

Township Archives
Township of Brick, NJ
401 Chambers Bridge Rd, Brick, NJ 08723

***This File Contains Personal Identifiable
Information of Private Citizen(s).***

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- Social Security Numbers
- Drivers' License Numbers
- Unlisted Phone Numbers
- Credit Card Numbers
- Bank Account Numbers and Balances

For further information, consult with the Township Clerk, Township Archivist or Township Attorney prior to release.

A handwritten signature in black ink, appearing to read "Bryan J. Dickerson", is written over the printed name.

Bryan J. Dickerson, CA, CMR
Township Archivist

Issued: 8 January 2020

BLOCK 827 LOT 19 QUALIFICATION CODE _____ ADDRESS (SITE) _____ PERMIT NO. 20-3021



CONSTRUCTION PERMIT APPLICATION

Applicant Completes: Sections I, II, III (optional), IV, VI, and VII

C18-002416

I. IDENTIFICATION

1. Proposed Work Site at: 1617 Route 88 West Brick NJ 08724

2. Name of Owner in Fee: Dr. Richard J. Depalma

Tel. (732) 4585746 e-mail _____

Address _____

3. Ownership in Fee: Public _____ Private _____

4. Principal Contractor: Rossicasons Plumbing Tel. (732) 513-7769

Address 2019 Margerum Ave e-mail _____
Lake Comp CT 07719

License No. OR, if new home, Builder Reg. No. 19HC 00406500 Exp. Date 6-30-2020

Home Improvement Contractor Registration No. or Exemption Reason (if applicable): _____

Federal Emp. ID No. _____ FAX: (_____) _____

5. Architect or Engineer _____ Contact _____

Address _____ e-mail _____

Tel. (_____) _____ FAX: (_____) _____

6. Responsible Person in Charge once Work has Begun _____

Tel. (_____) _____ FAX: (_____) _____

V. FEE SUMMARY (for office use only)

	Update	Update
1. Building	\$ <u>100</u>	
2. Electrical	\$ <u>150</u>	
3. Plumbing		
4. Fire Protection		
5. Elevator Devices		
6. Subtotal		
7. Less 20% for State Plan Review	\$	
8. Subtotal	\$	
9. State Permit Surcharge Fee	\$ <u>10</u>	
10. Subtotal	\$	
11. Cert. of Occupancy		
12. Other		
13. TOTAL	\$ <u>310</u>	

VI. BUILDING/SITE CHARACTERISTICS

	(office use only)
1. Number of Stories	
2. Height of Structure	ft.
3. Area — Largest Floor	sq. ft.
4. New Building Area	sq. ft.
5. Volume of New Structure	cu. ft.
6. Max. Live Load	
7. Max. Occupancy Load	
8. If Industrialized Building: State Approved _____ HUD _____	
9. Total Land Area Disturbed	sq. ft.
10. Flood Hazard Zone	
11. Base Flood Elevation	ft.
12. Wetlands yes _____ no _____	

IIa. PROPOSED WORK

☐ Minor Work ☐ New Building ☐ Addition ☐ Demolition

☐ Repair ☐ Alteration ☐ Renovation ☐ Reconstruction

☐ Asbestos Abat. -Subch. 8 ☐ Lead Hazard Abatement ☐ Radon Remediation ☐ Annual Permit

IIb. SUBCODES (Check all that apply)

	Est. Cost	Plans Rec'd by	Date Rec'd	Rejection Date	Approval Date	Re-viewer	Resubmission Dates Approval	Rejection	Re-viewer
☐ Building									
☐ Electrical									
☐ Plumbing									
☐ Fire Protection									
☐ Elevator									
TOTAL COST									

VII. DESCRIPTION OF BUILDING USE

A. RESIDENTIAL (primary use)

1. State Specific Use: _____

2. Use Group, Proposed: _____

3. Change in Use Group, Indicate Present: _____

4. No. of dwelling units: Total Units Income-restricted

Gained, Sale	
Gained, Rental	
Lost, Sale	
Lost, Rental	

B. NON-RESIDENTIAL (primary use)

1. State Specific Use: _____

2. Use Group, Proposed: _____

3. Change in Use Group, Indicate Present: _____

C. MIXED USE -List secondary use(s): _____

D. Construct. Classification: Present _____ Proposed _____

III. PLAN REVIEW (optional)

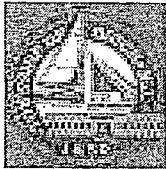
DO YOU WANT:

1. ☐ Partial Releases

2. ☐ Prototype Processing

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

1. ☐ Elevators/Escalators/Lifts/Dumbwaiters/Moving Walks	4. ☐ Refrigeration Systems	8. ☐ Smoke Control Systems in Open Wells	12. ☐ Fire Alarm
2. ☐ High Pressure Boilers	5. ☐ Cross-Connections/Backflow Preventers	9. ☐ Underground Storage Tanks	
3. ☐ Pressure Vessels	6. ☐ Hazardous Uses/Places of Assembly	10. ☐ Swimming Pools, Spas and Hot Tubs	
	7. ☐ Sprinklers/Standpipes	11. ☐ LPGas Tanks	



Brick Township
401 Chambersbridge Rd
Brick, NJ 08723

Date Issued 1/12/2021
Control Number C-18-002416
Permit Number 20-3021
Permit Issue Date 12/23/2020
Certificate Number 20-3021

Certificate
Construction Code Division
(Certificate of Approval)

Identification

Work Site Location: 1617 ROUTE 88 Brick Township, NJ Block: 827 Lot: 19 Qual: _____
Owner in Fee: 1617 ROUTE 88 WEST ASSOCIATES
Owner Address: 1617 ROUTE 88 WEST BRICK NJ 08724
Telephone: (732) 458-5746
Contractor Rossics and Son Plumbing & Heating
Address 2019 Marcrum Avenue Lake Como NJ 07719
Telephone: 732 5137769 Fax: _____ Federal Emp. Number: _____
License Number or Builders Registration Number: _____
Home Warranty Number: _____ Type of Warranty Plan: ☐ State ☐ Private
Use Group: B Construction Classification: _____
Maximum Live Load: 0 Maximum Occupancy Load: 0
Description of Work/Use: AIR CONDITIONER

Certificate Comments:

☐ **Certificate of Occupancy**

This serves notice that said building or structure has been constructed in accordance with the New Jersey Uniform Construction Code and is approved for occupancy.

☒ **Certificate of Approval**

This serves notice that the work completed has been constructed or installed in accordance with the New Jersey Uniform Construction Code and is approved. If the permit was issued for minor work, this certificate was based upon what was visible at the time of inspection.

☐ **Certificate of Continued Occupancy**

This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

☐ **Temporary Certificate of Compliance**

The following conditions must be met no later than or the owner will be subject to fine or order to vacate:
This certificate has an expiration date of:
Conditions to be met:

☐ **Certificate of Clearance - Lead Abatement 5:17**

This serves notice that based on written certification, lead abatement was performed as per NJAC5:17 to the following extent.

- ☐ Total removal of lead-based paint hazards in scope of work
- ☐ Partial or limited time period (years); see file

☐ **Certificate of Clearance - Asbestos Abatement**

This serves notice that based on written certification, asbestos abatement was performed to the following extent.

- ☐ Total removal of asbestos hazards in scope of work
- ☐ Partial or limited time period (years); see file

☐ **Certificate of Compliance**

This serves notice that said potentially hazardous equipment has been installed and/or maintained in accordance with the New Jersey Uniform Construction Code and is approved for use until

☐ **Temporary Certificate of Occupancy**

The following conditions must be met no later than: or the owner will be subject to fine or order to vacate:
This certificate has an expiration date of:
Conditions to be met:

Daniel Newman Jr.

Construction Official

Date Printed: 1/12/2021

U.C.C. F260 (rev. 08/05)

Fee: \$0.00
Check Number: _____
Collected By: _____



PLUMBING SUBCODE TECHNICAL SECTION



A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 827 Lot 19 Qualification Code _____
 Work Site Location 1617 Route 88 West
Brick NJ 08724
 Owner in Fee: Dr Richard J Depalma
 Tel. 732 458 5746 e-mail _____

Address _____
 Contractor: Rossios & Sons Plumbing Tel. 732.513.7769
 Address 2019 Marguerite Ave e-mail _____
Lake Como NJ 07719

Contractor License No. 19HC00406500 Exp. Date 6.30.2020
 Home Improvement Contractor Registration No. or Exemption Reason _____
 Federal Emp. ID No. _____ FAX: _____

B. PLUMBING CHARACTERISTICS

Use Group Present _____ Proposed _____
 Building Sewer Size _____ Public Sewer _____ Private Septic _____
 Water Service Size _____ Public Water _____ Private Well _____
\$ 8,000.00

JOB SUMMARY (Office Use Only)		Dates (Month/Day)			
PLAN REVIEW	INSPECTIONS	Failure	Failure	Approval	Initial
☒ No Plans Required	Type:				
☐ Partial Underslab Utilities Approved	Slab				
Date: _____ Approved by: _____	Rough				
☐ Plumbing Plans Approved	Water				
Date: _____ Approved by: _____	Sewer				
Joint Plan Review Required:	Fixtures				
☐ Bldg. ☐ Elec. ☐ Fire ☐ Elev.	Gas Equipment				
SUBCODE APPROVAL for PERMIT	Gas Piping				
Date: _____ Approved by: _____	LPGas Tank				
SUBCODE APPROVAL for CERTIFICATE	Fuel Oil Piping				
☐ CO ☐ CCO ☐ CA	Solar				
Date: <u>1-8-20</u>	TCO				
Approved by: <u>[Signature]</u>	Final				

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

Applicant sign/Contractor

sign and seal here: [Signature]

Print name here: Paul Rossios

☒ Licensed Plumbing Contractor

☐ Exempt Applicant

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

direct replacement of AC

QTY.	FIXTURE/EQUIPMENT	FEE (Office Use Only)
_____	Water Closet	\$ _____
_____	Urinal/Bidet	_____
_____	Bath Tub	_____
_____	Lavatory	_____
_____	Shower	_____
_____	Floor Drain	_____
_____	Sink	_____
_____	Dishwasher	_____
_____	Drinking Fountain	_____
_____	Washing Machine	_____
_____	Hose Bibb	_____
_____	Water Heater	_____
_____	Fuel Oil Piping	_____
_____	Gas Piping	_____
_____	LPGas Tank	_____
_____	Steam Boiler	_____
_____	Hot Water Boiler	_____
_____	Sewer Pump	_____
_____	Interceptor/Separator	_____
_____	Backflow Preventer	_____
_____	Greasetrapp	_____
_____	Sewer Connection	_____
_____	Water Service Connection	_____
_____	Stacks	_____
1	Other <u>AC 10 Ton</u>	_____

Administrative Surcharge	\$ _____
Minimum Fee	\$ _____
State Permit Surcharge Fee	\$ _____
TOTAL FEE	\$ _____



ELECTRICAL SUBCODE TECHNICAL SECTION



Date Received
Control #
Date Issued
Permit #

12/23/2020

20-3021

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 82-7 Lot 19 Qualification Code _____

Work Site Location 1617 Route 88 West

Brick, NJ 08124

Owner in Fee: Dr. Richard J Depalma

Tel. 732 458 5746 e-mail _____

Address _____

Contractor: Rossica & Sons Plumbing Tel. 732 513 7769

Address 2019 Margaret Ave e-mail _____

Contractor License No. 19HC00406500 Exp. Date 6-30-2020

Home Improvement Contractor Registration No. or Exemption Reason _____

Federal Emp. ID No. _____ FAX: _____

B. ELECTRICAL CHARACTERISTICS

Use Group Present _____ Proposed _____

[] Pole/Pad # _____ [] Temporary [] Other _____

Building Occupied as _____ Utility Co. _____

Est. Cost of Elec. Work \$ 308.00

JOB SUMMARY (Office Use Only)		INSPECTIONS		Dates (Month/Day)	
PLAN REVIEW		Type:	Failure	Failure	Approval
[] No Plans Required		Rough			
[] Partial -Underslab Utilities Approved		Barrier-Free			
Date: _____ Approved by: _____		Trench			
[] Electric Plans Approved		Temp. Serv.			
Date: _____ Approved by: _____		Constr. Serv.			
Joint Plan Review Required:		TCO			
[] Bldg. [] Plumb. [] Fire. [] Elev.		Other			
SUBCODE APPROVAL for PERMIT		Service			
Date: _____		Final			
Approved by: _____		Barrier-Free			
SUBCODE APPROVAL for CERTIFICATE		Temp. Cut-in-Card	Date Issued		
[] CO [] CCO [] CA		Final Cut-in-Card	Date Issued		
Date: <u>1-5-21</u>		Annual Pool Inspection			
Approved by: <u>UN</u>		Date of Grounding and Bonding			
		Certification			

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application.

Applicant sign/Contractor sign and seal here: Paul Rossica

Print name here: Paul Rossica

[X] Licensed Elec. Contractor [] Certif'd Landscape Irrigation Contractor [] Exempt Applicant

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK: direct replacement of AC

QTY.	SIZE	ITEMS	FEE (Office Use)
_____	_____	Lighting Fixtures	_____
_____	_____	Receptacles	_____
_____	_____	Switches	_____
_____	_____	Detectors	_____
_____	_____	Light Poles	_____
_____	_____	Motors—Fract. HP	_____
_____	_____	Emergency & Exit Lights	_____
_____	_____	Communications Points	_____
_____	_____	Alarm Devices/E.A.C. Panel	_____
_____	_____	TOTAL NUMBERS	\$ _____
_____	_____	Pool Permit/with UW Lights	_____
_____	_____	Storable Pool/Spa/Hot Tub	_____
_____	_____	KW Elec. Range/Receptacle	_____
_____	_____	KW Oven/Surface Unit	_____
_____	_____	KW Elec. Water Heater	_____
_____	_____	KW Elec. Dryer/Receptacle	_____
_____	_____	KW Dishwasher	_____
_____	_____	HP Garbage Disposal	_____
_____	_____	KW Central A/C Unit	_____
_____	_____	HP/KW Space Heater/Air Handler	_____
_____	_____	KW Baseboard Heat	_____
_____	_____	HP Motors 1/+ HP	_____
_____	_____	KW Transformer/Generator	_____
_____	_____	AMP Service	_____
_____	_____	AMP Subpanels	_____
_____	_____	AMP Motor Control Center	_____
_____	_____	KW Elec. Sign/Outline Light	_____

Administrative Surcharge \$ _____
Minimum Fee \$ _____
State Permit Surcharge Fee \$ _____
TOTAL FEE \$ _____



CONSTRUCTION PERMIT

Date Issued 12/23/20
Control # C-18-002416
Permit # 1321

IDENTIFICATION Block: 827 Lot: 19 Qualifier _____
Work Site Location: 1617 ROUTE 88 Brick Township, NJ Contractor Rossics and Son Plumbing & Heating
Address 2019 Marcrum Avenue Lake Como NJ 07719
Owner in Fee 1617 ROUTE 88 WEST ASSOCIATES
1617 ROUTE 88 WEST BRICK NJ 08724 Telephone: 732 5137769
Lic. No. or Bldrs. Reg. No. 11207 11207 11207
Telephone: (732) 458-5746 Federal Employee. No. _____

Is hereby granted permission to perform the following work:

- ☐ BUILDING ☒ PLUMBING ☐ LEAD HAZARD ABATEMENT
☒ ELECTRICAL ☐ FIRE PROTECTION ☐ DEMOLITION
☐ ELEVATOR DEVICES ☐ ASBESTOS ABATEMENT (Subchapter 8 only) ☐ OTHER

DESCRIPTION OF WORK:

AIR CONDITIONER

Note: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.
Estimated Cost of Work \$8,300

Construction Official [Signature]

Date 6/27/18

U.C.C. F170
equiv (rev 1/04)

1 WHITE - INSPECTOR

2 CANARY - OFFICE

3 PINK - TAX ASSESSOR

4 GOLD - APPLICANT

PAYMENTS (Office Use Only)

Building	\$0
Electrical	\$150
Plumbing	\$150
Fire Protection	\$0
Elevator Devices	\$0
Other	\$0.00
DCA Training Fee	\$16
CO Fee	
Other	\$0
Total	\$316
Check No.	<u>1211</u>
Cash	\$0
Credit	\$0
Collected By	<u>M. Eagon</u>

REQUIRED INSPECTIONS

Construction work must be inspected in accordance with the State Uniform Construction Code Regulations N.J.A.C. 5:23-2.18. This agency will carry out such periodic inspections during the progress of work as are necessary to insure that the work installed conforms with the requirements of the Uniform Construction Code.

The owner or other responsible person in charge of work must notify this agency when work is ready for any required inspections specified below. Requests for inspections must be made at least 24 hours prior to the time the inspection is desired. Inspections will be performed within three business days of the time for which they are requested. The work must not proceed in a manner which will preclude the inspection until it has been made and approval granted.

☐ Required inspections for all subcodes for one- and two-family dwellings are as follows:

1. The bottom of footing trenches before placement of footings, except that in cases of pile foundations, inspections shall be made in accordance with the requirements of the building subcode.
2. Foundations and all walls up to grade level prior to back filling.
3. All structural framing, connections, wall and roof sheathing and insulation; electrical rough wiring, panel and service installation; rough plumbing. The framing inspection shall take place after the rough electrical and plumbing inspections and after the installation of the heating, ventilation and /or air conditioning duct system. The insulation inspection shall be performed after all other subcode rough inspections and prior to the installation of any interior finish material.
4. Installation of all finished materials, sealings of exterior joints, plumbing piping, trim and fixtures; electrical wiring, devices and fixtures; mechanical systems equipment.

Additional required inspections for all subcodes of construction, for other than one- and two-family dwellings, are fire suppression systems, heat producing devices and Barrier Free subcode accessibility, if applicable.

☐ Required special inspections. The applicant by accepting the permit will be deemed to have consented to these requirements:

- ☒ A final inspection is required for each applicable subcode area before a final Certificate of Occupancy or Approval may be issued. The final inspections include the installation of all interior and exterior finish materials, sealing of exterior joints, mechanical system and other required equipment; electrical wiring, devices and fixtures; plumbing pipes, trim and fixtures; tests required by any provision of the adopted subcodes, Barrier Free accessibility, if applicable; and verification of compliance with NJAC 5:23-3.5, "Posting structures".

☐ A complete copy of released plans must be kept on the job site.

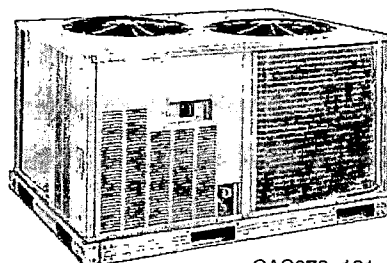
If you do not understand any of this information, please ask.

COMMERCIAL SPLIT SYSTEMS CONDENSING UNITS

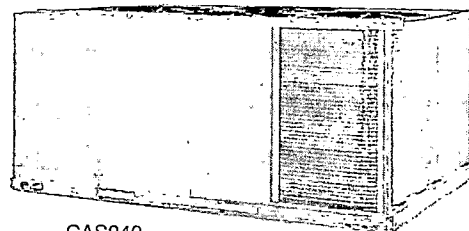
R-410A, 6 to 20 TONS

BUILT TO LAST, EASY TO INSTALL AND SERVICE

- Single stage cooling capacity control on all 072 to 150 models
 - Terminal board facilitating simple safety circuit troubleshooting and simplified control box
 - Outdoor temperature cooling operation range up to 125°F (52°C) and down to 35°F (2°C)
 - All models utilize copper tube / aluminum plate fin coils
 - Brass suction and liquid line service valves
 - Full perimeter base rail with built-in rigging adapters and fork truck slots
 - Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
 - Compressors mounted on independent vibration isolators
 - High capacity filter drier is supplied for each circuit. Field installation is required
 - Comfort Alert™ Diagnostic Board
 - LED Go-No-Go and fault code
 - Built in time guard anti-short cycle
 - 3-phase fault protection
 - Fault code retention logic
 - Low volt compressor contactor protector
 - All units have high and low pressure switches
 - Direct drive permanently lubricated condenser fan motors
 - UL and UL, Canada apply to standard units; 575 volt units UL, Canada only
- LIMITED WARRANTY**
- 5 Year compressor limited warranty
 - 1 Year parts limited warranty



CAS072-121



CAS240



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



UNIT PERFORMANCE DATA¹ - Single Circuit

Model Number	COOLING			Total Power (KW)	Unit Dimensions H x W x L Inches [mm]	Ship Weight lb. / kg
	Nominal Capacity Ton	Net Capacity BTUH	E.E.R			
CAS072*AA0A00A	6	71,000	11.5	6.2	42-3/8 x 59-3/8 x 45-7/8 [1077 x 1508 x 1164]	389 / 176
CAS091*AA0A00A	7.5	92,000	11.2	8.2	42-3/8 x 59-3/8 x 45-7/8 [1077 x 1508 x 1164]	391 / 177
CAS121*AA0A00A	10	117,000	11.2	10.4	50-3/8 x 59-3/8 x 45-7/8 [1279 x 1507 x 1164]	490 / 222
CAS151*AA0A00A	12.5	148,000	11.0	13.5	50-3/8 x 59-3/8 x 45-7/8 [1279 x 1507 x 1164]	598 / 271
CAS181*AA0A00A	15	184,000	11.2	16.4	50-3/8 x 86-3/8 x 45-1/8 [1279 x 2193 x 1148]	731 / 322
CAS241*AA0A00A	20	240,000	11.0	21.8	50-3/8 x 86-3/8 x 67-1/8 [1279 x 2193 x 1704]	978 / 444

UNIT PERFORMANCE DATA¹ - Dual Circuit

CAS120*DA0A00A	10	117,000	11.2	10.4	50-3/8 x 59-3/8 x 45-7/8 [1279 x 1507 x 1164]	516 / 234
CAS150*DA0A00A	12.5	148,000	11.0	13.5	50-3/8 x 59-3/8 x 45-7/8 [1279 x 1507 x 1164]	654 / 297
CAS180*DA0A00A	15	184,000	11.2	16.4	50-3/8 x 86-3/8 x 45-1/8 [1279 x 2193 x 1148]	731 / 322
CAS240*DA0A00A	20	240,000	11.0	21.8	50-3/8 x 86-3/8 x 67-1/8 [1279 x 2193 x 1704]	978 / 444

* - Indicates Unit voltage: H = 208/230-3-60, L = 460-3-60, S = 575-3-60

¹ - Above ratings are with matching size air handling unit

MODEL NUMBER NOMENCLATURE

MODEL SERIES	C	A	S	0	9	1	H	A	A	0	A	0	0	A
Position Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14
C = R-410A Condensing Unit														
A = Air Conditioning (Cooling Only)														
H = Heat Pump														
S = Standard ASHRAE 90.1-2010 Efficiency														
072 = 71,000 BTUH = 6 Tons														
091 = 92,000 BTUH = 7.5 Tons (1 circuit)														
120 = 117,000 BTUH = 10 Tons (2 circuit)														
121 = 117,000 BTUH = 10 Tons (1 circuit)														
150 = 148,000 BTUH = 12.5 Tons (2 circuit)														
151 = 148,000 BTUH = 12.5 Tons (1 circuit)														
180 = 180,000 BTUH = 15 Tons (2 circuit)														
181 = 180,000 BTUH = 15 Tons (1 circuit)														
240 = 240,000 BTUH = 20 Tons (2 circuit)														
241 = 240,000 BTUH = 20 Tons (1 circuit)														
H = 208/230-3-60														
L = 460-3-60														
S = 575-3-60														
A = Single Circuit														
B = Single Circuit w/ Low Ambient Control														
D = Dual Circuit														
E = Dual Circuit w/ Low Ambient Control														
G = Single Circuit 2 Stage (072 & 091 models only)														
H = Single Circuit 2 Stage w/ Low Ambient Control (072 & 091 models only)														
A = Cu/Al Cond. RTPF														
B = Precoat Al/Cu Cond. RTPF														
C = E-Coat Al/Cu Cond. RTPF														
E = Cu/Cu Cond. RTPF														
0 = None														
1 = Non-powered 115v Convenience Outlet														
A = None														
C = Non-Fused Disconnect Switch														
0 = Standard Elec-Mechanical Control														
0 = No options, reserved for future Use														
A = Original Design														



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



CAS - 6 to 12.5 Ton
CAS - 10 to 12.5 Ton



CAS - 15 to 20 Ton



Certified to ISO 9001

AHRI* CAPACITY RATINGS

UNIT	COOLING STAGES	COMPRESSORS	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	EER	IEER	IEER w/ 2-SPEED
CAS072(A,B)/FAS072	1	1	6	71.0	6.2	11.5	12.2	N/A
CAS091(A,B)/FAS091	1	1	7.5	92.0	8.2	11.2	11.8	N/A
CAS121(A,B)/FAS120	1	1	10	117.0	10.4	11.2	12.0	N/A
CAS151(A,B)/FAS150	1	1	12.5	148.0	13.5	11.0	12.0	N/A
CAS181(A,B)/FAS180	1*	2	15	184.0	16.4	11.2	13.2	14.3
CAS241(A,B)/FAS240	1*	2	20	240.0	21.8	11.0	12.5	13.6

* Single circuit with two (tandem) compressors.

UNIT	COOLING STAGES	COMPRESSORS	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	EER	IEER	IEER w/ 2-SPEED
CAS072(G,H)/FAS072	2	1	6	70.0	5.8	12.0	12.2	14.0
CAS091(G,H)/FAS091	2	1	7.5	92.0	8.2	11.2	11.8	12.9
CAS120(G,H)/FAS120	2	2	10	117.0	10.4	11.2	11.6	13.0
CAS150(G,H)/FAS150	2	2	12.5	148.0	13.5	11.0	12.0	12.5
CAS180(G,H)/FAS180	2	2	15	184.0	16.4	11.2	11.8	12.6
CAS240(G,H)/FAS240	2	2	20	240.0	21.8	11.0	11.2	12.0

LEGEND

AHRI – Air Conditioning, Heating and Refrigeration Institute
ASHRAE – American Society of Heating, Refrigerating and Air Conditioning, Inc.
EER – Energy Efficiency Ratio
IEER – Integrated Energy Efficiency Ratio

NOTES

1. Rated in accordance with AHRI Standard 340/360, as appropriate.
2. Ratings are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 95°F (35°C) db outdoor air temp.
IEER Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 4 various outdoor temperatures.
3. All units comply with ASHRAE 90.1 Energy Standard for minimum EER and IEER requirements.

SOUND POWER LEVELS, dB

UNIT	COOLING CIRCUITS	OUTDOOR SOUND (dB)								
		A—WEIGHTED	63	125	250	500	1000	2000	4000	8000
RTPF — Round Tube/Plate Fin Coil Design										
CAS072	1 & 2	85	89.3	85.0	82.0	82.7	80.2	75.2	71.0	66.0
CAS091	1 & 2	85	89.3	85.0	82.0	82.7	80.2	75.2	71.0	66.0
CAS121	1	83	86.6	81.9	85.7	80.0	77.1	74.6	69.2	65.8
CAS120	2	84	86.3	85.8	81.4	81.9	79.5	75.1	71.9	68.9
CAS151	1	84	89.1	85.7	83.0	81.1	79.3	74.9	69.7	62.2
CAS150	2	83	81.7	80.9	82.2	80.4	78.2	73.6	69.7	65.4
CAS181	1	83	86.7	81.2	78.9	80.4	78.0	74.2	70.2	65.0
CAS180	2	83	86.7	81.2	78.9	80.4	78.0	74.2	70.2	65.0
CAS241	1	85	91.0	85.0	80.0	86.0	79.0	73.0	68.0	63.0
CAS240	2	85	91.0	85.0	80.0	86.0	79.0	73.0	68.0	63.0

LEGEND

dB = Decibel

NOTE: Outdoor sound data is measure in accordance with AHRI standard 270.

PHYSICAL DATA

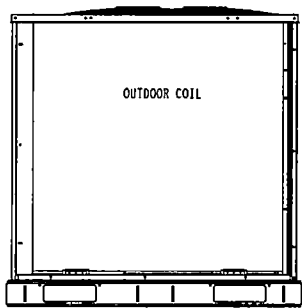
Single Circuit Models with RTPF – Round Tube/Plate Fin Coil Design								
	CAS072 (A,B)	CAS072 (G,H)	CAS091 (A,B)	CAS091 (G,H)	CAS121	CAS151	CAS181	CAS241
Refrigeration System								
# Circuits / # Comp. / Type	1 / 1 / Scroll	1 / 1 / 2 Stage Scroll	1 / 1 / Scroll	1 / 1 / Digital Scroll	1 / 1 / Scroll	1 / 1 / Scroll	1 / 2 / Scroll	1 / 2 / Scroll
R-410a charge A/B (lbs)	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
System charge w/ fan coil*	14.0	14.0	17.0	18.0	20.0	43.0	43.0	38.0
Metering device	TXV	TXV	TXV	TXV	TXV	TXV	TXV	TXV
High—press. Trip / Reset (psig)	630 / 505	630 / 505	630 / 505	630 / 505	630 / 505	630 / 505	630 / 505	630 / 505
Low—press. Trip / Reset (psig)	54 / 117	54 / 117	54 / 117	54 / 117	54 / 117	54 / 117	54 / 117	54 / 117
Cond. Coil								
Material (Fin/Tube)	Al/Cu	Al/Cu	Al/Cu	Al/Cu	Al/Cu	Al/Cu	Al/Cu	Al/Cu
Coil type	RTPF	RTPF	RTPF	RTPF	RTPF	RTPF	RTPF	RTPF
Rows / FPI	2 / 17	2 / 17	2 / 17	2 / 17	2 / 17	3 / 17	2 / 17	2 / 17
Total face area (ft ²)	17.5	17.5	17.5	23.0	25.1	31.8	23.5 x 2	25.0 x 2
Cond. fan / motor								
Qty / Motor drive type	2 / direct	2 / direct	2 / direct	2 / direct	2 / direct	2 / direct	3 / direct	4 / direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan diameter (in)	22	22	22	22	22	22	22	22
Nominal Airflow (cfm)	6,000	6,000	6,000	6,000	6,000	6,000	9,000	12,000
Watts (total)	610	610	610	610	610	610	970	1150

* Approximate system charge with about 25 ft piping of sizes indicated with matched FAS

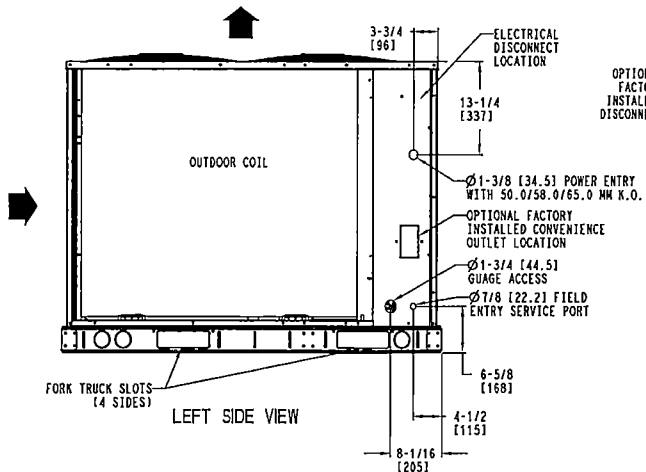
Dual Circuit Models with RTPF – Round Tube/Plate Fin Coil Design				
	CAS120 (D,E)	CAS150 (D,E)	CAS180 (D,E)	CAS240 (D,E)
Refrigeration System				
# Circuits / # Comp. / Type	2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll
R-410a charge A/B (lbs)	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0	9.0 / 9.0
System charge w/ fan coil*	11.0 / 11.0	22.0 / 22.0	22.0 / 22.0	19.0 / 19.0
Metering device	TXV	TXV	TXV	TXV
High—press. Trip / Reset (psig)	630 / 505	630 / 505	630 / 505	630 / 505
Low—press. Trip / Reset (psig)	54 / 117	54 / 117	54 / 117	54 / 117
Cond. Coil				
Material (Fin/Tube)	Al/Cu	Al/Cu	Al/Cu	Al/Cu
Coil type	RTPF	RTPF	RTPF	RTPF
Rows / FPI	2 / 17	3 / 17	2 / 17	2 / 17
total face area (ft ²)	25.1	31.8	23.5 x 2	25.0 x 2
Cond. fan / motor				
Qty / Motor drive type	2 / direct	2 / direct	3 / direct	4 / direct
Motor HP / RPM	1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100
Fan diameter (in)	22	22	22	22
Nominal Airflow (cfm)	6,000	6,000	9,000	12,000
Watts (total)	610	610	970	1150

* Approximate system charge with about 25 ft piping of sizes indicated with matched FAS

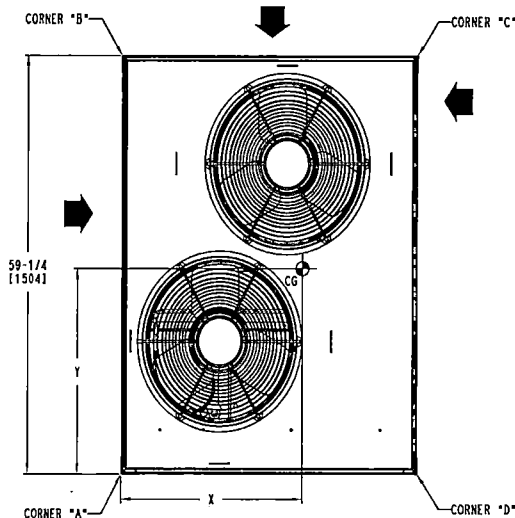
 CENTER OF GRAVITY
 DIRECTION OF AIR FLOW
 DIMENSIONS IN [] ARE IN MM



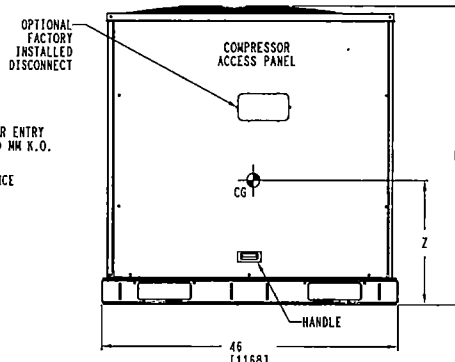
REAR VIEW



LEFT SIDE VIEW

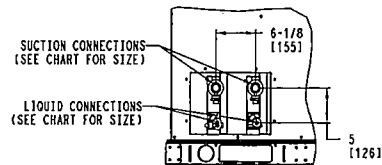


TOP VIEW

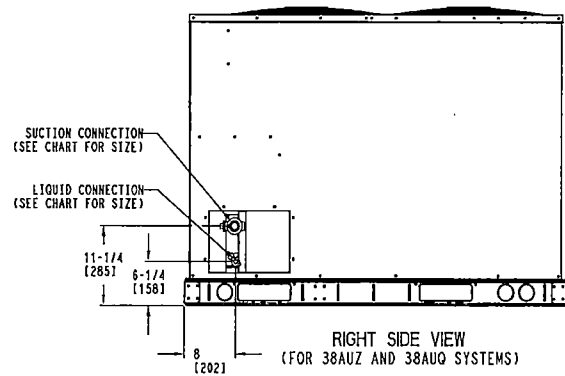


FRONT VIEW

SERVICE VALVE CONNECTIONS			
UNIT	SUCTION	LIQUID	QTY
CAS072	1-1/8 [28.6]	3/8 [9.5]	1
CAS091	1-1/8 [28.6]	1/2 [12.7]	1
CAS121	1-3/8 [34.9]	1/2 [12.7]	1
CAS161	1-3/8 [34.9]	5/8 [15.9]	1
CAS120	1-1/8 [28.6]	3/8 [9.5]	2
CAS150	1-3/8 [34.9]	1/2 [12.7]	2
CHS072	1-1/8 [28.6]	3/8 [9.5]	1
CHS090	1-1/8 [28.6]	1/2 [12.7]	1
CHS120	1-3/8 [34.9]	1/2 [12.7]	1



RIGHT SIDE VIEW
(FOR 38AUD SYSTEMS)



RIGHT SIDE VIEW
(FOR 38AUZ AND 38AUG SYSTEMS)

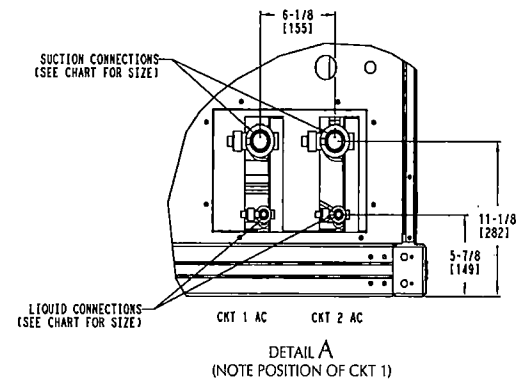
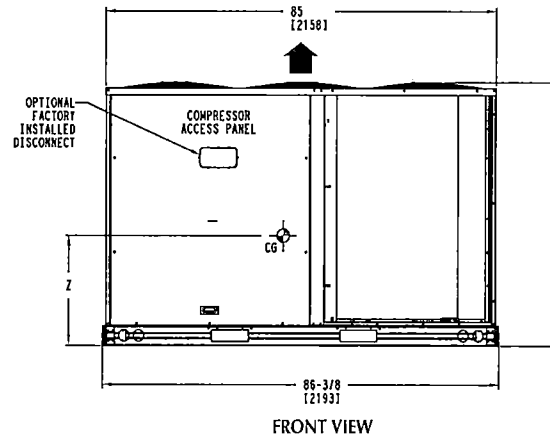
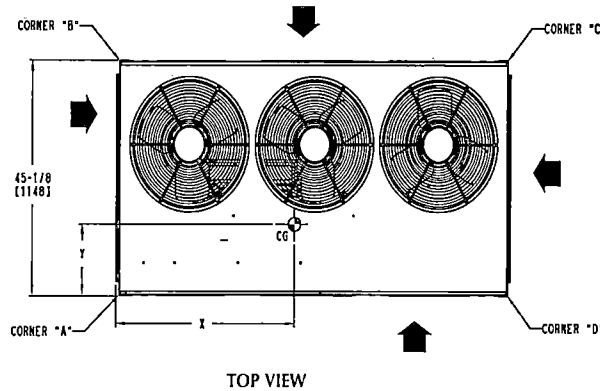
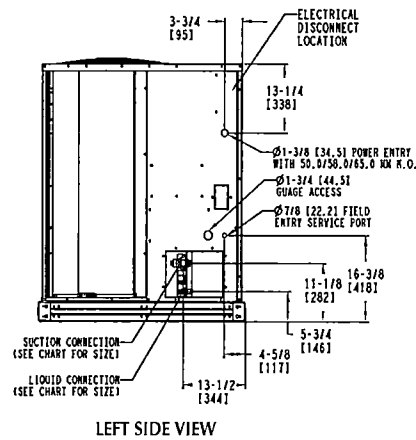
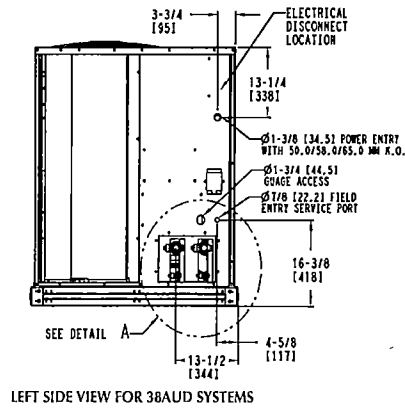
DIMENSIONS

UNIT	ELECTRICAL CHARACTERISTICS	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT H
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z	
CAS072	208/230-3-60,460-3-60,575-3-60	389	176	141	64	96	44	62	28	91	41	18 [457.2]	24 [609.6]	21 [533.4]	42-3/8 [1076.0]
CAS091 (A,B)	208/230-3-60,460-3-60,575-3-60	391	177	142	64	96	44	62	28	91	41	18 [457.2]	24 [609.6]	21 [533.4]	42-3/8 [1076.0]
CAS091 (D,E)	208/230-3-60,460-3-60,575-3-60	430	195	142	64	96	44	76	34	111	50	18 [457.2]	24 [609.6]	21 [533.4]	42-3/8 [1076.0]
CAS121	208/230-3-60,460-3-60,575-3-60	490	222	177	80	120	54	78	35	114	52	18 [457.2]	24 [609.6]	24 [609.6]	50-3/8 [1279.2]
CAS151	208/230-3-60,460-3-60,575-3-60	598	271	195	88	142	64	110	50	151	68	20 [508.0]	25 [635.0]	24 [609.6]	50-3/8 [1279.2]
CAS120	208/230-3-60,460-3-60,575-3-60	516	234	185	84	117	53	83	38	131	59	19 [482.6]	23 [584.2]	24 [609.6]	50-3/8 [1279.2]
CAS150	208/230-3-60,460-3-60,575-3-60	654	297	214	97	155	70	120	54	165	75	20 [508.0]	25 [635.0]	24 [609.6]	50-3/8 [1279.2]
CHS072	208/230-3-60,460-3-60,575-3-60	444	201	134	61	97	44	90	41	123	56	22 [558.8]	25 [635.0]	13 [330.2]	42-3/8 [1076.0]
CHS090 (A,B)	208/230-3-60,460-3-60,575-3-60	483	219	162	74	110	50	85	39	125	57	20 [508.0]	24 [609.6]	21 [533.4]	42-3/8 [1076.0]
CHS090 (D,E)	208/230-3-60,460-3-60,575-3-60	523	237	174	79	118	54	96	44	135	61	21 [533.4]	24 [609.6]	23 [584.2]	50-3/8 [1279.2]
CHS120	208/230-3-60,460-3-60,575-3-60	575	261	186	84	126	57	106	48	157	71	21 [533.4]	24 [609.6]	23 [584.2]	50-3/8 [1279.2]

NOTES:

1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
 - A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
 - B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL. STANDARD CLEARANCES ON REMAINING TWO SIDES.
 - C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
 - D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
 - E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
 - F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

UNIT	ELECTRICAL CHARACTERISTICS	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z	
CAS181	208/230-3-60, 460-3-60, 575-3-60	731	332	237	107	172	78	135	61	186	84	38 [165.2]	19 [482.6]	17 [431.8]	50-3/8 [1279.2]
CAS180	208/230-3-60, 460-3-60, 575-3-60	731	332	237	107	172	78	135	61	186	84	38 [165.2]	19 [482.6]	17 [431.8]	50-3/8 [1279.2]



NOTES:

1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
 - A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
 - B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER, THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
 - C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
 - D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
 - E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
 - F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
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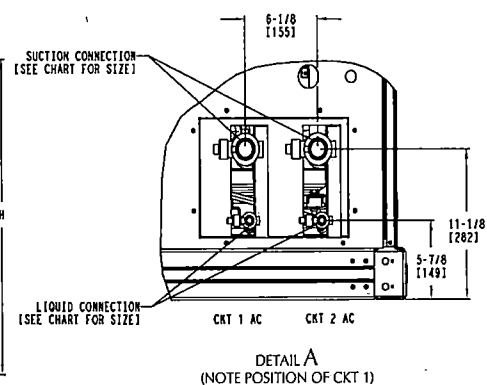
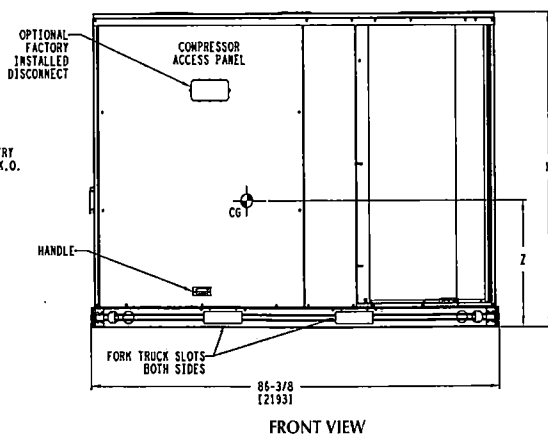
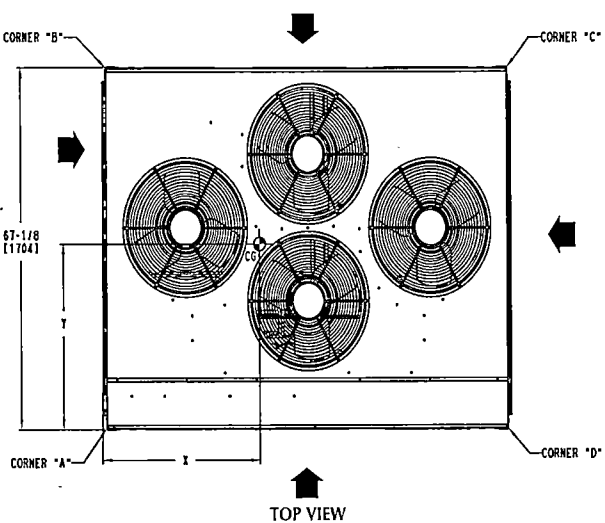
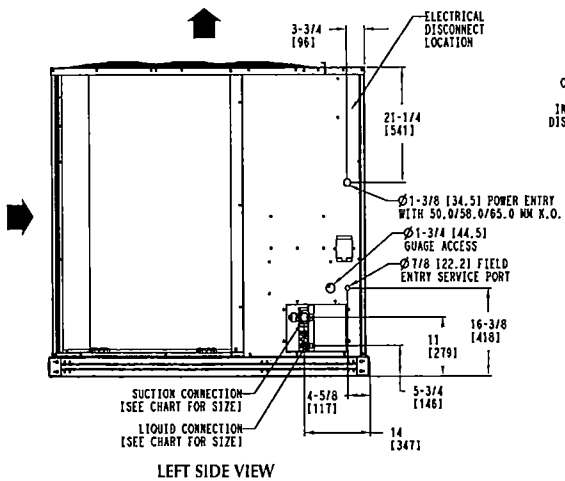
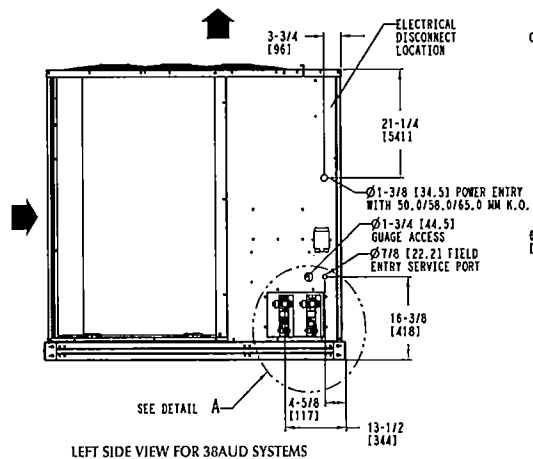
UNIT	SERVICE VALVE CONNECTIONS		QTY
	SUCTION	LIQUID	
CAS181	1-3/8 [34.9]	5/8 [15.9]	1 EA
CAS180	1-3/8 [34.9]	1/2 [12.7]	2 EA

CG CENTER OF GRAVITY

➔ DIRECTION OF AIR FLOW

DIMENSIONS IN [] ARE IN MM

UNIT	ELECTRICAL CHARACTERISTICS	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z	H
CAS241	208/230-3-60, 460-3-60, 575-3-60	978	444	360	163	188	85	147	67	283	128	38 [965.2]	23 [584.2]	17 [431.8]	50-3/8 [1279.2]
CAS240	208/230-3-60, 460-3-60, 575-3-60	978	444	360	163	188	85	147	67	283	128	38 [965.2]	23 [584.2]	17 [431.8]	50-3/8 [1279.2]



- NOTES:
1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
 - A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
 - B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER, THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
 - C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
 - D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
 - E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
 - F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
 2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
 3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

SERVICE VALVE CONNECTIONS				QTY
UNIT	SUCTION	LIQUID		
CAS241	1-5/8 [41.3]	5/8 [15.9]		1 EA
CAS240	1-3/8 [34.9]	1/2 [12.7]		2 EA

CG CENTER OF GRAVITY
 → DIRECTION OF AIR FLOW
 DIMENSIONS IN [] ARE IN MM

OPTIONS AND ACCESSORIES

CAS OPTIONS AND ACCESSORIES

ITEM	OPTION*	ACCESSORY†
Disconnect Switch (non-fused)‡	X	
Special-coated Coil Protection	X	
Convenience Outlet (115-v)**	X	
Low Ambient Temperature MotorMaster I® Control	X	X
Louvered Hail Guard		X
Programmable Thermostats		X

* Factory-installed option.

† Field-installed accessory.

‡ Non-fused disconnect switch cannot be used when unit MOCF electrical rating exceeds 80 amps.

** Non-powered versions available

CAS factory-installed options

CONDENSER COIL OPTIONS

Coil Coating Application – Round Tube/Plate Fin Coils

Description	Environment					
	Standard Non-Corrosive	Mild Coastal	Moderate Coastal	Severe Coastal	Industrial	Industrial & Coastal
Alum Fin / Cu Tube	X					
Pre-Coated Al / Cu		X				
E-Coated Al / Cu					X	X
Cu / Cu			X	X		

NOTE: Refer to the Guide Specifications for further detail.

E-coated aluminum-fin coils have a flexible and durable epoxy coating uniformly applied to all coil surfaces. Unlike brittle phenolic dip and bake coatings, E-coating provides superior protection with unmatched flexibility, edge coverage, metal adhesion, thermal performance, and most importantly, corrosion resistance.

E-coated coils provide this protection since all coil surfaces are completely encapsulated from environmental contamination. This coating is especially suitable in industrial environments.

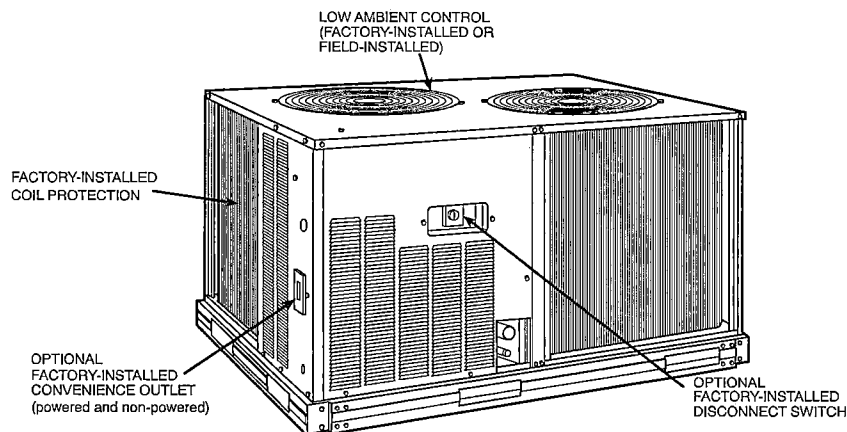
Pre-coated coils (RTPF coils only) provide protection in mild coastal environments.

-20°F (-29°C) low-ambient temperature kit option (MotorMaster I®) controls outdoor-fan motor operation to maintain the correct head pressure at low outdoor ambient temperatures.

Louvered hail guard package protects coils against damage from flying debris and hail.

115-v convenience outlet is used to power electric drills, lights, and refrigerant recovery machines. This means that a separate 115-v power supply is no longer necessary.

Non-fused disconnect switch is used to remove power locally at the condensing unit. This switch also includes a power lockout capability to protect the service person. This lockout switch saves the service person time and effort because there is no need to access a distant disconnect switch while servicing the unit.



C101216

OPTIONS AND ACCESSORIES (cont.)

CAS field-installed accessories

-20°F (-29°C) low-ambient temperature kit accessory (MotorMaster I®) controls outdoor-fan motor operation to maintain the correct head pressure at low outdoor ambient temperatures.

Louvered hail guard package protects coils against damage from flying debris and hail.

Condenser coil grille package protects condensing unit coil from impact by large objects and vandalism.

FAS OPTIONS AND ACCESSORIES

ITEM	OPTION*	ACCESSORY†
Alternate Fan Motors	X	
Alternate Drives	X	
CO ₂ Sensors		X
Condensate Drain Trap		X
Discharge Plenum		X
Economizer		X
Electric Heat		X
Overhead Suspension Package		X
Prepainted Units	X	
Return Air Grille		X
Steam Heating Coil		X
Subbase		X

* Factory-installed option.

† Field-installed accessory.

FAS factory-installed options

Alternate fan motors and drives are available to provide the widest possible range of performance.

Units constructed of prepainted steel are available from the factory for applications that require painted units. Unit color is American Sterling Gray.

FAS field-installed accessories

One-row steam coil has 1-in. OD copper tube and aluminum fins. The Inner Distributing Tube (IDT) design provides uniform temperatures across the coil face. The IDT steam coils are especially suited to applications where sub-freezing air enters the unit.

Electric resistance heat coils have an open-wire design and are mounted in a rigid frame. Safety cutouts for high temperature conditions are standard.

Economizer (enthalpy controlled) provides ventilation air and provides "free" cooling if the outside ambient temperature and humidity are suitable. The economizer can be used in both vertical and horizontal positions.

Discharge plenum directs the air discharge into the occupied space; integral horizontal and vertical louvers enable redirection of airflow. This accessory is available unpainted or painted.

Return-air grille provides a protective barrier over the return-air opening and gives a finished appearance to units installed in the occupied space. This accessory is available unpainted or painted.

Subbase provides a stable, raised platform and room for condensate drain connection for floor-mounted units. This accessory is available unpainted or painted.

Overhead suspension package includes necessary brackets to support units in horizontal installations.

CO₂ sensors can be used in conjunction with the economizer accessory to help meet indoor air quality requirements. The sensor signals the economizer to open when the CO₂ level in the space exceeds the setpoint. A programmable thermostat can also be used to override the sensor if the outside-air temperature is too high or too low.

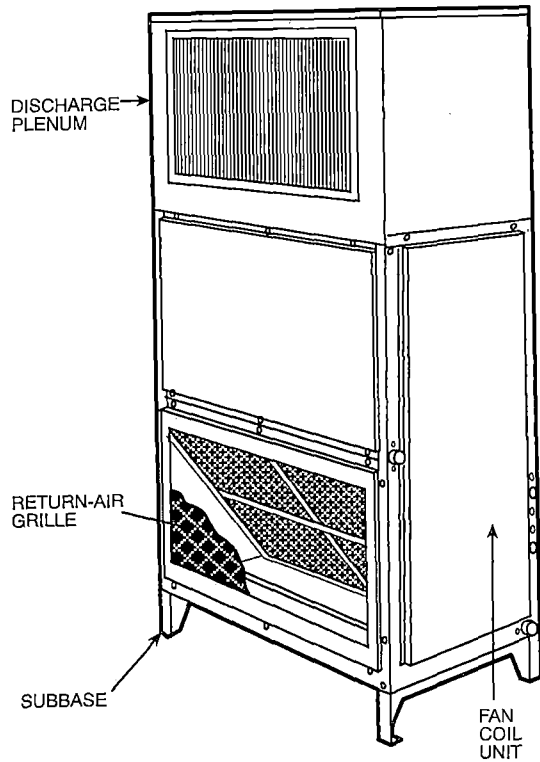
Condensate drain trap includes an overflow shutoff switch that can be wired to turn off the unit if the trap becomes plugged. The kit also includes a wire harness that can be connected to an alarm if desired. The transparent trap is designed for easy service and maintenance.

OPTIONS AND ACCESSORIES (cont.)

ACCESSORIES			
LOW AMBIENT CONTROLS			
PART NUMBER	DESCRIPTION	VOLTAGE	USED ON
CALOWAMB030A00	Motormaster I Combination Kit enables cooling operation down to -20F. Includes: Solid-State Variable Speed Motor Controller, Outdoor Motor, Bracket, Instructions, Wire Ties and time delay relay for timed bypass of low pressure switch on startup.	208/230-3-60	072,091,121, 151 (A,G)
CALOWAMB034A00		208/230-3-60	120, 150 (A,G)
CALOWAMB031A00		460-3-60	072, 091 (A,G)
CALOWAMB032A00		460-3-60	121, 151 (A,G)
CALOWAMB035A00		460-3-60	120, 150 (A,G)
CALOWAMB033A00		575-3-60	072, 091,121,151 (A,G)
CALOWAMB037A00		208/230-3-60	181 (A,G)
CALOWAMB038A00		460-3-60	181 (A,G)
CALOWAMB039A00		575-3-60	181 (A,G)
CALOWAMB018A00		208/230-3-60	241 (A,G)
CALOWAMB019A00		460-3-60	241 (A,G)
CALOWAMB020A00		575-3-60	241 (A,G)
CALOWAMB036A00		575-3-60	120, 150 (D)
CALOWAMB040A00		208/230-3-60	180 (D)
CALOWAMB041A00		460-3-60	180 (D)
CALOWAMB042A00		575-3-60	180 (D)
CALOWAMB021A00		208/230-3-60	240 (D)
CALOWAMB022A00		460-3-60	240 (D)
CALOWAMB023A00		575-3-60	240 (D)
LIQUID LINE SOLENOID VALVE (LLSV) †			
PART NUMBER	DESCRIPTION	USED ON	
1179871/EF680033	Liquid Line Solenoid Valve	Units Requiring (3/8 in) Liquid Lines	
1179872/EF680035	Liquid Line Solenoid Valve	Units Requiring (1/2 in) Liquid Lines	
1179873/EF680036	Liquid Line Solenoid Valve	Units Requiring (5/8 in) Liquid Lines	
1183150/EF680037	Liquid Line Solenoid Valve Coil	All LLSVs listed	
- Contact Application Engineering for refrigerant line lengths greater than 100 ft.			
† LLSV must be installed at the INDOOR unit.			
L - Liquid Line			
SIGHT GLASSES			
PART NUMBER	DESCRIPTION	USED ON	
1179879/KM680008	Sight Glass	Units Requiring (3/8 in.) Liquid Lines	
1179877/KM680004	Sight Glass	Units Requiring (1/2 in.) Liquid Lines	
1179878/KM680005	Sight Glass	Units Requiring (5/8 in.) Liquid Lines	
LOUVERED HAIL GUARDS			
PART NUMBER	DESCRIPTION	APPLICATION USAGE	
CALVHLGD005A00	Louvered Condenser Coil Hail Guard -- Includes louvered panel(s) to protect condenser coil from damage and vandalism	All 072 and 091 (A,B)	
CALVHLGD006A00		091 (G,H)	
CALVHLGD011A00		120, 121	
CALVHLGD012A00		150, 151	
CALVHLGD008A00		180, 181	
CALVHLGD009A00		240, 241	

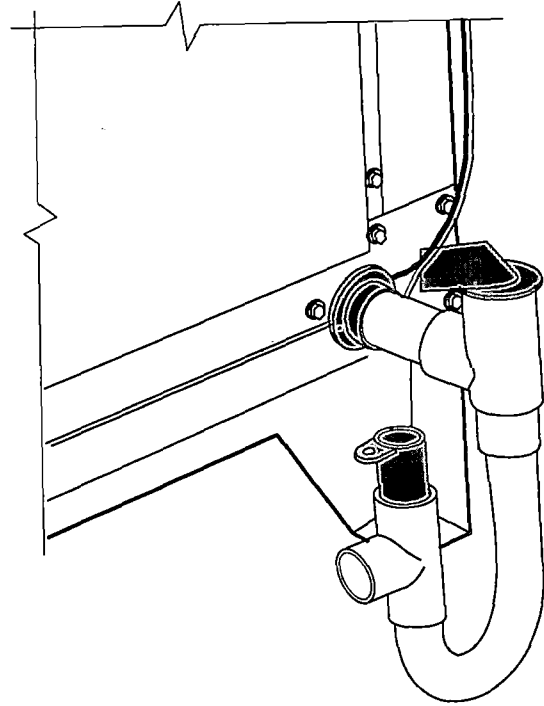
OPTIONS AND ACCESSORIES (cont.)

FAS WITH DISCHARGE PLENUM
RETURN—AIR GRILLE AND SUBBASE



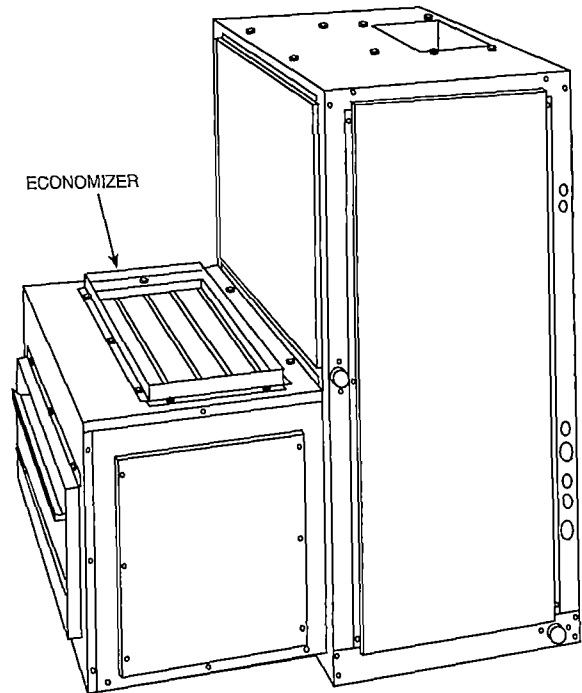
C150211

FAS WITH CONDENSATE



C150218

FAS WITH ECONOMIZER



C160002

SELECTION PROCEDURE

Combination ratings for CAS units matched with FAS Series air handlers are in this book. If unit is used with an air handler, use the ESP selection program to obtain combined ratings.

