

## Product Fiche

Technical parameters							
Model(s):		ACHP-H12/4R3HA-M (NE)					
Air-to-water heat ump:		yes					
Water-to-water heat pump:		no					
Brine-to-water heat pump:		no					
Low-temperature heat pump:		no					
Equipped with a supplementary heater:		no					
Heat pump combination heater:		no					
Declared climate condition		Warmer					
Declared temperature application		Low					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output(*)	Prated	11.1	kW	Seasonal space heating energy efficiency	$\eta_s$	254	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	-	kW	Tj = -7°C	COPd	-	-
Tj = +2°C	Pdh	10.90	kW	Tj = +2°C	COPd	3.59	-
Tj = +7°C	Pdh	7.14	kW	Tj = +7°C	COPd	5.82	-
Tj = +12°C	Pdh	3.17	kW	Tj = +12°C	COPd	7.94	-
Tj = bivalent temperature	Pdh	7.14	kW	Tj = bivalent temperature	COPd	5.82	-
Tj = operation limit temperature	Pdh	10.90	kW	Tj = operation limit temperature	COPd	3.59	-
For air-to-water heat pumps: Tj = -15°C (ifTOL<-20°C)	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C (ifTOL<-20°C)	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Ppsych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	POFF	0.020	kW	Rated heat output (*)	Psup	0.20	kW
Thermostat-off mode	PTO	0.030	kW				
Standby mode	PsB	0.020	kW				
Crankcase heater mode	PcK	0.000	kW				
Type of energy input							
Electricity							
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m <sup>3</sup> /h
Sound power level	LWA	-	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m <sup>3</sup> /h
Annual energy consumption	QHE	2308	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	Hwh	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Contact details	AUX Co., Ltd 1166 Mingguang North Road, Jiangshan Yinzhou District, Ningbo, 315191 Zhejiang, China						
(*) 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							

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Water-to-water heat pump:	no						
Brine-to-water heat pump:	no						
Low-temperature heat pump:	no						
Equipped with a supplementary heater:	no						
Heat pump combination heater:	no						
Declared climate condition	Warmer						
Declared temperature application	Medium						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output(*)	Prated	14.1	kW	Seasonal space heating energy efficiency	$\eta_s$	176	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	-	kW	Tj = -7°C	COPd	-	-
Tj = +2°C	Pdh	13.9	kW	Tj = +2°C	COPd	2.54	-
Tj = +7°C	Pdh	9.06	kW	Tj = +7°C	COPd	3.56	-
Tj = +12°C	Pdh	4.03	kW	Tj = +12°C	COPd	6.16	-
Tj = bivalent temperature	Pdh	9.06	kW	Tj = bivalent temperature	COPd	3.56	-
Tj = operation limit temperature	Pdh	13.9	kW	Tj = operation limit temperature	COPd	2.54	-
For air-to-water heat pumps: Tj = -15°C (ifTOL<-20°C)	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C(ifTOL<-20°C)	COPd	-	-
Bivalent temperature	Tbiv	7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Peych	-	kW	Cycling interval efficiency	COPeye	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	$P_{OFF}$	0.020	kW	Rated heat output (*)	Psup	0.20	kW
Thermostat-off mode	$P_{TO}$	0.030	kW	Type of energy input	Electricity		
Standby mode	$P_{SB}$	0.020	kW				
Crankcase heater mode	$P_{CK}$	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated airflow rate, outdoors	-	4650	m <sup>3</sup> /h
Sound power level	LWA	-	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m <sup>3</sup> /h
Annual energy consumption	QHE	4206	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	Hwh	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Contact details	AUX Co., Ltd 1166 Mingguang North Road, Jiangshan Yinzhou District, Ningbo, 315191 Zhejiang, China						
(*) 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							

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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:		no					
Heat pump combination heater:		no					
Declared climate condition		Average					
Declared temperature application		Low					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output ( )	Prated	12.2	kW	Seasonal space heating energy efficiency	$\eta_s$	194	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	10.79	kW	Tj = -7°C	COPd	3.02	-
Tj = +2°C	Pdh	6.57	kW	Tj= +2°C	COPd	4.83	-
Tj = +7°C	Pdh	4.22	kW	Tj= +7°C	COPd	6.27	-
Tj = +12°C	Pdh	1.88	kW	Tj=+12°C	COPd	9.38	-
Tj = bivalent temperature	Pdh	10.79	kW	Tj = bivalent temperature	COPd	3.02	-
Tj = operation limit temperature	Pdh	10.10	kW	Tj = operation limit temperature	COPd	2.61	-
For air-to-water heat pumps: Tj = -15°C (ifTOL<-20°C)	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C(ifTOL<-20°C)	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pe <sub>ych</sub>	-	kW	Cycling interval efficiency	COP <sub>cyc</sub>	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sub>OFF</sub>	0.020	kW	Rated heat output (*)	P <sub>sup</sub>	2.10	kW
Thermostat-off mode	P <sub>TO</sub>	0.030	kW	Type of energy input	Electricity		
Standby mode	P <sub>SB</sub>	0.020	kW				
Crankcase heater mode	P <sub>CK</sub>	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated airflow rate, outdoors	-	4650	m <sup>3</sup> /h
Sound power level	LWA	-	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m <sup>3</sup> /h
Annual energy consumption	Q <sub>HE</sub>	5114	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	H <sub>wh</sub>	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
Contact details	AUX Co., Ltd 1166 Mingguang North Road, Jiangshan Yinzhou District, Ningbo, 315191 Zhejiang, China						
<p>(*) 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).</p> <p>(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0.9</p>							

