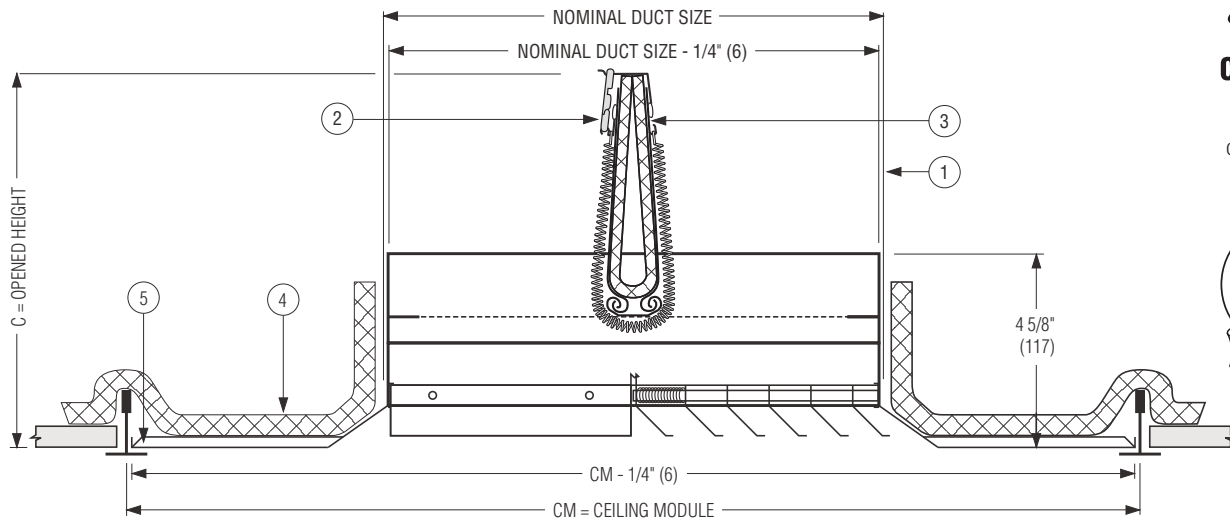




FIRE RATED MODULAR CORE CEILING DIFFUSER
 1, 2, 3 OR 4-WAY ADJUSTABLE DISCHARGE PATTERN
 STEEL • SQUARE NECK
 MODEL: 7500FRD



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	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:

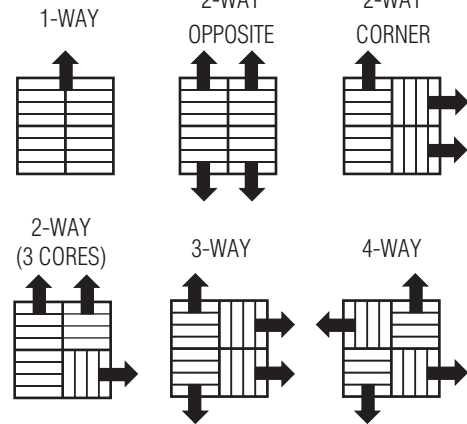
1. Steel duct drop (by others).
2. U.L. Listed fusible link. 212°F (100°C) standard.
3. Ceiling radiation damper (Model 0716).
4. Ceramic fibre thermal blanket accessory (Model 0726).
5. Corrosion resistant steel diffuser.

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:

