

# HERA BS

R290  
Refrigerant  
R290 | GWP=3



Reversible  
heat pump



Semi-hermetic  
piston compressor



Inverter



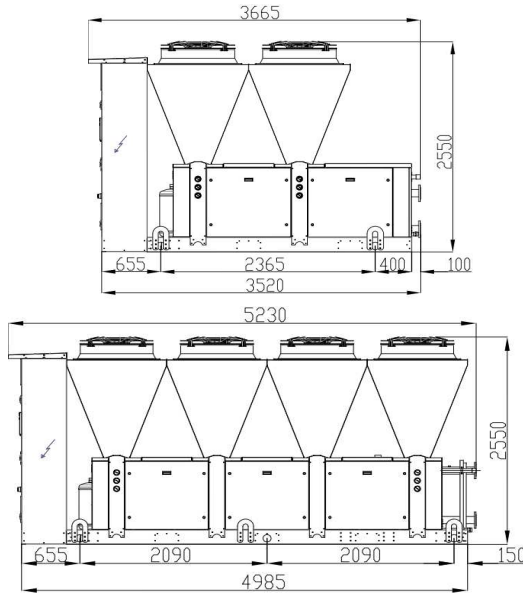
Axial fan



Brazed plate  
heat exchanger

200-2-2 PV ↔ 380-2-2 PV

## Air to water heat pumps for comfort applications



### Solution

B - Base  
P - Base with Pump

### Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

### Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 197 - 377 kW  
Cooling capacity 182 - 326 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is <b>mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.</b>
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a <b>high exchange surface area.</b>
<b>Water heat exchanger</b>	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and <b>high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.</b>
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA BS

## Technical data

HERA BS R290		200-2-2 PV	240-2-2 PV	305-2-2 PV	335-2-2 PV	380-2-2 PV
<b>Heating Capacity<sup>(1)</sup> (LN/SL versions)</b>	[kW]	201	239	297	333	377
Total power input <sup>(1)</sup>	[kW]	69,9	84,1	96,2	108,0	126
COP	[-]	2,88	2,84	3,09	3,08	2,99
<b>Heating Capacity<sup>(1)</sup> (XL versions)</b>	[kW]	197	236	293	329	375
Total power input <sup>(1)</sup>	[kW]	68,8	82,9	95,2	106,0	125
COP	[-]	2,86	2,85	3,08	3,10	3,00
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	34,9	41,5	51,5	57,8	65,4
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	45,6	54,9	47,5	42,0	46,0
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	33,2 / 41,9	39,4 / 49,8	48,9 / 61,8	54,9 / 69,4	62,1 / 78,5
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>						
SCOP (LN/SL - XL)	[W/W]	3,417 - 3,443	3,384 - 3,386	3,512 - 3,558	3,535 - 3,344	3,201 - 3,234
$\eta_{s,h}$ (LN/SL - XL)	[%]	133,7 - 134,7	132,3 - 132,5	137,5 - 139,3	138,4 - 130,8	125 - 126,4
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>						
SCOP (LN/SL - XL)	[W/W]	3,053 - 2,849	2,824 - 2,83	2,976 - 3,011	2,996 - 3,032	2,928 - 2,939
$\eta_{s,h}$ (LN/SL - XL)	[%]	119,1 - 111	110 - 110,2	116,1 - 117,4	116,9 - 118,3	114,1 - 114,5
<b>Cooling Capacity<sup>(2)</sup> (LN/SL versions)</b>	[kW]	183	214	260	290	326
Total power input <sup>(2)</sup>	[kW]	75,1	90,4	106	118	137
EER	[-]	2,44	2,37	2,45	2,46	2,38
<b>Cooling Capacity<sup>(2)</sup> (XL versions)</b>	[kW]	182	214	258	291	324
Total power input <sup>(2)</sup>	[kW]	73,8	89,5	102	115	134
EER	[-]	2,47	2,39	2,53	2,53	2,42
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	31,4	36,8	44,7	49,9	56,0
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	39,8	46,5	39,7	37,3	37,4
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	25,1 / 37,7	29,4 / 44,2	35,8 / 53,6	39,9 / 59,9	44,8 / 67,2
<b>Technical data</b>						
Refrigerant / GWP	-	R290 / 3				
Charge of refrigerant	[Kg]	> 12				
Number of refrigerant circuits	N°	2				
Compressor type / quantity	-/N°	Semihhermetic reciprocating with VFD (Variable Frequency Drive) / 2				
Expansion valve type	-	Electronic				
Fans quantity / type	-	4 / Axial EC		8 / Axial EC		
Fans power input <sup>(1)</sup> (total)	[kW]	1,54	1,67	2,28	2,45	2,62
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	50.050	51.600	89.800	92.150	94.400
<b>Electrical data</b>						
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50				
Maximum absorbed power	[kW]	87,9	97,9	138	141	151
Locked rotor current - LRA	[A]	153	168	238	245	261
Maximum absorbed current (full load)	[A]	153	168	238	245	261
<b>Solution BASE-P - with Hydronic Kit</b>						
Pump type	-	Centrifugal				
<b>Standard pump (1,5 bar)</b>						
Motor efficiency	-	IE3				
Pump motor nominal power input	[kW]	3,0	3,0	4,0	5,5	5,5
Pump motor nominal absorbed current	[A]	6,4	6,4	8,7	10,6	10,6
<b>Increased pump (3,0 bar)</b>						
Motor efficiency	-	IE3				
Pump motor nominal power input	[kW]	5,5	7,5	7,5	9,2	9,2
Pump motor nominal absorbed current	[A]	10,6	13,6	13,6	17,2	17,2
<b>Water connections</b>						
Size (nominal external diameter)	[inch]	3" (DN 80)	3" (DN 80)	4" (DN 100)	4" (DN 100)	4" (DN 100)
<b>Noise levels<sup>(3)</sup></b>						
Total sound power (LN version)	[db(A)]	86	87	91	92	93
Total sound pressure (LN version) - at 1 m distance	[db(A)]	67	68	71	72	73
Total sound pressure (LN version) - at 10 m distance	[db(A)]	54	55	59	60	61
Total sound power (SL version)	[db(A)]	85	86	90	91	92
Total sound pressure (SL version) - at 1 m distance	[db(A)]	66	67	70	71	72
Total sound pressure (SL version) - at 10 m distance	[db(A)]	53	54	58	59	60
Total sound power (XL version)	[db(A)]	83	84	88	89	90
Total sound pressure (XL version) - at 1 m distance	[db(A)]	64	65	68	69	70
Total sound pressure (XL version) - at 10 m distance	[db(A)]	51	52	56	57	58
<b>Dimensions and weights - unit</b>						
Length	[mm]	3.665	3.665	5.230	5.230	5.230
Width	[mm]	2.280	2.280	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550	2.550	2.550	2.550
Height (XL)	[mm]	2.610	2.610	2.610	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	2.800	2.840	3.970	3.990	4.180
Shipment weight - BP/SL/AS/EC/II version	[Kg]	2.900	2.940	4.070	4.090	4.280
Shipment weight - BP/XL/AS/EC/II version	[Kg]	2.930	2.970	4.130	4.150	4.340

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website

# HERA BS



Refrigerant  
R290 | GWP=3



SCOP



Reversible  
heat pump



Semi-hermetic  
piston compressor



Inverter



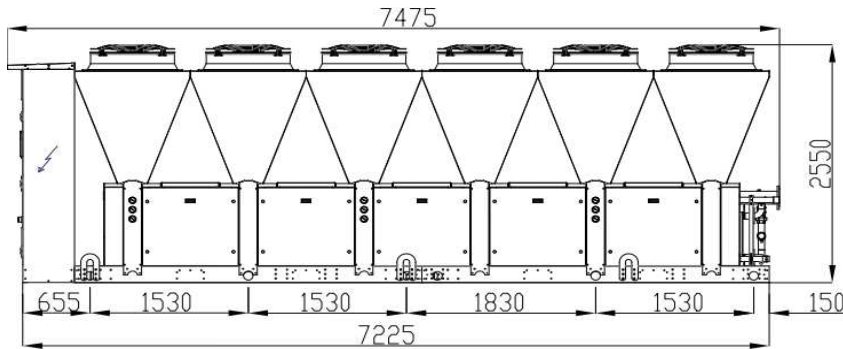
Axial fan



Braze plate  
heat exchanger

455-3-3 PV ↔ 565-3-3 PV

Air to water heat pumps for comfort applications



## Solution

B - Base  
P - Base with Pump

## Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

## Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 445 - 566 kW  
Cooling capacity 389 - 486 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is <b>mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.</b>
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a <b>high exchange surface area.</b>
<b>Water heat exchanger</b>	Braze plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and <b>high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.</b>
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54.  To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA BS

