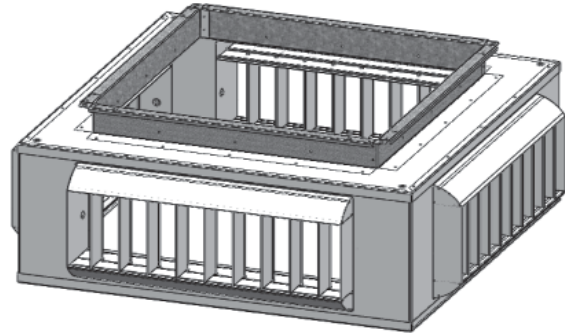


- TDBA_D4 - 4-Way Blow Drum Louver
- TDBA_G4 - 4-Way Blow Double Deflection
- TDBA_D6 - 6-Way Blow Drum Louver
- TDBA_G6 - 6-Way Blow Double Deflection

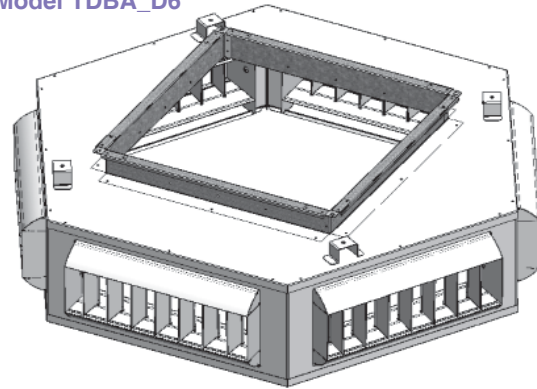
Standard Features

- Choice of drum louvers or double deflection grilles.
- 4-way or 6-way blow patterns. Other blow patterns are available upon request.
- 1" fiberglass insulation for reduced sound.
- Optional air deflector with turning vanes.
- 18 gauge top and bottom.
- TDC flanges included.

