

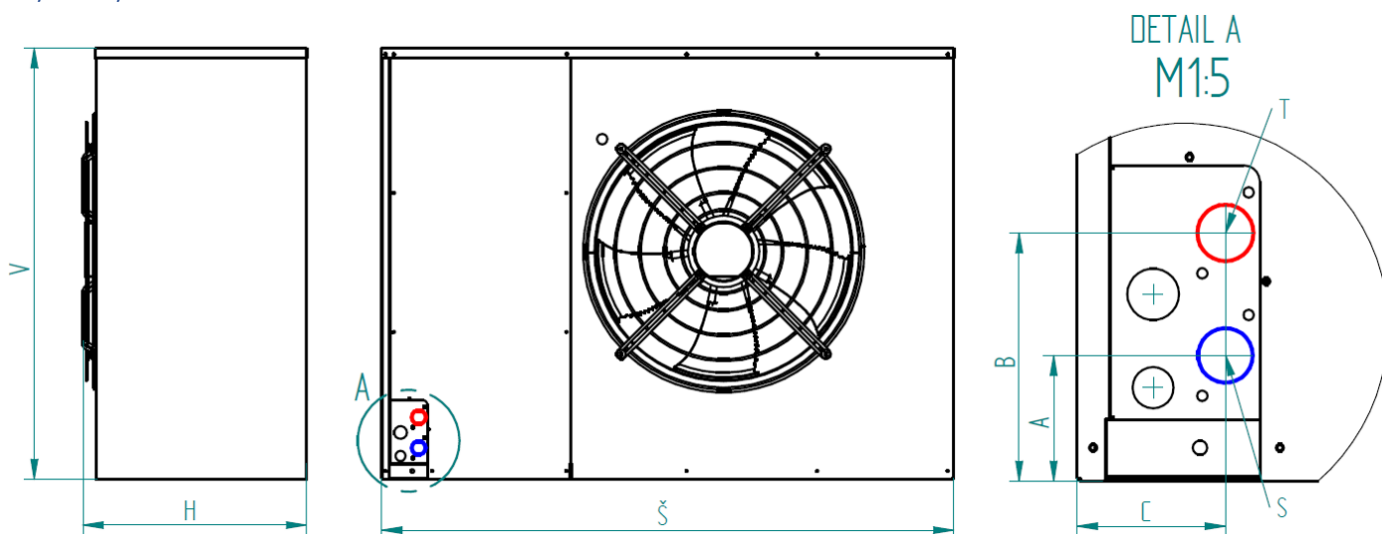
Parametry techniczne pomp ciepła IZZIFAST GRANDIS

Model	GRANDIS-N	GRANDIS-R
Napięcie nominalne; zabezpieczenie	3~N/PE/400V/50Hz; B16A	3~N/PE/400V/50Hz; B20A
Typ kompresora	Twin Rotatory	Twin Rotatory
Maksymalne natężenie prądu [A]	13	9
Prąd startowy [A]	5	5
Stable current [A]	3,97	2,71
Klasa ochrony	IP24	IP24
Czynnik chłodniczy	R290	R290
Ilość czynnika chłodniczego [kg]	0,75	1,4
Moc chłodnicza A35/W18 [kW]	5,3	8,3
Zakres pracy [°C]*	-25 to 38	-25 to 38
Zakres temperatury wody grzewczej [°C]	20 to 75	20 to 75
Przepływ wody grzewczej [m ³ /h]	0,5 to 3	0,5 to 3

