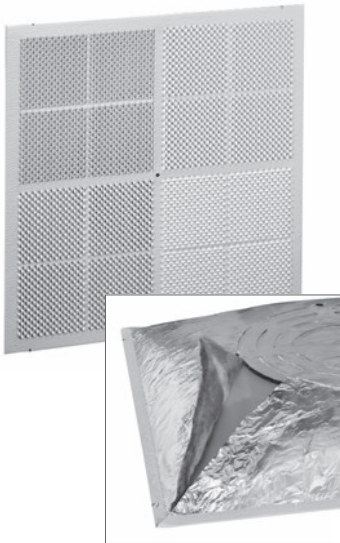
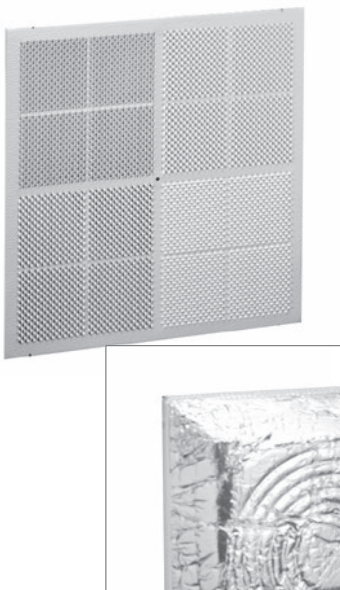
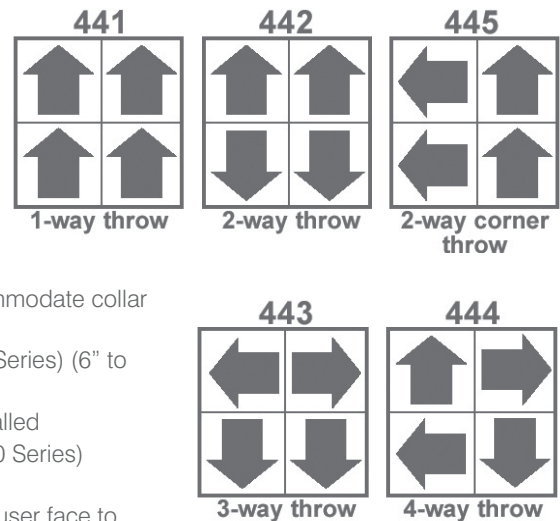
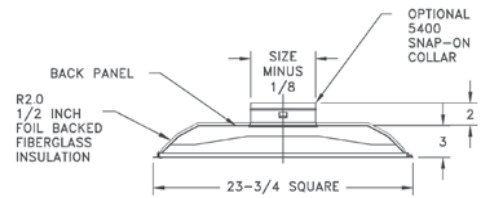




## 444 SurfAire® Aluminum Face Renovator Series Diffuser

- Aluminum face
- Unique deflector apertures
- Air distributed in thin layers along ceiling surface allowing optimum mixing of conditioned air
- Formed galvanized steel back panel
- Frame includes four seismic safety connections
- Back plate covered with glass fiber insulation to reduce condensation
- Aluminum foil vapor barrier protects insulation from harmful effects of condensation
- Insulation prescored to accommodate collar size desired
- Accepts snap-in collar (5400 Series) (6" to 12")
- 444 - 14" collar is factory-installed
- Utilizes butterfly damper (3800 Series) inserted in collar
- Damper adjusted through diffuser face to allow proper air balancing
- Bright White finish

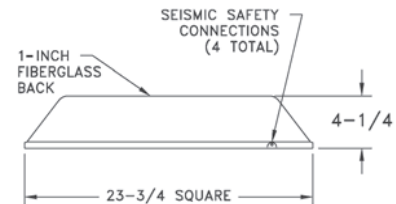
| 444 Available Size                                                               |
|----------------------------------------------------------------------------------|
| overall size 23 <sup>3</sup> / <sub>4</sub> " x 23 <sup>3</sup> / <sub>4</sub> " |



## REN4 Aluminum Face Renovator Series Diffuser with Insulated Back

- Aluminum face
- Unique deflector apertures
- Molded fiberglass back panel, available in R4.2 or R6
- Accepts 6" to 14" unique tab collar (6400 series) or 6" to 16" unique snap-in collar (5400 and 5400PP series); also accepts standard spin-in collar
- Frame includes four seismic safety connections
- Bright White finish

| REN4 Available Size                                                                    |
|----------------------------------------------------------------------------------------|
| 20" x 20", overall 23 <sup>3</sup> / <sub>4</sub> " x 23 <sup>3</sup> / <sub>4</sub> " |



See page 54 for fiberglass specifications.