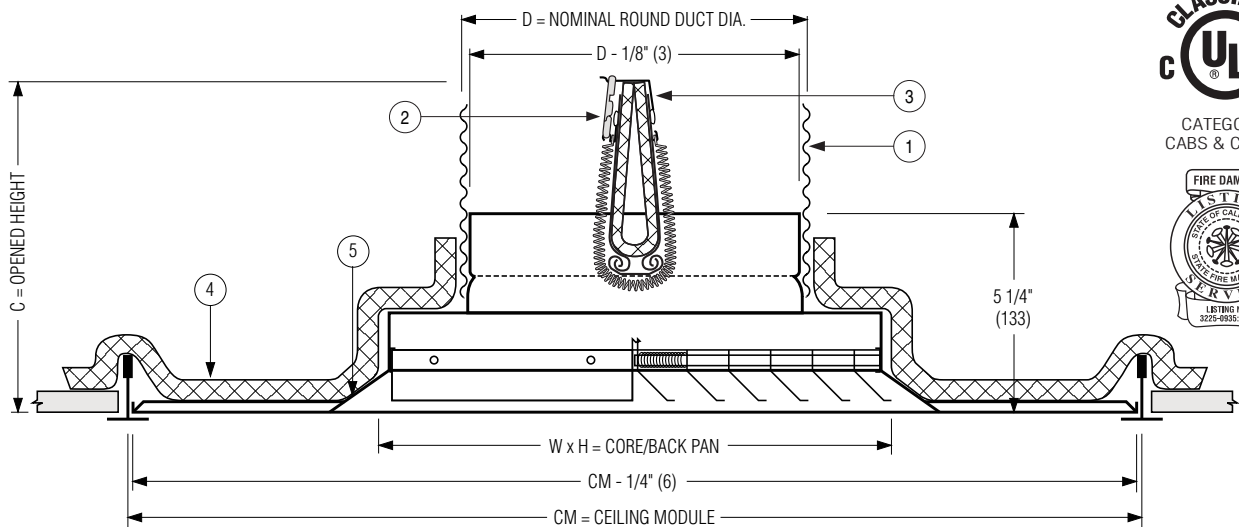
CONTRACTOR:

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:

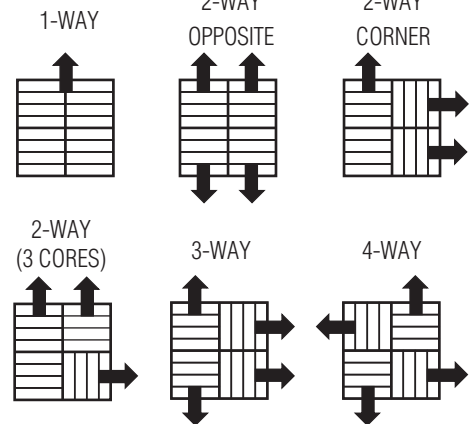
1. Flexible air duct (UL Class 0 or 1) connector or steel duct.
2. U.L. Listed fusible link. 212°F (100°C) standard.
3. Ceiling radiation damper (Model 0722).
4. Ceramic fibre thermal blanket accessory (Model 0725).
5. Corrosion resistant steel diffuser.

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.

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-CRDTBINST.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
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

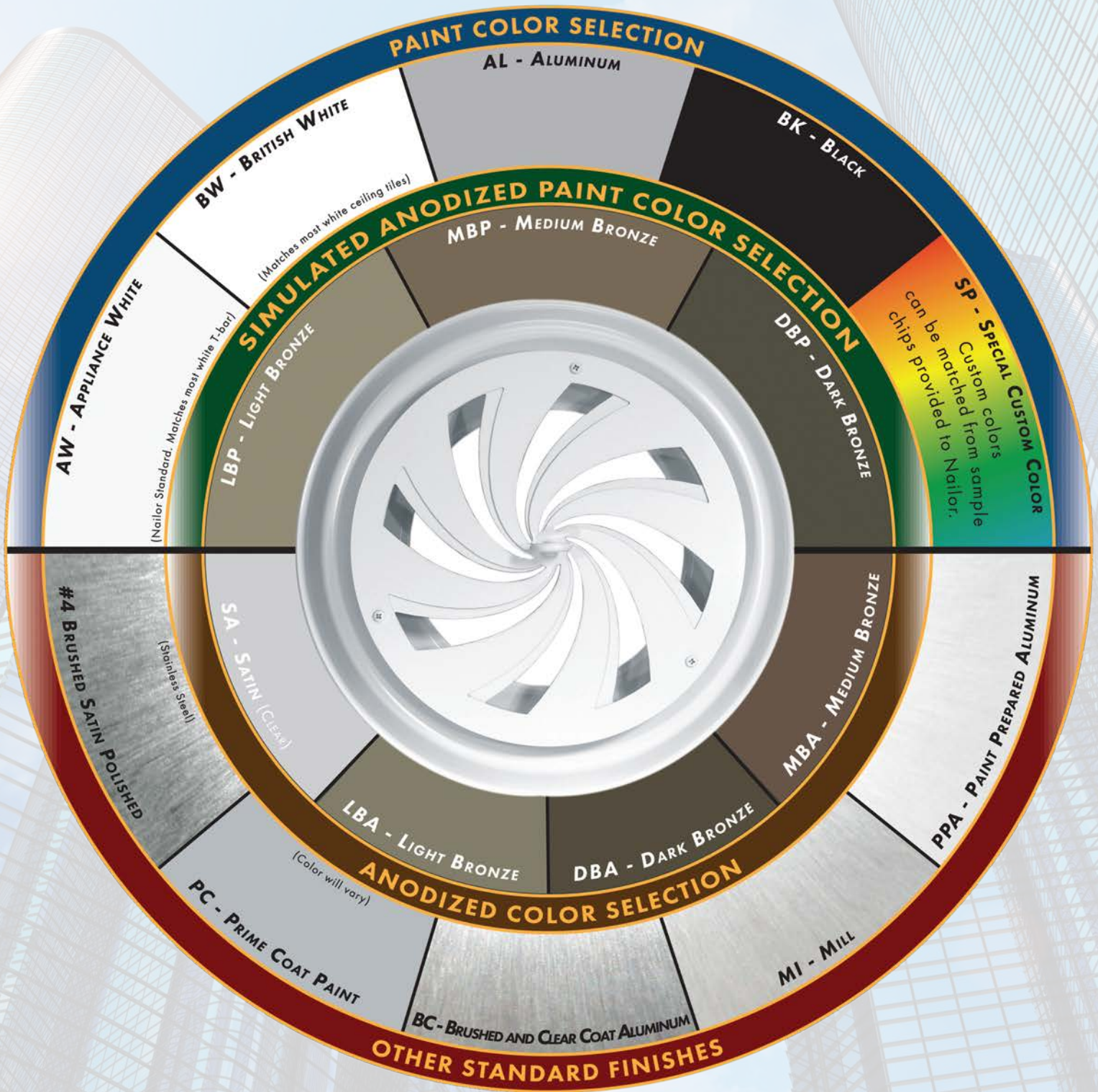
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



