MITSUBISHI ELECTRIC HYDRONICS & IT COOLING SYSTEMS S.p.A.

Climaveneta **Technical Documentation** i-BX-N_004M_035T_201807_ML

REGULATION (EU) N. 813/2013

Ecodesign requirements for space heaters

AIR TO WATER REVERSIBLE HEAT PUMPS

i-BX-N 004M - 035T

Heating Capacity Range 4,65 - 38,7 [kW] - (EN14511 VALUE) Nominal Heating Capacity at TdesignH Range 4,00 - 32,0 [kW]



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3. TECHNICAL PARAMETERS





1. REGULATION (EU) N. 813/2013

1.1 Scope of the document

This documenti is compliant with the Commission Regulation (EU) N. 813/2013 reguarding "REQUIREMENTS FOR PRODUCT INFORMATION" (Annex II, Point 5) and it is made by the required information set out of the Table 2, Annex II of the Regulation called "Information requirements for heat pump space heaters and heat pump combination heaters".

1.2 REGULATION (EU) N. 813/2013 description The COMMISSION REGULATION (EU) N. 813/2013 of 2 August 2013, implementing Directive 2009/125/EC of the European Parliament and of the Council, establishes ecodesign requirements for the placing on the market and/or putting into service of space heaters and combination heaters with a rated heat output ≤ 400 kW, including those integrated in packages of space heater, temperature control and solar device or packages of combination heater, temperature control and solar device as defined in Article 2 of Commission Delegated Regulation (EU) N. 811/2013.

1.3 Description of the data declared by Mitsubishi Electric Hydronics & **IT Cooling Systems**

- Heat pump combination heater: heat pump space heater that is designed to also provide heat to deliver hot drinking.
- Low-temperature application: application where the heat pump space heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of $35\ ^\circ C$. Medium-temperature application: application where the heat pump
- space heater or heat pump combination heater delivers its declared capacity for heating at an indoor heat exchanger outlet temperature of 55 °C
- TdesignH: temperature at reference design conditions.
- PdesignH, Design load for heating: the rated heat output of a heat pump space heater or heat pump combination heater at the reference design temperature, whereby the design load for heating is equal to the part load for heating with outdoor temperature equal to reference design temperature, expressed in kW.
- Seasonal space heating energy efficiency (ns): ratio between the space heating demand for a designated heating season, supplied by a heater and the annual energy consumption required to meet this demand, expressed in %.
- Seasonal space heating energy efficiency class: efficiency class determined on the basis of its seasonal space heating energy efficiency with a difference distribution between heaters and low temperature heat pumps.
- Low-temperature heat pump: heat pump space heater that is specifically designed for low-temperature application, and that cannot deliver heating water with an outlet temperature of 52 °C at an inlet dry (wet) bulb temperature of - 7 °C (- 8 °C) in the reference design conditions for average climate.
- Bivalent temperature: the outdoor temperature declared by the manufacturer for heating at which the declared capacity for heating equals the part load for heating and below which the declared capacity for heating requires supplementary capacity for heating to meet the part load for heating.
- Operation limit temperature: the outdoor temperature declared by the manufacturer for heating, below which the air-to-water heat pump space heater or air-to-water heat pump combination heater will not be able to deliver any heating capacity and the declared capacity for heating is equal to zero.
- Degradation coefficient: measure of efficiency loss due to cycling of heat pump space heaters or heat pump combination heaters.
- Off mode: a condition in which the heat pump space heater or heat pump combination heater is connected to the mains power source and is not providing any function.
- Thermostat-off mode: condition corresponding to the hours with no heating load and activated heating function, whereby the heating function is switched on but the heat pump space heater or heat pump combination heater is not operational.
- Standby mode: condition where the heater is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display.
- Crankcase heater mode: condition in which a heating device is activated to avoid the refrigerant migrating to the compressor so as to limit the refrigerant concentration in oil when the compressor is started.
- Seasonal coefficient of performance (SCOP): the overall coefficient of performance of a heat pump heater representative of the designated heating season, calculated as the reference annual heating demand divided by the annual energy consumption. Supplementary capacity for heating: rated heat output of a
- supplementary heater that supplements the declared capacity for heating part meet the to

load for heating, if the declared capacity for heating is less than the part load for heating. Capacity control: ability of a heat pump space heater or heat pump

- combination heater to change its capacity by changing the volumetric flow rate of at least one of the fluids needed to operate the refrigeration cycle.
- Annual energy consumption: means the energy consumption required to meet the reference annual heating demand for a designated heating season
- Sound power level (LWA): the A-weighted sound power level, indoors and/or outdoors, expressed in dB.

2. CLIMAVENETA CONTENTS UNIT

2.1 Table index

AIR TO WATER REVERSIBLE HEAT PUMPS

i-BX-N 004M - 035T

Heating Capacity Range 4,65 - 38,7 [kW] Nominal Heating Capacity at TdesignH Range 4,00 - 32,0 [kW]

Units	Version	Size				Pag.	
i-BX-N		004M	006M	008M	010M	010T	5
		013M	013T	015T	020T	025T	
		030T	035T				



i-BX-N /004M LOW TEMPERATURE ap	oplication		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	3
Seasonal space heating energy efficiency	ης	[%]	140
Seasonal space heating energy efficiency class	-		A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature	ature Tj		
Declared capacity for heating with outdoor temperature Tj = -7 °C	Pdh	[kW]	3,01
Declared capacity for heating with outdoor temperature Tj = +2 °C	Pdh	[kW]	1,83
Declared capacity for heating with outdoor temperature Tj = +7 °C	Pdh	[kW]	1,30
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	1,54
Declared capacity for heating with outdoor temperature Tj = Bivalent temperature	Pdh	[kW]	3,01
Declared capacity for heating with outdoor temperature Tj = Operation limit temperature	Pdh	[kW]	2,40
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh		0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperat	ture 20 °C and outdoor temperatu	re Tj	
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	COPd	-	2,72
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,57
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,21
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	5,27
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,72
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,28
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode		· · ·	
Off mode	POFF	[kW]	0,046
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,046
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	1,00
Other items		· · · · ·	
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	64
Annual electricity consumption for heating	QHE	[kWh]	1962
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	0,99
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	_

For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] (1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.



i-BX-N /004M MEDIUM TEMPERATURE	application		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	ves / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	ves / no		no
With supplementary heater:	ves / no		no
Mixed unit with heat pump:	ves / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	4
Seasonal space heating energy efficiency	ns	[%]	110
Seasonal space heating energy efficiency class	-		A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper	ature Ti		
Declared capacity for heating with outdoor temperature $Ti = -7$ °C	Pdh	[kW]	3 25
Declared capacity for heating with outdoor temperature $T_i = +2 ^{\circ}C_i$	Pdh	[kW]	1.98
Declared capacity for heating with outdoor temperature $T_i = +7 ^{\circ}C_i$	Pdh	[kW]	1,00
Declared capacity for heating with outdoor temperature $T_i = +12 ^{\circ}C$	Pdh	[kW]	1.50
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	3 25
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	0.00
For air-to-water heat numps: Ti = -15 °C (if TOL < -20 °C)	Pdh	[kW]	-
Bivalent temperature	Thiv	[°C]	-7
	Cdb	[0]	0.90
Declared coefficient of performance or primary energy ratio for part load at indoor tempera	ture 20 °C and outdoor temperatu	re Ti	0,00
Declared coefficient of performance with outdoor temperature Ti = -7 °C.		···)	2 14
Declared coefficient of performance with outdoor temperature Ti = $\pm 2^{\circ}$ C.	COPd		2.73
Declared coefficient of performance with outdoor temperature $T_{i} = \pm 7 ^{\circ}C_{i}$	COPd		3.38
Declared coefficient of performance with outdoor temperature Ti = $\pm 12^{\circ}$ C			4 42
Declared coefficient of performance with outdoor temperature $T_i = Rivalent temperature$	COPd		2 14
Declared coefficient of performance with outdoor temperature Ti = Operation limit temperature	COPd		1.00
For air-to-water heat numps: Ti = -15 °C (if TOL < -20 °C)	COPd		-
For air to water HP : Operation limit temperature		[°C]	-20
Heating water operating limit temperature at TOI	WTO	[°C]	45
Power consumption in modes other than active mode		[0]	10
Off mode	POFF	[k]\//]	0.046
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0.046
Crankcase beater mode	PCK	[kW]	0,000
Supplementary heater		[]	0,000
Nominal heating capacity	Psun	[k]\//]	3.67
Other items	1.000	[]	0,01
Capacity control	fixed / variable		variable
Sound power level indoors		[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	64
Annual electricity consumption for heating	OHE	[kWh]	2698
Outdoor heat exchanger		[kini]	2000
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	0.99
For water-/brine-to-water heat pumps; Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-
		L Louis L	

 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger
 Qwater/brine source
 [m³/h]

 (1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

i-BX-N /006M LOW TEMPERATURE ap	oplication		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	5
Seasonal space heating energy efficiency	ns	[%]	153
Seasonal space heating energy efficiency class	-		A++
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature	ature Tj		
Declared capacity for heating with outdoor temperature $Tj = -7$ °C	Pdh	[kW]	4,25
Declared capacity for heating with outdoor temperature Tj = +2 °C	Pdh	[kW]	2,59
Declared capacity for heating with outdoor temperature Tj = +7 °C	Pdh	[kW]	1,66
Declared capacity for heating with outdoor temperature $T_j = +12 \degree C$	Pdh	[kW]	1,99
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	4,25
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	3,37
For air-to-water heat pumps: $Ti = -15 \degree C$ (if TOL < $-20 \degree C$)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh		0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperat	ture 20 °C and outdoor temperatu	re Tj	
Declared coefficient of performance with outdoor temperature $Tj = -7$ °C	COPd	-	2,81
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,80
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,84
Declared coefficient of performance with outdoor temperature Ti = +12 °C	COPd	-	6,27
Declared coefficient of performance with outdoor temperature Ti = Bivalent temperature	COPd		2,81
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,25
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,062
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,062
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	1,44
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	65
Annual electricity consumption for heating	QHE	[kWh]	2550
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	0,95
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Owater/brine source	[m³/h]	

