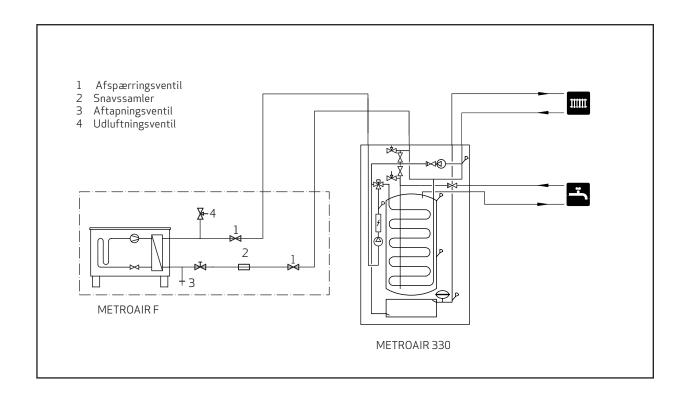
METROAIR F

Datablad





Supplier's name:	METRO T	THERM A/S	
Model:	METROAIR F6	+ METROAIR 330	
Temperature application	35	55	°C
Declared load profile for water	,	XL	
heating		^L	
Seasonal space heating energy	A+++	A++	
efficiency class, average climate:	Аттт	ATT	
Water heating energy efficiency		Λ	
class, average climate:	,	Α	
Rated heat output, average climate:	5,0	5,0	kW
Annual energy consumption for	2000	2040	Is\A/In
space heating, average climate	2089	3248	kWh
Annual electricity consumption for	4.0	000	1-10/1-
water heating, average climate	18	833	kWh
Seasonal space heating energy			
efficiency, average climate:	188	131	%
Water heating energy efficiency,		04	0/
average climate:	91		%
Sound power level LWA indoors	35		dB
Rated heat output, cold climate:	4,0	6,0	kW
Rated heat output, warm climate:	4,0	5,0	kW
Annual energy consumption for	0004	4040	1-14/1-
space heating, cold climate	2694	4610	kWh
Annual electricity consumption for	2.	332	kWh
water heating, cold climate	۷.	332	KVVII
Annual energy consumption for	872	1398	kWh
space heating, warm climate	012	1390	KVVII
Annual electricity consumption for	14	485	kWh
water heating, warm climate			
Seasonal space heating energy	143	116	%
efficiency, cold climate:			
Water heating energy efficiency, cold climate:	-	72	%
Seasonal space heating energy		<u> </u>	
efficiency, warm climate:	252	179	%
Water heating energy efficiency,		1	
warm climate:	113		%
Sound power level LWA outdoors		50	dB
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Data for package fiche

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Controller class	V	/	
Controler contribution to efficiency	4,	.0	%
Seasonal space heating energy efficiency of package, average climate:	192	135	%
Seasonal space heating energy efficiency class for package, average climate:	A+++	A++	%
Seasonal space heating energy efficiency of package, cold climate:	147	120	%
Seasonal space heating energy efficiency of package, warm climate:	256	183	%

Model(s):	METROAIR F6 + METROAIR 330
Type of heat source/sink:	Air-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: FN14825 and FN16147	•



