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## EUWA5-30HD



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# 1

## Features



The Daikin EUWA-HD series are packaged air-cooled water chillers with cooling applications for outdoor installation. They are available in 7 models with nominal cooling capacities ranging from 10.3 to 65.2 kW. These series are ideal in combination with Daikin fan coil units or air handling units for air conditioning offices, hotels, restaurants, shops, etc., or for supplying water for industrial applications.

- Daikin scroll compressor
- Low operating sound level
- Electronic DDC controller
- Low energy consumption
- High quality, anti-corrosion treated components as standard
- Pre-coated condenser coil fins
- Compact dimensions and low refrigerant volume
- Easy installation and maintenance
- Stainless steel plate heat exchanger

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## 2 Specifications



NOMINAL CAPACITY, CAPACITY STEPS and NOMINAL INPUT						
UNITS			EUWA5HD	EUWA8HD	EUWA10HD	EUWA15HD
NOMINAL CAPACITY (1)	Cooling	kW	10.3	18.3	21.6	30.7
CAPACITY STEPS		%	100	100	100	100 - 66
NOMINAL INPUT	Cooling	kW	4.3	6.4	8.5	13.2

TECHNICAL SPECIFICATIONS							
UNITS				EUWA5HD	EUWA8HD	EUWA10HD	EUWA15HD
DIMENSIONS	Unit	H	mm	1,444	1,220	1,444	1,535
		W	mm	645	1,290	1,290	1,930
		D	mm	700	700	700	700
WEIGHT	Machine weight	kg		135	200	230	375
	Operation weight	kg		137	202	233	380
MATERIAL				Polyester coated galvanised steel plate			
COLOUR				Ivory white / Munsell code 5Y7.5/1			
SOUND LEVEL (2)	Sound pressure	dB(A)		-	-	-	-
	Sound power	dB(A)		69	78	78	78
FAN	Air flow rate	m <sup>3</sup> /min		80	170	170	170 + 80
	Type			Direct drive			
	Qty x model			1	2	2	3
	No. of motors x output	W		1 x 140	190 + 230	190 + 230	140 + 190 + 230
	Discharge			Vertical			
WATER HEAT EXCHANGER	Type			Brased plate heat exchanger, one per circuit			
	Qty x model			1 x CB51 - 30H	1 x CB51 - 50H	1 x CB51 - 60H	1 x CB51 - 60H + 1 x CB51 - 30H
	Minimum water volume in the system (3)	l		50	90	100	100
	Water flow rate (WFR)	l/min		17 - 75	30 - 120	40 - 145	60 - 220
	Nominal water pressure drop	kPa		25	25	27	23
	Insulation material			Climaflex			
AIR HEAT EXCHANGER	Type			Cross fin coil Hi-X tubes and PE coated waffle louvre fins			
	Rows x stages x fin pitch	mm		2 x 50 x 2.0	2 x 40 x 2.0	2 x 50 x 2.0	2 x 50 x 2.0
	Face area	m <sup>2</sup>		1.26	1.57	1.97	1.97 + 1.26
REFRIGERANT CIRCUIT	Refrigerant type			R-22			
	Refrigerant charge	kg		3.6	5.1	5.9	5.9 + 3.6
	No. of circuits			1	1	1	2
	Refrigerant control			Capillary tube			
COMPRESSOR	Type			Hermetically sealed scroll			
	Qty x model	W1		1 x JT140B-YE	1 x JT212A-YE	1 x JT265A-YE	1 x JT265A-YE + 1 x JT140B-YE
	No. of compressors			1	1	1	2
	Speed	rpm		2,900	2,900	2,900	2,900
	Refrigerant oil			Suniso 4GSDID-K			
	Refrigerant oil charge	l		1.5	2.7	2.7	2.7 + 1.5
	Crankcase heater	W		33	50	50	50 + 33
PIPING CONNECTIONS	PHE water in-/outlet			FBSP 3/4"	FBSP 1"	FBSP 1"	FBSP 2"
SAFETY DEVICES				High pressure switch / Evaporating temperature protection / Discharge temperature control / Outlet water temperature protection / Compressor motor overcurrent / Fan thermal protector / Anti-recycling and guard timer / Digital display controller with electronic temperature control / Reverse phase protector / Internal fuses for each circuit			

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**2**

## 2 Specifications



NOMINAL CAPACITY, CAPACITY STEPS and NOMINAL INPUT					
UNITS			EUWA20HD	EUWA25HD	EUWA30HD
NOMINAL CAPACITY (1)	Cooling	kW	43.6	52.9	65.2
CAPACITY STEPS		%	100 - 50	100 - 60 - 40	100 - 66 - 33
NOMINAL INPUT	Cooling	kW	17.3	21.5	26.0

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# 2

TECHNICAL SPECIFICATIONS						
UNITS				EUWA20HD	EUWA25HD	EUWA30HD
DIMENSIONS	Unit	H	mm	1,535	1,535	1,535
		W	mm	2,575	3,220	3,865
		D	mm	700	700	700
WEIGHT	Machine weight	kg		510	655	780
	Operation weight	kg		516	663	789
MATERIAL				Polyester coated galvanised steel plate		
COLOUR				Ivory white / Munsell code 5Y7.5/1		
SOUND LEVEL (2)	Sound pressure	dB(A)		-	-	-
	Sound power	dB(A)		81	81	83
FAN	Air flow rate	m <sup>3</sup> /min		2 x 170	2 x 170 + 80	3 x 170
	Type			Direct drive		
	Qty x model			4	5	6
	No. of motors x output	W		2 x 190 + 2 x 230	140 + 2 x 190 + 2 x 230	3 x 190 + 3 x 230
	Discharge			Vertical		
WATER HEAT EXCHANGER	Type			Brased plate heat exchanger, one per circuit		
	Qty x model			2 x CB51 - 60H	2 x CB51 - 60H + 1 x CB51 - 30H	3 x CB51 - 60H
	Minimum water volume in the system (3)	l		100	100	100
	Water flow rate (WFR)	l/min		80 - 290	100 - 370	120 - 440
	Nominal water pressure drop	kPa		27	25	27
	Insulation material			Climaflex		
AIR HEAT EXCHANGER	Type			Cross fin coil Hi-X tubes and PE coated waffle louvre fins		
	Rows x stages x fin pitch	mm		2 x 50 x 2.0	2 x 50 x 2.0	2 x 50 x 2.0
	Face area	m <sup>2</sup>		2 x 1.97	2 x 1.97 + 1.26	3 x 1.97
REFRIGERANT CIRCUIT	Refrigerant type			R-22		
	Refrigerant charge	kg		2 x 5.9	2 x 5.9 + 3.6	3 x 5.9
	No. of circuits			2	3	3
	Refrigerant control			Capillary tube		
COMPRESSOR	Type			Hermetically sealed scroll		
	Qty x model	W1		2 x JT265A-YE	2 x JT265A-YE + 1 x JT140B-YE	3 x JT265A-YE
	No. of compressors			2	3	3
	Speed	rpm		2,900	2,900	2,900
	Refrigerant oil			Suniso 4GSDID-K		
	Refrigerant oil charge	l		2 x 2.7	2 x 2.7 + 1.5	3 x 2.7
	Crankcase heater	W		2 x 50	2 x 50 + 33	3 x 50
PIPING CONNECTIONS	PHE water in-/outlet			FBSP 2"	FBSP 2-1/2"	FBSP 2-1/2"
SAFETY DEVICES				High pressure switch / Evaporating temperature protection/ Discharge temperature control / Outlet water temperature protection / Compressor motor overcurrent / Fan thermal protector / Anti-recycling and guard timer / Digital display controller with electronic temperature control / Reverse phase protector / Internal fuses for each circuit		

## 2 Specifications



ELECTRICAL SPECIFICATIONS						
UNITS			EUWA5HD	EUWA8HD	EUWA10HD	EUWA15HD
POWER SUPPLY			W1	W1	W1	W1
NOMINAL DISTRIBUTION SYSTEM VOLTAGE	Phase		3N~	3N~	3N~	3N~
	Frequency	Hz	50	50	50	50
	Voltage	V	400	400	400	400
	Voltage tolerance	%	± 10	± 10	± 10	± 10
UNIT	Starting current		A	—	—	—
	Nominal running current		A	8.0	13.2	16.0
	Maximum running current		A	12.5	21.5	24.5
	Recommended fuses according to IEC standard 269-2		aM	3 x 20	3 x 25	3 x 32
COMPRESSOR	Phase		3~	3~	3~	3~
	Voltage	V	400	400	400	400
	Starting current		A	49	79	108/49
	Nominal running current		A	5.5	9.7	12.5
	Maximum running current		A	10.0	18.0	21.0
	Starting method		Direct on line			
CONTROL CIRCUIT	Phase		1~			
	Voltage	V	230			
	Recommended fuses		Factory mounted			

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2

## 2 Specifications


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**2**

ELECTRICAL SPECIFICATIONS					
UNITS			EUWA20HD	EUWA25HD	EUWA30HD
POWER SUPPLY			W1	W1	W1
NOMINAL DISTRIBUTION SYSTEM VOLTAGE	Phase		3N~	3N~	3N~
	Frequency	Hz	50	50	50
	Voltage	V	400	400	400
	Voltage tolerance	%	± 10	± 10	± 10
UNIT	Starting current		–	–	–
	Nominal running current		31.0	38.0	46.0
	Maximum running current		48.0	59.5	71.5
	Recommended fuses according to IEC standard 269-2		3 x 50	3 x 63	3 x 80
COMPRESSOR	Phase		3~	3~	3~
	Voltage	V	400	400	400
	Starting current		109	109/49	109
	Nominal running current		2 x 12.5	2 x 12.5 + 5.5	3 x 12.5
	Maximum running current		21.0	21/10	21.0
	Starting method		Direct on line		
CONTROL CIRCUIT	Phase		1~		
	Voltage	V	230		
	Recommended fuses		Factory mounted		

### NOTES

- Nominal cooling capacities are based on the following conditions:  
evaporator: 12°C/7°C; ambient: 35°C
- The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value, depending on the distance and acoustic environment. The sound power level is an absolute value indicating the "power" which a sound source generates.
- Minimum water volume for standard thermostat difference setting of 3K (5/8/10hp); 1.5K (15/20/25/30hp)  
For reduced setting multiply this water volume by 3 (5/8/10hp); 1.5 (15/20/25/30hp) / new setting  
Min. allowable setting = 0.1K (5/8/10hp); 0.4K (15/20/25/30hp)

