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

PROCESS

CHILLERS

TECS2-G05-Y

AIR COOLED CHILLERS WITH OIL-FREE COMPRESSORS FROM 218 TO 1313 kW

R513A

climaveneta.com

CLIMAVENETA®

TECS2-G05-Y

THE GREEN CHILLER OPERATING AT PEAK EFFICIENCY

Air cooled chiller with oil-free compressors. From 218 to 1313 kW

Resulting from the recognised prestige of Climaveneta brand products utilising magnetic levitation technology, TECS2-G05-Y air cooled chillers match together the advantages of the oil-free technology with the 513A innovative green refrigerant.

Brilliantly engineered to achieve premium levels of efficiency and reliability, TECS2-G05-Y also feature a very compact layout and silent operation that make this unit the ideal solution for any process application.

PROCESS APPLICATIONS

- Food industry
- Chemical and Pharmaceutical
- Printing industry
- Plastics

UNBEATABLE EFFICIENCY

Strict energy consumption and environmental impact regulations continually push towards ever more efficient units.
Achieving the greatest energy savings and ensuring long-term sustainability are challenges that modern cooling systems need to tackle.
The combination of the oil-free compressors, the in-house designed evaporator and the high efficiency EC fans, make together TECS2-G05-Y the solution that always harness the highest cooling efficiency, in every load condition.

SIMPLIFIED LOGISTICS

Oil-free compressors feature an extremely advantageous capacity / weight ratio.
The considerable weight reduction allows simplified on-site operations and a more compact layout compared to traditional screw compressor chillers.

Climaveneta's approach to cooling dependability goes beyond the unit's accurate and sturdy design. It also involves several devices and functions that maximise unit's uptime in case of emergency circumstances such as power supply outage.

ACOUSTIC VERSIONS

SL-CA	**Super Low noise version**, Class A of efficiency
XL-CA	**Extra Low noise version**, Class A of efficiency
SL-CA-E	**Super Low noise version**, Premium efficiency, Class A enhanced

HEAT RECOVERY CONFIGURATIONS

-	Basic function
D	Partial condensing heat recovery function

ALL-ROUND SUSTAINABILITY

R513A

TECS2-G05-Y 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 TECS2-G05-Y, a complete chiller range with reduced environmental impact, optimized for R513A refrigerant.

Combining brilliant annual efficiency with the use of a low GWP refrigerant, TECS2-G05-Y 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.

R513A

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 TECS2-G05-Y, 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

With thousands of units installed worldwide since 2003, Climaveneta air-cooled centrifugal chillers have evolved into a new generation.
Today TECS2-G05-Y combines extensive expertise and the latest technology with a new eco-friendly refrigerant.

LOW IN RUSH CURRENT

SoftSTART

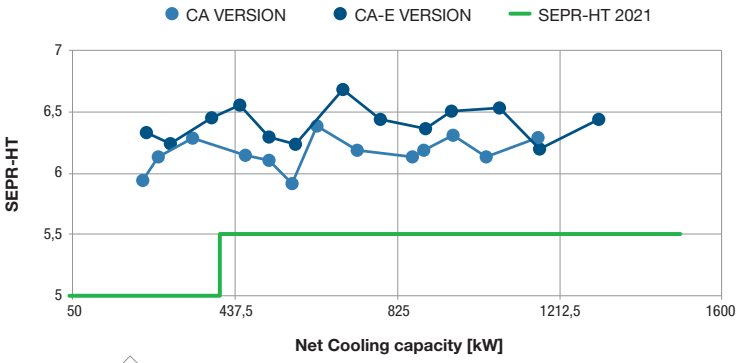
A further benefit is the very low inrush current, obtained thanks to the characteristics of the compressor and to the "inverter" starting. This is a crucial factor, as it allows a more favourable selection of the protection devices to be placed on the power supply between transformer and unit.

