Technical Manual

CHILLERS

REVERSIBLE HEAT PUMPS

CONDENSING UNITS

- EXTERNAL UNITS
- HIGH EFFICIENCY

ANL/ANL-H/ANL-C 020-202

EN

EUROVENT CERTIFIED PERFORMANCE
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18.08 6755451_05

TRANSLATION FROM ORIGINAL

Dear Customer,
Thank you for choosing an AERMEC product. This product is the result of many years of experience and in-depth engineering research, and it is built using top quality materials and advanced technologies.
In addition, the applied mark guarantees that our appliances fully comply with the safety requirements defined by the applicable product's rules. We constantly monitor the quality level, and as a result AERMEC products are synonymous with Safety, Quality, and Reliability.

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

Thank you again.
AERMEC S.p.A

INDEX

DESCRIPTION AND UNIT SELECTION 9

TYPICAL HYDRAULIC CIRCUITS 10
INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT
ANL “°” | "H" (STANDARD)....................10
INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT
ANL “°P|°N” / "HP|HN"....................11
TYPICAL HYDRAULIC CIRCUITS 12
INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT
ANL “°A|°Q” / "HA|HQ" 12
SYSTEM EXAMPLE FOR DHW PRODUCTION
WITH ANL50H° WITH ACCESSORY VMF-ACS....................13
SYSTEM EXAMPLE FOR DHW PRODUCTION
WITH ANL50H° WITH SAF....................14

REFRIGERANT CIRCUIT SCHEMATIC....................15
ANL HEAT PUMP WITH DESUPERHEATER....................15
ANL COOLING ONLY WITH DESUPERHEATER 16
MOTOCONDENSING ANL....................17

ACCESSORIES 20
COMPATIBILITY OF ACCESSORIES - ANL COOLING ONLY....................21
COMPATIBILITY OF ACCESSORIES - ANL REVERSIBLE HEAT PUMPS....................21

ANL COOLING ONLY - TECHNICAL DATA 22

*ANL COOLING ONLY - TECHNICAL DATA (WATER 23/18 AIR 35°C).......24

ANL COOLING ONLY - TECHNICAL DATA ANL-C....................25

ANL REVERSIBLE HEAT PUMPS - TECHNICAL DATA....................26

ANL REVERSIBLE HEAT PUMPS - * TECHNICAL DATA
(WATER 23/18 AIR 35°C - WATER 30-35°C AIR 7°C DRY BULB-6°C WET BULB) 29

GENERAL DATA....................31

DIMENSION, MINIMUM TECHNICAL SPACES AND WEIGHT* 32

OPERATING LIMITS....................34

SELECTION CRITERIA OF THE HEAT EXCHANGERS ACCORDING TO THE PLACE OF INSTALLATION OF THE UNIT....................37
BASIC PRINCIPLES ON MICROCHANNEL COIL CORROSION 38

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL 39

PRESSURE DROP 55

AVAILABLE HEADS 55

GLYCOL 57

EXPANSION TANK PRESSURE SETTING....................58

MINIMUM WATER CONTENT 58

DESUPERHEATER 59

CORRECTION FACTORS....................59

PRESSURE DROP 59

REFRIGERANT PIPING 60

SOUND DATA....................61

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KONFORMITÄTSERKLÄRUNG EU / DECLARACIÓN DE CONFORMIDAD UE

ANL
020-090

MODEL* ____________

SERIAL NUMBER_______

DATE_______________

Noi, firmatari della presente, dichiariamo sotto la nostra esclusiva responsabilità che l'insieme in oggetto così definito:
We, the undersigned, hereby declare under our own responsibility that the assembly in question, defined as follows:
Nous, Signataires du présent acte, déclarons sous notre responsabilité exclusive que le groupe cité à l'objet défini de la façon suivante:
Die Unterzeichner erklären unter eigener Verantwortung, dass die oben genannte Maschineneinheit, bestehend aus:
Nosotros, los abajo firmantes, declaramos bajo nuestra exclusiva responsabilidad, que el conjunto en cuestión, denominado:

Nome / Name / Nom / Name / Nombre	**ANL / ANL-H**
Tipo / Type / Type / Typ / Tipo	**Air/water chiller and reversible heat pumps for outdoor installation**
Modello / Model / Modèle / Model / Modelo	

A cui questa dichiarazione si riferisce è conforme a tutte le disposizioni pertinenti delle seguenti direttive:
To which this declaration refers, complies with all the provisions related to the following directives:
Auquel cette déclaration se réfère, est conforme à toutes les dispositions relatives des directives suivantes:
Das Gerät, auf welches sich diese Erklärung bezieht, entspricht allen Verordnungen im Zusammenhang mit den folgenden Richtlinien:
A la que esta declaración se refiere, es conforme con todas las disposiciones pertinentes de las siguientes directivas:

Direttiva LVD: 2014/35/UE
Direttiva Compatibilità Elettromagnetica EMCD: 2014/30/UE
Direttiva PED in materia di attrezzature a pressione: 2014/68/UE (modulo A)
Direttiva RoHS sulla restrizione dell'uso di determinate sostanze pericolose nelle AEE: 2011/65/UE

L'oggetto della dichiarazione di cui sopra è conforme alle pertinenti normative di armonizzazione dell'Unione:
The above-mentioned declaration complies with the harmonised European standards:
L'objet de la déclaration reportée ci-dessus est conforme aux normes d'harmonisation relatives de l'Union:
Der Gegenstand der genannten Erklärung entspricht den diesbezüglichen harmonisierten Normen der europäischen Gemeinschaft:
El objeto de la declaración de arriba es conforme con las normativas pertinentes de armonización de la Unión:

CEI EN 60335-2-40: 2005	**CEI EN 61000-6-1: 2007**	**UNI EN 378-2: 2017**
CEI EN 60335-2-40/A1: 2007	**CEI EN 61000-6-3: 2007**	**UNI EN 12735-1: 2016**
CEI EN 60335-2-40/A2: 2009	**CEI EN 55014-1: 2017**	
CEI EN 60335-2-40/A13: 2012	**CEI EN 55014-2: 2016**	

La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.
This declaration of conformity has been released under the exclusive responsibility of the manufacturer.
La déclaration de conformité présente est délivrée sous la responsabilité exclusive du fabricant.
Diese Konformitätserklärung wurde unter der ausschließlichen Verantwortung des Herstellers ausgestellt.
Esta declaración de conformidad se ha otorgado bajo la responsabilidad exclusiva del fabricante.

Firmato a nome e per conto di: AERMEC S.p.A.
Signed for and on behalf of: AERMEC S.p.A.
Signé par et au nom de: AERMEC S.p.A.
Unterzeichnet für und im Namen von: AERMEC S.p.A.
Firmado en nombre de: AERMEC S.p.A.

** NOTA: La presente dichiarazione non è valida per tutte le macchine non conformi al regolamento 2016/2281 ed elencate nella Tabella 1 sotto riportata.*
** NOTE: This declaration is not valid for machines not compliant with regulation 2016/2281 and listed in Table 1 below.*
** REMARQUE: Cette déclaration n'est pas valable pour les machines non conformes au règlement 2016/2281 et listées dans le tableau 1 ci-dessous.*
** ANMERKUNG: Diese Erklärung gilt nicht für Maschinen, die nicht der Verordnung 2016/2281 entsprechen und in der nachstehenden Tabelle 1 aufgeführt sind.*
** NOTA: Esta declaración no es válida para máquinas que no cumplen con la regulación 2016/2281 y se enumeran en la Tabla 1 a continuación.*

Bevilacqua (VR)

Commercial Director
Luigi Zucchi

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ANL
102-202

MODEL* ____________

SERIAL NUMBER_______

DATE_______________

Noi, firmatari della presente, dichiariamo sotto la nostra esclusiva responsabilità che l'insieme in oggetto così definito:
We, the undersigned, hereby declare under our own responsibility that the assembly in question, defined as follows:
Nous, Signataires du présent acte, déclarons sous notre responsabilité exclusive que le groupe cité à l'objet défini de la façon suivante:
Die Unterzeichner erklären unter eigener Verantwortung, dass die oben genannte Maschineneinheit, bestehend aus:
Nosotros, los abajo firmantes, declaramos bajo nuestra exclusiva responsabilidad, que el conjunto en cuestión, denominado:

Nome / Name / Nom / Name / Nombre	**ANL**
Tipo / Type / Type / Typ / Tipo	**Air/water Chiller for outdoor installation**
Modello / Model / Modèle / Model / Modelo	

A cui questa dichiarazione si riferisce è conforme a tutte le disposizioni pertinenti delle seguenti direttive:
To which this declaration refers, complies with all the provisions related to the following directives:
Auquel cette déclaration se réfère, est conforme à toutes les dispositions relatives des directives suivantes:
Das Gerät, auf welches sich diese Erklärung bezieht, entspricht allen Verordnungen im Zusammenhang mit den folgenden Richtlinien:
A la que esta declaración se refiere, es conforme con todas las disposiciones pertinentes de las siguientes directivas:

Direttiva LVD: 2014/35/UE
Direttiva Compatibilità Elettromagnetica EMCD: 2014/30/UE
Direttiva PED in materia di attrezzature a pressione: 2014/68/UE (modulo A)
Direttiva RoHS sulla restrizione dell'uso di determinate sostanze pericolose nelle AEE: 2011/65/UE

L'oggetto della dichiarazione di cui sopra è conforme alle pertinenti normative di armonizzazione dell'Unione:
The above-mentioned declaration complies with the harmonised European standards:
L'objet de la déclaration reportée ci-dessus est conforme aux normes d'harmonisation relatives de l'Union:
Der Gegenstand der genannten Erklärung entspricht den diesbezüglichen harmonisierten Normen der europäischen Gemeinschaft:
El objeto de la declaración de arriba es conforme con las normativas pertinentes de armonización de la Unión:

CEI EN 60335-2-40: 2005	**CEI EN 61000-6-1: 2007**	**UNI EN 378-2: 2017**
CEI EN 60335-2-40/A1: 2007	**CEI EN 61000-6-3: 2007**	**UNI EN 12735-1: 2016**
CEI EN 60335-2-40/A2: 2009	**CEI EN 55014-1: 2017**	
CEI EN 60335-2-40/A13: 2012	**CEI EN 55014-2: 2016**	

La presente dichiarazione di conformità è rilasciata sotto la responsabilità esclusiva del fabbricante.
This declaration of conformity has been released under the exclusive responsibility of the manufacturer.
La déclaration de conformité présente est délivrée sous la responsabilité exclusive du fabricant.
Diese Konformitätserklärung wurde unter der ausschließlichen Verantwortung des Herstellers ausgestellt.
Esta declaración de conformidad se ha otorgado bajo la responsabilidad exclusiva del fabricante.

Firmato a nome e per conto di: AERMEC S.p.A.
Signed for and on behalf of: AERMEC S.p.A.
Signé par et au nom de: AERMEC S.p.A.
Unterzeichnet für und im Namen von: AERMEC S.p.A.
Firmado en nombre de: AERMEC S.p.A.

** NOTA: La presente dichiarazione non è valida per tutte le macchine non conformi al regolamento 2016/2281 ed elencate nella Tabella 1 sotto riportata.*
** NOTE: This declaration is not valid for machines not compliant with regulation 2016/2281 and listed in Table 1 below.*
** REMARQUE: Cette déclaration n'est pas valable pour les machines non conformes au règlement 2016/2281 et listées dans le tableau 1 ci-dessous.*
** ANMERKUNG: Diese Erklärung gilt nicht für Maschinen, die nicht der Verordnung 2016/2281 entsprechen und in der nachstehenden Tabelle 1 aufgeführt sind.*
** NOTA: Esta declaración no es válida para máquinas que no cumplen con la regulación 2016/2281 y se enumeran en la Tabla 1 a continuación.*

Bevilacqua (VR)

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ANL-H
102-202

MODEL* ____________

SERIAL NUMBER_______

DATE________________

Noi, firmatari della presente, dichiariamo sotto la nostra esclusiva responsabilità che l'insieme in oggetto così definito:
We, the undersigned, hereby declare under our own responsibility that the assembly in question, defined as follows:
Nous, Signataires du présent acte, déclarons sous notre responsabilité exclusive que le groupe cité à l'objet défini de la façon suivante:
Die Unterzeichner erklären unter eigener Verantwortung, dass die oben genannte Maschineneinheit, bestehend aus:
Nosotros, los abajo firmantes, declaramos bajo nuestra exclusiva responsabilidad, que el conjunto en cuestión, denominado:

Nome / Name / Nom / Name / Nombre	**ANL-H**
Tipo / Type / Type / Typ / Tipo	**Air/water reversible heat pumps for outdoor installation**
Modello / Model / Modèle / Model / Modelo	

A cui questa dichiarazione si riferisce è conforme a tutte le disposizioni pertinenti delle seguenti direttive:
To which this declaration refers, complies with all the provisions related to the following directives:
Auquel cette déclaration se réfère, est conforme à toutes les dispositions relatives des directives suivantes:
Das Gerät, auf welches sich diese Erklärung bezieht, entspricht allen Verordnungen im Zusammenhang mit den folgenden Richtlinien:
A la que esta declaración se refiere, es conforme con todas las disposiciones pertinentes de las siguientes directivas:

Direttiva Macchine: 2006/42/CE
Direttiva Compatibilità Elettromagnetica EMCD: 2014/30/UE
Direttiva PED in materia di attrezzature a pressione: 2014/68/UE
Direttiva RoHS sulla restrizione dell'uso di determinate sostanze pericolose nelle AEE: 2011/65/UE

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CEI EN 60335-2-40/A1: 2007	**CEI EN 61000-6-3: 2007**	**UNI EN 12735-1: 2016**
CEI EN 60335-2-40/A2: 2009	**CEI EN 55014-1: 2017**	
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La déclaration de conformité présente est délivrée sous la responsabilité exclusive du fabricant
Diese Konformitätserklärung wurde unter der ausschließlichen Verantwortung des Herstellers ausgestellt
Esta declaración de conformidad se ha otorgado bajo la responsabilidad exclusiva del fabricante

La persona autorizzata a costituire il fascicolo tecnico è Luca Martin. Il prodotto, in accordo con la direttiva 2014/68/UE, soddisfa la procedura di Garanzia qualità Totale (modulo H) con certificato n.06/270-QT3664 Rev. 10 emesso dall'organismo notificato n.1131 CEC via Pisacane 46 Legnano (MI) – Italy.
The person authorised to compile the technical file is Luca Martin. The product, in agreement with Directive 2014/68/EU, satisfies the Total quality Guarantee procedure (form H) with certificate no. 06/270-QT3664 Rev. 10 issued by the notified body n.1131 CEC via Pisacane 46 Legnano (MI) - Italy.
La personne autorisée à constituer le dossier technique est Luca Martin. Le produit, selon la directive 2014/68/UE, respecte la procédure de Garantie de qualité Totale (module H) par le certificat n.06/270-QT3664 Rév. 10 émis par l'organisme notifié n.1131 CEC via Pisacane 46 Legnano (MI) - Italie.
Die bevollmächtigt, die technischen Unterlagen zusammenzustellen ist Luca Martin. In Übereinstimmung mit der Richtlinie 2014/68/EU, erfüllt das Produkt die Anforderungen des Verfahrens der umfassenden Qualitätssicherung (Modul H), Zertifikat Nr.06/270-QT3664 Rev. 10, ausgestellt durch benannte Stelle Nr. 1131 CEC Via Pisacane 46, Legnano (MI) - Italy.
La persona facultada para elaborar el expediente técnico es Luca Martin. El producto, conforme a la directiva 2014/68/UE, cumple con el procedimiento de Garantía de calidad total (módulo H) con certificado n. 06/270-QT3664 Rev. 10 emitido por el organismo autorizado n. 1131 CEC via Pisacane 46 Legnano (MI) - Italia.

** NOTA: La presente dichiarazione non è valida per tutte le macchine non conformi al regolamento 2016/2281 ed elencate nella Tabella 1 sotto riportata.*
** NOTE: This declaration is not valid for machines not compliant with regulation 2016/2281 and listed in Table 1 below.*
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** NOTA: Esta declaración no es válida para máquinas que no cumplen con la regulación 2016/2281 y se enumeran en la Tabla 1 a continuación.*

Bevilacqua (VR)

Commercial Director
Luigi Zucchi

Luigi Zucchi

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EC DECLARATION OF INCORPORATION / DÉCLARATION D'INCORPORATION CE
EINBAUERKLÄRUNG EG / DECLARACIÓN DE INCORPORACIÓN CE

ANL-C
020-202

MODEL

SERIAL NUMBER

DATE

Noi, firmatari della presente, dichiariamo sotto la nostra esclusiva responsabilità che l'insieme in oggetto così definito:
We, the undersigned, hereby declare under our own responsibility that the assembly in question, defined as follows:
Nous, Signataires du présent acte, déclarons sous notre responsabilité exclusive que le groupe cité à l'objet défini de la façon suivante:
Die Unterzeichner erklären unter eigener Verantwortung, dass die oben genannte Maschineneinheit, bestehend aus:
Nosotros, los abajo firmantes, declaramos bajo nuestra exclusiva responsabilidad, que el conjunto en cuestión, denominado:

Nome / Name / Nom / Name / Nombre	**ANL-C**
Tipo / Type / Type / Typ / Tipo	**Air/water Condensing unit for outdoor installation**
Modello / Model / Modèle / Model / Modelo	

A cui questa dichiarazione si riferisce è conforme a tutte le disposizioni pertinenti delle seguenti direttive:
To which this declaration refers, complies with all the provisions related to the following directives:
Auquel cette déclaration se réfère, est conforme à toutes les dispositions relatives des directives suivantes :
Das Gerät, auf welches sich diese Erklärung bezieht, entspricht allen Verordnungen im Zusammenhang mit den folgenden Richtlinien:
A la que esta declaración se refiere, es conforme con todas las disposiciones pertinentes de las siguientes directivas:

Direttiva Macchine: 2006/42/CE

La documentazione tecnica pertinente è stata compilata in conformità alla parte B dell'allegato VII; tale documentazione, o parti di essa, sarà trasmessa per posta o per via elettronica, in risposta ad una richiesta motivata da parte delle autorità nazionali competenti.
The relevant technical documentation is compiled in accordance with part B of Annex VII; this documentation, or part of it, will be transmitted by mail, in response to a reasoned request by the national authorities.
La documentation technique pertinente est constituée conformément à l'annexe VII, partie B; cette documentation ou una partie de celui-ci seront envoyés par la poste ou par voie électronique, à la suite d'une demande dûment motivée des autorités nationales.
Die dazugehoerende technische Dokumentation wurde in Uebereinstimmung mit dem Teil B der Anlage VII zusammengestellt. Diese Dokumentation (bzw. Teile davon) wird per Post oder per Email uebermittelt, in Beantwortung einer motivierten Forderung seitens der zustaendigen Nationalbehoerde.
La documentación técnica correspondiente, de conformidad con el anexo VII, parte B; dicha documentación o parte de ella se enviaràn por correo o por vìa electrònica, en respuesta a un requerimiento debidamente motivado de las autoridades nacionales.

La quasi-macchina a cui fa riferimento questa dichiarazione non deve essere messa in servizio finché la macchina finale in cui deve essere incorporata non sia stata dichiarata in conformità con le disposizioni della Direttiva Macchine 2006/42/CE.
The partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of Directive 2006/42/EC.
La quasi-machine ne doit pas être mise en service avant que la machine finale dans laquelle elle doit être incorporée ait été déclarée conforme aux dispositions pertinentes de la directive 2006/42/CE.
Die unvollständigen maschine, auf die sich diese Erklaerung bezieht, soll nicht im Betrieb gesetzt werden, solange die Schlussmaschine, in der sie eingebaut werden soll, nicht in Uebereinstimmung mit den Vorschriften der Maschinevorgabe 2006/42/EC erklaert wird.
La cuasi máquina no deberá ser puesta en servicio mientras la máquina final en la cual vaya a ser incorporada no haya sido declarada conforme a lo dispuesto en la Directiva 2006/42/CE.

Bevilacqua (VR),

Commercial Director
Luigi Zucchi

Luigi Zucchi

DESCRIPTION AND UNIT SELECTION

The EXTERNAL air cooled chillers and heat pump units of the ANL series with R410A have been designed and manufactured to meet the cooling/heating and production of domestic hot water (DHW) needs of small and medium systems in residential, commercial or industrial buildings.
The units are characterised by an extremely low noise operation and a high efficiency and reliability, through the use of high efficiency heat exchangers and scroll compressors of high performance and low noise.

They are available in versions:
1. **ANL "°" Standard chiller**
2. **ANL "H" Heat pump unit**
3. **ANL "C" Condensing unit**

CONFIGURATOR

DESCRIPTION	
	ANL
SIZE	
	020 - 025 - 030 - 040 - 050 - 070 - 080 - 090 - 102 - 152 - 202
MODEL	
°	Cooling only
H	Heat pump unit [1]
VERSION	
°	Standard
P	With pump
N	With high head pump (from size 102 to 202)
A	With buffer tank and pump
Q	With buffer tank and high head pump (from size 050 to 202)
HEAT RECOVERY	
°	Without heat recovery
D	With desuperheater [2] **(Condensing temperature control - DCPX standard)**
CONDENSER COIL [3]	
°	Aluminium
R	Copper
S	Tinned copper
V	Epoxy paint /cataphoresis treatment
FIELD OF USE	
°	Standard (water temperature produced down to 4°C)
Z	Low temperature (liquid temperature produced from 4°C to 0°C)
Y	Low temperature (liquid temperature produced from 0°C to -10°C)
EVAPORATOR	
°	Standard (water temperature produced down to 4°C)
C	Condensing unit (without evaporator)
POWER SUPPLY [4]	
°	400V/3N/50Hz
M	230V/1/50Hz (only sizes ANL 020 - 025 - 030 - 040)

[1] DHW production possible (DCPX | VMF-ACS |MODU-485A required)

[2] The desuperheater is available for sizes from 050 to 090 (A - HA) only with buffer tank, whilst sizes from 102 to 202 are available in all versions. Desuperheater is incompatible with the low temperature options, with the condensing unit version, and for dimensional reasons even with the option Q. For YD option contact head office.

[3] ° **(Only cooling model)** Sizes from 102 to 202 have microchannel coil.
R e S **(Only cooling model)** only available for sizes 030-090
(Models in heat pump) only for sizes 030H-202H
V **(Only cooling model)** Cataphoresis treatment Cooling only available only for sizes 020 ÷ 025 and 102 ÷ 202. Epoxy paint for models 020 ÷ 090
(Models in heat pump) Cataphoresis treatment for sizes 020H ÷ 025H. Epoxy paint for models with heat pump 020H ÷ 202H

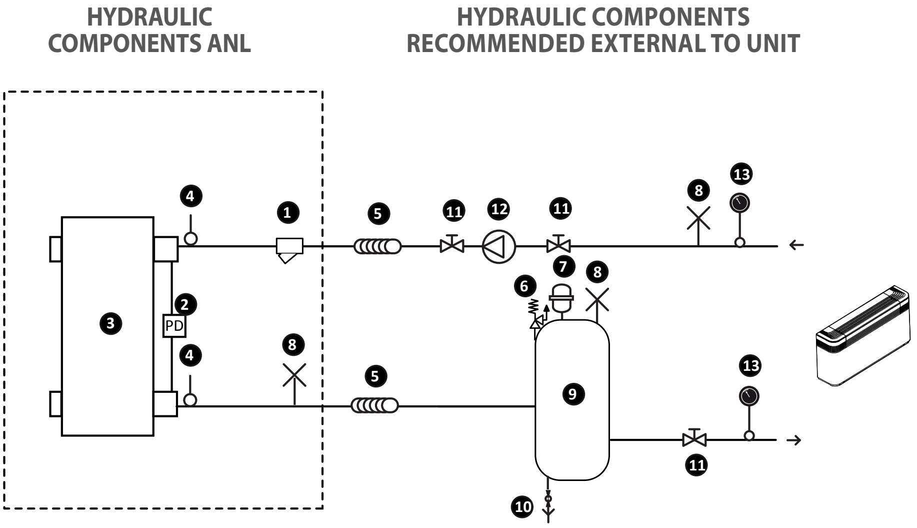
[4] ° from size 020 to 202
M from size 020 to 040

TYPICAL HYDRAULIC CIRCUITS

INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ANL "°" | "H" (STANDARD)

	COMPONENTS PROVIDED AS STANDARD
1	Water filter
2	Differential pressure switch / Flow switch **(ANL°|H 102…202)**
3	Plate heat exchanger
4	Water temperature sensor (IN/OUT)
8	Air vent

	COMPONENTS NOT PROVIDED AND RESPONSIBILITY OF THE INSTALLER
5	Anti-vibration joints
6	Safety valve
7	Expansion tank
9	System buffer tank
10	Drain valve
11	Isolating valve
12	Pump
13	Gauge



WARNING: The selection and installation of components external to the ANL °|H unit are the responsibility of the installer and must be carried out in accordance with good working practices and applicable standards of the country of destination.

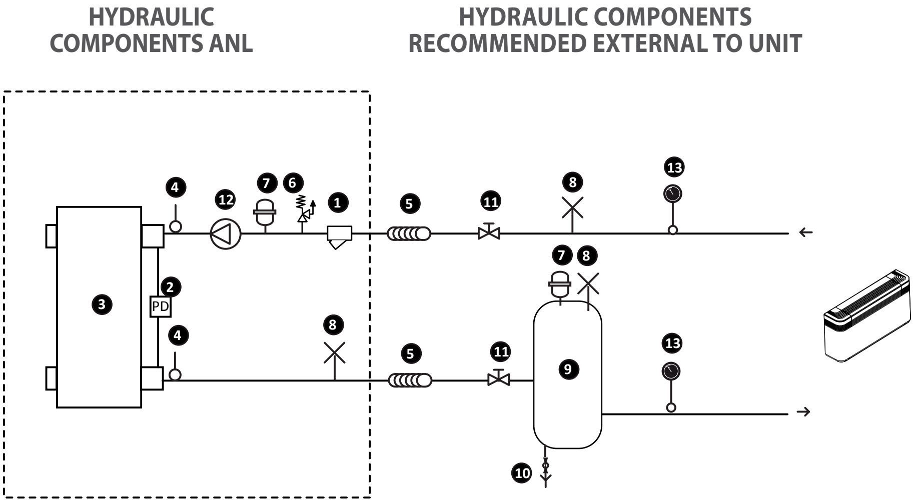
WARNING: The hydraulic piping to the unit must be adequately sized for the required flow rate. The water flow rate through the heat exchanger must always be constant.

WARNING: Carefully clean the system prior to connection to the unit. This cleaning eliminates welding slag, dirt, rust or any other impurities from the piping. These impurities may otherwise be deposited within the unit and cause a malfunction The connecting piping must be adequately supported so as not to impose any weight onto the unit.

INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ANL “°P|°N” / "HP|HN"

	COMPONENTS PROVIDED AS STANDARD
1	Water filter
2	Differential pressure switch / Flow switch **(ANL °P|°N / HP|HN 102…202)**
3	Plate heat exchanger
4	Water temperature sensor (IN/OUT)
6	Safety valve
7	Expansion tank
8	Air vent
12	Pump

	COMPONENTS NOT PROVIDED AND RESPONSIBILITY OF THE INSTALLER
5	Anti-vibration joints
7	Additional expansion tank (if necessary)
9	System buffer tank
10	Drain valve
11	Isolating valve
13	Gauge



WARNING: The selection and installation of components external to the ANL°P|N /ANLHP|HN unit are the responsibility of the installer and must be carried out in accordance with good working practices and applicable standards of the country of destination.

WARNING: The hydraulic piping to the unit must be adequately sized for the required flow rate. The water flow rate through the heat exchanger must always be constant.

WARNING: Carefully clean the system prior to connection to the unit. This cleaning eliminates welding slag, dirt, rust or any other impurities from the piping. These impurities may otherwise be deposited within the unit and cause a malfunction The connecting piping must be adequately supported so as not to impose any weight onto the unit.

TYPICAL HYDRAULIC CIRCUITS

INTERNAL AND EXTERNAL HYDRAULIC CIRCUIT ANL “°A|°Q” / "HA|HQ"

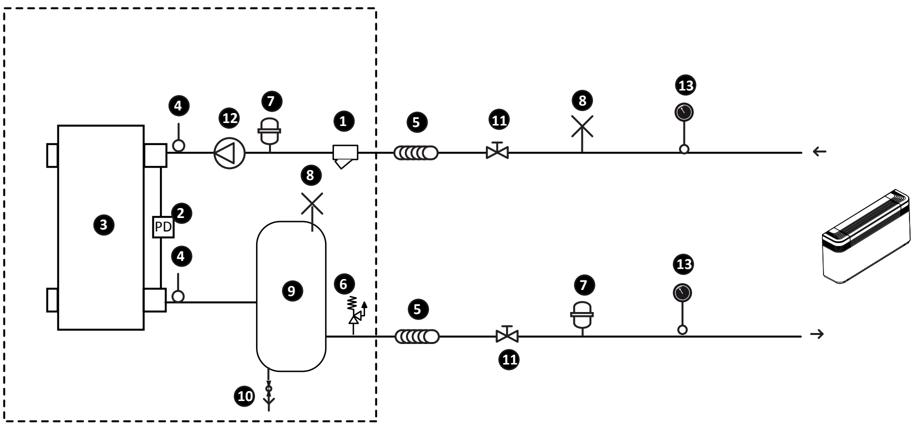
	COMPONENTS PROVIDED AS STANDARD ANL STANDARD
1	Water filter
2	Differential pressure switch / Flow switch **(ANL °A|HA 020…040 - °Q|HQ 102...202)**
3	Plate heat exchanger
4	Water temperature sensor (IN/OUT)
6	Safety valve
7	Expansion tank
8	Air vent
9	System buffer tank
12	Pump

	COMPONENTS NOT PROVIDED AND RESPONSIBILITY OF THE INSTALLER
5	Anti-vibration joints
7	Expansion tank
10	Drain valve
11	Isolating valve
13	Gauge

HYDRAULIC COMPONENTS ANL

HYDRAULIC COMPONENTS RECOMMENDED EXTERNAL TO UNIT

NOTE: from 020 to 040 the evaporator is flooded inside the storage tank.

