

#### Page 1 of 17

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#### <u>Login</u>

Summary of	Aquantia BI PRO 8 - 10 L DHW Tank	Reg. No.	041-K009-08	
Certificate Holder	,	<u> </u>		
Name	Frigicoll			
Address	Blasco de Garay, 4 6	Zip	08960	
City	Sant Just Desvern	Country	Spain	
Certification Body	BRE Global Limited			
Subtype title	Aquantia BI PRO 8 - 10 L DHW Tank			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R32			
Mass of Refrigerant	1.65 kg			
Certification Date	30.03.2021	30.03.2021		
Testing basis	Heat Pump Keymark Scheme Rules Rev 08			

# Model: KHP-BI 8 DVR2+ KHPI-BI-10VR2L

Configure model			
Model name	KHP-BI 8 DVR2+ KHPI-BI-10VR2L		
Application	Heating + DHW + low temp		
Units	Indoor + Outdoor		
Climate Zone	Colder Climate + Warmer Climate		
Reversibility	Yes		
Cooling mode application (optional)	n/a		

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	8.30 kW	7.50 kW	
El input	1.60 kW	2.36 kW	
СОР	5.20	3.18	

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	59 dB(A)	59 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	273 %	176 %
Prated	8.12 kW	7.56 kW
SCOP	6.99	4.47
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.57 kW	7.55 kW
COP Tj = +2°C	3.98	2.59
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.22 kW	4.86 kW
COP Tj = +7°C	6.26	3.92
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.45 kW	2.32 kW
COP Tj = 12°C	9.02	5.55
Cdh Tj = +12 °C	0.900	0.900



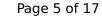


		The database on 25 juli 202
Pdh Tj = Tbiv	5.22 kW	4.86 kW
COP Tj = Tbiv	6.26	3.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.57 kW	7.55 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.98	2.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	65 °C	65 °C
Poff	14 W	14 W
PTO	24 W	24 W
PSB	14 W	14 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.55 kW	0.01 kW
Annual energy consumption Qhe	1569 kWh	2259 kWh

### Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	59 dB(A)	59 dB(A)	

#### EN 14825





j i i i i i i i i i i i i i i i i i i i	Low temperature	Medium temperature
$\eta_{s}$	170 %	112 %
Prated	6.98 kW	5.78 kW
SCOP	4.32	2.88
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = $-7^{\circ}$ C	4.46 kW	3.86 kW
$COP Tj = -7^{\circ}C$	3.66	2.48
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = $+2$ °C	2.70 kW	2.21 kW
COP Tj = +2°C	5.20	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	1.66 kW	1.44 kW
$COPTj = +7^{\circ}C$	6.53	4.11
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.66 kW	1.47 kW
COP Tj = 12°C	7.96	5.92
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	5.69 kW	4.71 kW
COP Tj = Tbiv	2.83	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	2.80 kW
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	2.80 kW