TECHNOLOGICAL CHOICES

CENTRIFUGAL COMPRESSOR WITH MAGNETIC LEVITATION

These top level technology compressors bring enormous benefits in terms of efficiency, adjustments, vibrations and weight. Magnetic levitation eliminates the need for lubricant, its delicate management and heat exchange penalisation. Partial load efficiency, which is crucial to reduce energy consumption during all-year-round operation, is therefore strongly increased

A profound knowledge is necessary to harness such a concentration of technology and here is where Climaveneta brand really makes the difference thanks to its profound experience in magnetic levitation compressor units and thousands of projects all over the world.

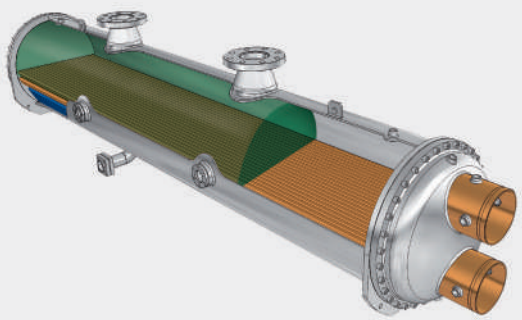


Every version of TECS2-G05-Y, is erp 2021 compliant for High temperature Process application, and is at the maximum level of efficiency at both partial and full load

Flooded evaporator

Designed and built internally, the geometry of the flooded evaporator grants optimum temperature distribution along the shell, hence highly efficient heat exchange and low refrigerant pressure drops.

Allowing the over-heating surface to be eliminated, the flooded evaporation delivers unbeatable heat exchange efficiency, but it also requires maximum care in keeping the exact liquid refrigerant level.



W3000TE CONTROL AND USER-FRIENDLY INTERFACE

The logic behind TECS2-G05-Y 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 conditions:

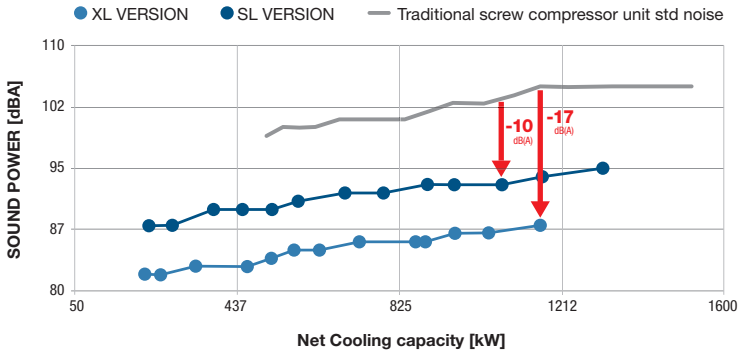
All the advantages in terms of reliability and technical support, thanks to Climaveneta's unbeatable know-how of this technology, for a truly ideal answer to the challenge of the most process applications:

EC FANS FOR A SUPER SILENT OPERATION

On TECS2-G05-Y units, the technology of EC electronic switching fans is introduced, as standard on SL-CA-E versions and optional on the other models.

The superior energy efficiency of the DC brushless motor further improves the chiller's performance, that reaches the highest Efficiency at partial load level in the market.

More advantages are low inrush current and the ability to continuously modulate the rotational speed with an immediate gain in both silence and energy consumption.

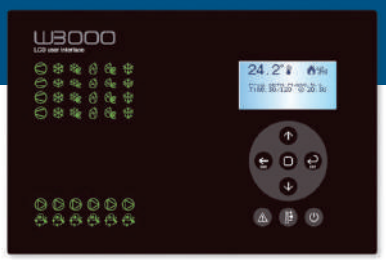


TECS2-G05-Y shows as the EC fans on the XL and SL versions ensure very low noise levels compared to traditional screw compressor units. These unbeatable sound power levels make this unit the perfect solution for noise critical applications.

