



Applied Systems

Technical Data

Air cooled chiller



EEEN13-403

EUWA-KBZW1

TABLE OF CONTENTS

EUWA-KBZW1

1	Features	2
2	Specifications	3
	Technical Specifications	3
	Technical Specifications	4
	Technical Specifications	6
	Electrical Specifications	8
	Electrical Specifications	9
	Electrical Specifications	10
3	Options	11
	Options	11
4	Capacity tables	12
	Cooling Capacity Tables	12
	Capacity Correction Factor	19
5	Dimensional drawings	20
	Dimensional Drawings	20
6	Centre of gravity	26
	Centre of Gravity	26
7	Piping diagrams	28
	Piping Diagrams	28
8	Wiring diagrams	29
	Wiring Diagrams - Three Phase	29
9	Sound data	30
	Sound Power Spectrum	30
10	Installation	31
	Water Charge, Flow and Quality	31
11	Operation range	32
	Operation Range	32
12	Hydraulic performance	33
	Water Pressure Drop Curve Evaporator	33
	Water Pressure Drop Curve Evaporator/Condenser	35
	Static Pressure Drop Unit	37
	Pump Characteristics	38

1 Features

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



2 Specifications

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

2 Specifications

2-1 Technical Specifications					EUWAN5 KBZ W1	EUWAP5K BZ W1	EUWAB5K BZ W1	EUWAN8K BZ W1	EUWAP8KBZ W1	EUWAB8KBZ W1	EUWAN10KB ZW1
Operation range	Water side	Cooling	Min.	°CDB	-10						
			Max.	°CDB	25						
	Air side	Cooling	Min.	°CDB	-15						
			Max.	°CDB	43						
Refrigerant	Type				R-407C						
	Control				Thermostatic expansion valve						
	Circuits	Quantity			1						
Refrigerant circuit	Charge			kg	3.9			4.6		5.9	
Water circuit	Piping connections diameter			inch	G 1" 1/4 (male)						
	Piping			inch	1-1/4"						
	Safety valve			bar	-	3		-	3		-
	Manometer				Yes						
	Drain valve / fill valve				Yes, ø15						
	Shut off valve				Yes						
	Total water volume			l	2 (2)	3 (2)	59 (2)	3 (2)		59 (2)	3 (2)
	Minimum water volume in the system			l	54 (3.0)			85 (3.0)		108 (3.0)	
	Air purge valve				Yes						
Refrigerant oil	Type				FVC68D						
	Charged volume			l	1.5			2.7			
Safety devices	Item	01			High pressure switch						
		02			Discharge temperature control						
		03			Compressor motor overcurrent relay						
		04			Pump motor overcurrent						
		05			Fan motor thermal protection						
		06			Anti-recycling and guard timer						
		07			Digital display controller with electronic temperature control						
		08			Reverse phase protector						
		09			Fuse						
Pump Standard	Nominal ESP pump	Cooling	kPa	-	239		-	198		-	
	Manufacturer			-	Grundfos		-	Grundfos		-	
	Model			-	CM3-3		-	CM3-3		-	
	Quantity			-	1		-	1		-	
	Type			-	Horizontal multi-stage end-suction		-	Horizontal multi-stage end-suction		-	
Pump Optional	Efficiency		%	-	77.4		-	77.4		-	
	Efficiency level			-	IE2		-	IE2		-	
	Manufacturer			-	Grundfos		-	Grundfos		-	
	Model			-	CM5-4		-	CM5-4		-	
	Quantity			-	1		-	1		-	
	Rated speed		rpm	-	2840-2870		-	2840-2870		-	
	Type			-	Horizontal multi-stage end-suction		-	Horizontal multi-stage end-suction		-	
Hydraulic performance	nominal ESP unit STANDARD		kPa	-	209 (1)		-	128 (1)		-	
	Pressure drop unit		kPa	27 (1)	-		46 (1)	-		56 (1)	

2-2 Technical Specifications					EUWAP10KB ZW1	EUWAB10KB ZW1	EUWAN12KB ZW1	EUWAP12KB ZW1	EUWAB12KB ZW1	EUWAN16KB ZW1	EUWAP16KB ZW1
Cooling capacity	Nom.			kW	22.9 (1)		26.2 (1)	26.8 (1)		34.4 (1)	35.4 (1)
Capacity steps				%	0-100					0-50-100	
Power input	Cooling	Nom.		kW	8.88 (1)		11.7 (1)			14.90 (1)	15.1 (1)
EER					2.58 (1)		2.24 (1)	2.29 (1)		2.31 (1)	2.34 (1)
Casing	Material				Polyester coated galvanised steel plate						
Dimensions	Unit	Height	mm	1,450			1,321				
		Width	mm	1,290			2,580				
		Depth	mm	734							
	Packed unit	Height	mm	1,645			1,745				
		Width	mm	1,380			2,660				
		Depth	mm	830			910				

2 Specifications

2-2 Technical Specifications				EUWAP10KB ZW1	EUWAB10KB ZW1	EJWAN12KB ZW1	EUWAP12KB ZW1	EUWAB12KB ZW1	EUWAN16KB ZW1	EUWAP16KB ZW1		
Weight	Unit			kg	259	271	248	262	274	430	448	
	Operation weight			kg	262	330	251	265	335	436	457	
	Packed unit			kg	269	281	258	272	284	455	473	
Packing	Material	Wood / Plastic foil										
	Weight			kg	10					25		
Water heat exchanger	Type	Braze plate										
	Quantity	1										
	Water volume			l	1.9		2.375			2.964		
	Water flow rate	Min.	Max.	l/min	32		38			53		
					129		152			212		
	Nominal water flow	Cooling			l/min	64 (1)		76 (1)			99 (1)	
			Nominal water pressure drop	Cooling		Heat exchanger	kPa	43 (1)		37 (1)		
	Insulation material	Kaiflex										
	Model	Type			AC70X-40HX			AC70X-50HX			AC230X-38HX	
Air heat exchanger	Type	Cross fin coil/Hi-X tubes and PE coated waffle louvre fins										
	Rows			Quantity	2							
	Stages			Quantity	50					40		
	Fin pitch			mm	2							
	Face area			m ²	1.970					1.570 + 1.570		
Hydraulic components	Buffer tank			Volume	l	-	55		-	55		-
	Expansion vessel			Volume	l	12		-	12		-	12
				Pre pressure	bar	1.5		-	1.5		-	1.5
	Water filter			Material	Brass							
Fan	Quantity			2					4			
	Type	Axial										
	Discharge direction	Vertical										
Fan group	Air flow rate	Cooling	Nom.	m ³ /min	170 (per 2 fans)							
Fan motor	Output			W	190							
	Quantity			1					2			
	Position	Vertical										
	Drive	Direct drive										
Fan motor 2	Output			W	230							
	Quantity			1					2			
Sound power level	Cooling			Nom.	78					79		
Compressor	Type	Hermetically sealed scroll compressor										
	Quantity			1					2			
	Model			JT265DA-YE			JT335DA-YE			JT212DA-YE		
	Speed			rpm	2,900							
	Starting method	Direct										
	Crankcase heater			W	50							
Operation range	Water side	Cooling	Min.	°CDB	-10							
			Max.	°CDB	25							
	Air side	Cooling	Min.	°CDB	-15							
			Max.	°CDB	43							
Refrigerant	Type	R-407C										
	Control	Thermostatic expansion valve										
	Circuits			Quantity	1					2		
Refrigerant circuit	Charge			kg	5.9			6.0			4.6	

2 Specifications

2

2-2 Technical Specifications				EUWA P10KB ZW1	EUWAB 10KB ZW1	EUWAN12KB ZW1	EUWAP12KB ZW1	EUWAB12KB ZW1	EUWAN16KB ZW1	EUWAP16KB ZW1	
Water circuit	Piping connections diameter	inch	G 1" 1/4 (male)					2" male			
	Piping	inch	1-1/4"					2"			
	Safety valve	bar	3	-	3	-	3				
	Manometer		Yes								
	Drain valve / fill valve		Yes, ø15								
	Shut off valve		Yes								
	Total water volume	l	3 (2)	59 (2)	3 (2)	4 (2)	60 (2)	6 (2)	9 (2)		
	Minimum water volume in the system	l	108 (3.0)		126 (3.0)			88 (3.0)			
	Air purge valve		Yes								
Refrigerant oil	Type		FVC68D								
	Charged volume	l	2.7								
Safety devices	Item	01	High pressure switch								
		02	Discharge temperature control								
		03	Compressor motor overcurrent relay								
		04	Pump motor overcurrent								
		05	Fan motor thermal protection								
		06	Anti-recycling and guard timer								
		07	Digital display controller with electronic temperature control								
		08	Reverse phase protector								
		09	Fuse								
Pump Standard	Nominal ESP pump	Coding	kPa	232	-	217	-	302			
	Manufacturer			Grundfos	-	Grundfos	-	Grundfos			
	Model			CM5-3	-	CM5-3	-	CM10-2			
	Quantity			1	-	1	-	1			
	Type			Horizontal multi-stage end-suction	-	Horizontal multi-stage end-suction	-	Horizontal multi-stage end-suction			
Pump Optional	Efficiency		%	77.4	-	83.2	-	83.2			
	Efficiency level			IE2	-	IE2	-	IE2			
	Manufacturer			Grundfos	-	Grundfos	-	Grundfos			
	Model			CM5-4	-	CM10-3	-	CM10-3			
	Quantity			1	-	1	-	1			
	Rated speed		rpm	2840-2870	-	2900-2920	-	2900-2920			
	Type			Horizontal multi-stage end suction	-	Horizontal multi-stage end suction	-	Horizontal multi-stage end suction			
Hydraulic performance	nominal ESP unit STANDARD		kPa	138 (1)	-	105 (1)	-	240 (1)			
	Pressure drop unit		kPa	-	56 (1)	-	25 (1)	-			

2-3 Technical Specifications				EUWAB 16KB ZW1	EUWAN 20KB ZW1	EUWAP20KB ZW1	EUWAB20KB ZW1	EUWAN24KB ZW1	EUWAP24KB ZW1	EUWAB24KB ZW1
Coding capacity	Nom.		kW	35.4 (1)	46.4 (1)	47.5 (1)	55.0 (1)	56.1 (1)		
Capacity steps			%	0-50-100						
Power input	Coding	Nom.	kW	15.1 (1)	18.1 (1)	18.2 (1)	24.1 (1)	24.2 (1)		
EER				2.34 (1)	2.56 (1)	2.61 (1)	2.28 (1)	2.32 (1)		
Casing	Material			Polyester coated galvanised steel plate						
Dimensions	Unit	Height	mm	1,321	1,541					
		Width	mm	2,580						
		Depth	mm	734						
	Packed unit	Height	mm	1,745						
		Width	mm	2,660						
		Depth	mm	910						
Weight	Unit		kg	460	490	508	520	496	514	526
	Operation weight		kg	525	496	518	545	503	524	592
	Packed unit		kg	485	515	533	585	521	539	551
Packing	Material			Wood / Plastic foil						
	Weight		kg	25			65	25		

