

**MITSUBISHI ELECTRIC  
HYDRONICS & IT COOLING SYSTEMS S.p.A.**

COMFORT

CHILLERS

# FX-G05

AIR SOURCE CHILLERS  
WITH SCREW  
COMPRESSORS,  
FROM 140 TO 1710 kW



# FX-G05

## THE ECO-FRIENDLY SOLUTION FOR YOUR PERFECT COMFORT.



Modern multi-use buildings, shopping centers, business premises and healthcare facilities are just some of the examples where increased comfort, reduced running cost, and the lowest ecological footprint are required at the same time.

**The sustainability-driven design of FX-G05 meets the highest efficiency targets required by modern projects, delivering a green approach to any centralized air conditioning system.**



### COMFORT APPLICATIONS

- ✓ Hotels
- ✓ Education centres
- ✓ Shopping centres
- ✓ Sport facilities
- ✓ Office buildings
- ✓ Banks
- ✓ Museums
- ✓ Institutions

#### +57° UNYIELDING IN EXTREME CONDITIONS -20°

Designed to ensure complete reliability, FX-G05 can operate in all climates from -20°C to +57°C and, equipped with highly resistant coil coatings, it withstands even the harshest industrial or marine environments.



#### QUICK & EASY INSTALLATION

The integrated hydronic modules allow for easy and fast installations and the advanced water flow controls make the most of the variable-speed pumps, bringing time-saving commissioning, and significant annual energy cuts.



#### HIGH DEGREE OF CONFIGURABILITY

Thanks to a whole range of configurations and accessories, FX-G05 can be easily integrated into ever increasingly complex building systems.

### COMPLETE RANGE OF CHILLERS

Low GWP from 140 to 1710 kW



<b>E</b>	Very high efficiency	EER: 3,16	SEER: 4,32
<b>CA</b>	High efficiency	EER: 3,03	SEER: 4,22
<b>K</b>	Key efficiency	EER: 2,74	SEER: 4,10

Average values (EN14511) of FX-G05 1502-7223

### ACOUSTIC VERSIONS

<b>-</b>	<b>Standard</b>	Unit with standard soundproofing equipment.	<b>Baseline</b>
		Unit with compressor acoustical enclosure (Opt. 2301).	<b>-2 dB(A)</b>
		Unit with noise reducer kit (Opt. 2315).	<b>-7 dB(A)</b>
<b>SL</b>	<b>Super low noise</b>	The highest level of noise reduction which cuts noise emissions by 10 to 12 dB(A), without compromising the unit's efficiency.	<b>-12 dB(A)</b>

### HEAT RECOVERY CONFIGURATIONS

<b>-</b>	<b>Standard unit</b>	Unit for the production of chilled water.	<b>Baseline</b>
<b>D</b>	<b>Partial heat recovery</b>	A desuperheater on the compressor discharge line recovers approximately 20% of the unit's capacity.	<b>60°C</b>
<b>R</b>	<b>Total heat recovery</b>	A devoted refrigerant water heat exchanger recovers all the condensation heat.	<b>55°C 60°C with HT kit</b>

# ALL-ROUND SUSTAINABILITY



**FX-G05 is the result of Mitsubishi Electric Hydronics & IT Cooling Systems' extensive approach to sustainability.**

Increasing concerns about the global warming impact of chillers and heat pumps is driving new regulatory policies to push towards even more efficient units with the lowest carbon footprint.

Today, an all-round approach is the only way to effectively reduce the Total Equivalent Warming Impact (TEWI).

**Fully committed to support the creation of a greener tomorrow, Mitsubishi Electric Hydronics & IT Cooling Systems designed FX-G05, a complete chiller range with reduced environmental impact, optimized for R513A refrigerant.**

Combining brilliant annual efficiency with the use of a low GWP refrigerant, FX-G05 tackles both the indirect (due to primary energy consumption) and the direct global warming, thus resulting in the perfect choice for any new, forward-looking cooling system.



## LOW GWP

-56% GWP vs R134a



**Non-flammable**  
Safety Class A1

## REFRIGERANT BENCHMARK

SCROLL		
Refrigerant	GWP*	Flammability**
R410A	2088	NON flammable
R32	675	MILDLY flammable
R454B	466	MILDLY flammable
R452B	698	MILDLY flammable

SCREW		
Refrigerant	GWP*	Flammability**
R134a	1430	NON flammable
R513A	631	NON flammable
1234ze	7	MILDLY flammable
1234yf	4	MILDLY flammable

\*IPCC AR4

\*\*ASHRAE 34 - ISO 817

New regulations like the EU F-gas and the Kigali Amendment to the Montreal Protocol, are driving the industry towards new eco-friendly refrigerants, with reduced greenhouse effect.

Unfortunately, the majority of low GWP refrigerants raises another critical issue: flammability.

The new refrigerant R513A, chosen for FX-G05, is a brilliant exception: it offers a -56% GWP reduction compared to R134a's while ensuring complete non-toxicity and non-flammability (Class A1 of ASHRAE 34, ISO 817).

## PROFOUND EXPERTISE



## TOP-LEVEL PERFORMANCE



With thousands of units installed worldwide since 2003, Climaveneta air-cooled screw chillers have evolved into the third generation: FX-G05 series. The highest manufacturing quality, proven reliability, and full configurability are the reasons behind the success of this range. Today FX-G05 combines extensive expertise with the latest technology to deliver you the best value.

Fully customizable with a range of versions and accessories, FX-G05 allows custom-made application design for individual projects. Thanks to devoted technological solutions and accurate design, each FX-G05 configuration brings high full load performance and brilliant part load efficiency together, thus helping individuals and businesses reduce the energy consumption of their HVAC systems and cut their running costs.

# TECHNOLOGICAL CHOICES

## W3000TE CONTROL

- Fully in-house developed management software.
- ▶ Efficient and reliable operation in all conditions
  - ▶ Connectivity with the most commonly used BMS protocols (Opt.)



## KIPlink USER INTERFACE

Innovative Wi-Fi interface for an easy and enhanced unit management.



## Micro-channel coils

New generation full aluminum micro-channel coils, ideally positioned on a "V" block structure to optimize airflow and heat transfer.

- ▶ Up to 30% of refrigerant charge reduction vs. traditional tube and fin coils.
- ▶ Long Life Alloy (LLA) for higher corrosion resistance and longer life cycle
- ▶ Protective coating available for harsh industrial and marine environments (Opt.)



## Built-in pump group (Opt.)

Factory-mounted pumps and pre-plumbed hydraulic components, for the minimum on-site installation time, work and cost.

- ▶ Fix speed and variable speed pumps available, with low or high head
- ▶ Electronic primary flow controls for constant pressure or constant temperature



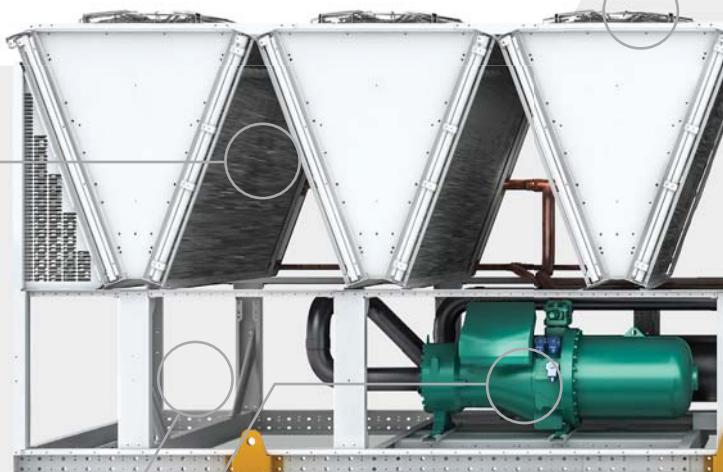
Communication based on Wi-Fi technology (no internet connection needed)



An exclusive product of Mitsubishi Electric Hydronics & IT Cooling Systems

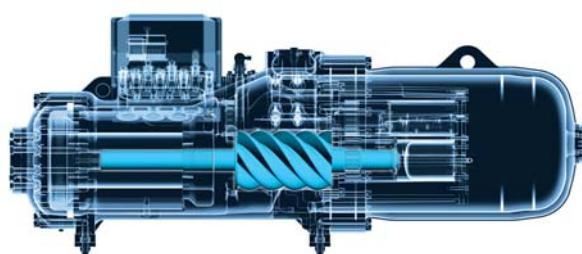


Industrial hardware characteristics, tolerates temperatures from -20 to +65°C



## CSC screw compressors

**Dual rotor screw compressors designed according to Mitsubishi Electric Hydronics & IT Cooling Systems specifications and for its exclusive use.**



# FX-G05 brings advanced technology and know-how together in customizable packages to aid design, specification, installation, and on-going operations.

r

R513A

## Variable speed fans

High performing axial fans equipped with autotransformer for speed adjustment.

- ▶ Precise air-flow management, reduced power consumption and lower sound levels at part load
- ▶ Totally independent ventilation system for each refrigerant circuit
- ▶ EC fans available with proprietary algorithm for energy savings and very low ambient operation (Opt.)



## Low GWP refrigerant

New generation refrigerant with reduced greenhouse effect. Non-flammable.

### Reduced GWP

R513A GWP<sub>100 year</sub> = 572  
(R134a GWP<sub>100 year</sub> = 1300)  
GWP values according to IPCC AR5

### Non-toxic, non-flammable

ASHRAE 34, ISO 817: A1 class

### Favorable physical properties

Same cooling capacity delivered as R134a  
Same operating pressures as R134a

### In line with standard building codes

No special equipment  
No need for flammable risk assessment  
No extra costs

### Compliant with eco regulation objectives

No future retrofit required  
Reduced price volatility

## Shell and tube evaporator

Dry expansion, single pass shell and tube evaporator, fully developed by Mitsubishi Electric Hydronics & IT Cooling Systems.

