

Page 1 of 49

#### This information was generated by the HP KEYMARK database on 18 Mar 2022

#### Login

Summary of	Mega M	Reg. No.	012-SC0835-18
Certificate Holder			
Name	Thermia		
Address	Snickaregatan 1	Zip	
City	Arvika	Country	Sweden
Certification Body	RISE CERT		
Subtype title	Mega M		
Heat Pump Type	Brine/Water and Water/Water		
Refrigerant	R410A		
Mass of Refrigerant	4.4 kg		
Certification Date	10.04.2019		

# Model: Thermia Mega M 2020

Configure model		
Model name	Thermia Mega M 2020	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

Brine/Water Heat Pump

## Heating

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	

EN 14511-2			
Low temperature Medium temperature			
Heat output	26.71 kW	22.39 kW	
El input	5.81 kW	7.52 kW	
СОР	4.60	2.98	

## **Average Climate**



EN 12102-1		
Medium temperature Low temperature		
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	218 %	168 %
Prated	38.06 kW	35.62 kW
SCOP	5.65	4.39
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	33.67 kW	31.51 kW
COP Tj = -7°C	4.56	3.21
Pdh Tj = $+2$ °C	20.49 kW	19.18 kW
COP Tj = +2°C	5.68	4.39
Pdh Tj = $+7^{\circ}$ C	13.18 kW	12.33 kW
$COP Tj = +7^{\circ}C$	6.28	5.16
Pdh Tj = 12°C	12.70 kW	12.57 kW
COP Tj = 12°C	6.31	5.34
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95





Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	13917 kWh	16768 kWh

## Warmer Climate

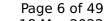
EN 12102-1			
Medium temperature Low temperature			
Sound power level indoor	48 dB(A)	50 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	220 %	167 %
Prated	38.06 kW	35.62 kW





SCOP	5.70	4.38
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	38.06 kW	35.62 kW
$COPTj = +2^{\circ}C$	4.29	2.95
Pdh Tj = $+7^{\circ}$ C	24.47 kW	22.90 kW
$COPTj = +7^{\circ}C$	5.35	3.89
Pdh Tj = 12°C	12.71 kW	12.48 kW
COP Tj = 12°C	6.31	5.17
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	7 W	7 W
РСК	0 W	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW





ion Qhe	kWh 10862 kWh
---------	---------------

## Colder Climate

EN 12102-1		
	Medium temperature	Low temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	226 %	174 %
Prated	38.06 kW	35.62 kW
SCOP	5.86	4.55
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	23.04 kW	21.56 kW
COP Tj = -7°C	5.57	4.12
Pdh Tj = $+2$ °C	14.02 kW	13.12 kW
COP Tj = +2°C	6.27	5.02
Pdh Tj = $+7^{\circ}$ C	12.71 kW	12.56 kW
COP Tj = +7°C	6.35	5.32
Pdh Tj = 12°C	12.70 kW	12.65 kW





COP Tj = 12°C	6.19	5.49
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	16014 kWh	19290 kWh

Water/Water Heat Pump

## Heating



EN 14511-4		
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	

EN 14511-2			
Low temperature Medium temperature			
Heat output	30.84 kW	42.37 kW	
El input	4.88 kW	11.23 kW	
СОР	6.31	3.77	

## Warmer Climate

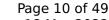
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825			
Low temperature Medium temperature			
$\eta_{S}$	307 %	220 %	
Prated	30.84 kW	42.37 kW	





	<u> </u>	
SCOP	7.87	5.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	30.84 kW	42.37 kW
COP Tj = +2°C	6.32	3.77
Pdh Tj = $+7^{\circ}$ C	19.83 kW	27.24 kW
$COP Tj = +7^{\circ}C$	7.73	5.08
Pdh Tj = 12°C	16.43 kW	16.23 kW
COP Tj = 12°C	8.44	6.76
Pdh Tj = Tbiv	30.84 kW	42.37 kW
COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW





|--|

## Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	315 %	230 %
Prated	30.84 kW	42.37 kW
SCOP	8.07	5.94
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	18.67 kW	25.65 kW
COP Tj = -7°C	7.98	5.40
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	16.42 kW	15.61 kW
COP Tj = +2°C	8.39	6.56
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	16.45 kW	16.33 kW
	,	



