



Chillers

# Technical Data

Small Air Cooled Chillers



EEDEN13-403

EUWA-KBZW1  
EUWY-KBZW1



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EUWY-KBZW1

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Air Cooled Chiller .....	<b>1</b>	EUWA-KBZW1	.....3	<b>1</b>
Air Cooled Chiller .....	<b>2</b>	EUWY-KBZW1	.....41	<b>2</b>



# TABLE OF CONTENTS

## EUWA-KBZW1

1	Features .....	4
2	Specifications .....	5
	Technical Specifications .....	5
	Technical Specifications .....	6
	Technical Specifications .....	8
	Electrical Specifications .....	9
	Electrical Specifications .....	10
	Electrical Specifications .....	10
3	Options .....	12
	Options .....	12
4	Capacity tables .....	13
	Cooling Capacity Tables .....	13
	Capacity Correction Factor .....	20
5	Dimensional drawings .....	21
	Dimensional Drawings .....	21
6	Centre of gravity .....	27
	Centre of Gravity .....	27
7	Piping diagrams .....	29
	Piping Diagrams .....	29
8	Wiring diagrams .....	30
	Wiring Diagrams - Three Phase .....	30
9	Sound data .....	31
	Sound Power Spectrum .....	31
10	Installation .....	32
	Water Charge, Flow and Quality .....	32
11	Operation range .....	33
	Operation Range .....	33
12	Hydraulic performance .....	34
	Water Pressure Drop Curve Evaporator .....	34
	Water Pressure Drop Curve Evaporator/Condenser .....	36
	Static Pressure Drop Unit .....	38
	Pump Characteristics .....	39

# 1 Features

- Optimised for use with R-407C
- Daikin scroll compressor
- Reduced installation time thanks to integrated pump and/or buffer tank
- Possibility for a 200l buffer tank
- Low operating sound level
- Easy maintenance
- Main switch
- Water flow switch
- 3 different design options available: EUWAN chiller without integrated hydraulic module; EUWAP chiller with integrated hydraulic module (pump, expansion vessel, hydraulic components); EUWAB chiller with integrated hydraulic module (buffer tank, pump, expansion vessel, hydraulic components)



## 2 Specifications

2-1 Technical Specifications				EUWAN5KBZ W1	EUWAP5KBZ W1	EUWAB5KBZ W1	EUWAN8KBZ W1	EUWAP8KBZ W1	EUWAB8KBZ W1	EUWAN10KB ZW1	
Cooling capacity	Nom.			kW	11.2 (1)	11.7 (1)	17.7 (1)	18.2 (1)	22.3 (1)		
Capacity steps				%	0-100						
Power input	Cooling	Nom.		kW	4.56 (1)	4.59 (1)	7.44 (1)	7.39 (1)	8.87 (1)		
EER					2.46 (1)	2.55 (1)	2.38 (1)	2.46 (1)	2.51 (1)		
Casing	Material			Polyester coated galvanised steel plate							
Dimensions	Unit	Height	mm	1,230						1,450	
		Width	mm	1,290							
		Depth	mm	734							
	Packed unit	Height	mm	1,425						1,645	
		Width	mm	1,380							
		Depth	mm	830							
Weight	Unit			kg	150	168	180	215	229	241	245
	Operation weight			kg	152	171	239	218	232	300	248
	Packed unit			kg	160	178	190	225	239	251	255
Packing	Material			Wood / Plastic foil							
	Weight			kg	10						
Water heat exchanger	Type			Brazed plate							
	Quantity			1							
	Water volume			l	1.14			1.615		1.9	
	Water flow rate	Min.	l/min	16			26		32		
		Max.	l/min	65			102		129		
	Nominal water flow	Cooling	l/min	32 (1)			51 (1)		64 (1)		
	Nominal water pressure drop	Cooling	Heat exchanger	kPa	24 (1)			38 (1)		43 (1)	
					Insulation material			Kaiflex			
	Model	Type			AC70X-24HX			AC70X-34HX		AC70X-40HX	
	Air heat exchanger	Type			Cross fin coil/Hi-X tubes and PE coated waffle louvre fins						
Rows		Quantity			2						
Stages		Quantity			40					50	
Fin pitch		mm			2						
Face area		m <sup>2</sup>			1.570					1.970	
Hydraulic components		Buffer tank	Volume	l	-	55	-	55	-		
	Expansion vessel	Volume	l	-	12	-	12	-			
		Pre pressure	bar	-	1.5	-	1.5	-			
	Water filter	Material			Brass						
Fan	Quantity			2							
	Type			Axial							
	Discharge direction			Vertical							
Fan group	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min	160 (per 2 fans)			170 (per 2 fans)			
Fan motor	Output			W	140			190			
	Quantity			1							
	Position			Vertical							
	Drive			Direct drive							
Fan motor 2	Output			W	140			230			
	Quantity			1							
Sound power level	Cooling	Nom.		dBA	67			76		78	
Compressor	Type			Hermetically sealed scroll compressor							
	Quantity			1							
	Model			JT140BF-YE			JT212DA-YE		JT265DA-YE		
	Speed			rpm	2,900						
	Starting method			Direct							
	Crankcase heater			W	33			50			

1  
2

## 2 Specifications

1  
2

2-1 Technical Specifications					EUWAN5KBZ W1	EUWAP5KBZ W1	EUWAB5KBZ W1	EUWAN8KBZ W1	EUWAP8KBZ W1	EUWAB8KBZ W1	EUWAN10KB ZW1
Operation range	Water side	Cooling	Min.	°CDB	-10						
			Max.	°CDB	25						
	Air side	Cooling	Min.	°CDB	-15						
			Max.	°CDB	43						
Refrigerant	Type				R-407C						
	Control				Thermostatic expansion valve						
	Circuits	Quantity				1					
Refrigerant circuit	Charge			kg	3.9			4.6		5.9	
Water circuit	Piping connections diameter			inch	G 1"1/4 (male)						
	Piping			inch	1-1/4"						
	Safety valve			bar	-	3		-	3		-
	Manometer				Yes						
	Drain valve / fill valve				Yes, ø15						
	Shut off valve				Yes						
	Total water volume			l	2 (2)	3 (2)	59 (2)	3 (2)		59 (2)	3 (2)
	Minimum water volume in the system			l	54 (3.0)			85 (3.0)		108 (3.0)	
	Air purge valve				Yes						
Refrigerant oil	Type				FVC68D						
	Charged volume			l	1.5			2.7			
Safety devices	Item	01			High pressure switch						
		02			Discharge temperature control						
		03			Compressor motor overcurrent relay						
		04			Pump motor overcurrent						
		05			Fan motor thermal protection						
		06			Anti-recycling and guard timer						
		07			Digital display controller with electronic temperature control						
		08			Reverse phase protector						
		09			Fuse						

2-2 Technical Specifications					EUWAP10KB ZW1	EUWAB10KB ZW1	EUWAN12KB ZW1	EUWAP12KB ZW1	EUWAB12KB ZW1	EUWAN16KB ZW1	EUWAP16KB ZW1	
Cooling capacity	Nom.			kW	22.9 (1)		26.2 (1)	26.8 (1)		34.4 (1)	35.4 (1)	
Capacity steps				%	0-100					0-50-100		
Power input	Cooling	Nom.		kW	8.88 (1)		11.7 (1)		14.90 (1)		15.1 (1)	
EER					2.58 (1)		2.24 (1)	2.29 (1)		2.31 (1)	2.34 (1)	
Casing	Material				Polyester coated galvanised steel plate							
Dimensions	Unit	Height		mm	1,450					1,321		
		Width		mm	1,290					2,580		
		Depth		mm	734							
	Packed unit	Height		mm	1,645					1,745		
		Width		mm	1,380					2,660		
Depth		mm	830					910				
Weight	Unit			kg	259	271	248	262	274	430	448	
	Operation weight			kg	262	330	251	265	335	436	457	
	Packed unit			kg	269	281	258	272	284	455	473	
Packing	Material				Wood / Plastic foil							
	Weight			kg	10					25		
Water heat exchanger	Type				Brazen plate							
	Quantity				1							
	Water volume			l	1.9	2.375			2.964			
	Water flow rate	Min.		l/min	32	38			53			
		Max.		l/min	129	152			212			
	Nominal water flow		Cooling	l/min	64 (1)	76 (1)			99 (1)			
	Nominal water pressure drop	Cooling	Heat exchanger		kPa	43 (1)	37 (1)			22 (1)		
			Insulation material				Kaiflex					
	Model	Type			AC70X-40HX		AC70X-50HX			AC230X-38HX		



## 2 Specifications

2-2 Technical Specifications					EUWAP10KB ZW1	EUWAB10KB ZW1	EUWAN12KB ZW1	EUWAP12KB ZW1	EUWAB12KB ZW1	EUWAN16KB ZW1	EUWAP16KB ZW1				
Air heat exchanger	Type				Cross fin coil/Hi-X tubes and PE coated waffle louvre fins										
	Rows	Quantity			2										
	Stages	Quantity			50				40						
	Fin pitch		mm		2										
	Face area		m <sup>2</sup>		1.970				1.570 + 1.570						
Hydraulic components	Buffer tank	Volume	l	-	55	-	55	-	-						
	Expansion vessel	Volume	l	12	-	12	-	12							
		Pre pressure	bar	1.5	-	1.5	-	1.5							
	Water filter	Material		Brass											
Fan	Quantity				2				4						
	Type				Axial										
	Discharge direction				Vertical										
Fan group	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min		170 (per 2 fans)									
Fan motor	Output			W		190									
	Quantity				1				2						
	Position				Vertical										
	Drive				Direct drive										
Fan motor 2	Output			W		230									
	Quantity				1				2						
Sound power level	Cooling	Nom.		dBA		78				79					
Compressor	Type				Hermetically sealed scroll compressor										
	Quantity				1				2						
	Model				JT265DA-YE		JT335DA-YE			JT212DA-YE					
	Speed			rpm		2,900									
	Starting method				Direct										
	Crankcase heater			W		50									
	Operation range	Water side	Cooling	Min.	°CDB	-10									
Max.				°CDB	25										
Air side		Cooling	Min.	°CDB	-15										
			Max.	°CDB	43										
Refrigerant	Type				R-407C										
	Control				Thermostatic expansion valve										
	Circuits	Quantity			1				2						
Refrigerant circuit	Charge			kg		5.9		6.0			4.6				
Water circuit	Piping connections diameter			inch		G 1"1/4 (male)				2" male					
	Piping			inch		1-1/4"					2"				
	Safety valve			bar		3		-		3		-	3		
	Manometer				Yes										
	Drain valve / fill valve				Yes, ø15										
	Shut off valve				Yes										
	Total water volume			l		3 (2)		59 (2)		3 (2)		4 (2)	60 (2)	6 (2)	9 (2)
	Minimum water volume in the system			l		108 (3.0)			126 (3.0)			88 (3.0)			
	Air purge valve				Yes										
Refrigerant oil	Type				FVC68D										
	Charged volume			l		2.7									
Safety devices	Item	01			High pressure switch										
		02			Discharge temperature control										
		03			Compressor motor overcurrent relay										
		04			Pump motor overcurrent										
		05			Fan motor thermal protection										
		06			Anti-recycling and guard timer										
		07			Digital display controller with electronic temperature control										
		08			Reverse phase protector										
		09			Fuse										

1  
2

## 2 Specifications

2-3 Technical Specifications				EUWAB16KB ZW1	EUWAN20KB ZW1	EUWAP20KB ZW1	EUWAB20KB ZW1	EUWAN24KB ZW1	EUWAP24KB ZW1	EUWAB24KB ZW1	
Cooling capacity	Nom.	kW		35.4 (1)	46.4 (1)	47.5 (1)		55.0 (1)	56.1 (1)		
Capacity steps				%							
				0-50-100							
Power input	Cooling	Nom.	kW		15.1 (1)	18.1 (1)	18.2 (1)		24.1 (1)	24.2 (1)	
EER				2.34 (1)	2.56 (1)	2.61 (1)		2.28 (1)	2.32 (1)		
Casing	Material			Polyester coated galvanised steel plate							
Dimensions	Unit	Height	mm	1,321	1,541						
		Width	mm	2,580							
		Depth	mm	734							
	Packed unit	Height	mm	1,745							
		Width	mm	2,660							
		Depth	mm	910							
Weight	Unit		kg	460	490	508	520	496	514	526	
	Operation weight		kg	525	496	518	545	503	524	592	
	Packed unit		kg	485	515	533	585	521	539	551	
Packing	Material			Wood / Plastic foil							
	Weight		kg	25			65	25			
Water heat exchanger	Type			Brazen plate							
	Quantity			1							
	Water volume		l	2.964	3.9			4.524			
	Water flow rate	Min.	l/min	53	67			79			
		Max.	l/min	212	267			317			
	Nominal water flow	Cooling	l/min	99 (1)	134 (1)			158 (1)			
	Nominal water pressure drop	Cooling	Heat exchanger	kPa	22 (1)						
		Insulation material			Kaiflex						
	Model		Type	AC230X-38HX	AC230X-50HX			AC230X-58HX			
	Air heat exchanger	Type			Cross fin coil/Hi-X tubes and PE coated waffle louvre fins						
Rows		Quantity		2							
Stages		Quantity		40	50						
Fin pitch		mm	2								
Face area		m <sup>2</sup>	1.570 + 1.570	1.970+1.970							
Hydraulic components	Buffer tank	Volume	l	55	-		55	-		55	
	Expansion vessel	Volume	l	12	-		12	-		12	
		Pre pressure	bar	1.5	-		1.5	-		1.5	
	Water filter	Material			Brass						
Fan	Quantity			4							
	Type			Axial							
	Discharge direction			Vertical							
Fan group	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min		170 (per 2 fans)					
Fan motor	Output		W	190							
	Quantity			2							
	Position			Vertical							
	Drive			Direct drive							
Fan motor 2	Output		W	230							
	Quantity			2							
Sound power level	Cooling	Nom.	dBA	79	81						
Compressor	Type			Hermetically sealed scroll compressor							
	Quantity			2							
	Model			JT212DA-YE	JT265DA-YE			JT335DA-YE			
	Speed		rpm	2,900							
	Starting method			Direct							
	Crankcase heater		W	50							

1  
2

## 2 Specifications

2-3 Technical Specifications					EUWAB16KB ZW1	EUWAN20KB ZW1	EUWAP20KB ZW1	EUWAB20KB ZW1	EUWAN24KB ZW1	EUWAP24KB ZW1	EUWAB24KB ZW1
Operation range	Water side	Cooling	Min.	°CDB	-10						
			Max.	°CDB	25						
	Air side	Cooling	Min.	°CDB	-15						
			Max.	°CDB	43						
Refrigerant	Type				R-407C						
	Control				Thermostatic expansion valve						
	Circuits	Quantity			2						
Refrigerant circuit	Charge			kg	4.6	5.9			6.0		
Water circuit	Piping connections diameter			inch	2" male						
	Piping			inch	2"						
	Safety valve			bar	3	-	3		-	3	
	Manometer				Yes						
	Drain valve / fill valve				Yes, ø15						
	Shut off valve				Yes						
	Total water volume			l	65 (2)	6 (2)	10 (2)	66 (2)	7 (2)	10 (2)	66 (2)
	Minimum water volume in the system			l	88 (3.0)	111 (3.0)			132 (3.0)		
	Air purge valve				Yes						
Refrigerant oil	Type				FVC68D						
	Charged volume			l	2.7						
Safety devices	Item	01			High pressure switch						
		02			Discharge temperature control						
		03			Compressor motor overcurrent relay						
		04			Pump motor overcurrent						
		05			Fan motor thermal protection						
		06			Anti-recycling and guard timer						
		07			Digital display controller with electronic temperature control						
		08			Reverse phase protector						
		09			Fuse						

2-4 Electrical Specifications					EUWAN5KBZ W1	EUWAP5KBZ W1	EUWAB5KBZ W1	EUWAN8KBZ W1	EUWAP8KBZ W1	EUWAB8KBZ W1	EUWAN10KB ZW1
Compressor	Phase				3~						
	Frequency			Hz	50						
	Voltage			V	400						
	Starting current			A	60.0			95.5		110.0	
	Nominal running current (RLA)			A	5.5			10.7		13.0	
	Maximum running current			A	9.0			14.0		17.0	
	Starting method				Direct on line						
	Crankcase heater			W	33			50			
Power supply	Name				W1						
	Phase				3N~						
	Frequency			Hz	50						
	Voltage			V	400						
	Voltage range	Min.	%		-10						
Max.		%		10							
Unit	Starting current			A	62.2	63.5		97.9	99.2		113
	Current	Zmax	Text	0.26				0.22			
	Nominal running current (RLA)	Cooling	A	7.7	9.0		13.6	14.9		15.9	
			A	11.2	12.5		16.9	18.2		19.9	
	Recommended fuses according to IEC standard 269-2				3 x 20gL/gG				3 x 25gL/gG		
Fans	Phase				1~						
	Voltage			V	230						
	Frequency			Hz	50						
	Maximum running current			A	2.2			2.9			

## 2 Specifications

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2-4 Electrical Specifications			EUWAN5KBZ W1	EUWAP5KBZ W1	EUWAB5KBZ W1	EUWAN8KBZ W1	EUWAP8KBZ W1	EUWAB8KBZ W1	EUWAN10KB ZW1
Control circuit	Phase		1~						
	Frequency	Hz	50						
	Voltage	V	230						
	Recommended fuses		Factory installed						
Wiring connections			See installation manual						

2-5 Electrical Specifications				EUWAP10KB ZW1	EUWAB10KB ZW1	EUWAN12KB ZW1	EUWAP12KB ZW1	EUWAB12KB ZW1	EUWAN16KB ZW1	EUWAP16KB ZW1
Compressor	Phase			3~						
	Frequency	Hz	50							
	Voltage	V	400							
	Starting current	A	110.0	136.0			95.0			
	Nominal running current (RLA)	A	13.0	17.6			10.7			
	Maximum running current	A	17.0	24.0			14.0			
	Starting method			Direct on line						
	Crankcase heater	W	50							
Power supply	Name			W1						
	Phase			3N~						
	Frequency	Hz	50							
	Voltage	V	400							
	Voltage range	Min.	%	-10						
		Max.	%	10						
Unit	Starting current	A	114	139	140		62.2	63.5		
	Current	Zmax	Text	0.22	0.21					
	Nominal running current (RLA)	Cooling	A	17.2	20.5	21.8		7.7	9.0	
	Maximum running current	A	21.2	26.9	28.2		11.2	12.5		
	Recommended fuses according to IEC standard 269-2			3 x 32gL/gG			3 x 40gL/gG			3 x 50gL/gG
Fans	Phase			1~						
	Voltage	V	230							
	Frequency	Hz	50							
	Maximum running current	A	2.9					5.8		
Control circuit	Phase			1~						
	Frequency	Hz	50							
	Voltage	V	230							
	Recommended fuses			Factory installed						
Wiring connections			See installation manual							

2-6 Electrical Specifications				EUWAB16KB ZW1	EUWAN20KB ZW1	EUWAP20KB ZW1	EUWAB20KB ZW1	EUWAN24KB ZW1	EUWAP24KB ZW1	EUWAB24KB ZW1
Compressor	Phase			3~						
	Frequency	Hz	50							
	Voltage	V	400							
	Starting current	A	95.0	110.0			136.0			
	Nominal running current (RLA)	A	10.7	13.0			17.6			
	Maximum running current	A	14.0	17.0			24.0			
	Starting method			Direct on line						
	Crankcase heater	W	50							
Power supply	Name			W1						
	Phase			3N~						
	Frequency	Hz	50							
	Voltage	V	400							
	Voltage range	Min.	%	-10						
		Max.	%	10						

## 2 Specifications

2-6 Electrical Specifications			EUWAB16KB ZW1	EUWAN20KB ZW1	EUWAP20KB ZW1	EUWAB20KB ZW1	EUWAN24KB ZW1	EUWAP24KB ZW1	EUWAB24KB ZW1
Unit	Starting current		A	63.5	97.9	99.2		113	114
	Current	Zmax	Text	0.21				0.20	
	Nominal running current (RLA)	Cooling	A	9.0	13.6	14.9		15.9	17.2
	Maximum running current		A	12.5	16.9	18.2		19.9	21.2
	Recommended fuses according to IEC standard 269-2			3 x 50gL/gG				3 x 63gL/gG	
Fans	Phase			1~					
	Voltage		V	230					
	Frequency		Hz	50					
	Maximum running current		A	5.8					
Control circuit	Phase			1~					
	Frequency		Hz	50					
	Voltage		V	230					
	Recommended fuses			Factory installed					
Wiring connections			See installation manual						

### Notes

- (1) Cooling: Ta 35°C - LWE 7°C (DT=5°C), data according EN 14511: 2011
- (2) Including piping + PHE + buffer tank (if present); excluding expansion vessel
- (3) Including water volume in the unit. In most applications this minimum water volume will have a satisfying result. In critical processes or in rooms with high heat load, extra water volume might be required.
- (4) Equipment complying with EN/IEC 61000-3-12
- (5) EN/IEC 61000-3-12: European/international technical standard setting the limits for voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated currents ≤ 75A

# 3 Options

## 3 - 1 Options

1  
3

### EUWA-KBZW1

Optional equipment for EUWA-KBZ  
Horse Power: 5-24

**Modelnumber**

EUWA(\*)5KBZW1 (on)  
EUWA(\*)8KBZW1 (on)

EUWA(\*)10KBZW1 (on)  
EUWA(\*)12KBZW1 (on)

EUWA(\*)16KBZW1 (on)  
EUWA(\*)20KBZW1 (on)

EUWA(\*)24KBZW1 (on)

Option number	Option description	Decimal code	(on)	Unit size																								Availability
				5KBZW1			8KBZW1			10KBZW1			12KBZW1			16KBZW1			20KBZW1			24KBZW1						
				N	P	B	N	P	B	N	P	B	N	P	B	N	P	B	N	P	B	N	P	B	N	P	B	
	Standard unit	-		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	<b>Not completely combinable options</b>	1st digit																										
ZH	chilled water temp down to -5°C	12	C--	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted
ZL	chilled water temp down to -10°C	24	O--	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted
	<b>Completely combinable options</b>	2nd/3rd digit																										
ESP	Fan motor size up (high esp 5mmH2O)	4	--4	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted
OP PUMP HIGH	Pump size up	8	--8	-	•	•	-	•	•	-	•	•	-	•	•	-	•	•	-	•	•	-	•	•	-	•	•	Factory mounted
OP10	Evaporator heatertape	16	--G	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted
	<b>Available kits</b>																											
EKGAU5/8KA	Gauges kit 5/8 Hp-units			•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Kit
EKGAU10/12KA	Gauges kit 10/12 Hp-units			-	-	-	-	-	-	-	-	-	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	Kit
EKGAU16KA	Gauges kit 16 Hp-units			-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	-	-	-	-	-	-	-	-	-	Kit
EKGAU20/24KA	Gauges kit 20/24 Hp-units			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	-	-	-	-	-	-	Kit
EKSS	Softstarter kit			•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	Kit
EKAC10C	Address card for connection to BMS or Remote user interface			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKRUMCA	Remote installed user interface			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKBT	Buffertank 200 l			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
	<b>Example of possible option combinations</b>																											
ESP + OP PUMP HIGH		12	--C																									
ESP + OP10		20	--K																									
ESP + OP10 + OP PUMP HIGH		28	--S																									
OP10 + OP PUMP HIGH		24	--O																									

**NOTES**

- x = not available yet  
• = available  
-- = not available  
•-<number> = available and a quantity <number> is necessary / unit
- Impossible option combination : ZH + ZL
- (\*) = N or P or B
- (on) = option number  
- 1st digit (on) = sum of 1st digit decimal code and this summation transferred to a 36 character system  
- 2/3rd digit (on) = sum of 2/3rd digit decimal code and this summation transferred to a 36 character system
- To install EKRUMCA => EKAC10C needs to be installed on the unit.
- EKAC10C : this address card allows direct connection to MODBUS BMS system

3TW60009-5

# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

### EUWA\*5KBZ

#### CC EUWAN5KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	5,14	6,12	7,10	8,07	9,05	10,0	11,0	12,0	13,4	14,9	17,8	19,8
25	4,72	5,66	6,60	7,54	8,48	9,42	10,4	11,3	12,7	14,1	16,9	18,8
30	4,31	5,21	6,11	7,01	7,92	8,82	9,72	10,6	12,0	13,3	16,0	17,8
35	3,89	4,75	5,62	6,48	7,35	8,22	9,08	9,9	11,2	12,5	15,1	16,9
40				5,95	6,78	7,61	8,44	9,27	10,5	11,8	14,2	15,9
43						7,25	8,06	8,86	10,1	11,3	13,7	

#### PI EUWAN5KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	3,11	3,15	3,20	3,25	3,29	3,34	3,38	3,43	3,50	3,57	3,70	3,79
25	3,41	3,46	3,50	3,55	3,59	3,64	3,68	3,73	3,80	3,87	4,01	4,10
30	3,76	3,81	3,86	3,90	3,95	3,99	4,04	4,08	4,15	4,22	4,36	4,45
35	4,17	4,22	4,26	4,31	4,35	4,40	4,45	4,49	4,56	4,63	4,77	4,86
40				4,77	4,81	4,86	4,91	4,95	5,02	5,09	5,23	5,32
43						5,16	5,21	5,25	5,32	5,39	5,53	

#### CC EUWAP/B5KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	5,57	6,55	7,53	8,51	9,48	10,5	11,4	12,4	13,9	15,3	18,3	20,2
25	5,16	6,10	7,04	7,98	8,92	9,86	10,8	11,7	13,1	14,6	17,4	19,3
30	4,74	5,64	6,54	7,45	8,35	9,25	10,15	11,1	12,4	13,8	16,5	18,3
35	4,32	5,18	6,05	6,92	7,78	8,65	9,51	10,4	11,7	13,0	15,6	17,3
40				6,39	7,21	8,04	8,87	9,70	10,9	12,2	14,7	16,3
43						7,68	8,49	9,29	10,5	11,7	14,1	

#### PI EUWAP/B5KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	3,14	3,18	3,23	3,28	3,32	3,37	3,41	3,46	3,53	3,60	3,73	3,82
25	3,44	3,49	3,53	3,58	3,62	3,67	3,71	3,76	3,83	3,90	4,03	4,13
30	3,79	3,84	3,89	3,93	3,98	4,02	4,07	4,11	4,18	4,25	4,39	4,48
35	4,20	4,25	4,29	4,34	4,38	4,43	4,48	4,52	4,59	4,66	4,80	4,89
40				4,80	4,84	4,89	4,94	4,98	5,05	5,12	5,26	5,35
43						5,19	5,24	5,28	5,35	5,42	5,56	

### SYMBOLS

CC : Cooling capacity (kW)  
 PI : Power input (kW)  
 LWE : Leaving Water Evaporator temperature (°C)  
 Ta : Ambient temperature (°C)

### NOTES

**1. Cooling capacity (CAP)**  
 Capacity is according to EN14511:2011 and valid for chilled water range  $\Delta t = 3 - 8^\circ\text{C}$

**2. Power input (kW)**  
 Power input is total input according to EN14511:2011

4TW54752-1B

# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

1  
4

### EUWA\*8KBZ

#### CC EUWAN8KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	7,26	8,85	10,45	12,04	13,63	15,2	16,8	18,4	20,8	23,2	28,0	31,1
25	7,01	8,51	10,01	11,51	13,01	14,52	16,0	17,5	19,8	22,0	26,5	29,5
30	6,76	8,17	9,58	10,99	12,40	13,81	15,22	16,6	18,7	20,9	25,1	27,9
35	6,50	7,82	9,14	10,46	11,78	13,10	14,42	15,7	17,7	19,7	23,7	26,3
40				9,94	11,17	12,40	13,63	14,86	16,7	18,5	22,2	24,7
43						11,97	13,15	14,33	16,1	17,9	21,4	

#### PI EUWAN8KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	4,39	4,52	4,66	4,80	4,94	5,08	5,21	5,35	5,56	5,77	6,18	6,46
25	4,92	5,06	5,20	5,34	5,48	5,61	5,75	5,89	6,10	6,31	6,72	7,00
30	5,55	5,69	5,83	5,97	6,10	6,24	6,38	6,52	6,73	6,93	7,35	7,62
35	6,27	6,41	6,54	6,68	6,82	6,96	7,10	7,23	7,44	7,65	8,06	8,34
40				7,49	7,63	7,76	7,90	8,04	8,25	8,46	8,87	9,15
43						8,29	8,43	8,57	8,77	8,98	9,40	

#### CC EUWAP/B8KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	7,77	9,36	10,95	12,55	14,14	15,7	17,3	18,9	21,3	23,7	28,5	31,6
25	7,52	9,02	10,52	12,02	13,52	15,02	16,5	18,0	20,3	22,5	27,0	30,0
30	7,26	8,68	10,09	11,50	12,91	14,32	15,73	17,1	19,3	21,4	25,6	28,4
35	7,01	8,33	9,65	10,97	12,29	13,61	14,93	16,3	18,2	20,2	24,2	26,8
40				10,45	11,68	12,91	14,14	15,37	17,2	19,1	22,7	25,2
43						12,48	13,66	14,83	16,6	18,4	21,9	

#### PI EUWAP/B8KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	4,34	4,48	4,61	4,75	4,89	5,03	5,17	5,30	5,51	5,72	6,13	6,41
25	4,88	5,01	5,15	5,29	5,43	5,57	5,70	5,84	6,05	6,26	6,67	6,95
30	5,50	5,64	5,78	5,92	6,06	6,19	6,33	6,47	6,68	6,88	7,30	7,58
35	6,22	6,36	6,50	6,63	6,77	6,91	7,05	7,19	7,39	7,60	8,02	8,29
40				7,44	7,58	7,72	7,85	7,99	8,20	8,41	8,82	9,10
43						8,24	8,38	8,52	8,73	8,93	9,35	

### SYMBOLS

CC : Cooling capacity (kW)  
 PI : Power input (kW)  
 LWE : Leaving Water Evaporator temperature (°C)  
 Ta : Ambient temperature (°C)

### NOTES

- Cooling capacity (CAP)**  
Capacity is according to EN14511:2011 and valid for chilled water range  $\Delta t = 3 - 8^\circ\text{C}$
- Power input (kW)**  
Power input is total input according to EN14511:2011



# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

### EUWA\*10KBZ

#### CC EUWAN10KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	11,6	13,4	15,2	17,0	18,8	20,7	22,5	24,3	27,0	29,8	35,2	38,9
25	10,4	12,2	13,9	15,7	17,5	19,3	21,0	22,8	25,4	28,1	33,4	36,9
30	9,27	11,0	12,7	14,4	16,1	17,9	19,6	21,3	23,9	26,4	31,6	35,0
35	8,12	9,78	11,4	13,1	14,8	16,4	18,1	19,8	22,3	24,8	29,8	33,1
40				11,8	13,4	15,0	16,7	18,3	20,7	23,1	28,0	31,2
43						14,2	15,8	17,4	19,7	22,1	26,9	

#### PI EUWAN10KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	5,43	5,57	5,71	5,85	6,00	6,14	6,28	6,42	6,63	6,84	7,26	7,54
25	6,14	6,28	6,42	6,56	6,70	6,84	6,98	7,12	7,33	7,54	7,97	8,25
30	6,89	7,03	7,17	7,31	7,45	7,59	7,73	7,87	8,08	8,29	8,71	8,99
35	7,67	7,81	7,96	8,10	8,24	8,38	8,52	8,66	8,87	9,08	9,50	9,78
40				8,93	9,07	9,21	9,35	9,49	9,70	9,91	10,3	10,6
43						9,73	9,87	10,0	10,2	10,4	10,9	

#### CC EUWAP/B10KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	12,2	14,0	15,8	17,7	19,5	21,3	23,1	24,9	27,7	30,4	35,9	39,5
25	11,1	12,8	14,6	16,4	18,1	19,9	21,7	23,4	26,1	28,7	34,0	37,6
30	9,91	11,6	13,3	15,1	16,8	18,5	20,2	21,9	24,5	27,1	32,2	35,7
35	8,76	10,4	12,1	13,8	15,4	17,1	18,8	20,4	22,9	25,4	30,4	33,7
40				12,5	14,1	15,7	17,3	18,9	21,3	23,8	28,6	31,8
43						14,8	16,4	18,0	20,4	22,8	27,5	

#### PI EUWAP/B10KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	5,44	5,58	5,72	5,86	6,00	6,14	6,28	6,42	6,64	6,85	7,27	7,55
25	6,15	6,29	6,43	6,57	6,71	6,85	6,99	7,13	7,34	7,55	7,97	8,25
30	6,89	7,03	7,17	7,31	7,46	7,60	7,74	7,88	8,09	8,30	8,72	9,00
35	7,68	7,82	7,96	8,10	8,24	8,38	8,53	8,67	8,88	9,09	9,51	9,79
40				8,93	9,08	9,22	9,36	9,50	9,71	9,92	10,3	10,6
43						9,73	9,88	10,0	10,2	10,4	10,9	

