



## DIRECT MULTIZONE SYSTEM DMS3-185—DMS3-275 DMS3-300—DMS3-360

Rooftop Heating-Cooling-Ventilating with Multizone Control

Gas Heat-700,000 Btuh Max. — Electric Heat-358,000 Btuh Max.

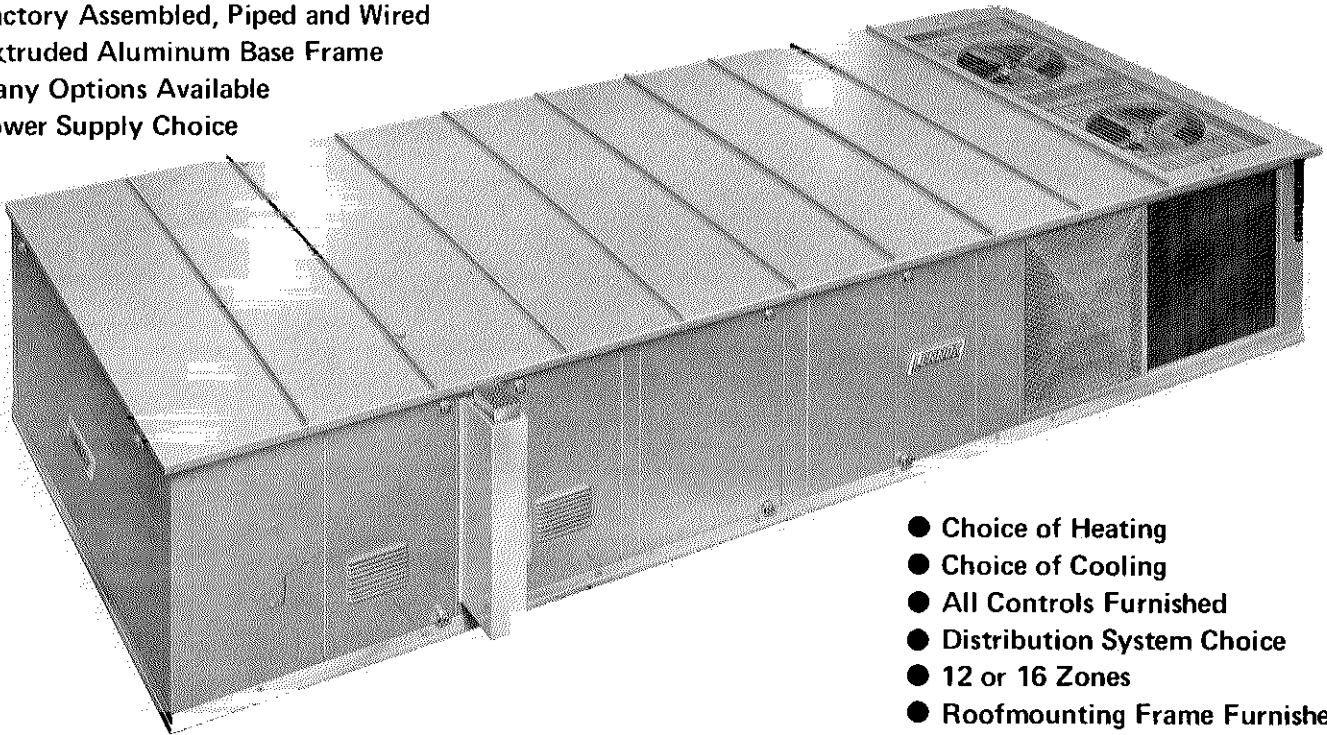
Hot Water 750,000 Btuh Max.—Steam Heat 742,000 Btuh Max.

Chilled Water Cooling-550,000 Btuh Max.

DX Cooling—196,000 to 338,000 Btuh @ ARI Conditions—Air Volume—10,000 cfm Maximum

ENGINEERING DATA  
COMBINATION UNITS  
DIRECT MULTIZONE  
SYSTEMS  
Page 51a  
November 15, 1973  
Supersedes 1-1 73

- Outdoor Enameled Galvanized Steel Casing
- Heat-Cool-Vent in One Single Package
- Factory Assembled, Piped and Wired
- Extruded Aluminum Base Frame
- Many Options Available
- Power Supply Choice



- Choice of Heating
- Choice of Cooling
- All Controls Furnished
- Distribution System Choice
- 12 or 16 Zones
- Roofmounting Frame Furnished

### Versatile Applications, Economical Operation And Single Source For Comfort Responsibility Available With Direct Multizone Systems

The DMS3 system is a complete Heat-Vent-Cool assembly (including condensing unit) of highly engineered, integrated components in a weatherproof, low silhouette single package. All necessary controls including a disconnect are factory installed, wired and approved by appropriate approval agencies.

All models are available with a choice of options including; gas, electric, hot water, or steam heat and chilled water cooling or self contained DX air conditioning with a complete refrigerant charge, POWER SAVER™ fresh air control, twin supply air blowers with drive and motor selection, return air blower, indoor condenser heat and several choices of air filtering. Complete controls are also furnished. Units are also available as cooling-ventilating models only, less the heating components. Air distribution is 12 or 16 zone multizone control at the unit or double duct with independent mixing dampers at each zone. A rugged and practical roof mounting frame is furnished. A choice of two deck control systems is available: Solid State Electronic Lennox Energy Saving Control System or Load Sensor Master/Sub-Master System. All of these features provide almost unlimited flexibility in application and system design.

The DMS3 units make it possible to specify an entire rooftop multizone comfort system, including all equipment and

controls, from one manufacturing source. This permits dealing only with Lennox for complete service and parts on the entire system. Lennox is and wants to be totally responsible for all the equipment and also for all of the controls operation when furnished as part of the package by Lennox.

The DX cooling system consists of two separate and completely independent refrigeration systems including separate Lennox LANDMARK<sup>®</sup> compressors and their independent condenser with fans and a separate circuit in the single evaporator coil. If cooling is not required initially the unit is available without the evaporator coil, compressors and condensing unit section. Future add-on cooling may be accomplished two ways. The evaporator coil can be factory installed with a standard production remote condensing unit and controls installed at a later date or the evaporator coil, controls and a remote condensing unit can all be installed later when cooling is required.

Equipment is shipped factory assembled. Factory installed disconnect and control wiring terminal block permit quick field wiring connections. Cooling system has been thoroughly tested and rated according to ARI Standard 210 test conditions. Life cycle testing of the heat exchanger in the Lennox Laboratory proves long life of the heating element. In addition each unit is test operated at the factory before shipment.

## ● CONTROL OPTIONS

**Night Setback**—Equipment is wired to receive night setback controls. In mild climates a manual system switch (not furnished), or automatic programming turns off the entire unit. For colder climates a "night thermostat" located in an average zone controls the conditioned area to a preset fuel saving temperature. Manual (BM-4762) or 12 hour clock timer (BM-4761) kits are available to override existing night setback controls. The switch or timer is mounted on a stainless steel plate which fits two standard electrical outlet boxes located in the wall. An optional skip-day clock timer (P-8-3744) mounted in the DMS3 programs the equipment and is required when the 12 hour clock timer (BM-4761) night override kit is used.

**Remote Readout Panel**—From one centrally located spot within the structure the operation of the DMS can be checked at a glance. Signal lights indicate; System On, Combustion Lockout, Condensing Unit Inoperative and Dirty Filter. See bulletin (Page 71) in Accessories section. When panel is used for night setback operation the following controls must be ordered extra; night thermostat, subbase, adaptor plate and skip-day clock.

## ● SUPPLY SYSTEM CHOICE

**12 or 16 Zones**—Located at unit with assembly matching width of unit. Zone dampers can be mechanically linked to be driven by a single damper motor. 6 zones per motor maximum. 800 series motors can also be slaved and controlled by one thermostat.

**Balancing Dampers**—Furnished and located at each zone outlet in unit.

**Double Duct**—Discharge head is located within the unit. Hot and cold ducts run length of building with branch lines feeding mixing boxes in each zone. A choice of mixing boxes is available. See mixing box bulletin (Page 73) in this section.

**Dual Duct Splitter**—A combination zone and double duct system application is also available. The duct system supply air outlets, in the unit, may be factory arranged in almost any combination desired.

## ● LOAD SENSOR MASTER/SUB-MASTER DECK CONTROLS (Opt.)

Keeps the hot and cold deck temperatures at a conservative setting during periods when all zones are satisfied. The hot deck (outside reset 1 to 1) temperature controller has an adjustable range and is factory set at 75F. The cold deck (outside reset 4-1) temperature controller is factory set at 70F and also has an adjustable range. Whenever any zone requires maximum heat or cooling the Load Sensor shifts the conservatively set deck temperature controls to satisfy the increased demand. When all zones are satisfied the Load Sensor shifts the deck temperature back to the conservative power saving temperature. Mixing boxes must be applied to double duct applications. A minimum number of mixing boxes will require Load Sensors (optional), located in the most critical zones, in most applications to sense temperature requirements.

## ● LOAD SENSOR ZONE CONTROL SYSTEM (Opt.)

Factory installed damper motor choice:

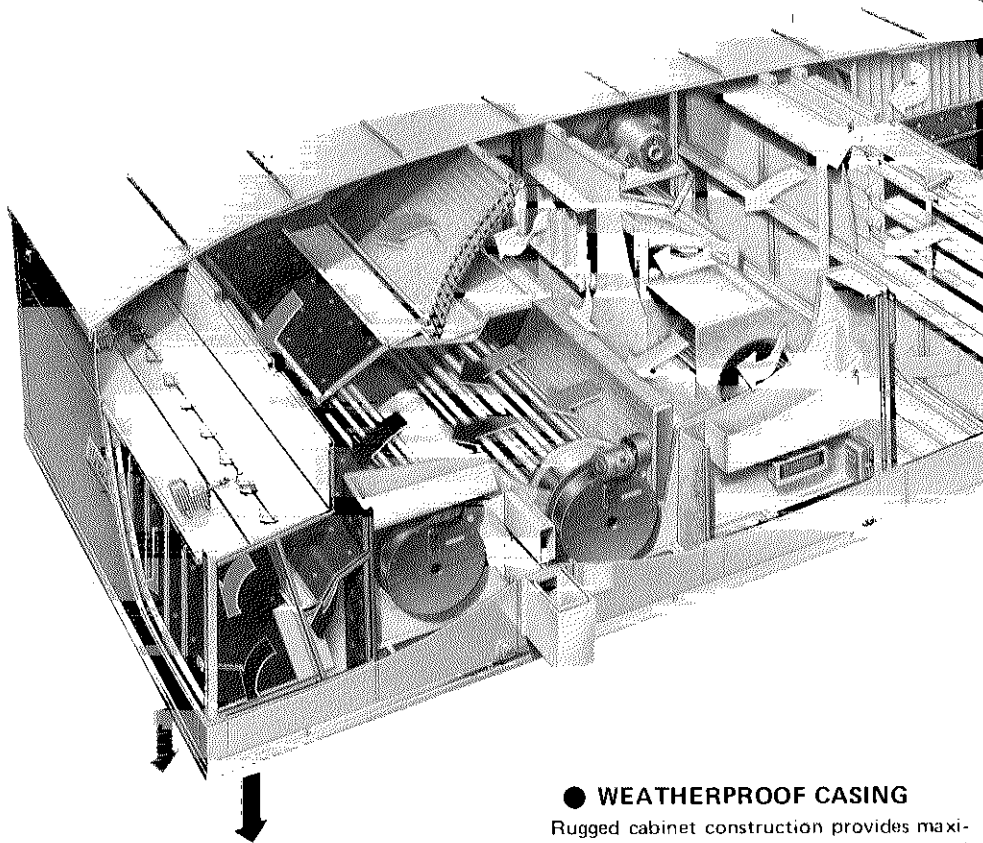
Control System	Damper Motor
ZC8 . . . . .	800 Series Proportioning
ZC8S . . . . .	800 Series Proportioning (slave damper)

## ● SAFETY CONTROLS

Gas fired models have a pre-purge timer and electronic flame sensor. All models have firestats located in hot deck, cold deck and return air area. Blower switch terminates heat-cool operation in event of abnormal operating conditions. All motors are overload protected. NEC or CEC approved fusing, wiring and disconnect are standard.

## ● SERVICE ENCLOSURE (Opt.)

Available as optional equipment. Protects service area from inclement weather during servicing. See bulletin (Page 25) in Accessories Section.



## ● POWER SAVER™. LOAD SENSOR CONTROLS (Opt.)

Optional equipment controls fresh air entry and "Free Cooling" with outdoor air. Structures that have high internal gains quite often require cooling at low outdoor air temperatures. Lennox POWER SAVER eliminates the need for mechanical cooling at these temperatures by using the outdoor air for cooling. An enthalpy control, located in the outdoor air stream senses the total heat content (dry bulb and wet bulb temperature) of the outdoor air. This unique control prevents excessive moisture laden outdoor air capable of adding to the cooling load from entering the building and yet permits cool dry outdoor air capable of cooling to enter, thus taking full advantage of free outdoor air cooling. The POWER SAVER equipment may also be specified less controls with the dampers linked for manual control. In addition the POWER SAVER dampers are now available factory wired for a fixed minimum position setting. This is a standard option and must be specified when ordering.

## ● APPROVALS

Gas Model design is A.G.A. certified or C.G.A. approved. U.L. Listing is pending on hot water, electric heat models and cooling models. All electrical components are U.L. Listed. Wiring is according to NEC or CEC. F.J.A. and F.M. construction is available.

## ● WEATHERPROOF CASING

Rugged cabinet construction provides maximum strength, resistance to stress and complete protection from the weather. The top and side panels are constructed of heavy gauge galvanized steel supported with rigid 16 gauge galvanized steel interior panels. Exterior panels have a durable finish coat of outdoor enamel. The top panels are joined with 3/16" diameter rubber tubing in the bottom of each standing seam. Side panels are sealed with polyurethane foam.

## ● INSULATION

All side panels and top panels are insulated with 1-1/2 inch thick (1-1/2 lb. density-mat faced) fiberglass insulation. In addition the base is insulated with 1 inch thick (6 lb. density) fiberglass insulation and protected by the 16 ga. galvanized drain pan.

## ● ACCESS PANELS

Equipped with locking type door handles. Heating, blower and filter panels are hinged.

## ● UNITIZED FRAME AND BASE

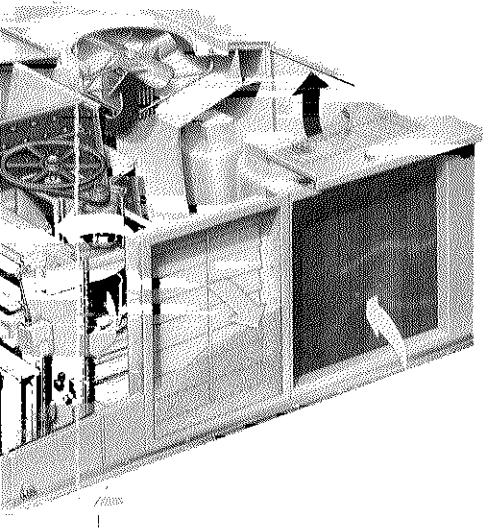
Base frame is constructed of 6061-T6 extruded aluminum. All support members are 16 gauge galvanized steel. The entire bottom is a galvanized drain pan which traps and drains off moisture.

## ● HOISTING LUGS AND SLING

Four 4 gauge steel lugs with hoisting sling attached are furnished as standard. Installer has only to attach hoisting equipment to sling and place unit in desired location. Each lug will handle a load of 4 G's.

## ● READY TO OPERATE

Equipment is shipped assembled with all controls wired and piped. A complete refrigerant charge is furnished.



## ● POWERFUL BLOWERS

Two 15" x 15" blowers deliver large air volumes with low power consumption. The blower assemblies are mounted to a rugged angle iron frame with the entire blower and frame assembly vibration isolated on coil steel springs. Equipped with permanently lubricated ball bearings. Blower wheels are statically and dynamically balanced. Pivoted motor mounting base permits quick and simple belt tension adjustment or belt changing. A choice of motor hp and drives is available.

## ● PRESSURE CONVERTER

Mounted to blower discharge snout giving increased performance by converting the kinetic energy of the high velocity blower discharge to static pressure. The converter also gives uniform air distribution.

## ● RETURN AIR BLOWER (Opt.)

Exhausts air in direct proportion to the amount of outside air introduced into the system. It can exhaust 100% of the total supply air handled. It also overcomes resistance in the return air system. A choice of motor hp and drives are available.

## ● ROOF MOUNTING FRAME

A rugged 14" National Roofing Contractors Association approved roof mounting frame (MF3-26514) exactly fits the perimeter of the DMS3 unit. It is flashed into the roof and mates to the DMS3 extruded aluminum base frame where a neoprene sponge gasket completes the sealing and weather-proofing job. A 2 x 4 nailer is secured to the sides of the frame to facilitate flashing. It is also available 8" high (MF3-2568) (not NRCA approved.)

## ● COMBUSTIBLE ADAPTOR FRAME (Optional)

The AF7-275 adaptor frame is used where the MF3 roof mounting frame is installed on combustible material. The adaptor frame isolates the warm air plenum from combustible material.

## ● SMOKE DETECTOR CONTROLS (Opt.)

The Photo Cell Smoke Detectors are designed to detect the presence of smoke within the system and to actuate the blower motor controls and other devices to: (1) shut off the entire system or (2) operate only 100% exhaust, venting smoke from the system or (3) operate only 100% outside supply air for evacuation, generating positive pressure preventing smoke from entering an uninvolved area or (4) both 100% outside supply air and exhaust operation for one unit total system applications. Terminals are also available for connection of remote alarm circuits. Actuation occurs when smoke within the unit exceeds a density that is sufficient to obscure light by a factor of 2% to 4% per foot. A key switch is provided for periodic test. Two detectors are provided, one is located in the return air section and one in the blower section downstream from the air filters. In addition, a remote test/reset control may be provided which acts as a remote test station.

## ● FILTER OPTIONS

**Standard Frame Filters**—Generous filter area consists of one inch, 20 pores per inch polyurethane media mounted in rugged individual galvanized metal frames. They are easily accessible for servicing. The filter rack is 4" thick which makes room for 3" of additional filtering material—such as activated charcoal.

**Bag Filters**—Highly efficient bag filters are available in three models; 55%, 85% and 95% efficiency based on National Bureau of Standards dustspot test. Specify efficiency desired when ordering. All three models are equipped with frame prefilters to extend the life of the bag filters.

**Automatic Roll Filters**—65 ft. roll gives an average of 1 year air filtering without servicing. This is based on 72 hours a week unit operation under average dust loading conditions. They are available with an adjustable timed automatic advance or adjustable automatic pressure advance.

## ● HEATING OPTIONS

**Gas (275,000 to 700,000 Btuh Input)**—Single or dual (in series) DURATUBE<sup>®</sup> heat exchangers provide maximum heating efficiency and long service life. Tube and drum construction permit normal heat element expansion and contraction without metal fatigue. A choice of aluminized steel or Lennox DURAGLASS II<sup>®</sup> coated steel heat exchangers. Flame observation port is furnished. True power burner(s) use 100% secondary air. Two stage burner operation is available with natural gas only on 350,000 and 500,000 input models. All valves are installed, wired, piped and tested.

**Electric (45 to 105 KW)**—Elements are nichrome bare wire exposed directly to the hot deck air stream. Equipped with manual reset backup limits. A choice of heater controls is available; four stage hot deck control or a sequence controller with modulating hot deck control.

**Hot Water (50,000 to 750,000 Btuh)**—A factory installed hot water coil can be with either three-way modulating valve or primary-secondary flow controls. Factory installed valve and pump (primary-secondary control). Coil freeze-up protection furnished.

**Steam Heat (299,000 to 742,000 Btuh)**—Steam coil is factory installed. Factory installed piping includes a modulating steam valve and float. Coil is pressure leak tested at 450-500 psi. Positive coil freeze-up protection is provided.

## ● OUTSIDE AIR INTAKE

Outside air enters through corrosion resistant grilles. An eliminator section traps rain and keeps it from entering the air handling sections. The trapped moisture is eliminated through drainage holes.

## ● EXHAUST DAMPERS

Extruded aluminum dampers ride in nylon bearings.

## ● CONDENSER SECTION

Two Lennox LANDMARK compressors and their independent refrigerant circuits, condensers and fans give staging control to fit varying cooling load requirements. In addition the No. 1 refrigerant circuit is equipped with capacity reduction. A portion of the compressor discharge gas is by-passed directly into the refrigerant distributor, maintaining full refrigerant flow and compressor cooling. DMS3-185/275 models are equipped with two single speed L2 compressors. DMS3-300 uses the L2 and the new nominal 15 ton L6 two speed compressor. DMS3-360 incorporates the L6 two speed and the new nominal 15 ton L2 single speed compressor. These new compressors have the same reliable parts and design as the original L2. In addition the new 15 ton compressors have a sightglass, flanged fitting for suction line connection and two speed operation (L6 model only) for additional capacity reduction. Two speed control provides maximum efficiency and operation economy during periods of reduced load. See capacity chart.

## ● INDOOR CONDENSER HEAT (Opt.)

Available as optional equipment. It is activated by the first stage of the heating controller when compressor No. 1 is running. The coil is located in the hot deck and will continue to give approximately 95,000 (DMS3-185), 125,000 (DMS3-275) and 155,000 (DMS3-300/360) Btuh of heat as long as compressor No. 1 is operating and there is a demand for heat. If compressor No. 1 is not operating, the entire heating load is handled by the gas, electric, hot water or steam components.

## ● EVAPORATOR COIL

Lennox designed and built evaporator has ripple edge aluminum fins machine fitted to seamless copper tubes. The two separate circuits are circuted in row depth. Each circuit has its own independent expansion valve, separate condensing section and complete refrigerant charge. Pressure leak tested at 450 to 500 psi.

## ● CHILLED WATER COOLING

Six row single circuit coil, with factory installed modulating valve. Water line inlet openings are provided in cabinet for ease of entry. Coil is constructed of aluminum fins mechanically bonded to seamless copper tubes. Pressure leak tested at 450 to 500 psi.

## ● THERMOSTAT FURNISHED

A stainless steel mercury bulb thermostat and mounting plate is furnished for each zone when using the 800 series damper actuator. It mounts to a standard 2 x 3-1/4 electrical box. When the solid state modulating damper actuator is used a compatible room temperature sensing transmitter is furnished. Available with or without exposed set-point and indicating thermometer or with exposed set-point only. Also available with concealed set-point, thermometer and locking screw or with concealed set-point and locking screw only. Specify when ordering. A wall plate adaptor (order no. P-8-10531) is required for mounting to a standard electrical box. Adaptor must be ordered extra.

**SPECIFICATIONS AND RATINGS**

Model No.			DMS3-185	DMS3-275	†DMS3-185-275	DMS3-300	DMS3-360
Cooling Capacity	At ARI Standard 210 Test Conditions	Total capacity (Btuh)	196,000	278,000	210,000	304,000	338,000
		S/T ratio	.77	.77	.80	.77	.73
		Compressor watts	19,600	27,900	20,400	34,000	42,000
Condenser Coils	Net face area (sq. ft.)		(2)-12.6	(2)-12.6	(2)-12.6	(2)-12.7	(2)-12.7
	Tube diameter & No. of rows		3/8-2	3/8-4	3/8-2	3/8-6	3/8-6
	Fins per inch		18	18	18	15	15
Condenser Fans	Diameter (in.) & No. of blades		(2)-26-5	(2)-26-5	(2)-26-5	(2)-30-6	(2)-30-6
	Total air volume (cfm)		15,400	13,600	13,600	15,200	15,200
	Motor hp		(2)-1	(2)-1	(2)-1	(2)-2	(2)-2
	Watts input (total)		2,800	2,800	2,800	5,000	5,000
Evaporator Coil	Net face area (sq. ft.)		15.3	15.3	15.3	15.3	15.3
	Tube diameter- No. of rows-Fins per inch		1/2-4-13	1/2-6-13	1/2-6-13	1/2-6-13	1/2-6-13
Chilled water cooling capacity range (Btuh)			140,000-550,000				
Chilled Water Coil	Net face area (sq. ft.)		15.3				
	Tube diameter No. of rows Fins per inch		1/2-6-13				
Heating Options	Gas piping connections IPS (in.)	Natural	1-1/4 (1"-275,000 Btuh)				
		Propane	1				
	Gas heating capacities (Nat. or Propane) Maximum input/output (Btuh)		*275,000-206,250				
			**350,000-262,500				
			**500,000-375,000				
	††Electric Heating capacity range (Btuh)	3 elements	***700,000-525,000				
		4 elements	115,300-153,500				
		5 elements	153,500-204,600				
		6 elements	191,800-255,800				
		7 elements	230,200-306,900				
Hot water heating capacity range (Btuh)		268,500-358,000					
Steam heating capacity range (Btuh)		50,000-750,000					
		299,000-742,000					
Hot Water Coil	Net face area (sq. ft.)		10.4				
	Tube diameter-No. of rows-Fins per inch		1/2-3-10				
Steam Coil	Net face area (sq. ft.)		9.9				
	Tube diameter-No. of rows-Fins per inch		1/2-2-10				
Hot Water, Steam & Chilled water coil connection Inlet & Outlet			See Valve Selection Curves				
Filter Options	Standard frame filter size (in.) & free area (sq. ft.)		(3)-20 x 20 x 1-(5)-20 x 25 x 1-(25.7)				
	Roll filter free area (sq. ft.)		18.2				
	Bag filter free area (sq. ft.)		465.0				
Supply Air Blowers	Blower wheel nominal diam. x width (in.)		(2) 15 x 15				
	Motor horsepower (minimum-maximum)		3-10				
	Air volume range (cfm)		5,000-10,000				
Return Air Blower	Wheel diameter (in.)		40-backward curved blades				
	Motor horsepower (minimum-maximum)		1-1/2-3				
	Air volume range (cfm)		5,000-10,000				
Condensate drain connection I.P.M. (in.)			1-1/4				
Electrical characteristics			208 to 600 volt-60 hertz-3 phase				

\*Single stage heating natural gas only. \*\*Two stage heating natural gas only. \*\*\*Dual heat exchangers in series.