I. Determine cooling load, evaporator-air temperature, and quantity.

Given:

Total Cooling Capacity
Required (TC) 121,000 Btuh
Sensible Heat Capacity
Required (SHC) 95,000 Btuh
Compressor Type Scroll
Temperature Air Entering
Condenser (Edb) 95°F
Temperature Air Entering
Evaporator (db/wb) 80°F db, 67°F wb
Evaporator Air Quantity 4,000 cfm
External Static Pressure 0.4 in. wg
Length of Interconnecting
Refrigerant Piping 25 ft (Linear)
Power Supply (V-Ph-Hz) 208/230-3-60

II. Select condensing unit air-handler combination.

For this example, select a CAS121 matched with a FAS120 coil. This CAS121/FAS120 condensing unit air-handler combination provides 122,000 Btuh of total cooling capacity and 97,200 Btuh of sensible capacity at the given conditions. If other temperatures or airflow values are required, interpolate the values from the combination ratings.

III. Determine sizes of liquid and suction lines.

Enter Refrigerant Piping Sizes table. The sizes shown are based on an equivalent length of pipe. This equivalent length is equal to the linear length of pipe indicated at the top of each sizing column, plus a 50% allowance for fitting losses. For this example, note in the linear length column that the proper pipe size is $\frac{1}{2}$ in. for the liquid line and $1\frac{3}{8}$ in. for the suction line.

For extended line lengths over 100 feet, contact your ICP representative or application engineer.

IV. Determine fan rpm and bhp (brake horsepower).

Refer to the FAS Air Handler Catalog – Fan Performance table. Enter the Air Handler Fan Performance table at FAS120 at 4000 cfm and move to the External Static Pressure (ESP) column. Note that the conditions require 803 rpm at 1.77 bhp.

V. Determine motor and drive.

Enter the Fan Motor Data tables and find the standard motor for FAS120 unit rated at 2.4 Hp. Since the bhp required is 1.77, a standard motor satisfies the requirement and should be used.

Next, find the type of drive that satisfies the 803 rpm requirement in the Drive Data tables. For the FAS120 unit, the Standard Drive table shows an rpm range of 666-863. Since the rpm required is 803, the standard drive satisfies the requirement and should be used.

CONTROLS

Operating sequences

When the wall thermostat calls for cooling, terminals G and Y1 are energized. As a result, the indoor fan contactor (IFC) and the compressor contactor (C1) are energized, causing the indoor fan motor (IFM), compressor #1, and outdoor fans (OFM) to start. The field-supplied and field-installed liquid line valve also opens, allowing the system to function in Cooling mode.

If the unit has 2 stages of cooling, the wall thermostat will additionally energize Y2. The Y2 signal will energize compressor contactor #2 (C2), causing compressor #2 to start. For CAS072(G,H), the Compressor Loader Plug is energized, causing the second compressor stage to start.

Regardless of the number of stages, the field-supplied liquid line valve shall open and the outdoor fan motors (OFM) run continuously while unit is cooling.

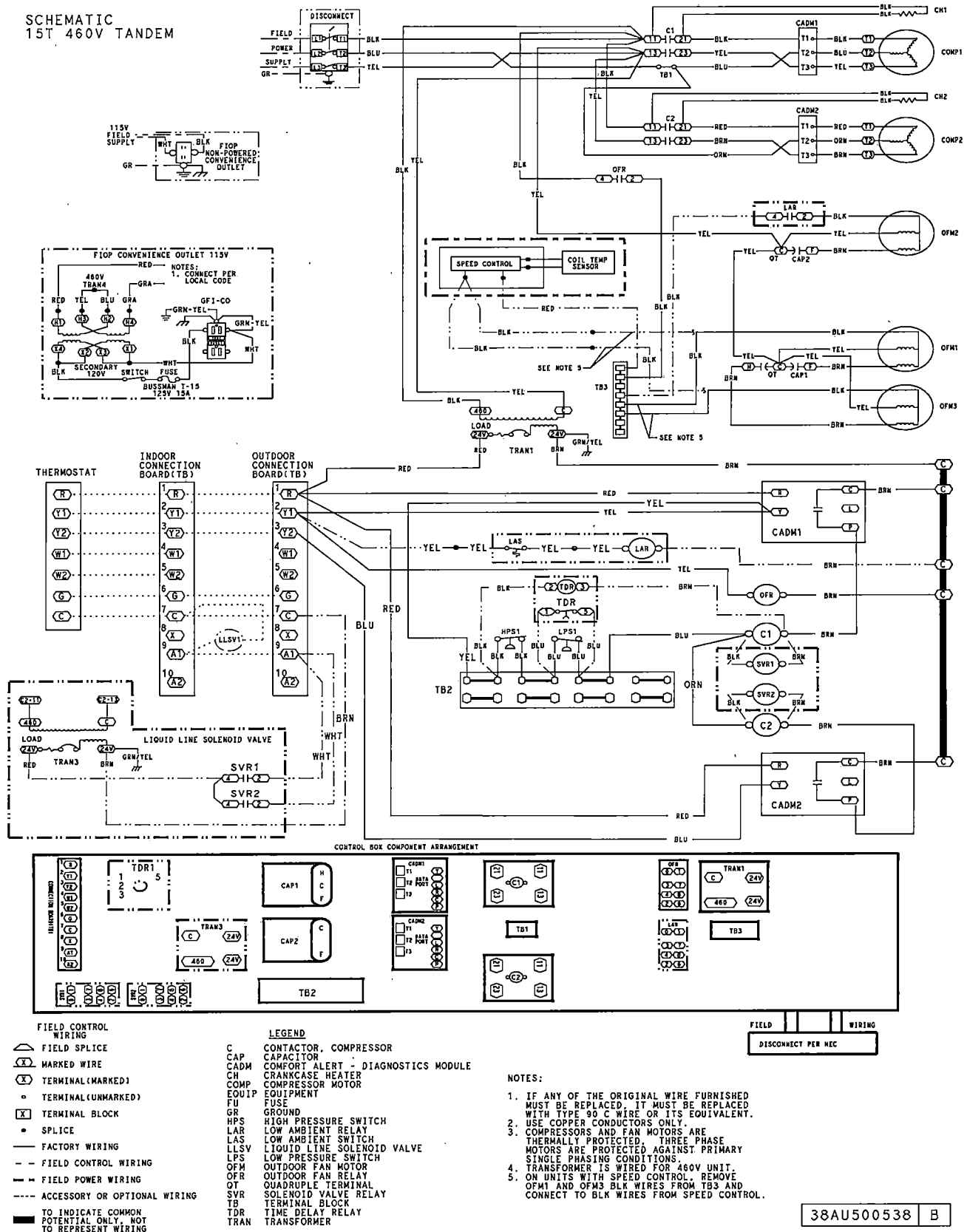
When cooling demand decreases, the thermostat will de-energize Y2. Y2 signal will de-energize compressor contactor #2 (C2), causing compressor #2 to stop. For CAS072(G,H), the Compressor Loader Plug is de-energized, causing the second compressor stage to stop.

When cooling demand has been satisfied, the thermostat will de-energize Y1, and G terminals. Y1 and G signal will de-energize compressor contactor #1 (C1), causing compressor #1 to stop. If the wall thermostat is set to continuous (CONT), the indoor fan motor will continue to operate. Otherwise, the indoor fan motor will stop.

The outdoor fan motors (OFM) will turn off and field-supplied liquid line valve shall close, minimizing the potential for refrigerant migration.

TYPICAL WIRING SCHEMATIC

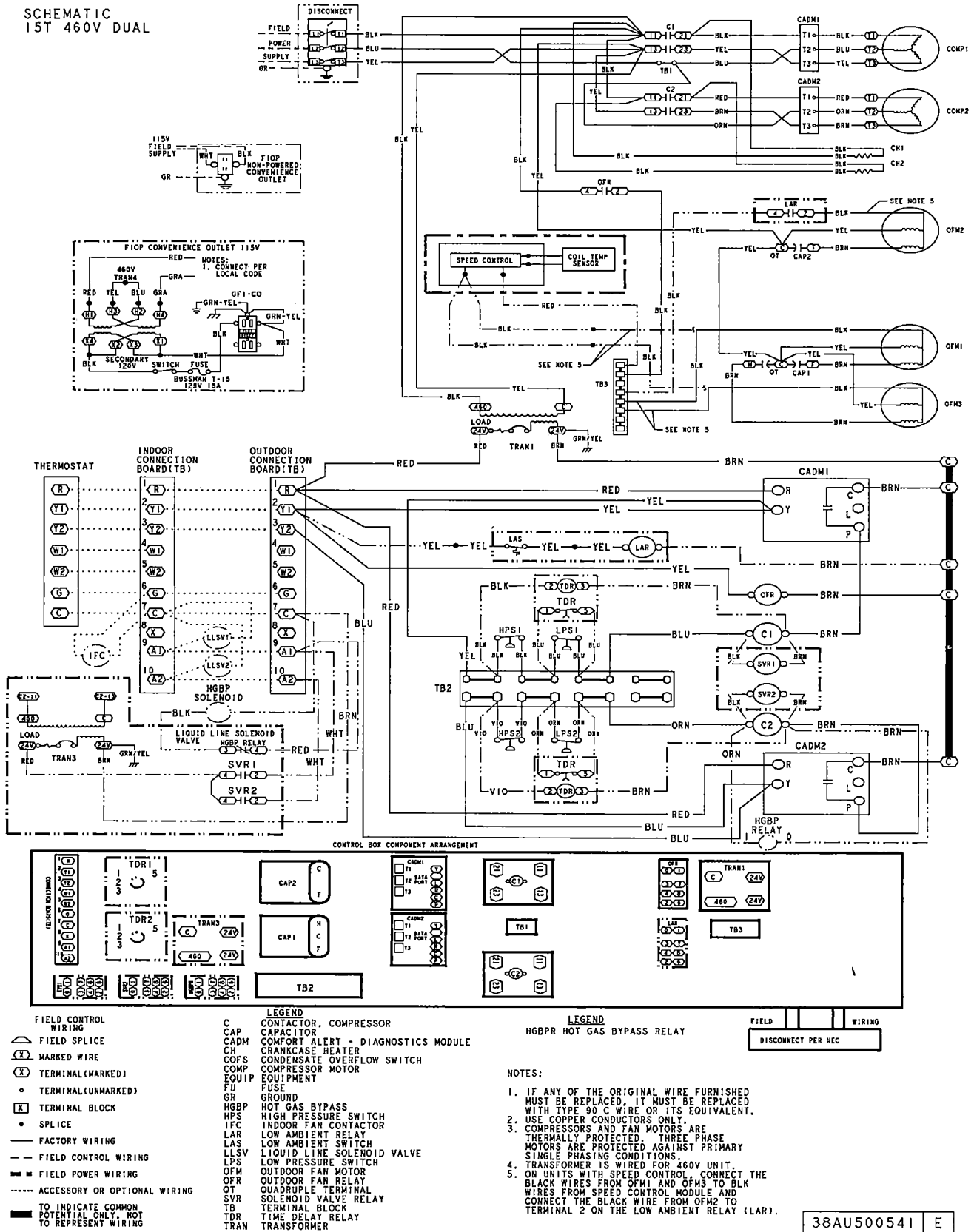
SCHEMATIC
1ST 460V TANDEM



Typical CAS181 Single Circuit

TYPICAL WIRING SCHEMATIC (cont.)

SCHEMATIC
15T 460V DUAL



Typical CAS180 Dual Circuit

PERFORMANCE DATA

CAS072

CONDENSER ONLY RATINGS

SST (°F)		AIR TEMPERATURE ENTERING CONDENSER (°F)					
		80	85	95	100	105	115
20	TC	46.7	45.1	41.7	39.8	37.9	33.9
	kW	4.04	4.27	4.77	5.04	5.32	5.93
	SDT	91.6	96.4	105.9	110.6	115.3	124.7
25	TC	51.8	50.0	46.4	44.5	42.5	38.3
	kW	4.06	4.29	4.79	5.05	5.33	5.95
	SDT	92.7	97.5	106.9	111.6	116.3	125.6
30	TC	57.0	55.2	51.4	49.4	47.3	42.9
	kW	4.07	4.30	4.80	5.07	5.35	5.96
	SDT	93.9	98.6	108.1	112.7	117.4	126.7
35	TC	62.7	60.8	56.8	54.6	52.4	47.8
	kW	4.09	4.32	4.81	5.08	5.36	5.98
	SDT	95.1	99.8	109.2	113.9	118.6	127.8
40	TC	68.7	66.7	62.5	60.2	57.9	53.0
	kW	4.11	4.34	4.83	5.10	5.38	5.99
	SDT	96.5	101.1	110.5	115.1	119.7	128.8
45	TC	75.2	73.1	68.5	66.2	63.7	58.6
	kW	4.13	4.36	4.84	5.10	5.38	5.99
	SDT	97.9	102.5	111.8	116.3	120.9	129.9
50	TC	82.2	79.9	75.1	72.5	69.9	64.4
	kW	4.15	4.37	4.85	5.12	5.39	6.00
	SDT	99.4	104.0	113.1	117.6	122.2	131.1

NOTE:

Condensing unit only ratings are at 45°F SST and 95°F entering-air temperature. EER = 12.5

CAS091

CONDENSER ONLY RATINGS

SST (°F)		AIR TEMPERATURE ENTERING CONDENSER (°F)					
		80	85	95	100	105	115
20	TC	65.2	63.2	59.1	57.0	54.8	50.5
	kW	5.04	5.33	5.98	6.34	6.73	7.60
	SDT	95.3	100.2	109.8	114.7	119.5	129.2
25	TC	71.3	69.2	64.8	62.6	60.3	55.7
	kW	5.12	5.42	6.07	6.42	6.81	7.66
	SDT	96.4	101.2	110.8	115.6	120.4	129.9
30	TC	77.8	75.5	70.9	68.5	66.2	61.3
	kW	5.22	5.51	6.16	6.51	6.89	7.74
	SDT	97.6	102.4	111.9	116.6	121.3	130.7
35	TC	84.8	82.4	77.5	75.0	72.4	67.2
	kW	5.32	5.61	6.26	6.61	6.99	7.83
	SDT	98.8	103.5	112.9	117.6	122.3	131.6
40	TC	92.3	89.7	84.5	81.8	79.0	73.5
	kW	5.44	5.73	6.37	6.72	7.10	7.94
	SDT	100.1	104.8	114.2	118.8	123.5	132.7
45	TC	100.3	97.5	91.9	89.0	86.1	80.1
	kW	5.57	5.86	6.50	6.85	7.23	8.07
	SDT	101.6	106.2	115.5	120.2	124.8	133.9
50	TC	108.7	105.8	99.8	96.7	93.6	87.3
	kW	5.71	6.00	6.64	7.00	7.38	8.21
	SDT	103.1	107.8	117.0	121.6	126.2	135.3

NOTE:

Condensing unit only ratings are at 45°F SST and 95°F entering-air temperature. EER = 12.9

LEGEND:

kW - Compressor Power
 SDT - Saturated Discharge Temperature at Compressor (°F)
 SST - Saturated Suction Temperature (°F)
 TC - Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

CAS121

CONDENSER ONLY RATINGS

SST (°F)		AIR TEMPERATURE ENTERING CONDENSER (°F)					
		80	85	95	100	105	115
20	TC	78.0	75.4	70.1	67.3	64.6	58.9
	kW	6.03	6.44	7.31	7.76	8.23	9.21
	SDT	94.0	98.7	108.2	113.0	117.7	127.2
25	TC	86.1	83.3	77.6	74.7	71.7	65.7
	kW	6.11	6.53	7.41	7.87	8.36	9.36
	SDT	95.2	100.0	109.4	114.2	118.9	128.2
30	TC	94.7	91.8	85.6	82.5	79.4	73.0
	kW	6.20	6.62	7.51	7.98	8.47	9.49
	SDT	96.6	101.3	110.7	115.4	120.0	129.2
35	TC	104.0	100.8	94.3	90.9	87.6	80.7
	kW	6.30	6.71	7.61	8.09	8.58	9.62
	SDT	98.1	102.7	112.0	116.6	121.2	130.4
40	TC	113.9	110.4	103.4	99.9	96.2	88.9
	kW	6.39	6.81	7.71	8.20	8.70	9.75
	SDT	99.5	104.2	113.4	117.9	122.5	131.6
45	TC	124.3	120.6	113.1	109.2	105.4	97.5
	kW	6.49	6.92	7.83	8.32	8.82	9.89
	SDT	101.1	105.7	114.8	119.4	123.9	132.9
50	TC	135.4	131.4	123.3	119.2	115.0	106.5
	kW	6.61	7.04	7.96	8.45	8.96	10.03
	SDT	102.8	107.3	116.4	120.9	125.4	134.3

NOTE:

Condensing unit only ratings are at 45°F SST and 95°F entering-air temperature. EER = 13.35

CAS120 Dual Circuit

CONDENSER ONLY RATINGS

SST (°F)		AIR TEMP ENT CONDENSER (°F)					
		85	95	100	105	115	120
20	TC	75.29	69.95	67.18	64.32	58.42	55.21
	kW	6.88	7.89	8.43	8.96	10.04	10.53
	SDT	102.3	111.4	116.1	120.5	129.6	133.7
25	TC	83.12	77.31	74.32	71.28	64.99	61.76
	kW	6.97	7.98	8.53	9.07	10.18	10.73
	SDT	103.6	112.6	117.3	121.8	130.7	135.1
30	TC	91.41	85.21	81.99	78.76	72.08	68.58
	kW	7.06	8.08	8.63	9.18	10.31	10.87
	SDT	104.9	114.0	118.5	122.9	131.8	136.1
35	TC	100.35	93.69	90.26	86.76	85.11	75.65
	kW	7.15	8.18	8.73	9.29	10.42	10.99
	SDT	106.3	115.2	119.8	124.2	132.9	137.1
40	TC	109.90	102.58	98.84	95.06	87.13	83.07
	kW	7.25	8.29	8.83	9.39	10.54	11.12
	SDT	107.6	116.6	121.0	125.4	134.0	138.2
45	TC	119.86	111.84	107.74	103.56	95.02	90.54
	kW	7.36	8.39	8.93	9.49	10.64	11.22
	SDT	109.0	117.9	122.3	126.6	135.1	139.2
50	TC	130.20	121.39	116.90	112.33	103.07	98.17
	kW	7.48	8.51	9.04	9.60	10.75	11.33
	SDT	110.5	119.2	123.5	127.8	136.2	140.2

NOTE:

Condensing unit only ratings are at 45°F SST and 95°F entering-air temperature. EER = 11.24

LEGEND:

kW - Compressor Power

SDT - Saturated Discharge Temperature at Compressor (°F)

SST - Saturated Suction Temperature (°F)

TC - Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

CAS151

CONDENSER ONLY RATINGS

SST (°F)		AIR TEMPERATURE ENTERING CONDENSER (°F)					
		80	85	95	100	105	115
20	TC	100.8	97.4	90.3	86.6	83.0	75.5
	kW	8.48	8.97	10.00	10.53	11.07	12.19
	SDT	98.0	102.6	111.8	116.4	120.9	130.0
25	TC	111.5	107.8	100.2	96.3	92.4	84.7
	kW	8.66	9.15	10.20	10.75	11.31	12.47
	SDT	99.6	104.1	113.2	117.7	122.3	131.3
30	TC	122.9	118.9	110.7	106.6	102.4	93.9
	kW	8.84	9.35	10.41	10.97	11.55	12.75
	SDT	101.3	105.8	114.8	119.3	123.8	132.7
35	TC	134.9	130.6	121.9	117.4	113.0	103.8
	kW	9.05	9.55	10.64	11.21	11.80	13.03
	SDT	103.1	107.6	116.5	120.9	125.4	134.2
40	TC	147.7	143.0	133.7	128.9	124.1	114.3
	kW	9.27	9.78	10.88	11.47	12.07	13.32
	SDT	105.1	109.5	118.3	122.8	127.1	135.8
45	TC	161.1	156.2	146.1	141.0	135.8	125.4
	kW	9.51	10.03	11.15	11.73	12.34	13.61
	SDT	107.2	111.6	120.3	124.7	129.0	137.5
50	TC	175.4	170.1	159.3	153.8	148.3	137.1
	kW	9.78	10.30	11.42	12.02	12.63	13.92
	SDT	109.5	113.8	122.4	126.7	130.9	139.4

NOTE:

Condensing unit only ratings are at 45°F SST and 95°F entering-air temperature. EER = 12.47

CAS150 Dual Circuit

CONDENSER ONLY RATINGS

SST (°F)		AIR TEMP ENT CONDENSER (°F)					
		85	95	100	105	115	120
20	TC	93.24	86.18	82.60	78.94	71.54	67.78
	kW	9.22	10.36	10.96	11.56	12.76	13.37
	SDT	104.4	113.3	117.8	122.2	130.9	135.2
25	TC	103.39	95.91	92.05	88.15	80.16	76.08
	kW	9.42	10.60	11.21	11.83	13.10	13.73
	SDT	106.1	114.9	119.3	123.7	132.3	136.6
30	TC	114.29	106.19	102.04	97.79	89.15	84.74
	kW	9.63	10.84	11.46	12.10	13.41	14.07
	SDT	107.8	116.6	120.9	125.3	133.8	138.0
35	TC	125.69	116.93	112.44	107.84	105.72	93.69
	kW	9.84	11.07	11.71	12.36	13.70	14.38
	SDT	109.5	118.2	122.6	126.8	135.2	139.4
40	TC	137.57	128.07	123.21	118.21	108.08	102.90
	kW	10.05	11.30	11.95	12.61	13.98	14.68
	SDT	111.3	119.9	124.2	128.4	136.7	140.8
45	TC	149.86	139.53	134.26	128.83	117.83	112.22
	kW	10.27	11.53	12.18	12.85	14.24	14.95
	SDT	113.1	121.6	125.8	130.0	138.1	142.1
50	TC	162.51	151.29	145.56	139.64	127.71	121.55
	kW	10.50	11.76	12.42	13.09	14.48	15.20
	SDT	114.9	123.3	127.5	131.6	139.6	143.5

NOTE:

Condensing unit only ratings are at 45°F SST and 95°F entering-air temperature. EER = 10.5

LEGEND:

kW – Compressor Power
 SDT – Saturated Discharge Temperature at Compressor (°F)
 SST – Saturated Suction Temperature (°F)
 TC – Gross Cooling Capacity (1000 Btu/h)

PERFORMANCE DATA (cont.)

CAS181

CONDENSER ONLY RATINGS

SST (°F)		AIR TEMPERATURE ENTERING CONDENSER (°F)					
		80	85	95	105	115	125
20	TC	125.5	121.8	114.2	106.6	99.7	79.7
	kW	10.5	11.2	12.6	14.2	16.0	17.5
	SDT	98.6	103.4	113.0	122.7	134.9	136.0
25	TC	138.7	134.7	126.5	118.1	109.3	98.5
	kW	10.7	11.4	12.8	14.3	16.0	17.9
	SDT	100.0	104.7	114.2	123.6	132.9	140.5
30	TC	152.9	148.6	139.8	130.7	120.9	104.9
	kW	10.9	11.6	13.0	14.6	16.2	17.8
	SDT	101.4	106.2	115.5	125.0	133.6	139.4
35	TC	168.2	163.5	154.1	144.2	133.6	121.2
	kW	11.2	11.8	13.2	14.8	16.5	18.1
	SDT	102.9	107.5	117.0	126.2	134.8	142.1
40	TC	184.9	179.4	169.3	158.7	147.6	135.1
	kW	11.5	12.0	13.5	15.1	16.8	18.5
	SDT	105.2	108.9	118.5	127.7	136.7	144.5
45	TC	202.1	196.7	185.7	174.3	162.5	150.4
	kW	11.7	12.4	13.9	15.6	17.5	19.6
	SDT	106.4	111.2	120.9	130.7	140.4	150.2
50	TC	220.6	214.7	202.1	190.0	174.6	159.6
	kW	11.9	12.6	13.9	15.4	16.9	18.5
	SDT	107.2	111.7	120.4	129.4	136.9	144.9

NOTE:

Condensing unit only ratings are at 45°F SST and 95°F entering-air temperature. EER = 12.53

CAS180 Dual Circuit

CONDENSER ONLY RATINGS

SST (°F)		AIR TEMPERATURE ENTERING CONDENSER (°F)					
		80	85	95	105	115	125
20	TC	127.6	123.7	116.0	108.1	99.7	90.2
	kW	10.0	10.6	11.9	13.4	14.9	16.6
	SDT	96.0	100.5	109.8	119.2	128.3	137.0
25	TC	140.9	136.7	128.3	119.5	110.4	101.2
	kW	10.0	10.6	11.9	13.4	14.9	16.6
	SDT	96.0	100.5	109.8	119.2	128.3	137.0
30	TC	155.0	150.5	141.3	132.0	122.3	111.4
	kW	10.4	11.0	12.3	13.7	15.3	17.0
	SDT	98.7	103.3	112.4	121.5	130.6	139.1
35	TC	170.1	165.3	155.4	145.2	134.4	123.3
	kW	10.6	11.2	12.5	14.0	15.5	17.2
	SDT	100.1	104.7	113.8	122.8	131.7	140.4
40	TC	186.3	181.0	170.3	159.0	147.3	134.9
	kW	10.8	11.4	12.8	14.2	15.8	17.4
	SDT	101.6	106.1	115.1	124.0	132.8	141.4
45	TC	203.4	197.6	185.7	173.5	160.6	147.2
	kW	11.1	11.7	13.0	14.4	16.0	17.6
	SDT	103.2	107.6	116.5	125.4	134.0	142.5
50	TC	221.4	214.9	202.0	188.6	174.5	159.7
	kW	11.4	12.0	13.3	14.7	16.2	17.9
	SDT	104.8	109.2	118.0	126.7	135.2	143.5

NOTE:

Condensing unit only ratings are at 45°F SST and 95°F entering-air temperature. EER = 12.52

LEGEND:

kW - Compressor Power

SDT - Saturated Discharge Temperature at Compressor (°F)

SST - Saturated Suction Temperature (°F)

TC - Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

CAS241

CONDENSER ONLY RATINGS

SST (°F)		AIR TEMPERATURE ENTERING CONDENSER (°F)					
		80	85	95	105	115	125
20	TC	159.2	154.5	144.5	133.9	122.5	110.2
	KW	13.0	13.7	15.3	17.1	19.2	21.5
	SDT	97.3	101.8	110.6	119.3	127.9	136.5
25	TC	176.1	171.0	160.2	148.8	136.5	123.2
	KW	13.2	14.0	15.6	17.4	19.5	21.8
	SDT	98.9	103.3	112.0	120.7	129.2	137.6
30	TC	194.2	188.6	176.9	164.5	151.3	136.9
	KW	13.5	14.3	15.9	17.7	19.7	22.0
	SDT	100.6	104.9	113.6	122.1	130.5	138.8
35	TC	213.5	207.4	194.7	181.2	166.8	151.2
	KW	13.8	14.6	16.2	18.0	20.0	22.3
	SDT	102.4	106.7	115.2	123.6	131.9	140.1
40	TC	234.1	227.4	213.5	198.8	183.1	166.1
	KW	14.2	14.9	16.5	18.3	20.3	22.6
	SDT	104.3	108.5	116.9	125.2	133.3	141.4
45	TC	255.9	248.6	233.3	217.3	200.1	181.7
	KW	14.6	15.3	16.9	18.7	20.7	22.9
	SDT	106.3	110.5	118.7	126.8	134.9	142.7
50	TC	279.0	270.9	254.2	236.7	218.1	197.8
	KW	15.1	15.8	17.3	19.1	21.1	23.2
	SDT	108.5	112.5	120.6	128.6	136.5	144.1

NOTE:

Condensing unit only ratings are at 45°F SST and 95°F entering-air temperature. EER = 12.87

CAS240 Dual Circuit

CONDENSER ONLY RATINGS

SST (°F)		AIR TEMPERATURE ENTERING CONDENSER (°F)					
		80	85	95	105	115	125
20	TC	160.3	155.5	145.3	134.3	122.5	109.6
	KW	12.7	13.4	15.0	16.8	18.8	21.1
	SDT	97.0	101.5	110.3	119.1	127.7	136.3
25	TC	177.2	171.9	160.8	149.0	136.3	122.3
	KW	12.7	13.4	15.0	16.8	18.8	21.1
	SDT	97.0	101.5	110.3	119.1	127.7	136.3
30	TC	195.1	189.4	177.4	164.5	150.7	135.6
	KW	13.2	13.9	15.5	17.3	19.3	21.5
	SDT	100.3	104.6	113.3	121.8	130.3	138.6
35	TC	214.3	208.0	194.9	180.9	165.9	149.5
	KW	13.5	14.3	15.8	17.6	19.6	21.8
	SDT	102.1	106.3	114.9	123.3	131.7	139.8
40	TC	234.6	227.7	213.4	198.2	181.7	163.9
	KW	13.9	14.6	16.2	17.9	19.9	22.1
	SDT	104.0	108.2	116.6	124.9	133.1	141.1
45	TC	256.3	258.7	242.3	224.9	206.2	186.1
	KW	14.3	15.2	16.7	18.5	20.4	22.5
	SDT	106.0	111.1	119.2	127.4	135.4	143.1
50	TC	279.1	272.0	254.7	236.3	216.6	195.4
	KW	14.7	15.5	17.0	18.7	20.6	22.7
	SDT	108.1	112.3	120.4	128.4	136.4	143.9

NOTE:

Condensing unit only ratings are at 45°F SST and 95°F entering-air temperature. EER = 13.55

LEGEND:

kW – Compressor Power
 SDT – Saturated Discharge Temperature at Compressor (°F)
 SST – Saturated Suction Temperature (°F)
 TC – Gross Cooling Capacity (1000 Btuh)

PERFORMANCE DATA (cont.)

CAS072 – FAS072

COMBINATION RATINGS

		AMBIENT TEMPERATURE																			
		85				95				105				115				125			
		EA (db)				EA (db)				EA (db)				EA (db)				EA (db)			
		75	80	85	75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
1800 Cfm		EA (wb)				EA (wb)				EA (wb)				EA (wb)				EA (wb)			
58	THC	65.8	65.8	74.1	63.4	63.4	71.4	60.7	60.7	68.3	58.3	58.3	65.7	54.7	54.7	61.6	61.6	61.6			
	SHC	57.4	65.8	74.1	55.3	63.4	71.4	53.0	60.7	68.3	50.9	58.3	65.7	47.8	54.7	61.6	61.6	61.6			
62	THC	68.1	68.1	70.7	65.2	65.2	69.2	62.0	62.0	67.6	58.1	58.1	65.7	54.6	54.6	55.4	55.4	55.4			
	SHC	51.9	61.3	70.7	50.4	59.8	69.2	48.9	58.3	67.6	47.1	56.4	65.7	36.3	45.9	55.4	55.4	55.4			
67	THC	74.0	74.0	74.0	70.9	70.9	70.9	67.3	67.3	67.3	63.4	63.4	63.4	56.7	56.7	56.7	56.7	56.7			
	SHC	42.3	51.8	61.3	41.0	50.5	59.9	39.5	49.0	58.4	37.9	47.3	56.8	35.3	44.9	54.4	54.4	54.4			
72	THC	80.7	80.7	80.7	77.3	77.3	77.3	73.6	73.6	73.6	69.4	69.4	69.4	63.2	63.2	63.2	63.2	63.2			
	SHC	32.7	42.2	51.8	31.4	40.9	50.4	30.0	39.5	49.0	28.4	37.9	47.4	26.2	35.7	45.3	45.3	45.3			
76	THC	—	86.2	86.2	—	82.6	82.6	—	78.6	78.6	—	74.3	74.3	—	70.7	70.7	70.7	70.7			
	SHC	—	34.5	44.3	—	33.2	43.0	—	31.8	41.6	—	30.3	40.0	—	29.0	38.7	38.7	38.7			
58	THC	69.0	69.0	77.8	66.5	66.5	74.9	63.7	63.7	71.8	61.2	61.2	69.0	—	—	—	—	—			
	SHC	60.3	69.0	77.8	58.0	66.5	74.9	55.6	63.7	71.8	53.5	61.2	69.0	—	—	—	—	—			
62	THC	70.2	70.2	77.1	67.2	67.2	75.5	64.0	64.0	73.6	60.4	60.4	70.7	—	—	—	—	—			
	SHC	55.7	66.4	77.1	54.2	64.8	75.5	52.5	63.0	73.6	50.2	60.4	70.7	—	—	—	—	—			
67	THC	75.9	75.9	75.9	72.6	72.6	72.6	68.9	68.9	68.9	64.8	64.8	64.8	59.1	59.1	59.9	59.9	59.9			
	SHC	44.8	55.7	66.5	43.4	54.3	65.1	41.9	52.8	63.6	40.3	51.1	62.0	38.1	49.0	59.9	59.9	59.9			
72	THC	82.5	82.5	82.5	79.0	79.0	79.0	75.2	75.2	70.9	70.9	70.9	63.9	63.9	63.9	63.9	63.9	63.9			
	SHC	33.7	44.6	55.5	32.4	43.3	54.2	31.0	41.8	52.7	29.4	40.3	51.1	26.9	37.9	48.8	48.8	48.8			
76	THC	—	88.1	88.1	—	84.3	84.3	—	80.2	80.2	—	75.5	75.5	—	71.8	71.8	71.8	71.8			
	SHC	—	35.8	47.0	—	34.5	45.6	—	33.0	44.2	—	31.4	42.5	—	30.2	41.2	41.2	41.2			
58	THC	71.7	71.7	80.8	69.0	69.0	77.8	66.1	66.1	74.5	62.6	62.6	70.6	58.9	58.9	66.3	66.3	66.3			
	SHC	62.6	71.7	80.8	60.3	69.0	77.8	57.7	66.1	74.5	54.7	62.6	70.6	51.4	58.9	66.3	66.3	66.3			
62	THC	72.0	72.0	82.7	69.1	69.1	80.8	66.2	66.2	77.4	63.0	63.0	73.6	—	—	—	—	—			
	SHC	59.0	70.9	82.7	57.4	69.1	80.8	55.0	66.2	77.4	52.3	63.0	73.6	—	—	—	—	—			
67	THC	77.3	77.3	77.3	74.0	74.0	74.0	70.2	70.2	70.2	66.1	66.1	66.9	62.5	62.5	65.0	65.0	65.0			
	SHC	47.1	59.3	71.5	45.7	57.9	70.1	44.2	56.4	68.6	42.6	54.7	66.9	41.0	53.0	65.0	65.0	65.0			
72	THC	84.0	84.0	84.0	80.4	80.4	80.4	76.4	76.4	76.4	71.8	71.8	71.8	67.5	67.5	67.5	67.5	67.5			
	SHC	34.6	46.9	59.1	33.3	45.5	57.8	31.9	44.1	56.3	30.2	42.4	54.6	28.7	40.8	52.9	52.9	52.9			
76	THC	—	89.5	89.5	—	85.7	85.7	—	81.4	81.4	—	76.7	76.7	—	—	—	—	—			
	SHC	—	36.9	49.4	—	35.6	48.1	—	34.2	46.6	—	32.6	45.0	—	—	—	—	—			
58	THC	73.9	73.9	83.3	71.2	71.2	80.2	68.1	68.1	76.7	64.8	64.8	73.0	58.6	58.6	66.0	66.0	66.0			
	SHC	64.6	73.9	83.3	62.2	71.2	80.2	59.5	68.1	76.7	56.5	64.8	73.0	51.2	58.6	66.0	66.0	66.0			
62	THC	74.0	74.0	86.5	71.3	71.3	83.3	68.2	68.2	79.7	64.8	64.8	75.8	—	—	—	—	—			
	SHC	61.5	74.0	86.5	59.2	71.3	83.3	56.6	68.2	79.7	53.8	64.8	75.8	—	—	—	—	—			
67	THC	78.5	78.5	78.5	75.1	75.1	75.1	71.2	71.2	73.2	67.0	67.0	71.5	63.2	63.2	69.4	69.4	69.4			
	SHC	49.3	62.7	76.2	47.9	61.3	74.8	46.4	59.8	73.2	44.7	58.1	71.5	43.0	56.2	69.4	69.4	69.4			
72	THC	85.1	85.1	85.1	81.4	81.4	81.4	77.3	77.3	77.3	72.6	72.6	72.6	65.3	65.3	65.3	65.3	65.3			
	SHC	35.5	49.0	62.5	34.2	47.6	61.1	32.7	46.1	59.6	31.1	44.5	57.9	28.6	42.2	55.7	55.7	55.7			
76	THC	—	90.7	90.7	—	86.7	86.7	—	82.3	82.3	—	—	—	—	—	—	—	—			
	SHC	—	38.1	51.8	—	36.7	50.4	—	35.3	48.9	—	—	—	—	—	—	—	—			
2700 Cfm		EA (wb)				EA (wb)				EA (wb)				EA (wb)				EA (wb)			
58	THC	75.9	75.9	85.5	73.0	73.0	82.3	69.8	69.8	78.7	66.3	66.3	74.7	62.4	62.4	70.4	70.4	70.4			
	SHC	66.3	75.9	85.5	63.8	73.0	82.3	61.0	69.8	78.7	57.9	66.3	74.7	54.5	62.4	70.4	70.4	70.4			
62	THC	75.9	75.9	88.8	73.1	73.1	85.4	69.9	69.9	81.7	66.4	66.4	77.6	60.2	60.2	70.4	70.4	70.4			
	SHC	63.1	75.9	88.8	60.7	73.1	85.4	58.0	69.9	81.7	55.1	66.4	77.6	50.0	60.2	70.4	70.4	70.4			
67	THC	79.5	79.5	80.7	76.0	76.0	79.3	72.1	72.1	77.6	67.9	67.9	75.7	63.7	63.7	73.5	73.5	73.5			
	SHC	51.4	66.0	80.7	49.9	64.6	79.3	48.4	63.0	77.6	46.7	61.2	75.7	44.8	59.2	73.5	73.5	73.5			
72	THC	86.1	86.1	86.1	82.3	82.3	82.3	78.0	78.0	73.3	73.3	73.3	69.6	69.6	69.6	69.6	69.6	69.6			
	SHC	36.3	51.0	65.8	35.0	49.7	64.4	33.5	48.1	62.8	31.9	46.5	61.1	30.5	44.9	59.3	59.3	59.3			
76	THC	—	91.6	91.6	—	87.6	87.6	—	—	—	—	—	—	—	—	—	—	—			
	SHC	—	39.1	54.0	—	37.8	52.7	—	—	—	—	—	—	—	—	—	—	—			
2400 Cfm		EA (wb)				EA (wb)				EA (wb)				EA (wb)				EA (wb)			
58	THC	71.7	71.7	80.8	69.0	69.0	77.8	66.1	66.1	74.5	62.6	62.6	70.6	58.9	58.9	66.3	66.3	66.3			
	SHC	62.6	71.7	80.8	60.3	69.0	77.8	57.7	66.1	74.5	54.7	62.6	70.6	51.4	58.9	66.3	66.3	66.3			
62	THC	72.0	72.0	82.7	69.1	69.1	80.8	66.2	66.2	77.4	63.0	63.0	73.6	—	—	—	—	—			
	SHC	59.0	70.9	82.7	57.4	69.1	80.8	55.0	66.2	77.4	52.3	63.0	73.6	—	—	—	—	—			
67	THC	77.3	77.3	77.3	74.0	74.0	74.0	70.2	70.2	70.2	66.1	66.1	66.9	62.5	62.5	65.0	65.0	65.0			
	SHC	47.1	59.3	71.5	45.7	57.9	70.1	44.2	56.4	68.6	42.6	54.7	66.9	41.0	53.0	65.0	65.0	65.0			
72	THC	84.0	84.0	84.0	80.4	80.4	80.4	76.4	76.4	76.4	71.8	71.8	71.8	67.5	67.5	67.5	67.5	67.5			
	SHC	34.6	46.9	59.1	33.3	45.5	57.8	31.9	44.1	56.3	30.2	42.4	54.6	28.7	40.8	52.9	52.9	52.9			
76	THC	—	89.5	89.5	—	85.7	85.7	—	81.4	81.4	—	76.7	76.7	—	—	—	—	—			
	SHC	—	36.9	49.4	—	35.6	48.1	—	34.2	46.6	—	32.6	45.0	—	—	—	—	—			
58	THC	73.9	73.9	83.3	71.2	71.2	80.2	68.1	68.1	76.7	64.8	64.8	73.0	58.6	58.6	66.0	66.0	66.0			
	SHC	64.6	73.9	83.3	62.2	71.2	80.2	59.5	68.1	76.7	56.5	64.8	73.0	51.2	58.6	66.0	66.0	66.0			
62	THC	74.0	74.0	86.5	71.3	71.3	83.3	68.2	68.2	79.7	64.8	64.8	75.8	—	—	—	—	—			
	SHC	61.5	74.0	86.5	59.2	71.3	83.3	56.6	68.2	79.7	53.8	64.8	75.8	—	—	—	—	—			
67	THC	78.5	78.5	78.5	75.1	75.1	75.1	71.2	71.2	73.2	67.0	67.0	71.5	63.2	63.2	69.4	69.4	69.4			
	SHC	49.3	62.7	76.2	47.9	61.3	74.8	46.4	59.8	73.2	44.7	58.1	71.5	43.0	56.2	69.4	69.4	69.4			
72	THC	85.1	85.1	85.1	81.4	81.4	81.4	77.3	77.3	77.3	72.6	72.6	72.6	65.3	65.3	65.3	65.3	65.3			
	SHC	35.5	49.0	62.5	34.2	47.6	61.1	32.7	46.1	59.6	31.1	44.5	57.9	28.6	42.2	55.7	55.7	55.7			
76	THC	—	90.7	90.7	—	86.7	86.7	—	82.3	82.3	—	—	—	—	—	—	—	—			
	SHC	—	38.1	51.8	—	36.7	50.4	—	35.3	48.9	—	—	—	—	—	—	—	—			
3000 Cfm		EA (wb)				EA (wb)				EA (wb)				EA (wb)				EA (wb)			
58	THC	75.9	75.9	85.5	73.0	73.0	82.3	69.8	69.8	78.7	66.3	66.3	74.7	62.4	62.4	70.4	70.4	70.4			
	SHC	66.3	75.9	85.5	63.8	73.0	82.3	61.0</													

– Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS072 – FAS091

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
2250 Cfm	EA (wb)	58	THC	71.6	71.6	80.7	69.1	69.1	77.9	66.2	66.2	74.6	63.2	63.2	72.2	—	—	—
			SHC	62.5	71.6	80.7	60.3	69.1	77.9	57.8	66.2	74.6	55.0	63.2	72.2	—	—	—
		62	THC	72.5	72.5	81.5	69.6	69.6	79.6	66.6	66.6	76.6	63.2	63.2	73.2	—	—	—
			SHC	58.5	70.0	81.5	56.9	68.2	79.6	54.6	65.6	76.6	52.1	62.7	73.2	—	—	—
		67	THC	78.1	78.1	78.1	74.8	74.8	74.8	71.2	71.2	71.2	67.0	67.0	67.7	60.9	60.9	64.5
			SHC	46.9	58.7	70.5	45.6	57.4	69.1	44.1	55.9	67.6	42.4	54.2	66.0	40.1	52.0	63.8
		72	THC	84.9	84.9	84.9	81.4	81.4	81.4	77.4	77.4	77.4	73.1	73.1	73.1	68.9	68.9	68.9
			SHC	34.9	46.7	58.6	33.6	45.4	57.3	32.1	43.9	55.8	30.5	42.3	54.1	29.0	40.7	52.5
		76	THC	—	90.6	90.6	—	86.9	86.9	—	82.5	82.5	—	77.1	77.1	—	—	—
			SHC	—	37.1	49.1	—	35.9	47.9	—	33.5	43.4	—	31.9	41.8	—	—	—
2600 Cfm	EA (wb)	58	THC	74.8	74.8	84.2	72.1	72.1	81.3	69.0	69.0	77.8	65.7	65.7	74.0	62.2	62.2	70.0
			SHC	65.3	74.8	84.2	62.9	72.1	81.3	60.3	69.0	77.8	57.3	65.7	74.0	54.3	62.2	70.0
		62	THC	74.9	74.9	87.2	72.1	72.1	84.3	69.1	69.1	80.8	65.7	65.7	76.8	61.7	61.7	72.1
			SHC	62.0	74.6	87.2	60.0	72.1	84.3	57.4	69.1	80.8	54.6	65.7	76.8	51.2	61.7	72.1
		67	THC	79.8	79.8	79.8	76.3	76.3	76.4	72.6	72.6	74.2	68.4	68.4	71.9	63.9	63.9	69.8
			SHC	49.7	63.1	76.5	48.3	61.8	75.1	46.8	60.2	73.6	45.1	58.5	71.9	43.3	56.5	69.8
		72	THC	86.5	86.5	86.5	82.9	82.9	82.9	78.8	78.8	78.8	74.3	74.3	74.3	69.5	69.5	69.5
			SHC	36.0	49.4	62.9	34.7	48.1	61.6	33.2	46.6	60.1	31.6	45.0	58.4	29.9	43.3	56.7
		76	THC	—	92.3	92.3	—	87.7	87.7	—	—	—	—	—	—	—	—	—
			SHC	—	38.5	52.2	—	36.5	49.2	—	—	—	—	—	—	—	—	—
3000 Cfm	EA (wb)	58	THC	77.6	77.6	87.4	74.8	74.8	84.2	71.5	71.5	80.6	67.9	67.9	76.5	64.9	64.9	73.1
			SHC	67.7	77.6	87.4	65.3	74.8	84.2	62.5	71.5	80.6	59.3	67.9	76.5	56.7	64.9	73.1
		62	THC	77.7	77.7	90.8	74.8	74.8	87.5	71.6	71.6	83.7	67.9	67.9	79.4	64.9	64.9	75.9
			SHC	64.5	77.7	90.8	62.1	74.8	87.5	59.5	71.6	83.7	56.4	67.9	79.4	53.9	64.9	75.9
		67	THC	81.2	81.2	83.0	77.7	77.7	81.6	73.9	73.9	80.0	69.6	69.6	78.0	65.3	65.3	74.4
			SHC	52.7	67.8	83.0	51.3	66.4	81.6	49.8	64.9	80.0	48.0	63.0	78.0	44.5	59.4	74.4
		72	THC	87.9	87.9	87.9	84.2	84.2	84.2	80.0	80.0	80.0	75.3	75.3	75.3	70.2	70.2	70.2
			SHC	37.1	52.3	67.6	35.8	51.0	66.2	34.3	49.5	64.7	32.7	47.9	63.0	31.0	46.1	61.2
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3400 Cfm	EA (wb)	58	THC	79.7	79.7	89.8	76.8	76.8	86.4	73.4	73.4	82.7	69.6	69.6	78.4	64.8	64.8	73.0
			SHC	69.6	79.7	89.8	67.0	76.8	86.4	64.1	73.4	82.7	60.8	69.6	78.4	56.6	64.8	73.0
		62	THC	79.8	79.8	93.3	76.8	76.8	89.8	73.5	73.5	85.9	69.7	69.7	81.4	65.6	65.6	76.8
			SHC	66.3	79.8	93.3	63.8	76.8	89.8	61.0	73.5	85.9	57.8	69.7	81.4	54.5	65.6	76.8
		67	THC	82.3	82.3	88.8	78.8	78.8	87.3	74.9	74.9	85.5	70.6	70.6	83.2	—	—	—
			SHC	55.4	72.1	88.8	53.9	70.6	87.3	52.4	68.9	85.5	50.5	66.8	83.2	—	—	—
		72	THC	88.9	88.9	88.9	85.1	85.1	85.1	80.8	80.8	80.8	76.1	76.1	76.1	—	—	—
			SHC	38.2	55.0	71.9	36.9	53.7	70.5	35.4	52.2	69.0	33.8	50.5	67.3	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3750 Cfm	EA (wb)	58	THC	81.5	81.5	91.9	78.5	78.5	88.4	75.0	75.0	84.5	71.1	71.1	80.1	64.7	64.7	72.9
			SHC	71.2	81.5	91.9	68.5	78.5	88.4	65.5	75.0	84.5	62.1	71.1	80.1	56.5	64.7	72.9
		62	THC	81.6	81.6	95.4	78.5	78.5	91.8	75.1	75.1	87.8	71.2	71.2	83.2	66.3	66.3	77.5
			SHC	67.8	81.6	95.4	65.2	78.5	91.8	62.4	75.1	87.8	59.1	71.2	83.2	55.1	66.3	77.5
		67	THC	83.2	83.2	93.9	79.7	79.7	92.2	75.8	75.8	90.3	71.5	71.5	87.7	—	—	—
			SHC	57.7	75.8	93.9	56.2	74.2	92.2	54.6	72.4	90.3	52.6	70.2	87.7	—	—	—
		72	THC	89.7	89.7	89.7	85.8	85.8	85.8	81.5	81.5	81.5	76.8	76.8	76.8	—	—	—
			SHC	39.1	57.4	75.7	37.8	56.0	74.3	36.3	54.5	72.7	34.7	52.8	71.0	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS091 – FAS091

COMBINATION RATINGS

		AMBIENT TEMPERATURE											
		85			95			105			115		
		EA (db)			EA (db)			EA (db)			EA (db)		
		75	80	85	75	80	85	75	80	85	75	80	85
2250 Cfm	EA (wb)												
	THC	84.6	84.6	95.4	81.7	81.7	92.1	78.5	78.5	88.5	75.5	75.5	85.1
	SHC	73.9	84.6	95.4	71.3	81.7	92.1	68.5	78.5	88.5	65.9	75.5	85.1
	THC	88.2	88.2	89.4	84.6	87.6	87.6	80.7	80.7	85.6	76.9	76.9	83.6
	SHC	66.1	77.7	89.4	64.3	75.9	87.6	62.4	74.0	85.6	60.5	72.0	83.6
	THC	95.5	95.5	95.5	91.5	91.5	91.5	87.3	87.3	87.3	82.7	82.7	82.7
2625 Cfm	EA (wb)												
	THC	84.6	84.6	95.4	81.7	81.7	92.1	78.5	78.5	88.5	75.5	75.5	85.1
	SHC	73.9	84.6	95.4	71.3	81.7	92.1	68.5	78.5	88.5	65.9	75.5	85.1
	THC	88.2	88.2	89.4	84.6	87.6	87.6	80.7	80.7	85.6	76.9	76.9	83.6
	SHC	66.1	77.7	89.4	64.3	75.9	87.6	62.4	74.0	85.6	60.5	72.0	83.6
	THC	95.5	95.5	95.5	91.5	91.5	91.5	87.3	87.3	87.3	82.7	82.7	82.7
3000 Cfm	EA (wb)												
	THC	84.6	84.6	95.4	81.7	81.7	92.1	78.5	78.5	88.5	75.5	75.5	85.1
	SHC	73.9	84.6	95.4	71.3	81.7	92.1	68.5	78.5	88.5	65.9	75.5	85.1
	THC	88.2	88.2	89.4	84.6	87.6	87.6	80.7	80.7	85.6	76.9	76.9	83.6
	SHC	66.1	77.7	89.4	64.3	75.9	87.6	62.4	74.0	85.6	60.5	72.0	83.6
	THC	95.5	95.5	95.5	91.5	91.5	91.5	87.3	87.3	87.3	82.7	82.7	82.7
3375 Cfm	EA (wb)												
	THC	84.6	84.6	95.4	81.7	81.7	92.1	78.5	78.5	88.5	75.5	75.5	85.1
	SHC	73.9	84.6	95.4	71.3	81.7	92.1	68.5	78.5	88.5	65.9	75.5	85.1
	THC	88.2	88.2	89.4	84.6	87.6	87.6	80.7	80.7	85.6	76.9	76.9	83.6
	SHC	66.1	77.7	89.4	64.3	75.9	87.6	62.4	74.0	85.6	60.5	72.0	83.6
	THC	95.5	95.5	95.5	91.5	91.5	91.5	87.3	87.3	87.3	82.7	82.7	82.7
3750 Cfm	EA (wb)												
	THC	84.6	84.6	95.4	81.7	81.7	92.1	78.5	78.5	88.5	75.5	75.5	85.1
	SHC	73.9	84.6	95.4	71.3	81.7	92.1	68.5	78.5	88.5	65.9	75.5	85.1
	THC	88.2	88.2	89.4	84.6	87.6	87.6	80.7	80.7	85.6	76.9	76.9	83.6
	SHC	66.1	77.7	89.4	64.3	75.9	87.6	62.4	74.0	85.6	60.5	72.0	83.6
	THC	95.5	95.5	95.5	91.5	91.5	91.5	87.3	87.3	87.3	82.7	82.7	82.7

- Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS091 – FAS120

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3000 Cfm	EA (wb)	58	THC	93.7	93.7	105.5	90.3	90.3	101.8	86.7	86.7	97.7	82.7	82.7	93.2	—	—	—
			SHC	81.8	93.7	105.5	78.9	90.3	101.8	75.7	86.7	97.7	72.2	82.7	93.2	—	—	—
		62	THC	94.5	94.5	106.5	90.8	90.8	104.2	86.8	86.8	101.5	83.0	83.0	97.0	78.0	78.0	91.2
			SHC	76.4	91.4	106.5	74.4	89.3	104.2	72.1	86.8	101.5	68.9	83.0	97.0	64.8	78.0	91.2
		67	THC	101.3	101.3	101.3	97.0	97.0	97.0	92.4	92.4	92.4	87.7	87.7	87.7	80.4	80.4	83.5
			SHC	60.9	76.3	91.7	59.2	74.5	89.9	57.3	72.7	88.0	55.4	70.7	86.0	52.7	68.1	83.5
		72	THC	109.4	109.4	109.4	104.9	104.9	104.9	100.0	100.0	100.0	94.7	94.7	94.7	87.1	87.1	87.1
			SHC	44.9	60.4	75.8	43.3	58.7	74.1	41.5	56.9	72.2	39.6	54.9	70.2	36.9	52.2	67.6
		76	THC	—	116.1	116.1	—	111.3	111.3	—	106.1	106.1	—	100.4	100.4	—	—	—
			SHC	—	47.7	63.5	—	46.0	61.8	—	44.3	60.0	—	42.3	57.9	—	—	—
3500 Cfm	EA (wb)	58	THC	97.4	97.4	109.7	93.9	93.9	105.8	90.0	90.0	101.4	85.9	85.9	96.8	79.7	79.7	89.8
			SHC	85.0	97.4	109.7	82.0	93.9	105.8	78.6	90.0	101.4	75.0	85.9	96.8	69.6	79.7	89.8
		62	THC	97.5	97.5	114.0	93.9	93.9	109.9	90.1	90.1	105.4	86.0	86.0	100.5	82.6	82.6	96.6
			SHC	81.0	97.5	114.0	78.0	93.9	109.9	74.8	90.1	105.4	71.4	86.0	100.5	68.6	82.6	96.6
		67	THC	103.2	103.2	103.2	98.8	98.8	98.8	94.2	94.2	95.8	89.1	89.1	93.7	82.7	82.7	91.4
			SHC	64.5	82.1	99.6	62.8	80.3	97.8	60.9	78.4	95.8	58.9	76.3	93.7	56.5	73.9	91.4
		72	THC	111.2	111.2	111.2	106.6	106.6	106.6	101.6	101.6	101.6	96.2	96.2	96.2	88.8	88.8	88.8
			SHC	46.3	63.9	81.4	44.7	62.2	79.7	42.9	60.3	77.8	40.9	58.3	75.8	38.4	55.8	73.2
		76	THC	—	117.9	117.9	—	113.0	113.0	—	107.6	107.6	—	101.8	101.8	—	—	—
			SHC	—	49.5	67.4	—	47.8	65.6	—	46.0	63.7	—	44.0	61.6	—	—	—
4000 Cfm	EA (wb)	58	THC	100.4	100.4	113.1	96.7	96.7	109.0	92.7	92.7	104.5	88.4	88.4	99.6	82.0	82.0	92.4
			SHC	87.7	100.4	113.1	84.4	96.7	109.0	80.9	92.7	104.5	77.2	88.4	99.6	71.6	82.0	92.4
		62	THC	100.4	100.4	117.4	96.8	96.8	113.2	92.8	92.8	108.5	88.4	88.4	103.4	81.7	81.7	95.5
			SHC	83.4	100.4	117.4	80.4	96.8	113.2	77.1	92.8	108.5	73.5	88.4	103.4	67.8	81.7	95.5
		67	THC	104.7	104.7	107.0	100.3	100.3	105.1	95.5	95.5	103.1	90.4	90.4	100.8	82.8	82.8	94.5
			SHC	67.9	87.5	107.0	66.1	85.6	105.1	64.2	83.6	103.1	62.2	81.5	100.8	54.7	74.6	94.5
		72	THC	112.7	112.7	112.7	108.0	108.0	108.0	102.8	102.8	102.8	97.3	97.3	97.3	89.9	89.9	89.9
			SHC	47.7	67.2	86.7	46.0	65.5	84.9	44.1	63.6	83.0	42.2	61.6	80.9	39.7	59.0	78.4
		76	THC	—	119.4	119.4	—	114.3	114.3	—	108.7	108.7	—	103.0	103.0	—	94.3	94.3
			SHC	—	51.2	71.0	—	49.5	69.2	—	47.6	67.2	—	45.6	65.1	—	42.8	62.0
4500 Cfm	EA (wb)	58	THC	102.7	102.7	115.7	98.9	98.9	111.5	94.8	94.8	106.8	90.3	90.3	101.7	85.1	85.1	95.9
			SHC	89.7	102.7	115.7	86.3	98.9	111.5	82.7	94.8	106.8	78.9	90.3	101.7	74.3	85.1	95.9
		62	THC	102.8	102.8	120.2	99.0	99.0	115.7	94.8	94.8	110.9	90.3	90.3	105.6	83.6	83.6	97.8
			SHC	85.4	102.8	120.2	82.2	99.0	115.7	78.8	94.8	110.9	75.1	90.3	105.6	69.5	83.6	97.8
		67	THC	105.9	105.9	113.8	101.5	101.5	111.7	96.7	96.7	109.5	91.6	91.6	106.8	84.0	84.0	100.0
			SHC	71.0	92.4	113.8	69.2	90.5	111.7	67.2	88.3	109.5	65.0	85.9	106.8	57.0	76.0	100.0
		72	THC	113.8	113.8	113.8	109.0	109.0	109.0	103.7	103.7	103.7	98.1	98.1	98.1	89.5	89.5	89.5
			SHC	48.9	70.3	91.7	47.2	68.6	89.9	45.3	66.6	87.9	43.4	64.6	85.7	40.6	61.8	83.1
		76	THC	—	120.4	120.4	—	115.3	115.3	—	109.6	109.6	—	103.9	103.9	—	—	—
			SHC	—	52.7	74.3	—	51.0	72.4	—	49.1	70.3	—	47.1	68.1	—	—	—
5000 Cfm	EA (wb)	58	THC	105.0	105.0	118.3	101.0	101.0	113.9	96.8	96.8	109.0	92.1	92.1	103.8	88.1	88.1	99.3
			SHC	91.7	105.0	118.3	88.2	101.0	113.9	84.5	96.8	109.0	80.5	92.1	103.8	76.9	88.1	99.3
		62	THC	105.1	105.1	122.9	101.1	101.1	118.2	96.8	96.8	113.2	92.2	92.2	107.8	85.5	85.5	100.0
			SHC	87.3	105.1	122.9	84.0	101.1	118.2	80.4	96.8	113.2	76.6	92.2	107.8	71.1	85.5	100.0
		67	THC	107.1	107.1	120.5	102.6	102.6	118.3	97.8	97.8	115.8	92.7	92.7	112.8	—	—	—
			SHC	74.1	97.3	120.5	72.2	95.3	118.3	70.1	93.0	115.8	67.8	90.3	112.8	—	—	—
		72	THC	114.9	114.9	114.9	109.9	109.9	109.9	104.6	104.6	104.6	98.9	98.9	98.9	—	—	—
			SHC	50.1	73.4	96.7	48.4	71.6	94.8	46.5	69.6	92.7	44.6	67.5	90.5	—	—	—
		76	THC	—	121.4	121.4	—	116.2	116.2	—	110.4	110.4	—	104.7	104.7	—	—	—
			SHC	—	54.2	77.5	—	52.4	75.6	—	50.5	73.4	—	48.5	71.1	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS121 – FAS120