### SYMBOLS

CC : Cooling capacity (kW)  
 PI : Power input (kW)  
 LWE : Leaving Water Evaporator temperature (°C)  
 Ta : Ambient temperature (°C)

### NOTES

**1. Cooling capacity (CAP)**  
 Capacity is according to EN14511:2011 and valid for chilled water range  $\Delta t = 3 - 8^\circ\text{C}$

**2. Power input (kW)**  
 Power input is total input according to EN14511:2011

4TW54772-1B

# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

1  
4

### EUWA\*12KBZ

#### CC EUWAN12KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	15,9	17,8	19,7	21,6	23,5	25,4	27,4	29,3	32,1	35,0	40,8	44,6
25	14,0	15,9	17,8	19,7	21,6	23,5	25,4	27,3	30,2	33,0	38,7	42,5
30	12,1	14,0	15,9	17,8	19,7	21,6	23,5	25,4	28,2	31,0	36,7	40,5
35	10,3	12,1	14,0	15,9	17,8	19,6	21,5	23,4	26,2	29,0	34,6	38,4
40				14,0	15,8	17,7	19,6	21,4	24,2	27,0	32,6	36,3
43						16,5	18,4	20,2	23,0	25,8	31,4	

#### PI EUWAN12KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	7,04	7,25	7,47	7,68	7,89	8,10	8,31	8,52	8,83	9,15	9,78	10,2
25	7,85	8,06	8,27	8,48	8,69	8,90	9,11	9,32	9,64	9,95	10,6	11,0
30	8,83	9,04	9,25	9,47	9,68	9,89	10,1	10,3	10,6	10,9	11,6	12,0
35	10,0	10,2	10,4	10,6	10,8	11,1	11,3	11,5	11,7	12,1	12,7	13,2
40				12,0	12,2	12,4	12,6	12,8	13,1	13,5	14,1	14,5
43						13,3	13,5	13,7	14,0	14,4	15,0	

#### CC EUWAP/B12KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	16,5	18,4	20,3	22,3	24,2	26,1	28,0	29,9	32,8	35,7	41,4	45,2
25	14,6	16,5	18,4	20,3	22,2	24,1	26,1	28,0	30,8	33,7	39,4	43,2
30	12,8	14,7	16,5	18,4	20,3	22,2	24,1	26,0	28,8	31,7	37,3	41,1
35	10,9	12,8	14,6	16,5	18,4	20,3	22,2	24,0	26,8	29,7	35,3	39,0
40				14,6	16,5	18,3	20,2	22,1	24,9	27,7	33,2	37,0
43						17,2	19,0	20,9	23,7	26,5	32,0	

#### PI EUWAP/B12KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	7,05	7,26	7,47	7,68	7,89	8,10	8,32	8,53	8,84	9,16	9,79	10,2
25	7,85	8,07	8,28	8,49	8,70	8,91	9,12	9,33	9,64	9,96	10,6	11,0
30	8,84	9,05	9,26	9,47	9,68	9,89	10,1	10,3	10,6	10,9	11,6	12,0
35	10,0	10,2	10,4	10,6	10,9	11,1	11,3	11,5	11,7	12,1	12,7	13,2
40				12,0	12,2	12,4	12,6	12,8	13,2	13,5	14,1	14,5
43						13,3	13,5	13,7	14,1	14,4	15,0	

### SYMBOLS

CC : Cooling capacity (kW)  
 PI : Power input (kW)  
 LWE : Leaving Water Evaporator temperature (°C)  
 Ta : Ambient temperature (°C)

### NOTES

**1. Cooling capacity (CAP)**  
 Capacity is according to EN14511:2011 and valid for chilled water range  $\Delta t = 3 - 8^\circ\text{C}$

**2. Power input (kW)**  
 Power input is total input according to EN14511:2011

# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

### EUWA\*16KBZ

#### CC EUWAN16KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	12,4	16,1	19,8	23,4	26,3	29,2	32,1	34,9	39,2	43,5	52,0	57,7
25	12,0	15,7	19,5	22,9	25,6	28,3	31,0	33,6	37,6	41,6	49,5	54,7
30	11,7	15,4	19,1	22,5	24,9	27,4	29,9	32,3	36,0	39,6	46,9	51,7
35	11,3	15,0	18,7	22,1	24,3	26,6	28,8	31,0	34,4	37,7	44,4	48,8
40				21,8	23,8	25,8	27,8	29,8	32,8	35,8	41,8	45,8
43						25,4	27,2	29,0	31,8	34,6	40,3	

#### PI EUWAN16KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	8,81	9,09	9,37	9,64	9,92	10,2	10,5	10,8	11,2	11,6	12,4	13,0
25	10,0	10,3	10,6	10,9	11,1	11,4	11,7	12,0	12,4	12,8	13,6	14,2
30	11,3	11,5	11,8	12,1	12,4	12,6	12,9	13,2	13,6	14,0	14,9	15,4
35	12,5	12,8	13,1	13,4	13,6	13,9	14,2	14,5	14,9	15,3	16,1	16,7
40				14,6	14,9	15,2	15,5	15,8	16,2	16,6	17,4	18,0
43						16,0	16,3	16,6	17,0	17,4	18,2	

#### CC EUWAP/B16KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	13,4	17,1	20,8	24,4	27,3	30,2	33,1	35,9	40,2	44,5	53,0	58,6
25	13,0	16,7	20,5	23,9	26,6	29,3	32,0	34,6	38,6	42,6	50,4	55,7
30	12,7	16,4	20,1	23,5	25,9	28,4	30,9	33,3	37,0	40,6	47,9	52,7
35	12,3	16,0	19,7	23,1	25,3	27,6	29,8	32,0	35,4	38,7	45,4	49,8
40				22,8	24,8	26,8	28,8	30,8	33,8	36,8	42,8	46,8
43						26,3	28,2	30,0	32,8	35,6	41,3	

#### PI EUWAP/B16KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	9,02	9,29	9,57	9,85	10,1	10,4	10,7	11,0	11,4	11,8	12,6	13,2
25	10,2	10,5	10,8	11,1	11,3	11,6	11,9	12,2	12,6	13,0	13,8	14,4
30	11,5	11,7	12,0	12,3	12,6	12,9	13,1	13,4	13,8	14,2	15,1	15,6
35	12,7	13,0	13,3	13,6	13,8	14,1	14,4	14,7	15,1	15,5	16,3	16,9
40				14,9	15,1	15,4	15,7	16,0	16,4	16,8	17,6	18,2
43						16,2	16,5	16,8	17,2	17,6	18,4	

### SYMBOLS

CC : Cooling capacity (kW)  
 PI : Power input (kW)  
 LWE : Leaving Water Evaporator temperature (°C)  
 Ta : Ambient temperature (°C)

### NOTES

#### 1. Cooling capacity (CAP)

Capacity is according to EN14511:2011 and valid for chilled water range  $\Delta t = 3 - 8^\circ\text{C}$

#### 2. Power input (kW)

Power input is total input according to EN14511:2011

4TW54792-1C

# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

1  
4

### EUWA\*20KBZ

#### CC EUWAN20KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	25,4	28,9	32,4	35,8	39,3	42,7	46,2	49,6	54,7	59,9	70,1	76,9
25	23,8	27,2	30,5	33,9	37,2	40,5	43,8	47,0	52,0	56,9	66,6	73,2
30	22,3	25,5	28,7	31,9	35,1	38,2	41,3	44,5	49,2	53,8	63,2	69,4
35	20,9	23,9	27,0	30,0	33,0	36,0	38,9	41,9	46,4	50,8	59,7	65,6
40				28,1	30,9	33,7	36,6	39,4	43,6	47,8	56,3	61,9
43						32,4	35,1	37,9	41,9	46,0	54,2	

#### PI EUWAN20KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	11,2	11,5	11,8	12,1	12,4	12,7	12,9	13,2	13,7	14,1	15,0	15,6
25	12,8	13,1	13,4	13,7	14,0	14,3	14,6	14,9	15,3	15,7	16,6	17,2
30	14,3	14,6	14,9	15,2	15,5	15,8	16,1	16,4	16,8	17,2	18,1	18,7
35	15,7	16,0	16,3	16,6	16,9	17,2	17,5	17,8	18,1	18,6	19,5	20,1
40				17,9	18,2	18,5	18,8	19,1	19,5	20,0	20,8	21,4
43						19,3	19,6	19,8	20,3	20,7	21,6	

#### CC EUWAP/B20KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	26,5	30,0	33,5	36,9	40,4	43,8	47,3	50,7	55,9	61,0	71,2	78,0
25	24,9	28,3	31,6	35,0	38,3	41,6	44,9	48,2	53,1	58,0	67,8	74,3
30	23,4	26,6	29,8	33,0	36,2	39,3	42,5	45,6	50,3	55,0	64,3	70,5
35	22,0	25,0	28,1	31,1	34,1	37,1	40,1	43,0	47,5	52,0	60,8	66,8
40				29,2	32,0	34,9	37,7	40,5	44,7	48,9	57,4	63,0
43						33,5	36,3	39,0	43,1	47,1	55,3	

#### PI EUWAP/B20KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	11,3	11,6	11,9	12,2	12,4	12,7	13,0	13,3	13,8	14,2	15,1	15,6
25	12,9	13,2	13,5	13,8	14,1	14,4	14,6	14,9	15,4	15,8	16,7	17,3
30	14,4	14,7	15,0	15,3	15,6	15,9	16,2	16,4	16,9	17,3	18,2	18,8
35	15,8	16,1	16,4	16,7	17,0	17,3	17,6	17,9	18,2	18,7	19,6	20,2
40				18,0	18,3	18,6	18,9	19,2	19,6	20,0	20,9	21,5
43						19,3	19,6	19,9	20,4	20,8	21,7	

### SYMBOLS

CC : Cooling capacity (kW)  
 PI : Power input (kW)  
 LWE : Leaving Water Evaporator temperature (°C)  
 Ta : Ambient temperature (°C)

### NOTES

**1. Cooling capacity (CAP)**  
 Capacity is according to EN14511:2011 and valid for chilled water range  $\Delta t = 3 - 8^\circ\text{C}$

**2. Power input (kW)**  
 Power input is total input according to EN14511:2011

# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

### EUWA\*24KBZ

#### CC EUWAN24KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	34,7	38,3	41,9	45,5	49,0	52,6	56,2	59,7	65,1	70,4	81,1	88,3
25	31,9	35,4	38,9	42,4	45,9	49,4	52,9	56,3	61,6	66,8	77,3	84,2
30	29,1	32,5	35,9	39,3	42,7	46,1	49,5	52,9	58,1	63,2	73,4	80,2
35	26,5	29,9	33,2	36,6	39,9	43,3	46,6	50,0	55,0	60,0	70,1	76,8
40				33,2	36,4	39,7	42,9	46,2	51,0	55,9	65,6	72,1
43						37,7	40,9	44,1	48,9	53,7	63,3	

#### PI EUWAN24KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	14,6	15,0	15,4	15,9	16,3	16,8	17,2	17,6	18,3	18,9	20,2	21,1
25	16,4	16,9	17,3	17,7	18,2	18,6	19,1	19,5	20,1	20,8	22,1	23,0
30	18,4	18,9	19,3	19,7	20,2	20,6	21,1	21,5	22,1	22,8	24,1	25,0
35	20,6	21,0	21,4	21,9	22,3	22,7	23,2	23,6	24,1	24,9	26,2	27,1
40				24,1	24,6	25,0	25,4	25,9	26,5	27,2	28,5	29,4
43						26,4	26,9	27,3	27,9	28,6	29,9	

#### CC EUWAP/B24KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	35,9	39,4	43,0	46,6	50,2	53,7	57,3	60,9	66,2	71,6	82,3	89,4
25	33,1	36,6	40,0	43,5	47,0	50,5	54,0	57,5	62,7	67,9	78,4	85,4
30	30,2	33,7	37,1	40,5	43,9	47,3	50,7	54,1	59,2	64,3	74,5	81,3
35	27,7	31,0	34,4	37,7	41,1	44,4	47,8	51,1	56,1	61,2	71,2	77,9
40				34,3	37,6	40,8	44,1	47,3	52,2	57,0	66,7	73,2
43						38,9	42,1	45,3	50,0	54,8	64,4	

#### PI EUWAP/B24KBZ

Ta /LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	14,6	15,1	15,5	16,0	16,4	16,8	17,3	17,7	18,3	19,0	20,3	21,2
25	16,5	16,9	17,4	17,8	18,3	18,7	19,1	19,6	20,2	20,9	22,2	23,0
30	18,5	18,9	19,4	19,8	20,2	20,7	21,1	21,6	22,2	22,9	24,2	25,0
35	20,6	21,1	21,5	21,9	22,4	22,8	23,2	23,7	24,2	25,0	26,3	27,2
40				24,2	24,6	25,1	25,5	25,9	26,6	27,3	28,6	29,4
43						26,5	26,9	27,4	28,0	28,7	30,0	

### SYMBOLS

CC : Cooling capacity (kW)  
 PI : Power input (kW)  
 LWE : Leaving Water Evaporator temperature (°C)  
 Ta : Ambient temperature (°C)

### NOTES

**1. Cooling capacity (CAP)**  
 Capacity is according to EN14511:2011 and valid for chilled water range  $\Delta t = 3 - 8^\circ\text{C}$

**2. Power input (kW)**  
 Power input is total input according to EN14511:2011

4TW54812-1B

# 4 Capacity tables

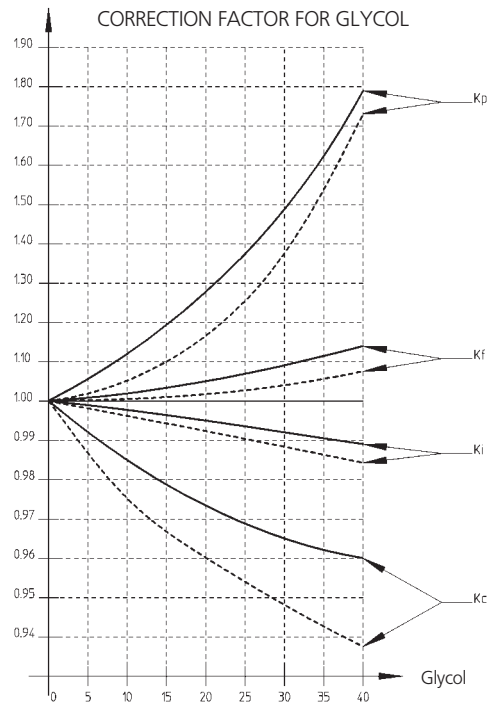
## 4 - 2 Capacity Correction Factor

1  
4

### EUWA-KBZW1

Required glycol concentration

Type	Concentration (wt%)	0	10	20	30	40
Ethylene glycol	Freezing point °C	0	-4	-9	-16	-23
	Minimum LWE °C	5	2	0	-5	-11
Propylene glycol	Freezing point °C	0	-3	-7	-13	-22
	Minimum LWE °C	5	3	-2	-4	-10



Legend: — Ethylene glycol  
 - - - Propylene glycol  
 Kc Correction on cooling capacity  
 Ki Correction on power input  
 Kf Correction on flow rate  
 Kp Correction on pressure drop

4TW54179-1





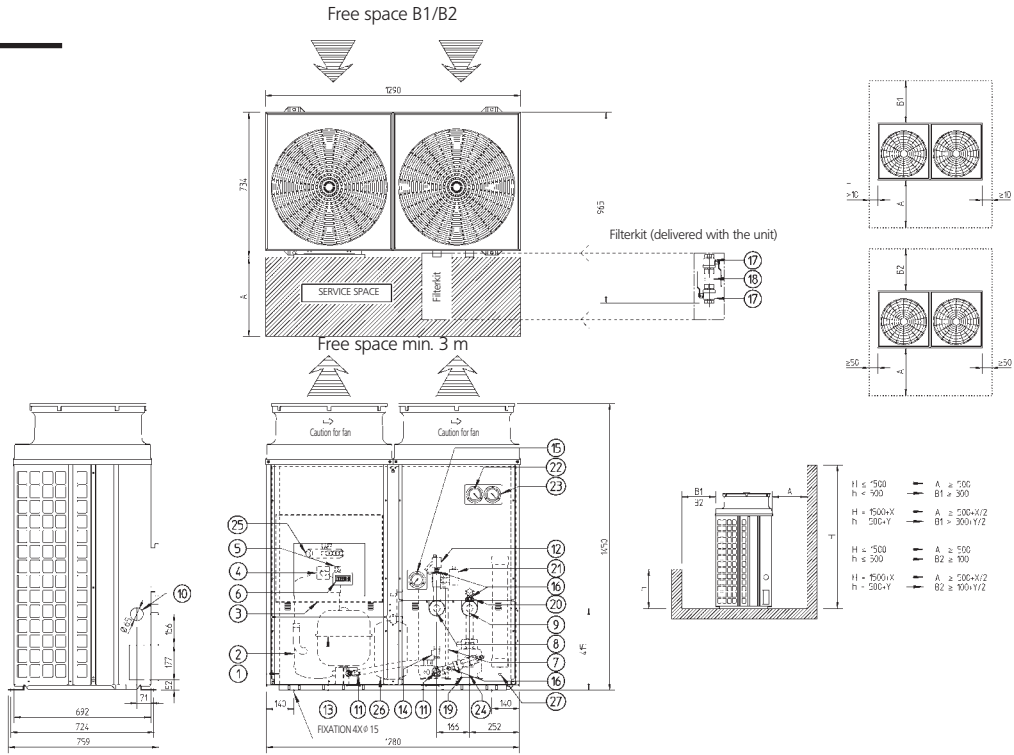


## 5 Dimensional drawings

### 5 - 1 Dimensional Drawings

#### EUWAP10-12KBZW1

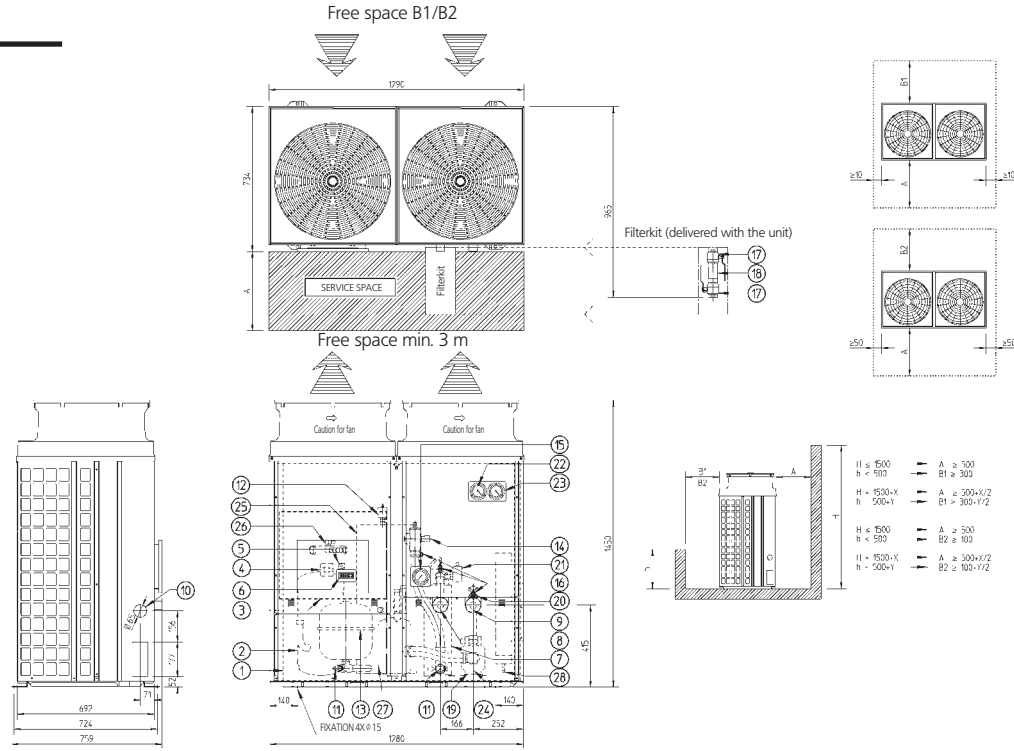
- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 1 1/4" M BSP
  - 9 Water OUT connection: 1 1/4" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Manometer (water)
  - 16 Pressure port
  - 17 Ball valve: 1-1/4" BSP
  - 18 Water filter: 1-1/4" BSP
  - 19 Pump
  - 20 Regulation valve
  - 21 Flow switch
  - 22 High pressure gauge (optional)
  - 23 Low pressure gauge (optional)
  - 24 Pump drain
  - 25 4 way valve \*
  - 26 Accumulator \*
  - 27 Liquid receiver \*
- \* Only for H/P models



3TW55714-2

#### EUWAB10-12KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 1 1/4" M BSP
  - 9 Water OUT connection: 1 1/4" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Manometer (water)
  - 16 Pressure port
  - 17 Ball valve: 1-1/4" BSP
  - 18 Water filter: 1-1/4" BSP
  - 19 Pump
  - 20 Regulation valve
  - 21 Flow switch
  - 22 High pressure gauge (optional)
  - 23 Low pressure gauge (optional)
  - 24 Pump drain
  - 25 Buffer tank
  - 26 4 way valve \*
  - 27 Accumulator \*
  - 28 Liquid receiver \*
- \* Only for H/P models



3TW55714-3

1  
5

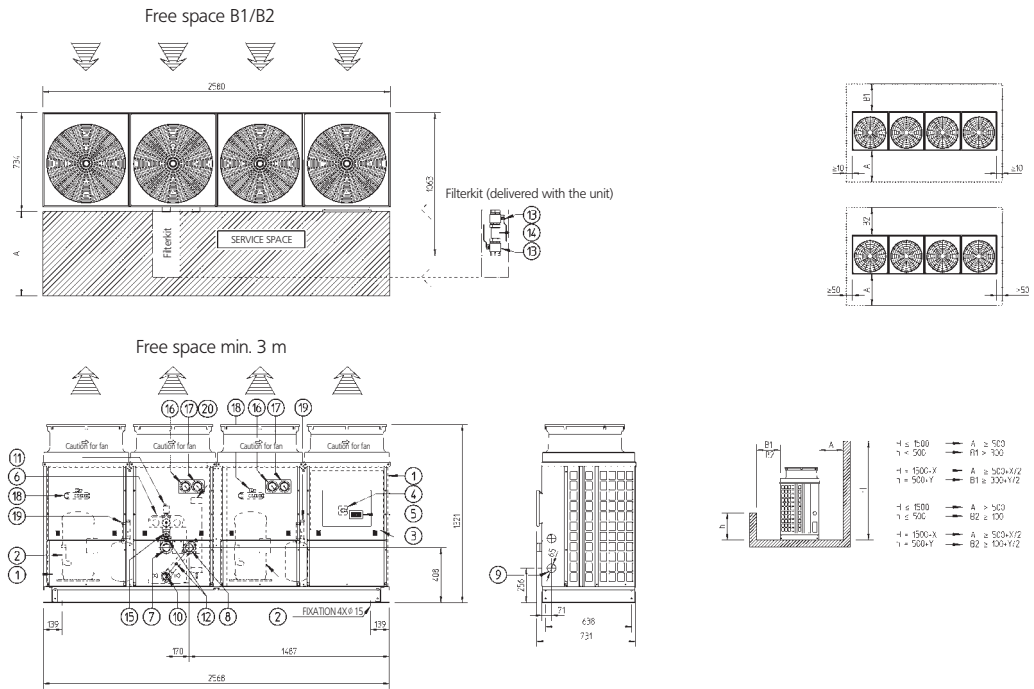
# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

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### EUWAN16KBZW1

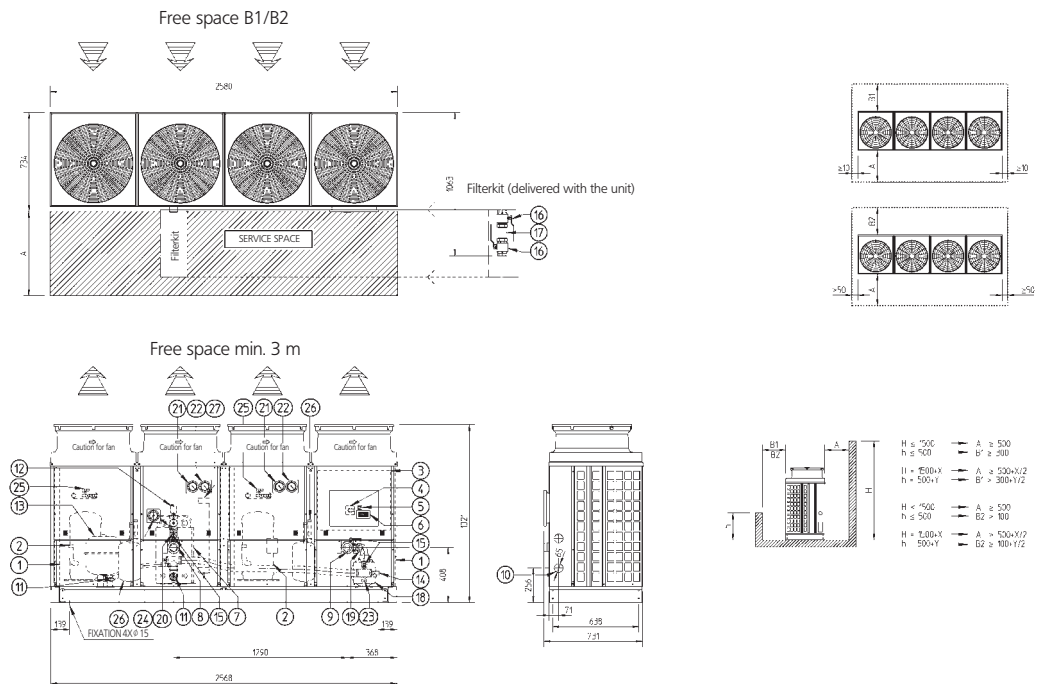
- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Digital display controller
  - 6 Water heat exchanger
  - 7 Water IN connection: 2" M BSP
  - 8 Water OUT connection: 2" M BSP
  - 9 Power supply intake
  - 10 Drain
  - 11 Air purge
  - 12 Pressure port
  - 13 Ball valve
  - 14 Water filter
  - 15 Flow switch
  - 16 High pressure gauge (optional)
  - 17 Low pressure gauge (optional)
  - 18 4 way valve\*
  - 19 Accumulator\*
  - 20 Liquid receiver\*
- \* Only for H/P models



3TW55734-1

### EUWAP16KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 2" M BSP
  - 9 Water OUT connection: 2" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Pressure port
  - 16 Ball valve
  - 17 Water filter
  - 18 Pump
  - 19 Regulation valve
  - 20 Flow switch
  - 21 High pressure gauge (optional)
  - 22 Low pressure gauge (optional)
  - 23 Pump drain
  - 24 Water pressure gauge
  - 25 4 way valve\*
  - 26 Accumulator\*
  - 27 Liquid receiver\*
- \* Only for H/P models



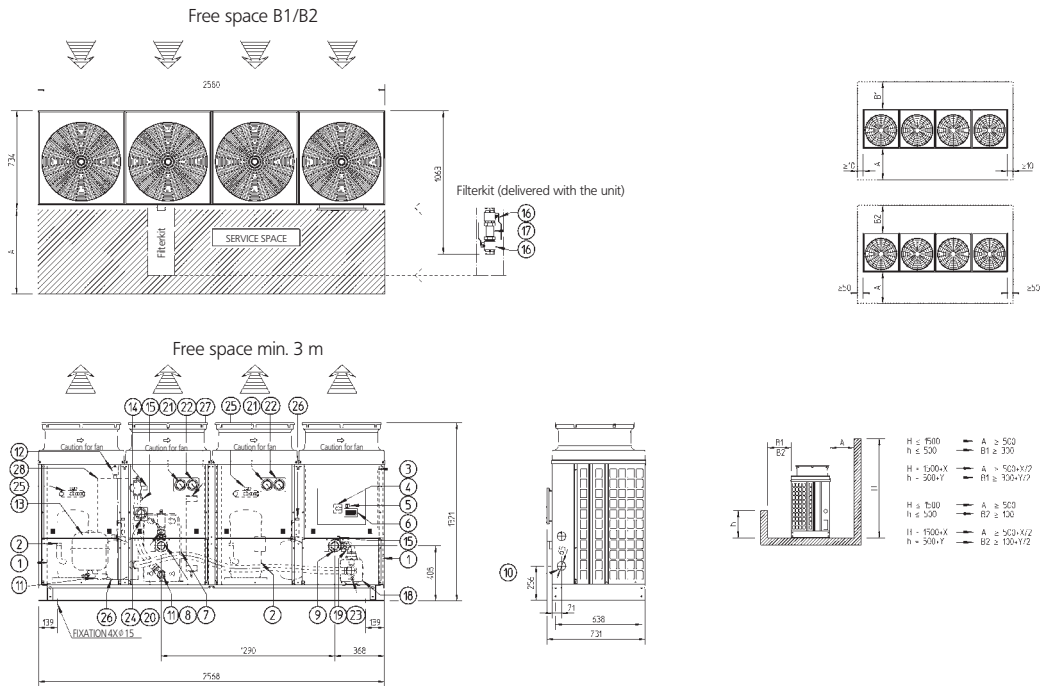
3TW55734-2

# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

### EUWAB16KBZW1

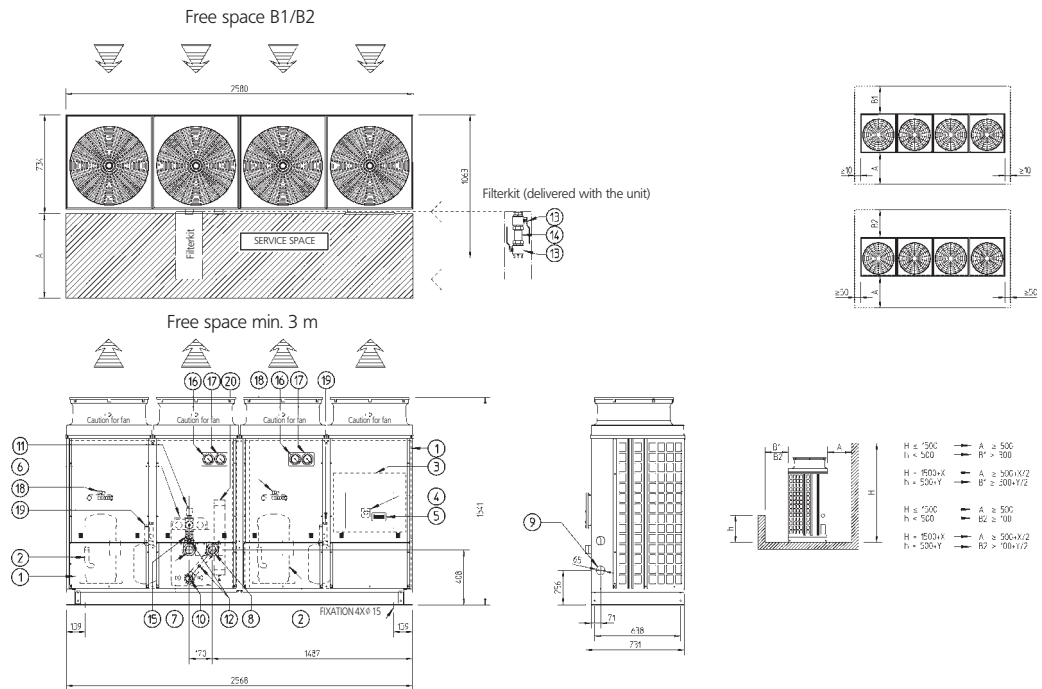
- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 2" M BSP
  - 9 Water OUT connection: 2" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Pressure port
  - 16 Ball valve
  - 17 Water filter
  - 18 Pump
  - 19 Regulation valve
  - 20 Flow switch
  - 21 High pressure gauge (optional)
  - 22 Low pressure gauge (optional)
  - 23 Pump drain
  - 24 Water pressure gauge
  - 25 4 way valve\*
  - 26 Accumulator\*
  - 27 Liquid receiver\*
  - 28 Buffer tank
- \* Only for H/P models



3TW55734-3

### EUWAN20-24KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Digital display controller
  - 6 Water heat exchanger
  - 7 Water IN connection: 2" M BSP
  - 8 Water OUT connection: 2" M BSP
  - 9 Power supply intake
  - 10 Drain
  - 11 Air purge
  - 12 Pressure port
  - 13 Ball valve
  - 14 Water filter
  - 15 Flow switch
  - 16 High pressure gauge (optional)
  - 17 Low pressure gauge (optional)
  - 18 4 way valve\*
  - 19 Accumulator\*
  - 20 Liquid receiver\*
- \* Only for H/P models