- ▶ Internally grooved copper tubes for enhanced heat exchange
- ▶ Low pressure drops
- ▶ Fully protected against ice formation

Brazed plate evaporator for small sizes (<200 kW)

## Innovative internal geometry

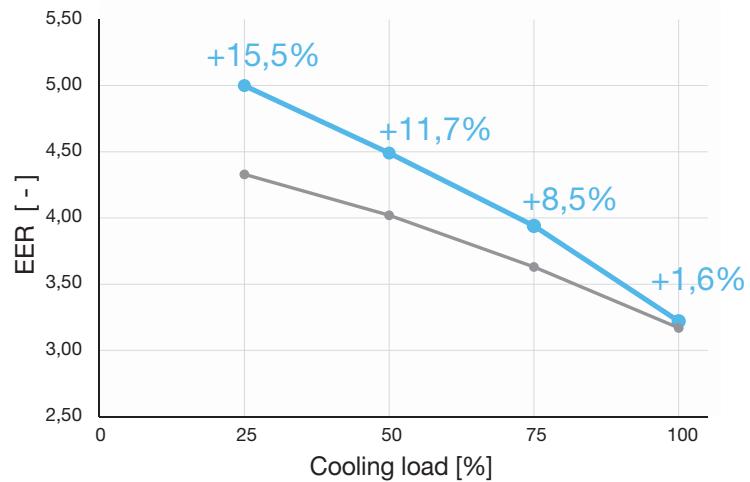
Thanks to its specific design, aimed at optimizing the internal volumes for partial load operation, the CSC compressors deliver excellent performance in all the different operating conditions.

## Enhanced lubrication system

A special oil management valve calibrates the oil circulation and delivers a remarkable increase of the compressor efficiency at partial loads.

## Extreme durability

The brilliantly engineered mechanics include carbon steel bearings guaranteed for a lifetime of 150.000 hours.



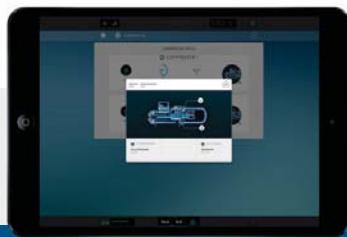
The graph shows the chiller efficiency with the variation of the load rate and air temperature (ESEER operating conditions).

# CORE FEATURES FOR ALL YOUR EQUIPMENT NEEDS

## W3000TE control and KIPlink innovative interface

The logic behind FX-G05 is the W3000TE control software. Characterized by advanced functions and algorithms, **W3000TE features proprietary settings** that ensure faster adaptive responses to different dynamics, in all operating modes. Direct control over the unit comes through the innovative KIPlink interface.

Based on Wi-Fi technology, **KIPlink** gets rid of the standard keyboard and **allows one to operate on the unit directly from a mobile device** (smartphone, tablet, notebook).



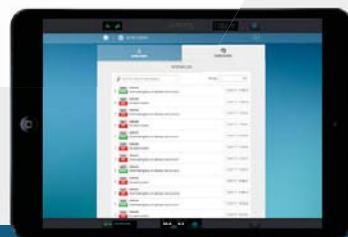
**Easier on-site operation**

Monitor each component while moving around the unit for maintenance operations. View and change all parameters with easy-to-understand screenshots and dedicated tooltips. Get devoted “help” message for alarm reset and trouble shooting.



**Real-time graphs and trends**

Monitor the immediate labor status of the compressors, heat exchangers, cooling circuits and pumps. View the real-time graphs of the key operating variable trends.



**Data logger function**

View history of events and use the filter for a simple search. Enhance diagnostics with data and graphs of 10 minutes before and after each alarm. Download all the data for detailed analysis.



### How to access the unit with KIPlink

Direct access to the W3000TE control is achieved by scanning the QR-code positioned on the front side of the FX-G05 unit.



### LED switch

The three-colour LED button positioned on the electrical board allows the user to switch the unit on/off and visualize the general status of the equipment without using any mobile device.

In addition (Opt. 1442, 1444) or in substitution (Opt. 6194, 6195) to the KIPlink, FX-G05 can be provided with: a 7" color touch screen interface or with a keyboard with large display and LED icons. In these cases, the LED switch is not provided. Remote keyboard is possible (Opt. C9261063, C9261064, C926108911, C926108913).

## Witness Testing

Test your chiller before its installation and make its performance totally reliable.

### Performance WITNESS TEST

Performance Witness testing is available as additional service in order to allow the final user to see the unit being tested under specific conditions. Carried out within modern and sophisticated facilities, this service gives the customer the possibility to choose among different witness test options in order to:

- ▶ Verify unit operation under severe conditions
- ▶ Detect sound emissions
- ▶ Check performance, both at full and partial loads
- ▶ Test the unit with low outdoor air temperature operation
- ▶ Time the fast restart



## Hydronic modules and flow controls

The FX-G05 units can be equipped with a factory-mounted complete pump group, which **optimizes hydraulic and electrical installation space, time and costs, or simply with terminals to control the external pumps with the unit control logic.**



### Close-coupled pumps by Grundfos

SiC/SiC (silicon carbide) primary seal pairing, extremely resistant against wear, abrasive particles and wear.

EPDM bellows seal prevent the risk of deposits, such as rust, on the shaft.

Pull-out design: during maintenance the power head can be pulled out without removing the pump housing from the pipework.

In-line or end-suction models were chosen based on dimensions and performances

**Factory-mounted pump group** 2 pumps (duty/standby) provide low or high head (available head approx. 100 or 200 kPa).  
1 pump available for single compressor units.

#### Fixed speed pumps

1 pump	LH 2-poles: Opt. 4706
	HH 2-poles: Opt. 4707
2 pumps	LH 2-poles: Opt. 4711 / 4-poles: Opt. 4708
	HH 2-poles: Opt. 4712 / 4-poles: Opt. 4709

#### Variable speed pumps

1 pump	LH 2-poles: Opt. 4717
	HH 2-poles: Opt. 4718
2 pumps	LH 2-poles: Opt. 4722 / 4-poles: Opt. 4719
	HH 2-poles: Opt. 4723 / 4-poles: Opt. 4721

#### Terminals for external pump control

The unit controls the activation or the activation and speed of 1 or 2 external pumps.

##### ON/OFF signal

1 pump	Opt. 4702
2 pumps	Opt. 4703

##### Modulating signal

1 pump	Opt. 4713
2 pumps	Opt. 4714

### VPF control logic

The VPF control series (Variable Primary Flow) doesn't only **adjust the pump speed on the basis of the plant's thermal load**, but also **dynamically optimizes the unit's thermoregulation** for variable flow operation, thus ensuring both the highest pump energy savings and chiller stable operation.

#### VPF: constant ΔP on the plant side

For systems with only the primary circuit.  
Opt. 4864 or 4865 for single unit system  
Opt. 4866 for multi-unit system

#### VPFD: constant ΔT on the plant side

For systems with primary and secondary circuits separated by a hydraulic decoupler.  
Opt. 4867 for single unit system  
Opt. 4868 for multi-unit system

For quick and easy commissioning, it is possible to adjust the pump speed directly from the unit control (Opt. 4862).

## Operating limits

- Standard unit
- Required: Kit HT (Opt. 1955)
- Required: EC fans (Opt. 808)
- Required: DBA device (coil flooding) (Opt. 813)  
EC fans (Opt. 808)

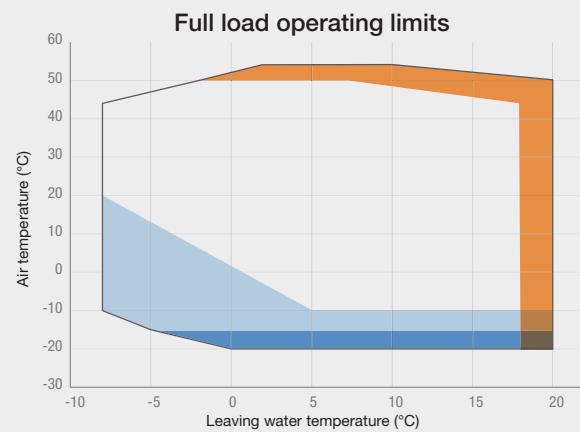
Air temp. < -10°C: Double insulation on heat exchangers (Opt. 2631)  
LWT < 0°C: Compressor liquid injection (Opt. 871)

### Partial load operating limits

In case of higher outdoor air temperature, FX-G05 automatically partializes its resources to ensure uninterrupted operation (HPTC function).

Operating limits when working partialized (water \*7°C):

/K, /SL-K	53°C
/E, SL-E	55°C
/CA, SL-CA	55°C
+kit HT (all versions)	57°C



The diagram shows the operating limits of versions /E, /SL-E  
For versions /K, /SL-K, the max outdoor temperature is lowered by 4°C  
For versions /CA, /SL-CA, the max outdoor temperature is lowered by 2°C

# ACCESSORIES

## EC fans

**EC fans (Opt. 808):** Electronically commutated fans with brushless motor to continuously adjust the speed in order to minimise energy consumption and noise emissions, especially at part loads (+1% of EER, +5% of SEER).

**+5%**  
**SEER**

## Noise reduction

### Compressor acoustical enclosure (Opt. 2301):

Enclosure realised with painted sheet metal panels lined with an acoustic insulation.  
Sound power reduction: -2 dB(A).

### Noise Reducer kit (Opt. 2315):

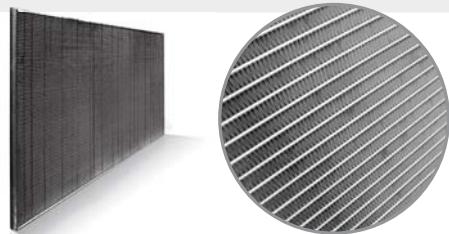
The kit includes dedicated fans' speed calibration together with the soundproofing of the most critical components.  
Sound power reduction: -7 dB(A).



