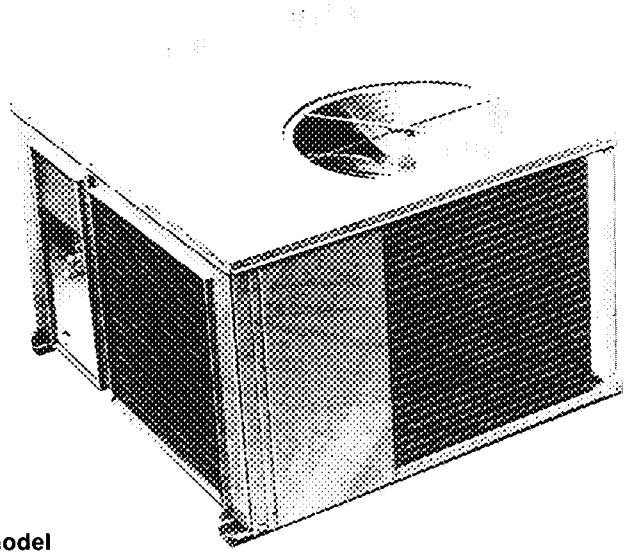
bryant

SINGLE-PACKAGE COOLING UNIT

Model 559E
Size 120
50 Hz



Model 559E120

Model 559E120 cooling unit combines total adaptability with air conditioning excellence to provide an economical, high-performance system for commercial, industrial, or educational establishments.

The 559E120 is a one-piece, compact unit that can be used for either ground level or rooftop applications It is pre-wired and pre-charged ready for easy rigging and placement.

Economical and versatile, the 559E120 offers a wide selection of accessories to satisfy specific installation requirements.

FEATURES

TWO INDEPENDENT REFRIGERATION CIRCUITS, each with its own compressor, allow operation of only the circuitry necessary to maintain desired conditions. One circuit can be serviced while the second provides continued operation, resulting in less down time and lower service costs Exceptional part-load performance keeps energy costs low

HEAVY-DUTY, HIGH-CAPACITY TWIN HERMETIC COMPRESSORS are designed and built for maximum efficiency and operating reliability. They are equipped with crankcase heaters, internal linebreak protection against overcurrent and overtemperature, larger bearing journals, larger valves and an extra-large oil pump.

SHORT-CYCLE PROTECTION shuts compressor down if any safety device trips Device can be reset manually at the thermostat.

LOW-PRESSURE SWITCH AND HIGH-PRESSURE VALVE prevent possible damage during abnormal operating conditions.