For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] (1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

i-BX-N /006M MEDIUM TEMPERATURE	application		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	ves / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	ves / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	5
Seasonal space heating energy efficiency	ns	[%]	122
Seasonal space heating energy efficiency class	-		A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper	ature Tj	I	
Declared capacity for heating with outdoor temperature $T_j = -7 \degree C$	Pdh	[kW]	4,71
Declared capacity for heating with outdoor temperature Tj = +2 °C	Pdh	[kW]	2,87
Declared capacity for heating with outdoor temperature Tj = +7 °C	Pdh	[kW]	1,84
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	1,91
Declared capacity for heating with outdoor temperature Tj = Bivalent temperature	Pdh	[kW]	4,71
Declared capacity for heating with outdoor temperature Tj = Operation limit temperature	Pdh	[kW]	0,00
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor tempera	ture 20 °C and outdoor temperatu	re Tj	
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	COPd	-	2,31
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	2,91
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,06
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	5,43
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,31
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	1,00
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,062
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,062
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	5,32
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	65
Annual electricity consumption for heating	QHE	[kWh]	3530
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	0,95
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger
 Qwater/brine source
 [m³/h]

 (1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

i-BX-N /008M LOW TEMPERATURE ap	oplication		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	6
Seasonal space heating energy efficiency	ηs	[%]	163
Seasonal space heating energy efficiency class	-		A++
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature	ature Tj		
Declared capacity for heating with outdoor temperature Tj = -7 °C	Pdh	[kW]	5,33
Declared capacity for heating with outdoor temperature Tj = +2 °C	Pdh	[kW]	3,24
Declared capacity for heating with outdoor temperature Tj = +7 °C	Pdh	[kW]	2,16
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	2,71
Declared capacity for heating with outdoor temperature Tj = Bivalent temperature	Pdh	[kW]	5,33
Declared capacity for heating with outdoor temperature Tj = Operation limit temperature	Pdh	[kW]	4,22
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperat	ture 20 °C and outdoor temperatu	re Tj	
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	COPd	-	2,80
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,96
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	5,55
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	7,69
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,80
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,31
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	1,80
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	66
Annual electricity consumption for heating	QHE	[kWh]	2997
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	0,99
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	_

For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] (1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

i-BX-N /008M MEDIUM TEMPERATURE	application		
Air-to-water heat pump:	yes / no		ves
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	7
Seasonal space heating energy efficiency	ηs	[%]	126
Seasonal space heating energy efficiency class	-		A++
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature	ature Tj		
Declared capacity for heating with outdoor temperature $Tj = -7$ °C	Pdh	[kW]	6,21
Declared capacity for heating with outdoor temperature Tj = +2 °C	Pdh	[kW]	3,78
Declared capacity for heating with outdoor temperature Tj = +7 °C	Pdh	[kW]	2,43
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	2,63
Declared capacity for heating with outdoor temperature Tj = Bivalent temperature	Pdh	[kW]	6,21
Declared capacity for heating with outdoor temperature Tj = Operation limit temperature	Pdh	[kW]	0,00
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperat	ture 20 °C and outdoor temperatu	re Tj	
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	COPd		2,40
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd		2,93
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,34
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	6,21
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,40
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	1,00
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	7,02
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	66
Annual electricity consumption for heating	QHE	[kWh]	4496
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	0,99
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

i-BX-N /010M LOW TEMPERATURE application				
Air-to-water heat pump:	yes / no		yes	
Water-to-water heat pump:	yes / no		no	
Brine-to-water heat pump:	yes / no		no	
Low-temperature heat pump:	yes / no		no	
With supplementary heater:	yes / no		no	
Mixed unit with heat pump:	yes / no		no	
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C	
Water flow rate	fixed / variable		fixed	
Outlet temperature	fixed / variable		variable	
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average	
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	8	
Seasonal space heating energy efficiency	ηs	[%]	139	
Seasonal space heating energy efficiency class	-	-	A+	
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperat	ure Tj	1 1		
Declared capacity for heating with outdoor temperature $Tj = -7$ °C	Pdh	[kW]	7,24	
Declared capacity for heating with outdoor temperature $T_i = +2 \degree C$	Pdh	[kW]	4,41	
Declared capacity for heating with outdoor temperature Tj = +7 °C	Pdh	[kW]	2,83	
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	2,85	
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	7,24	
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	6,33	
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-	
Bivalent temperature	Tbiv	[°C]	-7	
Degradation coefficient	Cdh		0,90	
Declared coefficient of performance or primary energy ratio for part load at indoor temperatu	re 20 °C and outdoor temperature	Tj	· · · · · · · · · · · · · · · · · · ·	
Declared coefficient of performance with outdoor temperature $Tj = -7$ °C	COPd	-	2,74	
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,47	
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,11	
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	4,78	
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,74	
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,49	
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-	
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20	
Heating water operating limit temperature at TOL	WTOL	[°C]	45	
Power consumption in modes other than active mode				
Off mode	POFF	[kW]	0,070	
Thermostat-off mode	PTO	[kW]	0,000	
Standby mode	PSB	[kW]	0,070	
Crankcase heater mode	РСК	[kW]	0,000	
Supplementary heater				
Nominal heating capacity	Psup	[kW]	1,85	
Other items				
Capacity control	fixed / variable		variable	
Sound power level, indoors	LWA	[dB(A)]	-	
Sound power level, outdoors	LWA	[dB(A)]	69	
Annual electricity consumption for heating	QHE	[kWh]	4777	
Outdoor heat exchanger	•	· .		
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	1,67	
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-	

i-BX-N /010M MEDIUM TEMPERATURE a	application		
Air-to-water heat pump:	ves / no		ves
Water-to-water heat pump:	ves / no		no
Brine-to-water heat pump:	ves / no		no
Low-temperature heat pump:	ves / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	ves / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	9
Seasonal space heating energy efficiency	ns	[%]	110
Seasonal space heating energy efficiency class	-		A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature	ature Tj	I	
Declared capacity for heating with outdoor temperature $T_j = -7$ °C	Pdh	[kW]	7,55
Declared capacity for heating with outdoor temperature $T_j = +2 \degree C$	Pdh	[kW]	4,60
Declared capacity for heating with outdoor temperature $T_i = +7 \degree C$	Pdh	[kW]	2,96
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	2,77
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	7,55
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	0,00
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperat	ure 20 °C and outdoor temperatur	re Tj	
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	COPd	-	2,04
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	2,76
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	3,46
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	4,10
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,04
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	1,00
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode	·		
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,012
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	8,54
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	69
Annual electricity consumption for heating	QHE	[kWh]	6253
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	1,67
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

i-BX-N /010T LOW TEMPERATURE app	olication		
Air-to-water heat pump:	ves / no		Ves
Water-to-water heat pump	ves/no		no
Brine-to-water heat pump:	ves/no		no
Low-temperature heat pump:	ves/no		no
With supplementary heater:	ves/no		no
Mixed unit with heat nump:	ves/no		no
Temperature application (1)	$(low 35^{\circ}C/medium 55^{\circ}C)$		low 35°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	8
Seasonal space heating energy efficiency	ns	[%]	142
Seasonal space heating energy efficiency class	-	-	A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperat	ture Ti	II	
Declared capacity for heating with outdoor temperature Ti = -7 °C	Pdh	[kW]	7.50
Declared capacity for heating with outdoor temperature $T_i = +2 \text{ °C}$	Pdh	[kW]	4,56
Declared capacity for heating with outdoor temperature $T_i = +7$ °C	Pdh	[kW]	2.93
Declared capacity for heating with outdoor temperature $T_i = +12 \text{ °C}$	Pdh	[kW]	2.89
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	7.50
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	6.97
For air-to-water heat pumps: Ti = -15 °C (if TOL < -20 °C)	Pdh	[kW]	-
Bivalent temperature	Thiv	[¹]	-7
Degradation coefficient	Cdh	-	0.90
Declared coefficient of performance or primary energy ratio for part load at indoor temperatu	ire 20 °C and outdoor temperature	Ti	.,
Declared coefficient of performance with outdoor temperature $T_i = -7 \degree C$	COPd	-	2,86
Declared coefficient of performance with outdoor temperature Ti = +2 °C	COPd	-	3,59
Declared coefficient of performance with outdoor temperature Ti = +7 °C	COPd	-	4,19
Declared coefficient of performance with outdoor temperature Ti = +12 °C	COPd	-	4.98
Declared coefficient of performance with outdoor temperature Ti = Bivalent temperature	COPd	-	2,86
Declared coefficient of performance with outdoor temperature Ti = Operation limit temperature	COPd	-	2,67
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[00]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater		1 1	
Nominal heating capacity	Psup	[kW]	1,50
Other items		1 1	
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	69
Annual electricity consumption for heating	QHE	[kWh]	4815
Outdoor heat exchanger	·	·	
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	1,67
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

Unit in standard configuration/execution, without optional accessories.

ELCA_Engine ver. 4.0.5.5 - DB ver. 0.0.0.0

i-BX-N /010T MEDIUM TEMPERATURE a	application		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	9
Seasonal space heating energy efficiency	 ηs	[%]	114
Seasonal space heating energy efficiency class	-		A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature	ature Tj	I	
Declared capacity for heating with outdoor temperature $T_j = -7$ °C	Pdh	[kW]	8,03
Declared capacity for heating with outdoor temperature $T_i = +2 \degree C$	Pdh	[kW]	4,89
Declared capacity for heating with outdoor temperature $T_i = +7 \degree C$	Pdh	[kW]	3,14
Declared capacity for heating with outdoor temperature Ti = +12 °C	Pdh	[kW]	2,80
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	8,03
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	0,00
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperat	ture 20 °C and outdoor temperatur	re Tj	·
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	COPd		2,19
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	2,86
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	3,55
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	4,28
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,19
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	1,00
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,013
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	9,07
Other items	· ·		
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	69
Annual electricity consumption for heating	QHE	[kWh]	6425
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	1,67
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

i-BX-N /013M LOW TEMPERATURE app	lication		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	10
Seasonal space heating energy efficiency	ηs	[%]	149
Seasonal space heating energy efficiency class	-	-	A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperat	ure Tj	1	
Declared capacity for heating with outdoor temperature $T_i = -7 \degree C$	Pdh	[kW]	9,24
Declared capacity for heating with outdoor temperature $T_i = +2 \degree C$	Pdh	[kW]	5,62
Declared capacity for heating with outdoor temperature $T_i = +7 \degree C$	Pdh	[kW]	3,61
Declared capacity for heating with outdoor temperature $T_i = +12 \degree C$	Pdh	[kW]	2,93
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	9,24
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	8,81
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperatu	re 20 °C and outdoor temperature 1	ſj	· · · · · · · · · · · · · · · · · · ·
Declared coefficient of performance with outdoor temperature $T_j = -7 \text{ °C}$	COPd	-	2,78
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,69
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,81
Declared coefficient of performance with outdoor temperature Ti = +12 °C	COPd	-	5,65
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,78
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,60
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	РТО	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	1,63
Other items		1 1	
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	70
Annual electricity consumption for heating	QHE	[kWh]	5660
Outdoor heat exchanger	·		
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	1,64
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

