



CBPE / CBPR SENSIBLE COOLING CAPACITY

|                      |                     | Chilled Water Flow Rate, GPM |                 |                   |                 |                   |                 |                   |                 |                   |                 |                   |                 |
|----------------------|---------------------|------------------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|
| Nominal Length<br>ft | Nominal Width<br>in | 0.75 GPM                     |                 | 1.0 GPM           |                 | 1.25 GPM          |                 | 1.5 GPM           |                 | 2.0 GPM           |                 | 2.5 GPM           |                 |
|                      |                     | Q <sub>SENS</sub>            | ΔP <sub>w</sub> | Q <sub>SENS</sub> | ΔP <sub>w</sub> | Q <sub>SENS</sub> | ΔP <sub>w</sub> | Q <sub>SENS</sub> | ΔP <sub>w</sub> | Q <sub>SENS</sub> | ΔP <sub>w</sub> | Q <sub>SENS</sub> | ΔP <sub>w</sub> |
|                      |                     | Btu/h                        | ft wg           | Btu/h             | ft wg           | Btu/h             | ft wg           | Btu/h             | ft wg           | Btu/h             | ft wg           | Btu/h             | ft wg           |
| 4                    | 13                  | 963                          | 0.33            | 1,000             | 0.75            | 1,029             | 1.17            | 1,054             | 1.62            | 1,094             | 2.69            | 1,127             | 4.01            |
|                      | 17                  | 1,045                        | 0.40            | 1,085             | 0.90            | 1,117             | 1.41            | 1,144             | 1.94            | 1,188             | 3.23            | 1,223             | 4.81            |
|                      | 18                  | 1,121                        | 0.46            | 1,164             | 1.06            | 1,198             | 1.64            | 1,227             | 2.26            | 1,274             | 3.77            | 1,312             | 5.61            |
|                      | 22                  | 1,190                        | 0.53            | 1,236             | 1.21            | 1,272             | 1.88            | 1,303             | 2.59            | 1,353             | 4.31            | 1,393             | 6.41            |
|                      | 24                  | 1,255                        | 0.60            | 1,303             | 1.36            | 1,342             | 2.11            | 1,374             | 2.91            | 1,427             | 4.84            | 1,469             | 7.21            |
| 6                    | 13                  | 1,444                        | 0.45            | 1,499             | 1.05            | 1,544             | 1.63            | 1,581             | 2.24            | 1,642             | 3.70            | 1,690             | 5.48            |
|                      | 17                  | 1,568                        | 0.54            | 1,628             | 1.26            | 1,676             | 1.95            | 1,717             | 2.68            | 1,782             | 4.44            | 1,835             | 6.58            |
|                      | 18                  | 1,681                        | 0.63            | 1,745             | 1.46            | 1,797             | 2.28            | 1,840             | 3.13            | 1,911             | 5.18            | 1,967             | 7.67            |
|                      | 22                  | 1,785                        | 0.72            | 1,854             | 1.67            | 1,909             | 2.60            | 1,955             | 3.58            | 2,029             | 5.92            | 2,089             | 8.77            |
|                      | 24                  | 1,883                        | 0.81            | 1,955             | 1.88            | 2,013             | 2.93            | 2,061             | 4.02            | 2,140             | 6.66            | 2,204             | 9.86            |
| 8                    | 13                  | 1,925                        | 0.57            | 1,999             | 1.34            | 2,058             | 2.08            | 2,108             | 2.85            | 2,189             | 4.71            | 2,254             | 6.95            |
|                      | 17                  | 2,091                        | 0.68            | 2,171             | 1.61            | 2,235             | 2.50            | 2,289             | 3.42            | 2,376             | 5.65            | 2,447             | 8.35            |
|                      | 18                  | 2,241                        | 0.79            | 2,327             | 1.87            | 2,396             | 2.91            | 2,454             | 4.00            | 2,548             | 6.59            | 2,623             | 9.74            |
|                      | 22                  | 2,380                        | 0.91            | 2,472             | 2.14            | 2,545             | 3.33            | 2,606             | 4.57            | 2,706             | 7.53            | 2,786             | 11.13           |
|                      | 24                  | 2,510                        | 1.02            | 2,606             | 2.41            | 2,684             | 3.75            | 2,748             | 5.14            | 2,854             | 8.47            | 2,938             | 12.52           |
| 10                   | 13                  | 2,407                        | 0.68            | 2,499             | 1.63            | 2,573             | 2.54            | 2,635             | 3.47            | 2,736             | 5.71            | 2,817             | 8.43            |
|                      | 17                  | 2,613                        | 0.82            | 2,713             | 1.96            | 2,794             | 3.04            | 2,861             | 4.17            | 2,971             | 6.86            | 3,059             | 10.11           |
|                      | 18                  | 2,801                        | 0.96            | 2,909             | 2.28            | 2,995             | 3.55            | 3,067             | 4.86            | 3,185             | 8.00            | 3,279             | 11.80           |
|                      | 22                  | 2,975                        | 1.09            | 3,089             | 2.61            | 3,181             | 4.06            | 3,258             | 5.56            | 3,382             | 9.14            | 3,482             | 13.49           |
|                      | 24                  | 3,138                        | 1.23            | 3,258             | 2.94            | 3,354             | 4.56            | 3,435             | 6.25            | 3,567             | 10.28           | 3,673             | 15.17           |