Applied standards: EN14825 and EN16147	7						
				Seasonal space heating energy			
Rated heat output	Prated	5,3	kW	efficiency	$\eta_{\rm s}$	131	%
Declared capacity for part load at outdoor tem	perature Tj			Declared coefficient of performance for part	load at outdo	or temperat	ture Tj
Tj = -7 °C	Pdh	4,7	kW	Tj = -7 °C	COPd	1,88	-
Tj = +2 °C	Pdh	2,8	kW	Tj = +2 °C	COPd	3,26	-
Tj = +7 °C	Pdh	1,8	kW	Tj = +7 °C	COPd	4,72	-
Tj = +12 °C	Pdh	2,7	kW	Tj = +12 °C	COPd	6,47	-
Tj = biv	Pdh	4,7	kW	Tj = biv	COPd	1,88	-
Tj = TOL	Pdh	4,1	kW	Tj = TOL	COPd	1,77	-
Tj = -15 °C (if TOL < -20 °C)	Pdh	-	kW	Tj = -15 °C (if TOL < -20 °C)	COPd		-
Bivalent temperature	T _{biv}	-7	°C	Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych		kW	Cycling interval efficiency	COPcyc		-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit	WTOL	58	°C
Power consumption in modes other than active	mode			Supplementary heater			
Off mode	P _{OFF}	0,007	kW	Rated heat output	Psup	1,2	kW
Thermostat-off mode	P _{TO}	0,012	kW		'		
Standby mode	P _{SB}	0,012	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0	kW				
Other items							
Capacity control		variable		Rated air flow rate, outdoors		2526	m³/h
Sound power level, indoors/outdoors	L _{WA}	35/50	dB	Rated water flow rate, indoor heat exchanger			m³/h
				Rated brine or water flow rate,			
Annual energy consumption	Q_{HE}	3248	kWh	outdoor heat exchanger			m³/h
For heat pump combination heater:							
Declared load profile		XL		Water heating energy efficiency	η_{wh}	91	%
Daily electricity consumption	Q _{elec}	8,59	kWh	Daily fuel consumption	Q _{fuel}		kWh
Annual electricity consumption	AEC	1833	kWh	Annual fuel consumption	AFC		GJ
Approved by:		ı		'			1
Contact details	METRO T	HERM A/	S Rund	nsvej 55 DK-3220 Helsinge www.metroth	erm.dk		
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Supplier's name:	METRO TI		
Model:	METROAIR F8 +	METROAIR 330	
Temperature application	35	55	℃
Declared load profile for water	Х	1	
heating		, -	
Seasonal space heating energy	A++	A++	
efficiency class, average climate:	ATT	ATT	
Water heating energy efficiency	4	1	
class, average climate:		1	
Rated heat output, average climate:	8,2	7,0	kW
Annual energy consumption for	0000	4447	1-10/1-
space heating, average climate	3882	4447	kWh
Annual electricity consumption for	16	90	kWh
water heating, average climate	10	09	KVVII
Seasonal space heating energy	470	407	0/
efficiency, average climate:	172	127	%
Water heating energy efficiency,	99		%
average climate:	99		%
Sound power level LWA indoors	3	5	dB
Rated heat output, cold climate:	9,0	10,0	kW
Rated heat output, warm climate:	8,0	8,0	kW
Annual energy consumption for	6264	8844	kWh
space heating, cold climate	0204	0044	KVVII
Annual electricity consumption for	18	86	kWh
water heating, cold climate	10	00	KVVII
Annual energy consumption for	1879	2333	kWh
space heating, warm climate	1070	2000	10011
Annual electricity consumption for	15	40	kWh
water heating, warm climate		T	
Seasonal space heating energy	139	108	%
efficiency, cold climate:			
Water heating energy efficiency, cold climate:	8	9	%
Seasonal space heating energy			
efficiency, warm climate:	225	180	%
Water heating energy efficiency,		_	%
warm climate:	10	109	
Sound power level LWA outdoors	5	4	dB

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4,	.0	%
176	131	%
_	_	
A+++	A++	%
1.40	110	%
143	112	70
229	184	%
		,,
	176 A+++ 143	A+++ 143 112

Model(s):	METROAIR F8 + METROAIR 330
Type of heat source/sink:	Air-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)
A 1: - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	



