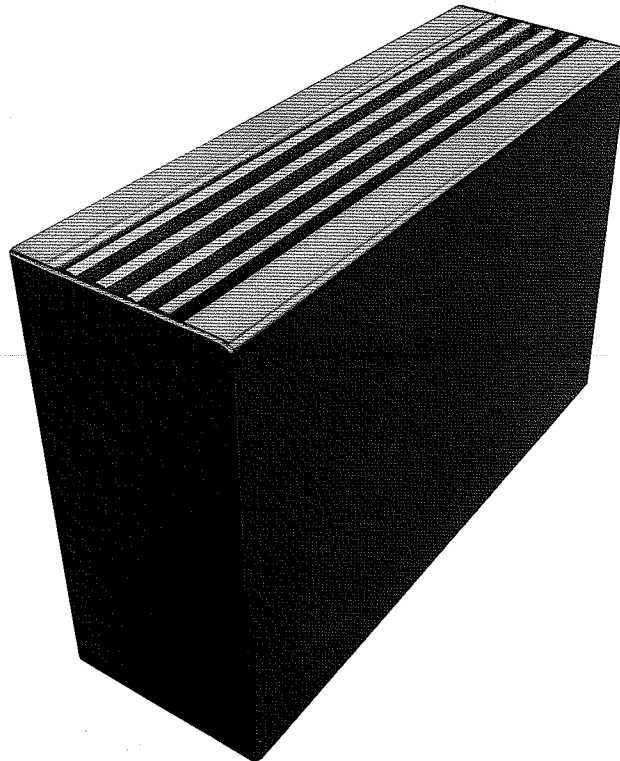




# CUSTOM AIR CABINETS



Built of heavy 14 gauge galvanealed steel in custom sizes for supply or return of air at building perimeter. Easily adjustable damper provides an even air discharge along the entire length of the cabinet as well as air quantity control. A flush bar grille and special butt joints provide a totally clean installation. Grille of extruded aluminum in clear anodized finish available in 0, 15 or 30 degrees, 2-1/2 inches less in width than cabinet.

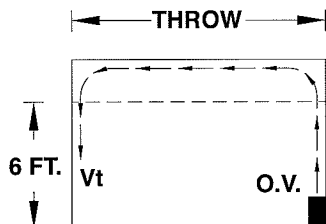
Standard construction consists of extruded linear grilles, in four bar styles, at 0, 15 or 30 degrees flush with top of unit. Cabinets have full backs and bottoms and flush butt joints. Finishes include prime coat or stock enamel finish of white, tan, grey or black.

## OPTIONS

- A. Custom height, width and length as required. Maximum length 8 ft. in one section.
- B. Cabinets available in aluminum or stainless steel 12, 14, 16 or 18 gauge.
- C. Special finishes and colors.
- D. Insulation of fiberglass or sprayed-on mastic.
- E. Toe space.
- F. Screen under grille to catch debris.
- G. Inside and outside corners.

