



Product Catalog

Model #: CGAM 052F 2N02 AXD2 A1A1 A1AX XA1C 1AXX XXXX XAXA 3A1D 1XXL XX
Serial #: U16B53757

Air-Cooled Scroll Chillers **Model CGAM — Made in USA** 20 to 130 Nominal Tons (60 Hz and 50 Hz)

Year: 2016
Size: 52 Tons



Shipping Weight: 3,761 lbs
Operating Weight: 3,806 lbs

L: 9' 6"
W: 7' 5"
H: 7' 1"



CGAM 052 F 2 N0 2 A X D 2 A 1 A 1 A 1 A X X A 1 C 1 A X X X X X X A X A 3

Model Number Descriptions

Digits 1-4— Chiller Model

CGAM= Air-Cooled Scroll Packaged
Chiller

Digits 5-7— Unit Nominal Ton

020 = 20 Tons
026 = 26 Tons
030 = 30 Tons
035 = 35 Tons
040 = 40 Tons
052 = 52 Tons
060 = 60 Tons
070 = 70 Tons
080 = 80 Tons
090 = 90 Tons
100 = 100 Tons
110 = 110 Tons
120 = 120 Tons
130 = 130 Tons

Digit 8— Unit Voltage

A = 208 Volt 60 Hz 3 Phase
B = 230 Volt 60 Hz 3 Phase
D = 380 Volt 60 Hz 3 Phase
E = 400 Volt 50 Hz 3 Phase
F = 460 Volt 60 Hz 3 Phase
G = 575 Volt 60 Hz 3 Phase

Digit 9— Manufacturing Plant

2 = Pueblo, USA

Digits 10-11— Design Sequence

** = Factory/ABU Assigned

Digit 12— Unit Type

2 = High Efficiency
3 = Extra Efficiency

Digit 13— Agency Listing

X = No Agency Listing
A = UL Listed to U.S. and
Canadian Safety Standard

Digit 14— Pressure Vessel Code

X = No Pressure Vessel Code

Digit 15— Unit Application

B = High Ambient (32-125°F/0-52°C)
D = Wide Ambient
(0-125°F/-18-52°C)
J = Extreme Low Ambient —
down to -20°F (-28.9°C)

Digit 16— Refrigerant Isolation Valves

2 = Refrigerant Isolation Valves
(Discharge Valve)

Digit 17— Structural Options

A = Standard Unit Structure
B = Seismic to International Building
Code (IBC)
C = California Office of Statewide
Health Planning and
Development (OSHPD)
Certification
D = Wind Load for Florida Hurricane

Digit 18— Freeze Protection (Factor-Installed Only)

X = Without Freeze Protection
1 = With Freeze Protection
(External T-Stat Control)

Digit 19— Insulation

A = Factory Insulation - All Cold Parts
B = Insulation for High Humidity/
Low Evap Temp

Digit 20— Factory Charge

1 = Full Factory Refrigerant Charge
(R-410A)
2 = Nitrogen Charge

Digit 21— Evaporator Application

A = Standard Cooling
(42 to 65°F/5.5 to 18°C)
B = Low Temperature Process
(10 to 42°F/-12.2 to 5.5°C)
C = Ice-Making - Hardwired Interface
(20 to 65°F/-7 to 18°C)
D = Low Leaving Water
(below 10°F/-12.2°C)

Digit 22— Water Connections

1 = Grooved Pipe Connection

Digit 23— Condenser Fin Material

A = Lanced Aluminum Fins
C = Non-Lanced Copper Fins
D = Lanced Aluminum Fins
w/ CompleteCoat™
H = Microchannel Coils
J = Microchannel Coils
w/ CompleteCoat

Digit 24— Condenser Heat Recovery

X = No Heat Recovery
1 = Partial Heat Recovery with
Fan Control

Digit 25— Not Used

X

Digit 26— Starter Type

A = Across the Line Starter/
Direct on Line

Digit 27— Incoming Power Line Connection

1 = Single Point Power Connection

Digit 28— Power Line Connection Type

A = Terminal Block
C = Circuit Breaker
D = Circuit Breaker with High Fault
Rated Control Panel

Digit 29— Enclosure Type

1 = Water Tight (per UL 1995
Standard)

Digit 30— Unit Operator Interface

A = Dyna-View/English

Digit 31— Remote Interface (Digital Comm)

