shut-off valve Drain valve / Fill valve Automatic air purge valve Flow switch	o	o	o	o	Factory-mounted	N			-
OPSP	Additional hydraulic components Pump Expansion vessel Safety valve	o	o	o	o	Factory-mounted	P			78
OPHP	Pressure gauge OPHP = OPSP, but the pump has a higher static pressure.	o	o	o	o	Factory-mounted	H			79
OP10	Heater tape for freeze prevention at negative ambient temperatures	o	o	o	o	Factory-mounted			H	57
OPZL	Low leaving water temperature operation down to -10°C	o	o	o	o	Factory-mounted		B		08b
EKRP1AHT*	Demand PCB Additional inputs for: Remote ON/OFF Remote cooling/heating Remote thermo ON/OFF	o	o	o	o	Option kit				
EKRUAHT*	Remote control	o	o	o	o	Option kit				
BHGP26A1	Digital pressure gauge	o	o	o	o	Option kit				
DTA104A62	External control adapter Demand control Low-noise control	o	o	o	o	Option kit				

characters 11, 12,

3D111473A

EWAQ-CW
EWYQ-CW

Option availability	Double circuit	EW(A/Y)Q*CAW*			Availability	Model name Character position			Numeric option code
		040	050	064		11	12	13	
-	Standard hydraulic package Filter Shut-off valves Drain valve / Fill valve Automatic air purge valve Flow switch	o	o	o	Factory-mounted	N			-
OPSP	Additional hydraulic components Pump Expansion vessel Safety valve	o	o	o	Factory-mounted	P			78
OPHP	Pressure gauge OPHP = OPSP, but the pump has a higher static pressure.	o	o	o	Factory-mounted	H			79
OP10	Heater tape for freeze prevention at negative ambient temperatures	o	o	o	Factory-mounted		-	H	57
OPZL	Low leaving water temperature operation down to -10°C	o	o	o	Factory-mounted		B	-	08b
EKRP1AHT*	Demand PCB Additional inputs for: Remote ON/OFF Remote cooling/heating Remote thermo ON/OFF	o	o	o	Option kit				
EKRUAHT*	Remote control	o	o	o	Option kit				
BHGP26A1	Digital pressure gauge	o	o	o	Option kit				
DTA104A62	External control adapter Demand control Low-noise control	o	o	o	Option kit				

Model name
characters 11, 12, 13
indicate options.

3D111473A

4 Capacity tables

4 - 1 Cooling Capacity Tables

EWYQ-CWN
EWAQ-CWN

4

Cooling operation (Maximum)
·N· models

Tamb		20		25		30		35		40	
LWE	Size	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
5	016	20,0	6,18	20,0	6,87	20,0	7,93	20,0	9,21	19,4	9,93
	021	25,0	7,8	25,0	8,6	25,0	9,5	25,0	10,5	25,0	12,3
	025	28,3	9,4	28,1	10,3	28,1	11,2	27,4	11,9	26,2	13,1
	032	37,6	12,8	37,6	14,8	37,1	16,6	35,9	18,1	30,4	16,4
	040	50,1	15,8	50,1	17,0	50,1	18,9	50,1	21,2	50,1	25,2
	050	54,2	18,1	55,1	20,1	54,6	21,8	53,1	23,2	50,4	25,6
7	064	74,1	25,8	73,0	28,7	71,9	31,8	69,2	34,8	59,1	31,9
	016	20,0	5,43	20,0	5,99	20,0	6,82	20,0	7,90	20,0	9,28
	021	25,0	7,27	25,0	7,96	25,0	8,80	25,0	9,69	25,0	11,2
	025	30,1	9,28	30,1	10,7	30,1	11,7	30,1	13,1	28,3	14,1
	032	37,6	11,7	37,6	13,6	37,6	16,0	37,6	18,1	31,2	15,7
	040	50,1	14,5	50,1	15,8	50,1	17,4	50,1	19,5	50,1	22,6
10	050	60,1	18,9	60,1	21,5	60,1	23,7	60,1	27,6	54,8	27,4
	064	75,2	24,6	75,2	28,0	75,2	32,2	75,2	37,8	60,2	30,1
	016	20,0	4,86	20,0	5,29	20,0	5,97	20,0	6,76	20,0	7,62
	021	25,0	6,64	25,0	7,34	25,0	8,10	25,0	8,93	25,0	10,0
	025	30,1	8,46	30,1	9,81	30,1	11,0	30,1	11,9	29,1	12,7
	032	37,6	10,6	37,6	12,2	37,6	14,5	37,6	16,3	32,1	14,5
15	040	50,1	12,9	50,1	14,3	50,1	15,8	50,1	17,6	50,1	19,9
	050	60,1	16,8	60,1	19,4	60,1	21,7	60,1	23,7	57,7	25,9
	064	75,2	22,3	75,2	25,1	75,2	29,5	75,2	33,8	62,7	28,3
	016	20,0	3,91	20,0	4,51	20,0	5,09	20,0	5,72	20,0	6,47
	021	25,0	5,67	25,0	6,34	25,0	7,07	25,0	7,82	25,0	8,60
	025	30,1	6,90	30,1	7,97	30,1	9,14	30,1	10,1	30,1	11,1
18	032	37,6	9,21	37,6	10,5	37,6	12,0	37,6	13,8	33,2	12,6
	040	50,1	11,0	50,1	12,3	50,1	13,7	50,1	15,2	50,1	16,8
	050	60,1	14,0	60,1	16,0	60,1	18,3	60,1	20,0	60,1	22,2
	064	75,2	19,0	75,2	21,1	75,2	24,2	75,2	27,8	65,3	24,7
	016	20,0	3,56	20,0	4,01	20,0	4,57	20,0	5,20	20,0	5,88
	021	25,0	5,18	25,0	5,82	25,0	6,61	25,0	7,36	25,0	8,11
18	025	30,1	6,26	30,1	7,22	30,1	8,34	30,1	9,28	30,1	10,2
	032	37,6	8,30	37,6	9,52	37,6	10,8	37,6	12,5	34,2	11,7
	040	50,1	10,2	50,1	11,5	50,1	12,9	50,1	14,2	50,1	15,8
	050	60,1	12,7	60,1	14,5	60,1	16,8	60,1	18,8	60,1	20,4
	064	75,2	17,2	75,2	19,1	75,2	22,0	75,2	25,5	67,9	23,3

Symbols

CC: Cooling capacity [kW]
 PI: Power input [kW]
 LWE: Leaving water evaporator temperature [°C]
 Tamb: Ambient temperature [°C]

Notes

- Cooling capacity [kW]
The capacity is according to ·EN14511:2013· and valid for chilled water range $Dt = -3-8^{\circ}C$
- Power input [kW]
The power input is the total input according to ·EN14511:2013·

3D111566

4 Capacity tables

4 - 1 Cooling Capacity Tables

EWYQ-CWN
EWAQ-CWN

Cooling operation (Maximum)
·OPZL N· models

Tamb		20		25		30		35		40	
LWE	Size	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
-10	016	12,4	6,54	12,4	7,11	12,2	7,80	11,8	8,37	11,2	8,97
	021	17,6	8,61	17,5	9,08	17,0	9,8	16,3	10,6	15,3	11,6
	025	18,1	8,86	18,0	9,31	17,6	10,1	16,8	10,8	15,8	11,9
	032	25,4	12,2	24,6	13,5	22,7	14,9	20,8	16,3	16,8	14,3
	040	34,9	16,1	34,4	17,5	33,4	19,0	31,9	20,3	30,0	22,3
	050	35,3	16,5	35,0	18,1	34,0	19,6	32,6	21,0	30,7	23,0
	064	49,3	23,4	47,4	25,9	43,7	28,6	40,3	31,5	32,1	27,0
-5	016	15,3	6,89	15,2	7,39	14,9	8,09	14,3	8,68	13,5	9,28
	021	21,0	9,13	20,9	9,42	20,4	10,2	19,6	10,9	18,5	12,0
	025	21,5	8,91	21,4	9,65	21,0	10,5	20,0	11,2	18,9	12,2
	032	29,5	12,6	29,2	14,0	27,6	15,5	25,2	17,1	22,7	17,8
	040	41,4	16,6	41,1	18,2	39,9	19,7	38,2	21,0	36,1	23,1
	050	41,9	17,1	41,7	18,8	40,6	20,3	39,0	21,7	36,8	23,8
	064	57,4	24,3	56,6	26,9	53,1	29,7	49,1	32,5	40,0	29,7

Symbols

CC: Cooling capacity [kW]
PI: Power input [kW]
LWE: Leaving water evaporator temperature [°C]
Tamb: Ambient temperature [°C]

Notes

- Cooling capacity [kW]
The capacity is according to ·EN14511:2013· and valid for chilled water range $\Delta t = -3-8^{\circ}\text{C}$
- Power input [kW]
The power input is the total input according to ·EN14511:2013·
- The use of glycol and other antifreezes
The correction factors for the cooling capacity and power input depend on the type and concentration of the used antifreeze.

4 Capacity tables

4 - 1 Cooling Capacity Tables

EWYQ-CWN
EWAQ-CWN

4

Cooling operation (Nominal)
·N· models

Tamb		20		25		30		35		40	
LWE	Size	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
5	016	16,8	4,35	16,8	4,94	16,8	5,65	16,8	6,43	16,8	7,24
	021	21,0	5,82	21,0	6,37	21,0	7,13	21,0	8,04	21,0	9,11
	025	25,3	7,52	25,3	8,37	25,3	9,23	25,3	10,4	25,3	12,11
	032	31,6	9,61	31,6	10,9	31,6	12,2	31,5	14,2	30,6	16,2
	040	42,1	11,5	42,1	12,7	42,1	14,3	42,1	16,2	42,1	18,3
	050	50,5	15,3	50,5	16,9	50,5	18,8	50,5	21,1	50,5	24,8
	064	63,2	19,1	63,2	21,5	63,2	24,4	63,2	28,5	59,4	31,6
7	016	16,8	4,06	16,8	4,59	16,8	5,23	16,8	5,93	16,8	6,72
	021	21,0	5,54	21,0	6,13	21,0	6,83	21,0	7,61	21,0	8,47
	025	25,3	7,05	25,3	7,89	25,3	8,74	25,3	9,60	25,3	10,9
	032	31,6	9,18	31,6	10,3	31,6	11,5	31,6	12,9	31,3	15,5
	040	42,1	11,0	42,1	11,9	42,1	13,4	42,1	15,1	42,1	16,9
	050	50,5	14,2	50,5	15,8	50,5	17,5	50,5	19,2	50,5	22,4
	064	63,2	18,1	63,2	20,4	63,2	22,7	63,2	25,7	63,2	30,3
10	016	16,8	3,59	16,8	4,05	16,8	4,59	16,8	5,33	16,8	6,05
	021	21,0	5,18	21,0	5,73	21,0	6,31	21,0	7,07	21,0	7,91
	025	25,3	6,29	25,3	7,28	25,3	7,87	25,3	8,92	25,3	9,92
	032	31,6	8,25	31,6	9,43	31,6	10,5	31,6	11,9	31,6	14,1
	040	42,1	10,1	42,1	11,1	42,1	12,3	42,1	13,8	42,1	15,4
	050	50,5	12,6	50,5	14,4	50,5	15,9	50,5	17,6	50,5	19,9
	064	63,2	16,4	63,2	18,8	63,2	20,9	63,2	24,1	63,2	28,2
15	016	16,8	2,78	16,8	3,27	16,8	3,74	16,8	4,31	16,8	4,93
	021	21,0	4,26	21,0	4,91	21,0	5,45	21,0	6,11	21,0	6,86
	025	25,3	5,50	25,3	6,16	25,3	7,00	25,3	7,81	25,3	8,56
	032	31,6	6,86	31,6	7,81	31,6	8,91	31,6	10,0	31,6	11,5
	040	42,1	8,39	42,1	9,74	42,1	10,8	42,1	12,1	42,1	13,6
	050	50,5	11,0	50,5	12,3	50,5	13,9	50,5	15,3	50,5	16,8
	064	63,2	13,7	63,2	15,5	63,2	17,8	63,2	19,9	63,2	23,2
18	016	16,8	2,48	16,8	2,92	16,8	3,35	16,8	3,87	16,8	4,48
	021	21,0	3,67	21,0	4,32	21,0	4,92	21,0	5,50	21,0	6,19
	025	25,3	5,20	25,3	5,76	25,3	6,55	25,3	7,29	25,3	8,05
	032	31,6	6,34	31,6	7,21	31,6	8,14	31,6	9,23	31,6	10,4
	040	42,1	7,27	42,1	8,55	42,1	9,64	42,1	10,8	42,1	12,3
	050	50,5	10,1	50,5	11,4	50,5	13,0	50,5	14,4	50,5	15,8
	064	63,2	12,4	63,2	14,2	63,2	16,4	63,2	18,2	63,2	20,6

Symbols

CC: Cooling capacity [kW]
 PI: Power input [kW]
 LWE: Leaving water evaporator temperature [°C]
 Tamb: Ambient temperature [°C]

Notes

- Cooling capacity [kW]
The capacity is according to ·EN14511:2013· and valid for chilled water range Dt = ·3-8·°C
- Power input [kW]
The power input is the total input according to ·EN14511:2013·

3D111567

4 Capacity tables

4 - 1 Cooling Capacity Tables

EWYQ-CWN
EWAQ-CWN

Cooling operation (Nominal)
·OPZL N· models

Tamb		20		25		30		35		40	
LWE	Size	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
-10	016	12,5	6,56	12,5	7,13	12,3	7,81	11,9	8,39	11,3	8,99
	021	18,0	8,37	17,8	9,10	17,2	9,87	16,5	10,6	15,5	11,6
	025	18,2	8,56	18,1	9,32	17,6	10,1	16,9	10,8	15,9	11,8
	032	25,7	12,2	24,8	13,5	22,9	14,9	21,0	16,3	16,9	14,3
	040	35,3	16,1	34,8	17,5	33,8	19,0	32,3	20,4	30,3	22,4
	050	37,7	16,8	37,4	18,3	36,5	19,9	35,2	21,3	30,7	23,0
-5	016	15,5	6,91	15,5	7,42	15,1	8,11	14,5	8,70	13,7	9,30
	021	21,0	8,71	21,0	9,45	20,7	10,3	19,8	11,0	18,7	12,0
	025	21,7	8,94	21,6	9,67	21,1	10,5	20,2	11,2	19,1	12,2
	032	29,7	12,7	29,6	14,1	27,9	15,5	25,5	17,1	23,0	17,9
	040	42,1	16,8	41,6	18,2	40,4	19,7	38,7	21,1	36,5	23,2
	050	42,4	17,4	42,1	18,8	41,1	20,4	39,4	21,7	37,2	23,8
	064	57,9	24,3	57,2	27,0	53,7	29,8	49,0	32,7	41,1	29,9

Symbols

CC: Cooling capacity [kW]
PI: Power input [kW]
LWE: Leaving water evaporator temperature [°C]
Tamb: Ambient temperature [°C]

Notes

- Cooling capacity [kW]
The capacity is according to ·EN14511:2013· and valid for chilled water range $\Delta t = -3-8 \cdot ^\circ\text{C}$
- Power input [kW]
The power input is the total input according to ·EN14511:2013·
- The use of glycol and other antifreezes
The correction factors for the cooling capacity and power input depend on the type and concentration of the used antifreeze.

