



Air Conditioning Technical Data

Low temperature hydrobox for VRV



EEDEN13-204

HXY-A

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1 Features

- Highly efficient space heating/cooling
- Can be used with a variety of applications such as underfloor, AHU, low temperature radiators, ...
- Leaving water temperature range from 5°C to 45°C without electric heater
- Super wide operating range for hot water production from -20 to +43°C ambient outdoor temperature
- Accurate temperature control, fresh air provision, Biddle air curtains and hot water production, all integrated in a single system requiring only one single point of contact
- VRV® plug-and-play as all necessary components are integrated for quick installation
- Saves time on system design as all water-side components are fully integrated with direct control over leaving water temperature
- Saves space with contemporary wall hung design
- Requires no gas connection or oil tank
- Connectable to VRV IV heat pump



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2 Specifications

2-1 Technical Specifications				HXY080A		HXY125A		
Cooling capacity	Nom.		kW	8 (1)		12.5 (1)		
Heating capacity	Nom.		kW	9 (2)		14 (2)		
Casing	Colour			White				
	Material			Precoated sheet metal				
Dimensions	Unit	Height	mm	890				
		Width	mm	480				
		Depth	mm	344				
	Packed unit	Height	mm	415				
		Width	mm	650				
		Depth	mm	1,016				
Weight	Unit		kg	44				
	Packed unit		kg	47				
Packing	Material			Carton / EPS / PP (Straps)		Carton / EPS / PP (Straps)		
	Weight			kg				
Pump	Type			DC motor				
	Nr of speeds			Inverter controlled				
	Nominal ESP unit	Heating	kPa	79		43		
		Cooling	kPa	83		55		
	Power input			W		110		
Expansion vessel	Volume		l	10				
	Max. water pressure		bar	3				
	Pre pressure		bar	1				
Operation range	Heating	Ambient	Min.	°C	-20			
			Max.	°C	24			
		Water side	Min.	°C	25			
			Max.	°C	45			
	Cooling	Ambient	Min.	°CDB	10			
			Max.	°CDB	43			
		Water side	Min.	°C	5			
			Max.	°C	20			
Refrigerant circuit	Gas side diameter		mm	15.9				
	Liquid side diameter		mm	9.5				
Water circuit	Piping connections diameter		inch	G 1"1/4 (female)				
	Safety valve		bar	3				
	Manometer			Yes				
	Drain valve / fill valve			Yes				
	Shut off valve			Yes				
	Flow switch			Yes				
	Air purge valve			Yes				
	Water side Heat exchanger	Type			Brazed plate			
Quantity			1					
Water flow rate		Min.	l/min	15.0 (6)				
		Heating	Nom.	l/min	25.8		40.1	
		Cooling	Nom.	l/min	22.9		35.8	
Insulation material			Foamed synthetic elastomer					
Water filter	Diameter perforations		mm	1				
	Material			copper - brass - stainless steel				
PED	Category			Art3§3				

2 Specifications

2-2 Electrical Specifications			HXY080A	HXY125A
Power supply	Phase		1~	
	Frequency	Hz	50	
	Voltage	V	220-240	
Voltage range	Min.	%	-10	
	Max.	%	10	
Current	Zmax	List	No requirements	
	Recommended fuse	A	6 ~16	
Current - 50Hz	Nominal running current	A	2.5	
Wiring connections	Communication cable	Quantity	2	
		Type of wires	0.75 ~ 1.25 mm ² (F1F2)	
	For connection with user interface	Quantity	2	
		Type of wires	0.75 ~ 1.25 mm ² (P1P2)	
	For power supply	Quantity	3G	
		Type of wires	wire type / size has to be selected according to applicable legislation	

Notes

- (1) Tamb 35°C - LWE 18°C (DT=5°C)
- (2) DB/WB 7°C/6°C - LWC 35°C (DT=5°C)
- (3) PED unit category: Art3§3: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC
- (4) The sound pressure level is measured via a microphone at a 1m distance from the unit. It is a relative value, depending on the distance and acoustic environment.
- (5) Value mentioned is connection after ball valves, Connection at unit is G1-1/4 FEMALE
- (6) Flow switch setting
- (7) Height difference between lowest and highest point in the water circuit has to be ≤ 5 m
- (8) Combination restrictions of 3D079543 are effective to this unit.