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 – 2006.

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:

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

3. 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.

4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

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

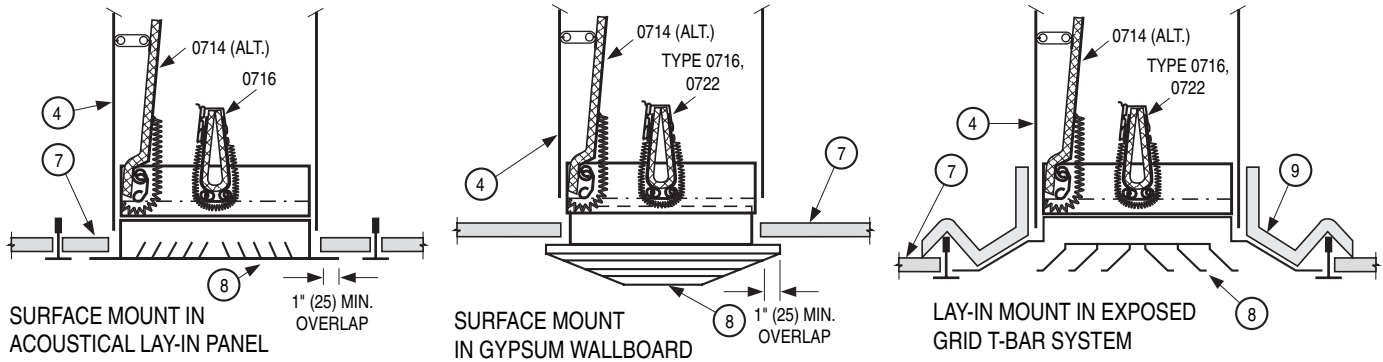
QUALIFICATIONS:

- **UL 555C Classified Ceiling Damper (File #9660).**
- **CAN4-S112.2 Ceiling Firestop Flap Assemblies.**
- **California State Fire Marshal: Fire Damper Listing No. 3225-0935:102.**
- **City of New York Board of Standards and Appeals. Cal. No. 460-88-SA.**
- **Meets the requirements for NFPA 90A, IBC and NBC (Canada) and associated local building codes.**

