EcoDesign Manual

Air-to-water reversible heat pumps

ZIRAN PRO KWR

COMFORT

EN

KEYTER TECHNOLOGIES, S.L. – A-3132 Road km 15 – P.O. Box 650 – 14900 Lucena, Córdoba, Spain | Tel: +34 957 510 752 | www.keyter.com | info@keyter.com

EcoDesign Manual

Air-to-water reversible heat pumps

ZIRAN PRO KWR

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Reversible Heat Pump (Cooling Mode)

EN

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR1030IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	33.4	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	33.4	kW
T_j = + 30 ºC	**Pdc**	27.1	kW
T_j = + 25 ºC	**Pdc**	22.5	kW
T_j = + 20 ºC	**Pdc**	24.5	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	168.0	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	3.0	%
T_j = + 30 ºC	EER_d	3.9	%
T_j = + 25 ºC	EER_d	4.8	%
T_j = + 20 ºC	EER_d	6.1	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0.0/87	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	19000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR1030IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD+SAND.20mm

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	33.4	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	33.4	kW
T_j = + 30 ºC	**Pdc**	27.1	kW
T_j = + 25 ºC	**Pdc**	22.5	kW
T_j = + 20 ºC	**Pdc**	24.5	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	168.0	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	3.0	%
T_j = + 30 ºC	EER_d	3.9	%
T_j = + 25 ºC	EER_d	4.8	%
T_j = + 20 ºC	EER_d	6.1	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0.0/84	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	19000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR1060IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	55.2	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	55.2	kW
T_j = + 30 ºC	**Pdc**	42.3	kW
T_j = + 25 ºC	**Pdc**	39.2	kW
T_j = + 20 ºC	**Pdc**	43.7	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	162.0	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.7	%
T_j = + 30 ºC	EER_d	3.5	%
T_j = + 25 ºC	EER_d	4.8	%
T_j = + 20 ºC	EER_d	6.5	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0,0/91.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	19000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR1060IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD+SAND.20mm

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	55.2	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	55.2	kW
T_j = + 30 ºC	**Pdc**	42.3	kW
T_j = + 25 ºC	**Pdc**	39.2	kW
T_j = + 20 ºC	**Pdc**	43.7	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	162.0	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.7	%
T_j = + 30 ºC	EER_d	3.5	%
T_j = + 25 ºC	EER_d	4.8	%
T_j = + 20 ºC	EER_d	6.5	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0.0/88.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	19000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR2070IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	72.5	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	72.5	kW
T_j = + 30 ºC	**Pdc**	57.2	kW
T_j = + 25 ºC	**Pdc**	33.4	kW
T_j = + 20 ºC	**Pdc**	36.3	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	167.9	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.6	%
T_j = + 30 ºC	EER_d	3.6	%
T_j = + 25 ºC	EER_d	4.8	%
T_j = + 20 ºC	EER_d	5.9	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0,0/92.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	38000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR2070IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD+SAND.20mm

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	72.5	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	72.5	kW
T_j = + 30 ºC	**Pdc**	57.2	kW
T_j = + 25 ºC	**Pdc**	33.4	kW
T_j = + 20 ºC	**Pdc**	36.3	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	167.9	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.6	%
T_j = + 30 ºC	EER_d	3.6	%
T_j = + 25 ºC	EER_d	4.8	%
T_j = + 20 ºC	EER_d	5.9	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0.0/89.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	38000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR2080IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	81.0	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	81.0	kW
T_j = + 30 ºC	**Pdc**	64.6	kW
T_j = + 25 ºC	**Pdc**	37.8	kW
T_j = + 20 ºC	**Pdc**	42.1	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	162.6	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.5	%
T_j = + 30 ºC	EER_d	3.5	%
T_j = + 25 ºC	EER_d	4.6	%
T_j = + 20 ºC	EER_d	5.8	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0,0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	38000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR2080IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD+SAND.20mm

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	81.0	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	81.0	kW
T_j = + 30 ºC	**Pdc**	64.6	kW
T_j = + 25 ºC	**Pdc**	37.8	kW
T_j = + 20 ºC	**Pdc**	42.1	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	162.6	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.5	%
T_j = + 30 ºC	EER_d	3.5	%
T_j = + 25 ºC	EER_d	4.6	%
T_j = + 20 ºC	EER_d	5.8	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0.0/91.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	38000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR2100IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	92.0	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	92.0	kW
T_j = + 30 ºC	**Pdc**	74.5	kW
T_j = + 25 ºC	**Pdc**	47.8	kW
T_j = + 20 ºC	**Pdc**	51.9	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	162.1	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.3	%
T_j = + 30 ºC	EER_d	3.5	%
T_j = + 25 ºC	EER_d	4.7	%
T_j = + 20 ºC	EER_d	5.8	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0,0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	38000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR2100IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD+SAND.20mm

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	92.0	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	92.0	kW
T_j = + 30 ºC	**Pdc**	74.5	kW
T_j = + 25 ºC	**Pdc**	47.8	kW
T_j = + 20 ºC	**Pdc**	51.9	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	162.1	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.3	%
T_j = + 30 ºC	EER_d	3.5	%
T_j = + 25 ºC	EER_d	4.7	%
T_j = + 20 ºC	EER_d	5.8	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0.0/91.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	38000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR3120IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	113.5	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	113.5	kW
T_j = + 30 ºC	**Pdc**	86.4	kW
T_j = + 25 ºC	**Pdc**	58.3	kW
T_j = + 20 ºC	**Pdc**	40.1	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	164.1	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.8	%
T_j = + 30 ºC	EER_d	3.6	%
T_j = + 25 ºC	EER_d	4.5	%
T_j = + 20 ºC	EER_d	5.4	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0,0/94.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	38000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR3120IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD+SAND.20mm

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	113.5	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	113.5	kW
T_j = + 30 ºC	**Pdc**	86.4	kW
T_j = + 25 ºC	**Pdc**	58.3	kW
T_j = + 20 ºC	**Pdc**	40.1	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	164.1	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.8	%
T_j = + 30 ºC	EER_d	3.6	%
T_j = + 25 ºC	EER_d	4.5	%
T_j = + 20 ºC	EER_d	5.4	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0.0/91.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	38000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR4140IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	148.1	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	148.1	kW
T_j = + 30 ºC	**Pdc**	115.7	kW
T_j = + 25 ºC	**Pdc**	76.7	kW
T_j = + 20 ºC	**Pdc**	35.1	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	169.7	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.7	%
T_j = + 30 ºC	EER_d	3.7	%
T_j = + 25 ºC	EER_d	4.7	%
T_j = + 20 ºC	EER_d	5.4	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0,0/95.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	76000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR4140IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD+SAND.20mm

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	148.1	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	148.1	kW
T_j = + 30 ºC	**Pdc**	115.7	kW
T_j = + 25 ºC	**Pdc**	76.7	kW
T_j = + 20 ºC	**Pdc**	35.1	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	169.7	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.7	%
T_j = + 30 ºC	EER_d	3.7	%
T_j = + 25 ºC	EER_d	4.7	%
T_j = + 20 ºC	EER_d	5.4	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0.0/92.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	76000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR4160IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	167.6	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	167.6	kW
T_j = + 30 ºC	**Pdc**	131.7	kW
T_j = + 25 ºC	**Pdc**	87.3	kW
T_j = + 20 ºC	**Pdc**	40.0	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	165.6	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.6	%
T_j = + 30 ºC	EER_d	3.6	%
T_j = + 25 ºC	EER_d	4.6	%
T_j = + 20 ºC	EER_d	5.3	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0,0/97.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	76000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR4160IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD+SAND.20mm

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	167.6	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	167.6	kW
T_j = + 30 ºC	**Pdc**	131.7	kW
T_j = + 25 ºC	**Pdc**	87.3	kW
T_j = + 20 ºC	**Pdc**	40.0	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	165.6	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.6	%
T_j = + 30 ºC	EER_d	3.6	%
T_j = + 25 ºC	EER_d	4.6	%
T_j = + 20 ºC	EER_d	5.3	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0.0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	76000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR4200IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	193.9	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	193.9	kW
T_j = + 30 ºC	**Pdc**	157.1	kW
T_j = + 25 ºC	**Pdc**	91.8	kW
T_j = + 20 ºC	**Pdc**	49.5	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	162.7	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.5	%
T_j = + 30 ºC	EER_d	3.5	%
T_j = + 25 ºC	EER_d	4.5	%
T_j = + 20 ºC	EER_d	5.5	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0,0/97.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	76000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 2016/2281