* Sprawdzono przez laboratorium badawcze przy niższym obciążeniu pompy ciepła

** Laboratorium badawcze potwierdziło, że przy niższym obciążeniu pompy ciepła można osiągnąć temperaturę wody 75°C

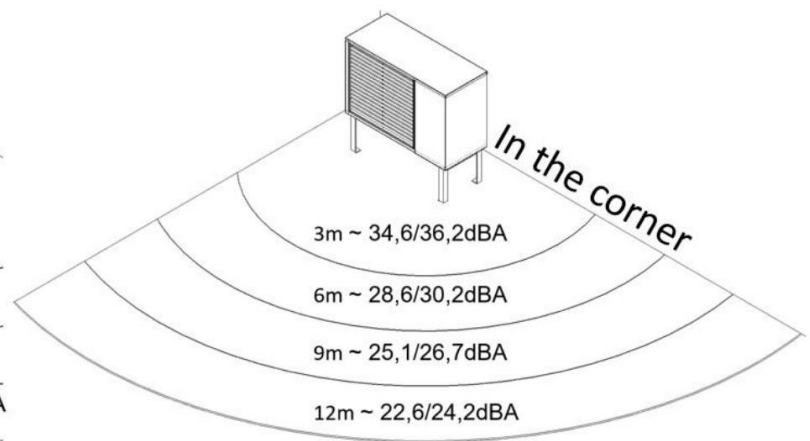
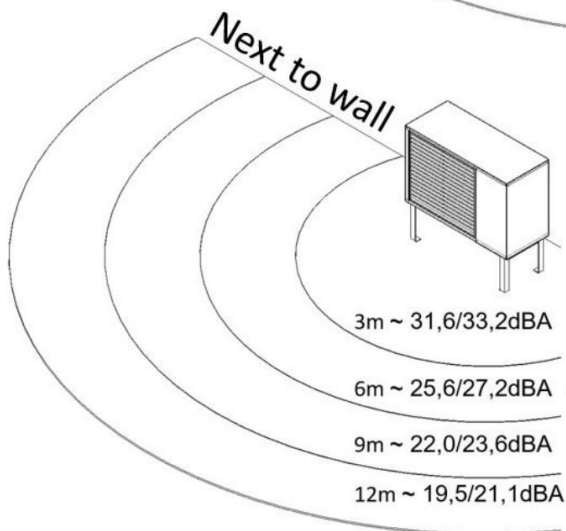
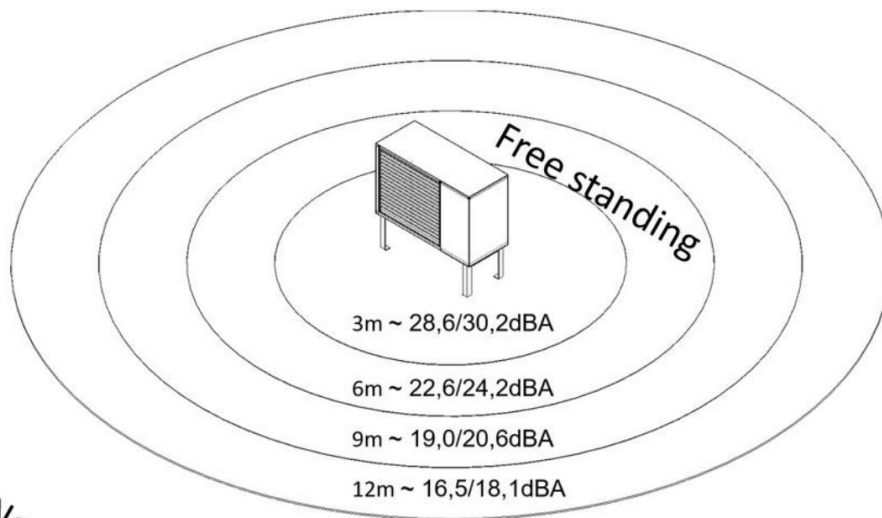
Wymiary montażowe



Model	GRANDIS-N	GRANDIS-R
V [mm]	740	1070
S [mm]	1130	1430
H [mm]	500	560
A [mm]	107	78
B [mm]	183	154
C [mm]	82	92
Weight [kg]	115	195
T – ciepła woda [mm]	G1" DIN ISO 228	G1" DIN ISO 228
S – zimna woda [mm]	G1" DIN ISO 228	G1" DIN ISO 228

		GRANDIS-R
Acoustic pressure at 3m [dB(A)]	28,6	30,2
Acoustic pressure at 6m [dB(A)]	22,6	24,2
Acoustic power L_{WA} [dB(A)]	46,1	47,7

The values of acoustic pressure are stated as follows - GRANDIS-N /GRANDIS-R.