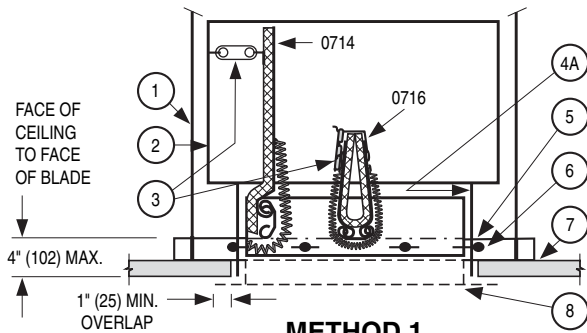
**NOTES:**

1. Model Series 0700 Ceiling Dampers (known as Fire Stop Flaps in Canada) are for use in place of the hinged blade, sheet metal damper in steel ducts with steel diffuser or grille as specified in the "Design Information Section – General" and in the individual floor or roof ceiling design(s) being used, as illustrated and described in the current UL Fire Resistance Directory. One ceiling damper of the same size as the allowable duct outlet size may be substituted for each hinged sheet metal damper specified in the design.
The clearance between each side of the ceiling damper and the duct drop shall be 1/8" (3) maximum.
2. Opening in ceiling membrane may be up to 1" (25) larger than the nominal size of the ceiling radiation damper. For exposed grid T-Bar ceiling systems, where the opening in the ceiling membrane is larger (more than 1" (25)) than the ceiling damper, a thermal blanket (Model 0725 or 0726) must be installed over the exposed surface of the diffuser (see lay-in diffuser applications).
Duct outlets in lay-in ceilings should be located within the field of an acoustical ceiling panel or tile.
Where it is necessary to cut a main runner or cross tee, each cut end shall be supported by a vertical No. 12 SWG hanger wire. A 1/2" (13) clearance shall be maintained between the duct outlet and each cut end at main runner and cross tee. The duct outlet shall be located so that no more than one main runner or cross tee is cut when penetrating the ceiling membrane.
3. A. Before installing Model 0716 or 0722, open blades and install fusible link between spring loaded wire clips. Do not bend or deform clips after assembly. If dampers are provided with link tabs instead of wire clips, install link and bend tabs to secure link in position.
B. After installing damper model 0714 in duct drop, open blade and attach link to duct or duct drop.
4. **INSTALLATION:**
Method 1. Type 0714, 0716 and 0720
Attach the two 16 ga. (1.6) steel support channels. (1 1/2" (38) deep with 1/2" (13) flanges), through the duct drop and ceiling damper using 3/16" (5) diameter by 1/2" (13) long steel bolts spaced 6" (152) o.c. maximum, with two bolts per channel minimum. The bolts shall not interfere with the closing of the ceiling damper.
Method 2. Type 0714, 0716, 0720 and 0722
Support the duct with two 16 ga. (1.6) steel support channels (1 1/2" (38) deep with 1/2" (13) flanges). Place the support channels at the bottom of the duct adjacent to both sides of the duct drop. Install the ceiling damper in the duct drop using 3/16" (5) diameter by 1/2" (13) long steel bolts, #8 by 1/2" (13) sheet metal screws or 3/16" (5) diameter steel rivets at 6" (152) o.c. with 2 per side minimum for rectangular or square dampers. For round dampers, use three equally spaced #8 x 1/2" (13) sheet metal screws for dampers up to 10" (254) dia. and four for larger sizes.
5. Use No. 12 SWG galvanized steel wire hangers to independently support channels to the structural members of the floor or roof above.
6. Maximum damper size. Models 0714, 0716, 0716-4 and 0716-4A: 24" x 24" (610 x 610).
Model 0716A: 16" x 16" (406 x 406). Model 0720: 18" x 18" (457 x 457).
Model 0722: 24" (610) dia. Model 0722A: 16" (406) dia..
7. **Steel grille or diffuser installation:** Attach to the duct drop or ceiling damper using #8 by 1/2" (13) long sheet metal screws at 8" (203) o.c. maximum and at least one screw per side for rectangular or square dampers. Round neck grilles or diffusers shall be attached to the duct drop or ceiling damper using a minimum of four equally spaced #8 x 1/2" (13) sheet metal screws. The grille or diffuser flange face shall overlap the ceiling opening by 1" (25) minimum and provide structural support for the ceiling membrane.
Non-steel grille or diffuser installation: Duct drop requires a support flange as detailed on page 2. Grille or diffuser may be attached in any suitable manner.