## 659T/659TI/PFT/PFTI Series Performance (Page 53, 56)

| Average Face Velocity |     | 300  | 400  | 500  | 600  |
|-----------------------|-----|------|------|------|------|
| 659T                  | CFM | 730  | 975  | 1220 | 1465 |
|                       | -Ps | .017 | .030 | .047 | .067 |
| PFT                   | CFM | 820  | 1095 | 1370 | 1645 |
|                       | -Ps | .028 | .050 | .078 | .113 |
| <b>659-TI</b>         |     |      |      |      |      |
| w/12" collar          | CFM | 670  | 890  | 1115 | 1340 |
|                       | -Ps | .084 | .147 | .230 | .330 |
| w/14" collar          | CFM | 680  | 905  | 1130 | 1355 |
|                       | -Ps | .060 | .105 | .165 | .240 |
| w/16" collar          | CFM | 695  | 930  | 1160 | 1390 |
|                       | -Ps | .039 | .068 | .106 | .155 |
| <b>PFTI</b>           |     |      |      |      |      |
| w/12" collar          | CFM | 770  | 1025 | 1280 | 1535 |
|                       | -Ps | .098 | .170 | .265 | .380 |
| w/14" collar          | CFM | 775  | 1035 | 1295 | 1555 |
|                       | -Ps | .076 | .125 | .200 | .283 |
| w/16" collar          | CFM | 790  | 1050 | 1315 | 1580 |
|                       | -Ps | .055 | .094 | .145 | .210 |

**Note:** Tested without filters. Typical capacity is 2 CFM per square inch of nominal filter area. Recommended face velocity is 300-450 FPM. Velocities higher will decrease filter performance, increase flow resistance, and possibly be of noise concern. Velocity measured 1" from face.

## 96AFBT/96AFBTI (Page 54, 55)

| Face Velocity |                           | 300    | 400    | 500    | 600    | 700    |
|---------------|---------------------------|--------|--------|--------|--------|--------|
| 20 x 20       | CFM                       | 675    | 900    | 1125   | 1350   | 1575   |
|               | Static Pressure (in W.C.) | -0.024 | -0.042 | -0.065 | -0.094 | -0.128 |
| Ak 2.25       | Total Pressure (in W.C.)  | -0.018 | -0.032 | -0.050 | -0.072 | -0.098 |

**Note:** Tested without filters. Typical capacity is 2 CFM per square inch of nominal filter area. Recommended face velocity is 300-450 FPM. Velocities higher will decrease filter performance, increase flow resistance, and possibly be of noise concern. Velocity measured 1" from face.

## 94AT (Page 57)

| Face Velocity* |     | 300  | 400  | 500  | 600  |
|----------------|-----|------|------|------|------|
| 22X22          | CFM | 684  | 912  | 1140 | 1368 |
|                | -Ps | .018 | .033 | .051 | .071 |
| 22X46          | CFM | 2004 | 2672 | 3340 | 4008 |
|                | -Ps | .018 | .032 | .051 | .073 |