†Mix match model, uses DMS3-185 condensing section and DMS3-275 evaporator section.

††See electric heat rating table for capacities at various voltages.

NOTE Hot water and chilled water capacity ranges shown are possible with varying supply conditions and air volumes. See coil capacity curves. Steam capacity ranges are possible with varying steam pressure and air volume. See steam rating chart.

**MANY OPTIONS AND FEATURES IN A FLEXIBLE SINGLE PACKAGE ROOFTOP DIRECT MULTIZONE SYSTEM**

**ELECTRONIC LENNOX ENERGY SAVING SYSTEM (Opt.)**

The solid state electronic control system measures the deviation between room temperature and set point and then controls the supply air temperature to meet the load requirements. The control system consists of a room temperature sensing transmitter (thermostat) for each zone, supply air sensor for each zone, load analyzer control module with zone circuit board and heat-cool logic control relays, spring return zone damper actuator for each zone plus a mixed air/ventilation damper actuator with infinite resolution for blending outdoor air with return air. This system operates the unit equipment to automatically match its output to the load requirements with minimum space temperature variation. To accomplish this, the zone with the greatest cooling load will have its zone damper open full to the cold deck and will control the cold deck temperature to just match the load requirement in that zone. The zone with the greatest heating load will have its zone damper open full to the hot deck and will control the hot deck temperature to just match the load requirement in that zone. The other zones in the system (with their individual room temperature sensing transmitters and supply air sensors) will blend hot and cold air to match the supply air temperature to the load in each individual zone. Also the system will often balance so that the same supply air temperature will be nearly right for each zone. The system can then "coast" with only the blowers operating for as long as the balanced condition continues. Should the load requirement in any zone change the controls will immediately respond to match supply air temperature to the load in that zone. In addition, the right amount of outdoor air or indoor condenser coil heat is automatically furnished and utilized in the system to maintain temperature and minimize mechanical heating and cooling. With this control system troubleshooting is simple because the load analyzer signal transmitted by the room sensing transmitter reflects the load on the zone and indicates system performance. The load analyzer signal can be monitored at the room temperature sensing transmitter or the load analyzer control module mounted on the unit. All zones of the system may be checked at one easily accessible point, the load analyzer control module.

**POWER SAVER SOLID STATE CONTROLS (Opt.)**

Optional equipment controls fresh air entry and "Free Cooling" with outdoor air. Structures that have high internal gains quite often require cooling at low outdoor air temperature. Lennox POWER SAVER eliminates the need for mechanical cooling at these temperatures by using outdoor air for cooling. Mixed air low limit control located in the blower section, morning warm-up control located in return air stream and enthalpy control located in the outdoor air stream, regulate damper operation. The enthalpy control senses the total heat content of the outdoor air. This unique control prevents excessive moisture laden outdoor air that will add to the cooling load from entering the unit and yet permits cool dry air capable of cooling to enter, thus taking full advantage of free outdoor air for cooling. The POWER SAVER equipment may also be specified less controls with the dampers linked for manual operation.

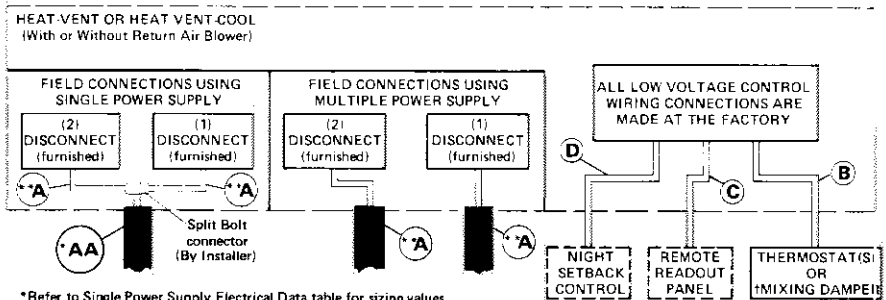
**SOLID STATE ZONE CONTROL SYSTEM (Opt.)**

Factory installed damper motor choice:  
 Control System Damper Motor  
 ZC14 ..... Modulating (spring return)  
 ZC12 ..... Pneumatic Actuator

(See Pneumatic Controls bulletin, Page 75)

# FIELD WIRING

NOTE—Correct size unit disconnect is furnished and factory installed.



\*Refer to Single Power Supply Electrical Data table for sizing values.  
 \*\*Refer to Multiple Power Supply Electrical Data table for sizing values.

A-A—3 wire power (For 208, 230, 460 and 575 volt models).

A-6 wire power (For 208, 230, 460 and 575 volt models.)

B-2 wire low voltage (From terminal strip to each load sensor thermostat.)

-4 wire low voltage (When double duct mixing boxes with load sensor are used.)

-4 wire low voltage (From terminal strip to each electronic load analyzer room temperature sensing transmitter [Thermostat].)

-3 wire low voltage (1 signal wire to each transmitter [Thermostat]. 2 power supply wires, 24 VDC.) (When double duct mixing boxes with electronic load analyzer are used.)

C-9 wire low voltage (From terminal strip to optional remote readout control panel.)

D-2 wire low voltage (From terminal strip to night setback or system switch.)

NOTE—Unit is equipped with 100% branch fusing.

## MULTIPLE POWER SUPPLY—DMS3-185-275-300-360 ELECTRIC HEAT ONLY (With or Without Chilled Water)

Voltage (3ph)	Number of Elements	WITHOUT RETURN AIR BLOWER												WITH RETURN AIR BLOWER												
		Supply Air Blower Motor hp						3 hp Supply Air Blower Motor			5 hp Supply Air Blower Motor			7 1/2 hp Supply Air Blower Motor			10 hp Supply Air Blower Motor									
		3		5		7-1/2		10		1-1/2		3	1-1/2		3		1-1/2		3		1-1/2		3			
Minimum Circuit Ampacity		Minimum Circuit Ampacity		Minimum Circuit Ampacity		Minimum Circuit Ampacity		Minimum Circuit Ampacity		Minimum Circuit Ampacity	Minimum Circuit Ampacity		Minimum Circuit Ampacity		Minimum Circuit Ampacity		Minimum Circuit Ampacity		Minimum Circuit Ampacity		Minimum Circuit Ampacity					
Disc.1		Disc.2		Disc.1		Disc.2		Disc.1		Disc.2		Disc.1	Disc.2		Disc.1		Disc.2		Disc.1		Disc.2		Disc.1		Disc.2	
208	3	22.8	117.4	33.4	117.4	39.8	117.4	48.1	117.4	28.5	117.4	33.4	117.4	36.1	117.4	45.5	117.4	50.4	117.4	53.8	117.4	58.7	117.4	58.7	117.4	
	4	22.8	156.5	33.4	156.5	39.8	156.5	48.1	156.5	28.5	156.5	33.4	156.5	36.1	156.5	45.5	156.5	50.4	156.5	53.8	156.5	58.7	156.5	58.7	156.5	
	5	22.8	195.6	33.4	195.6	39.8	195.6	48.1	195.6	28.5	195.6	33.4	195.6	36.1	195.6	45.5	195.6	50.4	195.6	53.8	195.6	58.7	195.6	58.7	195.6	
	6	22.8	234.8	33.4	234.8	39.8	234.8	48.1	234.8	28.5	234.8	33.4	234.8	36.1	234.8	45.5	234.8	50.4	234.8	53.8	234.8	58.7	234.8	58.7	234.8	
	7	20.7	135.4	27.7	135.4	36.2	135.4	43.7	135.4	25.9	135.4	30.3	135.4	32.9	135.4	37.3	135.4	41.4	135.4	45.8	135.4	48.9	135.4	53.3	135.4	
	8	20.7	180.5	27.7	180.5	36.2	180.5	43.7	180.5	25.9	180.5	30.3	180.5	32.9	180.5	37.3	180.5	41.4	180.5	45.8	180.5	48.9	180.5	53.3	180.5	
230	3	20.7	225.6	27.7	225.6	36.2	225.6	43.7	225.6	25.9	225.6	30.3	225.6	32.9	225.6	37.3	225.6	41.4	225.6	45.8	225.6	48.9	225.6	53.3	225.6	
	4	20.7	225.6	27.7	225.6	36.2	225.6	43.7	225.6	25.9	225.6	30.3	225.6	32.9	225.6	37.3	225.6	41.4	225.6	45.8	225.6	48.9	225.6	53.3	225.6	
	5	20.7	225.6	27.7	225.6	36.2	225.6	43.7	225.6	25.9	225.6	30.3	225.6	32.9	225.6	37.3	225.6	41.4	225.6	45.8	225.6	48.9	225.6	53.3	225.6	
	6	68.0	225.6	75.0	225.6	83.5	225.6	91.0	225.6	74.5	225.6	80.0	225.6	81.5	225.6	87.0	225.6	90.0	225.6	95.5	225.6	97.5	225.6	103.0	225.6	
	7	113.1	225.6	120.1	225.6	128.6	225.6	136.1	225.6	119.6	225.6	127.1	225.6	126.6	225.6	132.1	225.6	135.1	225.6	143.6	225.6	142.6	225.6	148.1	225.6	
	8	10.4	67.5	13.9	67.5	18.2	67.5	21.9	67.5	13.0	67.5	15.2	67.5	16.5	67.5	18.7	67.5	20.8	67.5	23.0	67.5	24.5	67.5	26.7	67.5	
460	3	10.4	90.0	13.9	90.0	18.2	90.0	21.9	90.0	13.0	90.0	15.2	90.0	16.5	90.0	18.7	90.0	20.8	90.0	23.0	90.0	24.5	90.0	26.7	90.0	
	4	34.0	90.0	37.5	90.0	41.8	90.0	45.5	90.0	37.2	90.0	40.0	90.0	40.8	90.0	43.5	90.0	45.0	90.0	47.8	90.0	48.8	90.0	51.5	90.0	
	5	56.5	90.0	60.0	90.0	64.3	90.0	68.0	90.0	58.7	90.0	62.5	90.0	63.3	90.0	66.3	90.0	67.5	90.0	70.3	90.0	71.3	90.0	74.3	90.0	
	6	79.0	90.0	82.5	90.0	86.8	90.0	90.5	90.0	82.2	90.0	85.0	90.0	85.8	90.0	88.5	90.0	90.0	90.0	92.8	90.0	93.8	90.0	96.5	90.0	
	7	8.4	54.0	11.1	54.0	14.7	54.0	17.3	54.0	10.5	54.0	12.3	54.0	13.2	54.0	15.0	54.0	16.8	54.0	18.6	54.0	19.4	54.0	21.2	54.0	
	8	8.4	72.0	11.1	72.0	14.7	72.0	17.3	72.0	10.5	72.0	12.3	72.0	13.2	72.0	15.0	72.0	16.8	72.0	18.6	72.0	19.4	72.0	21.2	72.0	
575	4	8.4	90.0	11.1	90.0	14.7	90.0	17.3	90.0	10.5	90.0	12.3	90.0	13.2	90.0	15.0	90.0	16.8	90.0	18.6	90.0	19.4	90.0	21.2	90.0	
	6	8.4	108.0	11.1	108.0	14.7	108.0	17.3	108.0	10.5	108.0	12.3	108.0	13.2	108.0	15.0	108.0	16.8	108.0	18.6	108.0	19.4	108.0	21.2	108.0	
	7	27.2	108.0	30.0	108.0	33.6	108.0	36.1	108.0	29.9	108.0	32.1	108.0	32.6	108.0	34.3	108.0	36.2	108.0	38.5	108.0	38.8	108.0	41.0	108.0	

NOTE—Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

## MULTIPLE POWER SUPPLY—DMS3-185 & DMS3-185/275 DX COOLING AND ELECTRIC HEAT

Voltage (3ph)	Number of Elements	WITHOUT RETURN AIR BLOWER								WITH RETURN AIR BLOWER															
		Supply Air Blower Motor hp								3 hp Supply Air Blower Motor Return Air Blower Motor hp		5 hp Supply Air Blower Motor Return Air Blower Motor hp		7-1/2 hp Supply Air Blower Motor Return Air Blower Motor hp		10 hp Supply Air Blower Motor Return Air Blower Motor hp									
		3		5		7-1/2		10		1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3								
		Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)								
208	3	106.0	117.4	112.1	117.4	119.0	117.4	126.2	117.4	111.7	117.4	118.0	117.4	117.8	117.4	122.7	117.4	125.3	117.4	130.2	117.4	131.0	117.4	136.8	117.4
	4	106.0	156.5	112.1	156.5	119.6	156.5	126.2	156.5	111.7	156.5	116.6	156.5	117.8	156.5	122.7	156.5	126.3	156.5	130.2	156.5	131.0	156.5	136.8	156.5
	5	106.0	195.6	112.1	195.6	119.6	195.6	126.2	195.6	111.7	195.6	116.6	195.6	117.8	195.6	122.7	195.6	126.3	195.6	130.2	195.6	131.0	195.6	136.8	195.6
	6	106.0	234.8	112.1	234.8	119.6	234.8	126.2	234.8	111.7	234.8	116.6	234.8	117.8	234.8	122.7	234.8	126.3	234.8	130.2	234.8	131.0	234.8	136.8	234.8
	7	106.0	274.0	112.1	274.0	119.6	274.0	126.2	274.0	111.7	274.0	116.6	274.0	117.8	274.0	122.7	274.0	126.3	274.0	130.2	274.0	131.0	274.0	136.8	274.0
	4	102.9	126.4	100.0	134.4	115.3	135.9	121.3	135.1	100.0	135.4	112.6	135.4	113.7	135.4	118.1	135.4	120.5	135.4	124.9	135.4	125.6	135.4	130.9	135.4
	5	102.9	165.6	100.0	180.1	115.3	180.5	121.3	180.5	100.0	180.5	112.6	180.5	113.7	180.5	118.1	180.5	120.5	180.5	124.9	180.5	125.6	180.5	130.9	180.5
230	3	102.9	225.6	100.0	225.6	115.3	225.6	121.3	225.6	100.0	225.6	112.6	225.6	113.7	225.6	118.1	225.6	120.5	225.6	124.9	225.6	125.6	225.6	130.9	225.6
	4	102.9	264.8	100.0	264.8	115.3	264.8	121.3	264.8	100.0	264.8	112.6	264.8	113.7	264.8	118.1	264.8	120.5	264.8	124.9	264.8	125.6	264.8	130.9	264.8
	5	102.9	304.0	100.0	304.0	115.3	304.0	121.3	304.0	100.0	304.0	112.6	304.0	113.7	304.0	118.1	304.0	120.5	304.0	124.9	304.0	125.6	304.0	130.9	304.0
	6	102.9	343.2	100.0	343.2	115.3	343.2	121.3	343.2	100.0	343.2	112.6	343.2	113.7	343.2	118.1	343.2	120.5	343.2	124.9	343.2	125.6	343.2	130.9	343.2
	7	113.1	225.6	120.1	225.6	146.1	225.6	119.6	225.6	126.1	225.6	126.1	225.6	135.1	225.6	135.1	225.6	140.9	225.6	140.9	225.6	142.6	225.6	144.1	225.6
	4	48.6	67.5	51.4	67.5	54.8	67.5	57.8	67.5	51.2	67.5	54.4	67.5	54.0	67.5	56.2	67.5	57.4	67.5	59.6	67.5	60.4	67.5	62.6	67.5
	5	48.6	90.0	51.4	90.0	54.8	90.0	57.8	90.0	51.2	90.0	53.4	90.0	54.0	90.0	56.2	90.0	57.4	90.0	59.6	90.0	60.4	90.0	62.6	90.0
400	6	53.5	90.0	60.0	90.0	64.3	90.0	68.0	90.0	57.7	90.0	62.1	90.0	63.3	90.0	66.0	90.0	67.5	90.0	70.3	90.0	71.3	90.0	74.0	90.0
	7	79.0	90.0	82.5	90.0	86.9	90.0	90.0	90.0	82.2	90.0	85.0	90.0	85.9	90.0	88.9	90.0	90.0	90.0	92.8	90.0	93.8	90.0	96.5	90.0
	4	39.4	64.0	41.6	64.0	44.5	64.0	46.5	64.0	41.5	64.0	43.0	64.0	43.7	64.0	45.5	64.0	46.6	64.0	48.4	64.0	48.6	64.0	50.4	64.0
	5	39.4	72.0	41.6	72.0	44.5	72.0	46.5	72.0	41.5	72.0	43.0	72.0	43.7	72.0	45.5	72.0	46.6	72.0	48.4	72.0	48.6	72.0	50.4	72.0
	6	39.4	90.0	41.6	90.0	44.5	90.0	46.5	90.0	41.5	90.0	43.0	90.0	43.7	90.0	45.5	90.0	46.6	90.0	48.4	90.0	48.6	90.0	50.4	90.0
	7	39.4	108.0	41.6	108.0	44.5	108.0	46.5	108.0	41.5	108.0	43.0	108.0	43.7	108.0	45.5	108.0	46.6	108.0	48.4	108.0	48.6	108.0	50.4	108.0
	8	39.4	108.0	41.6	108.0	44.5	108.0	46.5	108.0	41.5	108.0	43.0	108.0	43.7	108.0	45.5	108.0	46.6	108.0	48.4	108.0	48.6	108.0	50.4	108.0

NOTE—Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

## MULTIPLE POWER SUPPLY—DMS3-300 DX COOLING AND ELECTRIC HEAT

Voltage (3ph)	Number of Elements	WITHOUT RETURN AIR BLOWER								WITH RETURN AIR BLOWER															
		Supply Air Blower Motor hp								3 hp Supply Air Blower Motor Return Air Blower Motor hp		5 hp Supply Air Blower Motor Return Air Blower Motor hp		7-1/2 hp Supply Air Blower Motor Return Air Blower Motor hp		10 hp Supply Air Blower Motor Return Air Blower Motor hp									
		3		5		7-1/2		10		1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3								
		Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)	Minimum Circuit Ampacity Disc.(1) Disc.(2)								
208	3	108.0	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	117.4	
	4	108.0	156.5	117.4	156.5	117.4	156.5	117.4	156.5	117.4	156.5	117.4	156.5	117.4	156.5	117.4	156.5	117.4	156.5	117.4	156.5	117.4	156.5	117.4	
	5	108.0	195.6	117.4	195.6	117.4	195.6	117.4	195.6	117.4	195.6	117.4	195.6	117.4	195.6	117.4	195.6	117.4	195.6	117.4	195.6	117.4	195.6	117.4	
	6	108.0	234.8	117.4	234.8	117.4	234.8	117.4	234.8	117.4	234.8	117.4	234.8	117.4	234.8	117.4	234.8	117.4	234.8	117.4	234.8	117.4	234.8	117.4	
	7	108.0	274.0	117.4	274.0	117.4	274.0	117.4	274.0	117.4	274.0	117.4	274.0	117.4	274.0	117.4	274.0	117.4	274.0	117.4	274.0	117.4	274.0	117.4	
	4	108.0	135.4	100.0	135.4	115.3	135.4	115.3	135.4	100.0	135.4	112.6	135.4	113.7	135.4	118.1	135.4	120.5	135.4	124.9	135.4	125.6	135.4	130.9	135.4
	5	108.0	180.5	100.0	180.5	115.3	180.5	115.3	180.5	100.0	180.5	112.6	180.5	113.7	180.5	118.1	180.5	120.5	180.5	124.9	180.5	125.6	180.5	130.9	180.5
230	3	108.0	225.6	100.0	225.6	115.3	225.6	115.3	225.6	100.0	225.6	112.6	225.6	113.7	225.6	118.1	225.6	120.5	225.6	124.9	225.6	125.6	225.6	130.9	225.6
	4	108.0	264.8	100.0	264.8	115.3	264.8	115.3	264.8	100.0	264.8	112.6	264.8	113.7	264.8	118.1	264.8	120.5	264.8	124.9	264.8	125.6	264.8	130.9	264.8
	5	108.0	304.0	100.0	304.0	115.3	304.0	115.3	304.0	100.0	304.0	112.6	304.0	113.7	304.0	118.1	304.0	120.5	304.0	124.9	304.0	125.6	304.0	130.9	304.0
	6	108.0	343.2	100.0	343.2	115.3	343.2	115.3	343.2	100.0	343.2	112.6	343.2	113.7	343.2	118.1	343.2	120.5	343.2	124.9	343.2	125.6	343.2	130.9	343.2
	7	108.0	225.6	106.1	225.6	122.9	225.6	119.9	225.6	166.7	225.6	170.1	225.6	171.3	225.6	175.7	225.6	178.1	225.6	182.5	225.6	184.1	225.6	188.5	225.6
	4	79.8	67.5	82.6	67.5	86.0	67.5	89.0	67.5	82.4	67.5	84.6	67.5	85.2	67.5	87.4	67.5	88.4	67.5	90.8	67.5	91.6	67.5	93.8	67.5
	5	79.8	90.0	82.6	90.0	86.0	90.0	89.0	90.0	82.4	90.0	84.6	90.0	85.2	90.0	87.4	90.0	88.4	90.0	90.8	90.0	91.6	90.0	93.8	90.0
400	6	79.8	90.0	82.6	90.0	86.0	90.0	89.0	90.0	82.4	90.0	84.6	90.0	85.2	90.0	87.4	90.0	88.4	90.0	90.8	90.0	91.6	90.0	93.8	90.0
	7	79.8	90.0	82.6	90.0	86.0	90.0	89.0	90.0	82.4	90.0	84.6	90.0	85.2	90.0	87.4	90.0	88.4	90.0	90.8	90.0	91.6	90.0	93.8	90.0
	3	62.1	64.0	64.3	64.0	67.2	64.0	69.2	64.0	62.1	64.0	65.8	64.0	66.2	64.0	68.0	64.0	68.1	64.0	70.9	64.0	71.1	64.0	72.9	64.0
	4	62.1	72.0	64.3	72.0	67.2	72.0	69.2	72.0	64.0	72.0	65.8	72.0	66.2	72.0	68.0	72.0	68.1	72.0	70.9	72.0	71.1	72.0	72.9	72.0
	5	62.1	90.0	64.3	90.0	67.2	90.0	69.2	90.0	64.0	90.0	65.8	90.0	66.2	90.0	68.0	90.0	68.1	90.0	70.9	90.0	71.1	90.0	72.9	90.0
	6	62.1	108.0	64.3	108.																				

