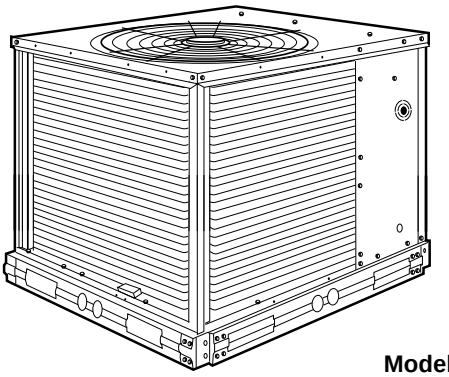
Bryant
Air Conditioning

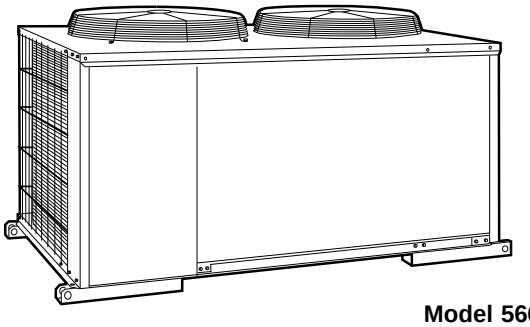
COMMERCIAL AIR-COOLED CONDENSING UNITS WITH 524A AIR-HANDLING UNITS

Models 566D 569C,576B with 524A

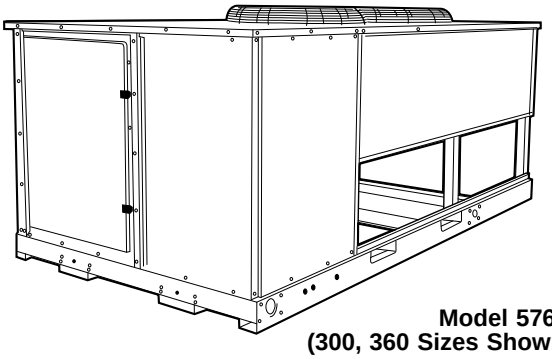
6 to 30 Tons



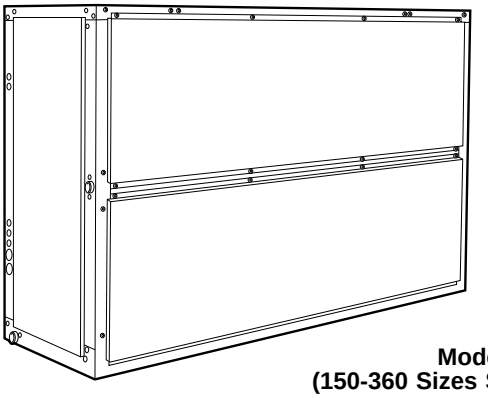
Model 569C



Model 566D



Model 576B
(300, 360 Sizes Shown)



Model 524A
(150-360 Sizes Shown)

DESCRIPTION

Model 569C condensing units are available in nominal 6- to 10-ton sizes; Model 566D condensing units are available in nominal 10- to 20-ton sizes; Model 576B condensing units are available in nominal 7½- to 10-ton, 25-ton, and 30-ton sizes. All three model series are high-quality units that provide high operating efficiency, low sound ratings, and years of trouble-free operation.

When matched with model 524A air handlers, the 569C, 566D, and 576B Series units provide split systems for a wide variety of applications.

STANDARD FEATURES

HIGHLY EFFICIENT HERMETIC (569C) AND SEMI-HERMETIC (566D, 576B) COMPRESSORS are engineered for long life and durability. Compressors include overload protection and vibration isolation for quiet operation. Semi-hermetic compressors in units of 10 tons and higher have standard unloaders to increase efficiency and comfort levels.

HIGH-PRESSURE SWITCH protects the system from abnormally high operating pressures.

LOW-PRESSURE SWITCH protects the system from low-pressure conditions including loss of charge.

OIL PRESSURE SWITCH (576B300,360 Units) ensures compressor crankcase oil pressure does not drop below safe operating levels. Oil switch is manually reset.

TIME GUARD® device provides a 5-minute delay in compressor operation between cooling cycles. This protects compressor against short cycling.

HIGH UNIT EERs (Energy Efficiency Ratios) mean cooling energy savings.

24-V CONTROL CIRCUIT TRANSFORMER permits quick, easy wiring of standard and programmable 24-v thermostats.

PREPAINTED STEEL CABINETS ensure attractive appearance, long life, and corrosion resistance.

AGENCY APPROVALS ensure unit has been designed to the latest safety standards of UL (Underwriters' Laboratories), CSA (Canadian Standards Association), ETL (Electrical Testing Laboratory), and ETLC (Electrical Testing Laboratory, Canada).

REFRIGERANT FILTER DRIER (569C, 576B090-120 Units) traps system dirt and moisture for trouble-free operation.

ROLL-FORMED BASE RAIL (569C, 576B090-120 Units) features forklift slots and rigging holes for easy moving and installation.

CYCLE-LOC™ CONTROLS (569C, 576B090-120 Units) monitor compressor power and prevent compressor from starting during high- or low-pressure conditions.

HIGH EFFICIENCY COPPER TUBE-ALUMINUM FIN OUTDOOR COIL construction provides years of trouble-free operation. Internally grooved copper tube for more efficient heat transfer. Optional copper fins are available.

CRANKCASE HEATERS (566D,576B Units) eliminate liquid slugging at unit start-up.

Form No. PDS 569C.72.5B

FIELD-INSTALLED ACCESSORY DESCRIPTION AND USAGE

Gage Panel — Package includes suction and head pressure gages, mounting bracket, fittings, and hardware.

SUGGESTED USE:

- When easy and quick reading of system operating pressures is desired.

Low Ambient Kit — Kit consists of electronic control and condenser-coil temperature sensor to regulate the condenser fan motor in order to maintain condenser-coil head pressure for proper cooling operation.

SUGGESTED USE:

- Whenever cooling is required at low outdoor ambient temperatures (as low as –20 F).

Winter-Start Relay Package — Package consists of time-delay.

SUGGESTED USE:

- For timed bypass of low-pressure switch on start-up during low ambient conditions. (Not required for 576B300,360 units.)

Thermostat and Subbase — Accessories consist of a temperature regulating device with a separate mounting support.

SUGGESTED USE:

- For cooling control of condensing unit.

Condenser Coil Guard Assembly (569C, 576B090-120, 566D Units) — Package consists of a coil grille which attaches to the condenser coil.

SUGGESTED USE:

- To protect the condenser coil from damage by large objects or vandalism.

Condenser Coil Hail Guard Assembly (569C, 576B090-120 Units) — Package consists of a hood and coil grille which attach to the condenser coil.

SUGGESTED USE:

- To protect the condenser coil from hail and other debris.

Pressure-Operating Unloader (566D120-180 Units) — Package includes cylinder head, valve plate, unloader valve, and hardware.

SUGGESTED USE:

- To add additional step of unloading. Provides maximum comfort and energy efficiency at partial loads.

Electric Solenoid Unloader Conversion Package (576B120, 566D, and 576B300,360 Units) — Accessory consists of unloader valve, piston, and hardware. Note that coil is sold as a separate accessory.

SUGGESTED USE:

- To convert any pressure-operated unloader to electric unloading.

Hot Gas Bypass Kit (576B300,360 Units) — Accessory contains valve and hardware to maintain constant suction pressure.

SUGGESTED USE:

- To prevent the indoor coil from freezing during low airflow or low return air temperature conditions.

Part Winding Start Relay (576B300,360 Units) — Accessory reduces inrush current and locked rotor amps during unit start-up.

SUGGESTED USE:

- On 208/230 V, 3 Ph, 60 Hz units only, reduces start-up loads.

CONTENTS

524A AIR-HANDLING UNIT STANDARD FEATURES

MULTIPOISE DESIGN can be installed horizontally or vertically without modification. Accessory suspension packages and subbases are available for floor or ceiling mounting. Coil connection access is provided on both sides of the unit, and drain connections are provided for both horizontal and vertical applications.

INDOOR AIR QUALITY is promoted by cleanable insulation treated with an EPA-registered antimicrobial agent, 2-in. deep filters, and sloped drain pans. When used with an accessory CO_2 sensor, the economizer accessory can be used to admit extra fresh air into the building if necessary.

RUGGED DEPENDABILITY is provided by the die-formed galvanized steel casings, galvanized steel internal components (including fan scrolls and coil casings) and mechanically bonded coil fins.

EASIER INSTALLATION AND SERVICE help you to get the unit installed and running quickly. The direct expansion (DX) coils have thermostatic expansion valves (TXVs) with matching distributor nozzles. Units can be converted from horizontal to vertical operation by simply repositioning the unit. Drain pan connections are duplicated on both sides of the unit, and drain pans can be pitched for right- or left-hand operation with a simple adjustment. The fan motor and fan contactor are prewired. The filters, motor, drive, TXVs, and coil connections are all easily accessed by removing a single side panel.

ECONOMICAL OPERATION saves money by reducing installation expense and providing ongoing energy-efficient performance. Coils have mechanically bonded fins for improved heat transfer. The high efficiency, precision-balanced fans minimize surging and unbalanced operation to reduce operating expenses. When the outside air enthalpy is suitable, the economizer accessory can admit outside air to provide ''free'' cooling. Accessory hot water and steam coils and electric heaters are mounted directly on the fan deck for easy installation.

524A FACTORY-INSTALLED OPTION DESCRIPTION AND USAGE

Alternate Fan Motors and Drives are available to provide the widest possible range of performance. In addition to the drive supplied for standard static pressure applications, drives for medium and high static applications are also available. An alternate motor is also available for use with the high-static drive.

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

524A FIELD-INSTALLED ACCESSORY DESCRIPTION AND USAGE

Two-Row Hot Water Coils have 5⁄8-in. diameter copper tubes mechanically bonded to aluminum plate fins. The coils have non-ferrous headers.

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 steam coil has a broad operating pressure range; up to 175 psig at 400 F. IDT steam coils are especially suited to applications where sub-freezing air enters the unit.

Electric Resistance Heat Coil has a multi-stage, open-wire design and is mounted in a rigid frame. Safety cutouts for high temperature conditions are standard.

Economizer (Enthalpy Controlled) provides ventilation air and provides ''free'' cooling if outside ambient temperature and humidity are suitable. Can also be used in conjunction with thermostats and CO_2 sensors to help meet indoor air quality requirements.

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.

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 connection for floor-mounted units. Accessory is available unpainted or painted.

Overhead Suspension Package includes necessary brackets to support units in horizontal ceiling installations.

CO_2 Sensor 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 CO_2 level in the space exceeds the set point.

MODEL DESCRIPTIONS

569C P X 072 000 AA

569C — Commercial Air-Cooled Condensing Unit With Hermetic Compressor

Voltage Designation
E — 460-3-60
P — 208/230-3-60

Heating
X — None

Nominal Tons Cooling
072 — 6
090 — 7 1/2
120 — 10

Factory-Installed Options
AA — No Options
RA — Copper Fins on Coils

Heating Capacity
000 — No Heat

566D E X 120 000 AA

566D — Commercial Air-Cooled Condensing Unit With Semi-Hermetic Compressor

Voltage Designation
E — 460-3-60
P — 208/230-3-60
T — 575-3-60 (240 Size Only)

Heating
X — None

Nominal Tons Cooling
120 — 10
150 — 12 1/2
180 — 15
240 — 20

Factory-Installed Options
AA — None

Heating Capacity
000 — No Heat

576B P X 300 000 AA

576B — Commercial Air-Cooled Condensing Unit With Semi-Hermetic Compressor

Voltage Description
E — 460-3-60
P — 208/230-3-60
T — 575-3-60 (090-120 sizes only)

Heating
X — None

Nominal Tons Cooling
090 — 7 1/2
102 — 8 1/2
120 — 10
300 — 25
360 — 30

Factory-Installed Options
AA — None

Heating Capacity
000 — No Heat

Quality Assurance

Carrier Corporation
UL REGISTERED FIRM ISO 9002 #A2260

Approvals:
ISO 9002
EN 29002
BS5750 PART 2
ANSI/ASQC Q92

566D; 576B300,360 UNITS

Quality Assurance

UL REGISTERED FIRM ISO 9002 #A2325

Approvals:
ISO 9002
EN 29002
BS5750 PART 2
ANSI/ASQC Q92

569C; 576B090-120 UNITS

MODEL DESCRIPTIONS (cont)

524A P B 120 000 GC

524A — Fan Coil

Voltage
E — 460-3-60
J — 208/230-1-60
(sizes 072, 090 only)
P — 208/230-3-60
T — 575-3-60

Coil Option
B — DX Cooling coil with TXVs

Nominal Cooling (Tons)
072 — 6
090 — 7 1/2
120 — 10
150 — 12 1/2
180 — 15
240 — 20
300 — 25
360 — 30

Nominal Heating (Btuh)
(Not applicable to 524A-B)
000 — 524A-B units

Factory-Installed Options

GC — Unpainted, Standard Motor and Standard Drive

HC — Unpainted, Standard Motor and Medium-Static Drive (not available for 300 size)

TC — Unpainted, Alternate Motor and Medium-Static Drive (300 size only)

YC — Unpainted, Alternate Motor and High-Static Drive*

ED — Painted, Standard Motor and Standard Drive

FD — Painted, Standard Motor and Medium-Static Drive (not available for 300 size)

RD — Painted, Alternate Motor and Medium-Static Drive (300 size only)

WD — Painted, Alternate Motor and High-Static Drive*

Quality Assurance

Carrier Corporation
UL REGISTERED FIRM
ISO 9002 #A2260

Approvals:
ISO 9002
EN 29002
BS5750 PART 2
ANSI/ASQC Q92

LEGEND

TXV — Thermostatic Expansion Valve

*The YC and WD option codes for all 360 size units and 090 size units with 208/230-1-60 voltage designate standard motor and high-static drive.

ARI CAPACITIES

569C UNITS

UNIT 569C	INDOOR UNIT	EVAPORATOR AIRFLOW (Cfm)	SYSTEM		CONDENSING UNIT ONLY*	
			Net Cap. (Btuh)†	EER†	Capacity (Btuh)	EER
072	524A072 524A090	2400 2600	71,000 74,000	9.8 9.9	75,000	11.1
090	524A072 524A090 524A120	2400 3000 3450	84,000 90,000 93,000	9.1 9.3 9.3	97,000	10.7
120	524A120 524A150	4000 4650	120,000 124,000	9.0 9.3	129,000	10.2

LEGEND

ARI — Air Conditioning and Refrigeration Institute
EER — Energy Efficiency Ratio

*Rated at 45 F saturated suction temperature and 95 F entering-air temperature.
†Rated in accordance with ARI Standard 210/240-89.

566D UNITS

UNIT 566D	INDOOR UNIT	EVAPORATOR AIRFLOW (Cfm)	SYSTEM		CONDENSING UNIT ONLY*	
			Net Cap. (Btuh)†	EER†	Net Cap. (Btuh)	EER
120	524A090 524A120 524A150	3000 4000 4300	104,000 112,000 117,000	9.3 9.4 9.9	120,000	10.8
150	524A120 524A150 524A180	4000 5000 5300	130,000 136,000 144,000	9.6 9.9 10.0	149,000	11.8
180	524A150 524A180 524A240	5000 6000 7000	166,000 178,000 186,000	8.9 9.1 9.1	192,000	10.5
240	524A180 524A240 524A300	6000 7000 8600	206,000 216,000 230,000	8.7 8.7 8.8	239,000	9.9

LEGEND

ARI — Air Conditioning and Refrigeration Institute
EER — Energy Efficiency Ratio

*Condensing unit only ratings are at 45 F SST and 95 F entering air temperature, in accordance with ARI Standard 365.
†Rated in accordance with ARI Standard 210/240-89 or 360-86.

576B UNITS

UNIT 576B	INDOOR UNIT	EVAPORATOR AIRFLOW (Cfm)	SYSTEM		CONDENSING UNIT ONLY*	
			Net Cap. (Btuh)†	EER†	Net Cap. (Btuh)	EER
090	524A072 524A090 524A120	2400 3000 3450	84,000 90,000 93,000	9.8 9.9 9.9	97,000	11.5
102	524A090 524A120	3000 4000	101,000 109,000	9.0 9.0	115,000	10.7
120	524A090 524A120 524A150	3000 4000 4200	102,000 109,000 114,000	9.1 9.0 9.6	117,000	10.6

LEGEND

ARI — Air Conditioning and Refrigeration Institute
EER — Energy Efficiency Ratio
SST — Saturated Suction Temperature

*Condensing unit only ratings are at 45 F SST and 95 F entering air temperature.
†Rated in accordance with ARI Standard 210/240-89 or 360-86.

NOTE: Ratings for 576B300 and 360 units combined with 524A air-handling units exceed the scope of the ARI certification program. See page 24 for ratings for these unit combinations.

DIMENSIONAL DRAWING — 569C, 576B090-120 UNITS

DIMENSIONS (Ft-in.)

UNIT	A	B	C	D	E	F
With Aluminum Fin Coils (Std)						
569C072	1-6½	1-2¾	—	1-2¼	1-4 5/16	2-9 5/16
569C090	1-8	1-6½	2-9 13/16	1-3	2-5/16	3-5 7/16
569C120	1-9	1-8	2-0	1-3	2-5/16	3-5 7/16
576B090	1-6	1-4¾	2-9 13/16	1-3	2-5/16	3-5 7/16
576B102	1-7	1-5	2-9 13/16	1-3	2-5/16	3-5 7/16
576B120	1-7	1-5	2-9 13/16	1-3	2-5/16	3-5 7/16
With Copper Fin Coils (Optional)						
569C072	1-8	1-3	—	1-2¼	1-4 5/16	2-9 5/16
569C090	1-9½	1-6	2-9 13/16	1-3	2-5/16	3-5 7/16
569C120	1-10	1-7	2-0	1-3	2-5/16	3-5 7/16
576B090	1-7½	1-4½	2-9 13/16	1-3	2-5/16	3-5 7/16
576B102	1-7½	1-4	2-9 13/16	1-3	2-5/16	3-5 7/16
576B120	1-7½	1-4	2-9 13/16	1-3	2-5/16	3-5 7/16

ELECTRICAL CONNECTIONS

CONNECTION SIZES	
AA	1⅜″ Dia Field Power Supply Hole
BB	2″ Dia Power Supply Knockout
CC	2½″ Dia Power Supply Knockout
DD	⅞″ Dia Field Control Wiring Hole

SERVICE VALVE CONNECTIONS

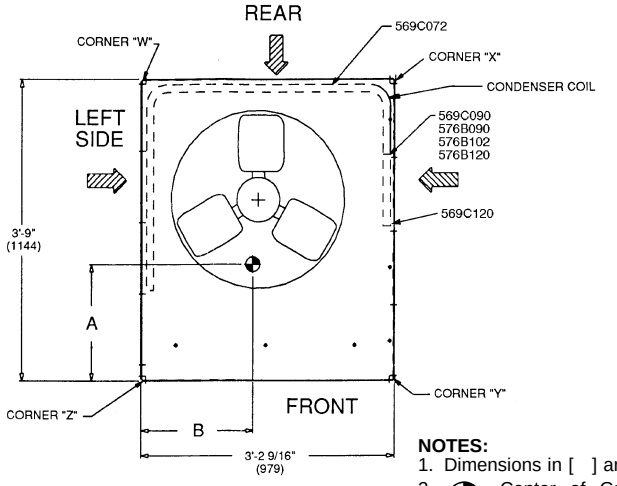
UNIT	SUCTION	LIQUID
569C072	1⅛″	½″
569C090	1⅛″	½″
569C120	1⅛″	⅝″
576B090	1⅛″	½″
576B102	1⅛″	⅝″
576B120	1⅛″	⅝″

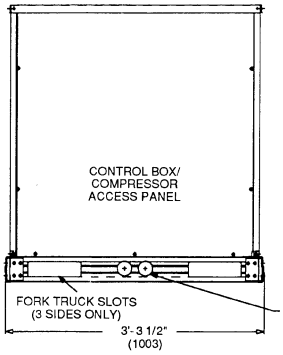
WEIGHT CHART (lb)

UNIT	STD UNIT		CORNER W		CORNER X	
	Al	Cu	Al	Cu	Al	Cu
569C072	340	386	86	106	53	65
569C090	370	438	86	114	78	95
569C120	395	472	89	118	92	116
576B090	510	578	114	143	89	106
576B102	564	632	133	161	97	114
576B120	564	632	133	161	97	114

UNIT	CORNER Y		CORNER Z	
	Al	Cu	Al	Cu
569C072	77	82	124	133
569C090	99	108	107	121
569C120	109	119	105	119
576B090	133	142	173	187
576B102	141	150	193	207
576B120	141	150	193	207

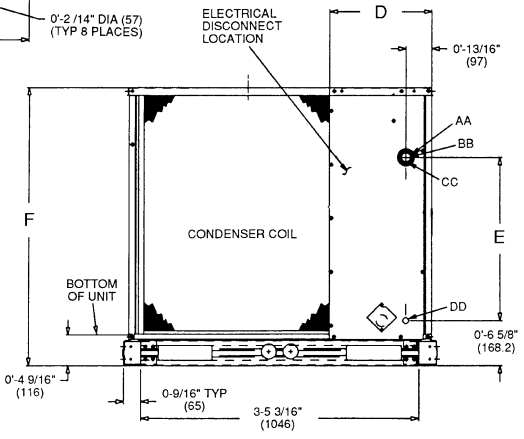
NOTE: Al indicates weight with aluminum-fin coil (standard); Cu indicates weight with copper-fin coil (optional).

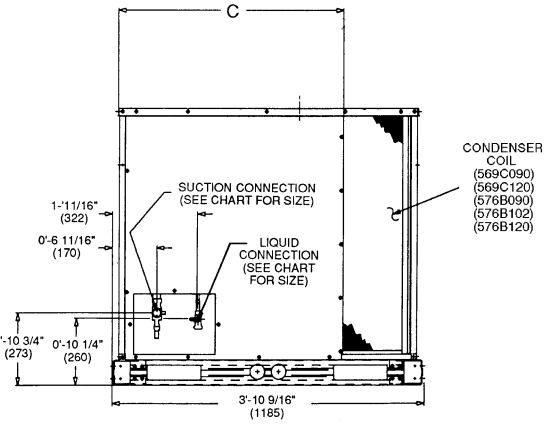




NOTES:

1. Dimensions in [ ] are in millimeters.
2. Center of Gravity. See chart for dimensions.
3. Direction of airflow.
4. Minimum clearance (local codes or jurisdiction may prevail):
   a. Bottom to combustible surfaces, 0 inches.
   b. Either left or rear side of condensing unit must have 36-in. clearance for proper airflow; the remaining side(s) must have 12-in. clearance each.
   c. Overhead, 60 in., to assure proper condenser fan operation.
   d. Between units, control box side, 42 in. per NEC (National Electrical Code).
   e. Between unit and ungrounded surfaces, control box side, 36 in. per NEC.
   f. Between unit and block or concrete walls and other grounded surfaces, control box side, 42 in. per NEC.
5. With the exception of the clearance for the condenser coil as stated in Note 4b, a removable fence or barricade requires no clearance.
6. Units may be installed on combustible floors made from wood or Class A, B, or C roof covering material.
7. Certified dimension drawings available on request.

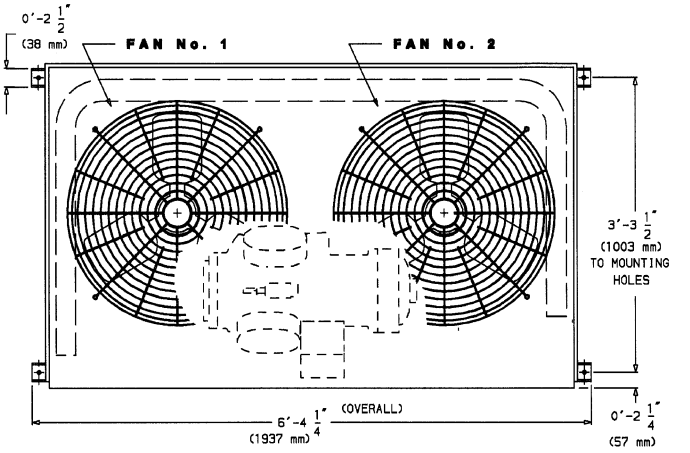




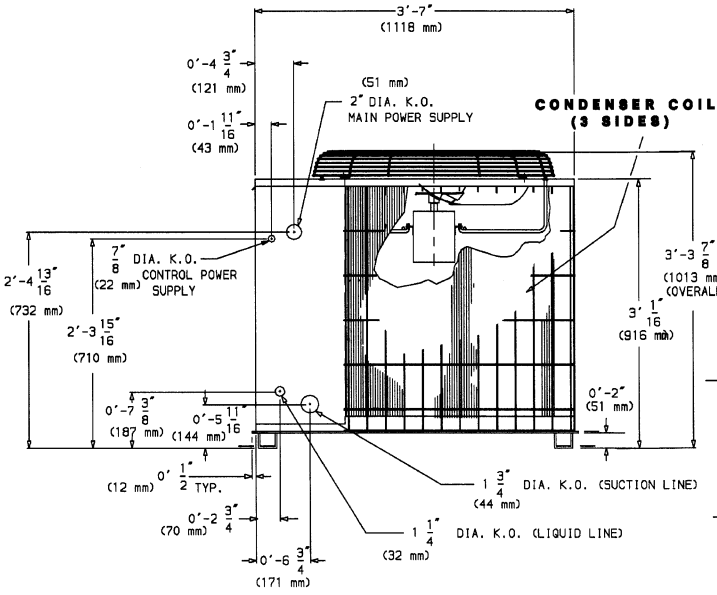
DIMENSIONAL DRAWING — 566D UNITS

UNIT 566D	SUCTION CONNECTION (in. OD)	WEIGHT	
		Lbs	Kg
120	1⅛	732	332
150	1⅜	779	353
180	1⅜	789	358
240	1⅝	900	408

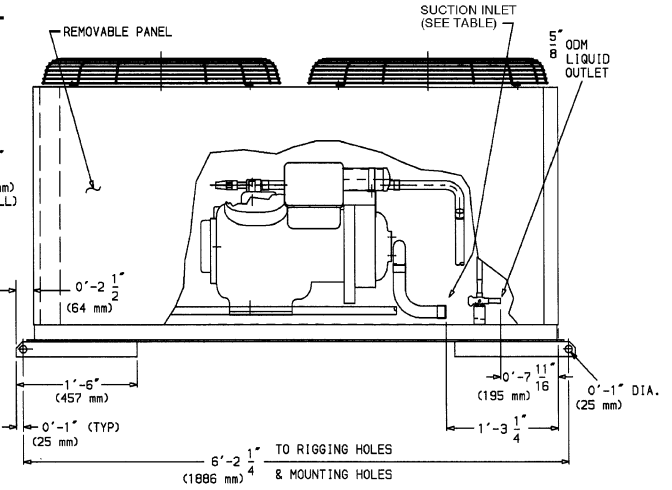
UNIT 566D	TOTAL WEIGHT (lb)	OPERATIONAL CORNER WEIGHTS (lb)			
		A	B	C	D
120	732	142	138	225	227
150	779	143	140	247	249
180	789	143	143	250	253
240	900	178	168	269	285