2 Specifications

2-3 Technical Specifications					EUWAB1 6KB ZW1	EUWAN2 0KB ZW1	EUWAP2 0KB ZW1	EUWAB2 0KB ZW1	EUWAN2 4KB ZW1	EUWAP2 4KB ZW1	EUWAB2 4KB ZW1	
Water heat exchanger	Type		Braze plate									
	Quantity		1									
	Water volume		l	2.964	3.9			4.524				
	Water flow rate	Min.	l/min	53	67			79				
		Max.	l/min	212	267			317				
	Nominal water flow	Cooling	l/min	99 (1)	134 (1)			158 (1)				
	Nominal water pressure drop	Cooling	Heat exchanger	kPa	22 (1)							
		Insulation material			Kaiflex							
Model	Type	AC230X-38HX		AC230X-50HX			AC230X-58HX					
Air heat exchanger	Type		Cross fin coil/Hi-X tubes and PE coated waffle louvre fins									
	Rows	Quantity		2								
	Stages	Quantity		40	50							
	Fin pitch		mm	2								
	Face area		m ²	1.570 + 1.570	1.970+1.970							
Hydraulic components	Buffer tank	Volume	l	55	-		55	-		55		
	Expansion vessel	Volume	l	12	-		12	-		12		
		Pre pressure	bar	1.5	-		1.5	-		1.5		
	Water filter	Material		Brass								
Fan	Quantity		4									
	Type		Axial									
	Discharge direction		Vertical									
Fan group	Air flow rate	Cooling	Nom.	m ³ /min	170 (per 2 fans)							
Fan motor	Output		W		190							
	Quantity		2									
	Position		Vertical									
	Drive		Direct drive									
Fan motor 2	Output		W		230							
	Quantity		2									
Sound power level	Cooling	Nom.		dBA	79	81						
Compressor	Type		Hermetically sealed scroll compressor									
	Quantity		2									
	Model		JT212DA-YE		JT265DA-YE			JT335DA-YE				
	Speed		rpm		2,900							
	Starting method		Direct									
	Crankcase heater		W		50							
Operation range	Water side	Cooling	Min.	°CDB	-10							
			Max.	°CDB	25							
	Air side	Cooling	Min.	°CDB	-15							
			Max.	°CDB	43							
Refrigerant	Type		R-407C									
	Control		Thermostatic expansion valve									
	Circuits	Quantity		2								
Refrigerant circuit	Charge		kg	4.6	5.9			6.0				
Water circuit	Piping connections diameter		inch		2" male							
	Piping		inch		2"							
	Safety valve		bar		3	-		3	-		3	
	Manometer		Yes									
	Drain valve / fill valve		Yes, ø15									
	Shut off valve		Yes									
	Total water volume		l	65 (2)	6 (2)	10 (2)	66 (2)	7 (2)	10 (2)	66 (2)		
	Minimum water volume in the system		l	88 (3.0)	111 (3.0)			132 (3.0)				
	Air purge valve		Yes									
	Refrigerant oil	Type		FVC68D								
Charged volume		l		2.7								

2 Specifications

2

2-3 Technical Specifications				EUWAB16KB ZW1	EUWAN20KB ZW1	EUWAP20KB ZW1	EUWAB20KB ZW1	EUWAN24KB ZW1	EUWAP24KB ZW1	EUWAB24KB ZW1
Safety devices	Item	01	High pressure switch							
		02	Discharge temperature control							
		03	Compressor motor overcurrent relay							
		04	Pump motor overcurrent							
		05	Fan motor thermal protection							
		06	Anti-recycling and guard timer							
		07	Digital display controller with electronic temperature control							
		08	Reverse phase protector							
		09	Fuse							
Pump Standard	Nominal ESP pump	Coding	kPa	302	-	288	-	276		
	Manufacturer				Grundfos	-	Grundfos	-	Grundfos	
	Model				CM10-2	-	CM10-2	-	CM10-2	
	Quantity				1	-	1	-	1	
	Type				Horizontal multi-stage end-suction	-	Horizontal multi-stage end-suction	-	Horizontal multi-stage end-suction	
Pump Optional	Efficiency	%		83.2	-	83.2	-	83.2		
	Efficiency level				IE2	-	IE2	-	IE2	
	Manufacturer				Grundfos	-	Grundfos	-	Grundfos	
	Model				CM10-3	-	CM10-3	-	CM10-3	
	Quantity				1	-	1	-	1	
	Rated speed	rpm		2900-2920	-	2900-2920	-	2900-2920		
	Type				Horizontal multi-stage end suction	-	Horizontal multi-stage end suction	-	Horizontal multi-stage end suction	
Hydraulic performance	nominal ESP unit STANDARD	kPa		240 (1)	-	195 (1)	-	158 (1)		
	Pressure drop unit	kPa		-	30 (1)	-	32 (1)	-	-	

2-4 Electrical Specifications				EUWAN5KBZ W1	EUWAP5KBZ W1	EUWAB5KBZ W1	EUWAN8KBZ W1	EUWAP8KBZ W1	EUWAB8KBZ W1	EUWAN10KBZ W1	
Compressor	Phase				3~						
	Frequency	Hz	50								
	Voltage	V	400								
	Starting current	A		60.0		95.5		110.0			
	Nominal running current (RLA)	A		5.5		10.7		13.0			
	Maximum running current	A		9.0		14.0		17.0			
	Starting method	Direct on line									
	Crankcase heater	W		33		50					
Power supply	Name				W1						
	Phase				3N~						
	Frequency	Hz	50								
	Voltage	V	400								
	Voltage range	Min.	%	-10							
Max.		%	10								
Unit	Starting current	A		62.2		63.5		97.9		99.2	113
	Current	Zmax	Text	0.26			0.22				
	Nominal running current (RLA)	Coding	A	7.7		9.0		13.6		14.9	15.9
	Maximum running current	A		11.2		12.5		16.9		18.2	19.9
	Recommended fuses according to IEC standard 269-2				3 x 20gU/gG			3 x 25gU/gG			
Fans	Phase				1~						
	Voltage	V	230								
	Frequency	Hz	50								
	Maximum running current	A		2.2		2.9					
Control circuit	Phase				1~						
	Frequency	Hz	50								
	Voltage	V	230								
	Recommended fuses	Factory installed									

2 Specifications

2-4 Electrical Specifications			EUWAN5KBZ W1	EUWAP5KBZ W1	EUWAB5KBZ W1	EUWAN8KBZ W1	EUWAP8KBZ W1	EUWAB8KBZ W1	EUWAN10KB ZW1	
Wiring connections			See installation manual							
Pump Standard	Phase		-	3~	-	-	3~	-	-	
	Frequency	Hz	-	50	-	-	50	-	-	
	Voltage	V	-	400	-	-	400	-	-	
	Maximum running current	A	-	1.2	-	-	1.2	-	-	
Pump Optional	Power supply	Phase	-	3	-	-	3	-	-	
		Frequency	Hz	-	50	-	50	-	-	
		Voltage	V	-	400	-	-	400	-	-
	Current	Maximum running current	A	-	1.9	-	-	1.9	-	-
		Power output	Rated	kW	-	0.85	-	-	0.85	-

2

2-5 Electrical Specifications			EUWAP10KB ZW1	EUWAB10KB ZW1	EUWAN12KB ZW1	EUWAP12KB ZW1	EUWAB12KB ZW1	EUWAN16KB ZW1	EUWAP16KB ZW1
Compressor	Phase		3~						
	Frequency	Hz	50						
	Voltage	V	400						
	Starting current	A	110.0		136.0			95.0	
	Nominal running current (RLA)	A	13.0		17.6			10.7	
	Maximum running current	A	17.0		24.0			14.0	
	Starting method		Direct on line						
	Crankcase heater	W	50						
Power supply	Name		W1						
	Phase		3N~						
	Frequency	Hz	50						
	Voltage	V	400						
	Voltage range	Min.	%	-10					
Max.		%	10						
Unit	Starting current	A	114	139	140		62.2	63.5	
	Current	Zmax	Text	0.22	0.21				
	Nominal running current (RLA)	Cooling	A	17.2	20.5	21.8	7.7	9.0	
	Maximum running current	A	21.2	26.9	28.2	11.2	12.5		
	Recommended fuses according to IEC standard 269-2		3 x 32gL/gG			3 x 40gL/gG			3 x 50gL/gG
Fans	Phase		1~						
	Voltage	V	230						
	Frequency	Hz	50						
	Maximum running current	A	2.9					5.8	
Control circuit	Phase		1~						
	Frequency	Hz	50						
	Voltage	V	230						
	Recommended fuses		Factory installed						
Wiring connections			See installation manual						
Pump Standard	Type		-						
	Phase		3~	-	3~	-	3~	-	
	Frequency	Hz	50	-	50	-	50	-	
	Voltage	V	400	-	400	-	400	-	
	Maximum running current	A	1.8	-	1.8	-	3.0	-	
Pump Optional	Power supply	Phase	3	-	3	-	3	-	
		Frequency	Hz	50	-	50	-	50	-
		Voltage	V	400	-	400	-	400	-
	Current	Maximum running current	A	1.9	-	4.4	-	4.4	
	Power output	Rated	kW	0.85	-	2.2	-	2.2	

2 Specifications

2

2-6 Electrical Specifications			EUWAB 16KB ZW1	EUWAN 20KB ZW1	EUWAP 20KB ZW1	EUWAB 20KB ZW1	EUWAN 24KB ZW1	EUWAP 24KB ZW1	EUWAB 24KB ZW1	
Compressor	Phase		3~							
	Frequency		50							
	Voltage		400							
	Starting current		A	95.0	110.0			136.0		
	Nominal running current (RLA)		A	10.7	13.0			17.6		
	Maximum running current		A	14.0	17.0			24.0		
	Starting method		Direct on line							
	Crank case heater		W	50						
Power supply	Name		W1							
	Phase		3N~							
	Frequency		50							
	Voltage		400							
	Voltage range	Min.	%	-10						
		Max.	%	10						
Unit	Starting current		A	63.5	97.9	99.2		113	114	
	Current	Zmax	Text	0.21				0.20		
	Nominal running current (RLA)	Cooling	A	9.0	13.6	14.9		15.9	17.2	
	Maximum running current		A	12.5	16.9	18.2		19.9	21.2	
	Recommended fuses according to IEC standard 269-2			3 x 50gL/gG				3 x 63gL/gG		
Fans	Phase		1~							
	Voltage		230							
	Frequency		50							
	Maximum running current		5.8							
Control circuit	Phase		1~							
	Frequency		50							
	Voltage		230							
	Recommended fuses		Factory installed							
Wiring connections			See installation manual							
Pump Standard	Type		-							
	Phase		3~	-	3~		-	3~		
	Frequency		Hz	50	-	50		-	50	
	Voltage		V	400	-	400		-	400	
	Maximum running current		A	3.0	-	3.0		-	3.0	
Pump Optional	Power supply	Phase		3	-	3		-	3	
		Frequency		Hz	50	-	50		-	50
		Voltage		V	400	-	400		-	400
	Current	Maximum running current	A	4.4	-	4.4		-	4.4	
	Power output	Rated	kW	2.2	-	2.2		-	2.2	

Notes

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

3 Options

3 - 1 Options

EUWA-KBZW1

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

Modelnumber

EUWA(*)5KBZW1 (on) EUWA(*)10KBZW1 (on) EUWA(*)16KBZW1 (on) EUWA(*)24KBZW1 (on)
EUWA(*)8KBZW1 (on) EUWA(*)12KBZW1 (on) EUWA(*)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	-		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	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