# SUPPLY AIR CAPACITY TABLE

| CFM Per<br>Linear Foot<br>of Grille | Cabinet<br>Width | Grille<br>Width | ②<br>Throw in Ft. | S.P. Loss in In. H <sub>2</sub> O<br>Blade Angle |     | ①<br>NC | Outlet Velocity F.P.M. (O.V.)<br>Blade Angle |       |
|-------------------------------------|------------------|-----------------|-------------------|--------------------------------------------------|-----|---------|----------------------------------------------|-------|
|                                     |                  |                 |                   | 0 & 15                                           | 30  |         | 0 & 15                                       | 30    |
| 20                                  | 4.0"             | 1.5"            | 2'                | .02                                              | .02 | <20     | 510                                          | 565   |
| 30                                  | 4.0"             | 1.5"            | 3'                | .06                                              | .08 | 24      | 760                                          | 855   |
|                                     | 4.5"             | 2.0"            | 2'                | .02                                              | .02 | 21      | 485                                          | 535   |
| 40                                  | 4.0"             | 1.5"            | 4'                | .10                                              | .14 | 29      | 1,010                                        | 1,140 |
|                                     | 4.5"             | 2.0"            | 3'                | .04                                              | .06 | 26      | 645                                          | 720   |
|                                     | 5.0"             | 2.5"            | 2'                | .02                                              | .02 | 21      | 470                                          | 520   |
| 50                                  | 4.0"             | 1.5"            | 7'                | .18                                              | .24 | 29      | 1,260                                        | 1,430 |
|                                     | 4.5"             | 2.0"            | 5'                | .06                                              | .08 | 26      | 800                                          | 900   |
|                                     | 5.0"             | 2.5"            | 4'                | .04                                              | .06 | 21      | 585                                          | 650   |
|                                     | 5.5"             | 3.0"            | 3'                | .02                                              | .02 | <20     | 450                                          | 495   |
| 60                                  | 4.5"             | 2.0"            | 8'                | .10                                              | .14 | 29      | 960                                          | 1,080 |
|                                     | 5.0"             | 2.5"            | 7'                | .04                                              | .06 | 26      | 700                                          | 785   |
|                                     | 5.5"             | 3.0"            | 5'                | .02                                              | .03 | 21      | 540                                          | 600   |
|                                     | 6.5"             | 4.0"            | 4'                | .01                                              | .02 | <20     | 380                                          | 415   |
| 70                                  | 4.5"             | 2.0"            | 10'               | .12                                              | .16 | 29      | 1,120                                        | 1,265 |
|                                     | 5.0"             | 2.5"            | 9'                | .06                                              | .08 | 31      | 820                                          | 925   |
|                                     | 5.5"             | 3.0"            | 6'                | .04                                              | .06 | 26      | 670                                          | 750   |
|                                     | 6.5"             | 4.0"            | 5'                | .02                                              | .02 | <20     | 445                                          | 490   |
| 80                                  | 4.5"             | 2.0"            | 12'               | .16                                              | .20 | 31      | 1,285                                        | 1,440 |
|                                     | 5.0"             | 2.5"            | 11'               | .08                                              | .10 | 31      | 930                                          | 1,050 |
|                                     | 5.5"             | 3.0"            | 8'                | .06                                              | .08 | 26      | 710                                          | 795   |
|                                     | 6.5"             | 4.0"            | 7'                | .02                                              | .02 | 21      | 505                                          | 560   |
| 90                                  | 5.0"             | 2.5"            | 13'               | .10                                              | .14 | 29      | 1,040                                        | 1,175 |
|                                     | 5.5"             | 3.0"            | 11'               | .08                                              | .10 | 29      | 795                                          | 895   |
|                                     | 6.5"             | 4.0"            | 8'                | .02                                              | .04 | 26      | 560                                          | 625   |
|                                     | 7.5"             | 5.0"            | 6'                | .01                                              | .02 | 21      | 460                                          | 510   |
| 100                                 | 5.0"             | 2.5"            | 16'               | .12                                              | .16 | 29      | 1,160                                        | 1,315 |
|                                     | 5.5"             | 3.0"            | 12'               | .08                                              | .10 | 29      | 885                                          | 1,000 |
|                                     | 6.5"             | 4.0"            | 10'               | .04                                              | .06 | 26      | 630                                          | 705   |
|                                     | 7.5"             | 5.0"            | 8'                | .02                                              | .02 | 21      | 510                                          | 565   |
| 120                                 | 5.5"             | 3.0"            | 16'               | .12                                              | .16 | 29      | 1,060                                        | 1,200 |
|                                     | 6.5"             | 4.0"            | 12'               | .06                                              | .08 | 29      | 755                                          | 845   |
|                                     | 7.5"             | 5.0"            | 10'               | .04                                              | .06 | 26      | 610                                          | 670   |
|                                     | 8.5"             | 6.0"            | 8'                | .02                                              | .02 | 21      | 490                                          | 540   |
| 140                                 | 5.5"             | 3.0"            | 19'               | .16                                              | .22 | 34      | 1,230                                        | 1,400 |
|                                     | 6.5"             | 4.0"            | 16'               | .08                                              | .10 | 31      | 880                                          | 990   |
|                                     | 7.5"             | 5.0"            | 13'               | .04                                              | .06 | 26      | 710                                          | 800   |
|                                     | 8.5"             | 6.0"            | 10'               | .02                                              | .02 | 21      | 570                                          | 635   |
| 160                                 | 6.5"             | 4.0"            | 18'               | .10                                              | .14 | 34      | 1,000                                        | 1,130 |
|                                     | 7.5"             | 5.0"            | 15'               | .06                                              | .08 | 31      | 810                                          | 915   |
|                                     | 8.5"             | 6.0"            | 13'               | .04                                              | .06 | 26      | 650                                          | 725   |
|                                     | 10.5"            | 8.0"            | 9'                | .02                                              | .02 | 21      | 470                                          | 520   |
| 180                                 | 6.5"             | 4.0"            | 21'               | .14                                              | .18 | 34      | 1,120                                        | 1,265 |
|                                     | 7.5"             | 5.0"            | 18'               | .08                                              | .10 | 31      | 910                                          | 1,025 |
|                                     | 8.5"             | 6.0"            | 16'               | .06                                              | .08 | 26      | 735                                          | 825   |
|                                     | 10.5"            | 8.0"            | 12'               | .04                                              | .06 | 21      | 530                                          | 590   |