Model:	**KWR4200IVS4D**
Refrigerant fluid:	R290
Outdoor side heat exchanger chiller:	air
Indoor side heat exchanger chiller:	water
Type:	compressor driven vapour compression
Driver of compressor:	electric motor
Application temperatures:	12/7˚C
Acoustic elements:	STD+SAND.20mm

COOLING MODE

Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	193.9	kW
Declared cooling capacity for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	**Pdc**	193.9	kW
T_j = + 30 ºC	**Pdc**	157.1	kW
T_j = + 25 ºC	**Pdc**	91.8	kW
T_j = + 20 ºC	**Pdc**	49.5	kW
Degradation co-efficient	**Cdc**	0.9	---

Item	Symbol	Value	Unit
Seasonal space cooling energy efficiency	$\eta_{s,c}$	162.7	%
Declared energy efficiency ratio or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
T_j = + 35 ºC	EER_d	2.5	%
T_j = + 30 ºC	EER_d	3.5	%
T_j = + 25 ºC	EER_d	4.5	%
T_j = + 20 ºC	EER_d	5.5	%

Power 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}	0.000	kW
Standby mode	P_{SB}	0.024	kW

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (outdoor)	L_{WA}	0.0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh input *GCV*
GWP of the refrigerant	---	3	kg CO_2 eq (100 years)

For air-to-water comfort chillers: air flow rate, outdoor measured	---	76000	m^3/h
For water/brine-to-water chillers: rated brine or water flow rate, outdoor side heat exchanger	---	N/A	m^3/h

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

EcoDesign Manual

Air-to-water reversible heat pumps

ZIRAN PRO KWR

COMFORT

Reversible Heat Pump (Heating Mode)

EN

KEYTER TECHNOLOGIES, S.L. – A-3132 Road km 15 – P.O. Box 650 – 14900 Lucena, Córdoba, Spain | Tel: +34 957 510 752 | www.keyter.com | info@keyter.com

EcoDesign Manual

Air-to-water reversible heat pumps

ZIRAN PRO KWR

COMFORT

Reversible Heat Pump (Heating Mode)

Average climate 30/35ºC

EN

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ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1030IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	35	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	25.6	kW
T_j = + 2 ºC	***Pdh***	19.9	kW
T_j = + 7 ºC	***Pdh***	21.6	kW
T_j = + 12 ºC	***Pdh***	25.6	kW
T_j = bivalent temperature	***Pdh***	28.2	kW
T_j = operation limit temperature	***Pdh***	22.9	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	163	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.1	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	5.3	---
T_j = + 12 ºC	***COPd***	6.8	---
T_j = bivalent temperature	***COPd***	2.9	---
T_j = operation limit temperature	***COPd***	3.4	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	11.9	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/87	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1030IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	35	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	25.6	kW
T_j = + 2 ºC	***Pdh***	19.9	kW
T_j = + 7 ºC	***Pdh***	21.6	kW
T_j = + 12 ºC	***Pdh***	25.6	kW
T_j = bivalent temperature	***Pdh***	28.2	kW
T_j = operation limit temperature	***Pdh***	22.9	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	163	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.1	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	5.3	---
T_j = + 12 ºC	***COPd***	6.8	---
T_j = bivalent temperature	***COPd***	2.9	---
T_j = operation limit temperature	***COPd***	3.4	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	11.9	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/84	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1060IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	58	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	43.0	kW
T_j = + 2 ºC	***Pdh***	33.5	kW
T_j = + 7 ºC	***Pdh***	35.7	kW
T_j = + 12 ºC	***Pdh***	42.1	kW
T_j = bivalent temperature	***Pdh***	46.9	kW
T_j = operation limit temperature	***Pdh***	38.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.1	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	5.2	---
T_j = + 12 ºC	***COPd***	6.5	---
T_j = bivalent temperature	***COPd***	2.9	---
T_j = operation limit temperature	***COPd***	3.4	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	19.8	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1060IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	58	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	43.0	kW
T_j = + 2 ºC	***Pdh***	33.5	kW
T_j = + 7 ºC	***Pdh***	35.7	kW
T_j = + 12 ºC	***Pdh***	42.1	kW
T_j = bivalent temperature	***Pdh***	46.9	kW
T_j = operation limit temperature	***Pdh***	38.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.1	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	5.2	---
T_j = + 12 ºC	***COPd***	6.5	---
T_j = bivalent temperature	***COPd***	2.9	---
T_j = operation limit temperature	***COPd***	3.4	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	19.8	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/88.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2070IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	80	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	59.6	kW
T_j = + 2 ºC	***Pdh***	46.6	kW
T_j = + 7 ºC	***Pdh***	36.6	kW
T_j = + 12 ºC	***Pdh***	42.7	kW
T_j = bivalent temperature	***Pdh***	64.5	kW
T_j = operation limit temperature	***Pdh***	52.9	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.0	---
T_j = + 2 ºC	***COPd***	4.1	---
T_j = + 7 ºC	***COPd***	5.5	---
T_j = + 12 ºC	***COPd***	6.8	---
T_j = bivalent temperature	***COPd***	2.8	---
T_j = operation limit temperature	***COPd***	3.2	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	27.0	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/92.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	35000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2070IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	80	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	59.6	kW
T_j = + 2 ºC	***Pdh***	46.6	kW
T_j = + 7 ºC	***Pdh***	36.6	kW
T_j = + 12 ºC	***Pdh***	42.7	kW
T_j = bivalent temperature	***Pdh***	64.5	kW
T_j = operation limit temperature	***Pdh***	52.9	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.0	---
T_j = + 2 ºC	***COPd***	4.1	---
T_j = + 7 ºC	***COPd***	5.5	---
T_j = + 12 ºC	***COPd***	6.8	---
T_j = bivalent temperature	***COPd***	2.8	---
T_j = operation limit temperature	***COPd***	3.2	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	27.0	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/89.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	35000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2080IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	94	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	73.9	kW
T_j = + 2 ºC	***Pdh***	52.4	kW
T_j = + 7 ºC	***Pdh***	41.4	kW
T_j = + 12 ºC	***Pdh***	49.0	kW
T_j = bivalent temperature	***Pdh***	75.8	kW
T_j = operation limit temperature	***Pdh***	62.7	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.1	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	5.1	---
T_j = + 12 ºC	***COPd***	6.5	---
T_j = bivalent temperature	***COPd***	2.7	---
T_j = operation limit temperature	***COPd***	3.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	31.2	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2080IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	94	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	73.9	kW
T_j = + 2 ºC	***Pdh***	52.4	kW
T_j = + 7 ºC	***Pdh***	41.4	kW
T_j = + 12 ºC	***Pdh***	49.0	kW
T_j = bivalent temperature	***Pdh***	75.8	kW
T_j = operation limit temperature	***Pdh***	62.7	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.1	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	5.1	---
T_j = + 12 ºC	***COPd***	6.5	---
