

Model number nomenclature



AQUASNAP® CHILLER MODEL NUMBER DESIGNATION

30RA N 040 - - - 6 1 1 K A
3 0 R A N 0 1 0 - - - 6 1 1 - -

38RA – Air-Cooled AquaSnap Chiller

Compressor Start Option
N – Standard Across-the-Line Start

Unit Sizes
 010 025 045
 015 030 050
 018 035 055
 022 **040**

Chilled Fluid Pump Options
 – – No pump installed
A – Single Pump, 1.5 HP
B – Single Pump, 2 HP
C – Single Pump, 2 HP High Head
D – Single Pump, 3 HP
E – Single Pump, 5 HP
F – Dual Pump, 1.5 HP
G – Dual Pump, 2 HP
H – Dual Pump, 2 HP High Head
J – Dual Pump, 3 HP
K – Dual Pump, 5 HP

Display, Energy Management, GFI Option
 – – Standard Scrolling Marquee (SM) Display
E – SM + EMM
S – SM + EMM + GFI Convenience Outlet
 (120 Volt, 4 Amp) [1,4,5,6 Voltages Only]

Condenser Coil Options
 – – Standard Copper Tube/Aluminum Fin
C – Copper Tube/Copper Fin, Copper Tube Sheet/Mylar
 Coil Separator
E – Copper Tube/Aluminum Fin with E-Coat
F – Copper Tube/Copper Fin, Copper Tube Sheet,
 Mylar Separator with E-Coat
K – Copper Tube/Aluminum Fin Precoated

Voltage
 1 – 575-3-60
 2 – 380-3-60
 4 – 230-3-60
 5 – 208/230-3-60
6 – 460-3-60

Factory-Installed Options (FIOP)

Packaging
1 – Standard Domestic (Coil Cover and Bottom Skid)
3 – Standard Export with Coil Cover, Top and Bottom Skid & Shipping Bag
4 – Full Export Crate
5 – Option #1 with Factory-Installed Coil Grilles
7 – Option #3 with Factory-Installed Coil Grilles
8 – Option #4 with Factory-Installed Coil Grilles

Series – 1

LEGEND

EMM – Energy Management Module
GFI – Ground Fault Interrupting



Quality Assurance

Certified to ISO 9001: 2000

ARI* capacity ratings

UNIT 30RA	CAPACITY		COMPRESSOR POWER INPUT (kW)	FAN POWER (kW)	TOTAL POWER (kW)	FULL LOAD		IPLV		COOLER FLOW RATE		COOLER WATER PRESSURE DROP	
	Tons	kW				EER	COP	EER	COP	GPM	L/s	Ft wg	kPa
010	9.6	33.7	9.7	1.9	11.7	9.8	2.9	12.9	3.8	22.9	1.4	5.6	16.7
015	13.7	48.1	14.8	1.9	16.8	9.8	2.9	12.8	3.7	33.0	2.1	6.8	20.3
018	15.9	55.9	18.0	1.9	20.0	9.6	2.8	13.4	3.9	38.2	2.4	7.5	22.4
022	21.1	74.2	23.4	1.7	25.2	10.0	2.9	14.1	4.1	50.6	3.2	9.7	29.0
025	23.8	83.6	27.9	1.7	29.7	9.6	2.8	13.9	4.1	57.1	3.6	10.7	32.0
030	27.2	95.6	31.7	1.7	33.5	9.8	2.9	14.0	4.1	65.3	4.1	12.6	37.7
035	34.8	122.3	37.8	3.6	41.5	10.1	2.9	14.5	4.2	83.4	5.3	7.7	23.0
040	37.7	132.5	42.8	3.6	46.6	9.7	2.8	13.6	4.0	90.6	5.7	8.2	24.5
045	43.1	151.5	47.5	3.4	51.1	10.1	3.0	15.2	4.4	103.4	6.5	11.2	33.5
050	47.4	166.6	55.8	3.4	59.4	9.6	2.8	14.1	4.1	113.8	7.2	12.1	36.2
055	54.3	190.8	63.4	3.4	67.0	9.7	2.8	14.1	4.1	130.4	8.2	14.3	42.7