## MULTIPLE POWER SUPPLY—DMS3-275 DX COOLING AND ELECTRIC HEAT

Voltage (3ph)	Number of Elements	WITHOUT RETURN AIR BLOWER								WITH RETURN AIR BLOWER																	
		Supply Air Blower Motor hp								3 hp Supply Air Blower Motor				5 hp Supply Air Blower Motor				7 1/2 hp Supply Air Blower Motor				10 hp Supply Air Blower Motor					
		3		5		7-1/2		10		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp			
		Minimum	Amperage	Minimum	Amperage	Minimum	Amperage	Minimum	Amperage	1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3		
Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)		
208	3	139.5	117.4	145.6	117.4	152.3	117.4	159.7	117.4	145.2	117.4	146.1	117.4	152.2	117.4	158.8	117.4	163.7	117.4	168.4	117.4	174.3	117.4	180.4	117.4	186.5	117.4
	4	139.5	156.5	145.6	156.5	153.3	156.5	159.7	156.5	145.2	156.5	146.1	156.5	152.2	156.5	158.8	156.5	163.7	156.5	168.4	156.5	174.3	156.5	180.4	156.5	186.5	156.5
	5	139.5	195.6	145.6	195.6	193.3	195.6	199.6	195.6	145.2	195.6	146.1	195.6	152.2	195.6	158.8	195.6	163.7	195.6	168.4	195.6	174.3	195.6	180.4	195.6	186.5	195.6
	6	139.5	234.8	145.6	234.8	183.3	234.8	150.7	234.8	145.2	234.8	146.1	234.8	152.2	234.8	158.8	234.8	163.7	234.8	168.4	234.8	174.3	234.8	180.4	234.8	186.5	234.8
	7	139.5	234.8	145.6	234.8	153.3	234.8	150.7	234.8	145.2	234.8	146.1	234.8	152.2	234.8	158.8	234.8	163.7	234.8	168.4	234.8	174.3	234.8	180.4	234.8	186.5	234.8
	3	136.4	136.4	142.0	136.4	148.8	136.4	154.8	136.4	141.6	136.4	146.0	136.4	147.2	136.4	151.6	136.4	154.0	136.4	158.4	136.4	162.8	136.4	167.2	136.4	171.6	136.4
	4	136.4	180.5	142.0	180.5	148.8	180.5	154.8	180.5	141.6	180.5	146.0	180.5	147.2	180.5	151.6	180.5	154.0	180.5	158.4	180.5	162.8	180.5	167.2	180.5	171.6	180.5
5	136.4	225.6	142.0	225.6	168.8	225.6	154.8	225.6	141.6	225.6	146.0	225.6	147.2	225.6	151.6	225.6	154.0	225.6	158.4	225.6	162.8	225.6	167.2	225.6	171.6	225.6	
6	136.4	225.6	142.0	225.6	148.8	225.6	154.8	225.6	141.6	225.6	146.0	225.6	147.2	225.6	151.6	225.6	154.0	225.6	158.4	225.6	162.8	225.6	167.2	225.6	171.6	225.6	
7	136.4	225.6	142.0	225.6	148.8	225.6	154.8	225.6	141.6	225.6	146.0	225.6	147.2	225.6	151.6	225.6	154.0	225.6	158.4	225.6	162.8	225.6	167.2	225.6	171.6	225.6	
230	3	67.1	67.5	69.0	67.5	73.3	67.5	75.3	67.5	69.7	67.5	71.9	67.5	72.5	67.5	74.7	67.5	75.9	67.5	78.1	67.5	80.0	67.5	81.1	67.5	82.6	67.5
	4	67.1	90.0	69.0	90.0	73.3	90.0	75.3	90.0	69.7	90.0	71.9	90.0	72.5	90.0	74.7	90.0	75.9	90.0	78.1	90.0	79.9	90.0	81.1	90.0	82.6	90.0
	5	67.1	90.0	69.0	90.0	73.3	90.0	75.3	90.0	69.7	90.0	71.9	90.0	72.5	90.0	74.7	90.0	75.9	90.0	78.1	90.0	79.9	90.0	81.1	90.0	82.6	90.0
	6	67.1	90.0	69.0	90.0	73.3	90.0	75.3	90.0	69.7	90.0	71.9	90.0	72.5	90.0	74.7	90.0	75.9	90.0	78.1	90.0	79.9	90.0	81.1	90.0	82.6	90.0
	7	79.0	90.0	82.5	90.0	80.8	90.0	80.5	90.0	82.2	90.0	82.0	90.0	82.8	90.0	82.7	90.0	82.6	90.0	82.7	90.0	82.8	90.0	82.9	90.0	83.0	90.0
	4	48.7	54.0	51.9	54.0	54.8	54.0	56.8	54.0	51.8	54.0	53.6	54.0	54.0	54.0	55.8	54.0	56.9	54.0	58.9	54.0	61.7	54.0	64.7	54.0	67.7	54.0
	5	48.7	72.0	51.9	72.0	54.8	72.0	56.8	72.0	51.8	72.0	53.6	72.0	54.0	72.0	54.8	72.0	56.8	72.0	58.7	72.0	61.7	72.0	64.7	72.0	67.7	72.0
460	3	49.7	108.0	51.9	108.0	54.8	108.0	56.8	108.0	51.8	108.0	53.6	108.0	54.0	108.0	55.8	108.0	56.9	108.0	58.7	108.0	58.9	108.0	61.7	108.0	64.7	108.0
	4	49.7	108.0	51.9	108.0	54.8	108.0	56.8	108.0	51.8	108.0	53.6	108.0	54.0	108.0	55.8	108.0	56.9	108.0	58.7	108.0	58.9	108.0	61.7	108.0	64.7	108.0
	5	49.7	108.0	51.9	108.0	54.8	108.0	56.8	108.0	51.8	108.0	53.6	108.0	54.0	108.0	55.8	108.0	56.9	108.0	58.7	108.0	58.9	108.0	61.7	108.0	64.7	108.0
	6	49.7	108.0	51.9	108.0	54.8	108.0	56.8	108.0	51.8	108.0	53.6	108.0	54.0	108.0	55.8	108.0	56.9	108.0	58.7	108.0	58.9	108.0	61.7	108.0	64.7	108.0
	7	49.7	108.0	51.9	108.0	54.8	108.0	56.8	108.0	51.8	108.0	53.6	108.0	54.0	108.0	55.8	108.0	56.9	108.0	58.7	108.0	58.9	108.0	61.7	108.0	64.7	108.0
	3	89.1	67.5	91.9	67.5	58.8	67.5	61.8	67.5	91.7	67.5	93.9	67.5	94.5	67.5	60.2	67.5	61.4	67.5	63.6	67.5	64.4	67.5	66.6	67.5	68.3	67.5
	4	89.1	90.0	91.9	90.0	58.8	90.0	61.8	90.0	91.7	90.0	93.9	90.0	94.5	90.0	60.2	90.0	61.4	90.0	63.6	90.0	64.4	90.0	66.6	90.0	68.3	90.0
5	89.1	90.0	91.9	90.0	58.8	90.0	61.8	90.0	91.7	90.0	93.9	90.0	94.5	90.0	60.2	90.0	61.4	90.0	63.6	90.0	64.4	90.0	66.6	90.0	68.3	90.0	
6	89.1	90.0	91.9	90.0	84.3	90.0	68.0	90.0	91.7	90.0	93.9	90.0	94.5	90.0	60.2	90.0	61.4	90.0	63.6	90.0	64.4	90.0	66.6	90.0	68.3	90.0	
7	89.1	90.0	91.9	90.0	86.0	90.0	90.0	90.0	91.7	90.0	93.9	90.0	94.5	90.0	89.0	90.0	90.0	90.0	92.8	90.0	93.8	90.0	96.5	90.0	99.0	90.0	
575	3	71.3	84.0	73.5	84.0	76.4	84.0	78.4	84.0	73.4	84.0	75.2	84.0	75.6	84.0	77.4	84.0	78.5	84.0	80.3	84.0	80.5	84.0	82.3	84.0	84.0	84.0
	4	71.3	90.0	73.5	90.0	76.4	90.0	78.4	90.0	73.4	90.0	75.2	90.0	75.6	90.0	77.4	90.0	78.5	90.0	80.3	90.0	80.5	90.0	82.3	90.0	84.0	90.0
	5	71.3	90.0	73.5	90.0	76.4	90.0	78.4	90.0	73.4	90.0	75.2	90.0	75.6	90.0	77.4	90.0	78.5	90.0	80.3	90.0	80.5	90.0	82.3	90.0	84.0	90.0
	6	71.3	108.0	73.5	108.0	76.4	108.0	78.4	108.0	73.4	108.0	75.2	108.0	75.6	108.0	77.4	108.0	78.5	108.0	80.3	108.0	80.5	108.0	82.3	108.0	84.0	108.0
	7	71.3	108.0	73.5	108.0	76.4	108.0	78.4	108.0	73.4	108.0	75.2	108.0	75.6	108.0	77.4	108.0	78.5	108.0	80.3	108.0	80.5	108.0	82.3	108.0	84.0	108.0
	3	89.1	90.0	91.9	90.0	86.0	90.0	90.0	90.0	91.7	90.0	93.9	90.0	94.5	90.0	89.0	90.0	90.0	90.0	92.8	90.0	93.8	90.0	96.5	90.0	99.0	90.0
	4	89.1	90.0	91.9	90.0	86.0	90.0	90.0	90.0	91.7	90.0	93.9	90.0	94.5	90.0	89.0	90.0	90.0	90.0	92.8	90.0	93.8	90.0	96.5	90.0	99.0	90.0

NOTE—Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

## MULTIPLE POWER SUPPLY—DMS3-360 DX COOLING AND ELECTRIC HEAT

Voltage (3ph)	Number of Elements	WITHOUT RETURN AIR BLOWER								WITH RETURN AIR BLOWER																	
		Supply Air Blower Motor hp								3 hp Supply Air Blower Motor				5 hp Supply Air Blower Motor				7 1/2 hp Supply Air Blower Motor				10 hp Supply Air Blower Motor					
		3		5		7-1/2		10		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp			
		Minimum	Amperage	Minimum	Amperage	Minimum	Amperage	Minimum	Amperage	1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3		
Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)	Circuit Disc. (1)	Capacity Disc. (2)		
208	3	186.9	117.4	195.0	117.4	202.5	117.4	209.1	117.4	194.6	117.4	199.5	117.4	200.7	117.4	205.6	117.4	208.9	117.4	215.3	117.4	222.0	117.4	228.7	117.4	235.4	117.4
	4	186.9	156.5	195.0	156.5	202.5	156.5	209.1	156.5	194.6	156.5	199.5	156.5	200.7	156.5	205.6	156.5	208.9	156.5	215.3	156.5	222.0	156.5	228.7	156.5	235.4	156.5
	5	186.9	195.6	195.0	195.6	202.5																					

**SINGLE POWER SUPPLY—DMS3-185-275-300-360 ELECTRIC HEAT ONLY (With or Without Chilled Water)**

Voltage (3 ph)	Number of Elements	WITHOUT RETURN AIR BLOWER				WITH RETURN AIR BLOWER							
		Supply Air Blower Motor hp				3 hp Supply Air Blower Motor		5 hp Supply Air Blower Motor		7-1/2 hp Supply Air Blower Motor		10 hp Supply Air Blower Motor	
		3	5	7-1/2	10	Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp	
						1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3
Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	
208	3	140.2	147.8	157.2	165.5	145.9	150.8	153.5	158.4	162.9	167.8	171.2	176.1
	4	179.3	186.9	196.3	204.6	185.0	189.9	192.6	197.5	202.0	206.9	210.3	215.2
	5	218.4	226.0	235.4	243.7	224.1	229.0	231.7	236.6	241.1	246.0	249.4	254.3
	6	257.6	265.2	274.6	282.9	263.3	268.2	270.9	275.8	280.3	285.2	288.6	293.5
	7	299.2	306.8	316.2	324.4	306.3	312.4	313.9	320.0	323.3	329.4	331.5	337.7
230	3	156.1	163.1	171.6	179.1	161.3	165.7	168.3	172.7	176.8	181.2	184.3	188.7
	4	201.2	208.2	216.7	224.2	206.4	210.8	213.4	217.8	221.9	226.3	229.4	233.8
	5	246.3	253.3	261.8	269.3	251.5	255.9	258.5	262.9	267.0	271.4	274.5	278.9
	6	293.6	300.6	309.1	316.6	300.1	305.6	307.1	312.6	315.6	321.1	323.1	328.6
	7	338.7	345.7	354.2	361.7	345.2	330.7	352.2	357.7	360.7	366.2	368.2	373.7
460	3	77.9	81.4	85.7	89.4	80.4	82.7	84.0	86.2	88.3	90.5	92.0	94.2
	4	100.4	103.9	108.2	111.9	103.0	105.2	106.5	108.7	110.8	113.0	114.5	116.7
	5	124.0	127.5	131.8	135.5	127.2	130.0	130.8	133.5	135.0	137.8	138.8	141.5
	6	146.5	150.0	154.3	158.0	149.7	152.5	153.3	156.0	157.5	160.3	161.3	164.0
	7	169.0	172.5	176.8	180.5	172.2	175.0	175.8	178.5	180.0	182.8	183.8	186.5
575	3	62.4	65.1	68.7	71.3	64.5	66.3	67.2	69.0	70.8	72.6	73.4	75.2
	4	80.4	83.1	86.7	89.3	82.5	84.3	85.2	87.0	88.8	90.6	91.4	93.2
	5	98.4	101.1	104.7	107.3	100.5	102.3	103.2	105.0	106.8	108.6	109.4	111.2
	6	116.4	119.1	122.7	125.3	118.5	120.3	121.2	123.0	124.8	126.6	127.4	129.2
	7	135.2	138.0	141.6	144.1	137.9	140.1	140.6	142.9	144.2	146.5	146.8	149.0

NOTE—Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

**SINGLE POWER SUPPLY—DMS3-185 & DMS3-185/275 DX COOLING AND ELECTRIC HEAT**

Voltage (3 ph)	Number of Elements	WITHOUT RETURN AIR BLOWER				WITH RETURN AIR BLOWER							
		Supply Air Blower Motor hp				3 hp Supply Air Blower Motor		5 hp Supply Air Blower Motor		7-1/2 hp Supply Air Blower Motor		10 hp Supply Air Blower Motor	
		3	5	7-1/2	10	Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp	
						1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3
Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	
208	3	145.1	151.2	158.7	165.5	150.8	155.7	156.9	161.8	164.4	169.3	171.2	176.1
	4	179.3	186.9	196.3	204.6	185.0	189.9	192.6	197.5	202.0	206.9	210.3	215.2
	5	218.4	226.0	235.4	243.7	224.1	229.0	231.7	236.6	241.1	246.0	249.4	254.3
	6	257.6	265.2	274.6	282.9	263.3	268.2	270.9	275.8	280.3	285.2	288.6	293.5
	7	299.2	306.8	316.2	324.4	306.3	312.4	313.9	320.0	323.3	329.4	331.5	337.7
230	3	156.1	163.1	171.6	179.1	161.3	165.7	168.3	172.7	176.8	181.2	184.3	188.7
	4	201.2	208.2	216.7	224.2	206.4	210.8	213.4	217.8	221.9	226.3	229.4	233.8
	5	246.3	253.3	261.8	269.3	251.5	255.9	258.5	262.9	267.0	271.4	274.5	278.9
	6	293.6	300.6	309.1	316.6	300.1	305.6	307.1	312.6	315.6	321.1	323.1	328.6
	7	338.7	345.7	354.2	361.7	345.2	330.7	352.2	357.7	360.7	366.2	368.2	373.7
460	3	77.9	81.4	85.7	89.4	80.4	82.7	84.0	86.2	88.3	90.5	92.0	94.2
	4	100.4	103.9	108.2	111.9	103.0	105.2	106.5	108.7	110.8	113.0	114.5	116.7
	5	124.0	127.5	131.8	135.5	127.2	130.0	130.8	133.5	135.0	137.8	138.8	141.5
	6	146.5	150.0	154.3	158.0	149.7	152.5	153.3	156.0	157.5	160.3	161.3	164.0
	7	169.0	172.5	176.8	180.5	172.2	175.0	175.8	178.5	180.0	182.8	183.8	186.5
575	3	62.4	65.1	68.7	71.3	64.5	66.3	67.2	69.0	70.8	72.6	73.4	75.2
	4	80.4	83.1	86.7	89.3	82.5	84.3	85.2	87.0	88.8	90.6	91.4	93.2
	5	98.4	101.1	104.7	107.3	100.5	102.3	103.2	105.0	106.8	108.6	109.4	111.2
	6	116.4	119.1	122.7	125.3	118.5	120.3	121.2	123.0	124.8	126.6	127.4	129.2
	7	135.2	138.0	141.6	144.1	137.9	140.1	140.6	142.9	144.2	146.5	146.8	149.0

NOTE—Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

**SINGLE POWER SUPPLY—DMS3-275 DX COOLING AND ELECTRIC HEAT**

Voltage (3 ph)	Number of Elements	WITHOUT RETURN AIR BLOWER				WITH RETURN AIR BLOWER							
		Supply Air Blower Motor hp				3 hp Supply Air Blower Motor		5 hp Supply Air Blower Motor		7-1/2 hp Supply Air Blower Motor		10 hp Supply Air Blower Motor	
		3	5	7-1/2	10	Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp	
						1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3
Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	
208	3	178.6	184.7	192.2	198.8	184.3	189.2	190.4	195.3	197.9	202.8	204.5	209.4
	4	179.3	186.9	196.3	204.6	185.0	189.9	192.6	197.5	202.0	206.9	210.3	215.2
	5	218.4	226.0	235.4	243.7	224.1	229.0	231.7	236.6	241.1	246.0	249.4	254.3
	6	257.6	265.2	274.6	282.9	263.3	268.2	270.9	275.8	280.3	285.2	288.6	293.5
	7	299.2	306.8	316.2	324.4	306.3	312.4	313.9	320.0	323.3	329.4	331.5	337.7
230	3	181.5	187.1	193.9	199.9	186.7	191.1	192.3	196.7	199.1	203.5	205.1	209.5
	4	201.2	208.2	216.7	224.2	206.4	210.8	213.4	217.8	221.9	226.3	229.4	233.8
	5	246.3	253.3	261.8	269.3	251.5	255.9	258.5	262.9	267.0	271.4	274.5	278.9
	6	293.6	300.6	309.1	316.6	300.1	305.6	307.1	312.6	315.6	321.1	323.1	328.6
	7	338.7	345.7	354.2	361.7	345.2	330.7	352.2	357.7	360.7	366.2	368.2	373.7
460	3	89.6	92.4	95.8	98.8	92.2	94.4	95.0	97.2	98.4	100.6	101.4	103.6
	4	100.4	103.9	108.2	111.9	103.0	105.2	106.5	108.7	110.8	113.0	114.5	116.7
	5	124.0	127.5	131.8	135.5	127.2	130.0	130.8	133.5	135.0	137.8	138.8	141.5
	6	146.5	150.0	154.3	158.0	149.7	152.5	153.3	156.0	157.5	160.3	161.3	164.0
	7	169.0	172.5	176.8	180.5	172.2	175.0	175.8	178.5	180.0	182.8	183.8	186.5
575	3	67.7	69.9	72.8	74.8	69.8	71.6	72.0	73.8	74.9	76.7	76.9	78.7
	4	80.4	83.1	86.7	89.3	82.5	84.3	85.2	87.0	88.8	90.6	91.4	93.2
	5	98.4	101.1	104.7	107.3	100.5	102.3	103.2	105.0	106.8	108.6	109.4	111.2
	6	116.4	119.1	122.7	125.3	118.5	120.3	121.2	123.0	124.8	126.6	127.4	129.2
	7	135.2	138.0	141.6	144.1	137.9	140.1	140.6	142.9	144.2	146.5	146.8	149.0

NOTE—Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).



**SINGLE POWER SUPPLY—DMS3-300 DX COOLING AND ELECTRIC HEAT**

Voltage (3 ph)	Number of Elements	WITHOUT RETURN AIR BLOWER				WITH RETURN AIR BLOWER							
		Supply Air Blower Motor hp				3 hp Supply Air Blower Motor		5 hp Supply Air Blower Motor		7-1/2 hp Supply Air Blower Motor		10 hp Supply Air Blower Motor	
		3	5	7-1/2	10	Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp	
						1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3
Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	
208	3	207.7	213.8	221.3	227.9	213.4	218.3	219.5	224.4	227.0	231.9	233.6	238.5
	4	207.7	213.8	221.3	227.9	213.4	218.3	219.5	224.4	227.0	231.9	233.6	238.5
	5	218.4	226.0	235.4	243.7	224.1	229.0	231.7	236.6	241.1	246.0	249.4	254.3
	6	257.6	265.2	274.6	282.9	263.3	268.2	270.9	275.8	280.3	285.2	288.6	293.5
	7	299.2	306.8	316.2	324.4	306.3	312.4	313.9	320.0	323.3	329.4	331.5	337.7
230	3	205.6	211.2	218.0	224.0	210.8	215.2	216.4	220.8	223.2	227.6	229.2	233.6
	4	205.6	211.2	218.0	224.2	210.8	215.2	216.4	220.8	223.2	227.6	229.4	233.8
	5	246.3	253.3	261.8	269.3	251.5	255.9	258.5	262.9	267.0	271.4	274.5	278.9
	6	293.6	300.6	309.1	316.6	300.1	305.6	307.1	312.6	315.6	321.1	323.1	328.6
	7	338.7	345.7	354.2	361.7	345.2	350.7	352.2	357.7	360.7	366.2	368.2	373.7
460	3	102.3	105.1	108.5	111.5	104.9	107.1	107.7	109.9	110.9	113.3	114.1	116.3
	4	102.3	105.1	108.5	111.9	104.9	107.1	107.7	109.9	110.9	113.3	114.5	116.7
	5	124.0	127.5	131.8	135.5	127.2	130.0	130.8	133.5	135.0	137.8	138.8	141.5
	6	146.5	150.0	154.3	158.0	149.7	152.5	153.3	156.0	157.5	160.3	161.3	164.0
	7	169.0	172.5	176.8	180.5	172.2	175.0	175.8	178.5	180.0	182.8	183.8	186.5
575	3	80.1	82.3	85.2	87.2	82.0	83.8	84.2	86.0	87.1	88.9	89.1	90.9
	4	80.4	83.1	86.7	89.3	82.5	84.3	85.2	87.0	88.8	90.6	91.4	93.2
	5	98.4	101.1	104.7	107.3	100.5	102.3	103.2	105.0	106.8	108.6	109.4	111.2
	6	116.4	119.1	122.7	125.3	118.5	120.3	121.2	123.0	124.8	126.6	127.4	129.2
	7	135.2	138.0	141.6	144.1	137.9	140.1	140.6	142.9	144.2	146.5	146.8	149.0

NOTE—Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

**SINGLE POWER SUPPLY—DMS3-360 DX COOLING AND ELECTRIC HEAT**

Voltage (3 ph)	Number of Elements	WITHOUT RETURN AIR BLOWER				WITH RETURN AIR BLOWER							
		Supply Air Blower Motor hp				3 hp Supply Air Blower Motor		5 hp Supply Air Blower Motor		7-1/2 hp Supply Air Blower Motor		10 hp Supply Air Blower Motor	
		3	5	7-1/2	10	Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp		Return Air Blower Motor hp	
						1-1/2	3	1-1/2	3	1-1/2	3	1-1/2	3
Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	Minimum Circuit Ampacity	
208	3	228.0	234.1	241.6	248.2	233.7	238.6	239.8	244.7	247.3	252.2	253.9	258.8
	4	228.0	234.1	241.6	248.2	233.7	238.6	239.8	244.7	247.3	252.2	253.9	258.8
	5	228.0	234.1	241.6	248.2	233.7	238.6	239.8	244.7	247.3	252.2	253.9	258.8
	6	257.6	265.2	274.6	282.9	263.3	268.2	270.9	275.8	280.3	285.2	288.6	293.5
	7	299.2	306.8	316.2	324.4	306.3	312.4	313.9	320.0	323.3	329.4	331.5	337.7
230	3	223.2	228.8	235.6	241.6	228.9	232.8	234.0	238.4	240.8	245.2	246.8	251.2
	4	223.2	228.8	235.6	241.6	228.9	232.8	234.0	238.4	240.8	245.2	246.8	251.2
	5	246.3	253.3	261.8	269.3	251.5	255.9	258.5	262.9	267.0	271.4	274.5	278.9
	6	293.6	300.6	309.1	316.6	300.1	305.6	307.1	312.6	315.6	321.1	323.1	328.6
	7	338.7	345.7	354.2	361.7	345.2	350.7	352.2	357.7	360.7	366.2	368.2	373.7
460	3	111.6	114.4	117.8	120.8	114.2	116.4	117.0	119.2	120.4	122.6	123.4	125.6
	4	111.6	114.4	117.8	120.8	114.2	116.4	117.0	119.2	120.4	122.6	123.4	125.6
	5	124.0	127.5	131.8	135.5	127.2	130.0	130.8	133.5	135.0	137.8	138.8	141.5
	6	146.5	150.0	154.3	158.0	149.7	152.5	153.3	156.0	157.5	160.3	161.3	164.0
	7	169.0	172.5	176.8	180.5	172.2	175.0	175.8	178.5	180.0	182.8	183.8	186.5
575	3	89.3	91.5	94.4	96.4	91.4	93.2	93.6	95.4	96.5	98.3	98.5	100.3
	4	89.3	91.5	94.4	96.4	91.4	93.2	93.6	95.4	96.5	98.3	98.5	100.3
	5	98.4	101.1	104.7	107.3	100.5	102.3	103.2	105.0	106.8	108.6	109.4	111.2
	6	116.4	119.1	122.7	125.3	118.5	120.3	121.2	123.0	124.8	126.6	127.4	129.2
	7	135.2	138.0	141.6	144.1	137.9	140.1	140.6	142.9	144.2	146.5	146.8	149.0

NOTE—Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

**ELECTRIC HEAT DATA**

**ELECTRIC HEAT RATINGS**

Elements	Volts Input	208V	220/240V	440/480V	550/600V
3	Kw Input	33.8	37.7/45.0	37.7/45.0	37.7/45.0
	Bruh Output	115,300	128,000/153,500	128,000/153,000	128,000/153,000
4	Kw Input	45.0	50.5/60.0	50.5/60.0	50.5/60.0
	Bruh Output	153,500	169,800/204,600	169,800/204,600	169,800/204,600
5	Kw Input	56.3	63.0/75.0	63.0/75.0	63.0/75.0
	Bruh Output	191,800	212,300/255,800	212,300/255,800	212,300/255,800
6	Kw Input	67.5	75.6/90.0	75.6/90.0	75.6/90.0
	Bruh Output	230,200	254,700/306,900	254,700/306,900	254,700/306,900
7	Kw Input	78.8	88.4/105.0	88.4/105.0	88.4/105.0
	Bruh Output	268,500	297,200/358,000	297,200/358,000	297,200/358,000

## ELECTRICAL DATA

### DMS3-185 & DMS3-185/275 DX COOLING AND ELECTRIC HEAT ELECTRICAL DATA

Voltage (three phase)		208V	230V	460V	575V	
Compressors		Full load amps (each)	31.8	31.8	14.6	11.9
		Power factor	.85	.85	.85	.85
		Locked rotor amps (each)	185.0	185.0	93.0	76.0
Condenser Fan Motors		Full load amps (each)	4.7	4.3	2.2	1.7
		Horsepower	(2) -1	(2) -1	(2) -1	(2) -1
Supply Air Blower Motor	3 hp	Full load amps	10.6	9.6	4.8	3.9
		Locked rotor amps	70.0	64.0	32.0	26.0
	5 hp	Full load amps	16.7	15.2	7.6	6.1
		Locked rotor amps	101.0	92.0	46.0	37.0
	7-1/2 hp	Full load amps	24.2	22.0	11.0	9.0
		Locked rotor amps	154.7	150.0	75.0	56.0
	10 hp	Full load amps	30.8	28.0	14.0	11.0
		Locked rotor amps	194.0	175.0	87.5	70.0
Return Air Blower Motor	1-1/2 hp	Full load amps	5.7	5.2	2.6	2.1
		Locked rotor amps	44.0	31.6	15.8	12.8
	3 hp	Full load amps	10.6	9.6	4.8	3.9
		Locked rotor amps	70.0	64.0	32.0	26.0
2 KVA transformer full load amps (all models)		9.6	8.7	4.4	3.5	
Electric heat full load amps/element (3 minimum - 7 maximum)		31.3	36.7	18.0	14.4	

### DMS3-185 & DMS3-185/275 GAS, CHILLED WATER, HOT WATER AND STEAM

Voltage (three phase)	Without Return Air Blower				With Return Air Blower		
	Supply Air Blower Motor hp	Gas, Steam or Hot Water Heat & Chilled Water	Gas, Steam or Hot Water Heat & Air Conditioning	Return Air Blower Motor hp	Gas, Steam or Hot Water Heat & Chilled Water	Gas, Steam or Hot Water Heat & Air Conditioning	
		Minimum Circuit Ampacity	Minimum Circuit Ampacity		Minimum Circuit Ampacity	Minimum Circuit Ampacity	
208	3	22.8	106.0	1-1/2	28.5	111.7	
				3	33.4	116.6	
	5	30.4	112.1	1-1/2	36.1	117.8	
				3	41.0	122.7	
	7-1/2	39.8	119.6	1-1/2	45.5	125.3	
				3	50.4	130.2	
	10	48.1	126.2	1-1/2	53.8	131.9	
				3	58.7	136.8	
230	3	20.7	102.9	1-1/2	25.9	108.1	
				3	30.3	112.5	
	5	27.7	108.5	1-1/2	32.9	113.7	
				3	37.3	118.1	
	7-1/2	36.2	115.3	1-1/2	41.4	120.5	
				3	45.8	124.9	
	10	43.7	121.3	1-1/2	48.9	126.5	
				3	53.3	130.9	
460	3	10.4	48.6	1-1/2	13.0	51.2	
				3	15.2	53.4	
	5	13.9	51.4	1-1/2	16.5	54.0	
				3	18.7	56.2	
	7-1/2	18.2	54.8	1-1/2	20.8	57.4	
				3	23.0	59.6	
	10	21.9	57.8	1-1/2	24.5	60.4	
				3	26.7	62.6	
575	3	8.4	39.4	1-1/2	10.5	41.5	
				3	12.3	43.0	
	5	11.1	41.6	1-1/2	13.2	43.7	
				3	15.0	45.5	
	7-1/2	14.7	44.5	1-1/2	16.8	46.6	
				3	18.6	48.4	
	10	17.3	46.5	1-1/2	19.4	48.6	
				3	21.2	50.4	

Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

## ELECTRICAL DATA

### DMS3-275 DX COOLING AND ELECTRIC HEAT ELECTRICAL DATA

Voltage (three phase)		208V	230V	460V	575V	
Compressors	Full load amps (each)	46.7	46.7	22.8	16.5	
	Power factor	.85	.85	.85	.85	
	Locked rotor amps (each)	240.0	240.0	128.0	92.0	
Condenser Fan Motors	Full load amps (each)	4.7	4.3	2.2	1.7	
	Horsepower	(2)–1	(2)–1	(2)–1	(2) 1	
Supply Air Blower Motor	3 hp	Full load amps	10.6	9.6	4.8	3.9
		Locked rotor amps	70.0	64.0	32.0	26.0
	5 hp	Full load amps	16.7	15.2	7.6	6.1
		Locked rotor amps	101.0	92.0	46.0	37.0
	7-1/2 hp	Full load amps	24.2	22.0	11.0	9.0
		Locked rotor amps	154.7	150.0	75.0	56.0
	10 hp	Full load amps	30.8	28.0	14.0	11.0
		Locked rotor amps	194.0	175.0	87.5	70.0
Return Air Blower Motor	1-1/2 hp	Full load amps	5.7	5.2	2.6	2.1
		Locked rotor amps	44.0	31.6	15.8	12.8
	3 hp	Full load amps	10.6	9.6	4.8	3.9
		Locked rotor amps	70.0	64.0	32.0	26.0
2 KVA transformer full load amps (all models)		9.6	8.7	4.4	3.5	
Electric heat full load amps/element (3 minimum - 7 maximum)		31.3	36.1	18.0	14.4	

### DMS3-275 GAS, CHILLED WATER, HOT WATER AND STEAM

Voltage (three phase)	Without Return Air Blower				With Return Air Blower		
	Supply Air Blower Motor hp	Gas, Steam or Hot Water Heat & Chilled Water	Gas, Steam or Hot Water Heat & Air Conditioning	Return Air Blower Motor hp	Gas, Steam or Hot Water Heat & Chilled Water	Gas, Steam or Hot Water Heat & Air Conditioning	
		Minimum Circuit Ampacity	Minimum Circuit Ampacity		Minimum Circuit Ampacity	Minimum Circuit Ampacity	
208	3	22.8	139.5	1-1/2	28.5	145.2	
		30.4	145.6	3	33.4	150.1	
	5	39.8	153.1	1-1/2	36.1	151.3	
		48.1	159.7	3	41.0	156.2	
	7-1/2	58.7	170.3	1-1/2	45.5	158.8	
		63.7	163.7	3	50.4	163.7	
	10	68.7	165.4	1-1/2	53.8	165.4	
		70.3	170.3	3	58.7	170.3	
230	3	20.7	136.4	1-1/2	25.9	141.6	
		27.7	142.0	3	30.3	146.0	
	5	32.9	147.2	1-1/2	32.9	147.2	
		37.3	151.6	3	37.3	151.6	
	7-1/2	41.4	154.0	1-1/2	41.4	154.0	
		45.8	158.4	3	45.8	158.4	
	10	48.9	160.0	1-1/2	48.9	160.0	
		53.3	164.4	3	53.3	164.4	
460	3	10.4	67.1	1-1/2	13.0	69.7	
		13.9	69.9	3	15.2	71.9	
	5	16.5	72.5	1-1/2	16.5	72.5	
		18.7	74.7	3	18.7	74.7	
	7-1/2	20.8	75.9	1-1/2	20.8	75.9	
		23.0	78.1	3	23.0	78.1	
	10	24.5	78.9	1-1/2	24.5	78.9	
		26.7	81.1	3	26.7	81.1	
575	3	8.4	49.7	1-1/2	10.5	51.8	
		11.1	51.9	3	12.3	53.6	
	5	13.2	54.0	1-1/2	13.2	54.0	
		15.0	55.8	3	15.0	55.8	
	7-1/2	16.8	56.9	1-1/2	16.8	56.9	
		18.6	58.7	3	18.6	58.7	
	10	19.4	58.9	1-1/2	19.4	58.9	
		21.2	60.7	3	21.2	60.7	

Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

## ELECTRICAL DATA

### DMS3-300 DX COOLING AND ELECTRIC HEAT ELECTRICAL DATA

Voltage (three phase)		208V	230V	460V	575V	
Compressor 1	Full load amps	70.0	66.0	33.0	26.4	
	Power factor	.85	.85	.85	.85	
	Locked rotor amps	412.0	375.0	188.0	151.0	
Compressor 2	Full load amps	46.7	46.7	22.8	16.5	
	Power factor	.85	.85	.85	.85	
	Locked rotor amps	240.0	240.0	128.0	92.0	
Condenser Fan Motors	Full load amps (each)	8.6	7.8	3.9	3.1	
	Horsepower	(2)-2	(2)-2	(2)-2	(2)-2	
Supply Air Blower Motor	3 hp	Full load amps	10.6	9.6	4.8	3.9
		Locked rotor amps	70.0	64.0	32.0	26.0
	5 hp	Full load amps	16.7	15.2	7.6	6.1
		Locked rotor amps	101.0	92.0	46.0	37.0
	7-1/2 hp	Full load amps	24.2	22.0	11.0	9.0
		Locked rotor amps	155.0	150.0	75.0	56.0
	10 hp	Full load amps	30.8	28.0	14.0	11.0
		Locked rotor amps	194.0	175.0	88.0	70.0
Return Air Blower Motor	1-1/2 hp	Full load amps	5.7	5.2	2.6	2.1
		Locked rotor amps	44.0	31.6	15.8	12.8
	3 hp	Full load amps	10.6	9.6	4.8	3.9
		Locked rotor amps	70.0	64.0	32.0	26.0
2 KVA transformer full load amps (all models)		9.6	8.7	4.4	3.5	
Electric heat full load amps/element (3 minimum - 7 maximum)		31.3	36.1	18.0	14.4	

### DMS3-300 GAS, CHILLED WATER, HOT WATER AND STEAM

Voltage (three phase)	Without Return Air Blower			With Return Air Blower		
	Supply Air Blower Motor Hp	Gas, Steam or Hot Water Heat & Chilled Water Minimum Circuit Ampacity	Gas, Steam or Hot Water Heat & Air Conditioning Minimum Circuit Ampacity	Return Air Blower Motor HP	Gas, Steam or Hot Water Heat & Chilled Water Minimum Circuit Ampacity	Gas, Steam or Hot Water Heat & Air Conditioning Minimum Circuit Ampacity
208	3	22.8	168.6	1-1/2	28.5	174.3
				3	33.4	179.2
	5	30.4	174.7	1-1/2	36.1	180.4
				3	41.0	185.3
	7-1/2	39.8	182.2	1-1/2	45.5	187.9
				3	50.4	192.8
	10	48.1	188.8	1-1/2	53.8	194.5
				3	58.7	199.4
230	3	20.7	160.5	1-1/2	25.9	165.7
				3	30.3	170.1
	5	27.7	166.1	1-1/2	32.9	171.3
				3	37.3	175.7
	7-1/2	36.2	172.9	1-1/2	41.4	178.1
				3	45.8	182.5
	10	43.7	178.9	1-1/2	48.9	184.1
				3	53.3	188.5
460	3	10.4	79.8	1-1/2	13.0	82.4
				3	15.2	84.6
	5	13.9	82.6	1-1/2	16.5	85.2
				3	18.7	87.4
	7-1/2	18.2	86.0	1-1/2	20.8	88.4
				3	23.0	90.8
	10	21.9	89.0	1-1/2	24.5	91.6
				3	26.7	93.8
575	3	8.4	62.1	1-1/2	10.5	64.0
				3	12.3	65.8
	5	11.1	64.3	1-1/2	13.2	66.2
				3	15.0	68.0
	7-1/2	14.7	67.2	1-1/2	16.8	69.1
				3	18.6	70.9
	10	17.3	69.2	1-1/2	19.4	71.1
				3	21.2	72.9

Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

# ELECTRICAL DATA

## DMS3-360 DX COOLING AND ELECTRIC HEAT ELECTRICAL DATA

Voltage (three phase)		208V	230V	460V	575V		
Compressor 1	Full load amps	70.0	66.0	33.0	26.4		
	Power factor	.85	.85	.85	.85		
	Locked rotor amps	412.0	375.0	188.0	151.0		
Compressor 2	Full load amps	67.0	64.3	32.1	25.7		
	Power factor	.85	.85	.85	.85		
	Locked rotor amps	398.0	361.0	181.0	144.0		
Condenser Fan Motors	Full load amps (each)	8.6	7.8	3.9	3.1		
	Horsepower	(2)–2	(2)–2	(2)–2	(2)–2		
Supply Air Blower Motor	3 hp	Full load amps	10.6	9.6	4.8	3.9	
		Locked rotor amps	70.0	64.0	32.0	26.0	
	5 hp	Full load amps	16.7	15.2	7.6	6.1	
		Locked rotor amps	101.0	92.0	46.0	37.0	
	7-1/2 hp	Full load amps	24.2	22.0	11.0	9.0	
		Locked rotor amps	155.0	150.0	75.0	56.0	
	10 hp	Full load amps	30.8	28.0	14.0	11.0	
		Locked rotor amps	194.0	175.0	88.0	70.0	
	Return Air Blower Motor	1-1/2 hp	Full load amps	5.7	5.2	2.6	2.1
			Locked rotor amps	44.0	31.6	15.8	12.8
		3 hp	Full load amps	10.6	9.6	4.8	3.9
			Locked rotor amps	70.0	64.0	32.0	26.0
2 KVA transformer full load amps (all models)		9.6	8.7	4.4	3.5		
Electric heat full load amps/element (3 minimum – 7 maximum)		31.3	36.1	18.0	14.4		

## DMS3-360 GAS, CHILLED WATER, HOT WATER AND STEAM

Voltage (three phase)	Without Return Air Blower					With Return Air Blower				
	Supply Air Blower Motor hp	Gas, Steam or Hot Water Heat & Chilled Water	Gas, Steam or Hot Water Heat & Air Conditioning			Return Air Blower Motor hp	Gas, Steam or Hot Water Heat & Chilled Water	Gas, Steam or Hot Water Heat & Air Conditioning		
		Minimum Circuit Ampacity	Disc. (1)	Disc. (2)	*Unit		Minimum Circuit Ampacity	Disc. (1)	Disc. (2)	*Unit
208	3	22.8	188.9	---	---	1-1/2	28.5	194.6	---	---
						3	33.4	199.5	---	---
	5	30.4	195.0	---	---	1-1/2	36.1	200.7	---	---
						3	41.0	205.6	---	---
	7-1/2	39.8	202.5	---	---	1-1/2	45.5	208.2	---	---
						3	50.4	135.3	94.6	213.1
	10	48.1	209.1	---	---	1-1/2	53.8	137.0	94.6	214.8
						3	58.7	141.9	94.6	219.7
230	3	20.7	178.1	---	---	1-1/2	25.9	183.3	---	---
						3	30.3	187.7	---	---
	5	27.7	183.7	---	---	1-1/2	32.9	188.9	---	---
						3	37.3	193.3	---	---
	7-1/2	36.2	190.5	---	---	1-1/2	41.4	195.7	---	---
						3	45.8	200.1	---	---
	10	43.7	196.5	---	---	1-1/2	48.9	201.7	---	---
						3	53.3	206.1	---	---
460	3	10.4	52.6	44.5	89.1	1-1/2	13.0	55.2	44.5	91.7
						3	15.2	57.4	44.5	93.9
	5	13.9	55.4	44.5	91.9	1-1/2	16.5	58.0	44.5	94.5
						3	18.7	60.2	44.5	96.7
	7-1/2	18.2	58.8	44.5	95.3	1-1/2	20.8	61.4	44.5	97.9
						3	23.0	63.6	44.5	100.1
	10	21.9	61.8	44.5	98.3	1-1/2	24.5	64.4	44.5	100.9
						3	26.7	66.6	44.5	103.1
575	3	8.4	71.3	---	---	1-1/2	10.5	73.4	---	---
						3	12.3	75.2	---	---
	5	11.1	73.5	---	---	1-1/2	13.2	75.6	---	---
						3	15.0	77.4	---	---
	7-1/2	14.7	76.4	---	---	1-1/2	16.8	78.5	---	---
						3	18.6	80.3	---	---
	10	17.3	78.4	---	---	1-1/2	19.4	80.5	---	---
						3	21.2	82.3	---	---

Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 75C (167F).

\*Single Power Supply.

# BLOWER DATA

## BLOWER DRIVE SELECTION

Using total air volume (cfm) and system Static Pressure External to Unit (inches water gauge) requirements, determine from Blower Performance Chart Rpm and Bhp required for job. Specify Bhp, exact

Rpm and power characteristics required when ordering. The correct motor and pulleys will be factory installed. The following tables list Motor hp and Rpm range of the drive setups available with each motor.

### RETURN AIR BLOWER

Nominal Motor Hp	Maximum Usable Hp	Rpm Range Of All Available Drive Setups @ 1720 RPM Motor Speed
1-1/2	1.72	330-430
3	3.45	445-545

### SUPPLY AIR BLOWER

Nominal Motor Hp	Maximum Usable Hp	Rpm Range Of All Available Drive Setups @ 1720 RPM Motor Speed
3	3.45	595-925
5	5.75	595-925
7-1/2	8.63	825-1175
10	11.5	825-1175

NOTE—The maximum usable hp of motors furnished by Lennox are shown in table. If other motors of comparable hp are used be sure to keep within the service factor limitations outlined on the motor nameplate.

### MINIMUM HORSEPOWER REQUIREMENTS AS REQUIRED BY A.G.A.

Gas Input (Btuh)	Minimum Supply Air Blower Motor Required	* Minimum Return Air Blower Motor Required
350,000	3 hp	1-1/2 hp
500,000	3 hp	1-1/2 hp
700,000	7-1/2 hp	1-1/2 hp

\* Return air blower is optional and not required in all applications.

### DMS3-185-275-300-360 SUPPLY AIR BLOWER PERFORMANCE

Air Volume (cfm)	STATIC PRESSURE EXTERNAL TO UNIT (Inches Water Gauge)																					
	0		.10		.20		.30		.40		.50		.60		.70		.80		.90		1.00	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	---	---	---	---	615	1.5	660	1.7	700	1.9	730	2.1	765	2.3	795	2.5	830	2.7	860	3.0	880	3.3
6500	---	---	---	---	610	1.6	650	1.8	685	2.1	725	2.3	755	2.5	785	2.7	820	2.9	850	3.1	880	3.3
7000	---	---	605	1.7	640	2.0	680	2.2	715	2.5	750	2.7	780	2.9	810	3.1	845	3.3	875	3.5	905	3.7
7500	610	1.7	645	2.0	675	2.3	710	2.5	740	2.8	775	3.1	805	3.3	840	3.5	870	3.7	900	4.0	930	4.2
8000	650	2.2	680	2.5	710	2.7	745	3.0	775	3.2	805	3.5	835	3.7	865	4.0	895	4.2	925	4.5	955	4.7
8500	690	2.7	720	3.0	750	3.2	780	3.5	805	3.7	835	4.0	865	4.2	895	4.5	920	4.8	950	5.0	980	5.3
9000	725	3.2	755	3.4	785	3.7	810	3.9	840	4.2	870	4.4	900	4.7	925	5.0	950	5.4	980	5.7	1005	6.0
9500	760	3.7	790	3.9	815	4.2	845	4.4	870	4.7	900	4.9	925	5.2	955	5.6	980	5.9	1010	6.3	1035	6.6
10,000	800	4.2	825	4.4	850	4.7	880	4.9	905	5.2	930	5.4	955	5.7	980	6.1	1010	6.5	1035	6.8	1060	7.2

NOTE—The above chart is based on the maximum HP condition of zone dampers in the intermediate position, standard frame filters and 20% outside air. Return air blower is not included. For full cooling or full heating, CFM will be reduced approximately 10%.

### RETURN AIR BLOWER PERFORMANCE

Air Volume (cfm)	STATIC PRESSURE EXTERNAL TO UNIT (Return Air System) — (Inches Water Gauge)											
	0		.10		.20		.30		.40		.50	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	---	---	---	---	---	---	345	.8	380	1.0	415	1.3
5500	---	---	---	---	330	.7	360	.9	395	1.1	430	1.5
6000	---	---	---	---	345	.8	375	1.0	410	1.2	440	1.6
6500	---	---	330	.7	360	.9	390	1.2	425	1.3	455	1.7
7000	---	---	350	.8	375	1.0	405	1.3	440	1.5	470	1.8
7500	---	---	365	.9	390	1.2	420	1.5	455	1.7	485	2.0
8000	340	.7	375	1.0	410	1.3	440	1.6	470	1.9	500	2.2
8500	365	.9	390	1.2	425	1.5	455	1.8	490	2.2	515	2.5
9000	385	1.0	405	1.3	445	1.6	475	2.0	505	2.4	530	2.7
9500	405	1.3	430	1.6	460	1.9	490	2.2	515	2.6	540	2.9
10,000	430	1.5	455	1.8	480	2.1	505	2.4	530	2.7	555	3.1

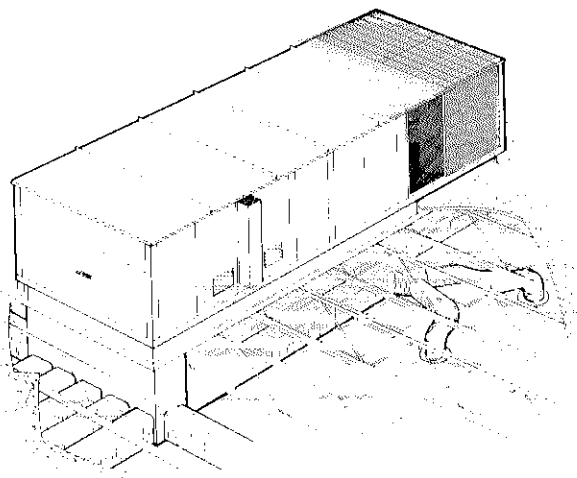
### PRESSURE DROP OF OPTIONAL FILTERS

Air Volume (cfm)	* Filter Pressure Drop (inches water gauge)			
	Bag Filters			Roll Filter
	55% efficiency	85% efficiency	95% efficiency	
5000	.16	.20	.24	.02
5500	.18	.22	.26	.02
6000	.20	.25	.28	.03
6500	.21	.27	.31	.03
7000	.23	.29	.33	.04
7500	.26	.32	.37	.04
8000	.28	.35	.40	.04
8500	.30	.38	.43	.05
9000	.33	.42	.47	.05
9500	.36	.45	.51	.06
10,000	.39	.49	.55	.07

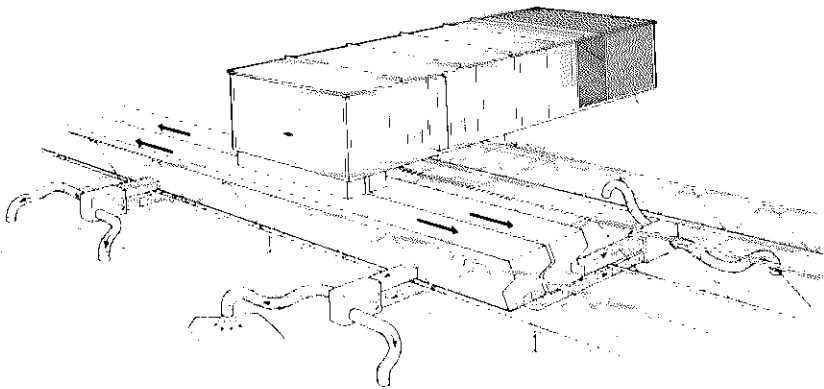
\*When optional filters are used pressure drop shown must be added to system resistance when selecting RPM & BHP requirements.

NOTE—Frame filter resistance has been deducted from figures shown in table.

## TYPICAL APPLICATIONS



Zone distribution system.  
Mixing dampers located at unit.



Double duct distribution system with zone damper boxes.  
Mixing dampers remote from unit

## APPLICATION AND SYSTEM DESIGN

This *Application and System Design* section outlines some basic application data and installation hints which should be followed. Consideration should be given to roof loading, roof flashing, clearances, sound treatment and volume dampers.

### Roofmounting Frame

Mounting frames are shipped knocked down in a compact package for ease in transportation and lifting to the rooftop. Bolts and rugged joint plates are furnished to secure the sections together at the job site. Holes are provided in the frame sections and joining plates. The entire weight of the unit is transferred uniformly to the mounting frame.

### Roofmounting Frame Supports

The roofmounting frame can be installed directly on the deck or setting on the roof supports under the deck. When the frame sets directly on the deck adequate structural strength in the deck is required. When installing the frames on support members under the deck the following support specifications apply:

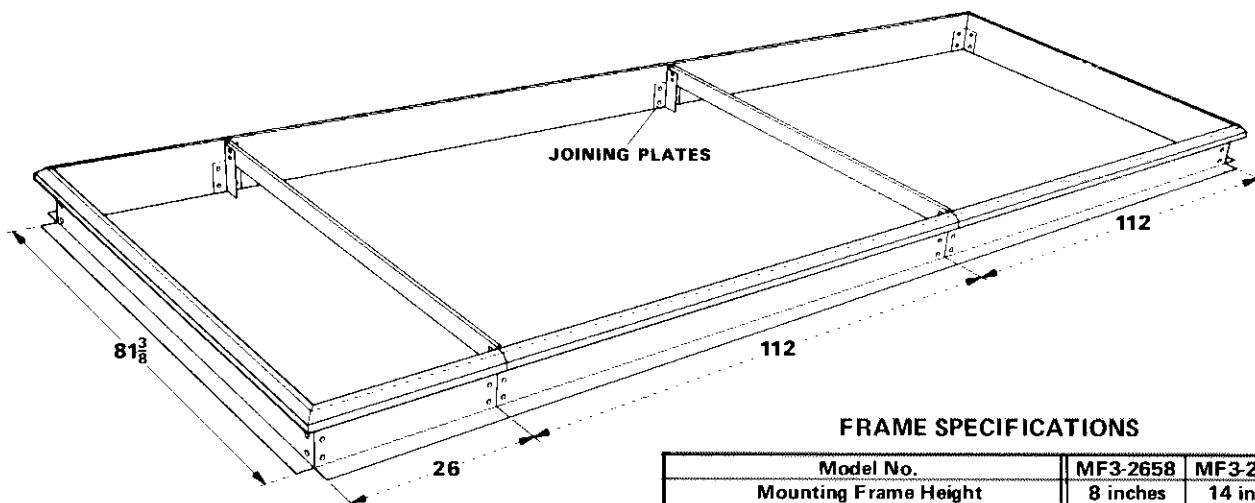
1—With joint plates bolted the maximum frame span between supports is 5 feet.

2—With joint plates welded to frame the maximum frame span or cantilever is:

	Span	Cantilever
8" high frame	11 feet	6 feet
14" high frame	16 feet	9 feet

3—A bolted joint cannot be included in a cantilever. If the roof mounting frame is cantilevered more than 6 feet the joint plate and frame (closest to the overhang) must be welded.

4— There must be at least 32 inches of frame in contact with the roof supports.



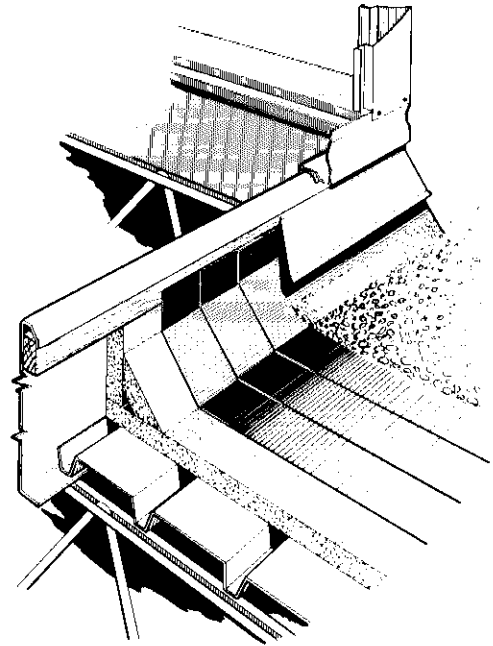
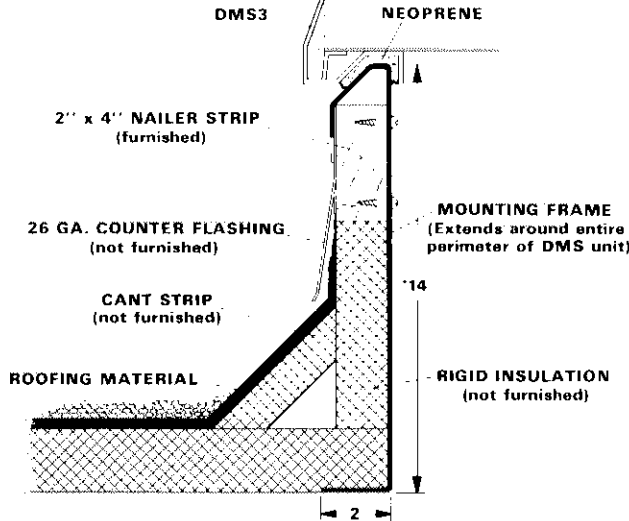
### FRAME SPECIFICATIONS

Model No.	MF3-2658	MF3-26514
Mounting Frame Height	8 inches	14 inches
*Frame moment of inertia (I)	20 in. <sup>4</sup>	77 in. <sup>4</sup>
*Frame section modulus $\frac{I}{C}$	4.8 in. <sup>3</sup>	10.7 in. <sup>3</sup>
Mounting frame weight (lb./ft. of length)	4.2	6.1
Mounting frame design strength (psi)	20,000	

\*Includes both sides of roof mounting frame.

