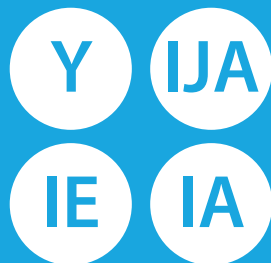




# ENERG

енергия · ενεργεια



METROSAVER MB 10



A<sup>++</sup>

A<sup>+++</sup>

A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

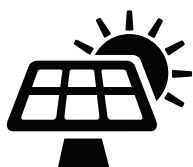
D

E

F

G

+



+



+



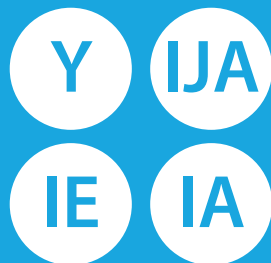
+





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## METROSAVER MB 10



A<sup>++</sup>



A



55 °C

A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

D

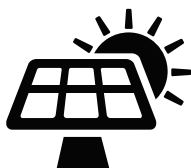
E

F

G

A<sup>+++</sup>

+



+



+



+



XL

A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

D

E

F

G

A



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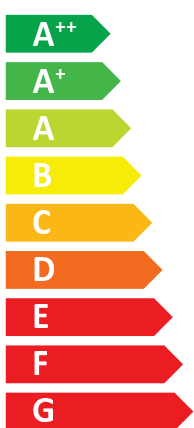
METROSAVER MB 10



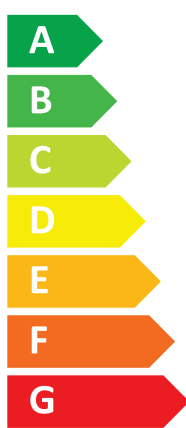
55 °C



XL



A++



A



45 dB



dB



10 kW  
10 kW  
10 kW

2015

811/2013



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METROSAVER MB 10



55 °C

35 °C



**A++**

**A++**



**45** dB



dB

■ 10  
■ **10**  
■ 10  
kW

■ 12  
■ **12**  
■ 12  
kW




2015

811/2013

Supplier's name:	<b>METRO THERM A/S</b>		
Model:	<b>Metrosaver MB 10</b>		
Temperature application	35	55	°C
Declared load profile for water heating	<b>XL</b>		
Seasonal space heating energy efficiency class, average climate:	<b>A++</b>	<b>A++</b>	
Water heating energy efficiency class, average climate:	<b>A</b>		
Rated heat output, average climate:	12	10	kW
Annual energy consumption for space heating, average climate	4906	5345	kWh
Annual electricity consumption for water heating, average climate	1745		kWh
Seasonal space heating energy efficiency, average climate:	194	147	%
Water heating energy efficiency, average climate:	96		%
Sound power level LWA indoors	45		dB
Rated heat output, cold climate:	12	10	kW
Rated heat output, warm climate:	12	10	kW
Annual energy consumption for space heating, cold climate	5695	6214	kWh
Annual electricity consumption for water heating, cold climate	1745		kWh
Annual energy consumption for space heating, warm climate	3169	3456	kWh
Annual electricity consumption for water heating, warm climate	1745		kWh
Seasonal space heating energy efficiency, cold climate:	200	151	%
Water heating energy efficiency, cold climate:	96		%
Seasonal space heating energy efficiency, warm climate:	194	147	%
Water heating energy efficiency, warm climate:	96		%
Sound power level LWA outdoors	-		dB

#### Data for package fiche

Controller class	VII		
Controller contribution to efficiency	3,5		%
Seasonal space heating energy efficiency of package, average climate:	198	150	%
Seasonal space heating energy efficiency class for package, average climate:	<b>A+++</b>	<b>A+++</b>	%
Seasonal space heating energy efficiency of package, cold climate:	203	154	%
Seasonal space heating energy efficiency of package, warm climate:	198	150	%