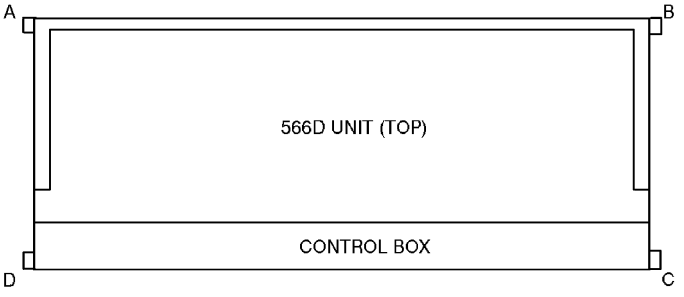
TOP VIEW



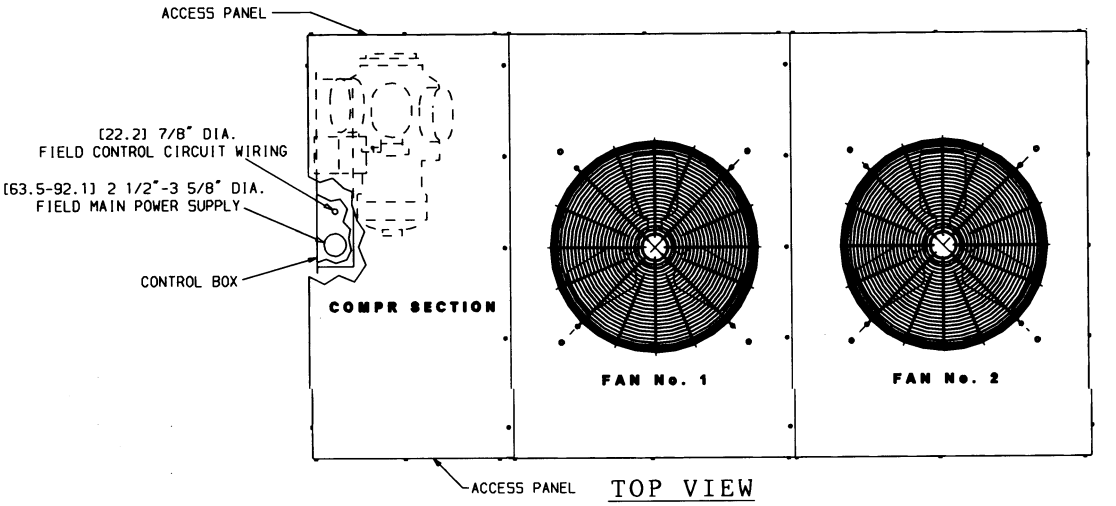
END VIEW



SIDE VIEW



DIMENSIONAL DRAWING — 576B300,360 UNITS

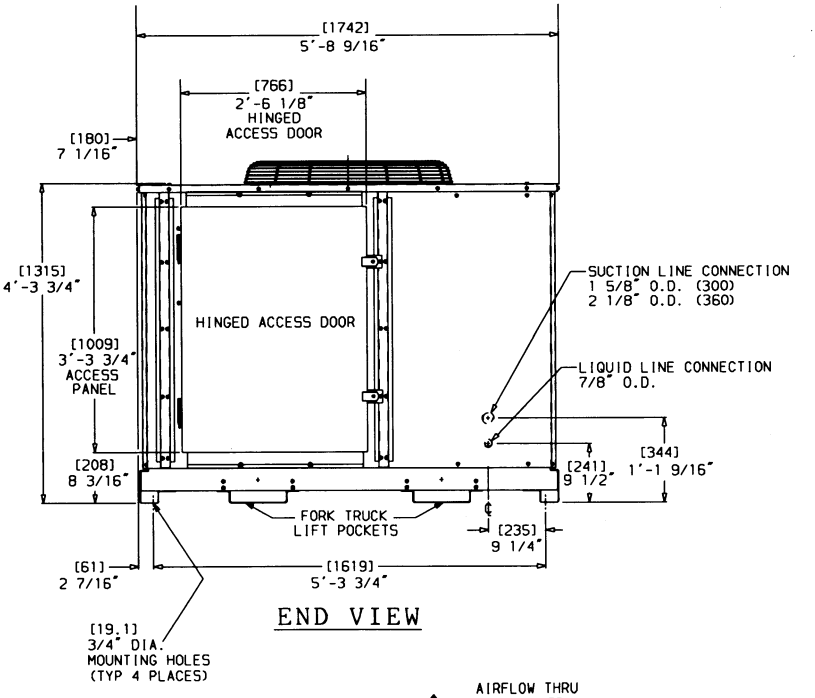


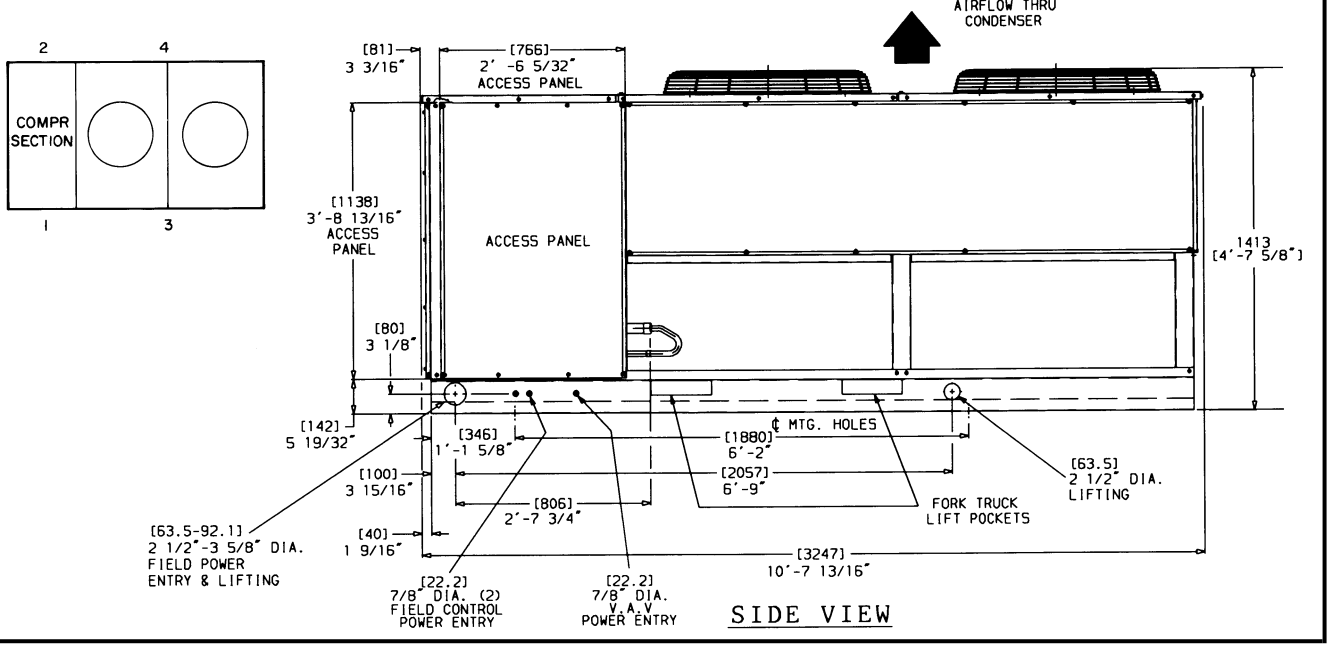
NOTES:
1. There must be 4 ft (1220 mm) for service and for unrestricted airflow on all sides of unit.
2. There must be minimum 8 ft (2440 mm) clear air space above unit.
3. The approximate operating weight of the unit follows:

UNIT	WT (Lb)	WT (Kg)
576B300	1650	748
576B360	1803	818

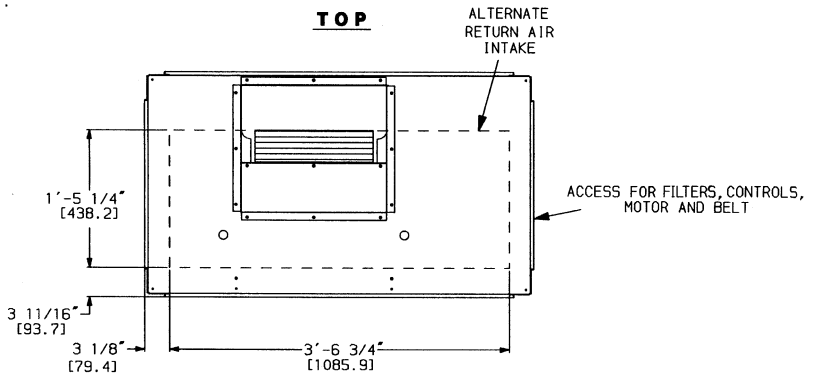
APPROX. OPER. WT (lb)
AT LIFTING HOLES

576B	1	2	3	4	Tot.
300	418	626	242	364	1650
360	459	673	272	399	1803



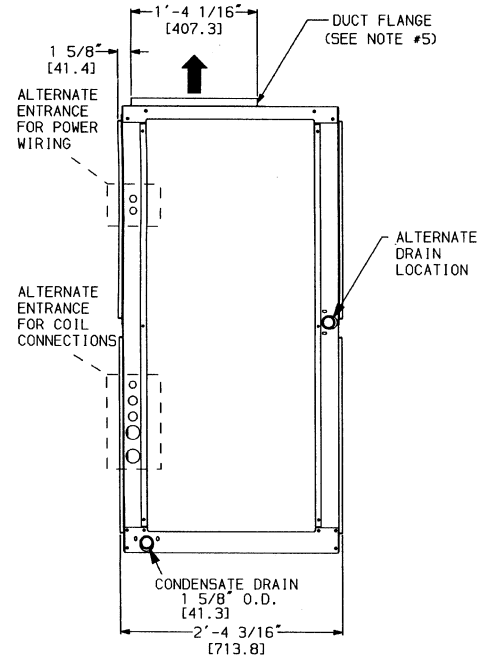


DIMENSIONAL DRAWING — 524A072-120 UNITS

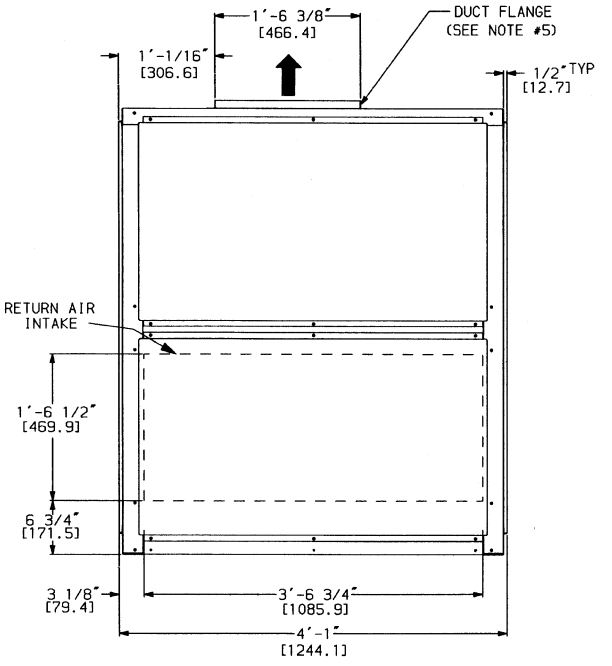


NOTES:

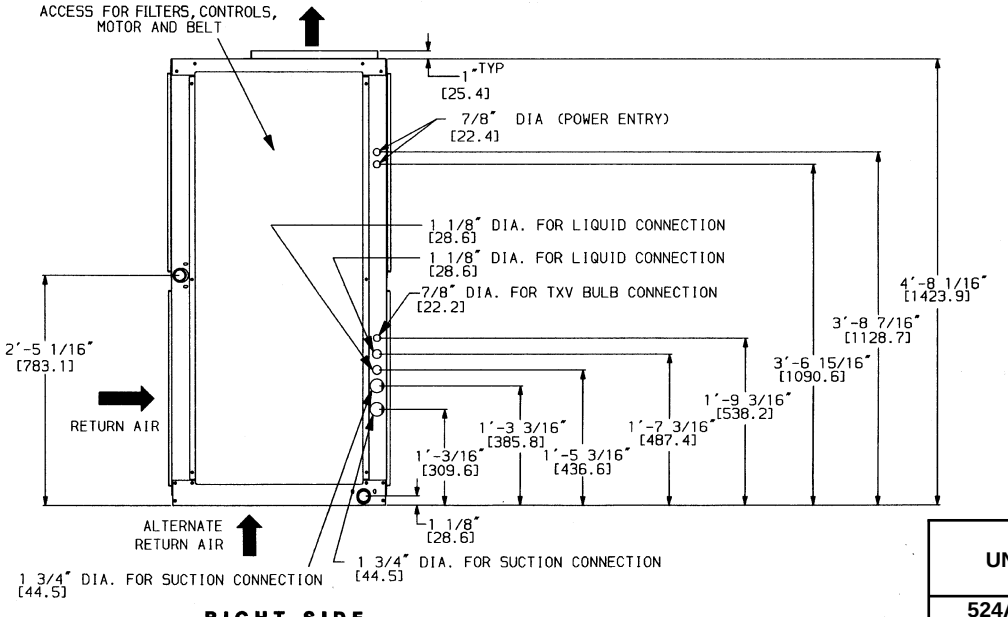
1. Dimensions in [ ] are in millimeters.
2. ➡ Direction of airflow.
3. Recommended clearance:
   - Rear: 3″
   - Front: 2′-6″
   - Right side: 2′-6″
   - Left side: 2′-6″
   - Local codes or jurisdiction may prevail.
4. Liquid piping not supplied.
5. Duct flange is factory supplied and field installed.



LEFT SIDE



FRONT

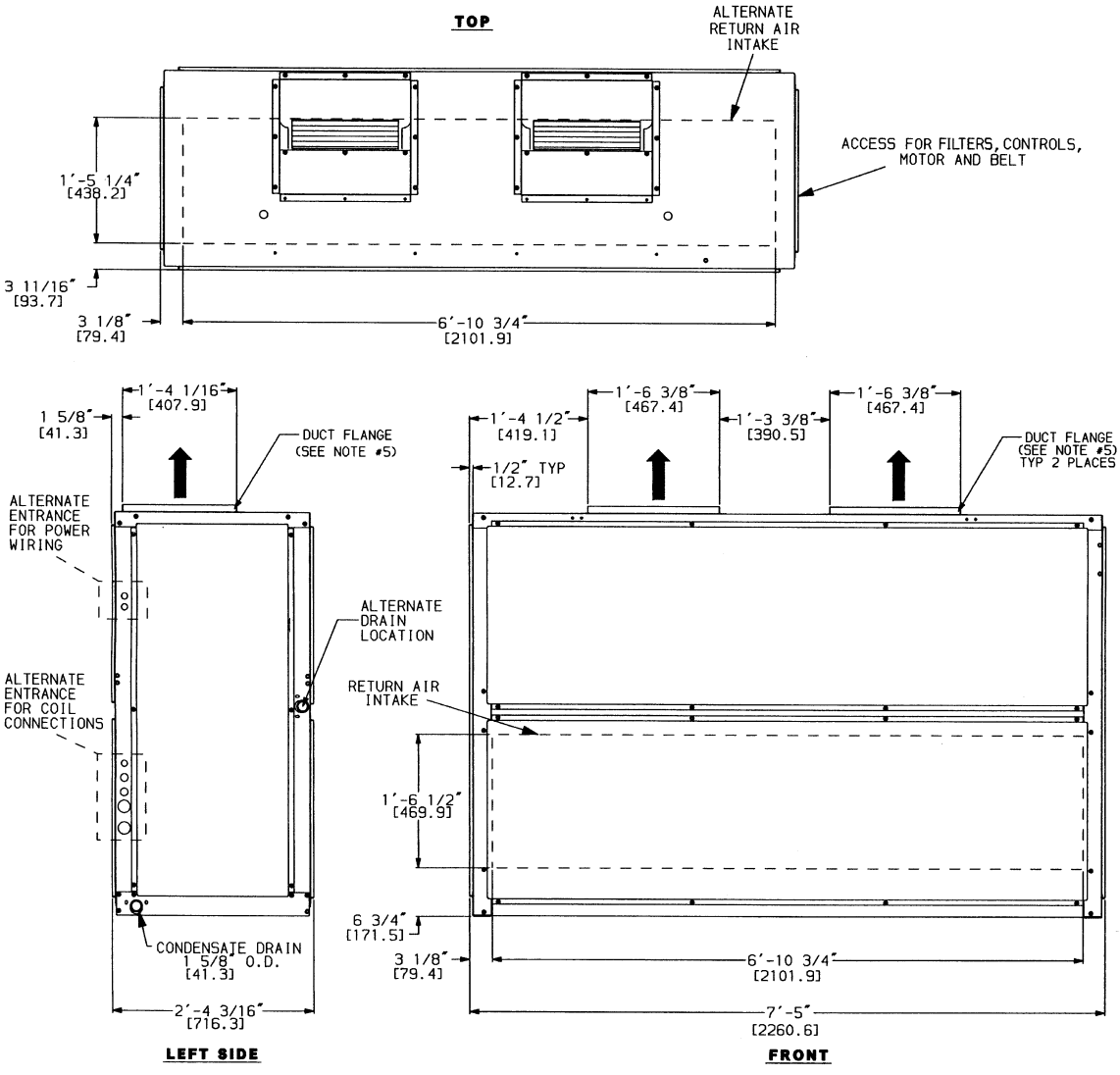


RIGHT SIDE

UNIT	UNIT WEIGHT (W/TXV) (lb)
524A072	381
524A090	385
524A120	405

TXV — Thermostatic Expansion Valve

DIMENSIONAL DRAWING — 524A150-240 UNITS



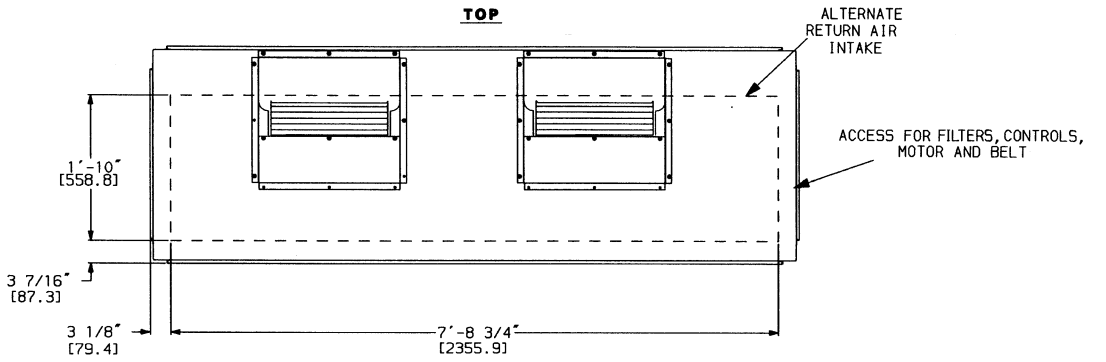
NOTES:

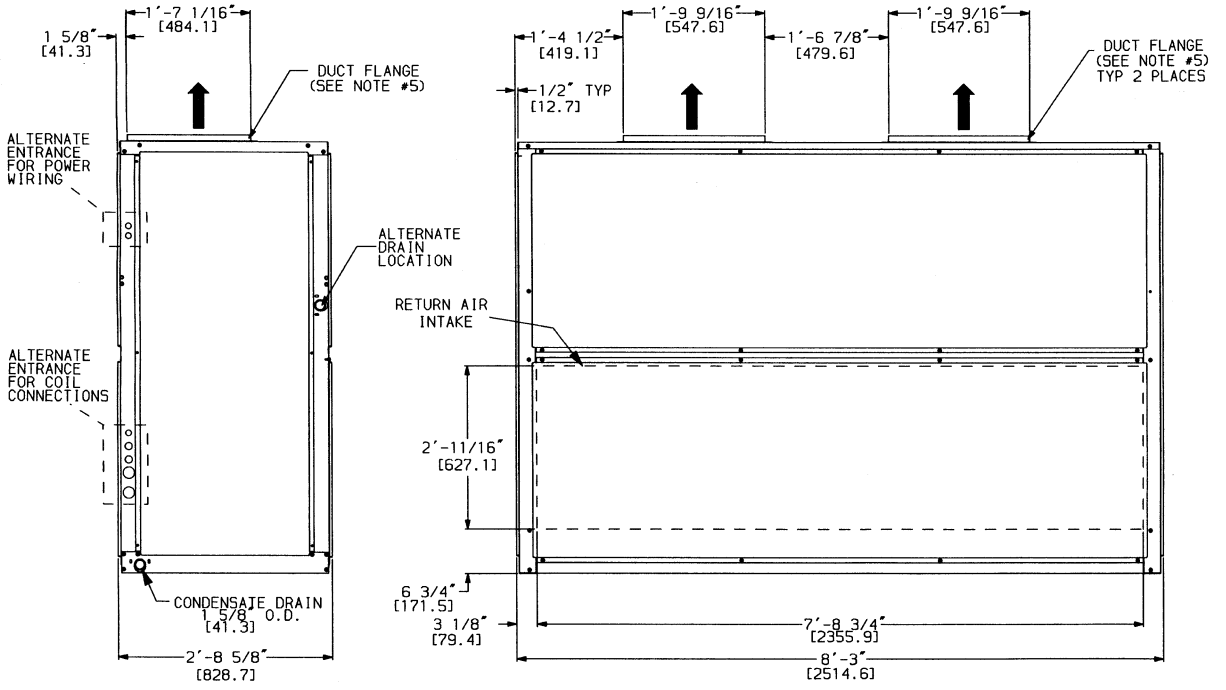
1. Dimensions in [ ] are in millimeters.
2. ➡ Direction of airflow.
3. Recommended clearance:
   - Rear: 3″
   - Front: 2′-6″
   - Right side: 2′-6″
   - Left side: 2′-6″
   - Local codes or jurisdiction may prevail.
4. Liquid piping not supplied.
5. Duct flange is factory supplied and field installed.

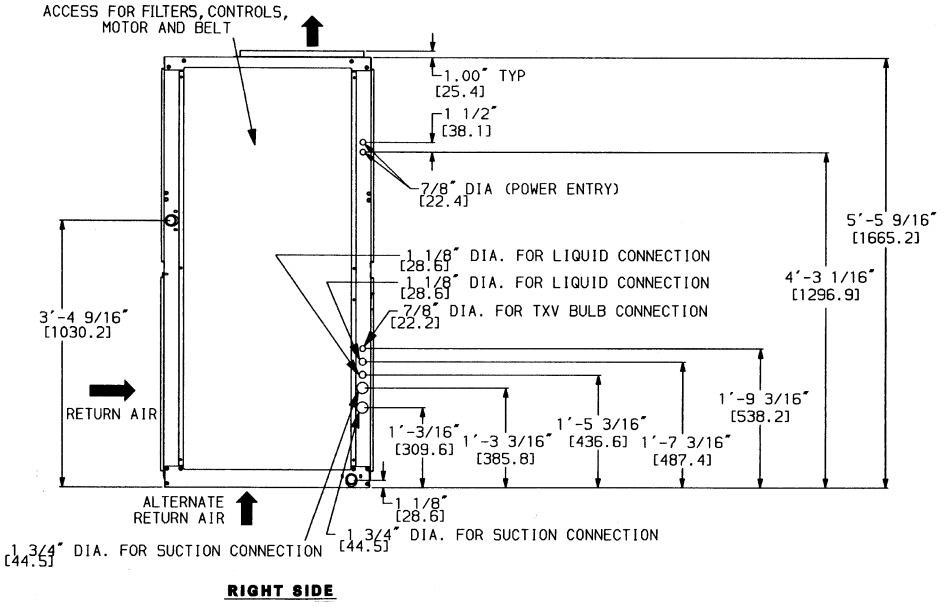
UNIT	UNIT WEIGHT (W/TXV) (lb)
524A150	670
524A180	685
524A240	690

TXV — Thermostatic Expansion Valve

DIMENSIONAL DRAWINGS — 524A300,360 UNITS







NOTES:

1. Dimensions in [ ] are in millimeters.
2. Direction of airflow.
3. Recommended clearance:
   - Rear: 3″
   - Front: 2′-6″
   - Right side: 2′-6″
   - Left side: 2′-6″
   - Local codes or jurisdiction may prevail.
4. Liquid piping not supplied.
5. Duct flange is factory supplied and field installed.

UNIT	UNIT WEIGHT (W/TXV) (lb)
524A300	1020
524A360	1030

TXV — Thermostatic Expansion Valve

SPECIFICATIONS

569C, 576B090-120 UNITS

BASE UNIT	569C072	569C090	569C120	576B090	576B102	576B120
NOMINAL CAPACITY (tons)	6	7½	10	7½	8½	10
OPERATING WEIGHT (lb)	340	370	395	510	564	564
RIGGING WEIGHT (lb)	390	420	445	560	614	614
REFRIGERANT*	R-22					
Operating Charge, Approx. (lb)	10.0					
UNIT VOLUME (cu ft)	35.5	44.0	44.0	44.0	44.0	44.0
COMPRESSOR	Reciprocating, Hermetic			Reciprocating, Semi-Hermetic		
Qty...Type	1...SF5572E	1...SF5594E	1...SF5612E/F	1...06DA818	1...06DA824	1...06DH824 (See Note)
Qty Cylinders (ea)	4	4	4	4	6	6
Speed (rpm)	3450	3450	3450	1750	1750	1750
Oil Charge (oz) (ea)	65	65	65	88	128	128
CONDENSER AIR FAN	Propeller; Direct Drive					
Qty...Rpm	1...850	1...1100	1...1100	1...1100	1...1100	1...1100
Diameter (in.)	26	26	26	26	26	26
Motor Hp (NEMA)	⅓	¾	¾	¾	¾	¾
Watts	444	976	960	930	930	930
Nominal Cfm Total	3800	6500	7000	6500	6500	6500
CONDENSER COIL	Enhanced Copper Tubes, Aluminum Lanced Fins					
Face Area (sq ft)	12.24	18.0	20.50	18.0	18.0	18.0
Storage Capacity (lb)†	11.26	16.56	18.87	16.56	16.56	16.56
CONNECTIONS (sweat)						
Suction (in.)	1⅛	1⅛	1⅛	1⅛	1⅛	1⅛
Liquid (in.)	½	½	⅝	½	⅝	⅝
CONTROLS						
Pressurestat Settings (psig)						
High Cutout	426 ± 7					
Cut-in	320 ± 20					
Low Cutout	7 ± 3					
Cut-in	22 ± 5					

LEGEND

NEMA — National Electrical Manufacturers Association

*Unit is factory supplied with holding charge only.

†Storage capacity of condenser coil with coil 80% full of liquid R-22 at 124 F.

NOTE: Unit 576B120 has one step of unloading. Full load is 100% of capacity, and one step of unloading is 67% capacity. Unit 576B120 has the following unloader settings: Load is 70 ± 1 psig and unload is 60 ± 2 psig.

566D UNITS

BASE UNIT 566D	120	150	180	240
OPERATING WEIGHT (lb)	732	779	789	900
REFRIGERANT*	R-22			
Operating Charge, Approx. (lb)	22	23	23	28
COMPRESSOR	Reciprocating, Semi-Hermetic			
Speed (Rpm)	1750			
No. Cylinders	6	6	6	4
Model No.	06DD824	06DD328	06DD537	06E4250
Oil (pt)	10	10	10	15.5
Crankcase Heater Watts	125	125	125	180
Unloader Setting (psig)				
Load	70	70	70	72
Unload	60	60	60	62
OUTDOOR-AIR FANS	Axial Flow, Direct Drive			
No. ...Rpm	2...1075			
Diameter (in.)	26			
Motor Hp	½			
Nominal Total Airflow (Cfm)	11,000			
FAN CYCLING CONTROL				
Operating Pressure (psig), No. 2 Fan				
Close	260 ± 15			
Open	126 ± 10			
OUTDOOR COIL				
Face Area (sq ft)	29.2			
Storage Capacity (lb)†	27.2	40.0	40.0	40.0
CONTROLS				
Pressurestat Settings (psig)				
High Cutout	395 ± 10			
Cut-in	295 ± 10			
Low Cutout	27 ± 3			
Cut-in	44 ± 5			
FUSIBLE PLUG (F)	200	200	200	210
PIPING CONNECTIONS (in. ODM)				
Suction	1⅛	1⅜	1⅜	1⅝
Liquid	⅝			
Hot Gas Bypass	⅜			

*Unit is factory supplied with holding charge only.

†Storage capacity is measured at liquid saturated temperatures of 125 F for 566D120, 123 F for 566D150, and 130 F for 566D180,240 (coil 80% full of R-22 liquid).

SPECIFICATIONS (cont)

576B300,360 UNITS

BASE UNIT 576B	300	360
NOMINAL CAPACITY (tons)	25	30
OPERATING WEIGHT (lb)		
Unit	1650	1803
COMPRESSOR	Serviceable, Semi-Hermetic	
Quantity...Type	1...06E9265	1...06E9275
No. Cylinders — Speed (Rpm)	6 — 1750	6 — 1750
Capacity Steps, No.	3	3
%	100-66-33	100-66-33
Oil (pt)	20.0	20.0
Oil Pressure Switch (psid)		
Set Point	9	
Differential	2.8	
Crankcase Heater (watts)	180	
Capacity Control	Suction Pressure Unloader(s)	
No. 1	Unloader Settings (psig)	
Load	76	76
Unload	58	58
No. 2	Unloader Settings (psig)	
Load	78	78
Unload	60	60
REFRIGERANT	R-22	
Operating Charge (lb-oz) Approx.*	30-8	43-8
CONDENSER FANS	Direct Drive Propeller	
Quantity...Diameter (in.)	2...30	2...30
Nominal Airflow (cfm)	15,700	15,700
Motor Hp...Rpm	1...1140	1...1140
Power Consumption (watts ea.)	1490	1750
CONDENSER COIL	Enhanced Copper Tube, Lanced Aluminum Fins	
Rows...Fins/in.	2...19	3...17
Total Face Area (sq ft)	39.2	39.2
Storage	37.7	56.6
HIGH-PRESSURE SWITCH (psig)		
Cutout	426 ± 7	
Reset	320 ± 20	
LOW-PRESSURE SWITCH (psig)		
Cutout	27 ± 3	
Reset	44 ± 5	
FAN CYCLE SWITCH (psig)		
Close	260 ± 15	
Open	160 ± 10	
OIL PRESSURE SWITCH (psig)		
Cut-in	14	
Cutout	6	
CONNECTION SIZE (in.)		
Suction	1⅝	2⅛
Liquid	⅞	⅞

Psid — Pounds per sq. in. Differential

*Unit is factory supplied with holding charge only.
†Storage at 125 F liquid temperature and 80% full.

