

AIR-COOLED FIXED-SPEED SCREW CHILLER



Very economical operation
Low sound levels
Simple installation
Environmentally responsible
Exceptional reliability

30XB 250-1700

AQUAFORCE

Nominal cooling capacity 267-1682 kW - 50 Hz

The AquaForce™ 30XB and 30XBP liquid chillers are the economic solution for commercial and industrial applications where high reliability and economic operation in all climate conditions are key customer requirements.

The AquaForce™ 30XB and 30XBP liquid chillers are designed to meet current and future regulations for energy efficiency and operating sound levels. They use the latest Carrier technologies:

Carrier 06T twin-rotor fixed-speed screw compressors.

Low noise 6th generation of Carrier Flying Bird™ fans with AC motor (30XB) or EC motor (30XBP).

Carrier flooded shell-and-tube evaporator with new copper tube design for low pressure drops

2nd generation of "V" shape Carrier Novation™ microchannel heat exchangers with optional Enviro-Shield coatings.

Carrier Touch Pilot® control with color touch screen user interface that includes 10 languages and integrated web-server.



CARRIER participates in the ECP programme for LCP/HP
Check ongoing validity of certificate:
www.eurovent-certification.com

PHYSICAL DATA, SIZES 30XB-250 TO 800

30XB		250	300	350	400	450	500	600	700	750	800	
Cooling												
Standard unit Full load performances* CA1	Nominal capacity	kW	274	299	327	393	444	496	615	682	726	788
	EER	kW/kWh	3,14	3,11	3,11	3,22	3,11	3,1	3,15	3,34	3,11	3,14
	Eurovent class		A	A	A	A	A	A	A	A	A	A
Unit with option 15LS (+) Full load performances* CA1	Nominal capacity	kW	270	294	321	382	430	485	607	661	698	767
	EER	kW/kWh	3,1	3,05	3,07	3,17	2,98	2,93	3,12	3,2	3	2,97
	Eurovent class		A	B	B	A	B	B	A	A	B	B
Standard unit Seasonal energy efficiency **	SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,12	4,16	4,24	4,00	NA	NA	NA	4,26	NA	4,17
	η _{s cool} _{12/7°C}	%	162	164	166	157	NA	NA	NA	167	NA	164
	SEPR _{12/7°C} Process high temp.	kWh/kWh	4,74	5,15	5,51	4,95	5,33	5,00	5,20	5,50	5,07	5,09
Unit with Option 5 Seasonal energy efficiency **	SEPR _{-2/-8°C} Process medium temp.***	kWh/kWh	NA	2,89	2,97	2,6	3,43	2,94	3,57	3,71	3,39	3,33
	SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,12	4,16	4,23	4,28	4,27	4,09	4,13	4,47	4,21	4,36
	η _{s cool} _{12/7°C}	%	162	164	166	168	168	161	162	176	166	171
Unit with Option 17 & 299 Seasonal energy efficiency **	SEPR _{12/7°C} Process high temp.	kWh/kWh	4,75	5,16	5,54	4,99	5,21	5,02	5,25	5,55	5,10	5,13
	SEPR _{-2/-8°C} Process medium temp.***	kWh/kWh	2,79	3,1	3,27	2,93	3,66	3,71	3,82	3,93	3,59	3,49
	SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,26	4,29	4,51	4,26	4,18	4,13	NA	4,34	NA	NA
Unit with Option 15LS (+) Seasonal energy efficiency **	η _{s cool} _{12/7°C}	%	167	169	177	167	164	162	NA	171	NA	NA
	SEPR _{12/7°C} Process high temp.	kWh/kWh	5,03	5,24	5,98	5,17	5,50	5,13	5,66	5,69	5,40	5,52
	SEPR _{-2/-8°C} Process medium temp.***	kWh/kWh	2,67	2,96	3,08	NA	3,59	3,12	3,92	3,94	3,66	3,70
Unit with Option 5 & 15LS (+) Seasonal energy efficiency **	SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,15	4,17	4,39	4,37	4,30	4,20	4,21	4,41	4,23	4,23
	η _{s cool} _{12/7°C}	%	163	164	173	172	169	165	165	174	166	166
	SEPR _{12/7°C} Process high temp.	kWh/kWh	5,69	5,80	6,10	5,61	5,58	5,78	5,73	5,91	5,52	5,57
Unit with Option 5, 17, 15LS(+) Seasonal energy efficiency **	SEPR _{-2/-8°C} Process medium temp.***	kWh/kWh	2,80	3,17	3,39	2,95	3,69	3,83	3,96	3,99	3,69	3,72
	Sound levels											
	Standard unit											
Sound power ⁽¹⁾	dB(A)	99	99	99	99	101	99	101	99	103	103	
Sound pressure at 10 m ⁽²⁾	dB(A)	67	67	67	67	69	67	68	67	70	70	
Unit + option 15⁽³⁾												
Sound power ⁽¹⁾	dB(A)	93	93	94	95	95	95	97	96	97	98	
Sound pressure at 10 m ⁽²⁾	dB(A)	61	61	62	63	63	63	65	63	64	65	
Unit + option 15LS⁽³⁾												
Sound power ⁽¹⁾	dB(A)	87	87	87	90	91	91	93	92	94	94	
Sound pressure at 10 m ⁽²⁾	dB(A)	55	55	55	58	59	59	60	59	61	61	
Unit + option 15LS+⁽³⁾												
Sound power ⁽¹⁾	dB(A)	-	-	-	-	89	89	91	90	91	92	
Sound pressure at 10 m ⁽²⁾	dB(A)	-	-	-	-	56	56	57	56	58	58	
Dimensions												
Standard unit												
Length	mm	3604	3604	3604	4798	4798	4798	7186	7186	7186	7186	
Width	mm	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253	
Height	mm	2322	2322	2322	2322	2322	2322	2322	2322	2322	2322	

