

- **UL 555S CLASSIFIED SMOKE DAMPER**
- **CLASS I or II at 250° or 350°**
- **PREMIUM PERFORMANCE**
- **EXTRUDED ALUMINUM AIRFOIL BLADE**

MODELS:

- 1280 TYPE A**
- 1281 TYPE A IN SLEEVE**
- 1282 TYPE B**
- 1283 TYPE C**



Model 1280 (shown with SMP)

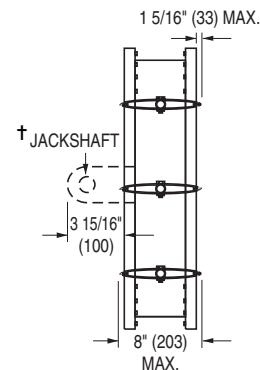
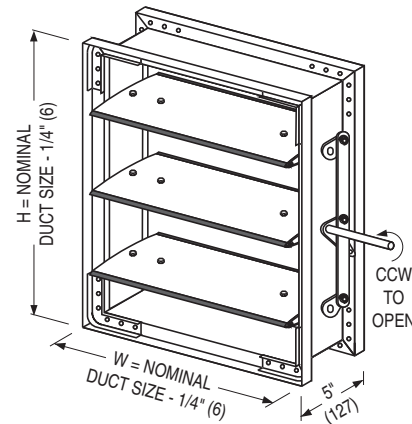
The 1280 Series Smoke (Leakage Rated) dampers are Nailor's premium choice for applications where a leakage rated damper is required as part of a static smoke control or dynamic smoke management system. Features of the 1280 Series include a smoothly contoured extruded aluminum airfoil blade and compression type seals that have been specially designed to offer not only the lowest leakage class available with airflow in either direction, but also ultra-low pressure drop characteristics. Together with maintenance-free concealed linkage out of the airstream, the design minimizes unwanted turbulence and noise generation. A rugged hat channel style frame with die-formed corner gussets for superior rigidity virtually eliminates racking for worry free installation.

QUALIFICATIONS:

- UL 555S Classified Smoke Damper (File # 9492).
- Leakage Class I or II at 250°F or 350°F Elevated Temperature.
- Meets NFPA 90A and NFPA 92A, requirements for Leakage Rated (Smoke) Dampers.
- Tested in accordance with AMCA Standard 500-D for pressure drop.
- Maximum velocity 2000 fpm @ 4" w.g. (10 m/s @ 1 kPa), dependent upon actuator.

CONSTRUCTION DETAILS:

- FRAME:** 5" x 7/8" x 16 ga. (127 x 22 x 1.6) galvanized steel hat channel.
- BLADES:** Airfoil type 6063-T5 extruded aluminum on 5 1/2" (140) centers. Parallel action.
- LINKAGE:** Concealed in frame. 12 ga. (2.7) plated steel.
- BEARINGS:** 1/2" (13) dia. self-lubricating oilite bronze.
- AXLES:** 1/2" (13) dia. plated steel bolted to blades.
- DRIVE SHAFT:** 6" (152) long x 1/2" (13) dia. plated steel rigid shaft extension.
- JAMB SEALS:** Cambered stainless steel.
- BLADE SEALS:** Silicone.
- MINIMUM SIZE:** 8" x 8" (203 x 203).
- MAXIMUM SIZE:** Single Section
Vertical or Horizontal mount:
36" x 48" (914 x 1219).
Multiple Section Assembly
Vertical or Horizontal mount:
144" x 96" (3658 x 2438), 288" x 48"
(7315 x 1219) or 72" x 144" (1829 x 3658).



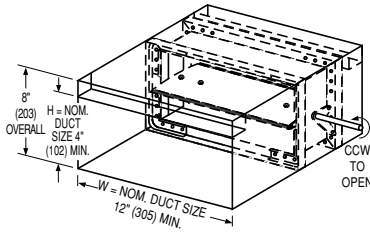
† jackshaft standard on multiple section dampers using a single actuator or when actuators are mounted in the airstream.

TYPE A: MODEL 1280
TYPE A IN SLEEVE: MODEL 1281

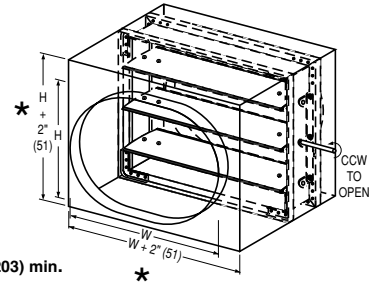
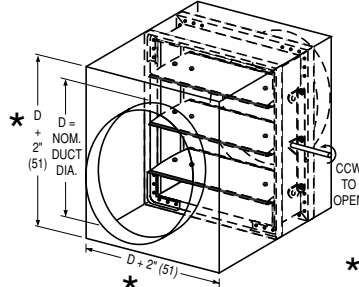
Standard factory sleeve (caulked to UL requirements) 16" long x 20 ga. (406 x 1.0) (18 ga. for dampers over 84" (2134) in width).