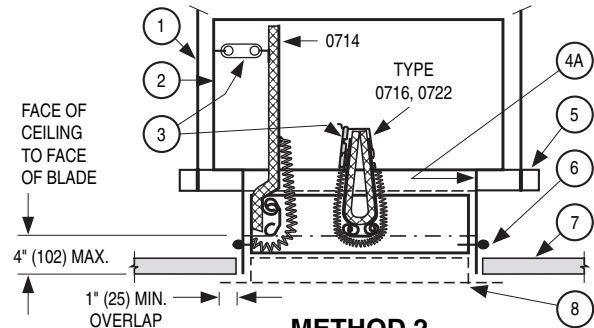
TYPICAL GRILLE/DIFFUSER APPLICATIONS



STEEL GRILLE OR DIFFUSER DETAIL

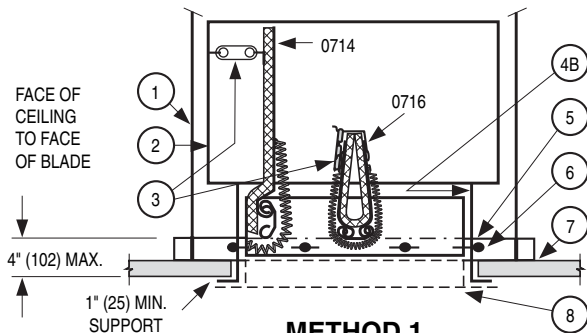


METHOD 1
MODELS 0714, 0716, 0716A,
0716-4, 0716-4A AND 0720

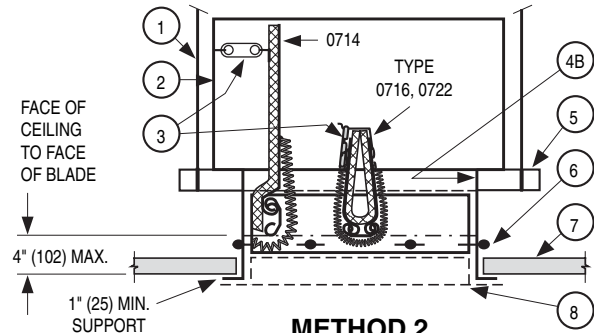


METHOD 2
MODELS 0714, 0716, 0716A,
0716-4, 0716-4A, 0720, 0722 AND 0722A

NON-STEEL GRILLE OR DIFFUSER DETAIL



METHOD 1
MODELS 0714, 0716, 0716A,
0716-4, 0716-4A AND 0720



METHOD 2
MODELS 0714, 0716, 0716A,
0716-4, 0716-4A, 0720, 0722 AND 0722A

ITEMS:

1. Wire hangers (4 required).
2. Main duct.
3. Listed fusible link or alt. listed adj. fusible link assembly. (Blade control through screw adjustment).
- 4a. Steel duct drop.
- 4b. Steel duct drop with 1" (25) lower support flange. The support flange may be integral to the duct drop or 1" x 1" (25 x 25) angles may be fastened to the duct drop at 4" (102) max. on center, min. two per side.
5. Support channels (2 required).
6. Mounting bolts, screws or rivets.
7. Ceiling: Acoustical panel (lay-in), acoustical tile or gypsum wallboard.
8. Grille or diffuser (see note 7).
9. Supplementary thermal blanket for use where ceiling opening is larger than nominal damper size. (See lay-in diffuser applications).

Dimensions are in inches (mm).

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**CEILING DAMPER, DIFFUSER AND THERMAL BLANKET ASSEMBLY
FOR LAY-IN INSTALLATION WITH FLEXIBLE OR STEEL DUCT****QUALIFICATIONS:**

- UL 555C Classified Ceiling Damper. (File # 9660).
- CAN4-S112.2 Ceiling Firestop Flap Assemblies.
- California State Fire Marshal: Fire Damper Listing No. 3225-0935:102.
- City of New York Board of Standards and Appeals. Cal. No. 460-88-SA.
- Meets the requirements for NFPA 90A, IBC, BOCA, SBCCI, UBC, NBC (Canada) and associated local building codes.