# 3 Capacity tables

## 3-1 Cooling capacities for air conditioning applications



AMBIENT TEMPERATURE (°CDB)		15		20		25		30		35		39	
LWE (°C)	MODEL	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
4	5HD	10.9	2.6	10.5	3.0	10.2	3.3	9.9	3.8	9.8	4.2	9.3	4.7
	8HD	19.5	4.0	19.0	4.5	18.4	5.1	17.8	5.7	17.2	6.3	16.7	6.8
	10HD	23.1	5.2	22.4	6.0	21.7	6.7	21.0	7.5	20.3	8.3	19.8	8.9
	15HD	32.9	8.1	31.9	9.3	30.8	10.5	29.8	11.6	28.9	12.8	28.0	13.8
	20HD	46.7	10.6	45.3	12.2	43.8	13.7	42.4	15.3	41.0	17.0	39.9	18.1
	25HD	56.4	13.2	54.7	15.1	53.1	17.1	51.4	19.0	49.8	20.8	48.5	22.4
	30HD	69.7	15.9	67.6	18.2	65.5	20.5	63.4	22.8	61.4	25.1	59.8	27.0
7	5HD	11.5	2.7	11.1	3.1	10.9	3.4	10.5	3.9	10.3	4.3	10.0	4.7
	8HD	20.5	4.2	20.0	4.7	19.4	5.3	18.9	5.9	18.3	6.4	17.8	6.9
	10HD	24.3	5.5	23.6	6.2	22.9	7.0	22.3	7.8	21.6	8.5	21.0	9.2
	15HD	34.5	8.3	33.6	9.6	32.6	10.8	31.7	12.0	30.7	13.2	30.0	14.2
	20HD	49.0	11.1	47.7	12.7	46.3	14.2	45.0	15.8	43.6	17.3	42.5	18.6
	25HD	59.5	13.7	57.9	15.6	56.2	17.6	54.6	19.5	52.9	21.5	51.6	23.0
	30HD	73.4	16.4	71.3	18.8	69.3	21.2	67.2	23.6	65.2	26.0	63.5	27.9
10	5HD	12.1	2.8	11.7	3.2	11.4	3.5	11.1	4.0	10.7	4.4	10.5	4.7
	8HD	21.6	4.3	21.1	4.9	20.4	5.5	19.9	6.1	19.3	6.6	18.9	7.1
	10HD	25.6	5.7	24.9	6.5	24.2	7.2	23.6	8.0	22.9	8.8	22.3	9.4
	15HD	36.4	8.7	35.4	9.9	34.5	11.1	33.5	12.4	32.5	13.6	31.8	14.5
	20HD	51.6	11.6	50.3	13.2	48.9	14.7	47.6	16.3	46.2	17.8	45.1	19.1
	25HD	62.8	14.2	61.1	16.2	59.4	18.2	57.7	20.1	56.0	22.0	54.7	23.6
	30HD	77.3	17.3	75.2	19.6	73.2	22.0	71.1	24.3	69.1	26.6	67.4	28.5
13	5HD	12.6	3.0	12.3	3.4	12.0	3.8	11.6	4.2	11.4	4.6	11.1	4.9
	8HD	22.8	4.5	22.2	5.1	21.6	5.7	21.1	6.2	20.4	6.8	20.0	7.3
	10HD	26.9	6.0	26.2	6.7	25.5	7.5	24.8	8.2	24.1	9.0	23.6	9.6
	15HD	38.3	9.3	37.3	10.5	36.3	11.6	35.3	12.7	34.4	14.0	33.5	14.9
	20HD	54.3	12.1	52.9	13.7	51.6	15.2	50.1	16.7	48.7	18.3	47.7	19.6
	25HD	65.8	14.9	64.2	16.8	62.5	18.8	60.9	20.7	59.1	22.6	57.8	24.2
	30HD	81.3	17.9	79.2	20.3	77.1	22.6	75.0	25.0	72.9	27.4	71.3	29.3
16	5HD	13.3	3.4	12.9	3.8	12.5	4.0	12.2	4.3	12.0	4.7	11.6	4.9
	8HD	23.8	4.7	23.2	5.3	22.7	5.9	22.1	6.4	21.5	7.0	21.1	7.5
	10HD	28.2	6.2	27.5	7.0	26.8	7.7	26.1	8.5	25.4	9.2	24.9	9.9
	15HD	40.1	10.0	39.1	11.0	38.1	12.0	37.1	13.0	36.1	14.3	35.3	15.2
	20HD	57.0	12.6	55.6	14.2	54.1	15.7	52.8	17.2	51.4	18.8	50.3	20.1
	25HD	69.1	15.6	67.3	17.4	65.7	19.3	64.0	21.2	62.3	23.3	60.9	24.9
	30HD	85.3	18.2	83.2	20.8	81.0	23.3	78.8	25.9	76.7	28.2	75.3	30.1
19	5HD	13.8	3.7	13.4	3.8	13.2	4.0	12.8	4.3	12.5	4.7	12.2	4.9
	8HD	25.0	4.9	24.4	5.5	23.8	6.0	23.2	6.6	22.7	7.2	22.2	7.7
	10HD	29.5	6.4	28.8	7.2	28.1	8.0	27.4	8.7	26.7	9.5	26.2	10.1
	15HD	41.9	10.4	40.9	11.4	39.9	12.4	38.9	13.4	37.9	14.6	37.1	15.5
	20HD	59.6	13.1	58.2	14.7	56.8	16.2	55.4	17.7	54.0	19.3	52.9	20.6
	25HD	72.2	16.6	70.5	18.3	68.8	20.0	67.0	21.7	65.4	23.9	64.0	25.6
	30HD	89.8	18.6	87.4	21.3	85.0	24.0	82.5	26.6	80.5	29.1	79.2	31.0

### SYMBOLS

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

### NOTES

- Cooling capacity (CAP)**  
 CAP = Cool. Cap. from table (kW)  
 NOTE: Capacity is for chilled water range Dt = 3-8°C
- Power input (PC)**  
 PI = Power input from table (kW)  
 NOTE: Power input is total input: compressor + fans + control circuit + pumps
- Water flow rate (WFR)**  
 $WFR = (860 \times CAP) / (60 \times Dt)$  (l/min)  
 CAP = From above calculation  
 Dt = Chilled water temperature rise within 3-8°C  
 NOTE: WFR should always be within the limits
- Water pressure drop through the evaporator (PDw)**  
 PDw = Water pressure drop from water pressure drop curve at above calculated WFR.
- CAP and PI are according to the Eurovent rating standard 6/C/003-96.

Shows nominal cooling capacities

# 3 Capacity tables

## 3-2 Cooling capacities with glycol for process cooling application



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3

3-2

AMBIENT TEMPERATURE (°CDB)		15		20		25		30		35		39	
LWE (°C)	MODEL	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
-10	5	4.8	1.4	4.5	2.1	4.3	2.7	4.0	3.3	3.7	4.0	-	-
	8	8.7	3.1	8.2	3.7	7.7	4.3	7.2	4.9	6.7	5.5	-	-
	10	10.3	4.1	9.7	4.9	9.1	5.6	8.5	6.4	7.9	7.2	-	-
	15	15.1	5.8	14.2	7.2	13.4	8.5	12.5	9.9	11.6	11.2	-	-
	20	20.6	8.3	19.4	9.9	18.2	11.4	17.0	13.0	15.8	14.6	-	-
	25	25.4	10.0	23.9	12.0	22.5	14.0	21.0	16.0	19.5	18.0	-	-
-8	30	30.9	13.5	29.1	15.5	27.3	17.5	25.5	19.5	23.7	21.5	-	-
	5	5.6	1.6	5.3	2.2	5.0	2.8	4.7	3.4	4.4	4.0	-	-
	8	10.0	3.3	9.5	3.8	8.9	4.4	8.4	5.0	7.9	5.6	-	-
	10	11.8	4.2	11.2	5.0	10.5	5.8	9.9	6.6	9.3	7.3	-	-
	15	17.4	6.1	16.5	7.5	15.5	8.8	14.6	10.1	13.7	11.4	-	-
	20	23.6	8.6	22.4	10.2	21.0	11.8	19.8	13.3	18.6	14.9	-	-
-6	25	29.2	10.5	27.7	12.5	26.0	14.5	24.5	16.5	23.0	18.5	-	-
	30	35.4	13.8	33.6	15.9	31.5	17.9	29.7	20.0	27.9	22.0	-	-
	5	6.3	1.7	6.0	2.3	5.7	2.9	5.3	3.5	5.0	4.1	-	-
	8	11.3	3.4	10.7	4.0	10.2	4.5	9.6	5.1	9.1	5.7	-	-
	10	13.3	4.4	12.7	5.2	12.0	5.9	11.4	6.7	10.7	7.5	-	-
	15	19.6	6.4	18.7	7.7	17.7	9.1	16.7	10.4	15.7	11.7	-	-
-4	20	26.6	9.0	25.4	10.5	24.0	12.1	22.8	13.7	21.4	15.2	-	-
	25	32.9	10.9	31.4	12.9	29.7	14.9	28.1	16.9	26.4	18.9	-	-
	30	39.9	14.2	38.1	16.3	36.0	18.4	34.2	20.4	32.1	22.5	-	-
	5	7.0	1.9	6.7	2.4	6.3	3.0	6.0	3.6	5.7	4.1	5.4	4.5
	8	12.6	3.5	12.0	4.1	11.4	4.7	10.8	5.2	10.3	5.8	9.8	6.3
	10	14.9	4.6	14.2	5.3	13.5	6.1	12.8	6.9	12.1	7.6	11.5	8.3
-2	15	21.9	6.7	20.9	8.0	19.8	9.3	18.8	10.6	17.8	11.9	16.9	12.9
	20	29.8	9.3	28.4	10.9	27.0	12.4	25.6	14.0	24.2	15.5	23.0	16.8
	25	36.8	11.3	35.1	13.3	33.3	15.3	31.6	17.3	29.9	19.3	28.4	20.8
	30	44.7	14.6	42.6	16.7	40.5	18.8	38.4	20.9	36.3	23.0	34.5	24.7
	5	7.7	2.0	7.4	2.6	7.0	3.1	6.7	3.6	6.4	4.1	6.1	4.6
	8	13.9	3.6	13.3	4.2	12.7	4.8	12.1	5.4	11.5	5.9	11.0	6.4
0	10	16.4	4.7	15.7	5.5	15.0	6.3	14.2	7.0	13.5	7.8	12.9	8.4
	15	24.1	7.1	23.1	8.3	22.0	9.6	20.9	10.9	19.9	12.1	19.0	13.2
	20	32.8	9.6	31.4	11.2	30.0	12.7	28.4	14.3	27.0	15.9	25.8	17.1
	25	40.5	11.8	38.8	13.7	37.0	15.7	35.1	17.7	33.4	19.7	31.9	21.2
	30	49.2	14.9	47.1	17.1	45.0	19.2	42.6	21.4	40.5	23.6	38.7	25.3
	5	8.4	2.2	8.1	2.7	7.7	3.2	7.4	3.7	7.0	4.2	6.7	4.6
2	8	15.2	3.7	14.6	4.3	13.9	4.9	13.3	5.5	12.6	6.1	12.1	6.5
	10	17.9	4.9	17.2	5.7	16.4	6.4	15.7	7.2	14.9	8.0	14.3	8.6
	15	26.3	7.4	25.3	8.6	24.1	9.9	23.1	11.1	21.9	12.4	21.0	13.4
	20	35.8	9.9	34.4	11.5	32.8	13.1	31.4	14.6	29.8	16.2	28.6	17.5
	25	44.2	12.2	42.5	14.2	40.5	16.1	38.8	18.1	36.8	20.1	35.3	21.6
	30	53.7	15.3	51.6	17.5	49.2	19.7	47.1	21.9	44.7	24.1	42.9	25.8
	5	9.2	2.3	8.8	2.8	8.4	3.3	8.1	3.8	7.7	4.2	7.4	4.6
	8	16.5	3.9	15.8	4.4	15.2	5.0	14.5	5.6	13.8	6.2	13.3	6.7
	10	19.5	5.0	18.7	5.8	17.9	6.6	17.1	7.4	16.3	8.1	15.7	8.7
	15	28.7	7.7	27.5	8.9	26.3	10.1	25.2	11.4	24.0	12.6	23.1	13.6
	20	39.0	10.3	37.4	11.8	35.8	13.4	34.2	15.0	32.6	16.5	31.4	17.8
	25	48.2	12.6	46.2	14.6	44.2	16.6	42.3	18.5	40.3	20.5	38.8	22.0
	30	58.5	15.6	56.1	17.9	53.7	20.1	51.3	22.4	48.9	24.6	47.1	26.4

