

4.1 GENERAL TECHNICAL DATA

FOCS2-W-G05 /CA

[SI System]

FOCS2-W-G05 /CA		1301 1401 3202 3602 4202 4502 4802 5402 6002 8103										
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	306,0	348,3	843,9	957,3	1071	1145	1213	1348	1490	2024
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
EER	(1)	kW/kW	4,857	4,865	4,858	4,867	4,857	4,860	4,854	4,847	4,847	4,850
ESEER	(1)	kW/kW	5,820	5,830	5,870	6,140	6,080	6,170	6,170	6,010	6,090	5,970
COOLING ONLY (EN14511 VALUE)												
Cooling capacity	(1)(2)	kW	304,9	347,0	841,1	954,1	1069	1142	1210	1344	1485	2018
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
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
Cooling energy class			B	B	B	B	B	B	B	B	B	B
COOLING WITH PARTIAL RECOVERY												
Cooling capacity	(3)	kW	317,5	361,4	875,5	993,2	1111	1188	1259	1399	1546	2100
Total power input	(3)	kW	60,80	69,08	167,6	189,8	212,8	227,3	241,1	268,4	296,6	402,7
Desuperheater heating capacity	(3)	kW	16,36	18,59	45,11	51,08	57,26	61,17	64,89	72,21	79,81	108,4
COOLING WITH TOTAL HEAT RECOVERY												
Cooling capacity	(4)	kW	275,7	313,9	751,8	852,9	964,3	1029	1091	1205	1333	-
Total power input	(4)	kW	80,07	91,02	217,4	246,5	276,2	294,6	312,7	345,2	381,2	-
Recovery heat exchanger capacity	(4)	kW	351,0	399,4	956,1	1085	1224	1306	1385	1529	1691	-
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
Pressure drop	(1)	kPa	41,9	45,0	45,4	46,4	30,6	34,2	38,4	47,4	54,6	43,7
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
Pressure drop	(1)	kPa	36,4	35,4	35,3	35,2	34,8	35,8	36,5	35,0	37,0	35,0
PARTIAL RECOVERY USER SIDE IN REFRIGERATION												
Water flow	(3)	l/s	0,790	0,897	2,177	2,466	2,764	2,953	3,132	3,486	3,853	5,230
Pressure drop	(3)	kPa	37,6	35,0	28,6	36,6	36,1	34,9	33,7	31,5	38,5	33,6
HEAT EXCHANGER RECOVERY USER SIDE IN REFRIGERATION												
Water flow	(4)	l/s	16,94	19,28	46,15	52,35	59,08	63,06	66,87	73,83	81,62	-
Pressure drop	(4)	kPa	33,9	33,0	32,0	32,0	32,1	33,0	33,6	31,8	33,7	-
REFRIGERANT CIRCUIT												
Compressors nr.		N°	1	1	2	2	2	2	2	2	2	3
Number of capacity steps		N°	0	0	0	0	0	0	0	0	0	0
No. Circuits		N°	1	1	2	2	2	2	2	2	2	3
Regulation			STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS									
Min. capacity step		%	25	25	25	25	25	25	25	25	25	17
Refrigerant			R513A R513A R513A R513A R513A R513A R513A R513A R513A R513A R513A									
Refrigerant charge		kg	45,0	46,0	133	137	137	132	147	173	189	283
Oil charge		kg	19,0	19,0	70,0	70,0	70,0	70,0	70,0	76,0	76,0	114
Rc (ASHRAE)	(5)	kg/kW	0,15	0,13	0,16	0,15	0,13	0,12	0,12	0,13	0,13	0,14
NOISE LEVEL												
Sound Pressure	(6)	dB(A)	79	79	80	80	80	80	80	82	82	82
Sound power level in cooling	(7)(8)	dB(A)	97	97	99	99	99	99	99	101	101	102
SIZE AND WEIGHT												
A	(9)	mm	3830	3830	4750	4750	4750	4750	4750	4850	4850	4950
B	(9)	mm	900	900	1150	1150	1150	1150	1150	1150	1150	1700
H	(9)	mm	1700	1700	2050	2050	2200	2200	2200	2200	2200	2150
Operating weight	(9)	kg	2050	2110	5110	5400	6070	6120	6180	6950	7090	10170

Notes:

1 Plant (side) cooling exchanger water (in/out) 12,00°C/7,00°C; Source (side) heat exchanger water (in/out) 30,00°C/35,00°C.

