

HERA HE



Refrigerant
R290 | GWP=3



SCOP



Reversible
heat pump



Semi-hermetic
piston compressor



Inverter



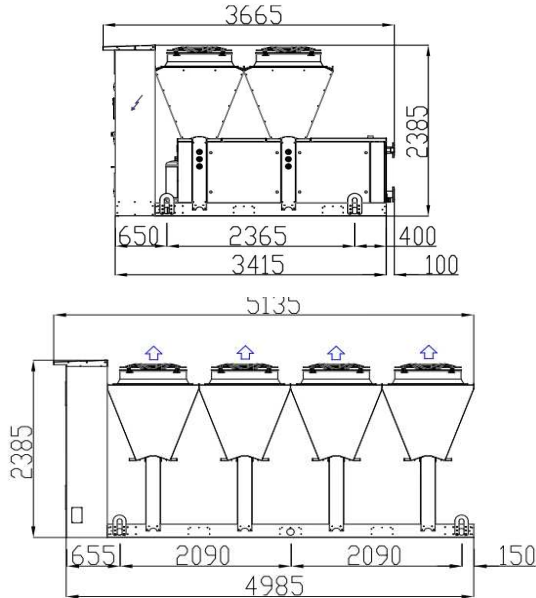
Axial fan



Brazed 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

Safety system	To ensure high-safety-level the unit is equipped with an ATEX certified gas detector and an EC centrifugal extraction fan . 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.
Structure	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 ZAPLUS
Compressor with inverter	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.
EC Fan	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.
Air heat exchanger	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
Water heat exchanger	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 high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	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.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	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
Heating Capacity⁽¹⁾ (LN/SL versions)	[kW]	167	202	250	272	300
Total power input ⁽¹⁾	[kW]	52,5	63,8	78,9	85,6	96
COP	[-]	3,18	3,17	3,17	3,18	3,14
Heating Capacity⁽¹⁾ (XL versions)	[kW]	165	189	249	270	300
Total power input ⁽¹⁾	[kW]	52,0	63,1	78,3	84,9	95
COP	[-]	3,17	3,00	3,18	3,18	3,16
Water flow ⁽¹⁾	[m ³ /h]	28,9	35,0	43,4	47,1	52,0
Water pressure drop ⁽¹⁾ - Base version	[kPa]	35,0	40,0	35,0	30,0	30,0
Min / Max water flow (heat exchanger, user side)	[m ³ /h]	27,5 / 34,7	33,3 / 42	41,2 / 52,1	44,7 / 56,5	49,4 / 62,4
Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate						
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 _{s,h} (LN/SL - XL)	[%]	146,1 - 137,9	141,5 - 137,8	146,4 - 148,9	148,1 - 150,3	144,3 - 144,7
Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate						
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 _{s,h} (LN/SL - XL)	[%]	121 - 122,3	121,7 - 122,6	120,2 - 121,7	120,5 - 122,3	120,2 - 120,1
Cooling Capacity⁽²⁾ (LN/SL versions)	[kW]	150	176	218	237	267
Total power input ⁽²⁾	[kW]	57,9	69,8	85,9	93,4	106
EER	[-]	2,591	2,521	2,538	2,537	2,519
Cooling Capacity⁽²⁾ (XL versions)	[kW]	150	175	216	237	267
Total power input ⁽²⁾	[kW]	56,3	68,5	82,9	89,9	104
EER	[-]	2,664	2,555	2,606	2,636	2,567
Water flow ⁽²⁾	[m ³ /h]	25,80	30,40	37,50	40,80	45,90
Water pressure drop ⁽²⁾ - Base version	[kPa]	30,0	35,0	30,0	30,0	30,0
Min / Max water flow (heat exchanger, user side)	[m ³ /h]	20,6 / 31	24,3 / 36,5	30 / 45	32,6 / 49	36,7 / 55,1
Technical data						
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 ⁽¹⁾ (total)	[kW]	1,27	1,37	2,00	2,10	2,21
Total air flow ⁽¹⁾	[m ³ /h]	45.800	47.100	84.500	85.900	87.500
Electrical data						
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50				
Maximum absorbed power	[kW]	76,2	85,6	110,0	110,3	138,1
Locked rotor current - LRA	[A]	< 10				
Maximum absorbed current (full load)	[A]	127	141,2	187,6	187,6	238
Solution BASE-P - with Hydronic Kit						
Pump type	-	Centrifugal				
Standard pump (1,5 bar)						
Motor efficiency	-	IE3				
Pump motor nominal power input	[kW]	3	3	4	4	5,5
Pump motor nominal absorbed current	[A]	6,4	6,4	8,7	8,7	10,6
Increased pump (3,0 bar)						
Motor efficiency	-	IE3				
Pump motor nominal power input	[kW]	7,5	7,5	7,5	7,5	11
Pump motor nominal absorbed current	[A]	13,6	13,6	13,6	13,6	21,3
Water connections						
Size (nominal external diameter)	[inch]	3"	3"	3"	4"	4"
Noise levels⁽³⁾						
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
Dimensions and weights - unit						
Length	[mm]	3.665	3.665	5.135	5.135	5.135
Width	[mm]	2.280	2.280	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.385	2.385	2.385	2.385	2.385
Height (XL)	[mm]	2.560	2.560	2.560	2.560	2.560
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



