



# Product Data

MCHX COILS

# AQUASNAP® 30RB060-390 Air-Cooled Chillers

60 to 390 Nominal Tons  
(210 to 1370 kW)

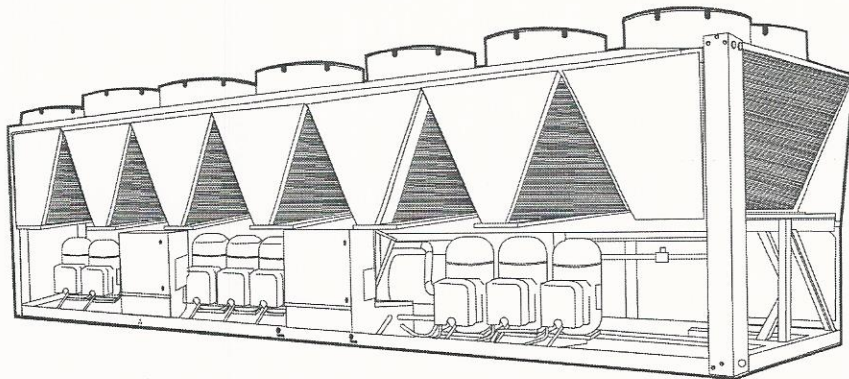
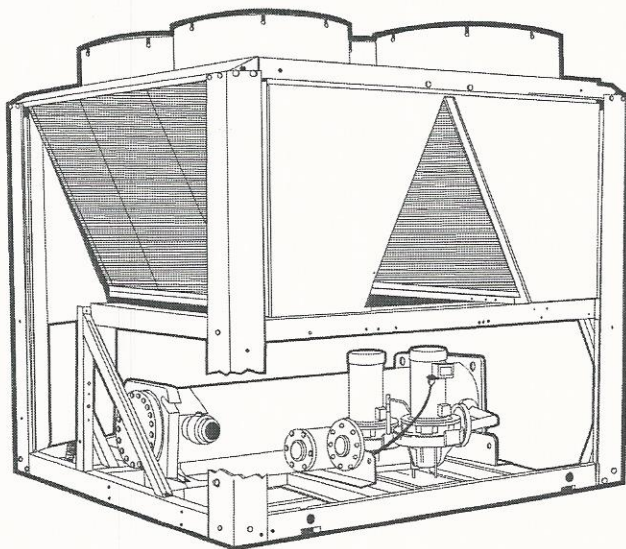
MODEL#: 30RBD12054-LO--3

S/N: 4312078176

YR: 2012 208/230-3-60

120 TON R-410A

# AQUASNAP®



The AquaSnap chiller is an effective all-in-one package that is easy to install and easy to own. AquaSnap chillers cost less to purchase and install, and then operate quietly and efficiently. Value-added features include:

- Rotary scroll compression
- Puron® HFC refrigerant (R-410A)
- Quiet AeroAcoustic™ fan system
- Easy to use ComfortLink™ controls
- Optional full heat reclaim package
- Optional integrated hydronic pump package, available with variable frequency drive (VFD)
- Novation® heat exchanger technology with microchannel coil

## Features/Benefits

**Carrier's superior chiller design provides savings at initial purchase, at installation, and for years afterward.**

### Costs less right from the start

Carrier's AquaSnap chillers feature a compact, all-in-one package design that installs quickly and easily on the ground or the rooftop. The optional pump and hydronic components are already built in; this costs less than buying and installing the components individually. The chiller's fully integrated and pre-assembled hydronic system installs in minutes. No other chiller in this class installs so easily and inexpensively. The preassembled and integrated hydronic module (available with VFD) utilizes top-quality components and pumps to ensure years of reliable operation. The AquaSnap unit's high efficiency keeps operating costs down.



SEISMICOMPLIANT™

\* Meets IBC 2006, ASCE-7-05, CBC 2007, and OSHPD seismic requirements.