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3000 Cfm	EA (wb)	58	THC	110.5	110.5	121.5	106.2	106.2	117.1	101.6	101.6	112.4	96.9	96.9	107.5	92.5	92.5	102.9
			SHC	99.4	110.5	121.5	95.3	106.2	117.1	90.9	101.6	112.4	86.3	96.9	107.5	82.0	92.5	102.9
		62	THC	114.0	114.0	114.0	108.8	108.8	111.4	103.3	103.3	108.7	97.6	97.6	105.6	91.2	91.2	101.6
			SHC	92.3	103.2	114.0	89.9	100.6	111.4	87.3	98.0	108.7	84.5	95.1	105.6	80.8	91.2	101.6
		67	THC	123.2	123.2	123.2	117.4	117.4	117.4	111.5	111.5	111.5	105.1	105.1	105.1	—	—	—
			SHC	76.4	86.8	97.2	74.1	84.4	94.7	71.7	81.9	92.1	69.1	79.3	89.4	—	—	—
3500 Cfm	EA (wb)	72	THC	133.0	133.0	133.0	126.8	126.8	126.8	120.4	120.4	120.4	113.5	113.5	113.5	106.0	106.0	106.0
			SHC	60.2	70.1	79.9	57.9	67.7	77.5	55.6	65.3	74.9	53.2	62.7	72.3	50.5	60.0	69.4
		76	THC	—	140.7	140.7	—	134.2	134.2	—	127.6	127.6	—	120.2	120.2	—	112.3	112.3
			SHC	—	56.4	65.8	—	54.1	63.4	—	51.8	61.0	—	49.3	58.4	—	46.6	55.6
		58	THC	115.8	115.8	128.4	111.2	111.2	123.6	106.3	106.3	118.6	101.1	101.1	113.2	94.3	94.3	106.2
			SHC	103.3	115.8	128.4	98.8	111.2	123.6	94.1	106.3	118.6	89.0	101.1	113.2	82.5	94.3	106.2
4000 Cfm	EA (wb)	62	THC	117.4	117.4	124.5	112.0	112.0	121.6	106.6	106.6	118.3	101.1	101.1	113.2	93.0	93.0	104.8
			SHC	99.5	112.0	124.5	96.9	109.2	121.6	93.8	106.0	118.3	89.0	101.1	113.2	81.2	93.0	104.8
		67	THC	126.1	126.1	126.1	120.0	120.0	120.0	113.8	113.8	113.8	107.2	107.2	107.2	101.0	101.0	101.0
			SHC	81.5	93.4	105.4	79.1	91.0	102.8	76.7	88.4	100.2	74.1	85.8	97.4	71.6	83.2	94.7
		72	THC	135.6	135.6	135.6	129.2	129.2	129.2	122.6	122.6	122.6	115.5	115.5	115.5	108.0	108.0	108.0
			SHC	62.8	74.1	85.4	60.5	71.7	82.9	58.2	69.3	80.4	55.7	66.7	77.7	53.2	64.0	74.9
4500 Cfm	EA (wb)	76	THC	—	143.2	143.2	—	136.5	136.5	—	129.7	129.7	—	122.1	122.1	—	—	—
			SHC	—	58.4	69.2	—	56.1	66.8	—	53.8	64.4	—	51.3	61.8	—	—	—
		58	THC	120.2	120.2	134.3	115.3	115.3	129.2	110.1	110.1	123.8	104.5	104.5	118.0	97.1	97.1	110.4
			SHC	106.1	120.2	134.3	101.4	115.3	129.2	96.4	110.1	123.8	91.0	104.5	118.0	83.9	97.1	110.4
		62	THC	120.5	120.5	133.7	115.3	115.3	129.2	110.2	110.2	123.9	104.6	104.6	118.1	97.0	97.0	110.3
			SHC	105.6	119.7	133.7	101.4	115.3	129.2	96.5	110.2	123.9	91.1	104.6	118.1	83.8	97.0	110.3
5000 Cfm	EA (wb)	67	THC	128.2	128.2	128.2	122.0	122.0	122.0	115.6	115.6	115.6	108.8	108.8	108.8	101.3	101.3	102.0
			SHC	86.2	99.7	113.2	83.9	97.2	110.6	81.4	94.7	108.0	78.8	92.0	105.1	76.0	89.0	102.0
		72	THC	137.6	137.6	137.6	131.0	131.0	131.0	124.2	124.2	124.2	116.9	116.9	116.9	109.3	109.3	109.3
			SHC	65.2	78.0	90.7	62.9	75.6	88.2	60.6	73.1	85.7	58.1	70.6	83.0	55.6	67.8	80.1
		76	THC	—	145.0	145.0	—	138.2	138.2	—	131.2	131.2	—	—	—	—	—	—
			SHC	—	60.3	72.5	—	58.1	70.1	—	55.8	67.7	—	—	—	—	—	—
5000 Cfm	EA (wb)	58	THC	123.8	123.8	139.3	118.6	118.6	134.0	113.2	113.2	128.4	107.3	107.3	122.2	102.3	102.3	117.1
			SHC	108.2	123.8	139.3	103.2	118.6	134.0	98.0	113.2	128.4	92.4	107.3	122.2	87.6	102.3	117.1
		62	THC	123.9	123.9	139.4	118.7	118.7	134.1	113.3	113.3	128.4	107.4	107.4	122.3	101.8	101.8	116.5
			SHC	108.3	123.9	139.4	103.3	118.7	134.1	98.1	113.3	128.4	92.5	107.4	122.3	87.1	101.8	116.5
		67	THC	130.0	130.0	130.0	123.6	123.6	123.6	117.1	117.1	117.1	110.2	110.2	112.5	102.8	102.8	109.3
			SHC	90.8	105.8	120.9	88.3	103.2	118.2	85.8	100.6	115.4	83.2	97.8	112.5	80.3	94.8	109.3
5000 Cfm	EA (wb)	72	THC	139.1	139.1	139.1	132.4	132.4	132.4	125.5	125.5	125.5	118.1	118.1	118.1	110.3	110.3	110.3
			SHC	67.4	81.7	95.9	65.2	79.3	93.3	62.9	76.8	90.8	60.4	74.2	88.1	57.8	71.5	85.2
		76	THC	—	146.4	146.4	—	139.6	139.6	—	—	—	—	—	—	—	—	—
			SHC	—	62.2	75.7	—	59.9	73.3	—	—	—	—	—	—	—	—	—
		58	THC	126.8	126.8	143.8	121.4	121.4	138.2	115.8	115.8	132.3	109.8	109.8	126.1	103.0	103.0	119.1
			SHC	109.8	126.8	143.8	104.5	121.4	138.2	99.2	115.8	132.3	93.4	109.8	126.1	86.9	103.0	119.1
5000 Cfm	EA (wb)	62	THC	126.9	126.9	143.9	121.4	121.4	138.2	115.9	115.9	132.4	109.8	109.8	126.2	103.1	103.1	119.2
			SHC	109.8	126.9	143.9	104.6	121.4	138.2	99.3	115.9	132.4	93.5	109.8	126.2	87.0	103.1	119.2
		67	THC	131.4	131.4	131.4	125.0	125.0	125.5	118.4	118.4	122.7	111.5	111.5	119.6	104.1	104.1	116.1
			SHC	95.1	111.7	128.2	92.6	109.1	125.5	90.1	106.4	122.7	87.3	103.4	119.6	84.2	100.1	116.1
		72	THC	140.3	140.3	140.3	133.5	133.5	133.5	126.6	126.6	126.6	119.0	119.0	119.0	111.1	111.1	111.1
			SHC	69.6	85.3	100.9	67.4	82.9	98.4	65.1	80.5	95.9	62.6	77.9	93.2	60.0	75.1	90.3
5000 Cfm	EA (wb)	76	THC	—	147.6	147.6	—	—	—	—	—	—	—	—	—	—	—	
			SHC	—	64.0	78.8	—	—	—	—	—	—	—	—	—	—	—	

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS121 – FAS150

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3750 Cfm	EA (wb)	58	THC	119.7	119.7	132.9	115.2	115.2	128.3	110.5	110.5	123.4	105.3	105.3	118.0	97.9	97.9	110.4
			SHC	106.5	119.7	132.9	102.2	115.2	128.3	97.6	110.5	123.4	92.6	105.3	118.0	85.5	97.9	110.4
		62	THC	121.2	121.2	130.3	116.0	116.0	127.0	110.8	110.8	122.9	105.4	105.4	118.1	98.7	98.7	111.1
			SHC	104.0	117.2	130.3	101.0	114.0	127.0	97.2	110.1	122.9	92.7	105.4	118.1	86.2	98.7	111.1
		67	THC	130.0	130.0	130.0	124.4	124.4	124.4	118.5	118.5	118.5	112.0	112.0	112.0	104.9	104.9	104.9
			SHC	85.3	97.8	110.3	83.1	95.5	108.0	80.8	93.1	105.5	78.3	90.5	102.7	75.6	87.7	99.8
		72	THC	139.4	139.4	139.4	133.7	133.7	133.7	127.7	127.7	127.7	120.9	120.9	120.9	113.5	113.5	113.5
			SHC	65.3	77.1	88.8	63.3	75.0	86.7	61.2	72.8	84.4	58.9	70.4	81.8	56.3	67.7	79.0
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4300 Cfm	EA (wb)	58	THC	124.1	124.1	138.8	119.4	119.4	134.1	114.5	114.5	128.9	109.0	109.0	123.2	100.5	100.5	114.4
			SHC	109.2	124.1	138.8	104.8	119.4	134.1	100.0	114.5	128.9	94.8	109.0	123.2	86.6	100.5	114.4
		62	THC	124.5	124.5	138.3	119.5	119.5	134.1	114.5	114.5	128.9	109.1	109.1	123.3	101.0	101.0	114.9
			SHC	108.7	123.5	138.3	104.9	119.5	134.1	100.1	114.5	128.9	94.9	109.1	123.3	87.1	101.0	114.9
		67	THC	132.1	132.1	132.1	126.4	126.4	126.4	120.4	120.4	121.1	113.8	113.8	115.6	106.5	106.5	109.5
			SHC	90.7	104.9	119.0	88.5	102.5	116.6	86.1	100.1	114.1	83.6	97.4	111.2	80.7	94.5	108.1
		72	THC	141.3	141.3	141.3	135.5	135.5	135.5	129.5	129.5	129.5	122.6	122.6	122.6	114.3	114.3	114.3
			SHC	68.1	81.4	94.7	66.1	79.3	92.6	64.0	77.1	90.3	61.7	74.7	87.7	57.6	69.7	81.7
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5000 Cfm	EA (wb)	58	THC	128.9	128.9	145.7	124.1	124.1	140.7	118.9	118.9	135.3	113.2	113.2	129.3	106.8	106.8	122.7
			SHC	112.1	128.9	145.7	107.5	124.1	140.7	102.5	118.9	135.3	97.0	113.2	129.3	90.9	106.8	122.7
		62	THC	129.0	129.0	145.8	124.2	124.2	140.7	119.0	119.0	135.3	113.3	113.3	129.4	106.8	106.8	122.7
			SHC	112.2	129.0	145.8	107.6	124.2	140.7	102.6	119.0	135.3	97.1	113.3	129.4	91.0	106.8	122.7
		67	THC	134.4	134.4	134.4	128.6	128.6	128.6	122.5	122.5	124.7	115.8	115.8	121.8	108.4	108.4	118.5
			SHC	97.3	113.6	129.8	95.1	111.2	127.4	92.7	108.7	124.7	90.1	105.9	121.8	87.0	102.8	118.5
		72	THC	143.4	143.4	143.4	137.5	137.5	137.5	131.3	131.3	131.3	124.3	124.3	124.3	—	—	—
			SHC	71.6	86.8	102.0	69.6	84.7	99.9	67.5	82.6	97.6	65.2	80.1	95.0	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5700 Cfm	EA (wb)	58	THC	132.3	132.3	151.0	127.3	127.3	145.8	122.0	122.0	140.3	116.1	116.1	134.1	109.5	109.5	127.2
			SHC	113.6	132.3	151.0	108.8	127.3	145.8	103.7	122.0	140.3	98.1	116.1	134.1	91.8	109.5	127.2
		62	THC	132.4	132.4	151.1	127.4	127.4	145.9	122.1	122.1	140.3	116.2	116.2	134.2	109.5	109.5	127.3
			SHC	113.7	132.4	151.1	108.9	127.4	145.9	103.8	122.1	140.3	98.1	116.2	134.2	91.8	109.5	127.3
		67	THC	136.0	136.0	141.8	130.2	130.2	137.7	124.1	124.1	134.2	117.4	117.4	130.6	110.3	110.3	125.5
			SHC	103.2	121.5	139.8	100.8	119.0	137.2	98.1	116.1	134.2	94.9	112.7	130.6	90.2	107.8	125.5
		72	THC	144.7	144.7	144.7	138.8	138.8	138.8	132.0	132.0	140.6	126.0	126.0	133.0	—	—	—
			SHC	74.8	92.0	109.1	72.8	89.9	107.0	71.4	88.0	81.8	68.7	85.2	101.8	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6250 Cfm	EA (wb)	58	THC	134.9	134.9	155.1	129.8	129.8	149.8	124.4	124.4	144.2	118.3	118.3	137.8	111.6	111.6	130.8
			SHC	114.7	134.9	155.1	109.9	129.8	149.8	104.7	124.4	144.2	98.9	118.3	137.8	92.5	111.6	130.8
		62	THC	135.0	135.0	155.2	129.9	129.9	149.9	124.5	124.5	144.2	118.4	118.4	137.9	111.7	111.7	130.9
			SHC	114.8	135.0	155.2	109.9	129.9	149.9	104.7	124.5	144.2	98.9	118.4	137.9	92.5	111.7	130.9
		67	THC	137.2	137.2	147.6	131.4	131.4	144.9	125.3	125.3	141.6	118.7	118.7	137.5	111.8	111.8	131.0
			SHC	107.8	127.7	147.6	105.3	125.1	144.9	102.4	122.0	141.6	98.6	118.1	137.5	92.7	111.8	131.0
		72	THC	145.7	145.7	145.7	139.9	139.9	139.9	—	—	—	—	—	—	—	—	—
			SHC	77.3	96.0	114.7	75.4	94.0	112.6	—	—	—	—	—	—	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS120 – FAS120

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3000 Cfm	EA (wb)	58	THC	111.6	111.6	125.3	107.3	107.3	120.5	102.6	102.6	115.2	97.3	97.3	109.4	91.7	91.7	103.0
			SHC	97.9	111.6	125.3	94.1	107.3	120.5	89.9	102.6	115.2	85.3	97.3	109.4	80.3	91.7	103.0
		62	THC	115.9	115.9	119.8	110.5	110.5	117.1	104.8	104.8	114.2	98.3	98.3	110.7	92.4	92.4	106.2
			SHC	88.6	104.2	119.8	86.0	101.5	117.1	83.2	98.7	114.2	79.9	95.3	110.7	76.2	91.2	106.2
		67	THC	125.6	125.6	125.6	119.9	119.9	119.9	113.7	113.7	113.7	107.1	107.1	107.1	99.6	99.6	99.6
			SHC	71.9	87.6	103.3	69.4	85.1	100.8	66.8	82.5	98.1	63.9	79.6	95.3	60.8	76.5	92.2
3500 Cfm	EA (wb)	58	THC	117.1	117.1	131.6	112.5	112.5	126.4	107.5	107.5	120.8	102.0	102.0	114.7	95.7	95.7	107.7
			SHC	102.6	117.1	131.6	98.6	112.5	126.4	94.2	107.5	120.8	89.4	102.0	114.7	83.8	95.7	107.7
		62	THC	119.3	119.3	130.8	113.8	113.8	127.8	108.1	108.1	123.7	102.1	102.1	119.1	95.7	95.7	111.7
			SHC	95.1	112.9	130.8	92.3	110.0	127.8	88.9	106.3	123.7	85.1	102.1	119.1	79.7	95.7	111.7
		67	THC	128.8	128.8	128.8	122.8	122.8	122.8	116.4	116.4	116.4	109.5	109.5	109.5	101.9	101.9	101.9
			SHC	76.0	94.1	112.2	73.5	91.6	109.7	70.8	88.9	107.0	68.0	86.1	104.2	64.9	82.9	101.0
4000 Cfm	EA (wb)	58	THC	121.6	121.6	136.6	116.7	116.7	131.2	111.4	111.4	125.3	105.7	105.7	118.9	99.2	99.2	111.7
			SHC	106.5	121.6	136.6	102.2	116.7	131.2	97.6	111.4	125.3	92.5	105.7	118.9	86.8	99.2	111.7
		62	THC	122.2	122.2	140.3	117.0	117.0	135.6	111.4	111.4	130.0	105.7	105.7	123.4	99.2	99.2	115.9
			SHC	100.7	120.5	140.3	97.0	116.3	135.6	92.8	111.4	130.0	88.0	105.7	123.4	82.6	99.2	115.9
		67	THC	131.1	131.1	131.1	125.0	125.0	125.0	118.5	118.5	118.5	111.4	111.4	112.6	103.7	103.7	109.4
			SHC	79.9	100.4	120.8	77.4	97.8	118.3	74.7	95.1	115.6	71.8	92.2	112.6	68.7	89.0	109.4
4500 Cfm	EA (wb)	58	THC	125.3	125.3	140.9	120.2	120.2	135.3	114.8	114.8	129.1	108.8	108.8	122.4	102.4	102.4	115.2
			SHC	109.7	125.3	140.9	105.2	120.2	135.3	100.4	114.8	129.1	95.2	108.8	122.4	89.5	102.4	115.2
		62	THC	125.3	125.3	146.2	120.2	120.2	140.3	114.7	114.7	134.0	108.8	108.8	127.1	102.4	102.4	119.6
			SHC	104.4	125.3	146.2	100.1	120.2	140.3	95.5	114.7	134.0	90.5	108.8	127.1	85.1	102.4	119.6
		67	THC	133.0	133.0	133.0	126.8	126.8	126.8	120.1	120.1	123.8	112.9	112.9	120.7	105.1	105.1	117.3
			SHC	83.6	106.4	129.2	81.1	103.8	126.6	78.3	101.0	123.8	75.4	98.0	120.7	72.2	94.8	117.3
5000 Cfm	EA (wb)	58	THC	128.4	128.4	144.5	123.2	123.2	138.7	117.6	117.6	132.3	111.4	111.4	125.4	104.7	104.7	117.9
			SHC	112.4	128.4	144.5	107.8	123.2	138.7	102.8	117.6	132.3	97.4	111.4	125.4	91.5	104.7	117.9
		62	THC	128.4	128.4	149.9	123.2	123.2	143.9	117.5	117.5	137.3	111.4	111.4	130.2	104.7	104.7	122.4
			SHC	106.9	128.4	149.9	102.5	123.2	143.9	97.8	117.5	137.3	92.6	111.4	130.2	87.0	104.7	122.4
		67	THC	134.6	134.6	137.2	128.3	128.3	134.5	121.5	121.5	131.6	114.2	114.2	128.3	106.3	106.3	124.6
			SHC	87.1	112.2	137.2	84.6	109.5	134.5	81.8	106.7	131.6	78.8	103.6	128.3	75.5	100.1	124.6
5000 Cfm	EA (wb)	72	THC	144.2	144.2	144.2	137.7	137.7	137.7	130.6	130.6	130.6	122.8	122.8	122.8	114.4	114.4	114.4
			SHC	60.6	85.8	111.0	58.3	83.5	108.6	55.8	80.9	106.1	53.0	78.2	103.3	50.1	75.2	100.3
		76	THC	—	151.9	151.9	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	64.9	90.4	—	—	—	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS120 – FAS150

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3750 Cfm	EA (wb)	58	THC	118.1	118.1	133.1	113.8	113.8	128.3	109.1	109.1	123.0	103.9	103.9	117.1	98.2	98.2	110.7
			SHC	103.1	118.1	133.1	99.4	113.8	128.3	95.3	109.1	123.0	90.7	103.9	117.1	85.8	98.2	110.7
		62	THC	120.1	120.1	133.8	115.0	115.0	130.9	109.5	109.5	127.1	104.1	104.1	121.7	98.3	98.3	115.0
			SHC	96.2	115.0	133.8	93.6	112.3	130.9	90.5	108.8	127.1	86.4	104.1	121.7	81.7	98.3	115.0
		67	THC	130.2	130.2	130.2	124.8	124.8	124.8	118.7	118.7	118.7	112.0	112.0	112.0	104.6	104.6	105.5
			SHC	77.7	96.9	116.0	75.5	94.6	113.8	73.0	92.2	111.3	70.4	89.5	108.6	67.4	86.4	105.5
		72	THC	140.9	140.9	140.9	135.4	135.4	135.4	129.2	129.2	129.2	122.3	122.3	122.3	114.6	114.6	114.6
			SHC	58.0	77.3	96.6	56.0	75.3	94.5	53.7	73.0	92.2	51.2	70.4	89.7	48.4	67.6	86.8
		76	THC	—	149.8	149.8	—	144.2	144.2	—	137.8	137.8	—	130.6	130.6	—	122.6	122.6
			SHC	—	61.4	81.1	—	59.4	79.1	—	57.3	76.9	—	54.9	74.5	—	52.2	71.7
4300 Cfm	EA (wb)	58	THC	122.7	122.7	138.2	118.2	118.2	133.2	113.3	113.3	127.7	107.9	107.9	121.5	101.8	101.8	114.7
			SHC	107.1	122.7	138.2	103.3	118.2	133.2	98.9	113.3	127.7	94.1	107.9	121.5	88.9	101.8	114.7
		62	THC	123.2	123.2	142.6	118.4	118.4	138.1	113.4	113.4	132.5	108.0	108.0	126.2	101.9	101.9	119.1
			SHC	101.5	122.0	142.6	98.2	118.1	138.1	94.1	113.3	132.5	89.7	108.0	126.2	84.6	101.9	119.1
		67	THC	132.3	132.3	132.3	126.8	126.8	126.8	120.6	120.6	121.3	113.8	113.8	118.1	106.3	106.3	114.4
			SHC	81.8	103.6	125.2	79.6	101.3	123.0	77.1	98.8	120.5	74.4	96.0	117.7	71.4	92.9	114.4
		72	THC	143.1	143.1	143.1	137.4	137.4	137.4	131.0	131.0	131.0	124.0	124.0	124.0	116.1	116.1	116.1
			SHC	59.7	81.4	103.3	57.7	79.4	101.2	55.4	77.1	98.9	52.9	74.6	96.3	50.1	71.8	93.5
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5000 Cfm	EA (wb)	58	THC	127.4	127.4	143.6	122.8	122.8	138.4	117.7	117.7	132.6	111.9	111.9	126.1	105.5	105.5	118.9
			SHC	111.3	127.4	143.6	107.2	122.8	138.4	102.7	117.7	132.6	97.7	111.9	126.1	92.1	105.5	118.9
		62	THC	127.5	127.5	149.1	122.9	122.9	143.7	117.7	117.7	137.7	112.0	112.0	131.0	105.6	105.6	123.5
			SHC	105.9	127.5	149.1	102.1	122.9	143.7	97.8	117.7	137.7	93.0	112.0	131.0	87.7	105.6	123.5
		67	THC	134.4	134.4	136.4	128.9	128.9	134.1	122.6	122.6	131.4	115.7	115.7	128.4	108.0	108.0	124.8
			SHC	86.9	111.7	136.4	84.7	109.4	134.1	82.2	106.8	131.4	79.3	103.8	128.4	76.2	100.5	124.8
		72	THC	145.1	145.1	145.1	139.4	139.4	139.4	132.9	132.9	132.9	125.7	125.7	125.7	117.6	117.6	117.6
			SHC	61.7	86.6	111.5	59.6	84.6	109.5	57.4	82.3	107.2	54.8	79.7	104.6	52.1	76.9	101.7
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5700 Cfm	EA (wb)	58	THC	131.2	131.2	147.9	126.4	126.4	142.4	121.1	121.1	136.4	115.1	115.1	129.8	108.5	108.5	122.4
			SHC	114.5	131.2	147.9	110.3	126.4	142.4	105.7	121.1	136.4	100.5	115.1	129.8	94.8	108.5	122.4
		62	THC	131.3	131.3	153.5	126.5	126.5	148.0	121.2	121.2	141.7	115.2	115.2	134.7	108.6	108.6	127.1
			SHC	109.0	131.3	153.5	105.1	126.5	148.0	100.6	121.2	141.7	95.7	115.2	134.7	90.3	108.6	127.1
		67	THC	136.1	136.1	146.9	130.5	130.5	144.4	124.2	124.2	141.6	117.2	117.2	138.0	109.6	109.6	133.8
			SHC	91.6	119.3	146.9	89.3	116.9	144.4	86.7	114.2	141.6	83.8	111.0	138.0	80.2	107.0	133.8
		72	THC	146.6	146.6	146.6	140.9	140.9	140.9	134.2	134.2	134.2	126.9	126.9	126.9	118.7	118.7	118.7
			SHC	63.5	91.5	119.6	61.5	89.5	117.5	59.3	87.2	115.2	56.7	84.6	112.6	54.0	81.8	109.7
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6250 Cfm	EA (wb)	58	THC	133.5	133.5	150.5	128.7	128.7	145.0	123.3	123.3	138.9	117.2	117.2	132.1	110.5	110.5	124.5
			SHC	116.6	133.5	150.5	112.4	128.7	145.0	107.6	123.3	138.9	102.3	117.2	132.1	96.4	110.5	124.5
		62	THC	133.6	133.6	156.3	128.8	128.8	150.6	123.3	123.3	144.2	117.3	117.3	137.1	110.5	110.5	129.2
			SHC	111.0	133.6	156.3	107.0	128.8	150.6	102.5	123.3	144.2	97.4	117.3	137.1	91.8	110.5	129.2
		67	THC	137.1	137.1	154.6	131.5	131.5	151.9	125.1	125.1	148.6	118.2	118.2	144.5	110.8	110.8	138.2
			SHC	95.1	124.8	154.6	92.7	122.3	151.9	89.9	119.3	148.6	86.7	115.6	144.5	82.4	110.3	138.2
		72	THC	147.5	147.5	147.5	141.7	141.7	141.7	135.0	135.0	135.0	127.6	127.6	127.6	119.4	119.4	119.4
			SHC	65.0	95.3	125.6	63.0	93.3	123.6	60.7	91.0	121.2	58.2	88.4	118.6	55.4	85.6	115.8
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

– Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS151 – FAS150

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3750 Cfm	EA (wb)	58	THC	138.4	138.4	152.4	133.2	133.2	147.0	127.6	127.6	141.2	121.6	121.6	135.0	113.3	113.3	126.5
			SHC	124.5	138.4	152.4	119.4	133.2	147.0	114.0	127.6	141.2	108.2	121.6	135.0	100.2	113.3	126.5
		62	THC	144.5	144.5	144.5	137.9	137.9	138.9	131.0	131.0	135.4	123.7	123.7	131.6	—	—	—
			SHC	114.9	128.6	142.3	111.8	125.4	138.9	108.6	122.0	135.4	105.0	118.3	131.6	—	—	—
		67	THC	156.4	156.4	156.4	149.4	149.4	149.4	141.9	141.9	141.9	134.0	134.0	134.0	125.3	125.3	125.3
			SHC	95.6	108.7	121.7	92.7	105.7	118.6	89.7	102.5	115.3	86.5	99.2	111.9	83.1	95.7	108.2
		72	THC	168.6	168.6	168.6	161.2	161.2	161.2	153.4	153.4	153.4	144.8	144.8	144.8	135.6	135.6	135.6
			SHC	75.7	88.1	100.4	73.0	85.2	97.5	70.1	82.2	94.3	67.0	79.0	91.0	63.8	75.6	87.4
		76	THC	—	178.5	178.5	—	170.8	170.8	—	162.6	162.6	—	153.6	153.6	—	143.9	143.9
			SHC	—	71.4	83.2	—	68.7	80.3	—	65.8	77.3	—	62.7	74.0	—	59.4	70.6
4375 Cfm	EA (wb)	58	THC	145.4	145.4	161.2	139.7	139.7	155.4	133.7	133.7	149.2	127.3	127.3	142.6	121.3	121.3	136.3
			SHC	129.5	145.4	161.2	124.0	139.7	155.4	118.3	133.7	149.2	112.1	127.3	142.6	106.3	121.3	136.3
		62	THC	148.6	148.6	155.2	141.9	141.9	151.6	134.8	134.8	147.6	127.5	127.5	142.8	121.2	121.2	136.1
			SHC	123.8	139.5	155.2	120.5	136.0	151.6	116.8	132.2	147.6	112.3	127.5	142.8	106.1	121.1	136.1
		67	THC	160.2	160.2	160.2	152.9	152.9	152.9	145.2	145.2	145.2	136.9	136.9	136.9	127.9	127.9	127.9
			SHC	101.9	116.9	131.8	99.0	113.8	128.7	96.0	110.7	125.4	92.8	107.3	121.9	89.3	103.7	118.1
		72	THC	172.3	172.3	172.3	164.7	164.7	164.7	156.5	156.5	156.5	147.7	147.7	147.7	138.1	138.1	138.1
			SHC	79.0	93.2	107.3	76.3	90.3	104.3	73.4	87.3	101.1	70.3	84.0	97.8	67.0	80.6	94.2
		76	THC	—	182.1	182.1	—	174.2	174.2	—	165.6	165.6	—	156.4	156.4	—	146.3	146.3
			SHC	—	74.0	87.5	—	71.3	84.6	—	68.4	81.5	—	65.3	78.3	—	61.9	74.8
5000 Cfm	EA (wb)	58	THC	151.0	151.0	168.8	145.0	145.0	162.6	138.7	138.7	156.0	131.9	131.9	149.0	124.6	124.6	141.4
			SHC	133.2	151.0	168.8	127.5	145.0	162.6	121.4	138.7	156.0	114.9	131.9	149.0	107.9	124.6	141.4
		62	THC	152.2	152.2	166.8	145.3	145.3	162.8	138.9	138.9	156.2	132.0	132.0	149.1	124.7	124.7	141.5
			SHC	131.5	149.1	166.8	127.8	145.3	162.8	121.5	138.9	156.2	115.0	132.0	149.1	107.9	124.7	141.5
		67	THC	163.1	163.1	163.1	155.6	155.6	155.6	147.6	147.6	147.6	139.1	139.1	139.1	130.1	130.1	130.1
			SHC	107.9	124.8	141.6	105.0	121.7	138.5	101.9	118.5	135.1	98.6	115.1	131.5	95.1	111.4	127.7
		72	THC	175.0	175.0	175.0	167.3	167.3	167.3	158.8	158.8	158.8	149.8	149.8	149.8	140.0	140.0	140.0
			SHC	82.1	98.0	113.9	79.4	95.2	111.0	76.5	92.1	107.8	73.4	88.9	104.4	70.1	85.4	100.7
		76	THC	—	184.8	184.8	—	176.6	176.6	—	167.9	167.9	—	158.4	158.4	—	—	—
			SHC	—	76.5	91.6	—	73.8	88.8	—	70.8	85.7	—	67.7	82.4	—	—	—
5625 Cfm	EA (wb)	58	THC	155.6	155.6	175.2	149.4	149.4	168.8	142.8	142.8	161.9	135.7	135.7	154.5	127.9	127.9	146.4
			SHC	136.0	155.6	175.2	130.0	149.4	168.8	123.7	142.8	161.9	116.8	135.7	154.5	109.4	127.9	146.4
		62	THC	155.7	155.7	175.3	149.5	149.5	168.8	142.9	142.9	162.0	135.8	135.8	154.6	128.0	128.0	146.5
			SHC	136.1	155.7	175.3	130.1	149.5	168.8	123.8	142.9	162.0	117.0	135.8	154.6	109.5	128.0	146.5
		67	THC	165.3	165.3	165.3	157.8	157.8	157.8	149.6	149.6	149.6	140.9	140.9	140.9	131.7	131.7	136.8
			SHC	113.6	132.4	151.2	110.7	129.3	148.0	107.5	126.0	144.5	104.1	122.5	140.8	100.5	118.6	136.8
		72	THC	177.3	177.3	177.3	169.3	169.3	169.3	160.7	160.7	160.7	151.5	151.5	151.5	141.6	141.6	141.6
			SHC	85.0	102.7	120.5	82.3	99.9	117.4	79.4	96.8	114.2	76.3	93.6	110.8	73.0	90.1	107.2
		76	THC	—	187.0	187.0	—	178.7	178.7	—	169.7	169.7	—	—	—	—	—	—
			SHC	—	78.9	95.7	—	76.2	92.8	—	73.2	89.8	—	—	—	—	—	—
6250 Cfm	EA (wb)	58	THC	159.5	159.5	180.9	153.1	153.1	174.3	146.2	146.2	167.1	138.9	138.9	159.5	131.0	131.0	151.2
			SHC	138.0	159.5	180.9	131.9	153.1	174.3	125.3	146.2	167.1	118.3	138.9	159.5	110.7	131.0	151.2
		62	THC	159.6	159.6	181.0	153.2	153.2	174.4	146.3	146.3	167.2	139.0	139.0	159.5	131.0	131.0	151.2
			SHC	138.2	159.6	181.0	132.0	153.2	174.4	125.5	146.3	167.2	118.4	139.0	159.5	110.7	131.0	151.2
		67	THC	167.2	167.2	167.2	159.5	159.5	159.5	151.2	151.2	153.5	142.5	142.5	149.6	133.1	133.1	145.3
			SHC	119.0	139.7	160.4	116.0	136.6	157.1	112.8	133.1	153.5	109.2	129.4	149.6	105.3	125.3	145.3
		72	THC	179.0	179.0	179.0	170.9	170.9	170.9	162.2	162.2	162.2	152.8	152.8	152.8	142.6	142.6	142.6
			SHC	87.9	107.4	126.8	85.1	104.5	123.8	82.2	101.4	120.6	79.1	98.2	117.2	75.9	94.7	113.5
		76	THC	—	188.7	188.7	—	180.2	180.2	—	—	—	—	—	—	—	—	—
			SHC	—	81.3	99.8	—	78.5	96.9	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS151 - FAS180

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
4500 Cfm	EA (wb)	58	THC	149.9	149.9	166.0	144.0	144.0	160.0	137.7	137.7	153.4	130.8	130.8	146.3	122.9	122.9	138.1
			SHC	133.8	149.9	166.0	128.1	144.0	160.0	122.0	137.7	153.4	115.3	130.8	146.3	107.8	122.9	138.1
		62	THC	152.8	152.8	160.5	145.8	145.8	156.7	138.6	138.6	152.1	131.1	131.1	146.5	122.0	122.0	137.1
			SHC	128.7	144.6	160.5	125.2	141.0	156.7	120.8	136.5	152.1	115.6	131.1	146.5	106.8	122.0	137.1
		67	THC	164.6	164.6	164.6	157.1	157.1	157.1	149.0	149.0	149.0	140.3	140.3	140.3	—	—	—
			SHC	105.8	120.9	136.1	102.8	117.8	132.9	99.7	114.5	129.5	96.2	111.0	125.8	—	—	—
		72	THC	176.9	176.9	176.9	169.1	169.1	169.1	160.6	160.6	160.6	151.4	151.4	151.4	—	—	—
			SHC	81.9	96.2	110.5	79.1	93.3	107.5	76.1	90.1	104.2	72.9	86.7	100.7	—	—	—
		76	THC	—	187.1	187.1	—	179.0	179.0	—	169.7	169.7	—	—	—	—	—	—
			SHC	—	76.2	89.7	—	73.4	86.9	—	69.9	82.9	—	—	—	—	—	—
5300 Cfm	EA (wb)	58	THC	156.6	156.6	175.0	150.4	150.4	168.6	143.7	143.7	161.7	136.4	136.4	154.1	124.7	124.7	141.2
			SHC	138.2	156.6	175.0	132.2	150.4	168.6	125.8	143.7	161.7	118.8	136.4	154.1	108.2	124.7	141.2
		62	THC	157.6	157.6	173.5	150.7	150.7	168.8	143.8	143.8	161.7	136.5	136.5	154.2	125.1	125.1	141.6
			SHC	136.9	155.2	173.5	132.5	150.7	168.8	125.9	143.8	161.7	118.9	136.5	154.2	108.6	125.1	141.6
		67	THC	167.9	167.9	167.9	160.2	160.2	160.2	151.8	151.8	152.2	142.9	142.9	144.4	—	—	—
			SHC	113.4	131.0	148.5	110.5	127.9	145.3	107.3	124.5	141.7	103.8	120.9	138.0	—	—	—
		72	THC	180.2	180.2	180.2	172.1	172.1	172.1	163.4	163.4	163.4	153.9	153.9	153.9	—	—	—
			SHC	85.9	102.4	118.8	83.1	99.5	115.8	80.1	96.3	112.5	76.9	92.9	109.0	—	—	—
		76	THC	—	189.4	189.4	—	181.2	181.2	—	—	—	—	—	—	—	—	—
			SHC	—	78.2	93.1	—	75.5	90.3	—	—	—	—	—	—	—	—	—
6000 Cfm	EA (wb)	58	THC	161.3	161.3	181.5	154.9	154.9	174.9	147.8	147.8	167.6	140.3	140.3	159.7	—	—	—
			SHC	141.1	161.3	181.5	134.9	154.9	174.9	128.1	147.8	167.6	120.9	140.3	159.7	—	—	—
		62	THC	161.7	161.7	181.1	155.0	155.0	175.0	148.0	148.0	167.7	140.4	140.4	159.8	—	—	—
			SHC	140.7	160.9	181.1	135.0	155.0	175.0	128.2	148.0	167.7	121.0	140.4	159.8	—	—	—
		67	THC	170.1	170.1	170.1	162.3	162.3	162.3	153.8	153.8	155.1	144.7	144.7	149.9	—	—	—
			SHC	119.6	139.1	158.6	116.6	136.0	155.3	113.3	132.5	151.6	109.7	128.7	147.7	—	—	—
		72	THC	182.3	182.3	182.3	174.1	174.1	174.1	165.2	165.2	165.2	155.4	155.4	155.4	—	—	—
			SHC	89.1	107.4	125.7	86.3	104.5	122.7	83.3	101.3	119.4	80.1	97.9	115.8	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6800 Cfm	EA (wb)	58	THC	166.2	166.2	188.7	159.5	159.5	181.8	152.2	152.2	174.2	144.3	144.3	165.9	—	—	—
			SHC	143.6	166.2	188.7	137.2	159.5	181.8	130.2	152.2	174.2	122.6	144.3	165.9	—	—	—
		62	THC	166.3	166.3	188.8	159.6	159.6	181.9	152.3	152.3	174.3	144.4	144.4	166.0	—	—	—
			SHC	143.8	166.3	188.8	137.4	159.6	181.9	130.3	152.3	174.3	122.7	144.4	166.0	—	—	—
		67	THC	172.4	172.4	175.3	164.5	164.5	169.2	155.9	155.9	163.4	146.7	146.7	159.1	—	—	—
			SHC	126.9	148.8	170.7	123.8	145.5	167.3	120.3	141.9	163.4	116.3	137.6	159.1	—	—	—
		72	THC	184.4	184.4	184.4	176.1	176.1	176.1	167.0	167.0	167.0	157.1	157.1	157.1	—	—	—
			SHC	93.0	113.5	134.1	90.2	110.6	131.1	87.2	107.5	127.8	84.0	104.1	124.2	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7500 Cfm	EA (wb)	58	THC	170.1	170.1	194.7	163.2	163.2	187.6	155.7	155.7	179.7	147.5	147.5	171.2	—	—	—
			SHC	145.4	170.1	194.7	138.8	163.2	187.6	131.6	155.7	179.7	123.8	147.5	171.2	—	—	—
		62	THC	170.2	170.2	194.8	163.3	163.3	187.7	155.8	155.8	179.8	147.6	147.6	171.3	—	—	—
			SHC	145.6	170.2	194.8	139.0	163.3	187.7	131.7	155.8	179.8	123.9	147.6	171.3	—	—	—
		67	THC	174.3	174.3	181.8	166.3	166.3	178.1	157.7	157.7	174.0	148.4	148.4	169.1	—	—	—
			SHC	133.4	157.6	181.8	130.1	154.1	178.1	126.4	150.2	174.0	122.0	145.5	169.1	—	—	—
		72	THC	186.0	186.0	186.0	177.6	177.6	177.6	168.4	168.4	168.4	158.4	158.4	158.4	—	—	—
			SHC	96.5	119.2	141.9	93.8	116.3	138.9	90.8	113.2	135.6	87.6	109.8	132.0	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS150 – FAS150

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
3750 Cfm	EA (wb)	58	THC	137.2	137.2	152.7	132.4	132.4	147.9	127.1	127.1	142.6	121.2	121.2	136.7	114.7	114.7	130.2
			SHC	121.7	137.2	152.7	117.0	132.4	147.9	111.6	127.1	142.6	105.8	121.2	136.7	99.3	114.7	130.2
		62	THC	143.2	143.2	143.2	137.3	137.3	140.1	130.6	130.6	136.8	123.3	123.3	133.1	115.5	115.5	128.8
			SHC	112.0	127.5	142.9	109.1	124.6	140.1	105.9	121.3	136.8	102.2	117.7	133.1	97.9	113.3	128.8
		67	THC	154.9	154.9	154.9	148.6	148.6	148.6	141.6	141.6	141.6	133.9	133.9	133.9	125.4	125.4	125.4
			SHC	91.1	106.5	122.0	88.4	103.9	119.4	85.5	101.0	116.5	82.3	97.8	113.3	78.9	94.3	109.8
		72	THC	166.4	166.4	166.4	160.0	160.0	160.0	152.9	152.9	152.9	144.8	144.8	144.8	135.8	135.8	135.8
			SHC	69.8	85.3	100.7	67.4	82.9	98.4	64.8	80.3	95.7	61.8	77.3	92.8	58.6	74.0	89.5
		76	THC	—	175.4	175.4	—	169.0	169.0	—	161.5	161.5	—	153.2	153.2	—	—	—
			SHC	—	67.2	82.7	—	65.5	81.0	—	63.3	78.8	—	60.7	76.2	—	—	—
4375 Cfm	EA (wb)	58	THC	143.6	143.6	161.7	138.6	138.6	156.7	133.0	133.0	151.0	126.7	126.7	144.8	119.9	119.9	137.9
			SHC	125.6	143.6	161.7	120.6	138.6	156.7	114.9	133.0	151.0	108.7	126.7	144.8	101.8	119.9	137.9
		62	THC	147.0	147.0	155.9	140.8	140.8	152.8	134.1	134.1	149.0	127.7	127.7	141.1	120.7	120.7	134.7
			SHC	119.8	137.9	155.9	116.7	134.7	152.8	112.9	130.9	149.0	105.0	123.1	141.1	98.6	116.6	134.7
		67	THC	158.8	158.8	158.8	152.3	152.3	152.3	145.0	145.0	145.0	137.0	137.0	137.0	128.1	128.1	128.1
			SHC	96.4	114.4	132.5	93.7	111.8	129.8	90.8	108.9	126.9	87.6	105.6	123.7	84.1	102.1	120.2
		72	THC	170.6	170.6	170.6	163.9	163.9	163.9	156.3	156.3	156.3	147.8	147.8	147.8	138.6	138.6	138.6
			SHC	72.3	90.3	108.4	69.8	87.9	105.9	67.1	85.1	103.2	64.1	82.1	100.2	60.8	78.8	96.9
		76	THC	—	179.7	179.7	—	172.7	172.7	—	165.0	165.0	—	—	—	—	—	—
			SHC	—	70.7	88.7	—	68.5	86.6	—	66.1	84.1	—	—	—	—	—	—
5000 Cfm	EA (wb)	58	THC	148.9	148.9	169.6	143.7	143.7	164.3	137.8	137.8	158.4	131.3	131.3	151.9	124.0	124.0	144.7
			SHC	128.3	148.9	169.6	123.1	143.7	164.3	117.2	137.8	158.4	110.6	131.3	151.9	103.4	124.0	144.7
		62	THC	149.9	149.9	167.0	144.2	144.2	160.8	138.6	138.6	154.4	131.8	131.8	149.5	124.0	124.0	144.7
			SHC	125.8	146.4	167.0	119.6	140.2	160.8	113.1	133.8	154.4	108.3	128.9	149.5	103.4	124.0	144.7
		67	THC	161.8	161.8	161.8	155.1	155.1	155.1	147.6	147.6	147.6	139.3	139.3	139.3	130.2	130.2	130.2
			SHC	101.4	122.0	142.6	98.7	119.3	139.9	95.7	116.3	137.0	92.4	113.0	133.7	88.8	109.5	130.1
		72	THC	173.7	173.7	173.7	166.7	166.7	166.7	158.9	158.9	158.9	150.2	150.2	150.2	140.7	140.7	140.7
			SHC	74.4	95.0	115.7	71.9	92.5	113.2	69.2	89.8	110.4	66.1	86.7	107.4	62.8	83.4	104.1
		76	THC	—	183.0	183.0	—	175.8	175.8	—	—	—	—	—	—	—	—	—
			SHC	—	73.4	94.1	—	71.2	91.8	—	—	—	—	—	—	—	—	—
5625 Cfm	EA (wb)	58	THC	153.5	153.5	176.7	148.0	148.0	171.2	141.9	141.9	165.1	135.1	135.1	158.3	127.5	127.5	150.8
			SHC	130.2	153.5	176.7	124.8	148.0	171.2	118.7	141.9	165.1	111.9	135.1	158.3	104.3	127.5	150.8
		62	THC	153.9	153.9	171.9	148.3	148.3	168.2	141.9	141.9	165.0	135.1	135.1	158.3	127.5	127.5	150.7
			SHC	125.5	148.7	171.9	121.8	145.0	168.2	118.6	141.8	165.0	111.9	135.1	158.3	104.3	127.5	150.7
		67	THC	164.1	164.1	164.1	157.3	157.3	157.3	149.7	149.7	149.7	141.2	141.2	143.4	131.9	131.9	139.7
			SHC	106.0	129.2	152.4	103.3	126.5	149.7	100.3	123.5	146.7	97.0	120.2	143.4	93.3	116.5	139.7
		72	THC	176.2	176.2	176.2	169.0	169.0	169.0	161.0	161.0	161.0	152.1	152.1	152.1	142.4	142.4	142.4
			SHC	76.4	99.6	122.8	73.8	97.1	120.3	71.1	94.3	117.5	68.0	91.2	114.4	64.7	87.9	111.1
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6250 Cfm	EA (wb)	58	THC	157.3	157.3	183.1	151.7	151.7	177.5	145.4	145.4	171.2	138.3	138.3	164.1	130.5	130.5	156.3
			SHC	131.6	157.3	183.1	125.9	151.7	177.5	119.6	145.4	171.2	112.5	138.3	164.1	104.7	130.5	156.3
		62	THC	157.3	157.3	183.1	151.7	151.7	177.5	145.4	145.4	171.1	138.3	138.3	164.1	130.5	130.5	156.3
			SHC	131.6	157.3	183.1	125.9	151.7	177.5	119.6	145.4	171.1	112.5	138.3	164.1	104.7	130.5	156.3
		67	THC	166.1	166.1	166.1	159.2	159.2	159.3	151.3	151.3	156.2	142.7	142.7	152.8	133.2	133.2	149.0
			SHC	110.5	136.3	162.0	107.8	133.5	159.3	104.7	130.5	156.2	101.3	127.0	152.8	97.4	123.2	149.0
		72	THC	178.3	178.3	178.3	170.9	170.9	170.9	162.7	162.7	162.7	153.7	153.7	153.7	143.8	143.8	143.8
			SHC	78.1	103.9	129.7	75.6	101.4	127.2	72.8	98.6	124.4	69.8	95.5	121.3	66.4	92.2	118.0
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS150 – FAS180

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
4500 Cfm	EA (wb)	58	THC	145.6	145.6	164.1	140.4	140.4	158.2	134.6	134.6	151.7	128.4	128.4	144.6	121.6	121.6	137.0
			SHC	127.1	145.6	164.1	122.5	140.4	158.2	117.5	134.6	151.7	112.1	128.4	144.6	106.2	121.6	137.0
		62	THC	149.1	149.1	162.7	142.7	142.7	159.2	135.8	135.8	155.2	128.8	128.8	149.6	121.7	121.7	142.3
			SHC	117.6	140.1	162.7	114.5	136.8	159.2	110.9	133.1	155.2	106.4	128.0	149.6	101.1	121.7	142.3
		67	THC	161.2	161.2	161.2	154.4	154.4	154.4	147.0	147.0	147.0	138.8	138.8	138.8	130.1	130.1	130.1
			SHC	94.6	117.4	140.3	91.8	114.6	137.5	88.8	111.6	134.5	85.6	108.4	131.2	82.1	104.9	127.7
		72	THC	174.0	174.0	174.0	167.0	167.0	167.0	159.1	159.1	159.1	150.6	150.6	150.6	141.2	141.2	141.2
			SHC	70.0	93.0	116.1	67.4	90.4	113.4	64.6	87.6	110.6	61.6	84.5	107.5	58.3	81.2	104.1
		76	THC	—	184.6	184.6	—	177.3	177.3	—	169.1	169.1	—	160.1	160.1	—	150.3	150.3
			SHC	—	72.9	96.6	—	70.5	94.0	—	67.7	91.2	—	64.8	88.2	—	61.6	85.0
5300 Cfm	EA (wb)	58	THC	152.7	152.7	172.0	147.0	147.0	165.7	140.9	140.9	158.8	134.3	134.3	151.3	127.0	127.0	143.1
			SHC	133.2	152.7	172.0	128.4	147.0	165.7	123.1	140.9	158.8	117.3	134.3	151.3	110.8	127.0	143.1
		62	THC	153.6	153.6	176.8	147.4	147.4	171.5	141.0	141.0	165.0	134.4	134.4	157.2	127.1	127.1	148.6
			SHC	126.2	151.5	176.8	122.0	146.8	171.5	117.2	141.0	165.0	111.6	134.4	157.2	105.6	127.1	148.6
		67	THC	164.9	164.9	164.9	157.8	157.8	157.9	150.2	150.2	150.6	141.7	141.7	144.5	132.6	132.6	140.7
			SHC	100.8	127.3	153.7	98.0	124.5	150.9	95.0	121.4	147.8	91.7	118.1	144.5	88.1	114.4	140.7
		72	THC	177.6	177.6	177.6	170.3	170.3	170.3	162.2	162.2	162.2	153.3	153.3	153.3	143.7	143.7	143.7
			SHC	72.4	99.1	125.7	69.9	96.5	123.1	67.0	93.7	120.2	64.0	90.6	117.1	60.6	87.2	113.7
		76	THC	—	188.2	188.2	—	180.6	180.6	—	172.1	172.1	—	162.9	162.9	—	152.8	152.8
			SHC	—	76.0	103.2	—	73.5	100.6	—	70.8	97.9	—	67.9	94.9	—	64.7	91.6
6000 Cfm	EA (wb)	58	THC	157.7	157.7	177.7	151.8	151.8	171.1	145.5	145.5	163.9	138.5	138.5	156.1	130.9	130.9	147.5
			SHC	137.6	157.7	177.7	132.6	151.8	171.1	127.0	145.5	163.9	120.9	138.5	156.1	114.3	130.9	147.5
		62	THC	157.8	157.8	184.5	152.0	152.0	177.7	145.6	145.6	170.2	138.6	138.6	162.1	131.0	131.0	153.2
			SHC	131.1	157.8	184.5	126.2	152.0	177.7	120.9	145.6	170.2	115.1	138.6	162.1	108.8	131.0	153.2
		67	THC	167.2	167.2	167.2	160.1	160.1	162.1	152.3	152.3	158.9	143.7	143.7	155.3	134.6	134.6	151.3
			SHC	105.9	135.5	165.0	103.1	132.6	162.1	100.0	129.5	158.9	96.7	126.0	155.3	93.0	122.1	151.3
		72	THC	180.0	180.0	180.0	172.6	172.6	172.6	164.3	164.3	164.3	155.3	155.3	155.3	145.4	145.4	145.4
			SHC	74.5	104.3	134.0	72.0	101.6	131.3	69.1	98.8	128.4	66.1	95.7	125.3	62.7	92.3	121.9
		76	THC	—	190.6	190.6	—	182.8	182.8	—	174.2	174.2	—	164.8	164.8	—	154.6	154.6
			SHC	—	78.6	108.9	—	76.1	106.3	—	73.4	103.5	—	70.5	100.5	—	67.3	97.3
6800 Cfm	EA (wb)	58	THC	162.2	162.2	182.9	156.2	156.2	176.1	149.6	149.6	168.6	142.4	142.4	160.4	134.5	134.5	151.5
			SHC	141.7	162.2	182.9	136.4	156.2	176.1	130.7	149.6	168.6	124.3	142.4	160.4	117.4	134.5	151.5
		62	THC	162.4	162.4	190.0	156.3	156.3	182.9	149.7	149.7	175.1	142.5	142.5	166.6	134.6	134.6	157.3
			SHC	134.9	162.4	190.0	129.9	156.3	182.9	124.4	149.7	175.1	118.4	142.5	166.6	111.8	134.6	157.3
		67	THC	169.5	169.5	177.2	162.2	162.2	174.2	154.3	154.3	170.7	145.7	145.7	166.7	136.4	136.4	162.1
			SHC	111.5	144.4	177.2	108.6	141.4	174.2	105.5	138.1	170.7	101.9	134.4	166.7	98.1	130.0	162.1
		72	THC	182.2	182.2	182.2	174.6	174.6	174.6	166.2	166.2	166.2	157.0	157.0	157.0	146.9	146.9	146.9
			SHC	76.8	109.9	143.1	74.2	107.3	140.5	71.4	104.4	137.6	68.3	101.3	134.5	65.0	97.9	131.0
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7500 Cfm	EA (wb)	58	THC	165.7	165.7	186.8	159.6	159.6	179.8	152.7	152.7	172.1	145.2	145.2	163.7	137.1	137.1	154.5
			SHC	144.7	165.7	186.8	139.3	159.6	179.8	133.4	152.7	172.1	126.8	145.2	163.7	119.7	137.1	154.5
		62	THC	165.9	165.9	193.9	159.6	159.6	186.7	152.8	152.8	178.7	145.3	145.3	169.9	137.2	137.2	160.4
			SHC	137.8	165.9	193.9	132.6	159.6	186.7	126.9	152.8	178.7	120.7	145.3	169.9	113.9	137.2	160.4
		67	THC	171.2	171.2	187.4	163.9	163.9	184.1	155.9	155.9	180.3	147.2	147.2	175.8	137.9	137.9	170.1
			SHC	116.2	151.8	187.4	113.2	148.7	184.1	109.9	145.1	180.3	106.2	141.0	175.8	101.8	135.9	170.1
		72	THC	183.8	183.8	183.8	176.0	176.0	176.0	167.5	167.5	167.5	158.2	158.2	158.2	148.0	148.0	148.0
			SHC	78.7	114.8	150.9	76.1	112.2	148.3	73.3	109.3	145.4	70.2	106.2	142.2	66.9	102.8	138.7
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS181 – FAS180

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
4500 Cfm	EA (wb)	58	THC	169.9	169.9	190.5	164.1	164.1	184.2	157.5	157.5	176.8	151.4	151.4	170.0	—	—	—
			SHC	148.9	169.7	190.5	143.9	164.1	184.2	138.1	157.5	176.8	132.7	151.4	170.0	—	—	—
		62	THC	178.8	178.8	178.8	171.5	171.5	174.3	163.3	163.3	170.5	155.3	155.3	166.3	146.7	146.7	161.9
			SHC	133.1	155.4	177.8	129.5	151.9	174.3	125.7	148.1	170.5	121.7	144.0	166.3	117.4	139.7	161.9
		67	THC	193.8	193.8	193.8	186.0	186.0	186.0	177.5	177.5	177.5	168.6	168.6	168.6	—	—	—
			SHC	108.6	130.7	152.8	105.2	127.4	149.5	101.6	123.8	146.0	97.8	120.1	142.4	—	—	—
		72	THC	210.1	210.1	210.1	201.7	201.7	201.7	192.6	192.6	192.6	182.7	182.7	182.7	—	—	—
			SHC	85.0	106.1	127.1	81.6	103.0	124.3	77.9	99.5	121.1	74.0	95.9	117.7	—	—	—
		76	THC	—	223.4	223.4	—	215.0	215.0	—	205.5	205.5	—	194.8	194.8	—	—	—
			SHC	—	86.6	111.3	—	82.8	107.5	—	79.6	104.3	—	76.5	101.3	—	—	—
5250 Cfm	EA (wb)	58	THC	178.2	178.2	200.2	172.0	172.0	193.3	164.8	164.8	185.2	158.4	158.4	178.0	150.6	150.6	169.3
			SHC	156.3	178.2	200.2	150.8	172.0	193.3	144.4	164.8	185.2	138.7	158.4	178.0	131.9	150.6	169.3
		62	THC	184.0	184.0	193.8	176.0	176.0	189.8	167.6	167.6	185.5	159.7	159.7	180.7	151.0	151.0	174.3
			SHC	142.4	168.1	193.8	138.5	164.1	189.8	134.4	160.0	185.5	130.1	155.4	180.7	124.8	149.6	174.3
		67	THC	199.0	199.0	199.0	190.8	190.8	190.8	181.6	181.6	181.6	172.6	172.6	172.6	—	—	—
			SHC	114.5	140.0	165.6	111.0	136.6	162.2	107.2	132.9	158.6	103.5	129.2	154.9	—	—	—
		72	THC	215.3	215.3	215.3	206.5	206.5	206.5	196.9	196.9	196.9	186.7	186.7	186.7	—	—	—
			SHC	87.1	111.9	136.7	83.7	108.7	133.7	80.0	105.2	130.3	76.2	101.4	126.7	—	—	—
		76	THC	—	229.0	229.0	—	219.8	219.8	—	209.6	209.6	—	198.7	198.7	—	—	—
			SHC	—	89.0	117.8	—	86.3	115.2	—	83.2	105.2	—	79.7	103.1	—	—	—
6000 Cfm	EA (wb)	58	THC	185.2	185.2	208.1	178.7	178.7	200.8	170.9	170.9	192.2	164.2	164.2	184.6	156.1	156.1	175.6
			SHC	162.2	185.2	208.1	156.5	178.7	200.8	149.6	170.9	192.2	143.7	164.2	184.6	136.6	156.1	175.6
		62	THC	188.1	188.1	208.1	180.3	180.3	203.5	—	—	—	164.5	164.5	189.5	156.3	156.3	181.6
			SHC	150.7	179.4	208.1	146.6	175.1	203.5	—	—	—	135.6	162.5	189.5	129.7	155.6	181.6
		67	THC	203.1	203.1	203.1	194.6	194.6	194.6	185.6	185.6	185.6	175.8	175.8	175.8	—	—	—
			SHC	120.0	148.9	177.8	116.6	145.5	174.4	112.8	141.8	170.8	108.9	137.9	166.9	—	—	—
		72	THC	219.3	219.3	219.3	210.2	210.2	210.2	200.2	200.2	200.2	189.8	189.8	189.8	—	—	—
			SHC	89.2	117.4	145.7	85.8	114.2	142.6	82.0	110.6	139.1	78.2	106.8	135.5	—	—	—
		76	THC	—	232.9	232.9	—	223.4	223.4	—	213.1	213.1	—	201.9	201.9	—	—	—
			SHC	—	92.4	116.9	—	89.4	115.2	—	86.2	112.9	—	82.6	110.0	—	—	—
6750 Cfm	EA (wb)	58	THC	191.0	191.0	214.8	184.2	184.2	207.2	176.6	176.6	198.6	169.0	169.0	190.1	160.6	160.6	180.7
			SHC	167.3	191.0	214.8	161.2	184.2	207.2	154.5	176.6	198.6	147.8	169.0	190.1	140.5	160.6	180.7
		62	THC	192.1	192.1	219.7	184.5	184.5	212.5	177.8	177.8	202.9	168.9	168.9	197.3	160.6	160.6	187.6
			SHC	157.7	188.7	219.7	152.1	182.3	212.5	145.5	174.2	202.9	140.6	168.9	197.3	133.6	160.6	187.6
		67	THC	206.4	206.4	206.4	197.7	197.7	197.7	188.2	188.2	188.2	178.4	178.4	178.5	—	—	—
			SHC	125.4	157.5	189.7	121.8	154.0	186.2	118.0	150.2	182.5	114.1	146.3	178.5	—	—	—
		72	THC	222.5	222.5	222.5	213.1	213.1	213.1	203.1	203.1	203.1	192.4	192.4	192.4	—	—	—
			SHC	91.1	122.7	154.3	87.7	119.4	151.1	84.0	115.8	147.5	80.2	112.1	144.0	—	—	—
		76	THC	—	236.1	236.1	—	226.5	226.5	—	215.9	215.9	—	204.4	204.4	—	—	—
			SHC	—	95.3	124.6	—	92.3	122.2	—	89.0	119.5	—	85.4	116.3	—	—	—
7500 Cfm	EA (wb)	58	THC	196.0	196.0	220.5	189.0	189.0	212.6	181.2	181.2	204.0	173.1	173.1	194.8	—	—	—
			SHC	171.5	196.0	220.5	165.3	189.0	212.6	158.5	181.2	204.0	151.4	173.1	194.8	—	—	—
		62	THC	196.1	196.1	228.2	189.0	189.0	220.6	182.3	182.3	207.2	173.1	173.1	202.2	—	—	—
			SHC	162.9	195.5	228.2	157.3	189.0	220.6	148.6	177.9	207.2	144.0	173.1	202.2	—	—	—
		67	THC	209.1	209.1	209.1	200.2	200.2	200.2	190.5	190.5	193.8	180.5	180.5	189.7	—	—	—
			SHC	130.5	165.8	201.1	126.9	162.2	197.6	123.1	158.4	193.8	119.1	154.4	189.7	—	—	—
		72	THC	225.2	225.2	225.2	215.6	215.6	215.6	205.4	205.4	205.4	194.4	194.4	194.4	—	—	—
			SHC	93.0	127.9	162.7	89.6	124.5	159.4	85.9	120.9	155.9	82.0	117.1	152.2	—	—	—
		76	THC	—	238.9	238.9	—	229.0	229.0	—	218.1	218.1	—	206.4	206.4	—	—	—
			SHC	—	98.1	131.2	—	95.0	128.6	—	91.6	125.6	—	88.0	122.3	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS181 – FAS240