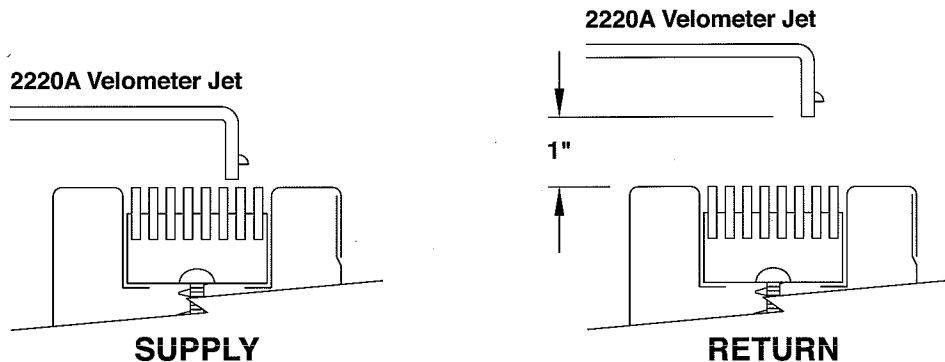


- ① NC based on (LW)  $Re^{-10}$  with 18 dB room attenuation - supply and return.  
 ② Throw is based on terminal velocity of 100 F.P.M. at 6 ft. level and 9 ft. ceiling.

|         |          |          |
|---------|----------|----------|
| Vt = 75 | Vt = 100 | Vt = 125 |
| x 1.5   | x 1      | x 0.5    |

# RETURN AIR CAPACITY TABLE

| Cabinet Width | Grille Width | Blade Angle | C.F.M. Per Linear Foot of Grille |                     |                     |                |
|---------------|--------------|-------------|----------------------------------|---------------------|---------------------|----------------|
|               |              |             | NC-25<br>-.04" S.P.              | NC-30<br>-.12" S.P. | NC-35<br>-.20" S.P. | A <sub>k</sub> |
| 4.0"          | 1.5"         | 0 or 15     | 24                               | 40                  | 58                  | .13            |
|               |              | 30          | 21                               | 38                  | 46                  | .12            |
| 4.5"          | 2.0"         | 0 or 15     | 38                               | 65                  | 95                  | .18            |
|               |              | 30          | 37                               | 58                  | 80                  | .17            |
| 5.0"          | 2.5"         | 0 or 15     | 49                               | 90                  | 120                 | .23            |
|               |              | 30          | 46                               | 75                  | 105                 | .22            |
| 5.5"          | 3.0"         | 0 or 15     | 63                               | 115                 | 150                 | .27            |
|               |              | 30          | 57                               | 102                 | 125                 | .25            |
| 6.5"          | 4.0"         | 0 or 15     | 88                               | 160                 | 210                 | .34            |
|               |              | 30          | 77                               | 135                 | 180                 | .33            |
| 7.5"          | 5.0"         | 0 or 15     | 115                              | 210                 | 270                 | .41            |
|               |              | 30          | 100                              | 175                 | 230                 | .39            |
| 8.5"          | 6.0"         | 0 or 15     | 140                              | 260                 | 330                 | .46            |
|               |              | 30          | 122                              | 210                 | 275                 | .44            |
| 10.5"         | 8.0"         | 0 or 15     | 195                              | 350                 | 450                 | .57            |
|               |              | 30          | 160                              | 300                 | 375                 | .54            |