# → Model number nomenclature



30RB D 120 5 4 - L 0 - - 3

30RB – Air-Cooled AquaSnap® Chiller

### Design Series

#### Nominal Sizes

060	110	170	275	360*
070	120	190	300	390*
080	130	210	315*	
090	150	225	330*	
100	160	250	345*	

#### Voltage

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

#### Condenser Coil Option

- Aluminum Fin/Copper Tube
- 0 – Copper Fin/Copper Tube
- 1 – Aluminum Pre-Coat Fin/Copper Tube
- 2 – Aluminum E-Coat Fin/Copper Tube
- 3 – Copper E-Coat Fin/Copper Tube
- 4 – Microchannel (MCHX)
- 5 – E-Coat, Microchannel (MCHX)

#### Hydronics Option

- No Pump Installed
- 0 – Single Pump, 3 HP
- 1 – Single Pump, 5 HP
- 2 – Single Pump, 7.5 HP
- 3 – Single Pump, 10 HP
- 4 – Single Pump, 15 HP
- 6 – Dual Pump, 3 HP
- 7 – Dual Pump, 5 HP
- 8 – Dual Pump, 7.5 HP, Low Head
- 9 – Dual Pump, 7.5 HP, High Head
- B – Dual Pump, 10 HP
- C – Dual Pump, 15 HP
- F – Single Pump, 3 HP with VFD
- G – Single Pump, 5 HP with VFD
- H – Single Pump, 7.5 HP with VFD
- J – Single Pump, 10 HP with VFD
- K – Single Pump, 15 HP with VFD
- M – Dual Pump, 3 HP with VFD
- N – Dual Pump, 5 HP with VFD
- P – Dual Pump, 7.5 HP, Low Head with VFD
- T – Dual Pump, 7.5 HP, High Head with VFD
- Q – Dual Pump, 10 HP with VFD
- R – Dual Pump, 15 HP with VFD
- Z – Special order designation

#### Cooler / Brine Options

- Integral Cooler, CRN (Canada)
- 0 – Integral Cooler, Cooler Heater, CRN (Canada)
- 4 – Integral Cooler, Microchannel (MCHX), CRN (Canada)
- 5 – Integral Cooler, Cooler Heater, Microchannel (MCHX), CRN (Canada)
- 9 – Integral Cooler, Med. Temperature Brine, CRN (Canada)
- B – Integral Cooler, Cooler Heater, Med. Temperature Brine, CRN (Canada)
- D – Integral Cooler, Med. Temperature Brine, Microchannel (MCHX), CRN (Canada)
- F – Integral Cooler, Cooler Heater, Med. Temperature Brine, Microchannel (MCHX), CRN (Canada)
- G – Integral Cooler, no CRN
- H – Integral Cooler, Cooler Heater, no CRN
- K – Integral Cooler, Microchannel (MCHX), no CRN
- L – Integral Cooler, Cooler Heater, Microchannel (MCHX), no CRN
- M – Integral Cooler, Med. Temperature Brine, no CRN
- N – Integral Cooler, Cooler Heater, Med. Temperature Brine, no CRN
- P – Integral Cooler, Med. Temperature Brine, Microchannel (MCHX), no CRN
- Q – Integral Cooler, Cooler Heater, Med. Temperature Brine, Microchannel (MCHX), no CRN
- R – Integral Cooler, Microchannel (MCHX), Heat Recovery, no CRN
- S – Integral Cooler, Cooler Heater, Microchannel (MCHX), Heat Recovery, no CRN
- T – Integral Cooler, Microchannel (MCHX), Heat Recovery, CRN (Canada)
- V – Integral Cooler, Cooler Heater, Microchannel (MCHX), Heat Recovery, CRN (Canada)

#### LEGEND

CRN	—	Canadian Registration Number
EMM	—	Energy Management Module
GFI-CO	—	Ground Fault Interrupting Convenience Outlet
LON	—	Local Operating Network
SCCR	—	Short Circuit Current Rating
VFD	—	Variable Frequency Device
XL	—	Across-the-Line Start

\*Refer to unit sizes and modular combinations on page 5.  
 †Sponsored by ASHRAE (American Society of Heating, Refrigerating, and Air Conditioning Engineers).