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Water-to-water heat pump:		no					
Brine-to-water heat pump:		no					
Low-temperature heat pump:		no					
Equipped with a supplementary heater:		no					
Heat pump combination heater:		no					
Declared climate condition		Average					
Declared temperature application		Medium					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output(*)	Prated	12	kW	Seasonal space heating energy efficiency	$\eta_s$	139	%
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	10.62	kW	Tj = -7°C	COPd	2.11	-
Tj = +2°C	Pdh	6.46	kW	Tj = +2°C	COPd	3.43	-
Tj = +7°C	Pdh	4.15	kW	Tj = +7°C	COPd	4.59	-
Tj = +12°C	Pdh	1.85	kW	Tj = +12°C	COPd	6.90	-
Tj = bivalent temperature	Pdh	10.62	kW	Tj = bivalent temperature	COPd	2.11	-
Tj = operation limit temperature	Pdh	9.16	kW	Tj = operation limit temperature	COPd	2.68	-
For air-to-water heat pumps: Tj = -15°C(ifTOL<-20°C)	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C (ifTOL<-20°C)	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	POFF	0.020	kW	Rated heat output (*)	Psup	2.84	kW
Thermostat-off mode	PTO	0.030	kW				
Standby mode	r <sub>SB</sub>	0.020	kW	Type of energy input	Electricity		
Crankcase heater mode	PcK	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m <sup>3</sup> /h
Sound power level	LWA	63	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m <sup>3</sup> /h
Annual energy consumption	QHE	6982	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	Hwh	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Contact details	AUX Co., Ltd 1166 Mingguang North Road, Jiangshan Yinzhou District, Ningbo, 315191 Zhejiang, China						
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Water-to-water heat pump:		no					
Brine-to-water heat pump:		no					
Low-temperature heat pump:		no					
Equipped with a supplementary heater:		no					
Heat pump combination heater:		no					
Declared climate condition		Colder					
Declared temperature application		Low					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output(*)	Prated	11.4	kW	Seasonal space heating energy efficiency	$\eta_s$	159	%
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	7.05	kW	Tj = -7°C	COPd	3.48	-
Tj = +2°C	Pdh	4.67	kW	Tj = +2°C	COPd	4.96	-
Tj = +7°C	Pdh	3.14	kW	Tj = +7°C	COPd	6.10	-
Tj = +12°C	Pdh	3.57	kW	Tj = +12°C	COPd	7.87	-
Tj = bivalent temperature	Pdh	9.28	kW	Tj = bivalent temperature	COPd	2.59	-
Tj = operation limit temperature	Pdh	7.01	kW	Tj = operation limit temperature	COPd	1.98	-
For air-to-water heat pumps: Tj = -15°C (ifTOL<-20°C)	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C(ifTOL<-20°C)	COPd	-	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	52	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	POFF	0.020	kW	Rated heat output (*)	Psup	4.39	kW
Thermostat-off mode	P TO	0.030	kW	Type of energy input	Electricity		
Standby mode	PsB	0.020	kW				
Crankcase heater mode	PcK	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m <sup>3</sup> /h
Sound power level	LWA	-	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m <sup>3</sup> /h
Annual energy consumption	QHE	6926	kWh				
For heat pump combination heater							
Declaed load profile	-			Water heating energy efficiency	Owh	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Contact details	AUX Co., Ltd 1166 Mingguang North Road, Jiangshan Yinzhou District, Ningbo, 315191 Zhejiang, China						
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Model(s):		ACHP-H12/4R3HA-M (NE)					
Air-to-water heat ump:		yes					
Water-to-water heat pump:		no					
Brine-to-water heat pump:		no					
Low-temperature heat pump:		no					
Equipped with a supplementary heater:		no					
Heat pump combination heater:		no					
Declared climate condition		Colder					
Declared temperature application		Medium					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output(*)	Prated	10.3	kW	Seasonal space heating energy efficiency	$\eta_s$	117	%
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20°C and outdoor temperature Tj			
Tj = -7°C	Pdh	6.63	kW	Tj = -7°C	COPd	2.63	-
Tj = +2°C	Pdh	4.06	kW	Tj = +2°C	COPd	3.60	-
Tj = +7°C	Pdh	2.78	kW	Tj = +7°C	COPd	4.54	-
Tj = +12°C	Pdh	3.33	kW	Tj = +12°C	COPd	6.25	-
Tj = bivalent temperature	Pdh	8.41	kW	Tj = bivalent temperature	COPd	1.84	-
Tj = operation limit temperature	Pdh	4.19	kW	Tj = operation limit temperature	COPd	1.13	-
For air-to-water heat pumps: Tj = -15°C(ifTOL<-20°C)	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C(ifTOL<-20°C)	COPd	-	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient(**)	Cdh	0.9	-	Heating water operating limit temperature	WTOL	52	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P <sup>OFF</sup>	0.020	kW	Rated heat output (*)	Psup	6.11	kW
Thermostat-off mode	P TO	0.030	kW	Type of energy input	Electricity		
Standby mode	P <sup>SB</sup>	0.020	kW				
Crankcase heater mode	P CK	0.000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated airflow rate, outdoors	-	4000	m <sup>3</sup> /h
Sound power level	LWA	-	dB	For water-/brine-to-water heat pumps:Rated brine or water flow rate, outdoor heat exchanger	-	-	m <sup>3</sup> /h
Annual energy consumption	QHE	8453	kWh				
For heat pump combination heater							
Declared load profile	-			Water heating energy efficiency	Hwh	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Contact details	AUX Co., Ltd 1166 Mingguang North Road, Jiangshan Yinzhou District, Ningbo, 315191 Zhejiang, China						
<p>(*) 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).</p> <p>(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh =0.9</p>							