3 Options

3 - 1 Options

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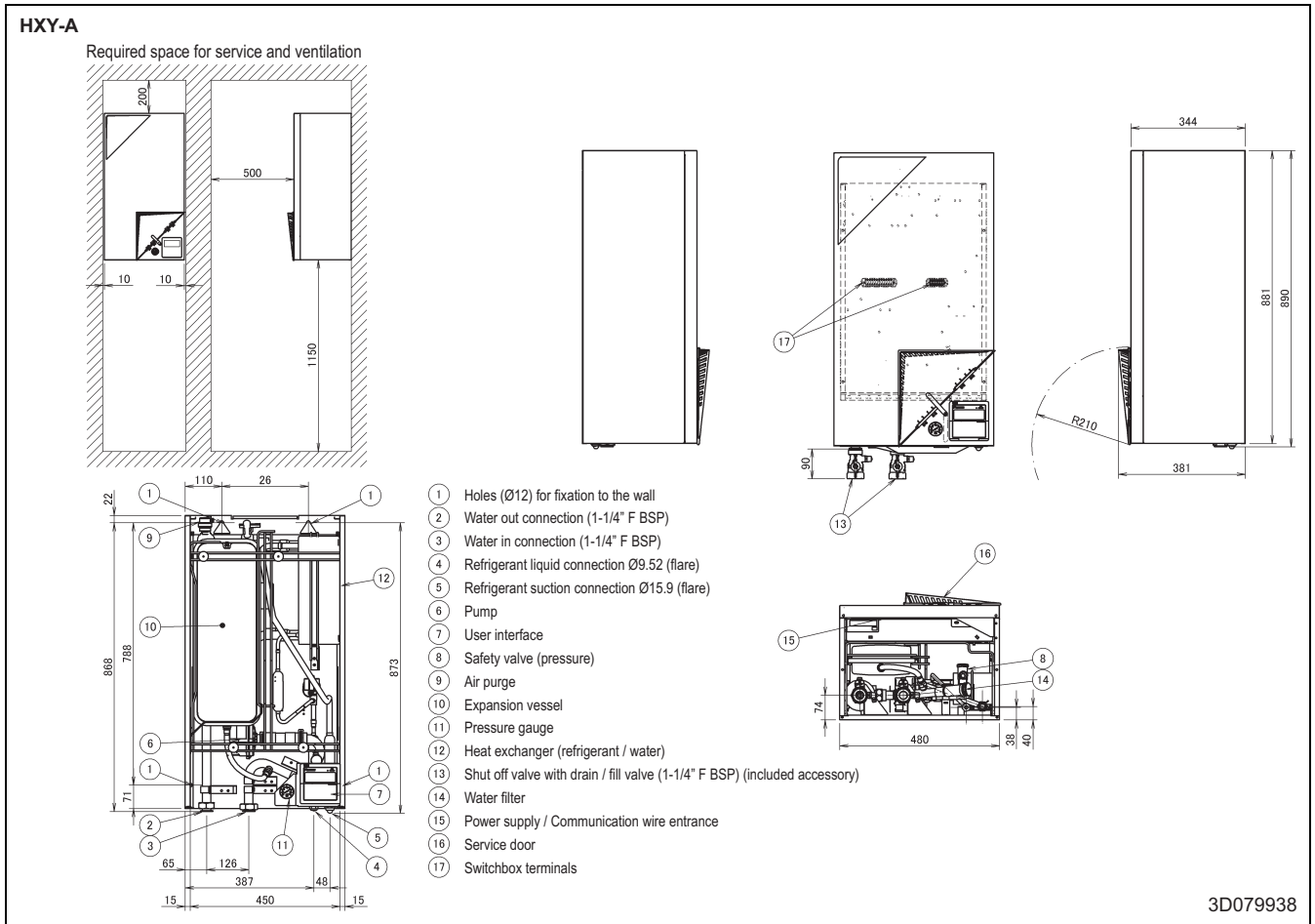
Name of option	Kit name	HXY080A	HXY125A
Drain pan	EKHBPCA2	0	0
Demand PCB	EKRP1AHTA	0	0
Remote user interface	EKRUHTB	0	0
Back up heater	EKBUHAA6(W1/V3)	0	0
Wired room thermostat	EKRTWA	0	0
Wireless room thermostat	EKRTR1	0	0
External sensor room thermostat	EKRTETS	0	0