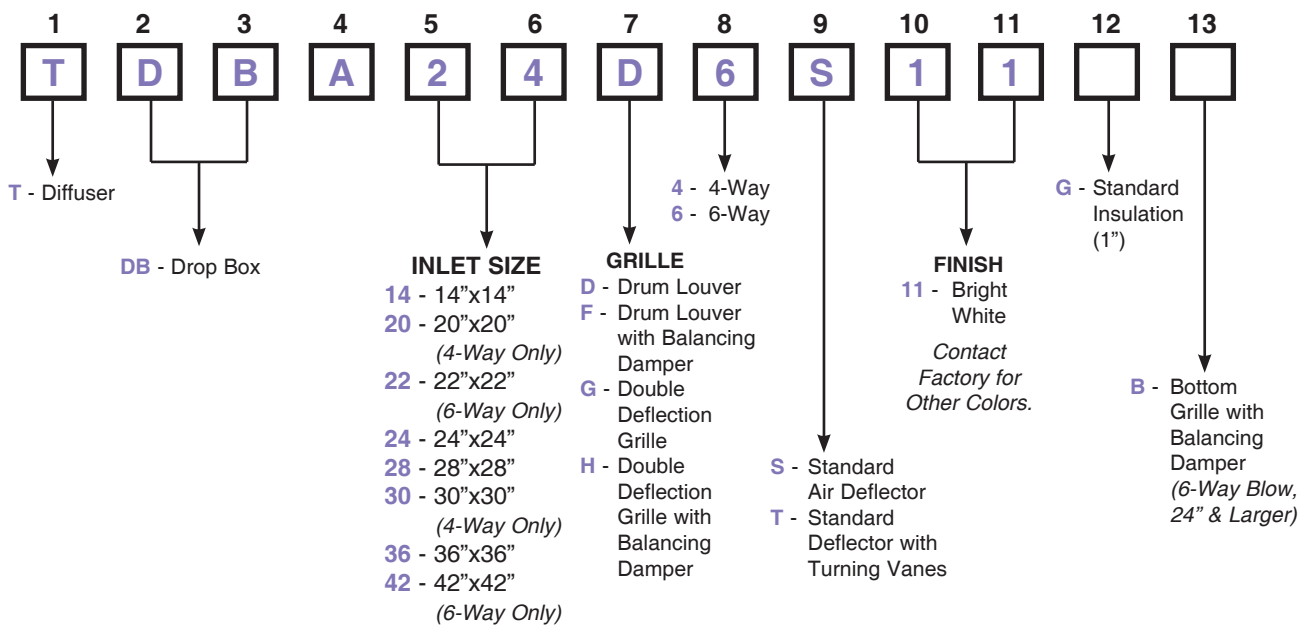
Model TDBA_D4

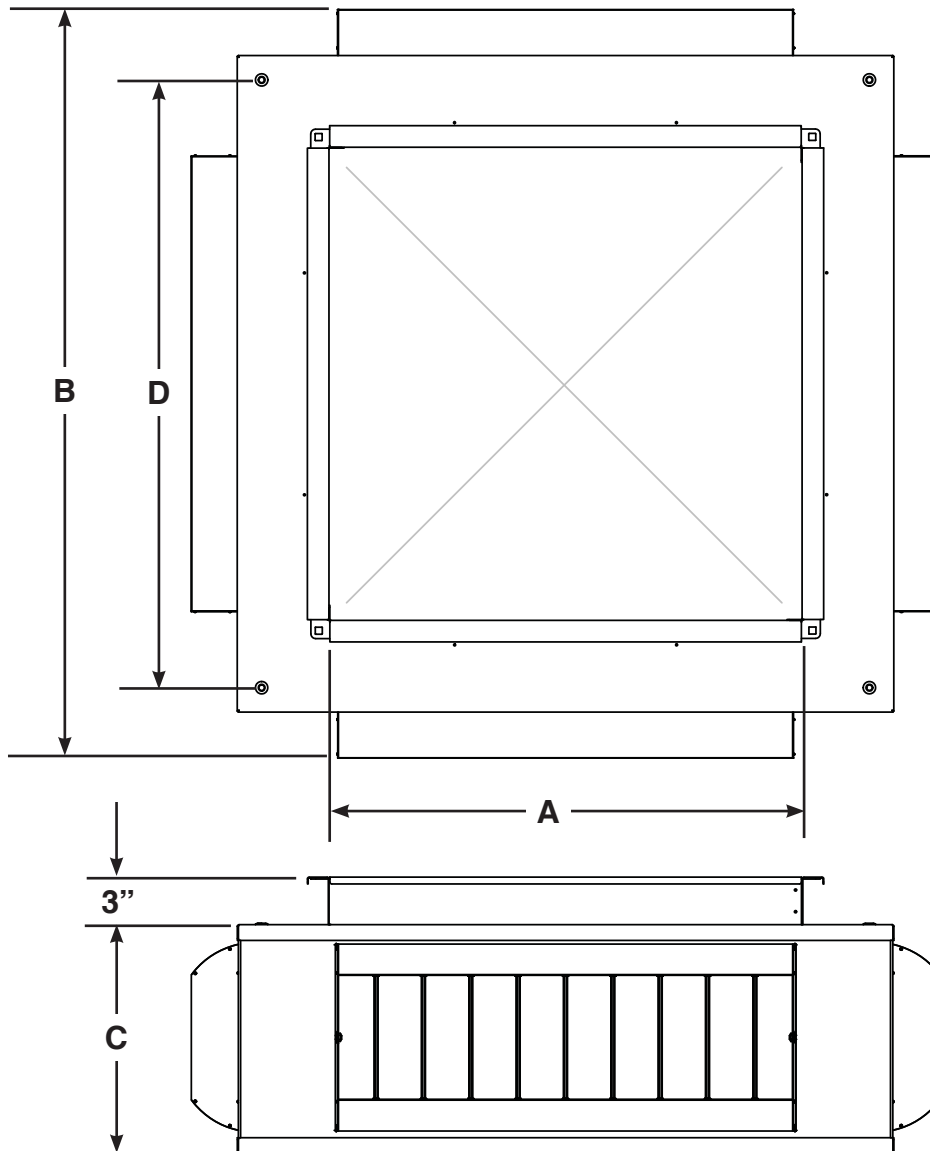


Model TDBA_D6



Model Numbering System





| Neck Size A | B | C | D | CFM | Est. Weight |
|----------------|--------|--------|--------|--------------|-------------|
| 14x14 | 24 | 10 | 21 | 800-2,000 | 50 |
| 20x20 | 32 | 10 | 29 | 1,600-4,100 | 80 |
| 24x24 | 35-1/2 | 12-1/2 | 32-1/2 | 2,400-6,000 | 100 |
| 28x28 | 39 | 12-1/2 | 36 | 3,200-8,100 | 120 |
| 30x30 | 41-1/2 | 14-1/2 | 38-1/2 | 3,700-9,400 | 140 |
| 36x36 | 50 | 17 | 47 | 5,400-13,500 | 195 |

