



Chillers

Technical Data

Air Cooled Chiller



ECDEN10-403A

EUWA*-KBZW1
EUWY*-KBZW1

R-407C



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EUWA*-KBZW1
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R-407C

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EUWA-KBZW1

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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)



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2 Specifications

2-1 Technical Specifications				EUWAN5KBZW1	EUWAP5KBZW1	EUWAB5KBZW1	EUWAN8KBZW1	EUWAP8KBZW1	EUWAB8KBZW1	
Cooling capacity	Nom.		kW	11.3 (1)			19.7 (1)			
Capacity steps			%	0-100						
Power input	Cooling	Nom.	kW	4.48 (2)			7.27 (2)			
EER				2.53			2.46			
Casing	Colour	Ivory white (Munsell code: 5Y7.5/1)								
	Material	Polyester coated galvanised steel plate								
Dimensions	Unit	Height	mm	1,230						
		Width	mm	1,290						
		Depth	mm	734						
	Packed unit	Height	mm	1,425						
		Width	mm	1,380						
		Depth	mm	830						
Weight	Unit		kg	150	168	180	215	229	241	
	Operation weight		kg	152	171	239	218	232	300	
	Packed unit		kg	160	178	190	225	239	251	
Packing	Material	Wood + Plastic foil								
	Weight		kg	10						
Water heat exchanger	Type	Brazed plate								
	Quantity	1								
	Water volume		l	1.14			1.615			
	Water flow rate	Min.		l/min	16			26		
		Max.		l/min	65			102		
	Nominal water flow	Cooling		l/min	32 (1)			51 (1)		
	Nominal water pressure drop	Cooling	Heat exchanger	kPa	24			38		
	Insulation material	Kaiflex								
	Model	Type	AC70X-24HX			AC70X-34HX				
	Air heat exchanger	Type	Cross fin coil/Hi-X tubes and PE coated waffle louvre fins							
Rows		Quantity	2							
Stages		Quantity	40							
Fin pitch			mm	2						
Face area			m ²	1.570						
Pump	Quantity			-	1	-	1			
	Model			-	CM3-3	-	CM3-3			
	Nominal ESP pump	Cooling	kPa	-	239	-	198			
	Nominal ESP unit	Cooling	kPa	209 (1)			128 (1)			
Fan	Quantity	2								
	Type	Axial								
	Discharge direction	Vertical								
Fan group	Air flow rate	Cooling	Nom.	m ³ /min	160 (per 2 fans)			170 (per 2 fans)		
Fan motor	Output		W	140			190			
	Quantity			2			1			
	Drive	Direct drive								
Fan motor 2	Output		W	140			230			
Sound power level	Cooling	Nom.	dB(A)	67			76			
Compressor	Type	Hermetically sealed scroll compressor								
	Quantity	1								
	Model	JT140BF-YE			JT212DA-YE					
	Speed		rpm	2,900						
	Oil	Charged volume	l	1.5			2.7			
Refrigerant	Type	R-407C								
	Control	Thermostatic expansion valve								
	Circuits	Quantity	1							
Refrigerant circuit	Charge		kg	3.9			4.6			

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2 Specifications

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2-1 Technical Specifications				EUWAN5KBZW1	EUWAP5KBZW1	EUWAB5KBZW1	EUWAN8KBZW1	EUWAP8KBZW1	EUWAB8KBZW1
Water circuit	Piping connections diameter	inch	G 1"1/4 (male)						
	Piping	inch	1-1/4"						
	Safety valve	bar	-	3	-	3	-	3	
	Manometer		Yes						
	Drain valve / fill valve		Yes, ø15						
	Shut off valve		Yes						
	Air purge valve		Yes						
	Total water volume	l	2 (3)	3 (3)	59 (3)	3 (3)	3.0 (3)	59 (3)	
	Minimum water volume in the system	l	54 (4.0)			85 (4.0)		4 (4.0)	85 (4.0)
Refrigerant oil	Type	FVC68D							
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						
Hydraulic components	Buffer tank	Volume	l	-	55	-	-	55	
	Nominal water pressure drop unit	Cooling	kPa	27	-	46	-	-	
		Expansion vessel	Volume	l	-	12	-	12	
		Pre pressure		bar	-	1.5	-	1.5	
					Water filter	Material	Brass		

2-1 Technical Specifications				EUWAN10KBZW1	EUWAP10KBZW1	EUWAB10KBZW1	EUWAN12KBZW1	EUWAP12KBZW1	EUWAB12KBZW1		
Cooling capacity	Nom.	kW	22.5 (1)			11.3 (1)	11.3 (1)				
Capacity steps		%	0-100								
Power input	Cooling	Nom.	kW	8.64 (2)			4.52 (2)				
EER			2.60				2.51				
Casing	Colour	Ivory white (Munsell code: 5Y7.5/1)									
	Material	Polyester coated galvanised steel plate									
Dimensions	Unit	Height	mm	1,450							
		Width	mm	1,290							
		Depth	mm	734							
	Packed unit	Height	mm	1,645							
		Width	mm	1,380							
		Depth	mm	830							
Weight	Unit	kg	245	259	271	248	262	274			
	Operation weight	kg	248	262	330	251	265	335			
	Packed unit	kg	255	269	281	258	272	284			
Packing	Material	Wood + Plastic foil									
	Weight	kg	10								
Water heat exchanger	Type	Braze plate									
	Quantity	1									
	Water volume	l	1.9			2.375					
	Water flow rate	Min.	l/min	32			38				
		Max.	l/min	129			152				
	Nominal water flow	Cooling	l/min	64 (1)			76 (1)				
	Nominal water pressure drop	Cooling	Heat exchanger	kPa	43			37			
					Insulation material	Kaiflex					
	Model	Type	AC70X-40HX				AC70X-50HX				

2 Specifications

2-1 Technical Specifications				EUWAN10KBZW1	EUWAP10KBZW1	EUWAB10KBZW1	EUWAN12KBZW1	EUWAP12KBZW1	EUWAB12KBZW1		
Air heat exchanger	Type			Cross fin coil/Hi-X tubes and PE coated waffle louvre fins							
	Rows	Quantity		2							
	Stages	Quantity		50							
	Fin pitch		mm	2							
	Face area		m ²	1.97							
Pump	Quantity			-	1	-	-	1	-		
	Model			-	CM5-3	-	-	CM5-3	-		
	Nominal ESP pump	Cooling	kPa	-	232	-	-	217	-		
	Nominal ESP unit	Cooling	kPa	-	138	-	-	105	-		
Fan	Quantity			2							
	Type			Axial							
	Discharge direction			Vertical							
Fan group	Air flow rate	Cooling	Nom.	m ³ /min		170 (per 2 fans)					
Fan motor	Output			W							
	Quantity			2							
	Drive			Direct drive							
Fan motor 2	Output			W							
Sound power level	Cooling	Nom.		dBA							
Compressor	Type			Hermetically sealed scroll compressor							
	Quantity			1							
	Model			JT265DA-YE		JT335DA-YE					
	Speed		rpm	2,900							
	Oil	Charged volume		l							
Refrigerant	Type			R-407C							
	Control			Thermostatic expansion valve							
	Circuits	Quantity		1							
Refrigerant circuit	Charge		kg		5.9		6.0				
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							
	Air purge valve			Yes							
	Total water volume		l		3 (3)		59 (3)		3 (3) 4 (3) 60 (3)		
	Minimum water volume in the system		l		108 (4.0)		126 (4.0)		126 (4.0)		
Refrigerant oil	Type			FVC68D							
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							
Hydraulic components	Buffer tank	Volume		l		-	55		-	-	55
	Nominal water pressure drop unit	Cooling		kPa		56	-		56	-	
		Expansion vessel		Volume		l		-	12		-
	Water filter	Pre pressure		bar		-	1.5		-	1.5	
		Material			Brass						

2-1 Technical Specifications				EUWAN16KBZW1	EUWAP16KBZW1	EUWAB16KBZW1	EUWAN20KBZW1	EUWAP20KBZW1	EUWAB20KBZW1
Cooling capacity	Nom.		kW	34.6 (1)			46.6 (1)		
Capacity steps			%	0-50-100					
Power input	Cooling	Nom.		kW		14.70 (2)		17.90 (2)	
EER				2.35		2.60			

2 Specifications

2-1 Technical Specifications				EUWAN16KBZW1	EUWAP16KBZW1	EUWAB16KBZW1	EUWAN20KBZW1	EUWAP20KBZW1	EUWAB20KBZW1	
Casing	Colour			Ivory white (Munsell code: 5Y7.5/1)						
	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	2,260			2,660			
		Depth	mm	910						
Weight	Unit		kg	430	448	460	490	508	520	
	Operation weight		kg	436	457	525	496	518	545	
	Packed unit		kg	455	473	485	515	533	585	
Packing	Material			Wood + Plastic foil						
	Weight		kg	25					65	
Water heat exchanger	Type			Brazen plate						
	Quantity			1						
	Water volume		l	2.964			3.9			
	Water flow rate	Min.	l/min	53			67			
		Max.	l/min	212			267			
	Nominal water flow	Cooling	l/min	99 (1)			134 (1)			
	Nominal water pressure drop	Cooling	Heat exchanger	kPa	22					
		Insulation material			Kaiflex					
	Model		Type	AC230X-38HX			AC230X-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 ²	1.57+1.57			1.97+1.97				
Pump	Quantity			-	1		-	1		
	Model			-	CM10-2		-	CM10-2		
	Nominal ESP pump	Cooling	kPa	-	302		-	288		
	Nominal ESP unit	Cooling	kPa	-	240		-	195		
Fan	Quantity			4						
	Type			Axial						
	Discharge direction			Vertical						
Fan group	Air flow rate	Cooling	Nom.	m ³ /min		170 (per 2 fans)				
Fan motor	Output		W	190						
	Quantity			2						
	Drive			Direct drive						
Fan motor 2	Output		W	230						
Sound power level	Cooling	Nom.	dBA	79			81			
Compressor	Type			Hermetically sealed scroll compressor						
	Quantity			2						
	Model			JT212DA-YE			JT265DA-YE			
	Speed		rpm	2,900						
	Oil	Charged volume		l	2.7					
Refrigerant	Type			R-407C						
	Control			Thermostatic expansion valve						
	Circuits	Quantity		2						
Refrigerant circuit	Charge		kg	4.6			5.9			
Water circuit	Piping connections diameter		inch	2" male						
	Piping			-						
	Safety valve		bar	-	3		-	3		
	Manometer			Yes						
	Drain valve / fill valve			Yes, ø15						
	Shut off valve			Yes						
	Air purge valve			Yes						
	Total water volume		l	6 (3)	9 (3)	65 (3)	6 (3)	10 (3)	66 (3)	
	Minimum water volume in the system		l	88 (4.0)			111 (4.0)			

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2 Specifications

2-1 Technical Specifications				EUWAN16KBZW1	EUWAP16KBZW1	EUWAB16KBZW1	EUWAN20KBZW1	EUWAP20KBZW1	EUWAB20KBZW1	
Refrigerant oil	Type	FVC68D								
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						
Hydraulic components	Buffer tank	Volume	l	-	55	-	55			
	Nominal water pressure drop unit	Cooling	kPa	25	-	30	-			
		Expansion vessel	Volume	l	-	12	-	12		
		Pre pressure		bar	-	1.5	-	1.5		
					Water filter	Material	Brass			

2-1 Technical Specifications				EUWAN24KBZW1	EUWAP24KBZW1	EUWAB24KBZW1
Cooling capacity	Nom.	kW	55.3 (1)			
Capacity steps		%	0-50-100			
Power input	Cooling	Nom.	kW	23.80 (2)		
EER	2.32					
Casing	Colour	Ivory white (Munsell code: 5Y7.5/1)				
	Material	Polyester coated galvanised steel plate				
Dimensions	Unit	Height	mm	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	496	514	526	
	Operation weight	kg	503	524	592	
	Packed unit	kg	521	539	551	
Packing	Material	Wood + Plastic foil				
	Weight	kg	25			
Water heat exchanger	Type	Brazed plate				
	Quantity	1				
	Water volume	l	4.524			
	Water flow rate	Min.	l/min	79		
		Max.	l/min	317		
	Nominal water flow	Cooling	l/min	158 (1)		
	Nominal water pressure drop	Cooling	Heat exchanger	kPa	22	
	Insulation material	Kaiflex				
	Model	Type	AC230X-58HX			
	Air heat exchanger	Type	Cross fin coil/Hi-X tubes and PE coated waffle louvre fins			
Rows		Quantity	2			
Stages		Quantity	50			
Fin pitch		mm	2			
Face area		m ²	1.97+1.97			
Pump	Quantity	-	1	1		
	Model	-	CM10-2	CM10-2		
	Nominal ESP pump	Cooling	kPa	-	276	276
	Nominal ESP unit	Cooling	kPa	-	158	158
Fan	Quantity	4				
	Type	Axial				
	Discharge direction	Vertical				
Fan group	Air flow rate	Cooling	Nom.	m ³ /min	170 (per 2 fans)	

2 Specifications

2-1 Technical Specifications				EUWAN24KBZW1	EUWAP24KBZW1	EUWAB24KBZW1
Fan motor	Output	W		190		
	Quantity			2		
	Drive			Direct drive		
Fan motor 2	Output	W		230		
Sound power level	Cooling	Nom.	dBA	81		
Compressor	Type			Hermetically sealed scroll compressor		
	Quantity			2		
	Model			JT335DA-YE		
	Speed	rpm		2,900		
	Oil	Charged volume	l	2.7		
Refrigerant	Type			R-407C		
	Control			Thermostatic expansion valve		
	Circuits	Quantity		2		
Refrigerant circuit	Charge	kg		6.0		
Water circuit	Piping connections diameter	inch		2" male		
	Piping	inch		-		
	Safety valve	bar		-	3	3
	Manometer			Yes		
	Drain valve / fill valve			Yes, ø15		
	Shut off valve			Yes		
	Air purge valve			Yes		
	Total water volume	l		7 (3)	10 (3)	66 (3)
	Minimum water volume in the system	l		132 (4.0)		132 (4.0)
Refrigerant oil	Type			FVC68D		
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			
Hydraulic components	Buffer tank	Volume	l	55		
	Nominal water pressure drop unit	Cooling	kPa	32	-	-
		Expansion vessel	Volume	l	-	12
		Pre pressure	bar	-	1.5	1.5
Water filter	Material			Brass		
Notes			(1)Condition: Ta 35°C - LWE 7°C (DT = 5°C)			
			(2)Pump is not included			
			(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)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			

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2 Specifications

2-2 Electrical Specifications			EUWAN5KBZW1	EUWAP5KBZW1	EUWAB5KBZW1	EUWAN8KBZW1	EUWAP8KBZW1	EUWAB8KBZW1	
Pump	Type		Horizontal multi-stage end-suction						
	Phase		3~						
	Voltage	V	400						
	Maximum running current	A	-	1.3	-	1.3	-	1.3	
Compressor	Phase		3~						
	Voltage		400						
	Starting current	A	60.0			95.5			
	Nominal running current (RLA)	A	5.5			10.7			
	Maximum running current	A	9.0			14.0			
	Starting method		Direct on line						
	Crankcase heater	W	33			50			
Power supply	Name		W1						
	Phase		3N~						
	Frequency	Hz	50						
	Voltage		400						
	Voltage range	Min.	%	-10					
		Max.	%	10					
Unit	Starting current	A	62.2	63.5	97.9	99.2	-	-	
	Current	Zmax	Text	0.26			0.22		
	Nominal running current (RLA)	Cooling	A	7.7	9.0	13.6	14.9	-	
	Maximum running current	A	11.2	12.5	16.9	18.2	-	-	
	Minimum Ssc value		Equipment complying with EN/IEC 61000-3-12						
	Recommended fuses according to IEC standard 269-2		3 x 20gL/gG			3 x 25gL/gG			
Fans	Phase		1~						
	Voltage		230						
	Maximum running current		2.2			2.9			
Control circuit	Phase		1~						
	Voltage		230						
	Recommended fuses		Factory installed						
Wiring connections			See installation manual						

2-2 Electrical Specifications			EUWAN10KBZW1	EUWAP10KBZW1	EUWAB10KBZW1	EUWAN12KBZW1	EUWAP12KBZW1	EUWAB12KBZW1	
Pump	Type		Horizontal multi-stage end-suction						
	Phase		3~						
	Voltage	V	400						
	Maximum running current	A	-	1.3	-	1.3	-	1.3	
Compressor	Phase		3~						
	Voltage		400						
	Starting current	A	110.0			136.0			
	Nominal running current (RLA)	A	13.0			17.6			
	Maximum running current	A	17.0			24.0			
	Starting method		Direct on line						
	Crankcase heater	W	50						
Power supply	Name		W1						
	Phase		3N~						
	Frequency	Hz	50						
	Voltage		400						
	Voltage range	Min.	%	-10					
		Max.	%	10					
Unit	Starting current	A	113	114	139	140	-	-	
	Current	Zmax	Text	0.22		0.21	0.21		
	Nominal running current (RLA)	Cooling	A	15.9	17.2	20.5	21.8	-	
	Maximum running current	A	19.9	21.2	26.9	28.2	-	-	
	Minimum Ssc value		Equipment complying with EN/IEC 61000-3-12						
	Recommended fuses according to IEC standard 269-2		3 x 25gL/gG	3 x 32gL/gG			3 x 40gL/gG		

2 Specifications

2-2 Electrical Specifications			EUWAN10KBZW1	EUWAP10KBZW1	EUWAB10KBZW1	EUWAN12KBZW1	EUWAP12KBZW1	EUWAB12KBZW1
Fans	Phase		1~					
	Voltage		V		230			
	Maximum running current		A		2.9			
Control circuit	Phase		1~					
	Voltage		V		230			
	Recommended fuses		Factory installed					
Wiring connections			See installation manual					

2-2 Electrical Specifications			EUWAN16KBZW1	EUWAP16KBZW1	EUWAB16KBZW1	EUWAN20KBZW1	EUWAP20KBZW1	EUWAB20KBZW1		
Pump	Type		Horizontal multi-stage end-suction							
	Phase		3~							
	Voltage		V		400					
	Maximum running current		A		-	2	-	2		
Compressor	Phase		3~							
	Voltage		V		400					
	Starting current		A		95.0		110.0			
	Nominal running current (RLA)		A		10.7		13.0			
	Maximum running current		A		14.0		17.0			
	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		62.2	63.5	97.9	99.2		
	Current	Zmax	Text		0.21					
	Nominal running current (RLA)		Cooling		A		7.7	9.0	13.6	14.9
	Maximum running current		A		11.2	12.5	16.9	18.2		
	Minimum Ssc value		Equipment complying with EN/IEC 61000-3-12							
	Recommended fuses according to IEC standard 269-2		3 x 40gL/gG		3 x 50gL/gG					
Fans	Phase		1~							
	Voltage		V		230					
	Maximum running current		A		5.8					
Control circuit	Phase		1~							
	Voltage		V		230					
	Recommended fuses		Factory installed							
Wiring connections			See installation manual							

2-2 Electrical Specifications			EUWAN24KBZW1	EUWAP24KBZW1	EUWAB24KBZW1	
Pump	Type		Horizontal multi-stage end-suction			
	Phase		3~			
	Voltage		V		400	
	Maximum running current		A		-	2.7
Compressor	Phase		3~			
	Voltage		V		400	
	Starting current		A		136.0	
	Nominal running current (RLA)		A		17.6	
	Maximum running current		A		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

2-2 Electrical Specifications				EUWAN24KBZW1	EUWAP24KBZW1	EUWAB24KBZW1
Unit	Starting current		A	113	114	
	Current	Zmax	Text	0.20		
	Nominal running current (RLA)	Cooling	A	15.9	17.2	
	Maximum running current		A	19.9	21.2	
	Minimum Ssc value			Equipment complying with EN/IEC 61000-3-12		
	Recommended fuses according to IEC standard 269-2			3 x 63g/L/gG		
Fans	Phase			1~		
	Voltage		V	230		
	Maximum running current		A	5.8		
Control circuit	Phase			1~		
	Voltage		V	230		
	Recommended fuses			Factory installed		
Wiring connections				See installation manual		
Notes				(1)Condition: Ta 35°C - LWE 7°C (DT = 5°C)		
				(2)Pump is not included		
				(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)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		

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3 Options

3 - 1 Options

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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	-		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Not completely combinable options	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
	Completely combinable options	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
	Available kits																											
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
	Example of possible option combinations																											
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

CC EUWA*5KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	5.23	6.21	7.18	8.16	9.14	10.1	11.1	12.1	13.5	15.0	17.9	19.9
25	4.81	5.75	6.69	7.63	8.57	9.51	10.5	11.4	12.8	14.2	17.0	18.9
30	4.39	5.29	6.20	7.10	8.00	8.91	9.81	10.7	12.1	13.4	16.1	17.9
35	3.97	4.84	5.70	6.57	7.44	8.30	9.17	10.0	11.3	12.6	15.2	17.0
40				6.04	6.87	7.70	8.53	9.35	10.6	11.8	14.3	16.0
43						7.33	8.14	8.95	10.2	11.4	13.8	

PI EUWA*5KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	3.02	3.07	3.11	3.16	3.21	3.25	3.30	3.34	3.41	3.48	3.62	3.71
25	3.32	3.37	3.42	3.46	3.51	3.55	3.60	3.65	3.71	3.78	3.92	4.01
30	3.68	3.72	3.77	3.82	3.86	3.91	3.95	4.00	4.07	4.14	4.27	4.37
35	4.09	4.13	4.18	4.22	4.27	4.31	4.36	4.41	4.48	4.54	4.68	4.77
40				4.68	4.73	4.77	4.82	4.87	4.93	5.00	5.14	5.23
43						5.07	5.12	5.17	5.24	5.30	5.44	

4TW54752-1A

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 Eurovent rating standard 6/C/003-2003 and valid for chilled water range $\Delta t = 3 - 8^\circ\text{C}$.
- Power input (kW)**
Power input is total input according to Eurovent rating standard 6/C/003-2003: Compressor + fans + control circuit.

4 Capacity tables

4 - 1 Cooling Capacity Tables

CC EUWA*8KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	7.43	9.02	10.6	12.2	13.8	15.4	17.0	18.6	21.0	23.3	28.1	31.3
25	7.18	8.68	10.2	11.7	13.2	14.7	16.2	17.7	19.9	22.2	26.7	29.7
30	6.93	8.34	9.75	11.2	12.6	14.0	15.4	16.8	18.9	21.0	25.3	28.1
35	6.67	7.99	9.31	10.6	12.0	13.3	14.6	15.9	17.9	19.9	23.8	26.5
40				10.1	11.3	12.6	13.8	15.0	16.9	18.7	22.4	24.9
43						12.1	13.3	14.5	16.3	18.0	21.5	

PI EUWA*8KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	4.22	4.36	4.49	4.63	4.77	4.91	5.05	5.18	5.39	5.60	6.01	6.29
25	4.76	4.89	5.03	5.17	5.31	5.45	5.58	5.72	5.93	6.14	6.55	6.83
30	5.38	5.52	5.66	5.80	5.94	6.07	6.21	6.35	6.56	6.76	7.18	7.45
35	6.10	6.24	6.38	6.51	6.65	6.79	6.93	7.07	7.27	7.48	7.89	8.17
40				7.32	7.46	7.60	7.73	7.87	8.08	8.29	8.70	8.98
43						8.12	8.26	8.40	8.61	8.81	9.23	

4TW54762-1A

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 Eurovent rating standard 6/C/003-2003 and valid for chilled water range $Dt = 3 - 8^{\circ}\text{C}$.
- Power input (kW)**
Power input is total input according to Eurovent rating standard 6/C/003-2003: Compressor + fans + control circuit.

4 Capacity tables

4 - 1 Cooling Capacity Tables

CC EUWA*10KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	11.8	13.6	15.4	17.2	19.1	20.9	22.7	24.5	27.3	30.0	35.4	39.1
25	10.6	12.4	14.2	15.9	17.7	19.5	21.2	23.0	25.7	28.3	33.6	37.2
30	9.49	11.2	12.9	14.6	16.4	18.1	19.8	21.5	24.1	26.7	31.8	35.2
35	8.34	10.0	11.7	13.3	15.0	16.7	18.3	20.0	22.5	25.0	30.0	33.3
40				12.0	13.7	15.3	16.9	18.5	20.9	23.3	28.2	31.4
43						14.4	16.0	17.6	20.0	22.3	27.1	

PI EUWA*10KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	5.21	5.35	5.49	5.63	5.77	5.91	6.05	6.19	6.40	6.61	7.04	7.32
25	5.91	6.05	6.19	6.33	6.47	6.62	6.76	6.90	7.11	7.32	7.74	8.02
30	6.66	6.80	6.94	7.08	7.22	7.36	7.50	7.64	7.85	8.07	8.49	8.77
35	7.45	7.59	7.73	7.87	8.01	8.15	8.29	8.43	8.64	8.85	9.28	9.6
40				8.70	8.84	8.98	9.12	9.26	9.47	9.69	10.1	10.4
43						9.50	9.64	9.78	10.0	10.2	10.6	

4TW54772-1A

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 Eurovent rating standard 6/C/003-2003 and valid for chilled water range $\Delta t = 3 - 8^\circ\text{C}$.
- 2 **Power input (kW)**
Power input is total input according to Eurovent rating standard 6/C/003-2003: Compressor + fans + control circuit.