NOTE: A "Z" in position 11 indicates a special order machine. Digits following do not correspond to tables.

#### Packaging/Security Options

- L – No Packaging
- 0 – Skid
- 1 – Skid, Top Crate, Bag
- 3 – Coil Trim Panels
- 4 – Skid, Coil Trim Panels
- 5 – Skid, Top Crate, Bag, Coil Trim Panels
- 7 – Coil Trim Panels, Upper and Lower Grilles
- 8 – Skid, Coil Trim Panels, Upper and Lower Grilles
- 9 – Skid, Top Crate, Bag, Coil Trim Panels, Upper and Lower Grilles
- C – Trim Panels, Upper and Lower Grilles, Upper Hail Guards
- D – Skid, Coil Trim Panels, Upper Grilles and Lower Grilles, Upper Hail Guards
- F – Skid, Top Crate, Bag, Trim Panels, Upper and Lower Grilles, Upper Hail Guards
- H – Skid, Full End Covers
- J – Skid, Top Crate, Bag, Full End Covers
- K – Full End Covers

#### Controls/Communication Option

- None
- 0 – EMM
- 1 – Remote Service Port, GFI-CO
- 2 – EMM, Remote Service Port, GFI-CO
- 3 – BACnet Communication
- 4 – BACnet Communication, EMM
- 5 – BACnet Communication, Remote Service Port, GFI-CO
- 6 – BACnet Communication, EMM, Remote Service Port, GFI-CO
- 7 – BACnet Translator
- 8 – BACnet Translator, EMM
- 9 – BACnet Translator, Remote Service Port, GFI-CO
- B – BACnet Translator, EMM, Remote Service Port, GFI-CO
- H – LON Translator
- J – LON Translator, EMM
- K – LON Translator, Remote Service Port, GFI-CO
- L – LON Translator, EMM, Remote Service Port, GFI-CO

#### Electrical/Low Sound Options

- Single Point Power Connections, XL, Terminal Block
- 0 – Single Point Power Connections, XL, Terminal Block, High SCCR
- 3 – Dual Point Power Connections, XL, Terminal Block
- 4 – Dual Point Power Connections, XL, Terminal Block, High SCCR
- 7 – Single Point Power Connections, XL, Non-Fused Disconnect
- 8 – Single Point Power, XL, Non-Fused Disconnect, High SCCR
- C – Dual Point Power, XL, Non-Fused Disconnect
- D – Dual Point Power, XL, Non-Fused Disconnect, High SCCR
- G – Single Point Power Connections, XL, Terminal Block, Cmpr Blankets
- H – Single Point Power Connections, XL, Terminal Block, Cmpr Blankets, High SCCR
- J – Dual Point Power Connections, XL, Terminal Block, Cmpr Blankets
- K – Dual Point Power Connections, XL, Terminal Block, Cmpr Blankets, High SCCR
- L – Single Point Power Connections, XL, Non-Fused Disconnect, Cmpr Blankets
- M – Single Point Power Connections, XL, Non-Fused Disconnect, Cmpr Blankets, High SCCR
- N – Dual Point Power, XL, Non-Fused Disconnect, Cmpr Blankets
- P – Dual Point Power, XL, Non-Fused Disconnect, Cmpr Blankets, High SCCR
- Q – Single Point Power Connections, XL, Terminal Block, Cmpr Blankets, Cmpr Enclosures
- R – Single Point Power Connections, XL, Terminal Block, Cmpr Blankets, Cmpr Enclosures, High SCCR
- S – Dual Point Power Connections, XL, Terminal Block, Cmpr Blankets, Cmpr Enclosures
- T – Dual Point Power Connections, XL, Terminal Block, Cmpr Blankets, Cmpr Enclosures, High SCCR
- V – Single Point Power Connections, XL, Non-Fused Disconnect, Cmpr Blankets, Cmpr Enclosures
- W – Single Point Power Connections, XL, Non-Fused Disconnect, Cmpr Blankets, Cmpr Enclosures, High SCCR
- X – Dual Point Power, XL, Non-Fused Disconnect, Cmpr Blankets, Cmpr Enclosures
- Y – Dual Point Power, XL, Non-Fused Disconnect, Cmpr Blankets, Cmpr Enclosures, High SCCR

