

Climaveneta Technical Documentation
WRX_0162_0804_202005_ML

REGULATION (EU) N. 2016/2281 FOR AIR-COOLED ROOFTOP AIR CONDITIONERS

Ecodesign requirements for cooling products

REVERSIBLE AIR COOLED ROOFTOP UNIT

WRX 0162 - 0804

Cooling Capacity Range 50,8 - 240 [kW] - (EN14511 VALUE)
Nominal Cooling Capacity at TdesignC Range 51,4 - 244 [kW]



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1. REGULATION (EU) N. 2016/2281 FOR AIR-COOLED ROOFTOP AIR CONDITIONERS

1.1 Scope of the document

This document is compliant with the Commission Regulation (EU) N. 2016/2281 regarding "REQUIREMENTS FOR PRODUCT INFORMATION" (Annex II, Point 5). In particular, it deals with rooftop air conditioners and contains information required by Table 11 of the above-mentioned regulation, which is entitled "Information requirements for air-to-air air conditioners".

1.2 REGULATION (UE) N. 2016/2281 description

The COMMISSION REGULATION (EU) N. 2016/2281 of 30 November 2016, implementing Directive 2009/125/EC of the European Parliament and of the Council, establishes eco-design requirements for the placing on the market and/or putting into service of: air heating products with a rated heating capacity which does not exceed 1MW, cooling products and high temperature process chillers with a rated cooling capacity which do not exceed 2 MW, and all fan coil units. All these energy-related products are defined in Article 2 of the Regulation in question.

1.3 Description of the data declared by Mitsubishi Electric Hydronics & IT Cooling Systems

- Rooftop air conditioner: an air-to-air air conditioner driven by an electric compressor, with evaporator, compressor, and condenser integrated into a single package.
- Rated cooling capacity (Prated,c): the cooling capacity of a rooftop air conditioner when providing space cooling at standard rating conditions, expressed in kW.
- Seasonal energy efficiency of the space cooling ($\eta_{s,c}$): ratio between the space cooling demand pertaining to the designated cooling season, and the annual energy consumption required to meet this demand, expressed in %.
- Seasonal Energy Efficiency Ratio (SEER): the overall energy efficiency ratio of the rooftop air conditioner, representative for the cooling season, calculated as the reference annual cooling demand divided by the annual energy consumption for cooling.
- Degradation coefficient: measure of efficiency loss due to cycling of the rooftop.
- Off mode: a condition in which the rooftop is connected to the mains power source and is not providing any function.
- Thermostat off-mode: condition corresponding to the hours with no cooling load and activated cooling function, whereby the cooling function is switched on but the rooftop is not operational.
- Crankcase heater mode: condition in which a heating device is activated to avoid the refrigerant migrating to the compressor so as to limit the refrigerant concentration in oil when the compressor is started.
- Standby mode: condition where the rooftop is connected to the mains power source and depends on energy input from the mains power source to work as intended. The unit provides only the following functions, which may persist for an indefinite time: reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or information or status display.
- Capacity control: the ability of a rooftop to change its cooling capacity by changing the volumetric flow rate of at least one of the fluids needed to operate the refrigeration cycle.
- Sound power level (LWA): the A-weighted sound power level, indoors and/or outdoors, expressed in dB.
- Annual electricity consumption for cooling: the energy consumption required to meet the reference annual cooling demand.
- Global warming potential (GWP) of the refrigerant: the 100-year climatic warming potential of one kilogram of a greenhouse gas relative to one kilogram of dioxide (CO₂).

2. CLIMAVENETA CONTENTS UNIT

2.1 Table index

REVERSIBLE AIR COOLED ROOFTOP UNIT

WRX 0162 - 0804

Cooling Capacity Range 50,8 - 240 [kW]

Nominal Cooling Capacity at TdesignC Range 51,4 - 244 [kW]

Units	Version	Size					Pag.
WRX		0162	0182	0202	0262	0302	5
		0352	0402	0444	0484	0524	
		0604	0704	0804			

WRX 0162			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	51,4
Seasonal energy efficiency of the space cooling	eta_s	[%]	141,0
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	51,4
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	37,9
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	28,2
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	29,2
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,41
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,79
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,14
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,59
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,154
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,160
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	77,0
Annual electricity consumption for cooling	QCE	[kWh]	8566
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	30140