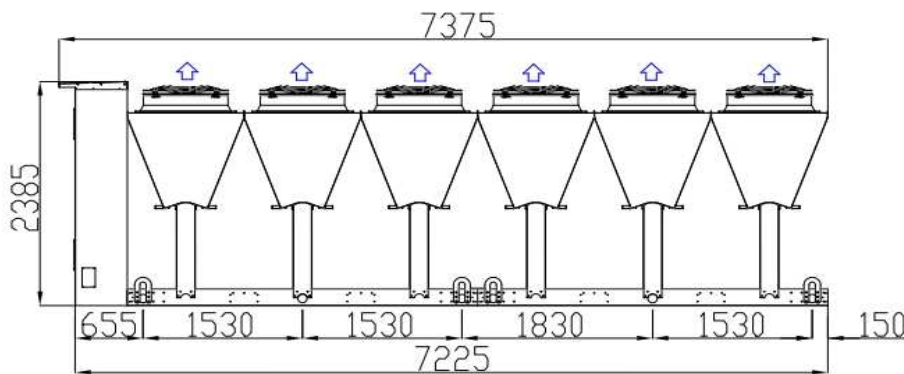
Axial fan



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

Safety system	To ensure high-safety-level the unit is equipped with an ATEX certified gas detector and an EC centrifugal extraction fan . 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.
Structure	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
Compressor with inverter	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.
EC Fan	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.
Air heat exchanger	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
Water heat exchanger	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.
Electrical board	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.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	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
Heating Capacity⁽¹⁾ (LN/SL versions)	[kW]	376	407	450	500
Total power input ⁽¹⁾	[kW]	118	129	143	161
COP	[-]	3,19	3,16	3,15	3,11
Heating Capacity⁽¹⁾ (XL versions)	[kW]	374	401	444	496
Total power input ⁽¹⁾	[kW]	117	127	141	159
COP	[-]	3,20	3,16	3,15	3,12
Water flow ⁽¹⁾	[m ³ /h]	65,1	70,6	78,1	86,7
Water pressure drop ⁽¹⁾ - Base version	[kPa]	30,0	35,0	30,0	40,0
Min / Max water flow (heat exchanger, user side)	[m ³ /h]	61,8 / 78,1	67,1 / 84,7	74,2 / 93,7	82,4 / 104
Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate					
SCOP (LN/SL - XL)	[W/W]	3,76 - 3,818	3,763 - 3,8	3,684 - 3,71	3,665 - 3,67
η _{s,h} (LN/SL - XL)	[%]	147,4 - 149,7	147,5 - 149	144,4 - 145,4	143,6 - 143,8
Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate					
SCOP (LN/SL - XL)	[W/W]	3,082 - 3,117	3,078 - 3,108	3,08 - 3,078	3,075 - 3,078
η _{s,h} (LN/SL - XL)	[%]	120,3 - 121,7	120,1 - 121,3	120,2 - 120,1	120 - 120,1
Cooling Capacity⁽²⁾ (LN/SL versions)	[kW]	326	352	398	440
Total power input ⁽²⁾	[kW]	129,0	139	159,0	177,0
EER	[-]	2,527	2,532	2,50	2,49
Cooling Capacity⁽²⁾ (XL versions)	[kW]	325	350	396	441
Total power input ⁽²⁾	[kW]	124,0	135	154,0	172,0
EER	[-]	2,621	2,593	2,57	2,56
Water flow ⁽²⁾	[m ³ /h]	56,1	60,5	68,4	75,7
Water pressure drop ⁽²⁾ - Base version	[kPa]	25	30	25	29
Min / Max water flow (heat exchanger, user side)	[m ³ /h]	44,9 / 67,3	48,4 / 72,6	54,7 / 82,1	60,6 / 90,8
Technical data					
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 ⁽¹⁾ (total)	[kW]	3,01	3,15	3,33	3,70
Total air flow ⁽¹⁾	[m ³ /h]	126.800	128.800	131.200	136.300
Electrical data					
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50			
Maximum absorbed power	[kW]	165,0	165,0	207,2	210,9
Locked rotor current - LRA	[A]	< 10			
Maximum absorbed current (full load)	[A]	281,4	281,4	357,0	367,5
Solution BASE-P - with Hydronic Kit					
Pump type	-	Centrifugal			
Standard pump (1,5 bar)					
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
Increased pump (3,0 bar)					
Motor efficiency	-	IE3			
Pump motor nominal power input	[kW]	11,0	11,0	11,0	15,0
Pump motor nominal absorbed current	[A]	21,3	21,3	21,3	27,7
Water connections					
Size (nominal external diameter)	[inch]	4"	4"	5"	5"
Noise levels⁽³⁾					
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
Dimensions and weights - unit					
Length	[mm]	7.375	7.375	7.375	7.375
Width	[mm]	2.280	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.385	2.385	2.385	2.385
Height (XL)	[mm]	2.560	2.560	2.560	2.560
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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Refrigerant
R290 | GWP=3



