

## Model Number Description

### Digit 1 — Unit Type

**E** = Packaged Cooling, Electric Heat  
**G** = Packaged Gas/Electric

### Digit 2 — Efficiency

**C** = ASHRAE 90.1 - 2016

### Digit 3 — Airflow Configuration

**C** = Convertible

### Digit 4, 5, 6 — Nominal Gross Cooling Capacity (MBh)

**090** = 7.5 Tons

**102** = 8.5 Tons

**120** = 10 Tons

**150** = 12.5 Tons

### Digit 7 — Major Design Sequence

**A** = Rev A

### Digit 8 — Voltage Selection

**3** = 208-230/60/3

**4** = 460/60/3

### Digit 9 — Unit Controls

**E** = Electromechanical

### Digit 10 — Heating Capacity

**0** = Cooling Only (field installed electric heat)

**H** = Gas Heat - High

**L** = Gas Heat - Low

**M** = Gas Heat - Medium

**X** = Gas Heat - Stainless Steel HX - Low

**Y** = Gas Heat - Stainless Steel HX - Medium

**Z** = Gas Heat - Stainless Steel HX - High

### Digit 11— Minor Design Sequence

**A** = Rev A

**B** = Rev B

### Digit 12, 13 — Service Sequence

**00** = None

### Digit 14 — Fresh Air Selection

**0** = No Fresh Air Options

*Note: Fresh air options are available as field installed accessories.*

### Digit 15 — Supply Fan/Drive Type/Motor

**7** = Multi-Speed Standard Motor

**9** = Multi-Speed Oversized Motor

### Digit 16 — Unit

**M** = Medium Foundation

### Digit 17 — Condenser Coil Protection

**0** = Standard Coil

### Digit 18 — Through The Base Provisions

**0** = No Through the Base Provisions

*Note: Through the base Provisions are available as field installed accessories.*

### Digit 19 — Disconnect Switch

**0** = No Disconnect/No Circuit Breaker

*Note: Non-Fused Disconnect are available as field installed accessories.*

### Digit 20 to 24

Not Used

## General Data

**Table 1. General data – 7.5 to 12.5 tons – 230 volts**

	7.5 Ton	8.5 Ton	10 Ton	12.5 Ton
	E/GCC090	E/GCC105	E/GCC120	E/GCC150
<b>Cooling Performance<sup>(a)</sup></b>				
Gross Cooling Capacity	90000	102000	120000	150000
EER (Downflow/Horizontal)	11.2	11.2	11.2	11.0
Nominal Airflow CFM / AHRI Rated CFM	3200/3000	3700/3000	3700/3200	4600/4000
AHRI Net Cooling Capacity	86000	104000	114000	140000
Integrated Energy Efficiency Ratio (IEER)	14.8	14.8	14.8	14.2
Percent Capacity @ part load (Stage 1/Stage 2)	58/100	47/100	44/100	32/100
System Power (kW)	7.68	9.29	10.18	12.73
<b>Compressor</b>				
Number/Type	2 / Scrolls	2 / Scrolls	2 / Scrolls	2 / Scrolls
<b>Sound</b>				
Outdoor Sound Rating (BELS)	8.2	8.2	8.2	8.7
<b>Outdoor Coil</b>				
Type	Microchannel	Microchannel	Microchannel	Microchannel
Coil Width (in.) (System A + System B)	0.63+0.63	0.81+1.0	0.81+1.0	1.28+1.28
Face Area (sq. ft.)	23.81	27.38	27.38	27.38
Rows/FPI	1/23	1/23	1/23	1/23
<b>Indoor Coil</b>				
Type	Microchannel	Microchannel	Microchannel	Microchannel
Tube Size (in.) ID	0.98	0.98	1.57	1.57
Face Area (sq. ft.)	12.88	12.88	12.88	12.88
Rows/FPI	3/17	3/17	4/17	4/17
Refrigerant Control	EXV	EXV	EXV	EXV
Drain Connection Number/Size (in.)	1 / 3/4 PVC Pipe Socket	1 / 3/4 PVC Pipe Socket	1 / 3/4 PVC Pipe Socket	1 / 3/4 PVC Pipe Socket
<b>Outdoor Fan</b>				
Type	Propeller	Propeller	Propeller	Propeller
Number Used/Diameter (in.)	2 / 23-1/2	2 / 23-1/2	2 / 23-1/2	2 / 23-1/2
Drive Type/No. Speeds	Direct / 10	Direct / 10	Direct / 10	Direct / 10
cfm	8400	8300	8300	10000
Number Motors/hp	2 / 1/3HP	2 / 1/3HP	2 / 1/3HP	2 / 3/4HP
Motor rpm	960	960	960	1070
<b>Indoor Fan</b>				
Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
Number Used/Diameter (in.)	1 / 15x15	1 / 15x15	1 / 15x15	1 / 15x15
Drive Type/No. Speeds	Belt / 1	Belt / 1	Belt / 1	Belt / 1
Number Motors	1	1	1	1
Motor hp (Standard/Oversized)	2.0 / 3.0	2.0 / 5.0	3.0 / 5.0	3.0 / 5.0
Motor rpm (Standard/Oversized)	1725	1725	1725	1725
Motor Frame Size (Standard/Oversized)	56 / 56	56 / 56	56 / 56	56 / 56
<b>Filters</b>				
Type Furnished	Throwaway	Throwaway	Throwaway	Throwaway
Number Size Recommended	( 4 ) 20*20*2	( 4 ) 20*20*2	( 4 ) 20*20*2	( 4 ) 20*20*2
<b>Refrigerant Charge (Pounds of R-410A)<sup>(b)</sup></b>				
Circuit A	3.97 lbs	4.85 lbs	5.29 lbs	7.50 lbs
Circuit B	3.53 lbs	4.41 lbs	5.07 lbs	5.73 lbs

<sup>(a)</sup> Units are AHRI Certified to AHRI Standard 340-360 (I-P). Rating conditions are 95°F outdoor air temperature, 80°F entering dry bulb, 67°F entering wet bulb with minimum external static pressure as determined by rating standard.