STANDARD FEATURES:

- 18 ga. top/bottom panels
- 20 ga. grille panels
- 20 ga. air diverter
- Drum louvers
- TDC connection flanges
- Intermediate turning vanes
- 1" 1-1/2# insulation on bottom for noise control
- 3/8-16 threaded inserts in each corner for mounting

Option:

- Balancing dampers (TDBA_F4)

4-WAY BLOW WITH DRUM LOUVERS

| NECK SIZE | | INTAKE DUCT VELOCITY | | | | | | |
|-----------|-------|----------------------|-----------|-----------|------------|------------|------------|------------|
| | | 600 | 750 | 900 | 1050 | 1200 | 1350 | 1500 |
| 14 | CFM | 817 | 1021 | 1225 | 1429 | 1633 | 1838 | 2042 |
| | THROW | 7-16-34 | 11-21-43 | 17-26-51 | 20-30-56 | 23-35-60 | 26-39-64 | 29-44-67 |
| | ΔP | 0.008 | 0.013 | 0.019 | 0.027 | 0.035 | 0.044 | 0.055 |
| 22 | CFM | 1667 | 2083 | 2500 | 2917 | 3333 | 3750 | 4167 |
| | THROW | 23-34-58 | 29-43-65 | 34-50-71 | 40-54-76 | 46-58-82 | 50-61-87 | 53-65-91 |
| | ΔP | 0.018 | 0.030 | 0.046 | 0.064 | 0.085 | 0.108 | 0.135 |
| 24 | CFM | 2400 | 3000 | 3600 | 4200 | 4800 | 5400 | 6000 |
| | THROW | 30-45-79 | 38-57-88 | 46-68-97 | 54-74-104 | 62-79-112 | 68-84-118 | 72-88-125 |
| | ΔP | 0.089 | 0.123 | 0.154 | 0.182 | 0.207 | 0.228 | 0.246 |
| 28 | CFM | 3267 | 4083 | 4900 | 5717 | 6533 | 7350 | 8167 |
| | THROW | 37-56-89 | 47-70-99 | 57-77-108 | 66-83-117 | 72-89-125 | 77-94-133 | 81-99-140 |
| | ΔP | 0.059 | 0.071 | 0.115 | 0.192 | 0.301 | 0.443 | 0.618 |
| 30 | CFM | 3750 | 4688 | 5625 | 6563 | 7500 | 8438 | 9375 |
| | THROW | 37-56-102 | 47-70-115 | 56-84-125 | 65-96-136 | 75-102-145 | 84-109-154 | 94-115-162 |
| | ΔP | 0.026 | 0.046 | 0.071 | 0.101 | 0.136 | 0.176 | 0.221 |
| 36 | CFM | 5400 | 6750 | 8100 | 9450 | 10800 | 12150 | 13500 |
| | THROW | 46-69-109 | 58-86-122 | 70-94-133 | 82-102-144 | 89-109-154 | 94-116-163 | 99-112-172 |
| | ΔP | 0.040 | 0.061 | 0.086 | 0.116 | 0.150 | 0.189 | 0.233 |

Throws based on Carnes standard drum louver performance data.

