DAIKIN

Chillers

Technical Data

Air Cooled Chiller

ECDEN10-403A

EUWA*-KBZW1
EUWY*-KBZW1

R-407C

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Air Cooled Chiller

ECDEN10-403A

EUWA*-KBZW1
EUWY*-KBZW1

R-407C

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EUWA-KBZW1

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					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			m²	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.	m³/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.		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					
Refrigerant circuit	Charge			kg	3.9			4.6		

2 Specifications

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	
	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)			85 (4)		
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)			26.5 (1)		
Capacity steps				%	0-100					
Power input	Cooling	Nom.		kW	8.64 (2)			11.50 (2)		
EER					2.60			2.30		
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				Brazed 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			m²	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.	m³/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	78					
Compressor	Type				Hermetically sealed scroll compressor					
	Quantity				1					
	Model				JT265DA-YE			JT335DA-YE		
	Speed			rpm	2,900					
	Oil	Charged volume		l	2.7					
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)			126 (4)	126 (4)	
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		-	12	
		Pre pressure		bar	-	1.5		-	1.5	
	Water filter	Material			Brass					

2 Specifications

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		
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				Brazed 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			m²	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.	m³/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		

2 Specifications

2-1 Technical Specifications					EUWAN16KBZW1	EUWAP16KBZW1	EUWAB16KBZW1	EUWAN20KBZW1	EUWAP20KBZW1	EUWAB20KBZW1
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	6 (3)	9 (3)	65 (3)	6 (3)	10 (3)	66 (3)
	Minimum water volume in the system			l	88 (4)			111 (4)		
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		

2 Specifications

2-1 Technical Specifications					EUWAN24KBZW1	EUWAP24KBZW1	EUWAB24KBZW1
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			m²	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.	m³/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	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)		132 (4)
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	12
		Pre pressure		bar	-	1.5	1.5
	Water filter	Material			Brass		
Notes					(1)Condition: Ta 35ºC - LWE 7ºC (DT = 5ºC)		
					(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		

2 Specifications

2-2 Electrical Specifications				EUWAN5KBZW1	EUWAP5KBZW1	EUWAB5KBZW1	EUWAN8KBZW1	EUWAP8KBZW1	EUWAB8KBZW1
Pump	Type			-	Horizontal multi-stage end-suction		-	Horizontal multi-stage end-suction	
	Phase				3~			3~	
	Voltage		V	-	400		-	400	
	Maximum running current		A	-	1.3		-	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				EUWAN10KBZW1	EUWAP10KBZW1	EUWAB10KBZW1	EUWAN12KBZW1	EUWAP12KBZW1	EUWAB12KBZW1
Pump	Type			-	Horizontal multi-stage end-suction		-	Horizontal multi-stage end-suction	
	Phase				3~			3~	
	Voltage		V	-	400		-	400	
	Maximum running current		A	-	1.3		-	1.3	
Compressor	Phase			3~					
	Voltage		V	400					
	Starting current		A	110.0			136.0	136.0	
	Nominal running current (RLA)		A	13.0			17.6	17.6	
	Maximum running current		A	17.0			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	113	114		139	140	
	Current	Zmax	Text	0.22			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		-	Horizontal multi-stage end-suction	
	Phase			3~			3~	
	Voltage	V	-	400		-	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					
	Voltage range 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 Specifications

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	2
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		
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 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 35ºC - LWE 7ºC (DT = 5ºC)		
				(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		

3 Options

3 - 1 Options

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	
	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 } See notes 5 & 6	Address card for connection to BMS or Remote user interface			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	Kit
EKRUMCA } See notes 5 & 6	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

1. ● x = not available yet
   ● = available
   – = not available
   ●-<number> = available and a quantity <number> is necessary / unit
2. Impossible option combination : ZH + ZL
3. (*) = N or P or B
4. (on) = option number
   - 1st digit (on) = sum of 1st digit decimal code and this sommation transferred to a 36 character system
   - 2/3rd digit (on) = sum of 2/3rd digit decimal code and this sommation transferred to a 36 character system
5. To install EKRUMCA => EKAC10C needs to be installed on the unit.
6. 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

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*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

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*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 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*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

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*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

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.

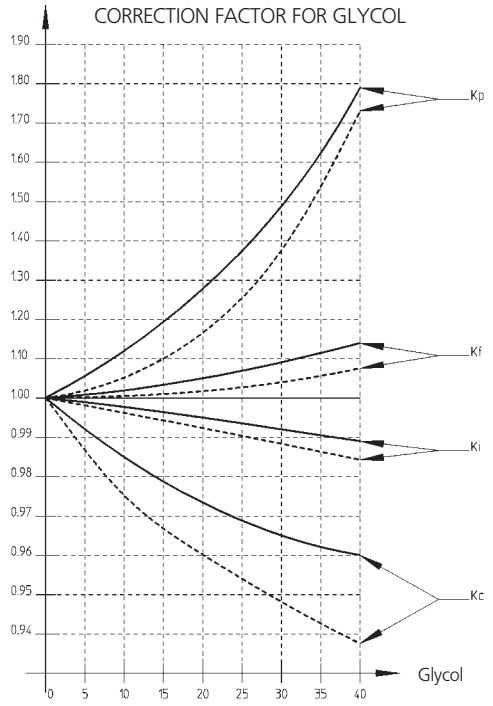
4 Capacity tables

4 - 2 Capacity Correction Factor

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

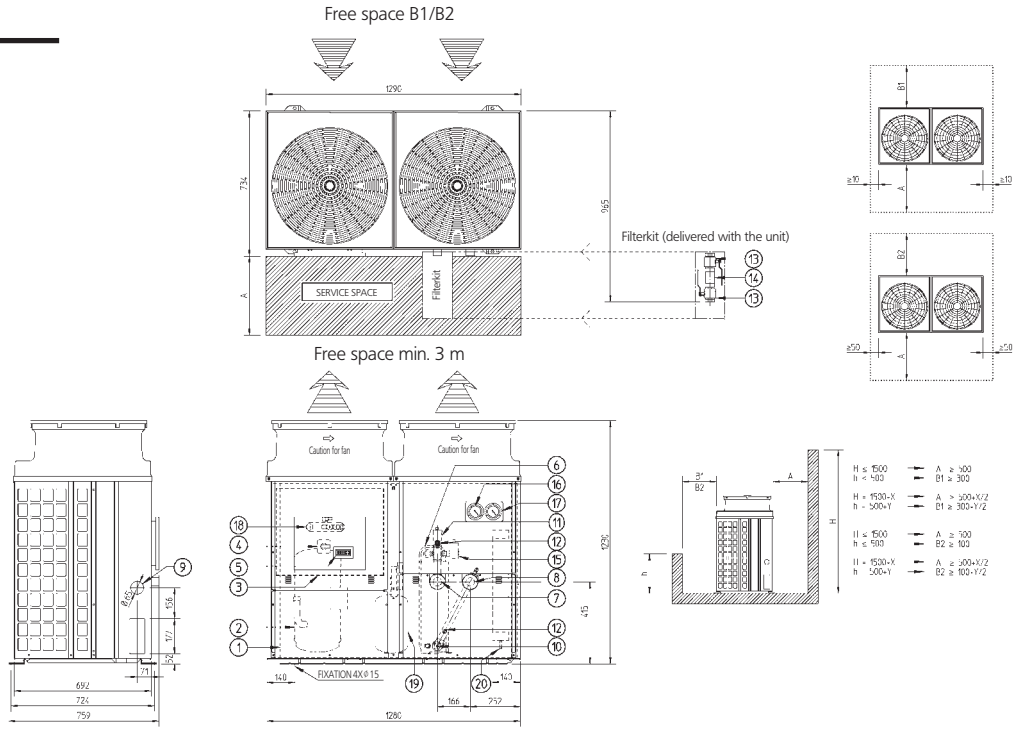
4TW54179-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWAN5-8KBZW1

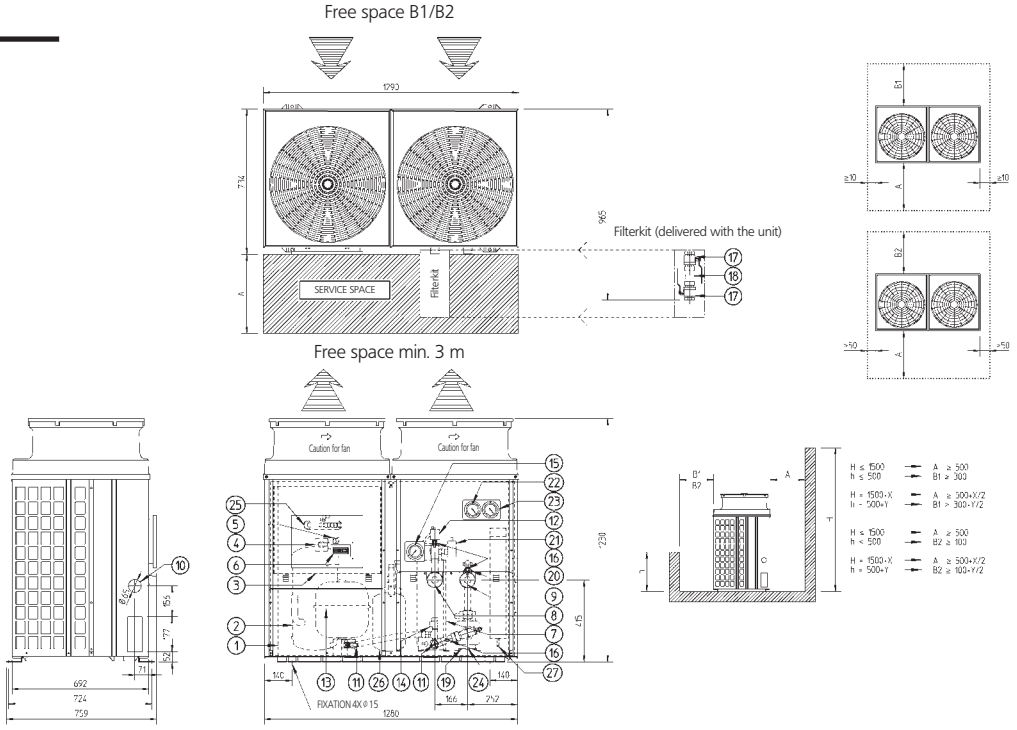
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Digital display controller
6 Water heat exchanger
7 Water IN connection: 1 1/4" M BSP
8 Water OUT connection: 1 1/4" M BSP
9 Power supply intake
10 Drain
11 Air purge
12 Pressure port
13 Ball valve: 1-1/4" BSP
14 Water filter: 1-1/4" BSP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



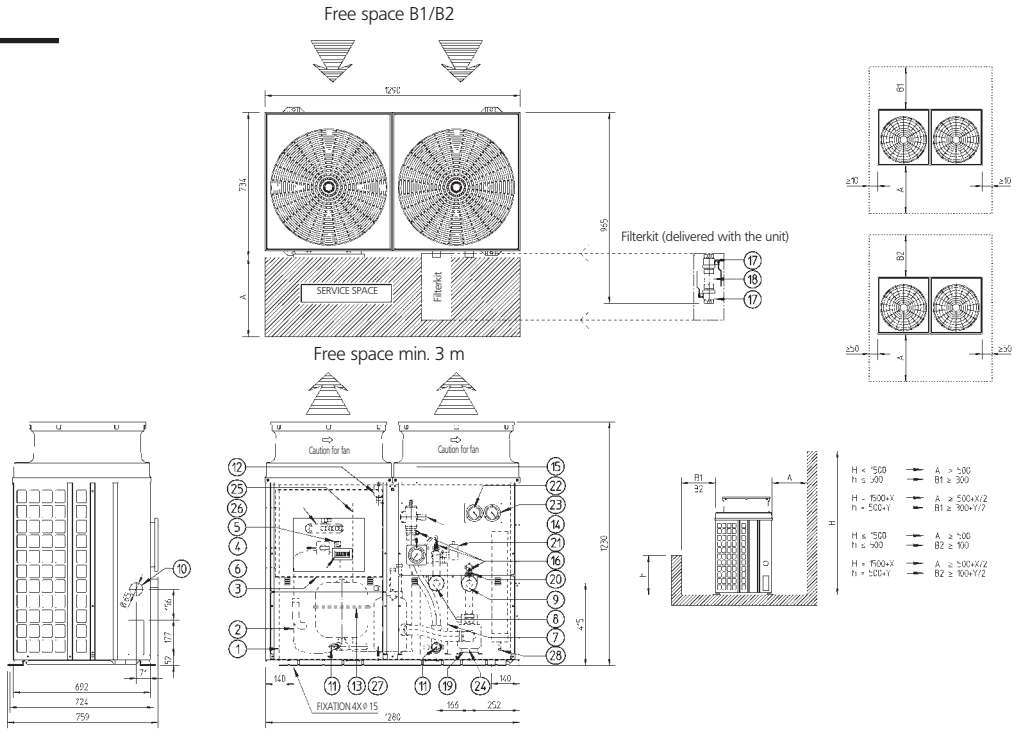
3TW55694-2

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWAB5-8KBZW1

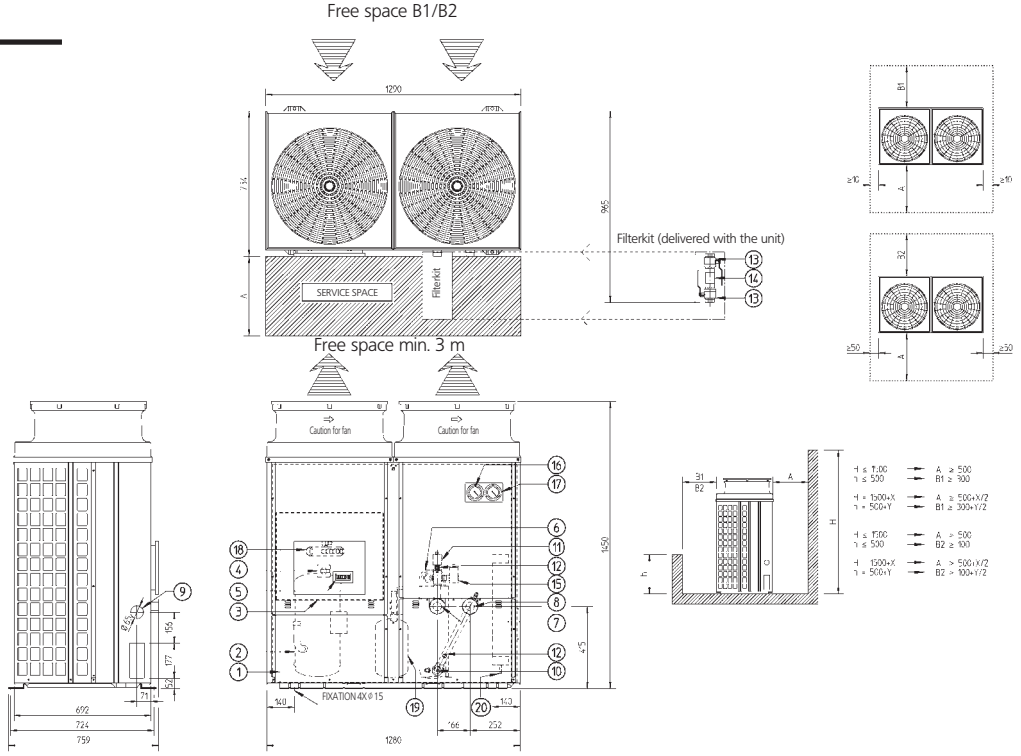
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Pump switch
6 Digital display controller
7 Water heat exchanger
8 Water IN connection: 1 1/4" M BSP
9 Water OUT connection: 1 1/4" M BSP
10 Power supply intake
11 Drain
12 Air purge
13 Expansion vessel
14 Safety valve
15 Manometer (water)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



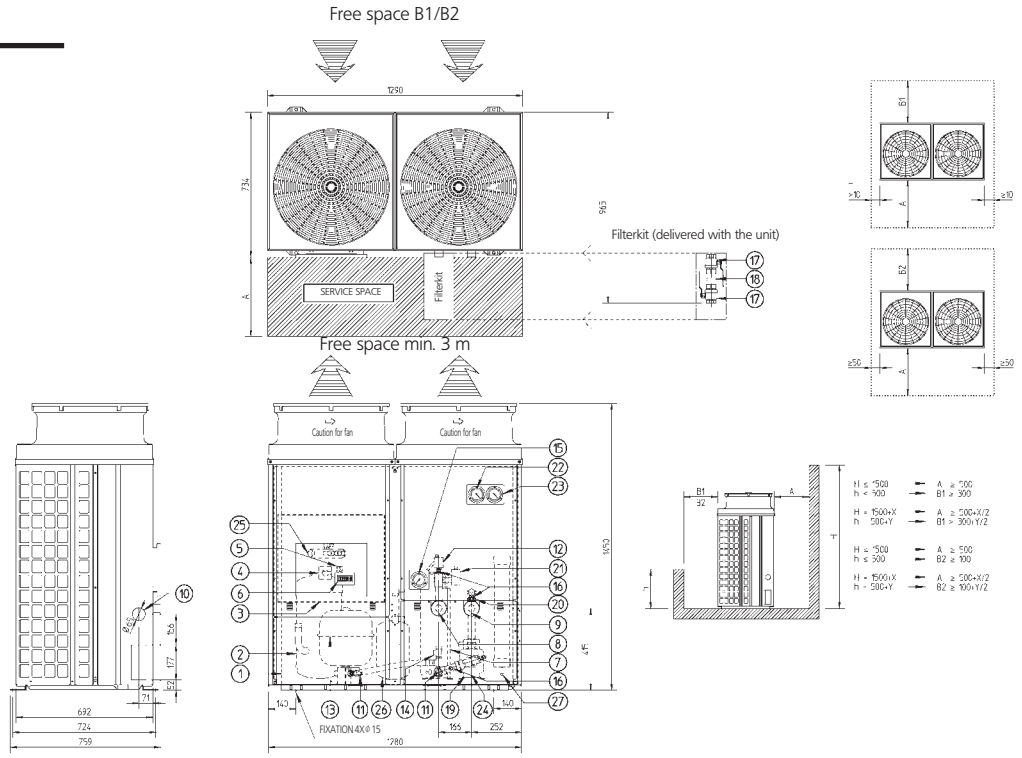
3TW55714-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWAP10-12KBZW1

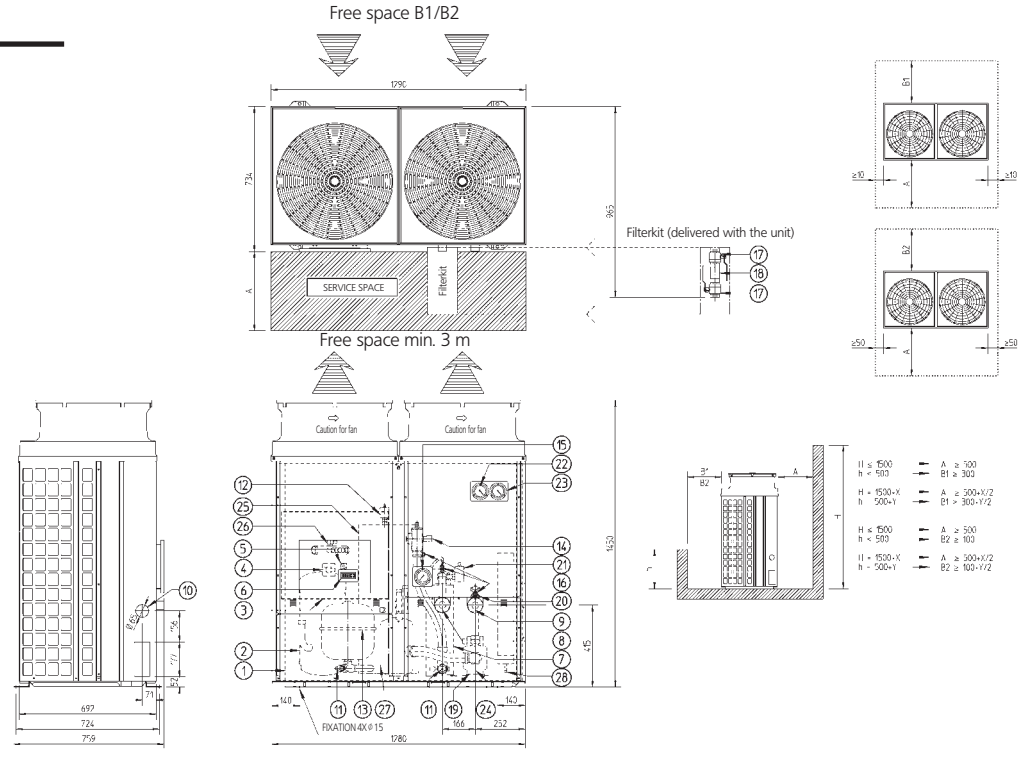
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Pump switch
6 Digital display controller
7 Water heat exchanger
8 Water IN connection: 1 1/4" M BSP
9 Water OUT connection: 1 1/4" M BSP
10 Power supply intake
11 Drain
12 Air purge
13 Expansion vessel
14 Safety valve
15 Manometer (water)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