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4 Dimensional drawings

4 - 1 Dimensional Drawings

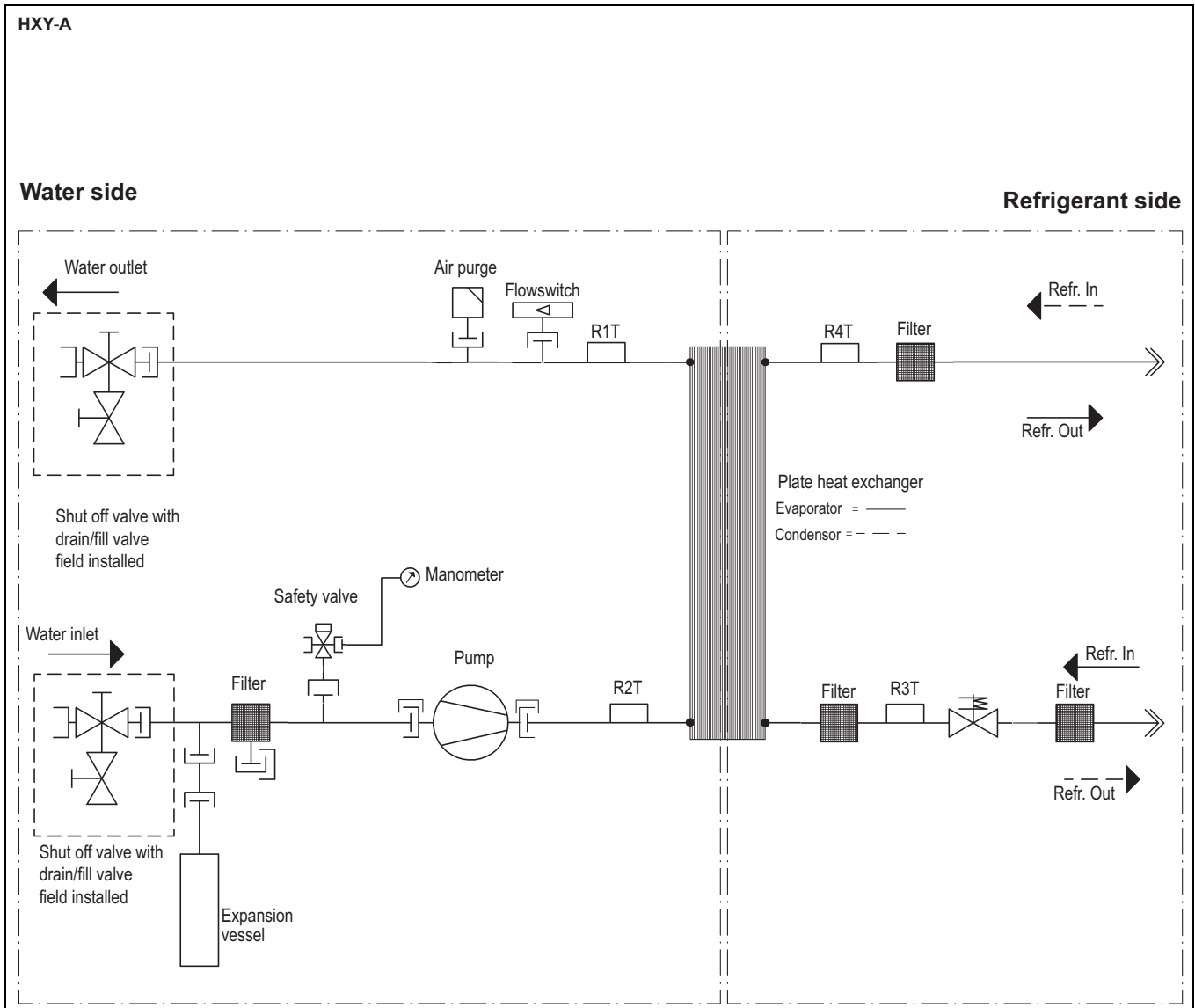
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5 Piping diagrams