## Coils and coatings

### MICROCHANNEL COILS

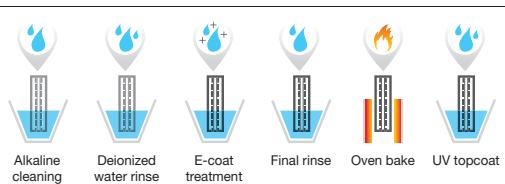
#### Al - Regular (std)



#### Al - E-coating (Opt. 876)



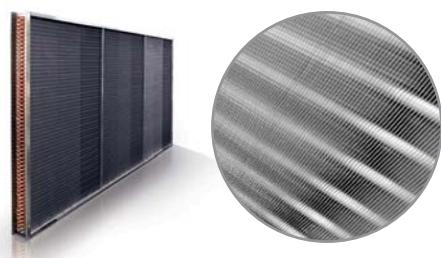
#### E-coating process



### TUBE & FIN COILS

#### Cu/Al - Regular (Opt. 879)

#### Cu/Al - Pre-painted fins (Opt. 894)



#### Cu/Al - High pressure spray coating (Opt. 895 / RFQ)

##### Fin Guard Silver SB \* Opt. 895

Polyurethane resin with aluminum fillers

- ✓ 3000 h ASTM B117
- ✓ UV rays - excellent

\* Thermoguard

##### PoluAI XT \* RFQ

Polyurethane resin with aluminum fillers

- ✓ 4000 h ASTM B117
- ✓ UV rays - excellent

\* Blygold

##### Heresite P-413C \* RFQ

Phenolic resin

- ✓ 6000 h ASTM B117
- ✓ UV rays - good

\* Heresite Protective Coating, LLC

#### Cu/Cu - Tube & fin coil (Opt. 881)

# FURTHER OPTIONS

## Auxiliary input

**4-20 mA (Opt. 6161):** Enables remote set-point adjustments (analog input).

**Double set-point (Opt. 6162):** Enables the remote switch between 2 set-points (digital input).

**Demand limit (Opt. 6171):** Limits the unit's power absorption for safety reasons or in temporary situations (digital input).

## Electrical

**Compressor rephasing (Opt. 3301):** The capacitors on the compressors' line increase the unit's power factor.

**Automatic circuit breakers for compressors (Opt. 3411) or all major electrical loads (Opt. 3412):** Protects the compressors or the compressors and fans from possible current peaks, over-current switches are provided in place of the standard fuses.

**Soft-starter (Opt. 1511) or 3-phase soft-starter (Opt. 1513):** Manages the inrush current enabling lower motor windings' mechanical wear, avoidance of mains voltage fluctuations during starting and favorable sizing for the electrical system.

## Connectivity

**BMS connection:** Serial card interface module to allow integration with BMS protocols:

**Modbus (Opt. 4181) / LonWorks (Opt. 4182) / BACnet MS/TP (Opt. 4184) / BACnet over IP (Opt. 4185):**

**M-Net interface kit (Opt. 4187):** Interface module to allow the integration of the unit with Mitsubishi Electric proprietary communication protocol M-Net.

## Energy Meter

**Energy meter for BMS (Opt. 5924):** Acquires electrical data and the power absorbed by the unit and send them to the BMS for energy metering (Modbus RS485).

## Refrigerant circuit

**Dual pressure relief valves with switch (Opt. 1961):** One valve is isolated from the refrigerant circuit while the other is in service. The user can work on the isolated valve for periodic maintenance or replacement, without removing the refrigerant from the circuit.

**Compressor suction valve (Opt. 1901):** Installed on each compressor suction line, it simplifies maintenance activity (discharge valves are present as per standard).

## Refrigerant leak detector

**Leak detector (Opt. 3431):** Factory installed device. In case of a gas leak detection it raises an alarm.

**Leak detector + compressor off (Opt. 3433):** Factory installed device. In case of a gas leak detection it raises an alarm and stops the units.

## Hydraulic

**Water flow switch (Opt. 1801):** Designed to protect the unit where the water flow across the evaporator is not sufficient and falls outside of the operating parameters.

**Delta T > 8°C (Opt. 2881):** Evaporator designed to operate with low primary circuit water flow.

**Flanged hydraulic connections (Opt. 2911):** Grooved coupling with flanged counter-pipe.

## Structure

**Anti-intrusion grilles (Opt. 2021):** Perimeter metal grilles to protect against the intrusion of solid bodies into the unit structure.

**Rubber type (Opt. 2101) or spring type (Opt. 2102) anti-vibration mountings:** Reduce vibrations, keeping noise transmission to a minimum.

## Packing

**Reinforcing bars (Opt. 1971):** Steel brackets used to strengthen the unit structure. Suggested in case of long truck transport.

**Nylon packing (Opt. 9966):** FX-G05 is covered with a protective nylon layer and provided with the lifting eye-plates, to load the unit into a truck.

**Container packing (Opt. 9979):** FX-G05 is covered with a protective nylon layer, provided with structural reinforcing bars and equipped with both lifting eye-plates and handling devices to load it on a container (metal slides, front handling bar).

**FX-G05 0751 - 1801**Chiller, air source for outdoor installation,  
from 140 to 396 kW.

<b>FX-G05 /K</b>		<b>0751</b>	<b>0851</b>	<b>0951</b>	<b>0961</b>	<b>1101</b>
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>						
<b>COOLING ONLY (GROSS VALUE)</b>						
Cooling capacity	(1) kW	145,5	160,1	202,8	221,9	238,0
Total power input	(1) kW	52,12	61,09	66,27	76,37	88,76
EER	(1) kW/kW	2,793	2,620	3,059	2,904	2,680
ESEER	(1) kW/kW	3,930	3,920	3,970	4,010	4,000
<b>COOLING ONLY (EN14511 VALUE)</b>						
Cooling capacity	(1)(2) kW	145,1	159,7	202,1	221,1	237,1
EER	(1)(2) kW/kW	2,760	2,600	3,020	2,860	2,640
ESEER	(1)(2) kW/kW	3,830	3,840	3,850	3,880	3,870
Cooling energy class		C	D	B	C	D
<b>ENERGY EFFICIENCY</b>						
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>						
Ambient refrigeration						
Prated,c	(7) kW	145	160	202	221	237
SEER	(7)(8)	3,80	3,80	3,87	3,89	3,83
Performance $\eta_S$	(7)(9) %	149	149	152	153	150
<b>EXCHANGERS</b>						
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>						
Water flow	(1) l/s	6,957	7,654	9,696	10,61	11,38
Pressure drop	(1) kPa	20,6	20,1	30,2	36,2	41,6
<b>REFRIGERANT CIRCUIT</b>						
Compressors nr.	N°	1	1	1	1	1
No. Circuits	N°	1	1	1	1	1
Refrigerant charge	kg	23,0	25,0	32,0	36,0	38,0
<b>NOISE LEVEL</b>						
Sound Pressure	(3) dB(A)	62	62	62	62	64
Sound power level in cooling	(4)(5) dB(A)	94	94	94	94	96
<b>SIZE AND WEIGHT</b>						
Length	(6) mm	1500	1500	2750	2750	2750
Width	(6) mm	2260	2260	2260	2260	2260
Height	(6) mm	2500	2500	2500	2500	2500
Operating weight	(6) kg	1480	1510	2100	2130	2460
<b>FX-G05 /K</b>		<b>1301</b>	<b>1401</b>	<b>1421</b>	<b>1431</b>	<b>1801</b>
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>						
<b>COOLING ONLY (GROSS VALUE)</b>						
Cooling capacity	(1) kW	274,7	299,1	329,0	347,7	395,7
Total power input	(1) kW	91,61	106,9	123,7	116,2	140,9
EER	(1) kW/kW	2,999	2,798	2,660	2,992	2,808
ESEER	(1) kW/kW	4,020	3,970	3,990	3,940	3,960
<b>COOLING ONLY (EN14511 VALUE)</b>						
Cooling capacity	(1)(2) kW	273,7	297,8	327,7	346,8	394,4
EER	(1)(2) kW/kW	2,950	2,750	2,620	2,960	2,770
ESEER	(1)(2) kW/kW	3,890	3,820	3,850	3,860	3,850
Cooling energy class		B	C	D	B	C
<b>ENERGY EFFICIENCY</b>						
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>						
Ambient refrigeration						
Prated,c	(7) kW	274	298	328	347	394
SEER	(7)(8)	3,85	3,80	3,83	3,90	3,86
Performance $\eta_S$	(7)(9) %	151	149	150	153	152
<b>EXCHANGERS</b>						
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>						
Water flow	(1) l/s	13,14	14,30	15,73	16,63	18,92
Pressure drop	(1) kPa	42,5	50,4	44,9	29,5	38,2
<b>REFRIGERANT CIRCUIT</b>						
Compressors nr.	N°	1	1	1	1	1
No. Circuits	N°	1	1	1	1	1
Refrigerant charge	kg	44,0	48,0	53,0	56,0	63,0
<b>NOISE LEVEL</b>						
Sound Pressure	(3) dB(A)	64	65	66	66	66
Sound power level in cooling	(4)(5) dB(A)	96	97	98	98	98
<b>SIZE AND WEIGHT</b>						
Length	(6) mm	2750	2750	2750	4000	4000
Width	(6) mm	2260	2260	2260	2260	2260
Height	(6) mm	2500	2500	2500	2500	2500
Operating weight	(6) kg	2510	2540	2580	3110	3540

**Notes:**

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.

2 Values in compliance with EN14511-3:2013.

3 Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding values calculated from the sound power level.

4 Sound power on the basis of measurements made in compliance with ISO 9614.

5 Sound power level in cooling, outdoors.

6 Unit in standard configuration/execution, without optional accessories.

7 Parameter calculated according to [REGULATION (EU) N. 2016/2281]

8 Seasonal energy efficiency ratio

9 Seasonal space cooling energy efficiency

The units highlighted in this publication contain R513A [GWP<sub>100</sub> 631] fluorinated greenhouse gases.

