## Technical parameters for heat pumps space heaters

## Model CRA/IK/WP 91

Air-to-water heat pump:	yes
Water-to-water heat pump:	no
Brine-to-water heat pump:	no
Low-temperature heat pump: (water temperature 35 °C)	yes
Equipped with a supplementary heater:	no
Heat pump combination heater:	no

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

Parameters shall be declared for average climate condition.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat pump	P <sub>nominale</sub>	21,38	kW	Seasonal space heating energy efficiency	$\eta_s$	125	%	
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					
$T_j = -7^{\circ}C$	Pdh	18,9	kW	$T_j = -7^{\circ}C$	$COP_d$	2,5		
$T_i = +2$ °C	Pdh	9,79	kW	$T_i = +2^{\circ}C$	COP <sub>d</sub>	3,03		
$T_i = +7^{\circ}C$	Pdh	15,7	kW	$T_i = +7^{\circ}C$	COP <sub>d</sub>	7,6		
$T_j = +12$ °C	Pdh	18,47	kW	$T_j = +12$ °C	$COP_d$	7,6		
$T_i$ = bivalent temperature	Pdh	18,9	kW	Tj = bivalent temperature	COP <sub>d</sub>	2,5		
Tj = operation limit temperature	Pdh	17,57	kW	Tj = operation limit temperature	COP <sub>d</sub>	2,3		
For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	$COP_d$	-		
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>	-	kW	Cycling interval efficiency	COP <sub>cyc</sub>	-		
Degradation co-efficient	Cdh	0,9	-	Heating water operating limit temperature	WTOL	40	°C	
Power consumption in modes other than active mode			Supplementary heater	Supplementary heater				
Off mode	P <sub>off</sub>	0,05	kW	Rated heat output	$P_{\text{sup}}$	-	kW	
Thermostat-off mode	P <sub>To</sub>	0	kW					
Standby mode	$P_{SB}$	0,06	kW	Type of energy input	-			
Crankcase heater mode	P <sub>CK</sub>	0	kW					
Other items								
Capacity control		fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	0	m³/h	
Sound power level, Indoors/outdoors	L <sub>WA</sub>	79	dB(A)	For water- or brine-to-water heat pumps: Rated brine or	-	-	m³/h	
Annual energy consumption	Q <sub>HE</sub>	9325	kWh	water flow rate, outdoor heat exchanger			, 	
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