3TW55744-1

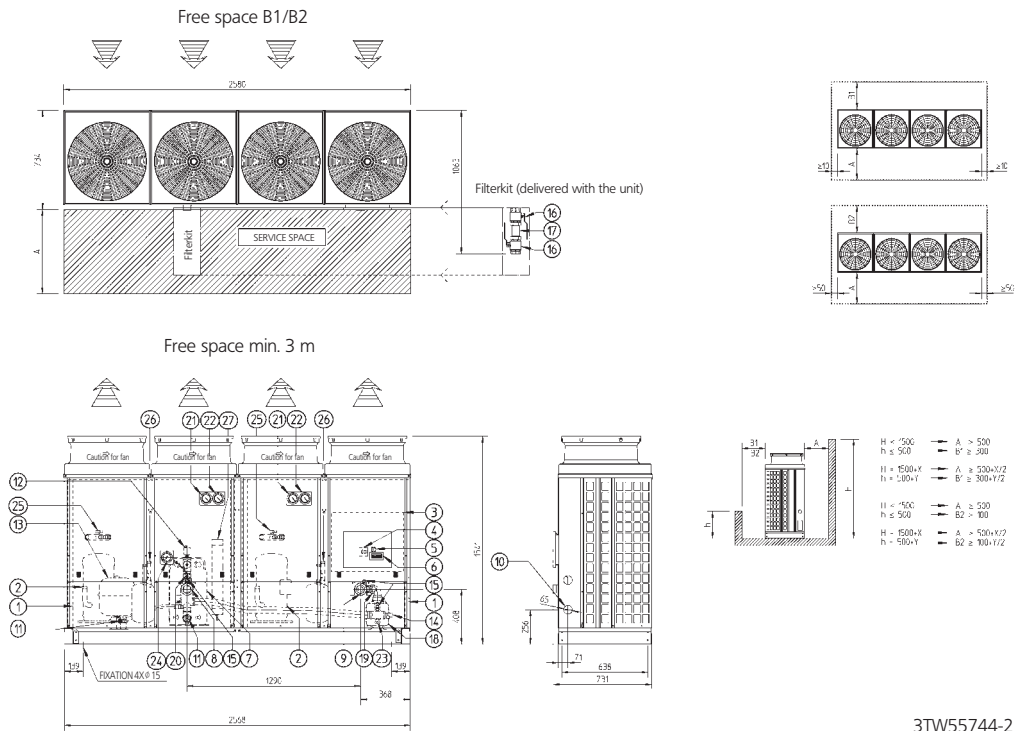
# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

1  
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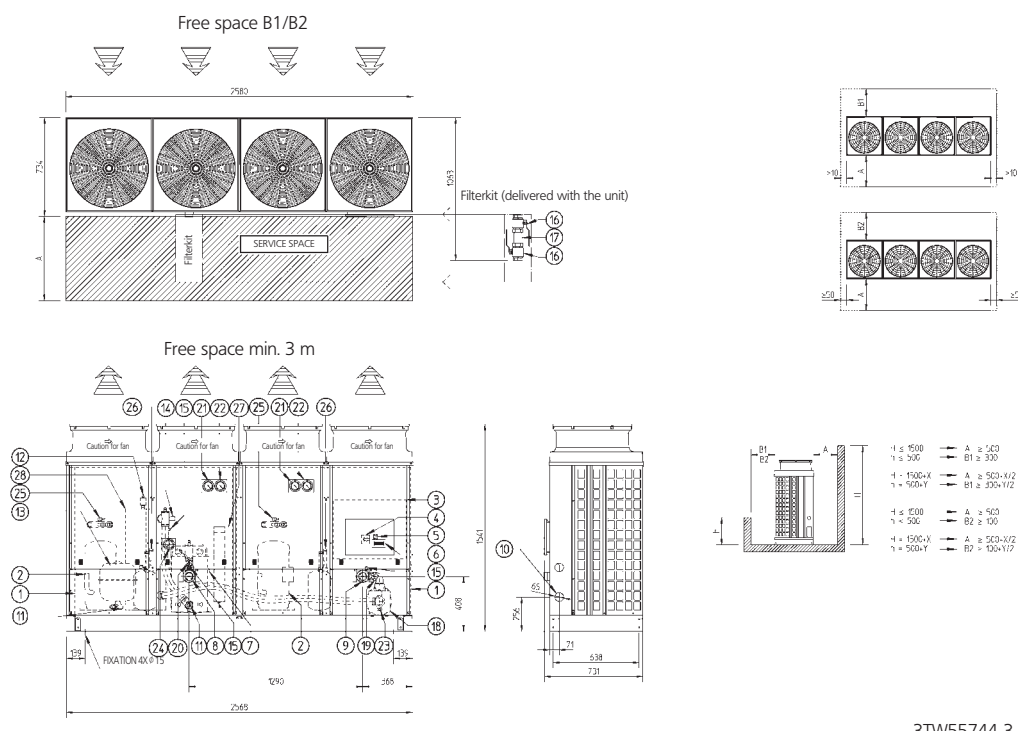
### EUWAP20-24KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 2" M BSP
  - 9 Water OUT connection: 2" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Pressure port
  - 16 Ball valve
  - 17 Water filter
  - 18 Pump
  - 19 Regulation valve
  - 20 Flow switch
  - 21 High pressure gauge (optional)
  - 22 Low pressure gauge (optional)
  - 23 Pump drain
  - 24 Water pressure gauge
  - 25 4 way valve\*
  - 26 Accumulator\*
  - 27 Liquid receiver\*
- \* Only for H/P models



### EUWAB20-24KBZW1

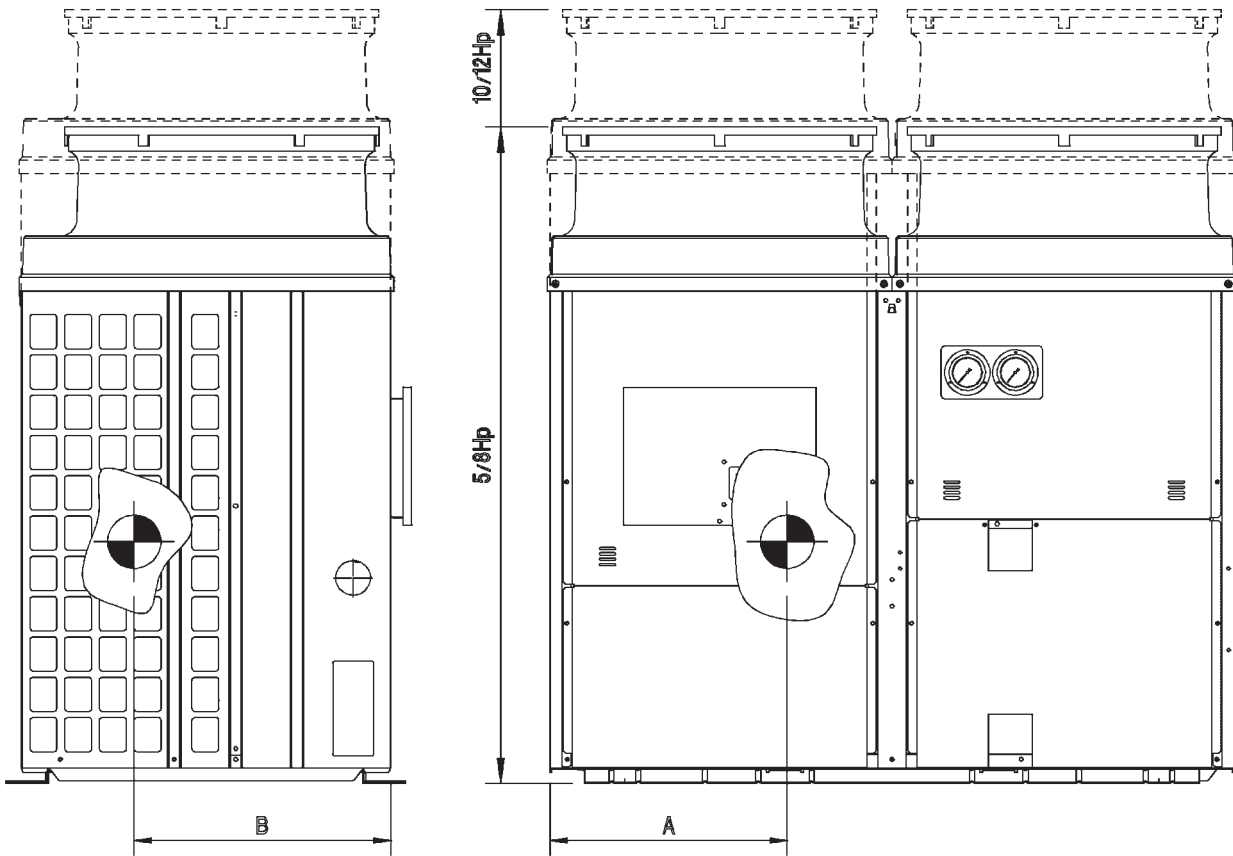
- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 2" M BSP
  - 9 Water OUT connection: 2" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Pressure port
  - 16 Ball valve
  - 17 Water filter
  - 18 Pump
  - 19 Regulation valve
  - 20 Flow switch
  - 21 High pressure gauge (optional)
  - 22 Low pressure gauge (optional)
  - 23 Pump drain
  - 24 Water pressure gauge
  - 25 4 way valve\*
  - 26 Accumulator\*
  - 27 Liquid receiver\*
  - 28 Buffer tank
- \* Only for H/P models



## 6 Centre of gravity

### 6 - 1 Centre of Gravity

EUWA\*5-12KBZW1



1  
6

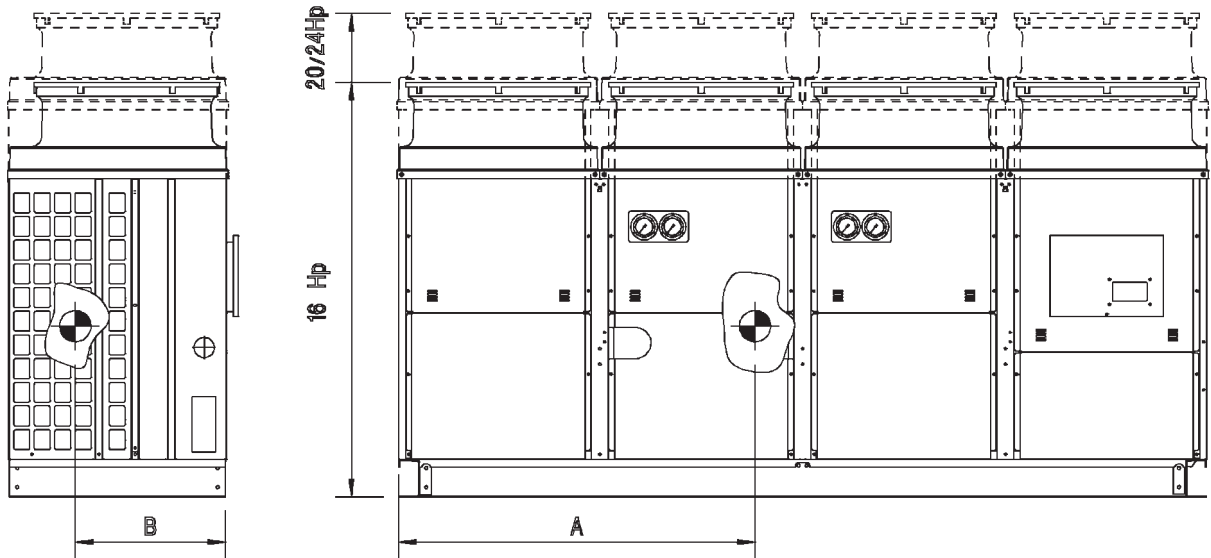
	5Hp		8Hp		10Hp		12Hp	
	A	B	A	B	A	B	A	B
B-Models	520	420	480	420	490	430	490	430
P-Models	510	420	470	420	480	430	490	430
N-Models	480	420	440	430	450	430	460	430

4TW54759-2

## 6 Centre of gravity

### 6 - 1 Centre of Gravity

EUWA\*16-24KBZW1



	16Hp		20Hp		24Hp	
	A	B	A	B	A	B
<b>B-Models</b>	1115	435	1120	435	1115	435
<b>P-Models</b>	1145	435	1140	435	1135	435
<b>N-Models</b>	1110	430	1115	435	1110	435

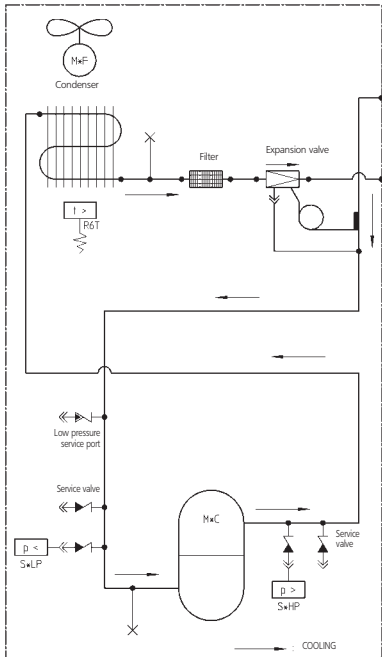
4TW54799-2

# 7 Piping diagrams

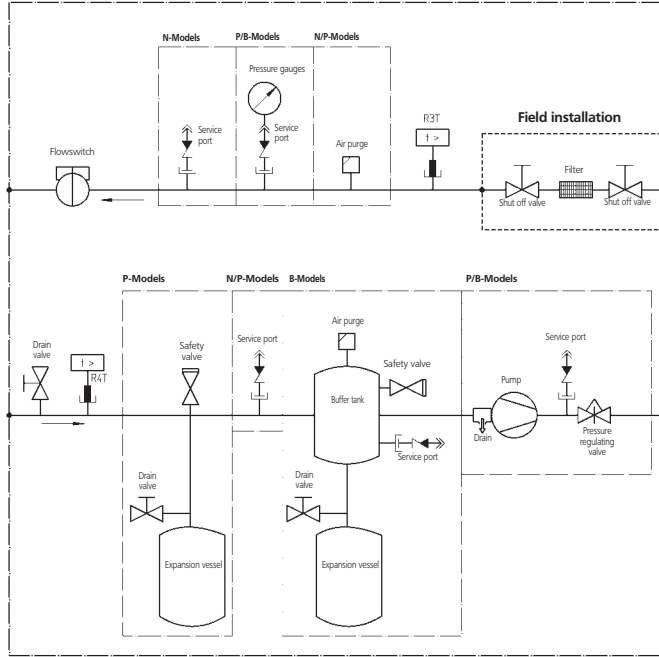
## 7 - 1 Piping Diagrams

EUWA\*5-24KBZW1

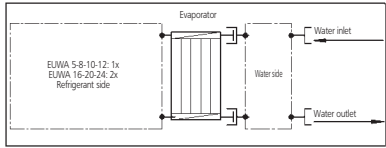
**Refrigerant side**



**Water side**



**Overview**



- R3T Inlet water temperature sensor
- R4T Outlet water temperature sensor
- R5T Ambient temperature sensor
- S\*HP High pressure switch
- S\*LP Low pressure switch
- M\*F Condenser fan
- M\*C Compressor

Check valve  
 Flare connection  
 Screw connection  
 Flange connection  
 Pinched pipe  
 Spinned pipe

3TW55625-1

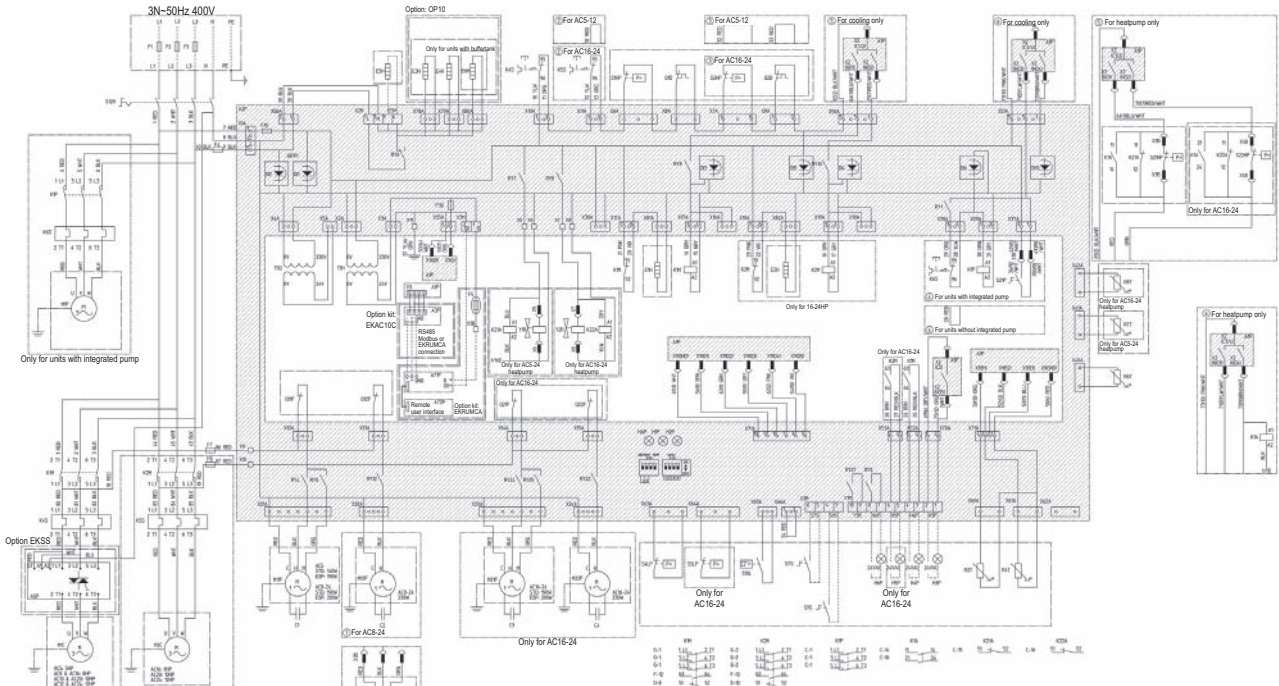
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# 8 Wiring diagrams

## 8 - 1 Wiring Diagrams - Three Phase

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8

EUWA-KBZW1 / EUWY-KBZW1



Y1R,Y2R	Reverse valve circuit 1, circuit 2	Q21F,Q22F	Thermal protector fan circuit 2	F3U	Fuse controller PCB
X1-8(A/B/M)	Connectors	Q11F,Q12F	Thermal protector fan circuit 1	F1U	Fuse I/O PCB
TR2	Transfo 230V-24V for supply of I/O PCB	Q1D,Q2D	Discharge thermal protector circuit 1, circuit 2	F7,F8	Fuse for fan motor circuit 1, circuit 2
TR1	Transfo 230V-24V for supply of controller PCB	PE	Main earth terminal	F6	Fuse for pumpcontactor
S21P	Switch for pump: Manual/Auto	M1P	Pump motor	F5	Surge proof fuse
S12M	Main isolator switch	M11F,M12F	Fan motors circuit 1	F4	Fuse I/O PCB & evaporator heatertape
S10L	Flowswitch	M21F,M22F	Fan motors circuit 2	F1,F2,F3	Main fuses for the unit
S9S	Switch for remote start/stop or dual setpoint	M1C,M2C	Compressor motor circuit 1, circuit 2	E6H	Buffertank (55l) heater
S7S	Switch for remote cooling/heating selection or dual setpoint	K1P	Pumpcontactor	E5H	Field heater
S4LP,S5LP	Low pressure switch circuit 1, circuit 2	K4S,K5S	Overcurrent relay pump	E3H,E4H	Evaporator heatertape
S1HP,S2HP	High pressure switch circuit 1, circuit 2	K1M, K2M	Overcurrent relay circuit 1, circuit 2	E1H,E2H	Crankcase heater circuit 1, circuit 2
S21HP,S22HP	High pressure switch during defrost circuit 1, circuit 2	K1A	Compressor contactor circuit 1, circuit 2	C1,C2,C3,C4	Capacitors for fanmotors
R7T,R8T	Coil temperature sensor for circuit 1, circuit 2	K21A,K22A	Auxiliary bypass relay	A71P	PCB: Power supply card
R6T	Ambient temperature sensor	H6P	Auxiliary bypass relay	A72P	PCB: Remote user interface
R4T	Evaporator outlet water temperature sensor	H5P	Indication lamp general operation	A5P	PCB: Softstarter for circuit 1
R3T	Evaporator inlet water temperature sensor	H4P	Indication lamp operation compressor 2	A3P	PCB: Address card
		H3P	Indication lamp operation compressor 1	A2P	PCB: I/O PCB
				A1P	PCB: Controller PCB

1TW60006-1

	Not standard included	
	Not possible as option	Possible as option
Obligatory	#	##
Not obligatory	*	**

A2P	A1P
<b>DIGITAL INPUTS</b>	<b>DIGITAL INPUTS</b>
D11 Reverse phase detection (L-N)	X1 (ID1-GND): Flow switch
D12 Reverse phase detection (N-L3)	X1 (ID2-GND): Remote ClH selection
D13 M1C ON detection	X1 (ID3-GND): High pressure switch + discharge protector + overcurrent
D14 M2C ON detection	X1 (ID4-GND): Low pressure switch
D15 Safety device detection	X1 (ID5-GND): Remote On/Off
D16 Pump ON detection	
D17 --	<b>DIGITAL OUTPUTS (RELAYS)</b>
D18 --	X2 (C12-NO1): Compressor M1C on
D19 --	X2 (C12-NO2): Compressor M2C on
D10 Reverse valve request	X2 (C3/4-NO3): Voltage free contact for pump
<b>DIGITAL OUTPUTS (RELAYS)</b>	X2 (C3/4-NO4): Reversing valve
RY1 Reversed phase protector	X2 (C5-NO5): Alarm voltage free contact
RY3 Pump/general operation	
RY4-24 Fan speed relay 1	<b>ANALOG INPUTS</b>
RY5-25 Fan speed relay 2	X1 (B1-GND): inlet water t°
RY6 Heatertape	X1 (B2-GND): outlet water t°
RY7 Reversing valve circ1	X1 (B3-GND): none
RY8 Reversing valve circ2	<b>ANALOG OUTPUTS</b>
RY9 M1C off (during defrost)	X1 (Y-GND)
RY10 M2C off (during defrost)	
RY12-22 Fan speed relay 3	
RY27 Reversing valve of water circuit	
<b>OTHERS</b>	
HAP Light emitting diode (service monitor green)	
H1P,H2P Light emitting diode (service monitor red)	
S1A Dipswitch (unit setting)	
S2A Dipswitch (defr. & fan setting)	

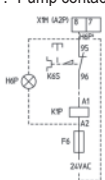
Units with integrated pump (400V)							
Fuses	5HP	8HP	10HP	12HP	16HP	20HP	24HP
F1,F2,F3 (g/L/gG)	3x20A	3x25A	3x32A	3x40A	3x50A	3x50A	3x63A

Units without integrated pump (400V)							
Fuses	5HP	8HP	10HP	12HP	16HP	20HP	24HP
F1,F2,F3 (g/L/gG)	3x20A	3x25A	3x25A	3x32A	3x40A	3x50A	3x63A

All models (400V)							
Fuses + overcurrent	5HP	8HP	10HP	12HP	16HP	20HP	24HP
F4	8A	8A	8A	8A	8A	8A	8A
F5	250mAT	250mAT	250mAT	250mAT	250mAT	250mAT	250mAT
F7,8	5A	5A	5A	5A	5A	5A	5A
F1U	5A	5A	5A	5A	5A	5A	5A
F3U	315mAT	315mAT	315mAT	315mAT	315mAT	315mAT	315mAT
K4S	9A	14A	17A	24A	14A	17A	24A
K5S	--	--	--	--	14A	17A	24A
K6S (st. pump or OPZH/ZL)	1.2A	1.2A	1.8A	1.8A	3A	3A	3A
K6S (op. pump or +OPZH/ZL)	1.9A	1.9A	1.9A	4.4A	4.4A	4.4A	4.4A

### NOTES

- Terminal 1, Wire 2, Field wiring to be in accordance with the local electrical regulations.
- If compressor rotates reversely, it may be damaged
- Optional:
  - OP10 = Evaporator heatertape
  - EKAC10C = Address card kit for Modbus or remote user interface connection
  - EKSS = softstart
  - OP PUMP high = High head pressure pump
  - EKURMCA = Remote user interface
- Terminals for fieldwiring
  - X1M: H3-6P: output terminal for fieldwiring (voltage free contact max 2A / output)
  - X2M: E5H: fieldheater (max 500W resistive / 230VAC / 50Hz)
  - X3M: S7S,S9S: Input terminal for fieldwiring (don't connect voltage)(switch load 6mA / 30VDC)
- Y1R, Y2R are activated in cooling mode
  - S7S open = heating
  - S7S closed = cooling
- Dipswitch setting
  - S2A dipswitch: Defrost & Fan setting
    - 1 > Only applicable for heatpump:
      - Off= start condition 1 for defrost cycle
      - On= start condition 2 for defrost cycle (5, 8, 10, 12, 16, 20, 24Hp)
    - 2 > Off= fansetting 1 (5, 8, 16Hp)
    - On= fansetting 2 (10, 12, 20, 24Hp)
  - S1A dipswitch: Unit setting
    - 1 > Off= 1 circuit
    - On= 2 circuit
    - 234 > Off Off Off = WC CO & WC CL CO
    - Off On Off = AC CO
    - On Off Off = AC HP (without compr. stop for defrost cycle)
    - On Off On = AC HP (with compr. stop for defrost cycle)
- Pump contact for units without integrated pump





## 9 Sound data

### 9 - 1 Sound Power Spectrum

	Sound power Lw per Octave band (dB)								Total (dBA)
	63	125	250	500	1000	2000	4000	8000	LwA
EUWA/Y(*)5K(B)ZW1	70	71	67	64	61	59	53	46	67
EUWA/Y(*)8K(B)ZW1	78	76	72	77	68	64	58	52	76
EUWA/Y(*)10K(B)ZW1	82	91	77	77	71	67	63	57	78
EUWA/Y(*)12K(B)ZW1	82	91	77	77	71	67	63	57	78
EUWA/Y(*)16K(B)ZW1	81	79	75	80	71	67	61	55	79
EUWA/Y(*)20K(B)ZW1	85	94	80	80	74	70	66	60	81
EUWA/Y(*)24K(B)ZW1	85	94	80	80	74	70	66	60	81

4TW54757-1D

#### NOTES

1. Data valid at nominal operation condition
2. Measured according ISO3744

# 10 Installation

## 10 - 1 Water Charge, Flow and Quality

Be sure the water quality is in accordance with the specifications below:

**1**  
**10**

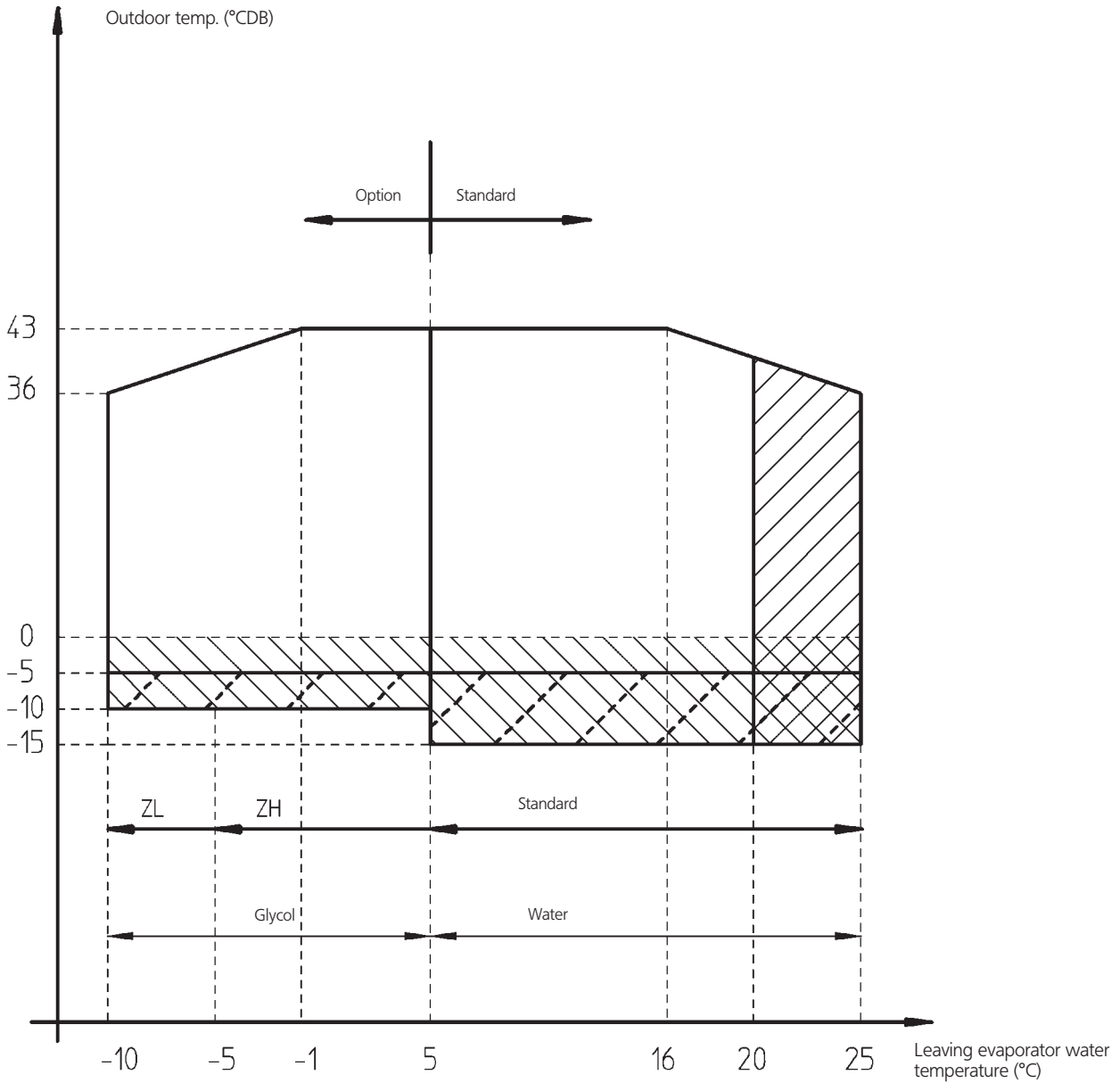
ITEMS	Cooled water		Tendency if out of criteria
	Circulating water (below 20°C)	Water supply	
Items to be controlled:			
- pH at 25°C	6.8 - 8.0	6.8 - 8.0	Corrosion + scale
- Electrical conduct (mS/m) at 25°C	Below 40	Below 30	Corrosion + scale
(μS/cm) at 25°C	—	—	Corrosion + scale
- Chloride ion (mg Cl <sup>-</sup> /l)	Below 50	Below 50	Corrosion
- Sulfate ion (mg SO <sub>4</sub> <sup>2-</sup> /l)	Below 50	Below 50	Corrosion
- M-alkalinity (pH 4.8) (mg SO <sub>3</sub> /l)	Below 50	Below 50	Scale
- Total hardness (mg CaCO <sub>3</sub> /l)	Below 70	Below 70	Scale
- Calcium hardness (mg CaCO <sub>3</sub> /l)	Below 50	Below 50	Scale
- Silica ion (mg SiO <sub>2</sub> /l)	Below 30	Below 30	Scale
Items to be referred to:			
- Iron (mg Fe/l)	Below 1.0	Below 0.3	Corrosion + scale
- Copper (mg Cu/l)	Below 1.0	Below 0.1	Corrosion
- Sulfite ion (mg S <sup>2-</sup> /l)	Not detectable	Not detectable	Corrosion
- ammonium ion (mg NH <sub>4</sub> <sup>+</sup> /l)	Below 1.0	Below 0.1	Corrosion
- Remaining chloride (mg Cl/l)	Below 0.3	Below 0.3	Corrosion
- Free carbide (mg SO <sub>2</sub> /l)	Below 4.0	Below 4.0	Corrosion
- Stability index	—	—	Corrosion + scale




Names, definitions and units are according to JIS K 0101. Units and figures between brackets are old units published as reference only.