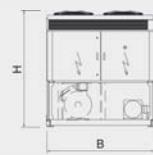
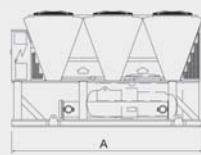
Certified data in EUROVENT



**GREEN  
CERTIFICATION  
RELEVANT**

**R R513A** **COOLING** **SCREW**  
**VPF VAR.PRIM.FLOW** **T SHELL & TUBES** **AXIAL**

<b>FX-G05 /SL-K</b>			<b>0751</b>	<b>0851</b>	<b>0951</b>	<b>0961</b>	<b>1101</b>
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>							
<b>COOLING ONLY (GROSS VALUE)</b>							
Cooling capacity	(1)	kW	140,1	169,5	195,5	214,7	245,9
Total power input	(1)	kW	52,54	56,12	66,96	78,02	83,46
EER	(1)	kW/kW	2,669	3,021	2,918	2,753	2,945
ESEER	(1)	kW/kW	3,940	4,130	3,940	4,050	4,060
<b>COOLING ONLY (EN14511 VALUE)</b>							
Cooling capacity	(1)(2)	kW	139,7	169,0	194,9	214,0	244,9
EER	(1)(2)	kW/kW	2,640	2,990	2,880	2,720	2,900
ESEER	(1)(2)	kW/kW	3,840	4,020	3,840	3,930	3,920
Cooling energy class			D	B	C	C	B
<b>ENERGY EFFICIENCY</b>							
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>							
Ambient refrigeration							
Prated,c	(7)	kW	140	169	195	214	245
SEER	(7)(8)		3,80	4,01	3,84	3,91	3,92
Performance $\eta_S$	(7)(9)	%	149	157	151	153	154
<b>EXCHANGERS</b>							
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>							
Water flow	(1)	l/s	6,698	8,107	9,351	10,27	11,76
Pressure drop	(1)	kPa	19,1	22,6	28,1	33,9	44,4
<b>REFRIGERANT CIRCUIT</b>							
Compressors n.r.		N°	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1
Refrigerant charge		kg	24,0	29,0	33,0	37,0	43,0
<b>NOISE LEVEL</b>							
Sound Pressure	(3)	dB(A)	52	52	53	53	55
Sound power level in cooling	(4)(5)	dB(A)	84	84	85	85	87
<b>SIZE AND WEIGHT</b>							
Length	(6)	mm	1500	2750	2750	2750	2750
Width	(6)	mm	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500
Operating weight	(6)	kg	1640	2050	2270	2290	2770
<b>FX-G05 /SL-K</b>			<b>1301</b>	<b>1401</b>	<b>1421</b>	<b>1431</b>	<b>1801</b>
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>							
<b>COOLING ONLY (GROSS VALUE)</b>							
Cooling capacity	(1)	kW	265,0	287,8	331,8	346,5	395,0
Total power input	(1)	kW	92,83	109,0	117,3	112,3	135,5
EER	(1)	kW/kW	2,856	2,640	2,829	3,085	2,915
ESEER	(1)	kW/kW	4,050	3,940	4,180	4,290	4,010
<b>COOLING ONLY (EN14511 VALUE)</b>							
Cooling capacity	(1)(2)	kW	264,1	286,6	330,5	345,6	393,7
EER	(1)(2)	kW/kW	2,820	2,600	2,790	3,050	2,880
ESEER	(1)(2)	kW/kW	3,930	3,800	4,030	4,180	3,900
Cooling energy class			C	D	C	B	C
<b>ENERGY EFFICIENCY</b>							
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>							
Ambient refrigeration							
Prated,c	(7)	kW	264	287	330	346	394
SEER	(7)(8)		3,87	3,80	4,02	4,21	3,94
Performance $\eta_S$	(7)(9)	%	152	149	158	165	155
<b>EXCHANGERS</b>							
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>							
Water flow	(1)	l/s	12,67	13,76	15,86	16,57	18,89
Pressure drop	(1)	kPa	39,5	46,6	45,7	29,3	38,1
<b>REFRIGERANT CIRCUIT</b>							
Compressors n.r.		N°	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1
Refrigerant charge		kg	46,0	49,0	58,0	60,0	68,0
<b>NOISE LEVEL</b>							
Sound Pressure	(3)	dB(A)	55	56	57	57	57
Sound power level in cooling	(4)(5)	dB(A)	87	88	89	89	89
<b>SIZE AND WEIGHT</b>							
Length	(6)	mm	2750	2750	4000	4000	4000
Width	(6)	mm	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500
Operating weight	(6)	kg	2770	2790	3250	3410	3880



**FX-G05 1502 - 7823**

Chiller, air source for outdoor installation,  
from 289 to 1710 kW.



<b>FX-G05 /K</b>			<b>1502</b>	<b>1702</b>	<b>1902</b>	<b>1922</b>	<b>2202</b>	<b>2602</b>	<b>2652</b>	<b>2702</b>	<b>2722</b>
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>											
<b>COOLING ONLY (GROSS VALUE)</b>											
Cooling capacity	(1)	kW	299,6	325,8	383,2	432,0	480,6	533,4	558,7	600,7	658,3
Total power input	(1)	kW	104,7	122,0	136,1	149,4	176,5	192,9	202,0	212,1	244,6
EER	(1)	kW/kW	2,862	2,670	2,816	2,892	2,723	2,765	2,766	2,832	2,691
ESEER	(1)	kW/kW	4,170	4,160	4,210	4,230	4,170	4,230	4,250	4,220	4,210
<b>COOLING ONLY (EN14511 VALUE)</b>											
Cooling capacity	(1)(2)	kW	298,9	324,9	382,1	430,5	479,3	531,7	557,1	598,8	656,3
EER	(1)(2)	kW/kW	2,830	2,640	2,780	2,850	2,700	2,730	2,740	2,800	2,660
ESEER	(1)(2)	kW/kW	4,050	4,030	4,060	4,060	4,030	4,070	4,110	4,060	4,060
Cooling energy class			C	D	C	C	C	C	C	C	D
<b>ENERGY EFFICIENCY</b>											
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>											
Ambient refrigeration											
Prated,c	(7)	kW	299	325	382	430	479	532	557	599	656
SEER	(7)(8)		4,07	4,03	4,09	4,11	4,10	4,10	4,10	4,11	4,10
Performance $\eta_S$	(7)(9)	%	160	158	160	161	161	161	161	161	161
<b>EXCHANGERS</b>											
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>											
Water flow	(1)	l/s	14,33	15,58	18,32	20,66	22,98	25,51	26,72	28,73	31,48
Pressure drop	(1)	kPa	23,9	28,3	33,6	42,7	32,3	39,8	34,9	40,3	38,5
<b>REFRIGERANT CIRCUIT</b>											
Compressors nr.	N°		2	2	2	2	2	2	2	2	2
No. Circuits	N°		2	2	2	2	2	2	2	2	2
Refrigerant charge	kg		51,0	54,0	63,0	72,0	79,0	87,0	92,0	101	108
<b>NOISE LEVEL</b>											
Sound Pressure	(3)	dB(A)	67	67	67	68	68	68	68	68	70
Sound power level in cooling	(4)(5)	dB(A)	99	99	99	100	100	100	100	100	102
<b>SIZE AND WEIGHT</b>											
Length	(6)	mm	2750	2750	4000	4000	4000	5250	5250	5250	5250
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	3160	3170	3720	3810	4610	5060	5060	5130	5520

<b>FX-G05 /K</b>			<b>3152</b>	<b>3602</b>	<b>3902</b>	<b>4202</b>	<b>4502</b>	<b>4802</b>	<b>4812</b>	<b>4822</b>	<b>5412</b>
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>											
<b>COOLING ONLY (GROSS VALUE)</b>											
Cooling capacity	(1)	kW	725,4	802,7	871,9	926,5	982,4	1021	1059	1146	1176
Total power input	(1)	kW	260,4	278,6	301,8	322,7	351,1	377,8	362,3	405,4	433,0
EER	(1)	kW/kW	2,786	2,881	2,889	2,871	2,798	2,702	2,923	2,827	2,716
ESEER	(1)	kW/kW	4,200	4,180	4,180	4,200	4,180	4,190	4,200	4,230	4,190
<b>COOLING ONLY (EN14511 VALUE)</b>											
Cooling capacity	(1)(2)	kW	722,9	800,2	869,2	923,3	979,4	1018	1055	1142	1172
EER	(1)(2)	kW/kW	2,750	2,850	2,850	2,830	2,770	2,670	2,880	2,790	2,690
ESEER	(1)(2)	kW/kW	4,030	4,020	4,020	4,030	4,030	4,020	4,030	4,050	4,040
Cooling energy class			C	C	C	C	C	D	C	C	D
<b>ENERGY EFFICIENCY</b>											
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>											
Ambient refrigeration											
Prated,c	(7)	kW	723	800	869	923	979	1018	1055	1142	1172
SEER	(7)(8)		4,10	4,11	4,10	4,10	4,11	4,10	4,11	4,11	4,10
Performance $\eta_S$	(7)(9)	%	161	161	161	161	161	161	161	162	161
<b>EXCHANGERS</b>											
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>											
Water flow	(1)	l/s	34,69	38,39	41,70	44,31	46,98	48,82	50,65	54,81	56,25
Pressure drop	(1)	kPa	46,8	40,9	42,6	48,1	41,8	45,1	48,5	53,3	42,2
<b>REFRIGERANT CIRCUIT</b>											
Compressors nr.	N°		2	2	2	2	2	2	2	2	2
No. Circuits	N°		2	2	2	2	2	2	2	2	2
Refrigerant charge	kg		120	135	146	155	161	168	174	189	193
<b>NOISE LEVEL</b>											
Sound Pressure	(3)	dB(A)	69	69	70	70	71	71	71	71	72
Sound power level in cooling	(4)(5)	dB(A)	102	102	103	103	104	104	104	104	105
<b>SIZE AND WEIGHT</b>											
Length	(6)	mm	6500	6500	7750	7750	7750	7750	9000	9000	9150
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	6450	6940	7440	7560	7790	7820	8250	8370	8660

**Notes:**

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.

2 Values in compliance with EN14511-3:2013.

3 Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.

