



## ENERG Y UA ehepγua · ενεργεια (Ε) (ΙΑ)



AMS20-10 + HBS20 + SMO

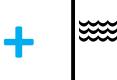


























A

B

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G





Supplier's name:	NIBE	E AB	
Model:	NIBE AMS20-1	10 + HBS20-10	
Temperature application	35	55	°C
Declared load profile for water			
heating			
Seasonal space heating energy	Λ	A++	
efficiency class, average climate:	A+++	A++	
Water heating energy efficiency			
class, average climate:			
	6	6	kW
Rated heat output, average climate:	Ü	0	K V V
Annual energy consumption for	2834	3961	kWh
space heating, average climate	2034	3901	KVVII
Annual electricity consumption for			kWh
water heating, average climate			KVVII
Seasonal space heating energy	181	132	%
efficiency, average climate:	101	132	70
Water heating energy efficiency,			%
average climate:			70
Sound power level LWA indoors	3	5	dB
Rated heat output, cold climate:	7	6	kW
Rated heat output, warm climate:	7	7	kW
Annual energy consumption for	4059	5204	kWh
space heating, cold climate	4009	3204	KVVII
Annual electricity consumption for			kWh
water heating, cold climate			KVVII
Annual energy consumption for	1379	1964	kWh
space heating, warm climate	1070	1304	KVVII
Annual electricity consumption for			kWh
water heating, warm climate			KVVII
Seasonal space heating energy	155	114	%
efficiency, cold climate:	100		70
Water heating energy efficiency, cold			%
climate:		_	70
Seasonal space heating energy	260	177	%
efficiency, warm climate:	200	1 '''	70
Water heating energy efficiency,			%
warm climate:			
Sound power level LWA outdoors	5	4	dB

## Data for package fiche with SMO or VVM

Controller class	CLASS	S_VI	
Controler contribution to efficiency	4		%
Seasonal space heating energy efficiency of package, average climate:	185	136	%
Seasonal space heating energy efficiency class for package, average climate:	A+++	A++	%
Seasonal space heating energy efficiency of package, cold climate:	159	118	%
Seasonal space heating energy efficiency of package, warm climate:	264	181	%

Model(s):	NIBE AMS20-10 + HBS20-10
Type of heat source/sink:	Air/water
Low-temperature heat pump:	No
Equipped with supplementary heater:	No
Heat pump combination heater:	No
Climate condition:	Average
Temperature application:	Medium temperature (55 °C)
Applied standards: EN11492E EN112102.1	