T_j = bivalent temperature	***COPd***	2.7	---
T_j = operation limit temperature	***COPd***	3.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	31.2	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2100IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	110	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	86.7	kW
T_j = + 2 ºC	***Pdh***	61.5	kW
T_j = + 7 ºC	***Pdh***	48.7	kW
T_j = + 12 ºC	***Pdh***	57.7	kW
T_j = bivalent temperature	***Pdh***	88.5	kW
T_j = operation limit temperature	***Pdh***	72.7	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.2	---
T_j = + 2 ºC	***COPd***	4.2	---
T_j = + 7 ºC	***COPd***	5.1	---
T_j = + 12 ºC	***COPd***	6.8	---
T_j = bivalent temperature	***COPd***	2.7	---
T_j = operation limit temperature	***COPd***	3.0	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	36.8	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2100IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	110	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	86.7	kW
T_j = + 2 ºC	***Pdh***	61.5	kW
T_j = + 7 ºC	***Pdh***	48.7	kW
T_j = + 12 ºC	***Pdh***	57.7	kW
T_j = bivalent temperature	***Pdh***	88.5	kW
T_j = operation limit temperature	***Pdh***	72.7	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.2	---
T_j = + 2 ºC	***COPd***	4.2	---
T_j = + 7 ºC	***COPd***	5.1	---
T_j = + 12 ºC	***COPd***	6.8	---
T_j = bivalent temperature	***COPd***	2.7	---
T_j = operation limit temperature	***COPd***	3.0	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	36.8	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR3120IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	115	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	84.3	kW
T_j = + 2 ºC	***Pdh***	59.8	kW
T_j = + 7 ºC	***Pdh***	38.8	kW
T_j = + 12 ºC	***Pdh***	41.5	kW
T_j = bivalent temperature	***Pdh***	92.8	kW
T_j = operation limit temperature	***Pdh***	78.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	162	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.2	---
T_j = + 2 ºC	***COPd***	4.4	---
T_j = + 7 ºC	***COPd***	4.5	---
T_j = + 12 ºC	***COPd***	5.4	---
T_j = bivalent temperature	***COPd***	3.1	---
T_j = operation limit temperature	***COPd***	3.5	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	36.7	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR3120IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	115	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	84.3	kW
T_j = + 2 ºC	***Pdh***	59.8	kW
T_j = + 7 ºC	***Pdh***	38.8	kW
T_j = + 12 ºC	***Pdh***	41.5	kW
T_j = bivalent temperature	***Pdh***	92.8	kW
T_j = operation limit temperature	***Pdh***	78.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	162	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.2	---
T_j = + 2 ºC	***COPd***	4.4	---
T_j = + 7 ºC	***COPd***	4.5	---
T_j = + 12 ºC	***COPd***	5.4	---
T_j = bivalent temperature	***COPd***	3.1	---
T_j = operation limit temperature	***COPd***	3.5	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	36.7	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4140IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	148	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	116.8	kW
T_j = + 2 ºC	***Pdh***	84.0	kW
T_j = + 7 ºC	***Pdh***	55.0	kW
T_j = + 12 ºC	***Pdh***	39.2	kW
T_j = bivalent temperature	***Pdh***	119.5	kW
T_j = operation limit temperature	***Pdh***	100.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	162	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.2	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	4.9	---
T_j = + 12 ºC	***COPd***	5.8	---
T_j = bivalent temperature	***COPd***	2.7	---
T_j = operation limit temperature	***COPd***	3.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	47.6	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/95.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	70000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4140IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	148	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	116.8	kW
T_j = + 2 ºC	***Pdh***	84.0	kW
T_j = + 7 ºC	***Pdh***	55.0	kW
T_j = + 12 ºC	***Pdh***	39.2	kW
T_j = bivalent temperature	***Pdh***	119.5	kW
T_j = operation limit temperature	***Pdh***	100.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	162	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.2	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	4.9	---
T_j = + 12 ºC	***COPd***	5.8	---
T_j = bivalent temperature	***COPd***	2.7	---
T_j = operation limit temperature	***COPd***	3.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	47.6	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/92.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	70000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4160IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	176	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	138.9	kW
T_j = + 2 ºC	***Pdh***	99.2	kW
T_j = + 7 ºC	***Pdh***	64.9	kW
T_j = + 12 ºC	***Pdh***	46.1	kW
T_j = bivalent temperature	***Pdh***	142.1	kW
T_j = operation limit temperature	***Pdh***	119.9	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.2	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	4.9	---
T_j = + 12 ºC	***COPd***	5.7	---
T_j = bivalent temperature	***COPd***	2.7	---
T_j = operation limit temperature	***COPd***	3.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	56.1	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/97.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4160IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	176	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	138.9	kW
T_j = + 2 ºC	***Pdh***	99.2	kW
T_j = + 7 ºC	***Pdh***	64.9	kW
T_j = + 12 ºC	***Pdh***	46.1	kW
T_j = bivalent temperature	***Pdh***	142.1	kW
T_j = operation limit temperature	***Pdh***	119.9	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.2	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	4.9	---
T_j = + 12 ºC	***COPd***	5.7	---
T_j = bivalent temperature	***COPd***	2.7	---
T_j = operation limit temperature	***COPd***	3.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	56.1	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4200IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	213	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	169.3	kW
T_j = + 2 ºC	***Pdh***	120.5	kW
T_j = + 7 ºC	***Pdh***	78.7	kW
T_j = + 12 ºC	***Pdh***	55.9	kW
T_j = bivalent temperature	***Pdh***	172.3	kW
T_j = operation limit temperature	***Pdh***	145.6	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.2	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	4.9	---
T_j = + 12 ºC	***COPd***	5.7	---
T_j = bivalent temperature	***COPd***	2.7	---
T_j = operation limit temperature	***COPd***	3.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	67.8	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/97.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4200IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	30/35˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	213	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	169.3	kW
T_j = + 2 ºC	***Pdh***	120.5	kW
T_j = + 7 ºC	***Pdh***	78.7	kW
T_j = + 12 ºC	***Pdh***	55.9	kW
T_j = bivalent temperature	***Pdh***	172.3	kW
T_j = operation limit temperature	***Pdh***	145.6	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	161	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	3.2	---
T_j = + 2 ºC	***COPd***	4.3	---
T_j = + 7 ºC	***COPd***	4.9	---
T_j = + 12 ºC	***COPd***	5.7	---
T_j = bivalent temperature	***COPd***	2.7	---
T_j = operation limit temperature	***COPd***	3.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	67.8	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