4 Sound power on the basis of measurements made in compliance with ISO 9614.

5 Sound power level in cooling, outdoors.

6 Unit in standard configuration/execution, without optional accessories.

7 Parameter calculated according to [REGULATION (EU) N. 2016/2281]

8 Seasonal space cooling energy efficiency

9 Seasonal space cooling energy efficiency

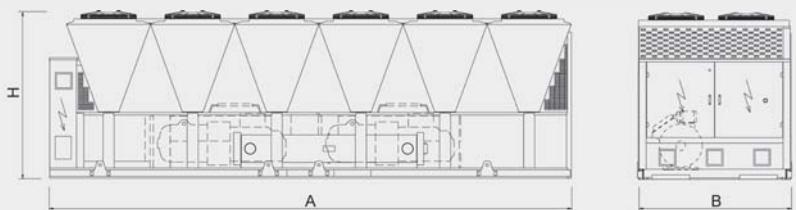
The units highlighted in this publication contain R513A [GWP<sub>100</sub> 631] fluorinated greenhouse gases.Certified data in **EUROVENT**



**GREEN  
CERTIFICATION  
RELEVANT**

**R R513A A ENERGY CLASS**  
**COOLING SCREW**  
**VPF VAR.PRIM.FLOW T SHELL & TUBES**  
**AXIAL**

<b>FX-G05 /K</b>			<b>6002</b>	<b>6022</b>	<b>6303</b>	<b>6903</b>	<b>7203</b>	<b>7213</b>	<b>7223</b>
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity	(1)	kW	1239	1303	1401	1481	1547	1654	1710
Total power input	(1)	kW	443,8	485,7	485,8	535,1	569,7	593,7	619,2
EER	(1)	kW/kW	2,792	2,683	2,884	2,768	2,715	2,786	2,762
ESEER	(1)	kW/kW	4,190	4,220	4,190	4,200	4,160	4,200	4,230
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2)	kW	1235	1298	1397	1476	1543	1649	1704
EER	(1)(2)	kW/kW	2,760	2,650	2,850	2,730	2,690	2,750	2,730
ESEER	(1)(2)	kW/kW	4,030	4,040	4,030	4,030	4,020	4,040	4,050
Cooling energy class			C	D	C	C	D	C	C
<b>ENERGY EFFICIENCY</b>									
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>									
<b>Ambient refrigeration</b>									
Prated,c	(7)	kW	1235	1298	1397	1476	1543	1649	1704
SEER	(7)(8)		4,10	4,10	4,12	4,11	4,10	4,12	4,13
Performance $\eta_S$	(7)(9)	%	161	161	162	162	161	162	162
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>									
Water flow	(1)	l/s	59,26	62,29	67,01	70,81	74,00	79,11	81,79
Pressure drop	(1)	kPa	46,9	51,8	45,4	50,7	39,0	44,6	51,2
<b>REFRIGERANT CIRCUIT</b>									
Compressors nr.		N°	2	2	3	3	3	3	3
No. Circuits		N°	2	2	3	3	3	3	3
Refrigerant charge		kg	208	214	236	244	254	273	288
<b>NOISE LEVEL</b>									
Sound Pressure	(3)	dB(A)	73	73	73	73	73	73	73
Sound power level in cooling	(4)(5)	dB(A)	106	106	106	106	106	106	106
<b>SIZE AND WEIGHT</b>									
Length	(6)	mm	10400	10400	11650	11650	11650	12900	12900
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	9200	9310	11880	11940	11950	12490	12570



**FX-G05 1502 - 7823**Chiller, air source for outdoor installation,  
from 289 to 1710 kW.

<b>FX-G05 /SL-K</b>		<b>1502</b>	<b>1702</b>	<b>1902</b>	<b>1922</b>	<b>2202</b>	<b>2602</b>	<b>2652</b>	<b>2702</b>	<b>2722</b>
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>										
<b>COOLING ONLY (GROSS VALUE)</b>										
Cooling capacity	(1) kW	288,5	333,4	381,6	418,7	476,0	518,6	556,0	578,5	663,2
Total power input	(1) kW	105,5	117,7	131,2	152,3	168,2	182,0	199,9	216,1	232,1
EER	(1) kW/kW	2,735	2,833	2,909	2,749	2,830	2,849	2,781	2,677	2,857
ESEER	(1) kW/kW	4,140	4,160	4,190	4,220	4,190	4,250	4,230	4,220	4,180
<b>COOLING ONLY (EN14511 VALUE)</b>										
Cooling capacity	(1)(2) kW	287,8	332,5	380,5	417,3	474,7	517,0	554,4	576,8	661,2
EER	(1)(2) kW/kW	2,710	2,800	2,880	2,720	2,800	2,820	2,750	2,650	2,820
ESEER	(1)(2) kW/kW	4,020	4,030	4,050	4,050	4,050	4,090	4,090	4,070	4,030
Cooling energy class		C	C	C	C	C	C	C	D	C
<b>ENERGY EFFICIENCY</b>										
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>										
Ambient refrigeration										
Prated,c	(7) kW	288	332	380	417	475	517	554	577	661
SEER	(7)(8)	4,02	4,04	4,10	4,10	4,11	4,10	4,10	4,11	4,10
Performance $\eta_{S}$	(7)(9) %	158	159	161	161	161	161	161	161	161
<b>EXCHANGERS</b>										
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>										
Water flow	(1) l/s	13,80	15,94	18,25	20,02	22,76	24,80	26,59	27,66	31,72
Pressure drop	(1) kPa	22,2	29,6	33,3	40,1	31,7	37,6	34,5	37,4	39,1
<b>REFRIGERANT CIRCUIT</b>										
Compressors nr.	N°	2	2	2	2	2	2	2	2	2
No. Circuits	N°	2	2	2	2	2	2	2	2	2
Refrigerant charge	kg	51,0	59,0	67,0	72,0	83,0	91,0	97,0	101	116
<b>NOISE LEVEL</b>										
Sound Pressure	(3) dB(A)	55	55	56	56	57	57	57	57	57
Sound power level in cooling	(4)(5) dB(A)	87	87	88	88	89	89	89	89	90
<b>SIZE AND WEIGHT</b>										
Length	(6) mm	2750	4000	4000	4000	5250	5250	5250	5250	6500
Width	(6) mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	(6) mm	2500	2500	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6) kg	3420	4160	4230	4230	5200	5560	5580	5620	6610

<b>FX-G05 /SL-K</b>		<b>3152</b>	<b>3602</b>	<b>3902</b>	<b>4202</b>	<b>4502</b>	<b>4802</b>	<b>4812</b>	<b>4822</b>	<b>5412</b>
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>										
<b>COOLING ONLY (GROSS VALUE)</b>										
Cooling capacity	(1) kW	716,6	770,8	838,7	892,9	964,9	1021	1052	1137	1169
Total power input	(1) kW	257,3	283,3	307,1	328,4	349,6	368,2	355,4	396,9	424,6
EER	(1) kW/kW	2,785	2,721	2,731	2,719	2,760	2,773	2,960	2,865	2,753
ESEER	(1) kW/kW	4,200	4,170	4,190	4,200	4,180	4,200	4,200	4,210	4,180
<b>COOLING ONLY (EN14511 VALUE)</b>										
Cooling capacity	(1)(2) kW	714,1	768,6	836,2	890,0	962,1	1018	1048	1133	1166
EER	(1)(2) kW/kW	2,750	2,690	2,700	2,690	2,730	2,740	2,920	2,820	2,720
ESEER	(1)(2) kW/kW	4,030	4,030	4,040	4,030	4,030	4,030	4,030	4,030	4,030
Cooling energy class		C	D	C	D	C	B	C	C	C
<b>ENERGY EFFICIENCY</b>										
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>										
Ambient refrigeration										
Prated,c	(7) kW	714	769	836	890	962	1018	1048	1133	1166
SEER	(7)(8)	4,10	4,11	4,10	4,10	4,11	4,10	4,11	4,11	4,11
Performance $\eta_{S}$	(7)(9) %	161	161	161	161	162	161	162	161	162
<b>EXCHANGERS</b>										
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>										
Water flow	(1) l/s	34,27	36,86	40,11	42,70	46,14	48,85	50,30	54,38	55,91
Pressure drop	(1) kPa	45,7	37,7	39,4	44,7	40,3	45,2	47,9	52,5	41,7
<b>REFRIGERANT CIRCUIT</b>										
Compressors nr.	N°	2	2	2	2	2	2	2	2	2
No. Circuits	N°	2	2	2	2	2	2	2	2	2
Refrigerant charge	kg	125	135	146	155	168	178	183	198	204
<b>NOISE LEVEL</b>										
Sound Pressure	(3) dB(A)	58	58	59	59	60	60	61	61	61
Sound power level in cooling	(4)(5) dB(A)	91	91	92	92	93	93	94	94	94
<b>SIZE AND WEIGHT</b>										
Length	(6) mm	6500	6500	7750	7750	9000	9000	10250	10250	10400
Width	(6) mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	(6) mm	2500	2500	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6) kg	7080	7550	8090	8200	9000	8870	9360	9470	9780

**Notes:**

- 1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.  
 2 Values in compliance with EN14511-3:2013.  
 3 Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.  
 4 Sound power on the basis of measurements made in compliance with ISO 9614.  
 5 Sound power level in cooling, outdoors.

6 Unit in standard configuration/execution, without optional accessories.

7 Parameter calculated according to [REGULATION (EU) N. 2016/2281]

8 Seasonal space cooling energy efficiency

The units highlighted in this publication contain R513A [GWP<sub>100</sub> 631] fluorinated greenhouse gases.Certified data in **EUROVENT**



