

ANTΛΙΑ ΘΕΡΜΟΤΗΤΑΣ ΑΕΡΑ - NEPOY AIR TO WATER HEAT PUMP

MPH-12363

## TEXNIKA XAPAKTHPIΣTIKA TECHNICAL DATA

## ΣΗΜΑΝΤΙΚΗ ΣΗΜΕΙΩΣΗ

Ευχαριστούμε πολύ για την αγορά του προϊόντος μας.: Πριν χρησιμοποιήσετε τη μονάδα σας, διαβάστε προσεκτικά αυτό το εγχειρίδιο και φυλάξτε το για μελλοντική αναφορά.

			Technic	al parameters					
Model(s):				MPH-12363	3				
Air-to-water heat pump:				yes					
Water-to-water heat pump:				no					
Brine-to-water heat pump:				no					
Low-temperature heat pump:				no					
Equipped with a supplementary heater:				yes (6kW	')				
Heat pump combination heater:				no					
Declared climate condition:				average					
Parameters are declared for low-temperate	ure application	on.	•						
ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit		
Rated heat output (*)	P <sub>rated</sub>	12	kW	Seasonal space heating energy efficiency	$\eta_{s}$	187	%		
Declared capacity for heating for part load outdoor temperature $T_{j}$	at indoor ten	nperature 20	) °C and	Declared coefficient of performance or prima temperature 20 °C and outdoor temperature		for part load at	indoor		
$T_j = -7^{\circ}C$	$P_{dh}$	10.7	kW	$T_j = -7^{\circ}C$	COP <sub>d</sub>	2.90	T		
T <sub>j</sub> = + 2°C	P <sub>dh</sub>	7.0	kW	$T_j = + 2^{\circ}C$	COP <sub>d</sub>	4.53	-		
T <sub>j</sub> = + 7°C	P <sub>dh</sub>	4.6	kW	$T_j = + 7^{\circ}C$	COP <sub>d</sub>	6.65	-		
T <sub>j</sub> = + 12°C	P <sub>dh</sub>	4.2	kW	T <sub>j</sub> = + 12°C	COP <sub>d</sub>	8.92	-		
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	10.7	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2.90	-		
T <sub>j</sub> = operation limit temperature	P <sub>dh</sub>	11.4	kW	T <sub>j</sub> = operation limit temperature	COP <sub>d</sub>	2.63	-		
For air-to-water heat pumps: $T_j = -15^{\circ}C$ (if TOL < $-20^{\circ}C$ )	P <sub>dh</sub>	N/A	kW	For air-to-water heat pumps: $T_j = -15^{\circ}C$ (if TOL < $-20^{\circ}C$ )	COP <sub>d</sub>	N/A	-		
Bivalent temperature	$T_{biv}$	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C		
Cycling interval capacity for heating	P <sub>cych</sub>	N/A	kW	Cycling interval efficiency	COP <sub>cyc</sub>	N/A	-		
Degradation co-efficient (**)	$C_dh$	0.9	-	Heating water operating limit temperature	WTOL	65	°C		
Power consumption in modes other than a	active mode			Supplementary heater					
Off mode	P <sub>OFF</sub>	0.014	kW	Rated heat output (**)	$P_{sup}$	0.6	kW		
Thermostat-off mode	P <sub>TO</sub>	0.024	kW				<u></u>		
Standby mode	P <sub>SB</sub>	0.014	kW	Type of energy input		Electric			
Crankcase heater mode	P <sub>CK</sub>	0.000	kW						
Other items									
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	5000	m³/h		
Sound power level, indoors/ outdoors	$L_{WA}$	-/64	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor		N/A	m³/h		
Annual energy consumption	$Q_{HE}$	5256	kWh	heat exchanger					
For heat pump combination heater:									
Declared load profile		N/A		Water heating energy efficiency	$\eta_{\text{wh}}$	N/A	%		
Daily electricity consumption	Q <sub>elec</sub>	N/A	kWh	Daily fuel consumption	Q <sub>fuel</sub>	N/A	kWh		
Annual electricity consumption	AEC	N/A	kWh	Annual fuel consumption	AFC	N/A	GJ		
Contact details	See the back	k cover of th	e manual						