### SYMBOLS

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

### NOTES

- Cooling capacity (CAP)**  
CAP = Cool. Cap. from table (kW)  
NOTE: Capacity is for chilled water range Dt = 3-8°C
- Power input (PC)**  
PI = Power input from table (kW)  
NOTE: Power input is total input: compressor + fans + control circuit + pumps
- Water flow rate (WFR)**  
WFR = (860 x CAP)/(60 x Dt) (l/min)  
CAP = From above calculation  
Dt = Chilled water temperature rise within 3-8°C  
NOTE: WFR should always be within the limits
- Water pressure drop through the evaporator (PDw)**  
PDw = Water pressure drop from water pressure drop curve at above calculated WFR.
- CAP and PI are according to the Eurovent rating standard 6/C/003-96.



# 3 Capacity tables

## 3-2 Cooling capacities with glycol for process cooling application



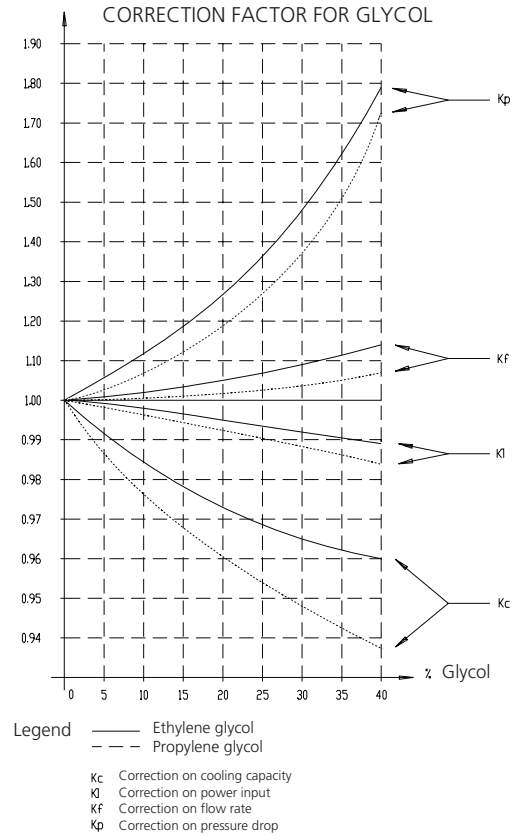
4

3

3-2

Required glycol concentration

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

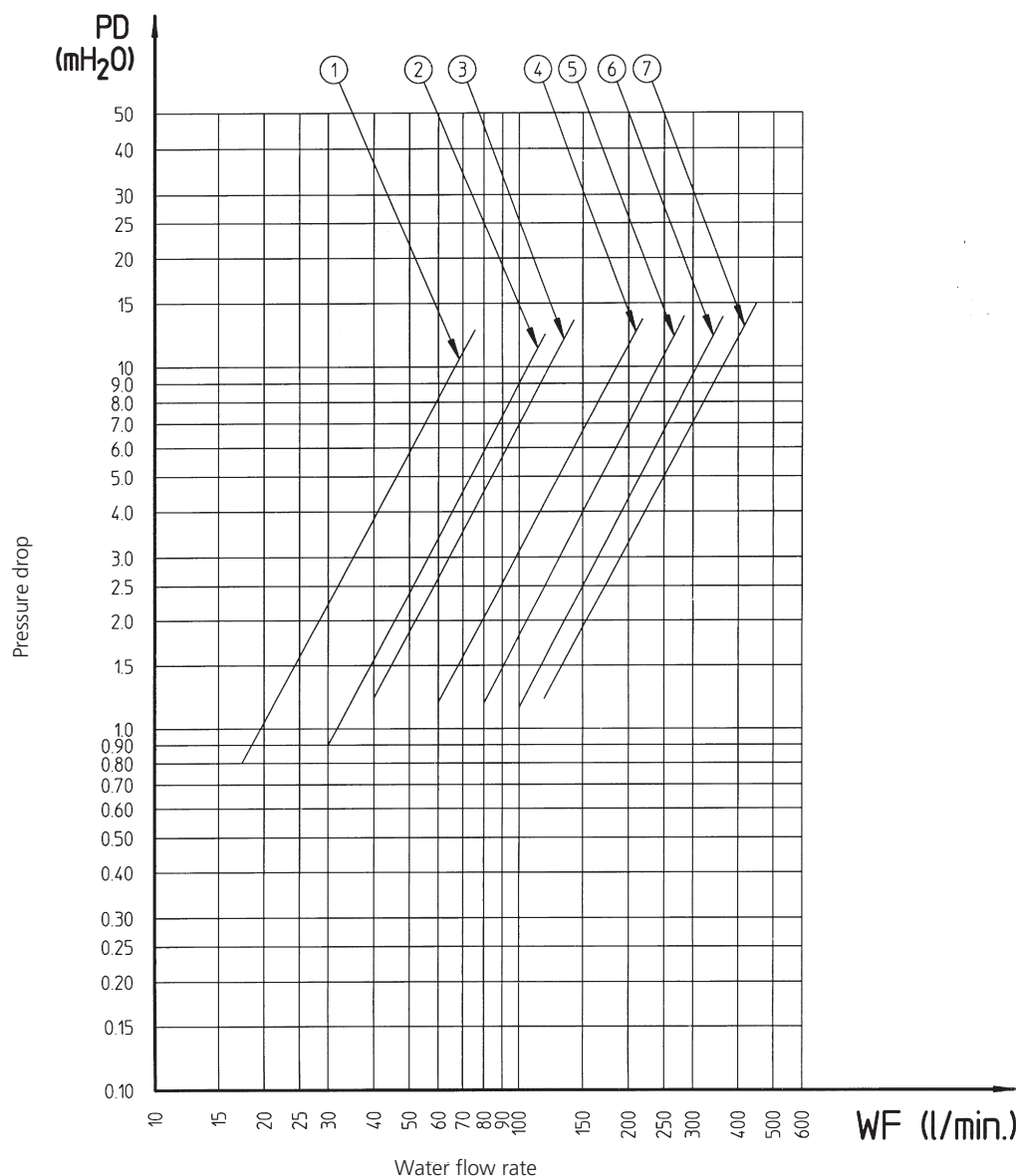


4TW50689-8

## 4 Water pressure drop curve



EUWA5-30H



PD: Pressure drop through the unit  
WF: Waterflow rate water heat exchanger

- ① EUWA5HD
- ② EUWA8HD
- ③ EUWA10HD
- ④ EUWA15HD
- ⑤ EUWA20HD
- ⑥ EUWA25HD
- ⑦ EUWA30HD

**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.

4TW50749-1A

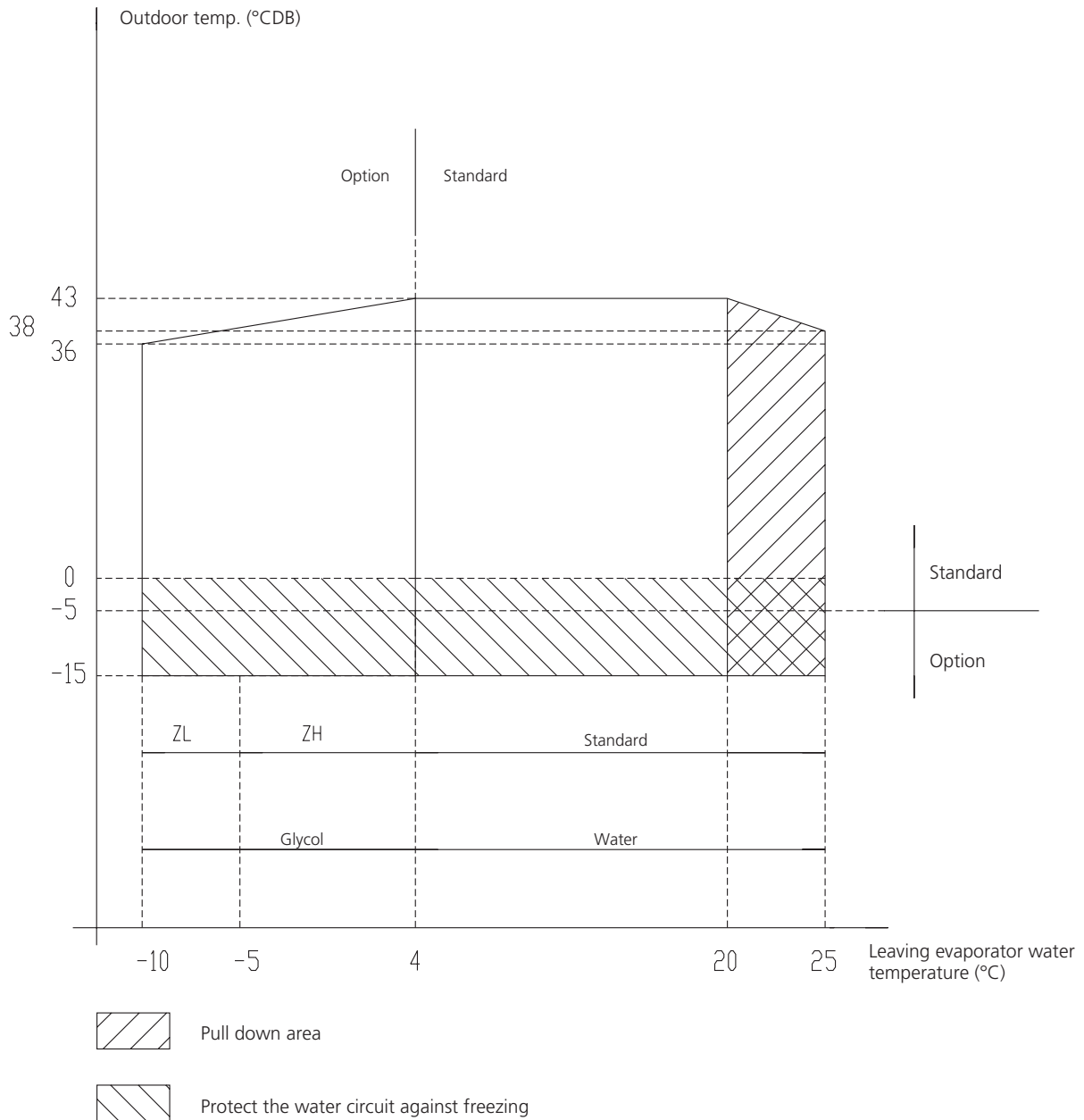
## 5 Operation range



4

5

EUWA5-30H



for

\* EUWA8-10HD

- If the units operate below -5°C and are installed in a rather windy space, a windscreen is required. Daikin offers a windscreen as option for this purpose.
- An extra fan speed control is required (Daikin Option kit EKHP8/10H).

\* EUWA5-15-20-25-30HD

- If the units operate below -5°C and are installed in a rather windy space, a windscreen is required. Daikin offers a windscreen as option for this purpose.

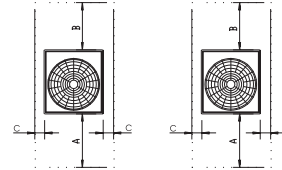
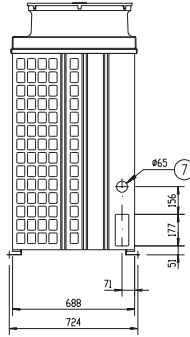
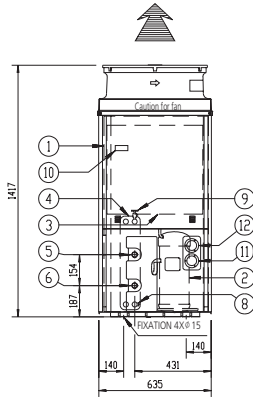
4TW50813-1A

## 6 Dimensional drawings

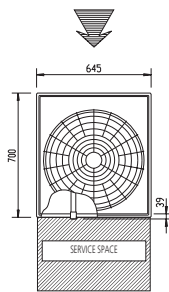


### EUWA5HD

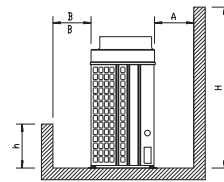
Free space min. 3 m



Free space B



- 1 Air heat exchanger
- 2 Compressor
- 3 Switch box
- 4 Water heat exchanger
- 5 Water IN connection 3/4" BSP
- 6 Water OUT connection 3/4" BSP