Applied standards: EN14825 and EN16147	remperature application:		ivie	alum tem	perature (55°C)			
Rated heat output Prated 7,0 kW efficiency n _{Is} 127 % Declared capacity for part load at outdoor temperature Tj Declared coefficient of performance for part load at outdoor temperature Tj Tj = -7 °C Pdh 6,3 kW Tj = -7 °C COPd 1,94 1 Tj = +2 °C Pdh 3,9 kW Tj = -7 °C COPd 3,11 1 Tj = +12 °C Pdh 3,7 kW Tj = +7 °C COPd 4,21 1 Tj = +12 °C Pdh 3,7 kW Tj = +7 °C COPd 4,21 1 Tj = +12 °C Pdh 3,7 kW Tj = +12 °C COPd 5,93 1 Tj = 15 °C (if TOL < -20 °C)	Applied standards: EN14825 and EN16147							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Rated heat output	Prated	7,0	kW		η _s	127	%
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Declared capacity for part load at outdoor temp	erature Tj			Declared coefficient of performance for part	load at outdo	or temperat	ture Tj
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Tj = -7 ℃	Pdh	6,3	kW	Tj = -7 ℃	COPd	1,94	-
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Tj = +2 ℃	Pdh	3,9	kW	Tj = +2 ℃	COPd	3,11	-
Tj = biv Pdh 6,6 kW Tj = TOL Pdh 5,9 kW Tj = TOL COPd 1,83 - Tj = TOL COPd 1,86 - Tj = TOL CO	Tj = +7 ℃	Pdh	2,6	kW	Tj = +7 ℃	COPd	4,42	-
Tj = TOL Tj = -15 °C (if TOL < -20 °C) Pdh NW Tj = -15 °C (if TOL < -20 °C) Pdh NW Bivalent temperature T T _{biv} - 8,6 °C Cycling interval capacity for heating Degradation co-efficient Cdh 0,97 - Degradation limit temperature ToL -10 °C Cycling interval efficiency CoPcyc - Pewer consumption imades other than active mode Cycling interval efficiency CoPcyc - Pewer consumption CoPcyc - Pewer consumption imades other than active mode Cycling interval efficiency CoPcyc - Heating water operating limit WTOL 58 °C Cycling interval efficiency CoPcyc - Heating water operating limit WTOL 58 °C Type of energy input Tj = -15 °C (if TOL < -20 °C) CoPcd CoPcide CoPcyc CoPcyc - Heating water operating limit WTOL 58 °C Type of energy input Type of		Pdh	3,7	kW	Tj = +12 ℃	COPd	5,93	-
Tj = -15 °C (if TOL < -20 °C)		Pdh	6,6	kW	Tj = biv	COPd	1,83	-
Bivalent temperature		Pdh	5,9	kW	,	COPd	1,86	-
Cycling interval capacity for heating Pcych	Tj = -15 °C (if TOL < -20 °C)	Pdh		kW	Tj = -15 °C (if TOL < -20 °C)	COPd		-
Degradation co-efficient Cdh 0,97 - Heating water operating limit WTOL 58 °C Power consumption in modes other than active mode Off mode Poff 0,002 kW Thermostat-off mode Poff 0,01 kW Standby mode Poff 0,01 kW Standby mode Poff 0,03 kW Crankcase heater mode Poff 0,03 kW Other items Capacity control variable Sound power level, indoors/outdoors LwA 35/54 dB Annual energy consumption Qelec 7,69 kWh Annual electricity consumption AEC 1689 kWh Annual fuel consumption AFC GJ Heating water operating limit WTOL 58 °C Supplementary heater Rated heat output Psup 1,1 kW Type of energy input Electric Type of energy input Selectric Rated air flow rate, outdoors at 3000 m³/h Rated brine or water flow rate, indoor heat exchanger 0,60 m³/h Rated brine or water flow rate, outdoor heat exchanger m³/h Water heating energy efficiency Twh 99 % Daily fuel consumption AFC GJ Approved by:	Bivalent temperature	T _{biv}	-8,6	°C	Operation limit temperature	TOL	-10	°C
Power consumption in modes other than active mode Off mode Poff 0,002 kW Thermostat-off mode Poff 0,01 kW Standby mode Poff 0,01 kW Standby mode Poff 0,03 kW Other items Capacity control Variable Sound power level, indoors/outdoors Annual energy consumption Quelic 7,69 kWh Annual electricity consumption AEC 1689 kWh Annual fuel consumption Poff 0,002 kW Rated heat output Psup 1,1 kW Rated heat output Psup 1,1 kW Rated output Psup 0,01 kW Rated air flow rate, outdoors Rated air flow rate, outdoors Rated water flow rate, indoor heat exchanger O,60 m³/h Rated brine or water flow rate, outdoor heat exchanger Declared load profile XL Water heating energy efficiency Psup 1,1 kW Type of energy input Electric Rated air flow rate, outdoors Rated water flow rate, outdoor heat exchanger O,60 m³/h Rated brine or water flow rate, outdoor heat exchanger Nm³/h Water heating energy efficiency Psup 1,1 kW Type of energy input Electric Type of energy input Electric Water heating energy input Daily fuel consumption AFC GJ Approved by:	Cycling interval capacity for heating	Pcych		kW	Cycling interval efficiency	COPcyc		-
Off mode	Degradation co-efficient	Cdh	0,97	-	Heating water operating limit	WTOL	58	°C
Thermostat-off mode Pro 0,01 kW Standby mode Pss 0,015 kW Crankcase heater mode Pck 0,03 kW Other items Capacity control Sound power level, indoors/outdoors Annual energy consumption Pcr heat pump combination heater: Declared load profile Daily electricity consumption Annual electricity consumption AEC 1689 kWh Annual fuel consumption Approved by:	Power consumption in modes other than active	mode			Supplementary heater			
Standby mode	Off mode	P _{OFF}	0,002	kW	Rated heat output	Psup	1,1	kW
Crankcase heater mode PCK 0,03 kW Other items Capacity control Sound power level, indoors/outdoors Annual energy consumption PCHE Annual energy consumption Annual electricity consumption Qelec Annual electricity consumption Qelec Approved by: Rated air flow rate, outdoors Rated water flow rate, indoor heat exchanger Rated brine or water flow rate, outdoor heat exchanger Mater heating energy efficiency PCHE Annual fuel consumption AFC GJ Approved by:	Thermostat-off mode	P _{TO}	0,01	kW				