4

EUWA*5KBZ

CC EUWAN5KBZ

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

PI EUWAN5KBZ

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

CC EUWAP/B5KBZ

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

PI EUWAP/B5KBZ

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

SYMBOLS

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

NOTES

1. Cooling capacity (CAP)

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

2. Power input (kW)

Power input is total input according to EN14511:2011

4TW54752-1B

4 Capacity tables

4 - 1 Cooling Capacity Tables

EUWA*8KBZ

CC EUWAN8KBZ

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

PI EUWAN8KBZ

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

CC EUWAP/B8KBZ

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

PI EUWAP/B8KBZ

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

SYMBOLS

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

NOTES

1. Cooling capacity (CAP)

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

2. Power input (kW)

Power input is total input according to EN14511:2011

4TW54762-1B

4 Capacity tables

4 - 1 Cooling Capacity Tables

4

EUWA*10KBZ

CC EUWAN10KBZ

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

PI EUWAN10KBZ

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

CC EUWAP/B10KBZ

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

PI EUWAP/B10KBZ

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

SYMBOLS

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

NOTES

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

4TW54772-1B

4 Capacity tables

4 - 1 Cooling Capacity Tables

EUWA*12KBZ

CC EUWAN12KBZ

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

PI EUWAN12KBZ

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

CC EUWAP/B12KBZ

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

PI EUWAP/B12KBZ

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

SYMBOLS

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

NOTES

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

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

4TW54782-1C

4 Capacity tables

4 - 1 Cooling Capacity Tables

4

EUWA*16KBZ

CC EUWAN16KBZ

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

PI EUWAN16KBZ

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

CC EUWAP/B16KBZ

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

PI EUWAP/B16KBZ

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

SYMBOLS

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

NOTES

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

4TW54792-1C

4 Capacity tables

4 - 1 Cooling Capacity Tables

EUWA*20KBZ

CC EUWAN20KBZ

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

PI EUWAN20KBZ

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

CC EUWAP/B20KBZ

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

PI EUWAP/B20KBZ

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

SYMBOLS

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

NOTES

1. Cooling capacity (CAP)

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

2. Power input (kW)

Power input is total input according to EN14511:2011

4TW54802-1B

4 Capacity tables

4 - 1 Cooling Capacity Tables

4

EUWA*24KBZ

CC EUWAN24KBZ

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

PI EUWAN24KBZ

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

CC EUWAP/B24KBZ

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

PI EUWAP/B24KBZ

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

SYMBOLS

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

NOTES

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

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

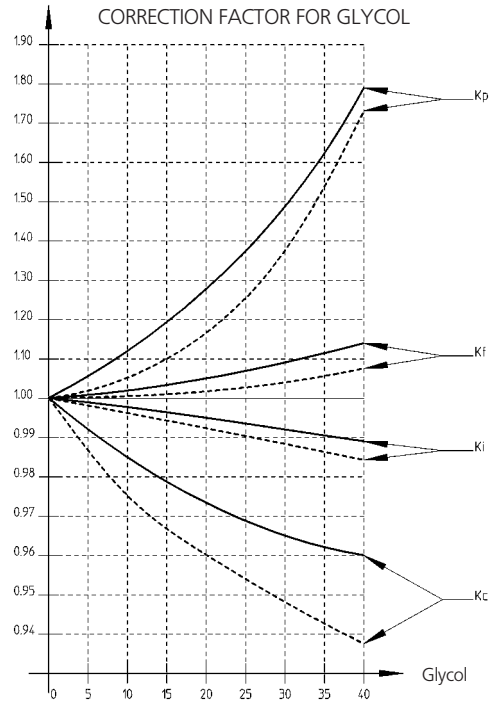
4 Capacity tables

4 - 2 Capacity Correction Factor

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

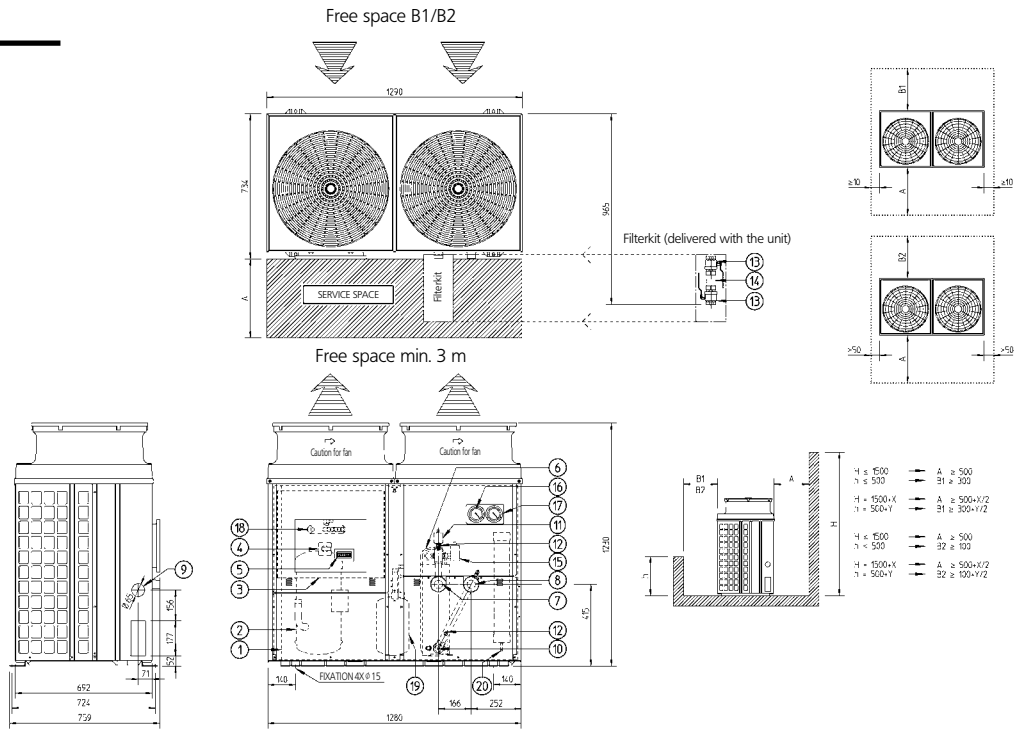
5 Dimensional drawings

5 - 1 Dimensional Drawings

5

EUWAN5-8KBZW1

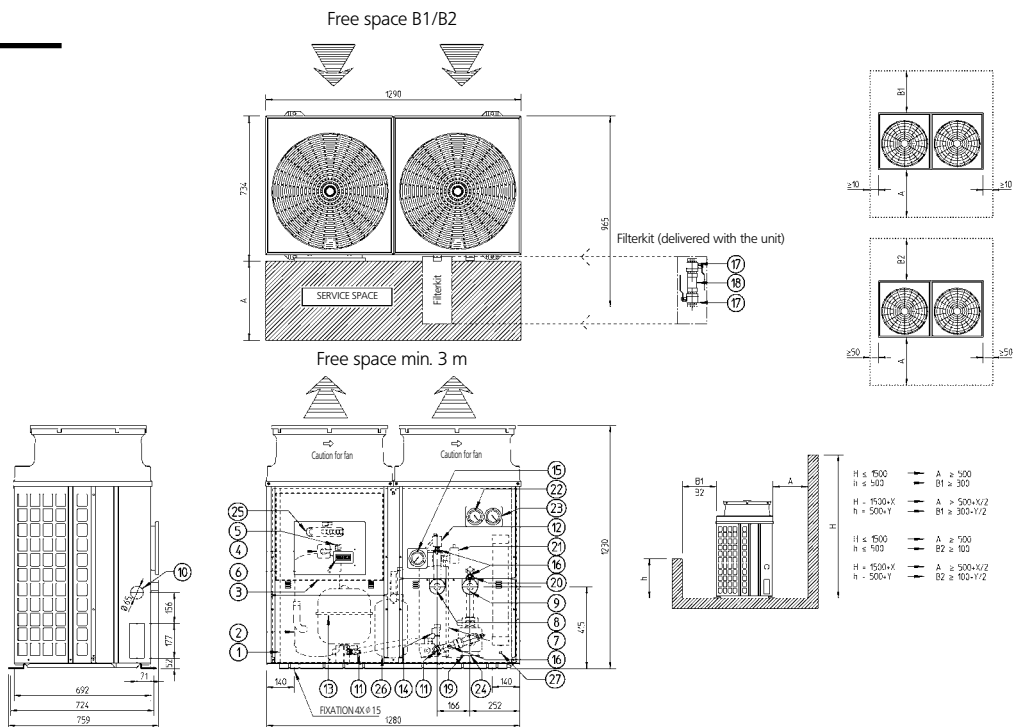
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Digital display controller
 - 6 Water heat exchanger
 - 7 Water IN connection: 1 1/4" M BSP
 - 8 Water OUT connection: 1 1/4" M BSP
 - 9 Power supply intake
 - 10 Drain
 - 11 Air purge
 - 12 Pressure port
 - 13 Ball valve: 1-1/4"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

EUWAP5-8KBZW1

- 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



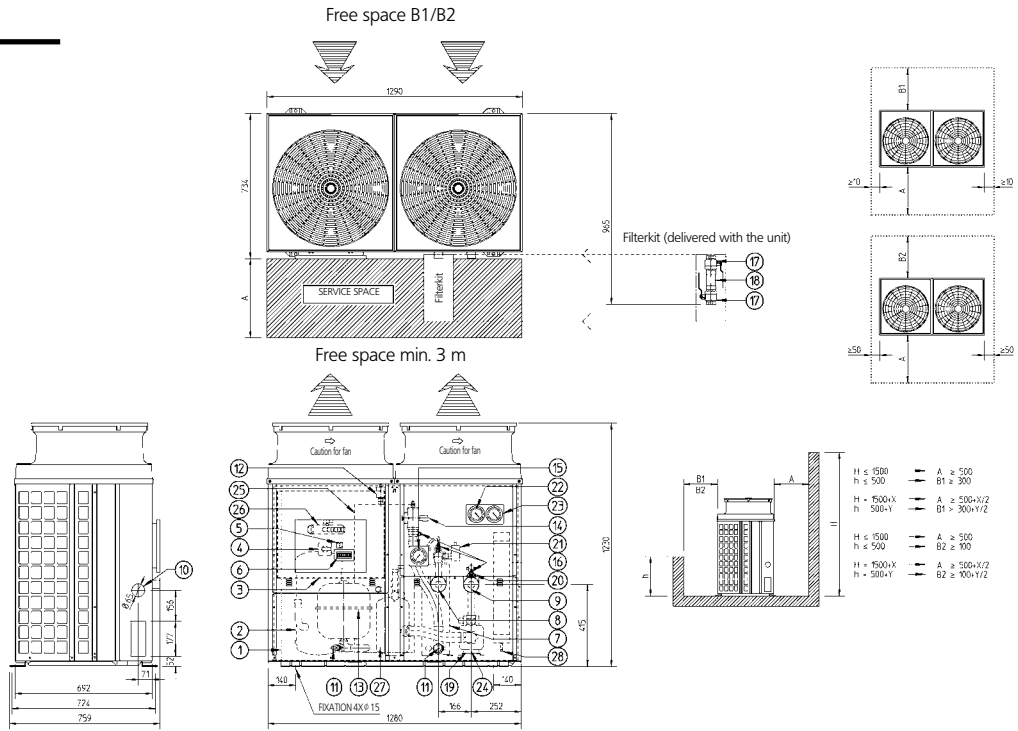
3TW55694-2

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWAB5-8KBZW1

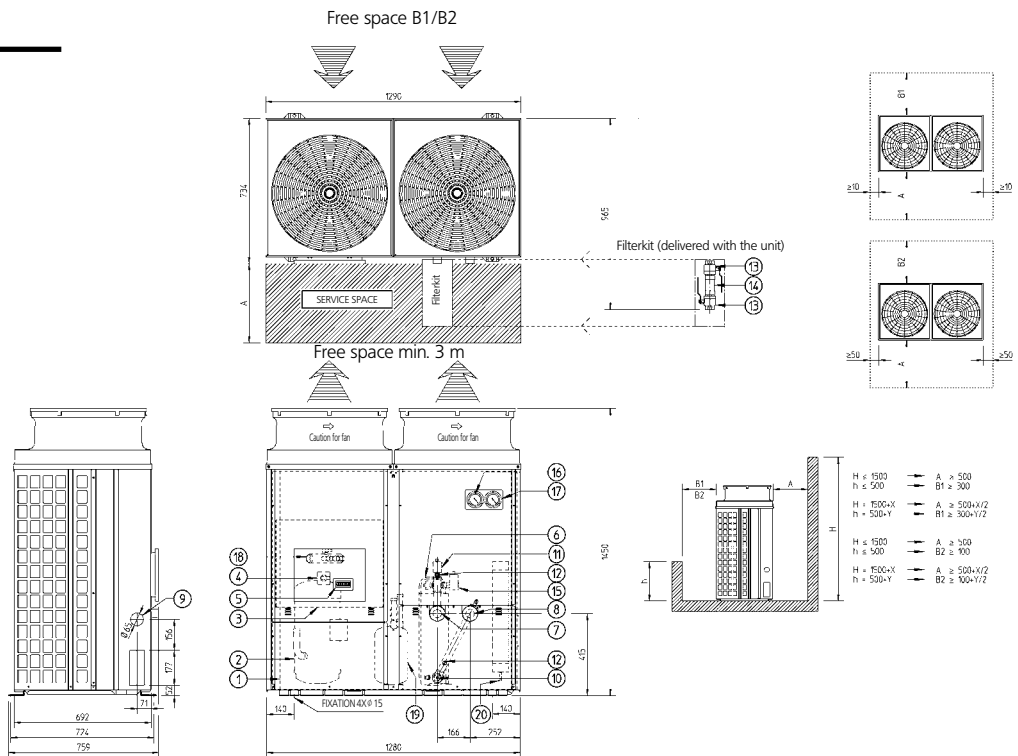
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Pump switch
 - 6 Digital display controller
 - 7 Water heat exchanger
 - 8 Water IN connection: 1 1/4" M BSP
 - 9 Water OUT connection: 1 1/4" M BSP
 - 10 Power supply intake
 - 11 Drain
 - 12 Air purge
 - 13 Expansion vessel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