Contact details: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A., via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

WRX 0182			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	58,9
Seasonal energy efficiency of the space cooling	eta_s	[%]	140,6
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	58,9
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	43,4
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	32,2
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	33,3
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,44
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,80
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,09
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,53
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,216
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,160
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	79,0
Annual electricity consumption for cooling	QCE	[kWh]	9835
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	32000

Contact details: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A., via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

WRX 0202			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	69,7
Seasonal energy efficiency of the space cooling	eta_s	[%]	144,2
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	69,7
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	51,4
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	38,2
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	39,4
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,43
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,82
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,17
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,62
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,201
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,160
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	82,0
Annual electricity consumption for cooling	QCE	[kWh]	11372
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	43060

Contact details: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A., via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

WRX 0262			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	83,7
Seasonal energy efficiency of the space cooling	eta_s	[%]	142,6
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	83,7
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	61,6
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	46,4
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	48,0
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,29
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,72
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,12
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,58
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,221
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,160
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	83,0
Annual electricity consumption for cooling	QCE	[kWh]	13777
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	43060

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WRX 0302			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	98,3
Seasonal energy efficiency of the space cooling	eta_s	[%]	146,6
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	98,3
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	72,5
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	54,3
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	56,3
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,34
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,77
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,20
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,70
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,226
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,160
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	84,0
Annual electricity consumption for cooling	QCE	[kWh]	15789
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	41260

Contact details: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A., via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

WRX 0352			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	111,2
Seasonal energy efficiency of the space cooling	eta_s	[%]	147,0
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	111
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	81,9
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	54,1
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	56,0
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,29
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,70
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,13
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,65
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,259
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,160
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	86,0
Annual electricity consumption for cooling	QCE	[kWh]	17788
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	40420

Contact details: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A., via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

WRX 0402			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	122,9
Seasonal energy efficiency of the space cooling	eta_s	[%]	144,6
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	123
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	90,6
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	67,9
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	70,5
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,28
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,71
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,11
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,59
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,300
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,160
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	87,0
Annual electricity consumption for cooling	QCE	[kWh]	20011
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	39580

Contact details: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A., via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

WRX 0444			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	144,0
Seasonal energy efficiency of the space cooling	eta_s	[%]	154,6
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	144
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	106
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	68,2
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	47,2
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,43
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,93
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	3,94
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	5,65
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,335
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,170
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	85,0
Annual electricity consumption for cooling	QCE	[kWh]	21914
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	60880

Contact details: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A., via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

WRX 0484			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	156,2
Seasonal energy efficiency of the space cooling	eta_s	[%]	174,6
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	156
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	115
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	74,0
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	51,1
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,54
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	4,49
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,95
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	5,08
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,407
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,170
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	86,0
Annual electricity consumption for cooling	QCE	[kWh]	21096
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	73260

Contact details: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A., via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

WRX 0524			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	173,0
Seasonal energy efficiency of the space cooling	eta_s	[%]	169,8
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	173
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	127
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	82,0
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	56,9
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,56
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	4,41
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,78
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,84
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,477
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,170
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	86,0
Annual electricity consumption for cooling	QCE	[kWh]	24018
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	77824

Contact details: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A., via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

WRX 0604			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	192,0
Seasonal energy efficiency of the space cooling	eta_s	[%]	169,0
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	192
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	141
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	90,9
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	64,3
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,20
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	4,26
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,78
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	5,06
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,558
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,170
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	86,0
Annual electricity consumption for cooling	QCE	[kWh]	26813
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	73260

Contact details: Mitsubishi Electric Hydronics & IT Cooling Systems S.p.A., via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy

WRX 0704			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	222,3
Seasonal energy efficiency of the space cooling	eta_s	[%]	159,0
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	222
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	164
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	105
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	71,0
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,26
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	4,62
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	3,62
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	5,52
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,587
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,170
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	89,0
Annual electricity consumption for cooling	QCE	[kWh]	32907
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	75560