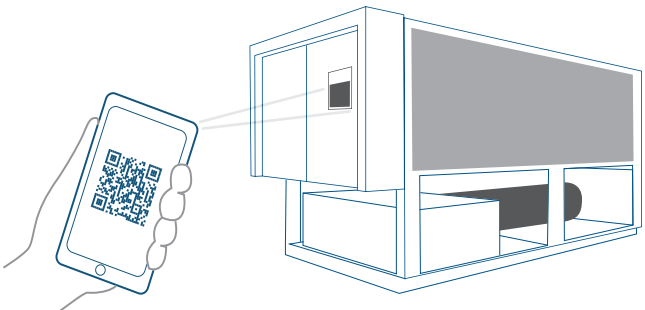
Electronic Expansion Valve

The electronic valve is adopted to grant the ideal operation of the evaporator in all conditions.
In the air cooled unit the control is made with a precise measurement of the subcooling in the condenser coil.

The fast processing of the acquired data allow a quick, fluctuation-free regulation, and therefore a highly accurate adjustment to the swings of load and ambient conditions.



- Efficient and reliable operation in all conditions
- Connectivity with the most commonly used BMS protocols (Opt.)
- Demand limit option (available for double circuit units).



Easier on-site operation

Real-time graphs and trends

Data logger function

As an option, the 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).

TECS2-G05-Y 0211 - 1154

High efficiency chiller, air source for outdoor installation, from 218 to 1313 kW.

TECS2-G05-Y/SL-CA			0211	0251	0351	0452	0512	0552	0652
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	230,4	255,9	343,3	437,9	502,5	567,3	643,1
Total power input	(1)	kW	70,85	80,82	110,0	137,7	160,7	173,5	207,2
EER	(1)	kW/kW	3,254	3,167	3,121	3,180	3,127	3,270	3,104
ESEER	(1)	kW/kW							
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	229,6	255,2	342,4	436,9	501,3	565,7	641,9
EER	(1)(2)	kW/kW	3,210	3,130	3,090	3,150	3,100	3,230	3,080
ESEER	(1)(2)	kW/kW	4,600	4,760	4,550	4,880	4,920	4,810	4,840
Cooling energy class			A	A	A	A	A	A	A
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Process refrigeration at high temperature									
Prated,c	(7)	kW	229,6	255,2	342,4	436,9	501,3	565,7	641,9
SEPR	(7)(9)		5,80	5,87	6,04	5,92	6,00	5,68	6,15
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2015/1095)									
Process refrigeration at medium temperature									
Prated,c	(8)	kW	-	-	-	-	-	-	-
SEPR	(8)(9)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	11,02	12,24	16,42	20,94	24,03	27,13	30,76
Pressure drop	(1)	kPa	35,7	27,0	28,1	27,0	27,0	34,4	20,7
REFRIGERANT CIRCUIT									
Compressors nr.		N°	1	1	1	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	100	100	120	210	180	210	240
NOISE LEVEL									
Sound Pressure	(3)	dB(A)	56	56	58	58	58	59	59
Sound power level in cooling	(4)(5)	dB(A)	88	88	90	90	90	91	92
SIZE AND WEIGHT									
A	(6)	mm	3100	3100	4000	4900	4900	5800	7000
B	(6)	mm	2260	2260	2260	2260	2260	2260	2260
H	(6)	mm	2430	2430	2430	2430	2430	2430	2430
Operating weight	(6)	kg	2320	2370	3050	4000	4240	4530	5800