4 Capacity tables

4 - 1 Cooling Capacity Tables

CC EUWA*12KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	16.1	18.0	19.9	21.9	23.8	25.7	27.6	29.5	32.4	35.3	41.0	44.9
25	14.2	16.1	18.1	20.0	21.9	23.8	25.7	27.6	30.4	33.3	39.0	42.8
30	12.4	14.3	16.2	18.0	19.9	21.8	23.7	25.6	28.4	31.3	36.9	40.7
35	10.5	12.4	14.3	16.1	18.0	19.9	21.8	23.6	26.5	29.3	34.9	38.7
40				14.2	16.1	18.0	19.8	21.7	24.5	27.3	32.9	36.6
43						16.8	18.6	20.5	23.3	26.1	31.6	

PI EUWA*12KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	6.79	7.00	7.21	7.42	7.63	7.84	8.05	8.27	8.58	8.90	9.5	9.9
25	7.59	7.80	8.01	8.23	8.44	8.65	8.86	9.07	9.38	9.7	10.3	10.8
30	8.58	8.79	9.00	9.21	9.42	9.63	9.84	10.1	10.4	10.7	11.3	11.7
35	9.75	9.96	10.2	10.4	10.6	10.8	11.0	11.2	11.4	11.9	12.5	12.9
40				11.7	11.9	12.2	12.4	12.6	12.9	13.2	13.8	14.3
43						13.1	13.3	13.5	13.8	14.1	14.7	

4TW54782-1B

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 Eurovent rating standard 6/C/003-2003 and valid for chilled water range Dt = 3 - 8°C.
- 2 **Power input (kW)**
Power input is total input according to Eurovent rating standard 6/C/003-2003: Compressor + fans + control circuit.

4 Capacity tables

4 - 1 Cooling Capacity Tables

CC EUWA*16KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	12.6	16.3	20.0	23.6	26.5	29.4	32.3	35.1	39.4	43.7	52.2	57.8
25	12.2	15.9	19.6	23.1	25.8	28.5	31.1	33.8	37.8	41.7	49.6	54.9
30	11.8	15.6	19.3	22.6	25.1	27.6	30.0	32.5	36.2	39.8	47.1	51.9
35	11.5	15.2	18.9	22.3	24.5	26.8	29.0	31.2	34.6	37.9	44.5	49.0
40				22.0	24.0	26.0	28.0	30.0	33.0	36.0	42.0	46.0
43						25.5	27.4	29.2	32.0	34.8	40.5	

CC EUWA*16KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	8.63	8.91	9.19	9.47	9.7	10.0	10.3	10.6	11.0	11.4	12.3	12.8
25	9.8	10.1	10.4	10.7	11.0	11.2	11.5	11.8	12.2	12.6	13.5	14.0
30	11.1	11.4	11.6	11.9	12.2	12.5	12.8	13.0	13.4	13.9	14.7	15.3
35	12.3	12.6	12.9	13.2	13.5	13.7	14.0	14.3	14.7	15.1	16.0	16.5
40				14.5	14.7	15.0	15.3	15.6	16.0	16.4	17.3	17.8
43						15.8	16.1	16.4	16.8	17.2	18.0	

4TW54792-1B

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 Eurovent rating standard 6/C/003-2003 and valid for chilled water range $\Delta t = 3-8^{\circ}\text{C}$
- Power input (kW)
Power input is total input according to Eurovent rating standard 6/C/003-2003:
Compressor + fans + control circuit

4 Capacity tables

4 - 1 Cooling Capacity Tables

CC EUWA*20KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	25.6	29.1	32.6	36.1	39.5	43.0	46.4	49.8	55.0	60.1	70.4	77.2
25	24.1	27.4	30.8	34.1	37.4	40.7	44.0	47.3	52.2	57.1	66.9	73.4
30	22.5	25.8	29.0	32.1	35.3	38.5	41.6	44.7	49.4	54.1	63.4	69.6
35	21.1	24.2	27.2	30.2	33.2	36.2	39.2	42.2	46.6	51.1	60.0	65.9
40				28.3	31.2	34.0	36.8	39.6	43.9	48.1	56.5	62.1
43						32.7	35.4	38.1	42.2	46.3	54.4	

PI EUWA*20KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	11.0	11.2	11.5	11.8	12.1	12.4	12.7	13.0	13.4	13.9	14.7	15.3
25	12.6	12.9	13.2	13.4	13.7	14.0	14.3	14.6	15.0	15.5	16.3	16.9
30	14.1	14.4	14.7	15.0	15.2	15.5	15.8	16.1	16.6	17.0	17.9	18.4
35	15.5	15.8	16.1	16.4	16.7	16.9	17.2	17.5	17.9	18.4	19.3	19.9
40				17.7	18.0	18.3	18.6	18.8	19.3	19.7	20.6	21.2
43						19.0	19.3	19.6	20.0	20.5	21.4	

4TW54802-1A

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 Eurovent rating standard 6/C/003-2003 and valid for chilled water range Dt = 3 - 8°C.
- 2 **Power input (kW)**
Power input is total input according to Eurovent rating standard 6/C/003-2003: Compressor + fans + control circuit.

4 Capacity tables

4 - 2 Capacity Correction Factor

CC EUWA*24KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	35.0	38.6	42.2	45.7	49.3	52.9	56.4	60.0	65.4	70.7	81.4	88.6
25	32.2	35.7	39.2	42.7	46.2	49.7	53.1	56.6	61.9	67.1	77.5	84.5
30	29.4	32.8	36.2	39.6	43.0	46.4	49.8	53.2	58.3	63.4	73.7	80.5
35	26.8	30.2	33.5	36.9	40.2	43.6	46.9	50.3	55.3	60.3	70.4	77.1
40				33.5	36.7	40.0	43.2	46.4	51.3	56.2	65.9	72.4
43						38.0	41.2	44.4	49.2	54.0	63.6	

PI EUWA*24KBZW1

Ta/LWE	-10	-8	-6	-4	-2	0	2	4	7	10	16	20
20	14.3	14.7	15.2	15.6	16.0	16.5	16.9	17.3	18.0	18.6	20.0	20.8
25	16.2	16.6	17.0	17.5	17.9	18.3	18.8	19.2	19.9	20.5	21.8	22.7
30	18.2	18.6	19.0	19.5	19.9	20.3	20.8	21.2	21.9	22.5	23.8	24.7
35	20.3	20.7	21.2	21.6	22.0	22.5	22.9	23.3	23.8	24.6	25.9	26.8
40				23.8	24.3	24.7	25.2	25.6	26.2	26.9	28.2	29.1
43						26.1	26.6	27.0	27.7	28.3	29.6	

4TW54812-1A

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 Eurovent rating standard 6/C/003-2003 and valid for chilled water range $Dt = 3 - 8^{\circ}\text{C}$.
- Power input (kW)**
Power input is total input according to Eurovent rating standard 6/C/003-2003: Compressor + fans + control circuit.

4 Capacity tables

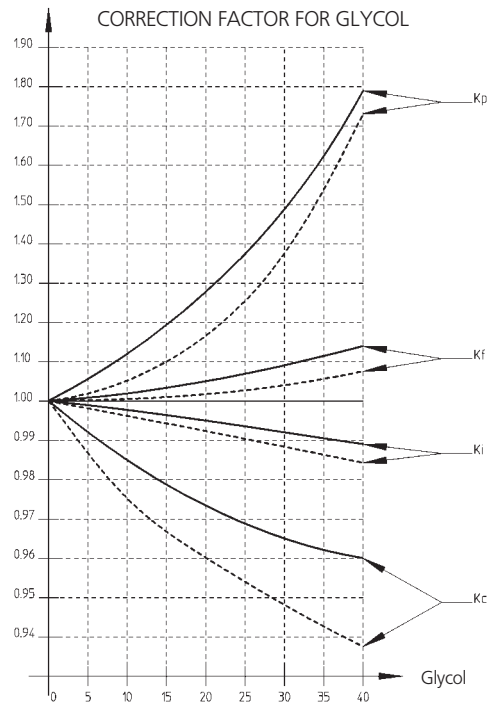
4 - 2 Capacity Correction Factor

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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

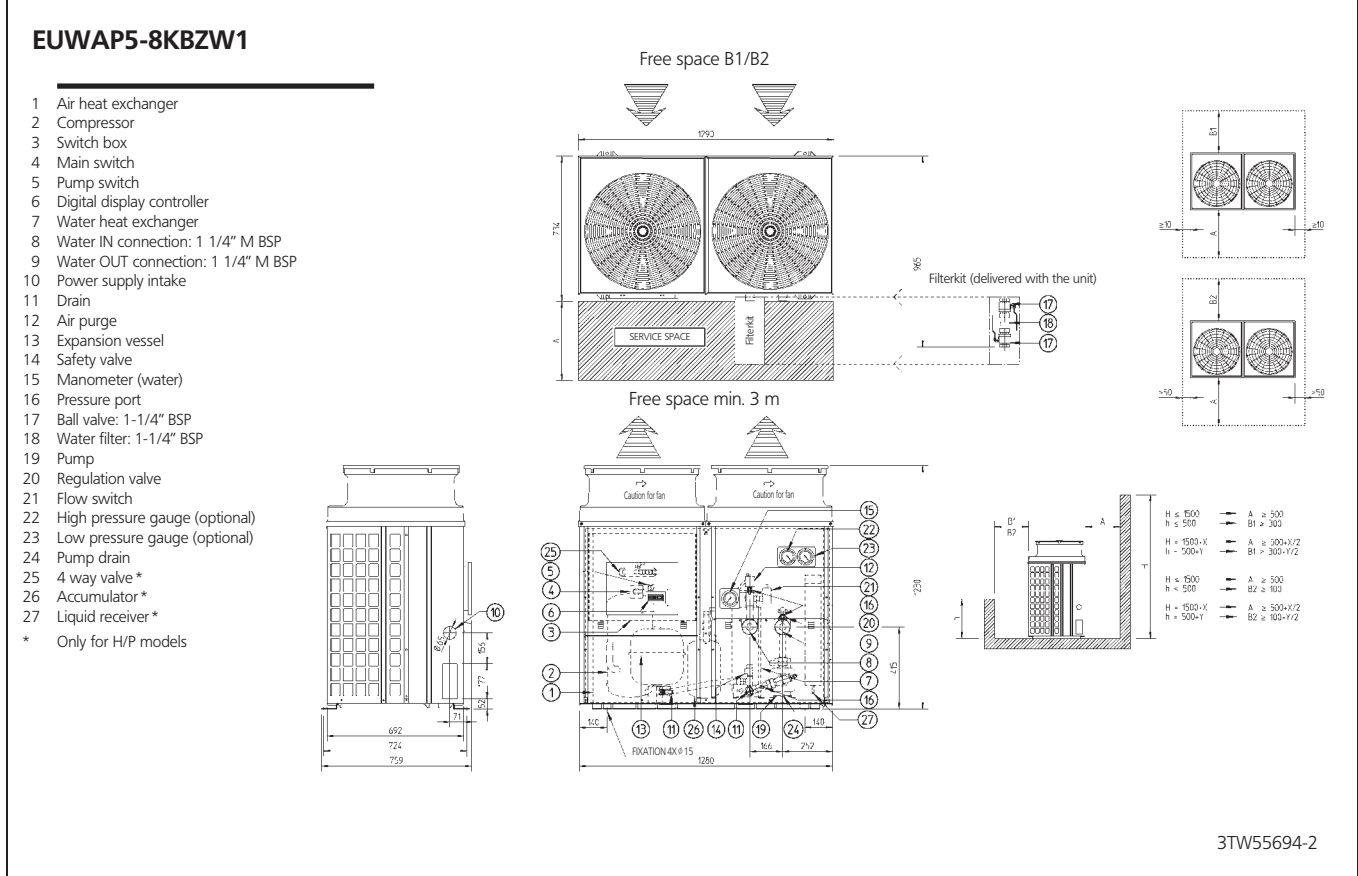
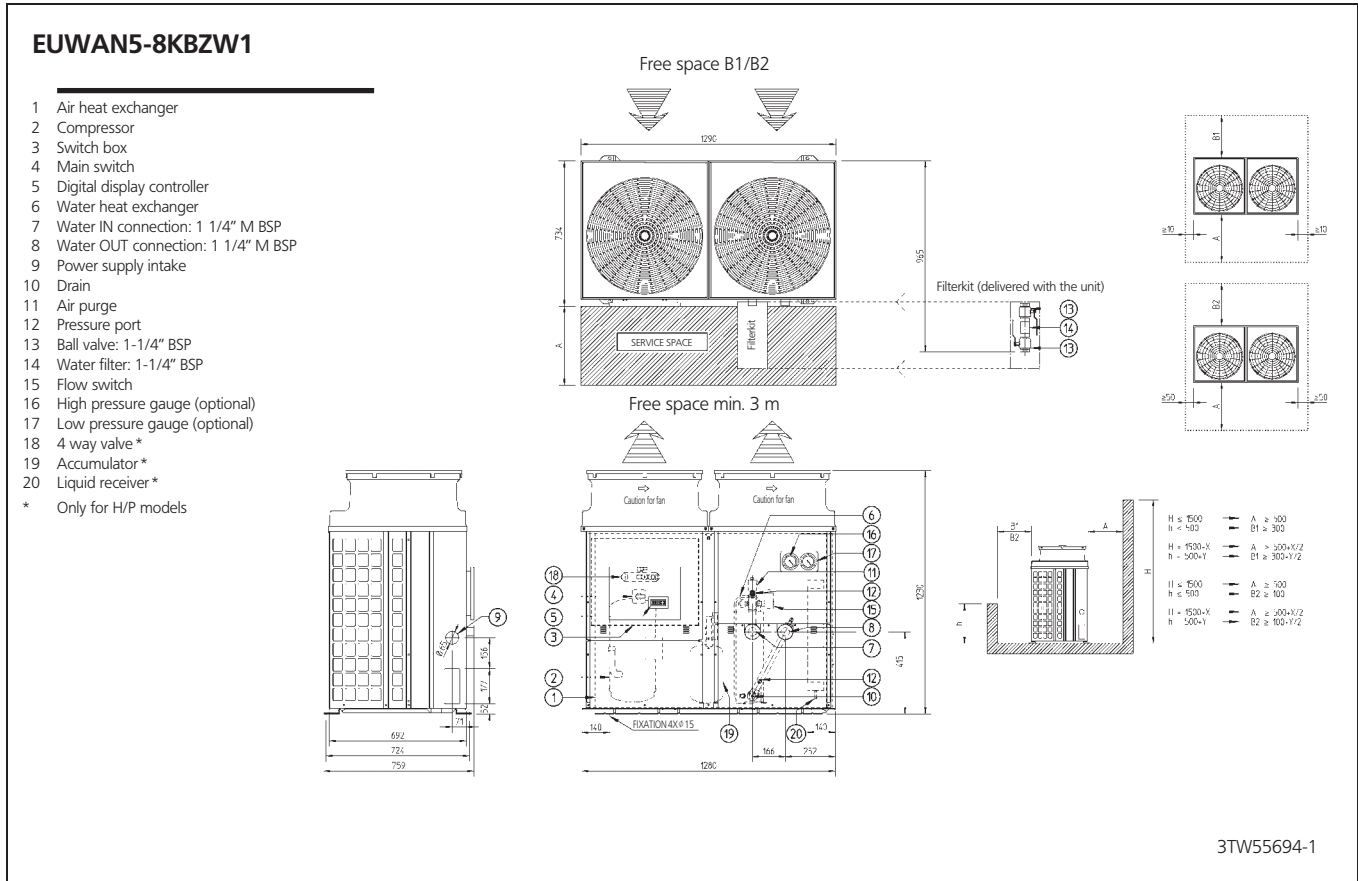


Legend: — Ethylene glycol
 - - - Propylene glycol
 Kc Correction on cooling capacity
 Ki Correction on power input
 Kf Correction on flow rate
 Kp Correction on pressure drop

4TW54179-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

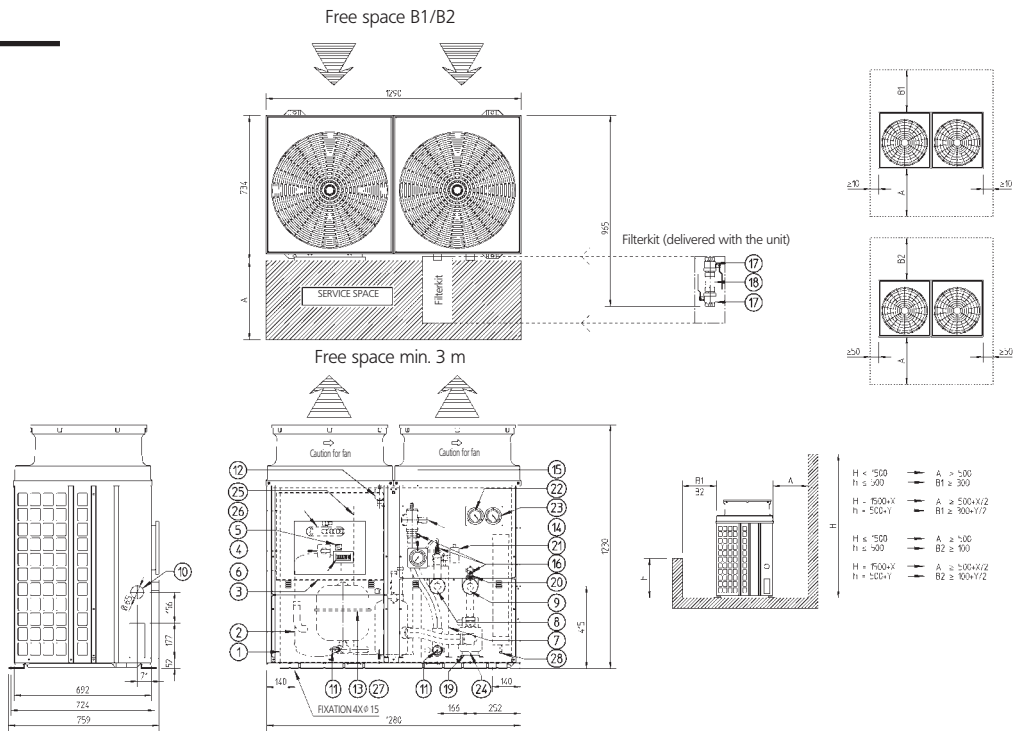


5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWAB5-8KBZW1

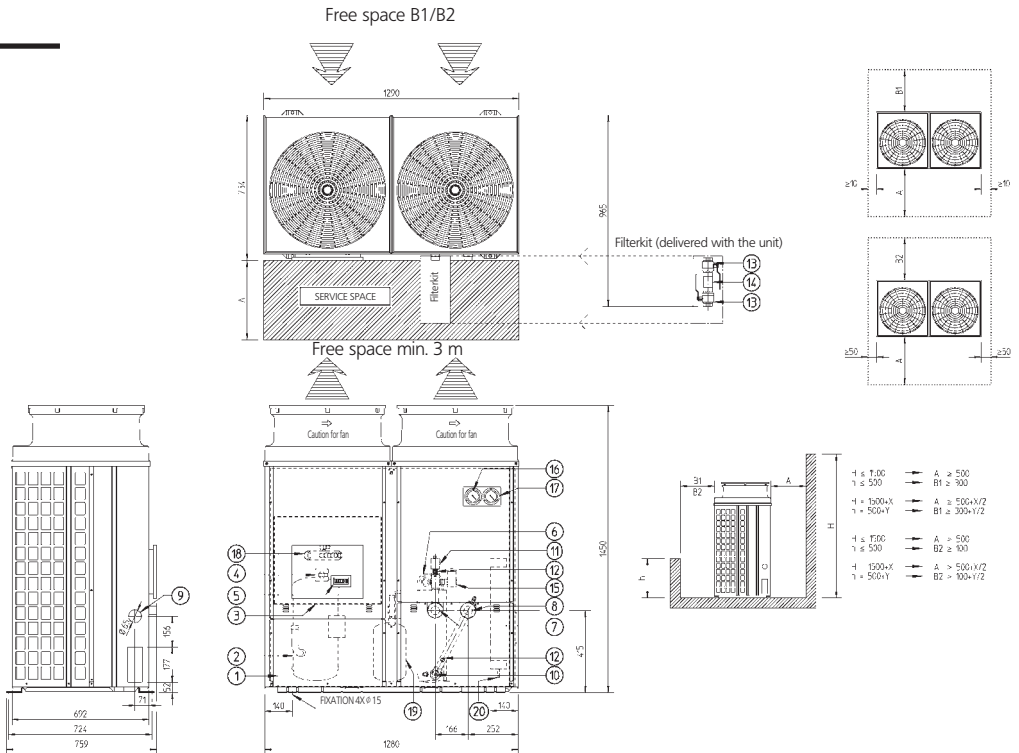
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Pump switch
 - 6 Digital display controller
 - 7 Water heat exchanger
 - 8 Water IN connection: 1 1/4" M BSP
 - 9 Water OUT connection: 1 1/4" M BSP
 - 10 Power supply intake
 - 11 Drain
 - 12 Air purge
 - 13 Expansion vessel
 - 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

EUWAN10-12KBZW1

- 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



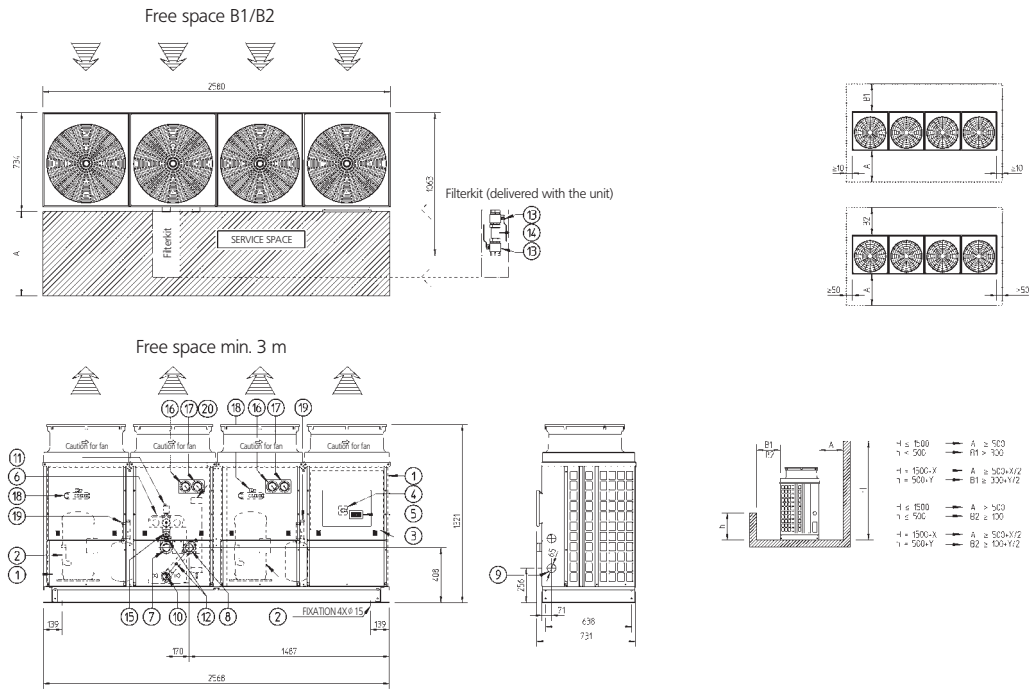
3TW55714-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

