DAIKIN

DAIKIN APPLIED (UK) LTD

Technically better...

EWAQ-F

Air cooled scroll chillers

Product manual

SS (Standard Efficiency - Standard Noise) - Cooling Capacity from 207 to 612 kW
SL (Standard Efficiency - Low Noise) - Cooling Capacity from 207 to 612 kW
SR (Standard Efficiency - Reduced Noise) - Cooling Capacity from 199 to 582 kW
XS (High Efficiency - Standard Noise) - Cooling Capacity from 171 to 675 kW
XL (High Efficiency - Low Noise) - Cooling Capacity from 171 to 675 kW
XR (High Efficiency - Reduced Noise) - Cooling Capacity from 166 to 648 kW

Performance according to EN14511
Eurovent certified
Refrigerant: R410A

CODE	
Date	
Supersedes	

Machine type

EWA	= Air cooled chiller cool. only
EWY	= Air cooled chiller heat pump
ERA	= Air cooled condensing unit

Refrigerant

D	= R-134a
P	= R-407C
Q	= R-410A

Capacity class in kW (Cooling)

Always 3-digit
code

Model series

A, B, …..

Inverter

-	= Non inverter

Efficiency level

S	= Standard Efficiency
X	= High Efficiency

Sound level

S	= Standard sound
L	= Low sound
R	= Reduced sound

EWAQ F-SL

MODEL		210	230	250	280	320	350	400	360
Capacity - Cooling *	kW	206	224	247	283	313	359	407	359
Capacity control - Type	---	Step	Step	Step	Step	Step	Step	Step	Step
Capacity control - Minimum capacity	%	25.0	22.0	25.0	23.0	25.0	21.0	25.0	21.0
Unit power input - Cooling *	kW	73.3	84.9	93.6	109	122	141	154	141
EER *	---	2.81	2.64	2.64	2.60	2.58	2.55	2.64	2.55
ESEER	---	3.79	3.77	3.81	3.74	3.78	3.73	3.78	4.02
IPLV	---	4.50	4.45	4.50	4.44	4.53	4.29	4.32	4.41
CASING									
Colour **	---	IW	IW	IW	IW	IW	IW	IW	IW
Material **	---	GPSS	GPSS	GPSS	GPSS	GPSS	GPSS	GPSS	GPSS
DIMENSIONS									
Height	mm	2271	2271	2271	2271	2271	2271	2447	2221
Width	mm	1224	1224	1224	1224	1224	1224	1224	2258
Length	mm	4413	4413	4413	5313	5313	6213	6213	3210
WEIGHT									
Unit Weight	kg	2297	2297	2373	2449	2535	2666	2968	2766
Operating Weight	kg	2309	2309	2385	2463	2549	2681	3008	2781
WATER HEAT EXCHANGER									
Type **	---	PHE	PHE	PHE	PHE	PHE	PHE	PHE	PHE
Water Volume	l	12	12	12	14	14	14	40	14
Nominal water flow rate - Cooling	l/s	9.9	10.7	11.8	13.6	15.0	17.2	19.5	17.2
Nominal Water pressure drop - Cooling ***	kPa	37	43	53	56	69	30	32	30
Insulation material **		CC	CC	CC	CC	CC	CC	CC	CC
AIR HEAT EXCHANGER									
Type **	---	HFP	HFP	HFP	HFP	HFP	HFP	HFP	HFP
FAN									
Type **	---	DPT	DPT	DPT	DPT	DPT	DPT	DPT	DPT
Drive **	---	DOL	DOL	DOL	DOL	DOL	DOL	DOL	DOL
Diameter	mm	800	800	800	800	800	800	800	800
Nominal air flow	l/s	21845	21845	21148	27306	26435	32767	32513	32767
Quantity	No.	4	4	4	5	5	6	6	6
Speed	rpm	900	900	900	900	900	900	900	900
Motor input	kW	7.0	7.0	7.0	8.8	8.8	10.5	10.5	10.5
COMPRESSOR									
Type	---	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Oil charge	l	19	23	27	26	25	25	25	25
Quantity	No.	4	4	4	4	4	4	4	4
SOUND LEVEL ****									
Sound Power - Cooling	dB(A)	91	92	92	93	93	94	94	94
Sound Pressure - Cooling	dB(A)	73	73	73	73	73	74	74	75
REFRIGERANT CIRCUIT									
Refrigerant type	---	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant charge	kg	28	28	32	33	40	46	54	46
N. of circuits	No.	2	2	2	2	2	2	2	2
PIPING CONNECTIONS									
Evaporator water inlet/outlet		3"	3"	3"	3"	3"	3"	3"	3"