<sup>(\*)</sup> For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

			Technic	cal parameters					
Model(s):				MPH-12363	3				
Air-to-water heat pump:				yes					
Water-to-water heat pump:				no					
Brine-to-water heat pump:				no					
Low-temperature heat pump:				no					
Equipped with a supplementary heater:				yes (6kW	V)				
Heat pump combination heater:				no					
Declared climate condition:				warmer	-				
Parameters are declared for low-temperate	ture application	on.							
ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit		
Rated heat output (*)	P <sub>rated</sub>	11	kW	Seasonal space heating energy efficiency	$\eta_{\rm s}$	253	%		
Declared capacity for heating for part load outdoor temperature T <sub>j</sub>	at indoor ter	nperature 20	) °C and	Declared coefficient of performance or prima temperature 20 °C and outdoor temperature		for part load at	indoor		
T <sub>j</sub> = - 7°C	$P_{dh}$	N/A	kW	T <sub>j</sub> = - 7°C	COP <sub>d</sub>	N/A	-		
T <sub>j</sub> = + 2°C	P <sub>dh</sub>	11.1	kW	$T_j = + 2^{\circ}C$	COP <sub>d</sub>	3.62	-		
$T_j = + 7^{\circ}C$	P <sub>dh</sub>	7.2	kW	T <sub>j</sub> = + 7°C	COP <sub>d</sub>	5.64	-		
$T_j = + 12^{\circ}C$	P <sub>dh</sub>	4.7	kW	T <sub>j</sub> = + 12°C	COP <sub>d</sub>	8.34	-		
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	7.2	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	5.64	-		
T <sub>j</sub> = operation limit temperature	P <sub>dh</sub>	11.1	kW	T <sub>j</sub> = operation limit temperature	COP <sub>d</sub>	3.62	-		
For air-to-water heat pumps: $T_j = -15^{\circ}C$ (if TOL < $-20^{\circ}C$ )	P <sub>dh</sub>	N/A	kW	For air-to-water heat pumps: T <sub>j</sub> = - 15°C (if TOL < - 20°C)	COP <sub>d</sub>	N/A	-		
Bivalent temperature	T <sub>biv</sub>	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C		
Cycling interval capacity for heating	P <sub>cych</sub>	N/A	kW	Cycling interval efficiency	COP <sub>cyc</sub>	N/A	-		
Degradation co-efficient (**)	C <sub>dh</sub>	0.9	-	Heating water operating limit temperature	WTOL	65	°C		
Power consumption in modes other than a	active mode			Supplementary heater					
Off mode	P <sub>OFF</sub>	0.014	kW	Rated heat output (**)	P <sub>sup</sub>	0.0	kW		
Thermostat-off mode	P <sub>TO</sub>	0.024	kW						
Standby mode	P <sub>SB</sub>	0.014	kW	Type of energy input		Electric			
Crankcase heater mode	P <sub>CK</sub>	0.000	kW						
Other items									
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	5000	m <sup>3</sup> /h		
Sound power level, indoors/ outdoors	L <sub>WA</sub>	-/64	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	N/A	m³/h		
Annual energy consumption	Q <sub>HE</sub>	2325	kWh	heat exchanger					
For heat pump combination heater:									
Declared load profile		N/A		Water heating energy efficiency	$\eta_{\text{wh}}$	N/A	%		
Daily electricity consumption	Q <sub>elec</sub>	N/A	kWh	Daily fuel consumption	Q <sub>fuel</sub>	N/A	kWh		
Annual electricity consumption	AEC	N/A	kWh	Annual fuel consumption	AFC	N/A	GJ		
Contact details		k cover of th							
(*) For heat pump space heaters and heaf	t pump comb	ination heat	ers, the rated	heat output Prated is equal to the design load for	heating Pdesiç	nh, and the rat	ted heat		

<sup>(\*)</sup> For neat pump space heaters and heat pump combination heaters, the rated heat output Prated output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

