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

COMFORT

CHILLERS

WATER COOLED CHILLER RANGE

SCREW COMPRESSORS WITH R513A REFRIGERANT

R513A

climaveneta.com

CLIMAVENETA®

DELIVERING THE BEST VALUE TO YOUR COMFORT APPLICATION

Today comfort applications are driven by new demands for low ecological footprint HVAC systems, able to reduce the greenhouse effect while ensuring high efficiency values.

Fully committed to supporting the creation of a greener tomorrow, Mitsubishi Electric presents a complete range of water cooled screw compressor chillers optimized for the use of R513A, the innovative low GWP refrigerant that ensures top-level chiller performance and a completely reliable usage.

COMFORT APPLICATIONS

- Commercial premises
- Office buildings
- Hotels and resorts
- Healthcare facilities
- Retail and department stores
- Sports and leisure installations

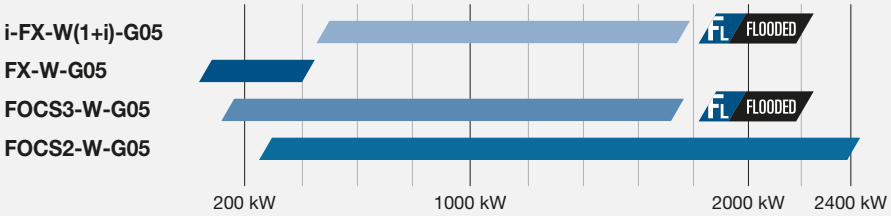
2 EVAPORATING TECHNOLOGIES

T SHELL&T.

FL FLOODED

Two types of heat exchangers to achieve premium levels of efficiency at both full and partial loads.

A COMPLETE RANGE FROM 124 kW TO 2 MW



HEAT RECOVERY SYSTEM AVAILABLE

HEAT RECOVERY

For recovering heat when both hot and cold water are required.

THE BEST COMPRESSOR COMBINATION

(1+i)

Two compressor technologies that can offer the best efficiency according to the real thermal loads.

INNOVATIVE 1+i INVERTER TECHNOLOGY

1 Fixed speed compr. + i Variable Speed Compr.

MANY INSTALLATION OPPORTUNITIES

i-FX-W(1+i)-G05	531-1778 kW	✓ Inverter driven compressor ✓ Unbeatable efficiency both at full and partial loads ✓ Compact design	**Ideal for medium-large applications**
FX-W-G05	124-399 kW	✓ High efficiency ✓ Heat recovery system available	**Ideal for small-medium size applications**
FOCS3-W-G05	188-1688 kW	✓ Extremely small footprint ✓ Very high efficiency	**Ideal for medium applications**
FOCS2-W-G05	305-2410 kW	✓ High configurability ✓ Wide choice of accessories ✓ Wide range > from 1 to 4 compressor units ✓ Low sound levels > several enclosures available	**Ideal for medium-large applications**

ALL-ROUND SUSTAINABILITY

R513A

The new screw compressor chiller range with R513A refrigerant 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).

Combining brilliant annual efficiency with the use of a low GWP refrigerant, the Climaveneta branded range of chillers with R513A tackles both indirect (due to primary energy consumption) and direct global warming, thus resulting in the perfect choice for any new, forward-looking cooling system.

R513A

-56% GWP
vs R134a

Non-flammable
Safety Class A1

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

Reduced GWP

R513A $GWP_{100\ year}$ = 572
(R134a $GWP_{100\ year}$ = 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 assesment
No extra costs

Compliant with eco regulation objectives

No future retrofit required
Reduced price volatility

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 the water cooled chiller range, 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).

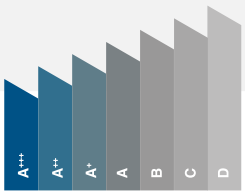
i-FX-W(1+i)-G05

HIGH EFFICIENCY WATER COOLED CHILLER AND HEAT PUMP REVERSIBLE ON THE HYDRAULIC SIDE, WITH INVERTER TECHNOLOGY AND FLOODED EVAPORATOR. 531-1778 kW

i-FX-W(1+i)-G05 is the Climaveneta brand water cooled i-FX with 1+i innovative logics that combines fixed speed and variable speed screw compressors, thus ensuring continuous modulation of loads and a perfect leaving water stability.
All the units come with an exclusive flooded evaporator and a shell and tube condenser, specifically conceived and developed in-house.

Their exclusive design ensures a perfect heat exchange coefficient and provides EER results not only above class A but also among the highest values available on the water chiller with screw compressor market.

PREMIUM ENERGY EFFICIENCY



i-FX-W(1+i)-G05 has been designed to operate at very high levels of efficiency at both full and partial loads.

With EER in Class A and unbeatable ESEER values, the water cooled chiller always meets the requested cooling capacity, thus ensuring reduced energy consumption and 20% less CO_2 emissions compared to other Class A chillers.

LARGE ENERGY SAVINGS

ErP 2021 COMPLIANT

Brilliantly engineered technological choices combined with great efforts during the design phase of the product have demonstrated that high efficiency can go hand in hand with significant cost savings, up to 21% compared to traditional traditional chillers featuring the same technology.

EER*= 5,10

SEER*= 7,27

*Average values

QUICK RETURN ON THE INVESTMENT

Accessibility is key in social development.
This means that technology and innovation must be available and affordable.

The unparalleled efficiency of i-FX-W(1+i)-G05 allows for a quick return on the investment compared to traditional class A chillers. The inverter driven technologies of screw compressor chillers has never been so accessible.

HIGHEST COOLING CAPACITY

The flooded evaporator and shell&tube condenser have both been designed by Mitsubishi Electric, with a special focus on optimizing performances of the whole unit.

They feature an innovative layout that optimizes the compressor operation, thus maximizing the unit cooling power.

(1+i)

A new concept of efficiency:
Fixed speed compressor (1)
+ Variable speed compressor (i)

UNBEATABLE EFFICIENCY, IN EVERY LOAD CONDITION

The advantages of 1+i logic

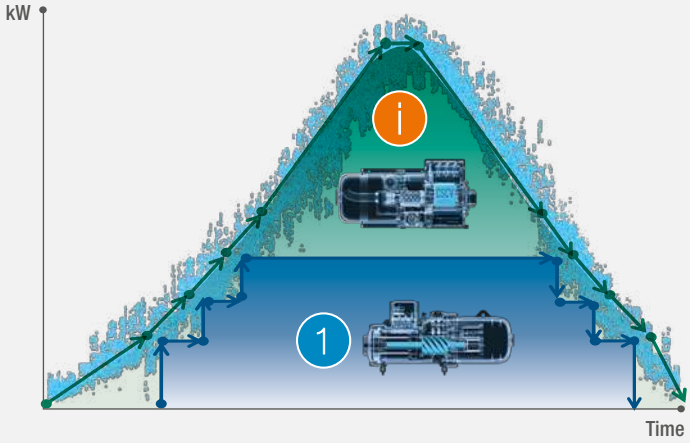
- Always the best combination of compressors
- Continuous modulation from 15% to 100%
- Perfect leaving water temperature stability
- EER in Class A efficiency
- SEER UP TO 7,53

Mitsubishi Electric has developed a new concept of efficiency: the combination of a fixed speed screw compressor (1) with a variable speed inverter driven screw compressor (+ i). This solution, combined with unique and advanced control logic, improves the best features and benefits of each compressor.

