

20/21
PRODUCTS

Product Catalogue

Square Ceiling Diffuser

Type (SCD)



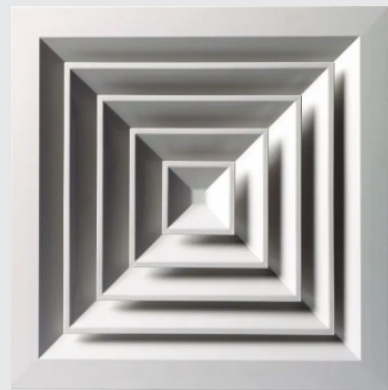
Khedr Trust
ALL AIR PRODUCTS

Square Ceiling Diffuser products are
manufactured by



“ Your comfort is
our priority ”

www.khedr-eg.com





Models

- SCD
- RCD

Finish

- Standard Finish - White

Square Ceiling Diffuser

Model Use

Khedr Model SCD /RCD Diffusers handle large amount of air for a given pressure drop and noise level.

Flow Pattern

Maintains an unbroken horizontal flow pattern from maximum cfm down to minimum.

Model Design

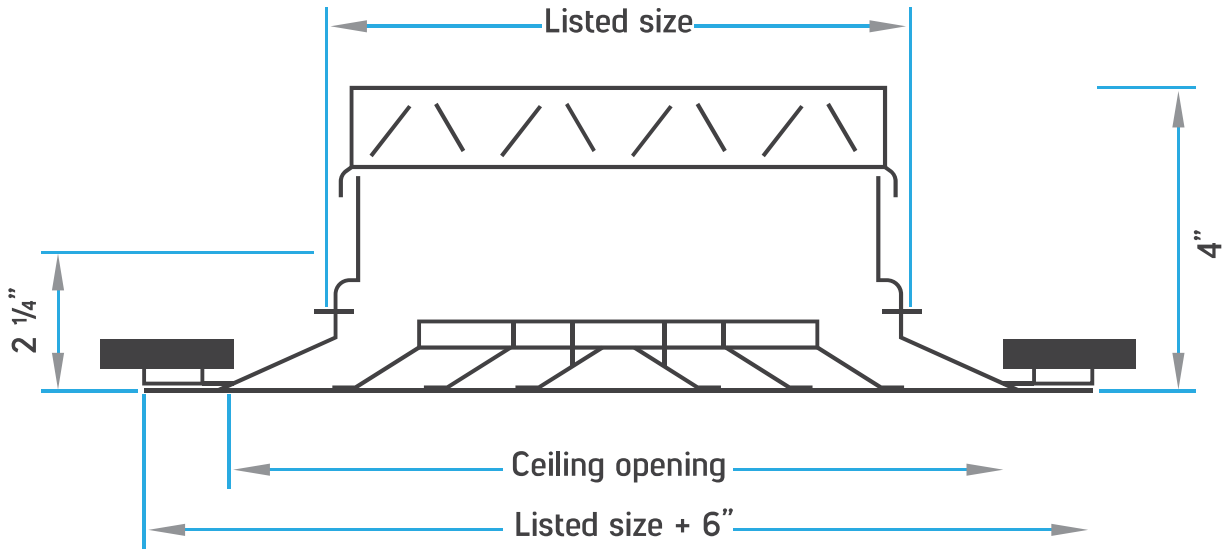
Flexible use with 1-,2-,3- or 4-way horizontal flow.

Appearance

Uniform face appearance with different neck sizes.

- Dimensions

- Surface Mount / Square or Rectangular Neck



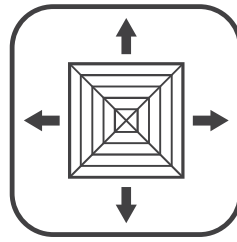
- Core Pattern Options

| | 1 - Way Discharge | 2 - Way Discharge | | 3 - Way Discharge | 4 - Way Discharge |
|--------------|-------------------|-------------------|----|-------------------|-------------------|
| SCD | | | | | |
| Pattern Type | 1 | 21 | 22 | 3 | 4 |
| RCD | | | | | |
| Pattern Type | 1 | 21 | 22 | 3 | 4 |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- Performance data

- SCD / 4-way



| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | | V _k Outlet Velocity "FPM" | | | | | | | | | | |
|---|-----|---|--|------|------|------|------|-------|-------|-------|-------|-------|-------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | | | P _T Total Pressure "Inches water" | | | | | | | | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 |
| 6 x 6 | CFM | | 50 | 60 | 70 | 80 | 90 | 100 | 120 | 140 | 160 | 180 | 200 |
| | T | X | 2-3 | 2-3 | 2-4 | 2-4 | 3-5 | 3-5 | 4-6 | 4-8 | 5-8 | 5-9 | 6-11 |
| A _k = 0.10 | | Y | 2-3 | 2-3 | 2-4 | 2-4 | 3-5 | 3-5 | 4-6 | 4-8 | 5-8 | 5-9 | 6-11 |
| 9 x 9 | CFM | | 110 | 135 | 155 | 180 | 205 | 225 | 270 | 315 | 360 | 410 | 450 |
| | T | X | 2-4 | 2-4 | 3-5 | 3-5 | 4-6 | 5-8 | 5-9 | 6-11 | 6-12 | 7-13 | 8-14 |
| A _k = 0.22 | | Y | 2-4 | 2-4 | 3-5 | 3-5 | 4-6 | 5-8 | 5-9 | 6-11 | 6-12 | 7-13 | 8-14 |
| 12 x 12 | CFM | | 200 | 240 | 280 | 320 | 360 | 400 | 480 | 560 | 640 | 725 | 800 |
| | T | X | 3-5 | 4-6 | 4-8 | 5-8 | 5-9 | 6-11 | 6-12 | 7-13 | 8-15 | 9-17 | 10-19 |
| A _k = 0.40 | | Y | 3-5 | 4-6 | 4-8 | 5-8 | 5-9 | 6-11 | 6-12 | 7-13 | 8-15 | 9-17 | 10-19 |
| 15 x 15 | CFM | | 310 | 375 | 440 | 500 | 565 | 625 | 750 | 875 | 1000 | 1125 | 1250 |
| | T | X | 4-6 | 4-8 | 5-9 | 6-11 | 6-11 | 6-12 | 8-15 | 10-18 | 10-19 | 12-21 | 13-23 |
| A _k = 0.62 | | Y | 4-6 | 4-8 | 5-9 | 6-11 | 6-11 | 6-12 | 8-15 | 10-18 | 10-19 | 12-21 | 13-23 |
| 18 x 18 | CFM | | 450 | 540 | 630 | 720 | 810 | 900 | 1080 | 1260 | 1440 | 1620 | 1800 |
| | T | X | 4-8 | 5-9 | 5-11 | 6-12 | 7-13 | 8-15 | 10-17 | 11-20 | 13-23 | 15-27 | 16-30 |
| A _k = 0.90 | | Y | 4-8 | 5-9 | 5-11 | 6-12 | 7-13 | 8-15 | 10-17 | 11-20 | 13-23 | 15-27 | 16-30 |
| 21 x 21 | CFM | | 615 | 740 | 860 | 985 | 1110 | 1230 | 1475 | 1725 | 1970 | 2220 | 2460 |
| | T | X | 5-9 | 6-11 | 7-13 | 8-14 | 9-15 | 9-17 | 11-21 | 13-25 | 15-29 | 17-31 | 19-35 |
| A _k = 1.23 | | Y | 5-9 | 6-11 | 7-13 | 8-14 | 9-15 | 9-17 | 11-21 | 13-25 | 15-29 | 17-31 | 19-35 |
| 24 x 24 | CFM | | 800 | 960 | 1120 | 1275 | 1440 | 1600 | 1925 | 2240 | 2570 | 2890 | 3200 |
| | T | X | 5-11 | 7-13 | 7-14 | 8-15 | 9-17 | 10-19 | 12-23 | 14-29 | 16-31 | 18-35 | 20-39 |
| A _k = 1.60 | | Y | 5-11 | 7-13 | 7-14 | 8-15 | 9-17 | 10-19 | 12-23 | 14-29 | 16-31 | 18-35 | 20-39 |

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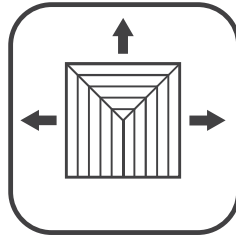
The minimum T Dimensions in feet is based on a V_T of 250 FPM with a V_R of 75 FPM , The Maximum T Dimension In feet is based on a V_T of 150 with a V_R of 45 FPM.