**GREEN  
CERTIFICATION  
RELEVANT**

**R R513A**

**A ENERGY CLASS**

**COOLING**

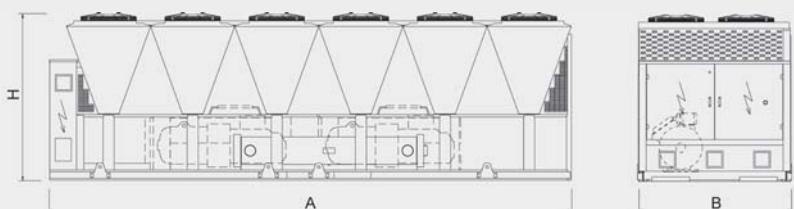
**SCREW**

**VPF VAR.PRIM.FLOW**

**T SHELL & TUBES**

**AXIAL**

<b>FX-G05 /SL-K</b>		<b>6002</b>	<b>6022</b>	<b>6303</b>	<b>6903</b>	<b>7203</b>	<b>7213</b>	<b>7223</b>
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>								
<b>COOLING ONLY (GROSS VALUE)</b>								
Cooling capacity	(1)	kW	1194	1289	1350	1463	1530	1595
Total power input	(1)	kW	451,2	478,6	494,5	531,6	563,4	607,6
EER	(1)	kW/kW	2,646	2,693	2,730	2,752	2,716	2,625
ESEER	(1)	kW/kW	4,180	4,220	4,180	4,200	4,160	4,170
<b>COOLING ONLY (EN14511 VALUE)</b>								
Cooling capacity	(1)(2)	kW	1190	1285	1346	1458	1526	1590
EER	(1)(2)	kW/kW	2,620	2,660	2,700	2,720	2,690	2,600
ESEER	(1)(2)	kW/kW	4,020	4,040	4,030	4,030	4,030	4,020
Cooling energy class			D	D	C	C	D	D
<b>ENERGY EFFICIENCY</b>								
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>								
Ambient refrigeration								
Prated,c	(7)	kW	1190	1285	1346	1458	1526	1590
SEER	(7)(8)		4,10	4,12	4,11	4,11	4,12	4,11
Performance $\eta_S$	(7)(9)	%	161	162	161	161	162	161
<b>EXCHANGERS</b>								
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>								
Water flow	(1)	l/s	57,11	61,64	64,56	69,97	73,16	76,27
Pressure drop	(1)	kPa	43,5	50,7	42,1	49,5	38,2	41,5
<b>REFRIGERANT CIRCUIT</b>								
Compressors n.r.	N°		2	2	3	3	3	3
No. Circuits	N°		2	2	3	3	3	3
Refrigerant charge	kg		208	224	236	255	267	278
<b>NOISE LEVEL</b>								
Sound Pressure	(3)	dB(A)	61	61	61	61	61	61
Sound power level in cooling	(4)(5)	dB(A)	94	94	94	94	94	95
<b>SIZE AND WEIGHT</b>								
Length	(6)	mm	10400	11650	11650	12900	12900	12900
Width	(6)	mm	2260	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	9860	10420	12810	13340	13420	13500



**FX-G05 1502 - 7823**

Chiller, air source for outdoor installation,  
from 289 to 1710 kW.



FX-G05 /CA			1502	1702	1902	1922	2202	2602	2652
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity	(1)	kW	302,4	349,6	395,0	461,7	513,2	551,4	590,7
Total power input	(1)	kW	99,27	112,9	130,0	149,8	166,3	182,0	191,9
EER	(1)	kW/kW	3,045	3,097	3,038	3,082	3,086	3,030	3,078
ESEER	(1)	kW/kW	4,290	4,310	4,310	4,280	4,310	4,310	4,320
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2)	kW	301,6	348,6	393,8	460,5	511,7	549,9	588,9
EER	(1)(2)	kW/kW	3,010	3,060	3,000	3,050	3,050	3,000	3,040
ESEER	(1)(2)	kW/kW	4,150	4,160	4,150	4,150	4,160	4,170	4,160
Cooling energy class		B	B	B	B	B	B	B	B
<b>ENERGY EFFICIENCY</b>									
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>									
Ambient refrigeration									
Prated,c	(7)	kW	302	349	394	460	512	550	589
SEER	(7)(8)		4,21	4,21	4,20	4,21	4,22	4,16	4,16
Performance $\eta_S$	(7)(9)	%	166	166	165	166	166	163	164
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>									
Water flow	(1)	l/s	14,46	16,72	18,89	22,08	24,54	26,37	28,25
Pressure drop	(1)	kPa	24,4	32,6	35,7	29,8	36,8	34,0	39,0
<b>REFRIGERANT CIRCUIT</b>									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	55,0	62,0	67,0	78,0	91,0	93,0	100
<b>NOISE LEVEL</b>									
Sound Pressure	(3)	dB(A)	66	66	67	67	68	68	68
Sound power level in cooling	(4)(5)	dB(A)	98	98	99	99	100	100	101
<b>SIZE AND WEIGHT</b>									
Length	(6)	mm	4000	4000	4000	5250	5250	5250	6500
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	3660	3720	3760	4660	5040	5090	5830

FX-G05 /CA			2702	2722	3152	3602	3902	4202	4502
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity	(1)	kW	628,7	683,7	766,2	837,8	904,7	956,0	1031
Total power input	(1)	kW	203,9	226,5	251,5	270,8	291,1	311,7	333,0
EER	(1)	kW/kW	3,083	3,019	3,047	3,094	3,108	3,067	3,096
ESEER	(1)	kW/kW	4,310	4,330	4,310	4,300	4,320	4,330	4,310
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2)	kW	626,6	681,5	764,0	835,0	901,7	952,5	1028
EER	(1)(2)	kW/kW	3,040	2,980	3,010	3,050	3,070	3,020	3,050
ESEER	(1)(2)	kW/kW	4,140	4,160	4,150	4,130	4,140	4,140	4,140
Cooling energy class		B	B	B	B	B	B	B	B
<b>ENERGY EFFICIENCY</b>									
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>									
Ambient refrigeration									
Prated,c	(7)	kW	627	682	764	835	902	952	1028
SEER	(7)(8)		4,19	4,22	4,24	4,21	4,23	4,22	4,22
Performance $\eta_S$	(7)(9)	%	165	166	167	165	166	166	166
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>									
Water flow	(1)	l/s	30,07	32,70	36,64	40,06	43,26	45,72	49,29
Pressure drop	(1)	kPa	44,2	41,6	37,2	44,5	45,8	51,2	46,0
<b>REFRIGERANT CIRCUIT</b>									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	106	115	130	141	153	162	174
<b>NOISE LEVEL</b>									
Sound Pressure	(3)	dB(A)	68	68	68	69	69	70	70
Sound power level in cooling	(4)(5)	dB(A)	101	101	101	102	102	103	103
<b>SIZE AND WEIGHT</b>									
Length	(6)	mm	6500	6500	7750	7750	9000	9000	10400
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	5690	6110	6970	7440	7890	8000	8700

**Notes:**

Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.

2 Values in compliance with EN14511-3:2013.

3 Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.

4 Sound power on the basis of measurements made in compliance with ISO 9614.

5 Sound power level in cooling, outdoors.

6 Unit in standard configuration/execution, without optional accessories.

7 Parameter calculated according to [REGULATION (EU) N. 2016/2281]

8 Seasonal energy efficiency ratio

9 Seasonal space cooling energy efficiency

The units highlighted in this publication contain R513A [GWP<sub>100</sub> 631] fluorinated greenhouse gases.

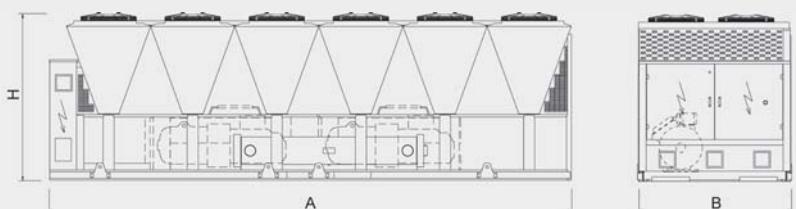
Certified data in EUROVENT



**GREEN  
CERTIFICATION  
RELEVANT**

**R R513A A ENERGY CLASS** **COOLING** **SCREW**  
**VVF VAR.PRIM.FLOW** **T SHELL & TUBES** **AXIAL**

<b>FX-G05 /CA</b>		<b>4802</b>	<b>4822</b>	<b>5412</b>	<b>5703</b>	<b>6303</b>	<b>6603</b>
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>							
<b>COOLING ONLY (GROSS VALUE)</b>							
Cooling capacity (1)	kW	1098	1177	1236	1342	1460	1521
Total power input (1)	kW	353,4	390,4	406,9	431,5	477,7	504,8
EER (1)	kW/kW	3,107	3,015	3,038	3,110	3,056	3,013
ESEER (1)	kW/kW	4,340	4,310	4,330	4,270	4,290	4,300
<b>COOLING ONLY (EN14511 VALUE)</b>							
Cooling capacity (1)(2)	kW	1094	1173	1232	1338	1456	1517
EER (1)(2)	kW/kW	3,060	2,980	3,000	3,070	3,030	2,980
ESEER (1)(2)	kW/kW	4,160	4,160	4,160	4,120	4,160	4,160
Cooling energy class		B	B	B	B	B	B
<b>ENERGY EFFICIENCY</b>							
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>							
<b>Ambient refrigeration</b>							
Prated,c (7)	kW	1094	1173	1232	1338	1456	1517
SEER (7)(8)		4,25	4,24	4,25	4,25	4,25	4,27
Performance $\eta_{IS}$ (7)(9)	%	167	167	167	167	167	168
<b>EXCHANGERS</b>							
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>							
Water flow (1)	l/s	52,53	56,31	59,13	64,17	69,81	72,73
Pressure drop (1)	kPa	50,1	42,3	46,7	41,6	34,7	37,7
<b>REFRIGERANT CIRCUIT</b>							
Compressors nr.	N°	2	2	2	3	3	3
No. Circuits	N°	2	2	2	3	3	3
Refrigerant charge	kg	185	199	209	227	260	258
<b>NOISE LEVEL</b>							
Sound Pressure (3)	dB(A)	70	70	71	71	71	71
Sound power level in cooling (4)(5)	dB(A)	103	103	104	104	104	104
<b>SIZE AND WEIGHT</b>							
Length (6)	mm	10400	10400	11650	12900	12900	12900
Width (6)	mm	2260	2260	2260	2260	2260	2260
Height (6)	mm	2500	2500	2500	2500	2500	2500
Operating weight (6)	kg	8780	9040	10120	12160	12330	12640



**FX-G05 1502 - 7823**

Chiller, air source for outdoor installation,  
from 289 to 1710 kW.



