Climaveneta Technical Brochures
NX-N 0152P - 0812P_201404_EN HCF R410A
ELCA_Engine ver.1.5.1.55

NX-N 0152P - 0812P

NEW!

35,8-219 kW | **Reversible unit, air source for outdoor installation**

(The photo of the unit is indicative and may vary depending on the model)

- REFRIGERANT GAS R410A
- ELECTRONIC EXPANSION VALVE
- CLASS A EFFICIENCY
- EXTENSIVE RANGE OF OPERATION
- COMPLIANCE WITH THE STRICTEST EUROPEAN STANDARDS
- TWO SOUND EMISSION LEVELS
- INTEGRATED HYDRONIC MODULE

CERTIFICATIONS

Product certifications

Voluntary product certifications

This company participates in the Eurovent Certification Programme. The products are listed in the Directory of certified products.
The Eurovent certificate, for the applicable units, refers to products with cooling capacity up to 600 kW, voluntarily extended up to 1500 kW, for air-cooled models and water-cooled models.

System certifications

Climaveneta S.p.A.:

Quality System complying with the requirements of UNI EN ISO9001:2008 regulation

Environmental Management System complying with the requirements of UNI EN ISO14001:2004 regulation

The units highlighted in this publication contain HFC R410A [GWP_{100} 2088] fluorinated greenhouse gases.

LEGEND

Functions

Cooling

Heating

Refrigerant

R-410A

Compressors

Scroll compressor

Fan

Axial fan

Exchangers

Plates

Other features

Energy Class A

Eurovent

2.2 GREEN CERTIFICATION RELEVANT

Climaveneta as a major player in the world HVAC market and a leading manufacturer of energy efficient, sustainable HVAC solutions, recognizes and supports the diffusion of green certification systems, as an effective way to deliver high performance buildings and improve the quality and the sustainability of the built environment.

Since the first certification system was introduced at the beginning of the 1990s, the demand for certified buildings has grown considerably, as well as the number of standards, rating and certification programs. Operating worldwide Climaveneta has extensive experience with many of them and is active member of Green Building Council Italy.

Climaveneta commitment to develop responsible and sustainable HVAC solutions, is reflected by a full range of premium efficiency products and systems, designed with special care to improve building energy performance ratings, according to major certification protocols, including LEED, BREAM, GREENSTAR, BCA, NABERS, DNGB, HQE and BEAM.

To find out more about how our products contribute to enhanced green certification rating and energy performance of a building, please refer to:
http://www.climaveneta.com/GLOBAL/Company/Green-Certifications/
QR code

2.3 NX-N /K: NEW COMPACT REVERSIBLE UNITS

NX-N is the new Climaveneta reversible units, available in the new K version, combining the two main features of this unit: efficiency and compactness.
NX-N in fact achieves excellent levels of energy efficiency while at the same time occupying less area, making this unit the best solution in all installations where there is limited space available.
Along with its compact dimensions, NX-N also comes in two versions with different sound emission ratings, so as to comply with the strictest installation requirements.
The LN version reduce noise levels by up to 6dB(A) compared to the most compact version, making the NX-N the ideal solution for satisfying the most demanding installation needs not only in terms of efficiency and compactness, but also low noise.
This ensures maximum installation flexibility, an essential requirement when operating in restricted spaces or when replacing or upgrading existing systems.

2.4 NX-N /CA: NEW HIGH EFFICIENCY REVERSIBLE UNITS WITH ENERGY CLASS A (IN HEATING)

When energy efficiency is a fundamental prerequisite, the Climaveneta NX-N/CA represents the best solution, ensuring the highest efficiency, with Eurovent class A COP values, calculated based on European standard EN14511.
NX/CA also features three different versions as regards sound emissions.
In addition to the standard version, two further versions can be selected, LN-CA which reduce noise by up to 6dB(A) while maintaining the same energy efficiency class.
Indeed the main new feature that distinguishes the Climaveneta NX-N/CA units from other products available on the market is the availability of a selection of versions with different sound emissions however without affecting the energy efficiency class, rather maintaining exceptional efficiency, all rated Eurovent class A.

2.5 COMPACT VERSIONS WITH STANDARD EFFICIENCY

NX-N/K: reversible units with standard efficiency, compact version
NX-N/LN-K: reversible units with standard efficiency, compact and low noise version
NX-N/D /K: reversible units with standard efficiency, compact version, including desuperheater for partial recovery of the heat of condensation
NX-N/D /LN-K: reversible units with standard efficiency, compact and low noise version, including desuperheater for partial recovery of the heat of condensation.

2.6 COMPACT VERSIONS WITH HIGH EFFICIENCY

NX-N /CA: reversible units with high efficiency, compact version
NX-N /LN-CA: reversible units with high efficiency, compact and low noise version
NX-N /D /CA: reversible units with high efficiency, compact version, including desuperheater for partial recovery of the heat of condensation
NX-N /D /LN-CA: reversible units with high efficiency, compact and low noise version, including desuperheater for partial recovery of the heat of condensation.

2.7 UNIT STRUCTURE

Please refer to the following table for more details about the type of structure adopted on each size and version.

Model	Taglia / Size						
LVM	0152P	0182P	0202P	0252P	0262P	0302P	0352P
Version	Potenza frigorifera / Cooling capacity [kW]						
K	38,7	43,8	51	58,3	64,6	74,1	84,4
LN-K	35,8	39,8	46,8	53,4	60,4	69,9	77,9
CA	40	45,3	51,2	59,6	66,8	80,9	92
LN-CA	36,3	40,9	47,5	54,3	59,8	79,4	87,1

LVM	Struttura V-profondo / Longitudinal V-shaped coil module

Model	Taglia / Size						
LVM	0402P	0452P	0502P	0552P	0602P	0702P	0802P
DCM	-	-	-	0562P	0612P	0712P	0812P
Version	Potenza frigorifera / Cooling capacity [kW]						
K	100	113	125	138	162	180	199
LN-K	94,5	104	114	132	154	168	180
CA	102	116	131	153	170	198	219
LN-CA	99	110	125	144	165	189	221

LVM	Struttura V-profondo / Longitudinal V-shaped coil module
DCM	Struttura Bi-batteria / Dual coil module

2.8 UNITS
Longitudinal V-shaped coil module

2.9 UNITS
“Dual-coil” module

2.10 HOW TO SELECT THE UNITS
==========
NX-N /K
Compact standard efficiency version

NX-N /K
Standard version

NX-N /LN-K
Compared to the standard version
- retains the same dimensions
- noise reduction of up to 6dB(A)

==========
NX-N /CA
Class A high efficiency version (in heating mode)

NX-N /CA
Standard version

NX-N /LN-CA
Compared to the standard version
- retains the same dimensions
- retains Class A energy efficiency (in heating mode)
- noise reduction of up to 6dB(A)

3.1 PRODUCT PRESENTATION

Outdoor unit with heat pump for the production of chilled/hot water with hermetic rotary scroll compressors dedicated to the use of R410A, axial fans, plate heat exchanger, condensing coil with copper tubes and aluminum fins and thermostatic or electronic expansion valve, according to the version. The range is composed by units equipped with two compressors in a single-circuit configuration.

3.3 REFRIGERANT GAS R410A

The use of R410A allowed to achive better energy efficiencies with environment full respect (ODP = 0)

3.4 ELECTRONIC EXPANSION VALVE

The use of the electronic expansion valve generates considerable benefits, especially in cases of variable demand and different external conditions. It has been introduced into these units as a result of accurate design choices concerning the cooling circuit and the optimisation of operation in various different working conditions. The electronic expansion valve comes standard in the high-efficieny CA version.

3.5 CLASS A EFFICIENCY

The full range is also available with the Class A efficiency rating (in heating). NX-N/CA guaranties within all the noise configurations premium levels of efficiency thanks to the generous sizing of the refrigerant-exchange surface areas and to an accurate control of the fans.

3.6 EXTENSIVE RANGE OF OPERATION

Unit´s operation guaranteed with external air temperature down to -10°C during winter and up to 46°C during summer.

3.7 COMPLIANCE WITH THE STRICTEST EUROPEAN STANDARDS

The main new feature that distinguishes the new NX-N units regards the calculation methods used to define the energy efficiency values.
These values are in fact now calculated not only based on the capacity delivered and power consumed by the unit, but also taking into account heat exchanger pressure drop, or the available pressure head if the unit is installed with pumps, as required by European standard EN14511.
In this way, energy efficiency is no longer an index for evaluating the unit alone, but rather extends the assessment by considering the unit within the system, consequently taking into account the energy required to pump the refrigerant or heat carrier fluid used in the system.

3.8 TWO SOUND EMISSION LEVELS

The new NX-N appliances have two different sound emission levels. This means the best unit can be identified based on requirements, according to the system where it will be installed and the application.

3.9 INTEGRATED HYDRONIC MODULE

The optional built-in hydronic module already contains the main water circuit components; it is available with single or twin in-line, for achieving both low or high head.

4.2 Reversible unit, air source for outdoor installation
Outdoor unit with heat pump for the production of chilled/hot water with hermetic rotary scroll compressors dedicated to the use of R410A, axial fans, plate heat exchanger, condensing coil with copper tubes and aluminum fins and thermostatic or electronic expansion valve, according to the version. The range is composed by units equipped with two compressors in a single-circuit configuration.

4.3 Installation note
The unit is supplied fully refrigerant charged and factory tested. On site installation only requires power and hydraulic connection.

4.4 Structure
Structure specifically designed for outdoor installation. Basement and frame in hot-galvanised shaped sheet steel with a suitable thickness. All parts polyester-powder painted to assure total weather resistance (Longitudinal V-shaped coil module).

4.5 Structure
Frame with base in polyester-painted thick hot-galvanised sheet steel. Shaped aluminium walls (Dual coil module).

4.6 Panelling
Specific panelling for outdoor installation in aluminium alloy which ensures total resistance to atmospheric agents, easily removable, made in such a way as to allow total access to the internal components to facilitate inspection and maintenance work (Dual coil module).

4.7 Compressor
Hermetic scroll compressors in tandem layout complete with oil sump heater, electronic overheating protection with centralised manual reset and a two-pole electric motor.

4.8 Plant side heat exchanger
Braze welded AISI 316 steel plate heat exchanger. The heat exchangers are lined on the outside with closed-cell neoprene lagging. When the unit is not operating, these are protected against formation of ice on the inside by an electric heater with thermostat, while when the unit is operating protection is ensured by a differential pressure switch on the water side. The unit can also operate with non-freezing mixes, down to heat exchanger outlet temperatures of -8°C.

4.9 Source side heat exchanger
Finned coil exchanger made from copper tubes and aluminium fins. The aluminium fins are correctly spaced to guarantee optimum heat exchange efficiency. The differentiated circulation suitably distributes the liquid in the coil during the expansion phase.

4.10 Fan section source side
Axial electric fans, protected to IP 54, with external rotor and plastic-coated aluminium blades. Housed in aerodynamic hoods complete with safety grille. 6 - pole electric motor with built-in overload protection. Differentiated ventilation control disabling the fan section of inactive circuits.
Fans diameter: 450mm, 800mm, 910mm according to different sizes and versions.
Condensation control with adjustment of fan rotation speed.
- Continuous adjustment of the fan speed on units:
- versions K, sizes 0152P..0352P
  versions LN-K sizes 0152P..0302P
  versions CA sizes 0152P..0262P
  versions LN-CA, sizes 0152P..0262P
- Pressostatic fan's control:
- versions K sizes 0402P..0802P
- Adjustment of the fan speed with auto-transformer on units:
- versions LN-K sizes 0402P..0802P
  versions LN-CA, sizes 0302P..0812P

4.11 Refrigerant circuit
Main components of the cooling circuit:
- single circuit in tandem compressors
- crankcase heater on each compressor
- R410A refrigerant
- total ratio between refrigerant charge and cooling capacity* lower than 0,12 g/W (versions K, LN-K, CA)
- total ratio between refrigerant charge and cooling capacity* lower than 0,15 g/W (versions LN-CA)
- plate heat exchanger
- drier filter; with replaceable cartridge (sizes 0452..0812)
- refrigerant line sight glass with humidity indicator
- electronic expansion valves (versions CA, LN-CA)
- mechanical thermostatic expansion valves (versions K, LN-K)
- high and low pressure transducers
- high and low pressure safety valve
- high and low pressure switches
- liquid line solenoid valve (versions CA, LN-CA)
- liquid line shut-off valve (sizes 0452..0812)
- * Cooling capacity according to Eurovent conditions: water(in/out) 12/7°C, outdoor temperature 35°C

4.12 Electrical and control panel
Electrical and control panel built to EN60204-1 and EC204-1 standards, complete with:
- electric panel with double door
- control circuit transformer
- general door lock isolator
- numbered cables
- electric circuit breakers for compressors and fans
- terminals for cumulative alarm block
- remote ON/OFF terminals
- spring-type control circuit terminal board
- relays for remote pump(s) activation for both circuits (only for units without hydronic pumps)
- electronic controller
- multi-language user keypad with LCD display
- IP43 protection
- Power supply 400V/3ph/50Hz+N+PE for units:
- versions K, sizes 0152P..0352P
  versions LN-K sizes 0152P.. 0352P
  versions CA sizes 0152P..0262P
  versions LN-CA, sizes 0152P..0262P
- Power supply 400V/3ph/50Hz+PE for units:
- versions K, sizes 0402P..0802P
  versions LN-K sizes 0352P..0802P
  versions CA sizes 0302P..0812P
  versions LN-CA, sizes 0302P..0812P

4.13 Certification, reference standard
The unit complies with the following directives and relative amendments:
- EUROVENT Certification program
- CE Declaration of conformity certificate for the European Union
- GOST Product quality certificate for Russian Federation
- Machine directive 2006/42/EC
- Low Voltage directive 2006/95/EC
- ElectroMagnetic compatibility directive 89/336/EEC + 2004/108/EC
- PED directive 97/23/EC
- ISO 9001 Company´s Quality Management System certification
- ISO 14001 Company´s Environmental Management System certification

4.14 Tests
Tests performed throughout the production process, as indicated in ISO9001.
Performance or noise tests can be performed by highly qualified staff in the presence of customers.
Performance tests comprise the measurement of:
- electrical data
- water flow rates
- working temperatures
- power input
- power output
- pressure drops on the water-side exchanger both at full load (at the conditions of selection and at the most critical conditions for the condenser) and at part load conditions.

During performance testing it is also possible to simulate the main alarm states.
Noise tests are performed to check noise emissions according to ISO9614.

4.15 Electronic Controller (W3000 – W3000SE)
The controller in two different versions according to the unit's type:
W3000: electronic controller complete with keypad features an easy-to-use interface and a complete LCD display, allowing to consult and intervene on the unit by means of a menu up to three languages (Italian and English come standard, a further language can be chosen within French, Spanish, German, Russian and Swedish)
W3000SE: electronic controller complete with keypad features an easy-to-use interface and a complete LCD display, allowing to consult and intervene on the unit by means of a multi-language menu, with selectable language setting on site. This controller also includes an internal clock.
The W3000SE controller offers advanced functions and algorithms.
The keypad features an easy-to-use interface and a complete LCD display, allowing to consult and intervene on the unit by means of a multi-level menu, with selectable language setting.
The regulation is based on the exclusive QuickMind algorithm, including self-adaptive control logics, beneficial in low water content systems. As

alternatives the proportional- or proportional- integral regulations are also available.
The diagnostics includes a complete alarm management, with the “black-box” and alarm logging functions for enhanced analysis of the unit operation (available on W3000SE only).
For multiple units’ systems, the regulation of the resources, via optional proprietary devices, can be implemented. Energy metering, for both consumption and capacity, can also be developed.
Supervision can be easily developed via proprietary devices or the integration in third party systems by means of the most common protocols as ModBus, Bacnet, Bacnet-over-IP, Echelon LonWorks.
Compatibility with the remote keyboard managing up to 10 units.
The internal real time clock allows to manage a weekly schedule operating on 4-day profiles with 10 hour belts (available on W3000SE only, optional on W3000 controller).
The defrost adopts a proprietary self-adaptive logic, which features the monitoring of numerous operational parameters.
This allows to reduce the number and duration of the defrost cycles, with a benefit for the overall energy efficiency.

4.16 Electronic controller
Please refer to the following table for more details about the type of electronic controller adopted by each size and version.

Model	Taglia / Size						
LVM	0152P	0182P	0202P	0252P	0262P	0302P	0352P
Version	Controller						
K	W3000						
LN-K	W3000						
CA	W3000 SE						
LN-CA	W3000 SE						
LVM	Struttura V-profondo / Longitudinal V-shaped coil module						

Model	Taglia / Size						
LVM	0402P	0452P	0502P	0552P	0602P	0702P	0802P
DCM	-	-	-	0562P	0612P	0712P	0812P
Version	Controller						
K	W3000 SE						
LN-K	W3000 SE						
CA	W3000 SE			W3000 SE			
LN-CA	W3000 SE			W3000 SE			
LVM	Struttura V-profondo / Longitudinal V-shaped coil module						
DCM	Struttura Bi-batteria / Dual coil module						

4.17 Versions
/K – Compact with standard efficiency
Key efficiency, compact version.

/LN-K - Compact with standard efficiency, low noise
Key efficiency, compact and low-noise version.
This configuration features special soundproofing for the compressor chamber and pumps (if present) and a reduced fan speed. Fan speed is automatically increased, however, in the event of particularly tough environmental conditions.

/CA - Class A of efficiency
Class A of efficiency as per Eurovent (in heating mode).

/LN-CA - Class A low-noise
Class A low-noise, in accordance with Eurovent (in heating mode).
This configuration features special soundproofing for the compressor chamber and pumps (if present) and a reduced fan speed. Fan speed is automatically increased, however, in the event of particularly tough environmental conditions.

4.21 Configurations
< >, Standard unit
Reversible standard unit for production of chilled/hot water according to the selected operation mode.

/D, with Desuperheater
Unit for the production of water for the primary circuit and for sanitary purposes.
This version features an additional water/coolant heat exchanger on the gas delivery line, fitted in series with the traditional cooling circuit condenser. This allows to recover the de-superheating heat for the production of medium-to-high temperature water (secondary or recovery circuit). Hot water can be produced in the recovery circuit for domestic hot water and the like both in summer and winter. The heating capacity of this circuit is approximately equal to the power input of the compressor.

5.1. ACCESSORIES

	ACCESSORIES	DESCRIPTION	BENEFIT
881	Cu/Cu condensing coils	Air-refrigerant heat exchanger with copper fins and tubes.	Recommended for applications in corrosive atmospheres
894	Condensing coils with epoxy-coated fins	Painted air-refrigerant heat exchanger.	Recommended for applications in medium level pollution atmospheres.
895	Condensing coils with Fin Guard Silver treatment	Air-refrigerant heat exchanger with epoxidic treatment on coils and fins.	Recommended for marine exposure conditions, with an high level of pollution or other aggressive atmospheres.
1511	Soft start	Electronic device adopted to manage the inrush current.	Break down of the inrush current as soon as the electrical motor is switch on, lower motor's mechanical wear, avoidance of mains voltage fluctuations during starting, favourable sizing for the electrical system.
2011	Remote phase-sequence control	Relay for controlling the phase-sequence of mains.	Protects loads against faults due to incorrect connection of the electric line.
3601	Compressors' on/off signal	Auxiliary contacts providing a voltage-free signal	Allows remote signalling of compressor's activation or remote control of any auxiliary loads.
4181	ModBUS connectivity	Interface module for ModBUS protocols	Allows integration with BMS operating with ModBUS protocol
4184	BACnet connectivity	Interface module for BACnet protocols	Allows integration with BMS operating with BACnet protocol
4185	BACnet OVER IP connectivity	Interface module for BACnet OVER-IP protocols	Allows to interconnect BACnet devices over Internet Protocol within wide-area networks
4182	Echelon connectivity	Interface module for Echelon systems	Allows integration with BMS operating with LonWorks procotls
1401	HP and LP gauges	High and low pressure gauges.	Allows immediate reading of the pressure values on both low and high pressure circuits.
1901	Compressor suction valve	Shut-off solenoid valve on compressor's suction circuit.	Simplifies maintenance activities
1811	Compr. discharge line valve	Shut-off solenoid valve on compressor discharge circuit	Simplifies maintenance activities.
2021	Anti-intrusions grills	Anti-intrusions grills	Avoid the intrusion of solid bodies into the unit's structure
6163	Aux 4-20mA remote D L.C.	4..20mA analogue input, voltage-free digitale input. Allows to change the operating set-point according to value of current applied to 4..20mA input and to limit the unit's power (by activating the digital input).	Enforce Energy Saving policy, ensure safety operation.
802	DVV	Fan speed control according to the condensing pressure; the use of this device is mandatory in case the unit operates with low evaporator leaving water temperature setpoint further combined with a low outdoor temperature [See the section "Operating limit" for more further information]	Increase of the unit global efficiency thanks to a more accurate fans speed management. Improvement of the quietness in part load operating conditions. Extension of the unit operating range ensuring a safe operation down to -10°C outdoor air temperature.
819	DVVF	Fan speed control according to the condensing pressure; the use of this device is mandatory in case the unit operates with low evaporator leaving water temperature setpoint further combined with a low outdoor temperature [See the section "Operating limit" for more further information]	Increase of the unit global efficiency thanks to a more accurate fans speed management. Improvement of the quietness in part load operating conditions. Extension of the unit operating range ensuring a safe operation down to -10°C outdoor air temperature. Allows the unit to operate at even most extreme conditions avoiding any risk of low pressure intervention.
821	DVV2F	Fan speed control according to the condensing pressure; the use of this device is mandatory in case the unit operates with low evaporator leaving water temperature setpoint further combined with a low outdoor temperature [See the section "Operating limit" for more further information]	Increase of the unit global efficiency thanks to a more accurate fans speed management. Improvement of the quietness in part load operating conditions. Extension of the unit operating range ensuring a safe operation down to -10°C outdoor air temperature. Allows the unit to operate at even most extreme conditions avoiding any risk of low pressure intervention.
809	LT kit for low temperature	Extends the operating limits down to -10°C, applicable on LN versions only	Allows unit operation in heating mode in strong winter conditions
2430	Antifreeze on pipes	Electrical heaters on pipes .This option is mandatory if the unit is supposed to work with outdoor temperature below 0°C	It protects the unit against ice formation on its hydraulic components
2432	Antifreeze on pipess + pump	Electrical heaters on pipes and other hydraulic unit's components. This option is mandatory if the unit is supposed to work with outdoor temperature below 0°C	It protects the unit against ice formation on its hydraulic components
2433	Antifreeze on pipes + pumps + tank	Electrical heaters on pipes and water tank. This option is mandatory if the unit is supposed to work with outdoor temperature below 0°C	It protects the unit against ice formation on its hydraulic components

NX-N /K			0152P	0182P	0202P	0252P	0262P	0302P	0352P	0402P	0452P	0502P
Power supply		V/ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50	400/3/50	400/3/50
PERFORMANCE												
COOLING ONLY (GROSS VALUE)												
Cooling capacity	(1)	**kW**	**38,7**	**43,8**	**51,0**	**58,3**	**64,6**	**74,1**	**84,4**	**100**	**113**	**125**
Total power input	(1)	kW	13,7	15,8	18,4	20,5	23,3	28,2	32,1	35,7	40,7	45,2
EER	(1)		2,82	2,77	2,77	2,84	2,77	2,63	2,63	2,81	2,76	2,77
ESEER	(1)		4,01	4,03	4,18	3,94	3,96	3,89	4,03	3,73	3,82	3,87
COOLING ONLY (EN14511 VALUE)												
Cooling capacity	(1)(2)	kW	38,5	43,5	50,7	58,0	64,3	73,8	83,9	99,6	112	124
EER	(1)(2)		2,76	2,71	2,71	2,79	2,72	2,58	2,57	2,75	2,71	2,71
ESEER	(1)(2)		3,83	3,85	4,00	3,78	3,82	3,77	3,84	3,58	3,67	3,74
Cooling energy class			C	C	C	C	C	D	D	C	C	C
HEATING ONLY (GROSS VALUE)												
Total heating capacity	(3)	**kW**	**42,9**	**47,4**	**55,3**	**65,0**	**70,7**	**80,1**	**92,1**	**108**	**119**	**134**
Total power input	(3)	kW	14,0	15,5	18,0	21,3	22,8	26,0	29,6	35,5	39,2	42,9
COP	(3)		3,06	3,06	3,07	3,05	3,10	3,08	3,11	3,05	3,05	3,12
HEATING ONLY (EN14511 VALUE)												
Total heating capacity	(3)(2)	kW	43,2	47,7	55,6	65,4	71,1	80,5	92,7	109	120	135
COP	(3)(2)		3,02	3,02	3,03	3,02	3,07	3,05	3,07	3,01	3,01	3,08
Cooling energy class			B	B	B	B	B	B	B	B	B	B
COOLING WITH PARTIAL RECOVERY												
Cooling capacity	(4)	kW	40,2	45,4	52,9	60,5	67,1	76,9	87,6	104	117	130
Total power input	(4)	kW	13,3	15,3	17,8	19,9	22,5	27,3	31,1	34,5	39,4	43,7
Desuperheater heating capacity	(4)	**kW**	**11,2**	**13,0**	**15,3**	**16,7**	**19,2**	**23,5**	**27,1**	**28,3**	**32,7**	**36,7**
EXCHANGERS												
HEAT EXCHANGER USER SIDE IN REFRIGERATION												
Water flow	(1)	m³/h	6,67	7,54	8,78	10,0	11,1	12,8	14,5	17,2	19,4	21,5
Pressure drop	(1)	kPa	35,4	33,3	35,0	32,8	32,8	30,9	49,2	48,2	49,5	47,2
HEAT EXCHANGER USER SIDE IN HEATING												
Water flow	(3)	m³/h	7,46	8,23	9,62	11,3	12,3	13,9	16,0	18,8	20,8	23,3
Pressure drop	(3)	kPa	44,2	39,8	42,0	41,5	40,0	36,8	59,7	57,3	56,9	55,3
PARTIAL RECOVERY USER SIDE IN												
Water flow	(4)	m³/h	1,94	2,26	2,67	2,91	3,33	4,09	4,71	4,91	5,69	6,38
Pressure drop	(4)	kPa	6,66	9,05	12,6	14,9	19,6	14,6	19,3	21,0	19,8	25,0
COMPRESSORS												
Compressors nr.		N°	2	2	2	2	2	2	2	2	2	2
Number of capacity		N°	2	2	2	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1	1	1	1
Regulation			STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS
Min. capacity step		%	50	50	50	50	50	50	50	50	50	50
Refrigerant			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge		kg	12,6	14,0	15,8	16,7	16,9	17,0	25,5	31,9	35,8	44,3
Oil charge		kg	3,60	6,80	6,80	6,80	6,80	6,80	8,10	9,40	11,5	13,6
FANS												
Quantity		N°	4	4	4	6	6	6	6	2	2	2
Air flow		m³/s	5,24	5,24	5,09	7,85	7,85	7,85	7,66	11,5	11,5	11,9
Fans power		kW	0,30	0,30	0,30	0,30	0,30	0,30	0,30	2,00	2,00	2,00
NOISE LEVEL												
Noise Pressure	(5)	dB(A)	52	52	52	53	53	53	54	56	56	56
Noise Power	(6)	dB(A)	84	84	84	85	85	85	86	88	88	88
SIZE AND WEIGHT												
A	(7)	mm	1825	1825	1825	2395	2395	2395	2395	2825	2825	3360
B	(7)	mm	1195	1195	1195	1195	1195	1195	1195	1195	1195	1195
H	(7)	mm	1865	1865	1865	1865	1865	1865	1865	1980	1980	1980
Operating weight	(7)	kg	510	550	570	640	650	660	790	970	1020	1150