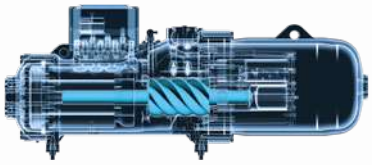
The result is a unit that focuses on efficiency in all load conditions, overcoming the limitations traditionally imposed by the full inverter system on full loads and the fixed speed screw compressors on partial loads.

PREMIUM EFFICIENCY THANKS TO THE COMBINATION (1+I) COMPRESSORS

- Cooling load of the variable speed compressor
- Cooling load of the fixed speed compressor
- Total requested cooling load

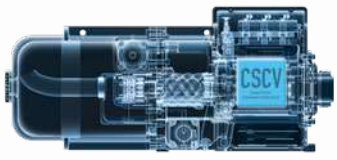


1 Fixed Speed Compressor



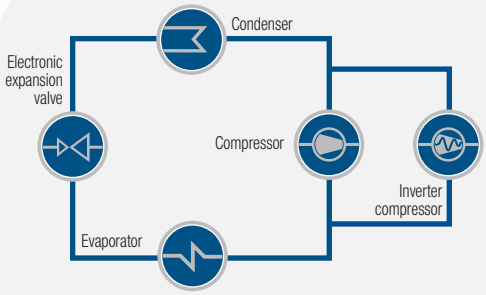
The new generation of fixed speed compressors is the result of our commitment to avoid the efficiency loss in part-load operation: the new compressor features a better lubrication system and an innovative internal geometry that allows a jump in performance at partial loads.

i Variable Speed Compressor



The new inverter driven compressor is compact, with an oil separator, frequency inverter and cooling system integrated all within a single casing. The Vi control allows automatic adaptation to the different operating conditions thus ensuring that different refrigeration load levels are always at the highest values of energy efficiency.

Two compressors in one single refrigerant circuit



The two compressors are combined in the same refrigerant circuit, ensuring higher efficiency values at partial loads in comparison with a proposal with units with independent circuits.

i-FX-W(1+i)-G05

High efficiency water cooled chiller,
for indoor installation.
531-1778 kW

i-FX-W(1+i)-G05			1402	1752	1902	2152	2602
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE							
COOLING ONLY (GROSS VALUE)							
Cooling capacity	(1)	kW	532,3	665,0	721,0	819,3	998,7
Total power input	(1)	kW	102,0	124,6	135,4	154,6	189,4
EER	(1)	kW/kW	5,219	5,337	5,325	5,299	5,273
ESEER	(1)	kW/kW	8,370	8,430	8,270	8,400	8,400
COOLING ONLY (EN14511 VALUE)							
Cooling capacity	(1)(2)	kW	530,7	662,9	718,8	816,9	995,5
EER	(1)(2)	kW/kW	5,020	5,130	5,110	5,090	5,070
ESEER	(1)(2)	kW/kW	7,200	7,270	7,110	7,230	7,240
Cooling energy class			B	A	A	A	A
ENERGY EFFICIENCY							
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)							
Ambient refrigeration							
Prated,c	(7)	kW	487	608	659	750	914
SEER	(7)(8)		7,18	7,11	7,03	7,18	7,31
Performance ηs	(7)(9)	%	279	277	273	279	284
EXCHANGERS							
HEAT EXCHANGER USER SIDE IN REFRIGERATION							
Water flow	(1)	l/s	25,45	31,80	34,48	39,18	47,76
Pressure drop	(1)	kPa	36,3	41,3	40,2	39,4	44,0
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION							
Water flow	(1)	l/s	30,22	37,63	40,81	46,41	56,61
Pressure drop	(1)	kPa	45,3	42,9	50,5	50,2	46,9
REFRIGERANT CIRCUIT							
Compressors nr.		N°	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1
NOISE LEVEL							
Sound Pressure	(3)	dB(A)	82	82	81	83	83
Sound power level in cooling	(4)(5)	dB(A)	100	100	100	102	102
SIZE AND WEIGHT							
Length	(6)	mm	2950	3310	3310	3310	4475
Width	(6)	mm	1320	1425	1445	1480	1410
Height	(6)	mm	1805	1935	2000	2150	2250
Operating weight	(6)	kg	3350	4280	4410	4830	6630

Notes:
1 Plant (side) cooling exchanger water (in/out) 12°C/7°C;
Source (side) heat exchanger water (in/out) 30°C/35°C.
2 Values in compliance with EN14511-3.
3 Average sound pressure level at 1m 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, indoors.
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_{100} 631] fluorinated greenhouse gases.

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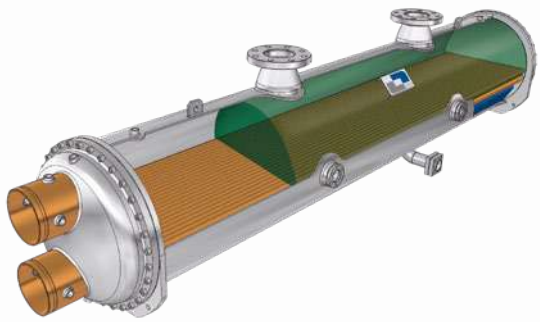
Innovative design of Heat Exchangers



The flooded evaporator and the shell and tube condenser, both fully designed and built internally, present an exclusive design aimed at maximising the cooling power and optimising the operation of the compressors.

The shell and tube condenser is designed in order to guarantee reduced pressure drops on the water side and to decrease the pumping costs as much as possible.

In the evaporator the complete flooding of the tubes is also guaranteed during partial load conditions by an electronic expansion valve, managed by proprietary control logics.

COOLING | SCREW | ENERGY CLASS A
HEATING | R R513A | FL FLOODED

i-FX-W(1+i)-G05			3002	3402	3852	4252	4652
Power supply		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE							
COOLING ONLY (GROSS VALUE)							
Cooling capacity	(1)	kW	1143	1296	1472	1607	1784
Total power input	(1)	kW	216,0	243,1	275,6	303,9	343,4
EER	(1)	kW/kW	5,292	5,331	5,341	5,288	5,195
ESEER	(1)	kW/kW	8,330	8,380	8,410	8,210	8,170
COOLING ONLY (EN14511 VALUE)							
Cooling capacity	(1)(2)	kW	1139	1293	1468	1602	1778
EER	(1)(2)	kW/kW	5,110	5,150	5,180	5,100	5,010
ESEER	(1)(2)	kW/kW	7,280	7,370	7,470	7,180	7,140
Cooling energy class			A	A	A	A	B
ENERGY EFFICIENCY							
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)							
Ambient refrigeration							
Prated,c	(7)	kW	1046	1186	1348	1482	1632
SEER	(7)(8)		7,44	7,40	7,53	7,23	7,29
Performance ηs	(7)(9)	%	290	288	293	281	284
EXCHANGERS							
HEAT EXCHANGER USER SIDE IN REFRIGERATION							
Water flow	(1)	l/s	54,66	61,97	70,41	76,87	85,33
Pressure drop	(1)	kPa	44,5	37,8	36,6	43,7	53,8
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION							
Water flow	(1)	l/s	64,76	73,34	83,30	91,08	101,4
Pressure drop	(1)	kPa	36,4	40,4	36,0	43,0	36,0
REFRIGERANT CIRCUIT							
Compressors nr.		N°	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1
NOISE LEVEL							
Sound Pressure	(3)	dB(A)	83	82	82	84	84
Sound power level in cooling	(4)(5)	dB(A)	102	102	102	104	104
SIZE AND WEIGHT							
Length	(6)	mm	4475	4570	4650	4650	4850
Width	(6)	mm	1405	1435	1495	1495	1495
Height	(6)	mm	2250	2380	2500	2500	2500
Operating weight	(6)	kg	7470	8220	8800	8930	9340