<sup>(b)</sup> Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

**General Data**

**Table 2. General data – 7.5 to 12.5 tons – 460 volts**

	7.5 Ton	8.5 Ton	10 Ton	12.5 Ton
	E/GCC090	E/GCC105	E/GCC120	E/GCC150
<b>Cooling Performance<sup>(a)</sup></b>				
Gross Cooling Capacity	90000	102000	120000	150000
EER (Downflow/Horizontal)	11.2	11.2	11.2	11.0
Nominal Airflow CFM / AHRI Rated CFM	3200/3000	3700/3000	3700/3200	4600/4000
AHRI Net Cooling Capacity	86000	104000	114000	140000
Integrated Energy Efficiency Ratio (IEER)	14.8	14.8	14.8	14.2
Percent Capacity @ part load (Stage 1/Stage 2)	58/100	47/100	44/100	32/100
System Power (kW)	7.68	9.29	10.18	12.73
<b>Compressor</b>				
Number/Type	2 / Scrolls	2 / Scrolls	2 / Scrolls	2 / Scrolls
<b>Sound</b>				
Outdoor Sound Rating (BELS)	8.2	8.2	8.2	9.2
<b>Outdoor Coil</b>				
Type	Microchannel	Microchannel	Microchannel	Microchannel
Coil Width (in.) (System A + System B)	0.63+0.63	1.0+1.0	1.0+1.0	1.28+1.28
Face Area (sq. ft.)	23.81	27.38	27.38	27.38
Rows/FPI	1/23	1/23	1/23	1/23
<b>Indoor Coil</b>				
Type	Microchannel	Microchannel	Microchannel	Microchannel
Tube Size (in.) ID	0.98	0.98	1.57	1.57
Face Area (sq. ft.)	12.88	12.88	12.88	12.88
Rows/FPI	3/17	3/17	4/17	4/17
Refrigerant Control	EXV	EXV	EXV	EXV
Drain Connection Number/Size (in.)	1 / 3/4 PVC Pipe Socket	1 / 3/4 PVC Pipe Socket	1 / 3/4 PVC Pipe Socket	1 / 3/4 PVC Pipe Socket
<b>Outdoor Fan</b>				
Type	Propeller	Propeller	Propeller	Propeller
Number Used/Diameter (in.)	2 / 23-1/2	2 / 23-1/2	2 / 23-1/2	2 / 23-1/2
Drive Type/No. Speeds	Direct / 10	Direct / 10	Direct / 10	Direct / 10
cfm	8400	8300	8300	10000
Number Motors/hp	2 / 1/3HP	2 / 1/3HP	2 / 1/3HP	2 / 3/4HP
Motor rpm	960	960	960	1070
<b>Indoor Fan</b>				
Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
Number Used/Diameter (in.)	1 / 15X15	1 / 15X15	1 / 15X15	1 / 15X15
Drive Type/No. Speeds	Belt / 1	Belt / 1	Belt / 1	Belt / 1
Number Motors	1	1	1	1
Motor hp (Standard/Oversized)	2.0 / 3.0	2.0 / 5.0	3.0 / 5.0	3.0 / 5.0
Motor rpm (Standard/Oversized)	1725	1725	1725	1725
Motor Frame Size (Standard/Oversized)	56/56	56/56	56/56	56/56
<b>Filters</b>				
Type Furnished	Throwaway	Throwaway	Throwaway	Throwaway
Number Size Recommended	( 4 ) 20*20*2	( 4 ) 20*20*2	( 4 ) 20*20*2	( 4 ) 20*20*2
<b>Refrigerant Charge (Pounds of R-410A)<sup>(b)</sup></b>				
Circuit A	3.97 lbs	4.85 lbs	5.29 lbs	7.72 lbs
Circuit B	3.31 lbs	4.41 lbs	4.85 lbs	5.95 lbs

<sup>(a)</sup> Units are AHRI Certified to AHRI Standard 340-360 (I-P) . Rating conditions are 95°F outdoor air temperature, 80°F entering dry bulb, 67°F entering wet bulb with minimum external static pressure as determined by rating standard.

<sup>(b)</sup> Refrigerant charge is an approximate value. For a more precise value, see unit nameplate and service instructions.

**Table 3. General data – heating performance – 7.5 to 12.5 tons**

	Heating Performance <sup>(a)</sup>					
	7.5 to 8.5 Tons			10 to 12.5 Tons		
Heating Models	Low	Medium	High	Low	Medium	High
Heating Input (Btu/h)	125000	180,000	225000	180,000	225000	250000
1 <sup>st</sup> Stage (Btu)	87500	126,000	168000	126,000	168000	200000
Heating Output (Btu/h)	100000	144,000	180,000	144,000	180000	200000
1 <sup>st</sup> Stage (Btu)	70000	100,000	125,000	100,000	125000	160000
Steady State Efficiency %	81%	81%	81%	81%	81%	81%
No. Burners	3	5	6	5	6	6
No. Stages	2	2	2	2	2	2
Gas Supply Line Pressure (in. wc)						
Natural Gas (minimum/maximum)	4.5 / 14.0 in. wc.	4.5 / 14.0 in. wc.	4.5 / 14.0 in. wc.	4.5 / 14.0 in. wc.	4.5 / 14.0 in. wc.	4.5 / 14.0 in. wc.
LP (minimum/maximum)	11.0/14.0 in. wc.	11.0/14.0 in. wc.	11.0/14.0 in. wc.	11.0/14.0 in. wc.	11.0/14.0 in. wc.	11.0/14.0 in. wc.
Gas Connection Pipe Size (in.)	1/2	1/2	3/4	1/2	3/4	3/4

<sup>(a)</sup> Heating Performance limit settings and rating data were established and approved under laboratory test conditions using American National Standards Institute standards (ANSI). Ratings shown are for elevations up to 2000 feet. For elevations above 2000 feet, ratings should be reduced at the rate of 4% for each 1000 feet above sea level.