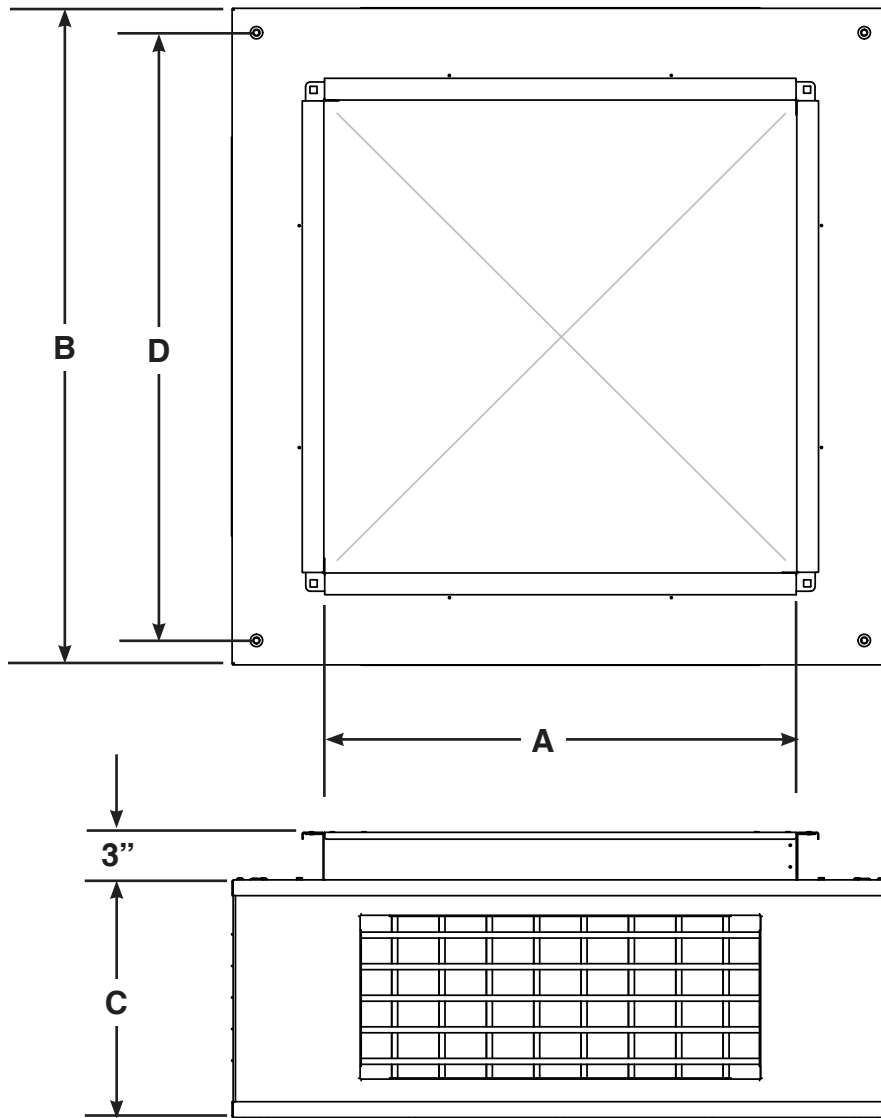
Throw data assumes the blades are spread 15°. For performance at 0° or 30° spreads, apply the following correction factors:

For 0° multiply throws by 1.2

For 0° multiply pressure by 0.795

For 30° multiply throws by 0.8

For 30° multiply pressure by 1.43



| Neck Size A | B | C | D | CFM | Est. Weight |
|----------------|--------|----|--------|--------------|-------------|
| 14x14 | 24 | 10 | 21 | 800-2,000 | 50 |
| 20x20 | 32 | 10 | 29 | 1,600-4,100 | 80 |
| 24x24 | 35-1/2 | 10 | 32-1/2 | 2,400-6,000 | 100 |
| 28x28 | 39 | 12 | 36 | 3,200-8,100 | 120 |
| 30x30 | 41-1/2 | 15 | 38-1/2 | 3,700-9,400 | 140 |
| 36x36 | 50 | 15 | 47 | 5,400-13,500 | 195 |

STANDARD FEATURES:

- 18 ga. top/bottom panels
- 20 ga. grille panels
- 20 ga. air diverter
- Double deflection grilles
- TDC connection flanges
- Intermediate turning vanes
- 1" 1-1/2# insulation on bottom for noise control
- 3/8-16 threaded inserts in each corner for mounting

Option:

- Balancing dampers (TDBA_H4)