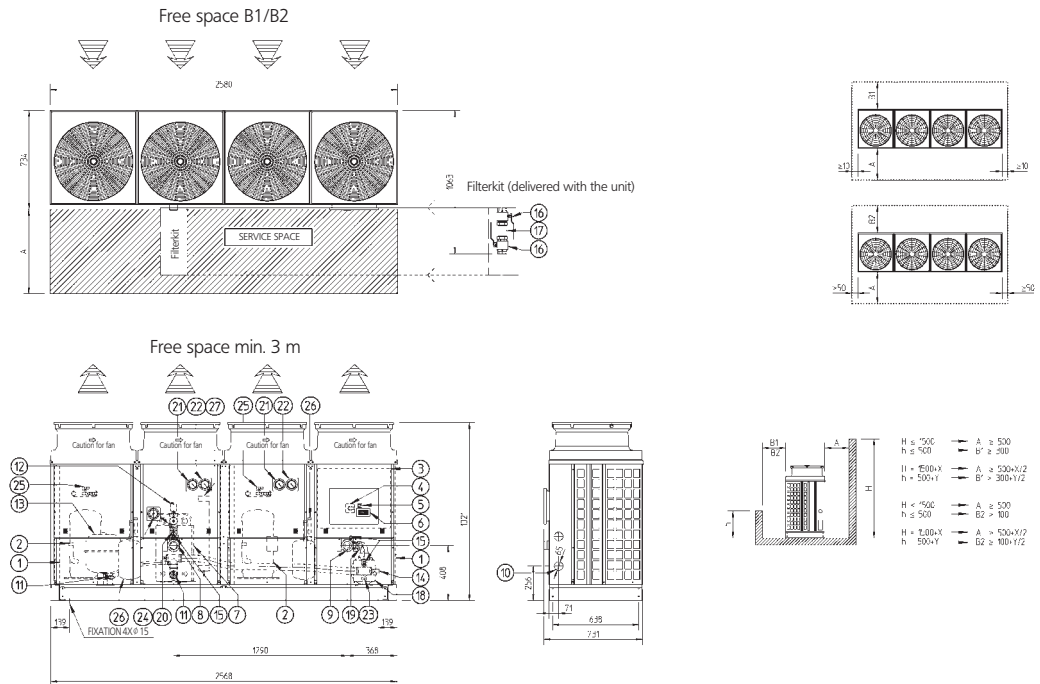
EUWAN16KBZW1

- 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



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

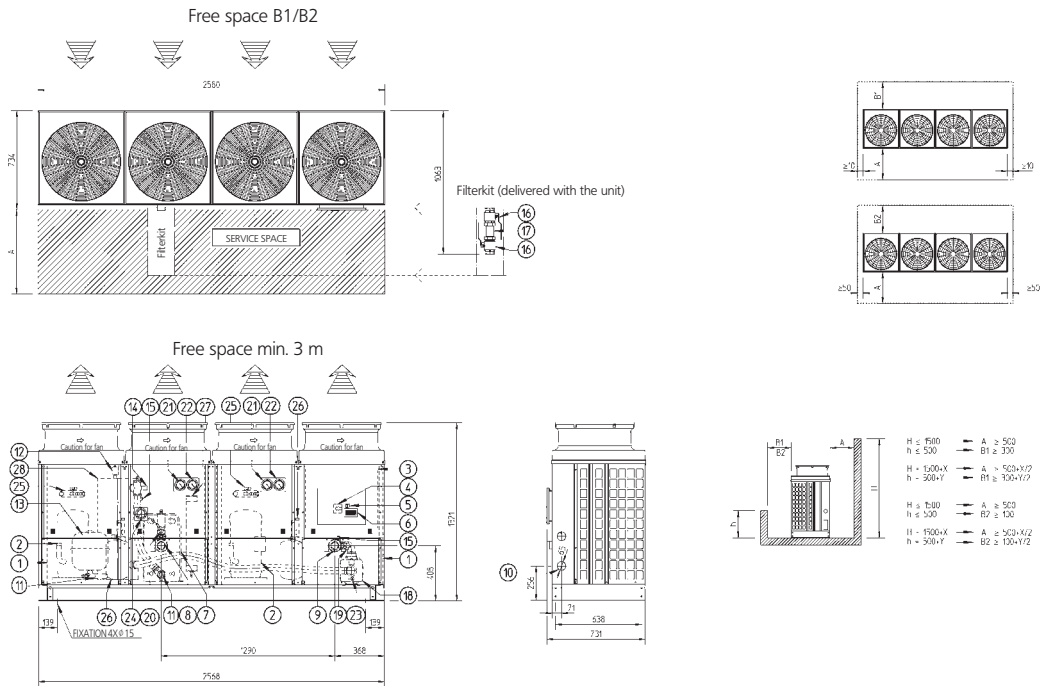


5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWAB16KBZW1

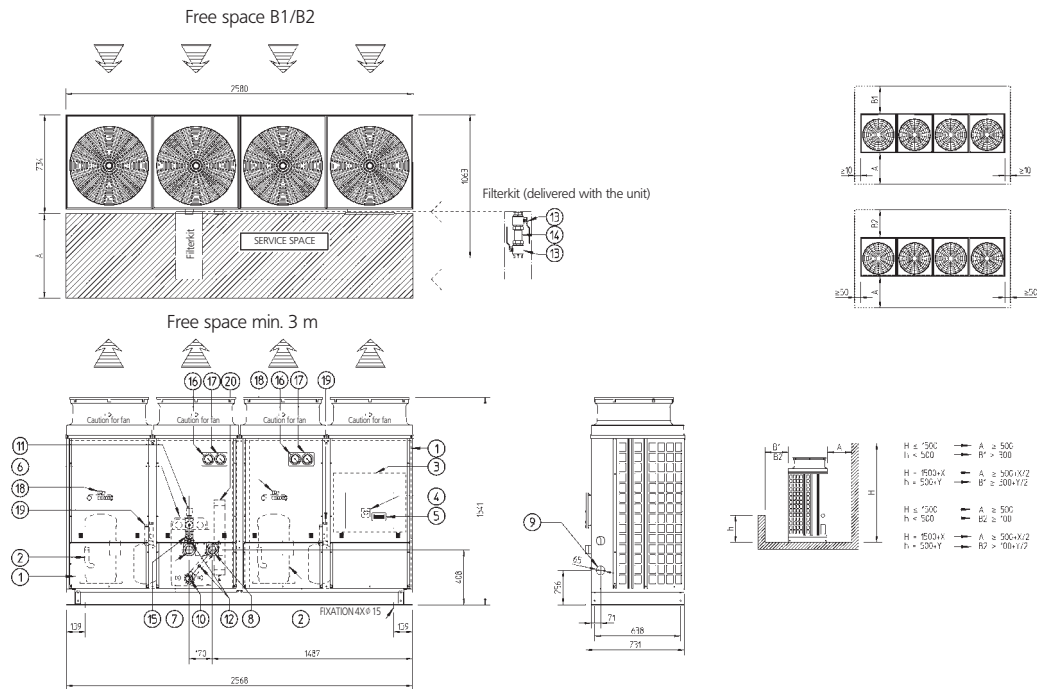
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Pump switch
 - 6 Digital display controller
 - 7 Water heat exchanger
 - 8 Water IN connection: 2" M BSP
 - 9 Water OUT connection: 2" M BSP
 - 10 Power supply intake
 - 11 Drain
 - 12 Air purge
 - 13 Expansion vessel
 - 14 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



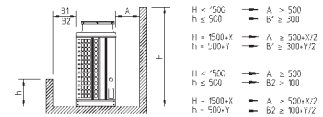
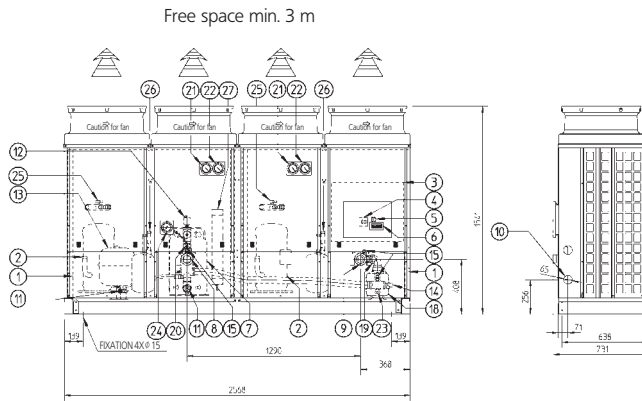
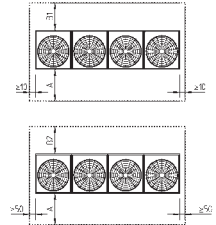
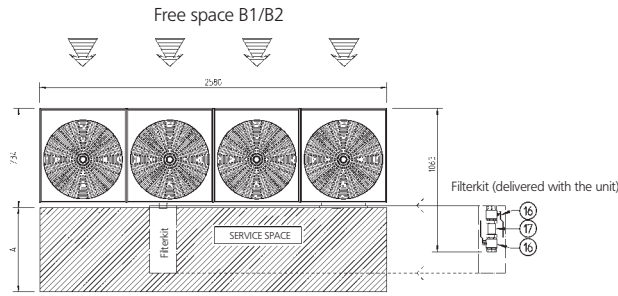
3TW55744-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWAP20-24KBZW1

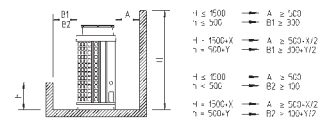
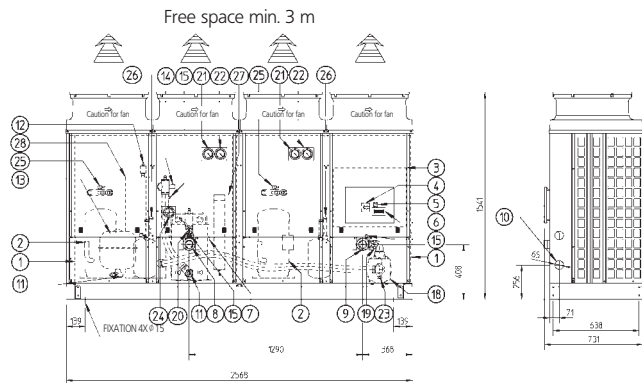
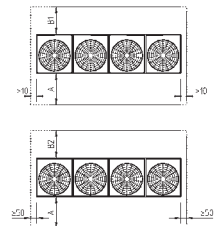
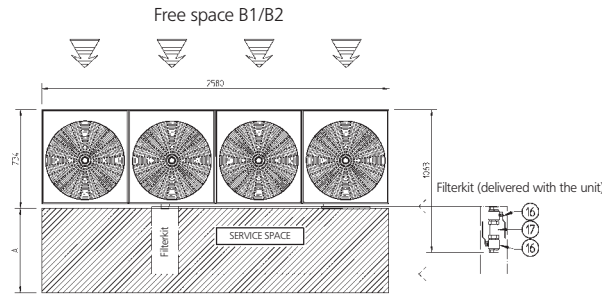
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Pump switch
 - 6 Digital display controller
 - 7 Water heat exchanger
 - 8 Water IN connection: 2" M BSP
 - 9 Water OUT connection: 2" M BSP
 - 10 Power supply intake
 - 11 Drain
 - 12 Air purge
 - 13 Expansion vessel
 - 14 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



3TW55744-2

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

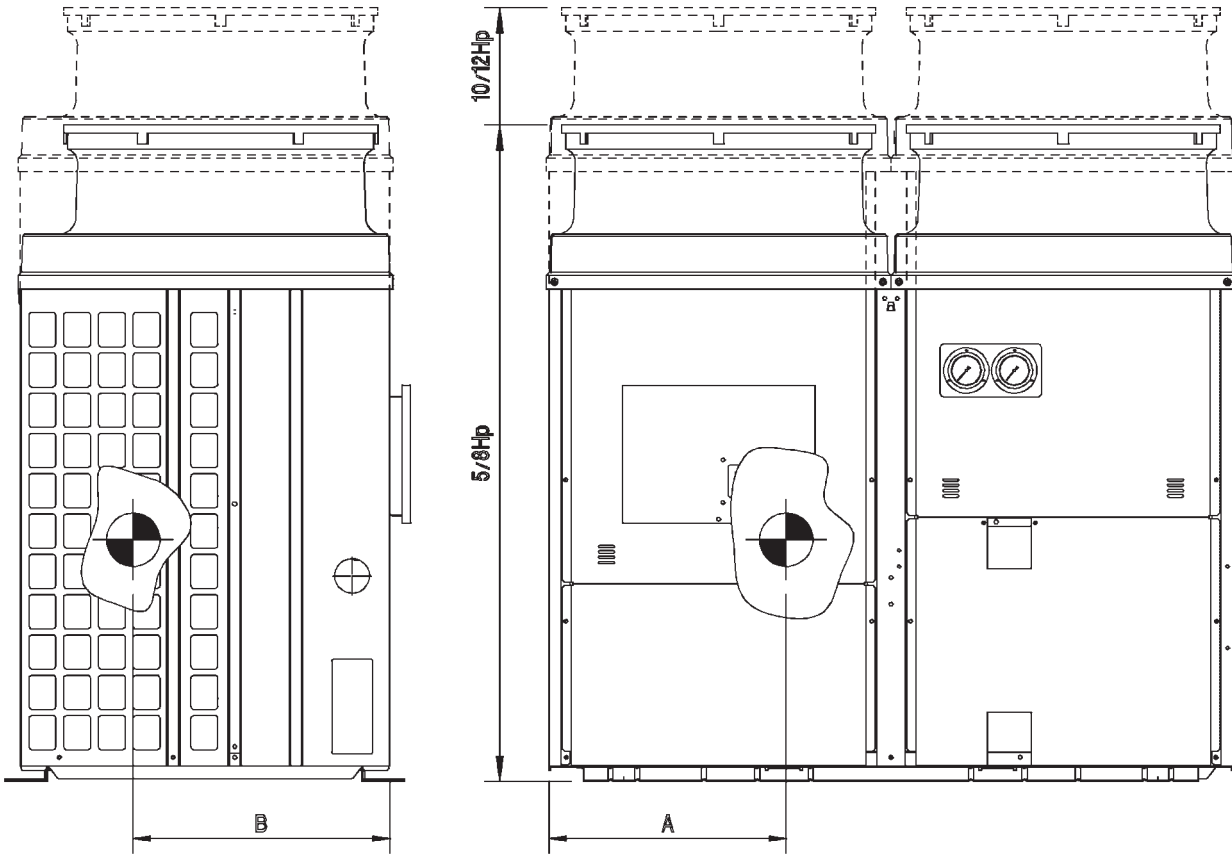


3TW55744-3

6 Centre of gravity

6 - 1 Centre of Gravity

EUWA*5-12KBZW1



1
6

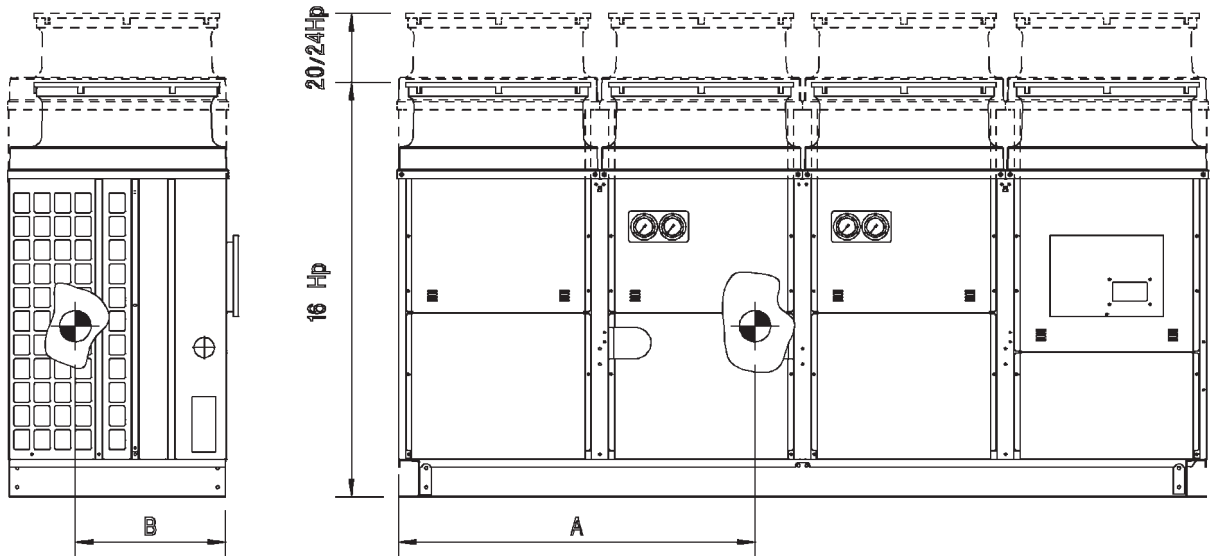
	5Hp		8Hp		10Hp		12Hp	
	A	B	A	B	A	B	A	B
B-Models	520	420	480	420	490	430	490	430
P-Models	510	420	470	420	480	430	490	430
N-Models	480	420	440	430	450	430	460	430

4TW54759-2

6 Centre of gravity

6 - 1 Centre of Gravity

EUWA*16-24KBZW1



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

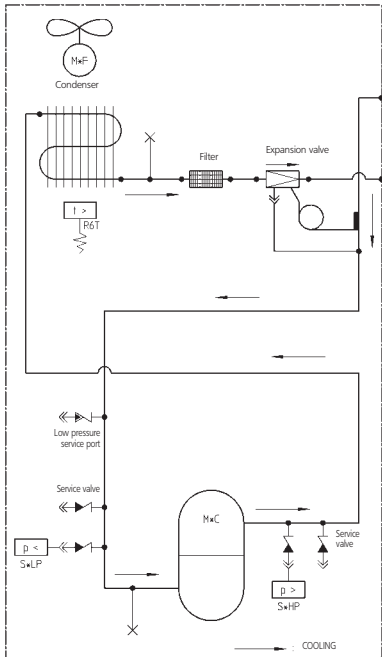
4TW54799-2

7 Piping diagrams

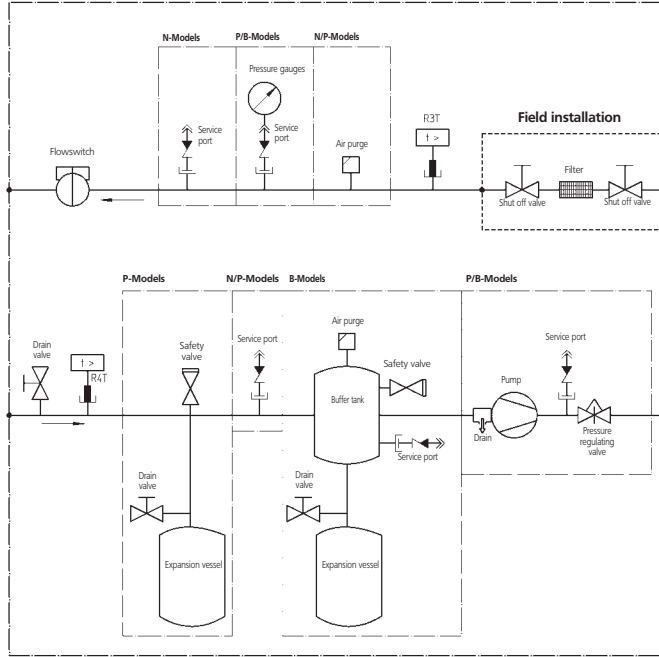
7 - 1 Piping Diagrams

EUWA*5-24KBZW1

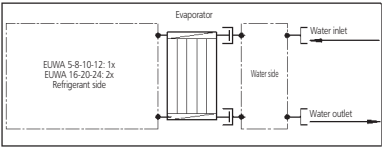
Refrigerant side



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

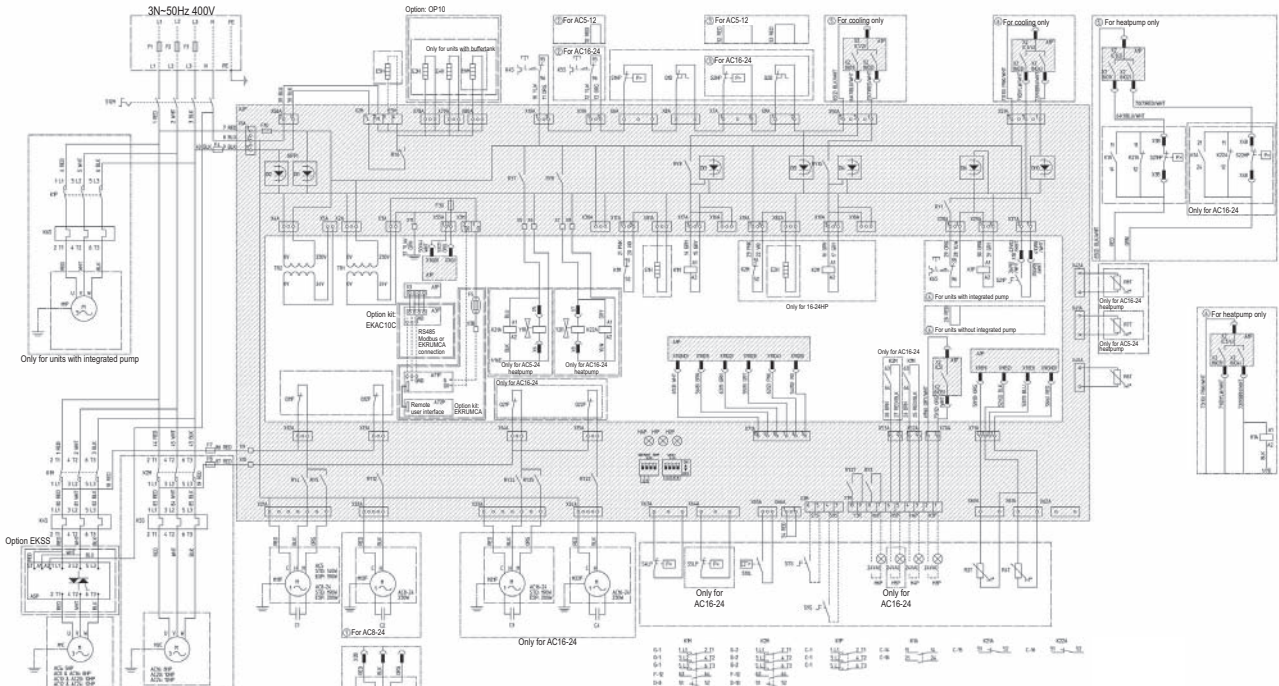
Check valve
 Flare connection
 Screw connection
 Flange connection
 Pinched pipe
 Spinned pipe

3TW55625-1

8 Wiring diagrams

8 - 1 Wiring Diagrams - Three Phase

EUWA-KBZW1 / EUWY-KBZW1



1
8

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

() Applicable for unit without integrated pump

A2P	A1P
DIGITAL INPUTS	DIGITAL INPUTS
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 --	DIGITAL OUTPUTS (RELAYS)
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
DIGITAL OUTPUTS (RELAYS)	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	ANALOG INPUTS
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	ANALOG OUTPUTS
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	
OTHERS	
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

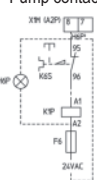
All models (400V)							
Fuses + overcurrent	5HP	8HP	10HP	12HP	16HP	20HP	24HP
F4	8A	8A	8A	8A	8A	8A	8A
F5	250mA	250mA	250mA	250mA	250mA	250mA	250mA
F7,8	5A	5A	5A	5A	5A	5A	5A
F1U	5A	5A	5A	5A	5A	5A	5A
F3U	315mA	315mA	315mA	315mA	315mA	315mA	315mA
K4S	9A	14A	17A	24A	14A	17A	24A
K5S	--	--	--	--	14A	17A	24A
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
 - 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:

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 ⁻ /l)	Below 50	Below 50	Corrosion
- Sulfate ion (mg SO ₄ ²⁻ /l)	Below 50	Below 50	Corrosion
- M-alkalinity (pH 4.8) (mg SO ₃ /l)	Below 50	Below 50	Scale
- Total hardness (mg CaCO ₃ /l)	Below 70	Below 70	Scale
- Calcium hardness (mg CaCO ₃ /l)	Below 50	Below 50	Scale
- Silica ion (mg SiO ₂ /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 ²⁻ /l)	Not detectable	Not detectable	Corrosion
- ammonium ion (mg NH ₄ ⁺ /l)	Below 1.0	Below 0.1	Corrosion
- Remaining chloride (mg Cl/l)	Below 0.3	Below 0.3	Corrosion
- Free carbide (mg SO ₂ /l)	Below 4.0	Below 4.0	Corrosion
- Stability index	—	—	Corrosion + scale

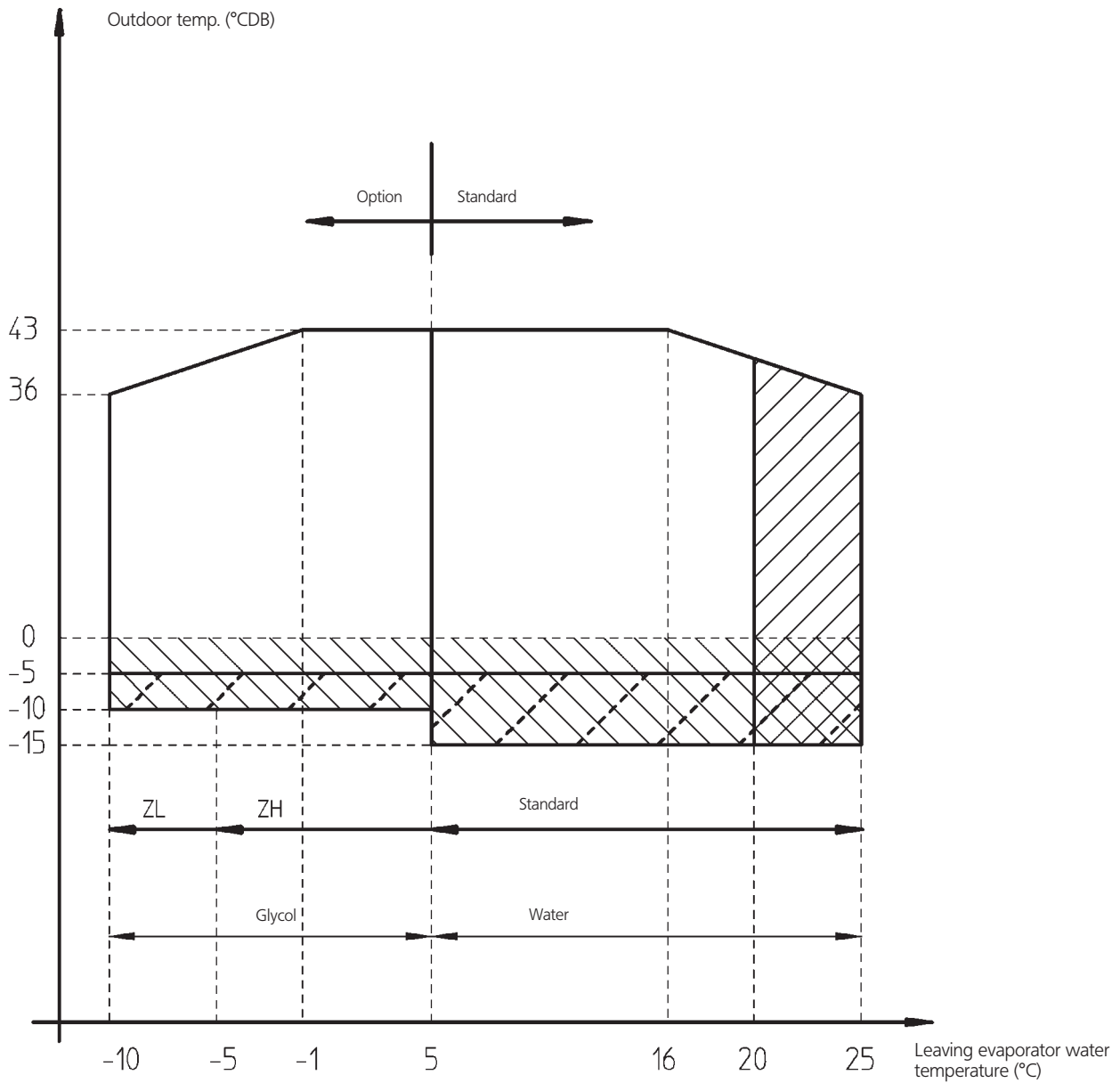
Names, definitions and units are according to JIS K 0101. Units and figures between brackets are old units published as reference only.