#### Refrigeration Circuit Option

- No Suction Line Insulation
- 0 – Suction Insulation
- 1 – Suction Service Valves
- 2 – Low Ambient Head Pressure Control Operation
- 3 – Suction Insulation, Suction Service Valves
- 4 – Suction Insulation, Low Ambient Head Pressure Control Operation
- 5 – Suction Service Valves, Low Ambient Head Pressure Control Operation
- 6 – Suction Insulation, Service Valves, Low Ambient Head Pressure Control Operation
- 7 – Minimum Load Control
- 8 – Suction Insulation, Minimum Load Control Operation
- 9 – Suction Service Valves, Minimum Load Control Operation
- B – Low Ambient Operation, Minimum Load Control Operation
- C – Suction Insulation, Suction Service Valves, Minimum Load Control Operation
- D – Suction Insulation, Low Ambient Head Pressure Control Operation, Minimum Load Control Operation
- F – Suction Service Valves, Low Ambient Head Pressure Control Operation, Minimum Load Control Operation
- G – Suction Insulation, Suction Service Valves, Low Ambient Head Pressure Control Operation, Minimum Load Control Operation

## Quality Assurance

Certified to ISO 9001



### UNIT SIZES AND MODULAR COMBINATIONS

UNIT 30RB	NOMINAL TONS	NOMINAL kW	MODULE A	MODULE B
060	60	210	—	—
070	70	245	—	—
080	80	280	—	—
090	90	315	—	—
100	100	350	—	—
110	110	385	—	—
120	120	421	—	—
130	130	456	—	—
150	150	526	—	—
160	160	562	—	—
170	170	597	—	—

UNIT 30RB	NOMINAL TONS	NOMINAL kW	MODULE A	MODULE B
190	190	667	—	—
210	210	737	—	—
225	225	791	—	—
250	250	879	—	—
275	275	967	—	—
300	300	1055	—	—
315	315	1107	160	160
330	330	1160	170	160
345	345	1213	170	170
360	360	1266	190	170
390	390	1370	190	190