			Technic	cal parameters				
Model(s):				MPH-1236	3			
Air-to-water heat pump:				yes				
Water-to-water heat pump:				no				
Brine-to-water heat pump:				no				
Low-temperature heat pump:				no				
Equipped with a supplementary heater:				yes (6kV	V)			
Heat pump combination heater:				no				
Declared climate condition:				colder				
Parameters are declared for low-temperate	ure application	on.						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	P <sub>rated</sub>	11	kW	Seasonal space heating energy efficiency	$\eta_{\rm s}$	163	%	
Declared capacity for heating for part load outdoor temperature T <sub>j</sub>	at indoor ten	nperature 20	) °C and	Declared coefficient of performance or prima temperature 20 °C and outdoor temperature		for part load at	indoor	
T <sub>j</sub> = -7°C	$P_{dh}$	7.2	kW	$T_j = -7^{\circ}C$	COP <sub>d</sub>	3.51	-	
T <sub>j</sub> = + 2°C	P <sub>dh</sub>	4.2	kW	T <sub>j</sub> = + 2°C	COP <sub>d</sub>	5.06	-	
T <sub>j</sub> = + 7°C	P <sub>dh</sub>	3.2	kW	T <sub>j</sub> = + 7°C	COP <sub>d</sub>	6.20	-	
T <sub>i</sub> = + 12°C	P <sub>dh</sub>	3.6	kW	T <sub>i</sub> = + 12°C	COP <sub>d</sub>	8.19	-	
T <sub>i</sub> = bivalent temperature	P <sub>dh</sub>	9.3	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2.59	-	
T <sub>i</sub> = operation limit temperature	P <sub>dh</sub>	7.1	kW	T <sub>i</sub> = operation limit temperature	COP <sub>d</sub>	2.08	_	
For air-to-water heat pumps: T <sub>j</sub> = – 15°C (if TOL < – 20°C)	P <sub>dh</sub>	N/A	kW	For air-to-water heat pumps: T <sub>i</sub> = – 15°C (if TOL < – 20°C)	COP <sub>d</sub>	N/A	-	
Bivalent temperature	T <sub>biv</sub>	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C	
Cycling interval capacity for heating	P <sub>cych</sub>	N/A	kW	Cycling interval efficiency	COP <sub>cyc</sub>	N/A	-	
Degradation co-efficient (**)	C <sub>dh</sub>	0.9	-	Heating water operating limit temperature	WTOL	65	°C	
Power consumption in modes other than a	active mode		1	Supplementary heater			<u>I</u>	
Off mode	P <sub>OFF</sub>	0.014	kW	Rated heat output (**)	P <sub>sup</sub>	3.9	kW	
Thermostat-off mode	P <sub>TO</sub>	0.024	kW				l	
Standby mode	P <sub>SB</sub>	0.014	kW	Type of energy input		Electric		
Crankcase heater mode	P <sub>CK</sub>	0.000	kW	5, 1				
			•					
Other items							Ť	
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	5000	m <sup>3</sup> /h	
Sound power level, indoors/ outdoors	L <sub>WA</sub>	-/64	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	N/A	m <sup>3</sup> /h	
Annual energy consumption	$Q_{HE}$	6738	kWh	heat exchanger				
For heat pump combination heater:								
Declared load profile		N/A		Water heating energy efficiency	$\eta_{wh}$	N/A	%	
Daily electricity consumption	Q <sub>elec</sub>	N/A	kWh	Daily fuel consumption	$Q_{fuel}$	N/A	kWh	
Annual electricity consumption	AEC	N/A	kWh	Annual fuel consumption	AFC	N/A	GJ	
Contact details	See the back	k cover of th	e manual					
(*) For heat pump space heaters and hear output of a supplementary heater Psup is (**) If Cdh is not determined by measurem	equal to the	supplementa	ary capacity f		r heating Pdesiç	nh, and the rat	ed heat	