** Cooling capacity, unit power input in cooling and EER are based on the following conditions: evaporator 12.0/7.0°C; ambient 35.0°C, unit at full load operation;*
*** IW: Ivory White - GPSS: Galvanized and Painted Steel Sheet - PHE: Plate Heat Exchanger - S&T: Single Pass Shell & Tube.*
***CC: Closed Cell - HFP: High efficiency fin and tube type - DPT: Direct Propeller Type - DOL: Direct On Line - VFD: Inverter - BRS: Brushless.*
**** If red contact factory. **** Details on measurement metods in the Sound Data section*
Unit performances are referred to ideal running conditions that are reproducible in laboratory test environment in accordance to recognized industry standards (i.e. EN14511). Weights and dimensions are indicative –For specific values refer to certified drawing issued by factory.
Data are referred to unit with standard options only. For specific information about additional options refer to databook specific section.

EWAQ F-SL

MODEL		210	230	250	280	320	350	400	360
POWER SUPPLY									
Phases	Nr	3	3	3	3	3	3	3	3
Frequency	Hz	50	50	50	50	50	50	50	50
Voltage	V	400	400	400	400	400	400	400	400
Voltage tolerance Minimum	%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%
Voltage tolerance Maximum	%	+10%	+10%	+10%	+10%	+10%	+10%	+10%	+10%
UNIT									
Maximum starting current	A	387	450	466	538	568	698	728	728
Nominal running current cooling	A	130	147	161	187	208	242	262	242
Mximum running current	A	165	182	198	231	261	294	323	294
Maximum current for wires sizing	A	182	200	218	254	287	323	355	323
FANS									
Nominal running current cooling	A	16	16	16	20	20	24	24	24
COMPRESSORS									
Phases	Nr	3	3	3	3	3	3	3	3
Voltage	V	400	400	400	400	400	400	400	400
Voltage tolerance Minimum	%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%
Voltage tolerance Maximum	%	+10%	+10%	+10%	+10%	+10%	+10%	+10%	+10%
Maximum running current	A	73	81	89	104	119	133	148	133
		73	81	89	104	119	133	148	133
Starting method	---	DOL	DOL	DOL	DOL	DOL	DOL	DOL	DOL

EWAQ F-SL

MODEL		410	480	550	610				
POWER SUPPLY									
Phases	Nr	3	3	3	3				
Frequency	Hz	50	50	50	50				
Voltage	V	400	400	400	400				
Voltage tolerance Minimum	%	-10%	-10%	-10%	-10%				
Voltage tolerance Maximum	%	+10%	+10%	+10%	+10%				
UNIT									
Maximum starting current	A	728	728	847	890				
Nominal running current cooling	A	262	322	356	391				
Mximum running current	A	323	391	443	486				
Maximum current for wires sizing	A	355	430	487	535				
FANS									
Nominal running current cooling	A	24	32	40	40				
COMPRESSORS									
Phases	Nr	3	3	3	3				
Voltage	V	400	400	400	400				
Voltage tolerance Minimum	%	-10%	-10%	-10%	-10%				
Voltage tolerance Maximum	%	+10%	+10%	+10%	+10%				
Maximum running current	A	148	178	192	221				
		148	178	207	221				
Starting method	---	DOL	DOL	DOL	DOL				

Fluid: Water
Allowed voltage tolerance ± 10%. Voltage unbalance between phases must be within ± 3%.
Maximum starting current: starting current of biggest compressor + current of the other compressors at maximum load + fans current at maximum load. In case of inverter driven units, no inrush current at start up is experienced.
Nominal current in cooling mode is referred to the following conditions: evaporator 12/7°C; ambient 35°C; compressors + fans current.
Maximum running current is based on max compressor absorbed current in its envelope and max fans absorbed current
Maximum unit current for wires sizing is based on minimum allowed voltage
Maximum current for wires sizing: (compressors full load ampere + fans current) x 1,1.
Electrical data are subject to modification without notice. Please refer to unit nameplate data

