

HSI

HFC
Refrigerant
R410A



AERMEC participates in the EUROVENT program: LCP
The products concerned appear on the site www.eurovent-certification.com

Variable MultiFlow
VMF

INVERTER
TECHNOLOGY

Reversible inverter Air/Water split heat pump for Heating, cooling and the production of domestic hot water
Heating Capacity from 5kW to 10kW
Cooling Capacity from 8kW to 14kW



HSI_WT / WTS /
WTT / WTST
(Accessories)

- **PRODUCTION OF HOT WATER UP TO 60°C**
- **PRODUCTION OF DOMESTIC HOT WATER WITH OUTSIDE TEMPERATURES FROM -20°C TO 45°C**

Features

HSI is the new split inverter heat pump system, more efficient than normal boiler systems as it guarantees heating, cooling and distribution of domestic hot water if combined with domestic hot water storage tanks (accessory), **efficiently and sustainably year-round.**

HSI has been designed to meet the needs of the new constructions market as well as the renovation market, **replacing or accompanying conventional boilers.**

The system can be installed in systems with any hydronic terminal, **and is already supplied with the main hydraulic components, thus facilitating final installation.**

Operating limits

Working at full load up to -20°C outside air temperature in winter, and up to 48°C in summer. Technical hot water production up to 60°C (for more information see the technical documentation)

Versions

HSI_C with HSI_E Single phase split heat pump
HSI_CT with HSI_ET Three phase split heat pump

Special features of the system:

HSI_C outdoor unit:

- Rotary Dual Stage Inverter Compressor, with vapour injection inside the compressor, which makes it possible to reach high temperatures of produced water and increase performance at partial loads, with minor electrical consumption.

- Axial Fan Inverters designed for aerodynamic optimisation, allowing a reduction of noise level and an increase in the air flow rate efficiency at the same time.
- Base electric resistor kit to prevent the formation of ice while the heat pump is in operation
- Electronic thermostatic valve.
- Length of cooling lines up to 30m, maximum difference in level between outdoor and indoor units 15m

HSI_E Hydronic Module Indoor Unit:

- High and low pressure transducers
- Integrated hydronic unit, which contains the main hydraulic components.
 - Inverter pump
 - Plate heat exchanger
 - Expansion tank
 - Safety valve
 - Flow switch
 - Pressure gauge
 - Water filter
 - Electric resistors
 - Room temperature probe provided
- **Adjustment.** The Remote-enabled Control Panel is integrated within the indoor unit and allows for the following:
 - Management of a 3-way valve (not provided)
 - Weekly programming with 5 time frames per day
 - Auto-Restart
 - Emergency function (in the event of a heating or domestic hot water mode malfunction, the electric resistors are activated)

- Rapid domestic hot water heating function (Quick Hot Water)
- Weather Dependent Mode function (Climatic Adjustment)
- Quiet function for silent functionality, programmable with a timer
- Condensation Control
- **In order to save electricity, the electric resistor contained inside the indoor unit is not enabled, but can be activated from the control panel.**
- When the anti-legionella function is set, the HSI unit heats the entire tank automatically once a week, up to a maximum temperature of 70°C, which kills the bacteria instantly.

Accessories

• HBI_WT (230V~50Hz)

• HBI_WTT (400V 3N~50Hz)

- Domestic hot WATER storage tank of 200, 300 litres with main coil and back-up 3kW electrical resistor
- Magnesium Sacrificial Anode
- Stainless steel tank and coil
- Painted sheet metal outer casing and insulation material, thickness 50mm
- Internal installation

• HBI_WTS (230V~50Hz)

• HBI_WTST (400V 3N~50Hz)

- Domestic hot WATER storage tank of 200, 300 litres with main coil, supplementary coil and back-up 3kW electrical resistor
- Magnesium Sacrificial Anode
- Stainless steel tank and coil
- Painted sheet metal outer casing and insulation material, thickness 50mm
- Internal installation

