

**McGill AirFlow LLC**

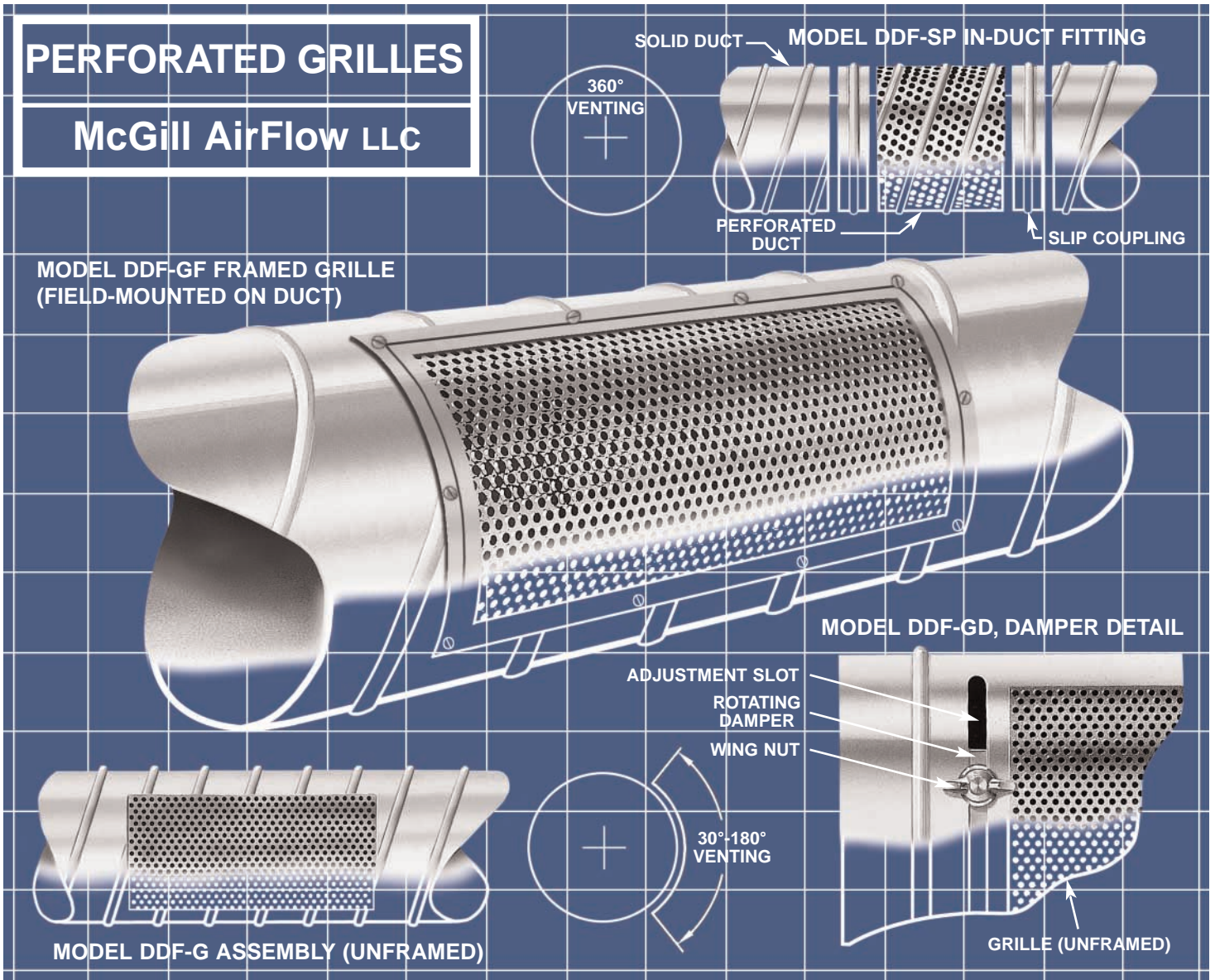
An enterprise of United McGill Corporation —  
Family owned and operated since 1951

# Duct-D-Fuser™ Terminal Outlets

## Perforated Grilles

for HVAC DUCT SYSTEMS

a McGill AirFlow™ product



McGill AirFlow manufactures sturdy, low-cost air diffusion products for exposed HVAC air distribution systems in large, open-area commercial and industrial facilities. Products include a variety of perforated grilles, assemblies, and fittings that are available in galvanized steel, paintable galvanized steel, 304 and 316 stainless steel, and aluminum.