# 11 Operation range

## 11 - 1 Operation Range

EUWA\*5-24KBZW1



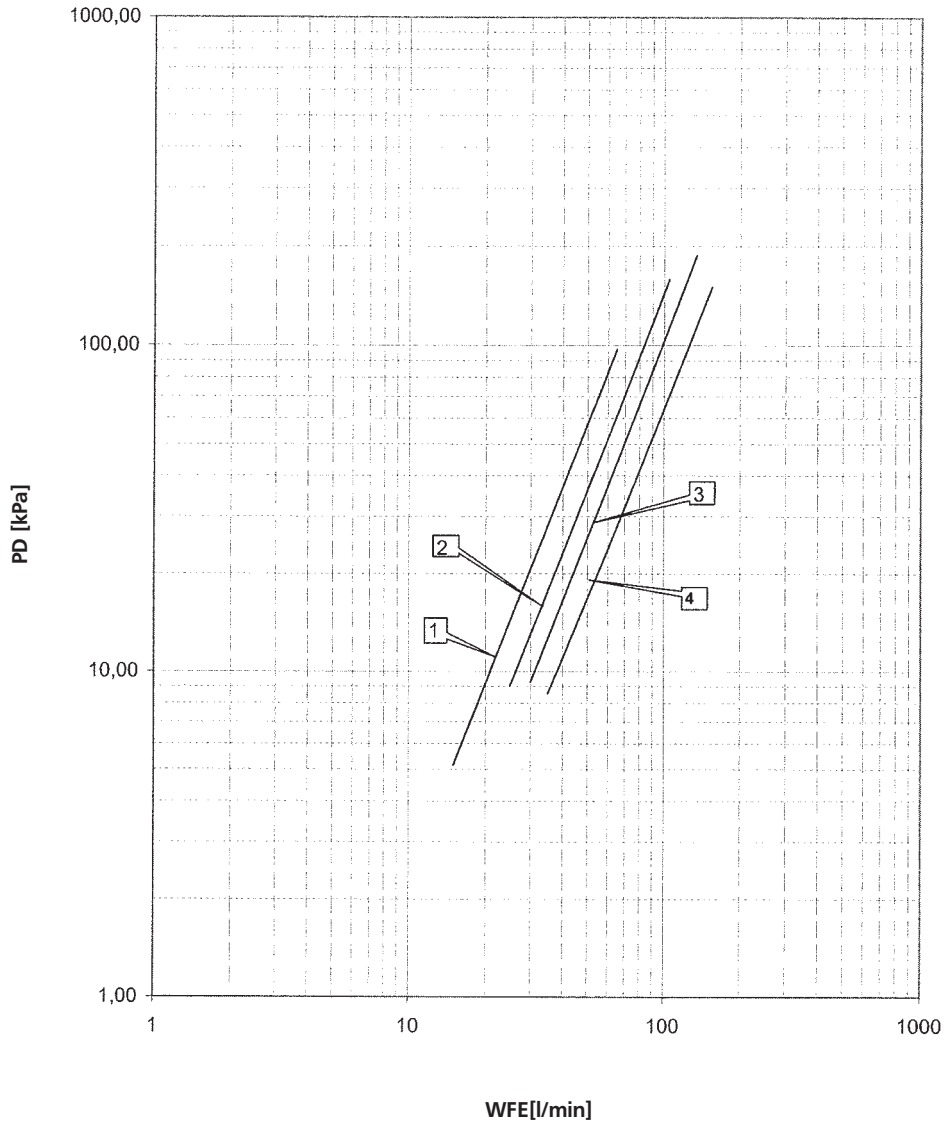
-  Pull down area
-  Protect the water circuit against freezing
-  If the units operate below -5°C and are installed in a rather windy space, a windscreen is required.

4TW54753-1

# 12 Hydraulic performance

## 12 - 1 Water Pressure Drop Curve Evaporator

EUWA\*5-12KBZW1



PD: Pressure drop through evaporator

WFE: Evaporator waterflow rate

- ① EUWA(\*)5K(B)ZW1
- ② EUWA(\*)8K(B)ZW1
- ③ EUWA(\*)10K(B)ZW1
- ④ EUWA(\*)12K(B)ZW1

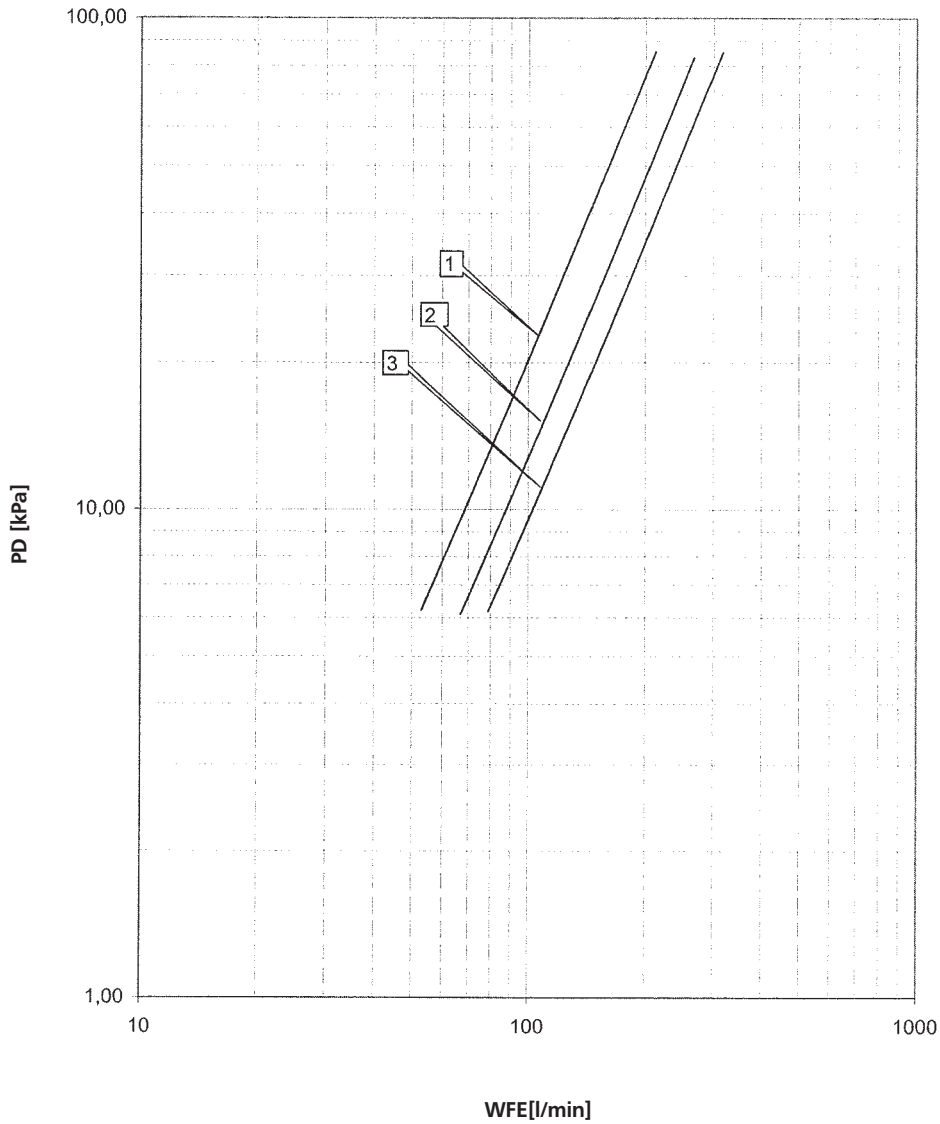
**Warning:** Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW54759-1A

## 12 Hydraulic performance

### 12 - 1 Water Pressure Drop Curve Evaporator

EUWA\*16-24KBZW1



PD: Pressure drop through evaporator

WFE: Evaporator waterflow rate

- ① EUWA(\*)16K(B)ZW1
- ② EUWA(\*)20K(B)ZW1
- ③ EUWA(\*)24K(B)ZW1

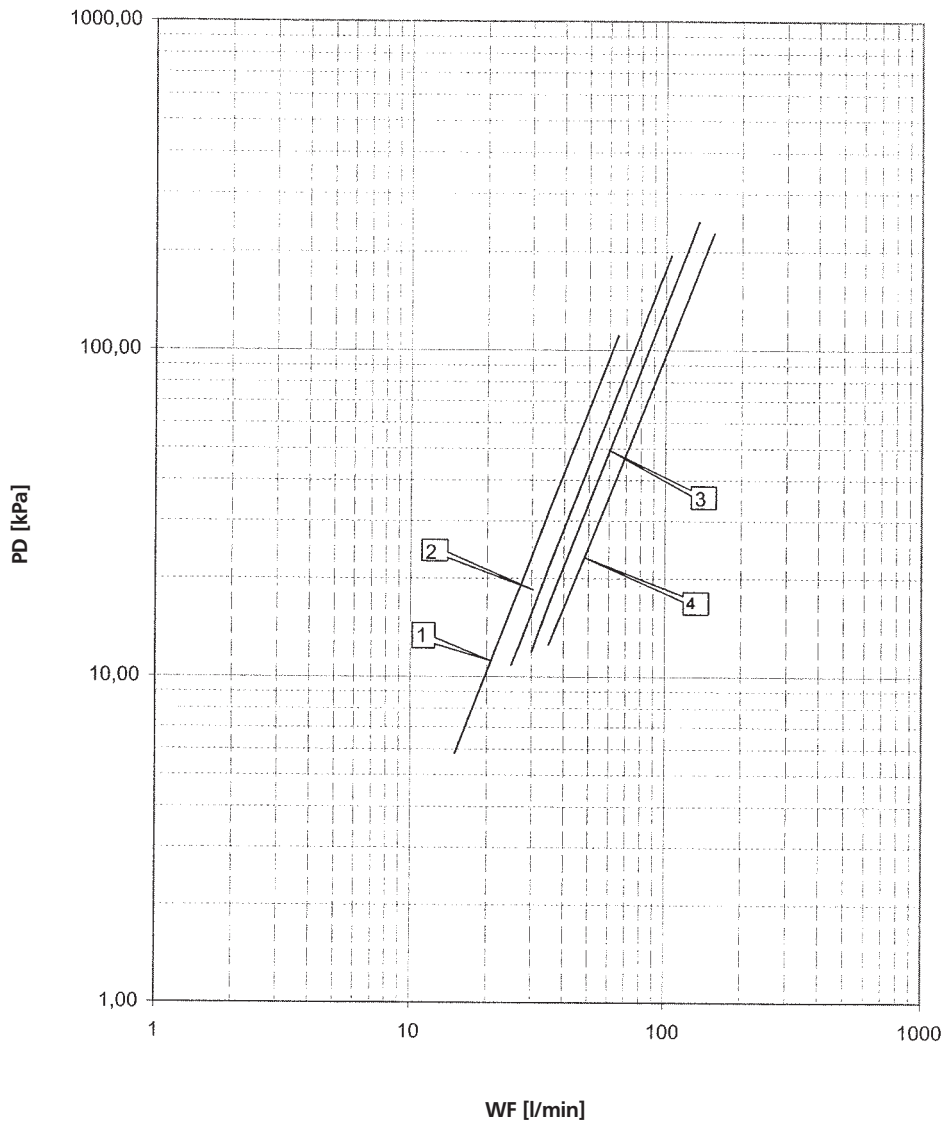
**Warning:** Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW54799-1B

# 12 Hydraulic performance

## 12 - 2 Water Pressure Drop Curve Evaporator/Condenser

EUWAN5-12KBZW1



PD: Pressure drop through the unit

WF: Waterflow rate

- ① EUWAN5KBZW1
- ② EUWAN8KBZW1
- ③ EUWAN10KBZW1
- ④ EUWAN12KBZW1

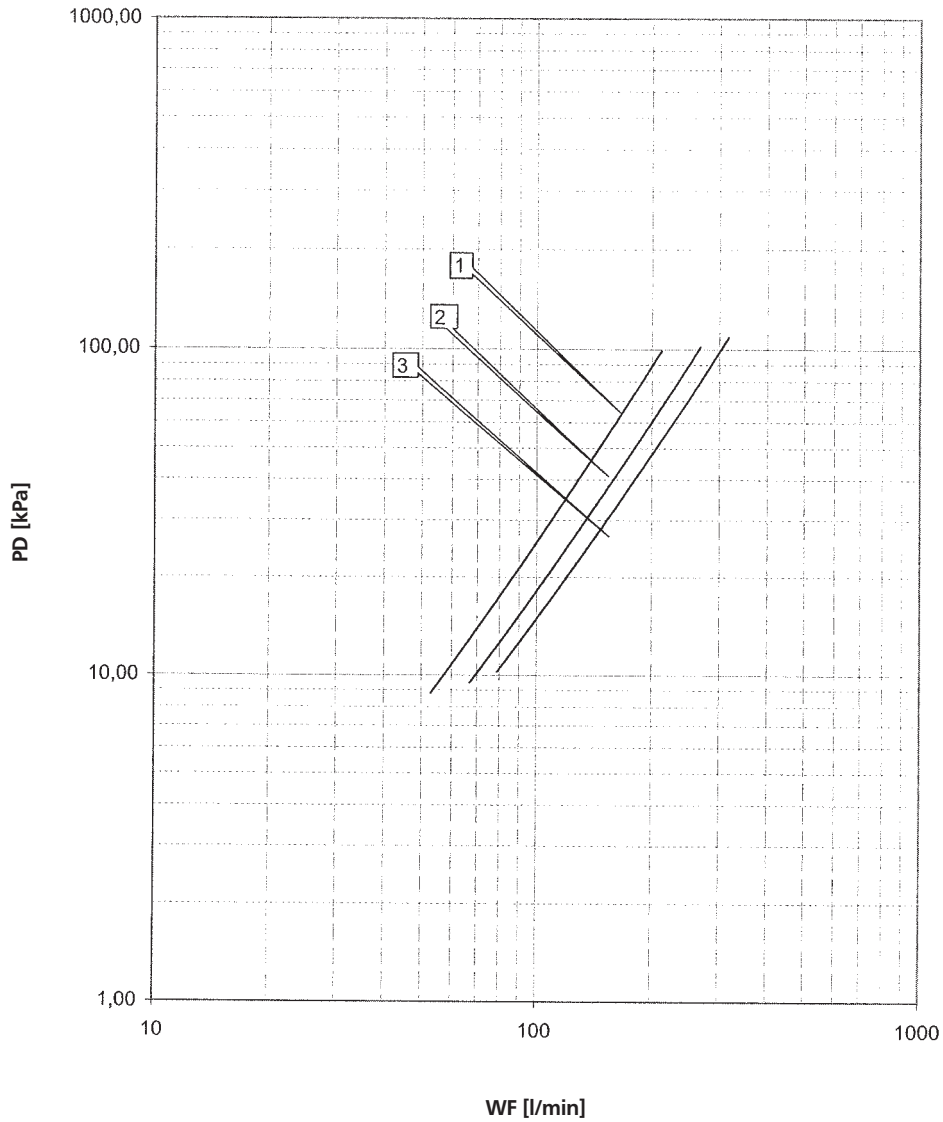
**Warning:** Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW55629-6

## 12 Hydraulic performance

### 12 - 2 Water Pressure Drop Curve Evaporator/Condenser

EUWAN16-24KBZW1



PD: Pressure drop through the unit

WF: Waterflow rate

- ① EUWAN16KBZW1
- ② EUWAN20KBZW1
- ③ EUWAN24KBZW1

**Warning:** Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW55669-6

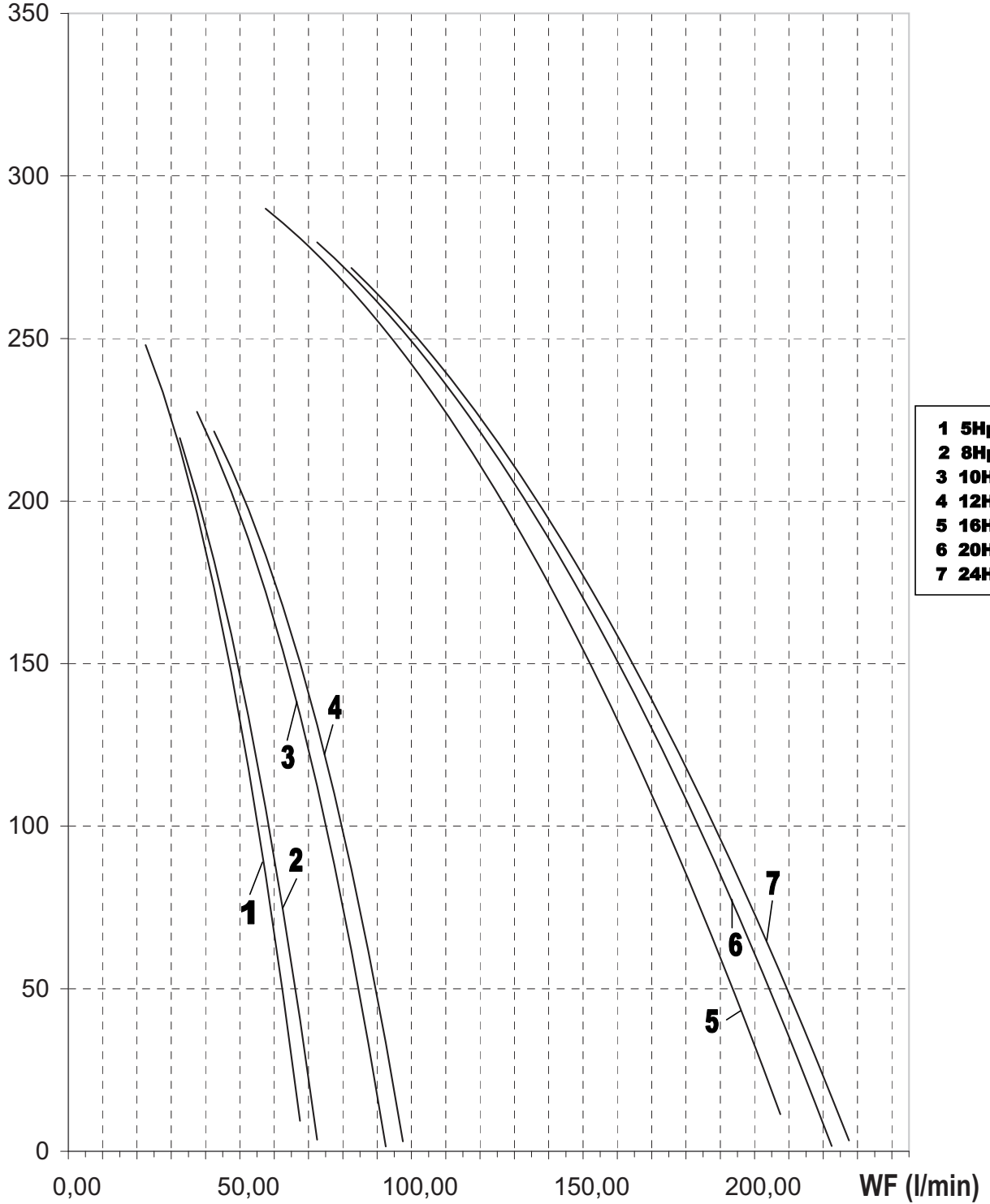
# 12 Hydraulic performance

## 12 - 3 Static Pressure Drop Unit

### EUWA5-24KBZW1

SP (kPa)

ESP Std CO



- 1 5Hp
- 2 8Hp
- 3 10Hp
- 4 12Hp
- 5 16Hp
- 6 20Hp
- 7 24Hp

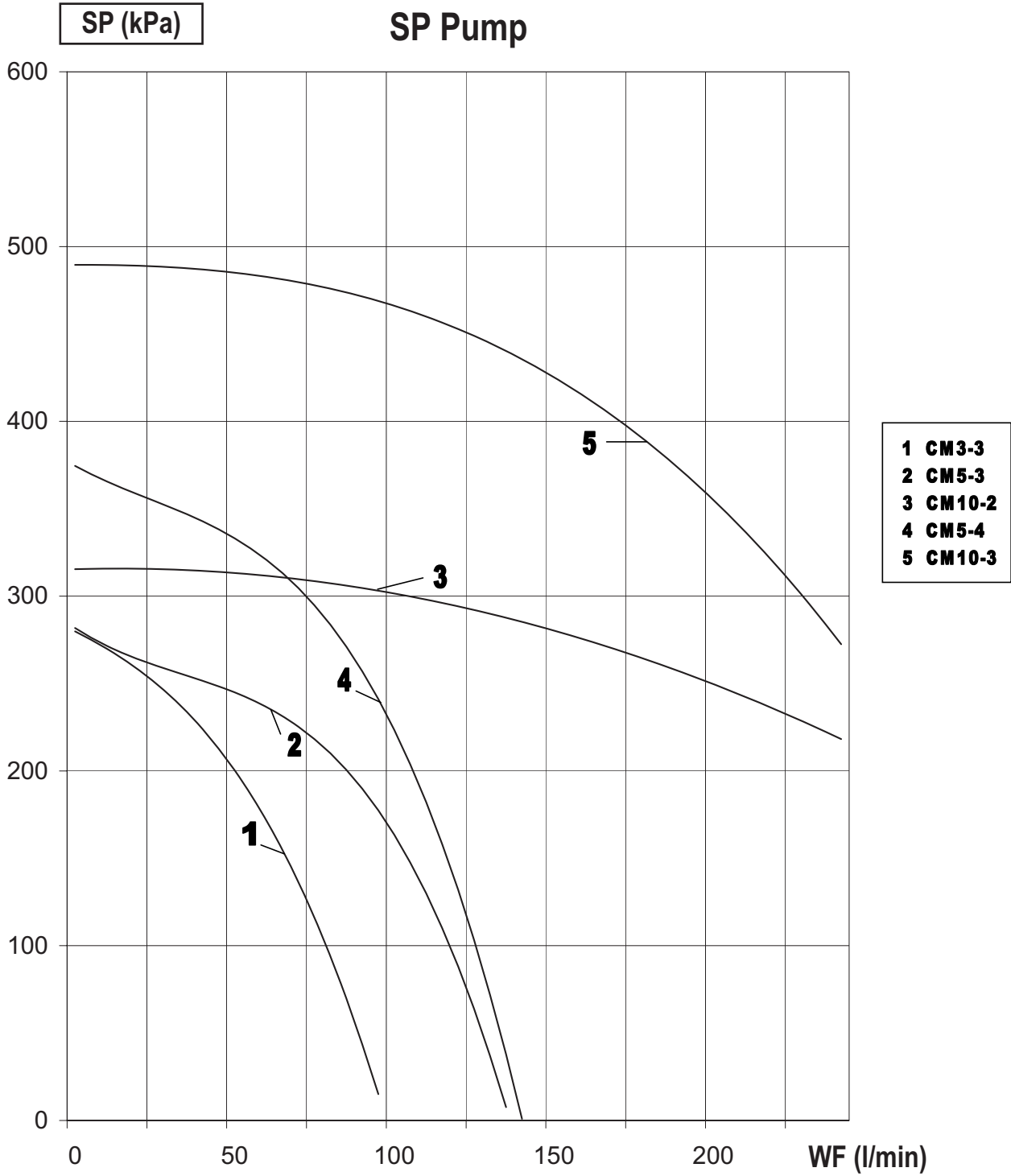
4TW60009-4



## 12 Hydraulic performance

### 12 - 4 Pump Characteristics

**EUWA5-24KBZW1**  
**EUWY5-24KBZW1**



4TW60009-3



# TABLE OF CONTENTS

## EUWY-KBZW1

1	Features .....	42
2	Specifications .....	43
	Technical Specifications .....	43
	Technical Specifications .....	45
	Technical Specifications .....	47
	Electrical Specifications .....	49
	Electrical Specifications .....	49
	Electrical Specifications .....	50
3	Options .....	52
	Options .....	52
4	Capacity tables .....	53
	Cooling Capacity Tables .....	53
	Heating Capacity Tables .....	56
	Capacity Correction Factor .....	58
5	Dimensional drawings .....	59
	Dimensional Drawings .....	59
6	Centre of gravity .....	65
	Centre of Gravity .....	65
7	Piping diagrams .....	67
	Piping Diagrams .....	67
8	Wiring diagrams .....	68
	Wiring Diagrams - Three Phase .....	68
9	Sound data .....	69
	Sound Power Spectrum .....	69
10	Installation .....	70
	Water Charge, Flow and Quality .....	70
11	Operation range .....	71
	Operation Range .....	71
12	Hydraulic performance .....	72
	Water Pressure Drop Curve Evaporator .....	72
	Water Pressure Drop Curve Evaporator/Condenser .....	74
	Static Pressure Drop Unit .....	76
	Pump Characteristics .....	77

# 1 Features

- Optimised for use with R-407C
- Daikin scroll compressor
- Reduced installation time thanks to integrated pump and/or buffer tank
- Possibility for a 200l buffer tank
- Low operating sound level
- Easy maintenance
- Main switch
- Water flow switch
- 3 different design options available: EUWAN chiller without integrated hydraulic module; EUWAP chiller with integrated hydraulic module (pump, expansion vessel, hydraulic components); EUWAB chiller with integrated hydraulic module (buffer tank, pump, expansion vessel, hydraulic components)

2  
1



## 2 Specifications

2-1 Technical Specifications				EUWYN5KBZ W1	EUWYP5KBZ W1	EUWYB5KBZ W1	EUWYN8KBZ W1	EUWYP8KBZ W1	EUWYB8KBZ W1	EUWYN10KB ZW1	
Cooling capacity	Nom.		kW	9.05 (1)	9.42 (1)		17.0 (1)	17.5 (1)		20.8 (1)	
Heating capacity	Nom.		kW	12.0 (2)	11.4 (2)		18.6 (2)	17.9 (2)		24.2 (2)	
Capacity steps			%	0-100							
Power input	Cooling	Nom.	kW	3.82 (1)	3.91 (1)		7.51 (1)	7.47 (1)		8.65 (1)	
	Heating	Nom.	kW	4.62 (2)	4.52 (2)		7.14 (2)	6.88 (2)		9.14 (2)	
EER				2.37 (1)	2.41 (1)		2.26 (1)	2.34 (1)		2.40 (1)	
COP				2.60 (2)	2.52 (2)		2.61 (2)	2.60 (2)		2.65 (2)	
Casing	Material		Polyester coated galvanised steel plate								
Dimensions	Unit	Height	mm	1,230						1,450	
		Width	mm	1,290							
		Depth	mm	734							
	Packed unit	Height	mm	1,425						1,645	
		Width	mm	1,380							
		Depth	mm	830							
Weight	Unit		kg	163	181	193	227	241	253	258	
	Operation weight		kg	165	184	252	230	244	312	261	
	Packed unit		kg	173	191	203	237	251	263	268	
Packing	Material		Wood / Plastic foil								
	Weight		kg	10							
Water heat exchanger	Type		Brazen plate								
	Quantity		1								
	Water volume		l	1.14		1.615		1.9			
	Water flow rate	Min.	l/min	21		31		38			
		Max.	l/min	68		106		137			
	Nominal water flow	Cooling	l/min	26 (1)		49 (1)		60 (1)			
		Heating	l/min	34 (2)		53 (2)		69 (2)			
	Nominal water pressure drop	Cooling	Heat exchanger	kPa	10 (1)		25 (1)		24 (1)		
		Heating	Heat exchanger	kPa	17 (2)		29 (2)		31 (2)		
	Insulation material		Kaiflex								
Model	Type		AC70X-34HX		AC70X-40HX		AC70X-50HX				
Air heat exchanger	Type		Cross fin coil/Hi-X tubes and PE coated waffle louvre fins								
	Rows	Quantity		2							
	Stages	Quantity		40				50			
	Fin pitch		mm	2							
	Face area		m <sup>2</sup>	1.570						1.970	
Hydraulic components	Buffer tank	Volume	l	-	55	-	55	-			
	Expansion vessel	Volume	l	-	12	-	12	-			
		Pre pressure	bar	-	1.5	-	1.5	-			
	Water filter	Material		Brass							
Fan	Quantity		2								
	Type		Axial								
	Discharge direction		Vertical								
Fan group	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min	160 (per 2 fans)		170 (per 2 fans)				
Fan motor	Output		W	140		190					
	Quantity		1								
	Position		Vertical								
	Drive		Direct drive								
Fan motor 2	Output		W	140		230					
	Quantity		1								
Sound power level	Cooling	Nom.	dBA	67		76		78			

2  
2

## 2 Specifications

2-1 Technical Specifications				EUWYN5KBZ W1	EUWYP5KBZ W1	EUWYB5KBZ W1	EUWYN8KBZ W1	EUWYP8KBZ W1	EUWYB8KBZ W1	EUWYN10KB ZW1	
Compressor	Type		Hermetically sealed scroll compressor								
	Quantity		1								
	Model		JT140BF-YE				JT212DA-YE			JT265DA-YE	
	Speed	rpm	2,900								
	Starting method		Direct								
	Crankcase heater		W	33				50			
Operation range	Water side	Cooling	Min.	°CDB	-10						
			Max.	°CDB	25						
		Heating	Min.	°CDB	35						
			Max.	°CDB	50						
	Air side	Cooling	Min.	°CDB	-15						
			Max.	°CDB	43						
		Heating	Min.	°CDB	-10						
			Max.	°CDB	21						
Refrigerant	Type		R-407C								
	Control		Thermostatic expansion valve								
	Circuits	Quantity	1								
Refrigerant circuit	Charge	kg	4.6				4.7		5.4		
Water circuit	Piping connections diameter		inch	G 1"1/4 (male)							
	Piping		inch	1-1/4"							
	Safety valve		bar	-	3		-	3		-	
	Manometer		Yes								
	Drain valve / fill valve		Yes, ø15								
	Shut off valve		Yes								
	Total water volume		l	2 (3)	3 (3)	59 (3)	3 (3)		59 (3)	3 (3)	
	Minimum water volume in the system		l	43 (4.0)				82 (4.0)			100 (4.0)
	Air purge valve		Yes								
	Refrigerant oil	Type		FVC68D							
Charged volume		l	1.5				2.7				
Safety devices	Item	01	High pressure switch								
		02	Discharge temperature control								
		03	Compressor motor overcurrent relay								
		04	Pump motor overcurrent								
		05	Fan motor thermal protection								
		06	Anti-recycling and guard timer								
		07	Digital display controller with electronic temperature control								
		08	Reverse phase protector								
		09	Fuse								
Pump Standard	Nominal ESP pump	Cooling	kPa	-	249		-	203		-	
	Manufacturer		Grundfos								
	Model		CM3-3								
	Quantity		1								
	Type		Horizontal multi-stage end-suction				Horizontal multi-stage end-suction				
Pump Optional	Efficiency	%	-	77.4		-	77.4		-		
	Efficiency level	IE2									
	Manufacturer		Grundfos								
	Model		CM5-4								
	Quantity		1								
	Rated speed	rpm	-	2840-2870				-	2840-2870		-
	Type		Horizontal multi-stage end suction				Horizontal multi-stage end suction				
Hydraulic performance	nominal ESP unit STANDARD		kPa	-	232 (1)		-	149 (1)		-	
	Pressure drop unit		kPa	13 (1)	-		34 (1)	-		37 (1)	

## 2 Specifications

2-2 Technical Specifications				EUWYP10KB ZW1	EUWYB10KB ZW1	EUWYN12KB ZW1	EUWYP12KB ZW1	EUWYB12KB ZW1	EUWYN16KB ZW1	EUWYP16KB ZW1	
Cooling capacity	Nom.		kW	21.5 (1)		24.8 (1)	25.4 (1)		34.1 (1)	35.0 (1)	
Heating capacity	Nom.		kW	23.3 (2)		27.2 (2)	26.0 (2)		37.1 (2)	35.7 (2)	
Capacity steps			%	0-100					0-50-100		
Power input	Cooling	Nom.	kW	8.69 (1)		11.5 (1)			14.9 (1)	15.2 (1)	
	Heating	Nom.	kW	8.98 (2)		10.9 (2)	10.4 (2)		14.2 (2)	14.0 (2)	
EER				2.47 (1)		2.16 (1)	2.21 (1)		2.29 (1)	2.30 (1)	
COP				2.59 (2)		2.50 (2)			2.61 (2)	2.55 (2)	
Casing	Material		Polyester coated galvanised steel plate								
Dimensions	Unit	Height	mm	1,450					1,321		
		Width	mm	1,290					2,580		
		Depth	mm	734							
	Packed unit	Height	mm	1,645					1,745		
		Width	mm	1,380					2,660		
		Depth	mm	830					910		
Weight	Unit		kg	272	284	258	272	284	455	473	
	Operation weight		kg	275	343	261	275	343	461	482	
	Packed unit		kg	282	294	268	282	294	480	498	
Packing	Material		Wood / Plastic foil								
	Weight		kg	10					25		
Water heat exchanger	Type		Brazen plate								
	Quantity		1								
	Water volume		l	1.9		2.375			2.964		
	Water flow rate	Min.	l/min	38		45			61		
		Max.	l/min	137		155			212		
	Nominal water flow	Cooling	l/min	60 (1)		72 (1)			98 (1)		
		Heating	l/min	69 (2)		77 (2)			106 (2)		
	Nominal water pressure drop	Cooling	Heat exchanger	kPa	24 (1)		33 (1)			12 (1)	
		Heating	Heat exchanger	kPa	31 (2)		38 (2)			14 (2)	
	Insulation material		Kaiflex								
	Model	Type		AC70X-50HX					AC230X-38HX		
Air heat exchanger	Type		Cross fin coil/Hi-X tubes and PE coated waffle louvre fins								
	Rows	Quantity		2							
	Stages	Quantity		50				40			
	Fin pitch		mm	2							
	Face area		m <sup>2</sup>	1.970					1.570 + 1.570		
Hydraulic components	Buffer tank	Volume	l	-	55	-	55		-		
	Expansion vessel	Volume	l	12		-	12		-	12	
		Pre pressure	bar	1.5		-	1.5		-	1.5	
	Water filter	Material		Brass							
Fan	Quantity		2						4		
	Type		Axial								
	Discharge direction		Vertical								
Fan group	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min		170 (per 2 fans)					
Fan motor	Output		W	190							
	Quantity		1						2		
	Position		Vertical								
	Drive		Direct drive								
Fan motor 2	Output		W	230							
	Quantity		1						2		
Sound power level	Cooling	Nom.	dBA	78						79	