## Technical data

HERA BS R290		455-3-3 PV	500-3-3 PV	535-3-3 PV	565-3-3 PV
<b>Heating Capacity <sup>(1)</sup> (LN/SL versions)</b>	[kW]	446	499	533	566
Total power input <sup>(1)</sup>	[kW]	144	162	172	189
COP	[-]	3,10	3,08	3,10	2,99
<b>Heating Capacity <sup>(1)</sup> (XL versions)</b>	[kW]	445	492	528	562
Total power input <sup>(1)</sup>	[kW]	142	160	171	188
COP	[-]	3,13	3,08	3,09	2,99
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	77,3	86,5	92,4	98,2
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	38,7	47,2	39,9	44,5
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	73,4 / 92,8	82,2 / 104	87,8 / 111	93,3 / 118
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>					
SCOP (LN/SL - XL)	[W/W]	3,558 - 3,617	3,515 - 3,371	3,375 - 3,407	3,203 - 3,25
η <sub>s,h</sub> (LN/SL - XL)	[%]	139,3 - 141,7	137,6 - 131,8	132 - 133,3	125,1 - 127
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>					
SCOP (LN/SL - XL)	[W/W]	2,986 - 3,03	3,001 - 3,022	3,03 - 3,055	2,93 - 2,94
η <sub>s,h</sub> (LN/SL - XL)	[%]	116,5 - 118,2	117 - 117,9	118,2 - 119,2	114,2 - 114,6
<b>Cooling Capacity <sup>(2)</sup> (LN/SL versions)</b>	[kW]	391	434	467	486
Total power input <sup>(2)</sup>	[kW]	159	176	189	205
EER	[-]	2,5	2,5	2,5	2,5
<b>Cooling Capacity <sup>(2)</sup> (XL versions)</b>	[kW]	389	430	467	484
Total power input <sup>(2)</sup>	[kW]	154	171	185	200
EER	[-]	2,5	2,5	2,5	2,4
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	67,2	74,6	80,3	83,6
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	31,6	38,0	32,6	35,0
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	53,8 / 80,6	59,7 / 89,5	64,2 / 96,4	66,9 / 100
<b>Technical data</b>					
Refrigerant / GWP	-	R290 / 3			
Charge of refrigerant	[Kg]	> 12			
Number of refrigerant circuits	N°	3			
Compressor type / quantity	-/N°	Semihermetic reciprocating with VFD (Variable Frequency Drive) / 3			
Expansion valve type	-	Electronic			
Fans quantity / type	-	12 / Axial EC			
Fans power input <sup>(1)</sup> (total)	[kW]	3,43	3,68	3,89	3,93
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	134.800	138.300	141.100	141.700
<b>Electrical data</b>					
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50			
Maximum absorbed power	[kW]	207	211	217	227
Locked rotor current - LRA	[A]	357	368	381	391
Maximum absorbed current (full load)	[A]	357	368	381	391
<b>Solution BASE-P - with Hydronic Kit</b>					
Pump type	-	Centrifugal			
<b>Standard pump (1,5 bar)</b>					
Motor efficiency	-	IE3			
Pump motor nominal power input	[kW]	5,5	5,5	7,5	7,5
Pump motor nominal absorbed current	[A]	10,6	10,6	13,6	13,6
<b>Increased pump (3,0 bar)</b>					
Motor efficiency	-	IE3			
Pump motor nominal power input	[kW]	9,2	11,0	11,0	11,0
Pump motor nominal absorbed current	[A]	17,2	21,3	21,3	21,3
<b>Water connections</b>					
Size (nominal external diameter)	[inch]	5" (DN 125)	5" (DN 125)	5" (DN 125)	6" (DN 150)
<b>Noise levels <sup>(3)</sup></b>					
Total sound power (LN version)	[db(A)]	93	93	93	95
Total sound pressure (LN version) - at 1 m distance	[db(A)]	72	72	72	74
Total sound pressure (LN version) - at 10 m distance	[db(A)]	60	60	60	62
Total sound power (SL version)	[db(A)]	92	92	92	94
Total sound pressure (SL version) - at 1 m distance	[db(A)]	71	71	71	73
Total sound pressure (SL version) - at 10 m distance	[db(A)]	59	59	59	61
Total sound power (XL version)	[db(A)]	90	90	90	92
Total sound pressure (XL version) - at 1 m distance	[db(A)]	69	69	69	71
Total sound pressure (XL version) - at 10 m distance	[db(A)]	57	57	57	59
<b>Dimensions and weights - unit</b>					
Length	[mm]	7.475	7.475	7.475	7.475
Width	[mm]	2.280	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550	2.550	2.550
Height (XL)	[mm]	2.610	2.610	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	5.960	5.960	6.250	6.290
Shipment weight - BP/SL/AS/EC/II version	[Kg]	6.060	6.060	6.350	6.390
Shipment weight - BP/XL/AS/EC/II version	[Kg]	6.150	6.150	6.440	6.480

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website

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R290 | GWP=3



SCOP



Reversible  
heat pump



Semi-hermetic  
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Inverter



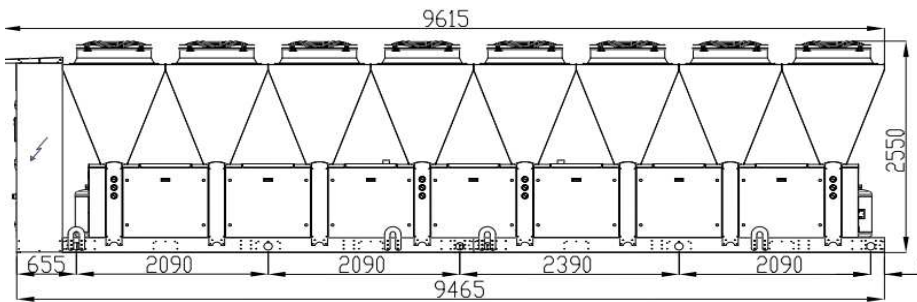
Axial fan



Brazed plate  
heat exchanger

665-4-4 PV ↔ 720-4-4 PV

Air to water heat pumps for comfort applications



## Solution

B - Base  
P - Base with Pump

## Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

## Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 658 - 710 kW  
Cooling capacity 581 - 630 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is <b>mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.</b>
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<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA BS

## Technical data

HERA BS R290		665-4-4 PV	720-4-4 PV
<b>Heating Capacity<sup>(1)</sup> (LN/SL versions)</b>	[kW]	<b>666</b>	<b>710</b>
Total power input <sup>(1)</sup>	[kW]	215	230
COP	[-]	3,10	3,09
<b>Heating Capacity<sup>(1)</sup> (XL versions)</b>	[kW]	<b>658</b>	<b>670</b>
Total power input <sup>(1)</sup>	[kW]	213	229
COP	[-]	3,09	2,93
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	116	123
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	42,0	41,3
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	110 / 139	117 / 148
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>			
SCOP (LN/SL - XL)	[W/W]	3,576 - 3,374	3,396 - 3,429
$\eta_{s,h}$ (LN/SL - XL)	[%]	140 - 132	132,8 - 134,2
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>			
SCOP (LN/SL - XL)	[W/W]	3,029 - 3,064	3,057 - 3,081
$\eta_{s,h}$ (LN/SL - XL)	[%]	118,2 - 119,6	119,3 - 120,3
<b>Cooling Capacity<sup>(2)</sup> (LN/SL versions)</b>	[kW]	<b>581</b>	<b>630</b>
Total power input <sup>(2)</sup>	[kW]	235	253
EER	[-]	2,53	2,51
<b>Cooling Capacity<sup>(2)</sup> (XL versions)</b>	[kW]	<b>581</b>	<b>624</b>
Total power input <sup>(2)</sup>	[kW]	229	247
EER	[-]	2,54	2,53
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	99,9	108
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	37,3	35,3
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	79,9 / 120	86,4 / 130
<b>Technical data</b>			
Refrigerant / GWP	-	R290 / 3	
Charge of refrigerant	[Kg]	> 12	
Number of refrigerant circuits	N°	4	
Compressor type / quantity	-/N°	Semihermetic reciprocating with VFD (Variable Frequency Drive) / 4	
Expansion valve type	-	Electronic	
Fans quantity / type	-	16 / Axial EC	
Fans power input <sup>(1)</sup> (total)	[kW]	4,90	5,17
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	184.300	187.900
<b>Electrical data</b>			
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50	
Maximum absorbed power	[kW]	281	289
Locked rotor current - LRA	[A]	490	508
Maximum absorbed current (full load)	[A]	490	508
<b>Solution BASE-P - with Hydronic Kit</b>			
Pump type	-	Centrifugal	
<b>Standard pump (1,5 bar)</b>			
Motor efficiency	-	IE3	
Pump motor nominal power input	[kW]	11	11
Pump motor nominal absorbed current	[A]	21,3	21,3
<b>Increased pump (3,0 bar)</b>			
Motor efficiency	-	IE3	
Pump motor nominal power input	[kW]	15,0	15,0
Pump motor nominal absorbed current	[A]	27,7	27,7
<b>Water connections</b>			
Size (nominal external diameter)	[inch]	6" (DN 150)	6" (DN 150)
<b>Noise levels<sup>(3)</sup></b>			
Total sound power (LN version)	[db(A)]	95	96
Total sound pressure (LN version) - at 1 m distance	[db(A)]	74	74
Total sound pressure (LN version) - at 10 m distance	[db(A)]	62	63
Total sound power (SL version)	[db(A)]	94	95
Total sound pressure (SL version) - at 1 m distance	[db(A)]	73	73
Total sound pressure (SL version) - at 10 m distance	[db(A)]	61	62
Total sound power (XL version)	[db(A)]	92	93
Total sound pressure (XL version) - at 1 m distance	[db(A)]	71	71
Total sound pressure (XL version) - at 10 m distance	[db(A)]	59	60
<b>Dimensions and weights - unit</b>			
Length	[mm]	9.615	9.615
Width	[mm]	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550
Height (XL)	[mm]	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	7.880	8.340
Shipment weight - BP/SL/AS/EC/II version	[Kg]	7.980	8.440
Shipment weight - BP/XL/AS/EC/II version	[Kg]	8.100	8.560

#### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(4) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

#### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website

# HERA HE

R290  
Refrigerant  
R290 | GWP=3



Reversible  
heat pump



Semi-hermetic  
piston compressor



Inverter



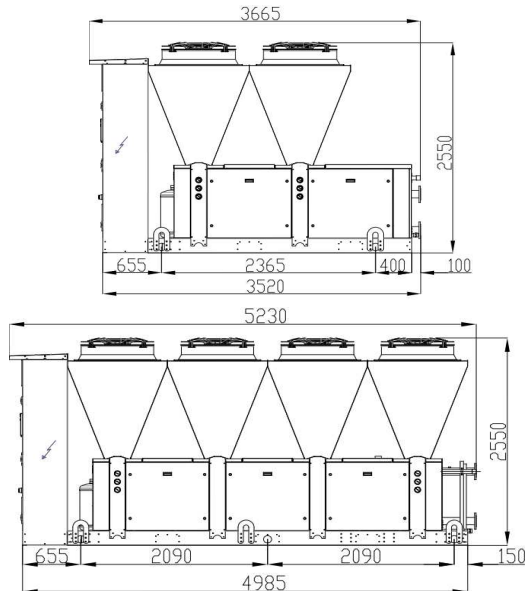
Axial fan



Brazen plate  
heat exchanger

195-2-2 PV ↔ 355-2-2 PV

## Air to water heat pumps for comfort applications



### Solution

B - Base  
P - Base with Pump

### Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

### Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 167 - 300 kW  
Cooling capacity 150 - 267 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is <b>mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.</b>
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. <b>The motor efficiency class complies with IE4.</b>
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a <b>high exchange surface area.</b>
<b>Water heat exchanger</b>	Brazen plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and <b>high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.</b>
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA HE