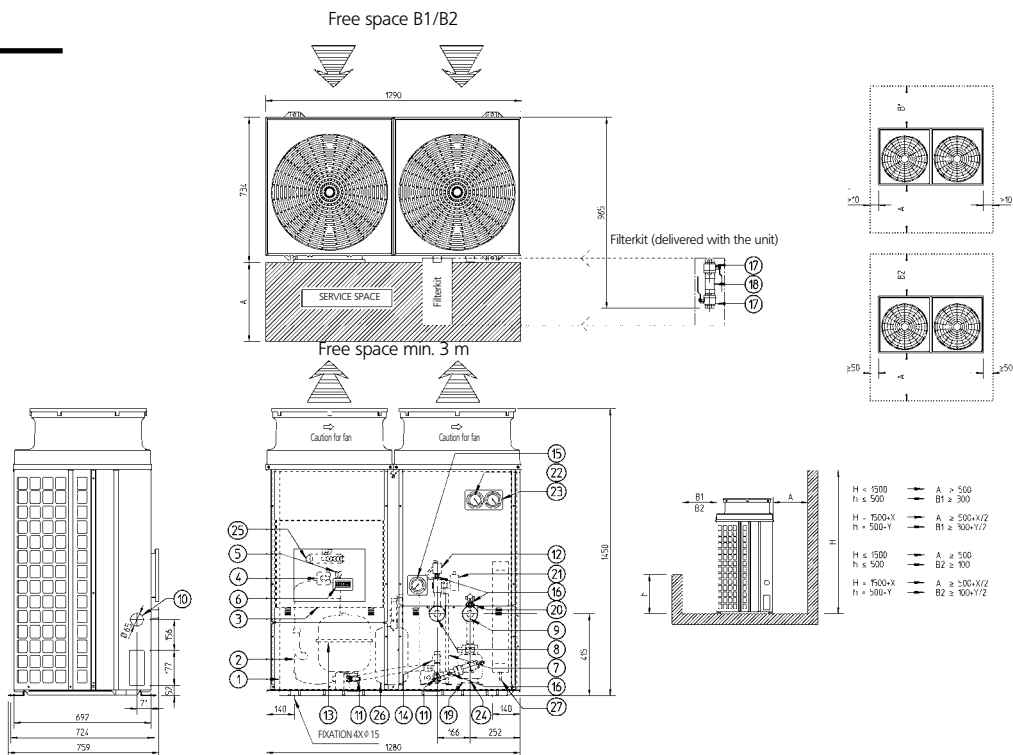
5 Dimensional drawings

5 - 1 Dimensional Drawings

5

EUWAP10-12KBZW1

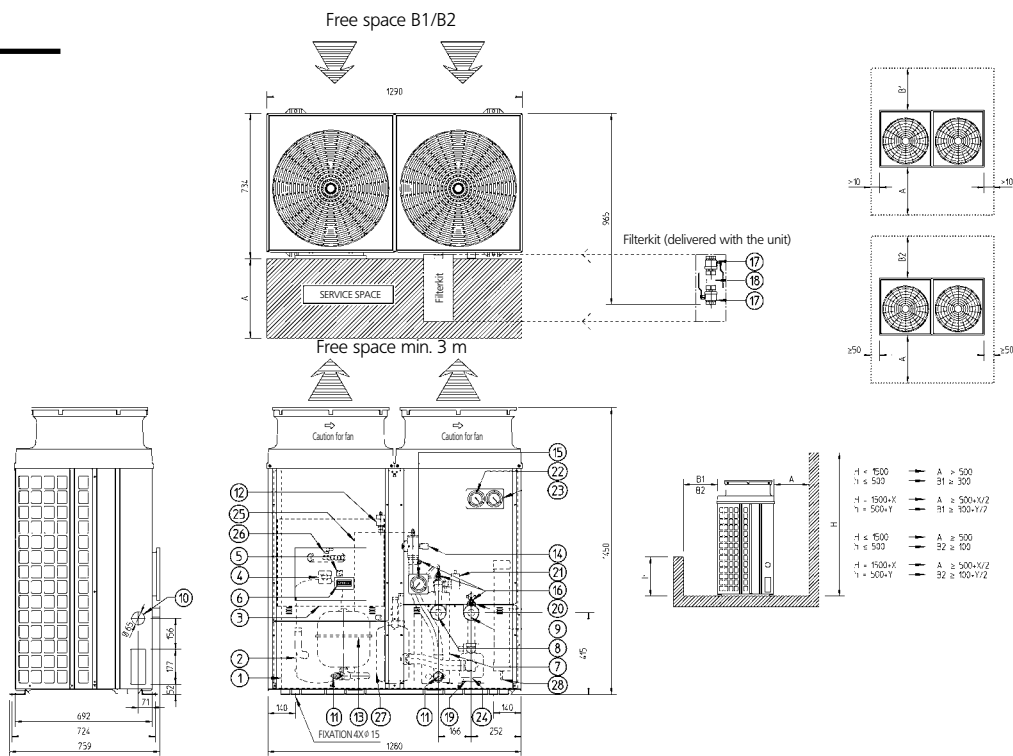
- 1 Air heat exchanger
 - 2 Compressor
 - 3 Switch box
 - 4 Main switch
 - 5 Pump switch
 - 6 Digital display controller
 - 7 Water heat exchanger
 - 8 Water IN connection: 1 1/4" M BSP
 - 9 Water OUT connection: 1 1/4" M BSP
 - 10 Power supply intake
 - 11 Drain
 - 12 Air purge
 - 13 Expansion vessel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