5 - 1 Piping Diagrams



Thermistor	Description
R1T	Outlet water heat exchanger thermistor
R2T	Inlet water exchanger thermistor
R3T	Refrigerant liquid side thermistor
R4T	Refrigerant gas side thermistor

	Flare conn.		Check valve		Brazed conn.		Quick coupling
	Screw conn.		Flange conn.		Pinched pipe		Spinned pipe

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6 Wiring diagrams

6 - 1 Wiring Diagrams - Single Phase

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NOTES TO GO THROUGH BEFORE STARTING THE UNIT:

X1M : Field wiring terminal for high voltage
 X2M : Field wiring terminal for low voltage

----- : Earth wiring
 - - - - - : Field supply

[Dashed box] : Option

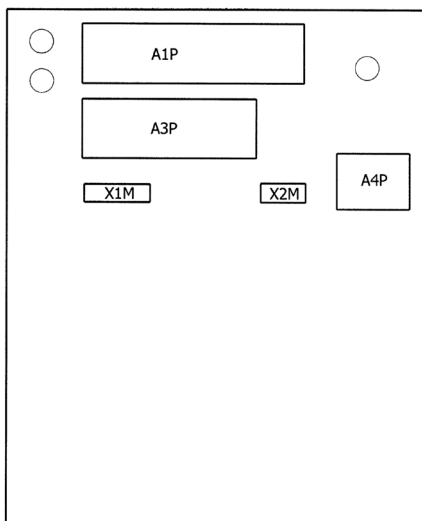
[Empty box] : Not mounted in switch box

[Box] : PCB

① : Several wiring possibilities

- User installed options:
- EKRUAHT* = Remote user interface
 - EKRP1AHT* = Demand PCB
 - EKBUH* = External back-up heater
 - EKRTW* = Room thermostat (wired)
 - EKRTTR* = Room thermostat (wireless)
 - EKRTETS = External temperature sensor for EKRTTR*

SWITCHBOX layout:



LEGEND

* : Field installed option
 # : Field supplied

Part number	Description
A1P	Main PCB (master)
A2P	User interface PCB
A3P	Control PCB
A4P	* Demand PCB
A5P	* Remote user interface PCB
A6P	* Thermostat PCB
A7P	* Receiver PCB
C1-C3	Filter capacitor
F1U (A*P)	Fuse (T, 3.15A, 250V)
HAP (A*P)	PCB LED
K1E	Electronic expansion valve
K*R (A3P)	PCB relay
M1P	Pump
PC (A7P)	* Power circuit
PS (A1P)	Switching power supply
Q* DI	# Earth leakage circuit breaker
R1H (A6P)	* Humidity sensor
R1T	Leaving water thermistor
R1T (A6P)	* Ambient sensor
R2T	Returning water thermistor
R2T	* External sensor (floor or ambient)
R3T	Refrigerant liquid thermistor
R4T	Refrigerant gas thermistor
S1L	Flow switch
S1S	# Thermostat input 1
S2S	# Thermostat input 2
S3S	# Operation ON input
S4S	# Operation OFF input
SS1 (A1P)	Selector switch (emergency)
SS1 (A2P)	Selector switch (main / sub)
SS1 (A5P)	* Selector switch (main / sub)
T1R	Diode bridge
V1C - V2C	Ferrite core noise filter
X*A (A*P)	PCB connector
X1M - X2M	Terminal strip
X*M (A*P)	* PCB terminal strip
Z1F (A1P)	Noise filter

