SPACE COOLERS

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The leader in packaged Space Cooling.

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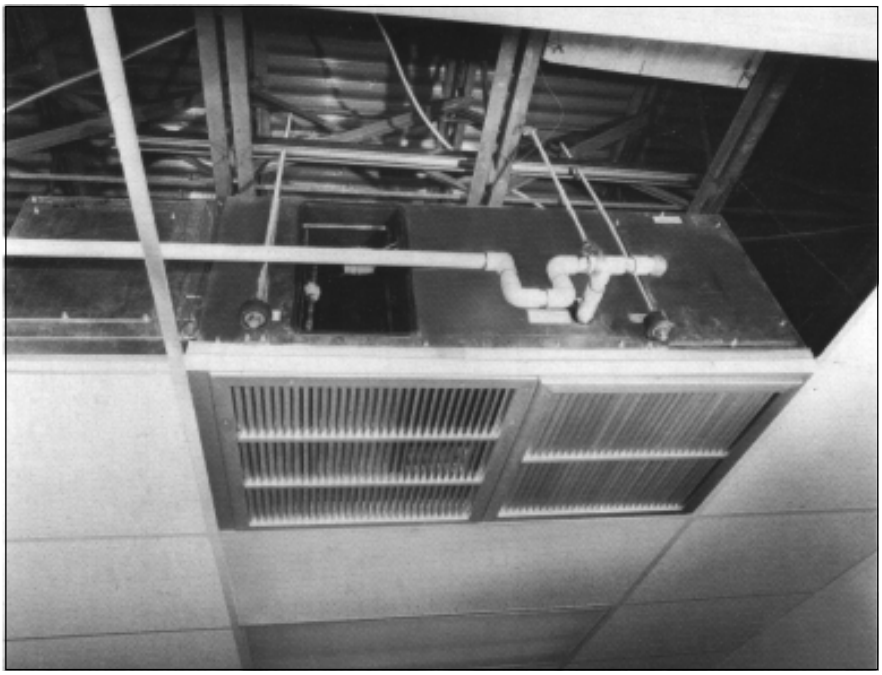
Description

Space Cooler™ from Coil Company.
A nominal 12,000 to 24,000 BTU, 208/230V/1Ø, self-contained air conditioner that installs anywhere you have free ceiling space.



A Space Cooler from Coil Company is the answer to your special cooling and dehumidification needs. And, it fits right into a standard 2' x 4' suspended ceiling panel, with no floor space needed.

You can install Space Coolers almost anywhere without cluttering up valuable wall, window or floor space. Ceiling installation means you can place a Space Cooler directly over the area that needs air conditioning without rearranging interior space.

Install or reposition with ease and less cost! Like ordinary window air conditioners, Space Coolers are self-contained units. There's no outside condensers to worry about - or interconnecting refrigerant piping, or any centralized ductwork for air distribution.

Spot cooling for any room, any reason. With Space Coolers, you don't need to be close to exterior walls for outdoor ducting. That means you can install Space Coolers practically anywhere you need spot cooling and dehumidification - interior offices, computer rooms, booths, communication rooms, libraries, foyers, kitchens, work areas, etc.

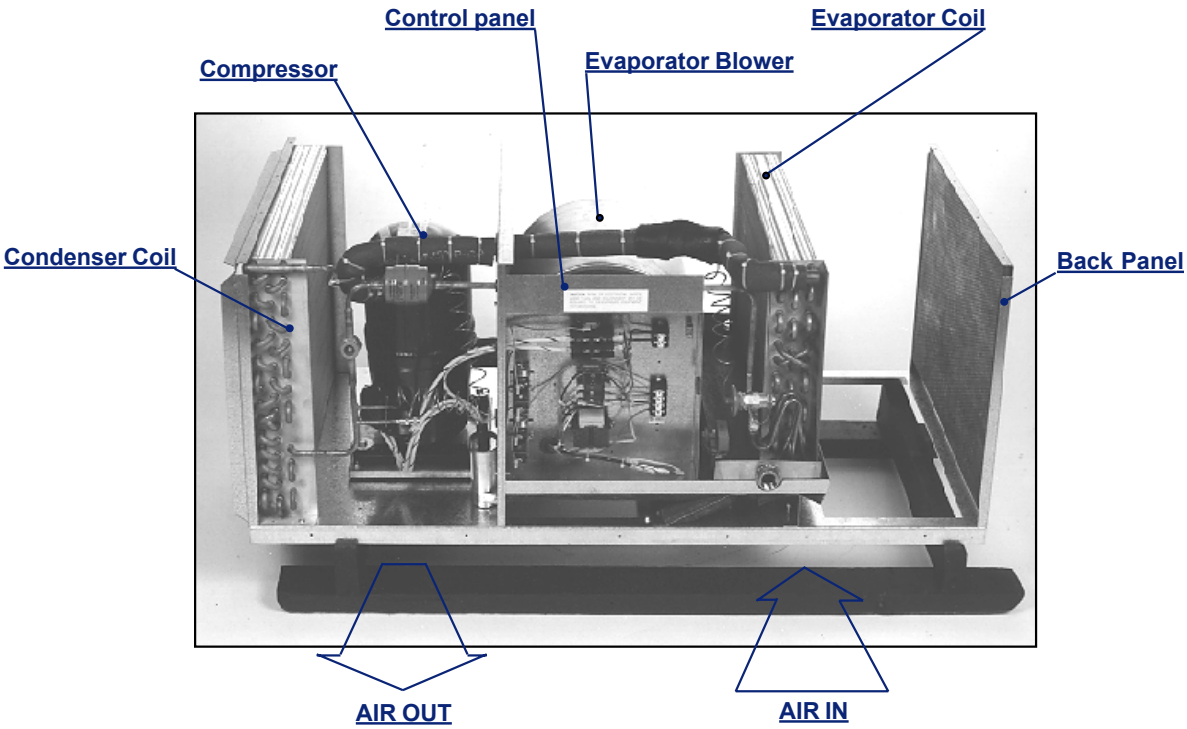
The right look for any interior design — almost invisible. The only part of an operating Space Cooler you see is an attractive louvered grille. No cabinetry, wiring, or piping to clash with your decor. Whether you want spot cooling for a bank lobby or a factory, Space Coolers will fit right in.