Page 11 of 49

This information was genera	ited by the HI KETMAI	tk database on 10 Mai 202
$COP Tj = +7^{\circ}C$	8.57	6.96
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	16.44 kW	16.45 kW
COP Tj = 12°C	8.51	7.22
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	30.84 kW	42.37 kW
COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
РТО	12 W	12 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	9416 kWh	17581 kWh
Pdh Tj = -15°C (if TOL<-20°C)	25.16	34.57
COP Tj = $-15$ °C (if TOL< $-20$ °C)	7.15	4.59
Cdh Tj = -15 °C	1.00	1.00

## Average Climate

EN 12102-1		
Medium temperature Low temperature		
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	306 %	221 %
Prated	30.84 kW	42.37 kW
SCOP	7.86	5.72
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	27.28 kW	37.48 kW
COP Tj = -7°C	6.72	4.10
Pdh Tj = +2°C	16.61 kW	22.82 kW
COP Tj = +2°C	8.06	5.73
Pdh Tj = +7°C	16.41 kW	14.67 kW
$COP Tj = +7^{\circ}C$	8.34	6.82
Pdh Tj = 12°C	16.46 kW	16.36 kW
COP Tj = 12°C	8.62	7.01
Pdh Tj = Tbiv	30.84 kW	42.37 kW



Page 13 of 49

COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
РТО	12 W	12 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	8104 kWh	15309 kWh

# **Model: Thermia Mega M**

Configure model		
Model name	Thermia Mega M	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x400V 50Hz		

Brine/Water Heat Pump

## Heating

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	

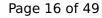
EN 14511-2		
	Low temperature	Medium temperature
Heat output	26.71 kW	22.39 kW
El input	5.81 kW	7.52 kW
СОР	4.60	2.98

## Average Climate



EN 12102-1			
Medium temperature Low temperature			
Sound power level indoor	48 dB(A)	50 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	218 %	168 %
Prated	38.06 kW	35.62 kW
SCOP	5.65	4.39
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	33.67 kW	31.51 kW
COP Tj = -7°C	4.56	3.21
Pdh Tj = +2°C	20.49 kW	19.18 kW
COP Tj = +2°C	5.68	4.39
Pdh Tj = +7°C	13.18 kW	12.33 kW
COP Tj = +7°C	6.28	5.16
Pdh Tj = 12°C	12.70 kW	12.57 kW
COP Tj = 12°C	6.31	5.34
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95



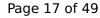


Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	o w	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	13917 kWh	16768 kWh

## Warmer Climate

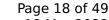
EN 12102-1			
Medium temperature Low temperature			
Sound power level indoor	48 dB(A)	50 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	220 %	167 %
Prated	38.06 kW	35.62 kW





SCOP	5.70	4.38
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	38.06 kW	35.62 kW
COP Tj = +2°C	4.29	2.95
Pdh Tj = $+7^{\circ}$ C	24.47 kW	22.90 kW
$COP Tj = +7^{\circ}C$	5.35	3.89
Pdh Tj = 12°C	12.71 kW	12.48 kW
COP Tj = 12°C	6.31	5.17
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	7 W	7 W
РСК	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW



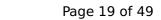


ion Qhe	kWh 10862 kWh
---------	---------------

## Colder Climate

EN 12102-1		
Medium temperature Low temperature		
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	226 %	174 %
Prated	38.06 kW	35.62 kW
SCOP	5.86	4.55
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = $-7^{\circ}$ C	23.04 kW	21.56 kW
COP Tj = -7°C	5.57	4.12
Pdh Tj = $+2$ °C	14.02 kW	13.12 kW
COP Tj = +2°C	6.27	5.02
Pdh Tj = $+7^{\circ}$ C	12.71 kW	12.56 kW
$COPTj = +7^{\circ}C$	6.35	5.32
Pdh Tj = 12°C	12.70 kW	12.65 kW