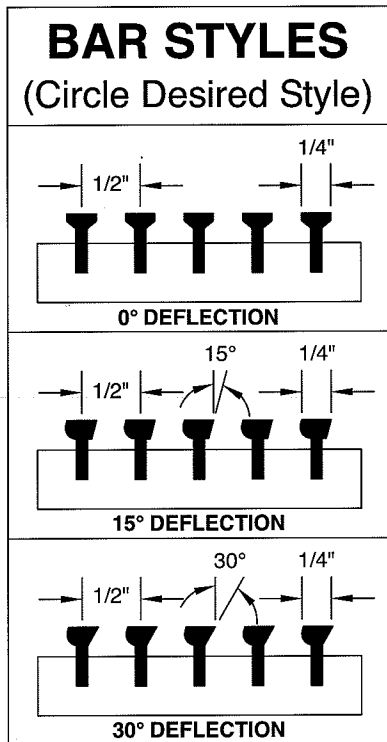
## AIR MEASUREMENT

$$CFM = A_k \times \text{Length of Cabinet in Feet} \times \text{Average Jet Velocity}$$

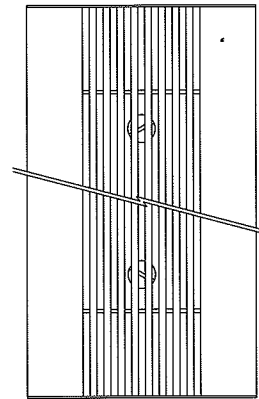
## A<sub>k</sub> AREA FACTORS FOR SUPPLY CABINET

| Blade Angle     | Cabinet Width | 4.0" | 4.5" | 5.0" | 5.5" | 6.5" | 7.5" | 8.5" | 10.5" |
|-----------------|---------------|------|------|------|------|------|------|------|-------|
|                 | Grille Width  | 1.5" | 2.0" | 2.5" | 3.0" | 4.0" | 5.0" | 6.0" | 8.0"  |
| 0 or 15 Degrees |               | .04  | .06  | .09  | .11  | .16  | .20  | .25  | .35   |
| 30 Degrees      |               | .03  | .05  | .08  | .09  | .14  | .17  | .21  | .30   |

# CUSTOM AIR CABINET SUBMITTAL DRAWING



Extruded Aluminum Grilles  
Clear Anodized Finish Standard  
All Above Bar Styles Are Pencil-Proof



PLAN VIEW

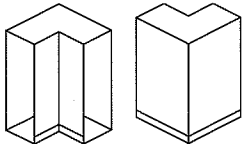
1-1/2" Minimum 1" Minimum

14 GA.  
Galvanealed  
Steel Front  
and Top

20 GA.  
Galvanized  
Steel Back  
and Bottom

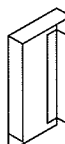
SIDE VIEW

## INSIDE / OUTSIDE CORNER



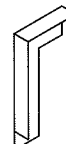
- Use for transfer of air around 90° inside (IC) or outside(OC) corners

## END CAP



- Use to terminate run
- Integral with top/front
- Standard on both ends

## WALL TRIMMER



- Use to trim at intersecting walls
- *Designate left or right*

| Qty. | Length | No. of Sections | Cabinet Height | Cabinet Width | Grille Width | Gauge Steel | Cabinet Finish | Grille Finish | Tag |
|------|--------|-----------------|----------------|---------------|--------------|-------------|----------------|---------------|-----|
|      |        |                 |                |               |              |             |                |               |     |
|      |        |                 |                |               |              |             |                |               |     |
|      |        |                 |                |               |              |             |                |               |     |
|      |        |                 |                |               |              |             |                |               |     |

Enclose sketch with order to show corners, end caps and lengths of runs.  
**NOTE:** Field cut openings should be on maximum 6 ft. centers.

To maintain KEES' policy of continuous product improvement, we reserve the right to change prices, specifications, ratings or dimensions without notice or obligation.

|            |  |          |       |          |                                                                                                                                                                                                                                                                       |  |  |
|------------|--|----------|-------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Project    |  |          |       | Location | <div><b>KEES INCORPORATED</b><br/>400 S. Industrial Dr. • P.O. Box L<br/>Elkhart Lake, WI 53020<br/>Phone: (920) 876-3391<br/>Fax: (920) 876-3065<br/>Website: www.kees.com</div> |  |  |
| Engineer   |  |          |       |          |                                                                                                                                                                                                                                                                       |  |  |
| Architect  |  | Dwg. No. | AB    |          |                                                                                                                                                                                                                                                                       |  |  |
| Contractor |  | Date     | 10/05 |          |                                                                                                                                                                                                                                                                       |  |  |



**KEES INCORPORATED**  
400 S. Industrial Dr. • P.O. Box L  
Elkhart Lake, WI 53020  
Phone: (920) 876-3391  
Fax: (920) 876-3065  
Website: www.kees.com