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       1.95       1.22         WTOL       65 °C       65 °C         Poff       14 W       14 W         PTO       24 W       24 W         PSB       14 W       14 W         PCK       0 W       0 W         Supplementary Heater: Type of energy input       Electricity       Electricity         Supplementary Heater: PSUP       2.91 kW       2.99 kW         Annual energy consumption Qhe       3978 kWh       4950 kWh         Pdh Tj = -15°C (if TOL<-20°C)       5.69       4.71         COP Tj = -15°C (if TOL<-20°C)       2.83       1.90         Cdh Tj = -15 °C       0.90       0.90			
Poff       14 W       14 W         PTO       24 W       24 W         PSB       14 W       14 W         PCK       0 W       0 W         Supplementary Heater: Type of energy input       Electricity       Electricity         Supplementary Heater: PSUP       2.91 kW       2.99 kW         Annual energy consumption Qhe       3978 kWh       4950 kWh         Pdh Tj = -15°C (if TOL<-20°C)	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.95	1.22
PTO       24 W       24 W         PSB       14 W       14 W         PCK       0 W       0 W         Supplementary Heater: Type of energy input       Electricity       Electricity         Supplementary Heater: PSUP       2.91 kW       2.99 kW         Annual energy consumption Qhe       3978 kWh       4950 kWh         Pdh Tj = -15°C (if TOL<-20°C)	WTOL	65 °C	65 °C
PSB       14 W       14 W         PCK       0 W       0 W         Supplementary Heater: Type of energy input       Electricity       Electricity         Supplementary Heater: PSUP       2.91 kW       2.99 kW         Annual energy consumption Qhe       3978 kWh       4950 kWh         Pdh Tj = -15°C (if TOL<-20°C)	Poff	14 W	14 W
PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 2.91 kW 2.99 kW  Annual energy consumption Qhe 3978 kWh 4950 kWh  Pdh Tj = -15°C (if TOL<-20°C) 5.69 4.71  COP Tj = -15°C (if TOL<-20°C) 2.83 1.90	РТО	24 W	24 W
Supplementary Heater: Type of energy input  Electricity  Electricity  2.91 kW  2.99 kW  Annual energy consumption Qhe  3978 kWh  Pdh Tj = -15°C (if TOL<-20°C)  5.69  4.71  COP Tj = -15°C (if TOL<-20°C)  2.83  1.90	PSB	14 W	14 W
Supplementary Heater: PSUP 2.91 kW 2.99 kW  Annual energy consumption Qhe 3978 kWh 4950 kWh  Pdh Tj = -15°C (if TOL<-20°C) 5.69 4.71  COP Tj = -15°C (if TOL<-20°C) 2.83 1.90	PCK	o w	o w
Annual energy consumption Qhe $3978 \text{ kWh}$ $4950 \text{ kWh}$ Pdh Tj = -15°C (if TOL<-20°C) $5.69$ $4.71$ COP Tj = -15°C (if TOL<-20°C) $2.83$ $1.90$	Supplementary Heater: Type of energy input	Electricity	Electricity
Pdh Tj = -15°C (if TOL<-20°C)  5.69  4.71  COP Tj = -15°C (if TOL<-20°C)  2.83  1.90	Supplementary Heater: PSUP	2.91 kW	2.99 kW
COP Tj = -15°C (if TOL<-20°C)  2.83  1.90	Annual energy consumption Qhe	3978 kWh	4950 kWh
	Pdh Tj = -15°C (if TOL<-20°C)	5.69	4.71
Cdh Tj = -15 °C 0.90	COP Tj = -15°C (if TOL $<$ -20°C)	2.83	1.90
	Cdh Tj = -15 °C	0.90	0.90

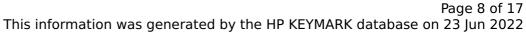
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	59 dB(A)	59 dB(A)	

EN 14825		
	Low temperature	Medium temperature





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$\eta_s$	205 %	132 %
Prated	8.12 kW	6.60 kW
SCOP	5.21	3.36
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.19 kW	5.84 kW
$COP Tj = -7^{\circ}C$	3.35	2.16
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.65 kW	3.76 kW
COP Tj = +2°C	5.09	3.30
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	2.90 kW	2.43 kW
$COP Tj = +7^{\circ}C$	6.82	4.34
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.63 kW	1.40 kW
COP Tj = 12°C	8.35	5.33
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	7.19 kW	5.84 kW
COP Tj = Tbiv	3.35	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.45 kW	4.91 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	1.84





WTOL 65 °C 65 °C Poff 14 W 14 W PTO 24 W 24 W **PSB** 14 W 14 W **PCK** 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.68 kW 1.69 kW

3223 kWh

4056 kWh

### Domestic Hot Water (DHW)

Annual energy consumption Qhe

#### Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	151 %	
СОР	3.66	
Heating up time	1:30 h:min	
Standby power input	21.0 W	
Reference hot water temperature	47.0 °C	
Mixed water at 40°C	200	

### Colder Climate



EN 16147		
Declared load profile	L	
Efficiency ηDHW	41 %	
СОР	2.61	
Heating up time	1:32 h:min	
Standby power input	25.0 W	
Reference hot water temperature	47.0 °C	
Mixed water at 40°C	200	

EN 16147		
Declared load profile	L	
Efficiency ηDHW	125 %	
СОР	3.02	
Heating up time	1:38 h:min	
Standby power input	23.0 W	
Reference hot water temperature	47.0 °C	
Mixed water at 40°C	200	



# Model: KHP-BI 10 DVR2+ KHPI-BI-10VR2L

Configure model		
Model name	KHP-BI 10 DVR2+ KHPI-BI-10VR2L	
Application	Heating + DHW + low temp	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply 1x230V 50Hz		

## Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	10.00 kW	9.50 kW	
El input	2.00 kW	3.06 kW	
СОР	5.00	3.10	

EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

### Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	279 %	180 %
Prated	8.58 kW	8.63 kW
SCOP	7.12	4.58
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	8.44 kW	8.06 kW
COP Tj = +2°C	3.84	2.59
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	5.52 kW	5.55 kW
$COPTj = +7^{\circ}C$	6.18	4.10
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	2.62 kW	2.53 kW
COP Tj = 12°C	9.04	5.82
Cdh Tj = +12 °C	0.90	0.90



