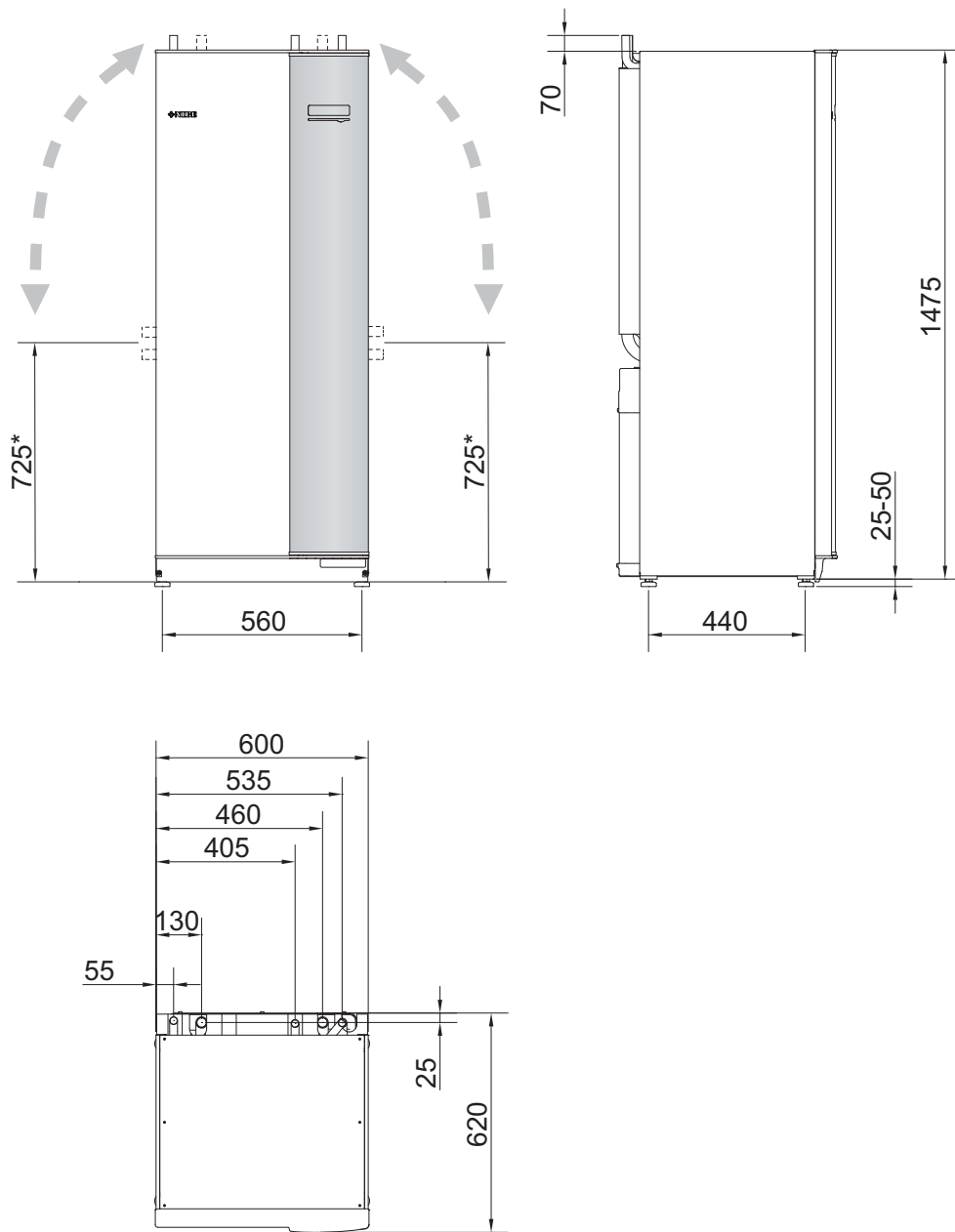


12 Technical data

Dimensions and setting-out coordinates



* This dimension applies at 90° angle on the brine pipes (side connection). The dimension can vary approx. ±100 mm in height as the brine pipes partially consist of flexible pipes.