FILTER-DRIERS are included to trap moisture and dirt

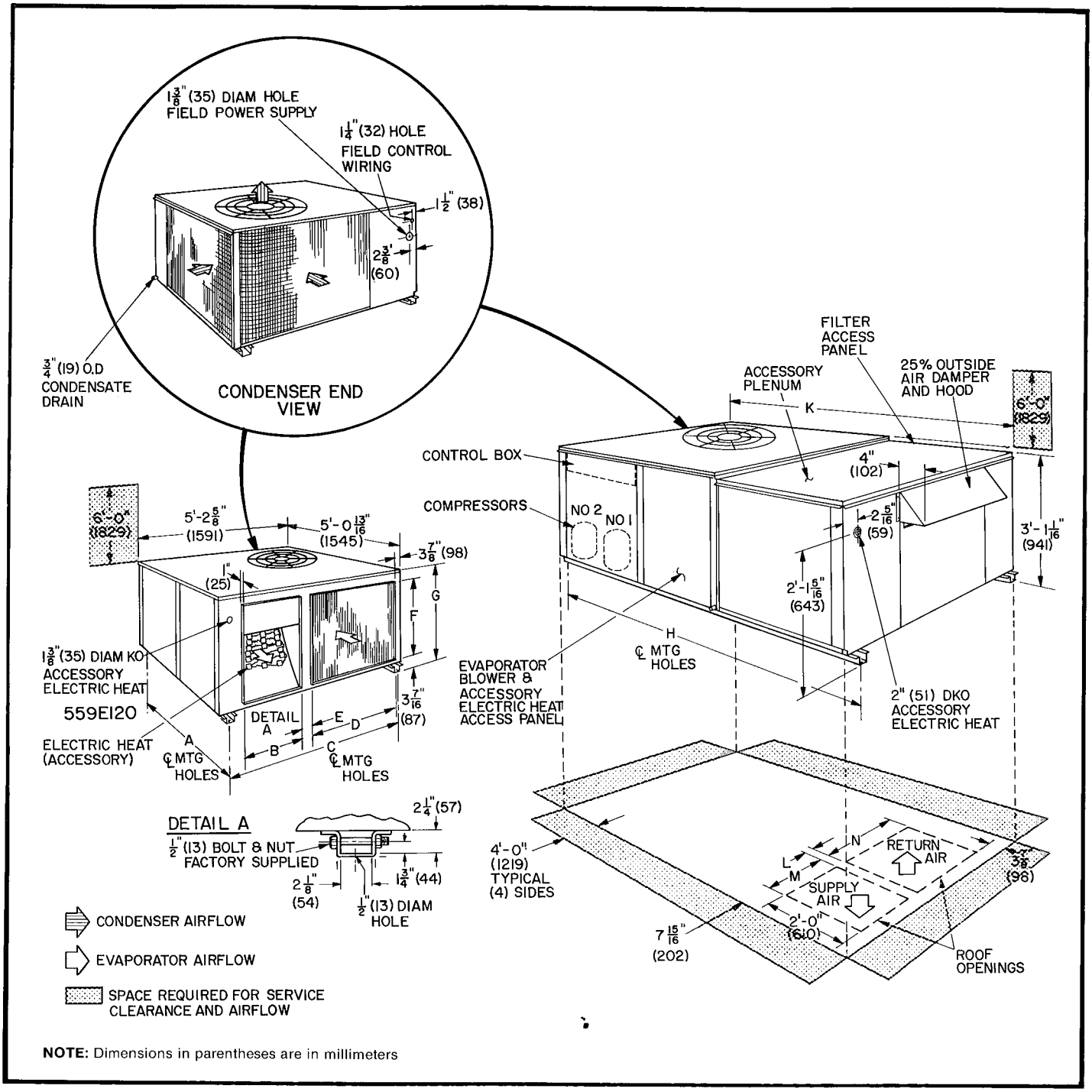
WEATHER-RESISTANT CABINET is galvanized, bonderized and coated with baked enamel finish for durability under all climate conditions

VARIABLE-SPEED BELT DRIVE in the evaporator fan motor provides quiet, high-volume fan operation.

FIELD-INSTALLED ACCESSORIES

Downturn plenum
Economizer
Electric heater
Roof curb
Thermostat and subbase
Head pressure control
Anti-recycle control