## RE5T/RE5TI (Page 58)

## REF5T/REF5TI (Page 56)

## Rezzin Egg Crate (Page 58)

## RHF45T (Page 55)

| Average Face Velocity   |     | 300  | 400  | 500  | 600  | 700  |
|-------------------------|-----|------|------|------|------|------|
| <b>RE5T/RE5TI</b>       |     |      |      |      |      |      |
| 22 x 22                 | CFM | 725  | 970  | 1210 | 1450 | 1695 |
|                         | -Ps | .004 | .006 | .010 | .014 | .020 |
| 46 x 22                 | CFM | 1520 | 2024 | 2530 | 3035 | 3540 |
|                         | -Ps | .003 | .006 | .010 | .012 | .018 |
| <b>RH45T</b>            |     |      |      |      |      |      |
| 22 x 22                 | CFM | 785  | 1045 | 1305 | 1565 | 1825 |
|                         | -Ps | .015 | .030 | .043 | .062 | .084 |
| 46 x 22                 | CFM | 1635 | 2180 | 2725 | 3270 | 3815 |
|                         | -Ps | .015 | .030 | .040 | .059 | .081 |
| <b>REF5T*/REF5TI*</b>   |     |      |      |      |      |      |
| 20 x 20                 | CFM | 600  | 800  | 1000 | 1200 | 1400 |
|                         | -Ps | .003 | .006 | .010 | .014 | .019 |
| 44 x 20                 | CFM | 1320 | 1760 | 2200 | 2640 | 3080 |
|                         | -Ps | .003 | .006 | .009 | .013 | .018 |
| <b>Rezzin Egg Crate</b> |     |      |      |      |      |      |
| 20 x 20                 | CFM | 420  | 560  | 700  | 840  | 980  |
|                         | -Ps | .004 | .008 | .013 | .018 | .025 |
| <b>RHF45T*</b>          |     |      |      |      |      |      |
| 20 x 20                 | CFM | 650  | 870  | 1085 | 1300 | 1520 |
|                         | -Ps | .015 | .025 | .040 | .060 | .080 |
| 44 x 20                 | CFM | 1430 | 1910 | 2385 | 2860 | 3340 |
|                         | -Ps | .015 | .024 | .039 | .058 | .078 |

**Note:** Tested without filters. Typical capacity is 2 CFM per square inch of nominal filter area. Recommended face velocity is 300-450 FPM. Velocities higher will decrease filter performance, increase flow resistance, and possibly be of noise concern. Velocity measured 1" from face.

## 441 &amp; 445 (Page 59)

| Neck Velocity |           | 250  | 350  | 450  | 550  | 650  | 750  | 850  | 1000 | 1200 |
|---------------|-----------|------|------|------|------|------|------|------|------|------|
| 6" Diameter   | CFM       | 50   | 70   | 90   | 110  | 130  | 145  | 165  | 195  | 235  |
|               | -Ps       | .004 | .009 | .014 | .021 | .029 | .036 | .046 | .065 | .092 |
| Ak .370       | NC        | <20  | <20  | <20  | <20  | <20  | 22   | 26   | 33   | 36   |
|               | 441 Throw | 5.5  | 7.0  | 9.5  | 11.0 | 14.0 | 16.0 | 18.0 | 22.0 | 24.0 |
| Ak .430       | 445 Throw | 4.0  | 5.0  | 6.5  | 8.0  | 10.0 | 11.0 | 13.0 | 15.0 | 17.0 |
| 8" Diameter   | CFM       | 85   | 120  | 155  | 190  | 225  | 260  | 295  | 350  | 420  |
|               | -Ps       | .006 | .011 | .018 | .027 | .037 | .050 | .064 | .090 | .127 |
| Ak .450       | NC        | <20  | <20  | <20  | <20  | 22   | 27   | 33   | 35   | 38   |
|               | 441 Throw | 7.0  | 10.0 | 13.0 | 16.0 | 18.0 | 21.0 | 25.0 | 29.0 | 31.0 |
| Ak .530       | 445 Throw | 5.0  | 7.0  | 9.5  | 12.0 | 13.0 | 15.0 | 18.0 | 21.0 | 23.0 |
| 10" Diameter  | CFM       | 135  | 190  | 245  | 300  | 355  | 410  | 465  | 545  | 655  |
|               | -Ps       | .009 | .018 | .030 | .044 | .062 | .082 | .105 | .145 | .212 |
| Ak .530       | NC        | <20  | <20  | <20  | 24   | 31   | 34   | 37   | 42   | 44   |
|               | 441 Throw | 9.0  | 12.0 | 16.0 | 20.0 | 24.0 | 27.0 | 30.0 | 32.0 | 34.0 |
| Ak .620       | 445 Throw | 6.5  | 9.0  | 11.0 | 14.0 | 17.0 | 19.0 | 21.0 | 23.0 | 24.0 |
| 12" Diameter  | CFM       | 195  | 275  | 355  | 430  | 510  | 590  | 670  | 785  | 940  |
|               | -Ps       | .013 | .026 | .044 | .064 | .090 | .120 | .155 | .215 | .300 |
| Ak .590       | NC        | <20  | <20  | 26   | 33   | 38   | 42   | 44   | 46   | 48   |
|               | 441 Throw | 10.0 | 13.0 | 19.0 | 25.0 | 30.0 | 32.0 | 33.0 | 34.0 | 35.0 |
| Ak .700       | 445 Throw | 7.5  | 9.0  | 14.0 | 17.0 | 21.0 | 23.0 | 24.0 | 25.0 | 26.0 |
| 14" Diameter  | CFM       | 265  | 375  | 480  | 590  | 695  | 800  | 910  | 1070 | 1285 |
|               | -Ps       | .018 | .036 | .059 | .089 | .125 | .165 | .210 | .295 | .410 |
| Ak .640       | NC        | <20  | 22   | 29   | 36   | 42   | >45  | >45  | >45  | >45  |
|               | 441 Throw | 8.0  | 13.0 | 22.0 | 26.0 | 28.0 | 30.0 | 31.0 | 32.0 | 33.0 |
| Ak .750       | 445 Throw | 6.0  | 10.0 | 16.0 | 20.0 | 22.0 | 24.0 | 26.0 | 28.0 | 30.0 |