4-WAY BLOW WITH DIFFUSERS

| NECK SIZE | | INTAKE DUCT VELOCITY | | | | | | |
|-----------|-------|----------------------|------------|-----------|------------|------------|------------|-------------|
| | | 600 | 750 | 900 | 1050 | 1200 | 1350 | 1500 |
| 14 | CFM | 817 | 1021 | 1225 | 1429 | 1633 | 1838 | 2042 |
| | THROW | 20-30-56 | 25-38-63 | 31-46-69 | 36-53-75 | 41-56-80 | 46-60-85 | 51-63-89 |
| | ΔP | 0.064 | 0.108 | 0.163 | 0.229 | 0.306 | 0.393 | 0.491 |
| 22 | CFM | 1667 | 2083 | 2500 | 2917 | 3333 | 3750 | 4167 |
| | THROW | 27-41-43 | 34-51-82 | 41-62-82 | 48-68-97 | 55-73-103 | 62-77-110 | 67-82-115 |
| | ΔP | 0.066 | 0.101 | 0.145 | 0.197 | 0.258 | 0.326 | 0.403 |
| 24 | CFM | 2400 | 3000 | 3600 | 4200 | 4800 | 5400 | 6000 |
| | THROW | 35-52-85 | 43-65-95 | 52-73-104 | 61-79-112 | 69-85-120 | 73-90-127 | 77-95-134 |
| | ΔP | 0.077 | 0.088 | 0.102 | 0.118 | 0.136 | 0.156 | 0.178 |
| 28 | CFM | 3267 | 4083 | 4900 | 5717 | 6533 | 7350 | 8167 |
| | THROW | 41-61-92 | 51-73-103 | 61-80-113 | 70-86-122 | 75-92-130 | 80-98-138 | 84-403-146 |
| | ΔP | 0.063 | 0.096 | 0.137 | 0.188 | 0.246 | 0.314 | 0.389 |
| 30 | CFM | 3750 | 4688 | 5625 | 6563 | 7500 | 8438 | 9375 |
| | THROW | 39-59-118 | 550-75-137 | 60-90-150 | 70-105-162 | 81-121-173 | 91-130-184 | 101-137-194 |
| | ΔP | 0.045 | 0.067 | 0.094 | 0.127 | 0.165 | 0.208 | 0.257 |
| 36 | CFM | 5400 | 6750 | 8100 | 9450 | 10800 | 12150 | 13500 |
| | THROW | 39-59-117 | 49-73-137 | 59-88-151 | 68-103-163 | 78-117-174 | 88-130-184 | 98-137-194 |
| | ΔP | 0.038 | 0.055 | 0.077 | 0.106 | 0.141 | 0.181 | 0.227 |

Throws based on Carnes standard 2" double deflection industrial grille performance data.

Throw data assumes the blades are spread 0°. For performance at 22.5° or 45° spreads, apply the following correction factors:

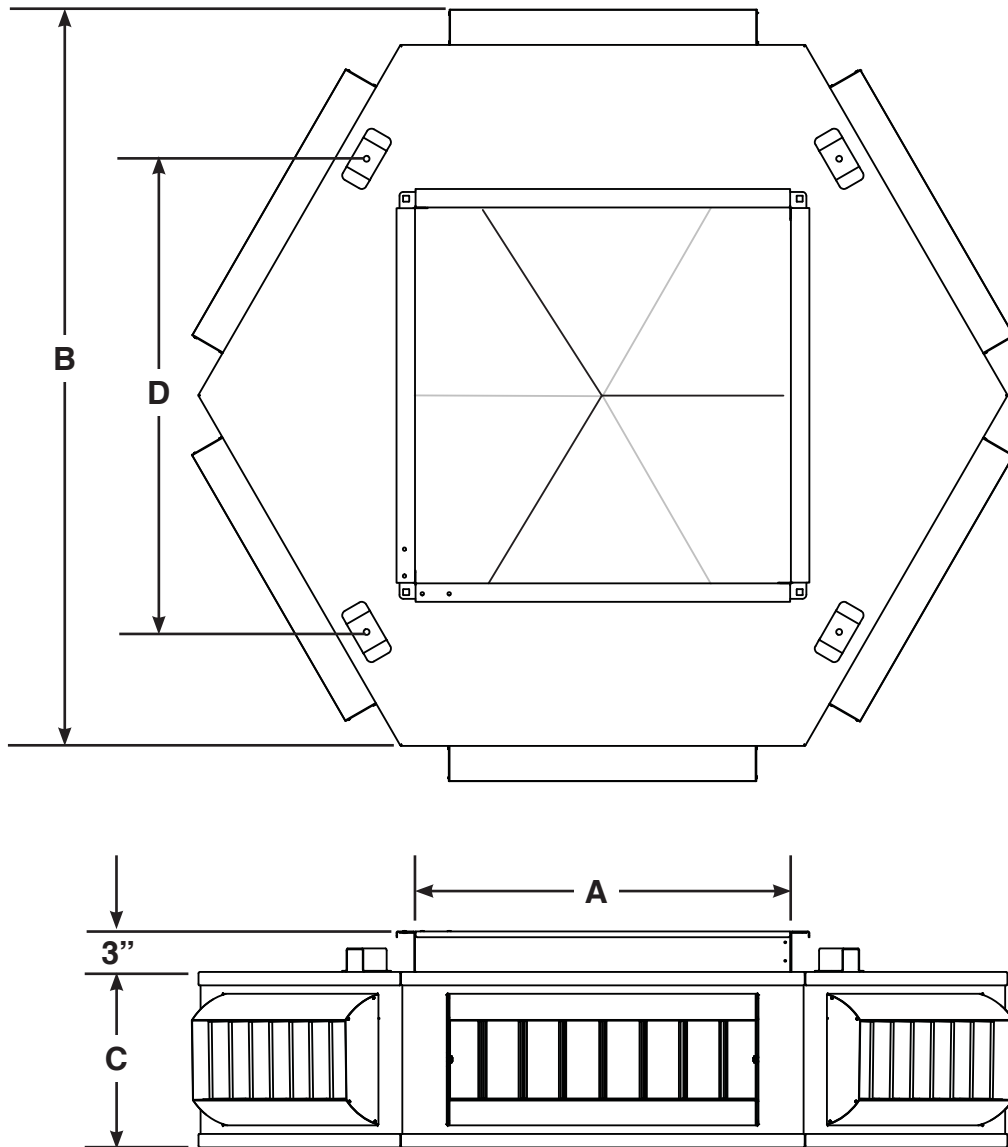
For 22.5° multiply throws by 0.806

For 22.5° multiply pressure by 1.299

For 45° multiply throws by 0.479

For 45° multiply pressure by 1.907

CARNES® 6-Way Drum Louver Drop Box Diffuser (TDBA_D6)



| Neck Size A | B | C | D | CFM | Est. Weight |
|----------------|--------|--------|--------|--------------|-------------|
| 14x14 | 30-1/4 | 10 | 19-1/8 | 800-2,000 | 63 |
| 22x22 | 42-1/4 | 10 | 27-7/8 | 2,000-5,000 | 114 |
| 24x24 | 48-1/4 | 10 | 32-1/4 | 2,400-6,000 | 132 |
| 28x28 | 52-1/4 | 13 | 35-1/8 | 3,300-8,100 | 167 |
| 36x36 | 64-1/4 | 15 | 44 | 5,400-13,500 | 237 |
| 42x42 | 76-1/4 | 17-1/2 | 52-3/4 | 7,400-18,300 | 345 |

STANDARD FEATURES:

- 18 ga. top/bottom panels
- 20 ga. grille panels
- 20 ga. air diverter
- Drum louvers
- TDC connection flanges
- Intermediate turning vanes
- 1" 1-1/2# insulation on bottom for noise control
- 14 ga. mounting brackets

Options:

- Balancing dampers (TDBA_F6)
- Bottom double deflection register (Option B)

6-WAY BLOW WITH DRUM LOUVERS

| NECK SIZE | | INTAKE DUCT VELOCITY | | | | | | |
|-----------|------------|----------------------|-----------|-----------|-----------|-----------|-----------|------------|
| | | 600 | 750 | 900 | 1050 | 1200 | 1350 | 1500 |
| 14 | CFM | 817 | 1021 | 1225 | 1429 | 1633 | 1838 | 2042 |
| | THROW | 13-20-29 | 17-23-32 | 20-25-35 | 22-27-38 | 23-29-40 | 25-30-43 | 26-32-45 |
| | ΔP | 0.032 | 0.049 | 0.070 | 0.096 | 0.125 | 0.159 | 0.197 |
| 22 | CFM | 2017 | 2521 | 3025 | 3529 | 4033 | 4538 | 5042 |
| | THROW | 30-44-62 | 39-49-69 | 44-54-76 | 47-58-82 | 51-62-88 | 54-66-93 | 57-69-98 |
| | ΔP | 0.055 | 0.118 | 0.180 | 0.242 | 0.303 | 0.363 | 0.423 |
| 24 | CFM | 2400 | 3000 | 3600 | 4200 | 4800 | 5400 | 6000 |
| | THROW | 40-60-86 | 50-68-96 | 60-75-106 | 66-81-114 | 70-86-122 | 75-91-129 | 79-96-136 |
| | ΔP | 0.077 | 0.119 | 0.172 | 0.234 | 0.308 | 0.391 | 0.485 |
| 28 | CFM | 3267 | 4083 | 4900 | 5717 | 6533 | 7350 | 8167 |
| | THROW | 37-53-75 | 46-59-83 | 53-65-91 | 57-70-99 | 61-75-105 | 65-79-112 | 68-83-118 |
| | ΔP | 0.043 | 0.064 | 0.090 | 0.121 | 0.158 | 0.200 | 0.248 |
| 36 | CFM | 5400 | 6750 | 8100 | 9450 | 10800 | 12150 | 13500 |
| | THROW | 45-64-90 | 56-71-101 | 58-71-101 | 69-84-119 | 73-90-127 | 78-95-135 | 82-101-142 |
| | ΔP | 0.033 | 0.053 | 0.077 | 0.106 | 0.140 | 0.179 | 0.223 |
| 42 | CFM | 7350 | 9188 | 11025 | 12863 | 14700 | 16538 | 18375 |
| | THROW | 44-61-86 | 55-68-96 | 61-74-105 | 65-80-113 | 70-86-121 | 74-91-129 | 78-86-136 |
| | ΔP | 0.030 | 0.045 | 0.065 | 0.088 | 0.116 | 0.148 | 0.183 |