Ceiling-to-floor cooling path for efficiency, comfort. Space Coolers direct cooled and dehumidified air exactly where it's needed, because Space Coolers install in the ceiling - usually the least cluttered of all interior surfaces - you can position each unit directly over the area to be cooled, eliminating the obstruction problems encountered with horizontal cooling paths. Side-by-side intake and discharge vents on the Space Cooler create a highly efficient circular path cycle ideal for open or semi-open areas.

Designed for easy servicing. Side access panels on the Space Cooler allow quick in-place servicing through adjacent removable 2' x 4' ceiling panels. In addition, a hinged intake grille opens up for quick filter changes and control adjustments.

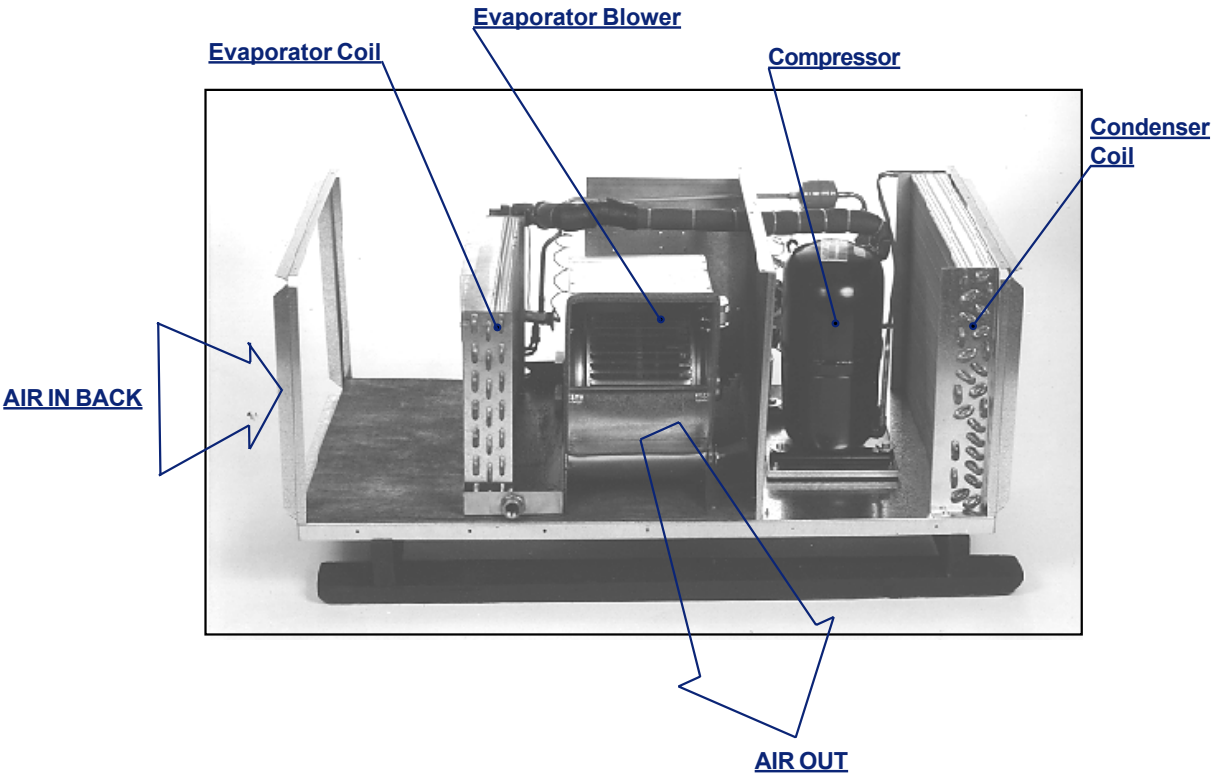
Description

Air Cooled Grille/Diffuser (ACGD)

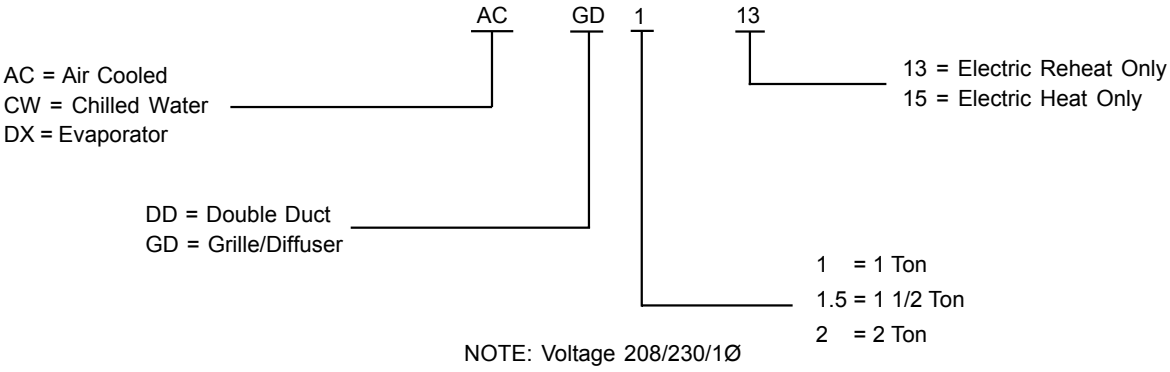


Description

Air Cooled Double Duct (ACDD)



MODEL NUMBER IDENTIFICATION



NOTE: Voltage 208/230/1Ø

STANDARD FEATURES

MAXIMUM DESIGN FLEXIBILITY

For both air cooled or water cooled applications. Units designed for mounting above 2 ft. x 4 ft. suspended panel opening. Provides comfort and temperature control for many types of areas.

COILS

Copper tube, aluminum fin, mounted in a stainless steel drain pan.

COMPRESSOR

Protected by thermal overload protection with both high (manual reset) and low (automatic reset) pressure switches. An expansion valve, a liquid line filter/dryer, and a sight moisture indicator provide a completely self-contained factory precharged refrigeration circuit.

ATTRACTIVE 3-WAY SUPPLY AIR DIFFUSER

AND RETURN AIR GRILLE

Shipped loose for “no duct” units. Single duct units only require a return air grille and double units require neither.

MOTORS / EVAPORATOR

3-speed, long life motors for single phase operation.

