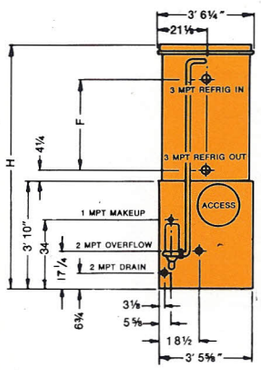
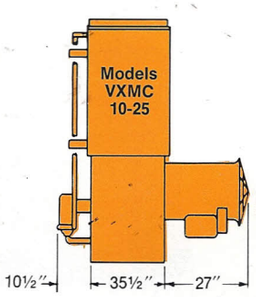
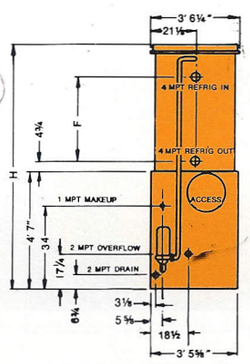
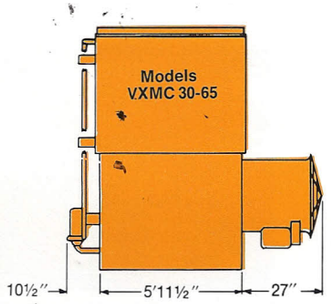
# Engineering Data / Models VXMC 10

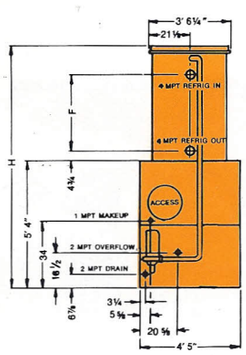
**Do not use for construction. Refer to factory certified dimensions.**
This brochure includes data current at the time of publication which should be reconfirmed at the time of purchase.