TECS2-G05-Y/SL-CA			0712	0853	0913	1013	1054	1154
Power supply		V/ph/Hz	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	733,3	840,5	891,7	964,6	1056	1173
Total power input	(1)	kW	225,0	269,6	287,3	309,1	335,2	373,3
EER	(1)	kW/kW	3,259	3,118	3,104	3,121	3,150	3,142
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	731,7	838,5	889,3	962,5	1053	1170
EER	(1)(2)	kW/kW	3,230	3,090	3,070	3,090	3,120	3,110
ESEER	(1)(2)	kW/kW	4,920	4,870	4,820	4,850	4,830	4,890
Cooling energy class			A	A	A	A	A	A
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Process refrigeration at high temperature								
Prated,c	(7)	kW	731,7	838,5	889,3	962,5	1053	1170
SEPR	(7)(9)		6,06	5,98	5,98	6,09	5,89	6,09
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2015/1095)								
Process refrigeration at medium temperature								
Prated,c	(8)	kW	-	-	-	-	-	-
SEPR	(8)(9)		-	-	-	-	-	-
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	35,07	40,19	42,64	46,13	50,52	56,08
Pressure drop	(1)	kPa	26,9	31,2	35,1	29,0	34,7	36,7
REFRIGERANT CIRCUIT								
Compressors nr.		N°	2	3	3	3	4	4
No. Circuits		N°	1	2	2	2	2	2
Refrigerant charge		kg	280	340	430	490	480	520
NOISE LEVEL								
Sound Pressure	(3)	dB(A)	59	60	60	60	61	61
Sound power level in cooling	(4)(5)	dB(A)	92	93	93	93	94	94
SIZE AND WEIGHT								
A	(6)	mm	7000	8500	9700	10600	11200	11500
B	(6)	mm	2260	2260	2260	2260	2260	2260
H	(6)	mm	2430	2430	2430	2430	2430	2430
Operating weight	(6)	kg	6150	6940	7370	8150	8700	9020

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 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 Seasonal energy efficiency of high temperature process cooling [REGULATION (EU) N. 2016/2281]
8 Seasonal Energy Efficiency of Process Cooling at Medium Temperature [REGULATION (EU) N. 2015/1095]
9 Seasonal energy efficiency ratio
The units highlighted in this publication contain R513A [GWP_{100} 631] fluorinated greenhouse gases.

Certified data in EUROVENT

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

VPF R513A COOLING ENERGY CLASS
VSPEED CENTRIFUGAL AXIAL FLOODED

TECS2-G05-Y/XL-CA			0211	0251	0351	0452	0512	0552	0652
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	217,9	252,4	338,6	431,0	519,2	573,0	634,0
Total power input	(1)	kW	68,84	79,54	109,0	135,9	165,3	171,1	205,8
EER	(1)	kW/kW	3,167	3,175	3,106	3,171	3,141	3,349	3,081
ESEER	(1)	kW/kW							
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	217,2	251,7	337,7	430,0	517,9	571,4	632,9
EER	(1)(2)	kW/kW	3,120	3,140	3,070	3,140	3,110	3,310	3,060
ESEER	(1)(2)	kW/kW	4,610	4,860	4,670	4,990	4,980	4,900	4,990
Cooling energy class			A	A	B	A	A	A	B
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Process refrigeration at high temperature									
Prated,c	(7)	kW	217,2	251,7	337,7	430,0	517,9	571,4	632,9
SEPR	(7)(9)		5,93	6,13	6,28	6,14	6,10	5,92	6,38
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2015/1095)									
Process refrigeration at medium temperature									
Prated,c	(8)	kW	-	-	-	-	-	-	-
SEPR	(8)(9)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	10,42	12,07	16,19	20,61	24,83	27,40	30,32
Pressure drop	(1)	kPa	32,0	26,3	27,3	26,2	28,8	35,1	20,1
REFRIGERANT CIRCUIT									
Compressors nr.		N°	1	1	1	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	100	100	130	220	220	240	270
NOISE LEVEL									
Sound Pressure	(3)	dB(A)	50	50	51	51	52	52	52
Sound power level in cooling	(4)(5)	dB(A)	82	82	83	83	84	85	85
SIZE AND WEIGHT									
A	(6)	mm	3100	3100	4000	4900	5800	7000	7000
B	(6)	mm	2260	2260	2260	2260	2260	2260	2260
H	(6)	mm	2430	2430	2430	2430	2430	2430	2430
Operating weight	(6)	kg	2370	2420	3200	4240	4690	5350	6150