Notes:
1 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C
2 Values in compliance with EN14511-3:2011
3 Plant (side) heat exchanger water (in/out) 40,0°C/45,0°C; Source (side) heat exchanger air (in) 7,0°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C; Plant (side) heat exchanger recovery water (in/out) 40,0°C/45,0°C
5 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
7 Unit in standard configuration/execution, without optional accessories.
- Unavailable

NX-N /K			0552P	0602P	0702P	0802P
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE						
COOLING ONLY (GROSS VALUE)						
Cooling capacity	(1)	**kW**	**138**	**162**	**180**	**199**
Total power input	(1)	kW	52,3	58,2	67,6	77,7
EER	(1)		2,64	2,78	2,66	2,56
ESEER	(1)		3,87	3,78	3,80	3,69
COOLING ONLY (EN14511 VALUE)						
Cooling capacity	(1)(2)	kW	138	161	179	198
EER	(1)(2)		2,59	2,73	2,62	2,51
ESEER	(1)(2)		3,72	3,65	3,67	3,56
Cooling energy class			D	C	D	D
HEATING ONLY (GROSS VALUE)						
Total heating capacity	(3)	**kW**	**150**	**175**	**193**	**211**
Total power input	(3)	kW	48,6	57,0	63,2	69,5
COP	(3)		3,09	3,06	3,06	3,04
HEATING ONLY (EN14511 VALUE)						
Total heating capacity	(3)(2)	kW	151	176	194	213
COP	(3)(2)		3,05	3,03	3,03	3,01
Cooling energy class			B	B	B	B
COOLING WITH PARTIAL RECOVERY						
Cooling capacity	(4)	kW	143	168	186	206
Total power input	(4)	kW	50,6	56,4	65,5	75,2
Desuperheater heating capacity	(4)	**kW**	**43,4**	**46,6**	**55,0**	**64,0**
EXCHANGERS						
HEAT EXCHANGER USER SIDE IN REFRIGERATION						
Water flow	(1)	m³/h	23,8	27,9	30,9	34,2
Pressure drop	(1)	kPa	47,9	47,0	44,8	54,8
HEAT EXCHANGER USER SIDE IN HEATING						
Water flow	(3)	m³/h	26,1	30,3	33,6	36,7
Pressure drop	(3)	kPa	57,5	55,8	52,8	63,2
PARTIAL RECOVERY USER SIDE IN						
Water flow	(4)	m³/h	7,53	8,10	9,56	11,1
Pressure drop	(4)	kPa	23,4	27,0	25,3	34,2
COMPRESSORS						
Compressors nr.		N°	2	2	2	2
Number of capacity		N°	2	2	2	2
No. Circuits		N°	1	1	1	1
Regulation			STEPS	STEPS	STEPS	STEPS
Min. capacity step		%	50	50	50	50
Refrigerant			R410A	R410A	R410A	R410A
Refrigerant charge		kg	45,3	48,8	49,8	52,5
Oil charge		kg	13,1	12,6	12,6	12,6
FANS						
Quantity		N°	2	3	3	3
Air flow		m³/s	12,7	17,3	17,3	17,3
Fans power		kW	1,84	2,00	2,00	2,00
NOISE LEVEL						
Noise Pressure	(5)	dB(A)	58	58	58	59
Noise Power	(6)	dB(A)	90	90	90	91
SIZE AND WEIGHT						
A	(7)	mm	3360	3980	3980	3980
B	(7)	mm	1195	1195	1195	1195
H	(7)	mm	1980	1980	1980	1980
Operating weight	(7)	kg	1210	1330	1360	1380

Notes:
1 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C
2 Values in compliance with EN14511-3:2011
3 Plant (side) heat exchanger water (in/out) 40,0°C/45,0°C; Source (side) heat exchanger air (in) 7,0°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C; Plant (side) heat exchanger recovery water (in/out) 40,0°C/45,0°C
5 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
7 Unit in standard configuration/execution, without optional accessories.
- Unavailable

NX-N /LN-K			0152P	0182P	0202P	0252P	0262P	0302P	0352P	0402P	0452P	0502P
Power supply		V/ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50	400/3/50	400/3/50
PERFORMANCE												
COOLING ONLY (GROSS VALUE)												
Cooling capacity	(1)	**kW**	**35,8**	**39,8**	**46,8**	**53,4**	**60,4**	**69,9**	**77,9**	**94,5**	**104**	**114**
Total power input	(1)	kW	15,2	17,6	19,9	22,4	25,8	29,9	34,9	36,7	42,5	47,8
EER	(1)		2,36	2,26	2,35	2,38	2,34	2,34	2,23	2,57	2,44	2,38
ESEER	(1)		3,91	3,75	4,07	3,82	3,84	3,85	3,92	3,89	3,89	3,85
COOLING ONLY (EN14511 VALUE)												
Cooling capacity	(1)(2)	kW	35,6	39,6	46,6	53,1	60,1	69,6	77,5	94,0	103	113
EER	(1)(2)		2,31	2,22	2,31	2,35	2,31	2,30	2,19	2,53	2,40	2,35
ESEER	(1)(2)		3,75	3,62	3,91	3,68	3,71	3,72	3,77	3,75	3,75	3,73
Cooling energy class			E	F	E	E	E	E	F	D	E	E
HEATING ONLY (GROSS VALUE)												
Total heating capacity	(3)	**kW**	**42,9**	**47,4**	**55,3**	**65,0**	**70,7**	**80,1**	**92,1**	**108**	**119**	**134**
Total power input	(3)	kW	14,0	15,5	18,0	21,3	22,8	26,0	29,6	35,5	39,2	42,9
COP	(3)		3,06	3,06	3,07	3,05	3,10	3,08	3,11	3,05	3,05	3,12
HEATING ONLY (EN14511 VALUE)												
Total heating capacity	(3)(2)	kW	43,2	47,7	55,6	65,4	71,1	80,5	92,7	109	120	135
COP	(3)(2)		3,02	3,02	3,03	3,02	3,07	3,05	3,07	3,01	3,01	3,08
Cooling energy class			B	B	B	B	B	B	B	B	B	B
COOLING WITH PARTIAL RECOVERY												
Cooling capacity	(4)	kW	37,1	41,3	48,5	55,4	62,6	72,5	80,8	98,0	107	118
Total power input	(4)	kW	14,7	17,0	19,2	21,7	24,9	28,9	33,8	35,5	41,1	46,2
Desuperheater heating capacity	(4)	**kW**	**12,8**	**15,0**	**17,0**	**19,0**	**21,9**	**25,6**	**30,1**	**30,8**	**35,9**	**40,7**
EXCHANGERS												
HEAT EXCHANGER USER SIDE IN REFRIGERATION												
Water flow	(1)	m³/h	6,16	6,86	8,05	9,20	10,4	12,0	13,4	16,3	17,8	19,6
Pressure drop	(1)	kPa	30,2	27,6	29,4	27,5	28,6	27,5	41,9	42,9	42,0	39,2
HEAT EXCHANGER USER SIDE IN HEATING												
Water flow	(3)	m³/h	7,46	8,23	9,62	11,3	12,3	13,9	16,0	18,8	20,8	23,3
Pressure drop	(3)	kPa	44,2	39,8	42,0	41,5	40,0	36,8	59,7	57,3	56,9	55,3
PARTIAL RECOVERY USER SIDE IN												
Water flow	(4)	m³/h	2,23	2,60	2,96	3,29	3,81	4,45	5,23	5,35	6,25	7,07
Pressure drop	(4)	kPa	8,79	12,0	15,5	19,2	25,7	17,2	23,9	25,0	23,9	30,6
COMPRESSORS												
Compressors nr.		N°	2	2	2	2	2	2	2	2	2	2
Number of capacity		N°	2	2	2	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1	1	1	1
Regulation			STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS
Min. capacity step		%	50	50	50	50	50	50	50	50	50	50
Refrigerant			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge		kg	12,6	14,0	15,8	16,7	16,9	17,0	25,5	31,9	35,8	44,3
Oil charge		kg	3,60	6,80	6,80	6,80	6,80	6,80	8,10	9,40	11,5	13,6
FANS												
Quantity		N°	4	4	4	6	6	6	6	2	2	2
Air flow		m³/s	3,37	3,37	3,82	5,13	5,13	5,96	5,73	8,41	8,41	8,82
Fans power		kW	0,20	0,20	0,20	0,20	0,20	0,20	0,20	1,10	1,10	1,10
NOISE LEVEL												
Noise Pressure	(5)	dB(A)	45	45	45	46	47	48	50	51	51	51
Noise Power	(6)	dB(A)	77	77	77	78	79	80	82	83	83	83
SIZE AND WEIGHT												
A	(7)	mm	1825	1825	1825	2395	2395	2395	2395	2825	2825	3360
B	(7)	mm	1195	1195	1195	1195	1195	1195	1195	1195	1195	1195
H	(7)	mm	1865	1865	1865	1865	1865	1865	1865	1980	1980	1980
Operating weight	(7)	kg	510	560	580	650	660	670	800	1010	1100	1200

Notes:
1 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C
2 Values in compliance with EN14511-3:2011
3 Plant (side) heat exchanger water (in/out) 40,0°C/45,0°C; Source (side) heat exchanger air (in) 7,0°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C; Plant (side) heat exchanger recovery water (in/out) 40,0°C/45,0°C
5 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
7 Unit in standard configuration/execution, without optional accessories.
- Unavailable

NX-N /LN-K			0552P	0602P	0702P	0802P
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE						
COOLING ONLY (GROSS VALUE)						
Cooling capacity	(1)	**kW**	**132**	**154**	**168**	**180**
Total power input	(1)	kW	54,1	60,5	71,6	83,8
EER	(1)		2,43	2,55	2,35	2,14
ESEER	(1)		3,99	3,96	3,91	3,62
COOLING ONLY (EN14511 VALUE)						
Cooling capacity	(1)(2)	kW	131	154	168	179
EER	(1)(2)		2,39	2,51	2,32	2,11
ESEER	(1)(2)		3,85	3,82	3,78	3,50
Cooling energy class			E	D	E	F
HEATING ONLY (GROSS VALUE)						
Total heating capacity	(3)	**kW**	**150**	**175**	**193**	**211**
Total power input	(3)	kW	48,6	57,0	63,2	69,5
COP	(3)		3,09	3,06	3,06	3,04
HEATING ONLY (EN14511 VALUE)						
Total heating capacity	(3)(2)	kW	151	176	194	213
COP	(3)(2)		3,05	3,03	3,03	3,01
Cooling energy class			B	B	B	B
COOLING WITH PARTIAL RECOVERY						
Cooling capacity	(4)	kW	137	160	175	186
Total power input	(4)	kW	52,3	58,5	69,2	81,0
Desuperheater heating capacity	(4)	**kW**	**46,3**	**51,1**	**61,0**	**71,9**
EXCHANGERS						
HEAT EXCHANGER USER SIDE IN REFRIGERATION						
Water flow	(1)	m³/h	22,7	26,6	29,0	30,9
Pressure drop	(1)	kPa	43,4	42,8	39,3	44,7
HEAT EXCHANGER USER SIDE IN HEATING						
Water flow	(3)	m³/h	26,1	30,3	33,6	36,7
Pressure drop	(3)	kPa	57,5	55,8	52,8	63,2
PARTIAL RECOVERY USER SIDE IN						
Water flow	(4)	m³/h	8,04	8,87	10,6	12,5
Pressure drop	(4)	kPa	26,6	32,4	31,1	43,2
COMPRESSORS						
Compressors nr.		N°	2	2	2	2
Number of capacity		N°	2	2	2	2
No. Circuits		N°	1	1	1	1
Regulation			STEPS	STEPS	STEPS	STEPS
Min. capacity step		%	50	50	50	50
Refrigerant			R410A	R410A	R410A	R410A
Refrigerant charge		kg	45,3	48,8	49,8	52,5
Oil charge		kg	13,1	12,6	12,6	12,6
FANS						
Quantity		N°	2	3	3	3
Air flow		m³/s	10,4	12,6	12,6	12,6
Fans power		kW	1,15	1,10	1,10	1,10
NOISE LEVEL						
Noise Pressure	(5)	dB(A)	52	52	52	54
Noise Power	(6)	dB(A)	84	84	84	86
SIZE AND WEIGHT						
A	(7)	mm	3360	3980	3980	3980
B	(7)	mm	1195	1195	1195	1195
H	(7)	mm	1980	1980	1980	1980
Operating weight	(7)	kg	1250	1360	1410	1430

Notes:
1 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C
2 Values in compliance with EN14511-3:2011
3 Plant (side) heat exchanger water (in/out) 40,0°C/45,0°C; Source (side) heat exchanger air (in) 7,0°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C; Plant (side) heat exchanger recovery water (in/out) 40,0°C/45,0°C
5 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
7 Unit in standard configuration/execution, without optional accessories.
- Unavailable

NX-N /CA			0152P	0182P	0202P	0252P	0262P	0302P	0352P	0402P	0452P	0502P
Power supply		V/ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE												
COOLING ONLY (GROSS VALUE)												
Cooling capacity	(1)	**kW**	**40,0**	**45,3**	**51,2**	**59,6**	**66,8**	**80,9**	**92,0**	**102**	**116**	**131**
Total power input	(1)	kW	13,0	15,0	18,0	19,9	22,5	27,0	30,8	34,4	39,1	43,5
EER	(1)		3,08	3,02	2,84	2,99	2,97	3,00	2,99	2,97	2,97	3,01
ESEER	(1)		4,19	4,24	4,22	4,05	4,12	4,01	4,12	4,13	4,17	4,05
COOLING ONLY (EN14511 VALUE)												
Cooling capacity	(1)(2)	kW	39,7	45,0	50,9	59,3	66,5	80,5	91,4	102	116	130
EER	(1)(2)		3,00	2,95	2,78	2,93	2,91	2,94	2,91	2,90	2,91	2,94
ESEER	(1)(2)		3,97	4,03	4,03	3,88	3,96	3,85	3,89	3,94	3,96	3,88
Cooling energy class			B	B	C	B	B	B	B	B	B	B
HEATING ONLY (GROSS VALUE)												
Total heating capacity	(3)	**kW**	**46,1**	**51,0**	**59,0**	**69,5**	**74,5**	**86,8**	**98,6**	**110**	**122**	**138**
Total power input	(3)	kW	14,1	15,5	18,1	21,3	22,9	26,7	30,3	33,9	37,6	42,4
COP	(3)		3,27	3,29	3,26	3,26	3,25	3,25	3,25	3,26	3,25	3,26
HEATING ONLY (EN14511 VALUE)												
Total heating capacity	(3)(2)	kW	46,4	51,3	59,4	69,9	74,9	87,3	99,3	111	123	139
COP	(3)(2)		3,21	3,24	3,21	3,22	3,21	3,21	3,20	3,21	3,21	3,22
Cooling energy class			A	A	A	A	A	A	A	A	A	A
COOLING WITH PARTIAL RECOVERY												
Cooling capacity	(4)	kW	41,5	47,0	53,2	61,8	69,4	83,9	95,4	106	121	136
Total power input	(4)	kW	12,6	14,5	17,4	19,3	21,7	26,2	29,9	33,3	37,9	42,2
Desuperheater heating capacity	(4)	**kW**	**10,6**	**12,3**	**15,0**	**16,2**	**18,4**	**20,5**	**23,9**	**27,4**	**31,6**	**33,5**
EXCHANGERS												
HEAT EXCHANGER USER SIDE IN REFRIGERATION												
Water flow	(1)	m³/h	6,89	7,80	8,82	10,3	11,5	13,9	15,8	17,6	20,0	22,5
Pressure drop	(1)	kPa	37,7	35,7	35,3	34,2	35,1	36,9	58,4	50,1	52,8	51,8
HEAT EXCHANGER USER SIDE IN HEATING												
Water flow	(3)	m³/h	8,01	8,85	10,3	12,1	13,0	15,1	17,1	19,2	21,2	24,0
Pressure drop	(3)	kPa	51,0	46,0	47,8	47,4	44,5	43,2	68,4	59,6	59,5	58,8
PARTIAL RECOVERY USER SIDE IN												
Water flow	(4)	m³/h	1,84	2,14	2,61	2,81	3,20	3,57	4,16	4,76	5,50	5,82
Pressure drop	(4)	kPa	5,97	8,08	12,0	13,9	18,1	11,1	15,1	19,7	18,5	20,8
COMPRESSORS												
Compressors nr.		N°	2	2	2	2	2	2	2	2	2	2
Number of capacity		N°	2	2	2	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1	1	1	1
Regulation			STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS
Min. capacity step		%	50	50	50	50	50	50	50	50	50	50
Refrigerant			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge		kg	14,0	15,5	15,6	16,8	17,1	19,9	30,0	34,5	38,0	44,5
Oil charge		kg	3,60	6,80	6,80	6,80	6,80	6,80	8,10	9,40	11,5	13,6
FANS												
Quantity		N°	4	4	4	6	6	2	2	2	2	3
Air flow		m³/s	5,40	5,40	5,40	7,66	7,66	11,5	11,9	12,7	12,7	17,3
Fans power		kW	0,30	0,30	0,30	0,30	0,30	2,00	2,00	1,84	1,84	2,00
NOISE LEVEL												
Noise Pressure	(5)	dB(A)	52	52	52	53	53	56	56	57	57	58
Noise Power	(6)	dB(A)	84	84	84	85	85	88	88	89	89	90
SIZE AND WEIGHT												
A	(7)	mm	2395	2395	2395	2395	2395	2825	3360	3360	3360	3980
B	(7)	mm	1195	1195	1195	1195	1195	1195	1195	1195	1195	1195
H	(7)	mm	1865	1865	1865	1865	1865	1980	1980	1980	1980	1980
Operating weight	(7)	kg	590	640	640	670	670	800	990	1120	1170	1290

Notes:
1 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C
2 Values in compliance with EN14511-3:2011
3 Plant (side) heat exchanger water (in/out) 40,0°C/45,0°C; Source (side) heat exchanger air (in) 7,0°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C; Plant (side) heat exchanger recovery water (in/out) 40,0°C/45,0°C
5 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
7 Unit in standard configuration/execution, without optional accessories.
- Unavailable

NX-N /CA			0562P	0612P	0712P	0812P
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE						
COOLING ONLY (GROSS VALUE)						
Cooling capacity	(1)	**kW**	**153**	**170**	**198**	**219**
Total power input	(1)	kW	51,3	56,5	66,5	72,2
EER	(1)		2,97	3,00	2,97	3,04
ESEER	(1)		4,04	4,05	3,93	3,86
COOLING ONLY (EN14511 VALUE)						
Cooling capacity	(1)(2)	kW	152	169	197	218
EER	(1)(2)		2,91	2,94	2,92	2,97
ESEER	(1)(2)		3,84	3,89	3,77	3,70
Cooling energy class			B	B	B	B
HEATING ONLY (GROSS VALUE)						
Total heating capacity	(3)	**kW**	**161**	**181**	**209**	**232**
Total power input	(3)	kW	49,7	55,6	64,4	71,2
COP	(3)		3,25	3,25	3,25	3,26
HEATING ONLY (EN14511 VALUE)						
Total heating capacity	(3)(2)	kW	162	182	210	234
COP	(3)(2)		3,20	3,21	3,21	3,22
Cooling energy class			A	A	A	A
COOLING WITH PARTIAL RECOVERY						
Cooling capacity	(4)	kW	158	176	205	228
Total power input	(4)	kW	49,8	54,8	64,6	70,1
Desuperheater heating capacity	(4)	**kW**	**38,7**	**43,3**	**48,6**	**53,8**
EXCHANGERS						
HEAT EXCHANGER USER SIDE IN REFRIGERATION						
Water flow	(1)	m³/h	26,3	29,2	34,0	37,8
Pressure drop	(1)	kPa	58,3	51,7	54,2	66,8
HEAT EXCHANGER USER SIDE IN HEATING						
Water flow	(3)	m³/h	28,0	31,4	36,4	40,4
Pressure drop	(3)	kPa	66,5	59,7	61,9	76,2
PARTIAL RECOVERY USER SIDE IN						
Water flow	(4)	m³/h	6,72	7,52	8,45	9,34
Pressure drop	(4)	kPa	18,6	23,3	19,8	24,2
COMPRESSORS						
Compressors nr.		N°	2	2	2	2
Number of capacity		N°	2	2	2	2
No. Circuits		N°	1	1	1	1
Regulation			STEPS	STEPS	STEPS	STEPS
Min. capacity step		%	50	50	50	50
Refrigerant			R410A	R410A	R410A	R410A
Refrigerant charge		kg	51,3	54,1	60,6	63,9
Oil charge		kg	13,1	12,6	12,6	12,6
FANS						
Quantity		N°	4	4	6	6
Air flow		m³/s	22,9	22,3	33,7	32,5
Fans power		kW	2,00	2,00	2,00	2,00
NOISE LEVEL						
Noise Pressure	(5)	dB(A)	59	59	60	61
Noise Power	(6)	dB(A)	91	91	92	93
SIZE AND WEIGHT						
A	(7)	mm	4110	4110	5110	5110
B	(7)	mm	2220	2220	2220	2220
H	(7)	mm	2150	2150	2150	2150
Operating weight	(7)	kg	1790	1890	2150	2260

Notes:
1 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C
2 Values in compliance with EN14511-3:2011
3 Plant (side) heat exchanger water (in/out) 40,0°C/45,0°C; Source (side) heat exchanger air (in) 7,0°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C; Plant (side) heat exchanger recovery water (in/out) 40,0°C/45,0°C
5 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
7 Unit in standard configuration/execution, without optional accessories.
- Unavailable

NX-N /LN-CA			0152P	0182P	0202P	0252P	0262P	0302P	0352P	0402P	0452P	0502P
Power supply		V/ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE												
COOLING ONLY (GROSS VALUE)												
Cooling capacity	(1)	**kW**	**36,3**	**40,9**	**47,5**	**54,3**	**59,8**	**79,4**	**87,1**	**99,0**	**110**	**125**
Total power input	(1)	kW	14,6	16,9	19,5	22,0	25,2	26,8	31,2	34,5	39,7	43,7
EER	(1)		2,49	2,42	2,44	2,47	2,37	2,96	2,79	2,87	2,77	2,86
ESEER	(1)		3,98	3,90	4,14	3,89	3,83	4,12	4,08	4,09	4,12	4,04
COOLING ONLY (EN14511 VALUE)												
Cooling capacity	(1)(2)	kW	36,1	40,7	47,3	54,0	59,5	79,0	86,6	98,4	109	124
EER	(1)(2)		2,44	2,38	2,39	2,43	2,34	2,91	2,73	2,81	2,71	2,80
ESEER	(1)(2)		3,81	3,76	3,97	3,75	3,70	3,96	3,88	3,90	3,93	3,89
Cooling energy class			E	E	E	E	E	B	C	C	C	C
HEATING ONLY (GROSS VALUE)												
Total heating capacity	(3)	**kW**	**46,1**	**51,0**	**59,0**	**69,5**	**74,5**	**86,8**	**98,6**	**110**	**122**	**138**
Total power input	(3)	kW	14,1	15,5	18,1	21,3	22,9	26,7	30,3	33,9	37,6	42,4
COP	(3)		3,27	3,29	3,26	3,26	3,25	3,25	3,25	3,26	3,25	3,26
HEATING ONLY (EN14511 VALUE)												
Total heating capacity	(3)(2)	kW	46,4	51,3	59,4	69,9	74,9	87,3	99,3	111	123	139
COP	(3)(2)		3,21	3,24	3,21	3,22	3,21	3,21	3,20	3,21	3,21	3,22
Cooling energy class			A	A	A	A	A	A	A	A	A	A
COOLING WITH PARTIAL RECOVERY												
Cooling capacity	(4)	kW	37,6	42,5	49,3	56,4	62,1	82,4	90,4	103	114	130
Total power input	(4)	kW	14,2	16,4	18,8	21,3	24,4	25,9	30,2	33,4	38,4	42,2
Desuperheater heating capacity	(4)	**kW**	**12,4**	**14,4**	**16,7**	**18,6**	**21,4**	**22,0**	**25,9**	**28,8**	**33,4**	**36,0**
EXCHANGERS												
HEAT EXCHANGER USER SIDE IN REFRIGERATION												
Water flow	(1)	m³/h	6,24	7,05	8,18	9,35	10,3	13,7	15,0	17,0	18,9	21,5
Pressure drop	(1)	kPa	31,0	29,1	30,4	28,4	28,1	35,5	52,4	47,0	47,3	47,1
HEAT EXCHANGER USER SIDE IN HEATING												
Water flow	(3)	m³/h	8,01	8,85	10,3	12,1	13,0	15,1	17,1	19,2	21,2	24,0
Pressure drop	(3)	kPa	51,0	46,0	47,8	47,4	44,5	43,2	68,4	59,6	59,5	58,8
PARTIAL RECOVERY USER SIDE IN												
Water flow	(4)	m³/h	2,15	2,50	2,90	3,22	3,72	3,82	4,49	5,00	5,80	6,26
Pressure drop	(4)	kPa	8,15	11,1	14,8	18,4	24,5	12,7	17,6	21,8	20,6	24,0
COMPRESSORS												
Compressors nr.		N°	2	2	2	2	2	2	2	2	2	2
Number of capacity		N°	2	2	2	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1	1	1	1
Regulation			STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS	STEPS
Min. capacity step		%	50	50	50	50	50	50	50	50	50	50
Refrigerant			R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge		kg	14,0	15,5	15,6	16,8	17,1	19,9	30,0	34,5	38,0	44,5
Oil charge		kg	3,60	6,80	6,80	6,80	6,80	6,80	8,10	9,40	11,5	13,6
FANS												
Quantity		N°	4	4	4	6	6	2	2	2	2	3
Air flow		m³/s	3,58	3,58	4,18	4,90	4,90	8,41	8,82	10,4	10,4	12,6
Fans power		kW	0,20	0,20	0,20	0,20	0,20	1,10	1,10	1,15	1,15	1,10
NOISE LEVEL												
Noise Pressure	(5)	dB(A)	45	45	45	46	47	50	51	52	52	52
Noise Power	(6)	dB(A)	77	77	77	78	79	82	83	84	84	84
SIZE AND WEIGHT												
A	(7)	mm	2395	2395	2395	2395	2395	2825	3360	3360	3360	3980
B	(7)	mm	1195	1195	1195	1195	1195	1195	1195	1195	1195	1195
H	(7)	mm	1865	1865	1865	1865	1865	1980	1980	1980	1980	1980
Operating weight	(7)	kg	600	640	650	710	720	840	1000	1130	1190	1300