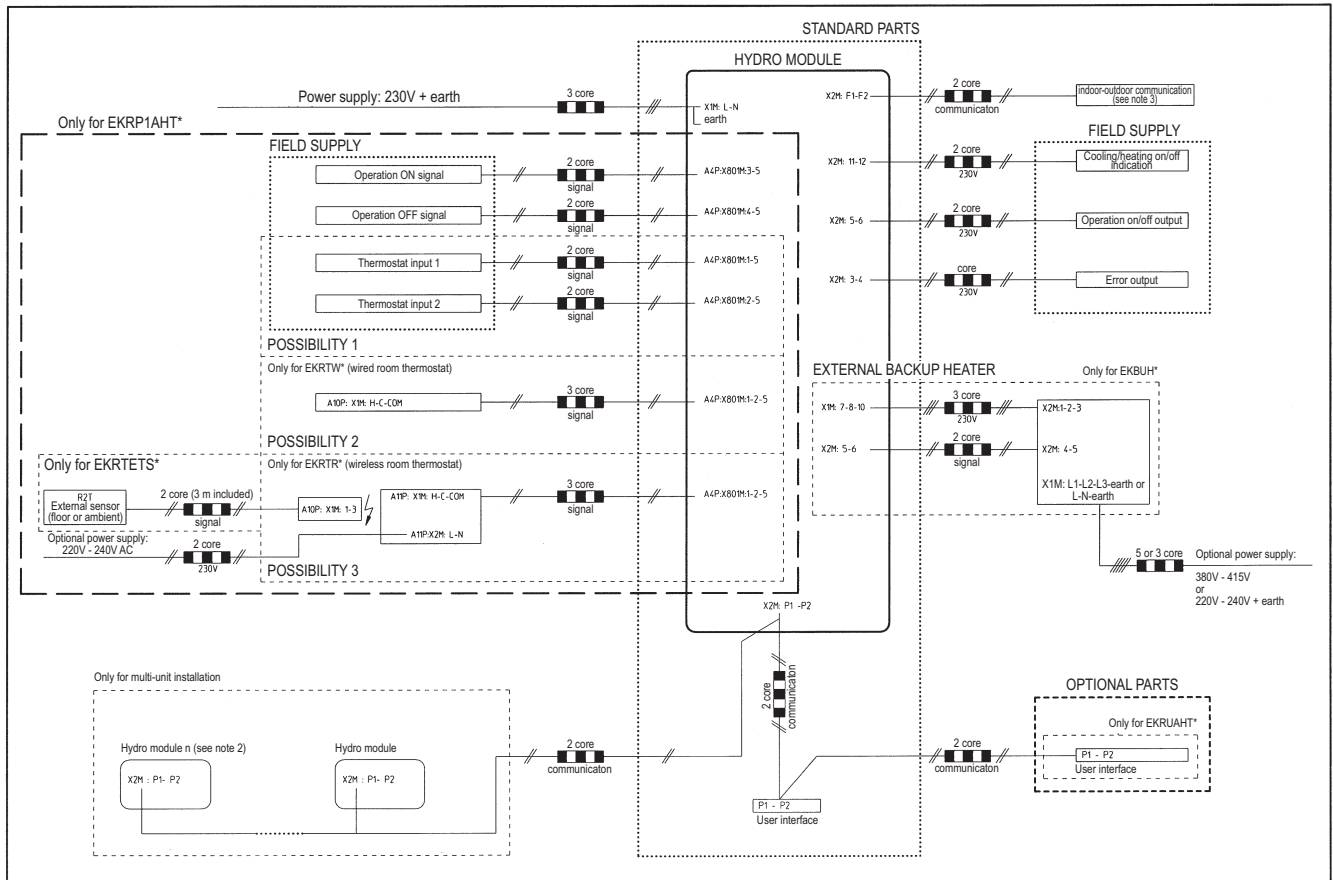
7 External connection diagrams

7 - 1 External Connection Diagrams

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Electrical connection diagram