5.49 35.62 kW 2.95 35.62 kW
2.95
35.62 kW
2.95
0.99
65 °C
7 W
7 W
7 W
0 W
n/a
0.00 kW
19290 kWh

Water/Water Heat Pump

## Heating



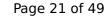
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	

EN 14511-2			
Low temperature Medium temperature			
Heat output	30.84 kW	42.37 kW	
El input	4.88 kW	11.23 kW	
СОР	6.31	3.77	

## Warmer Climate

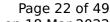
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	307 %	220 %
Prated	30.84 kW	42.37 kW





This information was genera	icca by the Hi Kermai	N database on 10 Mai 202.
SCOP	7.87	5.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	30.84 kW	42.37 kW
COP Tj = +2°C	6.32	3.77
Pdh Tj = $+7^{\circ}$ C	19.83 kW	27.24 kW
$COPTj = +7^{\circ}C$	7.73	5.08
Pdh Tj = 12°C	16.43 kW	16.23 kW
COP Tj = 12°C	8.44	6.76
Pdh Tj = Tbiv	30.84 kW	42.37 kW
COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
РТО	12 W	12 W
PSB	12 W	12 W
РСК	o w	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW



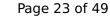


|--|

## Colder Climate

EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	48 dB(A)	50 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	315 %	230 %
Prated	30.84 kW	42.37 kW
SCOP	8.07	5.94
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	18.67 kW	25.65 kW
COP Tj = -7°C	7.98	5.40
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	16.42 kW	15.61 kW
COP Tj = +2°C	8.39	6.56
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	16.45 kW	16.33 kW
	,	





8.57	6.96
0.99	0.99
16.44 kW	16.45 kW
8.51	7.22
0.99	0.99
30.84 kW	42.37 kW
6.32	3.77
30.84 kW	42.37 kW
6.32	3.77
1.00	1.00
65 °C	65 °C
12 W	12 W
12 W	12 W
12 W	12 W
0 W	0 W
n/a	n/a
0.00 kW	0.00 kW
9416 kWh	17581 kWh
25.16	34.57
7.15	4.59
1.00	1.00
	0.99  16.44 kW  8.51  0.99  30.84 kW  6.32  30.84 kW  6.32  1.00  65 °C  12 W  12 W  12 W  0 W  n/a  0.00 kW  9416 kWh  25.16  7.15



## Average Climate

EN 12102-1			
Medium temperature Low temperature			
Sound power level indoor	48 dB(A)	50 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	306 %	221 %
Prated	30.84 kW	42.37 kW
SCOP	7.86	5.72
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = $-7^{\circ}$ C	27.28 kW	37.48 kW
$COP Tj = -7^{\circ}C$	6.72	4.10
Pdh Tj = $+2$ °C	16.61 kW	22.82 kW
COP Tj = +2°C	8.06	5.73
Pdh Tj = $+7^{\circ}$ C	16.41 kW	14.67 kW
$COP Tj = +7^{\circ}C$	8.34	6.82
Pdh Tj = 12°C	16.46 kW	16.36 kW
COP Tj = 12°C	8.62	7.01
Pdh Tj = Tbiv	30.84 kW	42.37 kW



#### Page 25 of 49

COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
РТО	12 W	12 W
PSB	12 W	12 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	8104 kWh	15309 kWh

# Model: Thermia Mega M 230

Configure model		
Model name	Thermia Mega M 230	
Application	Heating (medium temp)	
Units	Indoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x230V 50Hz		

Brine/Water Heat Pump

## Heating

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	26.71 kW	22.39 kW	
El input	5.81 kW	7.52 kW	
СОР	4.60	2.98	