i-BX-N /013M MEDIUM TEMPERATURE a	pplication		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	11
Seasonal space heating energy efficiency	ns	[%]	114
Seasonal space heating energy efficiency class	-	-	A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor tempera	ture Tj		
Declared capacity for heating with outdoor temperature $T_j = -7 \degree C$	Pdh	[kW]	9,39
Declared capacity for heating with outdoor temperature Tj = +2 °C	Pdh	[kW]	5,71
Declared capacity for heating with outdoor temperature Tj = +7 °C	Pdh	[kW]	3,67
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	2,79
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	9,39
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	0,00
For air-to-water heat pumps: $T_i = -15 \degree C$ (if $TOL < -20 \degree C$)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperatu	ure 20 °C and outdoor temperature	e Tj	
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	COPd	-	2,01
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	2,88
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	3,83
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	4,61
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,01
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	1,00
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	10,6
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	70
Annual electricity consumption for heating	QHE	[kWh]	7482
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	1,64
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

i-BX-N /013T LOW TEMPERATURE apr	plication		
Air-to-water heat pump:	ves / no		ves
Water-to-water heat pump:	ves / no		no
Brine-to-water heat pump:	ves / no		no
Low-temperature heat pump:	ves / no		no
With supplementary heater:	ves / no		no
Mixed unit with heat pump:	ves / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	11
Seasonal space heating energy efficiency	ns	[%]	157
Seasonal space heating energy efficiency class	-		A++
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperat	ture Tj	1 1	
Declared capacity for heating with outdoor temperature $T_i = -7 ^{\circ}C$	Pdh	[kW]	9,68
Declared capacity for heating with outdoor temperature $T_i = +2 \degree C$	Pdh	[kW]	5,89
Declared capacity for heating with outdoor temperature $T_i = +7 \text{ °C}$	Pdh	[kW]	3,79
Declared capacity for heating with outdoor temperature $T_i = +12 \degree C$	Pdh	[kW]	2,96
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	9,68
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	8,83
For air-to-water heat pumps: $T_i = -15 \degree C$ (if TOL $< -20 \degree C$)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperatu	re 20 °C and outdoor temperature	Tj	· · · · · · · · · · · · · · · · · · ·
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	COPd		2,88
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,78
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	5,08
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	6,26
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,88
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,63
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	2,11
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	70
Annual electricity consumption for heating	QHE	[kWh]	5663
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	1,64
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