Other items Capacity control variable Sound power level, indoors/outdoors Annual energy consumption Other items Capacity control Variable Sound power level, indoors/outdoors LwA 35/54 dB Annual energy consumption QHE 4447 kWh Capacity consumption AHA Rated air flow rate, outdoors Rated water flow rate, indoor heat exchanger Capacity consumption and capacity AHA Rated air flow rate, outdoors Rated water flow rate, indoor heat exchanger Capacity consumption rate, outdoors Rated water flow rate, indoor heat exchanger Capacity consumption rate, outdoors Rated water flow rate, outdoor heat exchanger Capacity consumption rate, outdoors Rated water flow rate, indoor heat exchanger Capacity consumption rate, outdoors Rated water flow rate, outdoor heat exchanger Capacity consumption rate, outdoors Rated water flow rate, indoor heat exchanger Capacity consumption rate, outdoor heat exchanger Capacity consumptio	Standby mode	P_{SB}	0,015	kW	Type of energy input		Electric	
Capacity control Sound power level, indoors/outdoors Lwa 35/54 dB Annual energy consumption QHE 4447 kWh Capacity control Annual energy consumption Qelec 7,69 kWh Annual electricity consumption Qelec 1689 kWh Annual fuel consumption Rated air flow rate, outdoors Rated water flow rate, indoor heat exchanger O,60 m³/h Rated brine or water flow rate, outdoor heat exchanger Marehat pump combination heater: Water heating energy efficiency Daily fuel consumption Qelec 7,69 kWh Annual fuel consumption AFC GJ Approved by:	Crankcase heater mode	P _{CK}	0,03	kW				
Sound power level, indoors/outdoors L _{WA} 35/54 dB Annual energy consumption Q _{HE} 4447 kWh Annual energy consumption Q _{elec} 7,69 kWh Annual electricity consumption Q _{elec} 7,69 kWh Annual electricity consumption AEC 1689 kWh Annual fuel consumption Rated water flow rate, indoor heat exchanger 0,60 m³/h Rated brine or water flow rate, outdoor heat exchanger Mater heating energy efficiency Paily fuel consumption Q _{fuel} kWh Annual fuel consumption AFC GJ Approved by:	Other items							
Sound power level, indoors/outdoors L _{WA} 35/54 dB exchanger Annual energy consumption Q _{HE} 4447 kWh Rated brine or water flow rate, outdoor heat exchanger m³/h For heat pump combination heater: Declared load profile XL Daily electricity consumption Q _{elec} 7,69 kWh Annual electricity consumption AEC 1689 kWh Annual fuel consumption AFC GJ Approved by:	Capacity control		variable		Rated air flow rate, outdoors		3000	m³/h
Annual energy consumption Q _{HE} 4447 kWh outdoor heat exchanger m³/h For heat pump combination heater: Declared load profile XL Daily electricity consumption Q _{elec} 7,69 kWh Annual electricity consumption AEC 1689 kWh Annual fuel consumption AFC GJ Approved by:	Sound power level, indoors/outdoors	L _{WA}	35/54	dB	′		0,60	m³/h
Declared load profile XL Water heating energy efficiency η _{wh} 99 % Daily electricity consumption Q _{elec} 7,69 kWh Daily fuel consumption Q _{fuel} kWh Annual electricity consumption AEC 1689 kWh Annual fuel consumption AFC GJ Approved by:	Annual energy consumption	Q_{HF}	4447	kWh				m³/h
Declared load profile XL Water heating energy efficiency η _{wh} 99 % Daily electricity consumption Q _{elec} 7,69 kWh Daily fuel consumption Q _{fuel} kWh Annual electricity consumption AEC 1689 kWh Annual fuel consumption AFC GJ Approved by:	For heat pump combination heater:							
Annual electricity consumption AEC 1689 kWh Annual fuel consumption AFC GJ Approved by:			XL		Water heating energy efficiency	η_{wh}	99	%
Annual electricity consumption AEC 1689 kWh Annual fuel consumption AFC GJ Approved by:	Daily electricity consumption	Oalaa	7.69	kWh	Daily fuel consumption	Ofuel		kWh
Approved by:	· · · · · · · · · · · · · · · · · · ·				•			
	·	ALC	1003	KVVII	r amount der consumption	AIC		
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Supplier's name:	METRO TI	HERM A/S	
Model:	METROAIR F12 +	METROAIR 330	
Temperature application	35	55	∞
Declared load profile for water	Х	1	
heating	^	<u>. </u>	
Seasonal space heating energy	A++	A++	
efficiency class, average climate:	Att	Att	
Water heating energy efficiency	<i>I</i>	1	
class, average climate:		1	
Rated heat output, average climate:	11,5	10,0	kW
Annual energy consumption for	5382	6136	kWh
space heating, average climate	5562	0130	KVVII
Annual electricity consumption for	17	02	kWh
water heating, average climate	17	02	KVVII
Seasonal space heating energy	474	100	0/
efficiency, average climate:	174	132	%
Water heating energy efficiency,	0	0	0/
average climate:	98		%
Sound power level LWA indoors	35		dB
Rated heat output, cold climate:	11,5	13,0	kW
Rated heat output, warm climate:	12,0	12,0	kW
Annual energy consumption for	7798	11197	kWh
space heating, cold climate	7790	11197	KVVII
Annual electricity consumption for	19	04	kWh
water heating, cold climate	13	04	KVVII
Annual energy consumption for	2759	3419	kWh
space heating, warm climate	2155	3413	KVVII
Annual electricity consumption for	15	51	kWh
water heating, warm climate		- · · · · · · · · · · · · · · · · · · ·	
Seasonal space heating energy	142	111	%
efficiency, cold climate:			
Water heating energy efficiency,	8	8	%
cold climate: Seasonal space heating energy			
efficiency, warm climate:	229	185	%
Water heating energy efficiency,			1
water fleating energy emclericy, warm climate:	108		%
Sound power level LWA outdoors	5	7	dB
Sound power level EVVA outdools	5	,	ub