X = No Remote Digital
Communication
2 = LonTalk®/Tracer® Summit
Interface
3 = Time of Day Scheduling
4 = BACNet® Interface

Digit 32— External Chilled/Hot Water and Current Demand Limit Setpoint

X = No External Chilled Water
Setpoint
A = External Chilled Water and
Demand Limit Setpoint 4-20mA
B = External Chilled Water and
Demand Limit Setpoint 2-10Vdc

Digit 33— Percent Capacity

X = Without % Capacity
1 = With % Capacity

Digit 34— Programmable Relays

X = No Programmable Relays
A = Programmable Relays

Digit 35— Pump Type

X = No Pumps and No Contactors
8 = Dual High Head Pump

Digit 36— Pump Flow Control

X = No Pump Control
B = Pump Flow Controlled by
Variable Speed Drive

Digit 37 — Buffer Tank

X

Digit 38— Short Circuit Rating

X = No Short Circuit Rating
A = Default A Short Circuit Rating
B = High A Short Circuit Rating

Digit 39— Installation Accessories

X = No Installation Accessories
1 = Elastomeric Isolators
3 = Seismically Rated Isolators
5 = Elastomeric Pads

Digit 40— Water Strainer

A = With Water Strainer Factory
Installed

Digit 41— Sound Attenuator Package

3 = Super Quiet
5 = Comprehensive Acoustic
Package



Model Number Descriptions

Digit 42— Appearance Options

- X = No Appearance Options
- A = Architectural Louvered Panels
- B = Half Louvers

Digit 43— Exterior Finish

- 1 = Standard Paint

Digit 44— Label, Literature Language

- B = Spanish and English
- D = English
- E = French and English

Digit 45— Phase Reversal Protection

- 1 = Phase Reversal Protection

Digit 46— Shipping Package

- X = No Skid (Standard)
- A = Unit Containerization Package

Digit 47— Performance Test Options

- X = No Performance Test
- 2 = Test with Report
- 3 = Witness Test with Report

Digit 48— Flow Switch Set Point

- C = Flow Switch Set Point 15
- F = Flow Switch Set Point 35
- H = Flow Switch Set Point 45
- L = Flow Switch Set Point 60

Digit 49— Not Used

X

Digit 50— Specials

- X = None
- S = Special

Note: If a digit is not defined it may be held for future use.

General Data

Table 1. General data - 60 Hz - high efficiency - IP

Size		20	26	30	35	40	52	60	70	80	90	100	110	120	130
Compressor															
Number	#	2	2	2	2	4	4	4	4	4	4	4	4	4	6
Tonnage/ckt ^(a)		10+10	13+13	15+15	15+20	10+10	13+13	15+15	15+20	20+20	20+25	25+25	25+30	30+30	20+20+25
Evaporator															
Water storage	(gal)	1.4	2.2	2.2	3.2	2.4	4.1	5.0	7.5	7.0	9.0	10.3	11.5	11.5	12.3
Min. flow	(gpm)	30	38	42	50	57	74	84	100	115	129	145	157	170	184
Max. flow	(gpm)	69	89	100	117	136	176	201	238	275	307	346	375	407	440
Water connection	(in)	2	2.5	2.5	2.5	3	3	3	3	4	4	4	4	4	4
Condenser															
Round Tube and Plate Fin Coils															
Quantity of coils	#	1	1	1	1	2	2	2	2	4	4	4	4	4	4
Coil length	(in)	91	91	127	127	91	91	127	127	121	121	144	144	144	180
Coil height	(in)	68	68	68	68	68	68	68	68	42	42	42	42	42	42
Number of rows	#	2	2	2	2	2	2	2	2	3	3	3	3	3	3
Fins per foot	(fpf)	192	192	192	192	192	192	192	192	192	192	192	192	192	192
Microchannel Coils															
Quantity of coils	#	1	1	1	1	2	2	2	2	8	8	8	8	8	8
Coil length	(in)	91	91	127	127	91	91	127	127	68+46	68+46	68+68	68+68	68+68	68+104
Coil height ^(b)	(in)	42+10	42+10	42+10	42+10	42+10	42+10	42+10	42+10	34+7	34+7	34+7	34+7	34+7	34+7
Tube width	(in)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Fan															
Quantity	#	2	2	3	3	4	4	6	6	6	6	8	8	8	10
Diameter	(in)	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8
Airflow per fan	(cfm)	9413	9420	9168	9173	9413	9420	9168	9173	9470	9472	9094	9096	9098	9094
Power per motor	(HP)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Motor RPM	(rpm)	840	840	840	840	840	840	840	840	840	840	840	840	840	840
Tip speed (ft/min)		6333	6333	6333	6333	6333	6333	6333	6333	6333	6333	6333	6333	6333	6333
General Unit															
Refrig circuits	#	1	1	1	1	2	2	2	2	2	2	2	2	2	2
Capacity steps	%	50-100	50-100	50-100	43-100	25-50-75-100	25-50-75-100	25-50-75-100	21-43-71-100	25-50-75-100	22-44-72-100	25-50-75-100	23-45-73-100	25-50-75-100	15-31-46-62-81-100
Min ambient - wide	(°F)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min ambient - high	(°F)	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Min ambient - extreme low	(°F)	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20
Round Tube and Plate Fin Coils															
Refrig charge/ckt ^(a)	(lbs)	32	34	44	48	32	32	44	48	74	78	90	86	86	112
Oil charge/ckt ^(a)	(gal)	1.7	1.7	1.9	3.5	1.7	1.7	1.9	3.5	3.5	3.5	3.5	3.7	3.8	5.8
Microchannel Coils															
Refrig charge/ckt ^(a)	(lbs)	19	22.5	28	35	19	20.5	28	35.5	45	47	49	46	50	66
Oil charge/ckt ^(a)	(gal)	1.4	1.4	1.6	2.9	1.4	1.4	1.6	2.9	2.9	2.9	2.9	3.0	3.1	5.4