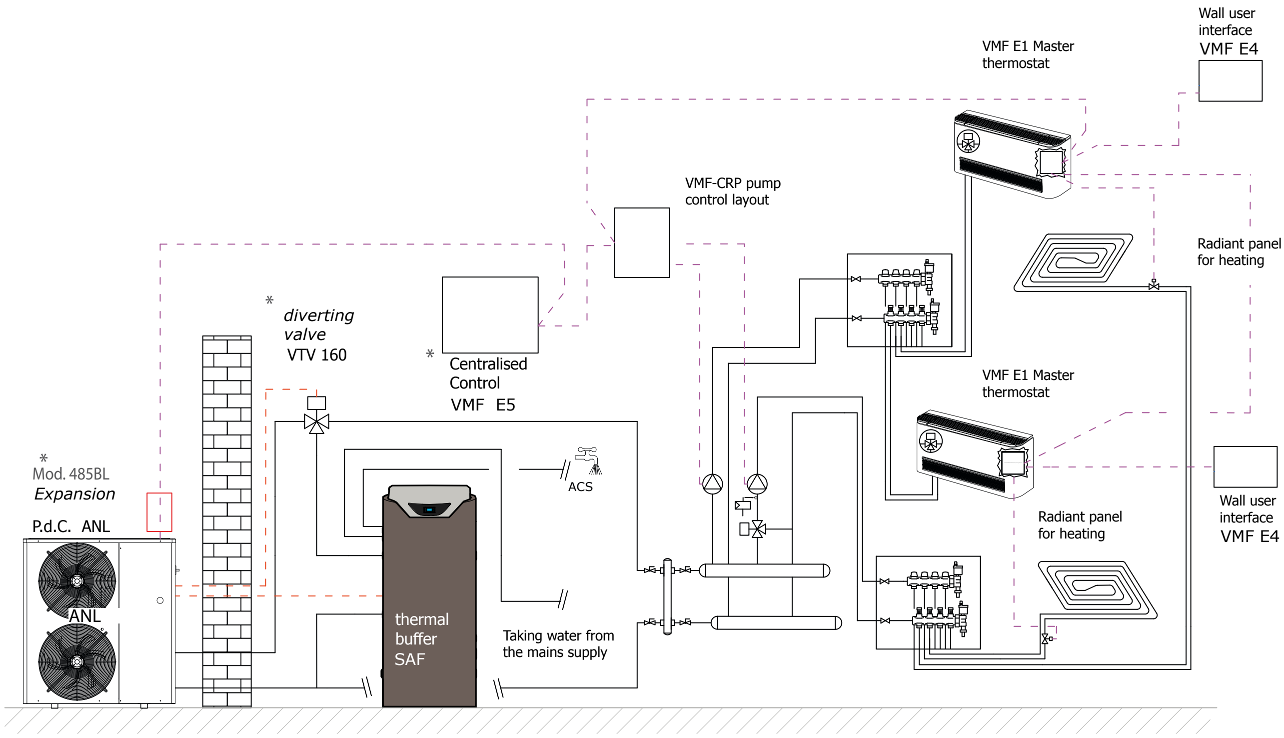


WARNING: The selection and installation of components external to the ANL°A|Q /ANLHA|HQ unit are the responsibility of the installer and must be carried out in accordance with good working practices and applicable standards of the country of destination.

WARNING: The hydraulic piping to the unit must be adequately sized for the required flow rate. The water flow rate through the heat exchanger must always be constant.

WARNING: Carefully clean the system prior to connection to the unit. This cleaning eliminates welding slag, dirt, rust or any other impurities from the piping. These impurities may otherwise be deposited within the unit and cause a malfunction The connecting piping must be adequately supported so as not to impose any weight onto the unit.

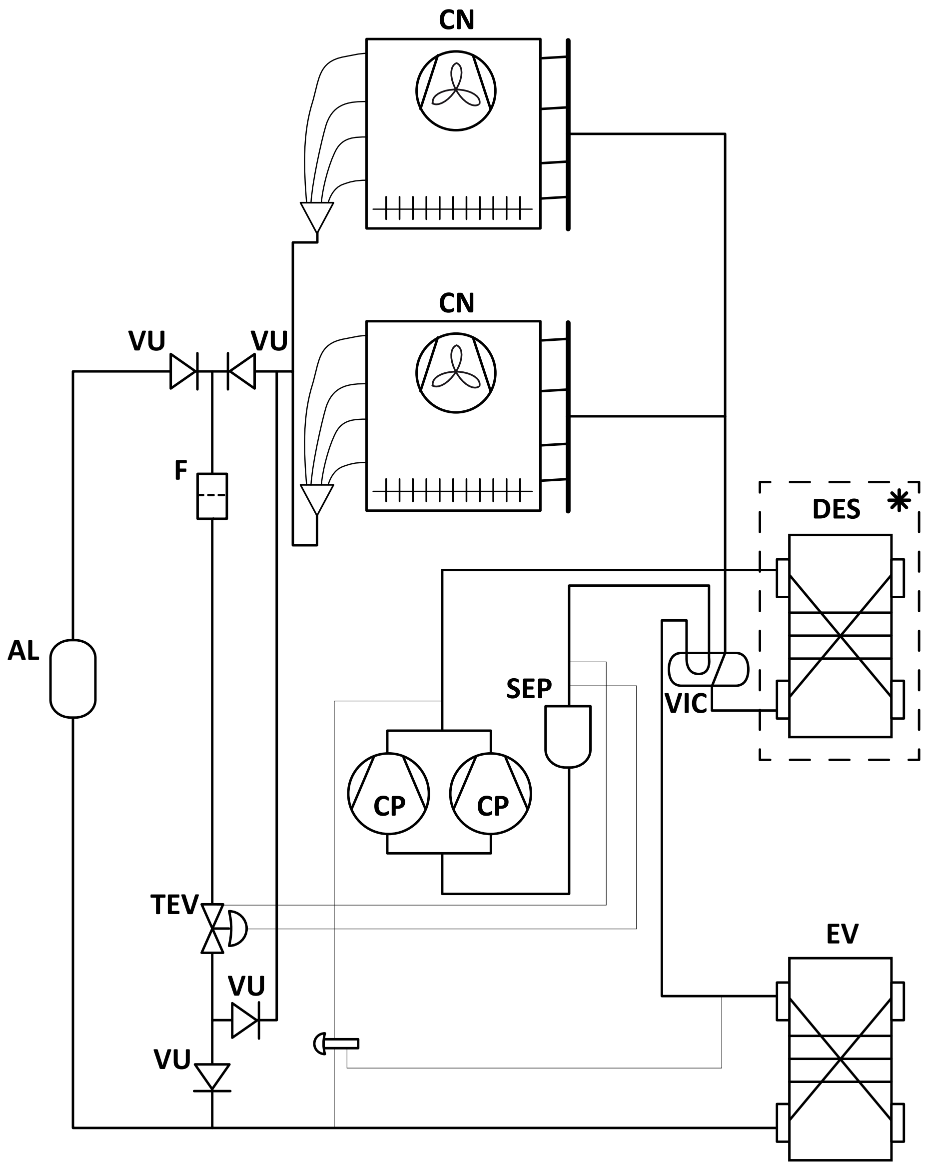
SYSTEM EXAMPLE FOR DHW PRODUCTION WITH ANL50H° WITH SAF



*** Mandatory accessory**

REFRIGERANT CIRCUIT SCHEMATIC

ANL HEAT PUMP WITH DESUPERHEATER

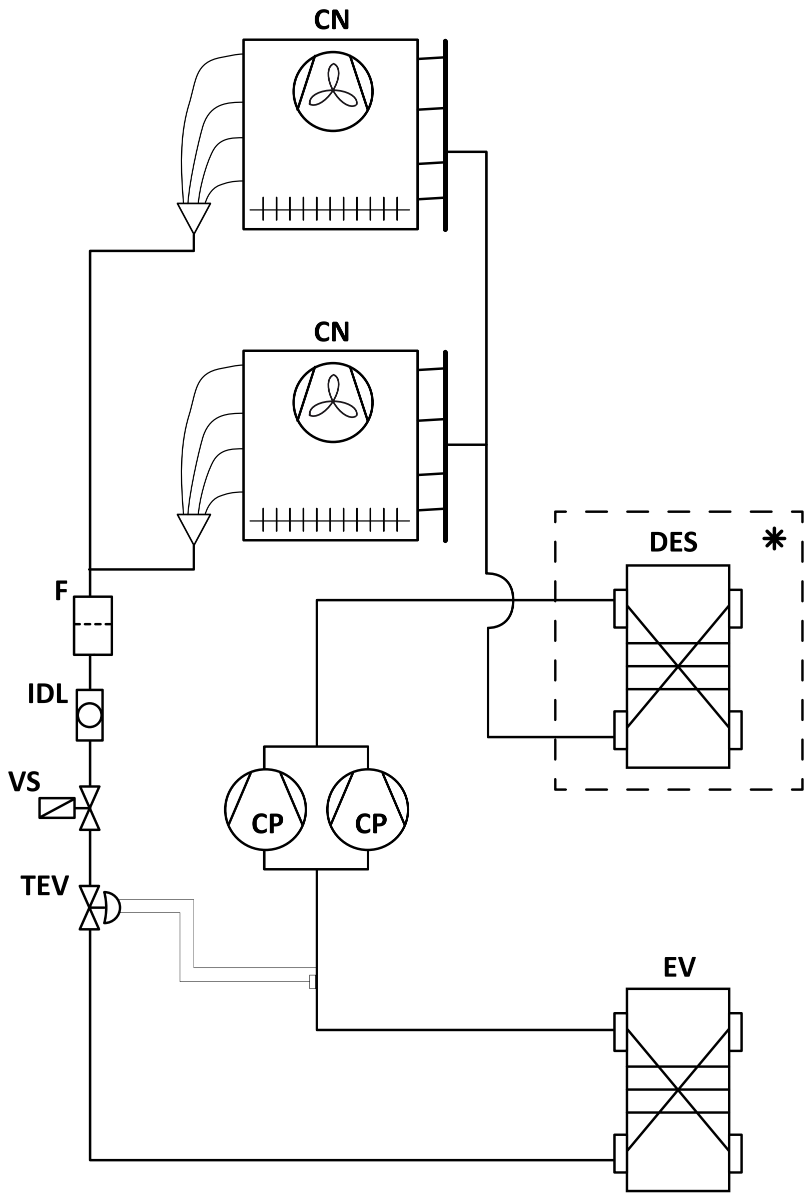


LEGEND

AL	Liquid accumulator
CN	Coil finned
CP	Compressor
F	Filter drier
EV	Plate heat exchanger
DES	Desuperheater (optional)
VIC	Reversing valve
SEP	Liquid separating
TEV	Thermostatic expansion valve
VU	Check valve

- **ANL 020-090 / 1 COMPRESSOR AND 1 COIL**
- **ANL 102-202 / 2 COMPRESSORS AND 2 COILS**
- ***(DESUPERHEATER) / OPTIONAL**

ANL COOLING ONLY WITH DESUPERHEATER

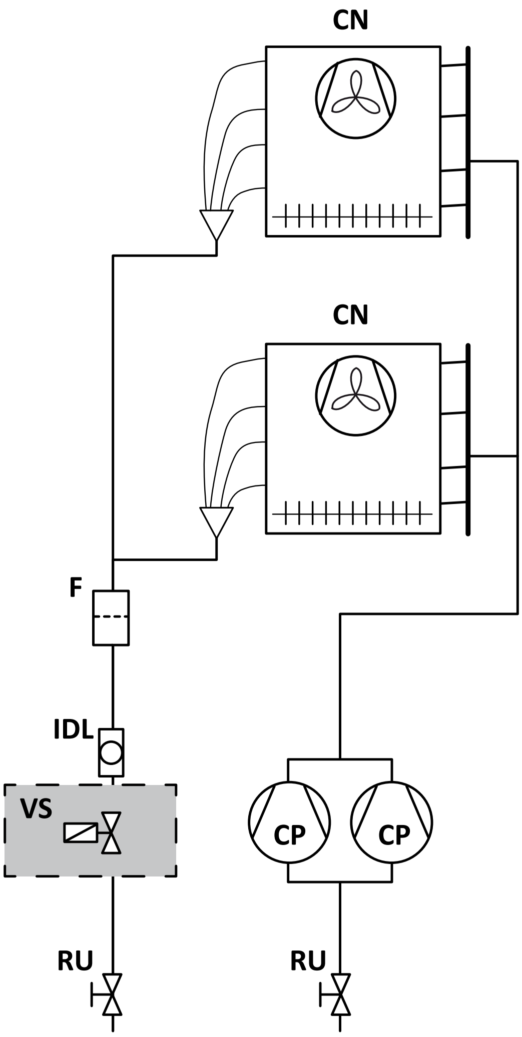


LEGEND

CN	Coil finned-microchannel
CP	Compressor
F	Filter drier
EV	Plate heat exchanger
DES	Desuperheater (optional)
IDL	Liquid indicator
VS	Solenoid valve
TEV	Thermostatic expansion valve
VU	Check valve

- **ANL 020-090 / 1 COMPRESSOR AND 1 COIL**
- **ANL 102-202 / 2 COMPRESSORS AND 2 COILS**
- ***(DESUPERHEATER) / OPTIONAL**

MOTOCONDENSING ANL



LEGEND

CN	Coil finned - microchannel
CP	Compressor
F	Filter drier
IDL	Liquid indicator
VS	Solenoid valve
RU	Taps

- **ANL 020-090 / 1 COMPRESSOR AND 1 COIL**
- **ANL 102-202 / 2 COMPRESSORS AND 2 COILS**
- **VS (Solenoid valve not present in sizes 020÷090).**

DESCRIPTION OF COMPONENTS

REFRIGERANT CIRCUIT

Scroll compressors
High efficiency rotary scroll hermetic compressor (mounted on elastic anti-vibration mounts) with two pole electric motor. Crankcase heaters as standard, automatically activated when the unit stops, as long as power is maintained to the unit.

System side heat exchanger
Brazed plate heat exchanger in stainless steel AISI 316. The heat exchanger is externally insulated with closed cell neoprene anti-condensation material.

Desuperheater
Brazed plate heat exchanger in stainless steel AISI 316. The heat exchanger is externally insulated with closed cell neoprene anti-condensation material.

WATER CHARACTERISTICS

System: Chiller with plate heat exchanger	
PH	7,5-9
Electric conductivity	100-500μS/cm
Total hardness	4,5-8,5°dH
Temperature	< 65°C
Oxygen content	< 0,1 ppm
Max. glycol amount	50%
Phosphates (PO4)	< 2ppm
Manganese (Mn)	< 0,05 ppm
Iron (Fe)	< 0,3 ppm
Alkalinity (HCO3)	70 - 300 ppm
Chloride ions (Cl-)	< 50 ppm
Sulphate ions (SO4)	< 50 ppm
Sulphide ion (S)	none
Ammonium ions (NH4)	none
Silica (SiO2)	< 30ppm

Source side microchannel heat exchanger
(ANL 102 ÷ 202 cooling only)
Microchannels heat exchanger that guarantees higher thermal exchange yield. Circuit that optimises the liquid distribution in the coil, which is arranged with V beam geometry with open angle. The configurator has always the standard copper/aluminium coils available.

Source side standard heat exchanger
(ANL 020 ÷ 090 cooling only)
(ANL 020 ÷ 202 heat pump)
Finned coil heat exchanger with copper tubes and aluminium fins adequately spaced to ensure high efficiencies.

Reversing valve
(only versions "H")
4 way reversing valve. Reverses the flow of refrigerant.

Liquid accumulator
(only versions "H")
Compensates for the difference in volume between the finned coil and the plpate heat exchanger, retaining the excessive liquid.

Filter drier
Hermetic type with ceramic cartridge and hygroscopic material, capable of retaining impurities and moisture within the refrigerant circuit.

Check valve
Consente il passaggio del refrigerante in una sola direzione.

Thermostatic expansion valve
Mechanical type, with external equaliser located at the evaporator outlet, modulates the flow of refrigerant into the evaporator based on the load and ensures the correct superheat of the suction gas.

Hot gas injection valve
(Only version "d")
Hot gas injection device upstream of the evaporator.

Liquid sight glass with moisture indicator
Used to check for the presence of moisture in the refrigerant circuit.

Liquid and discharge isolating valves
(version "C)
Permit the isolation of refrigerant in case of special maintenance.

STRUCTURE AND FANS

Structure
The main structure is made from hot dip galvanised steel panels, polyester powder coated and designed to ensure the maximum access for service and maintenance.
The base for sizes 102 - 152 - 202 heat pump units has holes in the proximity of the coil to permit drainage of water during the defrost cycle.

Fan assembly
External rotor axial fan with helicoidal blades, housed in a casing, complete with protective grilles. 6 pole electric motor with thermal protection.

EC fans inverter
Continuous circuit modulation based on condensing pressure, high efficiency brushless motor for better energy saving.
Fans EC inverter standard fitted for sizes 030÷090 heat pump version.

STANDARD HYDRAULIC CIRCUIT

Water filter
The water filter is provided with a filter mesh with holes no greater than one millimetre, blocking and removing from the unit any impurities found in the hydraulic circuit.

Flow switch
(On ANL°|H 102…202)
(On ANL °P|°N / HP|HN 102…202)
(On ANL °A|HA 020…040 - °Q|HQ 102...202)
The flow switch monitors the flow rate through the heat exchanger and stops the unit in case of insufficient flow.

Differential pressure switch
(On ANL°|H 020…090)
(On ANL °P|°N / HP|HN 020…090)
(On ANL °A|HA - °Q|HQ 050…090)
Located between the inlet and outlet of the evaporator. Monitors the flow rate through the heat exchanger and stops the unit in case of insufficient flow.

ADDITIONAL COMPONENTS DETAILED IN THE CONFIGURATOR

Pumps
Standard or high head

Expansion tank
Membrane type precharged with nitrogen.

Safety valve
With discharge pipe connection facility, and will operate in cases of hydraulic system overpressure.

Air vent
Mounted at the highest level of the hydraulic system. The air vent is used for the release of any air pockets from the hydraulic circuit.

System buffer tank (1)
Manufactured in steel and to reduce heat gain and avoid the formation of condensation is insulated with polyurethane material of adequate thickness. The buffer tank reduces the number of compressor starts and stabilises the water temperature delivered to the system.

CONTROL AND SAFETY COMPONENTS
High pressure pressostat (manual reset)
Fixed setting, fitted on the refrigerant high pressure side, stops the operation of the compressor in case of abnormal pressures.

Low pressure pressostat
(only versions "° | C")
Fixed setting, fitted on the refrigerant low pressure side, stops the operation of the compressor in case of abnormal pressures.

High pressure transducer
Mounted on the refrigerant circuit high pressure side provides the operating pressure to the control board and generates a pre-alarm in case of abnormal pressure.

Low pressure transducer
(only version "H")
Mounted on the refrigerant circuit low pressure side provides the operating pressure to the control board and generates a pre-alarm in case of abnormal pressure.

ELECTRICAL CONTROL AND POWER PANEL
Electrical panel conforming to EN 60204-1/IEC 204-1, complete with:
- Control circuit transformer
- Door interlocked isolator
- Circuit breakers and contactors for compressors and fans
- Terminals for REMOTE PANEL
- Spring type terminals for control circuit
- Externally rated cabinet with double panel and seals
- Electronic controller
- Relay output for evaporator pump and heat recovery pump enable (only for versions without pump assembly)
- All cables numbered

Door interlocked isolator
Access to the electrical panel is by operating the handle of the door interlocked isolator which removes power to the unit. To avoid accidentally powering up the unit during maintenance the isolator is fitted with a locking mechanism.

Controller keypad
Allows complete control of the unit. For further information refer to the user manual.

Electronic controller
MODU CONTROL
Control of the leaving water temperature with a proportional-integral algorithm: maintains the average leaving temperature to the desired valve
- Auto-adaptive differential starter timer: ensures the compressor minimum required running time for systems with low water content
- Intelligent defrost by decreasing pressure: determines when the coil is frosted avoiding unnecessary defrost cycles
- External air temperature setpoint compensation (with external air temperature sensor accessory): reduces electrical consumption
- Condensing control based on pressure, rather than temperature, for absolute stability (standard on sizes 030÷090 heat pump version; with accessory DCPX for all the others)
- Inverted condensing control for operation in heat pump mode even in the summer (standard on sizes 030÷090 heat pump version; with accessory DCPX for all the others)
- Pre-alarms with automatic reset: in case of alarms a number of restarts are permitted before a definitive lock out
- Alarm based on ΔT: to identify errors (reverse rotation) or reversing valve blocked
- Compressor hour run counter
- Compressor number of starts counter
- Alarm history
- Automatic restart after power failure
- Local or remote control

Display of unit status:
1. Power on
2. Compressor ON/OFF
3. Operating mode (heating/cooling)
4. Alarm active

Display of sensors, transducers and parameters
1. Water outlet temperature
2. Water inlet temperature
3. Coil temperature (heat pump unit)
4. Discharge refrigerant temperature
5. External air temperature (heat pump, cooling only with DCPX and sensor)
6. Discharge pressure (heat pump unit)
7. Suction pressure (heat pump unit)
8. Error from setpoint temperature (sum of the proportional and integral error)
9. Delay time to start / stop the compressor
10. Control of alarms
11. Low pressure
12. High pressure (pre-alarm: pressostat directly removes power to the compressor)
13. High discharge temperature
14. Anti-freeze
15. Flow protection
16. Alarm based on ΔT

- Alarms with automatic reset and limited number of resets before definitive lock out
- ON/OFF control from remote contact
- Change of season from remote contact

For further information refer to the user manual.

(1) Available only on request the tank in stainless steel AISI 304.

ACCESSORIES

MODU-485A
Interface RS-485 for supervisory systems with MODBUS protocol.

MULTICONTROL
Allows the simultaneous control of multiple chillers or heat pump units (up to 4) installed in a common system, fitted with our MODU-CONTROL controller.
For a more complete function the following accessories are available:

SPLW
System water sensor. In most cases the use of the sensors supplied loose with each chiller/heat pump unit is sufficient. In the case of common flow / return header installation this sensor can be used to control the common water temperature of the chillers connected to the header or just for reading values.

SDHW
Domestic hot water sensor. To be used with a storage tank for the control of water temperature produced.

VMF-CRP
to predict accessory for the management of the probes SPLW / SDHW if provided with the MULTICONTROL

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.

DCPX
Fan speed controller which allows correct operation in cooling mode between external air temperatures of +20°C and -10°C, in heat pump mode, in the summer for production of domestic hot water, up to +42°C (refer to the operating limits diagram).
In versions with desuperheater fitted as standard.

- **Standard on versions with desuperheater**
- **NOT available for sizes 030÷090 heat pump versions, because of standard condensing control and inverter fans.**

BDX
Condensate drain pan.

VT ANTI-VIBRATION MOUNTS
Set of anti-vibration mounts.

SAF
Thermal accumulator for the instantaneous production of domestic hot water.

DRE
Electronic soft starter device reducing starting current,

KR
Evaporator electric heater
Plate heat exchanger electric heater. Provides freeze protection of the evaporator in winter off periods.

KR B3
Base electric heater kit: avoids ice forming in the base.

RA
Buffer tank electric heater (in versions A|Q). Provides freeze protection of the buffer tank in winter off periods.

VMF-ACS
Electrical panel for enabling / complete control of a domestic hot water tank:

1. 3 way valve control
2. Anti-legionella
3. Temperature sensor
4. Immersion heater of:
   3 kW single |three phase
   6 kW three phase
   8 kW three phase

VMF-E5B|N
Recess mounted panel or white or black colour with back-lit LCD graphical display and capacitive keypad. Allows enabling/centralised control of:

1. A complete hydronic system comprising 1 master and maximum of 5 slave fan coil units
2. ChillerPump **(INTERFACE RS 485 FROM MODU-485A REQUIRED ACCESSORY)**
3. Circulating pumps: maximum configuration of 12 zone circulators
4. Boiler: control of boiler enable for the production of hot water
5. Heat recovery units: maximum of 3 enables for heat recovery units programmable by time-clock and/or air quality sensor VMF-VOC, domestic hot water module
6. Complete control of domestic hot water production **(ACCESSORY VMF-ACS see above).**

COMPATIBILITY OF ACCESSORIES - ANL COOLING ONLY

ANL		vers	020	025	030	040	050	070	080	090	102	152	202
MODU-485BL	(1)	all	•	•	•	•	•	•	•	•	•	•	•
MULTICONTROL		all	•	•	•	•	•	•	•	•	•	•	•
SPLW		all	•	•	•	•	•	•	•	•	•	•	•
VMF-CRP		all	•	•	•	•	•	•	•	•	•	•	•
PR3		all	•	•	•	•	•	•	•	•	•	•	•
DCPX	(2)	all	50	50	50	50	50	50	50	50	52	52	52
VT		°/°P/°C/°N	9	9	9	9	9	9	9	9	15	15	15
		°A/°Q	9	9	9	9	15	15	15	15	15	15	15
Accessories factory fitted only													
DRE	(3)		-	-	-	-	5	5	5	5	5 x2	5 x2	5 x2
KR	(4)	°/°P	2	2	2	2	2	2	2	2	100	100	100
		°A	-	-	-	-	2	2	2	2	100	100	100
RA		°A/°Q	•	•	•	•	•	•	•	•	-	-	-
RA100			-	-	-	-	-	-	-	-	•	•	•

COMPATIBILITY OF ACCESSORIES - ANL REVERSIBLE HEAT PUMPS

ANL - H		vers	020	025	030	040	050	070	080	090	102	152	202
MODU-485BL	(1)	all	•	•	•	•	•	•	•	•	•	•	•
MULTICONTROL		all	•	•	•	•	•	•	•	•	•	•	•
SPLW		all	•	•	•	•	•	•	•	•	•	•	•
SDHW		all	•	•	•	•	•	•	•	•	•	•	•
VMF-CRP		all	•	•	•	•	•	•	•	•	•	•	•
PR3		all	•	•	•	•	•	•	•	•	•	•	•
DCPX	(2)	H	51	51	*	*	*	*	*	*	53	53	53
BDX		H / HP / HN	5	5	5	5	5	5	5	5	-	-	-
		HA / HQ	5	5	5	5	6	6	6	6	-	-	-
VT		H / HP / HN	9	9	9	9	9	9	9	9	15	15	15
		HA / HQ	9	9	9	9	15	15	15	15	15	15	15
SAF		all	•	•	•	•	•	•	•	•	•	•	•
Accessories factory fitted only													
DRE	(3)		-	-	-	-	5	5	5	5	5 x2	5 x2	5 x2
KR	(4)	H/HP	2	2	2	2	2	2	2	2	100	100	100
		HA	-	-	-	-	2	2	2	2	100	100	100
KRB3		all	-	-	-	-	-	-	-	-	•	•	•
RA		HA	•	•	•	•	•	•	•	•	-	-	-
RA100			-	-	-	-	-	-	-	-	•	•	•

(1) The accessory MODU-485BL | DCPX (where existing) are compulsory for management and production of ACS
(2) Standard for the unit with desuperheater
(3) Only available with power supply 400V/3N Factory fitted only.
(4) Accessory not available for versions ANL 020…040°A | HA.
* Size with Inverter fans
x2 Indicates the quantity to order.