3D111567

4 Capacity tables

4 - 1 Cooling Capacity Tables

EWYQ-CWP
EWAQ-CWP

4

**Cooling operation (Maximum)
·P· models**

Tamb		20		25		30		35		40	
LWE	Size	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
5	016	20,2	6,06	20,2	6,75	20,2	7,81	20,2	9,09	19,6	9,81
	021	25,2	7,71	25,2	8,48	25,2	9,37	25,2	10,3	25,2	12,2
	025	28,5	9,22	28,3	10,2	28,3	11,0	27,6	11,8	26,4	13,0
	032	37,8	12,6	37,8	14,6	37,3	16,3	36,1	17,9	30,6	16,1
	040	50,3	15,8	50,3	17,0	50,3	18,9	50,3	21,3	50,3	25,2
	050	54,4	17,9	55,3	19,9	54,8	21,6	53,3	23,0	50,6	25,4
	064	74,2	25,6	73,1	28,5	72,0	31,6	69,3	34,6	59,2	31,7
7	016	20,2	5,32	20,2	5,87	20,2	6,70	20,2	7,78	20,2	9,16
	021	25,2	7,13	25,2	7,82	25,2	8,66	25,2	9,55	25,2	11,1
	025	30,3	9,13	30,3	10,5	30,3	11,6	30,3	13,0	28,5	13,9
	032	37,8	11,5	37,8	13,4	37,8	15,8	37,8	17,9	31,4	15,5
	040	50,3	14,5	50,3	15,8	50,3	17,4	50,3	19,5	50,3	22,7
	050	60,3	18,7	60,3	21,3	60,3	23,5	60,3	27,4	55,0	27,2
	064	75,3	24,4	75,3	27,8	75,3	32,0	75,3	37,6	60,3	29,9
10	016	20,2	4,74	20,2	5,17	20,2	5,85	20,2	6,64	20,2	7,50
	021	25,2	6,50	25,2	7,20	25,2	7,96	25,2	8,79	25,2	9,84
	025	30,3	8,31	30,3	9,66	30,3	10,8	30,3	11,8	29,3	12,6
	032	37,8	10,4	37,8	12,0	37,8	14,3	37,8	16,0	32,3	14,3
	040	50,3	12,9	50,3	14,3	50,3	15,8	50,3	17,6	50,3	19,9
	050	60,3	16,6	60,3	19,2	60,3	21,5	60,3	23,5	57,9	25,7
	064	75,3	22,1	75,3	24,9	75,3	29,3	75,3	33,6	62,8	28,1
15	016	20,2	3,79	20,2	4,39	20,2	4,97	20,2	5,60	20,2	6,35
	021	25,2	5,53	25,2	6,20	25,2	6,93	25,2	7,68	25,2	8,46
	025	30,3	6,75	30,3	7,82	30,3	8,99	30,3	9,9	30,3	10,9
	032	37,8	9,03	37,8	10,3	37,8	11,8	37,8	13,6	33,4	12,4
	040	50,3	11,0	50,3	12,3	50,3	13,7	50,3	15,2	50,3	16,8
	050	60,3	13,8	60,3	15,8	60,3	18,1	60,3	19,8	60,3	22,0
	064	75,3	18,8	75,3	20,9	75,3	24,0	75,3	27,6	65,4	24,5
18	016	20,2	3,44	20,2	3,89	20,2	4,45	20,2	5,08	20,2	5,76
	021	25,2	5,04	25,2	5,68	25,2	6,47	25,2	7,22	25,2	7,97
	025	30,3	6,11	30,3	7,07	30,3	8,19	30,3	9,13	30,3	10,0
	032	37,8	8,12	37,8	9,33	37,8	10,6	37,8	12,3	34,4	11,5
	040	50,3	10,2	50,3	11,5	50,3	12,9	50,3	14,2	50,3	15,8
	050	60,3	12,5	60,3	14,3	60,3	16,6	60,3	18,6	60,3	20,2
	064	75,3	17,0	75,3	18,9	75,3	21,8	75,3	25,3	68,0	23,1

Symbols

CC: Cooling capacity [kW]
 PI: Power input [kW]
 LWE: Leaving water evaporator temperature [°C]
 Tamb: Ambient temperature [°C]

Notes

- Cooling capacity [kW]
The capacity is according to ·EN14511:2013· and valid for chilled water range Dt = -3-8 °C
- Power input [kW]
The power input is the total input according to ·EN14511:2013·

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4 Capacity tables

4 - 1 Cooling Capacity Tables

EWYQ-CWP
EWAQ-CWP

Cooling operation (Maximum)
-OPZL P- models

Tamb		20		25		30		35		40	
LWE	Size	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
-10	016	12,6	6,42	12,6	6,99	12,4	7,68	12,0	8,26	11,4	8,85
	021	17,8	8,47	17,7	8,94	17,2	9,71	16,5	10,4	15,5	11,5
	025	18,3	8,71	18,2	9,16	17,8	10,0	17,0	10,6	16,0	11,8
	032	25,6	12,0	24,8	13,3	22,9	14,7	21,0	16,0	17,0	14,1
	040	35,1	16,1	34,6	17,5	33,6	19,0	32,1	20,3	30,2	22,4
	050	35,5	16,3	35,2	17,9	34,2	19,4	32,8	20,8	30,9	22,8
	064	49,4	23,2	47,5	25,7	43,8	28,4	40,4	31,3	32,2	26,8
-5	016	15,5	6,77	15,4	7,28	15,1	7,97	14,5	8,56	13,7	9,16
	021	21,2	8,99	21,1	9,28	20,6	10,1	19,8	10,7	18,7	11,9
	025	21,7	8,76	21,6	9,50	21,2	10,3	20,2	11,0	19,1	12,1
	032	29,7	12,4	29,4	13,8	27,8	15,3	25,4	16,8	22,9	17,6
	040	41,6	16,6	41,3	18,2	40,1	19,7	38,4	21,1	36,3	23,2
	050	42,1	16,9	41,9	18,6	40,8	20,1	39,2	21,5	37,0	23,6
	064	57,5	24,1	56,7	26,7	53,2	29,5	49,2	32,3	40,1	29,5

Symbols

CC: Cooling capacity [kW]
PI: Power input [kW]
LWE: Leaving water evaporator temperature [°C]
Tamb: Ambient temperature [°C]

Notes

- Cooling capacity [kW]
The capacity is according to ·EN14511:2013· and valid for chilled water range $\Delta t = -3-8 \text{ } ^\circ\text{C}$
- Power input [kW]
The power input is the total input according to ·EN14511:2013·
- The use of glycol and other antifreezes
The correction factors for the cooling capacity and power input depend on the type and concentration of the used antifreeze.

4 Capacity tables

4 - 1 Cooling Capacity Tables

EWYQ-CWP
EWAQ-CWP

4

Cooling operation (Nominal)
·P· models

Tamb		20		25		30		35		40	
LWE	Size	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
5	016	17,0	4,23	17,0	4,82	17,0	5,53	17,0	6,31	17,0	7,12
	021	21,2	5,68	21,2	6,23	21,2	6,99	21,2	7,90	21,2	8,97
	025	25,5	7,36	25,5	8,22	25,5	9,08	25,5	10,2	25,5	12,0
	032	31,8	9,43	31,8	10,7	31,8	12,0	31,7	14,0	30,8	16,0
	040	42,3	11,5	42,3	12,7	42,3	14,3	42,3	16,2	42,3	18,3
	050	50,7	15,1	50,7	16,7	50,7	18,6	50,7	20,9	50,7	24,5
	064	63,3	18,9	63,3	21,3	63,3	24,2	63,3	28,3	59,6	31,4
7	016	17,0	3,95	17,0	4,47	17,0	5,12	17,0	5,81	17,0	6,60
	021	21,2	5,40	21,2	5,99	21,2	6,69	21,2	7,47	21,2	8,33
	025	25,5	6,90	25,5	7,73	25,5	8,59	25,5	9,45	25,5	10,7
	032	31,8	9,00	31,8	10,1	31,8	11,3	31,8	12,7	31,5	15,3
	040	42,3	11,0	42,3	11,9	42,3	13,4	42,3	15,1	42,3	16,9
	050	50,7	14,0	50,7	15,7	50,7	17,3	50,7	19,0	50,7	22,2
	064	63,3	17,9	63,3	20,1	63,3	22,5	63,3	25,5	63,3	30,1
10	016	17,0	3,47	17,0	3,94	17,0	4,47	17,0	5,21	17,0	5,93
	021	21,2	5,04	21,2	5,59	21,2	6,17	21,2	6,93	21,2	7,77
	025	25,5	6,14	25,5	7,13	25,5	7,71	25,5	8,77	25,5	9,77
	032	31,8	8,07	31,8	9,25	31,8	10,3	31,8	11,7	31,8	13,9
	040	42,3	10,1	42,3	11,1	42,3	12,3	42,3	13,7	42,3	15,4
	050	50,7	12,4	50,7	14,2	50,7	15,7	50,7	17,4	50,7	19,7
	064	63,3	16,2	63,3	18,6	63,3	20,7	63,3	23,9	63,3	28,0
15	016	17,0	2,66	17,0	3,16	17,0	3,62	17,0	4,19	17,0	4,81
	021	21,2	4,12	21,2	4,77	21,2	5,31	21,2	5,97	21,2	6,72
	025	25,5	5,35	25,5	6,01	25,5	6,85	25,5	7,66	25,5	8,41
	032	31,8	6,70	31,8	7,64	31,8	8,73	31,8	9,82	31,8	11,3
	040	42,3	8,37	42,3	9,72	42,3	10,8	42,3	12,1	42,3	13,5
	050	50,7	10,8	50,7	12,1	50,7	13,7	50,7	15,1	50,7	16,7
	064	63,3	13,5	63,3	15,3	63,3	17,6	63,3	19,7	63,3	23,0
18	016	17,0	2,37	17,0	2,80	17,0	3,23	17,0	3,76	17,0	4,36
	021	21,2	3,53	21,2	4,18	21,2	4,78	21,2	5,36	21,2	6,05
	025	25,5	5,04	25,5	5,61	25,5	6,40	25,5	7,14	25,5	7,90
	032	31,8	6,17	31,8	7,04	31,8	7,97	31,8	9,05	31,8	10,2
	040	42,3	7,24	42,3	8,52	42,3	9,62	42,3	10,8	42,3	12,3
	050	50,7	9,9	50,7	11,2	50,7	12,8	50,7	14,3	50,7	15,6
	064	63,3	12,2	63,3	14,0	63,3	16,2	63,3	18,0	63,3	20,3

Symbols

CC: Cooling capacity [kW]
 PI: Power input [kW]
 LWE: Leaving water evaporator temperature [°C]
 Tamb: Ambient temperature [°C]

Notes

- Cooling capacity [kW]
The capacity is according to ·EN14511:2013· and valid for chilled water range $\Delta t = -3-8^{\circ}\text{C}$
- Power input [kW]
The power input is the total input according to ·EN14511:2013·

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4 Capacity tables

4 - 1 Cooling Capacity Tables

EWYQ-CWP
EWAQ-CWP

Cooling operation (Nominal)
·OPZL P· models

Tamb		20		25		30		35		40	
LWE	Size	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
-10	016	12,7	6,44	12,7	7,01	12,5	7,69	12,1	8,27	11,5	8,87
	021	18,2	8,23	18,0	8,96	17,4	9,73	16,7	10,4	15,7	11,5
	025	18,4	8,41	18,3	9,17	17,8	9,96	17,1	10,6	16,1	11,7
	032	25,9	12,1	25,0	13,3	23,1	14,7	21,2	16,1	17,1	14,1
	040	35,5	16,1	35,1	17,6	34,0	19,1	32,5	20,4	30,6	22,4
	050	37,9	16,6	37,6	18,1	36,7	19,7	35,4	21,1	30,9	22,8
	064	50,0	23,3	48,1	25,7	44,4	28,4	41,0	31,1	32,7	26,7
-5	016	15,7	6,79	15,7	7,30	15,3	7,99	14,7	8,58	13,9	9,18
	021	21,2	8,57	21,2	9,31	20,9	10,1	20,0	10,8	18,9	11,9
	025	21,9	8,79	21,8	9,52	21,3	10,3	20,4	11,0	19,3	12,1
	032	29,9	12,5	29,8	13,9	28,1	15,3	25,7	16,8	23,2	17,7
	040	42,3	16,8	41,8	18,2	40,6	19,7	38,9	21,1	36,8	23,2
	050	42,6	17,2	42,3	18,6	41,3	20,2	39,6	21,5	37,4	23,6
	064	58,1	24,1	57,4	26,8	53,9	29,6	49,2	32,5	41,3	29,7

Symbols

CC: Cooling capacity [kW]
PI: Power input [kW]
LWE: Leaving water evaporator temperature [°C]
Tamb: Ambient temperature [°C]

Notes

- Cooling capacity [kW]
The capacity is according to ·EN14511:2013· and valid for chilled water range $Dt = -3-8^{\circ}C$
- Power input [kW]
The power input is the total input according to ·EN14511:2013·
- The use of glycol and other antifreezes
The correction factors for the cooling capacity and power input depend on the type and concentration of the used antifreeze.