Notes:
1 Plant (side) cooling exchanger water (in/out) 12°C/7°C;
Source (side) heat exchanger water (in/out) 30°C/35°C.
2 Values in compliance with EN14511-3.
3 Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
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8 Seasonal energy efficiency ratio
9 Seasonal space cooling energy efficiency
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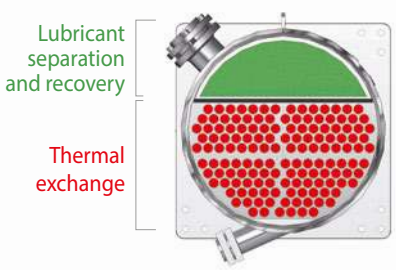
Perfect lubricant recovery

On the evaporator the presence of refrigerant fluid in the shell side and water in the tube side allows:
- Minimisation of pressure drops
- Perfect unified temperature as well as complete refrigerant evaporation
- No surface for over-heating
- Easy cleaning operations

Unique design of the heat exchangers that provides the perfect separation and complete recovery of the lubricant in order to guarantee proper lubrication of the compressors and the relevant cleaning of the shell and tube exchanging surfaces.



FX-W-G05

COMPACT WATER COOLED CHILLER WITH SCREW COMPRESSORS. 124-399 kW

FX-W-G05 is the ideal solution for applications of a small to medium size.
This range is also available with the heat recovery version, delivering exceptional efficiency values not only in producing cooling, but also in heating mode.

Thanks to its precise and accurate thermoregulation, FX-W-G05 can easily adapt to different thermal load conditions and countless installation requirements.

EXTREME EFFICIENCY

The FX-W-G05 range has been designed to provide utmost efficiency at both full loads in the summer, and partial loads in the spring and fall when the building cooling requirements decrease.

ErP 2021 COMPLIANT
Engineered with selected components and careful design, all FX-W-G05 units are compliant with the latest ErP 2021 efficiency targets for comfort applications.

Single circuit unit	Dual circuit unit
EER*=4,67	EER*=4,69
SEER*= 5,37	**SEER*= 5,60**

*Average values

HEAT RECOVERY SYSTEM

FX-W-G05 chillers will save money not only when the unit is producing cooling. It also offers the opportunity to recover heat when there is a simultaneous need for chilled and hot water by redirecting this heat from the chiller to various heating applications:

- **Restaurants, hotels, resorts, hospitals, residential buildings:** hot water can be used for the kitchen, laundry and bathrooms.
- **Schools, sports facilities and Spas:** showers, washrooms and swimming pool heating.
- **Offices or residential buildings:** radiant floor heating and restrooms.

HEAT RECOVERY CONFIGURATIONS

-	**Standard unit**	Unit for the production of chilled water.	**Baseline**
D	**Partial heat recovery**	A desuperheater on the compressor discharge line recovers approximately 20% of the unit's capacity.	**60°C**
R	**Total heat recovery**	A devoted refrigerant water heat exchanger recovers all the condensation heat.	**48°C**

VPF VARIABLE PRIMARY FLOW

R R513A | COOLING | T SHELL & TUBES | SCREW

FX-W-G05			0551	0651	0751	0851	0951	1102	1302	1402	1502	1602	1752
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	400/3/50	400/3/50
PERFORMANCE													
COOLING ONLY (GROSS VALUE)													
Cooling capacity	(1)	kW	124,3	140,5	166,3	198,2	221,7	252,4	285,1	311,9	345,2	366,2	400,6
Total power input	(1)	kW	25,50	28,41	35,57	40,52	46,10	51,04	56,86	64,04	71,26	76,05	86,66
EER	(1)	kW/kW	4,875	4,947	4,671	4,894	4,809	4,949	5,011	4,873	4,842	4,812	4,621
ESEER	(1)	kW/kW	5,970	5,950	5,960	5,940	5,930	6,320	6,240	6,220	6,120	6,110	6,090
COOLING ONLY (EN14511 VALUE)													
Cooling capacity	(1)(2)	kW	123,9	140,1	165,8	197,5	220,8	251,4	284,1	310,7	344,2	365,1	399,2
EER	(1)(2)	kW/kW	4,710	4,780	4,500	4,720	4,630	4,770	4,840	4,690	4,690	4,660	4,480
ESEER	(1)(2)	kW/kW	5,530	5,510	5,480	5,460	5,440	5,730	5,670	5,630	5,600	5,630	5,580
Cooling energy class			B	B	C	B	C	B	B	B	B	B	C
ENERGY EFFICIENCY													
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)													
Ambient refrigeration													
Prated,c	(7)	kW	124	140	166	198	221	251	284	311	344	365	399
SEER	(7)(8)		5,37	5,37	5,36	5,40	5,35	5,64	5,62	5,58	5,61	5,61	5,57
Performance η_s	(7)(9)	%	207	207	206	208	206	218	217	215	216	217	215
EXCHANGERS													
HEAT EXCHANGER USER SIDE IN REFRIGERATION													
Water flow	(1)	l/s	5,944	6,719	7,954	9,479	10,60	12,07	13,63	14,91	16,51	17,51	19,16
Pressure drop	(1)	kPa	19,8	19,7	27,6	33,0	41,2	41,0	38,5	46,1	32,0	36,0	43,0
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION													
Water flow	(1)	l/s	7,133	8,045	9,611	11,37	12,75	14,45	16,29	17,90	19,83	21,06	23,19
Pressure drop	(1)	kPa	22,1	25,9	31,0	27,0	26,5	22,7	26,6	29,3	33,0	28,9	24,8
REFRIGERANT CIRCUIT													
Compressors nr.		N°	1	1	1	1	1	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	2	2	2	2	2	2
NOISE LEVEL													
Sound Pressure	(3)	dB(A)	75	75	76	76	76	78	77	78	78	78	78
Sound power level in cooling	(4)(5)	dB(A)	92	92	93	93	93	95	95	96	96	96	96
SIZE AND WEIGHT													
Length	(6)	mm	2400	2600	2700	3000	3000	3000	3100	3100	3200	3200	3200
Width	(6)	mm	920	920	950	960	960	1100	1100	1100	1100	1200	1200
Height	(6)	mm	1500	1500	1500	1500	1500	1500	1500	1500	1600	1600	1600
Operating weight	(6)	kg	1050	1110	1280	1450	1460	1710	1820	1990	2280	2430	2590

Notes:
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9 Seasonal space cooling energy efficiency
The units highlighted in this publication contain HFC R513A (XP10) [GWP_{100} 631] fluorinated greenhouse gases.