ANL COOLING ONLY
TECHNICAL DATA

ANL Cooling only	Version		020	025	030	040	050	070	080	090	102	152	202
Cooling capacity **1**	°	kW	5,7	6,2	7,4	9,5	13,3	16,4	20,3	22,1	26,3	32,7	42,6
	P	kW	5,8	6,3	7,6	9,7	13,5	16,6	20,6	22,4	26,9	33,5	43,5
	A	kW	5,8	6,3	7,6	9,7	13,5	16,6	20,6	22,4	26,9	33,5	43,5
	N	kW	-	-	-	-	-	-	-	-	27,1	33,7	43,7
	Q	kW	-	-	-	-	13,7	16,9	20,9	22,7	27,1	33,7	43,7
Input power	°	kW	1,9	2,0	2,5	3,3	4,1	5,0	6,5	6,8	8,1	10,3	13,5
	P	kW	1,8	2,0	2,4	3,2	4,0	4,8	6,3	6,6	8,1	10,5	13,8
	A	kW	1,8	2,0	2,4	3,2	4,0	4,8	6,3	6,6	8,1	10,5	13,8
	N	kW	-	-	-	-	-	-	-	-	8,5	10,6	13,8
	Q	kW	-	-	-	-	4,2	5,0	6,5	6,8	8,5	10,6	13,8
Water flow rate	°	l/h	978	1064	1288	1648	2301	2833	3520	3829	4568	5667	7384
	P	l/h	978	1064	1288	1648	2301	2833	3520	3829	4568	5667	7384
	A	l/h	978	1064	1288	1648	2301	2833	3520	3829	4568	5667	7384
	N	l/h	-	-	-	-	-	-	-	-	4568	5667	7384
	Q	l/h	-	-	-	-	2301	2833	3520	3829	4568	5667	7384
Total pressure drop	°	kPa	21	21	22	24	25	26	34	35	58	61	68
	P	kPa	17	17	17	19	26	25	32	33	87	136	156
	A	kPa	17	17	17	19	26	25	32	33	87	136	156
	N	kPa	-	-	-	-	-	-	-	-	147	100	122
	Q	kPa	-	-	-	-	42	39	47	48	147	100	122
Available head SYSTEM SIDE	**P|A**	kPa	73	73	71	65	76	72	57	52	84	115	91
	N	kPa	-	-	-	-	-	-	-	-	140	185	159
	Q	kPa	-	-	-	-	160	159	144	140	140	185	159
Efficiencies													
EER	°	W/W	3,00	3,00	2,96	2,87	3,23	3,29	3,14	3,26	3,27	3,17	3,15
	P	W/W	3,19	3,20	3,14	3,03	3,37	3,44	3,27	3,39	3,34	3,18	3,15
	A	W/W	3,19	3,20	3,14	3,03	3,37	3,44	3,27	3,39	3,34	3,18	3,15
	N	W/W	-	-	-	-	-	-	-	-	3,20	3,18	3,16
	Q	W/W	-	-	-	-	3,28	3,37	3,22	3,35	3,20	3,18	3,16
ESEER	°	W/W	3,43	3,43	3,40	3,33	3,74	3,82	3,65	3,71	3,85	3,99	3,94
	P	W/W	3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
	A	W/W	3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
	N	W/W	-	-	-	-	-	-	-	-	3,61	3,74	3,62
	Q	W/W	-	-	-	-	3,66	3,77	3,61	3,75	3,61	3,74	3,62
Cooling mode for low temperature (UE n° 2016/2281)													
SEER	°		3,88	3,82	3,81	3,81	3,88	3,97	3,88	3,96	3,95	3,92	3,975
	P		4,03	4,06	4,01	3,97	4,02	4,08	4,03	4,08	3,93	3,81	3,82
	A		4,03	4,06	4,01	3,97	4,02	4,08	4,03	4,08	3,93	3,81	3,82
	N		-	-	-	-	-	-	-	-	3,81	3,81	3,82
	Q		-	-	-	-	3,81	4,01	3,93	4,02	3,81	3,81	3,82
ηsc	°		152	150	149	150	152	156	152	155	155	154	156
	P/A		158	159	157	156	158	160	158	160	154	149	150
	N/Q		-	-	-	-	149	157	154	158	149	149	150
Desuperheater *													
Cooling capacity **2**		kW	-	-	-	-	13,5	16,6	20,6	22,4	26,9	33,5	43,5
Recovered capacity		kW	-	-	-	-	5,4	6,6	8,2	8,9	13,8	17,1	18,9
Water flow rate desuperheater		l/h	-	-	-	-	940	1149	1428	1549	2403	2977	3291
Pressure drop desuperheater		kPa	-	-	-	-	8	10	11	13	14	25	31
Unit protective rating													
IP	**ALL**		24	24	24	24	24	24	24	24	24	24	24

***From the 050 to the 090 in the A - HA versions, always for the sizes 102 and 152.**

Data (14511: 2011)

[1] ***Cooling***
Water system side (in/out) 12°C/7°C
External air temperature 35°C

[2] ***Cooling with recovery***
Water out recovery side 50°C
Water out system side 7°C
Δt water 5°C

ANL Cooling only	Version		020	025	030	040	050	070	080	090	102	152	202
Electrical data (M) 230V/1/50Hz													
Total current input	°	A	6,43	7,30	8,17	10,78	-	-	-	-	-	-	-
	P	A	7,26	8,13	9,01	11,64	-	-	-	-	-	-	-
	A	A	7,26	8,13	9,01	11,64	-	-	-	-	-	-	-
	N	A	-	-	-	-	-	-	-	-	-	-	-
	Q	A	-	-	-	-	-	-	-	-	-	-	-
Maximum current (FLA)	°	A	16,50	16,50	19,70	23,70	-	-	-	-	-	-	-
	P	A	17,32	17,33	20,54	24,56	-	-	-	-	-	-	-
	A	A	17,32	17,33	20,54	24,56	-	-	-	-	-	-	-
	N	A	-	-	-	-	-	-	-	-	-	-	-
	Q	A	-	-	-	-	-	-	-	-	-	-	-
Starting current (LRA)	°	A	59,50	62,50	83,70	98,70	-	-	-	-	-	-	-
	P	A	60,32	63,33	84,54	99,56	-	-	-	-	-	-	-
	A	A	60,32	63,33	84,54	99,56	-	-	-	-	-	-	-
	N	A	-	-	-	-	-	-	-	-	-	-	-
	Q	A	-	-	-	-	-	-	-	-	-	-	-
Electrical data (°) 400V/3/50Hz													
Total current input	°	A	3,70	4,20	4,70	6,20	8,70	9,70	12,20	12,80	15,57	18,81	24,67
	P	A	4,50	5,00	5,50	7,10	10,00	11,10	13,70	14,30	16,60	20,50	26,60
	A	A	4,50	5,00	5,50	7,10	10,00	11,10	13,70	14,30	16,60	20,50	26,60
	N	A	-	-	-	-	-	-	-	-	17,50	20,90	27,10
	Q	A	-	-	-	-	9,50	10,60	13,10	13,80	17,50	20,90	27,10
Maximum current (FLA)	°	A	6,00	6,00	6,70	8,70	11,30	13,50	16,30	17,30	22,00	26,00	32,00
	P	A	6,82	6,83	7,54	9,56	12,65	14,90	17,76	18,79	23,03	27,73	33,95
	A	A	6,82	6,83	7,54	9,56	12,65	14,90	17,76	18,79	23,03	27,73	33,95
	N	A	-	-	-	-	-	-	-	-	24,00	28,00	34,00
	Q	A	-	-	-	-	12,00	14,00	17,00	18,00	24,00	28,00	34,00
Starting current (LRA)	°	A	26,50	32,50	35,70	48,70	65,30	75,30	102,30	96,30	76,00	87,00	117,00
	P	A	27,32	33,33	36,54	49,56	66,65	76,70	103,76	97,79	77,03	88,73	118,95
	A	A	27,32	33,33	36,54	49,56	66,65	76,70	103,76	97,79	77,03	88,73	118,95
	N	A	-	-	-	-	-	-	-	-	77,93	89,12	119,40
	Q	A	-	-	-	-	66,11	76,17	103,25	97,28	77,93	89,12	119,40

*ANL COOLING ONLY
TECHNICAL DATA (WATER 23/18 AIR 35°C)

ANL Cooling only	Version		20	25	30	40	50	70	80	90	102	152	202
Cooling capacity **3**	°	kW	6,8	7,4	9,0	11,5	16,1	19,7	24,5	26,6	32,2	39,8	51,5
	P	kW	7,0	7,6	9,1	11,7	16,3	20,0	24,8	26,9	32,8	40,6	52,2
	A	kW	7,0	7,6	9,1	11,7	16,3	20,0	24,8	26,9	32,8	40,6	52,2
	N	kW	-	-	-	-	-	-	-	-	32,9	40,9	52,7
	Q	kW	-	-	-	-	16,5	20,3	25,2	27,2	32,9	40,9	52,7
Input power	°	kW	2,0	2,1	2,6	3,5	4,3	5,2	6,8	7,1	8,5	10,8	14,2
	P	kW	1,9	2,0	2,5	3,3	4,2	5,0	6,6	6,9	8,5	11,2	14,7
	A	kW	1,9	2,0	2,5	3,3	4,2	5,0	6,6	6,9	8,5	11,2	14,7
	N	kW	-	-	-	-	-	-	-	-	9,0	11,1	14,6
	Q	kW	-	-	-	-	4,4	5,2	6,8	7,1	9,0	11,1	14,6
Water flow rate	°	l/h	1188	1289	1559	1996	2795	3431	4270	4622	5618	6947	8986
	P	l/h	1188	1289	1559	1996	2795	3431	4270	4622	5618	6947	8986
	A	l/h	1188	1289	1559	1996	2795	3431	4270	4622	5618	6947	8986
	N	l/h	-	-	-	-	-	-	-	-	5618	6947	8986
	Q	l/h	-	-	-	-	2795	3431	4270	4622	5618	6947	8986
Total pressure drop	°	kPa	31	31	32	35	37	38	50	51	87	91	100
	P	kPa	-	-	-	-	-	-	-	-	-	-	-
	A	kPa	-	-	-	-	-	-	-	-	-	-	-
	N	kPa	-	-	-	-	-	-	-	-	-	-	-
	Q	kPa	-	-	-	-	-	-	-	-	-	-	-
Available head SYSTEM SIDE	°	kPa	-	-	-	-	-	-	-	-	-	-	-
	P	kPa	63	63	61	51	59	54	31	25	37	45	10
	A	kPa	63	63	61	51	59	54	31	25	37	45	10
	N	kPa	-	-	-	-	-	-	-	-	63	133	95
	Q	kPa	-	-	-	-	136	135	114	109	63	133	95
Efficiencies													
EER	°	W/W	3,46	3,46	3,41	3,31	3,73	3,80	3,62	3,74	3,80	3,68	3,63
	P	W/W	3,72	3,71	3,65	3,51	3,92	3,98	3,77	3,89	3,85	3,63	3,55
	A	W/W	3,72	3,71	3,65	3,51	3,92	3,98	3,77	3,89	3,85	3,63	3,55
	N	W/W	-	-	-	-	-	-	-	-	3,66	3,68	3,62
	Q	W/W	-	-	-	-	3,80	3,89	3,72	3,84	3,66	3,68	3,62
ESEER	°	W/W	3,43	3,43	3,40	3,33	3,74	3,82	3,65	3,71	3,85	3,99	3,94
	P	W/W	3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
	A	W/W	3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
	N	W/W	-	-	-	-	-	-	-	-	3,61	3,74	3,62
	Q	W/W	-	-	-	-	3,66	3,77	3,61	3,75	3,61	3,74	3,62
Desuperheater **													
Cooling capacity **4**		kW	-	-	-	-	16,3	20,0	24,8	26,9	32,8	40,6	52,2
Recovered capacity		kW	-	-	-	-	5,4	6,6	8,2	8,9	13,8	17,1	18,9
Water flow rate desuperheater		l/h	-	-	-	-	940	1149	1428	1549	2403	2977	3291
Pressure drop desuperheater		kPa	-	-	-	-	8	10	11	13	14	25	31

Consider the installation of a dehumidifier
*****From the 050 to the 090 in the A - HA versions, always for the sizes 102 and 152.***

Data (14511: 2011)

1 Cooling
Water system side (in/out) 23°C/18°C
External air temperature 35°C

2 Cooling with recovery
Water out recovery side 50°C
Water out system side 7°C
Δt water 5°C

ANL COOLING ONLY
TECHNICAL DATA ANL-C

ANLC				020C	025C	030C	040C	050C	070C	080C	090C	102C	152C	202C
Cooling capacity			**kW**	5,7	6,0	7,5	9,6	13,7	16,8	20,8	22,5	26,9	33,4	43,7
Input power		°	**kW**	1,9	2,1	2,5	3,3	4,1	5,0	6,5	6,8	8,6	10,2	14,1
EFFICIENCIES														
EER		°	**W/W**	3,08	2,93	3,00	2,91	3,34	3,36	3,20	3,31	3,13	3,27	3,10
Unit protective rating														
IP				24	24	24	24	24	24	24	24	24	24	24
Electrical data														
Total current input	**230V/1**		**A**	3,70	4,20	4,70	6,30	-	-	-	-	-	-	-
	400V/3N		**A**	3,70	4,20	4,70	6,30	8,90	9,90	12,00	13,00	17,00	19,00	26,00
Maximum current (FLA)	**230V/1**		**A**	16,50	16,50	19,70	23,70	-	-	-	-	-	-	-
	400V/3N		**A**	6,00	6,00	6,70	8,70	11,30	13,50	16,30	17,30	22,00	26,00	34,00
Starting current (LRA)	**230V/1**		**A**	contact head office										
	400V/3N		**A**	26,50	32,50	35,70	48,70	65,30	75,30	102,30	96,30	76,00	87,00	117,00
Compressors														
driver				On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off
Type				Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Quantity			**n°**	1	1	1	1	1	1	1	1	2	2	2
Circuit			**n°**	1	1	1	1	1	1	1	1	1	1	1
Unit partialisation			**%**	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-50-100	0-50-100	0-50-100
Standard fans														
driver				On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off	On-Off
Type				Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial	Axial
Quantity			**n°**	1	1	1	1	2	2	2	2	2	2	2
Air flow rate			**m3/h**	2500	2500	3500	3500	7200	7200	7300	7200	14000	13500	13500
Current input			**A**	0,09	0,09	0,51	0,51	0,51	0,51	0,51	0,51	0,74	0,74	0,74
Power input			**kW**	0,45	0,45	0,115	0,115	0,115	0,115	0,115	0,115	3,2	3,2	3,2
Charge (The data provided can be amended at any time by Aermec if deemed necessary)														
Refrigerant R410A			**kg**	1,3	1,3	1,6	1,6	2,8	2,8	3,0	3,9	5,9	5,9	5,9
Oil			**kg**	1,1	1,1	1,2	1,3	1,7	1,7	1,7	1,8	3,4	3,4	3,5
			Type	POE	POE	POE	POE	FV68S	FV68S	FV68S	POE	FV68S	FV68S	POE
Dimensions														
Height (A)			**mm**	868	868	1000	1000	1252	1252	1252	1252	1450	1450	1450
Depth (B)			**mm**	900	900	900	900	1124	1124	1124	1124	1750	1750	1750
Width without feet (C)			**mm**	310	310	310	310	384	384	384	384	750	750	750
Width with feet (D)			**mm**	354	354	354	354	428	428	428	428	750	750	750
Empty weight			**Kg**	70	C.S.	78	78	110	141	141	141	288	*	*

COOLING

Evaporation temperature	5°C
External air temperature	35 °C

ANL REVERSIBLE HEAT PUMPS
TECHNICAL DATA

ANLH Cooling mode	Version		020	025	030	040	050	070	080	090	102	152	202
Cooling capacity **5**	**H°**	kW	5,6	6,1	7,4	9,5	13,3	16,4	20,3	22,1	25,8	31,7	40,6
	HP	kW	5,8	6,3	7,6	9,7	13,5	16,6	20,6	22,4	26,3	32,5	41,5
	HA	kW	5,8	6,3	7,6	9,7	13,5	16,6	20,6	22,4	26,3	32,5	41,5
	HN	kW	-	-	-	-	-	-	-	-	26,5	32,7	41,7
	HQ	kW	-	-	-	-	13,7	16,9	20,9	22,7	26,5	32,7	41,7
Input power	**H°**	kW	1,9	2,1	2,5	3,3	4,1	5,0	6,5	6,9	8,8	10,5	14,3
	HP	kW	1,8	2,0	2,4	3,2	4,0	4,8	6,3	6,6	8,8	10,7	14,5
	HA	kW	1,8	2,0	2,4	3,2	4,0	4,8	6,3	6,6	8,8	10,7	14,5
	HN	kW	-	-	-	-	-	-	-	-	9,2	10,8	14,6
	HQ	kW	-	-	-	-	4,2	5,0	6,5	6,8	9,2	10,8	14,6
Water flow rate	**H°**	l/h	978	1064	1288	1648	2301	2833	3520	3829	4465	5495	7030
	HP	l/h	978	1064	1288	1648	2301	2833	3520	3829	4465	5495	7030
	HA	l/h	978	1064	1288	1648	2301	2833	3520	3829	4465	5495	7030
	HN	l/h	-	-	-	-	-	-	-	-	4465	5495	7030
	HQ	l/h	-	-	-	-	2301	2833	3520	3829	4465	5495	7030
Total pressure drop	**H°**	kPa	30	31	32	30	34	35	44	60	55	57	62
	HP	kPa	-	-	-	-	-	-	-	-	-	-	-
	HA	kPa	-	-	-	-	-	-	-	-	-	-	-
	HN	kPa	-	-	-	-	-	-	-	-	-	-	-
	HQ	kPa	-	-	-	-	-	-	-	-	-	-	-
Available head SYSTEM SIDE	**HP|HA**	kPa	73	73	71	65	76	72	57	52	88	124	106
	HN	kPa	-	-	-	-	-	-	-	-	147	192	171
	HQ	kPa	-	-	-	-	160	159	144	140	147	192	171
Efficiencies													
EER	**H°**	W/W	2,97	2,97	2,93	2,86	3,21	3,26	3,12	3,21	2,92	3,02	2,84
	HP	W/W	3,19	3,20	3,14	3,03	3,37	3,43	3,27	3,39	2,98	3,04	2,86
	HA	W/W	3,19	3,20	3,14	3,03	3,37	3,43	3,27	3,39	2,98	3,04	2,86
	HN	W/W	-	-	-	-	-	-	-	-	2,88	3,04	2,86
	HQ	W/W	-	-	-	-	3,28	3,36	3,22	3,35	2,88	3,04	2,86
ESEER	**H°**	W/W	3,43	3,43	3,40	3,33	3,74	3,82	3,65	3,71	3,85	3,99	3,94
	HP	W/W	3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
	HA	W/W	3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
	HN	W/W	-	-	-	-	-	-	-	-	3,61	3,74	3,62
	HQ	W/W	-	-	-	-	3,66	3,77	3,61	3,75	3,61	3,74	3,62
Cooling mode for low temperature (UE n° 2016/2281)													
SEER	**H°**		3,01	3,06	3,14	3,2	3,78	3,91	3,79	3,8	3,56	3,75	3,59
	HP/HA		3,29	3,37	3,45	3,47	4,00	4,07	4,02	4,08	3,56	3,52	3,39
ηsc	**H°**		117,3	119,3	122,4	124,9	148,2	153,3	148,5	149,0	139,5	146,8	140,5
	HP/HA		128,7	131,7	134,9	135,7	157,0	159,9	157,9	160,3	139,5	137,6	132,7

Data (14511: 2011)

[5] Cooling

Water out system side (in/out) 12°C/7°C

External air temperature 35°C

ANL REVERSIBLE HEAT PUMPS
TECHNICAL DATA

ANLH Heating mode	Version		020	025	030	040	050	070	080	090	102	152	202
Heating capacity **6**	**H°**	kW	6,3	7,1	8,5	10,7	14,1	17,5	22,4	24,5	29,3	35,4	45,8
	HP	kW	6,1	6,9	8,3	10,5	13,9	17,2	22,1	24,1	28,7	34,6	44,9
	HA	kW	6,1	6,9	8,3	10,5	13,9	17,2	22,1	24,1	28,7	34,6	44,9
	HN	kW	-	-	-	-	-	-	-	-	28,6	34,3	44,6
	HQ	kW	-	-	-	-	13,7	16,9	21,8	23,8	28,6	34,3	44,6
Input power	**H°**	kW	2,0	2,2	2,7	3,3	4,4	5,1	6,5	7,1	8,9	10,5	13,8
	HP	kW	1,9	2,1	2,6	3,1	4,3	4,9	6,3	6,9	8,9	10,7	14,1
	HA	kW	1,9	2,1	2,6	3,1	4,3	4,9	6,3	6,9	8,9	10,7	14,1
	HN	kW	-	-	-	-	-	-	-	-	9,3	10,7	14,1
	HQ	kW	-	-	-	-	4,5	5,0	6,5	7,0	9,3	10,7	14,1
Water flow rate	**H°**	l/h	1077	1216	1460	1842	2433	3007	3859	4206	5041	6084	7878
	HP	l/h	1077	1216	1460	1842	2433	3007	3859	4206	5041	6084	7878
	HA	l/h	1077	1216	1460	1842	2433	3007	3859	4206	5041	6084	7878
	HN	l/h	-	-	-	-	-	-	-	-	5041	6084	7878
	HQ	l/h	-	-	-	-							
Total pressure drop	**H°**	kPa	36	40	41	37	38	39	53	72	70	70	78
	HP	kPa	-	-	-	-	-	-	-	-	-	-	-
	HA	kPa	-	-	-	-	-	-	-	-	-	-	-
	HN	kPa	-	-	-	-	-	-	-	-	-	-	-
	HQ	kPa	-	-	-	-	-	-	-	-	-	-	-
Available head	**HP|HA**	kPa	69	67	65	58	72	67	46	40	64	94	68
	HN	kPa	-	-	-	-	-	-	-	-	107	169	141
	HQ	kPa	-	-	-	-	154	152	131	126	107	169	141
Efficiencies													
COP	**H°**	W/W	3,17	3,22	3,13	3,26	3,19	3,46	3,44	3,43	3,30	3,38	3,33
	HP	W/W	3,27	3,33	3,23	3,36	3,25	3,53	3,51	3,52	3,23	3,23	3,19
	HA	W/W	3,27	3,33	3,23	3,36	3,25	3,53	3,51	3,52	3,23	3,23	3,19
	HN	W/W	-	-	-	-	-	-	-	-	3,07	3,20	3,17
	HQ	W/W	-	-	-	-	3,07	3,35	3,37	3,38	3,07	3,20	3,17

Desuperheater *		020	025	030	040	050	070	080	090	102	152	202
Cooling capacity	kW	-	-	-	-	13,5	16,6	20,6	22,4	26,3	32,5	41,5
Recovered capacity	kW	-	-	-	-	5,4	6,6	8,2	8,9	13,8	17,1	18,9
Water flow rate desuperheater	l/h	-	-	-	-	940	1149	1428	1549	2403	2977	3291
Pressure drop desuperheater	kPa	-	-	-	-	8	10	11	13	14	25	31

From the 050 to the 090 in the A - HA versions, always for the sizes 102 and 152.

Data (14511: 2011)

[6] *Heating*

Water system side (in/out) 40°C/45°C

Δt water 5°C

ANL REVERSIBLE HEAT PUMPS TECHNICAL DATA

Performance under average climatic conditions (Average)			020	025	030	040	050	070	080	090	102	152	202
Pdesignh	**	**H°**	6	7	8	10	13	16	21	23	28	33	43
		HP	6	6	8	10	13	16	21	23	27	32	42
		HA	6	6	8	10	13	16	21	23	27	32	42
		HN	-	-	-	-	-	-	-	-	26	32	41
		HQ	-	-	-	-	13	16	20	22	26	32	41
SCOP	**	**H°**	3,33	3,38	3,3	3,33	3,43	3,55	3,55	3,53	3,65	3,88	3,83
		HP	3,4	3,48	3,4	3,4	3,48	3,63	3,63	3,6	3,58	3,58	3,6
		HA	3,4	3,48	3,4	3,4	3,48	3,63	3,63	3,6	3,58	3,58	3,6
		HN	-	-	-	-	-	-	-	-	3,33	3,48	3,5
		HQ	-	-	-	-	3,28	3,45	3,48	3,48	3,33	3,48	3,5
ηs	**	**H°**	130	132	129	130	134	139	139	138	143	152	150
		HP	133	136	133	133	136	142	142	141	140	140	141
		HA	133	136	133	133	136	142	142	141	140	140	141
		HN	-	-	-	-	-	-	-	-	130	136	137
		HQ	-	-	-	-	128	135	136	136	130	136	137
Efficiency Energy Class	***	**H°**	A+	A+	A+	A+	A+	A+	A+	A+	A+	A++	A++
		HP	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+
		HA	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+
		HN	-	-	-	-	-	-	-	-	A+	A+	A+
		HQ	-	-	-	-	A+	A+	A+	A+	A+	A+	A+

***** Efficiencies for low temperature Applications (35°C)***
****** Efficiency Energy Class in according to regulation n°811/2013 Pdesignh ≤ 70kW***

Electrical data			020	025	030	040	050	070	080	090	102	152	202
Total current input (cooling)	**A**	**230V**	6,4	7,3	8,2	10,8	-	-	-	-	-	-	-
	A	**400V**	3,7	4,2	4,7	6,2	8,7	9,7	12,2	12,8	15,6	18,8	24,7
Total current input (heating)	**A**	**230V**	6,6	7,7	9,4	11,8	-	-	-	-	-	-	-
	A	**400V**	3,8	4,4	5,4	6,8	9,5	10,3	12,9	13,8	17,0	19,0	25,0
Maximum current (FLA)	**A**	**230V**	16,50	16,50	19,70	23,70	-	-	-	-	-	-	-
	A	**400V**	6,00	6,00	6,70	8,70	11,30	13,50	16,30	17,30	22	26	32
Starting current (LRA)	**A**	**230V**	59,5	62,5	83,7	98,7	-	-	-	-	-	-	-
	A	**400V**	26,5	32,5	35,7	48,7	65,3	75,3	102,3	96,3	76	87	117

ANL REVERSIBLE HEAT PUMPS
* TECHNICAL DATA (WATER 23/18 AIR 35°C - WATER 30-35°C AIR 7°C dry bulb-6°C wet bulb)

ANLH Cooling mode	Version		20	25	30	40	50	70	80	90	102	152	202
	H°	kW	6,8	7,4	8,9	11,5	16,0	19,7	24,5	26,5	28,7	34,6	44,9
	HP	kW	7,0	7,6	9,1	11,7	16,3	20,0	24,8	26,9	29,3	35,4	45,7
Cooling capacity 7	**HA**	kW	7,0	7,6	9,1	11,7	16,3	20,0	24,8	26,9	29,3	35,4	45,7
	HN	kW	-	-	-	-	-	-	-	-	29,4	35,7	46,0
	HQ	kW	-	-	-	-	16,5	20,3	25,2	27,2	29,4	35,7	46,0
	H°	kW	2,0	2,2	2,7	3,5	4,3	5,2	6,8	7,2	9,2	10,9	14,9
	HP	kW	1,9	2,0	2,5	3,3	4,2	5,0	6,6	6,9	9,2	11,2	15,2
Input power	**HA**	kW	1,9	2,0	2,5	3,3	4,2	5,0	6,6	6,9	9,2	11,2	15,2
	HN	kW	-	-	-	-	-	-	-	-	9,6	11,2	15,2
	HQ	kW	-	-	-	-	4,4	5,2	6,8	7,1	9,6	11,2	15,2
	H°	l/h	1188	1289	1559	1996	2795	3431	4270	4622	5000	6035	7814
	HP	l/h	1188	1289	1559	1996	2795	3431	4270	4622	5000	6035	7814
Water flow rate	**HA**	l/h	1188	1289	1559	1996	2795	3431	4270	4622	5000	6035	7814
	HN	l/h	-	-	-	-	-	-	-	-	5000	6035	7814
	HQ	l/h	-	-	-	-	2795	3431	4270	4622	5000	6035	7814
	H°	kPa	44	45	47	44	50	51	65	87	69	69	76
	HP	kPa	-	-	-	-	-	-	-	-	-	-	-
Total pressure drop	**HA**	kPa	-	-	-	-	-	-	-	-	-	-	-
	HN	kPa	-	-	-	-	-	-	-	-	-	-	-
	HQ	kPa	-	-	-	-	-	-	-	-	-	-	-
	H°	kPa	-	-	-	-	-	-	-	-	-	-	-
	HP	kPa	63	63	61	51	59	54	31	25	66	97	71
Available head	**HA**	kPa	63	63	61	51	59	54	31	25	66	97	71
	HN	kPa	-	-	-	-	-	-	-	-	110	171	143
	HQ	kPa	-	-	-	-	136	135	114	109	110	171	143
Efficiencies													
	H°	W/W	3,42	3,41	3,37	3,29	3,70	3,75	3,59	3,67	3,13	3,18	3,02
	HP	W/W	3,72	3,71	3,65	3,51	3,92	3,97	3,77	3,89	3,19	3,18	3,02
EER	**HA**	W/W	3,72	3,71	3,65	3,51	3,92	3,97	3,77	3,89	3,19	3,18	3,02
	HN	W/W	-	-	-	-	-	-	-	-	3,06	3,19	3,03
	HQ	W/W	-	-	-	-	3,80	3,88	3,72	3,84	3,06	3,19	3,03
	H°	W/W	3,43	3,43	3,40	3,33	3,74	3,82	3,65	3,71	3,85	3,99	3,94
	HP	W/W	3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
ESEER	**HA**	W/W	3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
	HN	W/W	-	-	-	-	-	-	-	-	3,61	3,74	3,62
	HQ	W/W	-	-	-	-	3,66	3,77	3,61	3,75	3,61	3,74	3,62

***Consider the installation of a dehumidifier**

Data (14511: 2011)

*[7] **Cooling***

Water system side (in/out) 23°C/18°C
External air temperature 35°C

ANL REVERSIBLE HEAT PUMPS
TECHNICAL DATA (WATER 23/18 AIR 35°C - WATER 30-35°C AIR 7°C dry bulb-6°C wet bulb)

ANLH heating mode	Version		20	25	30	40	50	70	80	90	102	152	202
Heating capacity 8	**H°**	kW	6,5	7,4	8,9	11,2	14,7	18,2	23,4	25,6	30,6	36,9	47,8
	HP	kW	6,4	7,2	8,7	11,0	14,5	17,9	23,1	25,2	30,0	36,1	46,9
	HA	kW	6,4	7,2	8,7	11,0	14,5	17,9	23,1	25,2	30,0	36,1	46,9
	HN	kW	-	-	-	-	-	-	-	-	29,9	35,9	46,6
	HQ	kW	-	-	-	-	14,3	17,7	22,8	24,8	29,9	35,9	46,6
Input power	**H°**	kW	1,7	1,9	2,3	2,9	3,8	4,5	5,8	6,4	8,0	9,5	12,6
	HP	kW	1,6	1,8	2,2	2,8	3,7	4,3	5,6	6,1	8,1	9,8	12,9
	HA	kW	1,6	1,8	2,2	2,8	3,7	4,3	5,6	6,1	8,1	9,8	12,9
	HN	kW	-	-	-	-	-	-	-	-	8,5	9,8	12,9
	HQ	kW	-	-	-	-	3,8	4,5	5,8	6,3	8,5	9,8	12,9
Water flow rate	**H°**	l/h	1120	1265	1518	1915	2530	3126	4012	4373	5241	6325	8190
	HP	l/h	1120	1265	1518	1915	2530	3126	4012	4373	5241	6325	8190
	HA	l/h	1120	1265	1518	1915	2530	3126	4012	4373	5241	6325	8190
	HN	l/h	-	-	-	-	-	-	-	-	5241	6325	8190
	HQ	l/h	-	-	-	-	2530	3126	4012	4373	5241	6325	8190
Total pressure drop	**H°**	kPa	39	44	44	40	41	42	57	78	76	75	84
	HP	kPa	-	-	-	-	-	-	-	-	-	-	-
	HA	kPa	-	-	-	-	-	-	-	-	-	-	-
	HN	kPa	-	-	-	-	-	-	-	-	-	-	-
	HQ	kPa	-	-	-	-	-	-	-	-	-	-	-
Available head	**H°**	kPa	-	-	-	-	-	-	-	-	-	-	-
	HP	kPa	67	64	62	55	69	64	41	34	55	81	52
	HA	kPa	67	64	62	55	69	64	41	34	55	81	52
	HN	kPa	-	-	-	-	-	-	-	-	93	160	128
	HQ	kPa	-	-	-	-	149	148	125	120	93	160	128
EFFICIENCIES													
COP	**H°**	W/W	3,83	3,89	3,78	3,82	3,86	4,04	4,01	4,00	3,81	3,87	3,80
	HP	W/W	4,00	4,07	3,95	3,96	3,96	4,16	4,12	4,13	3,72	3,69	3,63
	HA	W/W	4,00	4,07	3,95	3,96	3,96	4,16	4,12	4,13	3,72	3,69	3,63
	HN	W/W	-	-	-	-	-	-	-	-	3,51	3,66	3,62
	HQ	W/W	-	-	-	-	3,71	3,93	3,94	3,96	3,51	3,66	3,62
ESEER	**H°**	W/W	3,43	3,43	3,40	3,33	3,74	3,82	3,65	3,71	3,85	3,99	3,94
	HP	W/W	3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
	HA	W/W	3,50	3,54	3,55	3,48	3,85	3,97	3,80	3,95	3,96	3,94	3,82
	HN	W/W	-	-	-	-	-	-	-	-	3,61	3,74	3,62
	HQ	W/W	-	-	-	-	3,66	3,77	3,61	3,75	3,61	3,74	3,62