- 7 Power supply intake
- 8 Drain
- 9 Air purge
- 10 Electronic controller
- 11 Low pressure gauge (optional)
- 12 High pressure gauge (optional)



If  $C \geq 10$

$H \leq 1500 \rightarrow A \geq 500$

$h \leq 500 \rightarrow B \geq 300$

$H = 1500+X \rightarrow A \geq 500+X/2$

$h = 500+Y \rightarrow B \geq 300+Y/2$

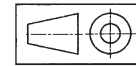
If  $C \geq 50$

$H \leq 1500 \rightarrow A \geq 500$

$h \leq 500 \rightarrow B \geq 100$

$H = 1500+X \rightarrow A \geq 500+X/2$

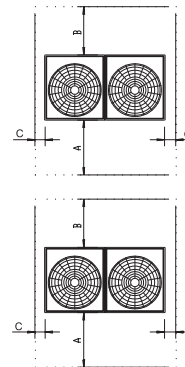
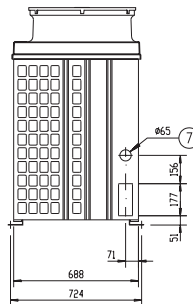
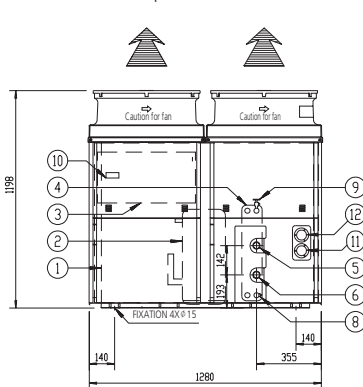
$h = 500+Y \rightarrow B \geq 100+Y/2$



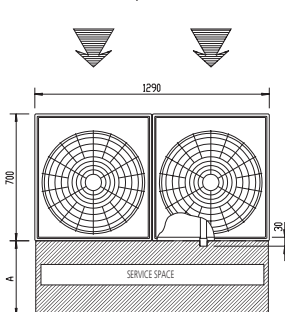
3TW50744-1B

### EUWA8HD

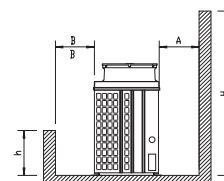
Free space min. 3 m



Free space B



- 1 Air heat exchanger
- 2 Compressor
- 3 Switch box
- 4 Water heat exchanger
- 5 Water IN connection 1" BSP
- 6 Water OUT connection 1" BSP
- 7 Power supply intake
- 8 Drain
- 9 Air purge
- 10 Electronic controller
- 11 Low pressure gauge (optional)
- 12 High pressure gauge (optional)



If  $C \geq 10$

$H \leq 1500 \rightarrow A \geq 500$

$h \leq 500 \rightarrow B \geq 300$

$H = 1500+X \rightarrow A \geq 500+X/2$

$h = 500+Y \rightarrow B \geq 300+Y/2$

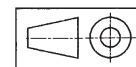
If  $C \geq 50$

$H \leq 1500 \rightarrow A \geq 500$

$h \leq 500 \rightarrow B \geq 100$

$H = 1500+X \rightarrow A \geq 500+X/2$

$h = 500+Y \rightarrow B \geq 100+Y/2$



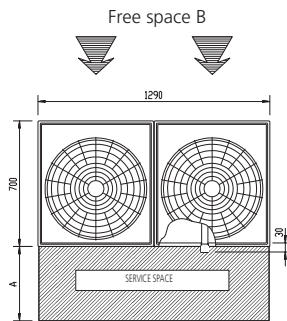
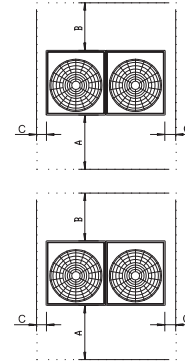
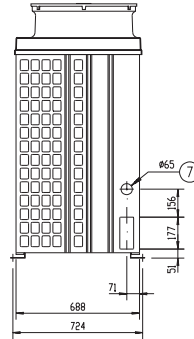
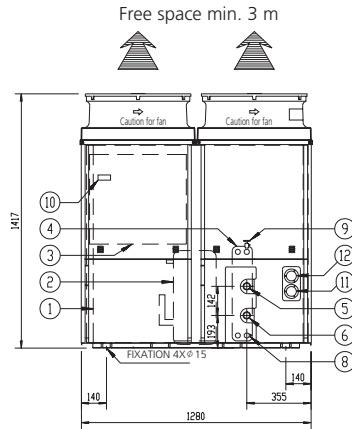
3TW50754-1C

## 6 Dimensional drawings

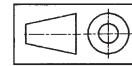
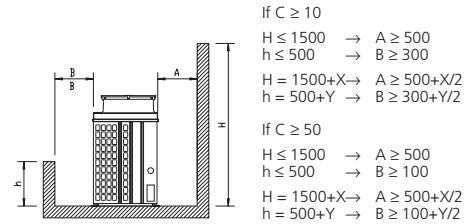


4  
6

### EUWA10HD

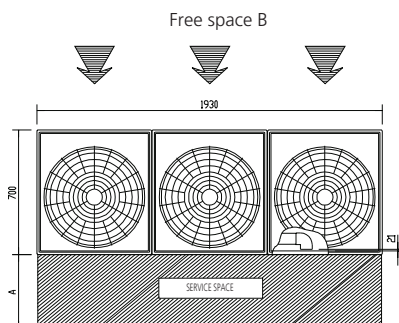
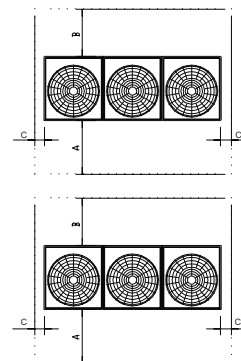
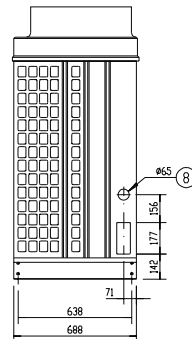
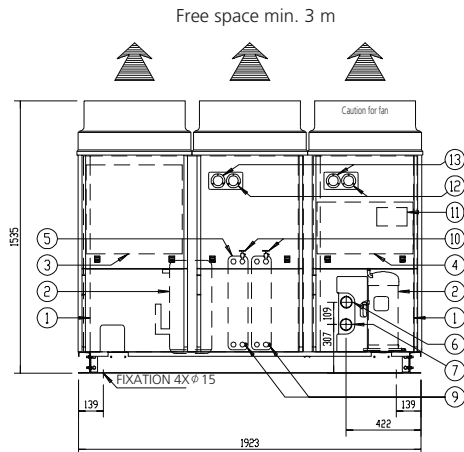


- 1 Air heat exchanger
- 2 Compressor
- 3 Switch box
- 4 Water heat exchanger
- 5 Water IN connection 1" BSP
- 6 Water OUT connection 1" BSP
- 7 Power supply intake
- 8 Drain
- 9 Air purge
- 10 Electronic controller
- 11 Low pressure gauge (optional)
- 12 High pressure gauge (optional)

