



30HXC 080-375

30GX 082-358

Screw Compressor

Water-Cooled Liquid Chillers and

Air-Cooled Liquid Chillers

30HXC Nominal cooling capacity 290-1325 kW

30GX Nominal cooling capacity 285-1205 kW

50 Hz



GLOBAL CHILLER



Installation, operation and maintenance instructions



Quality Management System Approval

7 - PHYSICAL DATA 30GX

30GX		082	092	102	112	122	132	152	162	182	207	227	247	267	298	328	358
Net cooling capacity*	kW	285	309	332	388	417	450	505	536	602	687	744	810	910	1003	1103	1207
Operating weight	kg	3116	3157	3172	3515	3531	3633	3920	3936	4853	5540	5570	6134	6365	7354	7918	8124
Refrigerant charge		HFC-134a															
Circuit A/B	kg	55/55	58/50	54/53	55/53	60/57	63/60	75/69	75/75	80/80	130/85	130/85	155/98	170/104	162/150	162/165	175/175
Oil		Polyolester oil CARRIER SPEC: PP 47-32															
Circuit A/B	l	20/20	20/20	20/20	20/20	20/20	20/20	20/20	20/20	20/20	40/20	40/20	40/20	40/20	40/40	40/40	40/40
Compressors		Hermetic twin-screw Power ³															
Circ.A, nom. size per compressor**		46	46	56	56	66	66	80	80	80+	66/56	80/66	80/80	80+/80+	80/80	80/80	80+/80+
Circ.B, nom. size per compressor**		39	46	46	56	56	66	66	80	80+	80	80	80	80+	66/66	80/802	80+/80+
Control type		PRO-DIALOG Plus control															
Number of capacity steps		6	6	6	6	6	6	6	6	6	8	8	8	8	10	10	10
Minimum capacity	%	19	21	19	21	19	21	19	21	21	16	14	14	14	9	10	10
Evaporator		Shell and tube type, with internally finned copper tubes															
Net water volume	l	65	73	73	87	87	101	91	91	109	140	140	165	181	203	229	229
Water connections		Factory-supplied flat flange, to be welded on site															
Inlet and outlet	in.	4	4	4	5	5	5	5	5	6	6	6	6	6	8	8	8
Drain and vent (NPT)	in.	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Maximum water-side operating pressure	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Condensers		Copper tubes and aluminium fins															
Fans		Axial FLYING BIRD 2 fan with rotating shroud															
Quantity		4	4	4	6	6	6	8	8	8	10	10	12	12	14	16	16
Speed	r/s	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
Total air flow	l/s	21110	21110	21110	31660	31660	31660	42220	42220	42220	52770	52770	63330	63330	73880	84440	84440

* Standardised Eurovent conditions: evaporator entering/leaving water temperatures = 12°C/7°C, outside air temperature = 35°C

Net cooling capacity: Gross cooling capacity minus the water pump heat against the internal evaporator pressure drop.

** The compressor size corresponds to the nominal capacity in tons (1 ton = 3.517 kW).

8 - ELECTRICAL DATA 30GX

30GX		082	092	102	112	122	132	152	162	182	207	227	247	267	298	328	358
Power circuit		The control circuit is supplied via the factory-installed transformer															
Nominal power supply	V-ph-Hz	400-3-50															
Voltage range	V	360-440															
Control circuit supply		The control circuit is supplied via the factory-installed transformer															
Nominal power input*	kW	98	109	123	133	150	166	179	196	214	246	281	292	332	364	394	449
Nominal current drawn *	A	180	200	223	256	273	290	326	352	388	449	492	528	582	642	704	776
Maximum power input**	kW	127	141	154	175	191	207	234	253	286	319	355	380	429	462	506	572
Circuit A	kW	-	-	-	-	-	-	-	-	-	193	228	253	286	253	253	286
Circuit B	kW	-	-	-	-	-	-	-	-	-	127	127	127	143	209	253	286
Cosine phi, unit at full load		0.85	0.85	0.85	0.85	0.85	0.85	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Maximum current drawn (Un - 10%)***	A	237	262	287	323	353	383	429	464	524	585	650	696	786	847	928	1048
Circuit A	A	-	-	-	-	-	-	-	-	-	353	418	464	524	464	464	524
Circuit B	A	-	-	-	-	-	-	-	-	-	232	232	232	262	383	464	524
Maximum current drawn (Un)***	A	217	240	263	297	324	351	394	426	480	537	596	639	721	777	852	961
Circuit A	A	-	-	-	-	-	-	-	-	-	324	383	426	480	426	426	480
Circuit B	A	-	-	-	-	-	-	-	-	-	213	213	213	240	351	426	480
Max. starting current, standard unit**** (Un)	A	334	357	401	435	468	495	590	622	662	1338	1631	1674	1767	1812	1887	2008
Circuit A***	A	-	-	-	-	-	-	-	-	-	1125	1418	1461	1527	1461	1461	1527
Circuit B***	A	-	-	-	-	-	-	-	-	-	1248	1248	1248	1287	1152	1461	1527
Max. starting current/max. current draw ratio, unit		1.54	1.49	1.53	1.47	1.44	1.41	1.50	1.46	1.38	2.49	2.74	2.62	2.45	2.33	2.22	2.09
Max. starting current/max. current draw ratio, circuit A		-	-	-	-	-	-	-	-	-	3.47	3.70	3.43	3.18	3.43	3.43	3.18
Max. starting current/max. current draw ratio, circuit B		-	-	-	-	-	-	-	-	-	5.86	5.86	5.86	5.36	3.28	3.43	3.18
Max. starting current - reduced current start**** (Un)	A	std.	std.	std.	std.	std.	std.	std.	std.	std.	878	955	998	1102	1136	1211	1343
Circuit A	A	std.	std.	std.	std.	std.	std.	std.	std.	std.	665	742	785	862	785	785	862
Circuit B	A	std.	std.	std.	std.	std.	std.	std.	std.	std.	572	572	572	622	692	785	862
Max. starting current - red. current start/max. current draw ratio, unit		std.	std.	std.	std.	std.	std.	std.	std.	std.	1.64	1.60	1.56	1.53	1.46	1.42	1.40
Circuit A		std.	std.	std.	std.	std.	std.	std.	std.	std.	2.05	1.94	1.84	1.79	1.84	1.84	1.79
Circuit B		std.	std.	std.	std.	std.	std.	std.	std.	std.	2.69	2.69	2.69	2.39	1.97	1.84	1.79
Three-phase short-circuit holding current	kA	25	25	25	25	25	25	25	25	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Circuit A	kA	-	-	-	-	-	-	-	-	-	25	25	25	25	25	25	25
Circuit B	kA	-	-	-	-	-	-	-	-	-	25	25	25	25	25	25	25
Customer standby capacity, unit or circuit A, for evaporator water pump connections †	kW	4	4	4	5.5	5.5	5.5	7.5	7.5	7.5	7.5	9	9	9	15	15	15

* Standard Eurovent conditions: Evaporator entering/leaving water temperature 12°C and 7°C. Outdoor air temperature 35°C.

** Power input, compressor and fan, at unit operating limits (evaporator water entering/leaving temperature = 15°C/10°C, outdoor air temperature = 46°C) and a nominal voltage of 400 V (data given on the unit name plate).

*** Maximum unit operating current at maximum unit power input.

**** Maximum instantaneous starting current (maximum operating current of the smallest compressor(s) + fan current + locked rotor current or reduced starting current of the largest compressor).

† Current and power inputs not included in the values above

N/A Not available