**NOTES:**

1. Follow carefully the installation procedure shown on page 2 for flexible duct and page 3 for hard duct.
2. Before installing, open damper blades and install link between spring loaded wire clips. Do not bend or deform clips after assembly. If dampers are provided with link tabs instead of wire clips, install link and bend tabs to secure link in position.
3. The end tabs of the 2'-0" (610) cross T-Bar shall be bent back against the web of the 4'-0" (1219) cross T-Bars. The 4'-0" (1219) cross T-Bars must have slots in the web for connection of the 2'-0" (610) cross T-Bar.
4. Use No. 12 SWG galvanized steel hanger wires to independently support the ceiling T-Bars to the structural members of the floor or roof above. Ensure hanger wires are plumb and straight.
5. Maximum distance from face of ceiling to face of damper blade is 4" (102).
6. Maximum size of the Ceiling Damper/Ceiling Air Diffuser neck is 12" x 12" (305 x 305) for square hard duct and 14" (356) dia. for flexible duct installations.
Larger neck sizes require the duct to be independently supported. See IOM pages 5.050-5.051.
The Flexible Duct shall be Class 0 or 1 bearing the UL Classification marking. The maximum length of the duct shall not exceed 14'-0" (4267) in length. No portion of the duct shall rest on the back surface of the ceiling panels or tiles and a minimum of 4" (102) clearance must be maintained. Where the duct must be supported, use straps or No. 12 SWG steel hanger wires 4'-0" (1219) to 6'-0" (1829) o.c.
7. Caution should be observed so that the duct does not interfere with the operation of the Classified Ceiling Damper of the Ceiling Air Diffuser assembly.
8. No Diffuser shall be located in an adjacent 24" x 48" (610 x 1219) ceiling grid module.
9. Ceiling Damper/Ceiling Air Diffuser assemblies are for use in lieu of the hinged blade, sheet metal damper in steel ducts as specified in the "Design Information Section - General", and in the individual floor and roof ceiling design(s) being used, as illustrated and described in the current UL "Fire Resistance Directory".

**CEILING DAMPER, DIFFUSER AND THERMAL BLANKET ASSEMBLY
FOR LAY-IN INSTALLATION WITH FLEXIBLE DUCT.
MODELS: 0722 & 0722A.**

Slip ceiling damper over neck of diffuser and install screws (item 5) on equally spaced centers.

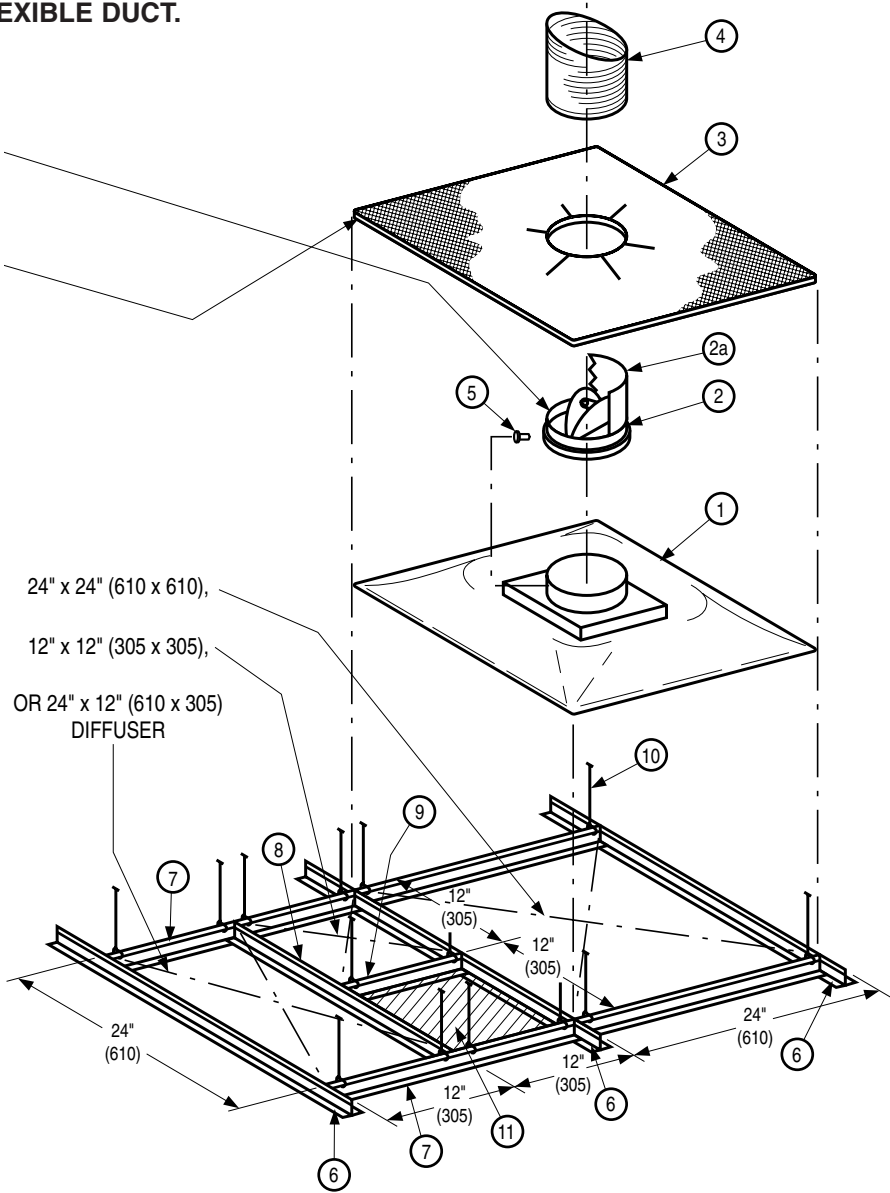
Place thermal blanket over ceiling damper and diffuser neck and set square with ceiling grid. Cut corners of blanket to clear hanger wires (item 10).

