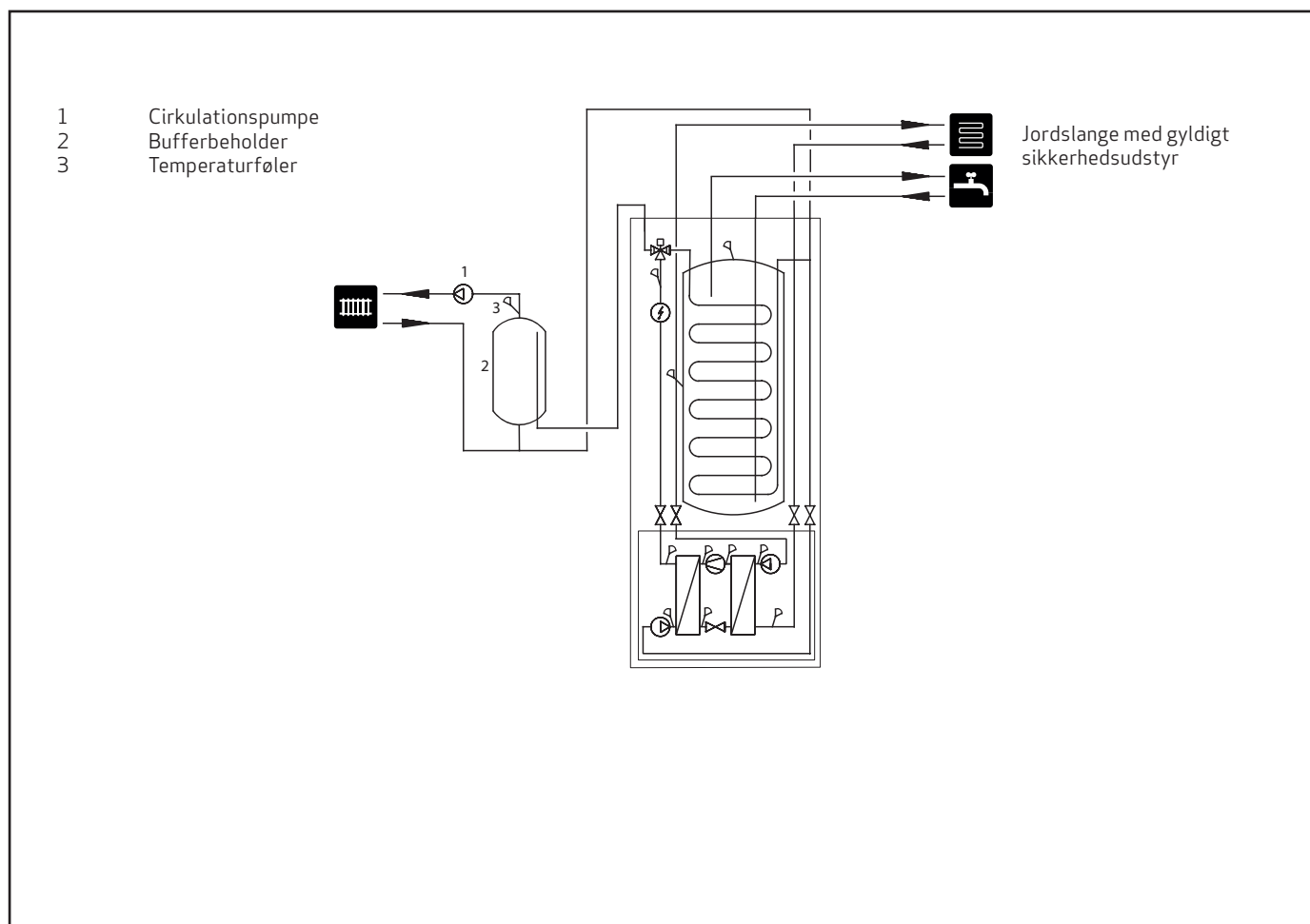


METROSAVER MB


Datablad



Supplier's name:	METRO THERM A/S		
Model:	Metrosaver MB 6		
Temperature application	35	55	°C
Declared load profile for water heating	XL		
Seasonal space heating energy efficiency class, average climate:	A+++	A++	
Water heating energy efficiency class, average climate:	A		
Rated heat output, average climate:	7	6	kW
Annual energy consumption for space heating, average climate	3010	3425	kWh
Annual electricity consumption for water heating, average climate	1709		kWh
Seasonal space heating energy efficiency, average climate:	184	137	%
Water heating energy efficiency, average climate:	98		%
Sound power level LWA indoors	43		dB
Rated heat output, cold climate:	7	6	kW
Rated heat output, warm climate:	7	6	kW
Annual energy consumption for space heating, cold climate	3487	3969	kWh
Annual electricity consumption for water heating, cold climate	1709		kWh
Annual energy consumption for space heating, warm climate	1964	2233	kWh
Annual electricity consumption for water heating, warm climate	1709		kWh
Seasonal space heating energy efficiency, cold climate:	190	141	%
Water heating energy efficiency, cold climate:	98		%
Seasonal space heating energy efficiency, warm climate:	182	136	%
Water heating energy efficiency, warm climate:	98		%
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:	188	140	%
Seasonal space heating energy efficiency class for package, average climate:	A+++	A++	%
Seasonal space heating energy efficiency of package, cold climate:	193	145	%
Seasonal space heating energy efficiency of package, warm climate:	186	139	%

