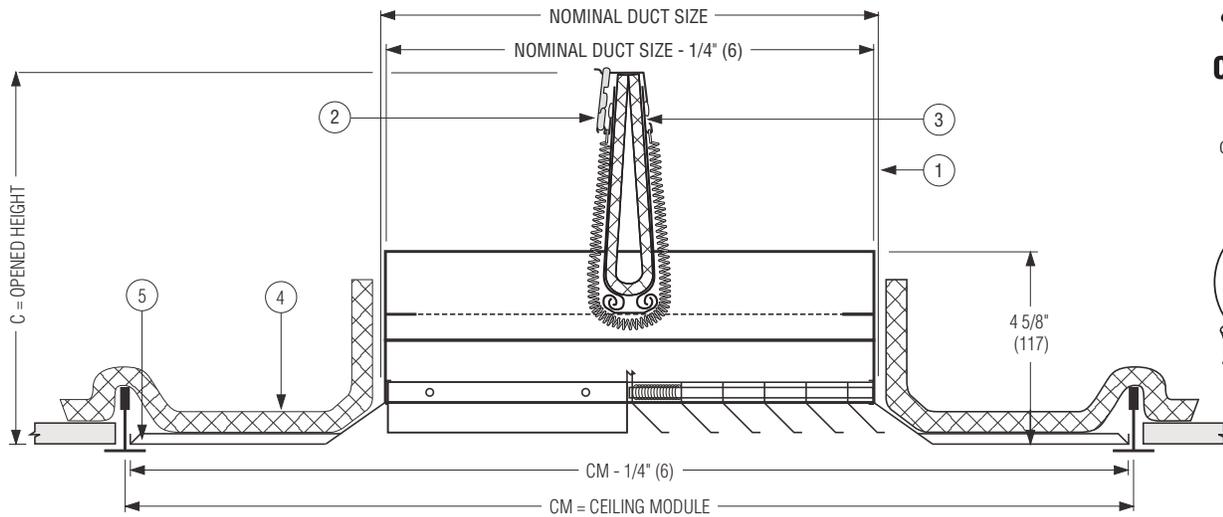




FIRE RATED MODULAR CORE CEILING DIFFUSER
 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN
 STEEL • SQUARE NECK
 MODEL: 7500FRD



CATEGORY CABS & CABS7



Dimensional Data and Sizing Availability:

Ceiling Module CM	Nominal Duct Size (square)	Opening Height C Standard
12 x 12	6 x 6	5 3/4
	8 x 8	6 3/4
	9 x 9	7 1/4
24 x 24	6 x 6	5 3/4
	8 x 8	6 3/4
	9 x 9	7 1/4
	10 x 10	7 3/4
	12 x 12	9
	14 x 14	9 3/4
15 x 15	15 x 15	10 1/4
	16 x 16	10 3/4
	18 x 18	11 3/4

Note: If square ceiling module is more than 3" (76) larger than the square neck (core/back pan), a module sized extended panel is utilized.

ITEMS:

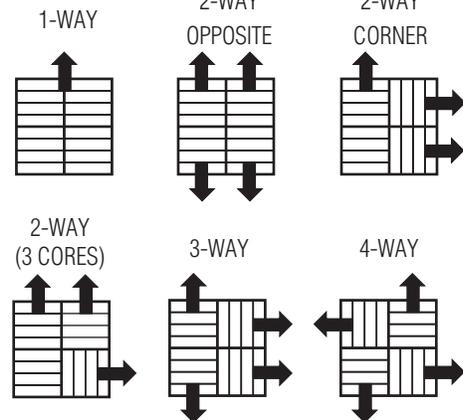
1. Steel duct drop (by others).
2. U.L. Listed fusible link. 212°F (100°C) standard.
3. Ceiling radiation damper (Model 0716).
4. Ceramic fibre thermal blanket accessory (Model 0726).
5. Corrosion resistant steel diffuser.

DESCRIPTION:

1. All models are classified for use in UL/ULC restrained or unrestrained floor/ceiling and or roof/ceiling assemblies which incorporate an exposed grid suspended ceiling (lay-in T-bar) with up to a 3 hour rating. For details of fire rated assemblies, see the current UL or ULC Fire Resistance Directory.
2. The diffuser consists of four spring loaded modular cores that may be simply adjusted by rotating each module after installation to provide a 1, 2, 3 or 4-way blow pattern. A tight horizontal air pattern from maximum to minimum flow makes it ideal for VAV applications.