EcoDesign Manual

Air-to-water reversible heat pumps

ZIRAN PRO KWR

COMFORT

Reversible Heat Pump (Heating Mode)

Average climate 47/55ºC

EN

KEYTER TECHNOLOGIES, S.L. – A-3132 Road km 15 – P.O. Box 650 – 14900 Lucena, Córdoba, Spain | Tel: +34 957 510 752 | www.keyter.com | info@keyter.com

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1030IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	33	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	24.3	kW
T_j = + 2 ºC	***Pdh***	18.3	kW
T_j = + 7 ºC	***Pdh***	21.3	kW
T_j = + 12 ºC	***Pdh***	24.7	kW
T_j = bivalent temperature	***Pdh***	26.8	kW
T_j = operation limit temperature	***Pdh***	20.8	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	143.2	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.9	---
T_j = + 7 ºC	***COPd***	4.7	---
T_j = + 12 ºC	***COPd***	5.8	---
T_j = bivalent temperature	***COPd***	2.3	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	12.3	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/87	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1030IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	33	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	24.3	kW
T_j = + 2 ºC	***Pdh***	18.3	kW
T_j = + 7 ºC	***Pdh***	21.3	kW
T_j = + 12 ºC	***Pdh***	24.7	kW
T_j = bivalent temperature	***Pdh***	26.8	kW
T_j = operation limit temperature	***Pdh***	20.8	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	143.2	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.9	---
T_j = + 7 ºC	***COPd***	4.7	---
T_j = + 12 ºC	***COPd***	5.8	---
T_j = bivalent temperature	***COPd***	2.3	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	12.3	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/84	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1060IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	60	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	44.1	kW
T_j = + 2 ºC	***Pdh***	32.4	kW
T_j = + 7 ºC	***Pdh***	37.3	kW
T_j = + 12 ºC	***Pdh***	43.1	kW
T_j = bivalent temperature	***Pdh***	48.1	kW
T_j = operation limit temperature	***Pdh***	38.2	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.2	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.8	---
T_j = + 7 ºC	***COPd***	4.6	---
T_j = + 12 ºC	***COPd***	5.6	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	21.3	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1060IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	60	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	44.1	kW
T_j = + 2 ºC	***Pdh***	32.4	kW
T_j = + 7 ºC	***Pdh***	37.3	kW
T_j = + 12 ºC	***Pdh***	43.1	kW
T_j = bivalent temperature	***Pdh***	48.1	kW
T_j = operation limit temperature	***Pdh***	38.2	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.2	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.8	---
T_j = + 7 ºC	***COPd***	4.6	---
T_j = + 12 ºC	***COPd***	5.6	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	21.3	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/88.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2070IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	75	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	55.7	kW
T_j = + 2 ºC	***Pdh***	41.3	kW
T_j = + 7 ºC	***Pdh***	31.8	kW
T_j = + 12 ºC	***Pdh***	37.0	kW
T_j = bivalent temperature	***Pdh***	61.0	kW
T_j = operation limit temperature	***Pdh***	48.1	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.3	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.7	---
T_j = + 7 ºC	***COPd***	4.5	---
T_j = + 12 ºC	***COPd***	5.7	---
T_j = bivalent temperature	***COPd***	2.3	---
T_j = operation limit temperature	***COPd***	2.7	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	27.4	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/92.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	35000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2070IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	75	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	55.7	kW
T_j = + 2 ºC	***Pdh***	41.3	kW
T_j = + 7 ºC	***Pdh***	31.8	kW
T_j = + 12 ºC	***Pdh***	37.0	kW
T_j = bivalent temperature	***Pdh***	61.0	kW
T_j = operation limit temperature	***Pdh***	48.1	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.3	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.7	---
T_j = + 7 ºC	***COPd***	4.5	---
T_j = + 12 ºC	***COPd***	5.7	---
T_j = bivalent temperature	***COPd***	2.3	---
T_j = operation limit temperature	***COPd***	2.7	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	27.4	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/89.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	35000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2080IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	89	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	65.9	kW
T_j = + 2 ºC	***Pdh***	48.4	kW
T_j = + 7 ºC	***Pdh***	37.3	kW
T_j = + 12 ºC	***Pdh***	43.3	kW
T_j = bivalent temperature	***Pdh***	71.9	kW
T_j = operation limit temperature	***Pdh***	57.1	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.1	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.5	---
T_j = + 2 ºC	***COPd***	3.7	---
T_j = + 7 ºC	***COPd***	4.5	---
T_j = + 12 ºC	***COPd***	5.7	---
T_j = bivalent temperature	***COPd***	2.3	---
T_j = operation limit temperature	***COPd***	2.7	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	32.0	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2080IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	89	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	65.9	kW
T_j = + 2 ºC	***Pdh***	48.4	kW
T_j = + 7 ºC	***Pdh***	37.3	kW
T_j = + 12 ºC	***Pdh***	43.3	kW
T_j = bivalent temperature	***Pdh***	71.9	kW
T_j = operation limit temperature	***Pdh***	57.1	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.1	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.5	---
T_j = + 2 ºC	***COPd***	3.7	---
T_j = + 7 ºC	***COPd***	4.5	---
T_j = + 12 ºC	***COPd***	5.7	---
T_j = bivalent temperature	***COPd***	2.3	---
T_j = operation limit temperature	***COPd***	2.7	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	32.0	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2100IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	108	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	79.9	kW
T_j = + 2 ºC	***Pdh***	58.6	kW
T_j = + 7 ºC	***Pdh***	45.1	kW
T_j = + 12 ºC	***Pdh***	52.3	kW
T_j = bivalent temperature	***Pdh***	87.3	kW
T_j = operation limit temperature	***Pdh***	69.4	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	140.8	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.7	---
T_j = + 7 ºC	***COPd***	4.4	---
T_j = + 12 ºC	***COPd***	5.7	---
T_j = bivalent temperature	***COPd***	2.3	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	38.6	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2100IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	108	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	79.9	kW
T_j = + 2 ºC	***Pdh***	58.6	kW
T_j = + 7 ºC	***Pdh***	45.1	kW
T_j = + 12 ºC	***Pdh***	52.3	kW
T_j = bivalent temperature	***Pdh***	87.3	kW
T_j = operation limit temperature	***Pdh***	69.4	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	140.8	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.7	---
T_j = + 7 ºC	***COPd***	4.4	---
T_j = + 12 ºC	***COPd***	5.7	---
T_j = bivalent temperature	***COPd***	2.3	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	38.6	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR3120IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	117	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	86.5	kW
T_j = + 2 ºC	***Pdh***	63.2	kW
T_j = + 7 ºC	***Pdh***	41.4	kW
T_j = + 12 ºC	***Pdh***	45.1	kW
T_j = bivalent temperature	***Pdh***	94.3	kW
T_j = operation limit temperature	***Pdh***	74.8	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.7	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.7	---
T_j = + 2 ºC	***COPd***	3.8	---
T_j = + 7 ºC	***COPd***	4.2	---
T_j = + 12 ºC	***COPd***	5.3	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	41.9	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR3120IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	117	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	86.5	kW
T_j = + 2 ºC	***Pdh***	63.2	kW
T_j = + 7 ºC	***Pdh***	41.4	kW
T_j = + 12 ºC	***Pdh***	45.1	kW
T_j = bivalent temperature	***Pdh***	94.3	kW
T_j = operation limit temperature	***Pdh***	74.8	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.7	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.7	---
T_j = + 2 ºC	***COPd***	3.8	---
T_j = + 7 ºC	***COPd***	4.2	---
T_j = + 12 ºC	***COPd***	5.3	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	41.9	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4140IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	157	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	116.5	kW
T_j = + 2 ºC	***Pdh***	85.2	kW
T_j = + 7 ºC	***Pdh***	55.8	kW
T_j = + 12 ºC	***Pdh***	60.8	kW
T_j = bivalent temperature	***Pdh***	127.0	kW
T_j = operation limit temperature	***Pdh***	100.6	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.9	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.7	---
T_j = + 2 ºC	***COPd***	3.8	---
T_j = + 7 ºC	***COPd***	4.2	---
T_j = + 12 ºC	***COPd***	5.4	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	56.7	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/95.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	70000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4140IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	157	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	116.5	kW
T_j = + 2 ºC	***Pdh***	85.2	kW
T_j = + 7 ºC	***Pdh***	55.8	kW
T_j = + 12 ºC	***Pdh***	60.8	kW
T_j = bivalent temperature	***Pdh***	127.0	kW
T_j = operation limit temperature	***Pdh***	100.6	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.9	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.7	---
T_j = + 2 ºC	***COPd***	3.8	---
T_j = + 7 ºC	***COPd***	4.2	---
T_j = + 12 ºC	***COPd***	5.4	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	56.7	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/92.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	70000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4160IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	184	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	136.5	kW
T_j = + 2 ºC	***Pdh***	99.2	kW
T_j = + 7 ºC	***Pdh***	64.9	kW
T_j = + 12 ºC	***Pdh***	70.6	kW
T_j = bivalent temperature	***Pdh***	148.6	kW
T_j = operation limit temperature	***Pdh***	118.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.4	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.8	---
T_j = + 7 ºC	***COPd***	4.1	---
T_j = + 12 ºC	***COPd***	5.3	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	65.7	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/97.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4160IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	184	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	136.5	kW
T_j = + 2 ºC	***Pdh***	99.2	kW
T_j = + 7 ºC	***Pdh***	64.9	kW
T_j = + 12 ºC	***Pdh***	70.6	kW
T_j = bivalent temperature	***Pdh***	148.6	kW
T_j = operation limit temperature	***Pdh***	118.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.4	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.8	---
T_j = + 7 ºC	***COPd***	4.1	---
T_j = + 12 ºC	***COPd***	5.3	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	65.7	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4200IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	219	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	162.6	kW
T_j = + 2 ºC	***Pdh***	118.1	kW
T_j = + 7 ºC	***Pdh***	77.2	kW
T_j = + 12 ºC	***Pdh***	84.0	kW
T_j = bivalent temperature	***Pdh***	177.0	kW
T_j = operation limit temperature	***Pdh***	141.1	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	140.8	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.8	---
T_j = + 7 ºC	***COPd***	4.1	---
T_j = + 12 ºC	***COPd***	5.3	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	78.1	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/97.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4200IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	47/55˚C
Equipped with a supplementary heater:	yes
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	219	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	162.6	kW
T_j = + 2 ºC	***Pdh***	118.1	kW
T_j = + 7 ºC	***Pdh***	77.2	kW
T_j = + 12 ºC	***Pdh***	84.0	kW
T_j = bivalent temperature	***Pdh***	177.0	kW
T_j = operation limit temperature	***Pdh***	141.1	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	140.8	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.6	---
T_j = + 2 ºC	***COPd***	3.8	---
T_j = + 7 ºC	***COPd***	4.1	---
T_j = + 12 ºC	***COPd***	5.3	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.8	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	78.1	kW
Type of energy input	Electric		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

EcoDesign Manual

Air-to-water reversible heat pumps

ZIRAN PRO KWR

COMFORT

Reversible Heat Pump (Heating Mode)

Average climate 55/65ºC

EN

KEYTER TECHNOLOGIES, S.L. – A-3132 Road km 15 – P.O. Box 650 – 14900 Lucena, Córdoba, Spain | Tel: +34 957 510 752 | www.keyter.com | info@keyter.com