Model DDF-G series grilles are constructed to be flush mounted to curved or flat surfaces and designed to provide airflow distribution similar to tap-mounted grilles.

Model DDF-SP in-duct fittings and assemblies are constructed of 360° perforated duct to provide low-throw, low-draft airflow performance.

Because of their lighter weight, McGill's perforated grilles are easier to install and less expensive to manufacture and ship than conventional rectangular tap-type diffusers. If local control of air direction, volume, or velocity is required, refer to McGill AirFlow's duct registers or Factair™ industrial diffusers brochure.

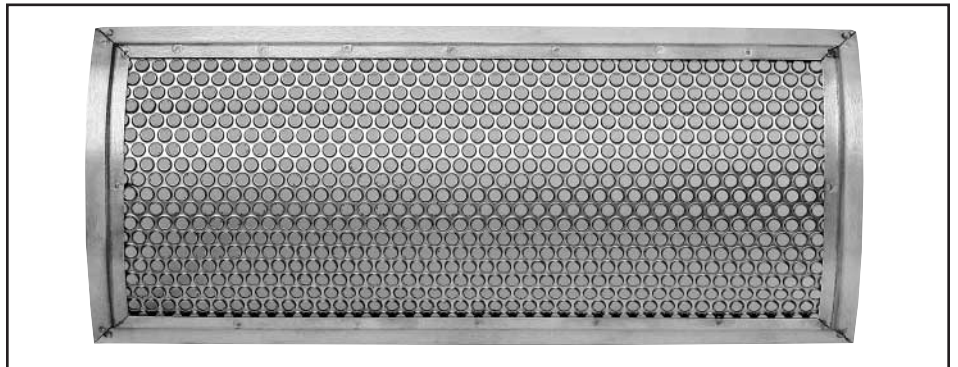
### Model DDF-G Loose Grilles

The Model DDF-GF grille has a mitered, offset, paintable galvanized sheet metal (or optional 304 and 316 stainless steel, and aluminum) frame for easy installation on a round, flat oval, or rectangular duct assembly or fitting body using sheet metal screws. There are 31 standard sizes (see **Table 1**). The Model DDF-GF grille can be field or factory installed. Factory-installed units incorporate closed cell foam gasketing for sealing.

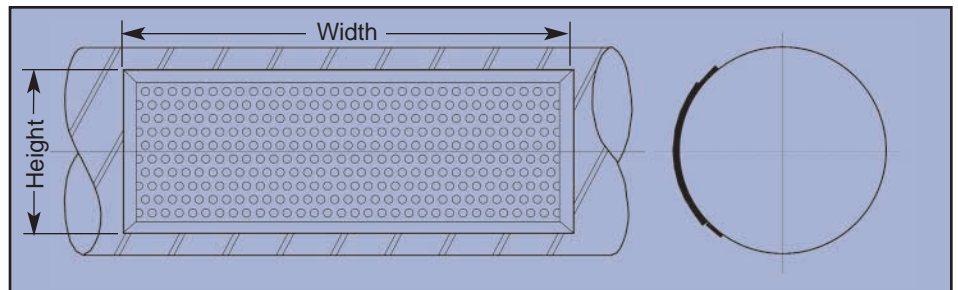
The Model DDF-GOBD grille incorporates an integrated, opposed blade damper for balancing volume flow rates among grilles. It can also be field or factory installed.



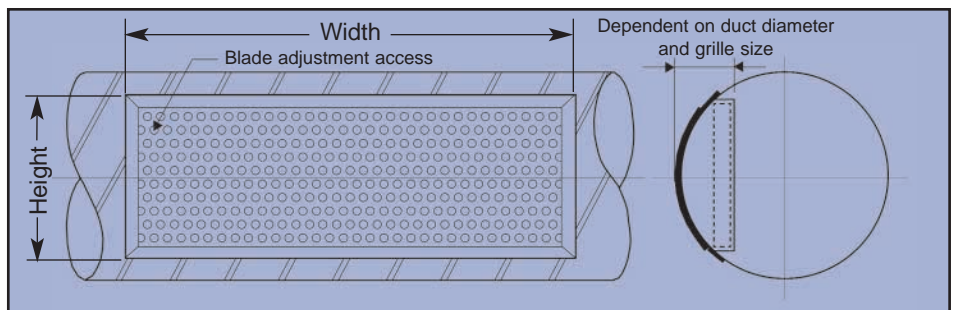
Model DDF-G Assembly with framed grilles on an exposed duct system