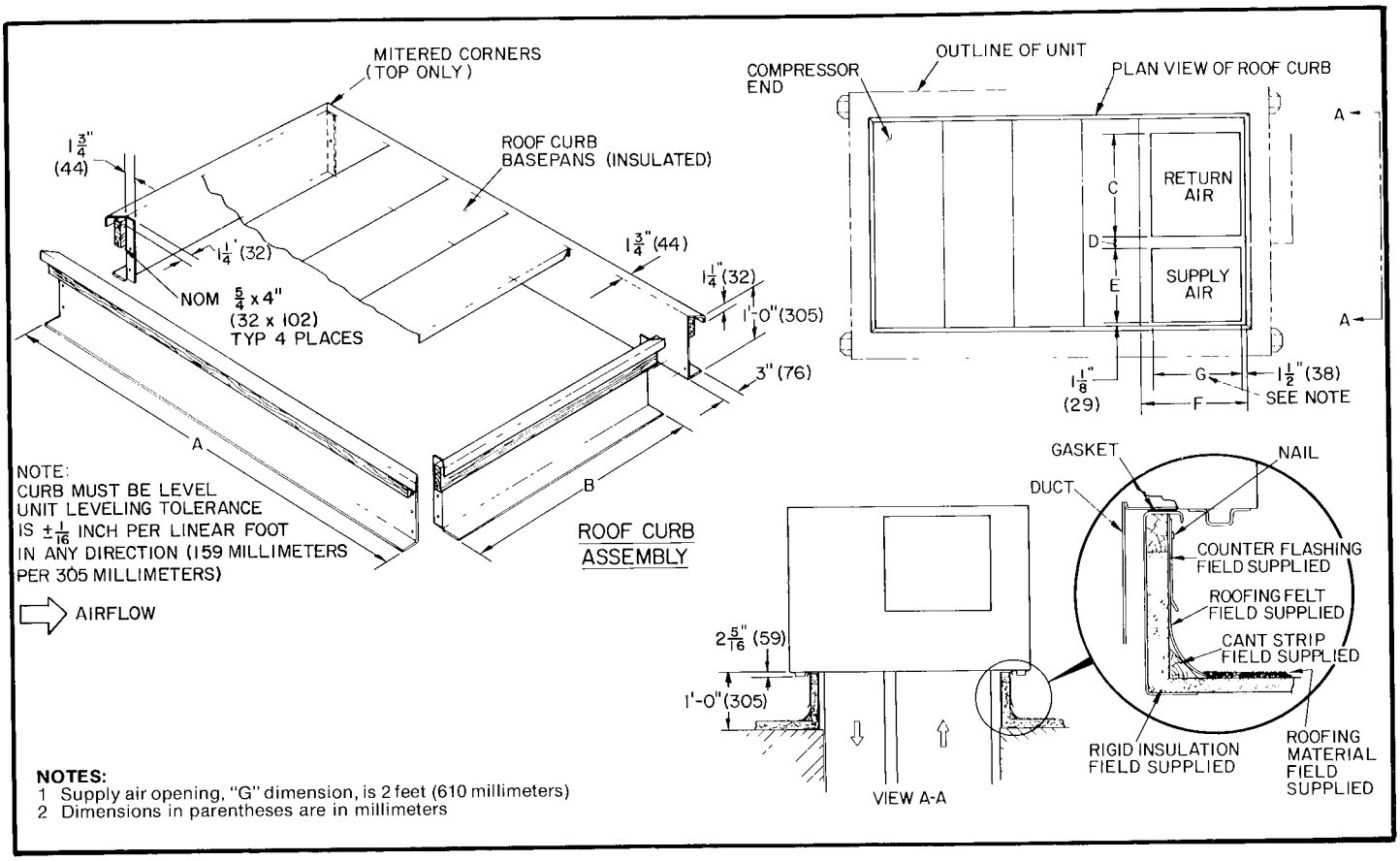
DIMENSIONAL DRAWING — MODEL 559E120 (WITH ACCESSORY PLENUM)



NOTE: Dimensions in parentheses are in millimeters

Dimensions	A	B	C	D	E	F	G	H	K	L	M	N
feet-inches	5-3	1-2 1/16	4-8 13/16	2-11	0-2 13/16	2-9⅜	3-2⅝	8-5 7/16	8-3¼	0-1 1/16	1-5 11/16	2-3 9/16
millimeters	1600	373	1443	889	71	848	981	2577	2521	27	449	690

DIMENSIONAL DRAWING — ROOF CURB



NOTES:
1 Supply air opening, "G" dimension, is 2 feet (610 millimeters)
2 Dimensions in parentheses are in millimeters

Base Unit Model No.	559E120*	
Roof Curb Model No.	311962-201	
	feet-inches	millimeters
A	7-0 7/16	2148
B	4-0 7/8	1241
C	2-3 3/16	691
D	0-1 1/16	27
E	1-5 11/16	449
F	2-0 1/16	611