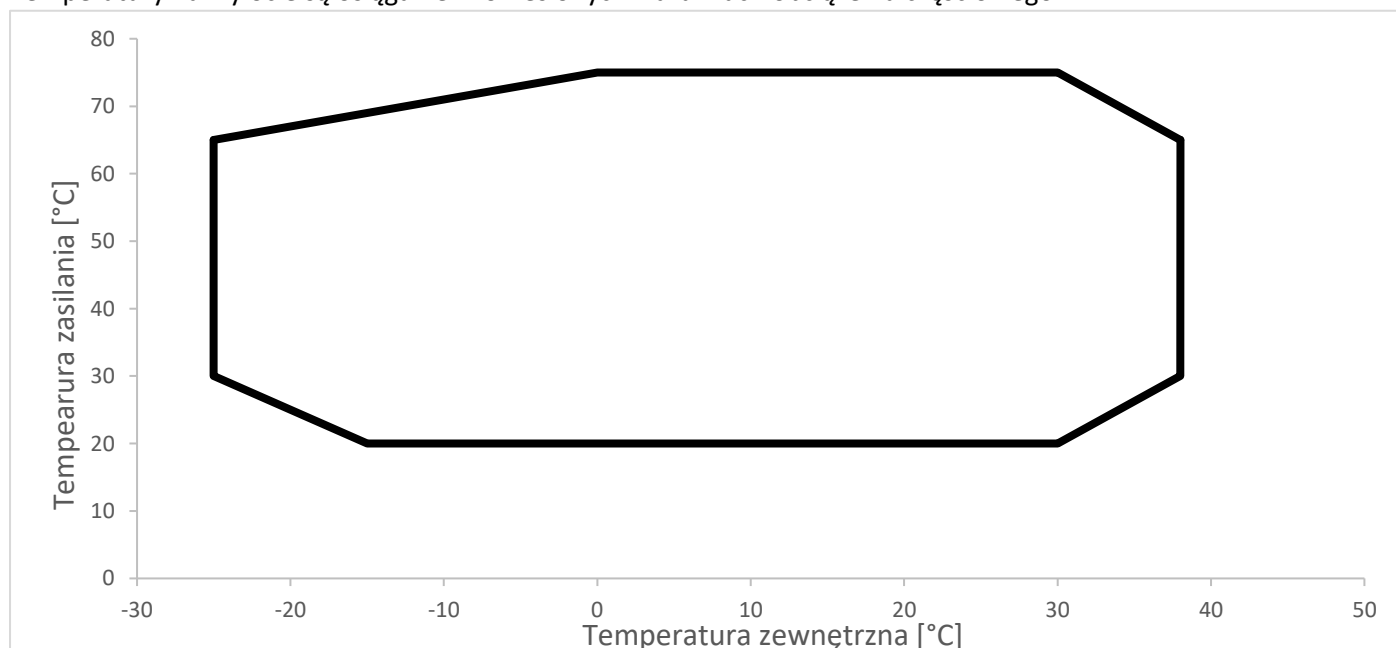
Model	GRANDIS-N	GRANDIS-R
Maksymalne straty ciepła budynku przy -15°C – ogrzewanie podłogowe [kW]*	7	15,5
Maksymalne straty ciepła budynku przy -15°C and 55°C - grzejniki [kW]*	7	15
Parametry użytkowe w warunkach nominalnych wg EN 14 511		
Moc grzewcza x COP at A7/W35 [kW x 1]	3,05 x 5,54	6,98 x 5,52
Moc grzewcza x COP at A7/W55 [kW x 1]	3,3 x 3,26	
Regulowane parametry pracy, referencyjna temperatura wody 35°C zgodnie z EN 14 825		
Moc grzewcza x COP at A12/W27 [kW x 1]	1,81 x 9,14	4,63 x 9
Moc grzewcza x COP at A7/W27 [kW x 1]	1,52 x 6,81	4,03 x 7,26
Moc grzewcza x COP at A2/W30 [kW x 1]	2,26 x 5,25	5,58 x 5,42
Moc grzewcza x COP at A-7/W34 [kW x 1]	3,72 x 3,51	
Regulowane parametry pracy, referencyjna temperatura wody 55°C zgodnie z EN 14 825		
Moc grzewcza x COP at A12/W35 [kW x 1]	1,75 x 7,16	4,46 x 6,81
Moc grzewcza x COP at A7/W36 [kW x 1]	1,45 x 5,29	3,82 x 5,39
Moc grzewcza x COP at A2/W42 [kW x 1]	2,15 x 3,98	5,37 x 4,1
Moc grzewcza x COP at A-7/W52 [kW x 1]	3,54 x 2,45	8,8 x 2,67
Parametry dla klimatu średniego przy regulowanej temperaturze wody		
P _{design} x SCOP W35 [kW x 1]	4,2 x 5,38	10,19 x 5,58
P _{design} x SCOP W55 [kW x 1]	4 x 4,05	9,97 x 4,21