Ar-Co-water heat pump.yes / noyesBrine-0-water heat pump.yes / nonoEnno-0-water heat pump.yes / nonoUow temperature heat pump.yes / nonoWith supplementary heater:yes / nonoWith supplementary heater:fixed / variablefixedWater flow ratefixed / variablefixed / variableSeasonal space heating energy efficiency classParameters are declared for average area load at indicor temperature 20 °C and outdoor temperature 1-Declared capacity for heating for part load at indicor temperature 20 °C and outdoor temperature 1-Declared capacity for heating soft part load at indicor temperature 20 °C and outdoor temperature 1-Declared capacity for heating soft part load at indicor temperature 20 °C and outdoor temperature 1-Declared capacity for heating soft part load at indicor temperature 1-Declared capacity for heating soft part load at indicor temperature 1 = - 2 °CPdnWithDeclared capacity for heating soft part load at indicor temperature 1 = - 2 °CPdnWithDeclared capacity for heating soft part load at indicor temperaturePdnWith0.00For air / water heat pumps.= - 1 °C (F) CPdnWith0.11Declared capacity for heating soft part load at indicor tempera	i-BX-N /013T MEDIUM TEMPERATURE	application		
Water-breaker heat pump: yes / no no Low-temperature heat pump: yes / no no Low-temperature heat pump: yes / no no Missopianemary heater: yes / no no Missopianemary heater: yes / no no Missopianemary heater: yes / no no Could temperature policitant (1) fixed / variable medium 55°C Water flow rate fixed / variable variable Parameters are declared for avarage/warmer/colder climate conditions (1) average / variable variable Parameters are declared for avarage/warmer/colder climate conditions (1) average / variable variable Seasonal space heating encry efficiency (18s fixed / variable variable variable Seasonal space heating encry without door temperature 1) = -7 °C Fixed Fixed / variable variable Declared capacity for heating with outdoor temperature 1) = -2 °C Fixed Fixed Fixed Declared capacity for heating with outdoor temperature 1) = -2 °C Fixed Fixed Fixed Declared capacity for heating with outdoor temperature 1) = -2 °C Fixed <t< th=""><th>Air-to-water heat pump:</th><th>yes / no</th><th></th><th>yes</th></t<>	Air-to-water heat pump:	yes / no		yes
Brine-Invester heat pump: Yes / no no With supprementary heater: Yes / no no With supprementary heater: Yes / no no Nade unit with heat pump: Yes / no no Temperature application (1) (nov 35°C) medium 55°C) medium 55°C Valuer from rate freed / variable freed / variable medium 55°C Outlet temperature application (1) average / variable variable variable Parameters are declared for average/warmer/colder climate conditions (1) average / variable average average Seasonal space heating energy efficiency class - - - A+ Declared capacity for heating with outdoor temperature 20 °C and outdoor temperature Tj Declared capacity for heating with outdoor temperature 1 = -7 °C Pdh [kW] 10.1 Declared capacity for heating with outdoor temperature 1 = -7 °C Pdh [kW] 6.15 Declared capacity for heating with outdoor temperature 1 = -7 °C Pdh [kW] 0.01 Declared capacity for heating with outdoor temperature 1 = 1 = 7 °C Pdh [kW] 0.11 Declared capacity f	Water-to-water heat pump:	yes / no		no
Low-temperature heat pump: yes / no no With supprementary heater: yes / no no Mixed unit with heat pump: yes / no no Temperature application (1) (low 35°C) medium 55°C) medium 55°C Water flow rate fixed / variable fixed / variable fixed / variable Outlet temperature application (1) average / variable fixed / variable average / variable Seasonal space heating energy efficiency rs - A+ Seasonal space heating energy efficiency class - - A+ Declared capacity for heating of part load at indoor temperature 1] = -7 °C Pdh [kW] 10.1 Declared capacity for heating of notation with outdoor temperature 1] = +2 °C Pdh [kW] 3.5 Declared capacity for heating with outdoor temperature 1] = +2 °C Pdh [kW] 3.6 Declared capacity for heating with outdoor temperature 1] = +2 °C Pdh [kW] - Declared capacity for heating with outdoor temperature 1] = +2 °C Pdh [kW] - Declared capacity for heating with outdoor temperature 1] = +2 °C Pdh [Brine-to-water heat pump:	yes / no		no
With supplementary heater ips/ / no no Nixed unit with heat pump: ips/ / no no Temperature application (1) ited variable fixed / variable fixed / variable Quart for rate fixed / variable fixed / variable variable variable Parameters are declared for average/warmericolder climate conditions (1) average average average Seasonal space heating energy officiency class rate heat output at Tdesign [NM] 11 Seasonal space heating energy officiency class rate r- A+ Declared capacity for heating with outdoor temperature Tj = -7 °C Pdh [NV] 10.1 Declared capacity for heating with outdoor temperature Tj = -7 °C Pdh [NV] 8.35 Declared capacity for heating with outdoor temperature Tj = -7 °C Pdh [NV] 8.35 Declared capacity for heating with outdoor temperature Tj = -7 °C Pdh [NV] 10.1 Declared capacity for heating with outdoor temperature Tj = -7 °C Pdh [NV] 10.1 Declared capacity for heating with outdoor temperature Tj = -7 °C Pdh [NV] 10.1	Low-temperature heat pump:	yes / no		no
Nited unit with heid pump: no no Importative application (1) (dow 35°C medium 55°C) medium 56°C Water from rate fixed / variable fixed / variable fixed / variable Cullet temperature as a declared for average/warmer/colder climate conditions (1) average / varianter average / varianter average / varianter average Rate heat output at Tobeligh Prated = Pdesignh [KW] 11 Seasonal space heating energy efficiency np [V] 1117 Seasonal space heating energy efficiency class - A+ Declared capacity for heating of variod at indoor temperature 20 °C and outdoor temperature TJ - A+ Declared capacity for heating of variod at indoor temperature TJ = + 7 °C Pdh [KW] 6,15 Declared capacity for heating off variod off temperature TJ = + 7 °C Pdn [KW] 3,85 Declared capacity for heating off variod off temperature TJ = + 7 °C Pdn [KW] 1,01 Declared capacity for heating off variod off temperature TJ = + 7 °C Pdn [KW] 1,01 Declared capacity for heating off variod variod temperature TJ = + 7 °C Pdn [KW]	With supplementary heater:	yes / no		no
Temperature application (1) fixed Variable medium 5°C) medium 5°C Water five rate fixed / variable fixed / variable fixed / variable Parameters are declared for average/warmer/colder climate conditions (1) average / variable variable Parameters are declared for average/warmer/colder climate conditions (1) average / variable variable Seasonal space heating energy efficiency class - - A+ Declared capacity for heating with outdoor temperature 1] = -7°C Pdh [KW] 10,1 Declared capacity for heating with outdoor temperature 1] = 4°C° Pdh [KW] 6,15 Declared capacity for heating with outdoor temperature 1] = 4°C° Pdh [KW] 6,15 Declared capacity for heating with outdoor temperature 1] = 4°C° Pdh [KW] 0,00 Declared capacity for heating with outdoor temperature 1] = 0/peraton limit temperature Pdh [KW] 10,1 Declared capacity for heating with outdoor temperature 1] = 0/peraton limit temperature Pdh [KW] 0,00 Evaluation coefficient Declared capacity for heating with outdoor temperature 1] = 0/peraton limit temperature Pdh [KW] 0,7	Mixed unit with heat pump:	ves / no		no
Water flow rate Excel / variable fixed / variable fixed / variable Outlet temperature fixed / variable fixed / variable variable Parameters are declared for average/warmer/colder climate conditions (1) average / variable average Rated heat output at Tolesignh Prated = Pdesignh [KW] 111 Seasonal space heating energy officiency rs [%] 1117 Seasonal space heating energy officiency rs - - At Declared capacity for heating off part load at indoor temperature 1 = - 7 °C Pdh [KW] 10,1 Declared capacity for heating with outdoor temperature 1 = + 2 °C Pdh [KW] 3.65 Declared capacity for heating with outdoor temperature 1 = + 2 °C Pdh [KW] 0.01 Declared capacity for heating with outdoor temperature 1 = + 2 °C Pdh [KW] 0.00 Declared capacity for heating with outdoor temperature 1 = + 2 °C Pdh [KW] 0.01 Declared capacity for heating with outdoor temperature 1 = + 7 °C Cdh - 0.90 Declared capacity for heating with outdoor temperature 1 = + 7 °C COPd	Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Coulte Imperature Ibse/1 variable variable Parameters are declared for variage/warmer/colder climate conditions (1) average / varmer / colder average Rated heat output at Tdesignh [RW] 11 Seasonal space heating energy efficiency ns [%] 1117 Seasonal space heating energy efficiency class - - A+ Declared capacity for heating with outdoor temperature T] = -7 °C Pdh [KW] 61.5 Declared capacity for heating with outdoor temperature T] + -2 °C Pdh [KW] 2.3 Declared capacity for heating with outdoor temperature T] = +2 °C Pdh [KW] 2.3 Declared capacity for heating with outdoor temperature T] = +2 °C Pdh [KW] 2.3 Declared capacity for heating with outdoor temperature T] = 5 °C (T OL < -20 °C)	Water flow rate	fixed / variable		fixed
Parameters are declared for average/warmer/colder climate conditions (1) average varmer/colder average Rated heat output at Tdesignh Prated = Pdesignh [KW] 11 Seasonal space heating energy efficiency ns [Ki] 117 Seasonal space heating energy efficiency class - - A* Declared capacity for heating with outdoor temperature 1] = - A* Declared capacity for heating with outdoor temperature 1] = - 7 °C Pdh [KW] 10.1 Declared capacity for heating with outdoor temperature 1] = -7 °C Pdh [KW] 6.15 Declared capacity for heating with outdoor temperature 1] = -7 °C Pdh [KW] 0.01 Declared capacity for heating with outdoor temperature 1] = -7 °C Pdh [KW] 0.01 Declared capacity for heating with outdoor temperature 1] = -7 °C Pdh [KW] 0.01 Declared capacity for heating with outdoor temperature 1] = 0 peration limit temperature Pdh [KW] 0.01 Declared capacity for heating with outdoor temperature 1] = -7 °C COPd - 2.14 Declared capacity for heating warearearearearearearearearearearearearea	Outlet temperature	fixed / variable		variable
Pated heat output at Tdesignh Prated = Pdesignh [KW] 11 Seasonal space heating energy efficiency rs [Ki] 117 Seasonal space heating energy efficiency class - - A+ Declared capacity for heating with outdoor temperature 10 = - 7 °C Pdh [KW] 10.1 Declared capacity for heating with outdoor temperature 11 = - 7 °C Pdh [KW] 6.15 Declared capacity for heating with outdoor temperature 11 = +12 °C Pdh [KW] 2.93 Declared capacity for heating with outdoor temperature 11 = +12 °C Pdh [KW] 0.00 Declared capacity for heating with outdoor temperature 11 = 8 valent temperature Pdh [KW] 0.00 Declared capacity for heating with outdoor temperature 11 = - 7 °C Pdh [KW] 0.00 Declared capacity for heating with outdoor temperature 11 = 8 valent temperature Pdh [KW] 0.00 Declared capacity for heating with outdoor temperature 11 = - 7 °C Pdh [KW] 0.00 Declared capacity for heating with outdoor temperature 11 = - 7 °C COPd 2.14 0.214 Declared coefficient 0 performance with outdoor temperatu	Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Seasonal space heating energy efficiency ns IVail 1117 Seasonal space heating energy efficiency class - - A+ Declared capacity for heating with outdoor temperature 20 °C and outdoor temperature Tj - A+ Declared capacity for heating with outdoor temperature Tj = - 7 °C Pdh [KW] 10.1 Declared capacity for heating with outdoor temperature Tj = + 7 °C Pdh [KW] 3.95 Declared capacity for heating with outdoor temperature Tj = + 7 °C Pdh [KW] 3.95 Declared capacity for heating with outdoor temperature Tj = Bvalent temperature Pdh [KW] 0.00 Declared capacity for heating with outdoor temperature Tj = Operation limit temperature Pdh [KW] 0.00 Declared capacity for heating with outdoor temperature Tj = - 7 °C CM Pdh [KW] 0.00 Declared capacity for heating water	Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	11
Geasonal space heating energy efficiency class - - A+ Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj -	Seasonal space heating energy efficiency	ns	[%]	117
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj Pdh [kW] 10.1 Declared capacity for heating with outdoor temperature Tj = -7 °C Pdh [kW] 6.15 Declared capacity for heating with outdoor temperature Tj = +7 °C Pdh [kW] 6.15 Declared capacity for heating with outdoor temperature Tj = +12 °C Pdh [kW] 3.95 Declared capacity for heating with outdoor temperature Tj = 0 peraton limit temperature Pdh [kW] 10.1 Declared capacity for heating with outdoor temperature Tj = 0 peraton limit temperature Pdh [kW] 10.1 Declared capacity for heating with outdoor temperature Tj = 0 peraton limit temperature Pdh [kW] 0.00 Declared capacity for heating with outdoor temperature Tj = 0 peraton limit temperature Pdh [kW] 0.00 Bivalent temperature Cdh - 0.90 Declared coefficient of performance with outdoor temperature Tj = 4 ° °C COPd - 2.14 Declared coefficient of performance with outdoor temperature Tj = 4 ° °C COPd - 2.14 Declared coefficient of performance with outdoor temperature Tj = 4 °C COPd -	Seasonal space heating energy efficiency class	•	-	A+
Declared capacity for heating with outdoor temperature Tj = -7 °C Pdh [kW] 10.1 Declared capacity for heating with outdoor temperature Tj = +2 °C Pdh [kW] 6.15 Declared capacity for heating with outdoor temperature Tj = +7 °C Pdh [kW] 3.95 Declared capacity for heating with outdoor temperature Tj = +12 °C Pdh [kW] 2.93 Declared capacity for heating with outdoor temperature Tj = Noreation limit temperature Pdh [kW] 0.01 Declared capacity for heating with outdoor temperature Tj = Noreation limit temperature Pdh [kW] 0.00 For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper	ature Tj		
