



STAINLESS STEEL SMOKE DAMPER
AIRFOIL BLADE • HIGH PERFORMANCE
ULTRA-LOW LEAKAGE • LOW PRESSURE DROP
MODELS: 1210SS AND 1211SS (TYPE A)



QUALIFICATIONS:

- UL 555S & CAN/ULC-S112.1 CLASSIFIED SMOKE DAMPER Leakage Class I or II at 250°F elevated temperature. (File # R9492)
- Meets NFPA 90A, 92A, 92B, 101 and 105 as well as IBC and NBC (Canada) Building Code requirements.
- California State Fire Marshal Listing No. 03230-0935:107.
- City of New York MEA# 366-03-M.
- **Maximum velocity: 2000 fpm @ 4" w.g.**

The 1210SS Series dampers are ideal for high humidity, mildly corrosive or, with optional Type 316 construction, more severe environments where building codes require a leakage rated smoke damper as part of a static smoke control or dynamic smoke management system.

The 1210SS Series has been especially designed and tested to offer premium performance. The 1210SS Series provides the lowest leakage class available and is qualified for vertical or horizontal installation with airflow in either direction. Airfoil blade design and elimination of blade sills, top and bottom, provide lowest pressure drop. Unique inter-locking double skin blade design eliminates combustible blade seals and provides flame and smoke seal under fire conditions.

STANDARD SPECIFICATION:

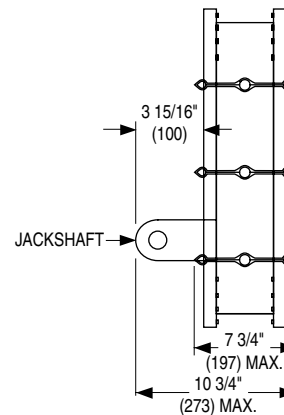
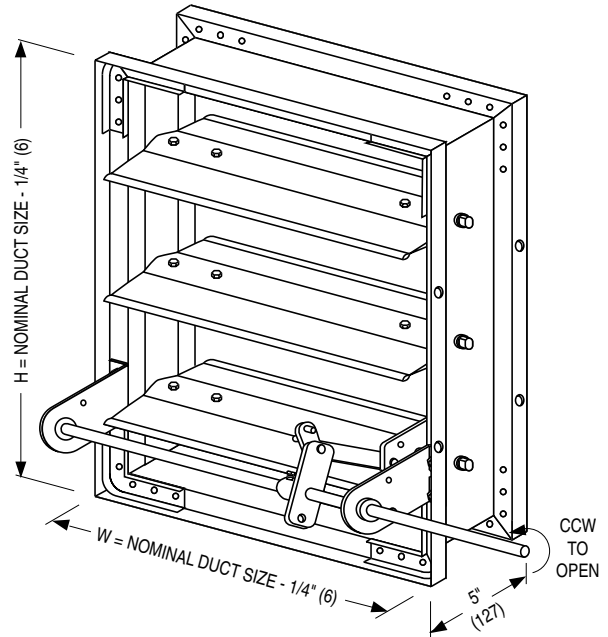
- Frame:** 5" x 7/8" x 16 ga. (127 x 22 x 1.6) stainless steel hat channel.
- Blades:** 14 ga. (2.0) equivalent stainless steel formed airfoil on 5 1/2" (140) centers. Opposed action.
- Linkage:** Concealed in frame. 12 ga. (2.7) stainless steel.
- Bearings:** 1/2" (13) dia. sintered stainless steel.
- Axles:** 1/2" (13) dia. stainless steel double bolted to blades.
- Jackshaft:** 1/2" (13) dia. stainless steel.
- Jamb Seals:** Cambered stainless steel.
- Sizes (Damper W x H):**

Velocity/ Pressure Rating	Elevated Temp. °F	Minimum		Maximum	
		Single Section	Single Section	Multiple Section	
		Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal
24	250	8" x 8" (203 x 203)	36" x 48" (914 x 1219)	144" x 96" (3658 x 2438)	

Note: Dampers with duct heights less than 8" (203) require a Type 'B' sleeve enclosure (Model 1212SS). Units less than 8" (203) in width only, or in both width and height, require a Type 'C' enclosure (Model 1213SS).