* Do ogrzewania budynku przy wspomnianych stratach ciepła uwzględnia się również ogrzewanie postojowe grzałką elektryczną. Temperatura zewnętrzna przy której włącza się grzałka zależy od strat obiektu oraz wymaganej temperatury wewnętrznej i zostanie podana orientacyjnie przez naszego przedstawiciela handlowego.

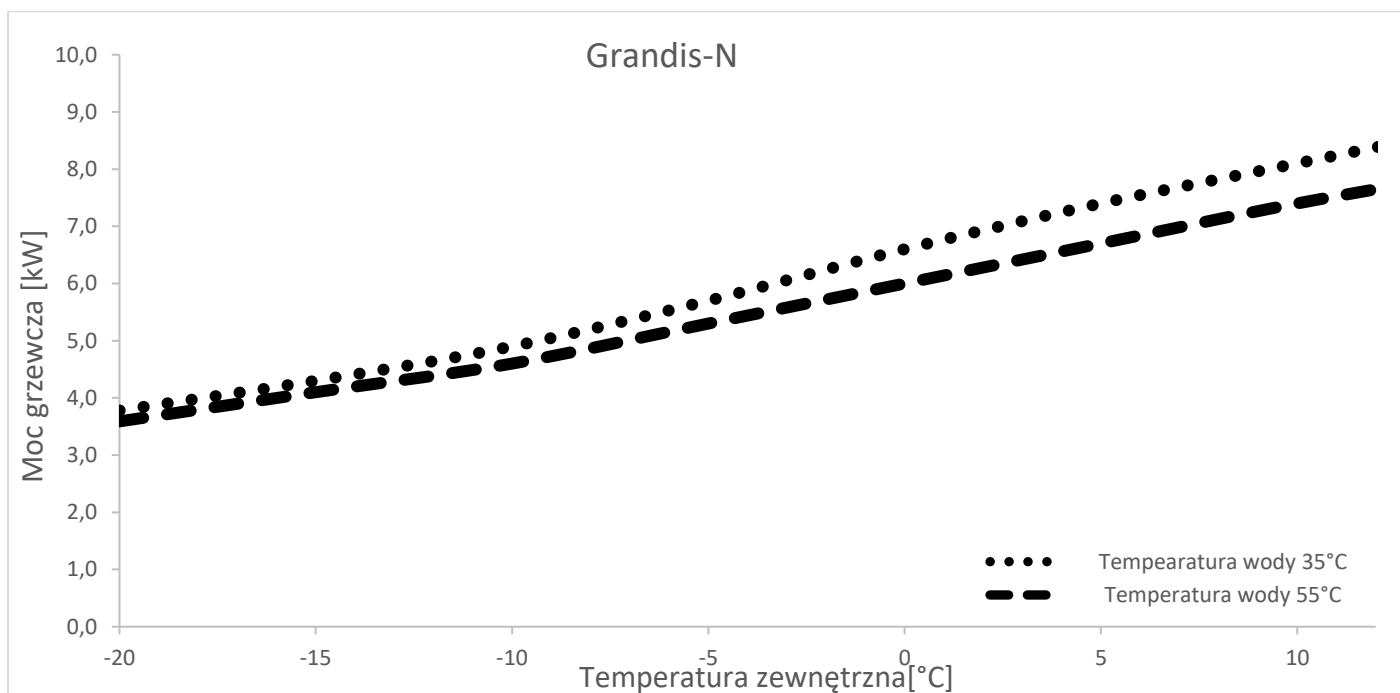
Model		GRANDIS-N		GRANDIS-R	
Temperatura wody [°C]		35	55	35	55
Klimat średni	Klasa energetyczna	A+++	A+++	A+++	A+++
	Efektywność sezonowa [%]	212,1	159	220,1	165,3
	Roczne zużycie energii [kWh]	1613	2040	3772	4892