## Average Climate



EN 12102-1			
Medium temperature Low temperature			
Sound power level indoor	48 dB(A)	50 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	218 %	168 %
Prated	38.06 kW	35.62 kW
SCOP	5.65	4.39
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	33.67 kW	31.51 kW
COP Tj = -7°C	4.56	3.21
Pdh Tj = $+2$ °C	20.49 kW	19.18 kW
COP Tj = +2°C	5.68	4.39
Pdh Tj = $+7^{\circ}$ C	13.18 kW	12.33 kW
$COP Tj = +7^{\circ}C$	6.28	5.16
Pdh Tj = 12°C	12.70 kW	12.57 kW
COP Tj = 12°C	6.31	5.34
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95





Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	7 W	7 W
PCK	o w	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	13917 kWh	16768 kWh

## Warmer Climate

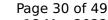
EN 12102-1		
	Medium temperature	Low temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	220 %	167 %
Prated	38.06 kW	35.62 kW
	I	I





SCOP	5.70	4.38
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	38.06 kW	35.62 kW
COP Tj = +2°C	4.29	2.95
Pdh Tj = $+7^{\circ}$ C	24.47 kW	22.90 kW
$COP Tj = +7^{\circ}C$	5.35	3.89
Pdh Tj = 12°C	12.71 kW	12.48 kW
COP Tj = 12°C	6.31	5.17
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	7 W	7 W
РСК	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW





Annual energy consumption Qhe	8920 kWh	10862 kWh	
-------------------------------	----------	-----------	--

## Colder Climate

EN 12102-1		
	Medium temperature	Low temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	226 %	174 %
Prated	38.06 kW	35.62 kW
SCOP	5.86	4.55
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	23.04 kW	21.56 kW
COP Tj = -7°C	5.57	4.12
Pdh Tj = $+2$ °C	14.02 kW	13.12 kW
COP Tj = +2°C	6.27	5.02
Pdh Tj = $+7^{\circ}$ C	12.71 kW	12.56 kW
COP Tj = +7°C	6.35	5.32
Pdh Tj = 12°C	12.70 kW	12.65 kW

COP Tj = 12°C	6.19	5.49
_ ,, _ , _ , ,	20.05 1111	25 62 1111
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95
		1100
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
WIGE	05 C	05 0
Poff	7 W	7 W
PTO	7 W	7 W
PSB	7 W	7 W
PCK	o w	o w
TER		
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	16014 kWh	19290 kWh

Water/Water Heat Pump

## Heating



EN 14511-4	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed

EN 14511-2		
	Low temperature	Medium temperature
Heat output	30.84 kW	42.37 kW
El input	4.88 kW	11.23 kW
СОР	6.31	3.77

## Warmer Climate

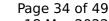
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	307 %	220 %
Prated	30.84 kW	42.37 kW



$\bigcirc$	
	CEN heat pump
5	KEYMARK

This information was genera		
SCOP	7.87	5.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	30.84 kW	42.37 kW
COP Tj = +2°C	6.32	3.77
Pdh Tj = $+7^{\circ}$ C	19.83 kW	27.24 kW
$COP Tj = +7^{\circ}C$	7.73	5.08
Pdh Tj = 12°C	16.43 kW	16.23 kW
COP Tj = 12°C	8.44	6.76
Pdh Tj = Tbiv	30.84 kW	42.37 kW
COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
РТО	12 W	12 W
PSB	12 W	12 W
РСК	0 W	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW





ļ			
Annual energy consumption Qhe	5238 kWh	9936 kWh	
		ı	

## Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	315 %	230 %
Prated	30.84 kW	42.37 kW
SCOP	8.07	5.94
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	18.67 kW	25.65 kW
COP Tj = -7°C	7.98	5.40
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	16.42 kW	15.61 kW
COP Tj = +2°C	8.39	6.56
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	16.45 kW	16.33 kW