Model(s):		Metrosaver MB 6					
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							
Rated heat output	Prated	6,0	kW	Seasonal space heating energy efficiency	η_s	137	%
<i>Declared capacity for part load at outdoor temperature Tj</i>				<i>Declared coefficient of performance for part load at outdoor temperature Tj</i>			
Tj = -7 °C	Pdh	4,8	kW	Tj = -7 °C	COPd	3,18	-
Tj = +2 °C	Pdh	5,3	kW	Tj = +2 °C	COPd	3,69	-
Tj = +7 °C	Pdh	5,6	kW	Tj = +7 °C	COPd	4,02	-
Tj = +12 °C	Pdh	6,0	kW	Tj = +12 °C	COPd	4,29	-
Tj = biv	Pdh	4,9	kW	Tj = biv	COPd	3,30	-
Tj = TOL	Pdh	4,5	kW	Tj = TOL	COPd	2,96	-
Tj = -15 °C (if TOL < -20 °C)	Pdh		kW	Tj = -15 °C (if TOL < -20 °C)	COPd		-
Bivalent temperature				Operation limit temperature			
	T _{biv}	-5,3	°C		TOL	-10	°C
Cycling interval capacity for heating				Cycling interval efficiency			
	P _{cyh}		kW		COP _{cyh}		-
Degradation co-efficient				temperature			
	Cdh	0,99	-		WTOL	65	°C
<i>Power consumption in modes other than active mode</i>				<i>Supplementary heater</i>			
Off mode	P _{OFF}	0,002	kW	Rated heat output	P _{sup}	1,5	kW
Thermostat-off mode	P _{TO}	0,01	kW	Type of energy input			
Standby mode	P _{SB}	0,007	kW	Electric			
Crankcase heater mode	P _{CK}	0,014	kW				
<i>Other items</i>							
Capacity control	fixed			Rated air flow rate, outdoors			m ³ /h
Sound power level, indoors/outdoors	L _{WA}	43/-	dB	Rated water flow rate, indoor heat exchanger		0,90	m ³ /h
Annual energy consumption	Q _{HE}	3425	kWh	Rated brine or water flow rate, outdoor heat exchanger		0,90	m ³ /h
<i>For heat pump combination heater:</i>							
Declared load profile	XL			Water heating energy efficiency	η_{wh}	98	%
Daily electricity consumption	Q _{elec}	7,78	kWh	Daily fuel consumption	Q _{fuel}		kWh
Annual electricity consumption	AEC	1709	kWh	Annual fuel consumption	AFC		GJ
Approved by:							
Contact details		METRO THERM A/S Rundinsvej 55 DK-3200 Helsingør www.metrotherm.dk					

Supplier's name:	METRO THERM A/S		
Model:	Metrosaver MB 8		
Temperature application	35	55	°C
Declared load profile for water heating	XL		
Seasonal space heating energy efficiency class, average climate:	A+++	A++	
Water heating energy efficiency class, average climate:	A		
Rated heat output, average climate:	9	8	kW
Annual energy consumption for space heating, average climate	3797	4433	kWh
Annual electricity consumption for water heating, average climate	1668		kWh
Seasonal space heating energy efficiency, average climate:	188	141	%
Water heating energy efficiency, average climate:	100		%
Sound power level LWA indoors	45		dB
Rated heat output, cold climate:	9	8	kW
Rated heat output, warm climate:	9	8	kW
Annual energy consumption for space heating, cold climate	4393	5142	kWh
Annual electricity consumption for water heating, cold climate	1668		kWh
Annual energy consumption for space heating, warm climate	2461	2860	kWh
Annual electricity consumption for water heating, warm climate	1668		kWh
Seasonal space heating energy efficiency, cold climate:	194	145	%
Water heating energy efficiency, cold climate:	100		%
Seasonal space heating energy efficiency, warm climate:	187	141	%
Water heating energy efficiency, warm climate:	100		%
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:	191	145	%
Seasonal space heating energy efficiency class for package, average climate:	A+++	A++	%
Seasonal space heating energy efficiency of package, cold climate:	198	149	%
Seasonal space heating energy efficiency of package, warm climate:	191	145	%