Zakres pracy sprężarki

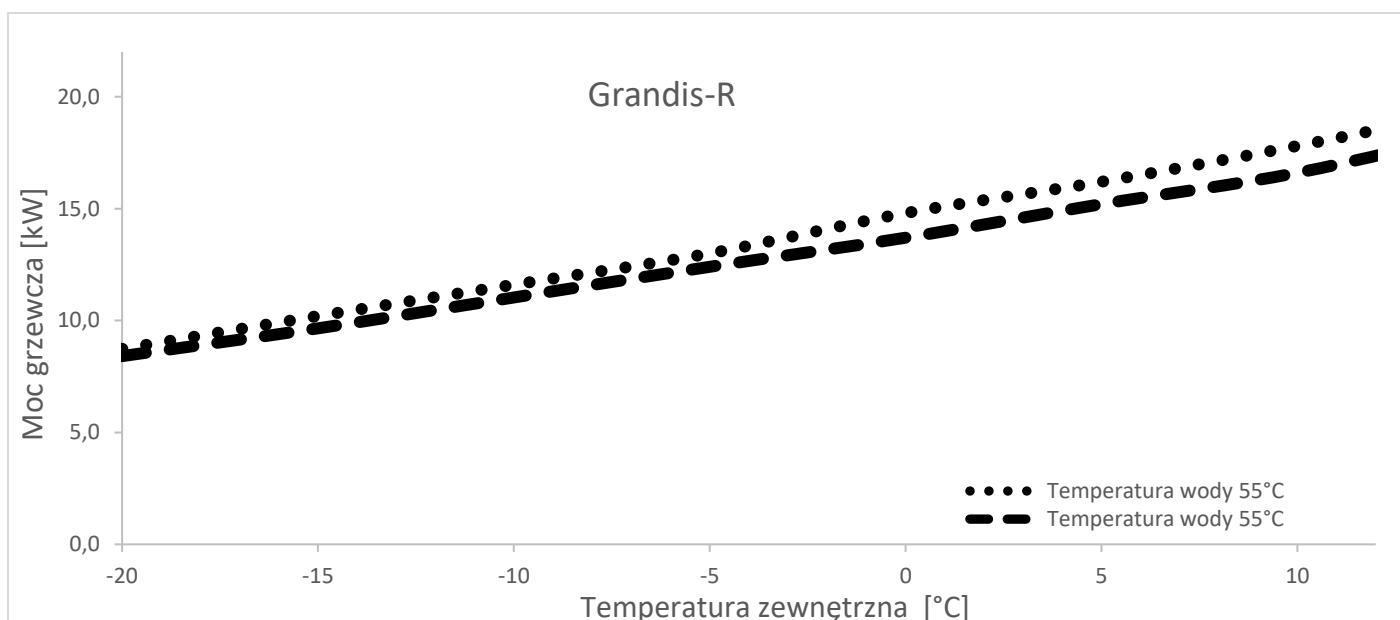
obszar roboczy jest zweryfikowany przez laboratorium badawcze, spełnia wymagania normy EN 14511-4. Temperatury na wylocie są osiągalne w określonych warunkach obciążenia częściowego.