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
6000 Cfm	EA (wb)	58	THC	188.1	188.1	211.9	181.9	181.9	205.0	175.2	175.2	197.4	167.8	167.8	189.1	159.7	159.7	180.0
			SHC	164.2	188.1	211.9	158.8	181.9	205.0	153.0	175.2	197.4	146.5	167.8	189.1	139.4	159.7	180.0
		62	THC	189.5	189.5	216.5	182.5	182.5	212.0	175.4	175.4	205.1	168.0	168.0	196.4	159.8	159.8	186.9
			SHC	154.7	185.6	216.5	150.8	181.4	212.0	145.7	175.4	205.1	139.5	168.0	196.4	132.7	159.8	186.9
		67	THC	203.3	203.3	203.3	195.6	195.6	195.6	187.2	187.2	187.2	177.9	177.9	177.9	167.8	167.8	172.0
			SHC	123.2	154.9	186.5	120.1	151.7	183.3	116.7	148.3	179.9	113.0	144.6	176.1	109.0	140.5	172.0
		72	THC	218.9	218.9	218.9	210.9	210.9	210.9	202.0	202.0	202.0	192.1	192.1	192.1	181.3	181.3	181.3
			SHC	90.2	122.0	153.8	87.2	119.0	150.8	84.0	115.8	147.5	80.5	112.2	143.9	76.7	108.3	140.0
		76	THC	—	232.4	232.4	—	224.0	224.0	—	214.7	214.7	—	—	—	—	—	—
			SHC	—	95.8	128.2	—	92.9	125.2	—	89.8	122.0	—	—	—	—	—	—
7000 Cfm	EA (wb)	58	THC	195.8	195.8	220.6	189.4	189.4	213.4	182.3	182.3	205.4	174.5	174.5	196.6	165.8	165.8	186.9
			SHC	171.0	195.8	220.6	165.3	189.4	213.4	159.1	182.3	205.4	152.4	174.5	196.6	144.8	165.8	186.9
		62	THC	196.0	196.0	229.2	189.5	189.5	221.6	182.4	182.4	213.3	174.6	174.6	204.2	166.0	166.0	194.1
			SHC	162.8	196.0	229.2	157.4	189.5	221.6	151.5	182.4	213.3	145.1	174.6	204.2	137.9	166.0	194.1
		67	THC	207.2	207.2	207.2	199.2	199.2	201.0	190.5	190.5	197.4	181.1	181.1	193.5	170.7	170.7	189.2
			SHC	131.3	167.8	204.3	128.1	164.6	201.0	124.6	161.0	197.4	120.9	157.2	193.5	116.8	153.0	189.2
		72	THC	222.7	222.7	222.7	214.4	214.4	214.4	205.4	205.4	205.4	195.2	195.2	195.2	184.1	184.1	184.1
			SHC	93.3	130.0	166.6	90.3	127.0	163.6	87.1	123.7	160.3	83.6	120.1	156.7	79.7	116.2	152.7
		76	THC	—	236.5	236.5	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	100.0	137.1	—	—	—	—	—	—	—	—	—	—	—	—
8000 Cfm	EA (wb)	58	THC	202.0	202.0	227.6	195.3	195.3	220.1	187.9	187.9	211.8	179.8	179.8	202.6	170.7	170.7	192.4
			SHC	176.4	202.0	227.6	170.5	195.3	220.1	164.1	187.9	211.8	157.0	179.8	202.6	149.1	170.7	192.4
		62	THC	202.1	202.1	236.4	195.4	195.4	228.5	188.0	188.0	219.9	179.9	179.9	210.4	170.8	170.8	199.8
			SHC	167.9	202.1	236.4	162.3	195.4	228.5	156.2	188.0	219.9	149.4	179.9	210.4	141.9	170.8	199.8
		67	THC	210.1	210.1	221.2	202.1	202.1	217.8	193.3	193.3	214.0	183.7	183.7	209.7	173.2	173.2	204.8
			SHC	138.9	180.0	221.2	135.7	176.7	217.8	132.2	173.1	214.0	128.3	169.0	209.7	124.0	164.4	204.8
		72	THC	225.7	225.7	225.7	217.3	217.3	217.3	207.9	207.9	207.9	197.6	197.6	197.6	186.2	186.2	186.2
			SHC	96.3	137.7	179.1	93.4	134.7	176.1	90.1	131.4	172.8	86.6	127.8	169.1	82.7	123.9	165.1
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9000 Cfm	EA (wb)	58	THC	207.1	207.1	233.4	200.2	200.2	225.6	192.6	192.6	217.0	184.1	184.1	207.4	174.8	174.8	196.9
			SHC	180.8	207.1	233.4	174.8	200.2	225.6	168.2	192.6	217.0	160.7	184.1	207.4	152.6	174.8	196.9
		62	THC	207.2	207.2	242.3	200.3	200.3	234.2	192.7	192.7	225.3	184.2	184.2	215.4	174.9	174.9	204.5
			SHC	172.1	207.2	242.3	166.4	200.3	234.2	160.1	192.7	225.3	153.0	184.2	215.4	145.3	174.9	204.5
		67	THC	212.6	212.6	237.2	204.5	204.5	233.5	195.6	195.6	229.3	186.0	186.0	224.4	175.5	175.5	217.9
			SHC	146.2	191.7	237.2	142.9	188.2	233.5	139.2	184.3	229.3	135.1	179.7	224.4	130.1	174.0	217.9
		72	THC	228.0	228.0	228.0	219.4	219.4	219.4	209.9	209.9	209.9	199.5	199.5	199.5	187.9	187.9	187.9
			SHC	99.2	145.3	191.4	96.3	142.3	188.3	93.0	139.0	184.9	89.5	135.4	181.2	85.6	131.4	177.2
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10,000 Cfm	EA (wb)	58	THC	211.4	211.4	238.2	204.3	204.3	230.2	196.4	196.4	221.4	187.8	187.8	211.6	178.1	178.1	200.7
			SHC	184.6	211.4	238.2	178.4	204.3	230.2	171.5	196.4	221.4	164.0	187.8	211.6	155.5	178.1	200.7
		62	THC	211.5	211.5	247.3	204.4	204.4	239.0	196.6	196.6	229.8	187.9	187.9	219.7	178.2	178.2	208.3
			SHC	175.7	211.5	247.3	169.8	204.4	239.0	163.3	196.6	229.8	156.1	187.9	219.7	148.0	178.2	208.3
		67	THC	214.6	214.6	251.9	206.6	206.6	247.8	197.8	197.8	242.7	188.2	188.2	235.9	178.3	178.3	223.5
			SHC	152.9	202.4	251.9	149.4	198.6	247.8	145.4	194.0	242.7	140.5	188.2	235.9	133.1	178.3	223.5
		72	THC	229.9	229.9	229.9	221.2	221.2	221.2	211.6	211.6	211.6	201.0	201.0	201.0	—	—	—
			SHC	102.1	152.7	203.3	99.1	149.7	200.2	95.9	146.4	196.9	92.3	142.7	193.1	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS180 – FAS180

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
4500 Cfm	EA (wb)	58	THC	168.2	168.2	185.7	161.9	161.9	181.8	156.0	156.0	175.2	149.4	149.4	167.8	143.0	143.0	160.7
			SHC	145.7	165.7	185.7	142.0	161.9	181.8	136.7	156.0	175.2	130.9	149.4	167.8	125.3	143.0	160.7
		62	THC	176.6	176.6	176.6	169.7	169.7	172.9	162.2	162.2	169.3	153.7	153.7	165.1	145.0	145.0	160.6
			SHC	131.8	154.0	176.2	128.4	150.7	172.9	124.8	147.0	169.3	120.7	142.9	165.1	116.4	138.5	160.6
		67	THC	192.7	192.7	192.7	185.3	185.3	185.3	177.2	177.2	177.2	168.0	168.0	168.0	158.8	158.8	158.8
			SHC	108.2	130.1	151.9	104.9	126.9	148.9	101.5	123.5	145.5	97.6	119.7	141.8	93.7	115.9	138.1
		72	THC	210.4	210.4	210.4	202.4	202.4	202.4	193.7	193.7	193.7	184.1	184.1	184.1	173.7	173.7	173.7
			SHC	85.4	106.0	126.6	82.1	103.1	124.0	78.6	99.8	121.1	74.9	96.3	117.8	70.9	92.5	114.2
		76	THC	—	224.8	224.8	—	216.8	216.8	—	207.7	207.7	—	197.7	197.7	—	186.5	186.5
			SHC	—	86.9	111.7	—	83.2	107.9	—	80.0	104.8	—	77.2	102.0	—	73.8	96.1
5250 Cfm	EA (wb)	58	THC	175.7	175.7	197.4	169.9	169.9	190.9	163.6	163.6	183.9	157.0	157.0	176.5	148.9	148.9	167.4
			SHC	154.0	175.7	197.4	148.9	169.9	190.9	143.3	163.6	183.9	137.5	157.0	176.5	130.3	148.9	167.4
		62	THC	181.7	181.7	192.0	174.2	174.2	188.1	166.6	166.6	184.0	157.8	157.8	179.0	149.9	149.9	172.2
			SHC	141.0	166.5	192.0	137.2	162.7	188.1	133.4	158.7	184.0	128.8	153.9	179.0	123.4	147.8	172.2
		67	THC	198.0	198.0	198.0	190.1	190.1	190.1	181.6	181.6	181.6	172.0	172.0	172.0	162.6	162.6	162.6
			SHC	114.1	139.4	164.7	110.7	136.1	161.5	107.2	132.6	158.1	103.3	128.8	154.3	99.4	124.9	150.4
		72	THC	215.8	215.8	215.8	207.4	207.4	207.4	198.2	198.2	198.2	188.3	188.3	188.3	177.5	177.5	177.5
			SHC	87.6	112.0	136.4	84.4	108.9	133.5	80.8	105.6	130.4	77.1	102.0	127.0	73.1	98.2	123.3
		76	THC	—	230.9	230.9	—	222.1	222.1	—	212.5	212.5	—	202.0	202.0	—	190.4	190.4
			SHC	—	89.4	118.3	—	86.8	115.7	—	83.9	109.4	—	80.7	103.0	—	77.0	100.5
6000 Cfm	EA (wb)	58	THC	182.7	182.7	205.3	176.5	176.5	198.5	169.9	169.9	191.0	162.2	162.2	182.4	154.7	154.7	174.0
			SHC	160.0	182.7	205.3	154.6	176.5	198.5	148.7	169.9	191.0	142.0	162.2	182.4	135.3	154.7	174.0
		62	THC	185.8	185.8	205.9	178.6	178.6	200.2	170.8	170.8	195.6	163.3	163.3	186.9	155.9	155.9	177.2
			SHC	149.1	177.5	205.9	144.4	172.3	200.2	140.3	167.9	195.6	134.0	160.5	186.9	127.2	152.2	177.2
		67	THC	202.0	202.0	202.0	193.9	193.9	193.9	185.0	185.0	185.0	175.4	175.4	175.4	165.2	165.2	165.2
			SHC	119.6	148.2	176.9	116.3	144.9	173.6	112.6	141.3	170.1	108.7	137.5	166.3	104.6	133.4	162.2
		72	THC	219.9	219.9	219.9	211.2	211.2	211.2	201.7	201.7	201.7	191.8	191.8	191.8	180.4	180.4	180.4
			SHC	89.8	117.6	145.4	86.5	114.5	142.5	82.9	111.1	139.2	79.2	107.3	135.4	75.1	103.6	132.0
		76	THC	—	235.1	235.1	—	226.2	226.2	—	216.2	216.2	—	205.2	205.2	—	193.3	193.3
			SHC	—	92.9	121.7	—	90.2	114.7	—	87.1	112.8	—	83.7	110.2	—	79.9	107.2
6750 Cfm	EA (wb)	58	THC	188.5	188.5	212.0	182.1	182.1	204.8	175.1	175.1	197.0	167.0	167.0	187.9	159.2	159.2	179.2
			SHC	165.0	188.5	212.0	159.4	182.1	204.8	153.2	175.1	197.0	146.1	167.0	187.9	139.2	159.2	179.2
		62	THC	189.7	189.7	216.7	183.3	183.3	208.6	176.4	176.4	200.6	168.7	168.7	191.6	159.2	159.2	185.9
			SHC	155.5	186.1	216.7	149.8	179.2	208.6	144.0	172.3	200.6	137.5	164.6	191.6	132.4	159.2	185.9
		67	THC	205.3	205.3	205.3	196.8	196.8	196.8	187.8	187.8	187.8	178.1	178.1	178.1	167.5	167.5	173.4
			SHC	124.9	156.7	188.6	121.5	153.3	185.2	117.8	149.7	181.6	113.9	145.7	177.6	109.6	141.5	173.4
		72	THC	223.3	223.3	223.3	214.3	214.3	214.3	204.6	204.6	204.6	194.2	194.2	194.2	182.6	182.6	182.6
			SHC	91.8	122.9	154.0	88.5	119.7	151.0	84.9	116.3	147.7	81.2	112.7	144.2	77.1	108.7	140.3
		76	THC	—	238.8	238.8	—	229.4	229.4	—	219.1	219.1	—	207.9	207.9	—	195.4	195.4
			SHC	—	96.1	124.2	—	93.2	122.1	—	90.0	119.6	—	86.5	116.7	—	82.6	113.3
7500 Cfm	EA (wb)	58	THC	193.5	193.5	217.7	186.9	186.9	210.2	179.6	179.6	202.1	171.5	171.5	193.1	163.1	163.1	183.6
			SHC	169.3	193.5	217.7	163.5	186.9	210.2	157.1	179.6	202.1	150.0	171.5	193.1	142.6	163.1	183.6
		62	THC	194.9	194.9	221.2	188.2	188.2	213.2	180.1	180.1	207.5	171.5	171.5	200.4	163.1	163.1	190.6
			SHC	158.8	190.0	221.2	153.1	183.2	213.2	148.3	177.9	207.5	142.6	171.5	200.4	135.6	163.1	190.6
		67	THC	207.9	207.9	207.9	199.3	199.3	199.3	190.0	190.0	192.6	180.1	180.1	188.7	169.2	169.2	184.2
			SHC	129.9	164.9	199.8	126.4	161.4	196.4	122.7	157.7	192.6	118.7	153.7	188.7	114.4	149.3	184.2
		72	THC	226.0	226.0	226.0	216.9	216.9	216.9	207.0	207.0	207.0	196.3	196.3	196.3	184.4	184.4	184.4
			SHC	93.7	128.1	162.4	90.4	124.9	159.3	86.9	121.5	156.0	83.1	117.7	152.4	78.9	113.6	148.4
		76	THC	—	241.7	241.7	—	232.1	232.1	—	221.6	221.6	—	210.1	210.1	—	197.2	197.2
			SHC	—	98.9	131.0	—	96.0	128.6	—	92.7	125.9	—	89.2	122.7	—	85.2	119.2

– Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS180 – FAS240

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
6000 Cfm	EA (wb)	58	THC	189.5	189.5	213.0	182.9	182.9	205.6	175.8	175.8	197.7	168.1	168.1	189.0	159.8	159.8	179.8
			SHC	166.0	189.5	213.0	160.2	182.9	205.6	154.0	175.8	197.7	147.1	168.1	189.0	139.9	159.8	179.8
		62	THC	191.7	191.7	215.9	184.0	184.0	211.1	176.3	176.3	203.9	168.3	168.3	196.3	159.8	159.8	186.5
			SHC	155.8	185.8	215.9	151.6	181.3	211.1	146.0	174.9	203.9	140.1	168.2	196.3	133.1	159.8	186.5
		67	THC	207.6	207.6	207.6	199.1	199.1	199.1	189.8	189.8	189.8	180.1	180.1	180.1	169.2	169.2	170.3
			SHC	124.8	155.7	186.5	121.3	152.1	182.9	117.4	148.2	179.0	113.5	144.3	175.1	108.9	139.6	170.3
		72	THC	225.6	225.6	225.6	216.6	216.6	216.6	206.8	206.8	206.8	196.1	196.1	196.1	184.7	184.7	184.7
			SHC	92.7	123.8	154.8	89.3	120.4	151.4	85.7	116.7	147.7	81.8	112.7	143.7	77.6	108.5	139.5
		76	THC	—	240.7	240.7	—	231.2	231.2	—	220.8	220.8	—	209.6	209.6	—	—	—
			SHC	—	98.4	130.4	—	95.2	127.1	—	91.6	123.4	—	87.8	119.4	—	—	—
7000 Cfm	EA (wb)	58	THC	197.6	197.6	222.2	190.6	190.6	214.3	183.0	183.0	205.9	174.8	174.8	196.7	165.9	165.9	186.6
			SHC	173.0	197.6	222.2	166.8	190.6	214.3	160.1	183.0	205.9	152.9	174.8	196.7	145.2	165.9	186.6
		62	THC	197.6	197.6	230.6	190.6	190.6	222.5	183.0	183.0	213.6	174.8	174.8	204.1	165.8	165.8	193.7
			SHC	164.6	197.6	230.6	158.8	190.6	222.5	152.3	183.0	213.6	145.5	174.8	204.1	138.0	165.8	193.7
		67	THC	211.7	211.7	211.7	202.9	202.9	202.9	193.4	193.4	195.5	183.1	183.1	191.2	172.1	172.1	186.3
			SHC	132.4	167.8	203.3	128.7	164.1	199.6	124.8	160.2	195.5	120.6	155.9	191.2	116.0	151.2	186.3
		72	THC	229.8	229.8	229.8	220.5	220.5	220.5	210.3	210.3	210.3	199.3	199.3	199.3	187.6	187.6	187.6
			SHC	95.6	131.3	167.0	92.2	127.9	163.6	88.5	124.2	159.8	84.6	120.1	155.7	80.4	115.8	151.3
		76	THC	—	245.1	245.1	—	235.3	235.3	—	224.5	224.5	—	—	—	—	—	—
			SHC	—	102.4	138.9	—	99.1	135.5	—	95.5	131.8	—	—	—	—	—	—
8000 Cfm	EA (wb)	58	THC	204.0	204.0	229.5	196.7	196.7	221.4	188.8	188.8	212.5	180.1	180.1	202.8	170.9	170.9	192.3
			SHC	178.5	204.0	229.5	172.1	196.7	221.4	165.1	188.8	212.5	157.5	180.1	202.8	149.4	170.9	192.3
		62	THC	204.0	204.0	238.2	196.6	196.6	229.7	188.7	188.7	220.5	180.2	180.2	210.5	170.8	170.8	199.6
			SHC	169.8	204.0	238.2	163.6	196.6	229.7	157.0	188.7	220.5	149.8	180.2	210.5	142.0	170.8	199.6
		67	THC	214.7	214.7	219.1	205.8	205.8	215.2	196.1	196.1	211.0	185.7	185.7	206.3	174.5	174.5	201.0
			SHC	139.4	179.2	219.1	135.7	175.5	215.2	131.7	171.3	211.0	127.3	166.8	206.3	122.6	161.8	201.0
		72	THC	232.9	232.9	232.9	223.4	223.4	223.4	213.0	213.0	213.0	201.7	201.7	201.7	189.2	189.2	189.2
			SHC	98.4	138.6	178.8	94.9	135.1	175.3	91.2	131.3	171.4	87.2	127.2	167.3	82.8	122.8	162.7
		76	THC	—	248.6	248.6	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	106.2	147.2	—	—	—	—	—	—	—	—	—	—	—	—
9000 Cfm	EA (wb)	58	THC	209.3	209.3	235.6	201.8	201.8	227.2	193.6	193.6	217.9	184.6	184.6	207.9	174.9	174.9	197.0
			SHC	183.0	209.3	235.6	176.5	201.8	227.2	169.2	193.6	217.9	161.3	184.6	207.9	152.8	174.9	197.0
		62	THC	209.3	209.3	244.5	201.7	201.7	235.7	193.5	193.5	226.2	184.6	184.6	215.8	174.9	174.9	204.5
			SHC	174.1	209.3	244.5	167.8	201.7	235.7	160.9	193.5	226.2	153.4	184.6	215.8	145.3	174.9	204.5
		67	THC	217.2	217.2	234.0	208.2	208.2	230.1	198.2	198.2	225.4	187.7	187.7	220.1	176.6	176.6	213.6
			SHC	145.9	190.0	234.0	142.2	186.1	230.1	138.0	181.7	225.4	133.4	176.7	220.1	128.2	170.9	213.6
		72	THC	235.4	235.4	235.4	225.7	225.7	225.7	215.1	215.1	215.1	203.7	203.7	203.7	191.4	191.4	191.4
			SHC	100.9	145.5	190.0	97.5	142.0	186.5	93.7	138.1	182.6	89.7	134.0	178.3	85.4	129.6	173.7
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10,000 Cfm	EA (wb)	58	THC	213.8	213.8	240.8	206.1	206.1	232.1	197.6	197.6	222.6	188.3	188.3	212.1	178.4	178.4	201.0
			SHC	186.9	213.8	240.8	180.1	206.1	232.1	172.7	197.6	222.6	164.5	188.3	212.1	155.8	178.4	201.0
		62	THC	213.8	213.8	249.9	206.0	206.0	240.8	197.6	197.6	231.0	188.3	188.3	220.3	178.3	178.3	208.6
			SHC	177.8	213.8	249.9	171.2	206.0	240.8	164.1	197.6	231.0	156.4	188.3	220.3	148.0	178.3	208.6
		67	THC	219.3	219.3	248.2	210.1	210.1	243.6	200.2	200.2	238.3	189.7	189.7	232.2	178.9	178.9	222.0
			SHC	152.2	200.2	248.2	148.2	195.9	243.6	143.7	191.0	238.3	138.8	185.5	232.2	132.0	177.0	222.0
		72	THC	237.4	237.4	237.4	227.6	227.6	227.6	216.8	216.8	216.8	205.2	205.2	205.2	192.7	192.7	192.7
			SHC	103.4	152.2	201.1	99.9	148.7	197.5	96.1	144.8	193.5	92.1	140.7	189.2	87.7	136.1	184.5
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btu/h)

SHC – Sensible Cooling Capacity, Gross (1,000 Btu/h)

PERFORMANCE DATA (cont.)

CAS241 – FAS240

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
6000 Cfm	EA (wb)	58	THC	221.5	221.5	248.3	213.5	213.5	239.8	204.9	204.9	230.0	195.3	195.3	219.4	184.5	184.5	207.4
			SHC	194.2	221.2	248.3	187.3	213.5	239.8	179.7	204.9	230.0	171.2	195.3	219.4	161.7	184.5	207.4
		62	THC	232.4	232.4	232.9	222.4	222.4	228.1	211.4	211.4	222.6	199.4	199.4	216.7	186.5	186.5	209.6
			SHC	173.9	203.4	232.9	169.1	198.6	228.1	163.7	193.2	222.6	157.9	187.3	216.7	151.3	180.5	209.6
		67	THC	251.7	251.7	251.7	240.8	240.8	240.8	228.9	228.9	228.9	215.9	215.9	215.9	201.6	201.6	201.6
			SHC	141.6	170.7	199.8	136.8	166.0	195.3	131.7	161.1	190.4	126.2	155.6	185.0	120.3	149.7	179.2
		72	THC	272.8	272.8	272.8	260.8	260.8	260.8	247.6	247.6	247.6	233.4	233.4	233.4	217.8	217.8	217.8
			SHC	110.4	138.3	166.1	105.5	133.8	162.0	100.3	128.9	157.5	94.8	123.6	152.4	88.9	117.9	147.0
		76	THC	—	290.9	290.9	—	278.1	278.1	—	263.7	263.7	—	248.5	248.5	—	231.6	231.6
			SHC	—	111.5	144.5	—	106.8	139.8	—	103.0	136.0	—	98.3	123.1	—	92.9	120.2
7000 Cfm	EA (wb)	58	THC	232.1	232.1	260.6	223.5	223.5	251.1	214.2	214.2	240.7	203.9	203.9	229.2	192.4	192.4	216.4
			SHC	203.5	232.1	260.6	195.9	223.5	251.1	187.7	214.2	240.7	178.6	203.9	229.2	168.5	192.4	216.4
		62	THC	238.9	238.9	253.7	228.3	228.3	248.2	217.1	217.1	242.1	205.0	205.0	234.5	192.8	192.8	222.1
			SHC	186.0	219.8	253.7	180.8	214.5	248.2	175.1	208.6	242.1	168.4	201.5	234.5	159.1	190.6	222.1
		67	THC	258.3	258.3	258.3	246.8	246.8	246.8	234.4	234.4	234.4	220.8	220.8	220.8	205.9	205.9	205.9
			SHC	149.2	182.8	216.5	144.4	178.1	211.8	139.2	173.0	206.7	133.6	167.4	201.2	127.5	161.4	195.3
		72	THC	279.3	279.3	279.3	266.7	266.7	266.7	253.0	253.0	253.0	238.3	238.3	238.3	222.0	222.0	222.0
			SHC	113.2	145.9	178.5	108.3	141.2	174.1	103.1	136.3	169.4	97.6	130.9	164.2	91.5	125.1	158.6
		76	THC	—	297.5	297.5	—	283.8	283.8	—	269.2	269.2	—	253.2	253.2	—	235.5	235.5
			SHC	—	116.1	154.6	—	112.0	138.2	—	107.4	137.4	—	102.4	133.9	—	96.7	129.1
8000 Cfm	EA (wb)	58	THC	240.8	240.8	270.6	231.8	231.8	260.5	221.8	221.8	249.4	210.9	210.9	237.2	198.8	198.8	223.6
			SHC	211.0	240.8	270.6	203.0	231.8	260.5	194.2	221.8	249.4	184.6	210.9	237.2	173.9	198.8	223.6
		62	THC	244.2	244.2	271.9	233.5	233.5	265.4	222.6	222.6	255.7	211.0	211.0	245.3	198.8	198.8	232.0
			SHC	196.6	234.3	271.9	190.9	228.2	265.4	183.3	219.5	255.7	175.2	210.2	245.3	165.5	198.8	232.0
		67	THC	263.5	263.5	263.5	251.6	251.6	251.6	238.7	238.7	238.7	224.6	224.6	224.6	209.2	209.2	210.8
			SHC	156.4	194.4	232.4	151.5	189.6	227.6	146.3	184.4	222.4	140.6	178.7	216.9	134.5	172.6	210.8
		72	THC	284.4	284.4	284.4	271.3	271.3	271.3	257.3	257.3	257.3	242.0	242.0	242.0	225.4	225.4	225.4
			SHC	115.9	153.0	190.2	110.9	148.3	185.7	105.8	143.3	180.9	100.2	137.9	175.6	94.2	132.0	169.9
		76	THC	—	302.5	302.5	—	288.4	288.4	—	273.4	273.4	—	256.8	256.8	—	—	—
			SHC	—	120.4	153.1	—	116.0	150.4	—	111.3	146.9	—	106.0	142.5	—	—	—
9000 Cfm	EA (wb)	58	THC	248.2	248.2	279.1	238.7	238.7	268.5	228.3	228.3	256.8	216.8	216.8	244.0	204.1	204.1	229.7
			SHC	217.4	248.2	279.1	209.0	238.7	268.5	199.8	228.3	256.8	189.7	216.8	244.0	178.5	204.1	229.7
		62	THC	249.3	249.3	285.8	238.9	238.9	277.7	228.3	228.3	266.5	216.8	216.8	253.2	204.1	204.1	238.4
			SHC	204.9	245.4	285.8	198.4	238.0	277.7	190.1	228.3	266.5	180.4	216.8	253.2	169.8	204.1	238.4
		67	THC	267.7	267.7	267.7	255.5	255.5	255.5	242.2	242.2	242.2	227.7	227.7	232.0	212.0	212.0	225.6
			SHC	163.4	205.6	247.7	158.4	200.6	242.9	153.1	195.3	237.6	147.3	189.7	232.0	141.1	183.4	225.6
		72	THC	288.5	288.5	288.5	275.2	275.2	275.2	260.8	260.8	260.8	245.1	245.1	245.1	228.1	228.1	228.1
			SHC	118.4	159.9	201.4	113.5	155.2	196.8	108.3	150.1	191.9	102.7	144.6	186.5	96.6	138.7	180.7
		76	THC	—	306.6	306.6	—	292.3	292.3	—	276.7	276.7	—	—	—	—	—	—
			SHC	—	124.2	162.9	—	119.7	159.4	—	114.8	155.2	—	—	—	—	—	—
10,000 Cfm	EA (wb)	58	THC	254.7	254.7	286.5	244.7	244.7	275.3	233.9	233.9	263.2	221.9	221.9	249.8	208.7	208.7	234.9
			SHC	222.9	254.7	286.5	214.1	244.7	275.3	204.6	233.9	263.2	194.0	221.9	249.8	182.5	208.7	234.9
		62	THC	254.6	254.6	297.3	244.8	244.8	285.3	233.9	233.9	273.1	221.9	221.9	259.2	208.6	208.6	243.8
			SHC	212.0	254.6	297.3	203.4	244.4	285.3	194.6	233.9	273.1	184.5	221.9	259.2	173.4	208.6	243.8
		67	THC	271.3	271.3	271.3	258.7	258.7	258.7	245.1	245.1	252.3	230.3	230.3	246.7	214.0	214.0	239.7
			SHC	170.0	216.4	262.7	165.0	211.4	257.7	159.6	206.0	252.3	153.9	200.3	246.7	147.3	193.5	239.7
		72	THC	292.0	292.0	292.0	278.4	278.4	278.4	263.7	263.7	263.7	247.4	247.4	247.4	230.0	230.0	230.0
			SHC	120.9	166.6	212.3	116.0	161.8	207.6	110.7	156.7	202.6	105.0	151.0	197.1	98.9	145.1	191.2
		76	THC	—	310.1	310.1	—	295.3	295.3	—	—	—	—	—	—	—	—	—
			SHC	—	127.8	171.4	—	123.2	167.5	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS241 – FAS300

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
7500 Cfm	EA (wb)	58	THC	236.2	236.2	266.2	228.0	228.0	256.9	219.0	219.0	246.7	209.0	209.0	235.5	198.1	198.1	223.2
			SHC	206.3	236.2	266.2	199.0	228.0	256.9	191.2	219.0	246.7	182.5	209.0	235.5	172.9	198.1	223.2
		62	THC	241.6	241.6	264.9	231.6	231.6	259.3	220.9	220.9	252.9	209.4	209.4	244.9	198.2	198.2	231.8
			SHC	191.3	228.1	264.9	186.2	222.8	259.3	180.6	216.7	252.9	209.4	209.4	244.9	164.7	198.2	231.8
		67	THC	262.3	262.3	262.3	251.0	251.0	251.0	238.9	238.9	238.9	225.7	225.7	225.7	211.4	211.4	211.4
			SHC	154.6	192.0	229.4	149.9	187.3	224.6	145.0	182.3	219.6	139.6	176.9	214.2	133.9	171.1	208.4
		72	THC	284.6	284.6	284.6	272.4	272.4	272.4	259.2	259.2	259.2	244.7	244.7	244.7	229.2	229.2	229.2
			SHC	116.2	153.9	191.6	111.6	149.3	186.9	106.8	144.3	181.9	101.5	139.0	176.4	95.9	133.3	170.7
		76	THC	—	303.1	303.1	—	289.9	289.9	—	275.8	275.8	—	260.4	260.4	—	—	—
			SHC	—	123.4	162.7	—	118.8	157.9	—	114.0	152.8	—	108.7	147.3	—	—	—
8750 Cfm	EA (wb)	58	THC	247.1	247.1	278.5	238.2	238.2	268.4	228.5	228.5	257.5	217.8	217.8	245.4	206.1	206.1	232.2
			SHC	215.7	247.1	278.5	208.0	238.2	268.4	199.5	228.5	257.5	190.2	217.8	245.4	179.9	206.1	232.2
		62	THC	248.7	248.7	286.9	238.6	238.6	279.1	228.7	228.7	267.4	218.0	218.0	254.9	206.2	206.2	241.2
			SHC	204.5	245.7	286.9	198.2	238.6	279.1	189.9	228.7	267.4	181.1	218.0	254.9	171.3	206.2	241.2
		67	THC	268.2	268.2	268.2	256.5	256.5	256.5	243.9	243.9	243.9	230.1	230.1	234.0	215.3	215.3	227.8
			SHC	164.0	206.9	249.7	159.3	202.1	244.9	154.2	197.0	239.7	148.7	191.4	234.0	142.8	185.3	227.8
		72	THC	290.8	290.8	290.8	277.9	277.9	277.9	264.2	264.2	264.2	249.2	249.2	249.2	233.1	233.1	233.1
			SHC	120.1	163.2	206.3	115.4	158.5	201.5	110.5	153.4	196.4	105.1	148.0	190.9	99.4	142.2	184.9
		76	THC	—	309.2	309.2	—	295.5	295.5	—	280.8	280.8	—	—	—	—	—	—
			SHC	—	128.3	172.8	—	123.7	168.0	—	118.7	162.8	—	—	—	—	—	—
10,000 Cfm	EA (wb)	58	THC	255.9	255.9	288.4	246.5	246.5	277.8	236.2	236.2	266.1	224.9	224.9	253.4	212.5	212.5	239.4
			SHC	223.5	255.9	288.4	215.2	246.5	277.8	206.2	236.2	266.1	196.3	224.9	253.4	185.5	212.5	239.4
		62	THC	256.1	256.1	299.5	246.7	246.7	288.4	236.3	236.3	276.4	225.0	225.0	263.1	212.6	212.6	248.6
			SHC	212.7	256.1	299.5	204.9	246.7	288.4	196.3	236.3	276.4	186.9	225.0	263.1	176.6	212.6	248.6
		67	THC	272.9	272.9	272.9	260.7	260.7	264.2	247.7	247.7	258.7	233.6	233.6	252.6	218.5	218.5	245.9
			SHC	173.0	221.1	269.2	168.1	216.1	264.2	162.9	210.8	258.7	157.2	204.9	252.6	151.1	198.5	245.9
		72	THC	295.5	295.5	295.5	282.2	282.2	282.2	268.1	268.1	268.1	252.7	252.7	252.7	236.1	236.1	236.1
			SHC	123.7	172.1	220.4	119.0	167.3	215.5	114.0	162.2	210.3	108.6	156.6	204.7	102.8	150.7	198.6
		76	THC	—	314.0	314.0	—	299.8	299.8	—	—	—	—	—	—	—	—	—
			SHC	—	133.0	182.6	—	128.2	177.7	—	—	—	—	—	—	—	—	—
11,250 Cfm	EA (wb)	58	THC	263.3	263.3	296.8	253.4	253.4	285.5	242.6	242.6	273.4	230.7	230.7	260.0	217.7	217.7	245.4
			SHC	229.9	263.3	296.8	221.2	253.4	285.5	211.8	242.6	273.4	201.5	230.7	260.0	190.1	217.7	245.4
		62	THC	263.5	263.5	308.1	253.6	253.6	296.5	242.8	242.8	283.9	230.9	230.9	270.0	217.9	217.9	254.8
			SHC	218.9	263.5	308.1	210.6	253.6	296.5	201.7	242.8	283.9	191.8	230.9	270.0	181.0	217.9	254.8
		67	THC	276.6	276.6	287.7	264.2	264.2	282.3	250.9	250.9	276.5	236.5	236.5	269.8	221.3	221.3	262.1
			SHC	181.4	234.6	287.7	176.4	229.4	282.3	171.1	223.8	276.5	165.2	217.5	269.8	158.6	210.3	262.1
		72	THC	299.3	299.3	299.3	285.7	285.7	285.7	271.2	271.2	271.2	255.4	255.4	255.4	238.5	238.5	238.5
			SHC	127.2	180.6	234.1	122.4	175.7	229.1	117.3	170.6	223.8	111.9	165.0	218.0	106.1	159.0	211.9
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12,500 Cfm	EA (wb)	58	THC	269.7	269.7	303.9	259.3	259.3	292.2	248.1	248.1	279.5	235.7	235.7	265.6	222.2	222.2	250.4
			SHC	235.5	269.7	303.9	226.4	259.3	292.2	216.6	248.1	279.5	205.8	235.7	265.6	194.1	222.2	250.4
		62	THC	269.8	269.8	315.5	259.4	259.4	303.4	248.2	248.2	290.2	235.8	235.8	275.7	222.4	222.4	260.0
			SHC	224.2	269.8	315.5	215.5	259.4	303.4	206.2	248.2	290.2	195.9	235.8	275.7	184.7	222.4	260.0
		67	THC	279.8	279.8	305.1	267.1	267.1	299.3	253.7	253.7	292.8	239.2	239.2	285.1	223.8	223.8	275.5
			SHC	189.4	247.2	305.1	184.3	241.8	299.3	178.6	235.7	292.8	172.3	228.7	285.1	164.9	220.2	275.5
		72	THC	302.4	302.4	302.4	288.5	288.5	288.5	273.7	273.7	273.7	257.7	257.7	257.7	240.4	240.4	240.4
			SHC	130.5	188.9	247.3	125.7	184.0	242.3	120.6	178.7	236.9	115.1	173.1	231.0	109.2	167.0	224.7
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS240 – FAS240

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
6000 Cfm	EA (wb)	58	THC	220.0	220.0	247.0	212.1	212.1	238.2	203.4	203.4	228.5	193.7	193.7	217.7	182.8	182.8	205.5
			SHC	193.0	220.0	247.0	186.0	212.1	238.2	178.3	203.4	228.5	169.8	193.7	217.7	160.1	182.8	205.5
		62	THC	230.1	230.1	234.9	220.0	220.0	230.0	209.0	209.0	224.6	197.0	197.0	218.3	183.9	183.9	210.5
			SHC	174.4	204.7	234.9	169.6	199.8	230.0	164.2	194.4	224.6	158.2	188.3	218.3	151.2	180.8	210.5
		67	THC	251.0	251.0	251.0	239.9	239.9	239.9	227.9	227.9	227.9	214.6	214.6	214.6	199.9	199.9	199.9
			SHC	142.4	172.3	202.2	137.6	167.6	197.6	132.5	162.6	192.7	126.9	157.1	187.3	120.9	151.1	181.3
		72	THC	274.2	274.2	274.2	262.0	262.0	262.0	248.7	248.7	248.7	234.1	234.1	234.1	217.9	217.9	217.9
			SHC	111.3	140.1	168.9	106.4	135.5	164.6	101.2	130.6	160.0	95.6	125.2	154.8	89.5	119.3	149.1
		76	THC	—	294.4	294.4	—	281.0	281.0	—	266.4	266.4	—	250.7	250.7	—	233.4	233.4
			SHC	—	113.0	146.0	—	108.7	141.7	—	104.6	133.3	—	99.7	126.2	—	94.1	122.4
7000 Cfm	EA (wb)	58	THC	230.8	230.8	259.3	222.2	222.2	249.7	212.8	212.8	239.2	202.3	202.3	227.5	190.6	190.6	214.4
			SHC	202.3	230.8	259.3	194.7	222.2	249.7	186.4	212.8	239.2	177.2	202.3	227.5	166.9	190.6	214.4
		62	THC	236.4	236.4	255.9	225.9	225.9	250.3	215.3	215.3	241.3	203.8	203.8	231.2	191.3	191.3	220.8
			SHC	186.6	221.3	255.9	181.4	215.8	250.3	174.2	207.7	241.3	166.3	198.7	231.2	158.0	189.4	220.8
		67	THC	257.6	257.6	257.6	245.9	245.9	245.9	233.2	233.2	233.2	219.3	219.3	219.3	204.0	204.0	204.0
			SHC	150.4	185.0	219.6	145.5	180.2	214.9	140.3	175.0	209.8	134.6	169.4	204.2	128.4	163.2	198.1
		72	THC	281.0	281.0	281.0	268.1	268.1	268.1	254.2	254.2	254.2	238.8	238.8	238.8	222.0	222.0	222.0
			SHC	114.4	148.1	181.8	109.5	143.4	177.3	104.2	138.4	172.5	98.5	132.8	167.2	92.3	126.8	161.3
		76	THC	—	301.1	301.1	—	287.2	287.2	—	272.2	272.2	—	255.7	255.7	—	—	—
			SHC	—	118.2	151.3	—	113.9	143.1	—	109.2	140.7	—	104.0	136.6	—	—	—
8000 Cfm	EA (wb)	58	THC	239.6	239.6	269.4	230.5	230.5	259.2	220.5	220.5	248.0	209.4	209.4	235.6	197.0	197.0	221.7
			SHC	209.9	239.6	269.4	201.8	230.5	259.2	193.0	220.5	248.0	183.3	209.4	235.6	172.3	197.0	221.7
		62	THC	241.9	241.9	274.0	232.2	232.2	263.9	222.0	222.0	253.2	210.1	210.1	242.3	197.0	197.0	230.1
			SHC	197.3	235.6	274.0	189.6	226.8	263.9	181.7	217.5	253.2	173.3	207.8	242.3	163.9	197.0	230.1
		67	THC	262.7	262.7	262.7	250.5	250.5	250.5	237.3	237.3	237.3	222.9	222.9	222.9	207.1	207.1	214.0
			SHC	158.0	197.1	236.3	153.0	192.2	231.4	147.6	186.9	226.1	141.8	181.1	220.3	135.5	174.7	214.0
		72	THC	286.3	286.3	286.3	272.8	272.8	272.8	258.4	258.4	258.4	242.5	242.5	242.5	225.1	225.1	225.1
			SHC	117.4	155.7	194.1	112.4	150.9	189.5	107.1	145.8	184.5	101.3	140.1	179.0	95.1	134.0	173.0
		76	THC	—	306.6	306.6	—	292.0	292.0	—	276.5	276.5	—	—	—	—	—	—
			SHC	—	122.8	157.5	—	118.2	154.2	—	113.3	150.2	—	—	—	—	—	—
9000 Cfm	EA (wb)	58	THC	247.2	247.2	278.0	237.6	237.6	267.3	227.1	227.1	255.5	215.4	215.4	242.4	202.4	202.4	227.8
			SHC	216.4	247.2	278.0	207.9	237.6	267.3	198.7	227.1	255.5	188.4	215.4	242.4	176.9	202.4	227.8
		62	THC	249.4	249.4	281.3	239.3	239.3	272.2	227.9	227.9	262.4	215.4	215.4	251.6	202.3	202.3	236.4
			SHC	202.5	241.9	281.3	195.4	233.8	272.2	187.7	225.1	262.4	179.2	215.4	251.6	168.3	202.3	236.4
		67	THC	266.8	266.8	266.8	254.2	254.2	254.2	240.6	240.6	241.9	225.9	225.9	235.9	209.5	209.5	229.3
			SHC	165.2	208.8	252.4	160.1	203.8	247.4	154.7	198.3	241.9	148.7	192.3	235.9	142.2	185.7	229.3
		72	THC	290.4	290.4	290.4	276.6	276.6	276.6	261.8	261.8	261.8	245.4	245.4	245.4	227.6	227.6	227.6
			SHC	120.1	163.0	205.9	115.1	158.2	201.2	109.8	152.9	196.1	103.9	147.2	190.5	97.6	141.0	184.4
		76	THC	—	310.7	310.7	—	295.9	295.9	—	—	—	—	—	—	—	—	—
			SHC	—	126.7	167.1	—	122.1	163.2	—	—	—	—	—	—	—	—	—
10,000 Cfm	EA (wb)	58	THC	253.7	253.7	285.4	243.7	243.7	274.2	232.7	232.7	261.9	220.5	220.5	248.2	206.9	206.9	233.0
			SHC	221.9	253.7	285.4	213.1	243.7	274.2	203.5	232.7	261.9	192.7	220.5	248.2	180.8	206.9	233.0
		62	THC	255.5	255.5	290.4	244.0	244.0	282.1	232.6	232.6	271.8	220.5	220.5	257.6	206.9	206.9	241.9
			SHC	208.4	249.4	290.4	201.5	241.8	282.1	193.5	232.6	271.8	183.3	220.5	257.6	171.9	206.9	241.9
		67	THC	270.1	270.1	270.1	257.2	257.2	262.7	243.3	243.3	257.0	228.0	228.0	250.8	211.4	211.4	243.3
			SHC	172.1	220.0	267.8	166.9	214.8	262.7	161.4	209.2	257.0	155.2	203.0	250.8	148.3	195.8	243.3
		72	THC	293.9	293.9	293.9	279.7	279.7	279.7	264.4	264.4	264.4	247.8	247.8	247.8	229.6	229.6	229.6
			SHC	122.8	170.1	217.4	117.7	165.1	212.5	112.3	159.8	207.3	106.4	154.0	201.6	100.1	147.8	195.4
		76	THC	—	314.3	314.3	—	299.1	299.1	—	—	—	—	—	—	—	—	—
			SHC	—	130.6	175.9	—	125.8	171.7	—	—	—	—	—	—	—	—	—

– Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

PERFORMANCE DATA (cont.)

CAS240 – FAS300

COMBINATION RATINGS

				AMBIENT TEMPERATURE														
				85			95			105			115			125		
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)		
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85
7500 Cfm	EA (wb)	58	THC	237.5	237.5	261.6	228.5	228.5	251.7	218.7	218.7	240.9	207.7	207.7	228.8	195.9	195.9	215.8
			SHC	213.4	237.5	261.6	205.3	228.5	251.7	196.5	218.7	240.9	186.6	207.7	228.8	176.0	195.9	215.8
		62	THC	241.6	241.6	261.6	230.8	230.8	255.7	220.1	220.1	246.2	207.9	207.9	236.1	196.1	196.1	222.6
			SHC	201.2	231.4	261.6	195.7	225.7	255.7	188.0	217.1	246.2	179.8	207.9	236.1	169.5	196.1	222.6
		67	THC	262.2	262.2	262.2	250.1	250.1	250.1	237.0	237.0	237.0	222.5	222.5	222.5	207.4	207.4	207.4
			SHC	163.9	194.6	225.3	158.9	189.6	220.3	153.6	184.2	214.9	147.7	178.3	208.9	141.6	172.2	202.7
		72	THC	285.5	285.5	285.5	272.2	272.2	272.2	257.9	257.9	257.9	242.1	242.1	242.1	225.6	225.6	225.6
			SHC	125.1	156.0	186.9	120.2	151.0	181.9	114.9	145.7	176.5	109.2	139.9	170.6	103.2	133.8	164.5
		76	THC	—	305.5	305.5	—	291.1	291.1	—	—	—	—	—	—	—	—	—
			SHC	—	124.9	156.9	—	120.0	151.8	—	—	—	—	—	—	—	—	—
8750 Cfm	EA (wb)	58	THC	248.0	248.0	273.2	238.3	238.3	262.5	227.7	227.7	250.8	215.9	215.9	237.8	203.3	203.3	223.9
			SHC	222.8	248.0	273.2	214.1	238.3	262.5	204.6	227.7	250.8	194.0	215.9	237.8	182.6	203.3	223.9
		62	THC	249.2	249.2	280.0	238.6	238.6	270.9	227.9	227.9	258.8	216.1	216.1	245.4	203.4	203.4	231.0
			SHC	213.6	246.8	280.0	206.3	238.6	270.9	197.0	227.9	258.8	186.8	216.1	245.4	175.8	203.4	231.0
		67	THC	267.7	267.7	267.7	254.9	254.9	254.9	241.2	241.2	241.2	226.3	226.3	228.3	210.6	210.6	221.6
			SHC	174.8	210.1	245.4	169.7	204.9	240.2	164.2	199.3	234.5	158.2	193.2	228.3	151.8	186.7	221.6
		72	THC	291.3	291.3	291.3	277.3	277.3	277.3	262.4	262.4	262.4	246.1	246.1	246.1	228.9	228.9	228.9
			SHC	130.3	165.7	201.2	125.2	160.6	196.0	119.9	155.2	190.5	114.0	149.2	184.4	108.0	143.1	178.1
		76	THC	—	311.4	311.4	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	130.1	166.5	—	—	—	—	—	—	—	—	—	—	—	—
10,000 Cfm	EA (wb)	58	THC	256.5	256.5	282.5	246.1	246.1	271.1	234.9	234.9	258.8	222.4	222.4	245.0	209.1	209.1	230.4
			SHC	230.4	256.5	282.5	221.2	246.1	271.1	211.1	234.9	258.8	199.9	222.4	245.0	187.9	209.1	230.4
		62	THC	256.7	256.7	291.5	246.3	246.3	279.7	235.1	235.1	267.0	222.6	222.6	252.8	209.3	209.3	237.6
			SHC	221.9	256.7	291.5	213.0	246.3	279.7	203.2	235.1	267.0	192.4	222.6	252.8	180.9	209.3	237.6
		67	THC	271.7	271.7	271.7	258.6	258.6	259.0	244.6	244.6	253.0	229.2	229.2	246.3	213.3	213.3	238.9
			SHC	185.1	224.9	264.6	179.8	219.4	259.0	174.1	213.6	253.0	167.8	207.1	246.3	161.1	200.0	238.9
		72	THC	295.6	295.6	295.6	281.2	281.2	281.2	265.8	265.8	265.8	249.0	249.0	249.0	—	—	—
			SHC	135.2	175.0	214.9	130.0	169.8	209.6	124.6	164.2	203.9	118.6	158.2	197.7	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11,250 Cfm	EA (wb)	58	THC	263.5	263.5	290.3	252.7	252.7	278.3	240.9	240.9	265.3	227.9	227.9	251.0	214.0	214.0	235.7
			SHC	236.8	263.5	290.3	227.0	252.7	278.3	216.4	240.9	265.3	204.7	227.9	251.0	192.2	214.0	235.7
		62	THC	263.7	263.7	299.5	252.9	252.9	287.1	241.1	241.1	273.7	228.0	228.0	258.9	214.1	214.1	243.1
			SHC	228.0	263.7	299.5	218.6	252.9	287.1	208.4	241.1	273.7	197.1	228.0	258.9	185.1	214.1	243.1
		67	THC	275.0	275.0	282.7	261.6	261.6	276.8	247.2	247.2	270.3	231.8	231.8	262.6	216.0	216.0	251.8
			SHC	194.9	238.8	282.7	189.4	233.1	276.8	183.4	226.8	270.3	176.6	219.6	262.6	168.2	210.0	251.8
		72	THC	299.0	299.0	299.0	284.2	284.2	284.2	268.4	268.4	268.4	251.3	251.3	251.3	—	—	—
			SHC	139.8	184.0	228.1	134.6	178.7	222.7	129.0	173.0	216.9	123.1	166.8	210.6	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12,500 Cfm	EA (wb)	58	THC	269.5	269.5	296.9	258.2	258.2	284.4	245.9	245.9	270.9	232.4	232.4	256.0	218.0	218.0	240.1
			SHC	242.2	269.5	296.9	232.0	258.2	284.4	221.0	245.9	270.9	208.8	232.4	256.0	195.9	218.0	240.1
		62	THC	269.7	269.7	306.3	258.4	258.4	293.4	246.1	246.1	279.4	232.5	232.5	264.0	218.1	218.1	247.6
			SHC	233.2	269.7	306.3	223.4	258.4	293.4	212.8	246.1	279.4	201.0	232.5	264.0	188.6	218.1	247.6
		67	THC	277.8	277.8	299.7	264.1	264.1	293.2	249.7	249.7	285.6	234.5	234.5	274.3	218.8	218.8	261.2
			SHC	204.0	251.8	299.7	198.2	245.7	293.2	191.6	238.6	285.6	183.1	228.7	274.3	173.4	217.3	261.2
		72	THC	301.7	301.7	301.7	286.6	286.6	286.6	270.5	270.5	270.5	—	—	—	—	—	—
			SHC	144.3	192.6	241.0	139.0	187.2	235.5	133.4	181.5	229.6	—	—	—	—	—	—
		76	THC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
			SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Not operational

THC – Total Cooling Capacity, Gross (1,000 Btuh)

SHC – Sensible Cooling Capacity, Gross (1,000 Btuh)

ELECTRICAL DATA

CAS072*(A,B) COOLING WITHOUT POWERED CONVENIENCE OUTLET

(Units Produced On or After 02/09/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP 1		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	19.6	136	325	1.5	28/28	45/45
460-3-60	414	506	8.2	66	325	0.8	12	20
575-3-60	518	633	6.6	55	325	0.7	10	15

(Units Produced on or Prior to 02/08/2015)

V-Ph-Hz	VOLTAGE RANGE		COMP 1		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	19.0	123	325	1.5	27/27	45/45
460-3-60	414	506	9.7	62	325	0.8	14	20
575-3-60	518	633	7.4	50	325	0.7	11	15

CAS072*(G,H) COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	17.5	136	325	1.5	25/25	30/30
460-3-60	414	506	8.4	66	325	0.8	13	20
575-3-60	518	633	6.3	55	325	0.7	10	15

CAS091*(A,B) COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	25	164	325	1.5	34.3	50
460-3-60	414	506	12.2	100	325	0.8	16.9	25
575-3-60	518	633	9.0	78	325	0.7	12.7	20

CAS091*(G,H) COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	24	164	325	1.5	33/33	50/50
460-3-60	414	506	12.6	100	325	0.8	18	25
575-3-60	518	633	9.9	78	325	0.7	14	20

CAS121 COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	30.1	225	325	1.5	40.6	60
460-3-60	414	506	16.7	114	325	0.8	22.5	30
575-3-60	518	633	12.2	80	325	0.7	16.7	25

CAS120 COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	15.9	110	15.9	110	325	1.5	38.8	50
460-3-60	414	506	7.7	52	7.7	52	325	0.8	18.9	25
575-3-60	518	633	5.7	39	5.7	39	325	0.7	14.2	20

CAS151 COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	48.1	245	325	1.5	63.1	80
460-3-60	414	506	18.6	125	325	0.8	24.9	30
575-3-60	518	633	14.7	100	325	0.7	19.8	30

CAS150 COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	22.40	149	22.40	149	325	1.5	53.4	60
460-3-60	414	506	10.6	75	10.6	75	325	0.8	25.5	30
575-3-60	518	633	7.7	54	7.7	54	325	0.7	18.7	25

ELECTRICAL DATA (cont.)

CAS181 COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	25	164	25	164	325	1.5	60.8	80
460-3-60	414	506	12.2	100	12.2	100	325	0.8	29.9	40
575-3-60	518	633	9	78	9	78	325	0.7	22.4	30

CAS180 COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	25	164	25	164	325	1.5	60.7	80
460-3-60	414	506	12.2	100	12.2	100	325	0.8	29.8	40
575-3-60	518	633	9	78	9	78	325	0.6	22.0	30

CAS241 COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	30.1	225	30.1	225	325	1.5	73.7	100
460-3-60	414	506	16.7	114	16.7	114	325	0.8	40.8	50
575-3-60	518	633	12.2	80	12.2	80	325	0.7	30.3	40

CAS240 COOLING WITHOUT POWERED CONVENIENCE OUTLET

V-Ph-Hz	VOLTAGE RANGE		COMP 1		COMP 2		OFM (ea)		POWER SUPPLY	
	MIN	MAX	RLA	LRA	RLA	LRA	WATTS	FLA	MCA	Fuse
208/230-3-60	187	253	30.1	225	30.1	225	325	1.5	73.7	100
460-3-60	414	506	16.7	114	16.7	114	325	0.8	40.8	50
575-3-60	518	633	12.2	80	12.2	80	325	0.7	30.3	40

APPLICATION DATA

Operating limits

Maximum outdoor temperature 125°F

Minimum return-air temperature (FAS) 55°F

Maximum return-air temperature (FAS) 95°F

Range of acceptable saturation

suction temperature 20 to 50°F

Maximum discharge temperature 275°F

Minimum discharge superheat 60°F

NOTES:

1. Select air handler at no less than 300 cfm/ton (nominal condensing unit capacity).
2. Total combined draw of the field-supplied liquid line solenoid valve and air handler fan contactor must not exceed 22 va. If the specified va must be exceeded, use a remote relay to control the load.

Refrigerant piping

IMPORTANT: Do not bury refrigerant piping underground.

It is recommended that the refrigerant piping for all commercial split systems include a liquid line solenoid valve, a liquid line filter drier and a sight glass.

MINIMUM OUTDOOR-AIR OPERATING TEMPERATURE

UNIT CAS	MINIMUM OUTDOOR TEMP (°F)	
	Std	With MotorMaster I® Control†
072	35	-20
091	35	
121	35	
151	35	
181	35	
241	35	
120	35	
150	35	
180	35	
240	35	

† Wind baffles (field-supplied and field-installed) are recommended for all units with MotorMaster I® control. Refer to Low Ambient Temperature Control Installation Instructions for additional information.

For refrigerant lines longer than 75 lineal ft, a liquid line solenoid valve installed at the **indoor** unit and a suction accumulator are required. Refer to the Refrigerant Specialties Part Numbers table.

REFRIGERANT SPECIALTIES PART NUMBERS

LIQUID LINE SIZE (in.)	LIQUID LINE SOLENOID VALVE (LLSV)	LLSV COIL	SIGHT GLASS
3/8	1179871	1179874	1179879
1/2	1179872	1179874	1179877
5/8	1179873	1179874	1179878

NOTE: CAS units require TWO sets of parts.