V_T Terminal Velocity "FPM"
 V_k Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_k Outlet Area "Feet²"
 N_c re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- SCD / 3-way



| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | CFM | V _k Outlet Velocity "FPM" | | | | | | | | | | | |
|---|-----|--|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | |
| | | P _T Total Pressure "Inches water" | | | | | | | | | | | |
| | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 | |
| 6 x 6 A _k = 0.10 | CFM | 50 | 60 | 70 | 80 | 90 | 100 | 120 | 140 | 160 | 180 | 200 | |
| | T | X | 2-4 | 2-4 | 3-5 | 3-5 | 4-7 | 4-7 | 5-9 | 6-10 | 6-11 | 6-11 | 7-13 |
| | | Y | 1-2 | 1-2 | 2-3 | 2-3 | 2-4 | 2-4 | 3-6 | 3-6 | 4-7 | 4-7 | 4-8 |
| 9 x 9 A _k = 0.22 | CFM | 110 | 135 | 155 | 180 | 205 | 225 | 270 | 315 | 360 | 410 | 450 | |
| | T | X | 2-4 | 3-6 | 4-7 | 4-8 | 5-9 | 5-9 | 6-12 | 7-13 | 9-15 | 10-18 | 11-20 |
| | | Y | 2-3 | 2-3 | 2-4 | 2-4 | 3-6 | 3-6 | 4-7 | 5-9 | 6-10 | 6-11 | 7-12 |
| 12 x 12 A _k = 0.40 | CFM | 200 | 240 | 280 | 320 | 360 | 400 | 480 | 560 | 640 | 725 | 800 | |
| | T | X | 4-7 | 5-9 | 6-10 | 6-10 | 6-11 | 7-13 | 9-16 | 12-21 | 13-22 | 14-24 | 16-27 |
| | | Y | 2-5 | 3-5 | 4-7 | 4-7 | 4-8 | 5-9 | 6-10 | 7-12 | 8-13 | 8-14 | 9-16 |
| 15 x 15 A _k = 0.62 | CFM | 310 | 375 | 440 | 500 | 565 | 625 | 750 | 875 | 1000 | 1125 | 1250 | |
| | T | X | 4-8 | 6-11 | 7-13 | 8-14 | 8-15 | 9-16 | 11-19 | 13-23 | 15-26 | 17-29 | 19-33 |
| | | Y | 2-4 | 4-7 | 4-7 | 4-8 | 5-9 | 6-10 | 7-12 | 9-15 | 10-18 | 11-20 | 12-21 |
| 18 x 18 A _k = 0.90 | CFM | 450 | 540 | 630 | 720 | 810 | 900 | 1080 | 1260 | 1440 | 1620 | 1800 | |
| | T | X | 4-9 | 6-11 | 7-13 | 9-15 | 10-18 | 11-20 | 13-24 | 15-26 | 18-32 | 20-35 | 23-40 |
| | | Y | 3-5 | 4-7 | 5-9 | 6-10 | 6-11 | 7-12 | 9-15 | 10-18 | 11-20 | 12-22 | 14-25 |
| 21 x 21 A _k = 1.23 | CFM | 615 | 740 | 860 | 985 | 1110 | 1230 | 1475 | 1725 | 1970 | 2220 | 2460 | |
| | T | X | 5-11 | 7-13 | 11-19 | 11-20 | 12-21 | 12-23 | 16-29 | 19-34 | 21-39 | 24-42 | 27-45 |
| | | Y | 3-6 | 4-8 | 6-11 | 7-12 | 8-13 | 8-14 | 10-17 | 11-20 | 14-23 | 16-25 | 18-29 |
| 24 x 24 A _k = 1.60 | CFM | 800 | 960 | 1120 | 1275 | 1440 | 1600 | 1925 | 2240 | 2570 | 2890 | 3200 | |
| | T | X | 7-14 | 9-16 | 11-19 | 13-21 | 14-24 | 16-27 | 17-31 | 21-35 | 25-39 | 28-43 | 32-47 |
| | | Y | 5-9 | 6-11 | 7-13 | 8-14 | 9-15 | 9-16 | 11-19 | 14-24 | 16-27 | 18-31 | 20-33 |

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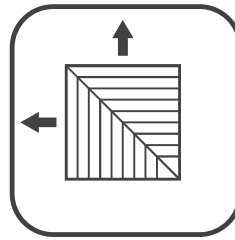
The minimum T Dimensions in feet is based on a VT of 170 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 85 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_k Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_k Outlet Area "Feet²"
 N_c re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- SCD / 2-way



| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | | V _k Outlet Velocity "FPM" | | | | | | | | | | |
|---|-----|---|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | | | P _T Total Pressure "Inches water" | | | | | | | | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 |
| 6 x 6 | CFM | | 45 | 55 | 60 | 70 | 80 | 90 | 105 | 125 | 140 | 160 | 180 |
| | T | X | 1-3 | 2-5 | 2-5 | 3-7 | 3-7 | 5-8 | 5-8 | 6-11 | 7-12 | 8-14 | 9-14 |
| A _k = 0.10 | | Y | 1-3 | 2-5 | 2-5 | 3-7 | 3-7 | 5-8 | 5-8 | 6-11 | 7-12 | 8-14 | 9-14 |
| 9 x 9 | CFM | | 95 | 115 | 135 | 155 | 175 | 195 | 235 | 275 | 315 | 350 | 390 |
| | T | X | 4-6 | 4-6 | 5-7 | 5-8 | 6-10 | 6-11 | 8-13 | 9-14 | 10-16 | 13-20 | 14-22 |
| A _k = 0.22 | | Y | 4-6 | 4-6 | 5-7 | 5-8 | 6-10 | 6-11 | 8-13 | 9-14 | 10-16 | 13-20 | 14-22 |
| 12 x 12 | CFM | | 175 | 210 | 245 | 280 | 315 | 350 | 420 | 480 | 560 | 635 | 700 |
| | T | X | 5-7 | 5-8 | 6-11 | 8-13 | 8-13 | 9-14 | 10-16 | 13-19 | 14-22 | 16-26 | 19-29 |
| A _k = 0.40 | | Y | 5-7 | 5-8 | 6-11 | 8-13 | 8-13 | 9-14 | 10-16 | 13-19 | 14-22 | 16-26 | 19-29 |
| 15 x 15 | CFM | | 275 | 330 | 385 | 440 | 495 | 550 | 660 | 775 | 885 | 995 | 1100 |
| | T | X | 5-9 | 7-12 | 8-13 | 9-14 | 10-16 | 11-18 | 13-21 | 15-25 | 19-29 | 21-33 | 23-36 |
| A _k = 0.62 | | Y | 5-9 | 7-12 | 8-13 | 9-14 | 10-16 | 11-18 | 13-21 | 15-25 | 19-29 | 21-33 | 23-36 |
| 18 x 18 | CFM | | 390 | 470 | 545 | 625 | 700 | 780 | 935 | 1090 | 1250 | 1410 | 1560 |
| | T | X | 7-12 | 9-14 | 10-15 | 10-16 | 12-19 | 14-22 | 16-25 | 18-29 | 21-33 | 25-38 | 28-42 |
| A _k = 0.90 | | Y | 7-12 | 9-14 | 10-15 | 10-16 | 12-19 | 14-22 | 16-25 | 18-29 | 21-33 | 25-38 | 28-42 |
| 21 x 21 | CFM | | 540 | 650 | 760 | 865 | 975 | 1080 | 1300 | 1515 | 1730 | 1945 | 2160 |
| | T | X | 8-13 | 10-15 | 12-18 | 13-21 | 15-23 | 17-28 | 20-32 | 22-35 | 25-39 | 29-43 | 32-47 |
| A _k = 1.23 | | Y | 8-13 | 10-15 | 12-18 | 13-21 | 15-23 | 17-28 | 20-32 | 22-35 | 25-39 | 29-43 | 32-47 |
| 24 x 24 | CFM | | 705 | 845 | 990 | 1130 | 1270 | 1410 | 1690 | 1950 | 2250 | 2540 | 2820 |
| | T | X | 9-16 | 11-18 | 13-21 | 15-24 | 17-27 | 19-29 | 22-34 | 25-38 | 29-42 | 33-47 | 37-51 |
| A _k = 1.60 | | Y | 9-16 | 11-18 | 13-21 | 15-24 | 17-27 | 19-29 | 22-34 | 25-38 | 29-42 | 33-47 | 37-51 |