## Technical data

HERA HE R290		195-2-2 PV	230-2-2 PV	270-2-2 PV	300-2-2 PV	355-2-2 PV
<b>Heating Capacity<sup>(1)</sup> (LN/SL versions)</b>	[kW]	167	202	250	272	300
Total power input <sup>(1)</sup>	[kW]	52,5	63,8	78,9	85,6	96
COP	[-]	3,18	3,17	3,17	3,18	3,14
<b>Heating Capacity<sup>(1)</sup> (XL versions)</b>	[kW]	165	189	249	270	300
Total power input <sup>(1)</sup>	[kW]	52,0	63,1	78,3	84,9	95
COP	[-]	3,17	3,00	3,18	3,18	3,16
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	28,9	35,0	43,4	47,1	52,0
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	32,5	40,5	35,0	29,1	30,6
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	27,5 / 34,7	33,3 / 42	41,2 / 52,1	44,7 / 56,5	49,4 / 62,4
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>						
SCOP (LN/SL - XL)	[W/W]	3,729 - 3,523	3,614 - 3,521	3,735 - 3,796	3,777 - 3,834	3,682 - 3,692
η <sub>s,h</sub> (LN/SL - XL)	[%]	146,1 - 137,9	141,5 - 137,8	146,4 - 148,9	148,1 - 150,3	144,3 - 144,7
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>						
SCOP (LN/SL - XL)	[W/W]	3,101 - 3,134	3,118 - 3,141	3,08 - 3,118	3,088 - 3,133	3,08 - 3,078
η <sub>s,h</sub> (LN/SL - XL)	[%]	121 - 122,3	121,7 - 122,6	120,2 - 121,7	120,5 - 122,3	120,2 - 120,1
<b>Cooling Capacity<sup>(2)</sup> (LN/SL versions)</b>	[kW]	150	176	218	237	267
Total power input <sup>(2)</sup>	[kW]	57,9	69,8	85,9	93,4	106
EER	[-]	2,59	2,52	2,54	2,54	2,52
<b>Cooling Capacity<sup>(2)</sup> (XL versions)</b>	[kW]	150	175	216	237	267
Total power input <sup>(2)</sup>	[kW]	56,3	68,5	82,9	89,9	104
EER	[-]	2,66	2,55	2,61	2,64	2,57
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	25,8	30,4	37,5	40,8	45,9
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	28,0	33,0	29,0	26,0	26,2
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	20,6 / 31	24,3 / 36,5	30 / 45	32,6 / 49	36,7 / 55,1
<b>Technical data</b>						
Refrigerant / GWP	-	R290 / 3				
Charge of refrigerant	[Kg]	> 12				
Number of refrigerant circuits	N°	2				
Compressor type / quantity	-/N°	Semihhermetic reciprocating with VFD (Variable Frequency Drive) / 2				
Expansion valve type	-	Electronic				
Fans quantity / type	-	4 / Axial EC		8 / Axial EC		
Fans power input <sup>(1)</sup> (total)	[kW]	1,27	1,37	2,00	2,10	2,21
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	45.800	47.100	84.500	85.900	87.500
<b>Electrical data</b>						
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50				
Maximum absorbed power	[kW]	76,2	85,6	110	110	138
Locked rotor current - LRA	[A]	127	141	188	188	238
Maximum absorbed current (full load)	[A]	127	141	188	188	238
<b>Solution BASE-P - with Hydronic Kit</b>						
Pump type	-	Centrifugal				
<b>Standard pump (1,5 bar)</b>						
Motor efficiency	-	IE3				
Pump motor nominal power input	[kW]	2,2	3	3	3	4
Pump motor nominal absorbed current	[A]	4,7	6,4	6,4	6,4	8,7
<b>Increased pump (3,0 bar)</b>						
Motor efficiency	-	IE3				
Pump motor nominal power input	[kW]	4	5,5	7,5	7,5	7,5
Pump motor nominal absorbed current	[A]	8,7	10,6	13,6	13,6	13,6
<b>Water connections</b>						
Size (nominal external diameter)	[inch]	3" (DN 80)	3" (DN 80)	3" (DN 80)	4" (DN 100)	4" (DN 100)
<b>Noise levels<sup>(3)</sup></b>						
Total sound power (LN version)	[db(A)]	86	87	91	92	93
Total sound pressure (LN version) - at 1 m distance	[db(A)]	67	68	71	72	73
Total sound pressure (LN version) - at 10 m distance	[db(A)]	54	55	59	60	61
Total sound power (SL version)	[db(A)]	85	86	90	91	92
Total sound pressure (SL version) - at 1 m distance	[db(A)]	66	67	70	71	72
Total sound pressure (SL version) - at 10 m distance	[db(A)]	53	54	58	59	60
Total sound power (XL version)	[db(A)]	83	84	88	89	90
Total sound pressure (XL version) - at 1 m distance	[db(A)]	64	65	68	69	70
Total sound pressure (XL version) - at 10 m distance	[db(A)]	51	52	56	57	58
<b>Dimensions and weights - unit</b>						
Length	[mm]	3.665	3.665	5.230	5.230	5.230
Width	[mm]	2.280	2.280	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550	2.550	2.550	2.550
Height (XL)	[mm]	2.610	2.610	2.610	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	2.800	2.840	3.970	3.990	4.180
Shipment weight - BP/SL/AS/EC/II version	[Kg]	2.900	2.940	4.070	4.090	4.280
Shipment weight - BP/XL/AS/EC/II version	[Kg]	2.930	2.970	4.130	4.150	4.340

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website



# HERA HE



Refrigerant  
R290 | GWP=3



SCOP



Reversible  
heat pump



Semi-hermetic  
piston compressor



Inverter



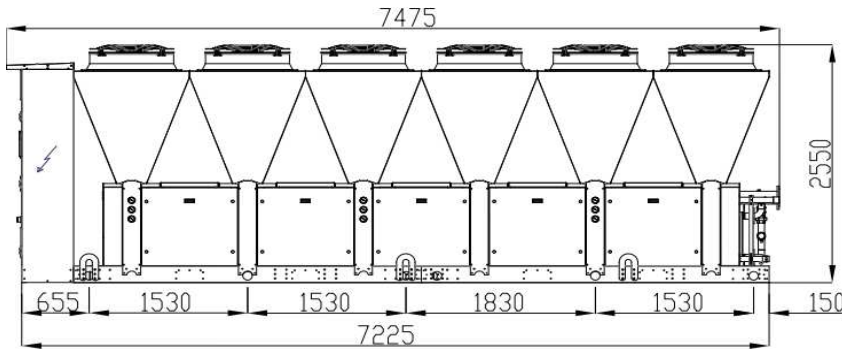
Axial fan



Braze plate  
heat exchanger

405-3-3 PV ↔ 530-3-3 PV

Air to water heat pumps for comfort applications



## Solution

B - Base  
P - Base with Pump

## Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

## Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 376 - 500 kW  
Cooling capacity 326 - 440 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
<b>Water heat exchanger</b>	Braze plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA HE

## Technical data

HERA HE R290		405-3-3 PV	450-3-3 PV	505-3-3 PV	530-3-3 PV
<b>Heating Capacity <sup>(1)</sup> (LN/SL versions)</b>	[kW]	376	407	450	500
Total power input <sup>(1)</sup>	[kW]	118	129	143	161
COP	[-]	3,19	3,16	3,15	3,11
<b>Heating Capacity <sup>(1)</sup> (XL versions)</b>	[kW]	374	401	444	496
Total power input <sup>(1)</sup>	[kW]	117	127	141	159
COP	[-]	3,20	3,16	3,15	3,12
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	65,1	70,6	78,1	86,7
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	28,5	32,8	29,6	35,6
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	61,8 / 78,1	67,1 / 84,7	74,2 / 93,7	82,4 / 104
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>					
SCOP (LN/SL - XL)	[W/W]	3,76 - 3,818	3,763 - 3,8	3,684 - 3,71	3,665 - 3,67
η <sub>s,h</sub> (LN/SL - XL)	[%]	147,4 - 149,7	147,5 - 149	144,4 - 145,4	143,6 - 143,8
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>					
SCOP (LN/SL - XL)	[W/W]	3,082 - 3,117	3,078 - 3,108	3,08 - 3,078	3,075 - 3,078
η <sub>s,h</sub> (LN/SL - XL)	[%]	120,3 - 121,7	120,1 - 121,3	120,2 - 120,1	120 - 120,1
<b>Cooling Capacity <sup>(2)</sup> (LN/SL versions)</b>	[kW]	326	352	398	440
Total power input <sup>(2)</sup>	[kW]	129	139	159	177
EER	[-]	2,53	2,53	2,50	2,49
<b>Cooling Capacity <sup>(2)</sup> (XL versions)</b>	[kW]	325	350	396	441
Total power input <sup>(2)</sup>	[kW]	124	135	154	172
EER	[-]	2,62	2,59	2,57	2,56
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	56,1	60,5	68,4	75,7
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	22,9	26,2	24,5	29,3
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	44,9 / 67,3	48,4 / 72,6	54,7 / 82,1	60,6 / 90,8
<b>Technical data</b>					
Refrigerant / GWP	-	R290 / 3			
Charge of refrigerant	[Kg]	> 12			
Number of refrigerant circuits	N°	3			
Compressor type / quantity	-/N°	Semihermetic reciprocating with VFD (Variable Frequency Drive) / 3			
Expansion valve type	-	Electronic			
Fans quantity / type	-	12 / Axial EC			
Fans power input <sup>(1)</sup> (total)	[kW]	3,01	3,15	3,33	3,70
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	126.800	128.800	131.200	136.300
<b>Electrical data</b>					
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50			
Maximum absorbed power	[kW]	165	165	207	211
Locked rotor current - LRA	[A]	281	281	357	368
Maximum absorbed current (full load)	[A]	281	281	357	368
<b>Solution BASE-P - with Hydronic Kit</b>					
Pump type	-	Centrifugal			
<b>Standard pump (1,5 bar)</b>					
Motor efficiency	-	IE3			
Pump motor nominal power input	[kW]	5,5	5,5	5,5	5,5
Pump motor nominal absorbed current	[A]	10,6	10,6	10,6	10,6
<b>Increased pump (3,0 bar)</b>					
Motor efficiency	-	IE3			
Pump motor nominal power input	[kW]	9,2	9,2	9,2	11,0
Pump motor nominal absorbed current	[A]	17,2	17,2	17,2	21,3
<b>Water connections</b>					
Size (nominal external diameter)	[inch]	4" (DN 100)	4" (DN 100)	5" (DN 125)	5" (DN 125)
<b>Noise levels <sup>(3)</sup></b>					
Total sound power (LN version)	[db(A)]	93	93	93	95
Total sound pressure (LN version) - at 1 m distance	[db(A)]	72	72	72	74
Total sound pressure (LN version) - at 10 m distance	[db(A)]	60	60	60	62
Total sound power (SL version)	[db(A)]	92	92	92	94
Total sound pressure (SL version) - at 1 m distance	[db(A)]	71	71	71	73
Total sound pressure (SL version) - at 10 m distance	[db(A)]	59	59	59	61
Total sound power (XL version)	[db(A)]	90	90	90	92
Total sound pressure (XL version) - at 1 m distance	[db(A)]	69	69	69	71
Total sound pressure (XL version) - at 10 m distance	[db(A)]	57	57	57	59
<b>Dimensions and weights - unit</b>					
Length	[mm]	7.475	7.475	7.475	7.475
Width	[mm]	2.280	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550	2.550	2.550
Height (XL)	[mm]	2.610	2.610	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	5.960	5.960	6.250	6.290
Shipment weight - BP/SL/AS/EC/II version	[Kg]	6.060	6.060	6.350	6.390
Shipment weight - BP/XL/AS/EC/II version	[Kg]	6.150	6.150	6.440	6.480