R-410A Filter Drier(s)

Model-Size	Qty	Liquid Line OD	Desiccant Volume	Part Number Ref
CAS*072	1	3/8-in	8 cu. in.	1179878
CAS*091	1	1/2-in	16 cu. in.	1179538
CAS*121	1	1/2-in	16 cu. in.	1179538
CAS*151	1	5/8-in	16 cu. in.	1179558
CAS*181	1	5/8-in	30 cu. in.	1179552
CAS*241	1	5/8-in	30 cu. in.	1179552
CAS*120	2	3/8-in	8 cu. in.	1179492
CAS*150	2	1/2-in	16 cu. in.	1179538
CAS*180	2	1/2-in	16 cu. in.	1179538
CAS*240	2	1/2-in	16 cu. in.	1179538

CAS 072-151 PIPING RECOMMENDATIONS (SINGLE-CIRCUIT UNIT)

Model & Nominal Capacity	Linear Line (ft)	0 - 25		25 - 50		50 - 75		75 - 100		100 - 125		125 - 150		150 - 175		175 - 200	
	Linear Line (m)	0 - 8		8 - 15		15 - 23		23 - 30		30 - 38		38 - 46		46 - 53		53 - 61	
	Equivalent Line (ft)	0 - 38		38 - 75		75 - 113		113 - 150		150 - 188		188 - 225		225 - 263		263 - 300	
	Equivalent, Line (m)	0 - 12		12 - 23		23 - 34		34 - 46		46 - 57		57 - 69		69 - 80		80 - 91	
CAS072 TC 68.5 SC 5.6F	Liquid Line size	3/8"	3/8"	1/2"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	5/8"
	Liquid PD (F)	2.0	4.0	0.7	1.1	0.3	1.4	0.4	1.8	0.5	2.1	0.6	2.5	0.7	2.8	0.8	0.8
	Max Lift	18	7	34	31	39	44	57	41	57	35	54	31	53	27	52	52
	Max Lift PD (F)	3.5	4.6	3.5	3.5	3.5	5.0	5.0	5.0	5.0	4.9	5.0	5.0	5.0	5.0	5.0	5.0
	Suction Line size	7/8"	7/8"	1 1/8"	7/8"	1 1/8"	7/8"	1 1/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
	Suction Line PD (F)	0.9	1.8	0.5	2.7	0.8	3.6	1.0	4.5	1.3	1.6	1.6	1.8	1.8	2.1	2.1	2.1
	Charge	10.8	11.8	13.7	15.2	18.5	16.9	21.3	18.7	24.2	21.4	27.1	23.4	30.0	25.3	32.8	32.8
	#/TR	1.90	2.07	2.41	2.67	3.25	2.97	3.74	3.28	4.25	3.8	4.75	4.1	5.26	4.4	5.75	5.75
CAS091 (A,B) TC 91.9 SC 11.8F	Liquid Line size	1/2"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	5/8"
	Liquid PD (F)	0.6	1.3	0.3	1.9	0.5	2.5	0.7	3.2	0.9	3.8	1.0	4.4	1.2	5.1	1.4	1.4
	Max Lift	25	50	50	75	75	100	100	97	97	90	90	82	121	74	119	119
	Max Lift PD (F)	2.7	5.4	4.5	8.1	6.7	10.8	9.0	11.2	8.9	11.2	8.5	11.2	11.2	11.2	11.2	11.2
	Suction Line size	7/8"	7/8"	1 1/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
	Suction Line PD (F)	1.5	3.1	0.8	4.6	1.2	1.6	1.6	2.1	0.7	2.5	0.8	2.9	1.0	3.3	1.1	1.1
	Charge	13.6	15.4	16.1	17.2	20.5	19.5	23.3	21.5	27.1	23.4	30.2	25.4	33.2	27.3	36.3	36.3
	#/TR	1.78	2.02	2.11	2.25	2.68	2.55	3.05	2.81	3.54	3.06	3.95	3.32	4.34	3.57	4.75	4.75
CAS091 (D,E) TC 92.0 SC 11.3F	Liquid Line size	1/2"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	5/8"
	Liquid PD (F)	0.6	1.3	0.3	1.9	0.5	2.5	0.7	3.2	0.9	3.8	1.0	4.4	1.2	5.1	1.4	1.4
	Max Lift	25	50	50	75	75	100	100	97	97	90	90	82	121	74	119	119
	Max Lift PD (F)	2.7	5.4	4.5	8.1	6.7	10.8	9.0	11.2	8.9	11.2	8.5	11.2	11.2	11.2	11.2	11.2
	Suction Line size	7/8"	7/8"	1 1/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
	Suction Line PD (F)	1.5	3.1	0.8	4.6	1.2	1.6	1.6	2.1	0.7	2.5	0.8	2.9	1.0	3.3	1.1	1.1
	Charge	15.0	18.4	19.1	20.2	23.5	22.5	26.3	24.5	30.1	25.4	32.2	26.4	34.2	27.3	36.5	36.5
	#/TR	1.78	2.02	2.11	2.25	2.68	2.55	3.05	2.81	3.54	3.06	3.95	3.32	4.34	3.57	4.75	4.75
CAS121 TC 113.1 SC 7.1F	Liquid Line size	1/2"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
	Liquid PD (F)	0.9	1.9	0.5	2.8	0.8	3.8	1.0	4.7	1.3	5.7	1.6	1.8	1.8	2.1	2.1	2.1
	Max Lift	25	40	50	28	54	34	68	22	65	11	63	59	59	55	55	55
	Max Lift PD (F)	2.9	5.0	4.5	5.0	5.0	6.5	6.4	6.5	6.4	6.5	6.5	6.4	6.4	6.4	6.4	6.4
	Suction Line size	7/8"	7/8"	1 1/8"	1 1/8"	1 3/8"	1 1/8"	1 3/8"	1 1/8"	1 3/8"	1 1/8"	1 3/8"	1 1/8"	1 3/8"	1 1/8"	1 3/8"	1 3/8"
	Suction Line PD (F)	2.4	4.8	1.2	1.8	0.6	2.4	0.9	3.1	1.1	3.7	1.3	4.3	1.5	4.9	1.7	1.7
	Charge	15.7	17.5	19.7	19.8	23.1	21.6	26.1	23.6	29.2	25.5	32.3	34.1	35.3	36.9	38.4	38.4
	#/TR	1.67	1.86	2.09	2.10	2.45	2.29	2.77	2.50	3.10	2.71	3.43	3.62	3.75	3.92	4.08	4.08
CAS151 TC 146.1 SC 3.9F	Liquid Line size	5/8"	5/8"	3/4"	5/8"	3/4"	5/8"	3/4"	5/8"	3/4"	5/8"	3/4"	5/8"	3/4"	5/8"	3/4"	7/8"
	Liquid PD (F)	0.4	0.8	0.4	1.2	0.6	1.6	0.8	2.0	1.1	2.4	1.1	2.8	1.5	1.7	0.6	0.6
	Max Lift	23	16	23	10	18	28	38	21	36	14	35	9	30	25	43	43
	Max Lift PD (F)	1.8	1.84	1.84	1.8	1.8	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	Suction Line size	1 1/8"	1 1/8"	1 3/8"	1 1/8"	1 3/8"	1 3/8"	1 3/8"	1 3/8"	1 5/8"	1 3/8"	1 5/8"	1 3/8"	1 5/8"	1 3/8"	1 5/8"	1 5/8"
	Suction Line PD (F) (Cap Red)	1.1	2.2	0.8	3.3 (-2.3%)	1.2	1.6	1.6	2.0	0.8	2.4 (-0.7%)	1.0	2.8 (-1.4%)	1.2	3.2 (-2.1%)	1.3	1.3
	Charge	31.8	34.7	37.6	37.6	41.8	41.1	46.1	44.2	51.6	47.3	56.1	50.3	60.6	63.4	76.9	76.9
	#/TR	2.62	2.86	3.09	3.09	3.44	3.38	3.79	3.64	4.24	3.89	4.61	4.14	4.98	5.21	6.32	6.32

Legend:	
TC	Total Capacity, MBH (at 45°F Saturated suction, 95°F outdoor air temp)
SC	Sub-cooling, degrees F (at liquid line valve)
Equivalent Length	Equivalent tubing length, including effects of refrigeration specialties devices
Linear Length	Linear tubing length, feet
Liquid Line size	Tubing size, inches OD.
Liquid PD (F)	Liquid line pressure drop, saturated temperature, degrees F
Max Lift	Maximum liquid lift (indoor unit ABOVE outdoor unit only), at maximum permitted liquid line pressure drop
Suction Line size	Tube size, inches OD
Suction Line (PD) (F)	Suction line pressure drop, saturated temperature, degree F
(Cap Red)	Capacity reduction caused by suction line pressure drop GT 2 deg F
Charge	Charge Quantity, lbs. Calculated for both liquid line sizes (where applicable), but only with larger suction line size (where applicable)
#/TR	Charge to unit capacity ratio, lbs per ton (at 45 F SST, 95 F ODA)

CAS 181-241 PIPING RECOMMENDATIONS (SINGLE-CIRCUIT UNIT)

Model & Nominal Capacity	Linear Line (ft)	0 - 25	25 - 50	50 - 75	75 - 100	100 - 125		125 - 150		150 - 175		175 - 200			
	Linear Line (m)	0 - 8	8 - 15	15 - 23	23 - 30	30 - 38		38 - 46		46 - 53		53 - 61			
	Equivalent Line (ft)	0 - 38	38 - 75	75 - 113	113 - 150	150 - 188		188 - 225		225 - 263		263 - 300			
	Equivalent, Line (m)	0 - 12	12 - 23	23 - 34	34 - 46	46 - 57		57 - 69		69 - 80		80 - 91			
CAS181 TC 185.7 SC 18.4F	Liquid Line size	5/8"	5/8"	5/8"	5/8"	5/8"		5/8"		5/8"	3/4"	5/8"	3/4"		
	Liquid PD (F)	0.7	1.3	2.0	2.7	3.4		4.0		4.7	2.5	5.4	2.8		
	Max Lift	25	50	75	100	125		150		153	175	145	175		
	Max Lift PD (F)	2.8	5.65	8.5	11.3	14.1		16.9		17.9	17.5	17.9	17.9		
	Suction Line size	1 3/8"	1 3/8"	1 3/8"	1 3/8"	1 3/8"	1 5/8"	1 3/8"	1 5/8"	1 3/8"	1 5/8"	1 3/8"	1 5/8"		
	Suction Ln PD(F) (Cap Red)	1.4	1.0	1.5	2.0	2.5 (-0.9%)	1.1	3 (-1.8%)	1.3	3.5 (-2.7%)	1.5	4 (-3.6%)	1.7		
	Charge	35.1	38.1	41.2	44.2	47.3	48.4	50.4	51.7	53.4	63.7	56.5	68.3		
	#/TR	2.9	3.11	3.36	3.61	3.86	3.95	4.11	4.22	4.36	5.20	4.61	5.57		
	CAS241 TC 233.3 SC 13.0F	Liquid Line size	5/8"	5/8"	5/8"	5/8"	5/8"	3/4"	5/8"	3/4"	5/8"	3/4"	5/8"	3/4"	
Liquid PD (F)		1.1	2.1	3.2	4.3	5.4	2.8	6.4	3.3	7.5	3.9	8.6	4.4		
Max Lift		25	50	93	98	85	116	71	108	59	102	46	95		
Max Lift PD (F)		3.2	6.4	9.6	12.5	12.5	12.5	12.4	12.5	12.5	12.5	12.5	12.5		
Suction Line size		1 3/8"	1 3/8"	1 3/8"	1 5/8"	1 3/8"	1 5/8"	1 3/8"	1 5/8"	1 5/8"	2 1/8"	1 5/8"	2 1/8"		
Suction Ln PD(F) (Cap Red)		0.8	1.6	2.4 (-0.8%)	1.0	3.3 (-2.2%)	1.4	4 (-3.6%)	1.7	2.0	0.4	2.4 (-0.7%)	0.5	2.7 (-1.2%)	0.6
Charge		31.1	34.1	37.2	37.9	40.2	41.1	43.3	50.7	47.7	58.5	51.0	63.6	54.3	68.7
#/TR		2.52	2.77	3.02	3.07	3.26	3.34	3.51	4.11	3.87	4.75	4.13	5.16	4.40	5.57

Legend:	
TC	Total Capacity, MBH (at 45°F Saturated suction, 95°F outdoor air temp)
SC	Sub-cooling, degrees F (at liquid line valve)
Equivalent Length	Equivalent tubing length, including effects of refrigeration specialties devices
Linear Length	Linear tubing length, feet
Liquid Line size	Tubing size, inches OD.
Liquid PD (F)	Liquid line pressure drop, saturated temperature, degrees F
Max Lift	Maximum liquid lift (indoor unit ABOVE outdoor unit only), at maximum permitted liquid line pressure drop
Suction Line size	Tube size, inches OD
Suction Line (PD) (F)	Suction line pressure drop, saturated temperature, degree F
(Cap Red)	Capacity reduction caused by suction line pressure drop GT 2 deg F
Charge	Charge Quantity, lbs. Calculated for both liquid line sizes (where applicable), but only with larger suction line size (where applicable)
#/TR	Charge to unit capacity ratio, lbs per ton (at 45 F SST, 95 F ODA)

CAS 120-240 PIPING RECOMMENDATIONS (TWO-CIRCUIT UNIT)

NOTE: CAS units requires TWO sets of refrigeration piping

NOTE: CAS units requires TWO sets of refrigeration piping															
Model & Nominal Capacity	Linear Line (ft)	0 - 25	25 - 50	50 - 75	75 - 100	100 - 125	125 - 150	150 - 175	175 - 200						
	Linear Line (m)	0 - 8	8 - 15	15 - 23	23 - 30	30 - 38	38 - 46	46 - 53	53 - 61						
	Equivalent Line (ft)	0 - 38	38 - 75	75 - 113	113 - 150	150 - 188	188 - 225	225 - 263	263 - 300						
	Equivalent Line (m)	0 - 12	12 - 23	23 - 34	34 - 46	46 - 57	57 - 69	69 - 80	80 - 91						
CAS120 TC 55.9 Each SC 12.7F	Liquid Line size	3/8"	3/8"	3/8"	3/8"	1/2"	3/8"	1/2"	3/8"	1/2"	1/2"	5/8"	1/2"	5/8"	
	Liquid PD (F)	1.4	2.7	5.5	5.5	0.9	6.9	1.1	8.2	1.4	1.6	0.5	1.8	0.5	
	Max Lift	25	50	75	82	100	66	125	49	133	130	144	128	144	
	Max Lift PD (F)	3.4	6.8	10.2	12.1	9.0	12.1	11.2	12.1	12.1	12.1	12.1	12.1	12.1	
	Suction Line size	3/4"	7/8"	7/8"	7/8"	1 1/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	
	Suction Ln PD (F) (Cap Red)	1.4	1.2	1.8	2.5 (-0.8%)	0.8	3.1 (-1.9%)	0.9	1.1	1.1	1.3	1.3	1.5	1.5	
	Charge	9.0	10.0	11.0	12.1	15.7	13.1	17.7	14.9	19.6	21.5	28.2	23.5	31.0	
	#/TR	0.73	0.81	0.89	0.97	1.27	1.05	1.42	1.20	1.58	1.74	2.27	1.89	2.50	
CAS150 TC 69.8 Each SC 14.2F	Liquid Line size	3/8"	3/8"	3/8"	3/8"	1/2"	3/8"	1/2"	1/2"	1/2"	5/8"	1/2"	5/8"	5/8"	
	Liquid PD (F)	2.1	4.1	6.2	8.2	1.5	10.3	1.8	2.2	2.2	2.6	0.7	2.9	0.8	
	Max Lift	128	50	75	69	155	42	125	145	140	163	135	162	162	
	Max Lift PD (F)	4.0	8.1	12.1	13.6	9.4	13.6	11.7	13.6	13.6	13.6	13.6	13.6	13.6	
	Suction Line size	7/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	
	Suction Ln PD (F) (Cap Red)	1.0	1.9	2.9 (-1.5%)	0.8	1.1	1.4	1.6	1.6	1.6	1.9	2.2 (-0.3%)	0.7	0.7	
	Charge	17.0	18.0	19.0	19.5	20.6	23.7	21.8	25.7	27.6	29.5	36.2	31.5	39.0	
	#/TR	1.36	1.44	1.52	1.56	1.65	1.90	1.74	2.05	2.21	2.36	2.89	2.52	3.12	
CAS180 TC 92.9 Each SC 15.1F	Liquid Line size	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	
	Liquid PD (F)	3.4	6.9	10.3	1.9	2.6	3.2	3.9	3.9	1.0	4.5	1.2	5.1	1.4	
	Max Lift	25	50	32	75	144	125	127	150	121	159	112	157	157	
	Max Lift PD (F)	5.5	11.1	13.0	8.2	10.9	13.7	14.5	13.6	14.5	14.5	14.5	14.5	14.5	
	Suction Line size	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	
	Suction Ln PD (F) (Cap Red)	1.5	3.1 (-1.9%)	0.8	1.2	1.6	2 (-0.1%)	0.7	2.5 (-0.8%)	0.8	2.9 (-1.5%)	1.0	3.3 (-2.2%)	1.1	
	Charge	17.0	18.0	18.3	19.5	21.8	23.7	25.7	26.6	27.6	34.4	29.5	37.4	31.5	40.5
	#/TR	1.35	1.43	1.46	1.55	1.73	1.89	2.04	2.11	2.19	2.73	2.35	2.97	2.50	3.22
CAS240 TC 121.2 Each SC 10.6F	Liquid Line size	3/8"	1/2"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	1/2"	5/8"	5/8"	5/8"	3/4"	
	Liquid PD (F)	5.6	2.2	3.3	0.9	4.3	1.2	5.4	1.5	6.5	1.8	2.1	2.4	1.3	
	Max Lift	25	50	64	75	70	108	55	104	42	100	97	92	107	
	Max Lift PD (F)	7.7	6.3	8.5	7.1	10.0	9.4	9.9	10.0	10.0	10.0	10.0	9.9	10.0	
	Suction Line size	1 1/8"	1 1/8"	1 1/8"	1 3/8"	1 1/8"	1 3/8"	1 1/8"	1 3/8"	1 3/8"	1 3/8"	1 3/8"	1 3/8"	1 3/8"	
	Suction Line PD (F) (Cap Red)	0.7	1.3	2.0	0.7	2.7 (-1.2%)	1.0	3.4 (-2.4%)	1.2	1.4	1.4	1.7	1.9	1.9	
	Charge	15.2	17.9	19.8	23.2	21.7	26.2	23.7	29.3	26.7	32.4	35.4	38.5	48.5	
	#/TR	1.20	1.41	1.56	1.83	1.72	2.07	1.87	2.31	2.11	2.56	2.80	3.04	3.83	

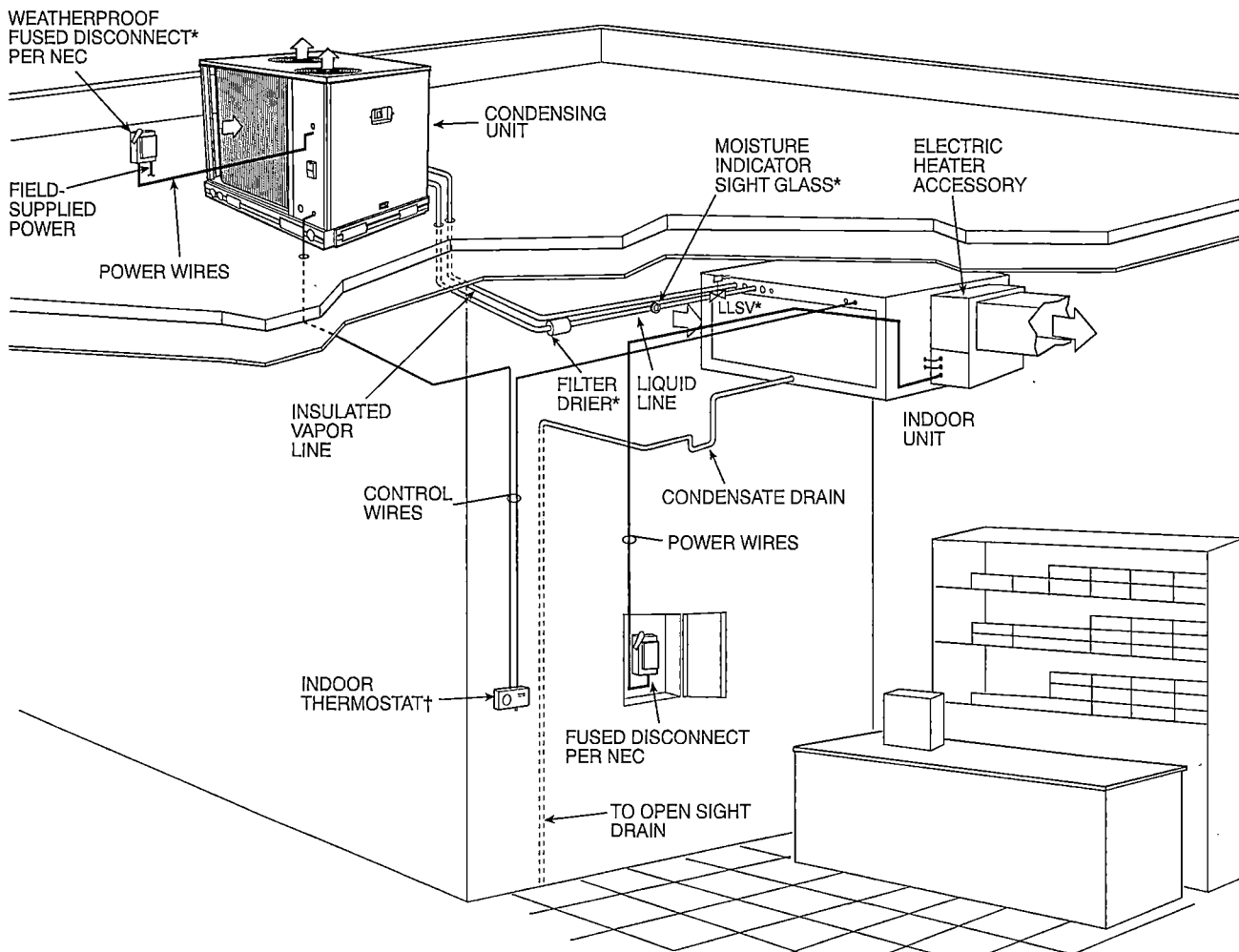
Legend:

TC	Total Capacity, MBH (at 45°F Saturated suction, 95°F outdoor air temp)
SC	Sub-cooling, degrees F (at liquid line valve)
Equivalent Length	Equivalent tubing length, including effects of refrigeration specialties devices
Linear Length	Linear tubing length, feet
Liquid Line size	Tubing size, inches OD.
Liquid PD (F)	Liquid line pressure drop, saturated temperature, degrees F
Max Lift	Maximum liquid lift (indoor unit ABOVE outdoor unit only), at maximum permitted liquid line pressure drop
Suction Line size	Tube size, inches OD
Suction Line (PD) (F)	Suction line pressure drop, saturated temperature, degree F
(Cap Red)	Capacity reduction caused by suction line pressure drop GT 2 deg F
Charge	Charge Quantity, lbs. Calculated for both liquid line sizes (where applicable), but only with larger suction line size (where applicable)
#/TR	Charge to unit capacity ratio, lbs per ton (at 45 F SST, 95 F ODA)

TYPICAL PIPING AND WIRING

Roof Installation and a Ceiling-Mounted Fan Coil

HORIZONTAL INSTALLATION



C150197

LEGEND:

NEC - National Electrical Code
TXV - Thermostatic Expansion Valve

* Field-supplied

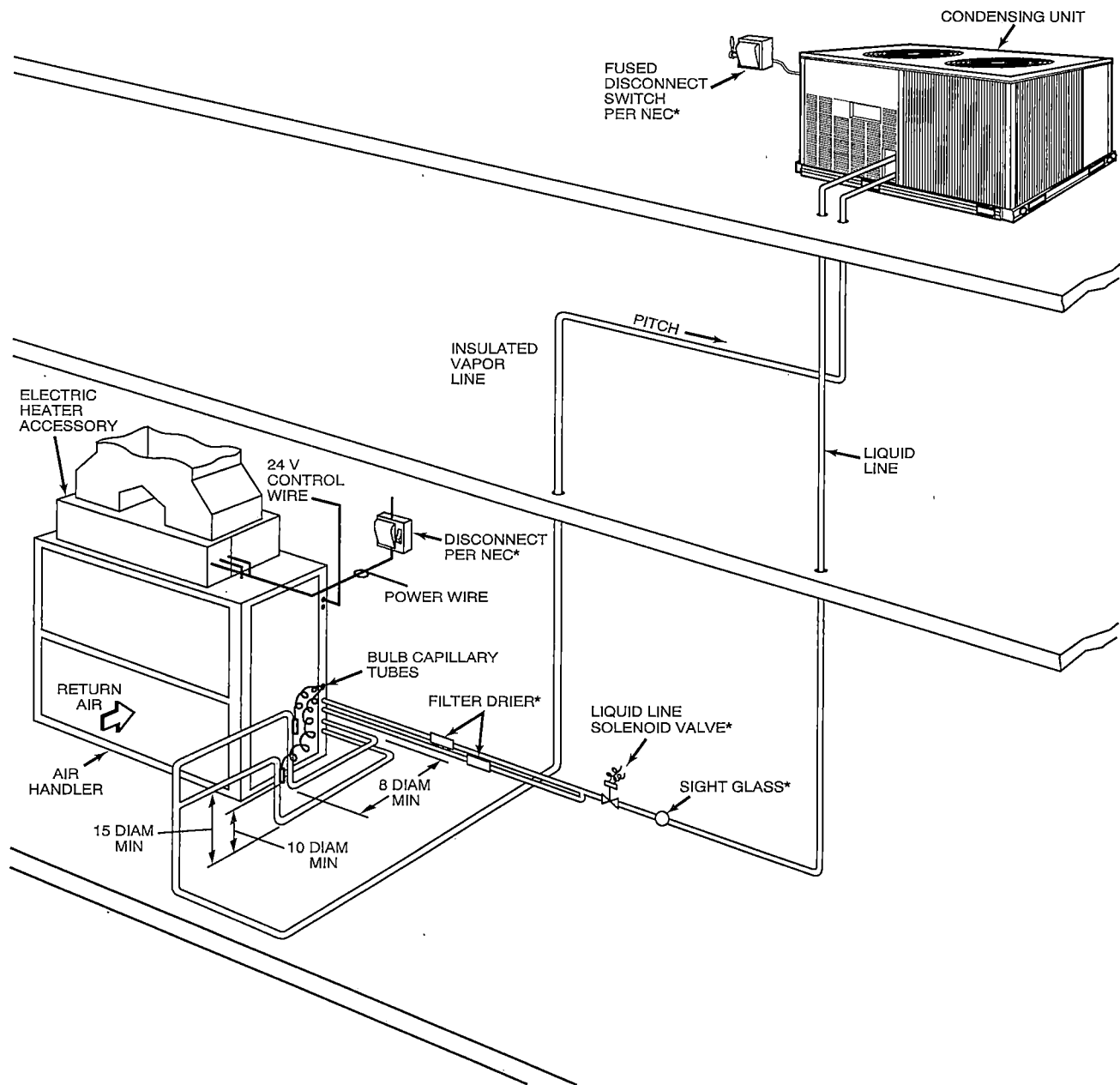
† Double riser may be required. Consult condensing unit product data catalog for details.

NOTES:

1. All piping must follow standard refrigerant piping techniques. Refer to ICP System Design Manual for details.
2. All wiring must comply with the applicable local and national codes.
3. Wiring and piping shown are general points-of-connection guides only and are not intended for, or to include all details for, a specific installation.
4. Liquid line solenoid valve (solenoid drop control) is recommended to prevent refrigerant migration to the compressor on line links above 75 feet.
5. Internal factory-supplied TXVs not shown.

TYPICAL PIPING AND WIRING (CONT.)

Roof Installation and a Vertical Discharge Fan Coil



LEGEND

DIAM — Diameter

NEC — National Electrical Code

TXV — Thermostatic Expansion Valve

— Piping

*Field supplied

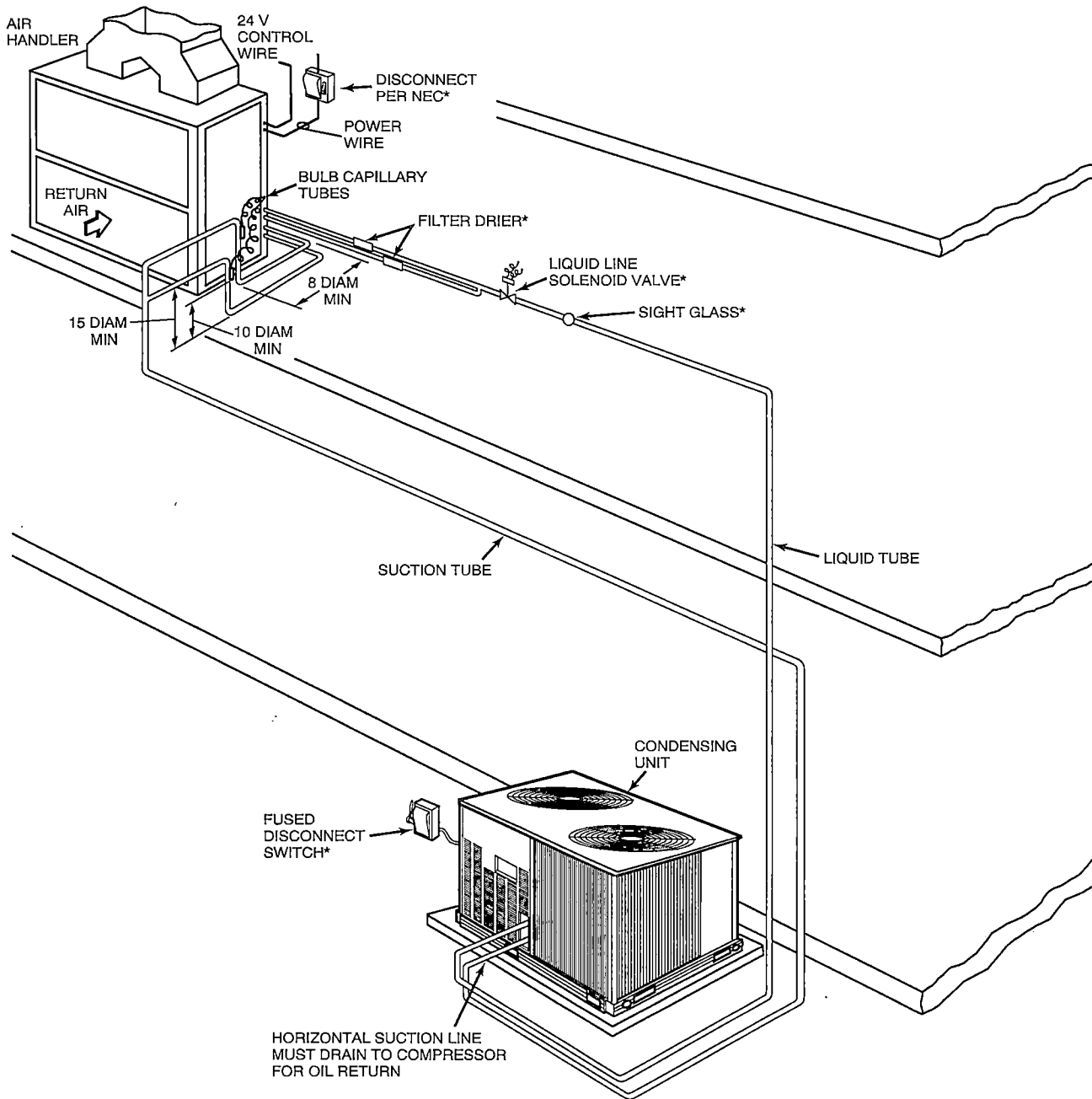
NOTES:

1. All piping must follow standard refrigerant piping techniques. Refer to System Design Manual for details.
2. All wiring must comply with applicable local and national codes.
3. Wiring and piping shown are general points-of-connection guides only and are not intended for, or to include all details for, a specific installation.
4. Liquid line solenoid valve (solenoid drop control) is recommended to prevent refrigerant migration to the compressor on line links above 75 feet.
5. Internal factory-supplied TXVs and check valves not shown.

C150435

TYPICAL PIPING AND WIRING (CONT.)

Ground Level Installation and Vertical Discharge Fan Coil



LEGEND

DIAM — Diameter
NEC — National Electrical Code
TXV — Thermostatic Expansion Valve
 Piping

*Field supplied

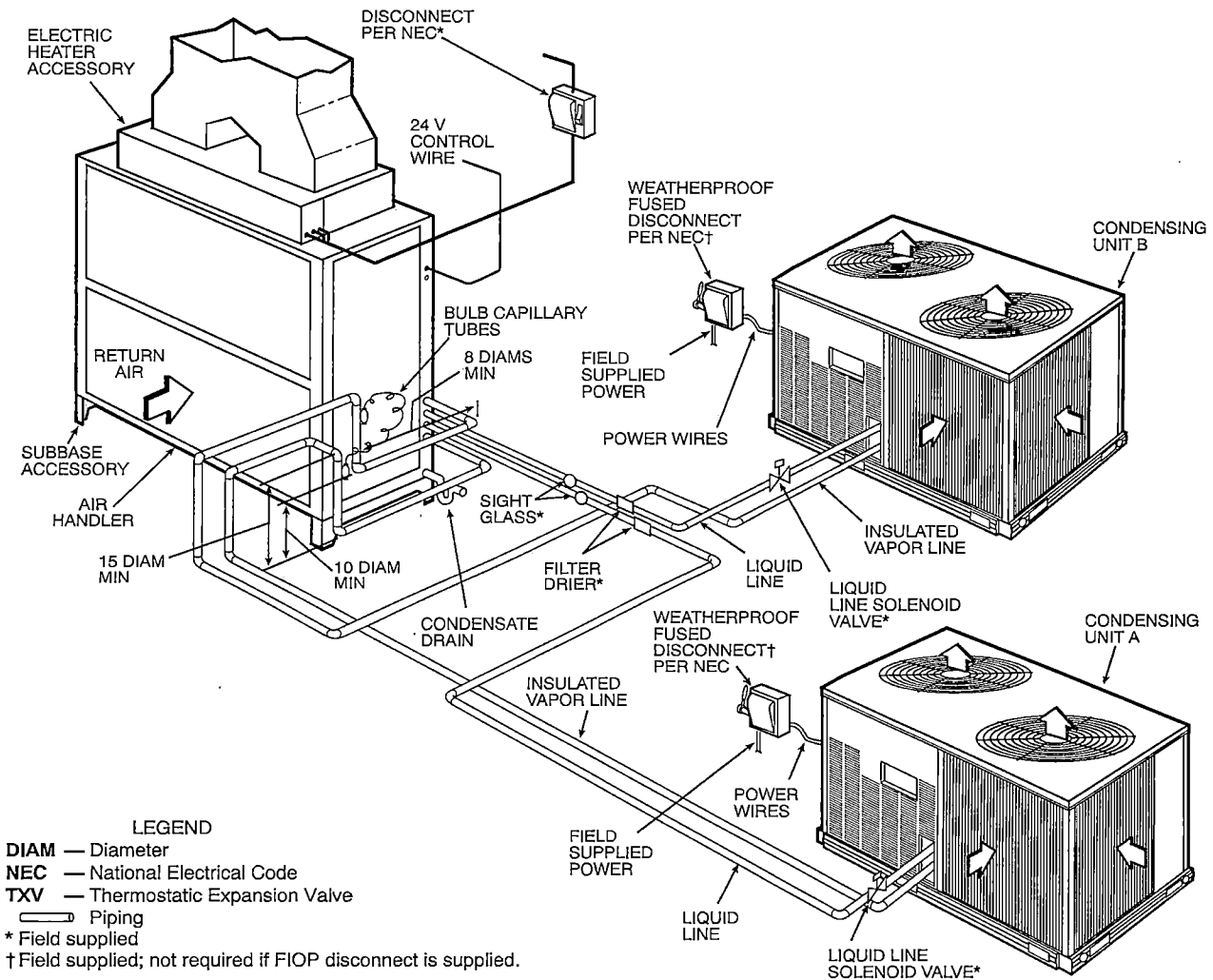
NOTES:

1. All piping must follow standard refrigerant piping techniques. Refer to System Design Manual for details.
2. All wiring must comply with applicable local and national codes.
3. Wiring and piping shown are general points-of-connection guides only and are not intended for, or to include all details for, a specific installation.
4. Liquid line solenoid valve (solenoid drop control) is recommended to prevent refrigerant migration to the compressor on line links above 75 feet.
5. Internal factory-supplied TXVs and check valves not shown.

C150433

TYPICAL PIPING AND WIRING (CONT.)

Dual Condensing Units and a Dual Circuit Fan Coil



NOTES:

1. All piping must follow standard refrigerant piping techniques. Refer to System Design Manual for details.
2. All wiring must comply with applicable local and national codes.
3. Wiring and piping shown are general points-of-connection guides only and are not intended for, or to include all details for, a specific installation.
4. Liquid line solenoid valve (solenoid drop control) is recommended to prevent refrigerant migration to the compressor on line links above 75 feet.
5. Condensing Unit A should be the first on, last off and be connected to the lower half of the coil.
6. Internal factory-supplied TXVs and check valves not shown.

C150437

GUIDE SPECIFICATIONS

Commercial Air-Cooled Condensing Units

HVAC Guide Specifications

Size Range: 6 to 20 Tons, Nominal

ICP Model Numbers: CAS, Single Circuit (072 - 241 Models) CAS, Dual Circuit (120 - 240 Models)

Part 1 — General

1.01 SYSTEM DESCRIPTION

Outdoor-mounted, air-cooled condensing unit suitable for on-the-ground or rooftop installation. Unit shall consist of a hermetic scroll air-conditioning compressor(s) assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall be used in a refrigeration circuit matched with a packaged air-handling unit.

1.02 QUALITY ASSURANCE

- A. Unit shall be rated in accordance with AHRI Standard 360.
- B. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.
- C. Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL and UL, Canada label.
- D. Unit cabinet shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- E. Air-cooled condenser coils for hermetic scroll compressor units CAS shall be leak tested at 150 psig, and pressure tested at 650 psig.
- F. Unit shall be manufactured in a facility registered to ISO 9001:2000 manufacturing quality standard.

1.03 DELIVERY, STORAGE, AND HANDLING

Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.

1.04 WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER.)

Part 2 — Products

2.01 EQUIPMENT

A. General:

Factory-assembled, single piece, air-cooled condensing unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, holding charge, and special features required prior to field start-up.

B. Unit Cabinet:

- 1. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.
- 2. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.

C. Condenser Fans:

- 1. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
- 2. Fan blades shall be balanced.
- 3. Condenser fan discharge openings shall be equipped with PVC-coated steel wire safety guards.
- 4. Condenser fan and motor shaft shall be corrosion resistant.

D. Compressor:

- 1. Compressor shall be of the hermetic scroll type.
- 2. Compressor shall be mounted on rubber grommets.
- 3. Compressors shall include overload protection.
- 4. Compressors shall be equipped with a crankcase heater.
- 5. Compressor shall be equipped with internal high pressure and high temperature protection.
- 6. CAS180 and 240 sizes shall use two scroll compressors manifold together. CAS091(D) and CAS091(E) shall use one refrigerant circuit with one 2-stage compressor.

E. Condenser Coils:

- 1. Standard Aluminum fin - Copper Tube Coils:
 - a. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.

- b. Evaporator coils shall be leak tested to 150 psig, pressure tested to 450 psig, and qualified to UL 1995 burst test at 1775 psig.
- c. Condenser coils shall be leak tested to 150 psig, pressure tested to 650 psig, and qualified to UL 1995 burst test at 1980 psig.
- 2. Optional Pre-coated aluminum-fin condenser coils:
 - a. Shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments.
 - b. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube.
 - c. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.
- 3. Optional Copper-fin evaporator and condenser coils:
 - a. Shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets.
 - b. Galvanized steel tube sheets shall not be acceptable.
 - c. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.
- 4. Optional E-coated aluminum-fin evaporator and condenser coils:
 - a. Shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins.
 - b. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.
 - c. Color shall be high gloss black with gloss per ASTM D523-89.
 - d. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges.
 - e. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93.
 - f. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93).
 - g. Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92).
 - h. Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90.

F. Refrigeration Components:

Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, and a partial holding charge of refrigerant.

G. Controls and Safeties:

- 1. Minimum control functions shall include:
 - a. Control wire terminal blocks.
 - b. Compressor lockout on auto-reset safety until reset from thermostat.
 - c. Except for CAS091(G,H) models, each unit shall utilize the Comfort Alert™ Diagnostic Board that provides:
 - (1.) System Pressure Trip fault code indication
 - (2.) Short Cycling fault code indication
 - (3.) Locked Rotor fault code indication
 - (4.) Open Circuit fault code indication
 - (5.) Reverse Phase 3 fault code indication
 - (6.) Welded Contactor fault code indication
 - (7.) Low Voltage fault code indication
 - (8.) Anti-short cycle protection
 - (9.) Phase reversal protection
- 2. On CAS091 (G,H) models, the two stage digital scroll compressor is controlled by a discharge solenoid and non-adjustable digital timer to control the stages of compression. At part load the solenoid is closed and opens at intervals which equal desired stage of compression.
- 3. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:
 - a. High discharge pressure cutout.
 - b. Low pressure cutout.

H. Operating Characteristics:

1. The capacity of the condensing unit shall meet or exceed _____ Btuh at a suction temperature of _____ °F. The power consumption at full load shall not exceed _____ kW.
2. The combination of the condensing unit and the evaporator or fan coil unit shall have a total net cooling capacity of _____ Btuh or greater at conditions of _____ cfm entering-air temperature at the evaporator at _____ °F wet bulb and _____ °F dry bulb, and air entering the condensing unit at _____ °F.
3. The system shall have an EER of _____ Btuh/Watt or greater at standard AHRI conditions.
4. Standard unit shall be capable to operate up to 125°F (52°C) and down to 40°F (4°C)

I. Electrical Requirements:

1. Nominal unit electrical characteristics shall be _____ v, 3-ph, 60 Hz. The unit shall be capable of satisfactory operation within voltage limits of _____ v to _____ v.
2. Unit electrical power shall be single-point connection.
3. Unit control circuit shall contain a 24-v transformer for unit control.

J. Special Features:

1. Low-Ambient Temperature Control:

A low-ambient temperature control shall be available as a factory-installed option or as a field-installed accessory. This low-ambient control shall regulate speed of the condenser-fan motors in response to the saturated condensing temperature of the unit. The control shall maintain correct condensing pressure at outdoor temperatures down to -20°F (-29°C).

2. Unit-Mounted, Non-Fused Disconnect Switch:

Switch shall be factory-installed and internally mounted. NEC and UL-approved non-fused switch shall provide unit power shutoff. Switch shall be accessible from outside the unit and shall provide power off lockout capability. Non-fused disconnect switch cannot be used when unit MOCP electrical rating exceeds 80 amps.

3. Convenience Outlet:

Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle. Outlet shall include 15 amp GFI (ground fault interrupter) receptacle with independent fuse protection. Voltage required to operate convenience outlet shall be provided by a factory-installed step-down transformer. Outlet shall be accessible from outside the unit.

4. Louvered Hail Guard Package:

Louvered hail guard package shall protect coils against damage from hail and other flying debris.

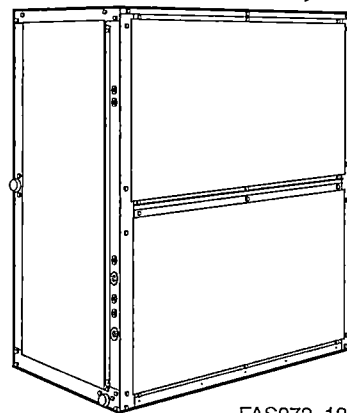
DIRECT EXPANSION COMMERCIAL PACKAGED AIR HANDLING UNITS, 6 – 25 TONS

BUILT TO LAST, EASY TO INSTALL AND SERVICE

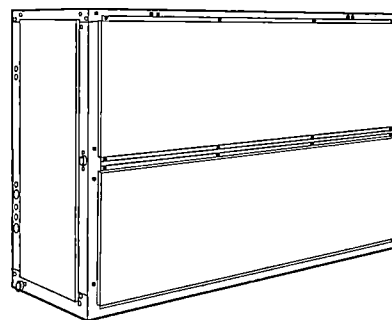
- Multi-position design for horizontal or vertical installation without modification.
- Two sloped condensate pans on each unit for horizontal or vertical applications.
- Standard sloped drain pans and cleanable insulation treated with Environmental Protection Agency (EPA) registered antimicrobial agent improves indoor air quality.
- High-static design meets a wider range of applications than competitive packaged air handler lines
- Ultra low leak economizer accessory provides ventilation air and "free" cooling with built in Fault Detection and Diagnostic (FDD) capabilities
- Single refrigerant circuit on 072 and 091 sizes. Dual refrigerant circuit on 120–300 sizes.
Dual circuit can be field modified for use on single circuit condensers.
- Cooling coils with mechanically bonded fins provide peak heat transfer.
- Optional 2-speed indoor fan with VFD controller
- Standard factory-installed thermo-static expansion valve (TXV) with removable power element.
- Easy maintenance – removal of single panel allows access to virtually all components.
- Die-formed galvanized steel casings provide durability and structural integrity. Optional paint is available.
- 24-volt terminal block for control wiring connection.
- Hot water coil, steam coil, and electric heat accessories are available.

WARRANTY

- 1 Year parts limited warranty



FAS072-120



FAS150-300



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.



UNIT PERFORMANCE DATA

UNIT	Nominal Tons	Number of Circuits	Unit Dimensions H x W x L [mm]	Unit Weight lb. [kg]
FAS072*AAA0A0A	6	1	56-1/16" x 49" x 28-3/16" [1424 x 1244 x 714]	399 [181]
FAS091*AAA0A0A	7 1/2	1	56-1/16" x 49" x 28-3/16" [1424 x 1244 x 714]	404 [183]
FAS120*AAA0A0A	10	2	56-1/16" x 49" x 28-3/16" [1424 x 1244 x 714]	425 [193]
FAS150*AAA0A0A	12 1/2	2	56-1/16" x 89" x 28-3/16" [1424 x 2261 x 714]	695 [315]
FAS180*AAA0A0A	15	2	56-1/16" x 89" x 28-3/16" [1424 x 2261 x 714]	713 [323]
FAS240*AAA0A0A	20	2	56-1/16" x 89" x 28-3/16" [1424 x 2261 x 714]	730 [331]
FAS300*AAA0A0A	25	2	65-9/16" x 100-1/2" x 32-5/8" [1665 x 2553 x 829]	1050 [477]

* Indicates Unit voltage: K = 208/230-1-60, H = 208/230-3-60, M = 208/230/460-3-60, L = 460-3-60, S = 575-3-60

NOTE: BASE MODEL NUMBERS LISTED. SEE MODEL NOMENCLATURE LISTING FOR ADDITIONAL OPTIONS

MODEL NUMBER NOMENCLATURE

MODEL SERIES	F	A	S	0	9	1	M	A	A	A	0	A	0	A
Position Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14
F = R-410A Fan Coil Unit														
A = Air Conditioning (Cooling Only) Type														
S = Standard Efficiency Efficiency														
072 = 6 Tons (1 circuit)														
091 = 7.5 Tons (1 circuit)														
120 = 10 Tons (2 circuit)														
150 = 12.5 Tons (2 circuit)														
180 = 15 Tons (2 circuit)														
240 = 20 Tons (2 circuit)														
300 = 25 Tons (2 circuit)														
Nominal Tonnage														
K = 208/230-1-60														
H = 208/230-3-60														
M = 460/208/230-3-60														
L = 460-3-60														
S = 575-3-60 Voltage														
A = Standard Static Standard Efficiency Motor / Standard Drive														
B = High (Alternate) Static Standard Efficiency Motor / High Drive (072 & 091 Only)														
High (Alternate) Static High Efficiency / High Drive (150, 180, 240, 300 Only)														
D = Standard Static High Efficiency Motor / Standard Drive														
E = High (Alternate) Static High Efficiency Motor / High Drive Fan Motor Options*														
* See table below for Fan Motor Options														
A = Al/Cu Indoor Coil														
A = Future Use														
0 = Single Speed Indoor Fan Motor														
2 = Two Speed Indoor Fan Motor Controller (VFD) Fan Speed Controller														
A = None – Standard – Unpainted														
B = Painted cabinet (Gray) Painted Cabinet Options														
0 = Future use Future Use														
A = Standard														

Notes:

* All FAS072–150 units with a “6” voltage designation are triple voltage; ie., 208/230/460–3–60.

Size FAS180 is also triple voltage in the “6” configuration unless the High Static motor option is used that is discrete 460–3–60.

Units that require 2–speed indoor fan motor must use dedicated voltage models listed. The VFD used is not multi–voltage.

** 30 size models and single–phase 072 and 091 sizes designate standard motor and high static drive.

Position 8	Motor Description	Voltage	Unit Size						
			072	091	120	150	180	240	300
A	Std Static, Std Efficient Motor / Std Drive	All	✓	✓	✓	✓	✓	–	–
		575–3–60	✓	✓	✓	–	–	–	–
B	High (Alternate) Static, Std Efficient Motor / High Drive	208/230–1–60	✓	✓	–	–	–	–	–
		208/230–3–60	✓	✓	✓	✓	–	–	–
		460–3–60	✓	✓	✓	✓	–	–	–
D	Std Static, High Efficient Motor / Std Drive	All	–	–	–	–	–	✓	✓
E	High (Alternate) Static, High Efficient Motor / High Drive	575–3–60	–	–	–	✓	✓	✓	✓
		208/230–3–60	–	–	–	–	✓	✓	✓
		460–3–60	–	–	–	–	✓	✓	✓

2– Speed Motors

Position 8	Motor Description	Voltage	Unit Size						
			072	091	120	150	180	240	300
A	Std Static, Std Efficient Motor / Std Drive	All	✓	✓	✓	✓	✓	–	–
	Std Static, High Efficient Motor / Std Drive	All	–	–	–	–	–	✓	✓
E	High (Alternate) Static, Std Efficient Motor / High Drive	575–3–60	✓	✓	✓	–	–	–	–
		208/230–3–60	✓	✓	✓	✓	–	–	–
		460–3–60	✓	✓	✓	✓	–	–	–
	High (Alternate) Static, High Efficient Motor / High Drive	575–3–60	–	–	–	✓	✓	✓	✓
		208/230–3–60	–	–	–	–	✓	✓	✓
		460–3–60	–	–	–	–	✓	✓	✓

PHYSICAL DATA

UNIT FAS	072	091	120	150	180	240	300
NOMINAL CAPACITY (Tons)	6	7½	10	12½	15	20	25
OPERATING WEIGHT (lb)							
Base Unit with TXV (4 Row)	399	404	425	695	713	730	1050
Plenum	175	175	175	225	225	225	325
Economizer	185	185	185	340	340	340	340
Hot Water Coil	195	195	195	285	285	285	345
Steam Coil	215	215	215	340	340	340	405
FANS							
Qty...Diam. (in.)	1...15	1...15	1...15	2...15	2...15	2...15	2...18
Nominal Airflow (cfm)	2400	3000	4000	5000	6000	8000	10,000
Airflow Range (cfm)	1800-3000	2250-3750	3000-5000	3750-6250	4500-7500	6000-10,000	7500-12,500
Nom. Motor Hp (Standard Motor)*							
208/230-1-60	1.3	2.4	—	—	—	—	—
208/230-3-60 and 460-3-60	2.4	2.4	2.4	2.9	3.7	5.0	7.5
575-3-60	1.0	2.0	2.0	3.0	3.0	5.0	7.5
Motor Speed (rpm)							
208/230-1-60	1725	1725	—	—	—	—	—
208/230-3-60 and 460-3-60	1725	1725	1725	1725	1725	1760	1760
575-3-60	1725	1725	1725	1725	1725	1745	1755
REFRIGERANT	R-410A						
Shipping charge (lb)	Nitrogen Purge						
Metering Device	TXV						
Operating charge (lb) (approx per circuit)†	3.0	3.0	1.5/1.5	2.0/2.0	2.5/2.5	3.5/3.5	4.5/4.5
DIRECT-EXPANSION COIL	Enhanced Copper Tubes, Aluminum Sine-Wave Fins						
Max Working Pressure (psig)	650						
Material	Al / Cu						
Coil Type	RTPF						
Face Area (sq ft)	6.67	8.33	10.01	13.25	17.67	19.88	24.86
No. of Splits	1	1	2	2	2	2	2
Split Type...Percentage	—	—	Face...50/50				
No. of Circuits per Split	12	15	9	12	16	18	20
Rows...Fins/in.	4...15	4...15	4...15	4...15	4...15	4...15	4...15
STEAM COIL							
Max Working Press. (psig at 260°F)	20						
Total Face Area (sq ft)	6.67	6.67	6.67	13.33	13.33	13.33	15.0
Rows...Fins/in.	1...9	1...9	1...9	1...10	1...10	1...10	1...10
HOT WATER COIL							
Max Working Pressure (psig)	150						
Total Face Area (sq ft)	6.67	6.67	6.67	13.33	13.33	13.33	15.0
Rows...Fins/in.	2...8.5	2...8.5	2...8.5	2...8.5	2...8.5	2...8.5	2...12.5
Water Volume							
(gal)	8.3			13.9			14.3
(ft³)	1.1			1.85			1.90
PIPING CONNECTIONS							
Quantity...Size (in.)							
DX Coil — Suction (ODF)	1...1⅛	1...1⅛	2...1⅛	2...1⅛	2...1⅛	2...1⅛	2...1⅜
DX Coil — Liquid Refrig. (ODF)	1...5⁄8		2...5⁄8		2...5⁄8		
Steam Coil, In (MPT)	1...2½		1...2½				
Steam Coil, Out (MPT)	1...1½		1...1½				
Hot Water Coil, In (MPT)	1...1½		1...1½	1...2			
Hot Water Coil, Out (MPT)	1...1½		1...1½	1...2			
Condensate (PVC)	1...5⁄8 ODM / 1 1⁄4 IDF						
FILTERS	Throwaway — Factory-Supplied						
Quantity...Size (in.)	4...16 x 24 x 2			4...16 x 20 x 2		4...20 x 24 x 2	
				4...16 x 24 x 2		4...20 x 25 x 2	
Access Location	Right or Left Side						

* Refer to Alternate Fan Motor Data table for alternate motor data.

† Units are shipped without refrigerant charge.

OPTIONS AND ACCESSORIES

ITEM	OPTION*	ACCESSORY †
Alternate Fan Motors	X	
Alternate Drives	X	
2-Speed Indoor Fan Motor System	X	
CO ₂ Sensors		X
Condensate Drain Trap		X
Discharge Plenum		X
Economizer Ultra LOW LEAK-FDD		X
Economizer Standard Leak		X
Electric Heat		X
Hot Water Heating Coils		X
Overhead Suspension Package		X
Prepainted Units	X	
Return Air Grille		X
Steam Heating Coil		X
Subbase		X

* Factory—installed option.

† Field—installed accessory

Factory—installed options

Alternate fan motors and drives are available to provide the widest possible range of performance.

Prepainted steel units are available from the factory for applications that require painted units. Units are painted with American Sterling Gray color.

2-Speed Indoor Fan Motor system saves energy and installation time by utilizing a Variable Frequency Drive (VFD) to automatically adjust the indoor fan motor speed in sequence with the units cooling operation. Per ASHRAE 90.1 2010 standard section 6.4.3.10.b, during the first stage of cooling operation the VFD will adjust the fan motor to provide 2/3rd of the total cfm established for the unit. When a call for the second stage of cooling is required, the VFD will allow the total cfm for the unit established (100%). During the heating mode the VFD will allow total design cfm (100%) operation and during the ventilation mode the VFD will allow operation to 2/3rd of total cfm.

Compared to single speed indoor fan motor systems, ICP's 2-Speed Indoor Fan Motor system can save substantial energy, 25%+*, versus single speed indoor fan motor systems.

*Data based on .10 (\$/kWh) in an office application utilizing ICP's HAP 4.6 simulation software program.

The VFD used in ICP's 2-Speed Indoor Fan Motor system has soft start capabilities to slowly ramp up the speeds, thus eliminating any high inrush air volume during initial start-up. It also has internal over current protection for the fan motor and a field installed display kit that allows adjustment and in depth diagnostics of the VFD.

This 2-Speed Indoor Fan Motor system is available on models with 2-stage cooling operation with electrical mechanical controls.

The 2-Speed Indoor Fan Motor system is very flexible for initial fan performance set up and adjustment. The standard factory shipped VFD is pre-programmed to automatically stage the fan speed between the first and second stage of cooling. The unit fan performance static pressure and cfm can be easily adjusted using the traditional means of pulley adjustments. The other means to adjust the unit static and cfm performance is

to utilize the field installed Display Kit and adjust the frequency and voltage in the VFD to required performance requirements. In either case, once set up, the VFD will automatically adjust the speed between the cooling stage operations.

Field—installed accessories

Two-row hot water coils have copper tubes mechanically bonded to aluminum plate fins and non-ferrous headers.

One-row steam coil has copper tubes and aluminum fins. The Inner Distributing Tube (IDT) design provides uniform temperatures across the coil face. The steam coil has a broad operating pressure range; up to 20 psi (138 kPag) at 260°F (126°C). The IDT steam coils are especially suited to applications where sub-freezing air enters the unit.

Electric resistance heat coils have an open-wire design and are mounted in a rigid frame. Safety cutouts for high temperature conditions are standard. Terminal block for single-point power connection is included.

Economizers – temperature dry bulb controlled –

Ultra LOW LEAK – EconoMi\$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator. Supply and outdoor air sensors, and CO₂ sensor compatible, for use in electro mechanical controls only. Also includes return and outside air damper leakage that meets California Title 24 section 140.4 requirements. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.

STANDARD – EconoMi\$er IV – with gear driven damper blades and W7212 controller (Use --HH--57AC-078 for enthalpy control).

Discharge plenum directs the air discharge directly into the occupied space; integral horizontal and vertical louvers enable redirection of airflow. Accessory is available unpainted or painted. Field assembly is required (only applicable for vertical application).

Return-air grille provides a protective barrier over the return-air opening and gives a finished appearance to units installed in the occupied space. Accessory is available unpainted or painted.

Subbase provides a stable, raised platform and room for condensate drain trap connection for vertical floor-mounted units. Accessory is available unpainted or painted.

Overhead suspension package includes necessary brackets to support units in horizontal ceiling installations.

CO₂ sensors can be used in conjunction with the economizer accessory to help meet indoor air quality requirements. The sensor signals the economizer to open when the CO₂ level in the space exceeds the set point. A programmable thermostat can be used to override the sensor if the outside-air temperature is too high or too low.

Condensate drain trap includes an overflow shutoff switch that can be wired to turn off the unit if the trap becomes plugged. Kit also includes a wire harness that can be connected to an alarm if desired. The transparent trap is designed for easy service and maintenance.