Wykres mocy grzewczej

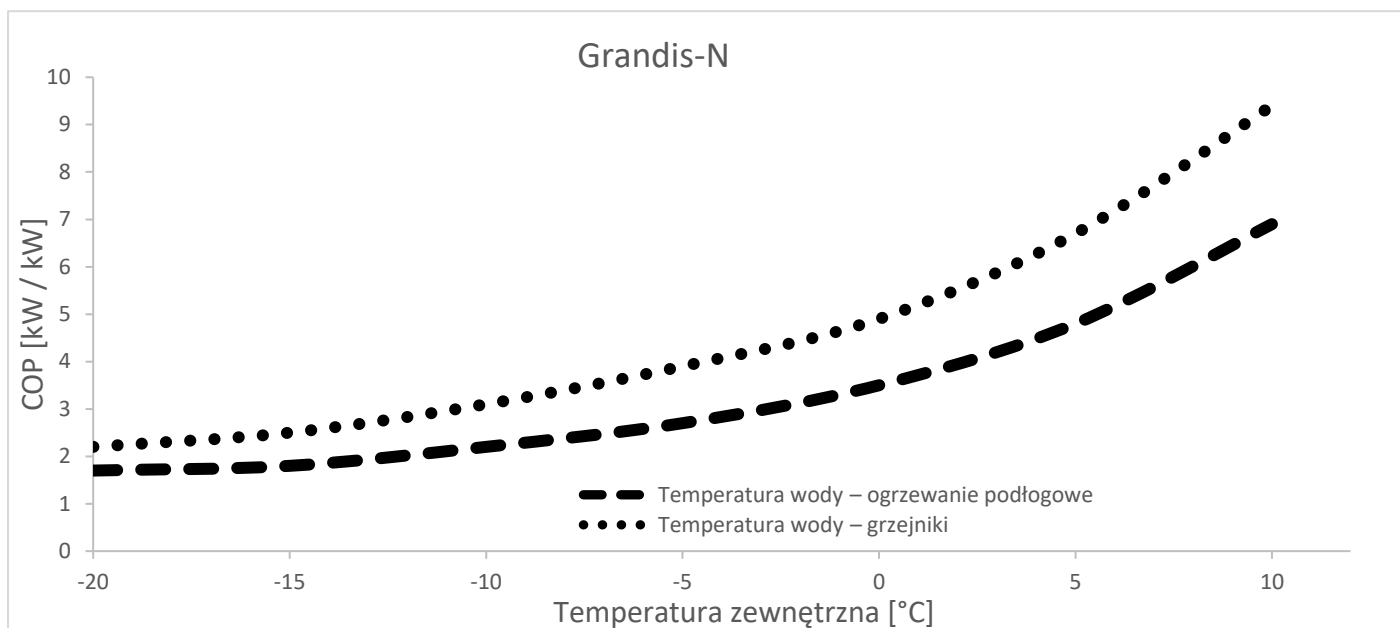


Grandis-N								
Temperatura zewnętrzna [°C]	-20	-15	-10	-5	0	5	10	15
Moc grzewcza 35°C [kW]	3,8	4,3	4,9	5,7	6,6	7,4	8,1	8,8
Moc grzewcza 55°C [kW]	3,6	4,1	4,6	5,3	6	6,7	7,4	8