TECS2-G05-Y/XL-CA			0712	0853	0913	1013	1054	1154
Power supply		V/ph/Hz	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	730,0	865,8	888,0	959,1	1040	1163
Total power input	(1)	kW	226,0	279,0	290,4	311,0	330,3	376,9
EER	(1)	kW/kW	3,230	3,103	3,058	3,084	3,149	3,086
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	728,4	863,6	885,7	957,0	1037	1160
EER	(1)(2)	kW/kW	3,200	3,070	3,030	3,060	3,120	3,050
ESEER	(1)(2)	kW/kW	4,990	4,980	4,990	4,990	4,950	4,970
Cooling energy class			A	A	B	B	A	B
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Process refrigeration at high temperature								
Prated,c	(7)	kW	728,4	863,6	885,7	957,0	1037	1160
SEPR	(7)(9)		6,18	6,13	6,18	6,30	6,13	6,28
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2015/1095)								
Process refrigeration at medium temperature								
Prated,c	(8)	kW	-	-	-	-	-	-
SEPR	(8)(9)		-	-	-	-	-	-
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	34,91	41,40	42,47	45,87	49,75	55,63
Pressure drop	(1)	kPa	26,7	33,1	34,8	28,6	33,7	36,1
REFRIGERANT CIRCUIT								
Compressors nr.		N°	2	3	3	3	4	4
No. Circuits		N°	1	2	2	2	2	2
Refrigerant charge		kg	310	410	450	520	500	580
NOISE LEVEL								
Sound Pressure	(3)	dB(A)	53	53	53	54	54	55
Sound power level in cooling	(4)(5)	dB(A)	86	86	86	87	87	88
SIZE AND WEIGHT								
A	(6)	mm	7900	9400	9700	10600	11200	12400
B	(6)	mm	2260	2260	2260	2260	2260	2260
H	(6)	mm	2430	2430	2430	2430	2430	2430
Operating weight	(6)	kg	6650	7520	7770	8650	9150	9960

TECS2-G05-Y 0211 - 1154

High efficiency chiller, air source for outdoor installation, from 218 to 1313 kW.

TECS2-G05-Y/SL-CA-E			0211	0251	0351	0452	0512	0552	0652
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	226,4	282,8	381,9	450,5	520,5	583,5	695,8
Total power input	(1)	kW	67,41	81,04	112,7	133,0	154,1	168,3	203,5
EER	(1)	kW/kW	3,359	3,491	3,389	3,387	3,378	3,467	3,419
ESEER	(1)	kW/kW							
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	225,6	281,9	380,8	449,4	519,2	581,8	694,4
EER	(1)(2)	kW/kW	3,310	3,440	3,340	3,350	3,340	3,420	3,390
ESEER	(1)(2)	kW/kW	5,100	5,300	5,200	5,520	5,400	5,300	5,530
Cooling energy class			A	A	A	A	A	A	A
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Process refrigeration at high temperature									
Prated,c	(7)	kW	225,6	281,9	380,8	449,4	519,2	581,8	694,4
SEPR	(7)(9)		6,32	6,24	6,45	6,56	6,29	6,23	6,68
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2015/1095)									
Process refrigeration at medium temperature									
Prated,c	(8)	kW	-	-	-	-	-	-	-
SEPR	(8)(9)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	10,83	13,52	18,26	21,55	24,89	27,90	33,27
Pressure drop	(1)	kPa	34,5	33,0	34,7	28,6	29,0	36,4	24,2
REFRIGERANT CIRCUIT									
Compressors nr.		N°	1	1	1	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1
Refrigerant charge		kg	100	100	130	220	220	240	270
NOISE LEVEL									
Sound Pressure	(3)	dB(A)	56	56	58	58	58	59	59
Sound power level in cooling	(4)(5)	dB(A)	88	88	90	90	90	91	92
SIZE AND WEIGHT									
A	(6)	mm	3100	3100	4000	4900	4900	5800	7000
B	(6)	mm	2260	2260	2260	2260	2260	2260	2260
H	(6)	mm	2430	2430	2430	2430	2430	2430	2430
Operating weight	(6)	kg	2270	2350	3130	4070	4230	4570	6040