CONDENSER

Single speed

QUICK CLIP MOUNTING ISOLATORS

Mean fast and easy installation. Isolation is always an important factor for noise.

CONDENSATE DRAIN PANS

Stainless steel and elevated to allow for proper trapping of condensate. Drain connections (3/4” f.p.t.) are provided on each side of cabinet.

FLOAT SWITCH

Provided for each drain pan to prevent overflow in the event of a blocked drain line or if unit is not installed in a level position. Switch is wired to unit control panel.

ELECTRICAL CONTROL PANEL

Electrical Components to include: contactor (for AC units only), relay(s), control transformer and power supply connections.

FAN(S)

Forward curved, direct drive for both supply fan and condenser fan (air cooled units only).

OPTIONAL FEATURES

- Electric reheat with factory - wired contactor and remote dehumidistat.
- Remote condensate pump package.

STANDARD FEATURES

GENERAL

Provide “Space Cooler” environmental control system. Unit to be self-contained, factory tested and charged. Unit configuration shall be horizontal, designed for ceiling mounting and fit the 2’ x 4’ opening of the “Tee-Bar” ceiling grid. System shall be provided with ETL label.

UNIT CABINETS

Cabinet and chassis shall be constructed of heavy gauge galvanized steel and designed for easy installation and service access. All service access to be through the sides of the unit without removing the unit from the ceiling. Cabinet shall be insulated with 1-1/2 lb. density insulation providing thermal and acoustical treatment. Mounting kit shall include vibration isolators.

AIR DISTRIBUTION SYSTEM

The air flow system shall include a direct drive double width, double inlet forward curved centrifugal fan arranged to draw air through the evaporator. The blower motor shall be mounted on vibration isolators and shall have three speeds to allow air flow to be adjusted to the specific requirements of the installation. The return/supply grille assembly shall include three-way outlet grille and a hinged return grille for filter access. Filter shall be 1” disposable type.

REFRIGERATION SYSTEM

The refrigeration system shall be self contained, and include high-efficiency hermetic compressor designed for heat pump duty with vibration isolation. The copper tube aluminum fin evaporator coil shall be mounted in a stainless steel drain pan. The drain pan shall be equipped with single float switch to stop unit operation in the event of a drain failure. The system shall include an externally equalized thermostatic expansion valve, liquid line filter, dryer sight glass with moisture indicator, manual reset high pressure, automatic reset low pressure switch and pressure fittings for charging, evacuation and service.

ELECTRICAL SYSTEM 208/230/1Ø

The electrical box shall include all contactors, relays and transformers required for unit operation. The electrical box shall be located to allow full service from the side of the unit.

AIR COOLED CONDENSER

(Air Cooled System Only) The condenser coil shall be copper tube aluminum fin and factory mounted, piped and charged. The blower box assembly shall include a direct drive centrifugal fan for use with either plenum air or outside air via ductwork.

CHILLED WATER SYSTEMS

Chilled water systems shall include a copper tube aluminum fin cooling coil.

OPTIONAL FEATURES

ELECTRIC HEAT

The factory installed electric heat/reheat shall be low watt density type mounted downstream of the evaporator coil. Automatic reset safety switch plus a fusible link shall provide for shutdown.

CONDENSATE PUMP

Provide low profile condensate pump capable of 30 gph @ 14’ of head suitable for mounting below the drain outlet and above the ceiling tiles including all traps, and associated piping. Pump to be U.L. listed and include built-in check valve and stainless steel motor shaft, and mounting brackets for attachment to unit.

THERMOSTAT

Remote thermostat, wall mounted.

AC SERIES (AIR COOLED)*

SERIES	ACGD GRILLE/DIFFUSER			ACDD DOUBLE DUCTED (2)		
NOMINAL TONS	1.0	1.5	2.0	1.0	1.5	2.0
MODEL NUMBER	ACGD-1	ACGD-1.5	ACGD-2	ACDD-1	ACDD-1.5	ACDD-2
TOTAL COOLING MBH (3)	13.0	18.9	24.2	13.5	19.9	22.4
SENSIBLE COOLING MBH	8.7	13.1	17.0	9.3	13.8	15.6
AIR FLOW CFM (NOMINAL)	400	600	800	400	600	800
FAN MOTOR HP	1/4	1/4	1/4	1/4	1/4	1/4
FAN SPEEDS	3 SPD	3 SPD	3 SPD	3 SPD	3 SPD	3 SPD
FAN MOTOR AMPS	2.0	2.0	2.0	2.0	2.0	2.0
COMPRESSOR AMPS	8.3	7.2	9.6	8.3	7.2	9.6
FAN MOTOR HP	1/3	1/3	1/3	1/3	1/3	1/3
FAN MOTOR AMPS	2.3	2.3	2.3	2.3	2.3	2.3
AIR FLOW CFM (ACTUAL)	415(M)	611(M)	765(H)	444(H)	654(H)	681(H)
COOLING CIRCUIT FLA	12.6	11.5	13.9	12.6	11.5	13.9
COOLING CIRCUIT MCA	14.6	13.3	16.3	14.6	13.3	16.3
COOLING CIRCUIT MFS	20	20	25	20	20	25
HEATING CIRCUIT FLA	11	20	20	11	20	20
HEATING CIRCUIT MCA	20	25	25	20	25	25
HEATING CIRCUIT MFS	20	25	25	20	25	25
WEIGHT (APPROX. LBS.)	287	302	320	277	292	310

NOTES:

1. CFM delivered on any single duct unit assumes an external static pressure of .05”.
2. CFM delivered on any double duct unit assumes an external static pressure of .10”.
3. Performance based on the following: 80ºF DB/67ºF WB entering air, 95ºF ambient entering condenser air.
4. FLA = Full load amps

   MCA = Minimum circuit amps - (2) Separate power supplies required for heating and cooling in same unit.