SPECIFICATIONS

UNIT 524A	072	090	120	150	180	240	300	360
NOMINAL CAPACITY (Tons)	6	7½	10	12½	15	20	25	30
OPERATING WEIGHT (lb)								
Base Unit with TXV	381	385	405	670	685	690	1020	1030
Plenum	97	97	97	140	140	140	180	180
FANS								
Qty...Diam. (in.)	1...15	1...15	1...15	2...15	2...15	2...15	2...18	2...18
Nominal Airflow (cfm)	2400	3000	4000	5000	6000	8000	10,000	12,000
Airflow Range (cfm)	1800-3000	2250-3750	3000-5000	3750-6250	4500-7500	6000-10,000	7500-12,500	9000-15,000
Nominal Motor Hp (Standard Motor)								
208/230-1-60	1.3	2.4	—	—	—	—	—	—
208/230-3-60 and 460-3-60	1.7	2.4	2.4	2.9	3.7	5.0	7.5	10.0
575-3-60	1.0	2.0	2.0	3.0	3.0	5.0	7.5	10.0
Motor Speed (rpm)								
208/230-1-60	1725	1725	—	—	—	—	—	—
208/230-3-60 and 460-3-60	1725	1725	1725	1725	1725	1745	1745	1745
575-3-60	1725	1725	1725	1725	1725	1745	1755	1755
REFRIGERANT	R-22							
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	5.0/5.0
DIRECT-EXPANSION COIL	Enhanced Copper Tubes, Aluminum Sine-Wave Fins							
Max Working Pressure (psig)	435							
Face Area (sq ft)	6.67	8.33	10.0	13.25	17.67	19.88	24.86	29.83
No. of Splits	1	1	2	2	2	2	2	2
Split Type...Percentage	—	—	Face...50/50					
No. of Circuits per Split	12	15	9	9	12	13	15	18
Rows...Fins/in.	3...15	3...15	3...17	3...15	3...15	3...17	3...15	3...15
STEAM COIL								
Max Working Pressure (psig)	175 at 400 F							
Total Face Area (sq ft)	6.67	6.67	6.67	13.33	13.33	13.33	15.0	15.0
Rows...Fins/in.	1...9	1...9	1...9	1...10	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	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	2...12.5
PIPING CONNECTIONS, Quantity...Size (in.)								
DX Coil — Suction (ODF)	1...1⅛	1...1⅛	2...1⅛	2...1⅛	2...1⅛	2...1⅛	2...1⅜	2...1⅜
DX Coil — Liquid Refrigerant (ODF)	1...⅝				2...⅝			
Steam Coil, In (MPT)	1...2½				2...2½			
Steam Coil, Out (MPT)	1...1½				2...1½			
Hot Water Coil, In (MPT)	1...1½		2...1½		2...2			
Hot Water Coil, Out (MPT)	1...1½		2...1½		2...2			
Condensate (Male PVC)	1...1¼							
FILTERS	Throwaway — Factory Supplied							
Quantity...Size (in.)	4...16 x 24 x 2			4...16 x 20 x 2 4...16 x 24 x 2			4...20 x 24 x 2 4...20 x 25 x 2	
Access Location	Either Side							

LEGEND

TXV — Thermostatic Expansion Valve

*Units are shipped without refrigerant charge.

SELECTION PROCEDURE

I DETERMINE COOLING LOAD, EVAPORATOR-AIR TEMPERATURE AND QUANTITY.

Given:

Total Cooling Capacity
Required (TC) . . . . . 230,000 Btuh
Sensible Heat Capacity
Required (SHC) . . . . . 185,000 Btuh
Temperature Air Entering Condenser (Edb) . . . . . 95 F
Temperature Air Entering
Evaporator (db/wb) . . . . . 80 F db, 67 F wb
Evaporator Air Quantity . . . . . 8,000 cfm
External Static Pressure . . . . . 0.80 in. wg
Length of Interconnecting
Refrigerant Piping . . . . . 30 ft (Linear)

II SELECT CONDENSING UNIT AIR-HANDLER COMBINATION.

For this example, select a 566D240 unit matched with a 524A240 unit (See Combination Ratings table, page 22.) This 566D240/524A240 condensing unit-air handler combination provides 235,600 Btuh of total cooling capacity and 187,900 Btuh of sensible capacity at the given conditions. If other temperatures or cfm values are required, interpolate the values from the combination ratings.

III DETERMINE SIZES OF LIQUID AND SUCTION LINES.

Enter Refrigerant Piping Sizes table (page 46). 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 a more accurate determination of actual equivalent length in place of using the estimated 50% value, refer to the System Design Manual.) For this example, note in the linear length column that the proper pipe size is $\frac{7}{8}$ in. for the liquid line and $1\frac{5}{8}$ in. for the suction line.

IV DETERMINE FAN RPM AND BHP (BRAKE HORSEPOWER).

At the Air Delivery table (page 26), enter the 523A240 section at 8000 cfm and move to the External Static Pressure (ESP) column. Note that the conditions require 904 rpm at 3.86 bhp. Use the standard motor and medium-static drive (option code HC or FD).

CONDENSING UNIT RATINGS — 569C UNITS

UNIT 569C	SST (F)	CONDENSER AIR TEMPERATURE (F)																	
		80			85			95			100			105			115		
		Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW
072 (6 Tons)	25	52.3	104	4.87	50.3	109	5.04	46.1	118	5.38	43.9	123	5.51	41.6	127	5.65	37.4	137	5.93
	30	60.2	107	5.08	58.0	111	5.27	53.6	121	5.63	51.2	125	5.79	48.8	130	5.94	44.3	140	6.25
	35	68.2	110	5.29	65.8	114	5.49	61.0	123	5.88	58.5	128	6.06	56.1	132	6.23	51.2	142	6.57
	40	76.1	112	5.50	73.5	117	5.72	68.5	126	6.14	65.9	130	6.33	63.3	135	6.52	58.1	144	6.90
	45	84.0	115	5.72	81.3	119	5.94	75.9	128	6.39	73.2	133	6.60	70.5	137	6.82	65.0	146	7.22
	50	91.9	118	5.93	89.1	122	6.17	83.4	131	6.65	80.5	135	6.88	77.7	139	7.11	71.9	148	7.54
090 (7½ Tons)	25	69.1	102	6.31	66.7	107	6.53	61.6	116	6.91	59.1	120	7.10	56.7	125	7.27	51.9	134	7.58
	30	78.6	104	6.55	76.0	109	6.79	70.5	118	7.22	67.8	123	7.43	65.1	127	7.62	59.9	137	7.98
	35	88.1	107	6.78	85.2	111	7.04	79.3	120	7.52	76.5	125	7.76	73.6	129	7.98	67.9	139	8.39
	40	97.6	109	7.01	94.5	114	7.29	88.2	123	7.83	85.1	127	8.09	82.0	132	8.33	75.8	141	8.79
	45	107	111	7.24	104	116	7.55	97.1	125	8.14	93.8	129	8.42	90.5	134	8.69	83.8	143	9.19
	50	117	114	7.47	114	118	7.80	106	127	8.44	103	132	8.75	99.3	136	9.04	92.3	145	9.60
120 (10 Tons)	25	92.6	106	8.88	89.2	110	9.19	81.8	119	9.73	78.5	124	10.0	75.1	128	10.3	68.1	138	10.7
	30	105	108	9.29	102	113	9.62	93.7	122	10.2	90.1	126	10.5	86.3	131	10.8	78.8	140	11.3
	35	118	111	9.70	114	116	10.1	106	124	10.7	102	129	11.0	97.6	133	11.4	89.6	142	11.9
	40	131	114	10.1	126	118	10.5	118	127	11.2	113	131	11.6	109	136	11.9	100	145	12.5
	45	143	117	10.5	139	121	10.9	129	130	11.7	125	134	12.1	120	138	12.4	111	147	13.2
	50	157	120	11.0	152	124	11.4	142	132	12.2	137	137	12.6	132	141	13.0	122	150	13.8

LEGEND

Cap. — Capacity (1000 Btuh)
kW — Compressor Motor Power Input
SDT — Saturated Discharge Temperature
SST — Saturated Suction Temperature

CONDENSING UNIT RATINGS — 576B090-120 UNITS

UNIT 576B	SST (F)	CONDENSER AIR TEMPERATURE (F)																	
		80			85			95			100			105			115		
		Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW
090 (7½ Tons)	25	68.8	102	5.69	66.2	106	5.89	61.2	116	6.24	58.6	120	6.41	56.1	125	6.55	50.9	134	6.79
	30	78.4	104	5.92	75.6	108	6.14	70.1	118	6.55	67.4	122	6.74	64.6	127	6.91	59.0	136	7.20
	35	87.9	106	6.15	85.0	111	6.40	79.1	120	6.86	76.1	124	7.07	73.1	129	7.27	67.2	138	7.62
	40	97.5	109	6.38	94.3	113	6.65	88.0	122	7.17	84.8	127	7.41	81.7	131	7.63	75.3	140	8.04
	45	107.0	111	6.61	104.0	115	6.91	97.0	124	7.48	93.6	129	7.74	90.2	133	7.99	83.4	142	8.46
	50	117.0	114	6.83	113.0	118	7.16	106.0	127	7.78	103.0	131	8.08	99.2	136	8.36	92.0	144	8.88
102 (8½ Tons)	25	82.9	106	7.52	79.7	111	7.75	73.2	119	8.16	70.1	124	8.35	66.9	128	8.51	60.3	137	8.78
	30	94.1	109	7.94	90.7	114	8.20	83.7	122	8.66	80.4	127	8.88	76.8	131	9.07	69.7	140	9.40
	35	105.3	112	8.36	101.4	116	8.64	94.1	125	9.16	90.5	129	9.41	86.7	134	9.63	79.2	142	10.0
	40	116.9	115	8.78	113.0	119	9.09	104.3	128	9.66	100.5	132	9.93	96.6	136	10.2	88.7	145	10.6
	45	127.5	118	9.20	123.6	122	9.53	115.0	131	10.2	111.1	135	10.5	106.3	139	10.7	98.5	147	11.3
	50	139.1	121	9.62	135.2	125	9.99	125.6	134	10.7	121.7	138	11.0	116.9	142	11.3	108.2	150	11.9
120 (10 Tons)	25	84.4	106	7.51	81.1	110	7.74	74.4	119	8.15	71.3	124	8.34	68.0	128	8.50	61.4	137	8.78
	30	95.8	109	7.92	92.3	113	8.17	85.1	122	8.64	81.7	126	8.86	78.1	131	9.05	71.1	139	9.40
	35	107.0	112	8.33	103.0	116	8.61	95.8	125	9.14	92.1	129	9.38	88.3	133	9.61	80.7	142	10.0
	40	119.0	115	8.74	115.0	119	9.05	107.0	127	9.63	102.0	132	9.91	93.4	136	10.2	90.3	145	10.6
	45	130.0	118	9.15	126.0	122	9.49	117.0	130	10.1	113.0	134	10.4	109.0	139	10.7	100.0	147	11.2
	50	142.0	121	9.57	138.0	125	9.94	128.0	133	10.6	124.0	137	11.0	119.0	141	11.3	110.0	150	11.9

LEGEND

Cap. — Capacity (1000 Btuh)
kW — Compressor Motor Power Input
SDT — Saturated Discharge Temperature
SST — Saturated Suction Temperature

CONDENSING UNIT RATINGS — 566D UNITS

UNIT 566D	SST (F)	CONDENSER AIR TEMPERATURE (F)														
		85			95			100			105			115		
		Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW
120 (10 Tons)	25	86	109	7.5	79	118	8.0	75	123	8.2	72	127	8.4	66	137	8.8
	30	96	111	7.9	88	120	8.4	85	124	8.7	81	129	8.9	74	138	9.3
	35	106	113	8.3	98	122	8.8	94	126	9.1	91	131	9.4	83	140	9.8
	40	117	115	8.6	109	124	9.3	105	128	9.6	101	133	9.8	93	142	10.4
	45	129	117	9.0	120	126	9.7	116	131	10.0	111	135	10.3	103	144	10.9
	50	141	120	9.4	132	129	10.1	127	133	10.5	122	137	10.8	113	146	11.5
150 (12½ Tons)	25	104	109	9.1	97	119	9.7	93	124	10.0	89	129	10.2	82	139	10.7
	30	117	109	9.4	109	119	10.0	105	124	10.4	101	129	10.7	93	139	11.3
	35	131	110	9.7	122	120	10.4	118	124	10.7	113	129	11.1	104	139	11.8
	40	145	112	10.0	135	121	10.8	131	126	11.2	126	130	11.5	117	140	12.3
	45	159	114	10.4	149	123	11.2	144	127	11.6	139	132	12.0	130	141	12.8
	50	174	116	10.7	164	125	11.6	159	129	12.1	153	134	12.5	143	143	13.3
180 (15 Tons)	25	140	110	13.1	131	119	13.9	127	124	14.3	122	128	14.7	114	138	15.3
	30	155	112	13.7	145	121	14.6	140	126	15.1	136	130	15.5	126	139	16.2
	35	170	114	14.4	160	123	15.4	155	128	15.8	150	132	16.3	140	141	17.1
	40	187	117	15.1	176	126	16.1	170	130	16.6	165	135	17.1	154	144	18.1
	45	204	119	15.7	192	128	16.9	186	133	17.5	180	137	18.0	168	146	19.0
	50	222	122	16.4	209	131	17.7	203	135	18.3	197	140	18.9	184	148	20.0
240 (20 Tons)	25	172	111	16.4	157	119	17.1	149	123	17.4	142	128	17.7	128	136	18.1
	30	195	114	17.6	180	123	18.4	172	127	18.8	164	131	19.1	149	140	19.6
	35	219	118	18.7	203	126	19.7	194	130	20.1	186	134	20.5	170	143	21.1
	40	243	121	19.9	225	129	21.0	217	133	21.5	208	137	21.9	191	146	22.7
	45	266	125	21.1	248	133	22.3	239	137	22.8	230	141	23.3	212	149	24.2
	50	290	128	22.2	271	136	23.5	262	140	24.1	252	144	24.7	232	152	25.7

LEGEND

Cap. — Capacity (1000 Btuh)
kW — Compressor Motor Power Input
SDT — Saturated Discharge Temperature
SST — Saturated Suction Temperature

CONDENSING UNIT RATINGS — 576B300,360 UNITS

UNIT 576B	SST (F)	CONDENSER AIR TEMPERATURE (F)														
		85			95			100			105			115		
		Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW	Cap.	SDT (F)	Comp kW
300 (25 Tons)	20	199	108	20.7	183	117	21.6	176	121	22.0	169	126	22.4	154	135	23.0
	25	230	111	22.2	213	120	23.2	204	124	23.7	196	129	24.1	180	138	24.9
	30	261	114	23.6	242	123	24.8	233	127	25.4	224	131	25.9	206	140	26.8
	35	292	117	25.0	271	125	26.4	261	130	27.0	252	134	27.6	232	143	28.7
	40	323	120	26.4	301	128	28.0	290	133	28.7	279	137	29.3	258	145	30.6
	45	354	123	27.8	330	131	29.5	319	135	30.3	307	140	31.1	284	148	32.4
	50	386	126	29.3	361	134	31.2	348	138	32.0	336	142	32.9	312	151	34.4
360 (30 Tons)	20	227	107	23.5	209	116	24.4	201	121	24.8	193	125	25.1	176	134	25.6
	25	260	110	25.1	241	119	26.2	232	124	26.6	223	128	27.0	205	137	27.7
	30	293	113	26.6	273	122	27.9	264	126	28.4	254	131	28.9	234	140	29.8
	35	326	116	28.1	305	125	29.6	295	129	30.2	284	133	30.8	263	142	31.9
	40	359	119	29.6	337	128	31.3	326	132	32.1	314	136	32.8	292	145	34.0
	45	393	122	31.1	369	130	33.0	357	135	33.9	345	139	34.7	321	147	36.1
	50	428	125	32.7	402	133	34.8	390	138	35.7	377	142	36.6	351	150	38.2

LEGEND

Cap. — Capacity (1000 Btuh)
kW — Compressor Motor Power Input
SDT — Saturated Discharge Temperature
SST — Saturated Suction Temperature

COMBINATION RATINGS — 569C UNITS

569C072/524A072

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		1800/0.06			2400/0.10			3000/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	78.8	72.7	66.1	82.4	76.4	70.0	84.6	79.1	73.1
	SHC	39.9	49.5	62.4	44.4	58.1	70.0	50.2	64.6	73.1
	kW	5.87	5.70	5.51	5.97	5.80	5.62	6.03	5.88	5.71
95	TC	75.3	69.5	63.3	78.7	72.9	67.1	80.6	75.4	70.1
	SHC	38.4	48.3	60.2	43.0	56.8	67.1	48.9	63.3	70.1
	kW	6.37	6.17	5.97	6.48	6.29	6.09	6.55	6.37	6.19
100	TC	73.6	67.8	61.8	76.8	71.1	65.6	78.6	73.6	68.5
	SHC	37.7	47.6	58.9	42.3	56.0	65.6	48.2	62.6	68.5
	kW	6.61	6.40	6.18	6.73	6.52	6.32	6.80	6.61	6.43
105	TC	71.8	66.2	60.3	74.9	69.3	64.0	76.7	71.7	66.9
	SHC	36.9	47.0	57.7	41.6	55.3	64.0	47.6	61.9	66.9
	kW	6.87	6.64	6.39	7.00	6.77	6.55	7.08	6.87	6.67
115	TC	68.1	62.7	57.2	70.9	65.6	60.8	72.5	67.8	63.7
	SHC	35.3	45.6	55.1	40.1	53.8	60.8	46.2	60.4	63.6
	kW	7.36	7.11	6.86	7.50	7.25	7.02	7.57	7.35	7.16

569C072/524A090

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		2250/0.06			3000/0.10			3750/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	85.1	78.5	72.0	87.6	82.0	76.4	89.7	84.6	79.7
	SHC	44.3	57.1	69.9	52.2	66.1	76.4	57.0	74.8	79.7
	kW	6.05	5.86	5.68	6.12	5.96	5.80	6.18	6.03	5.89
95	TC	81.2	74.9	68.8	83.4	78.1	73.0	85.3	80.5	76.2
	SHC	42.7	55.5	67.1	50.8	64.4	73.0	55.5	73.2	76.2
	kW	6.57	6.36	6.15	6.64	6.46	6.29	6.71	6.55	6.40
100	TC	79.2	73.1	67.1	81.3	76.1	71.3	83.2	78.5	74.5
	SHC	41.9	54.7	65.6	50.1	63.6	71.3	54.7	72.4	74.4
	kW	6.82	6.59	6.37	6.90	6.71	6.53	6.97	6.80	6.65
105	TC	77.3	71.2	65.4	79.2	74.1	69.5	81.0	76.5	72.7
	SHC	41.1	53.9	64.2	49.4	62.7	69.5	54.0	71.6	72.7
	kW	7.10	6.85	6.61	7.18	6.97	6.78	7.26	7.07	6.91
115	TC	73.2	67.3	61.8	74.8	70.0	65.8	76.4	72.2	68.9
	SHC	39.4	52.2	61.1	47.9	61.0	65.8	52.4	69.9	68.9
	kW	7.60	7.33	7.07	7.68	7.45	7.26	7.75	7.55	7.40

569C090/524A072

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		1800/0.06			2400/0.10			3000/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	92.0	84.7	—	96.8	89.6	80.9	99.9	93.0	84.3
	SHC	45.6	54.1	—	49.8	63.4	80.9	55.3	69.9	84.3
	kW	7.22	7.02	—	7.35	7.16	6.92	7.44	7.25	7.01
95	TC	88.2	81.3	73.7	92.7	85.8	77.9	95.4	89.0	81.2
	SHC	43.9	52.8	68.6	48.3	61.9	77.8	53.8	68.4	81.2
	kW	7.83	7.59	7.32	7.99	7.75	7.47	8.08	7.86	7.59
100	TC	86.3	79.6	72.1	90.6	83.9	76.3	93.2	87.0	79.5
	SHC	43.1	52.1	67.4	47.5	61.2	76.2	53.1	67.6	79.5
	kW	8.14	7.88	7.60	8.30	8.04	7.75	8.40	8.16	7.88
105	TC	84.4	77.8	70.5	88.5	81.9	74.6	91.0	84.9	77.9
	SHC	42.3	51.4	66.1	46.7	60.4	74.6	52.3	66.8	77.9
	kW	8.43	8.15	7.84	8.61	8.33	8.02	8.71	8.45	8.15
115	TC	80.3	74.1	67.3	84.1	77.9	71.3	86.3	80.7	74.4
	SHC	40.6	50.0	63.4	45.0	58.8	71.3	50.8	65.3	74.4
	kW	9.02	8.70	8.37	9.21	8.89	8.56	9.32	9.03	8.72

569C090/524A090

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		2250/0.06			3000/0.10			3750/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	100.1	92.4	84.3	104.2	97.3	89.3	107.1	100.5	93.0
	SHC	50.5	63.2	80.4	57.7	72.5	89.3	63.1	81.2	93.0
	kW	7.44	7.23	7.01	7.56	7.37	7.15	7.63	7.45	7.25
95	TC	95.8	88.4	80.9	99.4	92.8	85.6	102.0	95.9	89.2
	SHC	48.7	61.4	77.5	56.1	70.6	85.6	61.3	79.3	89.2
	kW	8.09	7.84	7.57	8.22	7.99	7.74	8.31	8.10	7.87
100	TC	93.6	86.4	79.1	97.0	90.6	83.7	99.5	93.6	87.3
	SHC	47.8	60.5	75.9	55.3	69.7	83.7	60.4	78.4	87.3
	kW	8.41	8.14	7.86	8.54	8.30	8.04	8.64	8.41	8.17
105	TC	91.4	84.3	77.2	94.6	88.4	81.8	97.0	91.3	85.3
	SHC	46.9	59.6	74.3	54.5	68.8	81.8	59.6	77.5	85.3
	kW	8.73	8.43	8.13	8.86	8.60	8.32	8.96	8.72	8.47
115	TC	86.8	80.1	73.5	89.6	83.8	77.9	91.7	86.5	81.3
	SHC	45.0	57.8	71.1	52.9	66.8	77.9	57.7	75.6	81.3
	kW	9.34	9.01	8.67	9.48	9.19	8.89	9.59	9.32	9.06

569C090/524A120

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3000/0.05			4000/0.07			5000/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	110.2	102.0	94.2	114.0	106.3	99.8	116.1	108.9	104.3
	SHC	58.1	76.0	91.5	66.0	87.2	99.7	74.8	99.6	104.3
	kW	7.72	7.50	7.28	7.82	7.61	7.43	7.88	7.68	7.56
95	TC	105.0	97.2	90.0	108.3	101.2	95.3	110.2	103.5	99.8
	SHC	55.9	74.0	88.0	63.8	84.8	95.3	72.7	97.4	99.8
	kW	8.41	8.14	7.89	8.53	8.28	8.08	8.60	8.36	8.23
100	TC	102.5	94.9	87.9	105.7	98.7	93.1	107.5	100.9	97.6
	SHC	54.9	73.0	86.3	62.8	83.7	93.1	71.8	96.3	97.6
	kW	8.75	8.46	8.20	8.87	8.61	8.39	8.94	8.69	8.56
105	TC	100.0	92.5	85.8	103.0	96.2	90.9	—	98.2	95.3
	SHC	53.9	71.9	84.5	61.8	82.5	90.9	—	95.2	95.3
	kW	9.09	8.78	8.49	9.22	8.93	8.71	—	9.02	8.89
115	TC	94.6	87.6	81.3	97.3	90.9	86.2	—	92.7	90.6
	SHC	51.7	69.8	80.8	59.6	80.1	86.2	—	93.0	90.6
	kW	9.73	9.38	9.07	9.86	9.55	9.31	—	9.63	9.53

569C120/524A120

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3000/0.05			4000/0.07			5000/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	133.6	123.2	112.5	139.7	129.6	119.2	143.4	133.7	124.2
	SHC	67.7	85.1	106.7	75.9	97.9	119.2	84.2	109.7	124.2
	kW	10.73	10.41	10.08	10.92	10.61	10.29	11.03	10.74	10.45
95	TC	127.5	118.2	108.8	132.6	123.7	114.9	135.6	127.2	119.6
	SHC	65.2	82.9	103.7	73.2	95.2	114.8	81.5	107.0	119.5
	kW	11.63	11.21	10.78	11.86	11.46	11.06	12.00	11.62	11.27
100	TC	124.8	115.0	105.3	130.1	120.7	111.7	133.2	124.3	116.7
	SHC	64.1	81.6	100.7	72.2	93.8	111.7	80.7	105.9	116.7
	kW	12.09	11.68	11.28	12.31	11.92	11.54	12.44	12.07	11.75
105	TC	121.5	112.3	103.2	126.3	117.6	109.3	129.1	120.8	114.1
	SHC	62.7	80.4	99.0	70.7	92.3	109.3	79.2	104.4	114.1
	kW	12.47	12.05	11.64	12.69	12.29	11.91	12.81	12.44	12.13
115	TC	115.5	106.4	97.6	120.0	111.4	103.7	122.6	114.4	108.6
	SHC	60.2	77.9	94.3	68.3	89.5	103.7	77.0	101.8	108.6
	kW	13.49	12.91	12.35	13.77	13.22	12.73	13.94	13.42	13.05

LEGEND

BF — Bypass Factor
Edb — Entering Dry Bulb
EER — Energy Efficiency Ratio
Ewb — Entering Wet Bulb
kW — Compressor Motor Power Input
SHC — Sensible Heat Capacity (1000 Btuh), Gross
TC — Total Capacity (1000 Btuh), Gross
— — Unit cannot operate at these conditions due to interruption by safety control.

NOTES:

1. Gross capacities shown do not include a deduction for evaporator fan motor heat.
2. Combination ratings are based on a 2° F line loss. For a close-coupled system (less than 15 ft), *add 2%* to ratings. All combination ratings are based on R-22.
3. SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. *Above 80 F edb, add (corr factor x cfm) to SHC.*

BYPASS FACTOR (BF)	ENTERING-AIR DRY BULB TEMP (F)					
	79	78	77	76	75	under 75
	81	*82*	*83*	*84*	*85*	*over 85*
	Correction Factor					
.05	1.04	2.07	3.11	4.14	5.18	Use formula shown below.
.10	.98	1.96	2.94	3.92	4.91	
.20	.87	1.74	2.62	3.49	4.36	
.30	.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.
Correction Factor = 1.10 x (1 – BF) x (edb – 80).