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PERFECT INDOOR COMFORT

The advanced control system is engineered to maintain optimal comfort conditions all year-round according to occupancy needs and variations.
For those projects where quality of acoustical comfort is key, an optional compressor enclosure cuts noise emissions by 5 dB(A).

COMPACT DESIGN FOR THE HIGHEST FLEXIBILITY

The compact structure resulting from the rationalised design and assembly of the chiller components leads to more flexibility during the installation phase, both in the case of new plants and existing ones.

REDUCED MAINTENANCE COSTS

The latest technology for the compressors and top quality heat exchangers provide outstanding long-term reliability aimed at lower maintenance costs.

EXTENDED OPERATING FIELD

Dedicated heat exchangers and wide operation limits for a vast range of applications:
- Operation down to -8°C
- Suitable for dry cooler, cooling tower, geothermal probes.

FOCS3-W-G05

WATER COOLED CHILLER WITH SCREW COMPRESSORS AND FLOODED EVAPORATOR. 188-1688 kW

FOCS3-W-G05 is the high efficiency screw compressor chiller featuring shell and tube condenser, flooded evaporator and electronic expansion valve.

Thanks to its vertical and compact design, the chiller can be easily installed in narrow spaces and can fit into most building layouts.
High perfomances and premium efficiency are achieved thanks to the accurate sizing of all components and the precision in the control logics.

UNPARALLELED EFFICIENCY

Thanks to the choice of high performing components, the FOCS3-W-G05 units are characterized by really competitive efficiency levels both at full and part loads (EER 5.16; SEER 6.23), which ensure minimum running costs and a quick return on investment.

COMPACT DESIGN

The compact and essential design leads to more flexibility during the design phase, both in the case of new plants and preexisting ones, to a higher ease of handling and on site positioning in plants with reduced space.

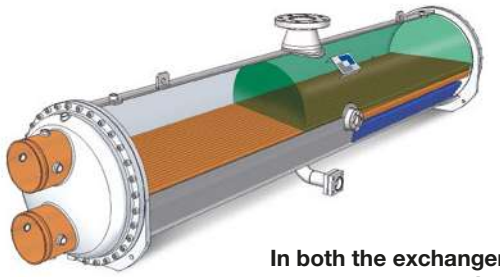
EASY ADAPTABILITY

Maximum adaptability to the needs of the plant thanks to the continuous modulation of the cooling capacity and the precision in the control logics.

INNOVATIVE DESIGN OF THE HEAT EXCHANGERS

The flooded evaporator and the shell and tube condenser, both fully designed and built internally, present an exclusive design aimed to maximize the cooling power and optimize the operation of the compressors.

In the evaporator the complete flooding of the tubes is also guaranteed during partial load conditions by an electronic expansion valve, managed by proprietary control logics. The shell and tube condenser is designed in order to guarantee reduced pressure drops on the water side and to decrease the pumping costs as much as possible.



In both the exchangers the presence of refrigerant fluid in the shell side and water in the tube side allows:

- Minimization of pressure drops
- Perfect unified temperature as well as complete refrigerant evaporation
- Elimination of a surface dedicated to super-heating
- Facilitation of cleaning operation

VPF VARIABLE PRIMARY FLOW

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

COOLING | SCREW | ENERGY CLASS | R513A | FLOODED

FOCS3-W-G05			0551	0701	0851	0951	1101	1301	1401	1651	1901	2101	2501
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	400/3/50	400/3/50
PERFORMANCE													
COOLING ONLY (GROSS VALUE)													
Cooling capacity	(1)	kW	188,2	250,0	306,0	337,6	383,5	459,9	524,0	591,8	681,6	741,3	837,0
Total power input	(1)	kW	36,40	47,78	58,45	63,77	72,73	85,99	96,90	108,2	127,0	138,7	155,6
EER	(1)	kW/kW	5,170	5,230	5,231	5,292	5,275	5,348	5,408	5,470	5,367	5,345	5,379
ESEER	(1)	kW/kW	6,910	7,150	6,560	6,830	6,800	6,730	7,250	6,960	7,020	6,920	6,800
COOLING ONLY (EN14511 VALUE)													
Cooling capacity	(1)(2)	kW	187,4	248,9	304,7	336,1	381,9	458,2	522,3	589,5	679,4	738,9	834,3
EER	(1)(2)	kW/kW	4,890	4,950	4,960	5,010	5,000	5,090	5,190	5,200	5,120	5,130	5,160
ESEER	(1)(2)	kW/kW	6,180	6,370	5,950	6,150	6,140	6,140	6,670	6,310	6,390	6,400	6,280
Cooling energy class			B	B	B	B	B	A	A	A	A	A	A
ENERGY EFFICIENCY													
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)													
Ambient refrigeration													
Prated,c	(7)	kW	187	249	305	336	382	458	522	590	679	739	834
SEER	(7)(8)		5,81	6,04	5,62	5,78	5,79	5,94	6,50	6,12	6,19	6,27	6,19
Performance ηs	(7)(9)	%	224	234	217	223	223	230	252	237	240	243	240
EXCHANGERS													
HEAT EXCHANGER USER SIDE IN REFRIGERATION													
Water flow	(1)	l/s	9,001	11,95	14,63	16,15	18,34	21,99	25,06	28,30	32,59	35,45	40,03
Pressure drop	(1)	kPa	42,0	48,7	49,1	52,4	52,8	47,5	39,9	50,9	42,0	42,7	42,8
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION													
Water flow	(1)	l/s	10,70	14,19	17,36	19,13	21,74	26,02	29,60	33,37	38,54	41,94	47,31
Pressure drop	(1)	kPa	57,4	57,9	56,7	59,3	58,1	55,2	44,8	55,8	60,4	45,8	48,1
REFRIGERANT CIRCUIT													
Compressors nr.		N°	1	1	1	1	1	1	1	1	1	1	1
No. Circuits		N°	1	1	1	1	1	1	1	1	1	1	1
NOISE LEVEL													
Sound Pressure	(3)	dB(A)	77	77	80	80	80	80	80	80	80	82	82
Sound power level in cooling	(4)(5)	dB(A)	95	95	98	98	98	98	98	98	98	100	100
SIZE AND WEIGHT													
Length	(6)	mm	2920	2920	2920	2920	2920	2900	2900	2900	2930	2980	2990
Width	(6)	mm	1180	1180	1180	1180	1180	1180	1180	1180	1180	1190	1280
Height	(6)	mm	1870	1870	1870	1870	1870	1960	1970	1960	2050	2100	2200
Operating weight	(6)	kg	1740	1790	2170	2200	2260	2940	3020	3150	3270	3570	3960