<b>FX-G05 /SL-CA</b>			<b>1502</b>	<b>1702</b>	<b>1902</b>	<b>1922</b>	<b>2202</b>	<b>2602</b>	<b>2652</b>
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity	(1)	kW	304,2	344,9	394,3	450,1	500,7	560,7	582,8
Total power input	(1)	kW	98,67	112,2	126,9	149,7	166,1	185,7	189,1
EER	(1)	kW/kW	3,082	3,074	3,107	3,007	3,014	3,019	3,082
ESEER	(1)	kW/kW	4,290	4,310	4,320	4,250	4,300	4,310	4,300
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2)	kW	303,4	343,9	393,1	449,0	499,3	559,1	581,0
EER	(1)(2)	kW/kW	3,050	3,040	3,070	2,980	2,980	2,990	3,040
ESEER	(1)(2)	kW/kW	4,160	4,160	4,160	4,130	4,160	4,150	4,150
Cooling energy class		B	B	B	B	B	B	B	B
<b>ENERGY EFFICIENCY</b>									
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>									
Ambient refrigeration									
Prated,c	(7)	kW	303	344	393	449	499	559	581
SEER	(7)(8)		4,22	4,21	4,20	4,19	4,22	4,22	4,18
Performance $\eta_{S}$	(7)(9)	%	166	165	165	165	166	166	164
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>									
Water flow	(1)	l/s	14,55	16,49	18,85	21,53	23,94	26,81	27,87
Pressure drop	(1)	kPa	24,7	31,7	35,6	28,3	35,1	35,1	38,0
<b>REFRIGERANT CIRCUIT</b>									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	55,0	62,0	71,0	82,0	91,0	101	112
<b>NOISE LEVEL</b>									
Sound Pressure	(3)	dB(A)	55	56	56	57	57	57	58
Sound power level in cooling	(4)(5)	dB(A)	87	88	88	89	89	90	91
<b>SIZE AND WEIGHT</b>									
Length	(6)	mm	4000	4000	5250	5250	5250	6500	6500
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	4130	4190	4680	5140	5520	6140	6390

<b>FX-G05 /SL-CA</b>			<b>2702</b>	<b>2722</b>	<b>3152</b>	<b>3602</b>	<b>3902</b>	<b>4202</b>	<b>4502</b>
Power supply	V/ph/Hz		400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity	(1)	kW	615,6	680,7	754,1	819,3	899,1	947,9	1020
Total power input	(1)	kW	204,4	221,1	246,8	262,5	285,1	305,7	327,1
EER	(1)	kW/kW	3,012	3,079	3,056	3,121	3,154	3,101	3,118
ESEER	(1)	kW/kW	4,290	4,330	4,300	4,290	4,300	4,330	4,300
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2)	kW	613,9	678,5	752,0	816,7	896,1	944,5	1017
EER	(1)(2)	kW/kW	2,980	3,040	3,020	3,080	3,110	3,060	3,080
ESEER	(1)(2)	kW/kW	4,150	4,160	4,160	4,120	4,130	4,140	4,140
Cooling energy class		B	B	B	B	A	B	B	B
<b>ENERGY EFFICIENCY</b>									
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>									
Ambient refrigeration									
Prated,c	(7)	kW	614	678	752	817	896	944	1017
SEER	(7)(8)		4,22	4,24	4,25	4,21	4,23	4,23	4,24
Performance $\eta_{S}$	(7)(9)	%	166	166	167	166	166	166	167
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>									
Water flow	(1)	l/s	29,44	32,55	36,06	39,18	43,00	45,33	48,80
Pressure drop	(1)	kPa	33,7	41,2	36,1	42,6	45,3	50,3	45,1
<b>REFRIGERANT CIRCUIT</b>									
Compressors nr.		N°	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	123	136	148	162	171	184	197
<b>NOISE LEVEL</b>									
Sound Pressure	(3)	dB(A)	58	59	59	59	59	60	60
Sound power level in cooling	(4)(5)	dB(A)	91	92	92	92	92	93	93
<b>SIZE AND WEIGHT</b>									
Length	(6)	mm	6500	7750	7750	9000	10250	10250	11650
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	6520	7150	7610	8500	8990	9280	9810

**Notes:**

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.

2 Values in compliance with EN14511-3:2013.

3 Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.

4 Sound power on the basis of measurements made in compliance with ISO 9614.

5 Sound power level in cooling, outdoors.

6 Unit in standard configuration/execution, without optional accessories.

7 Parameter calculated according to [REGULATION (EU) N. 2016/2281]

8 Seasonal space cooling energy efficiency

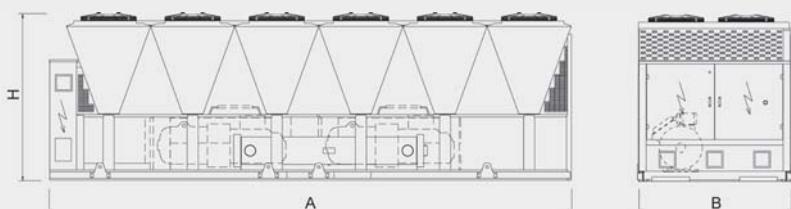
9 The units highlighted in this publication contain R513A [GWP<sub>100</sub> 631] fluorinated greenhouse gases.Certified data in **EUROVENT**



**GREEN  
CERTIFICATION  
RELEVANT**

**R R513A A ENERGY CLASS**  
**COOLING SCREW**  
**VPF VAR.PRIM.FLOW T SHELL & TUBES**  
**AXIAL**

<b>FX-G05 /SL-CA</b>			<b>4802</b>	<b>4822</b>	<b>5412</b>	<b>5703</b>	<b>6303</b>
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>							
<b>COOLING ONLY (GROSS VALUE)</b>							
Cooling capacity	(1)	kW	1086	1163	1219	1310	1442
Total power input	(1)	kW	347,6	384,6	401,4	426,7	479,4
EER	(1)	kW/kW	3,124	3,024	3,037	3,070	3,008
ESEER	(1)	kW/kW	4,330	4,310	4,330	4,280	4,280
<b>COOLING ONLY (EN14511 VALUE)</b>							
Cooling capacity	(1)(2)	kW	1082	1160	1215	1306	1439
EER	(1)(2)	kW/kW	3,080	2,990	3,000	3,040	2,980
ESEER	(1)(2)	kW/kW	4,150	4,160	4,160	4,130	4,150
Cooling energy class			B	B	B	B	B
<b>ENERGY EFFICIENCY</b>							
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>							
Ambient refrigeration							
Prated,c	(7)	kW	1082	1160	1215	1306	1439
SEER	(7)(8)		4,25	4,26	4,26	4,25	4,25
Performance $\eta_S$	(7)(9)	%	167	167	167	167	167
<b>EXCHANGERS</b>							
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>							
Water flow	(1)	l/s	51,94	55,63	58,31	62,64	68,95
Pressure drop	(1)	kPa	48,9	41,3	45,4	39,7	33,9
<b>REFRIGERANT CIRCUIT</b>							
Compressors nr.		N°	2	2	2	3	3
No. Circuits		N°	2	2	2	3	3
Refrigerant charge		kg	210	220	237	260	226
<b>NOISE LEVEL</b>							
Sound Pressure	(3)	dB(A)	60	60	62	62	62
Sound power level in cooling	(4)(5)	dB(A)	93	93	95	95	95
<b>SIZE AND WEIGHT</b>							
Length	(6)	mm	11650	11650	12900	12900	12900
Width	(6)	mm	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500
Operating weight	(6)	kg	9890	10230	10760	13130	13260



**FX-G05 1502 - 7823**

Chiller, air source for outdoor installation,  
from 289 to 1710 kW.



<b>FX-G05 /E</b>		<b>1502</b>	<b>1702</b>	<b>1902</b>	<b>1922</b>	<b>2202</b>	<b>2602</b>	<b>2652</b>	<b>2702</b>	<b>2722</b>
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>										
<b>COOLING ONLY (GROSS VALUE)</b>										
Cooling capacity	(1) kW	316,5	362,6	413,8	451,2	530,5	575,8	612,9	649,8	703,3
Total power input	(1) kW	98,32	112,6	128,0	142,3	162,6	177,5	188,6	199,6	221,8
EER	(1) kW/kW	3,220	3,220	3,233	3,171	3,263	3,244	3,250	3,256	3,171
ESEER	(1) kW/kW	4,350	4,370	4,360	4,370	4,360	4,360	4,370	4,390	4,360
<b>COOLING ONLY (EN14511 VALUE)</b>										
Cooling capacity	(1)(2) kW	315,8	361,6	412,9	450,1	529,0	574,4	611,2	647,9	701,5
EER	(1)(2) kW/kW	3,190	3,180	3,200	3,140	3,220	3,210	3,210	3,220	3,140
ESEER	(1)(2) kW/kW	4,230	4,220	4,250	4,240	4,210	4,230	4,220	4,240	4,230
Cooling energy class	A	A	A	A	A	A	A	A	A	A
<b>ENERGY EFFICIENCY</b>										
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>										
Ambient refrigeration										
Prated,c	(7) kW	316	362	413	450	529	574	611	648	702
SEER	(7)(8)	4,32	4,29	4,32	4,28	4,32	4,28	4,27	4,32	4,32
Performance $\eta_{S}$	(7)(9) %	170	168	170	168	170	168	168	170	170
<b>EXCHANGERS</b>										
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>										
Water flow	(1) l/s	15,14	17,34	19,79	21,58	25,37	27,54	29,31	31,07	33,63
Pressure drop	(1) kPa	22,9	30,1	24,0	28,5	35,8	29,5	33,4	37,5	31,4
<b>REFRIGERANT CIRCUIT</b>										
Compressors nr.	N°	2	2	2	2	2	2	2	2	2
No. Circuits	N°	2	2	2	2	2	2	2	2	2
Refrigerant charge	kg	56,0	64,0	74,0	82,0	94,0	102	109	116	125
<b>NOISE LEVEL</b>										
Sound Pressure	(3) dB(A)	66	67	67	67	67	67	68	68	68
Sound power level in cooling	(4)(5) dB(A)	98	99	99	99	100	100	101	101	101
<b>SIZE AND WEIGHT</b>										
Length	(6) mm	4000	5250	5250	5250	6500	6500	7750	7750	7750
Width	(6) mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	(6) mm	2500	2500	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6) kg	3720	4240	4360	4420	5590	5920	6400	6490	6600