Notes:
1 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C
2 Values in compliance with EN14511-3:2011
3 Plant (side) heat exchanger water (in/out) 40,0°C/45,0°C; Source (side) heat exchanger air (in) 7,0°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C; Plant (side) heat exchanger recovery water (in/out) 40,0°C/45,0°C
5 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
7 Unit in standard configuration/execution, without optional accessories.
- Unavailable

NX-N /LN-CA			0562P	0612P	0712P	0812P
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE						
COOLING ONLY (GROSS VALUE)						
Cooling capacity	(1)	**kW**	**144**	**165**	**189**	**212**
Total power input	(1)	kW	50,1	55,7	63,8	70,1
EER	(1)		2,88	2,97	2,96	3,03
ESEER	(1)		4,01	4,12	3,95	3,91
COOLING ONLY (EN14511 VALUE)						
Cooling capacity	(1)(2)	kW	144	164	188	211
EER	(1)(2)		2,82	2,91	2,91	2,97
ESEER	(1)(2)		3,82	3,97	3,80	3,76
Cooling energy class			C	B	B	B
HEATING ONLY (GROSS VALUE)						
Total heating capacity	(3)	**kW**	**161**	**181**	**209**	**232**
Total power input	(3)	kW	49,7	55,6	64,4	71,2
COP	(3)		3,25	3,25	3,25	3,26
HEATING ONLY (EN14511 VALUE)						
Total heating capacity	(3)(2)	kW	162	182	210	234
COP	(3)(2)		3,20	3,21	3,21	3,22
Cooling energy class			A	A	A	A
COOLING WITH PARTIAL RECOVERY						
Cooling capacity	(4)	kW	150	172	196	220
Total power input	(4)	kW	48,5	53,9	61,8	67,8
Desuperheater heating capacity	(4)	**kW**	**40,8**	**45,8**	**51,0**	**56,6**
EXCHANGERS						
HEAT EXCHANGER USER SIDE IN REFRIGERATION						
Water flow	(1)	m³/h	24,8	28,5	32,5	36,6
Pressure drop	(1)	kPa	52,1	49,1	49,5	62,6
HEAT EXCHANGER USER SIDE IN HEATING						
Water flow	(3)	m³/h	28,0	31,4	36,4	40,4
Pressure drop	(3)	kPa	66,5	59,7	61,9	76,2
PARTIAL RECOVERY USER SIDE IN						
Water flow	(4)	m³/h	7,08	7,96	8,87	9,84
Pressure drop	(4)	kPa	20,7	26,1	21,8	26,8
COMPRESSORS						
Compressors nr.		N°	2	2	2	2
Number of capacity		N°	2	2	2	2
No. Circuits		N°	1	1	1	1
Regulation			STEPS	STEPS	STEPS	STEPS
Min. capacity step		%	50	50	50	50
Refrigerant			R410A	R410A	R410A	R410A
Refrigerant charge		kg	51,3	54,1	60,6	63,9
Oil charge		kg	13,1	12,6	12,6	12,6
FANS						
Quantity		N°	4	4	6	6
Air flow		m³/s	16,7	16,0	24,2	23,0
Fans power		kW	1,10	1,10	1,10	1,10
NOISE LEVEL						
Noise Pressure	(5)	dB(A)	53	53	54	55
Noise Power	(6)	dB(A)	85	85	86	87
SIZE AND WEIGHT						
A	(7)	mm	4110	4110	5110	5110
B	(7)	mm	2220	2220	2220	2220
H	(7)	mm	2150	2150	2150	2150
Operating weight	(7)	kg	1800	1900	2160	2270

Notes:
1 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C
2 Values in compliance with EN14511-3:2011
3 Plant (side) heat exchanger water (in/out) 40,0°C/45,0°C; Source (side) heat exchanger air (in) 7,0°C - 87% R.H.
4 Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C; Plant (side) heat exchanger recovery water (in/out) 40,0°C/45,0°C
5 Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.
6 Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.
7 Unit in standard configuration/execution, without optional accessories.
- Unavailable

PERFORMANCE BASED ON EN14511

All the units certified by Eurovent have the performance statements with the traditional index (GROSS value) and with new index based on EN141511 (EN14511 value).

This set of rules redefines the method to calculate the chillers and heat pumps performance. The news is that, according to the EN14511-2011, water pressure drops on heat exchangers and fans and pumps available head (for ducted and pumps on board units) enter in the unit efficiency calculation. Up to now they have not been considered since an effective method was not defined yet.

From 2013, January the 1st, Eurovent declares only the units cooling and heating capacity, efficiency (EER, COP and ESEER) and product classification based on EN14511

The performance according to EN 14511 shall be calculated according to the following logic:

$$P_{\underset{EN14511}{cooling}} = P_{cooling} - P_{abs.\Delta p}$$

$$P_{\underset{EN14511}{heating}} = P_{heating} + P_{abs.\Delta p}$$

$$P_{\underset{EN14511}{abs}} = P_{abs} + P_{abs.\Delta p}$$

$$EER_{EN14511} = \frac{P_{\underset{EN14511}{cooling}}}{P_{\underset{EN14511}{abs}}}$$

$$COP_{EN14511} = \frac{P_{\underset{EN14511}{heating}}}{P_{\underset{EN14511}{abs}}}$$

$$ESEER_{EN14511} = 0.03 * EER_{\underset{EN14511}{100\%}} + 0.33 * EER_{\underset{EN14511}{75\%}} + 0.41 * EER_{\underset{EN14511}{50\%}} + 0.23 * EER_{\underset{EN14511}{25\%}}$$

dove:

$P_{cooling}, P_{heating}$ Cooling and heating capacity unit [kW]

P_{abs} Power input by compressor and (if present) fans [kW]

$P_{abs.\Delta p}$ Ideal fluid pump power input to overcome the pressure drop of the refrigerant/water exchangers [kW]

$P_{\underset{EN14511}{cooling}}, P_{\underset{EN14511,}{heating}} P_{\underset{EN14511}{abs}}, EER_{EN14511}, COP_{EN14511}, ESEER_{EN14511}$ Performance in accordance with EN14511

7.1. FAN STRUCTURE AND CONTROL

The table shows the dimensions of the fans used on the different unit sizes and versions.

Fan diameter [mm]		NX-N																	
	VERSION	0152P	0182P	0202P	0252P	0262P	0302P	0352P	0402P	0452P	0502P	0552P	0562P	0602P	0612P	0702P	0712P	0802P	0812P
450	K	CONT	CONT	CONT	CONT	CONT	CONT	CONT	-	-	-	-	-	-	-	-	-	-	-
	LN-K	CONT	CONT	CONT	CONT	CONT	CONT	CONT	-	-	-	-	-	-	-	-	-	-	-
	CA	CONT	CONT	CONT	CONT	CONT	-	-	-	-	-	-	-	-	-	-	-	-	-
	LN-CA	CONT	CONT	CONT	CONT	CONT	-	-	-	-	-	-	-	-	-	-	-	-	-
800	K	-	-	-	-	-	-	-	PRES	PRES	PRES	-	-	PRES	-	PRES	-	PRES	-
	LN-K	-	-	-	-	-	-	-	TRA	TRA	TRA	-	-	TRA	-	TRA	-	TRA	-
	CA	-	-	-	-	-	TRA	TRA	-	-	TRA	-	TRA	-	TRA	-	TRA	-	TRA
	LN-CA	-	-	-	-	-	TRA	TRA	-	-	TRA	-	TRA	-	TRA	-	TRA	-	TRA
910	K	-	-	-	-	-	-	-	-	-	-	PRES	-	-	-	-	-	-	-
	LN-K	-	-	-	-	-	-	-	-	-	-	TRA	-	-	-	-	-	-	-
	CA	-	-	-	-	-	-	-	TRA	TRA	-	-	-	-	-	-	-	-	-
	LN-CA	-	-	-	-	-	-	-	TRA	TRA	-	-	-	-	-	-	-	-	-

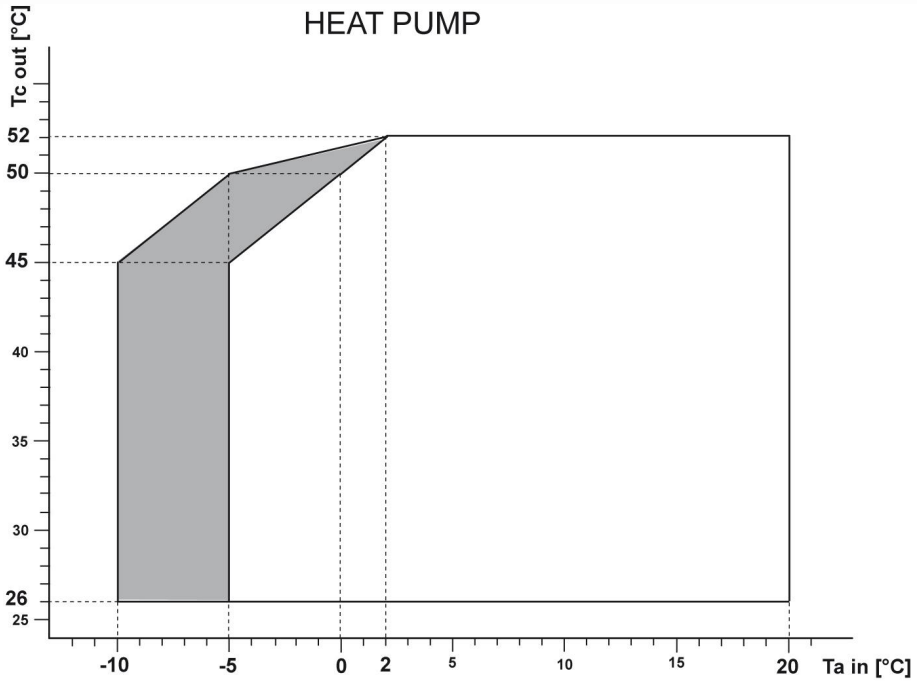
The table shows the type of fan control adopted on the new NX units:

CONT = Continuous fan control by phase-cutting

PRES = Fan control by pressure, deactivates one or more fans.
Fan control by autotransformer can also be chosen for these units (option code 802)

TRA = Fan control by autotransformer

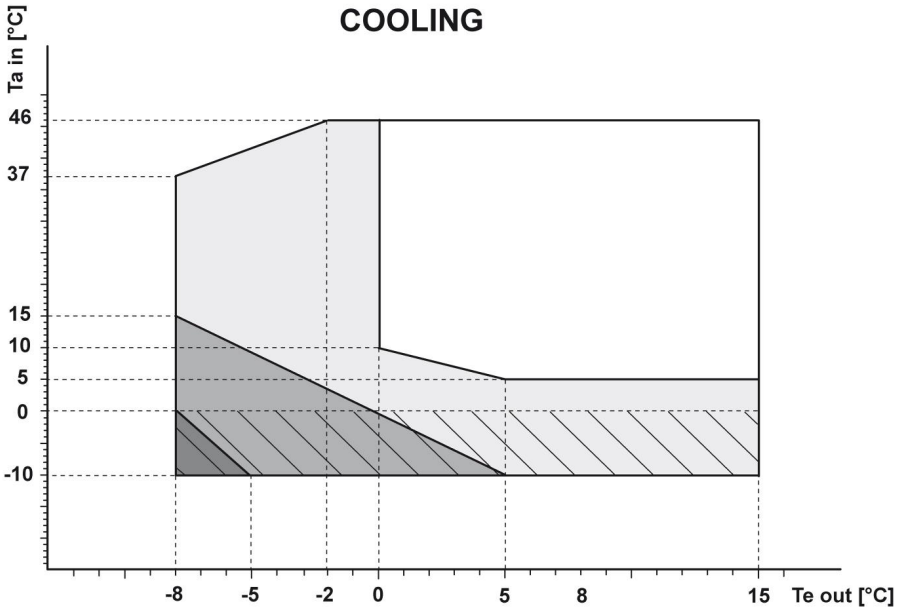
Important
Units with fan control by pressure **[PRES]** have an operating range limited to above-zero water and outside air temperatures
To extend the operating temperature range to below-zero temperatures, fan control by autotransformer, code 802 **[TRA]** must be used.
See the section on operating limits for further details.



Ta in Outdoor air temperature [°C]

Te out Plant (side) heating exchanger water temperature [°C]

LT Kit option (809) required (Only for CA and LN-CA version)



Ta in Outdoor air temperature [°C]

Te out Plant (side) cooling exchanger water temperature [°C]

Pressostatic control DP option (801) required (Only for size 0402..0802 - K version)

DVV option (802) required

DVVF option (819) required

DVV2F option (821) required

Antifreeze on pipes +pumps option (2432) required if hydronic kit is present

SIZE		
NX-N /K /0152P	NX-N /D /LN-K /0702P	NX-N /D /LN-CA /0562P
NX-N /K /0182P	NX-N /D /LN-K /0802P	NX-N /D /LN-CA /0612P
NX-N /K /0202P	NX-N /CA /0152P	NX-N /D /LN-CA /0712P
NX-N /K /0252P	NX-N /CA /0182P	NX-N /D /LN-CA /0812P
NX-N /K /0262P	NX-N /CA /0202P	
NX-N /K /0302P	NX-N /CA /0252P	
NX-N /K /0352P	NX-N /CA /0262P	
NX-N /K /0402P	NX-N /CA /0302P	
NX-N /K /0452P	NX-N /CA /0352P	
NX-N /K /0502P	NX-N /CA /0402P	
NX-N /K /0552P	NX-N /CA /0452P	
NX-N /K /0602P	NX-N /CA /0502P	
NX-N /K /0702P	NX-N /CA /0562P	
NX-N /K /0802P	NX-N /CA /0612P	
NX-N /D /K /0152P	NX-N /CA /0712P	
NX-N /D /K /0182P	NX-N /CA /0812P	
NX-N /D /K /0202P	NX-N /D /CA /0152P	
NX-N /D /K /0252P	NX-N /D /CA /0182P	
NX-N /D /K /0262P	NX-N /D /CA /0202P	
NX-N /D /K /0302P	NX-N /D /CA /0252P	
NX-N /D /K /0352P	NX-N /D /CA /0262P	
NX-N /D /K /0402P	NX-N /D /CA /0302P	
NX-N /D /K /0452P	NX-N /D /CA /0352P	
NX-N /D /K /0502P	NX-N /D /CA /0402P	
NX-N /D /K /0552P	NX-N /D /CA /0452P	
NX-N /D /K /0602P	NX-N /D /CA /0502P	
NX-N /D /K /0702P	NX-N /D /CA /0562P	
NX-N /D /K /0802P	NX-N /D /CA /0612P	
NX-N /LN-K /0152P	NX-N /D /CA /0712P	
NX-N /LN-K /0182P	NX-N /D /CA /0812P	
NX-N /LN-K /0202P	NX-N /LN-CA /0152P	
NX-N /LN-K /0252P	NX-N /LN-CA /0182P	
NX-N /LN-K /0262P	NX-N /LN-CA /0202P	
NX-N /LN-K /0302P	NX-N /LN-CA /0252P	
NX-N /LN-K /0352P	NX-N /LN-CA /0262P	
NX-N /LN-K /0402P	NX-N /LN-CA /0302P	
NX-N /LN-K /0452P	NX-N /LN-CA /0352P	
NX-N /LN-K /0502P	NX-N /LN-CA /0402P	
NX-N /LN-K /0552P	NX-N /LN-CA /0452P	
NX-N /LN-K /0602P	NX-N /LN-CA /0502P	
NX-N /LN-K /0702P	NX-N /LN-CA /0562P	
NX-N /LN-K /0802P	NX-N /LN-CA /0612P	
NX-N /D /LN-K /0152P	NX-N /LN-CA /0712P	
NX-N /D /LN-K /0182P	NX-N /LN-CA /0812P	
NX-N /D /LN-K /0202P	NX-N /D /LN-CA /0152P	
NX-N /D /LN-K /0252P	NX-N /D /LN-CA /0182P	
NX-N /D /LN-K /0262P	NX-N /D /LN-CA /0202P	
NX-N /D /LN-K /0302P	NX-N /D /LN-CA /0252P	
NX-N /D /LN-K /0352P	NX-N /D /LN-CA /0262P	
NX-N /D /LN-K /0402P	NX-N /D /LN-CA /0302P	
NX-N /D /LN-K /0452P	NX-N /D /LN-CA /0352P	
NX-N /D /LN-K /0502P	NX-N /D /LN-CA /0402P	
NX-N /D /LN-K /0552P	NX-N /D /LN-CA /0452P	
NX-N /D /LN-K /0602P	NX-N /D /LN-CA /0502P	

8.2 ETHYLENE GLYCOL MIXTURE

Ethylene glycol and water mixture, used as a heat-conveying fluid, cause a variation in unit performance. For correct data, use the factors indicated in the following tabel.

	Freezing point (°C)							
	0	-5	-10	-15	-20	-25	-30	-35
	Ethylene glycol percentage by weight							
	0%	12%	20%	30%	35%	40%	45%	50%
cPf	1	0,985	0,98	0,974	0,97	0,965	0,964	0,96
cQ	1	1,02	1,04	1,075	1,11	1,14	1,17	1,2
cdp	1	1,07	1,11	1,18	1,22	1,24	1,27	1,3

cPf: cooling power correction factor
cQ: flow correction factor
cdp: pressure drop correction factor

For data concerning other kind of anti-freeze solutions (e,g, propylene glycol) please contact our Sale Department.

8.3 FOULING FACTORS

Performances are based on clean condition of tubes (fouling factor = 1). For different fouling values, performance should be adjusted using the correction factors shown in the following table.

SERIES	FOULING FACTORS	EVAPORATOR			CONDENSER/RECOVERY			DESUPERHEATER
	ff (m² °CW)	F1	FK1	KE [°C]	F2	FK2	KC [°C]	R3
VARIOUS	0	1,000	1,000	0,0	1,000	1,000	0,0	1,000
VARIOUS	$1{,}80 \times 10^{-5}$	1,000	1,000	0,0	1,000	1,000	0,0	1,000
VARIOUS	$4{,}40 \times 10^{-5}$	1,000	1,000	0,0	0,990	1,030	1,0	0,990
VARIOUS	$8{,}80 \times 10^{-5}$	0,960	0,990	0,7	0,980	1,040	1,5	0,980
VARIOUS	$13{,}20 \times 10^{-5}$	0,944	0,985	1,0	0,964	1,050	2,3	0,964
VARIOUS	$17{,}20 \times 10^{-5}$	0,930	0,980	1,5	0,950	1,060	3,0	0,950

ff: fouling factors
f1 - f2: potential correction factors
fk1 - fk2: compressor power input correction factors
r3: capacity correction factors
KE: minimum condenser outlet temperature increase
KC: maximum condenser outlet temperature decrease

9.1 HYDRAULIC DATA

Water flow and pressure drop

Water flow in the plant (side) exchanger is given by:
Q=Px0,86/Dt
Q: water flow (m3/h)
Dt: difference between inlet and outlet water temp. (°C)
P: heat exchanger capacity (kW)

Pressure drop is given by:
Dp= K x Q2/1000
Q: water flow (m3/h)
Dp: pressure drop (kPa)
K: unit size ratio

SIZE	HEAT EXCHANGER USER SIDE					HEAT RECOVERY EX. USER SIDE			
	K	Q min m³/h	Q max m³/h	C.A.S. dm³	C.a. min m³	K	Q min m³/h	C.A.S. dm³	Q max m³/h
NX-N /K /0152P	795	3,90	11,6	2	0,10	-	-	-	-
NX-N /K /0182P	587	4,50	13,1	3	0,11	-	-	-	-
NX-N /K /0202P	454	5,30	14,8	3	0,13	-	-	-	-
NX-N /K /0252P	325	6,00	17,2	4	0,15	-	-	-	-
NX-N /K /0262P	265	6,70	17,4	4	0,17	-	-	-	-
NX-N /K /0302P	190	7,70	17,4	5	0,20	-	-	-	-
NX-N /K /0352P	233	8,80	22,0	6	0,23	-	-	-	-
NX-N /K /0402P	162	10,5	29,3	7	0,25	-	-	-	-
NX-N /K /0452P	132	11,8	33,3	7	0,29	-	-	-	-
NX-N /K /0502P	102	13,2	37,5	9	0,33	-	-	-	-
NX-N /K /0552P	84,5	14,6	39,1	9	0,38	-	-	-	-
NX-N /K /0602P	60,6	17,1	39,1	12	0,42	-	-	-	-
NX-N /K /0702P	46,8	19,0	43,0	14	0,49	-	-	-	-
NX-N /K /0802P	46,8	21,1	43,0	14	0,55	-	-	-	-
NX-N /D /K /0152P	795	3,90	11,6	2	0,10	1767	-	-	3,00
NX-N /D /K /0182P	587	4,50	13,1	3	0,11	1767	-	-	3,40
NX-N /D /K /0202P	454	5,30	14,8	3	0,13	1767	-	-	4,10
NX-N /D /K /0252P	325	6,00	17,2	4	0,15	1767	-	-	4,30
NX-N /D /K /0262P	265	6,70	17,4	4	0,17	1767	-	-	4,90
NX-N /D /K /0302P	190	7,70	17,4	5	0,20	871	-	1	5,70
NX-N /D /K /0352P	233	8,80	22,0	6	0,23	871	-	1	6,70
NX-N /D /K /0402P	162	10,5	29,3	7	0,25	871	-	1	6,80
NX-N /D /K /0452P	132	11,8	33,3	7	0,29	613	-	1	7,90
NX-N /D /K /0502P	102	13,2	37,5	9	0,33	613	-	1	9,00
NX-N /D /K /0552P	84,5	14,6	39,1	9	0,38	412	-	1	10,1
NX-N /D /K /0602P	60,6	17,1	39,1	12	0,42	412	-	1	11,2
NX-N /D /K /0702P	46,8	19,0	43,0	14	0,49	277	-	1	13,3
NX-N /D /K /0802P	46,8	21,1	43,0	14	0,55	277	-	1	15,6
NX-N /LN-K /0152P	795	3,90	11,6	2	0,10	-	-	-	-
NX-N /LN-K /0182P	587	4,50	13,1	3	0,11	-	-	-	-
NX-N /LN-K /0202P	454	5,30	14,8	3	0,13	-	-	-	-
NX-N /LN-K /0252P	325	6,00	17,2	4	0,15	-	-	-	-
NX-N /LN-K /0262P	265	6,70	17,4	4	0,17	-	-	-	-
NX-N /LN-K /0302P	190	7,70	17,4	5	0,20	-	-	-	-
NX-N /LN-K /0352P	233	8,80	22,0	6	0,23	-	-	-	-
NX-N /LN-K /0402P	162	10,5	29,3	7	0,25	-	-	-	-
NX-N /LN-K /0452P	132	11,8	33,3	7	0,29	-	-	-	-
NX-N /LN-K /0502P	102	13,2	37,5	9	0,33	-	-	-	-
NX-N /LN-K /0552P	84,5	14,6	39,1	9	0,38	-	-	-	-
NX-N /LN-K /0602P	60,6	17,1	39,1	12	0,42	-	-	-	-
NX-N /LN-K /0702P	46,8	19,0	43,0	14	0,49	-	-	-	-
NX-N /LN-K /0802P	46,8	21,1	43,0	14	0,55	-	-	-	-
NX-N /D /LN-K /0152P	795	3,90	11,6	2	0,10	1767	-	-	3,00
NX-N /D /LN-K /0182P	587	4,50	13,1	3	0,11	1767	-	-	3,40

Q min: minimum water flow admitted to the heat exchanger
Q max: maximum water flow admitted to the heat exchanger
C.a. min: minimum water content admitted in the plant, using traditional control logic
C.A.S.: Exchanger water content