1
10

11 Operation range

11 - 1 Operation Range

EUWA*5-24KBZW1



Pull down area



Protect the water circuit against freezing



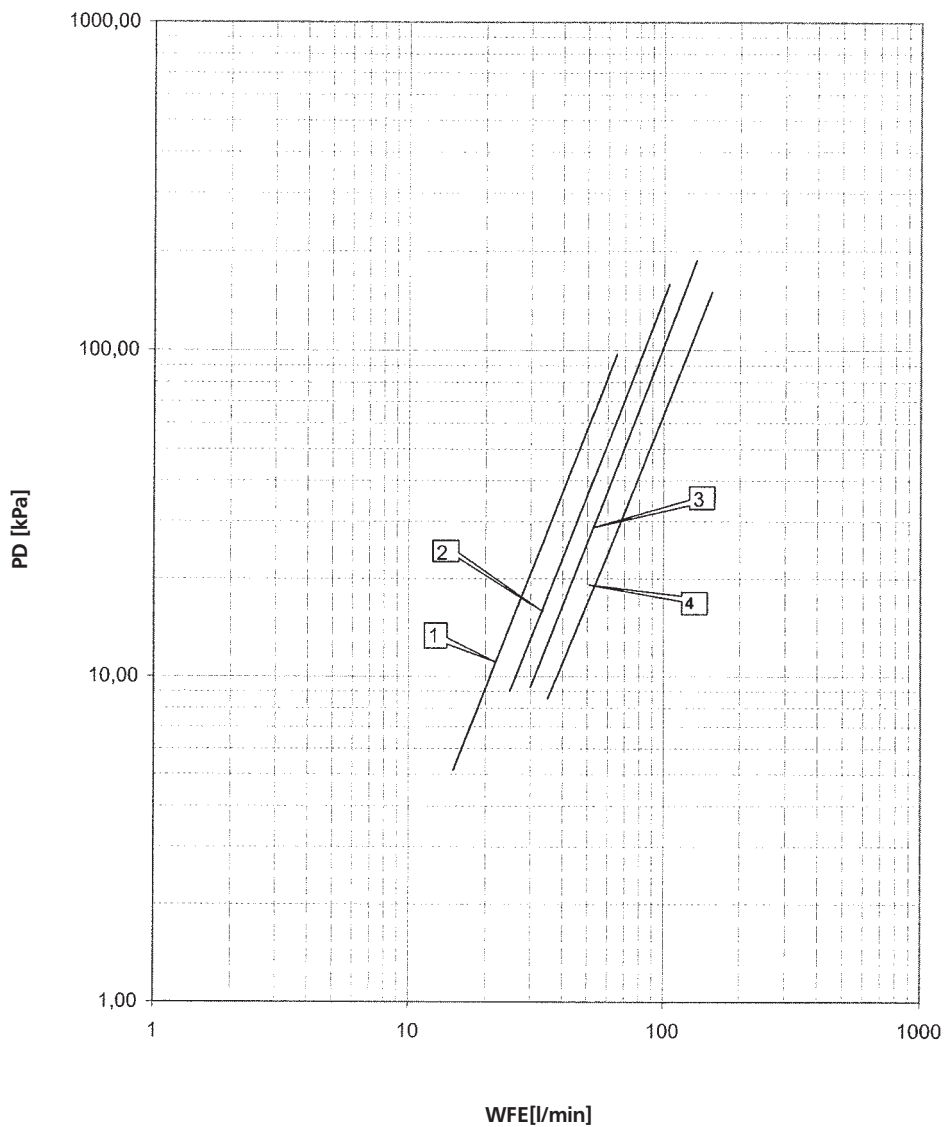
If the units operate below -5°C and are installed in a rather windy space, a windscreen is required.

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

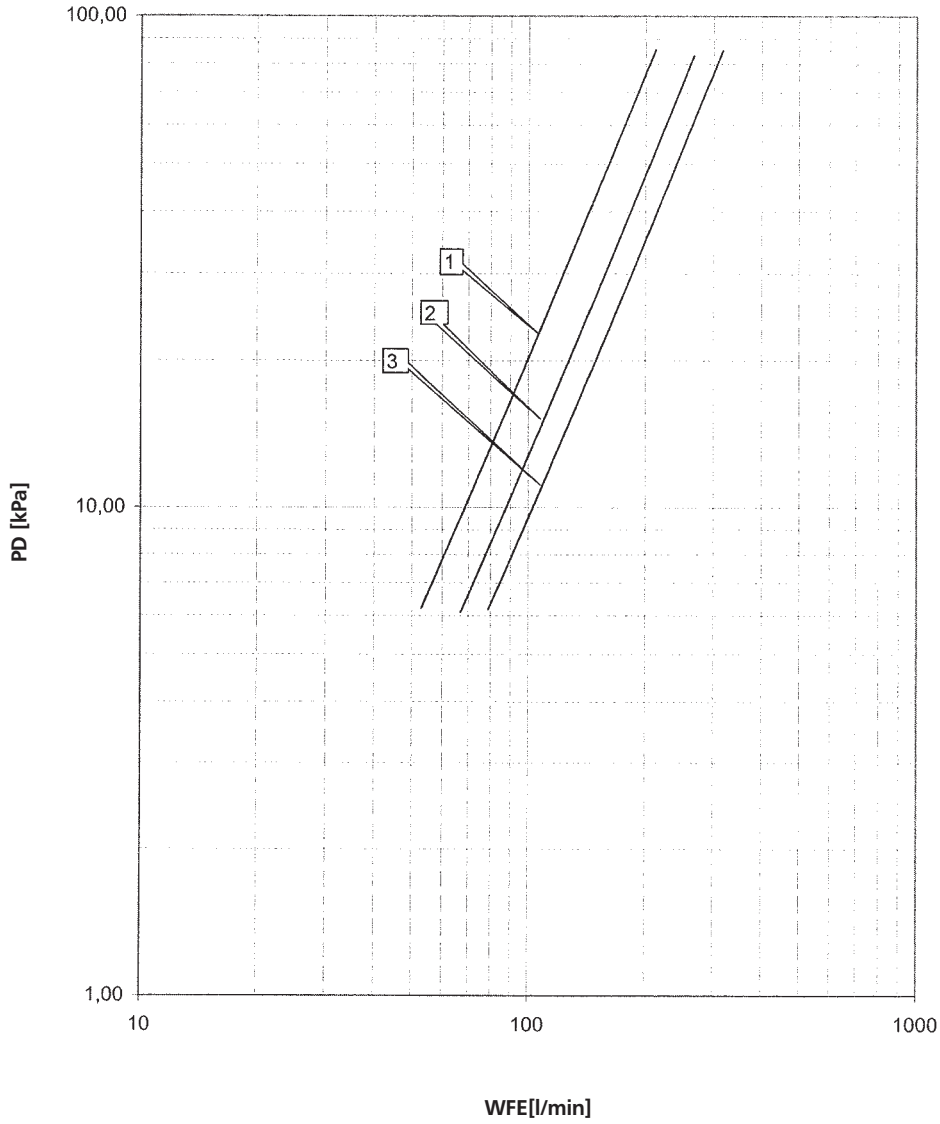
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

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

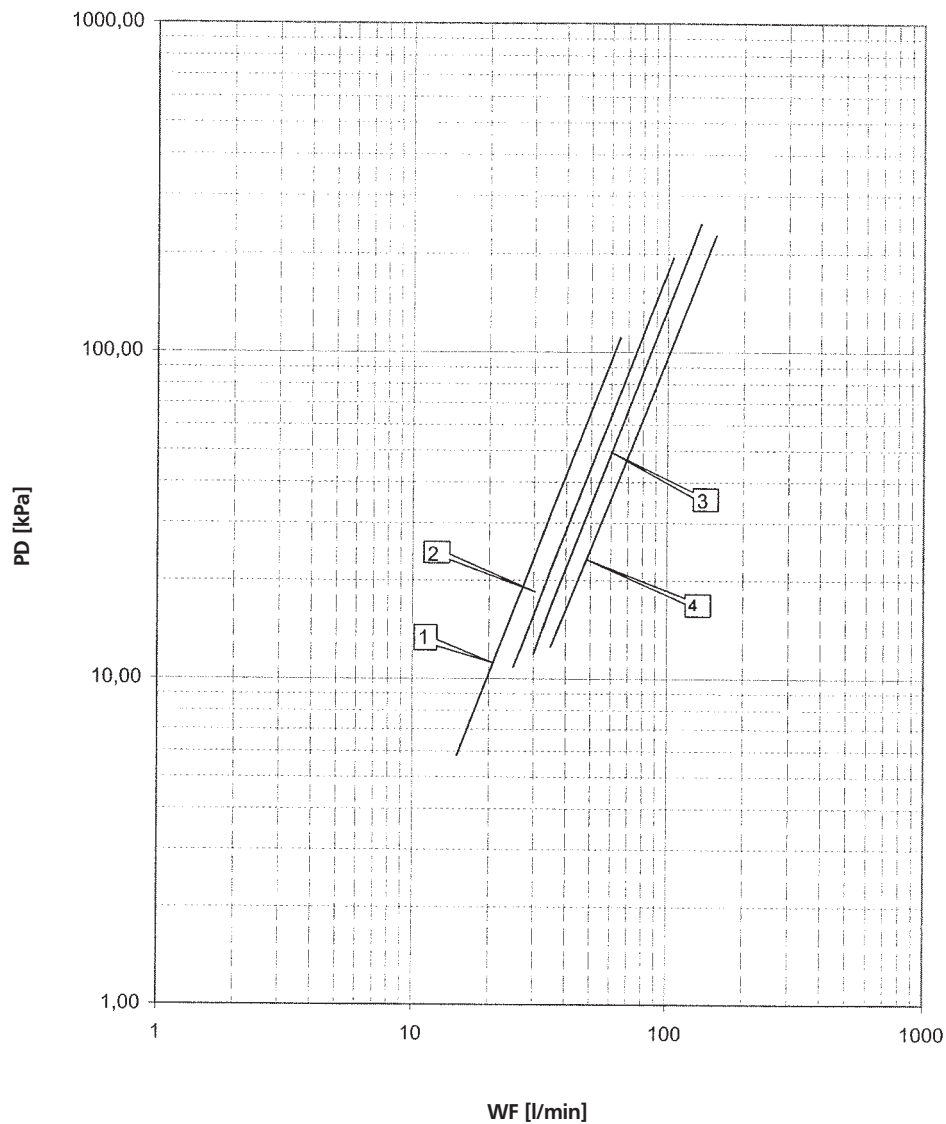
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW54799-1B

12 Hydraulic performance

12 - 2 Water Pressure Drop Curve Unit

EUWAN5-12KBZW1



PD: Pressure drop through the unit

WF: Waterflow rate

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

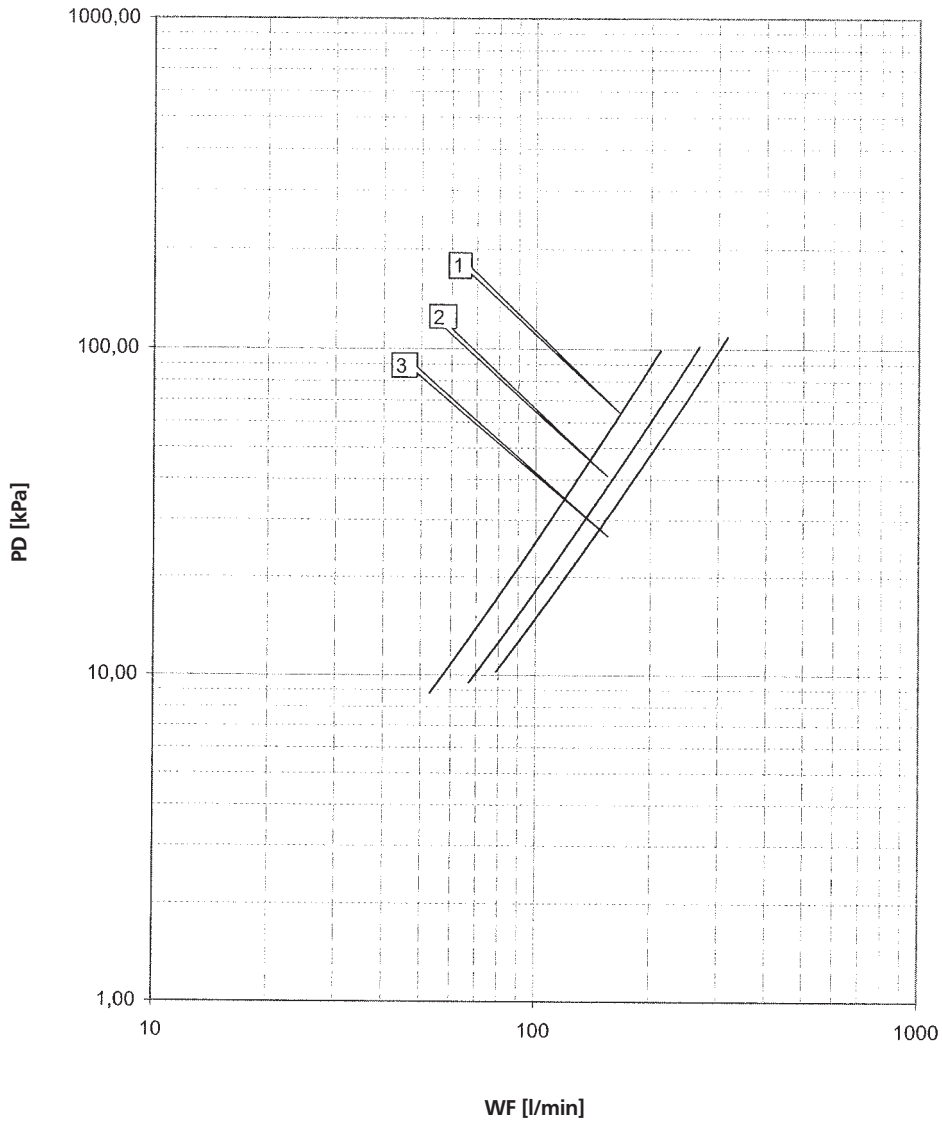
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW55629-6

12 Hydraulic performance

12 - 2 Water Pressure Drop Curve Unit

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

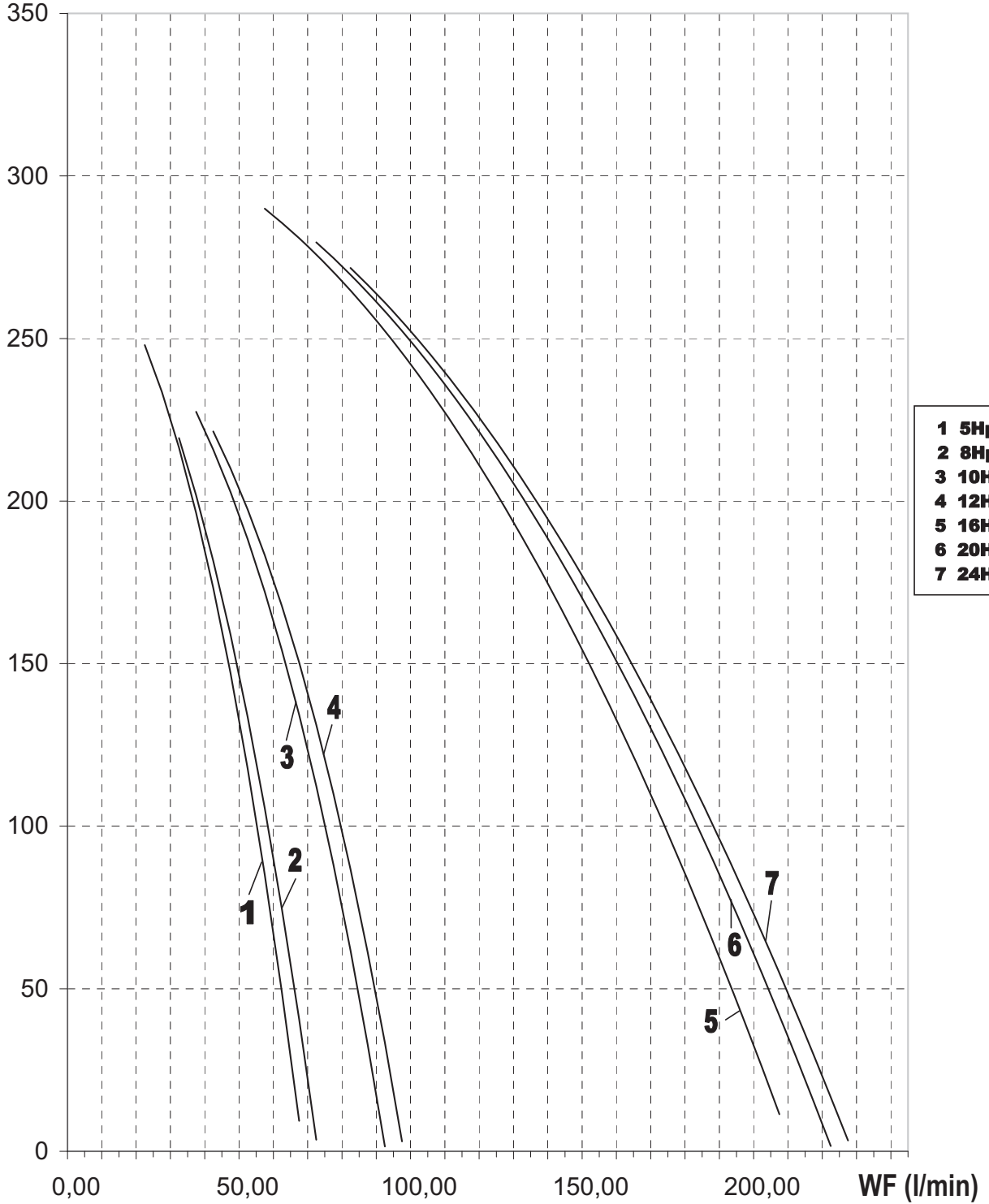
12 Hydraulic performance

12 - 3 External Static Pressure Drop Unit

EUWA5-24KBZW1

SP (kPa)

ESP Std CO



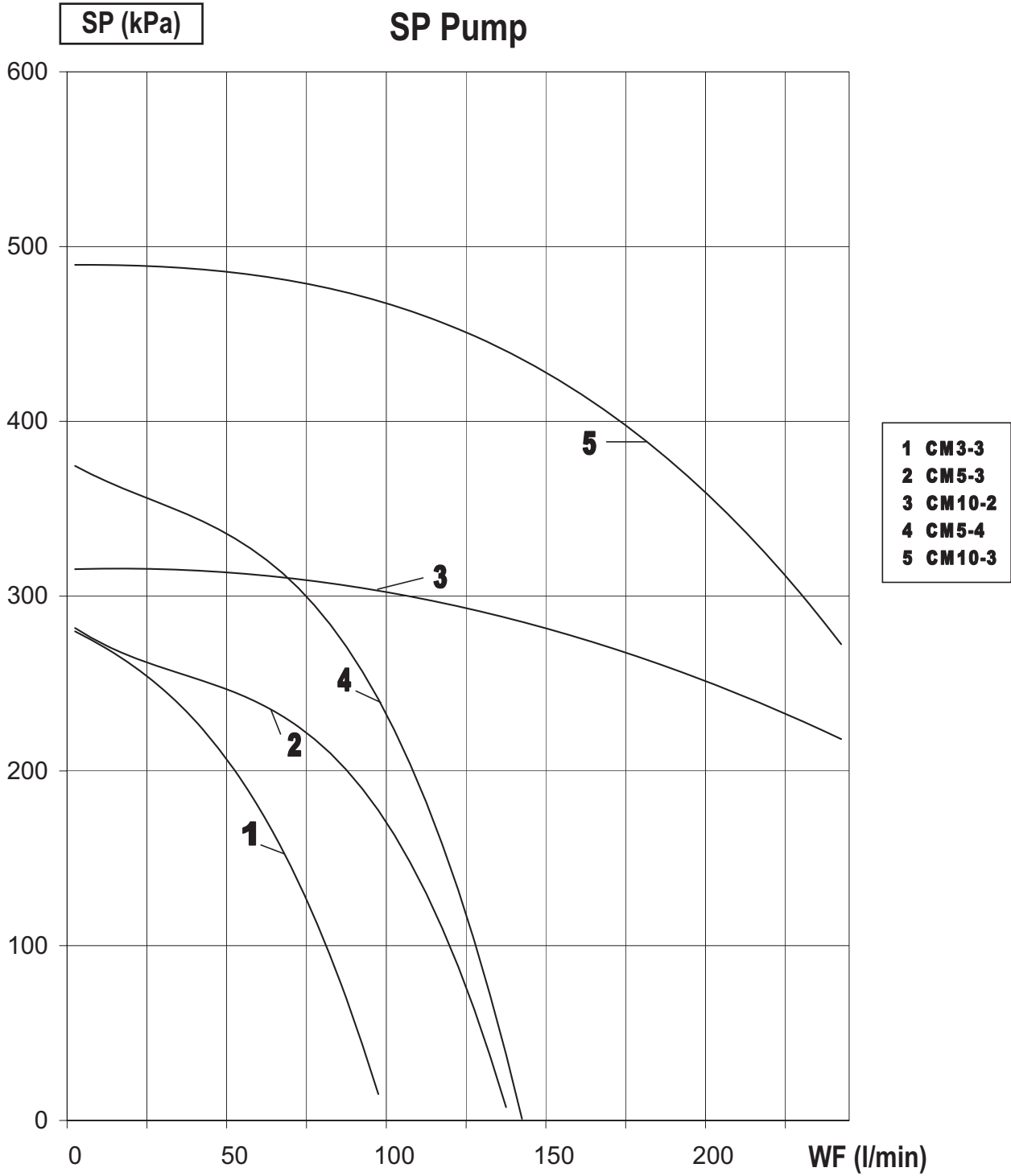
- 1 5Hp
- 2 8Hp
- 3 10Hp
- 4 12Hp
- 5 16Hp
- 6 20Hp
- 7 24Hp