Technical specifications



1x230V

1x230V		5
Output data at nom flow <small>Refers to performance of heat pump excl. circulation pumps</small>		
0/35		
Rated output	kW	4.89
Cooling output	kW	3.83
Electrical output	kW	1.06
COP	-	4.62
0/50		
Rated output	kW	3.79
Cooling output	kW	2.61
Electrical output	kW	1.18
COP	-	3.20
Output data according to EN 14511:2011		
0/35		
Rated output	kW	4.65
Electrical output	kW	1.08
COP _{EN14511}	-	4.30
0/45		
Rated output	kW	3.98
Electrical output	kW	1.17
COP _{EN14511}	-	3.40
Additional power	kW	1/2/3/4/5/6/7
Electrical data		
Rated voltage		230V 50 Hz
Max operating current, compressor (Including Control system and Circulation pumps)	A _{rms}	9.5
Starting current	A _{rms}	23
Max permitted impedance at connection point ¹⁾	ohm	-
Max operating current heat pump incl. 1 – 2 kW immersion heater (Recommended fuse rating)	A _{rms}	18(20)
Max operating current heat pump incl. 3 – 4 kW immersion heater (Recommended fuse rating)	A _{rms}	27(32)
Max operating current heat pump incl. 5 – 6 kW immersion heater (Recommended fuse rating)	A _{rms}	36(40)
Max operating current heat pump including 7 kW immersion heater (Recommended fuse rating)	A _{rms}	40(40)
Output, Brine pump	W	30 – 87
Output, Heating medium pump	W	7 – 63
IP class		IP 21
Refrigerant circuit		
Type of refrigerant		R407C
Volume	kg	1.2
Cut-out value pressostat HP	MPa	2.9 (29 bar)
Difference pressostat HP	MPa	-0.7 (-7 bar)
Cut-out value pressostat LP	MPa	0.15 (1.5 bar)
Difference pressostat LP	MPa	0.15 (1.5 bar)

1x230V			5
Brine circuit			
Energy class Brine pump			low energy
Max system pressure brine	MPa		0.3 (3 bar)
Min flow	l/s		0.19
Nominal flow	l/s		0.23
Max external avail. press at nom flow, heating/cooling operation	kPa		63/62
Max/Min incoming Brine temp	°C		see diagram
Min. outgoing brine temp.	°C		-12
Heating medium circuit			
Energy class circ-pump			low energy
Max system pressure heating medium	MPa		0.4 (4 bar)
Min flow	l/s		0.08
Nominal flow	l/s		0.10
Max external avail. press at nom flow	kPa		49
Max/Min heating medium temp	°C		see diagram
Noise output (L_{WA}) according to EN 12102 at 0/35	dB(A)		37
Sound pressure level (L_{PA}) calculated values according to EN ISO 11203 at 0/35 and a distance of 1 m	dB(A)		22
Pipe connections			
Brine ext diam. CU pipe	mm		28
Heating medium ext diam. CU pipes	mm		22
Connection, hot water heater ext diam	mm		22

3x400V

3x400V			5	6	8	10
Output data at nom flow <small>Refers to performance of heat pump excl. circulation pumps</small>						
0/35						
Rated output	kW		4.89	6.48	8.19	10.06
Cooling output	kW		3.83	5.17	6.57	8.11
Electrical output	kW		1.06	1.31	1.62	1.95
COP	-		4.62	4.94	5.05	5.15
0/50						
Rated output	kW		3.79	5.15	6.73	8.46
Cooling output	kW		2.61	3.61	4.81	6.14
Electrical output	kW		1.18	1.53	1.92	2.32
COP	-		3.20	3.36	3.51	3.64
Output data according to EN 14511:2011						
0/35						
Rated output	kW		4.65	6.07	7.67	9.66
Electrical output	kW		1.08	1.32	1.64	2.01
COP _{EN14511}	-		4.30	4.59	4.68	4.81
0/45						
Rated output	kW		3.98	5.19	6.70	8.55
Electrical output	kW		1.17	1.46	1.83	2.27
COP _{EN14511}	-		3.40	3.56	3.67	3.77
Additional power	kW		1/2/3/4/5/6/7 (switchable to 2/4/6/9)			
Electrical data						
Rated voltage			400V 3NAC 50 Hz			