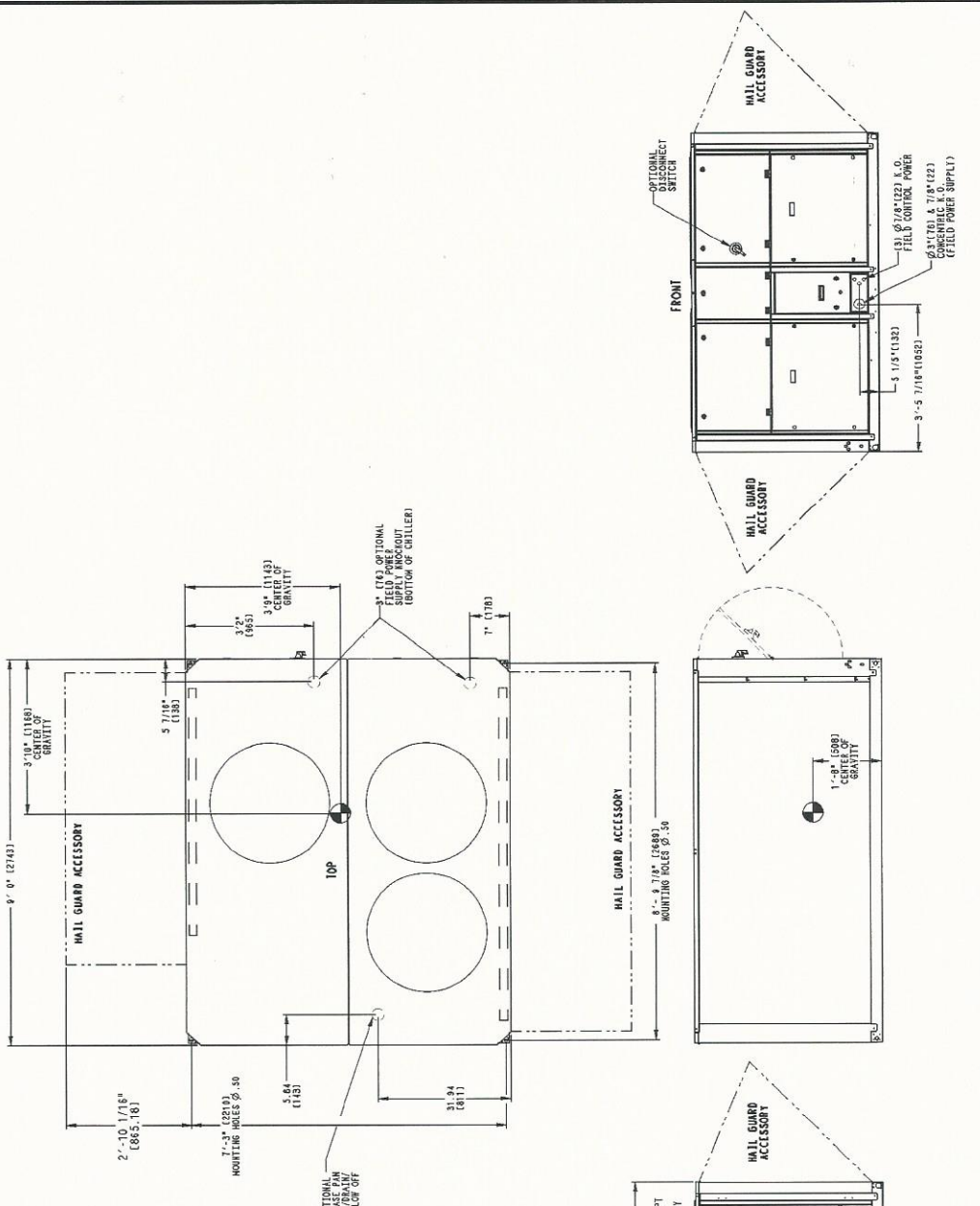
LEGEND

COP – Coefficient of Performance
EER – Energy Efficiency Ratio
IPLV – Integrated Part Load Value

* Air Conditioning and Refrigeration Institute.
 NOTE: Based on ARI-550/590 standard rating conditions. Ratings are for standard chillers only. Ratings do not include options.