Data (14511: 2011)

8 Heating mode

Water system side (in/out) 30°C/35°C
Δt water 5°C

GENERAL DATA

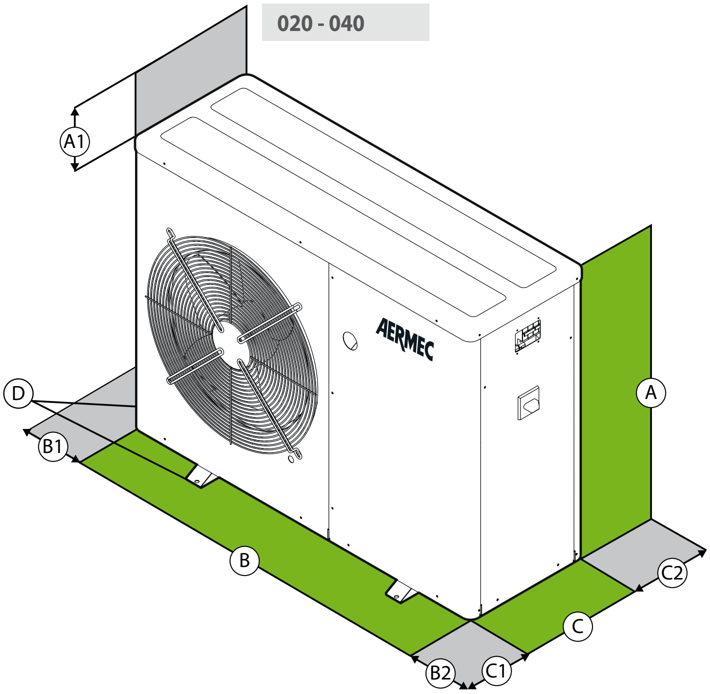
ANL		Version		020	025	030	040	050	070	080	090	102	152	202
Scroll compressor														
Quantity/Circuit			n°/n°	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/1	2/1	2/1
Compressor crankcase heaters			n°/kW	1x70	1x70	1x70	1x70	1x35	1x35	1x35	1x65	2X35	2X35	2X65
Capacity control			%	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-100	0-50-100	0-50-100	0-50-100
Heat exchanger system side														
Quantity			n°	1	1	1	1	1	1	1	1	1	1	1
Water content			dm^3						n.d.					
Hydraulic connections	IN|OUT		Ø	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼	1"¼
Unit protective rating														
IP									24					
HYDRONIC KIT SYSTEM SIDE														
Buffer tank														
Volume			l	25	25	35	35	75	75	75	75	100	100	100
Heater quantity / electrical input			n°/W						ACCESSORY					
EXPANSION TANK														
Quantity/ volume			n°/l	2	2	2	2	5	5	5	5	8	8	8
Pressure setting			bar	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
Safety valve														
Quantity / pressure relief rating			n°/bar	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6
Desuperheater														
Quantity			n°	-	-	-	-	1	1	1	1	1	1	1
Water content			dm^3						n.d.					
Hydraulic connections	IN|OUT		Ø	-	-	-	-	1"	1"	1"	1"	1"	1"	1"
Standard axial fans														
Quantity			n°	1	1	1	1	2	2	2	2	2	2	2
Air flow cooling mode			m^3/h	2500	2500	3500	3500	7200	7200	7300	7200	14000	13500	13500
Current input		°	A	0,085	0,085	0,51	0,51	0,51	0,51	0,51	0,51	0,74	0,74	0,74
Power input		°	kW	0,45	0,45	0,115	0,115	0,115	0,115	0,115	0,115	3,2	3,2	3,2
Current input		H	A	0,085	0,085	0,95	0,95	0,95	0,95	0,95	0,95	0,74	0,74	0,74
Power input		H	kW	0,45	0,45	0,120	0,120	0,120	0,120	0,120	0,120	3,2	3,2	3,2
Sound data														
Sound pressure			dB(A)	30	30	37	37	38	38	38	37	44	45	46
Sound power			dB(A)	61	61	68	68	69	69	69	68	76	77	78
Charge (The data provided can be amended at any time by Aermec if deemed necessary)														
Refrigerant R410A	°	all	kg	1,25	1,30	1,56	1,61	2,79	2,84	2,95	3,86	3,65	3,70	4,45
	H	all	kg	1,50	1,50	1,80	1,99	4,15	4,10	4,14	4,88	12,70	16,00	17,00
Oil	-	-	kg	1,1	1,1	1,2	1,3	1,7	1,7	1,7	1,8	3,4	3,4	3,5
	-	-	Type	POE	POE	POE	POE	FV68S	FV68S	FV68S	POE	FV68S	FV68S	POE

Sound power
Aermec determines sound power values in agreement with the 9614-2 Standard, in compliance with that requested by Eurovent certification.

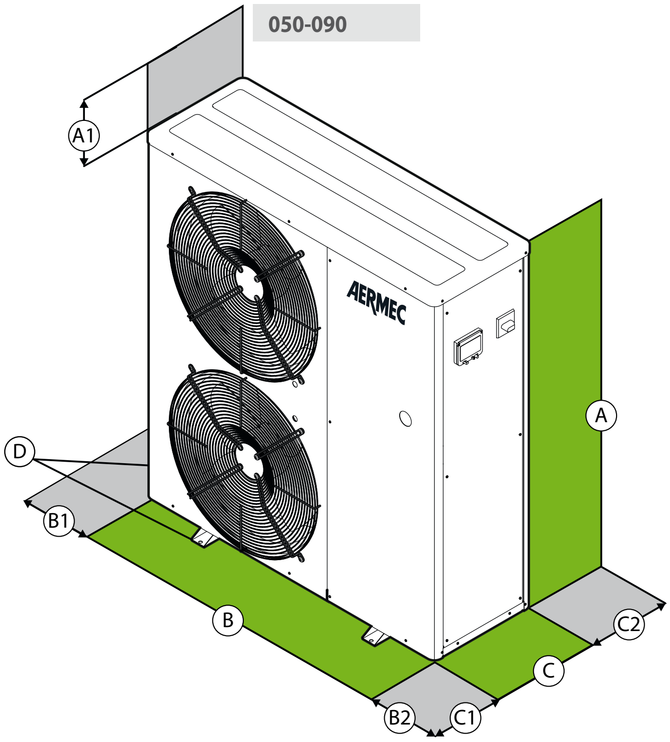
Sound Pressure
Sound pressure measured in free field conditions with reflective surface (directivity factor Q=2) at 10mt distance from external surface of unit, in compliance with ISO 3744 regulations.

DIMENSION, MINIMUM TECHNICAL SPACES AND WEIGHT*

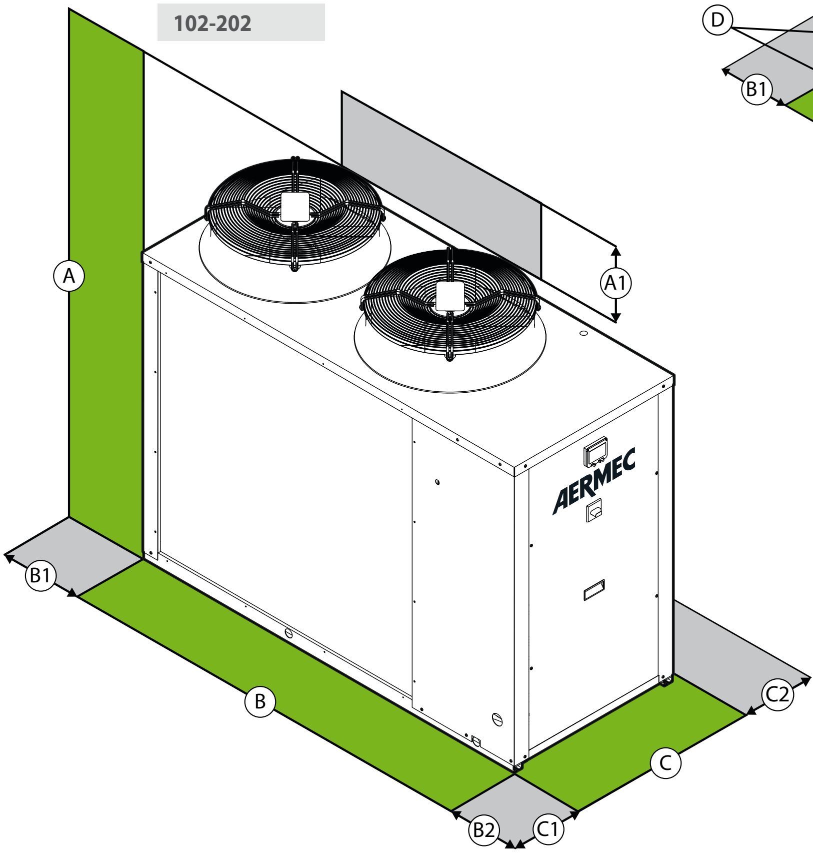
020 - 040



050-090



102-202



* DWG available for download in the webpage and in the Magellano's archive

Minimum technical spaces

ANL/ANLH		020	025	030	040	050	070	080	090	102	152	202
A1	mm	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
B1	mm	200	200	200	200	300	300	300	300	800	800	800
B2	mm	500	500	500	500	500	500	500	500	1100	1100	1100
C1	mm	*	*	*	*	*	*	*	*	800	800	800
C2	mm	150	150	150	150	200	200	200	200	800	800	800

* = Contact head office

Dimensions

ANL/ANLH	ver.		020	025	030	040	050	070	080	090	102	152	202
Height (A)	°	mm	868	868	1000	1000	1252	1252	1252	1252	1450	1450	1450
	P	mm	868	868	1000	1000	1252	1252	1252	1252	1450	1450	1450
	A	mm	868	868	1015	1015	1281	1281	1281	1281	1450	1450	1450
	N	mm	-	-	-	-	-	-	-	-	1450	1450	1450
	Q	mm	-	-	-	-	1281	1281	1281	1281	1450	1450	1450
Depth (B)	°	mm	900	900	900	900	1124	1124	1124	1124	1750	1750	1750
	P	mm	900	900	900	900	1124	1124	1124	1124	1750	1750	1750
	A	mm	1124	1124	1124	1124	1165	1165	1165	1165	1750	1750	1750
	N	mm	-	-	-	-	-	-	-	-	1750	1750	1750
	Q	mm	-	-	-	-	1165	1165	1165	1165	1750	1750	1750
Width without feet (C)	°	mm	310	310	310	310	384	384	384	384	750	750	750
	P	mm	310	310	310	310	384	384	384	384	750	750	750
	A	mm	384	384	384	384	550	550	550	550	750	750	750
	N	mm	-	-	-	-	-	-	-	-	750	750	750
	Q	mm	-	-	-	-	550	550	550	550	750	750	750
Width with feet (D)	°	mm	354	354	354	354	428	428	428	428	750	750	750
	P	mm	354	354	354	354	428	428	428	428	750	750	750
	A	mm	428	428	428	428	550	550	550	550	750	750	750
	N	mm	-	-	-	-	-	-	-	-	750	750	750
	Q	mm	-	-	-	-	550	550	550	550	750	750	750
Empty weight	°	Kg	75	75	86	86	120	120	120	156	270	293	329
	P	kg	77	77	91	91	127	127	163	163	288	314	350
	A	kg	99	99	103	103	147	147	147	183	338	364	400
	N	kg	-	-	-	-	-	-	-	-	288	314	350
	Q	kg	-	-	-	-	147	147	147	183	338	364	400

OPERATING LIMITS

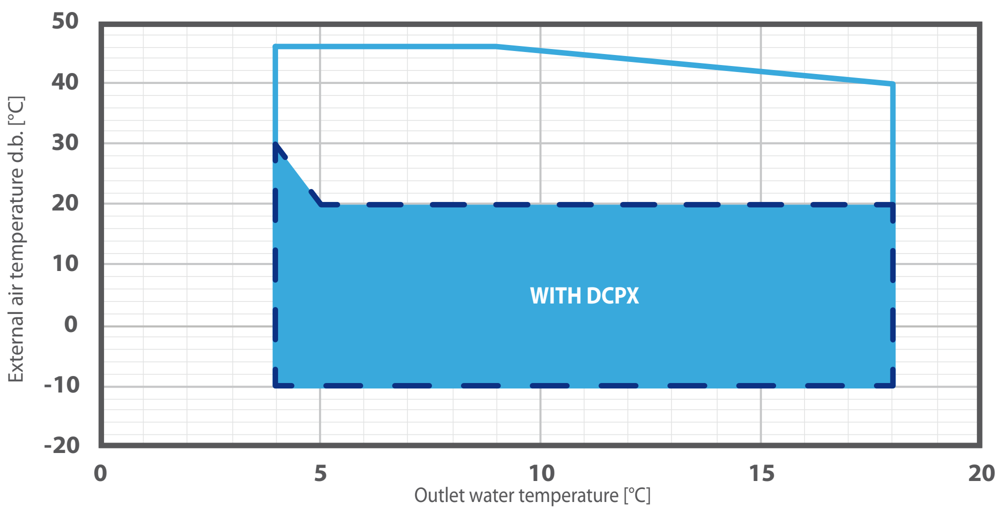
The units in standard configuration are not suited for installation in saline environments.
For the operating limits refer to the diagrams which are valid for Δt= 5K.
If operation outside of these limits is required we first recommend contacting our commercial technical services.

Nota: If the unit is installed in particularly windy locations the provision of wind barriers may be necessary to avoid malfunctions.

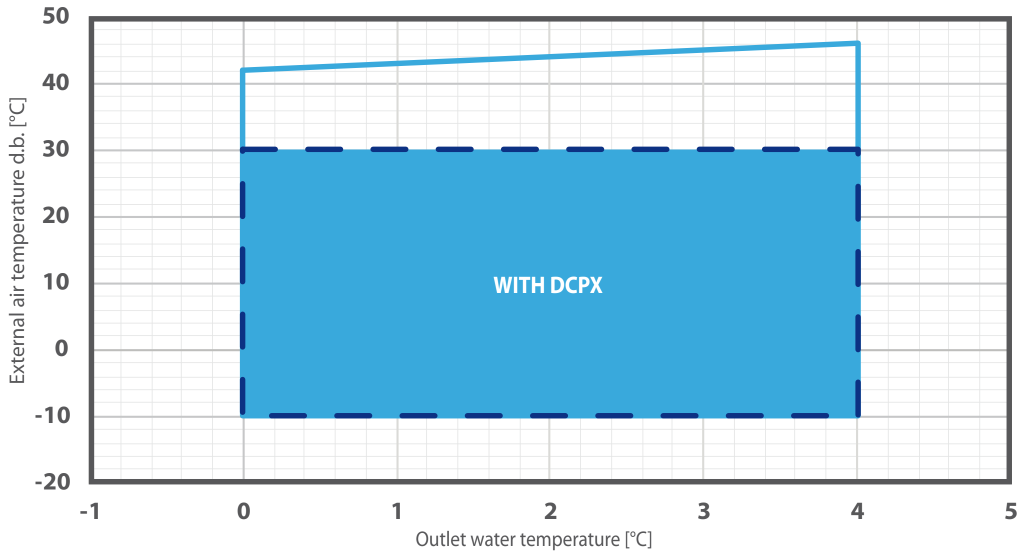
Maximum ratings

REFRIGERANT SIDE		High pressure side	Low pressure side
Maximum permitted pressure	bar	42	25
Maximum permitted temperature	°C	120	52
Minimum permitted temperature COOLING ONLY VERSIONS	°C	-10	-16
Minimum permitted temperature HEAT PUMP VERSIONS	°C	-10	-10

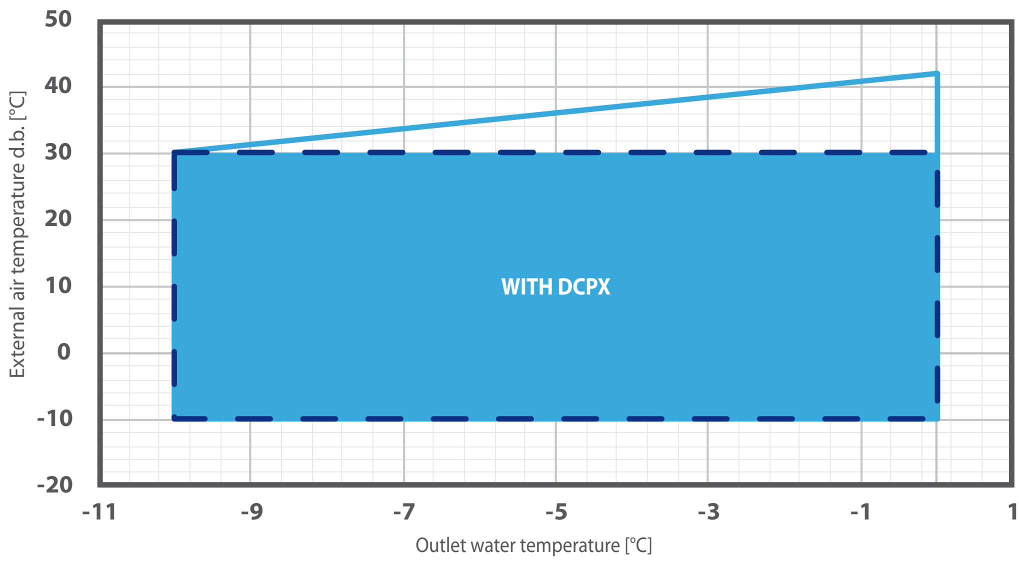
ANL cooling only - ANLH cooling mode (Thermostatic valve standard "o" type)



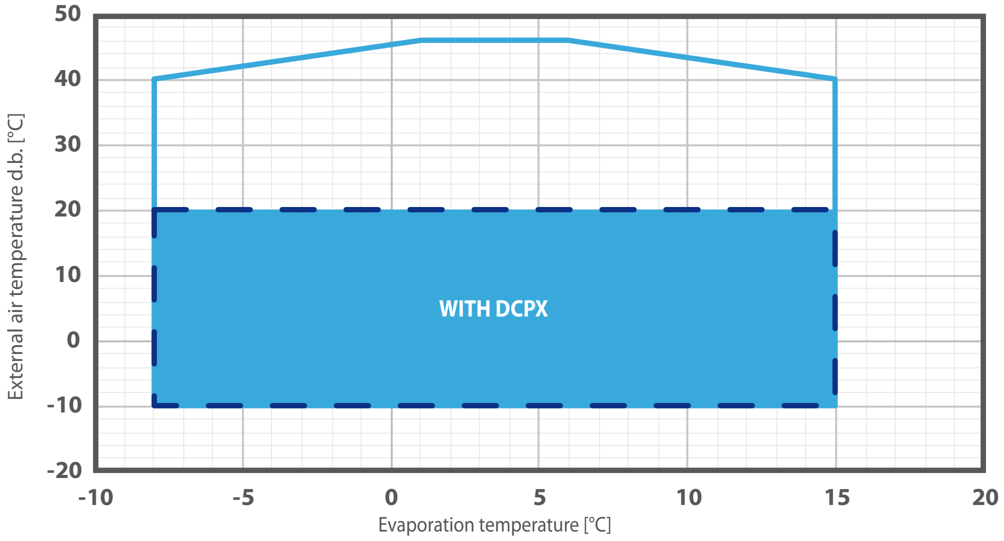
ANL cooling only (Thermostatic valve "Z" type)



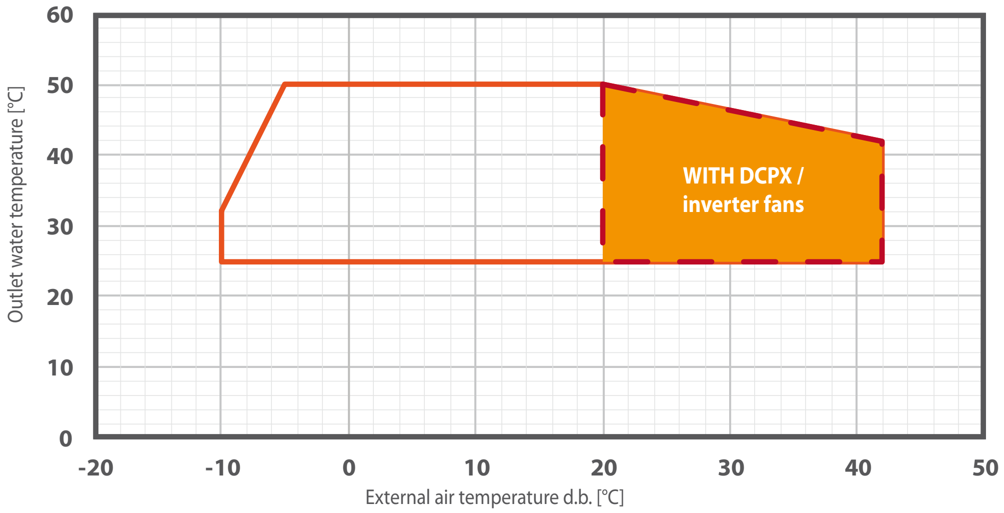
ANL cooling only (Thermostatic valve "Y" type)



ANL motorcondensing functioning (Evaporation temperature up to -8°C)



ANLH heating mode (Thermostatic valve standard "o" type)



SELECTION CRITERIA OF THE HEAT EXCHANGERS ACCORDING TO THE PLACE OF INSTALLATION OF THE UNIT

NOTE: The purpose of this application guide is to provide general information on the mechanisms of corrosion and corrosive environments. The guide provides advice on the applications, however, you cannot anticipate all the details concerning the application in the actual destination place of our products in this document. In addition, the requirements relating to the service life of a potential product are not known. For these reasons, Aermec prefers to work closely with the customers to fully understand the requirements of the project and the operating environments. Aermec assumes no liability for the completeness and correctness of the information contained herein.

Potentially corrosive outdoor environments include areas near coasts, industrial sites, densely populated urban areas, certain rural areas or a combination of these environments. Other factors, including the presence of effluent gas, sewage vents or open sewage systems and the exhaust of diesel engines can all be harmful for the coils.

• **Coastal/marine environments**: Coastal and marine environments are distinguished by an abundance of sodium chloride (salt) transported by sea spray, vapour or mist. It is important to note that salt water can be transported many miles by wind and tidal currents. It is not uncommon for contamination due to salt water to occur 10 km away from the coast. For this reason, equipment may have to be protected from the electrolytes of marine origin.

• **Industrial Environments**: Industrial applications are associated with several different conditions that can potentially produce a variety of atmospheric emissions. Contaminants from sulphur and nitrogen oxides are most often linked to high-density urban environments. The combustion of coal oils and fuel oils releases sulphur oxides (SO2, SO3) and nitrogen oxides (NOx) into the atmosphere. These gases accumulate in the atmosphere and return to the ground as acid rain or low pH dew.
Industrial emissions are not only potentially corrosive: many industrial dust particles can be loaded with harmful components such as metal oxides, chlorides, sulphates, sulphuric acid, carbon and carbon compounds. In the presence of oxygen, water or high humidity environments, these particles can be extremely corrosive and in several forms, including general and localised corrosion, such as pitting and anthill.

A combination of marine/industrial environments: Sea mist loaded with salt, associated with the harmful emissions of an industrial environment, poses a serious risk. The combined effects of the salt loaded mist and industrial emissions accelerate corrosion. Within the manufacturing plants, corrosive gas may result from the processing of chemicals or by the typical industrial processes used in manufacturing. Potential contributing factors that must be considered are open sewers, vent openings, diesel exhaust, heavy traffic emissions, landfills, exhaust from aircraft engines and ocean-going vessels, industrial production, chemical treatment structures (cooling towers located nearby) and fossil fuel electrical installations.

• **Urban Environments**: Densely populated areas generally have high levels of emissions of motor vehicles and increases in duel use for heating buildings. Both conditions increase the concentration of sulphur oxides (SOx) and nitrogen oxide (NOx). Inside a building, the gas can be produced from cleaning agents, cigarette smoke, process operations and data centre printers. Corrosive atmospheres may even occur in some closed areas, such as facilities with swimming pools and water treatment systems.
The severity of corrosion in this environment is influenced by the levels of pollution, which in turn depend on several factors, including the population density of the area. Each piece of equipment installed in places immediately near exhaust of diesel engines, exhaust chimneys of incinerators, chimneys of fuel-powered boilers or areas exposed to emissions from fossil fuels, must be considered an industrial application.

• **Rural Environments:** Rural environments may contain high levels of pollution from ammonia and nitrogen products from animal excrements, fertilisers and high concentration of diesel engine exhaust. The approach to these environments must be entirely similar to that of industrial environments.
Local weather conditions have a major role in the concentration or dispersion of outdoor gaseous contaminants. Thermal inversions can trap pollutants, thereby producing serious air pollution problems.

ADDITIONAL TIPS

Although each of the above corrosive environments can be detrimental to the life of the heat exchanger, several additional factors must be considered before choosing the final design. The local climate surrounding the site of application may be influenced by the presence of:

- **Wind**
- **Dust**
- **Salty roads**
- **Swimming pools**
- **Diesel engine / traffic exhaust**
- **Localised mist**
- **Cleaning agents for domestic use**
- **Sewage system outlets**
- **Many other separate contaminants**

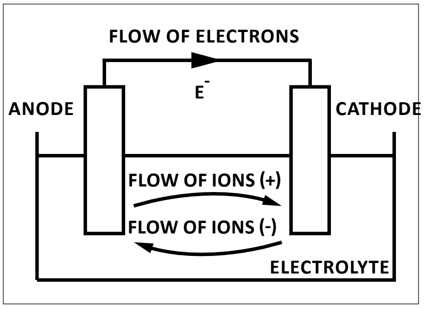
Even within 3-5 km from these particular local climates a normal environment with moderate characteristics can be classified as an environment that requires preventive corrosion measures. When these factors are directly and immediately part of the environment, their influence is further aggravating.

Application	Tip
Severe Environments	O-V Coils
Moderate environments	Standard coil °

B/BASIC PRINCIPLES ON MICROCHANNEL COIL CORROSION

The main material in AERMEC heat exchangers is aluminium. Aluminium is a very reactive material, whose surface is easily oxidised. As long as this hard layer of aluminium oxide remains intact, the aluminium at the base will remain corrosion resistant. For other materials, for example steel, the oxide layer detaches from the surface and peels off, thereby allowing the underlying metal to be constantly attacked.
Extreme environments may, however, damage the layer of oxide that could not be regenerated as quickly as necessary to provide sufficient protection to the product. These hostile environments are distinguished by very high or very low levels of pH. Normally, the protective oxide of aluminium is generally stable in the pH range of 4.5 and 8.5. For this reason, sea water with neutral pH does not intrinsically corrode aluminium. Galvanic corrosion is the reason why precautions are required in marine environments for heat exchangers with aluminium cooling louvers and copper piping. Galvanic corrosion occurs when different metals come into contact through an electrolyte. Because of an electrochemical reaction, electrons detach from one of the metals (reduce), whereas the other metal increases the electrons (oxidised).

The role of each metal is determined by the respective galvanic potential, typically summarised by the galvanic series. The metal with the lower galvanic potential will be reduced (consumed), whereas the metal with higher potential will be oxidised, thereby becoming more resistant. In the case of aluminium and copper (for example in the presence of salt water), the aluminium will be sacrificed in favour of the copper. It is customary for AERMEC to custom design the chemistry and the selection of materials to make sure that the first component to corrode is a fin structure. The pipe that carries the refrigerant, which has a round or microchannel section, is the component of the most protected exchanger since perforation would cause refrigerant leakage.



Pitting corrosion is nothing else than the localised version of galvanic corrosion. The different material is often an inclusion in the same base metal alloy. Often, the surface treatment, for example thermal zinc spraying (with low galvanic potential), are those used most in order to create general corrosion, which acts laterally across the surface of the part, which is a preferable corrosion to direct downward corrosion through a cavity, so as to avoid perforation.
Anthill or ant-nest corrosion is a poorly known phenomenon which takes its name from the morphology that is similar to that of a nest of ants. It can be best described as micro-pitting because the cavities on the surface are generally so small that they are invisible to the naked eye. This type of corrosion occurs more commonly in copper pipes. The ant-hill corrosion is caused by the chemical reaction, which requires three components: oxygen, water and organic acid.