MODULAR CORE ADJUSTMENTS

(The Model 7500FRD is shipped with the core set for 4-way discharge).



3. The fixed radiation damper is standard. The AV adjustable option is not available on this model as the core restricts access. Balancing should be performed by installing a remote damper in the duct take-off.
4. Standard finish is AW Appliance White.

OPTIONS:

1. Non-standard temperature U.L. Listed fusible link.
 - 165°F (74°C)
2. Finish:
 - SP Special. Specify _____.

For installation instructions, see IOM-CRSDINST or IOM-CRDTBINST.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

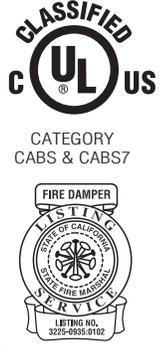
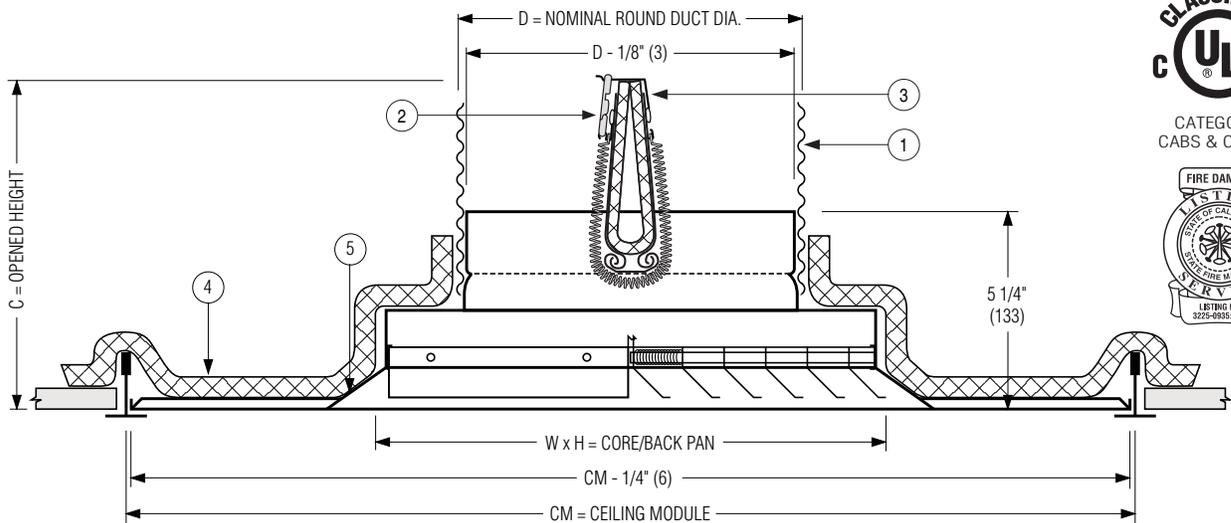
CONTRACTOR:

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
1 - 30 - 17	7500FRD	11 - 24 - 16	7500FRD-1



FIRE RATED MODULAR CORE CEILING DIFFUSER
 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN
 STEEL • ROUND NECK
 MODEL: 7505FRD



Dimensional Data and Sizing Availability:

Ceiling Module	Core/Back Pan	Round Neck	Opening Height	
CM	W x H	D	C	
12 x 12	9 x 9	6	6 1/2	
		8	7 1/2	
24 x 24	9 x 9	6	6 1/2	
		8	7 1/2	
	10 x 10	6	6 1/2	
		8	7 1/2	
	12 x 12	8	7 1/2	
		10	8 1/2	
	15 x 15	10	10	8 1/2
			12	9 1/2
14		10 1/2	10 1/2	
		12	9 1/2	
18 x 18	14	14	10 1/2	

