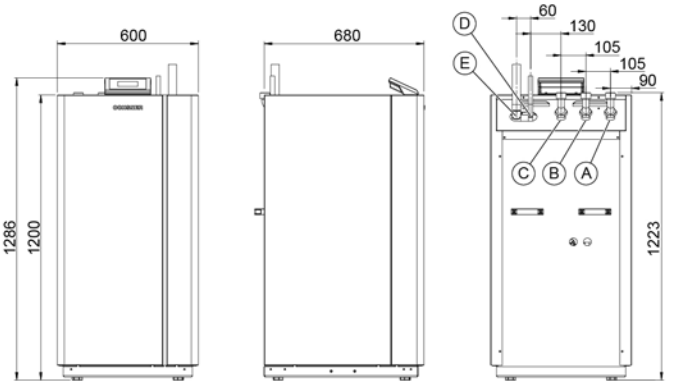
AIR 23 C12A

HIGH EFFICIENCY AIR/WATER HEAT PUMP
INCL. HORIZONTAL SPLIT EVAPORATOR

ORDER NUMBER: 287040
SERIES: M4
TF MAX. 65 °C
SPLIT



Ⓐ FLHC (outlet) Ⓑ FLT (outlet) Ⓒ RTN (inlet) Ⓓ WQA (outlet) Ⓔ WQA (inlet)

APPLIANCE DATA

Dimensions HxWxD	[mm]	1285x600x681
Hydraulic connection	[inch]	1 1/2"
Weight	[kg]	148
Casing colour		White/anthracite

HEATING MODE PERFORMANCE FIGURES (to EN 14511)

Standard point A10/W35		
Heating output	[kW]	23,40
Total power consumption / operating current	[kW]/[A]	4.60 / 9.00
COP		5,10
Operating point A7/W35		
Heating output	[kW]	20,70
Total power consumption / operating current	[kW]/[A]	4.50 / 8.80
COP		4,60
Standard point A2/W35		
Heating output	[kW]	17,20
Total power consumption / operating current	[kW]/[A]	4.10 / 8.00
COP		4,20
Standard point L-7/W35		
Heating output	[kW]	13,70
Total power consumption / operating current	[kW]/[A]	3.90 / 7.60
COP		3,50
Operating point L-10/W35		
Heating output	[kW]	12,80
Total power consumption / operating current	[kW]/[A]	3.90 / 7.60
COP		3,30
Operating point A2/W50		
Heating output	[kW]	16,80
Total power consumption / operating current	[kW]/[A]	5.30 / 10.30
COP		3,20
Operating point A2/W60		
Heating output	[kW]	16,40
Total power consumption / operating current	[kW]/[A]	5.80 / 11.30
COP		2,80

COOLING MODE PERFORMANCE FIGURES

Operating point A30/W18		
Cooling capacity	[kW]	15,60
Total power consumption / operating current	[kW]/[A]	5.10 / 9.90
Energy efficiency ratio EER		3,10
Operating point A30/W7		
Cooling capacity	[kW]	15,20
Total power consumption / operating current	[kW]/[A]	5.00 / 9.80
Energy efficiency ratio EER		3,00

Hydraulic version			Electric immersion heater		3-way switching module	
			Internal	external	Internal	external
M2-1	M4-1		x		x	
M2-2	M4-2			x	x	
M2-3	M4-3		x			x
M2-4	M4-4	M6		x		x

SPECIFICATION

Phases/nominal voltage/frequency	[~]/[V]/[Hz]	3/400/50
Output factor cos φ		0,74
Fuse protection (tripping curve "C")	[A]	20
Max. operating current	[A]	16,80
Max. starting current/max. with soft start	[A]	101.00 / 50.50
Sound power/sound pressure level (at 1 m distance) indoor unit	[dBA]	49.50 / 41.50
Sound power/sound pressure level (at 10 m distance), outdoor unit	[dBA]	54.0 / 26.0