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANL COOLING ONLY - WITHOUT PUMPS - WITH VALVE Y

■ = DCPX accessory

020

TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	3,8	3,8	3,8	3,8	3,8	-	-	-	4,5	4,5	4,5	4,5	4,5	4,2	-	-	5,1	5,1	5,1	5,1	5,1	4,8	4,5	4,3
Pe	1,61	1,61	1,07	1,07	1,07	-	-	-	1,63	1,63	1,37	1,37	1,37	1,54	-	-	1,66	1,66	1,56	1,56	1,56	1,73	1,88	1,93
EER	2,36	2,36	3,55	3,55	3,55	-	-	-	2,73	2,74	3,26	3,26	3,26	2,70	-	-	3,06	3,09	3,28	3,28	3,28	2,76	2,36	2,23
Qu	732	732	732	732	732	-	-	-	848	843	843	843	843	785	-	-	964	944	944	944	944	882	819	793
ΔP	15	15	15	15	15	-	-	-	19	18	18	18	18	16	-	-	24	21	21	21	21	19	16	15

025

TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	4,1	4,1	4,1	4,1	4,1	-	-	-	4,9	4,9	4,9	4,9	4,9	4,5	-	-	5,5	5,6	5,6	5,6	5,6	5,2	4,8	4,7
Pe	1,74	1,74	1,16	1,16	1,16	-	-	-	1,77	1,78	1,49	1,49	1,49	1,68	-	-	1,80	1,80	1,70	1,70	1,70	1,88	2,05	2,10
EER	2,36	2,36	3,55	3,55	3,55	-	-	-	2,73	2,74	3,27	3,27	3,27	2,71	-	-	3,07	3,10	3,29	3,29	3,29	2,77	2,37	2,23
Qu	797	797	797	797	797	-	-	-	923	916	916	916	916	854	-	-	1049	1028	1028	1028	1028	958	890	863
ΔP	15	15	15	15	15	-	-	-	19	18	18	18	18	16	-	-	24	21	21	21	21	19	16	15

030

TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	5,0	5,0	5,0	5,0	5,0	-	-	-	5,9	5,9	5,9	5,9	5,9	5,5	-	-	6,7	6,8	6,8	6,8	6,8	6,3	5,9	5,7
Pe	2,14	2,14	1,42	1,42	1,42	-	-	-	2,18	2,18	1,83	1,83	1,83	2,06	-	-	2,21	2,22	2,09	2,09	2,09	2,31	2,52	2,59
EER	2,33	2,33	3,50	3,50	3,50	-	-	-	2,69	2,70	3,22	3,22	3,22	2,67	-	-	3,02	3,05	3,24	3,24	3,24	2,73	2,33	2,20
Qu	964	964	964	964	964	-	-	-	1117	1109	1109	1109	1109	1033	-	-	1269	1243	1243	1243	1243	1160	1077	1044
ΔP	15	15	15	15	15	-	-	-	20	19	19	19	19	16	-	-	25	22	22	22	22	19	17	16

040

TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	6,4	6,4	6,4	6,4	6,4	-	-	-	7,5	7,5	7,5	7,5	7,5	7,0	-	-	8,6	8,6	8,6	8,6	8,6	8,1	7,5	7,3
Pe	2,83	2,83	1,88	1,88	1,88	-	-	-	2,88	2,88	2,41	2,41	2,41	2,72	-	-	2,92	2,92	2,75	2,75	2,75	3,05	3,32	3,41
EER	2,25	2,25	3,39	3,39	3,39	-	-	-	2,61	2,62	3,13	3,13	3,13	2,59	-	-	2,93	2,96	3,14	3,14	3,14	2,64	2,26	2,13
Qu	1234	1234	1234	1234	1234	-	-	-	1429	1419	1419	1419	1419	1323	-	-	1625	1591	1591	1591	1591	1485	1379	1337
ΔP	17	17	17	17	17	-	-	-	21	21	21	21	21	18	-	-	27	24	24	24	24	21	18	17

050

TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	8,9	8,9	8,9	8,9	8,9	-	-	-	10,5	10,5	10,5	10,5	10,5	9,8	-	-	11,9	12,1	12,1	12,1	12,1	11,3	10,5	10,2
Pe	3,51	3,51	2,33	2,33	2,33	-	-	-	3,57	3,57	2,99	2,99	2,99	3,37	-	-	3,62	3,63	3,42	3,42	3,42	3,79	4,12	4,23
EER	2,54	2,54	3,82	3,82	3,82	-	-	-	2,94	2,95	3,52	3,52	3,52	2,91	-	-	3,30	3,33	3,53	3,53	3,53	2,97	2,54	2,40
Qu	1723	1723	1723	1723	1723	-	-	-	1996	1982	1982	1982	1982	1848	-	-	2268	2221	2221	2221	2221	2074	1925	1866
ΔP	18	18	18	18	18	-	-	-	22	21	21	21	21	19	-	-	28	25	25	25	25	22	19	18

070

TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	11,0	11,0	11,0	11,0	11,0	-	-	-	12,9	13,0	13,0	13,0	13,0	12,1	-	-	14,7	14,9	14,9	14,9	14,9	13,9	12,9	12,5
Pe	4,24	4,24	2,82	2,82	2,82	-	-	-	4,31	4,32	3,62	3,62	3,62	4,08	-	-	4,38	4,38	4,13	4,13	4,13	4,58	4,98	5,12
EER	2,59	2,59	3,89	3,89	3,89	-	-	-	3,00	3,00	3,59	3,59	3,59	2,97	-	-	3,36	3,39	3,60	3,60	3,60	3,03	2,59	2,45
Qu	2122	2122	2122	2122	2122	-	-	-	2458	2441	2441	2441	2441	2276	-	-	2793	2735	2735	2735	2735	2554	2370	2298
ΔP	18	18	18	18	18	-	-	-	23	22	22	22	22	19	-	-	29	26	26	26	26	23	20	19

Data 14511:2013

TA b.s. External air temperature with dry bulb (°C)
TWu Temperature of System side Water Produced (°C)
Glycol Suggested ethylene glycol percentage (%)
Pc Cooling capacity [kW]
Pe Input power (kW)
Qu System side Water flow rate [l/h]
ΔP Pressure drop to the exchanger (kPa)
\- Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note

For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANL COOLING ONLY - WITHOUT PUMPS - WITH VALVE Y

■ = DCPX accessory

080																								
TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	13,6	13,6	13,6	13,6	13,6	-	-	-	16,0	16,1	16,1	16,1	16,1	15,0	-	-	18,3	18,5	18,5	18,5	18,5	17,2	16,0	15,5
Pe	5,52	5,52	3,67	3,67	3,67	-	-	-	5,62	5,62	4,71	4,71	4,71	5,30	-	-	5,70	5,71	5,37	5,37	5,37	5,96	6,48	6,66
EER	2,47	2,47	3,71	3,71	3,71	-	-	-	2,86	2,87	3,42	3,42	3,42	2,83	-	-	3,20	3,23	3,44	3,44	3,44	2,89	2,47	2,33
Qu	2637	2637	2637	2637	2637	-	-	-	3055	3032	3032	3032	3032	2827	-	-	3471	3399	3399	3399	3399	3173	2946	2856
ΔP	24	24	24	24	24	-	-	-	30	29	29	29	29	25	-	-	38	34	34	34	34	30	26	24

090																								
TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	14,8	14,8	14,8	14,8	14,8	-	-	-	17,5	17,5	17,5	17,5	17,5	16,3	-	-	19,9	20,1	20,1	20,1	20,1	18,8	17,4	16,9
Pe	5,78	5,78	3,85	3,85	3,85	-	-	-	5,89	5,89	4,94	4,94	4,94	5,56	-	-	5,97	5,98	5,63	5,63	5,63	6,25	6,79	6,98
EER	2,56	2,56	3,85	3,85	3,85	-	-	-	2,97	2,97	3,55	3,55	3,55	2,94	-	-	3,33	3,36	3,56	3,56	3,56	3,00	2,57	2,42
Qu	2869	2869	2869	2869	2869	-	-	-	3322	3299	3299	3299	3299	3075	-	-	3776	3697	3697	3697	3697	3451	3205	3106
ΔP	25	25	25	25	25	-	-	-	31	30	30	30	30	26	-	-	39	35	35	35	35	31	27	25

102																								
TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	17,6	17,6	17,6	17,6	17,6	-	-	-	20,8	20,8	20,8	20,8	20,8	19,4	-	-	23,6	23,9	23,9	23,9	23,9	22,3	20,7	20,1
Pe	6,85	6,85	4,57	4,57	4,57	-	-	-	6,98	6,98	5,86	5,86	5,86	6,59	-	-	7,10	7,11	6,69	6,69	6,69	7,41	8,04	8,25
EER	2,57	2,57	3,86	3,86	3,86	-	-	-	2,97	2,98	3,55	3,55	3,55	2,95	-	-	3,33	3,36	3,57	3,57	3,57	3,01	2,58	2,44
Qu	3422	3422	3422	3422	3422	-	-	-	3963	3935	3935	3935	3935	3669	-	-	4504	4411	4411	4411	4411	4118	3823	3706
ΔP	41	41	41	41	41	-	-	-	51	50	50	50	50	43	-	-	65	59	59	59	59	51	44	42

152																								
TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	21,9	21,9	21,9	21,9	21,9	-	-	-	25,8	25,9	25,9	25,9	25,9	24,1	-	-	29,3	29,7	29,7	29,7	29,7	27,7	25,7	25,0
Pe	8,76	8,76	5,85	5,85	5,85	-	-	-	8,93	8,93	7,50	7,50	7,50	8,43	-	-	9,08	9,09	8,56	8,56	8,56	9,47	10,28	10,56
EER	2,50	2,50	3,75	3,75	3,75	-	-	-	2,89	2,89	3,45	3,45	3,45	2,86	-	-	3,23	3,26	3,46	3,46	3,46	2,92	2,50	2,36
Qu	4246	4246	4246	4246	4246	-	-	-	4918	4882	4882	4882	4882	4552	-	-	5588	5472	5472	5472	5472	5108	4743	4597
ΔP	43	43	43	43	43	-	-	-	54	52	52	52	52	45	-	-	69	62	62	62	62	54	46	44

202																								
TA b.s.	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42	-10	0	10	20	30	35	40	42
TWu	-10								-5								0							
Glycol %	31	31	31	31	31	-	-	-	27	24	24	24	24	24	-	-	27	17	17	17	17	17	17	17
Pc	28,5	28,5	28,5	28,5	28,5	-	-	-	33,6	33,7	33,7	33,7	33,7	31,4	-	-	38,2	38,6	38,6	38,6	38,6	36,1	33,5	32,5
Pe	11,51	11,51	7,67	7,67	7,67	-	-	-	11,72	11,73	9,84	9,84	9,84	11,07	-	-	11,92	11,93	11,23	11,23	11,23	12,44	13,50	13,87
EER	2,48	2,48	3,72	3,72	3,72	-	-	-	2,86	2,87	3,43	3,43	3,43	2,84	-	-	3,21	3,24	3,44	3,44	3,44	2,90	2,48	2,34
Qu	5533	5533	5533	5533	5533	-	-	-	6408	6363	6363	6363	6363	5931	-	-	7281	7131	7131	7131	7131	6656	6180	5992
ΔP	48	48	48	48	48	-	-	-	60	58	58	58	58	51	-	-	77	69	69	69	69	60	52	49

Data 14511:2013

TA b.s. External air temperature with dry bulb (°C)
TWu Temperature of System side Water Produced (°C)
Glycol Suggested ethylene glycol percentage (%)
Pc Cooling capacity [kW]
Pe Input power (kW)
Qu System side Water flow rate [l/h]
ΔP Pressure drop to the exchanger (kPa)
\- Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note

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YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANL COOLING ONLY - WITHOUT PUMPS - WITH VALVE Z

■ = DCPX accessory

020																								
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	5,1	5,1	5,1	5,1	5,1	4,8	4,5	-	5,3	5,4	5,4	5,4	5,4	5,0	4,7	-	5,5	5,6	5,6	5,6	5,6	5,3	4,9	4,5
Pe	1,66	1,66	1,56	1,56	1,56	1,73	1,88	-	1,67	1,67	1,62	1,62	1,62	1,79	1,94	-	1,68	1,68	1,66	1,66	1,66	1,83	1,97	2,10
EER	3,06	3,09	3,28	3,28	3,28	2,76	2,36	-	3,18	3,22	3,33	3,33	3,33	2,82	2,42	-	3,30	3,35	3,40	3,40	3,40	2,89	2,49	2,13
Qu	964	944	944	944	944	882	819	-	1009	982	982	982	982	916	852	-	1052	1019	1019	1019	1019	953	886	807
ΔP	24	21	21	21	21	19	16	-	26	22	22	22	22	20	17	-	28	24	24	24	24	21	18	15

025																								
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	5,5	5,6	5,6	5,6	5,6	5,2	4,8	-	5,8	5,9	5,9	5,9	5,9	5,5	5,1	-	6,0	6,1	6,1	6,1	6,1	5,7	5,3	4,9
Pe	1,80	1,80	1,70	1,70	1,70	1,88	2,05	-	1,81	1,82	1,76	1,76	1,76	1,94	2,10	-	1,82	1,83	1,80	1,80	1,80	1,99	2,14	2,29
EER	3,07	3,10	3,29	3,29	3,29	2,77	2,37	-	3,19	3,23	3,34	3,34	3,34	2,82	2,42	-	3,31	3,36	3,41	3,41	3,41	2,89	2,49	2,13
Qu	1049	1028	1028	1028	1028	958	890	-	1097	1068	1068	1068	1068	998	927	-	1144	1109	1109	1109	1109	1036	964	878
ΔP	24	21	21	21	21	19	16	-	26	22	22	22	22	20	17	-	28	24	24	24	24	21	18	15

030																								
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	6,7	6,8	6,8	6,8	6,8	6,3	5,9	-	7,0	7,1	7,1	7,1	7,1	6,6	6,2	-	7,3	7,4	7,4	7,4	7,4	6,9	6,5	5,9
Pe	2,21	2,22	2,09	2,09	2,09	2,31	2,52	-	2,23	2,23	2,16	2,16	2,16	2,39	2,58	-	2,24	2,25	2,22	2,22	2,22	2,44	2,64	2,81
EER	3,02	3,05	3,24	3,24	3,24	2,73	2,33	-	3,14	3,18	3,29	3,29	3,29	2,78	2,39	-	3,26	3,31	3,36	3,36	3,36	2,85	2,45	2,10
Qu	1269	1243	1243	1243	1243	1160	1077	-	1328	1292	1292	1292	1292	1206	1121	-	1385	1342	1342	1342	1342	1255	1167	1062
ΔP	25	22	22	22	22	19	17	-	27	23	23	23	23	20	18	-	29	25	25	25	25	22	19	16

040																								
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	8,6	8,6	8,6	8,6	8,6	8,1	7,5	-	8,9	9,1	9,1	9,1	9,1	8,5	7,9	-	9,3	9,5	9,5	9,5	9,5	8,9	8,3	7,5
Pe	2,92	2,92	2,75	2,75	2,75	3,05	3,32	-	2,94	2,94	2,85	2,85	2,85	3,15	3,41	-	2,96	2,96	2,92	2,92	2,92	3,22	3,48	3,71
EER	2,93	2,96	3,14	3,14	3,14	2,64	2,26	-	3,05	3,09	3,19	3,19	3,19	2,70	2,31	-	3,16	3,21	3,25	3,25	3,25	2,76	2,38	2,03
Qu	1625	1591	1591	1591	1591	1485	1379	-	1700	1654	1654	1654	1654	1545	1435	-	1773	1719	1719	1719	1719	1606	1493	1360
ΔP	27	24	24	24	24	21	18	-	29	26	26	26	26	22	19	-	32	27	27	27	27	24	20	17

050																								
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	11,9	12,1	12,1	12,1	12,1	11,3	10,5	-	12,5	12,7	12,7	12,7	12,7	11,9	11,0	-	13,0	13,3	13,3	13,3	13,3	12,4	11,6	10,5
Pe	3,62	3,63	3,42	3,42	3,42	3,79	4,12	-	3,65	3,65	3,54	3,54	3,54	3,91	4,23	-	3,67	3,68	3,63	3,63	3,63	4,00	4,32	4,60
EER	3,30	3,33	3,53	3,53	3,53	2,97	2,54	-	3,43	3,47	3,59	3,59	3,59	3,04	2,61	-	3,55	3,61	3,66	3,66	3,66	3,11	2,68	2,29
Qu	2268	2221	2221	2221	2221	2074	1925	-	2373	2310	2310	2310	2310	2157	2004	-	2475	2400	2400	2400	2400	2242	2084	1899
ΔP	28	25	25	25	25	22	19	-	31	27	27	27	27	23	20	-	33	28	28	28	28	25	21	18

070																								
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	14,7	14,9	14,9	14,9	14,9	13,9	12,9	-	15,4	15,6	15,6	15,6	15,6	14,6	13,6	-	16,1	16,4	16,4	16,4	16,4	15,3	14,2	13,0
Pe	4,38	4,38	4,13	4,13	4,13	4,58	4,98	-	4,40	4,41	4,27	4,27	4,27	4,72	5,11	-	4,43	4,44	4,38	4,38	4,38	4,83	5,22	5,56
EER	3,36	3,39	3,60	3,60	3,60	3,03	2,59	-	3,50	3,54	3,66	3,66	3,66	3,10	2,66	-	3,63	3,68	3,74	3,74	3,74	3,17	2,73	2,33
Qu	2793	2735	2735	2735	2735	2554	2370	-	2922	2844	2844	2844	2844	2655	2468	-	3048	2955	2955	2955	2955	2760	2567	2339
ΔP	29	26	26	26	26	23	20	-	32	28	28	28	28	24	21	-	35	29	29	29	29	26	22	18

Data 14511:2013

TA b.s. External air temperature with dry bulb (°C)
TWu Temperature of System side Water Produced (°C)
Glycol Suggested ethylene glycol percentage (%)
Pc Cooling capacity [kW]
Pe Input power (kW)
Qu System side Water flow rate [l/h]
ΔP Pressure drop to the exchanger (kPa)
\- Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note

For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANL COOLING ONLY - WITHOUT PUMPS - WITH VALVE Z

■ = DCPX accessory

												080												
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	18,3	18,5	18,5	18,5	18,5	17,2	16,0	-	19,1	19,4	19,4	19,4	19,4	18,1	16,9	-	19,9	20,3	20,3	20,3	20,3	19,0	17,7	16,1
Pe	5,70	5,71	5,37	5,37	5,37	5,96	6,48	-	5,73	5,75	5,56	5,56	5,56	6,14	6,65	-	5,77	5,79	5,71	5,71	5,71	6,29	6,79	7,24
EER	3,20	3,23	3,44	3,44	3,44	2,89	2,47	-	3,33	3,38	3,49	3,49	3,49	2,95	2,53	-	3,45	3,51	3,56	3,56	3,56	3,02	2,60	2,23
Qu	3471	3399	3399	3399	3399	3173	2946	-	3631	3533	3533	3533	3533	3299	3066	-	3787	3672	3672	3672	3672	3430	3190	2906
ΔP	38	34	34	34	34	30	26	-	42	36	36	36	36	32	27	-	45	38	38	38	38	34	29	24

												090												
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	19,9	20,1	20,1	20,1	20,1	18,8	17,4	-	20,8	21,1	21,1	21,1	21,1	19,7	18,3	-	21,7	22,1	22,1	22,1	22,1	20,7	19,2	17,5
Pe	5,97	5,98	5,63	5,63	5,63	6,25	6,79	-	6,01	6,02	5,83	5,83	5,83	6,44	6,97	-	6,05	6,07	5,98	5,98	5,98	6,59	7,12	7,58
EER	3,33	3,36	3,56	3,56	3,56	3,00	2,57	-	3,46	3,50	3,62	3,62	3,62	3,06	2,63	-	3,58	3,64	3,69	3,69	3,69	3,14	2,70	2,31
Qu	3776	3697	3697	3697	3697	3451	3205	-	3950	3844	3844	3844	3844	3589	3335	-	4120	3993	3993	3993	3993	3731	3470	3161
ΔP	39	35	35	35	35	31	27	-	43	37	37	37	37	33	28	-	46	40	40	40	40	35	30	25

												102												
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	23,6	23,9	23,9	23,9	23,9	22,3	20,7	-	24,7	25,1	25,1	25,1	25,1	23,5	21,8	-	25,8	26,3	26,3	26,3	26,3	24,6	22,9	20,9
Pe	7,10	7,11	6,69	6,69	6,69	7,41	8,04	-	7,15	7,16	6,93	6,93	6,93	7,64	8,26	-	7,21	7,21	7,12	7,12	7,12	7,82	8,43	8,97
EER	3,33	3,36	3,57	3,57	3,57	3,01	2,58	-	3,46	3,51	3,62	3,62	3,62	3,07	2,64	-	3,58	3,64	3,70	3,70	3,70	3,14	2,71	2,33
Qu	4504	4411	4411	4411	4411	4118	3823	-	4711	4585	4585	4585	4585	4281	3979	-	4914	4765	4765	4765	4765	4451	4140	3771
ΔP	65	59	59	59	59	51	44	-	71	62	62	62	62	54	47	-	77	66	66	66	66	57	50	41

												152												
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	29,3	29,7	29,7	29,7	29,7	27,7	25,7	-	30,7	31,2	31,2	31,2	31,2	29,1	27,1	-	32,0	32,6	32,6	32,6	32,6	30,5	28,4	25,9
Pe	9,08	9,09	8,56	8,56	8,56	9,47	10,28	-	9,14	9,15	8,86	8,86	8,86	9,77	10,56	-	9,21	9,22	9,09	9,09	9,09	10,00	10,78	11,48
EER	3,23	3,26	3,46	3,46	3,46	2,92	2,50	-	3,36	3,41	3,52	3,52	3,52	2,98	2,56	-	3,48	3,54	3,59	3,59	3,59	3,05	2,63	2,26
Qu	5588	5472	5472	5472	5472	5108	4743	-	5845	5688	5688	5688	5688	5312	4937	-	6097	5911	5911	5911	5911	5522	5136	4679
ΔP	69	62	62	62	62	54	46	-	75	65	65	65	65	57	49	-	81	69	69	69	69	60	52	43

												202												
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu	0								2								4							
Glycol %	27	17	17	17	17	17	17	-	27	13	13	13	13	13	13	-	27	10	10	10	10	10	10	10
Pc	38,2	38,6	38,6	38,6	38,6	36,1	33,5	-	40,0	40,6	40,6	40,6	40,6	38,0	35,3	-	41,7	42,5	42,5	42,5	42,5	39,8	37,0	33,7
Pe	11,92	11,93	11,23	11,23	11,23	12,44	13,50	-	12,00	12,01	11,63	11,63	11,63	12,82	13,87	-	12,09	12,10	11,94	11,94	11,94	13,13	14,16	15,07
EER	3,21	3,24	3,44	3,44	3,44	2,90	2,48	-	3,33	3,38	3,49	3,49	3,49	2,96	2,54	-	3,45	3,51	3,56	3,56	3,56	3,03	2,61	2,24
Qu	7281	7131	7131	7131	7131	6656	6180	-	7617	7413	7413	7413	7413	6923	6432	-	7945	7702	7702	7702	7702	7196	6692	6097
ΔP	77	69	69	69	69	60	52	-	83	73	73	73	73	63	55	-	90	77	77	77	77	67	58	48

Data 14511:2013

TA b.s. External air temperature with dry bulb (°C)
TWu Temperature of System side Water Produced (°C)
Glycol Suggested ethylene glycol percentage (%)
Pc Cooling capacity [kW]
Pe Input power (kW)
Qu System side Water flow rate [l/h]
ΔP Pressure drop to the exchanger (kPa)
\- Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note
For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANL COOLING ONLY - WITHOUT PUMPS - WITH VALVE °

■ = DCPX accessory

020

TA b.s.	-10	0	10	20	30	35	40	46
TWu	4							
Glycol %	27	10	10	10	10	10	10	10
Pc	5,54	5,64	5,64	5,64	5,64	5,28	4,91	4,48
Pe	1,68	1,68	1,66	1,66	1,66	1,83	1,97	2,10
EER	3,30	3,35	3,40	3,40	3,40	2,89	2,49	2,13
Qu	1052	1019	1019	1019	1019	953	886	807
ΔP	28	24	24	24	24	21	18	15

TA b.s.	-10	0	10	20	30	35	40	46
TWu	7							
Glycol %	27	10	0	0	0	**0**	0	0
Pc	6,62	6,75	6,83	6,83	6,06	**5,66**	5,28	4,82
Pe	1,34	1,34	1,36	1,36	1,71	**1,89**	2,02	2,15
EER	4,93	5,03	5,04	5,04	3,55	**3,00**	2,61	2,25
Qu	1259	1222	1183	1183	1048	**978**	913	833
ΔP	40	34	31	31	24	**21**	18	15

TA b.s.	-10	0	10	20	30	35	40	46
TWu	9							
Glycol %	27	10	0	0	0	0	0	0
Pc	6,87	7,00	7,08	7,08	6,28	5,88	5,48	5,02
Pe	1,36	1,35	1,38	1,38	1,73	1,90	2,04	2,16
EER	5,07	5,17	5,14	5,14	3,63	3,10	2,69	2,32
Qu	1305	1267	1229	1229	1089	1019	949	867
ΔP	42	36	33	33	26	23	20	16

020

TA b.s.	-10	0	10	20	30	35	40	46
TWu	14							
Glycol %	27	10	0	0	0	0	0	-
Pc	7,46	7,61	7,69	7,69	6,84	6,41	5,99	-
Pe	1,39	1,38	1,42	1,42	1,78	1,94	2,07	-
EER	5,38	5,50	5,41	5,41	3,85	3,31	2,89	-
Qu	1416	1377	1339	1339	1188	1114	1039	-
ΔP	50	43	39	39	31	27	24	-

TA b.s.	-10	0	10	20	30	35	40	46
TWu	18							
Glycol %	27	10	0	0	0	0	0	-
Pc	7,92	8,08	8,17	8,17	7,27	6,82	6,39	-
Pe	1,42	1,42	1,46	1,46	1,81	1,97	2,10	-
EER	5,58	5,71	5,60	5,60	4,01	3,46	3,04	-
Qu	1503	1462	1424	1424	1266	1188	1111	-
ΔP	55	48	44	44	35	31	27	-

025

TA b.s.	-10	0	10	20	30	35	40	46
TWu	4							
Glycol %	27	10	10	10	10	10	10	10
Pc	6,03	6,14	6,14	6,14	6,14	5,74	5,34	4,87
Pe	1,82	1,83	1,80	1,80	1,80	1,99	2,14	2,29
EER	3,31	3,36	3,41	3,41	3,41	2,89	2,49	2,13
Qu	1144	1109	1109	1109	1109	1036	964	878
ΔP	28	24	24	24	24	21	18	15

TA b.s.	-10	0	10	20	30	35	40	46
TWu	7							
Glycol %	27	10	0	0	0	**0**	0	0
Pc	7,21	7,35	7,43	7,43	6,59	**6,15**	5,74	5,24
Pe	1,46	1,46	1,47	1,47	1,86	**2,05**	2,20	2,33
EER	4,94	5,04	5,05	5,05	3,55	**3,00**	2,62	2,25
Qu	1370	1329	1287	1287	1141	**1064**	993	906
ΔP	40	34	31	31	24	**21**	18	15

TA b.s.	-10	0	10	20	30	35	40	46
TWu	9							
Glycol %	27	10	0	0	0	0	0	0
Pc	7,47	7,62	7,70	7,70	6,84	6,40	5,97	5,46
Pe	1,47	1,47	1,50	1,50	1,88	2,06	2,22	2,35
EER	5,08	5,19	5,15	5,15	3,63	3,11	2,69	2,32
Qu	1419	1378	1337	1337	1185	1108	1033	944
ΔP	42	36	33	33	26	23	20	16

025

TA b.s.	-10	0	10	20	30	35	40	46
TWu	14							
Glycol %	27	10	0	0	0	0	0	-
Pc	8,12	8,28	8,37	8,37	7,44	6,97	6,52	-
Pe	1,50	1,50	1,54	1,54	1,93	2,11	2,25	-
EER	5,40	5,51	5,43	5,43	3,86	3,31	2,89	-
Qu	1541	1498	1456	1456	1293	1211	1131	-
ΔP	50	43	39	39	31	27	24	-

TA b.s.	-10	0	10	20	30	35	40	46
TWu	18							
Glycol %	27	10	0	0	0	0	0	-
Pc	8,62	8,79	8,88	8,88	7,91	7,41	6,95	-
Pe	1,54	1,54	1,58	1,58	1,97	2,14	2,29	-
EER	5,60	5,72	5,62	5,62	4,02	3,46	3,04	-
Qu	1634	1591	1549	1549	1377	1289	1208	-
ΔP	55	48	44	44	35	31	27	-

030

TA b.s.	-10	0	10	20	30	35	40	46
TWu	4							
Glycol %	27	10	10	10	10	10	10	10
Pc	7,29	7,43	7,43	7,43	7,43	6,95	6,46	5,89
Pe	2,24	2,25	2,22	2,22	2,22	2,44	2,64	2,81
EER	3,26	3,31	3,36	3,36	3,36	2,85	2,45	2,10
Qu	1385	1342	1342	1342	1342	1255	1167	1062
ΔP	29	25	25	25	25	22	19	16

TA b.s.	-10	0	10	20	30	35	40	46
TWu	7							
Glycol %	27	10	0	0	0	**0**	0	0
Pc	8,72	8,89	8,99	8,99	7,97	**7,44**	6,95	6,35
Pe	1,79	1,79	1,81	1,81	2,28	**2,52**	2,70	2,86
EER	4,87	4,97	4,98	4,98	3,50	**2,95**	2,58	2,22
Qu	1657	1608	1558	1558	1380	**1288**	1201	1096
ΔP	41	36	32	32	25	**22**	19	16