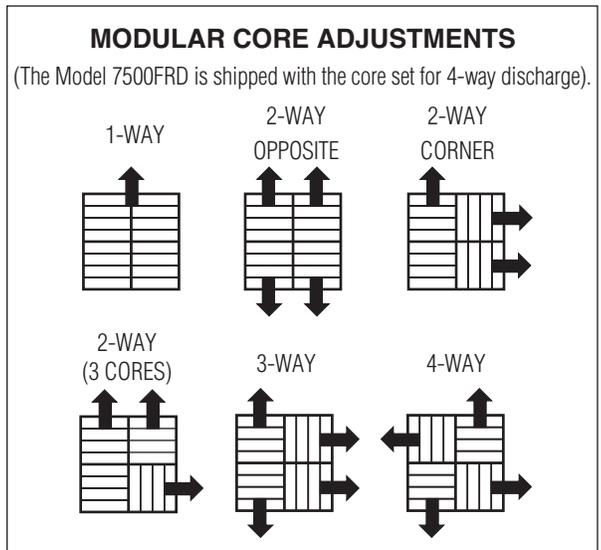
Note: If square ceiling module is more than 3" (76) larger than the square neck (core/back pan), a module sized extended panel is utilized.

ITEMS:

1. Flexible air duct (UL Class 0 or 1) connector or steel duct.
2. U.L. Listed fusible link. 212°F (100°C) standard.
3. Ceiling radiation damper (Model 0722).
4. Ceramic fibre thermal blanket accessory (Model 0725).
5. Corrosion resistant steel diffuser.

DESCRIPTION:

1. All models are classified for use in UL/ULC restrained or unrestrained floor/ceiling and or roof/ceiling assemblies which incorporate an exposed grid suspended ceiling (lay-in T-bar) with up to a 3 hour rating. For details of fire rated assemblies, see the current UL or ULC Fire Resistance Directory.
2. The diffuser consists of four spring loaded modular cores that may be simply adjusted by rotating each module after installation to provide a 1, 2, 3 or 4-way blow pattern. A tight horizontal air pattern from maximum to minimum flow makes it ideal for VAV applications.



3. The fixed radiation damper is standard. The AV adjustable option is not available on this model as the core restricts access. Balancing should be performed by installing a remote damper in the duct take-off.
4. Standard finish is AW Appliance White.

OPTIONS:

1. Non-standard temperature U.L. Listed fusible link.
 165°F (74°C)
2. Finish:
 SP Special. Specify _____.

For installation instructions, see IOM-CRDTBINST.

SCHEDULE TYPE:	Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	12 - 2 - 16	7500FRD	5 - 11 - 15	7500FRD-2

Nailor offers a selection of standard colors and finishes available on our grilles, registers and diffusers. For painted finishes, our state-of-the-art paint systems provide environmentally friendly finishing solutions with uniform coverage and coating thickness. The result is an exceptionally durable finish that resists scratching, corrosion and general wear. Additional facilities for special requirements, as well as a selection of anodized or brushed finishes, complete our ability to provide unmatched beauty and durability for any application.

NAILOR POWDER COAT PROPERTIES

FILM THICKNESS	2.0 to 3.0 mils
HARDNESS	2 H
IMPACT RESISTANCE	Direct: 160 inch - lbs. Reverse 160 inch - lbs.
SALT SPRAY	1000 hours

ELECTROCOATING PROPERTIES

FILM THICKNESS	.8 to 1.2 mils
HARDNESS	HB TO H
IMPACT RESISTANCE	80 inch - lbs
SALT SPRAY	100 hours


POWDER COAT

Nailor's powder coat is a high-tech thermosetting polyester powder coating with superior physical properties that provide excellent color and gloss retention. The finish offers extreme durability and hardness that resists scratching, chipping and general wear. Surface preparation includes degreasing and a chemical cleaning followed by a clean rinse before a final powder coat finish is applied and baked. The environmentally friendly Nailor powder coat system assures uniform coverage and color consistency resulting in a long lasting superior finish. Colors, including simulated anodizing, which is far more economical than color anodizing, can be selected from Nailor's standard color chart or non-standard colors and can be matched from sample chips provided to Nailor.

ELECTROCOATING

E-Coat is an environmentally friendly coating that provides complete coverage and a wide range of performance properties, formulated to meet corrosion, durability and other performance specifications. Electrocoating is a highly automated process in which paint is electrically deposited onto a metal foundation. Film build thickness is uniform and overall application efficiencies are in excess of 90%. Paint is consistent on all part-to-part surfaces, preventing sags, runs or drips. E-Coat offers flexibility, better first yield pass and quicker production times compared to other forms of paint applications. Electrocoating is an excellent solution that offers superior properties and uniform finish.

