EcoDesign Manual

Modular air-to-water chillers

NEMESIS KWS

COMFORT

EN

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Cooling Only

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NEMESIS AIR-WATER CHILLER

Information requirements in accordance with Regulation (EU) 2016/2281

Model		**KWS1100UNS3C**
Refrigerant fluid		R454B
Outdoor heat exchanger of the chiller:		Air
Indoor heat exchanger of the chiller:		Water
Aplication temperatures	12/7ºC	Low temperature
Type:		Vapor compression by compressor
Compressor drive:		Electric motor

Refrigeration Mode

Element	Symbol	Value	Unit
Declared cooling capacity	$P_{rated,c}$	98.2	kW
Declared cooling capacity for part load at the given outdoor temperatures T j and indoor temperature of 27°C/19°C (dry/wet bulb)			
T_j = + 35 °C	Pdc	98.2	kW
T_j = + 30 °C	Pdc	113.6	kW
T_j = + 25 °C	Pdc	64.3	kW
T_j = + 20 °C	Pdc	71.1	kW
Degradation coefficient	Cdc	0.9	---

Element	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	174.9	%
Declared energy efficiency ratio or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = + 35 °C	EER_d	3.17	%
T_j = + 30 °C	EER_d	4.03	%
T_j = + 25 °C	EER_d	5.12	%
T_j = + 20 °C	EER_d	6.09	%

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW

Crankcase heater mode	P_{CK}	0.130	kW
Standby mode	P_{SB}	0.024	kW

Other elements

Power control	Stepped		
Sound power level (indoor/outdoor)	L_{WA}	84.4	dB(A)
Nitrogen oxide emissions	NO_X	0	mg/kWh of fuel consumption (GCV)
Refrigerant GWP	—	466	Global warming potential (100 years)

Air-to-water comfort chillers: airflow (outdoor)	—	40500	m^3/h

Contact information	Manufactured by KEYTER TECHNOLOGIES S.L. - P.I. Los Santos, C/ José Estrada Orellana, 2 - C.P.: 14900 - Lucena, Córdoba (SPAIN) - Phone: +34 957 51 07 52

NEMESIS AIR-WATER CHILLER

Information requirements in accordance with Regulation (EU) 2016/2281

Model		**KWS1120UNS3C**
Refrigerant fluid		R454B
Outdoor heat exchanger of the chiller:		Air
Indoor heat exchanger of the chiller:		Water
Aplication temperatures	12/7ºC	Low temperature
Type:		Vapor compression by compressor
Compressor drive:		Electric motor

Refrigeration Mode

Element	Symbol	Value	Unit
Declared cooling capacity	$P_{rated,c}$	107.9	kW
Declared cooling capacity for part load at the given outdoor temperatures T j and indoor temperature of 27°C/19°C (dry/wet bulb)			
T_j = + 35 °C	Pdc	107.9	kW
T_j = + 30 °C	Pdc	125.2	kW
T_j = + 25 °C	Pdc	70.8	kW
T_j = + 20 °C	Pdc	78.2	kW
Degradation coefficient	Cdc	0.9	---

Element	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	172.8	%
Declared energy efficiency ratio or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = + 35 °C	EER_d	3.11	%
T_j = + 30 °C	EER_d	3.97	%
T_j = + 25 °C	EER_d	5.05	%
T_j = + 20 °C	EER_d	6.02	%

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW

Crankcase heater mode	P_{CK}	0.130	kW
Standby mode	P_{SB}	0.024	kW

Other elements

Power control	Stepped		
Sound power level (indoor/outdoor)	L_{WA}	85.7	dB(A)
Nitrogen oxide emissions	NO_x	0	mg/kWh of fuel consumption (GCV)
Refrigerant GWP	—	466	Global warming potential (100 years)

Air-to-water comfort chillers: airflow (outdoor)	—	40500	m^3/h

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NEMESIS AIR-WATER CHILLER

Information requirements in accordance with Regulation (EU) 2016/2281

Model		**KWS1150UNS3C**
Refrigerant fluid		R454B
Outdoor heat exchanger of the chiller:		Air
Indoor heat exchanger of the chiller:		Water
Aplication temperatures	12/7ºC	Low temperature
Type:		Vapor compression by compressor
Compressor drive:		Electric motor