Declared capacity for heating with outdoor temperature $T_1 = +2 ° C$ Pdh[LW]6,15Declared capacity for heating with outdoor temperature $T_1 = +7 ° C$ Pdh[LW]3,95Declared capacity for heating with outdoor temperature $T_1 = +12 ° C$ Pdh[LW]3,95Declared capacity for heating with outdoor temperature $T_1 = +12 ° C$ Pdh[LW]10,1Declared capacity for heating with outdoor temperature $T_1 = +12 ° C$ Pdh[LW]10,1Declared capacity for heating with outdoor temperature $T_1 = +2 ° C$ Pdh[LW]0,00For air-to-water heat pumps: $T_1 = -15 ° C$ (if TOL < - 20 °C)	Declared capacity for heating with outdoor temperature Ti = -7 °C	Pdh	[kW]	10.1
Declared capacity for heating with outdoor temperature Tj = +7 °C Pdh [kW] 3,95 Declared capacity for heating with outdoor temperature Tj = bavlent temperature Pdh [kW] 2,93 Declared capacity for heating with outdoor temperature Tj = Depretation limit temperature Pdh [kW] 10,1 Declared capacity for heating with outdoor temperature Tj = Depretation limit temperature Pdh [kW] 0,00 For air-to-water heat pumps: Tj = -15 °C (if TOL <- 20 °C)	Declared capacity for heating with outdoor temperature Ti = +2 °C	Pdh	[kW]	6.15
Declared capacity for heating with outdoor temperature Tj = ±12 °C Pdh [kW] 2,93 Declared capacity for heating with outdoor temperature Tj = Bivalent temperature Pdh [kW] 10,1 Declared capacity for heating with outdoor temperature Tj = Doperation limit temperature Pdh [kW] 0.00 For air-to-water heat pumps: Tj = -15 °C (f TOL < - 20 °C)	Declared capacity for heating with outdoor temperature Ti = +7 °C	Pdh	[kW]	3.95
Declared capacity for heating with outdoor temperature Tj = Bivalent temperature Pdh [kW] 10,1 Declared capacity for heating with outdoor temperature Tj = Operation limit temperature Pdh [kW] 0.00 For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	Declared capacity for heating with outdoor temperature Ti = +12 °C	Pdh	[kW]	2.93
Declared capacity for heating with outdoor temperature TJ = Operation limit temperaturePdh[kW]0,00For air-to-water heat pumps: TJ = -15 °C (ff TOL < - 20 °C)	Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	10.1
For air-to-water heat pumps: $T] = -15 °C (ff TOL < -20 °C) Pdh [kW] - Bivalent temperature Tbiv [°C] -7 Degradation coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature TJ - 0.90 Declared coefficient of performance with outdoor temperature TJ = - 7 °C COPd - 2.14 Declared coefficient of performance with outdoor temperature TJ = +2 °C COPd - 2.90 Declared coefficient of performance with outdoor temperature TJ = +2 °C COPd - 3.81 Declared coefficient of performance with outdoor temperature TJ = +12 °C COPd - 4.92 Declared coefficient of performance with outdoor temperature TJ = +2 °C COPd - 1.40 Declared coefficient of performance with outdoor temperature TJ = Operation limit temperature COPd - 2.14 Declared coefficient of performance with outdoor temperature TJ = Operation limit temperature COPd - 1.00 For air-to-water heat pumps: TJ = - 15 °C (if TOL < - 20 °C)$	Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	0.00
Bivalent temperature Tbiv $[^{+}C]$ -7 Degradation coefficient Cdh - 0.90 Declared coefficient of performance or primary energy ratio for part load at indoor temperature Tj - 0.90 Declared coefficient of performance with outdoor temperature Tj = -7 °C COPd - 2.14 Declared coefficient of performance with outdoor temperature Tj = +2 °C COPd - 2.90 Declared coefficient of performance with outdoor temperature Tj = +12 °C COPd - 4.92 Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature COPd - 4.92 Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature COPd - 4.92 Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature COPd - 1.00 For air-to-water heat pumps: Tj = -15 °C (if TOL < - 20 °C)	For air-to-water heat pumps: Ti = -15 °C (if TOL < -20 °C)	Pdh	[kW]	-
Degradation coefficient Cdh Image: Control of the second sec	Bivalent temperature	Tbiv		-7
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 1) Image: Coefficient of performance with outdoor temperature 1] = -7 °C COPd - 2,14 Declared coefficient of performance with outdoor temperature 1] = +7 °C COPd - 2,90 Declared coefficient of performance with outdoor temperature 1] = +7 °C COPd - 3,81 Declared coefficient of performance with outdoor temperature 1] = +12 °C COPd - 4,92 Declared coefficient of performance with outdoor temperature 1] = +12 °C COPd - 4,92 Declared coefficient of performance with outdoor temperature 1] = +12 °C COPd - 4,92 Declared coefficient of performance with outdoor temperature 1] = = +12 °C COPd - 4,92 Declared coefficient of performance with outdoor temperature 1] = 0 peration limit temperature COPd - 1,00 For air-to-water heat pumps: 1] = -15 °C (ff TOL < -20 °C)	Degradation coefficient	Cdh	-	0.90
Declared coefficient of performance with outdoor temperature Tj = -7 °C COPd - 2,14 Declared coefficient of performance with outdoor temperature Tj = +2 °C COPd - 2,90 Declared coefficient of performance with outdoor temperature Tj = +2 °C COPd - 2,90 Declared coefficient of performance with outdoor temperature Tj = +12 °C COPd - 3,81 Declared coefficient of performance with outdoor temperature Tj = +12 °C COPd - 4,92 Declared coefficient of performance with outdoor temperature Tj = 0 peration limit temperature COPd - 2,14 Declared coefficient of performance with outdoor temperature Tj = 0 peration limit temperature COPd - 4,92 Declared coefficient of performance with outdoor temperature Tj = 0 operation limit temperature COPd - 1,00 For air-to-water HP : Operation limit temperature T ToL (°C) -20 - For air-to-water HP : Operating limit temperature at TOL WTOL (°C) - - Power consumption in modes other than active mode ToL (°C) - - Off mode POFF [kW] 0,000 Standby mode SWN 0,000	Declared coefficient of performance or primary energy ratio for part load at indoor temperat	ture 20 °C and outdoor temperatu	re Ti	-,
Declared coefficient of performance with outdoor temperature Tj = +2 °C COPd - 2.90 Declared coefficient of performance with outdoor temperature Tj = +2 °C COPd - 3.81 Declared coefficient of performance with outdoor temperature Tj = +12 °C COPd - 4.92 Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature COPd - 4.92 Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature COPd - 2.14 Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature COPd - 2.14 Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature COPd - 1.00 For air-to-water heat pumps: Tj = -15 °C (f TOL < - 20 °C)	Declared coefficient of performance with outdoor temperature Ti = -7 °C	COPd		2.14
Declared coefficient of performance with outdoor temperature Tj = +7 °C COPd - 3,81 Declared coefficient of performance with outdoor temperature Tj = +12 °C COPd - 4,92 Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature COPd - 2,14 Declared coefficient of performance with outdoor temperature Tj = Divalent temperature COPd - 2,14 Declared coefficient of performance with outdoor temperature Tj = Divalent temperature COPd - 2,14 Declared coefficient of performance with outdoor temperature Tj = Divalent temperature COPd - 2,14 Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature COPd - 7,00 For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	Declared coefficient of performance with outdoor temperature $Ti = +2 °C$	COPd	-	2,90
Declared coefficient of performance with outdoor temperature Tj = +12 °C COPd - 4,92 Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature COPd - 2,14 Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature COPd - 2,14 Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature COPd - 1,00 For air-to-water heat pumps: Tj = -15 °C (if TOL < - 20 °C)	Declared coefficient of performance with outdoor temperature $Ti = +7$ °C	COPd	-	3.81
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature COPd - 2,14 Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature COPd - 1,00 For air-to-water heat pumps: Tj = - 15 °C (ff TOL < - 20 °C)	Declared coefficient of performance with outdoor temperature $Ti = +12$ °C	COPd	-	4,92
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature COPd - 1,00 For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	Declared coefficient of performance with outdoor temperature Ti = Bivalent temperature	COPd	-	2.14
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	Declared coefficient of performance with outdoor temperature Ti = Operation limit temperature	COPd	-	1.00
For air-to-water HP : Operation limit temperature TOL [°C] -20 Heating water operating limit temperature at TOL WTOL [°C] 45 Power consumption in modes other than active mode Off mode POFF [kW] 0,070 Thermostat-off mode PTO [kW] 0,000 Standby mode PSB [kW] 0,070 Crankcase heater mode PCK [kW] 0,000 Supplementary heater Nominal heating capacity PSup [kW] 11,4 Other items Capacity control fixed / variable variable variable Sound power level, indoors LWA [dB(A)] - Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)	COPd	-	-
Heating water operating limit temperature at TOL WTOL [°C] 45 Power consumption in modes other than active mode POFF [kW] 0,070 Off mode POFF [kW] 0,000 Thermostat-off mode PTO [kW] 0,000 Standby mode PSB [kW] 0,070 Crankcase heater mode PCK [kW] 0,070 Supplementary heater PCK [kW] 0,000 Nominal heating capacity Psup [kW] 11,4 Other items Capacity control fixed / variable variable Sound power level, indoors LWA [dB(A)] - Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Power consumption in modes other than active mode Off mode POFF [kW] 0,070 Thermostat-off mode PTO [kW] 0,000 Standby mode PSB [kW] 0,070 Crankcase heater mode PSB [kW] 0,070 Crankcase heater mode PCK [kW] 0,000 Supplementary heater PSup [kW] 11,4 Other items Capacity control fixed / variable variable Sound power level, indoors LWA [dB(A)] - Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger For air-to-water HP: Rated air flow rate, outdoors Qairsource [m ⁹ /h] 1,64 For water./brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m ⁹ /h] -	Heating water operating limit temperature at TOL	WTOL	[°C]	45
Off modePOFF[kW]0,070Thermostat-off modePTO[kW]0,000Standby modePSB[kW]0,070Crankcase heater modePSB[kW]0,070Crankcase heater modePCK[kW]0,000Supplementary heaterNominal heating capacityPsup[kW]11,4Other itemsCapacity controlfixed / variablevariableSound power level, indoorsLWA[dB(A)]-Sound power level, outdoorsLWA[dB(A)]70Annual electricity consumption for heatingQHE[kWh]7835Outdoor heat exchangerFor air-to-water HP: Rated air flow rate, outdoors heat exchangerQairsource[m³/h]1,64For air-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchangerQwater/brine source[m³/h]-	Power consumption in modes other than active mode			
Thermostat-off modePTO[kW]0,000Standby modePSB[kW]0,070Crankcase heater modePCK[kW]0,000Supplementary heaterNominal heating capacityPsup[kW]11,4Other itemsCapacity controlfixed / variablevariableSound power level, indoorsLWA[dB(A)]-Sound power level, outdoorsLWA[dB(A)]70Annual electricity consumption for heatingQHE[kWh]7835Outdoor heat exchangerFor air-to-water HP: Rated air flow rate, outdoorsQairsource[m³/h]1,64For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchangerQwater/brine source[m³/h]-	Off mode	POFF	[kW]	0,070
Standby mode PSB [kW] 0,070 Crankcase heater mode PCK [kW] 0,000 Supplementary heater PSup [kW] 11,4 Other items Capacity control fixed / variable variable Sound power level, indoors LWA [dB(A)] - Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger Variable Variable Variable For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	Thermostat-off mode	РТО	[kW]	0.000
Crankcase heater mode PCK [kW] 0,000 Supplementary heater Nominal heating capacity Psup [kW] 11,4 Other items Capacity control fixed / variable variable Sound power level, indoors LWA [dB(A)] - Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	Standby mode	PSB	[kW]	0,070
Supplementary heater Psup [kW] 11,4 Other items Capacity control fixed / variable variable Capacity control fixed / variable variable Sound power level, indoors LWA [dB(A)] - Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	Crankcase heater mode	РСК	[kW]	0,000
Nominal heating capacity Psup [kW] 11,4 Other items Capacity control fixed / variable variable Sound power level, indoors LWA [dB(A)] - Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	Supplementary heater			,
Other items Capacity control fixed / variable variable Sound power level, indoors LWA [dB(A)] - Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger Variable Variable Variable For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	Nominal heating capacity	Psup	[kW]	11,4
Capacity control fixed / variable variable Sound power level, indoors LWA [dB(A)] - Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger Variable Variable Variable For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	Other items			•
Sound power level, indoors LWA [dB(A)] - Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	Capacity control	fixed / variable		variable
Sound power level, outdoors LWA [dB(A)] 70 Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger Control of the section	Sound power level, indoors	LWA	[dB(A)]	-
Annual electricity consumption for heating QHE [kWh] 7835 Outdoor heat exchanger End of the sector of	Sound power level, outdoors	LWA	[dB(A)]	70
Outdoor heat exchanger For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	Annual electricity consumption for heating	QHE	[kWh]	7835
For air-to-water HP: Rated air flow rate, outdoors Qairsource [m³/h] 1,64 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h] -	Outdoor heat exchanger			
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source [m³/h]	For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	1,64
	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

