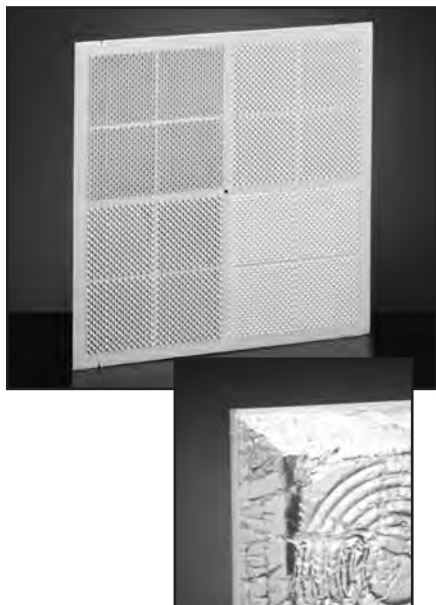
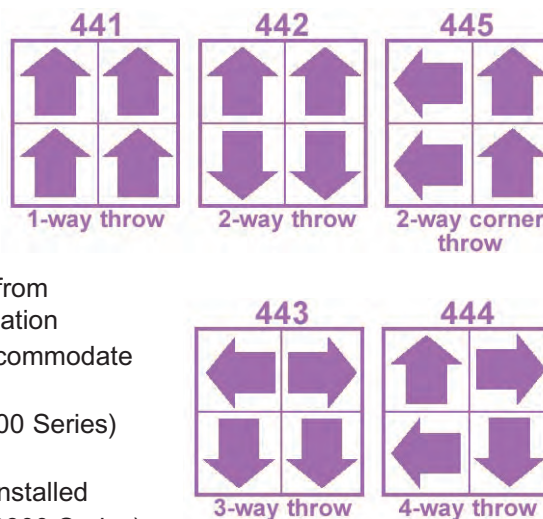
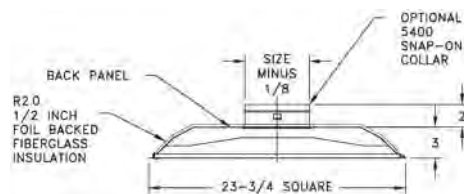


## 444 SurfAire® Aluminum Face Renovator Series Diffuser

- 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

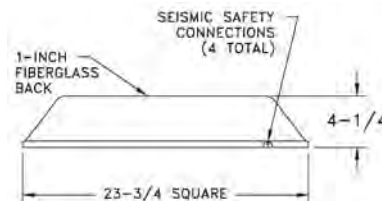
**444 Available Size**  
overall size 23<sup>3</sup>/<sub>4</sub>" x 23<sup>3</sup>/<sub>4</sub>"



## 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 18" (16" to 18" only for R4.2) 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
659-TI	CFM	670	890	1115	1340
	-Ps	.084	.147	.230	.330
w/12" collar	CFM	680	905	1130	1355
	-Ps	.060	.105	.165	.240
w/14" collar	CFM	695	930	1160	1390
	-Ps	.039	.068	.106	.155
PFTI	CFM	770	1025	1280	1535
	-Ps	.098	.170	.265	.380
w/12" 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	524	698	873	1048	1222
	Static Pressure (in W.C.)	-0.024	-0.042	-0.065	-0.094	-0.128
Ak 1.750	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.

## RE5T/RE5TI (Page 58)

## REF5T/REF5TI (Page 56)

## RZREF5T (Page 58)

## RHF45T (Page 55)

Average Face Velocity		300	400	500	600	700
RE5T/RE5TI	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
RH45T	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
REF5T*/REF5TI*	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
RZREF5T	CFM	420	560	700	840	980
	-Ps	.004	.008	.013	.018	.025
RHF45T*	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 & 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
	Throw	5.5	7.0	9.5	11.0	14.0	16.0	18.0	22.0	24.0
Ak .430	NC	4.0	5.0	6.5	8.0	10.0	11.0	13.0	15.0	17.0
	Throw	8.5	12.0	15.5	19.0	22.5	26.0	29.5	35.0	42.0
8" Diameter	CFM	.006	.011	.018	.027	.037	.050	.064	.090	.127
	Ps	<20	<20	<20	<20	22	27	33	35	38
Ak .450	NC	7.0	10.0	13.0	16.0	18.0	21.0	25.0	29.0	31.0
	Throw	5.0	7.0	9.5	12.0	13.0	15.0	18.0	21.0	23.0
10" Diameter	CFM	.009	.018	.030	.044	.062	.082	.105	.145	.212
	Ps	<20	<20	<20	24	31	34	37	42	44
Ak .530	NC	9.0	12.0	16.0	20.0	24.0	27.0	30.0	32.0	34.0
	Throw	6.5	9.0	11.0	14.0	17.0	19.0	21.0	23.0	24.0
12" Diameter	CFM	.013	.026	.044	.064	.090	.120	.155	.215	.300
	Ps	<20	<20	26	33	38	42	46	46	48
Ak .590	NC	10.0	13.0	19.0	25.0	30.0	32.0	33.0	34.0	35.0
	Throw	7.5	9.0	14.0	17.0	21.0	23.0	24.0	25.0	26.0
14" Diameter	CFM	.018	.036	.059	.089	.125	.165	.210	.295	.410
	Ps	<20	22	29	36	42	>45	>45	>45	>45
Ak .640	NC	8.0	13.0	22.0	26.0	28.0	30.0	31.0	32.0	33.0
	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.