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1030IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	30	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	21.4	kW
T_j = + 2 ºC	***Pdh***	17.3	kW
T_j = + 7 ºC	***Pdh***	21.1	kW
T_j = + 12 ºC	***Pdh***	24.0	kW
T_j = bivalent temperature	***Pdh***	24.1	kW
T_j = operation limit temperature	***Pdh***	17.8	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	130.8	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.43	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.4	---
T_j = + 2 ºC	***COPd***	3.5	---
T_j = + 7 ºC	***COPd***	4.4	---
T_j = + 12 ºC	***COPd***	5.6	---
T_j = bivalent temperature	***COPd***	2.6	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/84	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1030IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	30	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	21.4	kW
T_j = + 2 ºC	***Pdh***	17.3	kW
T_j = + 7 ºC	***Pdh***	21.1	kW
T_j = + 12 ºC	***Pdh***	24.0	kW
T_j = bivalent temperature	***Pdh***	24.1	kW
T_j = operation limit temperature	***Pdh***	17.8	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	130.8	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.43	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.4	---
T_j = + 2 ºC	***COPd***	3.5	---
T_j = + 7 ºC	***COPd***	4.4	---
T_j = + 12 ºC	***COPd***	5.6	---
T_j = bivalent temperature	***COPd***	2.6	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/84	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1060IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	55	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	39.8	kW
T_j = + 2 ºC	***Pdh***	31.0	kW
T_j = + 7 ºC	***Pdh***	37.3	kW
T_j = + 12 ºC	***Pdh***	42.2	kW
T_j = bivalent temperature	***Pdh***	44.3	kW
T_j = operation limit temperature	***Pdh***	33.9	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	128.7	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.37	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.5	---
T_j = + 7 ºC	***COPd***	4.3	---
T_j = + 12 ºC	***COPd***	5.4	---
T_j = bivalent temperature	***COPd***	2.5	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/88.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR1060IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	55	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	39.8	kW
T_j = + 2 ºC	***Pdh***	31.0	kW
T_j = + 7 ºC	***Pdh***	37.3	kW
T_j = + 12 ºC	***Pdh***	42.2	kW
T_j = bivalent temperature	***Pdh***	44.3	kW
T_j = operation limit temperature	***Pdh***	33.9	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	128.7	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.37	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.5	---
T_j = + 7 ºC	***COPd***	4.3	---
T_j = + 12 ºC	***COPd***	5.4	---
T_j = bivalent temperature	***COPd***	2.5	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/88.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	21000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2070IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65°C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	75	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	54.4	kW
T_j = + 2 ºC	***Pdh***	42.2	kW
T_j = + 7 ºC	***Pdh***	51.0	kW
T_j = + 12 ºC	***Pdh***	60.2	kW
T_j = bivalent temperature	***Pdh***	60.4	kW
T_j = operation limit temperature	***Pdh***	46.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	130.4	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.41	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.5	---
T_j = + 7 ºC	***COPd***	4.4	---
T_j = + 12 ºC	***COPd***	5.8	---
T_j = bivalent temperature	***COPd***	2.5	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/89.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	35000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2070IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65°C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	75	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	54.4	kW
T_j = + 2 ºC	***Pdh***	42.2	kW
T_j = + 7 ºC	***Pdh***	51.0	kW
T_j = + 12 ºC	***Pdh***	60.2	kW
T_j = bivalent temperature	***Pdh***	60.4	kW
T_j = operation limit temperature	***Pdh***	46.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	130.4	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.41	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.5	---
T_j = + 7 ºC	***COPd***	4.4	---
T_j = + 12 ºC	***COPd***	5.8	---
T_j = bivalent temperature	***COPd***	2.5	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/89.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	35000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2080IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65°C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	86	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	62.9	kW
T_j = + 2 ºC	***Pdh***	48.5	kW
T_j = + 7 ºC	***Pdh***	58.6	kW
T_j = + 12 ºC	***Pdh***	69.1	kW
T_j = bivalent temperature	***Pdh***	69.7	kW
T_j = operation limit temperature	***Pdh***	53.7	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	129.0	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.37	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.5	---
T_j = + 7 ºC	***COPd***	4.3	---
T_j = + 12 ºC	***COPd***	5.8	---
T_j = bivalent temperature	***COPd***	2.5	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2080IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65°C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	86	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	62.9	kW
T_j = + 2 ºC	***Pdh***	48.5	kW
T_j = + 7 ºC	***Pdh***	58.6	kW
T_j = + 12 ºC	***Pdh***	69.1	kW
T_j = bivalent temperature	***Pdh***	69.7	kW
T_j = operation limit temperature	***Pdh***	53.7	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	129.0	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.37	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.5	---
T_j = + 7 ºC	***COPd***	4.3	---
T_j = + 12 ºC	***COPd***	5.8	---
T_j = bivalent temperature	***COPd***	2.5	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2100IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65°C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	103	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	75.0	kW
T_j = + 2 ºC	***Pdh***	57.7	kW
T_j = + 7 ºC	***Pdh***	69.7	kW
T_j = + 12 ºC	***Pdh***	82.3	kW
T_j = bivalent temperature	***Pdh***	83.0	kW
T_j = operation limit temperature	***Pdh***	64.0	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	127.6	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.34	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.4	---
T_j = + 7 ºC	***COPd***	4.3	---
T_j = + 12 ºC	***COPd***	5.6	---
T_j = bivalent temperature	***COPd***	2.5	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR2100IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65°C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	103	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	75.0	kW
T_j = + 2 ºC	***Pdh***	57.7	kW
T_j = + 7 ºC	***Pdh***	69.7	kW
T_j = + 12 ºC	***Pdh***	82.3	kW
T_j = bivalent temperature	***Pdh***	83.0	kW
T_j = operation limit temperature	***Pdh***	64.0	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	127.6	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.34	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.4	---
T_j = + 7 ºC	***COPd***	4.3	---
T_j = + 12 ºC	***COPd***	5.6	---
T_j = bivalent temperature	***COPd***	2.5	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.140	kW

Supplementary heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR3120IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	110	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	81.2	kW
T_j = + 2 ºC	***Pdh***	62.2	kW
T_j = + 7 ºC	***Pdh***	41.4	kW
T_j = + 12 ºC	***Pdh***	45.8	kW
T_j = bivalent temperature	***Pdh***	89.2	kW
T_j = operation limit temperature	***Pdh***	69.0	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	133.2	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.48	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.5	---
T_j = + 7 ºC	***COPd***	4.1	---
T_j = + 12 ºC	***COPd***	5.9	---
T_j = bivalent temperature	***COPd***	2.5	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	41.4	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR3120IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	110	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	81.2	kW
T_j = + 2 ºC	***Pdh***	62.2	kW
T_j = + 7 ºC	***Pdh***	41.4	kW
T_j = + 12 ºC	***Pdh***	45.8	kW
T_j = bivalent temperature	***Pdh***	89.2	kW
T_j = operation limit temperature	***Pdh***	69.0	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	133.2	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.48	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.5	---
T_j = + 7 ºC	***COPd***	4.1	---
T_j = + 12 ºC	***COPd***	5.9	---
T_j = bivalent temperature	***COPd***	2.5	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	41.4	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/91.6	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	39000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output ***Prated*** is equal to the design load for heating ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4140IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	143	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	105.4	kW
T_j = + 2 ºC	***Pdh***	81.2	kW
T_j = + 7 ºC	***Pdh***	54.4	kW
T_j = + 12 ºC	***Pdh***	62.9	kW
T_j = bivalent temperature	***Pdh***	115.8	kW
T_j = operation limit temperature	***Pdh***	89.2	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	132.7	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.47	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.4	---
T_j = + 7 ºC	***COPd***	4.2	---
T_j = + 12 ºC	***COPd***	6.2	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	54.1	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/95.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	70000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4140IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	143	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	105.4	kW
T_j = + 2 ºC	***Pdh***	81.2	kW
T_j = + 7 ºC	***Pdh***	54.4	kW
T_j = + 12 ºC	***Pdh***	62.9	kW
T_j = bivalent temperature	***Pdh***	115.8	kW
T_j = operation limit temperature	***Pdh***	89.2	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	132.7	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.47	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.4	---
T_j = + 7 ºC	***COPd***	4.2	---
T_j = + 12 ºC	***COPd***	6.2	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.1	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	54.1	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/92.2	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	70000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4160IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	166	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	122.3	kW
T_j = + 2 ºC	***Pdh***	93.6	kW
T_j = + 7 ºC	***Pdh***	62.6	kW
T_j = + 12 ºC	***Pdh***	72.3	kW
T_j = bivalent temperature	***Pdh***	134.0	kW
T_j = operation limit temperature	***Pdh***	103.8	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	131.5	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.44	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.4	---
T_j = + 7 ºC	***COPd***	4.2	---
T_j = + 12 ºC	***COPd***	6.1	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.0	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	62.1	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/97.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4160IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	166	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	122.3	kW
T_j = + 2 ºC	***Pdh***	93.6	kW
T_j = + 7 ºC	***Pdh***	62.6	kW
T_j = + 12 ºC	***Pdh***	72.3	kW
T_j = bivalent temperature	***Pdh***	134.0	kW
T_j = operation limit temperature	***Pdh***	103.8	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	131.5	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.44	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.4	---
T_j = + 7 ºC	***COPd***	4.2	---
T_j = + 12 ºC	***COPd***	6.1	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.0	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	62.1	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4200IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	198	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	146.1	kW
T_j = + 2 ºC	***Pdh***	111.6	kW
T_j = + 7 ºC	***Pdh***	74.6	kW
T_j = + 12 ºC	***Pdh***	86.2	kW
T_j = bivalent temperature	***Pdh***	160.1	kW
T_j = operation limit temperature	***Pdh***	124.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	130.4	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.41	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.4	---
T_j = + 7 ºC	***COPd***	4.1	---
T_j = + 12 ºC	***COPd***	6.0	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.0	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	73.9	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/97.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