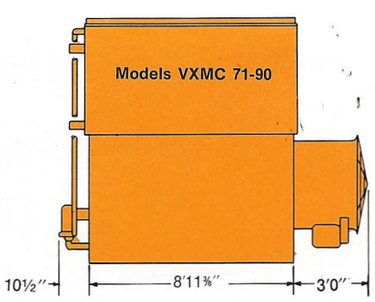


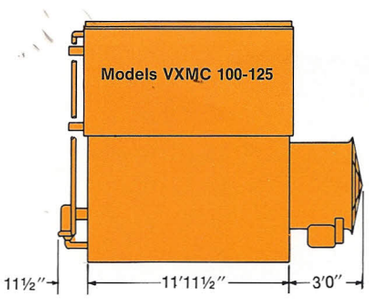




| MODEL NO. | APPROX. SHPG. WEIGHT | APPROX. OPER. WEIGHT | HEAVIEST SECTION (COIL) | CFM | FAN MOTOR HP (0" ESP) | GPM | PUMP MOTOR HP | R-717 CHARGE (LBS.) | REMOTE SUMP | | F | H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | BOTTOM DRAIN SIZE | APPROX. OPER. WEIGHT | | |
| **VXMC 10** | 1070 | 1380 | 1070* | 2900 | ⅓ | 35 | ⅓ | 19 | 2½ | 1140 | 15¾ | 80⅞ |
| **VXMC 15** | 1260 | 1580 | 850 | 3800 | ¾ | 35 | ⅓ | 25 | 2½ | 1340 | 25¼ | 90⅜ |
| **VXMC 20** | 1420 | 1760 | 1000 | 4400 | 1 | 35 | ⅓ | 32 | 2½ | 1520 | 34¾ | 99⅞ |
| **VXMC 25** | 1470 | 1810 | 1050 | 5300 | 2 | 35 | ⅓ | 34 | 2½ | 1570 | 34¾ | 99⅞ |
| **VXMC 30** | 1850 | 2550 | 1120 | 8200 | 2 | 75 | ½ | 35 | 3 | 2090 | 14¾ | 89⅞ |
| **VXMC 38** | 2100 | 2810 | 1350 | 8900 | 2 | 75 | ½ | 45 | 3 | 2350 | 24¼ | 99⅜ |
| **VXMC 46** | 2390 | 3130 | 1650 | 8500 | 2 | 75 | ½ | 61 | 3 | 2670 | 33¾ | 108⅞ |
| **VXMC 51** | 2440 | 3180 | 1700 | 10000 | 3 | 75 | ½ | 65 | 3 | 2720 | 33¾ | 108⅞ |
| **VXMC 57** | 2700 | 3480 | 1940 | 9600 | 3 | 75 | ½ | 76 | 3 | 3020 | 43¼ | 118⅜ |
| **VXMC 65** | 2770 | 3550 | 2010 | 11600 | 5 | 75 | ½ | 80 | 3 | 3090 | 43¼ | 118⅜ |
| **VXMC 71** | 3670 | 4980 | 2400 | 12100 | 3 | 115 | ¾ | 90 | 4 | 4230 | 37¾ | 121⅞ |
| **VXMC 80** | 3740 | 5050 | 2470 | 14500 | 5 | 115 | ¾ | 100 | 4 | 4300 | 37¾ | 121⅞ |
| **VXMC 90** | 4160 | 5270 | 2850 | 14000 | 5 | 115 | ¾ | 110 | 4 | 4520 | 48¼ | 132⅜ |
| **VXMC 100** | 4600 | 6370 | 3060 | 19600 | 5 | 150 | 1 | 120 | 6 | 5360 | 37¾ | 121⅞ |
| **VXMC 110** | 4680 | 6450 | 3140 | 22000 | 7½ | 150 | 1 | 130 | 6 | 5440 | 37¾ | 121⅞ |
| **VXMC 125** | 5230 | 7060 | 3640 | 21000 | 7½ | 150 | 1 | 145 | 6 | 6050 | 48¼ | 132⅜ |
| **VXMC 138** | 7130 | 8920 | 4920 | 25900 | 5 | 220 | 1½ | 170 | 6 | 7510 | 37¾ | 133⅞ |
| **VXMC 150** | 7220 | 9010 | 5830 | 28300 | 7½ | 220 | 1½ | 190 | 6 | 7590 | 37¾ | 133⅞ |
| **VXMC 170** | 8120 | 9930 | 5930 | 28000 | 7½ | 220 | 1½ | 210 | 6 | 8510 | 48¼ | 144⅜ |
| **VXMC N195** | 9950 | 13540 | 6580 | 40000 | 7½ | 305 | 3 | 240 | 6 | 11100 | 37¾ | 145⅞ |
| **VXMC N215** | 11190 | 14840 | 7810 | 37900 | 7½ | 305 | 3 | 295 | 6 | 12400 | 48¼ | 156⅜ |
| **VXMC N235** | 11330 | 14970 | 7950 | 42300 | 10 | 305 | 3 | 320 | 6 | 12530 | 48¼ | 156⅜ |
| **VXMC N265** | 15230 | 20790 | 10180 | 54800 | 7½ | 460 | 5 | 360 | 8 | 17070 | 37¾ | 157⅞ |
| **VXMC N285** | 15360 | 20920 | 10320 | 58600 | 10 | 460 | 5 | 390 | 8 | 17200 | 37¾ | 157⅞ |
| **VXMC N315** | 17160 | 22790 | 12060 | 56000 | 10 | 460 | 5 | 440 | 8 | 19070 | 48¼ | 168⅜ |
| **VXMC N345** | 17370 | 22980 | 12270 | 61700 | 15 | 460 | 5 | 470 | 8 | 19270 | 48¼ | 168⅜ |

* Unit normally ships in one piece.

# Engineering Data / Models VXC 10

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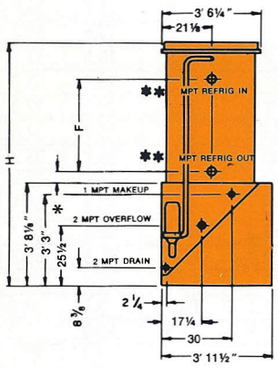
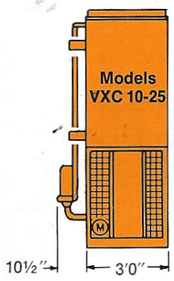
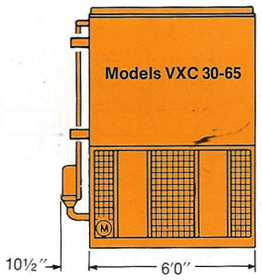
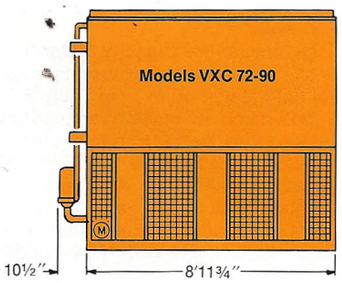
Models VXC 10-135