Model(s):				Metrosaver MB 8										
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														
Rated heat output				Prated	8,0	kW		Seasonal space heating energy efficiency						
								η_s	141	%				
<i>Declared capacity for part load at outdoor temperature Tj</i>						<i>Declared coefficient of performance for part load at outdoor temperature Tj</i>								
Tj = -7 °C	Pdh	6,2	kW		Tj = -7 °C	COPd	3,28	-						
Tj = +2 °C	Pdh	6,9	kW		Tj = +2 °C	COPd	3,81	-						
Tj = +7 °C	Pdh	7,2	kW		Tj = +7 °C	COPd	4,13	-						
Tj = +12 °C	Pdh	7,6	kW		Tj = +12 °C	COPd	4,41	-						
Tj = biv	Pdh	6,4	kW		Tj = biv	COPd	3,44	-						
Tj = TOL	Pdh	5,9	kW		Tj = TOL	COPd	3,07	-						
Tj = -15 °C (if TOL < -20 °C)	Pdh		kW		Tj = -15 °C (if TOL < -20 °C)	COPd		-						
Bivalent temperature				T _{biv}	-4,9	°C		Operation limit temperature						
Cycling interval capacity for heating				P _{cyc}		kW		Cycling interval efficiency						
Degradation co-efficient				Cdh	0,99	-		temperature						
								WTOL	65	°C				
<i>Power consumption in modes other than active mode</i>						<i>Supplementary heater</i>								
Off mode	P _{OFF}	0,002	kW		Rated heat output				P _{sup}	2,1	kW			
Thermostat-off mode	P _{TO}	0,01	kW											
Standby mode	P _{SB}	0,007	kW		Type of energy input				Electric					
Crankcase heater mode	P _{CK}	0,014	kW											
<i>Other items</i>														
Capacity control				fixed		Rated air flow rate, outdoors								
Sound power level, indoors/outdoors				L _{WA}	45/-	dB		Rated water flow rate, indoor heat exchanger				0,64	m ³ /h	
Annual energy consumption				Q _{HE}	4433	kWh		Rated brine or water flow rate, outdoor heat exchanger				1,20	m ³ /h	
<i>For heat pump combination heater:</i>														
Declared load profile				XL		Water heating energy efficiency				η_{wh}	100	%		
Daily electricity consumption				Q _{elec}	7,60	kWh		Daily fuel consumption				Q _{fuel}	kWh	
Annual electricity consumption				AEC	1668	kWh		Annual fuel consumption				AFC	GJ	
Approved by:														
Contact details				METRO THERM A/S Rundinsvej 55 DK-3200 Helsingør www.metrotherm.dk										

Supplier's name:	METRO THERM A/S		
Model:	Metrosaver MB 10		
Temperature application	35	55	°C
Declared load profile for water heating	XL		
Seasonal space heating energy efficiency class, average climate:	A+++	A++	
Water heating energy efficiency class, average climate:	A		
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:	A+++	A+++	%
Seasonal space heating energy efficiency of package, cold climate:	203	154	%
Seasonal space heating energy efficiency of package, warm climate:	198	150	%

Model(s):				Metrosaver MB 10											
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															
Rated heat output				Prated	10,0	kW		Seasonal space heating energy efficiency							
								η_s	147	%					
<i>Declared capacity for part load at outdoor temperature Tj</i>								<i>Declared coefficient of performance for part load at outdoor temperature Tj</i>							
Tj = -7 °C	Pdh	7,9	kW		Tj = -7 °C				COPd	3,40	-				
Tj = +2 °C	Pdh	8,7	kW		Tj = +2 °C				COPd	3,91	-				
Tj = +7 °C	Pdh	9,2	kW		Tj = +7 °C				COPd	4,25	-				
Tj = +12 °C	Pdh	9,6	kW		Tj = +12 °C				COPd	4,58	-				
Tj = biv	Pdh	8,2	kW		Tj = biv				COPd	3,52	-				
Tj = TOL	Pdh	7,6	kW		Tj = TOL				COPd	3,19	-				
Tj = -15 °C (if TOL < -20 °C)	Pdh		kW		Tj = -15 °C (if TOL < -20 °C)				COPd		-				
Bivalent temperature				T _{biv}	-5,2	°C		Operation limit temperature				TOL	-10	°C	
Cycling interval capacity for heating				P _{cyc}		kW		Cycling interval efficiency				COP _{cyc}		-	
Degradation co-efficient				Cdh	1,00	-		temperature				WTOL	65	°C	
<i>Power consumption in modes other than active mode</i>								<i>Supplementary heater</i>							
Off mode	P _{OFF}	0,002	kW		Rated heat output				P _{sup}	2,4	kW				
Thermostat-off mode	P _{TO}	0,01	kW												
Standby mode	P _{SB}	0,007	kW		Type of energy input				Electric						
Crankcase heater mode	P _{CK}	0,014	kW												
<i>Other items</i>															
Capacity control	fixed			Rated air flow rate, outdoors											
Sound power level, indoors/outdoors	L _{WA}	45/-	dB		Rated water flow rate, indoor heat exchanger				0,82 m ³ /h						
Annual energy consumption	Q _{HE}	5345	kWh		Rated brine or water flow rate, outdoor heat exchanger				1,56 m ³ /h						
<i>For heat pump combination heater:</i>															
Declared load profile				XL				Water heating energy efficiency							
								η_{wh}				96	%		
Daily electricity consumption	Q _{elec}	7,95	kWh		Daily fuel consumption				Q _{fuel}		kWh				
Annual electricity consumption	AEC	1745	kWh		Annual fuel consumption				AFC		GJ				
Approved by:															
Contact details				METRO THERM A/S Rundinsvej 55 DK-3200 Helsingør www.metrotherm.dk											