

7 GENERAL TECHNICAL DATA

Data Book

MECH-iS-G07 0051 - 0112_202203_EN R32

[SI System]

MECH-iS-G07			0051	0061	0071	0082	0092	0102	0112
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	50,09	60,11	70,14	80,14	90,23	100,2	110,2
Total power input	(1)	kW	15,16	19,13	26,89	26,24	32,57	31,43	37,90
EER	(1)	kW/kW	3,296	3,147	2,606	3,057	2,767	3,191	2,908
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(4)	kW	50,00	60,00	70,00	80,00	90,00	100,0	110,0
EER	(1)(4)	kW/kW	3,280	3,110	2,580	3,020	2,740	3,150	2,870
COOLING WITH PARTIAL RECOVERY									
Cooling capacity	(5)	kW	51,97	62,36	72,77	83,15	93,61	104,0	114,3
Total power input	(5)	kW	14,66	18,50	25,99	25,37	31,48	30,39	36,64
Desuperheater heating capacity	(5)	kW	12,68	16,19	23,11	22,16	27,82	26,37	32,15
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN COOLING									
Water flow	(1)	l/s	2,395	2,874	3,354	3,833	4,315	4,792	5,270
Pressure drop at the heat exchanger	(1)(4)	kPa	15,6	22,5	30,6	23,6	29,9	28,3	34,2
PARTIAL RECOVERY USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	0,612	0,781	1,116	1,070	1,343	1,273	1,552
Pressure drop at the heat exchanger	(1)	kPa	8,57	14,0	28,5	12,9	20,4	12,9	19,1
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
16°C/10°C									
Cooling capacity	(2)	kW	54,69	65,32	75,82	87,60	98,20	109,4	120,1
Total power input	(2)	kW	15,47	19,61	27,69	26,82	33,41	32,06	38,73
EER	(2)	kW/kW	3,529	3,332	2,736	3,269	2,940	3,408	3,103
23°C/15°C									
Cooling capacity	(3)	kW	62,37	73,93	85,00	100,1	111,5	124,7	136,4
Total power input	(3)	kW	15,86	20,25	28,85	27,55	34,52	32,81	39,78
EER	(3)	kW/kW	3,925	3,640	2,941	3,640	3,232	3,802	3,427
EXCHANGERS									
16°C/10°C									
Water flow	(2)	l/s	2,181	2,605	3,024	3,494	3,917	4,362	4,788
Pressure drop at the heat exchanger	(2)	kPa	12,9	18,5	24,9	19,6	24,7	23,4	28,2
23°C/15°C									
Water flow	(3)	l/s	1,868	2,215	2,546	2,999	3,339	3,735	4,086
Pressure drop at the heat exchanger	(3)	kPa	9,50	13,3	17,6	14,5	17,9	17,2	20,6
REFRIGERANT CIRCUIT									
Compressors nr.		N°	1	1	1	2	2	2	2
Number of capacity steps		N°	0	0	0	0	0	0	0
No. Circuits		N°	1	1	1	1	1	1	1
Regulation			Stepless	Stepless	Stepless	Stepless	Stepless	Stepless	Stepless
Min. capacity step		%	27	27	27	22	22	20	20
Refrigerant			R32	R32	R32	R32	R32	R32	R32
Theoretical refrigerant charge		kg	8,00	8,00	8,00	11,0	11,0	13,0	13,0
Oil charge		kg	3,50	3,50	3,50	7,00	7,00	7,00	7,00
Rc (ASHRAE)	(6)	kg/kW	0,16	0,13	0,12	0,14	0,12	0,13	0,12
FANS									
Quantity		N°	2	2	2	3	3	4	4
Air flow		m³/s	6,86	7,01	7,01	9,84	9,84	12,97	12,97
Total fans power input		kW	0,96	1,00	1,00	1,41	1,41	1,88	1,88
NOISE LEVEL									
Total sound Pressure	(7)	dB(A)	45	46	48	48	49	50	50
Total sound power level in cooling	(8)(9)	dB(A)	77	78	80	80	81	82	82
SIZE AND WEIGHT									
A	(10)	mm	2085	2085	2085	2600	2600	3225	3225
B	(10)	mm	1100	1100	1100	1100	1100	1100	1100
H	(10)	mm	2400	2400	2400	2400	2400	2400	2400
Operating weight	(10)	kg	630	630	630	830	830	940	940

Notes:

1 Plant (side) cooling exchanger water (in/out) 12,00°C/7,00°C; Source (side) heat exchanger air (in) 35,0°C.

2 Plant (side) cooling exchanger water (in/out) 16,00°C/10,00°C; Source (side) heat exchanger air (in) 35,0°C.

3 Plant (side) cooling exchanger water (in/out) 23,00°C/15,00°C; Source (side) heat exchanger air (in) 35,0°C.

4 Values in compliance with EN14511

5 Plant (side) cooling exchanger water (in/out) 12,00°C/7,00°C; Source (side) heat exchanger air (in) 35,0°C; Plant (side) heat exchanger recovery water (in/out) 40,00°C/45,00°C.

6 Rated in accordance with AHRI Standard 550/590

7 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.

8 Sound power on the basis of measurements taken in compliance with ISO 9614.

9 Sound power level in cooling, outdoors.

10 Unit in standard configuration, without optional accessories.

- Not available

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8 TECHNICAL DATA SEASONAL EFFICIENCY IN COOLING (EN14825 VALUE)

Data Book
MECH-IS-G07 0051 - 0112_202203_EN R32

[SI System]

ENERGY EFFICIENCY

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

Ambient refrigeration

MECH-IS-G07			0051	0061	0071	0082	0092	0102	0112			
Prated,c	(1)	kW	50,0	60,0	70,0	80,0	90,0	100,0	110,0			
SEER	(1) (2)	-	5,29	5,28	4,98	5,15	5,12	5,32	5,29			
Performance ηs	(1) (3)	%	209,0	208,0	196,0	203,0	202,0	210,0	209,0			

Notes:

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

(2) Seasonal energy efficiency ratio

(3) Seasonal space cooling energy efficiency

The units highlighted in this publication contain R32 [GWP₁₀₀ 677] fluorinated greenhouse gases.

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ENERGY EFFICIENCY

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

High temperature process cooling

MECH-IS-G07			0051	0061	0071	0082	0092	0102	0112			
Prated,c	(1)	kW	50,00	60,00	70,00	80,00	90,00	100,00	109,96			
SEPR HT	(1) (3)	-	6,29	5,96	5,18	6,27	6,04	5,98	5,89			

Notes:

(1) Seasonal energy efficiency of high temperature process cooling [REGULATION (EU) N. 2016/2281]

(3) Seasonal space cooling energy efficiency

The units highlighted in this publication contain R32 [GWP₁₀₀ 677] fluorinated greenhouse gases.

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