ZIRAN PRO REVERSIBLE HEAT PUMP

Information requirements according to Regulation (EU) 813/2013

Model:	**KWR4200IVS4D**
Refrigerant fluid:	R290
Heat pump type:	air-water
Application temperatures:	55/65˚C
Equipped with a supplementary heater:	no
Heat pump combination heater:	no
Acoustic elements:	STD+SAND.20mm

HEATING MODE

Parameters declared for average climate conditions

Item	Symbol	Value	Unit
Rated heat output (*)	***Prated***	198	kW
Declared capacity for heating for part load at indoor temperature 20 ºC and outdoor temperature T_j			
T_j = - 7 ºC	***Pdh***	146.1	kW
T_j = + 2 ºC	***Pdh***	111.6	kW
T_j = + 7 ºC	***Pdh***	74.6	kW
T_j = + 12 ºC	***Pdh***	86.2	kW
T_j = bivalent temperature	***Pdh***	160.1	kW
T_j = operation limit temperature	***Pdh***	124.3	kW
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	-5	ºC
Degradation co-efficient	***Cdh***	0.9	---

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	130.4	%
Net seasonal coefficient of performance in active mode (**)	***SCOPnet***	3.41	---
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20ºC and outdoor temperature T_j			
T_j = - 7 ºC	***COPd***	2.3	---
T_j = + 2 ºC	***COPd***	3.4	---
T_j = + 7 ºC	***COPd***	4.1	---
T_j = + 12 ºC	***COPd***	6.0	---
T_j = bivalent temperature	***COPd***	2.4	---
T_j = operation limit temperature	***COPd***	2.0	---
For air-to-water heat pumps: T_j = - 15 ºC (if *TOL* < - 20 ºC)	***COPd***	N/A	---
Operation limit temperature	***TOL***	-10	ºC
Heating water operation limit temperature	***WTOL***	70	ºC

Power consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.280	kW

Supplementary heater

Rated heat output (*)	***Psup***	73.9	kW
Type of energy input	N/A		

Other items

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoors/outdoors)	L_{WA}	0/94.1	dB
Emissions of nitrogen oxides	NO_X	0	mg/kWh

For air-to-water heat pumps: rated air flow rate, outdoors	---	78000	m^3/h
For water-/brine-to-water heat pumps: rated brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 ***Pdesign,h*** , and the rated heat output of a supplementary heater ***Psup*** is equal to the supplementary capacity for heating ***sup(Tj)*** .

(**) For electrically driven heat pumps, the net seasonal coefficient of performance in active mode ***SCOPnet*** is equal to the estimated average seasonal performance factor ***SPF*** , parameter that is needed for the calculation of the amount of the renewable energy supplied by heat pumps.

EcoDesign Manual

Air-to-water reversible heat pumps

ZIRAN PRO KWR

COMFORT

Reversible Heat Pump (Heating Mode)

Warmer climate 30/35ºC

EN

KEYTER TECHNOLOGIES, S.L. – A-3132 Road km 15 – P.O. Box 650 – 14900 Lucena, Córdoba, Spain | Tel: +34 957 510 752 | www.keyter.com | info@keyter.com

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-1030-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	30/35ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	35.0	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	***Pdh***	N/A	kW
T_j = + 2 ºC	***Pdh***	35.0	kW
T_j = + 7 ºC	***Pdh***	25.2	kW
T_j = + 12 ºC	***Pdh***	29.7	kW
T j = bivalent temperature	***Pdh***	35.0	kW
T j = operational limit	***Pdh***	35.0	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	2	ºC
Degradation coefficient of heat pumps	***Cdh***	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	206.1	%
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	3.88	---
T_j = + 7 ºC	COP_d	5.20	---
T_j = + 12 ºC	COP_d	6.74	---
T j = bivalent temperature	COP_d	3.88	---
T j = operational limit	COP_d	3.88	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	***TOL***	-10	ºC
Water heating limit temperature	***WTOL***	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/87	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	19905	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	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

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-1060-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	30/35ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	57.7	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	***Pdh***	N/A	kW
T_j = + 2 ºC	***Pdh***	57.7	kW
T_j = + 7 ºC	***Pdh***	35.2	kW
T_j = + 12 ºC	***Pdh***	40.4	kW
T j = bivalent temperature	***Pdh***	57.7	kW
T j = operational limit	***Pdh***	57.7	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	2	ºC
Degradation coefficient of heat pumps	***Cdh***	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	198.3	%
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	3.73	---
T_j = + 7 ºC	COP_d	4.98	---
T_j = + 12 ºC	COP_d	6.14	---
T j = bivalent temperature	COP_d	3.73	---
T j = operational limit	COP_d	3.73	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	***TOL***	-10	ºC
Water heating limit temperature	***WTOL***	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/91.6	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	19905	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-2070-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	30/35ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	78.6	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	78.6	kW
T_j = + 7 ºC	**Pdh**	53.8	kW
T_j = + 12 ºC	**Pdh**	35.6	kW
T j = bivalent temperature	**Pdh**	78.6	kW
T j = operational limit	**Pdh**	78.6	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	191.7	%
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	3.28	---
T_j = + 7 ºC	COP_d	4.40	---
T_j = + 12 ºC	COP_d	6.08	---
T j = bivalent temperature	COP_d	3.28	---
T j = operational limit	COP_d	3.28	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/92.2	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	44000	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-2080-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	30/35ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	92.5	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	***Pdh***	N/A	kW
T_j = + 2 ºC	***Pdh***	92.5	kW
T_j = + 7 ºC	***Pdh***	41.6	kW
T_j = + 12 ºC	***Pdh***	48.1	kW
T j = bivalent temperature	***Pdh***	92.5	kW
T j = operational limit	***Pdh***	92.5	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	2	ºC
Degradation coefficient of heat pumps	***Cdh***	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	187.3	%
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	3.35	---
T_j = + 7 ºC	COP_d	4.83	---
T_j = + 12 ºC	COP_d	6.01	---
T j = bivalent temperature	COP_d	3.35	---
T j = operational limit	COP_d	3.35	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	***TOL***	-10	ºC
Water heating limit temperature	***WTOL***	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/94.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	42872	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-2100-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	30/35ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	107.3	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	107.3	kW
T_j = + 7 ºC	**Pdh**	48.2	kW
T_j = + 12 ºC	**Pdh**	55.5	kW
T j = bivalent temperature	**Pdh**	107.3	kW
T j = operational limit	**Pdh**	107.3	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	183.6	%
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	3.28	---
T_j = + 7 ºC	COP_d	4.66	---
T_j = + 12 ºC	COP_d	5.73	---
T j = bivalent temperature	COP_d	3.28	---
T j = operational limit	COP_d	3.28	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/94.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	42872	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-3120-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	30/35ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	117.8	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	117.8	kW
T_j = + 7 ºC	**Pdh**	85.5	kW
T_j = + 12 ºC	**Pdh**	97.5	kW
T j = bivalent temperature	**Pdh**	117.8	kW
T j = operational limit	**Pdh**	117.8	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	202.1	%
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	3.92	---
T_j = + 7 ºC	COP_d	5.16	---
T_j = + 12 ºC	COP_d	6.43	---
T j = bivalent temperature	COP_d	3.92	---
T j = operational limit	COP_d	3.92	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/94.6	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	42872	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-4140-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	30/35ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	150.7	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	150.7	kW
T_j = + 7 ºC	**Pdh**	95.2	kW
T_j = + 12 ºC	**Pdh**	51.9	kW
T j = bivalent temperature	**Pdh**	150.7	kW
T j = operational limit	**Pdh**	150.7	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	201.4	%
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	3.23	---
T_j = + 7 ºC	COP_d	4.46	---
T_j = + 12 ºC	COP_d	6.44	---
T j = bivalent temperature	COP_d	3.23	---
T j = operational limit	COP_d	3.23	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/95.2	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	88000	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-4160-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	30/35ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	178.2	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	***Pdh***	N/A	kW
T_j = + 2 ºC	***Pdh***	178.2	kW
T_j = + 7 ºC	***Pdh***	112.3	kW
T_j = + 12 ºC	***Pdh***	85.7	kW
T j = bivalent temperature	***Pdh***	178.2	kW
T j = operational limit	***Pdh***	178.2	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	2	ºC
Degradation coefficient of heat pumps	***Cdh***	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	197.1	%
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	3.35	---
T_j = + 7 ºC	COP_d	4.60	---
T_j = + 12 ºC	COP_d	6.19	---
T j = bivalent temperature	COP_d	3.35	---
T j = operational limit	COP_d	3.35	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	***TOL***	-10	ºC
Water heating limit temperature	***WTOL***	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/97.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	85744	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-4200-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	30/35ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	215.6	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	***Pdh***	N/A	kW
T_j = + 2 ºC	***Pdh***	215.6	kW
T_j = + 7 ºC	***Pdh***	135.8	kW
T_j = + 12 ºC	***Pdh***	112.2	kW
T j = bivalent temperature	***Pdh***	215.6	kW
T j = operational limit	***Pdh***	215.6	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	2	ºC
Degradation coefficient of heat pumps	***Cdh***	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	194.8	%
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	3.37	---
T_j = + 7 ºC	COP_d	4.61	---
T_j = + 12 ºC	COP_d	6.10	---
T j = bivalent temperature	COP_d	3.37	---
T j = operational limit	COP_d	3.37	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	***TOL***	-10	ºC
Water heating limit temperature	***WTOL***	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/97.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	85744	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