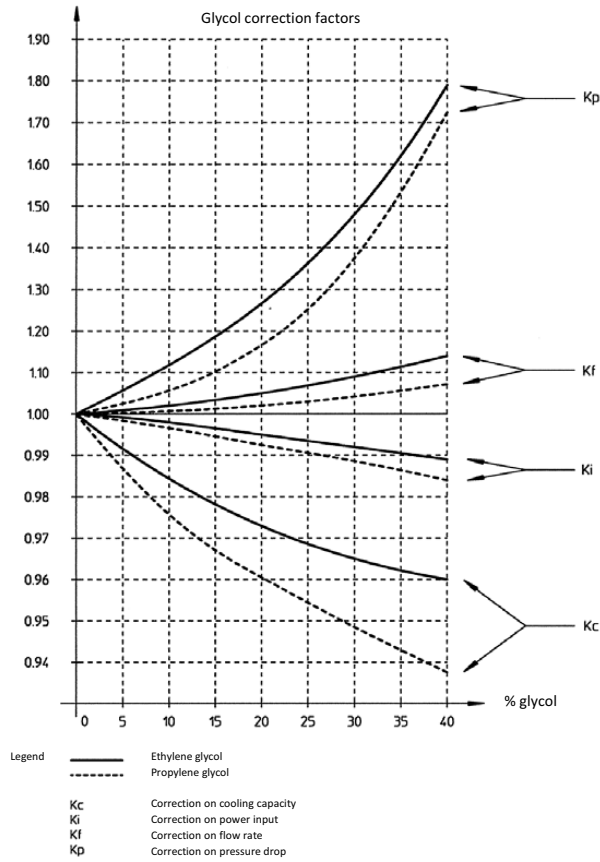
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4 Capacity tables

4 - 2 Capacity Correction Factor

4

EWYQ-CWN/P/H
EWAQ-CWN/P/H

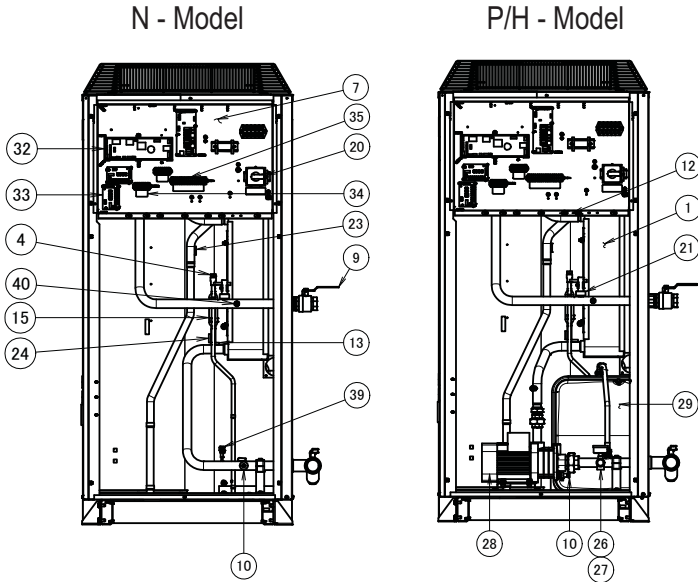


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5 Dimensional drawings

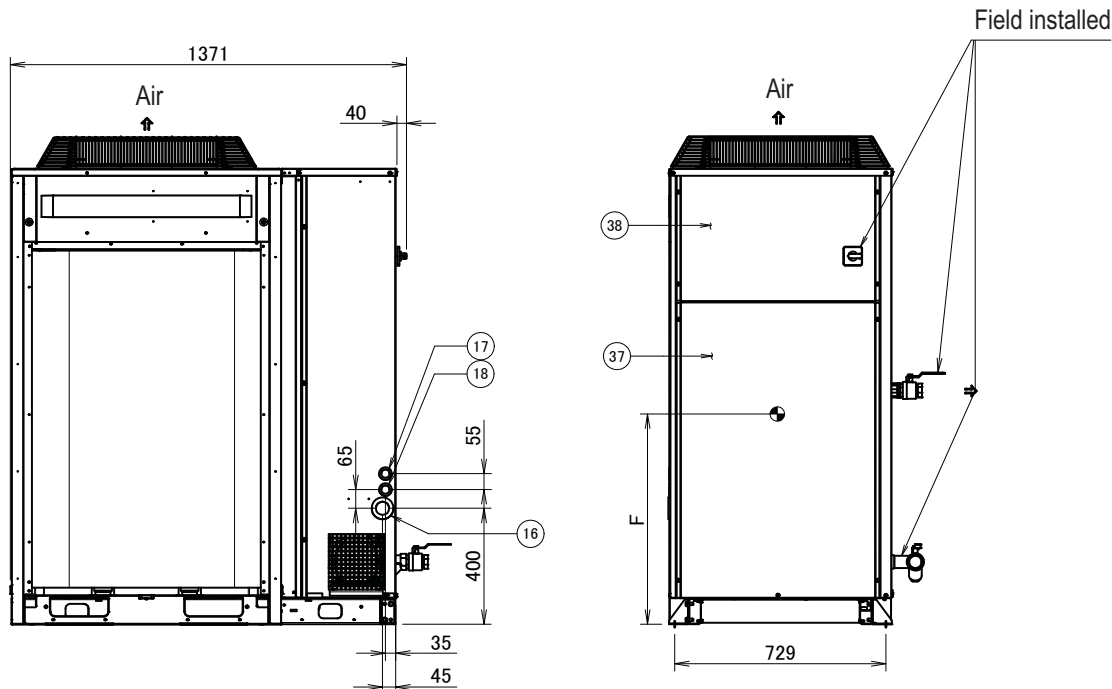
5 - 1 Dimensional Drawings

EWYQ016-025CWN/P/H
EWAQ016-025CWN/P/H



Model	E	F	G
EWA/YQ016CAWN	736	619	371
EWA/YQ021CAWN	768	613	372
EWA/YQ025CAWN	768	613	372
EWA/YQ016CAWP	711	602	379
EWA/YQ021CAWP	745	599	379
EWA/YQ025CAWP	745	599	379

01	Brazed plate heat exchanger	
02	Coil	
03	Compressor	
04	Expansion valve	
05	Gas stop valve	
06	Liquid stop valve	
07	Hydro module switch box	
08	Chilled water IN ·G1-1/4 shutoff valve· (female)	
09	Chilled water OUT ·G1-1/4 shutoff valve· (female)	
10	Drain	
11	Air purge	
12	Leaving water temperature sensor	
13	Entering water temperature sensor	
14	Ambient temperature sensor	
15	Refrigerant filter	
16	Power supply wiring intake (knockout hole ·Ø45·)	
17	Low voltage wiring intake ·Ø29·	
18	High voltage wiring intake ·Ø29·	
19	Lifting eye for sling	
20	Main isolator switch	
21	Flow switch	
22	Fan	
23	Gas pipe sensor	
24	Liquid pipe sensor	
25	Water filter	
26	Safety valve	Optional
27	Pressure gauge	Optional
28	Pump	Optional
29	Expansion vessel	Optional
30	Accumulator	
31	Outdoor module switch box	
32	Hydro module main PCB	
33	Demand PCB	Optional
34	Terminal block (low voltage)	
35	Terminal block (high voltage)	
36	Outdoor module service panel	
37	Hydro module service panel	
38	Hydro module switch box service panel	
39	Water pressure port before brazed plate heat exchanger	
40	Water pressure port after brazed plate heat exchanger	



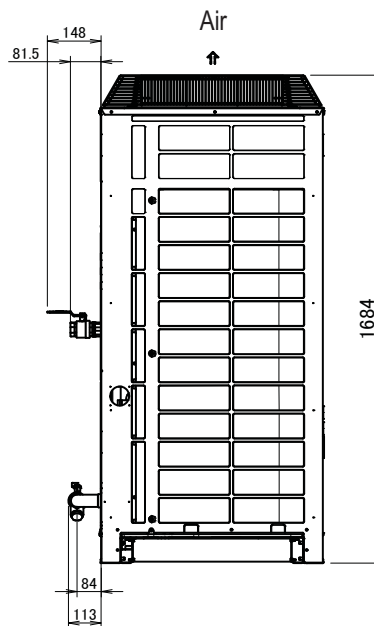
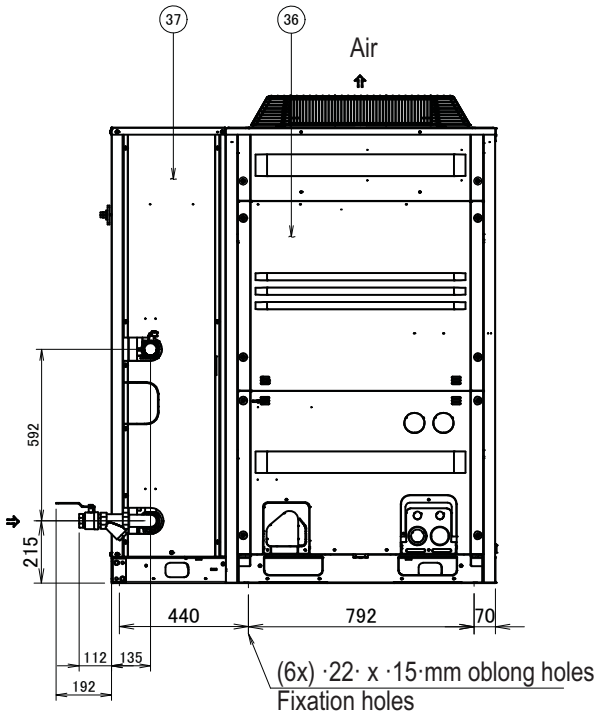
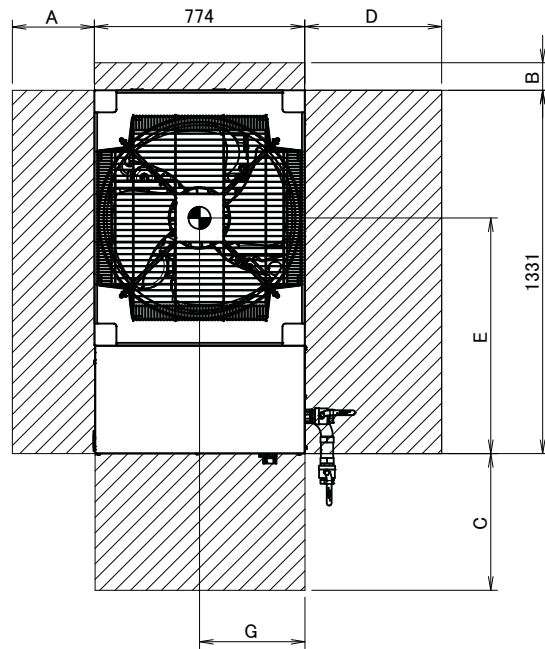
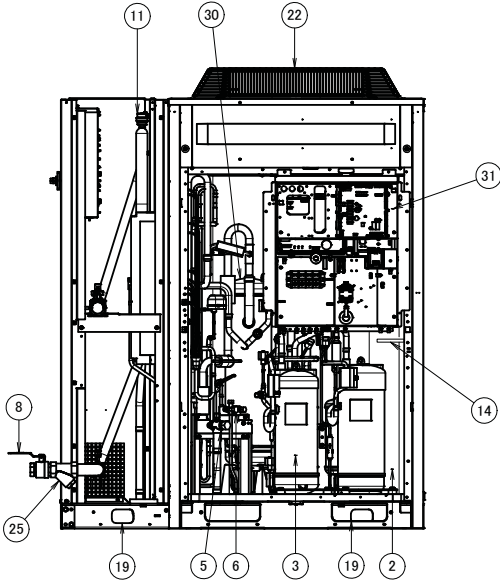
5 Dimensional drawings

5 - 1 Dimensional Drawings

5

EWYQ016-025CWN/P/H
EWAQ016-025CWN/P/H

- 1. Distance from wall (or other unit) for regions without heavy snowfall
- 2. Distance from wall (or other unit) for regions with heavy snowfall



Legend

Required space for service and ventilation

Centre of gravity

	1	2
A	300	500
B	100	500
C	500	500
D	500	500

5 Dimensional drawings

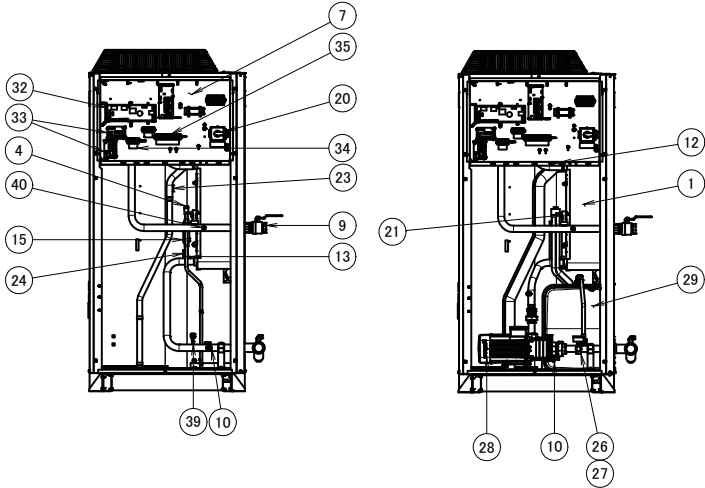
5 - 1 Dimensional Drawings

EWYQ032CWN/P/H
EWAQ032CWN/P/H

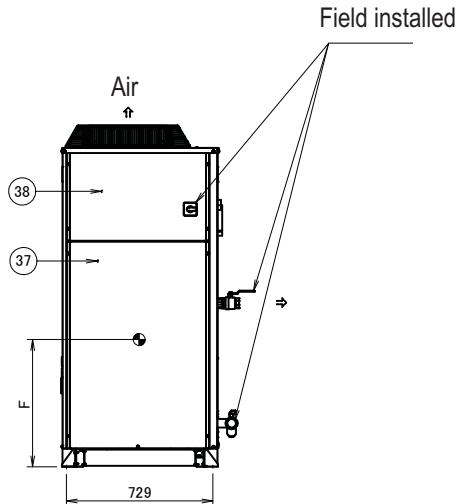
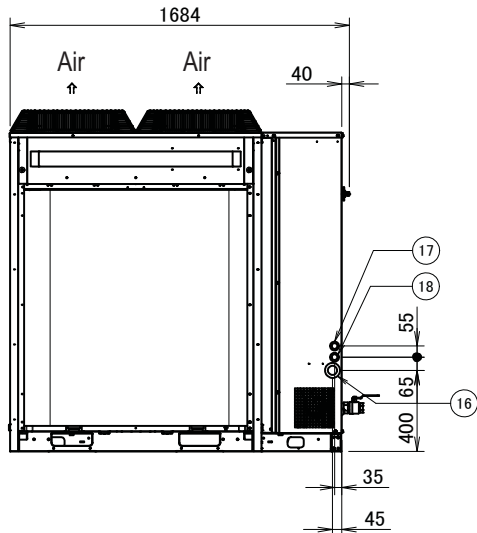
01	Brazed plate heat exchanger	
02	Coil	
03	Compressor	
04	Expansion valve	
05	Gas stop valve	
06	Liquid stop valve	
07	Hydro module switch box	
08	Chilled water IN ·G1-1/4 shutoff valve· (female)	
09	Chilled water OUT ·G1-1/4 shutoff valve· (female)	
10	Drain	
11	Air purge	
12	Leaving water temperature sensor	
13	Entering water temperature sensor	
14	Ambient temperature sensor	
15	Refrigerant filter	
16	Power supply wiring intake (knockout hole ·Ø45·)	
17	Low voltage wiring intake ·Ø29·	
18	High voltage wiring intake ·Ø29·	
19	Lifting eye for sling	
20	Main isolator switch	
21	Flow switch	
22	Fan	
23	Gas pipe sensor	
24	Liquid pipe sensor	
25	Water filter	
26	Safety valve	Optional
27	Pressure gauge	Optional
28	Pump	Optional
29	Expansion vessel	Optional
30	Accumulator	
31	Outdoor module switch box	
32	Hydro module main PCB	
33	Demand PCB	Optional
34	Terminal block (low voltage)	
35	Terminal block (high voltage)	
36	Outdoor module service panel	
37	Hydro module service panel	
38	Hydro module switch box service panel	
39	Water pressure port before brazed plate heat exchanger	
40	Water pressure port after brazed plate heat exchanger	