COMBINATION RATINGS — 569C UNITS (cont)

569C120/524A150

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3750/0.06			5000/0.08			6250/0.10		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	141.9	130.2	120.2	147.2	136.2	127.6	150.9	140.1	133.5
	SHC	75.2	95.6	116.3	85.0	111.2	127.6	94.8	125.0	133.5
	kW	10.99	10.63	10.32	11.15	10.81	10.55	11.27	10.93	10.73
95	TC	134.5	124.1	115.6	138.9	129.3	122.3	142.1	132.7	127.6
	SHC	72.4	92.8	112.4	81.9	108.3	122.3	91.8	121.5	127.6
	kW	11.95	11.48	11.09	12.15	11.71	11.39	12.29	11.87	11.64
100	TC	132.2	121.1	112.4	136.7	126.5	119.4	140.0	130.1	125.0
	SHC	71.4	91.4	109.6	81.1	107.1	119.4	91.1	120.3	125.0
	kW	12.40	11.94	11.57	12.59	12.16	11.87	12.73	12.31	12.10
105	TC	128.2	117.8	109.8	132.3	122.9	116.5	135.4	126.1	121.8
	SHC	69.9	89.9	107.4	79.5	105.5	116.5	89.5	118.4	121.8
	kW	12.77	12.30	11.94	12.96	12.53	12.24	13.10	12.68	12.48
115	TC	121.9	111.5	104.0	125.8	116.4	110.7	—	119.5	116.0
	SHC	67.5	87.0	102.5	77.1	102.7	110.7	—	115.4	116.0
	kW	13.89	13.23	12.75	14.14	13.54	13.18	—	13.74	13.52

COMBINATION RATINGS — 569B090-120 UNITS

576B090/524A072

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		1800/0.06			2400/0.10			3000/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	91.8	84.5	—	96.7	89.4	80.6	99.8	92.8	84.1
	SHC	45.5	54.0	—	49.8	63.4	80.6	55.3	69.8	84.1
	kW	6.57	6.37	—	6.71	6.50	6.26	6.79	6.60	6.36
95	TC	88.1	81.2	73.5	92.6	85.7	77.7	95.4	88.9	81.0
	SHC	43.9	52.8	68.5	48.2	61.9	77.7	53.8	68.3	81.0
	kW	7.17	6.93	6.67	7.33	7.09	6.81	7.42	7.20	6.93
100	TC	86.1	79.4	71.9	90.5	83.7	76.0	93.1	86.8	79.3
	SHC	43.1	52.1	67.1	47.4	61.1	76.0	53.0	67.5	79.3
	kW	7.46	7.21	6.92	7.62	7.37	7.08	7.72	7.48	7.20
105	TC	84.2	77.6	70.4	88.3	81.8	74.4	90.8	84.7	77.7
	SHC	42.2	51.4	65.9	46.6	60.3	74.4	52.3	66.8	77.7
	kW	7.73	7.46	7.15	7.91	7.63	7.32	8.02	7.76	7.46
115	TC	82.6	73.0	63.1	88.8	78.9	68.9	92.7	83.3	73.6
	SHC	41.5	49.6	60.0	46.8	59.1	68.9	52.9	66.2	73.6
	kW	8.21	7.99	7.76	8.35	8.12	7.89	8.44	8.23	8.00

576B090/524A120

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3000/0.05			4000/0.07			5000/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	110.3	102.0	94.1	114.1	106.4	99.7	116.3	109.0	104.3
	SHC	58.1	76.0	91.4	66.0	87.2	99.7	74.8	99.6	104.3
	kW	7.08	6.85	6.63	7.19	6.98	6.79	7.25	7.05	6.92
95	TC	105.0	97.2	89.9	108.4	101.2	95.2	110.3	103.4	99.8
	SHC	55.9	73.9	87.9	63.8	84.8	95.2	72.8	97.4	99.7
	kW	7.75	7.49	7.24	7.87	7.62	7.42	7.94	7.70	7.57
100	TC	102.4	94.8	87.7	105.6	98.6	93.0	107.4	100.8	97.5
	SHC	54.9	72.9	86.1	62.8	83.6	93.0	71.8	96.3	97.5
	kW	8.07	7.78	7.52	8.19	7.93	7.72	8.26	8.01	7.89
105	TC	99.7	92.3	85.6	102.7	96.0	90.7	—	98.0	95.1
	SHC	53.8	71.9	84.3	61.7	82.4	90.7	—	95.1	95.1
	kW	8.39	8.08	7.79	8.52	8.23	8.01	—	8.32	8.20
115	TC	107.4	95.3	84.5	113.0	101.5	92.5	—	105.2	99.4
	SHC	56.9	73.1	83.4	65.6	85.0	92.5	—	98.1	99.4
	kW	8.79	8.50	8.25	8.91	8.65	8.44	—	8.73	8.60

576B090/524A090

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		2250/0.06			3000/0.10			3750/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	100.1	92.2	84.1	104.2	97.2	89.1	107.1	100.4	92.9
	SHC	50.4	63.1	80.2	57.7	72.4	89.1	63.1	81.2	92.9
	kW	6.80	6.58	6.36	6.92	6.72	6.49	7.00	6.81	6.60
95	TC	95.7	88.3	80.7	99.3	92.7	85.5	101.9	95.8	89.1
	SHC	48.6	61.4	77.3	56.1	70.6	85.5	61.3	79.3	89.1
	kW	7.44	7.18	6.92	7.56	7.33	7.08	7.65	7.44	7.21
100	TC	93.5	86.2	78.8	96.9	90.5	83.5	99.4	93.4	87.1
	SHC	47.7	60.5	75.7	55.3	69.6	83.5	60.4	78.4	87.1
	kW	7.74	7.46	7.19	7.86	7.62	7.36	7.96	7.73	7.50
105	TC	91.2	84.1	77.0	94.4	88.2	81.6	96.8	91.1	85.2
	SHC	46.8	59.6	74.2	54.5	68.7	81.6	59.5	77.4	85.2
	kW	8.03	7.73	7.43	8.17	7.91	7.63	8.27	8.03	7.78
115	TC	93.3	82.4	71.9	98.6	88.7	78.8	102.7	93.3	84.1
	SHC	47.7	58.8	69.8	55.9	68.9	78.8	61.5	78.3	84.1
	kW	8.46	8.21	7.96	8.58	8.35	8.12	8.68	8.46	8.24

576B102/524A090

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		2250/0.06			3000/0.10			3750/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	111.9	103.3	—	117.3	109.3	99.5	120.7	113.0	103.5
	SHC	55.3	68.0	—	62.1	77.6	99.4	67.8	86.2	103.4
	kW	9.05	8.69	—	9.27	8.94	8.53	9.41	9.09	8.69
95	TC	106.6	98.1	89.2	111.5	103.7	94.4	114.8	107.4	98.5
	SHC	53.1	65.6	84.6	60.2	75.2	94.4	65.8	83.9	98.5
	kW	9.78	9.34	8.90	10.02	9.63	9.16	10.19	9.81	9.37
100	TC	104.3	95.9	87.2	109.0	101.4	92.4	112.2	104.9	96.4
	SHC	52.2	64.7	82.9	59.3	74.2	92.4	64.8	83.0	96.4
	kW	10.13	9.67	9.20	10.38	9.97	9.49	10.56	10.16	9.70
105	TC	101.6	93.6	85.4	105.8	98.7	90.4	108.7	102.0	94.2
	SHC	51.1	63.7	81.4	58.3	73.1	90.4	63.6	81.8	94.2
	kW	10.46	10.05	9.62	10.67	10.31	9.88	10.83	10.48	10.08
115	TC	96.6	88.7	80.7	100.5	93.5	85.8	103.3	96.7	89.6
	SHC	49.0	61.6	77.3	56.5	70.9	85.8	61.7	79.7	89.6
	kW	11.16	10.60	10.03	11.44	10.94	10.39	11.64	11.17	10.66

LEGEND

BF — Bypass Factor
Edb — Entering Dry Bulb
EER — Energy Efficiency Ratio
Ewb — Entering Wet Bulb
kW — Compressor Motor Power Input
SHC — Sensible Heat Capacity (1000 Btuh), Gross
TC — Total Capacity (1000 Btuh), Gross
— — Unit cannot operate at these conditions due to interruption by safety control.

NOTES:

1. Gross capacities shown do not include a deduction for evaporator fan motor heat.
2. Combination ratings are based on a 2° F line loss. For a close-coupled system (less than 15 ft), *add 2%* to ratings. All combination ratings are based on R-22.
3. SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. *Above 80 F edb, add (corr factor x cfm) to SHC.*

BYPASS FACTOR (BF)	ENTERING-AIR DRY BULB TEMP (F)					
	79	78	77	76	75	under 75
	81	*82*	*83*	*84*	*85*	*over 85*
	Correction Factor					
.05	1.04	2.07	3.11	4.14	5.18	Use formula shown below.
.10	.98	1.96	2.94	3.92	4.91	
.20	.87	1.74	2.62	3.49	4.36	
.30	.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.
Correction Factor = 1.10 x (1 – BF) x (edb – 80).

COMBINATION RATINGS — 569B090-120 UNITS (cont)

576B102/524A120

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3000/0.05			4000/0.07			5000/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	123.9	114.9	105.9	128.7	120.1	111.8	131.5	123.4	116.4
	SHC	63.7	81.5	101.2	71.6	93.5	111.8	80.1	105.5	116.4
	kW	9.54	9.17	8.79	9.74	9.39	9.04	9.86	9.52	9.23
95	TC	118.1	109.1	100.4	122.6	114.2	106.3	125.3	117.2	111.1
	SHC	61.3	79.1	96.6	69.3	90.8	106.3	77.9	103.0	111.1
	kW	10.36	9.90	9.46	10.59	10.16	9.76	10.72	10.31	10.00
100	TC	115.4	106.6	98.1	119.8	111.4	104.0	122.3	114.4	108.8
	SHC	60.2	78.0	94.7	68.2	89.5	103.9	76.9	101.8	108.7
	kW	10.73	10.26	9.79	10.97	10.52	10.11	11.11	10.68	10.37
105	TC	111.9	103.5	95.6	115.8	108.0	101.2	118.0	110.6	105.8
	SHC	58.8	76.7	92.7	66.7	88.0	101.2	75.4	100.3	105.8
	kW	10.99	10.56	10.15	11.19	10.79	10.44	11.30	10.92	10.67
115	TC	106.5	98.2	90.5	110.2	102.5	96.1	—	105.0	100.9
	SHC	56.6	74.4	88.4	64.5	85.4	96.1	—	98.0	100.9
	kW	11.87	11.28	10.73	12.13	11.58	11.13	—	11.76	11.47

576B120/524A090

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		2250/0.06			3000/0.10			3750/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	113.1	104.3	—	118.7	110.5	100.3	122.3	114.3	104.4
	SHC	55.8	68.4	—	62.6	78.1	100.3	68.4	86.7	104.4
	kW	8.98	8.62	—	9.20	8.87	8.46	9.34	9.02	8.62
95	TC	108.2	100.0	91.3	113.0	105.5	96.4	116.2	109.0	100.3
	SHC	53.8	66.5	86.4	60.7	76.0	96.4	66.3	84.6	100.3
	kW	9.69	9.30	8.89	9.91	9.56	9.13	10.06	9.73	9.31
100	TC	105.2	96.6	87.6	110.1	102.3	93.0	113.5	105.9	97.1
	SHC	52.6	65.0	83.3	59.7	74.6	93.0	65.3	83.4	97.1
	kW	10.05	9.67	9.27	10.27	9.92	9.51	10.42	10.09	9.69
105	TC	103.0	94.5	85.9	107.6	100.0	91.1	110.7	103.5	95.1
	SHC	51.6	64.1	81.8	58.9	73.6	91.1	64.3	82.4	95.1
	kW	10.41	10.02	9.61	10.63	10.27	9.86	10.78	10.44	10.05
115	TC	97.5	89.7	81.7	101.5	94.5	86.7	104.3	97.7	90.5
	SHC	49.4	62.0	78.2	56.8	71.3	86.7	62.1	80.1	90.5
	kW	11.05	10.56	10.07	11.29	10.86	10.38	11.47	11.06	10.61

576B120/524A120

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3000/0.05			4000/0.07			5000/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	125.5	116.2	106.9	130.5	121.7	113.0	133.4	125.1	117.7
	SHC	64.3	82.1	102.1	72.4	94.2	113.0	80.7	106.2	117.7
	kW	9.47	9.10	8.73	9.67	9.32	8.97	9.79	9.45	9.16
95	TC	119.3	110.7	102.3	123.7	115.6	108.0	126.3	118.6	112.5
	SHC	61.8	79.7	98.2	69.7	91.4	108.0	78.3	103.5	112.5
	kW	10.21	9.81	9.41	10.42	10.03	9.68	10.53	10.17	9.89
100	TC	116.8	107.7	98.9	121.4	112.8	104.9	124.0	115.8	109.8
	SHC	60.8	78.4	95.4	68.8	90.1	104.9	77.5	102.4	109.8
	kW	10.57	10.16	9.77	10.77	10.39	10.04	10.89	10.53	10.26
105	TC	114.0	105.2	96.7	118.3	110.0	102.6	120.8	112.9	107.4
	SHC	59.6	77.4	93.6	67.7	88.9	102.6	76.4	101.2	107.4
	kW	10.94	10.52	10.12	11.14	10.75	10.40	11.26	10.88	10.63
115	TC	107.5	99.2	91.5	111.2	103.5	97.1	—	106.0	101.8
	SHC	57.0	74.8	89.2	64.9	85.9	97.1	—	98.4	101.8
	kW	11.66	11.15	10.67	11.89	11.42	11.02	—	11.57	11.31

576B120/524A150

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3750/0.06			5000/0.08			6250/0.10		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	132.4	122.0	113.7	136.7	127.2	120.4	139.8	130.5	125.6
	SHC	71.6	91.8	110.7	81.1	107.4	120.4	91.0	120.5	125.6
	kW	9.75	9.33	9.00	9.92	9.54	9.26	10.04	9.67	9.48
95	TC	125.5	115.8	108.4	129.3	120.5	114.7	132.0	123.4	119.7
	SHC	68.9	89.0	106.3	78.4	104.5	114.7	88.3	117.2	119.7
	kW	10.50	10.04	9.70	10.68	10.26	9.99	10.81	10.40	10.22
100	TC	123.3	112.9	105.3	127.2	117.8	112.0	130.2	121.0	117.3
	SHC	68.0	87.6	103.6	77.6	103.4	112.0	87.7	116.1	117.2
	kW	10.86	10.39	10.06	11.03	10.62	10.35	11.16	10.76	10.59
105	TC	120.2	110.0	102.9	123.9	114.8	109.4	—	117.8	114.5
	SHC	66.8	86.3	101.5	76.4	102.1	109.4	—	114.6	114.5
	kW	11.23	10.75	10.41	11.40	10.97	10.72	—	11.12	10.96
115	TC	113.0	103.4	97.2	—	107.8	103.3	—	110.4	108.2
	SHC	64.1	83.3	96.7	—	99.0	103.3	—	111.1	108.2
	kW	12.00	11.41	11.02	—	11.68	11.40	—	11.85	11.70

LEGEND

BF — Bypass Factor
Edb — Entering Dry Bulb
EER — Energy Efficiency Ratio
Ewb — Entering Wet Bulb
kW — Compressor Motor Power Input
SHC — Sensible Heat Capacity (1000 Btuh), Gross
TC — Total Capacity (1000 Btuh), Gross
— — Unit cannot operate at these conditions due to interruption by safety control.

NOTES:

1. Gross capacities shown do not include a deduction for evaporator fan motor heat.
2. Combination ratings are based on a 2° F line loss. For a close-coupled system (less than 15 ft), *add 2%* to ratings. All combination ratings are based on R-22.
3. SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. *Above 80 F edb, add (corr factor x cfm) to SHC.*

BYPASS FACTOR (BF)	ENTERING-AIR DRY BULB TEMP (F)					
	79	78	77	76	75	under 75
	81	*82*	*83*	*84*	*85*	*over 85*
	Correction Factor					
.05	1.04	2.07	3.11	4.14	5.18	Use formula shown below.
.10	.98	1.96	2.94	3.92	4.91	
.20	.87	1.74	2.62	3.49	4.36	
.30	.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.
Correction Factor = 1.10 x (1 – BF) x (edb – 80).

COMBINATION RATINGS — 566D UNITS

566D120/524A090

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		2250/0.06			3000/0.10			3750/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	114.2	104.9	—	120.2	111.5	100.6	124.0	115.5	104.9
	SHC	56.3	68.6	—	63.1	78.5	100.6	69.0	87.2	104.9
	kW	8.51	8.20	—	8.71	8.42	8.05	8.83	8.55	8.20
95	TC	109.5	100.7	91.6	114.7	106.7	96.9	118.2	110.5	101.0
	SHC	54.3	66.8	86.6	61.2	76.5	96.9	66.9	85.2	101.0
	kW	9.32	9.00	8.67	9.51	9.22	8.86	9.64	9.35	9.01
100	TC	107.1	98.4	89.3	112.1	104.2	94.7	115.5	107.9	98.8
	SHC	53.3	65.8	84.7	60.4	75.4	94.7	66.0	84.1	98.8
	kW	9.67	9.36	9.03	9.86	9.57	9.22	9.98	9.70	9.37
105	TC	104.4	96.3	87.8	109.0	101.6	92.9	112.1	105.0	96.8
	SHC	52.2	64.9	83.4	59.3	74.3	92.9	64.8	83.0	96.8
	kW	9.97	9.56	9.14	10.20	9.83	9.39	10.35	10.00	9.59
115	TC	99.4	91.4	83.1	103.6	96.4	88.2	106.5	99.7	92.1
	SHC	50.2	62.7	79.4	57.5	72.1	88.2	62.9	80.9	92.1
	kW	10.72	10.32	9.91	10.93	10.57	10.16	11.07	10.73	10.35

566D120/524A120

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3000/0.05			4000/0.07			5000/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	127.4	117.6	107.7	132.8	123.4	114.1	136.0	127.1	119.0
	SHC	65.1	82.7	102.7	73.2	95.0	114.1	81.6	107.0	119.0
	kW	8.95	8.62	8.29	9.13	8.81	8.50	9.23	8.94	8.67
95	TC	121.5	112.3	103.2	126.3	117.6	109.3	—	120.8	114.1
	SHC	62.7	80.4	99.0	70.7	92.3	109.3	—	104.4	114.1
	kW	9.75	9.42	9.09	9.93	9.61	9.31	—	9.73	9.48
100	TC	118.8	109.7	100.7	123.5	114.8	106.8	—	118.0	111.7
	SHC	61.6	79.3	96.9	69.6	91.1	106.8	—	103.3	111.7
	kW	10.10	9.77	9.44	10.27	9.96	9.66	—	10.07	9.84
105	TC	115.2	106.7	98.4	119.4	111.4	104.1	—	114.2	108.8
	SHC	60.1	78.0	95.0	68.1	89.5	104.1	—	101.7	108.8
	kW	10.51	10.08	9.67	10.72	10.32	9.96	—	10.46	10.19
115	TC	109.7	101.3	93.3	—	105.7	99.0	—	108.3	103.7
	SHC	57.9	75.7	90.7	—	86.9	99.0	—	99.4	103.7
	kW	11.24	10.81	10.41	—	11.04	10.70	—	11.17	10.94

566D120/524A150

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3750/0.06			5000/0.08			6250/0.10		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	134.9	123.8	114.9	139.6	129.3	121.9	—	132.9	127.5
	SHC	72.5	92.7	111.7	82.2	108.3	121.9	—	121.6	127.5
	kW	9.20	8.83	8.53	9.35	9.01	8.76	—	9.13	8.95
95	TC	128.2	117.8	109.8	132.3	122.9	116.5	—	126.1	121.8
	SHC	69.9	89.9	107.4	79.5	105.5	116.5	—	118.4	121.8
	kW	10.00	9.62	9.33	10.15	9.80	9.57	—	9.92	9.76
100	TC	125.4	115.0	107.2	129.4	120.0	113.9	—	123.2	119.2
	SHC	68.8	88.6	105.2	78.5	104.3	113.9	—	117.1	119.2
	kW	10.34	9.96	9.68	10.49	10.14	9.92	—	10.26	10.12
105	TC	121.2	111.4	104.4	—	116.0	110.7	—	118.9	115.7
	SHC	67.2	87.0	102.9	—	102.6	110.7	—	115.1	115.7
	kW	10.81	10.32	9.97	—	10.55	10.28	—	10.70	10.53
115	TC	115.4	105.7	99.1	—	110.1	105.4	—	112.9	110.3
	SHC	65.0	84.3	98.3	—	100.1	105.4	—	112.3	110.3
	kW	11.52	11.03	10.70	—	11.26	11.02	—	11.40	11.27

566D150/524A120

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3000/0.05			4000/0.07			5000/0.12		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	145.6	134.4	122.6	152.8	141.8	129.6	157.1	146.6	134.6
	SHC	72.5	89.9	115.1	80.9	103.4	129.6	88.9	115.0	134.6
	kW	10.02	9.70	9.36	10.22	9.91	9.56	10.34	10.05	9.70
95	TC	139.5	128.4	116.9	146.3	135.5	123.9	150.3	140.0	129.1
	SHC	70.0	87.3	110.5	78.4	100.5	123.9	86.6	112.3	129.1
	kW	10.93	10.61	10.28	11.12	10.81	10.48	11.24	10.94	10.63
100	TC	136.7	126.3	115.4	143.1	132.8	122.1	146.8	137.1	127.1
	SHC	68.9	86.4	109.1	77.2	99.3	122.1	85.3	111.1	127.1
	kW	11.38	11.05	10.72	11.57	11.26	10.93	11.69	11.39	11.08
105	TC	133.6	123.2	112.5	139.7	129.6	119.2	143.4	133.7	124.2
	SHC	67.7	85.1	106.7	75.9	97.9	119.2	84.2	109.7	124.2
	kW	11.79	11.39	10.98	12.03	11.64	11.24	12.17	11.80	11.43
115	TC	128.0	117.6	107.2	133.7	123.8	113.9	137.1	127.6	119.1
	SHC	65.3	82.7	102.4	73.6	95.2	113.9	82.0	107.2	119.1
	kW	12.72	12.32	11.92	12.94	12.56	12.18	13.07	12.71	12.38

566D150/524A150

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3750/0.06			5000/0.08			6250/0.10		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	155.0	142.8	131.1	161.2	149.4	138.9	165.4	153.8	145.0
	SHC	80.2	101.4	125.5	90.1	116.9	138.9	99.8	131.4	145.0
	kW	10.29	9.94	9.60	10.46	10.12	9.82	10.58	10.25	10.00
95	TC	148.5	136.3	125.2	154.4	142.7	133.0	158.5	147.0	139.1
	SHC	77.7	98.4	120.5	87.6	114.0	133.0	97.4	128.2	139.1
	kW	11.19	10.84	10.52	11.35	11.02	10.74	11.47	11.14	10.92
100	TC	145.2	133.5	123.2	150.7	139.6	130.6	154.4	143.6	136.5
	SHC	76.5	97.2	118.8	86.2	112.7	130.6	96.0	126.6	136.5
	kW	11.64	11.28	10.96	11.80	11.46	11.19	11.92	11.59	11.37
105	TC	141.9	130.2	120.2	147.2	136.2	127.6	150.9	140.1	133.5
	SHC	75.2	95.6	116.3	85.0	111.2	127.6	94.8	125.6	133.5
	kW	12.11	11.66	11.28	12.31	11.89	11.56	12.46	12.04	11.79
115	TC	135.9	124.2	114.8	140.9	130.0	122.2	144.5	133.9	128.0
	SHC	72.9	92.9	111.6	82.7	108.6	122.2	92.6	122.1	128.0
	kW	13.03	12.58	12.21	13.22	12.80	12.50	13.36	12.95	12.72

566D150/524A180

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		4500/0.03			6000/0.05			7500/0.08		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	165.7	153.7	142.4	170.8	160.6	150.8	175.3	165.0	157.4
	SHC	90.0	114.1	139.2	99.4	130.5	150.8	111.0	146.0	157.4
	kW	10.59	10.25	9.92	10.74	10.45	10.16	10.87	10.57	10.35
95	TC	158.6	147.0	136.0	163.4	153.6	144.2	167.8	157.8	150.8
	SHC	87.5	111.1	133.6	96.7	127.1	144.2	108.4	142.4	150.8
	kW	11.47	11.14	10.83	11.61	11.33	11.06	11.74	11.45	11.25
100	TC	154.5	143.6	133.3	158.9	149.8	141.0	163.0	153.7	147.4
	SHC	86.1	109.6	131.2	94.9	125.3	141.0	106.6	140.3	147.3
	kW	11.92	11.59	11.27	12.06	11.78	11.51	12.18	11.90	11.70
105	TC	150.9	140.2	130.0	155.1	146.2	137.7	159.2	150.0	144.0
	SHC	84.8	108.0	128.3	93.5	123.5	137.7	105.3	138.5	144.0
	kW	12.46	12.05	11.65	12.62	12.28	11.95	12.78	12.42	12.19
115	TC	144.4	134.0	124.1	148.3	139.8	131.6	152.3	143.4	137.9
	SHC	82.5	105.3	123.1	91.0	120.4	131.6	102.8	135.2	137.9
	kW	13.35	12.95	12.57	13.50	13.18	12.86	13.66	13.31	13.10

LEGEND

BF — Bypass Factor
Edb — Entering Dry Bulb
EER — Energy Efficiency Ratio
Ewb — Entering Wet Bulb
kW — Compressor Motor Power Input
SHC — Sensible Heat Capacity (1000 Btuh), Gross
TC — Total Capacity (1000 Btuh), Gross
— — Unit cannot operate at these conditions due to interruption by safety control.

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The sensible heat capacity (SHC) is based on 80 F dry-bulb temperature of air entering evaporator coil.

   Below 80 F dry-bulb, subtract (corr factor x cfm) from SHC.
   Above 80 F dry bulb, add (corr factor x cfm) to SHC.

BYPASS FACTOR	ENTERING-AIR DRY BULB TEMP (F)					
	79	78	77	76	75	under 75
	81	*82*	*83*	*84*	*85*	*over 85*
	Correction Factor					
.10	.99	1.98	2.97	3.96	4.95	Use formula shown below.
.20	.88	1.76	2.64	3.52	4.40	
.30	.77	1.54	2.31	3.08	3.85	

   Interpolation is permissible.
   Correction Factor = 1.1 x (1 – BF) x (db – 80).

3. Gross capacities shown do not include a deduction for evaporator fan motor heat.
4. Formulas:

$$t_{ldb} = t_{edb} - \frac{\text{sensible heat capacity (Btuh)}}{1.1 \times \text{cfm}}$$

   t_{lwb} = wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb}).

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

   where h_{ewb} = enthalpy of air entering evaporator coil

5. Combination ratings are based on a 2° F line loss. For a close-coupled system (less than 15 ft), *add 2%* to ratings. All combination ratings are based on R-22.

COMBINATION RATINGS — 566D UNITS (cont)

566D180/524A150

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		3750/0.06			5000/0.08			6250/0.10		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	181.7	167.9	—	190.3	176.1	160.9	195.7	181.8	167.7
	SHC	90.5	113.0	—	100.8	128.3	160.8	110.2	144.5	167.7
	kW	14.85	14.20	—	15.25	14.59	13.87	15.51	14.86	14.19
95	TC	175.1	161.7	—	183.0	169.5	155.6	188.0	174.9	162.2
	SHC	88.0	110.2	—	98.1	125.5	155.6	107.6	141.2	162.2
	kW	16.06	15.39	—	16.45	15.77	15.08	16.70	16.04	15.41
100	TC	171.4	158.0	143.9	179.0	165.7	152.3	184.0	171.0	158.9
	SHC	86.5	108.5	136.4	96.6	123.9	152.3	106.2	139.4	158.9
	kW	16.68	15.93	15.13	17.11	16.36	15.60	17.39	16.65	15.97
105	TC	168.2	155.3	142.0	175.3	162.6	150.0	180.0	167.6	156.4
	SHC	85.3	107.2	134.8	95.3	122.5	150.0	104.8	137.8	156.4
	kW	17.29	16.52	15.72	17.72	16.96	16.20	18.00	17.25	16.58
115	TC	160.9	148.6	136.4	167.4	155.4	144.2	171.7	160.0	150.3
	SHC	82.5	104.1	130.0	92.4	119.4	144.2	102.0	134.2	150.3
	kW	18.54	17.75	16.97	18.96	18.19	17.47	19.24	18.48	17.86

566D180/524A180

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		4500/0.03			6000/0.05			7500/0.08		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	196.7	181.4	167.0	204.2	190.6	177.3	209.9	196.4	184.8
	SHC	100.9	126.5	160.9	111.9	145.0	177.3	123.4	161.7	184.8
	kW	15.55	14.84	14.16	15.91	15.27	14.64	16.18	15.54	15.00
95	TC	188.8	174.5	161.0	195.6	183.0	170.7	200.9	188.4	178.0
	SHC	98.2	123.4	155.6	108.7	141.4	170.7	120.2	157.7	178.0
	kW	16.74	16.03	15.35	17.08	16.45	15.84	17.35	16.72	16.20
100	TC	184.7	170.6	157.4	191.3	179.0	167.0	196.6	184.3	174.2
	SHC	96.7	121.7	152.4	107.1	139.4	167.0	118.6	155.6	174.2
	kW	17.43	16.64	15.89	17.80	17.11	16.43	18.09	17.40	16.84
105	TC	180.6	167.3	154.8	186.7	175.2	163.9	191.7	180.1	170.8
	SHC	95.3	120.2	150.1	105.4	137.6	163.9	116.9	153.6	170.8
	kW	18.04	17.24	16.49	18.40	17.71	17.03	18.70	18.01	17.45
115	TC	172.1	159.8	148.1	177.5	167.0	156.7	182.1	171.5	163.3
	SHC	92.3	116.8	144.3	101.9	133.6	156.7	113.5	149.2	163.3
	kW	19.26	18.47	17.72	19.61	18.93	18.27	19.91	19.22	18.70

566D180/524A240

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		6000/0.03			8000/0.06			10,000/0.07		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	214.1	198.7	185.1	221.3	206.0	195.8	224.4	212.1	204.4
	SHC	115.8	151.5	181.2	131.8	175.4	195.8	145.7	196.7	204.4
	kW	16.37	15.65	15.01	16.71	15.99	15.51	16.86	16.28	15.92
95	TC	205.0	190.4	177.9	211.6	197.1	188.2	214.2	202.8	196.4
	SHC	112.3	148.1	175.0	128.3	171.6	188.2	142.1	192.5	196.4
	kW	17.55	16.82	16.20	17.88	17.15	16.71	18.01	17.44	17.12
100	TC	200.6	186.2	174.0	207.1	192.6	184.2	209.6	198.4	192.5
	SHC	110.7	146.4	171.5	126.7	169.8	184.2	140.5	190.4	192.5
	kW	18.32	17.51	16.82	18.69	17.87	17.40	18.83	18.20	17.86
105	TC	195.5	181.8	170.4	201.6	187.8	180.3	203.7	193.3	188.2
	SHC	108.7	144.6	168.4	124.7	167.7	180.3	138.4	188.1	188.2
	kW	18.93	18.11	17.43	19.29	18.47	18.02	19.42	18.80	18.49
115	TC	185.7	172.9	162.6	191.2	178.3	172.0	192.9	183.4	179.5
	SHC	105.0	140.9	161.6	120.9	163.7	172.0	134.6	183.6	179.5
	kW	20.14	19.31	18.65	20.49	19.66	19.26	20.60	19.99	19.74

566D240/524A180

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		4500/0.03			6000/0.05			7500/0.08		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	232.1	211.5	—	243.6	224.3	205.7	251.3	232.6	214.6
	SHC	113.4	140.0	—	126.7	161.4	205.7	138.2	179.8	214.6
	kW	19.33	18.26	—	19.93	18.93	17.95	20.33	19.36	18.42
95	TC	221.4	201.5	—	232.1	213.7	196.0	239.6	221.7	204.9
	SHC	109.7	135.5	—	122.4	156.3	196.0	134.0	174.3	204.9
	kW	20.79	19.67	—	21.40	20.36	19.36	21.83	20.81	19.86
100	TC	216.6	197.5	179.9	226.8	209.2	192.2	234.0	216.8	201.0
	SHC	108.0	133.7	172.2	120.4	154.1	192.2	132.0	171.9	201.0
	kW	21.48	20.35	19.31	22.08	21.04	20.04	22.50	21.49	20.55
105	TC	211.1	192.4	175.1	221.0	203.8	187.3	228.1	211.2	196.0
	SHC	106.0	131.4	168.0	118.2	151.5	187.3	129.9	169.1	196.0
	kW	22.10	20.91	19.81	22.73	21.63	20.58	23.18	22.10	21.14
115	TC	200.5	182.9	166.7	209.4	193.5	178.3	216.1	200.4	186.8
	SHC	102.3	127.2	160.6	113.9	146.5	178.3	125.6	163.7	186.8
	kW	23.38	22.12	20.96	24.02	22.88	21.79	24.49	23.37	22.40

566D240/524A240

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		6000/0.03			8000/0.06			10,000/0.07		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	256.4	236.5	216.9	267.0	247.5	229.7	272.9	255.3	240.0
	SHC	131.9	167.0	208.9	148.3	192.9	229.7	162.8	216.4	240.0
	kW	20.60	19.56	18.54	21.15	20.13	19.21	21.46	20.54	19.75
95	TC	224.8	225.2	206.5	255.0	235.6	219.4	260.3	243.3	229.7
	SHC	127.5	162.4	199.9	144.0	187.9	219.4	158.3	211.0	229.7
	kW	22.12	21.01	19.96	22.69	21.60	20.68	22.99	22.04	21.27
100	TC	234.0	220.1	202.3	248.6	229.9	214.8	253.5	237.4	224.9
	SHC	125.3	160.3	196.2	141.7	185.5	214.8	156.0	208.2	224.9
	kW	22.80	21.68	20.63	23.37	22.26	21.37	23.66	22.70	21.97
105	TC	233.1	214.3	197.1	242.5	223.9	209.6	247.1	231.3	219.6
	SHC	123.0	157.9	191.6	139.5	182.9	209.6	153.7	205.5	219.6
	kW	23.50	22.30	21.20	24.09	22.91	22.00	24.39	23.38	22.64
115	TC	221.0	203.1	187.2	229.7	211.8	199.4	233.6	218.9	209.2
	SHC	118.4	153.3	183.1	134.8	177.8	199.4	149.0	199.8	209.2
	kW	24.84	23.56	22.43	25.46	24.18	23.30	25.74	24.69	24.00

566D240/524A300

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		7500/0.04			10,000/0.06			12,500/0.08		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	275.0	253.1	235.5	284.8	262.9	249.6	289.9	271.6	261.5
	SHC	148.4	191.3	231.9	168.6	222.7	249.6	188.3	250.8	261.5
	kW	21.57	20.43	19.51	22.08	20.94	20.25	22.35	21.39	20.87
95	TC	262.7	240.6	224.5	272.2	250.1	238.8	276.9	258.9	250.7
	SHC	143.9	186.3	221.9	164.2	217.4	238.8	184.0	245.3	250.6
	kW	23.13	21.88	20.97	23.67	22.42	21.78	23.93	22.91	22.45
100	TC	256.1	234.5	219.6	265.0	243.6	233.5	269.4	252.1	245.1
	SHC	141.5	183.8	217.3	161.7	214.7	233.5	181.5	242.4	245.1
	kW	23.81	22.53	21.65	24.34	23.07	22.47	24.60	23.57	23.16
105	TC	249.9	228.2	214.0	258.6	237.1	228.0	262.8	245.7	239.5
	SHC	139.2	181.2	212.2	159.4	212.1	228.0	179.3	239.5	239.5
	kW	24.56	23.18	22.28	25.12	23.75	23.17	25.39	24.30	23.91
115	TC	236.6	215.4	203.1	244.7	223.8	216.8	248.4	232.1	228.0
	SHC	134.3	176.1	202.2	154.6	206.6	216.8	174.5	233.6	228.0
	kW	25.96	24.44	23.56	26.54	25.04	24.54	26.80	25.64	25.34

LEGEND

BF — Bypass Factor
Edb — Entering Dry Bulb
EER — Energy Efficiency Ratio
Ewb — Entering Wet Bulb
kW — Compressor Motor Power Input
SHC — Sensible Heat Capacity (1000 Btuh), Gross
TC — Total Capacity (1000 Btuh), Gross
— — Unit cannot operate at these conditions due to interruption by safety control.