## 2 Specifications

2-2 Technical Specifications				EUWYP10KB ZW1	EUWYB10KB ZW1	EUWYN12KB ZW1	EUWYP12KB ZW1	EUWYB12KB ZW1	EUWYN16KB ZW1	EUWYP16KB ZW1				
Compressor	Type			Hermetically sealed scroll compressor										
	Quantity			1					2					
	Model			JT265DA-YE		JT335DA-YE			JT212DA-YE					
	Speed			rpm			2,900							
	Starting method			Direct										
	Crankcase heater			W			50							
Operation range	Water side	Cooling	Min.	°CDB	-10									
			Max.	°CDB	25									
		Heating	Min.	°CDB	35									
			Max.	°CDB	50									
	Air side	Cooling	Min.	°CDB	-15									
			Max.	°CDB	43									
Heating		Min.	°CDB	-10										
		Max.	°CDB	21										
Refrigerant	Type			R-407C										
	Control			Thermostatic expansion valve										
	Circuits	Quantity		1					2					
Refrigerant circuit	Charge			kg			5.4		5.1					
Water circuit	Piping connections diameter			inch			G 1"1/4 (male)			2" male				
	Piping			inch			1-1/4"			2"				
	Safety valve			bar			3		-	3				
	Manometer			Yes										
	Drain valve / fill valve			Yes, ø15										
	Shut off valve			Yes										
	Total water volume			l			3 (3)		59 (3)	3 (3)	4 (3)	60 (3)	6 (3)	9 (3)
	Minimum water volume in the system			l			100 (4.0)		119 (4.0)			82 (4.0)		
	Air purge valve			Yes										
Refrigerant oil	Type			FVC68D										
	Charged volume			l			2.7							
Safety devices	Item	01		High pressure switch										
		02		Discharge temperature control										
		03		Compressor motor overcurrent relay										
		04		Pump motor overcurrent										
		05		Fan motor thermal protection										
		06		Anti-recycling and guard timer										
		07		Digital display controller with electronic temperature control										
		08		Reverse phase protector										
		09		Fuse										
Pump Standard	Nominal ESP pump	Cooling	kPa		237		-	223		-	302			
	Manufacturer			Grundfos		-	Grundfos		-	Grundfos				
	Model			CM5-3		-	CM5-3		-	CM10-2				
	Quantity			1		-	1		-	1				
	Type			Horizontal multi-stage end-suction		-	Horizontal multi-stage end-suction		-	Horizontal multi-stage end-suction				
Pump Optional	Efficiency		%		77.4		-	83.2		-	83.2			
	Efficiency level			IE2		-	IE2		-	IE2				
	Manufacturer			Grundfos		-	Grundfos		-	Grundfos				
	Model			CM5-4		-	CM10-3		-	CM10-3				
	Quantity			1		-	1		-	1				
	Rated speed		rpm		2840-2870		-	2900-2920		-	2900-2920			
Type			Horizontal multi-stage end suction		-	Horizontal multi-stage end suction		-	Horizontal multi-stage end suction					
Hydraulic performance	nominal ESP unit STANDARD		kPa		167 (1)		-	123 (1)		-	249			
	Pressure drop unit		kPa		-		52 (1)	-		12	-			



## 2 Specifications

2-3 Technical Specifications				EUWYB16KB ZW1	EUWYN20KB ZW1	EUWYP20KB ZW1	EUWYB20KB ZW1	EUWYN24KB ZW1	EUWYP24KB ZW1	EUWYB24KB ZW1	
Cooling capacity	Nom.		kW	35.0 (1)	39.8 (1)	40.9 (1)	49.8 (1)	50.9 (1)			
Heating capacity	Nom.		kW	35.7 (2)	46.2 (2)	44.5 (2)	54.2 (2)	52.5 (2)			
Capacity steps			%	0-50-100							
Power input	Cooling	Nom.	kW	15.2 (1)	16.4 (1)	16.6 (1)	22.8 (1)	22.9 (1)			
	Heating	Nom.	kW	14.0 (2)	17.5 (2)	17.1 (2)	21.6 (2)	21.1 (2)			
EER				2.30 (1)	2.43 (1)	2.46 (1)	2.18 (1)	2.22 (1)			
COP				2.55 (2)	2.64 (2)	2.60 (2)	2.51 (2)	2.49 (2)			
Casing	Material	Polyester coated galvanised steel plate									
Dimensions	Unit	Height	mm	1,321	1,541						
		Width	mm	2,580							
		Depth	mm	734							
	Packed unit	Height	mm	1,745							
		Width	mm	2,660							
		Depth	mm	910							
Weight	Unit		kg	485	516	534	546	516	534	546	
	Operation weight		kg	550	522	544	612	522	544	612	
	Packed unit		kg	510	541	559	571	541	559	571	
Packing	Material	Wood / Plastic foil									
	Weight		kg	25							
Water heat exchanger	Type	Brazen plate									
	Quantity	1									
	Water volume		l	2.964	3.9			4.524			
	Water flow rate	Min.	l/min	61	72			89			
		Max.	l/min	212	263			309			
	Nominal water flow	Cooling	l/min	98 (1)	115 (1)			143 (1)			
		Heating	l/min	106 (2)	132 (2)			155 (2)			
	Nominal water pressure drop	Cooling	Heat exchanger	kPa	12 (1)				19 (1)		
		Heating	Heat exchanger	kPa	14 (2)	16 (2)			22 (2)		
	Insulation material	Kaiflex									
	Model	Type	AC230X-38HX		AC230X-50HX			AC230X-58HX			
Air heat exchanger	Type	Cross fin coil/Hi-X tubes and PE coated waffle louvre fins									
	Rows	Quantity	2								
	Stages	Quantity	40	50							
	Fin pitch		mm	2							
	Face area		m <sup>2</sup>	1.570 + 1.570	1.970+1.970						
Hydraulic components	Buffer tank	Volume	l	55	-	55	-	55			
	Expansion vessel	Volume	l	12	-	12	-	12			
		Pre pressure	bar	1.5	-	1.5	-	1.5			
	Water filter	Material	Brass								
Fan	Quantity	4									
	Type	Axial									
	Discharge direction	Vertical									
Fan group	Air flow rate	Cooling	Nom.	m <sup>3</sup> /min	170 (per 2 fans)						
Fan motor	Output		W	190							
	Quantity	2									
	Position	Vertical									
	Drive	Direct drive									
Fan motor 2	Output		W	230							
	Quantity	2									
Sound power level	Cooling	Nom.	dBA	79	81						

## 2 Specifications

2-3 Technical Specifications				EUWYB16KB ZW1	EUWYN20KB ZW1	EUWYP20KB ZW1	EUWYB20KB ZW1	EUWYN24KB ZW1	EUWYP24KB ZW1	EUWYB24KB ZW1		
Compressor	Type		Hermetically sealed scroll compressor									
	Quantity		2									
	Model		JT212DA-YE	JT265DA-YE				JT335DA-YE				
	Speed	rpm	2,900									
	Starting method		Direct									
	Crankcase heater		W	50								
Operation range	Water side	Cooling	Min.	°CDB	-10							
			Max.	°CDB	25							
		Heating	Min.	°CDB	35							
			Max.	°CDB	50							
	Air side	Cooling	Min.	°CDB	-15							
			Max.	°CDB	43							
	Heating	Min.	°CDB	-10								
		Max.	°CDB	21								
Refrigerant	Type		R-407C									
	Control		Thermostatic expansion valve									
	Circuits	Quantity	2									
Refrigerant circuit	Charge	kg	5.1	5.4				5.6				
Water circuit	Piping connections diameter		inch	2" male								
	Piping		inch	2"								
	Safety valve		bar	3	-	3		-	3			
	Manometer		Yes									
	Drain valve / fill valve		Yes, ø15									
	Shut off valve		Yes									
	Total water volume		l	65 (3)	6 (3)	10 (3)	66 (3)	6 (3)	10 (3)	66 (3)		
	Minimum water volume in the system		l	82 (4.0)	96 (4.0)				119 (4.0)			
	Air purge valve		Yes									
Refrigerant oil	Type		FVC68D									
	Charged volume		l	2.7								
Safety devices	Item	01	High pressure switch									
		02	Discharge temperature control									
		03	Compressor motor overcurrent relay									
		04	Pump motor overcurrent									
		05	Fan motor thermal protection									
		06	Anti-recycling and guard timer									
		07	Digital display controller with electronic temperature control									
		08	Reverse phase protector									
		09	Fuse									
Pump Standard	Nominal ESP pump	Cooling	kPa	302	-	296		-	284			
	Manufacturer			Grundfos	-	Grundfos		-	Grundfos			
	Model			CM10-2	-	CM10-2		-	CM10-2			
	Quantity			1	-	1		-	1			
	Type			Horizontal multi-stage end-suction	-	Horizontal multi-stage end-suction		-	Horizontal multi-stage end-suction			
Pump Optional	Efficiency	%	83.2	-	83.2		-	83.2				
	Efficiency level			IE2	-	IE2		-	IE2			
	Manufacturer			Grundfos	-	Grundfos		-	Grundfos			
	Model			CM10-3	-	CM10-3		-	CM10-3			
	Quantity			1	-	1		-	1			
	Rated speed	rpm	2900-2920	-	2900-2920		-	2900-2920				
	Type			Horizontal multi-stage end suction	-	Horizontal multi-stage end suction		-	Horizontal multi-stage end suction			
Hydraulic performance	nominal ESP unit STANDARD		kPa	249	-	229		-	185			
	Pressure drop unit		kPa	-	19	-		27	-			

## 2 Specifications

2-4 Electrical Specifications			EUWYN5KBZ W1	EUWYP5KBZ W1	EUWYB5KBZ W1	EUWYN8KBZ W1	EUWYP8KBZ W1	EUWYB8KBZ W1	EUWYN10KB ZW1	
Compressor	Phase		3~							
	Frequency	Hz	50							
	Voltage	V	400							
	Starting current	A	60.0			95.5		110.0		
	Nominal running current (RLA)	A	5.5			10.7		13.0		
	Maximum running current	A	9.0			14.0		17.0		
	Starting method		Direct on line							
	Crankcase heater	W	33			50				
Power supply	Name		W1							
	Phase		3N~							
	Frequency	Hz	50							
	Voltage	V	400							
	Voltage range	Min.	%	-10						
		Max.	%	10						
Unit	Starting current	A	62.2	63.5	97.9	99.2	113			
	Current	Zmax	Text	0.26			0.22			
	Nominal running current (RLA)	Cooling	A	7.7	9.0	13.6	14.9	15.9		
	Maximum running current	A	11.2	12.5	16.9	18.2	19.9			
	Recommended fuses according to IEC standard 269-2		3 x 20gL/gG			3 x 25gL/gG				
Fans	Phase		1~							
	Voltage	V	230							
	Frequency	Hz	50							
	Maximum running current	A	2.2			2.9				
Control circuit	Phase		1~							
	Frequency	Hz	50							
	Voltage	V	230							
	Recommended fuses		Factory installed							
Wiring connections			See installation manual							
Pump Standard	Phase		-	3~	-	3~	-			
	Frequency	Hz	-	50	-	50	-			
	Voltage	V	-	400	-	400	-			
	Maximum running current	A	-	1.2	-	1.2	-			
Pump Optional	Power supply	Phase	-	3	-	3	-			
		Frequency	Hz	-	50	-	50	-		
		Voltage	V	-	400	-	400	-		
	Current	Maximum running current	A	-	1.9	-	1.9	-		
	Power output	Rated	kW	-	0.85	-	0.85	-		

2-5 Electrical Specifications			EUWYP10KB ZW1	EUWYB10KB ZW1	EUWYN12KB ZW1	EUWYP12KB ZW1	EUWYB12KB ZW1	EUWYN16KB ZW1	EUWYP16KB ZW1	
Compressor	Phase		3~							
	Frequency	Hz	50							
	Voltage	V	400							
	Starting current	A	110.0			136.0		95.0		
	Nominal running current (RLA)	A	13.0			17.6		10.7		
	Maximum running current	A	17.0			24.0		14.0		
	Starting method		Direct on line							
	Crankcase heater	W	50							
Power supply	Name		W1							
	Phase		3N~							
	Frequency	Hz	50							
	Voltage	V	400							
	Voltage range	Min.	%	-10						
		Max.	%	10						

## 2 Specifications

2  
2

2-5 Electrical Specifications				EUWYP10KB ZW1	EUWYB10KB ZW1	EUWYN12KB ZW1	EUWYP12KB ZW1	EUWYB12KB ZW1	EUWYN16KB ZW1	EUWYP16KB ZW1					
Unit	Starting current		A	114		139	140		97.9	99.9					
	Current	Zmax	Text	0.22		0.21									
	Nominal running current (RLA)	Cooling	A	17.2		20.5	21.8		27.2	29.2					
	Maximum running current		A	21.2		26.9	28.2		33.8	25.8					
	Recommended fuses according to IEC standard 269-2				3 x 32gL/gG			3 x 40gL/gG		3 x 50gL/gG					
Fans	Phase			1~											
	Voltage		V	230											
	Frequency		Hz	50											
	Maximum running current		A	2.9					5.8						
Control circuit	Phase			1~											
	Frequency		Hz	50											
	Voltage		V	230											
	Recommended fuses				Factory installed										
Wiring connections				See installation manual											
Pump Standard	Type			-											
	Phase			3~	-	3~	-	3~	-	3~					
	Frequency		Hz	50	-	50	-	50	-	50					
	Voltage		V	400	-	400	-	400	-	400					
	Maximum running current		A	1.8	-	1.8	-	1.8	-	3.0					
Pump Optional	Power supply	Phase		3		-		3		-		3			
		Frequency		Hz		50		-		50		-		50	
		Voltage		V		400		-		400		-		400	
	Current	Maximum running current		A		1.9		-		4.4		-		4.4	
		Power output		Rated		kW		0.85		-		2.2		-	

2-6 Electrical Specifications				EUWYB16KB ZW1	EUWYN20KB ZW1	EUWYP20KB ZW1	EUWYB20KB ZW1	EUWYN24KB ZW1	EUWYP24KB ZW1	EUWYB24KB ZW1	
Compressor	Phase			3~							
	Frequency		Hz	50							
	Voltage		V	400							
	Starting current		A	95.0	110.0				136.0		
	Nominal running current (RLA)		A	10.7	13.0				17.6		
	Maximum running current		A	14.0	17.0				24.0		
	Starting method				Direct on line						
	Crankcase heater		W	50							
Power supply	Name			W1							
	Phase			3N~							
	Frequency		Hz	50							
	Voltage		V	400							
	Voltage range	Min.	%	-10							
Max.		%	10								
Unit	Starting current		A	99.9	113	115		139	142		
	Current	Zmax	Text	0.21					0.20		
	Nominal running current (RLA)	Cooling	A	29.2	31.8	33.8		41	43.7		
	Maximum running current		A	25.8	39.8	41.8		53.8	56.5		
	Recommended fuses according to IEC standard 269-2				3 x 50gL/gG				3 x 63gL/gG		
Fans	Phase			1~							
	Voltage		V	230							
	Frequency		Hz	50							
	Maximum running current		A	5.8							
Control circuit	Phase			1~							
	Frequency		Hz	50							
	Voltage		V	230							
	Recommended fuses				Factory installed						

## 2 Specifications

2-6 Electrical Specifications			EUWYB16KB ZW1	EUWYN20KB ZW1	EUWYP20KB ZW1	EUWYB20KB ZW1	EUWYN24KB ZW1	EUWYP24KB ZW1	EUWYB24KB ZW1	
Wiring connections			See installation manual							
Pump Standard	Type		-							
	Phase		3~	-	3~	-	3~	-	3~	
	Frequency	Hz	50	-	50	-	50	-	50	
	Voltage	V	400	-	400	-	400	-	400	
	Maximum running current	A	3.0	-	3.0	-	3.0	-	3.0	
Pump Optional	Power supply	Phase	3	-	3	-	3	-	3	
		Frequency	Hz	50	-	50	-	50	-	50
		Voltage	V	400	-	400	-	400	-	400
	Current	Maximum running current	A	4.4	-	4.4	-	4.4	-	4.4
		Power output	Rated	kW	2.2	-	2.2	-	2.2	-

### Notes

- (1) Cooling: Ta 35°C - LWE 7°C (DT=5°C), data according EN 14511: 2011
- (2) Heating: Ta DB/WB 7°C/6°C - LWC 45°C (DT=5°C), data according EN 14511: 2011
- (3) Including piping + PHE + buffer tank (if present); excluding expansion vessel
- (4) Including water volume in the unit. In most applications this minimum water volume will have a satisfying result. In critical processes or in rooms with high heat load, extra water volume might be required.
- (5) Equipment complying with EN/IEC 61000-3-12
- (6) EN/IEC 61000-3-12: European/international technical standard setting the limits for voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with rated currents ≤ 75A

# 3 Options

## 3 - 1 Options

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3

### EUWY-KBZW1

Optional equipment for EUWY-KBZ  
Horse Power: 5-24

**Modelnumber**

EUWY(\*)5KBZW1 (on)      EUWY(\*)10KBZW1 (on)      EUWY(\*)16KBZW1 (on)      EUWY(\*)24KBZW1 (on)  
 EUWY(\*)8KBZW1 (on)      EUWY(\*)12KBZW1 (on)      EUWY(\*)20KBZW1 (on)

Option number	Option description	Decimal code	(on)	Unit size																								Availability
				5KBZW1			8KBZW1			10KBZW1			12KBZW1			16KBZW1			20KBZW1			24KBZW1						
				N	P	B	N	P	B	N	P	B	N	P	B	N	P	B	N	P	B	N	P	B	N	P	B	
	Standard unit	-		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	<b>Not completely combinable options</b>	1st digit																										
ZH	chilled water temp down to -5°C	12	C--	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted
ZL	chilled water temp down to -10°C	24	O--	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted
	<b>Completely combinable options</b>	2nd/3rd digit																										
ESP	Fan motor size up (high esp 5mmH20)	4	--4	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted
OP PUMP HIGH	Pump size up	8	--8	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted
OP10	Evaporator heatertape	16	--G	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted
	<b>Available kits</b>																											
EKGAU5/8KA	Gauges kit 5/8 Hp-units			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKGAU10/12KA	Gauges kit 10/12 Hp-units			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKGAU16KA	Gauges kit 16 Hp-units			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKGAU20/24KA	Gauges kit 20/24 Hp-units			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKSS	Softstarter kit			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKAC10C	Address card for connection to BMS or Remote user interface			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKRUMCA	Remote installed user interface			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKBT	Buffertank 200 l			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
	<b>Example of possible option combinations</b>																											
ESP + OP PUMP HIGH		12	--C																									
ESP + OP10		20	--K																									
ESP + OP10 + OP PUMP HIGH		28	--S																									
OP10 + OP PUMP HIGH		24	--O																									

**NOTES**

- x = not available yet  
 • = available  
 -- = not available  
 •-<number> = available and a quantity <number> is necessary / unit
- Impossible option combination : ZH + ZL
- (\*) = N or P or B
- (on) = option number  
 - 1st digit (on) = sum of 1st digit decimal code and this summation transferred to a 36 character system  
 - 2/3rd digit (on) = sum of 2/3rd digit decimal code and this summation transferred to a 36 character system
- To install EKRUMCA => EKAC10C needs to be installed on the unit.
- EKAC10C : this address card allows direct connection to MODBUS BMS system

3TW60079-5

# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

### EUWYN-KBZ

		Cooling N-models									
Tamb (°C)		20		25		30		35		40	
LWE [°C]	Model	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
5	5 KZ	9,55	2,85	9,05	3,14	8,65	3,48	8,25	3,79	7,75	4,11
	8 KZ	19,5	5,77	18,2	6,18	16,9	6,75	15,7	7,41	14,4	8,16
	10 KZ	23,6	6,56	22,2	7,12	20,8	7,76	19,4	8,51	18,1	9,35
	12 KZ	28,5	8,53	26,8	9,36	25,0	10,2	23,2	11,2	21,5	12,2
	16 KZ	39,1	11,5	36,5	12,3	33,9	13,4	31,5	14,7	28,9	16,2
	24 KZ	45,2	12,4	42,5	13,5	39,8	14,7	37,2	16,1	34,7	17,7
7	5 KZ	10,1	2,86	9,85	3,18	9,45	3,49	9,05	3,82	8,55	4,12
	8 KZ	20,9	5,87	19,6	6,33	18,3	6,87	17,0	7,51	15,7	8,28
	10 KZ	25,0	6,69	23,6	7,25	22,2	7,91	20,8	8,65	19,4	9,49
	12 KZ	30,1	8,70	28,4	9,53	26,6	10,5	24,8	11,5	23,1	12,5
	16 KZ	41,9	11,7	39,3	12,6	36,7	13,7	34,1	14,9	31,5	16,4
	24 KZ	47,8	12,7	45,2	13,8	42,5	15,0	39,8	16,4	37,2	18,0
10	5 KZ	11,3	2,89	11,2	3,20	10,7	3,52	10,3	3,84	9,75	4,14
	8 KZ	23,2	6,05	21,8	6,50	20,4	7,05	19,0	7,72	17,7	8,47
	10 KZ	27,1	6,88	25,7	7,44	24,2	8,11	22,8	8,86	21,3	9,70
	12 KZ	32,5	9,14	30,7	9,98	29,0	10,9	27,2	11,9	25,5	12,9
	16 KZ	46,5	12,1	43,7	13,0	40,9	14,1	38,1	15,4	35,5	16,9
	24 KZ	51,8	13,1	49,2	14,2	46,3	15,4	43,6	16,8	40,8	18,4
13	5 KZ	11,5	2,90	11,3	3,23	11,0	3,54	10,6	3,85	10,2	4,16
	8 KZ	25,4	6,19	23,9	6,66	22,5	7,20	21,1	7,88	19,6	8,63
	10 KZ	29,2	7,07	27,7	7,64	26,2	8,31	24,8	9,06	23,3	9,90
	12 KZ	34,9	9,47	33,1	10,3	31,4	11,3	29,6	12,2	27,8	13,2
	16 KZ	50,9	12,5	47,9	13,4	45,1	14,4	42,3	15,7	39,3	17,2
	24 KZ	55,8	13,5	53,0	14,6	50,1	15,8	47,5	17,2	44,6	18,8
16	5 KZ	11,7	2,94	11,5	3,26	11,2	3,58	10,9	3,90	10,5	4,21
	8 KZ	27,7	6,35	26,2	6,82	24,6	7,39	23,1	8,07	21,6	8,84
	10 KZ	31,3	7,25	29,8	7,82	28,3	8,50	26,8	9,26	25,2	10,1
	12 KZ	37,3	9,89	35,5	10,8	33,8	11,6	32,0	12,7	30,2	13,7
	16 KZ	55,5	12,8	52,5	13,7	49,3	14,8	46,3	16,1	43,3	17,7
	24 KZ	59,8	13,9	57,0	15,0	54,1	16,2	51,3	17,6	48,2	19,2
19	5 KZ	11,9	2,97	11,8	3,29	11,6	3,61	11,3	3,93	11,0	4,23
	8 KZ	30,7	6,51	29,0	6,99	27,4	7,59	25,8	8,28	24,2	9,04
	10 KZ	33,4	7,42	31,9	8,00	30,3	8,68	28,8	9,45	27,2	10,3
	12 KZ	39,7	10,21	37,9	11,1	36,1	12,0	34,4	13,0	32,6	14,0
	16 KZ	61,5	13,3	58,1	14,2	54,9	15,3	51,7	16,6	48,5	18,1
	24 KZ	63,8	14,3	61,0	15,4	57,9	16,6	55,1	18,0	52,0	19,6
	24 KZ	79,6	20,7	76,0	22,3	72,4	24,2	69,0	26,1	65,4	28,1

#### CONDITIONS

##### 1. Cooling capacity

Capacity is according to EN14511:2011 and valid for chilled water range  $\Delta t = 3 - 8^\circ\text{C}$

##### 2. Heating capacity

Capacity is according to EN14511:2011 and valid for chilled water range  $\Delta t = 3 - 8^\circ\text{C}$

##### 3. Power input (kW)

Power input is total input according to EN14511:2011

#### SYMBOLS

- CC : Cooling capacity (kW)
- HC : Heating capacity (kW)
- PI : Power input (kW)
- LWE : Leaving Water Evaporator temperature ( $^\circ\text{C}$ )
- LWC : Leaving Water Condenser temperature ( $^\circ\text{C}$ )
- Tamb : Ambient temperature ( $^\circ\text{C}$ )
- Tamb : Ambient temperature dry bulb [ $^\circ\text{CDB}$ ]

3TW55172-1E

# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

2  
4

### EUWYP/B-KBZ

Tamb (°C)		Cooling P/B-models									
LWE [°C]		20		25		30		35		40	
	Model	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
5	5 KZ	9,92	2,94	9,42	3,24	9,02	3,57	8,62	3,88	8,12	4,20
	8 KZ	20,0	5,73	18,7	6,14	17,4	6,71	16,2	7,37	14,9	8,12
	10 KZ	24,3	6,59	22,9	7,15	21,5	7,80	20,1	8,54	18,8	9,38
	12 KZ	29,1	8,5	27,4	9,4	25,6	10,2	23,8	11,2	22,1	12,2
	16 KZ	40,0	11,7	37,4	12,5	34,8	13,7	32,4	15,0	29,8	16,5
	20 KZ	46,2	12,6	43,5	13,7	40,9	14,9	38,2	16,3	35,7	17,9
24 KZ	58,3	17,1	54,9	18,7	51,3	20,4	47,7	22,4	44,3	24,4	
7	5 KZ	10,4	2,96	10,22	3,27	9,82	3,59	9,42	3,91	8,92	4,21
	8 KZ	21,4	5,83	20,1	6,29	18,8	6,83	17,5	7,47	16,2	8,24
	10 KZ	25,7	6,72	24,3	7,28	22,9	7,94	21,5	8,69	20,1	9,52
	12 KZ	30,7	8,7	29,0	9,5	27,2	10,5	25,4	11,5	23,7	12,5
	16 KZ	42,8	12,0	40,2	12,9	37,6	13,9	35,0	15,2	32,4	16,7
	20 KZ	48,9	12,9	46,2	13,9	43,5	15,2	40,9	16,6	38,2	18,1
24 KZ	61,5	17,5	58,1	19,1	54,5	20,9	50,9	22,9	47,5	25,0	
10	5 KZ	11,6	2,98	11,5	3,30	11,0	3,61	10,6	3,93	10,12	4,24
	8 KZ	23,7	6,01	22,3	6,46	20,9	7,01	19,5	7,68	18,2	8,43
	10 KZ	27,8	6,91	26,4	7,48	24,9	8,14	23,5	8,89	22,0	9,73
	12 KZ	33,1	9,1	31,3	10,0	29,6	10,9	27,8	11,9	26,1	12,9
	16 KZ	47,4	12,4	44,6	13,3	41,8	14,3	39,0	15,6	36,4	17,1
	20 KZ	52,9	13,3	50,2	14,3	47,4	15,6	44,7	17,0	41,8	18,6
24 KZ	66,3	18,4	62,7	20,0	59,3	21,9	55,7	23,7	52,3	25,8	
13	5 KZ	11,8	3,00	11,6	3,32	11,3	3,63	10,9	3,95	10,5	4,25
	8 KZ	25,9	6,15	24,4	6,62	23,0	7,16	21,6	7,84	20,1	8,59
	10 KZ	29,9	7,10	28,4	7,67	26,9	8,34	25,5	9,09	24,0	9,93
	12 KZ	35,5	9,5	33,7	10,3	32,0	11,3	30,2	12,2	28,4	13,2
	16 KZ	51,8	12,7	48,8	13,6	46,0	14,7	43,2	16,0	40,2	17,5
	20 KZ	56,9	13,7	54,0	14,7	51,2	16,0	48,5	17,4	45,6	19,0
24 KZ	71,1	19,1	67,5	20,8	64,1	22,6	60,5	24,5	56,9	26,5	
16	5 KZ	12,0	3,03	11,8	3,35	11,5	3,68	11,2	3,99	10,8	4,30
	8 KZ	28,2	6,31	26,7	6,78	25,1	7,35	23,6	8,03	22,1	8,80
	10 KZ	32,0	7,28	30,5	7,86	29,0	8,53	27,5	9,29	25,9	10,1
	12 KZ	37,9	9,9	36,1	10,8	34,4	11,6	32,6	12,7	30,8	13,7
	16 KZ	56,4	13,1	53,4	14,0	50,2	15,1	47,2	16,4	44,2	17,9
	20 KZ	60,9	14,1	58,0	15,1	55,2	16,4	52,3	17,8	49,3	19,4
24 KZ	75,9	20,0	72,3	21,7	68,9	23,4	65,3	25,4	61,7	27,5	
19	5 KZ	12,2	3,06	12,1	3,38	11,9	3,70	11,6	4,02	11,3	4,32
	8 KZ	31,2	6,47	29,5	6,95	27,9	7,55	26,3	8,24	24,7	9,00
	10 KZ	34,1	7,46	32,6	8,04	31,0	8,72	29,5	9,48	27,9	10,3
	12 KZ	40,3	10,2	38,5	11,1	36,7	12,0	35,0	13,0	33,2	14,0
	16 KZ	62,4	13,5	59,0	14,4	55,8	15,6	52,6	16,9	49,4	18,4
	20 KZ	64,9	14,5	62,0	15,5	59,0	16,8	56,1	18,2	53,1	19,8
24 KZ	80,7	20,7	77,1	22,4	73,5	24,3	70,1	26,1	66,5	28,2	

### CONDITIONS

#### 1. Cooling capacity

Capacity is according to EN14511:2011 and valid for chilled water range Dt = 3 - 8°C

#### 2. Heating capacity

Capacity is according to EN14511:2011 and valid for chilled water range Dt = 3 - 8°C

#### 3. Power input (kW)

Power input is total input according to EN14511:2011

### SYMBOLS

- CC : Cooling capacity (kW)
- HC : Heating capacity (kW)
- PI : Power input (kW)
- LWE : Leaving Water Evaporator temperature (°C)
- LWC : Leaving Water Condensor temperature (°C)
- Tamb : Ambient temperature (°C)
- Tamb : Ambient temperature dry bulb [°CDB]