N - Model

P/H - Model



Model	E	F	G
EWA/YQ032CAWN	870	606	380
EWA/YQ032CAWP	850	595	385



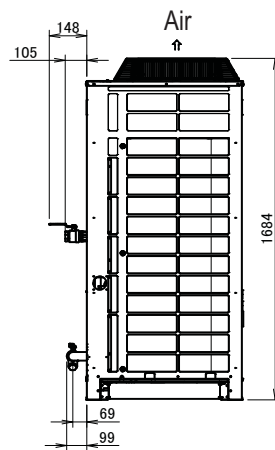
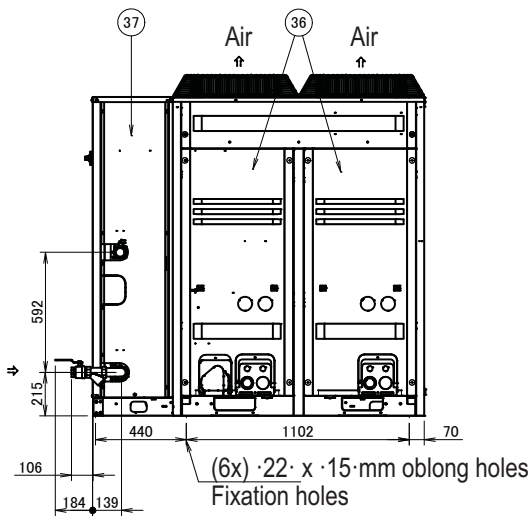
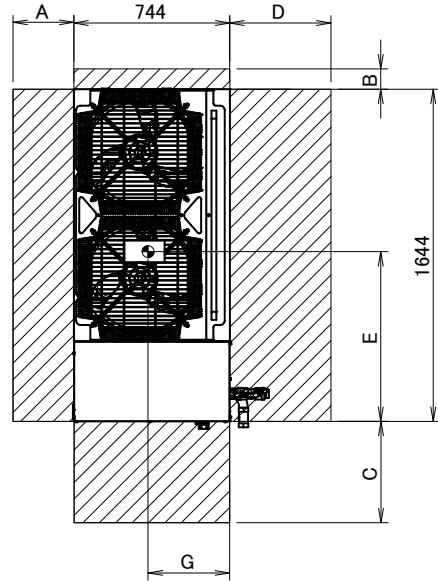
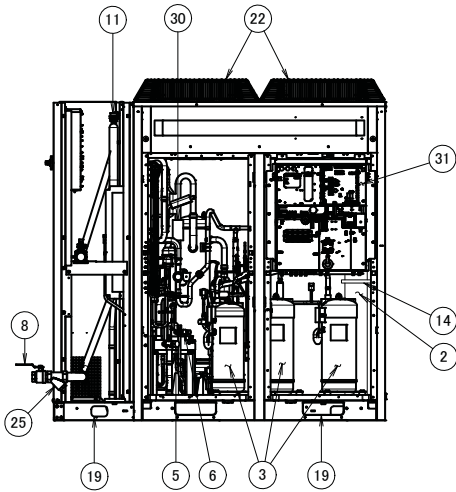
5 Dimensional drawings

5 - 1 Dimensional Drawings

5

EWYQ032CWN/P/H
EWAQ032CWN/P/H

- 1.Distance from wall (or other unit) for regions without heavy snowfall
- 2.Distance from wall (or other unit) for regions with heavy snowfall



Legend	
	Required space for service and ventilation
	Centre of gravity

	1	2
A	300	500
B	100	500
C	500	500
D	500	500

5 Dimensional drawings

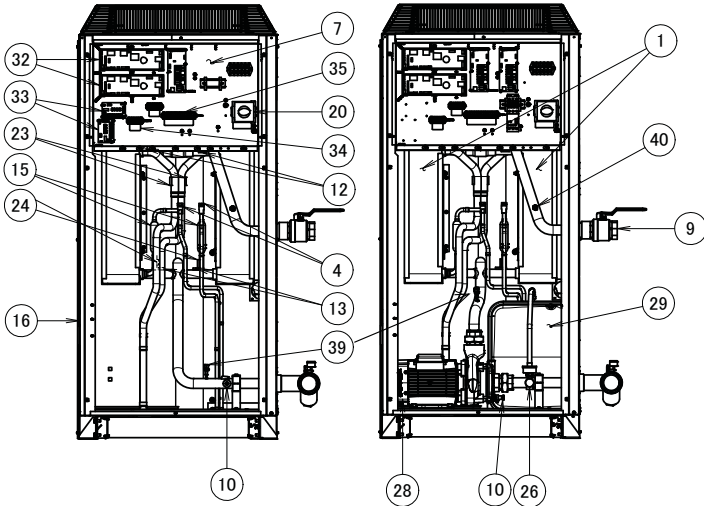
5 - 1 Dimensional Drawings

EWYQ040-050CWN/P/H
EWAQ040-050CWN/P/H

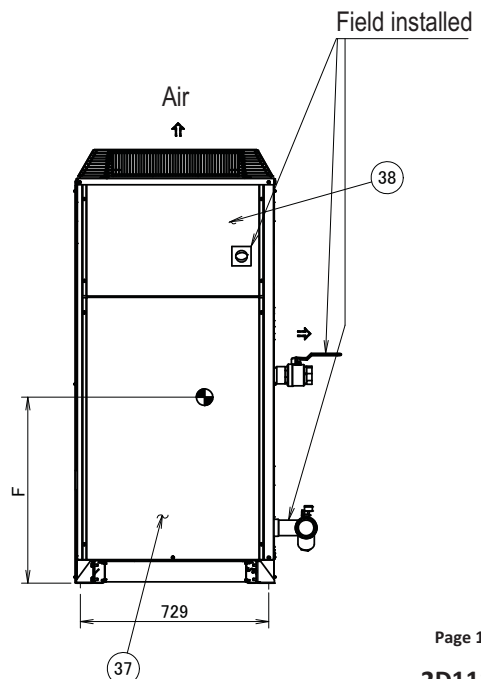
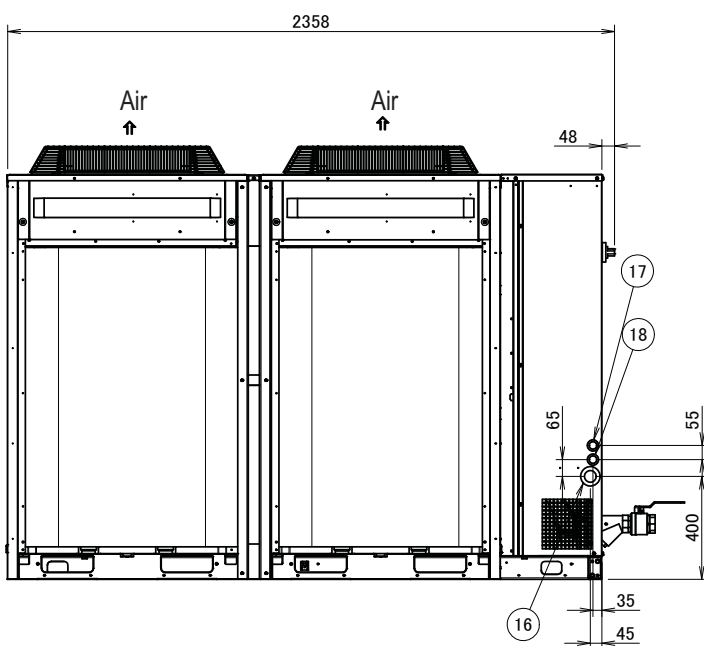
01	Brazed plate heat exchanger	
02	Coil	
03	Compressor	
04	Expansion valve	
05	Gas stop valve	
06	Liquid stop valve	
07	Hydro module switch box	
08	Chilled water IN ·G2 shutoff valve· (female)	
09	Chilled water OUT ·G1-1/4 shutoff valve· (female)	
10	Drain	
11	Air purge	
12	Leaving water temperature sensor	
13	Entering water temperature sensor	
14	Ambient temperature sensor	
15	Refrigerant filter	
16	Power supply wiring intake (knockout hole ·Ø45·)	
17	Low voltage wiring intake ·Ø29·	
18	High voltage wiring intake ·Ø29·	
19	Lifting eye for sling	
20	Main isolator switch	
21	Flow switch	
22	Fan	
23	Gas pipe sensor	
24	Liquid pipe sensor	
25	Water filter	
26	Safety valve	Optional
27	Pressure gauge	Optional
28	Pump	Optional
29	Expansion vessel	Optional
30	Accumulator	
31	Outdoor module switch box	
32	Hydro module main PCB	
33	Demand PCB	Optional
34	Terminal block (low voltage)	
35	Terminal block (high voltage)	
36	Outdoor module service panel	
37	Hydro module service panel	
38	Hydro module switch box service panel	
39	Water pressure port before brazed plate heat exchanger	
40	Water pressure port after brazed plate heat exchanger	

N - Model

P/H - Model



Model	E	F	G
EWA/YQ040CAWN	1227	592	380
EWA/YQ050CAWN	1227	592	380
EWA/YQ040CAWP	1183	577	387
EWA/YQ050CAWP	1183	577	387



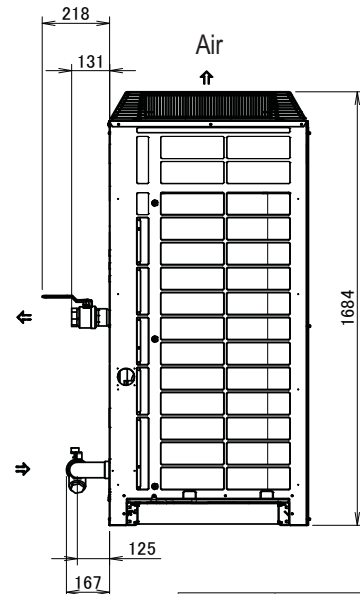
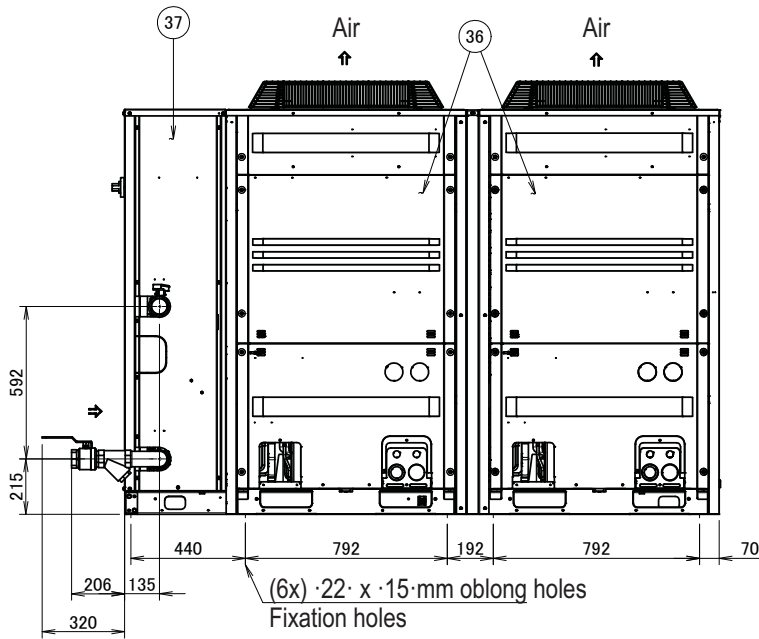
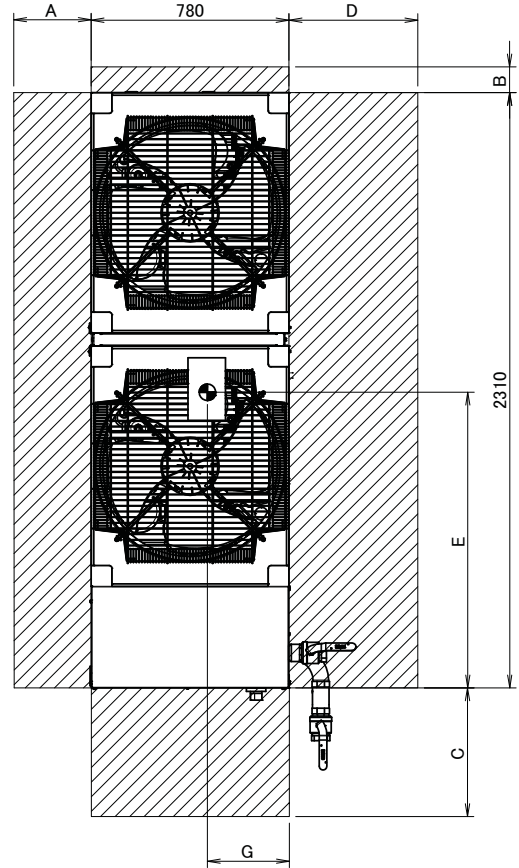
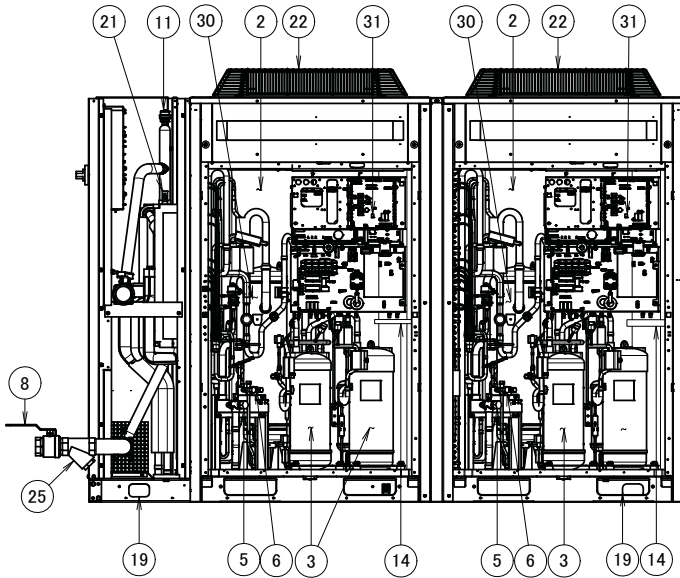
5 Dimensional drawings

5 - 1 Dimensional Drawings

5

EWYQ040-050CWN/P/H
EWAQ040-050CWN/P/H

1. Distance from wall (or other unit) for regions without heavy snowfall
2. Distance from wall (or other unit) for regions with heavy snowfall



Legend	
	Required space for service and ventilation
	Centre of gravity

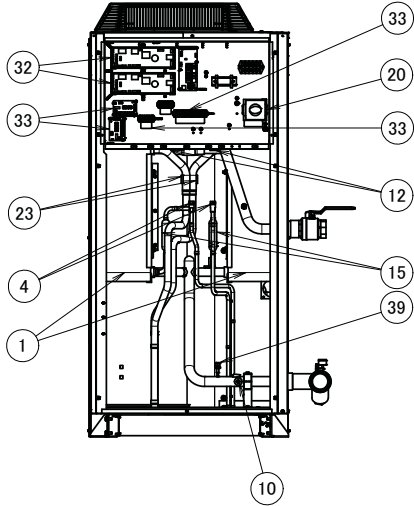
	1	2
A	300	500
B	100	500
C	500	500
D	500	500