**Note:** The use of a balancing hood is recommended to balance the system.

NC is based on 10dB room attenuation (Re: 10<sup>-12</sup> watts) ASHRAE 36-72.

Terminal Velocity of 75 FPM

## 442, 443 &amp; 444 SurfAire® (Page 59)

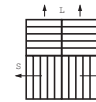
| Neck Velocity |            | 250     | 350      | 450       | 550       | 650       | 750       | 850       | 1000      | 1200      |
|---------------|------------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 6" Diameter   | CFM        | 50      | 70       | 90        | 110       | 130       | 145       | 165       | 195       | 235       |
|               | -Ps        | .004    | .009     | .014      | .021      | .029      | .036      | .046      | .065      | .094      |
| Ak .430       | NC         | <20     | <20      | <20       | <20       | 23        | 27        | 31        | 35        | 36        |
|               | 444 Throw  | 3.0     | 3.5      | 4.5       | 6.0       | 7.5       | 8.0       | 9.0       | 11.0      | 12.0      |
| Ak .430       | 443 Throw* | 3.0/4.0 | 3.5/5.0  | 4.5/6.5   | 6.0/8.0   | 7.5/10.0  | 8.0/11.0  | 9.0/13.0  | 11.0/15.0 | 12.0/17.0 |
| Ak .430       | 442 Throw  | 4.0     | 5.0      | 6.5       | 8.0       | 10.0      | 11.0      | 13.0      | 15.0      | 17.0      |
| 8" Diameter   | CFM        | 85      | 120      | 155       | 190       | 225       | 260       | 295       | 350       | 420       |
|               | -Ps        | .006    | .012     | .019      | .029      | .040      | .054      | .070      | .098      | .140      |
| Ak .530       | NC         | <20     | <20      | <20       | <20       | 21        | 26        | 31        | 34        | 37        |
|               | 444 Throw  | 4.0     | 5.0      | 6.5       | 8.0       | 9.5       | 11.0      | 13.0      | 15.0      | 17.0      |
| Ak .530       | 443 Throw* | 4.0/5.5 | 5.0/7.0  | 6.5/9.0   | 8.0/11.0  | 9.5/14.0  | 11.0/16.0 | 13.0/19.0 | 15.0/21.0 | 17.0/23.0 |
| Ak .530       | 442 Throw  | 5.5     | 7.0      | 9.0       | 11.0      | 14.0      | 16.0      | 19.0      | 21.0      | 23.0      |
| 10" Diameter  | CFM        | 135     | 190      | 245       | 300       | 355       | 410       | 465       | 545       | 655       |
|               | -Ps        | .009    | .017     | .028      | .043      | .060      | .078      | .102      | .140      | .205      |
| Ak .620       | NC         | <20     | <20      | <20       | 22        | 29        | 35        | 38        | 42        | 46        |
|               | 444 Throw  | 4.0     | 6.0      | 8.0       | 10.0      | 12.0      | 13.0      | 15.0      | 18.0      | 19.0      |
| Ak .620       | 443 Throw* | 4.0/6.0 | 6.0/8.0  | 8.0/11.0  | 10.0/14.0 | 12.0/17.0 | 13.0/19.0 | 15.0/21.0 | 18.0/25.0 | 19.0/26.0 |
| Ak .620       | 442 Throw  | 6.0     | 8.0      | 11.0      | 14.0      | 17.0      | 19.0      | 21.0      | 25.0      | 26.0      |
| 12" Diameter  | CFM        | 190     | 245      | 355       | 450       | 530       | 590       | 670       | 785       | 940       |
|               | -Ps        | .012    | .024     | .040      | .059      | .082      | .110      | .142      | .195      | .275      |
| Ak .700       | NC         | <20     | <20      | 22        | 28        | 35        | 39        | 44        | 47        | 52        |
|               | 444 Throw  | 5.0     | 7.5      | 10.0      | 11.5      | 14.0      | 16.0      | 18.0      | 19.0      | 20.0      |
| Ak .700       | 443 Throw* | 5.0/8.5 | 7.5/11.0 | 10.0/14.0 | 11.5/17.0 | 14.0/19.0 | 16.0/23.0 | 18.0/25.0 | 19.0/26.0 | 20.0/27.0 |
| Ak .700       | 442 Throw  | 8.5     | 11.0     | 14.0      | 17.0      | 19.0      | 23.0      | 25.0      | 26.0      | 27.0      |
| 14" Diameter  | CFM        | 265     | 375      | 480       | 590       | 695       | 800       | 910       | 1070      | 1285      |
|               | -Ps        | .015    | .031     | .050      | .075      | .105      | .137      | .177      | .245      | .350      |
| Ak .750       | NC         | <20     | 21       | 27        | 31        | 36        | 40        | 45        | 49        | 53        |
|               | 444 Throw  | 6.0     | 9.0      | 11.0      | 14.0      | 17.0      | 19.0      | 20.0      | 22.0      | 24.0      |
| Ak .750       | 443 Throw* | 6.0/8.5 | 9.0/13.0 | 11.0/16.0 | 14.0/20.0 | 17.0/24.0 | 19.0/26.0 | 20.0/27.0 | 22.0/28.0 | 24.0/29.0 |
| Ak .750       | 442 Throw  | 8.5     | 13.0     | 16.0      | 20.0      | 24.0      | 26.0      | 27.0      | 28.0      | 29.0      |