SCOP



Reversible
heat pump



Semi-hermetic
piston compressor



Inverter



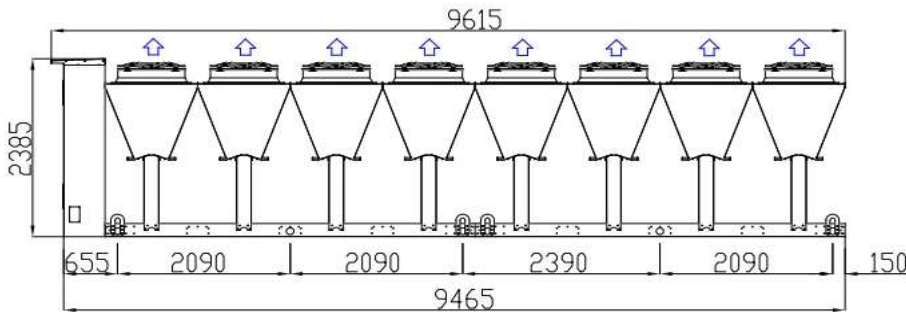
Axial fan



Brazen 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

Safety system	To ensure high-safety-level the unit is equipped with an ATEX certified gas detector and an EC centrifugal extraction fan . 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.
Structure	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
Compressor with inverter	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.
EC Fan	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.
Air heat exchanger	Finned coil made with copper pipes arranged on staggered rows, mechanically expanded inside a pack of aluminium fins offering a high exchange surface area.
Water heat exchanger	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 high performance results, furthermore it guarantees small dimensions and easy installation and maintenance.
Electrical board	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.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	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
Heating Capacity⁽¹⁾ (LN/SL versions)	[kW]	543	600	666
Total power input ⁽¹⁾	[kW]	171	191	213
COP	[-]	3,18	3,14	3,13
Heating Capacity⁽¹⁾ (XL versions)	[kW]	540	591	656
Total power input ⁽¹⁾	[kW]	170	189	211
COP	[-]	3,18	3,13	3,11
Water flow ⁽¹⁾	[m ³ /h]	94	104	115
Water pressure drop ⁽¹⁾ - Base version	[kPa]	30,0	30,6	35,0
Min / Max water flow (heat exchanger, user side)	[m ³ /h]	89,5 / 113	98,8 / 125	109 / 138
Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Low Temperature - Average Climate				
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
Applications for seasonal efficiency for heating according to Commission Regulation (EU) No 813/2013 - Medium Temperature - Average Climate				
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
Cooling Capacity⁽²⁾ (LN/SL versions)	[kW]	474	534	596
Total power input ⁽²⁾	[kW]	187,0	213	237,0
EER	[-]	2,530	2,510	2,51
Cooling Capacity⁽²⁾ (XL versions)	[kW]	474	530	591
Total power input ⁽²⁾	[kW]	179,0	206	231,0
EER	[-]	2,648	2,573	2,56
Water flow ⁽²⁾	[m ³ /h]	81,6	91,8	102,0
Water pressure drop ⁽²⁾ - Base version	[kPa]	26	26	27
Min / Max water flow (heat exchanger, user side)	[m ³ /h]	65,3 / 97,9	73,4 / 110	81,6 / 122
Technical data				
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 ⁽¹⁾ (total)	[kW]	4,21	4,43	5,01
Total air flow ⁽¹⁾	[m ³ /h]	171.800	174.900	182.700
Electrical data				
Power supply (main - gas detector)	-	400/3+N/50 - 230/1/50		
Maximum absorbed power	[kW]	220,0	276,3	281,2
Locked rotor current - LRA	[A]	< 10		
Maximum absorbed current (full load)	[A]	375,2	476,0	490,0
Solution BASE-P - with Hydronic Kit				
Pump type	-	Centrifugal		
Standard pump (1,5 bar)				
Motor efficiency	-	IE3		
Pump motor nominal power input	[kW]	7,5	7,5	9,2
Pump motor nominal absorbed current	[A]	13,6	13,6	17,2
Increased pump (3,0 bar)				
Motor efficiency	-	IE3		
Pump motor nominal power input	[kW]	15,0	15,0	15,0
Pump motor nominal absorbed current	[A]	27,7	27,7	27,7
Water connections				
Size (nominal external diameter)	[inch]	5"	5"	6"
Noise levels⁽³⁾				
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
Dimensions and weights - unit				
Length	[mm]	9.615	9.615	9.615
Width	[mm]	2.280	2.280	2.280
Height (LN, SL)	[mm]	2.385	2.385	2.385
Height (XL)	[mm]	2.560	2.560	2.560
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