FOCS3-W-G05			2602	3002	3152	3502	3652	4002	4102	4502	4602	4752
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	400/3/50
PERFORMANCE												
COOLING ONLY (GROSS VALUE)												
Cooling capacity	(1)	kW	915,9	1062	1140	1218	1303	1382	1450	1522	1614	1693
Total power input	(1)	kW	171,0	194,8	204,3	222,9	234,1	251,9	263,1	279,3	295,9	304,3
EER	(1)	kW/kW	5,356	5,452	5,580	5,464	5,566	5,486	5,511	5,449	5,455	5,564
ESEER	(1)	kW/kW	7,060	7,330	7,530	7,150	7,400	7,130	7,200	7,190	7,230	7,500
COOLING ONLY (EN14511 VALUE)												
Cooling capacity	(1)(2)	kW	913,2	1058	1137	1214	1299	1377	1445	1517	1609	1688
EER	(1)(2)	kW/kW	5,160	5,210	5,400	5,220	5,380	5,250	5,290	5,210	5,240	5,320
ESEER	(1)(2)	kW/kW	6,400	6,480	6,870	6,330	6,740	6,350	6,450	6,410	6,500	6,660
Cooling energy class			A	A	A	A	A	A	A	A	A	A
ENERGY EFFICIENCY												
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)												
Ambient refrigeration												
Prated,c	(7)	kW	913	1058	1137	1214	1299	1377	1445	1517	1609	1688
SEER	(7)(8)		6,28	6,37	6,89	6,24	6,76	6,30	6,50	6,34	6,41	6,62
Performance ηs	(7)(9)	%	243	247	267	242	262	244	252	246	248	257
EXCHANGERS												
HEAT EXCHANGER USER SIDE IN REFRIGERATION												
Water flow	(1)	l/s	43,80	50,79	54,53	58,23	62,33	66,11	69,33	72,76	77,20	80,94
Pressure drop	(1)	kPa	40,0	51,5	37,4	51,4	39,8	50,4	46,7	51,5	42,5	46,7
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION												
Water flow	(1)	l/s	51,80	59,91	64,10	68,67	73,30	77,91	81,66	85,84	91,05	95,19
Pressure drop	(1)	kPa	44,5	54,4	32,0	56,8	34,1	53,5	50,1	55,4	53,7	58,7
REFRIGERANT CIRCUIT												
Compressors nr.		N°	2	2	2	2	2	2	2	2	2	2
No. Circuits		N°	2	2	2	2	2	2	2	2	2	2
NOISE LEVEL												
Sound Pressure	(3)	dB(A)	81	81	81	81	81	81	82	82	82	82
Sound power level in cooling	(4)(5)	dB(A)	100	100	100	100	100	100	101	102	102	102
SIZE AND WEIGHT												
Length	(6)	mm	4430	4430	4440	4470	4470	4470	4565	4650	5270	5270
Width	(6)	mm	1270	1270	1270	1270	1320	1270	1320	1320	1320	1320
Height	(6)	mm	2210	2210	2280	2250	2330	2280	2380	2380	2380	2380
Operating weight	(6)	kg	6200	6430	7080	7160	7560	7280	7850	7940	8420	8950

Notes:

1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 30°C/35°C.
2 Values in compliance with EN14511-3.
3 Average sound pressure level at 1m 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, indoors.
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_{100} 631] fluorinated greenhouse gases

Certified data in EUROVENT

FOCS2-W-G05

WATER COOLED CHILLER AND HEAT PUMP WITH SCREW COMPRESSORS AND SHELL AND TUBE CONDENSER 305-2410 kW

Ideal solution for medium and large size applications, the FOCS2-W-G05 series features a wide cooling capacity from 305 to 2410 kW and units from one to four compressors.

All the units offers precise and accurate thermoregulation, easily adapting to different thermal load conditions. High performances are guaranteed thanks to the accurate sizing of all the components.

COUNTLESS INSTALLATION OPPORTUNITIES

FOCS2-W-G05 is available with a wide range of accessories and configurations. This high configurability is key to always delivering the most appropriate solution to customers, according to the plant requirements.

2 Efficiency Versions

- **CA** high efficiency
- **CA-E** Class A version

3 Acoustic Configurations

-	**Standard unit**	**Baseline**
	Standard unit +Enclosure (Base) realized with peraluman panels lined with an acoustic insulation made by polyester fiber of thickness 30 mm.	**-14 dB(A)**
	Standard unit +Enclosure (Plus) realized with peraluman panels lined with a special acoustic insulation composed by 5 alternating layers of polyurethane and gaiter of total thickness 50 mm.	**-18 dB(A)**

3 Heat Recovery Configurations

FOCS2-W-G05 chillers will save money not only when the unit is producing cooling. It also offers the opportunity to recover heat when there is a simultaneous need for chilled and hot water by redirecting this heat from the chiller to various heating applications:

- **Restaurants, hotels, resorts, hospitals, residential buildings:** hot water can be used for the kitchen, laundry and bathrooms.
- **Schools, sports facilities and Spas:** showers, washrooms and swimming pool heating.
- **Offices or residential buildings:** radiant floor heating and restrooms.

HEAT RECOVERY

-	**Standard unit**	Unit for the production of chilled water.	**Baseline**
D	**Partial heat recovery**	A desuperheater on the compressor discharge line recovers approximately 20% of the unit's capacity.	**60°C**
R	**Total heat recovery**	A devoted refrigerant water heat exchanger recovers all the condensation heat.	**50°C**
H	**Heat pump reversibile on the hydraulic side**		