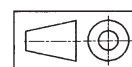
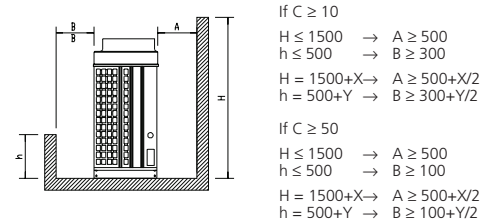


3TW50764-1D

### EUWA15HD



- 1 Air heat exchangers
- 2 Compressors
- 3 Main switchbox
- 4 Sub switch box
- 5 Water heat exchangers
- 6 Water IN connection 2" BSP
- 7 Water OUT connection 2" BSP
- 8 Power supply intake
- 9 Drain
- 10 Air purge
- 11 Electronic controller
- 12 Low pressure gauge (optional)
- 13 High pressure gauge (optional)

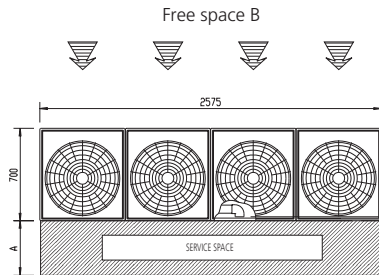
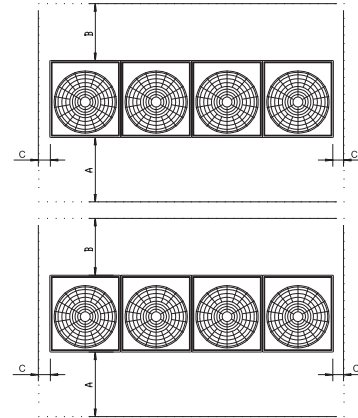
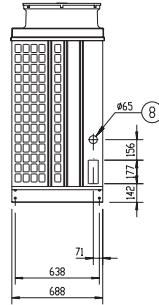
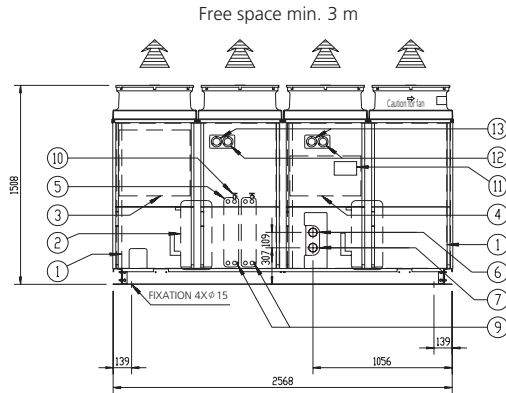


3TW50774-1B

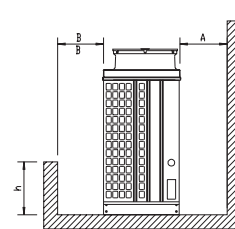
## 6 Dimensional drawings



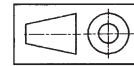
### EUWA20HD



- 1 Air heat exchangers
- 2 Compressors
- 3 Main switchbox
- 4 Sub switch box
- 5 Water heat exchangers
- 6 Water IN connection 2" BSP
- 7 Water OUT connection 2" BSP
- 8 Power supply intake
- 9 Drain
- 10 Air purge
- 11 Electronic controller
- 12 Low pressure gauge (optional)
- 13 High pressure gauge (optional)

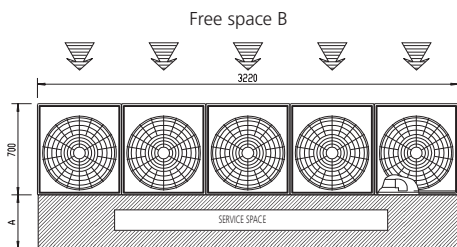
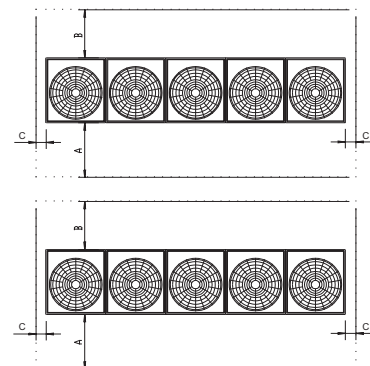
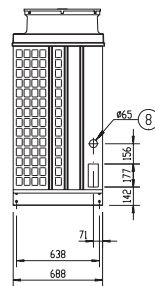
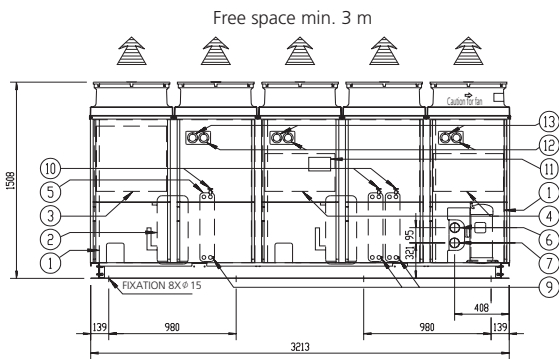


- If  $C \geq 10$
- $H \leq 1500 \rightarrow A \geq 500$   
 $h \leq 500 \rightarrow B \geq 300$   
 $H = 1500+X \rightarrow A \geq 500+X/2$   
 $h = 500+Y \rightarrow B \geq 300+Y/2$
- If  $C \geq 50$
- $H \leq 1500 \rightarrow A \geq 500$   
 $h \leq 500 \rightarrow B \geq 100$   
 $H = 1500+X \rightarrow A \geq 500+X/2$   
 $h = 500+Y \rightarrow B \geq 100+Y/2$

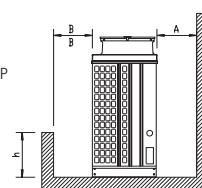


3TW50784-1B

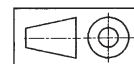
### EUWA25HD



- 1 Air heat exchangers
- 2 Compressors
- 3 Main switchbox
- 4 Sub switch box
- 5 Water heat exchangers
- 6 Water IN connection 2 1/2" BSP
- 7 Water OUT connection 2 1/2" BSP
- 8 Power supply intake
- 9 Drain
- 10 Air purge
- 11 Electronic controller
- 12 Low pressure gauge (optional)
- 13 High pressure gauge (optional)



- If  $C \geq 10$
- $H \leq 1500 \rightarrow A \geq 500$   
 $h \leq 500 \rightarrow B \geq 300$   
 $H = 1500+X \rightarrow A \geq 500+X/2$   
 $h = 500+Y \rightarrow B \geq 300+Y/2$
- If  $C \geq 50$
- $H \leq 1500 \rightarrow A \geq 500$   
 $h \leq 500 \rightarrow B \geq 100$   
 $H = 1500+X \rightarrow A \geq 500+X/2$   
 $h = 500+Y \rightarrow B \geq 100+Y/2$