ROOF MOUNTING FRAME

APPROVED BY NATIONAL ROOFING CONTRACTORS ASSOCIATION



\*An 8" high frame is also available for special applications. It is not NRCA approved.

UNIT NET WEIGHT, CENTER OF GRAVITY AND CORNER WEIGHTS

Components		Total Net Weight (lbs)	Moment in "X" Direction	Moment in "Y" Direction
Basic unit		2525	331,000	+7,500
**12 zone mounting frame		370	49,000	0
**AF7-275 combustible adaptor frame		30	---	---
Blower Motor And Drives	3 hp	70	8,000	+1,400
	5 hp	75	8,000	+1,500
	7-1/2 hp	90	10,000	+1,800
	10 hp	130	14,000	+2,600
Heating Options	1 gas heat exchanger	295	19,000	+5,800
	2 gas heat exchangers	495	28,000	+8,200
	Electric Section	255	14,000	-2,200
	Hot water coil	155	9,000	-500
	Steam Coil	125	7,000	-400
Cooling	Evaporator/Chilled Water only	270	18,000	-1100
	Complete system (DMS3-185)	1,530	304,000	-3,400
	Complete system (DMS3-275)	1,725	339,000	-3,800
	Complete system (DMS3-300)	1,830	341,000	-3,800
	Complete system (DMS3-360)	1,875	342,000	-3,800
POWER SAVER System		40	6,000	+1,000
Filter	Frame or bag	75	10,000	---
	Roll	220	31,000	-2,000
Return air blower		275	56,000	+4,600
Distribution Head	12 zone (E.P.)	375	4,600	0
	12 zone (MOD.)	425	5,500	0
	Double Duct	180	2,000	0
**SE1-87 Service Enclosure		344	---	---
**SEK1-87-22 Service Enclosure Kit		45	---	---

\*\*Do not include in hoisting weight.  
E.P. = Electrical proportioning damper motor.

Moment is in inch lbs.  
MOD.=Modulating damper motor (Each motor weighs 9 lbs.)

How to calculate center of gravity:

- 1 Add up System Component wts. to arrive at Total Net Wt.
- 2-Add up Moment in "X" Direction figures to arrive at a total.
- 3- Add up Moment in "Y" Direction figures to arrive at a total.
- 4-Divide total Moment in "X" Direction by Total Wt. to obtain "X".
- 5-Divide total Moment in "Y" Direction by Total Wt. to obtain "Y" Dimension.

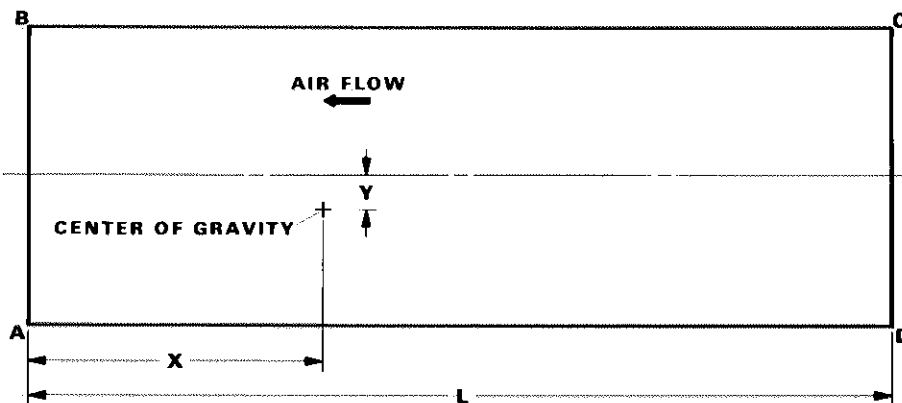
How to calculate corner weights:

$$A = (\text{Wt. of unit}) \left( \frac{(265 - X)(43 + Y)}{23,000} \right)$$

$$B = (\text{Wt. of unit}) \left( \frac{(265 - X)(43 - Y)}{23,000} \right)$$

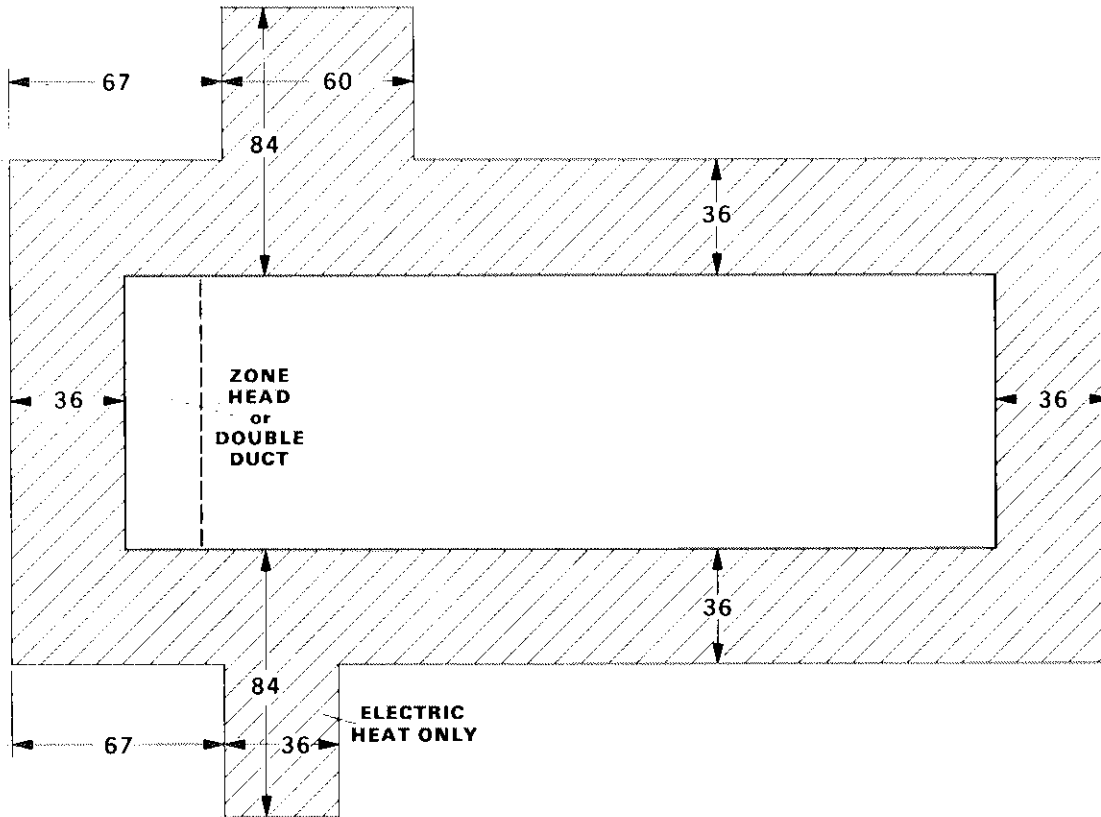
$$C = (\text{Wt. of unit}) \left( \frac{(X)(43 - Y)}{23,000} \right)$$

$$D = (\text{Wt. of unit}) \left( \frac{(X)(43 + Y)}{23,000} \right)$$





SERVICE CLEARANCES



RETURN AIR SYSTEMS, ACOUSTICAL TREATMENT AND VOLUME DAMPERS

**Return Air**

Return air systems are generally one of two types:

- 1—Ducted return air system
- 2—Open plenum return air system (Sandwich space)

The ducted return air system offers the feature of lining the duct with insulation giving the ultimate in acoustical treatment.

The open plenum system eliminates the cost of return air ducts and is extremely flexible. In a building with relocatable interior walls it is much easier to change the location of a ceiling grille than reroute a ducted return system.

**Acoustical Treatment**

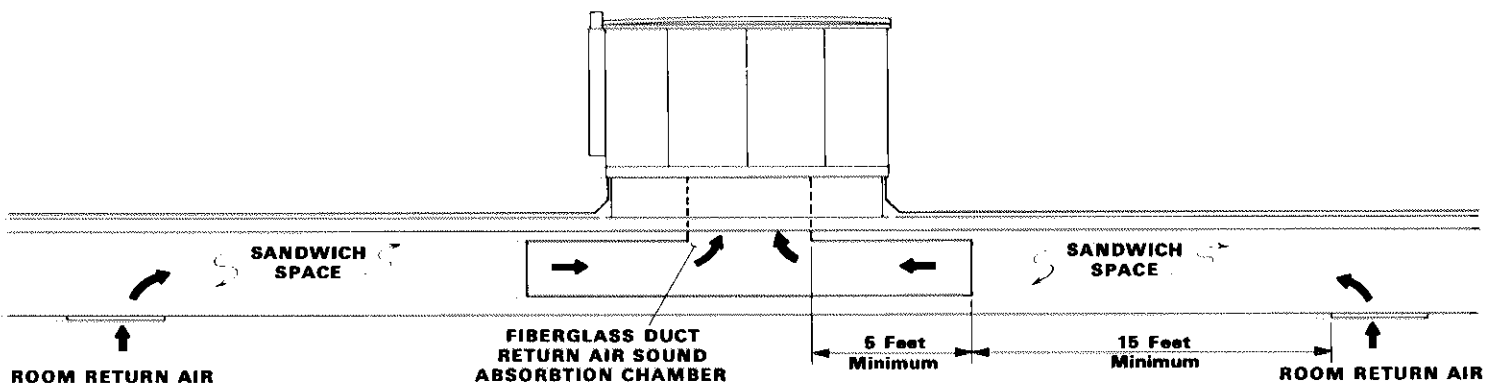
It is recommended to insulate the supply duct to reduce duct loss or gain and to prevent condensation. Use 1-1/2 lbs. density on ducts which deliver air velocities up to 1500 fpm.

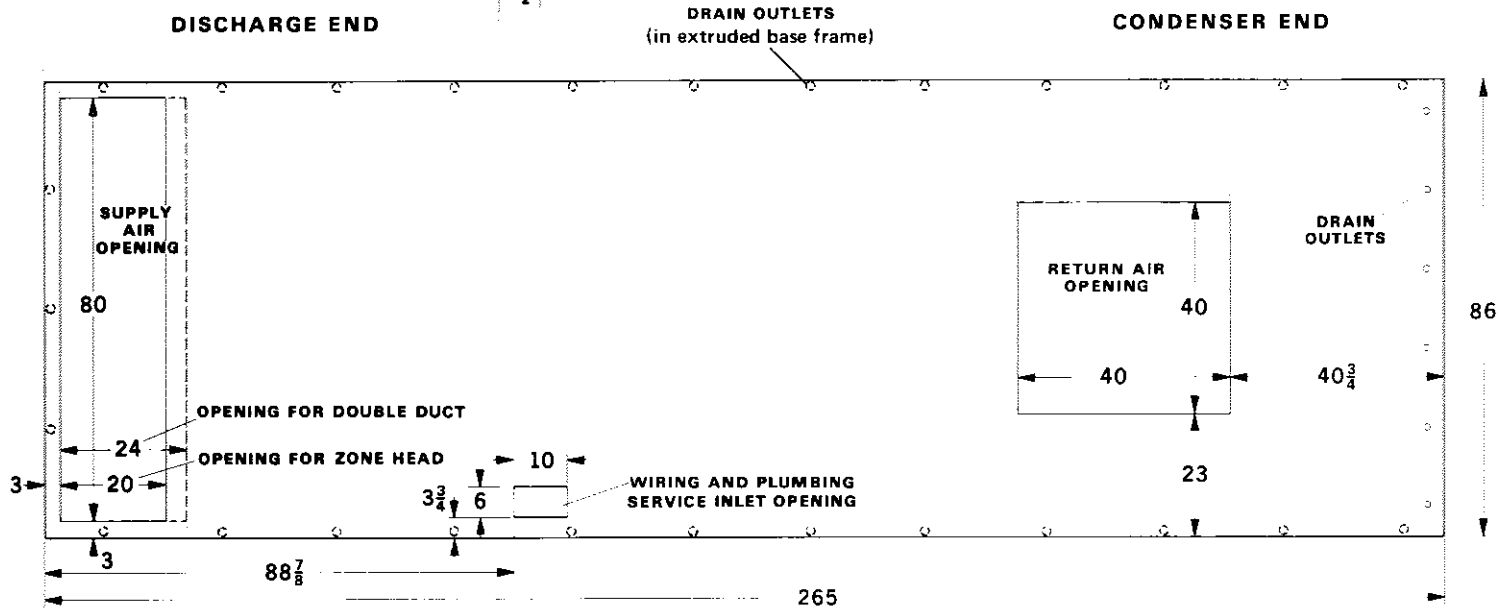
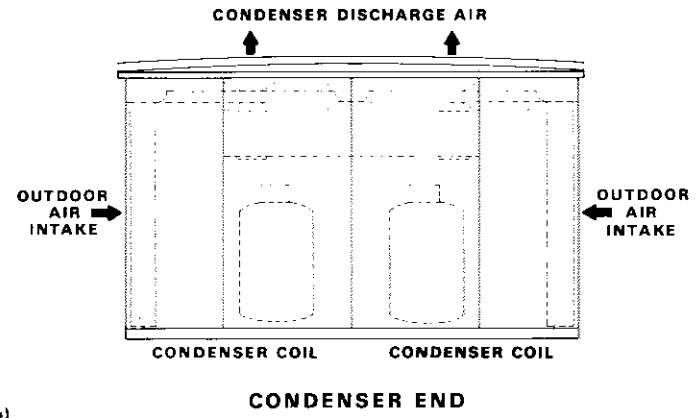
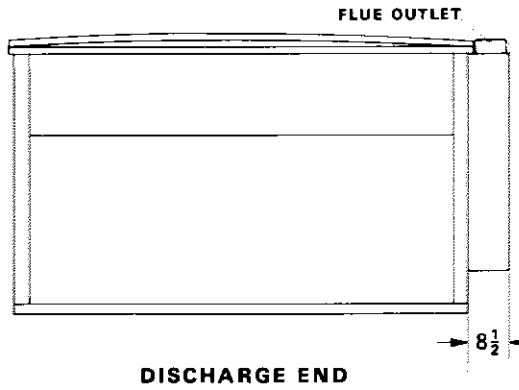
3 lb. density or neoprene coated is recommended for ducts which handle air at velocities greater than 1500 fpm. Insulation can be 1/2" or 1" thick and can be on the outside or inside of the duct.

Where any rooftop equipment utilizes the sandwich space for the return air system a return air chamber such as shown below should be connected to the air inlet opening. This reduces air handling sound transmission through the thin ceiling panels. It should be sized not to exceed 1500 fpm return air velocity. It can be of fiberglass duct or fiberglass lined metal duct. It is recommended not to install a ceiling return air grille within 15' of the duct inlet. The illustration below is just one recommended way to build an acoustical trap and has been used with good results.

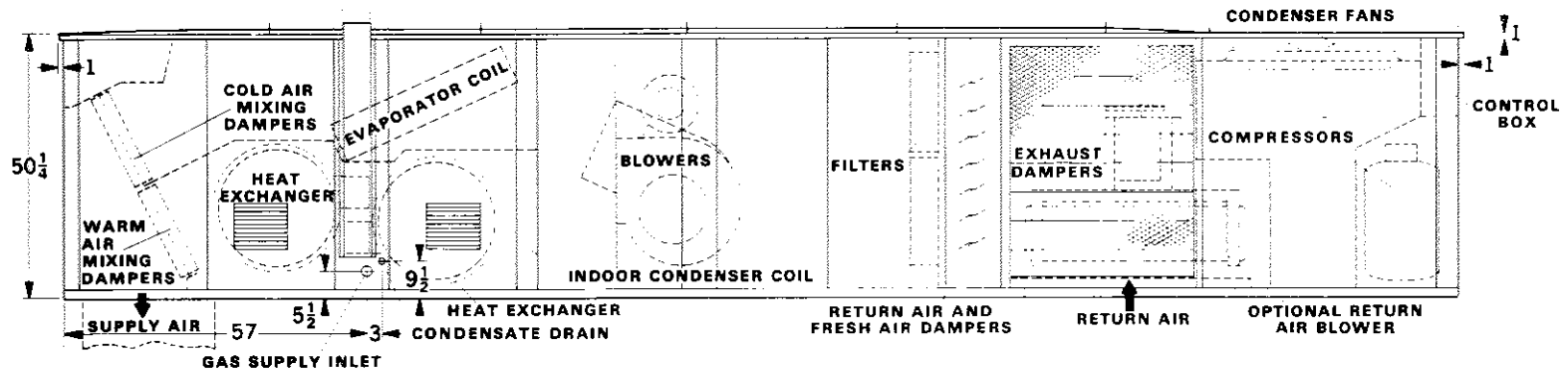
**Volume Dampers**

Volume dampers are important to good system design. Lengths of supply runs vary and are usually of the same cubics, therefore balancing dampers should be used in each supply branch run. Balancing dampers are furnished and factory installed on the zone model units. The dampers are located in each zone at the air discharge end of the unit at bottom of the air outlet. The installer must furnish and install the balancing dampers for double duct applications. Dampers should be installed between mixing box and diffuser outlet.





BOTTOM VIEW (Looking Down)



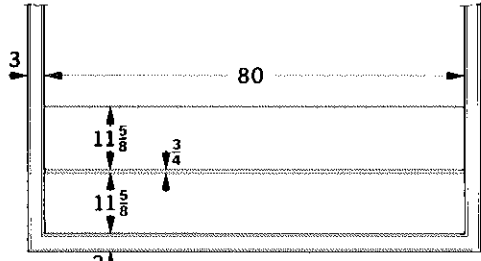
BURNER ACCESS SIDE

DIMENSIONS (inches)

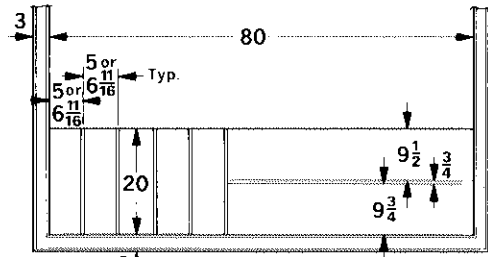
# SUPPLY AIR CONNECTIONS

NOTE—12 zone maximum air volume per zone is 833 cfm.

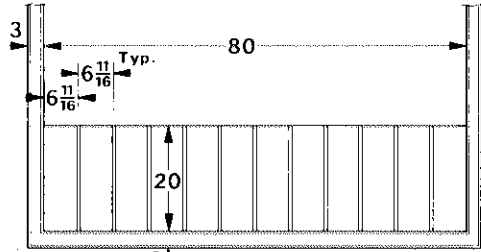
16 zone maximum air volume per zone is 625 cfm.



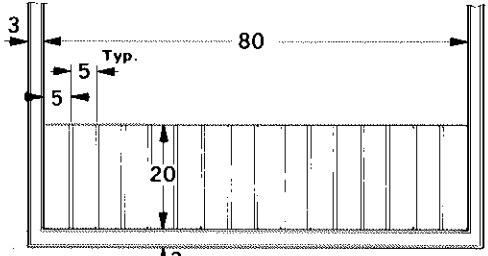
3↑ SUPPLY AIR CONNECTIONS FOR DOUBLE DUCT APPLICATIONS



3↑ DUAL DUCT SPLITTER SUPPLY AIR CONNECTIONS FOR COMBINATION ZONE AND DOUBLE DUCT APPLICATIONS

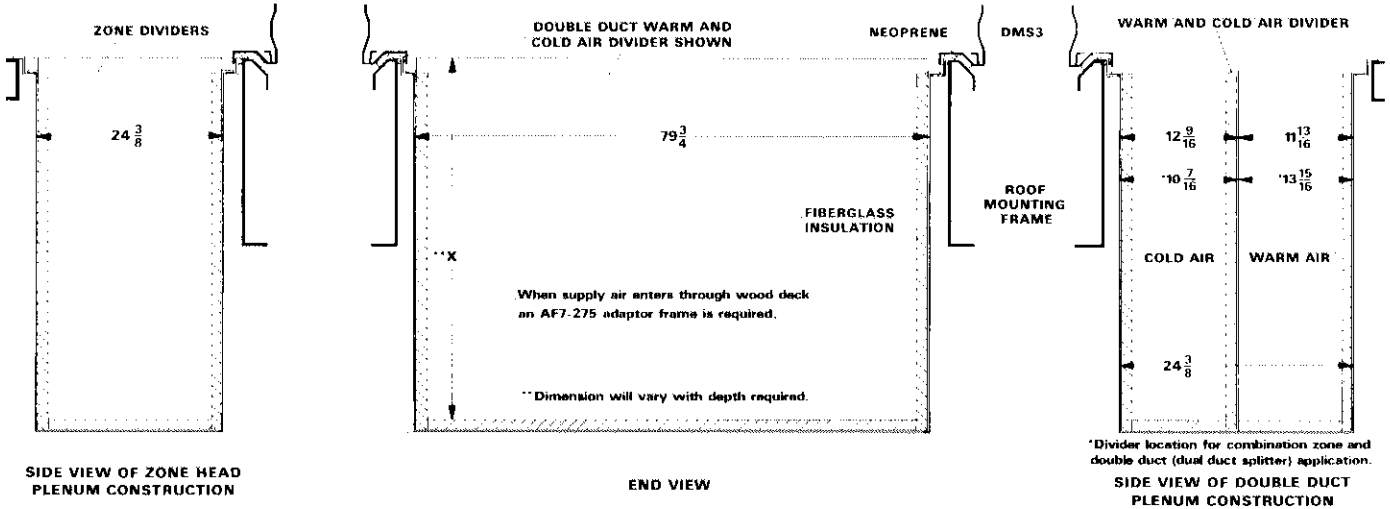


3↑ SUPPLY AIR CONNECTIONS FOR 12 OR LESS ZONES



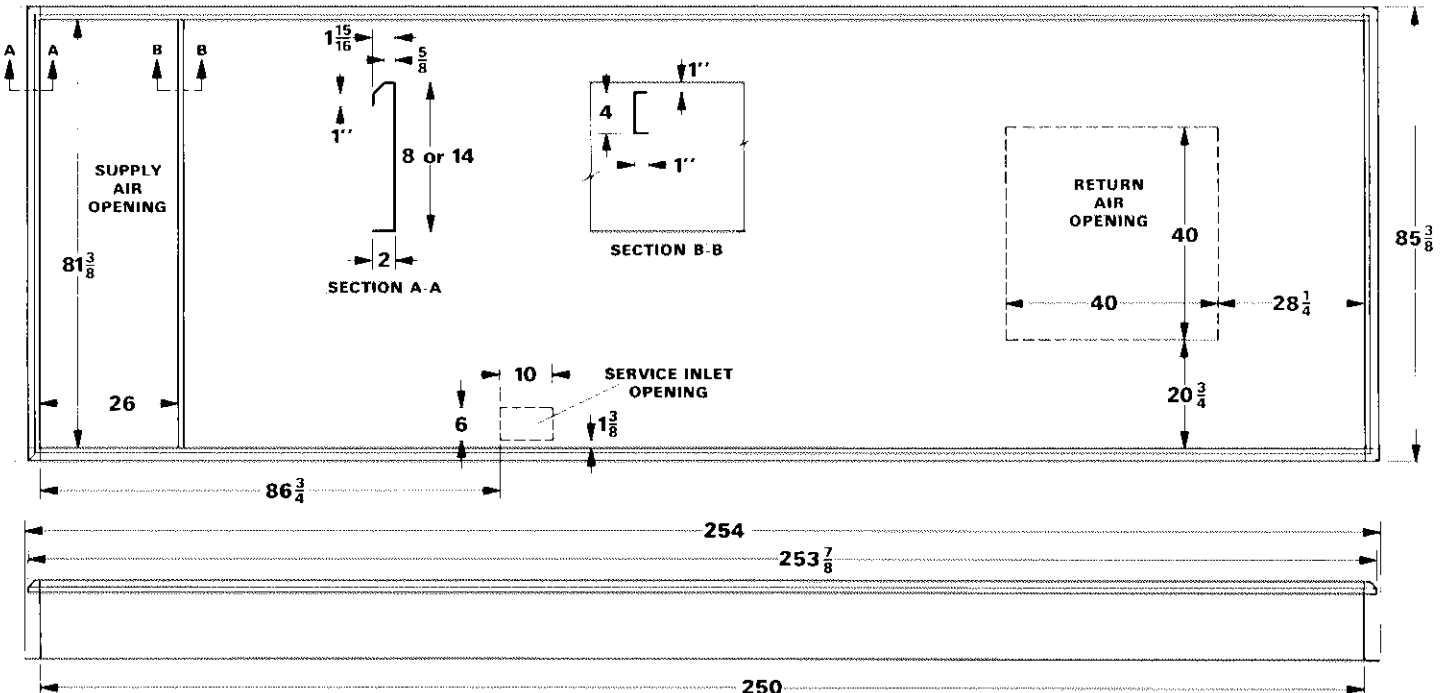
3↑ SUPPLY AIR CONNECTIONS FOR 16 OR LESS ZONES