i-BX-N /015T LOW TEMPERATURE ap	plication		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	12
Seasonal space heating energy efficiency	ns	[%]	144
Seasonal space heating energy efficiency class	-	-	A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor tempera	iture Tj		
Declared capacity for heating with outdoor temperature Tj = -7 °C	Pdh	[kW]	10,9
Declared capacity for heating with outdoor temperature Tj = +2 °C	Pdh	[kW]	6,61
Declared capacity for heating with outdoor temperature Tj = +7 °C	Pdh	[kW]	4,25
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	4,08
Declared capacity for heating with outdoor temperature Tj = Bivalent temperature	Pdh	[kW]	10,9
Declared capacity for heating with outdoor temperature Tj = Operation limit temperature	Pdh	[kW]	10,0
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperate	ure 20 °C and outdoor temperature	э Тj	
Declared coefficient of performance with outdoor temperature Tj = -7 °C	COPd		2,94
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,64
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,28
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	4,48
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,94
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,69
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	2,26
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	74
Annual electricity consumption for heating	QHE	[kWh]	6916
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	1,80
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

I-BX-N /015T MEDIUM TEMPERATURE	application		
Air-to-water heat pump:	yes / no		ves
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	ves / no		no
Low-temperature heat pump:	ves / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	ves / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	14
Seasonal space heating energy efficiency	ns	[%]	116
Seasonal space heating energy efficiency class	•	-	A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper	ature Ti		
Declared capacity for heating with outdoor temperature $Ti = -7$ °C	Pdh	[kW]	12.2
Declared capacity for heating with outdoor temperature $T_i = +2 \text{ °C}$	Pdh	[kW]	7.44
Declared capacity for heating with outdoor temperature $T_i = +7 \text{ °C}$	Pdh	[kW]	4.78
Declared capacity for heating with outdoor temperature Ti = $+12 \degree$ C	Pdh	[kW]	3.89
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	12.2
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	0.00
For air-to-water heat pumps: Ti = -15 °C (if TOL < -20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
	Cdh	-	0.90
Declared coefficient of performance or primary energy ratio for part load at indoor temperation	ture 20 °C and outdoor temperatur	re Ti	-,
Declared coefficient of performance with outdoor temperature Ti = -7 °C	COPd		2.21
Declared coefficient of performance with outdoor temperature $T_i = +2 \degree C$	COPd		2,93
Declared coefficient of performance with outdoor temperature Ti = +7 °C	COPd		3,72
Declared coefficient of performance with outdoor temperature Ti = +12 °C	COPd		3.96
Declared coefficient of performance with outdoor temperature Ti = Bivalent temperature	COPd	-	2,21
Declared coefficient of performance with outdoor temperature Ti = Operation limit temperature	COPd	-	1,00
For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode	I		
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,008
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	13,8
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	74
Annual electricity consumption for heating	QHE	[kWh]	9601
Outdoor heat exchanger	· · · · · · · · · · · · · · · · · · ·	· ·	
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	1,80
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

i-BX-N /020T LOW TEMPERATURE ap	plication		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	16
Seasonal space heating energy efficiency		[%]	139
Seasonal space heating energy efficiency class	-		A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature	ature Tj		
Declared capacity for heating with outdoor temperature Tj = - 7 °C	Pdh	[kW]	14,6
Declared capacity for heating with outdoor temperature Tj = +2 °C	Pdh	[kW]	8,87
Declared capacity for heating with outdoor temperature Tj = +7 °C	Pdh	[kW]	5,70
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	5,70
Declared capacity for heating with outdoor temperature Tj = Bivalent temperature	Pdh	[kW]	14,6
Declared capacity for heating with outdoor temperature Tj = Operation limit temperature	Pdh	[kW]	13,4
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperat	ure 20 °C and outdoor temperatu	re Tj	
Declared coefficient of performance with outdoor temperature Tj = -7 °C	COPd	-	2,84
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,48
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,24
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	4,59
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,84
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,60
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	3,10
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	74
Annual electricity consumption for heating	QHE	[kWh]	9560
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	2,33
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

 For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger
 Qwater/brine source
 [m³/h]

(1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

i-BX-N /020T MEDIUM TEMPERATURE :	application		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	ves / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	17
Seasonal space heating energy efficiency	ns	[%]	113
Seasonal space heating energy efficiency class	•		A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature	ature Tj		
Declared capacity for heating with outdoor temperature Ti = -7 °C	Pdh	[kW]	15.3
Declared capacity for heating with outdoor temperature Ti = +2 °C	Pdh	[kW]	9.32
Declared capacity for heating with outdoor temperature $Ti = +7 \degree C$	Pdh	[kW]	5.99
Declared capacity for heating with outdoor temperature Ti = $+12 \degree$ C	Pdh	[kW]	5.46
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	15.3
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	0.00
For air-to-water heat pumps: Ti = -15 °C (if TOL < -20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh		0.90
Declared coefficient of performance or primary energy ratio for part load at indoor temperat	ture 20 °C and outdoor temperatu	re Ti	-,
Declared coefficient of performance with outdoor temperature Ti = -7 °C	COPd		2,10
Declared coefficient of performance with outdoor temperature Ti = +2 °C	COPd		2,81
Declared coefficient of performance with outdoor temperature Ti = +7 °C	COPd		3,77
Declared coefficient of performance with outdoor temperature Ti = +12 °C	COPd		4.16
Declared coefficient of performance with outdoor temperature Ti = Bivalent temperature	COPd		2.10
Declared coefficient of performance with outdoor temperature Ti = Operation limit temperature	COPd		1,00
For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)	COPd		-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL		45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	РТО	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			·
Nominal heating capacity	Psup	[kW]	17,3
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	74
Annual electricity consumption for heating	QHE	[kWh]	12309
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	2,33
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

i-BX-N /025T LOW TEMPERATURE ap	plication		
Air-to-water heat pump:	yes / no		ves
Water-to-water heat pump:	ves / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	22
Seasonal space heating energy efficiency	ns	[%]	148
Seasonal space heating energy efficiency class	-		A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor tempera	ture Tj		
Declared capacity for heating with outdoor temperature $T_i = -7 \degree C$	Pdh	[kW]	19,4
Declared capacity for heating with outdoor temperature $T_i = +2 \degree C$	Pdh	[kW]	11,8
Declared capacity for heating with outdoor temperature $T_i = +7 \text{ °C}$	Pdh	[kW]	7,59
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	8,13
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	19,4
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	18,2
For air-to-water heat pumps: $T_i = -15 \degree C$ (if $TOL < -20 \degree C$)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperate	ure 20 °C and outdoor temperature	e Tj	
Declared coefficient of performance with outdoor temperature Tj = -7 °C	COPd		2,93
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,70
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,39
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	5,44
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,93
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,74
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	3,73
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	75
Annual electricity consumption for heating	QHE	[kWh]	12010
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	3,76
I Forwater /bring to water boot number Dated bring or water flow rate, outdate boot and and	Owatar/bring course	[[mo3/b]	

[m³/h] For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Qwater/brine source -(1) The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.

I-BX-N /025T MEDIUM TEMPERATURE a	pplication		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	yes / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	yes / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	21
Seasonal space heating energy efficiency	ns	[%]	115
Seasonal space heating energy efficiency class	-	-	A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor tempera	ture Tj	I	
Declared capacity for heating with outdoor temperature $Tj = -7$ °C	Pdh	[kW]	18,9
Declared capacity for heating with outdoor temperature $T_i = +2 \degree C$	Pdh	[kW]	11,5
Declared capacity for heating with outdoor temperature Tj = +7 °C	Pdh	[kW]	7,40
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	7,86
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	18,9
Declared capacity for heating with outdoor temperature Tj = Operation limit temperature	Pdh	[kW]	0,00
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv	[°C]	-7
Degradation coefficient	Cdh	-	0,90
Declared coefficient of performance or primary energy ratio for part load at indoor temperate	ure 20 °C and outdoor temperatur	re Tj	
Declared coefficient of performance with outdoor temperature Tj = -7 °C	COPd	-	2,09
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	2,95
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	3,56
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	4,69
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,09
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	1,00
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	PTO	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	21,4
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	75
Annual electricity consumption for heating	QHE	[kWh]	14966
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	3,76
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

i-BX-N /030T LOW TEMPERATURE application					
Air-to-water heat pump:	yes / no		ves		
Water-to-water heat pump:	yes / no		no		
Brine-to-water heat pump:	yes / no		no		
Low-temperature heat pump:	yes / no		no		
With supplementary heater:	yes / no		no		
Mixed unit with heat pump:	yes / no		no		
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C		
Water flow rate	fixed / variable		fixed		
Outlet temperature	fixed / variable		variable		
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average		
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	25		
Seasonal space heating energy efficiency	 ηs	[%]	149		
Seasonal space heating energy efficiency class	-		A+		
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperat	ture Tj	1 1			
Declared capacity for heating with outdoor temperature $T_i = -7 \text{ °C}$	Pdh	[kW]	21,9		
Declared capacity for heating with outdoor temperature $T_i = +2 \degree C$	Pdh	[kW]	13,3		
Declared capacity for heating with outdoor temperature $T_i = +7 \degree C$	Pdh	[kW]	8,56		
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	8,21		
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	21,9		
Declared capacity for heating with outdoor temperature Tj = Operation limit temperature	Pdh	[kW]	19,9		
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-		
Bivalent temperature	Tbiv	[°C]	-7		
Degradation coefficient	Cdh	-	0,90		
Declared coefficient of performance or primary energy ratio for part load at indoor temperatu	re 20 °C and outdoor temperature	Tj			
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	COPd	- [2,62		
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,81		
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,49		
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	5,99		
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,62		
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,39		
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	COPd -		-		
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20		
Heating water operating limit temperature at TOL	WTOL	[°C]	45		
Power consumption in modes other than active mode	· ·				
Off mode	POFF	[kW]	0,070		
Thermostat-off mode	PTO	[kW]	0,000		
Standby mode	PSB	[kW]	0,070		
Crankcase heater mode	PCK	[kW]	0,000		
Supplementary heater					
Nominal heating capacity	Psup	[kW]	4,81		
Other items					
Capacity control	fixed / variable		variable		
Sound power level, indoors	LWA	[dB(A)]	-		
Sound power level, outdoors LWA [dB(A)]					
Annual electricity consumption for heating	QHE	[kWh]	13449		
Outdoor heat exchanger		_			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	4,20		
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-		