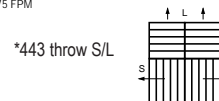
NC is based on 10dB room attenuation (Re: 10<sup>-12</sup> watts) ASHRAE 36-72.  
Terminal Velocity of 75 FPM

## 442, 443 & 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	<20	23	27	31	35
	Throw	3.0	3.5	4.5	6.0	7.5	8.0	9.0	11.0	12.0
Ak .430	NC	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
	Throw	4.0	5.0	6.5	8.0	10.0	11.0	13.0	15.0	17.0
8" Diameter	CFM	.006	.012	.019	.029	.040	.054	.070	.098	.140
	Ps	<20	<20	<20	<20	21	26	31	34	37
Ak .530	NC	4.0	5.0	6.5	8.0	9.5	11.0	13.0	15.0	17.0
	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	NC	5.5	7.0	9.0	11.0	14.0	16.0	19.0	21.0	23.0
	Throw	5.5	7.0	9.0	11.0	14.0	16.0	19.0	21.0	23.0
10" Diameter	CFM	.009	.017	.028	.043	.069	.098	.120	.140	.205
	Ps	<20	<20	<20	22	29	35	38	42	46
Ak .620	NC	4.0	6.0	8.0	10.0	12.0	13.0	15.0	18.0	19.0
	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	NC	6.0	8.0	11.0	14.0	17.0	19.0	21.0	25.0	26.0
	Throw	6.0	8.0	11.0	14.0	17.0	19.0	21.0	25.0	26.0
12" Diameter	CFM	.012	.024	.040	.059	.082	.110	.142	.195	.275
	Ps	<20	<20	<20	28	35	39	44	47	52
Ak .700	NC	5.0	7.5	10.0	11.5	14.0	16.0	18.0	19.0	20.0
	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	NC	8.5	11.0	14.0	17.0	19.0	23.0	25.0	26.0	27.0
	Throw	8.5	11.0	14.0	17.0	19.0	23.0	25.0	26.0	27.0
14" Diameter	CFM	.015	.031	.050	.075	.105	.137	.177	.245	.350
	Ps	<20	<20	<20	31	36	40	45	49	53
Ak .750	NC	6.0	9.0	11.0	14.0	17.0	19.0	20.0	22.0	24.0
	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	NC	8.5	13.0	16.0	20.0	24.0	26.0	27.0	28.0	29.0
	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



## REN4 (Page 59)

Neck Velocity		180	220	300	350	400	450	500	580	650	700
6" Diameter	CFM	35	45	60	70	80	90	100	115	130	135
	Ps	.002	.003	.004	.006	.008	.010	.012	.015	.020	.022
Ak .430	NC	<20	<20	<20	<20	<20	<20	20	22	26	30
	Throw	3.0	3.5	4.5	5.5	6.5	7.5	8.0	9.0	11.0	11.0
8" Diameter	CFM	.002	.003	.006	.008	.010	.013	.016	.021	.027	.032
	Ps	<20	<20	<20	<20	<20	22	25	30	35	38
Ak .530	NC	4.0	5.0	6.0	7.0	8.5	9.5	11.0	12.0	13.0	15.0
	Throw	4.0	5.0	6.0	7.0	8.5	9.5	11.0	12.0	13.0	15.0
10" Diameter	CFM	.003	.005	.009	.011	.015	.019	.024	.031	.040	.045
	Ps	<20	<20	<20	<20	20	23	27	33	35	39
Ak .620	NC	4.0	5.5	7.0	8.0	9.5	11.0	12.0	13.0	15.0	16.0
	Throw	4.0	5.5	7.0	8.0	9.5	11.0	12.0	13.0	15.0	16.0
12" Diameter	CFM	.005	.007	.013	.018	.023	.029	.036	.048	.061	.071
	Ps	<20	<20	<20	<20	21	24	27	33	36	40
Ak .700	NC	4.5	5.5	7.0	8.0	10.0	11.0	12.0	14.0	15.0	17.0
	Throw	4.5	5.5	7.0	8.0	10.0	11.0	12.0	14.0	15.0	17.0
14" Diameter	CFM	.007	.011	.020	.027	.036	.044	.055	.074	.094	.107
	Ps	<20	<20	<20	<20	20	24	28	32	35	40
Ak .750	NC	4.5	5.5	7.0	8.5	10.0	11.0	12.0	14.0	16.0	17.0
	Throw	4.5	5.5	7.0	8.5	10.0	11.0	12.0	14.0	16.0	17.0

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