Dimensions

Unit Dimensions

Unit without Options

Note: The number of fans shown does not represent the number of fans installed.

Figure 4. Dimensions, 20 to 35 ton units, no options

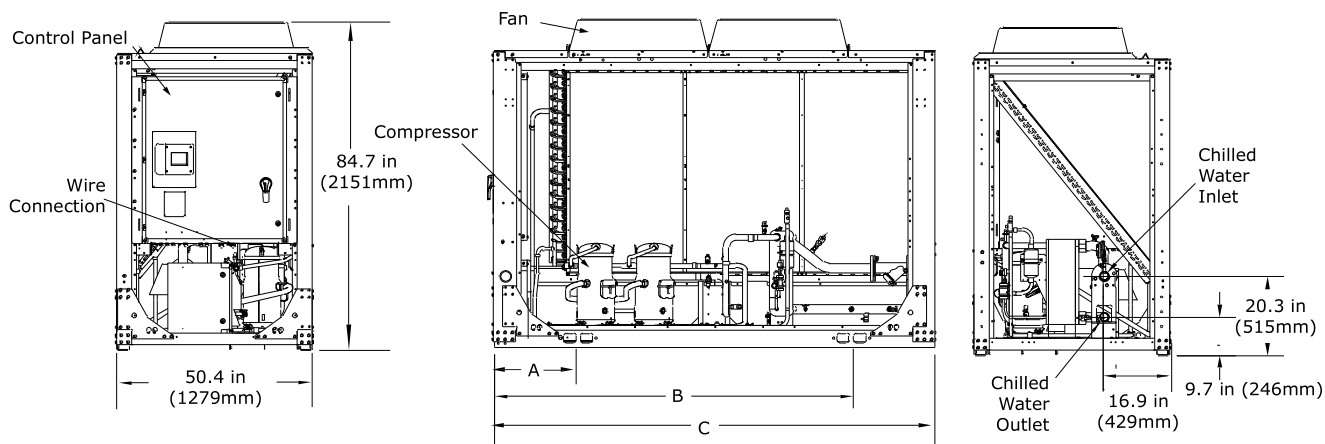


Table 13. Dimensions, 20 to 35 ton units, no options

Unit Size (tons)	A		B		C		Water Connection (from end of chiller)	
	in	mm	in	mm	in	mm	in	mm
20, 26	21.2	535	92.7	2354	113.8	2890	1.7	44
30, 35	21.3	541	128.4	3263	149.8	3804	1.6	40