4TW60009-4

12 Hydraulic performance

12 - 4 Static Pressure Pump

EUWA5-24KBZW1
EUWY5-24KBZW1



4TW60009-3

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EUWY-KBZW1

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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				EUWYN5KBZW1	EUWYP5KBZW1	EUWYB5KBZW1	EUWYN8KBZW1	EUWYP8KBZW1	EUWYB8KBZW1	
Cooling capacity	Nom.		kW	9.1 (1)			17.1 (1)			
Heating capacity	Nom.		kW	11.9 (2)			18.5 (2)			
Capacity steps			%	0-100						
Power input	Cooling	Nom.	kW	3.77 (3)			7.38 (3)			
	Heating	Nom.	kW	4.56 (3)			7.01 (3)			
EER				2.41			2.32			
COP				2.61			2.64			
Casing	Colour	Ivory white (Munsell code: 5Y7.5/1)								
	Material	Polyester coated galvanised steel plate								
Dimensions	Unit	Height	mm	1,230						
		Width	mm	1,290						
		Depth	mm	734						
	Packed unit	Height	mm	1,425						
		Width	mm	1,380						
		Depth	mm	830						
Weight	Unit		kg	163	181	193	227	241	253	
	Operation weight		kg	165	184	252	230	244	312	
	Packed unit		kg	173	191	203	237	251	263	
Packing	Material	Wood + Plastic foil								
	Weight		kg	10						
Water heat exchanger	Type	Braze plate								
	Quantity	1								
	Water volume		l	1.14			1.615			
	Water flow rate	Min.		l/min	21			31		
		Max.		l/min	68			106		
	Nominal water flow	Cooling		l/min	26 (1)			49 (1)		
		Heating		l/min	34 (2)			53 (2)		
	Nominal water pressure drop	Cooling	Filter	kPa	10			25		
		Heating	Filter	kPa	17			29		
	Insulation material	Kaiflex								
	Model	Type	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							
	Fin pitch		mm	2						
	Face area		m ²	1.570						
	Pump	Quantity			-	1	-	1		
Model				-	CM3-3	-	CM3-3			
Nominal ESP pump		Cooling	kPa	-	249	-	203			
Nominal ESP unit		Cooling	kPa	-	232 (1)	-	149 (1)			
Fan	Quantity	2								
	Type	Axial								
	Discharge direction	Vertical								
Fan group	Air flow rate	Cooling	Nom.	m ³ /min	160 (per 2 fans)			170 (per 2 fans)		
Fan motor	Output		W	140			190			
	Quantity			2			1			
	Drive	Direct drive								
Fan motor 2	Output		W	-			230			
	Quantity			-			1			
Sound power level	Cooling	Nom.	dBA	67			76			
Compressor	Type	Hermetically sealed scroll compressor								
	Quantity	1								
	Model	JT140BF-YE			JT212DA-YE					
	Speed		rpm	2,900						
	Oil	Charged volume	l	1.5			2.7			
Refrigerant	Type	R-407C								
	Control	Thermostatic expansion valve								
	Circuits	Quantity	1							

2
2

2 Specifications

2-1 Technical Specifications				EUWYN5KBZW1	EUWYP5KBZW1	EUWYB5KBZW1	EUWYN8KBZW1	EUWYP8KBZW1	EUWYB8KBZW1
Refrigerant circuit	Charge	kg	4.6			4.7			
Water circuit	Piping connections diameter	inch	G 1"1/4 (male)						
	Piping	inch	1-1/4"						
	Safety valve	bar	-	3	-	3	-	3	
	Manometer		Yes						
	Drain valve / fill valve		Yes, ø15						
	Shut off valve		Yes						
	Air purge valve		Yes						
	Total water volume	l	2 (4)	3 (4)	59 (4)	3 (4)	59 (4)		
	Minimum water volume in the system	l	43 (5.0)			82 (5.0)			
Refrigerant oil	Type	FVC68D							
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						
Hydraulic components	Buffer tank	Volume	l	-	55	-	55		
	Nominal water pressure drop unit	Cooling	kPa	13	-	34	-		
		Expansion vessel	Volume	l	-	12	-	12	
	Water filter	Pre pressure	bar	-	1.5	-	1.5		
		Material	Brass						
Safety valve	bar	-	3	-	3				

2-1 Technical Specifications				EUWYN10KBZW1	EUWYP10KBZW1	EUWYB10KBZW1	EUWYN12KBZW1	EUWYP12KBZW1	EUWYB12KBZW1	
Cooling capacity	Nom.	kW	21.0 (1)			25.0 (1)				
Heating capacity	Nom.	kW	24.0 (2)			27.0 (2)				
Capacity steps		%	0-100							
Power input	Cooling	Nom.	kW	8.49 (3)			11.3 (3)			
	Heating	Nom.	kW	8.98 (3)			10.7 (3)			
EER			2.47			2.21				
COP			2.67			2.52				
Casing	Colour	Ivory white (Munsell code: 5Y7.5/1)								
	Material	Polyester coated galvanised steel plate								
Dimensions	Unit	Height	mm	1,450						
		Width	mm	1,290						
		Depth	mm	734						
	Packed unit	Height	mm	1,645						
		Width	mm	1,380						
		Depth	mm	830						
Weight	Unit	kg	258	272	284	258	272	284		
	Operation weight	kg	261	275	343	261	275	343		
	Packed unit	kg	268	282	294	268	282	294		
Packing	Material	Wood + Plastic foil								
	Weight	kg	10							

2 Specifications

2-1 Technical Specifications					EUWYN10KBZW1	EUWYP10KBZW1	EUWYB10KBZW1	EUWYN12KBZW1	EUWYP12KBZW1	EUWYB12KBZW1	
Water heat exchanger	Type		Braze plate								
	Quantity		1								
	Water volume		l	1.9		2.375		2.375			
	Water flow rate	Min.	l/min	38		45		45			
		Max.	l/min	137		155		155			
	Nominal water flow	Cooling	l/min	60 (1)		72 (1)		72 (1)			
		Heating	l/min	69 (2)		77 (2)		77 (2)			
	Nominal water pressure drop	Cooling	Filter	kPa	24		33		33		
		Heating	Filter	kPa	31		38		38		
	Insulation material		Kaiflex								
Model	Type	AC70X-50HX									
Air heat exchanger	Type		Cross fin coil/Hi-X tubes and PE coated waffle louvre fins								
	Rows	Quantity	2								
	Stages	Quantity	50								
	Fin pitch		mm	2							
	Face area		m ²	1.970							
Pump	Quantity		-	1		-		1			
	Model		-	CM5-3		-		CM5-3			
	Nominal ESP pump	Cooling	kPa	-		-		223			
	Nominal ESP unit	Cooling	kPa	-		167 (1)		-		123 (1)	
Fan	Quantity		2								
	Type		Axial								
	Discharge direction		Vertical								
Fan group	Air flow rate	Cooling	Nom.	m ³ /min							
Fan motor	Output		W								
	Quantity		1								
	Drive		Direct drive								
Fan motor 2	Output		W								
	Quantity		1								
Sound power level	Cooling	Nom.	dBA								
Compressor	Type		Hermetically sealed scroll compressor								
	Quantity		1								
	Model		JT256DA-YE				JT335DA-YE				
	Speed		rpm								
	Oil	Charged volume	l								
Refrigerant	Type		R-407C								
	Control		Thermostatic expansion valve								
	Circuits	Quantity	1								
Refrigerant circuit	Charge		kg								
Water circuit	Piping connections diameter		inch								
	Piping		inch								
	Safety valve		bar		3		-		3		
	Manometer		Yes								
	Drain valve / fill valve		Yes, ø15								
	Shut off valve		Yes								
	Air purge valve		Yes								
	Total water volume		l	3 (4)		59 (4)		3 (4)		4 (4) 60 (4)	
	Minimum water volume in the system		l	100 (5.0)				119 (5.0)			
Refrigerant oil	Type		FVC68D								
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 Specifications

2-1 Technical Specifications				EUWYN10KBZW1	EUWYP10KBZW1	EUWYB10KBZW1	EUWYN12KBZW1	EUWYP12KBZW1	EUWYB12KBZW1
Hydraulic components	Buffer tank	Volume	l	-	-	55	-	-	55
	Nominal water pressure drop unit	Cooling	kPa	37	-	-	52	-	-
	Expansion vessel	Volume	l	-	12	-	-	12	-
		Pre pressure	bar	-	1.5	-	-	1.5	-
	Water filter	Material	Brass						
	Safety valve		bar	-	3	-	-	3	-

2-1 Technical Specifications				EUWYN16KBZW1	EUWYP16KBZW1	EUWYB16KBZW1	EUWYN20KBZW1	EUWYP20KBZW1	EUWYB20KBZW1	
Cooling capacity	Nom.	kW	34.2 (1)				40 (1)			
Heating capacity	Nom.	kW	37.0 (2)				46 (2)			
Capacity steps			%	0-50-100						
Power input	Cooling	Nom.	kW	14.8 (3)			16.2 (3)			
	Heating	Nom.	kW	14.10 (3)			17.3 (3)			
EER				2.3			2.5			
COP				2.62			2.66			
Casing	Colour	Ivory white (Munsell code: 5Y7.5/1)								
	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	455	473	485	516	534	546		
	Operation weight	kg	461	482	550	522	544	612		
	Packed unit	kg	480	498	510	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				
	Water flow rate	Min.	l/min	61			72			
		Max.	l/min	212			263			
	Nominal water flow	Cooling	l/min	98 (1)			115 (1)			
		Heating	l/min	106 (2)			132 (2)			
	Nominal water pressure drop	Cooling	Filter	kPa	12					
		Heating	Filter	kPa	14			16		
	Insulation material	Kaiflex								
Model	Type	AC230X-38HX			AC230X-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 ²	1.57+1.57			1.970+1.970				
	Pump	Quantity	-			1		-		1
Model		-			CM10-2		-		CM10-2	
Nominal ESP pump		Cooling	kPa	-			-		296	
Nominal ESP unit		Cooling	kPa	-			249 (1)		-	
Fan	Quantity	4								
	Type	Axial								
	Discharge direction	Vertical								
Fan group	Air flow rate	Cooling	Nom.	m ³ /min	170 (per 2 fans)					
Fan motor	Output	W			190					
	Quantity	2								
	Drive	Direct drive								
Fan motor 2	Output	W			230					
	Quantity	2								
Sound power level	Cooling	Nom.	dB(A)	79			81			

2 Specifications

2-1 Technical Specifications				EUWYN16KBZW1	EUWYP16KBZW1	EUWYB16KBZW1	EUWYN20KBZW1	EUWYP20KBZW1	EUWYB20KBZW1	
Compressor	Type	Hermetically sealed scroll compressor								
	Quantity	2								
	Model	JT212DA-YE				JT265DA-YE				
	Speed	rpm	2,900							
	Oil	Charged volume	l	2.7						
Refrigerant	Type	R-407C								
	Control	Thermostatic expansion valve								
	Circuits	Quantity	2							
Refrigerant circuit	Charge	kg	5.1				5.4			
Water circuit	Piping connections diameter	inch	2" male							
	Piping	inch	2"							
	Safety valve	bar	-	3		-	3			
	Manometer	Yes								
	Drain valve / fill valve	Yes, ø15								
	Shut off valve	Yes								
	Air purge valve	Yes								
	Total water volume	l	6 (4)	9 (4)	65 (4)	6 (4)	10 (4)	66 (4)		
	Minimum water volume in the system	l	82 (5.0)				96 (5.0)			
Refrigerant oil	Type	FVC68D								
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							
Hydraulic components	Buffer tank	Volume	l	-	55		-	55		
	Nominal water pressure drop unit	Cooling	kPa	12	-		19	-		
	Expansion vessel	Volume	l	-	12		-	12		
		Pre pressure	bar	-	1.5		-	1.5		
	Water filter	Material								
Safety valve	bar	-	3		-	3				

2-1 Technical Specifications				EUWYN24KBZW1	EUWYP24KBZW1	EUWYB24KBZW1
Cooling capacity	Nom.	kW	50.0 (1)			50.0 (1)
Heating capacity	Nom.	kW	54.0 (2)			54.0 (2)
Capacity steps			%	0-50-100		
Power input	Cooling	Nom.	kW	22.6 (3)		22.6 (3)
	Heating	Nom.	kW	21.4 (3)		21.4 (3)
EER			2.2			2.2
COP			2.52			2.52
Casing	Colour	Ivory white (Munsell code: 5Y7.5/1)				
	Material	Polyester coated galvanised steel plate				
Dimensions	Unit	Height	mm	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	516	534	546	
	Operation weight	kg	522	544	612	
	Packed unit	kg	541	559	571	
Packing	Material	Wood + Plastic foil				
	Weight	kg	25			

2 Specifications

2-1 Technical Specifications					EUWYN24KBZW1	EUWYP24KBZW1	EUWYB24KBZW1
Water heat exchanger	Type				Brazen plate		
	Quantity				1		
	Water volume				4.524		
	Water flow rate	Min.	l/min		89		
		Max.	l/min		309		
	Nominal water flow	Cooling	l/min		143 (1)		
		Heating	l/min		155 (2)		
	Nominal water pressure drop	Cooling	Filter	kPa	19		
		Heating	Filter	kPa	22		
	Insulation material				Kaiflex		
Model		Type		AC230X-58HX			
Air heat exchanger	Type				Cross fin coil/Hi-X tubes and PE coated waffle louvre fins		
	Rows	Quantity			2		
	Stages	Quantity			50		
	Fin pitch			mm	2		
	Face area			m ²	1.970+1.970		
	Pump	Quantity				-	1
Model				-	CM10-2		
Nominal ESP pump		Cooling	kPa		-	284	
Nominal ESP unit		Cooling	kPa		-	185 (1)	
Fan	Quantity				4		
	Type				Axial		
	Discharge direction				Vertical		
Fan group	Air flow rate	Cooling	Nom.	m ³ /min	170 (per 2 fans)		
Fan motor	Output				190		
	Quantity				2		
	Drive				Direct drive		
Fan motor 2	Output			W	230		
	Quantity				2		
Sound power level	Cooling	Nom.		dBA	81		
Compressor	Type				Hermetically sealed scroll compressor		
	Quantity				2		
	Model				JT335DA-YE		
	Speed			rpm	2,900		
	Oil	Charged volume		l	2.7		
Refrigerant	Type				R-407C		
	Control				Thermostatic expansion valve		
	Circuits	Quantity			2		
Refrigerant circuit	Charge			kg	5.6		
Water circuit	Piping connections diameter			inch	2" male		
	Piping			inch	2"		
	Safety valve			bar	-		
	Manometer				Yes		
	Drain valve / fill valve				Yes, ø15		
	Shut off valve				Yes		
	Air purge valve				Yes		
	Total water volume			l	6 (4)	10 (4)	66 (4)
Minimum water volume in the system			l	119 (5.0)			
Refrigerant oil	Type				FVC68D		
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 Specifications

2-1 Technical Specifications				EUWYN24KBZW1	EUWYP24KBZW1	EUWYB24KBZW1	
Hydraulic components	Buffer tank	Volume	l	-		55	
	Nominal water pressure drop unit	Cooling	kPa	27	-	-	
	Expansion vessel	Volume	l	-			12
		Pre pressure	bar	-			1.5
	Water filter	Material		Brass			
	Safety valve		bar	-		3	
Notes				(1)Condition: Ta 35°C - LWE 7°C (DT = 5°C)			
				(2)Condition: Ta DB/WB 7°C/6°C - LWC 45°C (Dt=5°C)			
				(3)Pump is not included			
				(4)Including piping + PHE + buffer tank (if present); excluding expansion vessel			
				(5)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.			
				(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			

2

2

2 Specifications

2
2

2-2 Electrical Specifications				EUWYN5KBZW1	EUWYP5KBZW1	EUWYB5KBZW1	EUWYN8KBZW1	EUWYP8KBZW1	EUWYB8KBZW1
Pump	Type			Horizontal multi-stage end-suction					
	Phase			3~					
	Voltage		V	400					
	Maximum running current		A	1.3					
Compressor	Phase			3~					
	Voltage		V	400					
	Starting current		A	60.0			95.5		
	Nominal running current (RLA)		A	5.5			10.7		
	Maximum running current		A	9.0			14.0		
	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		
	Current	Zmax	Text	0.26			0.22		
	Nominal running current (RLA)	Cooling	A	7.7	9.0	13.6	14.9		
	Maximum running current		A	11.2	12.5	16.9	18.2		
	Minimum Ssc value			Equipment complying with EN/IEC 61000-3-12					
	Recommended fuses according to IEC standard 269-2			3 x 20gL/gG			3 x 25gL/gG		
Fans	Phase			1~					
	Voltage		V	230					
	Maximum running current		A	2.2			2.9		
Control circuit	Phase			1~					
	Voltage		V	230					
	Recommended fuses			Factory installed					
Wiring connections				See installation manual					

2-2 Electrical Specifications				EUWYN10KBZW1	EUWYP10KBZW1	EUWYB10KBZW1	EUWYN12KBZW1	EUWYP12KBZW1	EUWYB12KBZW1
Pump	Type			Horizontal multi-stage end-suction					
	Phase			3~					
	Voltage		V	400					
	Maximum running current		A	1.3					
Compressor	Phase			3~					
	Voltage		V	400					
	Starting current		A	110.0			136.0		
	Nominal running current (RLA)		A	13.0			17.6		
	Maximum running current		A	17.0			24.0		
	Starting method			Direct on line					
	Crankcase heater		W	50					
Power supply	Name			V3			W1		W1
	Phase			1~			3N~		3N~
	Frequency		Hz						50
	Voltage		V	230			400		400
	Voltage range	Min.	%						-10
		Max.	%						10

2 Specifications

2-2 Electrical Specifications				EUWYN10KBZW1	EUWYP10KBZW1	EUWYB10KBZW1	EUWYN12KBZW1	EUWYP12KBZW1	EUWYB12KBZW1
Unit	Starting current		A	113	114		139		140
	Current	Zmax	Text				0.21		0.21
	Nominal running current (RLA)	Cooling	A	15.9	17.2		20.5		21.8
	Maximum running current		A	19.9	21.2		26.9		28.2
	Minimum Ssc value								Equipment complying with EN/IEC 61000-3-12
	Recommended fuses according to IEC standard 269-2				3 x 32gL/gG			3 x 40gL/gG	
Fans	Phase								1~
	Voltage		V						230
	Maximum running current		A						2.9
Control circuit	Phase								1~
	Voltage		V						230
	Recommended fuses								Factory installed
Wiring connections									See installation manual

2-2 Electrical Specifications				EUWYN16KBZW1	EUWYP16KBZW1	EUWYB16KBZW1	EUWYN20KBZW1	EUWYP20KBZW1	EUWYB20KBZW1
Pump	Type			Horizontal multi-stage end-suction					
	Phase			3~					
	Voltage		V	400					
	Maximum running current		A	2.0					
Compressor	Phase			3~					
	Voltage		V	400					
	Starting current		A	95.0			110.0		
	Nominal running current (RLA)		A	10.7			13.0		
	Maximum running current		A	14.0			17.0		
	Starting method			Direct on line					
	Crankcase heater		W	50					
Power supply	Name			W1					
	Phase			3N~					
	Frequency		Hz	50					
	Voltage			400					
	Voltage range	Min.		%	-10				
Max.			%	10					
Unit	Starting current		A	97.9	99.9		113		115
	Current	Zmax	Text	0.21					
	Nominal running current (RLA)	Cooling	A	27.2	29.2		31.8		33.8
	Maximum running current		A	33.8	25.8		39.8		41.8
	Minimum Ssc value			Equipment complying with EN/IEC 61000-3-12					
	Recommended fuses according to IEC standard 269-2			3 x 50gL/gG					
Fans	Phase			1~					
	Voltage		V	230					
	Maximum running current		A	5.8					
Control circuit	Phase			1~					
	Voltage		V	230					
	Recommended fuses			Factory installed					
Wiring connections			See installation manual						

2-2 Electrical Specifications				EUWYN24KBZW1	EUWYP24KBZW1	EUWYB24KBZW1
Pump	Type			Horizontal multi-stage end-suction		
	Phase			3~		
	Voltage		V	400		
	Maximum running current		A	2.7		

2 Specifications

2
2

2-2 Electrical Specifications				EUWYN24KBZW1	EUWYP24KBZW1	EUWYB24KBZW1
Compressor	Phase					3~
	Voltage		V			400
	Starting current		A	136.0		136.0
	Nominal running current (RLA)		A	17.6		17.6
	Maximum running current		A	24.0		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	139	142	142
	Current	Zmax	Text	0.20		0.20
	Nominal running current (RLA)	Cooling	A	41	43.7	43.7
	Maximum running current		A	53.8	56.5	56.5
	Minimum Ssc value			Equipment complying with EN/IEC 61000-3-12		
	Recommended fuses according to IEC standard 269-2			3 x 63gL/gG		
Fans	Phase					1~
	Voltage		V			230
	Maximum running current		A			5.8
Control circuit	Phase					1~
	Voltage		V			230
	Recommended fuses			Factory installed		
Wiring connections			See installation manual			
Notes			(1)Condition: Ta 35°C - LWE 7°C (DT = 5°C)			
			(2)Condition: Ta DB/WB 7°C/6°C - LWC 45°C (Dt=5°C)			
			(3)Pump is not included			
			(4)Including piping + PHE + buffer tank (if present); excluding expansion vessel			
			(5)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.			
			(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

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	-		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
ZH	Not completely combinable options chilled water temp down to -5°C chilled water temp down to -10°C	1st digit																											
ZL			12	C-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted
	Completely combinable options Fan motor size up (high esp 5mmH20) Pump size up Evaporator heatertape	2nd/3rd digit																											
ESP		4	--4	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted	
OP PUMP HIGH		8	--8	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted	
OP10		16	--G	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Factory mounted	
EKGAU5/8KA	Available kits Gauges kit 5/8 Hp-units Gauges kit 10/12 Hp-units Gauges kit 16 Hp-units Gauges kit 20/24 Hp-units Softstarter kit Address card for connection to BMS or Remote user interface Remote installed user interface Buffertank 200 l			•	•	•	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Kit	
EKGAU10/12KA				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Kit	
EKGAU16KA				-	-	-	-	-	-	-	-	-	•	•	•	-	-	-	-	-	-	-	-	-	-	-	-	Kit	
EKGAU20/24KA				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Kit	
EKSS				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Kit	
EKAC10C		} See notes 5 & 6			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKRUMCA					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKBT				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit	
ESP + OP PUMP HIGH	Example of possible option combinations	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

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4 Capacity tables

4 - 1 Cooling Capacity Tables

Tamb (°C)		20		25		30		35		40	
LWE (°C)	MODEL	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
-10	5 KZ	5.85	2.65	5.35	2.97	4.95	3.29	4.55	3.61		
	8 KZ	10.01	4.71	8.58	5.16	7.15	5.70	6.66	6.44		
	10 KZ	13.3	5.36	11.9	5.91	10.5	6.47	9.10	7.20		
	12 KZ	16.7	6.96	15.0	7.77	13.2	8.43	11.4	9.4		
	16 KZ	20.0	9.43	17.2	10.3	14.3	11.4	13.3	12.9		
	20 KZ	25.3	10.2	22.7	11.3	20.0	12.3	17.3	13.7		
-7	5 KZ	6.60	2.67	6.10	3.00	5.70	3.32	5.30	3.64	4.80	4.03
	8 KZ	11.2	4.90	9.90	5.35	8.60	5.89	8.00	6.61	7.50	7.31
	10 KZ	15.4	5.58	14.0	6.13	12.6	6.70	11.2	7.44	10.5	8.33
	12 KZ	19.1	7.24	17.4	8.05	15.6	8.72	13.8	9.7	12.1	10.7
	16 KZ	22.4	9.82	19.8	10.7	17.2	11.8	16.0	13.2	13.4	14.6
	20 KZ	29.3	10.7	26.7	11.7	24.0	12.8	21.3	14.2	20.0	15.9
-4	5 KZ	7.35	2.70	6.85	3.02	6.45	3.34	6.05	3.67	5.55	4.04
	8 KZ	13.3	5.08	12.0	5.53	10.7	6.08	10.0	6.79	8.65	7.51
	10 KZ	17.5	5.79	16.1	6.34	14.7	6.93	13.3	7.67	12.5	8.55
	12 KZ	21.5	7.51	19.8	8.33	18.0	9.00	16.2	10.0	14.5	11.0
	16 KZ	26.6	10.2	24.0	11.1	21.4	12.2	19.9	13.6	17.3	15.0
	20 KZ	33.3	11.1	30.7	12.1	28.0	13.2	25.3	14.6	23.7	16.3
-1	5 KZ	8.10	2.73	7.60	3.05	7.20	3.37	6.80	3.69	6.30	4.06
	8 KZ	15.4	5.26	14.1	5.71	12.8	6.26	11.9	6.96	10.6	7.69
	10 KZ	19.6	5.99	18.2	6.55	16.8	7.16	15.4	7.90	14.4	8.76
	12 KZ	23.9	7.78	22.2	8.61	20.4	9.28	18.6	10.3	16.9	11.3
	16 KZ	30.8	10.6	28.2	11.5	25.6	12.5	23.8	13.9	21.2	15.4
	20 KZ	37.3	11.5	34.7	12.5	32.0	13.7	29.3	15.1	27.4	16.7
2	5 KZ	8.85	2.76	8.35	3.08	7.95	3.40	7.55	3.72	7.05	4.07
	8 KZ	17.5	5.43	16.2	5.89	14.9	6.44	13.9	7.12	12.6	7.88
	10 KZ	21.7	6.20	20.3	6.75	18.9	7.38	17.5	8.12	16.4	8.98
	12 KZ	26.3	8.04	24.6	8.87	22.8	9.55	21.0	10.6	19.3	11.6
	16 KZ	35.0	10.9	32.4	11.8	29.8	12.9	27.7	14.3	25.1	15.8
	20 KZ	41.3	11.9	38.7	12.9	36.0	14.1	33.3	15.5	31.1	17.1
	24 KZ	52.6	16.2	49.2	17.9	45.6	19.2	42.0	21.2	38.6	23.2

3TW55172-2

SYMBOLS

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

CONDITIONS:

- 1 **Cooling capacity**
Capacity is according to Eurovent rating standard 6/C/003-2003 and valid for chilled water range Dt = 3 - 8°C.
- 2 **Power input**
Power input is total input according to Eurovent rating standard 6/C/003-2003.