KEYTER

EcoDesign Manual

Air-to-water reversible heat pumps

ZIRAN PRO KWR

COMFORT

Reversible Heat Pump (Heating Mode)

Warmer climate 47/55ºC

EN

KEYTER TECHNOLOGIES, S.L. – A-3132 Road km 15 – P.O. Box 650 – 14900 Lucena, Córdoba, Spain | Tel: +34 957 510 752 | www.keyter.com | info@keyter.com

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-1030-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	47/55ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	30.8	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	30.8	kW
T_j = + 7 ºC	**Pdh**	23.2	kW
T_j = + 12 ºC	**Pdh**	28.8	kW
T j = bivalent temperature	**Pdh**	30.8	kW
T j = operational limit	**Pdh**	30.8	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	162.2	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	4.15	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.79	---
T_j = + 7 ºC	COP_d	3.99	---
T_j = + 12 ºC	COP_d	5.74	---
T j = bivalent temperature	COP_d	2.79	---
T j = operational limit	COP_d	2.79	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/87	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	19905	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-1060-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	47/55ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	51.7	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	51.7	kW
T_j = + 7 ºC	**Pdh**	32.7	kW
T_j = + 12 ºC	**Pdh**	39.2	kW
T j = bivalent temperature	**Pdh**	51.7	kW
T j = operational limit	**Pdh**	51.7	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	160.8	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	4.11	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.73	---
T_j = + 7 ºC	COP_d	3.90	---
T_j = + 12 ºC	COP_d	5.36	---
T j = bivalent temperature	COP_d	2.73	---
T j = operational limit	COP_d	2.73	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/91.6	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	19905	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-2070-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	47/55ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	68.7	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	68.7	kW
T_j = + 7 ºC	**Pdh**	28.0	kW
T_j = + 12 ºC	**Pdh**	34.4	kW
T j = bivalent temperature	**Pdh**	68.7	kW
T j = operational limit	**Pdh**	68.7	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	158.0	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	4.04	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.39	---
T_j = + 7 ºC	COP_d	3.87	---
T_j = + 12 ºC	COP_d	5.37	---
T j = bivalent temperature	COP_d	2.39	---
T j = operational limit	COP_d	2.39	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/92.2	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	44000	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-2080-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	47/55ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	80.9	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	80.9	kW
T_j = + 7 ºC	**Pdh**	48.0	kW
T_j = + 12 ºC	**Pdh**	46.4	kW
T j = bivalent temperature	**Pdh**	80.9	kW
T j = operational limit	**Pdh**	80.9	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	158.4	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	4.04	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.43	---
T_j = + 7 ºC	COP_d	3.65	---
T_j = + 12 ºC	COP_d	5.33	---
T j = bivalent temperature	COP_d	2.43	---
T j = operational limit	COP_d	2.43	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/94.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	42872	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-2100-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	47/55ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	93.8	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	93.8	kW
T_j = + 7 ºC	**Pdh**	55.7	kW
T_j = + 12 ºC	**Pdh**	53.5	kW
T j = bivalent temperature	**Pdh**	93.8	kW
T j = operational limit	**Pdh**	93.8	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	154.3	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	3.94	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.40	---
T_j = + 7 ºC	COP_d	3.57	---
T_j = + 12 ºC	COP_d	5.16	---
T j = bivalent temperature	COP_d	2.40	---
T j = operational limit	COP_d	2.40	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/94.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	42872	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-3120-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	47/55ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	106.4	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	106.4	kW
T_j = + 7 ºC	**Pdh**	80.0	kW
T_j = + 12 ºC	**Pdh**	95.0	kW
T j = bivalent temperature	**Pdh**	106.4	kW
T j = operational limit	**Pdh**	106.4	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	160.0	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	4.09	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.84	---
T_j = + 7 ºC	COP_d	3.96	---
T_j = + 12 ºC	COP_d	5.49	---
T j = bivalent temperature	COP_d	2.84	---
T j = operational limit	COP_d	2.84	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/94.6	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	42872	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-4140-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	47/55ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	132.1	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	132.1	kW
T_j = + 7 ºC	**Pdh**	87.3	kW
T_j = + 12 ºC	**Pdh**	50.1	kW
T j = bivalent temperature	**Pdh**	132.1	kW
T j = operational limit	**Pdh**	132.1	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	162.9	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	4.16	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.36	---
T_j = + 7 ºC	COP_d	3.47	---
T_j = + 12 ºC	COP_d	5.63	---
T j = bivalent temperature	COP_d	2.36	---
T j = operational limit	COP_d	2.36	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/95.2	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	88000	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-4160-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	47/55ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	156.5	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	***Pdh***	N/A	kW
T_j = + 2 ºC	***Pdh***	156.5	kW
T_j = + 7 ºC	***Pdh***	103.1	kW
T_j = + 12 ºC	***Pdh***	82.8	kW
T j = bivalent temperature	***Pdh***	156.5	kW
T j = operational limit	***Pdh***	156.5	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	2	ºC
Degradation coefficient of heat pumps	***Cdh***	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	158.8	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	4.05	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.44	---
T_j = + 7 ºC	COP_d	3.58	---
T_j = + 12 ºC	COP_d	5.39	---
T j = bivalent temperature	COP_d	2.44	---
T j = operational limit	COP_d	2.44	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	***TOL***	-10	ºC
Water heating limit temperature	***WTOL***	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/97.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	85744	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-4200-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	47/55ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	189.1	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	189.1	kW
T_j = + 7 ºC	**Pdh**	124.6	kW
T_j = + 12 ºC	**Pdh**	108.3	kW
T j = bivalent temperature	**Pdh**	189.1	kW
T j = operational limit	**Pdh**	189.1	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	157.1	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	4.01	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.44	---
T_j = + 7 ºC	COP_d	3.58	---
T_j = + 12 ºC	COP_d	5.32	---
T j = bivalent temperature	COP_d	2.44	---
T j = operational limit	COP_d	2.44	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/97.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	85744	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

EcoDesign Manual

Air-to-water reversible heat pumps

ZIRAN PRO KWR

COMFORT

Reversible Heat Pump (Heating Mode)