Dimensions — 30RA035,040



- NOTES:**
- Unit must have clearances for airflow as follows:
 - TOP — Do not restrict in any way
 - COIL SIDE — 3 1/2 ft [1067 mm] from solid surface
 - OTHER SIDE AND ENDS — 3 ft [914 mm] from solid surface (for service access)
 - Coil side clearance with accessory hall guard installed is 3 ft [914 mm] to outside edge of hall guard top panel
 - Coil side clearance for multiple chiller installation is 6 ft [1981 mm]
 - Strainer is factory installed in entering fluid piping. Flow switch is factory installed in the leaving fluid piping.
 - Dimensions in [] are in mm.

Ø1 3/4" (44.1) OPTIONAL FIELD PIPE OUTLET (BOTTOM OF CHILLER)

Physical data (cont)



UNIT WEIGHTS

STD UNITS

30RA SIZE	POUNDS — ALUMINUM				
	A	B	C	D	Total Weight
010	182	210	255	299	946
015	197	245	291	335	1068
018	206	268	377	358	1209
022	336	451	381	355	1523
025	350	464	395	380	1589
030	378	518	409	400	1705
035	748	642	604	850	2844
040	763	653	616	882	2914
045	860	709	746	903	3218
050	876	721	770	946	3313
055	977	753	831	954	3515

30RA SIZE	POUNDS — COPPER				
	A	B	C	D	Total Weight
010	194	231	274	326	1025
015	216	280	321	382	1199
018	220	303	411	404	1338
022	364	521	418	410	1713
025	380	532	432	436	1780
030	409	606	441	474	1930
035	854	721	691	958	3224
040	869	731	702	992	3294
045	965	790	833	1011	3599
050	978	805	859	1051	3693
055	1096	857	931	1082	3966

30RA SIZE	KILOGRAMS — ALUMINUM				
	A	B	C	D	Total Weight
010	83	95	116	136	430
015	89	111	132	152	484
018	93	122	171	162	548
022	152	205	173	161	691
025	159	210	179	172	720
030	171	235	186	181	773
035	339	291	274	386	1290
040	346	296	279	400	1321
045	390	322	338	410	1460
050	397	327	349	429	1502
055	443	342	377	433	1595

30RA SIZE	KILOGRAMS — COPPER				
	A	B	C	D	Total Weight
010	88	105	124	148	465
015	98	127	146	173	544
018	100	137	186	183	606
022	165	236	190	186	777
025	172	241	196	198	807
030	186	275	200	215	876
035	387	327	313	435	1462
040	394	332	318	450	1494
045	438	358	378	459	1633
050	444	365	390	477	1676
055	497	389	422	491	1799

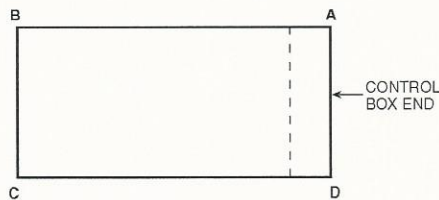
SINGLE PUMP UNITS

30RA SIZE	POUNDS — ALUMINUM				
	A	B	C	D	Total Weight
010	209	241	293	343	1086
015	223	277	329	379	1208
018	230	299	421	399	1349
022	367	492	416	388	1663
025	381	505	430	413	1729
030	409	561	443	433	1845
035	801	687	646	910	3044
040	815	698	658	943	3114
045	913	753	792	959	3418
050	929	765	816	1003	3513
055	1033	796	878	1008	3715

30RA SIZE	POUNDS — COPPER				
	A	B	C	D	Total Weight
010	221	262	312	370	1165
015	242	312	359	426	1339
018	244	334	455	445	1478
022	395	562	453	443	1853
025	411	573	467	469	1920
030	440	649	475	507	2070
035	907	766	733	1018	3424
040	921	776	744	1053	3494
045	1018	834	879	1067	3799
050	1031	849	905	1108	3893
055	1152	900	978	1136	4166

30RA SIZE	KILOGRAMS — ALUMINUM				
	A	B	C	D	Total Weight
010	95	109	133	156	493
015	101	126	149	172	548
018	104	136	191	181	612
022	166	224	189	176	755
025	173	229	195	187	784
030	185	254	201	196	836
035	363	311	293	413	1380
040	370	316	298	427	1411
045	414	342	359	435	1550
050	421	347	370	455	1593
055	468	361	398	458	1685