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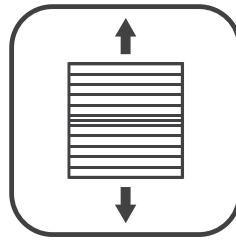
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_k Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_k Outlet Area "Feet²"
 N_c re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- SCD / 2-way, continued



| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | | V _k Outlet Velocity "FPM" | | | | | | | | | | |
|---|-----|---|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | | | P _T Total Pressure "Inches water" | | | | | | | | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 |
| 6 x 6 | CFM | | 45 | 55 | 60 | 70 | 80 | 90 | 105 | 125 | 140 | 160 | 180 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.10 | | Y | 3-5 | 3-5 | 4-7 | 4-7 | 5-8 | 5-8 | 6-9 | 9-13 | 10-15 | 11-17 | 12-18 |
| 9 x 9 | CFM | | 95 | 115 | 135 | 155 | 175 | 195 | 235 | 275 | 315 | 350 | 390 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.22 | | Y | 5-7 | 6-8 | 6-8 | 6-9 | 8-12 | 9-13 | 11-17 | 12-18 | 14-20 | 16-24 | 18-26 |
| 12 x 12 | CFM | | 175 | 210 | 245 | 280 | 315 | 350 | 420 | 480 | 560 | 635 | 700 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.40 | | Y | 4-7 | 6-9 | 9-13 | 10-15 | 11-17 | 12-18 | 14-20 | 17-23 | 18-27 | 21-31 | 23-35 |
| 15 x 15 | CFM | | 275 | 330 | 385 | 440 | 495 | 550 | 660 | 775 | 885 | 995 | 1100 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.62 | | Y | 8-12 | 10-14 | 10-15 | 12-18 | 14-20 | 15-23 | 18-27 | 22-32 | 24-36 | 26-39 | 29-43 |
| 18 x 18 | CFM | | 390 | 470 | 545 | 625 | 700 | 780 | 935 | 1080 | 1250 | 1410 | 1560 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.90 | | Y | 9-15 | 11-17 | 12-18 | 14-20 | 15-23 | 18-26 | 20-30 | 24-36 | 27-42 | 31-45 | 36-51 |
| 21 x 21 | CFM | | 540 | 650 | 760 | 865 | 975 | 1080 | 1300 | 1515 | 1730 | 1945 | 2160 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 1.23 | | Y | 11-17 | 14-20 | 15-23 | 18-26 | 19-29 | 23-35 | 26-40 | 29-44 | 34-49 | 38-54 | 43-59 |
| 24 x 24 | CFM | | 705 | 845 | 990 | 1130 | 1270 | 1410 | 1690 | 1950 | 2250 | 2540 | 2820 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 1.60 | | Y | 12-19 | 14-22 | 17-25 | 20-30 | 21-33 | 23-35 | 27-40 | 34-46 | 39-51 | 42-56 | 46-60 |

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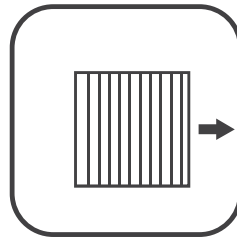
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_k Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_k Outlet Area "Feet²"
 N_c re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- SCD / 1-way



| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | | V _k Outlet Velocity "FPM" | | | | | | | | | | |
|---|-----|---|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | | | P _T Total Pressure "Inches water" | | | | | | | | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 |
| 6 x 6 A _k = 0.10 | CFM | | 45 | 55 | 60 | 70 | 80 | 90 | 105 | 125 | 140 | 160 | 180 |
| | T | X | 3-5 | 4-7 | 5-8 | 6-9 | 8-10 | 9-12 | 10-14 | 12-18 | 14-20 | 15-22 | 16-24 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 9 x 9 A _k = 0.22 | CFM | | 95 | 115 | 135 | 155 | 175 | 195 | 235 | 275 | 315 | 350 | 390 |
| | T | X | 6-9 | 7-10 | 9-13 | 10-14 | 11-17 | 13-19 | 15-21 | 18-26 | 19-29 | 22-33 | 25-38 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 12 x 12 A _k = 0.40 | CFM | | 175 | 210 | 245 | 280 | 315 | 350 | 420 | 480 | 560 | 635 | 700 |
| | T | X | 8-12 | 10-14 | 12-18 | 13-19 | 15-21 | 18-26 | 21-31 | 24-36 | 27-40 | 30-43 | 33-45 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 15 x 15 A _k = 0.62 | CFM | | 275 | 330 | 385 | 440 | 495 | 550 | 660 | 775 | 885 | 995 | 1100 |
| | T | X | 10-16 | 13-19 | 14-22 | 18-26 | 19-29 | 21-31 | 25-37 | 30-43 | 35-46 | 38-50 | 42-56 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 18 x 18 A _k = 0.90 | CFM | | 390 | 470 | 545 | 625 | 700 | 780 | 935 | 1090 | 1250 | 1410 | 1560 |
| | T | X | 13-21 | 15-23 | 18-26 | 19-29 | 22-33 | 25-38 | 29-42 | 35-46 | 42-49 | 44-52 | 49-56 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 21 x 21 A _k = 1.23 | CFM | | 540 | 650 | 760 | 865 | 975 | 1080 | 1300 | 1515 | 1730 | 1945 | 2160 |
| | T | X | 14-23 | 17-25 | 21-30 | 24-36 | 27-40 | 30-43 | 34-48 | 39-54 | 44-60 | 48-64 | 53-68 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 24 x 24 A _k = 1.60 | CFM | | 705 | 845 | 990 | 1130 | 1270 | 1410 | 1690 | 1950 | 2250 | 2540 | 2820 |
| | T | X | 20-29 | 23-33 | 24-36 | 27-40 | 30-44 | 35-48 | 39-54 | 43-60 | 48-65 | 52-69 | 56-74 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |

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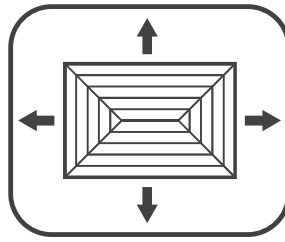
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V_T Terminal Velocity "FPM"
 V_k Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_k Outlet Area "Feet²"
 N_c re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- RCD / 4-way

