

Subtype HYDRABLOCK C 5, 7, 9kW

Certificate Holder	ITALTHERM S.p.A.
Address	Via Salvo D'Acquisto 10
ZIP	29010
City	Pontenure (PC)
Country	IT
Certification Body	BRE Global Limited
Subtype title	HYDRABLOCK C 5, 7, 9kW
Registration number	041-K052-01
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.25 kg
Certification Date	24.05.2023
Testing basis	Heat Pump Keymark Scheme Rules Rev 11
Testing laboratory	TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN

Model HYDRABLOCK C 5 M

Model name	HYDRABLOCK C 5 M
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	6.5 kW	6.3 kW
El input	1.23 kW	1.97 kW
COP	5.3	3.2

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	201.8 %	140.72 %
Prated	6.52 kW	6.36 kW
SCOP	5.12	3.59
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.77 kW	5.62 kW
COP Tj = -7°C	3.43	2.36
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	3.74 kW	3.52 kW
COP Tj = +2°C	5.04	3.7
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	2.32 kW	2.2 kW

COP Tj = +7°C	6.06	4.21
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	1.87 kW	1.31 kW
COP Tj = 12°C	9.12	4.96
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	5.77 kW	5.62 kW
COP Tj = Tbiv	3.43	2.36
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.52 kW	6.04 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3	2.02
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	20 W	20 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0 kW	0.32 kW
Annual energy consumption Qhe	2631 kWh	3655 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	173.4 %	113.12 %
Prated	6.13 kW	5.22 kW
SCOP	4.41	2.9
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.11 kW	3.21 kW
COP Tj = -7°C	3.76	2.6
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	2.38 kW	2.03 kW
COP Tj = +2°C	5.33	3.18
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	1.66 kW	1.56 kW
COP Tj = +7°C	5.78	4.5
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	1.87 kW	1.44 kW
COP Tj = 12°C	9.12	5.83
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	5 kW	4.25 kW
COP Tj = Tbiv	3.02	2

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.21 kW	3.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.12	1.32
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	20 W	20 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.92 kW	1.98 kW
Annual energy consumption Qhe	3425 kWh	4428 kWh
Pdh Tj = -15°C (if TOL)	5	4.25
COP Tj = -15°C (if TOL	3.02	2
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	268.2 %	170.9 %
Prated	6.24 kW	6.17 kW
SCOP	6.78	4.35
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.69 kW	6.17 kW
COP Tj = +2°C	4.31	2.77
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	4.01 kW	3.97 kW
COP Tj = +7°C	6.39	3.9
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	2.07 kW	2.06 kW
COP Tj = 12°C	8.71	5.28
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	4.01 kW	3.97 kW
COP Tj = Tbiv	6.39	3.9
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.69 kW	6.17 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.31	2.77
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	20 W	20 W
PSB	13 W	13 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.55 kW	0 kW
Annual energy consumption Qhe	1229 kWh	1895 kWh

Model HYDRABLOCK C 7 M

Model name	HYDRABLOCK C 7 M
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	8.40 kW	8.20 kW
El input	1.66 kW	2.60 kW
COP	5.05	3.15

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	203.99 %	143.64 %
Prated	7.90 kW	7.25 kW
SCOP	5.17	3.67
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.99 kW	6.42 kW
COP Tj = -7°C	3.29	2.31
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.51 kW	4.03 kW
COP Tj = +2°C	4.99	3.76
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	2.81 kW	2.56 kW

COP Tj = +7°C	6.72	4.48
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.87 kW	1.31 kW
COP Tj = 12°C	9.12	4.96
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	6.99 kW	6.42 kW
COP Tj = Tbiv	3.29	2.31
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.46 kW	6.85 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	1.98
WTOL	65.00 °C	65.00 °C
Poff	13.00 W	13.00 W
PTO	20.00 W	20.00 W
PSB	13.00 W	13.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.44 kW	0.40 kW
Annual energy consumption Qhe	3155 kWh	4088 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	174.6 %	117.73 %
Prated	7.51 kW	6.06 kW
SCOP	4.44	3.02
Tbiv	-15.00 °C	-15.00 °C
TOL	-22.00 °C	-22.00 °C
Pdh Tj = -7°C	4.42 kW	3.95 kW
COP Tj = -7°C	3.67	2.75
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	2.99 kW	2.25 kW
COP Tj = +2°C	5.50	3.30
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	2.03 kW	1.56 kW
COP Tj = +7°C	6.69	4.50
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.87 kW	1.44 kW
COP Tj = 12°C	9.12	5.83
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	6.12 kW	4.94 kW
COP Tj = Tbiv	2.70	2.08