ITEMS:

1. Lay-in type steel diffuser with round neck or square-to-round adapter. (24 gauge minimum).
2. Ceiling damper.
- 2a. Ceiling damper with top extension.
3. Thermal blanket. (Model 0725).
4. UL Listed flexible duct.
5. #8 x 1/2" (13) sheet metal screws; equally spaced. Three required for 10" (254) dia. or less. Four required for 12" (305) and 14" (356) dia.
6. Main T-bar runner.
7. 4'-0" (1219) cross T-bar.
8. 2'-0" (610) T-bar.
9. 1'-0" (305) T-bar.
10. The 4 corners of the grid module in which the lay-in diffuser is installed shall have a hanger wire support.
11. Ceiling panel or tile set in ceiling grid.

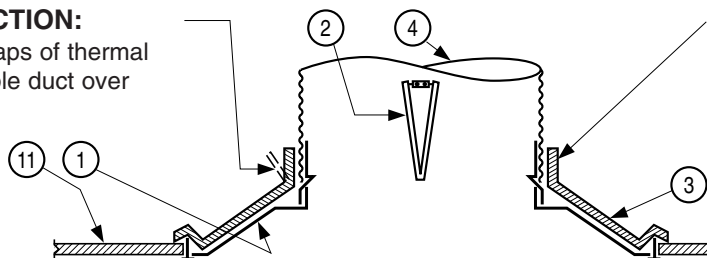
Combined diagram of typical ceiling grid layouts to suit 12" x 12" (305 x 305), 24" x 12" (610 x 305) or 24" x 24" (610 x 610) diffuser sizes as noted.

No diffusers shall be located in adjacent modules. Refer to notes on page 5.060.



DUCT CONNECTION:

Fold back neck flaps of thermal blanket, slip flexible duct over diffuser neck.



THERMAL BLANKET ATTACHMENT:

Replace neck flaps of thermal blanket over duct and fasten duct to neck over blanket using 18 SWG min. steel wire or steel clamp in accordance with duct manufacturer's installation instructions. Do not use bolts, screws or rivets.

CEILING DAMPER, DIFFUSER AND THERMAL BLANKET ASSEMBLY FOR LAY-IN INSTALLATION WITH RECTANGULAR STEEL DUCT. MODELS: 0714, 0716, 0716A, 0716-4, 0716-4A & 0720.

Slip ceiling damper over neck of diffuser and install screws (item 5) on equally spaced centers.