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website

# HERA HE



Refrigerant  
R290 | GWP=3



SCOP



Reversible  
heat pump



Semi-hermetic  
piston compressor



Inverter



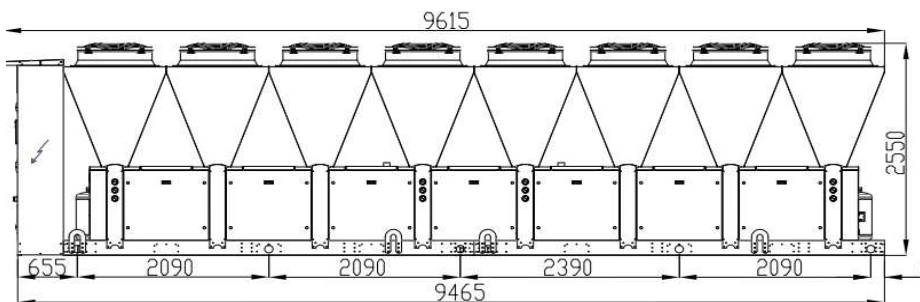
Axial fan



Brazed plate  
heat exchanger

600-4-4 PV ↔ 710-4-4 PV

Air to water heat pumps for comfort applications



## Solution

B - Base  
P - Base with Pump

## Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

## Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 540 - 666 kW  
Cooling capacity 474 - 596 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is <b>mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.</b>
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a <b>high exchange surface area.</b>
<b>Water heat exchanger</b>	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and <b>high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.</b>
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54.  To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA HE

## Technical data

HERA HE R290		600-4-4 PV	675-4-4 PV	710-4-4 PV
<b>Heating Capacity<sup>(1)</sup> (LN/SL versions)</b>	[kW]	<b>543</b>	<b>600</b>	<b>666</b>
Total power input <sup>(1)</sup>	[kW]	171	191	213
COP	[-]	3,18	3,14	3,13
<b>Heating Capacity<sup>(1)</sup> (XL versions)</b>	[kW]	<b>540</b>	<b>591</b>	<b>656</b>
Total power input <sup>(1)</sup>	[kW]	170	189	211
COP	[-]	3,18	3,13	3,11
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	94	104	115
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	29,1	30,6	31,3
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	89,5 / 113	98,8 / 125	109 / 138
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>				
SCOP (LN/SL - XL)	[W/W]	3,81 - 3,869	3,67 - 3,687	3,663 - 3,699
$\eta_{s,h}$ (LN/SL - XL)	[%]	149,4 - 151,8	143,8 - 144,5	143,5 - 145
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>				
SCOP (LN/SL - XL)	[W/W]	3,116 - 3,158	3,079 - 3,085	3,081 - 3,095
$\eta_{s,h}$ (LN/SL - XL)	[%]	121,7 - 123,3	120,2 - 120,4	120,2 - 120,8
<b>Cooling Capacity<sup>(2)</sup> (LN/SL versions)</b>	[kW]	<b>474</b>	<b>534</b>	<b>596</b>
Total power input <sup>(2)</sup>	[kW]	187	213	237
EER	[-]	2,53	2,51	2,51
<b>Cooling Capacity<sup>(2)</sup> (XL versions)</b>	[kW]	<b>474</b>	<b>530</b>	<b>591</b>
Total power input <sup>(2)</sup>	[kW]	179	206	231
EER	[-]	2,65	2,57	2,56
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	81,6	91,8	102
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	26	26	27
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	65,3 / 97,9	73,4 / 110	81,6 / 122
<b>Technical data</b>				
Refrigerant / GWP	-	R290 / 3		
Charge of refrigerant	[Kg]	> 12		
Number of refrigerant circuits	N°	4		
Compressor type / quantity	-/N°	Semihhermetic reciprocating with VFD (Variable Frequency Drive) / 4		
Expansion valve type	-	Electronic		
Fans quantity / type	-	16 / Axial EC		
Fans power input <sup>(1)</sup> (total)	[kW]	4,21	4,43	5,01
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	171.800	174.900	182.700
<b>Electrical data</b>				
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50		
Maximum absorbed power	[kW]	220	276	281
Locked rotor current - LRA	[A]	375	476	490
Maximum absorbed current (full load)	[A]	375	476	490
<b>Solution BASE-P - with Hydronic Kit</b>				
Pump type	-	Centrifugal		
<b>Standard pump (1,5 bar)</b>				
Motor efficiency	-	IE3		
Pump motor nominal power input	[kW]	7,5	7,5	11
Pump motor nominal absorbed current	[A]	13,6	13,6	21,3
<b>Increased pump (3,0 bar)</b>				
Motor efficiency	-	IE3		
Pump motor nominal power input	[kW]	11,0	15,0	15,0
Pump motor nominal absorbed current	[A]	21,3	27,7	27,7
<b>Water connections</b>				
Size (nominal external diameter)	[inch]	5" (DN 125)	5" (DN 125)	6" (DN 150)
<b>Noise levels<sup>(3)</sup></b>				
Total sound power (LN version)	[db(A)]	95	95	96
Total sound pressure (LN version) - at 1 m distance	[db(A)]	74	74	74
Total sound pressure (LN version) - at 10 m distance	[db(A)]	62	62	63
Total sound power (SL version)	[db(A)]	94	94	95
Total sound pressure (SL version) - at 1 m distance	[db(A)]	73	73	73
Total sound pressure (SL version) - at 10 m distance	[db(A)]	61	61	62
Total sound power (XL version)	[db(A)]	92	92	93
Total sound pressure (XL version) - at 1 m distance	[db(A)]	71	71	71
Total sound pressure (XL version) - at 10 m distance	[db(A)]	59	59	60
<b>Dimensions and weights - unit</b>				
Length	[mm]	9.615	9.615	9.615
Width	[mm]	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550	2.550
Height (XL)	[mm]	2.610	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	7.880	8.250	8.340
Shipment weight - BP/SL/AS/EC/II version	[Kg]	7.980	8.350	8.440
Shipment weight - BP/XL/AS/EC/II version	[Kg]	8.100	8.470	8.560

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(4) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website

# HERA HE+

R290  
Refrigerant  
R290 | GWP=3

SCOP  
Reversible  
heat pump

Semi-hermetic  
piston compressor

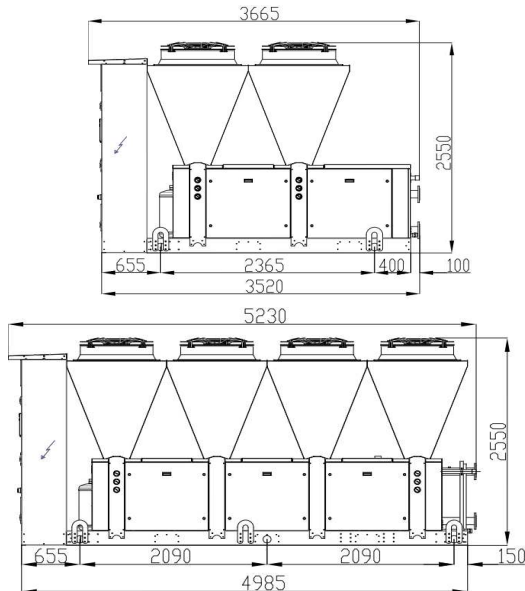
Inverter

Axial fan

Brazed plate  
heat exchanger

160-2-2 PV ↔ 270-2-2 PV

## Air to water heat pumps for comfort applications



### Solution

B - Base  
P - Base with Pump

### Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

### Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 159 - 269 kW  
Cooling capacity 139 - 241 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is <b>mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.</b>
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. <b>The motor efficiency class complies with IE4.</b>
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a <b>high exchange surface area.</b>
<b>Water heat exchanger</b>	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and <b>high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.</b>
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA HE+