TECS2-G05-Y/SL-CA-E			0712	0853	0913	1013	1054	1154
Power supply		V/ph/Hz	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	786,2	894,0	956,7	1071	1168	1313
Total power input	(1)	kW	233,3	263,0	279,5	316,2	335,5	382,5
EER	(1)	kW/kW	3,370	3,399	3,423	3,387	3,481	3,433
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	784,3	891,6	953,9	1068	1164	1309
EER	(1)(2)	kW/kW	3,330	3,360	3,380	3,350	3,430	3,380
ESEER	(1)(2)	kW/kW	5,460	5,310	5,400	5,390	5,530	5,380
Cooling energy class			A	A	A	A	A	A
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Process refrigeration at high temperature								
Prated,c	(7)	kW	784,3	891,6	953,9	1068	1164	1309
SEPR	(7)(9)		6,44	6,36	6,51	6,53	6,20	6,43
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2015/1095)								
Process refrigeration at medium temperature								
Prated,c	(8)	kW	-	-	-	-	-	-
SEPR	(8)(9)		-	-	-	-	-	-
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	37,60	42,75	45,75	51,24	55,85	62,77
Pressure drop	(1)	kPa	31,0	35,3	40,4	35,7	42,4	46,0
REFRIGERANT CIRCUIT								
Compressors nr.		N°	2	3	3	3	4	4
No. Circuits		N°	1	2	2	2	2	2
Refrigerant charge		kg	310	410	450	520	500	580
NOISE LEVEL								
Sound Pressure	(3)	dB(A)	59	60	60	60	61	62
Sound power level in cooling	(4)(5)	dB(A)	92	93	93	93	94	95
SIZE AND WEIGHT								
A	(6)	mm	7900	8500	9700	10600	11200	12400
B	(6)	mm	2260	2260	2260	2260	2260	2260
H	(6)	mm	2430	2430	2430	2430	2430	2430
Operating weight	(6)	kg	6450	7020	7610	8510	8660	9720

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 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 Seasonal energy efficiency of high temperature process cooling [REGULATION (EU) N. 2016/2281]
8 Seasonal Energy Efficiency of Process Cooling at Medium Temperature [REGULATION (EU) N. 2015/1095]
9 Seasonal energy efficiency ratio
The units highlighted in this publication contain R513A [GWP_{100} 631] fluorinated greenhouse gases.

Certified data in EUROVENT

EUROVENT CERTIFIED PERFORMANCE
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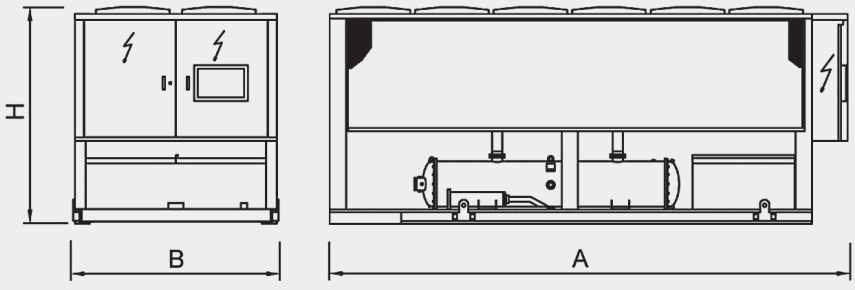
VPF | R513A | COOLING | ENERGY CLASS
VSPEED | CENTRIFUGAL | AXIAL | FLOODED



“ EXPERIENCE IS BY FAR THE BEST PROOF”

Sir Francis Bacon
British philosopher (1561-1626)

BRAUNFORM BAHLINGEN AM KAISERSTUHL

2012 Germany

Industrial technology

Plant type: Hydronic System
Cooling capacity: 850 kW
Installed machines:
1x TECS2/SL-CA 0913

