

COOLERADO M50

SUBMITTAL DATA SHEET



JOB NAME:	LOCATION:	
CONTRACTOR:	PROJECT MANAGER:	
SUPERINTENDENT:	SUBCONTRACTOR:	
PURCHASER:	ORDER NO:	
ENGINEER:	PROJECT MANAGER:	
SUBMITTED TO:	APPROVAL:	CONSTRUCTION:
SUBMITTED BY:	DATE:	
UNIT DESIGNATION:	SCHEDULE NO:	MODEL NO:

COOLING PERFORMANCE

Outdoor Design Temperature _____°F _____°C DB, _____°F _____°C WB
Elevation Above Sea Level..... FT, _____ M
Intake Air External Static Pressure..... IWG, _____ Pa
Intake Air Flow..... CFM, _____ LPS
Conditioned Air Ext. Static Pressure IWG, _____ Pa
Total Conditioned Air @ Full Speed..... CFM, _____ LPS
Conditioned Air Temperature (+/- 2).....°F _____°C DB, _____°F _____°C WB
Conditioned Air Added Humidity.....°F _____°C DB, _____°F _____°C WB
Working Air External Static Pressure..... IWG, _____ Pa
Working Air Flow..... CFM, _____ LPS

ELECTRICAL DATA

200 – 277V, 50 – 60Hz, 790W max., 4.0 Amp, EC Motor
FLA..... 5
Power Supply (max. overcurrent protection)..... 20
Min. unit disconnect FLA 10
Ampacity 15 – 20
Min. wire size 14 AWG w/ ground
External Fusing 10 – 20 amp
Phase 1
HZ (require to spec) 50/60
Power input requirement (watts) 790
EC, backward curved impeller, 3D, 500mm diameter..... ☐

TOTAL UNIT WEIGHT/SHIPPING DIMENSIONS

Dry Install Weight:..... 370 lbs (168 kg)
Operating Weight (wet)..... 420 lbs (190.5 kg)
Shipping Dimensions..... 30" (1,524mm)W x 50" (1,270mm)L x
..... 73" (1,854mm)H, 400 LBS (181.4 Kg)

WATER

*Minimum Flow with 1/2" NPT Connection..... 1.4 GPM (5.3 Lt)
Supply Line Dynamic Pressure at Unit 40 – 80 PSI / 225 – 500 kPa

*The water flow rate listed is the instantaneous peak rate when the solenoid valve inside the unit is on and 0 gpm (lps) when the valve is off. The solenoid valve cycles on once every two minutes for varying lengths of time (5 to 40 second on time).

CONFIGURATION ☐ Indoor ☐ Outdoor
Working Air Connections ☐ L Side & R Side (or) ☐ Top

FACTORY OPTIONS

Thermostat with auto-variable motor speed control ☐
Insulated Product Air Plenum ☐
Working Air Louver(s), Replaces Side Access Panel(s) ☐

STANDARD FEATURES

- 3-year limited warranty on HMX; 1-year warranty on all other components
- EER 100+ (Energy Efficiency Ratio)
- COP 29.3+
- Quiet and vibration free operation
- Cooling capacity increases as ambient temperature increases
- Low maintenance, simple winterization
- Low water use
- Patented thermodynamic cycle
- ABS pan
- Powder coated, electro-galvanized steel housing
- All electrical/water connections can be accessed from front
- Easy to connect power/control wiring
- Integrated control module for reliable, economical operation
- Patented, high technology, poly heat and mass exchanger (HMX)
- Biocide integrated into HMX fibers
- Removable panels - greater durability, ease of access
- No chemical refrigerants or ozone depleting chemicals
- No humidity added or removed
- Fresh, outside air for better indoor air quality (IAQ)
- Filtered air with reduced dust, pollens and allergens
- No tool filter access panel - 3 standard size 20" (508mm) x 25" (635mm) x 2" (50.8mm) MERV 8 ring frame air filters
- Tapered intake air plenum for fan efficiency/even air distribution
- Conditioned air plenum provided – accommodates most any size, shape, duct
- Optional factory working air louvers can be mounted in side access panels
- Compact, easy to install, ideal height 69.00" cabinet
- 4 lifting lugs on the bottom of the unit for easier and safer handling during installation
- High efficiency, electronically commutated motor (ECM)
- Optional auto-variable speed thermostat available
- Supplied with water filter (30 nominal micron, 9.875" cartridge)
- Drain with multi-dimensional port and screwed into the base
- Pre-cut exhaust cut out on the top
- Service covers with tear drop mounting holes to avoid need to completely remove the screws
- Adjustable feet to level the unit on uneven ground
- Pressure measurement port in the wet section for balancing the air flow thru the HMX's
- Low water pressure cut off switch
- Made in the USA