HYDRAULIC DATA

SIZE	HEAT EXCHANGER USER SIDE					HEAT RECOVERY EX. USER SIDE			
	K	Q min m³/h	Q max m³/h	C.A.S. dm³	C.a. min m³	K	Q min m³/h	C.A.S. dm³	Q max m³/h
NX-N /D /LN-K /0202P	454	5,30	14,8	3	0,13	1767	-	-	4,10
NX-N /D /LN-K /0252P	325	6,00	17,2	4	0,15	1767	-	-	4,30
NX-N /D /LN-K /0262P	265	6,70	17,4	4	0,17	1767	-	-	4,90
NX-N /D /LN-K /0302P	190	7,70	17,4	5	0,20	871	-	1	5,70
NX-N /D /LN-K /0352P	233	8,80	22,0	6	0,23	871	-	1	6,70
NX-N /D /LN-K /0402P	162	10,5	29,3	7	0,25	871	-	1	6,80
NX-N /D /LN-K /0452P	132	11,8	33,3	7	0,29	613	-	1	7,90
NX-N /D /LN-K /0502P	102	13,2	37,5	9	0,33	613	-	1	9,00
NX-N /D /LN-K /0552P	84,5	14,6	39,1	9	0,38	412	-	1	10,1
NX-N /D /LN-K /0602P	60,6	17,1	39,1	12	0,42	412	-	1	11,2
NX-N /D /LN-K /0702P	46,8	19,0	43,0	14	0,49	277	-	1	13,3
NX-N /D /LN-K /0802P	46,8	21,1	43,0	14	0,55	277	-	1	15,6
NX-N /CA /0152P	795	3,90	11,6	2	0,10	-	-	-	-
NX-N /CA /0182P	587	4,50	13,1	3	0,11	-	-	-	-
NX-N /CA /0202P	454	5,30	14,8	3	0,13	-	-	-	-
NX-N /CA /0252P	325	6,00	17,2	4	0,15	-	-	-	-
NX-N /CA /0262P	265	6,70	17,4	4	0,17	-	-	-	-
NX-N /CA /0302P	190	7,70	17,4	5	0,20	-	-	-	-
NX-N /CA /0352P	233	8,80	22,0	6	0,23	-	-	-	-
NX-N /CA /0402P	162	10,5	29,3	7	0,25	-	-	-	-
NX-N /CA /0452P	132	11,8	33,3	7	0,29	-	-	-	-
NX-N /CA /0502P	102	13,2	37,5	9	0,33	-	-	-	-
NX-N /CA /0562P	84,5	14,6	39,1	9	0,38	-	-	-	-
NX-N /CA /0612P	60,6	17,1	39,1	12	0,42	-	-	-	-
NX-N /CA /0712P	46,8	19,0	43,0	14	0,49	-	-	-	-
NX-N /CA /0812P	46,8	21,1	43,0	14	0,55	-	-	-	-
NX-N /D /CA /0152P	795	3,90	11,6	2	0,10	1767	-	-	3,00
NX-N /D /CA /0182P	587	4,50	13,1	3	0,11	1767	-	-	3,40
NX-N /D /CA /0202P	454	5,30	14,8	3	0,13	1767	-	-	4,10
NX-N /D /CA /0252P	325	6,00	17,2	4	0,15	1767	-	-	4,30
NX-N /D /CA /0262P	265	6,70	17,4	4	0,17	1767	-	-	4,90
NX-N /D /CA /0302P	190	7,70	17,4	5	0,20	871	-	1	5,70
NX-N /D /CA /0352P	233	8,80	22,0	6	0,23	871	-	1	6,70
NX-N /D /CA /0402P	162	10,5	29,3	7	0,25	871	-	1	6,80
NX-N /D /CA /0452P	132	11,8	33,3	7	0,29	613	-	1	7,90
NX-N /D /CA /0502P	102	13,2	37,5	9	0,33	613	-	1	9,00
NX-N /D /CA /0562P	84,5	14,6	39,1	9	0,38	412	-	1	10,1
NX-N /D /CA /0612P	60,6	17,1	39,1	12	0,42	412	-	1	11,2
NX-N /D /CA /0712P	46,8	19,0	43,0	14	0,49	277	-	1	13,3
NX-N /D /CA /0812P	46,8	21,1	43,0	14	0,55	277	-	1	15,6
NX-N /LN-CA /0152P	795	3,90	11,6	2	0,10	-	-	-	-
NX-N /LN-CA /0182P	587	4,50	13,1	3	0,11	-	-	-	-
NX-N /LN-CA /0202P	454	5,30	14,8	3	0,13	-	-	-	-
NX-N /LN-CA /0252P	325	6,00	17,2	4	0,15	-	-	-	-
NX-N /LN-CA /0262P	265	6,70	17,4	4	0,17	-	-	-	-
NX-N /LN-CA /0302P	190	7,70	17,4	5	0,20	-	-	-	-
NX-N /LN-CA /0352P	233	8,80	22,0	6	0,23	-	-	-	-
NX-N /LN-CA /0402P	162	10,5	29,3	7	0,25	-	-	-	-
NX-N /LN-CA /0452P	132	11,8	33,3	7	0,29	-	-	-	-
NX-N /LN-CA /0502P	102	13,2	37,5	9	0,33	-	-	-	-
NX-N /LN-CA /0562P	84,5	14,6	39,1	9	0,38	-	-	-	-

Q min: minimum water flow admitted to the heat exchanger
Q max: maximum water flow admitted to the heat exchanger
C.a. min: minimum water content admitted in the plant, using traditional control logic
C.A.S.: Exchanger water content

HYDRAULIC DATA

SIZE	HEAT EXCHANGER USER SIDE					HEAT RECOVERY EX. USER SIDE			
	K	Q min m³/h	Q max m³/h	C.A.S. dm³	C.a. min m³	K	Q min m³/h	C.A.S. dm³	Q max m³/h
NX-N /LN-CA /0612P	60,6	17,1	39,1	12	0,42	-	-	-	-
NX-N /LN-CA /0712P	46,8	19,0	43,0	14	0,49	-	-	-	-
NX-N /LN-CA /0812P	46,8	21,1	43,0	14	0,55	-	-	-	-
NX-N /D /LN-CA /0152P	795	3,90	11,6	2	0,10	1767	-	-	3,00
NX-N /D /LN-CA /0182P	587	4,50	13,1	3	0,11	1767	-	-	3,40
NX-N /D /LN-CA /0202P	454	5,30	14,8	3	0,13	1767	-	-	4,10
NX-N /D /LN-CA /0252P	325	6,00	17,2	4	0,15	1767	-	-	4,30
NX-N /D /LN-CA /0262P	265	6,70	17,4	4	0,17	1767	-	-	4,90
NX-N /D /LN-CA /0302P	190	7,70	17,4	5	0,20	871	-	1	5,70
NX-N /D /LN-CA /0352P	233	8,80	22,0	6	0,23	871	-	1	6,70
NX-N /D /LN-CA /0402P	162	10,5	29,3	7	0,25	871	-	1	6,80
NX-N /D /LN-CA /0452P	132	11,8	33,3	7	0,29	613	-	1	7,90
NX-N /D /LN-CA /0502P	102	13,2	37,5	9	0,33	613	-	1	9,00
NX-N /D /LN-CA /0562P	84,5	14,6	39,1	9	0,38	412	-	1	10,1
NX-N /D /LN-CA /0612P	60,6	17,1	39,1	12	0,42	412	-	1	11,2
NX-N /D /LN-CA /0712P	46,8	19,0	43,0	14	0,49	277	-	1	13,3
NX-N /D /LN-CA /0812P	46,8	21,1	43,0	14	0,55	277	-	1	15,6

Q min: minimum water flow admitted to the heat exchanger
Q max: maximum water flow admitted to the heat exchanger
C.a. min: minimum water content admitted in the plant, using traditional control logic
C.A.S.: Exchanger water content

SIZE	Power supply V/ph/Hz	Maximum values								
		Compressor				Fans (1)		Total (1)(2)		
		n	F.L.I. [kW]	F.L.A. [A]	L.R.A. [A]	F.L.I. [kW]	F.L.A. [A]	F.L.I. [kW]	F.L.A. [A]	S.A. [A]
0152P	400/3/50+N	2	2 x 8.6	2 x 13.9	2 x 101	0,30	1,10	18,4	32,2	119
0182P	400/3/50+N	2	2 x 10.1	2 x 16.4	2 x 111	0,30	1,10	21,4	37,2	132
0202P	400/3/50+N	2	2 x 11.8	2 x 20.4	2 x 118	0,30	1,10	24,8	45,2	143
0252P	400/3/50+N	2	2 x 13.2	2 x 22.6	2 x 118	0,30	1,10	28,2	51,8	147
0262P	400/3/50+N	2	2 x 14.4	2 x 25.5	2 x 140	0,30	1,10	30,6	57,6	172
0302P	400/3/50+N	2	2 x 17	2 x 30.5	2 x 173	0,30	1,10	35,8	67,6	210
0352P	400/3/50+N	2	1 x 17 + 1 x 22.3	1 x 30.5 + 1 x 36.1	1 x 173 + 1 x 225	0,30	1,10	41,1	73,2	262
0402P	400/3/50	2	2 x 22.3	2 x 36.1	2 x 225	2,00	3,90	48,6	80,0	269
0452P	400/3/50	2	1 x 22.3 + 1 x 27.4	1 x 36.1 + 1 x 45.8	1 x 225 + 1 x 272	2,00	3,90	53,7	89,7	316
0502P	400/3/50	2	2 x 27.4	2 x 45.8	2 x 272	2,00	3,90	58,8	99,4	326
0552P	400/3/50	2	1 x 27.4 + 1 x 35.8	1 x 45.8+1 x 58.9	1 x 272 + 1 x 310	1,84	3,76	66,9	112	363
0602P	400/3/50	2	2 x 35.8	2 x 58.9	2 x 310	2,00	3,90	77,6	130	381
0702P	400/3/50	2	1 x 35.8 + 1 x 44.7	1 x 58.9 + 1 x 73.3	1 x 310 + 1 x 394	2,00	3,90	86,5	144	465
0802P	400/3/50	2	2 x 44.7	2 x 73.3	2 x 394	2,00	3,90	95,4	158	479

F.L.I.: Full load power
F.L.A.: Full load current
L.R.A.: Locked rotor amperes for single compressor
S.A.: Inrush current

(1) Values calculated referring to the version with the maximum number of fans working at the max absorbed current
(1)(2) Safety values to be considered when cabling the unit for power supply and line-protections

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Voltage tolerance: 10%
Maximum voltage unbalance: 3%

Give the typical operating conditions of units designed for outdoor installation, which can be associated (according to reference document IEC 60721) to the following classes:
- climatic conditions class 4K4H: air temperature range from -20 up to 55°C (*), relative humidity range from 4 up to 100%, with possible precipitations, at air pressure from 70 and 106 kPa and a maximum solar radiation of 1120 W/m2
- special climatic conditions negligible
- biological conditions class 4B1 and 4C2: locations in a generic urban area
- mechanically active substances class 4S2: locations in areas with sand or dust representative of urban areas
- mechanical conditions class 4M1: locations protected from significant vibrations or shocks

The required protection level for safe operation, according to reference document IEC 60529, is IP43XW (protection against access, to the most critical unit's parts, of external devices with diameter larger than 1 mm and rain).
The unit can be considered IP44XW protected, i.e. protected against access of external devices (with diameter larger than 1 mm) and water in general.

(*) for the unit's operating limits, see "selection limits" section

SIZE	Power supply V/ph/Hz	Maximum values								
		Compressor				Fans (1)		Total (1)(2)		
		n	F.L.I. [kW]	F.L.A. [A]	L.R.A. [A]	F.L.I. [kW]	F.L.A. [A]	F.L.I. [kW]	F.L.A. [A]	S.A. [A]
0152P	400/3/50+N	2	2 x 8.6	2 x 13.9	2 x 101	0,30	1,10	18,4	32,2	119
0182P	400/3/50+N	2	2 x 10.1	2 x 16.4	2 x 111	0,30	1,10	21,4	37,2	132
0202P	400/3/50+N	2	2 x 11.8	2 x 20.4	2 x 118	0,30	1,10	24,8	45,2	143
0252P	400/3/50+N	2	2 x 13.2	2 x 22.6	2 x 118	0,30	1,10	28,2	51,8	147
0262P	400/3/50+N	2	2 x 14.4	2 x 25.5	2 x 140	0,30	1,10	30,6	57,6	172
0302P	400/3/50+N	2	2 x 17	2 x 30.5	2 x 173	0,30	1,10	35,8	67,6	210
0352P	400/3/50+N	2	1 x 17 + 1 x 22.3	1 x 30.5 + 1 x 36.1	1 x 173 + 1 x 225	0,30	1,10	41,1	73,2	262
0402P	400/3/50	2	2 x 22.3	2 x 36.1	2 x 225	2,00	3,90	48,6	80,0	269
0452P	400/3/50	2	1 x 22.3 + 1 x 27.4	1 x 36.1 + 1 x 45.8	1 x 225 + 1 x 272	2,00	3,90	53,7	89,7	316
0502P	400/3/50	2	2 x 27.4	2 x 45.8	2 x 272	2,00	3,90	58,8	99,4	326
0552P	400/3/50	2	1 x 27.4 + 1 x 35.8	1 x 45.8+1 x 58.9	1 x 272 + 1 x 310	1,84	3,76	66,9	112	363
0602P	400/3/50	2	2 x 35.8	2 x 58.9	2 x 310	2,00	3,90	77,6	130	381
0702P	400/3/50	2	1 x 35.8 + 1 x 44.7	1 x 58.9 + 1 x 73.3	1 x 310 + 1 x 394	2,00	3,90	86,5	144	465
0802P	400/3/50	2	2 x 44.7	2 x 73.3	2 x 394	2,00	3,90	95,4	158	479

F.L.I.: Full load power
F.L.A.: Full load current
L.R.A.: Locked rotor amperes for single compressor
S.A.: Inrush current

(1) Values calculated referring to the version with the maximum number of fans working at the max absorbed current
(1)(2) Safety values to be considered when cabling the unit for power supply and line-protections

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Voltage tolerance: 10%
Maximum voltage unbalance: 3%

Give the typical operating conditions of units designed for outdoor installation, which can be associated (according to reference document IEC 60721) to the following classes:
- climatic conditions class 4K4H: air temperature range from -20 up to 55°C (*), relative humidity range from 4 up to 100%, with possible precipitations, at air pressure from 70 and 106 kPa and a maximum solar radiation of 1120 W/m2
- special climatic conditions negligible
- biological conditions class 4B1 and 4C2: locations in a generic urban area
- mechanically active substances class 4S2: locations in areas with sand or dust representative of urban areas
- mechanical conditions class 4M1: locations protected from significant vibrations or shocks

The required protection level for safe operation, according to reference document IEC 60529, is IP43XW (protection against access, to the most critical unit's parts, of external devices with diameter larger than 1 mm and rain).
The unit can be considered IP44XW protected, i.e. protected against access of external devices (with diameter larger than 1 mm) and water in general.

(*) for the unit's operating limits, see "selection limits" section

SIZE	Power supply V/ph/Hz	Maximum values								
		Compressor				Fans (1)		Total (1)(2)		
		n	F.L.I. [kW]	F.L.A. [A]	L.R.A. [A]	F.L.I. [kW]	F.L.A. [A]	F.L.I. [kW]	F.L.A. [A]	S.A. [A]
0152P	400/3/50+N	2	2 x 8.6	2 x 13.9	2 x 101	0,30	1,10	18,4	32,2	119
0182P	400/3/50+N	2	2 x 10.1	2 x 16.4	2 x 111	0,30	1,10	21,4	37,2	132
0202P	400/3/50+N	2	2 x 11.8	2 x 20.4	2 x 118	0,30	1,10	24,8	45,2	143
0252P	400/3/50+N	2	2 x 13.2	2 x 22.6	2 x 118	0,30	1,10	28,2	51,8	147
0262P	400/3/50+N	2	2 x 14.4	2 x 25.5	2 x 140	0,30	1,10	30,6	57,6	172
0302P	400/3/50	2	2 x 17	2 x 30.5	2 x 173	2,00	3,90	38,0	68,8	211
0352P	400/3/50	2	1 x 17 + 1 x 22.3	1 x 30.5 + 1 x 36.1	1 x 173 + 1 x 225	2,00	3,90	43,3	74,4	263
0402P	400/3/50	2	2 x 22.3	2 x 36.1	2 x 225	1,84	3,76	48,3	79,7	269
0452P	400/3/50	2	1 x 22.3 + 1 x 27.4	1 x 36.1 + 1 x 45.8	1 x 225 + 1 x 272	1,84	3,76	53,4	89,4	316
0502P	400/3/50	2	2 x 27.4	2 x 45.8	2 x 272	2,00	3,90	60,8	103	330
0562P	400/3/50	2	1 x 27.4 + 1 x 35.8	1 x 45.8+1 x 58.9	1 x 272 + 1 x 310	2,00	4,10	71,2	121	372
0612P	400/3/50	2	2 x 35.8	2 x 58.9	2 x 310	2,00	4,10	79,6	134	385
0712P	400/3/50	2	1 x 35.8 + 1 x 44.7	1 x 58.9 + 1 x 73.3	1 x 310 + 1 x 394	2,00	4,10	92,5	157	478
0812P	400/3/50	2	2 x 44.7	2 x 73.3	2 x 394	2,00	4,10	101	171	492

F.L.I.: Full load power
F.L.A.: Full load current
L.R.A.: Locked rotor amperes for single compressor
S.A.: Inrush current

(1) Values calculated referring to the version with the maximum number of fans working at the max absorbed current
(1)(2) Safety values to be considered when cabling the unit for power supply and line-protections

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Voltage tolerance: 10%
Maximum voltage unbalance: 3%

Give the typical operating conditions of units designed for outdoor installation, which can be associated (according to reference document IEC 60721) to the following classes:
- climatic conditions class 4K4H: air temperature range from -20 up to 55°C (*), relative humidity range from 4 up to 100%, with possible precipitations, at air pressure from 70 and 106 kPa and a maximum solar radiation of 1120 W/m2
- special climatic conditions negligible
- biological conditions class 4B1 and 4C2: locations in a generic urban area
- mechanically active substances class 4S2: locations in areas with sand or dust representative of urban areas
- mechanical conditions class 4M1: locations protected from significant vibrations or shocks

The required protection level for safe operation, according to reference document IEC 60529, is IP43XW (protection against access, to the most critical unit's parts, of external devices with diameter larger than 1 mm and rain).
The unit can be considered IP44XW protected, i.e. protected against access of external devices (with diameter larger than 1 mm) and water in general.

(*) for the unit's operating limits, see "selection limits" section

SIZE	Power supply V/ph/Hz	Maximum values								
		Compressor				Fans (1)		Total (1)(2)		
		n	F.L.I. [kW]	F.L.A. [A]	L.R.A. [A]	F.L.I. [kW]	F.L.A. [A]	F.L.I. [kW]	F.L.A. [A]	S.A. [A]
0152P	400/3/50+N	2	2 x 8.6	2 x 13.9	2 x 101	0,30	1,10	18,4	32,2	119
0182P	400/3/50+N	2	2 x 10.1	2 x 16.4	2 x 111	0,30	1,10	21,4	37,2	132
0202P	400/3/50+N	2	2 x 11.8	2 x 20.4	2 x 118	0,30	1,10	24,8	45,2	143
0252P	400/3/50+N	2	2 x 13.2	2 x 22.6	2 x 118	0,30	1,10	28,2	51,8	147
0262P	400/3/50+N	2	2 x 14.4	2 x 25.5	2 x 140	0,30	1,10	30,6	57,6	172
0302P	400/3/50	2	2 x 17	2 x 30.5	2 x 173	2,00	3,90	38,0	68,8	211
0352P	400/3/50	2	1 x 17 + 1 x 22.3	1 x 30.5 + 1 x 36.1	1 x 173 + 1 x 225	2,00	3,90	43,3	74,4	263
0402P	400/3/50	2	2 x 22.3	2 x 36.1	2 x 225	1,84	3,76	48,3	79,7	269
0452P	400/3/50	2	1 x 22.3 + 1 x 27.4	1 x 36.1 + 1 x 45.8	1 x 225 + 1 x 272	1,84	3,76	53,4	89,4	316
0502P	400/3/50	2	2 x 27.4	2 x 45.8	2 x 272	2,00	3,90	60,8	103	330
0562P	400/3/50	2	1 x 27.4 + 1 x 35.8	1 x 45.8+1 x 58.9	1 x 272 + 1 x 310	2,00	4,10	71,2	121	372
0612P	400/3/50	2	2 x 35.8	2 x 58.9	2 x 310	2,00	4,10	79,6	134	385
0712P	400/3/50	2	1 x 35.8 + 1 x 44.7	1 x 58.9 + 1 x 73.3	1 x 310 + 1 x 394	2,00	4,10	92,5	157	478
0812P	400/3/50	2	2 x 44.7	2 x 73.3	2 x 394	2,00	4,10	101	171	492

F.L.I.: Full load power
F.L.A.: Full load current
L.R.A.: Locked rotor amperes for single compressor
S.A.: Inrush current

(1) Values calculated referring to the version with the maximum number of fans working at the max absorbed current
(1)(2) Safety values to be considered when cabling the unit for power supply and line-protections

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Voltage tolerance: 10%
Maximum voltage unbalance: 3%

Give the typical operating conditions of units designed for outdoor installation, which can be associated (according to reference document IEC 60721) to the following classes:
- climatic conditions class 4K4H: air temperature range from -20 up to 55°C (*), relative humidity range from 4 up to 100%, with possible precipitations, at air pressure from 70 and 106 kPa and a maximum solar radiation of 1120 W/m2
- special climatic conditions negligible
- biological conditions class 4B1 and 4C2: locations in a generic urban area
- mechanically active substances class 4S2: locations in areas with sand or dust representative of urban areas
- mechanical conditions class 4M1: locations protected from significant vibrations or shocks

The required protection level for safe operation, according to reference document IEC 60529, is IP43XW (protection against access, to the most critical unit's parts, of external devices with diameter larger than 1 mm and rain).
The unit can be considered IP44XW protected, i.e. protected against access of external devices (with diameter larger than 1 mm) and water in general.

(*) for the unit's operating limits, see "selection limits" section

SOUND POWER									
SIZE	Octave band [Hz]								Total sound level dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound power level dB								
0152P	85	85	81	80	80	77	69	57	**84**
0182P	85	85	81	80	80	77	69	57	**84**
0202P	85	85	81	80	80	77	69	57	**84**
0252P	86	86	82	81	81	78	70	58	**85**
0262P	86	86	82	81	81	78	70	58	**85**
0302P	86	86	82	81	81	78	70	58	**85**
0352P	87	87	83	82	82	79	71	59	**86**
0402P	89	89	85	84	84	81	73	61	**88**
0452P	89	89	85	84	84	81	73	61	**88**
0502P	89	89	85	84	84	81	73	61	**88**
0552P	91	91	87	86	86	83	75	63	**90**
0602P	91	91	87	86	86	83	75	63	**90**
0702P	91	91	87	86	86	83	75	63	**90**
0802P	92	92	88	87	87	84	76	64	**91**

Working conditions

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

Such certification refers specifically to the sound Power Level in dB(A). This is therefore the only acoustic data to be considered as binding.

SOUND PRESSURE LEVEL									
SIZE	Octave band [Hz]								Total sound level dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound pressure level dB								
0152P	53	53	49	48	48	45	37	25	**52**
0182P	53	53	49	48	48	45	37	25	**52**
0202P	53	53	49	48	48	45	37	25	**52**
0252P	54	54	50	49	49	46	38	26	**53**
0262P	54	54	50	49	49	46	38	26	**53**
0302P	54	54	50	49	49	46	38	26	**53**
0352P	55	55	51	50	50	47	39	27	**54**
0402P	57	57	53	52	52	49	41	29	**56**
0452P	57	57	53	52	52	49	41	29	**56**
0502P	57	57	53	52	52	49	41	29	**56**
0552P	59	59	55	54	54	51	43	31	**58**
0602P	59	59	55	54	54	51	43	31	**58**
0702P	59	59	55	54	54	51	43	31	**58**
0802P	60	60	56	55	55	52	44	32	**59**

Working conditions

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

SOUND POWER									
SIZE	Octave band [Hz]								Total sound level dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound power level dB								
0152P	78	78	75	74	73	69	62	48	**77**
0182P	78	78	75	74	73	69	62	48	**77**
0202P	78	78	75	74	73	69	62	48	**77**
0252P	78	78	76	75	74	70	63	49	**78**
0262P	80	80	77	76	75	71	65	50	**79**
0302P	81	81	78	77	76	72	66	51	**80**
0352P	84	82	83	82	76	71	65	59	**82**
0402P	85	83	84	83	77	72	66	60	**83**
0452P	85	83	84	83	77	72	66	60	**83**
0502P	85	83	84	83	77	72	66	60	**83**
0552P	86	84	85	84	78	73	67	61	**84**
0602P	86	84	85	84	78	73	67	61	**84**
0702P	86	84	85	84	78	73	67	61	**84**
0802P	88	86	87	86	80	75	69	63	**86**

Working conditions

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

Such certification refers specifically to the sound Power Level in dB(A). This is therefore the only acoustic data to be considered as binding.

SOUND PRESSURE LEVEL									
SIZE	Octave band [Hz]								Total sound level dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound pressure level dB								
0152P	46	46	43	42	41	37	30	16	**45**
0182P	46	46	43	42	41	37	30	16	**45**
0202P	46	46	43	42	41	37	30	16	**45**
0252P	46	46	44	43	42	38	31	17	**46**
0262P	48	48	45	44	43	39	33	18	**47**
0302P	49	49	46	45	44	40	34	19	**48**
0352P	52	50	51	50	44	39	33	27	**50**
0402P	53	51	52	51	45	40	34	28	**51**
0452P	53	51	52	51	45	40	34	28	**51**
0502P	53	51	52	51	45	40	34	28	**51**
0552P	54	52	53	52	46	41	35	29	**52**
0602P	54	52	53	52	46	41	35	29	**52**
0702P	54	52	53	52	46	41	35	29	**52**
0802P	56	54	55	54	48	43	37	31	**54**

Working conditions

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

SOUND POWER									
SIZE	Octave band [Hz]								Total sound level dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound power level dB								
0152P	85	85	81	80	80	77	69	57	**84**
0182P	85	85	81	80	80	77	69	57	**84**
0202P	85	85	81	80	80	77	69	57	**84**
0252P	86	86	82	81	81	78	70	58	**85**
0262P	86	86	82	81	81	78	70	58	**85**
0302P	89	89	85	84	84	81	73	61	**88**
0352P	89	89	85	84	84	81	73	61	**88**
0402P	90	90	86	85	85	82	74	62	**89**
0452P	90	90	86	85	85	82	74	62	**89**
0502P	91	91	87	86	86	83	75	63	**90**
0562P	92	92	88	87	87	84	76	64	**91**
0612P	92	92	88	87	87	84	76	64	**91**
0712P	93	93	89	88	88	85	77	65	**92**
0812P	94	94	90	89	89	86	78	66	**93**

Working conditions

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

Such certification refers specifically to the sound Power Level in dB(A). This is therefore the only acoustic data to be considered as binding.

SOUND PRESSURE LEVEL									
SIZE	Octave band [Hz]								Total sound level dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound pressure level dB								
0152P	53	53	49	48	48	45	37	25	**52**
0182P	53	53	49	48	48	45	37	25	**52**
0202P	53	53	49	48	48	45	37	25	**52**
0252P	54	54	50	49	49	46	38	26	**53**
0262P	54	54	50	49	49	46	38	26	**53**
0302P	57	57	53	52	52	49	41	29	**56**
0352P	57	57	53	52	52	49	41	29	**56**
0402P	58	58	54	53	53	50	42	30	**57**
0452P	58	58	54	53	53	50	42	30	**57**
0502P	59	59	55	54	54	51	43	31	**58**
0562P	60	60	56	55	55	52	44	32	**59**
0612P	60	60	56	55	55	52	44	32	**59**
0712P	61	61	57	56	56	53	45	33	**60**
0812P	62	62	58	57	57	54	46	34	**61**

Working conditions

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

SOUND POWER									
SIZE	Octave band [Hz]								Total sound level dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound power level dB								
0152P	78	78	75	74	73	69	63	48	**77**
0182P	78	78	75	74	73	69	63	48	**77**
0202P	78	78	75	74	73	69	63	48	**77**
0252P	79	79	76	75	74	70	64	49	**78**
0262P	80	80	77	76	75	71	65	50	**79**
0302P	84	82	83	82	76	71	65	59	**82**
0352P	85	83	84	83	77	72	66	60	**83**
0402P	86	84	85	84	78	73	67	61	**84**
0452P	86	84	85	84	78	73	67	61	**84**
0502P	86	84	85	84	78	73	67	61	**84**
0562P	87	85	86	85	79	74	68	62	**85**
0612P	87	85	86	85	79	74	68	62	**85**
0712P	88	86	87	86	80	75	69	63	**86**
0812P	89	87	88	87	81	76	70	64	**87**

Working conditions

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Sound power on the basis of measurements made in compliance with ISO 9614 and Eurovent 8/1 for Eurovent certified units; in compliance with ISO 3744 for non-certified units.