HEATING · COOLING · SCREW · R513A · ENERGY CLASS · SHELL & TUBES

FOCS2-W-G05 /CA			1301	1401	3202	3602	4202	4502	4802	5402	6002	8103	9003	9004	9604
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	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE															
COOLING ONLY (GROSS VALUE)															
Cooling capacity	(1)	kW	306,0	348,3	843,9	957,3	1071	1145	1213	1348	1490	2024	2236	2278	2416
Total power input	(1)	kW	63,01	71,59	173,7	196,7	220,5	235,6	249,9	278,1	307,4	417,3	460,6	469,7	498,3
EER	(1)	kW/kW	4,857	4,865	4,858	4,867	4,857	4,860	4,854	4,847	4,847	4,850	4,855	4,850	4,848
ESEER	(1)	kW/kW	5,820	5,830	5,870	6,140	6,080	6,170	6,170	6,010	6,090	5,970	6,010	6,110	6,050
COOLING ONLY (EN14511 VALUE)															
Cooling capacity	(1)(2)	kW	304,9	347,0	841,1	954,1	1069	1142	1210	1344	1485	2018	2228	2273	2410
EER	(1)(2)	kW/kW	4,670	4,680	4,690	4,700	4,720	4,720	4,710	4,690	4,680	4,710	4,700	4,730	4,720
ESEER	(1)(2)	kW/kW	5,340	5,350	5,400	5,620	5,660	5,720	5,690	5,540	5,560	5,500	5,500	5,680	5,600
Cooling energy class			B	B	B	B	B	B	B	B	B	B	B	B	B
ENERGY EFFICIENCY															
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)															
Ambient refrigeration															
Prated,c	(7)	kW	305	347	841	954	1069	1142	1210	1344	1485	-	-	-	-
SEER	(7)(8)		5,44	5,46	5,88	5,88	5,88	5,90	5,88	5,88	5,88	-	-	-	-
Performance ηs	(7)(9)	%	210	211	227	227	227	228	227	227	227	-	-	-	-
EXCHANGERS															
HEAT EXCHANGER USER SIDE IN REFRIGERATION															
Water flow	(1)	l/s	14,64	16,66	40,35	45,78	51,23	54,74	58,02	64,47	71,27	96,81	106,9	108,9	115,5
Pressure drop	(1)	kPa	41,9	45,0	45,4	46,4	30,6	34,2	38,4	47,4	54,6	43,7	53,3	32,3	36,3
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION															
Water flow	(1)	l/s	17,57	20,00	48,46	54,95	61,51	65,73	69,67	77,44	85,60	116,3	128,4	130,8	138,8
Pressure drop	(1)	kPa	36,4	35,4	35,3	35,2	34,8	35,8	36,5	35,0	37,0	35,0	36,3	35,5	37,4
REFRIGERANT CIRCUIT															
Compressors nr.		N°	1	1	2	2	2	2	2	2	2	3	3	4	4
No. Circuits		N°	1	1	2	2	2	2	2	2	2	3	3	4	4
NOISE LEVEL															
Sound Pressure	(3)	dB(A)	79	79	80	80	80	80	80	82	82	82	82	82	82
Sound power level in cooling	(4)(5)	dB(A)	97	97	99	99	99	99	99	101	101	102	102	102	102
SIZE AND WEIGHT															
Length	(6)	mm	3830	3830	4750	4750	4750	4750	4750	4850	4850	4950	4950	4650	4650
Width	(6)	mm	900	900	1150	1150	1150	1150	1150	1150	1150	1700	1700	2250	2250
Height	(6)	mm	1700	1700	2050	2050	2200	2200	2200	2200	2200	2150	2150	2230	2230
Operating weight	(6)	kg	2050	2110	5110	5400	6070	6120	6180	6950	7090	10170	10350	14330	14390

Notes:
1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger water (in/out) 30°C/35°C.
2 Values in compliance with EN14511-3.
3 Average sound pressure level at 1m 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, indoors.
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_{100} 631] fluorinated greenhouse gases.

Certified data in EUROVENT

EASY ADAPTABILITY

Maximum adaptability to the needs of the plant thanks to the continuous modulation of the cooling capacity and the precision in the control logics.

FLEXIBLE INSTALLATION

The compact and essential design leads to more flexibility during the design phase, both in the case of new plants and preexisting ones, in addition to a greater ease of handling and on site positioning in plants with reduced space.

EXTREMELY SILENT OPERATION

The FOCS2-W-G05 family offers the widest variability in terms of sound levels. Thanks to a variety of accessories from the 50 mm thick fiber-form soundproofing insulation to the external casing, FOCS2-W-G05 is able to further reduce the sound levels of 18 dB(A).

FOCS2-W-G05

Water cooled chiller and heat pump with screw compressors
and shell and tube condenser
305-2410 kW.

FOCS2-W-G05 /CA-E			1301	1401	1601	1801	2101	2401	2802	3202	3602
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
PERFORMANCE											
COOLING ONLY (GROSS VALUE)											
Cooling capacity	(1)	kW	320,7	364,7	441,9	506,3	573,7	649,4	729,4	884,2	1012
Total power input	(1)	kW	59,70	67,84	82,38	94,07	106,9	121,0	135,8	164,8	187,9
EER	(1)	kW/kW	5,372	5,379	5,363	5,380	5,367	5,367	5,371	5,365	5,386
ESEER	(1)	kW/kW	6,370	6,370	6,300	6,390	6,380	6,400	6,520	6,440	6,600
COOLING ONLY (EN14511 VALUE)											
Cooling capacity	(1)(2)	kW	319,5	363,3	440,0	504,2	571,4	646,5	726,6	880,5	1009
EER	(1)(2)	kW/kW	5,110	5,120	5,090	5,110	5,100	5,090	5,130	5,110	5,170
ESEER	(1)(2)	kW/kW	5,710	5,720	5,630	5,720	5,710	5,700	5,850	5,720	5,940
Cooling energy class			A	A	A	A	A	A	A	A	A
ENERGY EFFICIENCY											
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)											
Ambient refrigeration											
Prated,c	(7)	kW	320	363	440	504	571	646	727	880	1009
SEER	(7)(8)		5,75	5,78	5,88	5,88	5,88	5,88	6,04	5,96	6,17
Performance ηs	(7)(9)	%	222	223	227	227	227	227	233	230	239
EXCHANGERS											
HEAT EXCHANGER USER SIDE IN REFRIGERATION											
Water flow	(1)	l/s	15,33	17,44	21,13	24,21	27,44	31,06	34,88	42,28	48,41
Pressure drop	(1)	kPa	45,7	47,7	53,5	53,4	52,8	60,2	51,9	58,6	41,3
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION											
Water flow	(1)	l/s	18,13	20,62	24,99	28,62	32,44	36,72	41,24	49,99	57,20
Pressure drop	(1)	kPa	49,0	47,2	52,2	53,3	55,0	57,0	47,2	52,1	53,4
REFRIGERANT CIRCUIT											
Compressors nr.		N°	1	1	1	1	1	1	2	2	2
No. Circuits		N°	1	1	1	1	1	1	2	2	2
NOISE LEVEL											
Sound Pressure	(3)	dB(A)	79	78	78	78	78	78	80	80	80
Sound power level in cooling	(4)(5)	dB(A)	97	97	97	97	97	97	99	99	99
SIZE AND WEIGHT											
A	(6)	mm	4250	4250	4150	4150	4130	4350	4550	4950	5170
B	(6)	mm	900	900	900	900	900	900	1150	1150	1150
H	(6)	mm	1815	1910	1990	1990	1990	2090	2050	2200	2200
Operating weight	(6)	kg	2470	2770	3570	3750	3790	4230	5390	6460	6920

Notes:
1 Plant (side) cooling exchanger water (in/out) 12°C/7°C;
Source (side) heat exchanger water (in/out) 30°C/35°C.
2 Values in compliance with EN14511-3.
3 Average sound pressure level at 1m 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, indoors.
6 Unit in standard configuration/execution, without optional accessories.
7 Parameter calculated according to [REGULATION (EU) N. 2016/2281]
8 Seasonal energy efficiency ratio
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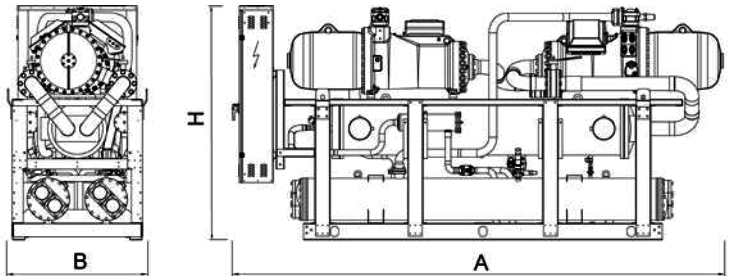
Certified data in EUROVENT