3TW55714-2

EUWAB10-12KBZW1

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



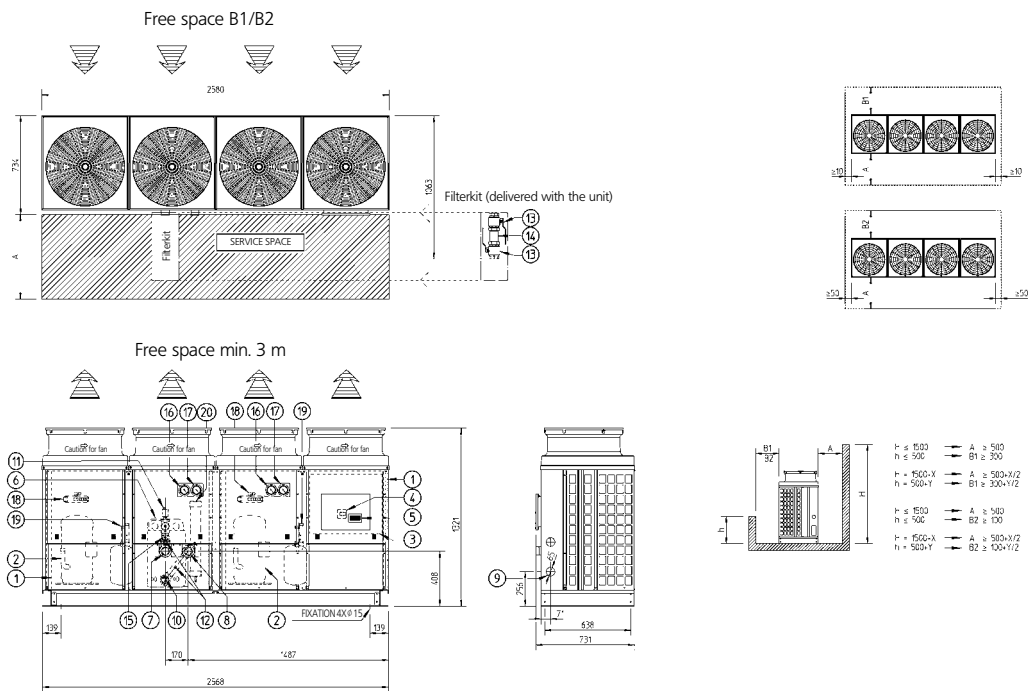
3TW55714-3

5 Dimensional drawings

5 - 1 Dimensional Drawings

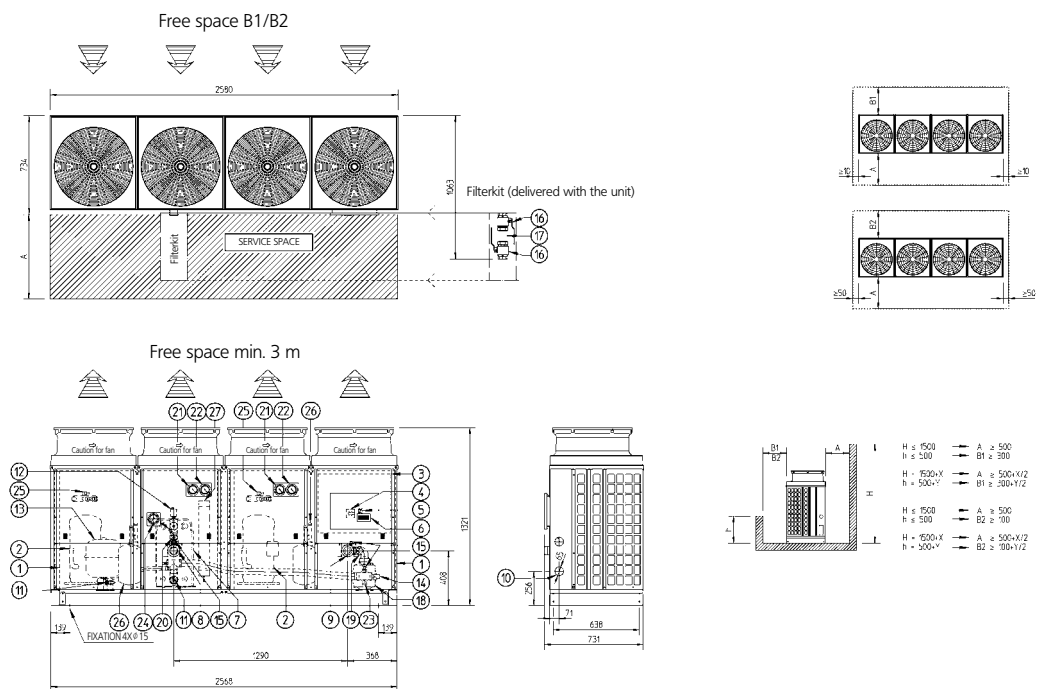
EUWAN16KBZW1

- 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



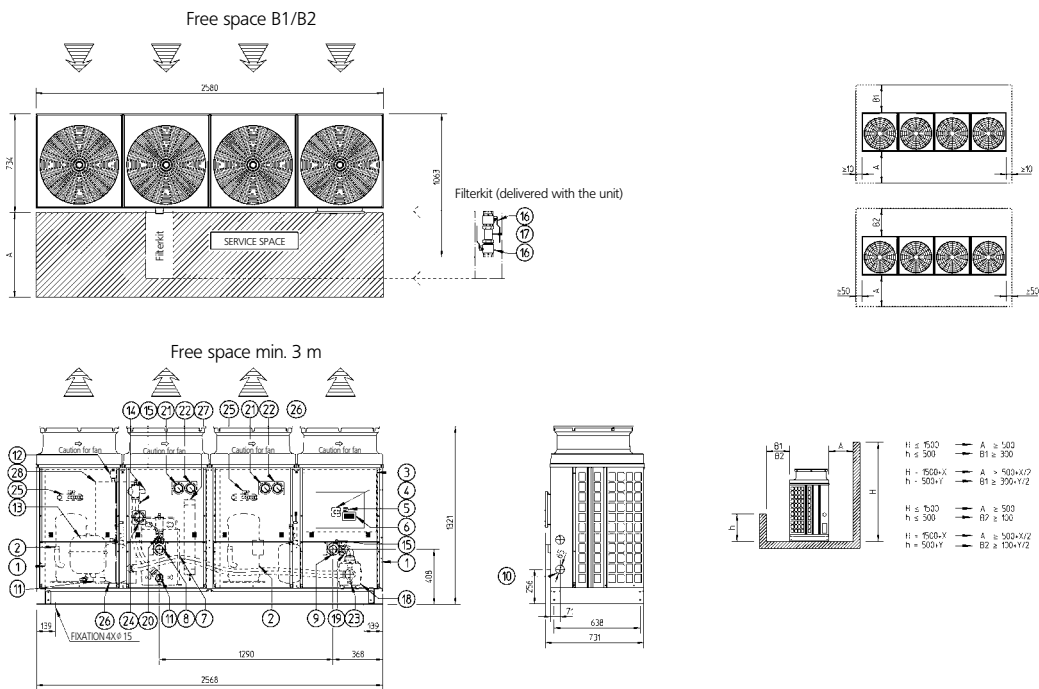
5 Dimensional drawings

5 - 1 Dimensional Drawings

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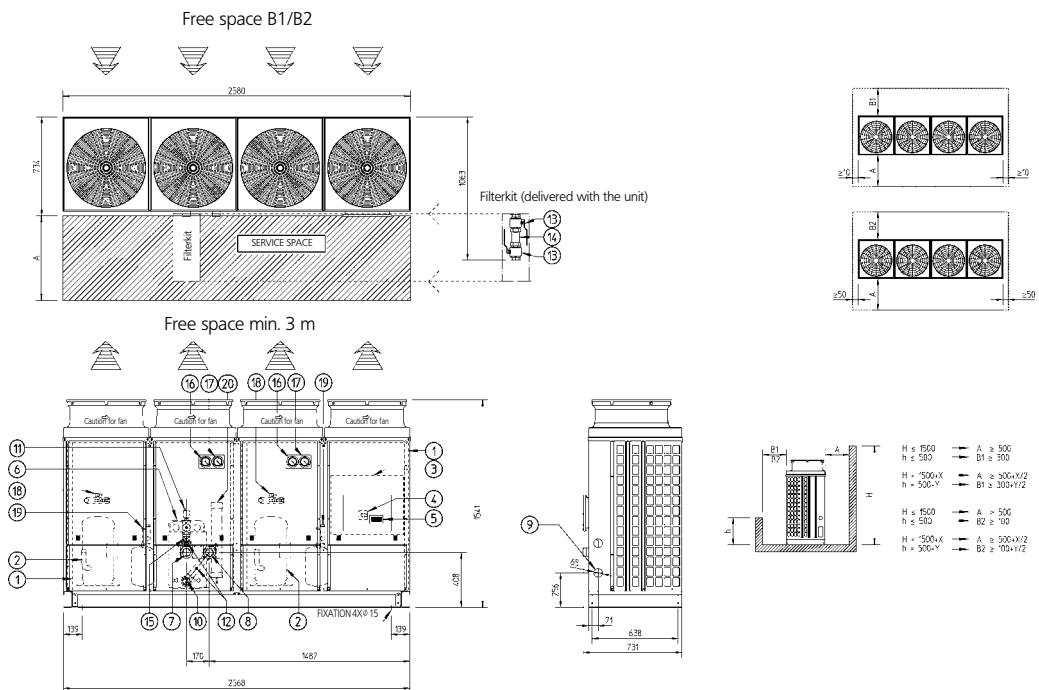
EUWAB16KBZW1

- 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



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

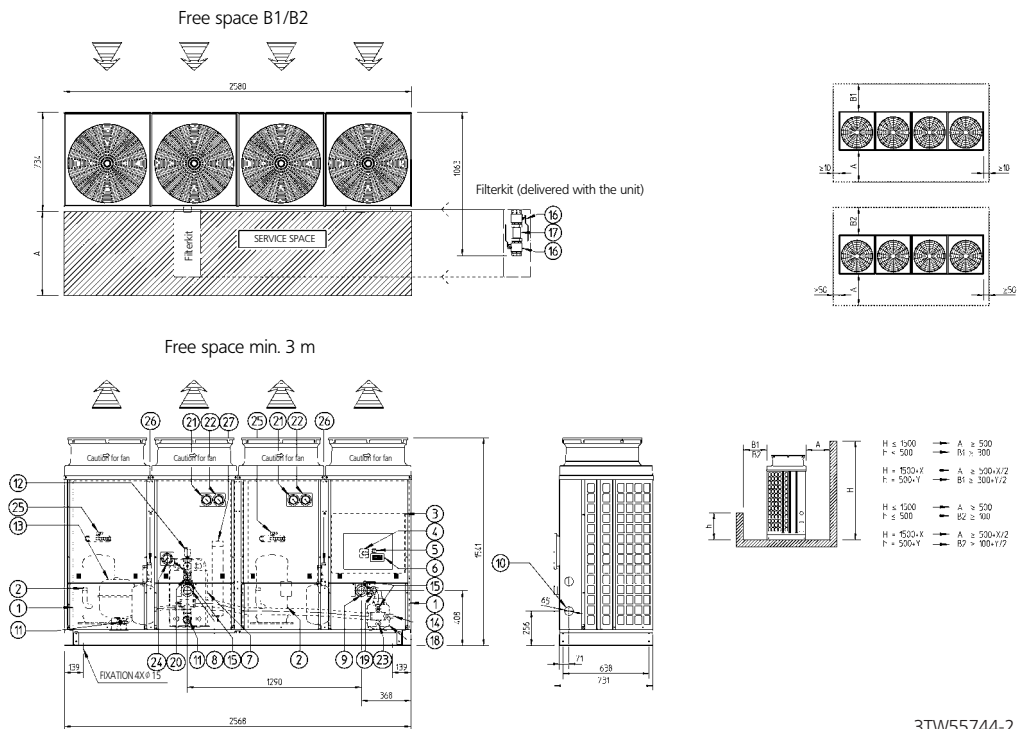


5 Dimensional drawings

5 - 1 Dimensional Drawings

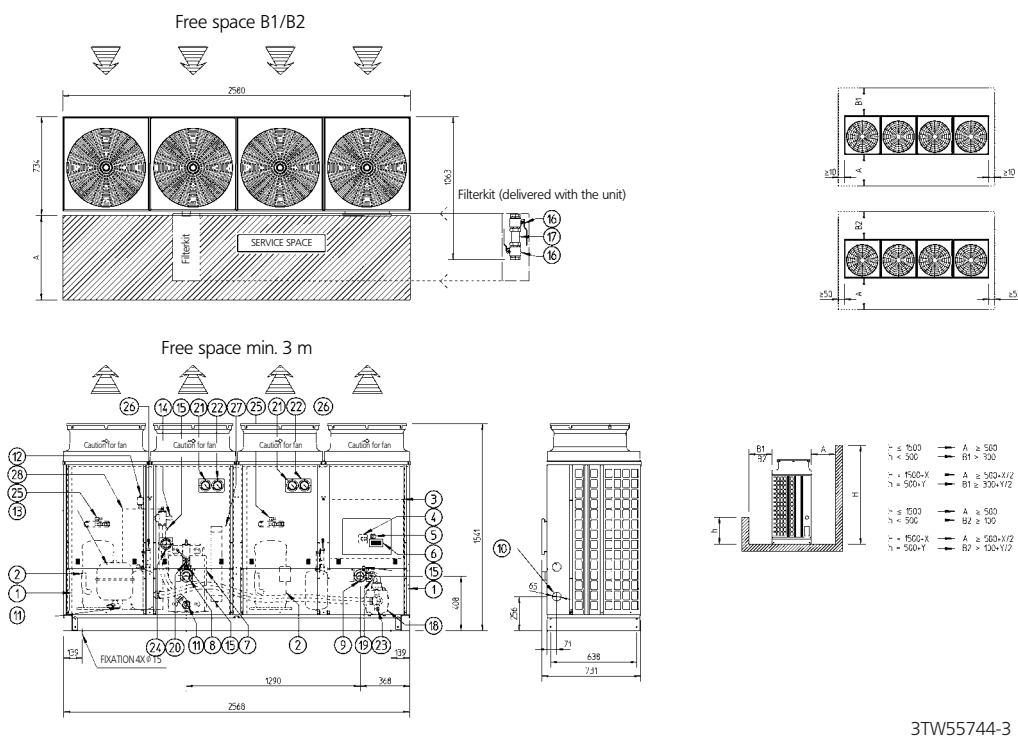
EUWAP20-24KBZW1

- 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



EUWAB20-24KBZW1

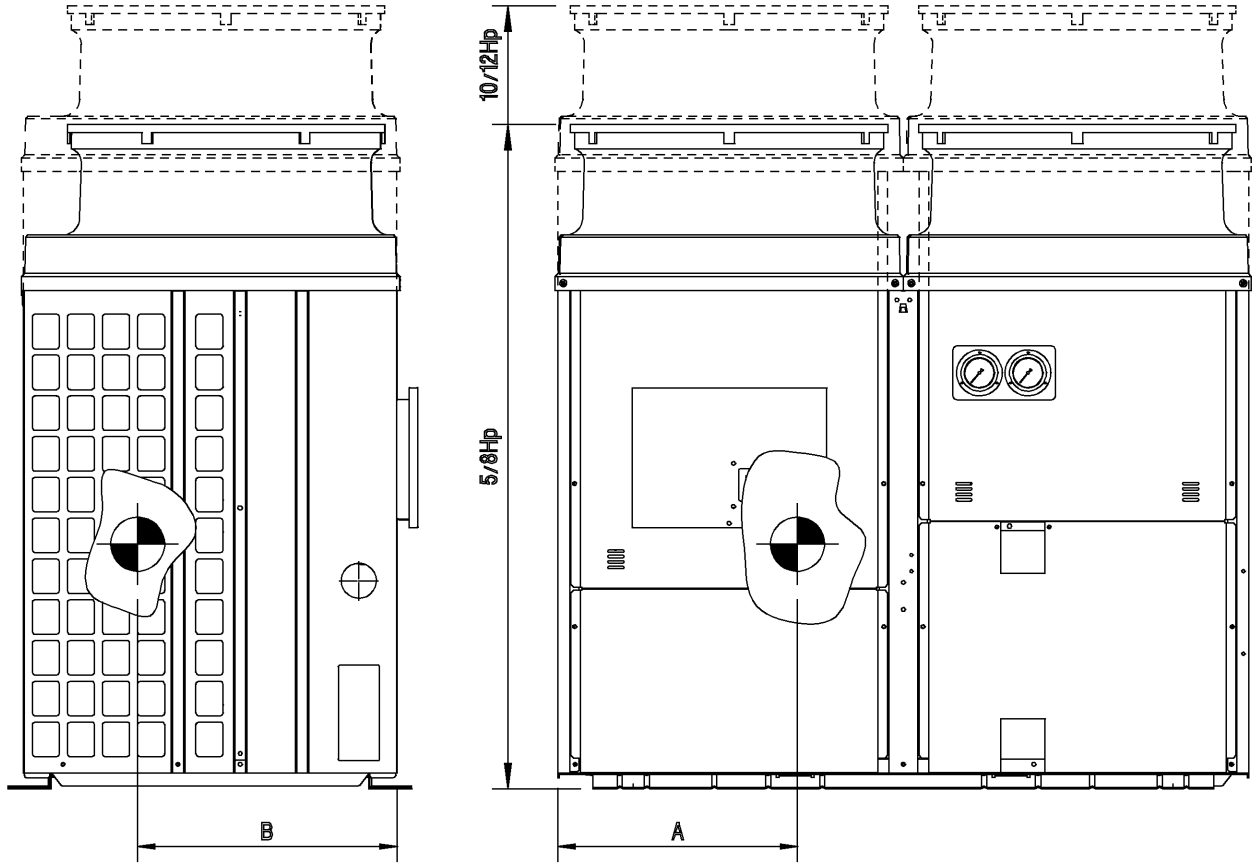
- 1 Air heat exchanger
- 2 Compressor
- 3 Switch box
- 4 Main switch
- 5 Pump switch
- 6 Digital display controller
- 7 Water heat exchanger
- 8 Water IN connection: 2" M BSP
- 9 Water OUT connection: 2" M BSP
- 10 Power supply intake
- 11 Drain
- 12 Air purge
- 13 Expansion vessel
- 14 Safety valve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



6 Centre of gravity

6 - 1 Centre of Gravity

EUWA*5-12KBZW1



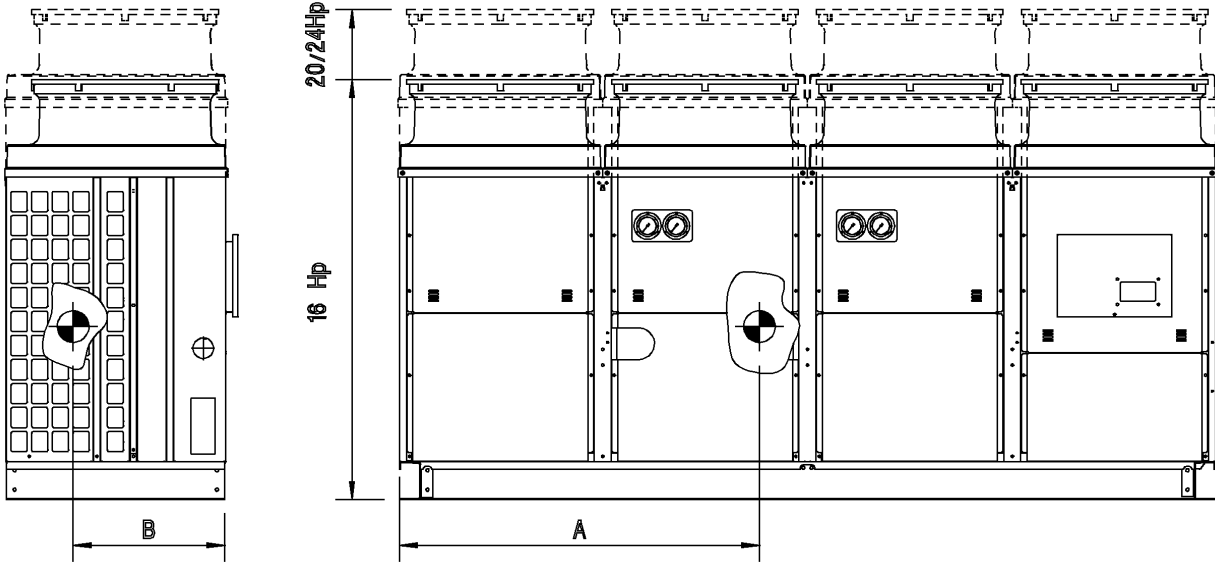
	5Hp		8Hp		10Hp		12Hp	
	A	B	A	B	A	B	A	B
B-Models	520	420	480	420	490	430	490	430
P-Models	510	420	470	420	480	430	490	430
N-Models	480	420	440	430	450	430	460	430