## AHRI\* capacity ratings

30RB UNIT SIZE	CAPACITY		COMP	FAN	TOTAL POWER	FULL LOAD		IPLV		COOLER FLOW RATE		COOLER PD	
	Tons	kW	kW	kW	kW	EER	COP	EER	COP	GPM	L/s	ft wg	kPa
060	57.1	200.8	60.1	10.3	70.4	9.7	2.9	13.1	3.9	136.5	8.6	8.9	26.6
070	66.5	233.9	73.1	10.3	83.4	9.6	2.8	13.4	3.9	159.0	10.0	11.7	35.0
080	76.0	267.3	85.0	10.3	95.3	9.6	2.8	14.2	4.2	181.7	11.5	7.0	20.9
090	86.4	303.8	91.1	15.5	106.6	9.7	2.9	13.4	3.9	206.7	13.0	8.9	26.6
100	95.7	336.5	104.0	15.5	119.5	9.6	2.8	13.6	4.0	229.0	14.4	10.7	32.0
110	105.5	371.0	116.6	15.5	132.1	9.6	2.8	13.7	4.0	252.1	15.9	8.8	26.3
120	118.4	416.4	129.5	18.1	147.6	9.6	2.8	13.7	4.0	283.2	17.9	10.9	32.6
130	127.3	447.7	137.5	20.6	158.1	9.7	2.8	13.6	4.0	304.4	19.2	12.5	37.4
150	144.4	507.8	158.4	20.6	179.0	9.7	2.8	13.8	4.0	345.3	21.8	7.5	22.4
160	153.0	538.0	162.8	25.8	188.6	9.7	2.9	13.4	3.9	366.0	23.1	8.4	25.1
170	166.4	585.5	182.4	25.8	208.2	9.6	2.8	13.5	4.0	398.1	25.1	9.8	29.3
190	188.5	662.9	205.6	31.0	236.6	9.6	2.8	13.4	3.9	450.9	28.4	12.4	37.1
210	201.9	710.0	217.6	31.0	248.6	9.7	2.9	13.7	4.0	482.7	30.5	9.9	29.6
225	214.2	753.3	236.8	31.0	267.8	9.6	2.8	13.8	4.0	512.3	32.3	11.2	33.5
250	237.8	836.2	261.5	36.1	297.6	9.6	2.8	13.6	4.0	568.8	35.9	13.6	40.7
275	260.2	915.0	284.0	41.3	325.3	9.6	2.8	13.7	4.0	622.4	39.3	16.2	48.4
300	282.6	993.8	308.1	46.5	354.6	9.6	2.8	13.5	4.0	675.6	42.6	19.0	56.8
315	306.0	1076.1	325.7	51.6	377.3	9.7	2.9	13.4	3.9	731.9	46.2	8.4	25.1
330	319.4	1123.6	345.2	51.6	396.8	9.6	2.8	13.5	4.0	764.1	48.2	9.8	29.3
345	332.9	1170.7	364.8	51.6	416.4	9.6	2.8	13.5	4.0	796.3	50.2	9.8	29.3
360	355.0	1248.4	388.0	56.8	444.8	9.6	2.8	13.5	4.0	849.0	53.6	12.4	37.1
390	377.0	1325.8	411.1	62.0	473.1	9.6	2.8	13.4	3.9	901.7	56.9	12.4	37.1

#### LEGEND

- COP** — Coefficient of Performance
- EER** — Energy Efficiency Ratios
- IPLV** — Integrated Part Load Value
- PD** — Pressure Drop

\*Air Conditioning, Heating, and Refrigeration Institute.

NOTE: Based on AHRI 550/590 standard rating conditions. Ratings are for standard chillers only. Ratings do not include options.