2 Values in compliance with EN14511-3:2013.

3 Plant (side) cooling exchanger water (in/out): 12,00°C/7,00°C; Source (side) heat exchanger water (in/out): 30,00°C/35,00°C; Plant (side) heat exchanger recovery water (in/out): 40,00°C/45,00°C.

4 Plant (side) cooling exchanger water (in/out) 12,00°C/7,00°C; Plant (side) heat exchanger recovery water (in/out) 40,00°C/45,00°C.

5 Rated in accordance with AHRI Standard 550/590 (2011 with addendum 1).

6 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.

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

8 Sound power level in cooling, indoors.

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

- Not available

Certified data in EUROVENT

GENERAL TECHNICAL DATA

FOCS2-W-G05 /CA

[SI System]

FOCS2-W-G05 /CA		9003	9004	9604
Power supply		V/ph/Hz	400/3/50	400/3/50
PERFORMANCE				
COOLING ONLY (GROSS VALUE)				
Cooling capacity	(1)	kW	2236	2278
Total power input	(1)	kW	460,6	469,7
EER	(1)	kW/kW	4,855	4,850
ESEER	(1)	kW/kW	6,010	6,110
COOLING ONLY (EN14511 VALUE)				
Cooling capacity	(1)(2)	kW	2228	2273
EER	(1)(2)	kW/kW	4,700	4,730
ESEER	(1)(2)	kW/kW	5,500	5,680
Cooling energy class		B	B	B
COOLING WITH PARTIAL RECOVERY				
Cooling capacity	(3)	kW	2319	2363
Total power input	(3)	kW	444,5	453,2
Desuperheater heating capacity	(3)	kW	119,6	122,0
COOLING WITH TOTAL HEAT RECOVERY				
Cooling capacity	(4)	kW	-	-
Total power input	(4)	kW	-	-
Recovery heat exchanger capacity	(4)	kW	-	-
EXCHANGERS				
HEAT EXCHANGER USER SIDE IN REFRIGERATION				
Water flow	(1)	l/s	106,9	108,9
Pressure drop	(1)	kPa	53,3	32,3
HEAT EXCHANGER SOURCE SIDE IN REFRIGERATION				
Water flow	(1)	l/s	128,4	130,8
Pressure drop	(1)	kPa	36,3	35,5
PARTIAL RECOVERY USER SIDE IN REFRIGERATION				
Water flow	(3)	l/s	5,773	5,887
Pressure drop	(3)	kPa	38,3	34,6
HEAT EXCHANGER RECOVERY USER SIDE IN REFRIGERATION				
Water flow	(4)	l/s	-	-
Pressure drop	(4)	kPa	-	-
REFRIGERANT CIRCUIT				
Compressors nr.		N°	3	4
Number of capacity steps		N°	0	0
No. Circuits		N°	3	4
Regulation		STEPLESS	STEPLESS	STEPLESS
Min. capacity step		%	17	12,5
Refrigerant		R513A	R513A	R513A
Refrigerant charge		kg	275	281
Oil charge		kg	114	140
Rc (ASHRAE)	(5)	kg/kW	0,13	0,13
NOISE LEVEL				
Sound Pressure	(6)	dB(A)	82	82
Sound power level in cooling	(7)(8)	dB(A)	102	102
SIZE AND WEIGHT				
A	(9)	mm	4950	4650
B	(9)	mm	1700	2250
H	(9)	mm	2150	2230
Operating weight	(9)	kg	10350	14330

Notes:

1 Plant (side) cooling exchanger water (in/out) 12,00°C/7,00°C; Source (side) heat exchanger water (in/out) 30,00°C/35,00°C.