Inis information was genera	ted by the HP KETMAP	K uatabase on 10 Mai 2022
$COP Tj = +7^{\circ}C$	8.57	6.96
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	16.44 kW	16.45 kW
COP Tj = 12°C	8.51	7.22
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	30.84 kW	42.37 kW
COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
РТО	12 W	12 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	9416 kWh	17581 kWh
Pdh Tj = -15°C (if TOL<-20°C)	25.16	34.57
COP Tj = $-15$ °C (if TOL< $-20$ °C)	7.15	4.59
Cdh Tj = -15 °C	1.00	1.00



## Average Climate

EN 12102-1		
	Medium temperature	Low temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	306 %	221 %
Prated	30.84 kW	42.37 kW
SCOP	7.86	5.72
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	27.28 kW	37.48 kW
COP Tj = -7°C	6.72	4.10
Pdh Tj = $+2$ °C	16.61 kW	22.82 kW
COP Tj = +2°C	8.06	5.73
Pdh Tj = $+7^{\circ}$ C	16.41 kW	14.67 kW
COP Tj = +7°C	8.34	6.82
Pdh Tj = 12°C	16.46 kW	16.36 kW
COP Tj = 12°C	8.62	7.01
Pdh Tj = Tbiv	30.84 kW	42.37 kW



### Page 37 of 49

COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
РТО	12 W	12 W
PSB	12 W	12 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	8104 kWh	15309 kWh



# Model: Thermia Mega M 3-230 2020

Configure model		
Model name   Thermia Mega M 3-230 2020		
Application	Heating (medium temp)	
Units Indoor		
Climate Zone Colder Climate + Warmer Climate		
Reversibility No		
Cooling mode application (optional)	n/a	

General Data		
Power supply 3x230V 50Hz		

Brine/Water Heat Pump

## Heating

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	

EN 14511-2		
Low temperature Medium temperature		
Heat output	26.71 kW	22.39 kW
El input	5.81 kW	7.52 kW
СОР	4.60	2.98

## **Average Climate**



EN 12102-1		
Medium temperature Low temperature		
Sound power level indoor 48 dB(A) 50 dB(A)		50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	218 %	168 %
Prated	38.06 kW	35.62 kW
SCOP	5.65	4.39
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	33.67 kW	31.51 kW
COP Tj = -7°C	4.56	3.21
Pdh Tj = +2°C	20.49 kW	19.18 kW
COP Tj = +2°C	5.68	4.39
Pdh Tj = +7°C	13.18 kW	12.33 kW
COP Tj = +7°C	6.28	5.16
Pdh Tj = 12°C	12.70 kW	12.57 kW
COP Tj = 12°C	6.31	5.34
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95



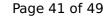


Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	7 W	7 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	13917 kWh	16768 kWh

## Warmer Climate

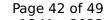
EN 12102-1			
Medium temperature Low temperature			
Sound power level indoor 48 dB(A) 50 dB(A)		50 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	220 %	167 %
Prated	38.06 kW	35.62 kW





SCOP	5.70	4.38
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	38.06 kW	35.62 kW
$COPTj = +2^{\circ}C$	4.29	2.95
Pdh Tj = $+7^{\circ}$ C	24.47 kW	22.90 kW
$COPTj = +7^{\circ}C$	5.35	3.89
Pdh Tj = 12°C	12.71 kW	12.48 kW
COP Tj = 12°C	6.31	5.17
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	7 W	7 W
РСК	0 W	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW





ion Qhe	kWh 10862 kWh
---------	---------------

## Colder Climate

EN 12102-1		
	Medium temperature	Low temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	226 %	174 %
Prated	38.06 kW	35.62 kW
SCOP	5.86	4.55
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	23.04 kW	21.56 kW
COP Tj = -7°C	5.57	4.12
Pdh Tj = $+2$ °C	14.02 kW	13.12 kW
COP Tj = +2°C	6.27	5.02
Pdh Tj = $+7^{\circ}$ C	12.71 kW	12.56 kW
COP Tj = +7°C	6.35	5.32
Pdh Tj = 12°C	12.70 kW	12.65 kW