## SUPPLY AIR PLENUMS

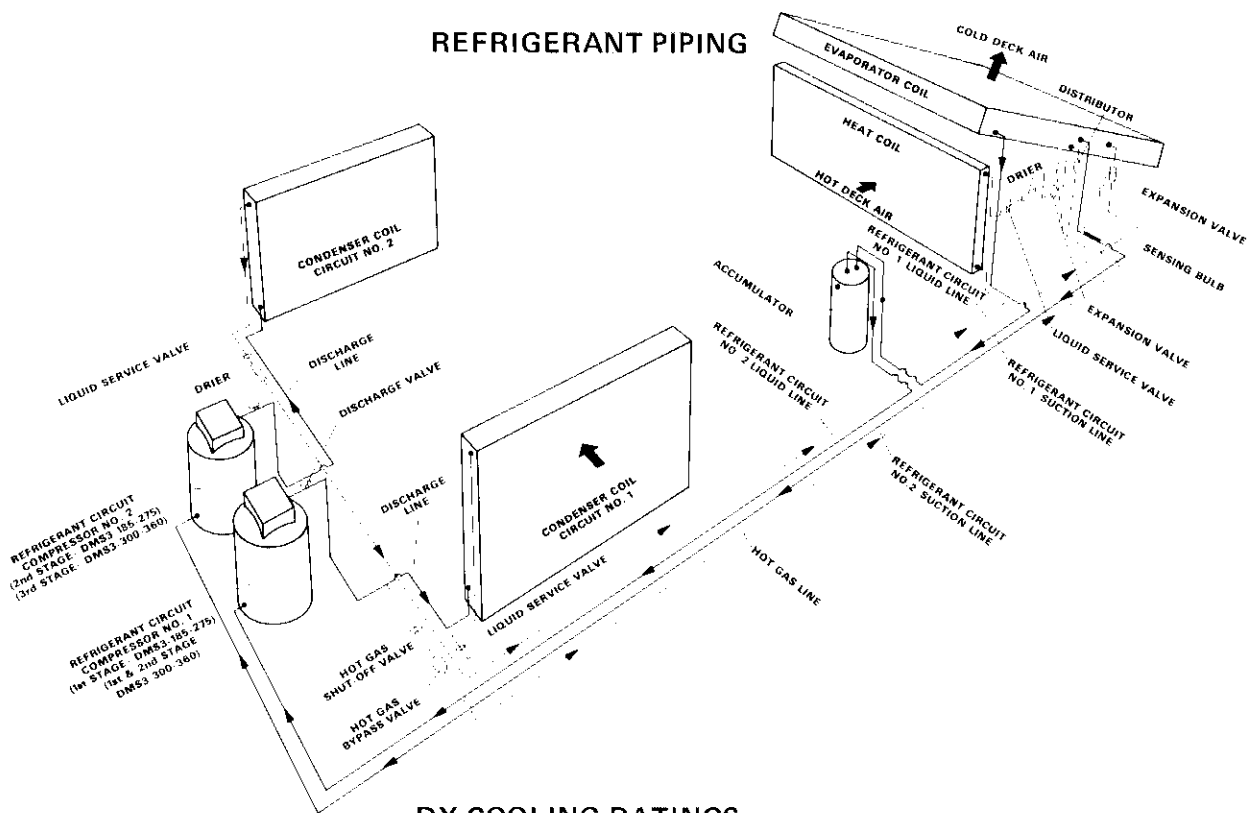


\*Divider location for combination zone and double duct (dual duct splitter) application.  
SIDE VIEW OF DOUBLE DUCT PLENUM CONSTRUCTION

## ROOF MOUNTING FRAME (12 or 16 Zone Head & Double Duct)



# REFRIGERANT PIPING



## DX COOLING RATINGS DMS3-185 COOLING CAPACITY

Evaporator Air 80F Dry Bulb		Air Temperature Entering Condenser Coil (F)											
		85			95			105			115		
Entering Wet Bulb (F)	Total Air Volume (cfm)	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input
63	6000	188,000	.88	17,200	177,000	.91	18,500	167,000	.94	19,900	157,000	.98	21,100
	6750	191,000	.92	17,400	180,000	.95	18,700	170,000	.98	20,100	159,000	1.00	21,300
	7500	194,000	.95	17,600	182,000	.99	18,900	172,000	1.00	20,300	161,000	1.00	21,500
67	6000	202,000	.70	18,000	191,000	.72	19,300	180,000	.74	20,800	169,000	.76	22,000
	6750	206,000	.73	18,200	194,000	.75	19,500	183,000	.77	21,000	172,000	.80	22,300
	7500	209,000	.75	18,400	196,000	.78	19,700	186,000	.80	21,200	175,000	.83	22,500
71	6000	217,000	.54	18,800	205,000	.55	20,100	194,000	.57	21,700	182,000	.58	23,000
	6750	221,000	.56	19,000	208,000	.57	20,300	197,000	.59	21,900	185,000	.60	23,300
	7500	224,000	.57	19,200	211,000	.59	20,500	200,000	.60	22,100	187,000	.62	23,500

## DMS3-275 COOLING CAPACITY

Evaporator Air 80F Dry Bulb		Air Temperature Entering Condenser Coil (F)											
		85			95			105			115		
Entering Wet Bulb (F)	Total Air Volume (cfm)	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input
63	8800	269,000	.91	24,800	254,000	.95	26,400	238,000	.98	28,000	225,000	1.00	29,800
	9900	273,000	.96	25,100	258,000	.99	26,600	242,000	1.00	28,200	228,000	1.00	30,000
67	8800	290,000	.73	26,000	274,000	.75	27,700	258,000	.77	29,300	243,000	.79	31,100
	9900	294,000	.75	26,300	278,000	.77	27,900	261,000	.80	29,500	246,000	.83	31,300
71	8800	310,000	.56	27,100	293,000	.57	28,900	276,000	.59	30,400	261,000	.60	32,200
	9900	315,000	.58	27,400	297,000	.59	29,100	281,000	.61	30,700	264,000	.63	32,500

## DMS3-185-275 (Mix-Match) COOLING CAPACITY

Evaporator Air 80F Dry Bulb		Air Temperature Entering Condenser Coil (F)											
		85			95			105			115		
Entering Wet Bulb (F)	Total Air Volume (cfm)	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input
63	6000	199,000	.90	17,900	187,000	.93	19,100	176,000	.96	20,500	165,000	1.00	21,700
	6750	203,000	.94	18,100	191,000	.97	19,300	180,000	1.00	20,700	168,000	1.00	22,000
	7500	206,000	.98	18,300	194,000	1.00	19,500	183,000	1.00	20,900	170,000	1.00	22,200
67	6000	215,000	.71	18,700	202,000	.73	20,000	191,000	.75	21,500	179,000	.78	22,800
	6750	220,000	.74	18,900	206,000	.77	20,200	195,000	.79	21,700	182,000	.82	23,000
	7500	224,000	.77	19,100	210,000	.80	20,400	200,000	.82	22,000	186,000	.85	23,300
71	6000	230,000	.55	19,400	217,000	.56	20,800	205,000	.58	22,400	192,000	.59	23,700
	6750	236,000	.57	19,700	221,000	.58	21,000	209,000	.60	22,700	196,000	.62	24,000
	7500	240,000	.59	19,900	225,000	.60	21,200	213,000	.62	22,900	199,000	.64	24,200

**DX COOLING RATING**  
**DMS3-300 COOLING CAPACITY**

Evaporator Air 80F Dry Bulb		Air Temperature Entering Condenser Coil (F)											
		85			95			105			115		
Entering Wet Bulb (F)	Total Air Volume (cfm)	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input
63	9,000	293,000	.90	30,200	280,000	.93	32,200	266,000	.95	34,900	252,000	.98	39,100
	10,000	297,000	.94	30,500	285,000	.96	32,600	272,000	.99	35,400	257,000	1.00	39,500
67	9,000	314,000	.73	31,600	299,000	.74	33,600	284,000	.76	36,300	267,000	.79	40,300
	10,000	319,000	.75	31,900	304,000	.77	34,000	287,000	.79	36,600	270,000	.82	40,600
71	9,000	339,000	.56	33,000	322,000	.57	35,000	304,000	.59	37,000	284,000	.60	41,700
	10,000	343,000	.58	33,300	326,000	.59	35,300	307,000	.61	38,000	287,000	.62	42,400

**DMS3-360 COOLING CAPACITY**

Evaporator Air 80F Dry Bulb		Air Temperature Entering Condenser Coil (F)											
		85			95			105			115		
Entering Wet Bulb (F)	Total Air Volume (cfm)	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input
63	9,000	325,000	.85	37,400	312,000	.87	39,800	296,000	.89	43,500	279,000	.92	49,300
	10,000	332,000	.88	37,900	318,000	.90	40,400	302,000	.93	44,000	284,000	.96	49,700
67	9,000	349,000	.69	39,200	333,000	.70	41,600	315,000	.72	45,100	295,000	.74	50,800
	10,000	355,000	.71	39,600	338,000	.73	42,000	319,000	.75	45,600	299,000	.77	51,200
71	9,000	373,000	.54	40,900	356,000	.55	43,300	337,000	.56	47,600	316,000	.58	57,400
	10,000	379,000	.56	41,300	361,000	.57	43,800	340,000	.58	49,500	320,000	.59	59,900

**DMS3-300 AND DMS3-360 COOLING CAPACITY (1st Stage—Low Speed Operation)**

Evaporator Air 80F Dry Bulb		Air Temperature Entering Condenser Coil (F)								
		65			75			85		
Entering Wet Bulb (F)	Total Air Volume (cfm)	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Compressor Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Compressor Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Compressor Motor Watts Input
63	4000	104,000	.90	7700	100,000	.91	8000	97,000	.93	8400
	5000	107,000	.95	7800	103,000	.97	8100	100,000	.99	8500
	6000	110,000	1.00	7900	106,000	1.00	8200	103,000	1.00	8600
67	4000	112,000	.72	8000	108,000	.73	8300	104,000	.74	8600
	5000	115,000	.76	8000	111,000	.77	8400	107,000	.79	8700
	6000	117,000	.80	8100	113,000	.81	8400	109,000	.83	8800
71	4000	121,000	.56	8200	117,000	.57	8500	112,000	.58	8900
	5000	124,000	.58	8200	119,000	.59	8600	114,000	.60	8900
	6000	125,000	.61	8300	120,000	.62	8600	115,000	.63	9000

**STEAM HEAT RATINGS**

**STEAM HEATING CAPACITY**

Air Volume (cfm)	Steam Pressure (psi)									
	0		5		10		15		25	
	Heating Capacity (Btuh)	Leaving Air Temp. (Degrees F)	Heating Capacity (Btuh)	Leaving Air Temp. (Degrees F)	Heating Capacity (Btuh)	Leaving Air Temp. (Degrees F)	Heating Capacity (Btuh)	Leaving Air Temp. (Degrees F)	Heating Capacity (Btuh)	Leaving Air Temp. (Degrees F)
5000	343,000	124	377,000	130	405,000	135	428,000	139	467,000	146
6000	380,000	119	418,000	125	449,000	129	474,000	133	517,000	140
7000	411,000	114	452,000	120	486,000	124	513,000	128	560,000	134
8000	443,000	111	487,000	116	522,000	120	552,000	124	602,000	130
9000	468,000	108	515,000	113	553,000	117	585,000	120	637,000	126
10,000	497,000	106	547,000	111	587,000	114	621,000	117	677,000	123

NOTE—Based on 60F entering air temperature.

**Steam Coil Capacity Correction Factory Chart**

Multiply rating in steam coil capacity chart by correction factor below.

Entering Air Temperature (Degrees F)	*Steam Pressure (psig)				
	0	5	10	15	25
80	0.868	0.880	0.889	0.899	0.903
70	0.934	0.940	0.944	0.950	0.952
60	1.000	1.000	1.000	1.000	1.000
50	1.066	1.060	1.056	1.050	1.048
40	1.132	1.120	1.111	1.101	1.097

NOTE: Leaving Air Temp. = Ent. Air Temp. +  $\frac{\text{Btuh Capacity}}{1.08 \times \text{cfm}}$

## GUIDE SPECIFICATIONS

Prepared for the guidance of architects, consulting engineers and mechanical contractors.

**General**—Furnish and install a roof mounted multizone (heating or heating-cooling unit) with all controls, ducts and zone dampers. The Multizone system shall be a standard product of a firm regularly engaged in manufacture of heating-cooling equipment. The manufacturer shall have parts and service available throughout the United States and Canada.

**Roof Mounting Frame**—A hot dipped galvanized steel mounting frame shall be furnished. It shall conform exactly to the shape of the system and contoured to accept the base of the equipment. Flashing shall be the responsibility of a roofing contractor. The 14" high frame shall be approved by National Roofing Contractors Association.

**Air Distribution**—Shall be (double duct with remote zone dampers or zone dampers located at the unit or a combination of both, dual duct splitter).

All air distribution ducts shall be fiberglass or . . . . . ga. galvanized steel insulated with . . . . . inch thick . . . . . lb. density fiberglass or equivalent.

Balancing dampers shall be located at each zone outlet and be equipped with locking devices.

**DX Cooling System**—The total certified cooling capacity shall not be less than . . . . . Btuh with an evaporator air volume of . . . . . cfm, an entering wet bulb air temperature of . . . . F and outdoor air db temperature of . . . . F. The compressor power input shall not exceed . . . . . Kw at these conditions.

The coils shall be non-ferrous construction with aluminum fins mechanically bonded to seamless copper tubes. All coils shall be factory pressure leak tested at 450-500 psi.

The system shall consist of (2) totally independent refrigeration systems including compressor, condenser coil, condenser fan and evaporator coil with expansion valve. The condenser coils shall have sub-cooling rows. The compressors shall be internally spring mounted and have positive crankshaft lubrication, crankcase heater, discharge temperature limiter, current and temperature sensing motor overloads.

**Condenser Indoor Heat**—The refrigeration system shall have an indoor condenser coil which delivers 95,000, 125,000 or 155,000 Btuh of heat to the conditioned area whenever the system requires simultaneous heating and cooling. It shall be located in the hot deck.

**Chilled Water System**—The total certified cooling capacity shall not be less than . . . . . Btuh with a cooling coil air volume of . . . . . cfm, an entering wet bulb air temperature of . . . . . F with a flow rate of . . . . . gpm and an entering water temperature of . . . . . F.

The water coil shall be non-ferrous construction with aluminum fins bonded to seamless copper tubes. It shall be factory pressure leak tested at 450-500 psi. A modulating motorized water valve shall be factory installed.

**Gas Heating System**—The certified total heating capacity output shall be . . . . . Btuh with a gas input of . . . . . Btuh. Automatic controls furnished as standard equipment shall give two stage operation, except on propane fired single heat exchanger models single stage operation only is available. Cylindrical tube and drum heat exchanger shall be constructed of (aluminized steel or glass coated steel). Stainless steel power burner(s) shall have pre-purge, intermittent spark ignition (continuous pilot flame during main burner operation), 100% safety shutoff controls, electronic flame sensing controls, series gas valves and fan controls to terminate blower operation at night. Staging control shall be with separate gas valves. An automatic safety shutoff valve shall be furnished.

**Electric Heating System**—The certified total heating capacity output shall be . . . . . Btuh at . . . . . volts power supply.

Heating elements shall be nichrome bare wire exposed directly to the air stream and be equipped with manual reset backup limits. They shall be controlled by a (four stage controller or sequencer) with 1st stage controlling condenser heat.

**Hot Water Heating System**—The certified total heating capacity output shall be . . . . . Btuh with a heating coil air volume of . . . . . cfm, at water entering temperature of . . . . . F and a flow rate of . . . . . gpm and an entering air temperature of . . . . . F. A three way modulating water valve (with/without) primary pump shall be factory installed. The coil shall be of non-ferrous construction with aluminum fins mechanically bonded to seamless copper tubes.

**Steam Heating System**—The certified total heating capacity output shall be . . . . . Btuh, with an air volume of . . . . . cfm at an entering air temperature of . . . . . F and . . . . . lbs. steam pressure.

A modulating steam valve and float shall be factory installed. The coil shall be of non-ferrous construction with aluminum fins mechanically bonded to seamless copper tubes. Coil shall be self draining and distributed to provide even temperature across the unit.

**Frame and Casing**—All external surfaces shall be of painted (outdoor enamel) 20 gauge galvanized steel 0.0396" thick or (base frame) 6061-T6 extruded aluminum. All galvanized side and top panels shall be insulated with 1-1/2" thick fiberglass insulation. The extruded aluminum base shall be lined with 1" thick fiberglass insulation. The top panels shall be joined with a 3/16" diameter rubber tubing in the bottom of each standing seam. Side panel seams shall be sealed with polyurethane foam. All interior support members shall be 16 ga. steel. All access panels shall have locking door handles.

**Supply Air Blowers**—Twin supply air blowers shall have permanently lubricated ball bearings, velocity pressure converters, adjustable belt drives and a cradle motor mount where belt tension can be easily adjusted. The entire assembly shall be floated on steel springs. They shall be capable of delivering . . . . . cfm at an external static pressure of . . . . . inches water gauge requiring . . . . . bhp and . . . . . rpm.

**Return Air Blower**—Shall have permanently lubricated ball bearings, adjustable belt drives and be capable of exhausting . . . . . cfm at an external static pressure of . . . . . inches water gauge requiring . . . . . bhp and . . . . . rpm.

**Frame Filters**—Filter media shall be 1 inch 20 pores per inch polyurethane enclosed in individual galvanized frames. Total free area shall be 25.7 sq. ft. Filter rack shall be wide enough to allow addition of up to 3" of other filtering material.

**Bag Filter**—Shall be equipped with a frame pre-filter and have an efficiency of . . . . . % based on National Bureau of Standards dustspot test.

**Automatic Roll Filters**—65 ft. roll of 2 inch fiberglass shall have an automatic (timed or pressure drop) advance.

**Service Enclosure**—Shall be available to protect service area from inclement weather during service period.

**Approvals**—All gas models shall be A.G.A. certified or C.G.A. Approved. All electrical components shall have a U.L. Listing. All wiring shall be in compliance with NEC or CEC. F.I.A. and F.M. construction shall be available.

(Continued on next Page)

## GUIDE SPECIFICATIONS (Cont't)

(Continued)

**Controls**—All controls shall be the sole responsibility of the mechanical equipment manufacturer and shall be installed factory wired and tested.

**Smoke Detector Controls**—Shall be available to detect the presence of smoke within the system and actuate the blower motor controls and other devices to prevent the spread of smoke throughout the conditioned area.

**Alternate Electronic Energy Saving Control System**—Shall consist of a room temperature sensing transmitter (set-point adjustable 55°F to 85°F) for each zone, a supply air sensor for each zone, zone damper actuators for each zone and a load analyzer control module with circuit board and heat-cool logic relays to operate the mechanical equipment. Mixed air low limit control, morning warm-up control and enthalpy control shall regulate a modulating damper actuator to provide outdoor air, return air and mixed air volume requirements. The room transmitter and supply air sensor shall have thermistors (semi-conductors with an electrical resistance that varies with temperature). The load analyzer control module shall provide a 24 volt DC regulated power supply to the room transmitter and heat-cool logic relays. The room transmitter shall convert the room temperature variations from set-point into a proportionally varying DC voltage. The supply air sensor, located in the supply air duct, shall sense the supplied air temperature and provide a signal which combines with the room transmitter signal to give the resultant output load signal. (The voltage signal produced by a 1 degree change at the room transmitter shall equal the signal produced by a 20 degree change at the supply air sensor.) As a result of the supply sensor signal the control system shall respond not only to the room temperature deviations from set-point but also to the effect of the outdoor air and the mechanical systems response to the load. The load analyzer control module shall operate the mechanical equipment, through the heat-cool logic relays, according to the amount of the voltage (signal) received. The logic relays are sensitive to varying voltages and in conjunction with the modulating voltage signals for the zone damper actuators and mixed air/ventilation damper actuator shall be programmed to operate the mechanical equipment automatically in sequence, as required, through the cooling, ventilating and heating cycles. The load analyzer control module shall also provide a central location for troubleshooting and identification of improper wiring.

**Alternate Load Sensor Master/Sub-Master Control System**—

**Fresh Air Control**—Shall include a step controller and outside reset Master/Sub-Master cold deck ductstat. They shall control a modulating damper motor to deliver the required amount of outdoor air into the conditioned area. An adjustable enthalpy control shall prevent excessive moisture laden outside air from entering by returning the damper motor to the minimum position.

**Cold Deck Control**—The cold deck temperature shall be controlled by an adjustable outside reset ductstat and a modulated step controller.

**Chilled Water Cold Deck Controls**—Shall include dual outside reset ductstats and a modulating motorized valve to maintain a cold deck air temperature appropriate to the outdoor air temperature.

The control system shall be Master/Sub-Master controlled to automatically shift the cold deck temperature down as much as 10F colder during periods of peak loading.

**Gas Fired Hot Deck Control**—The hot deck temperature shall be controlled by an adjustable outside reset ductstat and a four stage controller to maintain a hot deck air temperature appropriate to the outdoor air temperature.

**Electric Heat Hot Deck Controls**—Shall include an outside reset ductstat and a (four stage or sequencer) which maintains a hot deck air temperature appropriate to the outdoor air temperature.

**Hot Water and Steam Heat Hot Deck Controls**—Shall include an outside reset ductstat and a modulating motorized valve to maintain a hot deck air temperature appropriate to the outdoor air temperature.

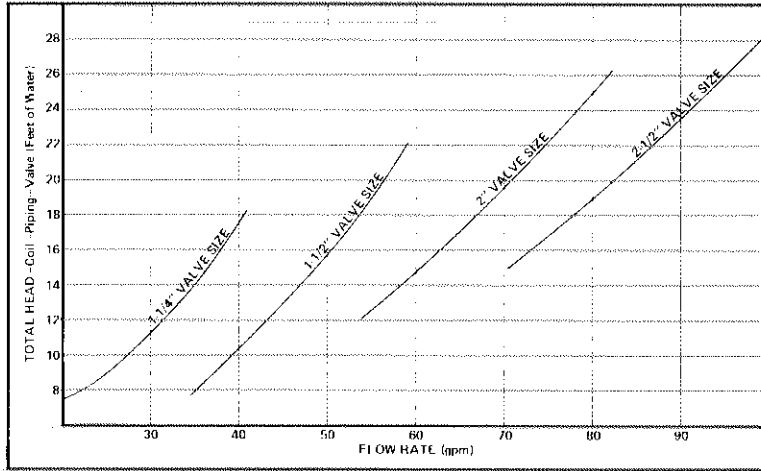
The control system shall be Master/Sub-Master controlled to automatically shift the hot deck temperature up as much as 20F during periods of peak loading.

**Zone Controls**—Shall be a proportioning zone damper motor which is controlled by a wall mounted thermostat.

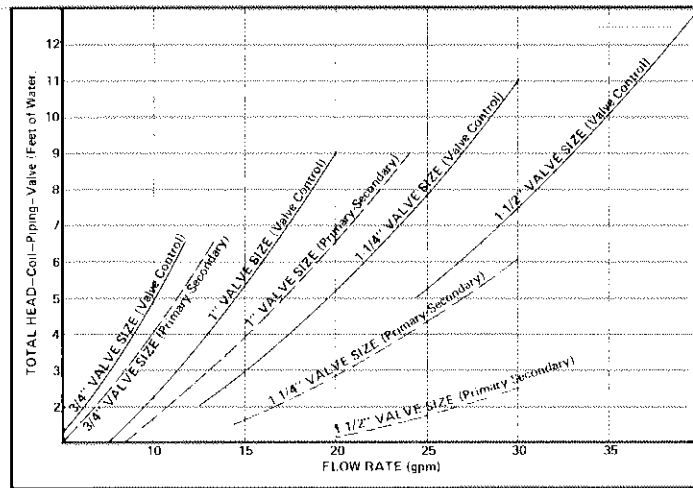
**Outside Air Damper**—Damper blades shall ride in nylon bearings. Damper motor shall be full modulating with adjustable potentiometer for minimum position.