Compatibility of the domestic hot water storage tank with HSI

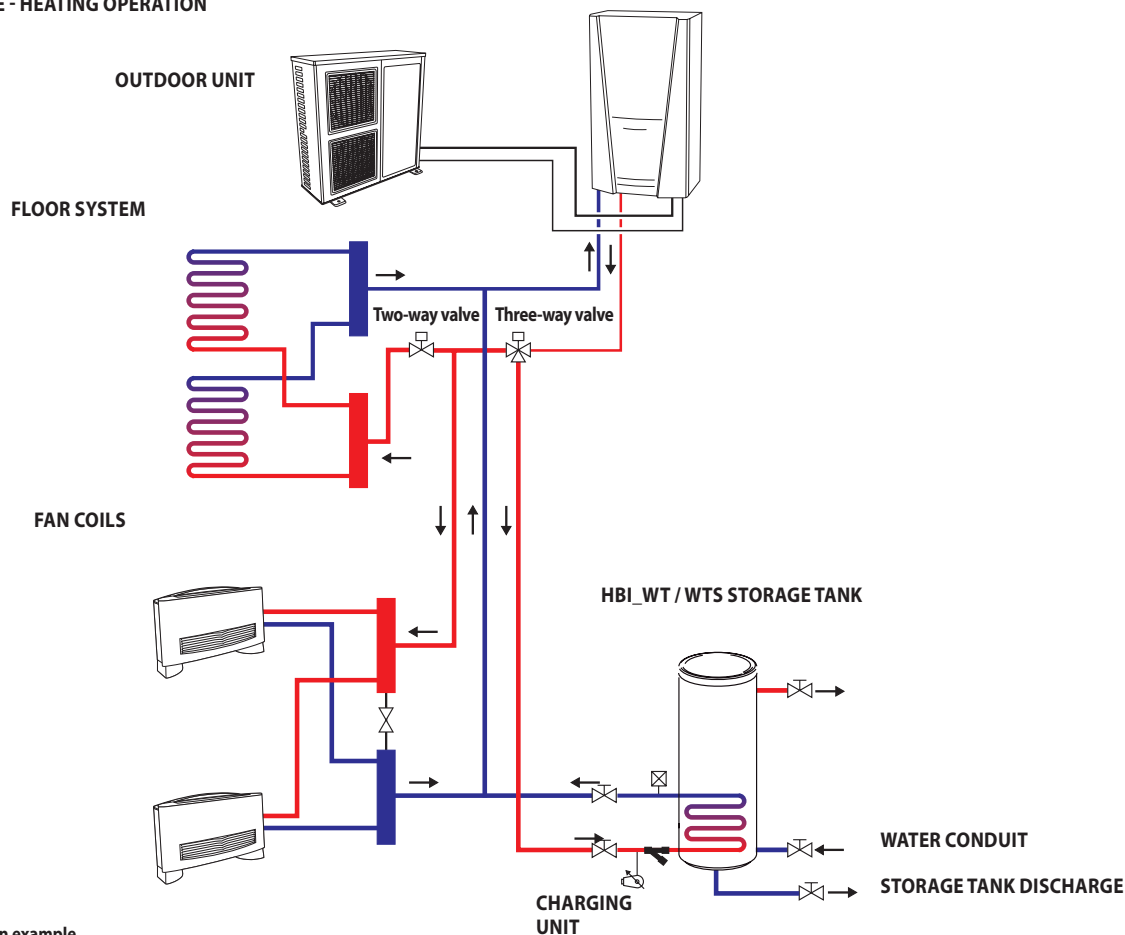
	HSI080C	HSI100C	HSI120CT	HSI140CT
MODEL 230V~50Hz	HSI080E	HSI100E	HSI120ET	HSI140ET
HBI200WT/WTS	•	•	-	-
HBI300WT/WTS	•	•	-	-
MODEL 400V 3N~50Hz	-	-	-	-
HBI200WTT/WTST	-	-	•	•
HBI300WTT/WTST	-	-	•	•

Domestic hot water storage tank technical data

HSI_C/CT		HBI200WT/WTT	HBI200WTS/WTST	HBI300WT/WTT	HBI300WTS/WTST
Electrical Data		230V~50Hz - 400V 3~50Hz	230V~50Hz - 400V 3~50Hz	230V~50Hz - 400V 3~50Hz	230V~50Hz - 400V 3~50Hz
Capacity	l	200	200	300	300
Min. temperature setting	* °C		40		
Max. temperature setting	* °C		80		
Electric resistor					
Quantity	no.		1		
Power	kW		3		
Input Current	A		13		
Hydraulic connections					
Use (in/out)	Type/Ø		G 1/2" (Female)		
Main coil	Type/Ø		G 3/4" (Female)		
Supplementary coil (L)	Type/Ø	/	G 3/4" (Female)	/	G 3/4" (Female)
Supplementary coil technical data					
Length	m	/	10	/	10
Ø x Thickness	mm	/	22 x 0,8	/	22 x 0,8