2 Values in compliance with EN14511-3:2013.

3 Plant (side) cooling exchanger water (in/out): 12,00°C/7,00°C; Source (side) heat exchanger water (in/out): 30,00°C/35,00°C; Plant (side) heat exchanger recovery water (in/out): 40,00°C/45,00°C.

4 Plant (side) cooling exchanger water (in/out) 12,00°C/7,00°C; Plant (side) heat exchanger recovery water (in/out) 40,00°C/45,00°C.

5 Rated in accordance with AHRI Standard 550/590 (2011 with addendum 1).

6 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.

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

8 Sound power level in cooling, indoors.

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

- Not available

Certified data in EUROVENT

GENERAL TECHNICAL DATA

FOCS2-W-G05 /CA-E

[SI System]

FOCS2-W-G05 /CA-E		1301140116011801210124012802320236024202										
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	320,7	364,7	441,9	506,3	573,7	649,4	729,4	884,2	1012	1147
Total power input	(1)	kW	59,70	67,84	82,38	94,07	106,9	121,0	135,8	164,8	187,9	213,8
EER	(1)	kW/kW	5,372	5,379	5,363	5,380	5,367	5,367	5,371	5,365	5,386	5,365
ESEER	(1)	kW/kW	6,370	6,370	6,300	6,390	6,380	6,400	6,520	6,440	6,600	6,520
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	1143
EER	(1)(2)	kW/kW	5,110	5,120	5,090	5,110	5,100	5,090	5,130	5,110	5,170	5,120
ESEER	(1)(2)	kW/kW	5,710	5,720	5,630	5,720	5,710	5,700	5,850	5,720	5,940	5,800
Cooling energy class		A	A	A	A	A	A	A	A	A	A	A
COOLING WITH PARTIAL RECOVERY												
Cooling capacity	(3)	kW	322,3	366,5	444,1	508,9	576,6	652,6	733,1	888,6	1017	1153
Total power input	(3)	kW	59,58	67,70	82,21	93,88	106,7	120,8	135,5	164,4	187,6	213,3
Desuperheater heating capacity	(3)	kW	16,03	18,22	22,12	25,26	28,70	32,50	36,47	44,25	50,47	57,40
COOLING WITH TOTAL HEAT RECOVERY												
Cooling capacity	(4)	kW	288,7	328,4	394,6	452,2	-	-	656,8	789,6	904,1	-
Total power input	(4)	kW	76,22	86,59	103,7	118,4	-	-	173,3	207,3	236,6	-
Recovery heat exchanger capacity	(4)	kW	360,4	409,8	492,1	563,5	-	-	819,7	984,4	1127	-
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	54,85
Pressure drop	(1)	kPa	45,7	47,7	53,5	53,4	52,8	60,2	51,9	58,6	41,3	55,0
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	64,85
Pressure drop	(1)	kPa	49,0	47,2	52,2	53,3	55,0	57,0	47,2	52,1	53,4	55,0
PARTIAL RECOVERY USER SIDE IN REFRIGERATION												
Water flow	(3)	l/s	0,774	0,879	1,068	1,219	1,386	1,569	1,760	2,136	2,436	2,771
Pressure drop	(3)	kPa	10,6	13,7	8,87	11,6	14,9	19,1	13,8	13,5	11,5	14,9
HEAT EXCHANGER RECOVERY USER SIDE IN REFRIGERATION												
Water flow	(4)	l/s	17,39	19,78	23,75	27,20	-	-	39,57	47,52	54,38	-
Pressure drop	(4)	kPa	45,1	43,5	47,2	48,1	-	-	43,4	47,1	48,3	-
REFRIGERANT CIRCUIT												
Compressors nr.		N°	1	1	1	1	1	1	2	2	2	2
Number of capacity steps		N°	0	0	0	0	0	0	0	0	0	0
No. Circuits		N°	1	1	1	1	1	1	2	2	2	2
Regulation		STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS										
Min. capacity step		%	25	25	25	25	25	25	25	25	25	25
Refrigerant		R513A R513A R513A R513A R513A R513A R513A R513A R513A R513A R513A										
Refrigerant charge		kg	53,0	63,0	79,0	76,0	84,0	105	131	147	168	183
Oil charge		kg	19,0	19,0	35,0	35,0	35,0	35,0	38,0	70,0	70,0	70,0
Rc (ASHRAE)	(5)	kg/kW	0,17	0,17	0,18	0,15	0,15	0,16	0,18	0,17	0,17	0,16
NOISE LEVEL												
Sound Pressure	(6)	dB(A)	79	78	78	78	78	78	80	80	80	79
Sound power level in cooling	(7)(8)	dB(A)	97	97	97	97	97	97	99	99	99	99
SIZE AND WEIGHT												
A	(9)	mm	4250	4250	4150	4150	4130	4350	4550	4950	5170	4920
B	(9)	mm	900	900	900	900	900	900	1150	1150	1150	1150
H	(9)	mm	1815	1910	1990	1990	1990	2090	2050	2200	2200	2350
Operating weight	(9)	kg	2470	2770	3570	3750	3790	4230	5390	6460	6920	7900