This information was generated by the Hill RETMARK database on 10 Mar 20		
COP Tj = 12°C	6.19	5.49
Pdh Tj = Tbiv	38.06 kW	35.62 kW
COP Tj = Tbiv	4.29	2.95
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	38.06 kW	35.62 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.29	2.95
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	0.99
WTOL	65 °C	65 °C
Poff	7 W	7 W
РТО	7 W	7 W
PSB	7 W	7 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	16014 kWh	19290 kWh

Water/Water Heat Pump

## Heating



EN 14511-4		
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	

EN 14511-2		
Low temperature Medium temperature		
Heat output	30.84 kW	42.37 kW
El input	4.88 kW	11.23 kW
СОР	6.31	3.77

## Warmer Climate

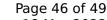
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	307 %	220 %
Prated	30.84 kW	42.37 kW





<u> </u>		
SCOP	7.87	5.70
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	30.84 kW	42.37 kW
COP Tj = +2°C	6.32	3.77
Pdh Tj = +7°C	19.83 kW	27.24 kW
$COPTj = +7^{\circ}C$	7.73	5.08
Pdh Tj = 12°C	16.43 kW	16.23 kW
COP Tj = 12°C	8.44	6.76
Pdh Tj = Tbiv	30.84 kW	42.37 kW
COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
РТО	12 W	12 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
	I	1





|--|

## Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	48 dB(A)	50 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	315 %	230 %
Prated	30.84 kW	42.37 kW
SCOP	8.07	5.94
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	18.67 kW	25.65 kW
COP Tj = -7°C	7.98	5.40
Cdh Tj = -7 °C	0.99	1.00
Pdh Tj = +2°C	16.42 kW	15.61 kW
COP Tj = +2°C	8.39	6.56
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = +7°C	16.45 kW	16.33 kW
	,	





$COPTj = +7^{\circ}C$	8.57	6.96
Cdh Tj = +7 °C	0.99	0.99
Pdh Tj = 12°C	16.44 kW	16.45 kW
COP Tj = 12°C	8.51	7.22
Cdh Tj = +12 °C	0.99	0.99
Pdh Tj = Tbiv	30.84 kW	42.37 kW
COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
РТО	12 W	12 W
PSB	12 W	12 W
PCK	o w	o w
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	9416 kWh	17581 kWh
Pdh Tj = -15°C (if TOL<-20°C)	25.16	34.57
COP Tj = -15°C (if TOL<-20°C)	7.15	4.59
Cdh Tj = -15 °C	1.00	1.00



## Average Climate

EN 12102-1			
	Medium temperature	Low temperature	
Sound power level indoor	48 dB(A)	50 dB(A)	

EN 14825				
	Low temperature	Medium temperature		
$\eta_{s}$	306 %	221 %		
Prated	30.84 kW	42.37 kW		
SCOP	7.86	5.72		
Tbiv	-10 °C	-10 °C		
TOL	-10 °C	-10 °C		
Pdh Tj = -7°C	27.28 kW	37.48 kW		
COP Tj = $-7^{\circ}$ C	6.72	4.10		
Pdh Tj = $+2$ °C	16.61 kW	22.82 kW		
COP Tj = +2°C	8.06	5.73		
Pdh Tj = $+7^{\circ}$ C	16.41 kW	14.67 kW		
COP Tj = +7°C	8.34	6.82		
Pdh Tj = 12°C	16.46 kW	16.36 kW		
COP Tj = 12°C	8.62	7.01		
Pdh Tj = Tbiv	30.84 kW	42.37 kW		



### Page 49 of 49

COP Tj = Tbiv	6.32	3.77
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	30.84 kW	42.37 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	6.32	3.77
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	1.00	1.00
WTOL	65 °C	65 °C
Poff	12 W	12 W
PTO	12 W	12 W
PSB	12 W	12 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	8104 kWh	15309 kWh