For more details please check unit wiring diagram



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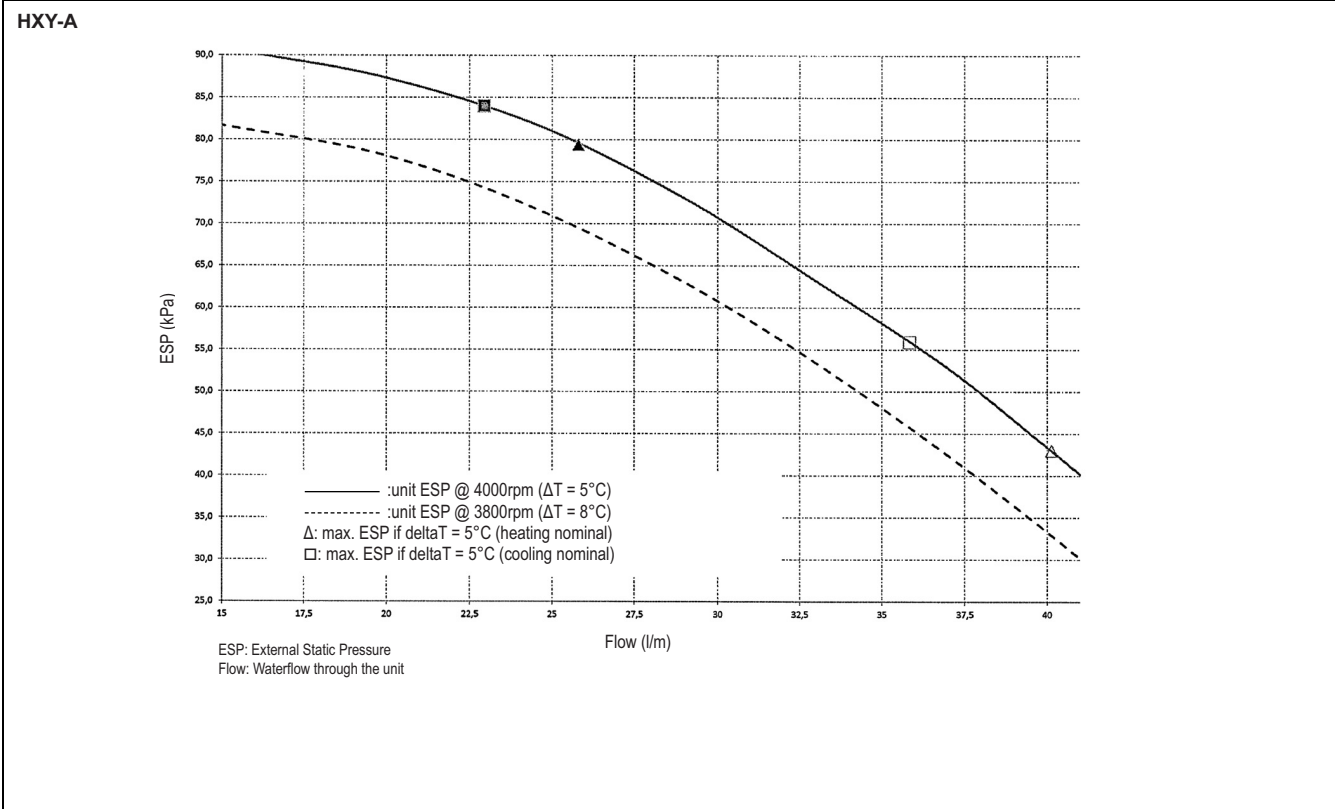
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NOTES

1. In case of signal cable keep minimum distance to power cables > 5 cm.
2. Max. of 16 hydromodules can be connected.
3. For indoor-outdoor communication: refer to information of the outdoor unit for details.