3x400V		5	6	8	10
Max operating current, compressor Including Control system, Circulation pumps and 0 kW immersion heater (Recommended fuse rating)	A _{rms}	9.5(1-phase) (16)	4.6(16)	6.6(16)	6.9(16)
Starting current	A _{rms}	23	18	23	23
Max permitted impedance at connection point ¹⁾	ohm	-	-	-	-
Max operating current heat pump incl. 1 – 2 kW immersion heater (Recommended fuse rating)	A _{rms}	18(20)	13(16)	15(16)	15(16)
Max operating current heat pump incl. 3 – 4 kW immersion heater (Recommended fuse rating)	A _{rms}	18(20)	13(16)	15(16)	15(16)
Max operating current heat pump incl. 5 – 6 kW immersion heater (Recommended fuse rating)	A _{rms}	18(20)	13(16)	15(16)	15(16)
Max operating current heat pump including 7 kW immersion heater, connected upon delivery (Recommended fuse rating)	A _{rms}	18(20)	19(20)	21(25)	21(25)
Max operating current heat pump including 9 kW immersion heater, re- quires switching (Recommended fuse rating)	A _{rms}	24(25)	19(20)	22(25)	22(25)
Output, Brine pump	W	30 – 87	30 – 87	30 – 87	35 – 185
Output, Heating medium pump	W	7 – 63	7 – 63	7 – 63	7 – 63
IP class		IP 21			
Refrigerant circuit					
Type of refrigerant		R407C			
Volume	kg	1.2	1.5	1.8	2.1
Cut-out value pressostat HP	MPa	2.9 (29 bar)			
Difference pressostat HP	MPa	-0.7 (-7 bar)			
Cut-out value pressostat LP	MPa	0.15 (1.5 bar)			
Difference pressostat LP	MPa	0.15 (1.5 bar)			
Brine circuit					
Energy class Brine pump		low energy			
Max system pressure brine	MPa	0.3 (3 bar)			
Min flow	l/s	0.19	0.25	0.33	0.40
Nominal flow	l/s	0.23	0.30	0.42	0.51
Max external avail. press at nom flow, heating/cooling operation	kPa	63/62	59/55	47/38	84/69
Max/Min incoming Brine temp	°C	see diagram			
Min. outgoing brine temp.	°C	-10			
Heating medium circuit					
Energy class circ-pump		low energy			
Max system pressure heating medium	MPa	0.4 (4 bar)			
Min flow	l/s	0.08	0.10	0.13	0.16
Nominal flow	l/s	0.10	0.13	0.18	0.22
Max external avail. press at nom flow	kPa	49	46	47	43
Max/Min heating medium temp	°C	see diagram			
Noise output (L_{WA}) according to EN 12102 at 0/35	dB(A)	37	42	43	43
Sound pressure level (L_{PA}) calculated values according to EN ISO 11203 at 0/35 and a distance of 1 m	dB(A)	22	27	28	28
Pipe connections					
Brine ext diam. CU pipe	mm	28			
Heating medium ext diam. CU pipes	mm	22			
Hot water connection external diam	mm	22			

3x400V		5	6	8	10
Cold water connection external diam	mm	22			

Miscellaneous

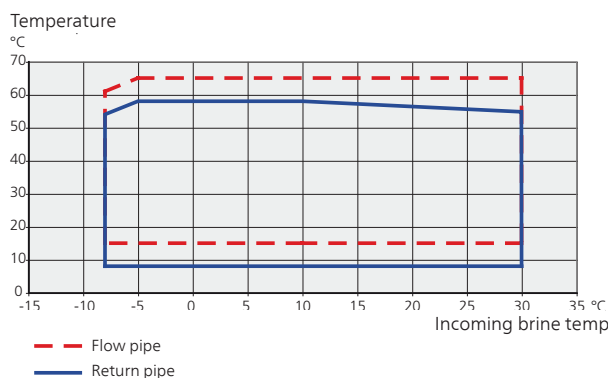
Miscellaneous		5	6	8	10
Dimensions and weight					
Width	mm	600			
Depth	mm	620			
Height	mm	1500			
Required ceiling height ²⁾	mm	1670			
Weight complete heat pump	kg	175	180	190	195
Weight only cooling module	kg	118	123	133	138
Part number, 1x230V		065 159	-	-	-
Part number, 3x400V		065 132	065 133	065 134	065 135
Part number, 3x400V (for Germany, Switzerland and Austria only)		065 124	065 125	065 126	065 127

¹⁾Max. permitted impedance in the mains connected point in accordance with EN 61000-3-11. Start currents can cause short voltage dips that could affect other equipment in unfavourable conditions. If the impedance in the mains connection point is higher than that stated it is possible that interference will occur. If the impedance in the mains connection point is higher than that stated check with the power supplier before purchasing the equipment.

²⁾With feet dismantled the height is approx. 1650 mm.

Working range heat pump, compressor operation

The compressor provides a flow temperature up to 65 °C, the remainder (up to 70 °C) is obtained using the additional heat.



Diagram, passive cooling output

System temperature: 18 °C/23 °C, nominal brine flow