5 Dimensional drawings

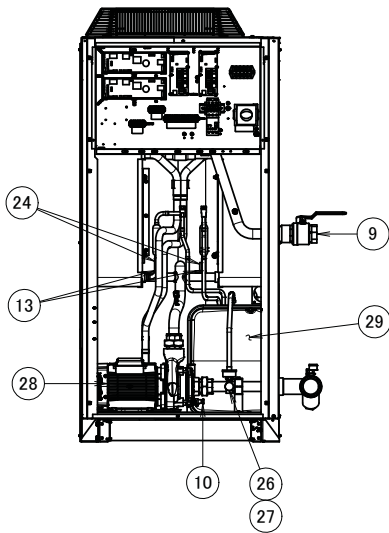
5 - 1 Dimensional Drawings

EWYQ064CWN/P/H
EWAQ064CWN/P/H

N - Model

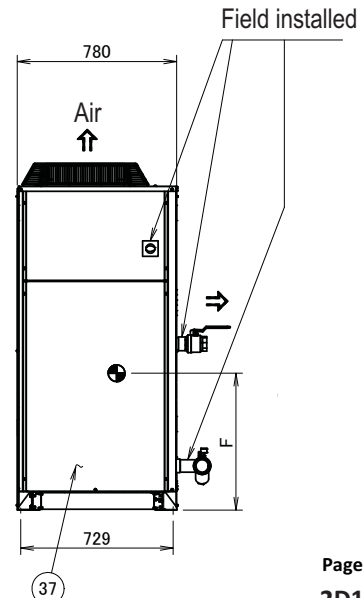
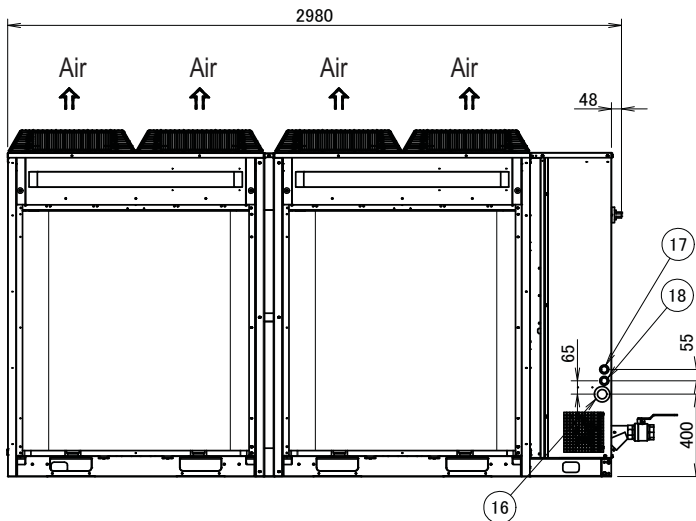


P/H - Model



01	Brazed plate heat exchanger	
02	Coil	
03	Compressor	
04	Expansion valve	
05	Gas stop valve	
06	Liquid stop valve	
07	Hydro module switch box	
08	Chilled water IN ·G2 shutoff valve· (female)	
09	Chilled water OUT ·G1-1/4 shutoff valve· (female)	
10	Drain	
11	Air purge	
12	Leaving water temperature sensor	
13	Entering water temperature sensor	
14	Ambient temperature sensor	
15	Refrigerant filter	
16	Power supply wiring intake (knockout hole ·Ø45·)	
17	Low voltage wiring intake ·Ø29·	
18	High voltage wiring intake ·Ø29·	
19	Lifting eye for sling	
20	Main isolator switch	
21	Flow switch	
22	Fan	
23	Gas pipe sensor	
24	Liquid pipe sensor	
25	Water filter	
26	Safety valve	Optional
27	Pressure gauge	Optional
28	Pump	Optional
29	Expansion vessel	Optional
30	Accumulator	
31	Outdoor module switch box	
32	Hydro module main PCB	
33	Demand PCB	Optional
34	Terminal block (low voltage)	
35	Terminal block (high voltage)	
36	Outdoor module service panel	
37	Hydro module service panel	
38	Hydro module switch box service panel	
39	Water pressure port before brazed plate heat exchanger	
40	Water pressure port after brazed plate heat exchanger	

Model	E	F	G
EWA/YQ064CAWN	1471	388	590
EWA/YQ064CAWP	1430	394	578

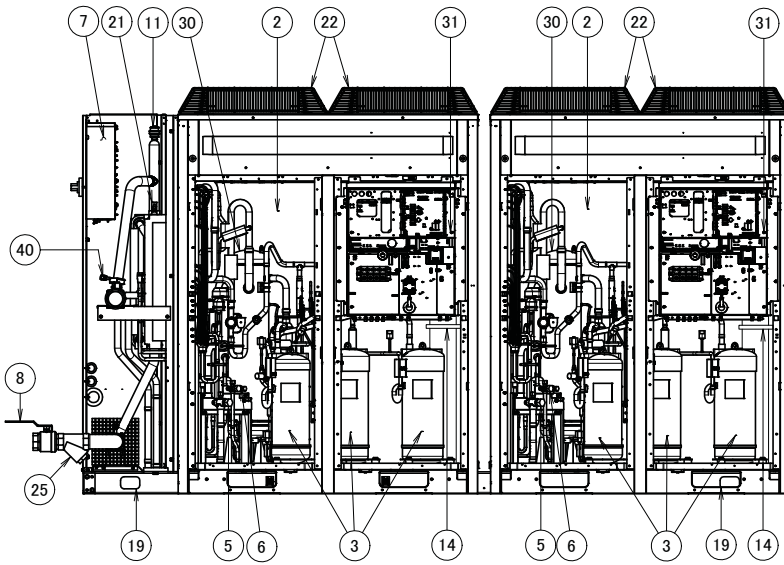


5 Dimensional drawings

5 - 1 Dimensional Drawings

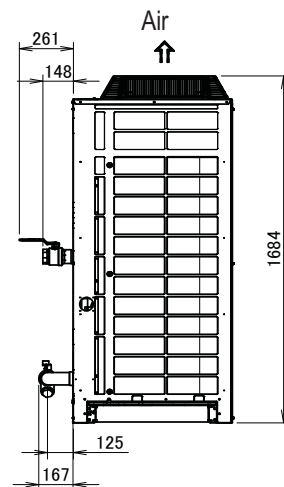
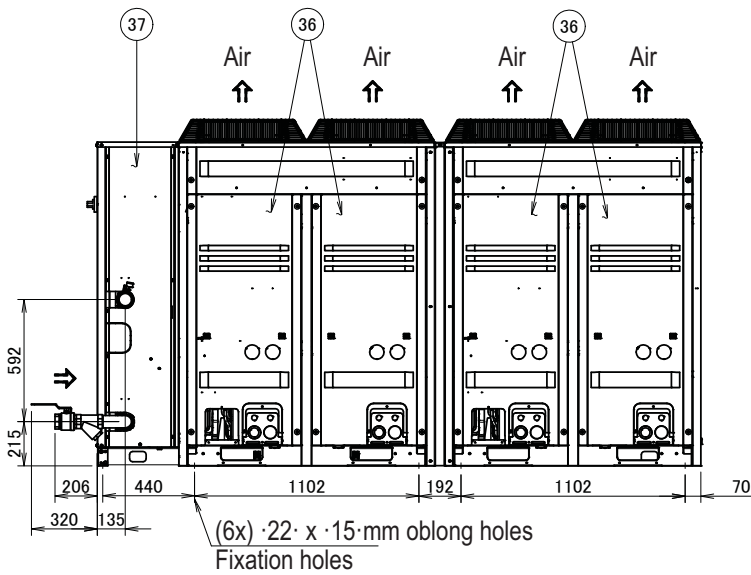
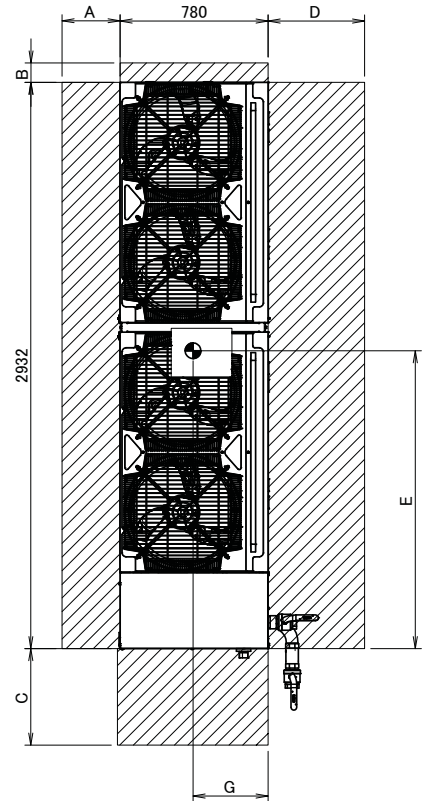
5

EWYQ064CWN/P/H
EWAQ064CWN/P/H



- 1. Distance from wall (or other unit) for regions without heavy snowfall
- 2. Distance from wall (or other unit) for regions with heavy snowfall

	1	2
A	300	500
B	100	500
C	500	500
D	500	500



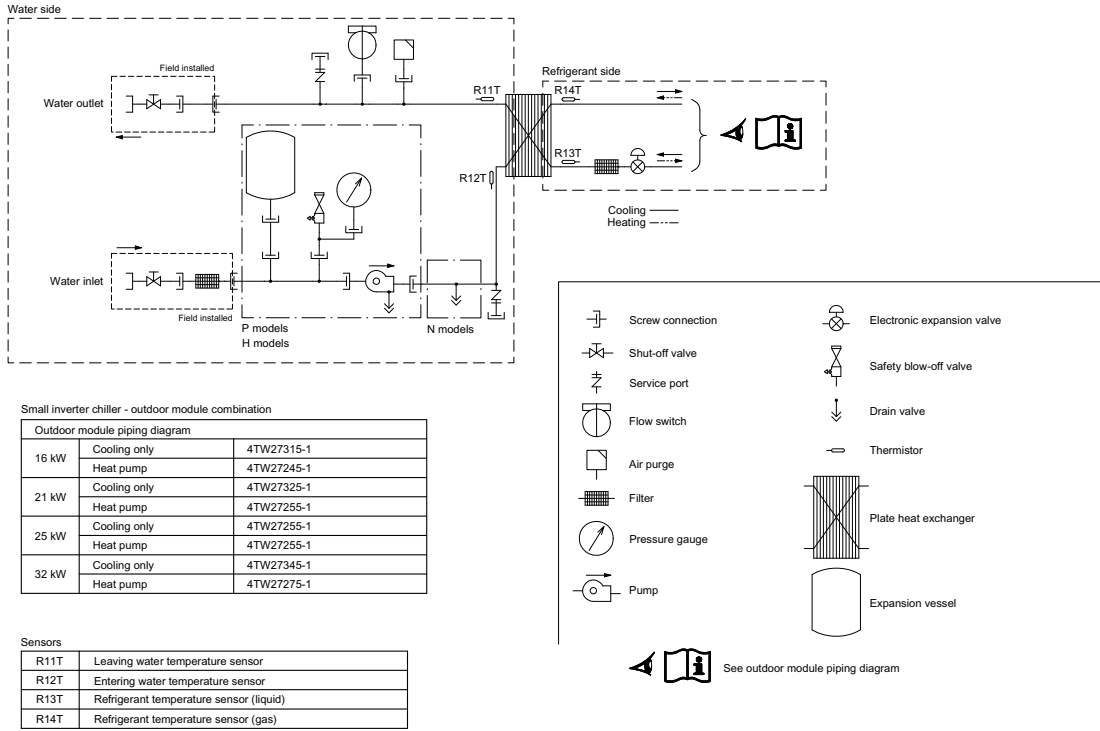
Legend	
	Required space for service and ventilation
	Centre of gravity

6 Piping diagrams

6 - 1 Piping Diagrams

EWYQ016-032CWN/P/H

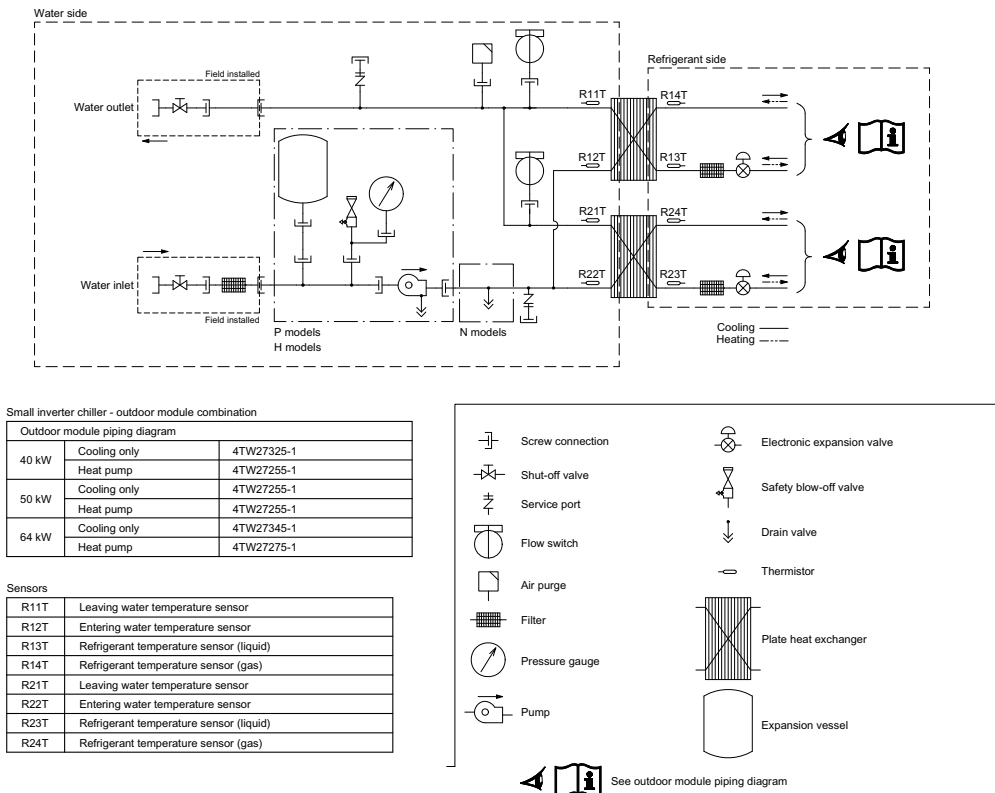
EWAQ016-032CWN/P/H



3D111569

EWYQ040-064CWN/P/H

EWAQ040-064CWN/P/H



3D111571

7 Wiring diagrams

7 - 1 Wiring Diagrams - Three Phase

7

EWYQ016-032CWN/P/H EWAQ016-032CWN/P/H

Legend

* : field installed option
: field supplied

Part number	Description
A1P	Main PCB (master)
A2P	User interface PCB
A3P	Control PCB
A4P	* Demand PCB
A5P	Main PCB (slave)
A6P	* Demand PCB
A7P	* Remote user interface PCB
C1-C3	Filter capacitor
E1H	Switch box heater
E2H	Plate heat exchanger heater (Circuit 1)
E3H	Plate heat exchanger heater (Circuit 2)
A4H	Water piping heater
E5H	Expansion vessel heater
F1 - F2	Fuse (F, 1A, 250V)
F1U (A*P)	Fuse (T, 3.15A, 250V)
HAP (A*P)	PCB LED