ACCESSORY HEATERS			
HEATER PART NO.	DESCRIPTION	NOMINAL CAPACITY	USED WITH
(240V – 3 PHASE – 60 HZ)			
CAELHEAT001A00	5.0 kW, 240–3–60	5	072, 091, 120
CAELHEAT004A00	10.0 kW, 240–3–60	10	072, 091, 120
CAELHEAT007A00	15.0 kW, 240–3–60	15	072, 091, 120
CAELHEAT010A00	25.0 kW, 240–3–60	25	072, 091, 120
CAELHEAT013A00	35.0 kW, 240–3–60	35	091, 120
CAELHEAT016A00	10.0 kW, 240–3–60	10	180, 240
CAELHEAT019A00	20.0 kW, 240–3–60	20	180, 240
CAELHEAT022A00	30.0 kW, 240–3–60	30	180, 240
CAELHEAT025A00	50.0 kW, 240–3–60	50	180, 240
CAELHEAT028A00	20.0 kW, 240–3–60	20	300
CAELHEAT031A00	40.0 kW, 240–3–60	40	300
CAELHEAT034A00	50.0 kW, 240–3–60	50	300
CAELHEAT037A00	70.0 kW, 240–3–60	70	300
(480V – 3 PHASE – 60 HZ)			
CAELHEAT002A00	5.0 kW, 480–3–60	5	072, 091, 120
CAELHEAT005A00	10.0 kW, 480–3–60	10	072, 091, 120
CAELHEAT008A00	15.0 kW, 480–3–60	15	072, 091, 120
CAELHEAT011A00	25.0 kW, 480–3–60	25	072, 091, 120
CAELHEAT014A00	35.0 kW, 480–3–60	35	091, 120
CAELHEAT017A00	10.0 kW, 480–3–60 and 7.0 kW, 400–3–50 Electric Heater	10	180, 240
CAELHEAT020A00	20.0 kW, 480–3–60 and 15.0 kW, 400–3–50 Electric Heater	20	180, 240
CAELHEAT023A00	30.0 kW, 480–3–60 and 21.0 kW, 400–3–50 Electric Heater	30	180, 240
CAELHEAT026A00	50.0 kW, 480–3–60 and 35.0 kW, 400–3–50 Electric Heater	50	180, 240
CAELHEAT028A00	20.0 kW, 480–3–60	20	300
CAELHEAT031A00	40.0 kW, 480–3–60	40	300
CAELHEAT034A00	50.0 kW, 480–3–60	50	300
CAELHEAT037A00	70.0 kW, 480–3–60	70	300
(575V – 3 PHASE – 60 HZ)			
CAELHEAT003A00	5.0 kW, 575–3–60	5	072, 091, 120
CAELHEAT006A00	10.0 kW, 575–3–60	10	072, 091, 120
CAELHEAT009A00	15.0 kW, 575–3–60	15	072, 091, 120
CAELHEAT012A00	25.0 kW, 575–3–60	25	072, 091, 120
CAELHEAT015A00	35.0 kW, 575–3–60	35	091, 120
CAELHEAT015A00	10.0 kW, 575–3–60	10	180, 240
CAELHEAT021A00	20.0 kW, 575–3–60	20	180, 240
CAELHEAT024A00	30.0 kW, 575–3–60	30	180, 240
CAELHEAT027A00	50.0 kW, 575–3–60	50	180, 240
CAELHEAT030A00	20.0 kW, 480–3–60	20	300
CAELHEAT033A00	40.0 kW, 480–3–60	40	300
CAELHEAT036A00	50.0 kW, 480–3–60	50	300
CAELHEAT039A00	70.0 kW, 480–3–60	70	300

* Electric heaters tested at a maximum ESP of 1.9"

NOTE: App. Shipping weight for AAHC05AHA/CAELHEATER001A00–35CSA/015A00 is 55 lbs. each

App. Shipping weight for AAHC10BHA/CAELHEAT016A00 – 027A00 is 60 lbs. each

App. Shipping weight for AACH20EHC/ CAELHEAT028A00 – 039 is 75 lbs. each

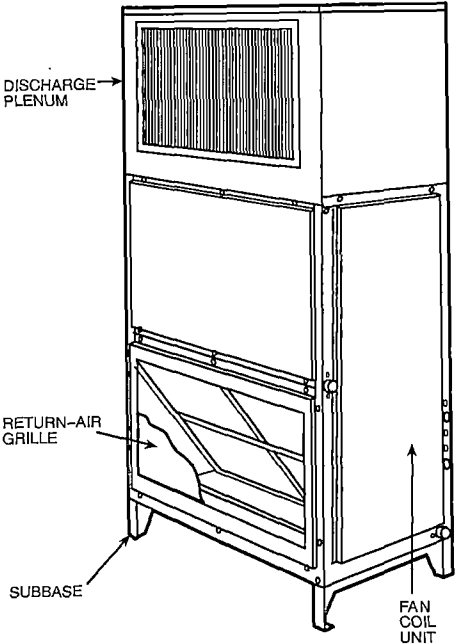
ACCESSORIES		
PART NO.	DESCRIPTION	USED WITH
CAECOMZR001B00	Economizer — temperature dry bulb controlled – Standard Leak design with gear driven damper blades and W7212 controller ‡ (Use --HH--57AC- 078 for enthalpy control)	072-120
CAECOMZR008A00	Economizer – temperature dry bulb controlled – Ultra LOW LEAK – EconoMi\$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator. Supply and outdoor air sensors, and CO2 sensor compatible, for use in electro mechanical controls only. Also includes return and outside air damper leakage that meets Title 24 section 140.4 requirements. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.	072-120
--HH--57AC-081	Enthalpy Control for W7220 Controller only, (One required for single enthalpy, two required for different enthalpy) Only available through Micrometl.	072-120
--HH--57AC-078	Enthalpy control upgrade. Only available through Micrometl.	072-120
AHWC01AAA CAHWCOIL001A00	Hot Water Coil (2 row)	072-120
ACSC01AA CAOVRFLW001A00	Condensate Overflow Switch Assembly	072-120
APDC01AAA CAPLENUM001A00	Discharge Plenum	072-120
APDPC01AAA CAPLENUM004A00	Discharge Plenum – Painted	072-120
AGRC01AAA CARAGRIL001A00	Return Air Grille	072-120
AGRPC01AAA CARAGRIL004A00	Return Air Grille – Painted	072-120
ASPC01AAA CASTCOIL001A00	Steam Coil (1 row)	072-120
CASUBASE001A00	Floor Mount Base (Subbase)	072-120
ASBPC01AA CASUBASE003A00	Floor Mount Base (Subbase) – Painted	072-120
AHBC01AA CASUSPEN001A00	Overhead Suspension Brackets	072-120
CAECOMZR010A00	Economizer – temperature dry bulb controlled – Ultra LOW LEAK – EconoMi\$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator. Supply and outdoor air sensors, and CO2 sensor compatible, for use in electro mechanical controls only. Also includes return and outside air damper leakage that meets Title 24 section 140.4 requirements. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.	150 – 240
CAECOMZR002B00	Economizer — temperature dry bulb Enthalpy Controlled Standard Leak design with gear driven damper blades and W7212 controller ‡ (Use --HH--57AC-078 for enthalpy control)	150 – 240
--HH--57AC-081	Enthalpy Control for W7220 Controller only, (One required for single enthalpy, two required for different enthalpy) Only available through Micrometl.	150 – 240
--HH--57AC-078	Enthalpy control upgrade. Only available through Micrometl.	150 – 240
AHWC02BAA CAHWCOIL002A00	Hot Water Coil (2 row)	150 – 240
ACSC01AA CAOVRFLW001A00	Condensate Overflow Switch Assembly	150 – 240
APDC02BAA CAPLENUM002A00	Discharge Plenum	150 – 240
APDPC02BAA CAPLENUM005A00	Discharge Plenum – Painted	150 – 240
AGRC02BAA CARAGRIL002A00	Return Air Grille	150 – 240
AGRPC02BAA CARAGRIL005A00	Return Air Grille – Painted	150 – 240
ASPC02BAA CASTCOIL002A00	Steam Coil (1 row)	150 – 240
CASUBASE001A00	Floor Mount Base (Subbase)	150 – 240
ASBPC01AA CASUBASE003A00	Floor Mount Base (Subbase) – Painted	150 – 240

ACCESSORIES		
PART NO.	DESCRIPTION	USED WITH
AHBC01AA CASUSPEN001A00	Overhead Suspension Brackets	150 – 240
† Discharge plenums are shipped knocked down and require field assembly. Cannot be used with electric heat, or horizontal applications.		
‡ This accessory replaces CAECOMZR001A00 which used a linkage damper blade design and W7459 controller. The CAE-COMZR001A00 can be used if inventory is available as there is no price change between the two.		
CAECOMZR003B00	Economizer — temperature dry bulb Enthalpy Controlled Standard Leak design with gear driven damper blades and W7212 controller ‡ (Use --HH--57AC-078 for enthalpy control)	300
CAECOMZR012A00	Economizer – temperature dry bulb controlled – Ultra LOW LEAK – EconoMi\$er X with solid-state W7220 controller, gear-driven, modulating damper, spring return actuator. Supply and outdoor air sensors, and CO2 sensor compatible, for use in electro mechanical controls only. Also includes return and outside air damper leakage that meets Title 24 section 140.4 requirements. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.	300
--HH--57AC-081	Enthalpy Control for W7220 Controller only, (One required for single enthalpy, two required for different enthalpy). Only available through Micrometl.	300
--HH--57AC-078	Enthalpy control upgrade. Only available through Micrometl.	300
AHWCOIL003A00	Hot Water Coil (2 row)	300
ACSC01AA CAOVRFLW001A00	Condensate Overflow Switch Assembly	300
CAPLENUM003A00	Discharge Plenum	300
CAPLENUM006A00	Discharge Plenum – Painted	300
CARAGRIL003A00	Return Air Grille	300
CARAGRIL006A00	Return Air Grille – Painted	300
CASTCOIL003A00	Steam Coil (1 row)	300
CASUBASE002A00	Floor Mount Base (Subbase)	300
CASUBASE004A00	Floor Mount Base (Subbase) – Painted	300
AHBC01AA CASUSPEN001A00	Overhead Suspension Brackets	300
NOTE: Accessories are unpainted unless noted otherwise in the description.		
‡ This accessory replaces CAECOMZR001A00 which used a linkage damper blade design and W7459 controller. The CAE-COMZR001A00 can be used if inventory is available as there is no price change between the two.		

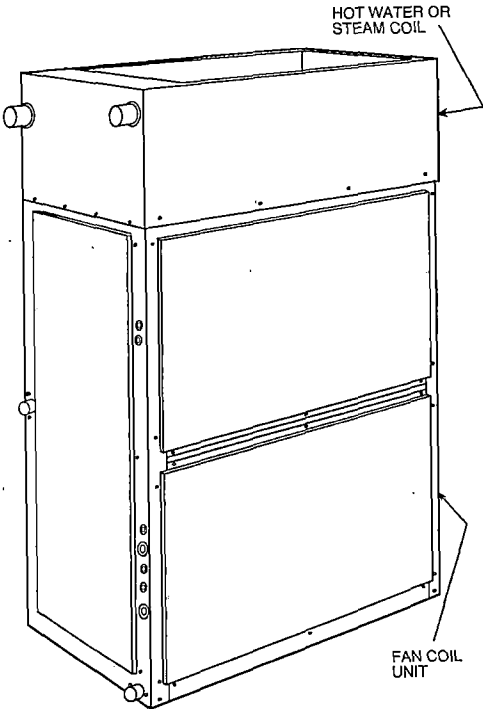
ACCESSORIES			
ACCESSORIES: 2-SPEED (VFD) DISPLAY KIT			
PART NO.	DESCRIPTION	SHIPPING WT. (LBS)	USED WITH
CRDISKIT001A00	2 Speed VFD display kit - Provides the field capability to set up points and troubleshooting codes on the VFD controller. Kit includes display and cable. If preferred, kit can be used for any associated unit with VFD.	4	All 2 Speed VFD Controllers
ACCESSORIES: RELAY PACKAGE			
CATRANRY001A00	Transformer Relay Package - Contains 200/230/460 to 24-volt transformer, indoor fan and solenoid valve relays with wiring and quick connect terminals. Formerly 38AE-900---001.	4	Recommended for 24-volt thermostat applications when additional VA is required.

OPTIONS AND ACCESSORIES (cont.)

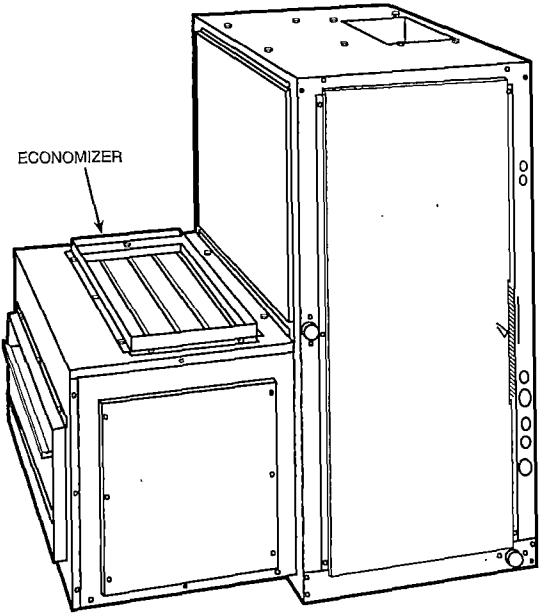
FAS WITH DISCHARGE PLENUM,
RETURN AIR GRILLE AND SUBBASE



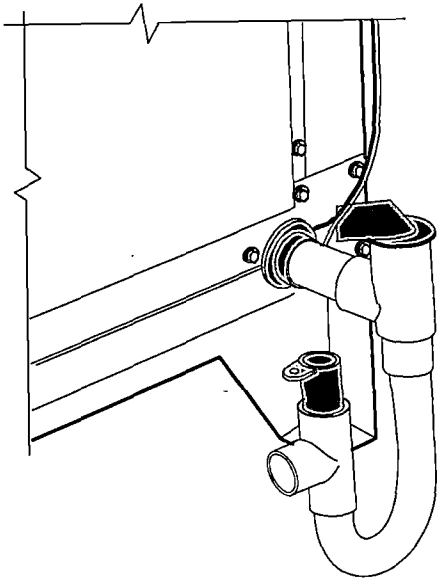
FAS WITH HOT WATER OR STEAM COIL



FAS WITH ECONOMIZER



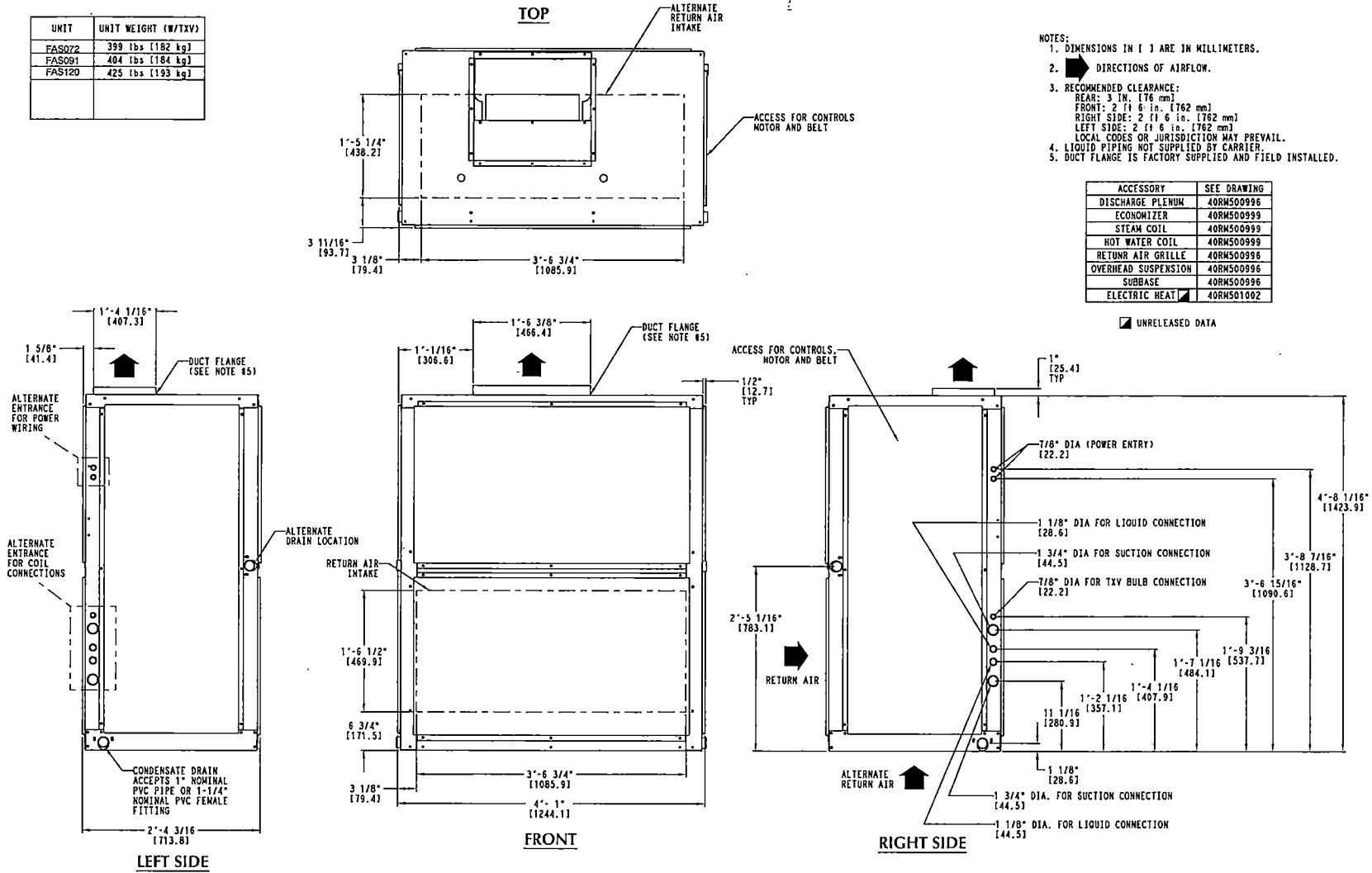
FAS WITH CONDENSATE TRAP



FAS072-120

C160026

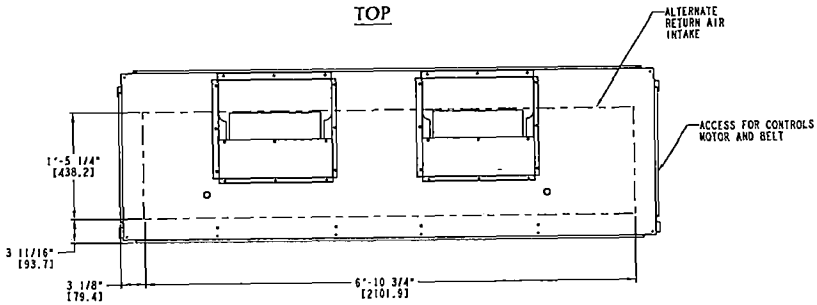
UNIT	UNIT WEIGHT (W/TXV)
FAS072	399 lbs [182 kg]
FAS091	404 lbs [184 kg]
FAS120	425 lbs [193 kg]



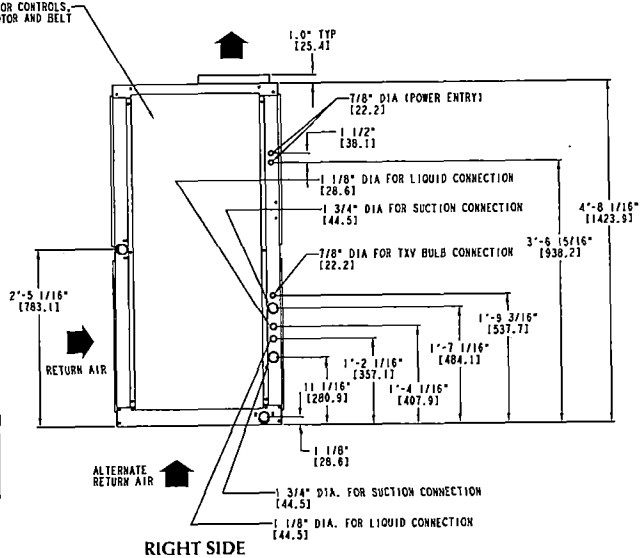
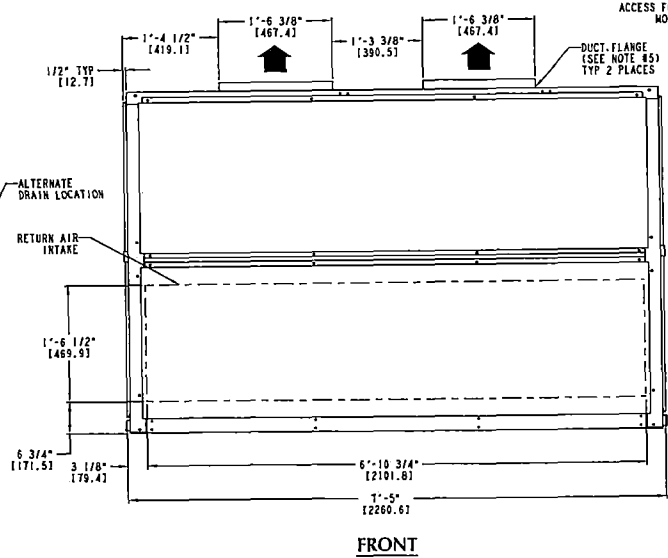
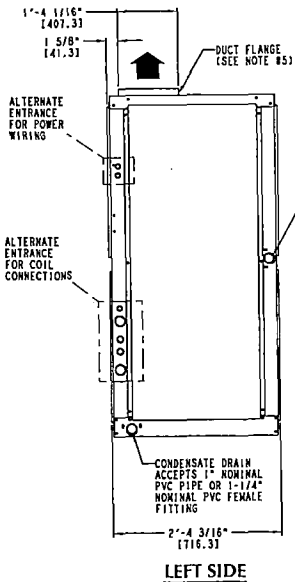
- NOTES:
1. DIMENSIONS IN [] ARE IN MILLIMETERS.
 2. DIRECTIONS OF AIRFLOW.
 3. RECOMMENDED CLEARANCE:
REAR: 2' 11 6/16" [762 mm]
FRONT: 2' 11 6/16" [762 mm]
RIGHT SIDE: 2' 11 6/16" [762 mm]
LEFT SIDE: 2' 11 6/16" [762 mm]
LOCAL CODES OR JURISDICTION MAY PREVAIL.
 4. LIQUID PIPING NOT SUPPLIED BY CARRIER.
 5. DUCT FLANGE IS FACTORY SUPPLIED AND FIELD INSTALLED.

ACCESSORY	SEE DRAWING
DISCHARGE PLENUM	40RM500997
ECONOMIZER	40RM501000
STEAM COIL	40RM501000
HOT WATER COIL	40RM501000
RETURN AIR GRILLE	40RM500997
OVERHEAD SUSPENSION	40RM500997
SUBBASE	40RM500997
ELECTRIC HEAT	40RM501002

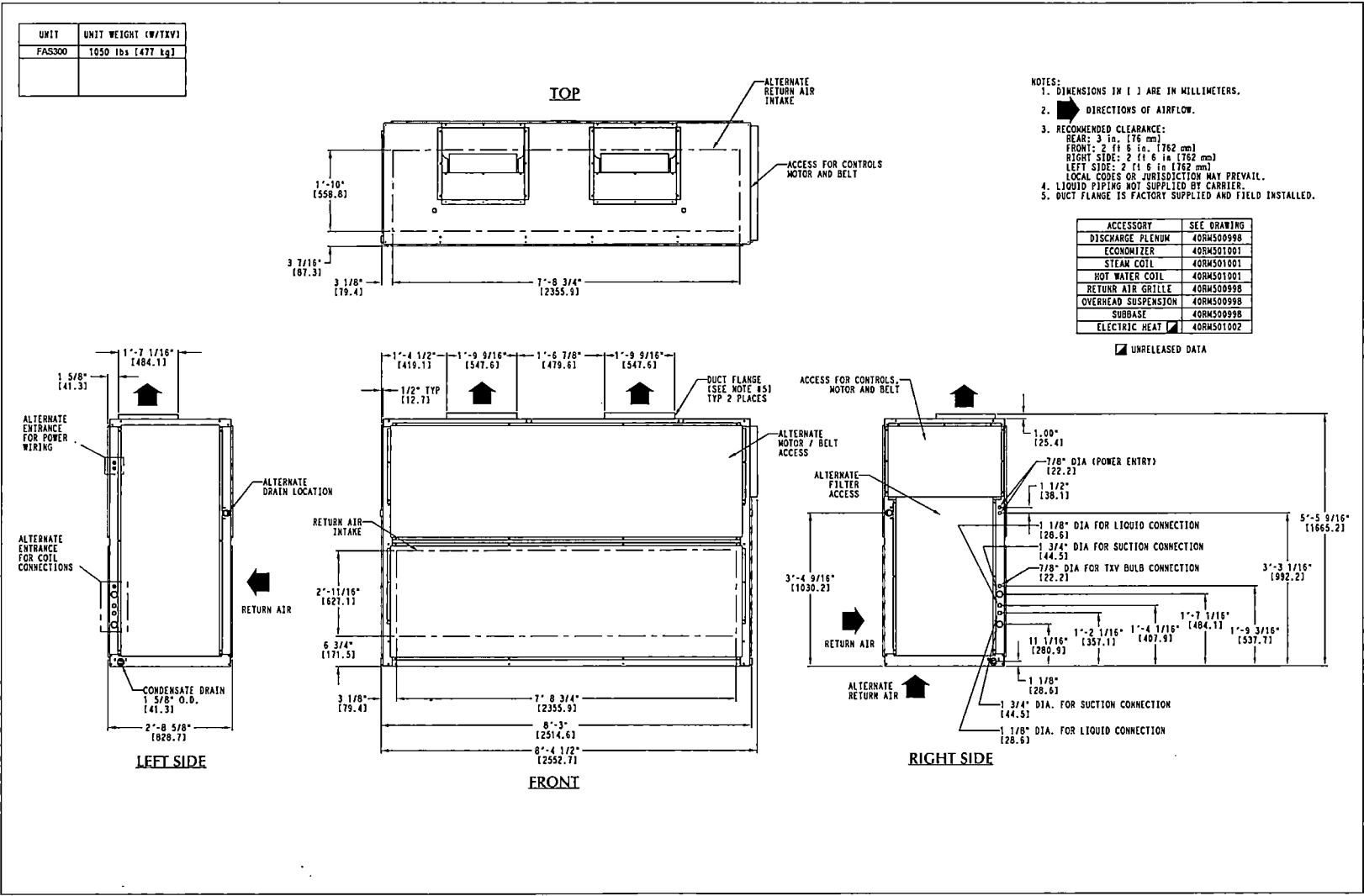
UNRELEASED DATA



UNIT	UNIT WEIGHT (W/TXV)
FAST180	713 lbs [323 kg]
FAS240	730 lbs [331 kg]
FHS180	713 lbs [323 kg]
FHS240	720 lbs [327 kg]

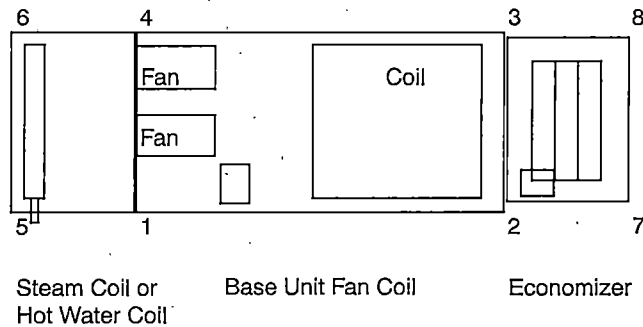


FAST180 - 240



DIMENSIONS (cont.)

CORNER WEIGHTS HORIZONTAL POSITION



C09039

FAS – Horizontal Position

FAS UNIT	UNIT OR ACCESSORY NAME		UNIT OR ACCESSORY WEIGHT (lb)	CORNER NUMBER (WEIGHT IN LB)							
				1	2	3	4	5	6	7	8
072	FAN COIL BASE UNIT		399	109.3	106.1	90.6	93.4	—	—	—	—
091	FAN COIL BASE UNIT		404	110.7	107.5	91.7	94.5	—	—	—	—
120	FAN COIL BASE UNIT		425	116.4	113.0	96.5	99.4	—	—	—	—
072 – 120	STEAM COIL	ADD	215	40.2	0.0	0.0	40.6	66.5	67.5	0.0	0.0
	HOT WATER COIL	ADD	195	35.9	0.0	0.0	36.7	60.4	62.0	0.0	0.0
	ECONOMIZER	ADD	185	0.0	36.8	35.7	0.0	0.0	0.0	56.8	55.1
	ECO + STEAM COIL	ADD	400	38.8	38.6	37.4	39.2	64.2	65.2	59.5	57.7
	ECO + HW COIL	ADD	380	36.9	35.8	34.6	37.7	62.1	63.8	55.1	53.4
150	FAN COIL BASE UNIT		695	224.0	177.7	129.8	163.7	—	—	—	—
180	FAN COIL BASE UNIT		713	229.8	182.3	133.2	167.9	—	—	—	—
300	FAN COIL BASE UNIT		730	235.6	186.4	136.5	171.5	—	—	—	—
150 – 300	STEAM COIL	ADD	340	61.4	0.0	0.0	62.0	107.8	108.8	0.0	0.0
	HOT WATER COIL	ADD	285	51.7	0.0	0.0	51.3	91.5	90.6	0.0	0.0
	ECONOMIZER	ADD	340	0.0	66.9	62.0	0.0	0.0	0.0	109.8	102.0
	ECO + STEAM COIL	ADD	680	64.4	63.7	59.0	65.0	113.0	114.1	104.5	97.1
	ECO + HW COIL	ADD	625	60.0	57.6	53.4	59.5	106.2	105.1	94.6	87.8
300	FAN COIL BASE UNIT		1050	338.4	268.5	196.1	247.2	—	—	—	—
	STEAM COIL	ADD	405	73.2	0.0	0.0	73.8	128.4	129.6	0.0	0.0
	HOT WATER COIL	ADD	345	62.6	0.0	0.0	62.1	110.7	109.6	0.0	0.0
	ECONOMIZER	ADD	450	0.0	88.5	82.0	0.0	0.0	0.0	145.3	134.2
	ECO + STEAM COIL	ADD	855	80.6	80.1	74.1	81.6	142.0	143.4	131.3	122
	ECO + HW COIL	ADD	795	76.8	73.7	68.2	75.7	135.0	133.6	120.3	111.7

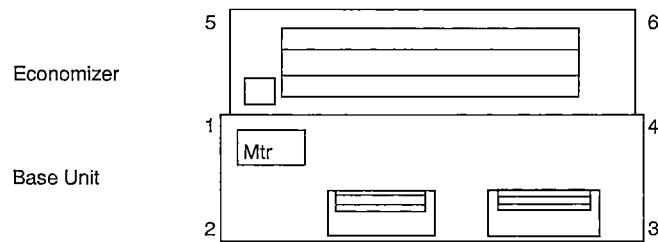
LEGEND:

ECO – Economizer

HW – Hot Water

DIMENSIONS (cont.)

CORNER WEIGHTS VERTICAL POSITION



NOTE: Steam, Hot Water & Plenum
on top of positions 1,2,3,4

C09040

FAS – Vertical Position

FAS UNIT	UNIT OR ACCESSORY NAME		UNIT OR ACCESSORY WEIGHT (lb)	CORNER NUMBER (WEIGHT IN LB)					
				1	2	3	4	5	6
072	FAN COIL BASE UNIT		399	100.5	114.9	98.0	85.8	—	—
091	FAN COIL BASE UNIT		404	101.7	116.3	99.1	86.9	—	—
120	FAN COIL BASE UNIT		425	107.6	122.3	108.0	87.1	—	—
072, 091, 120	STEAM COIL	ADD	215	54.1	54.1	53.4	53.4	0.0	0.0
	HOT WATER COIL	ADD	195	49.4	49.4	48.1	48.1	0.0	0.0
	PLENUM	ADD	175	50.8	36.7	36.7	50.8	0.0	0.0
	ECONOMIZER	ADD	195	38.9	0.0	0.0	37.1	59.9	58.3
	ECO + STEAM COIL	ADD	410	93.0	53.4	52.6	91.1	61.0	59.1
	ECO + HW COIL	ADD	390	88.9	52.3	50.9	86.5	56.7	54.9
150	FAN COIL BASE UNIT		695	191.2	210.5	153.8	139.5	—	—
180	FAN COIL BASE UNIT		713	196.2	216.0	157.8	143.1	—	—
180	FAN COIL BASE UNIT		677	186.3	205.1	149.8	135.8	—	—
150, 180	STEAM COIL	ADD	340	85.4	85.4	84.6	84.6	0.0	0.0
	HOT WATER COIL	ADD	285	70.9	70.9	71.6	71.6	0.0	0.0
	PLENUM	ADD	225	72.5	40.0	40.0	72.5	0.0	0.0
	ECONOMIZER	ADD	340	66.5	0.0	0.0	62.0	109.5	102.0
	ECO + STEAM COIL	ADD	680	153.0	89.1	88.7	147.7	104.5	97.0
	ECO + HW COIL	ADD	625	139.9	82.5	83.3	136.7	94.7	87.9

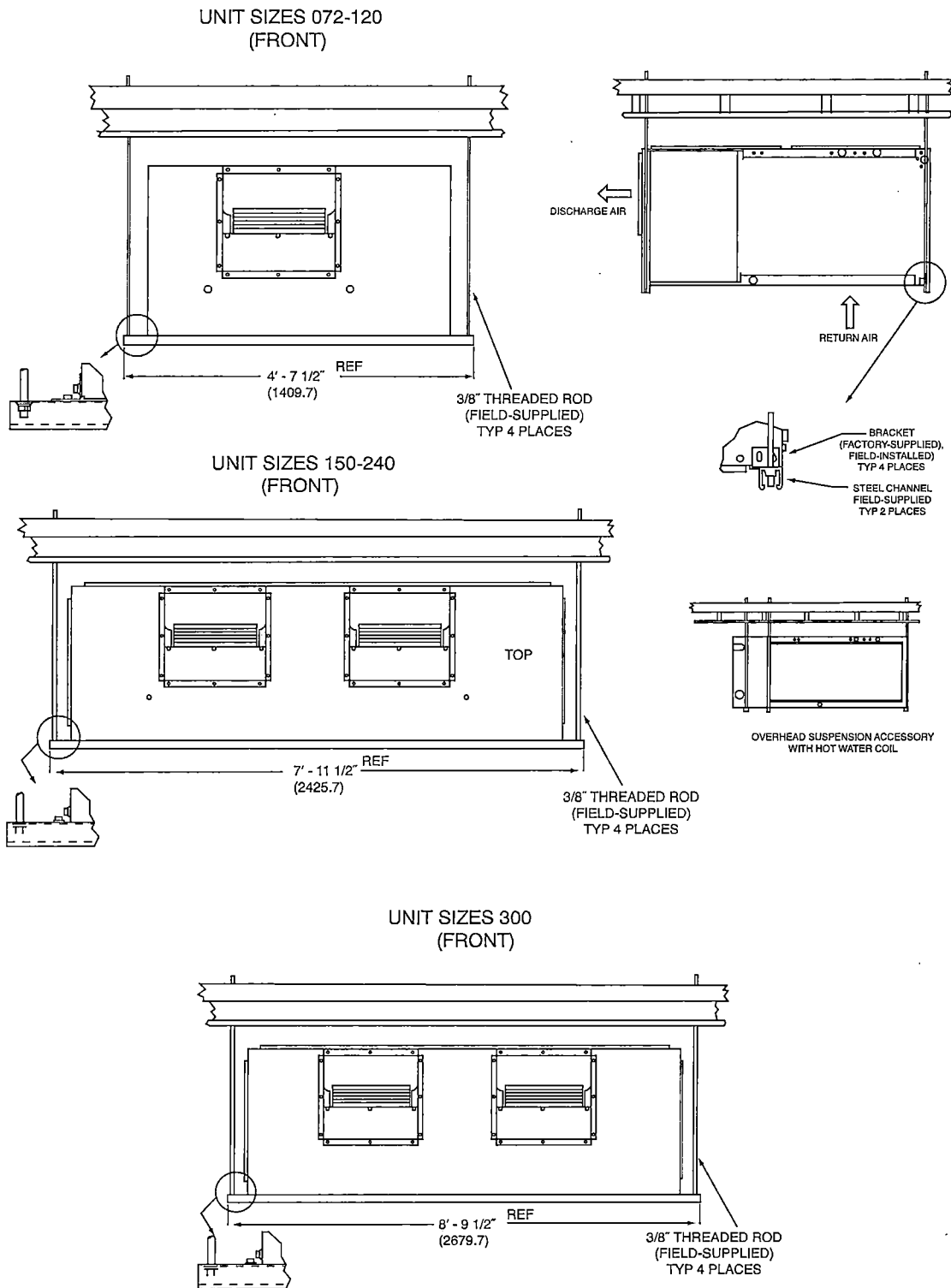
LEGEND:

ECO – Economizer

HW – Hot Water

DIMENSIONS (cont.)

OVERHEAD SUSPENSION ACCESSORY



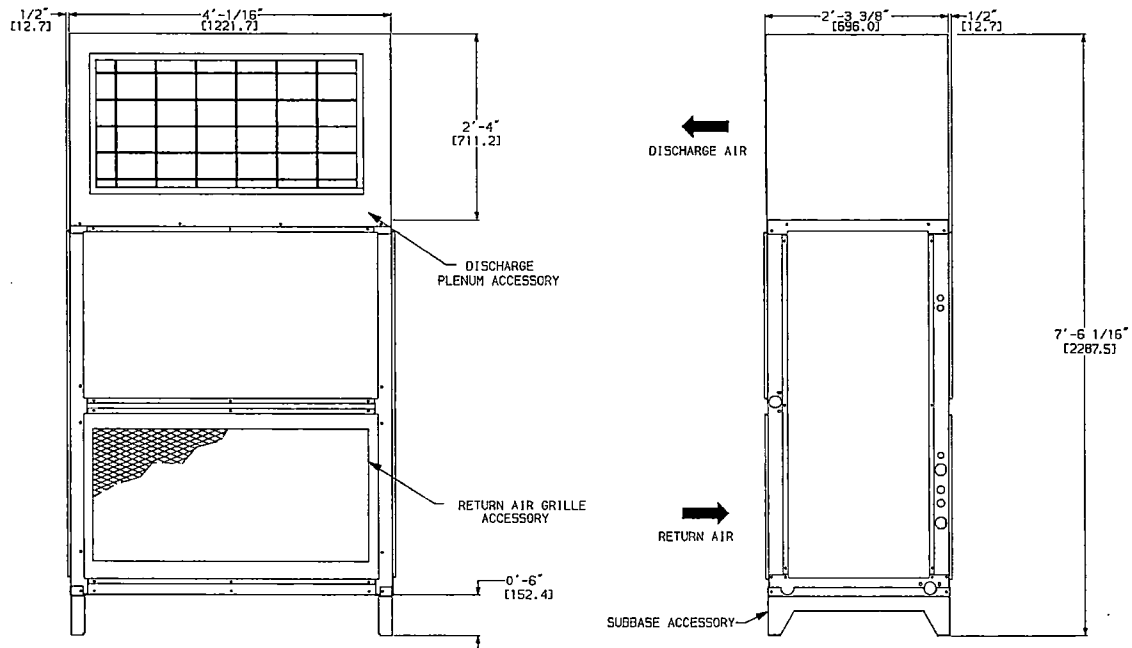
NOTE: Dimensions in [] are millimeters.

C150270

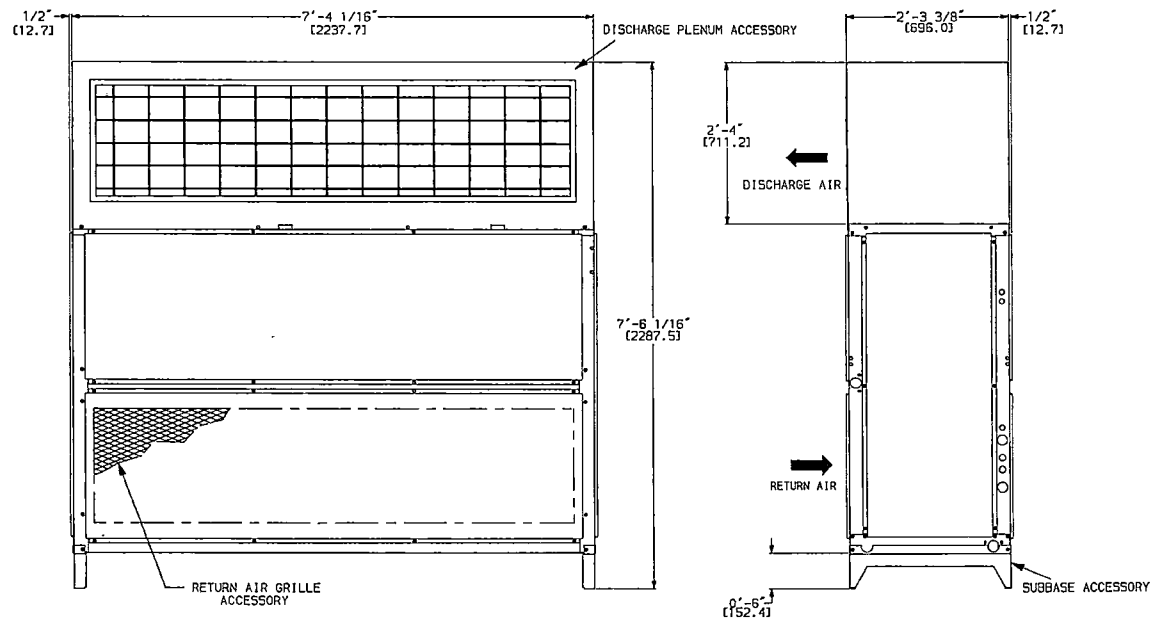
DIMENSIONS (cont.)

PLENUM, RETURN-AIR GRILLE, AND SUBBASE ACCESSORIES

UNIT SIZES 072-120



UNIT SIZE 150 - 240



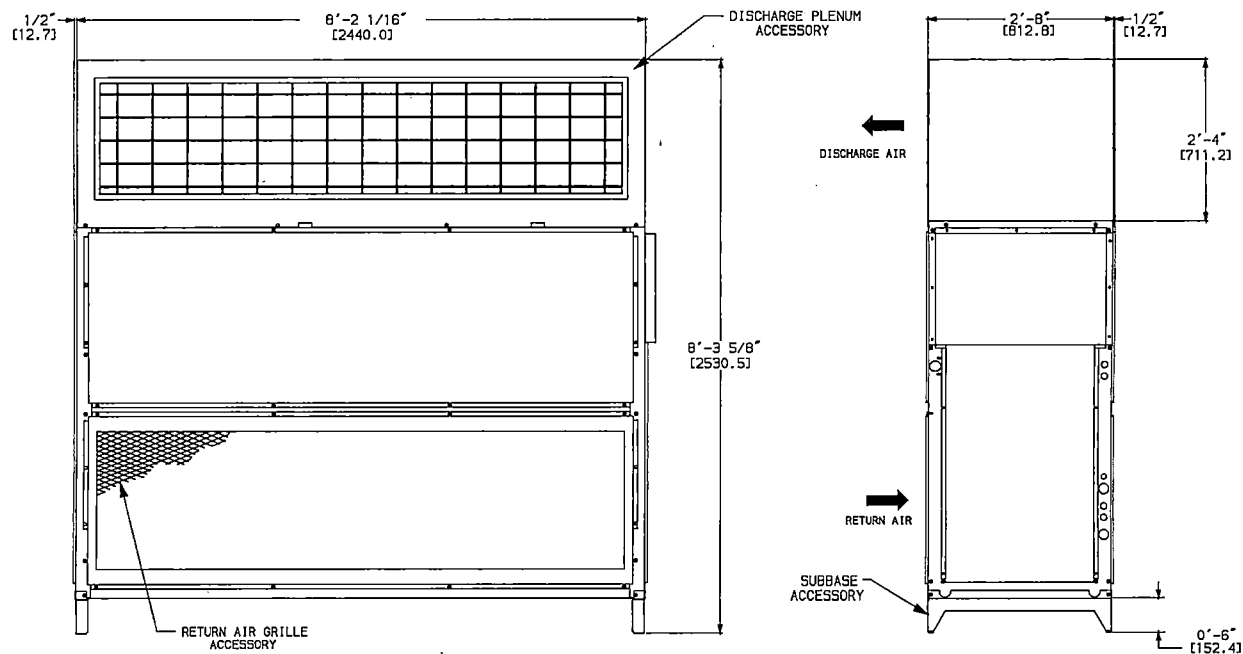
NOTE: Dimensions in [] are millimeters.

C150277

DIMENSIONS (cont.)

PLENUM, RETURN-AIR GRILLE, AND SUBBASE ACCESSORIES

UNIT SIZE 300



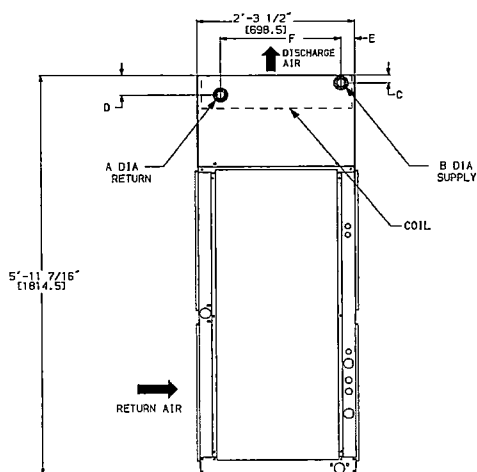
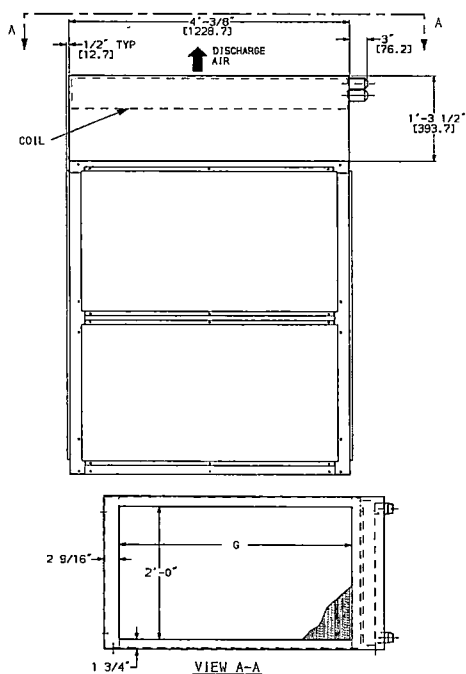
NOTE: Dimensions in [] are millimeters.

C150276

DIMENSIONS (cont.)

HOT WATER AND STEAM COIL ACCESSORIES

Unit Sizes 072-120

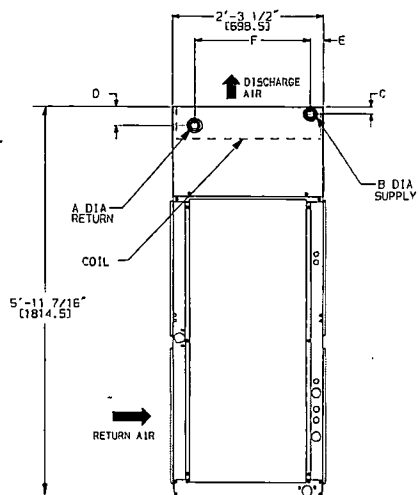
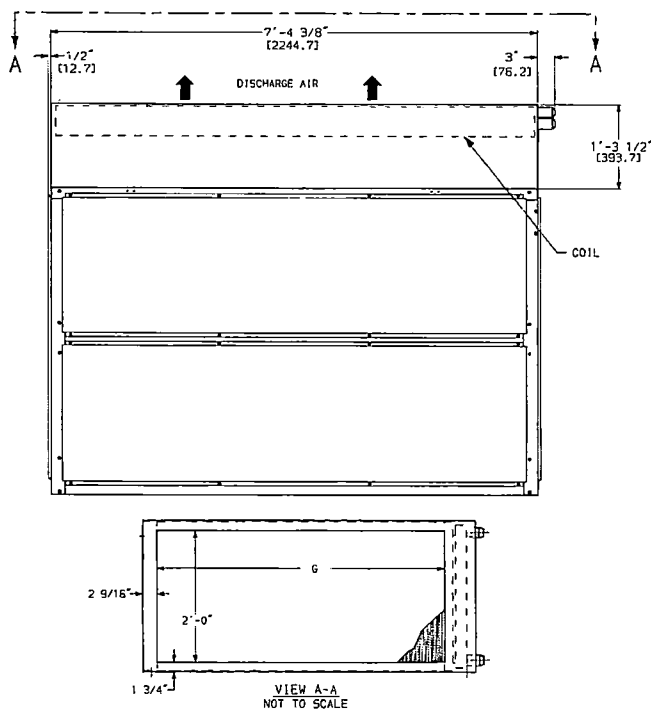


DIMENSION	HOT WATER COIL	STEAM COIL
A	1 1/2" MPT [38.1]	1 1/2" MPT [38.1]
B	1 1/2" MPT [38.1]	2 1/2" MPT [63.5]
C	2 3/8" [60.3]	3 1/8" [79.4]
D	4 7/8" [123.8]	3 1/8" [79.4]
E	2 1/8" [54.0]	4 9/16" [115.8]
F	1'-11 1/4" [590.6]	1'-9" [584.2]
G	3'-4" [1016.0]	3'-4" [1016.0]

NOTE: Dimensions in [] are millimeters.

C160024

Unit Sizes 180 & 240

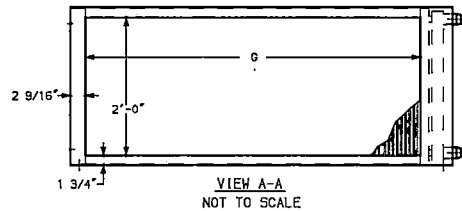
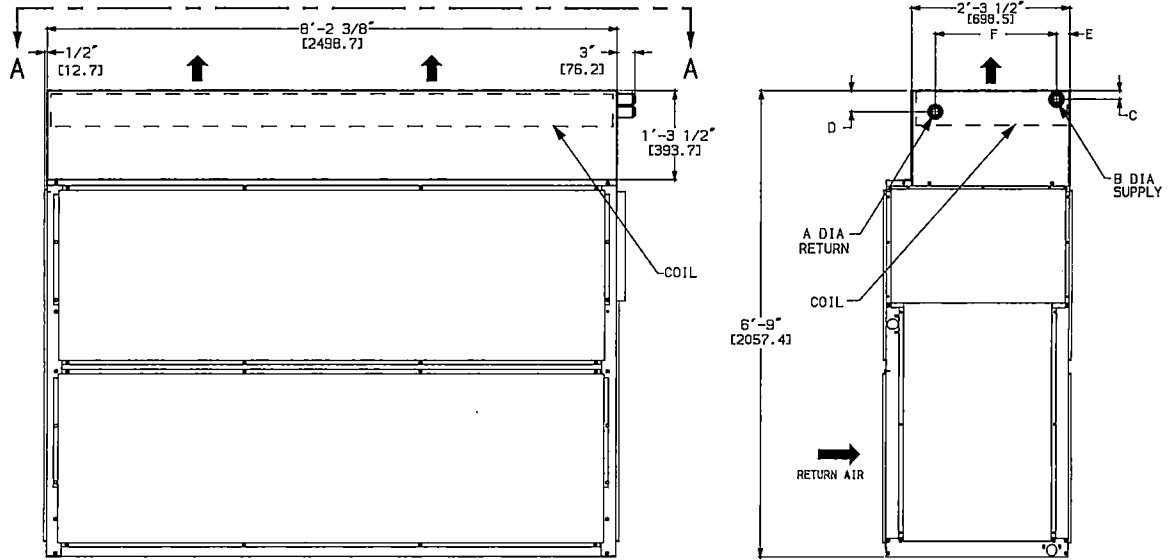


DIMENSION	HOT WATER COIL	STEAM COIL
A	2" MPT [50.8]	1 1/2" MPT [38.1]
B	2" MPT [50.8]	2 1/2" MPT [63.5]
C	2 3/8" [60.3]	3 1/8" [79.4]
D	4 7/8" [123.8]	3 1/8" [79.4]
E	2 1/8" [54.0]	4 9/16" [115.8]
F	1'-11 1/4" [590.6]	1'-9" [584.2]
G	6'-8" [2032.0]	6'-8" [2032.0]

DIMENSIONS (cont.)

HOT WATER AND STEAM COIL ACCESSORIES

UNIT SIZES 300



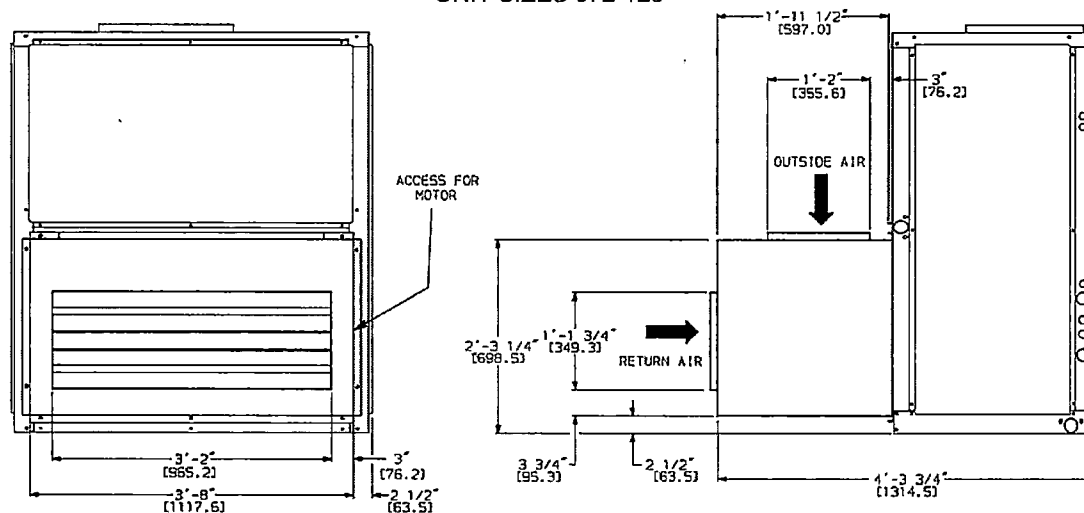
NOTE: Dimensions in [] are millimeters.

DIMENSION	HOT WATER COIL		STEAM COIL	
A	2" MPT	[50.8]	1 1/2" MPT	[38.1]
B	2" MPT	[50.8]	2 1/2" MPT	[63.5]
C	2 3/8"	[60.3]	3 1/8"	[79.4]
D	4 7/8"	[123.8]	3 1/8"	[79.4]
E	2 1/8"	[54.0]	4 9/16"	[115.8]
F	1'-11 1/4"	[590.6]	1'-9"	[584.2]
G	7'-6"	[2286.0]	7'-6"	[2286.0]

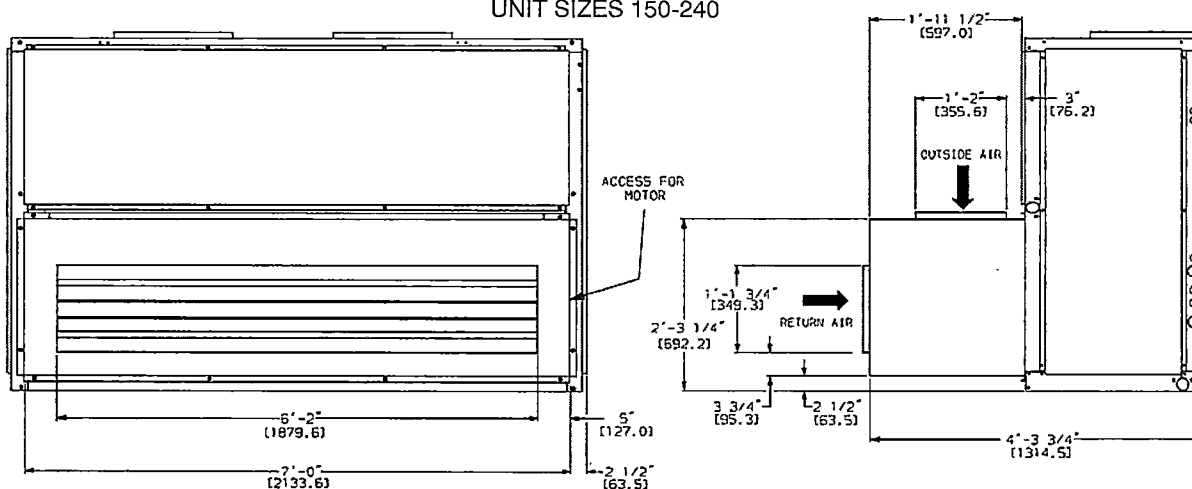
C150273

DIMENSIONS (cont.)

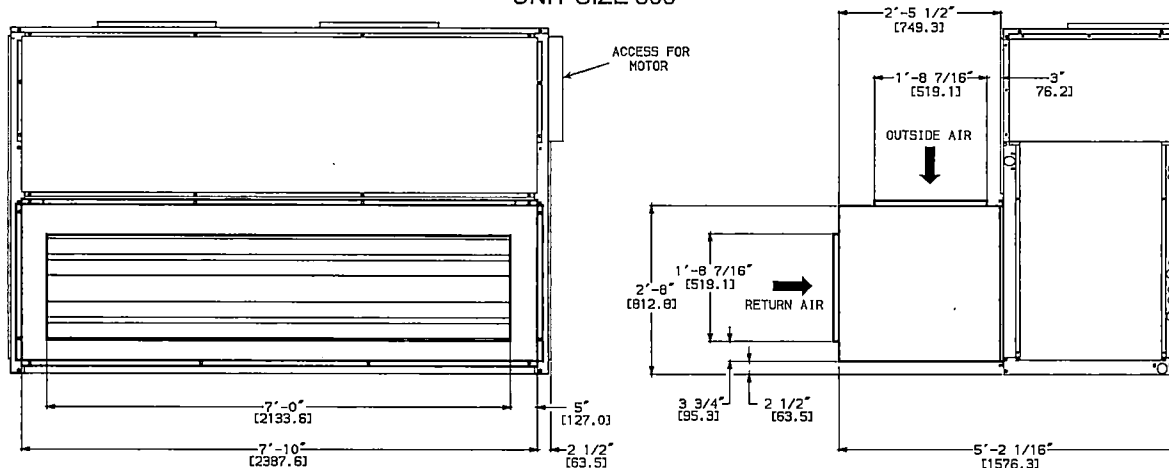
ECONOMIZER ACCESSORY UNIT SIZES 072-120



UNIT SIZES 150-240



UNIT SIZE 300



NOTE:

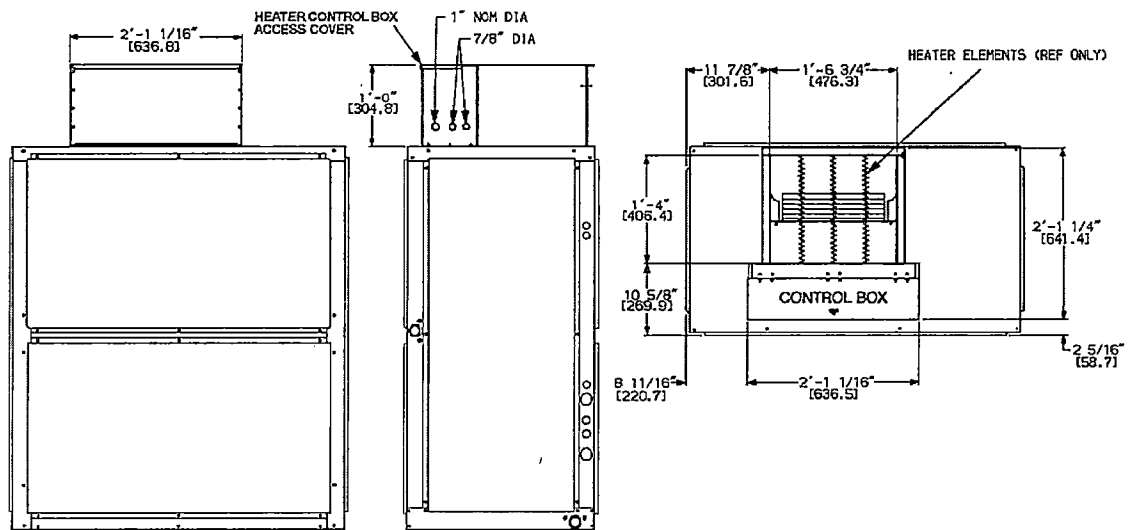
1. For horizontal unit applications, economizer can be attached to end of unit opposite duct connections.
2. Dimensions in [] are millimeters.

C160028

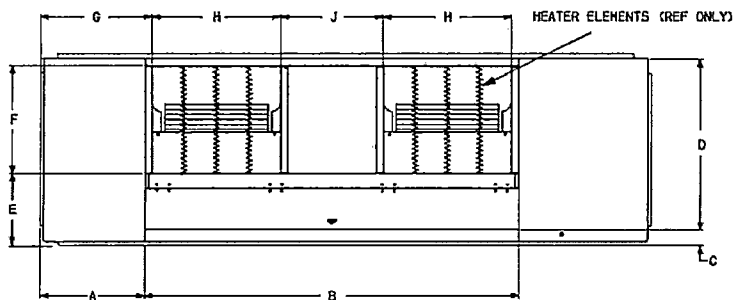
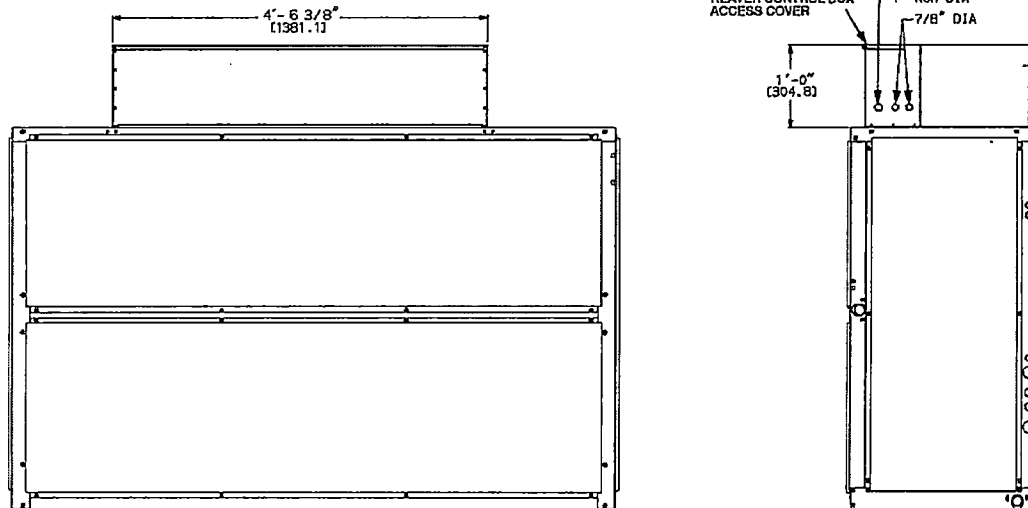
DIMENSIONS (cont.)