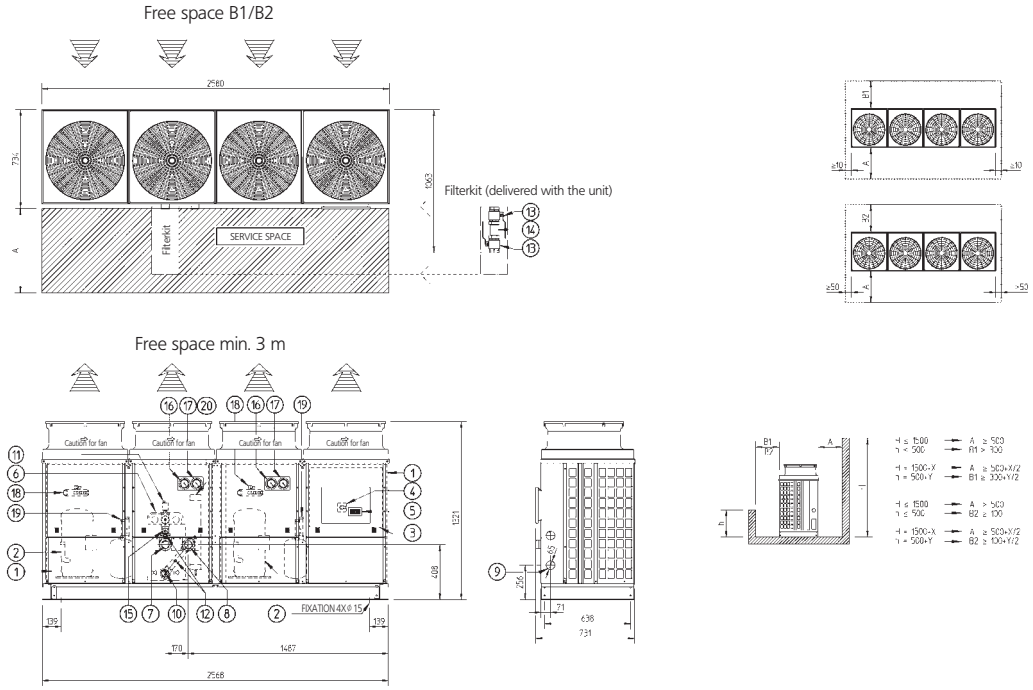
3TW55714-3

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWAN16KBZW1

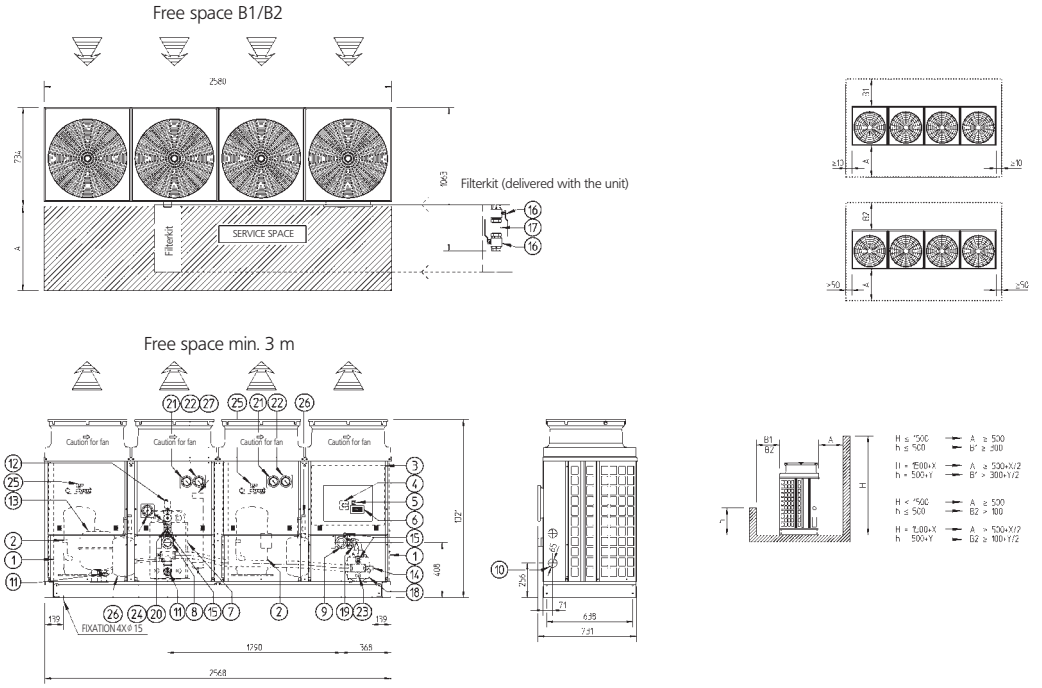
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Digital display controller
6 Water heat exchanger
7 Water IN connection: 2" M BSP
8 Water OUT connection: 2" M BSP
9 Power supply intake
10 Drain
11 Air purge
12 Pressure port
13 Ball valve
14 Water filter
15 Flow switch
16 High pressure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



3TW55734-1

EUWAP16KBZW1

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



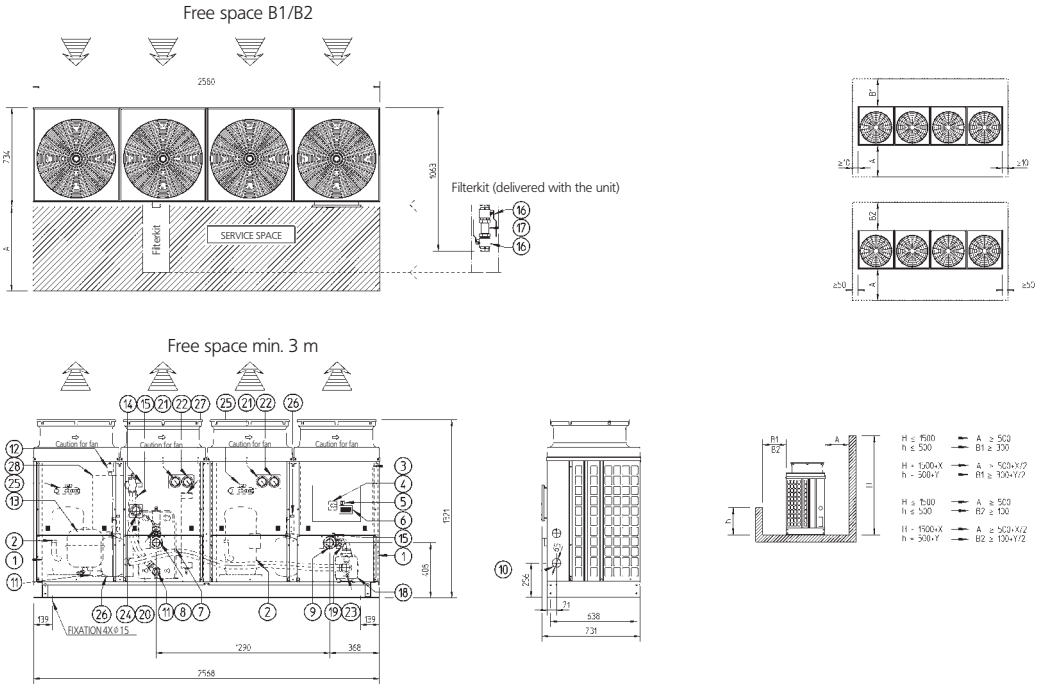
3TW55734-2

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWAB16KBZW1

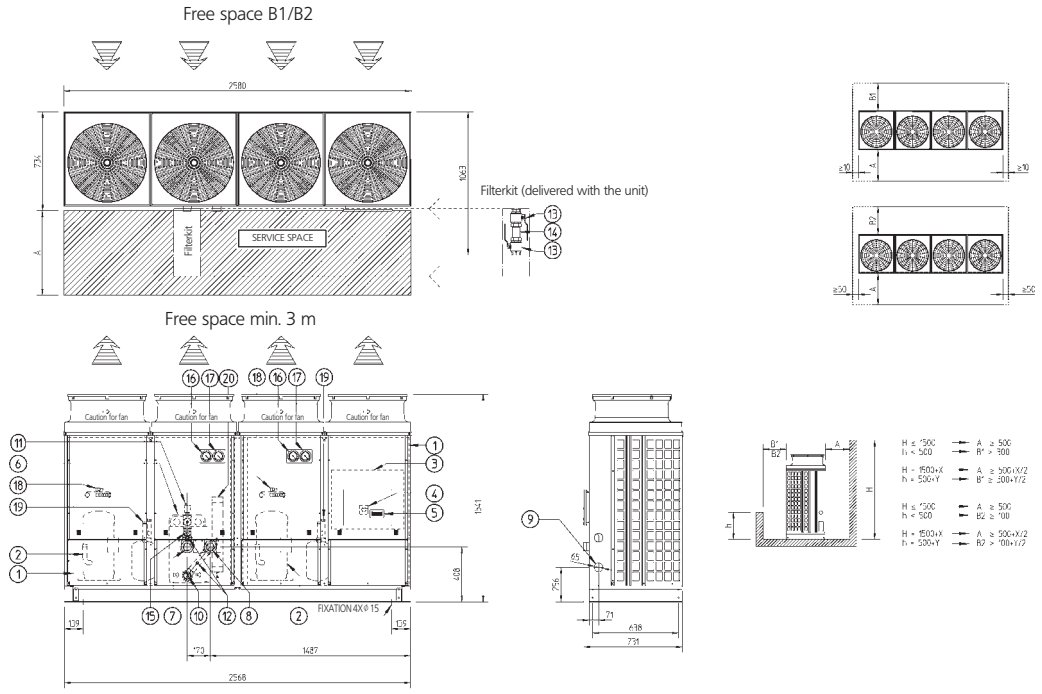
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Pump switch
6 Digital display controller
7 Water heat exchanger
8 Water IN connection: 2" M BSP
9 Water OUT connection: 2" M BSP
10 Power supply intake
11 Drain
12 Air purge
13 Expansion vessel
14 Safety valve
15 Pressure port
16 Ball valve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



3TW55734-3

EUWAN20-24KBZW1

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



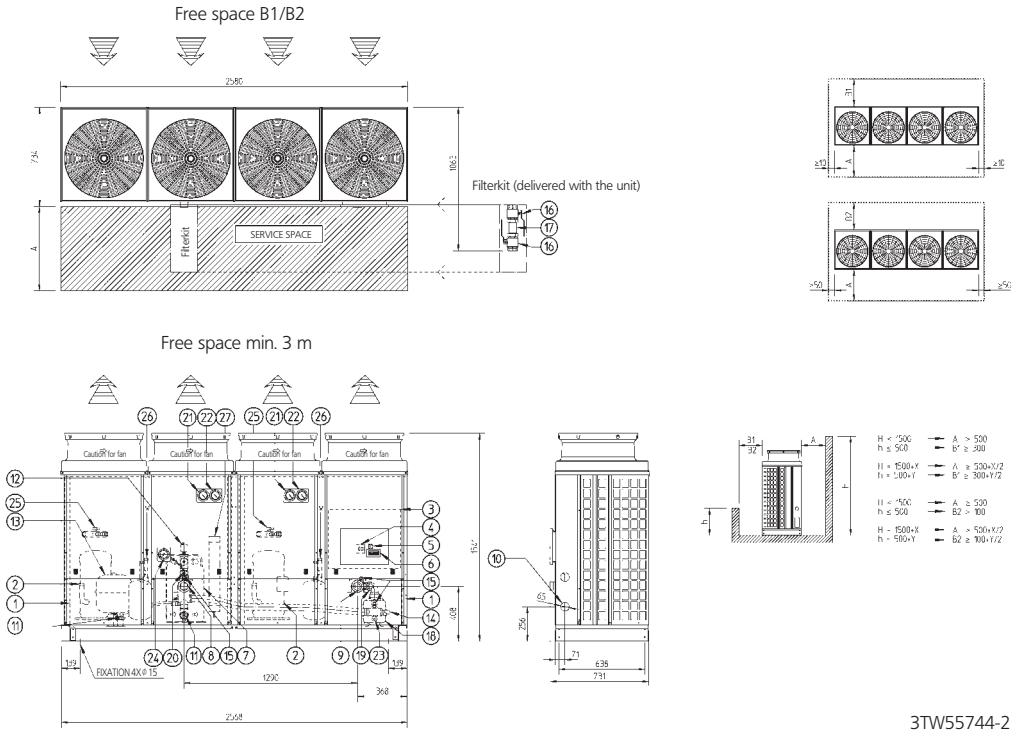
3TW55744-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWAP20-24KBZW1

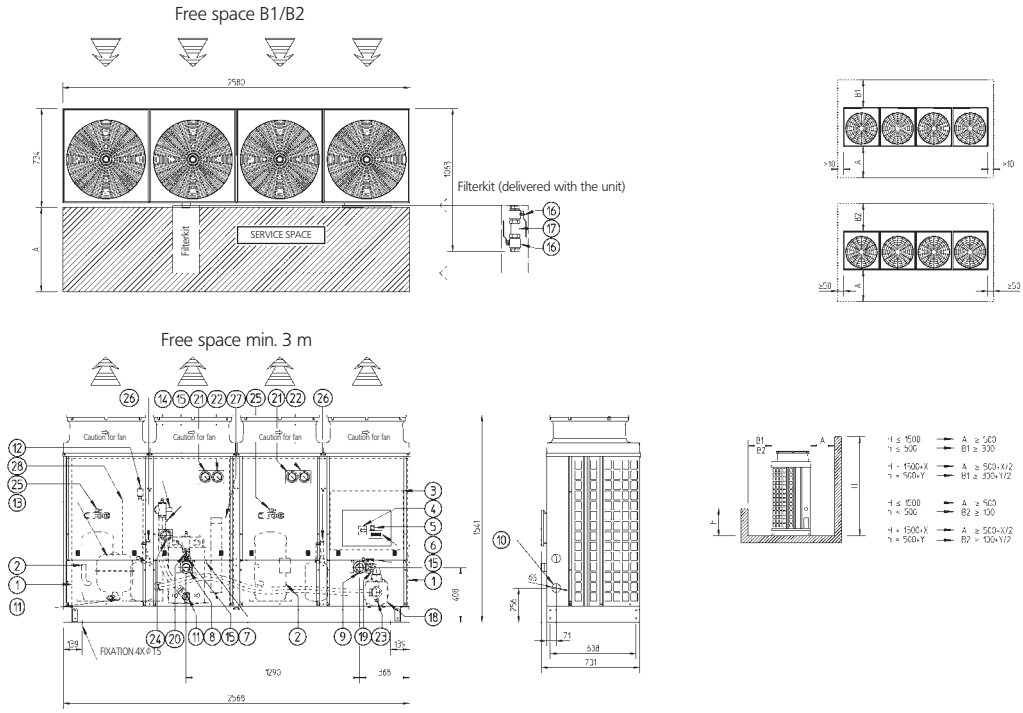
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Pump switch
6 Digital display controller
7 Water heat exchanger
8 Water IN connection: 2" M BSP
9 Water OUT connection: 2" M BSP
10 Power supply intake
11 Drain
12 Air purge
13 Expansion vessel
14 Safety valve
15 Pressure port
16 Ball valve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

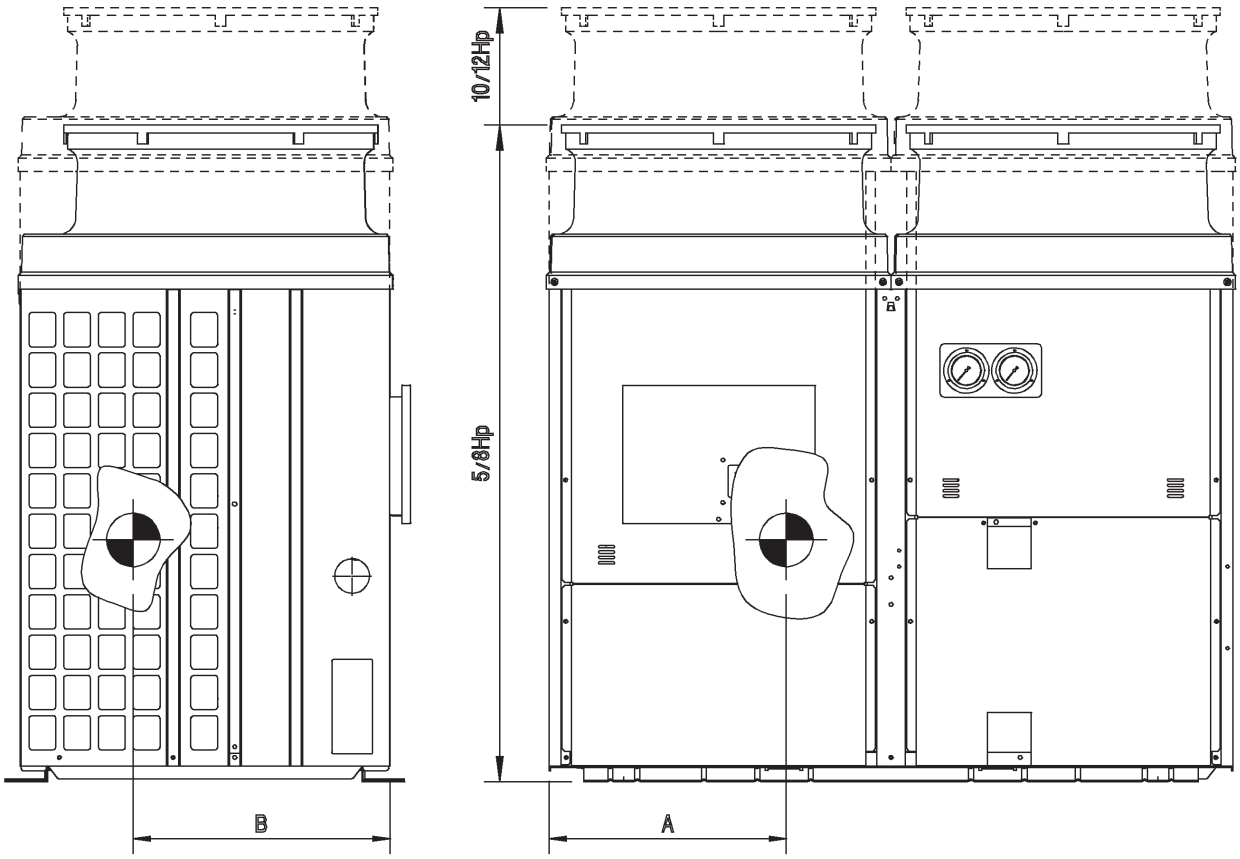


3TW55744-3

6 Centre of gravity

6 - 1 Centre of Gravity

EUWA*5-12KBZW1



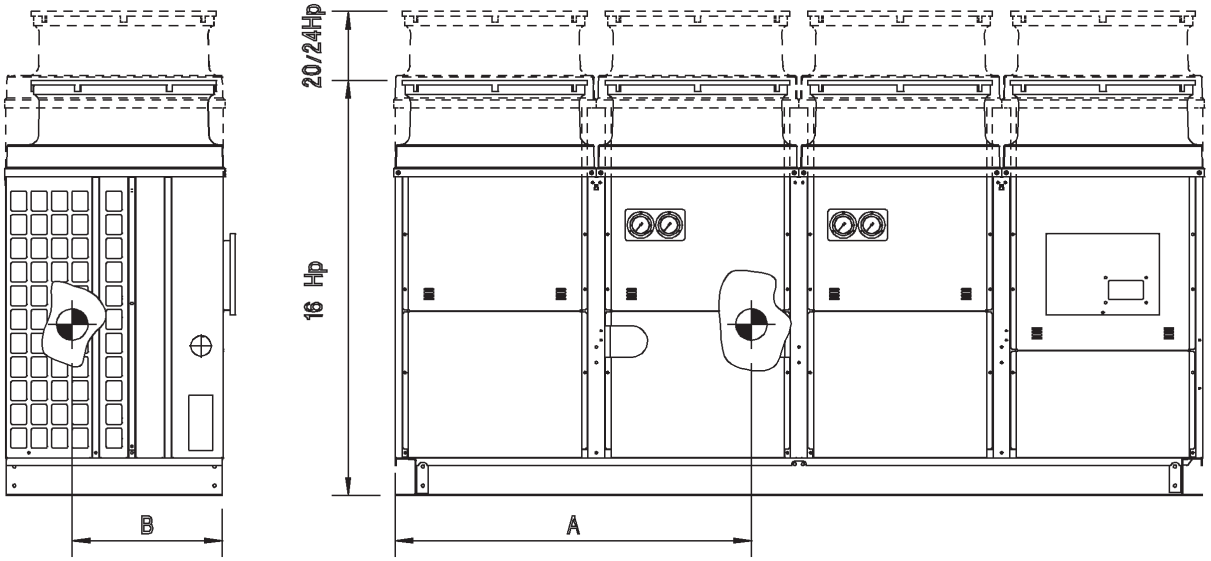
	5Hp		8Hp		10Hp		12Hp	
	A	B	A	B	A	B	A	B
B-Models	520	420	480	420	490	430	490	430
P-Models	510	420	470	420	480	430	490	430
N-Models	480	420	440	430	450	430	460	430