MFS = Maximum fuse size

***See expanded performance charts on page 10.**

ACGD (Grille/Diffuser)	ACDD (Double Duct)
1 Ton = Med. Speed	1 Ton = Hi Speed
1 1/2 Ton = Med. Speed	1 1/2 Ton = Hi Speed
2 Ton = Hi Speed	2 Ton = Hi Speed

DX EVAPORATOR

SERIES	DXGD GRILLE/DIFFUSER		
NOMINAL TONS	1.0	1.5	2
MODEL NUMBER	DXGD-1	DXGD-1.5	DXGD-2
TOTAL COOLING MBH (3)	13.0	18.9	24.2
SENSIBLE COOLING MBH	8.7	13.1	17.0
AIR FLOW CFM (NOMINAL)	400	600	800
FAN MOTOR HP	1/4	1/4	1/4
FAN SPEEDS	3 SPD	3 SPD	3 SPD
FAN MOTOR AMPS	2.0	2.0	2.0
HEATING CIRCUIT FLA	11	20	20
HEATING CIRCUIT MCA	20	25	25
HEATING CIRCUIT MFS	20	25	25
WEIGHT (APPROX. LBS.)	162	165	167

1 Ton = Med. Speed
1 1/2 Ton = Med. Speed
2 Ton = Hi Speed

***See expanded performance charts on page 11.**

NOTES:
1. CFM delivered on any single duct unit assumes an external static pressure of .05”.
2. CFM delivered on any double duct unit assumes an external static pressure of .10”.
3. Performance based on the following: 80ºF DB/67ºF WB entering air.
4. FLA = Full load amps
   MCA = Minimum circuit amps - (2) Separate power supplies required for heating and cooling in same unit.
   MFS = Maximum fuse size

CHILLED WATER

SERIES	DXGD GRILLE/DIFFUSER		
NOMINAL TONS	1.0	1.5	2
MODEL NUMBER	DXGD-1	DXGD-1.5	DXGD-2
TOTAL COOLING MBH (3)	13.0	18.9	24.2
SENSIBLE COOLING MBH	8.7	13.1	17.0
AIR FLOW CFM (NOMINAL)	400	600	800
FAN MOTOR HP	1/4	1/4	1/4
FAN SPEEDS	3 SPD	3 SPD	3 SPD
FAN MOTOR AMPS	2.0	2.0	2.0
HEATING CIRCUIT FLA	11	20	20
HEATING CIRCUIT MCA	20	25	25
HEATING CIRCUIT MFS	20	25	25
WEIGHT (APPROX. LBS.)	162	165	167

1 Ton = Med. Speed
1 1/2 Ton = Med. Speed
2 Ton = Hi Speed

***See expanded performance charts on page 11.**

NOTES:
1. CFM delivered on any single duct unit assumes an external static pressure of .05”.
2. CFM delivered on any double duct unit assumes an external static pressure of .10”.
3. Performance based on the following: 80ºF DB/67ºF WB entering air, 45ºF entering water temp.
4. FLA = Full load amps
   MCA = Minimum circuit amps - (2) Separate power supplies required for heating and cooling in same unit.
   MFS = Maximum fuse size

EXPANDED PERFORMANCE - AIR COOLED UNITS*

MODEL	TYPE	SPEED CFM	TOTAL/SENS MBH		
			80/67	75/62.5	72/60
AC-GD-1.0 (MED)	AIR COOLED	H	14.7/10.2	10.7/8.7	8.6/7.8
	1.0 TON	M	13.0/8.7	9.4/7.4	7.6/6.7
	NO DUCT	L	11.9/8.0	8.6/6.8	7.0/6.1
AC-GD-1.5 (MED)	AIR COOLED	H	21.5/15.1	15.6/12.9	12.6/11.5
	1.5 TON	M	18.9/13.1	13.8/11.3	11.1/10.1
	NO DUCT	L	17.3/12.0	12.6/10.2	10.1/8.9
AC-GD-2.0 (HI)	AIR COOLED	H	24.2/17.0	17.6/14.6	14.3/13.1
	2.0 TON	M	20.9/14.5	15.2/12.4	12.3/11.1
	NO DUCT	L	17.8/11.9	13.0/10.2	10.5/9.1
AC-DD-1.0 (HI)	AIR COOLED	H	13.5/9.3	9.8/8.0	7.9/7.2
	1.0 TON	M	11.9/8.0	8.6/6.8	7.0/6.1
	DOUBLE DUCT	L	10.4/7.0	7.5/5.9	6.1/5.3
AC-DD-1.5 (HI)	AIR COOLED	H	19.9/13.8	14.4/11.8	11.6/10.6
	1.5 TON	M	17.4/12.1	12.7/10.3	10.2/9.0
	DOUBLE DUCT	L	15.8/10.9	11.5/9.3	9.3/8.4
AC-DD-2.0 (HI)	AIR COOLED	H	22.4/15.6	16.3/13.3	13.2/4.9
	2.0 TON	M	19.2/13.2	14.0/11.3	11.3/10.1
	DOUBLE DUCT	L	16.3/11.1	11.9/9.5	9.6/8.5

***Contact factory for performance other than shown.**

NOTES:

Air Cooled

All units performance based on 95ºF ambient air to condensers and proper condenser air flow. Double duct airflows and capacity based on .10” external static pressure against supply fan.

EXPANDED PERFORMANCE - CHILLED WATER UNITS

MODEL	TYPE	SPEED CFM	TOTAL SENS MBH		
			80/67	75/62.5	72/60
CW-GD-1.0 (MED)	CHILLED WATER	H	15.5/11.1	10.9/9.6	8.8/8.6
	1.0 TON	M	13.7/9.7	9.7/8.3	7.6/7.4
	NO DUCT	L	12.5/8.8	8.7/7.5	7.8/6.1
CW-GD-1.5 (MED)	CHILLED WATER	H	19.1/14.2	13.5/12.2	11.0/11.0
	1.5 TON	M	17.2/12.5	12.0/10.7	9.7/9.7
	NO DUCT	L	15.7/11.4	11.0/9.7	8.8/8.8
CW-GD-2.0 (HI)	CHILLED WATER	H	26.4/18.9	18.5/16.1	15.1/14.7
	2.0 TON	M	22.5/15.9	16.0/13.6	12.9/12.3
	NO DUCT	L	19.3/13.4	13.6/11.4	11.0/10.3

***Contact factory for performance other than shown.**

NOTES:

Chilled Water

All unit performance based on Ent. Water at 45ºF and leaving at 55ºF.

To figure required GPM, MBN x 1.000 = BTUN ÷ 5000 = GPM flow.