*Dimensions apply to 559E120 units with accessory plenum

SPECIFICATIONS

MODEL 559E120	SI		ENGLISH	
OPERATING WEIGHT				
Unit	kg	354	lb	780
Plenum		82		180
Economizer		14		30
Roof Curb		102		225
ELECTRICAL				
Unit Volts-Phase (50 Hz)		400-3		400-3
Operating Voltage Range		342-457		342-457
Min Ampacity for Wire Sizing		33		33
Max Fuse Size (Amps)*		40		40
COMPRESSORS & REFRIGERANT				
Compressor No 1 Type†		P64		P64
Rated Load Amps		10 4		10 4
Locked Rotor Amps		49 0		49 0
Compressor No 2 Type†		P64		P64
Rated Load Amps		10 4		10 4
Locked Rotor Amps		49 0		49 0
System No 1 Refrigerant R-22 Amount	kg	3 31	lb	7 3
System No 2 Refrigerant R-22 Amount	kg	3 63	lb	8 0
INDOOR COIL‡				
Coil Face Area	m^2	79	sq ft	8 5
Rows/Fin Spacing	mm	4/381	in	4/15
INDOOR BLOWER & MOTOR**				
Size	mm	305 x 279	in	12 x 11
Nominal Air Quantity	l/s	1699	cfm	3600
Speed Range	r/s	12 1 - 16 4	rpm	725 - 985
Max Allowable Speed	r/s	25	rpm	1500
Fan Pulley Pitch Diameter	mm	140	in	5 5
Belt Number Type Length	mm	1 V .1168	in	1 V 46
Speed Change per Full Turn of Movable Pulley Flange	r/s	0 9	rpm	52
Movable Pulley Max Full Turns from Closed Position		5		5
Factory Setting — Full Turns Open		2		2
Factory Speed Setting	r/s	14 7	rpm	880
Motor	watts	1119	hp	1 5
Nominal Motor Speed	r/s	23 8	rpm	1425
OUTDOOR COIL‡				
Coil Face Area	m^2	2 06	sq ft	22 2
Rows/Fin Spacing	mm	2/381	in	2/15
OUTDOOR FAN & MOTOR††				
Nominal Air Quantity	l/s	2949	cfm	6250
Number Diameter	mm	1 660	in	1 26
Motor	watts	746	hp	1
INDOOR AIR FILTERS‡‡				
Quantity Size	mm	2 508 x 635 x 51 2 406 x 635 x 51	in	2 20 x 25 x 2 2 . 16 x 25 x 2
OPTIONAL EQUIPMENT				
Downturn plenum	311963-201			
Economizer	311961-201			
Electric heater	311965-201, 311965-202, 311965-203			
Roof curb	311962-201			
Thermostat	P272-2783			
Subbase(s)	P272-1882, P272-1885			
Head pressure control	307183-101			
Anti-recycle control	311958-201			

*Fuse only
†Full Hermetic, 2 cylinders
‡Copper tubes, aluminum plate fins
**One centrifugal, adjustable belt drive
††Propeller type, direct drive
‡‡10% efficient, fiberglass throwaway filters

FAN PERFORMANCE — SI

Unit	L/s	External Static Pressure (Pa)																	
		25		50		75		100		125		149		174		199		224		249	
		Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW
559E120	1557	—	—	748	0 99	772	1 05	796	1 11	824	1 18	857	1 26	888	1 33	920	1 41	951	1 46	978	1.55
	1652	752	1 06	774	1 12	796	1 18	823	1 25	854	1 33	884	1 42	914	1 50	944	1 58	975	1.65	*1001*	*1.72*
	1746	782	1 22	804	1 28	832	1 36	860	1 45	889	1 54	917	1 63	945	1 70	972	1.78	*1002*	*1.81*	*1032*	*1.89*
	1840	818	1 44	843	1 52	870	1 60	898	1 69	924	1 78	950	1 85	975	1 92	*1005*	*2.01*	*1034*	*2.09*	*1060*	*2.18*
	1888	839	1 57	864	1 64	890	1 73	916	1 81	941	1 90	967	1.97	*993*	*2.04*	*1023*	*2.13*	*1050*	*2.22*	*1075*	*2.31*
	1935	859	1 69	885	1 78	910	1 86	935	1 94	959	2.01	*982*	*2.08*	*1012*	*2.18*	*1041*	*2.27*	*1067*	*2.36*	*1092*	*2.46*
	2029	899	1 95	923	2.02	945	2.09	967	2.16	*993*	*2.27*	*1023*	*2.38*	*1050*	*2.47*	—	—	—	—	—	—
	2124	936	2 19	*956*	*2.27*	*974*	*2.34*	*1005*	*2.46*	—	—	—	—	—	—	—	—	—	—	—	—

Field-supplied motor and drive is required

kW — Kilowatts **Rpm** — Revolutions per minute

NOTES:

1 Fan performacne is based on wet coil and deducted casing losses

2 Service factor up to 150% of motor nominal horsepower may be used with original motor

3 *Values in italics* indicate that field-supplied drive may be used with standard motor