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

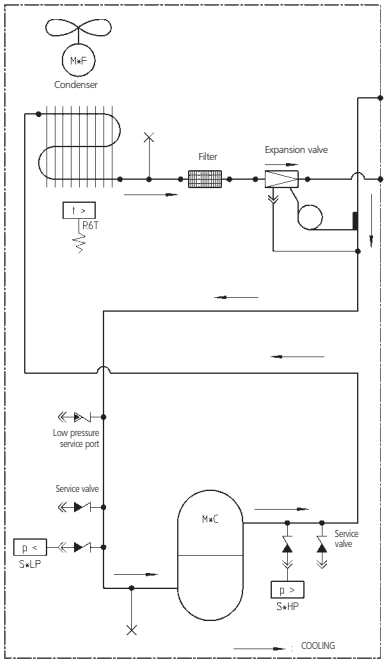
4TW54799-2

7 Piping diagrams

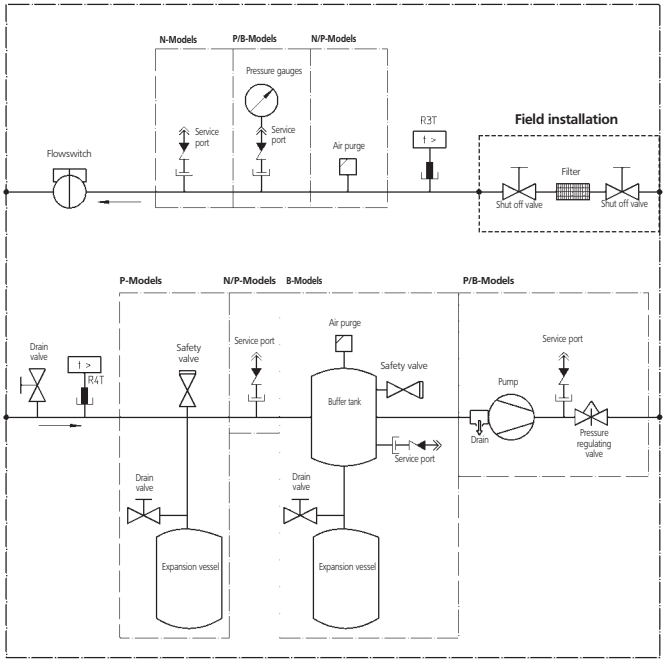
7 - 1 Piping Diagrams

EUWA*5-24KBZW1

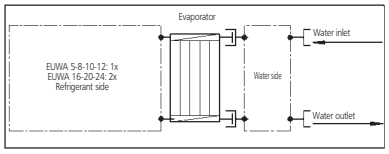
Refrigerant side



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

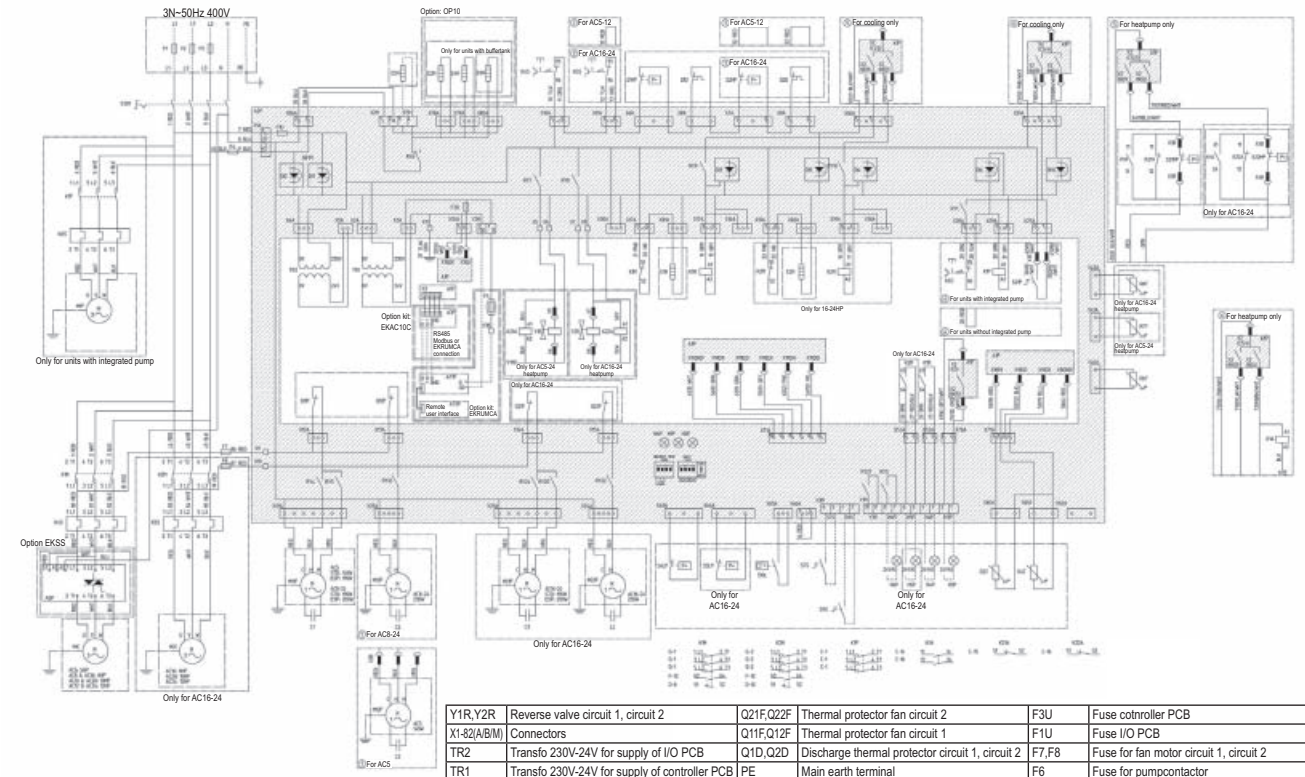
Check valve — Flare connection — Screw connection — Flange connection — Pinched pipe — Spinned pipe

3TW55625-1

8 Wiring diagrams

8 - 1 Wiring Diagrams - Three Phase

EUWA-KBZW1 / EUWY-KBZW1



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

( ) Applicable for unit without integrated pump

A2P	A1P
DIGITAL INPUTS DI1 Reverse phase detection (L1-N) DI2 Reverse phase detection (N-L3) DI3 M1C ON detection DI4 M2C ON detection DI5 Safety device detection DI6 Pump ON detection DI7 – – DI8 – – DI9 – – DI10 Reverse valve request	DIGITAL INPUTS X1 (ID1-GND) : Flow switch X1 (ID2-GND) : Remote C/H selection X1 (ID3-GND) : High pressure switch + discharge protector + overcurrent X1 (ID4-GND) : Low pressure switch X1 (ID5-GND) : Remote On/Off
DIGITAL OUTPUTS (RELAYS) RY1 Reversed phase protector RY3 Pump/general operation RY4-24 Fan speed relay 1 RY5-25 Fan speed relay 2 RY6 Heatertape RY7 Reversing valve circ1 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	DIGITAL OUTPUTS (RELAYS) X2 (C1/2-NO1) : Compressor M1C on X2 (C1/2-NO2) : Compressor M2C on X2 (C3/4-NO3) : Voltage free contact for pump X2 (C3/4-NO4) : Reversing valve X2 (C5-NO5) : Alarm voltage free contact
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)	ANALOG INPUTS X1 (B1-GND) : inlet water t° X1 (B2-GND) : outlet water t° X1 (B3-GND) : none
	ANALOG OUTPUTS X1 (Y-GND)

	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

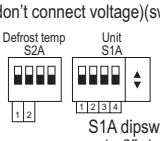
	All models (400V)						
Fuses + overcurrent	5HP	8HP	10HP	12HP	16HP	20HP	24HP
F4	8A	8A	8A	8A	8A	8A	8A
F5	250mAT	250mAT	250mAT	250mAT	250mAT	250mAT	250mAT
F7,8	5A	5A	5A	5A	5A	5A	5A
F1U	5A	5A	5A	5A	5A	5A	5A
F3U	315mAT	315mAT	315mAT	315mAT	315mAT	315mAT	315mAT
K4S	9A	14A	17A	24A	14A	17A	24A
K5S	– –	– –	– –	– –	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 cotnroller PCB
X1-82(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
		K6S	Overcurrent relay pump	E3H,E4H	Evaporator heatertape
S4LP,S5LP	Low pressure switch circuit 1, circuit 2	K4S,K5S	Overcurrent relay circuit 1, circuit 2	E1H,E2H	Crankcase heater circuit 1, circuit 2
S1HP,S2HP	High pressure switch circuit 1, circuit 2	K1M, K2M	Compressor contactor circuit 1, circuit 2	C1,C2,C3,C4	Capacitors for fanmotors
S21HP,S22HP	High pressure switch during defrost circuit 1, circuit 2	K1A	Auxiliary bypass relay	A71P	PCB: Power supply card
		K21A,K22A	Auxiliary bypass relay	A72P	PCB: Remote user interface
R7T,R8T	Coil temperature sensor for circuit 1, circuit 2	H6P	Indication lamp general operation	A5P	PCB: Softstarter for circuit 1
R6T	Ambient temperature sensor	H5P	Indication lamp operation compressor 2	A3P	PCB: Address card
R4T	Evaporator outlet water temperature sensor	H4P	Indication lamp operation compressor 1	A2P	PCB: I/O PCB
R3T	Evaporator inlet water temperature sensor	H3P	Indication lamp alarm	A1P	PCB: Controller PCB

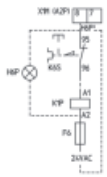
1TW60006-1

NOTES

1. [1] : Terminal 1, ~ : Wire 2, – – – : Field wiring to be in accordance with the local electrical regulations, –·–·– : Earth wiring, ▭ : Option, ▨ : PCB, ▭ : outside switchbox
2. If compressor rotates reversely, it may be damaged
3. 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
4. Terminals for fieldwiring
   X1M: H3-6P: output terminal for fieldwiring (voltage free contact max 2A / output)
   X2M: E5H: fieldheater (max 500W reistive / 230VAC / 50Hz)
   X3M: S7S,S9S: Input terminal for fieldwiring (don't connect voltage)(switch load 6mA / 30VDC)
5. Y1R, Y2R are activated in cooling mode
   S7S open = heating
   S7S closed = cooling
6. 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)
7. 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:

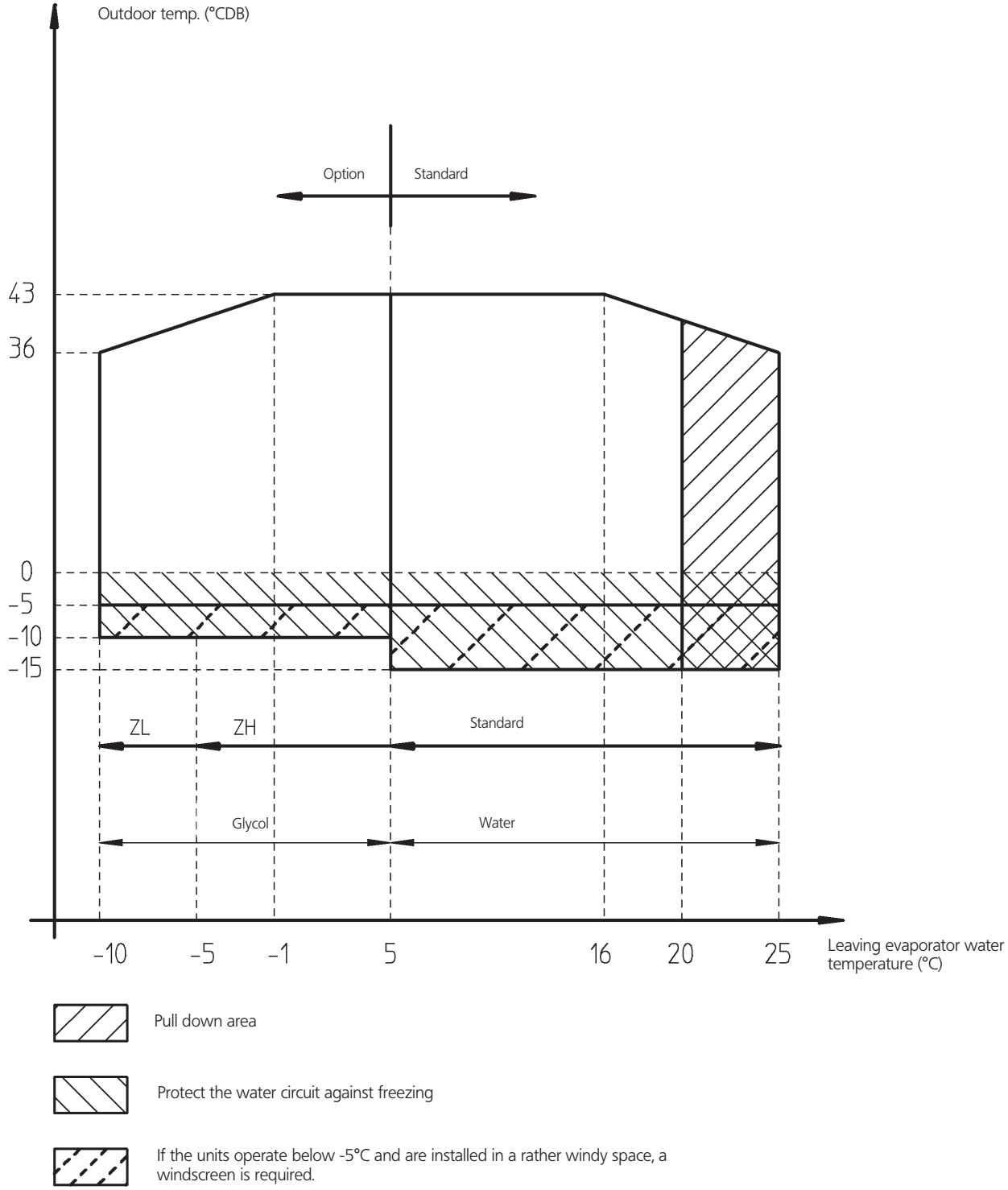
ITEMS	Cooled water		Tendency if out of criteria
	Circulating water (below 20°C)	Water supply	
Items to be controlled:			
- pH at 25°C	6.8 - 8.0	6.8 - 8.0	Corrosion + scale
- Electrical conduct			
(mS/m) at 25°C	Below 40	Below 30	Corrosion + scale
(μS/cm) at 25°C	—	—	Corrosion + scale
- Chloride ion (mg 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.