30RA SIZE	KILOGRAMS — COPPER				
	A	B	C	D	Total Weight
010	108	129	152	181	570
015	117	151	174	206	648
018	117	161	218	215	711
022	187	268	215	211	881
025	194	272	221	224	911
030	208	308	224	241	981
035	422	356	341	474	1593
040	429	361	346	490	1626
045	473	387	408	496	1764
050	479	394	421	514	1808
055	533	417	453	527	1930



Physical data



ENGLISH

UNIT 30RA	010	015	018	022	025	030	035	040	045	050	055
REFRIGERANT TYPE	R-22, TXV Controlled System										
Refrigerant Charge (lb) Ckt A/Ckt B	16/—	24/—	31/—	40/—	45/—	55/—	44/30	45/30	44/44	45/45	55/55
COMPRESSORS	Scroll, Hermetic										
Quantity	1	1	2	2	2	2	3	3	4	4	4
Speed (Rpm)	3500										
(Qty) Ckt A	(1) SM125	(1) SM185	(2) SM110	(1) SM115, (1) SM160	(2) SM160	(2) SM185	(1) SM115, (1) SM160	(2) SM160	(1) SM125, (1) SM160	(2) SM160	(2) SM185
(Qty) Ckt B	—	—	—	—	—	—	(1) SM185	(1) SM185	(1) SM125, (1) SM160	(2) SM160	(2) SM185
Oil Charge (Compressor/Pt)	SM110/5.7, SM115/6.7, SM125/6.7, SM160/7.0, SM185/11.6										
No. Capacity Steps	Standard										
Optional (Maximum)	1	1	2	2	2	2	3	3	4	4	4
Minimum Capacity Step (%)	Standard										
Optional	2	2	3	3	3	3	4	4	5	5	5
Standard	100	100	50	41	50	50	25	32	22	25	25
Optional	69	79	32	27	38	39	16	24	15	19	20
COOLER	Welded, Direct-Expansion Plate Heat Exchanger										
Net Fluid Volume (gal)	1.12	1.61	1.86	2.41	2.84	3.40	6.30	7.00	6.55	7.44	8.56
Maximum Refrigerant Pressure (psig)	450	450	450	450	450	450	450	450	450	450	450
Maximum Water Side Pressure Without Pump(s) (psig)	150	150	150	150	150	150	150	150	150	150	150
Maximum Water Side Pressure With Pump(s) (psig)	150	150	150	150	150	150	150	150	150	150	150
WATER CONNECTIONS (in.)	Inlet and Outlet, FPT										
Inlet and Outlet, FPT	2	2	2	2	2	2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2
Drain (NPT)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
CONDENSER FANS	Standard Low Noise Type										
Fan Speed (Rpm) Standard/Low Noise	1140/570	1140/570	1140/570	—/850	—/850	—/850	—/850	—/850	—/850	—/850	—/850
No. Blades...Diameter (in.) Ckt A/Ckt B	15...30/—	15...30/—	15...30/—	11...30/—	11...30/—	11...30/—	11...30/—	11...30/ 11...30	11...30/ 11...30	11...30/ 11...30	11...30/ 11...30
No. Fans...Total kW	1...1.8	1...1.8	1...1.8	2...2.0	2...2.0	2...2.0	2...2.0 (A), 1...1.8 (B)	2...2.0 (A), 1...1.8 (B)	4...4.0	4...4.0	4...4.0
Total Airflow (Cfm)	10,500	10,500	10,500	13,600	13,600	14,500	21,000	21,000	27,300	27,300	29,000
CONDENSER COILS	Quantity...No. Rows										
Quantity...No. Rows	1...2	1...3	1...3	1...3	1...3	1...3	2...3	2...3	2...3	2...3	2...3
Total Face Area (sq ft)	23	23	23	32	32	40	55	55	64	64	80
HYDRONIC MODULE (Optional)*	Pump(s), Strainer with Blowdown Valve, Expansion Tank, Pressure Taps, Drain and Vent Plugs, Flow Switch, and Balance Valve										
Pump	Single or Dual, Centrifugal Monocell Pump(s), 3500 Rpm										
Expansion Tank Volume (gal)	5.0/2.9										
Total/Acceptance	10.0/5.5										