Notes:

1 Plant (side) cooling exchanger water (in/out) 12,00°C/7,00°C; Source (side) heat exchanger water (in/out) 30,00°C/35,00°C.

2 Values in compliance with EN14511-3:2013.

3 Plant (side) cooling exchanger water (in/out): 12,00°C/7,00°C; Source (side) heat exchanger water (in/out): 30,00°C/35,00°C; Plant (side) heat exchanger recovery water (in/out): 40,00°C/45,00°C.

4 Plant (side) cooling exchanger water (in/out) 12,00°C/7,00°C; Plant (side) heat exchanger recovery water (in/out) 40,00°C/45,00°C.

5 Rated in accordance with AHRI Standard 550/590 (2011 with addendum 1).

6 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.

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

8 Sound power level in cooling, indoors.

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

- Not available

Certified data in EUROVENT

GENERAL TECHNICAL DATA

FOCS2-W-G05 /CA-E

[SI System]

FOCS2-W-G05 /CA-E		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	1299	706,7	781,3	1411	2025	2157	2294
Total power input	(1)	kW	242,0	133,2	146,9	266,3	375,9	401,7	427,5
EER	(1)	kW/kW	5,368	5,306	5,319	5,299	5,387	5,370	5,366
ESEER	(1)	kW/kW	6,530	6,380	6,400	6,540	6,620	6,510	6,520
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	1293	704,0	778,6	1407	2019	2149	2286
EER	(1)(2)	kW/kW	5,110	5,060	5,090	5,090	5,190	5,140	5,140
ESEER	(1)(2)	kW/kW	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
COOLING WITH PARTIAL RECOVERY									
Cooling capacity	(3)	kW	1305	710,3	785,2	1418	2035	-	-
Total power input	(3)	kW	241,6	132,9	146,6	265,8	375,1	-	-
Desuperheater heating capacity	(3)	kW	65,00	35,76	39,44	71,51	100,9	-	-
COOLING WITH TOTAL HEAT RECOVERY									
Cooling capacity	(4)	kW	-	-	-	-	-	-	-
Total power input	(4)	kW	-	-	-	-	-	-	-
Recovery heat exchanger capacity	(4)	kW	-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	62,10	33,80	37,36	67,48	96,82	103,2	109,7
Pressure drop	(1)	kPa	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	73,42	40,02	44,23	79,94	114,4	121,9	129,7
Pressure drop	(1)	kPa	57,3	52,3	49,9	52,2	52,6	54,0	54,5
PARTIAL RECOVERY USER SIDE IN REFRIGERATION									
Water flow	(3)	l/s	3,138	1,726	1,904	3,452	4,873	-	-
Pressure drop	(3)	kPa	19,1	19,8	23,3	19,8	11,5	-	-
HEAT EXCHANGER RECOVERY USER SIDE IN REFRIGERATION									
Water flow	(4)	l/s	-	-	-	-	-	-	-
Pressure drop	(4)	kPa	-	-	-	-	-	-	-
REFRIGERANT CIRCUIT									
Compressors nr.		N°	2	1	1	2	4	4	4
Number of capacity steps		N°	0	0	0	0	0	0	0
No. Circuits		N°	2	1	1	2	4	4	4
Regulation		STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS STEPLESS							
Min. capacity step		%	25	25	25	25	25	25	25
Refrigerant		R513A R513A R513A R513A R513A R513A R513A							
Refrigerant charge		kg	221	121	111	231	336	366	366
Oil charge		kg	70,0	38,0	38,0	76,0	140	140	140
Rc (ASHRAE)	(5)	kg/kW	0,17	0,17	0,14	0,17	0,17	0,17	0,16
NOISE LEVEL									
Sound Pressure	(6)	dB(A)	79	80	80	81	82	82	82
Sound power level in cooling	(7)(8)	dB(A)	99	99	99	101	102	102	102
SIZE AND WEIGHT									
A	(9)	mm	4920	4350	4350	5200	5220	4900	4900
B	(9)	mm	1285	900	900	1285	2250	2250	2250
H	(9)	mm	2430	2180	2180	2440	2305	2455	2455
Operating weight	(9)	kg	8560	4760	4870	8850	13720	15850	16100