EXPANDED PERFORMANCE - DX UNITS

MODEL	TYPE	SPEED CFM	TOTAL/SENS MBH		
			80/67	75/62.5	72/60
DX-GD-1.0 (MED)	DIRECT EXP.	H	14.7/10.2	10.7/8.7	8.6/7.8
	1.0 TON	M	13.0/8.7	9.4/7.4	7.6/6.7
	NO DUCT	L	11.9/8.0	8.6/6.8	7.0/6.1
DX-GD-1.5 (MED)	DIRECT EXP.	H	21.5/15.1	15.6/12.9	12.6/11.5
	1.5 TON	M	18.9/13.1	13.8/11.3	11.1/10.1
	NO DUCT	L	17.3/12.0	12.6/10.2	10.1/8.9
DX-GD-2.0 (HI)	DIRECT EXP.	H	24.2/17.0	17.6/14.6	14.3/13.1
	2.0 TON	M	20.9/14.5	15.2/12.4	12.3/11.1
	NO DUCT	L	17.8/11.9	13.0/10.2	10.5/9.1

***Contact factory for performance other than shown.**

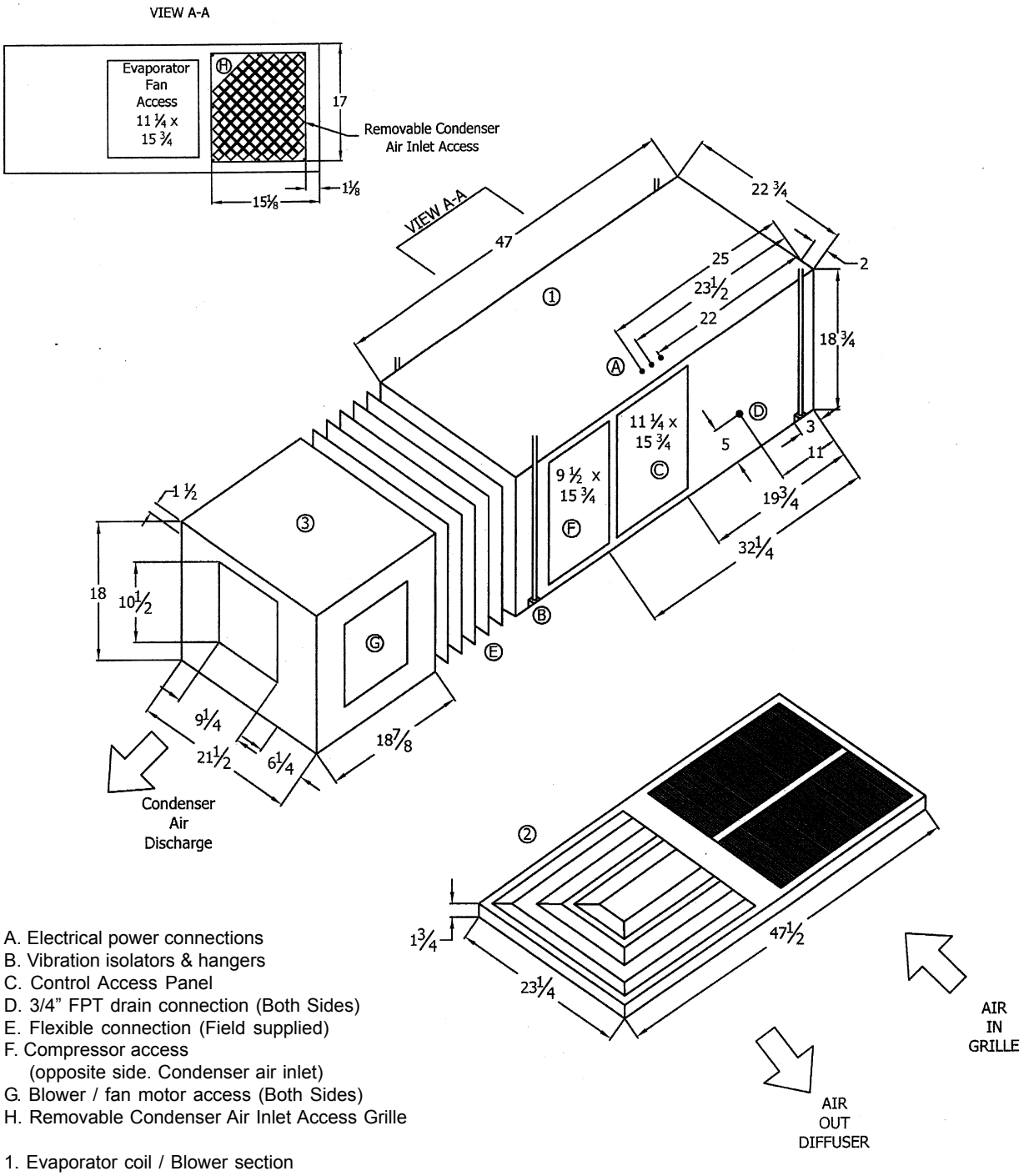
NOTES:

DX units

All unit performance based on remote condensing unit to be R-22 at 45° SST and match required capacity.

Air Cooled Grille/Diffuser - Dimensions

ACGD 1, 1 1/2, 2 Ton Units



A. Electrical power connections
B. Vibration isolators & hangers
C. Control Access Panel
D. 3/4" FPT drain connection (Both Sides)
E. Flexible connection (Field supplied)
F. Compressor access
(opposite side. Condenser air inlet)
G. Blower / fan motor access (Both Sides)
H. Removable Condenser Air Inlet Access Grille