Tj = +2 °C	Temperature application:			Medium te	emperature (55 °C)			
Prace   6,5 kW   efficiency   ns   132	Applied standards: EN14825 - EN12102	-1						
Tj = 7 ° C	Rated heat output	Prated	6,5	kW		η <sub>s</sub>	132	%
T  = +2 °C	Declared capacity for part load at outdoor temperature Ti			Declared coefficient of performance for part load at outdoor temperature Ti				
Tj = +7 °C	Tj = -7 °C	Pdh	5,8	kW	Tj = -7 °C	COPd	1,98	
Tj = +12 °C Pdh 5,8 kW Tj = TDL Pdh 5,8 kW Tj = TDL Pdh 5,8 kW Tj = 15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -20 °C) Pdh kW Tj = -15 °C (if TDL < -	Tj = +2 °C	Pdh	3,5	kW	Tj = +2 °C	COPd	3,17	
Tj = biv Pdh 5,8 kW Tj = TOL Pdh 5,8 kW Tj = TOL Pdh 5,8 kW Tj = TOL CPP Depth 5,8 kW Tj = TOL COPD 1,69 Tj = -15 °C (if TOL < -20 °C) COPD 1,69 Tj = -15 °C (if TOL < -20 °C) COPD 1,69 Tj = -15 °C (if TOL < -20 °C) COPD 1,69 Tj = -15 °C (if TOL < -20 °C) COPD 1,69 Tj = -15 °C (if TOL < -20 °C) COPD 1,69 Tj = TOL CPP Depth 6,69 Tj = TOL CPC Depth 6,69 Tj = TO	Tj = +7 °C	Pdh	2,3	kW	Tj = +7 °C	COPd	4,98	
Tj = TOL	Tj = +12 °C	Pdh	2,2	kW	Tj = +12 °C	COPd	5,50	
Tj = -15 °C (if TOL < -20 °C) Pdh kW  Bivalent temperature T <sub>biv</sub> -7 °C Cycling interval capacity for heating Pcych kW Degradation co-efficient Cdh 0,98 - Heating water operating limit WTOL 60  Power consumption in modes other than active mode Off mode Poff 0,003 kW Standby mode Pro 0,008 kW Standby mode Ps 0,000 kW  Standby mode Ps 0,000 kW  Crankcase heater mode Pc 0,000 kW  Crankcase heater mode Pc 0,000 kW  Souther items Capacity control Variable Rated water flow rate, indoor heat exchanger Rated brine or water flow rate, outdoors act exchanger Rated brine or water flow rate, outdoor heat exchanger Pro Po	Tj = biv	Pdh	5,8	kW	Tj = biv	COPd	1,98	
Bivalent temperature	Tj = TOL	Pdh	5,8	kW	Tj = TOL	COPd	1,69	
Cycling interval capacity for heating Pcych Degradation co-efficient Cdh 0,98 - Cycling interval efficiency CoPcyc Heating water operating limit WTOL 60  Power consumption in modes other than active mode Off mode Poff O,003 kW Standby mode Pro 0,008 kW Standby mode Pro 0,008 kW Standby mode Pro 0,000 kW Type of energy input Electric Crankcase heater mode Pro 0,000 kW Type of energy input Sound power level, indoors/outdoors LwA 35/54 dB Sound power level, indoors/outdoors LwA 3961 kWh Sound power level, indoors/outdoors Poff heat pump combination heater:  Declared load profile Water heating energy efficiency Pwh Daily fuel consumption Qelec kWh Annual electricity consumption AEC kWh Annual fuel consumption AFC Approved by:	Tj = -15 °C (if TOL < -20 °C)	Pdh		kW	Tj = -15 °C (if TOL < -20 °C)	COPd		<u>]                                    </u>
Cycling interval capacity for heating Degradation co-efficient Cdh 0,98 - Cycling interval efficiency COPcyc Heating water operating limit WTOL 60  Power consumption in modes other than active mode Off mode Poff O,003 kW Thermostat-off mode Pro 0,008 kW Standby mode Pro 0,008 kW Standby mode Pro 0,008 kW Crankcase heater mode Pro 0,000 kW Thermostatemap Pro 0,000	Bivalent temperature	T <sub>hiv</sub>	-7	°C	Operation limit temperature	TOL	-10	°C
Degradation co-efficient Cdh 0,98 - Heating water operating limit WTOL 60  Power consumption in modes other than active mode Off mode Poff 0,003 kW Thermostat-off mode Pro 0,008 kW Standby mode Psa 0,008 kW Crankcase heater mode Pck 0,000 kW  Other items Capacity control Variable Sound power level, indoors/outdoors Lwa 35/54 dB Annual energy consumption QHE 3961 kWh  Daily electricity consumption Qelec Annual feetricity consumption AEC kWh  Approved by:	Cycling interval capacity for heating	+		kW	Cycling interval efficiency	COPcvc		-
Power consumption in modes other than active mode  Off mode  Off mode  Off mode  Poff  Off  Off  Poff  Off  Off  Node  Poff  Off  Off  Node  Poff  Off  Off  Node  Poff  Off  Off  Node  Poff  Off  Off  Off  Off  Off  Off  Of			0.98	-	•		60	°C