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The sensible heat capacity (SHC) is based on 80 F dry-bulb temperature of air entering evaporator coil.

   Below 80 F dry-bulb, subtract (corr factor x cfm) from SHC.
   Above 80 F dry bulb, add (corr factor x cfm) to SHC.

BYPASS FACTOR	ENTERING-AIR DRY BULB TEMP (F)					
	79	78	77	76	75	under 75
	81	*82*	*83*	*84*	*85*	*over 85*
	Correction Factor					
.10	.99	1.98	2.97	3.96	4.95	Use formula shown below.
.20	.88	1.76	2.64	3.52	4.40	
.30	.77	1.54	2.31	3.08	3.85	

   Interpolation is permissible.
   Correction Factor = 1.1 x (1 – BF) x (db – 80).

3. Gross capacities shown do not include a deduction for evaporator fan motor heat.
4. Formulas:

$$t_{ldb} = t_{edb} - \frac{\text{sensible heat capacity (Btuh)}}{1.1 \times \text{cfm}}$$

   t_{lwb} = wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb}).

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

   where h_{ewb} = enthalpy of air entering evaporator coil

5. Combination ratings are based on a 2° F line loss. For a close-coupled system (less than 15 ft), *add 2%* to ratings. All combination ratings are based on R-22.

COMBINATION RATINGS — 576B300,360 UNITS

576B300/524A240

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		6000/0.03			8000/0.05			10,000/0.07		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	305.1	279.8	—	320.3	295.8	—	330.3	305.7	279.5
	SHC	150.5	184.8	—	167.6	213.3	—	183.0	239.4	279.5
	kW	25.59	24.45	—	26.28	25.17	—	26.73	25.62	24.44
95	TC	292.8	268.8	—	306.8	283.5	257.9	315.7	292.9	269.6
	SHC	145.8	180.3	—	162.7	208.1	257.9	177.8	233.6	269.6
	kW	27.58	26.34	—	28.30	27.09	25.77	28.76	27.58	26.38
100	TC	286.3	262.5	237.6	300.0	276.8	252.2	308.6	286.1	263.9
	SHC	143.3	177.7	227.0	160.3	205.3	252.2	175.3	230.5	263.9
	kW	28.50	27.18	25.81	29.25	27.97	26.61	29.72	28.49	27.26
105	TC	279.8	256.7	232.8	292.9	270.3	247.1	300.9	279.4	258.6
	SHC	140.8	175.3	222.8	157.7	202.5	247.1	172.6	227.4	258.6
	kW	29.35	27.86	26.33	30.19	28.74	27.25	30.71	29.32	27.99
115	TC	266.8	245.0	223.2	278.7	257.4	236.9	285.7	265.9	248.0
	SHC	135.9	170.5	214.4	152.6	197.1	236.9	167.3	221.3	248.0
	kW	31.21	29.70	28.19	32.03	30.56	29.14	32.52	31.15	29.91

576B300/524A300

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		7500/0.04			10,000/0.06			12,500/0.08		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	330.8	305.4	277.1	344.8	318.8	293.3	353.4	329.1	307.4
	SHC	168.9	212.4	270.1	189.8	245.6	293.3	209.5	275.9	307.3
	kW	26.75	25.61	24.33	27.39	26.21	25.06	27.77	26.67	25.69
95	TC	316.6	292.0	266.5	329.6	304.5	282.3	337.3	314.4	295.9
	SHC	163.7	207.0	260.4	184.4	239.8	282.3	204.1	269.5	295.9
	kW	28.81	27.54	26.22	29.48	28.18	27.03	29.88	28.69	27.73
100	TC	309.7	285.0	260.4	322.5	297.3	276.3	329.8	307.2	289.9
	SHC	161.2	204.2	254.8	181.9	236.8	276.3	201.6	266.4	289.9
	kW	29.79	28.42	27.07	30.49	29.10	27.94	30.90	29.65	28.69
105	TC	302.3	277.9	254.8	314.5	289.8	270.4	321.4	299.5	283.8
	SHC	158.4	201.3	249.7	179.1	233.7	270.4	198.8	263.0	283.7
	kW	30.80	29.23	27.75	31.58	29.99	28.75	32.03	30.62	29.61
115	TC	287.5	264.0	243.6	298.6	274.9	258.7	304.6	284.3	271.5
	SHC	153.0	195.7	239.4	173.5	227.6	258.7	193.2	256.4	271.5
	kW	32.64	31.01	29.60	33.41	31.77	30.65	33.83	32.42	31.53

576B300/524A360

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		9000/0.04			12,000/0.06			15,000/0.08		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	353.9	325.8	300.2	367.2	339.2	318.4	374.7	350.2	378.8
	SHC	186.0	238.4	293.9	212.4	276.3	318.4	234.9	311.5	272.3
	kW	27.80	26.53	25.37	28.40	27.13	26.19	28.74	27.63	28.92
95	TC	337.9	310.6	288.0	350.0	323.1	305.6	356.7	333.7	327.6
	SHC	179.9	232.4	282.8	206.6	269.8	305.6	228.9	304.2	309.3
	kW	29.91	28.50	27.33	30.53	29.14	28.24	30.88	29.69	29.37
100	TC	330.6	303.1	281.4	342.4	315.4	299.1	348.8	326.0	305.6
	SHC	177.2	229.4	276.8	204.0	266.7	299.1	226.3	300.9	325.3
	kW	30.94	29.42	28.23	31.59	30.10	29.20	31.94	30.69	29.56
105	TC	322.2	295.2	274.9	333.4	307.1	292.3	339.4	317.4	283.3
	SHC	174.0	226.2	270.9	210.0	263.4	292.3	223.1	297.1	341.4
	kW	32.08	30.34	29.04	32.80	31.10	30.15	33.19	31.77	29.57
115	TC	305.6	279.5	262.0	315.7	290.5	278.7	—	300.4	244.7
	SHC	167.7	220.0	259.2	195.0	256.7	278.7	—	289.6	369.4
	kW	33.90	32.09	30.88	34.59	32.85	32.04	—	33.54	29.68

576B360/524A300

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		7500/0.04			10,000/0.06			12,500/0.08		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	352.5	326.2	—	368.2	341.0	310.1	378.3	351.7	324.8
	SHC	176.9	220.8	—	198.0	254.7	310.1	217.8	285.8	324.8
	kW	29.31	28.15	—	30.01	28.81	27.44	30.45	29.28	28.09
95	TC	339.4	313.7	283.7	354.1	327.7	300.1	363.2	338.1	314.4
	SHC	172.1	215.8	276.1	193.0	249.3	300.1	212.7	279.9	314.4
	kW	31.43	30.06	28.47	32.21	30.80	29.34	32.69	31.36	30.10
100	TC	332.6	307.3	278.7	346.8	320.8	294.9	355.4	331.0	308.9
	SHC	169.6	213.2	271.5	190.4	246.4	294.9	210.1	276.8	308.9
	kW	32.48	31.01	29.35	33.30	31.80	30.29	33.81	32.39	31.11
105	TC	325.3	299.8	272.2	339.1	313.1	288.5	347.5	323.3	302.6
	SHC	166.9	210.2	265.6	187.8	243.3	288.5	207.5	273.4	302.6
	kW	33.49	31.93	30.24	34.34	32.74	31.24	34.85	33.37	32.10
115	TC	311.0	286.2	261.5	323.8	298.6	277.4	331.2	308.5	291.0
	SHC	161.6	204.7	255.8	182.4	237.3	277.4	202.1	267.0	290.9
	kW	35.38	33.58	31.79	36.30	34.48	32.94	36.84	35.20	33.92

576B360/524A360

Temp (F) Air Entering Condenser (Edb)		Evaporator Air — Cfm/BF								
		9000/0.04			12,000/0.06			15,000/0.08		
		Evaporator Air — Ewb (F)								
		72	67	62	72	67	62	72	67	62
85	TC	378.5	349.4	319.1	393.6	364.1	338.1	402.6	375.7	478.8
	SHC	195.3	247.7	311.0	221.4	286.4	338.1	244.2	322.7	199.8
	kW	30.46	29.18	27.84	31.13	29.83	28.68	31.52	30.34	34.89
95	TC	363.6	335.2	307.9	377.5	349.0	326.3	385.6	360.2	414.0
	SHC	189.7	242.1	300.8	215.9	280.3	326.3	238.5	315.9	246.7
	kW	32.71	31.20	29.75	33.45	31.94	30.73	33.88	32.53	35.39
100	TC	355.9	327.8	302.0	369.2	341.3	320.2	376.8	352.2	385.2
	SHC	186.7	239.2	295.5	213.1	277.1	320.2	235.6	312.4	267.6
	kW	33.83	32.21	30.71	34.61	32.99	31.76	35.05	33.62	35.54
105	TC	348.1	319.8	295.0	361.1	333.1	313.3	368.4	344.1	359.4
	SHC	183.8	236.0	289.2	210.4	273.8	313.3	232.8	308.8	286.3
	kW	34.89	33.16	31.64	35.69	33.97	32.75	36.14	34.64	35.59
115	TC	331.9	304.5	282.6	343.8	316.8	300.3	350.2	327.4	309.6
	SHC	177.7	229.9	277.9	204.5	267.3	300.3	226.7	301.5	322.4
	kW	36.89	34.90	33.32	37.75	35.80	34.60	38.22	36.57	35.27

LEGEND

BF — Bypass Factor
Edb — Entering Dry Bulb
EER — Energy Efficiency Ratio
Ewb — Entering Wet Bulb
kW — Compressor Motor Power Input
SHC — Sensible Heat Capacity (1000 Btuh), Gross
TC — Total Capacity (1000 Btuh), Gross
— — Unit cannot operate at these conditions due to interruption by safety control.

NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The sensible heat capacity (SHC) is based on 80 F dry-bulb temperature of air entering evaporator coil.

   Below 80 F dry-bulb, subtract (corr factor x cfm) from SHC.
   Above 80 F dry bulb, add (corr factor x cfm) to SHC.

BYPASS FACTOR	ENTERING-AIR DRY BULB TEMP (F)					
	79	78	77	76	75	under 75
	81	*82*	*83*	*84*	*85*	*over 85*
	Correction Factor					
.10	.99	1.98	2.97	3.96	4.95	Use formula shown below.
.20	.88	1.76	2.64	3.52	4.40	
.30	.77	1.54	2.31	3.08	3.85	

   Interpolation is permissible.
   Correction Factor = 1.1 x (1 – BF) x (db – 80).

3. Gross capacities shown do not include a deduction for evaporator fan motor heat.
4. Formulas:

$$t_{ldb} = t_{edb} - \frac{\text{sensible heat capacity (Btuh)}}{1.1 \times \text{cfm}}$$

   t_{lwb} = wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h_{lwb}).

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

   where h_{ewb} = enthalpy of air entering evaporator coil

5. Combination ratings are based on a 2° F line loss. For a close-coupled system (less than 15 ft), *add 2%* to ratings. All combination ratings are based on R-22.

HYDRONIC HEATING CAPACITIES — 524A

UNIT 524A	AIRFLOW (Cfm)	1-ROW STEAM*		2-ROW HOT WATER COIL†			
		Cap.	Ldb	Cap.	Ldb	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
090	**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
360	**9,000**	560	117	735.0	136	73.5	6.2
	12,000	621	107	850.0	126	85.0	7.8
	15,000	670	101	950.0	119	95.0	9.3

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 steam heating coils: 175 psig at 400 F. Maximum operating limit for hot water coils is 150 psig.
2. Leaving db =ent db (F) + $\frac{\text{Capacity (Btuh)}}{1.1 \times \text{cfm}}$
3. See Heating Correction Factors tables below.

HEATING CORRECTION FACTORS — 524A

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

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.

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.

AIR DELIVERY — 524A (0.0-1.2 ESP)

UNIT 524A	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	*320*	*0.22*	*442*	*0.32*	**534**	**0.42**	**611**	**0.52**	678	0.61	739	0.70	795	0.80
	2,100	*373*	*0.31*	**483**	**0.42**	**569**	**0.53**	**642**	**0.63**	708	0.73	767	0.82	821	0.92
	2,400	*427*	*0.42*	**526**	**0.53**	**606**	**0.64**	676	0.75	739	0.86	796	0.96	849	1.06
	2,700	**480**	**0.54**	**570**	**0.67**	**646**	**0.78**	712	0.89	773	1.00	828	1.11	880	1.21
	3,000	**533**	**0.69**	**616**	**0.82**	687	0.94	750	1.05	808	1.16	862	1.28	912	1.39
090	2,250	*359*	*0.32*	*472*	*0.44*	**560**	**0.55**	634	0.65	700	0.75	759	0.86	814	0.96
	2,600	*415*	*0.45*	*516*	*0.57*	**599**	**0.68**	669	0.79	732	0.90	790	1.01	843	1.11
	3,000	*478*	*0.62*	**569**	**0.75**	**645**	**0.86**	712	0.98	773	1.09	828	1.20	879	1.32
	3,400	*542*	*0.82*	**624**	**0.95**	**695**	**1.08**	758	1.20	815	1.31	869	1.43	918	1.55
	3,750	**598**	**1.03**	**673**	**1.17**	740	1.29	800	1.42	855	1.60	906	1.66	954	1.78
120	3,000	*444*	*0.58*	*541*	*0.71*	*621*	*0.83*	691	0.94	753	1.05	809	1.17	862	1.28
	3,500	*518*	*0.82*	*604*	*0.95*	**677**	**1.08**	742	1.20	801	1.32	855	1.44	906	1.56
	4,000	*592*	*1.11*	**669**	**1.25**	**736**	**1.38**	797	1.51	853	1.63	904	1.75	953	1.88
	4,500	**666**	**1.44**	**735**	**1.59**	797	1.72	854	1.86	907	1.99	956	2.12	1003	2.24
	5,000	**740**	**1.83**	803	1.98	861	2.12	914	2.26	964	2.39	1010	2.53	1055	2.66
150	3,750	*363*	*0.37*	*475*	*0.58*	**566**	**0.80**	**645**	**1.02**	**715**	**1.24**	779	1.47	839	1.69
	4,300	416	*0.53*	*517*	*0.78*	**601**	**1.02**	**676**	**1.26**	743	1.50	805	1.74	862	1.99
	5,000	*484*	*0.81*	**573**	**1.08**	**650**	**1.35**	**719**	**1.62**	782	1.89	841	2.16	896	2.44
	5,700	**552**	**1.17**	**631**	**1.47**	**702**	**1.76**	766	2.06	826	2.36	881	2.66	934	2.96
	6,250	**605**	**1.51**	**678**	**1.83**	744	2.15	805	2.47	862	2.79	915	3.11	966	3.43
180	4,500	*391*	*0.51*	*495*	*0.75*	**581**	**1.00**	**657**	**1.25**	**725**	**1.50**	787	1.76	845	2.02
	5,300	*460*	*0.80*	**551**	**1.08**	**629**	**1.35**	**700**	**1.63**	764	1.91	823	2.20	878	2.48
	6,000	*521*	*1.13*	**602**	**1.43**	**675**	**1.73**	741	2.04	801	2.34	858	2.65	911	2.96
	6,800	**590**	**1.60**	**663**	**1.93**	730	2.26	791	2.59	847	2.92	901	3.26	951	3.60
	7,500	**651**	**2.10**	**718**	**2.45**	779	2.81	837	3.16	890	3.52	941	3.88	990	4.24
240	6,000	503	1.07	587	1.37	661	1.67	**727**	**1.97**	**789**	**2.28**	**846**	**2.59**	900	2.90
	7,000	586	1.64	660	1.98	**726**	**2.31**	**787**	**2.65**	**844**	**2.99**	898	3.33	948	3.67
	8,000	670	2.37	**735**	**2.74**	**795**	**3.12**	**851**	**3.49**	904	3.86	954	4.23	1001	4.61
	9,000	**754**	**3.28**	**812**	**3.69**	867	4.09	918	4.50	967	4.90	1014	5.31	1059	5.72
	10,000	**838**	**4.39**	891	4.83	941	5.27	988	5.70	1034	6.14	1077	6.85	1120	7.02
300	7,500	*412*	*1.15*	*492*	*1.53*	*568*	*2.00*	*640*	*2.56*	**710**	**3.22**	**776**	**3.98**	840	4.83
	8,750	*481*	*1.76*	*550*	*2.17*	*616*	*2.66*	**680**	**3.22**	**742**	**3.86**	**802**	**4.58**	860	5.38
	10,000	*549*	*2.55*	*610*	*2.99*	**669**	**3.50**	**726**	**4.07**	**782**	**4.70**	836	5.40	889	6.17
	11,250	*618*	*3.52*	**672**	**4.00**	**725**	**4.53**	**777**	**5.12**	**827**	**5.76**	876	6.45	925	7.21
	12,500	**687**	**4.71**	**735**	**5.22**	**783**	**5.78**	**830**	**6.38**	876	7.04	922	7.74	966	8.49
360	9,000	*471*	*1.78*	*539*	*2.17*	*604*	*2.63*	667	3.17	728	3.78	788	4.46	845	5.22
	10,500	*550*	*2.72*	*608*	*3.15*	*665*	*3.64*	720	4.18	774	4.79	827	5.45	878	6.18
	12,000	*628*	*3.93*	**679**	**4.40**	**730**	**4.92**	779	5.48	827	6.09	874	6.76	921	7.47
	13,500	**707**	**5.44**	**752**	**5.94**	**797**	**6.49**	841	7.08	885	7.71	928	8.38	970	9.10
	15,000	**785**	**7.27**	**826**	**7.81**	867	8.39	907	9.01	947	9.66	986	10.35	1024	11.07

LEGEND

Bhp — Brake Horsepower Input to Fan
ESP — External Static Pressure

Italic type indicates special field-supplied drive required for use with standard motor.

Bold indicates standard drive and standard motor.

Plain type indicates medium-static drive and standard motor. For 524A300 size only, plain type indicates medium-static drive and alternate motor.

indicates high-static drive and alternate motor. For 524A360 size and single-phase 090 size, shading indicates high-static drive and standard motor.

NOTES:
1. Maximum allowable fan speed is 1100 rpm for unit sizes 300 and 360; 1200 rpm for all other sizes.
2. Fan performance is based on deductions for wet coil, clean 2-in. filters, and unit casing. See below for factory-supplied filter pressure drop.
3. Refer to fan motor and drives tables, pages 48-50 to complete the selection.
4. Alternate motor not available for 360 size units or single-phase 090 size units.

FACTORY-SUPPLIED FILTER PRESSURE DROP (in. wg)

UNIT 524A	AIRFLOW (Cfm)	PRESSURE DROP (in. wg)
072	**1,800**	0.05
	2,400	0.08
	3,000	0.11
090	**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
360	**9,000**	0.19
	12,000	0.29
	15,000	0.40

AIR DELIVERY — 524A (1.4-2.4 ESP)

UNIT 524A	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**	847	0.89	896	0.98	942	1.07	986	1.16	1027	1.25	—	—
	2,100	872	1.02	920	1.11	965	1.21	1008	1.30	1050	1.40	—	—
	2,400	899	1.16	946	1.26	990	1.36	1033	1.46	1073	1.55	—	—
	2,700	928	1.32	974	1.42	1018	1.52	1059	1.63	*1099*	*1.73*	—	—
	3,000	959	1.49	1004	1.60	1046	1.71	*1087*	*1.81*	*1126*	*1.92*	—	—
090	**2,250**	865	1.06	913	1.16	958	1.27	1001	1.37	1042	1.47	—	—
	2,600	893	1.22	940	1.33	984	1.43	1027	1.54	1067	1.65	—	—
	3,000	928	1.43	973	1.54	1017	1.65	1058	1.76	1098	1.87	—	—
	3,400	965	1.66	1010	1.78	1052	1.89	1092	2.00	1131	2.12	—	—
	3,750	1000	1.90	1043	2.02	1084	2.13	1124	2.25	1162	2.37	—	—
120	**3,000**	911	1.39	958	1.50	1002	1.61	1044	1.72	1084	1.83	1123	1.94
	3,500	953	1.67	998	1.79	1041	1.90	1082	2.02	1122	2.13	1159	2.25
	4,000	999	2.00	1042	2.12	1084	2.24	1124	2.36	1162	2.48	1199	2.60
	4,500	1047	2.37	1089	2.50	1129	2.62	1168	2.74	—	—	—	—
	5,000	1097	2.79	1138	2.92	1177	3.05	—	—	—	—	—	—
150	**3,750**	894	1.91	947	2.14	996	2.37	1044	2.60	1089	2.83	—	—
	4,300	916	2.23	967	2.48	1016	2.73	1062	2.98	**1107**	**3.24**	—	—
	5,000	948	2.71	997	2.98	1044	3.26	1089	3.53	**1133**	**3.81**	—	—
	5,700	984	3.25	1031	3.55	1076	3.86	**1120**	**4.16**	**1162**	**4.46**	—	—
	6,250	1014	3.75	1060	4.07	**1104**	**4.39**	**1147**	**4.71**	**1188**	**5.03**	—	—
180	**4,500**	899	2.29	951	2.56	999	2.84	1046	3.12	1091	3.41	1133	3.70
	5,300	930	2.78	980	3.08	1027	3.38	1072	3.68	1116	3.99	1157	4.30
	6,000	961	3.28	1009	3.60	1055	3.92	1098	4.24	1141	4.57	*1181*	*4.91*
	6,800	999	3.94	1045	4.28	1089	4.63	1132	4.98	1173	5.33	—	—
	7,500	1036	4.60	1080	4.97	1123	5.34	1164	5.71	—	—	—	—
240	**6,000**	950	3.21	999	3.53	1045	3.85	1089	4.17	1131	4.50	1172	4.83
	7,000	996	4.02	1042	4.37	1086	4.72	1129	5.07	1169	5.43	—	—
	8,000	1047	4.99	1091	5.37	1133	5.75	1173	6.13	—	—	—	—
	9,000	1102	6.13	1143	6.54	1183	6.96	—	—	—	—	—	—
	10,000	1160	7.46	1200	7.91	—	—	—	—	—	—	—	—
300	**7,500**	903	5.79	963	6.83	1021	7.98	*1078*	*9.21*	—	—	—	—
	8,750	917	6.26	972	7.22	1025	8.26	*1078*	*9.38*	—	—	—	—
	10,000	941	7.01	991	7.91	1040	8.89	*1089*	*9.93*	—	—	—	—
	11,250	972	8.02	1019	8.89	1064	9.83	—	—	—	—	—	—
	12,500	1010	9.29	1053	10.15	*1095*	*11.05*	—	—	—	—	—	—
360	**9,000**	901	6.07	955	6.98	1008	7.98	1060	9.05	—	—	—	—
	10,500	928	6.98	978	7.84	1026	8.76	1073	9.74	—	—	—	—
	12,000	966	8.24	1011	9.07	1055	9.95	*1098*	*10.88*	—	—	—	—
	13,500	1011	9.86	1052	10.67	*1092*	*11.52*	—	—	—	—	—	—
	15,000	1062	11.84	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan
ESP — External Static Pressure

Plain type indicates medium-static drive and standard motor. For 524A300 size only, plain type indicates medium-static drive and alternate motor.

shaded cells indicates high-static drive and alternate motor. For 524A360 size and single-phase 090 size, shading indicates high-static drive and standard motor.

Italics indicate special field-supplied drive required for use with alternate motor. For 524A360 size only, italics indicate special field-supplied drive required for use with standard motor.

Bold indicates special field-supplied drive and motor.

NOTES:

1. Maximum allowable fan speed is 1100 rpm for unit sizes 300 and 360; 1200 rpm for all other sizes.
2. Fan performance is based on deductions for wet coil, clean 2-in. filters, and unit casing. See page 27 for factory-supplied filter pressure drop.
3. Refer to fan motor and drives tables, pages 48-50 to complete the selection.
4. Alternate motor not available for 360 size units or single-phase 090 size units.

ACCESSORY PLENUM AIR THROW DATA (Ft) — 524A UNITS

UNIT 524A	AIRFLOW (Cfm)	VANE DEFLECTION		
		Straight	22½°	45°
072	**2,400**	39	33	24
090	**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
360	**12,000**	85	72	52

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

ACCESSORY PRESSURE DROP (in. wg) — 524A UNITS

UNIT 524A	AIRFLOW (Cfm)	DISCHARGE PLENUM	RETURN AIR GRILLE	HEATING COILS			ECONOMIZER
				Hot Water	Steam	Electric	
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
090	**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
360	**9,000**	0.20	0.03	0.37	0.37	0.13	0.08
	12,000	0.32	0.05	0.59	0.59	0.22	0.14
	15,000	0.46	0.07	0.85	0.85	0.34	0.21

ELECTRICAL DATA

569C UNITS

UNIT 569C	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE*		COMPR		OFM	POWER SUPPLY	
		Min	Max	RLA	LRA	FLA	MCA	MOCP
072	208/230-3-60 460-3-60	187 414	254 508	19.0 9.5	142 72	1.9 1.0	25.6 12.9	35 15
090	208/230-3-60 460-3-60	187 414	254 508	25.0 12.4	185 89	3.1 1.4	34.4 16.9	45 20
120	208/230-3-60 460-3-60	187 414	254 508	34.5 17.0	239 119	3.1 1.4	46.2 22.7	60 30

576B090-120 UNITS

UNIT 576B	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE*		COMPR		OFM	POWER SUPPLY	
		Min	Max	RLA	LRA	FLA	MCA	MOCP
090	208/230-3-60 460-3-60 575-3-60	187 414 518	254 508 632	31.5 15.7 12.6	160 80 64	3.1 1.4 1.4	42.5 21.0 17.2	50 25 20
102	208/230-3-60 460-3-60 575-3-60	187 414 518	254 508 632	39.7 19.9 15.9	198 99 79	3.1 1.4 1.4	52.7 26.3 21.3	70 35 25
120	208/230-3-60 460-3-60 575-3-60	187 414 518	254 508 632	39.7 19.9 15.9	198 99 79	3.1 1.4 1.4	52.7 26.3 21.3	70 35 25

566D UNITS

UNIT 566D	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE*		COMPR		OFM				POWER SUPPLY	
		Min	Max	RLA	LRA	Qty	Nom. Hp	FLA (ea) Fan No.		MCA	MOCP (Fuse)
								1	2		
120	208/230-3-60 460-3-60	187 414	253 528	43.6 20.0	170 77	2	½	4.3 2.3	3.7 1.9	62.5 29.1	100 40
150	208/230-3-60 460-3-60	187 414	253 528	49.3 22.1	191 80	2	½	4.3 2.3	3.7 1.9	69.3 31.7	100 50
180	208/230-3-60 460-3-60	187 414	253 528	63.6 29.3	266 120	2	½	4.3 2.3	3.7 1.9	87.5 40.7	125 60
240	208/230-3-60 460-3-60 575-3-60	187 414 518	254 508 632	67.9 34.7 28.8	345 173 120	2	½	4.3 2.3 1.8	3.7 1.9 1.8	93.4 48.1 40.1	161 82 68

LEGEND

CSA — Canadian Standards Association
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps
MOCP — Maximum Overcurrent Protection
NEC — National Electrical Code
OFM — Outdoor (Condenser) Fan Motor
RLA — Rated Load Amps
UL — Underwriters' Laboratories

*Units are suitable for use on electrical systems where voltage supplied to the unit terminals is not below or above the listed limits.