Model Series 1280 dampers with duct heights less than 8" (203) require a Type 'B' sleeve enclosure (Model 1282). Overall damper height is 8" (203). Units less than 8" (203) in width only, or in both width and height, require a Type 'C' enclosure (Model 1283).

TYPE B SLEEVE ENCLOSURE MODEL: 1282

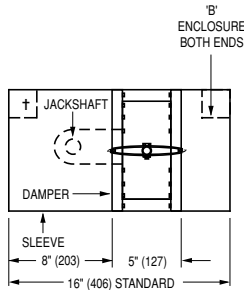


TYPE C SLEEVE ENCLOSURES MODEL: 1283

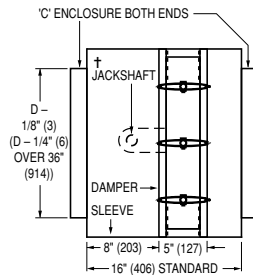


STYLE CR: FOR ROUND DUCT

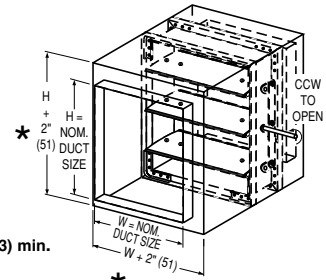
STYLE CO: FOR OVAL DUCT



† jackshaft standard on multiple section dampers using a single actuator or when actuators are mounted in the airstream.



TYPE C SIDE VIEW



STYLE CSR : FOR SQUARE or RECTANGULAR DUCT

Min. Duct Size: 8" x 4" (203 x 102)
(Overall damper H is 8" (203)).

Max. Duct Size: Vertical or Horizontal mount:
Single Section
36" x 7 1/2" (914 x 191).
Multiple Section Assembly
288" x 7 1/2" (7315 x 191).

Min. Duct Size: 4" (102) diameter.
(Overall damper size is 8" x 8" (203 x 203) min.).

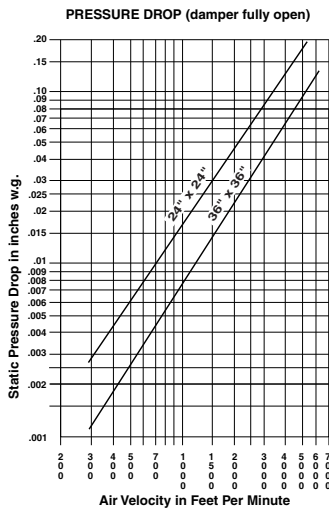
Max. Duct Size: Vertical or Horizontal mount:
Single Section
34" (864) diameter.
Multiple Section Assembly
94" (2388) diameter.

Min. Duct Size: 4" x 4" (102 x 102).
(Overall damper size is 8" x 8" (203 x 203) min.).

Max. Duct Size: Vertical or Horizontal mount:
Single Section
34" x 46" (864 x 1168)
Multiple Section Assembly
142" x 94" (3607 x 2388),
286" x 46" (7264 x 1168) or
70" x 142" (1778 x 3607).

PERFORMANCE DATA:

PRESSURE DROP (damper fully open)



Imperial figures shown. **To convert to SI (metric) system:**

Multiply:
CFM x .4719 = liters per second
inches w.g. x .2486 = kilopascals
fpm x .00508 = meters per second
cfm per sq. ft. x 5.08 = liters/second per sq. meter.

Tested per AMCA standard 500-D, Fig. 5.3.

LEAKAGE CLASS

The 1280 Series Smoke Damper has been designed and qualified under UL 555S in order to provide maximum system design flexibility. It is available with a Class I (currently the lowest available) or Class II leakage rating with all damper/actuator assemblies having been tested successfully at an elevated temperature of 250°F (121°C) or 350°F (176°C), depending on actuator, under airflow of 2000 fpm (10 m/s) at 4" w.g. (0.995 kPa).

The criteria for selection should be based upon both first cost consideration and the maximum total acceptable leakage of all closed dampers in the smoke management system when in the smoke control mode. This will have an influence on fan selection and capacity requirement.

Leakage Class	Maximum Leakage cfm/ft ² (m ³ /s/m ²)	
	@ 1" w.g. (0.249 kPa)	@ 4" w.g. (0.995 kPa)
I	4 (0.020)	8 (0.041)
II	10 (0.051)	20 (0.102)