11 Operation range

11 - 1 Operation Range

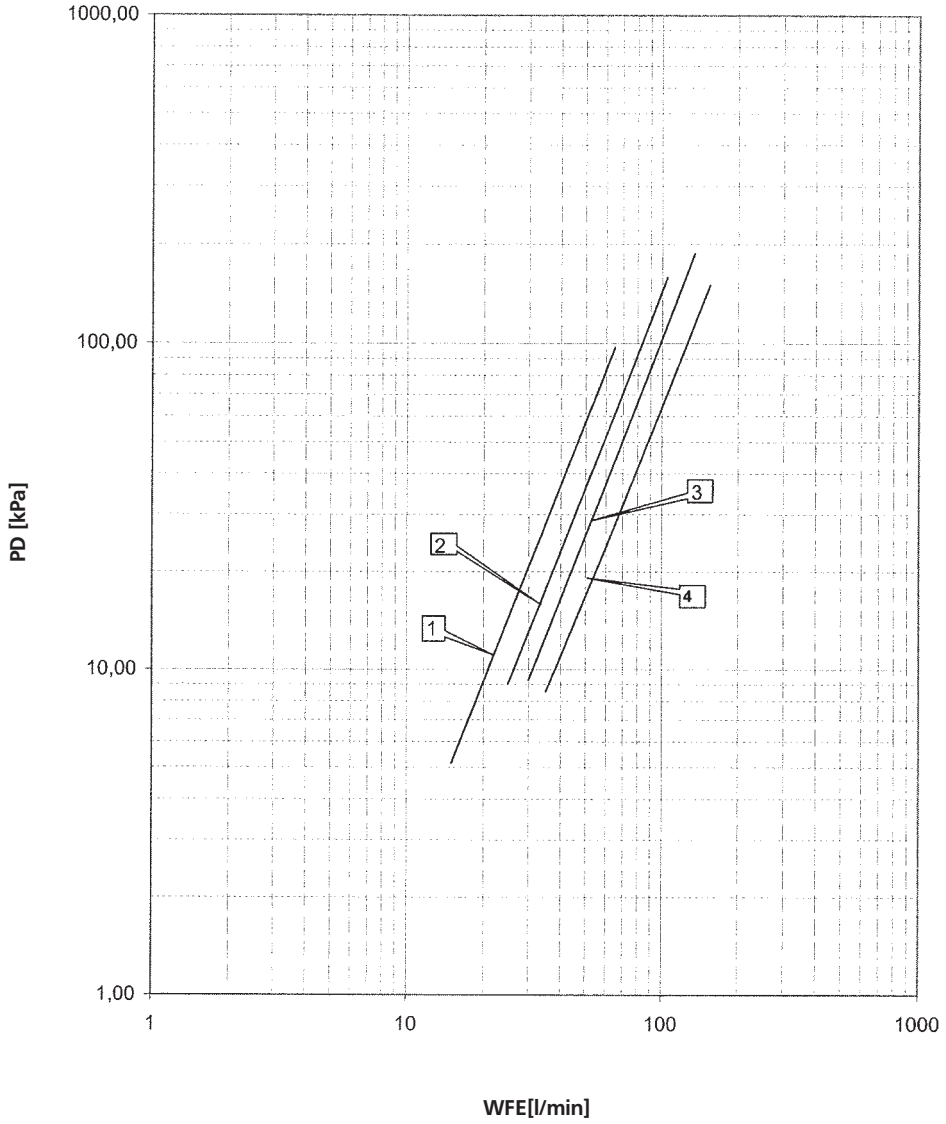
EUWA*5-24KBZW1



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

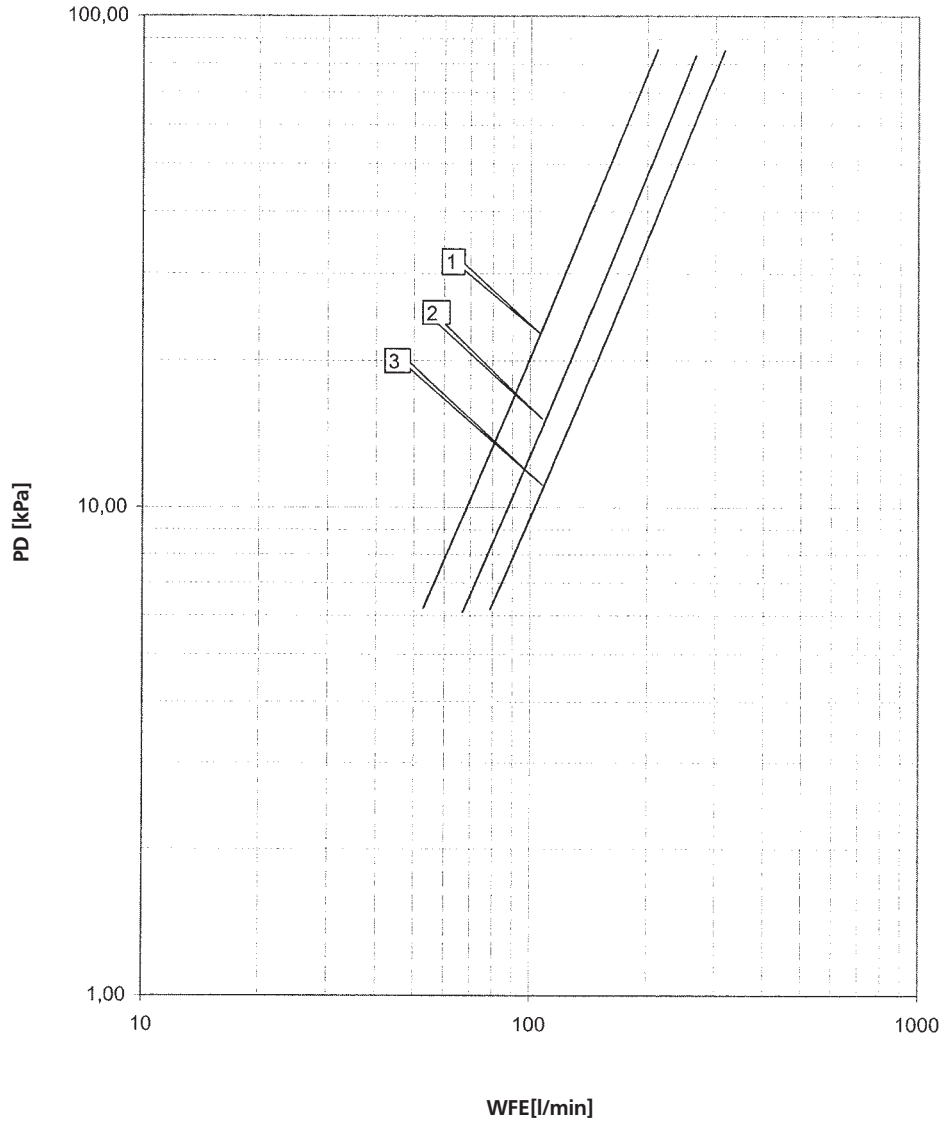
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

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

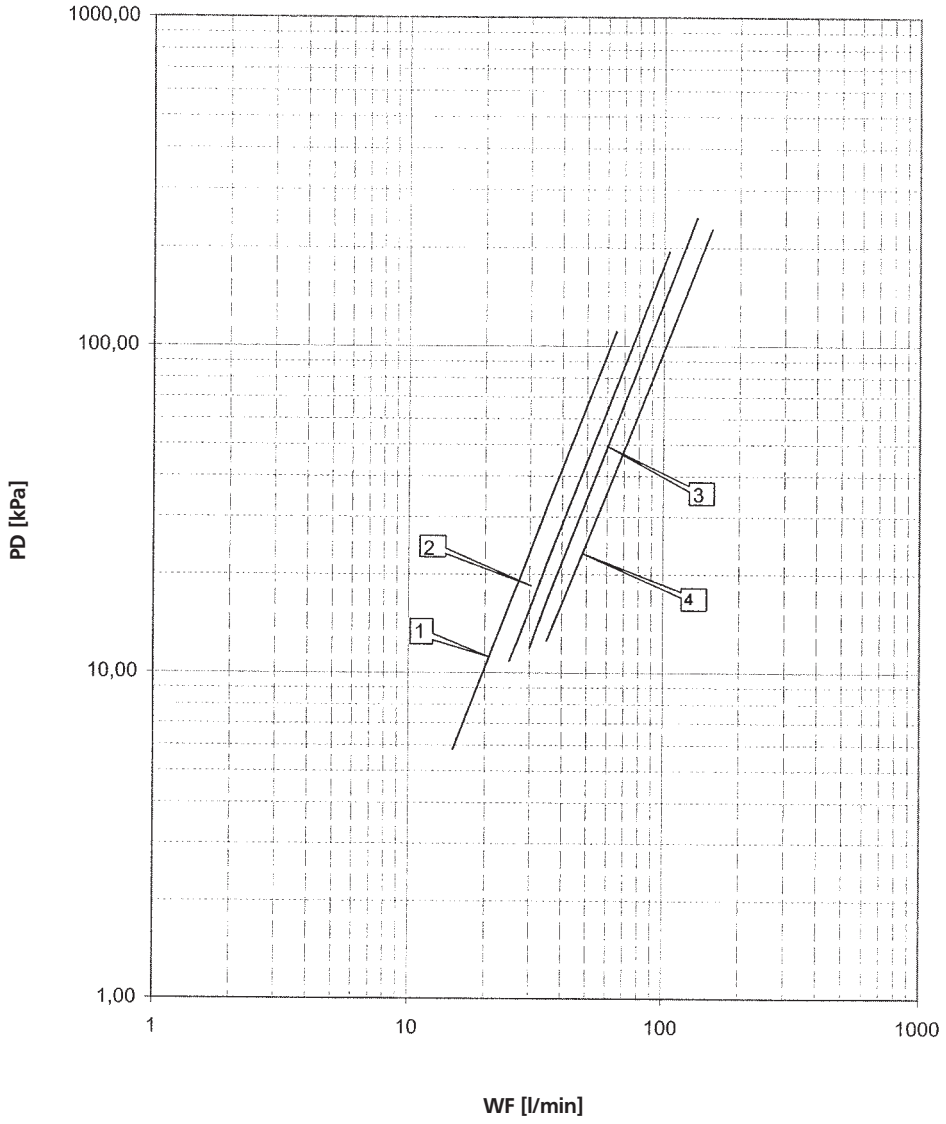
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

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

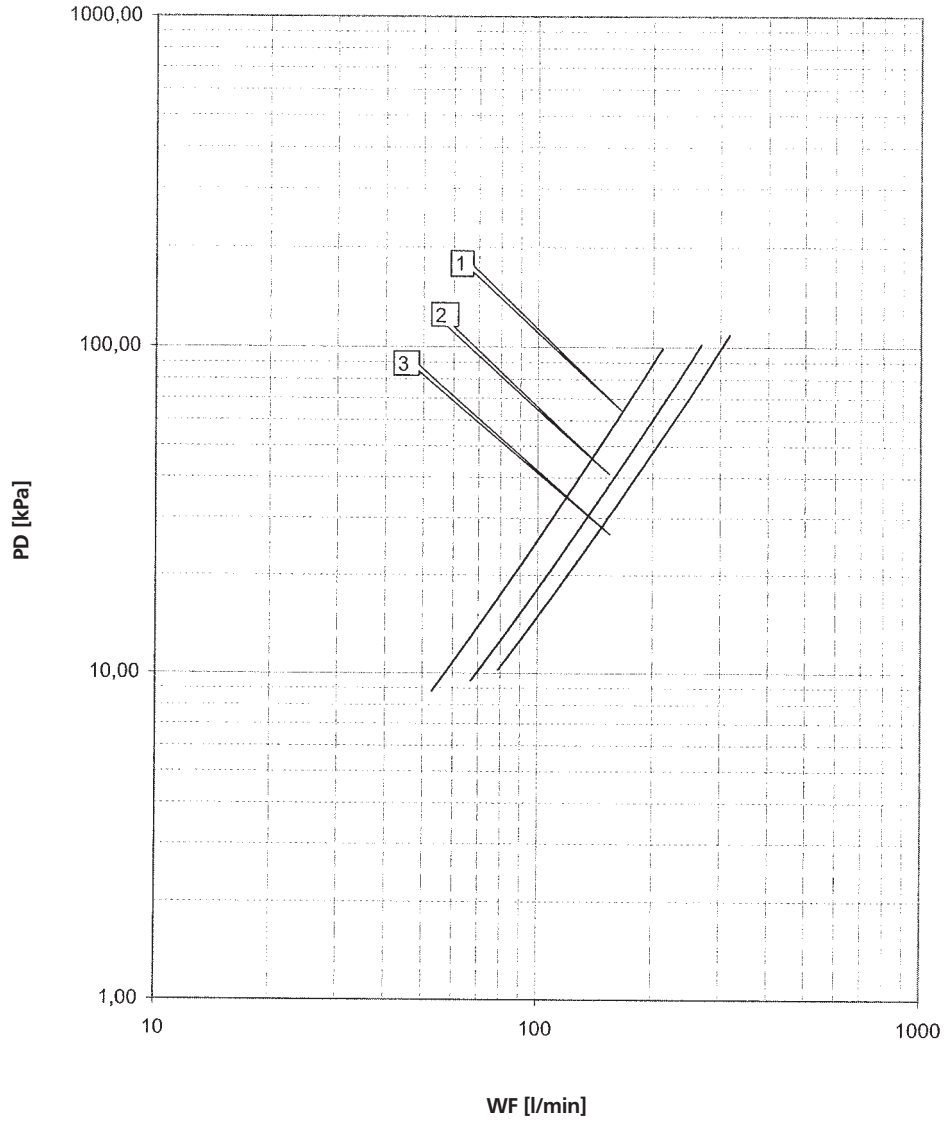
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

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

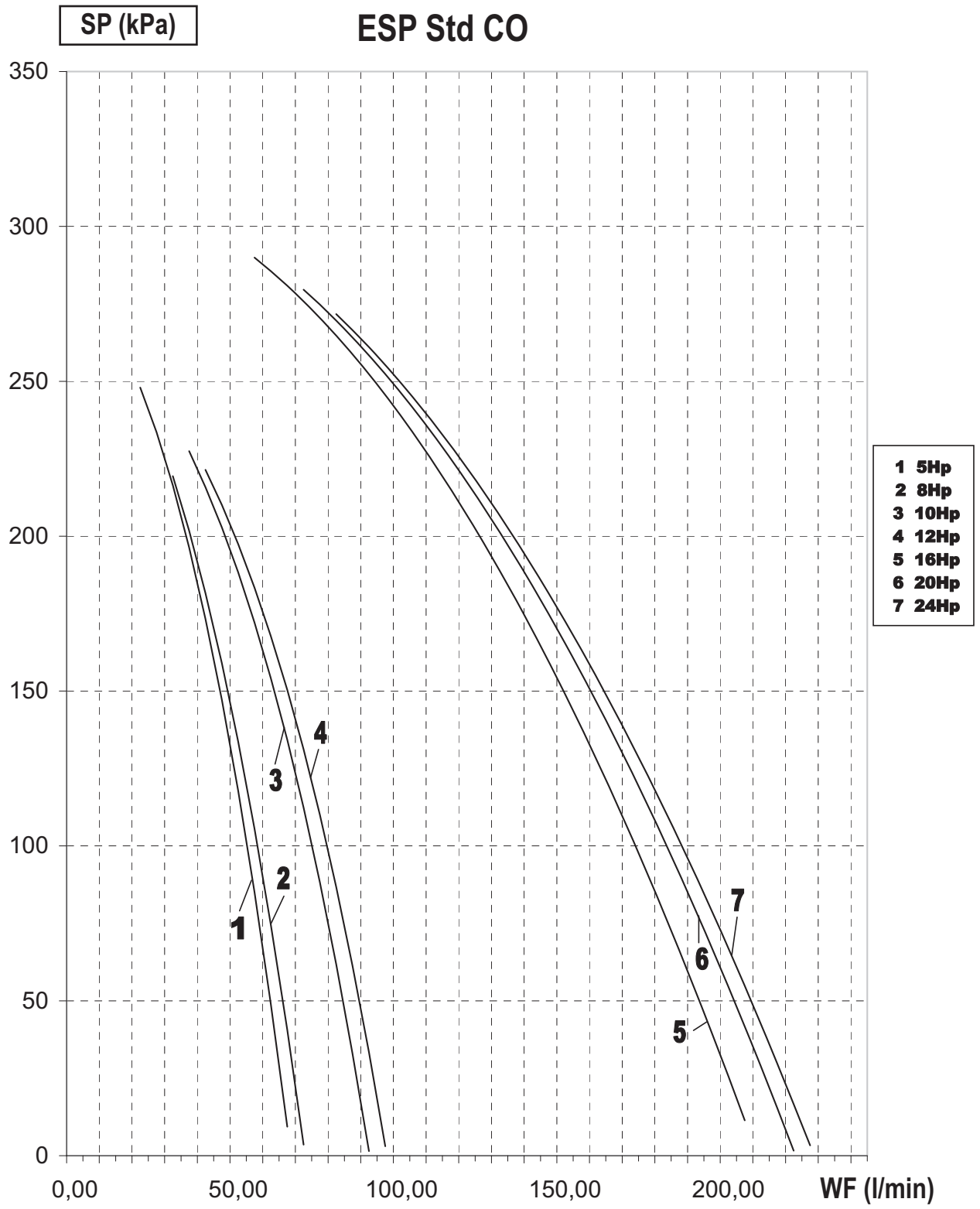
Warning: Selecting a flow outside the curves can cause damage to or malfunction of the unit. See also minimum and maximum allowed water flowrange in the technical specifications.

4TW55669-6

12 Hydraulic performance

12 - 3 External Static Pressure Drop Unit

EUWA5-24KBZW1

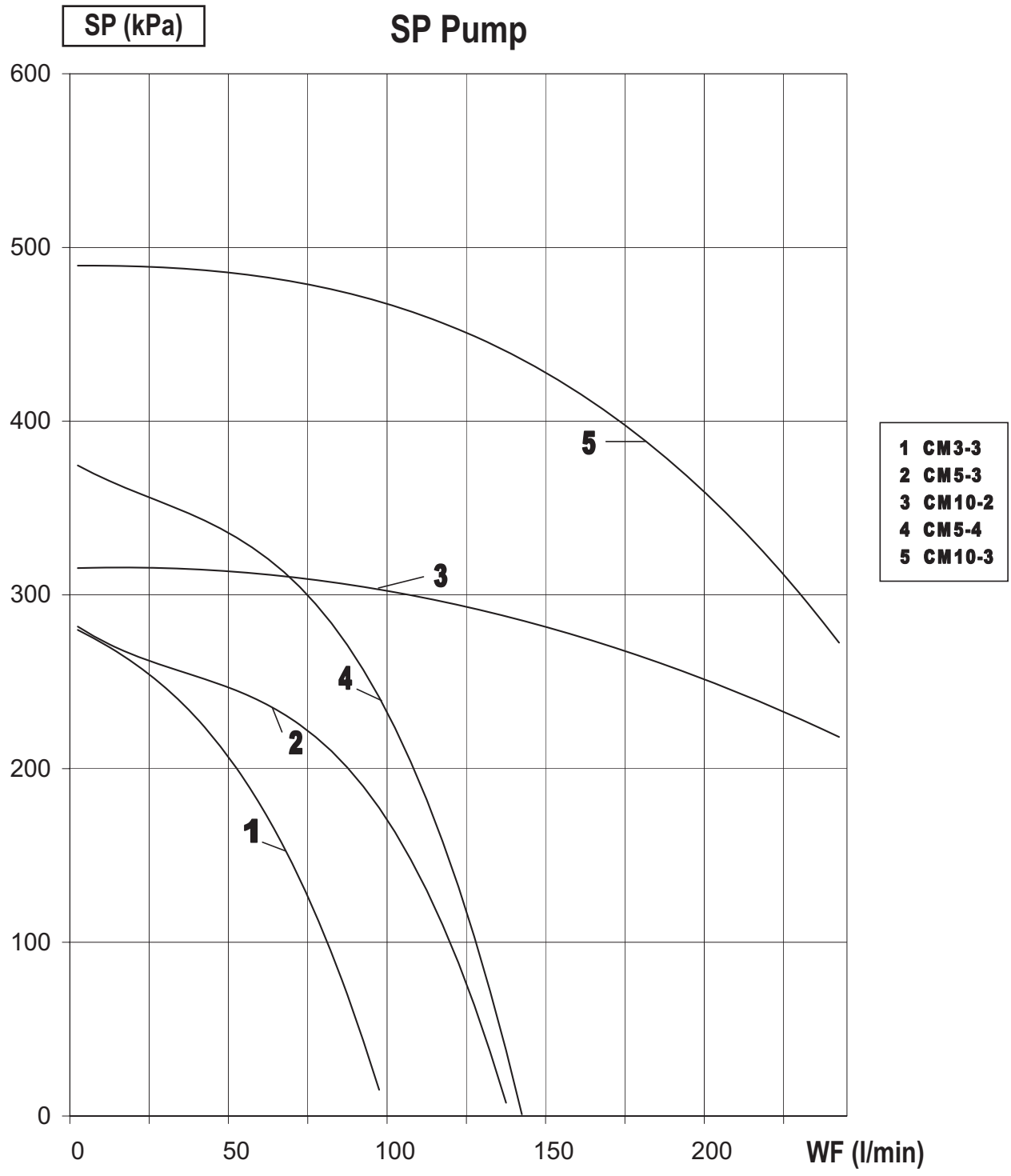


4TW60009-4

12 Hydraulic performance

12 - 4 Static Pressure Pump

EUWA5-24KBZW1
EUWY5-24KBZW1



4TW60009-3

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EUWY-KBZW1

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					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				Brazed 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			m²	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.	m³/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 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	
	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)			82 (5)		
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	
		Pre pressure	bar	-	1.5		-	1.5	
	Water filter	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				Brazed 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			m²	1.970					
Pump	Quantity				-	1		-	1	
	Model				-	CM5-3		-	CM5-3	
	Nominal ESP pump	Cooling		kPa	-	237		-	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.	m³/min	170 (per 2 fans)					
Fan motor	Output			W	190					
	Quantity				1					
	Drive				Direct drive					
Fan motor 2	Output			W	230					
	Quantity				1					
Sound power level	Cooling	Nom.		dBA	78					
Compressor	Type				Hermetically sealed scroll compressor					
	Quantity				1					
	Model				JT256DA-YE			JT335DA-YE		
	Speed			rpm	2,900					
	Oil	Charged volume		l	2.7					
Refrigerant	Type				R-407C					
	Control				Thermostatic expansion valve					
	Circuits	Quantity			1					
Refrigerant circuit	Charge			kg	5.4					
Water circuit	Piping connections diameter			inch	G 1"1/4 (male)					
	Piping			inch	1-1/4"					
	Safety valve			bar	3		-		3	
	Manometer				Yes					
	Drain valve / fill valve				Yes, ø15					
	Shut off valve				Yes					
	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)			119 (5)		
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				Brazed 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			m²	1.57+1.57			1.970+1.970		
Pump	Quantity				-	1		-	1	
	Model				-	CM10-2		-	CM10-2	
	Nominal ESP pump	Cooling		kPa	-	302		-	296	
	Nominal ESP unit	Cooling		kPa	-	249 (1)		-	229 (1)	
Fan	Quantity				4					
	Type				Axial					
	Discharge direction				Vertical					
Fan group	Air flow rate	Cooling	Nom.	m³/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.		dBA	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)			96 (5)		
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		Brass					
	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					Brazed plate		
	Quantity					1		
	Water volume				l	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				m²	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.		m³/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.			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)		
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 35ºC - LWE 7ºC (DT = 5ºC)		
				(2)Condition: Ta DB/WB 7ºC/6ºC - LWC 45ºC (Dt=5ºC)		
				(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 Specifications