4 Capacity tables

4 - 1 Cooling Capacity Tables

Tamb (°C)		20		25		30		35		40	
LWE (°C)	MODEL	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
5	5 KZ	9.60	2.80	9.10	3.10	8.70	3.43	8.30	3.75	7.80	4.06
	8 KZ	19.6	5.63	18.3	6.05	17.0	6.62	15.8	7.28	14.5	8.03
	10 KZ	23.8	6.39	22.4	6.95	21.0	7.60	19.6	8.34	18.3	9.19
	12 KZ	28.7	8.3	27.0	9.1	25.2	10.0	23.4	11.0	21.7	12.0
	16 KZ	39.2	11.4	36.6	12.2	34.0	13.3	31.6	14.6	29.0	16.1
	20 KZ	45.3	12.3	42.7	13.3	40.0	14.6	37.3	16.0	34.9	17.5
	24 KZ	57.4	16.8	54.0	18.4	50.4	20.0	46.8	22.1	43.4	24.1
7	5 KZ	10.1	2.82	9.90	3.13	9.50	3.45	9.10	3.77	8.60	4.07
	8 KZ	21.0	5.74	19.7	6.19	18.4	6.73	17.1	7.38	15.8	8.14
	10 KZ	25.2	6.52	23.8	7.08	22.4	7.74	21.0	8.49	19.6	9.32
	12 KZ	30.3	8.5	28.6	9.3	26.8	10.2	25.0	11.3	23.3	12.3
	16 KZ	42.0	11.6	39.4	12.5	36.8	13.5	34.2	14.8	31.6	16.3
	20 KZ	48.0	12.6	45.3	13.6	42.7	14.8	40.0	16.2	37.3	17.8
	24 KZ	60.6	17.1	57.2	18.8	53.6	20.6	50.0	22.6	46.6	24.7
10	5 KZ	11.3	2.84	11.2	3.16	10.7	3.47	10.3	3.79	9.80	4.10
	8 KZ	23.3	5.92	21.9	6.37	20.5	6.92	19.1	7.59	17.8	8.34
	10 KZ	27.3	6.72	25.9	7.28	24.4	7.95	23.0	8.70	21.5	9.53
	12 KZ	32.7	8.9	30.9	9.8	29.2	10.7	27.4	11.6	25.7	12.7
	16 KZ	46.6	12.0	43.8	12.9	41.0	14.0	38.2	15.3	35.6	16.7
	20 KZ	52.0	13.0	49.3	14.0	46.5	15.3	43.8	16.7	41.0	18.2
	24 KZ	65.4	18.1	61.8	19.7	58.4	21.6	54.8	23.4	51.4	25.4
13	5 KZ	11.5	2.86	11.3	3.18	11.0	3.49	10.6	3.81	10.2	4.12
	8 KZ	25.5	6.06	24.0	6.53	22.6	7.07	21.2	7.75	19.7	8.50
	10 KZ	29.4	6.90	27.9	7.48	26.4	8.14	25.0	8.90	23.5	9.74
	12 KZ	35.1	9.2	33.3	10.1	31.6	11.0	29.8	12.0	28.0	13.0
	16 KZ	51.0	12.3	48.0	13.3	45.2	14.3	42.4	15.6	39.4	17.1
	20 KZ	56.0	13.4	53.1	14.4	50.3	15.7	47.6	17.1	44.8	18.7
	24 KZ	70.2	18.8	66.6	20.5	63.2	22.3	59.6	24.2	56.0	26.2
16	5 KZ	11.7	2.89	11.5	3.21	11.2	3.54	10.9	3.86	10.5	4.16
	8 KZ	27.8	6.22	26.3	6.68	24.7	7.26	23.2	7.94	21.7	8.71
	10 KZ	31.5	7.09	30.0	7.66	28.5	8.33	27.0	9.09	25.4	9.9
	12 KZ	37.5	9.7	35.7	10.5	34.0	11.4	32.2	12.4	30.4	13.5
	16 KZ	55.6	12.7	52.6	13.6	49.4	14.7	46.4	16.0	43.4	17.6
	20 KZ	60.0	13.7	57.1	14.8	54.3	16.1	51.4	17.5	48.4	19.1
	24 KZ	75.0	19.7	71.4	21.4	68.0	23.0	64.4	25.1	60.8	27.1
19	5 KZ	11.9	2.92	11.8	3.24	11.6	3.56	11.3	3.88	11.0	4.18
	8 KZ	30.8	6.38	29.1	6.86	27.5	7.45	25.9	8.15	24.3	8.90
	10 KZ	33.6	7.26	32.1	7.84	30.5	8.52	29.0	9.28	27.4	10.1
	12 KZ	39.9	10.0	38.1	10.8	36.3	11.8	34.6	12.8	32.8	13.8
	16 KZ	61.6	13.2	58.2	14.1	55.0	15.2	51.8	16.5	48.6	18.0
	20 KZ	64.0	14.1	61.1	15.2	58.1	16.5	55.2	17.9	52.2	19.5
	24 KZ	79.8	20.4	76.2	22.1	72.6	24.0	69.2	25.8	65.6	27.9

3TW55172-1D

SYMBOLS

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

NOTES

- 1 **Cooling capacity**
Capacity is according to Eurovent rating standard 6/C/003-2003 and valid for chilled water range Dt = 3 - 8°C.
- 2 **Power input**
Power input is total input according to Eurovent rating standard 6/C/003-2003.

4 Capacity tables

4 - 2 Heating Capacity Tables

2
4

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	8.60	3.44	9.70	3.58	10.6	3.63	11.4	3.67	12.6	3.72	13.4	3.76	14.3	3.80
	8 KZ	12.9	5.79	14.5	5.83	15.8	5.86	17.2	5.87	19.1	5.90	20.6	5.91	22.2	5.92
	10 KZ	15.0	7.28	17.5	7.30	19.4	7.31	21.3	7.32	23.8	7.31	25.7	7.31	27.6	7.31
	12 KZ	16.9	8.63	19.7	8.65	21.8	8.66	23.9	8.66	26.8	8.66	28.9	8.65	31.0	8.63
	16 KZ	25.8	11.6	29.0	11.7	31.6	11.8	34.4	11.8	38.2	11.9	41.2	11.9	44.4	12.0
	20 KZ	28.8	14.0	33.5	14.0	37.2	14.1	40.8	14.1	45.6	14.1	49.3	14.2	52.9	14.2
40	5 KZ	8.30	3.94	9.40	4.00	10.3	4.04	11.1	4.08	12.2	4.14	13.1	4.18	14.0	4.22
	8 KZ	12.6	6.34	14.2	6.38	15.5	6.41	16.9	6.44	18.8	6.46	20.3	6.48	21.9	6.49
	10 KZ	15.1	8.12	17.6	8.13	19.5	8.15	21.4	8.15	23.9	8.15	25.8	8.15	27.7	8.14
	12 KZ	17.0	9.62	19.8	9.64	21.9	9.65	24.1	9.65	26.9	9.64	29.0	9.63	31.1	9.62
	16 KZ	25.2	12.7	28.4	12.8	31.0	12.9	33.8	12.9	37.6	13.0	40.6	13.1	43.8	13.1
	20 KZ	28.9	15.6	33.7	15.6	37.4	15.7	41.0	15.7	45.8	15.7	49.5	15.8	53.1	15.8
45	5 KZ	7.90	4.36	9.10	4.42	9.90	4.46	10.8	4.50	11.9	4.56	12.8	4.59	13.6	4.63
	8 KZ	12.3	6.89	13.9	6.93	15.2	6.96	16.6	6.99	18.5	7.01	20.0	7.03	21.6	7.04
	10 KZ	15.2	8.95	17.7	8.97	19.6	8.97	21.5	8.98	24.0	8.98	25.9	8.98	27.8	8.98
	12 KZ	17.1	10.6	19.9	10.6	22.1	10.6	24.2	10.6	27.0	10.7	29.1	10.7	31.3	10.7
	16 KZ	24.6	13.8	27.8	13.9	30.4	14.0	33.2	14.0	37.0	14.1	40.0	14.2	43.2	14.2
	20 KZ	29.1	17.2	33.9	17.2	37.6	17.3	41.2	17.3	46.0	17.3	49.6	17.4	53.3	17.4
50	5 KZ			8.80	4.83	9.60	4.87	10.5	4.92	11.6	4.97	12.4	5.01	13.3	5.05
	8 KZ			13.6	7.50	14.9	7.53	16.3	7.55	18.2	7.58	19.7	7.59	21.2	7.60
	10 KZ			17.8	9.80	19.7	9.81	21.6	9.81	24.1	9.82	26.0	9.82	27.9	9.81
	12 KZ			20.1	11.6	22.2	11.6	24.3	11.6	27.1	11.6	29.3	11.6	31.4	11.6
	16 KZ			27.2	15.0	29.8	15.1	32.6	15.2	36.4	15.2	39.4	15.3	42.4	15.3
	20 KZ			34.1	18.8	37.8	18.9	41.4	18.9	46.2	18.9	49.8	19.0	53.5	19.0
	24 KZ			40.2	23.3	44.4	23.3	48.6	23.4	54.2	23.4	58.6	23.4	62.8	23.4

3TW55172-1D

SYMBOLS

- HC : Heating capacity (kW)
- LWC : Leaving condenser water temperature (kW)
- PI : Power input (kW)
- Tamb : Ambient temperature dry bulb (°CDB)

NOTES

- 1 **Heating capacity**
Capacity is according to Eurovent rating standard 6/C/003-2003 and valid for chilled water range Dt = 3 - 8°C.
- 2 **Power input**
Power input is total input according to Eurovent rating standard 6/C/003-2003.

NOTES

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 formula.

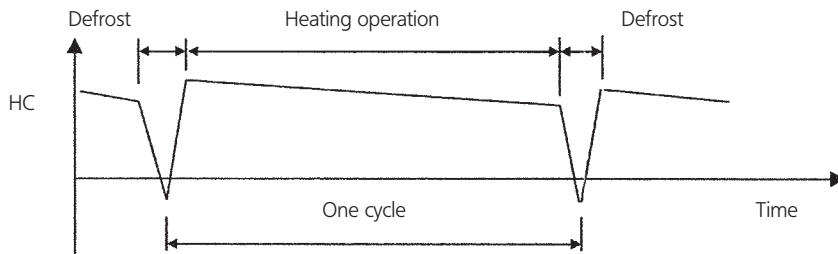
Integrated heating capacity = (Capacity tabulated) x Integrated correction factor during frosting period

Integrated heating capacity means that heating capacity during one cycle (between defrosting period and defrosting period) as shown below, 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 factors	0.85	0.86	0.86	0.87	0.89	0.91	1

Integrated heating capacity graph:



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.

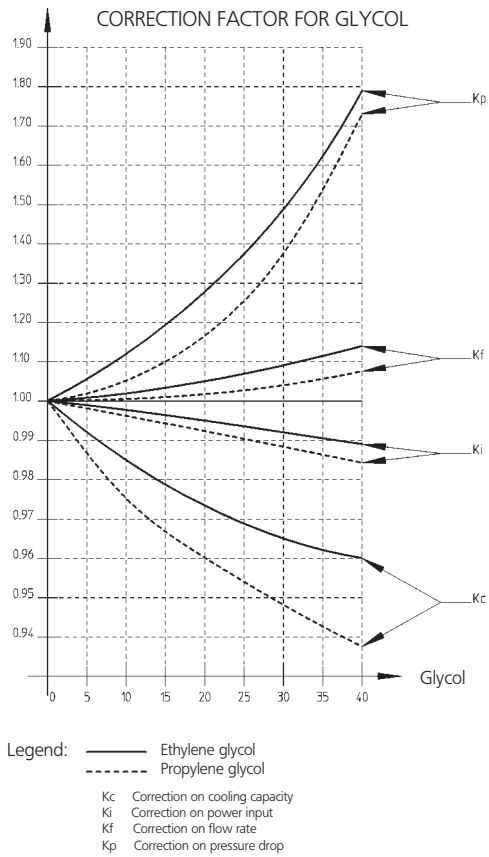
4 Capacity tables

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



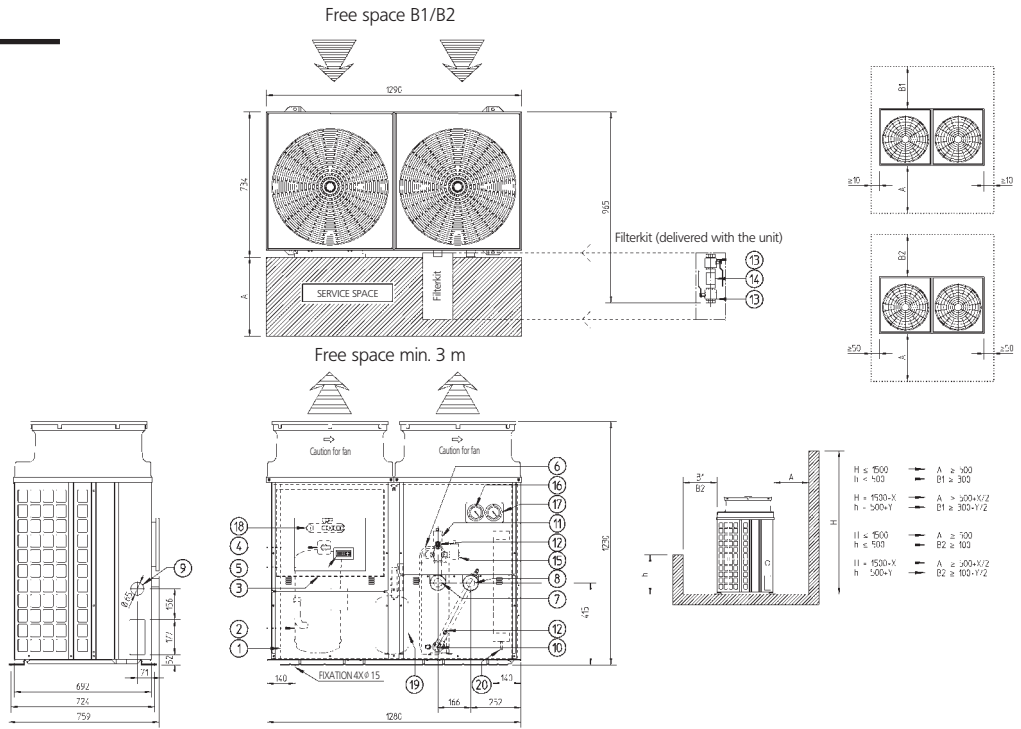
4TW54179-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWYN5-8KBZW1

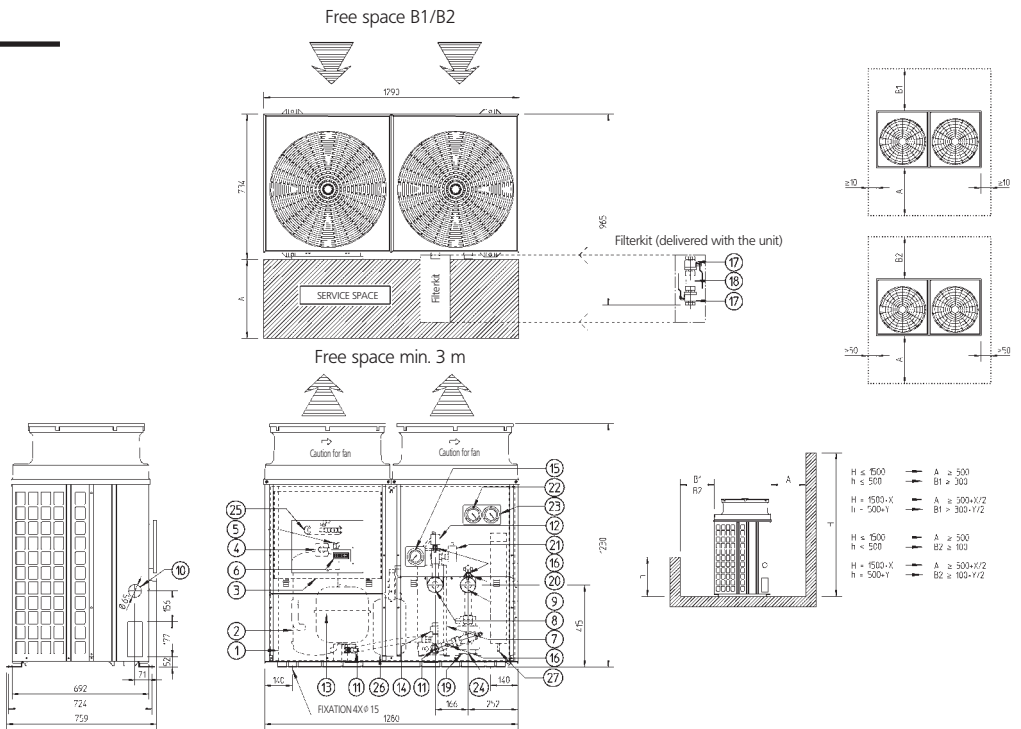
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Digital display controller
 - 6 Water heat exchanger
 - 7 Water IN connection: 1 1/4" M BSP
 - 8 Water OUT connection: 1 1/4" M BSP
 - 9 Power supply intake
 - 10 Drain
 - 11 Air purge
 - 12 Pressure port
 - 13 Ball valve: 1-1/4" 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



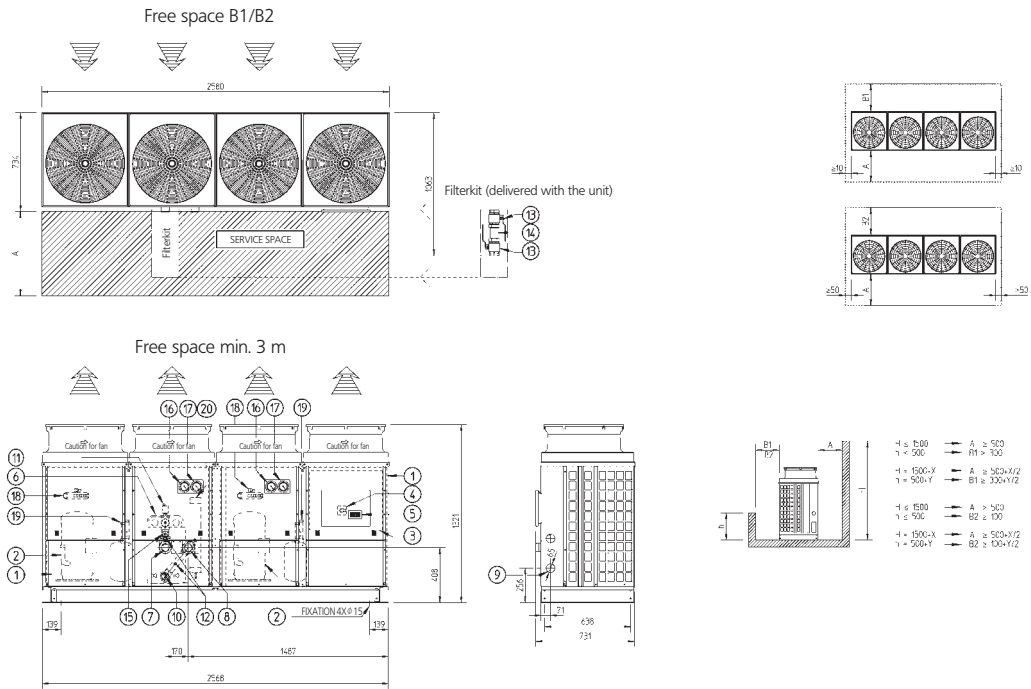
3TW55694-2

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWYN16KBZW1

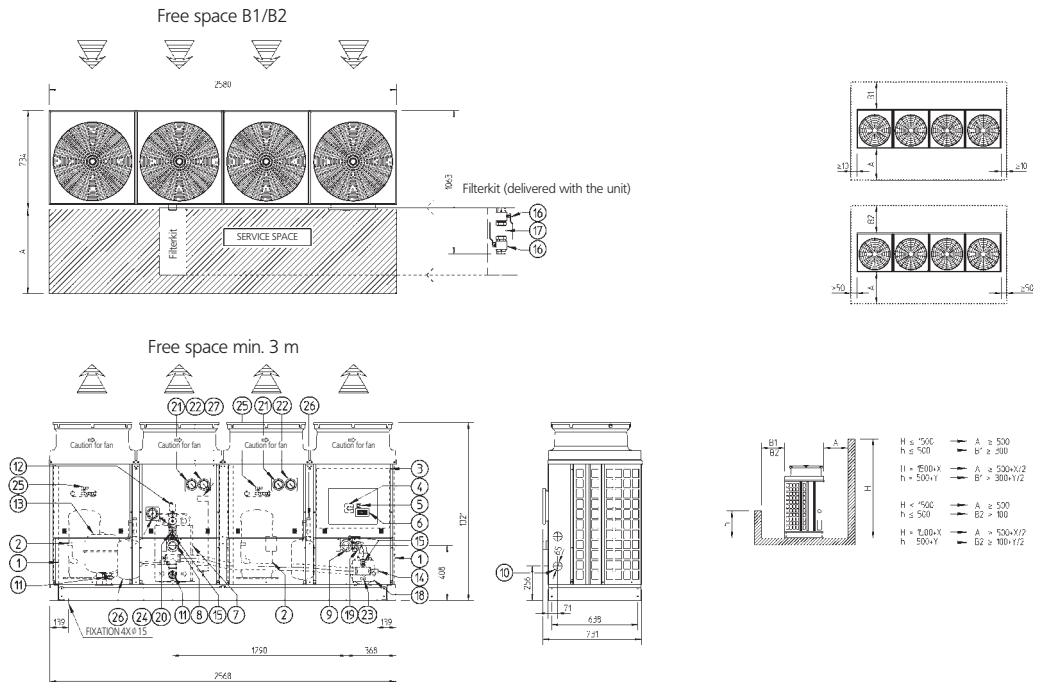
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Digital display controller
 - 6 Water heat exchanger
 - 7 Water IN connection: 2" M BSP
 - 8 Water OUT connection: 2" M BSP
 - 9 Power supply intake
 - 10 Drain
 - 11 Air purge
 - 12 Pressure port
 - 13 Ball valve
 - 14 Water 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