CLEAR ANODIZING (Aluminum products only)

Clear anodizing is a clear oxide coating that exemplifies an aluminum surface's natural oxide coating producing a hard, scratch resistant surface that is resistant to general wear and mild chemicals. The process provides a natural looking, virtually maintenance free finish that will endure for many years.

COLOR ANODIZING (Aluminum products only)

Color anodizing is an electrolytic process where, after standard anodizing procedures, colored metallic pigments penetrate the oxide surface pores producing a corrosion resistant, colorfast finish. The process results in a natural metallic appearance that requires little maintenance.

BRUSHED AND CLEAR COAT

Available on specific aluminum products (consult applicable product page for availability). Surface is brushed to achieve a scratch finish texture before being degreased and chemically cleaned. A clear lacquer coating is then applied to provide a durable protective finish.

#4 BRUSHED SATIN POLISHED (Stainless Steel products only)

Surface is polished to ASTM A480 #4 standard to achieve a bright durable finish that is resistant to mild chemicals and corrosion. A final coating is not required due to the inherent anti-corrosion properties of the stainless steel.

PRIME COAT

Prime coat provides a stable base for painting in the field. Surface pretreatment includes degreasing and a chemical cleaning before an alkyd prime coat is applied. After a thorough cleaning for dust, etc. that can contaminate the final finish and cause premature flaking or peeling, finish coat should be field applied as soon as possible.

PAINT PREPARED ALUMINUM (Aluminum products only)

Allows for field applied paint. Surface preparation includes degreasing and a chemical cleaning followed by a clean rinse. Finish coat should be field applied as soon as possible.

MILL FINISH

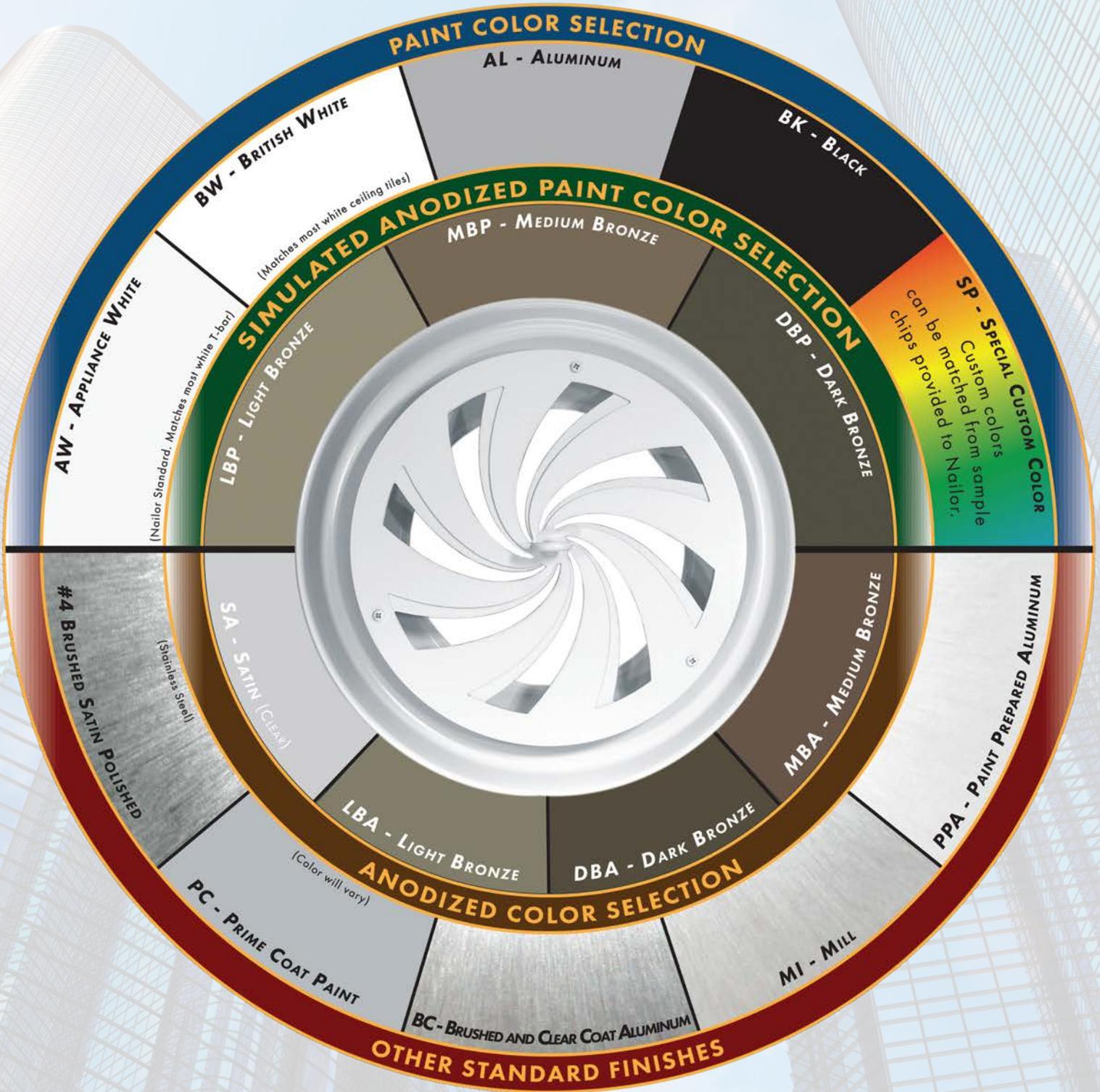
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