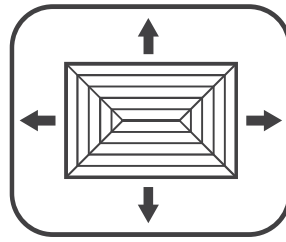


| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | | V _k Outlet Velocity "FPM" | | | | | | | | | | |
|---|-----|---|--|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | | | P _T Total Pressure "Inches water" | | | | | | | | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 |
| 9 x 6 | CFM | | 75 | 90 | 105 | 120 | 135 | 150 | 180 | 210 | 240 | 270 | 300 |
| | T | X | 1-3 | 1-3 | 2-4 | 2-4 | 3-5 | 3-5 | 4-6 | 4-6 | 4-8 | 5-9 | 6-11 |
| A _k = 0.15 | | Y | 2-4 | 3-5 | 3-5 | 4-6 | 4-6 | 4-8 | 5-9 | 6-11 | 7-13 | 8-15 | 8-15 |
| 12 x 6 | CFM | | 100 | 120 | 140 | 160 | 180 | 200 | 240 | 280 | 320 | 360 | 400 |
| | T | X | 1-3 | 1-3 | 2-4 | 2-4 | 2-4 | 3-5 | 4-6 | 4-8 | 4-8 | 5-9 | 6-11 |
| A _k = 0.20 | | Y | 3-5 | 4-6 | 4-8 | 4-8 | 5-9 | 6-11 | 7-13 | 8-15 | 8-15 | 10-18 | 11-21 |
| 12 x 9 | CFM | | 150 | 180 | 210 | 240 | 270 | 300 | 360 | 420 | 480 | 540 | 600 |
| | T | X | 2-4 | 2-4 | 3-5 | 4-6 | 4-7 | 4-8 | 5-9 | 6-11 | 7-13 | 7-13 | 8-14 |
| A _k = 0.30 | | Y | 3-5 | 3-5 | 4-6 | 4-8 | 5-10 | 6-11 | 6-12 | 7-13 | 9-17 | 10-18 | 11-19 |
| 15 x 9 | CFM | | 185 | 225 | 265 | 300 | 340 | 375 | 450 | 525 | 600 | 675 | 750 |
| | T | X | 2-4 | 2-4 | 3-5 | 4-6 | 4-6 | 4-8 | 5-9 | 5-9 | 6-12 | 7-13 | 7-13 |
| A _k = 0.37 | | Y | 4-6 | 4-6 | 5-9 | 6-11 | 6-12 | 8-14 | 8-15 | 9-17 | 11-21 | 13-25 | 13-25 |
| 18 x 9 | CFM | | 225 | 270 | 315 | 360 | 405 | 450 | 540 | 630 | 720 | 810 | 900 |
| | T | X | 2-4 | 2-4 | 3-5 | 4-6 | 4-6 | 4-8 | 5-9 | 5-10 | 6-12 | 8-14 | 10-17 |
| A _k = 0.45 | | Y | 4-6 | 5-9 | 6-11 | 6-12 | 8-14 | 8-15 | 10-19 | 11-23 | 13-25 | 15-29 | 17-32 |
| 21 x 9 | CFM | | 265 | 320 | 370 | 425 | 475 | 530 | 635 | 740 | 850 | 955 | 1060 |
| | T | X | 2-4 | 2-4 | 3-5 | 4-6 | 4-8 | 4-8 | 5-9 | 6-17 | 8-13 | 9-15 | 21-38 |
| A _k = 0.53 | | Y | 5-9 | 6-11 | 8-14 | 8-15 | 10-18 | 10-19 | 11-21 | 13-25 | 16-31 | 19-35 | 21-38 |
| 15 x 12 | CFM | | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 700 | 800 | 900 | 1000 |
| | T | X | 3-5 | 3-5 | 4-6 | 4-8 | 5-9 | 6-11 | 6-12 | 7-13 | 8-15 | 10-18 | 12-21 |
| A _k = 0.50 | | Y | 4-6 | 4-8 | 5-9 | 6-11 | 6-12 | 7-13 | 8-15 | 10-18 | 11-21 | 13-23 | 14-27 |
| 18 x 21 | CFM | | 295 | 355 | 415 | 475 | 535 | 595 | 715 | 835 | 950 | 1070 | 1190 |
| | T | X | 2-4 | 3-5 | 4-6 | 4-8 | 5-9 | 6-11 | 6-12 | 8-14 | 9-16 | 10-18 | 12-21 |
| A _k = 0.59 | | Y | 4-8 | 5-9 | 6-11 | 7-13 | 8-14 | 8-15 | 10-18 | 11-21 | 13-23 | 15-27 | 17-31 |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- RCD / 4-way, continued



| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | V_K Outlet Velocity "FPM" | | | | | | | | | | | |
|---|-----|-------------------------------------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | |
| | | P_T Total Pressure "Inches water" | | | | | | | | | | | |
| | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 | |
| 21 x 12 $A_K = 0.69$ | CFM | 345 | 415 | 485 | 555 | 625 | 690 | 830 | 970 | 1100 | 1240 | 1375 | |
| | T | X | 3-5 | 3-5 | 4-6 | 4-8 | 4-8 | 5-9 | 6-11 | 7-13 | 8-15 | 9-17 | 10-19 |
| | | Y | 5-9 | 6-11 | 7-13 | 8-14 | 8-15 | 10-18 | 11-21 | 14-26 | 16-29 | 17-31 | 19-35 |
| 24 x 12 $A_K = 0.80$ | CFM | 400 | 480 | 560 | 640 | 720 | 800 | 960 | 1140 | 1280 | 1440 | 1600 | |
| | T | X | 2-4 | 4-6 | 4-6 | 4-8 | 4-8 | 5-9 | 6-12 | 5-14 | 9-17 | 10-19 | 10-19 |
| | | Y | 6-11 | 7-13 | 8-14 | 9-16 | 10-18 | 11-21 | 14-26 | 15-29 | 17-31 | 19-35 | 21-39 |
| 18 x 15 $A_K = 0.75$ | CFM | 375 | 450 | 525 | 600 | 675 | 750 | 900 | 1050 | 1200 | 1350 | 1500 | |
| | T | X | 4-6 | 4-8 | 5-9 | 6-11 | 6-12 | 7-13 | 8-15 | 9-17 | 10-19 | 12-22 | 14-25 |
| | | Y | 4-8 | 5-9 | 6-11 | 6-12 | 8-14 | 8-15 | 10-18 | 10-19 | 13-23 | 15-26 | 17-29 |
| 15 x 15 $A_K = 0.62$ | CFM | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | |
| | T | X | 4-6 | 4-8 | 5-9 | 6-11 | 6-12 | 7-13 | 8-15 | 10-18 | 11-21 | 13-23 | 15-27 |
| | | Y | 6-11 | 6-12 | 8-14 | 9-17 | 10-18 | 1-21 | 13-25 | 15-29 | 17-32 | 20-36 | 22-39 |
| 24 x 18 $A_K = 1.20$ | CFM | 600 | 720 | 840 | 960 | 1080 | 1200 | 1440 | 1680 | 1920 | 2160 | 2400 | |
| | T | X | 4-8 | 5-9 | 6-11 | 6-12 | 7-14 | 8-15 | 10-18 | 11-21 | 13-25 | 15-30 | 16-32 |
| | | Y | 6-11 | 6-12 | 7-14 | 8-15 | 10-19 | 11-21 | 13-23 | 15-27 | 18-34 | 21-37 | 23-41 |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

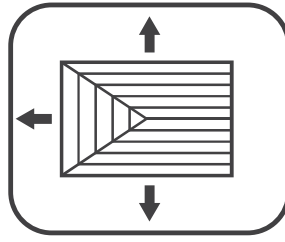
The minimum T Dimensions in feet is based on a VT of 200 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 100 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_K Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_K Outlet Area "Feet²"
 N_C re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- RCD / 3-way