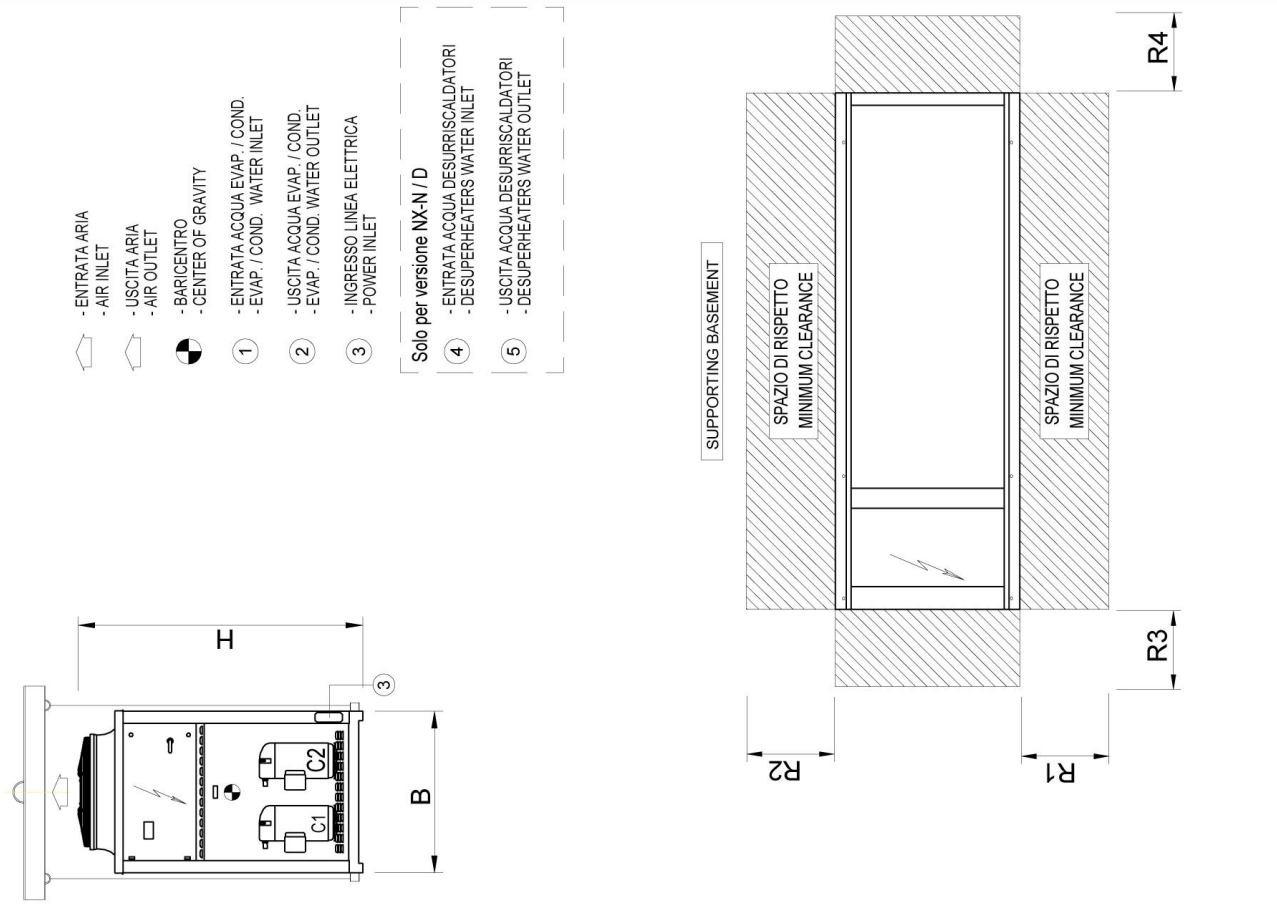
Such certification refers specifically to the sound Power Level in dB(A). This is therefore the only acoustic data to be considered as binding.

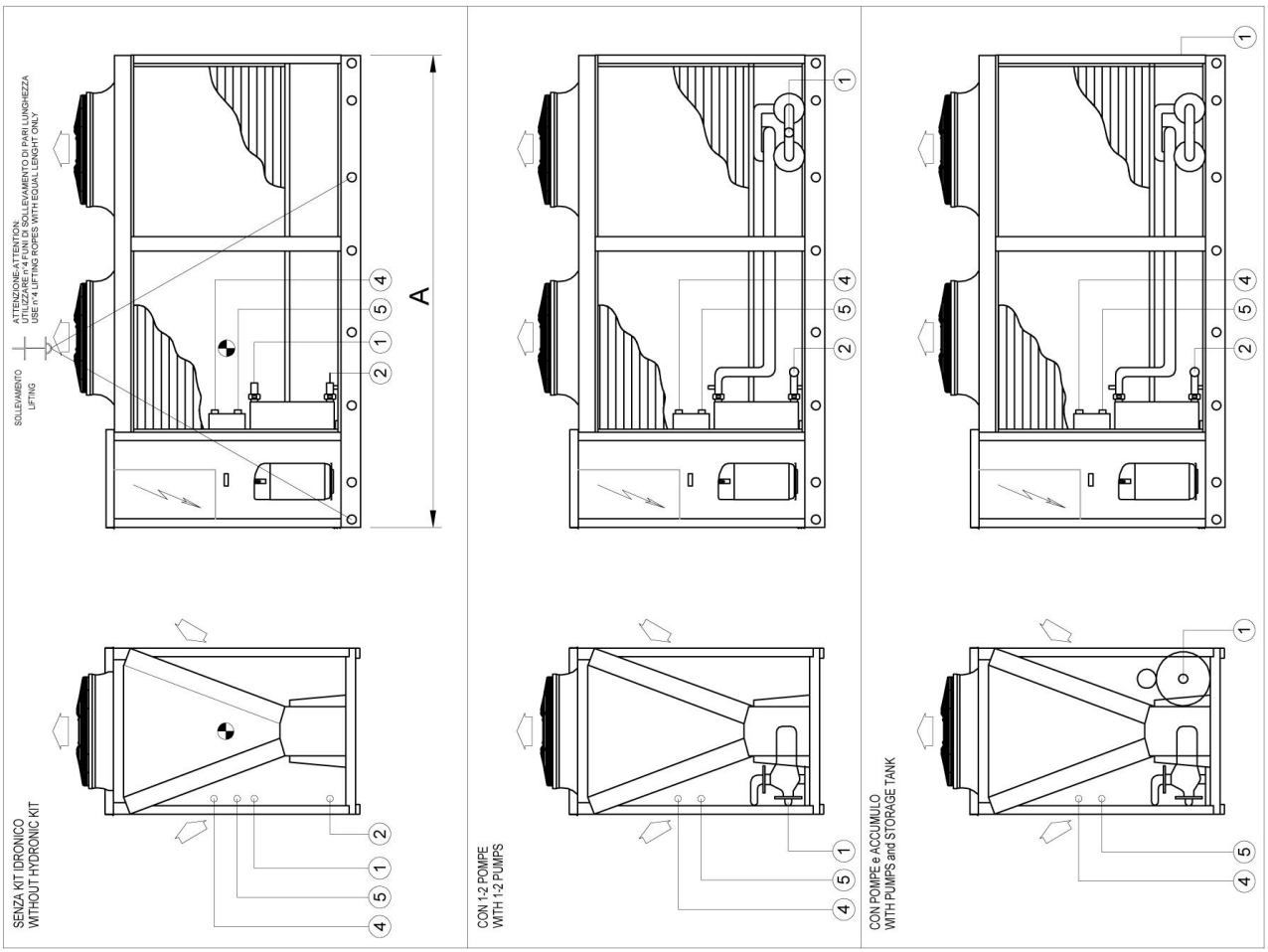
SOUND PRESSURE LEVEL									
SIZE	Octave band [Hz]								Total sound level dB(A)
	63	125	250	500	1000	2000	4000	8000	
	Sound pressure level dB								
0152P	46	46	43	42	41	37	31	16	**45**
0182P	46	46	43	42	41	37	31	16	**45**
0202P	46	46	43	42	41	37	31	16	**45**
0252P	47	47	44	43	42	38	32	17	**46**
0262P	48	48	45	44	43	39	33	18	**47**
0302P	52	50	51	50	44	39	33	27	**50**
0352P	53	51	52	51	45	40	34	28	**51**
0402P	54	52	53	52	46	41	35	29	**52**
0452P	54	52	53	52	46	41	35	29	**52**
0502P	54	52	53	52	46	41	35	29	**52**
0562P	55	53	54	53	47	42	36	30	**53**
0612P	55	53	54	53	47	42	36	30	**53**
0712P	56	54	55	54	48	43	37	31	**54**
0812P	57	55	56	55	49	44	38	32	**55**

Working conditions

Plant (side) cooling exchanger water (in/out) 12,0°C/7,0°C; Source (side) heat exchanger air (in) 35,0°C

Average sound pressure level, at 10m distance, unit in a free field on a reflective surface; non-binding value obtained from the sound power level.

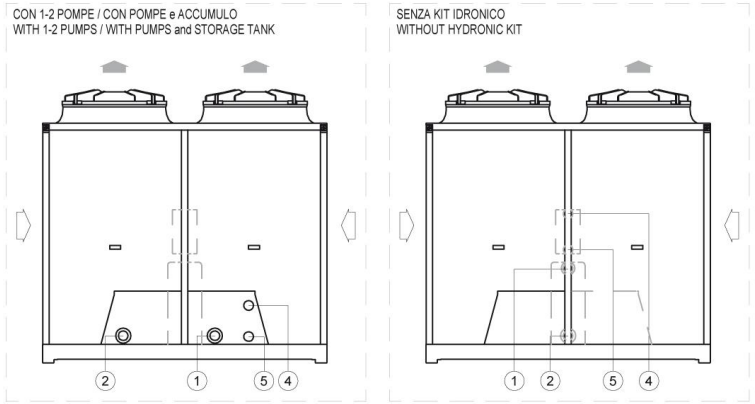


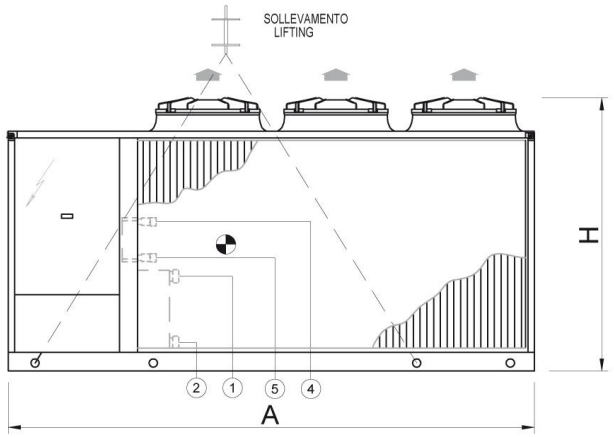


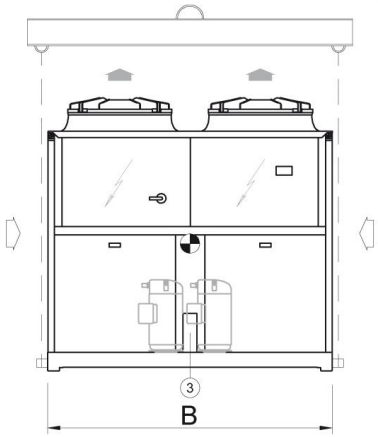
"REMARKS:
For installation purposes, please refer to the documentation sent after the purchase-contract. This technical data should be considered as indicative. CLIMAVENETA may modify them at any moment."

SIZE	DIMENSIONS AND WEIGHTS				CLEARANCE				WATER CONNECTIONS USER SIDE		WATER CONNECTIONS TO RECOVERY USER SIDE	
	A	B	H	VEIGH	R1	R2	R3	R4	IN/OUT		IN/OUT	
	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	TYPE	Ø	TYPE	Ø
NX-N /K /0152P	1825	1195	1865	510	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /K /0182P	1825	1195	1865	550	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /K /0202P	1825	1195	1865	570	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /K /0252P	2395	1195	1865	640	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /K /0262P	2395	1195	1865	650	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /K /0302P	2395	1195	1865	660	1000	1000	1000	1000	EN 10226 R	2"	-	-
NX-N /K /0352P	2395	1195	1865	790	1000	1000	1000	1000	EN 10226 R	2"	-	-
NX-N /K /0402P	2825	1195	1980	970	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /K /0452P	2825	1195	1980	1020	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /K /0502P	3360	1195	1980	1150	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /K /0552P	3360	1195	1980	1210	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /K /0602P	3980	1195	1980	1330	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /K /0702P	3980	1195	1980	1360	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /K /0802P	3980	1195	1980	1380	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /D /K /0152P	1825	1195	1865	510	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0182P	1825	1195	1865	550	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0202P	1825	1195	1865	570	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0252P	2395	1195	1865	640	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0262P	2395	1195	1865	650	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0302P	2395	1195	1865	660	1000	1000	1000	1000	EN 10226 R	2"	EN 10226 R	1" 1/4
NX-N /D /K /0352P	2395	1195	1865	790	1000	1000	1000	1000	EN 10226 R	2"	EN 10226 R	1" 1/4
NX-N /D /K /0402P	2825	1195	1980	970	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0452P	2825	1195	1980	1020	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0502P	3360	1195	1980	1150	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0552P	3360	1195	1980	1210	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0602P	3980	1195	1980	1330	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0702P	3980	1195	1980	1360	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /K /0802P	3980	1195	1980	1380	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /LN-K /0152P	1825	1195	1865	510	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /LN-K /0182P	1825	1195	1865	560	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /LN-K /0202P	1825	1195	1865	580	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /LN-K /0252P	2395	1195	1865	650	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /LN-K /0262P	2395	1195	1865	660	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /LN-K /0302P	2395	1195	1865	670	1000	1000	1000	1000	EN 10226 R	2"	-	-
NX-N /LN-K /0352P	2395	1195	1865	800	1000	1000	1000	1000	EN 10226 R	2"	-	-
NX-N /LN-K /0402P	2825	1195	1980	1010	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /LN-K /0452P	2825	1195	1980	1100	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /LN-K /0502P	3360	1195	1980	1200	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /LN-K /0552P	3360	1195	1980	1250	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /LN-K /0602P	3980	1195	1980	1360	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /LN-K /0702P	3980	1195	1980	1410	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /LN-K /0802P	3980	1195	1980	1430	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /D /LN-K /0152P	1825	1195	1865	510	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-K /0182P	1825	1195	1865	560	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-K /0202P	1825	1195	1865	580	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-K /0252P	2395	1195	1865	650	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-K /0262P	2395	1195	1865	660	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-K /0302P	2395	1195	1865	670	1000	1000	1000	1000	EN 10226 R	2"	EN 10226 R	1" 1/4
NX-N /D /LN-K /0352P	2395	1195	1865	800	1000	1000	1000	1000	EN 10226 R	2"	EN 10226 R	1" 1/4
NX-N /D /LN-K /0402P	2825	1195	1980	1010	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-K /0452P	2825	1195	1980	1100	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-K /0502P	3360	1195	1980	1200	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-K /0552P	3360	1195	1980	1250	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4

SIZE	DIMENSIONS AND WEIGHTS				CLEARANCE				WATER CONNECTIONS USER SIDE		WATER CONNECTIONS TO RECOVERY USER SIDE	
	A	B	H	WEIGHT	R1	R2	R3	R4	IN/OUT		IN/OUT	
	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	TYPE	Ø	TYPE	Ø
NX-N /D /LN-K /0602P	3980	1195	1980	1360	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-K /0702P	3980	1195	1980	1410	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-K /0802P	3980	1195	1980	1430	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /CA /0152P	2395	1195	1865	590	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /CA /0182P	2395	1195	1865	640	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /CA /0202P	2395	1195	1865	640	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /CA /0252P	2395	1195	1865	670	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /CA /0262P	2395	1195	1865	670	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /CA /0302P	2825	1195	1980	800	1000	1000	1000	1000	EN 10226 R	2"	-	-
NX-N /CA /0352P	3360	1195	1980	990	1000	1000	1000	1000	EN 10226 R	2"	-	-
NX-N /CA /0402P	3360	1195	1980	1120	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /CA /0452P	3360	1195	1980	1170	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /CA /0502P	3980	1195	1980	1290	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /D /CA /0152P	2395	1195	1865	590	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /CA /0182P	2395	1195	1865	640	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /CA /0202P	2395	1195	1865	640	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /CA /0252P	2395	1195	1865	670	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /CA /0262P	2395	1195	1865	670	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /CA /0302P	2825	1195	1980	800	1000	1000	1000	1000	EN 10226 R	2"	EN 10226 R	1" 1/4
NX-N /D /CA /0352P	3360	1195	1980	990	1000	1000	1000	1000	EN 10226 R	2"	EN 10226 R	1" 1/4
NX-N /D /CA /0402P	3360	1195	1980	1120	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /CA /0452P	3360	1195	1980	1170	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /CA /0502P	3980	1195	1980	1290	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /LN-CA /0152P	2395	1195	1865	600	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /LN-CA /0182P	2395	1195	1865	640	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /LN-CA /0202P	2395	1195	1865	650	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /LN-CA /0252P	2395	1195	1865	710	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /LN-CA /0262P	2395	1195	1865	720	1000	1000	1000	1000	EN 10226 R	1"1/2	-	-
NX-N /LN-CA /0302P	2825	1195	1980	840	1000	1000	1000	1000	EN 10226 R	2"	-	-
NX-N /LN-CA /0352P	3360	1195	1980	1000	1000	1000	1000	1000	EN 10226 R	2"	-	-
NX-N /LN-CA /0402P	3360	1195	1980	1130	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /LN-CA /0452P	3360	1195	1980	1190	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /LN-CA /0502P	3980	1195	1980	1300	1000	1000	1000	1000	EN 10226 R	2"1/2	-	-
NX-N /D /LN-CA /0152P	2395	1195	1865	600	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-CA /0182P	2395	1195	1865	640	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-CA /0202P	2395	1195	1865	650	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-CA /0252P	2395	1195	1865	710	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-CA /0262P	2395	1195	1865	720	1000	1000	1000	1000	EN 10226 R	1"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-CA /0302P	2825	1195	1980	840	1000	1000	1000	1000	EN 10226 R	2"	EN 10226 R	1" 1/4
NX-N /D /LN-CA /0352P	3360	1195	1980	1000	1000	1000	1000	1000	EN 10226 R	2"	EN 10226 R	1" 1/4
NX-N /D /LN-CA /0402P	3360	1195	1980	1130	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-CA /0452P	3360	1195	1980	1190	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4
NX-N /D /LN-CA /0502P	3980	1195	1980	1300	1000	1000	1000	1000	EN 10226 R	2"1/2	EN 10226 R	1" 1/4







- ENTRATA ARIA
- AIR INLET

- USCITA ARIA
- AIR OUTLET

- BARICENTRO
- CENTER OF GRAVITY

(1) - ENTRATA ACQUA EVAP. / COND.
- EVAP. / COND. WATER INLET

(2) - USCITA ACQUA EVAP. / COND.
- EVAP. / COND. WATER OUTLET

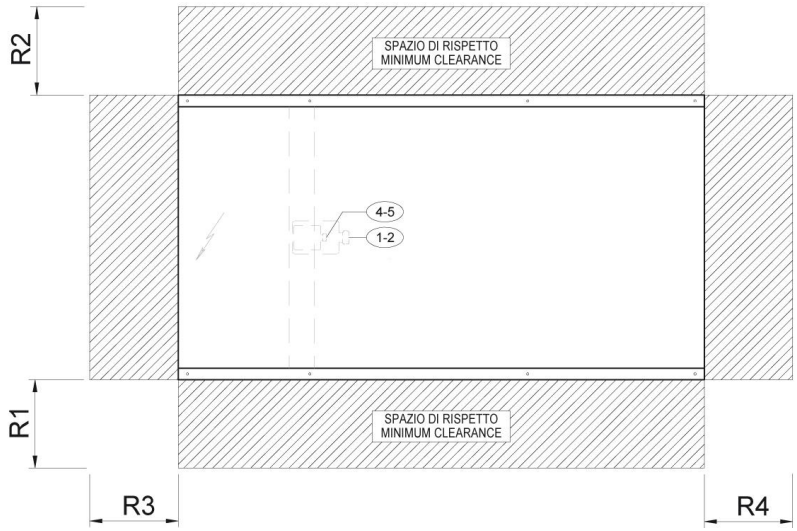
(3) - INGRESSO LINEA ELETTRICA
- POWER INLET

Solo per versione NX-N/D
Only for NX-N/D version

(4) - ENTRATA ACQUA DESURRISCALDATORI
- DESUPERHEATERS WATER INLET

(5) - USCITA ACQUA DESURRISCALDATORI
- DESUPERHEATERS WATER OUTLET

BASE D'APPOGGIO - SUPPORTING BASEMENT



"REMARKS:
For installation purposes, please refer to the documentation sent after the purchase-contract. This technical data should be considered as indicative. CLIMAVENETA may modify them at any moment."

SIZE	DIMENSIONS AND WEIGHTS				CLEARANCE				WATER CONNECTIONS USER SIDE		WATER CONNECTIONS TO RECOVERY USER SIDE	
	A	B	H	VEIGH	R1	R2	R3	R4	IN/OUT		IN/OUT	
	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	TYPE	Ø	TYPE	Ø
NX-N /CA /0562P	4110	2220	2150	1790	2000	2000	1000	2000	EN 10226 R	3"	-	-
NX-N /CA /0612P	4110	2220	2150	1890	2000	2000	1000	2000	EN 10226 R	3"	-	-
NX-N /CA /0712P	5110	2220	2150	2150	2000	2000	1000	2000	EN 10226 R	3"	-	-
NX-N /CA /0812P	5110	2220	2150	2260	2000	2000	1000	2000	EN 10226 R	3"	-	-
NX-N /D /CA /0562P	4110	2220	2150	1790	2000	2000	1000	2000	EN 10226 R	3"	EN 10226 R	1" 1/2
NX-N /D /CA /0612P	4110	2220	2150	1890	2000	2000	1000	2000	EN 10226 R	3"	EN 10226 R	1" 1/2
NX-N /D /CA /0712P	5110	2220	2150	2150	2000	2000	1000	2000	EN 10226 R	3"	EN 10226 R	1" 1/2
NX-N /D /CA /0812P	5110	2220	2150	2260	2000	2000	1000	2000	EN 10226 R	3"	EN 10226 R	1" 1/2
NX-N /LN-CA /0562P	4110	2220	2150	1800	2000	2000	1000	2000	EN 10226 R	3"	-	-
NX-N /LN-CA /0612P	4110	2220	2150	1900	2000	2000	1000	2000	EN 10226 R	3"	-	-
NX-N /LN-CA /0712P	5110	2220	2150	2160	2000	2000	1000	2000	EN 10226 R	3"	-	-
NX-N /LN-CA /0812P	5110	2220	2150	2270	2000	2000	1000	2000	EN 10226 R	3"	-	-
NX-N /D /LN-CA /0562P	4110	2220	2150	1800	2000	2000	1000	2000	EN 10226 R	3"	EN 10226 R	1" 1/2
NX-N /D /LN-CA /0612P	4110	2220	2150	1900	2000	2000	1000	2000	EN 10226 R	3"	EN 10226 R	1" 1/2
NX-N /D /LN-CA /0712P	5110	2220	2150	2160	2000	2000	1000	2000	EN 10226 R	3"	EN 10226 R	1" 1/2
NX-N /D /LN-CA /0812P	5110	2220	2150	2270	2000	2000	1000	2000	EN 10226 R	3"	EN 10226 R	1" 1/2

LEGEND OF PIPE CONNECTIONS

UNI ISO 228/1

Pipe threads where pressure-tight joints are not made on the threads - Designation, dimensions and tolerances

Used terminology:

G: Pipe threads where pressure-tight joints are not made on the threads
A: Close tolerance class for external pipe threads where pressure-tight joints are not made on the threads
B: Wider tolerance class for external pipe threads where pressure-tight joints are not made on the threads
Internal threads: G letter followed by thread mark (only tolerance class)
External threads: G letter followed by thread mark and by A letter for A class external threads or by B letter for B class external threads.

UNI EN 10226-1

Pipe threads where pressure-tight joints are made on the threads - Designation, dimensions and tolerances

Used terminology:

Rp: Internal cylindrical threads where pressure-tight joints are made on the threads
Rc: Internal conical threads where pressure-tight joints are made on the threads
R: External conical threads where pressure-tight joints are made on the threads
Internal cylindrical threads: R letter followed by p letter
Internal conical threads: R letter followed by c letter
External conical threads: R letter

Designation	Description
UNI EN 10226-1 - Rp 1 1/2	Internal cylindrical threads where pressure-tight joints are made on the threads, defined by standard UNI ISO 7/1 Conventional ø 1 1/2"
UNI EN 10226-1 - Rp 2 1/2	Internal cylindrical threads where pressure-tight joints are made on the threads, defined by standard UNI ISO 7/1 Conventional ø 2 1/2"
UNI EN 10226-1 - Rp 3	Internal cylindrical threads where pressure-tight joints are made on the threads, defined by standard UNI ISO 7/1 Conventional ø 3"
UNI EN 10226-1 - R 3	External conical threads where pressure-tight joints are made on the threads, defined by standard UNI ISO 7/1 Conventional ø 3"
UNI ISO 228/1 - G 4 B	Internal cylindrical threads where pressure-tight joints are not made on the threads, defined by standard UNI ISO 228/1 Tolerance class B for external thread Conventional ø 4"
DN 80 PN 16	Flange Nominal Diameter: 80 mm Nominal Pressure: 16 bar

Notes:

Conventional diameter value [in inches] identifies short thread designation, based upon the relative standard.
All relative values are defined by standards.
As example, here below some values:

	UNI EN 10226-1	UNI ISO 228/1
Conventional ø	1"	1"
Pitch	2.309 mm	2.309 mm
External ø	33.249 mm	33.249 mm
Core ø	30.291 mm	30.291 mm
Thread height	1.479 mm	1.479 mm

13.1 HYDRONIC GROUP (Optional)

The units can be supplied with a hydronic group. This houses all the main hydraulic components, thereby optimising hydraulic and electric installation space, time and cost.