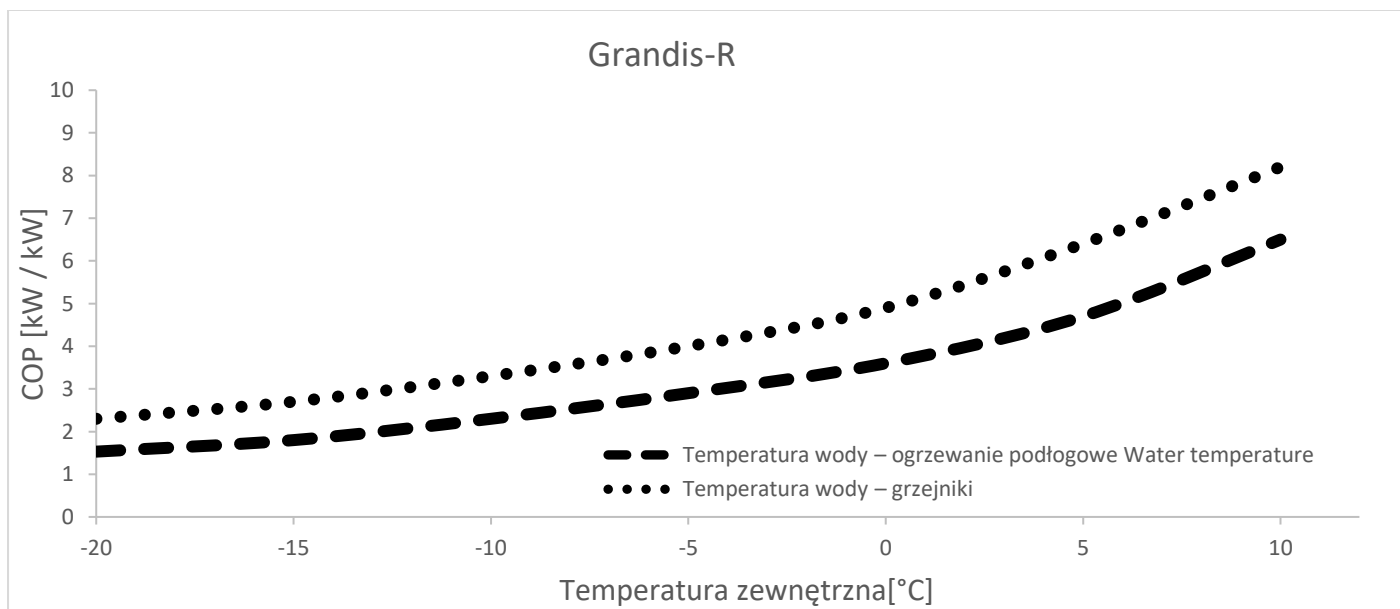
Grandis-N								
Temperatura zewnętrzna [°C]	-20	-15	-10	-5	0	5	10	15
Moc grzewcza 35°C [kW]	8,7	10,2	11,6	13	14,8	16,2	17,8	19,6
Moc grzewcza 55°C [kW]	8,4	9,7	11	12,4	13,7	15,2	16,6	18,6

Współczynnik wydajności



Temperatura zewnętrzna[°C]	-20	-15	-10	-5	0	5	10
Temperatura wody ogrzewanie podłogowe [°C]	38	37	35	33	31	28	25
Maximum COP [kW / kW]	2.2	2.5	3.1	3.9	4.9	6.7	9.4

Temperatura zewnętrzna [°C]	-20	-15	-10	-5	0	5	10
Temperatura wody grzejniki[°C]	65	60	55	50	44	38	32
Maximum COP [kW / kW]	1.7	1.8	2.2	2.7	3.5	4.8	6.9



Temperatura zewnętrzna [°C]	-20	-15	-10	-5	0	5	10
Temperatura wody ogrzewanie podłogowe [°C]	38	37	35	33	31	28	25
Maximum COP [kW / kW]	2.3	2.7	3.3	4	4.9	6.4	8.2

Temperatura zewnętrzna [°C]	-20	-15	-10	-5	0	5	10
Temperatura wody grzejniki [°C]	65	60	55	50	44	38	32
Maximum COP [kW / kW]	1.5	1.8	2.3	2.9	3.6	4.7	6.5