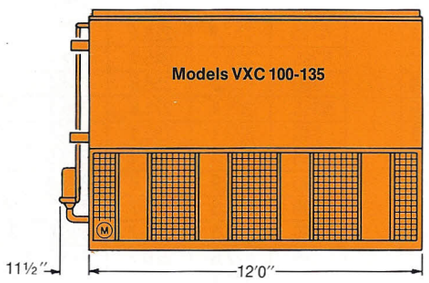



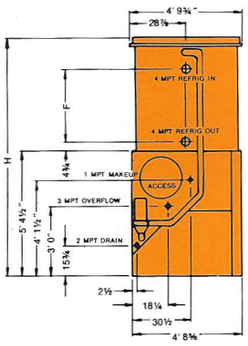

Ⓜ Fan Motor Location

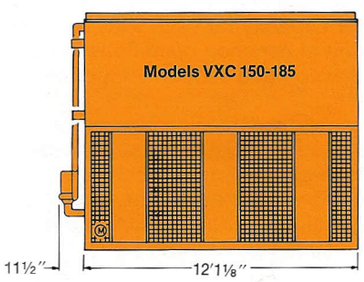
* 4¼" on VXC 10 through 25
4¾" on VXC 30 and larger

** See Note 2

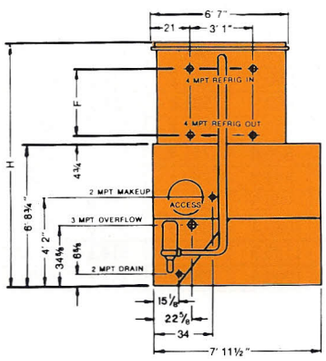
Models VXC 150-185 only

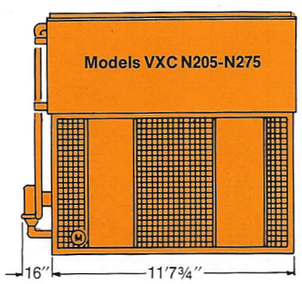


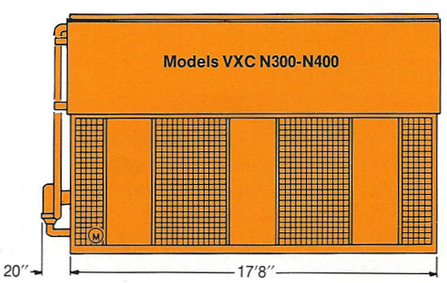




Models VXC N205-N400



# Selection

**Two methods of selection are presented in this section, *the heat rejection method* shown on these two pages, and *the evaporator ton method* shown on Pages 14 and 15. Selections may be made from the heat rejection method for any type of positive displacement compressor: open reciprocating, hermetic reciprocating, or rotary screw. The evaporator ton method is based on evaporator heat input only, and is limited to systems utilizing open reciprocating compressors.**

## Heat Rejection Method

In a mechanical refrigeration system, the function of an evaporative condenser is to reject heat to the environment. The heat to be rejected is the sum of the heat input at the evaporator and the energy input at the compressor. For a given set of operating conditions, the energy input through the compression process can vary for the several types of compressors—centrifugal, rotary screw, open reciprocating, and hermetic reciprocating. Therefore, in order to accurately determine the proper evaporative condenser required, it is necessary to establish the compressor energy input as well as the heat absorbed in the evaporator.

Frequently the total heat rejection of a system is specified. When it is not specified, it can be readily calculated. Total heat rejection is the sum of the compressor evaporator capacity in BTUH at the specified operating conditions, and the energy corresponding to the compressor brake horsepower in BTUH.

For open compressors:

Total heat rejection = Compressor evaporator capacity (BTUH) + Compressor BHP × 2545

For multi-stage open compressor systems, total heat rejection is calculated from the *high stage* compressor capacity and brake horsepower, expressed in BTUH.

In the case of hermetic compressors, compressor input is commonly expressed in KW and must be converted to BTUH:

Total heat rejection = Compressor evaporator capacity (BTUH) + Compressor KW × 3415

The base heat rejection of each Baltimore Aircoil evaporative condenser is shown in Tables 1 and 2. This represents the total heat rejection of each unit when operating at 105°F condensing temperature and 78°F wet bulb temperature, using refrigerants R-12, R-22, R-500, or R-502. Tables 3 and 4 present correction factors to be applied to the system heat rejection for other operating conditions of condensing temperature, wet bulb temperature, and refrigerant.

VXC and VXMC units which have the letter "N" preceeding the model number have a maximum width of eight (8) feet at the base. Units which do not have the letter "N", and have model numbers greater than 185, are ten (10) feet wide at the base.