* In accordance with standard EN14511-3:2013.

** In accordance with standard EN14825:2016, average climate

*** With EG 30%

CA1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator fouling factor 0 m².K/W

η_{s cool}_{12/7°C} & SEER_{12/7°C} **Bold values compliant to Ecodesign regulation: (EU) No 2016/2281 for Comfort application**

SEPR_{-2/-8°C} **Bold values compliant to Ecodesign regulation: (EU) No 2015/1095 for Process application**

NA Non Authorized for the specific application for CEE market



Eurovent certified values

PHYSICAL DATA, SIZES 30XB-850 TO 1700

30XB		850	900	1000	1100	1200	1300	1400	1500	1550	1700
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Cooling

Standard unit	Nominal capacity	kW	828	890	965	1126	1244	1332	1440	1492	1532	1689
Full load performances* CA1	EER	kW/kW	3,13	3,13	2,97	3,08	3,1	3,18	3,08	3,12	3,23	3,25
	Eurovent class		A	A	B	B	A	A	B	A	-	-
Unit with option 15LS (+)	Nominal capacity	kW	775	859	929	1111	1211	1298	1391	1418	1457	1627
Full load performances* CA1	EER	kW/kW	2,8	2,97	2,96	2,9	3,03	2,9	2,77	2,94	2,96	3,1
	Eurovent class		C	B	B	B	B	B	C	B	-	-
Standard unit	SEER_{12/7°C} Comfort low temp.	kWh/kWh	NA	4,12	NA	NA	4,18	NA	4,16	NA	4,17	NA
Seasonal energy efficiency **	η_s cool_{12/7°C}	%	NA	162	NA	NA	164	NA	163	NA	164	NA
	SEPR_{12/7°C} Process high temp.	kWh/kWh	5,18	5,08	5,13	5,31	5,46	5,33	5,43	5,17	5,31	5,24
Unit with Option 5	SEPR_{-2/-8°C} Process medium temp.***	kWh/kWh	NA	NA	3,49	3,50	3,39	3,36	3,40	NA	3,57	3,77
Seasonal energy efficiency **	SEER_{12/7°C} Comfort low temp.	kWh/kWh	4,10	4,26	4,1¹⁾	4,09	4,26	4,16	4,19	4,18	-	4,22
Unit with Option 17 & 299	η_s cool_{12/7°C}	%	161	167	161¹⁾	161	167	164	165	164	-	166
Seasonal energy efficiency **	SEPR_{12/7°C} Process high temp.	kWh/kWh	5,58	5,39	5,23	5,49	5,55	5,61	5,58	5,43	-	5,38
Unit with Option 5 & 17	SEPR_{-2/-8°C} Process medium temp.***	kWh/kWh	3,76	3,70	3,60	3,68	3,61	3,68	3,67	3,48	-	3,89
Seasonal energy efficiency **	SEER_{12/7°C} Comfort low temp.	kWh/kWh	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Unit with Option 15LS (+)	η_s cool_{12/7°C}	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Seasonal energy efficiency **	SEPR_{12/7°C} Process high temp.	kWh/kWh	5,23	5,37	5,31	5,10	5,34	NA	NA	NA	5,39	5,23
Unit with Option 5 & 15LS (+)	SEPR_{-2/-8°C} Process medium temp.***	kWh/kWh	3,27	NA	3,82	3,50	3,47	3,24	3,27	NA	3,70	3,97
Seasonal energy efficiency **	SEER_{12/7°C} Comfort low temp.	kWh/kWh	4,10	4,18	4,1⁺	NA	4,09	NA	NA	4,09	-	4,09
Unit with Option 17 & 299 & 15LS (+)	η_s cool_{12/7°C}	%	161	164	161⁺	NA	161	NA	NA	161	-	161
Seasonal energy efficiency **	SEPR_{12/7°C} Process high temp.	kWh/kWh	5,64	5,66	5,43	5,15	5,43	5,06	5,05	5,21	-	5,30
Unit with Option 5, 17, 15LS(+)	SEPR_{-2/-8°C} Process medium temp.***	kWh/kWh	3,80	3,83	3,81	3,55	3,52	3,28	3,33	3,63	-	3,97
Seasonal energy efficiency **												
Sound levels												
Standard unit												
	Sound power ⁽¹⁾	dB(A)	101	104	102	103	102	104	104	104	104	104
	Sound pressure at 10 m ⁽²⁾	dB(A)	70	71	69	70	69	71	71	71	71	70
Unit + option 15⁽³⁾												
	Sound power ⁽¹⁾	dB(A)	97	99	98	98	98	100	99	99	100	100
	Sound pressure at 10 m ⁽²⁾	dB(A)	65	66	65	65	65	67	65	65	67	66
Unit + option 15LS⁽³⁾												
	Sound power ⁽¹⁾	dB(A)	94	95	94	94	94	99	95	96	96	96
	Sound pressure at 10 m ⁽²⁾	dB(A)	61	62	61	61	61	66	62	63	63	62
Unit + option 15LS+⁽³⁾												
	Sound power ⁽¹⁾	dB(A)	91	93	92	93	93	97	94	95	93	93
	Sound pressure at 10 m ⁽²⁾	dB(A)	58	60	59	60	60	66	61	62	60	60