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WRX 0804			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	243,8
Seasonal energy efficiency of the space cooling	eta_s	[%]	164,6
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared cooling capacity with outdoor temperature Tj = +35°C	Pdc	[kW]	244
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	180
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	115
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	87,1
Degradation coefficient for chillers	Cdc		0,3
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj			
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	EERd	[%]	3,14
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	4,27
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,62
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,83
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,738
Crankcase heater mode	PCK	[kW]	0,000
Standby mode	PSB	[kW]	0,170
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	90,0
Annual electricity consumption for cooling	QCE	[kWh]	34907
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsouce	[m³/h]	75560

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ENGLISH	ITALIANO	FRANCAISE	DEUTSCH	ESPAÑOL
Air-to-air air conditioner	Refrigeratore aria / aria	Climatiseur air-air	Luft-Luft-Raumklimagerät	Acondicionador de aire aire-aire
Rated cooling capacity	Capacità di raffreddamento nominale	Puissance frigorifique nominale	Nennkühlleistung	Potencia nominal de refrigeración
Seasonal energy efficiency of the space cooling	Efficienza energetica stagionale del raffreddamento d'ambiente	Efficacité énergétique saisonnière pour le refroidissement des locaux	Raumkühlungs-Jahresnutzungsgrad	Eficiencia energética estacional de refrigeración de espacios
Declared cooling capacity for partial load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj	Capacità di raffreddamento dichiarata a carico parziale alla temperatura interna 27°C/19°C (Tbs/Tbu) con temperatura esterna Tj	Puissance frigorifique déclarée à charge partielle pour des températures extérieures données Tj et intérieure de 27 °C/19 °C (bulbe sec/ bulbe humide)	Angegebene Kühlleistung bei Teillast und bestimmten Außentemperaturen Tj und der Raumtemperatur 27 °C/19 °C (Trocken-/Feuchtkugel)	Potencia de refrigeración declarada para carga parcial a las temperaturas exteriores dadas Tj y a una temperatura interior de 27 °C/19 °C (termómetro seco/húmedo)
Declared cooling capacity with outdoor temperature Tj = +35°C	Capacità di raffreddamento dichiarata con temperatura esterna Tj = +35°C	Puissance frigorifique déclarée à la température extérieure Tj = 35°C	Angegebene Kühlleistung bei Teillast und einer Außentemperatur Tj = 35°C	Potencia de refrigeración declarada para carga parcial a la temperatura exterior Tj = 35°C
Declared cooling capacity with outdoor temperature Tj = +30°C	Capacità di raffreddamento dichiarata con temperatura esterna Tj = +30°C	Puissance frigorifique déclarée à la température extérieure Tj = 30°C	Angegebene Kühlleistung bei Teillast und einer Außentemperatur Tj = 30°C	Potencia de refrigeración declarada para carga parcial a la temperatura exterior Tj = 30°C
Declared cooling capacity with outdoor temperature Tj = +25°C	Capacità di raffreddamento dichiarata con temperatura esterna Tj = +25°C	Puissance frigorifique déclarée à la température extérieure Tj = 25°C	Angegebene Kühlleistung bei Teillast und einer Außentemperatur Tj = 25°C	Potencia de refrigeración declarada para carga parcial a la temperatura exterior Tj = 25°C
Declared cooling capacity with outdoor temperature Tj = +20°C	Capacità di raffreddamento dichiarata con temperatura esterna Tj = +20°C	Puissance frigorifique déclarée à la température extérieure Tj = 20°C	Angegebene Kühlleistung bei Teillast und einer Außentemperatur Tj = 20°C	Potencia de refrigeración declarada para carga parcial a la temperatura exterior Tj = 20°C
Degradation coefficient for chillers	Coefficiente di degradazione per i refrigeratori	Coefficient de dégradation pour les refroidisseurs	Minderungsfaktor von Kühlern	Coefficiente de degradación de las enfriadoras