## Technical data

HERA HE+ R290		160-2-2 PV	180-2-2 PV	210-2-2 PV	235-2-2 PV	270-2-2 PV
<b>Heating Capacity<sup>(1)</sup> (LN/SL versions)</b>	[kW]	159	178	210	234	269
Total power input <sup>(1)</sup>	[kW]	52,8	63,6	69,5	75,4	87,7
COP	[-]	3,01	2,80	3,02	3,10	3,07
<b>Heating Capacity<sup>(1)</sup> (XL versions)</b>	[kW]	159	177	211	231	267
Total power input <sup>(1)</sup>	[kW]	52,6	63,1	69,1	74,7	87,1
COP	[-]	3,02	2,81	3,05	3,09	3,07
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	27,6	30,9	36,3	40,5	46,6
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	41,4	50,7	55,2	23,4	30,0
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	26,2 / 33,1	29,4 / 37,1	34,5 / 43,6	38,5 / 48,6	44,3 / 55,9
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>						
SCOP (LN/SL - XL)	[W/W]	4,033 - 4,087	3,821 - 3,73	3,876 - 3,964	4,024 - 4,122	3,964 - 4,05
η <sub>s,h</sub> (LN/SL - XL)	[%]	158,3 - 160,5	149,9 - 146,2	152 - 155,6	158 - 161,9	155,6 - 159
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>						
SCOP (LN/SL - XL)	[W/W]	3,391 - 3,433	3,355 - 3,387	3,317 - 3,374	3,355 - 3,412	3,314 - 3,364
η <sub>s,h</sub> (LN/SL - XL)	[%]	132,6 - 134,3	131,2 - 132,5	129,7 - 132	131,2 - 133,5	129,6 - 131,6
<b>Cooling Capacity<sup>(2)</sup> (LN/SL versions)</b>	[kW]	140	162	186	208	238
Total power input <sup>(2)</sup>	[kW]	56,6	67,4	77,8	87,2	101
EER	[-]	2,47	2,40	2,39	2,39	2,36
<b>Cooling Capacity<sup>(2)</sup> (XL versions)</b>	[kW]	139	161	185	207	241
Total power input <sup>(2)</sup>	[kW]	55,2	65,9	74,4	83,9	98,5
EER	[-]	2,52	2,44	2,49	2,47	2,45
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	24,1	27,8	32,0	35,8	40,9
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	34,9	45,1	47,1	20,4	26,0
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	19,3 / 28,9	22,2 / 33,4	25,6 / 38,4	28,6 / 43	32,7 / 49,1
<b>Technical data</b>						
Refrigerant / GWP	-	R290 / 3				
Charge of refrigerant	[Kg]	> 12				
Number of refrigerant circuits	N°	2				
Compressor type / quantity	-/N°	Semihhermetic reciprocating with VFD (Variable Frequency Drive) / 2				
Expansion valve type	-	Electronic				
Fans quantity / type	-	4 / Axial EC		8 / Axial EC		
Fans power input <sup>(1)</sup> (total)	[kW]	1,28	1,35	2,11	2,12	2,28
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	46.800	47.700	87.000	87.300	89.700
<b>Electrical data</b>						
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50				
Maximum absorbed power	[kW]	68,4	82,4	96,8	109	127
Locked rotor current - LRA	[A]	122	143	167	186	231
Maximum absorbed current (full load)	[A]	122	143	167	186	231
<b>Solution BASE-P - with Hydronic Kit</b>						
Pump type	-	Centrifugal				
<b>Standard pump (1,5 bar)</b>						
Motor efficiency	-	IE3				
Pump motor nominal power input	[kW]	2,2	2,2	3,0	3,0	3,0
Pump motor nominal absorbed current	[A]	4,7	4,7	6,4	6,4	6,4
<b>Increased pump (3,0 bar)</b>						
Motor efficiency	-	IE3				
Pump motor nominal power input	[kW]	4,0	4,0	7,5	7,5	7,5
Pump motor nominal absorbed current	[A]	8,7	8,7	13,6	13,6	13,6
<b>Water connections</b>						
Size (nominal external diameter)	[inch]	3" (DN 80)	3" (DN 80)	3" (DN 80)	3" (DN 80)	4" (DN 100)
<b>Noise levels<sup>(3)</sup></b>						
Total sound power (LN version)	[db(A)]	86	87	91	92	93
Total sound pressure (LN version) - at 1 m distance	[db(A)]	67	68	71	72	73
Total sound pressure (LN version) - at 10 m distance	[db(A)]	54	55	59	60	61
Total sound power (SL version)	[db(A)]	85	86	90	91	92
Total sound pressure (SL version) - at 1 m distance	[db(A)]	66	67	70	71	72
Total sound pressure (SL version) - at 10 m distance	[db(A)]	53	54	58	59	60
Total sound power (XL version)	[db(A)]	83	84	88	89	90
Total sound pressure (XL version) - at 1 m distance	[db(A)]	64	65	68	69	70
Total sound pressure (XL version) - at 10 m distance	[db(A)]	51	52	56	57	58
<b>Dimensions and weights - unit</b>						
Length	[mm]	3.665	3.665	5.230	5.230	5.230
Width	[mm]	2.280	2.280	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550	2.550	2.550	2.550
Height (XL)	[mm]	2.610	2.610	2.610	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	2.800	2.840	3.970	3.990	4.180
Shipment weight - BP/SL/AS/EC/II version	[Kg]	2.900	2.940	4.070	4.090	4.280
Shipment weight - BP/XL/AS/EC/II version	[Kg]	2.930	2.970	4.130	4.150	4.340

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website

# HERA HE+



Refrigerant  
R290 | GWP=3



SCOP



Reversible  
heat pump



Semi-hermetic  
piston compressor



Inverter



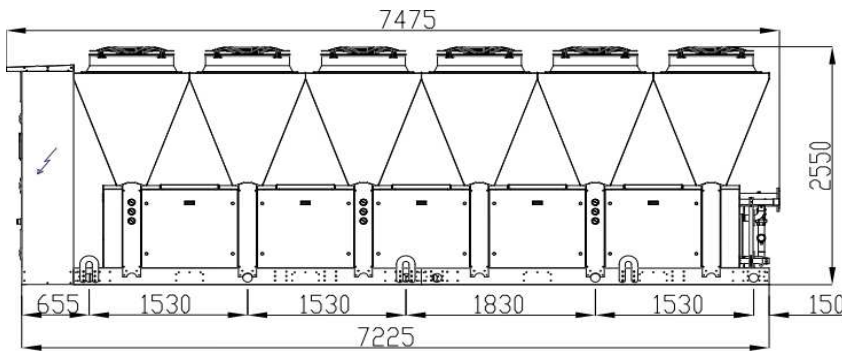
Axial fan



Braze plate  
heat exchanger

315-3-3 PV ↔ 405-3-3 PV

Air to water heat pumps for comfort applications



## Solution

B - Base  
P - Base with Pump

## Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

## Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 316 - 403 kW  
Cooling capacity 279 - 366 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
<b>Water heat exchanger</b>	Braze plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA HE+

## Technical data

HERA HE+ R290		315-3-3 PV	350-3-3 PV	405-3-3 PV
<b>Heating Capacity<sup>(1)</sup> (LN/SL versions)</b>	[kW]	<b>316</b>	<b>351</b>	<b>403</b>
Total power input <sup>(1)</sup>	[kW]	104	113	132
COP	[-]	3,04	3,11	3,05
<b>Heating Capacity<sup>(1)</sup> (XL versions)</b>	[kW]	<b>316</b>	<b>348</b>	<b>400</b>
Total power input <sup>(1)</sup>	[kW]	103	112	131
COP	[-]	3,07	3,11	3,05
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	54,8	60,8	69,9
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	31,4	27,9	35,9
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	52,1 / 65,8	57,8 / 73	66,4 / 83,9
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>				
SCOP (LN/SL - XL)	[W/W]	4,000 - 4,076	4,018 - 4,107	3,951 - 4,007
$\eta_{s,h}$ (LN/SL - XL)	[%]	157 - 160	157,7 - 161,3	155 - 157,3
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>				
SCOP (LN/SL - XL)	[W/W]	3,328 - 3,388	3,341 - 3,399	3,301 - 3,343
$\eta_{s,h}$ (LN/SL - XL)	[%]	130,1 - 132,5	130,6 - 133	129,1 - 130,7
<b>Cooling Capacity<sup>(2)</sup> (LN/SL versions)</b>	[kW]	<b>281</b>	<b>318</b>	<b>366</b>
Total power input <sup>(2)</sup>	[kW]	116	132	153
EER	[-]	2,42	2,41	2,39
<b>Cooling Capacity<sup>(2)</sup> (XL versions)</b>	[kW]	<b>279</b>	<b>317</b>	<b>366</b>
Total power input <sup>(2)</sup>	[kW]	111	127	148
EER	[-]	2,51	2,50	2,47
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	48,3	54,8	62,9
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	25,8	23,2	29,7
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	38,6 / 58	43,8 / 65,8	50,3 / 75,5
<b>Technical data</b>				
Refrigerant / GWP	-	R290 / 3		
Charge of refrigerant	[Kg]	> 12		
Number of refrigerant circuits	N°	3		
Compressor type / quantity	-/N°	Semihermetic reciprocating with VFD (Variable Frequency Drive) / 3		
Expansion valve type	-	Electronic		
Fans quantity / type	-	12 / Axial EC		
Fans power input <sup>(1)</sup> (total)	[kW]	3,03	3,16	3,41
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	128.700	130.800	134.400
<b>Electrical data</b>				
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50		
Maximum absorbed power	[kW]	145	163	190
Locked rotor current - LRA	[A]	251	279	346
Maximum absorbed current (full load)	[A]	251	279	346
<b>Solution BASE-P - with Hydronic Kit</b>				
Pump type	-	Centrifugal		
<b>Standard pump (1,5 bar)</b>				
Motor efficiency	-	IE3		
Pump motor nominal power input	[kW]	4,0	5,5	5,5
Pump motor nominal absorbed current	[A]	8,7	10,6	10,6
<b>Increased pump (3,0 bar)</b>				
Motor efficiency	-	IE3		
Pump motor nominal power input	[kW]	7,5	9,2	9,2
Pump motor nominal absorbed current	[A]	13,6	17,2	17,2
<b>Water connections</b>				
Size (nominal external diameter)	[inch]	4" (DN 100)	4" (DN 100)	4" (DN 100)
<b>Noise levels<sup>(3)</sup></b>				
Total sound power (LN version)	[db(A)]	93	93	93
Total sound pressure (LN version) - at 1 m distance	[db(A)]	72	72	72
Total sound pressure (LN version) - at 10 m distance	[db(A)]	60	60	60
Total sound power (SL version)	[db(A)]	92	92	92
Total sound pressure (SL version) - at 1 m distance	[db(A)]	71	71	71
Total sound pressure (SL version) - at 10 m distance	[db(A)]	59	59	59
Total sound power (XL version)	[db(A)]	90	90	90
Total sound pressure (XL version) - at 1 m distance	[db(A)]	69	69	69
Total sound pressure (XL version) - at 10 m distance	[db(A)]	57	57	57
<b>Dimensions and weights - unit</b>				
Length	[mm]	7.475	7.475	7.475
Width	[mm]	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550	2.550
Height (XL)	[mm]	2.610	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	5.960	5.960	6.250
Shipment weight - BP/SL/AS/EC/II version	[Kg]	6.060	6.060	6.350
Shipment weight - BP/XL/AS/EC/II version	[Kg]	6.150	6.150	6.440