“LONGITUDINAL V-SHAPED” STRUCTURE UNIT

Available pump confi gurations:
- Hydronic kit with one 2-pole low-head pump
- Hydronic kit with one 2-pole high-head pump
- Hydronic kit with two 2-pole low-head pumps
- Hydronic kit with two 2-pole high-head pumps

Storage tank (upon request)
The storage tank system features:
- 90 to 250 litres tank for the sizes and versions shown in the table of combinations,
- expansion vessel (EPDM membrane), with 1.5 bar pre-charge:
  - 5 litres with water tank to 90 litres
  - 8 litres with water tank from 140 litres to 200 litres
  - 12 litres with water tank to 250 litres
- pressure gauge,
- safety valve calibrated to 5 bars,
- storage tank with 20 mm lining,
- tank frost protection heater upon request.

2-pole low-head pump
Horizontal one-piece centrifuge pump with one impeller, axial suction and radial delivery, AISI 304L stainless steel pump body impeller. The section of shaft in contact with the liquid is made of stainless steel. Mechanical seal made of components in ceramics/carbon/NBR/AISI304. Three-phase electric motor protected to IP55, insulation class F, suitable for continuous service.

2-pole high-head pump
All versions of the hydronic unit can be supplied with a high-head pump. In these cases, the pump features a two-pole motor even in the silent-running versions.

Second pump
A second stand-by pump for high or low pressures is available on request. The pumps are automatically exchanged on the basis of a rotation program and the stand-by pump cuts in automatically if the primary pump fails. The two-pump hydronic assembly is also fitted with check valves to ensure the unit works correctly

Storage tank combinations

NX-N	VERSION	WATER TANK Capacity [litri]
0152P	K	90
	LN-K	
	CA	140
	LN-CA	
0182P	K	90
	LN-K	
	CA	140
	LN-CA	
0202P	K	90
	LN-K	
	CA	140
	LN-CA	
0252P	K	140
	LN-K	
	CA	
	LN-CA	
0262P	K	
	LN-K	
	CA	
	LN-CA	
0302P	K	
	LN-K	
	CA	
	LN-CA	
0352P	K	
	LN-K	
	CA	200
	LN-CA	

NX-N	VERSION	WATER TANK Capacity [litri]
0402P	K	140
	LN-K	
	CA	200
	LN-CA	
0452P	K	140
	LN-K	
	CA	200
	LN-CA	
0502P	K	200
	LN-K	
	CA	250
	LN-CA	
0552P	K	200
	LN-K	
0562P	CA	500
	LN-CA	
0602P	K	250
	LN-K	
0612P	CA	500
	LN-CA	
0702P	K	250
	LN-K	
0712P	CA	850
	LN-CA	
0802P	K	250
	LN-K	
0812P	CA	850
	LN-CA	

“DUAL COIL MODULE” STRUCTURE UNIT

Available pump configurations:
- Hydronic kit with one IN-LINE 2-pole low-head pump
- Hydronic kit with one IN-LINE 2-pole high-head pump
- Hydronic kit with IN-LINE 2-pole low-head twin pumps
- Hydronic kit with IN-LINE 2-pole high-head twin pumps

Storage tank (upon request)
The storage tank system features:
- 500 litre tank for the sizes and versions shown in the table of combinations,
- expansion vessel (EPDM membrane), with 1.5 bar pre-charge:
  - 18 litres with water tank to 500 litres
  - 40 litres with water tank to 850 litres
- pressure gauge,
- safety valve calibrated to 6 bars,
- storage tank with 20 mm lining,
- tank frost protection heater upon request.

2-pole low-head pump
Centrifugal pumps with in-line suction and delivery flanges, in single and twin versions. Pump body in cast iron and impeller in AISI 316L stainless steel or cast-iron, entirely laser technology welded. Mechanical seal with components in ceramics, carbon and EPDM elastomers. Three-phase electric motor protected to IP55, insulation class F, suitable for continuous service.

2-pole high-head pump
All versions of the hydronic unit can be supplied with a high head pump. In these cases, the pump features a two-pole motor even in the silent-running versions.

Twin pump
A second stand-by pump for high or low pressures is available on request. The pumps are automatically exchanged on the basis of a rotation programme and the stand-by pump cuts in automatically if the primary pump fails.

GENERAL CHARACTERISTICS

Water connections

In the units without pumps, standard version, the connections for the water inlet and outlet both in the evaporator and in the desuperheater are inside the unit. As an accessory one can request these connections fl ush with the unit.
For units with pumps, the connections are always fl ush with the unit.

Water-side mechanical filter (optional)

Y-filter designed and built to capture the impurities in the hydraulic circuit. It is fitted with a 0.9 mm stainless steel mesh cartridge which can be replaced without removing the valve body from the piping.

Unit electrical panel

The unit electrical panel is fitted with fuses and a circuit breaker contactor.

Special pumps

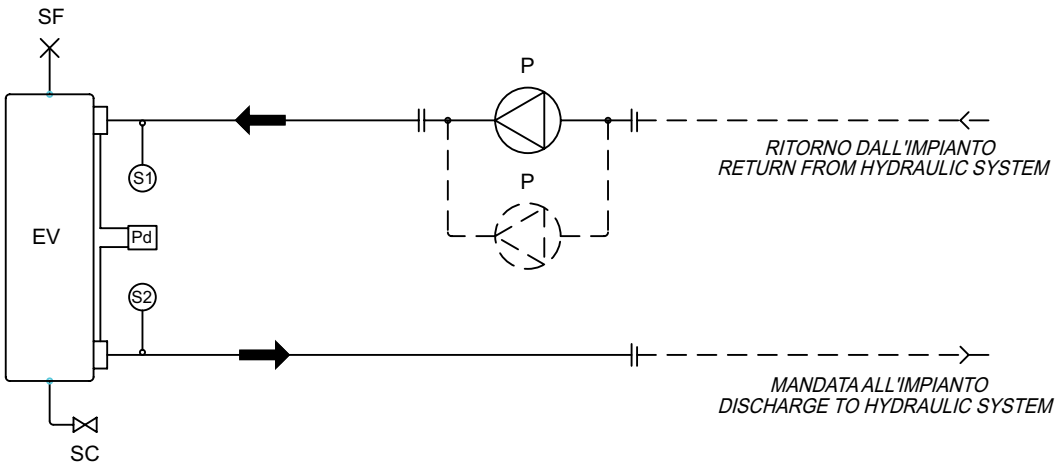
For pumps with different configurations, please contact our sales department.

Additional components

The supply does not include the following accessories though these are recommended to ensure correct system operation:

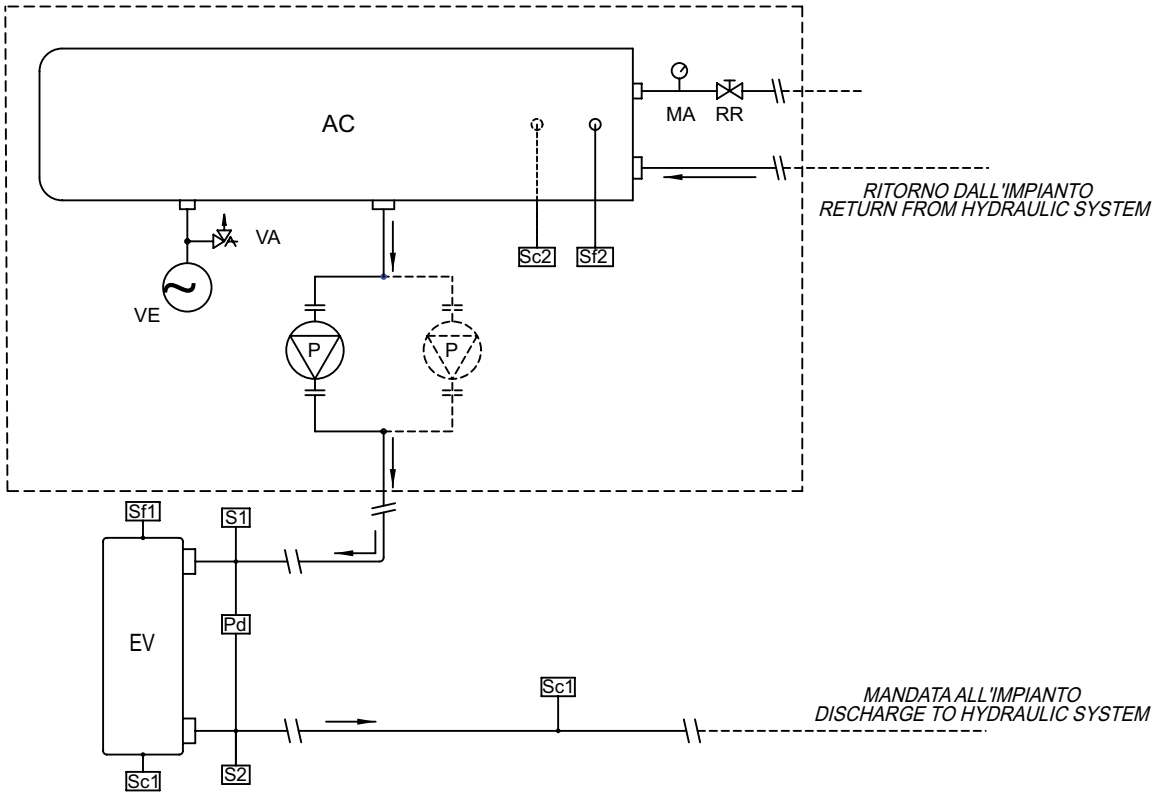
MA Pressure gauges upline and downline from the unit
GF Flexible joints on piping
RI On-off valves
T Outlet control thermometer

13.2 Hydraulic diagram



LEGENDA - LEGEND	
CONPONENTI DEL KIT IDRONICO *COMPONENTS OF THE HYDRONIC KIT*	
EV	Evaporatore Evaporator
P	Pompa Water pump
Pd	Pressostato differenziale lato acqua Water Differential pressure switch
SC	Valvola di scarico Drain valve
SF	Valvola di sfiato Purge valve
S1	Sonda ingresso acqua scambiatore Exchanger water inlet probe
S2	Sonda uscita acqua scambiatore Exchanger water outlet probe

13.3 Hydraulic diagram with water tank



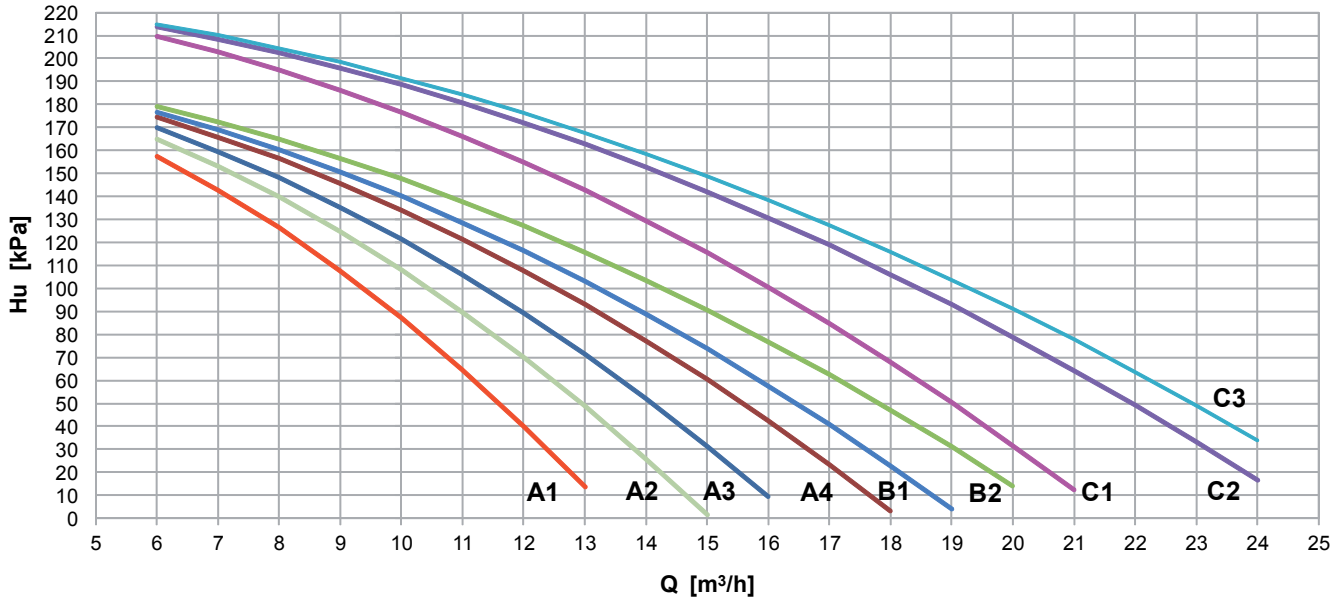
LEGENDA - LEGEND	
AC	Accumulo Water tank
EV	Evaporatore Evaporator
MA	Manometro Water pressure gauge
P	Pompa Water pump
Pd	Pressostato differenziale Differential pressure switch
RR	Rubinetto reintegro Filling valve
S1	Sonda ingresso acqua evaporatori/condensatori Evaporators/Condensers water inlet probe
S2	Sonda uscita acqua evaporatori/condensatori Evaporators/Condensers water outlet probe
Sc1	Scarico Evaporatore/Condensatore Evaporator/Condenser drain valve
Sc2	Scarico acqua accumulo Water tank drain valve
Sf1	Sfiato Evaporatore/Condensatore Evaporator/Condenser breather valve
Sf2	Sfiato accumulo Tank breather valve
VA	Valvola di sicurezza Safety valve
VE	Vaso di espansione Expansion tank

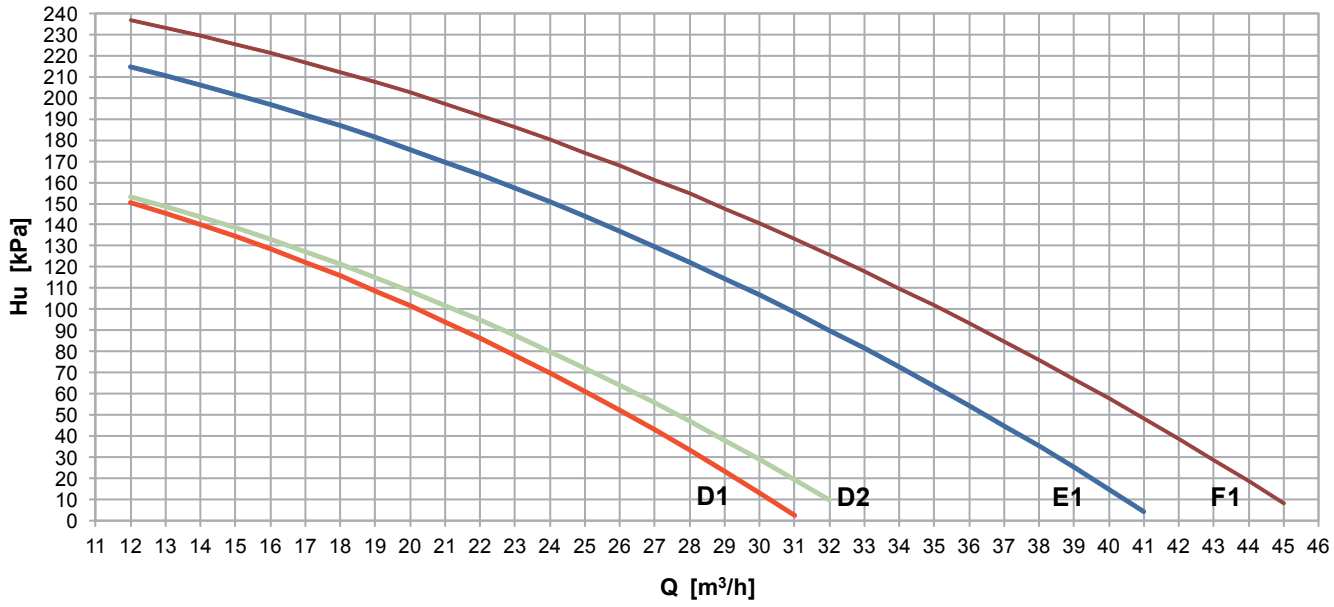
1 PUMP - LOW HEAD PUMP with or without WATER TANK (Longitudinal V-shaped coil module)

SIZE		CH		HP		PUMP					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0152	K	38,7	6,66	42,9	7,38	A1	DWC-V 300/1.1(R)*	2	3,2	1,1	99	88
	LN-K	35,8	6,16	42,9	7,38						106	88
	CA	40,0	6,88	46,1	7,93						96	79
	LN-CA	36,3	6,24	46,1	7,93						105	79
0182	K	43,8	7,53	47,4	8,15	A2					97	89
	LN-K	39,8	6,85	47,4	8,15						106	89
	CA	45,3	7,79	51,0	8,77						94	79
	LN-CA	40,9	7,03	51,0	8,77						104	79
0202	K	51,0	8,77	55,3	9,51	A3	DWC-V 300/1.1(R)	2	3,2	1,1	90	79
	LN-K	46,8	8,05	55,3	9,51						99	79
	CA	51,2	8,81	59,0	10,15						89	70
	LN-CA	47,5	8,17	59,0	10,15						97	70
0252	K	58,3	10,03	65,0	11,18	A4					85	70
	LN-K	53,4	9,18	65,0	11,18						95	70
	CA	59,6	10,25	69,5	11,95						82	59
	LN-CA	54,3	9,34	69,5	11,95						93	59
0262	K	64,6	11,11	70,7	12,16	B1	DWC-V 300/1.1	2	3,2	1,1	134	121
	LN-K	60,4	10,39	70,7	12,16						142	121
	CA	66,8	11,49	74,5	12,81						129	112
	LN-CA	59,8	10,29	74,5	12,81						143	112
0302	K	74,1	12,75	80,1	13,78	B2					125	113
	LN-K	69,9	12,02	80,1	13,78						134	113
	CA	80,9	13,91	86,8	14,93						111	98
	LN-CA	79,4	13,66	86,8	14,93						114	98
0352	K	84,4	14,52	92,1	15,84	C1	DWC-V 300/1.5	2	3,7	1,5	134	115
	LN-K	77,9	13,40	92,1	15,84						149	115
	CA	92,0	15,82	98,6	16,96						115	98
	LN-CA	87,1	14,98	98,6	16,96						128	98
0402	K	100,2	17,23	108,3	18,63	C2					129	112
	LN-K	94,5	16,25	108,3	18,63						140	112
	CA	102,2	17,58	110,4	18,99						125	108
	LN-CA	99,0	17,03	110,4	18,99						131	108
0452	K	112,5	19,35	119,5	20,55	C3					114	100
	LN-K	103,6	17,82	119,5	20,55						131	100
	CA	116,2	19,99	122,2	21,02						107	95
	LN-CA	109,9	18,90	122,2	21,02						119	95
0502	K	125,0	21,50	133,9	23,03	D1	DWC-V 500/1,5	2	3,7	1,5	94	81
	LN-K	113,9	19,59	133,9	23,03						108	81
	CA	130,9	22,51	138,2	23,77						86	75
	LN-CA	124,9	21,48	138,2	23,77						94	75
0552	K	138,2	23,77	150,1	25,82	D2					85	69
	LN-K	131,6	22,64	150,1	25,82						94	69
0602	K	161,9	27,85	174,6	30,03	E1	DWC-V 500/2.2	2	4,5	2,2	135	118
	LN-K	154,3	26,54	174,6	30,03						144	118
0702	K	179,7	30,91	193,2	33,23	F1	DWC-V 500/3	2	6,1	3,0	137	119
	LN-K	168,3	28,95	193,2	33,23						151	119
0802	K	198,8	34,19	211,4	36,36						112	94
	LN-K	179,5	30,87	211,4	36,36						137	94

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES



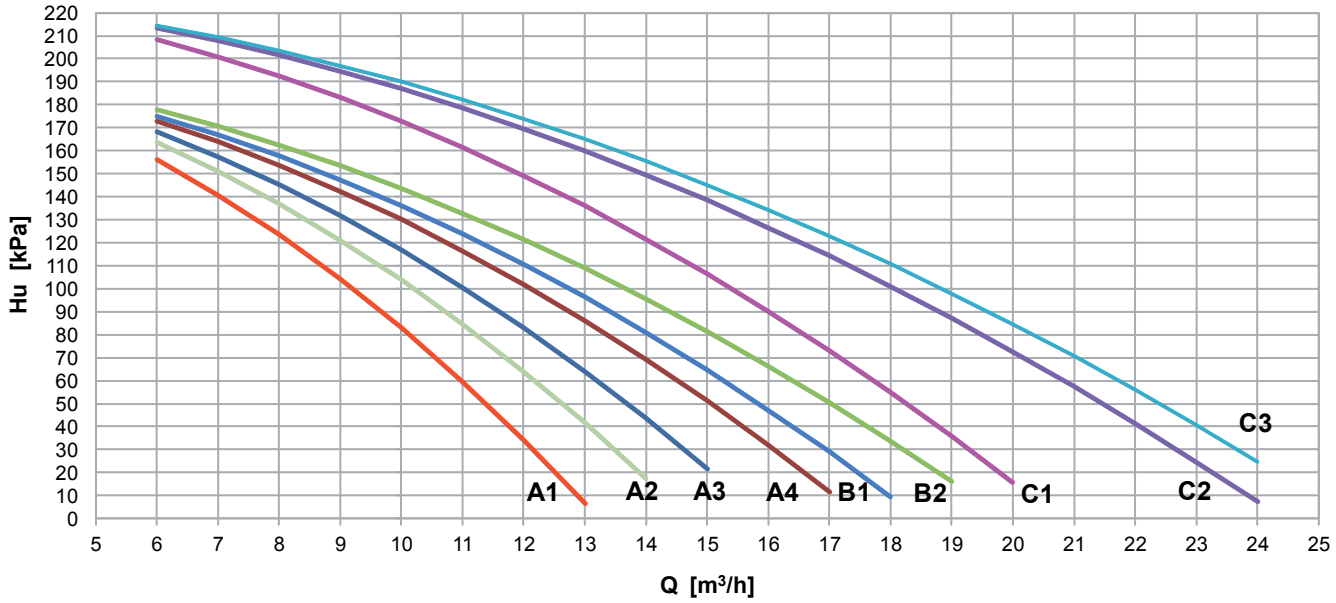


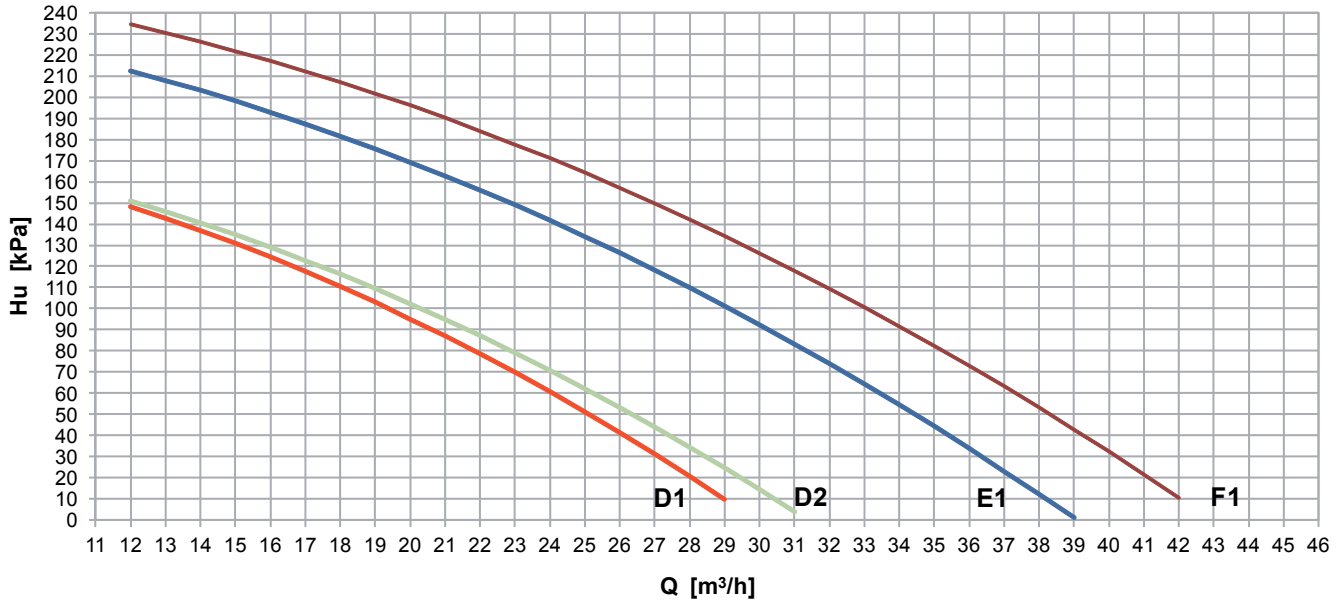
2 PUMPS - LOW HEAD PUMP with or without WATER TANK (Longitudinal V-shaped coil module)

SIZE		CH		HP		PUMP					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0152	K	38,7	6,66	42,9	7,38	A1	DWC-V 300/1.1(R)*	2	3,2	1,1	97	86
	LN-K	35,8	6,16	42,9	7,38						104	86
	CA	40,0	6,88	46,1	7,93						94	76
	LN-CA	36,3	6,24	46,1	7,93						103	76
0182	K	43,8	7,53	47,4	8,15	A2	DWC-V 300/1.1(R)	2	3,2	1,1	95	86
	LN-K	39,8	6,85	47,4	8,15						104	86
	CA	45,3	7,79	51,0	8,77						91	76
	LN-CA	40,9	7,03	51,0	8,77						102	76
0202	K	51,0	8,77	55,3	9,51	A3					86	76
	LN-K	46,8	8,05	55,3	9,51						96	76
	CA	51,2	8,81	59,0	10,15						86	66
	LN-CA	47,5	8,17	59,0	10,15						94	66
0252	K	58,3	10,03	65,0	11,18	A4					81	65
	LN-K	53,4	9,18	65,0	11,18						91	65
	CA	59,6	10,25	69,5	11,95						78	53
	LN-CA	54,3	9,34	69,5	11,95						89	53
0262	K	64,6	11,11	70,7	12,16	B1	DWC-V 300/1.1	2	3,2	1,1	129	115
	LN-K	60,4	10,39	70,7	12,16						138	115
	CA	66,8	11,49	74,5	12,81						124	106
	LN-CA	59,8	10,29	74,5	12,81						139	106
0302	K	74,1	12,75	80,1	13,78	B2					119	105
	LN-K	69,9	12,02	80,1	13,78						128	105
	CA	80,9	13,91	86,8	14,93						103	89
	LN-CA	79,4	13,66	86,8	14,93						107	89
0352	K	84,4	14,52	92,1	15,84	C1	DWC-V 300/1.5	2	3,7	1,5	125	105
	LN-K	77,9	13,40	92,1	15,84						141	105
	CA	92,0	15,82	98,6	16,96						105	86
	LN-CA	87,1	14,98	98,6	16,96						118	86
0402	K	100,2	17,23	108,3	18,63	C2					124	106
	LN-K	94,5	16,25	108,3	18,63						136	106
	CA	102,2	17,58	110,4	18,99						120	102
	LN-CA	99,0	17,03	110,4	18,99						127	102
0452	K	112,5	19,35	119,5	20,55	C3					108	94
	LN-K	103,6	17,82	119,5	20,55						126	94
	CA	116,2	19,99	122,2	21,02						101	88
	LN-CA	109,9	18,90	122,2	21,02						114	88
0502	K	125,0	21,50	133,9	23,03	D1	DWC-V 500/1,5	2	3,7	1,5	86	73
	LN-K	113,9	19,59	133,9	23,03						102	73
	CA	130,9	22,51	138,2	23,77						78	66
	LN-CA	124,9	21,48	138,2	23,77						87	66
0552	K	138,2	23,77	150,1	25,82	D2					76	58
	LN-K	131,6	22,64	150,1	25,82						85	58
0602	K	161,9	27,85	174,6	30,03	E1	DWC-V 500/2.2	2	4,5	2,2	122	104
	LN-K	154,3	26,54	174,6	30,03						133	104
0702	K	179,7	30,91	193,2	33,23	F1	DWC-V 500/3	2	6,1	3,0	122	109
	LN-K	168,3	28,95	193,2	33,23						138	114
0802	K	198,8	34,19	211,4	36,36						93	73
	LN-K	179,5	30,87	211,4	36,36						122	73