NOTES:
1. In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device shall be fuse or HACR breaker.
2. The 575-v units are CSA listed only.

ELECTRICAL DATA (cont)

576B300,360 UNITS

UNIT 576B	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE*		COMPR		OFM**			POWER SUPPLY	
		Min	Max	RLA	LRA	Qty	Nom. Hp	FLA (ea)	MCA†	MOCP
300	208/230-3-60 460-3-60	187 414	254 508	89.8 43.6	446 223	2	1	6.2 3.1	124.6 60.7	200 100
360	208/230-3-60 460-3-60	187 414	254 508	106.5 50.0	506 253	2	1	6.2 3.1	145.5 68.7	250 110

LEGEND

CSA — Canadian Standards Association
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps
MOCP — Maximum Overcurrent Protection
NEC — National Electrical Code
OFM — Outdoor (Condenser) Fan Motor
RLA — Rated Load Amps
UL — Underwriters' Laboratories

*Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed minimum and maximum limits.

†Fuse only. MCA values are the same for 208- and 230-v units.
**All fans are protected by a single circuit breaker.

NOTE: In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device shall be fuse or HACR breaker.

524A UNITS, STANDARD MOTORS

UNIT 524A	NOMINAL VOLTAGE (V*-PH-HZ)	VOLTAGE LIMITS	FAN MOTOR		POWER SUPPLY	
			Hp	FLA	Minimum Circuit Amps	MOCP
072	208/230-1-60	187-253	1.3	7.6	9.5	15
	208/230-3-60	187-253	1.7	4.0	5.0	15
	460-3-60	414-528	1.7	1.8	2.3	15
	575-3-60	518-632	1.0	1.35	1.7	15
090	208/230-1-60	187-253	2.4	11.0	13.8	20
	208/230-3-60	187-253	2.4	5.8	7.3	15
	460-3-60	414-528	2.4	2.6	3.3	15
	575-3-60	518-632	2.0	2.4	3.0	15
120	208/230-3-60	187-253	2.4	5.8	7.3	15
	460-3-60	414-528	2.4	2.6	3.3	15
	575-3-60	518-632	2.0	2.4	3.0	15
150	208/230-3-60	187-253	2.9	7.5	9.4	15
	460-3-60	414-528	2.9	3.4	4.3	15
	575-3-60	518-632	3.0	3.8	4.8	15
180	208/230-3-60	187-253	3.7	10.6	13.3	20
	460-3-60	414-528	3.7	4.8	6.0	15
	575-3-60	518-632	3.0	3.8	4.8	15
240	208/230-3-60	187-253	5.0	15.2/14.4	19.0/18.0	30/30
	460-3-60	414-528	5.0	7.2	9.0	15
	575-3-60	518-632	5.0	5.6	7.0	15
300	208/230-3-60	187-253	7.5	22.0/21.0	27.5/26.3	45/45
	460-3-60	414-528	7.5	10.5	13.1	20
	575-3-60	518-632	7.5	7.6	9.5	15
360	208/230-3-60	187-253	10.0	26.4/25.0	33.0/31.3	55/55
	460-3-60	414-528	10.0	12.5	15.6	25
	575-3-60	518-632	10.0	9.6	12.0	20

LEGEND

FLA — Full Load Amps
Hp — Horsepower
MOCP — Maximum Overcurrent Protection

*Motors are designed for satisfactory operation within 10% of nominal voltages shown. Voltages should not exceed the limits shown in the Voltage Limits column.

ELECTRICAL DATA (cont)

524A UNITS, ALTERNATE MOTORS

UNIT 524A	NOMINAL VOLTAGE (V*-PH-HZ)	VOLTAGE LIMITS	FAN MOTOR		POWER SUPPLY	
			Hp	FLA	Minimum Circuit Amps	MOCP
072	208/230-1-60	187-253	2.4	11.0	13.8	20
	208/230-3-60	187-253	2.9	7.5	9.4	15
	460-3-60	414-528	2.9	3.4	4.3	15
	575-3-60	518-632	2.0	2.4	3.0	15
090	208/230-3-60	187-253	2.9	7.5	9.4	15
	460-3-60	414-528	2.9	3.4	4.3	15
	575-3-60	518-632	3.0	2.4	3.0	15
120	208/230-3-60	187-253	3.7	10.6	13.3	20
	460-3-60	414-528	3.7	4.8	6.0	15
	575-3-60	518-632	3.0	3.8	4.8	15
150	208/230-3-60	187-253	3.7	10.6	13.3	20
	460-3-60	414-528	3.7	4.8	6.0	15
	575-3-60	518-632	5.0	5.6	7.0	15
180	208/230-3-60	187-253	5.0	15.2/14.4	19.9/18.0	30/30
	460-3-60	414-528	5.0	7.2	6.0	15
	575-3-60	518-632	5.0	5.6	4.8	15
240	208/230-3-60	187-253	7.5	22.0/21.0	27.5/26.3	45/45
	460-3-60	414-528	7.5	10.5	13.1	20
	575-3-60	518-632	7.5	7.6	9.5	15
300	208/230-3-60	187-253	10.0	26.4/25.0	33.0/31.3	55/55
	460-3-60	414-528	10.0	12.5	15.6	25
	575-3-60	518-632	10.0	9.6	12.0	20

LEGEND

FLA — Full Load Amps
Hp — Horsepower
MOCP — Maximum Overcurrent Protection

*Motors are designed for satisfactory operation within 10% of nominal voltages shown. Voltages should not exceed the limits shown in the Voltage Limits column.

ELECTRIC HEATER DATA — 524A UNITS

UNIT 524A	HEATER PART NO.	V-PH-HZ	NOMINAL kW	HEATER AMPS	MCA*	MOCP*
072-120	CAELHEAT001A00	240-3-60	5	12.0	25.6	30
	CAELHEAT002A00	480-3-60		6.0	12.3	15
	CAELHEAT003A00	575-3-60		5.0	11.9	15
	CAELHEAT004A00	240-3-60	10	24.1	40.7	50
	CAELHEAT005A00	480-3-60		12.0	17.8	25
	CAELHEAT006A00	575-3-60		10.0	18.1	25
	CAELHEAT007A00	240-3-60	15	36.0	55.7	80
	CAELHEAT008A00	480-3-60		18.0	27.4	40
	CAELHEAT009A00	575-3-60		15.1	24.4	35
	CAELHEAT010A00	240-3-60	25	60.1	85.8	125
	CAELHEAT011A00	480-3-60		30.1	42.4	60
	CAELHEAT012A00	575-3-60		25.1	67.0	50
090,120	CAELHEAT013A00	240-3-60	35	84.0	115.8	175
	CAELHEAT014A00	480-3-60		42.1	57.4	80
	CAELHEAT015A00	575-3-60		35.1	49.5	70
150-240	CAELHEAT016A00	240-3-60	10	24.1	52.1	60
	CAELHEAT017A00	480-3-60		12.0	25.5	30
	CAELHEAT018A00	575-3-60		10.0	20.2	25
	CAELHEAT019A00	240-3-60	20	47.9	82.1	110
	CAELHEAT020A00	480-3-60		24.1	40.6	50
	CAELHEAT021A00	575-3-60		20.1	32.7	45
	CAELHEAT022A00	240-3-60	30	71.9	112.2	150
	CAELHEAT023A00	480-3-60		36.1	55.6	80
	CAELHEAT024A00	575-3-60		30.1	45.3	70
180,240	CAELHEAT025A00	240-3-60	50	120.0	172.4	250
	CAELHEAT026A00	480-3-60		60.1	85.7	125
	CAELHEAT027A00	575-3-60		50.2	70.4	100
300,360	CAELHEAT028A00	240-3-60	20	47.9	86.5	110
	CAELHEAT029A00	480-3-60		24.1	42.6	60
	CAELHEAT030A00	575-3-60		20.1	34.7	45
	CAELHEAT031A00	240-3-60	40	95.7	146.7	200
	CAELHEAT032A00	480-3-60		48.1	72.6	100
	CAELHEAT033A00	575-3-60		40.2	59.8	80
	CAELHEAT034A00	240-3-60	50	120.0	176.8	250
	CAELHEAT035A00	480-3-60		60.1	87.7	125
	CAELHEAT036A00	575-3-60		50.2	72.4	100
	CAELHEAT037A00	240-3-60	70	167.9	236.9	350
	CAELHEAT038A00	480-3-60		84.0	117.8	175
	CAELHEAT039A00	575-3-60		70.3	97.5	150

LEGEND

HACR — Heating, Air Conditioning, and Refrigeration
MCA — Minimum Circuit Amps
MOCP — Maximum Overcurrent Protection (Amps)

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

NOTES:
1. MCA and MOCP values apply to both standard and alternate factory-supplied motors.
2. Electric heaters are tested and ETL approved at maximum total external static pressure of 1.9 in. wg.
3. Electrical resistance heaters are rated at 240 v, 480 v, or 575 v. To determine heater capacity (kW) at operating voltage, multiply 240-v, 480-v, or 575-v capacity by multipliers found in table below.

HEATER RATING VOLTAGE	ACTUAL HEATER VOLTAGE									
	200	208	230	240	440	460	480	550	575	600
240	.694	.751	.918	1	—	—	—	—	—	—
480	—	—	—	—	.840	.918	1	—	—	—
575	—	—	—	—	—	—	—	.915	1	1.089

NOTE: The following equation converts kW of heat energy to Btuh:
kW x 3.412 =Btuh.

OPERATING SEQUENCES

569C, 576B090-120 UNITS

At start-up, the thermostat calls for cooling, and with all safety devices satisfied, the compressor contactor and fan contactor energize, causing the compressor and outdoor-fan motor to operate. Through terminal G, the field-supplied and -installed indoor-fan contactor is also energized. A field-supplied and -installed liquid line valve (connect to TB terminals 6 and 7) also opens, allowing the system to function in Cooling mode. As cooling demand is satisfied, the thermostat contacts break, deenergizing the contactor and causing the system to shut off. The liquid line solenoid valve closes, minimizing the potential for refrigerant migration. The compressor does not restart until the thermostat again calls for cooling. If a demand for cooling occurs within 5 minutes after the thermostat is satisfied, the system does not restart because of the Time Guard® device. After a 5-minute period, the system restarts upon thermostat demand. The system is protected with the Cycle-LOC™ device so that the compressor does not start if a high-pressure or low-pressure fault occurs. To reset the Cycle-LOC device, set the thermostat to eliminate the cooling demand, then return to the original set point. This should be done only once; if system shuts down due to the same fault, determine the problem before attempting to reset the Cycle-LOC device.

Crankcase Heater (576B Units Only) — The crankcase heater is wired into the control circuit so that it cycles with the compressor, being *off* when the compressor is running and *on* when the compressor cycles off. *The crankcase heater is operable as long as the control circuit is energized.*

566D UNITS

Cooling — When the first stage (TC1) of the cooling thermostat closes, the timer starts. After approximately 3 seconds, the timer activates the compressor and fan motor no. 1 contactor. When the liquid pressure builds to approximately 260 psig, fan motor no. 2 is energized.

On demand for additional cooling capacity, the second stage (TC2) of the cooling thermostat closes, energizing a field-supplied liquid line solenoid valve (LLS), which opens. This increases the suction pressure, causing the compressor to operate at higher capacity.

When the fan switch is set at AUTO position, the indoor-air fan cycles with the compressor. When the switch is set at CONT position, the indoor-air fan runs continuously.

At shutdown, the Time Guard® timer prevents the compressor from restarting for approximately 5 minutes.

Crankcase Heater — The crankcase heater is wired into the control circuit so that it cycles with the compressor, being *off* when the compressor is running and *on* when the compressor cycles off. *The crankcase heater is operable as long as the control circuit is energized.*

Fan Cycling — Fan cycling is employed for head pressure control. The no. 2 fan responds to liquid line pressure, cycling on at approximately 260 psig and off at approximately 126 psig.

576B300,360 UNITS

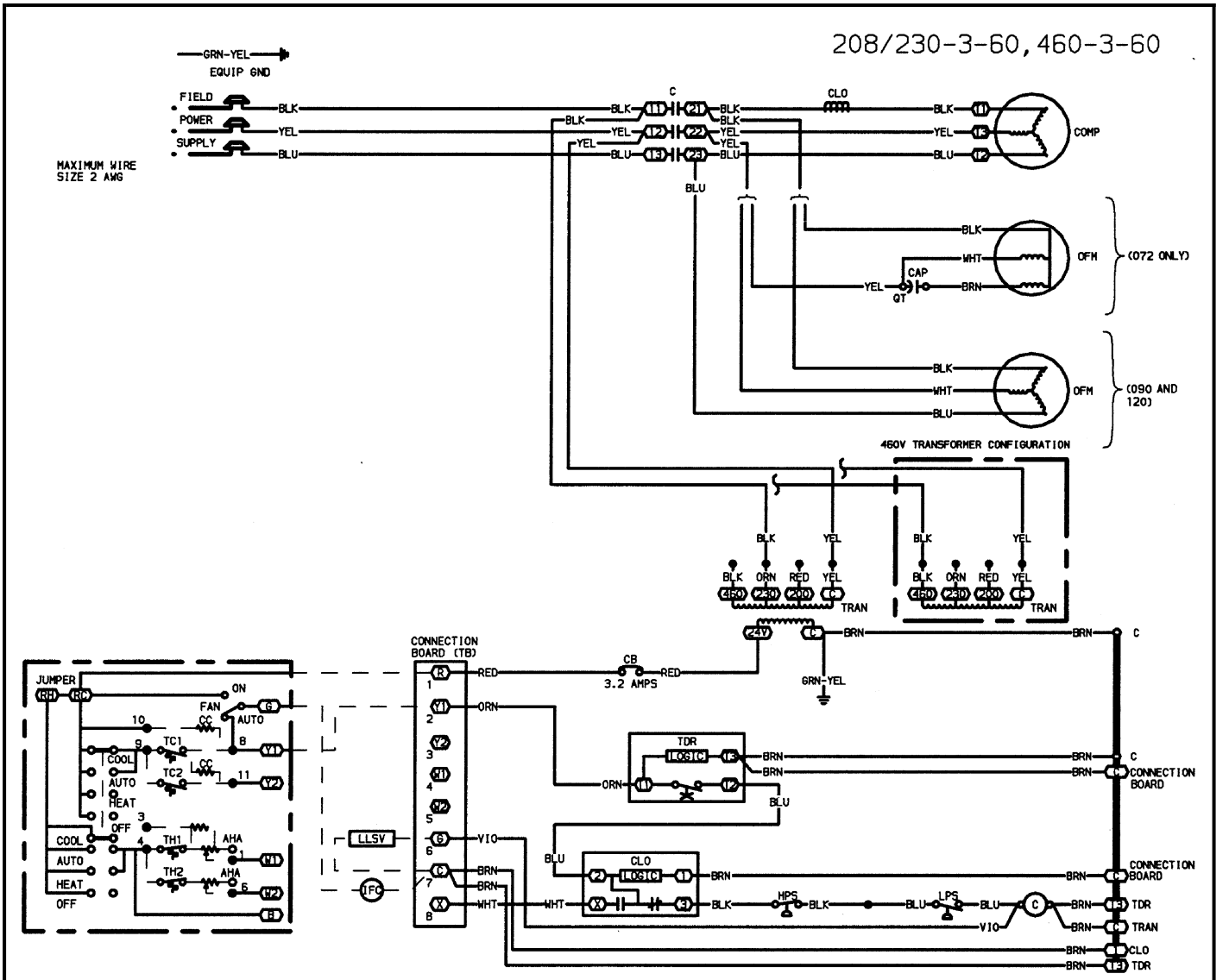
When space thermostat calls for cooling, the no. 1 condenser fan and compressor start after control module (CM) initial time delay of 3 (+2/–1) seconds. If an optional airflow switch is used, compressor and no. 1 condenser fan will not start until sufficient indoor airflow has closed the switch. After 3 seconds, the compressor starts and the factory-supplied, field-installed liquid line solenoid valve (for solenoid drop control) opens. The crankcase heater is deenergized. If the head pressure reaches 260 psig, the second condenser fan starts.

If cooling demand is low, suction pressure at the compressor drops. As the pressure drops, the compressor unloads 2 banks of cylinders as required. If cooling demand is high and 2-stage operation is used, the second step of the thermostat activates the capacity control liquid line solenoid which activates the second stage evaporator coil. The compressor cylinders load or unload in response to compressor suction pressure to meet evaporator load.

Two minutes after the compressor starts, the bypass relay (BPR) timer is deenergized and the low-pressure switch (LPS) bypass is deactivated. If the LPS trips during the first 2 minutes of operation, the compressor remains operational. If a high-pressure switch (HPS) trips at any time, or the LPS trips after 2 minutes, the compressor cannot restart until the control circuit power is interrupted at the thermostat due to the CM lockout feature.

As the space cooling load is satisfied, the second stage of the thermostat opens, and closes the field-supplied capacity control liquid line solenoid valve to deactivate the second stage coil. The compressor adjusts the number of active cylinders to meet the new load. When the space temperature is satisfied, the first stage of the thermostat opens and the control relay and the BPR open. This closes the solenoid drop control valve. The compressor stops and the crankcase heater is energized, preventing refrigerant from migrating to the compressor during the off cycle (solenoid drop refrigerant control). The CM anti-short-cycling timer is energized and runs for approximately 5 minutes. During this time, the compressor is not able to restart.

TYPICAL FIELD WIRING



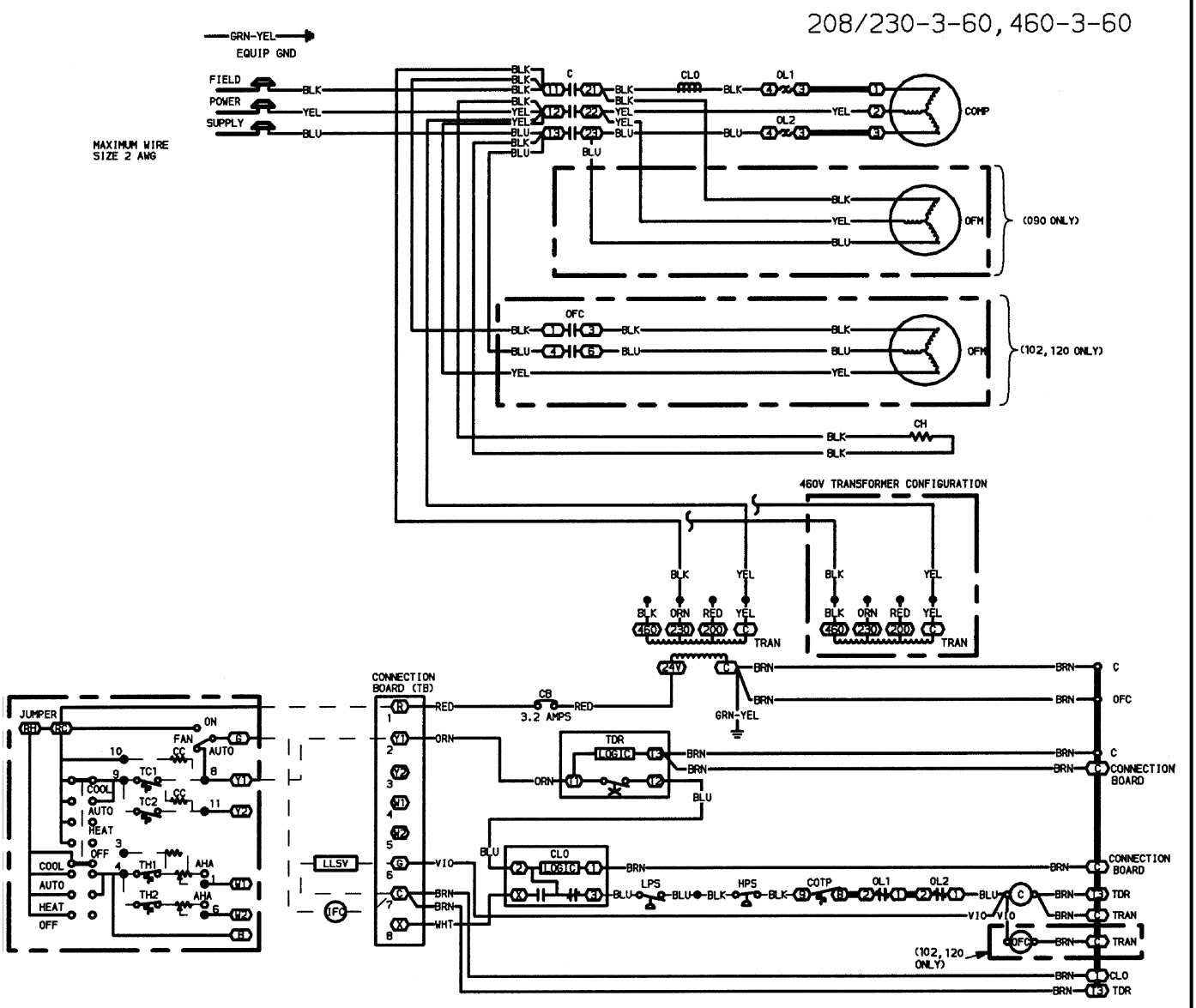
LEGEND

AHA	—	Adjustable Heat Anticipator
C	—	Contactor, Compressor
CB	—	Circuit Breaker
CC	—	Cooling Compensator
CLO	—	Compressor Lockout
HPS	—	High-Pressure Switch
IFC	—	Indoor-Fan Contactor
LLSV	—	Liquid Line Solenoid Valve
LPS	—	Low-Pressure Switch
TB	—	Terminal Block
TC	—	Thermostat-Cooling
TDR	—	Time-Delay Relay
TH	—	Thermostat-Heating
TRAN	—	Transformer

⟨X⟩	Terminal (Marked)
○	Terminal (Unmarked)
X	Terminal Block
●	Splice
———	Factory Wiring
— — —	Accessory or Optional Wiring
▬▬▬	To indicate common potential only, not to represent wiring.
- - - -	Field Wiring

569C Units

TYPICAL FIELD WIRING (cont)



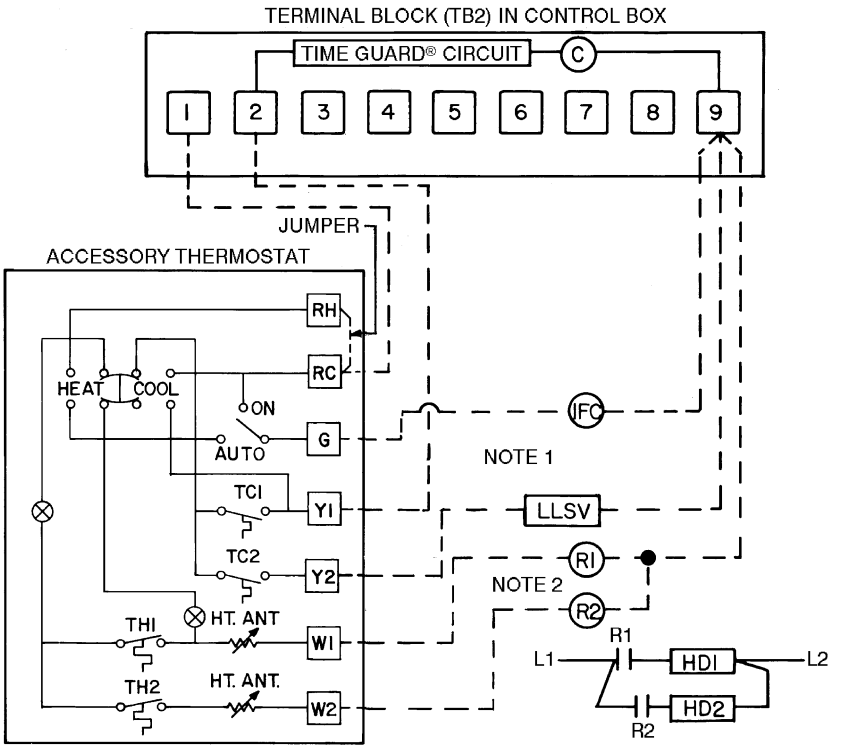
LEGEND

AHA	—	Adjustable Heat Anticipator
C	—	Contactor, Compressor
CB	—	Circuit Breaker
CC	—	Cooling Compensator
CLO	—	Compressor Lockout
HPS	—	High-Pressure Switch
IFC	—	Indoor-Fan Contactor
LLSV	—	Liquid Line Solenoid Valve
LPS	—	Low-Pressure Switch
TB	—	Terminal Block
TC	—	Thermostat-Cooling
TDR	—	Time-Delay Relay
TH	—	Thermostat-Heating
TRAN	—	Transformer

X	Terminal (Marked)
	Terminal (Unmarked)
X	Terminal Block
	Splice
	Factory Wiring
	Accessory or Optional Wiring
	To indicate common potential only, not to represent wiring.
	Field Wiring

576B090-120 Units

TYPICAL FIELD WIRING (cont)



LEGEND

C	—	Compressor Contactor
HD	—	Heating Device
HT. ANT	—	Heat Anticipator
IFC	—	Indoor Fan Contactor
LLSV	—	Liquid Line Solenoid Valve
R	—	Relay
TC	—	Thermostat, Cooling
TH	—	Thermostat, Heating
———		Factory Wiring
- - - -		Field Wiring

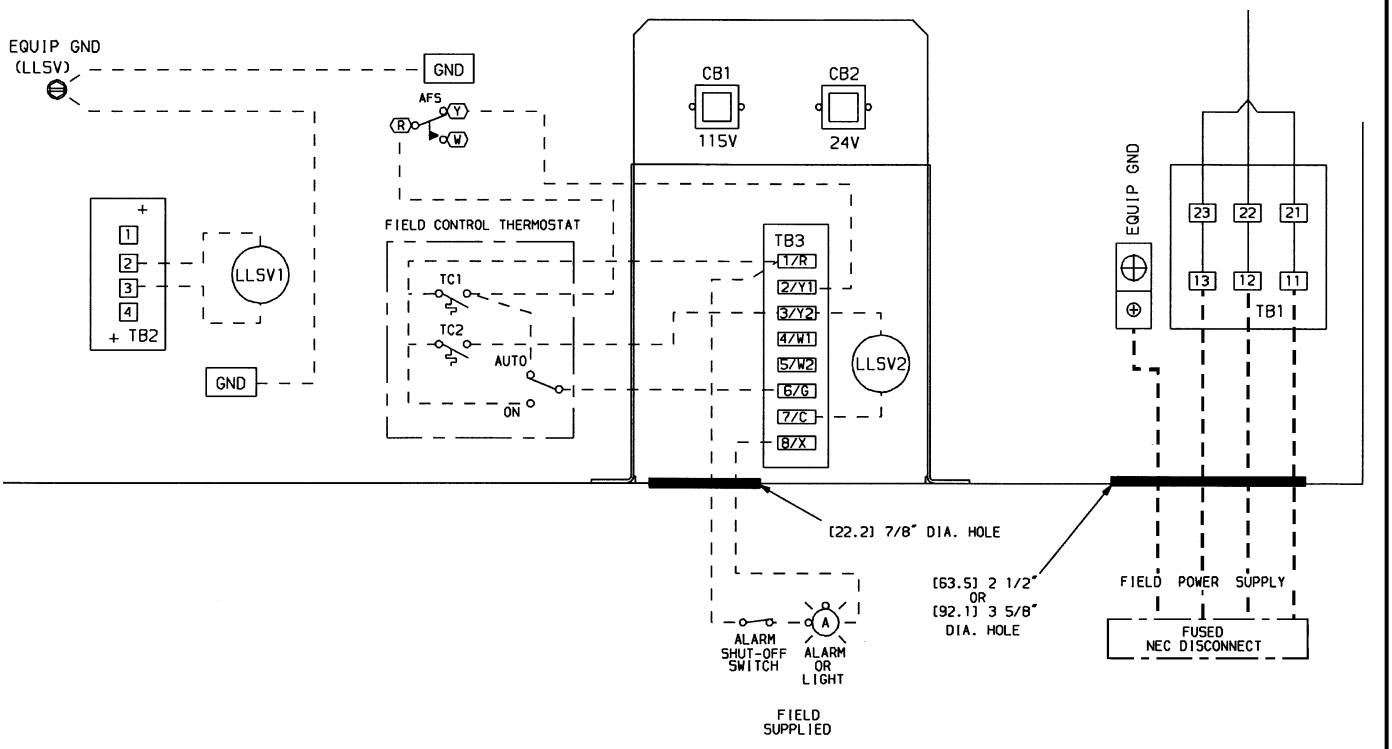
NOTES:

1. Combination LLSV plus IFC VA should not exceed 30 VA.
2. Do not exceed 5 VA (24 VAC) per coil.

} Use accessory relay-transformer package 319702-401 if these VA values must be exceeded.