			Technic	cal parameters				
Model(s):				MPH-1236	3			
Air-to-water heat pump:				yes				
Water-to-water heat pump:				no				
Brine-to-water heat pump:				no				
Low-temperature heat pump:				no				
Equipped with a supplementary heater:				yes (6k\	N)			
Heat pump combination heater:				no				
Declared climate condition:				average	)			
Parameters are declared for medium-temp	perature app	lication.						
ltem	Symbol	Value	Unit	ltem	Symbol	Value	Unit	
Rated heat output (*)	P <sub>rated</sub>	12	kW	Seasonal space heating energy efficiency	$\eta_{s}$	138	%	
Declared capacity for heating for part load outdoor temperature T <sub>j</sub>	at indoor ter	nperature 20	) °C and	Declared coefficient of performance or prima temperature 20 °C and outdoor temperature		for part load at	indoor	
T <sub>j</sub> = - 7°C	$P_{dh}$	10.7	kW	T <sub>j</sub> = - 7°C	COP <sub>d</sub>	2.13	-	
$T_j = + 2^{\circ}C$	P <sub>dh</sub>	6.6	kW	$T_j = + 2^{\circ}C$	COP <sub>d</sub>	3.33	-	
$T_j = +7^{\circ}C$	P <sub>dh</sub>	4.4	kW	T <sub>j</sub> = + 7°C	COP <sub>d</sub>	4.88	-	
T <sub>j</sub> = + 12°C	P <sub>dh</sub>	4.0	kW	T <sub>j</sub> = + 12°C	COP <sub>d</sub>	7.67	-	
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	10.7	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	2.13	-	
T <sub>j</sub> = operation limit temperature	P <sub>dh</sub>	10.0	kW	T <sub>j</sub> = operation limit temperature	COP <sub>d</sub>	1.82	-	
For air-to-water heat pumps: $T_j = -15^{\circ}C$ (if TOL < $-20^{\circ}C$ )	P <sub>dh</sub>	N/A	kW	For air-to-water heat pumps: $T_j = -15^{\circ}C$ (if TOL < $-20^{\circ}C$ )	COP <sub>d</sub>	N/A	-	
Bivalent temperature	T <sub>biv</sub>	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C	
Cycling interval capacity for heating	P <sub>cych</sub>	N/A	kW	Cycling interval efficiency	COP <sub>cyc</sub>	N/A	-	
Degradation co-efficient (**)	C <sub>dh</sub>	0.9	-	Heating water operating limit temperature	WTOL	65	°C	
Power consumption in modes other than a	active mode			Supplementary heater				
Off mode	P <sub>OFF</sub>	0.014	kW	Rated heat output (**)	P <sub>sup</sub>	2.0	kW	
Thermostat-off mode	P <sub>TO</sub>	0.024	kW					
Standby mode	P <sub>SB</sub>	0.014	kW	Type of energy input		Electric		
Crankcase heater mode	P <sub>CK</sub>	0.000	kW					
-	<u>.                                    </u>	<u> </u>	<u></u>	•				
Other items								
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	5000	m³/h	
Sound power level, indoors/ outdoors	L <sub>WA</sub>	-/64	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	N/A	m³/h	
Annual energy consumption	$Q_HE$	7085	kWh	heat exchanger				
For heat pump combination heater:								
Declared load profile		N/A		Water heating energy efficiency	$\eta_{\text{wh}}$	N/A	%	
Daily electricity consumption	Q <sub>elec</sub>	N/A	kWh	Daily fuel consumption	Q <sub>fuel</sub>	N/A	kWh	
Annual electricity consumption	AEC	N/A	kWh	Annual fuel consumption	AFC	N/A	GJ	
Contact details	See the bac	k cover of th	ne manual					
				heat output Prated is equal to the design load for	heating Pdesig	gnh, and the rat	ed heat	