* With electric resistors without electric resistors 40 ÷ 50 °C

SYSTEM EXAMPLE - HEATING OPERATION



The drawing is only an example

Technical data

HSI_C/CT		80C	100C	120CT	140CT
HSI_E/ET		80E	100E	120ET	140ET
V/ph/Hz		220~240V 50Hz	220~240V 50Hz	380-415V~3N 50Hz	380-415V~3N 50Hz
12°C/7°C	Cooling power	(1) kW	5,5	6,9	9,6
	Absorbed power	(1) kW	1,85	2,34	3,02
	HSI_E/ET max. power absorbed	(1) kW	6,2	6,2	6,2
	EER	(1)	2,97	2,95	3,18
	ESEER	(1)	3,20	3,10	3,40
	Eurovent class - cold	(1)	A	B	A
	Water flow rate	(1) l/h	946	1187	1651
40°C/45°C	Useful head	(1) kPa	15	15	15
	Thermal power	(2) kW	7,7	9,0	12,0
	Absorbed power	(2) kW	2,26	2,65	3,24
	COP	(2)	3,41	3,4	3,70
	Eurovent class - hot	(2)	A	A	A
	Water flow rate	(2) l/h	1324	1548	2064
	Useful head	(2) kPa			2202
23°C/18°C	Cooling power	(3) kW	8,2	9,7	13,5
	Absorbed power	(3) kW	1,86	2,46	3,46
	EER	(3)	4,41	3,94	3,90
	Water flow rate	(3) l/h	1410	1668	2322
	Useful head	(3) kPa	15	15	15
	Thermal power	(4) kW	8,0	9,2	12,0
	Absorbed power	(4) kW	1,85	2,19	2,67
30°C/35°C	COP	(4)	4,32	4,20	4,49
	Water flow rate	(4) l/h	1376	1582	2064
	Useful head	(4) kPa	15	15	15
Performance in average climate conditions					
	Pdesignh	(5)	6,20	6,50	8,40
	SCOP	(5)	4,07	3,99	4,15
	ηs	(5)	160	157	163
	Efficiency Energy Class	(7)	A++	A++	A++
	Pdesignh	(6)	5,60	5,60	10,00
	SCOP	(6)	3,15	3,15	3,42
	ηs	(6)	126	126	138
	Efficiency Energy Class	(7)	A++	A++	A++
Cooling mode for low temperature					
	ηsc		189.8	193.7	171.6
	SEER		4.82	4.92	4.37

Data (14511:2013)

- (1) Water evaporator 12°C/7°C, Outside air 35°C
 (2) Water condenser 40°C/45°C, Outside air 7°C d.b./6°C w.b.
 (3) Water evaporator 23°C/18°C, Outside air 35°C

(4) Water condenser 30°C/35°C, Outside air 7°C d.b./6°C w.b.

(5) Efficiency in applications for low temperatures (35°C)

(6) Efficiency in applications for average temperatures (55°C)

(7) Energy efficiency class in accordance with regulation no.811/2013 Pdesignh ≤ 70kW

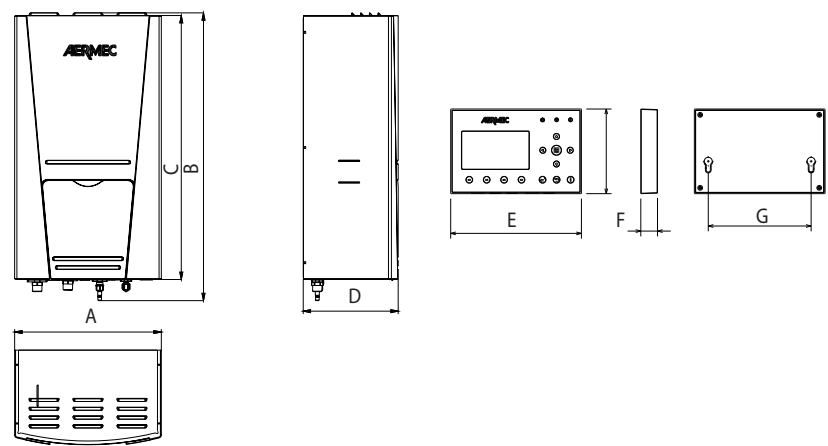
HSI_C/CT		80C	100C	120CT	140CT
HSI_E/ET		80E	100E	120ET	140ET
Electrical Data		220~240V 50Hz	220~240V 50Hz	380-415V~3N 50Hz	380-415V~3N 50Hz
Total current absorbed when cold	A	13,8	13,8	6,9	6,9
Total current absorbed when hot	A	16,4	16,4	8,2	8,2
HSI_C / CT outdoor unit					
Rotary Two Stage Inverter Compressor					
Compressors	no.		1		
Circuit	no.		1		
Coolant gas	Type		R410A		
Chiller Connections					
Gas line	mm(inch)		15,9(5/8")		
Liquid Line	mm(inch)		9,52(3/8")		
Axial Fans Inverter					
Fans	no.	1	1	2	2
Air flow rate, cooling		3511	3511	2917	7500
Sound Data					
sound power level	dB(A)	67	67	70	70
Sound pressure level	dB(A)	53	53	57	57
HSI_E / ET Indoor Unit					
System side heat exchanger - Plates					
Quantity	no.			1	
Circulator					
Quantity	no.			1	
Input Power	kW			105	
Expansion tank					
Quantity	no.			1	
Capacity	l			10	
Max pressure	bar			3	
Electric resistor					
Quantity	no.			1	
Power	kW			6	
Stages	no. (kW)	2 (3+3)	2 (3+3)	1 (6)	1 (6)
Connections					
Chiller Connections					
Gas line	mm(inch)			15,9(5/8")	
Liquid Line	mm(inch)			9,52(3/8")	
Hydraulic connections					
In	inch(type)			G1 (Male)	
Out	inch(type)			G1 (Male)	