SMOKE DAMPERS

MODELS: 1280/1281/1282/1283

VARIABLES/ACCESSORIES

VARIABLES:	CODE	DESCRIPTION
MOUNTING:	V	Vertical Mount (wall)
	H	Horizontal Mount (floor)
LEAKAGE/ELEV. TEMP. RATINGS:	125	Class I @ 250°F
	135	Class I @ 350°F
	225	Class II @ 250°F
	235	Class II @ 350°F
SLEEVE LENGTH/GAUGE:	Specify Sleeve Length:	12" (305) to 28" (711)
	Specify Sleeve Gauge:	20G, 18G, 16G, 14G, 10G
ACTUATORS:	MS4	Honeywell MS4X09 (120 VAC)
	MS8	Honeywell MS8X09 (24 VAC)
	4Y0	Honeywell MS4Y09 (230 VAC)
	412	Honeywell MS4120 (120 VAC)
	812	Honeywell MS8120 (24 VAC)
	462	Honeywell MS4620 (230 VAC)
	296	Siemens 331-2961 (25 psi)
ACTUATOR MOUNTING:	EXT	External Mount
	INT	Internal Mount
ACTUATOR LOCATION:	RH	Right-Hand Mount
	LH	Left-Hand Mount
	MH	Multi-Hand Mount
FAIL POSITION:	CL	Damper to Fail Closed
DAMPER LOCATION IN SLEEVE:	L8	8" (203) from Sleeve End
	L0	Specify dimension from sleeve end
FRAME MATERIAL:	EAF	Extruded Aluminum Frame
IF MODEL 1283 IS SELECTED, SPECIFY TYPE OF TRANSITION:	CR	Round Type C Transitions
	CO	Oval Type C Transitions
	CSR	Square/Rect. Type C Transitions
ACCESSORIES	CODE	DESCRIPTION
POSITION INDICATOR:	300	MLS-300 Switch Pack
E.P. SWITCH	EP1	120V Siemens 2651008
	EP2	24V Siemens 2651007
ACTUATOR MOUNTING HARDWARE:	JKS	Jackshaftering (required for internal mounting of actuator)
	SMP	Side Mounting Plate (required for mounting of actuator without sleeve)
FLANGED SLEEVE (MODEL 1281 ONLY)	TDF1	TDF Flange on One End
	TDF2	TDF Flange on Both Ends

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SMOKE DAMPERS

HOW TO SPECIFY OR TO ORDER

SMOKE DAMPERS

MODELS: 1280/1281/1282/1283

HOW TO ORDER:

Select model number and size, then select from each variable. Choose accessories as desired. See previous page for description of variables and accessories.

MODEL	SIZE W X H or DIA.	MOUNTING	LEAKAGE/ELEV. TEMP. RATING	SLEEVE LENGTH *	SLEEVE GAUGE *	ACTUATOR	ACTUATOR MOUNTING	ACTUATOR LOCATION	FAIL POSITION	DAMPER LOCATION IN SLEEVE	TRANSITION TYPE (MODEL 1283 ONLY)	OPTIONAL FRAME MATERIAL	ACCESSORIES	
1280	ie: 36" x 24"	V/H	125	SPECIFY LENGTH	20G	MS4	EXT	RH	CL	L8	CR	EAF	300	
1281	or		135		18G	MS8	INT	LH		L0	CO		EP1	
1282	18" dia.		225		16G	4Y0		MH			CSR		EP2	
1283			235		14G	412								JKS
					10G	812	462							
					296								TDF1	
													TDF2	

Notes: 1. * Standard sleeve is 16" (406) long x 20 ga. (1.0).

SMOKE DAMPERS

SUGGESTED SPECIFICATION:

Provide and install, as shown on plans and/or schedules, Smoke Dampers meeting or exceeding the following criteria: Frame shall be constructed of 16 ga. (1.6) galvanized steel hat channel with mitered corners reinforced with die-formed corner gussets for strength. Blades shall be of Type 6063-T5 extruded aluminum airfoil design on maximum 6" (152) centers with integral structural reinforcing tube running full length of each blade. Blade axles shall be 1/2" (13) dia. plated steel, double bolted at each end of blade to provide positive locking connection. Hex or square friction-fit, or press-fit axles are not acceptable. Bearings shall be self-lubricating oilite bronze type. Blade linkage shall be zero-maintenance, concealed in frame, out of airstream. Jamb seals shall be compression type cambered stainless steel. Blade seals shall be silicone, mechanically locked in extruded blade slots. Adhesive or clip-on type blade seals are not acceptable.

Dampers shall meet the requirements of NFPA 90A and 92A and shall be classified as a Class I or Class II (specifier select one) Leakage Rated (Smoke) Damper under UL 555S at an elevated temperature of 250°F (121°C) or 350°F (176°C) (specifier select one) and each damper shall bear a UL label verifying same. Dampers shall be suitable for use in dynamic or static smoke control systems. Dampers shall have been operation tested by UL to a minimum rated airflow of 2000 fpm (10.16 m/s) velocity with blades fully open, at a rated static pressure differential of 4" w.g. (1 kPa) with blades fully closed. Appropriate electrical or pneumatic (specifier select one) actuators shall be factory installed by the damper manufacturer and shall have been tested and classified together under UL 555S at an elevated temperature of 250°F (121°C) or 350°F (176°C). Actuators shall incorporate an OEM internal spring-return mechanism. External after-market spring mechanisms are not acceptable. Damper and actuator assembly shall be factory cycled a minimum of three times to ensure correct operation.

Damper manufacturer shall submit independent test data, supporting low pressure drop design, to be based on tests in accordance with AMCA Standard 500-D, and performed in an AMCA Certified laboratory. Pressure drop across a 24" x 24" (610 x 610) damper shall not exceed 0.048" w.g. (12 Pa) at 2000 fpm (10 m/s).

Standard of acceptance: Nailor Industries Model 1280.