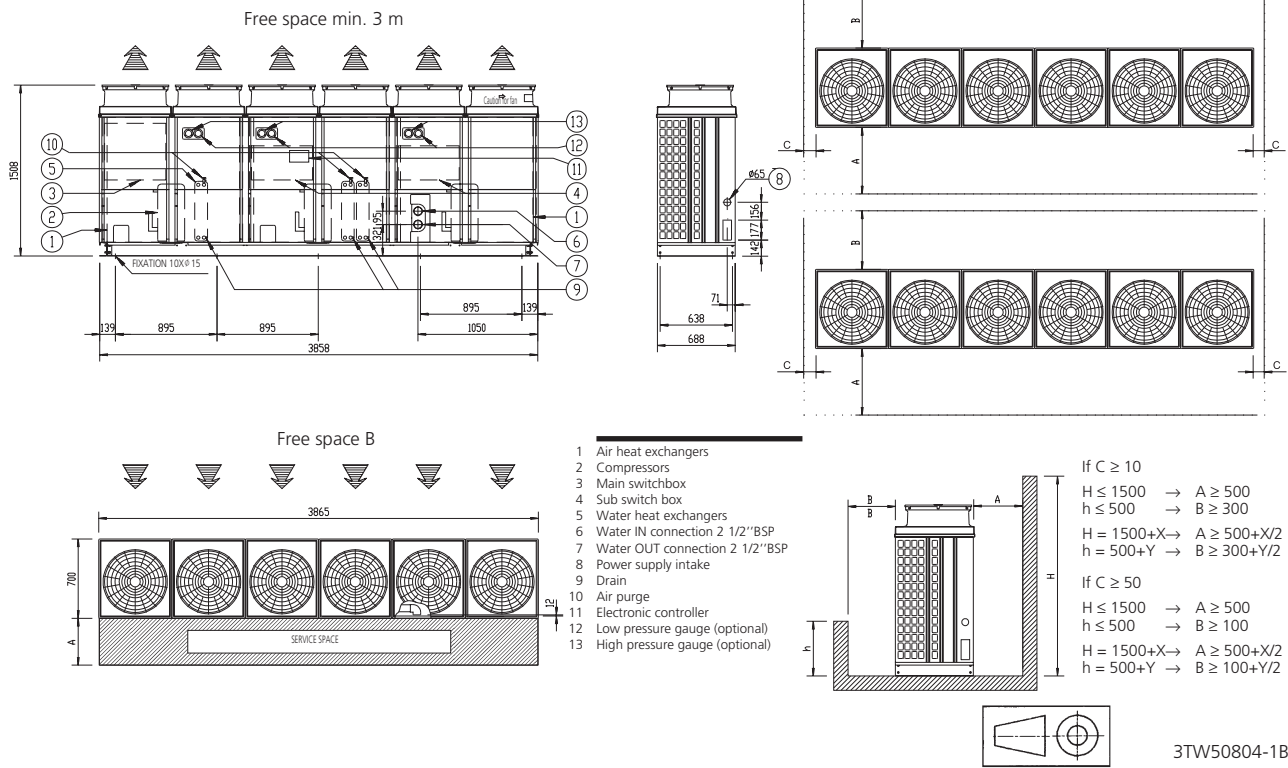
3TW50794-1B

## 6 Dimensional drawings



4  
6

### EUWA30HD



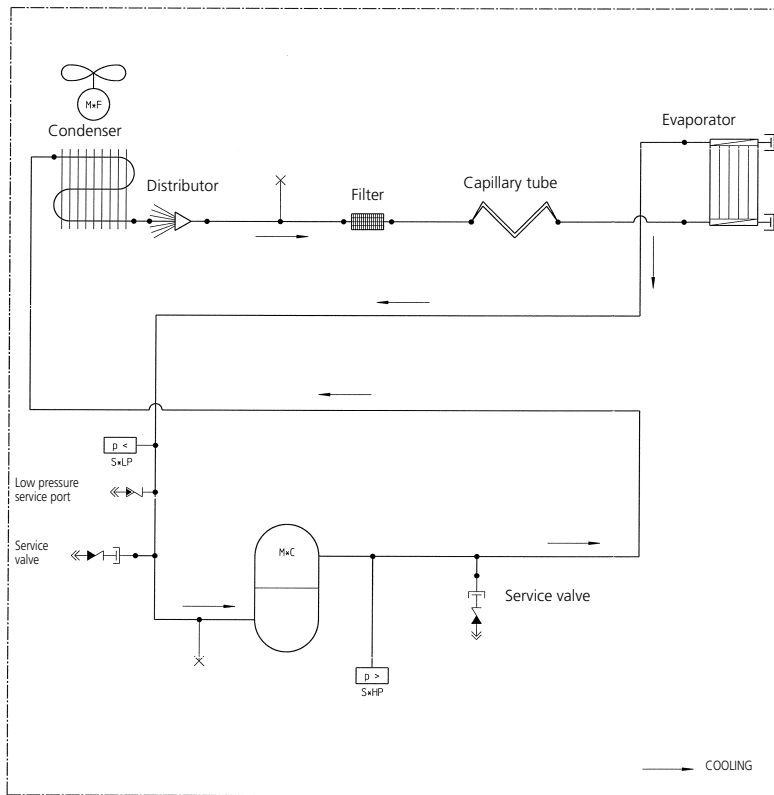
# 7 Piping diagrams



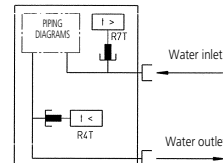
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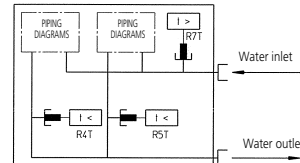
## EUWA-H



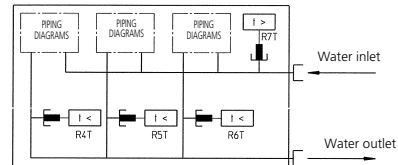
### EUWA5-8-10HD



### EUWA15-20HD



### EUWA25-30HD

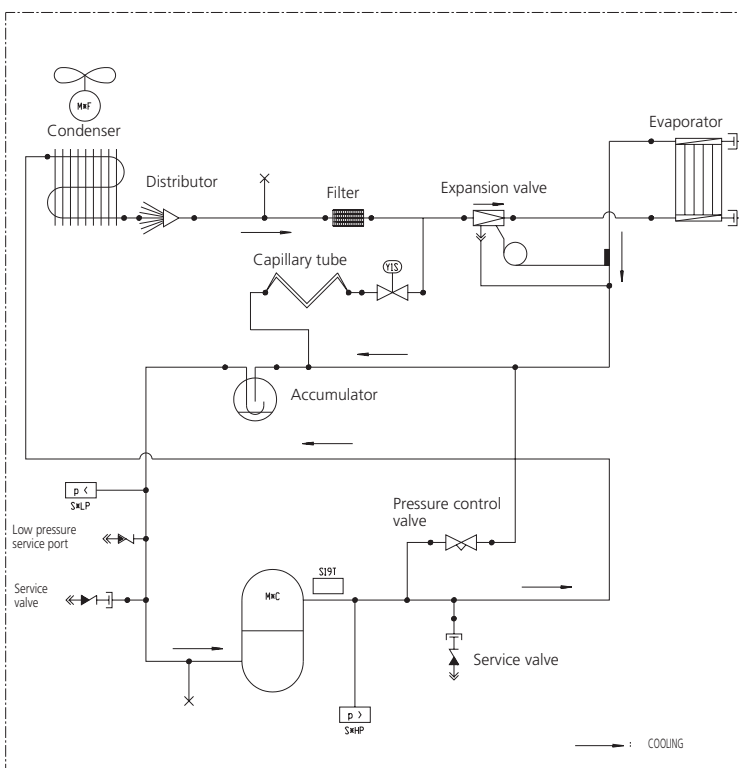


- Check valve
- Flare connection
- Screw connection
- Flange connection
- Pinched pipe
- Spinned pipe

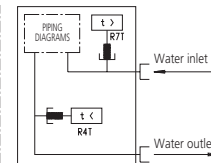
- R7T Thermostat
- R4,5,6T Freeze up protection thermostat
- S\*HP High pressure switch
- S\*LP Low pressure switch
- M\*F Condenser fan
- M\*C Compressor

3TW52945-1

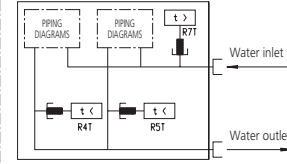
## EUWA-HW1(ZL/ZH Option)



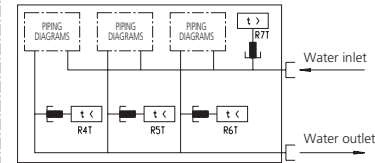
### EUWA5-8-10HD



### EUWA15-20HD



### EUWA25-30HD



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

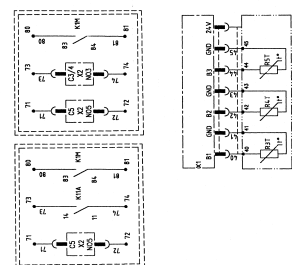
- R7T Thermostat
- R4,5,6T Freeze up protection thermostat
- S19T Thermostat for liquid injection
- Y1S Solenoid valve for injection line
- S\*HP High pressure switch
- S\*LP Low pressure switch
- M\*F Condenser fan
- M\*C Compressor

3TW52945-2



## 48

With OP10	Without OP10
-----------	--------------



	Not standard included	
	Not poss. as option	Poss. as option
Obligatory	#	##
Not obligatory	#	##

Connector in terminal unit for digital inputs, analog inputs, analog outputs and for

- [illegible]

(8) If compressor rotates reversely, it may be damaged.

(9) OPTIONAL

- ☐ EKHP2/10H = Kit for operation range down to -15°C  
 = Glycol application chilled water temperature  
☐ ZH = down to -5°C (Not for R-407C units)  
 = Glycol application chilled water temperature  
☐ ZL = down to -10°C (Not for R-407C units)  
☐ OP10 = Evaporator heatpate  
☐ ESP = Fan motor size up (high esp 5mmH<sub>2</sub>O)  
 EKAC10A = Address card kit for BMS-connections

NOTES

- |     | Terminal 1 | Terminal 2 | Field wiring, to be in accordance with the local electrical regulations | Earth wiring | Option | Wiring dependent on model |
|-----|------------|------------|---|--------------|--------|---------------------------|
| (1) | ●          | ○          | —   | —            | —      | —                         |
| (2) | —          | —          | —   | —            | —      | —                         |
| (3) | —          | —          | —   | —            | —      | —                         |
| (4) | —          | —          | —   | —            | —      | —                         |
| (5) | —          | —          | —   | —            | —      | —                         |
| (6) | —          | —          | —   | —            | —      | —                         |
| (7) | —          | —          | —   | —            | —      | —                         |

### Analog inputs

- | Operating inputs |                 |
|------------------|-----------------|
| X1 (B1-GND):     | Inlet water °t  |
| X1 (B2-GND):     | Outlet water °t |

Digital outputs (relays)

- Compressor ON  
Voltage free contact to pump + heatertape  
Alarm voltage free contact

Digital inputs

- X1 (ID1-GND):  
X1 (ID2-GND):  
X1 (ID3-GND):  
  
X1 (ID4-GND):  
X1 (ID5-GND):

206	206	206
-----	-----	-----

- |     |       |        |
|-----|-------|--------|
| 250 | 63G   | 1A     |
| 250 | 63G   | 28A    |
| 250 | 63G   | 315mAT |
| 250 | 05A   | 1A     |
| 250 | 06A   | 28A    |
| 250 | 06A   | 315mAT |
| 250 | 1A    | 1A     |
| 250 | 12A   | 28A    |
| 250 | 15mAT | 315mAT |

Recommended fuses gL/gG (aM also admitted)