4TW54759-2

6 Centre of gravity

6 - 1 Centre of Gravity

EUWA*16-24KBZW1



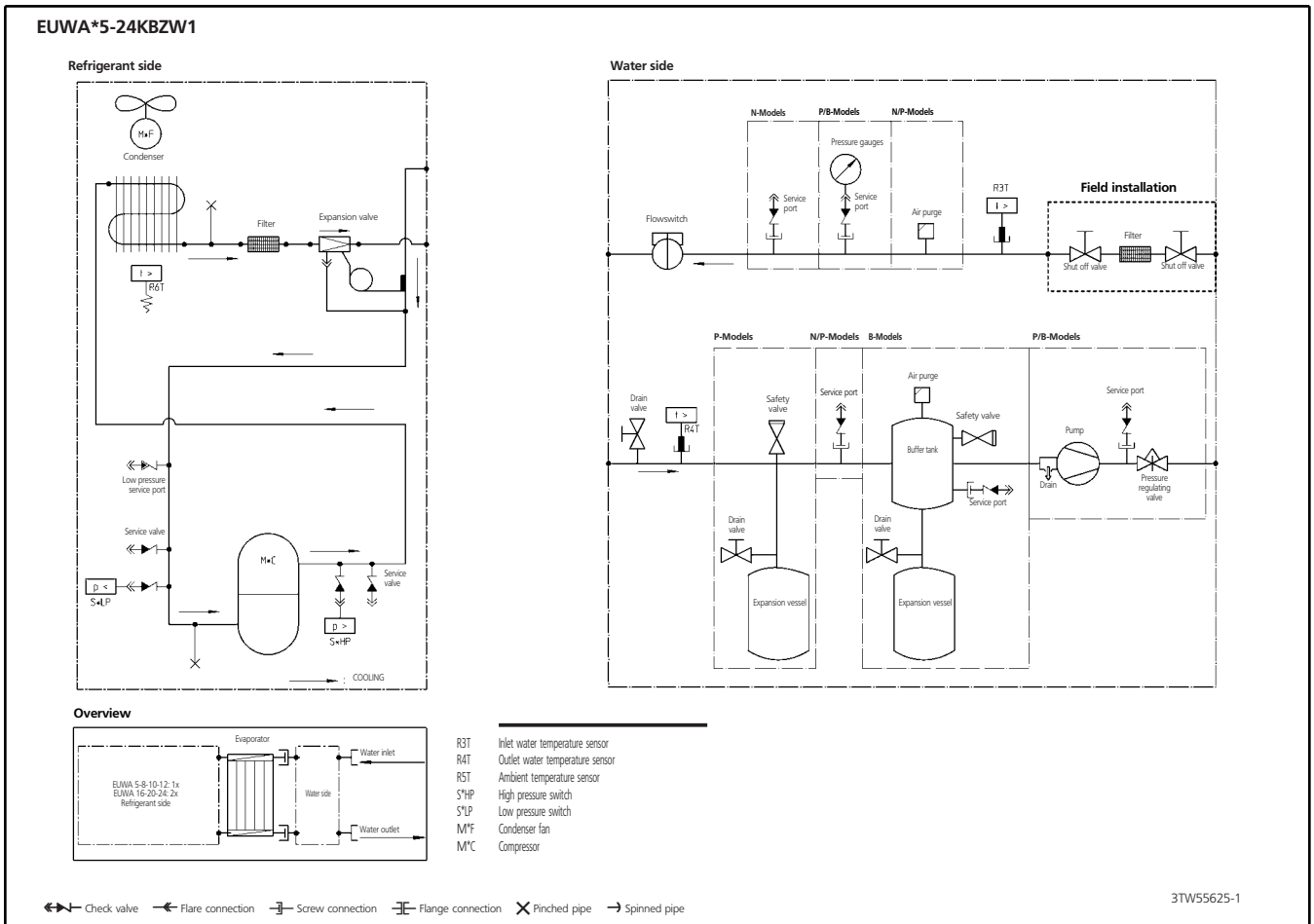
	16Hp		20Hp		24Hp	
	A	B	A	B	A	B
B-Models	1115	435	1120	435	1115	435
P-Models	1145	435	1140	435	1135	435
N-Models	1110	430	1115	435	1110	435

4TW54799-2

7 Piping diagrams

7 - 1 Piping Diagrams

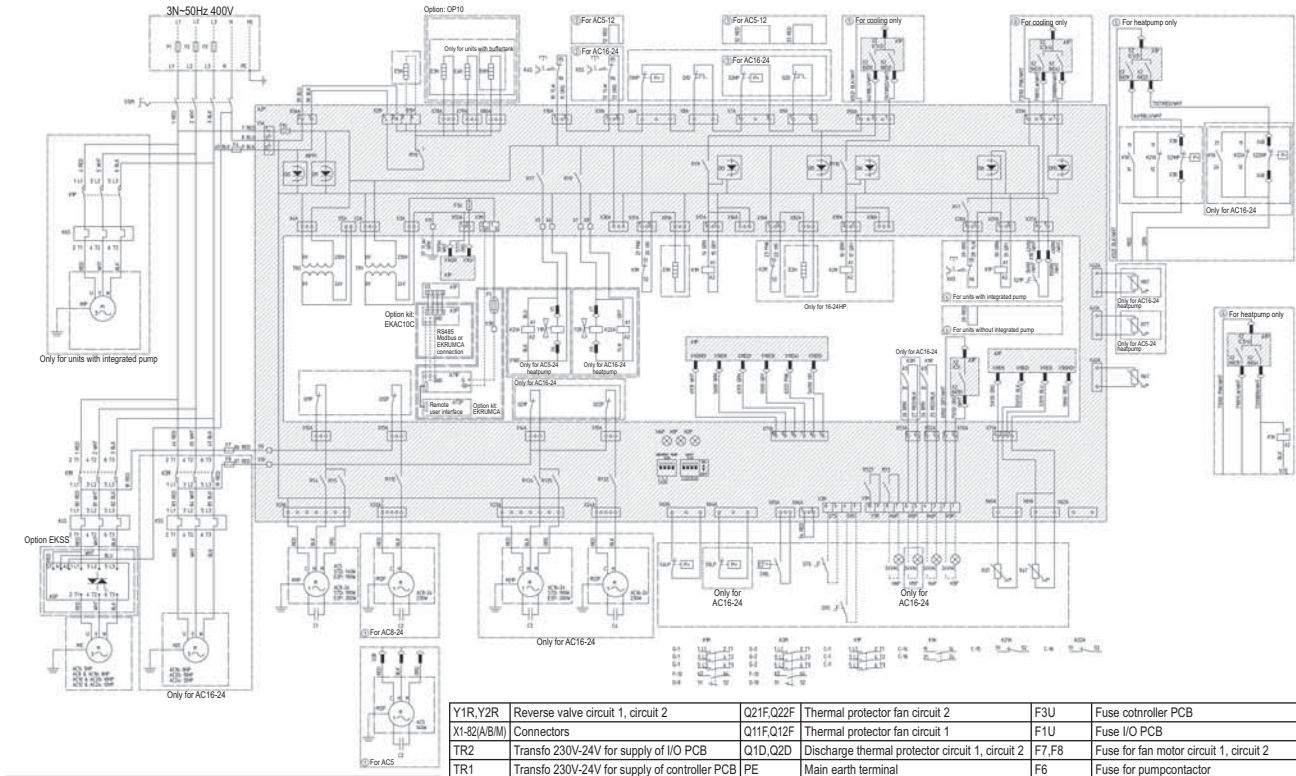
7



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 Cl 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	
D17 --	DIGITAL OUTPUTS (RELAYS)
D18 --	X2 (C1/2-NO1): Compressor M1C on
D19 --	X2 (C1/2-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 (= gLgG)	3x20A	3x25A	3x32A	3x40A	3x50A	3x50A	3x63A

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

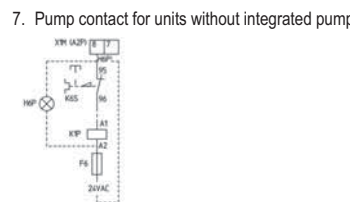
All models (400V)							
Fuses + overcurrent	5HP	8HP	10HP	12HP	16HP	20HP	24HP
F4	8A	8A	8A	8A	8A	8A	8A
F5	250mAT	250mAT	250mAT	250mAT	250mAT	250mAT	250mAT
F7,8	5A	5A	5A	5A	5A	5A	5A
F1U	5A	5A	5A	5A	5A	5A	5A
F3U	315mAT	315mAT	315mAT	315mAT	315mAT	315mAT	315mAT
K4S	9A	14A	17A	24A	14A	17A	24A
K5S	--	--	--	--	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(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 (65l) 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)



9 Sound data

9 - 1 Sound Power Spectrum

9

	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 ²⁻ /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 ₃ ²⁻ /l)	Below 4.0	Below 4.0	Corrosion
- Stability index	—	—	Corrosion + scale

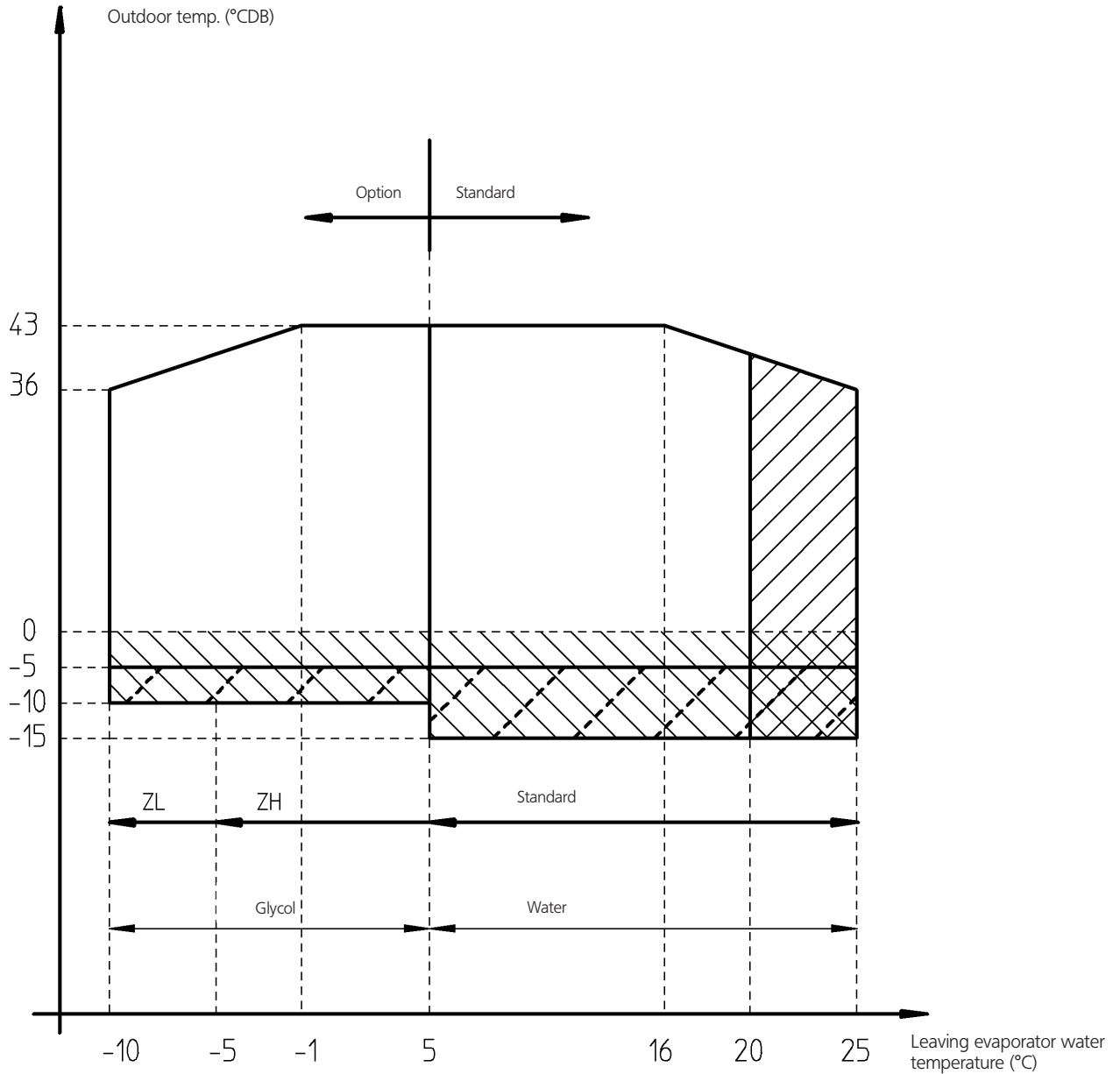
Names, definitions and units are according to JIS K 0101. Units and figures between brackets are old units published as reference only.