COOLERADO M50 PERFORMANCE TABLE*

Coolerado M50 Performance Table*										
External Static Pressure		Full Speed Product Air Flow			Approx. Product Air Wet Bulb Approach	Product Approx. = WB + below		Working Air Flow		
Inches H ₂ O	Pascal	CFM	CMH	LPS		F	C	CFM	CMH	LPS
0.00	0	1350	2290	635	94%	2	1.1	1000	1700	470
0.10	24.9	1280	2170	601	95%	2	1.1	950	1610	445
0.20	49.8	1200	2050	567	95%	1	.6	890	1510	420
0.30	74.7	1140	1930	534	98%	1	.5	840	1430	395
0.40	99.5	1060	1810	500	100%	0	0	790	1340	370
0.50	124.4	990	1690	466	103%	-1	-.6	730	1240	345
0.60	149.3	920	1560	433	107%	-2	-1.1	680	1150	320
0.70	174.2	850	1440	399	110%	-3	-1.7	630	1070	295
0.80	199.1	780	1320	366	113%	-4	-2.2	570	970	271
0.90	224	710	1200	332	117%	-5	-2.8	520	880	246
1.00	248.9	630	1080	298	120%	-6	-3.3	470	800	221
*Performance at sea level: Performance increases ~0.5% for every 1,000 feet / 305 m increase above sea level.										
Example: Design 98F DB / 62F WB, 0.1" ext. static, 98 - 62 = 36, 36 * 0.95 = 34.2, 98 - 34.2 = 63.8 °F Product Air Temperature ≈ Design WB + 2 = 64 °F										
Example: Design 36C DB / 16C WB, 0.1" ext. static, 36 - 16 = 20, 20 * 0.95 = 19, 36 - 19 = 17C Product Air Temperature ≈ Design WB + 1.1C = 18.1 °C										

CONTROL SYSTEMS



Optional Auto-Variable Speed Thermostat
Surface Mounted
3.5"W x 5"H x 1.25"D
Requires 4 Low Voltage Conductors

CLEARANCE TOLERANCES

Secure M50 units to angle support rail with screws located within 1" of the bottom of the base. There is an ABS drain pan that is above the bottom 1 inch. There are also 4 1/4" bolt holes at each corner that can be used to support or hold the unit. There are also 4 leveling feet below the unit.