output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

			Technic	al parameters					
Model(s):				MPH-1236	3				
Air-to-water heat pump:				yes					
Water-to-water heat pump:				no					
Brine-to-water heat pump:				no					
Low-temperature heat pump:				no					
Equipped with a supplementary heater:				yes (6kW	<i>'</i> )				
Heat pump combination heater:				no					
Declared climate condition:				warmer	-				
Parameters are declared for medium-tem	perature app	lication.							
Item	Symbol	Value	Unit	ltem	Symbol	Value	Unit		
Rated heat output (*)	P <sub>rated</sub>	12	kW	Seasonal space heating energy efficiency	η <sub>s</sub>	175	%		
Declared capacity for heating for part load outdoor temperature T <sub>j</sub>	d at indoor ter	nperature 20	) °C and	Declared coefficient of performance or prima temperature 20 °C and outdoor temperature		for part load at	indoor		
T <sub>j</sub> = - 7°C	$P_{dh}$	N/A	kW	$T_j = -7^{\circ}C$	COP <sub>d</sub>	N/A	-		
T <sub>j</sub> = + 2°C	$P_{dh}$	12.1	kW	$T_j = + 2^{\circ}C$	COP <sub>d</sub>	2.27	-		
T <sub>j</sub> = + 7°C	$P_{dh}$	8.0	kW	$T_j = + 7^{\circ}C$	COP <sub>d</sub>	3.85	-		
T <sub>j</sub> = + 12°C	$P_{dh}$	4.3	kW	T <sub>j</sub> = + 12°C	COP <sub>d</sub>	5.95	-		
$T_j$ = bivalent temperature	P <sub>dh</sub>	8.0	kW	T <sub>j</sub> = bivalent temperature	COPd	3.85	-		
$T_j$ = operation limit temperature	$P_{dh}$	12.1	kW	T <sub>j</sub> = operation limit temperature	COP <sub>d</sub>	2.27	-		
For air-to-water heat pumps: $T_j = -15^{\circ}C$ (if TOL < $-20^{\circ}C$ )	P <sub>dh</sub>	N/A	kW	For air-to-water heat pumps: $T_j = -15^{\circ}C$ (if TOL < $-20^{\circ}C$ )	COP <sub>d</sub>	N/A	-		
Bivalent temperature	T <sub>biv</sub>	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C		
Cycling interval capacity for heating	P <sub>cych</sub>	N/A	kW	Cycling interval efficiency	COP <sub>cyc</sub>	N/A	-		
Degradation co-efficient (**)	$C_{dh}$	0.9	-	Heating water operating limit temperature	WTOL	65	°C		
Power consumption in modes other than	active mode		•	Supplementary heater			•		
Off mode	P <sub>OFF</sub>	0.014	kW	Rated heat output (**)	P <sub>sup</sub>	0.0	kW		
Thermostat-off mode	P <sub>TO</sub>	0.024	kW				•		
Standby mode	P <sub>SB</sub>	0.014	kW	Type of energy input		Electric			
Crankcase heater mode	P <sub>CK</sub>	0.000	kW						
Other items									
- Common and the comm			1	For air-to-water heat pumps: Rated air flow		l			
Capacity control		variable		rate, outdoors	-	5000	m <sup>3</sup> /h		
Sound power level, indoors/ outdoors	L <sub>WA</sub>	-/64	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	N/A	m <sup>3</sup> /h		
Annual energy consumption	Q <sub>HE</sub>	3733	kWh	heat exchanger					
For heat pump combination heater:						1			
Declared load profile		N/A		Water heating energy efficiency	$\eta_{wh}$	N/A	%		
Daily electricity consumption	Q <sub>elec</sub>	N/A	kWh	Daily fuel consumption	$Q_{\text{fuel}}$	N/A	kWh		
Annual electricity consumption	AEC	N/A	kWh	Annual fuel consumption	AFC	N/A	GJ		
Contact details	See the bac	k cover of th	e manual						