1. Evaporator coil / Blower section
2. Return / Supply grille (gloss white)
3. Condenser blower box

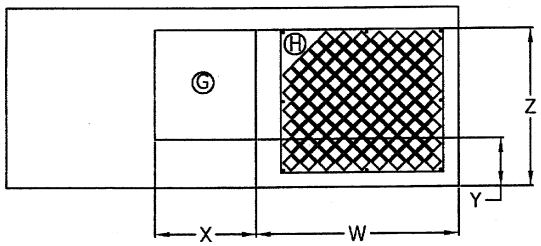
Air Cooled Double Duct - Dimensions

ACDD 1, 1 1/2, 2 Ton Units

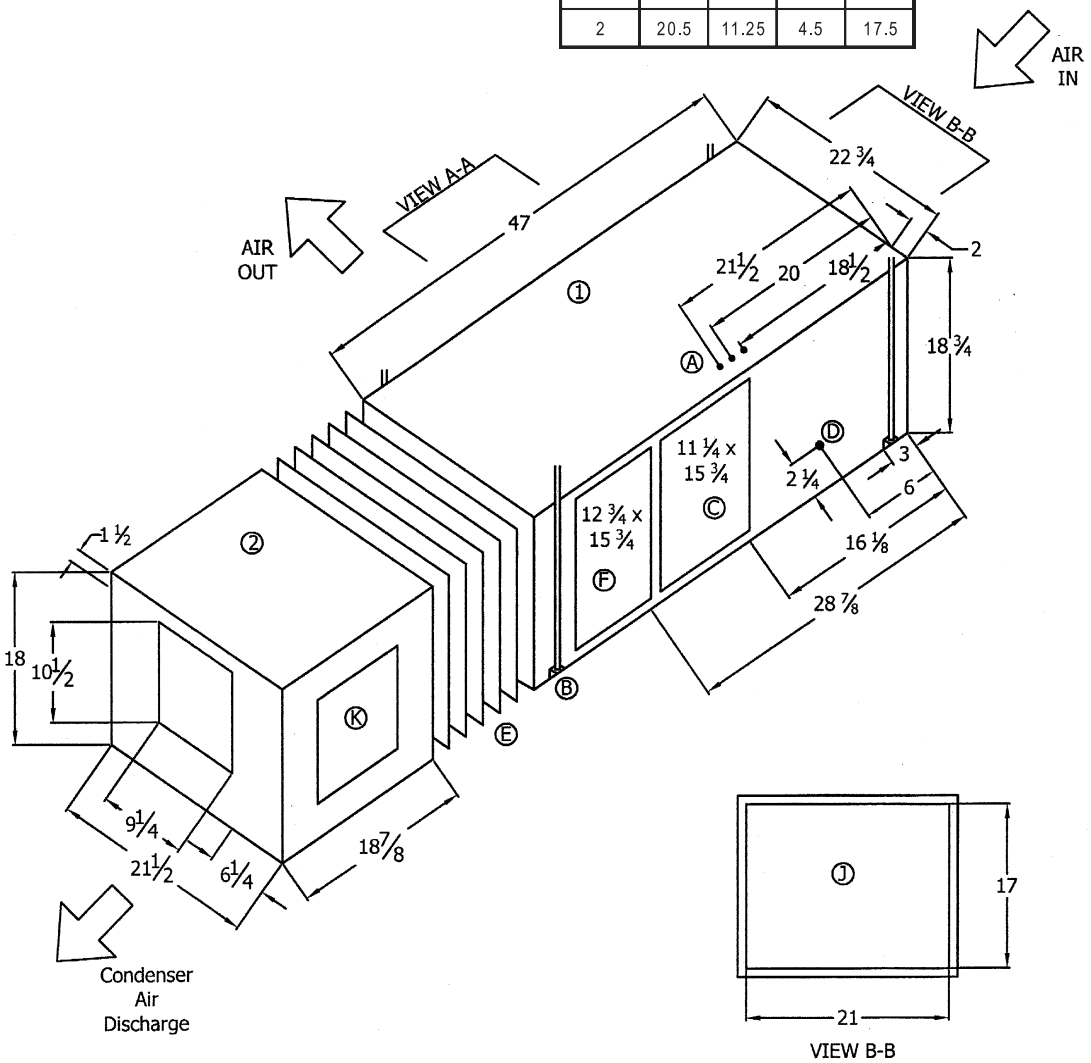
A. Electrical power connections
B. Vibration isolators & hangers
C. Control access panel
D. 3/4" FPT drain connection (Both Sides)
E. Flexible connection (Field Supplied)
F. Compressor access
G. Supply fan opening
H. Condenser inlet air open access with removable grille
J. Return air opening
K. Blower / fan motor access (Both Sides)

1. Evaporator coil / Blower section
2. Condenser blower box

VIEW A-A



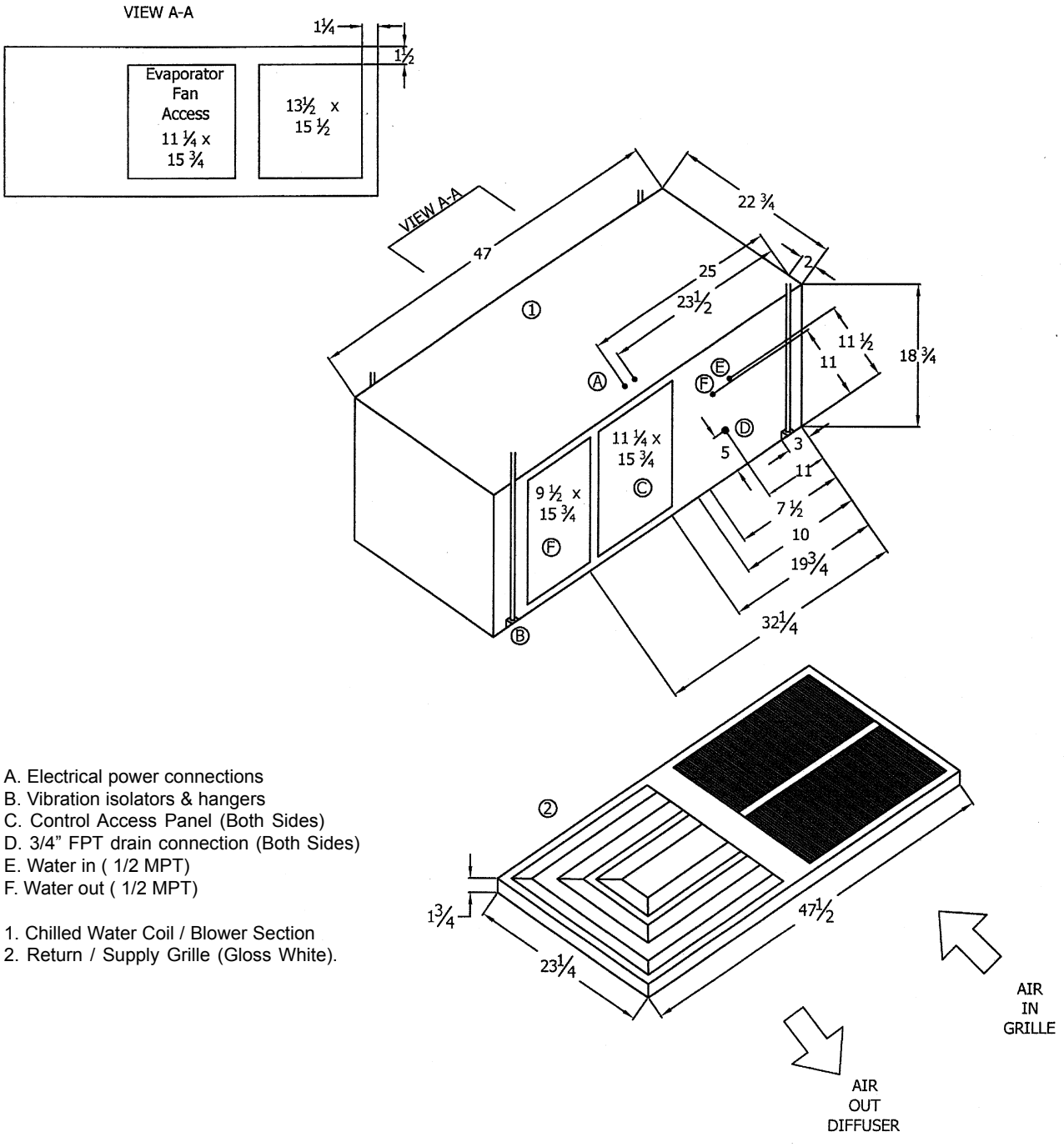
Tonnage	W	X	Y	Z
1	25.5	8.25	4	14.25
1.5	21	10.25	5.25	16.5
2	20.5	11.25	4.5	17.5



