FQBE

ECO-FRIENDLY LIQUID CHILLERS

R513A LOW GWP

FQBE MODELS		003	005	006	008	009	012	014	020	025
PERFORMANCES 20/15@25 [1][3]										
Cooling capacity	[kW]	2.23	4.00	5.74	7.96	9.38	11.63	15.10	19.06	24.26
Compressors power input	[kW]	0.39	1.19	1.76	1.18	1.50	1.92	2.53	3.49	5.13
Total power input	[kW]	0.55	1.34	1.92	1.33	1.65	2.07	3.13	4.09	6.03
Total absorbed current	[A]	2.77	9.07	8.35	4.56	5.10	5.03	10.98	14.74	24.40
Energy efficiency	EER	4.07	2.98	2.99	5.99	5.70	5.61	4.83	4.67	4.02
Water flow	[l/h]	384	687	987	1 369	1 613	2 000	2 598	3 279	4 172
Evaporator pressure drop	[kPa]	21.0	6.9	13.7	26.0	35.0	27.1	26.0	39.7	42.4
PERFORMANCES 12/7@35 [2][3]										
Cooling capacity	[kW]				5.49	6.53	8.28	10.70	13.27	
Compressors power input	[kW]				1.36	1.69	2.16	2.85	3.88	
Total power input	[kW]				1.51	1.84	2.31	3.45	4.48	
Total absorbed current	[A]				4.73	5.28	5.33	11.37	15.00	
Energy efficiency	EER				3.63	3.55	3.58	3.11	2.96	
Seasonal energy performance ratio [*]	SEPR HT				5.56	5.59	5.98	5.32	5.02	
Water flow	[l/h]				944	1 123	1 423	1 840	2 282	
Evaporator pressure drop	[kPa]				13.3	18.2	14.6	13.9	20.5	
ELECTRICAL DATA [3]										
Maximum power input (total)	[kW]	0.93	2.01	2.94	2.65	3.24	4.05	5.78	7.10	9.62
Maximum absorbed current (total)	[A]	4.69	13.82	12.53	6.09	7.02	7.83	14.77	17.06	27.86
Starting current	[A]	24.30	50.80	86.80	46.59	46.59	40.59	65.35	101.35	149.53
Fan power	[kW]	0.16	0.16	0.16	0.15	0.15	0.15	0.60	0.60	0.90
Fan current	[A]	0.80	0.80	0.80	1.59	1.59	1.59	6.35	6.35	9.53
Fan quantity	[#]	1	1	1	1	1	1	1	1	1
Power supply	[V/Ph/Hz]	230/1/50			400/3/50					
IP protection degree	---	IP40			IP44					
TECHNICAL DATA										
Refrigerant		R513A								
Compressor type		Rotary			Scroll					
Evaporator type		Brazed plates								
Condenser type		Microchannel								
Compressor quantity	[#]	1	1	1	1	1	1	1	1	1
Refrigeration circuit quantity	[#]	1	1	1	1	1	1	1	1	1
Air flow	[m³/h]	2 200	2 500	2 500	4 800	4 800	5 000	5 500	5 500	5 500
Sound pressure level [4]	[dbA]	46	46	46	49	49	49	49	49	49
Water connections size	[inch]	1/2"	1/2"	1/2"	1"	1"	1"	1"	1"	1"
Tank capacity	[dm³]	25	25	25	90	90	90	90	90	90
Width	[mm]	720	720	720	1 004	1 004	1 004	1 004	1 004	1 004
Depth	[mm]	670	670	670	753	753	753	753	753	753
Height	[mm]	680	680	680	1 257	1 257	1 257	1 257	1 257	1 257
Net Weight - standard version	[kg]	85	92	95	235	240	245	255	255	255

[*] With electronic fans, FQBE obtains performances in accordance with European Regulation (EU) 2016/2281 for eco-design requirements.

[1] Data referred to: water temp. in/out: 20/15°C - Ambient air temp. 25°C

[2] Data referred to: water temp. in/out: 12/7°C - Ambient air temp. 35°C

[3] Data referred to the unit without pump

[4] Data referred at 10 m in free field and 1,5 m height

FQBE: THE NEW QBE GENERATION WITH R513A REFRIGERANT

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R513A ECO-FRIENDLY REFRIGERANT

The FQBE liquid chillers series is Friulair's new range meeting the European F-Gas* regulation on fluorinated gases. The use of environmentally friendly R513A refrigerant gas with low GWP, non toxic and non-flammable, allows indoor installations of FQBE. The FQBE chillers wide operating range meets the most various industrial demands.

R513A LOW GWP

OZONE FRIENDLY
ODP (ozone depletion potential) = 0

NON-FLAMMABLE GAS
ASHRAE category A1

VERY LOW GWP
GWP (global warming potential)

REFRIGERANTS	GWP
R410A	2088
R134A	1430
R32	675
R513A	**631**

[*] The European F-Gas regulation forces each refrigerant producer or exporter to comply with a gradual reduction of the annual refrigerant gas quota expressed in CO_2 tons equivalent (GWP x mass). It is consequently necessary to decrease the use of high environmentally impacting refrigerant gases (i.e. high GWP) in favour of more eco friendly ones (i.e. low GWP).

ADDITIONAL INFORMATION

ERP SEPR HT READY 2021

The FQBE range guarantees high thermodynamic performances. The 008 ÷ 020 models comply with the Ecodesign ErP2021 - SEPR HT (UE) 2016/2281 limits.

INDUSTRY Ready 4.0

The FQBE range integrates into Industry 4.0 automated business systems.

Please contact our sales offices for further information: sales.chiller@friulair.com

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