

<b>Manufacturer:</b> AWE WÄRMEPUMPEN
<b>Model:</b> ESW 21
<b>Brine - to-water heat pump</b>
Low-temperature heat pump: yes
Equipped with a supplementary heater: no
Heat pump combination heater: no
Application: medium
Climate: average

Item	Symbol	Value	Unit
<b>Rated heat output *</b>	<i>Prated</i>	20	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature $T_j$			
$T_j = -7\text{ °C}$	<i>Pdh</i>	20,1	kW
$T_j = +2\text{ °C}$	<i>Pdh</i>	22,0	kW
$T_j = +7\text{ °C}$	<i>Pdh</i>	23,0	kW
$T_j = +12\text{ °C}$	<i>Pdh</i>	24,1	kW
$T_j =$ bivalent temperature	<i>Pdh</i>	19,5	kW
$T_j =$ operation limit	<i>Pdh</i>	19,5	kW
For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if $TOL < -20\text{ °C}$ )	<i>Pdh</i>	19,5	kW
Bivalent temperature	$T_{biv}$	-10	°C
Power input "compressor off"		0	W
Power consumption in modes other than active mode			
Off mode	$P_{OFF}$	0	W
Thermostat-off mode	$P_{TO}$	0	W
Standby mode	$P_{SB}$	0	W
Crankcase heater mode	$P_{CK}$	0	W
Other items			
Capacity control		fixed	
Sound power level, indoors/outdoors	$L_{WA}$	40	dB
		-	
Annual energy consumption	$Q_{HE}$	7590	kWh

Item	Symbol	Value	Unit
<b>Seasonal space heating energy efficiency</b>	$\eta_S$	205	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature $T_j$			
$T_j = -7\text{ °C}$	<i>COPd</i>	3,26	
$T_j = +2\text{ °C}$	<i>COPd</i>	5,58	
$T_j = +7\text{ °C}$	<i>COPd</i>	8,75	
$T_j = +12\text{ °C}$	<i>COPd</i>	18,13	
$T_j =$ bivalent temperature	<i>COPd</i>	2,84	
$T_j =$ operation limit	<i>COPd</i>	2,84	
For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if $TOL < -20\text{ °C}$ )	<i>COPd</i>	2,84	
For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	-10	°C
Heating water operating limit temperature	<i>WTOL</i>	55	°C
Supplementary heater			
Rated heat output *	$P_{sup}$	0,00	kW
Type of energy input	electricity		
For air-to-water heat pumps: Rated air flow rate, outdoors			
	-		m <sup>3</sup> /h
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
	-	4500	l/h

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

The calculation tool was made by Bundesverband Wärmepumpe BWP e.V.