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website



# HERA HE+



Refrigerant  
R290 | GWP=3



SCOP



Reversible  
heat pump



Semi-hermetic  
piston compressor



Inverter



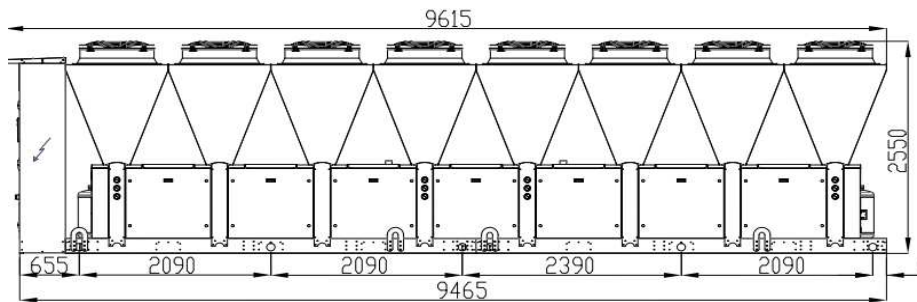
Axial fan



Brazed plate  
heat exchanger

470-4-4 PV ↔ 540-4-4 PV

Air to water heat pumps for comfort applications



## Solution

B - Base  
P - Base with Pump

## Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

## Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 462 - 538 kW  
Cooling capacity 414 - 482 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is <b>mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.</b>
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a <b>high exchange surface area.</b>
<b>Water heat exchanger</b>	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and <b>high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.</b>
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54.  To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA HE+

## Technical data

HERA HE+ R290		470-4-4 PV	540-4-4 PV
<b>Heating Capacity<sup>(1)</sup> (LN/SL versions)</b>	[kW]	<b>467</b>	<b>538</b>
Total power input <sup>(1)</sup>	[kW]	151	175
COP	[-]	3,09	3,07
<b>Heating Capacity<sup>(1)</sup> (XL versions)</b>	[kW]	<b>462</b>	<b>535</b>
Total power input <sup>(1)</sup>	[kW]	149	173
COP	[-]	3,10	3,09
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	81,0	93,3
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	23,4	27,8
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	77 / 97,2	88,6 / 112
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>			
SCOP (LN/SL - XL)	[W/W]	4,083 - 4,175	4,035 - 4,089
$\eta_{s,h}$ (LN/SL - XL)	[%]	160,3 - 164	158,4 - 160,5
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>			
SCOP (LN/SL - XL)	[W/W]	3,386 - 3,44	3,355 - 3,39
$\eta_{s,h}$ (LN/SL - XL)	[%]	132,5 - 134,6	131,2 - 132,6
<b>Cooling Capacity<sup>(2)</sup> (LN/SL versions)</b>	[kW]	<b>416</b>	<b>482</b>
Total power input <sup>(2)</sup>	[kW]	174	202
EER	[-]	2,39	2,39
<b>Cooling Capacity<sup>(2)</sup> (XL versions)</b>	[kW]	<b>414</b>	<b>477</b>
Total power input <sup>(2)</sup>	[kW]	168	196
EER	[-]	2,46	2,43
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	71,6	82,9
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	20,4	22,7
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	57,3 / 85,9	66,3 / 99,5
<b>Technical data</b>			
Refrigerant / GWP	-	R290 / 3	
Charge of refrigerant	[Kg]	> 12	
Number of refrigerant circuits	N°	4	
Compressor type / quantity	-/N°	Semihermetic reciprocating with VFD (Variable Frequency Drive) / 4	
Expansion valve type	-	Electronic	
Fans quantity / type	-	16 / Axial EC	
Fans power input <sup>(1)</sup> (total)	[kW]	4,24	4,56
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	174.700	179.300
<b>Electrical data</b>			
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50	
Maximum absorbed power	[kW]	218	254
Locked rotor current - LRA	[A]	372	462
Maximum absorbed current (full load)	[A]	372	462
<b>Solution BASE-P - with Hydronic Kit</b>			
Pump type	-	Centrifugal	
<b>Standard pump (1,5 bar)</b>			
Motor efficiency	-	IE3	
Pump motor nominal power input	[kW]	5,5	7,5
Pump motor nominal absorbed current	[A]	10,6	13,6
<b>Increased pump (3,0 bar)</b>			
Motor efficiency	-	IE3	
Pump motor nominal power input	[kW]	9,2	11,0
Pump motor nominal absorbed current	[A]	17,2	21,3
<b>Water connections</b>			
Size (nominal external diameter)	[inch]	5" (DN 125)	5" (DN 125)
<b>Noise levels<sup>(3)</sup></b>			
Total sound power (LN version)	[db(A)]	95	95
Total sound pressure (LN version) - at 1 m distance	[db(A)]	74	74
Total sound pressure (LN version) - at 10 m distance	[db(A)]	62	62
Total sound power (SL version)	[db(A)]	94	94
Total sound pressure (SL version) - at 1 m distance	[db(A)]	73	73
Total sound pressure (SL version) - at 10 m distance	[db(A)]	61	61
Total sound power (XL version)	[db(A)]	92	92
Total sound pressure (XL version) - at 1 m distance	[db(A)]	71	71
Total sound pressure (XL version) - at 10 m distance	[db(A)]	59	59
<b>Dimensions and weights - unit</b>			
Length	[mm]	9.615	9.615
Width	[mm]	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550
Height (XL)	[mm]	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	7.880	8.250
Shipment weight - BP/SL/AS/EC/II version	[Kg]	7.980	8.350
Shipment weight - BP/XL/AS/EC/II version	[Kg]	8.100	8.470

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(4) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website

# HERA HT

R290  
Refrigerant  
R290 | GWP=3

SCOP  
Reversible  
heat pump

Semi-hermetic  
piston compressor

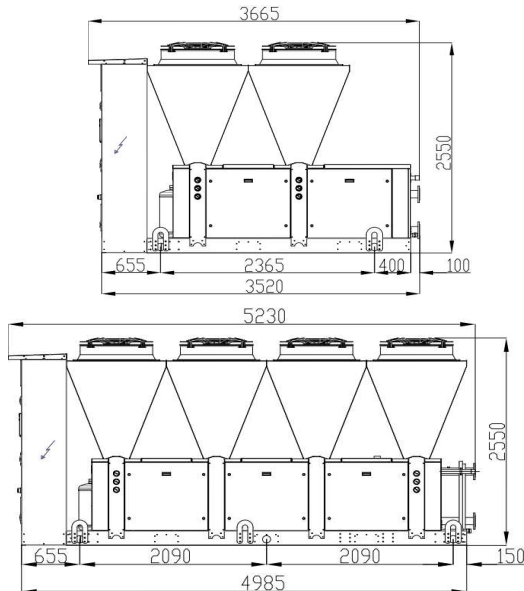
Inverter

Axial fan

Brazed plate  
heat exchanger

170-2-2 PV ↔ 310-2-2 PV

## Air to water heat pumps for comfort applications



### Solution

B - Base  
P - Base with Pump

### Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

### Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 173 - 307 kW  
Cooling capacity 154 - 275 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is <b>mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.</b>
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a <b>high exchange surface area.</b>
<b>Water heat exchanger</b>	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and <b>high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.</b>
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA HT