Figure 5. Dimensions, 40 to 70 ton units, no options

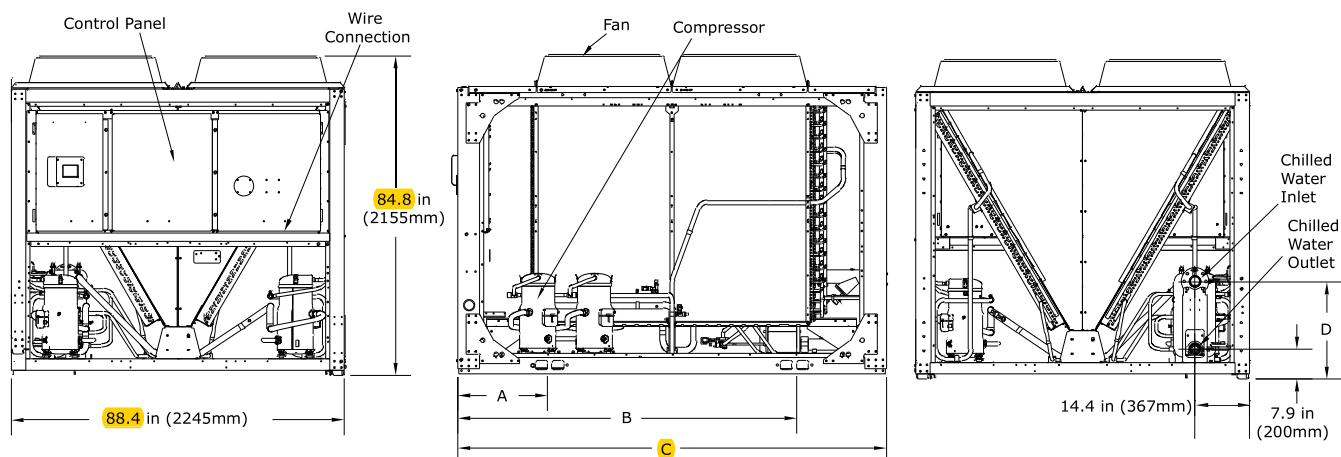


Table 14. Dimensions, 40 to 70 ton units, no options

Unit Size (tons)	A		B		C		D		Water Connection (from end of chiller)
	in	mm	in	mm	in	mm	in	mm	
40, 52	23.8	603	89.9	2282	113.8	2890	25.8	656	Even with unit end
60, 70	23.8	603	125.8	3196	149.8	3804	31.1	790	Even with unit end



Weights

Base Units

Round Tube and Plate Fin Condenser Coils

Notes:

- Base unit weights include aluminum fins, refrigerant charge, elastomeric isolators, circuit breakers and louvers.
- For units with microchannel condenser coils, see “Microchannel Condenser Coils,” p. 56.
- These weights do NOT include the following options: partial heat recovery, copper fins or seismic isolators. See “Option Weights,” p. 58 for additional weight added by these option selections.

Table 25. Base unit weights, 60 Hz, round tube and plate fin condenser — I-P (lb)

Unit Size (Tons)	Base Unit		Base Unit With Pump Package		Base Unit With Pump Package and Buffer Tank	
	Shipping	Operating	Shipping	Operating	Shipping	Operating
High Efficiency						
20	2185	2208	2726	2814	3252	4491
26	2249	2278	2790	2891	3317	4562
30	2846	2880	3388	3497	3915	5163
35	2878	2920	3420	3546	3947	5204
40	3666	3697	4285	4383	4876	6116
52	3761	3806	4379	4506	4971	6225
60	4978	5033	5814	5986	6406	7695
70	5045	5121	5881	6094	6473	7782
80	5607	5692	6486	6790	7077	8561
90	5859	5961	6738	7075	7329	8830
100	6646	6759	7549	7909	8265	10136
110	6724	6846	7627	8005	8343	10223
120	6762	6884	8018	8396	8733	10614
130	7753	7900	9006	9430	9722	11623
Extra Efficiency						
20	2258	2281	2798	2887	3325	4564
26	2322	2351	2863	2964	3389	4634
30	2945	2979	3487	3596	4014	5262
35	3023	3065	3565	3691	4092	5349
40	3812	3843	4431	4529	5022	6262
52	3959	4004	4578	4705	5169	6423
60	5177	5232	6013	6184	6604	7893
70	5118	5194	5954	6166	6545	7855
110	6724	6846	7627	8005	8343	10223
120	6762	6884	8018	8396	8733	10614

Note: All weights ±3%.