FAN PERFORMANCE — ENGLISH

Unit	Cfm	External Static Pressure (in. wg)																	
		0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
		Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW	Rpm	kW
559E120	3300	—	—	748	0 99	772	1 05	796	1 11	824	1 18	857	1 26	888	1.33	920	1 41	951	1 46	978	1.55
	3500	752	1 06	774	1 12	796	1 18	823	1 25	854	1 33	884	1 42	914	1 50	944	1 58	975	1.65	*1001*	*1.72*
	3700	782	1 22	804	1 28	832	1 36	860	1 45	889	1 54	917	1 63	945	1 70	972	1.78	*1002*	*1.81*	*1032*	*1.89*
	3900	818	1 44	843	1 52	870	1 60	898	1 69	924	1 78	950	1 85	975	1 92	*1005*	*2.01*	*1034*	*2.09*	*1060*	*2.18*
	4000	839	1 57	864	1 64	890	1 73	916	1 81	941	1 90	967	1.97	*993*	*2.04*	*1023*	*2.13*	*1050*	*2.22*	*1075*	*2.31*
	4100	859	1 69	885	1 78	910	1 86	935	1 94	959	2.01	*982*	*2.08*	*1012*	*2.18*	*1041*	*2.27*	*1067*	*2.36*	*1092*	*2.46*
	4300	899	1 95	923	2.02	945	2.09	967	2.16	*993*	*2.27*	*1023*	*2.38*	*1050*	*2.47*	—	—	—	—	—	—
	4500	936	2 19	*956*	*2.27*	*974*	*2.34*	*1005*	*2.46*	—	—	—	—	—	—	—	—	—	—	—	—

Field-supplied motor and drive is required

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NOTES:

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COOLING CAPACITIES — ENGLISH

Temp (F) Air Ent Cond		Evap Air — Cfm/BF											
		2700/.03				3600/.05				4000/ 06			
		Evap Air — Ewb (F)											
		72	67	62	57	72	67	62	57	72	67	62	57
70	TC	127 6	117 4	111 4	105 6	128 2	122 4	111 6	111 6	128 4	123 6	114 2	114 2
	SHC	64.2	79 0	95 0	104.8	65.2	89.4	111.4	111 4	69.0	93.0	114.2	114.2
	kW	10.48	10.12	9.44	9.16	10.50	10.34	9.86	9.86	10.52	10.42	10.00	10.00
85	TC	118 0	107 8	99 6	95 8	120 0	112 6	103 8	103 8	120 8	114 0	106 6	106 6
	SHC	60.2	75.0	89.4	95 4	64.2	85.8	103.6	103.6	67.4	90.0	106.6	106.6
	kW	11 42	10.94	10 36	10.18	11.54	11.20	10.76	10.76	11.58	11.28	10.92	10.92
95	TC	111 2	101 4	91 6	89 2	115 0	106 0	98 6	98 6	115 8	107 4	101 4	101 4
	SHC	57.6	72.2	85.6	89.0	63.6	83.4	98.4	98.4	66.4	87.8	101.4	101.4
	kW	12 02	11 48	10 96	10 86	12 24	11 78	11.34	11 36	12 30	11.85	11.54	11.54
100	TC	107 8	98 2	87 8	86 0	112 4	102 8	96 0	96 0	113 2	104 2	99 0	99 0
	SHC	56.4	71.0	83 6	85.8	63.4	82.4	95.8	95.8	66.0	86 8	98.8	98.8
	kW	12 34	11 76	11 28	11 20	12 60	12 06	11 64	11 66	12 64	12 14	11 84	11 84
105	TC	104 2	93 6	83 8	82 4	108 6	98 2	92 2	92 2	109 4	99 8	95 2	95 2
	SHC	55 2	69 2	80.4	82.4	62.2	80.6	92.2	92.2	64.8	85 0	95 2	95 2
	kW	12 6	12 06	11 62	11 56	12 88	12 34	11 98	12 00	12 94	12 44	12 18	12 18
115	TC	97 0	84 4	75 8	75 2	101 0	89 2	84 8	84 6	102 0	91 0	88 0	88 0
	SHC	52 6	65 6	74.2	75.2	59.8	77.2	84.8	84.6	62.4	81.8	87.8	88.0
	kW	13 16	12 62	12 30	12 26	13 44	12 90	12 68	12 68	13 52	13 00	12.84	12.82
125	TC	—	76 1	68 6	68 6	—	81 0	78 0	77 6	—	83 0	80 5	80 5
	SHC	—	62.2	68.5	68.6	—	73 9	78 0	77 6	—	78.7	80.5	80 5
	kW	—	13 21	13 02	13 00	—	13 49	13 42	13 40	—	13 59	13 54	13 49