Nailor[®]
Industries Inc.

STANDARD AND OPTIONAL FINISHES FOR GRILLES AND DIFFUSERS

The following standard colors and finishes are available on applicable Nailor air distribution products. Consult individual product pages for availability



The pictured finishes have been represented as best as possible within printing limitations. However, actual finish may vary. Contact your Nailor representative for a color chip sample on the material specified for a more accurate representation.

DBK - Black (for registers ordered with factory mounted dampers) - **BA** - Perforated Diffusers (4300 series only) Appliance White (AW) face with black back pan and pattern controllers.

“Complete Air Control and Distribution Solutions.”

WGDSOF2015

www.nailor.com

PERFORMANCE DATA:

Models 7500 and 7200 • Square Neck

Nominal Neck Size (inches)	Neck Velocity, FPM	200	300	400	500	600	700	800	900	1000	
	Velocity Pressure	.003	.006	.010	.016	.022	.031	.040	.051	.062	
6 x 6	Total Pressure	.008	.018	.033	.051	.073	.100	.131	.165	.204	
	Airflow, CFM	50	75	100	125	150	175	200	225	250	
	Throw	4-Way (1 core)	1-2-3	2-2-5	2-3-6	2-4-7	3-4-8	3-5-8	4-6-8	5-6-9	5-6-10
		3-Way (2 cores)	2-2-5	3-4-8	4-6-9	4-7-10	5-8-11	6-9-12	7-10-13	8-11-14	9-11-15
		2-Way (3 cores)	2-3-6	3-5-10	4-7-11	5-8-12	6-9-13	7-10-14	8-11-16	9-12-17	11-13-18
		1-Way (4 cores)	2-4-8	4-6-11	5-8-13	7-10-15	8-11-16	9-12-18	10-13-19	11-14-20	12-15-22
Noise Criteria	—	—	—	16	22	26	29	32	35		
8 x 8	Total Pressure	.006	.013	.022	.035	.050	.069	.090	.113	.140	
	Airflow, CFM	88	133	177	222	266	310	355	399	444	
	Throw	4-Way (1 core)	1-2-4	2-3-6	2-4-8	3-5-9	4-6-10	4-7-11	5-8-11	6-8-12	6-9-13
		3-Way (2 cores)	2-3-7	3-5-11	5-7-13	6-9-14	7-11-15	8-12-17	10-13-18	11-14-19	12-14-20
		2-Way (3 cores)	3-4-9	4-7-13	6-9-16	8-11-17	9-13-19	10-14-21	12-16-22	13-17-23	14-17-25
		1-Way (4 cores)	3-5-11	5-8-15	7-11-18	9-13-20	11-15-22	12-16-24	14-18-26	15-19-27	16-20-29
Noise Criteria	—	—	—	17	25	29	32	35	38		
10 x 10	Total Pressure	.007	.015	.027	.042	.060	.082	.108	.136	.168	
	Airflow, CFM	138	208	277	347	416	485	555	624	694	
	Throw	4-Way (1 core)	2-3-7	3-5-9	4-7-10	6-8-11	7-9-12	8-9-14	8-10-14	9-11-14	9-11-17
		3-Way (2 cores)	4-6-12	6-10-14	9-12-16	11-13-18	12-14-20	13-15-22	14-16-23	14-19-25	14-20-26
		2-Way (3 cores)	5-8-14	8-12-17	11-14-20	13-16-22	14-17-24	15-18-27	16-20-28	17-22-30	18-23-32