## Selection Procedure

1. Establish total heat rejection required by the system (See above).
2. Determine the refrigerant and design conditions for condensing temperature and wet bulb temperature.
3. Using the appropriate factor (Tables 3 and 4) for the proper refrigerant, determine the correction factor to be applied to the system heat rejection.
4. Multiply the correction factor by the total system heat rejection.

**TABLE 1 – Base Heat Rejection – Model VXC**

(MBH — THOUSANDS OF BTU'S PER HOUR)

| MODEL NO. VXC | HEAT REJECTION MBH | MODEL NO. VXC | HEAT REJECTION MBH | MODEL NO. VXC | HEAT REJECTION MBH |
|---|---|---|---|---|---|
| 10 | 147.0 | 185 | 2,719.5 | 590 | 8,673.0 |
| 15 | 220.5 | N205 | 3,013.5 | N600 | 8,820.0 |
| 20 | 294.0 | N230 | 3,381.0 | 620 | 9,114.0 |
| 25 | 367.5 | N250 | 3,675.0 | 650/N650 | 9,555.0 |
| 30 | 441.0 | N275 | 4,042.5 | 680 | 9,996.0 |
| 38 | 558.6 | N300 | 4,410.0 | 720/N720 | 10,584.0 |
| 46 | 676.2 | 320 | 4,704.0 | 760/N760 | 11,172.0 |
| 52 | 764.4 | N325 | 4,777.5 | N800 | 11,760.0 |
| 58 | 852.6 | 340 | 4,998.0 | 840 | 12,348.0 |
| 65 | 955.5 | 360/N360 | 5,292.0 | 900 | 13,230.0 |
| 72 | 1,058.4 | 380/N380 | 5,586.0 | 980 | 14,406.0 |
| 80 | 1,176.0 | N400 | 5,880.0 | 1060 | 15,582.0 |
| 90 | 1,323.0 | 420 | 6,174.0 | 1100 | 16,170.0 |
| 100 | 1,470.0 | 450 | 6,615.0 | 1180 | 17,346.0 |
| 110 | 1,617.0 | N460 | 6,762.0 | 1240 | 18,228.0 |
| 125 | 1,837.5 | 490 | 7,203.0 | 1300 | 19,110.0 |
| 135 | 1,984.5 | N500 | 7,350.0 | 1360 | 20,000.0 |
| 150 | 2,205.0 | 530 | 7,791.0 | | |
| 165 | 2,425.5 | 550/N550 | 8,085.0 | | |

**TABLE 2 – Base Heat Rejection – Model VXMC**

(MBH — THOUSANDS OF BTU'S PER HOUR)

| MODEL NO. VXMC | HEAT REJECTION MBH | MODEL NO. VXMC | HEAT REJECTION MBH | MODEL NO. VXMC | HEAT REJECTION MBH |
|---|---|---|---|---|---|
| 10 | 147.0 | 150 | 2,205.0 | N530 | 7,791.0 |
| 15 | 220.5 | 170 | 2,499.0 | 560 | 8,232.0 |
| 20 | 294.0 | N195 | 2,866.5 | N570 | 8,379.0 |
| 25 | 367.5 | N215 | 3,160.5 | 585 | 8,599.5 |
| 30 | 441.0 | N235 | 3,454.5 | 600 | 8,820.0 |
| 38 | 558.6 | N265 | 3,895.5 | 620 | 9,114.0 |
| 46 | 676.2 | N285 | 4,189.5 | N630 | 9,261.0 |
| 51 | 749.7 | 300 | 4,410.0 | 680 | 9,996.0 |
| 57 | 837.9 | N315 | 4,630.5 | N690 | 10,143.0 |
| 65 | 955.5 | 340 | 4,998.0 | 760 | 11,172.0 |
| 71 | 1,043.7 | N345 | 5,071.5 | 860 | 12,642.0 |
| 80 | 1,176.0 | 380 | 5,586.0 | 920 | 13,524.0 |
| 90 | 1.323.0 | N390 | 5,733.0 | 1020 | 14,994.0 |
| 100 | 1,470.0 | 430/N430 | 6,321.0 | 1120 | 16,464.0 |
| 110 | 1,617.0 | 460 | 6,762.0 | 1170 | 17,199.0 |
| 125 | 1,837.5 | N470 | 6,909.0 | 1240 | 18,228.0 |
| 138 | 2,028.6 | 510 | 7,497.0 | | |