566D Units

TYPICAL FIELD WIRING (cont)



LEGEND

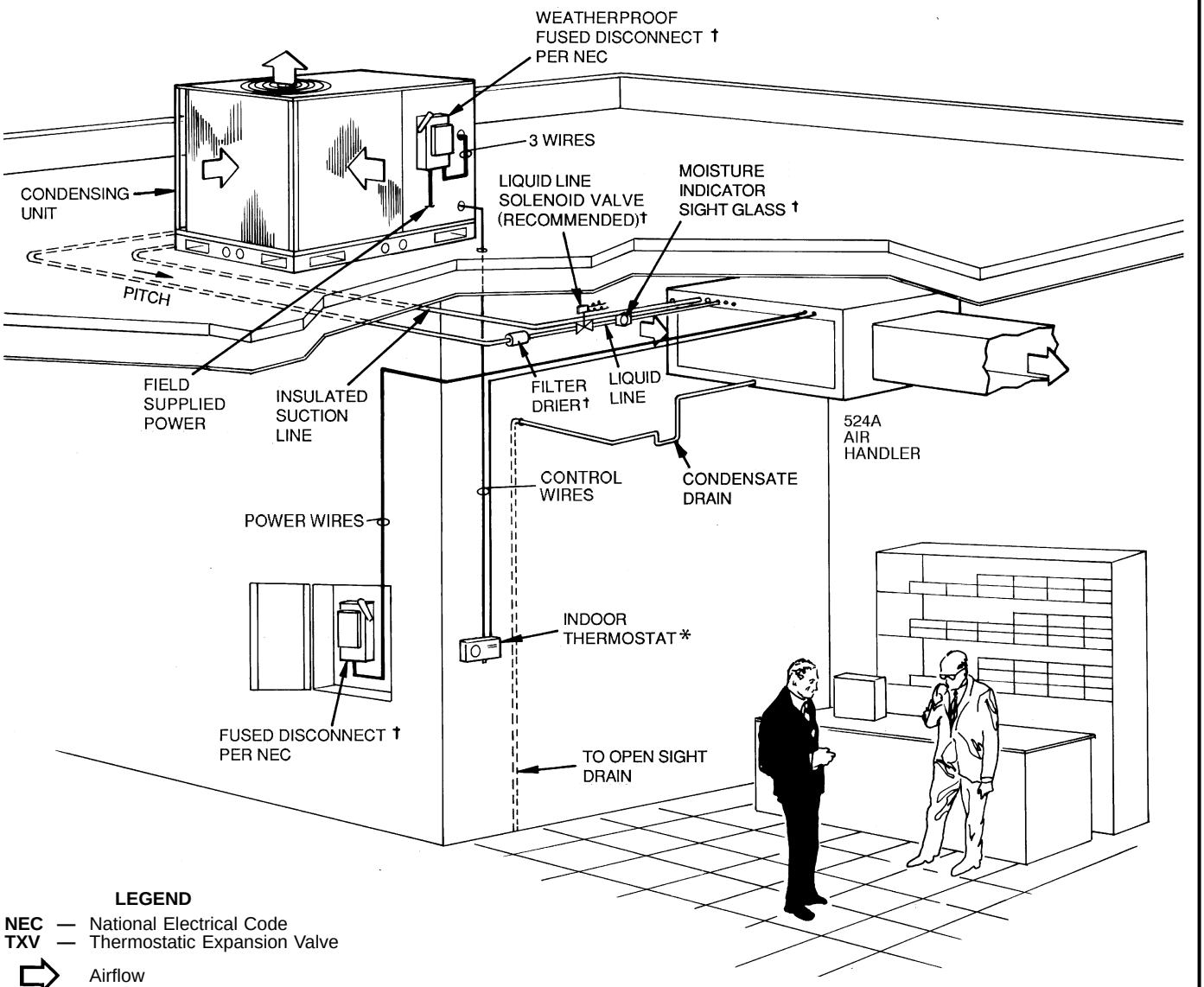
AFS	—	Airflow Switch (Field-Supplied)
CB	—	Circuit Breaker
EQUIP	—	Equipment
FU	—	Fuse
GND	—	Ground
LLSV1	—	Liquid Line Solenoid for Solenoid Drop Control (Field-Supplied)
LLSV2	—	Liquid Line Solenoid for Capacity Control (Field-Supplied)
NEC	—	National Electrical Code
TB	—	Terminal Block
TC	—	Thermostat Cooling
▬▬▬		Field Power Wiring
- - - -		Field Control Wiring
———		Factory-Installed Wiring
—- —		Accessory

NOTES:

1. Factory wiring is in accordance with the NEC. Any field modifications or additions must be in compliance with all applicable codes.
2. All field interlock contacts must have minimum rating of 180 va pilot duty plus capacity required for field-installed equipment. All field interlock contacts in the 24-v control circuit must have minimum rating of 70 va pilot duty plus capacity required for field-installed equipment.
3. For internal unit wiring, reference wiring book or unit wiring label diagram. TB2 is 115-1-60, TB3 is 24-1-60.
4. The following components are not located in the 576B unit control box: LLSV1, LLSV2, field control thermostat, AFS, alarm shutoff switch, and alarm or light.

576B300,360 Units

TYPICAL INSTALLATIONS



LEGEND

NEC — National Electrical Code
TXV — Thermostatic Expansion Valve

Airflow

24-Volt Wiring

Line Voltage

Piping

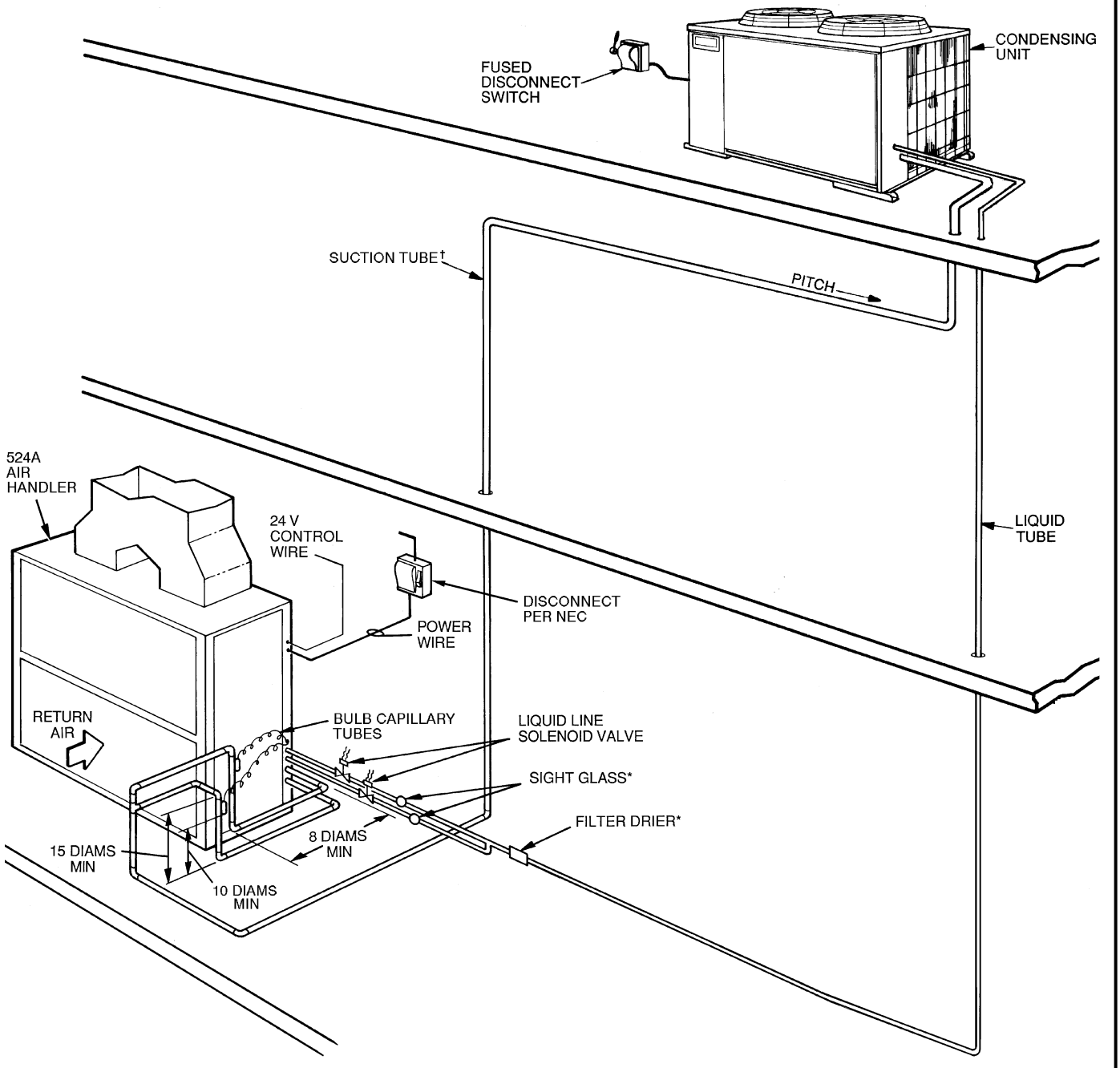
*Accessory item.
†Field supplied.

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 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.

Rooftop Installation — 569C, 576B090-120 Units

TYPICAL INSTALLATIONS (cont)



LEGEND

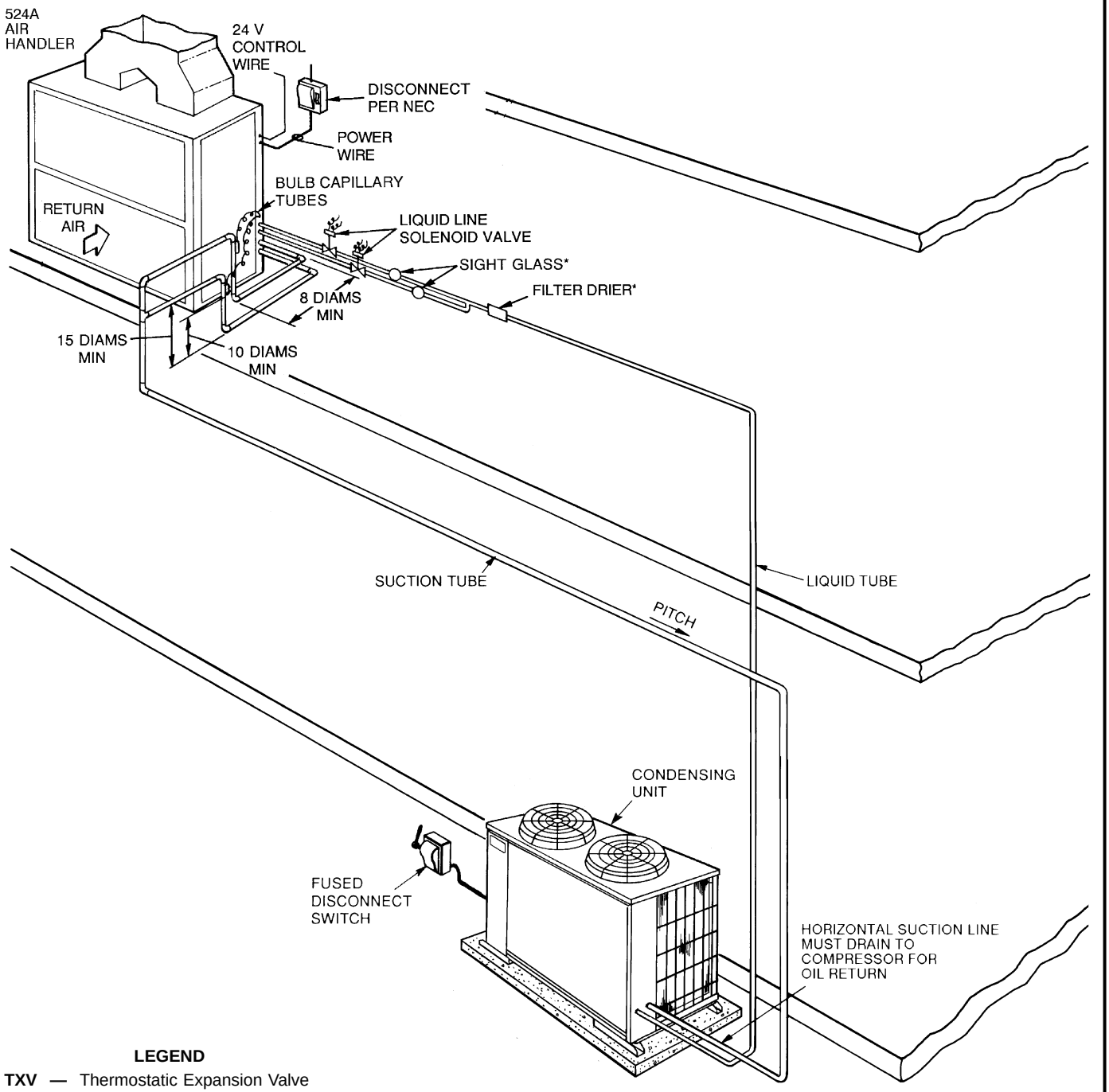
NEC — National Electrical Code
TXV — Thermostatic Expansion Valve
Piping

*Field supplied.
†Double riser may be required. Consult Application section 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.

Rooftop Installation — 566D Units



LEGEND

TXV — Thermostatic Expansion Valve

Piping

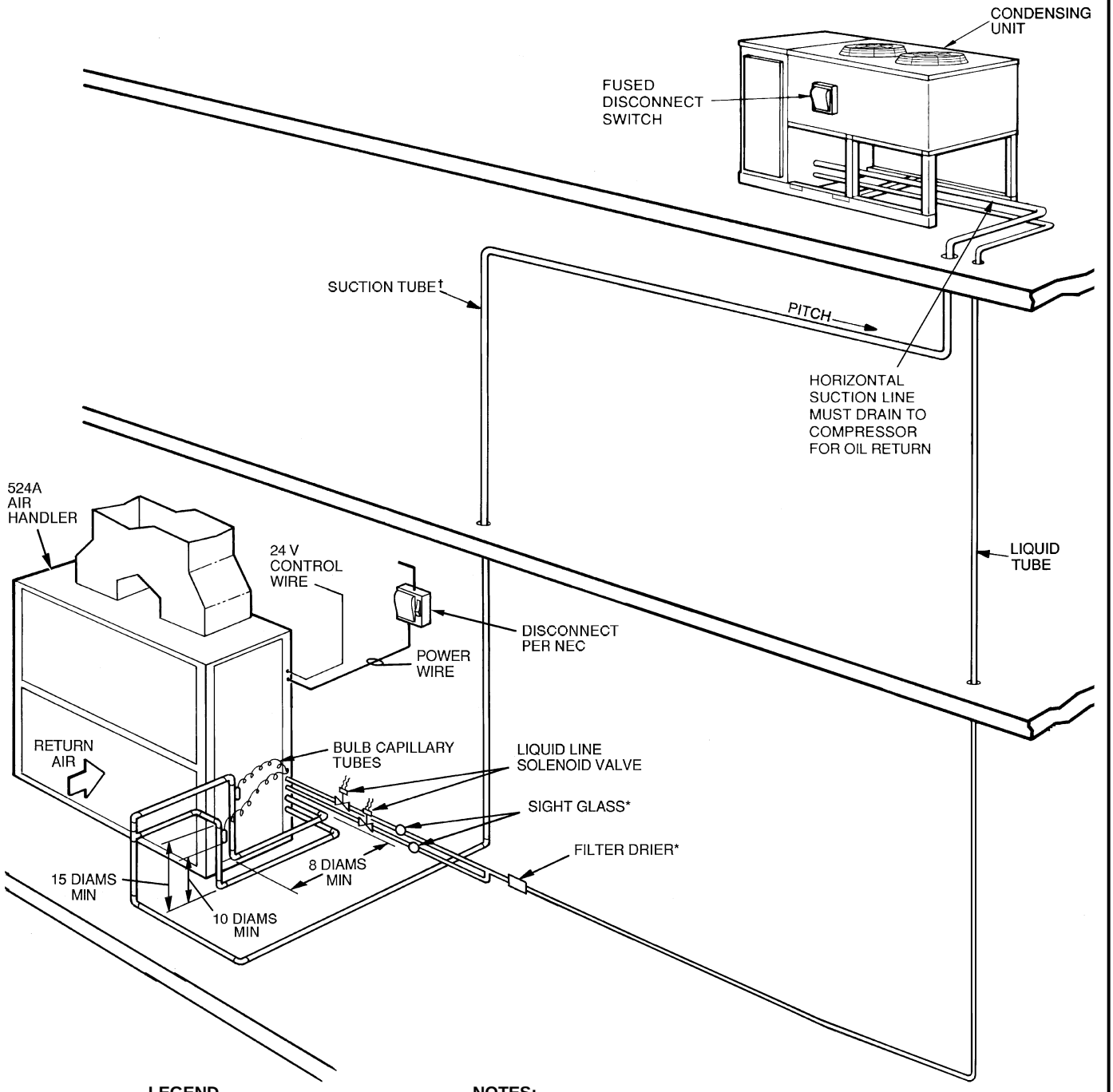
*Field supplied.

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.

Ground-Level Installation — 566D Units

TYPICAL INSTALLATIONS (cont)



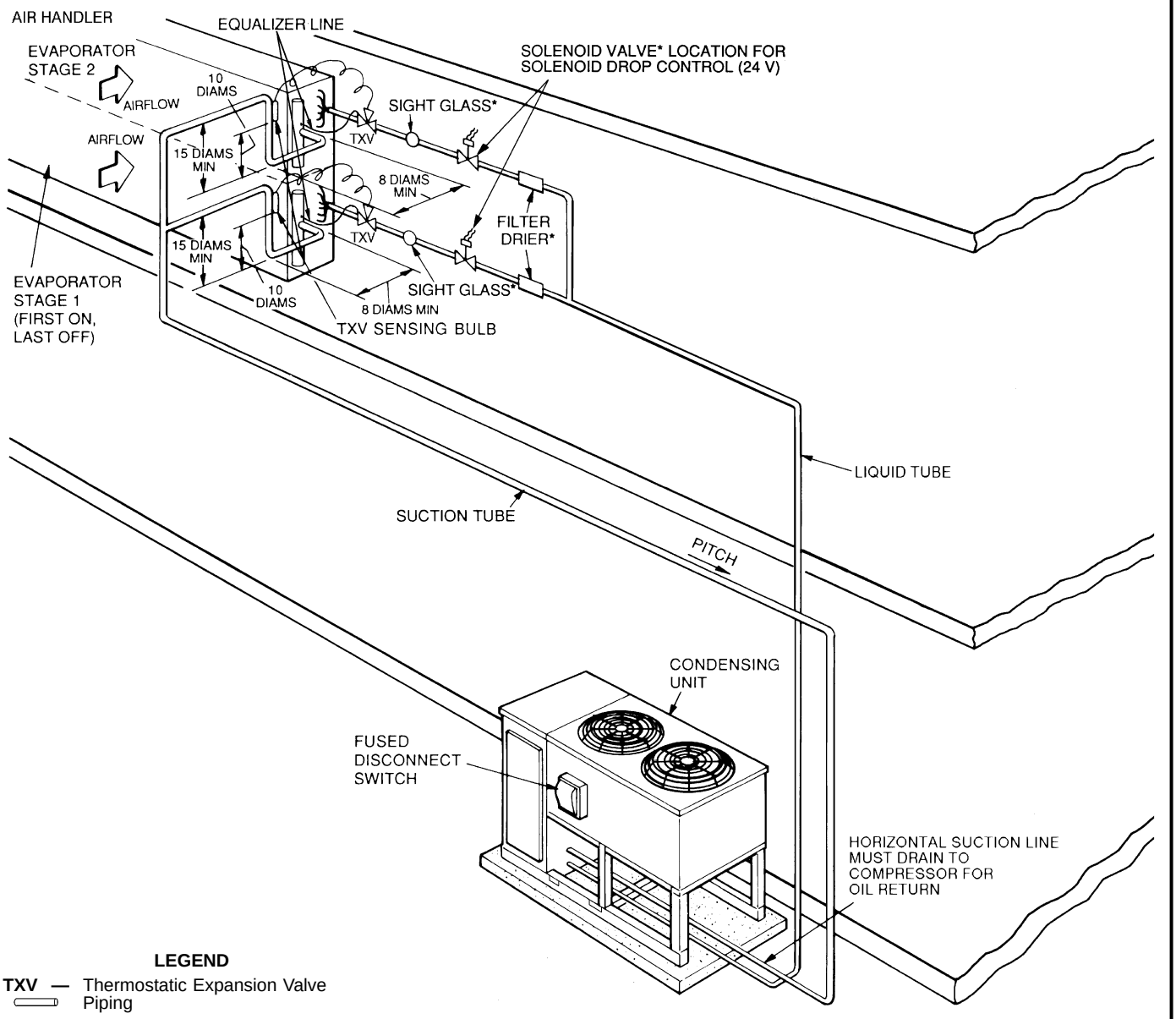
LEGEND

NEC — National Electrical Code
TXV — Thermostatic Expansion Valve
Piping

*Field supplied.
†Double riser may be required. Consult Application section 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.

Rooftop Installation — 576B300,360 Units



LEGEND

TXV — Thermostatic Expansion Valve
Piping

*Field supplied.

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.

Ground-Level Installation — 576B300,360 Units

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.

OPERATING LIMITS

Maximum Cooling Load	115 F
Minimum Return-Air Temperature	55 F
Maximum Return-Air Temperature	95 F
Range of Acceptable Saturation Suction Temperature	25 to 55 F
Maximum Discharge Temperature	275 F
Minimum Discharge Superheat	60 F

LIQUID LINE DATA

UNIT	MAX ALLOWABLE LIQUID LIFT (ft)	LIQUID LINE	
		Max Allowable Pressure Drop (psi)	Max Allowable Temp Loss (F)
569C072	86	7	2
569C090	60		
569C120	70		
576B090	60		
576B102	65		
576B120	65		

NOTE: Values shown are for units operating at 45 F saturated suction and 95 F entering air.

MINIMUM OUTDOOR-AIR OPERATING TEMPERATURE

UNIT	COMPRESSOR CAPACITY	CONDENSER TEMP (F)	MINIMUM OUTDOOR TEMP (F)	
			Standard	With Low-Ambient Kit
569C072	100%	90	53	−20
569C090	100%	90	60	−20
569C120	100%	90	52	−20
576B090	100%	90	60	−20
576B102	100%	90	53	−20
576B120*	100% 67%	90 80	48 52	−20 −20

*Unit has one step of unloading.

NOTES:
1. Field-fabricated wind baffles are required for low-ambient operation.
2. For winter operation, use accessory winter start package.

REFRIGERANT PIPING SIZES

UNIT	LINEAR LENGTH OF PIPING — FT							
	0-25		25-50		50-75		75-100	
	Line Size (in. OD)							
	L	S	L	S	L	S	L	S
569C072	½	1⅛	½	1⅛	½	1⅛	½	1⅛
569C090	½	1⅛	½	1⅛	⅝	1⅛	⅝	1⅜
569C120	⅝	1⅛	⅝	1⅜	⅝	1⅜	⅝	1⅜
576B090	½	1⅛	½	1⅛	⅝	1⅛	⅝	1⅜
576B102	⅝	1⅛	⅝	1⅛	⅝	1⅜	⅝	1⅜
576B120	⅝	1⅛	⅝	1⅛	⅝	1⅜	⅝	1⅜

LEGEND

L — Liquid Line **S —** Suction Line

NOTES:
1. Pipe sizes are based on a 2° F loss for liquid and suction lines.
2. Pipe sizes are based on the maximum linear length, shown for each column, plus a 50% allowance for fittings.
3. Charge units with R-22 in accordance with unit installation instructions.

APPLICATION DATA — 566D UNITS

1. 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.
2. When selecting vapor line sizes, oil return must be evaluated, particularly at part-load conditions.
3. The indoor fan must always be operating when outdoor unit is operating.
4. Ductwork should be sized according to unit size, not building load.
5. To minimize the possibility of air recirculation, avoid the use of concentric supply/return grilles.
6. Indoor equipment should be selected at no less than 300 cfm/ton.
7. A liquid line solenoid valve is recommended for all installations and is required if the interconnecting piping exceeds 75 feet.

   Field-supplied liquid line solenoid valves (capacity control) may be used to deactivate upper portion of evaporator coil surface in order to unload compressor (suction-activated unloaders) at part-load conditions.

OPERATING LIMITS

Maximum Outdoor Ambient	115 F
Minimum Outdoor Ambient	See Minimum Outdoor-Air Operating Temperature table below.
Minimum Return-Air Temperature	55 F
Maximum Return-Air Temperature	95 F
Normal Acceptable Saturation Suction Temperature Range	25 to 55 F
Maximum Discharge Temperature	295 F
Minimum Discharge Superheat	60 F

MINIMUM OUTDOOR-AIR OPERATING TEMPERATURE

UNIT 566D	NO. OF CYL	% FULL LOAD CAP.	MINIMUM OUTDOOR OPER TEMP (F)*
			DX Evaporator(s)
120	6	100	35
	4	67	55
	2†	33	75
150	6	100	37
	4	67	58
	2†	33	77
180	6	100	23
	4	67	46
	2†	33	70
240	4	100	15
	2	50	31

LEGEND

CAP. — Capacity
CYL — Cylinders
DX — Direct Expansion

*With accessory low-ambient kit, units can operate to –20 F ambient.
†Requires accessory pressure-operated unloader package.

NOTES:
1. Minimum outdoor-air operating temperatures for single direct-expansion evaporator based on:

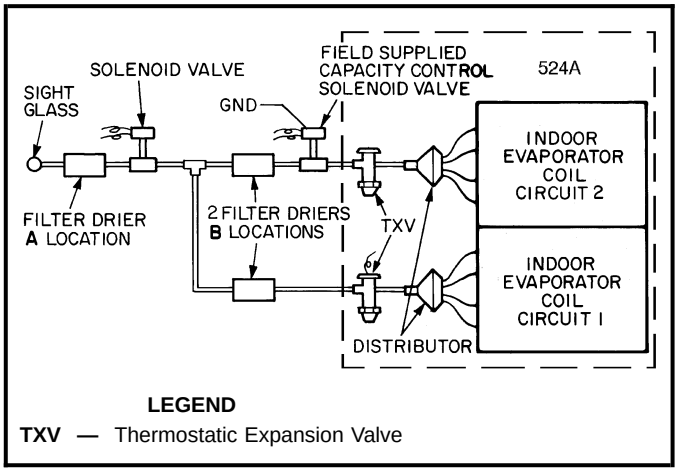
MIN. COND TEMP	90 F	80 F	70 F
% COMPR CAP.	100-75	75-50	50-17

2. For low-ambient operation, field-fabricated wind baffles are required on all 566D units.
3. For winter operation, use accessory winter-start package.

LIQUID LINE DATA

UNIT 566D	MAX. ALLOW. LIQUID LIFT (ft)	LIQUID LINE	
		Max Allow. Press. Drop (psi)	Max Allow. Temp Loss (F)
120	52	7	2
150	67		
180	82		
240	87		

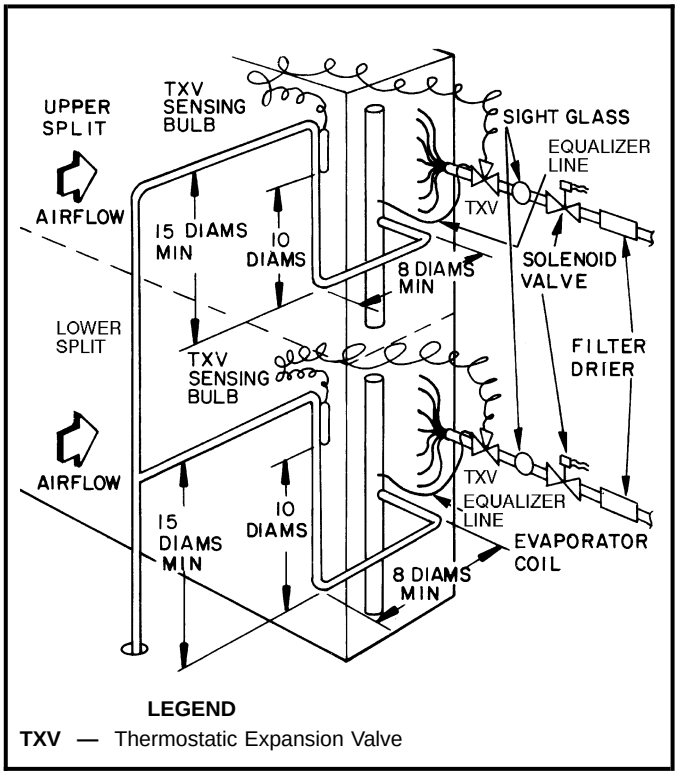
NOTE: Data above is for units operating at 45 F saturated suction and 95 F entering air.