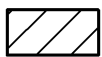

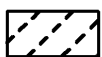
11 Operation range

11 - 1 Operation Range

11

EUWA*5-24KBZW1



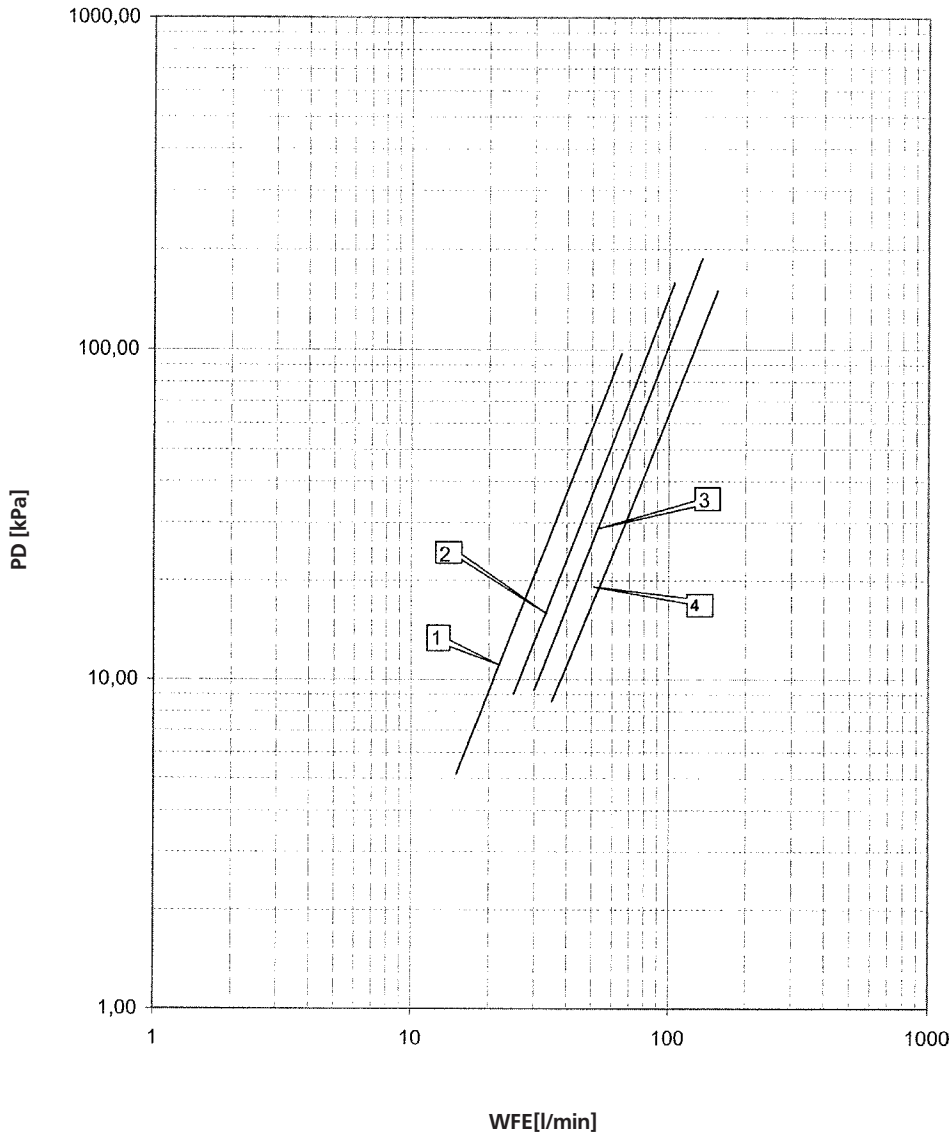
-  Pull down area
-  Protect the water circuit against freezing
-  If the units operate below -5°C and are installed in a rather windy space, a windscreen is required.

4TW54753-1

12 Hydraulic performance

12 - 1 Water Pressure Drop Curve Evaporator

EUWA*5-12KBZW1



PD: Pressure drop through evaporator

WFE: Evaporator waterflow rate

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

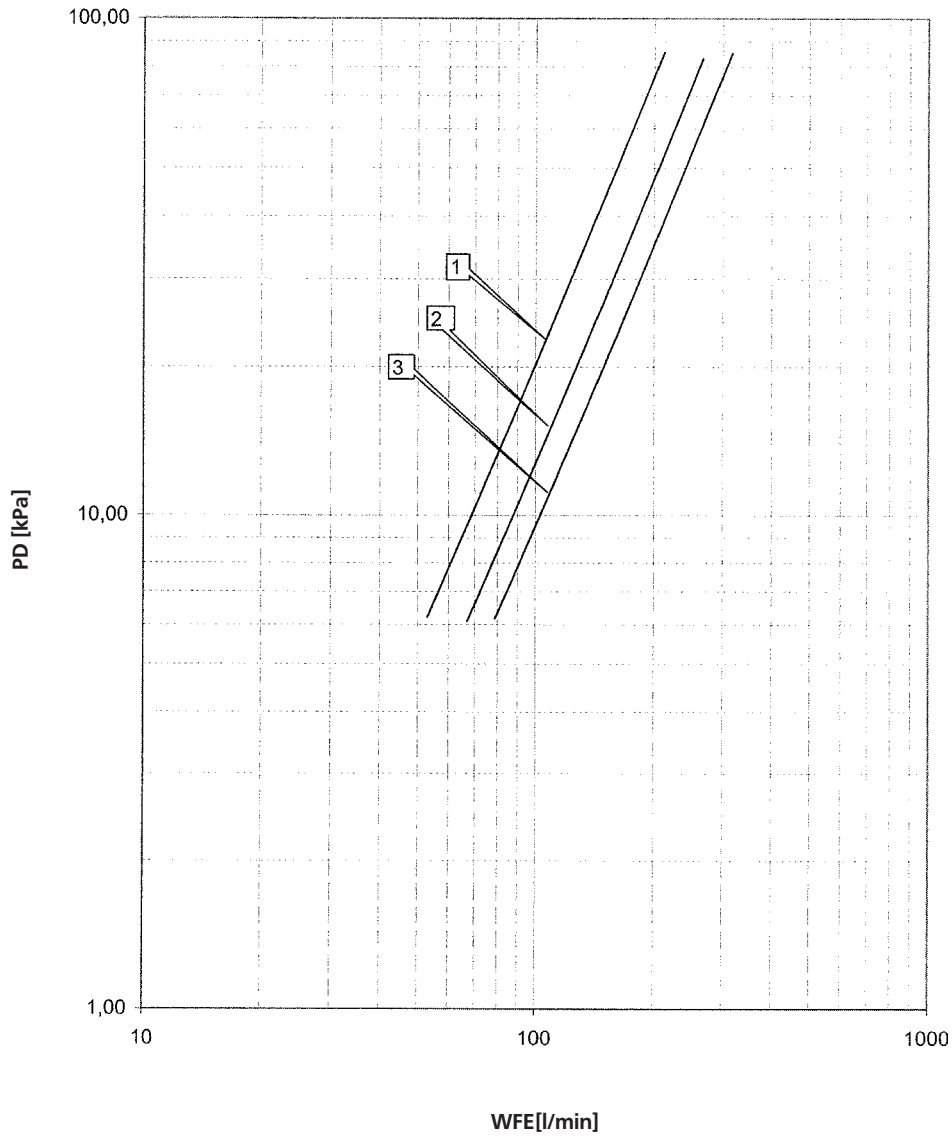
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW54759-1A

12 Hydraulic performance

12 - 1 Water Pressure Drop Curve Evaporator

EUWA*16-24KBZW1



PD: Pressure drop through evaporator
 WFE: Evaporator waterflow rate
 ① EUWA(*)16K(B)ZW1
 ② EUWA(*)20K(B)ZW1
 ③ EUWA(*)24K(B)ZW1

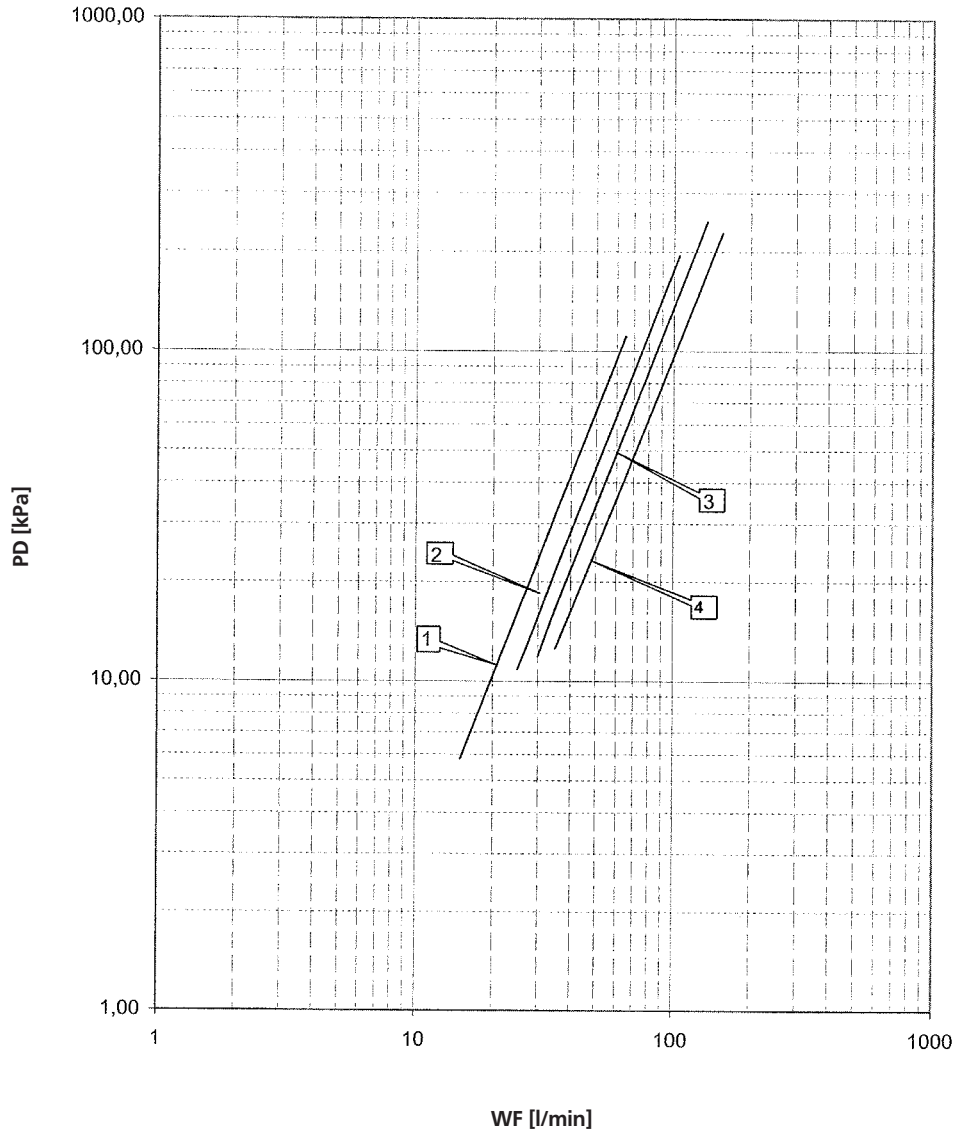
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW54799-1B