TA b.s.	-10	0	10	20	30	35	40	46
TWu	9							
Glycol %	27	10	0	0	0	0	0	0
Pc	9,05	9,22	9,32	9,32	8,27	7,74	7,22	6,60
Pe	1,80	1,80	1,84	1,84	2,31	2,53	2,72	2,88
EER	5,01	5,11	5,08	5,08	3,58	3,06	2,65	2,29
Qu	1718	1668	1617	1617	1433	1341	1249	1142
ΔP	44	38	35	35	27	24	21	17

030

TA b.s.	-10	0	10	20	30	35	40	46
TWu	14							
Glycol %	27	10	0	0	0	0	0	-
Pc	9,83	10,02	10,13	10,13	9,00	8,44	7,88	-
Pe	1,85	1,84	1,89	1,89	2,37	2,59	2,77	-
EER	5,33	5,44	5,35	5,35	3,80	3,26	2,85	-
Qu	1864	1812	1762	1762	1564	1465	1368	-
ΔP	52	45	41	41	32	28	25	-

TA b.s.	-10	0	10	20	30	35	40	46
TWu	18							
Glycol %	27	10	0	**0**	0	0	0	-
Pc	10,43	10,63	10,75	**10,75**	9,57	8,96	8,41	-
Pe	1,89	1,88	1,94	**1,94**	2,42	2,63	2,81	-
EER	5,53	5,65	5,54	**5,54**	3,96	3,41	3,00	-
Qu	1978	1925	1874	**1874**	1666	1559	1462	-
ΔP	58	51	46	46	37	32	28	-

Data 14511:2013

TA b.s.	External air temperature with dry bulb (°C)
TWu	Temperature of System side Water Produced (°C)
Glycol	Suggested ethylene glycol percentage (%)
Pc	Cooling capacity [kW]
Pe	Input power (kW)
Qu	System side Water flow rate [l/h]
ΔP	Pressure drop to the exchanger (kPa)
-	Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note

For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANL COOLING ONLY - WITHOUT PUMPS - WITH VALVE °

■ = DCPX accessory

040																								
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	4								7								9							
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	9,34	9,51	9,51	9,51	9,51	8,89	8,28	7,54	11,17	11,38	11,51	11,51	10,21	**9,53**	8,89	8,12	11,58	11,80	11,93	11,93	10,59	9,91	9,24	8,45
Pe	2,96	2,96	2,92	2,92	2,92	3,22	3,48	3,71	2,36	2,36	2,38	2,38	3,01	**3,32**	3,56	3,78	2,38	2,37	2,42	2,42	3,05	3,34	3,59	3,81
EER	3,16	3,21	3,25	3,25	3,25	2,76	2,38	2,03	4,74	4,83	4,83	4,83	3,39	**2,87**	2,50	2,15	4,87	4,97	4,93	4,93	3,47	2,97	2,57	2,22
Qu	1773	1719	1719	1719	1719	1606	1493	1360	2122	2059	1994	1994	1766	**1648**	1538	1403	2199	2135	2070	2070	1835	1716	1599	1461
ΔP	32	27	27	27	27	24	20	17	45	39	35	35	27	**24**	21	17	48	42	38	38	30	26	23	19

040																
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	14								18							
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	0	0	-
Pc	12,58	12,82	12,97	12,97	11,53	10,81	10,09	-	13,36	13,61	13,76	13,76	12,25	11,47	10,76	-
Pe	2,43	2,43	2,49	2,49	3,12	3,41	3,65	-	2,48	2,48	2,55	2,55	3,19	3,47	3,70	-
EER	5,18	5,29	5,20	5,20	3,69	3,17	2,76	-	5,38	5,49	5,39	5,39	3,85	3,31	2,91	-
Qu	2387	2321	2255	2255	2002	1876	1751	-	2531	2463	2399	2399	2133	1996	1871	-
ΔP	57	49	45	45	35	31	27	-	63	55	51	51	40	35	31	-

050																								
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	4								7								9							
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	13,04	13,29	13,29	13,29	13,29	12,42	11,56	10,54	15,60	15,90	16,07	16,07	14,26	**13,31**	12,42	11,34	16,18	16,49	16,67	16,67	14,79	13,85	12,91	11,80
Pe	3,67	3,68	3,63	3,63	3,63	4,00	4,32	4,60	2,93	2,93	2,96	2,96	3,74	**4,12**	4,42	4,69	2,95	2,95	3,01	3,01	3,78	4,15	4,46	4,73
EER	3,55	3,61	3,66	3,66	3,66	3,11	2,68	2,29	5,32	5,43	5,44	5,44	3,82	**3,23**	2,81	2,42	5,48	5,59	5,55	5,55	3,91	3,34	2,89	2,50
Qu	2475	2400	2400	2400	2400	2242	2084	1899	2962	2874	2783	2783	2466	**2301**	2146	1959	3070	2980	2889	2889	2561	2396	2232	2040
ΔP	33	28	28	28	28	25	21	18	47	40	36	36	29	**25**	22	18	51	43	39	39	31	27	23	20

050																
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	14								18							
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	0	0	-
Pc	17,58	17,92	18,11	18,11	16,10	15,09	14,10	-	18,66	19,02	19,23	19,23	17,12	16,08	15,03	-
Pe	3,02	3,02	3,10	3,10	3,88	4,24	4,54	-	3,09	3,08	3,17	3,17	3,96	4,31	4,60	-
EER	5,82	5,94	5,85	5,85	4,15	3,56	3,11	-	6,04	6,17	6,06	6,06	4,33	3,73	3,27	-
Qu	3332	3239	3148	3148	2795	2618	2444	-	3535	3439	3349	3349	2978	2795	2612	-
ΔP	59	51	47	47	37	32	28	-	66	58	53	53	42	37	32	-

070																								
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	4								7								9							
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	16,07	16,37	16,37	16,37	16,37	15,30	14,24	12,98	19,22	19,58	19,80	19,80	17,56	**16,39**	15,30	13,97	19,93	20,31	20,53	20,53	18,22	17,05	15,90	14,54
Pe	4,43	4,44	4,38	4,38	4,38	4,83	5,22	5,56	3,54	3,54	3,57	3,57	4,51	**4,98**	5,34	5,67	3,57	3,56	3,63	3,63	4,57	5,01	5,39	5,71
EER	3,63	3,68	3,74	3,74	3,74	3,17	2,73	2,33	5,43	5,54	5,55	5,55	3,89	**3,29**	2,87	2,47	5,59	5,70	5,66	5,66	3,99	3,40	2,95	2,55
Qu	3048	2955	2955	2955	2955	2760	2567	2339	3647	3539	3427	3427	3036	**2833**	2643	2412	3781	3670	3558	3558	3154	2951	2749	2512
ΔP	35	29	29	29	29	26	22	18	49	42	38	38	30	**26**	23	19	53	45	41	41	32	28	24	20

070																
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	14								18							
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	0	0	-
Pc	21,66	22,07	22,31	22,31	19,83	18,59	17,36	-	22,99	23,43	23,69	23,69	21,08	19,74	18,52	-
Pe	3,64	3,64	3,74	3,74	4,68	5,12	5,48	-	3,73	3,72	3,83	3,83	4,78	5,20	5,55	-
EER	5,95	6,06	5,97	5,97	4,24	3,63	3,17	-	6,17	6,30	6,18	6,18	4,41	3,80	3,33	-
Qu	4104	3989	3877	3877	3441	3224	3010	-	4353	4235	4124	4124	3667	3431	3217	-
ΔP	61	53	49	49	38	34	29	-	69	60	55	55	43	38	33	-

Data 14511:2013

TA b.s. External air temperature with dry bulb (°C)
TWu Temperature of System side Water Produced (°C)
Glycol Suggested ethylene glycol percentage (%)
Pc Cooling capacity [kW]
Pe Input power (kW)
Qu System side Water flow rate [l/h]
ΔP Pressure drop to the exchanger (kPa)
\- Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note
For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

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080 – TWu 4

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	10	10	10	10	10	10
Pc	19,94	20,32	20,32	20,32	20,32	18,99	17,67	16,11
Pe	5,77	5,79	5,71	5,71	5,71	6,29	6,79	7,24
EER	3,45	3,51	3,56	3,56	3,56	3,02	2,60	2,23
Qu	3787	3672	3672	3672	3672	3430	3190	2906
ΔP	45	38	38	38	38	34	29	24

080 – TWu 7

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	**0**	0	0
Pc	23,85	24,31	24,57	24,57	21,80	**20,35**	18,99	17,35
Pe	4,62	4,61	4,66	4,66	5,87	**6,48**	6,95	7,38
EER	5,17	5,27	5,28	5,28	3,71	**3,14**	2,73	2,35
Qu	4532	4398	4258	4258	3773	**3520**	3284	2997
ΔP	64	55	50	50	39	**34**	29	25

080 – TWu 9

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	0	0	0
Pc	24,73	25,20	25,49	25,49	22,62	21,17	19,74	18,05
Pe	4,65	4,65	4,73	4,73	5,95	6,52	7,01	7,43
EER	5,31	5,42	5,38	5,38	3,80	3,24	2,81	2,43
Qu	4697	4560	4421	4421	3919	3666	3416	3121
ΔP	69	59	53	53	42	37	32	27

080 – TWu 14

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	0	0	-
Pc	26,87	27,39	27,69	27,69	24,61	23,07	21,55	-
Pe	4,76	4,75	4,88	4,88	6,10	6,66	7,13	-
EER	5,65	5,76	5,68	5,68	4,03	3,46	3,02	-
Qu	5098	4956	4816	4816	4276	4006	3740	-
ΔP	80	69	63	63	50	44	38	-

080 – TWu 18

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	0	0	-
Pc	28,52	29,07	29,39	29,39	26,17	24,54	22,99	-
Pe	4,87	4,86	5,00	5,00	6,23	6,78	7,23	-
EER	5,86	5,98	5,88	5,88	4,20	3,62	3,18	-
Qu	5408	5262	5124	5124	4556	4270	3997	-
ΔP	90	78	72	72	57	50	44	-

090 – TWu 4

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	10	10	10	10	10	10
Pc	21,70	22,10	22,10	22,10	22,10	20,66	19,23	17,53
Pe	6,05	6,07	5,98	5,98	5,98	6,59	7,12	7,58
EER	3,58	3,64	3,69	3,69	3,69	3,14	2,70	2,31
Qu	4120	3993	3993	3993	3993	3731	3470	3161
ΔP	46	40	40	40	40	35	30	25

090 – TWu 7

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	**0**	0	0
Pc	25,95	26,44	26,73	26,73	23,71	**22,14**	20,66	18,87
Pe	4,85	4,84	4,88	4,88	6,16	**6,79**	7,28	7,73
EER	5,36	5,46	5,47	5,47	3,85	**3,26**	2,84	2,44
Qu	4930	4784	4632	4632	4104	**3829**	3573	3261
ΔP	66	57	51	51	40	**35**	30	25

090 – TWu 9

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	0	0	0
Pc	26,91	27,42	27,72	27,72	24,60	23,03	21,47	19,63
Pe	4,89	4,88	4,97	4,97	6,24	6,84	7,35	7,78
EER	5,51	5,62	5,58	5,58	3,94	3,37	2,92	2,52
Qu	5110	4961	4809	4809	4263	3988	3716	3395
ΔP	71	61	55	55	43	38	33	27

090 – TWu 14

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	0	0	-
Pc	29,23	29,79	30,12	30,12	26,77	25,10	23,45	-
Pe	5,00	4,99	5,12	5,12	6,40	6,98	7,47	-
EER	5,85	5,98	5,88	5,88	4,18	3,59	3,14	-
Qu	5546	5391	5240	5240	4651	4358	4068	-
ΔP	83	71	65	65	51	45	39	-

090 – TWu 18

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	0	0	-
Pc	31,03	31,63	31,98	31,98	28,47	26,57	25,01	-
Pe	5,11	5,10	5,25	5,25	6,53	7,10	7,58	-
EER	6,07	6,20	6,09	6,09	4,36	3,74	3,30	-
Qu	5884	5724	5574	5574	4956	4622	4348	-
ΔP	92	80	74	74	58	51	45	-

102 – TWu 4

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	10	10	10	10	10	10
Pc	25,80	26,29	26,29	26,29	26,29	24,58	22,88	20,86
Pe	7,21	7,21	7,12	7,12	7,12	7,82	8,43	8,97
EER	3,58	3,64	3,70	3,70	3,70	3,14	2,71	2,33
Qu	4914	4765	4765	4765	4765	4451	4140	3771
ΔP	77	66	66	66	66	57	50	41

102 – TWu 7

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	**0**	0	0
Pc	30,83	31,43	31,79	31,79	28,21	**26,34**	24,59	22,46
Pe	5,82	5,81	5,85	5,85	7,32	**8,06**	8,62	9,14
EER	5,29	5,41	5,44	5,44	3,85	**3,27**	2,85	2,46
Qu	5881	5706	5525	5525	4895	**4568**	4261	3889
ΔP	109	94	85	85	66	**58**	50	42

102 – TWu 9

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	0	0	0
Pc	31,97	32,59	32,97	32,97	29,27	27,40	25,55	23,37
Pe	5,88	5,86	5,95	5,95	7,43	8,12	8,71	9,21
EER	5,44	5,56	5,54	5,54	3,94	3,37	2,93	2,54
Qu	6095	5918	5736	5736	5085	4757	4432	4050
ΔP	117	101	91	91	72	63	54	45

102 – TWu 14

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	0	0	-
Pc	34,72	35,40	35,81	35,81	31,84	29,86	27,89	-
Pe	6,04	6,01	6,15	6,15	7,63	8,31	8,87	-
EER	5,75	5,89	5,82	5,82	4,17	3,59	3,14	-
Qu	6616	6430	6250	6250	5548	5198	4853	-
ΔP	137	118	108	108	85	75	65	-

102 – TWu 18

TA b.s.	-10	0	10	20	30	35	40	46
Glycol %	27	10	0	0	0	0	0	-
Pc	36,85	37,57	38,00	38,00	33,85	32,19	29,74	-
Pe	6,19	6,16	6,32	6,32	7,80	8,47	9,01	-
EER	5,95	6,10	6,01	6,01	4,34	3,80	3,30	-
Qu	7017	6827	6649	6649	5912	5618	5186	-
ΔP	153	133	123	123	97	87	75	-

Data 14511:2013

TA b.s. External air temperature with dry bulb (°C)
TWu Temperature of System side Water Produced (°C)
Glycol Suggested ethylene glycol percentage (%)
Pc Cooling capacity [kW]
Pe Input power (kW)
Qu System side Water flow rate [l/h]
ΔP Pressure drop to the exchanger (kPa)
\- Conditions outside the operating range
Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note
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YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANL COOLING ONLY - WITHOUT PUMPS - WITH VALVE °

■ = DCPX accessory

	152																							
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**4**								**7**								**9**							
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	32,02	32,63	32,63	32,63	32,63	30,51	28,39	25,89	38,27	39,01	39,46	39,46	35,01	**32,69**	30,52	27,88	39,68	40,46	40,92	40,92	36,32	34,01	31,71	29,00
Pe	9,21	9,22	9,09	9,09	9,09	10,00	10,78	11,48	7,43	7,41	7,46	7,46	9,36	**10,31**	11,03	11,70	7,49	7,47	7,59	7,59	9,49	10,38	11,14	11,79
EER	3,48	3,54	3,59	3,59	3,59	3,05	2,63	2,26	5,15	5,27	5,29	5,29	3,74	**3,17**	2,77	2,38	5,30	5,42	5,39	5,39	3,83	3,28	2,85	2,46
Qu	6097	5911	5911	5911	5911	5522	5136	4679	7296	7079	6855	6855	6073	**5667**	5287	4825	7562	7341	7117	7117	6309	5902	5499	5025
ΔP	81	69	69	69	69	60	52	43	115	99	89	89	70	**61**	53	44	123	106	96	96	75	66	57	48

	152															
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**14**								**18**							
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	0	0	-
Pc	43,10	43,95	44,45	44,45	39,52	37,05	34,62	-	45,74	46,64	47,17	47,17	42,01	39,82	36,91	-
Pe	7,69	7,65	7,84	7,84	9,74	10,62	11,34	-	7,88	7,84	8,05	8,05	9,95	10,82	11,51	-
EER	5,61	5,74	5,67	5,67	4,06	3,49	3,05	-	5,81	5,95	5,86	5,86	4,22	3,68	3,21	-
Qu	8208	7978	7754	7754	6884	6449	6021	-	8706	8471	8249	8249	7334	6947	6434	-
ΔP	144	124	114	114	90	79	69	-	161	140	129	129	102	91	78	-

	202																							
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**4**								**7**								**9**							
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	41,72	42,52	42,52	42,52	42,52	39,76	37,00	33,74	49,87	50,84	51,42	51,42	45,62	**42,60**	39,77	36,33	51,71	52,72	53,32	53,32	47,33	44,31	41,32	37,79
Pe	12,09	12,10	11,94	11,94	11,94	13,13	14,16	15,07	9,74	9,72	9,79	9,79	12,29	**13,53**	14,49	15,36	9,83	9,80	9,96	9,96	12,46	13,63	14,63	15,48
EER	3,45	3,51	3,56	3,56	3,56	3,03	2,61	2,24	5,12	5,23	5,25	5,25	3,71	**3,15**	2,75	2,36	5,26	5,38	5,35	5,35	3,80	3,25	2,82	2,44
Qu	7945	7702	7702	7702	7702	7196	6692	6097	9507	9225	8932	8932	7914	**7384**	6889	6288	9855	9567	9273	9273	8220	7690	7165	6548
ΔP	90	77	77	77	77	67	58	48	128	110	99	99	78	**68**	59	49	137	118	107	107	84	74	64	53

	202															
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**14**								**18**							
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	0	0	-
Pc	56,17	57,27	57,92	57,92	51,50	48,29	45,11	-	59,61	60,78	61,47	61,47	54,75	51,52	48,11	-
Pe	10,08	10,04	10,29	10,29	12,79	13,93	14,89	-	10,33	10,28	10,56	10,56	13,06	14,19	15,11	-
EER	5,57	5,71	5,63	5,63	4,03	3,47	3,03	-	5,77	5,91	5,82	5,82	4,19	3,63	3,18	-
Qu	10696	10396	10104	10104	8970	8404	7845	-	11345	11038	10749	10749	9557	8986	8384	-
ΔP	161	138	127	127	100	88	77	-	179	156	144	144	114	100	87	-

Data 14511:2013

TA b.s.	External air temperature with dry bulb (°C)
TWu	Temperature of System side Water Produced (°C)
Glycol	Suggested ethylene glycol percentage (%)
Pc	Cooling capacity [kW]
Pe	Input power (kW)
Qu	System side Water flow rate [l/h]
ΔP	Pressure drop to the exchanger (kPa)
-	Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note

For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANLH PERFORMANCE IN COOLING MODE - WITHOUT PUMPS - WITH VALVE °

■ = DCPX accessory

												020												
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu				4								7								9				
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	5,52	5,63	5,63	5,63	5,63	5,27	4,90	4,47	6,60	6,73	6,81	6,81	6,04	**5,64**	5,27	4,81	6,84	6,98	7,06	7,06	6,27	5,87	5,47	5,01
Pe	1,70	1,70	1,67	1,67	1,67	1,84	1,99	2,11	1,37	1,36	1,37	1,37	1,72	**1,89**	2,03	2,15	1,38	1,38	1,40	1,40	1,75	1,91	2,05	2,17
EER	3,26	3,32	3,36	3,36	3,36	2,86	2,47	2,12	4,83	4,94	4,96	4,96	3,51	**2,98**	2,59	2,23	4,96	5,08	5,05	5,05	3,59	3,07	2,67	2,31
Qu	1052	1019	1019	1019	1019	953	886	807	1259	1222	1183	1183	1048	**978**	913	833	1305	1267	1229	1229	1089	1019	949	867
ΔP	40	34	34	34	34	30	26	21	57	49	44	44	34	**30**	26	22	61	52	47	47	37	32	28	23

								020								
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu				14								18				
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	**0**	0	-
Pc	7,43	7,58	7,67	7,67	6,82	6,40	5,98	-	7,89	8,05	8,14	8,14	7,25	**6,81**	6,37	-
Pe	1,42	1,41	1,45	1,45	1,79	1,95	2,09	-	1,45	1,44	1,48	1,48	1,83	**1,99**	2,12	-
EER	5,25	5,38	5,31	5,31	3,80	3,27	2,86	-	5,43	5,57	5,48	5,48	3,95	**3,42**	3,00	-
Qu	1416	1377	1339	1339	1188	1114	1039	-	1503	1462	1424	1424	1266	**1188**	1111	-
ΔP	71	61	56	56	44	39	34	-	79	69	63	63	50	**43**	39	-

												025												
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu				4								7								9				
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	6,01	6,13	6,13	6,13	6,13	5,73	5,33	4,86	7,18	7,32	7,41	7,41	6,57	**6,14**	5,73	5,23	7,45	7,59	7,68	7,68	6,82	6,38	5,95	5,44
Pe	1,84	1,84	1,82	1,82	1,82	2,00	2,16	2,30	1,49	1,48	1,49	1,49	1,87	**2,06**	2,21	2,34	1,50	1,49	1,52	1,52	1,90	2,08	2,23	2,36
EER	3,26	3,32	3,37	3,37	3,37	2,86	2,47	2,12	4,83	4,94	4,96	4,96	3,51	**2,98**	2,60	2,24	4,97	5,08	5,06	5,06	3,59	3,07	2,67	2,31
Qu	1144	1109	1109	1109	1109	1036	964	878	1370	1329	1287	1287	1141	**1065**	993	906	1419	1378	1337	1337	1185	1108	1033	944
ΔP	41	35	35	35	35	31	26	22	59	50	45	45	36	**31**	27	22	63	54	49	49	38	33	29	24

								025								
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu				14								18				
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	**0**	0	-
Pc	8,09	8,25	8,34	8,34	7,42	6,96	6,50	-	8,58	8,75	8,85	8,85	7,89	**7,39**	6,93	-
Pe	1,54	1,53	1,57	1,57	1,95	2,12	2,27	-	1,58	1,57	1,61	1,61	1,99	**2,16**	2,30	-
EER	5,26	5,38	5,31	5,31	3,81	3,27	2,86	-	5,44	5,57	5,49	5,49	3,96	**3,42**	3,01	-
Qu	1541	1498	1456	1456	1293	1211	1131	-	1634	1591	1549	1549	1377	**1289**	1208	-
ΔP	73	63	58	58	46	40	35	-	82	71	65	65	52	**44**	40	-

												030												
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu				4								7								9				
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	10,50	10,05	9,25	8,36	7,41	6,93	6,45	5,88	11,18	10,67	9,93	8,96	7,95	**7,43**	6,93	6,33	11,62	11,08	10,29	9,30	8,25	7,73	7,20	6,59
Pe	1,51	1,26	1,39	1,77	2,23	2,46	2,65	2,82	1,55	1,29	1,44	1,83	2,30	**2,53**	2,71	2,88	1,57	1,30	1,47	1,86	2,33	2,55	2,74	2,90
EER	6,95	7,97	6,66	4,73	3,32	2,82	2,43	2,08	7,20	8,27	6,89	4,90	3,46	**2,94**	2,56	2,20	7,39	8,49	7,02	4,99	3,54	3,03	2,63	2,27
Qu	2011	1827	1680	1516	1342	1255	1167	1062	2142	1942	1727	1558	1380	**1288**	1201	1096	2227	2016	1793	1617	1433	1341	1249	1142
ΔP	89	67	57	46	36	32	27	23	101	75	57	47	37	**32**	28	23	109	81	62	50	39	35	30	25

								030								
TA b.s.	-10	0	10	20	30	35	40	46	-10	0	10	20	30	35	40	46
TWu				14								18				
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	**0**	0	-
Pc	12,68	12,05	11,18	10,10	8,98	8,42	7,87	-	13,48	12,79	11,86	10,72	9,54	**8,94**	8,39	-
Pe	1,60	1,33	1,52	1,92	2,39	2,61	2,79	-	1,61	1,34	1,56	1,97	2,44	**2,65**	2,83	-
EER	7,92	9,08	7,38	5,25	3,75	3,23	2,82	-	8,39	9,57	7,62	5,43	3,91	**3,37**	2,96	-
Qu	2429	2196	1954	1762	1564	1465	1368	-	2582	2333	2078	1874	1666	**1560**	1462	-
ΔP	128	96	73	60	47	41	36	-	144	108	83	68	53	**46**	41	-

Data 14511:2013

TA b.s.	External air temperature with dry bulb (°C)
TWu	Temperature of System side Water Produced (°C)
Glycol	Suggested ethylene glycol percentage (%)
Pc	Cooling capacity [kW]
Pe	Input power (kW)
Qu	System side Water flow rate [l/h]
ΔP	Pressure drop to the exchanger (kPa)
-	Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note

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YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANLH PERFORMANCE IN COOLING MODE - WITHOUT PUMPS - WITH VALVE °

■ = DCPX accessory

													040											
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**4**								**7**								**9**							
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	13,47	12,88	11,86	10,71	9,50	8,88	8,27	7,54	14,34	13,69	12,72	11,49	10,19	**9,52**	8,88	8,12	14,91	14,21	13,20	11,92	10,58	9,90	9,23	8,44
Pe	1,96	1,64	1,81	2,32	2,94	3,23	3,49	3,72	2,01	1,67	1,88	2,40	3,02	**3,33**	3,57	3,79	2,03	1,69	1,91	2,44	3,06	3,36	3,61	3,82
EER	6,87	7,86	6,55	4,62	3,24	2,75	2,37	2,03	7,15	8,18	6,78	4,79	3,37	**2,86**	2,49	2,14	7,35	8,42	6,91	4,89	3,45	2,95	2,56	2,21
Qu	2574	2339	2151	1941	1719	1606	1493	1360	2742	2487	2210	1994	1766	**1649**	1538	1403	2850	2582	2295	2070	1835	1716	1599	1461
ΔP	84	63	53	43	34	30	26	21	95	71	54	44	34	**30**	26	22	102	76	58	47	37	32	28	23

								040								
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**14**								**18**							
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	**0**	0	-
Pc	16,27	15,46	14,34	12,94	11,51	10,79	10,08	-	17,31	16,41	15,21	13,74	12,23	**11,46**	10,75	-
Pe	2,06	1,71	1,97	2,52	3,14	3,43	3,67	-	2,06	1,72	2,02	2,58	3,21	**3,48**	3,72	-
EER	7,90	9,04	7,28	5,15	3,66	3,15	2,75	-	8,40	9,54	7,53	5,33	3,82	**3,29**	2,89	-
Qu	3109	2810	2501	2255	2002	1876	1751	-	3306	2986	2661	2399	2133	**1996**	1871	-
ΔP	120	90	69	56	44	39	34	-	135	101	78	63	50	**43**	39	-

													050											
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**4**								**7**								**9**							
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	18,80	17,98	16,56	14,96	13,26	12,40	11,54	10,52	20,03	19,11	17,76	16,04	14,23	**13,29**	12,40	11,33	20,82	19,84	18,43	16,64	14,77	13,82	12,89	11,79
Pe	2,46	2,05	2,27	2,89	3,65	4,02	4,34	4,62	2,52	2,10	2,35	2,99	3,76	**4,14**	4,44	4,71	2,55	2,12	2,39	3,04	3,81	4,17	4,48	4,74
EER	7,65	8,76	7,31	5,18	3,63	3,09	2,66	2,28	7,94	9,11	7,57	5,37	3,79	**3,21**	2,80	2,41	8,15	9,36	7,71	5,47	3,87	3,31	2,88	2,49
Qu	3594	3265	3003	2710	2400	2242	2084	1899	3827	3470	3086	2783	2466	**2301**	2146	1959	3979	3603	3204	2889	2561	2396	2232	2040
ΔP	95	71	60	49	38	34	29	24	107	80	61	50	39	**34**	30	25	115	86	66	53	42	37	32	27

								050								
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**14**								**18**							
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	**0**	0	-
Pc	22,72	21,59	20,02	18,07	16,07	15,06	14,07	-	24,17	22,92	21,24	19,18	17,08	**16,05**	15,01	-
Pe	2,60	2,15	2,47	3,14	3,91	4,26	4,56	-	2,60	2,17	2,53	3,22	3,99	**4,34**	4,63	-
EER	8,75	10,02	8,11	5,76	4,11	3,53	3,09	-	9,28	10,57	8,39	5,96	4,28	**3,70**	3,24	-
Qu	4340	3923	3492	3148	2795	2618	2444	-	4614	4168	3714	3349	2978	**2796**	2612	-
ΔP	136	102	78	63	50	44	38	-	153	115	88	72	57	**49**	44	-

													070											
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**4**								**7**								**9**							
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	23,17	22,16	20,40	18,43	16,34	15,28	14,22	12,96	24,68	23,54	21,89	19,76	17,53	**16,37**	15,28	13,96	25,66	24,44	22,70	20,49	18,19	17,03	15,87	14,52
Pe	2,97	2,48	2,74	3,49	4,42	4,86	5,25	5,59	3,04	2,53	2,84	3,61	4,55	**5,01**	5,37	5,70	3,08	2,56	2,89	3,68	4,61	5,05	5,42	5,74
EER	7,81	8,94	7,46	5,28	3,70	3,14	2,71	2,32	8,11	9,30	7,72	5,47	3,86	**3,27**	2,85	2,45	8,33	9,55	7,86	5,58	3,95	3,37	2,93	2,53
Qu	4426	4022	3698	3337	2955	2760	2567	2339	4714	4274	3800	3427	3036	**2839**	2643	2412	4899	4438	3946	3558	3154	2951	2749	2512
ΔP	98	73	62	50	40	35	30	25	110	83	63	51	40	**35**	30	25	119	89	68	55	43	38	33	27