**Performance Data**

**10 Tons**

**Table 24. Belt drive evaporator fan performance - 10 tons with low gas heat - GCC120A(3,4)EL - downflow airflow**

External Static Pressure (Inches of Water)																				
CFM	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>Standard Motor</b>																				
3200	—	—	—	—	—	—	—	—	737	1.34	761	1.49	785	1.64	809	1.79	833	1.94	857	2.09
3600	—	—	—	—	739	1.46	760	1.58	782	1.72	804	1.86	828	2.02	851	2.18	875	2.34	906	2.64
4000	737	1.59	760	1.71	782	1.86	805	1.99	828	2.13	851	2.29	874	2.45	903	2.78	924	2.94	945	3.09
4400	780	2.03	805	2.18	830	2.33	854	2.49	876	2.65	902	2.96	923	3.11	944	3.24	965	3.39	986	3.52
External Static Pressure (Inches of Water)																				
CFM	1.1		1.2		1.3		1.4		1.5		1.6		1.7		1.8		1.9		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>High Static (oversize) Motor</b>																				
3200	879	2.21	910	2.46	931	2.54	952	2.66	973	2.79	994	2.91	1015	3.03	1036	3.16	1057	3.28	1078	3.39
3600	927	2.79	948	2.93	969	3.03	990	3.14	1011	3.26	1032	3.36	1053	3.44	1074	3.53	1095	3.61	1116	3.68
4000	966	3.23	987	3.34	1008	3.44	1031	3.53	1052	3.63	1072	3.72	1093	3.81	1116	3.88	1137	3.96	1159	4.06
4400	1007	3.66	1028	3.76	1049	3.86	1071	3.96	1092	4.06	1113	4.14	1135	4.24	1156	4.32	1178	4.42	1201	4.48

**Table 25. Belt drive evaporator fan performance - 10 tons with low gas heat - GCC120A(3,4)EL - horizontal airflow**

External Static Pressure (Inches of Water)																				
CFM	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>Standard Motor</b>																				
3200	—	—	—	—	—	—	729	1.36	753	1.51	777	1.66	801	1.81	825	1.96	849	2.11	873	2.26
3600	—	—	733	1.52	755	1.62	776	1.75	798	1.89	820	2.03	844	2.19	867	2.35	891	2.53	922	2.81
4000	753	1.76	776	1.88	798	2.02	821	2.16	844	2.31	867	2.45	892	2.61	919	2.95	940	3.11	961	3.26
4400	796	2.21	821	2.35	846	2.51	866	2.67	887	2.84	918	3.13	939	3.28	960	3.42	981	3.56	1002	3.69
External Static Pressure (Inches of Water)																				
CFM	1.1		1.2		1.3		1.4		1.5		1.6		1.7		1.8		1.9		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>High Static (oversize) Motor</b>																				
3200	905	2.49	926	2.61	947	2.72	968	2.83	989	2.96	1010	3.08	1031	3.2	1052	3.33	1073	3.45	1094	3.56
3600	943	2.96	964	3.09	985	3.22	1006	3.32	1027	3.43	1048	3.53	1069	3.62	1090	3.69	1111	3.78	1132	3.85
4000	982	3.39	1003	3.51	1024	3.61	1045	3.69	1066	3.81	1087	3.89	1108	3.97	1129	4.05	1150	4.13	1171	4.22
4400	1023	3.82	1044	3.93	1065	4.03	1086	4.13	1107	4.23	1128	4.32	1149	4.41	1170	4.49	1191	4.57	1212	4.65

Table 26. Belt drive evaporator fan performance - 10 tons with med gas heat - GCC120A(3,4)EM- downflow airflow

External Static Pressure (Inches of Water)																				
CFM	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
Standard Motor																				
3200	—	—	—	—	—	—	738	1.44	762	1.59	786	1.74	810	1.89	834	2.04	858	2.19	882	2.34
3600	—	—	742	1.59	764	1.71	785	1.83	807	1.97	829	2.11	853	2.27	876	2.43	910	2.73	931	2.89
4000	762	1.84	785	1.96	807	2.11	830	2.24	853	2.38	876	2.54	907	2.87	928	3.03	949	3.19	970	3.34
4400	805	2.28	830	2.43	855	2.58	879	2.75	906	3.06	927	3.21	948	3.36	969	3.49	990	3.64	1011	3.77
External Static Pressure (Inches of Water)																				
CFM	1.1		1.2		1.3		1.4		1.5		1.6		1.7		1.8		1.9		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
High Static (oversize) Motor																				
3200	914	2.57	935	2.71	956	2.79	977	2.91	998	3.04	1019	3.16	1040	3.28	1061	3.41	1082	3.53	1103	3.64
3600	952	3.04	973	3.18	994	3.28	1015	3.39	1036	3.51	1057	3.61	1078	3.69	1099	3.78	1120	3.86	1141	3.93
4000	991	3.48	1012	3.59	1033	3.69	1054	3.78	1075	3.88	1096	3.97	1117	4.05	1138	4.13	1159	4.21	1180	4.31
4400	1032	3.91	1053	4.01	1074	4.11	1095	4.21	1116	4.31	1137	4.39	1158	4.49	1179	4.57	1200	4.65	1221	4.73