2-2 Electrical Specifications				EUWYN5KBZW1	EUWYP5KBZW1	EUWYB5KBZW1	EUWYN8KBZW1	EUWYP8KBZW1	EUWYB8KBZW1
Pump	Type			-	Horizontal multi-stage end-suction		-	Horizontal multi-stage end-suction	
	Phase			-	3~		-	3~	
	Voltage		V	-	400		-	400	
	Maximum running current		A	-	1.3		-	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		-	Horizontal multi-stage end-suction	
	Phase			-	3~		-	3~	
	Voltage		V	-	400		-	400	
	Maximum running current		A	-	1.3		-	1.3	
Compressor	Phase			3~					
	Voltage		V	400					
	Starting current		A	110.0			136.0	136.0	
	Nominal running current (RLA)		A	13.0			17.6	17.6	
	Maximum running current		A	17.0			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					

2 Specifications

2-2 Electrical Specifications				EUWYN10KBZW1	EUWYP10KBZW1	EUWYB10KBZW1	EUWYN12KBZW1	EUWYP12KBZW1	EUWYB12KBZW1
Unit	Starting current		A	113	114		139	140	
	Current	Zmax	Text	0.22			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	
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		-	Horizontal multi-stage end-suction	
	Phase			-	3~		-	3~	
	Voltage		V	-	400		-	400	
	Maximum running current		A	-	2.0		-	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		V	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 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 Specifications

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	
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		
	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 35ºC - LWE 7ºC (DT = 5ºC)		
				(2)Condition: Ta DB/WB 7ºC/6ºC - LWC 45ºC (Dt=5ºC)		
				(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	
	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 } See notes 5 & 6	Address card for connection to BMS or Remote user interface			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	Kit
EKRUMCA } See notes 5 & 6	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

1. • x = not available yet
   • = available
   – = not available
   •-<number> = available and a quantity <number> is necessary / unit
2. Impossible option combination : ZH + ZL
3. (*) = N or P or B
4. (on) = option number
   - 1st digit (on) = sum of 1st digit decimal code and this sommation transferred to a 36 character system
   - 2/3rd digit (on) = sum of 2/3rd digit decimal code and this sommation transferred to a 36 character system
5. To install EKRUMCA => EKAC10C needs to be installed on the unit.
6. 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		
	24 KZ	33.4	14.0	30.0	15.6	26.4	15.7	22.8	17.7		
-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
	24 KZ	38.2	14.5	34.8	16.1	31.2	16.6	27.6	18.6	24.2	20.6
-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
	24 KZ	43.0	15.1	39.6	16.7	36.0	17.4	32.4	19.5	29.0	21.5
-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
	24 KZ	47.8	15.7	44.4	17.3	40.8	18.3	37.2	20.3	33.8	22.4
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

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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

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
	24 KZ	33.8	17.3	39.4	17.4	43.6	17.4	47.8	17.4	53.6	17.5	57.8	17.5	62.0	17.5
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
	24 KZ	34.0	19.3	39.6	19.3	43.8	19.4	48.2	19.4	53.8	19.4	58.0	19.5	62.2	19.5
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
	24 KZ	34.2	21.3	39.8	21.3	44.2	21.4	48.4	21.4	54.0	21.4	58.2	1.4	62.6	21.4
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

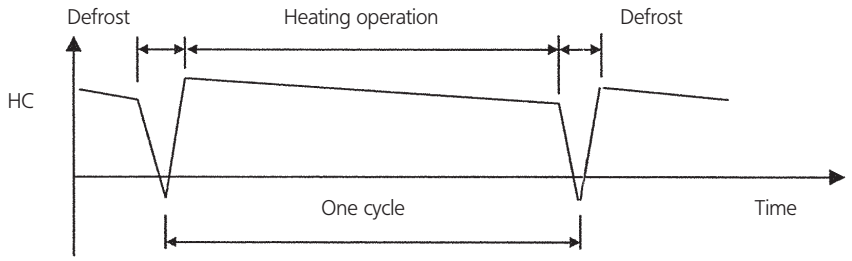
The heating capacities tabulated do not include capacity drop during frosting period and defrosting operation.
Namely, the integrated heating capacities in consideration with capacity drop during frosting period and defrosting operation are obtained from the following formula.

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.

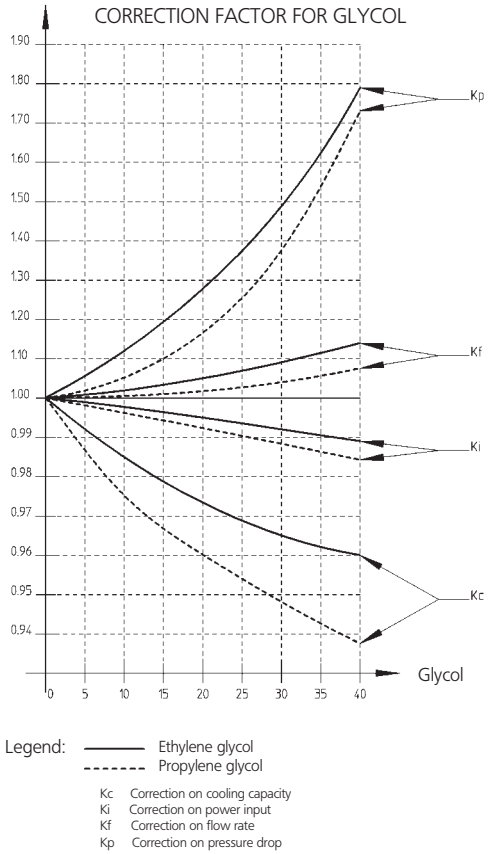
4 Capacity tables

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



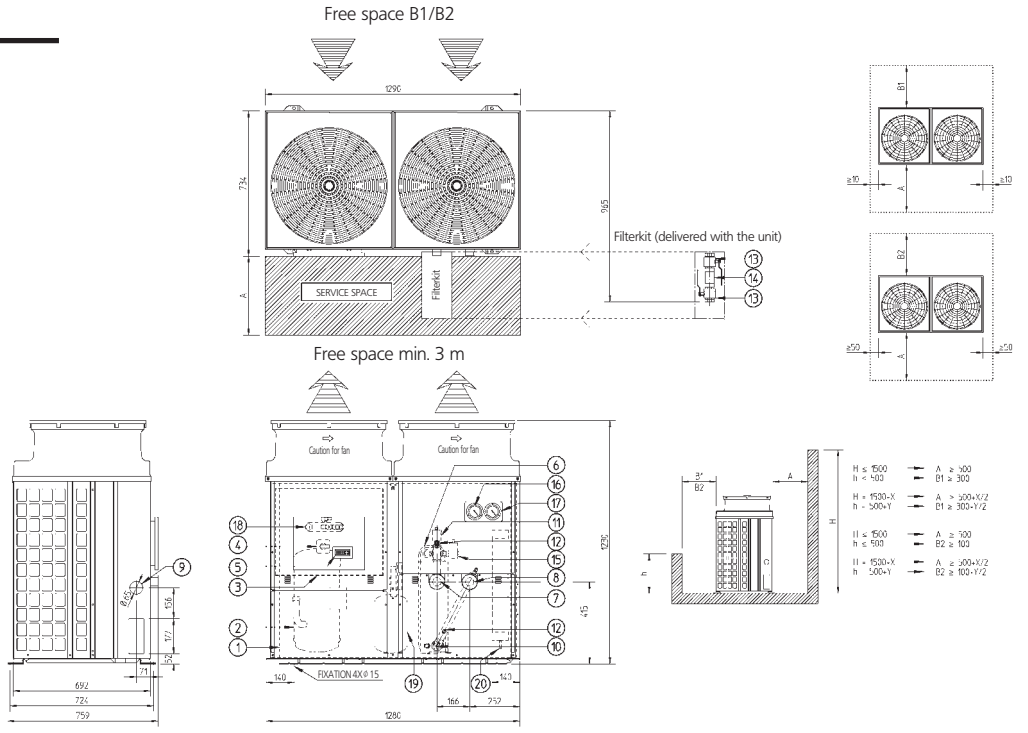
4TW54179-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWYN5-8KBZW1

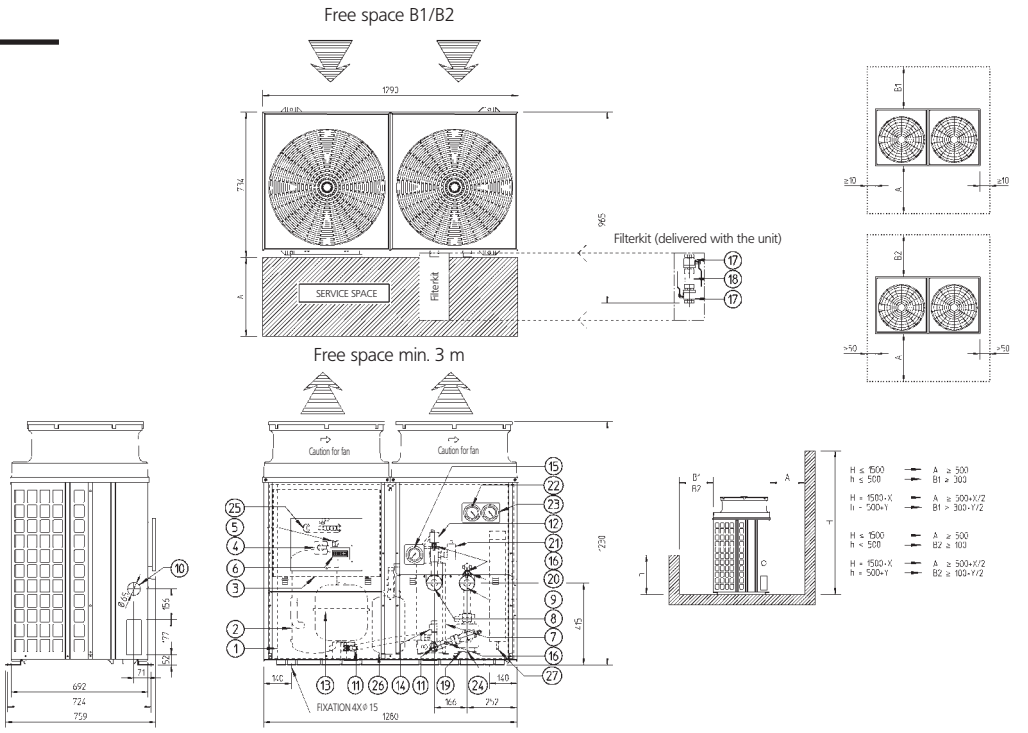
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Digital display controller
6 Water heat exchanger
7 Water IN connection: 1 1/4" M BSP
8 Water OUT connection: 1 1/4" M BSP
9 Power supply intake
10 Drain
11 Air purge
12 Pressure port
13 Ball valve: 1-1/4" BSP
14 Water filter: 1-1/4" BSP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

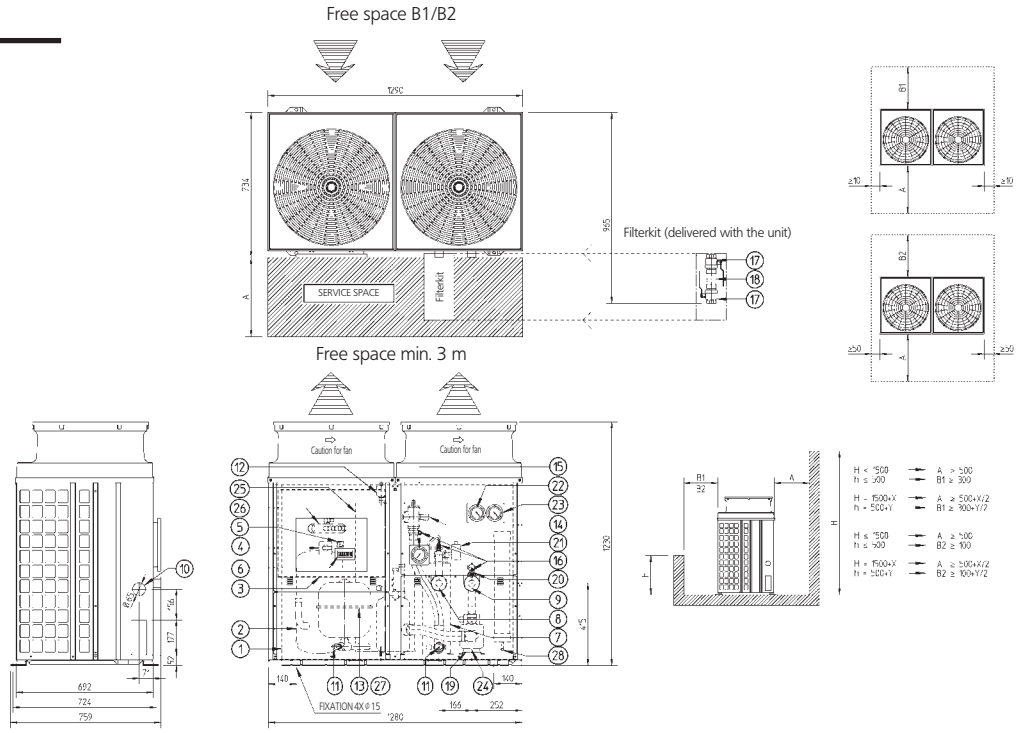
5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWYB5-8KBZW1

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

* Only for H/P models

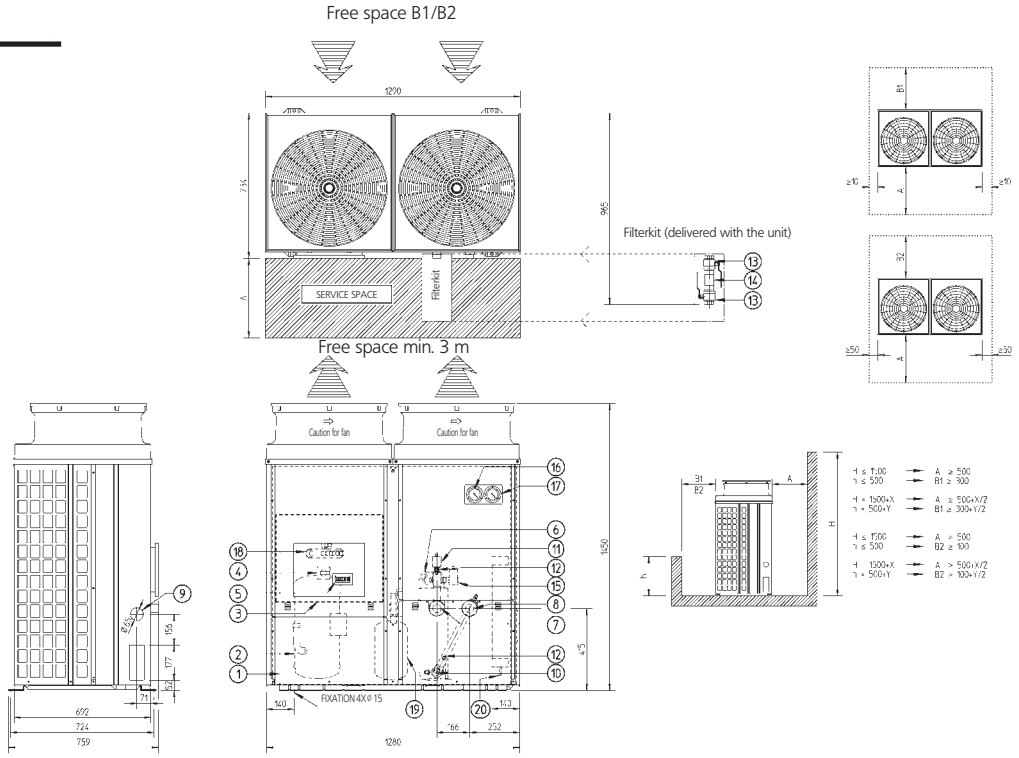


3TW55694-3

EUWYN10-12KBZW1

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

* Only for H/P models



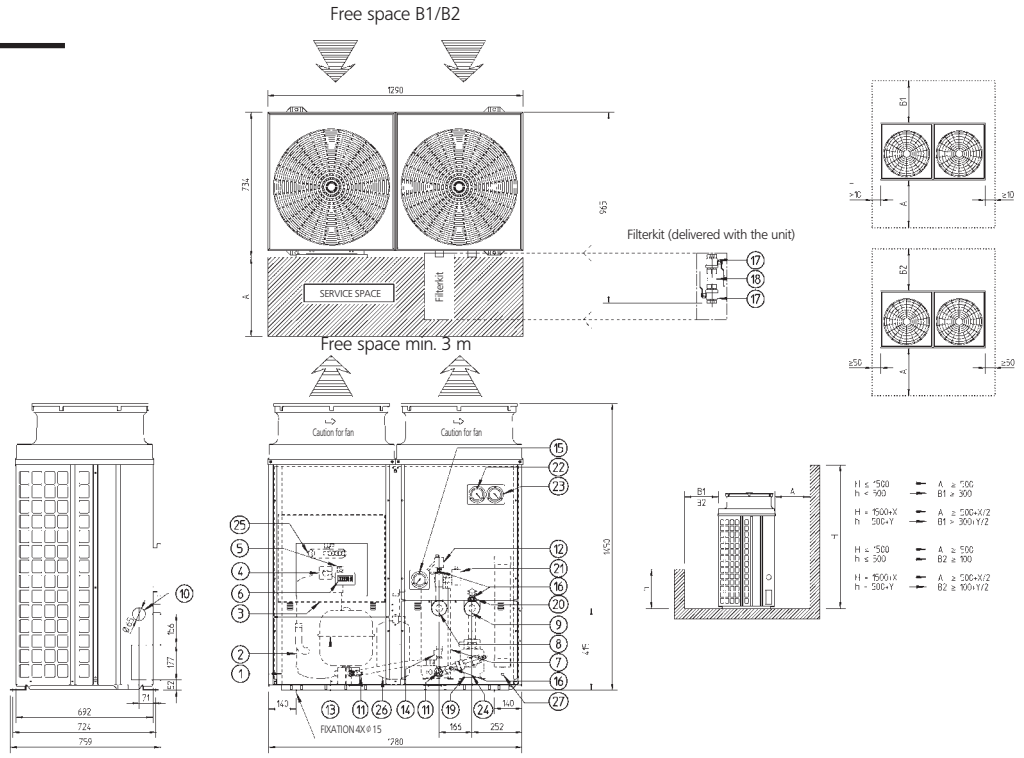
3TW55714-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWYP10-12KBZW1