<sup>(\*)</sup> For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

			Technic	cal parameters				
Model(s):				MPH-12363	3			
Air-to-water heat pump:				yes				
Water-to-water heat pump:				no				
Brine-to-water heat pump:				no				
Low-temperature heat pump:				no				
Equipped with a supplementary heater:				yes (6kW	/)			
Heat pump combination heater:				no				
Declared climate condition:				colder				
Parameters are declared for medium-temp	perature app	lication.						
ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	P <sub>rated</sub>	10	kW	Seasonal space heating energy efficiency	$\eta_{\rm s}$	119	%	
Declared capacity for heating for part load outdoor temperature T <sub>j</sub>	at indoor ter	nperature 20	) °C and	Declared coefficient of performance or prima temperature 20 °C and outdoor temperature		for part load at	indoor	
T <sub>j</sub> = - 7°C	$P_{dh}$	6.7	kW	T <sub>j</sub> = - 7°C	COP <sub>d</sub>	2.58	-	
T <sub>j</sub> = + 2°C	$P_{dh}$	4.0	kW	$T_j = + 2$ °C	COP <sub>d</sub>	3.68	-	
$T_j = + 7^{\circ}C$	$P_{dh}$	2.9	kW	T <sub>j</sub> = + 7°C	COP <sub>d</sub>	4.57	-	
$T_j = + 12^{\circ}C$	P <sub>dh</sub>	3.3	kW	$T_j = + 12$ °C	COP <sub>d</sub>	6.59	-	
T <sub>j</sub> = bivalent temperature	P <sub>dh</sub>	8.5	kW	T <sub>j</sub> = bivalent temperature	COP <sub>d</sub>	1.89	-	
T <sub>j</sub> = operation limit temperature	P <sub>dh</sub>	4.7	kW	T <sub>j</sub> = operation limit temperature	COP <sub>d</sub>	1.21	-	
For air-to-water heat pumps: $T_j = -15^{\circ}C$ (if TOL < $-20^{\circ}C$ )	P <sub>dh</sub>	N/A	kW	For air-to-water heat pumps: T <sub>j</sub> = – 15°C (if TOL < – 20°C)	COP <sub>d</sub>	N/A	-	
Bivalent temperature	T <sub>biv</sub>	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C	
Cycling interval capacity for heating	P <sub>cych</sub>	N/A	kW	Cycling interval efficiency	COP <sub>cyc</sub>	N/A	-	
Degradation co-efficient (**)	C <sub>dh</sub>	0.9	-	Heating water operating limit temperature	WTOL	65	°C	
Power consumption in modes other than a	active mode		•	Supplementary heater				
Off mode	P <sub>OFF</sub>	0.014	kW	Rated heat output (**)	P <sub>sup</sub>	5.3	kW	
Thermostat-off mode	P <sub>TO</sub>	0.024	kW					
Standby mode	P <sub>SB</sub>	0.014	kW	Type of energy input		Electric		
Crankcase heater mode	P <sub>CK</sub>	0.000	kW					
Other items	_			<del> </del>			•	
Capacity control		variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	5000	m³/h	
Sound power level, indoors/ outdoors	L <sub>WA</sub>	-/64	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor	-	N/A	m <sup>3</sup> /h	
Annual energy consumption	$Q_{HE}$	8459	kWh	heat exchanger				
For heat pump combination heater:	<u>-</u>							
Declared load profile		N/A		Water heating energy efficiency	$\eta_{\text{wh}}$	N/A	%	
Daily electricity consumption	Q <sub>elec</sub>	N/A	kWh	Daily fuel consumption	Q <sub>fuel</sub>	N/A	kWh	
Annual electricity consumption	AEC	N/A	kWh	Annual fuel consumption	AFC	N/A	GJ	
Contact details	See the bac	ck cover of th	ne manual					
				heat output Prated is equal to the design load for	heating Pdesiç	nh, and the rat	ed heat	

<sup>( )</sup> For near pump space nearers and near pump combination heaters, the rated heaf output Prated is equal to the design load for heating Pdesignh, and the rated heaf output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(\*\*) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9.

