ANL 290/650 heat pump

R410A

Air cooled heat pump
Axial fans
Cooling capacity 53÷128kW
Heating capacity 61÷142kW

Variable Multi Flow
VMF

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

Aermec
participate in the EUROVENT program: LCP
the products are present on the site
www.eurovent-certification.com

- **STANDARD VERSION**
- **LOW NOISE VERSION**
- **VERSION WITH BUILT–IN HYDRONIC KIT**

Features

- Heat pump models.
- Monocircuit.
- R410A gas.
- Available in 2 version:
  [◦] Standard ANL 400/650
  [L] Low noise vesion ANL 290/650
- High efficiency scroll compressors
- Flow switch as standard supply.
- Low and high pressure transducers as standard supply.
- **Cooling mode: ANL-H 290-400 up to 43°C**
- **Cooling mode: ANL-H 580-650 up to 44°C**
- **Heating mode: ANL-H 290-650 up to 50°C**
- High efficiency exchangers.
- Axial fans with low sound level.
- Versions with hydronic kit.
- Pump+Pump standby option controlled by manual switch.
- Electronic controller (Modu_control).
- Metallic protective cabinet with anti-corrosion polyester paint.
- Microprocessor control system
  - Control from the entering water temperature, with the possibility of selecting control of the leaving water temperature
  - Summer condensation control with 0-10V modulating signal depending on pressure, compensated according to the outside air temperature (with DCPX accessory)
  - Intelligent defrosting to decay of pressure.
  - Automatic rotation of compressors.
  - Load limiting safety control.
  - Automatic reset of alarms before total block.
  - Alarm history.

Accessories

- **MODU-485A**: RS-485 interface for supervision systems with MODBUS protocol.
- **AERSET:** accessory allows the automatic compensation of the operating setpoint of the unit to which it is connected, based on a 0-10V MODBUS input signal.
  Mandatory accessory:
  - AER485 or MODU-485A
- **AERWEB300:** The AERWEB option allows remote control of a chiller through a standard PC and an ethernet connection with a standard browser; 4 versions available:
  AERWEB300-6: Web server to monitor and remote control maximum 6 units on RS485 network;
  AERWEB300-18: Web server to monitor and remote control maximum 18 units on RS485 network;
  AERWEB300-6G: Web server to monitor and remote control maximum 6 units on RS485 network with integrated GPRS modem;
  AERWEB300-18G: Web server to monitor and remote control maximum 18 units on RS485 network with integrated GPRS modem.
- **MULTICONTROL: Allows the simultaneous control of several chillers or heat pumps (up to 4) fitted with our MODUCONTROL controller and installed in the same hydraulic system.**
  For complete control the following accessories are available:
- **SPLW**: System water temperature sensor. In most cases the loose supplied sensors for each chiller/heat pump are sufficient. In cases of a common flow/return header this sensor can be used to control the common system supply water temperature for the chillers connected to the header, or it can be used for temperature monitoring.
- **DCPX**: Low temperature device for correct cooling mode operation with ambient temperatures from less than 10 °C down to - 10 °C.
- **PR3**: Simplified remote panel. Permits control of the basic unit functions (on/off and change of operating mode, diagnostics and alarm reset). Maximum distance permitted is 150 m with screened cable.
- **GP**: Protects the external coil from blows.
- **VT**: Anti-vibration mounts.

Accessories can only be applied in the factory

- **RIF**: Current rephaser. Connected in parallel to the motor, it allows a reduction of the absorbed current about 10%.
- **DRE**: Current soft starter device (about 26% for two-circuit-units).
  Available only with power supply 400V/3N.

COMPATIBILITY WITH THE VMF SYSTEM.
For further system information please refer to the specific documentation.