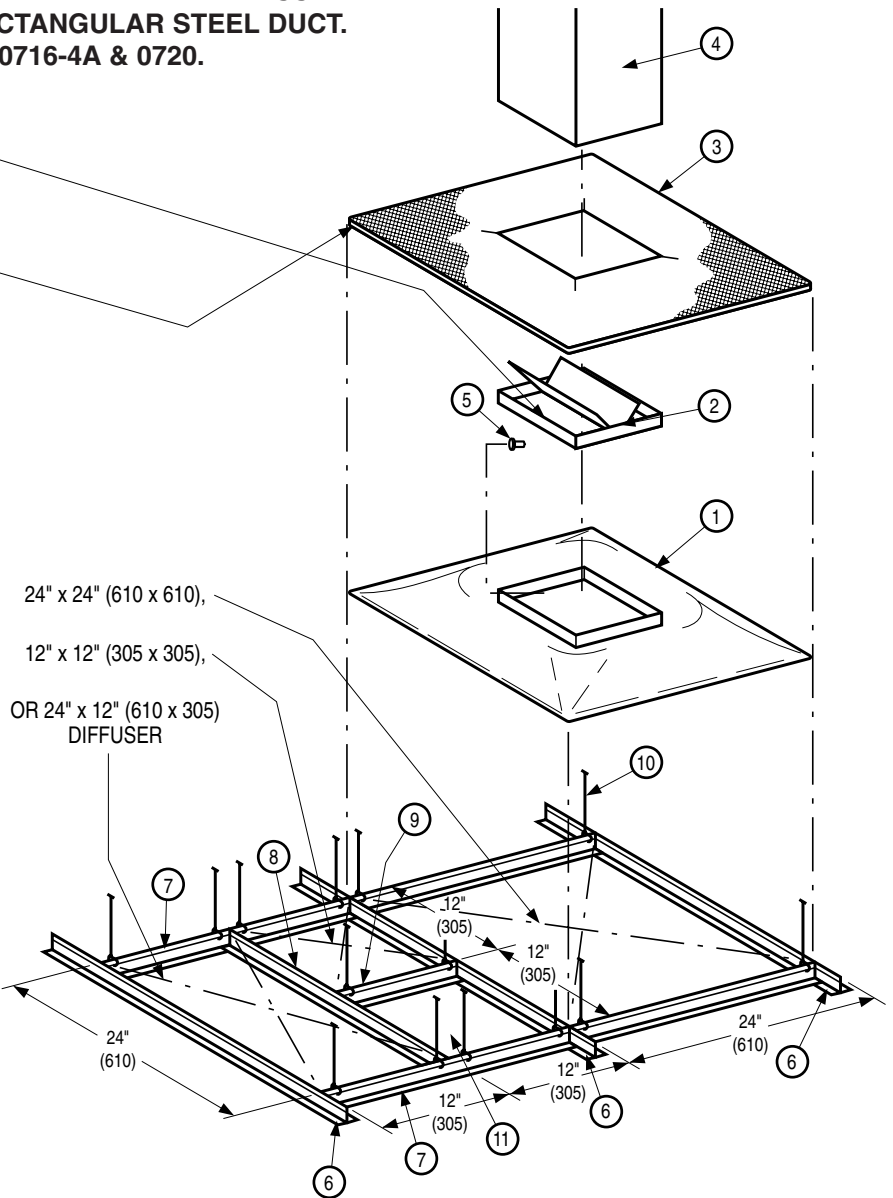
Place thermal blanket over ceiling damper and diffuser neck and set square with ceiling grid. Cut corners of blanket to clear hanger wires (item 10).

ITEMS:

1. Lay-in type steel diffuser with square or rectangular neck. (24 gauge min.).
2. Ceiling damper.
3. Thermal blanket. (Model 0726).
4. Steel duct drop.
5. #8 x 1/2" (13) sheet metal screws; equally spaced at 8" (203) o.c. maximum with at least one screw per side.
6. Main T-bar runner.
7. 4'-0" (1219) cross T-bar.
8. 2'-0" (610) T-bar.
9. 1'-0" (305) T-bar.
10. The 4 corners of the grid module in which the lay-in diffuser is installed shall have a hanger wire support.
11. Ceiling panel or tile set in ceiling grid.

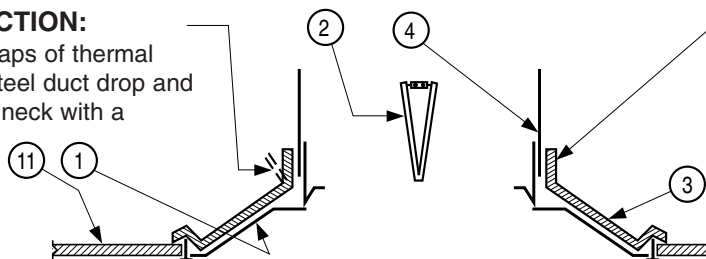
Combined diagram of typical ceiling grid layouts to suit 12" x 12" (305 x 305), 24" x 12" (610 x 305) or 24" x 24" (610 x 610) diffuser sizes as noted.

No diffusers shall be located in adjacent modules. Refer to notes on page 5.060.



DUCT CONNECTION:

Fold back neck flaps of thermal blanket, slip on steel duct drop and fasten to diffuser neck with a minimum of four #8 sheet metal screws, one per side.



THERMAL BLANKET ATTACHMENT:

Replace neck flaps of thermal blanket over duct and fasten using 18 SWG steel wire.



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