HEATING | SCREW | ENERGY CLASS
COOLING | R513A | SHELL & TUBES

FOCS2-W-G05 /CA-E			4202	4802	2701	3001	5402	7204	7804	8404
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
PERFORMANCE										
COOLING ONLY (GROSS VALUE)										
Cooling capacity	(1)	kW	1147	1299	706,7	781,3	1411	2025	2157	2294
Total power input	(1)	kW	213,8	242,0	133,2	146,9	266,3	375,9	401,7	427,5
EER	(1)	kW/kW	5,365	5,368	5,306	5,319	5,299	5,387	5,370	5,366
ESEER	(1)	kW/kW	6,520	6,530	6,380	6,400	6,540	6,620	6,510	6,520
COOLING ONLY (EN14511 VALUE)										
Cooling capacity	(1)(2)	kW	1143	1293	704,0	778,6	1407	2019	2149	2286
EER	(1)(2)	kW/kW	5,120	5,110	5,060	5,090	5,090	5,190	5,140	5,140
ESEER	(1)(2)	kW/kW	5,800	5,750	5,750	5,810	5,890	6,020	5,830	5,860
Cooling energy class			A	A	A	A	A	A	A	A
ENERGY EFFICIENCY										
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)										
Ambient refrigeration										
Prated,c	(7)	kW	1143	1293	704	779	1407	-	-	-
SEER	(7)(8)		6,04	6,03	5,88	5,88	6,09	-	-	-
Performance ηs	(7)(9)	%	234	233	227	227	236	-	-	-
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN REFRIGERATION										
Water flow	(1)	l/s	54,85	62,10	33,80	37,36	67,48	96,82	103,2	109,7
Pressure drop	(1)	kPa	55,0	65,0	51,5	47,2	46,0	41,3	59,3	54,6
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION										
Water flow	(1)	l/s	64,85	73,42	40,02	44,23	79,94	114,4	121,9	129,7
Pressure drop	(1)	kPa	55,0	57,3	52,3	49,9	52,2	52,6	54,0	54,5
REFRIGERANT CIRCUIT										
Compressors nr.		N°	2	2	1	1	2	4	4	4
No. Circuits		N°	2	2	1	1	2	4	4	4
NOISE LEVEL										
Sound Pressure	(3)	dB(A)	79	79	80	80	81	82	82	82
Sound power level in cooling	(4)(5)	dB(A)	99	99	99	99	101	102	102	102
SIZE AND WEIGHT										
A	(6)	mm	4920	4920	4350	4350	5200	5220	4900	4900
B	(6)	mm	1150	1285	900	900	1285	2250	2250	2250
H	(6)	mm	2350	2430	2180	2180	2440	2305	2455	2455
Operating weight	(6)	kg	7900	8560	4760	4870	8850	13720	15850	16100

Notes:
1 Plant (side) cooling exchanger water (in/out) 12°C/7°C;
Source (side) heat exchanger water (in/out) 30°C/35°C.
2 Values in compliance with EN14511-3.
3 Average sound pressure level at 1m 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, indoors.
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_{100} 631] fluorinated greenhouse gases.

Certified data in EUROVENT



A SELECTION OF CLIMAVENETA INSTALLATIONS

INTERCONTINENTAL HOTEL DHAKA

2016 DHAKA (BANGLADESH)

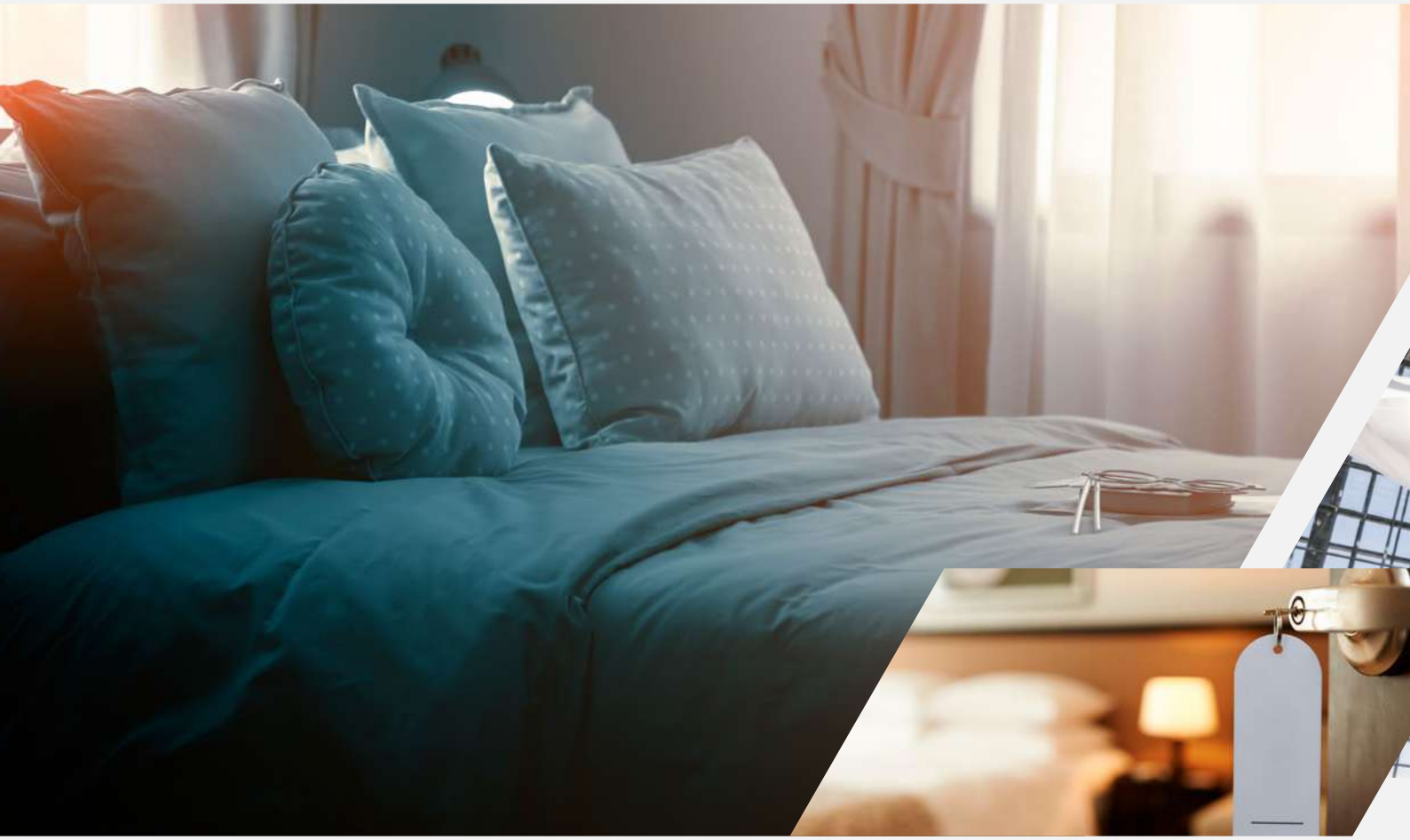
Application:
Hotel and resorts

Plant type:
Hydronic System

Cooling capacity: **3508 kW**

Heating capacity: **608 kW**

Installed machines: **2x FOCS3-W 4502, 2x ERACS2-Q/CA 1162, 191x i-LIFE2 402, 59x i-LIFE 602, 9x i-LIFE 802**



PROJECT

InterContinental Hotel Dhaka has been the first international five star hotel in Bangladesh and still is one of the best addresses of the country's capital. It opened in 1966 and hosted many important local political events. From 2013 to 2016 it went about a major renovation.