Accessory compatibility

ANL_H			290	300	340	400	580	620	650
MODU-485A		all	•	•	•	•	•	•	•
AERWEB-300		all	•	•	•	•	•	•	•
MULTICONTROL		all	•	•	•	•	•	•	•
SPLW		all	•	•	•	•	•	•	•
AERSET		all	•	•	•	•	•	•	•
PR3		all	•	•	•	•	•	•	•
DCPX (version with standard fan "°")	(1)	H	-	-	-	83	83	83	83
		HL	inverter fans			standard	standard	standard	standard
DCPX (version increased fan "M")		H	-	-	-	-	-	-	-
		HL	62	62	63	-	-	-	-
GP		all	GP3	GP3	GP3	GP2 (x2)	GP2 (x2)	GP2 (x2)	GP2 (x2)
VT (00)		all	17	17	17	11	11	11	11
VT (P1-P2-P3-P4)		all	13	13	13	11	11	11	11
VT (01-02-03-04)		all	13	13	13	11	11	11	11
Accessories can only be applied in the factory									
RIF		all	32	32	42	42	50	72	51

(1) Standard with desuperheater
(1) Standard for the size up 400HL to 650HL
(x2) indicates the quantity to order

Unit Configurator

By suitably combining the numerous options available it is possible to configure each model in such a way as to meet the most particular of system requirements.

Code **DESCRIPTION**

1,2,3 **ANL**

4,5,6 **SIZE**
290-300-340-400-580-620-650 (2)

7 **FIELD OF USE**
- **°** Standard with produced water down to +4 °C
- **Y** Low leaving water up to -6 °C (3)
- **X** Electronic thermostatic valve temperature of water produced up to +4°C (for different temperatures please contact us) (3)

8 **MODEL**
- **H** Heat pump

9 **HEAT RECOVERY**
- **°** Without heat recovery
- **D** With partial heat recovery (desuperheater)

10 **VERSION**
- **°** Standard (ANL 400-580-620-650)
- **L** Low noise

11 **COIL**
- **°** Aluminium
- **R** Copper
- **S** Tinned copper
- **V** Coated

12 **FAN** (4)
- **°** Standard
- **M** increased
- **J** Inverter

13 **POWER SUPPLY**
- **°** 400V-3N -50 Hz

14 **SOFT START**
- **°** Without Soft Start
- **S** With Soft Start

15-16 **SORAGE TANK/PUMP**
- **00** Without pump or storage tank
- **01** Low head pump and buffer tank
- **02** Single and standby low head pump and buffer tank
- **03** Single high head pump and buffer tank
- **04** Single and standby high head pump and buffer tank
- **P1** Low head pump
- **P2** Single and standby low head pump
- **P3** Single high head pump
- **P4** Single and standby high head pump

(2) Sizes up 290 to 340 are available only in the Low noise mode "L".
(3) "D" option is not compatible with "Y" valve.
(4) **On / off fan Standard,** standard sizes up 400 to 650
Fans on/off Increased, options only for size up ANL290HL to 340HL
Fans Inverter, standard sizes from 290 to 340, with no static pressure
Fans Inverter, option for sizes from 400 to 650 with static pressure