8 Hydraulic performance

8 - 1 Static Pressure Drop Unit

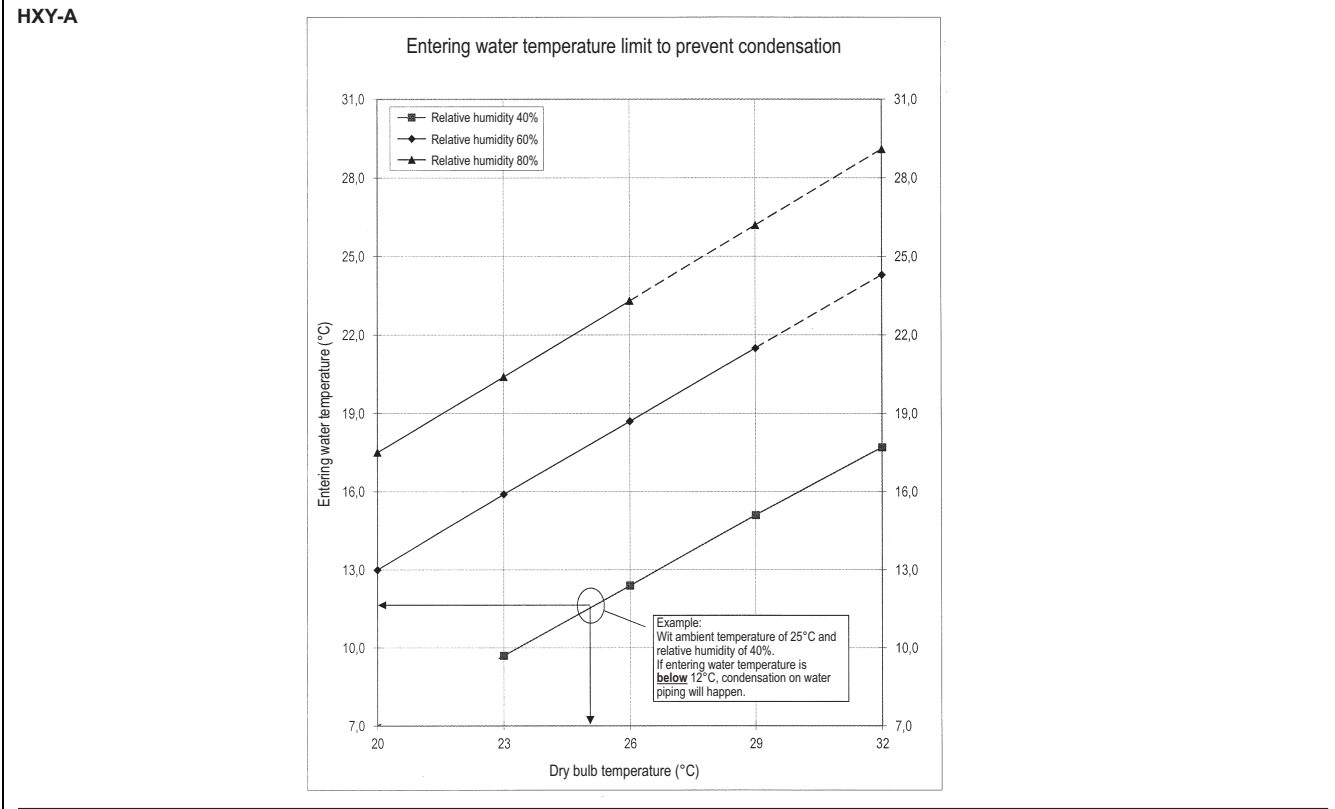


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NOTES

- Selecting a flow outside the curves can cause damage to or malfunctioning of the unit. See also minimum and maximum allowed flow in technical specifications.
- Water quality must be according to EN directive EC 98/83 EC.