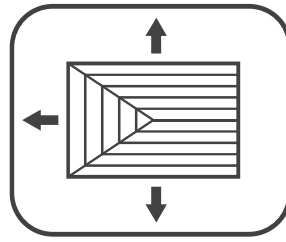


| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | | V _k Outlet Velocity "FPM" | | | | | | | | | | |
|---|-----|---|--|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | | | P _T Total Pressure "Inches water" | | | | | | | | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 |
| 9 x 6 | CFM | | 75 | 90 | 105 | 120 | 135 | 150 | 180 | 210 | 240 | 270 | 300 |
| | T | X | 3-5 | 3-5 | 3-6 | 4-8 | 5-9 | 6-10 | 6-11 | 7-12 | 9-16 | 10-18 | 11-19 |
| A _k = 0.15 | | Y | 1-2 | 1-2 | 2-3 | 2-3 | 2-4 | 2-4 | 2-4 | 3-6 | 4-7 | 4-8 | 4-8 |
| 12 x 6 | CFM | | 100 | 120 | 140 | 160 | 180 | 200 | 240 | 280 | 320 | 360 | 400 |
| | T | X | 3-5 | 4-7 | 4-7 | 5-9 | 6-10 | 6-11 | 8-14 | 9-16 | 10-18 | 11-20 | 13-23 |
| A _k = 0.20 | | Y | 1-2 | 1-2 | 1-2 | 2-3 | 2-3 | 2-4 | 3-6 | 4-7 | 4-7 | 4-8 | 5-9 |
| 12 x 9 | CFM | | 150 | 180 | 210 | 240 | 270 | 300 | 360 | 420 | 480 | 540 | 600 |
| | T | X | 4-7 | 4-8 | 5-9 | 6-11 | 7-13 | 8-14 | 9-15 | 10-18 | 11-20 | 12-21 | 14-25 |
| A _k = 0.30 | | Y | 2-3 | 2-3 | 2-4 | 3-6 | 4-7 | 4-8 | 4-8 | 5-9 | 6-10 | 6-11 | 7-12 |
| 15 x 9 | CFM | | 185 | 225 | 265 | 300 | 340 | 375 | 450 | 525 | 600 | 675 | 750 |
| | T | X | 4-8 | 5-9 | 6-10 | 7-12 | 8-14 | 9-16 | 11-19 | 11-20 | 14-24 | 16-28 | 19-31 |
| A _k = 0.37 | | Y | 2-3 | 2-4 | 2-4 | 2-4 | 3-6 | 4-7 | 4-8 | 4-8 | 6-10 | 6-11 | 8-13 |
| 18 x 9 | CFM | | 225 | 270 | 315 | 360 | 405 | 450 | 540 | 630 | 720 | 810 | 900 |
| | T | X | 4-8 | 6-10 | 6-11 | 7-13 | 9-15 | 10-18 | 11-19 | 13-23 | 15-26 | 18-30 | 20-35 |
| A _k = 0.45 | | Y | 1-2 | 2-3 | 2-4 | 3-6 | 3-6 | 4-7 | 4-8 | 5-9 | 7-11 | 8-13 | 9-15 |
| 21 x 9 | CFM | | 265 | 320 | 370 | 425 | 475 | 530 | 635 | 740 | 850 | 955 | 1060 |
| | T | X | 5-9 | 6-11 | 8-14 | 9-15 | 10-16 | 10-18 | 12-21 | 14-24 | 16-28 | 20-32 | 22-36 |
| A _k = 0.53 | | Y | 2-3 | 2-3 | 2-4 | 3-6 | 4-7 | 4-7 | 4-8 | 4-8 | 5-10 | 7-13 | 8-15 |
| 15 x 12 | CFM | | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 700 | 800 | 900 | 1000 |
| | T | X | 5-9 | 6-10 | 6-11 | 7-13 | 9-15 | 9-16 | 11-20 | 13-23 | 15-26 | 17-30 | 19-33 |
| A _k = 0.50 | | Y | 1-4 | 3-6 | 3-6 | 4-7 | 4-8 | 5-9 | 6-10 | 6-11 | 7-13 | 9-15 | 9-16 |
| 18 x 21 | CFM | | 295 | 355 | 415 | 475 | 535 | 595 | 715 | 835 | 950 | 1070 | 1190 |
| | T | X | 6-10 | 6-11 | 7-13 | 8-14 | 9-15 | 11-20 | 12-22 | 15-26 | 17-30 | 19-33 | 21-38 |
| A _k = 0.59 | | Y | 2-4 | 2-4 | 3-6 | 3-6 | 4-7 | 5-9 | 6-10 | 7-12 | 8-14 | 9-16 | 11-19 |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- RCD / 3-way, continued



| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | V_k Outlet Velocity "FPM" | | | | | | | | | | | | |
|---|--|-----|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 500 600 700 800 900 1000 1200 1400 1600 1800 2000 | | | | | | | | | | | | |
| | P_T Total Pressure "Inches water" | | | | | | | | | | | | |
| | 0.02 0.02 0.03 0.04 0.05 0.06 0.09 0.12 0.16 0.20 0.25 | | | | | | | | | | | | |
| 18 x 15 A _k = 0.75 | CFM | 375 | 459 | 525 | 600 | 675 | 750 | 900 | 1050 | 1200 | 1350 | 1500 | |
| | T | X | 6-10 | 7-12 | 7-13 | 9-15 | 11-19 | 12-21 | 7-13 | 15-26 | 18-32 | 21-36 | 25-40 |
| | | Y | 3-6 | 4-7 | 4-7 | 5-9 | 6-10 | 6-11 | 7-13 | 8-14 | 10-18 | 11-20 | 13-23 |
| 21 x 15 A _k = 0.87 | CFM | 435 | 525 | 610 | 695 | 785 | 870 | 1045 | 1200 | 1390 | 1565 | 1740 | |
| | T | X | 6-11 | 7-13 | 9-15 | 10-18 | 12-21 | 13-23 | 15-26 | 17-31 | 21-36 | 24-42 | 27-47 |
| | | Y | 3-6 | 4-7 | 4-8 | 5-9 | 6-10 | 6-11 | 7-12 | 8-14 | 10-18 | 11-20 | 13-24 |
| 21 x 18 A _k = 1.05 | CFM | 525 | 630 | 735 | 840 | 945 | 1050 | 1260 | 1470 | 1680 | 1890 | 2100 | |
| | T | X | 6-11 | 7-13 | 9-15 | 10-18 | 11-20 | 13-22 | 15-26 | 17-30 | 19-35 | 24-42 | 26-45 |
| | | Y | 3-6 | 4-7 | 4-8 | 6-10 | 6-11 | 7-12 | 8-14 | 9-16 | 10-18 | 12-21 | 14-24 |
| 24 x 18 A _k = 1.20 | CFM | 600 | 720 | 840 | 960 | 1080 | 1200 | 1440 | 1680 | 1920 | 2160 | 2400 | |
| | T | X | 7-13 | 9-15 | 10-18 | 13-22 | 14-24 | 15-26 | 19-32 | 23-37 | 26-42 | 28-47 | 30-51 |
| | | Y | 4-7 | 4-8 | 5-9 | 6-11 | 7-12 | 8-13 | 10-17 | 12-20 | 14-23 | 15-25 | 17-27 |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

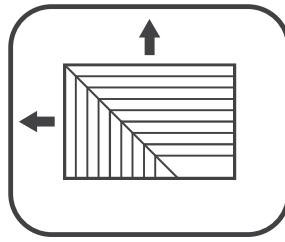
The minimum T Dimensions in feet is based on a VT of 170 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 85 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
V_k Outlet Velocity "FPM"
V_R Room Velocity "FPM"

T Throw "Feet"
A_k Outlet Area "Feet²"
N_c re 8db room

P_T Total Pressure "Inch Water"
P_S Static Pressure "Inch Water"