Technical data

ANL Reversible heat pump			290	300	340	400	580	620	650
Cooling capacity	kW	°	-	-	-	83	106	122	128
		L	53	57	66	78	101	116	122
Total power input	kW	°	-	-	-	28,98	41,54	43,30	48,42
		L	20,91	23,86	24,52	30,58	44,60	46,47	51,87
Evaporator water flow rate	l/h	°	-	-	-	14247	18292	21088	22291
		L	9152	9888	11348	13466	17412	20089	21150
Total pressure drop	kPa	°	-	-	-	29	44	53	61
		L	26	24	31	26	40	48	55
Total input current	A	°	-	-	-	52	68	70	77
		L	37	41	45	54	72	75	83
Heating capacity	kW	°/L	61	66	73	90	122	134	142
Total power input	kW	°/L	18,82	20,60	22,37	28,44	38,73	42,07	46,00
Condenser water flow rate	l/h	°/L	10407	11372	12431	15412	20902	22834	24176
Total pressure drop	kPa	°/L	32	29	35	33	55	61	70
Total input current	A	°/L	34	36	42	51	63	68	74
ENEGY INDEX									
EER	W/W	°	-	-	-	2,85	2,55	2,82	2,66
		L	2,53	2,40	2,68	2,55	2,26	2,50	2,36
ESEER	W/W	°	-	-	-	4,06	3,74	4,06	3,93
		L	3,80	3,69	4,15	3,64	3,31	3,60	3,48
COP	W/W	°/L	3,23	3,22	3,25	3,16	3,16	3,17	3,08
POWER SUPPLY									
Power supply	V					400V-3N-50Hz (with thermomagnetic switches)			
Maximum current (FLA)	A	°/L	44	47	54	65	98	107	116
Starting current (LRA)	A	°/L	126	128	160	181	264	264	273
IP PROTECTION									
IP	-	°/L	24	24	24	24	24	24	24
GAS									
Type	-	°/L				R410A			
SCROLL COMPRESSOR (Scroll)									
Compressor / Circuit	n°/n°	°/L	2/1	2/1	2/1	2/1	2/1	2/1	2/1
AXIAL FAN (°)									
Quantity	n°	°/L	4	4	6	2	2	2	2
Cold air flow	m^3/h	°	-	-	-	45800	45800	44600	44600
		L	17600	17600	17200	32060	32060	31220	31220
Heat air flow	m^3/h	°/L	17000	17000	16400	44400	44400	43000	43000
EVAPORATORS (Plates)									
Quantity	n°	°/L	1	1	1	1	1	1	1
Hydraulic connection (VICTAULIC)	Ø	°/L	2½	2½	2½	2½	2½	2½	2½
HYDRONIC KIT									
Buffer tank	l	°/L	300	300	300	300	400	400	400
Expansion tank	n°/l	°/L	1/25	1/25	1/25	1/25	1/25	1/25	1/25
Security valve	bar	°/L	6	6	6	6	6	6	6
SOUND DATA									
Sound power	dB(A)	°	-	-	-	89,4	89,4	89,4	89,4
		L	73,4	74,1	74,3	83,4	84,0	84,6	85,2
Sound pressure	dB(A)	°	-	-	-	57,6	57,6	57,6	57,6
		L	41,7	42,4	42,6	51,5	52,1	52,7	53,4

DATA DECLARED IN ACCORDANCE WITH UNI EN 14511: 2013

COOLING	
Evaporator water inlet	12°C
Evaporator water outlet	7°C
External air temperature	35 °C
Δt	5°C

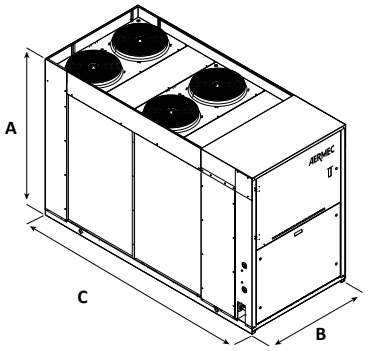
Heating	
Evaporator water inlet	40°C
External air temperature	7°C
Evaporator water outlet	45°C
Δt	5°C

Sound power
Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification.

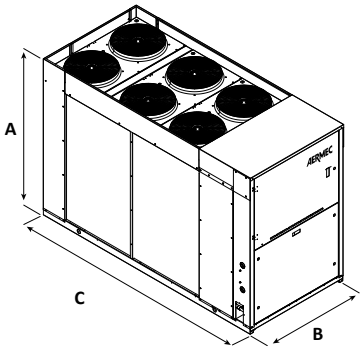
Sound pressure
Sound pressure in free field, at 10 m distance from the external surface of the unit (in accordance with UNI EN ISO 3744)

Dimensions (mm)

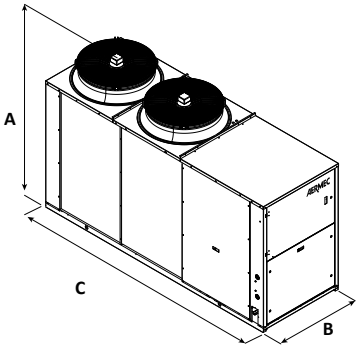
ANL-H 290-300



ANL-H 340



ANL-H 400-580-620-650



Mod ANL_H			**290**	**340**	**400**	**580**	**620**	**650**
Height	A	mm	1605	1605	1875	1875	1875	1875
Width	B	mm	1100	1100	1100	1100	1100	1100
Depth	C	mm	2450	2450	2950	3200	3200	3200
Empty weight "00"		Kg	655	684	808	902	1008	1053
Functioning weight "00"		Kg	673	703	832	926	1033	1078

Cod.: SANLH290_650UY.00/1301

Aermec S.p.A.
Via Roma, 996 - 37040 Bevilacqua (VR) - Italy
Tel. 0442633111 - Telefax 044293577
www.aermec.com