Warmer climate 55/65ºC

EN

KEYTER TECHNOLOGIES, S.L. – A-3132 Road km 15 – P.O. Box 650 – 14900 Lucena, Córdoba, Spain | Tel: +34 957 510 752 | www.keyter.com | info@keyter.com

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-1030-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	55/65ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	28.1	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	28.1	kW
T_j = + 7 ºC	**Pdh**	22.1	kW
T_j = + 12 ºC	**Pdh**	28.1	kW
T j = bivalent temperature	**Pdh**	28.1	kW
T j = operational limit	**Pdh**	28.1	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	143.4	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	3.68	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.37	---
T_j = + 7 ºC	COP_d	3.55	---
T_j = + 12 ºC	COP_d	5.21	---
T j = bivalent temperature	COP_d	2.37	---
T j = operational limit	COP_d	2.37	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/87	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	19905	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-1060-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	55/65ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	47.9	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	47.9	kW
T_j = + 7 ºC	**Pdh**	31.3	kW
T_j = + 12 ºC	**Pdh**	38.4	kW
T j = bivalent temperature	**Pdh**	47.9	kW
T j = operational limit	**Pdh**	47.9	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	143.6	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	3.68	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.32	---
T_j = + 7 ºC	COP_d	3.48	---
T_j = + 12 ºC	COP_d	4.91	---
T j = bivalent temperature	COP_d	2.32	---
T j = operational limit	COP_d	2.32	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/91.6	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	19905	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-2070-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	55/65ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	63.0	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	***Pdh***	N/A	kW
T_j = + 2 ºC	***Pdh***	63.0	kW
T_j = + 7 ºC	***Pdh***	26.6	kW
T_j = + 12 ºC	***Pdh***	33.5	kW
T j = bivalent temperature	***Pdh***	63.0	kW
T j = operational limit	***Pdh***	63.0	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	2	ºC
Degradation coefficient of heat pumps	***Cdh***	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	140.7	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	3.60	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.02	---
T_j = + 7 ºC	COP_d	3.45	---
T_j = + 12 ºC	COP_d	4.92	---
T j = bivalent temperature	COP_d	2.02	---
T j = operational limit	COP_d	2.02	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	***TOL***	-10	ºC
Water heating limit temperature	***WTOL***	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/92.2	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	44000	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-2080-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	55/65ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	74.1	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	74.1	kW
T_j = + 7 ºC	**Pdh**	45.7	kW
T_j = + 12 ºC	**Pdh**	45.2	kW
T j = bivalent temperature	**Pdh**	74.1	kW
T j = operational limit	**Pdh**	74.1	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.3	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	3.61	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.05	---
T_j = + 7 ºC	COP_d	3.25	---
T_j = + 12 ºC	COP_d	4.89	---
T j = bivalent temperature	COP_d	2.05	---
T j = operational limit	COP_d	2.05	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/94.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	42872	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-2100-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	55/65ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	86.0	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	***Pdh***	N/A	kW
T_j = + 2 ºC	***Pdh***	86.0	kW
T_j = + 7 ºC	***Pdh***	52.9	kW
T_j = + 12 ºC	***Pdh***	52.1	kW
T j = bivalent temperature	***Pdh***	86.0	kW
T j = operational limit	***Pdh***	86.0	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	***Pdh***	N/A	kW
Bivalent temperature	***Tbiv***	2	ºC
Degradation coefficient of heat pumps	***Cdh***	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	138.0	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	3.53	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.03	---
T_j = + 7 ºC	COP_d	3.18	---
T_j = + 12 ºC	COP_d	4.74	---
T j = bivalent temperature	COP_d	2.03	---
T j = operational limit	COP_d	2.03	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	***TOL***	-10	ºC
Water heating limit temperature	***WTOL***	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.065	kW

Backup heater

Rated heat output (*)	***Psup***	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/94.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	42872	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-3120-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	55/65ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	99.2	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	99.2	kW
T_j = + 7 ºC	**Pdh**	76.9	kW
T_j = + 12 ºC	**Pdh**	93.2	kW
T j = bivalent temperature	**Pdh**	99.2	kW
T j = operational limit	**Pdh**	99.2	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	142.1	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	3.64	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.42	---
T_j = + 7 ºC	COP_d	3.53	---
T_j = + 12 ºC	COP_d	5.00	---
T j = bivalent temperature	COP_d	2.42	---
T j = operational limit	COP_d	2.42	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/94.6	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	42872	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-4140-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	55/65ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	121.1	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	121.1	kW
T_j = + 7 ºC	**Pdh**	83.1	kW
T_j = + 12 ºC	**Pdh**	48.8	kW
T j = bivalent temperature	**Pdh**	121.1	kW
T j = operational limit	**Pdh**	121.1	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	145.8	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	3.73	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.00	---
T_j = + 7 ºC	COP_d	3.09	---
T_j = + 12 ºC	COP_d	5.17	---
T j = bivalent temperature	COP_d	2.00	---
T j = operational limit	COP_d	2.00	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/95.2	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	88000	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-4160-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	55/65ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	143.6	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	143.6	kW
T_j = + 7 ºC	**Pdh**	98.3	kW
T_j = + 12 ºC	**Pdh**	80.7	kW
T j = bivalent temperature	**Pdh**	143.6	kW
T j = operational limit	**Pdh**	143.6	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	141.8	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	3.63	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.06	---
T_j = + 7 ºC	COP_d	3.19	---
T_j = + 12 ºC	COP_d	4.94	---
T j = bivalent temperature	COP_d	2.06	---
T j = operational limit	COP_d	2.06	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/97.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	85744	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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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 Pdesign,h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

ZIRAN PRO

REVERSIBLE AIR TO WATER HEAT PUMP

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

Model	**KWR-4200-IVS4D**
Refrigerant fluid	R290
Outdoor heat exchanger of the chiller:	Air
Indoor heat exchanger of the chiller:	Water
Aplication temperatures	55/65ºC
Equipped with an auxiliary heater:	No
Combined heater and heat pump:	No

Heating Mode

Declared parameters for average heating season

Element	Symbol	Value	Unit
Rated heat output (*)	$P_{rated,h}$	173.6	kW
Declared heating capacity for part load at an indoor temperature of 20 ºC and an outdoor temperature T j			
T_j = - 7 ºC	**Pdh**	N/A	kW
T_j = + 2 ºC	**Pdh**	173.6	kW
T_j = + 7 ºC	**Pdh**	118.6	kW
T_j = + 12 ºC	**Pdh**	105.7	kW
T j = bivalent temperature	**Pdh**	173.6	kW
T j = operational limit	**Pdh**	173.6	kW
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	**Pdh**	N/A	kW
Bivalent temperature	**Tbiv**	2	ºC
Degradation coefficient of heat pumps	**Cdh**	0.9	---

Element	Symbol	Value	Unit
Seasonal space heating energy efficiency	$\eta_{s,h}$	140.1	%
Net seasonal coefficient of performance in active mode (**)	**SCOPnet**	3.58	---
Declared coefficient of performance or gas usage efficiency or auxiliary energy factor for part load at the given outdoor temperatures T j			
T_j = - 7 ºC	COP_d	N/A	---
T_j = + 2 ºC	COP_d	2.07	---
T_j = + 7 ºC	COP_d	3.19	---
T_j = + 12 ºC	COP_d	4.88	---
T j = bivalent temperature	COP_d	2.07	---
T j = operational limit	COP_d	2.07	---
Air-to-water heat pumps: T j = -15 ºC (if TOL < -20 ºC)	COP_d	N/A	---
Air-to-air heat pumps: operational limit temperature	**TOL**	-10	ºC
Water heating limit temperature	**WTOL**	65	ºC

Energy consumption in modes other than active mode

Off mode	P_{OFF}	0.000	kW
Thermostat-off mode	P_{TO}	0.024	kW
Standby mode	P_{SB}	0.024	kW
Crankcase heater mode	P_{CK}	0.130	kW

Backup heater

Rated heat output (*)	**Psup**	0.0	kW
Type of energy consumed	N/A		

Other elements

Capacity control	Variable		
Water flow rate capacity control	Fixed		
Sound power level (indoor/outdoor)	L_{WA}	0/97.1	dB
Nitrogen oxide emissions	NO_x	0	mg/kWh

Air-to-air heat pumps: declared outdoor air flow rate	---	85744	m^3/h
For water-to-air/brine-to-air heat pumps: nominal brine or water flow rate, outdoor heat exchanger	---	N/A	m^3/h

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