- RCD / 2-way

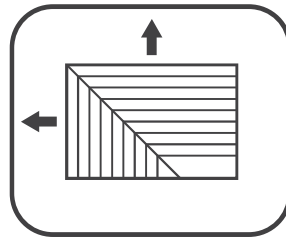


| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | | V _k Outlet Velocity "FPM" | | | | | | | | | | |
|---|-----|------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | | | P _T Total Pressure "Inches water" | | | | | | | | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 |
| 9 x 6 A _k = 0.13 | CFM | | 65 | 80 | 95 | 105 | 120 | 130 | 160 | 185 | 210 | 240 | 260 |
| | T | X | 2-4 | 3-5 | 4-6 | 4-6 | 5-7 | 5-7 | 6-9 | 6-10 | 7-12 | 8-13 | 10-16 |
| Y | | 3-5 | 4-7 | 5-8 | 5-8 | 6-11 | 6-11 | 8-13 | 9-14 | 11-16 | 13-21 | 16-25 | |
| 12 x 6 A _k = 0.17 | CFM | | 90 | 105 | 120 | 140 | 160 | 175 | 210 | 245 | 280 | 315 | 350 |
| | T | X | 2-4 | 3-5 | 3-5 | 4-6 | 5-7 | 5-7 | 5-8 | 6-11 | 7-12 | 8-13 | 10-15 |
| Y | | 3-6 | 5-8 | 6-11 | 7-12 | 8-13 | 9-14 | 10-15 | 13-20 | 15-24 | 17-26 | 19-29 | |
| 15 x 6 A _k = 0.22 | CFM | | 110 | 130 | 155 | 175 | 200 | 220 | 265 | 310 | 350 | 395 | 440 |
| | T | X | 2-4 | 3-5 | 3-5 | 4-6 | 5-7 | 5-8 | 6-9 | 6-10 | 8-12 | 10-14 | 11-17 |
| Y | | 5-8 | 6-10 | 7-12 | 8-13 | 10-15 | 11-17 | 13-20 | 15-24 | 17-27 | 20-30 | 22-34 | |
| 12 x 9 A _k = 0.26 | CFM | | 130 | 155 | 180 | 210 | 235 | 260 | 310 | 365 | 415 | 470 | 520 |
| | T | X | 4-6 | 4-6 | 5-7 | 5-8 | 6-10 | 6-11 | 8-13 | 11-17 | 12-19 | 13-20 | 14-23 |
| Y | | 5-7 | 5-8 | 6-10 | 6-11 | 8-12 | 9-14 | 10-16 | 14-21 | 16-24 | 17-26 | 19-30 | |
| 15 x 9 A _k = 0.32 | CFM | | 165 | 195 | 230 | 260 | 295 | 325 | 390 | 460 | 525 | 590 | 650 |
| | T | X | 4-6 | 5-7 | 6-8 | 6-9 | 6-11 | 7-12 | 9-14 | 10-15 | 12-17 | 13-20 | 14-22 |
| Y | | 6-10 | 6-11 | 8-12 | 10-14 | 10-16 | 12-19 | 14-22 | 16-25 | 19-29 | 21-33 | 23-35 | |
| 18 x 9 A _k = 0.39 | CFM | | 195 | 235 | 275 | 310 | 350 | 390 | 470 | 545 | 625 | 700 | 780 |
| | T | X | 4-6 | 5-7 | 5-7 | 5-8 | 6-10 | 7-12 | 8-13 | 9-15 | 11-17 | 12-20 | 14-24 |
| Y | | 6-11 | 8-13 | 9-14 | 10-15 | 11-18 | 13-21 | 16-25 | 19-29 | 22-33 | 23-35 | 26-39 | |
| 21 x 9 A _k = 0.45 | CFM | | 230 | 275 | 320 | 365 | 410 | 455 | 545 | 635 | 730 | 820 | 910 |
| | T | X | 4-6 | 5-7 | 6-8 | 6-9 | 6-10 | 6-11 | 8-13 | 10-15 | 12-18 | 13-21 | 15-27 |
| Y | | 8-13 | 10-15 | 11-17 | 12-19 | 13-21 | 15-24 | 18-29 | 22-34 | 24-38 | 26-42 | 30-47 | |
| 15 x 12 A _k = 0.43 | CFM | | 220 | 260 | 305 | 350 | 390 | 435 | 525 | 610 | 700 | 785 | 870 |
| | T | X | 5-7 | 5-8 | 6-10 | 7-12 | 8-13 | 9-14 | 11-18 | 13-20 | 15-24 | 16-26 | 18-29 |
| Y | | 5-8 | 6-11 | 8-13 | 9-14 | 10-16 | 12-19 | 14-22 | 16-25 | 19-29 | 21-32 | 24-37 | |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- RCD / 2-way, continued



| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | V_K Outlet Velocity "FPM" | | | | | | | | | | | | |
|---|--|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 500 600 700 800 900 1000 1200 1400 1600 1800 2000 | | | | | | | | | | | | |
| | P_T Total Pressure "Inches water" | | | | | | | | | | | | |
| | 0.02 0.02 0.03 0.04 0.05 0.06 0.09 0.12 0.16 0.20 0.25 | | | | | | | | | | | | |
| 18 x 12 A _K = 0.52 | CFM | 260 | 315 | 370 | 420 | 475 | 525 | 630 | 735 | 840 | 945 | 1050 | |
| | T | X | 4-7 | 5-8 | 6-10 | 7-12 | 9-14 | 10-15 | 12-18 | 14-20 | 16-24 | 18-27 | 21-31 |
| | | Y | 6-11 | 8-13 | 9-14 | 11-17 | 13-21 | 14-22 | 17-26 | 21-30 | 23-34 | 27-38 | 29-42 |
| 21 x 15 A _K = 0.76 | CFM | 380 | 455 | 530 | 605 | 685 | 760 | 915 | 1060 | 1220 | 1370 | 1520 | |
| | T | X | 6-10 | 6-11 | 8-13 | 9-14 | 10-16 | 12-19 | 13-21 | 15-26 | 18-29 | 21-33 | 25-38 |
| | | Y | 8-13 | 9-14 | 11-18 | 13-20 | 15-24 | 16-26 | 19-29 | 22-33 | 25-38 | 29-44 | 32-49 |
| 24 x 15 A _K = 0.87 | CFM | 440 | 525 | 615 | 700 | 790 | 875 | 1050 | 1225 | 1400 | 1575 | 1750 | |
| | T | X | 4-9 | 6-1 | 8-13 | 9-14 | 10-16 | 12-19 | 14-22 | 16-25 | 19-29 | 21-32 | 25-37 |
| | | Y | 8-14 | 10-16 | 13-20 | 15-24 | 16-26 | 19-29 | 22-34 | 25-38 | 29-44 | 33-48 | 37-52 |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

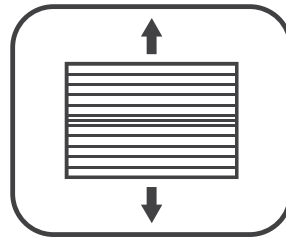
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_K Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_K Outlet Area "Feet²"
 N_C re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- RCD / 2-way, continued