Model DDF-GF Framed Grille



Model DDF-GF Framed Grille mounted on duct



Model DDF-GOBD Framed Grille with integrated, adjustable, opposed blade damper mounted on duct

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McGill AirFlow products depicted in this brochure were current at the time of publication. As a quality-conscious manufacturer, McGill AirFlow is continually seeking ways to improve its products to better serve its customers. Therefore, all designs, specifications, and product features are subject to change without notice.

## Model DDF-G Assemblies

Model DDF-G assemblies use factory-mounted grilles on a single run of spiral lockseam or longitudinal seam duct. Outlet opening sizes will vary along the length of the duct system. The selection of one standard Model DDF-GF framed grille size based on the largest opening size offers a uniform appearance. A more economical solution is to select standard Model DDF-G unframed grilles large enough to cover each individual opening.

## Model DDF-G Fittings

Model DDF-GB fittings incorporate an unframed DDF-G grille on a fitting body constructed from the appropriate SMACNA gauge material. The grille is sized to fit the cut-out required for the desired air volume. Model DDF-GB fittings are available in diameters from 6 through 60 inches with 30° to 180° venting.

The Model DDF-GD fitting allows airflow modulation through the use of an internal barrel damper. Wing nuts mounted in slots on either side of the grille provide accurate volume flow adjustments. The Model DDF-GD fitting incorporates unframed grilles only and is available in diameters ranging from 6 through 36 inches with 30° to 180° venting.

## Performance of DDF-G Duct-D-Fuser Products

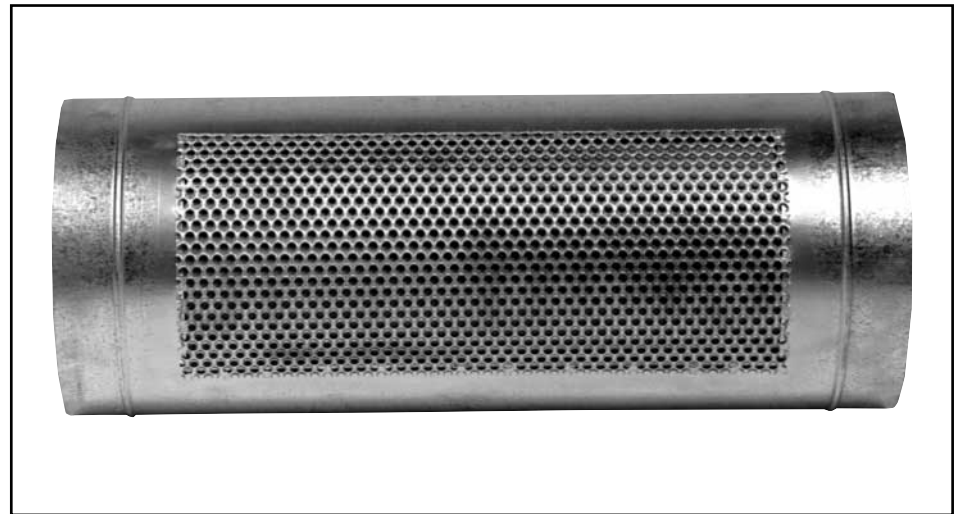
Refer to McGill AirFlow's *Engineering Report No. 159 Type A Duct-D-Fuser Grille Performance and Design Methodology* for guidelines in designing exposed air distribution systems using this unique flush-mounted air diffuser for round, flat oval, and rectangular duct systems. This report gives detailed airflow and acoustical performance data as well as a product specification.

Refer to McGill AirFlow's *DDF-GF and DDF-GOBD Performance Data Sheets* for selection of unit sizes based on available pressure and desired throw and acoustics characteristics.