3TW55172-1E



# 4 Capacity tables

## 4 - 1 Cooling Capacity Tables

### EUWY\*-KBZ

Tamb (°C)		N-models											
LWE (°C)	Model	20		25		30		35		40		CC	PI
-10	5 KZ	5.80	2.69	5.30	3.01	4.90	3.33	4.50	3.65				
	8 KZ	9.97	4.75	8.54	5.19	7.11	5.74	6.62	6.47				
	10 KZ	13.1	5.53	11.7	6.07	10.3	6.63	8.94	7.37				
	12 KZ	16.5	7.19	14.8	8.00	13.0	8.66	11.2	9.67				
	16 KZ	20.0	9.48	17.1	10.4	14.3	11.5	13.3	12.9				
	20 KZ	25.2	10.4	22.5	11.4	19.8	12.5	17.2	13.9				
	24 KZ	33.2	14.2	29.8	15.8	26.2	15.9	22.6	17.9				
-7	5 KZ	6.55	2.72	6.05	3.04	5.65	3.36	5.25	3.68	4.75	4.07		
	8 KZ	11.2	4.94	9.86	5.39	8.56	5.93	7.96	6.65	7.46	7.35		
	10 KZ	15.2	5.74	13.8	6.29	12.4	6.86	11.0	7.60	10.3	8.49		
	12 KZ	18.9	7.47	17.2	8.29	15.4	8.95	13.6	10.0	11.9	11.0		
	16 KZ	22.4	9.87	19.8	10.8	17.2	11.8	16.0	13.3	13.4	14.7		
	20 KZ	29.2	10.8	26.5	11.9	23.8	12.9	21.2	14.3	19.8	16.0		
	24 KZ	38.0	14.8	34.6	16.4	31.0	16.8	27.4	18.8	24.0	20.8		
-4	5 KZ	7.30	2.75	6.80	3.07	6.40	3.39	6.00	3.71	5.50	4.09		
	8 KZ	13.3	5.12	12.0	5.57	10.7	6.12	9.9	6.82	8.61	7.54		
	10 KZ	17.3	5.95	15.9	6.50	14.5	7.09	13.1	7.83	12.3	8.71		
	12 KZ	21.3	7.75	19.6	8.56	17.8	9.23	16.0	10.2	14.3	11.3		
	16 KZ	26.6	10.2	24.0	11.1	21.4	12.2	19.9	13.6	17.3	15.1		
	20 KZ	33.2	11.2	30.5	12.3	27.8	13.4	25.2	14.8	23.6	16.5		
	24 KZ	42.8	15.3	39.4	17.0	35.8	17.7	32.2	19.7	28.8	21.7		
-1	5 KZ	8.05	2.78	7.55	3.10	7.15	3.42	6.75	3.74	6.25	4.10		
	8 KZ	15.4	5.30	14.1	5.75	12.8	6.30	11.9	7.00	10.6	7.73		
	10 KZ	19.4	6.16	18.0	6.71	16.6	7.32	15.2	8.06	14.2	8.93		
	12 KZ	23.7	8.01	22.0	8.84	20.2	9.51	18.4	10.5	16.7	11.5		
	16 KZ	30.8	10.6	28.2	11.5	25.6	12.6	23.8	14.0	21.2	15.5		
	20 KZ	37.2	11.6	34.5	12.7	31.8	13.8	29.2	15.2	27.3	16.9		
	24 KZ	47.6	15.9	44.2	17.5	40.6	18.6	37.0	20.6	33.6	22.6		
2	5 KZ	8.80	2.80	8.30	3.12	7.90	3.45	7.50	3.77	7.00	4.11		
	8 KZ	17.5	5.47	16.2	5.93	14.9	6.48	13.8	7.16	12.5	7.92		
	10 KZ	21.5	6.36	20.1	6.91	18.7	7.54	17.3	8.29	16.2	9.14		
	12 KZ	26.1	8.28	24.4	9.10	22.6	9.78	20.8	10.8	19.1	11.8		
	16 KZ	35.0	11.0	32.4	11.9	29.8	13.0	27.7	14.3	25.1	15.8		
	20 KZ	41.2	12.0	38.5	13.1	35.8	14.3	33.2	15.7	31.0	17.3		
	24 KZ	52.4	16.5	49.0	18.1	45.4	19.4	41.8	21.4	38.4	23.5		

Tamb (°C)		P/B-models											
LWE (°C)	Model	20		25		30		35		40		CC	PI
-10	5 KZ	6.17	2.78	5.67	3.11	5.27	3.43	4.87	3.75				
	8 KZ	10.4	4.81	8.95	5.25	7.52	5.79	7.02	6.53				
	10 KZ	13.8	5.56	12.4	6.11	11.0	6.67	9.55	7.40				
	12 KZ	17.1	7.19	15.4	8.00	13.6	8.66	11.8	9.67				
	16 KZ	20.9	9.80	18.0	10.7	15.1	11.8	14.1	13.2				
	20 KZ	26.2	10.6	23.5	11.6	20.9	12.7	18.2	14.0				
	24 KZ	34.3	14.3	30.9	15.9	27.3	16.0	23.7	18.0				
-7	5 KZ	6.92	2.81	6.42	3.13	6.02	3.46	5.62	3.78	5.12	4.17		
	8 KZ	11.6	5.00	10.3	5.44	8.97	5.99	8.37	6.71	7.87	7.41		
	10 KZ	15.9	5.77	14.5	6.32	13.1	6.90	11.7	7.63	11.0	8.53		
	12 KZ	19.5	7.47	17.8	8.29	16.0	8.95	14.2	10.0	12.5	11.0		
	16 KZ	23.2	10.2	20.6	11.1	18.0	12.2	16.8	13.6	14.2	15.0		
	20 KZ	30.2	11.0	27.5	12.0	24.9	13.1	22.2	14.5	20.9	16.2		
	24 KZ	39.1	14.9	35.7	16.5	32.1	16.9	28.5	18.9	25.1	20.9		
-4	5 KZ	7.67	2.84	7.17	3.16	6.77	3.48	6.37	3.80	5.87	4.18		
	8 KZ	13.7	5.18	12.4	5.63	11.1	6.17	10.3	6.88	9.02	7.60		
	10 KZ	18.0	5.98	16.6	6.53	15.2	7.13	13.8	7.86	12.9	8.74		
	12 KZ	21.9	7.75	20.2	8.56	18.4	9.23	16.6	10.2	14.9	11.3		
	16 KZ	27.4	10.6	24.8	11.5	22.2	12.5	20.7	14.0	18.1	15.4		
	20 KZ	34.2	11.4	31.5	12.4	28.9	13.6	26.2	14.9	24.6	16.6		
	24 KZ	43.9	15.4	40.5	17.0	36.9	17.8	33.3	19.8	29.9	21.8		
-1	5 KZ	8.42	2.87	7.92	3.19	7.52	3.51	7.12	3.83	6.62	4.19		
	8 KZ	15.8	5.35	14.5	5.81	13.2	6.36	12.3	7.05	11.0	7.79		
	10 KZ	20.1	6.19	18.7	6.74	17.3	7.35	15.9	8.09	14.9	8.96		
	12 KZ	24.3	8.02	22.6	8.84	20.8	9.51	19.0	10.5	17.3	11.5		
	16 KZ	31.6	10.9	29.0	11.8	26.4	12.9	24.6	14.3	22.0	15.8		
	20 KZ	38.2	11.8	35.5	12.8	32.9	14.0	30.2	15.4	28.3	17.0		
	24 KZ	48.7	16.0	45.3	17.6	41.7	18.6	38.1	20.7	34.7	22.7		
2	5 KZ	9.17	2.90	8.67	3.22	8.27	3.54	7.87	3.86	7.37	4.21		
	8 KZ	17.9	5.53	16.6	5.98	15.3	6.53	14.2	7.22	12.9	7.97		
	10 KZ	22.2	6.39	20.8	6.95	19.4	7.58	18.0	8.32	16.8	9.17		
	12 KZ	26.7	8.28	25.0	9.10	23.2	9.78	21.4	10.8	19.7	11.8		
	16 KZ	35.8	11.3	33.2	12.2	30.6	13.3	28.5	14.6	25.9	16.1		
	20 KZ	42.2	12.2	39.5	13.3	36.9	14.4	34.2	15.8	32.0	17.5		
	24 KZ	53.5	16.5	50.1	18.2	46.5	19.5	42.9	21.5	39.5	23.5		

#### SYMBOLS

- CC : Cooling capacity (kW)
- HC : Heating capacity (kW)
- PI : Power input (kW)
- LWE : Leaving Water Evaporator temperature (°C)
- Ta : Ambient temperature (°C)

#### CONDITIONS

1. **Cooling capacity**  
Capacity is according to EN14511:2011 and valid for chilled water range Dt = 3 - 8°C
2. **Power input**  
Power input is total input according to EN14511:2011

3TW55172-2A

# 4 Capacity tables

## 4 - 2 Heating Capacity Tables

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4

### EUWYN-KBZ

		Heating N-models													
Tamb (°CDB)		-7		-3		0		3		7		10		13	
LWC [°C]	Model	HC	PI	HC	PI	HC	PI	HC	PI	HC	PI	HC	PI	HC	PI
35	5 KZ	8,66	3,50	9,76	3,65	10,7	3,69	11,5	3,74	12,7	3,79	13,5	3,83	14,4	3,87
	8 KZ	13,0	5,92	14,6	5,96	15,9	5,98	17,3	6,00	19,2	6,02	20,7	6,04	22,3	6,05
	10 KZ	15,2	7,44	17,7	7,46	19,6	7,46	21,5	7,47	24,0	7,47	25,9	7,47	27,8	7,47
	12 KZ	17,1	8,82	19,9	8,85	22,0	8,86	24,1	8,86	27,0	8,85	29,1	8,84	31,2	8,82
	16 KZ	25,9	11,7	29,1	11,8	31,7	11,9	34,5	11,9	38,3	12,0	41,3	12,1	44,5	12,1
	20 KZ	28,9	14,1	33,7	14,2	37,3	14,2	41,0	14,3	45,8	14,3	49,4	14,3	53,1	14,3
	24 KZ	34,0	17,5	39,6	17,6	43,8	17,6	48,0	17,6	53,8	17,7	58,0	17,7	62,2	17,7
40	5 KZ	8,36	4,00	9,46	4,07	10,4	4,10	11,2	4,15	12,3	4,20	13,2	4,24	14,1	4,28
	8 KZ	12,7	6,47	14,3	6,51	15,6	6,54	17,0	6,56	18,9	6,59	20,4	6,60	22,0	6,62
	10 KZ	15,3	8,28	17,8	8,29	19,7	8,30	21,6	8,30	24,1	8,31	26,0	8,31	27,9	8,30
	12 KZ	17,2	9,81	20,0	9,84	22,1	9,85	24,3	9,85	27,1	9,84	29,2	9,83	31,3	9,81
	16 KZ	25,3	12,8	28,5	12,9	31,1	13,0	33,9	13,1	37,7	13,1	40,7	13,2	43,9	13,2
	20 KZ	29,1	15,7	33,9	15,8	37,5	15,8	41,2	15,8	46,0	15,9	49,6	15,9	53,2	15,9
	24 KZ	34,2	19,5	39,8	19,6	44,0	19,6	48,4	19,6	54,0	19,7	58,2	19,7	62,4	19,7
45	5 KZ	7,96	4,43	9,16	4,48	9,96	4,53	10,9	4,56	12,0	4,62	12,9	4,66	13,7	4,70
	8 KZ	12,4	7,02	14,0	7,06	15,3	7,09	16,7	7,11	18,6	7,14	20,1	7,16	21,7	7,17
	10 KZ	15,4	9,11	17,9	9,13	19,8	9,13	21,7	9,14	24,2	9,14	26,1	9,14	28,0	9,14
	12 KZ	17,3	10,8	20,1	10,8	22,3	10,8	24,4	10,8	27,2	10,9	29,3	10,9	31,5	10,9
	16 KZ	24,7	13,9	27,9	14,0	30,5	14,1	33,3	14,2	37,1	14,2	40,1	14,3	43,3	14,3
	20 KZ	29,3	17,3	34,1	17,4	37,7	17,4	41,4	17,5	46,2	17,5	49,8	17,5	53,4	17,5
	24 KZ	34,4	21,5	40,0	21,5	44,4	21,6	48,6	21,6	54,2	21,6	58,4	1,6	62,8	21,7
50	5 KZ			8,86	4,89	9,66	4,94	10,6	4,98	11,7	5,04	12,5	5,08	13,4	5,11
	8 KZ			13,7	7,62	15,0	7,65	16,4	7,68	18,3	7,71	19,8	7,71	21,3	7,73
	10 KZ			18,0	9,96	19,9	9,97	21,8	9,97	24,3	9,98	26,2	9,98	28,1	9,96
	12 KZ			20,3	11,8	22,4	11,8	24,5	11,8	27,3	11,8	29,5	11,8	31,6	11,8
	16 KZ			27,3	15,1	29,9	15,2	32,7	15,3	36,5	15,4	39,5	15,4	42,5	15,5
	20 KZ			34,3	19,0	37,9	19,0	41,6	19,0	46,4	19,1	50,0	19,1	53,6	19,1
	24 KZ			40,4	23,5	44,6	23,6	48,8	23,6	54,4	23,6	58,8	23,6	63,0	23,6

### NOTES

1. The heating capacities tabulated do not include capacity drop during frosting period and defrosting operation.

Namely, the integrated heating capacities in consideration with capacity drop during frosting period and defrosting operation are obtained from the following formular :

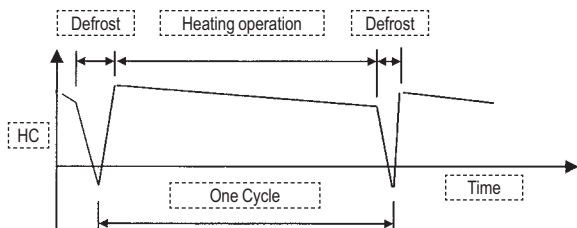
$$\text{Integrated heating capacity} = (\text{Capacity tabulated}) * (\text{Integrated correction factor during frosting period})$$

- Integrated heating capacity means the heating capacity during one cycle (between defrosting period and defrosting period), which is integrated and converted to heating capacity per hour.

- Integrated correction factor :

Entering air temp (°C) RH 85%	-7	-5	-3	0	3	5	7
Correction factor	0,85	0,86	0,86	0,87	0,89	0,91	1

- Integrated heating capacity graph :



2. In case the surface of the heat exchanger is covered with snow, heating capacity drops temporarily although it differs with outdoor temperature (°CDB), relative humidity (RH) and frosting volume.

# 4 Capacity tables

## 4 - 2 Heating Capacity Tables

### EUWYP/B-KBZ

Tamb (°CDB)		Heating P/B-models													
		-7		-3		0		3		7		10		13	
LWC [°C]	Model	HC	PI	HC	PI	HC	PI	HC	PI	HC	PI	HC	PI	HC	PI
35	5 KZ	8,10	3,40	9,20	3,54	10,1	3,59	10,9	3,63	12,1	3,68	12,9	3,72	13,8	3,76
	8 KZ	12,3	5,66	13,9	5,70	15,2	5,72	16,6	5,74	18,5	5,76	20,0	5,78	21,6	5,79
	10 KZ	14,3	7,28	16,8	7,30	18,7	7,30	20,6	7,31	23,1	7,31	25,0	7,31	26,9	7,31
	12 KZ	15,9	8,32	18,7	8,35	20,8	8,36	22,9	8,36	25,8	8,35	27,9	8,34	30,0	8,33
	16 KZ	24,5	11,5	27,7	11,6	30,3	11,7	33,1	11,7	36,9	11,8	39,9	11,9	43,1	11,9
	20 KZ	27,3	13,7	32,1	13,8	35,7	13,8	39,4	13,8	44,1	13,9	47,8	13,9	51,4	13,9
40	5 KZ	7,80	3,90	8,90	3,96	9,8	4,00	10,6	4,04	11,7	4,09	12,6	4,14	13,5	4,18
	8 KZ	12,0	6,21	13,6	6,25	14,9	6,28	16,3	6,30	18,2	6,33	19,7	6,35	21,3	6,36
	10 KZ	14,4	8,12	16,9	8,13	18,8	8,14	20,7	8,14	23,2	8,15	25,1	8,15	27,0	8,14
	12 KZ	16,0	9,31	18,8	9,34	20,9	9,35	23,1	9,35	25,9	9,34	28,0	9,33	30,1	9,31
	16 KZ	23,9	12,6	27,1	12,7	29,7	12,8	32,5	12,9	36,3	12,9	39,3	13,0	42,5	13,0
	20 KZ	27,5	15,3	32,3	15,4	35,9	15,4	39,5	15,4	44,3	15,5	48,0	15,5	51,6	15,5
45	5 KZ	7,40	4,32	8,60	4,37	9,40	4,42	10,3	4,45	11,4	4,52	12,3	4,55	13,1	4,59
	8 KZ	11,7	6,76	13,3	6,80	14,6	6,83	16,0	6,86	17,9	6,88	19,4	6,90	21,0	6,91
	10 KZ	14,5	8,94	17,0	8,97	18,9	8,97	20,8	8,98	23,3	8,98	25,2	8,98	27,1	8,97
	12 KZ	16,1	10,3	18,9	10,3	21,1	10,3	23,2	10,3	26,0	10,4	28,1	10,4	30,3	10,4
	16 KZ	23,3	13,7	26,5	13,8	29,1	13,9	31,9	14,0	35,7	14,0	38,7	14,1	41,9	14,1
	20 KZ	27,7	16,9	32,5	17,0	36,1	17,0	39,7	17,0	44,5	17,1	48,2	17,1	51,8	17,1
50	5 KZ			8,30	4,79	9,10	4,83	10,0	4,88	11,1	4,93	11,9	4,97	12,8	5,00
	8 KZ			13,0	7,36	14,3	7,39	15,7	7,42	17,6	7,45	19,1	7,45	20,6	7,47
	10 KZ			17,1	9,80	19,0	9,81	20,9	9,81	23,5	9,82	25,3	9,82	27,2	9,80
	12 KZ			19,1	11,3	21,2	11,3	23,3	11,3	26,1	11,3	28,3	11,3	30,4	11,3
	16 KZ			25,9	14,9	28,5	15,0	31,3	15,1	35,1	15,2	38,1	15,2	41,1	15,3
	20 KZ			32,6	18,6	36,3	18,6	39,9	18,6	44,7	18,7	48,4	18,7	52,0	18,7
	24 KZ			38,7	23,0	42,9	23,0	47,1	23,1	52,7	23,1	57,1	23,1	61,3	23,1

### NOTES

1. The heating capacities tabulated do not include capacity drop during frosting period and defrosting operation.

Namely, the integrated heating capacities in consideration with capacity drop during frosting period and defrosting operation are obtained from the following formular :

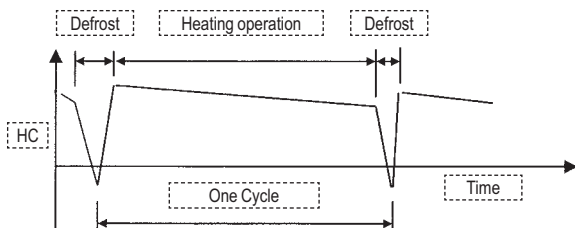
$$\text{Integrated heating capacity} = (\text{Capacity tabulated}) * (\text{Integrated correction factor during frosting period})$$

- Integrated heating capacity means the heating capacity during one cycle (between defrosting period and defrosting period), which is integrated and converted to heating capacity per hour.

- Integrated correction factor :

Entering air temp (°C) RH 85%	-7	-5	-3	0	3	5	7
Correction factor	0,85	0,86	0,86	0,87	0,89	0,91	1

- Integrated heating capacity graph :



2. In case the surface of the heat exchanger is covered with snow, heating capacity drops temporarily although it differs with outdoor temperature (°CDB), relative humidity (RH) and frosting volume.

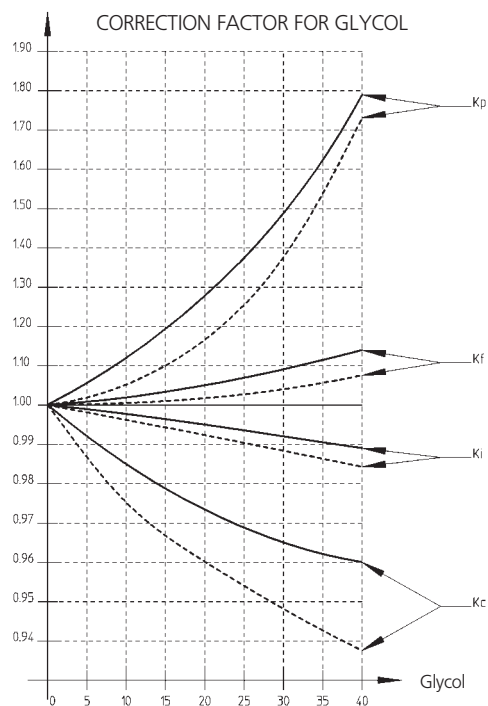
# 4 Capacity tables

## 4 - 3 Capacity Correction Factor

### EUWY-KBZW1

Required glycol concentration

Type	Concentration (wt%)	0	10	20	30	40
Ethylene glycol	Freezing point °C	0	-4	-9	-16	-23
	Minimum LWE °C	5	2	0	-5	-11
Propylene glycol	Freezing point °C	0	-3	-7	-13	-22
	Minimum LWE °C	5	3	-2	-4	-10



Legend: — Ethylene glycol  
 - - - Propylene glycol  
 Kc Correction on cooling capacity  
 Ki Correction on power input  
 Kf Correction on flow rate  
 Kp Correction on pressure drop

4TW54179-1

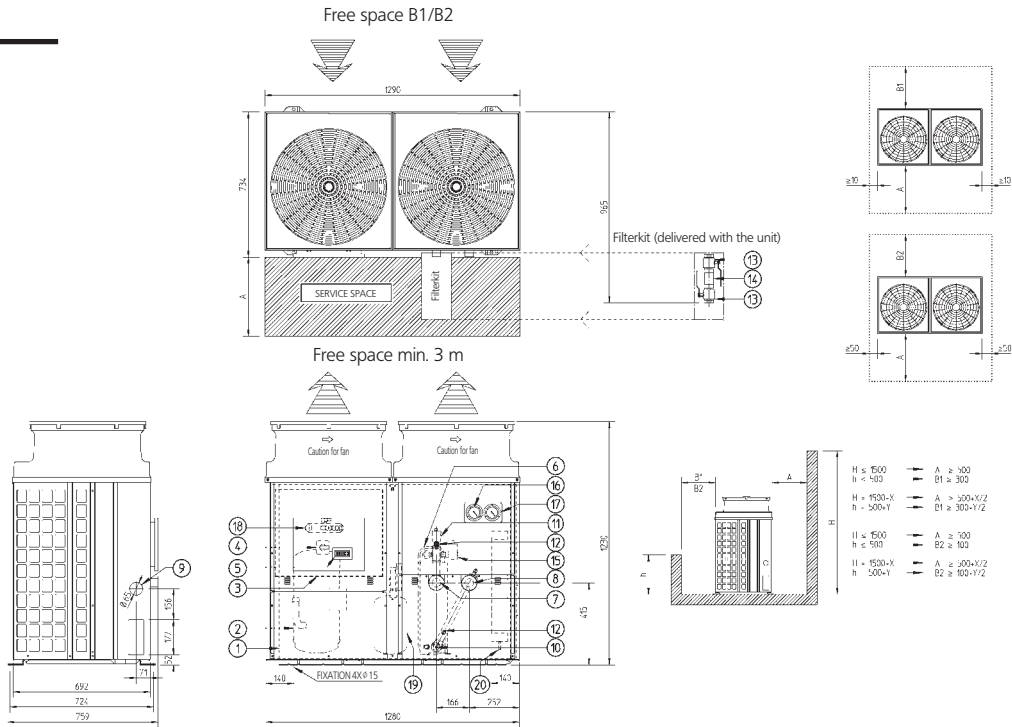
2  
4

# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

### EUWYN5-8KBZW1

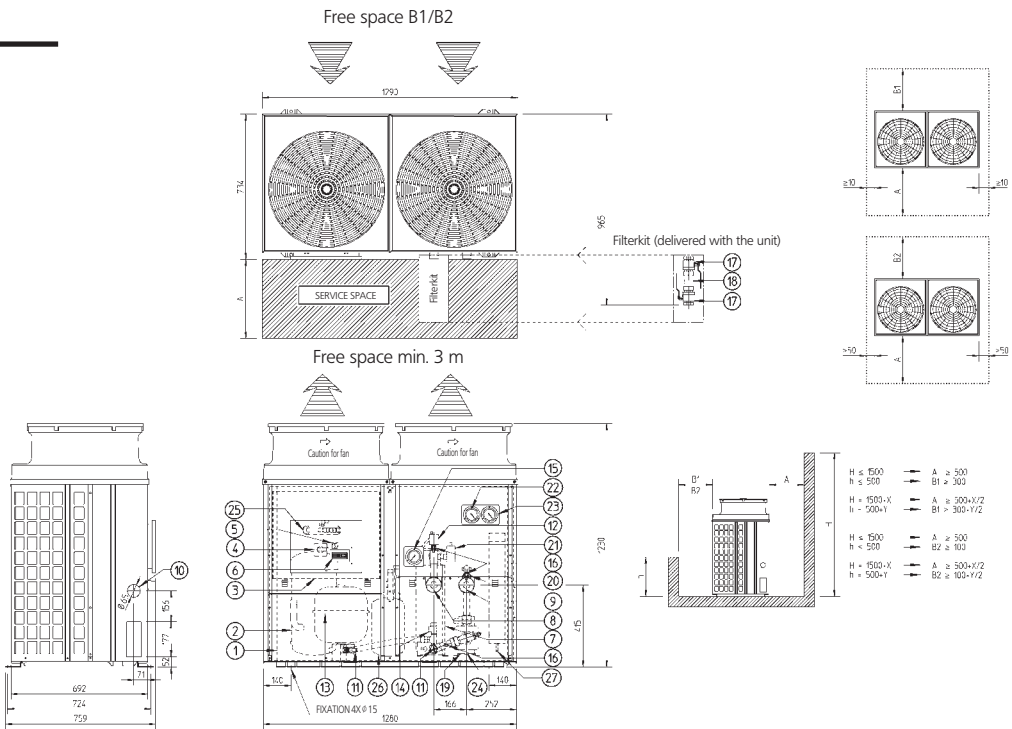
- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Digital display controller
  - 6 Water heat exchanger
  - 7 Water IN connection: 1 1/4" M BSP
  - 8 Water OUT connection: 1 1/4" M BSP
  - 9 Power supply intake
  - 10 Drain
  - 11 Air purge
  - 12 Pressure port
  - 13 Ball valve: 1-1/4" BSP
  - 14 Water filter: 1-1/4" BSP
  - 15 Flow switch
  - 16 High pressure gauge (optional)
  - 17 Low pressure gauge (optional)
  - 18 4 way valve \*
  - 19 Accumulator \*
  - 20 Liquid receiver \*
- \* Only for H/P models



3TW55694-1

### EUWYP5-8KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 1 1/4" M BSP
  - 9 Water OUT connection: 1 1/4" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Manometer (water)
  - 16 Pressure port
  - 17 Ball valve: 1-1/4" BSP
  - 18 Water filter: 1-1/4" BSP
  - 19 Pump
  - 20 Regulation valve
  - 21 Flow switch
  - 22 High pressure gauge (optional)
  - 23 Low pressure gauge (optional)
  - 24 Pump drain
  - 25 4 way valve \*
  - 26 Accumulator \*
  - 27 Liquid receiver \*
- \* Only for H/P models



3TW55694-2

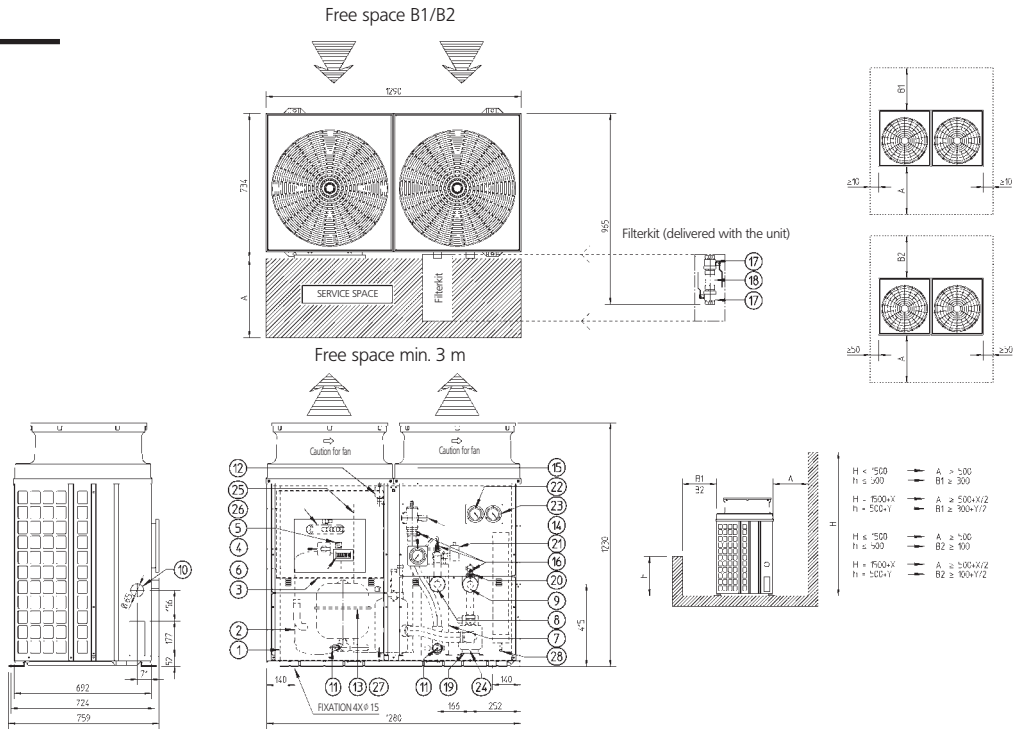
# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

2  
5

### EUWYB5-8KBZW1

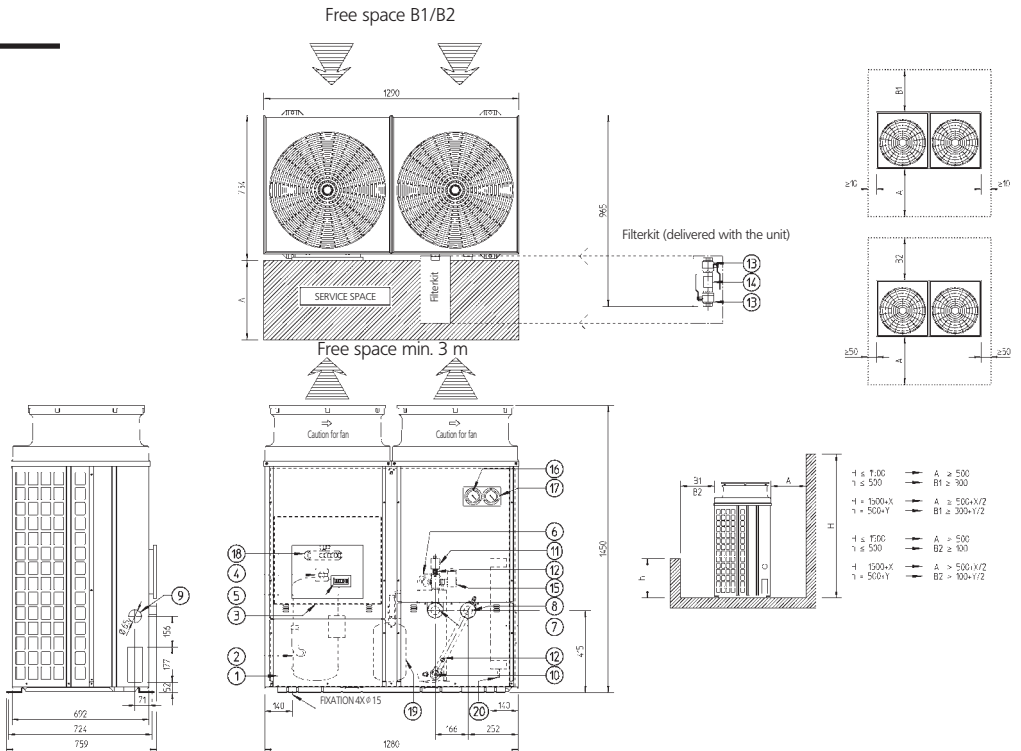
- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 1 1/4" M BSP
  - 9 Water OUT connection: 1 1/4" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Manometer (water)
  - 16 Pressure port
  - 17 Ball valve: 1-1/4" BSP
  - 18 Water filter: 1-1/4" BSP
  - 19 Pump
  - 20 Regulation valve
  - 21 Flow switch
  - 22 High pressure gauge (optional)
  - 23 Low pressure gauge (optional)
  - 24 Pump drain
  - 25 Buffer tank
  - 26 4 way valve\*
  - 27 Accumulator\*
  - 28 Liquid receiver\*
- \* Only for H/P models



3TW55694-3

### EUWYN10-12KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Digital display controller
  - 6 Water heat exchanger
  - 7 Water IN connection: 1 1/4" M BSP
  - 8 Water OUT connection: 1 1/4" M BSP
  - 9 Power supply intake
  - 10 Drain
  - 11 Air purge
  - 12 Pressure port
  - 13 Ball valve: 1-1/4" BSP
  - 14 Water filter: 1-1/4" BSP
  - 15 Flow switch
  - 16 High pressure gauge (optional)
  - 17 Low pressure gauge (optional)
  - 18 4 way valve\*
  - 19 Accumulator\*
  - 20 Liquid receiver\*
- \* Only for H/P models