Table 27. Belt drive evaporator fan performance - 10 tons with med gas heat - GCC120A(3,4)EM - horizontal airflow

External Static Pressure (Inches of Water)																				
CFM	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
Standard Motor																				
3200	—	—	—	—	—	—	754	1.62	778	1.77	802	1.92	826	2.07	850	2.22	874	2.37	898	2.52
3600	736	1.67	758	1.78	780	1.88	801	2.01	823	2.15	845	2.29	869	2.45	892	2.61	926	2.91	947	3.07
4000	778	2.02	801	2.14	823	2.28	846	2.42	869	2.56	902	2.88	923	3.05	944	3.21	965	3.37	986	3.52
4400	821	2.46	846	2.61	871	2.76	901	3.08	922	3.24	943	3.39	964	3.54	985	3.68	1006	3.82	1027	3.95
External Static Pressure (Inches of Water)																				
CFM	1.1		1.2		1.3		1.4		1.5		1.6		1.7		1.8		1.9		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
High Static (oversize) Motor																				
3200	930	2.75	951	2.88	972	2.98	993	3.09	1014	3.22	1035	3.34	1056	3.46	1077	3.59	1098	3.71	1119	3.82
3600	968	3.22	989	3.35	1010	3.47	1031	3.58	1052	3.69	1073	3.79	1094	3.88	1115	3.96	1136	4.04	1157	4.11
4000	1007	3.66	1028	3.77	1049	3.87	1070	3.96	1091	4.06	1112	4.15	1133	4.23	1154	4.31	1175	4.39	1196	4.48
4400	1048	4.08	1069	4.19	1090	4.29	1111	4.39	1132	4.49	1153	4.58	1174	4.67	1195	4.75	1216	4.83	1237	4.91

**Performance Data**

**Table 28. Belt drive evaporator fan performance - 10 tons with high gas heat - GCC120A(3,4)EH - downflow airflow**

CFM	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>Standard Motor</b>																				
3200	—	—	—	—	—	—	738	1.44	762	1.59	786	1.74	810	1.89	834	2.04	858	2.19	882	2.34
3600	—	—	742	1.59	764	1.71	785	1.83	807	1.97	829	2.11	853	2.27	876	2.43	910	2.73	931	2.89
4000	762	1.84	785	1.96	807	2.11	830	2.24	853	2.38	876	2.54	907	2.87	928	3.03	949	3.19	970	3.34
4400	805	2.28	830	2.43	855	2.58	879	2.75	906	3.06	927	3.21	948	3.36	969	3.49	990	3.64	1011	3.77
CFM	1.1		1.2		1.3		1.4		1.5		1.6		1.7		1.8		1.9		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>High Static (oversize) Motor</b>																				
3200	914	2.57	935	2.71	956	2.79	977	2.91	998	3.04	1019	3.16	1040	3.28	1061	3.41	1082	3.53	1103	3.64
3600	952	3.04	973	3.18	994	3.28	1015	3.39	1036	3.51	1057	3.61	1078	3.69	1099	3.78	1120	3.86	1141	3.93
4000	991	3.48	1012	3.59	1033	3.69	1054	3.78	1075	3.88	1096	3.97	1117	4.05	1138	4.13	1159	4.21	1180	4.31
4400	1032	3.91	1053	4.01	1074	4.11	1095	4.21	1116	4.31	1137	4.39	1158	4.49	1179	4.57	1200	4.65	1221	4.73

**Table 29. Belt drive evaporator fan performance - 10 tons with high gas heat - GCC120A(3,4)EH - horizontal airflow**

CFM	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>Standard Motor</b>																				
3200	—	—	—	—	—	—	754	1.62	778	1.77	802	1.92	826	2.07	850	2.22	874	2.37	898	2.52
3600	736	1.67	758	1.78	780	1.88	801	2.01	823	2.15	845	2.29	869	2.45	892	2.61	926	2.91	947	3.07
4000	778	2.02	801	2.14	823	2.28	846	2.42	869	2.56	902	2.88	923	3.05	944	3.21	965	3.37	986	3.52
4400	821	2.46	846	2.61	871	2.76	901	3.08	922	3.24	943	3.39	964	3.54	985	3.68	1006	3.82	1027	3.95
CFM	1.1		1.2		1.3		1.4		1.5		1.6		1.7		1.8		1.9		2.0	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
<b>High Static (oversize) Motor</b>																				
3200	930	2.75	951	2.88	972	2.98	993	3.09	1014	3.22	1035	3.34	1056	3.46	1077	3.59	1098	3.71	1119	3.82
3600	968	3.22	989	3.35	1010	3.47	1031	3.58	1052	3.69	1073	3.79	1094	3.88	1115	3.96	1136	4.04	1157	4.11
4000	1007	3.66	1028	3.77	1049	3.87	1070	3.96	1091	4.06	1112	4.15	1133	4.23	1154	4.31	1175	4.39	1196	4.48
4400	1048	4.08	1069	4.19	1090	4.29	1111	4.39	1132	4.49	1153	4.58	1174	4.67	1195	4.75	1216	4.83	1237	4.91

**Performance Data**

**Table 40. Standard motor and drive/fan speed (rpm)**

Tons	Unit Model Number	Fan Sheave	6 Turns Open	5 Turns Open	4 Turns Open	3 Turns Open	2 Turns Open	1 Turn Open	Closed
7.5	ECC090	15-15	716	743	772	798	824	850	879
	GCC090								
8.5	ECC102	15-15	735	762	790	817	844	871	898
	GCC102								
10	ECC120	15-15	735	762	790	817	844	871	898
	GCC120								
12.5	ECC150	15-16	735	762	790	817	844	871	898
	GCC150		770	806	843	878	912	948	982

Note: Factory Set at closed.