according to IEC standard 269-2

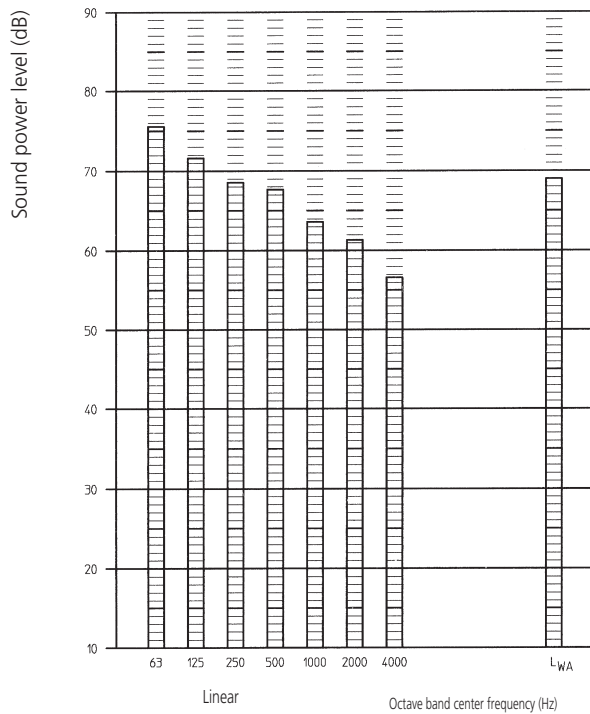




## 9 Sound power spectrum

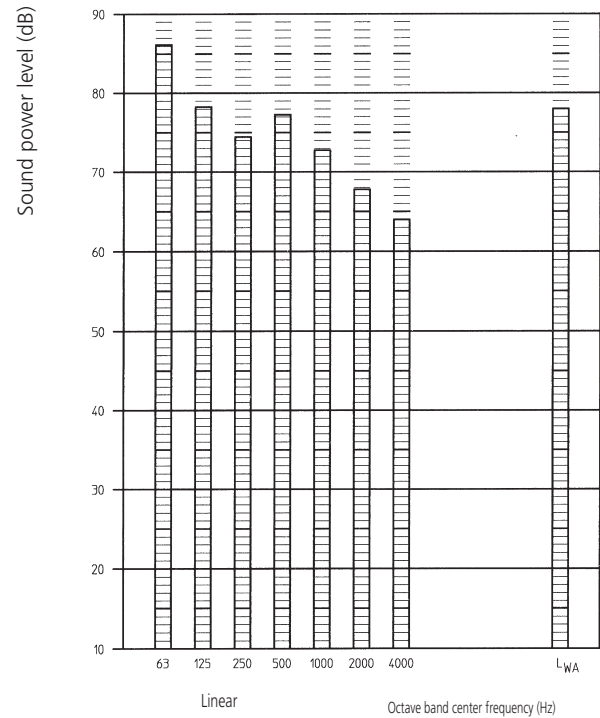


EUWA5HD



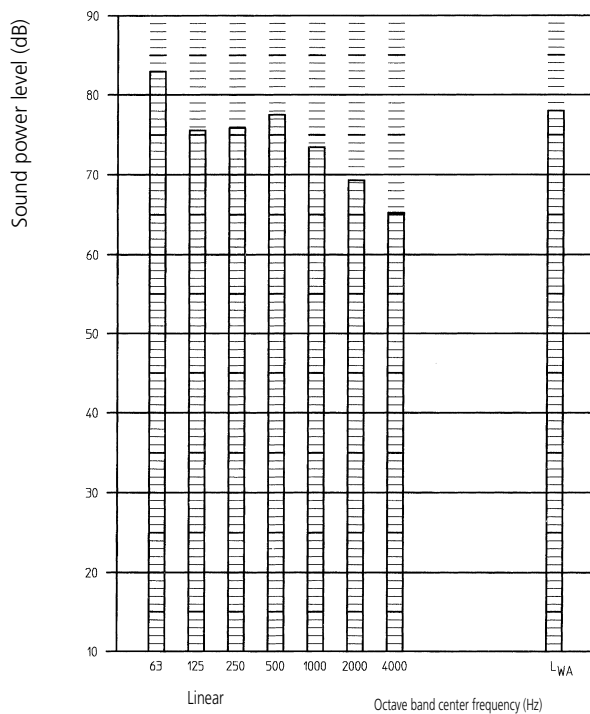
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EUWA8HD



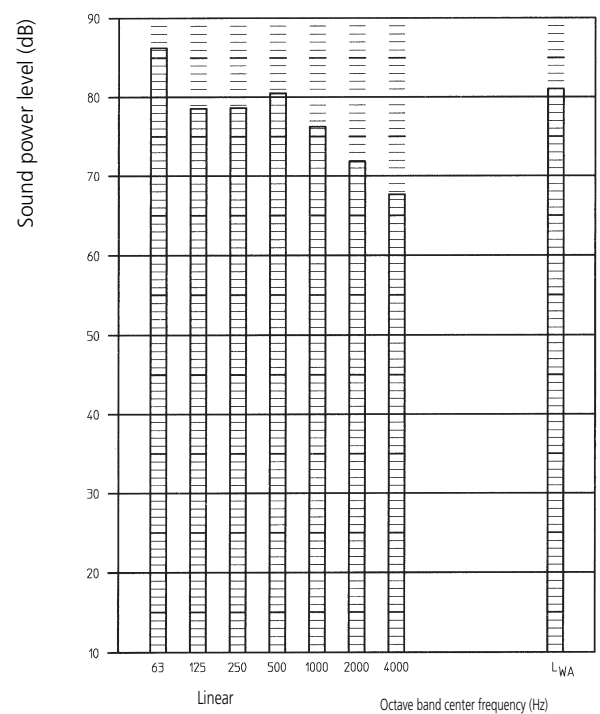
3TW50757-1

EUWA10-15HD



3TW50767-1

EUWA20-25HD

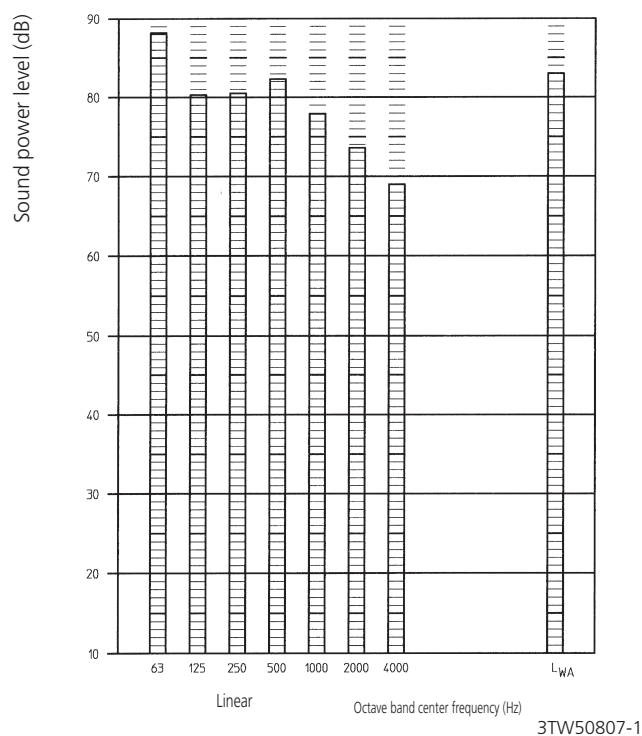


3TW50787-1

## 9 Sound power spectrum



### EUWA30HD



### NOTES

- Operation sound levels are valid at nominal operation condition
- Measured according to ISO 9614
- Reference acoustic pressure 0 dB = 1 pW

# 10 Installation



## 10-1 Selection of location + service space

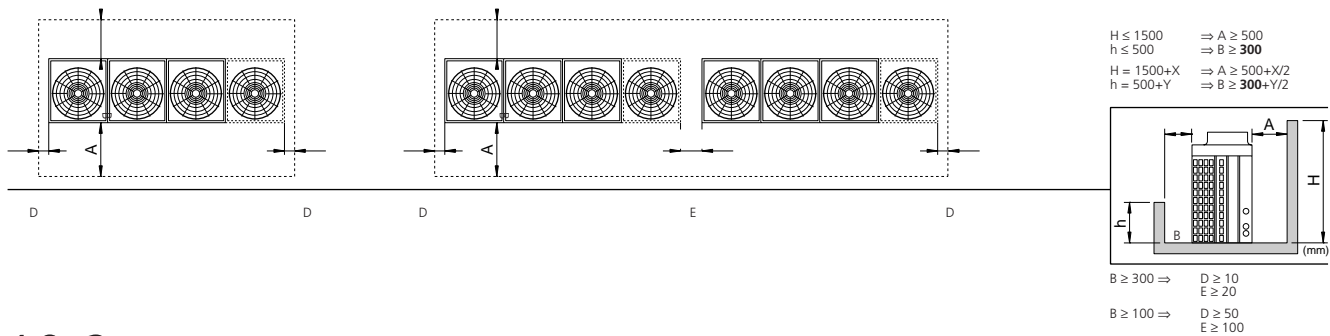
The EUWA-HD unit should be installed in a location that meets the following requirements:

1. The foundation is strong enough to support the weight of the unit and the floor is flat to prevent vibration and noise generation.
2. The space around the unit is adequate for servicing and the minimum space for air inlet and air outlet is available.  
If several units are being installed side by side in parallel, the minimum service space between them must be taken into account.
3. There is no danger of fire due to leakage of inflammable gas.
4. Ensure that water cannot cause any damage to the location in case it drips out the unit (e.g. in case of defrost).
5. Select the location of the unit in such a way that neither the discharged air nor the sound generated by the unit disturb anyone.
6. Make sure that the air inlet and outlet of the unit are not positioned towards the main wind direction. Frontal wind will disturb the operation of the unit. If necessary, use a windscreen to block the wind.
7. In heavy snowfall areas, select an installation site where snow will not affect operation of the unit.
8. Make sure that the unit can be fixed directly in concrete.

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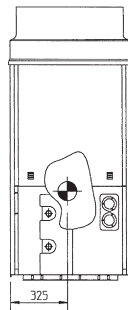
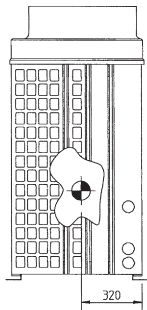
10

10-1

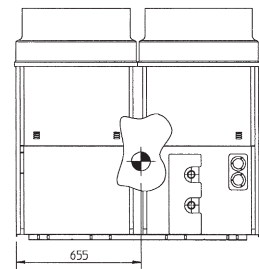
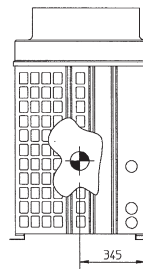


## 10-2 Centre of gravity

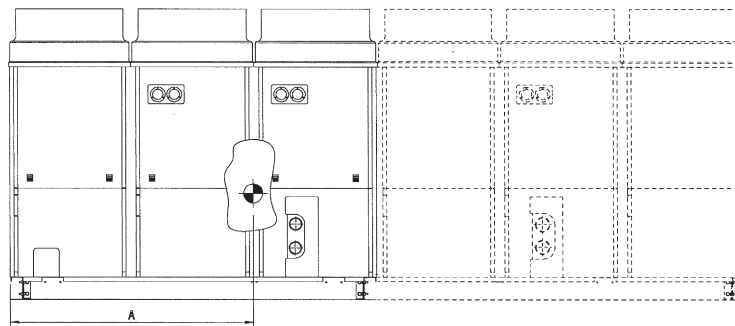
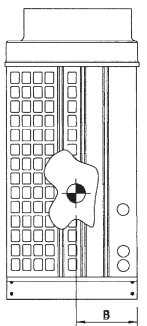
EUWA5



EUWA8-10



EUWA15-30



	A	B
EUWA15	900	310
EUWA20	1100	340
EUWA25	1600	325
EUWA30	1850	340

3TW50749-2A



# 10 Installation

## 10-3 Water charge, flow and quality



To assure proper operation of the unit, a minimum water volume is required in the system and the water flow must be within the operation range as specified in the table.