Notes:

1 Plant (side) cooling exchanger water (in/out) 12,00°C/7,00°C; Source (side) heat exchanger water (in/out) 30,00°C/35,00°C.

2 Values in compliance with EN14511-3:2013.

3 Plant (side) cooling exchanger water (in/out): 12,00°C/7,00°C; Source (side) heat exchanger water (in/out): 30,00°C/35,00°C; Plant (side) heat exchanger recovery water (in/out): 40,00°C/45,00°C.

4 Plant (side) cooling exchanger water (in/out) 12,00°C/7,00°C; Plant (side) heat exchanger recovery water (in/out) 40,00°C/45,00°C.

5 Rated in accordance with AHRI Standard 550/590 (2011 with addendum 1).

6 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.

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

8 Sound power level in cooling, indoors.

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

- Not available

Certified data in EUROVENT

GENERAL TECHNICAL DATA

ENERGY EFFICIENCY

SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)

Ambient refrigeration

FOCS2-W-G05 /CA			1301	1401	3202	3602	4202	4502	4802	5402	6002
Prated,c	(1)	kW	304,9	347	841,1	954,1	1069	1142	1210	1344	1485
SEER	(1)(2)		5,44	5,46	5,88	5,88	5,88	5,9	5,88	5,88	5,88
Performance η_s	(1)(3)	%	210	211	227	227	227	228	227	227	227

FOCS2-W-G05 /CA			8103	9003	9004	9604					
Prated,c	(1)	kW	-	-	-	-					
SEER	(1)(2)		-	-	-	-					
Performance η_s	(1)(3)	%	-	-	-	-					

FOCS2-W-G05 /CA-E			1301	1401	1601	1801	2101	2401	2802	3202	3602
Prated,c	(1)	kW	319,5	363,3	440	504,2	571,4	646,5	726,6	880,5	1009
SEER	(1)(2)		5,75	5,78	5,88	5,88	5,88	5,88	6,04	5,96	6,17
Performance η_s	(1)(3)	%	222	223	227	227	227	227	233	230	239

FOCS2-W-G05 /CA-E			4202	4802	2701	3001	5402	7204	7804	8404	
Prated,c	(1)	kW	1143	1293	704	778,6	1407	-	-	-	
SEER	(1)(2)		6,04	6,03	5,88	5,88	6,09	-	-	-	
Performance η_s	(1)(3)	%	234	233	227	227	236	-	-	-	

Notes:

(1) Seasonal energy efficiency of the cooling environment in AVERAGE climatic conditions [REGULATION (EU) N. 2016/2281]

(2) Seasonal space heating energy index

(3) Seasonal energy efficiency of the space cooling

The units highlighted in this publication contain R513A [GWP100 631] fluorinated greenhouse gases.

Certified data in EUROVENT