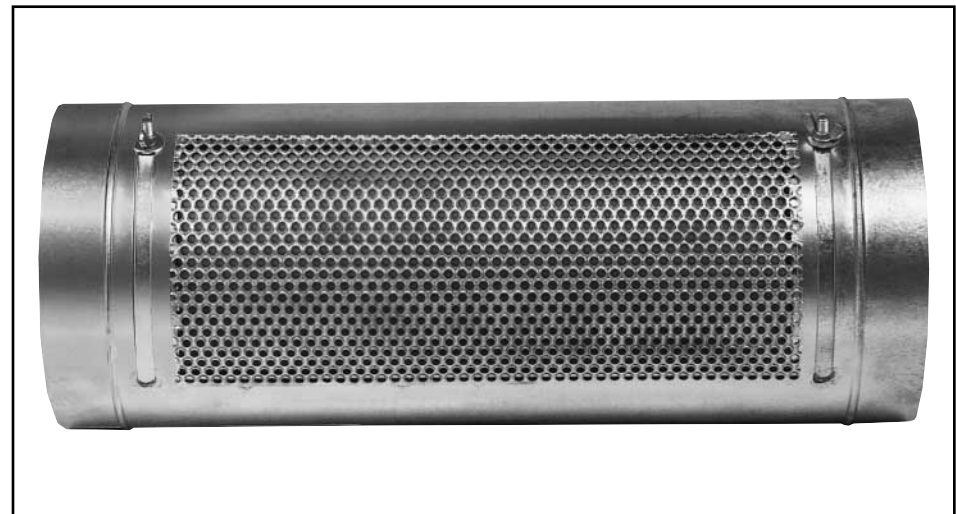
**Table 1**  
Available Grille Sizes for DDFG, DDFGF, and DDFGOBD

Arc Length or Height (inches)	Minimum Duct Diameter* (inches)													
	Width (inches)													
	4	6	8	10	12	16	18	20	24	30	36	48	54	60
4	8	8	8	8	8									
6		10		10	10	10		10						
8			12		12	12			12					
12					18		18		18	18	18			
18							24		24	24	24		24	24
24									32		32	32		32
30												40		40

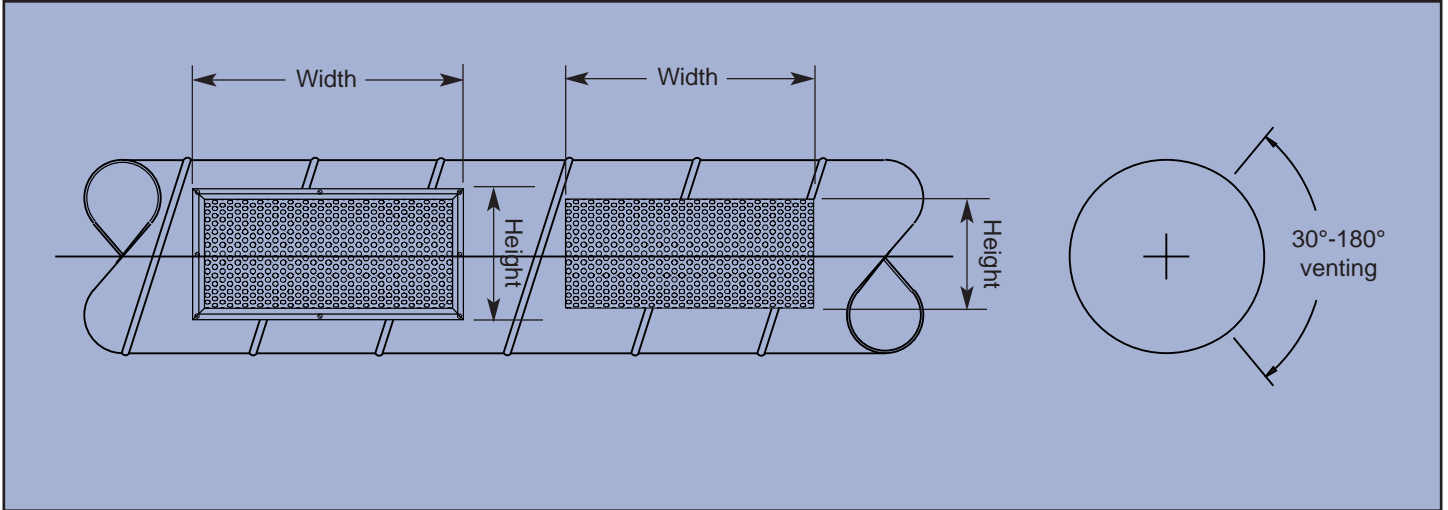
\*Maximum diameter is unlimited; can be provided off flat