3TW55714-1



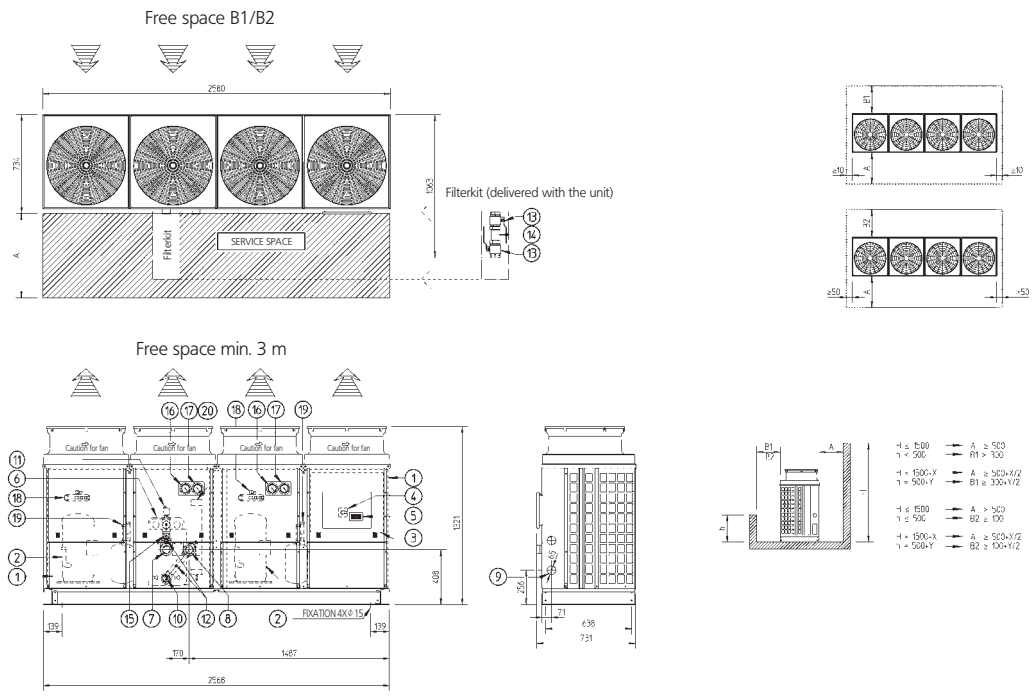
# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

2  
5

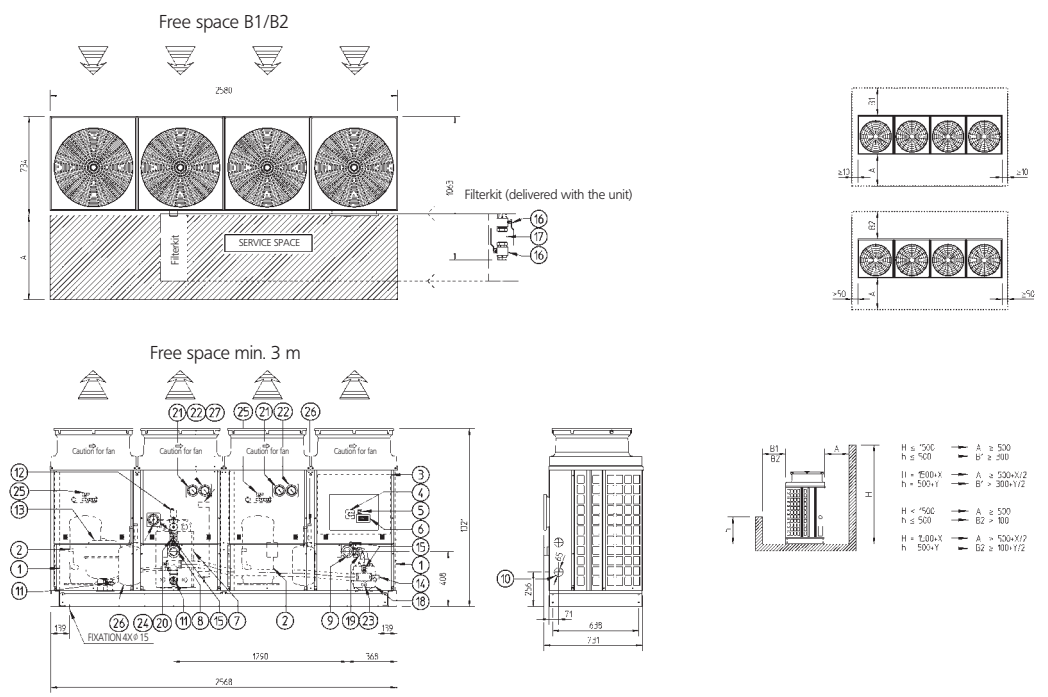
### EUWYN16KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Digital display controller
  - 6 Water heat exchanger
  - 7 Water IN connection: 2" M BSP
  - 8 Water OUT connection: 2" M BSP
  - 9 Power supply intake
  - 10 Drain
  - 11 Air purge
  - 12 Pressure port
  - 13 Ball valve
  - 14 Water filter
  - 15 Flow switch
  - 16 High pressure gauge (optional)
  - 17 Low pressure gauge (optional)
  - 18 4 way valve\*
  - 19 Accumulator\*
  - 20 Liquid receiver\*
- \* Only for H/P models



### EUWYP16KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 2" M BSP
  - 9 Water OUT connection: 2" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Pressure port
  - 16 Ball valve
  - 17 Water filter
  - 18 Pump
  - 19 Regulation valve
  - 20 Flow switch
  - 21 High pressure gauge (optional)
  - 22 Low pressure gauge (optional)
  - 23 Pump drain
  - 24 Water pressure gauge
  - 25 4 way valve\*
  - 26 Accumulator\*
  - 27 Liquid receiver\*
- \* Only for H/P models



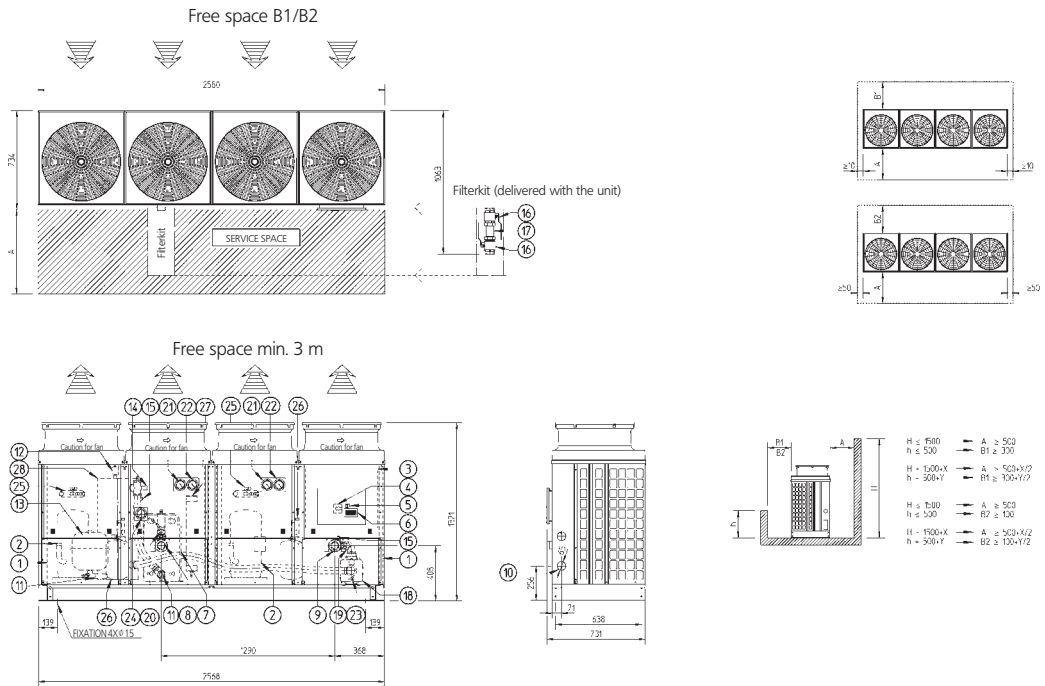


# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

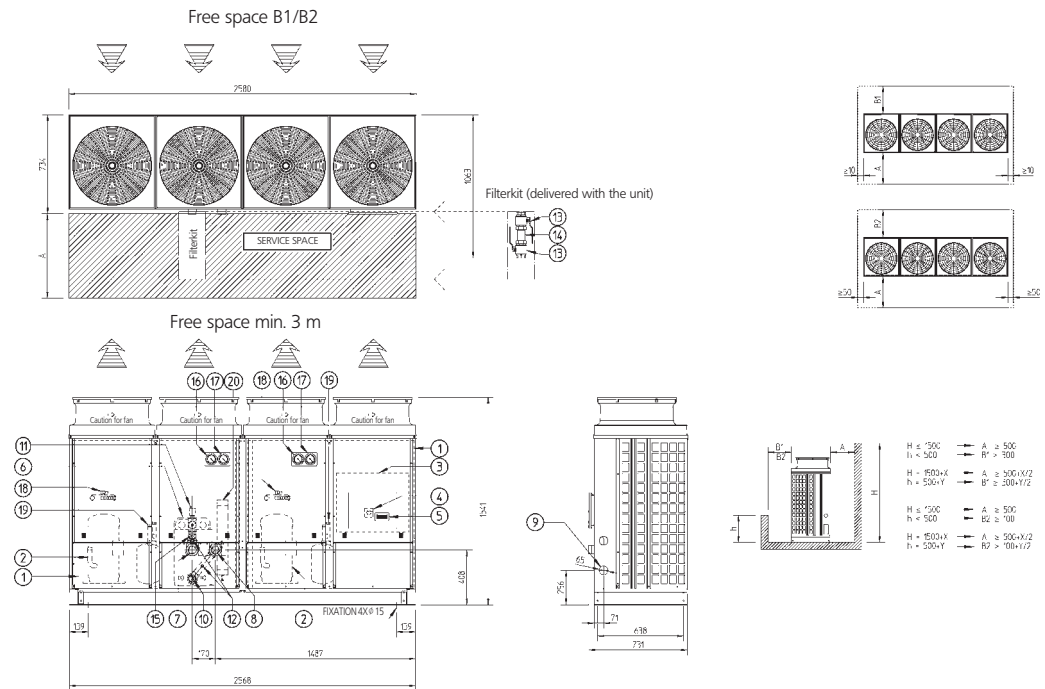
### EUWYB16KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 2" M BSP
  - 9 Water OUT connection: 2" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Pressure port
  - 16 Ball valve
  - 17 Water filter
  - 18 Pump
  - 19 Regulation valve
  - 20 Flow switch
  - 21 High pressure gauge (optional)
  - 22 Low pressure gauge (optional)
  - 23 Pump drain
  - 24 Water pressure gauge
  - 25 4 way valve\*
  - 26 Accumulator\*
  - 27 Liquid receiver\*
  - 28 Buffer tank
- \* Only for H/P models



### EUWYN20-24KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Digital display controller
  - 6 Water heat exchanger
  - 7 Water IN connection: 2" M BSP
  - 8 Water OUT connection: 2" M BSP
  - 9 Power supply intake
  - 10 Drain
  - 11 Air purge
  - 12 Pressure port
  - 13 Ball valve
  - 14 Water filter
  - 15 Flow switch
  - 16 High pressure gauge (optional)
  - 17 Low pressure gauge (optional)
  - 18 4 way valve\*
  - 19 Accumulator\*
  - 20 Liquid receiver\*
- \* Only for H/P models



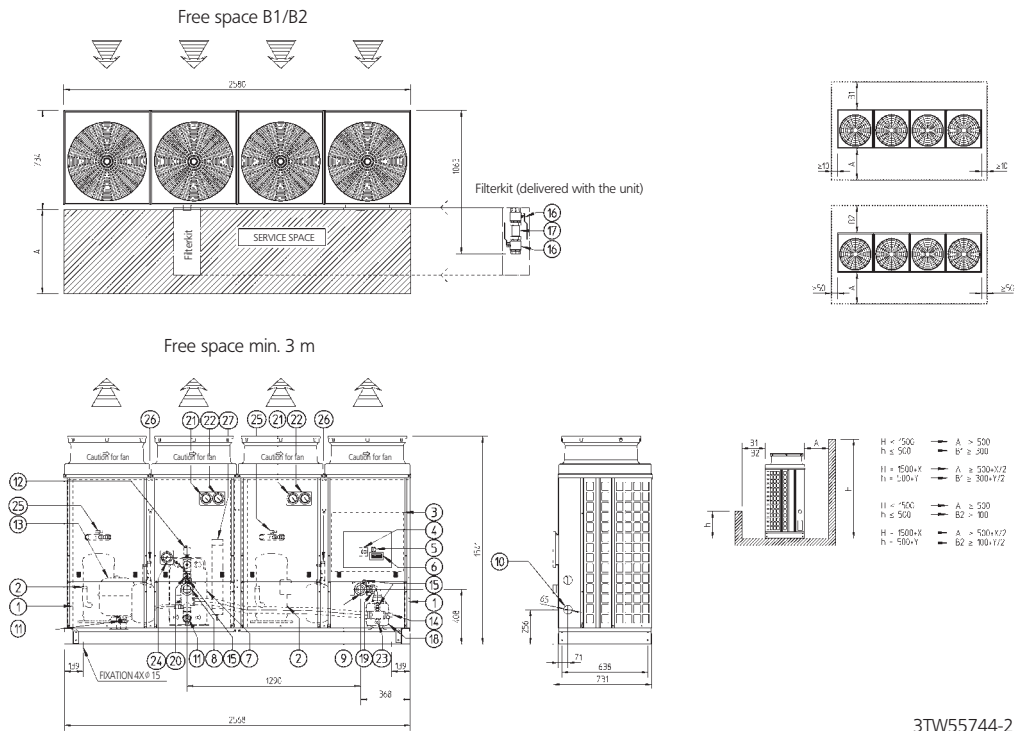
# 5 Dimensional drawings

## 5 - 1 Dimensional Drawings

2  
5

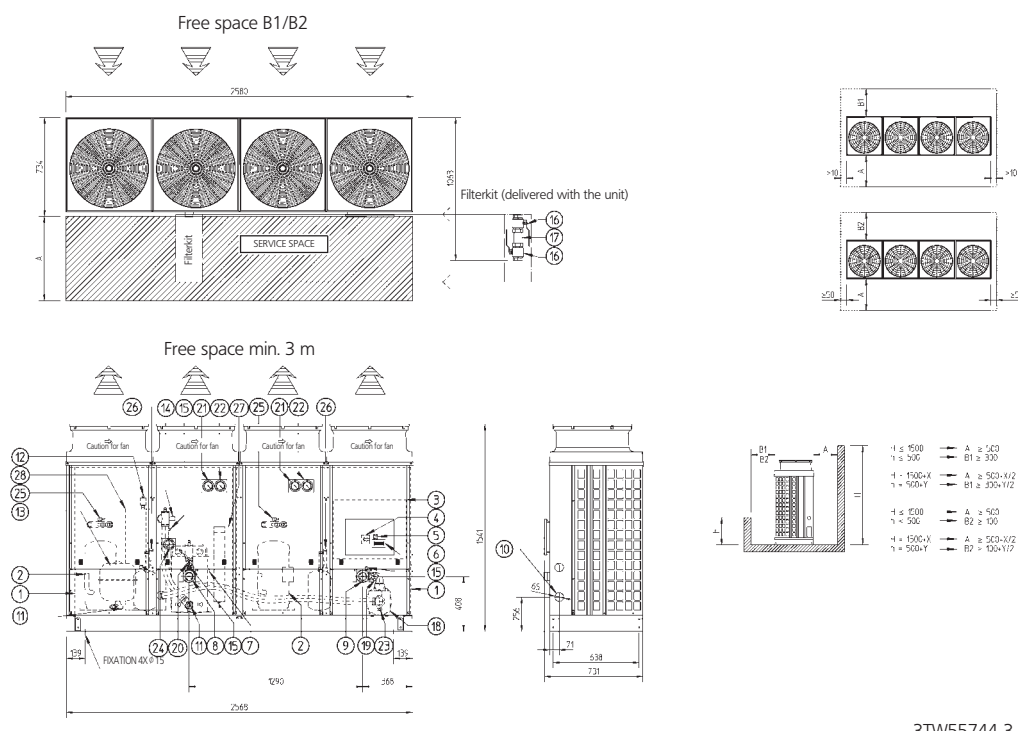
### EUWYP20-24KBZW1

- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 2" M BSP
  - 9 Water OUT connection: 2" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Pressure port
  - 16 Ball valve
  - 17 Water filter
  - 18 Pump
  - 19 Regulation valve
  - 20 Flow switch
  - 21 High pressure gauge (optional)
  - 22 Low pressure gauge (optional)
  - 23 Pump drain
  - 24 Water pressure gauge
  - 25 4 way valve\*
  - 26 Accumulator\*
  - 27 Liquid receiver\*
- \* Only for H/P models



### EUWYB20-24KBZW1

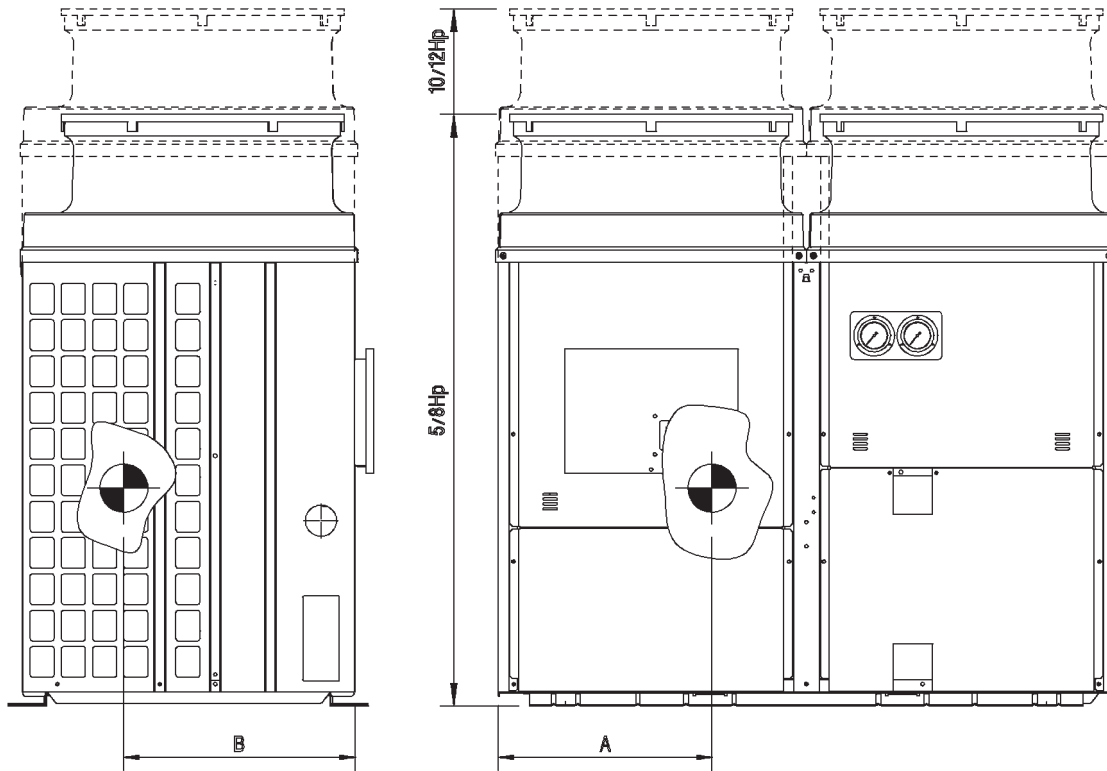
- 1 Air heat exchanger
  - 2 Compressor
  - 3 Switch box
  - 4 Main switch
  - 5 Pump switch
  - 6 Digital display controller
  - 7 Water heat exchanger
  - 8 Water IN connection: 2" M BSP
  - 9 Water OUT connection: 2" M BSP
  - 10 Power supply intake
  - 11 Drain
  - 12 Air purge
  - 13 Expansion vessel
  - 14 Safety valve
  - 15 Pressure port
  - 16 Ball valve
  - 17 Water filter
  - 18 Pump
  - 19 Regulation valve
  - 20 Flow switch
  - 21 High pressure gauge (optional)
  - 22 Low pressure gauge (optional)
  - 23 Pump drain
  - 24 Water pressure gauge
  - 25 4 way valve\*
  - 26 Accumulator\*
  - 27 Liquid receiver\*
  - 28 Buffer tank
- \* Only for H/P models



## 6 Centre of gravity

### 6 - 1 Centre of Gravity

EUWY\*5-12KBZW1



2  
6

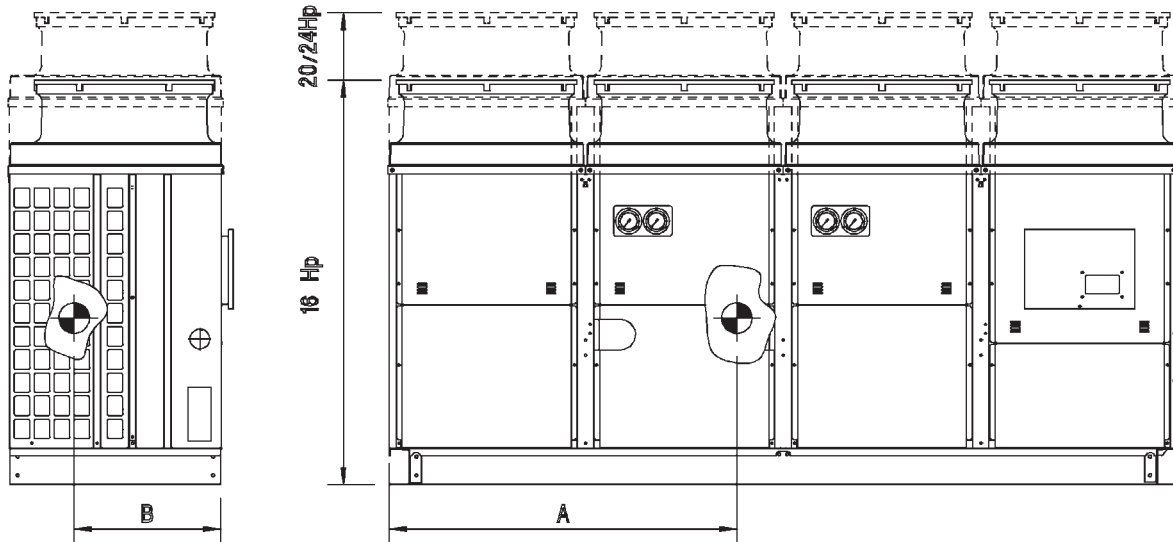
	5Hp		8Hp		10Hp		12Hp	
	A	B	A	B	A	B	A	B
<b>B-Models</b>	520	420	480	420	490	430	490	430
<b>P-Models</b>	510	420	470	420	480	430	490	430
<b>N-Models</b>	480	420	440	430	450	430	460	430

4TW54759-2

## 6 Centre of gravity

### 6 - 1 Centre of Gravity

EUWY\*16-24KBZW1

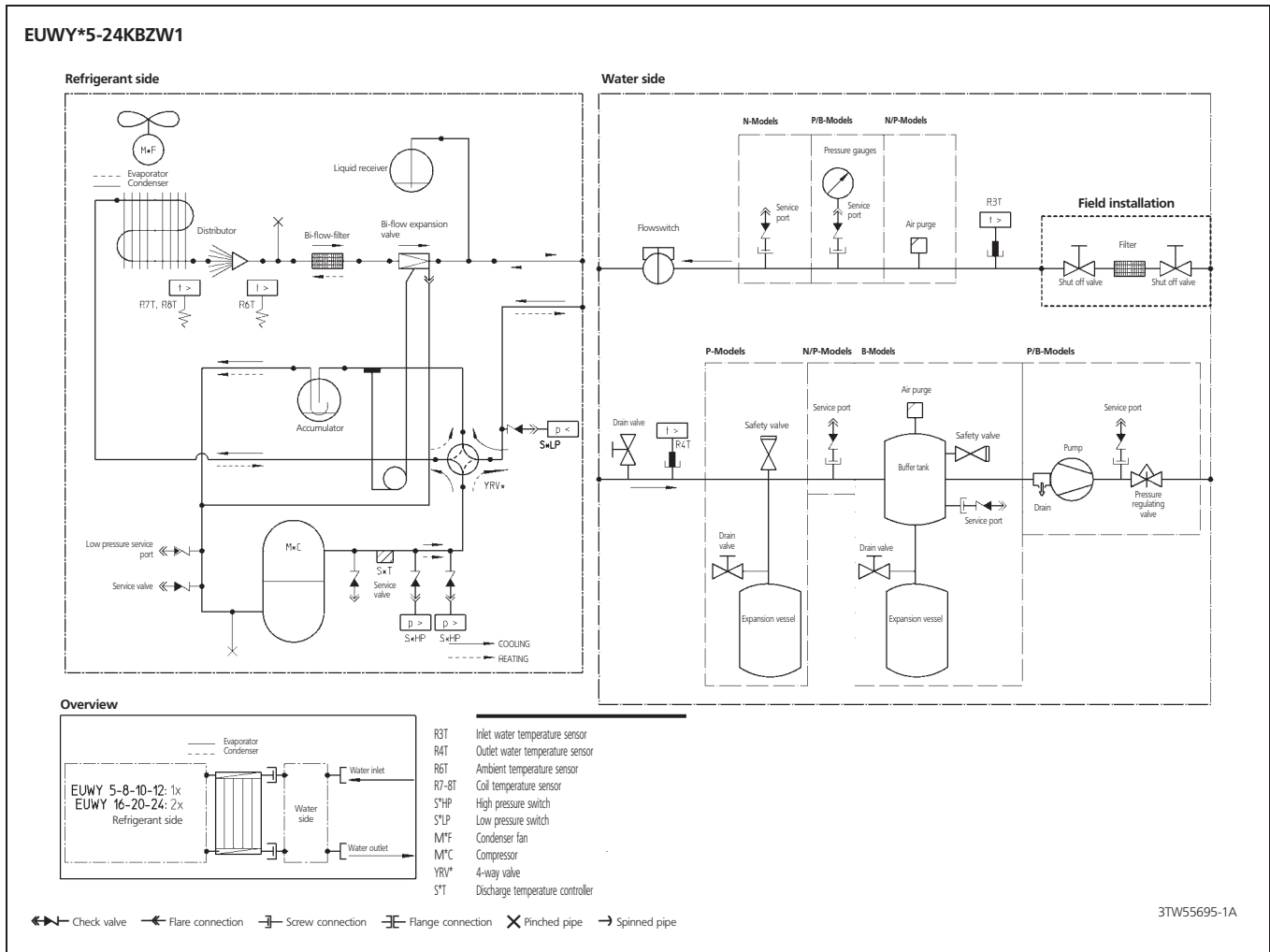


	16Hp		20Hp		24Hp	
	A	B	A	B	A	B
<b>B-Models</b>	1115	435	1120	435	1115	435
<b>P-Models</b>	1145	435	1140	435	1135	435
<b>N-Models</b>	1110	430	1115	435	1110	435

4TW54799-2

# 7 Piping diagrams

## 7 - 1 Piping Diagrams

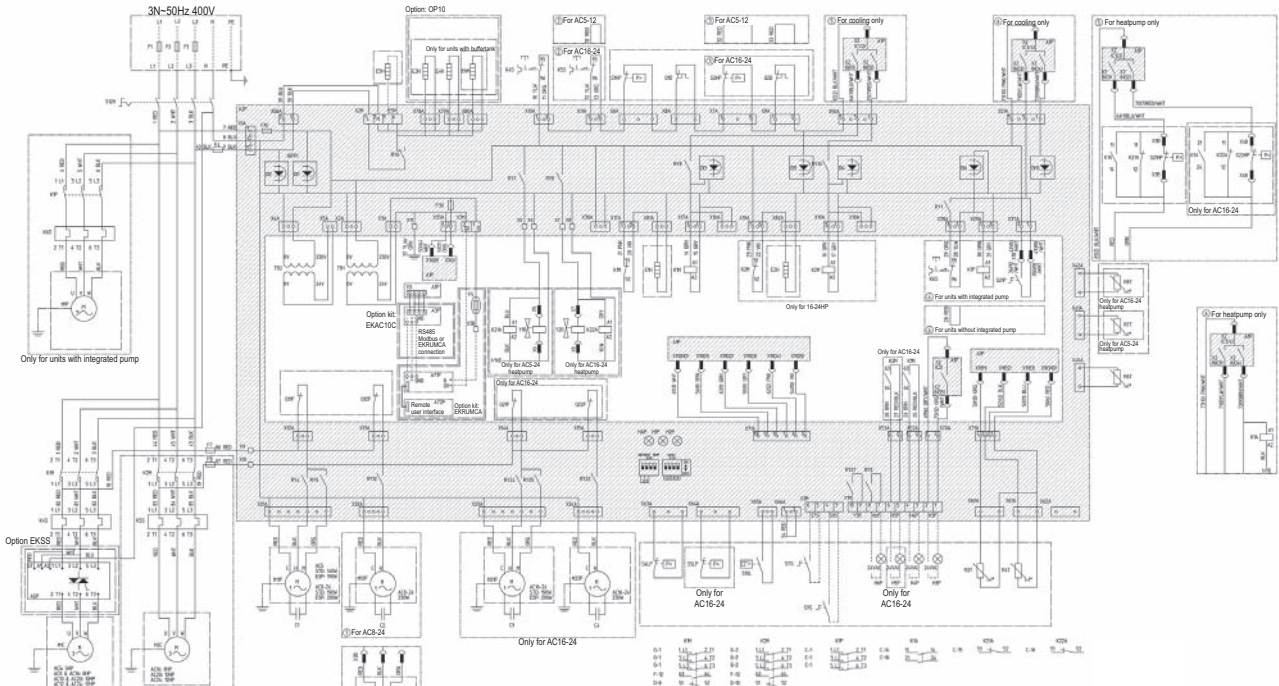


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7

# 8 Wiring diagrams

## 8 - 1 Wiring Diagrams - Three Phase

EUWA-KBZW1 / EUWY-KBZW1



2  
8

	Not standard included	
	Not possible as option	Possible as option
Obligatory	#	##
Not obligatory	*	**

( ) Applicable for unit without integrated pump

A2P	A1P
<b>DIGITAL INPUTS</b>	<b>DIGITAL INPUTS</b>
D11 Reverse phase detection (L-N)	X1 (ID1-GND) : Flow switch
D12 Reverse phase detection (N-L3)	X1 (ID2-GND) : Remote ClH selection
D13 M1C ON detection	X1 (ID3-GND) : High pressure switch + discharge protector + overcurrent
D14 M2C ON detection	X1 (ID4-GND) : Low pressure switch
D15 Safety device detection	X1 (ID5-GND) : Remote On/Off
D16 Pump ON detection	
D17 --	<b>DIGITAL OUTPUTS (RELAYS)</b>
D18 --	X2 (C12-NO1) : Compressor M1C on
D19 --	X2 (C12-NO2) : Compressor M2C on
D110 Reverse valve request	X2 (C3/4-NO3) : Voltage free contact for pump
<b>DIGITAL OUTPUTS (RELAYS)</b>	X2 (C3/4-NO4) : Reversing valve
RY1 Reversed phase protector	X2 (C5-NO5) : Alarm voltage free contact
RY3 Pump/general operation	
RY4-24 Fan speed relay 1	<b>ANALOG INPUTS</b>
RY5-25 Fan speed relay 2	X1 (B1-GND) : inlet water t°
RY6 Heater tape	X1 (B2-GND) : outlet water t°
RY7 Reversing valve circ1	X1 (B3-GND) : none
RY8 Reversing valve circ2	<b>ANALOG OUTPUTS</b>
RY9 M1C off (during defrost)	X1 (Y-GND)
RY10 M2C off (during defrost)	
RY12-22 Fan speed relay 3	
RY27 Reversing valve of water circuit	
<b>OTHERS</b>	
HAP Light emitting diode (service monitor green)	
H1P,H2P Light emitting diode (service monitor red)	
S1A Dipswitch (unit setting)	
S2A Dipswitch (defr. & fan setting)	

Fuses	Units with integrated pump (400V)						
F1,F2,F3 ( = gL/gG)	5HP	8HP	10HP	12HP	16HP	20HP	24HP
	3x20A	3x25A	3x32A	3x40A	3x50A	3x50A	3x63A

Fuses	Units without integrated pump (400V)						
F1,F2,F3 ( = gL/gG)	5HP	8HP	10HP	12HP	16HP	20HP	24HP
	3x20A	3x25A	3x32A	3x40A	3x50A	3x50A	3x63A

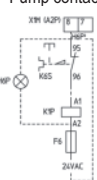
Fuses + overcurrent	All models (400V)							
F4	5HP	8HP	10HP	12HP	16HP	20HP	24HP	
	8A	8A	8A	8A	8A	8A	8A	
F5	250mA	250mA	250mA	250mA	250mA	250mA	250mA	
F7,8	5A	5A	5A	5A	5A	5A	5A	
F1U	5A	5A	5A	5A	5A	5A	5A	
F3U	315mA	315mA	315mA	315mA	315mA	315mA	315mA	
K4S	9A	14A	17A	24A	14A	17A	24A	
K5S	--	--	--	--	14A	17A	24A	
K6S (st. pump or OPZH/ZL)	1.2A	1.2A	1.8A	1.8A	3A	3A	3A	
K6S (op. pump or +OPZH/ZL)	1.9A	1.9A	1.9A	4.4A	4.4A	4.4A	4.4A	