* In accordance with standard EN14511-3:2013.

** In accordance with standard EN14825:2016, average climate

*** With EG 30%

+ SEER calculated with the option 119

CA1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator frosting factor 0 m².K/W

η_s cool_{12/7°C} & SEER_{12/7°C} Bold values compliant to Ecodesign regulation: (EU) No 2016/2281 for Comfort application

SEPR_{-2/-8°C} Bold values compliant to Ecodesign regulation: (EU) No 2015/1095 for Process application

NA Non Authorized for the specific application for CEE market

- Not applicable



Eurovent certified values

ELECTRICAL DATA, 30XB WITH OPTION CU/AL HEAT EXCHANGER

30XB with option 254 or 255	250	300	350	400	450	500	600	700	750	800	850	900	1000	
Power circuit supply														
Nominal voltage	V-ph-Hz	400-3-50												
Voltage range	V	360-440												
Control circuit supply														
24 V via internal transformer														
Maximum operating input power⁽¹⁾ - 30XB														
Standard unit	kW	129	140	154	176	198	220	266	288	325	344	375	403	462
Unit + option 15LS	kW	122	134	147	167	189	211	253	273	310	329	361	388	446
Power factor at maximum power⁽¹⁾ - 30XB														
Standard unit														
Displacement Power Factor (Cos Phi)		0,88	0,88	0,88	0,88	0,89	0,89	0,89	0,89	0,89	0,89	0,89	0,90	0,90
Unit + option 15LS														
Displacement Power Factor (Cos Phi)		0,88	0,88	0,88	0,88	0,89	0,89	0,89	0,89	0,89	0,89	0,89	0,90	0,90
Nominal operating current draw⁽²⁾ - 30XB														
Standard unit	A	154	170	190	215	246	272	332	358	413	434	454	515	542
Unit + option 15LS	A	143	159	179	200	231	257	311	335	390	411	431	492	524
Maximum operating current draw (Un)⁽¹⁾ - 30XB														
Standard unit	A	212	230	252	289	322	357	431	466	525	555	605	649	745
Unit + option 15LS	A	201	219	241	274	307	342	410	443	502	532	582	626	718
Maximum current (Un-10%)⁽¹⁾ - 30XB														
Standard unit	A	224	243	258	305	340	367	455	492	547	579	624	661	780
Unit + option 15LS	A	212	231	246	290	325	352	434	469	524	556	601	638	745
Nominal start-up current⁽³⁾ - 30XB														
Standard unit	A	247	247	263	380	481	481	542	567	741	762	762	838	858
Unit + option 15LS	A	241	241	257	374	475	475	532	555	731	752	752	826	845
Unit + option 25C	A	213	224	224	346	442	442	492	492	676	691	691	733	756
Maximum start-up current(Un)⁽²⁾ - 30XB														
Standard unit	A	276	277	294	417	519	523	591	621	797	822	837	905	955
Unit + option 15LS	A	270	271	288	411	513	518	582	609	787	813	828	893	942
Unit + option 25C	A	213	224	224	346	442	442	492	492	676	691	691	733	756

(1) Values obtained at unit continuous maximum operating conditions (data given on the unit nameplate)
(2) Operating current of the smallest compressor(s) + fan current + locked rotor current or reduced start-up current of the largest compressor.
(3) Standardised EUROVENT conditions, water-cooled exchanger water inlet/outlet = 12°C/7°C, outdoor air temperature = 35°C.