**Table 41. High Static (Oversize) motor and drive/fan speed (rpm)**

Tons	Unit Model Number	Fan Sheave	6 Turn Open	5 Turn Open	4 Turn Open	3 Turn Open	2 Turn Open	1 Turn Open	Closed
7.5	ECC090	15-15	885	946	978	1047	1108	1175	1229
	GCC090								
8.5	ECC102	15-15	900	959	994	1060	1124	1189	1243
	GCC102								
10	ECC120	15-15	900	959	994	1060	1124	1189	1243
	GCC120								
12.5	ECC150	15-16	916	975	1031	1090	1148	1209	1268
	GCC150								

Note: Factory Set at closed.

**Table 42. Static pressure drop through accessories (inches water column)**

Tons	Unit Model Number	Cfm	Standard Filters	Standard Economizer	Electric Heater					
					10.4	16	25	32	41	50
7.5	E/GCC090A (Downflow)	2400	0.01	—	0.005	0.005	0.050	0.01	0.01	—
		3000	0.03	—	0.010	0.010	0.010	0.02	0.02	—
		3375	0.04	—	0.015	0.015	0.015	0.03	0.03	—
	E/GCC090A (Horizontal)	2400	0.01	—	0.005	0.005	0.050	0.01	0.01	—
		3000	0.03	—	0.010	0.010	0.010	0.02	0.02	—
		3375	0.04	—	0.015	0.015	0.015	0.03	0.03	—
8.5	E/GCC102A (Downflow)	2720	0.02	—	0.010	0.010	0.010	0.02	0.02	—
		3400	0.04	—	0.015	0.015	0.015	0.03	0.03	—
		3825	0.05	—	0.020	0.020	0.020	0.04	0.04	—
	E/GCC102A (Horizontal)	2720	0.02	—	0.010	0.010	0.010	0.02	0.02	—
		3400	0.04	—	0.015	0.015	0.015	0.03	0.03	—
		3825	0.05	—	0.020	0.020	0.020	0.04	0.04	—
10	E/GCC120A (Downflow)	3200	0.03	—	0.015	0.015	—	0.03	0.03	0.03
		4000	0.05	—	0.020	0.020	—	0.04	0.04	0.04
		4500	0.07	—	0.025	0.025	—	0.05	0.05	0.05
	E/GCC120A (Horizontal)	3200	0.03	—	0.015	0.015	—	0.03	0.03	0.03
		4000	0.05	—	0.020	0.020	—	0.04	0.04	0.04
		4500	0.07	—	0.025	0.025	—	0.05	0.05	0.05
12.5	E/GCC150A (Downflow)	4000	0.05	—	0.020	0.020	—	0.04	0.04	0.04
		5000	0.07	—	0.030	0.030	—	0.06	0.06	0.06
		5625	0.09	—	0.035	0.035	—	0.07	0.07	0.07
	E/GCC150A (Horizontal)	4000	0.05	—	0.020	0.020	—	0.04	0.04	0.04
		5000	0.07	—	0.030	0.030	—	0.06	0.06	0.06
		5625	0.09	—	0.035	0.035	—	0.07	0.07	0.07



# Electrical Data

**Table 47. Unit wiring with cooling only (no electric heat) or gas heat**

TONS	Unit Model Number	Unit Operating Voltage Range	Standard Indoor Fan Motor		Oversized Indoor Fan Motor	
			Minimum Circuit Ampacity <sup>(a)</sup>	Maximum Fuse Size or Maximum Circuit Breaker	Minimum Circuit Ampacity	Maximum Fuse Size or Maximum Circuit Breaker
7.5	E/GCC090A	208-230	36	45	40	50
8.5	E/GCC102A	208-230	42	50	49	60
10	E/GCC120A	208-230	54	70	57	70
12.5	E/GCC150A	208-230	66	80	69	80
7.5	E/GCC090A	460	20	25	25	30
8.5	E/GCC102A	460	20	25	27	30
10	E/GCC120A	460	27	30	29	35
12.5	E/GCC150A	460	34	40	35	45

<sup>(a)</sup> For Standard and Oversized Indoor Fan Motor, values do not include power exhaust accessory.

**Table 48. Unit wiring with electric heat (single point connection)**

TONS	Unit Model Number	Heater kW Rating	Control Stages	Standard Indoor Fan Motor		Oversized Indoor Fan Motor	
				Minimum Circuit Ampacity	Maximum Fuse Size or Maximum Circuit Breaker	Minimum Circuit Ampacity	Maximum Fuse Size or Maximum Circuit Breaker
<b>208/230 Volts Three Phase</b>							
7.5	BAYHTMA341A	41.0	2	116/133	125/150	122/139	125/150
	BAYHTMA332A	32.0	2	93/106	100/110	99/112	100/125
	BAYHTMA325A	25.0	1	75/85	80/90	81/91	90/100
	BAYHTMA315A	16.0	1	51/58	60/60	57/64	60/70
	BAYHTMA310A	10.0	1	37/41	45/45	43/47	50/50
8.5	BAYHTMA341A	41.0	2	116/133	125/150	126/142	150/150
	BAYHTMA332A	32.0	2	93/106	100/110	102/115	110/125
	BAYHTMA325A	25.0	1	75/85	80/90	84/94	90/100
	BAYHTMA315A	16.0	1	51/58	60/60	60/67	60/70
	BAYHTMA310A	10.0	1	42/42	50/50	49/50	60/60
10	BAYHTMA350A	50.0	2	146/136	150/150	149/139	150/150
	BAYHTMA341A	41.0	2	122/139	125/150	126/142	150/150
	BAYHTMA332A	32.0	2	99/112	100/125	102/115	110/125
	BAYHTMA315A	16.0	1	57/64	70/70	60/67	70/70
	BAYHTMA310A	10.0	1	54/54	70/70	57/57	70/70
12.5	BAYHTMA350A	50.0	2	146/136	150/150	149/139	150/150
	BAYHTMA341A	41.0	2	122/139	125/150	126/142	150/150
	BAYHTMA332A	32.0	2	99/112	100/125	102/115	110/125
	BAYHTMA315A	16.0	1	66/66	80/80	69/69	90/90
	BAYHTMA310A	10.0	1	66/66	80/80	69/69	90/90
<b>460 Volts Three Phase</b>							
7.5	BAYHTMA441A	41.5	2	70	70	76	80
	BAYHTMA433A	33.0	2	57	60	63	70
	BAYHTMA425A	25.0	1	44	45	50	50
	BAYHTMA416A	15.0	1	31	35	37	40
	BAYHTMA414A	14.0	1	27	30	33	35
8.5	BAYHTMA441A	41.5	2	70	70	78	80
	BAYHTMA433A	33.0	2	57	60	65	70
	BAYHTMA425A	25.0	1	44	45	52	60
	BAYHTMA416A	15.0	1	31	35	39	40
	BAYHTMA414A	14.0	1	27	30	35	40