								070								
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**14**								**18**							
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	**0**	0	-
Pc	28,00	26,60	24,66	22,27	19,79	18,56	17,33	-	29,79	28,24	26,17	23,63	21,04	**19,71**	18,49	-
Pe	3,13	2,60	2,98	3,79	4,73	5,16	5,52	-	3,14	2,61	3,06	3,89	4,83	**5,24**	5,60	-
EER	8,95	10,25	8,28	5,87	4,19	3,60	3,14	-	9,50	10,80	8,57	6,08	4,36	**3,76**	3,30	-
Qu	5344	4832	4300	3877	3441	3224	3010	-	5682	5132	4573	4124	3667	**3431**	3217	-
ΔP	140	105	80	65	51	45	39	-	157	118	91	74	58	**50**	45	-

Data 14511:2013

TA b.s.	External air temperature with dry bulb (°C)
TWu	Temperature of System side Water Produced (°C)
Glycol	Suggested ethylene glycol percentage (%)
Pc	Cooling capacity [kW]
Pe	Input power (kW)
Qu	System side Water flow rate [l/h]
ΔP	Pressure drop to the exchanger (kPa)
-	Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note

For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANLH PERFORMANCE IN COOLING MODE - WITHOUT PUMPS - WITH VALVE °

■ = DCPX accessory

080

TA b.s.	-10	0	10	20	30	35	40	46
TWu	4							
Glycol %	27	10	10	10	10	10	10	10
Pc	28,75	27,50	25,32	22,88	20,29	18,97	17,65	16,09
Pe	3,87	3,23	3,56	4,54	5,74	6,31	6,81	7,26
EER	7,43	8,51	7,11	5,04	3,53	3,00	2,59	2,22
Qu	5499	4997	4594	4146	3672	3430	3190	2906
ΔP	123	92	78	63	50	43	38	31

TA b.s.	-10	0	10	20	30	35	40	46
TWu	7							
Glycol %	27	10	0	0	0	**0**	0	0
Pc	30,62	29,22	27,16	24,53	21,76	**20,32**	18,97	17,33
Pe	3,97	3,30	3,69	4,70	5,91	**6,51**	6,97	7,40
EER	7,71	8,85	7,36	5,22	3,68	**3,12**	2,72	2,34
Qu	5857	5311	4721	4258	3773	**3521**	3284	2997
ΔP	139	104	79	64	50	**44**	38	32

TA b.s.	-10	0	10	20	30	35	40	46
TWu	9							
Glycol %	27	10	0	0	0	0	0	0
Pc	31,83	30,33	28,17	25,44	22,58	21,14	19,71	18,02
Pe	4,02	3,34	3,76	4,78	5,99	6,56	7,04	7,45
EER	7,92	9,09	7,49	5,32	3,77	3,22	2,80	2,42
Qu	6088	5514	4902	4421	3919	3666	3416	3121
ΔP	149	112	85	69	54	48	41	34

TA b.s.	-10	0	10	20	30	35	40	46
TWu	14							
Glycol %	27	10	0	0	0	0	0	-
Pc	34,73	33,00	30,61	27,64	24,57	23,04	21,52	-
Pe	4,09	3,39	3,88	4,93	6,15	6,70	7,16	-
EER	8,49	9,73	7,88	5,60	4,00	3,44	3,00	-
Qu	6640	6003	5342	4816	4276	4006	3740	-
ΔP	176	131	101	82	65	57	50	-

TA b.s.	-10	0	10	20	30	35	40	46
TWu	18							
Glycol %	27	10	0	0	0	**0**	0	-
Pc	36,94	35,04	32,48	29,33	26,12	**24,50**	22,95	-
Pe	4,10	3,42	3,98	5,06	6,27	**6,82**	7,27	-
EER	9,01	10,26	8,15	5,79	4,16	**3,59**	3,16	-
Qu	7061	6377	5682	5124	4556	**4270**	3997	-
ΔP	198	149	114	93	73	**63**	57	-

090

TA b.s.	-10	0	10	20	30	35	40	46
TWu	4							
Glycol %	27	10	10	10	10	10	10	10
Pc	31,16	29,83	27,47	24,83	22,02	20,59	19,17	17,48
Pe	4,18	3,49	3,82	4,82	6,06	6,66	7,18	7,63
EER	7,45	8,56	7,20	5,15	3,63	3,09	2,67	2,29
Qu	5983	5436	4998	4511	3993	3731	3470	3161
ΔP	168	126	106	87	68	59	51	43

TA b.s.	-10	0	10	20	30	35	40	46
TWu	7							
Glycol %	27	10	0	0	0	**0**	0	0
Pc	33,19	31,69	29,48	26,63	23,63	**22,06**	20,60	18,82
Pe	4,30	3,57	3,95	4,99	6,24	**6,87**	7,34	7,78
EER	7,71	8,88	7,46	5,34	3,79	**3,21**	2,81	2,42
Qu	6371	5777	5136	4632	4104	**3830**	3573	3261
ΔP	189	142	108	88	69	**60**	52	43

TA b.s.	-10	0	10	20	30	35	40	46
TWu	9							
Glycol %	27	10	0	0	0	0	0	0
Pc	34,49	32,89	30,57	27,61	24,51	22,95	21,40	19,58
Pe	4,37	3,62	4,03	5,08	6,33	6,92	7,42	7,84
EER	7,90	9,10	7,58	5,43	3,87	3,32	2,89	2,50
Qu	6622	5998	5333	4809	4263	3988	3716	3395
ΔP	204	152	116	94	74	65	56	47

TA b.s.	-10	0	10	20	30	35	40	46
TWu	14							
Glycol %	27	10	0	0	0	0	0	-
Pc	37,63	35,78	33,20	29,99	26,67	25,01	23,37	-
Pe	4,47	3,70	4,18	5,26	6,51	7,08	7,56	-
EER	8,42	9,68	7,95	5,70	4,10	3,53	3,09	-
Qu	7223	6530	5812	5240	4651	4358	4068	-
ΔP	240	179	138	112	88	77	68	-

TA b.s.	-10	0	10	20	30	35	40	46
TWu	18							
Glycol %	27	10	0	0	0	**0**	0	-
Pc	40,01	37,98	35,22	31,82	28,35	**26,46**	24,91	-
Pe	4,51	3,74	4,30	5,40	6,65	**7,21**	7,67	-
EER	8,87	10,15	8,20	5,89	4,26	**3,68**	3,25	-
Qu	7680	6937	6181	5574	4956	**4622**	4348	-
ΔP	270	203	156	127	100	**85**	77	-

102

TA b.s.	-10	0	10	20	30	35	40	46
TWu	4							
Glycol %	27	10	10	10	10	10	10	10
Pc	25,22	25,71	25,71	25,71	25,71	24,04	22,37	20,40
Pe	7,87	7,88	7,77	7,77	7,77	8,55	9,23	9,82
EER	3,21	3,26	3,31	3,31	3,31	2,81	2,42	2,08
Qu	4803	4657	4657	4657	4657	4351	4046	3686
ΔP	73	62	62	62	62	54	47	39

TA b.s.	-10	0	10	20	30	35	40	46
TWu	7							
Glycol %	27	10	0	0	0	**0**	0	0
Pc	30,15	30,74	31,09	31,09	27,58	**25,75**	24,04	21,96
Pe	6,33	6,32	6,36	6,36	8,00	**8,82**	9,44	10,01
EER	4,76	4,87	4,89	4,89	3,45	**2,92**	2,55	2,19
Qu	5748	5578	5401	5401	4785	**4465**	4165	3802
ΔP	104	89	80	80	63	**55**	48	40

TA b.s.	-10	0	10	20	30	35	40	46
TWu	9							
Glycol %	27	10	0	0	0	0	0	0
Pc	31,26	31,87	32,24	32,24	28,62	26,79	24,98	22,85
Pe	6,38	6,37	6,47	6,47	8,11	8,88	9,53	10,09
EER	4,90	5,01	4,98	4,98	3,53	3,02	2,62	2,27
Qu	5959	5784	5607	5607	4970	4650	4332	3959
ΔP	111	95	86	86	68	59	52	43

TA b.s.	-10	0	10	20	30	35	40	46
TWu	14							
Glycol %	27	10	0	0	0	0	0	-
Pc	33,95	34,62	35,02	35,02	31,13	29,19	27,27	-
Pe	6,54	6,52	6,68	6,68	8,32	9,07	9,70	-
EER	5,19	5,31	5,24	5,24	3,74	3,22	2,81	-
Qu	6467	6286	6109	6109	5423	5081	4743	-
ΔP	130	112	103	103	81	71	62	-

TA b.s.	-10	0	10	20	30	35	40	46
TWu	18							
Glycol %	27	10	0	0	0	**0**	0	-
Pc	36,04	36,74	37,16	37,16	33,10	**31,48**	29,08	-
Pe	6,70	6,68	6,86	6,86	8,50	**9,24**	9,84	-
EER	5,38	5,50	5,42	5,42	3,90	**3,41**	2,95	-
Qu	6860	6674	6499	6499	5779	**5492**	5069	-
ΔP	145	126	116	116	92	**81**	71	-

Data 14511:2013

TA b.s. External air temperature with dry bulb (°C)
TWu Temperature of System side Water Produced (°C)
Glycol Suggested ethylene glycol percentage (%)
Pc Cooling capacity [kW]
Pe Input power (kW)
Qu System side Water flow rate [l/h]
ΔP Pressure drop to the exchanger (kPa)
\- Conditions outside the operating range
Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note
For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANLH PERFORMANCE IN COOLING MODE - WITHOUT PUMPS - WITH VALVE °

■ = DCPX accessory

	152																							
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**4**								**7**								**9**							
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	31,06	31,65	31,65	31,65	31,65	29,60	27,54	25,11	37,13	37,85	38,28	38,28	33,96	**31,71**	29,60	27,04	38,50	39,25	39,69	39,69	35,23	32,99	30,75	28,13
Pe	9,36	9,37	9,24	9,24	9,24	10,17	10,97	11,68	7,52	7,51	7,57	7,57	9,51	**10,48**	11,23	11,91	7,59	7,57	7,70	7,70	9,64	10,56	11,34	12,00
EER	3,32	3,38	3,42	3,42	3,42	2,91	2,51	2,15	4,94	5,04	5,06	5,06	3,57	**3,03**	2,64	2,27	5,07	5,18	5,16	5,16	3,65	3,12	2,71	2,34
Qu	5912	5731	5731	5731	5731	5355	4980	4537	7074	6864	6647	6647	5889	**5495**	5127	4679	7333	7119	6901	6901	6117	5723	5332	4873
ΔP	76	64	64	64	64	56	49	40	108	92	83	83	65	**57**	49	41	115	99	90	90	70	62	53	45

	152															
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**14**								**18**							
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	**0**	0	-
Pc	41,82	42,64	43,12	43,12	38,34	35,95	33,58	-	44,38	45,25	45,77	45,77	40,76	**38,64**	35,81	-
Pe	7,78	7,75	7,95	7,95	9,90	10,79	11,54	-	7,97	7,94	8,15	8,15	10,10	**10,98**	11,71	-
EER	5,38	5,50	5,43	5,43	3,87	3,33	2,91	-	5,57	5,70	5,61	5,61	4,03	**3,52**	3,06	-
Qu	7960	7736	7519	7519	6675	6254	5838	-	8443	8214	7999	7999	7112	**6737**	6239	-
ΔP	135	116	106	106	84	74	64	-	150	131	120	120	95	**83**	73	-

	202																							
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**4**								**7**								**9**							
Glycol %	27	10	10	10	10	10	10	10	27	10	0	0	0	**0**	0	0	27	10	0	0	0	0	0	0
Pc	39,75	40,51	40,51	40,51	40,51	37,87	35,24	32,13	47,52	48,44	48,98	48,98	43,46	**40,58**	37,88	34,60	49,27	50,23	50,80	50,80	45,09	42,21	39,35	35,99
Pe	12,74	12,76	12,59	12,59	12,59	13,86	14,96	15,93	10,21	10,20	10,29	10,29	12,96	**14,28**	15,30	16,24	10,30	10,28	10,46	10,46	13,13	14,38	15,45	16,36
EER	3,12	3,17	3,22	3,22	3,22	2,73	2,36	2,02	4,65	4,75	4,76	4,76	3,35	**2,84**	2,48	2,13	4,78	4,88	4,86	4,86	3,43	2,93	2,55	2,20
Qu	7564	7333	7333	7333	7333	6852	6372	5804	9051	8783	8504	8504	7535	**7031**	6559	5986	9383	9109	8829	8829	7826	7322	6822	6234
ΔP	82	70	70	70	70	61	53	44	117	100	90	90	71	**62**	54	45	125	108	97	97	77	67	58	49

	202															
TA b.s.	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**	**-10**	**0**	**10**	**20**	**30**	**35**	**40**	**46**
TWu	**14**								**18**							
Glycol %	27	10	0	0	0	0	0	-	27	10	0	0	0	**0**	0	-
Pc	53,52	54,56	55,18	55,18	49,06	46,00	42,97	-	56,80	57,91	58,57	58,57	52,15	**49,08**	45,82	-
Pe	10,54	10,51	10,79	10,79	13,47	14,69	15,72	-	10,80	10,76	11,07	11,07	13,75	**14,94**	15,94	-
EER	5,08	5,19	5,11	5,11	3,64	3,13	2,73	-	5,26	5,38	5,29	5,29	3,79	**3,29**	2,87	-
Qu	10184	9898	9620	9620	8540	8001	7469	-	10802	10510	10234	10234	9099	**8556**	7982	-
ΔP	146	126	116	116	91	80	70	-	164	143	131	131	104	**89**	80	-

Data 14511:2013

TA b.s. External air temperature with dry bulb (°C)
TWu Temperature of System side Water Produced (°C)
Glycol Suggested ethylene glycol percentage (%)
Pc Cooling capacity [kW]
Pe Input power (kW)
Qu System side Water flow rate [l/h]
ΔP Pressure drop to the exchanger (kPa)
\- Conditions outside the operating range
Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note
For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANLH PERFORMANCE IN HEATING MODE - WITHOUT PUMPS - WITH VALVE °

■ = DCPX accessory

	020																							
TA b.s.	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**
TWu	**25**								**30**								**35**							
Glycol %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	**0**	0	0	0	0	0
Ph	4,00	5,22	6,85	7,38	9,13	9,13	9,13	9,13	3,93	5,03	6,69	7,18	8,79	8,79	8,79	8,79	-	4,86	**6,54**	7,00	8,47	8,47	8,47	8,47
Pe	1,01	1,03	1,08	1,09	1,15	1,15	1,15	1,15	1,42	1,44	1,48	1,50	1,55	1,55	1,55	1,55	-	1,67	**1,71**	1,73	1,77	1,77	1,77	1,77
COP	3,95	5,05	6,37	6,76	7,94	7,94	7,94	7,94	2,76	3,48	4,51	4,78	5,66	5,66	5,66	5,66	-	2,91	**3,82**	4,06	4,78	4,78	4,78	4,78
Qu	685	893	1168	1256	1550	1550	1550	1550	675	861	1142	1225	1495	1495	1495	1495	-	834	**1120**	1197	1445	1445	1445	1445
ΔP	15	25	43	49	75	75	75	75	14	23	41	47	70	70	70	70	-	22	**36**	45	65	65	65	65

	020																							
TA b.s.	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**
TWu	**40**								**45**								**50**							
Glycol %	-	0	0	0	0	0	0	0	0	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	4,72	6,41	6,83	8,17	8,17	8,17	8,17	0,00	4,59	**6,26**	6,66	7,88	7,88	-	-	-	4,47	6,11	6,47	7,58	-	-	-
Pe	-	1,81	1,85	1,86	1,90	1,90	1,90	1,90	0,00	1,94	**1,97**	1,99	2,03	2,03	-	-	-	2,17	2,21	2,22	2,25	-	-	-
COP	-	2,61	3,47	3,67	4,30	4,30	4,30	4,30	0,00	2,37	**3,18**	3,34	3,88	3,88	-	-	-	2,06	2,77	2,92	3,36	-	-	-
Qu	-	812	1099	1170	1397	1397	1397	1397	0	791	**1077**	1143	1349	1349	-	-	-	772	1052	1113	1301	-	-	-
ΔP	-	21	38	43	61	61	61	61	0	20	**33**	41	57	57	-	-	-	19	35	39	53	-	-	-

	025																							
TA b.s.	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**
TWu	**25**								**30**								**35**							
Glycol %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	**0**	0	0	0	0	0
Ph	4,52	5,90	7,74	8,34	10,32	10,32	10,32	10,32	4,44	5,68	7,56	8,11	9,93	9,93	9,93	9,93	-	5,49	**7,39**	7,91	9,57	9,57	9,57	9,57
Pe	1,13	1,15	1,20	1,22	1,29	1,29	1,29	1,29	1,58	1,60	1,65	1,67	1,73	1,73	1,73	1,73	-	1,86	**1,90**	1,92	1,98	1,98	1,98	1,98
COP	4,01	5,13	6,46	6,84	8,03	8,03	8,03	8,03	2,81	3,54	4,57	4,86	5,74	5,74	5,74	5,74	-	2,96	**3,89**	4,12	4,85	4,85	4,85	4,85
Qu	773	1008	1319	1418	1750	1750	1750	1750	762	972	1290	1383	1688	1688	1688	1688	-	942	**1265**	1351	1631	1631	1631	1631
ΔP	16	28	47	55	84	84	84	84	16	26	45	52	78	78	78	78	-	24	**41**	50	73	73	73	73

	025																							
TA b.s.	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**
TWu	**40**								**45**								**50**							
Glycol %	-	0	0	0	0	0	0	0	-	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	5,33	7,24	7,71	9,23	9,23	9,23	9,23	-	5,19	**7,07**	7,52	8,90	8,90	-	-	-	5,05	6,90	7,31	8,56	-	-	-
Pe	-	2,01	2,05	2,07	2,12	2,12	2,12	2,12	-	2,16	**2,19**	2,22	2,26	2,26	-	-	-	2,41	2,45	2,47	2,51	-	-	-
COP	-	2,66	3,53	3,73	4,36	4,36	4,36	4,36	-	2,41	**3,23**	3,39	3,94	3,94	-	-	-	2,10	2,81	2,96	3,42	-	-	-
Qu	-	916	1240	1321	1577	1577	1577	1577	-	893	**1217**	1290	1524	1524	-	-	-	871	1187	1257	1469	-	-	-
ΔP	-	23	42	48	68	68	68	68	-	22	**37**	45	63	63	-	-	-	21	38	43	59	-	-	-

	030																							
TA b.s.	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**
TWu	**25**								**30**								**35**							
Glycol %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	**0**	0	0	0	0	0
Ph	5,42	7,08	9,28	10,00	12,37	15,98	22,49	24,29	5,33	6,81	9,06	9,73	11,91	15,28	21,49	23,22	-	6,59	**8,86**	9,48	11,48	14,62	20,54	22,22
Pe	1,39	1,42	1,47	1,50	1,57	1,69	1,96	2,05	1,95	1,98	2,03	2,06	2,13	2,23	2,47	2,55	-	2,29	**2,34**	2,36	2,43	2,52	2,73	2,81
COP	3,90	5,00	6,30	6,69	7,87	9,46	11,50	11,87	2,73	3,44	4,46	4,73	5,60	6,85	8,71	9,11	-	2,88	**3,79**	4,01	4,73	5,80	7,52	7,91
Qu	928	1209	1582	1702	2100	2700	3767	4060	914	1166	1548	1660	2026	2588	3610	3893	-	1131	**1518**	1621	1958	2482	3462	3736
ΔP	17	28	48	56	85	140	273	317	16	26	46	53	79	129	251	291	-	25	**41**	51	74	118	230	268

	030																							
TA b.s.	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**
TWu	**40**								**45**								**50**							
Glycol %	-	0	0	0	0	0	0	0	-	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	6,39	8,68	9,25	11,07	13,99	19,64	21,25	-	6,22	**8,49**	9,02	10,67	13,38	-	-	-	6,06	8,28	8,77	10,26	-	-	-
Pe	-	2,47	2,53	2,55	2,60	2,68	2,88	2,94	-	2,66	**2,71**	2,73	2,78	2,85	-	-	-	2,97	3,02	3,04	3,09	-	-	-
COP	-	2,58	3,43	3,63	4,25	5,21	6,83	7,22	-	2,34	**3,13**	3,30	3,84	4,69	-	-	-	2,04	2,74	2,88	3,33	-	-	-
Qu	-	1100	1489	1585	1893	2382	3320	3584	-	1072	**1460**	1548	1829	2284	-	-	-	1046	1425	1509	1763	-	-	-
ΔP	-	23	43	48	69	109	212	247	-	22	**37**	46	64	100	-	-	-	21	39	44	60	-	-	-

Data 14511:2013

TA b.s. External air temperature with dry bulb (°C)
TWu Temperature of System side Water Produced (°C)
Glycol Suggested ethylene glycol percentage (%)
Ph Heating capacity [kW]
Pe Input power (kW)
Qu System side Water flow rate [l/h]
ΔP Pressure drop to the exchanger (kPa)
\- Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note

For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANLH PERFORMANCE IN HEATING MODE - WITHOUT PUMPS - WITH VALVE °

■ = DCPX accessory

040																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	25								30								35							
Glycol %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	**0**	0	0	0	0	0
Ph	6,83	8,92	11,70	12,59	15,58	20,12	28,27	30,53	6,72	8,59	11,42	12,25	15,00	19,23	27,02	29,19	-	8,30	**11,17**	11,95	14,46	18,40	25,83	27,93
Pe	1,68	1,71	1,78	1,80	1,89	2,01	2,30	2,40	2,47	2,50	2,56	2,58	2,66	2,77	3,03	3,12	-	2,87	**2,92**	2,96	3,03	3,13	3,36	3,44
COP	4,07	5,21	6,59	6,99	8,26	9,99	12,30	12,74	2,72	3,44	4,46	4,75	5,64	6,94	8,92	9,37	-	2,89	**3,83**	4,04	4,77	5,88	7,70	8,13
Qu	1171	1526	1997	2148	2651	3408	4754	5124	1154	1472	1954	2094	2557	3266	4556	4913	-	1427	**1916**	2046	2471	3133	4369	4714
ΔP	15	26	44	51	77	128	249	289	15	24	42	48	72	117	228	266	-	22	**37**	46	67	108	210	245

040																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	40								45								50							
Glycol %	-	0	0	0	0	0	0	0	-	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	8,06	10,94	11,66	13,95	17,61	24,70	26,72	-	7,84	**10,70**	11,36	13,44	16,84	-	-	-	7,63	10,43	11,05	12,93	-	-	-
Pe	-	3,05	3,11	3,13	3,19	3,28	3,48	3,56	-	3,22	**3,28**	3,30	3,36	3,44	-	-	-	3,60	3,66	3,68	3,73	-	-	-
COP	-	2,64	3,52	3,72	4,37	5,37	7,09	7,51	-	2,43	**3,26**	3,44	4,00	4,90	-	-	-	2,12	2,85	3,00	3,47	-	-	-
Qu	-	1388	1878	2000	2389	3006	4189	4523	-	1353	**1843**	1954	2308	2882	-	-	-	1320	1798	1904	2225	-	-	-
ΔP	-	21	39	44	63	99	193	225	-	20	**34**	42	59	91	-	-	-	19	36	40	54	-	-	-

050																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	25								30								35							
Glycol %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	**0**	0	0	0	0	0
Ph	9,02	11,77	15,44	16,62	20,56	26,53	37,27	40,24	8,87	11,33	15,07	16,17	19,79	25,36	35,62	38,48	-	10,96	**14,74**	15,77	19,08	24,27	34,06	36,82
Pe	2,27	2,31	2,39	2,42	2,52	2,68	3,02	3,13	3,19	3,23	3,31	3,34	3,43	3,57	3,87	3,98	-	3,74	**3,81**	3,85	3,93	4,05	4,32	4,42
COP	3,98	5,11	6,47	6,88	8,15	9,92	12,36	12,87	2,78	3,51	4,56	4,85	5,77	7,11	9,20	9,68	-	2,93	**3,87**	4,10	4,85	5,99	7,88	8,34
Qu	1547	2016	2638	2837	3501	4501	6279	6767	1524	1945	2580	2766	3377	4313	6017	6489	-	1885	**2530**	2703	3263	4138	5770	6226
ΔP	15	26	45	52	79	130	253	293	15	24	43	49	73	119	232	270	-	23	**37**	47	68	110	213	248

050																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	40								45								50							
Glycol %	-	0	0	0	0	0	0	0	-	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	10,64	14,44	15,38	18,40	23,23	32,57	35,23	-	10,35	**14,12**	14,99	17,74	22,22	-	-	-	10,08	13,76	14,58	17,06	-	-	-
Pe	-	4,05	4,12	4,15	4,23	4,33	4,57	4,66	-	4,35	**4,42**	4,45	4,52	4,61	-	-	-	4,86	4,94	4,96	5,02	-	-	-
COP	-	2,63	3,50	3,71	4,35	5,36	7,13	7,57	-	2,38	**3,19**	3,37	3,92	4,82	-	-	-	2,07	2,79	2,94	3,40	-	-	-
Qu	-	1833	2481	2642	3155	3970	5533	5974	-	1787	**2434**	2581	3048	3807	-	-	-	1743	2375	2515	2938	-	-	-
ΔP	-	22	39	45	64	101	196	229	-	20	**34**	43	60	93	-	-	-	19	36	41	55	-	-	-

070																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	25								30								35							
Glycol %	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	-	-	0	**0**	0	0	0	0	0
Ph	11,14	14,54	19,07	20,53	25,39	32,76	46,01	-	10,96	14,00	18,62	19,97	24,44	31,32	43,97	-	-	13,54	**18,21**	19,47	23,56	29,97	42,05	45,45
Pe	2,58	2,63	2,73	2,76	2,89	3,07	3,47	-	3,80	3,84	3,93	3,97	4,08	4,24	4,60	-	-	4,42	**4,50**	4,55	4,65	4,79	5,11	5,22
COP	4,31	5,53	7,00	7,43	8,80	10,68	13,25	-	2,89	3,65	4,73	5,04	5,99	7,39	9,55	-	-	3,06	**4,05**	4,28	5,07	6,26	8,22	8,70
Qu	1911	2491	3260	3506	4327	5562	7760	-	1884	2403	3189	3419	4174	5330	7436	-	-	2329	**3127**	3340	4033	5113	7130	7694
ΔP	16	27	46	53	81	134	262	-	15	25	44	51	76	123	240	-	-	24	**40**	48	71	114	221	257

070																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	40								45								50							
Glycol %	-	0	0	0	0	0	0	0	-	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	13,14	17,83	19,00	22,73	28,69	40,21	43,49	-	12,79	**17,44**	18,52	21,91	27,44	-	-	-	12,45	17,00	18,01	21,07	-	-	-
Pe	-	4,69	4,78	4,81	4,90	5,03	5,32	5,42	-	4,96	**5,04**	5,08	5,16	5,27	-	-	-	5,55	5,63	5,66	5,73	-	-	-
COP	-	2,80	3,73	3,95	4,63	5,71	7,57	8,03	-	2,58	**3,46**	3,65	4,25	5,21	-	-	-	2,25	3,02	3,18	3,68	-	-	-
Qu	-	2266	3066	3265	3899	4906	6837	7382	-	2209	**3007**	3189	3767	4704	-	-	-	2155	2935	3107	3631	-	-	-
ΔP	-	22	41	46	66	105	203	237	-	21	**36**	44	62	96	-	-	-	20	37	42	57	-	-	-

Data 14511:2013

TA b.s.	External air temperature with dry bulb (°C)
TWu	Temperature of System side Water Produced (°C)
Glycol	Suggested ethylene glycol percentage (%)
Ph	Heating capacity [kW]
Pe	Input power (kW)
Qu	System side Water flow rate [l/h]
ΔP	Pressure drop to the exchanger (kPa)
-	Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note

For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANLH PERFORMANCE IN HEATING MODE - WITHOUT PUMPS - WITH VALVE °

■ = DCPX accessory

080																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	25								30								35							
Glycol %	0	0	0	0	0	0	-	-	0	0	0	0	0	0	-	-	-	0	**0**	0	0	0	-	-
Ph	14,30	18,68	24,50	26,38	32,63	42,13	-	-	14,07	17,98	23,92	25,66	31,41	40,27	-	-	-	17,39	**23,89**	25,02	30,28	38,53	-	-
Pe	3,33	3,40	3,53	3,58	3,76	4,03	-	-	4,89	4,95	5,08	5,13	5,29	5,53	-	-	-	5,70	**5,82**	5,87	6,02	6,23	-	-
COP	4,29	5,49	6,94	7,36	8,67	10,45	-	-	2,88	3,63	4,71	5,00	5,93	7,28	-	-	-	3,05	**4,10**	4,26	5,03	6,19	-	-
Qu	2453	3197	4183	4500	5552	7138	-	-	2418	3084	4092	4387	5356	6840	-	-	-	2989	**4012**	4286	5175	6562	-	-
ΔP	21	36	62	72	109	180	-	-	21	34	59	68	102	166	-	-	-	32	**53**	65	95	152	-	-
080																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	40								45								50							
Glycol %	-	0	0	0	0	0	-	-	-	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	16,88	22,91	24,41	29,21	36,88	-	-	-	16,42	**22,42**	23,79	28,15	35,27	-	-	-	15,99	21,84	23,13	27,08	-	-	-
Pe	-	6,05	6,17	6,22	6,35	6,53	-	-	-	6,39	**6,52**	6,56	6,67	6,83	-	-	-	7,14	7,26	7,30	7,41	-	-	-
COP	-	2,79	3,71	3,93	4,60	5,65	-	-	-	2,57	**3,45**	3,63	4,22	5,16	-	-	-	2,24	3,01	3,17	3,66	-	-	-
Qu	-	2907	3935	4190	5003	6296	-	-	-	2835	**3859**	4093	4834	6037	-	-	-	2765	3767	3988	4660	-	-	-
ΔP	-	30	55	62	89	140	-	-	-	28	**48**	59	83	129	-	-	-	27	50	56	77	-	-	-