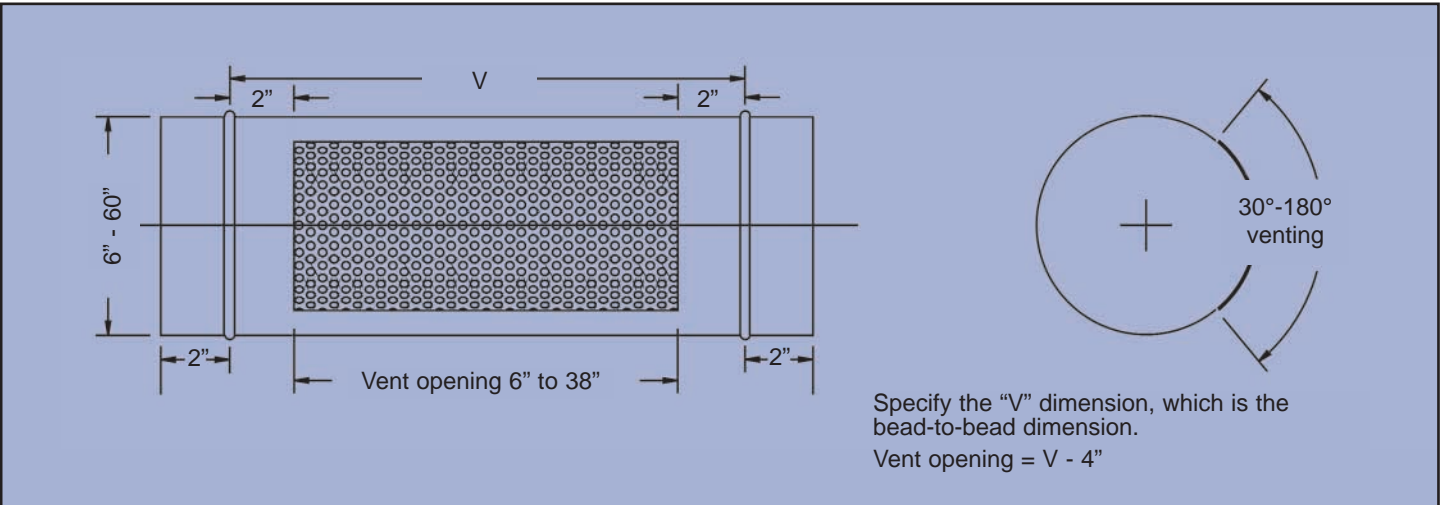
**Model DDF-GB Fitting**



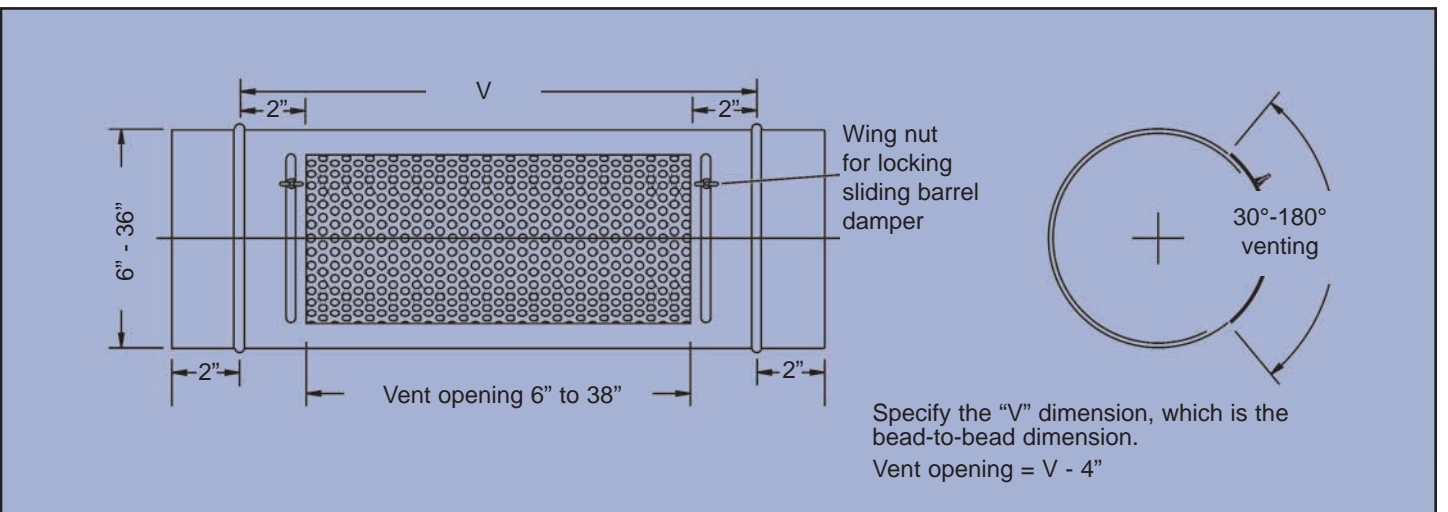
**Model DDF-GD Fitting**



**Model DDF-G Assembly with framed or unframed grille mounted on duct**



**Model DDF-GB Fitting with unframed grille mounted on fitting body with no internal barrel damper**



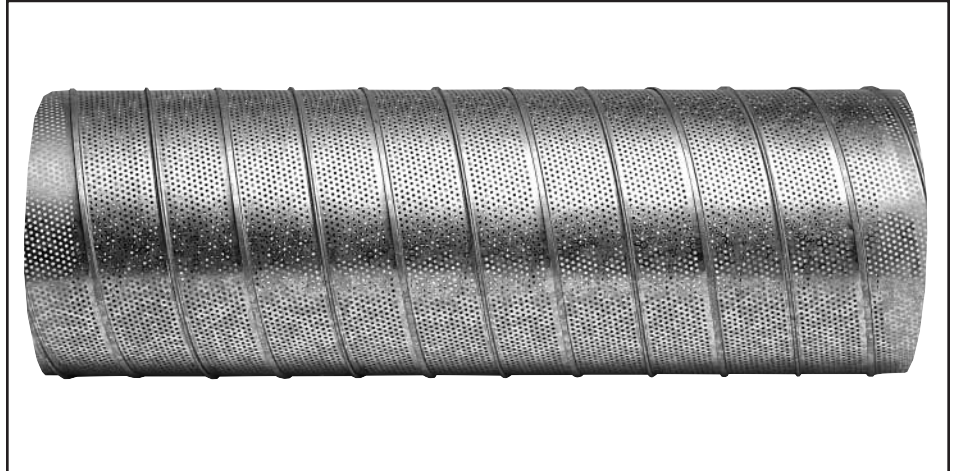
**Model DDF-GD Fitting with unframed grille mounted on fitting body with adjustable internal barrel damper**

## Model DDF-SP In-Duct Fitting

The Model DDF-SP in-duct fitting is built from 360° perforated, light-gauge, ribbed spiral lock seam duct with a 23 percent open area. Standard material construction is galvanized steel (paintable galvanized, 304 and 316 stainless steels, and aluminum are available). Model DDF-SP in-duct fittings are available in continuous lengths of 16 inches through 20 feet. Standard gauge-to-diameter relationships are 28 gauge for 9- through 42-inch diameters, and 26 gauge for 44- through 60-inch diameters. Model DDF-SP in-duct fittings are outfitted with standard slip couplings for easy joining to adjacent duct sections.