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NOTES

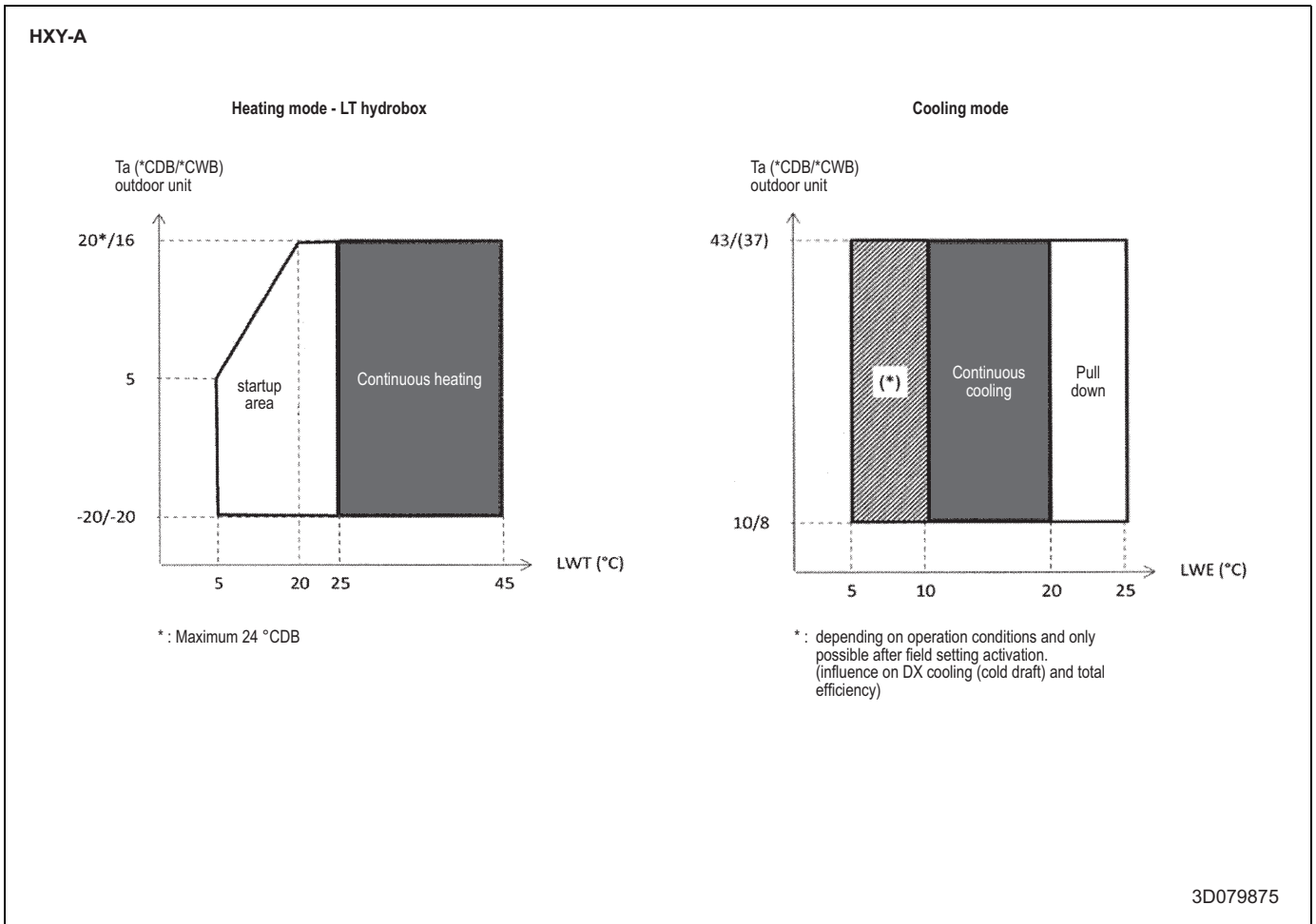
- Refer to psychrometric chart for more information.
- If condensation is expected, installation of EKHBPCA2 - drainpan kit must be considered.

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8 Hydraulic performance

8 - 1 Static Pressure Drop Unit

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