

Climaveneta Technical Documentation
WSM-T_0162_1204_201907_ML

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

Ecodesign requirements for cooling products

AIR TO AIR ROOFTOP UNIT, ONLY COOLING

WSM-T 0162 - 1204

Cooling Capacity Range 50,9 - 365 [kW] - (EN14511 VALUE)
Nominal Cooling Capacity at TdesignC Range 51,3 - 370 [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 (EU) 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

AIR TO AIR ROOFTOP UNIT, ONLY COOLING

WSM-T 0162 - 1204

Cooling Capacity Range 50,9 - 365 [kW]

Nominal Cooling Capacity at TdesignC Range 51,3 - 370 [kW]

Units	Version	Size					Pag.
WSM-T		0162	0182	0202	0704	0804	5
		0904	1004	1104	1204		

WSM-T 0162			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	51,3
Seasonal energy efficiency of the space cooling	eta_s	[%]	125,8
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]	51,3
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	37,8
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	29,1
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	30,2
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	[%]	3,37
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,80
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,25
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,72
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,337
Crankcase heater mode	PCK	[kW]	0,490
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]	9559
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	0,00

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

WSM-T 0182			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	59,8
Seasonal energy efficiency of the space cooling	eta_s	[%]	124,6
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]	59,8
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	44,1
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	34,7
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	36,0
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	[%]	3,25
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,68
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,11
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,55
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,395
Crankcase heater mode	PCK	[kW]	0,490
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]	11251
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	0,00

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

WSM-T 0202			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	64,9
Seasonal energy efficiency of the space cooling	eta_s	[%]	123,8
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]	64,9
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	47,9
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	37,4
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	38,8
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	[%]	3,61
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,03
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,48
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	0,440
Crankcase heater mode	PCK	[kW]	0,490
Standby mode	PSB	[kW]	0,160
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	85,0
Annual electricity consumption for cooling	QCE	[kWh]	12275
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	0,00

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

WSM-T 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	[%]	145,8
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]	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]	72,9
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	[%]	3,11
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	4,21
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,57
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,34
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	2,073
Crankcase heater mode	PCK	[kW]	0,670
Standby mode	PSB	[kW]	0,670
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	92,0
Annual electricity consumption for cooling	QCE	[kWh]	35880
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	0,00

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

WSM-T 0804			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	248,8
Seasonal energy efficiency of the space cooling	eta_s	[%]	140,2
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]	249
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	183
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	118
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	92,6
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	[%]	2,96
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	4,08
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	4,31
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,21
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	2,410
Crankcase heater mode	PCK	[kW]	0,670
Standby mode	PSB	[kW]	0,670
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	94,0
Annual electricity consumption for cooling	QCE	[kWh]	41702
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	0,00

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

WSM-T 0904			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	269,9
Seasonal energy efficiency of the space cooling	eta_s	[%]	125,4
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]	270
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	199
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	128
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	89,4
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	[%]	3,03
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,26
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	3,51
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,30
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	2,710
Crankcase heater mode	PCK	[kW]	0,656
Standby mode	PSB	[kW]	0,656
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	97,0
Annual electricity consumption for cooling	QCE	[kWh]	50511
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	0,00

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

WSM-T 1004			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	308,7
Seasonal energy efficiency of the space cooling	eta_s	[%]	127,0
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]	309
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	227
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	146
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	109
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	[%]	3,11
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,32
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	3,57
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,24
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	3,101
Crankcase heater mode	PCK	[kW]	0,682
Standby mode	PSB	[kW]	0,682
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	97,0
Annual electricity consumption for cooling	QCE	[kWh]	57068
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	0,00

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WSM-T 1104			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	338,9
Seasonal energy efficiency of the space cooling	eta_s	[%]	124,6
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]	339
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	250
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	161
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	110
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	[%]	3,00
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,23
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	3,46
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,14
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	3,261
Crankcase heater mode	PCK	[kW]	0,682
Standby mode	PSB	[kW]	0,682
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	97,0
Annual electricity consumption for cooling	QCE	[kWh]	63777
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	0,00

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

WSM-T 1204			
Air-to-air air conditioner	yes / no		yes
Rated cooling capacity	Prated =Pdesignc	[kW]	369,8
Seasonal energy efficiency of the space cooling	eta_s	[%]	124,6
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]	370
Declared cooling capacity with outdoor temperature Tj = +30°C	Pdc	[kW]	272
Declared cooling capacity with outdoor temperature Tj = +25°C	Pdc	[kW]	175
Declared cooling capacity with outdoor temperature Tj = +20°C	Pdc	[kW]	135
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	[%]	2,89
Declared energy efficiency ratio with outdoor temperature Tj = +30°C	EERd	[%]	3,14
Declared energy efficiency ratio with outdoor temperature Tj = +25°C	EERd	[%]	3,48
Declared energy efficiency ratio with outdoor temperature Tj = +20°C	EERd	[%]	4,29
Power consumption in modes other than active mode			
Off mode	POFF	[kW]	0,000
Thermostat-off mode	PTO	[kW]	3,339
Crankcase heater mode	PCK	[kW]	0,682
Standby mode	PSB	[kW]	0,682
Other items			
Capacity control	fixed/variable/staged		Staged
Sound power level, outdoor	LWA	[dB(A)]	97,0
Annual electricity consumption for cooling	QCE	[kWh]	69492
GWP of the refrigerant		[Kg CO2eq]	2088
Outdoor heat exchanger			
Air flow rate, outdoor measured	Qairsorce	[m³/h]	0,00

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

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	Efficiencia 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/Hilfsenergiefaktor 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	Schalleleistungspegel, 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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