Performance based on:

1. Unit height of 10 inches. Correction factors for other unit heights are shown in table 1 below.
2. Distance (Y) between top of beam and horizontal surface equal to 30% of coil width (W). For other values of Y/W see table 2 below.
3. Discharge through a minimum 50% free area face. Correction factors for other free areas are shown in table 3 below.
4. Free area for room air to enter ceiling cavity equal to free area of beam discharge into space.
5. Based on an 18°F ΔT between entering air and entering chilled water. Correction factors for other ΔT values are shown in table 4 below.

Legend:

Q<sub>SENS</sub> - Sensible Capacity, Coil [Btu/h]

ΔP<sub>w</sub> - Water coil pressure drop [ft wg]

TABLE 1: CORRECTION FOR UNIT HEIGHT

| Unit height | Multiply Table Value by: |
|-------------|--------------------------|
| 8           | 0.95                     |
| 10          | 1.00                     |
| 12          | 1.05                     |

TABLE 3: CORRECTION FOR FALSE CEILING FREE AREA

| Face free area | Multiply Table Value by: |
|----------------|--------------------------|
| 30%            | 0.94                     |
| 40%            | 0.98                     |
| 50% or more    | 1.00                     |

TABLE 2: CORRECTION FOR DISTANCE BELOW STRUCTURE VERSUS UNIT WIDTH (Y/W)

| Y/W  | Multiply Table Value by: |
|------|--------------------------|
| 0.10 | 0.66                     |
| 0.20 | 0.92                     |
| 0.30 | 1.00                     |
| 0.40 | 1.03                     |
| 0.50 | 1.04                     |

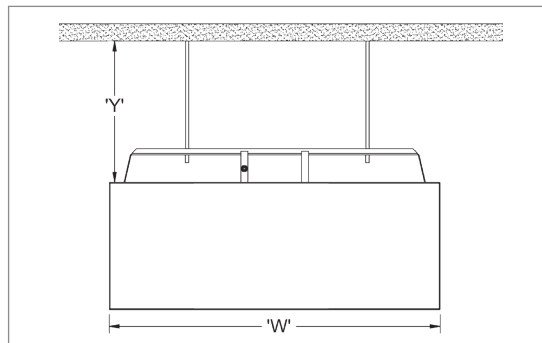


TABLE 4: CORRECTION FOR (ΔT) BETWEEN ENTERING AIR\* AND ENTERING CHILLED WATER

| Actual ΔT                | 10   | 12   | 14   | 16   | 18   | 20   | 22   | 24   |
|--------------------------|------|------|------|------|------|------|------|------|
| Multiply Table Value by: | 0.56 | 0.67 | 0.78 | 0.89 | 1.00 | 1.11 | 1.22 | 1.33 |

\*Note: Entering air temperature is typically 2-3°F above room temperature for exposed and standard recessed installations. When beams are installed above a adjacent to the perimeter glazing, entering air temperature is typically 5 to 7°F above that of the room.