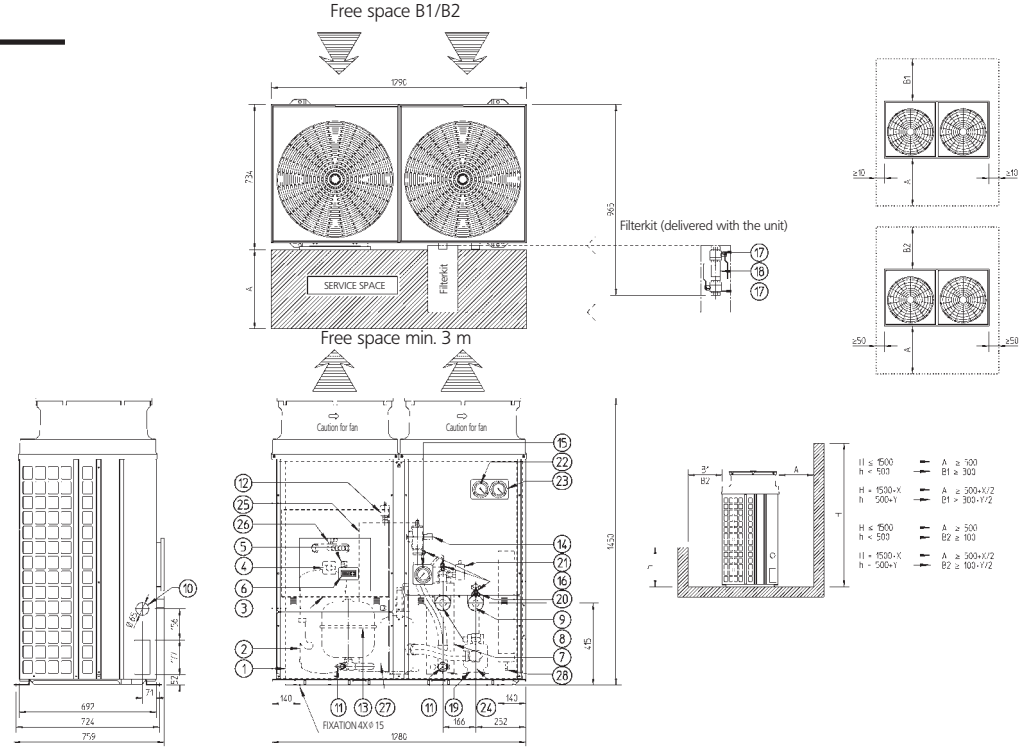
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Pump switch
6 Digital display controller
7 Water heat exchanger
8 Water IN connection: 1 1/4" M BSP
9 Water OUT connection: 1 1/4" M BSP
10 Power supply intake
11 Drain
12 Air purge
13 Expansion vessel
14 Safety valve
15 Manometer (water)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

EUWYB10-12KBZW1

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



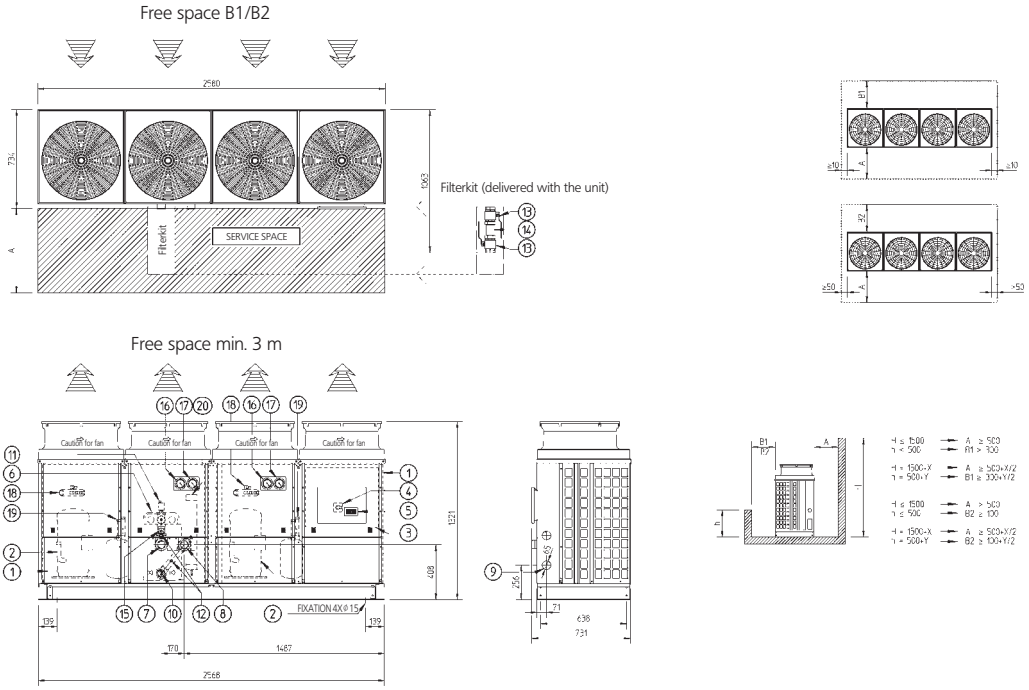
3TW55714-3

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWYN16KBZW1

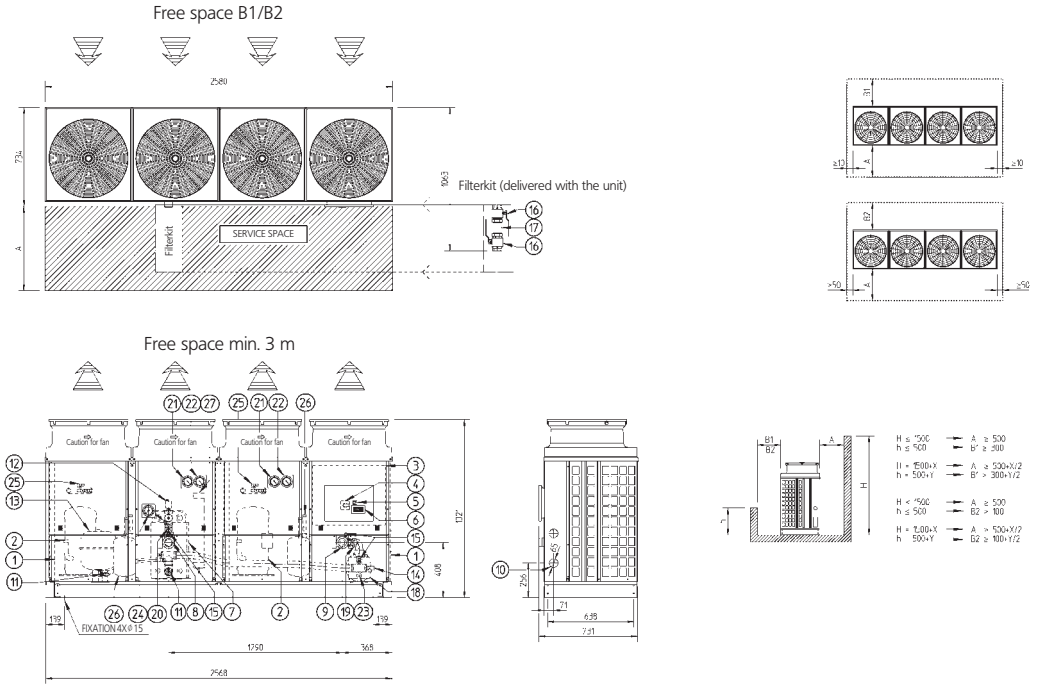
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Digital display controller
6 Water heat exchanger
7 Water IN connection: 2" M BSP
8 Water OUT connection: 2" M BSP
9 Power supply intake
10 Drain
11 Air purge
12 Pressure port
13 Ball valve
14 Water filter
15 Flow switch
16 High pressure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



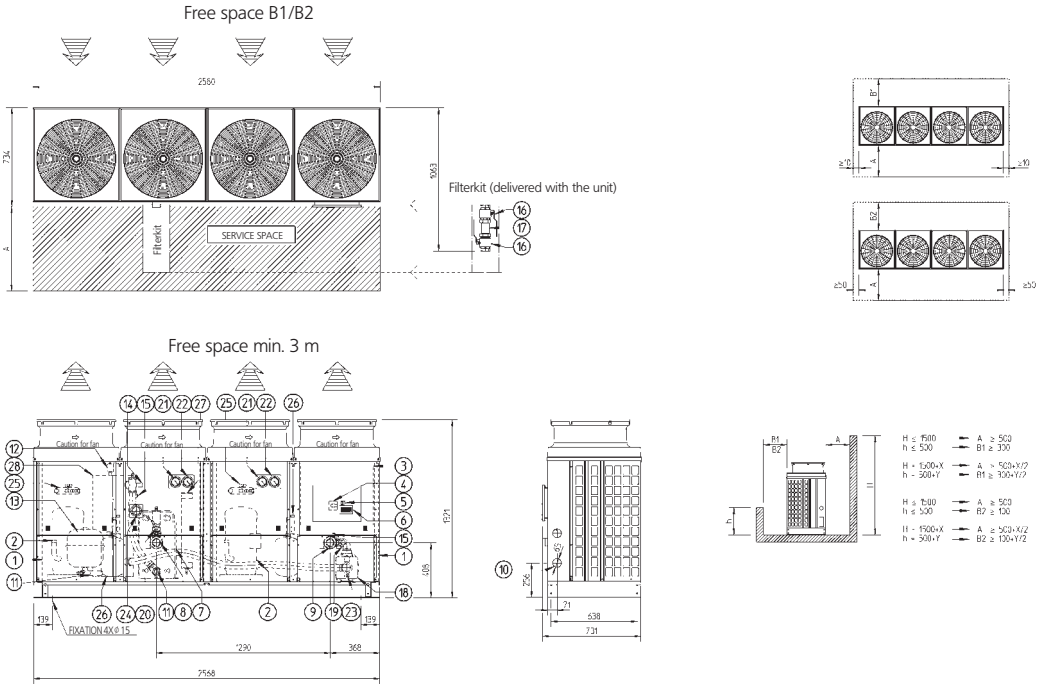
3TW55734-2

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWYB16KBZW1

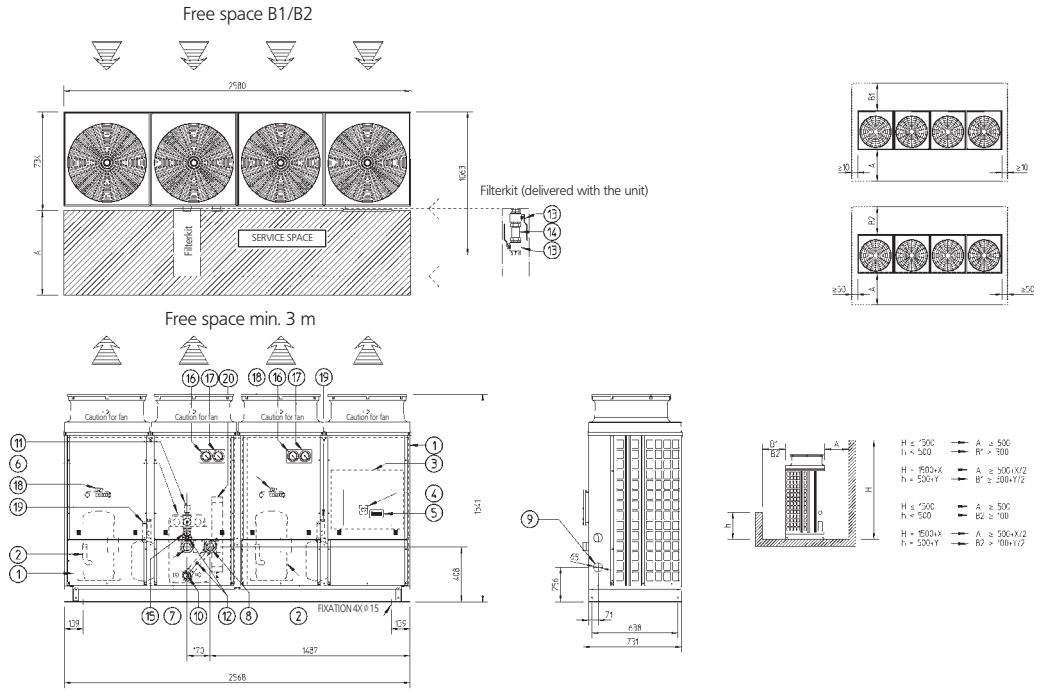
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Pump switch
6 Digital display controller
7 Water heat exchanger
8 Water IN connection: 2" M BSP
9 Water OUT connection: 2" M BSP
10 Power supply intake
11 Drain
12 Air purge
13 Expansion vessel
14 Safety valve
15 Pressure port
16 Ball valve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



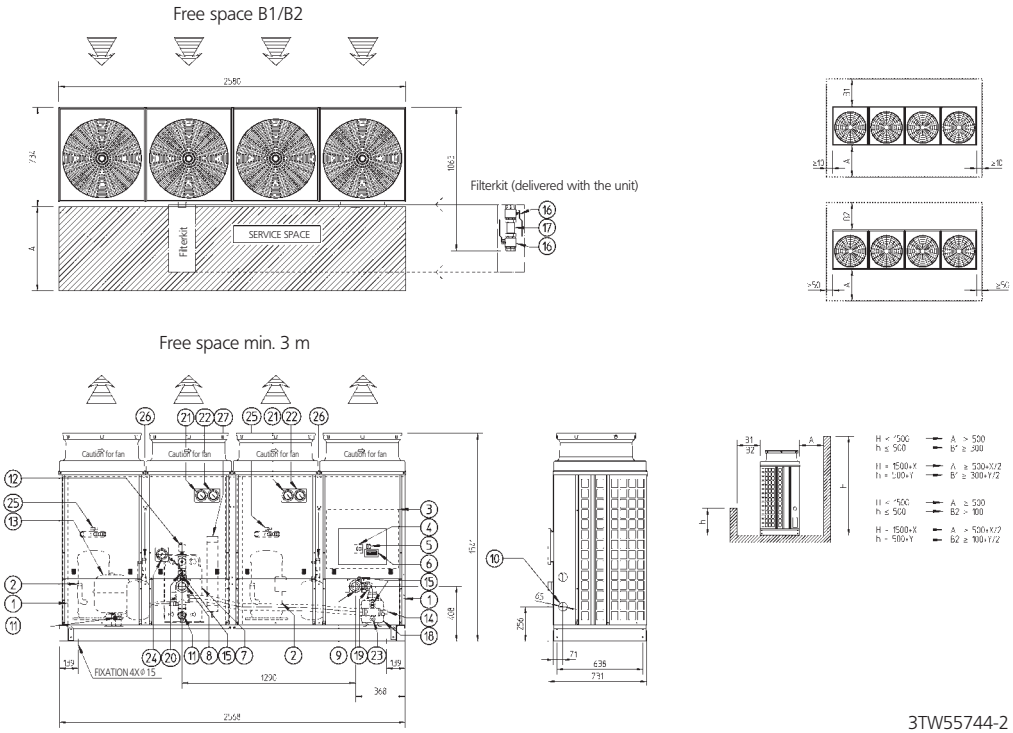
3TW55744-1

5 Dimensional drawings

5 - 1 Dimensional Drawings

EUWYP20-24KBZW1

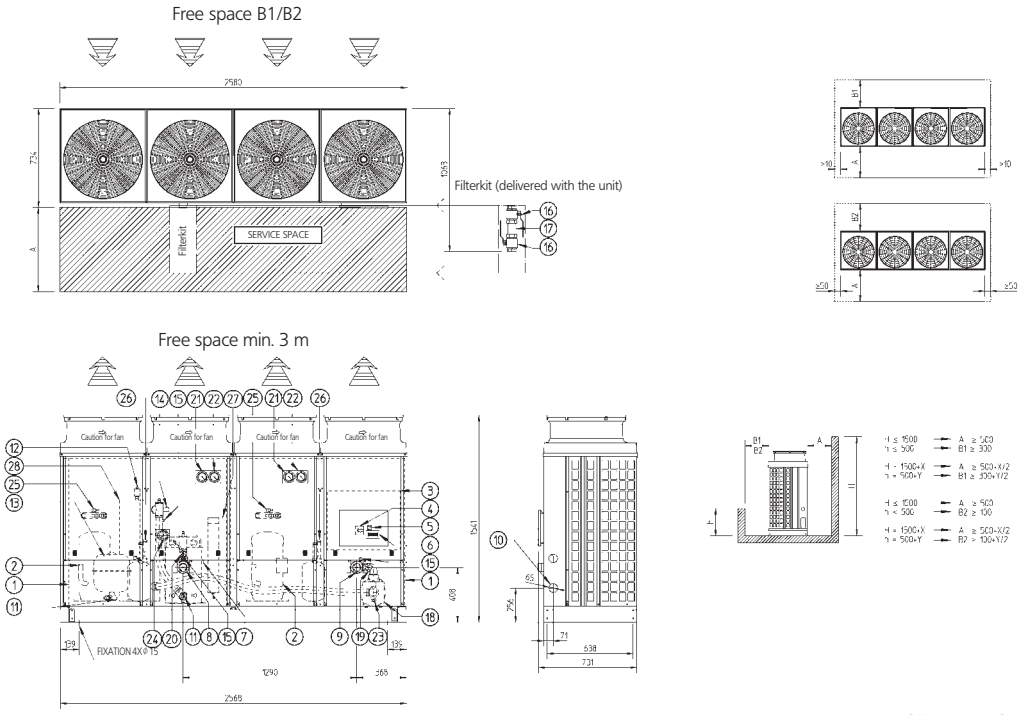
1 Air heat exchanger
2 Compressor
3 Switch box
4 Main switch
5 Pump switch
6 Digital display controller
7 Water heat exchanger
8 Water IN connection: 2" M BSP
9 Water OUT connection: 2" M BSP
10 Power supply intake
11 Drain
12 Air purge
13 Expansion vessel
14 Safety valve
15 Pressure port
16 Ball valve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