CONDENSER

Type		Plate heat exchanger
Material		Stainless steel 1.4301
Max. refrigerant operating pressure	[bar]	30
Max. heat transfer medium operating pressure	[bar]	3
Heat transfer medium temperature differential	[K]	5
Application range	[°C]	65
Heat transfer medium		Water
Test pressure	[bar]	45
Heat transfer medium flow rate	[m³/h]	3,40
Internal pressure differential	[mbar]	330
Flow meter (FM)	Internal	Installed as
Circulation pump heat sink (WNA)	Internal	Stratos Para 25/1-8
Residual head I WNA external	[mbar]	356 (M4-1) 452 (M4-4)

REFRIGERANT CIRCUIT

Refrigerant		R407C
Defrost technology		Hot gas
Refrigerant charge	[kg]	10

COMPRESSOR

Type		Scroll
Output levels		1
Speed	[rpm]	2900
Voltage/frequency	[V]/[Hz]	400/50

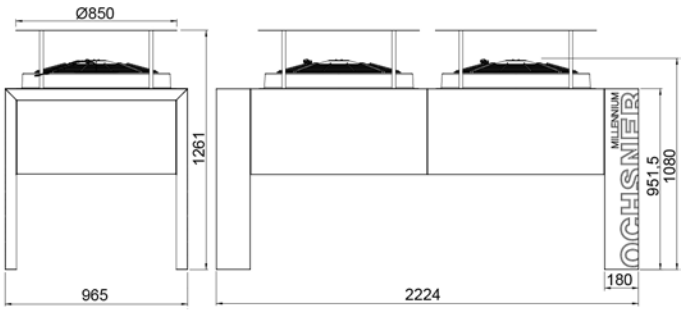
FAN

Type		axial
Number	[pce]	2
Voltage/frequency	[V]/[Hz]	230/50
Power consumption	[W]	1 x 111
Max. operating current	[A]	1 x 2.80

EVAPORATOR

Unit type		VHS-M 19
Dimensions HxWxD	[mm]	1080x2220x960
Type		Finned tube
Number	[pce]	1
Weight	[kg]	136
Fin pack material		Copper/ aluminium
Casing material		Stainless steel / coated
Max. refrigerant operating pressure	[bar]	30
Relative humidity	[%]	80
Heat transfer medium temperature differential	[K]	4,00
Air flow rate	[m³/h]	8000
Application range min./max	[°C]	-22 / 40

Status: 2019-05-21



SPLIT EVAPORATOR VHS-M 19

RECOMMENDED ACCESSORIES

	Order no./type	Description	Pressure loss
Heat pump buffer tank	min. PU500	30 l/kW at L2/W35	–
DHW tank	min. SP500	30 l/kW at L2/W50	–
External plate heat exchanger (DHW heating)	911252 PHE 5007	Prim.: 1 1/4" Sec.: 1"	Prim.: 37 mbar Sec.: 48 mbar
3-way switching module internal	980191	–	18 mbar
3-way switching module external	290341	DN40 (1 1/2"). kvs 25	18 mbar
Electric immersion heater internal	980190	8.8 kW (2.6 / 3.0 / 3.2)	81 mbar
External electric immersion heater (heat pump buffer tank)	922509	9 kW	–

Application	Booster heater output
Bivalent **parallel**	Sizing according to calculated value (offer program), but with minimum 50% of building heat load
Bivalent **partial parallel**	Sizing to 100% of building heat load
Bivalent **alternative**	Sizing to 100% of building heat load

	Max. connection length	Max. height differential
AIR 23 C12A	L ≤ 20	Hmax ≤ 10

LIMITS OF USE AIR 23 C12A

Outdoor temperature/max. heat pump flow temperature	A-10/W65°C A-15/W60°C A-20/W55°C
Underfloor heating (-15°C / 35°C)	YES
Radiators (-15°C / 50°C)	YES
Radiators (-15°C / 55°C)	YES
Radiators (-15°C / 65°C)	YES
Radiators (-15°C / 65°C)	Booster heater should be sized for 100% heat load
Domestic hot water	YES