ELECTRIC HEAT ACCESSORY

UNIT SIZES 072 - 120



UNIT SIZE 14 - 28



C160029

FAS UNIT SIZE	A	B	C	D	E	F	G	H	J
150 - 240	1'-3 1/4" [387.4]	4'-6 3/8" [1381.1]	2 5/16" [58.7]	2'-1 1/4" [641.4]	10 5/8" [269.9]	1'-4" [406.4]	1'-4 5/16" [414.3]	1'-6 3/4" [476.3]	1-7/8" [327.0]
300	1'-3 3/8" [390.5]	5'-4 7/8" [1636.8]	2 1/16" [52.4]	2'-6 3/16" [766.8]	1'-1 1/4" [311.2]	1'-7" [482.6]	1'-4 5/16" [414.3]	1'-10" [558.8]	1-4 7/16" [417.1]

NOTE: Dimensions in [] are millimeters.

SELECTION PROCEDURE (WITH EXAMPLE)

Cooling (DX)

I. Determine the cooling load and temperature and quantity of air entering the evaporator.

Given:

Total Capacity 200,000 Btuh

Sensible Heat Capacity 130,000 Btuh

Air Temperature Entering Indoor

Coil 80°F (27°C)db, 67°F (19°C) wb

Air Quantity Entering Indoor Coil 6000 cfm

Ductwork Static Pressure Loss 0.8 in. wg

Power Supply 230-3-60

II. Determine unit selection and coil refrigerant temperature.

Enter the Cooling Capacities table at 6000 cfm. Select a FAS180 unit which has a total capacity of 207,000 and 174,000 Btuh at 40 and 45°F (4 and 7°C) coil refrigerant temperature, respectively. By interpolation, coil refrigerant temperature of 41.1°F (5.1°C) is needed to give a total capacity of 200,000 Btuh. Sensible capacity is approximately 149,000 Btuh. Cooling load is satisfied.

Heating (Hot Water Coil)

I. Determine heating load and temperature of air entering the indoor coil.

Given:

Load 425,000 Btuh

Entering-Air Temperature 70°F (21°C)

Coils 2-Row Hot Water

Coil Entering-Water Temperature 200°F (93°C)

Water Temperature Drop 20°F (-7°C)

II. Find the heating capacity.

Enter Hydronic Heating Capacities table for the FAS180 unit at 6000 cfm. A 2-row hot water coil delivers 471,000 Btuh (based on 60°F/16°C entering air temperature and 20°F/-7°C water temperature drop). Since existing entering air temperature is 70°F (21°C), enter the Heating Correction Factors table for hot water coils at 200°F (93°C) entering water temperature, 20°F (-7°C) water temperature drop and 70°F (21°C) entering air. Read a constant of 0.93.

$$471,000 \times 0.93 = 438,000$$

The 438,000 Btuh rating satisfies the heating load.

Fan

I. Determine fan speed and brake horsepower:

From the Accessory Pressure Drop table, read a loss of 0.23 in. wg for a hot water coil at 6000 cfm.

$$\text{External static pressure} = 0.80 + 0.23$$

$$= 1.03 \text{ in. wg}$$

Enter FAS Fan Performance table at 6000 cfm and 1.03 in. wg. Interpolate and determine fan speed of 864 rpm and 3.1 bhp.

II. Determine motor and drive.

Enter the fan motor data tables and find that the 230 v standard motor for a FAS180 unit is rated at 3.7 Hp. Since the bhp required is 3.1, a standard motor satisfies the requirement and should be used.

Next, find the type of drive that satisfies the 864 rpm requirement in the Drive Data tables. For a FAS180 unit, the Medium-Static Drive table shows an rpm range of 742 to 943. Since the rpm required is 864, the medium-static drive satisfies the requirement and should be used. Select the standard motor and medium-static drive combination (option code HC or FD).

To select an outdoor unit for this FAS180 indoor section, refer to the Combination Rating sheets for ICP condensing units in the condensing unit Specification Sheet.

PERFORMANCE DATA

FAS COOLING CAPACITIES

UNIT	EVAPORATOR AIR		COIL REFRIGERANT TEMP (°F)									
	Airflow (Cfm)	Ewb (°F)	30		35		40		45		50	
			TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
072	1,800	72	124	60	113	55	101	49	87	43	71	37
		67	104	64	93	59	81	53	67	47	52	40
		62	86	68	75	62	63	56	49	49	42	42
	2,400	72	143	69	131	64	117	58	101	52	83	44
		67	121	76	108	70	94	64	78	57	60	50
		62	101	83	88	76	73	69	60	60	51	51
	3,000	72	158	77	144	71	129	65	111	58	92	51
		67	134	86	121	80	105	73	87	66	67	58
		62	113	95	98	88	82	80	70	70	59	59
091	2,250	72	155	75	141	68	126	61	108	54	89	46
		67	130	80	116	73	101	66	83	59	64	51
		62	108	85	94	78	78	70	62	62	52	52
	3,000	72	179	86	164	80	146	72	126	64	103	56
		67	151	95	136	88	118	80	98	71	75	62
		62	126	103	110	95	92	86	76	76	64	64
	3,750	72	197	96	180	89	161	82	139	73	115	63
		67	168	108	151	100	131	92	109	82	84	72
		62	141	119	122	110	103	100	87	87	74	74
120	3,000	72	200	96	182	88	161	79	138	70	113	60
		67	168	104	150	96	130	86	107	76	83	66
		62	140	112	121	102	101	92	82	82	69	69
	4,000	72	228	111	208	102	185	93	159	83	130	71
		67	194	124	174	114	150	104	124	93	96	81
		62	162	135	141	124	119	113	99	99	84	84
	5,000	72	250	123	228	114	204	105	175	94	143	81
		67	214	140	192	130	166	119	138	107	106	94
		62	179	155	156	143	133	130	113	113	96	96
150	3,750	72	251	121	228	110	202	99	173	87	140	74
		67	210	129	187	118	161	106	133	94	102	81
		62	174	138	150	126	125	113	100	100	84	84
	5,000	72	289	139	263	128	233	116	200	103	162	88
		67	244	154	218	141	188	128	155	114	119	99
		62	203	167	176	153	146	138	121	121	102	102
	6,250	72	319	155	290	143	258	131	221	116	180	101
		67	271	174	242	161	209	147	172	132	133	115
		62	226	192	196	177	164	160	139	139	118	118
180	4,500	72	310	150	281	136	249	122	214	108	174	92
		67	260	160	231	145	199	131	165	116	127	100
		62	215	169	186	154	154	138	121	121	102	102
	6,000	72	361	175	329	161	292	145	250	128	205	110
		67	304	191	271	175	235	159	194	141	149	122
		62	254	206	220	189	183	170	149	149	125	125
	7,500	72	401	196	366	181	325	164	280	146	229	127
		67	340	218	304	201	263	183	218	164	167	143
		62	285	239	247	220	206	197	172	172	145	145

LEGEND

db — Dry—Bulb Temp (°F)
Ewb — Entering Wet—Bulb Temp (°F)
lwb — Leaving Wet—Bulb Temp (°F)
SHC — Sensible Heat Capacity (1000 Btuh)
TC — Total Capacity (1000 Btuh)

NOTES:

1. Ratings based on approximately 15°F superheat leaving coil.
2. Direct interpolation is permissible. Do not extrapolate.
3. Dashes indicate coil loading limits are exceeded.
4. Evaporator fan heat not deducted from ratings.

5. Formulas:

$$\text{Leaving db} = \text{entering db} - \frac{\text{sensible heat capacity (Btuh)}}{1.1 \times \text{cfm}}$$

$$\text{Leaving wb} = \text{wet—bulb temperature corresponding to enthalpy of air leaving coil (h}_{lwb}\text{)}$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

where h_{lwb} = enthalpy of air entering coil

6. SHC is based on 80°F db temperature of air entering evaporator coil.

PERFORMANCE DATA (cont.)

FAS COOLING CAPACITIES (cont.)

UNIT	EVAPORATOR AIR		COIL REFRIGERANT TEMP (°F)									
	Airflow (Cfm)	Ewb (°F)	30		35		40		45		50	
			TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
240	6,000	72	408	197	372	180	331	162	272	141	232	123
		67	344	213	307	195	266	176	220	156	169	135
		62	286	227	248	208	207	188	164	164	139	139
	8,000	72	470	228	429	210	382	191	329	170	269	147
		67	399	253	357	233	309	212	256	189	197	166
		62	333	275	290	254	242	230	202	202	170	170
	10,000	72	516	253	471	235	421	215	363	192	297	168
		67	440	287	395	266	343	244	284	219	220	193
		62	369	317	322	294	271	266	232	232	196	196
300	7,500	72	470	226	428	208	379	187	328	167	270	144
		67	395	246	354	227	307	205	255	183	197	159
		62	329	265	287	244	240	221	193	193	163	163
	10,000	72	535	260	487	240	434	219	376	196	310	171
		67	454	291	407	269	354	246	295	221	228	194
		62	380	320	332	296	279	268	235	235	199	199
	12,500	72	583	287	531	267	475	245	412	221	341	194
		67	499	329	448	306	390	282	325	255	252	225
		62	420	367	367	341	310	310	269	269	228	228

LEGEND

db — Dry—Bulb Temp (°F)
Ewb — Entering Wet—Bulb Temp (°F)
lwb — Leaving Wet—Bulb Temp (°F)
SHC — Sensible Heat Capacity (1000 Btuh)
TC — Total Capacity (1000 Btuh)

NOTES:

1. Ratings based on approximately 15°F superheat leaving coil.
2. Direct interpolation is permissible. Do not extrapolate.
3. Dashes indicate coil loading limits are exceeded.
4. Evaporator fan heat not deducted from ratings.

5. Formulas:

$$\text{Leaving db} = \text{entering db} - \frac{\text{sensible heat capacity (Btuh)}}{1.1 \times \text{cfm}}$$

$$\text{Leaving wb} = \text{wet—bulb temperature corresponding to enthalpy of air leaving coil (h}_{lwb}\text{)}$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

where h_{lwb} = enthalpy of air entering coil

6. SHC is based on 80°F db temperature of air entering evaporator coil.

PERFORMANCE DATA (cont.)

HYDRONIC HEATING CAPACITIES

FAS UNIT	AIRFLOW (Cfm)	1-ROW STEAM*		2-ROW HOT WATER COIL†			
		Cap.	Ldb	Cap.	Ldb	Water Flow (Gpm)	PD
072	1,800	146	134	156.0	140	15.6	3.4
	2,400	173	126	183.0	131	18.3	4.3
	3,000	209	123	206.0	124	20.6	5.2
091	2,250	168	129	174.0	133	17.4	4.0
	3,000	209	123	206.0	124	20.6	5.2
	3,750	240	117	238.0	118	23.8	6.5
120	3,000	209	123	299.0	152	29.9	5.0
	4,000	243	115	275.0	124	27.5	6.6
	5,000	279	111	316.0	119	31.6	8.2
150	3,750	370	150	362.0	149	36.2	4.2
	5,000	425	137	409.0	136	40.9	5.1
	6,250	465	128	456.0	128	45.6	6.0
180	4,500	402	141	412.0	145	41.2	4.5
	6,000	458	129	471.0	133	47.1	5.5
	7,500	479	118	529.0	125	52.9	6.6
240	6,000	458	129	506.0	138	50.6	5.1
	8,000	487	115	584.0	128	58.4	6.3
	10,000	499	105	652.0	120	65.2	7.5
300	7,500	511	122	649.0	140	64.9	5.7
	10,000	575	112	752.0	130	75.2	7.1
	12,500	626	106	842.0	122	84.2	8.5

LEGEND:

Cap. — Capacity (Btuh in thousands)

Ldb — Leaving Air Dry Bulb Temp (°F)

PD — Pressure Drop (ft water)

* Based on 5 psig steam, 60°F entering-air temperature. All steam coils are non-freeze type.

† Based on 200°F entering water, 20°F water temperature drop, 60°F entering-air temperature.

NOTES:

1. Maximum operating limits for heating coils: 20 psig at 260°F.

2. Leaving db = ent db (°F) + $\frac{\text{Capacity (Btuh)}}{1.1 \times \text{cfm}}$

3. See Heating Correction Factors table.

HEATING CORRECTION FACTORS

HOT WATER COIL						
Water Temp Drop (°F)	Ent Water Temp (°F)	Entering-Air Temp (°F)				
		40	50	60	70	80
10	140	0.72	0.64	0.57	0.49	0.41
	160	0.89	0.81	0.74	0.66	0.58
	180	1.06	0.98	0.90	0.83	0.75
	200	1.22	1.15	1.07	1.00	0.92
	220	1.39	1.32	1.24	1.17	1.09
20	140	0.64	0.57	0.49	0.41	0.33
	160	0.81	0.74	0.66	0.58	0.51
	180	0.98	0.91	0.83	0.75	0.68
	200	1.15	1.08	1.00	0.93	0.85
	220	1.32	1.25	1.17	1.10	1.02
30	140	0.56	0.49	0.41	0.33	0.24
	160	0.74	0.66	0.58	0.51	0.43
	180	0.91	0.83	0.76	0.68	0.60
	200	1.08	1.00	0.93	0.85	0.78
	220	1.25	1.18	1.10	1.03	0.95

STEAM COIL					
Steam Pressure (psig)	Entering-Air Temp (°F)				
	40	50	60	70	80
0	1.06	0.98	0.91	0.85	0.78
2	1.09	1.02	0.95	0.89	0.82
5	1.13	1.06	1.00	0.93	0.87

NOTE: Multiply capacity given in the Hydronic Heating Capacities table by the correction factor for conditions at which unit is actually operating. Correct leaving-air temperature using formula in Note 2 of Hydronic Heating Capacities table.

PERFORMANCE DATA (cont.)

FAN PERFORMANCE DATA — FAS 0.0-1.2 in. wg ESP — 60 Hz

FAS UNIT	AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)													
		0.0		0.2		0.4		0.6		0.8		1.0		1.2	
		Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
072	1,800	419	0.21	471	0.26	564	0.37	649	0.49	727	0.63	797	0.77	862	0.92
	2,100	471	0.31	519	0.37	602	0.49	679	0.62	751	0.77	819	0.92	882	1.09
	2,400	524	0.44	568	0.51	645	0.64	715	0.79	781	0.94	844	1.11	905	1.28
	2,700	578	0.61	619	0.69	690	0.84	755	0.99	816	1.15	875	1.33	932	1.51
	3,000	633	0.81	671	0.90	738	1.07	799	1.24	856	1.41	910	1.60	963	1.79
091	2,250	290	0.10	510	0.39	594	0.51	669	0.65	739	0.79	806	0.95	870	1.12
	2,600	349	0.19	561	0.55	640	0.70	709	0.84	773	1.00	834	1.16	893	1.34
	3,000	579	0.70	621	0.79	695	0.96	759	1.12	818	1.30	874	1.47	928	1.66
	3,400	646	0.99	683	1.09	752	1.29	813	1.48	869	1.67	920	1.86	970	2.06
	3,750	705	1.31	739	1.42	804	1.63	862	1.85	915	2.05	964	2.26	1011	2.48
120	3,000	421	0.35	592	0.73	670	0.90	737	1.06	797	1.23	854	1.41	908	1.59
	3,500	626	0.98	664	1.08	735	1.28	798	1.48	855	1.67	908	1.87	958	2.07
	4,000	706	1.42	738	1.54	803	1.77	862	2.00	917	2.23	967	2.45	1014	2.67
	4,500	786	1.99	815	2.12	873	2.39	929	2.65	980	2.90	1028	3.16	1073	3.41
	5,000	867	2.70	893	2.84	946	3.14	997	3.43	1046	3.72	1092	4.00	1135	4.28
150	3,750	410	0.43	467	0.55	567	0.83	649	1.12	721	1.41	788	1.72	851	2.05
	4,300	455	0.62	504	0.74	599	1.05	679	1.38	748	1.70	811	2.04	871	2.39
	5,000	514	0.92	556	1.06	641	1.39	718	1.76	786	2.14	847	2.52	903	2.91
	5,700	575	1.32	612	1.47	686	1.82	759	2.23	825	2.66	884	3.09	939	3.52
	6,250	624	1.71	657	1.87	725	2.24	793	2.66	856	3.12	915	3.59	969	4.06
180	4,500	437	0.61	483	0.72	576	1.01	660	1.35	732	1.69	797	2.03	856	2.38
	5,300	499	0.95	538	1.07	617	1.37	696	1.74	767	2.13	830	2.53	888	2.94
	6,000	555	1.34	590	1.48	659	1.79	730	2.17	798	2.59	860	3.04	918	3.49
	6,800	620	1.91	651	2.06	712	2.39	774	2.78	836	3.22	896	3.71	952	4.21
	7,500	677	2.52	706	2.69	761	3.04	817	3.44	873	3.89	929	4.39	984	4.93
240	6,000	542	1.29	577	1.42	646	1.72	716	2.09	785	2.51	849	2.95	907	3.40
	7,000	620	1.99	652	2.15	711	2.48	771	2.85	831	3.28	890	3.76	947	4.27
	8,000	700	2.92	728	3.10	781	3.46	833	3.85	885	4.29	938	4.78	990	5.32
	9,000	781	4.10	806	4.30	854	4.71	900	5.13	946	5.58	993	6.08	1039	6.62
	10,000	862	5.56	885	5.79	929	6.24	971	6.70	1012	7.18	1054	7.69	1096	8.24
300	7,500	476	1.39	510	1.58	579	1.99	644	2.40	701	2.81	752	3.29	804	3.96
	8,750	545	2.14	574	2.35	633	2.81	691	3.29	747	3.77	797	4.25	842	4.76
	10,000	615	3.12	641	3.36	692	3.87	743	4.41	794	4.96	843	5.51	888	6.05
	11,250	685	4.37	709	4.64	754	5.20	800	5.79	845	6.40	891	7.02	935	7.64
	12,500	756	5.92	778	6.22	819	6.83	860	7.47	901	8.14	942	8.83	983	9.52

LEGEND

Bhp — Brake Horsepower Input to Fan

ESP — External Static Pressure

Bold indicates field—supplied drive is required.

Plain type indicates standard motor and standard drive.

Underline indicates a different motor and drive combination other than the standard motor and standard drive combination is required. Refer to fan motor and drive tables to complete selection.

NOTES:

Maximum allowable fan speed is 1100 rpm for unit size 28; 1200 rpm for all other sizes. Fan performance is based on deductions for wet coil, clean 2-in. filters, and unit casing. See table on page 27 for factory—supplied filter pressure drop. For 60 Hz units, the medium—static drive and standard motor combination is not available for 28 size.

PERFORMANCE DATA (cont.)

FAN PERFORMANCE DATA — FAS 1.4-2.4 in. wg ESP — 60 Hz

FAS UNIT	AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)											
		1.4		1.6		1.8		2.0		2.2		2.4	
		Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
072	1,800	<u>921</u>	<u>1.07</u>	<u>975</u>	<u>1.23</u>	<u>1026</u>	<u>1.39</u>	<u>1074</u>	<u>1.55</u>	<u>1120</u>	<u>1.72</u>	<u>1164</u>	<u>1.90</u>
	2,100	<u>942</u>	<u>1.26</u>	<u>997</u>	<u>1.43</u>	<u>1048</u>	<u>1.61</u>	<u>1097</u>	<u>1.79</u>	<u>1143</u>	<u>1.97</u>	<u>1186</u>	<u>2.16</u>
	2,400	<u>963</u>	<u>1.47</u>	<u>1017</u>	<u>1.66</u>	<u>1069</u>	<u>1.85</u>	<u>1118</u>	<u>2.05</u>	<u>1164</u>	<u>2.25</u>	—	—
	2,700	<u>987</u>	<u>1.71</u>	<u>1039</u>	<u>1.91</u>	<u>1090</u>	<u>2.12</u>	<u>1138</u>	<u>2.33</u>	<u>1185</u>	<u>2.55</u>	—	—
	3,000	<u>1015</u>	<u>1.99</u>	<u>1065</u>	<u>2.20</u>	<u>1113</u>	<u>2.42</u>	<u>1161</u>	<u>2.65</u>	—	—	—	—
091	2,250	<u>930</u>	<u>1.29</u>	<u>986</u>	<u>1.47</u>	<u>1039</u>	<u>1.65</u>	<u>1089</u>	<u>1.84</u>	<u>1136</u>	<u>2.03</u>	<u>1181</u>	<u>2.22</u>
	2,600	<u>950</u>	<u>1.53</u>	<u>1005</u>	<u>1.72</u>	<u>1057</u>	<u>1.92</u>	<u>1107</u>	<u>2.13</u>	<u>1154</u>	<u>2.33</u>	—	—
	3,000	<u>980</u>	<u>1.86</u>	<u>1031</u>	<u>2.06</u>	<u>1081</u>	<u>2.27</u>	<u>1129</u>	<u>2.49</u>	<u>1175</u>	<u>2.72</u>	—	—
	3,400	<u>1018</u>	<u>2.26</u>	<u>1065</u>	<u>2.48</u>	<u>1111</u>	<u>2.70</u>	<u>1156</u>	<u>2.93</u>	—	—	—	—
	3,750	<u>1057</u>	<u>2.69</u>	<u>1101</u>	<u>2.92</u>	<u>1144</u>	<u>3.15</u>	<u>1186</u>	<u>3.39</u>	—	—	—	—
120	3,000	<u>961</u>	<u>1.78</u>	<u>1012</u>	<u>1.98</u>	<u>1062</u>	<u>2.19</u>	<u>1111</u>	<u>2.41</u>	<u>1158</u>	<u>2.64</u>	—	—
	3,500	<u>1005</u>	<u>2.27</u>	<u>1052</u>	<u>2.49</u>	<u>1098</u>	<u>2.71</u>	<u>1142</u>	<u>2.94</u>	<u>1186</u>	<u>3.18</u>	—	—
	4,000	<u>1058</u>	<u>2.90</u>	<u>1101</u>	<u>3.13</u>	<u>1143</u>	<u>3.36</u>	<u>1184</u>	<u>3.60</u>	—	—	—	—
	4,500	<u>1116</u>	<u>3.66</u>	<u>1157</u>	<u>3.91</u>	<u>1196</u>	<u>4.16</u>	—	—	—	—	—	—
	5,000	<u>1176</u>	<u>4.56</u>	—	—	—	—	—	—	—	—	—	—
150	3,750	<u>912</u>	<u>2.39</u>	<u>971</u>	<u>2.76</u>	<u>1028</u>	<u>3.14</u>	<u>1083</u>	<u>3.54</u>	<u>1135</u>	<u>3.95</u>	<u>1185</u>	<u>4.36</u>
	4,300	<u>928</u>	<u>2.75</u>	<u>982</u>	<u>3.13</u>	<u>1036</u>	<u>3.53</u>	<u>1087</u>	<u>3.94</u>	<u>1138</u>	<u>4.37</u>	<u>1187</u>	<u>4.81</u>
	5,000	<u>956</u>	<u>3.30</u>	<u>1007</u>	<u>3.71</u>	<u>1056</u>	<u>4.13</u>	<u>1104</u>	<u>4.56</u>	<u>1151</u>	<u>5.00</u>	<u>1196</u>	<u>5.46</u>
	5,700	<u>990</u>	<u>3.96</u>	<u>1039</u>	<u>4.40</u>	<u>1086</u>	<u>4.85</u>	<u>1130</u>	<u>5.31</u>	<u>1174</u>	<u>5.78</u>	—	—
	6,250	<u>1019</u>	<u>4.54</u>	<u>1067</u>	<u>5.02</u>	<u>1112</u>	<u>5.50</u>	<u>1156</u>	<u>5.99</u>	<u>1198</u>	<u>6.49</u>	—	—
180	4,500	<u>912</u>	<u>2.75</u>	<u>967</u>	<u>3.12</u>	<u>1019</u>	<u>3.52</u>	<u>1070</u>	<u>3.92</u>	<u>1120</u>	<u>4.35</u>	<u>1168</u>	<u>4.79</u>
	5,300	<u>942</u>	<u>3.34</u>	<u>992</u>	<u>3.76</u>	<u>1041</u>	<u>4.18</u>	<u>1088</u>	<u>4.61</u>	<u>1134</u>	<u>5.06</u>	<u>1179</u>	<u>5.52</u>
	6,000	<u>971</u>	<u>3.95</u>	<u>1020</u>	<u>4.40</u>	<u>1067</u>	<u>4.86</u>	<u>1112</u>	<u>5.33</u>	<u>1156</u>	<u>5.81</u>	<u>1198</u>	<u>6.29</u>
	6,800	<u>1005</u>	<u>4.72</u>	<u>1054</u>	<u>5.23</u>	<u>1101</u>	<u>5.75</u>	<u>1145</u>	<u>6.27</u>	<u>1187</u>	<u>6.79</u>	—	—
	7,500	<u>1036</u>	<u>5.48</u>	<u>1084</u>	<u>6.04</u>	<u>1131</u>	<u>6.61</u>	<u>1174</u>	<u>7.17</u>	—	—	—	—
240	6,000	<u>961</u>	<u>3.86</u>	<u>1011</u>	<u>4.31</u>	<u>1058</u>	<u>4.77</u>	<u>1104</u>	<u>5.24</u>	<u>1147</u>	<u>5.71</u>	—	—
	7,000	<u>1000</u>	<u>4.79</u>	<u>1050</u>	<u>5.32</u>	<u>1097</u>	<u>5.85</u>	<u>1142</u>	<u>6.38</u>	<u>1184</u>	<u>6.91</u>	—	—
	8,000	<u>1041</u>	<u>5.88</u>	<u>1090</u>	<u>6.47</u>	<u>1137</u>	<u>7.07</u>	<u>1181</u>	<u>7.67</u>	—	—	—	—
	9,000	<u>1086</u>	<u>7.21</u>	<u>1133</u>	<u>7.82</u>	<u>1178</u>	<u>8.47</u>	—	—	—	—	—	—
	10,000	<u>1138</u>	<u>8.83</u>	<u>1180</u>	<u>9.46</u>	—	—	—	—	—	—	—	—
300	7,500	<u>874</u>	<u>5.33</u>	<u>897</u>	<u>5.91</u>	<u>940</u>	<u>6.80</u>	<u>990</u>	<u>7.50</u>	—	—	—	—
	8,750	<u>886</u>	<u>5.36</u>	<u>930</u>	<u>6.13</u>	<u>982</u>	<u>7.32</u>	<u>1020</u>	<u>8.10</u>	—	—	—	—
	10,000	<u>930</u>	<u>6.60</u>	<u>969</u>	<u>7.20</u>	<u>1007</u>	<u>7.89</u>	<u>1045</u>	<u>8.71</u>	—	—	—	—
	11,250	<u>976</u>	<u>8.25</u>	<u>1014</u>	<u>8.86</u>	<u>1051</u>	<u>9.49</u>	<u>1086</u>	<u>10.17</u>	—	—	—	—
	12,500	<u>1023</u>	<u>10.20</u>	<u>1061</u>	<u>10.88</u>	<u>1097</u>	<u>11.56</u>	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan

ESP — External Static Pressure

Bold indicates field-supplied drive is required.

Plain type indicates standard motor and standard drive.

Underline indicates a different motor and drive combination other than the standard motor and standard drive combination is required. Refer to fan motor and drive tables to complete selection.

NOTES:

Maximum allowable fan speed is 1100 rpm for unit size 28; 1200 rpm for all other sizes. Fan performance is based on deductions for wet coil, clean 2-in. filters, and unit casing. See table on page 27 for factory-supplied filter pressure drop. For 60 Hz units, the medium-static drive and standard motor combination is not available for 28 size.

PERFORMANCE DATA (cont.)

DUCT SOUND POWER LEVELS (L_w)

MODEL	SIZE	CFM	dB(A)	OCTAVE BAND CENTER FREQUENCY (Hz)						
				63	125	250	500	1000	2000	4000
FAS	072	2,400	86.3	93.2	89.2	85.2	84.2	80.2	78.2	74.2
	091	3,000	88.3	95.3	91.3	87.3	86.3	82.3	80.3	76.3
	120	4,000	91.6	98.6	94.6	90.6	89.6	85.6	83.6	79.6
	150	5,000	91.1	97.3	93.3	89.3	90.3	84.3	82.3	78.3
	180	6,000	92.7	98.9	94.9	90.9	91.9	85.9	83.9	79.9
	240	8,000	96.4	102.6	98.6	94.6	95.6	89.6	87.6	83.6
	300	10,000	96.2	102.5	98.5	94.5	95.5	89.5	87.5	83.5

LEGEND:

ASHRAE — American Society of Heating, Refrigerating and Air Conditioning, Inc.

HVAC — Heating, Ventilation and Air Conditioning

NOTES:

1. The above estimated sound power levels are based upon the ASHRAE calculation approach from the ASHRAE 1987 HVAC Systems and Applications handbook, Chapter 52.
2. Since this data is calculated, these sound power levels may be different than the actual sound power levels.
3. The acoustic center of the unit is located at the geometric center of the unit.

FACTORY-SUPPLIED FILTER PRESSURE DROP

UNIT SIZE	AIRFLOW (Cfm)	PRESSURE DROP (in. wg)
072	1,800	0.05
	2,400	0.08
	3,000	0.11
091	2,250	0.07
	3,000	0.11
	3,750	0.15
120	3,000	0.11
	4,000	0.17
	5,000	0.23
150	3,750	0.06
	5,000	0.10
	6,250	0.13
180	4,500	0.08
	6,000	0.12
	7,500	0.17
240	6,000	0.12
	8,000	0.19
	10,000	0.26
300	7,500	0.15
	10,000	0.22
	12,500	0.30

ACCESSORY PLENUM AIR THROW DATA

UNIT	AIRFLOW (Cfm)	VANE DEFLECTION		
		Straight	21 1/2°	45°
072	2,400	39	33	24
091	3,000	45	38	28
120	4,000	55	46	33
150	5,000	45	38	28
180	6,000	50	43	31
240	8,000	60	51	37
300	10,000	76	65	47

NOTE: Throw distances shown are for 75 fpm terminal velocity. Use the following multipliers to determine throw values for other terminal velocities.

TERMINAL VELOCITY (Fpm)	THROW FACTOR
50	X 1.50
100	X 0.75
150	X 0.50

PERFORMANCE DATA (cont.)

ACCESSORY PRESSURE DROP — in. wg

UNIT SIZE	AIRFLOW (Cfm)	DISCHARGE PLENUM	RETURN AIR GRILLE	Hot Water	Steam	Electric	ECONOMIZER
072	1,800	0.06	0.01	0.10	0.10	0.04	0.05
	2,400	0.10	0.01	0.16	0.16	0.06	0.07
	3,000	0.14	0.02	0.23	0.23	0.10	0.09
091	2,250	0.09	0.01	0.15	0.15	0.06	0.06
	3,000	0.14	0.02	0.23	0.23	0.10	0.09
	3,750	0.21	0.03	0.35	0.35	0.15	0.15
120	3,000	0.14	0.02	0.23	0.23	0.10	0.09
	4,000	0.22	0.04	0.37	0.37	0.17	0.17
	5,000	0.32	0.06	0.53	0.53	0.26	0.28
150	3,750	0.07	0.01	0.11	0.11	0.04	0.05
	5,000	0.12	0.02	0.17	0.17	0.07	0.07
	6,250	0.17	0.02	0.25	0.25	0.11	0.11
180	4,500	0.10	0.01	0.15	0.15	0.06	0.06
	6,000	0.16	0.02	0.23	0.23	0.10	0.09
	7,500	0.23	0.03	0.33	0.33	0.15	0.15
240	6,000	0.16	0.02	0.23	0.23	0.10	0.09
	8,000	0.26	0.04	0.37	0.37	0.17	0.17
	10,000	0.37	0.06	0.53	0.53	0.26	0.28
300	7,500	0.15	0.02	0.28	0.28	0.09	0.06
	10,000	0.24	0.03	0.44	0.44	0.16	0.09
	12,500	0.34	0.05	0.63	0.63	0.24	0.14

ELECTRICAL DATA

Table 1 – Electrical Data, Standard Motors with Factory-Installed Single Speed Fan Option

UNIT	V-PH-Hz†	VOLTAGE LIMITS	FAN MOTOR		POWER SUPPLY	
			Hp (kW)	FLA	Minimum Circuit Amps	MAX FUSE or HACR BRKR
072	208/230-1-60	187-253	1.3 (0.97)	6.60	9.00	15
	208/230-3-60	187-253	2.4 (1.79)	5.2	7.0	15
	460-3-60	414-506	2.4 (1.79)	2.6	4.0	15
	575-3-60	518-632	1.0 (0.75)	1.40	2.0	15
091	208/230-1-60	187-253	2.4 (1.79)	11.00	13.80	20
	208/230-3-60	187-253	2.4 (1.79)	5.2	7.0	15
	460-3-60	414-506	2.4 (1.79)	2.6	4.0	15
	575-3-60	518-632	2.0 (1.49)	2.40	3.0	15
120	208/230-3-60	187-253	2.4 (1.79)	5.2	7.0	15
	460-3-60	414-506	2.4 (1.79)	2.6	4.0	15
	575-3-60	518-632	2.0 (1.49)	2.40	3.0	15
150	208/230-3-60	187-253	2.9 (2.16)	7.5	10.0	15
	460-3-60	414-506	2.9 (2.16)	3.4	5.0	15
	575-3-60	518-632	3.0 (2.24)	3.80	5.0	15
180	208/230-3-60	187-253	3.7 (2.76)	10.2	13.0	20
	460-3-60	414-506	3.7 (2.76)	4.8	6.0	15
	575-3-60	518-632	3.0 (2.24)	3.80	5.0	15
240	208/230-3-60	187-253	5.0 (3.73)	18.0	23.0	40
	460-3-60	414-506	5.0 (3.73)	9.1	12.0	20
	575-3-60	518-632	5.0 (3.73)	8.0	10.0	15
300	208/230-3-60	187-253	7.5 (5.59)	23.5	30.0	50
	460-3-60	414-506	7.5 (5.59)	15.0	19.0	30
	575-3-60	518-632	7.5 (5.59)	10.0	13.0	20

See: "Legend and Notes for Tables 1 – 4" on page 30.

Table 2 – Electrical Data, Alternate Motors with Factory-Installed Single Speed Fan Option

UNIT	V-PH-Hz†	VOLTAGE LIMITS	FAN MOTOR		POWER SUPPLY	
			Hp (kW)	FLA	Minimum Circuit Amps	MAX FUSE or HACR BRKR
072	208/230-1-60	187-253	2.4 (1.79)	11.00	13.80	20
	208/230-3-60	187-253	2.9 (2.16)	7.5	10.0	15
	460-3-60	414-506	2.9 (2.16)	3.4	5.0	15
	575-3-60	518-632	2.0 (1.49)	2.40	3.0	15
091	208/230-1-60	187-253	2.4 (1.79)	11.00	13.80	15
	208/230-3-60	187-253	2.9 (2.16)	7.5	10.0	15
	460-3-60	414-506	2.9 (2.16)	3.4	5.0	15
	575-3-60	518-632	3.0 (2.24)	3.80	5.0	15
120	208/230-3-60	187-253	3.7 (2.76)	10.2	13.0	20
	460-3-60	414-506	3.7 (2.76)	4.8	6.0	15
	575-3-60	518-632	3.0 (2.24)	3.80	5.0	15
150	208/230-3-60	187-253	3.7 (2.76)	10.2	13.0	20
	460-3-60	414-506	3.7 (2.76)	4.8	6.0	15
	575-3-60	518-632	5.0 (3.73)	8.0	10.0	15
180	208/230-3-60	187-253	5.0 (3.73)	18.0	23.0	40
	460-3-60	414-506	5.0 (3.73)	9.1	12.0	20
	575-3-60	518-632	5.0 (3.73)	8.0	10.0	15
240	208/230-3-60	187-253	7.5 (5.59)	23.5	30.0	50
	460-3-60	414-506	7.5 (5.59)	15.0	19.0	30
	575-3-60	518-632	7.5 (5.59)	10.0	13.0	20
300	208/230-3-60	187-253	10.0 (7.46)	32.0	40.0	70
	460-3-60	414-506	10.0 (7.46)	16.0	20.0	35
	575-3-60	518-632	10.0 (7.46)	13.0	17.0	30

See: "Legend and Notes for Tables 1 – 4" on page 30.

Table 3 – Electrical Data, Standard Motors with Factory-Installed 2-Speed Fan Option

UNIT	V-PH-Hz†	VOLTAGE LIMITS	FAN MOTOR		POWER SUPPLY	
			Hp (kW)	FLA	Minimum Circuit Amps	MAX FUSE or HACR BRKR
072	208/230-3-60	187-253	2.4 (1.79)	7.1	9.0	15
	460-3-60	414-506	2.4 (1.79)	3.8	5.0	15
	575-3-60	518-632	2.4 (1.79)	3.5	5.0	15
091	208/230-3-60	187-253	2.4 (1.79)	7.1	9.0	15
	460-3-60	414-506	2.4 (1.79)	3.8	5.0	15
	575-3-60	518-632	2.4 (1.79)	3.5	5.0	15
120	208/230-3-60	187-253	2.4 (1.79)	7.1	9.0	15
	460-3-60	414-506	2.4 (1.79)	3.8	5.0	15
	575-3-60	518-632	2.4 (1.79)	3.5	5.0	15
150	208/230-3-60	187-253	2.9 (2.16)	8.6	11.0	15
	460-3-60	414-506	2.9 (2.16)	3.8	5.0	15
	575-3-60	518-632	3.7 (2.76)	4.5	6.0	15
180	208/230-3-60	187-253	3.7 (2.76)	10.8	14.0	20
	460-3-60	414-506	3.7 (2.76)	4.9	7.0	15
	575-3-60	518-632	3.7 (2.76)	4.5	6.0	15
240	208/230-3-60	187-253	5.0 (3.73)	18.0	23.0	40
	460-3-60	414-506	5.0 (3.73)	9.1	12.0	20
	575-3-60	518-632	5.0 (3.73)	8.0	10.0	15
300	208/230-3-60	187-253	7.5 (5.59)	23.5	30.0	50
	460-3-60	414-506	7.5 (5.59)	15.0	19.0	30
	575-3-60	518-632	7.5 (5.59)	10.0	13.0	20

See: "Legend and Notes for Tables 1 – 4" on page 30.

Table 4 – Electrical Data, Alternate Motors with Factory-Installed 2-Speed Fan Option

UNIT	V-PH-Hz†	VOLTAGE LIMITS	FAN MOTOR		POWER SUPPLY	
			Hp (kW)	FLA	Minimum Circuit Amps	MAX FUSE or HACR BRKR
072	208/230-3-60	187-253	3.7 (2.76)	10.8	14.0	20
	460-3-60	414-506	3.7 (2.76)	4.9	7.0	15
	575-3-60	518-632	3.7 (2.76)	4.5	6.0	15
091	208/230-3-60	187-253	3.7 (2.76)	10.8	14.0	20
	460-3-60	414-506	3.7 (2.76)	4.9	7.0	15
	575-3-60	518-632	3.7 (2.76)	4.5	6.0	15
120	208/230-3-60	187-253	3.7 (2.76)	10.8	14.0	20
	460-3-60	414-506	3.7 (2.76)	4.9	7.0	15
	575-3-60	518-632	3.7 (2.76)	4.5	6.0	15
150	208/230-3-60	187-253	3.7 (2.76)	10.8	14.0	20
	460-3-60	414-506	3.7 (2.76)	4.9	7.0	15
	575-3-60	518-632	5.0 (3.73)	8.0	10.0	15
180	208/230-3-60	187-253	5.0 (3.73)	18.0	23.0	40
	460-3-60	414-506	5.0 (3.73)	9.1	12.0	20
	575-3-60	518-632	5.0 (3.73)	8.0	10.0	15
240	208/230-3-60	187-253	7.5 (5.59)	23.5	30.0	50
	460-3-60	414-506	7.5 (5.59)	15.0	19.0	30
	575-3-60	518-632	7.5 (5.59)	10.0	13.0	20
300	208/230-3-60	187-253	10.0 (7.46)	32.0	40.0	70
	460-3-60	414-506	10.0 (7.46)	16.0	20.0	35
	575-3-60	518-632	10.0 (7.46)	13.0	17.0	25

See: "Legend and Notes for Tables 1 – 4" on page 30.

Legend and Notes for Tables 1 – 4

LEGEND:

FLA — Full Load Amps

MOCP — MAX FUSE or HACR BRKR

† Motors are designed for satisfactory operation within 10% of normal voltage shown. Voltages should not exceed the limits shown in the Voltage Limits column.

NOTES:

- Minimum circuit amps (MCA) and fuse or HACR breaker values are calculated in accordance with The NEC, Article 440.
- Motor FLA values are established in accordance with Underwriters' Laboratories (UL), Standard 1995.
- Unbalanced 3-Phase Supply Voltage**
Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the formula in the example (see column to the right) to determine the percentage of voltage imbalance.
- Installation with Accessory Electric Heaters
Size the Field Power Wiring between the heater TB1 and the FAS indoor fan motor per NEC Article 430-28 (1) or (2) (depends on length of conduit between heater enclosure and FAS power entry location). Install wires in field-installed conduit.



Example: Supply voltage is 230-3-60

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$



AB = 393 v
BC = 403 v
AC = 396 v

$$\text{Average Voltage} = \frac{(393 + 403 + 396)}{3} = \frac{1192}{3} = 397$$

Determine maximum deviation from average voltage.

(AB) 397 – 393 = 4 v

(BC) 403 – 397 = 6 v

(AC) 397 – 396 = 1 v

Maximum deviation is 4 v.

Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{6}{397} = 1.5\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

Table 5 – Electric Heater Data – Single Speed Motor

HEATER PART NO. CAELHEAT	SIZE	V-PH-Hz	FAN MOTOR			ELECTRIC HEATER(S)						MCA*	MOCP*
						Nom. Cap. (kW)	Actual Capacity (kW)			FLA			
			Hp	kW	FLA		Stage 1	Stage 2	Total				
001A00	208-3-60	1.3†	0.97	6.6	5.0	3.8	-	3.76	10.4	21.3	25		
		2.4†	1.79	11.0	5.0	3.8	-	3.76	10.4	26.8	35		
		2.4	1.79	5.2	5.0	3.8	-	3.76	10.4	19.5	20		
		2.9	2.16	7.5	5.0	3.8	-	3.76	10.4	22.4	25		
		3.7	2.76	10.2	5.0	3.8	-	3.76	10.4	25.8	30		
	240-3-60	1.3†	0.97	6.6	5.0	5.0	-	5.0	12.0	23.3	25		
		2.4†	1.79	11.0	5.0	5.0	-	5.0	12.0	28.8	35		
		2.4	1.79	5.2	5.0	5.0	-	5.0	12.0	21.5	25		
		2.9	2.16	7.5	5.0	5.0	-	5.0	12.0	24.4	25		
		3.7	2.76	10.2	5.0	5.0	-	5.0	12.0	27.8	30		
002A00	480-3-60	2.4	1.79	2.6	5.0	5.0	-	5.0	6.0	10.8	15		
		2.9	2.16	3.4	5.0	5.0	-	5.0	6.0	11.8	15		
		3.7	2.76	4.8	5.0	5.0	-	5.0	6.0	13.5	15		
		1.0	0.75	1.4	5.0	5.0	-	5.0	5.0	8.0	15		
003A00	575-3-60	2.0	1.49	2.4	5.0	5.0	-	5.0	5.0	9.3	15		
		3.0	2.24	3.8	5.0	5.0	-	5.0	5.0	11.0	15		
		1.3†	0.97	6.6	10.0	7.5	-	7.51	20.8	34.3	35		
		2.4†	1.79	11.0	10.0	7.5	-	7.51	20.8	39.8	40		
004A00	208-3-60	2.4	1.79	5.2	10.0	7.5	-	7.51	20.8	32.6	35		
		2.9	2.16	7.5	10.0	7.5	-	7.51	20.8	35.4	40		
		3.7	2.76	10.2	10.0	7.5	-	7.51	20.8	38.8	40		
		1.3†	0.97	6.6	10.0	10.0	-	10.0	24.1	38.3	40		
		2.4†	1.79	11.0	10.0	10.0	-	10.0	24.1	43.8	50		
	240-3-60	2.4	1.79	5.2	10.0	10.0	-	10.0	24.1	36.6	40		
		2.9	2.16	7.5	10.0	10.0	-	10.0	24.1	39.4	40		
		3.7	2.76	10.2	10.0	10.0	-	10.0	24.1	42.8	50		
		2.4	1.79	2.6	10.0	10.0	-	10.0	12.0	18.3	20		
		2.9	2.16	3.4	10.0	10.0	-	10.0	12.0	19.3	20		
005A00	480-3-60	3.7	2.76	4.8	10.0	10.0	-	10.0	12.0	21.0	25		
		1.0	0.75	1.4	10.0	10.0	-	10.0	10.0	14.3	15		
		2.0	1.49	2.4	10.0	10.0	-	10.0	10.0	15.6	20		
		3.0	2.24	3.8	10.0	10.0	-	10.0	10.0	17.3	20		
006A00	575-3-60	1.3†	0.97	6.6	15.0	11.3	-	11.27	31.3	47.4	50		
		2.4†	1.79	11.0	15.0	11.3	-	11.27	31.3	52.9	60		
		2.4	1.79	5.2	15.0	11.3	-	11.27	31.3	45.6	50		
		2.9	2.16	7.5	15.0	11.3	-	11.27	31.3	48.5	50		
		3.7	2.76	10.2	15.0	11.3	-	11.27	31.3	51.9	60		
	240-3-60	1.3†	0.97	6.6	15.0	15.0	-	15.0	36.1	58.9	60		
		2.4†	1.79	11.0	15.0	15.0	-	15.0	36.1	51.6	60		
		2.4	1.79	5.2	15.0	15.0	-	15.0	36.1	54.5	60		
		2.9	2.16	7.5	15.0	15.0	-	15.0	36.1	57.9	60		
		3.7	2.76	10.2	15.0	15.0	-	15.0	36.1	60	60		

See: "Legend and Notes for Tables 5 and 6" on page 39.

Table 5 – Electric Heater Data – Single Speed Motor (cont.)

HEATER PART NO. CAELHEAT	SIZE	V-PH-Hz	FAN MOTOR			ELECTRIC HEATER(S)						MCA*	MOCP*
						Nom. Cap. (kW)	Actual Capacity (kW)			FLA			
			Hp	kW	FLA		Stage 1	Stage 2	Total				
008A00		480-3-60	2.4	1.79	2.6	15.0	15.0	-	15.0	18.0	25.8	30	
			2.9	2.16	3.4	15.0	15.0	-	15.0	18.0	26.8	30	
			3.7	2.76	4.8	15.0	15.0	-	15.0	18.0	28.6	30	
			1.0	0.75	1.4	15.0	15.0	-	15.0	15.1	20.6	25	
			2.0	1.49	2.4	15.0	15.0	-	15.0	15.1	21.8	25	
009A00		575-3-60	3.0	2.24	3.8	15.0	15.0	-	15.0	15.1	23.6	25	
			1.3t	0.97	6.6	25.0	11.3	7.5	18.8	52.1	73.4	80	
			2.4t	1.79	11.0	25.0	11.3	7.5	18.8	52.1	78.9	80	
			2.4	1.79	5.2	25.0	11.3	7.5	18.8	52.1	71.7	80	
			2.9	2.16	7.5	25.0	11.3	7.5	18.8	52.1	74.5	80	
010A00	FAS 072-120	208-3-60	3.7	2.76	10.2	25.0	11.3	7.5	18.8	52.1	77.9	80	
			1.3t	0.97	6.6	25.0	15.0	10.0	25.0	60.1	83.4	90	
			2.4t	1.79	11.0	25.0	15.0	10.0	25.0	60.1	88.9	90	
			2.4	1.79	5.2	25.0	15.0	10.0	25.0	60.1	81.7	90	
			2.9	2.16	7.5	25.0	15.0	10.0	25.0	60.1	84.6	90	
		240-3-60	3.7	2.76	10.2	25.0	15.0	10.0	25.0	60.1	87.9	90	
			2.4	1.79	2.6	25.0	15.0	10.0	25.0	30.1	40.8	50	
			2.9	2.16	3.4	25.0	15.0	10.0	25.0	30.1	41.8	50	
			3.7	2.76	4.8	25.0	15.0	10.0	25.0	30.1	43.6	50	
			1.0	0.75	1.4	25.0	15.0	10.0	25.0	25.1	33.1	35	
012A00		575-3-60	2.0	1.49	2.4	25.0	15.0	10.0	25.0	25.1	34.4	35	
			3.0	2.24	3.8	25.0	15.0	10.0	25.0	25.1	36.1	40	
			2.4t	1.79	11.0	35.0	15.0	11.3	26.3	73.0	105.0	110	
			2.4	1.79	5.2	35.0	15.0	11.3	26.3	73.0	97.7	100	
			2.9	2.16	7.5	35.0	15.0	11.3	26.3	73.0	100.6	110	
013A00	FAS 091, 120	208-3-60	3.7	2.76	10.2	35.0	15.0	11.3	26.3	73.0	104.0	110	
			2.4t	1.79	11.0	35.0	20.0	15.0	35.0	84.2	119.0	125	
			2.4	1.79	5.2	35.0	20.0	15.0	35.0	84.2	111.7	125	
			2.9	2.16	7.5	35.0	20.0	15.0	35.0	84.2	114.6	125	
			3.7	2.76	10.2	35.0	20.0	15.0	35.0	84.2	118.0	125	
014A00		240-3-60	2.4	1.79	2.6	35.0	20.0	15.0	35.0	42.1	55.9	60	
			2.9	2.16	3.4	35.0	20.0	15.0	35.0	42.1	56.9	60	
			3.7	2.76	4.8	35.0	20.0	15.0	35.0	42.1	58.6	60	
			2.0	1.49	2.4	35.0	20.0	15.0	35.0	35.1	46.9	50	
			3.0	2.24	3.8	35.0	20.0	15.0	35.0	35.1	48.7	50	
015A00		575-3-60	3.0	2.24	3.8	35.0	20.0	15.0	35.0	35.1	48.7	50	

See: "Legend and Notes for Tables 5 and 6" on page 39.

Table 5 - ELECTRIC HEATER DATA - SINGLE SPEED MOTOR (cont.)

HEATER PART NO. CAELHEAT	SIZE	V-Ph-Hz	FAN MOTOR			ELECTRIC HEATER(S)						MCA*	MOCP*
						Actual Capacity (kW)			FLA				
			Hp	kW	FLA	Nom. Cap. (kW)	Stage 1	Stage 2		Total			
016A00		208-3-60	2.9	2.16	7.5	10.0	7.5	-	7.5	20.8	35.4	40	
			3.7	2.76	10.2	10.0	7.5	-	7.5	20.8	38.8	40	
			5.0	3.73	18.0	10.0	7.5	-	7.5	20.8	48.6	60	
			7.5	5.59	23.5	10.0	7.5	-	7.5	20.8	55.4	70	
			2.9	2.16	7.5	10.0	10.0	-	10.0	24.1	39.4	40	
	240-3-60	3.7	2.76	10.2	10.0	10.0	-	10.0	24.1	42.8	50		
		5.0	3.73	18.0	10.0	10.0	-	10.0	24.1	52.6	60		
		7.5	5.59	23.5	10.0	10.0	-	10.0	24.1	59.4	70		
		2.9	2.16	3.4	10.0	10.0	-	10.0	12.0	19.3	20		
		3.7	2.76	4.8	10.0	10.0	-	10.0	12.0	21.0	25		
017A00		480-3-60	5.0	3.73	9.1	10.0	10.0	-	10.0	12.0	26.4	30	
			7.5	5.59	15.0	10.0	10.0	-	10.0	12.0	33.8	40	
018A00		575-3-60	3.0	2.24	3.8	10.0	10.0	-	10.0	10.0	17.3	20	
			5.0	3.73	8.0	10.0	10.0	-	10.0	10.0	22.6	25	
			7.5	5.59	10.0	10.0	10.0	-	10.0	10.0	25.1	30	
019A00		208-3-60	2.9	2.16	7.5	20.0	14.9	-	15.0	41.7	61.5	70	
			3.7	2.76	10.2	20.0	14.9	-	15.0	41.7	64.9	70	
			5.0	3.73	18.0	20.0	14.9	-	15.0	41.7	74.6	80	
			7.5	5.59	23.5	20.0	14.9	-	15.0	41.7	81.5	90	
			2.9	2.16	7.5	20.0	19.9	-	20.0	48.1	69.5	70	
	240-3-60	3.7	2.76	10.2	20.0	19.9	-	20.0	48.1	72.9	80		
		5.0	3.73	18.0	20.0	19.9	-	20.0	48.1	82.6	90		
		7.5	5.59	23.5	20.0	19.9	-	20.0	48.1	89.5	100		
		2.9	2.16	3.4	20.0	20.0	-	20.0	24.1	34.3	35		
		3.7	2.76	4.8	20.0	20.0	-	20.0	24.1	36.1	40		
020A00		480-3-60	5.0	3.73	9.1	20.0	20.0	-	20.0	24.1	41.4	50	
			7.5	5.59	15.0	20.0	20.0	-	20.0	24.1	48.8	50	
021A00	FAS 150, 180, 240	575-3-60	3.0	2.24	3.8	20.0	20.0	-	20.0	20.1	29.9	30	
			5.0	3.73	8.0	20.0	20.0	-	20.0	20.1	35.1	40	
022A00		208-3-60	2.9	2.16	7.5	30.0	15.0	7.5	22.5	62.5	100.7	110	
			3.7	2.76	10.2	30.0	15.0	7.5	22.5	62.5	107.5	110	
			5.0	3.73	18.0	30.0	15.0	7.5	22.5	62.5	109.6	100	
			7.5	5.59	23.5	30.0	15.0	7.5	22.5	62.5	112.7	125	
			2.9	2.16	3.4	30.0	20.0	10.0	30.0	72.2	99.6	100	
	240-3-60	3.7	2.76	10.2	30.0	20.0	10.0	30.0	72.2	103.0	110		
		5.0	3.73	18.0	30.0	20.0	10.0	30.0	72.2	112.7	125		
		7.5	5.59	23.5	30.0	20.0	10.0	30.0	72.2	119.6	125		
		2.9	2.16	3.4	30.0	20.0	10.0	30.0	36.1	49.4	50		
		3.7	2.76	4.8	30.0	20.0	10.0	30.0	36.1	51.1	60		
023A00		480-3-60	5.0	3.73	9.1	30.0	20.0	10.0	30.0	36.1	56.5	60	
			7.5	5.59	15.0	30.0	20.0	10.0	30.0	36.1	63.9	70	
024A00		575-3-60	3.0	2.24	3.8	30.0	20.0	10.0	30.0	30.1	42.4	50	
			5.0	3.73	8.0	30.0	20.0	10.0	30.0	30.1	47.7	50	
025A00		208-3-60	7.5	5.59	10.0	30.0	20.0	10.0	30.0	30.1	50.2	60	
			3.7	2.76	10.2	50.0	22.6	15.0	37.6	104.3	143.1	150	
			5.0	3.73	18.0	50.0	22.6	15.0	37.6	104.3	152.8	175	
			7.5	5.59	23.5	50.0	22.6	15.0	37.6	104.3	159.7	175	
			3.7	2.76	10.2	50.0	30.0	20.0	50.0	120.3	163.1	175	
026A00		240-3-60	5.0	3.73	18.0	50.0	30.0	20.0	50.0	120.3	172.9	175	
			7.5	5.59	23.5	50.0	30.0	20.0	50.0	120.3	179.7	200	
			3.7	2.76	4.8	50.0	30.0	20.0	50.0	60.1	81.2	90	
			5.0	3.73	9.1	50.0	30.0	20.0	50.0	60.1	86.6	90	
			7.5	5.59	15.0	50.0	30.0	20.0	50.0	60.1	93.9	100	
027A00		575-3-60	3.0	2.24	3.8	50.0	30.0	20.0	50.0	50.2	67.5	70	
			5.0	3.73	8.0	50.0	30.0	20.0	50.0	50.2	72.8	80	
			7.5	5.59	10.0	50.0	30.0	20.0	50.0	50.2	75.3	80	

See "Legend and Notes for Tables 5 and 6" on page 39.

Table 5 – ELECTRIC HEATER DATA – SINGLE SPEED MOTOR (cont.)

HEATER PART NO. CAEL/HEAT	SIZE	V-PH-Hz	FAN MOTOR			ELECTRIC HEATER(S)					MCA*	MOCP*
						Nom. Cap. (kW)	Actual Capacity (kW)		FLA			
			Hp	kW	FLA		Stage 1	Stage 2		Total		
028A00		208-3-60	7.5	5.59	23.5	20.0	14.9	-	15.0	41.7	81.5	90
			10.0	7.46	32.0	20.0	14.9	-	15.0	41.7	92.1	110
			7.5	5.59	23.5	20.0	19.9	-	20.0	48.1	89.5	100
			10.0	7.46	32.0	20.0	19.9	-	20.0	48.1	100.1	110
029A00		480-3-60	7.5	5.59	15.0	20.0	20.0	-	20.0	24.1	48.8	50
			10.0	7.46	16.0	20.0	20.0	-	20.0	24.1	50.1	60
			7.5	5.59	10.0	20.0	20.0	-	20.0	20.1	37.6	40
			10.0	7.46	13.0	20.0	20.0	-	20.0	20.1	41.4	50
031A00		208-3-60	7.5	5.59	23.5	40.0	15.0	15.0	30.0	83.4	133.6	150
			10.0	7.46	32.0	40.0	15.0	15.0	30.0	83.4	144.2	150
			7.5	5.59	23.5	40.0	20.0	20.0	40.0	96.2	149.7	150
			10.0	7.46	32.0	40.0	20.0	20.0	40.0	96.2	160.3	175
032A00		480-3-60	7.5	5.59	15.0	40.0	20.0	20.0	40.0	48.1	78.9	80
			10.0	7.46	16.0	40.0	20.0	20.0	40.0	48.1	80.1	90
			7.5	5.59	10.0	40.0	20.0	20.0	40.0	40.2	62.7	70
			10.0	7.46	13.0	40.0	20.0	20.0	40.0	40.2	66.5	70
033A00		575-3-60	7.5	5.59	23.5	50.0	22.6	15.0	37.6	104.3	159.7	175
			10.0	7.46	32.0	50.0	22.6	15.0	37.6	104.3	170.3	175
			7.5	5.59	23.5	50.0	30.0	20.0	50.0	120.3	179.7	200
			10.0	7.46	32.0	50.0	30.0	20.0	50.0	120.3	190.4	200
034A00		240-3-60	7.5	5.59	15.0	50.0	30.0	20.0	50.0	60.1	93.9	100
			10.0	7.46	16.0	50.0	30.0	20.0	50.0	60.1	95.2	100
			7.5	5.59	10.0	50.0	30.0	20.0	50.0	50.2	75.3	80
			10.0	7.46	13.0	50.0	30.0	20.0	50.0	50.2	79.0	80
035A00		480-3-60	7.5	5.59	23.5	70.0	30.0	22.6	52.6	145.9	175.3	200
			10.0	7.46	32.0	70.0	30.0	22.6	52.6	145.9	185.9	200
			7.5	5.59	23.5	70.0	40.0	30.0	70.0	168.4	197.8	225
			10.0	7.46	32.0	70.0	40.0	30.0	70.0	168.4	208.4	225
036A00		575-3-60	7.5	5.59	15.0	70.0	40.0	30.0	70.0	84.2	102.9	110
			10.0	7.46	16.0	70.0	40.0	30.0	70.0	84.2	104.2	110
			7.5	5.59	10.0	70.0	40.0	30.0	70.0	70.3	82.8	90
			10.0	7.46	13.0	70.0	40.0	30.0	70.0	70.3	86.5	90
037A00		240-3-60	7.5	5.59	23.5	70.0	40.0	30.0	70.0	84.2	102.9	110
			10.0	7.46	32.0	70.0	40.0	30.0	70.0	84.2	104.2	110
			7.5	5.59	23.5	70.0	40.0	30.0	70.0	84.2	104.2	110
			10.0	7.46	32.0	70.0	40.0	30.0	70.0	84.2	104.2	110
038A00		480-3-60	7.5	5.59	15.0	70.0	40.0	30.0	70.0	84.2	102.9	110
			10.0	7.46	16.0	70.0	40.0	30.0	70.0	84.2	104.2	110
			7.5	5.59	10.0	70.0	40.0	30.0	70.0	84.2	104.2	110
			10.0	7.46	13.0	70.0	40.0	30.0	70.0	84.2	104.2	110
039A00		575-3-60	7.5	5.59	23.5	70.0	40.0	30.0	70.0	84.2	102.9	110
			10.0	7.46	32.0	70.0	40.0	30.0	70.0	84.2	104.2	110
			7.5	5.59	23.5	70.0	40.0	30.0	70.0	84.2	104.2	110
			10.0	7.46	32.0	70.0	40.0	30.0	70.0	84.2	104.2	110

See: "Legend and Notes for Tables 5 and 6" on page 39.