		1-Way (4 cores)	6-9-16	9-14-20	13-16-23	14-18-26	16-20-28	17-21-31	18-23-33	20-24-35	21-26-37
Noise Criteria	—	—	15	18	24	30	34	37	40		
12 x 12	Total Pressure	.007	.016	.029	.046	.066	.089	.116	.147	.182	
	Airflow, CFM	200	300	400	500	600	700	800	900	1000	
	Throw	4-Way (1 core)	2-4-8	4-6-11	5-8-12	7-10-14	8-11-14	9-11-15	10-12-17	11-13-18	11-14-19
		3-Way (2 cores)	5-8-14	8-12-17	10-14-20	13-15-22	14-17-24	15-18-26	16-20-28	17-21-30	18-22-32
		2-Way (3 cores)	6-10-17	10-14-21	12-17-24	15-19-27	17-21-29	18-22-32	19-24-34	21-26-36	22-27-39
		1-Way (4 cores)	7-11-19	11-16-24	14-19-28	17-22-31	19-24-34	21-26-37	22-28-40	24-30-42	25-31-45
Noise Criteria	—	—	17	21	27	32	36	40	43		
14 x 14	Total Pressure	.009	.020	.035	.055	.080	.108	.141	.179	.221	
	Airflow, CFM	272	408	544	680	816	952	1088	1224	1361	
	Throw	4-Way (1 core)	3-5-10	5-7-12	6-10-14	8-11-15	10-12-19	11-13-18	12-14-19	12-14-21	13-15-22
		3-Way (2 cores)	6-9-16	9-14-20	12-16-23	14-18-26	16-20-29	17-21-31	19-23-33	20-25-35	21-26-37
		2-Way (3 cores)	8-11-20	11-17-24	15-20-28	18-22-32	20-24-35	21-26-38	23-28-40	24-30-42	26-32-44
		1-Way (4 cores)	9-13-23	13-19-28	17-23-33	21-25-37	23-28-40	25-30-44	26-33-47	28-35-49	30-37-51
Noise Criteria	—	—	19	23	29	34	38	42	45		
16 x 16	Total Pressure	.011	.024	.043	.067	.096	.131	.172	.217	.268	
	Airflow, CFM	355	533	711	889	1066	1244	1422	1600	1778	
	Throw	4-Way (1 core)	3-5-11	5-8-14	7-11-15	9-13-17	11-14-19	12-14-21	13-15-23	14-17-24	14-17-25
		3-Way (2 cores)	7-10-18	10-15-23	14-18-27	17-21-30	18-23-33	20-25-36	21-27-38	23-28-41	24-30-43
		2-Way (3 cores)	9-12-22	12-19-29	17-22-33	21-25-36	22-28-40	24-30-43	26-33-46	28-34-49	29-36-51
		1-Way (4 cores)	10-14-26	14-22-32	20-26-38	24-29-42	26-32-46	28-35-49	30-38-53	32-40-56	34-42-59
Noise Criteria	—	—	21	25	31	36	40	44	47		

Performance Notes:

- All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.
- Throws are given at 150, 100 and 50 fpm terminal velocities, under isothermal conditions.

- Noise Criteria (NC) values are based on 10 dB room absorption, re 10⁻¹² watts. Dash (—) in spaces indicates an Noise Criteria level of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Neck Size Square in Inches	Ak Factor
6 x 6	.1134
8 x 8	.1932
9 x 9	.2551
10 x 10	.3024
12 x 12	.4526
14 x 14	.5883
15 x 15	.6804
16 x 16	.7728

PERFORMANCE DATA:

Models 7500 and 7200 • Square Neck

Nominal Neck Size (inches)	Neck Velocity, FPM	200	300	400	500	600	700	800	900	1000	
	Velocity Pressure	.003	.006	.010	.016	.022	.031	.040	.051	.062	
18 x 18	Total Pressure	.013	.029	.051	.080	.115	.157	.205	.259	.320	
	Airflow, CFM	450	675	900	1125	1350	1575	1800	2025	2250	
	Throw	4-Way (1 core)	4-6-13	6-10-15	8-13-18	11-14-20	13-15-22	14-16-24	14-18-26	15-19-27	16-20-29
		3-Way (2 cores)	8-12-21	12-17-26	15-21-30	19-23-34	21-26-37	23-28-40	24-30-43	26-32-46	27-34-48
		2-Way (3 cores)	10-14-26	14-21-32	19-26-36	23-28-41	26-32-44	28-34-48	29-36-52	31-39-55	33-41-58
		1-Way (4 cores)	11-16-30	16-25-37	22-30-42	27-33-48	30-37-51	32-40-56	34-42-60	36-45-63	39-48-67
Noise Criteria	—	15	22	26	32	37	42	45	48		
20 x 20	Total Pressure	.015	.034	.061	.095	.136	.186	.243	.307	.379	
	Airflow, CFM	555	835	1110	1390	1665	1945	2220	2500	2775	
	Throw	4-Way (1 core)	4-7-14	7-11-17	9-14-20	12-15-22	14-17-24	15-18-27	16-20-29	17-21-30	18-22-32
		3-Way (2 cores)	9-13-23	13-19-29	17-23-34	21-26-38	23-29-41	25-31-45	27-34-48	29-36-50	30-38-53
		2-Way (3 cores)	11-16-28	16-24-36	21-28-41	25-32-45	28-35-49	31-38-54	33-41-58	35-43-61	37-45-64
		1-Way (4 cores)	13-18-33	18-28-43	25-33-47	30-37-52	33-41-57	36-44-62	38-47-67	41-49-71	43-52-75
Noise Criteria	—	17	24	28	34	39	44	47	50		
22 x 22	Total Pressure	.018	.040	.071	.111	.159	.217	.284	.359	.443	
	Airflow, CFM	675	1000	1345	1680	2015	2350	2690	3025	3360	
	Throw	4-Way (1 core)	5-8-15	8-12-19	10-15-22	13-17-25	15-19-27	16-20-29	18-22-31	19-23-34	20-25-35
		3-Way (2 cores)	10-14-26	14-21-32	19-26-37	23-29-42	26-32-46	28-35-48	30-37-52	32-39-55	34-41-58
		2-Way (3 cores)	12-17-31	17-26-39	24-31-44	28-35-50	31-39-55	34-42-58	36-44-63	39-47-67	41-50-70
		1-Way (4 cores)	14-20-36	20-31-45	28-36-51	33-41-58	36-45-63	39-48-68	41-51-73	45-54-78	47-58-81
Noise Criteria	—	19	26	30	36	41	46	49	52		
24 x 24	Total Pressure	.021	.046	.082	.129	.185	.252	.329	.416	.514	
	Airflow, CFM	800	1200	1600	2000	2400	2800	3200	3600	4000	
	Throw	4-Way (1 core)	5-8-16	8-13-21	11-16-24	14-19-27	16-21-30	18-22-32	19-24-35	21-26-37	22-27-39
		3-Way (2 cores)	10-15-28	15-23-35	20-28-41	26-32-45	28-35-49	31-38-53	33-41-57	35-43-61	37-45-64
		2-Way (3 cores)	12-19-34	19-29-42	25-34-49	31-39-54	34-42-59	37-45-64	39-49-68	42-52-73	44-54-77
		1-Way (4 cores)	14-22-40	22-34-48	30-40-56	36-45-63	40-48-69	43-52-75	45-56-79	48-60-84	51-63-89
Noise Criteria	—	21	28	32	34	43	48	51	54		

Performance Notes:

- All pressures are in inches w.g.. To obtain static pressure, subtract the velocity pressure from the total pressure.
- Throws are given at 150, 100 and 50 fpm terminal velocities, under isothermal conditions.
- Noise Criteria (NC) values are based on 10 dB room absorption, re 10⁻¹² watts. Dash (—) in spaces indicates an Noise Criteria level of less than 15.
- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

Neck Size Square in Inches	Ak Factor
18 x 18	0.9541
20 x 20	1.2096
22 x 22	1.4636
24 x 24	1.7304