BF — Bypass Factor
Cfm — Cubic feet per minute
Ewb — Entering wet-bulb
kW — Power input (includes compressor and outdoor fan motor) as follows:
012 = 1 0 kW
SHC — Gross Sensible Capacity
TC — Gross Total Capacity

NOTES:

1 Ratings are gross, and do not account for the effects of the indoor fan motor power and heat

2 Direct interpolation is permissible Do not extrapolate

3 SHC is based on 80° F db temperature of air entering the indoor unit At any other temperature, correct the SHC read from the table of cooling capacities as follows:

$$\text{Corrected SHC}_{Btu/h} = \text{SHC} + [1\ 10 \times (1 - \text{BF}) \times (F_{db} - 80) \times \text{cfm}]$$

Observe the rule of signs. Above 80° F, SHC correction will be positive, add it to SHC Below 80°F, SHC correction will be negative, subtract it from SHC

4 Formulas:

$$F_{ldb} = F_{edb} - \frac{\text{SHC}_{Btu/h}}{1\ 10 \times \text{cfm}}$$

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

$$h_{lwb} = h_{ewb} - \frac{\text{TC}_{Btu/h}}{4\ 50 \times \text{cfm}}$$

Where h_{ewb} is enthalpy of air entering evaporator coil (Btu/lb)

NOMINAL CAPACITY RATINGS

Unit	Cfm	Cooling	
		Cap. (Btu/h)	EER
559E120	3600	106,000	9 0

Above ratings *do not* reflect the effect of indoor fan motor heat or power consumption Supplementary electric heat is *not* included

Ratings are based on a *cooling standard* of 80° F db, 67° F wb indoor entering air temperature, 95° F db, air entering outdoor unit and 400 cfm/ton

ELECTRICAL DATA — SI and ENGLISH

Unit	Nominal V/PH/HZ	Voltage Range		Compr*		OFM†	IFM†		Power Supply	
		Min	Max	RLA	LRA	FLA	Hp	FLA	MCA	MOCP‡
559E120	400/3/50	342	457	10 4 (ea)	49 0 (ea)	5 5	2	3 4	33	40

Compr — Compressor
FLA — Full Load Amps
Hp — Horsepower
IFM — Indoor Fan Motor
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps
MOCP — Maximum Overcurrent Protection
OFM — Outdoor Fan Motor
RLA — Rated Load Amps

*Units have 2 compressors; values apply to each
†Indoor and outdoor fan motors are 230/1/50
‡Fuse only

NOTES:
1 Motor RLA and FLA values are established in accordance with Underwriters Laboratores (UL) Standard 465
2 MCA and MOCP values are calculated in accordance with National Electrical Code (NEC) USA, Article 440

ACCESSORY STATIC PRESSURE LOSSES (in. wg) — ENGLISH

Unit	Cfm	Heaters				Plenum*
		Low	Medium	Med Hi	High	
559E120	2600	08	10	10	17	14
	3500	14	19	19	27	18
	4000	21	26	26	36	20
	4500	29	35	35	46	22

*Standard filter pressure drop included in 559E with accessory plenum

ELECTRIC HEATING CAPACITIES — ENGLISH

Unit	Volts/ Ph	Heater Size	Total kW	kW Stage 1*	Btu/h (1000)	kW Stage 2*	Btu/h (1000)
559E120	400/3	Low	4 8	4 8	16 6	—	—
		Medium	14 4	9 1	31 1	5 3	18 1
		Med Hi	19 7	9 8	33 6	9 8	33 6
		High	29 5	9 8	33 6	19 7	67 1

*Staged heating available if outdoor thermostat used Additional thermostats may be wired into the control circuit for additional stages of heating, if desired

SELECTION PROCEDURE (with example) — ENGLISH

I ESTABLISH REQUIREMENTS AT DESIGN CONDITIONS.

Cooling load — total capacity ..... 94 000 Btu/h
— sensible capacity ..... 75 000 Btu/h
Outside air temperature (cooling) ..... 95°F
Air entering indoor coil (cooling)
wb ..... 63 5°F
db ..... 77°F
Air quantity (cfm) 3600
Pressure loss of ducts and
diffusers (at 3600 cfm) ..... 0.45 in. wg
Heating load (max) ..... 65 000 Btu/h
Power supply (Volts-Phase-Hertz) 400-3-50

II DETERMINE UNIT SIZE.