Y1R,Y2R	Reverse valve circuit 1, circuit 2	Q21F,Q22F	Thermal protector fan circuit 2	F3U	Fuse controller PCB
X1-8(A/B/M)	Connectors	Q11F,Q12F	Thermal protector fan circuit 1	F1U	Fuse I/O PCB
TR2	Transfo 230V-24V for supply of I/O PCB	Q1D,Q2D	Discharge thermal protector circuit 1, circuit 2	F7,F8	Fuse for fan motor circuit 1, circuit 2
TR1	Transfo 230V-24V for supply of controller PCB	PE	Main earth terminal	F6	Fuse for pumpcontactor
S21P	Switch for pump: Manual/Auto	M1P	Pump motor	F5	Surge proof fuse
S12M	Main isolator switch	M11F,M12F	Fan motors circuit 1	F4	Fuse I/O PCB & evaporator heatertape
S10L	Flowswitch	M21F,M22F	Fan motors circuit 2	F1,F2,F3	Main fuses for the unit
S9S	Switch for remote start/stop or dual setpoint	M1C,M2C	Compressor motor circuit 1, circuit 2	E6H	Buffertank (55l) heater
S7S	Switch for remote cooling/heating selection or dual setpoint	K1P	Pumpcontactor	E5H	Field heater
S4LP,S5LP	Low pressure switch circuit 1, circuit 2	K4S,K5S	Overcurrent relay pump	E3H,E4H	Evaporator heatertape
S1HP,S2HP	High pressure switch circuit 1, circuit 2	K1M, K2M	Overcurrent relay circuit 1, circuit 2	E1H,E2H	Crankcase heater circuit 1, circuit 2
S21HP,S22HP	High pressure switch during defrost circuit 1, circuit 2	K1A	Compressor contactor circuit 1, circuit 2	C1,C2,C3,C4	Capacitors for fanmotors
R7T,R8T	Coil temperature sensor for circuit 1, circuit 2	K21A,K22A	Auxiliary bypass relay	A71P	PCB: Power supply card
R6T	Ambient temperature sensor	H6P	Auxiliary bypass relay	A72P	PCB: Remote user interface
R4T	Evaporator outlet water temperature sensor	H5P	Indication lamp general operation	A5P	PCB: Softstarter for circuit 1
R3T	Evaporator inlet water temperature sensor	H4P	Indication lamp operation compressor 2	A3P	PCB: Address card
		H3P	Indication lamp operation compressor 1	A2P	PCB: I/O PCB
			Indication lamp alarm	A1P	PCB: Controller PCB

1TW60006-1

### NOTES

- Terminal 1, --- : Wire 2, --- : Field wiring to be in accordance with the local electrical regulations.  
--- : Earth wiring, [ ] : Option, [ ] : PCB, [ ] : outside switchbox
- If compressor rotates reversely, it may be damaged
- Optional:
  - OP10 = Evaporator heatertape
  - EKAC10C = Address card kit for Modbus or remote user interface connection
  - EKSS = softstart
  - OP PUMP high = High head pressure pump
  - EKRUMLCA = Remote user interface
- Terminals for fieldwiring
  - X1M: H3-6P: output terminal for fieldwiring (voltage free contact max 2A / output)
  - X2M: E5H: fieldheater (max 500W resistive / 230VAC / 50Hz)
  - X3M: S7S,S9S: Input terminal for fieldwiring (don't connect voltage)(switch load 6mA / 30VDC)
- Y1R, Y2R are activated in cooling mode
  - S7S open = heating
  - S7S closed = cooling
- Dipswitch setting
  - S2A dipswitch: Defrost & Fan setting
    - 1 > Only applicable for heatpump:
      - Off= start condition 1 for defrost cycle
      - On= start condition 2 for defrost cycle (5, 8, 10, 12, 16, 20, 24Hp)
    - 2 > Off= fansetting 1 (5, 8, 16Hp)
    - On= fansetting 2 (10, 12, 20, 24Hp)
  - S1A dipswitch: Unit setting
    - 1 > Off= 1 circuit
    - On= 2 circuit
    - 234 > Off Off Off = WC CO & WC CL CO
    - Off On Off = AC CO
    - On Off Off = AC HP (without compr. stop for defrost cycle)
    - On Off On = AC HP (with compr. stop for defrost cycle)
- Pump contact for units without integrated pump



## 9 Sound data

### 9 - 1 Sound Power Spectrum

	Sound power Lw per Octave band (dB)								Total (dBA)
	63	125	250	500	1000	2000	4000	8000	LwA
EUWA/Y(*)5K(B)ZW1	70	71	67	64	61	59	53	46	67
EUWA/Y(*)8K(B)ZW1	78	76	72	77	68	64	58	52	76
EUWA/Y(*)10K(B)ZW1	82	91	77	77	71	67	63	57	78
EUWA/Y(*)12K(B)ZW1	82	91	77	77	71	67	63	57	78
EUWA/Y(*)16K(B)ZW1	81	79	75	80	71	67	61	55	79
EUWA/Y(*)20K(B)ZW1	85	94	80	80	74	70	66	60	81
EUWA/Y(*)24K(B)ZW1	85	94	80	80	74	70	66	60	81

4TW54757-1D

#### NOTES

1. Data valid at nominal operation condition
2. Measured according ISO3744

## 10 Installation

### 10 - 1 Water Charge, Flow and Quality

Be sure the water quality is in accordance with the specifications below:

ITEMS	Cooled water		Tendency if out of criteria
	Circulating water (below 20°C)	Water supply	
Items to be controlled:			
- pH at 25°C	6.8 - 8.0	6.8 - 8.0	Corrosion + scale
- Electrical conduct (mS/m) at 25°C	Below 40	Below 30	Corrosion + scale
(μS/cm) at 25°C	—	—	Corrosion + scale
- Chloride ion (mg Cl <sup>-</sup> /l)	Below 50	Below 50	Corrosion
- Sulfate ion (mg SO <sub>4</sub> <sup>2-</sup> /l)	Below 50	Below 50	Corrosion
- M-alkalinity (pH 4.8) (mg SO <sub>3</sub> /l)	Below 50	Below 50	Scale
- Total hardness (mg CaCO <sub>3</sub> /l)	Below 70	Below 70	Scale
- Calcium hardness (mg CaCO <sub>3</sub> /l)	Below 50	Below 50	Scale
- Silica ion (mg SiO <sub>2</sub> /l)	Below 30	Below 30	Scale
Items to be referred to:			
- Iron (mg Fe/l)	Below 1.0	Below 0.3	Corrosion + scale
- Copper (mg Cu/l)	Below 1.0	Below 0.1	Corrosion
- Sulfite ion (mg S <sup>2-</sup> /l)	Not detectable	Not detectable	Corrosion
- ammonium ion (mg NH <sub>4</sub> <sup>+</sup> /l)	Below 1.0	Below 0.1	Corrosion
- Remaining chloride (mg Cl/l)	Below 0.3	Below 0.3	Corrosion
- Free carbide (mg SO <sub>2</sub> /l)	Below 4.0	Below 4.0	Corrosion
- Stability index	—	—	Corrosion + scale

Names, definitions and units are according to JIS K 0101. Units and figures between brackets are old units published as reference only.

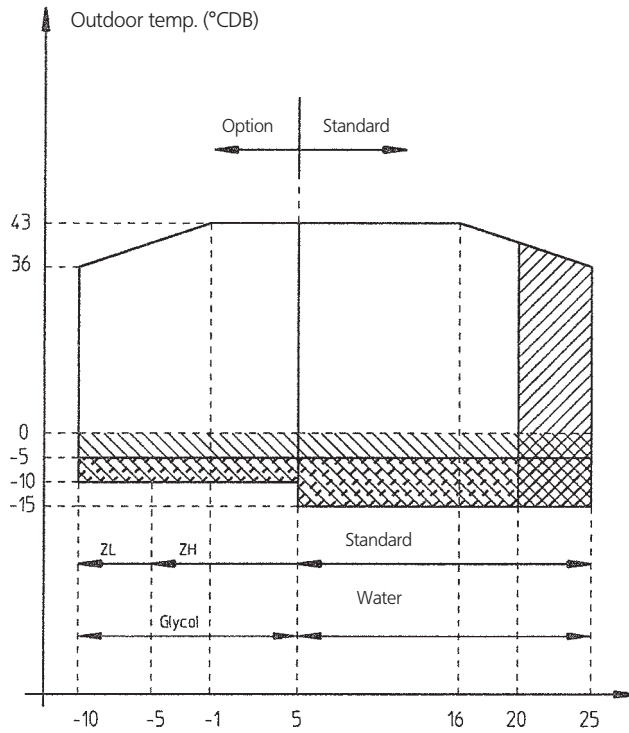


# 11 Operation range

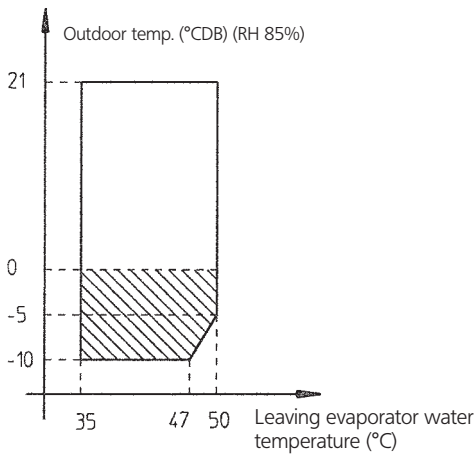
## 11 - 1 Operation Range




EUWY\*5-24KBZW1

### Cooling mode



### Heating mode



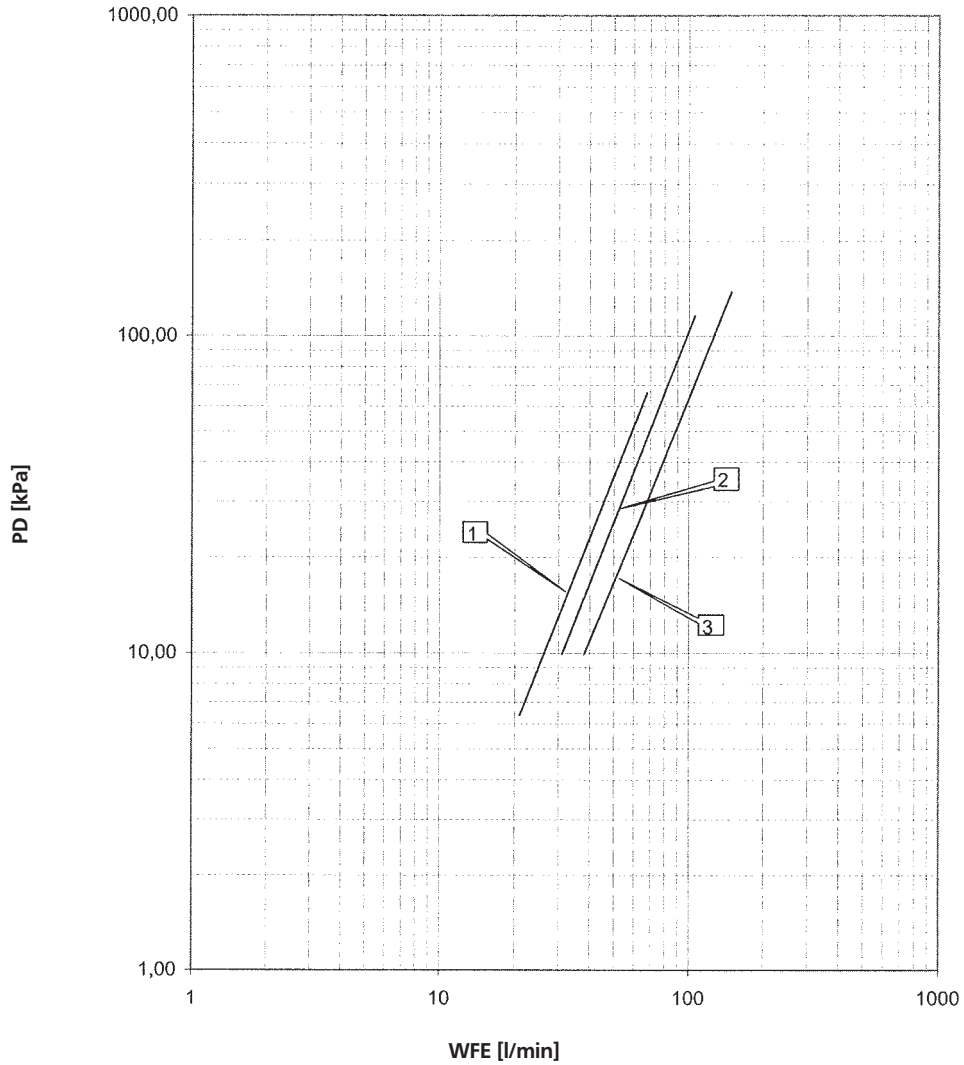
-  : Pull down area
-  : Protect the water circuit against freezing
-  : If the units operate below -5°C and are installed in a rather windy space, a windscreen is required.

4TW55173-1

## 12 Hydraulic performance

### 12 - 1 Water Pressure Drop Curve Evaporator

EUWY\*5-12KBZW1



PD: Pressure drop evaporator  
 WF: Evaporator waterflow rate

- ① EUWY(\*)5K(B)ZW1
- ② EUWY(\*)8K(B)ZW1
- ③ EUWY(\*)10K(B)ZW1  
 EUWY(\*)12K(B)ZW1(\*)

**Warning:** Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrate in the technical specifications.

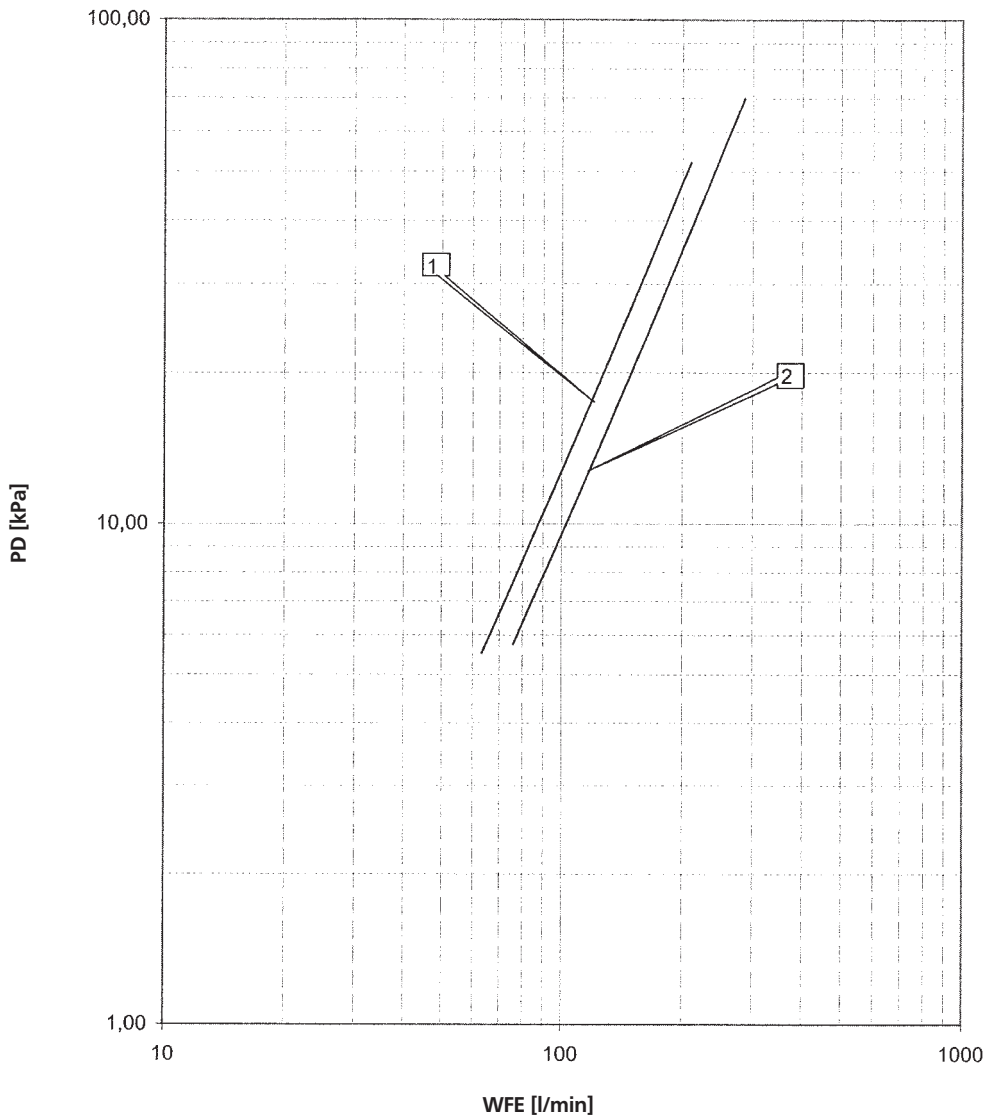
**(\*) Note:**  
 Minimum allowed flow of 12 Hp is 45 l/min.

4TW55179-1A

# 12 Hydraulic performance

## 12 - 1 Water Pressure Drop Curve Evaporator

EUWY\*16-24KBZW1



PD: Pressure drop evaporator  
 WF: Waterflow rate  
 ① EUWY(\*)16K(B)ZW1  
 ② EUWY(\*)20K(B)ZW1  
 EUWY(\*)24K(B)ZW1(\*)

**Warning:** Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrate in the technical specifications.

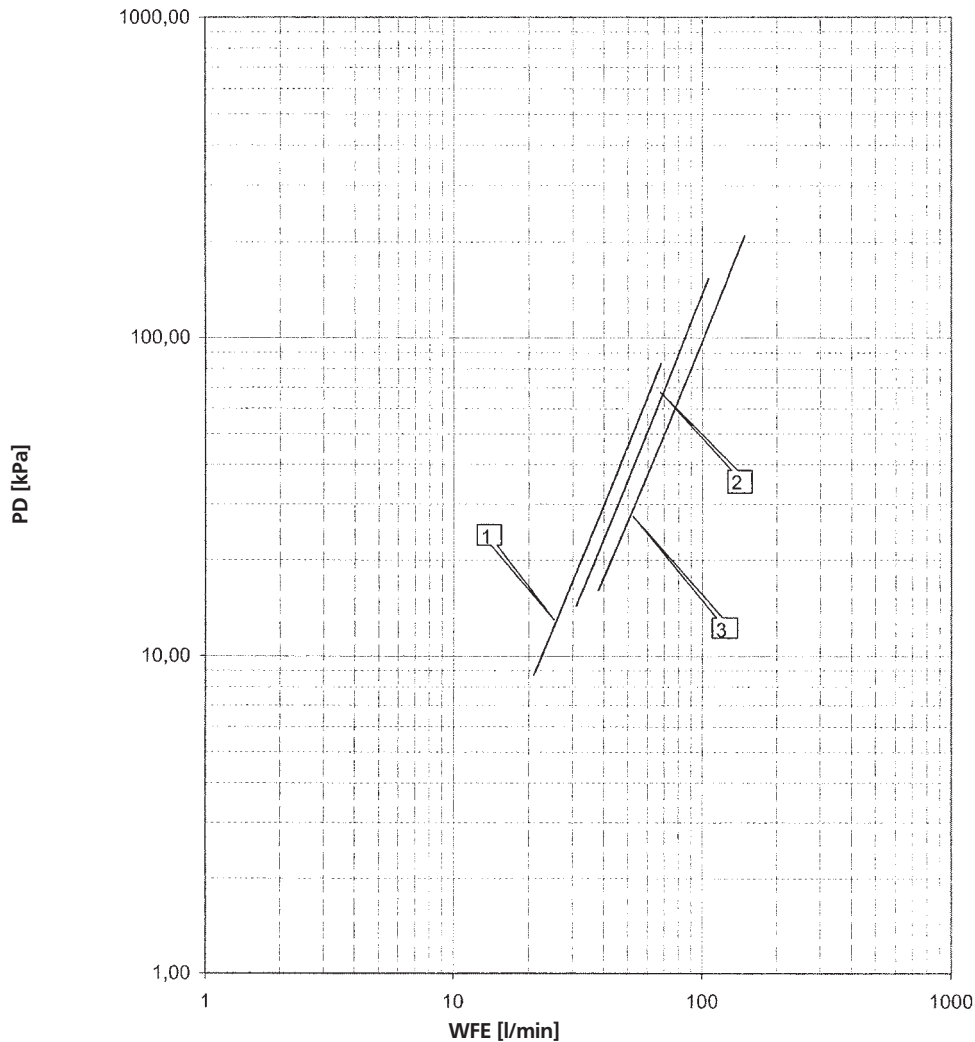
**(\*) Note:**  
 Minimum allowed waterflow of 24 Hp unit is 90 l/min.

4TW55219-1A

## 12 Hydraulic performance

### 12 - 2 Water Pressure Drop Curve Evaporator/Condenser

EUWYN5-12KBZW1



PD: Pressure drop evaporator  
WF: Evaporator waterflow rate

- ① EUWYN5KBZW1
- ② EUWYN8KBZW1
- ③ EUWYN10KBZW1 - EUWYN12KBZW1(\*)

**Warning:** Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

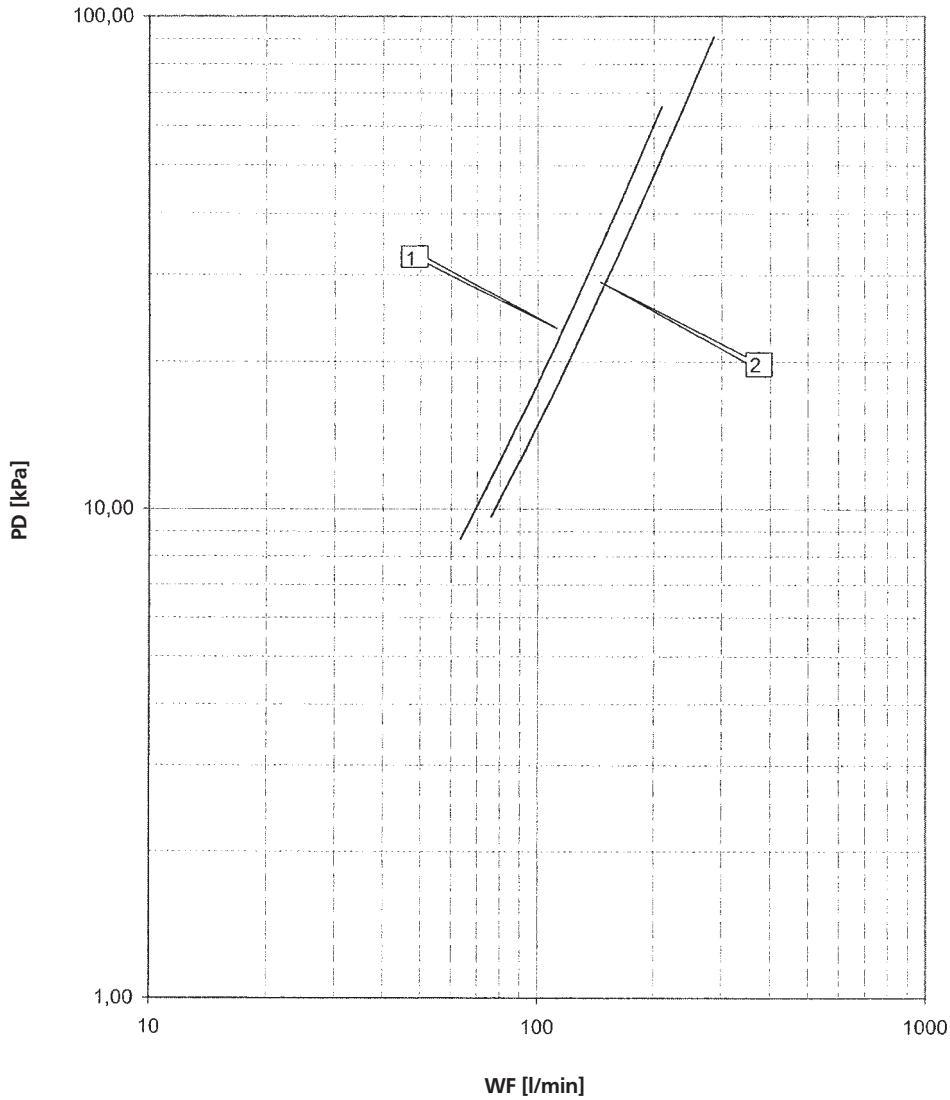
**(\*) Note:**  
Minimum allowed flow of 12 Hp is 45 l/min.

4TW55699-6

## 12 Hydraulic performance

### 12 - 2 Water Pressure Drop Curve Evaporator/Condenser

EUWYN16-24KBZW1



PD: Pressure drop through the unit

WF: Waterflow rate

① EUWYN16KBZW1

② EUWYN20KBZW1 - EUWYN24KBZW1(\*)

**Warning:** Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

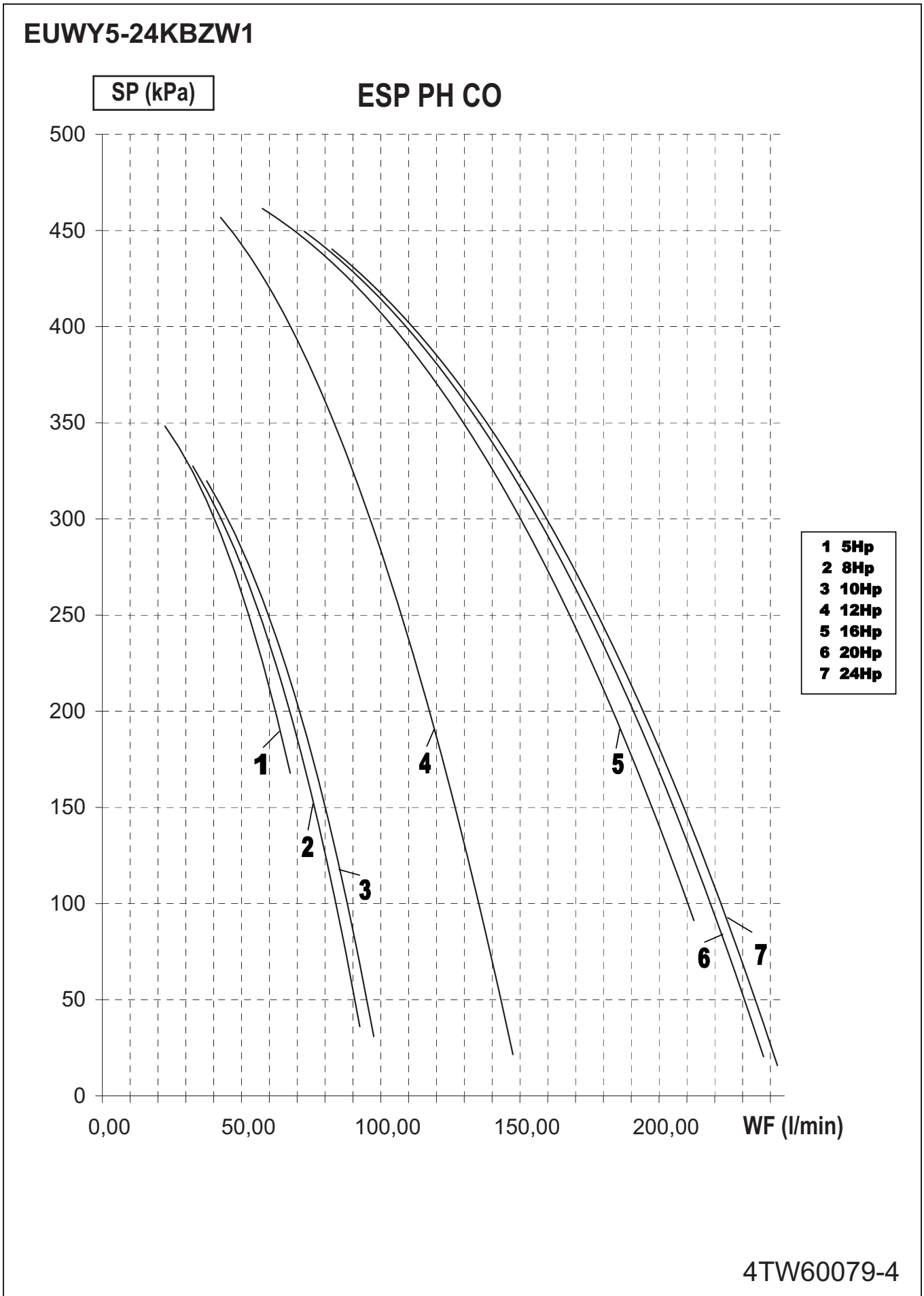
**(\*) Note:**

Minimum allowed waterflow of 24 Hp unit is 90 l/min.

4TW55739-6

## 12 Hydraulic performance

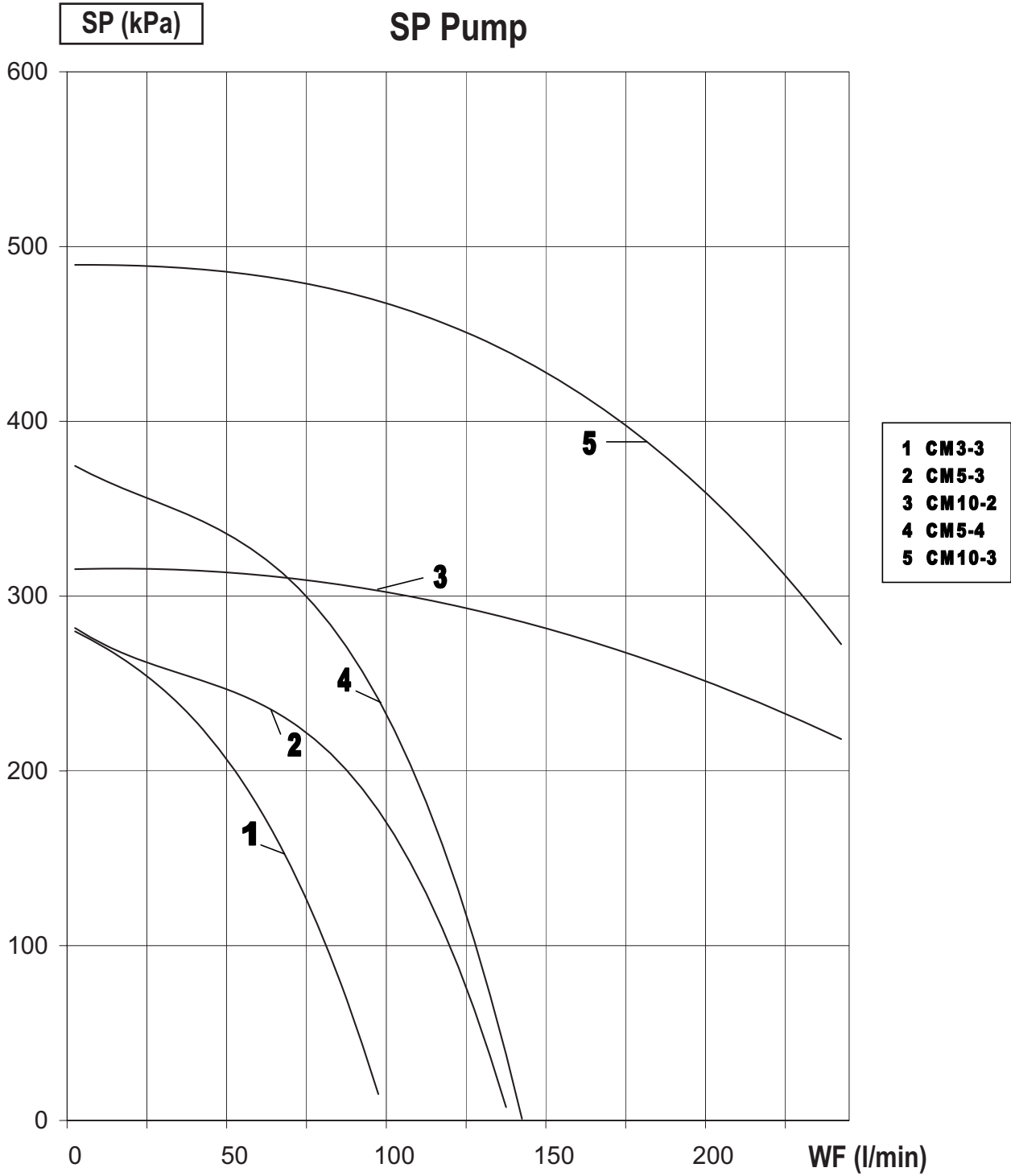
### 12 - 3 Static Pressure Drop Unit



## 12 Hydraulic performance

### 12 - 4 Pump Characteristics

**EUWA5-24KBZW1**  
**EUWY5-24KBZW1**



4TW60009-3



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