VIEW B-B
RETURN AIR OPENING

Chilled Water - Dimensions

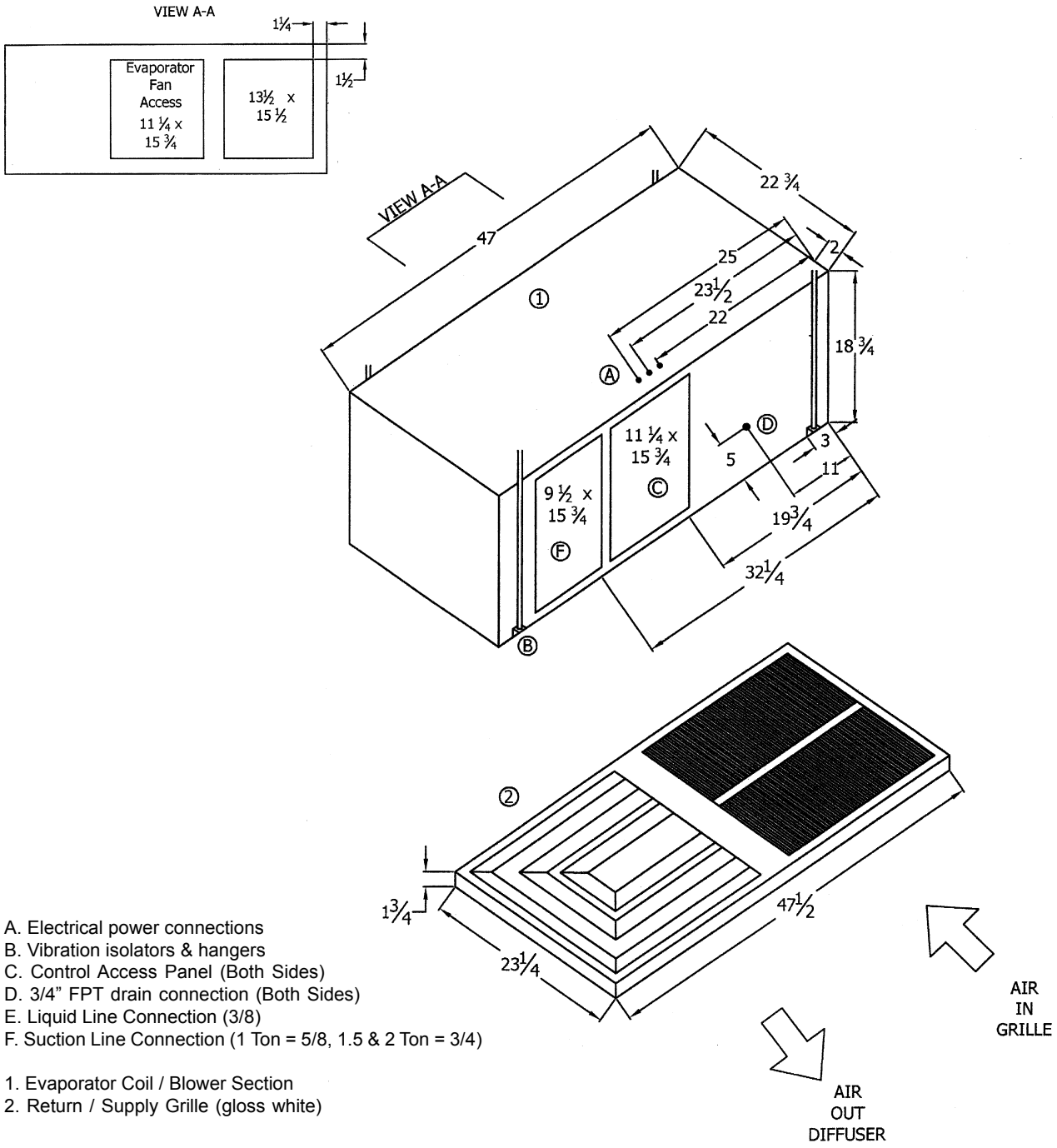
CWGD 1, 1 1/2, 2 Ton Units



A. Electrical power connections
B. Vibration isolators & hangers
C. Control Access Panel (Both Sides)
D. 3/4" FPT drain connection (Both Sides)
E. Water in (1/2 MPT)
F. Water out (1/2 MPT)

1. Chilled Water Coil / Blower Section
2. Return / Supply Grille (Gloss White).

DXGD 1, 1 1/2, 2 Ton Units



A. Electrical power connections
B. Vibration isolators & hangers
C. Control Access Panel (Both Sides)
D. 3/4" FPT drain connection (Both Sides)
E. Liquid Line Connection (3/8)
F. Suction Line Connection (1 Ton = 5/8, 1.5 & 2 Ton = 3/4)

1. Evaporator Coil / Blower Section
2. Return / Supply Grille (gloss white)

GENERAL GUIDELINES

Coil Company Space Coolers have been designed for installation in a standard two foot by four foot ceiling tile opening. Controls and normal service can be provided through access to one side of the unit. Twenty-four inch clearance on all sides is recommended, although clearance on one side is sufficient for routine service.