## Technical data

HERA HT R290		170-2-2 PV	205-2-2 PV	245-2-2 PV	280-2-2 PV	310-2-2 PV
<b>Heating Capacity<sup>(1)</sup> (LN/SL versions)</b>	[kW]	173	202	240	279	307
Total power input <sup>(1)</sup>	[kW]	55,5	64,8	75,4	87,5	97,2
COP	[-]	3,12	3,11	3,18	3,19	3,16
<b>Heating Capacity<sup>(1)</sup> (XL versions)</b>	[kW]	172	188	238	278	305
Total power input <sup>(1)</sup>	[kW]	55,0	65,0	74,8	86,8	96,4
COP	[-]	3,12	2,90	3,19	3,20	3,17
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	30,0	35,0	41,5	48,5	53,3
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	34,7	40,4	32,4	30,7	31,9
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	28,5 / 35,9	33,2 / 42	39,4 / 49,8	46 / 58,1	50,6 / 63,9
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>						
SCOP (LN/SL - XL)	[W/W]	3,618 - 3,658	3,632 - 3,667	3,936 - 4,003	4,009 - 4,068	3,983 - 4,034
η <sub>s,h</sub> (LN/SL - XL)	[%]	141,7 - 143,3	142,3 - 143,7	154,4 - 157,1	157,4 - 159,7	156,3 - 158,4
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>						
SCOP (LN/SL - XL)	[W/W]	3,285 - 3,318	3,074 - 3,010	3,291 - 3,339	3,339 - 3,383	3,323 - 3,361
η <sub>s,h</sub> (LN/SL - XL)	[%]	128,4 - 129,7	120,0 - 117,4	128,6 - 130,5	130,6 - 132,3	129,9 - 131,4
<b>Cooling Capacity<sup>(2)</sup> (LN/SL versions)</b>	[kW]	154	179	214	251	275
Total power input <sup>(2)</sup>	[kW]	61,2	71,7	84,8	97,6	108
EER	[-]	2,51	2,50	2,53	2,57	2,55
<b>Cooling Capacity<sup>(2)</sup> (XL versions)</b>	[kW]	153	178	214	250	273
Total power input <sup>(2)</sup>	[kW]	59,6	70,3	81,5	94,5	105
EER	[-]	2,56	2,54	2,62	2,64	2,61
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	26,5	30,8	36,9	43,2	47,3
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	29,3	33,9	28,1	28,9	27,6
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	21,2 / 31,7	24,6 / 37	29,5 / 44,3	34,6 / 51,9	37,8 / 56,7
<b>Technical data</b>						
Refrigerant / GWP	-	R290 / 3				
Charge of refrigerant	[Kg]	> 12				
Number of refrigerant circuits	N°	2				
Compressor type / quantity	-/N°	Semihhermetic reciprocating with VFD (Variable Frequency Drive) / 2				
Expansion valve type	-	Electronic				
Fans quantity / type	-	4 / Axial EC		8 / Axial EC		
Fans power input <sup>(1)</sup> (total)	[kW]	1,24	1,35	1,95	2,20	2,31
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	45.500	46.800	83.650	87.400	88.900
<b>Electrical data</b>						
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50				
Maximum absorbed power	[kW]	97,6	117,0	141	162	179
Locked rotor current - LRA	[A]	156	186	224	258	286
Maximum absorbed current (full load)	[A]	156	186	224	258	286
<b>Solution BASE-P - with Hydronic Kit</b>						
Pump type	-	Centrifugal				
<b>Standard pump (1,5 bar)</b>						
Motor efficiency	-	IE3				
Pump motor nominal power input	[kW]	2,2	3	3	3	4
Pump motor nominal absorbed current	[A]	4,7	6,4	6,4	6,4	8,7
<b>Increased pump (3,0 bar)</b>						
Motor efficiency	-	IE3				
Pump motor nominal power input	[kW]	4	5,5	7,5	7,5	7,5
Pump motor nominal absorbed current	[A]	8,7	10,6	13,6	13,6	13,6
<b>Water connections</b>						
Size (nominal external diameter)	[inch]	3" (DN 80)	3" (DN 80)	3" (DN 80)	4" (DN 100)	4" (DN 100)
<b>Noise levels<sup>(3)</sup></b>						
Total sound power (LN version)	[db(A)]	86	87	91	92	93
Total sound pressure (LN version) - at 1 m distance	[db(A)]	67	68	71	72	73
Total sound pressure (LN version) - at 10 m distance	[db(A)]	54	55	59	60	61
Total sound power (SL version)	[db(A)]	85	86	90	91	92
Total sound pressure (SL version) - at 1 m distance	[db(A)]	66	67	70	71	72
Total sound pressure (SL version) - at 10 m distance	[db(A)]	53	54	58	59	60
Total sound power (XL version)	[db(A)]	83	84	88	89	90
Total sound pressure (XL version) - at 1 m distance	[db(A)]	64	65	68	69	70
Total sound pressure (XL version) - at 10 m distance	[db(A)]	51	52	56	57	58
<b>Dimensions and weights - unit</b>						
Length	[mm]	3.665	3.665	5.230	5.230	5.230
Width	[mm]	2.280	2.280	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550	2.550	2.550	2.550
Height (XL)	[mm]	2.610	2.610	2.610	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	2.800	2.840	3.970	3.990	4.180
Shipment weight - BP/SL/AS/EC/II version	[Kg]	2.900	2.940	4.070	4.090	4.280
Shipment weight - BP/XL/AS/EC/II version	[Kg]	2.930	2.970	4.130	4.150	4.340

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website

# HERA HT



Refrigerant  
R290 | GWP=3



SCOP



Reversible  
heat pump



Semi-hermetic  
piston compressor



Inverter



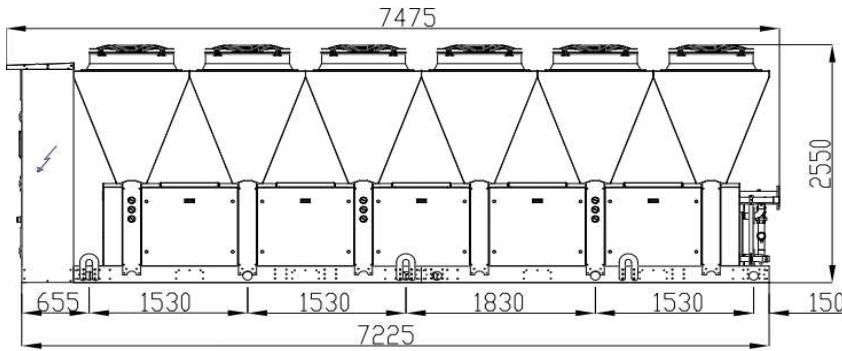
Axial fan



Braze plate  
heat exchanger

365-3-3 PV ↔ 510-3-3 PV

Air to water heat pumps for comfort applications



## Solution

B - Base  
P - Base with Pump

## Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

## Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 360 - 507 kW  
Cooling capacity 323 - 453 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
<b>Water heat exchanger</b>	Braze plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA HT

## Technical data

HERA HT R290		365-3-3 PV	425-3-3 PV	465-3-3 PV	510-3-3 PV
<b>Heating Capacity <sup>(1)</sup> (LN/SL versions)</b>	[kW]	360	419	461	507
Total power input <sup>(1)</sup>	[kW]	113	131	146	159
COP	[-]	3,20	3,19	3,17	3,19
<b>Heating Capacity <sup>(1)</sup> (XL versions)</b>	[kW]	358	416	458	502
Total power input <sup>(1)</sup>	[kW]	112	130	144	158
COP	[-]	3,21	3,19	3,17	3,19
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	62,4	72,6	79,9	87,9
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	26,4	34,5	30,8	36,5
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	59,3 / 74,9	69 / 87,1	75,9 / 95,9	83,5 / 106
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>					
SCOP (LN/SL - XL)	[W/W]	3,983 - 4,048	4,009 - 4,066	3,992 - 4,045	3,704 - 3,769
η <sub>s,h</sub> (LN/SL - XL)	[%]	156,3 - 158,9	157,4 - 159,6	156,7 - 158,8	145,1 - 147,8
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>					
SCOP (LN/SL - XL)	[W/W]	3,304 - 3,351	3,330 - 3,374	3,326 - 3,364	3,364 - 3,398
η <sub>s,h</sub> (LN/SL - XL)	[%]	129,1 - 131,0	130,2 - 131,9	130,0 - 131,6	131,5 - 132,9
<b>Cooling Capacity <sup>(2)</sup> (LN/SL versions)</b>	[kW]	323	373	411	453
Total power input <sup>(2)</sup>	[kW]	127	146	161	175
EER	[-]	2,54	2,56	2,55	2,49
<b>Cooling Capacity <sup>(2)</sup> (XL versions)</b>	[kW]	321	372	409	450
Total power input <sup>(2)</sup>	[kW]	122	141	157	171
EER	[-]	2,63	2,64	2,61	2,63
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	55,6	64,2	70,6	77,8
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	22,5	29,1	25,9	30,8
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	44,5 / 66,7	51,4 / 77,1	56,5 / 84,8	62,3 / 93,4
<b>Technical data</b>					
Refrigerant / GWP	-	R290 / 3			
Charge of refrigerant	[Kg]	> 12			
Number of refrigerant circuits	N°	3			
Compressor type / quantity	-/N°	Semihermetic reciprocating with VFD (Variable Frequency Drive) / 3			
Expansion valve type	-	Electronic			
Fans quantity / type	-	12 / Axial EC			
Fans power input <sup>(1)</sup> (total)	[kW]	2,93	3,30	3,48	3,63
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	125.600	130.900	133.350	135.400
<b>Electrical data</b>					
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50			
Maximum absorbed power	[kW]	211	243	269	290
Locked rotor current - LRA	[A]	337	388	430	463
Maximum absorbed current (full load)	[A]	337	388	430	463
<b>Solution BASE-P - with Hydronic Kit</b>					
Pump type	-	Centrifugal			
<b>Standard pump (1,5 bar)</b>					
Motor efficiency	-	IE3			
Pump motor nominal power input	[kW]	5,5	5,5	5,5	5,5
Pump motor nominal absorbed current	[A]	10,6	10,6	10,6	10,6
<b>Increased pump (3,0 bar)</b>					
Motor efficiency	-	IE3			
Pump motor nominal power input	[kW]	9,2	9,2	9,2	11,0
Pump motor nominal absorbed current	[A]	17,2	17,2	17,2	21,3
<b>Water connections</b>					
Size (nominal external diameter)	[inch]	4" (DN 100)	4" (DN 100)	5" (DN 125)	5" (DN 125)
<b>Noise levels <sup>(3)</sup></b>					
Total sound power (LN version)	[db(A)]	93	93	93	95
Total sound pressure (LN version) - at 1 m distance	[db(A)]	72	72	72	74
Total sound pressure (LN version) - at 10 m distance	[db(A)]	60	60	60	62
Total sound power (SL version)	[db(A)]	92	92	92	94
Total sound pressure (SL version) - at 1 m distance	[db(A)]	71	71	71	73
Total sound pressure (SL version) - at 10 m distance	[db(A)]	59	59	59	61
Total sound power (XL version)	[db(A)]	90	90	90	92
Total sound pressure (XL version) - at 1 m distance	[db(A)]	69	69	69	71
Total sound pressure (XL version) - at 10 m distance	[db(A)]	57	57	57	59
<b>Dimensions and weights - unit</b>					
Length	[mm]	7.475	7.475	7.475	7.475
Width	[mm]	2.280	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550	2.550	2.550
Height (XL)	[mm]	2.610	2.610	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	5.960	5.960	6.250	6.290
Shipment weight - BP/SL/AS/EC/II version	[Kg]	6.060	6.060	6.350	6.390
Shipment weight - BP/XL/AS/EC/II version	[Kg]	6.150	6.150	6.440	6.480

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(3) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website