Select unit on cooling capacity

Enter the cooling capacity table at the given air quantity (3600 cfm) and evaporator entering wet-bulb (63 5°F). Read across the table for gross total capacity (TC) and gross sensible capacity (SHC), under the condenser entering air temperature (95°F). Since 63.5°F is between 62 and 67°F (in the table), the required values must be found by interpolation

From the table for the 559E120 at 63.5°F entering air (wet-bulb)

$$TC = 98\,6 + \frac{1\,5}{5}(106\,0 - 98\,6) = 100.8 \text{ Btu/h}$$

$$SHC = 98\,4 - \frac{1\,5}{5}(98.4 - 83\,4) = 93\,9 \text{ Btu/h}$$

$$kW = 11.34 + \frac{1.5}{5}(11.78 - 11.34) = 11\,5$$

These gross capacities must now be adjusted downward to reflect the heat gained from the indoor fan motor To obtain the heat gained from the IFM (indoor fan motor), the total required static pressure must be calculated by adding all accessory and external pressure drops (See IV) Since heater pressure drop varies with the size of the heater, calculation of heater requirement should be made next.

III HEATING REQUIREMENTS.

Enter the electric heating capacities table for 559E120 units and find that the medium-hi sized heater (19 7 kW) with 67 200 Btu/h most closely satisfies the heat requirement of 65 000 Btu/h The heating capacity must be adjusted upward for the heat gain of the indoor fan motor.

IV ADD PRESSURE DROPS TO FIND INDOOR FAN MOTOR (IFM) kW AND HEAT.

At 3600 cfm indoor air·

The medium size heater pressure loss is ... 0 20 in wg
The plenum pressure loss is ..... 0 18 in wg
The pressure loss of connected ducts
and diffusers ..... 0 45 in wg
Sum (total external static pressure) is ..... 0.83 in wg

From the fan performance table, at 3600 cfm with 0 83 in. wg external static pressure requires 967 rpm, 1710 watts by interpolation. The heat equivalent of this is 3.41 Btu/h/watt x 1710 watts = 5834 Btu/h

SELECTION PROCEDURE (with example) — ENGLISH (cont)

V ADJUSTMENTS FOR IFM HEAT AND POWER INPUT.

COOLING.

Adjusted Total Capacity = TC - IFM heat
= 100 800 - 5834
= 94 966 Btu/h

Adjusted Sensible Capacity = SHC - IFM heat
= 93 900 - 5834
= 88 066 Btu/h

Adjusted Power Input = kW* + IFM power input
= 11 47 + 1.71
= 13 18 kW

*kW power input from cooling capacity table at selected conditions

HEATING.

Adjusted Heating Capacity = 67 200 + 5834
= 73 034 Btu/h

Adjusted Power Input = kW** + IFM power input
= 19 0 + 1.71
= 20 71 kW

**Electric heater kW power input from heating capacity tables

VI CORRECTIONS TO SENSIBLE CAPACITY FOR DRY-BULB TEMPERATURE ABOVE OR BELOW 80°F. (See capacity table notes and table of sensible heat correction factors)

Since dry-bulb is below 80°F, sensible heat correction must be subtracted from SHC. With 3600 cfm and BF of 05, correction factor for 77°F is -3.11.

Corrected sensible heat capacity
= 88 066 - 3 11 (3600)
= 76 870 Btu/h

Therefore, the final *net* capacities are
Sensible = 76 870 Btu/h
Total = 94 966 Btu/h

Thus, at the required design conditions, the 559E120 has adequate sensible capacity to satisfy the job conditions.

APPLICATION DATA

OPERATING LIMITS

Units will operate at ambients 1 7°C (35°F) without head pressure control provided the evaporator entering air wet-bulb temperature is equal to or greater than 11 7°C (53°F) and the supply air is not less than 1651 l/s (3500 cfm) Head pressure accessory will permit operation to ambients as low as -29°C (-20°F)

When return air ductwork systems are used, return side static pressures should be limited to 125 Pa (0.5 in wg)

Units without economizer are manual heat-to-cool changeover. Relay or equal must be used for automatic changeover Units with economizer must use automatic changeover thermostat.

INSTALLATION

A condensate trap that is a minimum of 100 millimeters (4 inches) deep must be field provided prior to start-up of cooling cycle.

