

Information requirements for comfort chillers								
Model(s):	CSAD UiAWP 100 PS							
Outdoor side heat exchanger of chiller:	Air to water							
Indoor side heat exchanger chiller:	Water							
Type:	Compressor driven vapour compression							
Driver of compressor:	Electric motor							
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	28.2	kW		Seasonal space cooling energy efficiency	$\eta_{s,c}$	154	%
Declared cooling capacity for part load at given outdoor temperature T_j					Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j = + 35 \text{ }^\circ\text{C}$	P_{dc}	28.2	kW		$T_j = + 35 \text{ }^\circ\text{C}$	EER_d	2.58	--
$T_j = + 30 \text{ }^\circ\text{C}$	P_{dc}	22.3	kW		$T_j = + 30 \text{ }^\circ\text{C}$	EER_d	3.74	--
$T_j = + 25 \text{ }^\circ\text{C}$	P_{dc}	14.67	kW		$T_j = + 25 \text{ }^\circ\text{C}$	EER_d	5.23	--
$T_j = + 20 \text{ }^\circ\text{C}$	P_{dc}	8.51	kW		$T_j = + 20 \text{ }^\circ\text{C}$	EER_d	7.14	--
Degradation co-efficient for chillers (*)	C_{dc}	0.9	--					
Power consumption in modes other than 'active mode'								
Off mode	P_{OFF}	0.075	kW		Crankcase heater mode	P_{CK}	0.075	kW
Thermostat-off mode	P_{TO}	0.425	kW		Standby mode	P_{SB}	0.075	kW
Other items								
Capacity control	variable				For air-to-water comfort chillers: air flow rate, outdoor measured	--	12500	m^3/h
Sound power level, indoors / outdoors	L_{WA}	-78	dB		For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	--	--	m^3/h
Emissions of nitrogen oxides (if applicable)	NO_x (**)	--	mg/kWh input GCV					
GWP of the refrigerant	--	2088	kg CO_2 eq (100 years)					
Standard rating conditions used:	Low temperature application							
Contact details	EUROFRED S.A. Cl. Marqués de Sentmenat, 97 - 08029 Barcelona - Spain Tel. 934 19 97 97 Fax 934 19 86 86							
(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9.								
(**) From 26 September 2018.								
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Type:	Compressor driven vapour compression							
Driver of compressor:	Electric motor							
Item	Symbol	Value	Unit		Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	55.0	kW		Seasonal space cooling energy efficiency	$\eta_{s,c}$	168	%
Declared cooling capacity for part load at given outdoor temperature T_j					Declared energy efficiency ratio for part load at given outdoor temperature T_j			
$T_j = + 35 \text{ }^\circ\text{C}$	P_{dc}	55.0	kW		$T_j = + 35 \text{ }^\circ\text{C}$	EER_d	2.44	--
$T_j = + 30 \text{ }^\circ\text{C}$	P_{dc}	43.35	kW		$T_j = + 30 \text{ }^\circ\text{C}$	EER_d	3.62	--
$T_j = + 25 \text{ }^\circ\text{C}$	P_{dc}	27.78	kW		$T_j = + 25 \text{ }^\circ\text{C}$	EER_d	5.25	--
$T_j = + 20 \text{ }^\circ\text{C}$	P_{dc}	14.81	kW		$T_j = + 20 \text{ }^\circ\text{C}$	EER_d	6.51	--
Degradation co-efficient for chillers (*)	C_{dc}	0.9	--					
Power consumption in modes other than 'active mode'								
Off mode	P_{OFF}	0.075	kW		Crankcase heater mode	P_{CK}	0.075	kW
Thermostat-off mode	P_{TO}	0.6	kW		Standby mode	P_{SB}	0.075	kW
Other items								
Capacity control	variable				For air-to-water comfort chillers: air flow rate, outdoor measured	--	24000	m^3/h
Sound power level, indoors / outdoors	L_{WA}	-87	dB		For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	--	--	m^3/h
Emissions of nitrogen oxides (if applicable)	$NO_x (**)$	--	mg/kWh input GCV					
GWP of the refrigerant	--	2088	kg CO_2 eq (100 years)					
Standard rating conditions used:	Low temperature application							
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Information requirements for heat pump space heaters and heat pump combination heaters							
Model(s):				CSAD UiAWP 100 PS			
Air-to-water heat pump:				YES			
Water-to-water heat pump:				NO			
Brine-to-water heat pump:				NO			
Low-temperature heat pump:				YES			