Model(s)				GRANDIS-N			
Heat pump air / water: (yes/no)				yes			
Heat pump solution-water: (yes/no)				no			
Heat pump water-water (yes/no)				no			
Low-temperature heat pump (yes/no)				no			
Equipped with a supplementary heater (yes/no)				no			
Combined heater with heat pump: (yes/no)				no			
Application: (low temperature/medium temperature)				medium-temperature			
Climatic conditions: (colder/average/warmer)				Average			
Item	Label	Value	Unit	Item	Label	Value	Unit
Rated heat output (1)	Prated	4	kW	Seasonal energy efficiency of heating	η_s	159	%
Declared heating output for partial load at indoor temperature 20 °C and outdoor temperature Tj				Declared heat factor or coefficient of primary energy ratio for partial load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7°C	Pdh	3.5	kW	Tj = -7°C	COPd	2.5	-
Tj = +2°C	Pdh	2.2	kW	Tj = +2°C	COPd	4	-
Tj = +7°C	Pdh	1.5	kW	Tj = +7°C	COPd	5.3	-
Tj = +12°C	Pdh	1.8	kW	Tj = +12°C	COPd	7.2	-
Tj = bivalent temperature	Pdh	4	kW	Tj = bivalent temperature	COPd	2.2	-
Tj = operation limit temperature	Pdh	4	kW	Tj = operation limit temperature	COPd	2.2	-
For air-to-water heat pumps Tj = -15°C (if TOL < -20°C)	Pdh	-	kW	For air-to-water heat pumps Tj = +15°C (if TOL < -20°C)	COPd	-	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cyh}	-	kW	Cycling interval capacity for heating	COP _{cyh}	-	-
Energy loss coefficient (2)	Cdh	0.9	-	Domestic hot water operating limit temperature	WTOL	75	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (1)	P _{sup}	0	kW
Thermostat-off mode	P _{TO}	0.014	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.015	kW				
Compressor cabinet heating mode	P _{CK}	0	kW				
Additional items							
Performance regulation	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	1600	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	-46.1	dB	For water-/brine-to-water heat pumps: Nominal brine or water flow rate	-	-	m ³ /h
Emissions of nitrogen oxides	NO _x	-	mg/kWh				
For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}		%
Electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}		kWh
Contact information	Acond a.s., Štěrboholská 1434/102a, 102 00 Prague 10 – Hostivař, Czech Republic						

Model(s)				GRANDIS-R			
Heat pump air / water: (yes/no)				yes			
Heat pump solution-water: (yes/no)				no			
Heat pump water-water (yes/no)				no			
Low-temperature heat pump (yes/no)				no			
Equipped with a supplementary heater (yes/no)				no			
Combined heater with heat pump: (yes/no)				no			
Application: (low temperature/medium temperature)				medium-temperature			
Climatic conditions: (colder/average/warmer)				Average			
Item	Label	Value	Unit	Item	Label	Value	Unit
Rated heat output (1)	Prated	10	kW	Seasonal energy efficiency of heating	η_s	165	%
Declared heat output for partial load at indoor temperature 20 °C and outdoor temperature Tj				Declared heat factor or coefficient of primary energy ratio for partial load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7°C	Pdh	8.8	kW	Tj = -7°C	COPd	2.7	-
Tj = +2°C	Pdh	5.4	kW	Tj = +2°C	COPd	4.1	-
Tj = +7°C	Pdh	3.8	kW	Tj = +7°C	COPd	5.4	-
Tj = +12°C	Pdh	4.5	kW	Tj = +12°C	COPd	6.8	-
Tj = bivalent temperature	Pdh	10	kW	Tj = bivalent temperature	COPd	2.3	-
Tj = operation limit temperature	Pdh	10	kW	Tj = operation limit temperature	COPd	2.3	-
For air-to-water heat pumps Tj = -15°C (if TOL < -20°C)	Pdh	-	kW	For air-to-water heat pumps Tj = +15°C (if TOL < -20°C)	COPd	-	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cyh}	-	kW	Cycling interval capacity for heating	COP _{cyh}	-	-
Energy loss coefficient (2)	Cdh	0.9	-	Domestic hot water operating limit temperature	WTOL	75	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0.015	kW	Rated heat output (1)	P _{sup}	0	kW
Thermostat-off mode	P _{TO}	0.014	kW	Type of energy input	Electrical		
Standby mode	P _{SB}	0.015	kW				
Compressor cabinet heating mode	P _{CK}	0	kW				
Additional items							
Performance regulation	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	3400	m ³ /h
Sound power level, indoors/outdoors	L _{WA}	-47.7	dB	For water-/brine-to-water heat pumps: Nominal brine or water flow rate	-	-	m ³ /h
Emissions of nitrogen oxides	NO _x	-	mg/kWh				
For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}		%
Electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Q _{fuel}		kWh
Contact information	Acond a.s., Štěrboholská 1434/102a, 102 00 Praha 10 – Hostivař, Czech Republic						

(1) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(2) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.