I-BX-N /030T MEDIUM TEMPERATURE a	application		
Air-to-water heat pump:	yes / no		ves
Water-to-water heat pump:	ves / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	yes / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	ves / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	Inco / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)			average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	25
Seasonal space heating energy efficiency	 ηs	[%]	116
Seasonal space heating energy efficiency class	-		A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature	ature Tj		
Declared capacity for heating with outdoor temperature $T_i = -7$ °C	Pdh	[kW]	22,0
Declared capacity for heating with outdoor temperature Ti = +2 °C	Pdh	[kW]	13,4
Declared capacity for heating with outdoor temperature $T_i = +7 \degree C$	Pdh	[kW]	8,62
Declared capacity for heating with outdoor temperature $T_j = +12 \degree C$	Pdh	[kW]	7,82
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	22,0
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	0,00
For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-
Bivalent temperature	Tbiv		-7
Degradation coefficient	Cdh		0.90
Declared coefficient of performance or primary energy ratio for part load at indoor temperat	ure 20 °C and outdoor temperatur	re Tj	,
Declared coefficient of performance with outdoor temperature $T_j = -7 \degree C$	COPd		1,97
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	2,96
Declared coefficient of performance with outdoor temperature Ti = +7 °C	COPd	-	3,65
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	5,31
Declared coefficient of performance with outdoor temperature Ti = Bivalent temperature	COPd	-	1,97
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	1,00
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	COPd	-	-
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	РТО	[kW]	0,000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	PCK	[kW]	0,000
Supplementary heater			
Nominal heating capacity	Psup	[kW]	24,9
Other items			
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	76
Annual electricity consumption for heating	QHE	[kWh]	17312
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	4,20
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

i-BX-N /035T LOW TEMPERATURE application					
Air-to-water heat pump:	yes / no		yes		
Water-to-water heat pump:	yes / no		no		
Brine-to-water heat pump:	yes / no		no		
Low-temperature heat pump:	yes / no		no		
With supplementary heater:	yes / no		no		
Mixed unit with heat pump:	yes / no		no		
Temperature application (1)	(low 35°C/ medium 55°C)		low 35°C		
Water flow rate	fixed / variable		fixed		
Outlet temperature	fixed / variable		variable		
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average		
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	28		
Seasonal space heating energy efficiency	 ηs	[%]	145		
Seasonal space heating energy efficiency class	-		A+		
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperat	ture Tj	1 1			
Declared capacity for heating with outdoor temperature $T_i = -7 \text{ °C}$	Pdh	[kW]	24,8		
Declared capacity for heating with outdoor temperature $T_i = +2 \degree C$	Pdh	[kW]	15,1		
Declared capacity for heating with outdoor temperature $T_i = +7 \degree C$	Pdh	[kW]	10,1		
Declared capacity for heating with outdoor temperature Tj = +12 °C	Pdh	[kW]	11,8		
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	24,8		
Declared capacity for heating with outdoor temperature Tj = Operation limit temperature	Pdh	[kW]	23,2		
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Pdh	[kW]	-		
Bivalent temperature	Tbiv	[°C]	-7		
Degradation coefficient	Cdh	-	0,90		
Declared coefficient of performance or primary energy ratio for part load at indoor temperatu	re 20 °C and outdoor temperature	rj			
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	COPd		2,49		
Declared coefficient of performance with outdoor temperature Tj = +2 °C	COPd	-	3,82		
Declared coefficient of performance with outdoor temperature Tj = +7 °C	COPd	-	4,37		
Declared coefficient of performance with outdoor temperature Tj = +12 °C	COPd	-	5,34		
Declared coefficient of performance with outdoor temperature Tj = Bivalent temperature	COPd	-	2,49		
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	COPd	-	2,26		
For air-to-water heat pumps: Tj = - 15 °C (if TOL < - 20 °C)	COPd -		-		
For air-to-water HP : Operation limit temperature	TOL	[°C]	-20		
Heating water operating limit temperature at TOL	WTOL	[°C]	45		
Power consumption in modes other than active mode	•				
Off mode	POFF	[kW]	0,070		
Thermostat-off mode	PTO	[kW]	0,000		
Standby mode	PSB	[kW]	0,070		
Crankcase heater mode	РСК	[kW]	0,000		
Supplementary heater					
Nominal heating capacity	Psup	[kW]	4,82		
Other items					
Capacity control	fixed / variable		variable		
Sound power level, indoors	LWA	[dB(A)]	-		
Sound power level, outdoors LWA [dB(A)]					
Annual electricity consumption for heating	QHE	[kWh]	15659		
Outdoor heat exchanger					
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	4,65		
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-		

Unit in standard configuration/execution, without optional accessories.

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I-BX-N /035T MEDIUM TEMPERATURE	application		
Air-to-water heat pump:	yes / no		yes
Water-to-water heat pump:	ves / no		no
Brine-to-water heat pump:	yes / no		no
Low-temperature heat pump:	ves / no		no
With supplementary heater:	yes / no		no
Mixed unit with heat pump:	ves / no		no
Temperature application (1)	(low 35°C/ medium 55°C)		medium 55°C
Water flow rate	fixed / variable		fixed
Outlet temperature	fixed / variable		variable
Parameters are declared for average/warmer/colder climate conditions (1)	average / warmer / colder		average
Rated heat output at Tdesignh	Prated = Pdesignh	[kW]	32
Seasonal space heating energy efficiency	ns	[%]	117
Seasonal space heating energy efficiency class	•	-	A+
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temper	ature Ti		
Declared capacity for heating with outdoor temperature $Ti = -7$ °C	Pdh	[kW]	28.3
Declared capacity for heating with outdoor temperature $T_i = +2 \text{ °C}$	Pdh	[kW]	17.2
Declared capacity for heating with outdoor temperature $T_i = +7 ^{\circ}C$	Pdh	[kW]	11 1
Declared capacity for heating with outdoor temperature Ti = $+12$ °C	Pdh	[kW]	11.4
Declared capacity for heating with outdoor temperature Ti = Bivalent temperature	Pdh	[kW]	28.3
Declared capacity for heating with outdoor temperature Ti = Operation limit temperature	Pdh	[kW]	0.00
For air-to-water heat pumps: Ti = -15 °C (if TOL < -20 °C)	Pdh	[kW]	-
Bivalent temperature	Thiv	[]	-7
	Cdh	-	0.90
Declared coefficient of performance or primary energy ratio for part load at indoor temperation	ture 20 °C and outdoor temperature	re Ti	0,00
Declared coefficient of performance with outdoor temperature Ti = -7 °C	COPd	-	2.08
Declared coefficient of performance with outdoor temperature $Ti = +2 °C$	COPd	-	2.93
Declared coefficient of performance with outdoor temperature $Ti = +7$ °C	COPd	-	3.89
Declared coefficient of performance with outdoor temperature $Ti = +12$ °C	COPd	-	4.87
Declared coefficient of performance with outdoor temperature Ti = Bivalent temperature	COPd	-	2.08
Declared coefficient of performance with outdoor temperature Ti = Operation limit temperature	COPd	-	1.00
For air-to-water heat pumps: Ti = – 15 °C (if TOL < – 20 °C)	COPd -		-
For air-to-water HP : Operation limit temperature	TOL [°C]		-20
Heating water operating limit temperature at TOL	WTOL	[°C]	45
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,070
Thermostat-off mode	РТО	[kW]	0.000
Standby mode	PSB	[kW]	0,070
Crankcase heater mode	РСК	[kW]	0,000
Supplementary heater			,
Nominal heating capacity	Psup	[kW]	32,0
Other items	·		,
Capacity control	fixed / variable		variable
Sound power level, indoors	LWA	[dB(A)]	-
Sound power level, outdoors	LWA	[dB(A)]	77
Annual electricity consumption for heating	QHE	[kWh]	21946
Outdoor heat exchanger			
For air-to-water HP: Rated air flow rate, outdoors	Qairsource	[m³/h]	4,65
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Qwater/brine source	[m³/h]	-