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES



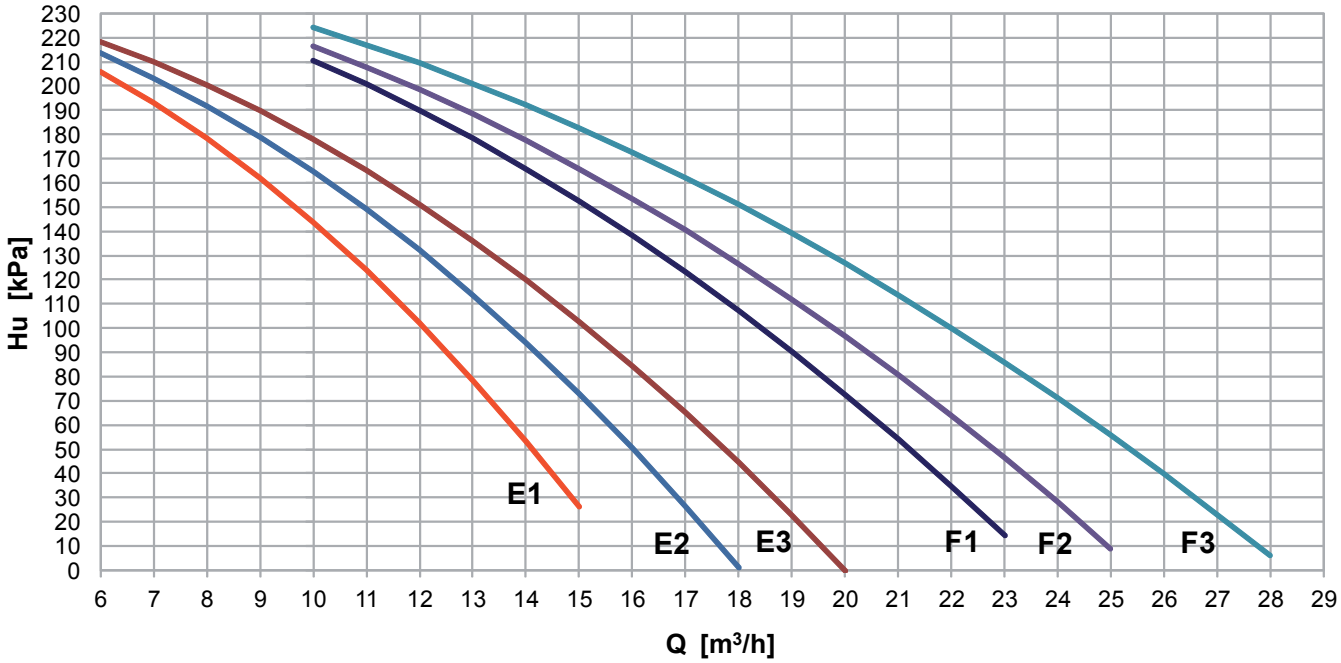


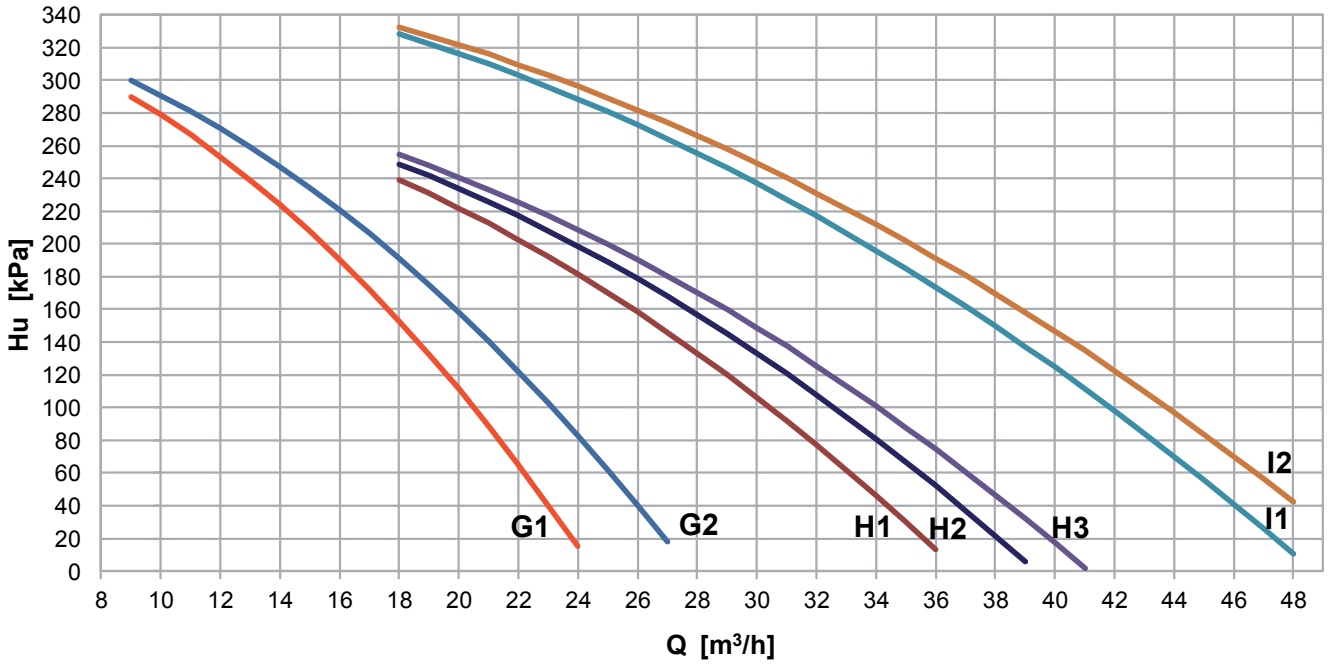
1 PUMP - HIGH HEAD PUMP with or without WATER TANK (Longitudinal V-shaped coil module)

SIZE		CH		HP		PUMPS					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0152	K	38,7	6,66	42,9	7,38	E1	DWC-V 500/2,2*	2	4,5	2,2	204	193
	LN-K	35,8	6,16	42,9	7,38						212	193
	CA	40,0	6,88	46,1	7,93						201	185
	LN-CA	36,3	6,24	46,1	7,93						210	185
0182	K	43,8	7,53	47,4	8,15	E2					202	195
	LN-K	39,8	6,85	47,4	8,15						211	195
	CA	45,3	7,79	51,0	8,77						199	188
	LN-CA	40,9	7,03	51,0	8,77						208	188
0202	K	51,0	8,77	55,3	9,51	E3					199	190
	LN-K	46,8	8,05	55,3	9,51						207	190
	CA	51,2	8,81	59,0	10,15						197	183
	LN-CA	47,5	8,17	59,0	10,15						205	183
0252	K	58,3	10,03	65,0	11,18	F1	DWC-V 500/3	2	6,1	3,0	205	195
	LN-K	53,4	9,18	65,0	11,18						212	195
	CA	59,6	10,25	69,5	11,95						203	187
	LN-CA	54,3	9,34	69,5	11,95						210	187
0262	K	64,6	11,11	70,7	12,16	F2					194	194
	LN-K	60,4	10,39	70,7	12,16						208	194
	CA	66,8	11,49	74,5	12,81						200	188
	LN-CA	59,8	10,29	74,5	12,81						209	188
0302	K	74,1	12,75	80,1	13,78	F3					201	192
	LN-K	69,9	12,02	80,1	13,78						206	192
	CA	80,9	13,91	86,8	14,93						191	182
	LN-CA	79,4	13,66	86,8	14,93						193	182
0352	K	84,4	14,52	92,1	15,84	G1	FHE 32-160/22**	2	4,6	2,2	215	192
	LN-K	77,9	13,40	92,1	15,84						232	192
	CA	92,0	15,82	98,6	16,96						193	173
	LN-CA	87,1	14,98	98,6	16,96						208	173
0402	K	100,2	17,23	108,3	18,63	G2					202	181
	LN-K	94,5	16,25	108,3	18,63						218	181
	CA	102,2	17,58	110,4	18,99						198	176
	LN-CA	99,0	17,03	110,4	18,99						204	176
0452	K	112,5	19,35	119,5	20,55	H1	FHE 40-160/30	2	6,1	3,0	228	216
	LN-K	103,6	17,82	119,5	20,55						239	216
	CA	116,2	19,99	122,2	21,02						222	211
	LN-CA	109,9	18,90	122,2	21,02						231	211
0502	K	125,0	21,50	133,9	23,03	H2					221	207
	LN-K	113,9	19,59	133,9	23,03						237	207
	CA	130,9	22,51	138,2	23,77						212	200
	LN-CA	124,9	21,48	138,2	23,77						221	200
0552	K	138,2	23,77	150,1	25,82	H3					210	191
	LN-K	131,6	22,64	150,1	25,82						220	191
0602	K	161,9	27,85	174,6	30,03	I1	FHE 40-160/40	2	7,6	4,0	257	236
	LN-K	154,3	26,54	174,6	30,03						269	236
0702	K	179,7	30,91	193,2	33,23	I2					241	219
	LN-K	168,3	28,95	193,2	33,23						254	219
0802	K	198,8	34,19	211,4	36,36						210	187
	LN-K	179,5	30,87	211,4	36,36						241	187

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES



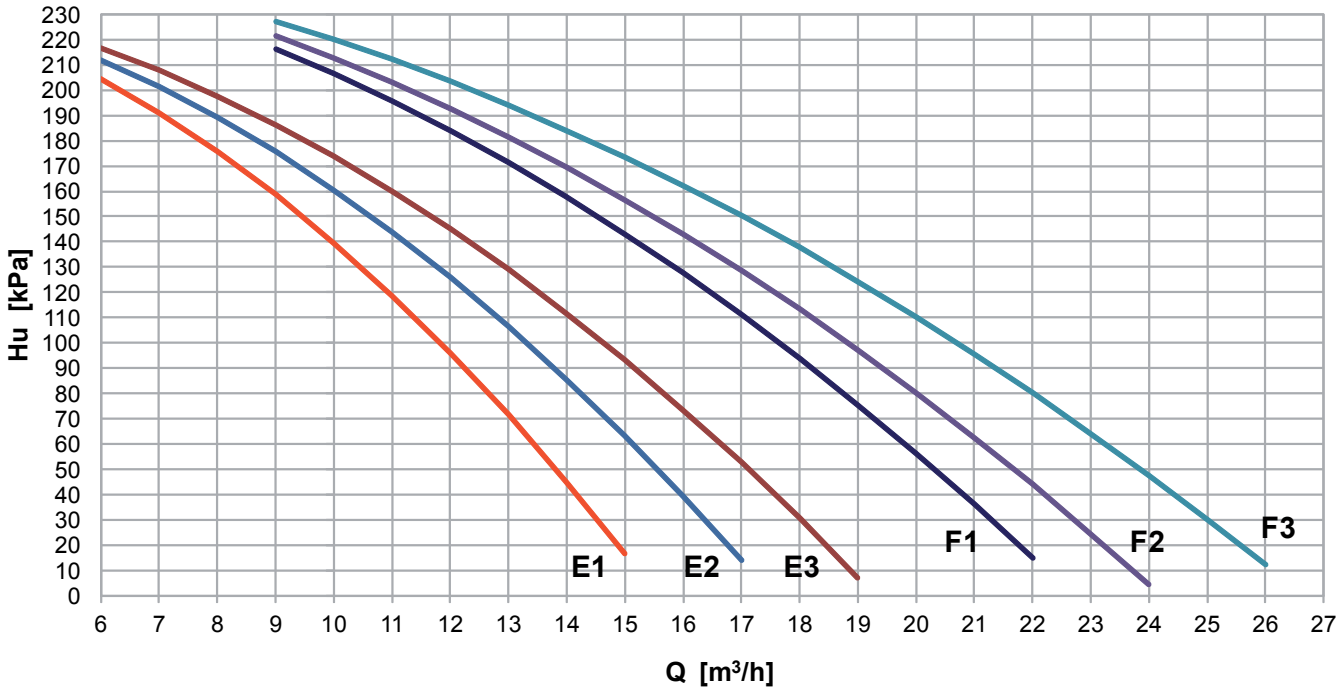


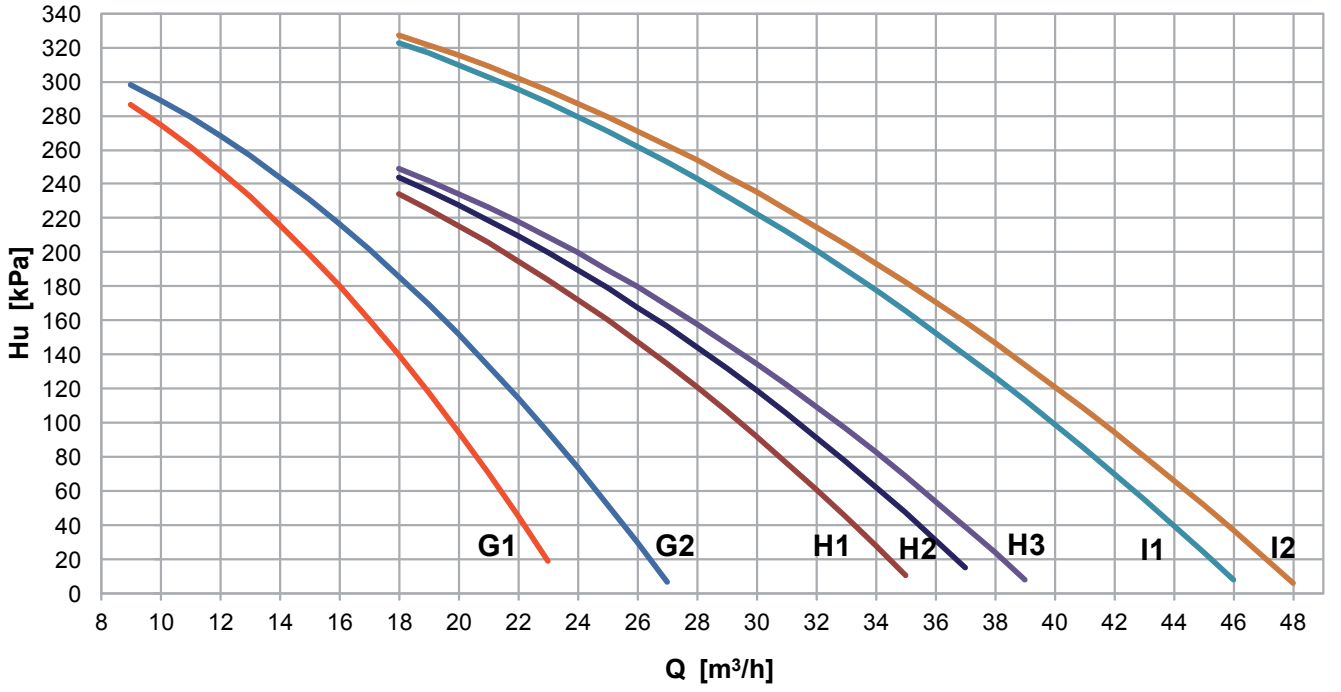
2 PUMPS - HIGH HEAD PUMP with or without WATER TANK (Longitudinal V-shaped coil module)

SIZE		CH		HP		POMPA					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Modello	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0152	K	38,7	6,66	42,9	7,38	E1	DWC-V 500/2,2*	2	4,5	2,2	202	190
	LN-K	35,8	6,16	42,9	7,38						210	190
	CA	40,0	6,88	46,1	7,93						199	182
	LN-CA	36,3	6,24	46,1	7,93						208	182
0182	K	43,8	7,53	47,4	8,15	E2					200	192
	LN-K	39,8	6,85	47,4	8,15						209	192
	CA	45,3	7,79	51,0	8,77						197	185
	LN-CA	40,9	7,03	51,0	8,77						206	185
0202	K	51,0	8,77	55,3	9,51	E3					195	186
	LN-K	46,8	8,05	55,3	9,51						204	186
	CA	51,2	8,81	59,0	10,15						194	179
	LN-CA	47,5	8,17	59,0	10,15						202	179
0252	K	58,3	10,03	65,0	11,18	F1	DWC-V 500/3	2	6,1	3,0	201	190
	LN-K	53,4	9,18	65,0	11,18						208	190
	CA	59,6	10,25	69,5	11,95						199	181
	LN-CA	54,3	9,34	69,5	11,95						207	181
0262	K	64,6	11,11	70,7	12,16	F2					189	188
	LN-K	60,4	10,39	70,7	12,16						204	188
	CA	66,8	11,49	74,5	12,81						194	181
	LN-CA	59,8	10,29	74,5	12,81						205	181
0302	K	74,1	12,75	80,1	13,78	F3					194	185
	LN-K	69,9	12,02	80,1	13,78						200	185
	CA	80,9	13,91	86,8	14,93						183	173
	LN-CA	79,4	13,66	86,8	14,93						186	173
0352	K	84,4	14,52	92,1	15,84	G1	FHE 32-160/22**	2	4,6	2,2	207	182
	LN-K	77,9	13,40	92,1	15,84						224	182
	CA	92,0	15,82	98,6	16,96						183	162
	LN-CA	87,1	14,98	98,6	16,96						198	162
0402	K	100,2	17,23	108,3	18,63	G2					198	175
	LN-K	94,5	16,25	108,3	18,63						214	175
	CA	102,2	17,58	110,4	18,99						194	170
	LN-CA	99,0	17,03	110,4	18,99						199	170
0452	K	112,5	19,35	119,5	20,55	H1	FHE 40-160/30	2	6,1	3,0	222	210
	LN-K	103,6	17,82	119,5	20,55						234	210
	CA	116,2	19,99	122,2	21,02						215	204
	LN-CA	109,9	18,90	122,2	21,02						226	204
0502	K	125,0	21,50	133,9	23,03	H2					214	199
	LN-K	113,9	19,59	133,9	23,03						231	199
	CA	130,9	22,51	138,2	23,77						204	191
	LN-CA	124,9	21,48	138,2	23,77						214	191
0552	K	138,2	23,77	150,1	25,82	H3					201	181
	LN-K	131,6	22,64	150,1	25,82						212	181
0602	K	161,9	27,85	174,6	30,03	I1	FHE 40-160/40	2	7,6	4,0	245	222
	LN-K	154,3	26,54	174,6	30,03						257	222
0702	K	179,7	30,91	193,2	33,23	I2					226	209
	LN-K	168,3	28,95	193,2	33,23						241	214
0802	K	198,8	34,19	211,4	36,36						191	166
	LN-K	179,5	30,87	211,4	36,36						226	166

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES



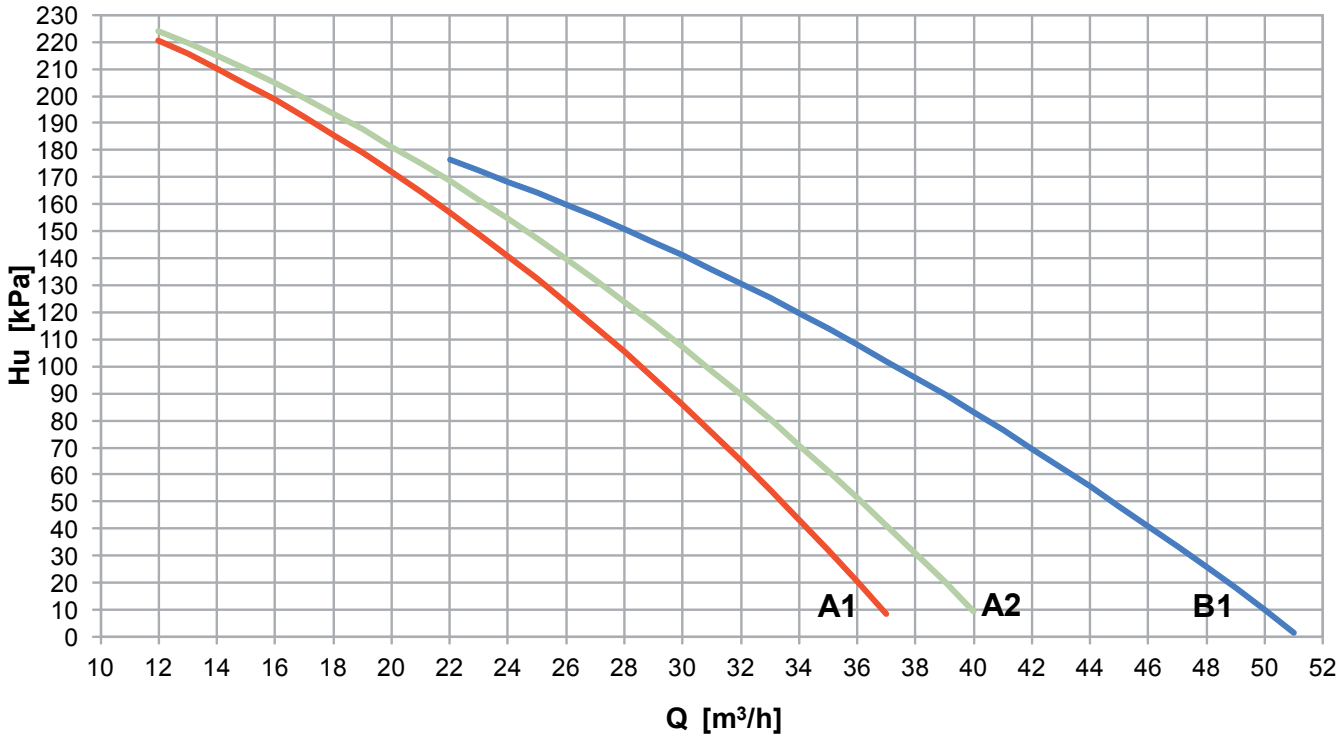


1 PUMP - LOW HEAD PUMP without WATER TANK (Dual coil module)

SIZE		CH		HP		PUMP					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0562	CA	153	26,2	161	27,8	A1	FCE 50-160/22	2	4,6	2,2	121	108
	LN-CA	144	24,8	161	27,8						134	108
0612	CA	170	29,2	181	31,1	A2					114	98
	LN-CA	165	28,4	181	31,1						121	98
0712	CA	198	34,0	209	36,0	B1	FCE 65-125/30	2	6,1	3,0	120	108
	LN-CA	189	32,5	209	36,0						128	108
0812	CA	220	37,8	232	40,0						97	83
	LN-CA	212	36,5	232	40,0						105	83

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES

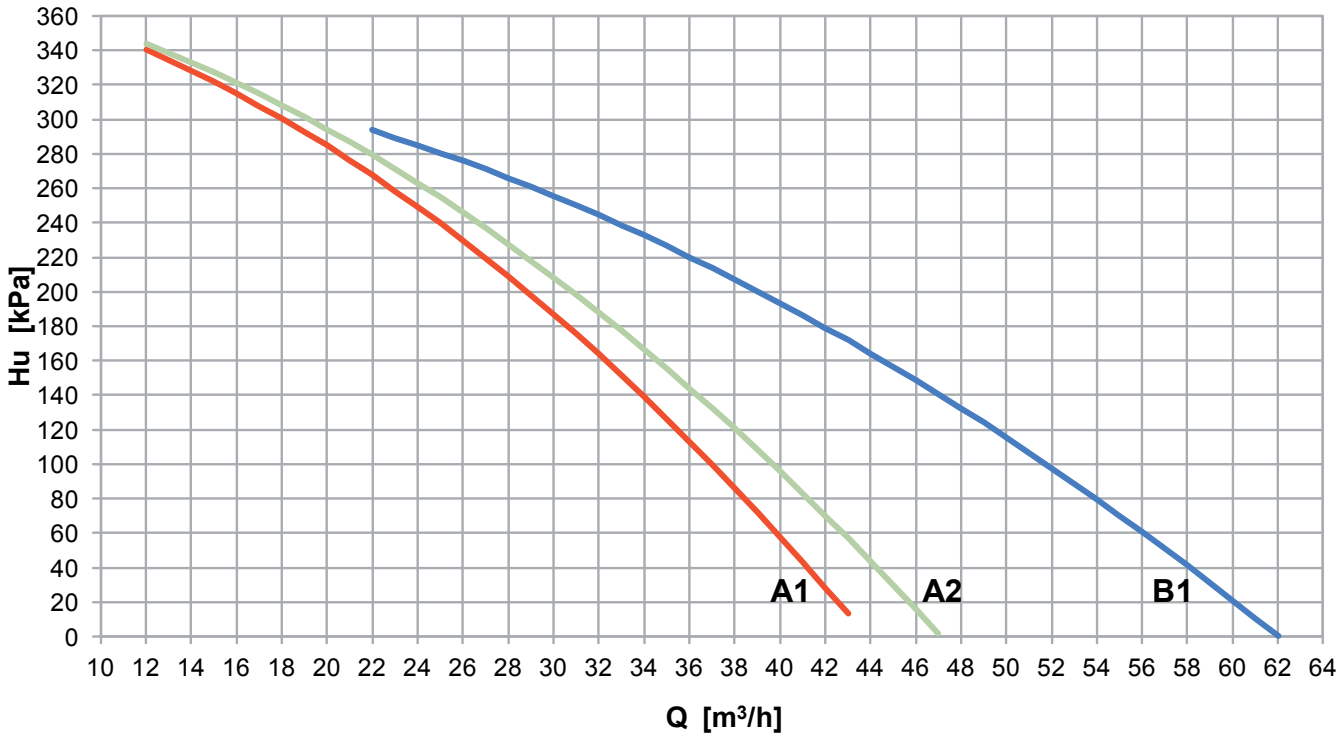


1 PUMP - LOW HEAD PUMP with WATER TANK (Dual coil module)

SIZE		CH		HP		PUMP					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0562	CA	153	26,2	161	27,8	A1	FCE 50-160/22	2	4,6	2,2	116	102
	LN-CA	144	24,8	161	27,8						130	102
0612	CA	170	29,2	181	31,1	A2					108	90
	LN-CA	165	28,4	181	31,1						114	90
0712	CA	198	34,0	209	36,0	B1	FCE 65-125/30	2	6,1	3,0	114	102
	LN-CA	189	32,5	209	36,0						123	102
0812	CA	220	37,8	232	40,0						91	76
	LN-CA	212	36,5	232	40,0						99	76