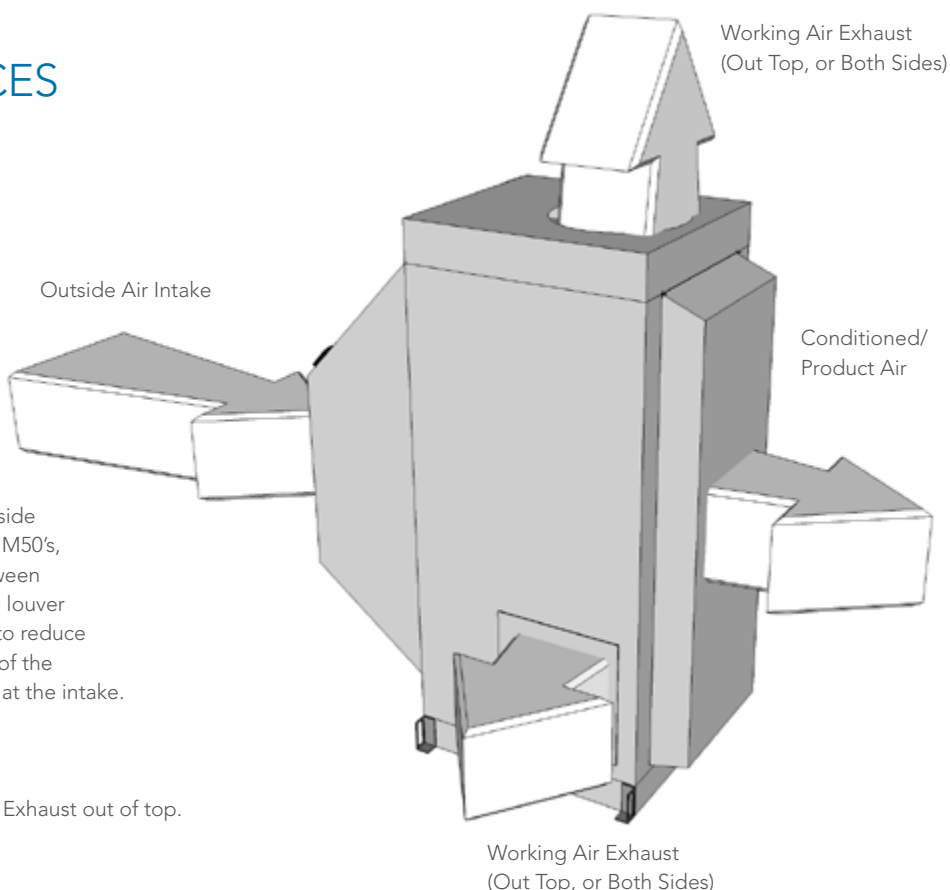
Minimum Clearances:

Sides: 0" If working air is exhausted from the top, no side clearance is needed. If (4) side louvers are used on (2) M50's, and stacked next to each other, the min. spacing between each unit should be 21". This will allow removal of the louver for servicing. If a baffle is needed between the M50's to reduce mixing, a 21" wide x 30" tall baffle would direct most of the Exhaust air out the back of the units, reducing mixing at the intake.

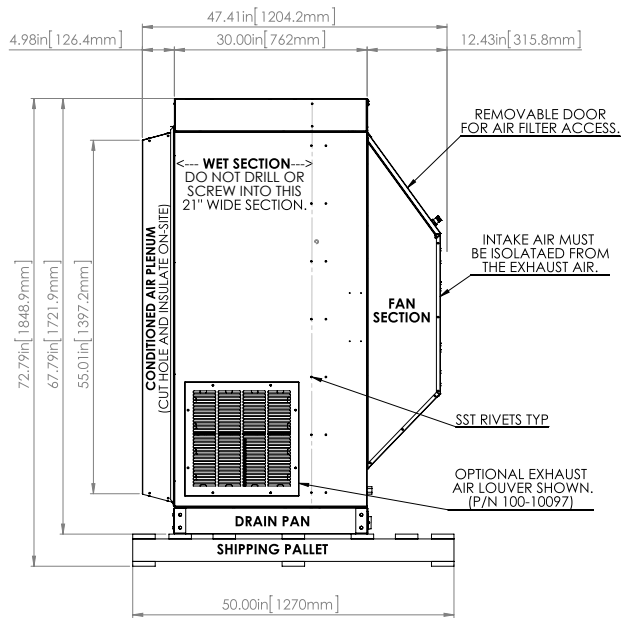
Air Intake (fan) Side: 24"

Conditioned Air Plenum Side: 12"