ENGLISH	ITALIANO	FRANCAISE	DEUTSCH	ESPANOL
Air-to-water heat pump:	Pompa di calore aria/ acqua:	Pompes à chaleur air-eau:	Luft-Wasser-Wärmepumpe:	Bomba de calor aire-agua:
Water-to-water heat pump:	Pompa di calore acqua/ acqua:	Pompes à chaleur eau-eau:	Wasser-Wasser-Wärmepumpe:	Bomba de calor agua-agua:
Brine-to-water heat pump:	Pompa di calore salamoia/ acqua:	Pompe à chaleur eau glycolée-eau:	Sole-Wasser-Wärmepumpe:	Bomba de calor salmuera-agua:
Low-temperature heat pump:	Pompa di calore a bassa temperatura:	Pompes à chaleur basse température:	Niedertemperatur-Wärmepumpe:	Bomba de calor de baja temperatura:
With supplementary heater:	Con riscaldatore supplementare:	Equipée d'un dispositif de chauffage d'appoint:	Mit Zusatzheizgerät:	Equipado con un calefactor complementario:
Mixed unit with heat pump:	Apparecchio misto a pompa di calore:	Dispositif de chauffage mixte par pompe à chaleur:	Kombiheizgerät mit Wärmepumpe:	Calefactor combinado con bomba de calor:
Temperature application	Temperatura applicazione	Application à température	Temperatur Anwendung	Aplicación de temperatura
Water flow rate	Portata d'acqua	Débit fluide	Volumenstrom Wasser	Caudal agua
Outlet temperature	Temperatura di uscita	Température de sortie	Austrittstemperatur	Temperatura de salida
Parameters are declared for average/warmer/colder climate conditions	I parametri sono dichiarati per condizioni climatiche medie/ alte/ basse	Les paramètres sont déclarés pour les conditions climatiques moyennes/chaud/basse	Die Parameter sind für eine Mitteltemperaturanwendung anzugeben	Los parámetros se indicarán para condiciones climáticas medias/ alta/ baja
Rated heat output at Tdesignh	Potenza termica nominale a Tdesign	Puissance thermique nominale Tdesignh	Wärmenennleistung Tdesignh	Potencia calorífica nominal Tdesignh
Seasonal space heating energy efficiency	Efficienza energetica stagionale del riscaldamento d'ambiente	Efficacité énergétique saisonnière pour le chauffage des locaux	Jahreszeitbedingte Raumheizungs-Energieeffizienz	Eficiencia energética estacional de calefacción
Seasonal space heating energy efficiency class	Classe di efficienza energetica stagionale del riscaldamento d'ambiente	Efficacité énergétique saisonnière pour le chauffage des locaux	Jahreszeitbedingte Raumheizungs-Energieeffizienz	Eficiencia energética estacional de calefacción
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj	Capacità di riscaldamento dichiarata a carico parziale, con temperatura interna pari a 20 °C e temperatura esterna Tj	Puissance calorifique déclarée à charge partielle pour une température intérieure de 20 °C et une température extérieure Tj	Angegebene Leistung für Teillast bei Raumlufttemperatur 20 °C und Außenlufttemperatur Tj	Capacidad de calefacción declarada para una carga parcial a una temperatura interior de 20 °C y una temperatura exterior Tj
Declared capacity for heating with outdoor temperature Tj = -7 °C	Capacità di riscaldamento con temperatura esterna Tj = - 7 °C	Puissance calorifique déclarée avec la température extérieure Tj = - 7 °C	Erklärt, Raumheizung mit Außenlufttemperatur Tj = – 7 °C	Capacidad de calefacción para una temperatura exterior Tj = - 7 °C
Declared capacity for heating with outdoor temperature Tj = +2 °C	Capacità di riscaldamento con temperatura esterna Tj = + 2 °C	Puissance calorifique déclarée avec la température extérieure Tj = +2 °C	Erklärt, Raumheizung mit Außenlufttemperatur Tj = +2 °C	Capacidad de calefacción para una temperatura exterior Tj = +2 °C
Declared capacity for heating with outdoor temperature Tj = +7 °C	Capacità di riscaldamento con temperatura esterna Tj = + 7 °C	Puissance calorifique déclarée avec la température extérieure Tj = +7 °C	Erklärt, Raumheizung mit Außenlufttemperatur Tj = +7 °C	Capacidad de calefacción para una temperatura exterior Tj = +7 °C
Declared capacity for heating with outdoor temperature Tj = +12 °C	Capacità di riscaldamento con temperatura esterna Tj = + 12 °C	Puissance calorifique déclarée avec la température extérieure Tj = +12 °C	Erklärt, Raumheizung mit Außenlufttemperatur Tj = +12 °C	Capacidad de calefacción para una temperatura exterior Tj = +12 °C
Declared capacity for heating with outdoor temperature Tj = Bivalent temperature	Capacità di riscaldamento con temperatura esterna Tj = temperatura bivalente	Puissance calorifique déclarée avec la température extérieure Tj = Température bivalente	Erklärt, Raumheizung mit Außenlufttemperatur Tj = Bivalenztemperatur	Capacidad de calefacción para una temperatura exterior Tj = Temperatura bivalente
Declared capacity for heating with outdoor temperature Tj = Operation limit temperature	Capacità di riscaldamento con temperatura esterna Tj = temperatura limite di esercizio	Puissance calorifique déclarée avec la température extérieure Tj = Température maximale de service	Erklärt, Raumheizung mit Außenlufttemperatur Tj = Betriebsgrenzwert-Temperatur	Capacidad de calefacción para una temperatura exterior Tj = Temperatura límite de funcionamiento
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Per le pompe di calore aria/ acqua: Tj = – 15 °C (se TOL < – 20 °C)	Pour les pompes à chaleur air-eau: Tj = – 15 °C (si TOL < – 20 °C)	Für Luft-Wasser-Wärmepumpen: Tj = -15 °C (wenn TOL < -20 °C)	Para bombas de calor aire-agua: Tj = – 15 °C (si TOL < – 20 °C)
Bivalent temperature	Temperatura bivalente	Température bivalente	Bivalenztemperatur	Temperatura bivalente
Degradation coefficient	Coefficiente di degradazione	Coefficient de dégradation	Minderungsfaktor	Coeficiente de degradación
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj	Coefficiente di prestazione dichiarato o indice di energia primaria per carico parziale, con temperatura interna pari a 20 °C e temperatura esterna Tj	Coefficient de performance déclaré ou coefficient sur énergie primaire déclaré à charge partielle pour une température intérieure de 20 °C et une température extérieure Tj	Angegebene Leistungszahl oder Heizzahl für Teillast bei Raumlufttemperatur 20 °C und Außenlufttemperatur Tj	Coeficiente de rendimiento declarado o factor energético primario para una carga parcial a una temperatura interior de 20 °C y una temperatura exterior Tj
Declared coefficient of performance with outdoor temperature Tj = - 7 °C	Coefficiente di prestazione con temperatura esterna Tj = – 7 °C	Coefficient de performance déclaré avec la température extérieure Tj = – 7 °C	Erklärten Leistungszahl bei Außenlufttemperatur Tj = – 7 °C	Capacidad de calefacción para una temperatura exterior Tj = – 7 °C
Declared coefficient of performance with outdoor temperature Tj = +2 °C	Coefficiente di prestazione con temperatura esterna Tj = + 2 °C	Coefficient de performance déclaré avec la température extérieure Tj = +2 °C	Erklärten Leistungszahl bei Außenlufttemperatur Tj = +2 °C	Capacidad de calefacción para una temperatura exterior Tj = +2 °C
Declared coefficient of performance with outdoor temperature Tj = +7 °C	Coefficiente di prestazione con temperatura esterna Tj = + 7 °C	Coefficient de performance déclaré avec la température extérieure Tj = +7 °C	Erklärten Leistungszahl bei Außenlufttemperatur Tj = +7 °C	Capacidad de calefacción para una temperatura exterior Tj = +7 °C
Declared coefficient of performance with outdoor temperature Tj = +12 °C	Coefficiente di prestazione con temperatura esterna Tj = + 12 °C	Coefficient de performance déclaré avec la température extérieure Tj = +12 °C	Erklärten Leistungszahl bei Außenlufttemperatur Tj = +12 °C	Capacidad de calefacción para una temperatura exterior Tj = +12 °C

ENGLISH	ITALIANO	FRANCAISE	DEUTSCH	ESPANOL
Declared coefficient of	Coefficiente di prestazione con	Coefficient de performance	Erklärten Leistungszahl bei	Capacidad de calefacción para
Declared coefficient of performance with outdoor temperature Tj = Operation limit temperature	Coefficiente di prestazione con temperatura esterna Tj = temperatura limite di esercizio	Coefficient de performance déclaré avec la température extérieure Tj = Température maximale de service	Erklärten Leistungszahl bei Außenlufttemperatur Tj = Betriebsgrenzwert-Temperatur	Capacidad de calefacción para una temperatura exterior Tj = Temperatura límite de funcionamiento
For air-to-water heat pumps: Tj = – 15 °C (if TOL < – 20 °C)	Per le pompe di calore aria/ acqua: Tj = – 15 °C (se TOL < – 20 °C)	Pour les pompes à chaleur air-eau: Tj = – 15 °C (si TOL < – 20 °C)	Für Luft-Wasser-Wärmepumpen: Tj = – 15 °C (wenn TOL < – 20 °C)	Para bombas de calor aire-agua: Tj = – 15 °C (si TOL < – 20 °C)
For air-to-water HP : Operation limit temperature	Per le pompe di calore aria/ acqua: temperatura limite di esercizio	Pour les pompes à chaleur air-eau: Température limite de fonctionnemen	Für Luft-Wasser-Wärmepumpen: Betriebsgrenzwert-Temperatur	Para bombas de calor aire-agua: Temperatura límite de funcionamiento
Heating water operating limit temperature	Temperatura limite di esercizio di riscaldamento dell'acqua	Température maximale de service de l'eau de chauffage	Grenzwert der Betriebstemperatur des Heizwassers	Temperatura límite de calentamiento de agua
Power consumption in modes other than active mode	Consumo energetico in modi diversi dal modo attivo	Consommation d'électricité dans les modes autres que le mode actif	Stromverbrauch in anderen Betriebsarten als dem Betriebszustand	Consumo de electricidad en modos distintos del activo
Off mode	Modo spento	Mode arrêt	Aus-Zustand	Modo desactivado
Thermostat-off mode	Modo termostato spento	Mode arrêt par thermostat	Thermostat-aus-Zustand	Modo desactivado por termostato
Standby mode	Modo stand-by	Mode veille	Bereitschaftszustand	Modo de espera
Crankcase heater mode	Modo riscaldamento del carter	Mode résistance de carter active	Betriebszustand mit Kurbelgehäuseheizung	Modo riscaldamento del carter
Supplementary heater	Riscaldatore supplementare	Dispositif de chauffage d'appoint	Zusatzheizgerät	Calefactor complementario
Nominal heating capacity	Potenza termica nominale	Puissance thermique nominale	Heizleistung nominal	Potencia térmica nominal
Other items	Altri elementi	Autres caractéristiques	Sonstige Elemente	Otros elementos
Capacity control	Controllo della capacità	Régulation de la puissance	Leistungssteuerung	Control de capacidad
Sound power level, indoors	Livello della potenza sonora, all'interno	Niveau de puissance acoustique, à l'intérieur	Schallleistungspegel, innen	Nivel de potencia acústica (interior)
Sound power level, outdoors	Livello della potenza sonora, all'esterno	Niveau de puissance acoustique, à l'extérieur	Schallleistungspegel, außen	Nivel de potencia acústica (exterior)
Annual electricity consumption for heating	Consumo di elettricità annuale per il riscaldamento	Consommation annuelle d'électricité pour le chauffage	Jahresstromverbrauch für die Heizung	Consumo anual de electricidad para la calefacción
Outdoor heat exchanger	Scambiatore di calore esterno	Echangeur de chaleur externe	Wärmetauscher äußere	Intercambiador de calor (exterior)
For air-to-water HP: Rated air flow rate, outdoors	Per le pompe di calore aria/ acqua: portata d'aria, all'esterno	Pour les pompes à chaleur air-eau: débit d'air nominal, à l'extérieur	Für Luft-Wasser-Wärmepumpen: Nenn-Luftdurchsatz, außen	Para bombas de calor aire-agua: Caudal de aire nominal (exterior)
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	Per le pompe di calore acqua/acqua e salamoia/acqua: flusso di salamoia o acqua nominale, scambiatore di calore all'esterno	Pour les pompes à chaleur eau-eau ou eau glycolée-eau: débit nominal d'eau glycolée ou d'eau, échangeur thermique extérieur	Für Wasser/Sole-Wasser-Wärmepumı Wasser- oder Sole-Nenndurchsatz	Para bombas de calor agua/salmuera a agua: Caudal de salmuera o de agua nominal, intercambiador de calor de exterior
Notes:	Note:	Remarques:	Hinweise:	Notas:
The parameters are declared for application at medium temperature, except in the case of low temperature heat pumps. For low temperature heat pumps, the parameters are declared for application at low temperature.	I parametri sono dichiarati per l'applicazione a temperatura media, tranne per le pompe di calore a bassa temperatura. Per le pompe di calore a bassa temperatura, i parametri sono dichiarati per l'applicazione a bassa temperatura.	Les paramètres sont déclarés pour l'application à moyenne température, excepté pour les pompes à chaleur basse température. Pour les pompes à chaleur basse température, les paramètres sont déclarés pour l'application à basse température.	Die Parameter sind für eine Mitteltemperaturanwendung anzugeben, außer für Niedertemperatur-Wärmepumpen. Für Niedertemperatur-Wärmepumpen sind die Parameter für eine Niedertemperaturanwendung anzugeben.	Los parámetros se declararán para aplicaciones de media temperatura, excepto si se trata de bombas de calor de baja temperatura. En el caso de las bombas de calor de baja temperatura, los parámetros se declararán para aplicaciones de baja temperatura.
Unit in standard configuration/execution, without optional accessories.	Unità in configurazione ed esecuzione standard, priva di accessori opzionali.	Unité en configuration et exécution standard, sans accessoires optionnels.	Gerät mit Standard-Konfiguration und -Ausführung, ohne wunschweises Zubehör.	Unidad en configuración y ejecución estándar, sin accesorios opcionales.





Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a

MITSUBISHI ELECTRIC HYDRONICS & IT COOLING SYSTEMS S.p.A.

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