# HERA HT



Refrigerant  
R290 | GWP=3



SCOP



Reversible  
heat pump



Semi-hermetic  
piston compressor



Inverter



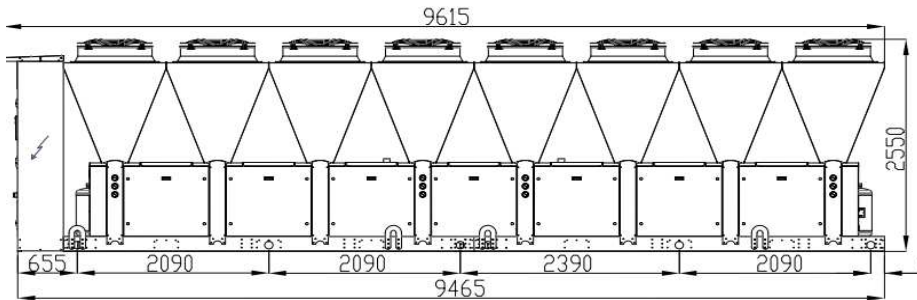
Axial fan



Brazed plate  
heat exchanger

560-4-4 PV ↔ 680-4-4 PV

Air to water heat pumps for comfort applications



## Solution

B - Base  
P - Base with Pump

## Version

LN - Low Noise  
SL - Super Low Noise  
XL - Extra Low Noise

## Equipment

AS - Standard equipment  
DS - Desuperheater

Heating capacity 559 - 676 kW  
Cooling capacity 503 - 609 kW

<b>Safety system</b>	To ensure high-safety-level the unit is equipped with an <b>ATEX certified gas detector</b> and an <b>EC centrifugal extraction fan</b> . The sensor, with external dedicated power supply and Modbus output signal, has an alarm threshold set at 10% of the lower flammable limit (LFL). The Propane alarm causes the immediate shutdown of the machine and the centrifugal extraction fan is switched on, which allows the ventilation of the compressor compartment and the dilution of the R290 concentration to values below the lower flammability limit.
<b>Structure</b>	Structure specifically designed for outdoor installation. Basement and frame in galvanised shaped sheet steel with a suitable thickness. All parts are polyester-powder painted to assure total weather resistance (RAL 7035 standard colour, others on request). LN (Low Noise) version: the panels are internally lined with sound-absorbing material. SL (Super Low Noise) version: the panels are sandwich and insulated with rock wool. XL (Extra Low Noise) version: the panels are sandwich and insulated with rock wool. Fans are ZPlus
<b>Compressor with inverter</b>	Reciprocating semi-hermetic type, fixed on anti-vibration system and complete with pressure lubrication system; oil crankcase heater; integral electronic protection and inlet plus outlet valves; flexible joints on suction and discharge. A VFD (Variable Frequency Drive) is provided in order to adapt the cooling capacity of the reciprocating compressor to the heating or cooling demand. The compressor is <b>mechanically optimized for use with Hydrocarbons. Some components are ATEX certified.</b>
<b>EC Fan</b>	Premium-Axial-Fans with bionic shaped blades and high-efficient EC (Electronically Commutated) external rotor motors, sealed in protection IP54 and thermal class THCL 155. The motor efficiency class complies with IE4.
<b>Air heat exchanger</b>	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a <b>high exchange surface area.</b>
<b>Water heat exchanger</b>	Brazed plate-type heat exchanger, stainless steel AISI 316 made, complete with water differential pressure switch, air vent valve and thermally insulated with closed-cell neoprene anti-condensate material. The heat exchanger design provides high thermal exchange and <b>high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.</b>
<b>Electrical board</b>	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is made according to standards IEC 204-1/EN60204-1 and it is complete with the following main components: - Main isolator switch - Door interlock safety device - Contactor and protection for compressor and fans - Cabinet minimum protection rating IP54. To ensure higher level of security, the cabinet is outside the machine and positioned on one side of the unit. The propane sensor is equipped with separate power supply: this power supply must always be guaranteed in order to ensure the monitoring of any leakage.
<b>Control</b>	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
<b>Refrigerant circuit</b>	Filter drier, moisture-liquid sight glass, electronic expansion valve, high & low pressure gauge, high and low pressure transducers, high pressure switch, safety high pressure valve (when required by EN 378-2016 standard).

## MAIN ACCESSORIES

- Anti-vibration rubber/spring mounts
- Low pressure switch
- Low pressure safety valve
- Double safety valve
- Overpressure valve / automatic by-pass
- Double water pump (stand-by) - Standard/ High pressure
- Inverter driven compressor
- Advanced control c.pCo

# HERA HT

## Technical data

HERA HT R290		560-4-4 PV	620-4-4 PV	680-4-4 PV
<b>Heating Capacity<sup>(1)</sup> (LN/SL versions)</b>	[kW]	559	614	676
Total power input <sup>(1)</sup>	[kW]	175	194	211
COP	[-]	3,20	3,16	3,20
<b>Heating Capacity<sup>(1)</sup> (XL versions)</b>	[kW]	556	610	671
Total power input <sup>(1)</sup>	[kW]	173	193	209
COP	[-]	3,21	3,17	3,20
Water flow <sup>(1)</sup>	[m <sup>3</sup> /h]	97	107	117
Water pressure drop <sup>(1)</sup> - Base version	[kPa]	30,7	31,9	32,2
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	92 / 116	101 / 128	111 / 141
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate</b>				
SCOP (LN/SL - XL)	[W/W]	4,040 - 4,101	4,015 - 4,069	3,763 - 3,829
$\eta_{s,h}$ (LN/SL - XL)	[%]	158,6 - 161,0	157,6 - 159,7	147,5 - 150,2
<b>Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate</b>				
SCOP (LN/SL - XL)	[W/W]	3,375 - 3,416	3,359 - 3,397	3,410 - 3,447
$\eta_{s,h}$ (LN/SL - XL)	[%]	132,0 - 133,6	131,4 - 132,9	133,4 - 134,9
<b>Cooling Capacity<sup>(2)</sup> (LN/SL versions)</b>	[kW]	503	550	609
Total power input <sup>(2)</sup>	[kW]	195	215	235
EER	[-]	2,53	2,51	2,51
<b>Cooling Capacity<sup>(2)</sup> (XL versions)</b>	[kW]	500	547	606
Total power input <sup>(2)</sup>	[kW]	189	209	228
EER	[-]	2,65	2,61	2,65
Water flow <sup>(2)</sup>	[m <sup>3</sup> /h]	86,5	94,5	105
Water pressure drop <sup>(2)</sup> - Base version	[kPa]	29	28	28
Min / Max water flow (heat exchanger, user side)	[m <sup>3</sup> /h]	69,2 / 104	75,6 / 113	83,8 / 126
<b>Technical data</b>				
Refrigerant / GWP	-	R290 / 3		
Charge of refrigerant	[Kg]	> 12		
Number of refrigerant circuits	N°	4		
Compressor type / quantity	-/N°	Semihhermetic reciprocating with VFD (Variable Frequency Drive) / 4		
Expansion valve type	-	Electronic		
Fans quantity / type	-	16 / Axial EC		
Fans power input <sup>(1)</sup> (total)	[kW]	4,41	4,63	4,85
Total air flow <sup>(1)</sup>	[m <sup>3</sup> /h]	174.750	177.700	180.750
<b>Electrical data</b>				
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50		
Maximum absorbed power	[kW]	324	359	366
Locked rotor current - LRA	[A]	517	573	586
Maximum absorbed current (full load)	[A]	517	573	586
<b>Solution BASE-P - with Hydronic Kit</b>				
Pump type	-	Centrifugal		
<b>Standard pump (1,5 bar)</b>				
Motor efficiency	-	IE3		
Pump motor nominal power input	[kW]	7,5	7,5	11
Pump motor nominal absorbed current	[A]	13,6	13,6	21,3
<b>Increased pump (3,0 bar)</b>				
Motor efficiency	-	IE3		
Pump motor nominal power input	[kW]	11,0	15,0	15,0
Pump motor nominal absorbed current	[A]	21,3	27,7	27,7
<b>Water connections</b>				
Size (nominal external diameter)	[inch]	5" (DN 125)	5" (DN 125)	6" (DN 150)
<b>Noise levels<sup>(3)</sup></b>				
Total sound power (LN version)	[db(A)]	95	95	96
Total sound pressure (LN version) - at 1 m distance	[db(A)]	74	74	74
Total sound pressure (LN version) - at 10 m distance	[db(A)]	62	62	63
Total sound power (SL version)	[db(A)]	94	94	95
Total sound pressure (SL version) - at 1 m distance	[db(A)]	73	73	73
Total sound pressure (SL version) - at 10 m distance	[db(A)]	61	61	62
Total sound power (XL version)	[db(A)]	92	92	93
Total sound pressure (XL version) - at 1 m distance	[db(A)]	71	71	71
Total sound pressure (XL version) - at 10 m distance	[db(A)]	59	59	60
<b>Dimensions and weights - unit</b>				
Length	[mm]	9.615	9.615	9.615
Width	[mm]	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.550	2.550	2.550
Height (XL)	[mm]	2.610	2.610	2.610
Shipment weight - BP/LN/AS/EC/II version	[Kg]	7.880	8.250	8.340
Shipment weight - BP/SL/AS/EC/II version	[Kg]	7.980	8.350	8.440
Shipment weight - BP/XL/AS/EC/II version	[Kg]	8.100	8.470	8.560

### Reference conditions:

(1) Outdoor ambient air = +7 °C / 87% r.h. - Condenser water temperature IN/OUT = 40/45 °C - Fluid: water - Results according to UNI EN 14511-202.

(2) Condenser air intake temperature = 35 °C - Evaporator water temperature IN/OUT = 12/7 °C - Fluid: water - Results according to UNI EN 14511-202.

(3) The declared cooling capacity are not taking into account the pump motor power input (where provided)

(4) Sound power level in compliance with ISO 3744 - Sound pressure level (average) at 10 meter distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level

### Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) No 811/2013, No 813/2011 and with the Harmonized Standards

The relevant information related to each model (eg.: SCOP, Seasonal Space Heating Energy Efficiency, Annual electricity consumption, ...) are published on our website