HUSKY INJECTION MOLDING SYSTEMS

2010 Chennai – India

Industrial technology

Plant type: Hydronic System
Cooling capacity: 1500 kW
Installed machines:
2x TECS2/SL-CA D 0712

MAINOVA AG GUTLEUTSTRASSE

2012 Frankfurt – Germany

Energy

Plant type: Hydronic System
Cooling capacity: 500 kW
Installed machines:
2x TECS2/SL-CA 0251

UNILEVER RESEARCH & DEVELOPMENT CENTRE

2016 Wirral - Great Britain

Industrial Process

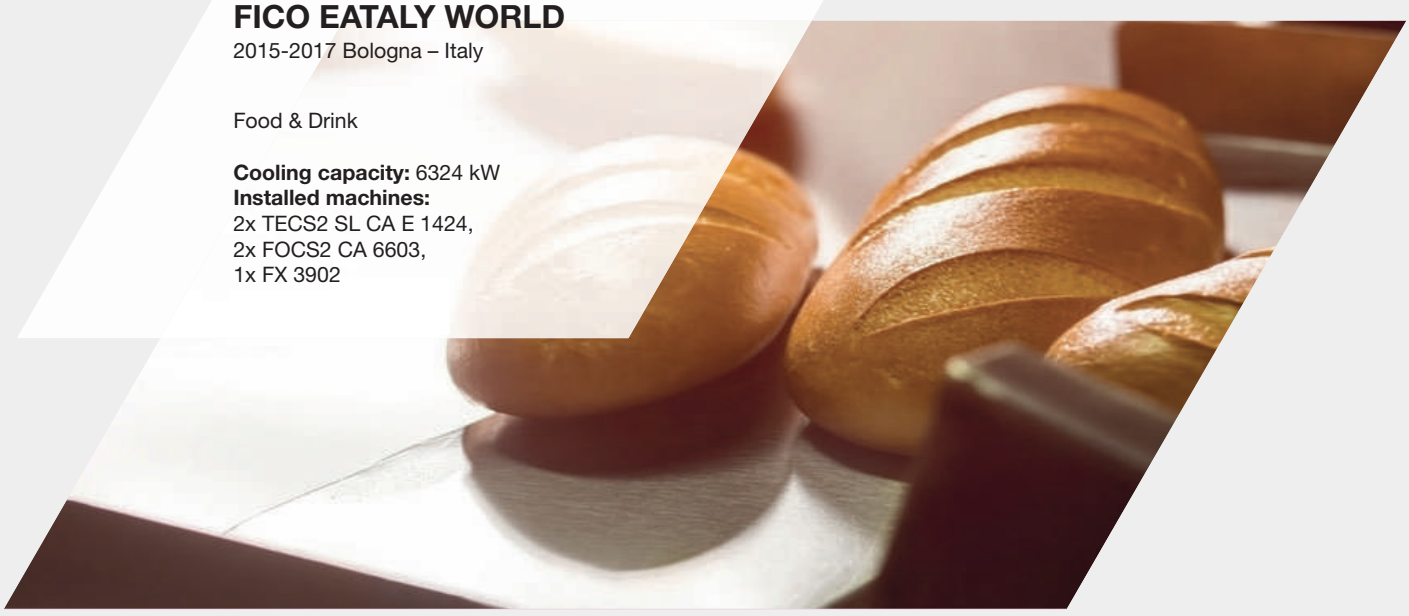
Plant type: Hydronic System
Cooling capacity: 1484 kW
Installed machines:
1x TECS2/D/SL-CA/S 0712,
1x TECS2/SL-CA/S 0712

FICO EATALY WORLD

2015-2017 Bologna – Italy

Food & Drink

Cooling capacity: 6324 kW
Installed machines:
2x TECS2 SL CA E 1424,
2x FOCS2 CA 6603,
1x FX 3902



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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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