Table 6 – Electric Heater Data – 2-Speed Motor

HEATER- PART NO.- CAELHEAT	SIZE	V-Ph-Hz	FAN MOTOR			ELECTRIC HEATER(S)					MCA*	MOCP*
						HP	kW	FLA	Nom. Cap. (kW)	Actual Capacity		
			Stage 1	Stage 2	Total							
001A00		208-3-60	1.7	1.27	5.8	5.0	3.8	-	3.8	10.4	20.3	25
			2.4	1.79	7.1	5.0	3.8	-	3.8	10.4	21.9	25
			3.7	2.76	10.8	5.0	3.8	-	3.8	10.4	26.5	30
			3.7**	2.76	10.6	5.0	3.8	-	3.8	10.4	26.3	30
			1.7	1.27	5.6	5.0	5.0	-	5.0	12.0	22.0	25
		240-3-60	2.4	1.79	7.1	5.0	5.0	-	5.0	12.0	23.9	25
			3.7	2.76	10.8	5.0	5.0	-	5.0	12.0	28.5	35
			3.7**	2.76	10.6	5.0	5.0	-	5.0	12.0	28.3	35
			1.7	1.27	2.9	5.0	5.0	-	5.0	6.0	11.1	15
			2.4	1.79	3.8	5.0	5.0	-	5.0	6.0	12.3	15
002A00		480-3-60	3.7	2.76	4.9	5.0	5.0	-	5.0	6.0	13.6	15
			3.7**	2.76	5.3	5.0	5.0	-	5.0	6.0	14.1	15
			1.7	1.27	2.8	5.0	5.0	-	5.0	5.0	9.8	15
			2.4	1.79	3.5	5.0	5.0	-	5.0	5.0	10.7	15
			3.7	2.76	4.5	5.0	5.0	-	5.0	5.0	11.9	15
003A00		575-3-60	1.7	1.27	5.8	10.0	7.5	-	7.5	20.8	33.3	35
			2.4	1.79	7.1	10.0	7.5	-	7.5	20.8	34.9	35
			3.7	2.76	10.8	10.0	7.5	-	7.5	20.8	39.6	40
			3.7**	2.76	10.6	10.0	7.5	-	7.5	20.8	39.3	40
			1.7	1.27	5.6	10.0	10.0	-	10.0	24.1	37.1	40
004A00		240-3-60	2.4	1.79	7.1	10.0	10.0	-	10.0	24.1	38.9	40
			3.7	2.76	10.8	10.0	10.0	-	10.0	24.1	43.6	50
			3.7**	2.76	10.6	10.0	10.0	-	10.0	24.1	43.3	50
			1.7	1.27	2.9	10.0	10.0	-	10.0	12.0	18.7	20
			2.4	1.79	3.8	10.0	10.0	-	10.0	12.0	19.8	20
005A00	FAS 072-120	480-3-60	3.7	2.76	4.9	10.0	10.0	-	10.0	12.0	21.2	25
			3.7**	2.76	5.3	10.0	10.0	-	10.0	12.0	21.7	25
			1.7	1.27	2.8	10.0	10.0	-	10.0	10.0	16.1	20
			2.4	1.79	3.5	10.0	10.0	-	10.0	10.0	16.9	20
			3.7	2.76	4.5	10.0	10.0	-	10.0	10.0	18.2	20
006A00		575-3-60	1.7	1.27	5.8	15.0	11.3	-	11.3	31.3	46.4	50
			2.4	1.79	7.1	15.0	11.3	-	11.3	31.3	48.0	50
			3.7	2.76	10.8	15.0	11.3	-	11.3	31.3	52.6	60
			3.7**	2.76	10.6	15.0	11.3	-	11.3	31.3	52.4	60
			1.7	1.27	5.6	15.0	15.0	-	15.0	36.1	52.1	60
007A00		208-3-60	2.4	1.79	7.1	15.0	15.0	-	15.0	36.1	54.0	60
			3.7	2.76	10.8	15.0	15.0	-	15.0	36.1	58.6	60
			3.7**	2.76	10.6	15.0	15.0	-	15.0	36.1	58.4	60
			1.7	1.27	2.9	15.0	15.0	-	15.0	18.0	26.2	30
			2.4	1.79	3.8	15.0	15.0	-	15.0	18.0	27.3	30
008A00		480-3-60	3.7	2.76	4.9	15.0	15.0	-	15.0	18.0	28.7	30
			3.7**	2.76	5.3	15.0	15.0	-	15.0	18.0	29.2	30
			1.7	1.27	2.8	15.0	15.0	-	15.0	15.1	22.3	25
			2.4	1.79	3.5	15.0	15.0	-	15.0	15.1	23.2	25
			3.7	2.76	4.5	15.0	15.0	-	15.0	15.1	24.5	25
009A00		575-3-60	1.7	1.27	5.8	25.0	11.3	7.5	18.8	52.1	72.4	80
			2.4	1.79	7.1	25.0	11.3	7.5	18.8	52.1	74.0	80
			3.7	2.76	10.8	25.0	11.3	7.5	18.8	52.1	78.7	80
			3.7**	2.76	10.6	25.0	11.3	7.5	18.8	52.1	78.4	80
			1.7	1.27	5.6	25.0	15.0	10.0	25.0	60.1	82.2	90
010A00		240-3-60	2.4	1.79	7.1	25.0	15.0	10.0	25.0	60.1	84.1	90
			3.7	2.76	10.8	25.0	15.0	10.0	25.0	60.1	88.7	90
			3.7**	2.76	10.6	25.0	15.0	10.0	25.0	60.1	88.4	90

See: "Legend and Notes for Tables 5 and 6" on page 39.

Table 6 – ELECTRIC HEATER DATA – 2-SPEED MOTOR (cont.)

HEATER PART NO. CAELHEAT	SIZE	V-PH-Hz	FAN MOTOR			ELECTRIC HEATER(S)						MCA*	MOCP*
						Nom. Cap. (kW)	Actual Capacity (kW)			FLA			
			Hp	kW	FLA		Stage 1	Stage 2	Total				
011A00	480-3-60		1.7	1.27	2.9	25.0	15.0	10.0	25.0	30.1	41.2	50	
			2.4	1.79	3.8	25.0	15.0	10.0	25.0	30.1	42.3	50	
			3.7	2.76	4.9	25.0	15.0	10.0	25.0	30.1	43.7	50	
			3.7**	2.76	5.3	25.0	15.0	10.0	25.0	30.1	44.2	50	
			1.7	1.27	2.8	25.0	15.0	10.0	25.0	25.1	34.9	35	
012A00	575-3-60		2.4	1.79	3.5	25.0	15.0	10.0	25.0	25.1	35.8	40	
			3.7	2.76	4.5	25.0	15.0	10.0	25.0	25.1	37.0	40	
			1.7	1.27	5.8	35.0	15.0	11.3	26.3	73.0	98.5	100	
			2.4	1.79	7.1	35.0	15.0	11.3	26.3	73.0	100.1	110	
			3.7	2.76	10.8	35.0	15.0	11.3	26.3	73.0	104.7	110	
013A00	FAS 072-120	208-3-60	3.7**	2.76	10.6	35.0	15.0	11.3	26.3	73.0	104.5	110	
			1.7	1.27	5.6	35.0	20.0	15.0	35.0	84.2	112.2	125	
			2.4	1.79	7.1	35.0	20.0	15.0	35.0	84.2	114.1	125	
			3.7	2.76	10.8	35.0	20.0	15.0	35.0	84.2	118.7	125	
			3.7**	2.76	10.6	35.0	20.0	15.0	35.0	84.2	118.5	125	
014A00	480-3-60		1.7	1.27	2.9	35.0	20.0	15.0	35.0	42.1	56.2	60	
			2.4	1.79	3.8	35.0	20.0	15.0	35.0	42.1	57.4	60	
			3.7	2.76	4.9	35.0	20.0	15.0	35.0	42.1	58.7	60	
			3.7**	2.76	5.3	35.0	20.0	15.0	35.0	42.1	59.2	60	
			1.7	1.27	2.8	35.0	20.0	15.0	35.0	35.1	47.4	50	
015A00	575-3-60		2.4	1.79	3.5	35.0	20.0	15.0	35.0	35.1	48.3	50	
			3.7	2.76	4.5	35.0	20.0	15.0	35.0	35.1	49.6	50	
			2.9	2.16	8.6	10.0	7.5	-	7.5	20.8	36.8	40	
			3.7	2.76	10.8	10.0	7.5	-	7.5	20.8	39.6	40	
			3.7	2.76	10.8	10.0	7.5	-	7.5	20.8	39.6	40	
016A00	208-3-60		5.0	3.73	18.0	10.0	7.5	-	7.5	20.8	48.6	60	
			5.0	3.73	18.0	10.0	7.5	-	7.5	20.8	48.6	60	
			5.0	3.73	18.0	10.0	7.5	-	7.5	20.8	48.6	60	
			2.9	2.16	8.6	10.0	7.5	-	7.5	20.8	55.4	70	
			2.9	2.16	8.6	10.0	10.0	-	10.0	24.1	40.8	50	
017A00	480-3-60		3.7	2.76	10.8	10.0	10.0	-	10.0	24.1	43.6	50	
			3.7	2.76	10.8	10.0	10.0	-	10.0	24.1	43.6	50	
			5.0	3.73	18.0	10.0	10.0	-	10.0	24.1	52.6	60	
			5.0	3.73	18.0	10.0	10.0	-	10.0	24.1	52.6	60	
			5.0	3.73	18.0	10.0	10.0	-	10.0	24.1	52.6	60	
018A00	575-3-60		7.5	5.59	23.5	10.0	10.0	-	10.0	24.1	59.4	70	
			2.9	2.16	3.8	10.0	10.0	-	10.0	12.0	19.8	20	
			3.7	2.76	4.9	10.0	10.0	-	10.0	12.0	21.2	25	
			3.7	2.76	4.9	10.0	10.0	-	10.0	12.0	21.2	25	
			3.7	2.76	4.9	10.0	10.0	-	10.0	12.0	21.2	25	
019A00	480-3-60		5.0	3.73	9.1	10.0	10.0	-	10.0	12.0	26.4	30	
			5.0	3.73	9.1	10.0	10.0	-	10.0	12.0	26.4	30	
			7.5	5.59	15.0	10.0	10.0	-	10.0	12.0	26.4	30	
			7.5	5.59	15.0	10.0	10.0	-	10.0	12.0	26.4	30	
			7.5	5.59	15.0	10.0	10.0	-	10.0	12.0	26.4	30	
020A00	575-3-60		3.7	2.76	4.5	10.0	10.0	-	10.0	10.0	18.2	20	
			3.7	2.76	4.5	10.0	10.0	-	10.0	10.0	18.2	20	
			5.0	3.73	8.0	10.0	10.0	-	10.0	10.0	22.6	25	
			5.0	3.73	8.0	10.0	10.0	-	10.0	10.0	22.6	25	
			5.0	3.73	8.0	10.0	10.0	-	10.0	10.0	22.6	25	
021A00	575-3-60		5.0	3.73	8.0	10.0	10.0	-	10.0	10.0	22.6	25	
			5.0	3.73	8.0	10.0	10.0	-	10.0	10.0	22.6	25	
			5.0	3.73	8.0	10.0	10.0	-	10.0	10.0	22.6	25	
			5.0	3.73	8.0	10.0	10.0	-	10.0	10.0	22.6	25	
			5.0	3.73	8.0	10.0	10.0	-	10.0	10.0	22.6	25	
022A00	575-3-60		7.5	5.59	10.0	10.0	10.0	-	10.0	10.0	25.1	30	
			7.5	5.59	10.0	10.0	10.0	-	10.0	10.0	25.1	30	
			7.5	5.59	10.0	10.0	10.0	-	10.0	10.0	25.1	30	
			7.5	5.59	10.0	10.0	10.0	-	10.0	10.0	25.1	30	
			7.5	5.59	10.0	10.0	10.0	-	10.0	10.0	25.1	30	

See: "Legend and Notes for Tables 5 and 6" on page 39.

Table 6 – ELECTRIC HEATER DATA – 2-SPEED MOTOR (cont.)

HEATER PART NO. CAELHEAT	SIZE	V-PH-Hz	FAN MOTOR			ELECTRIC HEATER(S)					MCA*	MOCP*
						Nom. Cap. (kW)	Actual Capacity (kW)			FLA		
			Hp	kW	FLA		Stage 1	Stage 2	Total			
019A00	FAS 150	208-3-60	2.9	2.16	8.6	20.0	15.0	-	15.0	41.7	62.9	70
	FAS 180	208-3-60	3.7	2.76	10.8	20.0	15.0	-	15.0	41.7	65.6	70
	FAS 180	208-3-60	3.7	2.76	10.8	20.0	15.0	-	15.0	41.7	65.6	70
	FAS 240	208-3-60	5.0	3.73	18.0	20.0	15.0	-	15.0	41.7	74.6	80
	FAS 240	208-3-60	5.0	3.73	18.0	20.0	15.0	-	15.0	41.7	74.6	80
	FAS 150	240-3-60	2.9	2.16	8.6	20.0	20.0	-	20.0	48.1	70.9	80
020A00	FAS 180	240-3-60	3.7	2.76	10.8	20.0	20.0	-	20.0	48.1	73.6	80
	FAS 180	240-3-60	3.7	2.76	10.8	20.0	20.0	-	20.0	48.1	73.6	80
	FAS 240	240-3-60	5.0	3.73	18.0	20.0	20.0	-	20.0	48.1	82.6	90
	FAS 240	240-3-60	5.0	3.73	18.0	20.0	20.0	-	20.0	48.1	82.6	90
	FAS 150	480-3-60	2.9	2.16	3.8	20.0	19.9	-	20.0	24.1	34.8	35
	FAS 150	480-3-60	3.7	2.76	4.9	20.0	19.9	-	20.0	24.1	36.2	40
021A00	FAS 180	575-3-60	3.7	3.73	9.1	20.0	19.9	-	20.0	24.1	36.2	40
	FAS 180	575-3-60	5.0	3.73	9.1	20.0	19.9	-	20.0	24.1	41.4	50
	FAS 240	575-3-60	5.0	3.73	8.0	20.0	20.0	-	20.0	24.1	41.4	50
	FAS 240	575-3-60	7.5	5.59	10.0	20.0	20.0	-	20.0	24.1	48.8	50
	FAS 150	575-3-60	3.7	2.76	4.5	20.0	20.0	-	20.0	20.1	30.7	35
	FAS 150	575-3-60	5.0	3.73	8.0	20.0	20.0	-	20.0	20.1	35.1	40
022A00	FAS 180	208-3-60	3.7	2.76	10.8	30.0	15.0	7.5	22.5	62.5	91.7	100
	FAS 180	208-3-60	3.7	2.76	10.8	30.0	15.0	7.5	22.5	62.5	91.7	100
	FAS 180	208-3-60	5.0	3.73	18.0	30.0	15.0	7.5	22.5	62.5	100.7	110
	FAS 150	240-3-60	2.9	2.16	8.6	30.0	20.0	10.0	30.0	72.2	101.0	110
	FAS 150	240-3-60	3.7	2.76	10.8	30.0	20.0	10.0	30.0	72.2	103.7	110
	FAS 180	240-3-60	3.7	2.76	10.8	30.0	20.0	10.0	30.0	72.2	103.7	110
023A00	FAS 150	480-3-60	2.9	2.16	3.8	30.0	20.0	10.0	30.0	36.1	49.9	50
	FAS 150	480-3-60	3.7	2.76	4.9	30.0	20.0	10.0	30.0	36.1	51.2	60
	FAS 180	480-3-60	3.7	2.76	4.9	30.0	20.0	10.0	30.0	36.1	51.2	60
	FAS 180	480-3-60	5.0	3.73	9.1	30.0	20.0	10.0	30.0	36.1	56.5	60
	FAS 240	480-3-60	5.0	3.73	9.1	30.0	20.0	10.0	30.0	36.1	56.5	60
	FAS 240	480-3-60	7.5	5.59	15.0	30.0	20.0	10.0	30.0	36.1	63.9	70
024A00	FAS 150	575-3-60	3.7	2.76	4.5	30.0	20.0	10.0	30.0	30.1	43.3	50
	FAS 150	575-3-60	5.0	3.73	8.0	30.0	20.0	10.0	30.0	30.1	47.7	50
	FAS 180	575-3-60	3.7	2.76	4.5	30.0	20.0	10.0	30.0	30.1	43.3	50
	FAS 180	575-3-60	5.0	3.73	8.0	30.0	20.0	10.0	30.0	30.1	47.7	50
	FAS 240	575-3-60	5.0	3.73	8.0	30.0	20.0	10.0	30.0	30.1	47.7	50
	FAS 240	575-3-60	7.5	5.59	10.0	30.0	20.0	10.0	30.0	30.1	50.2	60
025A00	FAS 180	208-3-60	3.7	2.76	10.8	50.0	22.6	15.0	37.6	104.3	143.8	150
	FAS 180	208-3-60	5.0	3.73	18.0	50.0	22.6	15.0	37.6	104.3	152.8	175
	FAS 240	208-3-60	5.0	3.73	18.0	50.0	22.6	15.0	37.6	104.3	152.8	175
	FAS 240	208-3-60	7.5	5.59	23.5	50.0	22.6	15.0	37.6	104.3	159.7	175
	FAS 180	240-3-60	3.7	2.76	10.8	50.0	30.0	20.0	50.0	120.3	163.9	175
	FAS 180	240-3-60	5.0	3.73	18.0	50.0	30.0	20.0	50.0	120.3	172.9	175
	FAS 240	240-3-60	5.0	3.73	18.0	50.0	30.0	20.0	50.0	120.3	172.9	175
	FAS 240	240-3-60	7.5	5.59	23.5	50.0	30.0	20.0	50.0	120.3	179.7	200

See: "Legend and Notes for Tables 5 and 6" on page 39.

Table 6 - ELECTRIC HEATER DATA - 2-SPEED MOTOR (cont.)

HEATER PART NO. CAELHEAT	SIZE	V-PH-Hz	FAN MOTOR			ELECTRIC HEATER(S)						MCA*	MOCP*
						Nom. Cap. (kW)	Actual Capacity (kW)			FLA			
			Hp	kW	FLA		Stage 1	Stage 2	Total				
026A00	FAS 180	480-3-60	3.7	2.76	4.9	50.0	30.0	20.0	50.0	60.1	81.3	90	
	FAS	480-3-60	5.0	3.73	9.1	50.0	30.0	20.0	50.0	60.1	86.6	90	
	FAS 240	480-3-60	5.0	3.73	9.1	50.0	30.0	20.0	50.0	60.1	86.6	90	
027A00	FAS 180	575-3-60	3.7	2.76	4.5	50.0	30.0	20.0	50.0	50.2	68.4	70	
	FAS	575-3-60	5.0	3.73	8.0	50.0	30.0	20.0	50.0	50.2	72.8	80	
	FAS 240	575-3-60	7.5	5.59	10.0	50.0	30.0	20.0	50.0	50.2	75.3	80	
028A00	FAS	208-3-60	7.5	5.59	23.5	20.0	15.0	-	15.0	41.7	81.5	90	
	FAS 300	208-3-60	10.0	7.46	32.0	20.0	15.0	-	15.0	41.7	92.1	110	
	FAS	240-3-60	10.0	7.46	32.0	20.0	20.0	-	20.0	48.1	100.1	110	
029A00	FAS 300	480-3-60	7.5	5.59	15.0	20.0	20.0	-	20.0	24.1	48.8	50	
	FAS	480-3-60	10.0	7.46	16.0	20.0	20.0	-	20.0	24.1	50.1	60	
030A00	FAS 300	575-3-60	7.5	5.59	10.0	20.0	20.0	-	20.0	20.1	37.6	40	
	FAS	575-3-60	10.0	7.46	13.0	20.0	20.0	-	20.0	20.1	41.4	50	
031A00	FAS 300	208-3-60	7.5	5.59	23.5	40.0	15.0	15.0	30.0	83.4	133.6	150	
	FAS	208-3-60	10.0	7.46	32.0	40.0	15.0	15.0	30.0	83.4	144.2	150	
	FAS 300	208-3-60	7.5	5.59	23.5	40.0	20.0	20.0	30.0	83.4	133.6	150	
032A00	FAS 300	480-3-60	7.5	5.59	15.0	40.0	20.0	20.0	40.0	48.1	78.9	80	
	FAS	480-3-60	10.0	7.46	16.0	40.0	20.0	20.0	40.0	48.1	80.1	90	
	FAS 300	575-3-60	7.5	5.59	10.0	40.0	20.0	20.0	40.0	40.2	62.7	70	
033A00	FAS 300	575-3-60	10.0	7.46	13.0	40.0	20.0	20.0	40.0	40.2	66.5	70	
	FAS	208-3-60	7.5	5.59	23.5	50.0	22.6	15.0	37.6	104.3	159.7	175	
	FAS 300	208-3-60	10.0	7.46	32.0	50.0	22.6	15.0	37.6	104.3	159.7	175	
034A00	FAS 300	208-3-60	7.5	5.59	23.5	50.0	30.0	20.0	37.6	104.3	170.3	175	
	FAS	208-3-60	10.0	7.46	32.0	50.0	30.0	20.0	37.6	104.3	169.7	175	
	FAS 300	480-3-60	7.5	5.59	15.0	50.0	30.0	20.0	50.0	60.1	93.9	100	
035A00	FAS 300	480-3-60	10.0	7.46	16.0	50.0	30.0	20.0	50.0	60.1	95.2	100	
	FAS	575-3-60	7.5	5.59	10.0	50.0	30.0	20.0	50.0	50.2	75.3	80	
	FAS 300	575-3-60	10.0	7.46	13.0	50.0	30.0	20.0	50.0	50.2	79.0	80	
037A00	FAS 300	208-3-60	7.5	5.59	23.5	70.0	30.0	22.6	52.6	145.9	175.3	200	
	FAS	208-3-60	10.0	7.46	32.0	70.0	30.0	22.6	52.6	145.9	185.9	200	
	FAS 300	240-3-60	7.5	5.59	23.5	70.0	40.0	30.0	70.0	168.4	197.8	225	
038A00	FAS 300	240-3-60	10.0	7.46	32.0	70.0	40.0	30.0	70.0	168.4	208.4	225	
	FAS	480-3-60	7.5	5.59	15.0	70.0	40.0	30.0	70.0	84.2	102.9	110	
	FAS 300	480-3-60	10.0	7.46	16.0	70.0	40.0	30.0	70.0	84.2	104.2	110	
039A00	FAS 300	575-3-60	7.5	5.59	10.0	70.0	40.0	30.0	70.0	70.3	82.8	90	
	FAS	575-3-60	10.0	7.46	13.0	70.0	40.0	30.0	70.0	70.3	86.5	90	

See "Legend and Notes for Tables 5 and 6" on page 39.

Legend and Notes for Tables 5 and 6

LEGEND

FLA — Full Load Amps
Hp — Horsepower
MCA — Minimum Circuit Amps
MOCP — Maximum Overcurrent Protection (Amps)

** High Efficiency Motor

* Values shown are for single-point connection of electric heat accessory and air handler.

† Single-phase motors. All other motors are 3-phase.

NOTES:

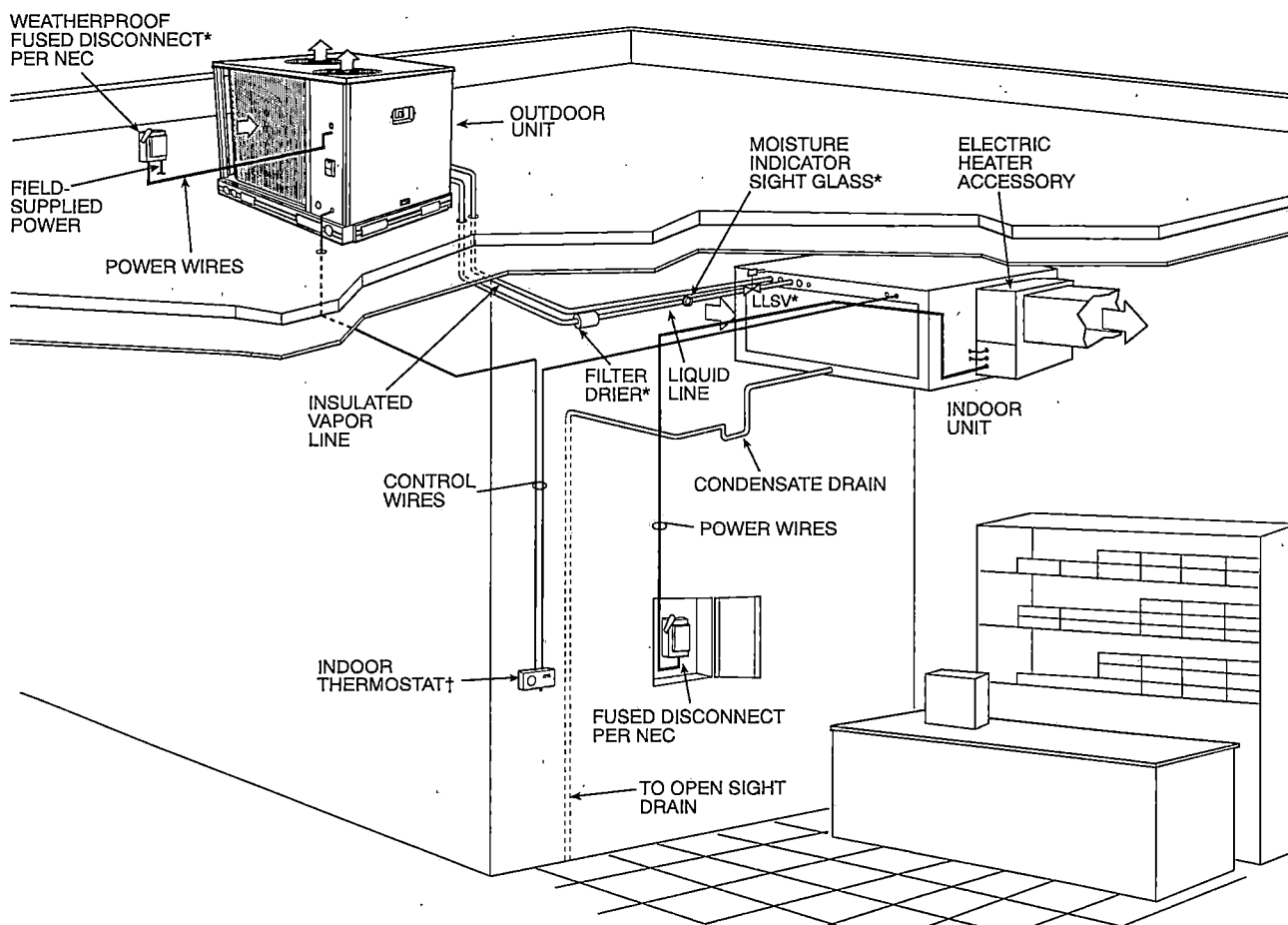
1. Electrical resistance heaters are rated at 240 v, 480 v, or 575 v. To determine heater capacity (kW) at unit nameplate multiply the 240-v, 480-v, or 575-v capacity (kW) by the factor shown in the table below for the unit voltage.

HEATER RATING VOLTAGE	ACTUAL HEATER VOLTAGE										
	200	208	230	240	400	440	460	480	550	575	600
240	0.694	0.751	0.918	1	—	—	—	—	—	—	—
480	—	—	—	—	0.694	0.84	0.918	1	—	—	—
575	—	—	—	—	—	—	—	—	0.915	1	1.089

2. The following equation converts kW of heat energy to Btuh: kW x 3,412 = Btuh.
3. Heater contactor coils are 24 v and require 8 va holding current.
4. Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.
5. MCA and MOCP values apply to both standard and alternate factory-supplied motors.
6. Approximate shipping weight for CAELHEAT001A00-015A00 is 55 lb (25 kg) each. Approximate shipping weight for CAELHEAT016A00-027A00 is 60 lb (27 kg) each, and CAELHEAT028A00-039A00 is 75 lb (34 kg) each.



TYPICAL PIPING AND WIRING



C09054

LEGEND:

NEC — National Electrical Code

TXV — Thermostatic Expansion Valve

* Field-supplied

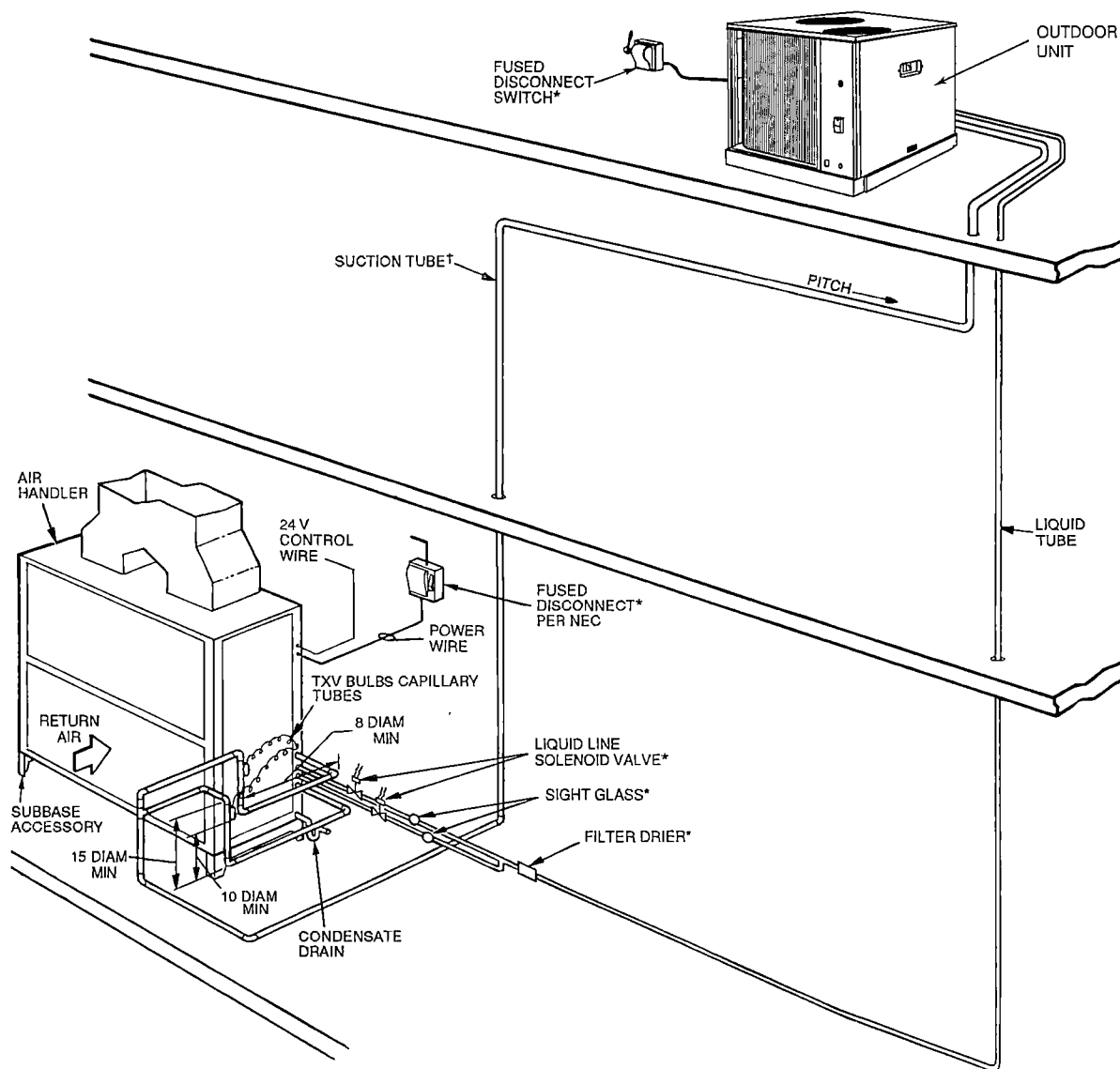
† Double riser may be required. Consult condensing unit product data catalog for details.

NOTES:

1. All piping must follow standard refrigerant piping techniques.
2. All wiring must comply with the applicable local and national codes.
3. Wiring and piping shown are general points-of-connection guides only and are not intended for, or to include all details for, a specific installation.
4. Liquid line solenoid valve (solenoid drop control) is recommended to prevent refrigerant migration to the compressor.
5. Internal factory-supplied TXVs not shown.

TYPICAL PIPING AND WIRING (cont.)

VERTICAL INSTALLATION (TYPICAL)



C150280

LEGEND:

LLSV — Liquid Line Solenoid Valve

NEC — National Electrical Code

TXV — Thermostatic Expansion Valve

* Field-supplied

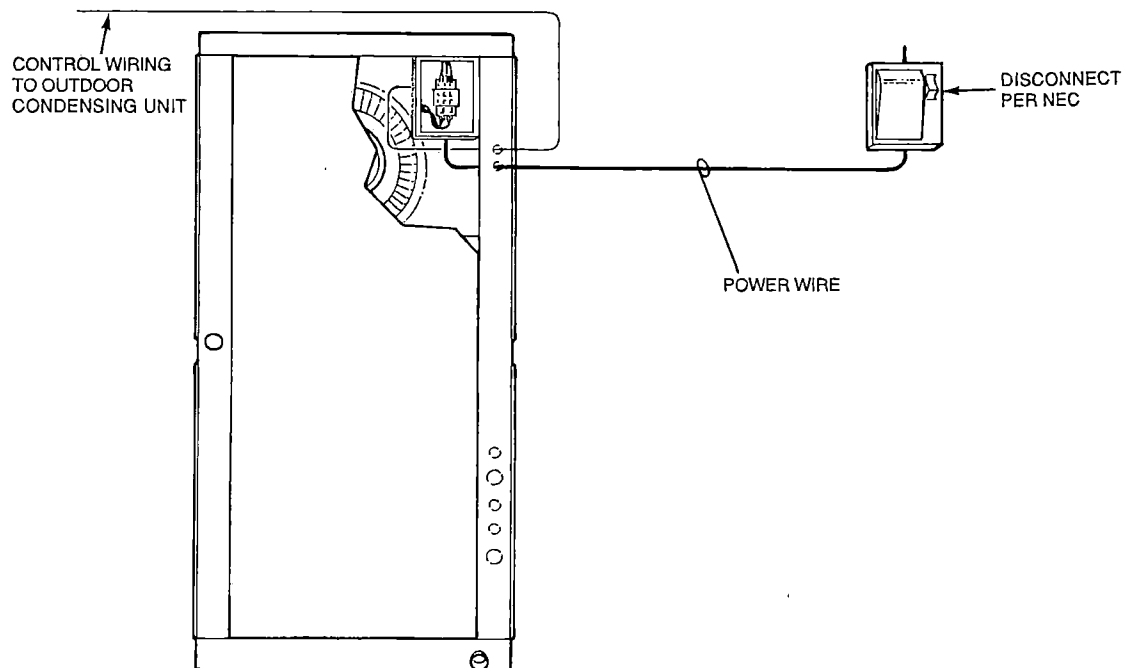
† Double riser may be required Consult condensing unit product data catalog for details.

NOTES:

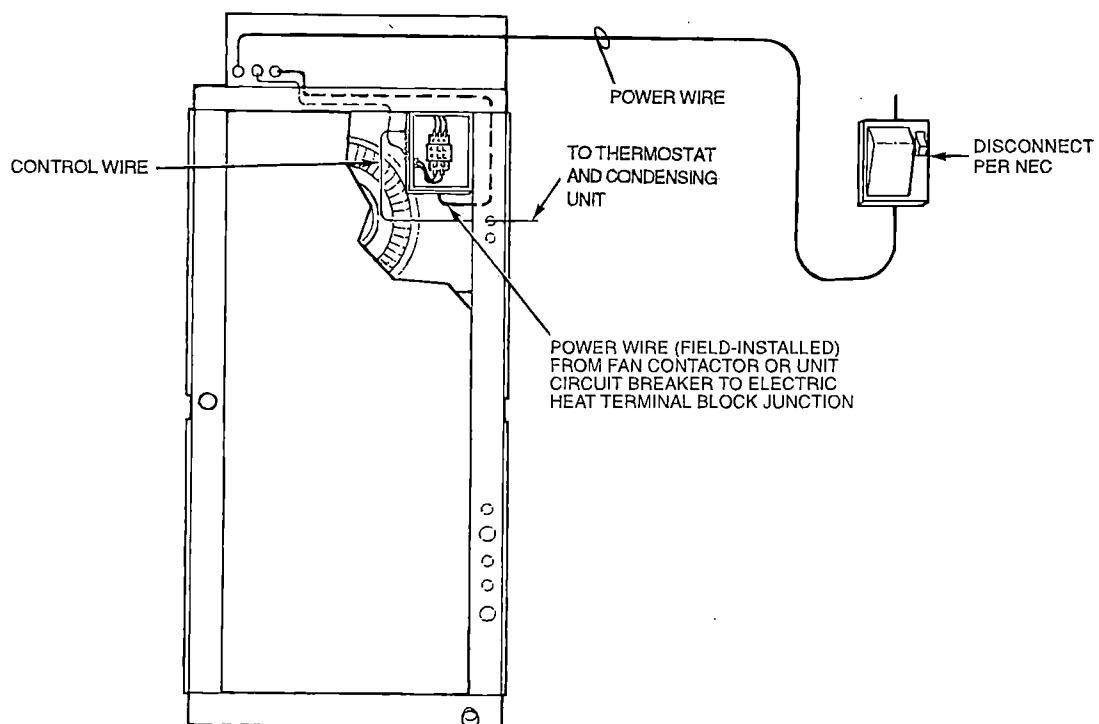
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2. All wiring must comply with the applicable local and national codes.
3. Wiring and piping shown are general points-of-connection guides only and are not intended for, or to include all details for, a specific installation.
4. Liquid line solenoid valve (solenoid drop control) is recommended to prevent refrigerant migration to the compressor.
5. Internal factory-supplied TXVs not shown.

TYPICAL PIPING AND WIRING (cont.)

WIRE ROUTING, BASE UNIT

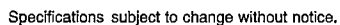


WIRE ROUTING, UNIT WITH ELECTRIC HEAT



C150279

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APPLICATION DATA

General

IMPORTANT: Do not bury refrigerant piping underground.

Select equipment to match or to be slightly less than peak load. This provides better humidity control, less unit cycling, and less part-load operation. Equipment should be selected to perform at no less than 300 cfm/ton (40 L/s per kW).

The air handler fan must always be operating when the condensing unit is operating.

Ductwork should be sized according to unit size, not building load. For larger units with two fans, a split duct transition is recommended at the fan outlets, but a plenum can be used with slight reduction in external static pressure capability.

AUXILIARY SIDE CONNECTOR DATA

UNIT	P/N	INLET/OUTLET DIAMETER — ODF (in.)	AUXILIARY (Hot Gas) DIAMETER — ODF (in.)
072	1178747	1 ¹ / ₈	5 ⁵ / ₈
091	1178748	1 ³ / ₈	7 ⁷ / ₈
120	1178747	1 ¹ / ₈	5 ⁵ / ₈
150	1178747	1 ¹ / ₈	5 ⁵ / ₈
180	1178747	1 ¹ / ₈	5 ⁵ / ₈
240	1178747	1 ¹ / ₈	5 ⁵ / ₈
300	1178748	1 ³ / ₈	7 ⁷ / ₈

FACTORY-INSTALLED NOZZLE AND DISTRIBUTOR DATA

UNIT	COIL TYPE	TXV Qty...Part No.*	DISTRIBUTOR Qty...Part No.†	FEEDER TUBES PER DISTRIBUTOR Qty...Size (in.)	NOZZLE Qty...Part No.
072	4 Row	1...TDEBX8	1...1116	12... ¹ / ₄	1...E5
091	4 Row	1...TDEBX8	1...1126	15... ¹ / ₄	1...C6
120	4 Row	2...TDEX6	2...1115	9... ¹ / ₄	2...E4
150	4 Row	2...TDEBX8	2...1115	12... ³ / ₁₆	2...E5
180	4 Row	2...TDEBX8	2...1126	16... ¹ / ₄	2...C6
240	4 Row	2...TDEBX11	2...1126	18... ³ / ₁₆	2...C8
300	4 Row	2...TDEBX11	2...1126	20... ³ / ₁₆	2...C15

LEGEND

TXV — Thermostatic Expansion Valve

* Danfoss part numbers shown.

† Sporlan Valve Co. part numbers shown.

NOTE: Hot gas bypass applications require field-supplied auxiliary side connector.

APPLICATION DATA (cont.)

FAN MOTOR DATA STANDARD MOTOR Single Speed

FAS UNIT	072	091	120	150	180	240	300
208/230-1-60							
Speed (rpm)	1725	1725	—	—	—	—	—
Hp	1.3	2.4	—	—	—	—	—
Frame (NEMA)	56Y	56Y	—	—	—	—	—
Shaft Dia (in.)	$\frac{5}{8}$	$\frac{5}{8}$	—	—	—	—	—
230-3-60 and 460-3-60							
Speed (rpm)	1750	1750	1750	1750	1750	1755	1760
Hp	2.4	2.4	2.4	2.9	3.7	5.0	7.5
Frame (NEMA)	56Y	56Y	56Y	56Y	56HZ	184T	S213T
Shaft Dia (in.)	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{3}{8}$
575-3-60							
Speed (rpm)	1725	1725	1725	1725	1725	1755	1750
Hp	1.0	2.0	2.0	3.0	3.0	5.0	7.5
Frame (NEMA)	56	56HZ	56HZ	56HZ	56HZ	184T	S213T
Shaft Dia (in.)	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{3}{8}$

LEGEND:

NEMA — National Electrical Manufacturers Association (U.S.A.)

FAN MOTOR DATA ALTERNATE MOTOR Single Speed

FAS UNIT	072	091	120	150	180	240	300
208/230-1-60							
Speed (rpm)	1725	1725	—	—	—	—	—
Hp	2.4	2.4	—	—	—	—	—
Frame (NEMA)	56Y	56Y	—	—	—	—	—
Shaft Dia (in.)	$\frac{5}{8}$	$\frac{5}{8}$	—	—	—	—	—
230-3-60 and 460-3-60							
Speed (rpm)	1750	1750	1750	1750	1755	1760	1755
Hp	2.9	2.9	3.7	3.7	5.0	7.5	10.0
Frame (NEMA)	56Y	56Y	56HZ	56HZ	184T	S213T	S215T
Shaft Dia (in.)	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$
575-3-60							
Speed (rpm)	1725	1725	1725	1745	1745	1755	1750
Hp	2.0	3.0	3.0	5.0	5.0	7.5	10.0
Frame (NEMA)	56HZ	56HZ	56HZ	184T	184T	S213T	S215T
Shaft Dia (in.)	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$

LEGEND:

NEMA — National Electrical Manufacturers Association (U.S.A.)

MOTOR EFFICIENCY FAS

MOTOR HP	EPACT MINIMUM	MOTOR EFFICIENCY
1.3*	—	70%
2.4	—	76.8%
2.9	—	77.1%
3.7	—	81.5%
5.0	89.5%	89.5%
7.5	91.7%	91.7%
10.0	91.7%	91.7%

LEGEND:

EPACT — Energy Policy and Conservation Act of 1992

* Single-phase only.

APPLICATION DATA (cont.)

FAN MOTOR DATA STANDARD MOTOR Two Speed

FAS UNIT	091	120	150	180	240	300
208/230—3—60 and 460—3—60						
Speed (rpm)	1680	1680	1735	1750	1755	1760
Hp	2.4	2.4	2.9	3.7	5.0	7.5
Frame (NEMA)	56HY	56HY	56HY	56HY	184T	S213T
Shaft Dia (in.)	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{3}{8}$
575-3-60						
Speed (rpm)	1680	1680	1710	1710	1755	1750
Hp	2.4	2.4	3.7	3.7	5.0	7.5
Frame (NEMA)	56HY	56HY	56HY	56HY	184T	S213T
Shaft Dia (in.)	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{3}{8}$

FAN MOTOR DATA ALTERNATE MOTOR Two Speed

FAS UNIT	091	120	150	180	240	300
208/230—3—60 and 460—3—60						
Speed (rpm)	1750	1750	1750	1755	1760	1755
Hp	3.7	3.7	3.7	5.0	7.5	10.0
Frame (NEMA)	56HY	56HY	56HY	184T	S213T	S215T
Shaft Dia (in.)	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$
575-3-60						
Speed (rpm)	1710	1710	1755	1755	1750	1755
Hp	3.7	3.7	5.0	5.0	7.5	10.0
Frame (NEMA)	56HY	56HY	184T	184T	S213T	S215T
Shaft Dia (in.)	$\frac{7}{8}$	$\frac{7}{8}$	$1\frac{1}{8}$	$1\frac{1}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$

MOTOR EFFICIENCY FAS – Two Speed Motor

MOTOR HP	EPACT MINIMUM	MOTOR EFFICIENCY
2.4	—	80.0%
2.9	—	86.5%
3.7	—	83.6%
5.0	89.5%	89.5%
7.5	91.7%	91.7%
10.0	91.7%	91.7%

LEGEND:

EPACT — Energy Policy and Conservation Act of 1992

APPLICATION DATA (cont.)

STANDARD DRIVE DATA, 60 Hz

FAS UNIT	072	091	120	150	180	240	300
MOTOR DRIVE							
Motor Pulley Pitch Diameter (in.)	2.4-3.4	2.8-3.8	3.4-4.4	2.8-3.8	2.8-3.8	3.7-4.7	4.3-5.3
Pulley Factory Setting Full Turns Open	2.5	2.5	2.5	2.5	2.5	3.0	3.0
FAN DRIVE							
Pulley Pitch Dia (in.)	8.8	8.8	8.8	9.0	9.0	9.4	11.0
Pulley Bore (in.)	1	1	1	1 ⁷ / ₁₆	1 ⁷ / ₁₆	1 ⁷ / ₁₆	1 ¹⁵ / ₁₆
Belt No. — Section	1—A	1—A	1—A	1—A	1—A	1—B	2—B [†]
Belt Pitch (in.)	40.3	41.3	42.3	42.3	42.3	41.8	(2) 42.8 (2) 43.8
FAN SPEEDS (rpm)							
Factory Settings	568	647	764	632	632	771	752
Range	470-666	549-745	666-863	537-728	537-728	679-863	682-841
Max Allowable Speed (rpm)	1200	1200	1200	1200	1200	1200	1100
Change per 1/2 turn of Moveable Motor Pulley Flange	19.6	19.6	19.7	19.1	19.1	15.3	13.1
MAX FULL TURNS FROM CLOSED POSITION	5	5	5	5	5	6	6
SHAFTS CENTER DISTANCE (in.)	10.44-12.32					9.12-10.99	6.67-9.43

[†] Four belts shipped with unit. Use correct set of 2 belts sized according to the pulley setting.

MEDIUM-STATIC DRIVE DATA, 60 Hz

FAS UNIT	072	091	120	150	180	240	300
MOTOR DRIVE							
Motor Pulley Pitch Diameter (in.)	3.4-4.4	3.4-4.4	3.4-4.4	3.4-4.4	3.7-4.7	4.3-5.3	4.3-5.3
Pulley Factory Setting Full Turns Open	2.5	2.5	2.5	2.5	3.0	3.0	3.0
FAN DRIVE							
Pulley Pitch Dia (in.)	8.8	8.0	8.0	8.2	8.6	9.4	9.4
Pulley Bore (in.)	1	1	1	1 ⁷ / ₁₆	1 ⁷ / ₁₆	1 ⁷ / ₁₆	1 ¹⁵ / ₁₆
Belt No. — Section	1—A	1—A	1—A	1—A	1—B	1—B	2—B [†]
Belt Pitch (in.)	42.3	40.3	40.3	41.3	41.8	41.8	(2) 38.8 (2) 39.8
FAN SPEEDS (rpm)							
Factory Setting	764	841	841	820	842	881	881
Range	666-863	733-949	733-949	715-926	742-943	798-984	798-984
Max Allowable Speed (rpm)	1200	1200	1200	1200	1200	1200	1100
Change per 1/2 Turn of Moveable Motor Pulley Flange	19.7	21.6	21.6	21.1	16.7	15.3	15.3
MAX FULL TURNS FROM CLOSED POSITION	5	5	5	5	6	6	6
SHAFTS CENTER DISTANCE (in.)	10.44-12.32					9.16-10.99	6.67-9.43

[†] Four belts shipped with unit. Use correct set of 2 belts sized according to the pulley setting.

APPLICATION DATA (cont.)

HIGH-STATIC DRIVE DATA, 60 Hz

FAS UNIT	072	091	120	150	180	240	300
MOTOR DRIVE							
Motor Pulley Pitch Diameter (in.)	3.4-4.4	3.4-4.4	3.4-4.4	3.7-4.7	4.3-5.3	4.3-5.3	4.3-5.3
Pulley Factory Setting Full Turns Open	2.5	2.5	2.5	3.0	3.0	3.0	3.0
FAN DRIVE							
Pulley Pitch Dia (in.)	7.0	6.0 [‡]	6.0	7.4	7.9	7.4	8.6
Pulley Bore (in.)	1	1	1	1 ⁷ / ₁₆	1 ⁷ / ₁₆	1 ⁷ / ₁₆	1 ¹⁵ / ₁₆
Belt No. — Section	1—A	1—A	1—A	1—B	1—B	2—B	2—B
Belt Pitch (in.)	41.3	37.3	37.3	39.8	39.8	36.8	37.8
FAN SPEEDS (rpm)							
Factory Setting	961	1121	1121	979	1060	1118	1024
Range	838-1084	978-1200 [†]	978-1200 [†]	873-1096	950-1171	1014-1200 [†]	873-1075
Max Allowable Speed (rpm)	1200	1200	1200	1200	1200	1200	1100
Change per 1/2 Turn of Moveable Motor Pulley Flange	24.6	28.7	28.7	19.4	18.4	19.4	16.7
MAX FULL TURNS FROM CLOSED POSITION	5	5	5	6	6	6	6
SHAFTS CENTER DISTANCE (in.)	10.44-12.32			10.44-12.32 ^{**}	9.16-10.99	8.16-10.02	6.67-9.43

[‡] Values for 3-phase motor shown. For single-phase motor, pulley pitch diameter is 7 in. and resulting fan speed is 837-1096 rpm.

[†] It is possible to adjust drive so that fan speed exceeds maximum allowable. DO NOT exceed 1200 rpm.

^{**} 575-v unit has a center distance of 9.16-10.99.

GUIDE SPECIFICATIONS

Commercial Packaged Air-Handling Unit

HVAC Guide Specifications

Size Range: 2,400 to 10,000 Cfm, Nominal Airflow, 6 to 25 Tons, Nominal Cooling

Model Numbers: FAS (Direct-Expansion Coil)

Part 1 — GENERAL

1.01 SYSTEM DESCRIPTION

- A. Indoor, packaged air-handling unit for use in commercial split systems. Unit shall have a multi-position design and shall be capable of horizontal or vertical installation on a floor or in a ceiling, with or without ductwork. (Only vertical units are to be applied without ductwork.)
- B. Unit with direct-expansion coil shall be used in a refrigerant circuit with a matching air-cooled condensing unit.

1.02 QUALITY ASSURANCE

- A. Coils shall be designed and tested in accordance with ASHRAE 15 Safety Code for Mechanical Refrigeration (U.S.A.), latest edition.
- B. Unit shall be constructed in accordance with ETL (U.S.A.) and ETL, Canada, standards and shall carry the ETL and ETL, Canada, labels.
- C. Unit insulation and adhesive shall comply with NFPA-90A (U.S.A.) requirements for flame spread and smoke generation. Insulation shall contain an EPA-registered immobilized antimicrobial agent to effectively resist the growth of bacteria and fungi as proven by tests in accordance with ASTM standards G21 and 22 (U.S.A.).
- D. Unit shall be manufactured in a facility registered to the ISO 9001 manufacturing quality standard.
- E. Direct-expansion coils shall be burst and leak tested at 435 psi.

1.03 DELIVERY AND STORAGE

Units shall be stored and handled per manufacturer's recommendations.

Part 2 — PRODUCTS

2.01 EQUIPMENT

Indoor mounted, draw-thru, packaged air-handling unit that can be used in a suspended horizontal configuration or a vertical configuration. Unit shall consist of forward-curved belt-driven centrifugal fan(s), motor and drive assembly, pre-wired fan motor contactor, factory-installed refrigerant metering devices (direct-expansion coil units), cooling coil, 2-in. (51-mm) disposable air filters, and condensate drain pans for vertical or horizontal configurations.

A. Base Unit:

- 1. Cabinet shall be constructed of mill-galvanized steel.
- 2. Cabinet panels shall be fully insulated with $\frac{1}{2}$ -in. (12.7-mm) fire-retardant material. Insulation shall contain an EPA-registered immobilized antimicrobial agent to effectively resist the growth of bacteria and fungi as proven by tests in accordance with ASTM standards G21 and 22 (U.S.A.).
- 3. Unit shall contain non-corroding condensate drain pans for both vertical and horizontal applications. Drain pans shall have connections on right and left sides of unit to facilitate field connection. Drain pans shall have the ability to be sloped toward the right or left side of the unit to prevent standing water from accumulating in pans.
- 4. Unit shall have factory-supplied 2-in. (51 mm) throwaway-type filters installed upstream from the cooling coil. Filter access shall be from either the right or left side of the unit.

B. Coils:

DX coil is 4-row and consists of copper tubes with sine-wave aluminum fins bonded to the tubes by mechanical expansion. Suction and liquid line connections or supply and discharge connections shall be made on the same side of the coil.

- 1. Direct-expansion coils shall feature factory installed thermostatic expansion valves (TXVs) for refrigerant control. The TXVs shall be R-410A compatible and capable of external adjustment. Coil tubing shall be internally rifled to maximize heat transfer. The FAS300 have 1179823 TXVs. These are Sporlan BBIZE-15-GA-BP5 which have a 5% bleed.

C. Operating Characteristics:

- 1. When combined with matching 569J condensing unit the system shall be capable of starting and running at ambient outdoor temperatures from 35°F (2°C) to 125°F (52°C) in cooling mode and from -10°F (-23°C) to 60°F (16°C) in heating mode.
- 2. Unit shall operate at +/- 10% from rated voltage.

D. Motor:

- 1. Fan motor of the size and electrical characteristics specified on the equipment schedule shall be factory supplied and installed.

2. Motors rated at 1.3 through 3.7 hp shall have inherent thermal overload protection. Motors rated at 5 hp shall be protected by a circuit breaker.
3. Evaporator-fan motor shall have permanently lubricated, sealed bearings and inherent automatic-reset thermal overload protection or manual reset calibrated circuit breakers. Evaporator motors are designed specifically for ICP and do not have conventional horsepower (hp) ratings listed on the motor nameplate. Motors are designed and qualified in the "air-over" location downstream of the cooling coil and carry a maximum continuous bhp rating that is the maximum application bhp rating for the motor; no "safety factors" above that rating may be applied.
4. All evaporator-fan motors 5 hp and larger shall meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT), effective October 24, 1997.

E. Special Features:

1. Alternate Motor and Drive:

An alternate motor and/or medium-static or high-static drive shall be available to meet the airflow and external static pressure requirements specified on the equipment schedule.

2. External Paint:

Where conditions require, units shall be painted with an American Sterling Gray finish.

3. Hot Water Coil:

Coil shall be 2-row, U-bend coil with copper tubes and aluminum plate fins bonded to the tubes by mechanical expansion. Coil shall be mounted in a galvanized steel housing that shall be fastened to the unit's fan deck for blow-thru heating operation. Coil shall have maximum working pressure of 150 psig.

4. Steam Distributing Coil:

Coil shall consist of one row of copper tubes with aluminum plate fins, and shall have inner steam distributing tubes. Coil shall be mounted in a galvanized steel housing and shall be fastened to the unit's fan deck for blow-thru heating operation. Coil shall have maximum working pressure of 20 psig at 260°F.

5. Electric Heaters:

Heaters for nominal 240, 480, or 575-volt, 3-phase, 60 Hz shall be factory-supplied for field installation as shown on the equipment drawings. Electric heat assembly shall be ETL (U.S.A.) and ETL, Canada, agency approved, and shall have single-point power wiring. Heater assembly shall include contactors with 24-v coils, power wiring, 24-v control wiring terminal blocks, and a hinged access panel. Electric heaters shall not be used with air discharge plenum.

6. Air Discharge Plenum:

Plenum shall be factory-supplied to provide free-blow air distribution for vertical floor-mounted units. A grille with moveable vanes for horizontal or vertical airflow adjustment shall be included. Plenum shall be field-assembled and field-installed on the unit's fan deck for blow-thru air distribution. Plenum shall not be used with electric heaters.

7. Return-Air Grille:

Grille shall be factory-supplied for field installation on the unit's return air opening.

8. Unit Subbase:

Subbase assembly shall be factory-supplied for field installation. Subbase shall elevate floor-mounted vertical units to provide access for correct condensate drain connection.

9. Economizers:

a. Accessory **Ultra LOW LEAK** EconoMi\$er X. (Field installed)

Economizer for ventilation or "free" cooling shall be factory provided for field installation on either return air opening of air handler.

- (1.) Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
- (2.) Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
- (3.) Shall include all hardware, actuator and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
- (4.) Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control
- (5.) Ultra LOW LEAK design meets California Title 24 section 140.4 and ASHRAE90.1 requirements for 4 cfm per sq.ft. on the outside air dampers and 10 cfm per sq. ft. on the return dampers.
- (6.) Economizer controller on EconoMi\$er X models shall be the Honeywell W7220 that provides:
 - i. 2---line LCD interface screen for setup, configuration and troubleshooting
 - ii. On---board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24.
 - iii. Sensor failure loss of communication identification
 - iv. Automatic sensor detection

- v. Capabilities for use with multiple—speed indoor fan systems
 - vi. Utilizing digital sensors: Dry bulb and Enthalpy. Accessory comes standard with dry bulb sensing.
 - vii. Field installing enthalpy sensor required.
- b. Accessory Standard Leak EconoMi\$er IV (Field installed)
- Economizer for ventilation or “free” cooling shall be factory provided for field installation on either return air opening of air handler.
- (1.) Integrated, gear driven opposing modulating blade design type capable of simultaneous economizer and compressor operation.
 - (2.) Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable.
 - (3.) Shall include all hardware, actuator and controls to provide free cooling with outdoor air when temperature and/or humidity are below setpoints.
 - (4.) Shall be equipped with gear driven dampers for both the outdoor ventilation air and the return air for positive air stream control
 - (5.) Standard leak rate shall be equipped with dampers not to exceed 2% leakage at 1 in. wg pressure differential.
 - (6.) Economizer controller on EconoMi\$er IV models shall be Honeywell W7212 that provides:
 - i. Combined minimum and DCV maximum damper position potentiometers with compressor staging relay.
 - ii. Functions with solid state analog enthalpy or dry bulb changeover control sensing.
 - iii. Contains LED indicates for:
 - when free cooling is available, when module is in DCV mode, when exhaust fan is closed.
10. Overhead Suspension Package:
Package shall include necessary brackets to support units in a horizontal ceiling installation.
11. CO₂ Sensor:
Sensor shall provide the ability to signal the economizer to open when the space CO₂ level exceeds the predetermined setpoint.
12. Condensate Drain Trap:
Trap shall have transparent, serviceable design for easy cleaning. Kit shall include overflow shutoff switch and wiring harness for connection to an alarm if desired.
13. 2-Speed Indoor Fan Motor system for 2-stage cooling models only:
Evaporator fan motor:
Shall have permanently lubricated bearings.
Shall have a maximum continuous bhp rating for continuous duty operation; no safety factors above that rating.
Shall be Variable Frequency duty and 2-speed control.
Shall contain motor shaft grounding ring to prevent electrical bearing fluting damage by safely diverting harmful shaft voltages and bearing currents to ground.
14. Variable Frequency Drive (VFD). Only available on 2-Speed Indoor Fan Motor system units:
Shall be installed inside the unit cabinet, mounted, wired and tested.
Shall contain Electromagnetic Interference (EMI) frequency protection.
Insulated Gate Bi-Polar Transistors (IGBT) used to produce the output pulse width modulated (PWM) waveform, allowing for quiet motor operation.
Self diagnostics with fault and power code LED indicator. Field accessory Display Kit available for further diagnostics and special setup applications.
RS485 capability standard.
Electronic thermal overload protection.
5% swinging chokes for harmonic reduction and improved power factor.
All printed circuit boards shall be conformal coated.