LEGEND

TXV — Thermostatic Expansion Valve

Location of One Liquid Line Solenoid Valve Servicing 2 Coil Circuits (Solenoid Drop Control)



LEGEND

TXV — Thermostatic Expansion Valve

Face-Split Coil Suction and Liquid Line Piping

REFRIGERANT PIPING SIZES

UNIT 566D	LENGTH OF INTERCONNECTING PIPING (FT)									
	0-15		16-25		26-50		51-75		76-100	
	Line Size (in. OD)									
	L	S	L	S	L	S	L	S	L	S
120	½	1⅛	½	1⅛	⅝	1⅜	⅝	1⅜	⅝	1⅝*
150	½	1⅛	½	1⅜	⅝	1⅜	⅝	1⅝*	⅞	1⅝*
180	½	1⅜	⅝	1⅜	⅝	1⅝	⅞	1⅝	⅞	2⅛
240	⅝	1⅝	⅝	1⅝	⅞	1⅝	⅞	2⅛	⅞	2⅛

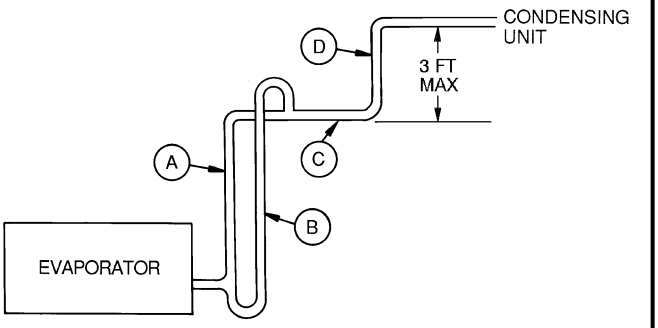
Shaded area — Close coupled.

LEGEND

L — Liquid
S — Suction

*Requires a double suction riser if 2 unloaders are used and the evaporator is below the condensing unit. See Refrigerant Piping Sizes — Double Suction Risers table below and Suction Line Piping figure below for more information.

NOTES:
1. Pipe sizes are based on a 2° F loss for liquid lines and a 1.5° F loss for suction lines.
2. Pipe sizes are based on an equivalent length equal to the maximum length of interconnecting piping plus 50% for fittings. A more accurate estimate may result in smaller sizes.



LEGEND

(A) Suction riser *without* trap
(B) Suction riser *with* trap
(C) Suction line to condensing unit
(D) Short vertical riser into condensing unit
566D120 — 1⅛ in. OD
566D150 — 1⅜ in. OD

Suction Line Piping

REFRIGERANT PIPING SIZES — DOUBLE SUCTION RISERS

UNIT 566D	LENGTH OF INTERCONNECTING PIPING (FT)					
	51-75			76-100		
	Line Size (in. OD)					
	A	B	C	A	B	C
120	—	—	—	1⅛	1⅜	1⅝
150	1⅛	1⅜	1⅝	1⅛	1⅜	1⅜

NOTES:
1. See Suction Line Piping figure above for "A," "B," and "C" dimensions.
2. No double suction risers are needed for unit sizes 180 or 240.

APPLICATION DATA — 576B300,360 UNITS

1. 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.
2. When selecting vapor line sizes, oil return should be evaluated, particularly at part-load conditions.
3. The indoor fan must always be operating when outdoor fan is operating.
4. Unit cycles should be limited to 3 or less per hour.
5. Multiple outdoor units may be used with a single indoor unit; this involves multiple refrigeration circuits.

IMPORTANT: When application is in a variable air volume (VAV) system, total building load is not the sum of the individual peak loads. If individual peak loads are summed, the equipment tends to be oversized for the load.

6. To minimize return-air temperature extremes, use the equipment room as a return-air plenum when applying VAV systems with supply-to-return-air recycle.
7. Indoor equipment should be selected at no less than 300 cfm/ton.

OPERATING LIMITS

Maximum Cooling Load	115 F
Minimum Cooling Load	Additional head pressure control may be required below 35 F outdoor ambient.
Minimum Return-Air Temperature	55 F
Maximum Return-Air Temperature	95 F
Normal Acceptable Saturation Suction Temperature Range	30 to 55 F
Maximum Discharge Temperature	295 F
Minimum Discharge Superheat	60 F

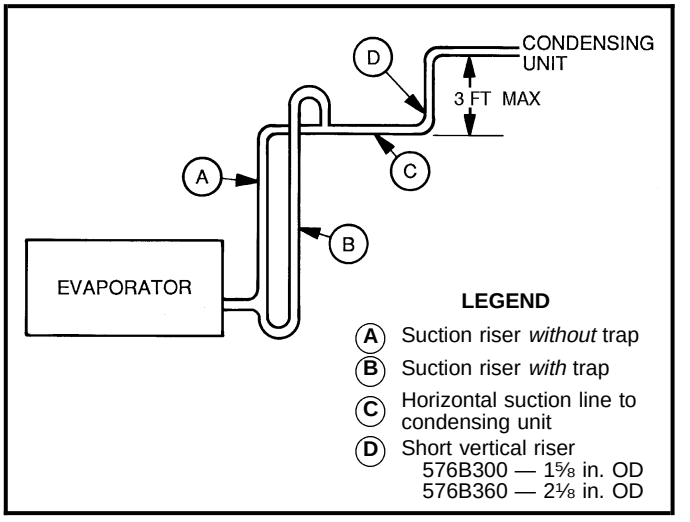
MINIMUM OUTDOOR-AIR OPERATING TEMPERATURE (F)

UNIT 576B	COMPR CAP. (%)	COND TEMP (F)	MIN OUTDOOR TEMP	
			Standard Unit	Low Ambient Control
300	100 67 33	90 80 70	31 35 43	–20 –20 –20
360	100 67 33	90 80 70	30 34 42	–20 –20 –20

MAXIMUM LIQUID LIFT*

UNIT 576B	FT
300	76
360	67

*Based on 2° F liquid line loss and 7 psi pressure loss for accessories.



Suction Line Piping

REFRIGERANT PIPING SIZES

SINGLE SUCTION RISERS

UNIT 576B	LENGTH OF INTERCONNECTING PIPING, FT									
	16-25		26-50		51-75		76-100		101-200	
	L	S	L	S	L	S	L	S	L	S
300	⅞	1⅝	⅞	2⅛*	⅞	2⅛*	⅞	2⅛*	⅞	2⅛*
360	⅞	2⅛	⅞	2⅛	⅞	2⅛	1⅛	2⅛	1⅛	2⅝*

LEGEND

L — Liquid Line
S — Suction Line

***IMPORTANT:** — Requires a double suction riser if evaporator is below condensing unit. See table below.

NOTE: Liquid and suction line sizes are OD (in.).

DOUBLE SUCTION RISERS

UNIT 576B	LENGTH OF INTERCONNECTING PIPING, FT											
	26-50			51-75			76-100			101-200		
	A	B	C	A	B	C	A	B	C	A	B	C
300	1⅜	1⅝	2⅛	1⅜	1⅝	2⅛	1⅜	1⅝	2⅛	1⅜	1⅝	2⅛
360	—	—	—	—	—	—	—	—	—	1⅝	2⅛	2⅝

NOTE: A, B, and C dimensions relate to reference diagram above.

APPLICATION DATA — 524A UNITS

1. 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.
2. The air handler fan must always be operating when the condensing unit is operating.
3. 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.
4. For VAV systems with supply-to-return air recycling, use the equipment room as a return air plenum.

OPERATING LIMITS

Maximum fan speed 524A072-240	1200 rpm
Maximum fan speed 524A300,360	1100 rpm

FACTORY-INSTALLED NOZZLE AND DISTRIBUTOR DATA

UNIT	TXV Qty...Part No.	DISTRIBUTOR Qty...Part No.	FEEDER TUBES PER DISTRIBUTOR Qty...Size (in.)	NOZZLE Qty...Part No.
524A072	1...XVE-5	1...1116	12...¼	1...E5
524A090	1...SVE-8	1...1126	15...¼	1...C6
524A120	2...XVE-4	2...1115	9...¼	2...E4
524A150	2...XVE-5	2...1115	9...¼	2...E5
524A180	2...XVE-8	2...1116	12...¼	2...E6
524A240	2...XVE-10	2...1116	13...¼	2...E8
524A300	2...EBSVE-11	2...1126	15...¼	2...C10
524A360	2...SVE-15	2...1126	18...¼	2...C12

TXV — Thermostatic Expansion Valve

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

STANDARD FAN MOTOR DATA

230-1-60 MOTORS

UNIT 524A	072	090
Speed (rpm)	1725	1725
Hp	1.3	2.4
Frame (NEMA)	56Y	56Y
Shaft Dia (in.)	⅝	⅝

NEMA — National Electrical Manufacturers Association

208/230-3-60 AND 460-3-60 MOTORS

UNIT 524A	072	090	120	150	180	240	300	360
Speed (rpm)	1725	1725	1725	1725	1725	1745	1745	1745
Hp	1.7	2.4	2.4	2.9	3.7	5.0	7.5	10.0
Frame (NEMA)	56Y	56Y	56Y	56Y	56Y	S184T	S213T	S215T
Shaft Dia (in.)	⅝	⅝	⅝	⅞	⅞	1⅛	1⅜	1⅜

NEMA — National Electrical Manufacturers Association

575-3-60 MOTORS

UNIT 524A	072	090	120	150	180	240	300	360
Speed (rpm)	1725	1725	1725	1725	1725	1745	1755	1755
Hp	1.0	2.0	2.0	3.0	3.0	5.0	7.5	10.0
Frame (NEMA)	56	56HZ	56HZ	56HZ	56HZ	184T	S213T	S215T
Shaft Dia (in.)	⅝	⅞	⅞	⅞	⅞	1⅛	1⅜	1⅜

NEMA — National Electrical Manufacturers Association

ALTERNATE FAN MOTOR DATA

230-1-60 MOTORS

UNIT 524A	072
Speed (rpm)	1725
Hp	2.4
Frame (NEMA)	56Y
Shaft Dia (in.)	5/8

NEMA — National Electrical Manufacturers Association

208/230-3-60 AND 460-3-60 MOTORS

UNIT 524A	072	090	120	150	180	240	300
Speed (rpm)	1725	1725	1725	1725	1745	1745	1750
Hp	2.9	2.9	3.7	3.7	5.0	7.5	10.0
Frame (NEMA)	56Y	56Y	Y56Y	Y56Y	S184T	S213T	S215T
Shaft Dia (in.)	7/8	7/8	7/8	7/8	1 1/8	1 3/8	1 3/8

NEMA — National Electrical Manufacturers Association

575-3-60 MOTORS

UNIT 524A	072	090	120	150	180	240	300
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.)	7/8	7/8	7/8	1 1/8	1 1/8	1 3/8	1 3/8

NEMA — National Electrical Manufacturers Association

STANDARD DRIVE DATA

UNIT 524A	072	090	120	150	180	240	300	360
MOTOR DRIVE								
Motor Pulley Pitch Diameter	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	4.3-5.3
Pulley Factory Setting Full Turns Open	2.5	2.5	2.5	2.5	2.5	3.0	3.0	3.0
FAN DRIVE								
Pulley Pitch Dia (in.)	8.8	8.8	8.8	9.0	9.0	9.4	11.0	11.0
Pulley Bore (in.)	1	1	1	1 7/16	1 7/16	1 7/16	1 15/16	1 15/16
Belt No. — Section	1—A	1—A	1—A	1—A	1—A	2—B	4—B	4—B
Belt Pitch (in.)	40.3	41.3	42.3	42.3	42.3	41.8	(2) 42.8 (2) 43.8	(2) 42.8 (2) 43.8
FAN SPEEDS (rpm)								
Factory Setting	568	647	764	632	632	771	752	752
Range	470-666	549-745	666-863	537-728	537-728	679-863	682-841	674-831
Max Allowable Speed	1200	1200	1200	1200	1200	1200	1100	1100
Change per ½ Turn of Moveable Motor Pulley Flange	19.6	19.6	19.7	19.1	19.1	15.3	13.1	13.1
MAX FULL TURNS FROM CLOSED POSITION	5	5	5	5	5	6	6	6
SHAFTS CENTER DISTANCE (in.)	10.44-12.32	10.44-12.32	10.44-12.32	10.44-12.32	10.44-12.32	9.12-10.99	6.67-9.43	6.67-9.43

MEDIUM-STATIC DRIVE DATA

UNIT 524A	072	090	120	150	180	240	300	360
MOTOR DRIVE								
Motor Pulley Pitch Diameter	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	4.3-5.3
Pulley Factory Setting Full Turns Open	2.5	2.5	2.5	2.5	3.0	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	9.4
Pulley Bore (in.)	1	1	1	1 7/16	1 7/16	1 7/16	1 15/16	1 15/16
Belt No. — Section	1—A	1—A	1—A	1—A	1—B	2—B	4—B	4—B
Belt Pitch (in.)	42.3	40.3	40.3	41.3	41.8	41.8	(2) 38.8 (2) 39.8	(2) 38.8 (2) 39.8
FAN SPEEDS (rpm)								
Factory Setting	764	841	841	820	842	881	881	881
Range	666-863	733-949	733-949	715-926	742-943	798-984	798-984	798-984
Max Allowable Speed	1200	1200	1200	1200	1200	1200	1100	1100
Change per ½ Turn of Moveable Motor Pulley Flange	19.7	21.6	21.6	21.1	16.7	15.3	15.3	15.3
MAX FULL TURNS FROM CLOSED POSITION	5	5	5	5	6	6	6	6
SHAFTS CENTER DISTANCE (in.)	10.44-12.32	10.44-12.32	10.44-12.32	10.44-12.32	10.44-12.32	9.16-10.99	6.67-9.43	6.67-9.43

HIGH-STATIC DRIVE DATA

UNIT 524A	072	090	120	150	180	240	300	360
MOTOR DRIVE								
Motor Pulley Pitch Diameter	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	4.3-5.3
Pulley Factory Setting Full Turns Open	2.5	2.5	2.5	3.0	2.5	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	8.6
Pulley Bore (in.)	1	1	1	1 7/16	1 7/16	1 7/16	1 15/16	1 15/16
Belt No. — Section	1—A	1—A	1—A	1—B	1—B	2—B	2—B	2—B
Belt Pitch (in.)	41.3	37.3	37.3	39.8	39.8	36.8	37.8	37.8
FAN SPEEDS (rpm)								
Factory Setting	961	1121	1121	979	1060	1118	1024	1024
Range	838-1084	978-1200*	978-1200	873-1096	950-1171	1014-1200	873-1075	873-1075
Max Allowable Speed	1200	1200	1200	1200	1200	1200	1100	1100
Change per ½ Turn of Moveable Motor Pulley Flange	24.6	28.7	28.7	19.4	30.8	19.4	16.7	16.7
MAX FULL TURNS FROM CLOSED POSITION	5	5	5	6	5	6	6	6
SHAFTS CENTER DISTANCE (in.)	10.44-12.32	10.44-12.32	10.44-12.32	10.44-12.32†	9.16-10.99	8.16-10.02	6.67-9.43	6.67-9.43

*Values for 3-phase motor shown. For single-phase motor, pulley pitch diameter is 7 in. and resulting fan speed range is 837-1096 rpm.
†575-v unit has a center distance of 9.16-10.99.

GENERAL: Furnish and install outdoor-mounted, single-piece, air-cooled condensing unit suitable for on-the-ground or rooftop installation.

Unit shall consist of a reciprocating compressor, an air-cooled coil, propeller-type condenser fan, 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 fan coil unit.

Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, and special features required prior to field start-up.

Units shall operate on 3-phase, 60-cycle power at the voltage shown on the unit informative plate.

Unit control circuit shall contain a 24-v transformer for unit control.

COOLING CAPACITY: Total cooling capacity of the unit shall be _____ Btuh or greater, with air-entering condenser at _____ F, and a saturated suction temperature at compressor of _____ F.

Saturated condensing temperature shall not exceed _____ F.

Maximum liquid lift shall be _____ feet.

CABINET: Unit cabinet shall be constructed of galvanized steel, bonderized, and coated with a prepainted baked enamel finish.

Lifting holes shall be provided to facilitate rigging.

DIMENSIONS: Dimensions of entire assembly shall not be more than _____ in. high and _____ in. wide.

CONNECTIONS: Only one liquid line, one suction line, and one power supply connection shall be required for each unit.

The electrical power shall be single-point connection.

FAN SECTION: Condenser fans shall be direct driven, propeller-type, discharging air vertically upward.

Fan blades shall be balanced and fan discharge openings shall be equipped with PVC-coated steel wire safety guards.

Condenser fan and motor shall be corrosion-resistant.

Fan motor bearings shall be permanently lubricated.

COIL SECTION: The condenser coil shall be air-cooled and circuited for integral subcooler.

Coil shall be constructed of aluminum fins (copper fins optional) mechanically bonded to internally grooved seamless copper tubes which are then cleaned, dehydrated, and sealed.

COMPRESSOR: The compressor shall be semi-hermetic (576B) or hermetic (569C) reciprocating type, and shall be mounted on vibration isolators. Units with semi-hermetic compressors shall have an integral crankcase heater.

Semi-hermetic compressor (576B) shall have automatically reversible positive-displacement oil pump to protect compressor; casing with discharge shutoff valves, oil level control orifice, and oil-pressure regulating valve; unloader (576B120) for capacity reduction capability.

REFRIGERATION COMPONENTS: Refrigeration circuit components shall include liquid line service valve, suction line service valve, liquid filter drier, a full charge of compressor oil, and a holding charge of refrigerant.

CONTROLS: Minimum control functions shall include power and control terminal blocks; 5-minute recycle protection to prevent compressor short-cycling; and lockout on auto-reset safety until reset from thermostat.

Minimum safety devices are equipped with automatic reset (after resetting first at thermostat) and shall include high discharge pressure cutout and low suction pressure cutout.

APPROVALS: Unit shall be rated in accordance with ARI Standard 210/240 (latest edition). Construction shall comply with ASHRAE 15 latest revision safety code and comply with NEC.

Unit shall be constructed in accordance with UL 1995 standard and shall carry the UL label of approval. Unit shall have CSA approval.

Unit cabinet shall be capable of withstanding Federal Test Method Standard No. 141 (method 6061) 500-hour salt spray test.

Unit shall be manufactured in a facility registered to the ISO 9002 manufacturing quality standard.

Air-cooled condenser coils for hermetic compressor units shall be leak tested at 200 psig and pressure tested at 428 psig.

ACCESSORIES: Field-installed accessories shall include low ambient temperature kit, gage panel, winter-start relay package, condenser coil guard assembly, condenser coil hail guard assembly, thermostats, and subbases. Electric solenoid unloader conversion package shall be available for 576B120 unit only.

ENGINEER'S SPECIFICATION GUIDE — 566D UNITS

GENERAL: Furnish and install an air-cooled condensing unit. The unit shall be properly assembled and tested at the factory, and shall be designed for use with R-22.

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.

The unit shall operate down to _____F outdoor-air temperature entering condenser with standard controls and down to _____ F outdoor-air temperature entering condenser with addition of accessory low-ambient kit.

COOLING CAPACITY: Total cooling capacity of the unit shall be _____ Btuh or greater, with air entering condenser at _____ F, and a saturated suction temperature at compressor of _____ F. Saturated condensing temperature shall not exceed _____ F. Maximum liquid lift shall be _____ ft.

CABINET: Unit cabinet shall be constructed of galvanized steel that is zinc phosphatized and prepainted with baked enamel.

Cabinet shall be capable of withstanding Federal Test method Standard no. 141 (method 6061) 500-hour salt-spray test.

Cabinet panels shall be easily removable for service access.

Openings shall be provided for power and refrigerant connections.

DIMENSIONS: Dimensions of entire assembly shall not be more than _____ in. high and _____ in. wide.

CONNECTIONS: Only one liquid line, one suction line, and one power supply connection shall be required for each unit.

FANS: Unit shall be equipped with two direct-driven, propeller-type fans in vertical discharge configuration.

Condenser fan motors shall have inherent protection, and shall be of the permanently lubricated type, resiliently mounted.

Each fan shall be equipped with a safety guard.

Controls shall be included for cycling fan(s) for intermediate season operation.

COIL SECTION: Condenser coil shall be of non-ferrous construction, with aluminum-plate fins mechanically bonded to seamless copper tubes.

Condenser coil shall be circuited for subcooling.

COMPRESSOR: Unit shall have one compressor, of serviceable semi-hermetic design with external spring isolators, and shall have an automatically reversible oil pump and crankcase heater.

Maximum power input to compressor(s) shall not exceed _____ kW at conditions specified.

Compressor(s) shall unload in response to suction pressure down to _____% of full capacity in _____ steps for partial load operation.

CONTROLS: Unit controls shall be factory wired and located in a separate enclosure.

Safety devices shall consist of low-pressure switch, high-pressure switch, and compressor overload devices.

Unit wiring shall incorporate a positive-acting timer to prevent short cycling of compressor if power is interrupted. Time Guard® timer shall prevent compressor from restarting for approximately 5 minutes after shut-off.

The units shall have transformer for 24-v control circuit for all voltages.

Circuit breaker shall provide phase protection.

APPROVALS: Performance shall be rated in accordance with ARI Standards 210/240 and 360 (latest editions). Condensing unit only performance shall be rated in accordance with ARI Standard 365 (latest edition).

Unit shall be manufactured in a facility registered to the ISO 9002 manufacturing quality standard.

Unit shall be constructed in accordance with UL regulations and shall carry UL label of approval.

ACCESSORIES: Field-installed accessories shall include pressure-operated unloader (sizes 120-180), gage panel, winter start package, electric solenoid unloader conversion package, thermostat and subbase, coil guard, and low ambient kit.

GENERAL: Furnish and install outdoor-mounted, air-cooled condensing unit suitable for on-the-ground or rooftop installation. The unit shall consist of a semi-hermetic refrigerant compressor/motor assembly, an air-cooled coil, propeller type condenser fans and a control box. All components shall be factory assembled as a single unit. A holding charge of R-22 shall be included. Unit shall be used in a refrigeration circuit to match up to a packaged air handling unit.

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. Unit electrical power shall be single point connection.

COOLING CAPACITY: 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-hr.

The combination of the condensing unit and air-handling unit shall have a total net cooling capacity of _____ Btuh or greater at conditions of _____ ft^3/min entering-air temperature at the evaporator at _____ F wet bulb and _____ F dry bulb, and air entering the condensing unit at _____ F. The system shall have an EER of _____ Btuh/watt or greater at standard ARI conditions.

CABINET: The cabinet shall be constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish.

FANS: Condenser fans shall be direct driven propeller type, discharging air vertically upward. Condenser motors shall be totally enclosed 3-phase type with Class B insulation and with permanently lubricated bearings. Shafts shall have inherent corrosion resistance. Fan blades shall be statically and dynamically balanced. Condenser fan openings shall be equipped with PVC coated steel wire safety guards.

COMPRESSOR: Compressor shall be serviceable reciprocating semi-hermetic type, equipped with an automatically reversible oil pump, operating oil charge, suction and discharge shutoff valves and an insert-type factory sized crankcase heater to control oil dilution. Compressor motor shall be cooled by suction gas passing around the motor windings.

Compressor shall be mounted on spring vibration isolators with an isolation efficiency of no less than 95%. Speed shall not exceed 1750 rpm. Compressor shall unload using pressure-operated suction cutoff unloading (electric solenoid unloading shall be available as an accessory).

CONDENSER COIL: Coil shall be air cooled, circuited for integral subcooler. Coil shall be constructed of aluminum fins mechanically bonded to internally grooved seamless copper tubes which are then cleaned, dehydrated and sealed.

REFRIGERATION COMPONENTS: Refrigeration circuit components shall include hot gas muffler, high side pressure relief device, liquid line shutoff valve, suction and discharge shutoff valves, holding charge of refrigerant R-22 and full charge of compressor oil.

CONTROLS AND SAFETIES: Operating controls and safeties shall be factory selected, assembled and tested. Minimum control functions shall include:

1. Power and control terminal blocks.
2. 5-minute recycle protection to prevent compressor short cycling.
3. Lock-out with manual reset from thermostat.
4. Capacity control on the compressor shall be by suction cutoff unloaders in response to compressor suction pressure. Electric solenoid unloading shall be available as an accessory.
5. Liquid line solenoid drop control at the end of every cycle to prevent refrigerant migration to the compressor when the compressor cycles off. A liquid line solenoid valve shall be provided for field installation.
6. Head pressure control to 35 F by fan cycling. One condenser fan shall be cycled by discharge pressure to maintain proper head pressure.
7. Winter start control to prevent nuisance tripouts at low ambient temperatures.
8. Anti-short-cycling timer.
9. Condenser fan motors to be protected against overload or single phase condition by internal overloads.

The following minimum safety devices shall be provided.

1. Automatic reset (after resetting control power).
2. High discharge pressure cutout.
3. Low suction pressure cutout.

Manual reset at the unit —

1. Low oil pressure cutout.
2. Compressor electrical overload through the use of definite-purpose contactors and calibrated, ambient compensated, magnetic trip circuit breakers. Circuit breakers shall open all 3 phases in the event of an overload in any one of the phases or single-phase condition.

Unit control circuit shall contain a 24-v transformer for unit control, with capacity to operate an indoor fan interlock.

APPROVALS: Unit shall be rated in accordance with ARI Standard 360, latest edition. Unit construction shall comply with ANSI/ASHRAE 15 (latest version) safety code and comply with NEC. Unit shall be constructed in accordance with UL standards and shall carry the UL label. Unit cabinet shall be capable of withstanding Federal Test Method Standard No. 141 (method 6061) 500-hour salt spray test. Air-cooled condenser coils shall be leak tested at 150 psig and pressure tested at 480 psig. Unit shall be manufactured in a facility registered to the ISO 9002 manufacturing quality standard.

ACCESSORIES: Field installed accessories shall include electric solenoid unloader, part winding start, gage panel, hot gas bypass kit, low-ambient kit, and thermostat.

ENGINEER'S SPECIFICATION GUIDE — 524A UNITS

GENERAL: Furnish and install indoor, draw-thru, direct expansion, packaged air handling unit that can be used with or without ductwork in a suspended horizontal configuration or free-standing vertical configuration. Unit shall not require modification for horizontal or vertical installation. Unit shall consist of forward-curved belt-driven centrifugal fan(s), motor and drive assembly, prewired fan motor contactor, factory-installed refrigerant metering devices, direct-expansion coil, 2-in. disposable air filters, and condensate drain pans for vertical or horizontal configurations. Unit shall be capable of being used in a refrigerant circuit with a matching air-cooled condensing unit(s).

Nominal unit electrical characteristics shall be _____ v, _____ ph, 60 Hz. The unit shall be capable of satisfactory operation within voltage limits of _____ v to _____ v.

Unit shall be capable of providing a constant volume of air at a specified external static pressure within the unit nominal operating range.

CABINET: Unit cabinet shall be constructed of mill galvanized steel. Painted American Sterling Gray casing shall be available as an option.

Cabinet panels shall be fully insulated with a fire-retardant material. Insulation shall be cleanable and treated with EPA-approved antimicrobial agent.

FAN SECTION: Unit shall be equipped with double-inlet fan wheel(s) with forward-curved blades that shall operate at least 25% below the first critical speed, and shall be designed for continuous operation at maximum rated fan speed.

Fan wheels and scrolls shall be constructed of mill galvanized steel. The fan shaft shall be constructed of steel, coated with a hydrocarbon rust inhibitor. Fan wheels shall be statically and dynamically balanced at the factory and shall run on split collet or spider-type bearings.

Fan motor and drive shall be factory supplied and installed as shown on the equipment schedule. Optional alternate motor and medium- or high-static drive shall be available to meet the airflow and external static pressure requirements specified on the equipment schedule.

CONDENSATE DRAIN PAN: Condensate drain pan shall be PVC material and shall extend under the entire coil area. No modification of the drain pan shall be required for either horizontal or vertical application. Condensate drain connection shall be 2 sets of 1¼-in. MPT PVC stubs.

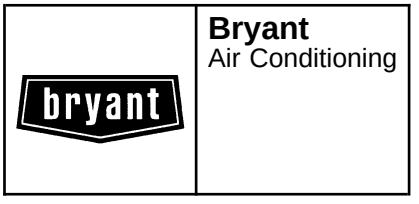
COILS: Direct-expansion coil shall have 3 rows of copper tubes, aluminum plate fins, and galvanized steel casing. Fins with belled collars shall be bonded to tubes by mechanical expansion. Coils shall have supply and discharge connections at the same end. All coils shall be burst tested at 435 psi and factory tested for leakage at 150 psig air pressure with the coils submerged in water. After testing, direct-expansion coils shall be dehydrated and charged with dry air.

Refrigerant distributor complete with nozzles shall be factory installed on the cooling coil. Distributor nozzles shall be sized for use with R-22. Matching TXVs shall be factory-supplied and installed.

FILTERS: Filter frame designed to accept standard 2-in. throwaway filters shall be installed upstream of the cooling coil. Filters shall be factory supplied.

APPROVALS: Units shall be constructed in accordance with ETL and ETLC regulations and shall carry ETL and ETLC labels of approval. Unit shall be manufactured in a facility certified to meet ISO 9002 quality standards.

ACCESSORIES: Field-installed accessories shall include air discharge plenum, return-air grille, hot water coil, steam distributing coil, unit subbase, overhead suspension package, electric strip heaters, CO_2 sensor, and economizer.



Bryant
Air Conditioning

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE
WITH INSTALLATION INSTRUCTIONS

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