Part number	Description
K11E	Electronic expansion valve (Circuit 1)
K21E	Electronic expansion valve (Circuit 2)
K1P	Pump contactor
K1S	Pump overcurrent relay
K*R (A3P)	PCB relay
M1P	Pump
PS (A*P)	Switching power supply
Q1DI	# Earth leakage circuit breaker
Q1T	Thermostat for expansion vessel heater
R11T	Leaving water thermistor (Circuit 1)
R12T	Returning water thermistor (Circuit 1)
R13T	Refrigerant liquid thermistor (Circuit 1)
R14T	Refrigerant gas thermistor (Circuit 1)
R21T	Leaving water thermistor (Circuit 2)

Part number	Description
R22T	Returning water thermistor (Circuit 2)
R23T	Refrigerant liquid thermistor (Circuit 2)
R24T	Refrigerant gas thermistor (Circuit 2)
S1L	Flow switch (Circuit 1)
S2L	Flow switch (Circuit 2)
S1M	Main switch
S1S	# Thermostat input 1
S2S	# Thermostat input 2
S3S	# Operation ON input
S4S	# Operation OFF input
SS1 (A1P, A5P)	Selector switch (emergency)
SS1 (A2P)	Selector switch (main / sub)
SS1 (A7P)	* Selector switch (main / sub)
V1C - V2C	Ferrite core noise filter
X1M - X4M	Terminal strip
X801 (A*P)	* PCB terminal strip
Z1F - Z2F (A*P)	Noise filter

Notes to go through before stating the unit

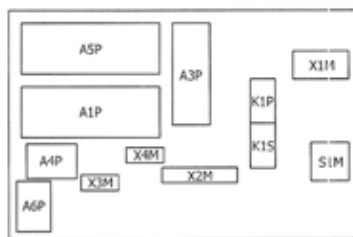
X1M : Terminal
X2M : Field wiring terminal for high voltage
X3M : Field wiring terminal for low voltage
X4M : Factory wiring terminal for low voltage

- : Earth wiring
- : Field supply
- : Option
- : Wiring depending on model
- : Not mounted in switch box
- : PCB
- : Connection ** continues on page 12 column 2
- : Several wiring possibilities

User installed options:

- EKRUAHT* = Remote user interface
- 1x EKRP1AHT* = Demand PCB (only for EW*Q(16-32)CAW*)
- 2x EKRP1AHT* = Demand PCB's (only for EW*Q(40-64)CAW*)

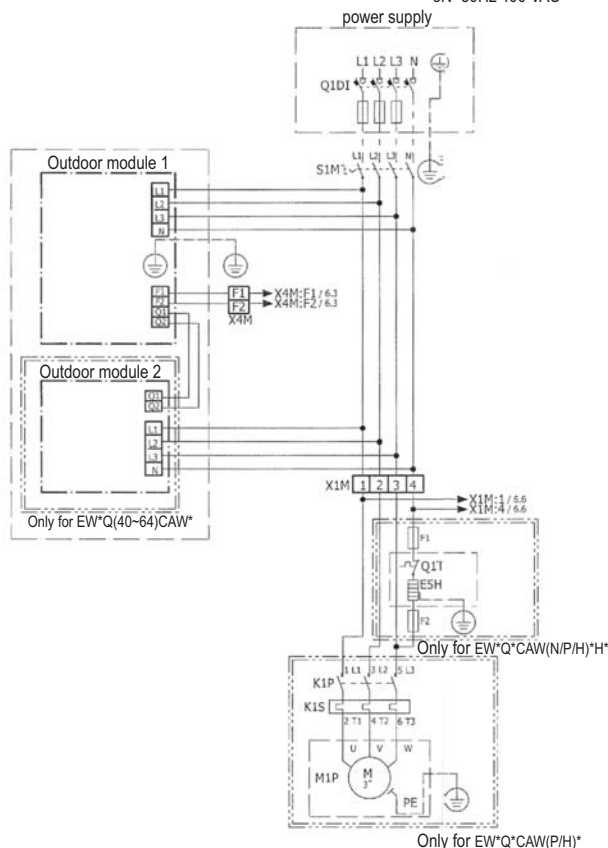
Switchbox layout



4D111478

EWYQ016-032CWN/P/H EWAQ016-032CWN/P/H

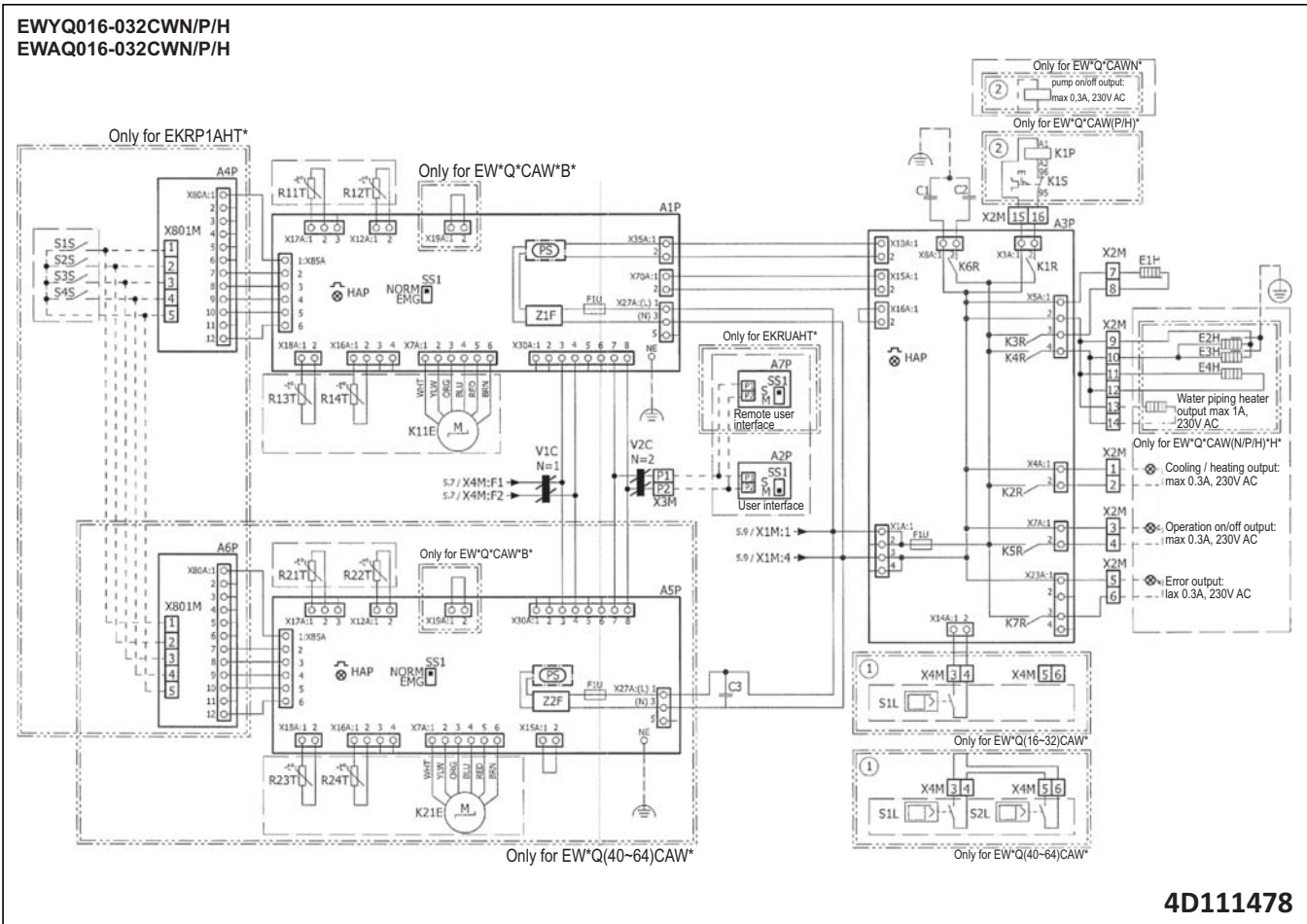
3N-50Hz 400 VAC



4D111478

7 Wiring diagrams

7 - 1 Wiring Diagrams - Three Phase



EWYQ040-064CWN/P/H
EWAQ040-064CWN/P/H

Legend

* : field installed option
: field supplied

Part number	Description
A1P	Main PCB circuit 1
A2P	User interface PCB
A3P	Control PCB circuit 1
A4P	* Demand PCB
A5P	Main PCB circuit 2
A6P	* Demand PCB
A7P	* Remote user interface PCB
A8P	control PCB circuit 2
C1 - C3	Filter capacitor
E1H	Switch box heater
E2H	Plate heat exchanger heater (Circuit 1)
E3H	Plate heat exchanger heater (Circuit 2)
E4H	Water piping heater
E5H	Expansion vessel heater
F1 - F2	Fuse (F, 1A, 250V)
F1U (A*P)	Fuse (T,b3.15A, 250V)
HAP (A*P)	PCB LED
K11E	Electronic expansion valve (Circuit 1)
K21E	Electronic expansion valve (Circuit 2)
K1P	Pump contactor
K1S	Pump overcurrent relay
K*R (A3P)	PCB relay
M1P	Pump
PS (A*P)	Switching power supply
Q1DI	# Earth leakage circuit breaker
Q1T	Thermistor for expansion vessel heater
R11T	Leaving water thermistor (Circuit 1)
R12T	Returning water thermistor (Circuit 1)
R13T	Refrigerant liquid thermistor (Circuit 1)
R14T	Refrigerant gas thermistor (Circuit 1)
R21T	Leaving water thermistor (Circuit 2)
R22T	Returning water thermistor (Circuit 2)
R23T	Refrigerant liquid thermistor (Circuit 2)
R24T	Refrigerant gas thermistor (Circuit 2)
S1L	Flow switch (Circuit 1)
S2L	Flow switch (Circuit 2)
S1M	Main switch
S1S	# Thermostat input 1
S2S	# Thermostat input 2
S3S	# Operation ON input
S4S	# Operation OFF input
SS1 (A1P, A5P)	Selector switch (emergency)
SS1 (A2P)	Selector switch (main / sub)
SS1 (A7P)	* Selector switch (main / sub)
V1C - V2C	Ferrite core noise filter
X1M - X4M	Terminal strip
X801M(A*P)	* PCB terminal strip
Z1F - Z2F (A*P)	Noise filter

Notes to go through before stating the unit

X1M : Terminal
X2M : Field wiring terminal for high voltage
X3M : Field wiring terminal for low voltage (circuit 1)
X4M : Field wiring terminal for low voltage (circuit 2)

User installed options:
 EKRUHT* = Remote user interface
 2x EKRP1AHT* = Demand PCB's