**Table 48. Unit wiring with electric heat (single point connection) (continued)**

TONS	Unit Model Number	Heater kW Rating	Control Stages	Standard Indoor Fan Motor		Oversized Indoor Fan Motor	
				Minimum Circuit Ampacity	Maximum Fuse Size or Maximum Circuit Breaker	Minimum Circuit Ampacity	Maximum Fuse Size or Maximum Circuit Breaker
10	BAYHTMA450A	50.0	2	74	80	76	80
	BAYHTMA441A	41.5	2	76	80	78	80
	BAYHTMA433A	33.0	2	63	70	65	70
	BAYHTMA416A	15.0	1	37	40	39	40
	BAYHTMA414A	14.0	1	33	35	35	40
12.5	BAYHTMA450A	50.0	2	74	80	76	80
	BAYHTMA441A	41.5	2	76	80	78	80
	BAYHTMA433A	33.0	2	63	70	65	70
	BAYHTMA416A	15.0	1	37	40	39	45
	BAYHTMA414A	14.0	1	34	40	35	45

**Table 49. Electrical characteristics – compressor motor and condenser motor**

TONS	Unit Model Number	Compressor Motors						Condenser Fan Motors				
		No.	Volts	Phase	rpm	Amps <sup>(a)</sup>		No.	Volts	Phase	hp	Amps
						RLA	LRA					FLA
7.5	E/GCC090A	2	203-230	3	3500	11.6/10.4	123/73	2	208-230	3	1/3	1.5
8.5	E/GCC102A	2	203-230	3	3500	15.6/11.6	93/123	2	208-230	3	1/3	1.5
10	E/GCC120A	2	203-230	3	3500	15.6/18.6	93/137	2	208-230	3	1/3	1.5
12.5	E/GCC150A	2	203-230	3	3500	23.2/15.6	164/93	2	208-230	3	3/4	4.5
7.5	E/GCC090A	2	460	3	3500	6.0/6.4	60/38	2	460	3	1/3	0.87
8.5	E/GCC102A	2	460	3	3500	6.5/6.0	60/60	2	460	3	1/3	0.87
10	E/GCC120A	2	460	3	3500	6.5/7.8	60/52	2	460	3	1/3	0.87
12.5	E/GCC150A	2	460	3	3500	11.2/6.5	75/60	2	460	3	3/4	2.1

<sup>(a)</sup> For Compressor Motors and Condenser Fan Motors: Amp draw for each motor; multiply value by number of motors to determine total amps.

**Table 50. Electrical characteristics – evaporator fan motor**

TONS	Unit Model Number	Standard Evaporator Fan Motor					Oversized Evaporator Fan Motor				
		No.	Volts	Phase	hp	Amps	No.	Volts	Phase	hp	Amps
						FLA					FLA
7.5	E/GCC090A	1	208-230	3	2	7.2	1	208-230	3	3	12.0
8.5	E/GCC102A	1	208-230	3	2	7.2	1	208-230	3	5	14.6
10	E/GCC120A	1	208-230	3	3	12.0	1	208-230	3	5	14.6
12.5	E/GCC150A	1	208-230	3	3	12.0	1	208-230	3	5	14.6
7.5	E/GCC090A	1	460	3	2	3.5	1	460	3	3	8.7
8.5	E/GCC102A	1	460	3	2	3.5	1	460	3	5	10.3
10	E/GCC120A	1	460	3	3	8.7	1	460	3	5	10.3
12.5	E/GCC150A	1	460	3	3	8.7	1	460	3	5	10.3

**Electrical Data**

**Table 51. Electrical characteristics – combustion blower motor (gas heat units)**

TONS	Unit Model Number	Combustion Blower Motor				
		No.	Volts	Phase	rpm	Amps
						FLA
7.5	E/GCC090	1	208/230	1	2100	1.2
8.5	E/GCC105	1	208/230	1	2100	1.2
10	E/GCC120	1	208/230	1	2100	1.2
12.5	E/GCC150	1	208/230	1	2100	1.2
7.5	E/GCC090	1	220	1	2100	1.2
8.5	E/GCC105	1	220	1	2100	1.2
10	E/GCC120	1	220	1	2100	1.2
12.5	E/GCC150	1	220	1	2100	1.2