At installers option, ductwork may be attached to curb on units with accessory plenum Interior installation may proceed before unit is set in place on roof

Field-installed electric heaters require separate power entry

Plenum filter racks accommodate 51-millimeter (2-inch) filters for higher filtration efficiency and/or longer filter life

ENGINEERS SPECIFICATION GUIDE

BASE UNIT

FURNISH AND INSTALL a one-piece, air-to-air cooling unit Basic unit shall be completely assembled and tested, with a complete refrigerant charge, ready to operate Unit shall be designed for either slab or single-piece curb mount

Unit shall include provisions for electric heat

COOLING CAPACITY — Unit cooling capacity shall be a net capacity with indoor fan motor heat deducted and shall be _____total or greater, _____sensible or greater at conditions of_____cfm air entering indoor coil, _____dry-bulb, _____wet-bulb, and _____dry-bulb entering outdoor coil

HEATING CAPACITY — Heating capacity shall be a net capacity with indoor fan motor heat added and shall be _____or greater.

UNIT COMPRESSOR(S) shall be welded, fully hermetic with crankcase heater(s) and suitable vibration isolators. The standard unit shall be capable of operating to 1 7° C (35° F) OAT on cooling cycle

COILS — Indoor and outdoor coils shall be of nonferrous construction with aluminum plate fins mechanically bonded to seamless copper tubes with all joints brazed

FANS AND MOTORS — Indoor air fan shall be forward-curved, centrifugal, belt-drive type capable of delivering _____at _____external static pressure Motor pulley shall be adjustable pitch Indoor fan motor shall be_____with permanently lubricated bearings Outdoor fan shall be of the propeller type with direct-driven permanently lubricated motor of_____or less. Fans shall discharge upward

UNIT CABINET — Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a baked enamel finish. Cabinet interior shall be insulated Cabinet panels shall be easily removable for service of all operating components. A condensate drain for the indoor coil shall be provided

CONTROLS — The unit shall be protected with low pressurestats, and current and temperature sensitive linebreak overload devices on each phase of the compressor motor

These devices shall be wired to the circuit to prevent compressor restart until reset at the thermostat The room thermostat shall contain an optional compressor malfunction light designed to light if any of the safety controls mentioned above trip out the compressor through the lockout circuit Two-compressor units shall have separate and independent refrigeration and control systems designed to allow for standby operation of either compressor if one is locked out

UNIT ELECTRICAL CONNECTIONS — Cabinet shall contain suitable openings for routing of all utility connections The base unit shall contain a terminal strip in the control compartment to allow for connection of room thermostat and field-installed accessories

MAXIMUM DIMENSIONS — Width_____, depth_____, height_____

ACCESSORIES

The following field-installed accessories (accessory) shall be provided

ELECTRIC RESISTANCE HEAT — Electric resistance heaters shall be supplied to offset building heat loss Heaters shall consist of open wire nichrome elements with controls necessary for operation Safety controls shall include primary overtemperature and overcurrent protection Heaters shall be available in 4 heat-to-cool ratios.

ROOF CURB shall be of the same manufacture as unit and shall include an insulated panel under compressor section to prevent condensation forming on the bottom Dimensions shall allow for easy duct location and connection to roof curb prior to unit placement.

ECONOMIZER CONTROL shall include return air and outdoor air dampers, outdoor air filter and hood and fully modulating electric control system with outdoor air thermostat and capable of introducing up to 100% outdoor air The control changeover from mechanical cooling to economizer operation shall be fully automatic through an adjustable outdoor air changeover thermostat

DOWNTURN PLENUM shall be designed to attach easily to the basic unit to direct airflow downward Plenum shall provide for a weatherproof opening for ductwork assembly, and shall include an outdoor air inlet

THERMOSTAT AND SUBBASE shall provide staged heating and cooling, manual or automatic changeover and fan control

OUTDOOR AIR THERMOSTATS shall provide for staging of the electric resistance heat according to outdoor temperature Thermostats shall be wired into the electric heater contactors and shall have an adjustable set point to provide economical resistance heat staging

ANTI-RECYCLE CONTROL shall prevent compressor short cycling as a result of a rapid change in thermostat setting, and shall automatically prevent compressor restart at least 5 minutes after shutdown

HEAD PRESSURE CONTROL shall provide solid-state outdoor fan speed control to maintain head pressure down to -29° C (-20 F) outdoor air temperature on cooling cycle

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS

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