Throws based on Carnes standard drum louver performance data.

Throw data assumes the blades are spread 15°. For performance at 0° or 30° spreads, apply the following correction factors:

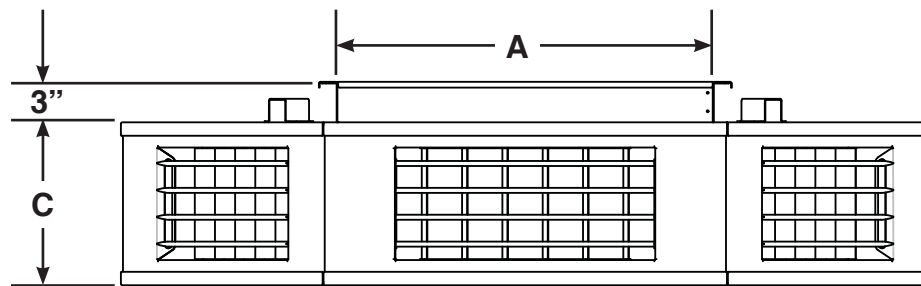
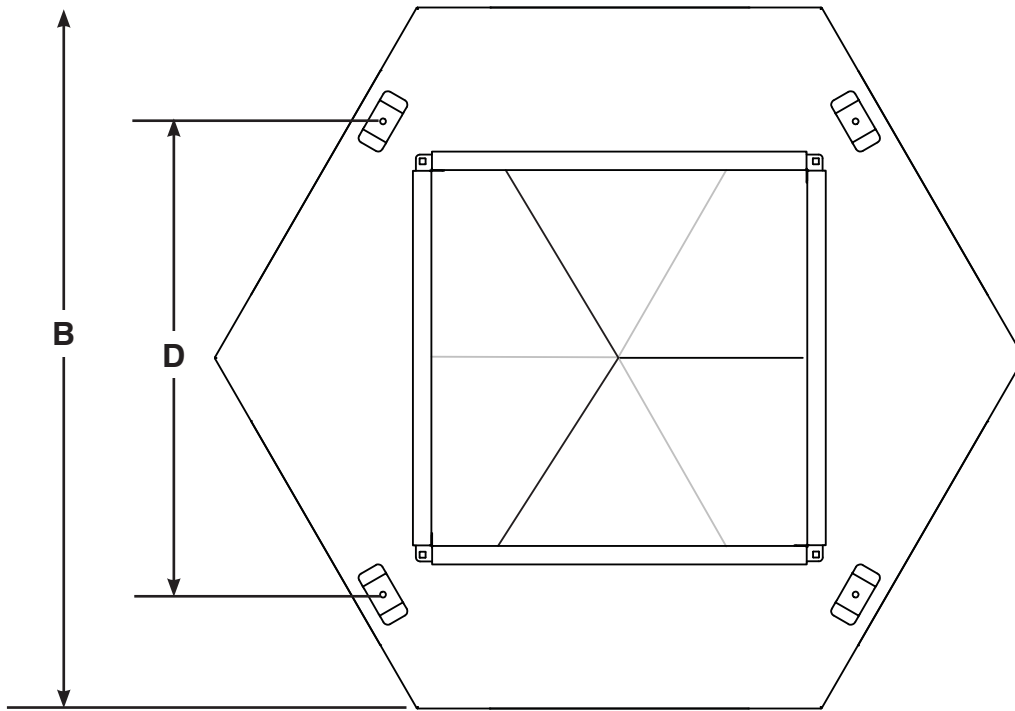
For 0° multiply throws by 1.2