DMS3-185-275-300-360  
**VALVE SELECTION AND COIL PRESSURE DROP**

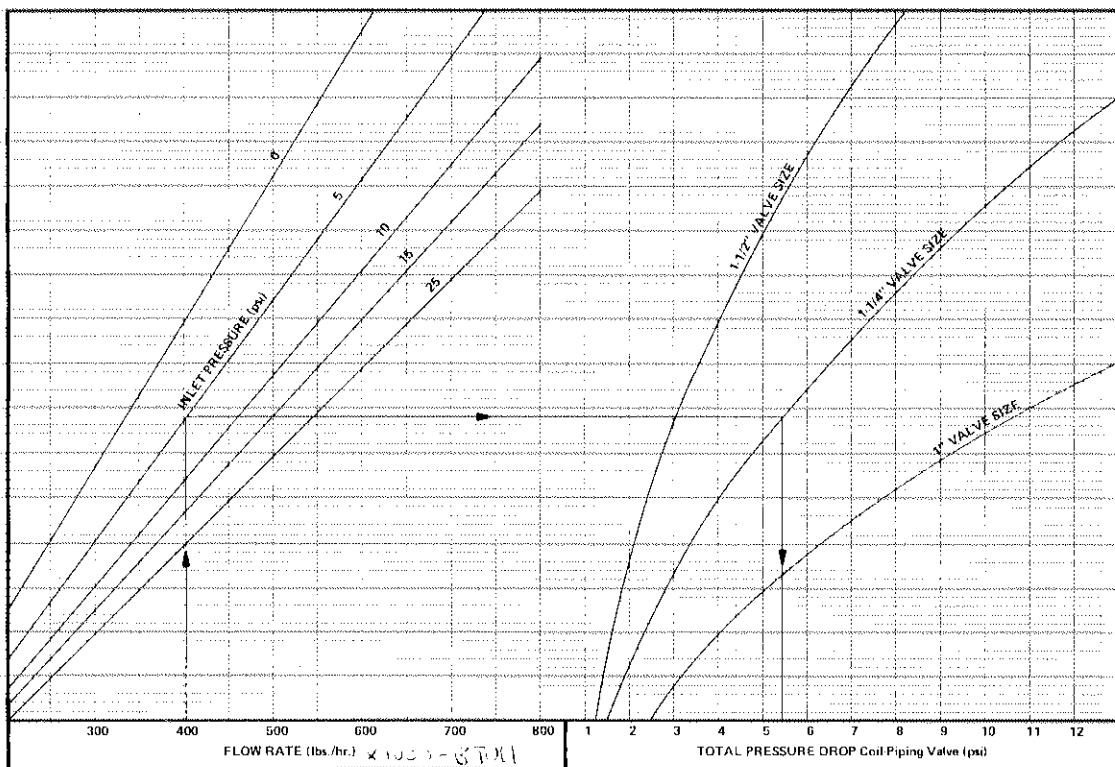
**CHILLED WATER**



**HOT WATER**



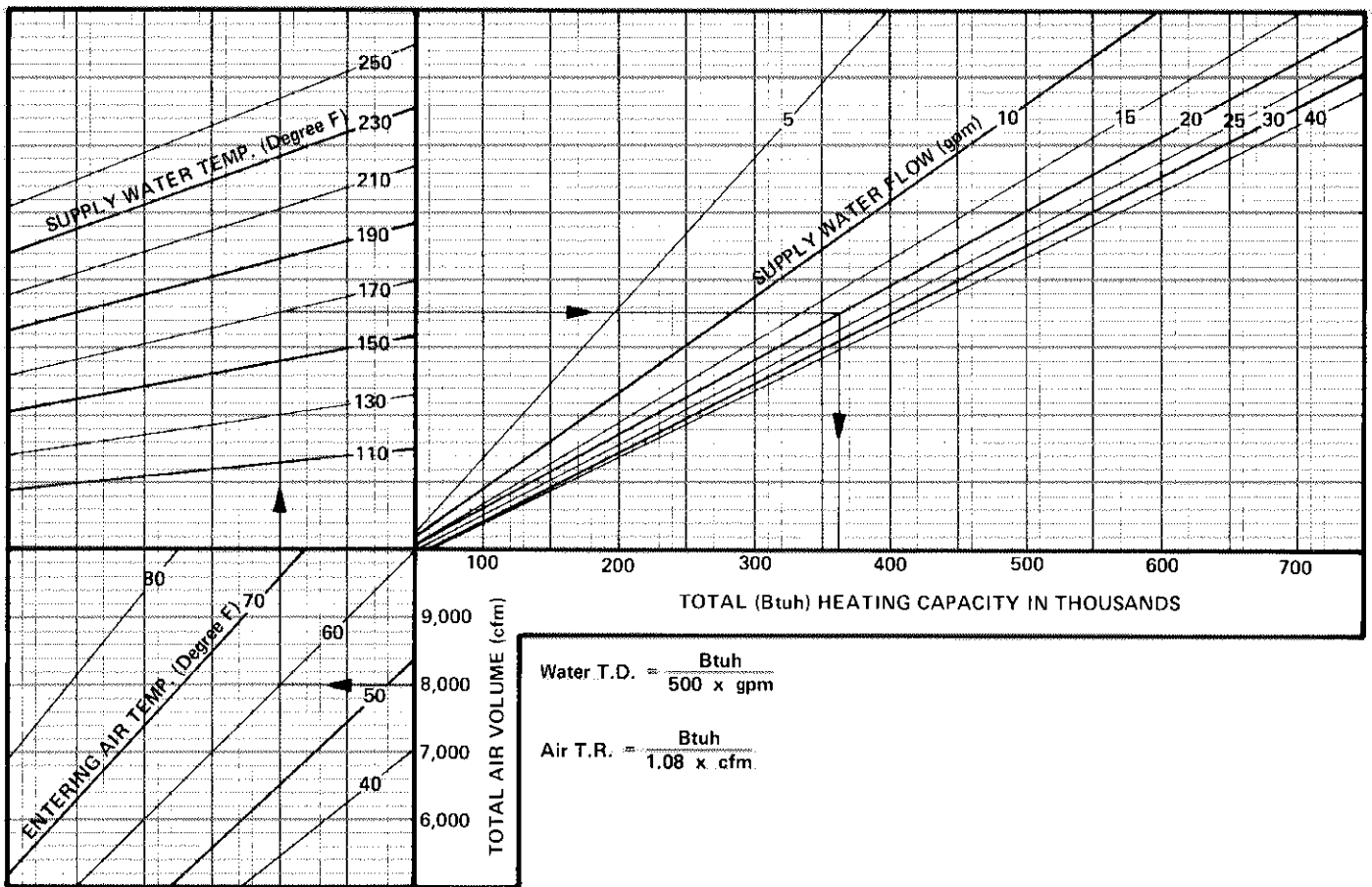
**STEAM HEAT**



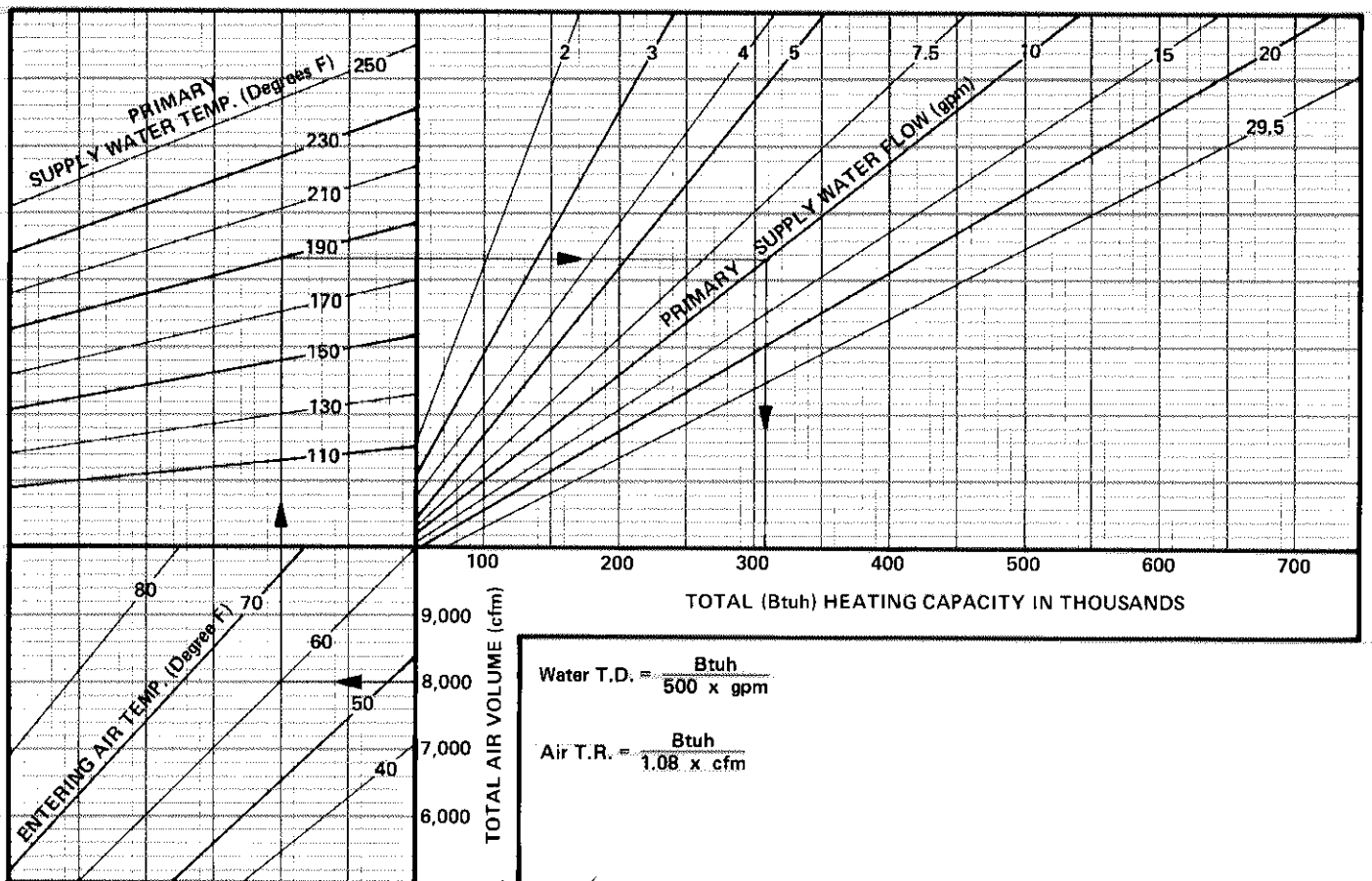
$BTUH \div 1000 = \text{FLOW RATE (LBS/HR)}$



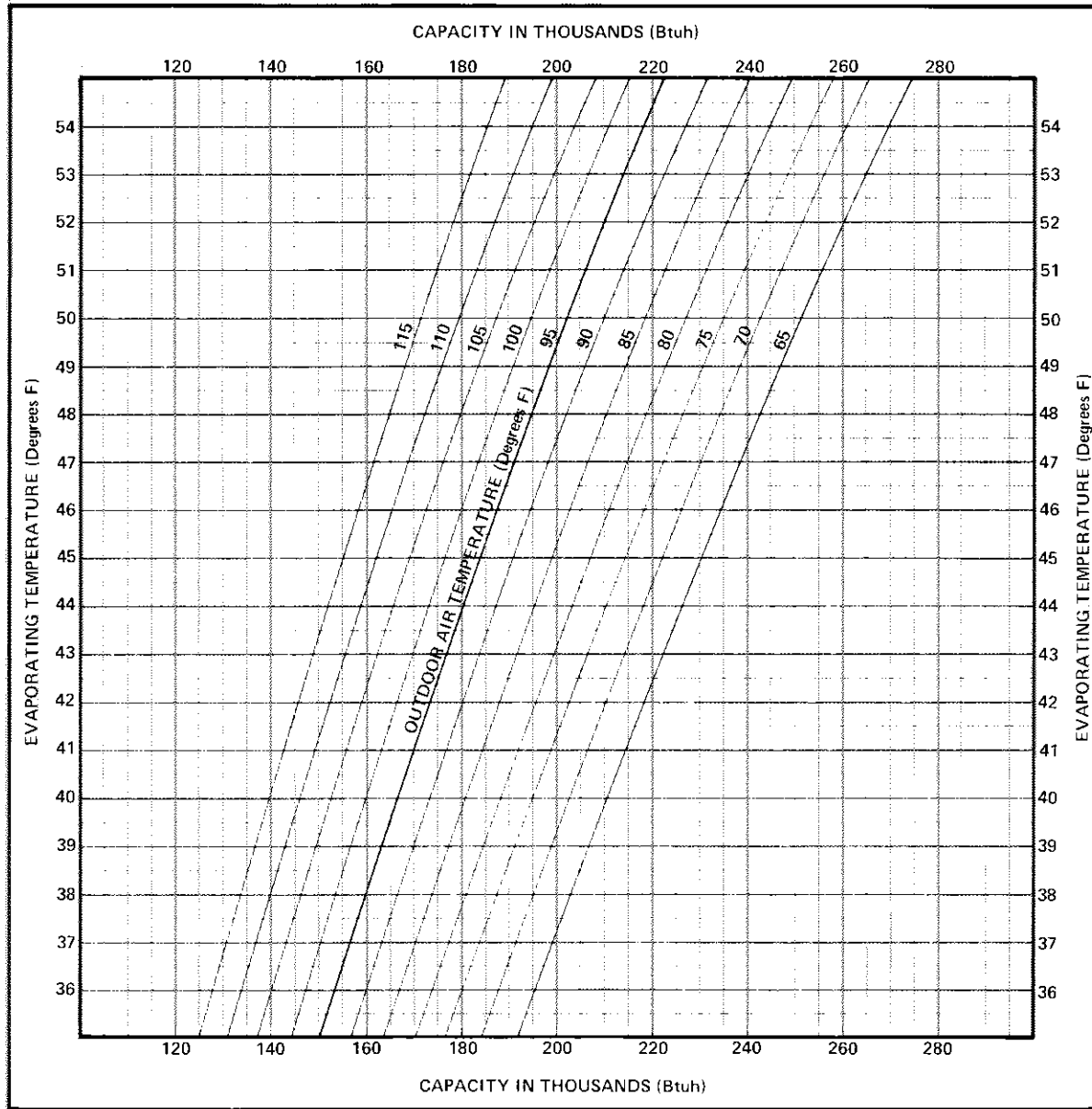
VALVE CONTROL SYSTEM



PRIMARY-SECONDARY SYSTEM

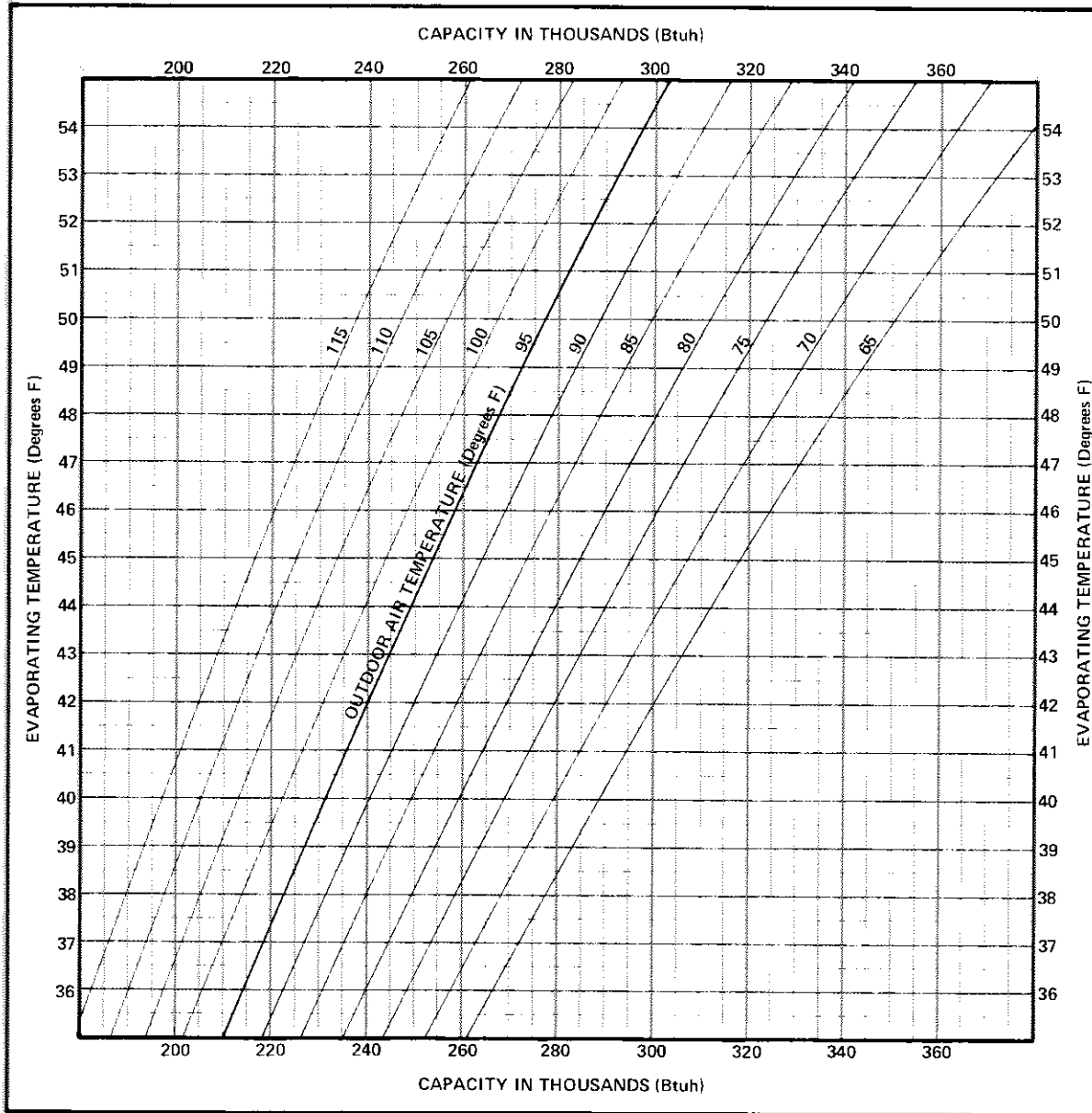


# DMS3-185 CONDENSING SECTION CAPACITY CURVE



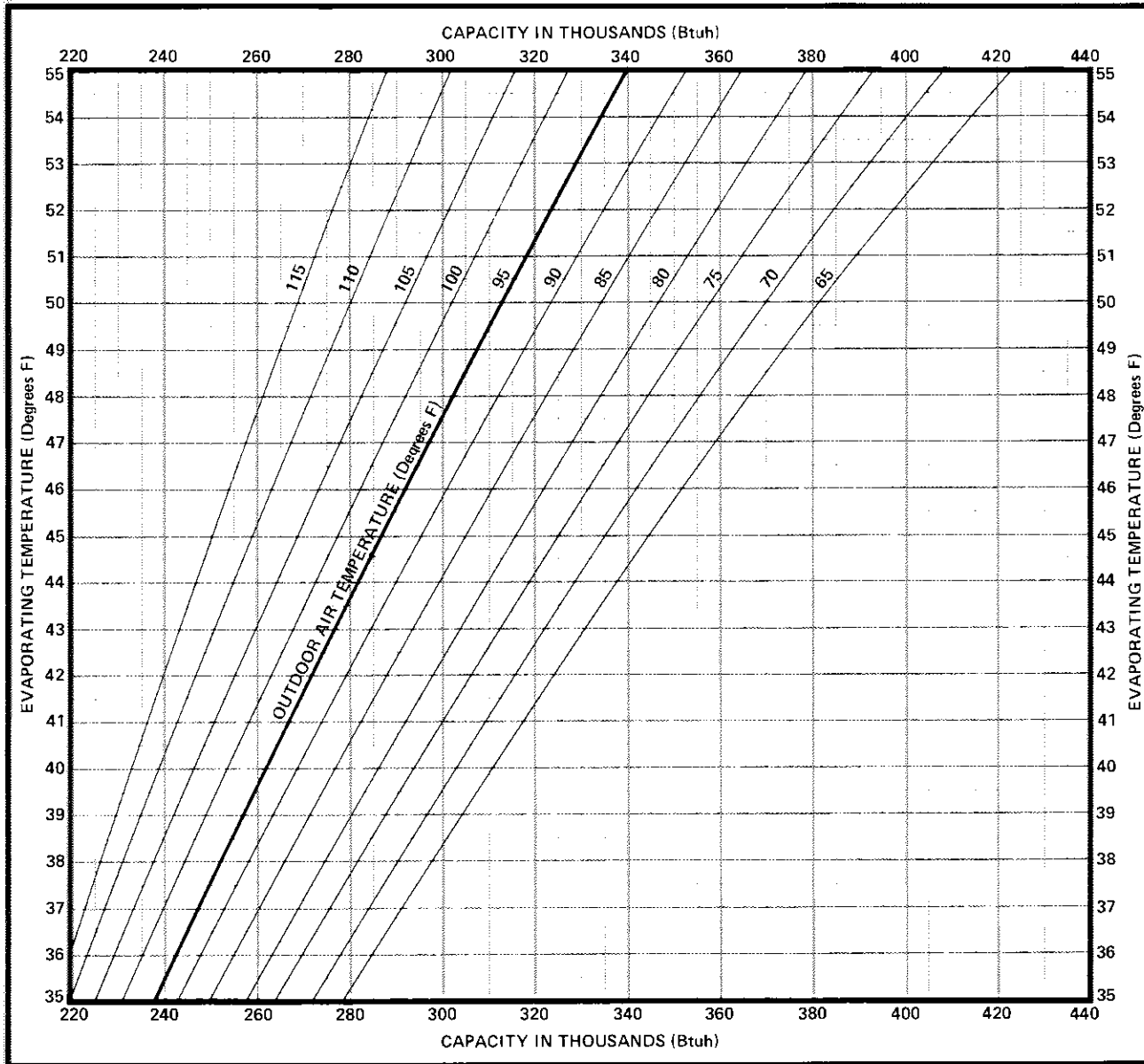
NOTE—Capacity shown is total capacity with two condensing sections running.

# DMS3-275 CONDENSING SECTION CAPACITY CURVE



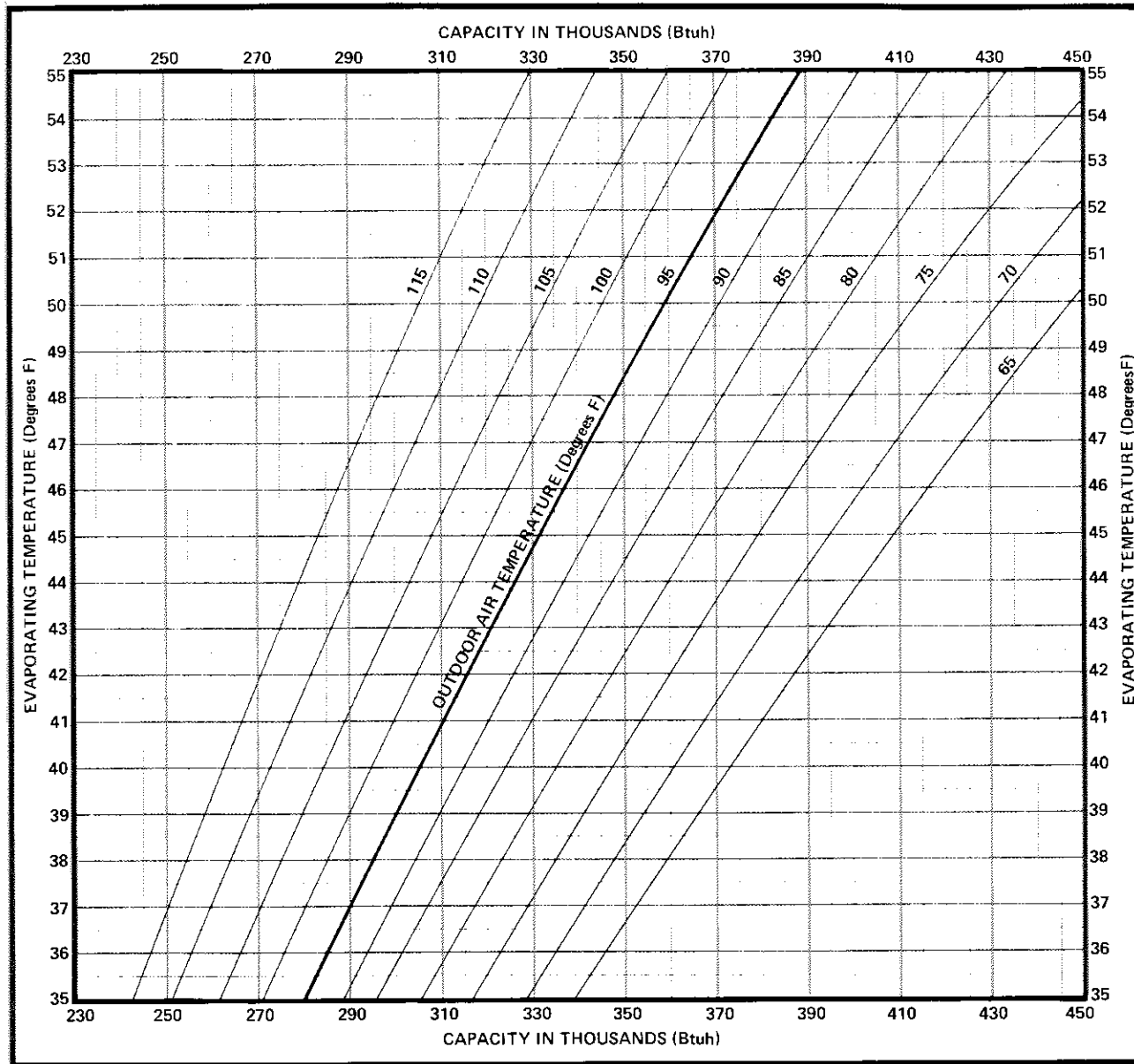
NOTE—Capacity shown is total capacity with two condensing sections running.

# DMS3-300 CONDENSING SECTION CAPACITY CURVE



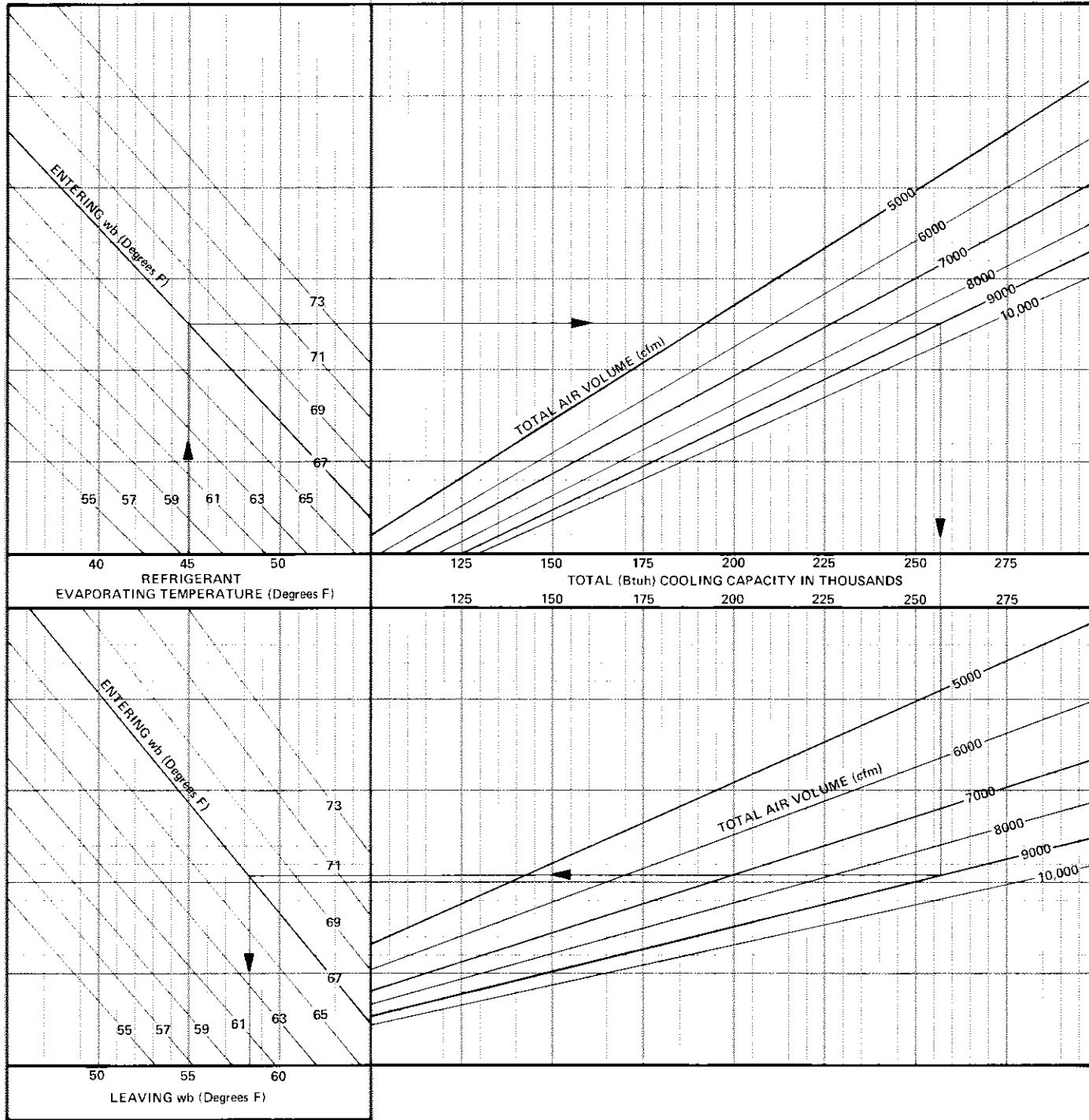
NOTE—Capacity shown is total capacity with two condensing sections running.