3TW55734-1

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



3TW55734-2

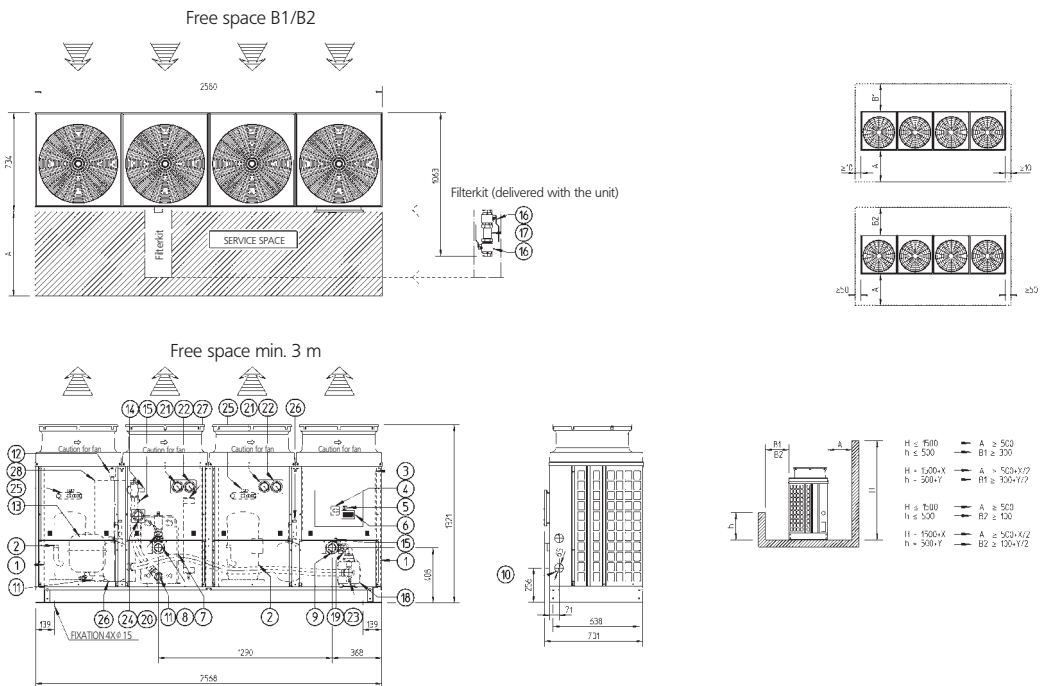
5 Dimensional drawings

5 - 1 Dimensional Drawings

2
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EUWYB16KBZW1

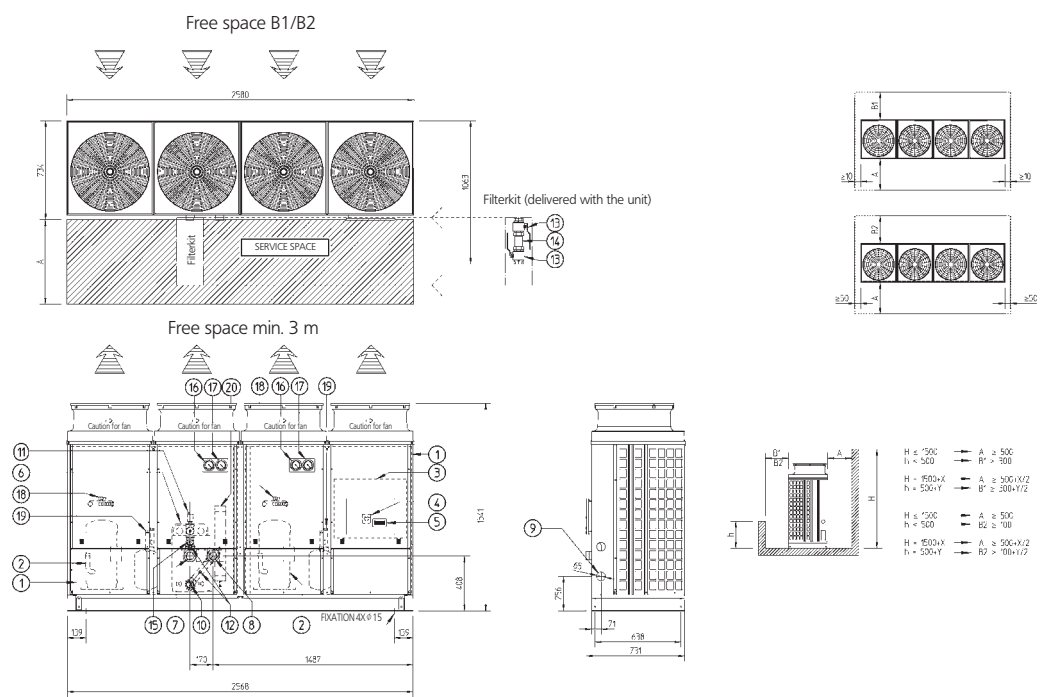
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Pump switch
 - 6 Digital display controller
 - 7 Water heat exchanger
 - 8 Water IN connection: 2" M BSP
 - 9 Water OUT connection: 2" M BSP
 - 10 Power supply intake
 - 11 Drain
 - 12 Air purge
 - 13 Expansion vessel
 - 14 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



3TW55734-3

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



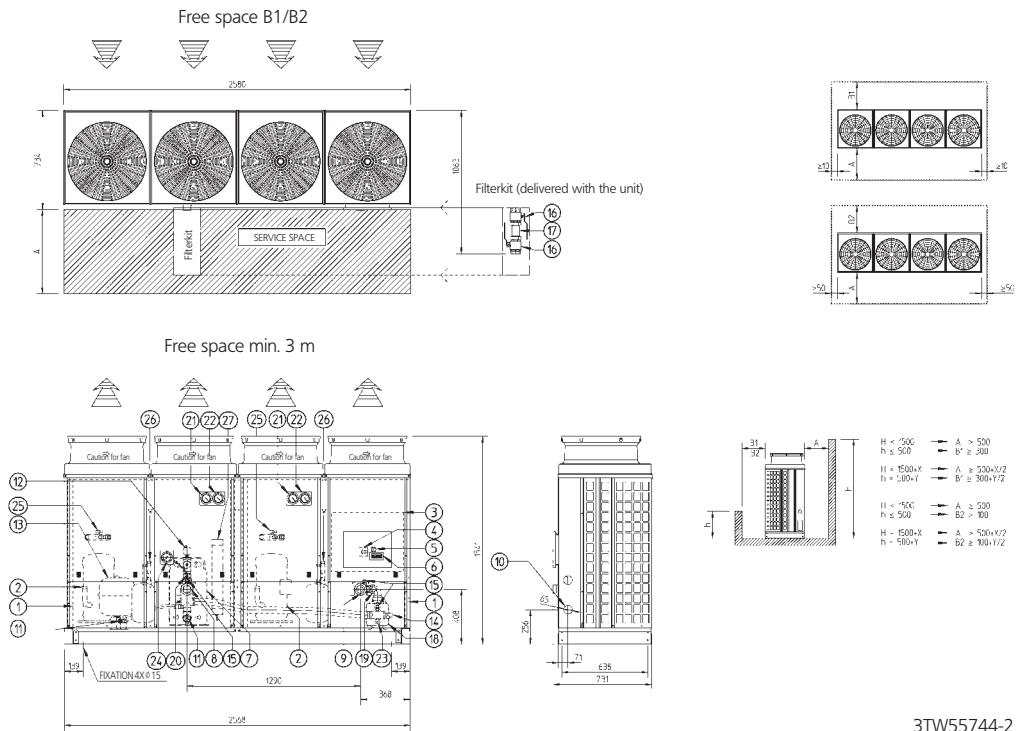
3TW55744-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWYP20-24KBZW1

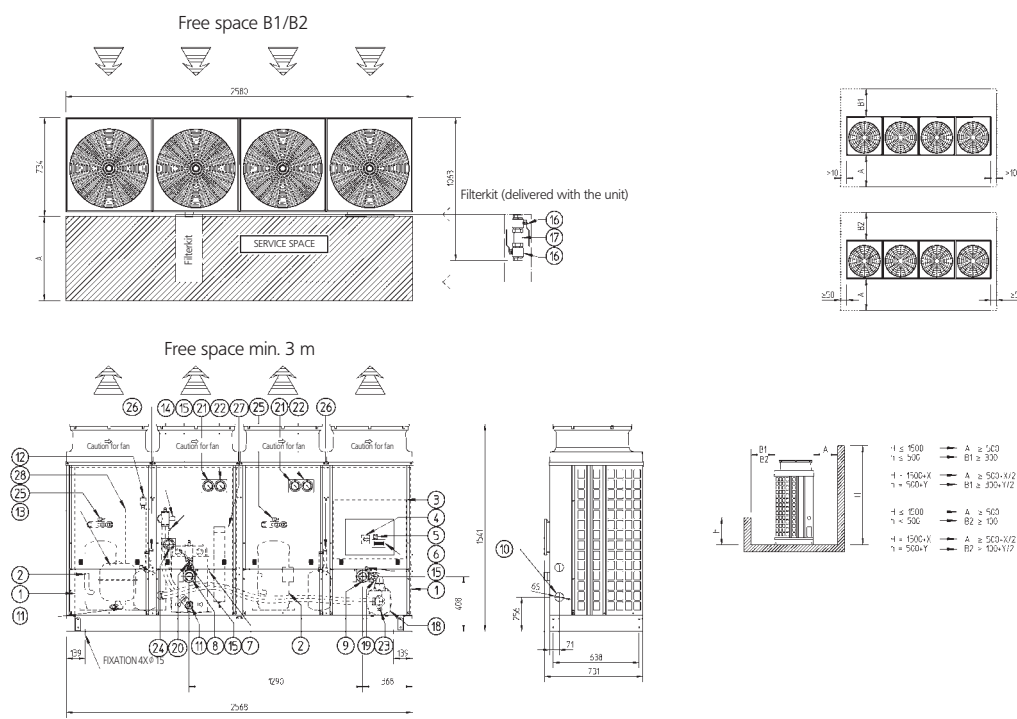
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Pump switch
 - 6 Digital display controller
 - 7 Water heat exchanger
 - 8 Water IN connection: 2" M BSP
 - 9 Water OUT connection: 2" M BSP
 - 10 Power supply intake
 - 11 Drain
 - 12 Air purge
 - 13 Expansion vessel
 - 14 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



2
5

EUWYB20-24KBZW1

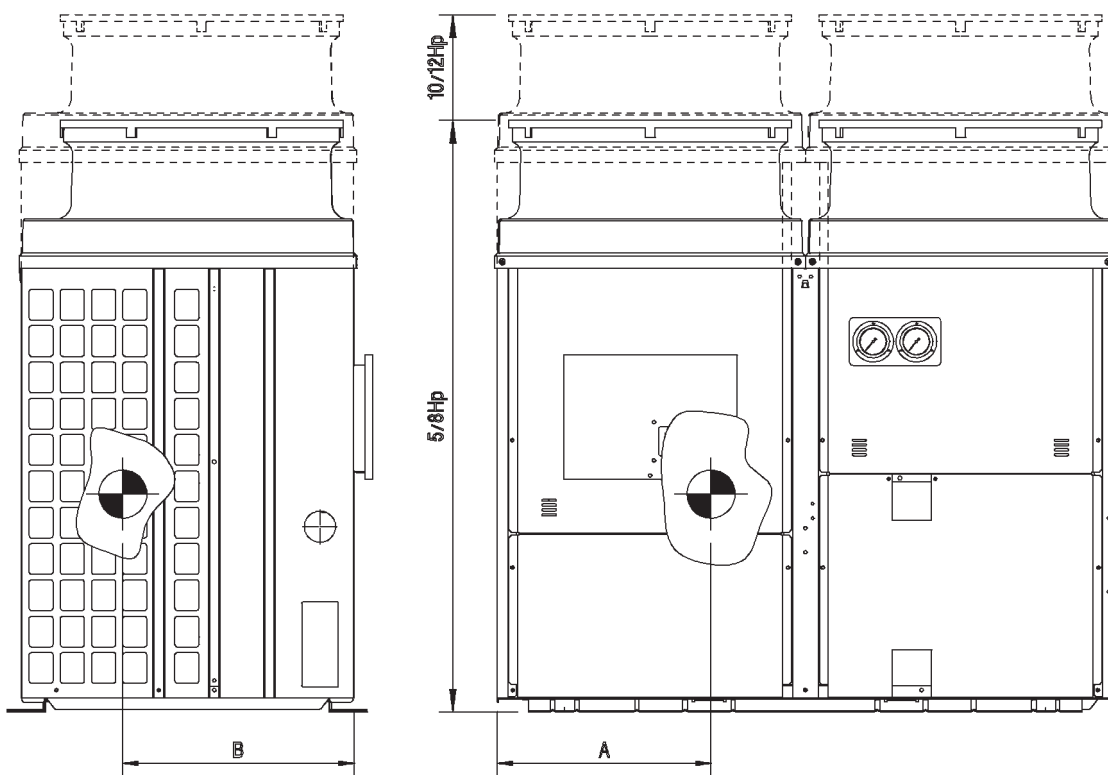
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Pump switch
 - 6 Digital display controller
 - 7 Water heat exchanger
 - 8 Water IN connection: 2" M BSP
 - 9 Water OUT connection: 2" M BSP
 - 10 Power supply intake
 - 11 Drain
 - 12 Air purge
 - 13 Expansion vessel
 - 14 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



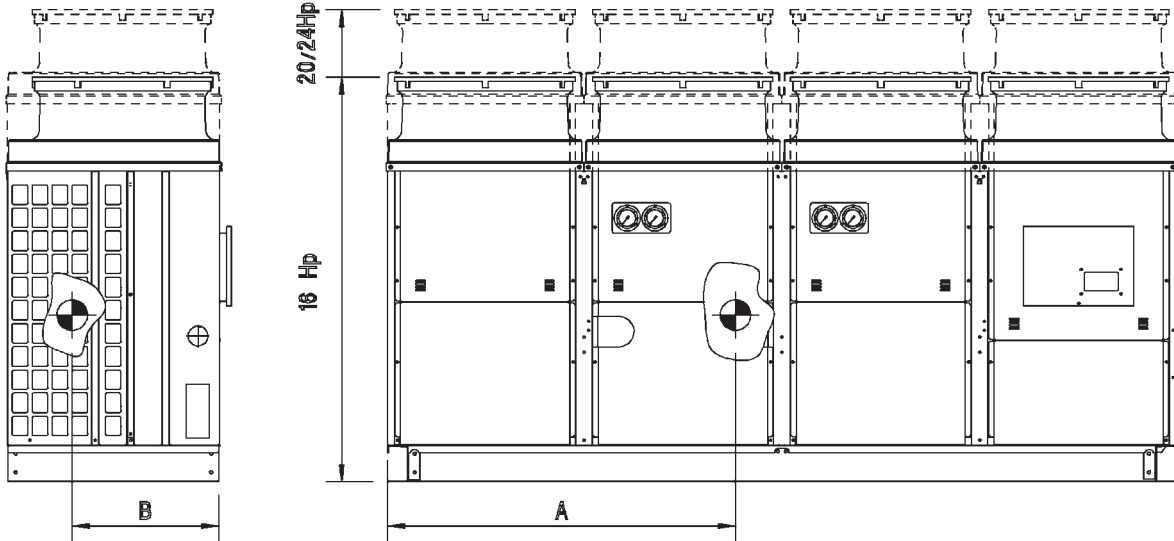
	5Hp		8Hp		10Hp		12Hp	
	A	B	A	B	A	B	A	B
B-Models	520	420	480	420	490	430	490	430
P-Models	510	420	470	420	480	430	490	430
N-Models	480	420	440	430	450	430	460	430

4TW54759-2

6 Centre of gravity

6 - 1 Centre of Gravity

EUWY*16-24KBZW1



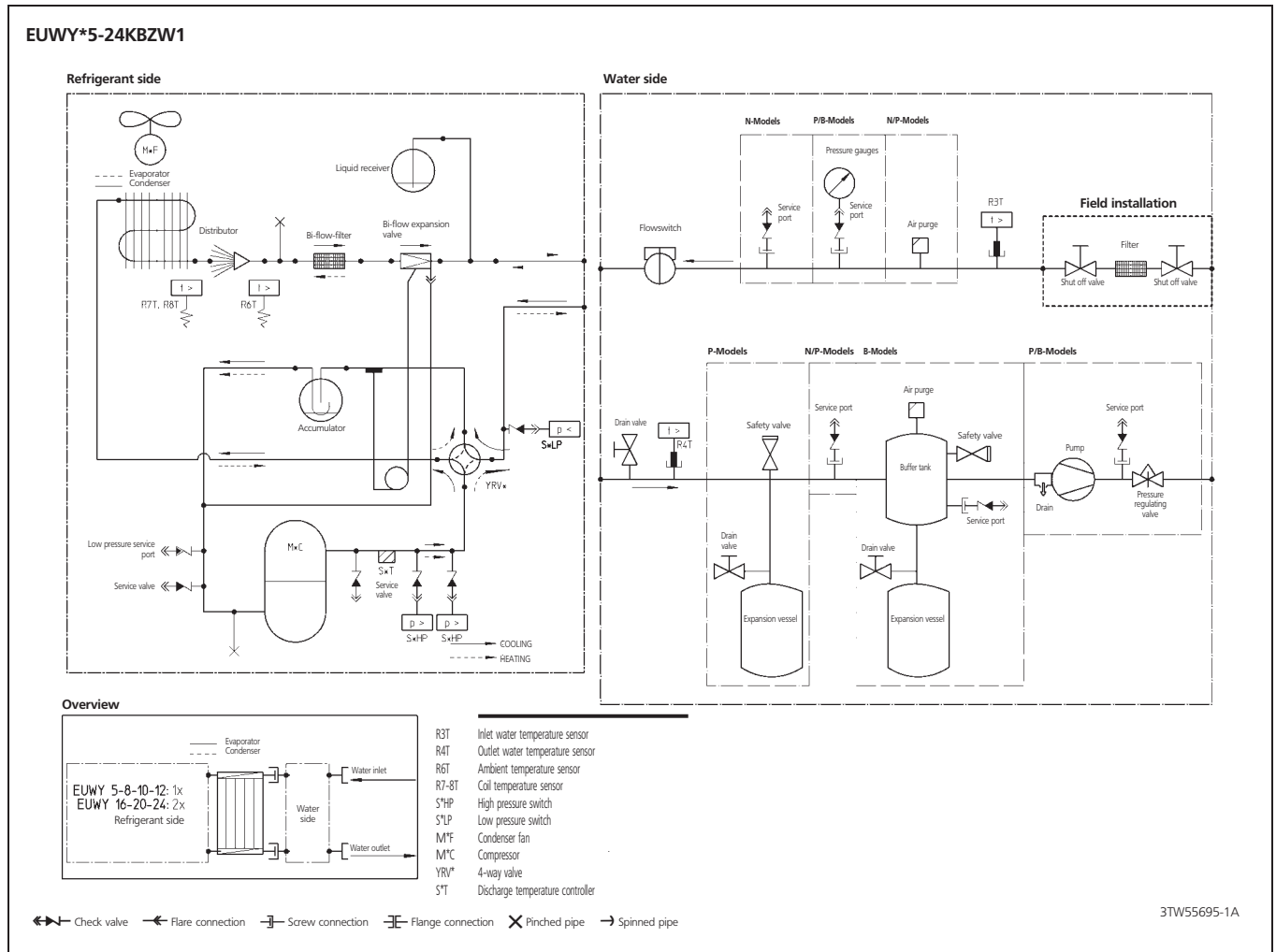
	16Hp		20Hp		24Hp	
	A	B	A	B	A	B
B-Models	1115	435	1120	435	1115	435
P-Models	1145	435	1140	435	1135	435
N-Models	1110	430	1115	435	1110	435

4TW54799-2

7 Piping diagrams

7 - 1 Piping Diagrams

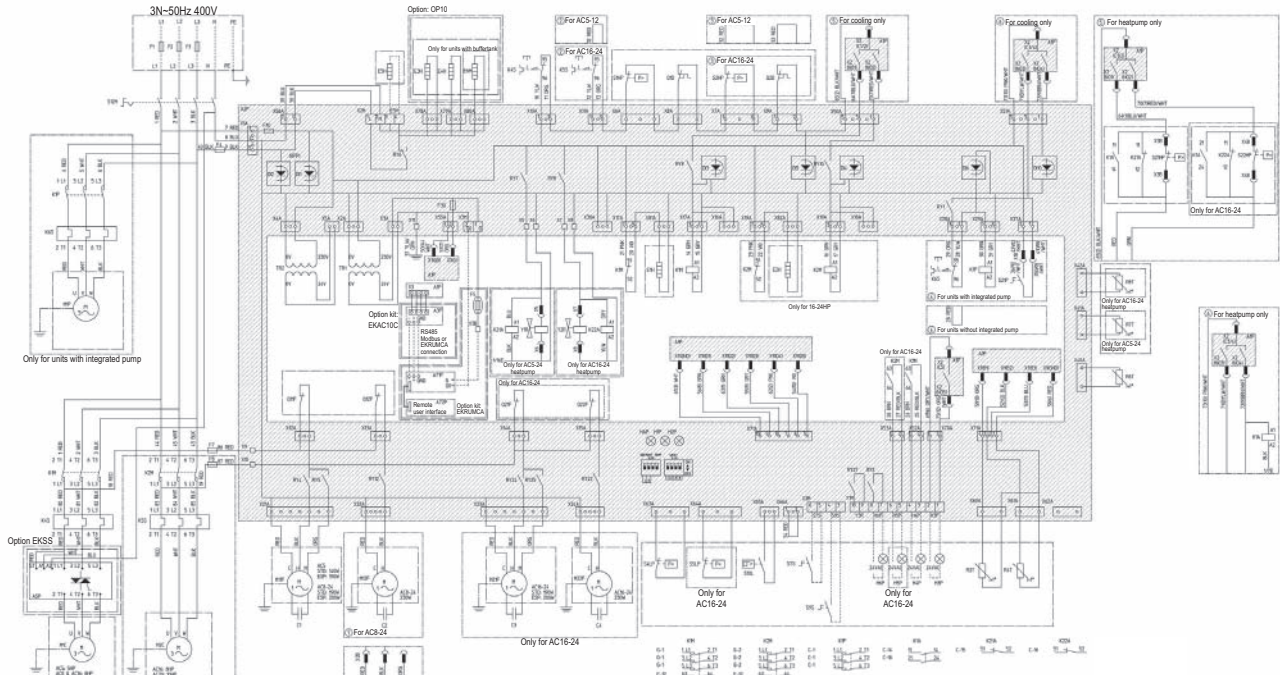
2
7



8 Wiring diagrams

8 - 1 Wiring Diagrams - Three Phase

EUWA-KBZW1 / EUWY-KBZW1



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

() Applicable for unit without integrated pump

A2P	A1P
DIGITAL INPUTS	DIGITAL INPUTS
D11 Reverse phase detection (L1-N)	X1 (D1-GND) : Flow switch
D12 Reverse phase detection (N-L3)	X1 (D2-GND) : Remote C/H selection
D13 M1C ON detection	X1 (D3-GND) : High pressure switch + discharge protector + overcurrent
D14 M2C ON detection	X1 (D4-GND) : Low pressure switch
D15 Safety device detection	X1 (D5-GND) : Remote On/Off
D16 Pump ON detection	DIGITAL OUTPUTS (RELAYS)
D17 --	X2 (C1/2-NO1) : Compressor M1C on
D18 --	X2 (C1/2-NO2) : Compressor M2C on
D19 --	X2 (C3/4-NO3) : Voltage free contact for pump
D110 Reverse valve request	X2 (C3/4-NO4) : Reversing valve
DIGITAL OUTPUTS (RELAYS)	X2 (C5-NO5) : Alarm voltage free contact
RY1 Reversed phase protector	ANALOG INPUTS
RY3 Pump/general operation	X1 (B1-GND) : inlet water t°
RY4-24 Fan speed relay 1	X1 (B2-GND) : outlet water t°
RY5-25 Fan speed relay 2	X1 (B3-GND) : none
RY6 Heater tape	ANALOG OUTPUTS
RY7 Reversing valve circ1	X1 (Y-GND)
RY8 Reversing valve circ2	
RY9 M1C off (during defrost)	
RY10 M2C off (during defrost)	
RY12-22 Fan speed relay 3	
RY27 Reversing valve of water circuit	
OTHERS	
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 (= gL/gG)	3x20A	3x25A	3x32A	3x40A	3x50A	3x50A	3x63A

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

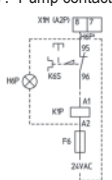
	All models (400V)							
Fuses + overcurrent	5HP	8HP	10HP	12HP	16HP	20HP	24HP	
F4	8A	8A	8A	8A	8A	8A	8A	
F5	250mAT	250mAT	250mAT	250mAT	250mAT	250mAT	250mAT	
F7,8	5A	5A	5A	5A	5A	5A	5A	
F1U	5A	5A	5A	5A	5A	5A	5A	
F3U	315mAT	315mAT	315mAT	315mAT	315mAT	315mAT	315mAT	
K4S	9A	14A	17A	24A	14A	17A	24A	
K5S	--	--	--	--	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	

Y1R,Y2R	Reverse valve circuit 1, circuit 2	Q21F,Q22F	Thermal protector fan circuit 2	F3U	Fuse controller PCB
X1-S2(AB/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	Buffer tank (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	K6S	Overcurrent relay pump	E3H,E4H	Evaporator heatertape
S1HP,S2HP	High pressure switch circuit 1, circuit 2	K4S,K5S	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	K1M,K2M	Compressor contactor circuit 1, circuit 2	C1,C2,C3,C4	Capacitors for fanmotors
R7T,R8T	Coil temperature sensor for circuit 1, circuit 2	K1A	Auxiliary bypass relay	A71P	PCB: Power supply card
R6T	Ambient temperature sensor	K21A,K22A	Auxiliary bypass relay	A72P	PCB: Remote user interface
R4T	Evaporator outlet water temperature sensor	H6P	Indication lamp general operation	A5P	PCB: Softstarter for circuit 1
R3T	Evaporator inlet water temperature sensor	H5P	Indication lamp operation compressor 2	A3P	PCB: Address card
		H4P	Indication lamp operation compressor 1	A2P	PCB: I/O PCB
		H3P	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
 - EKRUMCA = 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

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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 ⁻ /l)	Below 50	Below 50	Corrosion
- Sulfate ion (mg SO ₄ ²⁻ /l)	Below 50	Below 50	Corrosion
- M-alkalinity (pH 4.8) (mg SO ₃ /l)	Below 50	Below 50	Scale
- Total hardness (mg CaCO ₃ /l)	Below 70	Below 70	Scale
- Calcium hardness (mg CaCO ₃ /l)	Below 50	Below 50	Scale
- Silica ion (mg SiO ₂ /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 ²⁻ /l)	Not detectable	Not detectable	Corrosion
- ammonium ion (mg NH ₄ ⁺ /l)	Below 1.0	Below 0.1	Corrosion
- Remaining chloride (mg Cl/l)	Below 0.3	Below 0.3	Corrosion
- Free carbide (mg SO ₂ /l)	Below 4.0	Below 4.0	Corrosion
- Stability index	—	—	Corrosion + scale

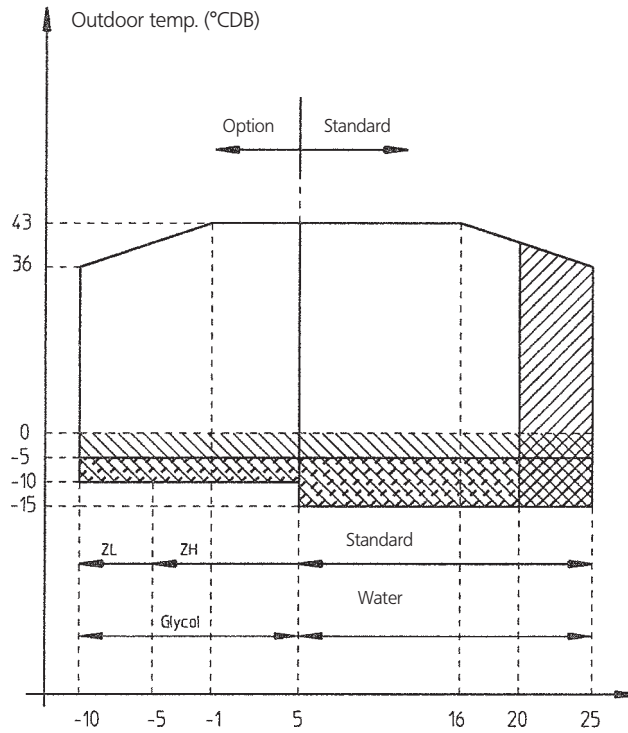
Names, definitions and units are according to JIS K 0101. Units and figures between brackets are old units published as reference only.