Equipped with a supplementary heater:				NO			
Heat pump combination heater:				NO			
Declared climate condition:				AVERAGE			
Parameters are declared for low-temperature application.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	20.8	KW	Seasonal space heating energy efficiency	η_s	128	%
Declared capacity for heating for part load at outdoor temperature T_j				Declared coefficient of performance or primary energy ratio for part load at outdoor temperature T_j			
$T_j = -7\text{ C}$	Pdh	18.47	KW	$T_j = -7\text{ C}$	COPd	2.56	-
$T_j = 2\text{ C}$	Pdh	10.26	KW	$T_j = 2\text{ C}$	COPd	3.64	-
$T_j = 7\text{ C}$	Pdh	6.69	KW	$T_j = 7\text{ C}$	COPd	4.73	-
$T_j = 12\text{ C}$	Pdh	6.63	KW	$T_j = 12\text{ C}$	COPd	6.04	-
T_j =bivalent temperature	Pdh	18.47	KW	T_j =bivalent temperature	COPd	2.56	-
T_j = operating limit	Pdh	21.18	KW	T_j = operating limit	COPd	2.25	-
For air-to-water heat pumps: $T_j = -15\text{ C}$	Pdh	-	KW	For air-to-water heat pumps: $T_j = -15\text{ C}$	COPd	-	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcy ch	-	KW	Cycling interval efficiency	COPcy c	-	-
Degradation co-efficient (**)	Cdh	0.9	--	Heating water operating limit temperature	WTOL	-	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Pof f	0.075	kW	Rated heat output (**)	Psup	-	-
Standby mode	Psb	0.075	kW				
Thermostat-off mode	Pto	0.5	kW	Type of energy input	-		
Crankcase heater mode	Pck	0.075	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	12500	m ³ /h
Sound power level, outdoors	LWA	78	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heatexchanger	-	-	m ³ /h
Annual energy consumption	QHE	13189	kWh				
For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
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(*) 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 = 0,99.							

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Water-to-water heat pump:		NO					
Brine-to-water heat pump:		NO					
Low-temperature heat pump:		YES					
Equipped with a supplementary heater:		NO					
Heat pump combination heater:		NO					
Declared climate condition:		AVERAGE					
Parameters are declared for low-temperature application.							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	31	KW	Seasonal space heating energy efficiency	η_s	135	%
Declared capacity for heating for part load at outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at outdoor temperature Tj			
Tj = -7°C	Pdh	26.1	KW	Tj = -7°C	COPd	2.59	-
Tj = 2°C	Pdh	16.7	KW	Tj = 2°C	COPd	3.56	-
Tj = 7°C	Pdh	11.8	KW	Tj = 7°C	COPd	3.87	-
Tj = 12°C	Pdh	11.2	KW	Tj = 12°C	COPd	5.70	-
Tj=bivalent temperature	Pdh	31.0	KW	Tj=bivalent temperature	COPd	2.32	-
Tj = operating limit	Pdh	31.0	KW	Tj = operating limit	COPd	2.32	-
For air-to-water heat pumps: Tj = -15°C	Pdh	-	KW	For air-to-water heat pumps: Tj = -15°C	COPd	-	-
Bivalent temperature	Tbiv	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcy ch	-	KW	Cycling interval efficiency	COPcy c	-	-
Degradation co-efficient (**)	Cdh	0.99	--	Heating water operating limit temperature	WTOL	35	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	Pof f	0.075	kW	Rated heat output (**)	Psup	-	-
Standby mode	Psb	0.075	kW				
Thermostat-off mode	Pto	0.600	kW	Type of energy input	-		
Crankcase heater mode	Pck	0.075	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	24000	m ³ /h
Sound power level, outdoors	LWA	86	dB	For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heatexchanger	-	-	m ³ /h
Annual energy consumption	QHE	18998	kWh				
For heat pump combination heater:							
Declared load profile	-			Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Qelec	-	kWh	Daily fuel consumption	Qf uel	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ
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(*) 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 =0.99.							