I	nform	atic	n requ	ire	ements for comfort chillers								
Model(s):					MPH-12363								
Outdoor side heat exchanger of chiller					Air to water								
indoor side heat exchanger chiller				Wa	Water								
Type:				con	npressor driven vapour compression								
Driver af compressor				Ele	ctric motor								
Item	Symbol	Value	Unit		ltem	Symbol	Value	Unit					
Rated cooling capacity	Prated,c	12	kW		Seasonal space cooling energy efficiency	$\eta_{s,c}$	197	%					
Declared capacity for cooling for part load at given outdoor temperature Tj					Declared energy efficiency ratio for cooling for part load at gitemperature Tj	ven outdo	or						
Tj = + 35°C	P <sub>dc</sub>	11.7	kW		Tj = +35°C	EERd	2.64	-					
Tj = + 30°C	P <sub>dc</sub>	8.8	kW		Tj = + 30°C	EERd	4.09	-					
Tj = + 25°C	P <sub>dc</sub>	5.9	kW		Tj = + 25°C	EERd	5.58	-					
Tj = + 20°C	P <sub>dc</sub>	4.1	kW		Tj = + 20°C	EERd	8.01	-					
	1				T	•	•						
Degradation co-efficient of chiller (*)	C <sub>dc</sub>	0.9	-										
	ı	Po	wer consump	tion	in modes other than "active mode"			1					
Off mode	P <sub>OFF</sub>	0.014	kW		Crankcase heater mode	P <sub>CK</sub>	0.000	kW					
Thermostat-off mode	P <sub>TO</sub>	0.024	kW		Standby mode	P <sub>SB</sub>	0.014	kW					
					Other items								
Capacity control		varial	ole		For air-to-water comfort chillers: air flow rate, outdoor measured	-	5000	m <sup>3</sup> /h					
Sound power level, indoors/ outdoors	LWA	-/64	dB										
Emissions of nitrogen oxide (if applicable)	NO <sub>x</sub> (**)	-	mg/kWh input GCV		For water/brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	N/A	m <sup>3</sup> /h					
GWP of the refrigerant	-	675	kg CO <sub>2 eq</sub> (100 years)										
Standard rating conditions used	Low temp	erature	application	•		•							
Contact details	See the b	ack co	ver of the ma	nual	r								
(*)If C <sub>dc</sub> is not determined by meas (**)From 26 September 2018.	urement th	nen the	default degra	adati	on coefficient of chillers shall be 0.9.								

In	forma	atior	requi	reı	ments for comfort chillers						
Model(s):					MPH-12363						
Outdoor side heat exchanger of chiller					Air to water						
indoor side heat exchanger chiller				Wa	iter						
Туре:				cor	npressor driven vapour compression						
Driver af compressor				Ele	ctric motor						
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit			
Rated cooling capacity	Prated,c	12	kW		Seasonal space cooling energy efficiency	$\eta_{s,c}$	276	%			
Declared capacity for cooling for part lot temperature Tj	oad at give	n outdo	or		Declared energy efficiency ratio for cooling for part load at gitemperature Tj	ven outdo	or	•			
Tj = + 35°C	P <sub>dc</sub>	12.0	kW		Tj = +35°C	EERd	3.91	-			
Tj = + 30°C	P <sub>dc</sub>	9.3	kW		Tj = + 30°C	EERd	5.67	-			
Tj = + 25°C	P <sub>dc</sub>	5.7	kW		Tj = + 25°C	EERd	7.98	-			
Tj = + 20°C	P <sub>dc</sub>	5.1	kW		Tj = + 20°C	EERd	11.37	-			
		· · · · · · · · · · · · · · · · · · ·									
Degradation co-efficient of chiller (*)	C <sub>dc</sub>	0.9	-								
		Powe	er consumption	on in	modes other than "active mode"	ı		1			
Off mode	P <sub>OFF</sub>	0.014	kW		Crankcase heater mode	P <sub>CK</sub>	0.000	kW			
Thermostat-off mode	P <sub>TO</sub>	0.024	kW		Standby mode	P <sub>SB</sub>	0.014	kW			
				(	Other items						
Capacity control		varial	ole		For air-to-water comfort chillers: air flow rate, outdoor measured	-	5000	m³/h			
Sound power level, indoors/ outdoors	LWA	-/64	dB								
Emissions of nitrogen oxide (if applicable)	NO <sub>x</sub> (**)	-	mg/kWh input GCV		For water/brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	N/A	m <sup>3</sup> /h			
GWP of the refrigerant	-	675	kg CO <sub>2 eq</sub> (100 years)								
Standard rating conditions used	Medium	tempera	ture applicat	ion		•	•				
Contact details	See the b	oack co	ver of the ma	ınua	ı						
(*)If C <sub>dc</sub> is not determined by measurer (**)From 26 September 2018.	ment then	the defa	ault degradati	ion d	coefficient of chillers shall be 0.9.						