12 Hydraulic performance

12 - 2 Water Pressure Drop Curve Evaporator/Condenser

EUWAN5-12KBZW1



PD: Pressure drop through the unit

WF: Waterflow rate

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

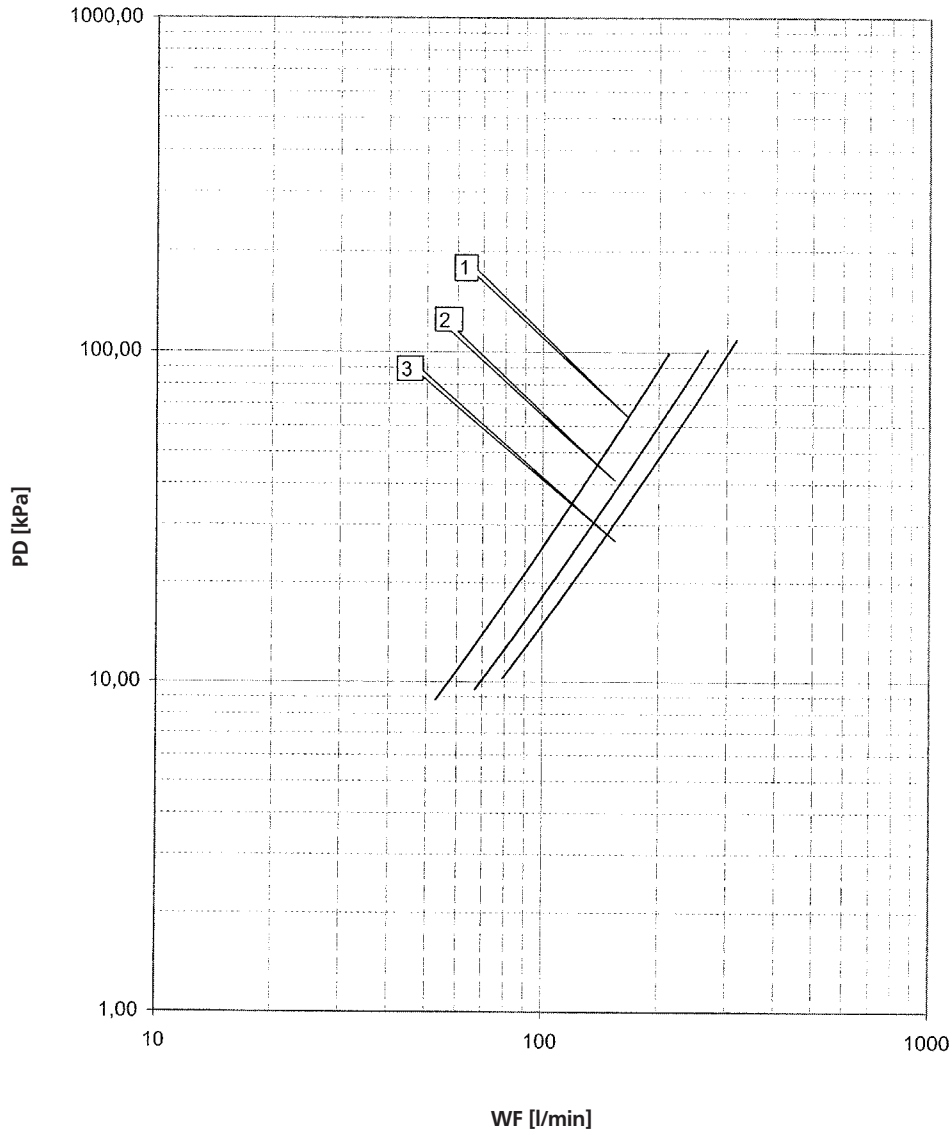
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW55629-6

12 Hydraulic performance

12 - 2 Water Pressure Drop Curve Evaporator/Condenser

EUWAN16-24KBZW1



PD: Pressure drop through the unit
 WF: Waterflow rate
 ① EUWAN16KBZW1
 ② EUWAN20KBZW1
 ③ EUWAN24KBZW1

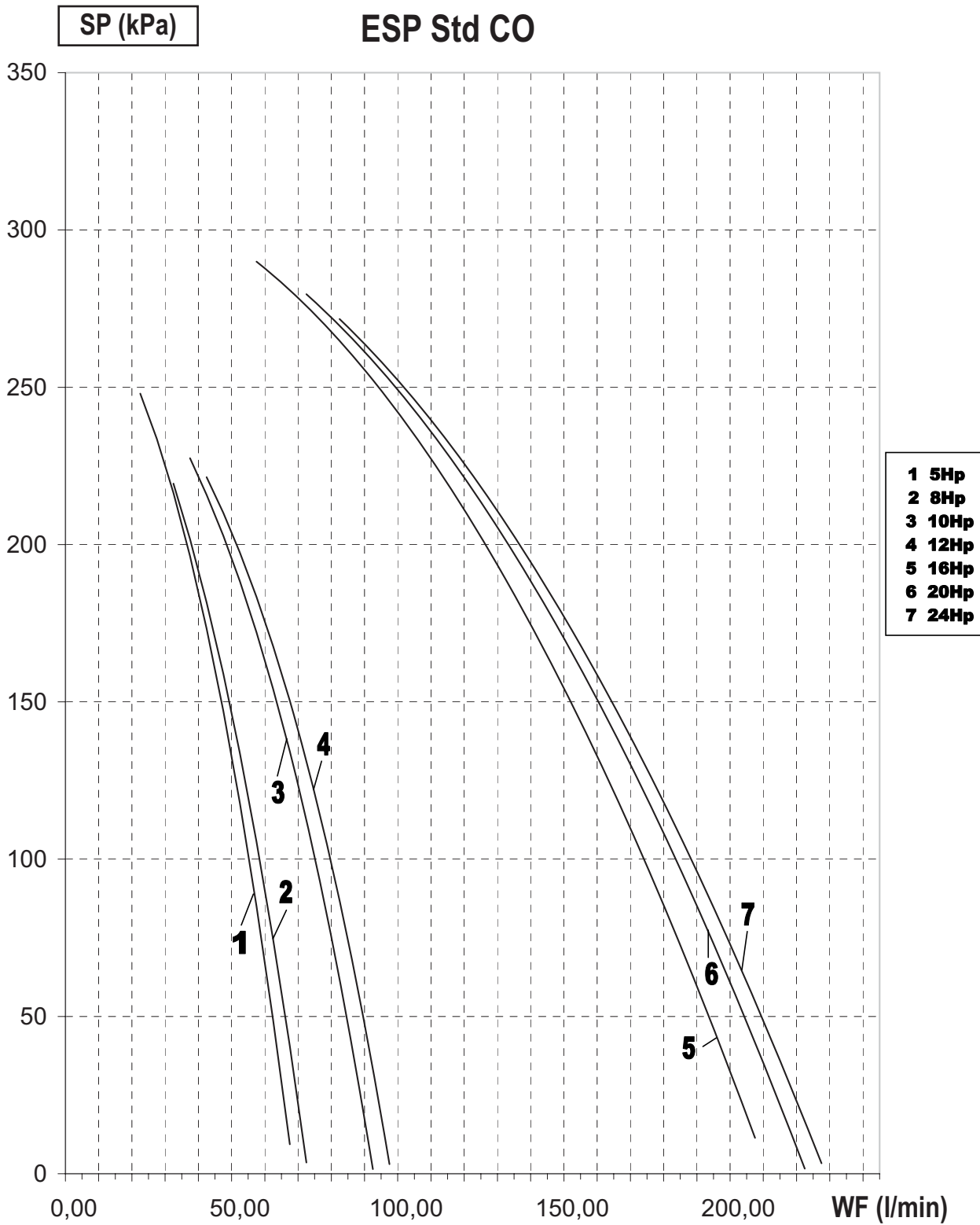
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW55669-6

12 Hydraulic performance

12 - 3 Static Pressure Drop Unit

EUWA5-24KBZW1



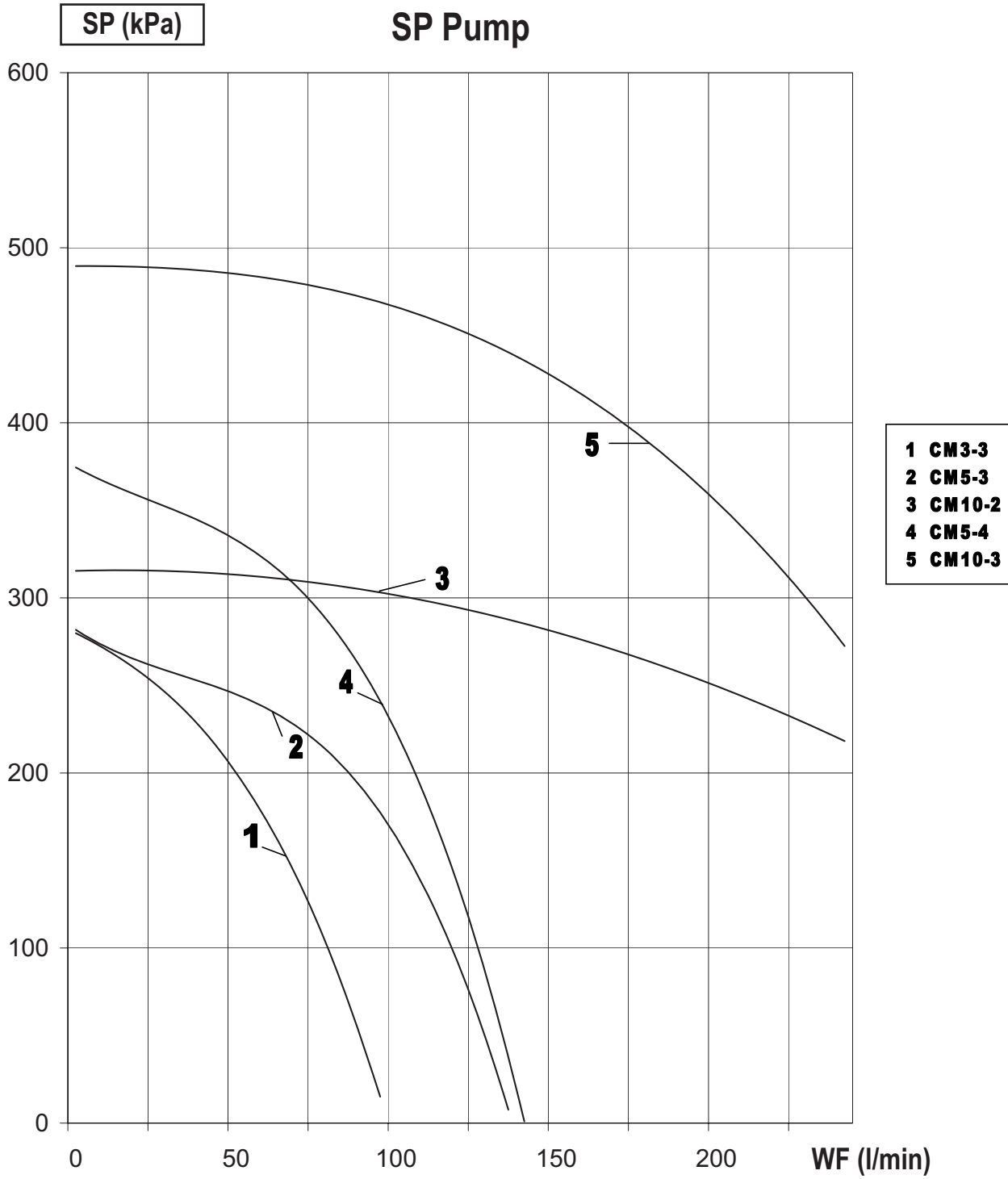
4TW60009-4

12 Hydraulic performance

12 - 4 Pump Characteristics

EUWA5-24KBZW1
EUWY5-24KBZW1

12



4TW60009-3



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