# DMS3-360 CONDENSING SECTION CAPACITY CURVE

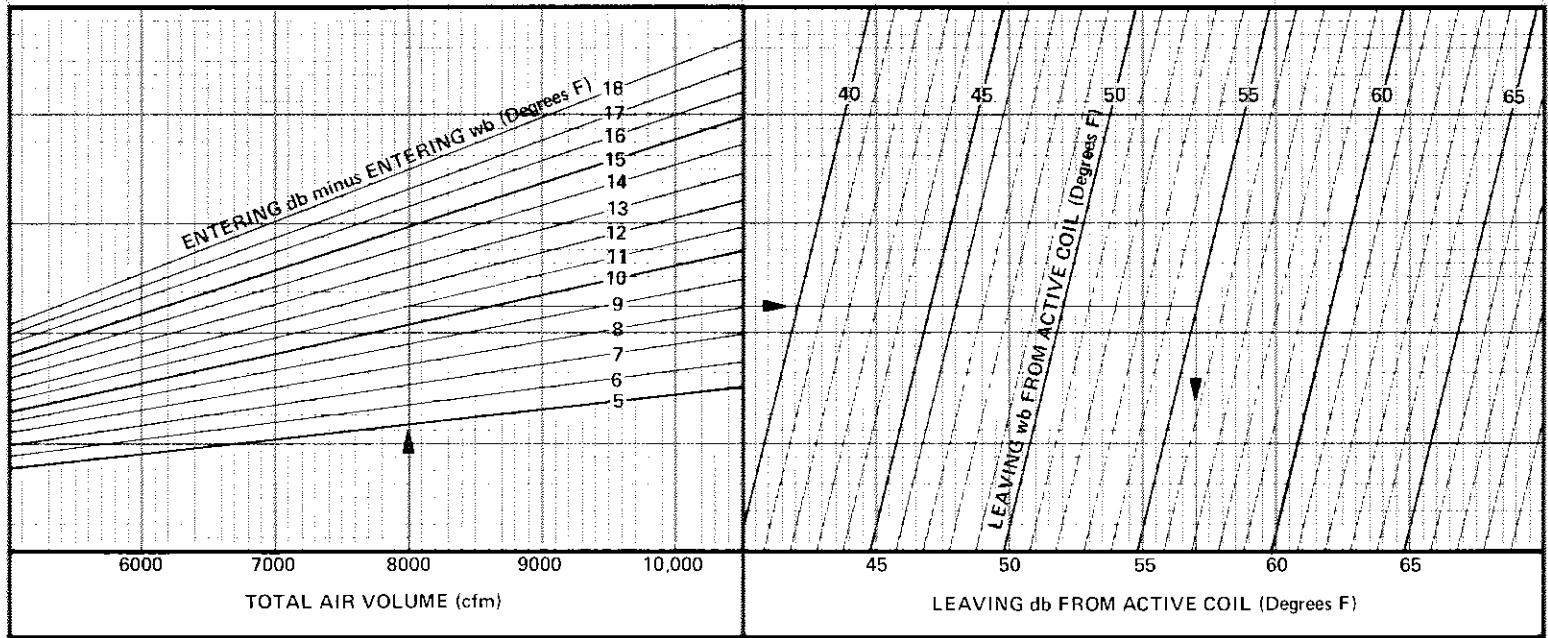


NOTE--Capacity shown is total capacity with two condensing sections running.

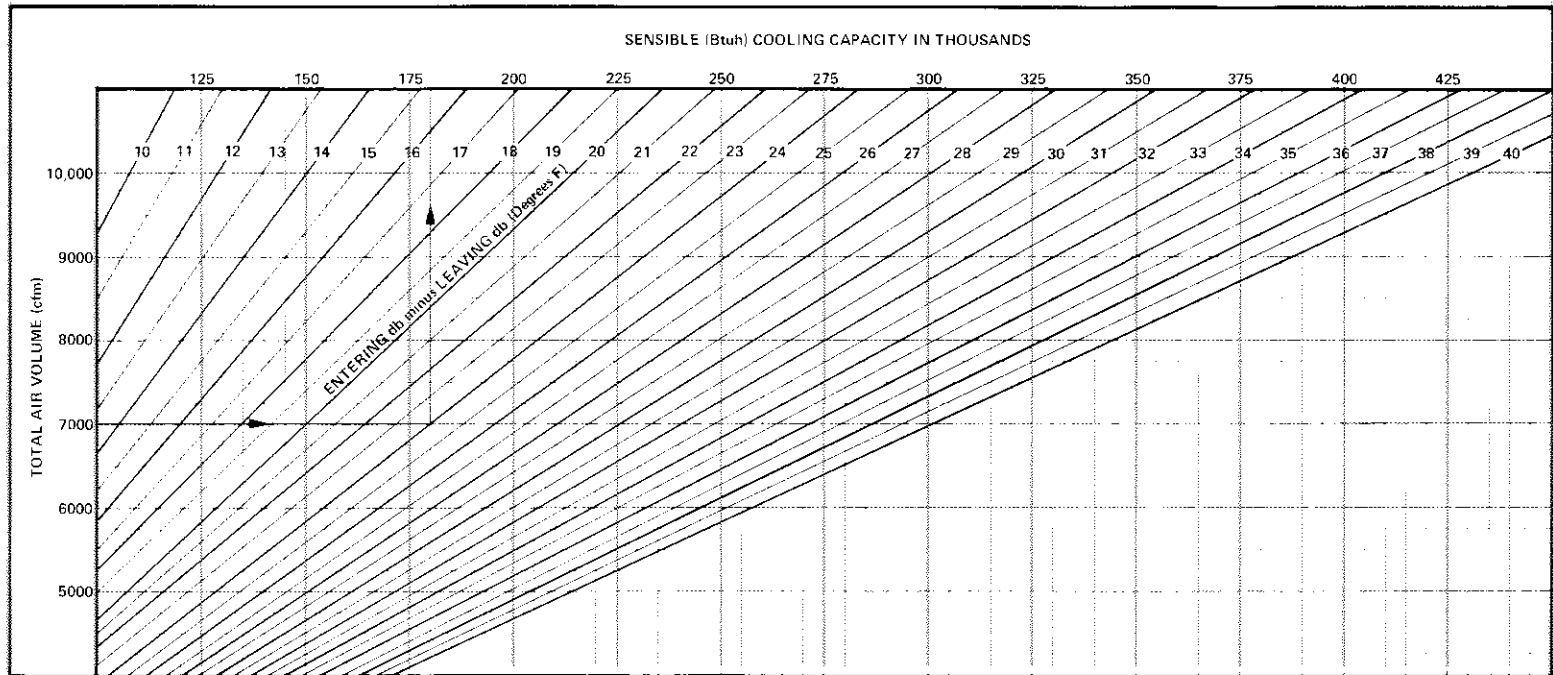
# DMS3-185 EVAPORATOR COIL PERFORMANCE CURVES



## DMS3-185 EVAPORATOR COIL LEAVING DRY BULB TEMPERATURE CURVES

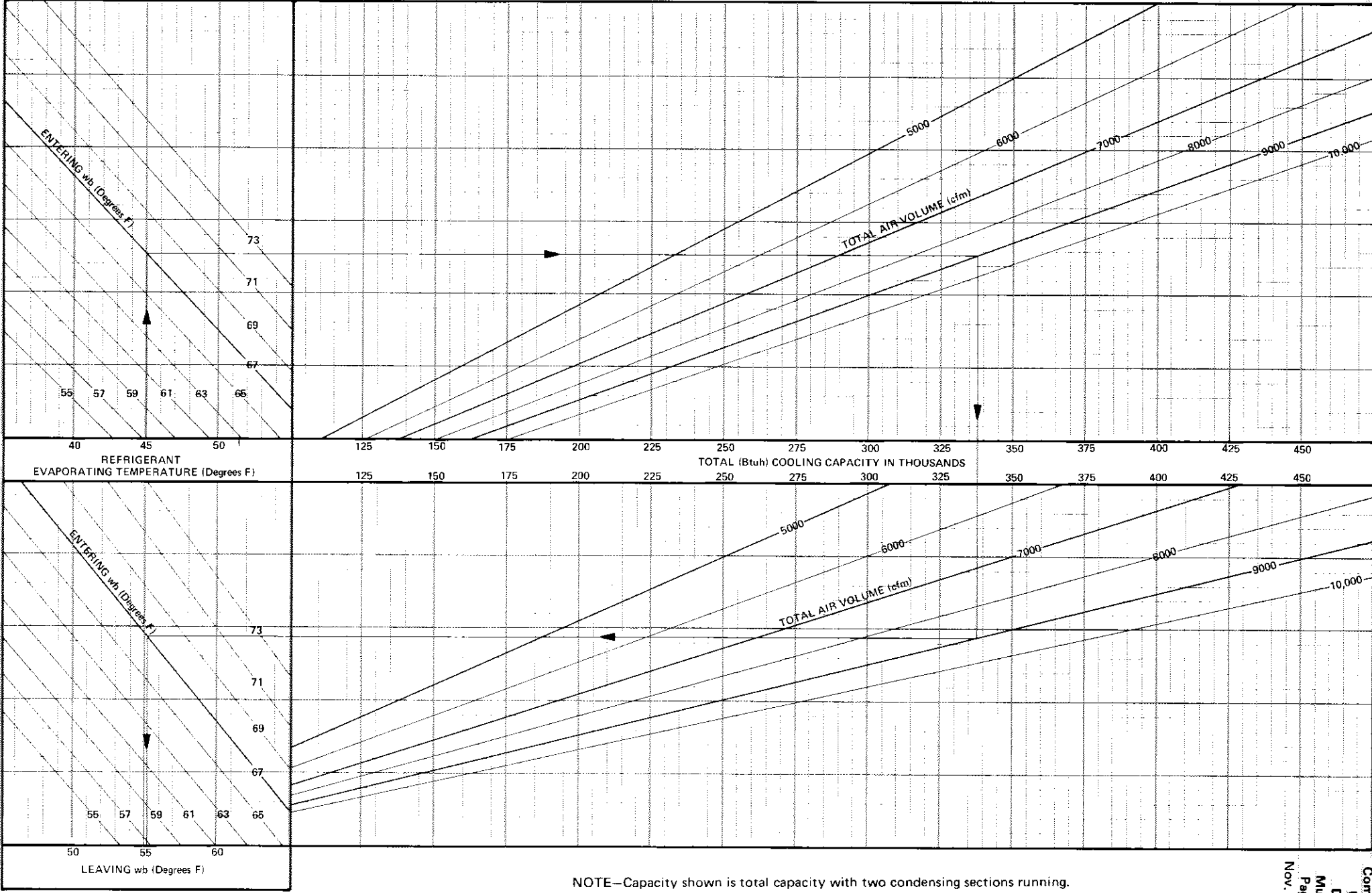


## DMS3-185 EVAPORATOR COIL SENSIBLE COOLING CAPACITY CURVES



NOTE—In rare applications the combination of a very high refrigerant evaporating temperature, low entering wet bulb temperature and an unusually high air volume will result in reading from the charts a greater sensible cooling capacity than the total cooling capacity. Therefore in these applications the sensible cooling capacity is the same as the total cooling capacity.

# DMS3-275-300-360 EVAPORATOR COIL PERFORMANCE CURVES

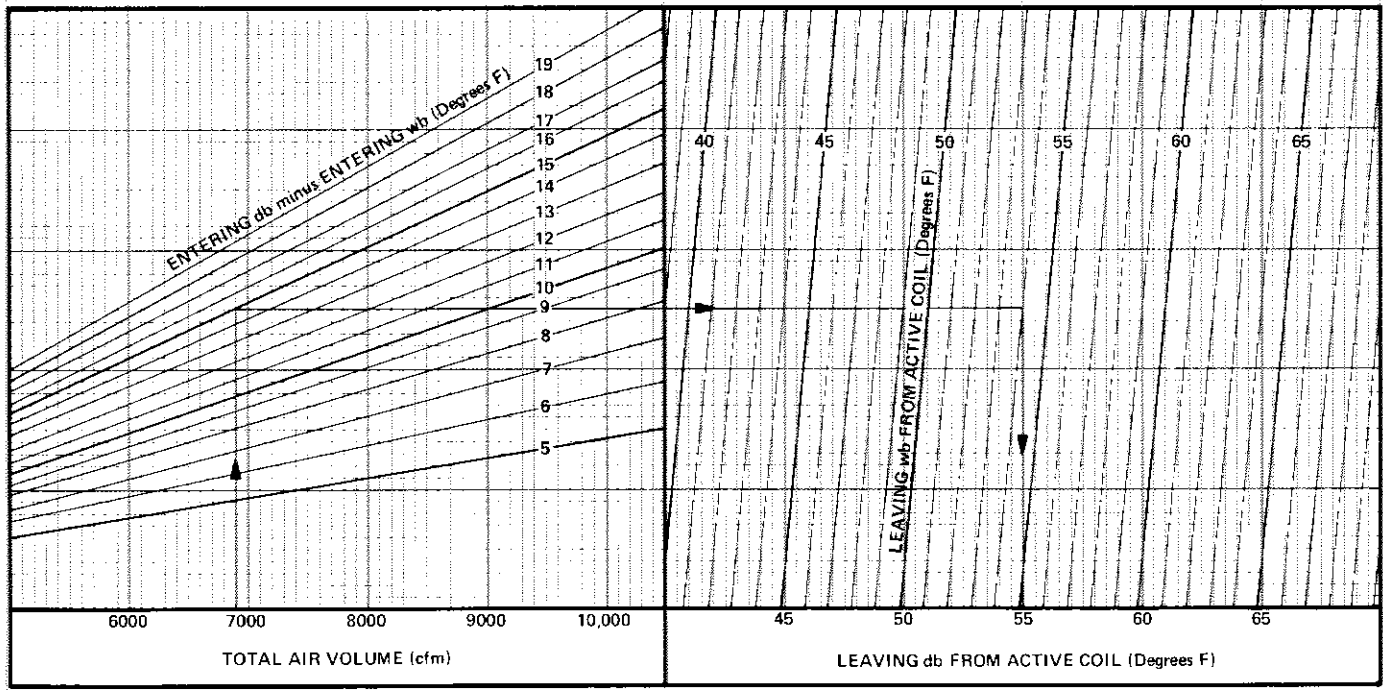


NOTE—Capacity shown is total capacity with two condensing sections running.

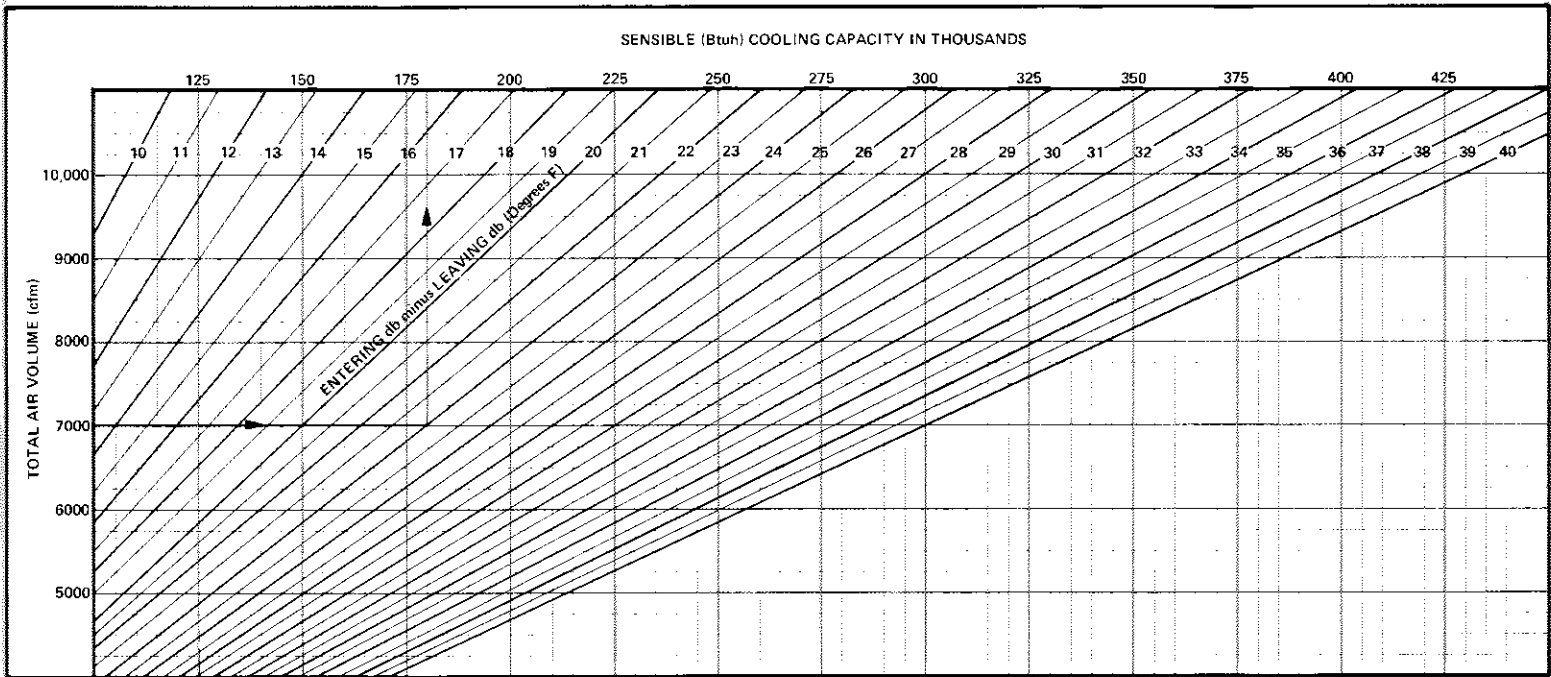


# DMS3-275-300-360 EVAPORATOR COIL LEAVING DRY BULB TEMPERATURE CURVES

NOTE—In rare applications the combination of a very high refrigerant evaporating temperature, low entering wet bulb temperature and an unusually high air volume will result in reading from the charts a greater sensible cooling capacity than the total cooling capacity. Therefore in these applications the sensible cooling capacity is the same as the total cooling capacity.

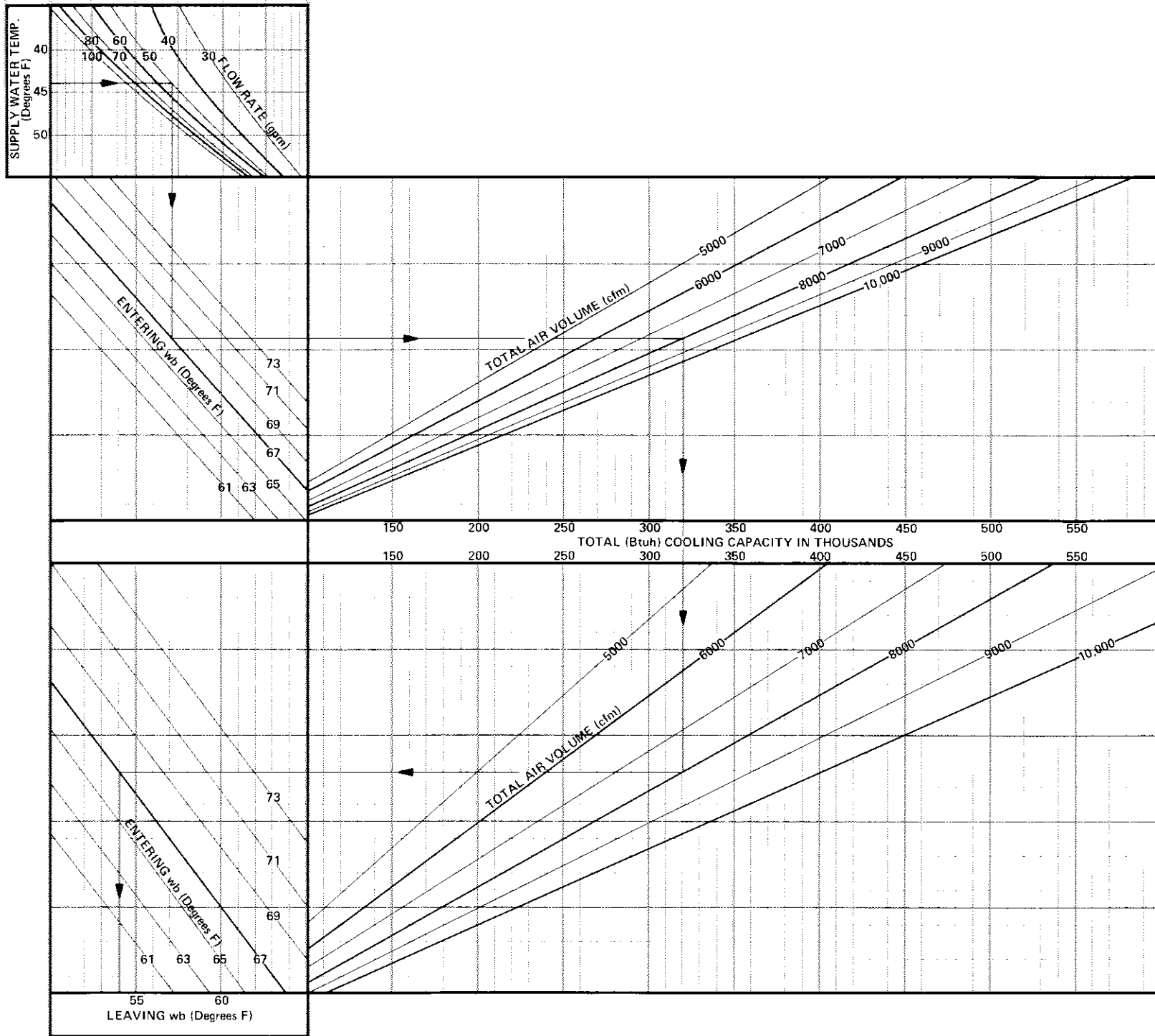


# DMS3-275-300-360 EVAPORATOR COIL SENSIBLE COOLING CAPACITY CURVES



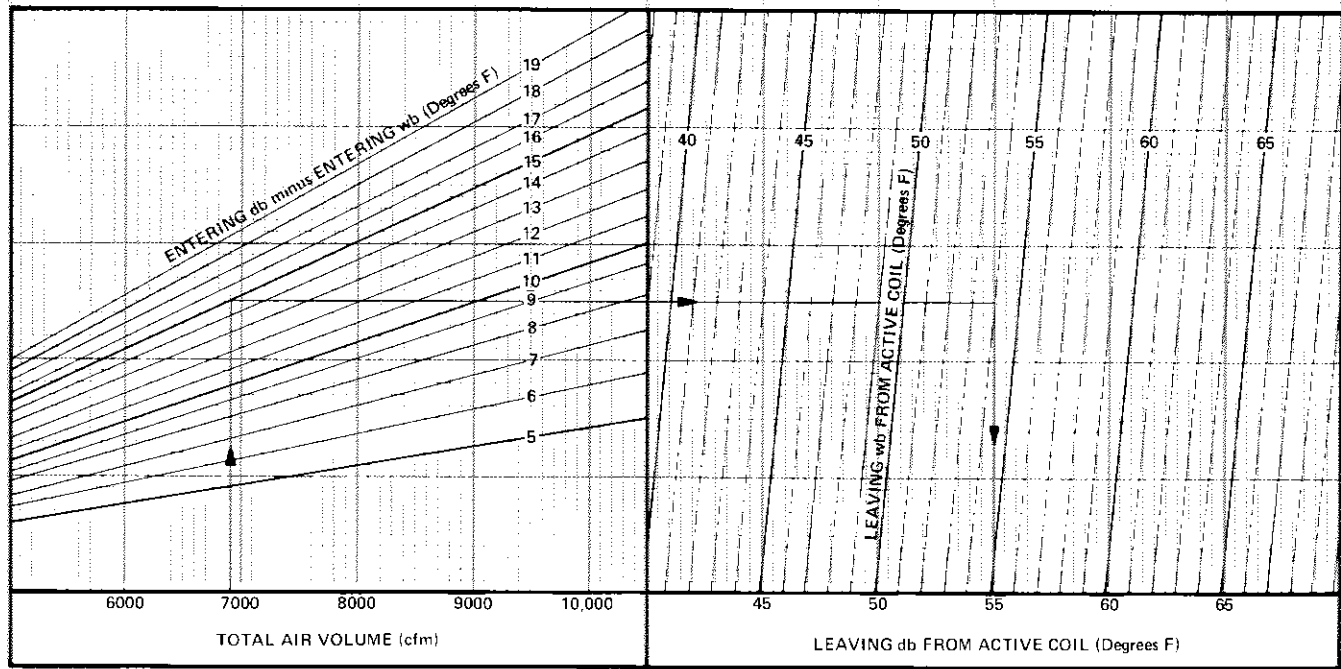
-514-

# DMS3-185-275-300-360 SIX ROW CHILLED WATER COIL PERFORMANCE CURVE



# DMS3-185-275-300-360 SIX ROW CHILLED WATER COIL LEAVING DRY BULB TEMPERATURE CURVE

NOTE—In rare applications the combination of a very high entering water temperature, low entering wet bulb temperature and an unusually high air volume will result in reading from the charts a greater sensible cooling capacity than the total cooling capacity. Therefore in these applications the sensible cooling capacity is the same as the total cooling capacity.



# DMS3-185-275-300-360 SIX ROW CHILLED WATER COIL SENSIBLE COOLING CAPACITY CURVE