Switchbox layout

Notes to go through before stating the unit

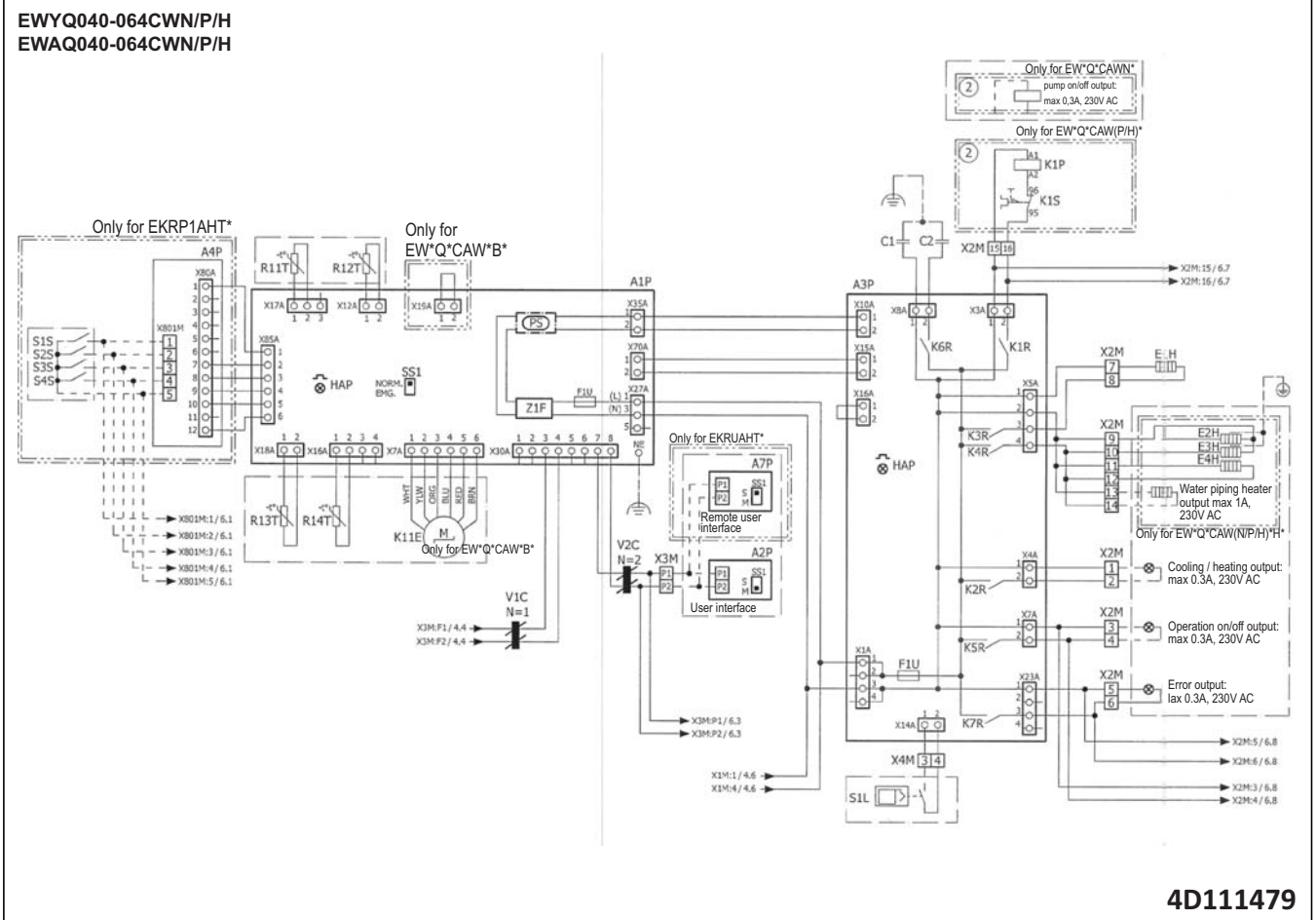
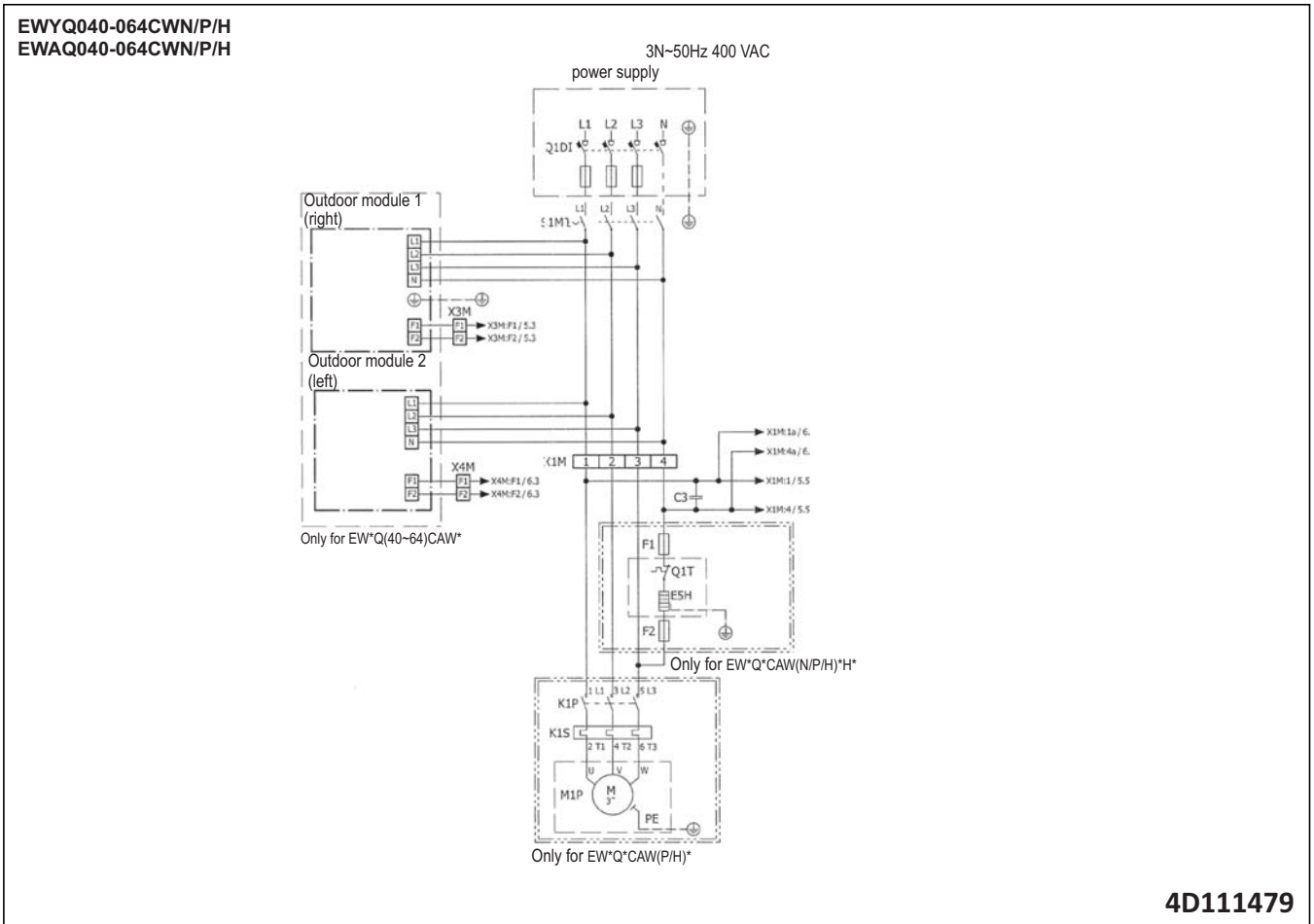
- - - - : Earth wiring
- · - · : Field supply
- : PCB
- (dashed) : Option
- (dotted) : Wiring depending on model
- (dotted) : Not mounted in switch box
- **/12.2 : Connection ** continues on page 12 column 2
- ⊙ : Several wiring possibilities

4D111479

7 Wiring diagrams

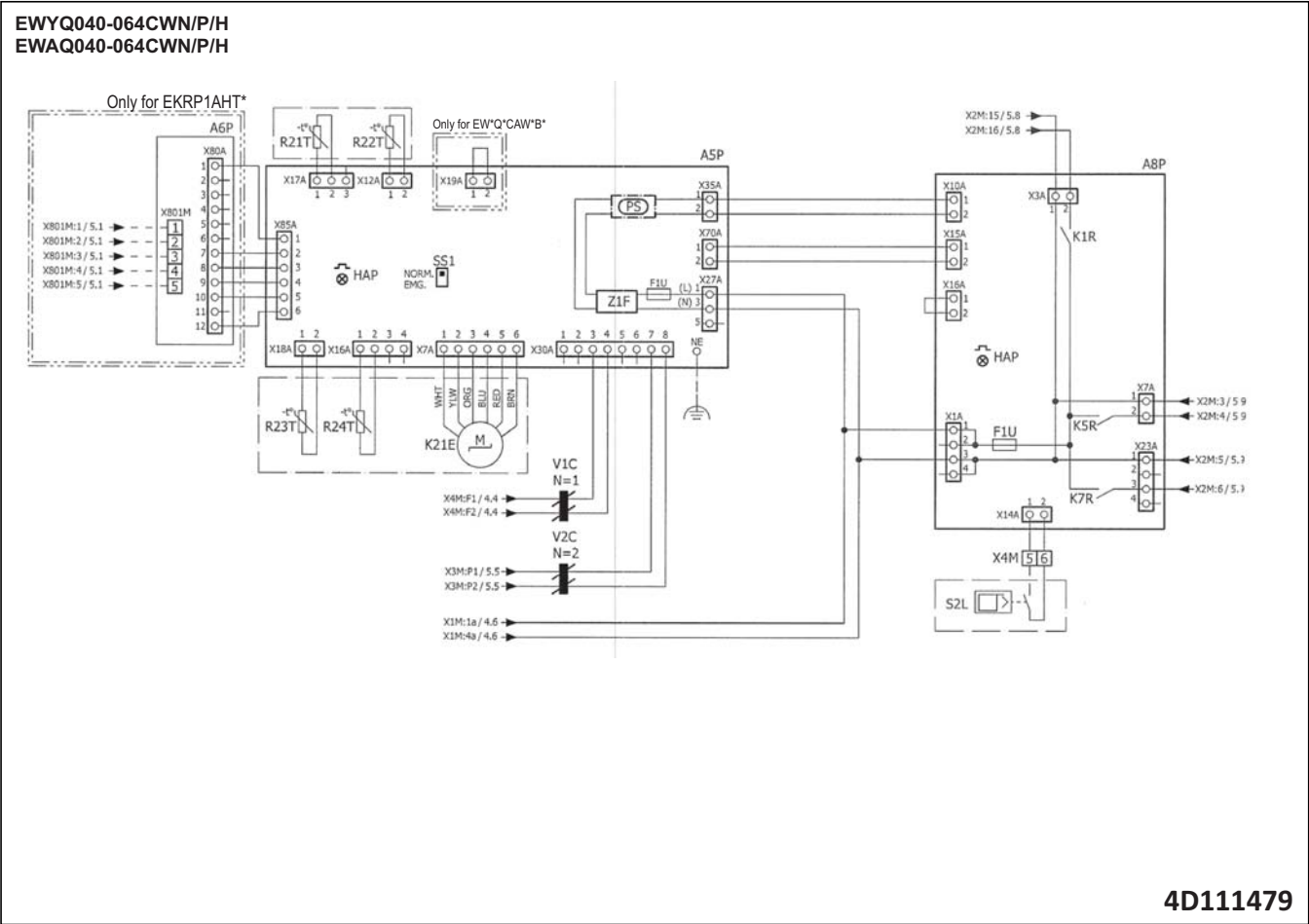
7 - 1 Wiring Diagrams - Three Phase

7



7 Wiring diagrams

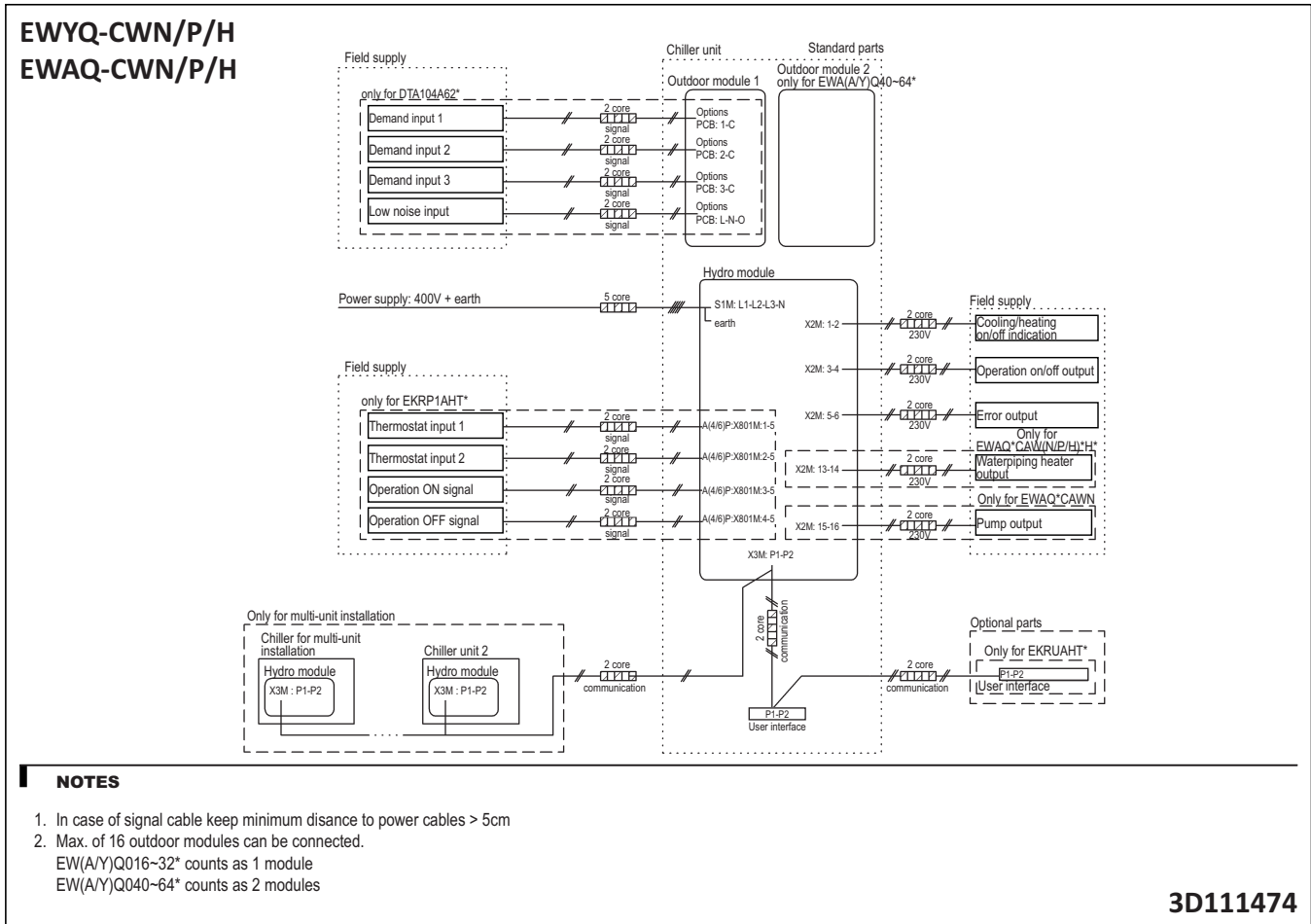
7 - 1 Wiring Diagrams - Three Phase



8 External connection diagrams

8 - 1 External Connection Diagrams

8



9 Sound data

9 - 1 Sound Power Spectrum

EWYQ-CWN/P/H
EWAQ-CWN/P/H

Units LWE= 7°C / Tamb = 35°C	Sound power level (Lw) per octave band [dB]								Total dBA
	63	125	250	500	1000	2000	4000	8000	LwA
EW(A/Y)Q016CAW*	84	79	76	73	67	65	61	78	78
EW(A/Y)Q021CAW*	84	80	77	73	66	60	53	78	78
EW(A/Y)Q025CAW*	84	80	77	73	66	60	53	78	78
EW(A/Y)Q032CAW*	84	80	80	75	68	63	62	80	80
EW(A/Y)Q040CAW*	87	83	80	76	69	63	56	81	81
EW(A/Y)Q050CAW*	87	83	80	76	69	63	56	81	81
EW(A/Y)Q064CAW*	87	83	83	78	71	66	65	83	83

Notes :

- 1) Measured according to ISO 3744
- 2) LWE = Leaving water evaporator temperature [°C]
- 3) Tamb = Ambient temperature [°C]

4D111576

10 Installation

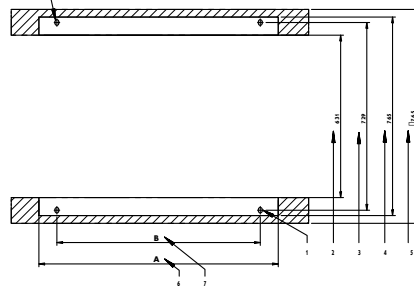
10 - 1 Fixation and Foundation of Units

10

EWYQ-CWN/P/H
EWAQ-CWN/P/H

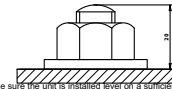
EWYQ	A	B	C
016~025	1340	792	-
032	1650	1102	-
040-050	2320	792	192
064	2940	1102	192

Fixation holes
15 x 22mm oblong holes



016~025 & 032 models

Foundation bolt type: M12. See note 4.



Notes

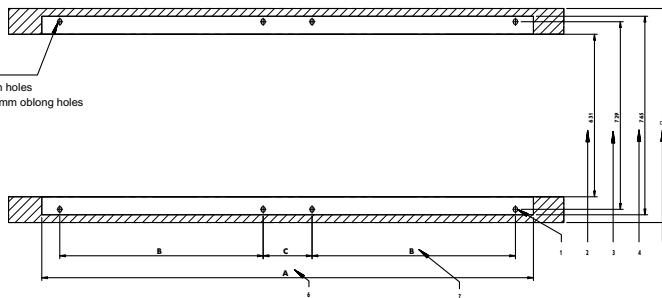
- To prevent vibration and noise, make sure the unit is installed level on a sufficiently strong base.
- The height of the foundation must at least be 150mm from the floor. In heavy snowfall areas, this height must be increased depending on the installation location and conditions.
- The unit must be installed on a solid longitudinal foundation (steel beam frame or concrete). Make sure the base under the unit is larger than the shaded area.
- Fasten the unit in place using M12 foundation bolts. It is recommended to keep 20mm of the bolt above the foundation surface.