# Physical data



## 30RB060-300 — ENGLISH

UNIT 30RB	060	070	080	090	100	110	120	130	150
<b>OPERATING WEIGHT (lb)*</b>									
Al-Cu Condenser Coil	4,111	4,317	4,600	5,932	6,155	6,519	7,690	8,045	9,174
Cu-Cu Condenser Coil	4,593	4,799	5,082	6,656	6,879	7,243	8,534	9,010	10,139
MCHX Condenser Coil	3,783	3,978	4,267	5,449	5,663	6,027	7,119	7,402	8,517
<b>REFRIGERANT TYPE</b>	R-410A, EXV Controlled System								
Refrigerant Charge (lb)									
Std Coil, Ckt A/Ckt B/Ckt C	89.5/40.5/—	112/40.5/—	68.5/68.5/—	94/76/—	94/96/—	94/106/—	94/133/—	133/106/—	133/133/—
MCHX Coil, Ckt A/Ckt B/Ckt C	40/20/—	40/20/—	33/33/—	40/40/—	40/42/—	40/53/—	43/57/—	54/43/—	56/62/—
<b>COMPRESSORS</b>	Scroll, Hermetic								
Quantity	3	3	4	4	4	5	5	6	6
Speed (rpm)	3500								
(Qty) Compressor Model Number Ckt A	(2) SH240	(2) SH300	(2) SH240	(2) SH300	(2) SH300	(2) SH300	(2) SH300	(3) SH300	(3) SH300
(Qty) Compressor Model Number Ckt B	(1) SH240	(1) SH240	(2) SH240	(2) SH240	(2) SH300	(3) SH240	(3) SH300	(3) SH240	(3) SH300
(Qty) Compressor Model Number Ckt C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Oil Charge (Pt, Ckt A/Ckt B/Ckt C)	26.2/13.1/—	26.2/13.1/—	26.2/26.2/—	26.2/26.2/—	26.2/26.2/—	26.2/39.4/—	26.2/39.4/—	39.4/39.4/—	39.4/39.4/—
No. Capacity Steps									
Standard	3	3	4	4	4	5	5	6	6
Optional (Maximum)	4	4	5	5	5	6	6	7	7
Minimum Capacity Step (%)									
Standard	33	29	25	22	25	18	20	15	17
Optional	22	19	16	14	18	12	14	10	12
Capacity (%)									
Ckt A	67	71	50	56	50	45	40	56	50
Ckt B	33	29	50	44	50	55	60	44	50
Ckt C	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>COOLER</b>	Direct Expansion, Shell and Tube Type								
Weight (empty, lb)	715	715	856	856	856	970	970	970	1518
Net Fluid Volume (gal)	28.2	28.2	31.3	31.3	31.3	45.8	45.8	45.8	73.5
Maximum Refrigerant Pressure (psig)	445	445	445	445	445	445	445	445	445
Maximum Water-Side Pressure without Pumps (psig)	300	300	300	300	300	300	300	300	300
Maximum Water-Side Pressure with Pumps (psig)	150	150	150	150	150	150	150	150	150
<b>COOLER WATER CONNECTIONS (in.)</b>									
Inlet and Outlet, Victaulic	4	4	4	4	4	6	6	6	6
Drain (NPT)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
<b>CONDENSER FANS</b>	Shrouded Axial Type, Vertical Discharge								
Standard Low Noise Type									
Fan Speed (rpm) Standard	1140	1140	1140	1140	1140	1140	1140	1140	1140
No. Blades...Diameter (in.)	9...30	9...30	9...30	9...30	9...30	9...30	9...30	9...30	9...30
No. Fans (Ckt A/Ckt B/Ckt C)	3/1/—	3/1/—	2/2/—	3/3/—	3/3/—	3/3/—	3/4/—	4/4/—	4/4/—
Total Airflow (cfm)	49,600	49,600	49,600	74,400	74,400	74,400	86,800	99,200	99,200
<b>CONDENSER COILS</b>									
No. Coils (Ckt A/Ckt B/Ckt C)	3/1/—	3/1/—	2/2/—	3/3/—	3/3/—	3/3/—	3/4/—	4/4/—	4/4/—
Total Face Area (sq ft)	94	94	94	141	141	141	164	188	188
Max Working Refrigerant Pressure (psig)	656	656	656	656	656	656	656	656	656
<b>OPTIONAL HEAT RECOVERY CONDENSER</b>	Flooded, Shell and Tube Type								
Weight (lb) (empty)	753	753	753	872	872	872	1236	1236	1236
Net Fluid Volume (gal)	8.0	8.0	8.0	10.0	10.0	10.0	15.1	15.1	15.1
Maximum Refrigerant Pressure (psig)	656	656	656	656	656	656	656	656	656
Maximum Water-Side Pressure (psig)	300	300	300	300	300	300	300	300	300
Water Connections (in.)									
Inlet and Outlet, Victaulic	3	3	3	3	3	3	5	5	5
Drain (NPT)	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
<b>HYDRONIC MODULE (Optional)</b>	Pump(s) with pressure/temperature taps and combination valve. Single or Dual, 1800 or 3600 rpm								
Pump									
<b>CHASSIS DIMENSIONS (ft-in.)</b>									
Length	7-11			11-10			15-9		
Width				7-4 <sup>25</sup> / <sub>32</sub>					
Height				7-6 <sup>7</sup> / <sub>16</sub>					

### LEGEND

- Al-Cu — Aluminum Fin/Copper Tube Condenser Coil
- Cu-Cu — Copper Fin/Copper Tube Condenser Coil
- EXV — Electronic Expansion Valve
- MCHX — Microchannel Condenser Coil
- N/A — Not Applicable

\*Operating weight does not include any options.