090																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	25								30								35							
Glycol %	0	0	0	0	0	0	-	-	0	0	0	0	0	0	-	-	-	0	**0**	0	0	0	-	-
Ph	15,61	20,40	26,76	28,82	35,68	46,09	-	-	15,36	19,63	26,13	28,04	34,33	44,05	-	-	-	18,98	**25,54**	27,34	33,09	42,15	-	-
Pe	3,64	3,73	3,90	3,96	4,20	4,55	-	-	5,34	5,42	5,58	5,64	5,85	6,17	-	-	-	6,23	**6,37**	6,45	6,64	6,92	-	-
COP	4,29	5,47	6,87	7,27	8,50	10,14	-	-	2,88	3,62	4,68	4,97	5,87	7,14	-	-	-	3,05	**4,01**	4,24	4,99	6,09	-	-
Qu	2674	3485	4560	4905	6052	7781	-	-	2636	3362	4461	4782	5838	7457	-	-	-	3258	**4374**	4673	5641	7153	-	-
ΔP	29	50	85	98	149	247	-	-	28	46	81	93	139	227	-	-	-	43	**72**	89	130	209	-	-
090																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	40								45								50							
Glycol %	-	0	0	0	0	0	-	-	-	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	18,43	25,02	26,67	31,92	40,33	-	-	-	17,93	**24,46**	25,99	30,77	38,57	-	-	-	17,46	23,85	25,27	29,59	-	-	-
Pe	-	6,60	6,76	6,82	6,98	7,23	-	-	-	6,98	**7,12**	7,18	7,34	7,55	-	-	-	7,79	7,94	7,99	8,12	-	-	-
COP	-	2,79	3,70	3,91	4,57	5,58	-	-	-	2,57	**3,44**	3,62	4,19	5,11	-	-	-	2,24	3,00	3,16	3,64	-	-	-
Qu	-	3169	4289	4568	5454	6863	-	-	-	3090	**4207**	4462	5269	6580	-	-	-	3014	4106	4347	5080	-	-	-
ΔP	-	41	75	85	121	192	-	-	-	39	**65**	81	113	177	-	-	-	37	69	77	105	-	-	-

102																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	25								30								35							
Glycol %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	**0**	0	0	0	0	0
Ph	18,70	24,42	32,04	34,50	42,70	42,70	42,70	42,70	18,39	23,51	31,28	33,56	41,09	41,09	41,09	41,09	-	22,74	**30,60**	32,72	39,61	39,61	39,61	39,61
Pe	4,54	4,64	4,82	4,90	5,16	5,16	5,16	5,16	6,66	6,74	6,93	7,00	7,23	7,23	7,23	7,23	-	7,76	**8,04**	8,01	8,22	8,22	8,22	8,22
COP	4,12	5,27	6,64	7,04	8,28	8,28	8,28	8,28	2,76	3,49	4,51	4,79	5,68	5,68	5,68	5,68	-	2,93	**3,81**	4,09	4,82	4,82	4,82	4,82
Qu	3205	4177	5464	5878	7253	7253	7253	7253	3158	4029	5346	5731	6996	6996	6996	6996	-	3905	**5241**	5599	6760	6760	6760	6760
ΔP	28	48	82	95	145	145	145	145	27	45	79	90	135	135	135	135	-	42	**76**	86	126	126	126	126
102																								
TA b.s.	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42	-10	0	7	10	20	30	40	42
TWu	40								45								50							
Glycol %	-	0	0	0	0	0	0	0	-	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	22,07	29,96	31,93	38,21	38,21	38,21	38,21	-	21,47	**29,31**	31,12	36,83	36,83	-	-	-	20,91	28,56	30,25	35,42	-	-	-
Pe	-	8,23	8,41	8,47	8,66	8,66	8,66	8,66	-	8,70	**8,88**	8,93	9,10	9,10	-	-	-	9,72	9,89	9,94	10,09	-	-	-
COP	-	2,68	3,56	3,77	4,41	4,41	4,41	4,41	-	2,47	**3,30**	3,48	4,05	4,05	-	-	-	2,15	2,89	3,04	3,51	-	-	-
Qu	-	3798	5141	5474	6536	6536	6536	6536	-	3703	**5041**	5347	6314	6314	-	-	-	3612	4921	5209	6087	-	-	-
ΔP	-	40	73	82	117	117	117	117	-	38	**69**	79	110	110	-	-	-	36	67	75	102	-	-	-

Data 14511:2013

TA b.s. External air temperature with dry bulb (°C)
TWu Temperature of System side Water Produced (°C)
Glycol Suggested ethylene glycol percentage (%)
Ph Heating capacity [kW]
Pe Input power (kW)
Qu System side Water flow rate [l/h]
ΔP Pressure drop to the exchanger (kPa)
\- Conditions outside the operating range
Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note
For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

YIELDS AND ABSORPTION DIFFERENT THAN NOMINAL

ANLH PERFORMANCE IN HEATING MODE - WITHOUT PUMPS - WITH VALVE °

= DCPX accessory

													152											
TA b.s.	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**
TWu	25								30								35							
Glycol %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	**0**	0	0	0	0	0
Ph	22,56	29,46	38,64	41,60	51,48	51,48	51,48	51,48	22,19	28,36	37,73	40,48	49,55	49,55	49,55	49,55	-	27,43	**36,91**	39,47	47,76	47,76	47,76	47,76
Pe	5,35	5,46	5,67	5,76	6,05	6,05	6,05	6,05	7,85	7,94	8,16	8,24	8,50	8,50	8,50	8,50	-	9,14	**9,52**	9,43	9,67	9,67	9,67	9,67
COP	4,22	5,40	6,81	7,23	8,51	8,51	8,51	8,51	2,83	3,57	4,62	4,91	5,83	5,83	5,83	5,83	-	3,00	**3,88**	4,19	4,94	4,94	4,94	4,94
Qu	3868	5041	6595	7094	8754	8754	8754	8754	3812	4862	6452	6917	8444	8444	8444	8444	-	4713	**6326**	6758	8159	8159	8159	8159
ΔP	28	48	82	95	144	144	144	144	27	44	78	90	134	134	134	134	-	42	**75**	86	125	125	125	125
													152											
TA b.s.	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**
TWu	40								45								50							
Glycol %	-	0	0	0	0	0	0	0	-	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	26,62	36,13	38,50	46,07	46,07	46,07	46,07	-	25,90	**35,35**	37,53	44,41	44,41	-	-	-	25,22	34,45	36,49	42,72	-	-	-
Pe	-	9,70	9,90	9,97	10,19	10,19	10,19	10,19	-	10,25	**10,45**	10,52	10,71	10,71	-	-	-	11,45	11,65	11,71	11,88	-	-	-
COP	-	2,75	3,65	3,86	4,52	4,52	4,52	4,52	-	2,53	**3,38**	3,57	4,15	4,15	-	-	-	2,20	2,96	3,12	3,59	-	-	-
Qu	-	4584	6204	6607	7888	7888	7888	7888	-	4469	**6084**	6454	7621	7621	-	-	-	4360	5939	6287	7347	-	-	-
ΔP	-	40	72	82	117	117	117	117	-	38	**68**	78	109	109	-	-	-	36	66	74	102	-	-	-

													202											
TA b.s.	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**
TWu	25								30								35							
Glycol %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	**0**	0	0	0	0	0
Ph	29,21	38,14	50,03	53,87	66,64	66,64	66,64	66,64	28,73	36,71	48,85	52,41	64,15	64,15	64,15	64,15	-	35,51	**47,80**	51,10	61,84	61,84	61,84	61,84
Pe	7,04	7,18	7,46	7,57	7,93	7,93	7,93	7,93	10,33	10,46	10,73	10,83	11,18	11,18	11,18	11,18	-	12,03	**12,58**	12,40	12,71	12,71	12,71	12,71
COP	4,15	5,31	6,71	7,12	8,40	8,40	8,40	8,40	2,78	3,51	4,55	4,84	5,74	5,74	5,74	5,74	-	2,95	**3,80**	4,12	4,87	4,87	4,87	4,87
Qu	5008	6528	8540	9186	11335	11335	11335	11335	4936	6296	8354	8957	10934	10934	10934	10934	-	6102	**8191**	8751	10565	10565	10565	10565
ΔP	31	53	91	106	161	161	161	161	30	50	87	100	150	150	150	150	-	47	**86**	96	140	140	140	140
													202											
TA b.s.	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**	**-10**	**0**	**7**	**10**	**20**	**30**	**40**	**42**
TWu	40								45								50							
Glycol %	-	0	0	0	0	0	0	0	-	0	**0**	0	0	0	-	-	-	0	0	0	0	-	-	-
Ph	-	34,47	46,78	49,85	59,65	59,65	59,65	59,65	-	33,54	**45,78**	48,59	57,50	57,50	-	-	-	32,65	44,60	47,24	55,31	-	-	-
Pe	-	12,76	13,03	13,12	13,40	13,40	13,40	13,40	-	13,50	**13,76**	13,84	14,09	14,09	-	-	-	15,08	15,33	15,41	15,64	-	-	-
COP	-	2,70	3,59	3,80	4,45	4,45	4,45	4,45	-	2,49	**3,33**	3,51	4,08	4,08	-	-	-	2,17	2,91	3,07	3,54	-	-	-
Qu	-	5936	8034	8555	10214	10214	10214	10214	-	5787	**7878**	8356	9868	9868	-	-	-	5645	7691	8141	9513	-	-	-
ΔP	-	44	81	92	130	130	130	130	-	42	**78**	87	122	122	-	-	-	40	74	83	113	-	-	-

Data 14511:2013

TA b.s.	External air temperature with dry bulb (°C)
TWu	Temperature of System side Water Produced (°C)
Glycol	Suggested ethylene glycol percentage (%)
Ph	Heating capacity [kW]
Pe	Input power (kW)
Qu	System side Water flow rate [l/h]
ΔP	Pressure drop to the exchanger (kPa)
-	Conditions outside the operating range

Capacities and pressure drops in the heat exchangers, calculated with ΔT 5 °C

Note

For operating conditions different to those declared refer to the selection program Magellano, available on www.aermec.com

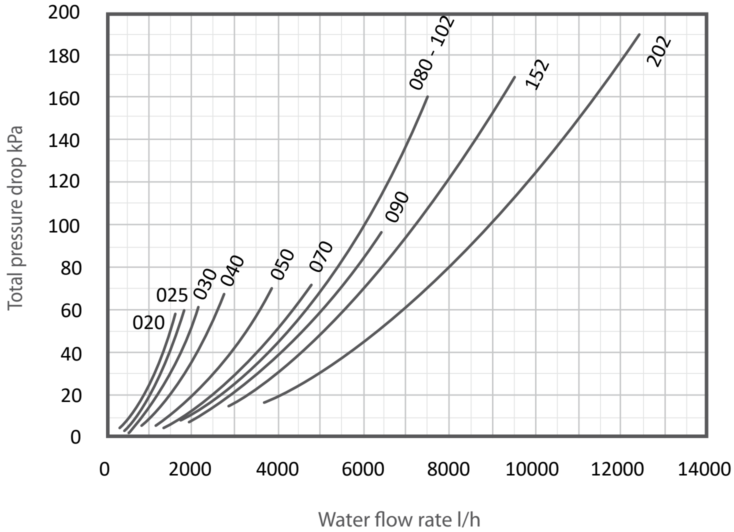
PRESSURE DROP

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

Average water temperature 10° C

For temperatures different than 10° C use the correction factor table.

Average water temperature	5	**10**	15	20	30	40	50
Coefficient multiplier	1,02	**1**	0,98	0,97	0,95	0,93	0,91

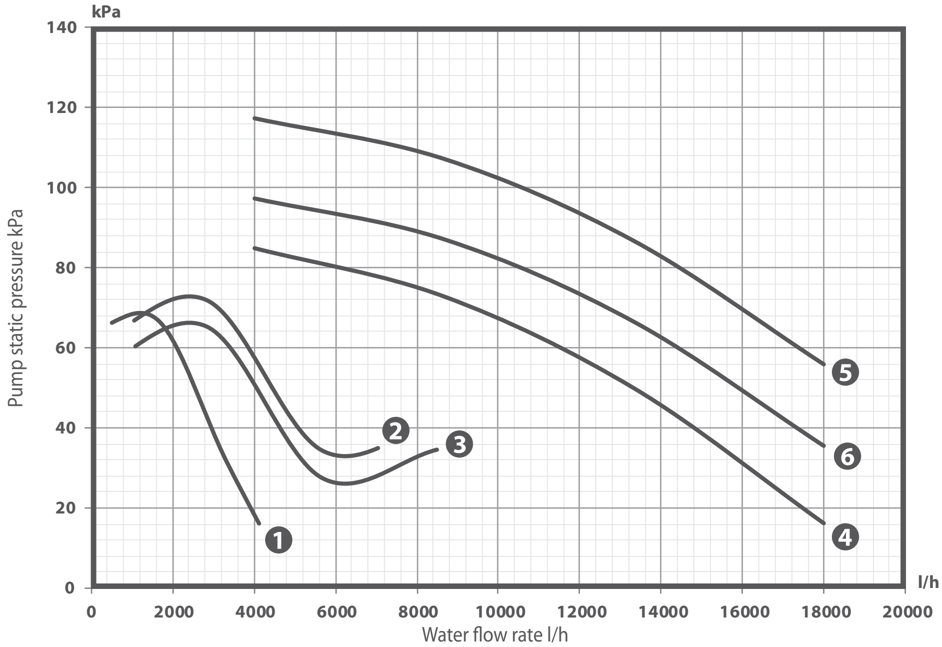


PUMPS ELECTRICAL DATA

Sizes ANL			20	25	30	40	50	70	80	90	102	152	202
Versions													
P	Max. power	kW	0,09	0,09	0,09	0,09	0,19	0,19	0,19	0,19	1,04	1,76	1,76
	Max. current	A	0,70	0,70	0,70	0,70	1,30	1,30	1,30	1,30	1,96	3,08	3,08
N	Max. power	kW	-	-	-	-	0,78	0,78	0,78	0,78	2,22	2,22	2,22
	Max. current	A	-	-	-	-	1,58	1,58	1,58	1,58	4,24	4,24	4,24
A	Max. power	kW	0,09	0,09	0,09	0,09	0,19	0,19	0,19	0,19	1,04	1,76	1,76
	Max. current	A	0,70	0,70	0,70	0,70	1,30	1,30	1,30	1,30	1,96	3,08	3,08
Q	Max. power	kW	-	-	-	-	0,78	0,78	0,78	0,78	2,22	2,22	2,22
	Max. current	A	-	-	-	-	1,58	1,58	1,58	1,58	4,24	4,24	4,24

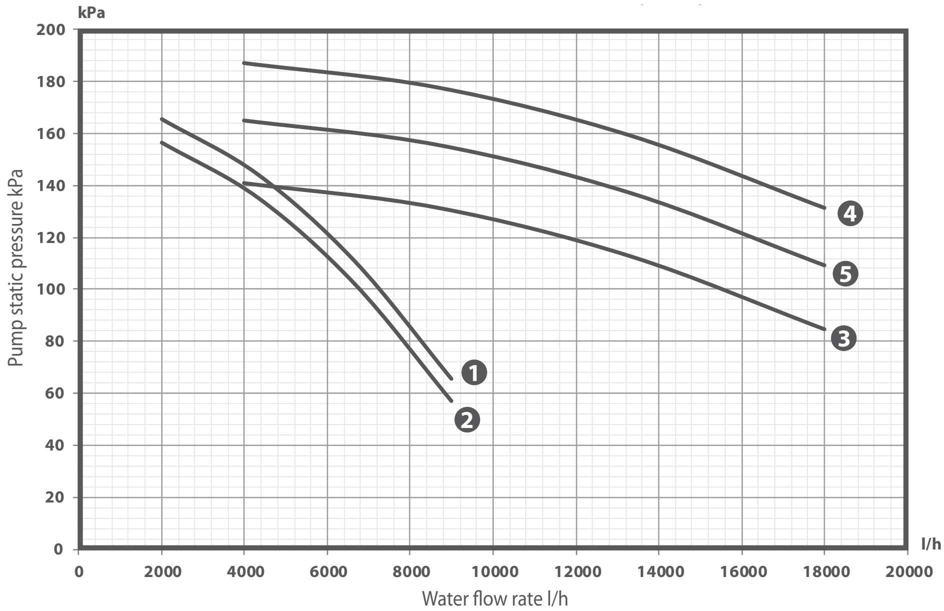
USEFUL HEAD

Low heat pumps (A-P)



n.	SIZE	HYDRONIC
1	020-025-030-040	P-A
2	050-070	P-A
3	080-090	P-A
4	102	P-A
5	152	P-A
6	202	P-A

High head pumps (N-Q)



n.	SIZE	HYDRONIC
1	050-070	Q
2	080-090	Q
3	102	N-Q
4	152	N-Q
5	202	N-Q

GLYCOL

ETHYLENE GLYCOL

COOLING MODE

CORRECTION FACTOR WITH ETHYLENE GLYCOL - COOLING MODE											
Freezing Point	°C	0	-3,63	-6,10	-8,93	-12,11	-15,74	-19,94	-24,79	-30,44	-37,10
Percent ethylene glycol	%	0	10	15	20	25	30	35	40	45	50
Qwc	-	1,000	1,033	1,040	1,049	1,060	1,072	1,086	1,102	1,120	1,141
Pc	-	1,000	0,990	0,985	0,980	0,975	0,970	0,965	0,960	0,955	0,950
Pa	-	1,000	0,996	0,994	0,992	0,990	0,988	0,986	0,984	0,982	0,980
Dp	-	1,000	1,109	1,157	1,209	1,268	1,336	1,414	1,505	1,609	1,728

Average water temperature = 9,5 °C

HEATING MODE

CORRECTION FACTOR WITH ETHYLENE GLYCOL - HEATING MODE											
Freezing Point	°C	0	-3,63	-6,10	-8,93	-12,11	-15,74	-19,94	-24,79	-30,44	-37,10
Percent ethylene glycol	%	0	10	15	20	25	30	35	40	45	50
Qwh	-	1,000	1,027	1,038	1,050	1,063	1,078	1,095	1,114	1,135	1,158
Ph	-	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Pa	-	1,000	1,002	1,003	1,004	1,005	1,007	1,008	1,010	1,012	1,015
Dp	-	1,000	1,087	1,128	1,175	1,227	1,286	1,353	1,428	1,514	1,610

Average water temperature = 42,5 °C

Qwc: Corrective factor of flow rates (middle water temperatur 9,5°C)
Qwh: Corrective factor of flow rates (middle water temperatur 42,5°C)
Pc: Corrective factor of cooling capacity
Ph: Corrective factor of heating capacity
Pa: Corrective factor of imput power
Dp: Corrective factor of pressure drop

PROPYLENE GLYCOL

COOLING MODE

CORRECTION FACTOR WITH PROPILENE GLYCOL - COOLING MODE											
Freezing Point	°C	0	-3,43	-5,30	-7,44	-9,98	-13,08	-16,86	-21,47	-27,04	-33,72
Percent PROPILENE glycol	%	0	10	15	20	25	30	35	40	45	50
Qwc	-	1,000	1,007	1,006	1,007	1,010	1,015	1,022	1,032	1,044	1,058
Pc	-	1,000	0,985	0,978	0,970	0,963	0,955	0,947	0,939	0,932	0,924
Pa	-	1,000	0,996	0,994	0,992	0,990	0,988	0,986	0,984	0,982	0,980
Dp	-	1,000	1,082	1,102	1,143	1,201	1,271	1,351	1,435	1,520	1,602

Average water temperature = 9,5 °C

HEATING MODE

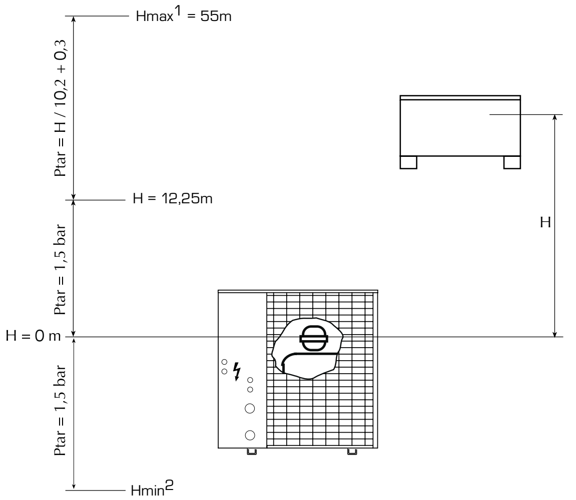
CORRECTION FACTOR WITH PROPILENE GLYCOL - HEATING MODE											
Freezing Point	°C	0	-3,43	-5,30	-7,44	-9,98	-13,08	-16,86	-21,47	-27,04	-33,72
Percent PROPILENE glycol	%	0	10	15	20	25	30	35	40	45	50
Qwh	-	1,000	1,008	1,014	1,021	1,030	1,042	1,055	1,071	1,090	1,112
Ph	-	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Pa	-	1,000	1,003	1,004	1,005	1,007	1,009	1,011	1,014	1,018	1,023
Dp	-	1,000	1,050	1,077	1,111	1,153	1,202	1,258	1,321	1,390	1,467

Average water temperature =42,5 °C

Qwc: Corrective factor of flow rates (middle water temperatur 9,5°C)
Qwh: Corrective factor of flow rates (middle water temperatur 42,5°C)
Pc: Corrective factor of cooling capacity
Ph: Corrective factor of heating capacity
Pa: Corrective factor of imput power
Dp: Corrective factor of pressure drop

EXPANSION TANK PRESSURE SETTING

The standard pressure setting that the expansion tank is pre-charged to is 1.5 bar, the maximum value is 6 bar.
The expansion tank pressure setting has to be adjusted based on the difference in height (H) of the installation (see figure) according to the formula:
p (rating) [bar] = H [m] / 10.2 + 0.3.
For example, if the difference in height H is 20 m then the value of the expansion tank pressure setting p is 2.3 bar.
If the calculated pressure setting value is less than 1.5 bar (when H < 12.25), maintain the standard pressure setting



LEGEND
(1) Ensure highest system point does not exceed 55 m difference.

(2) Ensure that the lowest point of the system can handle the total pressure.

ANL 020-025-030						
Hydraulic height	**H m**	**30**	**25**	**20**	**15**	**≥ 12.25**
Expansion tank setting	bar	3.2	2.8	2.3	1.8	1.5
Water content reference value	l (1)	103	121	139	158	168
Water content reference value	l (2)	46	55	63	71	76

ANL 040-050-080-090						
Hydraulic height	**H m**	**30**	**25**	**20**	**15**	**≥ 12.25**
Expansion tank setting	bar	3.2	2.8	2.3	1.8	1.5
Water content reference value	l (1)	257	303	348	394	419
Water content reference value	l (2)	116	136	157	177	189

MINIMUM WATER CONTENT

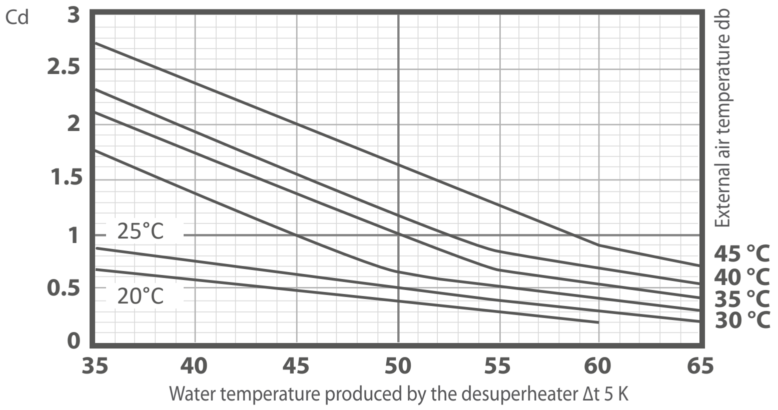
Minimum recommended water content (ANL|ANLH)		**020**	**025**	**030**	**040**	**050**	**070**	**080**	**090**	**102**	**152**	**202**
Number of compressors	n°	1	1	1	1	1	1	1	1	2	2	2
For air conditioning systems	l/kW	4										
For systems with process water	l/kW	8										

WARNING:
It is recommended to design for a high system water content (the table shows the minimum recommended), to limit:
1. The frequency of changes in operating modes.
2. The reduction of water temperature during the defrost cycle in winter periods.

DESUPERHEATER

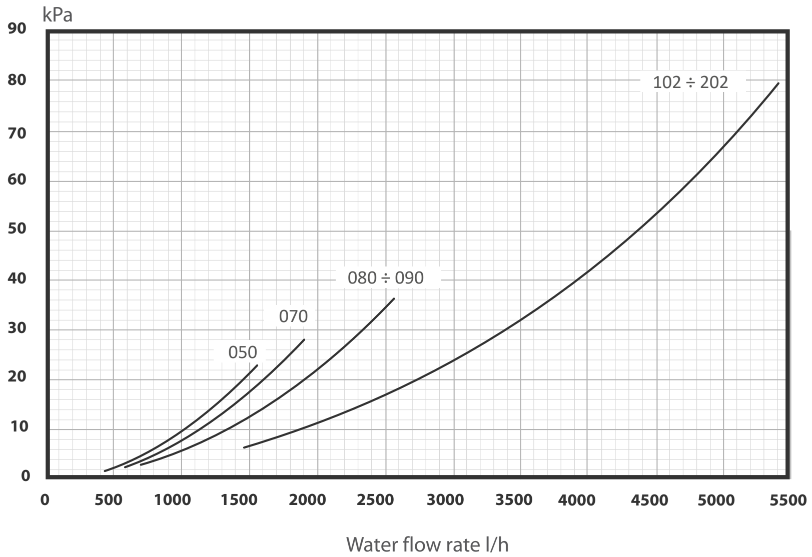
CORRECTION FACTORS

The heating capacity provided by the desuperheater is obtained by multiplying the nominal value with the coefficient (Cd).
The diagram allows the correction coefficient to be obtained as a function of external air temperature and water temperature produced by the desuperheater.
WARNING: The desuperheater can only be used in cooling mode. In heating mode is must be isolated.



PRESSURE DROP

Desuperheater		020	025	030	040	050	070	080	090	102	152	202
Recovered capacity [2]	kW	-	-	-	-	5,4	6,6	8,2	8,9	13,8	17,10	18,90
Water flow rate desuperheater	l/h	-	-	-	-	930	1140	1410	1530	2374	2941	3251
Pressure drop desuperheater	kPa	-	-	-	-	8	10	11	13	14	24	30



Average water temperature oC	**30**	**40**	**50**	**60**	**70**
Correction coefficient	1,04	1,02	**1**	0,98	0,96

REFRIGERANT PIPING

		REFRIGERANT PIPING		
Model	**Piping length [m]**	**Gas line Ø [mm]**	**Liquid line Ø [mm]**	**R410A [g/m]**
ANL 020 C	0-10	12,7	9,52	70
	10-20	12,7	9,52	70
	20-30	12,7	9,52	70
ANL 025 C	0-10	12,7	9,52	70
	10-20	12,7	9,52	70
	20-30	12,7	9,52	70
ANL 030 C	0-10	12,7	12,7	120
	10-20	12,7	12,7	120
	20-30	15,88	12,7	130
ANL 040 C	0-10	12,7	12,7	120
	10-20	15,88	12,7	130
	20-30	15,88	12,7	130
ANL 050 C	0-10	15,88	15,88	190
	10-20	15,88	15,88	190
	20-30	18	15,88	190
ANL 070 C	0-10	15,88	15,88	190
	10-20	18	15,88	190
	20-30	18	15,88	190
ANL 080 C	0-10	15,88	15,88	190
	10-20	18	15,88	190
	20-30	22	15,88	210
ANL 090 C	0-10	18	15,88	190
	10-20	22	15,88	210
	20-30	22	15,88	210
ANL 102 C	0-10	28,00	15,88	230
	10-20	28,00	15,88	230
	20-30	28,00	15,88	230
ANL 152 C	0-10	28,00	15,88	230
	10-20	28,00	15,88	230
	20-30	28,00	15,88	230
ANL 202 C	0-10	35,00	15,88	260
	10-20	35,00	18,00	310
	20-30	35,00	18,00	310

SOUND DATA

Sound power

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

Sound pressure

Sound pressure in free field conditions over a reflective plane (directivity factor Q=2) in accordance with ISO 3744.

COOLING

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

ANL/ ANLH	Total sound levels			Octave band [Hz]						
	Pot. dB(A)	Pressure		125	250	500	1000	2000	4000	8000
		dB(A) 10m	dB(A) 1m	Sound power by centre octave band [dB] (A)						
020	61	29,8	46,8	53,9	55,5	55,9	52,7	47,9	42	34,6
025	61	29,8	46,8	53,9	55,5	55,90	52,7	47,9	42	34,6
030	68	36,8	53,6	59,3	61	60,8	63,5	57,9	52,2	43,5
040	68	36,8	53,6	59,3	61	60,8	63,5	57,9	52,2	43,5
050	69	37,6	53,9	60,4	60,6	61,6	64,6	60,1	54,7	45
070	69	37,6	53,9	60,4	60,6	61,6	64,6	60,1	54,7	45
080	69	37,6	53,9	57,7	60,8	62,6	64,1	60,7	57,5	49,9
090	68	36,6	52,9	57,9	59,9	61,3	62,2	60,5	57,4	47
102	76	44,5	59,8	61,2	66	71,4	72	68,9	60,5	48,6
152	77	45,5	60,8	62,4	67,3	72,2	72,7	69,7	61,5	49,6
202	78	46,5	61,8	63,6	68,4	73,4	73,5	70,5	62,5	50,6

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