**Note:** The use of a balancing hood is recommended to balance the system.

NC is based on 10dB room attenuation (Re: 10<sup>-12</sup> watts) ASHRAE 36-72.

Terminal Velocity of 75 FPM

\*443 throw S/L



## 673TPI R6 (Page 54)

|                                |                 |       |       |       |       |       |       |       |
|--------------------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|
| 6" Diameter Inlet<br>Ak .730   | CFM             | 100   | 150   | 200   | 225   | 250   | 275   | 300   |
|                                | NC              | <20   | <20   | 21    | 24    | 27    | 30    | 32    |
|                                | Static Pressure | -.057 | -.127 | -.226 | -.287 | -.354 | -.428 | -.509 |
| 8" Diameter Inlet<br>Ak .795   | CFM             | 150   | 200   | 250   | 300   | 400   | 500   | 550   |
|                                | NC              | <20   | <20   | <20   | <20   | 25    | 31    | 36    |
|                                | Static Pressure | -.040 | -.072 | -.112 | -.161 | -.287 | -.448 | -.542 |
| 10" Diameter Inlet<br>Ak .880  | CFM             | 300   | 400   | 500   | 600   | 700   | 800   | 850   |
|                                | NC              | <20   | <20   | <20   | 24    | 28    | 33    | 35    |
|                                | Static Pressure | -.066 | -.117 | -.183 | -.264 | -.359 | -.469 | -.530 |
| 12" Diameter Inlet<br>Ak .980  | CFM             | 400   | 500   | 600   | 700   | 800   | 1000  | 1200  |
|                                | NC              | <20   | <20   | <20   | <20   | 22    | 28    | 34    |
|                                | Static Pressure | -.057 | -.088 | -.127 | -.173 | -.226 | -.354 | -.509 |
| 14" Diameter Inlet<br>Ak 1.105 | CFM             | 600   | 700   | 800   | 1000  | 1200  | 1400  | 1600  |
|                                | NC              | <20   | <20   | <20   | 20    | 24    | 28    | 34    |
|                                | Static Pressure | -.069 | -.094 | -.122 | -.191 | -.275 | -.374 | -.489 |
| 16" Diameter Inlet<br>Ak 1.240 | CFM             | 800   | 1000  | 1200  | 1600  | 1800  | 2000  | 2200  |
|                                | NC              | <20   | <20   | <20   | 25    | 28    | 31    | 36    |
|                                | Static Pressure | -.072 | -.112 | -.161 | -.287 | -.363 | -.448 | -.542 |