3TW55744-2

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

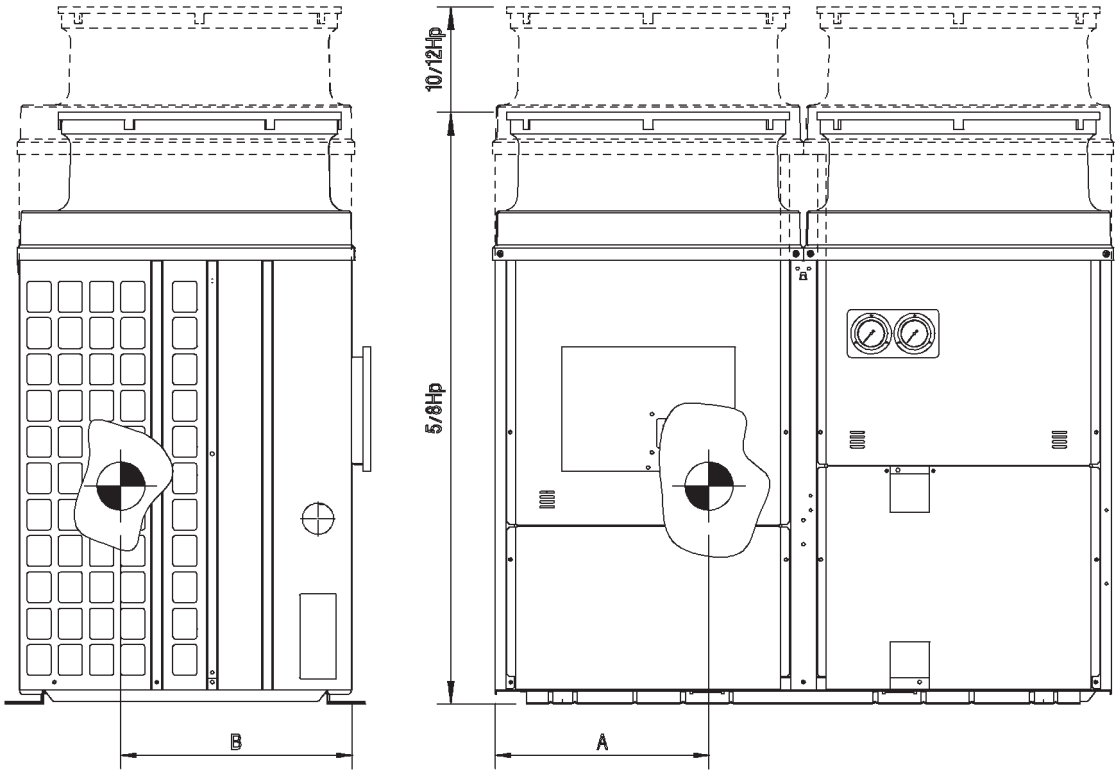


3TW55744-3

6 Centre of gravity

6 - 1 Centre of Gravity

EUWY*5-12KBZW1



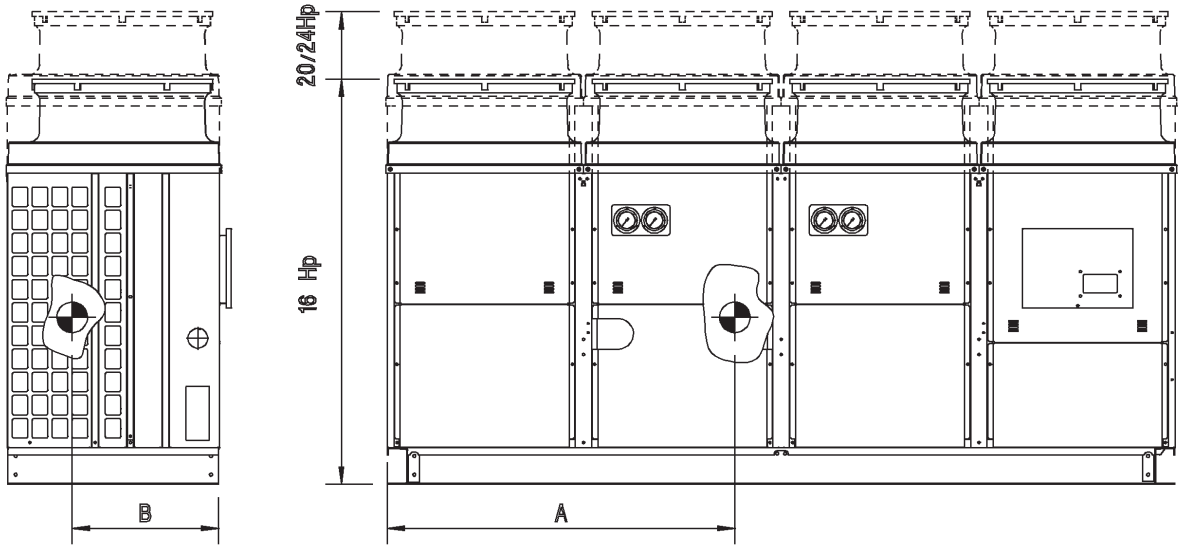
	5Hp		8Hp		10Hp		12Hp	
	A	B	A	B	A	B	A	B
B-Models	520	420	480	420	490	430	490	430
P-Models	510	420	470	420	480	430	490	430
N-Models	480	420	440	430	450	430	460	430

4TW54759-2

6 Centre of gravity

6 - 1 Centre of Gravity

EUWY*16-24KBZW1



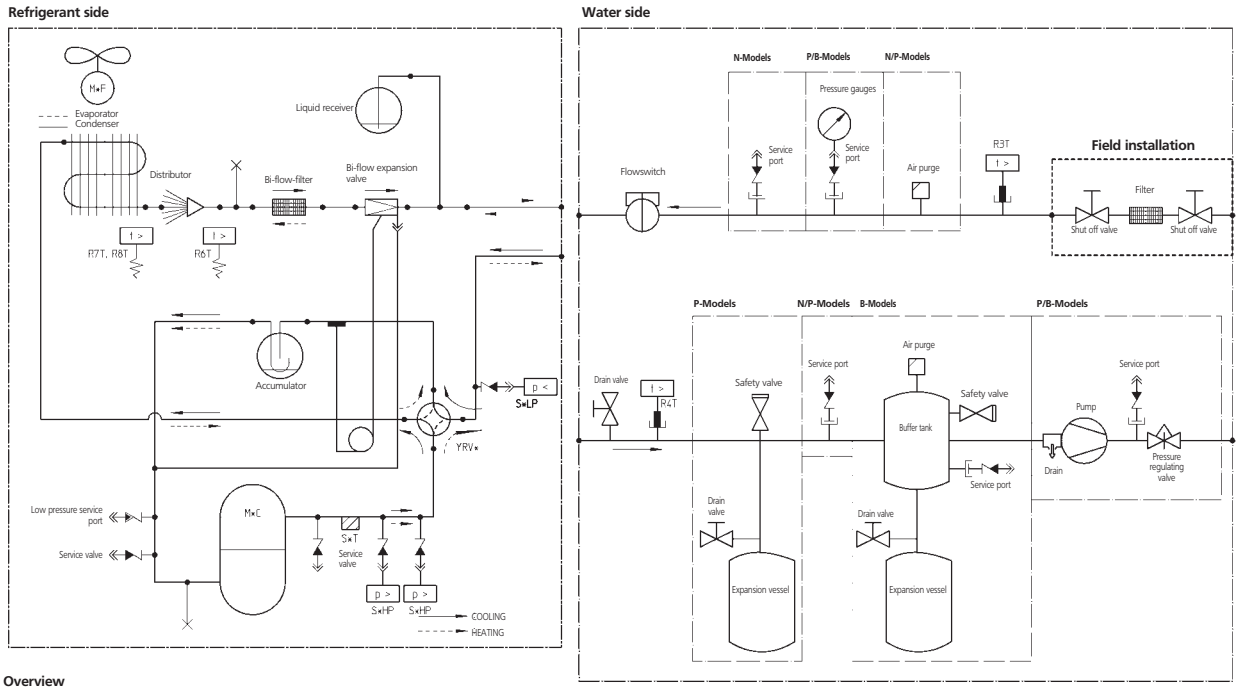
	16Hp		20Hp		24Hp	
	A	B	A	B	A	B
B-Models	1115	435	1120	435	1115	435
P-Models	1145	435	1140	435	1135	435
N-Models	1110	430	1115	435	1110	435

4TW54799-2

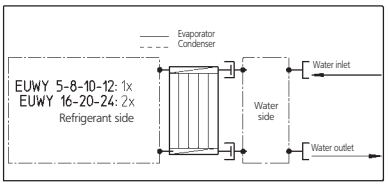
7 Piping diagrams

7 - 1 Piping Diagrams

EUWY*5-24KBZW1



Overview



R3T	Inlet water temperature sensor
R4T	Outlet water temperature sensor
R6T	Ambient temperature sensor
R7-8T	Coil temperature sensor
S*HP	High pressure switch
S*LP	Low pressure switch
M*F	Condenser fan
M*C	Compressor
YRV*	4-way valve
S*T	Discharge temperature controller

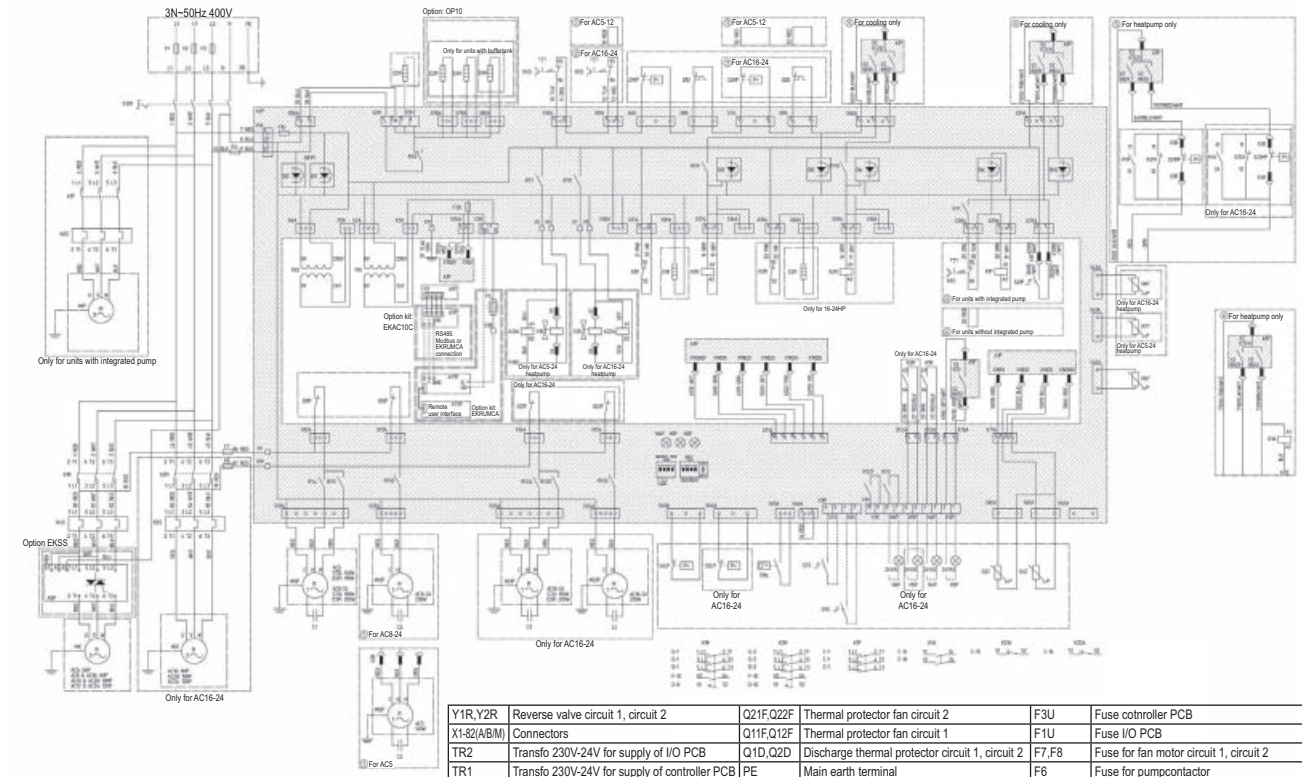
Check valve — Flare connection — Screw connection — Flange connection — Pinched pipe — Spinned pipe

3TW55695-1A

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 DI1 Reverse phase detection (L1-N) DI2 Reverse phase detection (N-L3) DI3 M1C ON detection DI4 M2C ON detection DI5 Safety device detection DI6 Pump ON detection DI7 – – DI8 – – DI9 – – DI10 Reverse valve request	DIGITAL INPUTS X1 (ID1-GND) : Flow switch X1 (ID2-GND) : Remote C/H selection X1 (ID3-GND) : High pressure switch + discharge protector + overcurrent X1 (ID4-GND) : Low pressure switch X1 (ID5-GND) : Remote On/Off
DIGITAL OUTPUTS (RELAYS) RY1 Reversed phase protector RY3 Pump/general operation RY4-24 Fan speed relay 1 RY5-25 Fan speed relay 2 RY6 Heatertape RY7 Reversing valve circ1 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	DIGITAL OUTPUTS (RELAYS) X2 (C1/2-NO1) : Compressor M1C on X2 (C1/2-NO2) : Compressor M2C on X2 (C3/4-NO3) : Voltage free contact for pump X2 (C3/4-NO4) : Reversing valve X2 (C5-NO5) : Alarm voltage free contact
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)	ANALOG INPUTS X1 (B1-GND) : inlet water t° X1 (B2-GND) : outlet water t° X1 (B3-GND) : none
	ANALOG OUTPUTS X1 (Y-GND)

	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

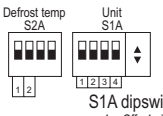
	All models (400V)						
Fuses + overcurrent	5HP	8HP	10HP	12HP	16HP	20HP	24HP
F4	8A	8A	8A	8A	8A	8A	8A
F5	250mAT	250mAT	250mAT	250mAT	250mAT	250mAT	250mAT
F7,8	5A	5A	5A	5A	5A	5A	5A
F1U	5A	5A	5A	5A	5A	5A	5A
F3U	315mAT	315mAT	315mAT	315mAT	315mAT	315mAT	315mAT
K4S	9A	14A	17A	24A	14A	17A	24A
K5S	– –	– –	– –	– –	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 cotnroller PCB
X1-82(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
		K6S	Overcurrent relay pump	E3H,E4H	Evaporator heatertape
S4LP,S5LP	Low pressure switch circuit 1, circuit 2	K4S,K5S	Overcurrent relay circuit 1, circuit 2	E1H,E2H	Crankcase heater circuit 1, circuit 2
S1HP,S2HP	High pressure switch circuit 1, circuit 2	K1M, K2M	Compressor contactor circuit 1, circuit 2	C1,C2,C3,C4	Capacitors for fanmotors
S21HP,S22HP	High pressure switch during defrost circuit 1, circuit 2	K1A	Auxiliary bypass relay	A71P	PCB: Power supply card
		K21A,K22A	Auxiliary bypass relay	A72P	PCB: Remote user interface
R7T,R8T	Coil temperature sensor for circuit 1, circuit 2	H6P	Indication lamp general operation	A5P	PCB: Softstarter for circuit 1
R6T	Ambient temperature sensor	H5P	Indication lamp operation compressor 2	A3P	PCB: Address card
R4T	Evaporator outlet water temperature sensor	H4P	Indication lamp operation compressor 1	A2P	PCB: I/O PCB
R3T	Evaporator inlet water temperature sensor	H3P	Indication lamp alarm	A1P	PCB: Controller PCB

1TW60006-1

NOTES

1. ·¹ : Terminal 1, ⁻ᶜ⁻ : Wire 2, – – – : Field wiring to be in accordance with the local electrical regulations, ⏚ : Earth wiring, ▭ : Option, ▨ : PCB, ▯ : outside switchbox
2. If compressor rotates reversely, it may be damaged
3. 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
4. Terminals for fieldwiring
   X1M: H3-6P: output terminal for fieldwiring (voltage free contact max 2A / output)
   X2M: E5H: fieldheater (max 500W reistive / 230VAC / 50Hz)
   X3M: S7S,S9S: Input terminal for fieldwiring (don't connect voltage)(switch load 6mA / 30VDC)
5. Y1R, Y2R are activated in cooling mode
   S7S open = heating
   S7S closed = cooling

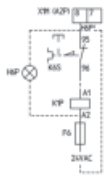


6. Dipswitch setting

   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)

7. 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

2
9

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

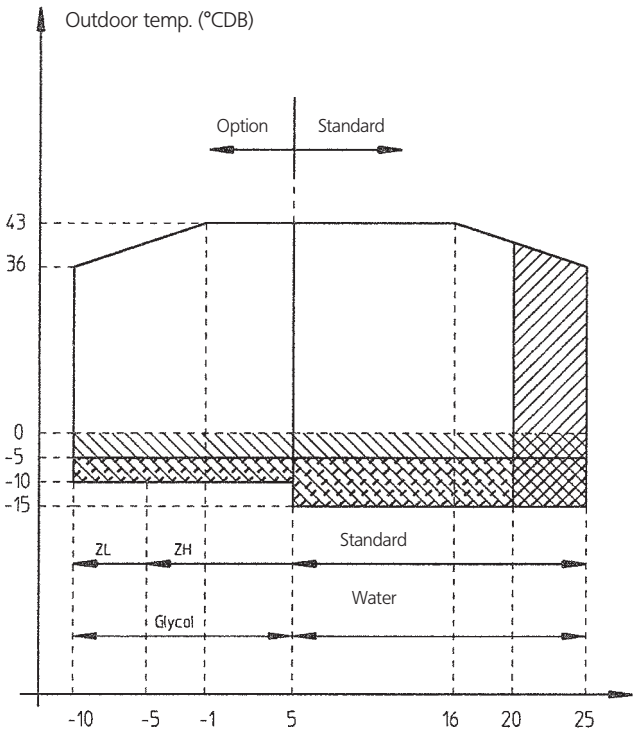
Names, definitions and units are according to JIS K 0101. Units and figures between brackets are old units published as reference only.

11 Operation range

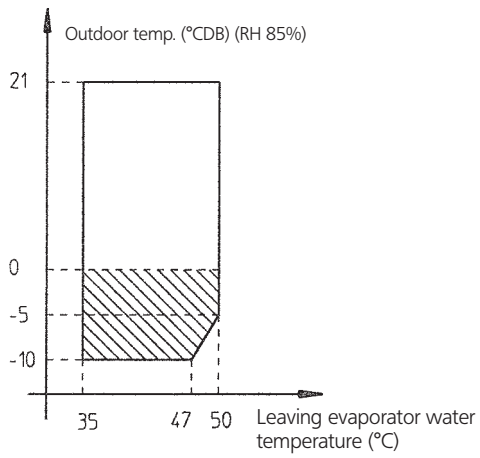
11 - 1 Operation Range

EUWY*5-24KBZW1

Cooling mode



Heating mode



: Pull down area

: Protect the water circuit against freezing

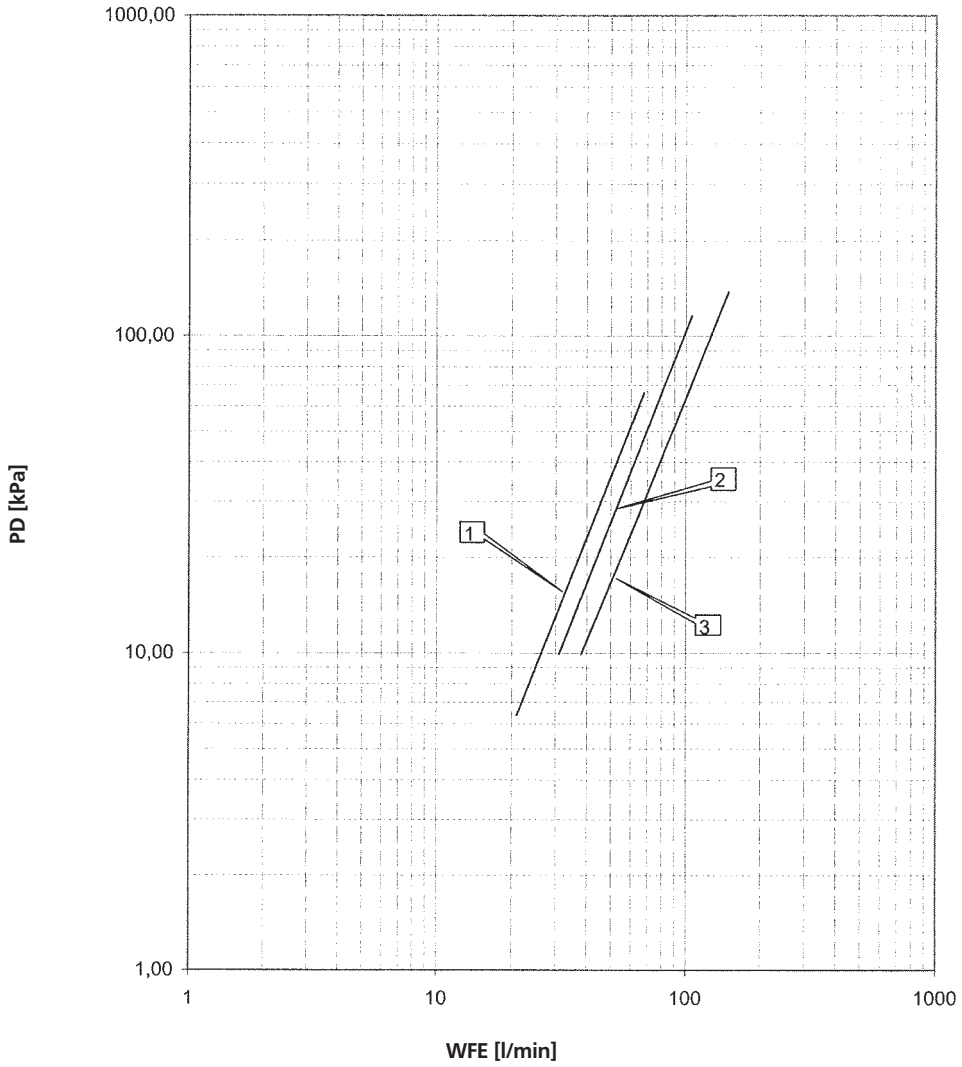
: If the units operate below -5°C and are installed in a rather windy space, a windscreen is required.

