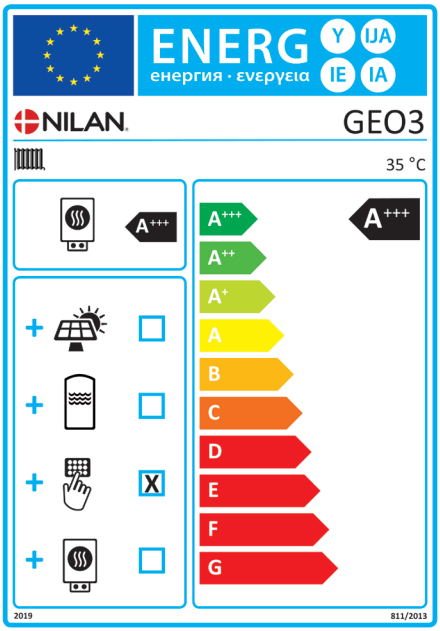
GEO 3

Heating pump system for space heating

Model	GEO 3
Air-to-water heat pump	No
Water-to-water heat pump	No
Brine-to-water heat pump	Yes
Low-temperature heat pump	Yes
Equipped with a supplementary heater	Yes
Heat pump combination heater	No
Temperature control:	
Model	CTS602
Class	2
Contribution to seasonal space heating energy efficiency	2%



Item	Symbol	Value	Unit
Rated heat output	*Prated*	3,44	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature of T_j			
T_j = -7 °C	*Pdh*	3,04	kW
T_j = +2 °C	*Pdh*	1,88	kW
T_j = +7 °C	*Pdh*	1,26	kW
T_j = +12 °C	*Pdh*	1,02	kW
T_j = bivalent temperature	*Pdh*	3,03	kW
T_j = operation limit temperature	*Pdh*	0	kW
For air-water-heating pumps Tj = -15 °C (if TOL < -20 °C)	*Pdh*		kW
Bivalent temperature	T_{biv}	-7	°C
Cycling interval capacity for heating	*Pcych*		kW
Degradation co-efficient	*Cdh*	0,97	
Power consumption in modes other than active mode			
Off mode	P_{OFF}	0,003	kW
Thermostat off-mode	P_{TO}	0,010	kW
Standby mode	P_{SB}	0,010	kW
Crankcase heater mode	P_{CK}	0,000	kW
Other items			
Capacity control:	Variable compressor Variable indoor temperature adjustment		
	Fixed indoor water flow Fixed outdoor water flow		
Sound power level, indoors	L_{WA}	47	dB
Emissions of nitrogen oxides	Q_{HE}	931	kWh

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	208	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T_j			
T_j = -7 °C	*COPd*	4,66	
T_j = +2 °C	*COPd*	5,29	
T_j = +7 °C	*COPd*	5,63	
T_j = +12 °C	*COPd*	5,82	
T_j = bivalent temperature	*COPd*	4,61	
T_j = operation limit temperature	*COPd*	0	
For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	*COPd*		
For air-to-water heat pumps: Operation limit temperature	*TOL*		°C
Cycling interval efficiency	*COPcyc*		
Heating water operating limit temperature	*WTOL*	52	°C
Supplementary heater			
Rated heat output	*Psup*	2	kW
Type of energy input	Electrical		
For air-to-water heat pumps: Rated air flow rate, outdoors			m^3/h
For water-/ brine-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger		0,518	m^3/h

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