Thermostat-off mode			0.003	k\M	<del>'</del>	Psun	0.7	kW
Standby mode  Crankcase heater mode  P <sub>SB</sub> O,008 kW  Type of energy input  Type of energy input  Electric  Ables and a state and			· '	-	Nateu Heat Output	rsup	0,7	KVV
Crankcase heater mode  PCK  O,000 kW  Other items  Capacity control  Variable  Sound power level, indoors/outdoors  Annual energy consumption  Capacity consumption  Capacity control  Variable  Rated air flow rate, outdoors  Rated water flow rate, indoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoors  Rated water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Daily electricity consumption heater:  Declared load profile  Water heating energy efficiency  Daily fuel consumption  AFC  Approved by:			· '	+				
Other items  Capacity control	,		0,008	kW	Type of energy input		Electric	
Capacity control  Capacity con	Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Sound power level, indoors/outdoors  L <sub>WA</sub> 35/54 dB  Annual energy consumption  Q <sub>HE</sub> 3961 kWh  Annual energy consumption  Q <sub>HE</sub> 3961 kWh  Annual electricity consumption  Q <sub>elec</sub> kWh  Annual electricity consumption  AEC kWh  Rated water flow rate, indoor heat exchanger  Rated brine or water flow rate, outdoor heat exchanger  Rated water flow rate, indoor heat exchanger  Rated water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated water flow rate, indoor heat exchanger  Rated water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor heat exchanger  Rated brine or water flow rate, indoor	Other items							
Sound power level, indoors/outdoors  LWA 35/54 dB exchanger Rated brine or water flow rate, outdoor heat exchanger  For heat pump combination heater:  Declared load profile  Daily electricity consumption  Qelec kWh Annual electricity consumption  AEC kWh Annual fuel consumption  AFC  Declared by:	Capacity control		Variable				3000	m³/h
Annual energy consumption  Q <sub>HE</sub> 3961 kWh  Rated brine or water flow rate, outdoor heat exchanger  n  For heat pump combination heater:  Declared load profile  Daily electricity consumption  Approved by:  Rated brine or water flow rate, outdoor heat exchanger  n  Rated brine or water flow rate, outdoor heat exchanger  n  Daily fuel consumption  AFC  Approved by:					· '			
Annual energy consumption  Q <sub>HE</sub> 3961 kWh outdoor heat exchanger  n  For heat pump combination heater:  Declared load profile  Daily electricity consumption  AEC  Water heating energy efficiency  Daily fuel consumption  Q <sub>fuel</sub> Annual fuel consumption  AFC  Approved by:	Sound power level, indoors/outdoors	$L_{WA}$	35/54	dB				m³/h
For heat pump combination heater:  Declared load profile  Daily electricity consumption  Annual electricity consumption  AEC  Water heating energy efficiency  Daily fuel consumption  AFC  Approved by:					· · · · · · · · · · · · · · · · · · ·			
Daily electricity consumption Q <sub>elec</sub> kWh Annual electricity consumption AEC kWh  Approved by:  Water heating energy efficiency n <sub>wh</sub> Daily fuel consumption Q <sub>fuel</sub> k  Annual fuel consumption AFC	Annual energy consumption	$Q_{HE}$	3961	kWh	outdoor heat exchanger			m³/h
Daily electricity consumption Q <sub>elec</sub> kWh Annual electricity consumption AEC kWh  Approved by:	For heat pump combination heater:							
Annual electricity consumption AEC kWh Annual fuel consumption AFC  Approved by:	Declared load profile				Water heating energy efficiency	$\eta_{\text{wh}}$		%
Annual electricity consumption AEC kWh Annual fuel consumption AFC Approved by:	Daily electricity consumption	Q <sub>elec</sub>		kWh	Daily fuel consumption	Q <sub>fuel</sub>		kWh
Approved by:				kWh				GJ
	,	<u> </u>		<u> </u>		-		
	Approved by: Contact details	© NIBE Energy Systems - Box 14 - Hannabadsvägen 5 - 28521 Markaryd - Sweden						