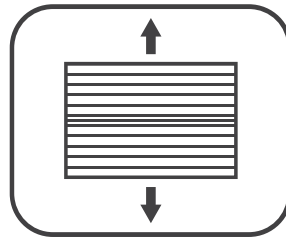


| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | | V _k Outlet Velocity "FPM" | | | | | | | | | | |
|---|-----|---|--|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | | | P _T Total Pressure "Inches water" | | | | | | | | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 |
| 9 x 6 | CFM | | 65 | 80 | 95 | 105 | 120 | 130 | 160 | 185 | 210 | 240 | 260 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.13 | | Y | 3-5 | 3-5 | 5-7 | 6-8 | 7-10 | 7-10 | 8-12 | 10-14 | 11-17 | 14-20 | 16-23 |
| 12 x 6 | CFM | | 90 | 105 | 120 | 140 | 160 | 175 | 210 | 245 | 280 | 315 | 350 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.17 | | Y | 3-5 | 5-7 | 6-8 | 6-9 | 7-10 | 8-12 | 10-14 | 12-18 | 15-21 | 16-23 | 17-25 |
| 15 x 6 | CFM | | 110 | 130 | 155 | 175 | 200 | 220 | 265 | 310 | 350 | 395 | 440 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.22 | | Y | 4-6 | 6-8 | 6-9 | 7-10 | 9-13 | 10-14 | 10-15 | 13-19 | 15-21 | 18-26 | 21-30 |
| 12 x 9 | CFM | | 130 | 155 | 180 | 210 | 235 | 260 | 310 | 365 | 415 | 470 | 520 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.26 | | Y | 5-7 | 6-8 | 6-9 | 8-12 | 10-14 | 10-14 | 11-17 | 14-21 | 16-24 | 19-27 | 20-31 |
| 15 x 9 | CFM | | 165 | 195 | 230 | 260 | 295 | 325 | 390 | 460 | 525 | 590 | 650 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.32 | | Y | 6-8 | 7-10 | 8-12 | 9-13 | 10-15 | 12-18 | 14-20 | 16-24 | 18-26 | 21-31 | 24-35 |
| 18 x 9 | CFM | | 195 | 235 | 275 | 310 | 350 | 390 | 470 | 545 | 625 | 700 | 780 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.39 | | Y | 6-9 | 8-12 | 9-13 | 10-14 | 11-17 | 13-9 | 15-21 | 17-25 | 19-29 | 22-33 | 25-39 |
| 21 x 9 | CFM | | 230 | 275 | 320 | 365 | 410 | 455 | 545 | 635 | 730 | 820 | 910 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.45 | | Y | 7-10 | 8-12 | 9-13 | 11-16 | 12-18 | 14-20 | 16-24 | 19-27 | 22-32 | 25-36 | 29-41 |
| 15 x 12 | CFM | | 220 | 260 | 305 | 350 | 390 | 435 | 525 | 610 | 700 | 785 | 870 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _k = 0.43 | | Y | 6-9 | 8-12 | 10-14 | 10-15 | 12-18 | 14-20 | 15-24 | 18-27 | 22-32 | 24-36 | 28-41 |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- RCD / 2-way, continued



| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | | V _K Outlet Velocity "FPM" | | | | | | | | | | |
|---|-----|---|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | | | P _T Total Pressure "Inches water" | | | | | | | | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 |
| 18 x 12 | CFM | | 260 | 315 | 370 | 420 | 475 | 525 | 630 | 735 | 840 | 945 | 1050 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _K = 0.52 | | Y | 7-11 | 9-13 | 11-15 | 12-18 | 13-19 | 15-21 | 18-26 | 20-29 | 23-34 | 27-39 | 31-42 |
| 21 x 15 | CFM | | 380 | 455 | 530 | 605 | 685 | 760 | 915 | 1060 | 1220 | 1370 | 1520 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _K = 0.76 | | Y | 9-13 | 10-15 | 12-18 | 14-20 | 15-23 | 17-25 | 20-30 | 23-34 | 27-40 | 31-44 | 34-48 |
| 24 x 15 | CFM | | 440 | 525 | 615 | 700 | 790 | 875 | 1050 | 1225 | 1400 | 1575 | 1750 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _K = 0.87 | | Y | 8-14 | 11-16 | 13-19 | 15-21 | 17-25 | 19-29 | 22-33 | 25-38 | 29-42 | 33-48 | 38-54 |
| 21 x 18 | CFM | | 460 | 550 | 640 | 735 | 825 | 915 | 1100 | 1280 | 1465 | 1645 | 1830 |
| | T | X | — | — | — | — | — | — | — | — | — | — | — |
| A _K = 0.91 | | Y | 10-15 | 11-17 | 13-19 | 16-22 | 19-25 | 20-28 | 23-33 | 26-38 | 29-42 | 34-46 | 38-51 |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

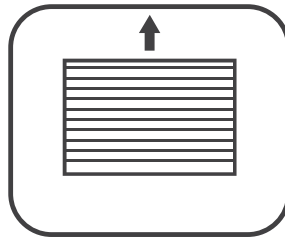
The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_K Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_K Outlet Area "Feet²"
 N_C re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- RCD / 1-way

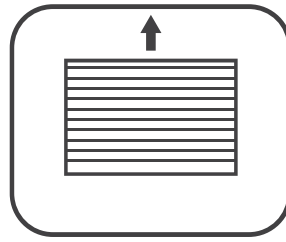


| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | | | V _k Outlet Velocity "FPM" | | | | | | | | | | |
|---|-----|---|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| | | | P _T Total Pressure "Inches water" | | | | | | | | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.09 | 0.12 | 0.16 | 0.20 | 0.25 |
| 9 x 6 A _k = 0.13 | CFM | | 65 | 80 | 95 | 105 | 120 | 130 | 160 | 185 | 210 | 240 | 265 |
| | T | X | 5-8 | 6-9 | 7-11 | 8-12 | 9-13 | 10-15 | 12-18 | 15-21 | 16-24 | 19-29 | 21-32 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 12 x 6 A _k = 0.17 | CFM | | 90 | 105 | 120 | 140 | 160 | 175 | 210 | 245 | 280 | 315 | 350 |
| | T | X | 5-8 | 6-9 | 9-13 | 9-14 | 10-15 | 12-18 | 14-20 | 17-25 | 18-27 | 20-30 | 23-35 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 15 x 6 A _k = 0.22 | CFM | | 110 | 130 | 155 | 175 | 200 | 220 | 265 | 310 | 350 | 395 | 440 |
| | T | X | 5-8 | 7-10 | 9-13 | 10-15 | 12-18 | 14-20 | 16-24 | 18-27 | 21-31 | 24-36 | 28-41 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 12 x 9 A _k = 0.26 | CFM | | 130 | 155 | 180 | 210 | 235 | 260 | 310 | 365 | 415 | 470 | 520 |
| | T | X | 7-10 | 8-12 | 10-14 | 11-17 | 12-18 | 14-20 | 17-25 | 19-29 | 22-33 | 25-37 | 28-41 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 15 x 9 A _k = 0.32 | CFM | | 165 | 195 | 230 | 260 | 295 | 325 | 390 | 460 | 525 | 590 | 650 |
| | T | X | 9-13 | 10-14 | 11-17 | 12-18 | 15-23 | 17-25 | 20-30 | 22-33 | 25-37 | 29-42 | 32-45 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 18 x 9 A _k = 0.39 | CFM | | 195 | 235 | 275 | 310 | 350 | 390 | 470 | 545 | 625 | 700 | 780 |
| | T | X | 9-13 | 10-15 | 12-18 | 14-20 | 16-24 | 18-26 | 20-30 | 25-37 | 27-40 | 31-44 | 36-48 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 15 x 12 A _k = 0.43 | CFM | | 220 | 260 | 305 | 350 | 390 | 435 | 525 | 610 | 700 | 780 | 870 |
| | T | X | 10-14 | 11-17 | 13-19 | 15-23 | 18-26 | 19-29 | 22-32 | 26-39 | 30-43 | 35-48 | 39-54 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- RCD / 1-way, continued