# Weights

**Table 53. Maximum unit and corner weights (lb) and center of gravity dimensions (in.)**

Tons	Unit Model No.	Weights (lb) <sup>(a), (b)</sup>		Corner Weights <sup>(c)</sup>				Center of Gravity (in.)	
		Shipping	Net	A	B	C	D	Length	Width
7.5	GCC090A	1087	1012	248	181	334	249	45.0	34.0
8.5	GCC102A	1111	1036	236	176	340	283	44.0	36.0
10	GCC120A	1133	1058	237	190	273	358	39.0	34.0
12.5	GCC150A	1235	1172	264	194	299	416	39.0	35.0
7.5	ECC090A	979	904	250	188	197	269	45.0	34.0
8.5	ECC102A	1003	928	252	187	200	289	44.0	36.0
10	ECC120A	1023	948	277	180	187	304	39.0	34.0
12.5	ECC150A	1124	1049	302	197	208	342	39.0	35.0

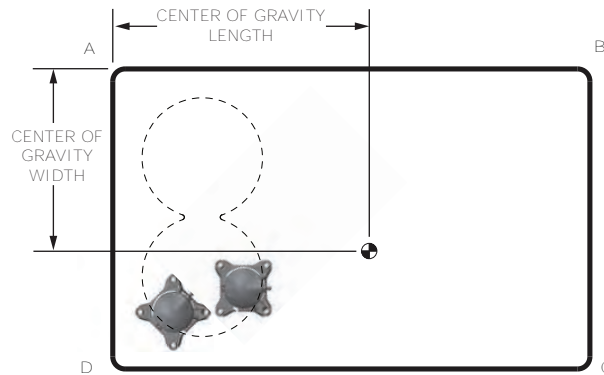
- (a) Weights are approximate. Horizontal and downflow unit and corner weights may vary slightly.
- (b) Weights do not include additional factory or field installed options/accessories.
- (c) Corner weights are given for information only. 7.5–12.5 ton models must be supported continuously by a curb or equivalent frame support.

**Note:** To calculate additional weight for accessories, see *Accessory net weights table*.

**Table 54. Accessory net weight (lb)**

Accessories	Model #	Net weight (lb)			
		E/GCC090	E/GCC102	E/GCC120	E/GCC150
<b>Electric Heaters</b>					
10 kW (240V)	BAYHTMA310A	43.65	43.65	43.65	43.65
16 kW (240V)	BAYHTMA315A	45.04	45.04	45.04	45.04
25 kW (240V)	BAYHTMA325A	46.01	46.01	46.01	46.01
32 kW (240V)	BAYHTMA332A	54.59	54.59	54.59	54.59
41 kW (240V)	BAYHTMA341A	55.56	55.56	55.56	55.56
50 kW (240V)	BAYHTMA350A	56.53	56.53	56.53	56.53
<b>Oversized Motor</b>					
2 HP (230 / 460)	—	37.5	37.5	37.5	37.5
3 HP (230 / 460)	—	45.0	45.0	45.0	45.0
5 HP (230 / 460)	—	53.0	53.0	53.0	53.0
<b>External Vent Hood</b>		2.8			

**Figure 8. Center of gravity/corner weights**



# Mechanical Specifications

## General

- Packaged rooftop units cooling, heating capacities, and efficiencies are AHRI Certified within scope of AHRI Standard (I-P) and ANSIZ21.47 and 10 CFR Part 431 pertaining to Commercial Warm Air Furnaces
- Packaged rooftop units are dedicated downflow or horizontal airflow
- Operating range between 125°F and 40°F in cooling standard from the factory
- Factory assembled, internally wired, fully charged with R-410A, and 100 percent run tested to check cooling operation, fan and blower rotation, and control sequence before leaving the factory
- Colored and numbered wiring internal to the unit for simplified identification
- Units ETL listed and labeled, classified in accordance

## Standard Features

### Casing

- Zinc coated, heavy gauge, galvanized steel
- Weather-resistant baked enamel finish on phosphatized exterior surfaces
- Meets ASTM B117, 672 hour salt spray test
- Removable single side maintenance access panels
- Lifting handles in maintenance access panels (can be removed and reinstalled by removing no more than 11 fasteners while providing a water and air tight seal)
- Exposed vertical panels and top covers in the indoor air section shall be insulated with a 1/2-inch, 1-pound density foil-faced, fire-resistant, permanent, odorless, glass fiber material
- Base of unit shall be insulated with 1/2-inch, 1-pound density, foil-faced, glass fiber material
- Base pan shall have no penetrations within the perimeter of the curb other than the raised 1 1/8-inch high downflow supply/return openings to provide an added water integrity precaution, if the condensate drain backs up
- Downflow unit's base pan shall have no penetrations within the perimeter of the curb other than the raised 1 1/8-inch high supply/return openings to provide an added water integrity precaution, if the condensate drain backs up
- Base of unit shall have provisions for forklift and crane lifting

### Compressors

- All units have direct-drive, hermetic, scroll type compressors with centrifugal type oil pumps
- Suction gas-cooled motor with voltage utilization range of plus or minus 10 percent of unit nameplate voltage
- Internal overloads standard with scroll compressors
- All models have phase monitors and Low and High Pressure Controls as standard

### Discharge Line Thermostat

- A bi-metal element discharge line thermostat is installed as a standard option on the discharge line of each system
- Provides extra protection to the compressors against high discharge temperatures in case of loss of charge, extremely high ambient and other conditions which could drive the discharge temperature higher
- Wired in series with high pressure control
- When discharge temperature rises above the protection limit, the bi-metal disc in the thermostat switches to the off position, opening the 24 Vac circuit
- When temperature on the discharge line cools down, the bi-metal disc closes the contactor circuit, providing power to the compressor

## Mechanical Specifications

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### Evaporator and Condenser Coils

- Microchannel coils burst tested by manufacturer
- Microchannel condenser coils standard on all units
- Coils leak tested to ensure the pressure integrity
- Evaporator coil and condenser coil leak tested to 225 psig and pressure tested to 450 psig
- Sloped condensate drain pans are standard

### Filters

Two inch standard filters shall be factory supplied on all units.