## Model DDF-SP Duct Assembly

The Model DDF-SP duct assembly is also built from 360° perforated, light-gauge, ribbed spiral lockseam duct with a 23 percent open area,



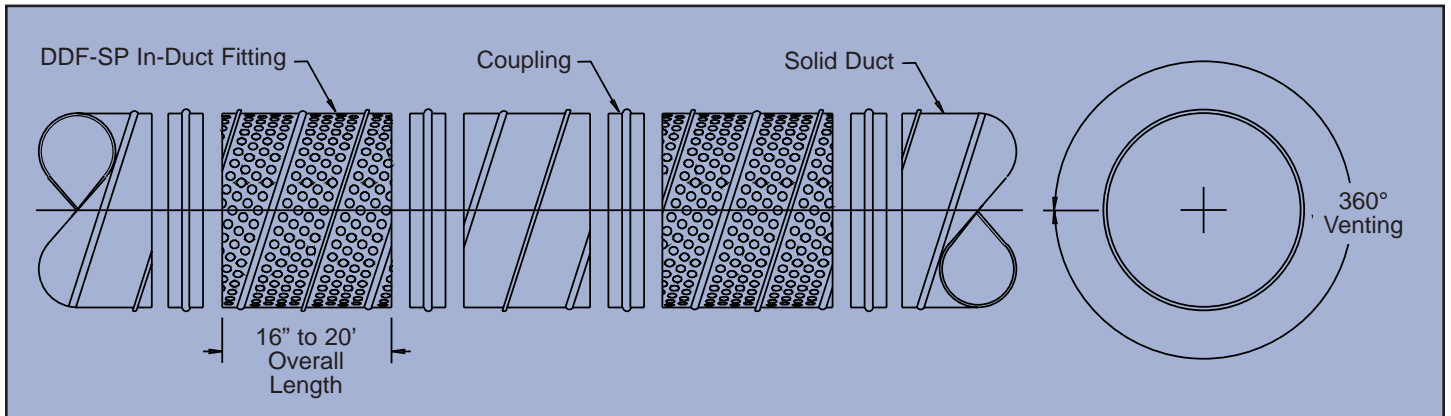
Model DDF-SP In-Duct Fitting

in gauges as noted for the in-duct fitting. The DDF-SP duct assembly ranges in length from 16 inches through 20 feet and incorporates appropriately sized orifice plates at predetermined locations along the assembly length for uniform airflow distribution. All DDF-SP duct assemblies must be designed

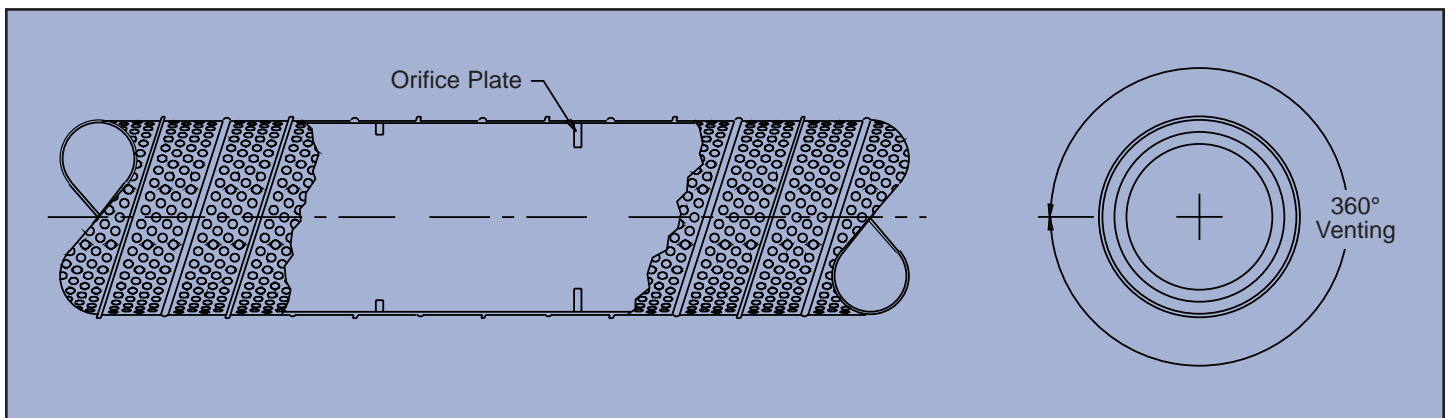
using McGill AirFlow's perforated grille design program.

## System Design

Contact the McGill AirFlow sales engineering office or plant nearest you for a free duct system design analysis of your next project.



Type DDF-SP In-Duct Fitting assembled to duct with couplings for 360° diffused throw



Model DDF-SP Duct Assembly for 360° diffused throw

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## McGill AirFlow LLC

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