<b>FX-G05 /E</b>		<b>3152</b>	<b>3602</b>	<b>3902</b>	<b>4202</b>	<b>4502</b>	<b>4802</b>	<b>4822</b>	<b>5412</b>
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>									
<b>COOLING ONLY (GROSS VALUE)</b>									
Cooling capacity	(1) kW	785,8	854,0	931,3	986,6	1054	1123	1219	1277
Total power input	(1) kW	245,6	266,4	288,3	309,5	330,1	350,9	388,4	407,4
EER	(1) kW/kW	3,200	3,206	3,230	3,188	3,193	3,200	3,139	3,135
ESEER	(1) kW/kW	4,350	4,370	4,420	4,380	4,400	4,400	4,330	4,350
<b>COOLING ONLY (EN14511 VALUE)</b>									
Cooling capacity	(1)(2) kW	783,7	851,4	927,8	983,6	1051	1119	1216	1274
EER	(1)(2) kW/kW	3,160	3,170	3,180	3,150	3,150	3,150	3,110	3,100
ESEER	(1)(2) kW/kW	4,210	4,210	4,210	4,210	4,220	4,210	4,200	4,210
Cooling energy class	A	A	A	A	A	A	A	A	A
<b>ENERGY EFFICIENCY</b>									
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>									
Ambient refrigeration									
Prated,c	(7) kW	784	851	928	984	1051	1119	1216	1274
SEER	(7)(8)	4,32	4,33	4,33	4,32	4,32	4,31	4,32	4,35
Performance $\eta_{S}$	(7)(9) %	170	170	170	170	170	169	170	171
<b>EXCHANGERS</b>									
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>									
Water flow	(1) l/s	37,58	40,84	44,54	47,18	50,39	53,70	58,31	61,05
Pressure drop	(1) kPa	34,6	40,9	53,0	42,1	46,1	51,2	34,4	37,7
<b>REFRIGERANT CIRCUIT</b>									
Compressors nr.	N°	2	2	2	2	2	2	2	2
No. Circuits	N°	2	2	2	2	2	2	2	2
Refrigerant charge	kg	140	152	166	176	187	200	217	228
<b>NOISE LEVEL</b>									
Sound Pressure	(3) dB(A)	68	69	69	70	70	70	70	71
Sound power level in cooling	(4)(5) dB(A)	101	102	102	103	103	103	103	104
<b>SIZE AND WEIGHT</b>									
Length	(6) mm	9000	9000	10250	10250	11650	11650	11650	12900
Width	(6) mm	2260	2260	2260	2260	2260	2260	2260	2260
Height	(6) mm	2500	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6) kg	7400	7880	8420	8660	9190	9270	10330	11170

Notes:

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.

2 Values in compliance with EN14511-3:2013.

3 Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.

4 Sound power on the basis of measurements made in compliance with ISO 9614.

5 Sound power level in cooling, outdoors.

6 Unit in standard configuration/execution, without optional accessories.

7 Parameter calculated according to [REGULATION (EU) N. 2016/2281]

8 Seasonal space cooling energy efficiency

The units highlighted in this publication contain R513A [GWP<sub>100</sub> 631] fluorinated greenhouse gases.

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**GREEN  
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**R R513A**

**A ENERGY CLASS**

**COOLING**

**SCREW**

**VPF VAR.PRIM.FLOW**

**T SHELL & TUBES**

**AXIAL**

<b>FX-G05 /SL-E</b>			<b>1502</b>	<b>1702</b>	<b>1902</b>	<b>1922</b>	<b>2202</b>	<b>2602</b>	<b>2652</b>	<b>2702</b>	<b>2722</b>
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>											
<b>COOLING ONLY (GROSS VALUE)</b>											
Cooling capacity	(1)	kW	312,8	359,1	409,0	447,3	524,1	568,3	605,2	641,9	696,6
Total power input	(1)	kW	97,03	110,3	126,2	141,4	160,5	176,0	186,6	197,3	220,9
EER	(1)	kW/kW	3,225	3,256	3,241	3,163	3,265	3,229	3,243	3,253	3,153
ESEER	(1)	kW/kW	4,380	4,390	4,360	4,370	4,370	4,450	4,430	4,440	4,430
<b>COOLING ONLY (EN14511 VALUE)</b>											
Cooling capacity	(1)(2)	kW	312,1	358,1	408,1	446,2	522,6	566,9	603,6	640,0	694,9
EER	(1)(2)	kW/kW	3,190	3,220	3,210	3,130	3,230	3,200	3,210	3,210	3,120
ESEER	(1)(2)	kW/kW	4,260	4,250	4,250	4,240	4,220	4,320	4,290	4,280	4,290
Cooling energy class		A	A	A	A	A	A	A	A	A	A
<b>ENERGY EFFICIENCY</b>											
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>											
<b>Ambient refrigeration</b>											
Prated,c	(7)	kW	312	358	408	446	523	567	604	640	695
SEER	(7)(8)		4,33	4,30	4,31	4,27	4,33	4,34	4,32	4,36	4,37
Performance $\eta_S$	(7)(9)	%	170	169	169	168	170	171	170	172	172
<b>EXCHANGERS</b>											
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>											
Water flow	(1)	l/s	14,96	17,17	19,56	21,39	25,06	27,18	28,94	30,70	33,31
Pressure drop	(1)	kPa	22,4	29,5	23,4	28,0	34,9	28,7	32,6	36,6	30,8
<b>REFRIGERANT CIRCUIT</b>											
Compressors nr.		N°	2	2	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2	2	2
Refrigerant charge		kg	56,0	64,0	74,0	82,0	94,0	102	109	116	125
<b>NOISE LEVEL</b>											
Sound Pressure	(3)	dB(A)	56	57	57	57	57	58	58	59	59
Sound power level in cooling	(4)(5)	dB(A)	88	89	89	89	90	91	91	92	92
<b>SIZE AND WEIGHT</b>											
Length	(6)	mm	4000	5250	5250	5250	6500	6500	7750	7750	7750
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	3960	4460	4620	4680	6120	6460	6940	7040	7140

<b>FX-G05 /SL-E</b>			<b>3152</b>	<b>3602</b>	<b>3902</b>	<b>4202</b>	<b>4502</b>	<b>4802</b>	<b>4822</b>	<b>5412</b>
Power supply	V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
<b>PERFORMANCE</b>										
<b>COOLING ONLY (GROSS VALUE)</b>										
Cooling capacity	(1)	kW	776,1	841,9	918,4	973,5	1040	1108	1205	1260
Total power input	(1)	kW	244,2	264,3	286,4	307,9	328,4	349,1	389,0	406,2
EER	(1)	kW/kW	3,178	3,185	3,207	3,162	3,167	3,174	3,098	3,102
ESEER	(1)	kW/kW	4,400	4,410	4,460	4,420	4,410	4,410	4,360	4,370
<b>COOLING ONLY (EN14511 VALUE)</b>										
Cooling capacity	(1)(2)	kW	774,1	839,4	915,0	970,6	1037	1104	1202	1257
EER	(1)(2)	kW/kW	3,140	3,150	3,160	3,120	3,130	3,130	3,070	3,070
ESEER	(1)(2)	kW/kW	4,260	4,250	4,260	4,260	4,240	4,220	4,240	4,230
Cooling energy class		A	A	A	A	A	A	B	B	B
<b>ENERGY EFFICIENCY</b>										
<b>SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)</b>										
<b>Ambient refrigeration</b>										
Prated,c	(7)	kW	774	839	915	971	1037	1104	1202	1257
SEER	(7)(8)		4,35	4,36	4,36	4,35	4,33	4,32	4,35	4,36
Performance $\eta_S$	(7)(9)	%	171	171	171	171	170	170	171	171
<b>EXCHANGERS</b>										
<b>HEAT EXCHANGER USER SIDE IN REFRIGERATION</b>										
Water flow	(1)	l/s	37,11	40,26	43,92	46,55	49,72	52,98	57,62	60,28
Pressure drop	(1)	kPa	33,7	39,7	51,5	41,0	44,9	49,8	33,6	36,7
<b>REFRIGERANT CIRCUIT</b>										
Compressors nr.		N°	2	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2	2
Refrigerant charge		kg	140	152	166	176	187	200	217	228
<b>NOISE LEVEL</b>										
Sound Pressure	(3)	dB(A)	59	59	59	60	60	60	60	62
Sound power level in cooling	(4)(5)	dB(A)	92	92	92	93	93	93	93	95
<b>SIZE AND WEIGHT</b>										
Length	(6)	mm	9000	9000	10250	10250	11650	11650	11650	12900
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260	2260
Height	(6)	mm	2500	2500	2500	2500	2500	2500	2500	2500
Operating weight	(6)	kg	7990	8500	8990	9290	9830	9910	10900	11530

# MORE THAN 1000 PROJECTS ALL OVER THE WORLD

## Howard Smith Wharves

2018 Brisbane - Australia

Mixed-Use Development

**Plant type:** Hydronic System

**Cooling capacity:** 1200 kW

**Installed machines:**

2x FX/CA high efficiency screw compressor chiller



## Woolworths Brookvale

2017 Brookvale - Australia

Supermarket

**Plant type:** Hydronic System

**Cooling capacity:** 466 kW

**Installed machines:**

1x FX/K screw compressor chiller



## Gabbana

2017 Windhof - Luxembourg

Office building

**Plant type:** Hydronic System

**Cooling capacity:** 386 kW

**Installed machines:**

1x FX-FC HFO screw compressor free-cooling chiller with HFO refrigerant



**Each one featured by different usage, location and system requirements.  
All of them sharing the highest efficiency, lowest noise emissions and complete reliability of Climaveneta's unique experience and know how.**

### Kernot Hall

2018 LaTrobe Victoria - Australia

Institutions

**Plant type:** Hydronic System

**Cooling capacity:** 582 kW

**Installed machines:**

1x FX/K screw compressor chiller



### FICO Eataly World

2017 Bologna - Italy

Food & Drink

**Plant type:** Hydronic System

**Cooling capacity:** 6324 kW

**Installed machines:** 2x TECS2 SL CA high efficiency oil-free compressor chillers, 2x FOCS2 CA high efficiency

screw compressor chillers, 1x FX screw compressor chiller



### De Bijenkorf Amsterdam

2018 Amsterdam - Netherlands

Retail

**Plant type:** Hydronic System

**Cooling capacity:** 415 kW

**Installed machines:** 1x FX HFO screw compressor chiller with HFO refrigerant





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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