11 Operation range

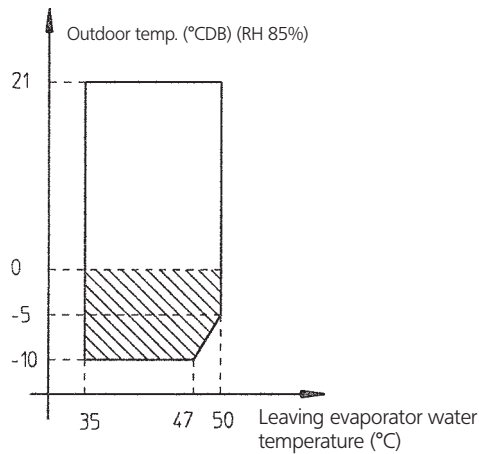
11 - 1 Operation Range




EUWY*5-24KBZW1

Cooling mode



Heating mode



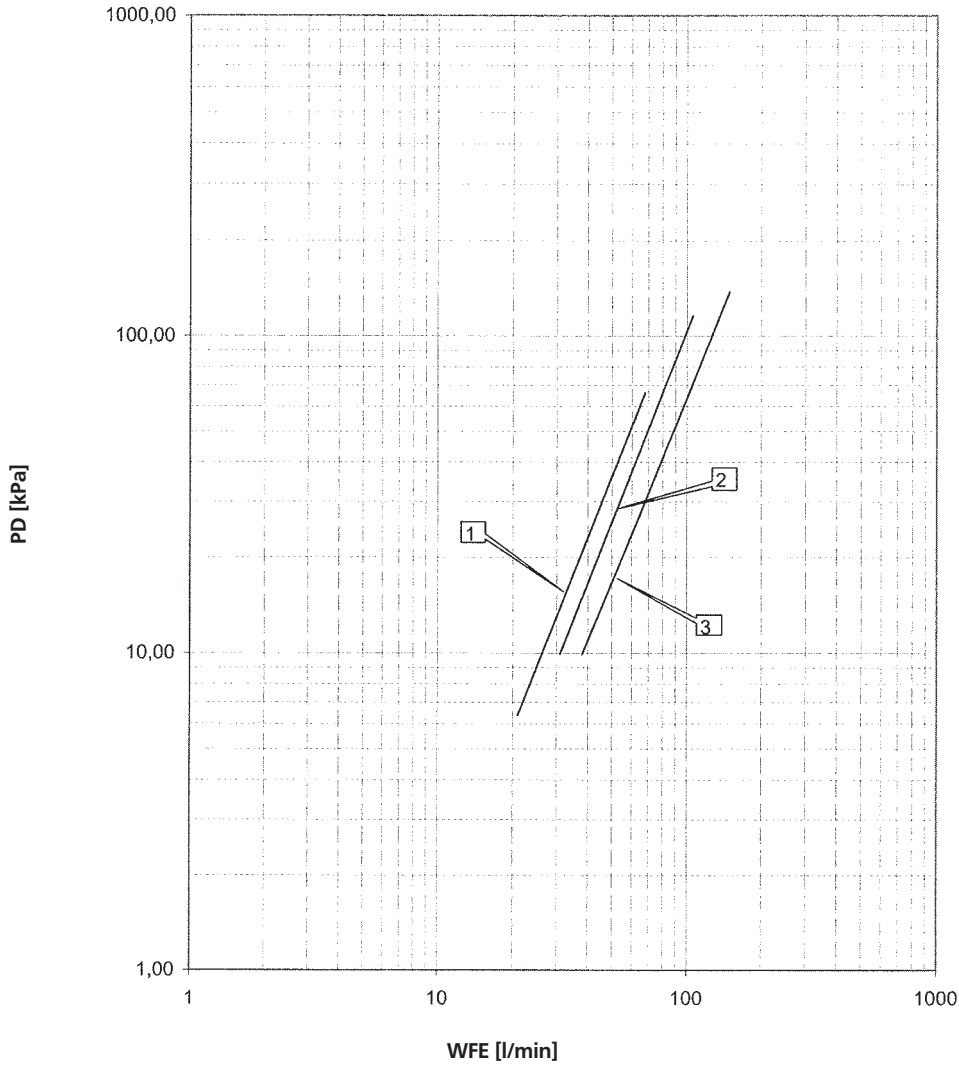
-  Pull down area
-  Protect the water circuit against freezing
-  If the units operate below -5°C and are installed in a rather windy space, a windscreen is required.

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.

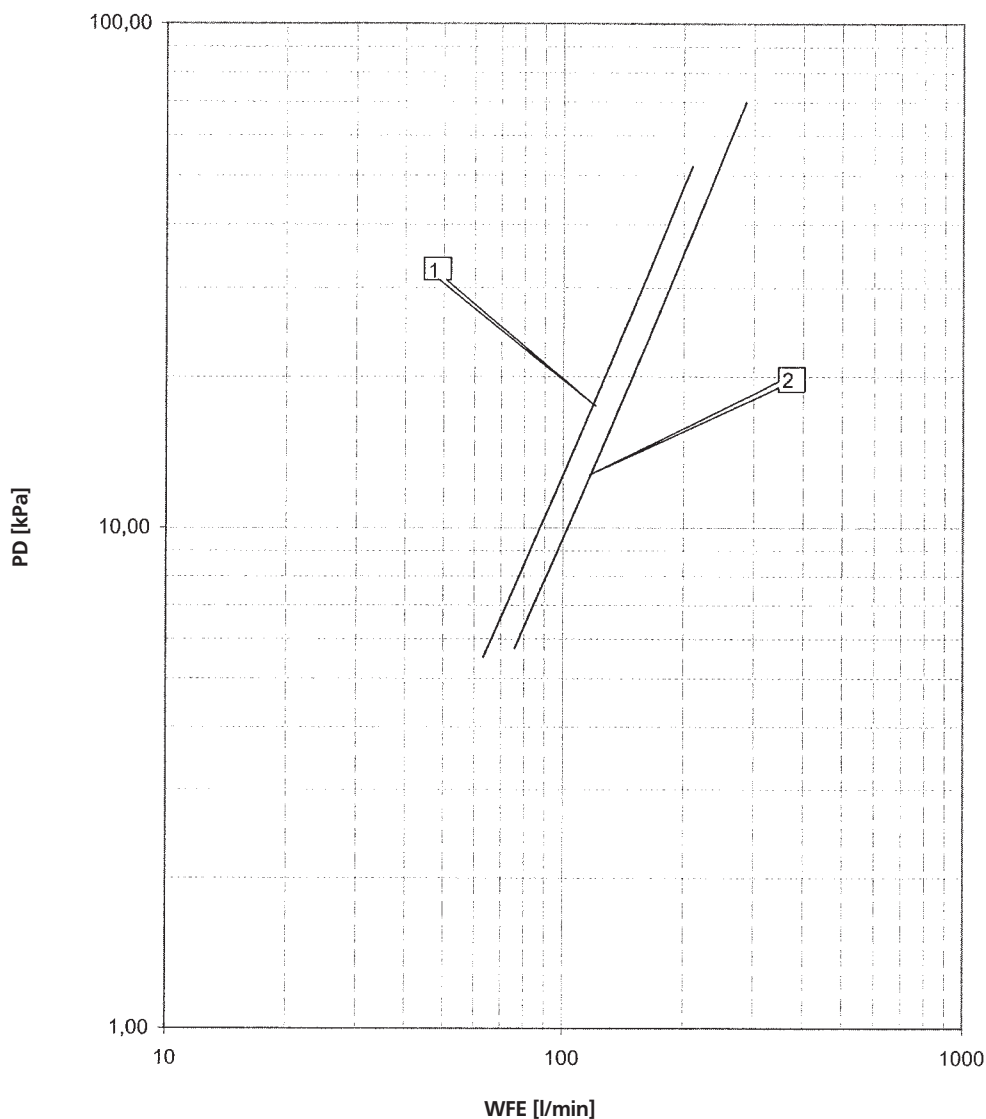
(*) Note:
 Minimum allowed flow of 12 Hp is 45 l/min.

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.

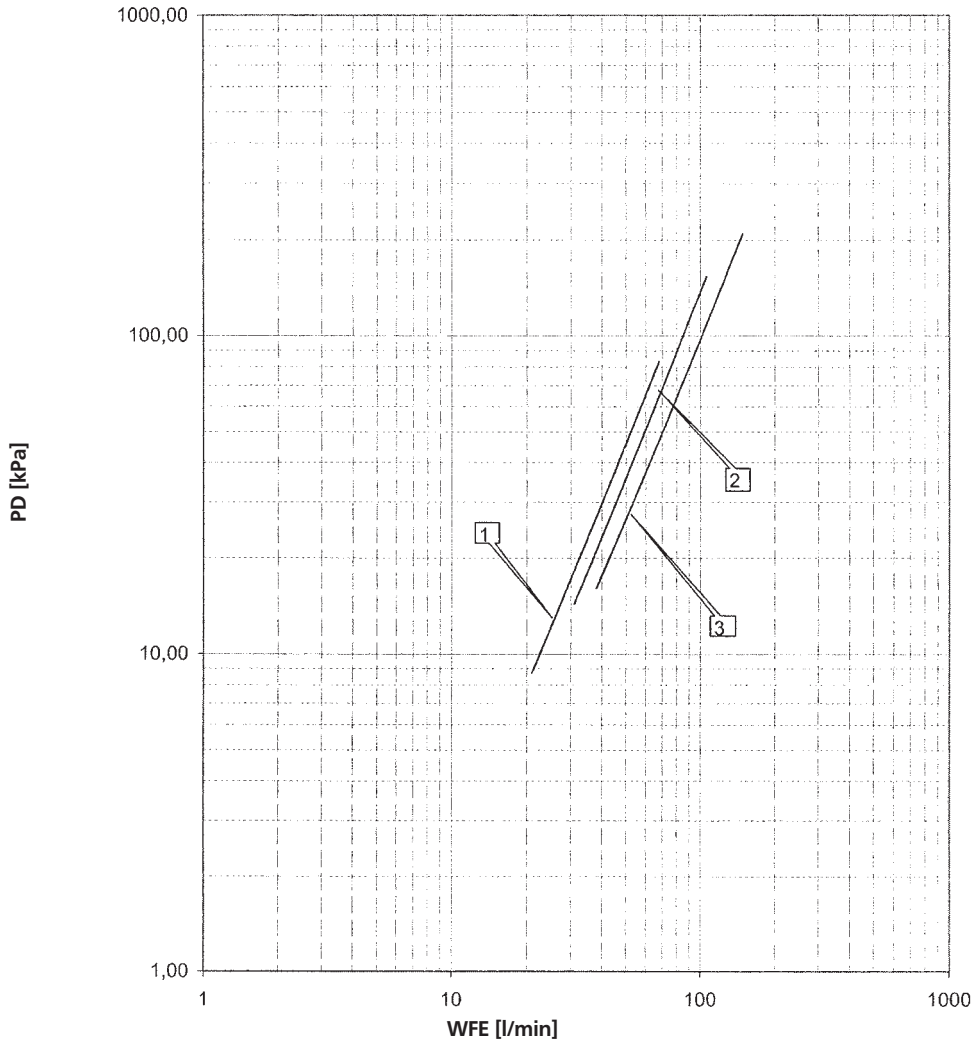
(*) Note:
 Minimum allowed waterflow of 24 Hp unit is 90 l/min.

4TW55219-1A

12 Hydraulic performance

12 - 2 Water Pressure Drop Curve Unit

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.

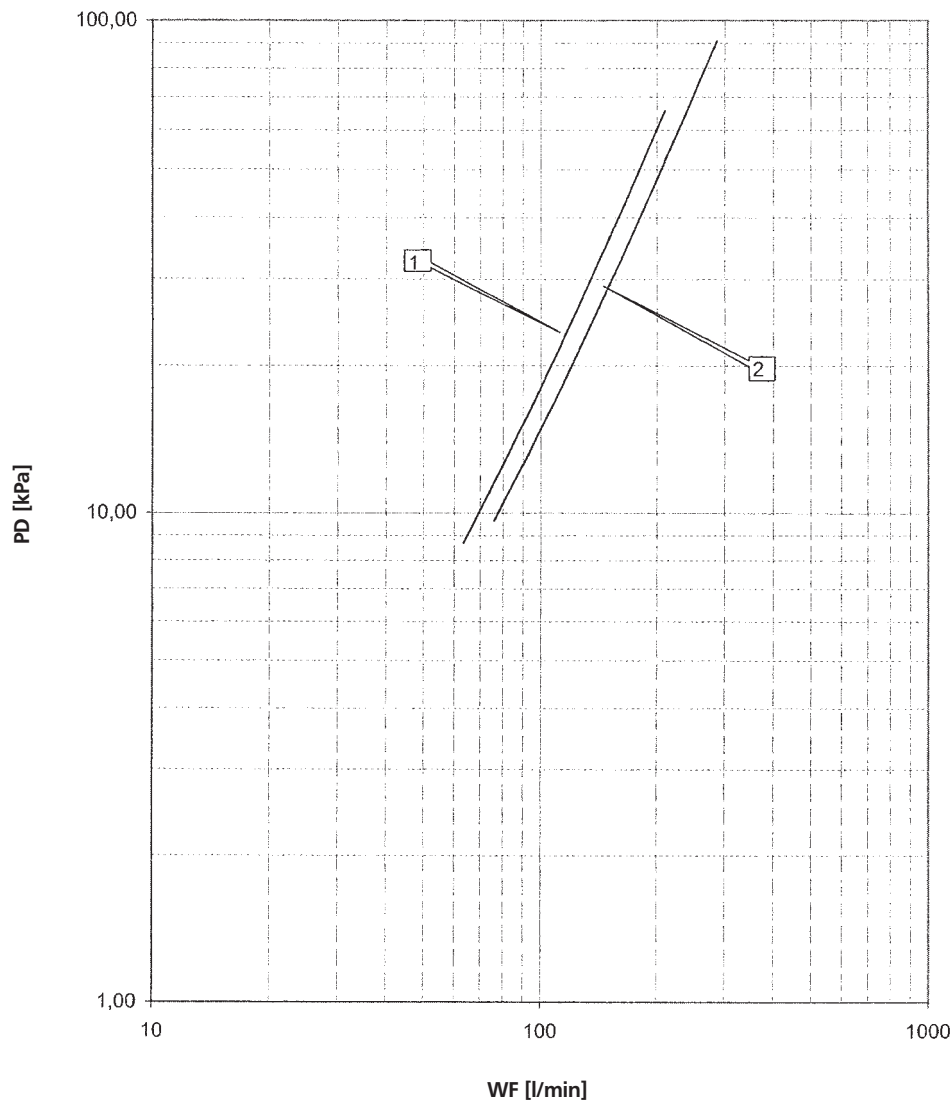
(*) Note:
 Minimum allowed flow of 12 Hp is 45 l/min.

4TW55699-6

12 Hydraulic performance

12 - 2 Water Pressure Drop Curve Unit

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.

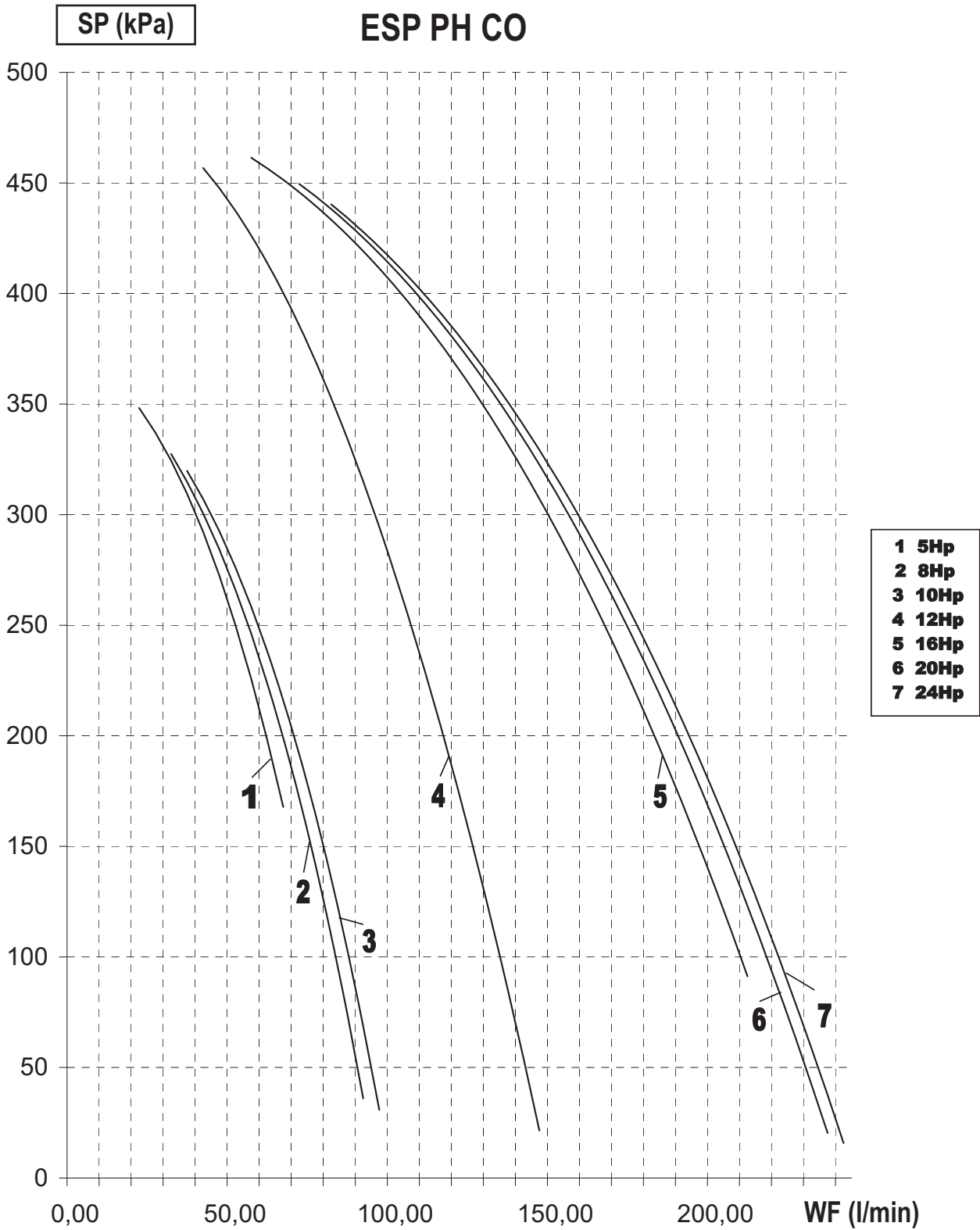
(*) Note:
 Minimum allowed waterflow of 24 Hp unit is 90 l/min.

4TW55739-6

12 Hydraulic performance

12 - 3 External Static Pressure Drop Unit

EUWY5-24KBZW1

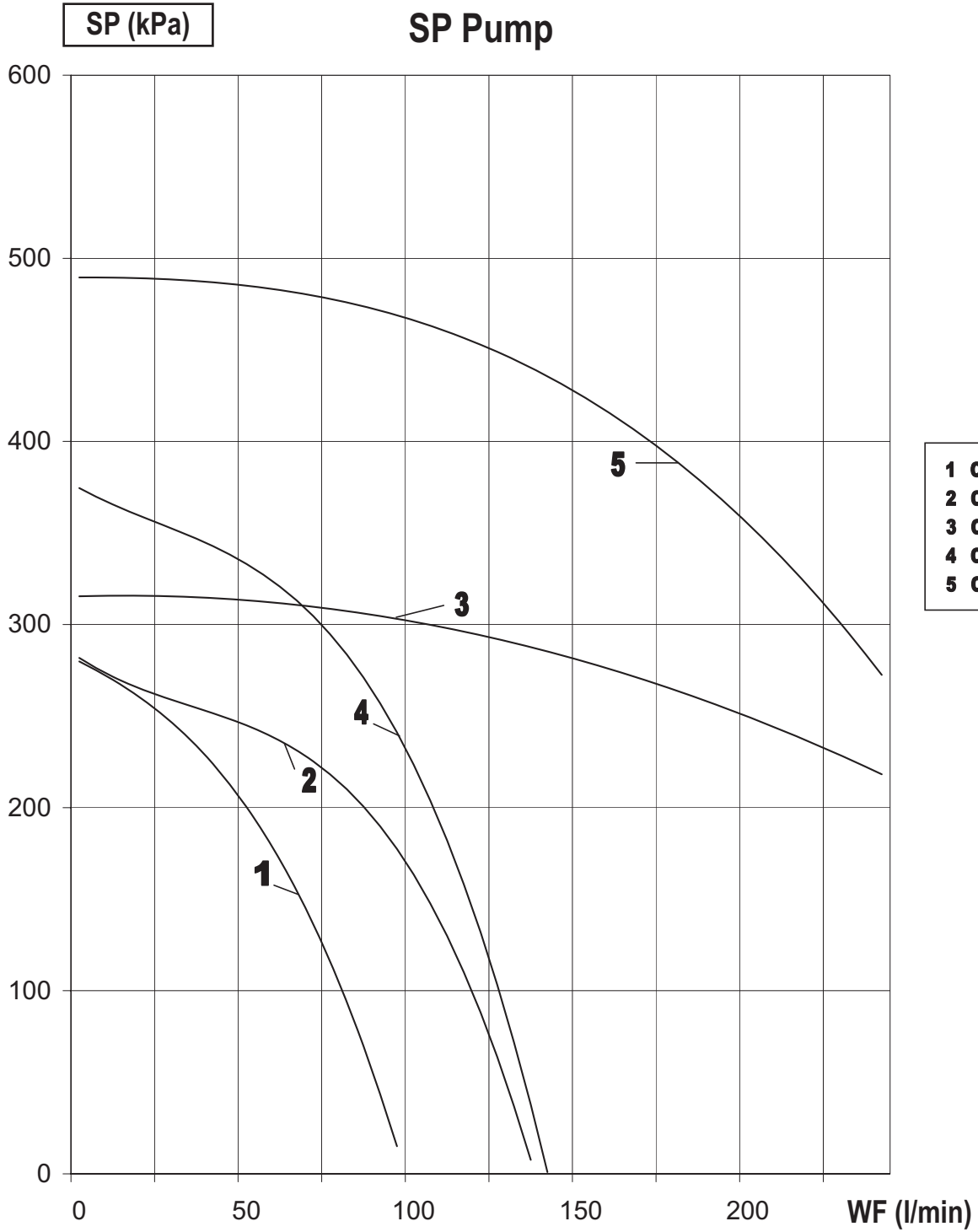


4TW60079-4

12 Hydraulic performance

12 - 4 Static Pressure Pump

EUWA5-24KBZW1
EUWY5-24KBZW1



- 1 CM3-3**
- 2 CM5-3**
- 3 CM10-2**
- 4 CM5-4**
- 5 CM10-3**

4TW60009-3



Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.



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