CHALLENGE

The retrofit of the complex comprised also a deep renovation of the HVAC system, in order to provide the guests with the uncompromised comfort standards typical of InterContinental hotel experience. At the same time, high energy efficiency was a key requirement of the new HVAC system, given the impact of air conditioning and sanitary hot water production on luxury hotel energy and running costs profile.

SOLUTION

The new HVAC system synergistically combines 2 INTEGRA units for simultaneous production of heating and cooling with 2 water cooled chillers FOCS3-W. INTEGRA units, besides satisfying a significant share of the cooling load, produce for free the sanitary hot water required by the hotel, thanks to their smart operating and heat recovery logic. The water cooled FOCS3-W chillers are used to tackle the remaining cooling loads and play a key role in coping with demand peaks. The smart integration of these technologies results in enhanced resiliency of the building and in a significant reduction of its operating costs.

ROME CONVENTION CENTRE LA NUVOLA

2013-2017 ROME (ITALY)

Application:
Fair

Plant type:
Hydronic System

Cooling capacity: **9182 kW**

Heating capacity: **4705 kW**

Installed machines: **5x ERACS2-WQ 3202, 2x FOCS2-W/CA 9604, 1x MANAGER 3000**

PROJECT

The Rome Convention Center La Nuvola, a work of extraordinary artistic value, marked by innovative logistic solutions and technologically advanced material choices. The building will rise up in a strategic area in the historical Eur district, integrated in the surrounding urban context, on a total area of more than 27,000 square meters, in EUR SpA possession.

CHALLENGE

The design of the Rome Convention Center La Nuvola stands out for its eco-friendly approa-ch, namely for a set of choices made to reduce energy consumption through the use of energy produced by renewable sources.

SOLUTION

This is the reason why the estate has been provided with an innovative air conditioning system based on variable flow units for optimized energy consumption on the basis of actual crowding. The heart of the system is composed of 5 multipurpose units ERACS-2WQ3202, 2 FOCS2WCA 9604 chillers and 1 Manager3000 control supplied by Climaveneta.

MORE THAN 1000 PROJECTS ALL OVER THE WORLD

2016 Rome - Italy

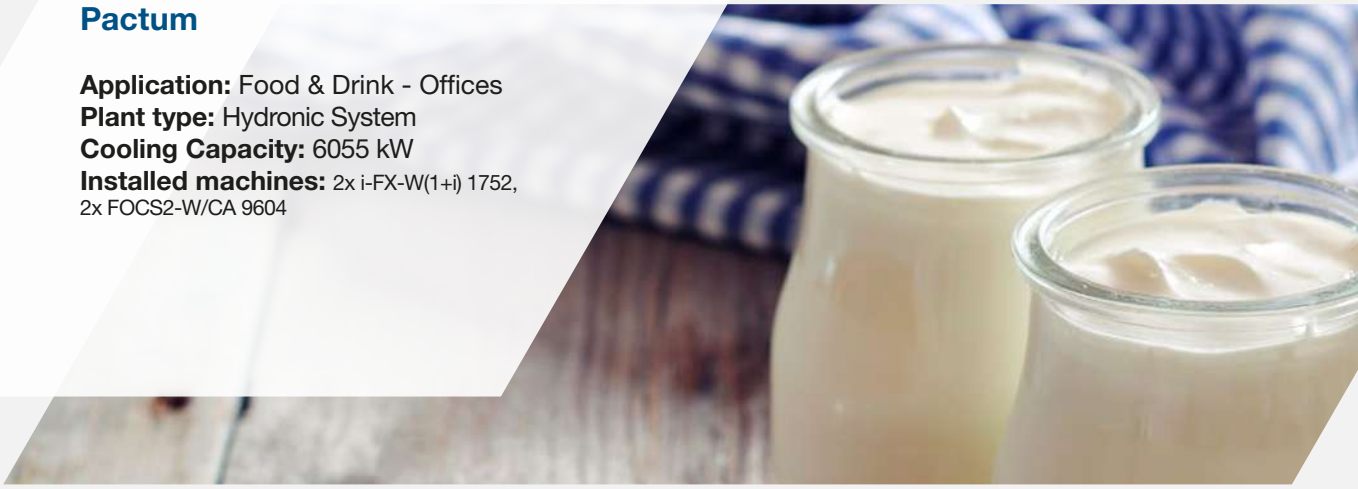
Bank of Italy

Application: Offices
Plant type: Hydronic System
Cooling Capacity: 917 kW
Installed machines: 1x i-FX-W(1+i)/CA 2602

2016-2017 New South Wales - Australia

Pactum

Application: Food & Drink - Offices
Plant type: Hydronic System
Cooling Capacity: 6055 kW
Installed machines: 2x i-FX-W(1+i) 1752, 2x FOCS2-W/CA 9604



2014 Karbala - Iraq

Alkafeel Hospital

Application: Healthcare / Hospitals
Plant type: Hydronic System
Cooling Capacity: 2426 kW
Installed machines: 3x FOCS2-W/CA 4802

Climaveneta's chiller units, with their unbeatable advantages in terms of efficiency, quality, and precision are already the preferred choice of the major brands in the most prestigious projects all over the world.

2016-2017 Bergen - Norway

Bergen Railway Station

Application: Offices
Plant type: HPAC System
Cooling Capacity: 1212 kW
Installed machines: 2x ABU 2.0 552, 3x ABU 30, 2x NECS-W 0352, 1x FOCS2-W-CA-E 3001

2016 Vietnam

Vietnam Justice Office

Application: Offices
Plant type: Hydronic System
Cooling capacity: 69831 kW
Heating capacity: 824 kW
Installed machines: 2x FOCS2-W/CA 7803, 1x FOCS-N B 3222, 1x Manager, 29x WIZARD 1220, 845x FCU units, 96x a HWD2 402, 227x a LIFE2 HP 1102, 191x aLIFE2 HP 802, 322x a LIFE2 HP 602, 6x a LIFE2 902,3x a LIFE2 1002

2017-2018 Turin - Italy

Politecnico di Torino

Application: School / University
Plant type: Air to Air System
Cooling Capacity: 3774 kW
Air flow: 48000 m³/h
Installed machines: 1x WTA-D/S 550, 4x WRX/S 0182, 1x FOCS2-W/CA-E 3602, 2x TECS2-W/LC 0912, 1x TECS2-W/HC 0712

CV_WATER COOLED CHILLER RANGE_COMFORT_10-18_ENG

CLIMAVENETA®

eco Changes 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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