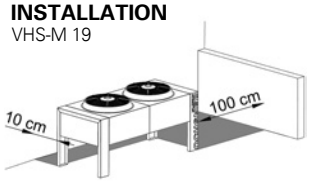
PRODUCT DATA **ErP: AIR 23 C12A**

		COLDER	MEAN	HOTTER
LOW TEMPERATURE	A++		**35°C**	
ηs		161	**174**	199
Energy consumption	[kWh]	6821	**7236**	4558
P rated	[kW]	11	**16**	17
SCOP		4,11	**4,43**	5,04
MEDIUM TEMPERATURE	A++		**55°C**	
ηs		123	**136**	157
Energy consumption	[kWh]	9740	**9600**	5563
P rated	[kW]	12	**16**	17
SCOP		3,15	**3,46**	3,99
DHW	A		**SP500**	
ηWH		94	**103**	119
Energy consumption	[kWh]	1478	**1351**	1172
Draw-off profile			**XL**	
Tank losses	[W]		**117**	

		indoor		outdoor
Sound power level	[dBA]	49,5		54
Controller class with room remote control		VII	Controller contribution [%]	3,5
Controller class without room remote control		**III**	Controller contribution [%]	1,5

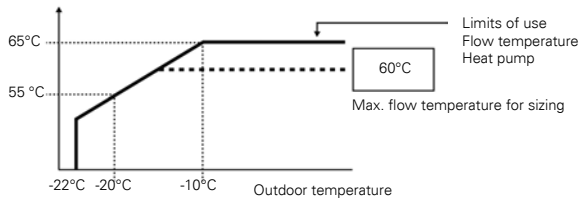
INSTALLATION

VHS-M 19

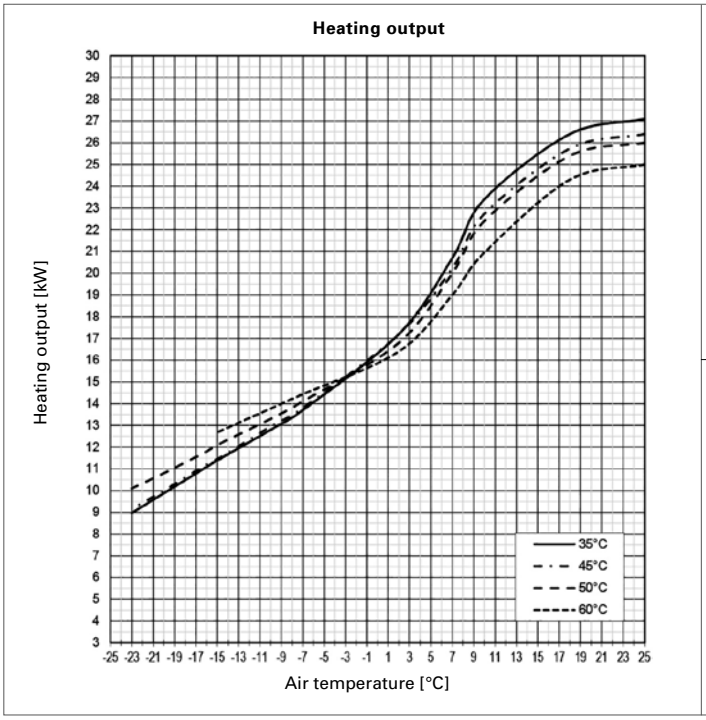


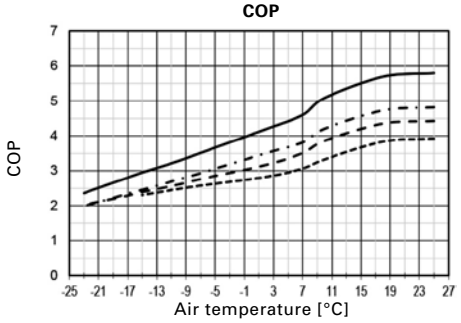
Longitudinal clearance to wall:
10 cm or min. 100 cm

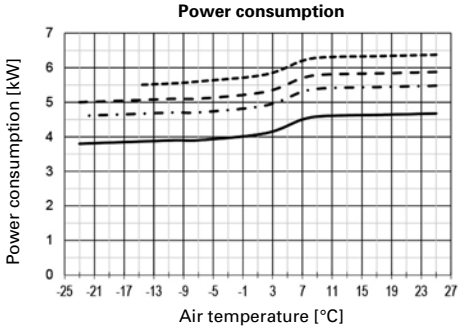
Lateral clearance to walls:
100 cm



PERFORMANCE CURVES AIR 23 C12A







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