SI

UNIT 30RA	010	015	018	022	025	030	035	040	045	050	055
REFRIGERANT TYPE	R-22, TXV Controlled System										
Refrigerant Charge (kg) Ckt A/Ckt B	7.3/—	10.9/—	14.1/—	18.2/—	20.5/—	22.7/—	20.0/13.6	20.4/13.6	20.0/20.0	20.4/20.4	25.0/25.0
COMPRESSORS	Scroll, Hermetic										
Quantity	1	1	2	2	2	2	3	3	4	4	4
Speed (r/s)	58.3										
(Qty) Ckt A	(1) SM125	(1) SM185	(2) SM110	(1) SM115, (1) SM160	(2) SM160	(2) SM185	(1) SM115, (1) SM160	(2) SM160	(1) SM125, (1) SM160	(2) SM160	(2) SM185
(Qty) Ckt B	—	—	—	—	—	—	(1) SM185	(1) SM185	(1) SM125, (1) SM160	(2) SM160	(2) SM185
Oil Charge (Compressor/Pt)	SM110/5.7, SM115/6.7, SM125/6.7, SM160/7.0, SM185/11.6										
No. Capacity Steps	Standard										
Optional (Maximum)	1	1	2	2	2	2	3	3	4	4	4
Minimum Capacity Step (%)	Standard										
Optional	2	2	3	3	3	3	4	4	5	5	5
Standard	100	100	50	42	50	50	25	32	22	25	25
Optional	69	79	32	27	38	39	16	24	15	19	20
COOLER	Welded, Direct-Expansion Plate Heat Exchanger										
Net Fluid Volume (L)	4.22	6.08	7.03	9.12	10.75	12.84	23.84	26.49	24.79	28.12	32.34
Maximum Refrigerant Pressure (kPa)	3103	3103	3103	3103	3103	3103	3103	3103	3103	3103	3103
Maximum Water Side Pressure Without Pump(s) (kPa)	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034
Maximum Water Side Pressure With Pump(s) (kPa)	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034	1034
WATER CONNECTIONS (mm)	Inlet and Outlet, FPT										
Inlet and Outlet, FPT	50.8	50.8	50.8	50.8	50.8	50.8	63.5	63.5	63.5	63.5	63.5
Drain (NPT)	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
CONDENSER FANS	Standard Low Noise Type										
Fan Speed (r/s) Standard/Low Noise	19/9.5	19/9.5	19/9.5	—/14.2	—/14.2	—/14.2	—/14.2	—/14.2	—/14.2	—/14.2	—/14.2
No. Blades...Diameter (mm) Ckt A/Ckt B	15...762/—	15...762/—	15...762/—	11...762/—	11...762/—	11...762/—	11...762/ 11...762	11...762/ 11...762	11...762/ 11...762	11...762/ 11...762	11...762/ 11...762
No. Fans...Total kW	1...1.8	1...1.8	1...1.8	2...2.0	2...2.0	2...2.0	2...2.0 (A), 1...1.8 (B)	2...2.0 (A), 1...1.8 (B)	4...4.0	4...4.0	4...4.0
Total Airflow (L/s)	4,955	4,955	4,955	6,419	6,419	6,843	9,595	9,595	12,884	12,884	13,687
CONDENSER COILS	Quantity...No. Rows										
Quantity...No. Rows	1...2	1...3	1...3	1...3	1...3	1...3	2...3	2...3	2...3	2...3	2...3
Total Face Area (sq m)	2.14	2.14	2.14	2.97	2.97	3.72	5.11	5.11	5.95	5.95	7.43
HYDRONIC MODULE (Optional)*	Pump(s), Strainer with Blowdown Valve, Expansion Tank, Pressure Taps, Drain and Vent Plugs, Flow Switch, and Balance Valve										
Pump	Single or Dual, Centrifugal Monocell Pump(s), 58.3 r/s										
Expansion Tank Volume (L)	18.9/11.0										
Total/Acceptance	37.9/20.8										

LEGEND

TXV — Thermostatic Expansion Valve

*Flow switch and strainer are standard on all units, with or without hydronic package.