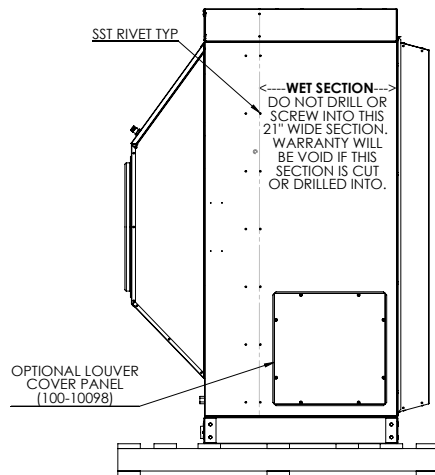
Top: 0", or 6" for installation or more if Working Air is Exhaust out of top.



COOLERADO M50



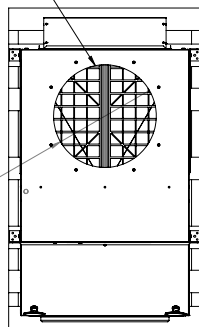
LEFT SIDE VIEW



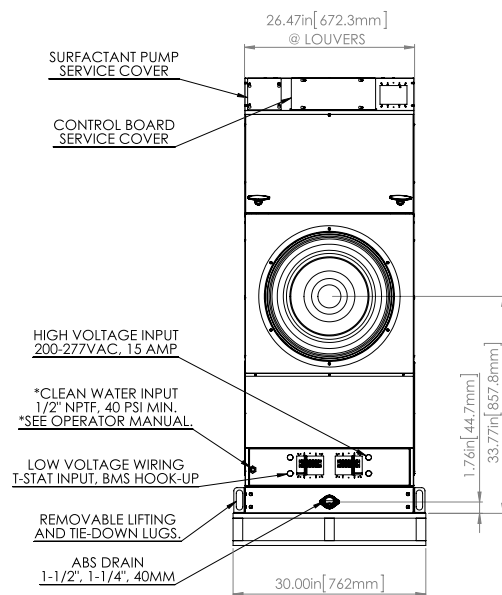
RIGHT SIDE VIEW

TOP EXHAUST OPTION:
REQUIRES A HOOD OR DUCT
TO PROTECT HMX FROM SUN
AND DIRECT HUMID AIR AWAY
FROM THE INLET AIR INTAKE.

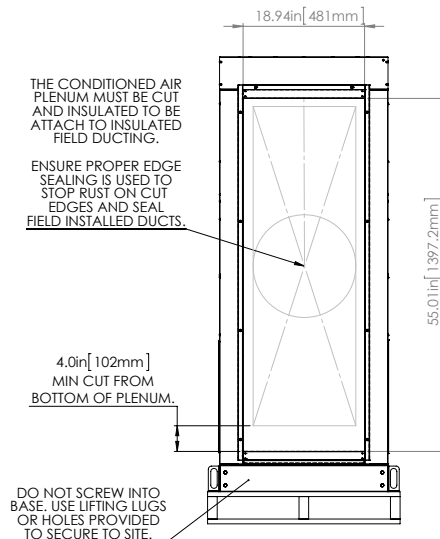
[406.4]
Ø 16.00 HOLE FOR
TOP EXHAUST CAN
BE COVERED WITH
LOUVER COVER
(P/N 100-10098)
WHEN SIDE EXHAUST
OPTIONS ARE USED.



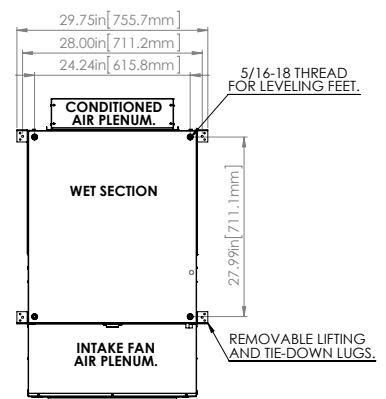
TOP VIEW



RIGHT SIDE VIEW



BACK VIEW



BOTTOM VIEW
(SHOWN W/O PALLET)