	Minimum water volume (ℓ)	Minimum water flow	Maximum water flow
EUWA5	150/a	17 l/min	75 l/min
EUWA8	270/a	30 l/min	120 l/min
EUWA10	300/a	40 l/min	145 l/min
EUWA15	150/a	60 l/min	220 l/min
EUWA20	150/a	80 l/min	290 l/min
EUWA25	150/a	100 l/min	370 l/min
EUWA30	150/a	120 l/min	440 l/min

a: steplength (default: 1,5 K for EUWA15-30HD, 3 K for EUWA5-10HD)

**Attention:** the water pressure should not exceed the maximum working pressure of 10 bar.

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

ITEMS	Evaporator water		Tendency if out of criteria
	Circulating water [<20°C]	Supply water	
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
- Chloride ion (mg Cl <sup>-</sup> /l)	Below 50	Below 50	Corrosion
- Sulfate ion (mg SO <sub>4</sub> <sup>2-</sup> /l)	Below 50	Below 50	Corrosion
- M-alkalinity (pH 4.8) (mg SO <sub>3</sub> /l)	Below 50	Below 50	Scale
- Total hardness (mg CaCO <sub>3</sub> /l)	Below 70	Below 70	Scale
- Calcium hardness (mg CaCO <sub>3</sub> /l)	Below 50	Below 50	Scale
- Silica ion (mg SiO <sub>2</sub> /l)	Below 30	Below 30	Scale
Items to be referred to:			
- Iron (mg Fe/l)	Below 1.0	Below 0.3	Corrosion + scale
- Copper (mg Cu/l)	Below 1.0	Below 0.1	Corrosion
- Sulfite ion (mg S <sup>2-</sup> /l)	Not detectable	Not detectable	Corrosion
- ammonium ion (mg NH <sub>4</sub> <sup>+</sup> /l)	Below 1.0	Below 0.1	Corrosion
- Remaining chloride (mg Cl/l)	Below 0.3	Below 0.3	Corrosion
- Free carbide (mg SO <sub>2</sub> /l)	Below 4.0	Below 4.0	Corrosion
- Stability index	—	—	Corrosion + scale

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

# 10 Installation



## 10-4 Operation pressure refrigerant circuit

It is important to check the high and low pressure of the refrigerant circuit to ensure the proper operation of the unit and to guarantee that the rated output will be obtained.

### Attention:

The pressures measured will vary between a maximum and minimum value, depending on the water and outdoor temperatures (at the moment of measurement).

Cooling mode	Minimum (outdoor temp. 15°CDB) (leaving water temp. 4°C)	Nominal (outdoor temp. 35°CDB) (leaving water temp. 7°C)	Maximum (outdoor temp. 38°CDB) (leaving water temp. 25°CDB)
Low pressure	4 bar	5 bar	8.5 bar
High pressure	7 bar	20 bar	22 bar

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10-4

## 10-5 Power circuit and cable requirements

A power circuit (see table below) must be provided for connection of the air conditioning unit. This circuit must be protected with the required safety devices, i.e. a circuit breaker, a slow blow fuse on each phase and an earth leak detector.

	Phase and frequency	Voltage	Recommended fuses
EUWA5HDW1	3N~50Hz	400V	20 aM
EUWA8HDW1	3N~50Hz	400V	25 aM
EUWA10HDW1	3N~50Hz	400V	32 aM
EUWA15HDW1	3N~50Hz	400V	40 aM
EUWA20HDW1	3N~50Hz	400V	50 aM
EUWA25HDW1	3N~50Hz	400V	63 aM
EUWA30HDW1	3N~50Hz	400V	80 aM

**Note:** select the power cable in accordance with relevant local and national regulations.

**Attention:** switch off the main isolator switch before making any connections (switch off the circuit breaker, remove or switch off the fuses).



# 10 Installation

## 10-6 Digital controller



### User interface EUWA5-10HD

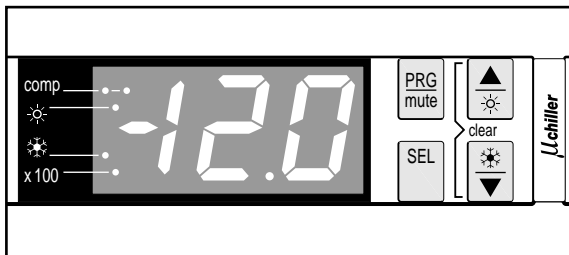
The digital controller consists of a numeric display, four labelled keys which you can press and four LEDs providing extra user information.

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10-6

#### Digital controller



Keys provided on the controller.

Each key, except for the lower left key, combines two functions: **PRG** / **mute**, **▲** / **☀** and **▼** / **☀**. The function carried out when the user presses one of these keys depends on the status of the controller and the unit at that specific moment.



Key, to enter the scroll list of user parameters, to confirm a parameter modification and to return to normal operation.



Key, to de-activate the buzzer in the case of an alarm.



Key, to scroll through the list of direct or user parameters or to raise a setting.



Key, to start the unit in heating mode or to switch the unit off when heating mode is active. (only EUWY-H models)



Key, to enter the scroll list of direct parameters or to switch between a parameter's code and its value.



Key, to start the unit in cooling mode or to switch the unit off when cooling mode is active.



Key, to scroll through the list of direct or user parameters or to lower a setting.

LEDs provided on the controller:

The controller provides five LEDs one of which, the left **comp** LED, is not used.



LED, indicates the status of the compressor. The LED does not light up when the compressor is not active, blinks when the compressor cannot start up although extra load is requested (e.g. timer active) and lights up permanently when the compressor is active.



LED, indicates that heating mode is active. (only EUWY-H models)



LED, indicates that cooling mode is active.



LED, indicates that the value on the numeric display should be multiplied by 100.

#### Note:

- Temperature readout tolerance:  $\pm 1^{\circ}\text{C}$ .
- Legibility of the numeric display may decrease in direct sunlight.

# 10 Installation

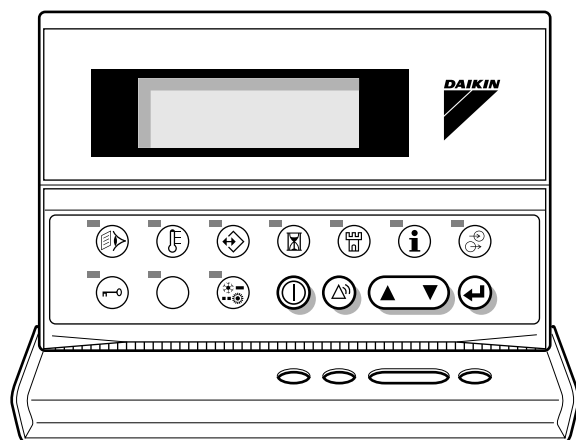
## 10-6 Digital controller







### User interface EUWA15-30HD






The digital controller consists of an alphanumeric display, labelled keys which you can press, a number of LEDs indicating the selected menu and a hinged cover. When the cover is closed, only the most frequently used keys are accessible.

Digital controller







Keys accessible when the cover is closed:

-  Key, to start up or to shut down the unit.
-  Key, to enter the safeties menu or to reset an alarm.
-  Key, to scroll through the screens of a menu (only in case  $\Delta$ ,  $\nabla$  or  $\Delta/\nabla$  appears) or to raise, respectively lower a setting.
-  Key, to confirm a selection or a setting.

-  Key, to enter the history menu.
-  Key, to enter the info menu.
-  Key, to enter the input/output status menu.
-  Key, to enter the user password menu.
-  Key, to select cooling or heating mode. (only EUWY-H models)

Keys only accessible when the cover is open:

-  Key, to enter the readout menu.
-  Key, to enter the setpoints menu.
-  Key, to enter the user settings menu.
-  Key, to enter the timers menu.

#### Note:

- Temperature readout tolerance:  $\pm 1^{\circ}\text{C}$ .
- Legibility of the alphanumeric display may decrease in direct sunlight.

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10-6

# 10 Installation

## 10-6 Digital controller



### Connection to the unit

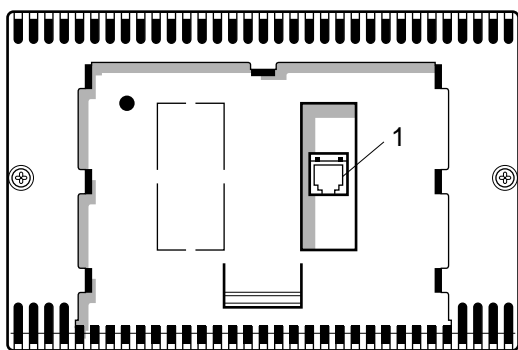
The digital controller is connected to the unit, more specifically to the controller PCB inside the unit, by means of a 6-ray cable and a connector located on the rear side of the controller. A cable length of up to 1,000 metres between the digital controller and the unit is allowed. This gives the opportunity to control the unit from a considerable distance. Refer to 'Cable for digital controller' in the installation manual for cable specifications.

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Rear side of the controller and its connector (1).

10-6



# 11 Accessories & options



Number	Description	3 digit code	Unit size							Availability
			5	8	10	15	20	25	30	
	Standard unit	Blank	○	○	○	○	○	○	○	
	<b>Not completely combinable options</b>	1st digit								
	Display language (GER)	2	—	—	—	○	○	○	○	Factory mounted
ZH	Glycol application chilled water temperature down to -5°C	12	○	○	○	○	○	○	○	Factory mounted
ZL	Glycol application chilled water temperature down to -10°C	14	○	○	○	○	○	○	○	Factory mounted
	<b>Completely combinable options</b>	2nd/3rd digit								
ESP	Fan motor size up (high esp 5mmH <sub>2</sub> O)	4	○	○	○	○	○	○	○	Factory mounted
OP10	Evaporator heatertape	16	○	○	○	○	○	○	○	Factory mounted
	Special standard unit	(*)								
OP10+EKGAU*+(EKHP*)		S								
	<b>Available kits</b>									
EKHP8/10H	Kit for operation range down to -15°C		std	○	○	std	std	std	std	Kit
EKGAU5/8/10H	Gauges kit 5/8/10Hp-units		○	○	○	—	—	—	—	Kit
EKGAU15/20H	Gauges kit 15/20Hp-units		—	—	—	○	○	—	—	Kit
EKGAU25/30H	Gauges kit 25/30Hp-units		—	—	—	—	—	○	○	Kit
NDJ26K140 (!)	Short duct for EUWAY		○1	—	—	○1	—	○1	—	Kit
NDJ26K280 (!)	Short duct for EUWAY		—	○1	○1	○1	○2	○2	○3	Kit
KPSJ26K280L	Windscreen left for EUWAY5H		○1	—	○1	○1	○1	○1	○1	Kit
KPSJ26K280R	Windscreen right for EUWAY5H		○1	—	○1	○1	○1	○1	○1	Kit
KPSJ26K160B	Windscreen back EUWAY5H		○1	—	—	○1	—	○1	—	Kit
KPSJ26K280B	Windscreen back EUWAY10H		—	—	○1	○1	○2	○2	○3	Kit
KPSJ26K140L	Windscreen left EUWAY8H		—	○1	—	—	—	—	—	Kit
KPSJ26K140R	Windscreen right EUWAY8H		—	○1	—	—	—	—	—	Kit
KPSJ26K224B	Windscreen back EUWAY8H		—	○1	—	—	—	—	—	Kit

NOTES	SYMBOLS
(!) Always in combination with esp	○ Available
Impossible option combinations: ZH+ZL ZH+OP10 ZL+OP10 Windscreen + short duct	○x Available and a quantity of x is needed for this unit size — Not available