Legend

- 1. Foundation bolt hole
- 2. Inner foundation dimension
- 3. Pitch of foundation bolt holes
- 4. Width of unit
- 5. Outer foundation dimension
- 7. Length of foundation
Pitch of foundation bolt holes

040-050 & 064 models

Fixation holes
15 x 22mm oblong holes



3D111577

10 Installation

10 - 2 Water Charge, Flow and Quality

EWA/YQ-CWN/P/H

This table is from JRA GL-02-1994

JRA: Japanese Refrigerant Association

ITEMS (1) (5)	Cooling water (3)			Cooled water		Heated water (2)				Tendency if out of criteria
	Circulating system		Once flow			Low temperature		High temperature		
	Circulating water	Supply water (4)	Flowing water	Circulating water [below 20°C]	Supply water (4)	Circulating water [20°C-60°C]	Supply water (4)	Circulating water [60°C-80°C]	Supply water (4)	
pH at 25°C	6.5-8.2	6.0-8.0	6.8-8.0	6.8-8.0	6.8-8.0	7.0-8.0	7.0-8.0	7.0-8.0	7.0-8.0	corrosion + scale
Electrical conductivity	[mS/m] at 25°C	below 80	below 30	below 40	below 40	below 30	below 30	below 30	below 30	corrosion + scale
	[µS/cm] At 25°C(1)	(below 800)	(below 300)	(below 400)	(below 400)	(below 300)	(below 300)	(below 300)	(below 300)	corrosion + scale
Chloride ion [mgCl ⁻ /l]	below 200	below 50	below 50	below 50	below 50	below 50	below 50	below 30	below 30	corrosion
Sulfate ion [mgSO ₄ ²⁻ /l]	below 200	below 50	below 50	below 50	below 50	below 50	below 50	below 30	below 30	corrosion
M-alkalinity (pH4.8) [mgCaCO ₃ /l]	below 100	below 50	below 50	below 50	below 50	below 50	below 50	below 50	below 50	scale
Total hardness [mgCaCO ₃ /l]	below 200	below 70	below 70	below 70	below 70	below 70	below 70	below 70	below 70	scale
Calcium hardness [mgCaCO ₃ /l]	below 150	below 50	below 50	below 50	below 50	below 50	below 50	below 50	below 50	scale
Silica ion [mgSiO ₂ /l]	below 50	below 30	below 30	below 30	below 30	below 30	below 30	below 30	below 30	scale
Iron [mgFe/l]	below 1.0	below 0.3	below 1.0	below 1.0	below 0.3	below 1.0	below 0.3	below 1.0	below 0.3	corrosion + scale
Copper [mgCu/l]	below 0.3	below 0.1	below 1.0	below 1.0	below 0.1	below 1.0	below 0.1	below 1.0	below 0.1	corrosion
Sulfide ion [mgS ²⁻ /l]	not detectable	not detectable	not detectable	not detectable	not detectable	not detectable	not detectable	not detectable	not detectable	corrosion
Ammonium ion [mgNH ₄ ⁺ /l]	below 1.0	below 0.1	below 1.0	below 1.0	below 0.1	below 0.3	below 0.1	below 0.1	below 0.1	corrosion
Remaining chloride [mgCl/l]	below 0.3	below 0.3	below 0.3	below 0.3	below 0.3	below 0.25	below 0.3	below 0.1	below 0.3	corrosion
Free carbide [mgCo ₃ /l]	below 4.0	below 4.0	below 4.0	below 4.0	below 4.0	below 0.4	below 4.0	below 0.4	below 4.0	corrosion
Stability index	6.0-7.0	---	---	---	---	---	---	---	---	corrosion + scale

NOTES

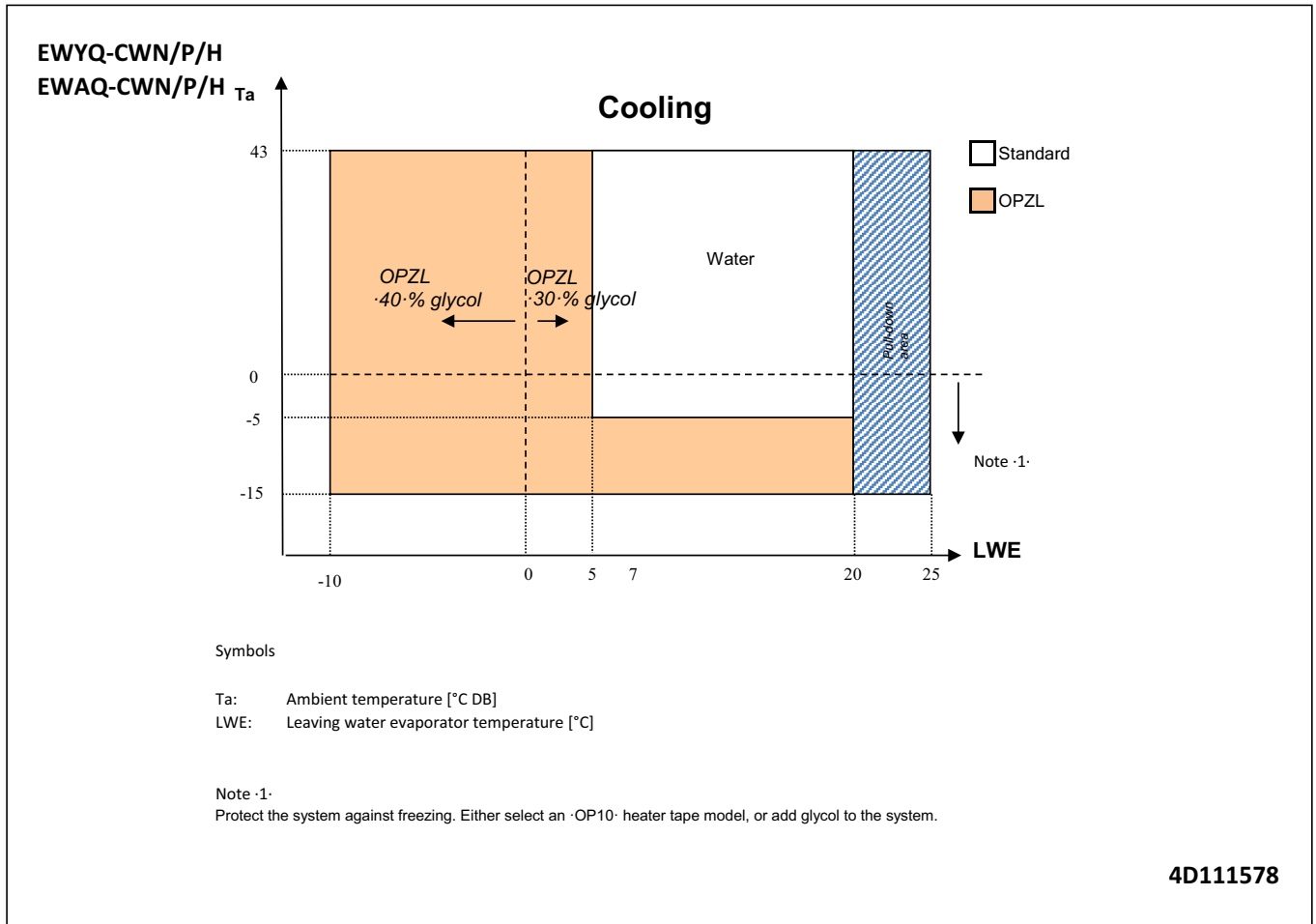
- Names, definitions and units are according to JIS K 0101. Units and figures between brackets are old units published as reference only.
- In case of using heated water (more than 40°C), corrosion is generally noticeable.
Especially when the iron material is in direct contact with water without any protection shields, it is desirable to give the valid measures for corrosion. e.g. chemical measure,...
- In the cooling water using hermetic cooling tower, closed circuit water is according to heated water standard, and scattered water is according to cooling water standard.
- Supply water is considered drink water, industrial water and ground water except for genuine water, neutral water and soft water.
- The above mentioned items are representable items in corrosion and scale cases.

3TW50179-1

11 Operation range

11 - 1 Operation Range

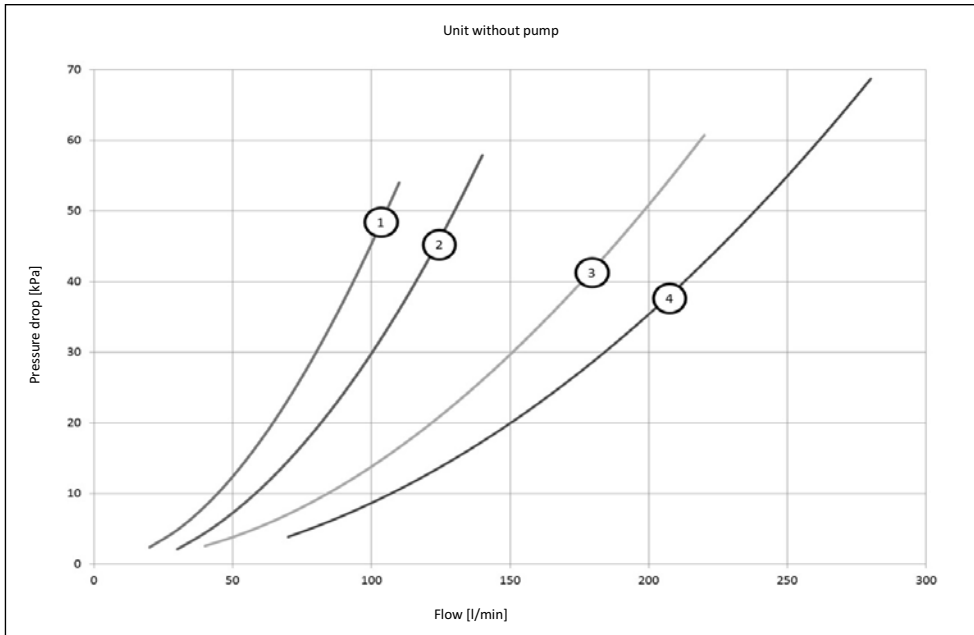
11



12 Hydraulic performance

12 - 1 Static Pressure Drop Unit

EWYQ-CWN
EWAQ-CWN



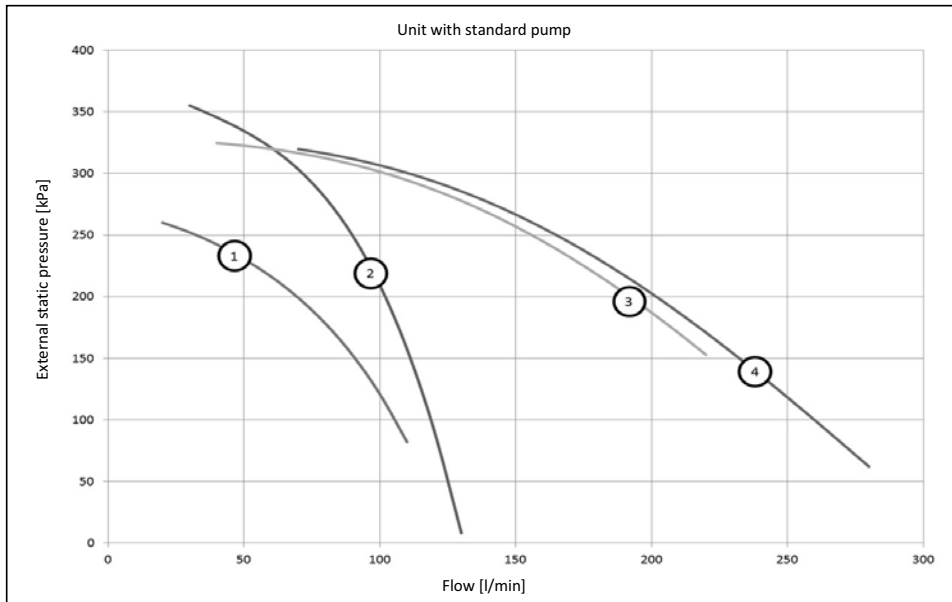
Warning

Selecting a flow outside the operating area can damage the unit or cause the unit to malfunction.
Also see the minimum and maximum allowed water flow rate on the "Technical specifications" datasheet.

- 1 - Size: ·016 - 021 - 025·
- 2 - Size: ·032·
- 3 - Size: ·040 - 050·
- 4 - Size: ·064·

4D111475A

EWYQ-CWP
EWAQ-CWP



Warning

Selecting a flow outside the operating area can damage the unit or cause the unit to malfunction.
Also see the minimum and maximum allowed water flow rate on the "Technical specifications" datasheet.

- 1 - Size: ·016 - 021 - 025·
- 2 - Size: ·032·
- 3 - Size: ·040 - 050·
- 4 - Size: ·064·

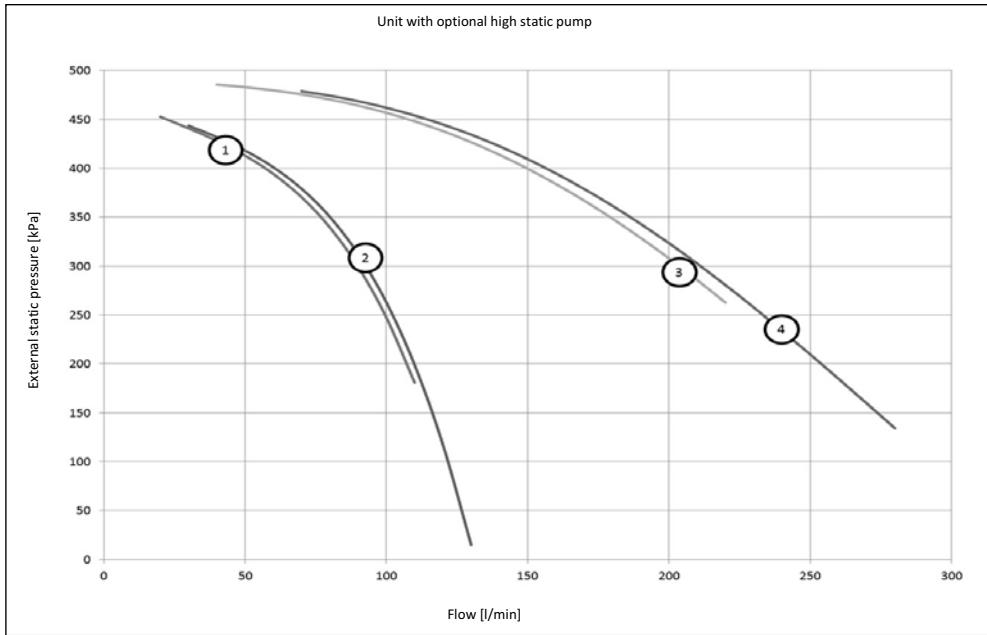
4D111475A

12 Hydraulic performance

12 - 1 Static Pressure Drop Unit

12

EWYQ-CWH
EWAQ-CWH



Warning

Selecting a flow outside the operating area can damage the unit or cause the unit to malfunction.
Also see the minimum and maximum allowed water flow rate on the "Technical specifications" datasheet.

- 1 - Size: :016 - 021 - 025
- 2 - Size: :032
- 3 - Size: :040 - 050
- 4 - Size: :064

4D111475A

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