For 0° multiply pressure by 0.795

For 30° multiply throws by 0.8

For 30° multiply pressure by 1.43

CARNES® 6-Way Double Deflection Drop Box Diffuser (TDBA_G6)



| Neck Size A | B | C | D | CFM | Est. Weight |
|----------------|--------|--------|--------|--------------|-------------|
| 14x14 | 30-1/4 | 10 | 19-1/8 | 800-2,000 | 63 |
| 22x22 | 42-1/4 | 10 | 27-7/8 | 2,000-5,000 | 107 |
| 24x24 | 48-1/4 | 10 | 32-1/4 | 2,400-6,000 | 135 |
| 28x28 | 52-1/4 | 12 | 35-1/8 | 3,300-8,100 | 165 |
| 36x36 | 64-1/4 | 15 | 44 | 5,400-13,500 | 244 |
| 42x42 | 76-1/4 | 17-1/2 | 52-3/4 | 7,400-18,300 | 326 |

STANDARD FEATURES:

- 18 ga. top/bottom panels
- 20 ga. grille panels
- 20 ga. air diverter
- Double deflection grilles
- TDC connection flanges
- Intermediate turning vanes
- 1" 1-1/2# insulation on bottom for noise control
- 14 ga. mounting brackets

Options:

- Balancing dampers (TDBA_H6)
- Bottom double deflection register (Option B)

6-WAY BLOW WITH DIFFUSERS

| NECK SIZE | | INTAKE DUCT VELOCITY | | | | | | |
|-----------|-------|----------------------|-----------|------------|------------|------------|-------------|-------------|
| | | 600 | 750 | 900 | 1050 | 1200 | 1350 | 1500 |
| 14 | CFM | 817 | 1021 | 1225 | 1429 | 1633 | 1838 | 2042 |
| | THROW | 12-17-35 | 14-22-43 | 17-26-51 | 20-30-55 | 23-34-59 | 26-39-62 | 29-43-65 |
| | ΔP | 0.048 | 0.075 | 0.108 | 0.146 | 0.188 | 0.236 | 0.288 |
| 22 | CFM | 2017 | 2521 | 3025 | 3529 | 4033 | 4538 | 5042 |
| | THROW | 26-39-67 | 32-48-74 | 39-58-82 | 45-62-88 | 51-67-94 | 58-71-100 | 61-74-105 |
| | ΔP | 0.080 | 0.124 | 0.177 | 0.241 | 0.316 | 0.401 | 0.496 |
| 24 | CFM | 2400 | 3000 | 3600 | 4200 | 4800 | 5400 | 6000 |
| | THROW | 16-35-69 | 26-43-83 | 35-52-91 | 40-61-98 | 46-69-105 | 52-78-111 | 58-83-117 |
| | ΔP | 0.044 | 0.068 | 0.099 | 0.136 | 0.179 | 0.229 | 0.286 |
| 28 | CFM | 3267 | 4083 | 4900 | 5717 | 6533 | 7350 | 8167 |
| | THROW | 27-41-81 | 34-51-95 | 41-61-104 | 48-72-112 | 55-82-120 | 62-90-127 | 68-95-134 |
| | ΔP | 0.043 | 0.068 | 0.099 | 0.136 | 0.180 | 0.230 | 0.286 |
| 36 | CFM | 5400 | 6750 | 8100 | 9450 | 10800 | 12150 | 13500 |
| | THROW | 44-67-133 | 56-84-160 | 67-101-175 | 78-118-189 | 90-135-203 | 101-152-215 | 112-160-226 |
| | ΔP | 0.033 | 0.052 | 0.076 | 0.105 | 0.139 | 0.179 | 0.223 |
| 42 | CFM | 7350 | 9188 | 11025 | 12863 | 14700 | 16538 | 18375 |
| | THROW | 42-63-126 | 53-79-142 | 63-95-156 | 74-111-168 | 85-127-180 | 95-135-191 | 106-142-201 |
| | ΔP | 0.041 | 0.063 | 0.091 | 0.125 | 0.164 | 0.209 | 0.259 |

Throws based on Carnes standard 2" double deflection industrial grille performance data.

Throw data assumes the blades are spread 0°. For performance at 22.5° or 45° spreads, apply the following correction factors:

For 22.5° multiply throws by 0.806

For 22.5° multiply pressure by 1.299

For 45° multiply throws by 0.479

For 45° multiply pressure by 1.907