Declared energy efficiency ratio for part load at indoor temperature 27°C/19°C (dry/wet bulb) and outdoor temperature Tj	Indice di efficienza energetica dichiarato a carico parziale alla temperatura interna 27°C/19°C (Tbs/Tbu) con temperatura esterna Tj	Coefficient d'efficacité énergétique déclaré ou rendement de la consommation de gaz/indice énergétique auxiliaire à charge partielle pour des températures extérieures données Tj	Angegebene Leistungszahl oder Gaswirkungsgrad/Hilfsenergieeffiz. bei Teillast und bestimmten Außentemperaturen Tj	Factor de eficiencia energética declarado o eficiencia del uso de gas o factor de energía auxiliar para carga parcial a las temperaturas exteriores dadas Tj
Declared energy efficiency ratio with outdoor temperature Tj = +35°C	Indice di efficienza energetica dichiarato con temperatura esterna Tj = +35°C	Coefficient d'efficacité énergétique déclaré à la température extérieure Tj = 35°C	Angegebene Leistungszahl bei Teillast und einer Außentemperatur Tj = 35°C	Factor de eficiencia energética declarado a la temperatura exterior Tj = 35°C
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	Indice di efficienza energetica dichiarato con temperatura esterna Tj = +30°C	Coefficient d'efficacité énergétique déclaré à la température extérieure Tj = 30°C	Angegebene Leistungszahl bei Teillast und einer Außentemperatur Tj = 30°C	Factor de eficiencia energética declarado a la temperatura exterior Tj = 30°C
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	Indice di efficienza energetica dichiarato con temperatura esterna Tj = +25°C	Coefficient d'efficacité énergétique déclaré à la température extérieure Tj = 25°C	Angegebene Leistungszahl bei Teillast und einer Außentemperatur Tj = 25°C	Factor de eficiencia energética declarado a la temperatura exterior Tj = 25°C
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	Indice di efficienza energetica dichiarato con temperatura esterna Tj = +20°C	Coefficient d'efficacité énergétique déclaré à la température extérieure Tj = 20°C	Angegebene Leistungszahl bei Teillast und einer Außentemperatur Tj = 20°C	Factor de eficiencia energética declarado a la temperatura exterior Tj = 20°C
Power consumption in modes other than active mode	Consumo di energia in modi diversi dal modo attivo	Consommation d'énergie dans les modes autres que le mode actif	Stromverbrauch in anderen Betriebsarten als dem „aktiven Betrieb“	Consumo de energía en modos distintos del modo activo
Off mode	Modo «spento»	Mode arrêt	AUS-Zustand	Modo desactivado
Thermostat-off mode	Modo «termostato spento»	Mode arrêt par thermostat	Thermostat-AUS- Zustand	Modo desactivado por termostato
Crankcase heater mode	Modo «riscaldamento del carter»	Mode résistance de carter active	Betriebszustand mit Kurbelwannenheizung	Modo de calentador del cárter activado
Standby mode	Modo «stand-by»	Mode veille	Bereitschaftszustand	Modo de espera
Other items	Altri elementi	Autres caractéristiques	Sonstige Produktdaten	Otros elementos
Capacity control	Dispositivo di controllo della capacità	Régulation de la puissance	Leistungsregelung	Control de la potencia
Sound power level, outdoor	Livello di potenza sonora esterno	Niveau de puissance acoustique, à l'extérieur	Schallleistungspegel, außen	Nivel de potencia acústica (exterior)
Annual electricity consumption for cooling	Consumo di elettricità annuale per il raffreddamento	Consommation annuelle d'électricité pour le refroidissement	Jahresstromverbrauch für die Kühlung	Consumo anual de electricidad para refrigeración
GWP of the refrigerant	GWP del refrigerante	PRP du fluide frigorigène	Treibhausgaspotenzial des Kältemittels	PCA del refrigerante
Outdoor heat exchanger	Scambiatore di calore esterno	Echangeur de chaleur côté extérieur	Wärmetauscher außen	Intercambiador de calor de exterior
Air flow rate, outdoor measured	Portata aria, misurata all'esterno	Débit d'air, mesuré à l'extérieur	Luftdurchsatz, außen gemessen	Caudal de aire (exterior)
Notes:	Note:	Remarques:	Hinweise:	Notas:

ENGLISH	ITALIANO	FRANCAISE	DEUTSCH	ESPAÑOL
The parameters are declared for	I parametri sono dichiarati per	Les paramètres sont déclarés	Die Parameter sind für eine	Los parámetros se declararán
Unit in standard configuration/execution, without optional accessories.	Unità in configurazione ed esecuzione standard, priva di accessori opzionali.	Unité en configuration et exécution standard, sans accessoires optionnels.	Gerät mit Standard-Konfiguration und -Ausführung, ohne wunschweises Zubehör.	Unidad en configuración y ejecución estándar, sin accesorios opcionales.



for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.



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