Sound power (Cold operation) Aermec determines the sound power value based on measures in accordance with standard UNI EN ISO 9614-2, in compliance with that set forth by the Eurovent certification.

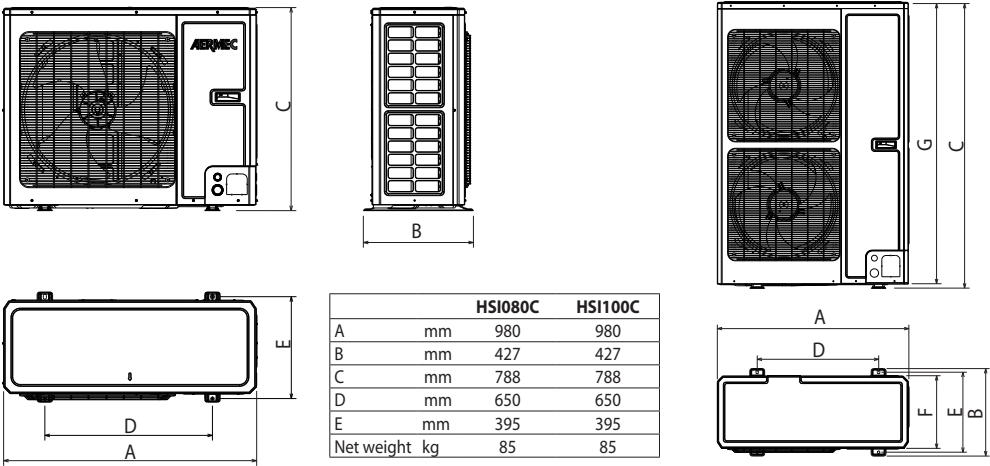
Sound pressure (Cold operation) Sound pressure measured in a free field, 10 m from the external surface of the unit (according to the UNI EN ISO 3744).

N.B.: For further information, please refer to the selection programme or the technical documentation available at www.aermec.com

Size data

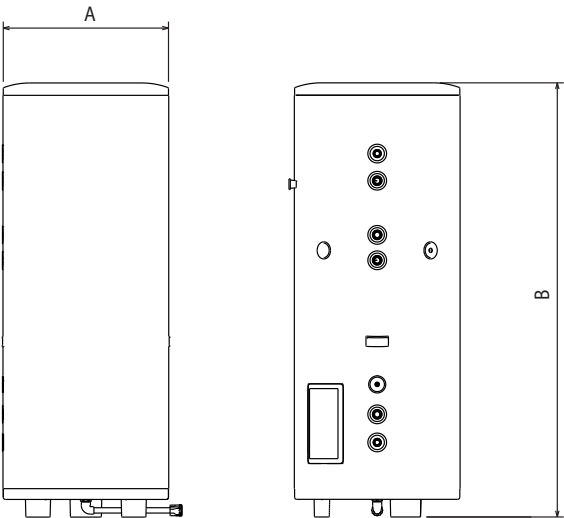


	HSI80E	HSI100E	HSI120ET	HSI140ET
A	mm	500		
B	mm	981		
C	mm	900		
D	mm	324		
E	mm	164,4		
F	mm	21		
G	mm	129,4		
Net weight	kg	56	56	58



	HSI080C	HSI100C
A	mm	980
B	mm	427
C	mm	788
D	mm	650
E	mm	395
Net weight	kg	85

	HSI120CT	HSI140CT
A	mm	900
B	mm	412
C	mm	1345
D	mm	572
E	mm	378
F	mm	340
G	mm	1326
Net weight	kg	126



	HBI200WT	HBI200WTS	HBI300WT	HBI300WTS	HBI200WTT	HBI200WTST	HBI300WTT	HBI300WTST
A	mm	540	620	620	540	540	620	620
B	mm	1595	1595	1620	1595	1595	1620	1620
Net weight	kg	68	71	82	87	71	82	87

Aermec reserves the right to make all modification deemed necessary for improving the product at any time with any modification of technical data.

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