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.78 kW	3.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.16	1.32
WTOL	65.00 °C	65.00 °C
Poff	13.00 W	13.00 W
PTO	20.00 W	20.00 W
PSB	13.00 W	13.00 W
PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.72 kW	2.82 kW
Annual energy consumption Qhe	4166 kWh	4948 kWh
Pdh Tj = -15°C (if TOL)	6.12	4.94
COP Tj = -15°C (if TOL	2.70	2.08
Cdh Tj = -15 °C	0.90	0.90

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
ηs	274.74 %	185.3 %
Prated	8.06 kW	8.10 kW
SCOP	6.94	4.71
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.23 kW	7.80 kW
COP Tj = +2°C	4.04	2.68
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.18 kW	5.22 kW
COP Tj = +7°C	6.35	4.07
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	2.46 kW	2.36 kW
COP Tj = 12°C	9.30	6.07
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	5.18 kW	5.22 kW
COP Tj = Tbiv	6.35	4.07
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.23 kW	7.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	4.04	2.68
WTOL	65.00 °C	65.00 °C
Poff	13.00 W	13.00 W
PTO	20.00 W	20.00 W
PSB	13.00 W	13.00 W

PCK	0.00 W	0.00 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.84 kW	0.32 kW
Annual energy consumption Qhe	1551 kWh	2303 kWh

Model HYDRABLOCK C 9 M

Model name	HYDRABLOCK C 9 M
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

General data

Power supply	1x230V 50Hz
Off-peak product	n/a

Outdoor Air/Water**EN 14511-4 | Heating**

Shutting off the heat transfer medium flow passed

Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

EN 14511-2 | Heating

	Low temperature	Medium temperature
Heat output	10 kW	9.4 kW
El input	2.13 kW	3.03 kW
COP	4.7	3.1

EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Average Climate

	Low temperature	Medium temperature
η_s	201.91 %	145.47 %
Prated	9.06 kW	8.16 kW
SCOP	5.12	3.71
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.02 kW	7.21 kW
COP Tj = -7°C	3.09	2.24
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	5.06 kW	4.56 kW
COP Tj = +2°C	4.92	3.86
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	3.22 kW	2.84 kW

COP Tj = +7°C	7.03	4.58
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	1.87 kW	1.31 kW
COP Tj = 12°C	9.12	4.96
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	8.02 kW	7.21 kW
COP Tj = Tbiv	3.09	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.88 kW	7.01 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.87	1.97
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	20 W	20 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.18 kW	1.14 kW
Annual energy consumption Qhe	3654 kWh	4539 kWh

EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Colder Climate

	Low temperature	Medium temperature
ηs	174.6 %	122.4 %
Prated	8.27 kW	7.21 kW
SCOP	4.44	3.14
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	5.42 kW	4.59 kW
COP Tj = -7°C	3.72	2.72
Cdh Tj = -7 °C	0.9	0.9
Pdh Tj = +2°C	3.14 kW	2.82 kW
COP Tj = +2°C	5.56	3.6
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	2.16 kW	1.76 kW
COP Tj = +7°C	6.55	4.84
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	1.87 kW	1.44 kW
COP Tj = 12°C	9.12	5.83
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	6.75 kW	5.88 kW
COP Tj = Tbiv	2.59	2.1

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.08 kW	3.24 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.01	1.32
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	20 W	20 W
PSB	13 W	13 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.19 kW	3.97 kW
Annual energy consumption Qhe	4591 kWh	5665 kWh
Pdh Tj = -15°C (if TOL)	6.75	5.88
COP Tj = -15°C (if TOL)	2.59	2.1
Cdh Tj = -15 °C	0.9	0.9

EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825 | Warmer Climate

	Low temperature	Medium temperature
η_s	279.05 %	193.4 %
Prated	9.04 kW	9.03 kW
SCOP	7.05	4.91
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.29 kW	8.42 kW
COP Tj = +2°C	3.85	2.68
Cdh Tj = +2 °C	0.9	0.9
Pdh Tj = +7°C	5.81 kW	5.81 kW
COP Tj = +7°C	6.24	4.16
Cdh Tj = +7 °C	0.9	0.9
Pdh Tj = 12°C	2.67 kW	2.74 kW
COP Tj = 12°C	9.63	6.64
Cdh Tj = +12 °C	0.9	0.9
Pdh Tj = Tbiv	5.81 kW	5.81 kW
COP Tj = Tbiv	6.24	4.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.29 kW	8.42 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.85	2.68
WTOL	65 °C	65 °C
Poff	13 W	13 W
PTO	20 W	20 W
PSB	13 W	13 W

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.75 kW	0.61 kW
Annual energy consumption Qhe	1714 kWh	2458 kWh