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.

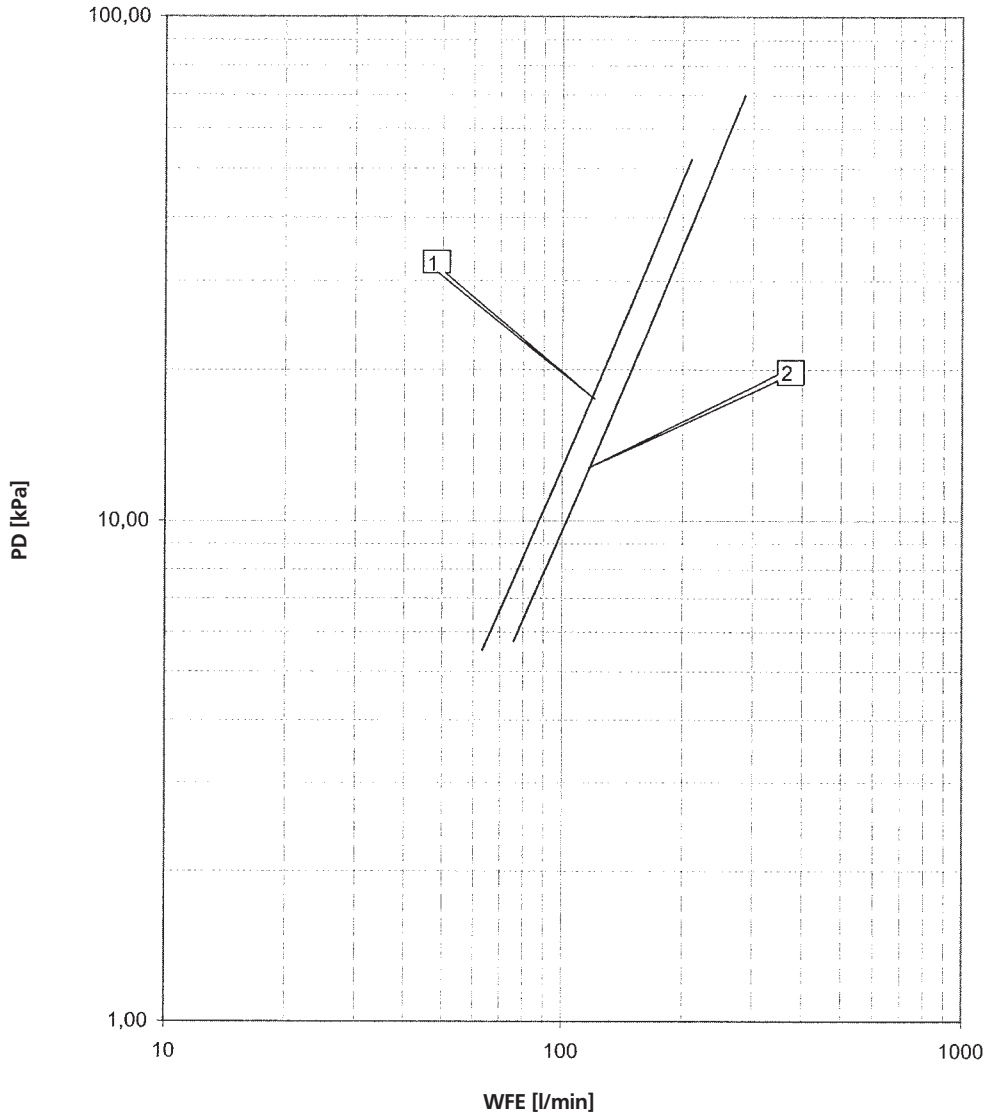
(*) Note:
Minimum allowed flow of 12 Hp is 45 l/min.

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.

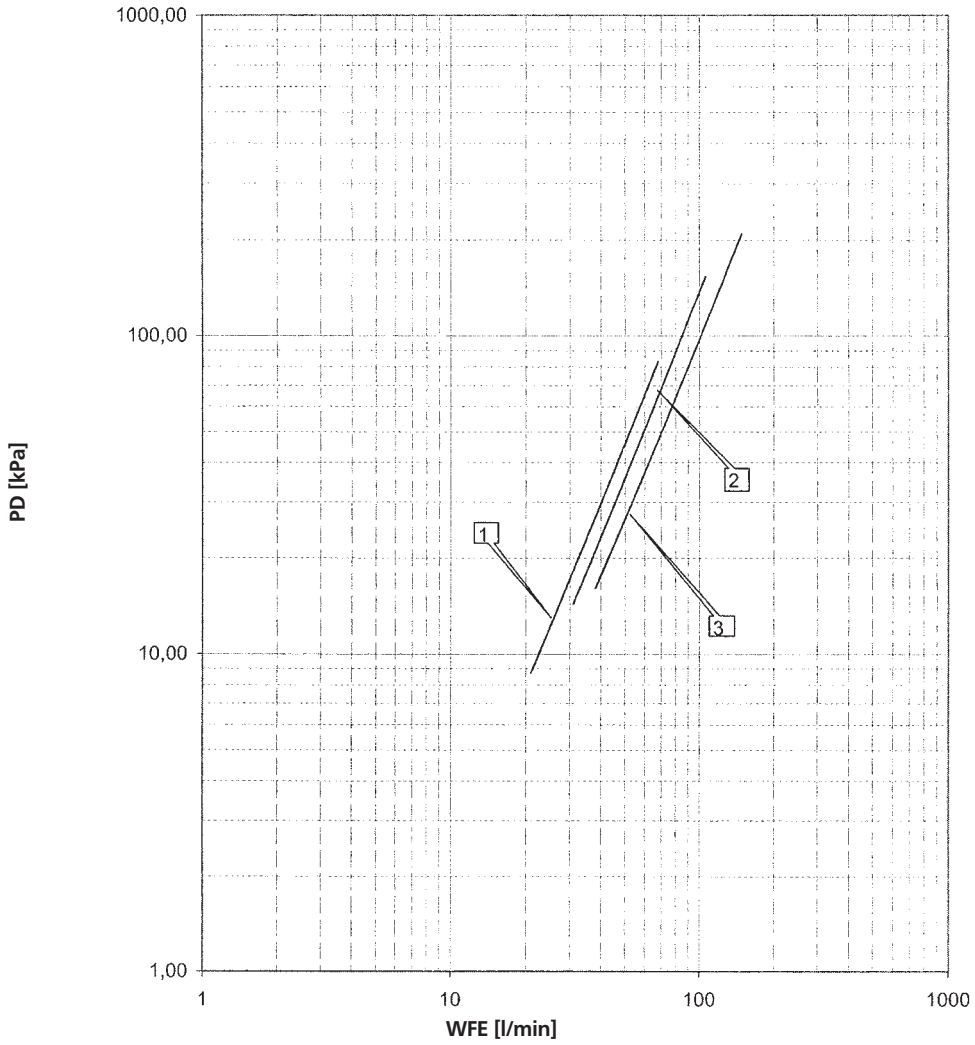
(*) Note:
Minimum allowed waterflow of 24 Hp unit is 90 l/min.

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.

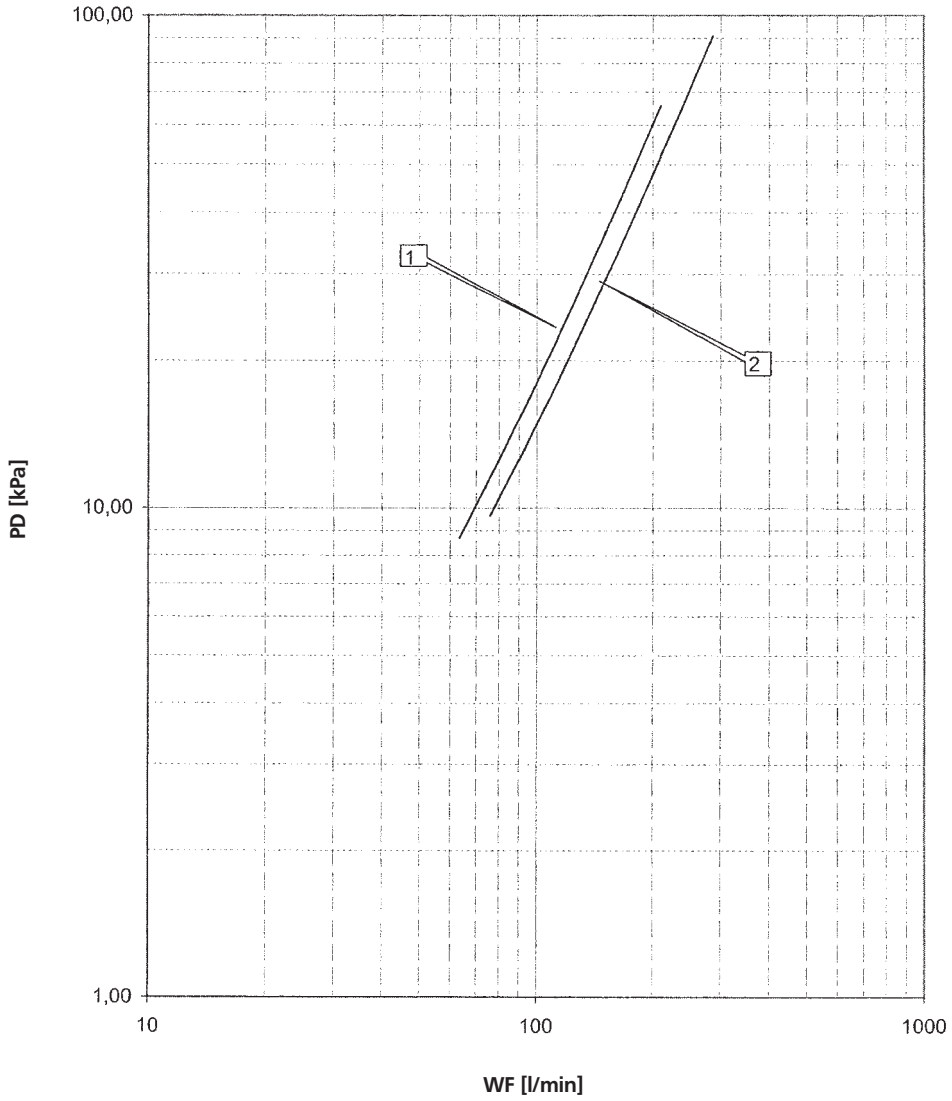
(*) Note:
Minimum allowed flow of 12 Hp is 45 l/min.

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.

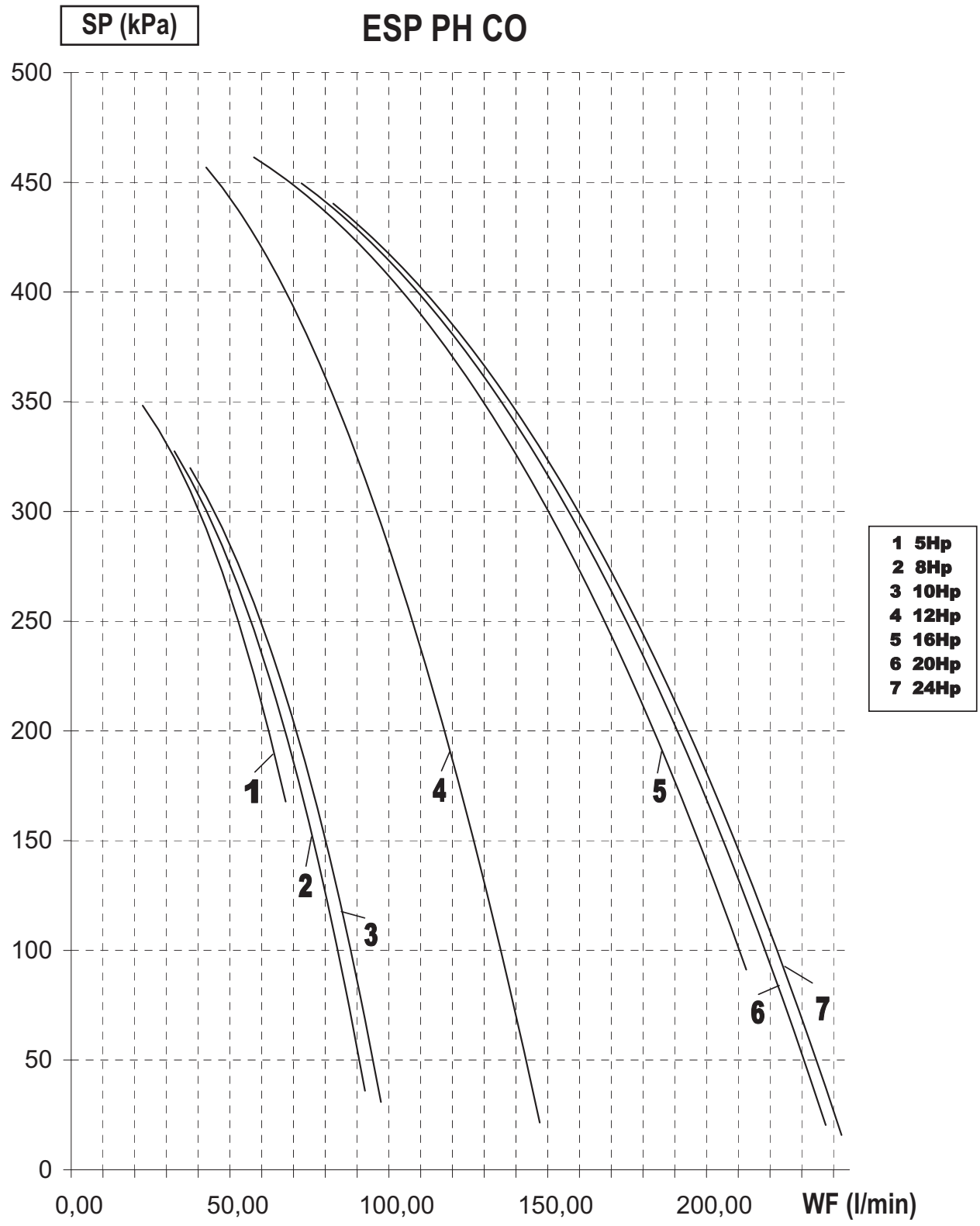
(*) Note:
Minimum allowed waterflow of 24 Hp unit is 90 l/min.

4TW55739-6

12 Hydraulic performance

12 - 3 External Static Pressure Drop Unit

EUWY5-24KBZW1

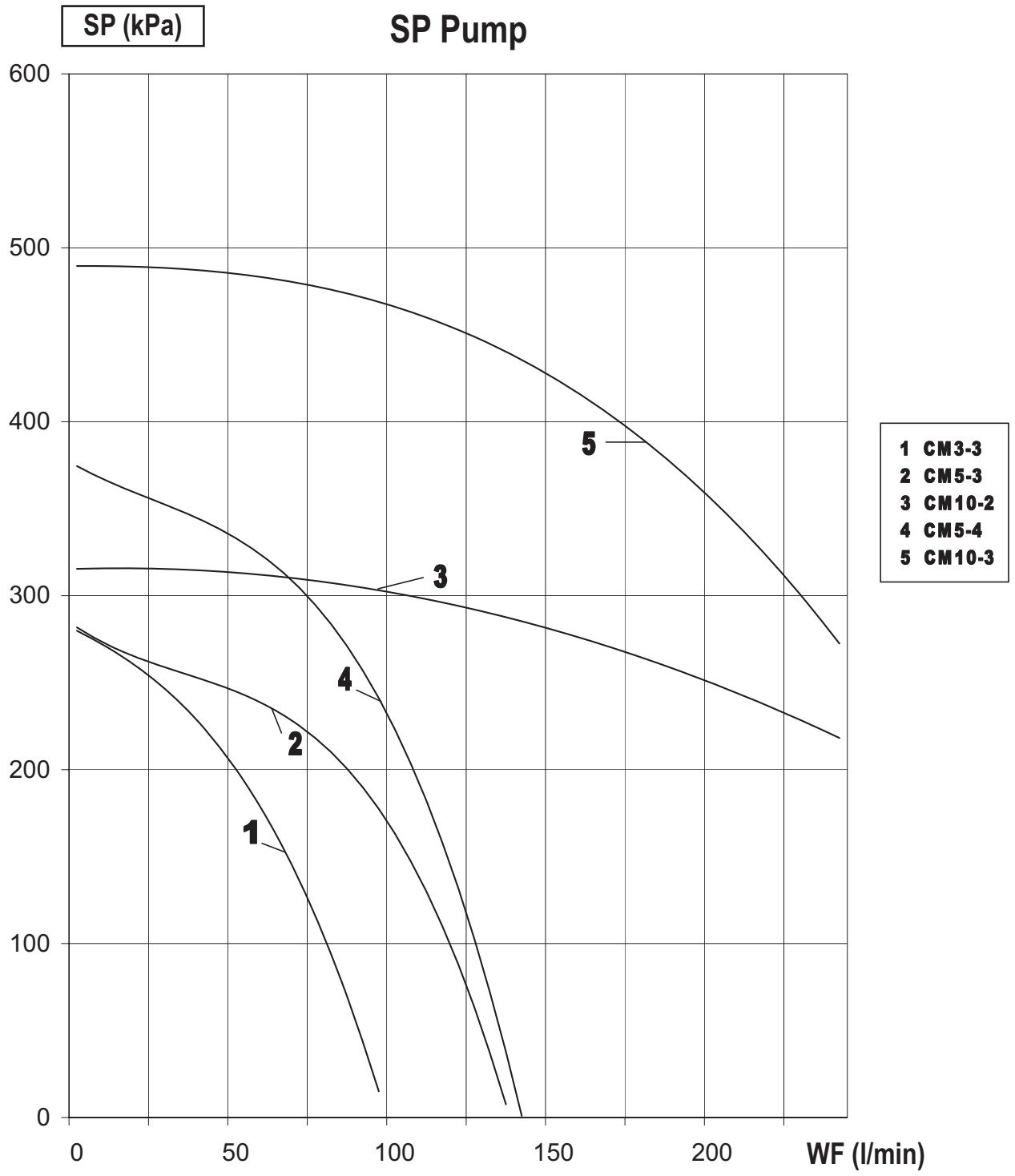


4TW60079-4

12 Hydraulic performance

12 - 4 Static Pressure Pump

EUWA5-24KBZW1
EUWY5-24KBZW1



4TW60009-3

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