EWAQ F-SL

	Sound pressure level at 1 m from the unit (rif. 2 x 10-5 Pa)								Power
MODEL	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	dB(A)	dB(A)
210	77.7	71.1	70.8	67.8	68.8	66.0	58.4	46.8	72.7	91.4
230	77.9	71.3	71.0	68.0	69.0	66.2	58.6	47.0	72.9	91.5
250	78.0	71.4	71.1	68.1	69.1	66.3	58.7	47.1	73.0	91.7
280	78.3	71.7	71.4	68.4	69.4	66.6	59.0	47.4	73.3	92.5
320	78.3	71.7	71.4	68.4	69.4	66.6	59.0	47.4	73.3	92.5
350	78.8	72.2	71.9	68.9	69.9	67.1	59.5	47.9	73.9	93.5
400	79.0	72.4	72.1	69.1	70.1	67.3	59.7	48.1	74.0	93.8
360	79.7	73.1	72.8	69.8	70.8	68.0	60.4	48.8	74.7	93.5
410	79.7	73.1	72.8	69.8	70.8	68.0	60.4	48.8	74.8	93.8
480	80.1	73.5	73.2	70.2	71.2	68.4	60.8	49.2	75.1	94.5
550	80.7	74.1	73.8	70.8	71.8	69.0	61.4	49.8	75.7	95.7
610	80.9	74.3	74.0	71.0	72.0	69.2	61.6	50.0	76.0	95.9

EWAQ F-SS

	Sound pressure level at 1 m from the unit (rif. 2 x 10-5 Pa)								Power
MODEL	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	dB(A)	dB(A)
210	79.8	73.2	72.9	69.9	70.9	68.1	60.5	48.9	74.9	93.5
230	80.4	73.8	73.5	70.5	71.5	68.7	61.1	49.5	75.4	94.1
250	80.9	74.3	74.0	71.0	72.0	69.2	61.6	50.0	75.9	94.6
280	80.9	74.3	74.0	71.0	72.0	69.2	61.6	50.0	76.0	95.1
320	80.9	74.3	74.0	71.0	72.0	69.2	61.6	50.0	76.0	95.1
350	81.9	75.3	75.0	72.0	73.0	70.2	62.6	51.0	77.0	96.6
400	81.9	75.3	75.0	72.0	73.0	70.2	62.6	51.0	77.6	97.5
360	82.8	76.2	75.9	72.9	73.9	71.1	63.5	51.9	77.8	96.6
410	82.8	76.2	75.9	72.9	73.9	71.1	63.5	51.9	78.5	97.5
480	82.6	76.0	75.7	72.7	73.7	70.9	63.3	51.7	77.7	97.1
550	83.7	77.1	76.8	73.8	74.8	72.0	64.4	52.8	78.7	98.6
610	84.4	77.8	77.5	74.5	75.5	72.7	65.1	53.5	79.5	99.4

EWAQ F-SR

	Sound pressure level at 1 m from the unit (rif. 2 x 10-5 Pa)								Power
MODEL	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	dB(A)	dB(A)
200	71.4	64.8	64.5	61.5	62.5	59.7	52.1	40.5	66.4	85.0
220	72.3	65.7	65.4	62.4	63.4	60.6	53.0	41.4	67.4	86.0
240	73.1	66.5	66.2	63.2	64.2	61.4	53.8	42.2	68.2	86.8
270	72.9	66.3	66.0	63.0	64.0	61.2	53.6	42.0	68.0	87.1
300	72.9	66.3	66.0	63.0	64.0	61.2	53.6	42.0	68.0	87.1
330	74.3	67.7	67.4	64.4	65.4	62.6	55.0	43.4	69.3	89.0
370	75.3	68.7	68.4	65.4	66.4	63.6	56.0	44.4	70.3	90.2
340	75.2	68.6	68.3	65.3	66.3	63.5	55.9	44.3	70.2	89.0
380	75.3	68.7	68.4	65.4	66.4	63.6	56.0	44.4	71.2	90.2
460	74.6	68.0	67.7	64.7	65.7	62.9	55.3	43.7	69.6	89.0
530	75.9	69.3	69.0	66.0	67.0	64.2	56.6	45.0	71.0	90.9
580	77.0	70.4	70.1	67.1	68.1	65.3	57.7	46.1	72.1	92.0

EWAQ F-XL

	Sound pressure level at 1 m from the unit (rif. 2 x 10-5 Pa)								Power
MODEL	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	dB(A)	dB(A)
170	76.4	69.8	69.5	66.5	67.5	64.7	57.1	45.5	71.4	90.0
200	77.6	71.0	70.7	67.7	68.7	65.9	58.3	46.7	72.6	91.2
220	78.1	71.5	71.2	68.2	69.2	66.4	58.8	47.2	73.1	92.3
250	78.2	71.6	71.3	68.3	69.3	66.5	58.9	47.3	73.2	92.4

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