| | |
|--|---------|
| | ≥ NC 45 |
| | NC 40 |
| | NC 35 |
| | NC 30 |
| | ≥ NC 30 |

| Neck Size "Inch"/Outlet Area "Inch" | V_K Outlet Velocity "FPM" | | | | | | | | | | | | |
|---|---|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 500 600 700 800 900 1000 1200 1400 1600 1800 2000 | | | | | | | | | | | | |
| | P_T Total Pressure "Inches water" | | | | | | | | | | | | |
| | 0.02 0.02 0.03 0.04 0.05 0.06 0.09 0.12 0.16 0.20 .25 | | | | | | | | | | | | |
| 18 x 12 $A_K = 0.52$ | CFM | | 260 | 315 | 370 | 420 | 475 | 525 | 630 | 735 | 840 | 945 | 1050 |
| | T | X | 10-15 | 12-18 | 14-20 | 17-25 | 19-27 | 21-30 | 25-36 | 28-41 | 32-45 | 36-49 | 42-54 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 21 x 15 $A_K = 0.76$ | CFM | | 380 | 455 | 530 | 605 | 685 | 760 | 915 | 1060 | 1220 | 1370 | 1520 |
| | T | X | 13-19 | 15-21 | 18-26 | 19-29 | 22-34 | 25-38 | 29-42 | 34-46 | 38-51 | 43-56 | 48-61 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 24 x 15 $A_K = 0.87$ | CFM | | 440 | 525 | 615 | 700 | 790 | 875 | 1050 | 1225 | 1400 | 1575 | 1750 |
| | T | X | 14-22 | 16-24 | 18-27 | 21-31 | 24-36 | 27-40 | 30-43 | 35-47 | 41-52 | 46-57 | 53-61 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |
| 21 x 18 $A_K = 0.91$ | CFM | | 460 | 550 | 640 | 735 | 825 | 915 | 1100 | 1280 | 1465 | 1645 | 1830 |
| | T | X | 14-20 | 16-24 | 19-29 | 22-32 | 24-36 | 26-39 | 30-43 | 35-47 | 41-51 | 45-56 | 49-62 |
| | | Y | — | — | — | — | — | — | — | — | — | — | — |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

The minimum T Dimensions in feet is based on a VT of 135 FPM with a VR of 65 FPM , The Maximum T Dimension In feet is based on a VT of 65 with a VR of 35 FPM .

V_T Terminal Velocity "FPM"
 V_K Outlet Velocity "FPM"
 V_R Room Velocity "FPM"

T Throw "Feet"
 A_K Outlet Area "Feet²"
 N_C re 8db room

P_T Total Pressure "Inch Water"
 P_S Static Pressure "Inch Water"

- Selection Procedure

1. Determine the required CFM per each outlet as per cooling Load Calculation.
2. Determine the type of pattern from table in page (3).
Example : "4-way, 2-way-21,...etc. "
3. Determine the recommended Outlet Velocity V_K according to application as per following Table.
4. Select the suitable size that give the required CFM at recommended outlet velocity from performance data tables.

| Application | V_K Outlet Velocity "FPM" |
|---------------------------------------|-----------------------------|
| Broadcast Studios | 300-500 |
| Residences | 500-750 |
| Apartments | 500-750 |
| Mosques , Churches | 500-750 |
| Hotel Bedrooms | 500-750 |
| Theaters | 500-750 |
| Private Offices, Acoustically Treated | 500-750 |
| Private Offices, not Treated | 500-800 |
| General Offices | 1000-1250 |
| Dept. Stores | 1500 |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

Table (1) - Recommended Outlet Velocity *

- Selection Procedure Example

1. Required 250 CFM as per cooling load calculations.
2. Required 4-way pattern type.
3. The recommended outlet velocity ranges from 500 - 750 FPM.
4. The size of air outlet can 12 X 12 at 700 FPM or 15 X 15 at 500 FPM velocity.

* Table 20—Carrier Handbook - Part 2. Air Distribution - Chapter 3. Room Air Distribution—p.72

| Neck Size "Inch"/Outlet Area "Inch" | | | V _k Outlet Velocity "FPM" | | | |
|---|-----|---|--|------|------|------|
| | | | 500 | 600 | 700 | 800 |
| | | | P _T Total Pressure "Inches water" | | | |
| | | | 0.02 | 0.02 | 0.03 | 0.04 |
| 6 x 6 | CFM | | 50 | 60 | 70 | 80 |
| | T | X | 2-3 | 2-3 | 2-4 | 2-4 |
| A _k = 0.10 | | Y | 2-3 | 2-3 | 2-4 | 2-4 |
| 9 x 9 | CFM | | 110 | 135 | 155 | 180 |
| | T | X | 2-4 | 2-4 | 3-5 | 3-5 |
| A _k = 0.22 | | Y | 2-4 | 2-4 | 3-5 | 3-5 |
| 12 x 12 | CFM | | 200 | 240 | 280 | 320 |
| | T | X | 3-5 | 4-6 | 4-8 | 5-8 |
| A _k = 0.40 | | Y | 3-5 | 4-6 | 4-8 | 5-8 |
| 15 x 15 | CFM | | 310 | 375 | 440 | 500 |
| | T | X | 4-6 | 4-8 | 5-9 | 6-11 |
| A _k = 0.62 | | Y | 4-6 | 4-8 | 5-9 | 6-11 |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

- How to order

| | | |
|---------|---------|---|
| Type | SCD | SCD Square Ceiling Diffuser RCD Rectangular Ceiling Diffuser |
| Pattern | 4 | Pattern Type at page (3) |
| Size | 24 x 24 | L X W " Inch" |
| Finish | 1 | 0 Aluminum 1 White Color 2 Other Colors |
| Damper | 0 | 0 Without Damper 1 With Damper |

Square Ceiling Diffuser products are manufactured by Khedr Trust Co.

| Room Types | | Noise Criteria (NC) |
|-------------------------------|---|---------------------|
| Residences, apartments | Living areas | 30 |
| | Bathrooms, kitchens, utility rooms | 35 |
| Hotels/motels | Individual rooms or suites | 30 |
| | Meeting/banquet rooms | 30 |
| | Corridors and lobbies | 40 |
| | Service/support areas | 40 |
| Office buildings | Executive and private offices | 30 |
| | Conference rooms | 30 |
| | Teleconference rooms | 25 |
| | Open-plan offices | 40 |
| | Corridors and lobbies | 40 |
| Courtrooms | Unamplified speech | 30 |
| | Amplified speech | 35 |
| Performing arts spaces | Drama theaters, concert and recital halls | 20 |
| | Music teaching studios | 25 |
| | Music practice rooms | 30 |
| Hospitals and clinics | Patient rooms | 30 |
| | Wards | 35 |
| | Operating and procedure rooms | 35 |
| | Corridors and lobbies | 40 |
| Laboratories | Testing/research with minimal speech Communication | 50 |
| | Extensive phone use and speech communication | 45 |
| | Group teaching | 35 |
| Churches, mosques, synagogues | General assembly with critical music programs | 25 |
| Schools | Classrooms | 30 |
| | Large lecture rooms with speech amplification | 30 |
| | Large lecture rooms without speech amplification | 25 |
| Libraries | | 30 |
| Indoor stadiums, gymnasiums | Gymnasiums and natatoriums | 45 |
| | Large-seating-capacity spaces with speech amplification | 50 |

* ASHRAE Applications – Ch. 49 Noise and Vibration Control

Other Products are provided by Khedr Trust Co.

Diffusers & Grilles

- Squar Ceiling Diffuser
- Circular Ceiling Diffuser
- Slot Linear Diffuser
- Linear Bar Grille
- Aluminum Grille
- Swirl Diffuser
- Perforated Ceiling Diffuser
- Disc Valve Diffuser
- Jet Diffuser
- Eye Ball Diffuser
- Door Grille
- Raised Floor Grid

Louvers

- Aluminum Louver
- Sand Trap Louver

Dampers

- Blade Volume Damper
- Toothed Wheel Volume Damper
- Gravity Shutter Damper

Acoustics

- Sound Attenuator
- Acoustic Louver

Smoke Management

- Fire Damper
- Smoke Motorized Damper
- Smoke Vent

Duct Works

- Galvanized Steel Duct
- Black Steel Duct
- Stainless Steel Duct
- Spiral Duct
- Flexible Duct
- Canavas
- Flanges
- Flexible Duct Connector



Khedr Trust

ALL AIR PRODUCTS



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