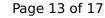


Pdh Tj = Tbiv       5.52 kW       5.55 kW         COP Tj = Tbiv       6.18       4.10         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       8.44 kW       8.16 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       3.84       2.61         WTOL       65 °C       65 °C         Poff       14 W       14 W         PTO       24 W       24 W         PSB       14 W       14 W         PCK       0 W       0 W         Supplementary Heater: Type of energy input       Electricity       Electricity         Supplementary Heater: PSUP       0.14 kW       0.48 kW         Annual energy consumption Qhe       1628 kWh       2516 kWh			
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = Tbiv	5.52 kW	5.55 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	COP Tj = Tbiv	6.18	4.10
WTOL 65 °C 65 °C  Poff 14 W 14 W  PTO 24 W 24 W  PSB 14 W 14 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.14 kW 0.48 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.44 kW	8.16 kW
Poff 14 W 14 W  PTO 24 W 24 W  PSB 14 W 14 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.14 kW 0.48 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.84	2.61
PTO 24 W 24 W  PSB 14 W 14 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.14 kW 0.48 kW	WTOL	65 °C	65 °C
PSB 14 W 14 W  PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.14 kW 0.48 kW	Poff	14 W	14 W
PCK 0 W 0 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.14 kW 0.48 kW	РТО	24 W	24 W
Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.14 kW 0.48 kW	PSB	14 W	14 W
Supplementary Heater: PSUP 0.14 kW 0.48 kW	PCK	o w	o w
	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 1628 kWh 2516 kWh	Supplementary Heater: PSUP	0.14 kW	0.48 kW
	Annual energy consumption Qhe	1628 kWh	2516 kWh

### Colder Climate

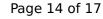
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	60 dB(A)	60 dB(A)	

EN 14825		
	Low temperature	Medium temperature





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$\eta_{s}$	170 %	116 %
Prated	7.75 kW	6.71 kW
SCOP	4.32	2.99
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = $-7^{\circ}$ C	4.83 kW	4.27 kW
COP Tj = -7°C	3.60	2.54
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	2.94 kW	2.57 kW
COPTj = +2°C	5.26	3.51
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	1.92 kW	1.66 kW
$COPTj = +7^{\circ}C$	7.08	4.37
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.66 kW	1.48 kW
COP Tj = 12°C	7.96	5.96
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	6.32 kW	5.48 kW
COP Tj = Tbiv	2.64	2.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.63 kW	2.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.22

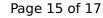




WTOL	65 °C	65 °C
Poff	14 W	14 W
РТО	24 W	24 W
PSB	14 W	14 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.13 kW	3.91 kW
Annual energy consumption Qhe	4424 kWh	5540 kWh
Pdh Tj = -15°C (if TOL<-20°C)	6.32	5.48
COP Tj = -15°C (if TOL $<$ -20°C)	2.64	2.00
Cdh Tj = -15 °C	0.90	0.90

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	60 dB(A)	60 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_s$	205 %	137 %
		•





Prated	9.17 kW	7.67 kW
SCOP	5.19	3.49
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.11 kW	6.78 kW
$COP Tj = -7^{\circ}C$	3.23	2.24
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = $+2$ °C	5.18 kW	4.29 kW
COP Tj = +2°C	5.01	3.42
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	3.32 kW	2.77 kW
$COPTj = +7^{\circ}C$	7.08	4.52
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.65 kW	1.58 kW
COP Tj = 12°C	8.58	5.68
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	8.11 kW	6.78 kW
COP Tj = Tbiv	3.23	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.40 kW	5.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.96	1.83
WTOL	65 °C	65 °C





Poff	14 W	14 W
РТО	24 W	24 W
PSB	14 W	14 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.76 kW	2.28 kW
Annual energy consumption Qhe	3647 kWh	4539 kWh

## Domestic Hot Water (DHW)

### Warmer Climate

EN 16147		
Declared load profile	L	
Efficiency ηDHW	151 %	
СОР	3.66	
Heating up time	1:30 h:min	
Standby power input	21.0 W	
Reference hot water temperature	47.0 °C	
Mixed water at 40°C	200	

### Colder Climate



EN 16147		
Declared load profile	L	
Efficiency ηDHW	107 %	
СОР	2.61	
Heating up time	1:31 h:min	
Standby power input	25.0 W	
Reference hot water temperature	47.0 °C	
Mixed water at 40°C	200 I	

EN 16147		
Deale and lead out file		
Declared load profile	L	
Efficiency ηDHW	125 %	
СОР	3.02	
Heating up time	1:38 h:min	
Standby power input	23.0 W	
Reference hot water temperature	47.0 °C	
Mixed water at 40°C	200 I	