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES

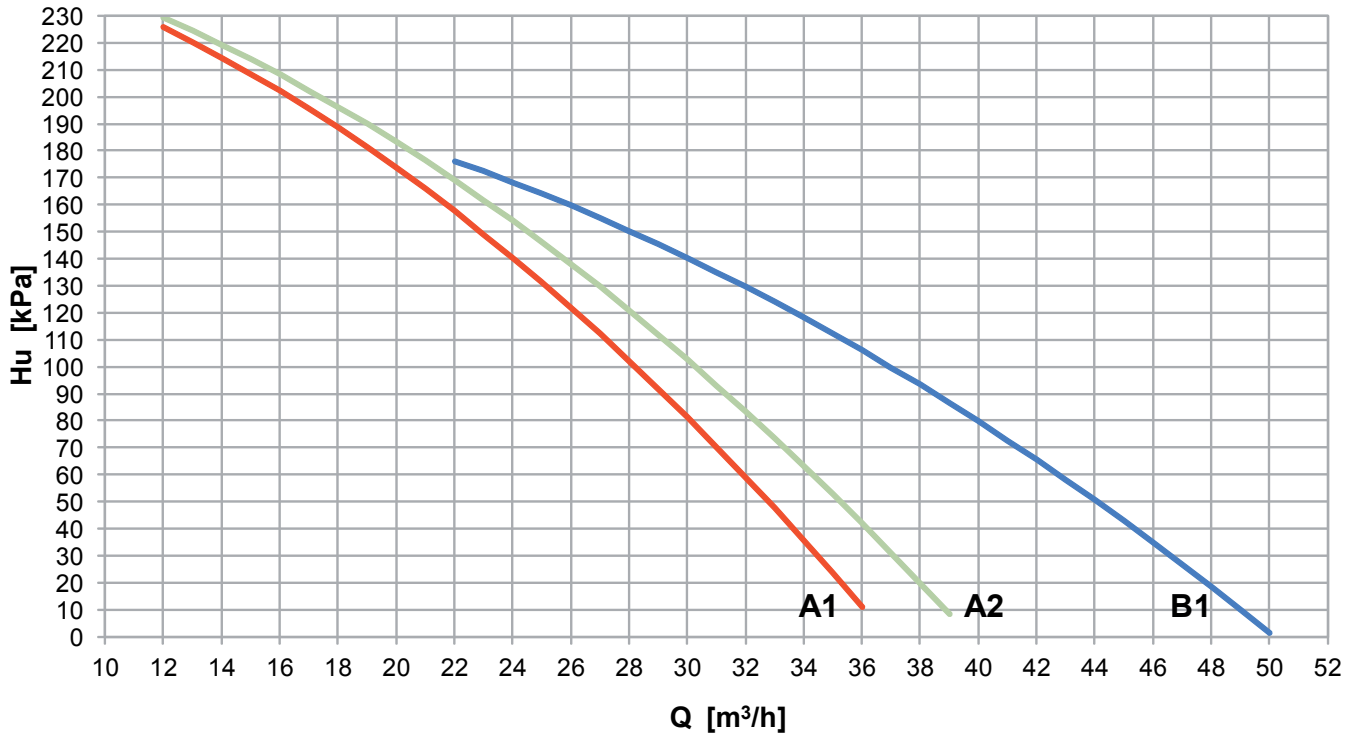


2 PUMPS - LOW HEAD PUMP without WATER TANK (Dual coil module)

SIZE		CH		HP		PUMP					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0562	CA	153	26,2	161	27,8	A1	FCTE 50-160/22	2	4,6	2,2	118	104
	LN-CA	144	24,8	161	27,8						116	104
0612	CA	170	29,2	181	31,1	A2					110	92
	LN-CA	165	28,4	181	31,1						117	92
0712	CA	198	34,0	209	36,0	B1	FCTE 65-125/30	2	6,1	3,0	119	106
	LN-CA	189	32,5	209	36,0						127	106
0812	CA	220	37,8	232	40,0						95	80
	LN-CA	212	36,5	232	40,0						103	80

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES

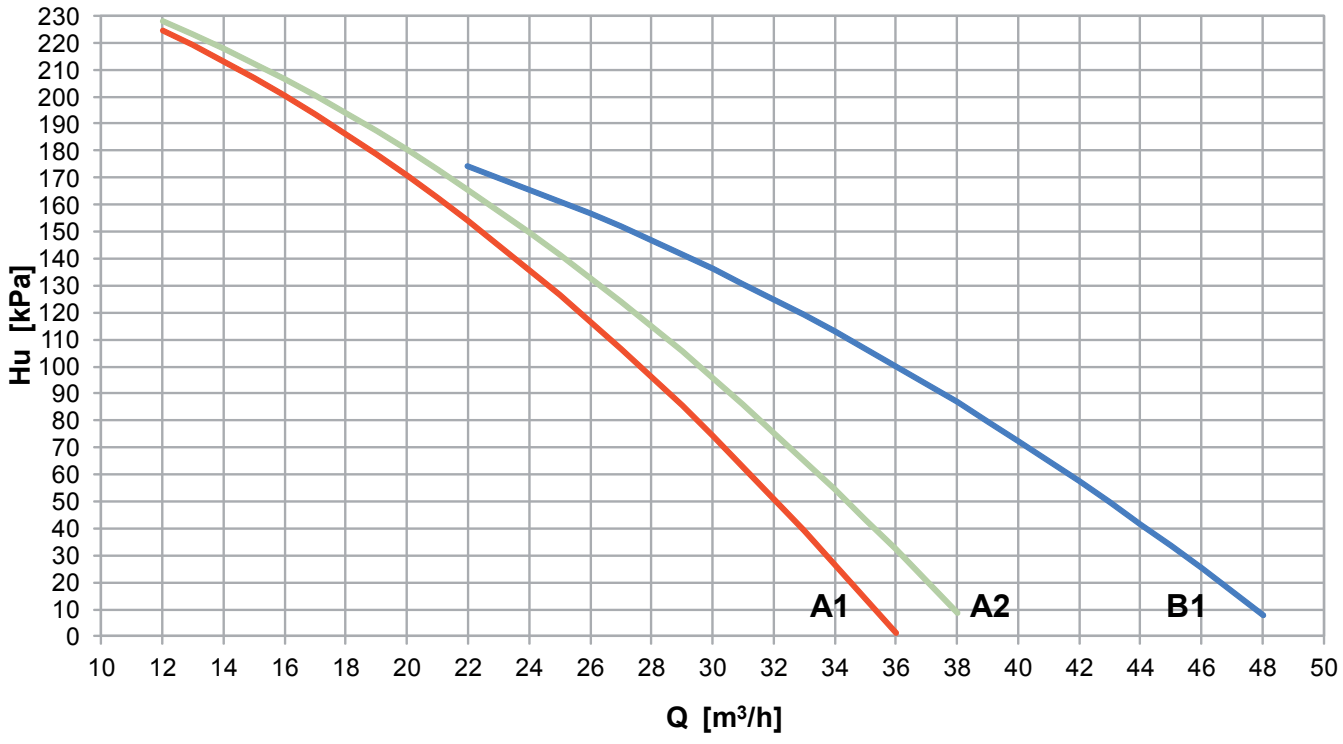


2 PUMPS - LOW HEAD PUMP with WATER TANK (Dual coil module)

SIZE		CH		HP		PUMP					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0562	CA	153	26,2	161	27,8	A1	FCTE 50-160/22	2	4,6	2,2	113	98
	LN-CA	144	24,8	161	27,8						111	98
0612	CA	170	29,2	181	31,1	A2					103	84
	LN-CA	165	28,4	181	31,1						110	84
0712	CA	198	34,0	209	36,0	B1	FCTE 65-125/30	2	6,1	3,0	113	100
	LN-CA	189	32,5	209	36,0						122	100
0812	CA	220	37,8	232	40,0						89	73
	LN-CA	212	36,5	232	40,0						97	73

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES

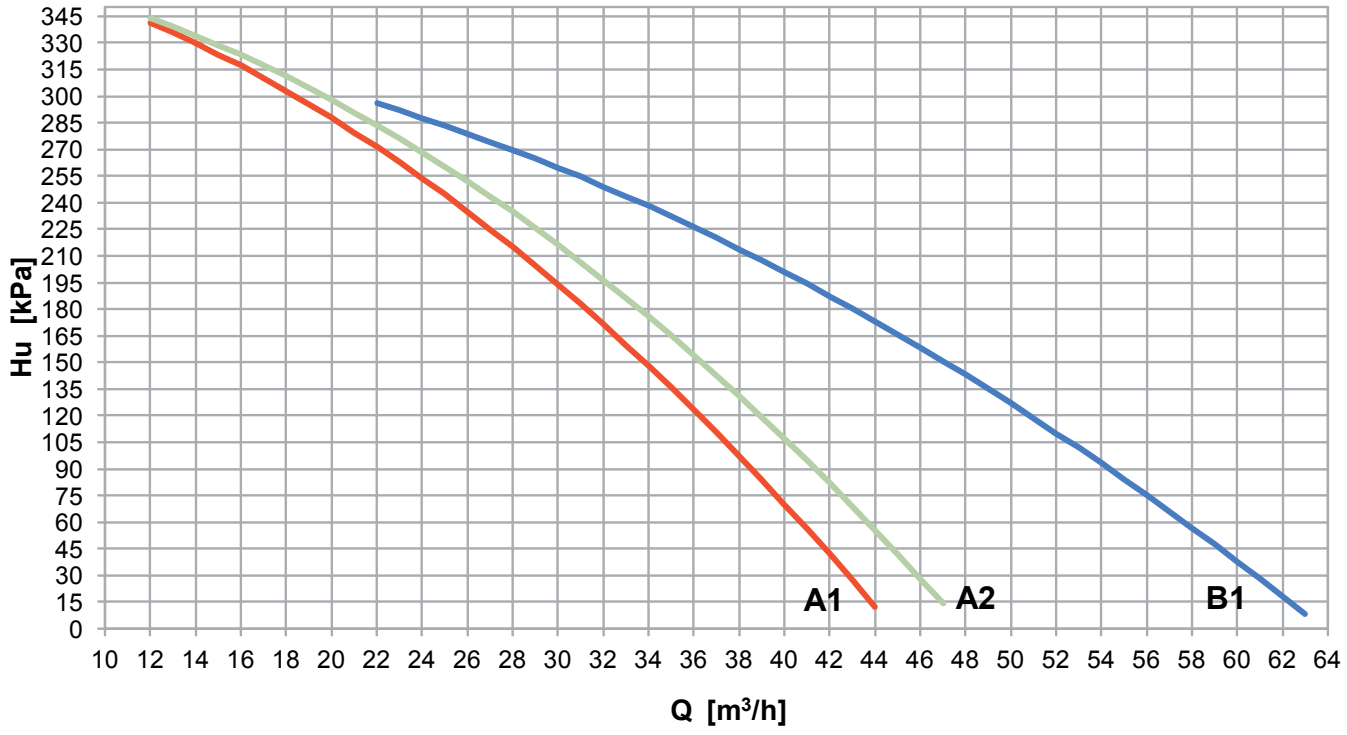


1 PUMP - HIGH HEAD PUMP without WATER TANK (Dual coil module)

SIZE		CH		HP		PUMP					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0562	CA	153	26,2	161	27,8	A1	FCE 50-160/40	2	7,6	4,0	233	218
	LN-CA	144	24,8	161	27,8						247	218
0612	CA	170	29,2	181	31,1	A2					223	205
	LN-CA	165	28,4	181	31,1						230	205
0712	CA	198	34,0	209	36,0	B1	FCE 65-160/55	2	10,4	5,5	237	226
	LN-CA	189	32,5	209	36,0						247	226
0812	CA	220	37,8	232	40,0						194	201
	LN-CA	212	36,5	232	40,0						223	201

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES

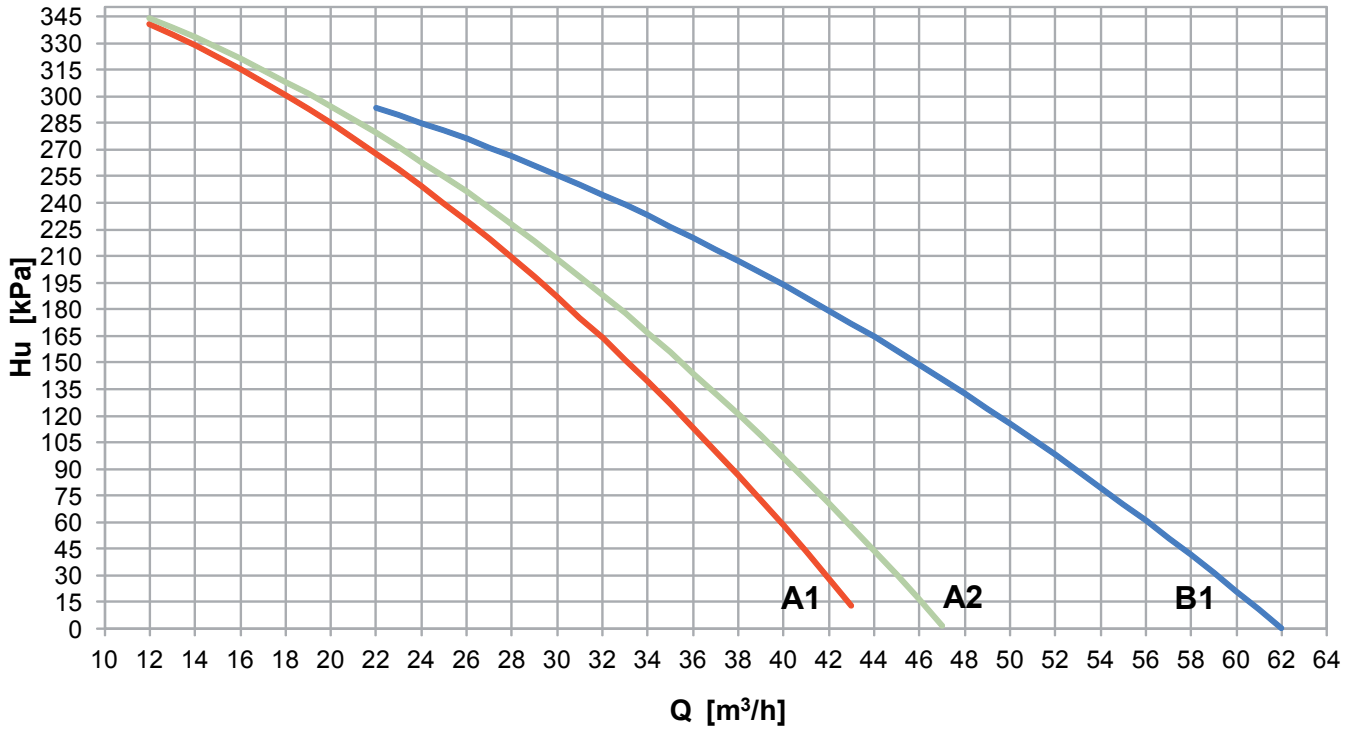


1 PUMP - HIGH HEAD PUMP with WATER TANK (Dual coil module)

SIZE		CH		HP		PUMP					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0562	CA	153	26,2	161	27,8	A1	FCE 50-160/40	2	7,6	4,0	228	212
	LN-CA	144	24,8	161	27,8						242	212
0612	CA	170	29,2	181	31,1	A2					217	198
	LN-CA	165	28,4	181	31,1						224	198
0712	CA	198	34,0	209	36,0	B1	FCE 65-160/55	2	10,4	5,5	232	210
	LN-CA	189	32,5	209	36,0						242	210
0812	CA	220	37,8	232	40,0						187	182
	LN-CA	212	36,5	232	40,0						217	182

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES

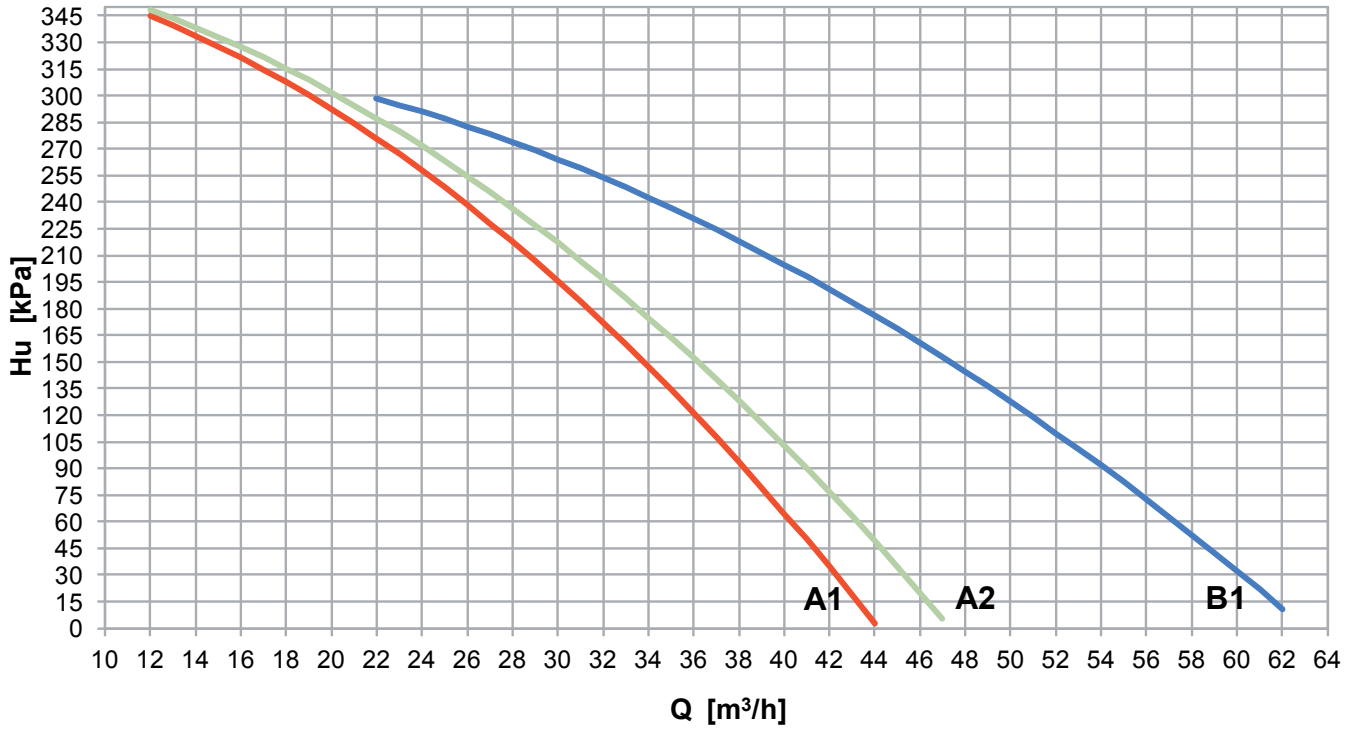


2 PUMPS - HIGH HEAD PUMP without WATER TANK (Dual coil module)

SIZE		CH		HP		PUMP					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0562	CA	153	26,2	161	27,8	A1	FCTE 50-160/40	2	7,6	4,0	236	221
	LN-CA	144	24,8	161	27,8						250	221
0612	CA	170	29,2	181	31,1	A2					225	206
	LN-CA	165	28,4	181	31,1						232	206
0712	CA	198	34,0	209	36,0	B1	FCTE 65-160/55	2	10,4	5,5	241	229
	LN-CA	189	32,5	209	36,0						251	229
0812	CA	220	37,8	232	40,0						218	203
	LN-CA	212	36,5	232	40,0						226	203

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES

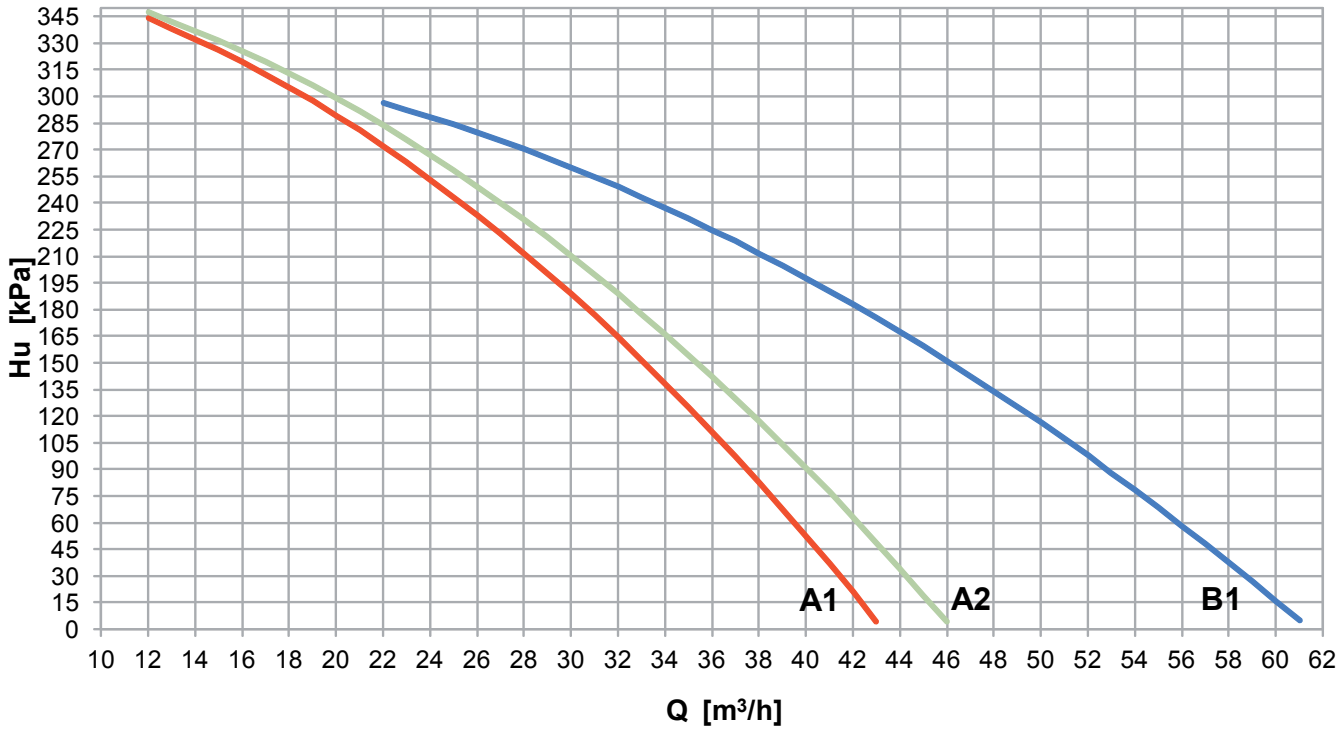


2 PUMPS - HIGH HEAD PUMP with WATER TANK (Dual coil module)

SIZE		CH		HP		PUMP					CH	HP
		Pfgross	Qfgross	Ptgross	Qcdgross	Rif.	Model	N.	F.L.A.	F.L.I.	HU	HU
		[kW] (1)	[m³/h] (1)	[kW] (1)	[m³/h] (1)			Poli	[A]	[kW]	[kPa]	[kPa]
0562	CA	153	26,2	161	27,8	A1	FCTE 50-160/40	2	7,6	4,0	231	215
	LN-CA	144	24,8	161	27,8						245	215
0612	CA	170	29,2	181	31,1	A2					219	199
	LN-CA	165	28,4	181	31,1						226	199
0712	CA	198	34,0	209	36,0	B1	FCTE 65-160/55	2	10,4	5,5	236	213
	LN-CA	189	32,5	209	36,0						246	213
0812	CA	220	37,8	232	40,0						212	184
	LN-CA	212	36,5	232	40,0						220	184

(1) Values refer to rated operating conditions
CH Cooling mode
HP Heating mode
Pf Cooling capacity of unit (cooling mode)
Pt Heating capacity of unit (heating mode)
Q Flow of water to plant (side) heat exchanger
F.L.I. Power absorbed by pump
F.L.A. Current absorbed by pump
HU Residual head (unit with hydronic unit without network filter)

WORKING HEAD CURVES



16.4 Line filter coefficients

The table below shows the coefficients “Kfi” values to calculate pressure drops by connections side in case of filter.

Pressure drop is given by:

$\Delta p = Kfi \times Q^2/1000$

Q: water flow (m^3/h)
Δp: pressure drop (kPa)
Kfi: unit size ratio

NX-N	VERSION	Kfi	FILTER ∅
0152P	K	130	1”1/2
	LN-K		
	CA		
	LN-CA		
0182P	K		
	LN-K		
	CA		
	LN-CA		
0202P	K		
	LN-K		
	CA		
	LN-CA		
0252P	K		
	LN-K		
	CA		
	LN-CA		
0262P	K		
	LN-K		
	CA		
	LN-CA		
0302P	K	78,5	2”
	LN-K		
	CA		
	LN-CA		
0352P	K		
	LN-K		
	CA		
	LN-CA		

NX-N	VERSION	Kfi	FILTER ∅
0402P	K	47,9	2”1/2
	LN-K		
	CA		
	LN-CA		
0452P	K		
	LN-K		
	CA		
	LN-CA		
0502P	K	23,7	3”
	LN-K		
	CA		
	LN-CA		
0552P	K		
	LN-K		
0562P	CA		
	LN-CA		
0602P	K		
	LN-K		
0612P	CA		
	LN-CA		
0702P	K	4,9	4”
	LN-K		
0712P	CA		
	LN-CA		
0802P	K		
	LN-K		
0812P	CA		
	LN-CA		

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