The units are designed to be mounted with 3/8" all-thread rods. Mount the all-thread through the mounting bracket and vibration isolator provided. Raise the unit above the ceiling at least three inches. Secure with locknuts.

Slide the filter/grille assembly into the suspended ceiling frame.

Lower the unit down on the filter/grille assembly, approximately 1/2" inch. The unit is ready for electrical and water connections.

AIR COOLED UNITS

The condenser blower assembly must be suspended above the ceiling, utilizing all-thread rods or suitable strapping. The rear flanges are designed to be secured to the rear of the main unit with screws. It is recommended, where possible, to utilize a field-fabricated flexible connector between the blower assembly and the main unit.

The condenser/blower assembly for indoor operation can be utilized with ductwork. Ductwork for the condenser blower assembly for outdoor operation must be sized to accommodate the published external static pressures.

ELECTRICAL

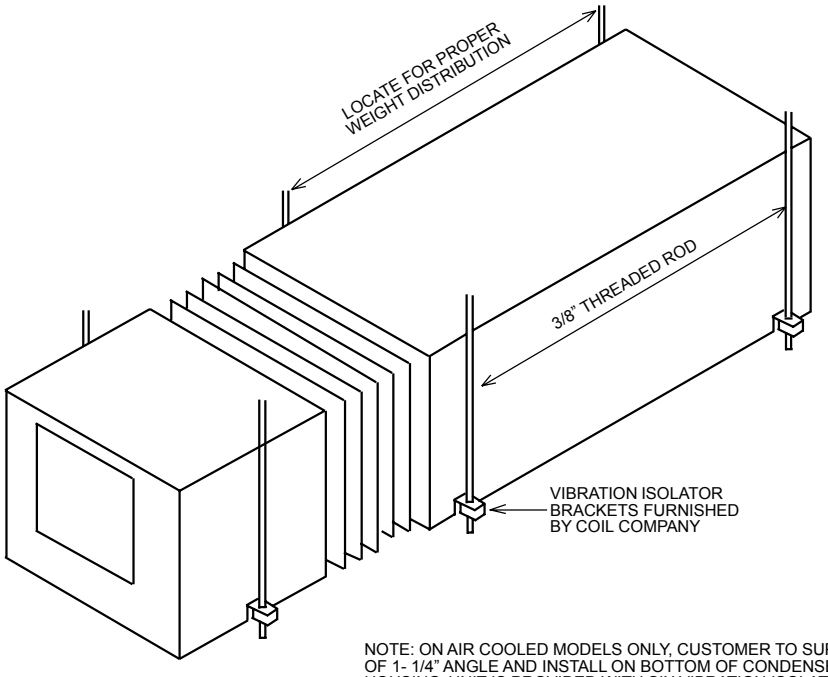
An externally fused disconnect or circuit breaker must be provided for 208/230 Volt - 1 Phase/60 Hertz service as required by local code. Connect power wiring in accordance with electrical diagram in control compartment and local code.

PIPING

For the chilled water models, 1/2 inch MPT supply and return connections are provided. Install water shut-off valves and unions (by others) on both the supply and return lines.

A 3/4" FPT line must be connected to the condensate drain. The drain line must run separately to the building drain or a drain receptacle.

MOUNTING DETAIL



NOTE: ON AIR COOLED MODELS ONLY, CUSTOMER TO SUPPLY 2 - 6" PIECES OF 1- 1/4" ANGLE AND INSTALL ON BOTTOM OF CONDENSER BLOWER HOUSING. UNIT IS PROVIDED WITH SIX VIBRATION ISOLATOR BRACKETS

Space Cooler Product Warranty

COIL COMPANY, LLC WARRANTS TO THE ORIGINAL OWNER/USER OF THE COIL COMPANY, LLC UNIT IDENTIFIED ABOVE TO BE FREE OF ORIGINAL DEFECTS IN MATERIAL OR WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE EFFECTIVE DATE OF THIS WARRANTY.

The Warranty extends for twelve (12) months from date of start-up, but no longer than eighteen (18) months from the date of shipment. The warranty does not include the filter.

This Warranty on the units obligates Coil Company, LLC to repair or replace, free of charge, any part or parts that show evidence of being defective in material and workmanship and are deemed so defective by personnel of Coil Company, LLC. The part must be returned for replacement with the proper information as required.

Coil Company, LLC assumes no obligation for labor required to replace the defective part or parts nor the freight or postage required to return or to secure the part which shall be at the cost and expense of the Original Owner/User. Warranty does not include breakage or rupture of water tubing when subjected to freezing temperatures.

Coil Company, LLC, will replace the defective part or parts within 21 days after the return to the Coil Company, LLC of such defective part or parts provided notice of such defect was given by Original Owner/User within the Warranty period.

An optional, additional four-year protection plan on the compressor is available at modest cost at the time of original unit sale only. This obligates Coil Company, LLC to replace f.o.b. factory, a defective compressor with a comparable compressor of equal capacity free of charge. No responsibility is assumed by Coil Company, LLC for refrigerant, labor, or freight to and from factory.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE ARE LIMITED IN DURATION TO ONE (1) YEAR FROM EFFECTIVE DATE OF THIS WARRANTY. COIL COMPANY, LLC IS NOT LIABLE FOR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT IN PART. THERE ARE NO OTHER OBLIGATIONS ON THE PART OF THE COIL COMPANY, LLC.

Warranty of Fitness

Coil Company, LLC does not provide a warranty of fitness since, in good faith Coil Company, LLC cannot anticipate or control the many different conditions under which the products of Coil Company, LLC may be used.

Coil Company LLC Manufactures:

Coils

Air Handlers

Space Coolers

COIL COMPANY

HEAT EXCHANGE • AIR HANDLING

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