### Gas Heat Section

- Progressive tubular heat exchanger, stainless steel burners and corrosion resistant steel
- Induced draft combustion blower shall be used to pull the combustion products through the firing tubes
- Heater shall use a direct spark ignition (DSI) system
- On initial call for heat, the combustion blower shall purge the heat exchanger for 20 seconds before ignition
- After three unsuccessful ignition attempts, entire heating system shall be locked out until manually reset at the thermostat/zone sensor
- Units shall be suitable for use with natural gas or propane (field-installed kit)

### Indoor Fan

- Belt driven, FC centrifugal fans with adjustable motor sheaves
- Motors thermally protected
- Oversized motors available for high static application
- Indoor fan motors meet the U.S. Energy Policy Act of 1992 (EPACT)

### Locking Safety Device

- Pressure switch monitoring allows for lockout in a situation where the switch is opened
- By monitoring the Y input as well as the pressure switches, advanced decision making can be made to identify situations where faults/errors occur

### Outdoor Fans

- Outdoor fan shall be externally drive, statically and dynamically balanced, draw-through in the vertical discharge position.
- Fan motor(s) shall be permanently lubricated and shall have current overload protection.

### Refrigerant Circuits

- Each refrigerant circuit shall have a fixed orifice, service pressure ports, and refrigerant line filter driers factory installed as standard
- An area shall be provided for replacement suction line driers

### Refrigerant Pressure Control

All units include High and Low Pressure Cutouts as standard.

### Unit Top

The top cover shall be double hemmed and gasket sealed to prevent water leakage.

## Factory Installed Options

### Multi-Speed Indoor Fan System

Incorporates a multi-speed fan control to change the speed of the fan to 70% of full airflow based off of compressor stages

### Oversized Motors

Oversized motors shall be available as a factory option for High Static applications.

## Field Installed Options

### Condensate Overflow Switch

This option shall shut the unit down in the event that a clogged condensate drain line prevents proper condensate removal from the unit.

### Demand Control Ventilation with CO<sub>2</sub> Sensor

- CO<sub>2</sub> sensor shall have the ability to monitor the concentration (parts per million, ppm) of CO<sub>2</sub> (Carbon Dioxide) in the air
- As the CO<sub>2</sub> concentration changes, the outside air damper modulates to meet the current ventilation needs of the zone

### Economizer (Standard) — Downflow

- Assembly includes fully modulating 0–100% motor and dampers, barometric relief, minimum position setting, preset linkage, wiring harness with plug, fixed dry bulb and spring return actuator
- Barometric relief damper shall provide a pressure operated damper that shall be gravity closing and shall prohibit entrance of outside air during the equipment “off” cycle

### Economizer — Horizontal

The horizontal economizer shall contain the same features as the downflow economizer with the exception of barometric relief.

### Electric Heaters

- Electric heat modules shall be available for installation within the basic unit
- Elements shall be constructed of heavy-duty nickel chromium elements internally delta connected for 240 volt, wye connected for volt
- Power assemblies shall provide single-point connection
- Electric heat modules shall be UL listed or CSA certified
- If ordering the Through the Base Electrical option with an Electric Heater, the heater must be factory installed.

### Hail Guards

Tool-less, hail protection quality coil guards are available for condenser coil protection.

### Low Leak Economizer with Fault Detection & Diagnostics – Downflow

- Controller shall have the capability to provide the value of each sensor used in controlling the economizer operation
- System status is also indicated for the following conditions:
  - Free cooling available
  - Economizer enabled
  - Compressor enabled
  - Heating Enabled

## Mechanical Specifications

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- Mixed air low limit cycle active
- Fault Detection and Diagnostic system detects the following faults:
  - Air temperature sensor failure/fault
  - Not economizing when conditions indicate system should be economizing
  - Economizing when conditions indicate system should not be economizing
  - Dampers are not modulating
  - Excessive amounts of outside air are being introduced through the economizer
- Fault Detection and Diagnostic system is certified by the California Energy Commission as meeting requirements of California Title 24 120.2(i)1 through 120.2(i)8 in accordance with Section 100(h)

### Manual Outside Air Damper

Manually set outdoor air dampers shall provide up to 50% outside air.

### Motorized Outside Air Damper

- Outdoor air dampers shall open to set position when indoor fan starts
- Damper shall close to the full closed position when indoor fan shuts down

### Powered Exhaust

The powered exhaust shall provide exhaust of return air, when using an economizer, to maintain better building pressurization.

### Reference or Comparative Enthalpy

- Used to measure and communicate outdoor humidity
- Unit receives and uses this information to provide improved comfort cooling while using the economizer
- Comparative Enthalpy measures and communicates humidity for both outdoor and return air conditions, and return air temperature – unit receives and uses this information to maximize use of economizer cooling, and to provide maximum occupant comfort control
- Reference or Comparative Enthalpy option shall be available when a factory or field installed Downflow Economizer is ordered
- Option is available on all models

### Remote Potentiometer

The minimum position setting of the economizer shall be adjusted with this accessory.

### Through the Base Gas Piping

- Unit shall include a standard through the base gas provision
- Option shall have all piping necessary including, black steel, manual gas shut-off valve, elbows, and union
- Manual shutoff valve shall include a 1/8-inch NPT pressure tap
- Assembly will require minor field labor to install (Gas/Electric Only)

### Through the Base Utilities Access

- Electrical service entrance shall be provided allowing electrical access for both control and main power connections inside the curb and through the base of the unit
- Option shall allow for field installation of liquid-tight conduit and an external field installed disconnect switch