Refrigeration Mode

Element	Symbol	Value	Unit
Declared cooling capacity	$P_{rated,c}$	131.6	kW
Declared cooling capacity for part load at the given outdoor temperatures T j and indoor temperature of 27°C/19°C (dry/wet bulb)			
T_j = + 35 °C	Pdc	131.6	kW
T_j = + 30 °C	Pdc	159.2	kW
T_j = + 25 °C	Pdc	89.9	kW
T_j = + 20 °C	Pdc	99.3	kW
Degradation coefficient	Cdc	0.9	---

Element	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	172.9	%
Declared energy efficiency ratio or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = + 35 °C	EER_d	2.89	%
T_j = + 30 °C	EER_d	4.01	%
T_j = + 25 °C	EER_d	5.09	%
T_j = + 20 °C	EER_d	6.06	%

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW

Crankcase heater mode	P_{CK}	0.130	kW
Standby mode	P_{SB}	0.024	kW

Other elements

Power control	Stepped		
Sound power level (indoor/outdoor)	L_{WA}	85.8	dB(A)
Nitrogen oxide emissions	NO_X	0	mg/kWh of fuel consumption (GCV)
Refrigerant GWP	—	466	Global warming potential (100 years)

Air-to-water comfort chillers: airflow (outdoor)	—	40500	m^3/h

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NEMESIS AIR-WATER CHILLER

Information requirements in accordance with Regulation (EU) 2016/2281

Model		**KWS1190UNS3C**
Refrigerant fluid		R454B
Outdoor heat exchanger of the chiller:		Air
Indoor heat exchanger of the chiller:		Water
Aplication temperatures	12/7ºC	Low temperature
Type:		Vapor compression by compressor
Compressor drive:		Electric motor

Refrigeration Mode

Element	Symbol	Value	Unit
Declared cooling capacity	$P_{rated,c}$	164.6	kW
Declared cooling capacity for part load at the given outdoor temperatures T j and indoor temperature of 27°C/19°C (dry/wet bulb)			
T_j = + 35 °C	**Pdc**	164.6	kW
T_j = + 30 °C	**Pdc**	190.2	kW
T_j = + 25 °C	**Pdc**	107.6	kW
T_j = + 20 °C	**Pdc**	118.7	kW
Degradation coefficient	**Cdc**	0.9	---

Element	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	171.7	%
Declared energy efficiency ratio or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = + 35 °C	EER_d	3.08	%
T_j = + 30 °C	EER_d	3.92	%
T_j = + 25 °C	EER_d	4.97	%
T_j = + 20 °C	EER_d	5.91	%

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW

Crankcase heater mode	P_{CK}	0.130	kW
Standby mode	P_{SB}	0.024	kW

Other elements

Power control	Stepped		
Sound power level (indoor/outdoor)	L_{WA}	92.3	dB(A)
Nitrogen oxide emissions	NO_x	0	mg/kWh of fuel consumption (GCV)
Refrigerant GWP	—	466	Global warming potential (100 years)

Air-to-water comfort chillers: airflow (outdoor)	—	40500	m^3/h

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NEMESIS AIR-WATER CHILLER

Information requirements in accordance with Regulation (EU) 2016/2281

Model		**KWS1240UNS3C**
Refrigerant fluid		R454B
Outdoor heat exchanger of the chiller:		Air
Indoor heat exchanger of the chiller:		Water
Aplication temperatures	12/7ºC	Low temperature
Type:		Vapor compression by compressor
Compressor drive:		Electric motor

Refrigeration Mode

Element	Symbol	Value	Unit
Declared cooling capacity	$P_{rated,c}$	201.6	kW
Declared cooling capacity for part load at the given outdoor temperatures T j and indoor temperature of 27°C/19°C (dry/wet bulb)			
T_j = + 35 °C	Pdc	201.6	kW
T_j = + 30 °C	Pdc	240.9	kW
T_j = + 25 °C	Pdc	135.9	kW
T_j = + 20 °C	Pdc	150.0	kW
Degradation coefficient	Cdc	0.9	---

Element	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	177.2	%
Declared energy efficiency ratio or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = + 35 °C	EER_d	3.00	%
T_j = + 30 °C	EER_d	4.09	%
T_j = + 25 °C	EER_d	5.16	%
T_j = + 20 °C	EER_d	6.19	%

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW

Crankcase heater mode	P_{CK}	0.130	kW
Standby mode	P_{SB}	0.024	kW

Other elements

Power control	Stepped		
Sound power level (indoor/outdoor)	L_{WA}	91.9	dB(A)
Nitrogen oxide emissions	NO_X	0	mg/kWh of fuel consumption (GCV)
Refrigerant GWP	—	466	Global warming potential (100 years)

Air-to-water comfort chillers: airflow (outdoor)	—	49000	m^3/h

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