<b>Model(s):</b>				<b>Metrosaver MB 10</b>				<div> <b>METRO THERM</b></div>			
Type of heat source/sink:				Brine-to-water							
Low-temperature heat pump:				No							
Equipped with supplementary heater:				Yes							
Heat pump combination heater:				Yes							
Climate condition:				Average							
Temperature application:				Medium temperature (55 °C)							
Applied standards: EN14825 and EN16147											
<b>Rated heat output</b>			Prated	10,0	kW	<b>Seasonal space heating energy efficiency</b>			η <sub>s</sub>	147	%
<i>Declared capacity for part load at outdoor temperature T<sub>j</sub></i>						<i>Declared coefficient of performance for part load at outdoor temperature T<sub>j</sub></i>					
T <sub>j</sub> = -7 °C	P <sub>dh</sub>	7,9	kW	T <sub>j</sub> = -7 °C			COP <sub>d</sub>	3,40	kW		
T <sub>j</sub> = +2 °C	P <sub>dh</sub>	8,7	kW	T <sub>j</sub> = +2 °C			COP <sub>d</sub>	3,91	kW		
T <sub>j</sub> = +7 °C	P <sub>dh</sub>	9,2	kW	T <sub>j</sub> = +7 °C			COP <sub>d</sub>	4,25	kW		
T <sub>j</sub> = +12 °C	P <sub>dh</sub>	9,6	kW	T <sub>j</sub> = +12 °C			COP <sub>d</sub>	4,58	kW		
T <sub>j</sub> = biv	P <sub>dh</sub>	8,2	kW	T <sub>j</sub> = biv			COP <sub>d</sub>	3,52	kW		
T <sub>j</sub> = TOL	P <sub>dh</sub>	7,6	kW	T <sub>j</sub> = TOL			COP <sub>d</sub>	3,19	kW		
T <sub>j</sub> = -15 °C (if TOL < -20 °C)	P <sub>dh</sub>		kW	T <sub>j</sub> = -15 °C (if TOL < -20 °C)			COP <sub>d</sub>		kW		
Bivalent temperature			T <sub>biv</sub>	-5,2	°C	Operation limit temperature			TOL	-10	°C
Cycling interval capacity for heating			P <sub>cyh</sub>		kW	Cycling interval efficiency			COP <sub>cyh</sub>		-
Degradation co-efficient			C <sub>dh</sub>	1,00	-	temperature			WTOL	65	°C
<i>Power consumption in modes other than active mode</i>						<i>Supplementary heater</i>					
Off mode	P <sub>OFF</sub>	0,002	kW	Rated heat output			P <sub>sup</sub>	2,4	kW		
Thermostat-off mode	P <sub>TO</sub>	0,01	kW								
Standby mode	P <sub>SB</sub>	0,007	kW	Type of energy input			Electric				
Crankcase heater mode	P <sub>CK</sub>	0,014	kW								
<i>Other items</i>											
Capacity control			fixed			Rated air flow rate, outdoors					m³/h
Sound power level, indoors/outdoors	L <sub>WA</sub>	45/-	dB	Rated water flow rate, indoor heat exchanger				0,82	m³/h		
Annual energy consumption	Q <sub>HE</sub>	5345	kWh	Rated brine or water flow rate, outdoor heat exchanger				1,56	m³/h		
<i>For heat pump combination heater:</i>											
<b>Declared load profile</b>			<b>XL</b>			<b>Water heating energy efficiency</b>			η <sub>wh</sub>	96	%
Daily electricity consumption	Q <sub>elec</sub>	7,95	kWh	Daily fuel consumption			Q <sub>fuel</sub>		kWh		
Annual electricity consumption	AEC	1745	kWh	Annual fuel consumption			AFC		GJ		
<b>Approved by:</b>											
<b>Contact details</b>			<b>METRO THERM A/S Rundinsvej 55 DK-3200 Helsingør <a href="http://www.metrotherm.dk">www.metrotherm.dk</a></b>								