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Controller class		l	
Controler contribution to efficiency	4,	,0	%
Seasonal space heating energy efficiency of package, average climate:	178	136	%
Seasonal space heating energy efficiency class for package, average climate:	A+++	A++	%
Seasonal space heating energy efficiency of package, cold climate:	146	115	%
Seasonal space heating energy efficiency of package, warm climate:	233	189	%

Model(s):	METROAIR F12 + METROAIR 330			
Type of heat source/sink:	Air-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				
	Seasonal space h			



Temperature application:		Me	dium ter	nperature (55 °C)			
Applied standards: EN14825 and EN16147							
				Seasonal space heating energy			
Rated heat output	Prated	10,0	kW	efficiency	η_{s}	132	%
Declared capacity for part load at outdoor temp			1.144	Declared coefficient of performance for part I	1		1
Tj = -7 ℃	Pdh	8,9	kW	Tj = -7 ℃	COPd	1,99	-
Tj = +2 ℃	Pdh	5,5	kW	Tj = +2 °C	COPd	3,22	-
Tj = +7 ℃	Pdh	3,5	kW	Tj = +7 °C	COPd	4,61	-
Tj = +12 ℃	Pdh	5,0	kW	Tj = +12 ℃	COPd	6,25	-
Tj = biv	Pdh	9,2	kW	Tj = biv	COPd	1,90	-
Tj = TOL	Pdh	8,1	kW	Tj = TOL	COPd	1,92	-
Tj = -15 °C (if TOL < -20 °C)	Pdh		kW	Tj = -15 ℃ (if TOL < -20 °C)	COPd		-
Bivalent temperature	T _{biv}	-7,9	°C	Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	,-	kW	Cycling interval efficiency	COPcyc		+
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit	WTOL	58	°C
				The state of the s			
Power consumption in modes other than active	mode			Supplementary heater			
Off mode	P _{OFF}	0,002	kW	Rated heat output	Psup	1,9	kW
Thermostat-off mode	P _{TO}	0,014	kW				
Standby mode	P_{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,035	kW				
Other items							
Capacity control		variable		Rated air flow rate, outdoors		4380	m³/h
				Rated water flow rate, indoor heat			111711
Sound power level, indoors/outdoors	L_{WA}	35/57	dB	exchanger		0,86	m³/h
				Rated brine or water flow rate,			
Annual energy consumption	Q_{HE}	6136	kWh	outdoor heat exchanger			m³/h
For heat pump combination heater:							
Declared load profile	1	XL		Water heating energy efficiency	η_{wh}	98	%
Decial ed Ioau profile		ΛL		water heating energy emclency	' lwh	30	/0
Daily electricity consumption	Q _{elec}	7,75	kWh	Daily fuel consumption	Q_{fuel}		kWh
Annual electricity consumption	AEC	1702	kWh	Annual fuel consumption	AFC		GJ
Approved by:	•			•			
Contact details	METRO T	HERM A/	S Rundii	nsvej 55 DK-3220 Helsinge www.metrothe	rm.dk		