BASE MODEL SELECTION:

- 1210SS** With side actuator mounting plate
- 1211SS** 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).
- 1211SS** Non-standard sleeve.
Specify _____ length _____ ga.
Available up to 36" (914) in length and 10 through 20 ga. (3.5 through 1.0).



CONSTRUCTION TYPE:

- 304** Type 304 Stainless Steel construction (Standard).
- 316** Type 316 Stainless Steel construction (Optional).

LEAKAGE CLASS/ELEVATED TEMPERATURE:

- I** **II** @ 250°F

DYNAMIC VELOCITY/PRESSURE RATING:

24 2000 fpm @ 4" w.g.

ACTUATOR SELECTION:

- Electric** **Pneumatic**

ACTUATOR LOCATION:

- External** (std.) **Internal** (in the airstream)

ACTUATOR FAIL POSITION:

- Normally Closed** (std.) **Normally Open**

OPTIONS:

- MLS-300** Position indicator switch pack

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

For installation instructions, see IOM-SDINST.
 Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
10 - 11 - 24	1200	5 - 7 - 12	1210SS-1



STAINLESS STEEL SMOKE DAMPER
AIRFOIL BLADE • HIGH PERFORMANCE
ULTRA-LOW LEAKAGE
MODEL: 1212SS
(TYPE B SLEEVE ENCLOSURE)



FOR DUCTS 8" (203) OR MORE IN WIDTH AND UNDER 8" (203) IN HEIGHT.

QUALIFICATIONS:

- **UL 555S & CANULC-S112.1 CLASSIFIED SMOKE DAMPER** Leakage Class I or II at 250°F elevated temperature. (File # R9492)
- Meets **NFPA 90A, 92A, 92B, 101 and 105** as well as **IBC and NBC (Canada) Building Code** requirements.
- **California State Fire Marshal Listing No. 03230-0935:107.**
- **City of New York MEA# 366-03-M.**
- **Maximum velocity: 2000 fpm @ 4" w.g.**

The 1210SS Series dampers are ideal for high humidity, mildly corrosive or, with optional Type 316 construction, more severe environments where building codes require a leakage rated smoke damper as part of a static smoke control or dynamic smoke management system.

The 1210SS Series has been especially designed and tested to offer premium performance. The 1210SS Series provides the lowest leakage class available and is qualified for vertical or horizontal installation with airflow in either direction. Airfoil blade design and elimination of blade sills, top and bottom, provide lowest pressure drop. Unique inter-locking double skin blade design eliminates combustible blade seals and provides flame and smoke seal under fire conditions.

STANDARD SPECIFICATION:

Frame: 5" x 7/8" x 16 ga. (127 x 22 x 1.6) stainless steel hat channel.

Blades: 14 ga. (2.0) equivalent stainless steel formed airfoil on 5 1/2" (140) centers.

Linkage: Concealed in frame. 12 ga. (2.7) stainless steel.

Bearings: 1/2" (13) dia. sintered stainless steel.

Axles: 1/2" (13) dia. stainless steel double bolted to blades.

Jackshaft: 1/2" (13) dia. stainless steel.

Jamb Seals: Cambered stainless steel.

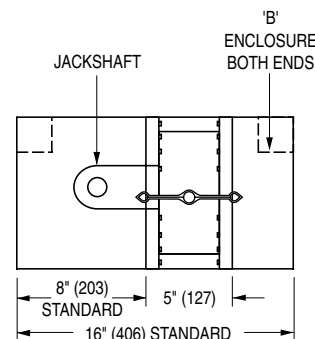
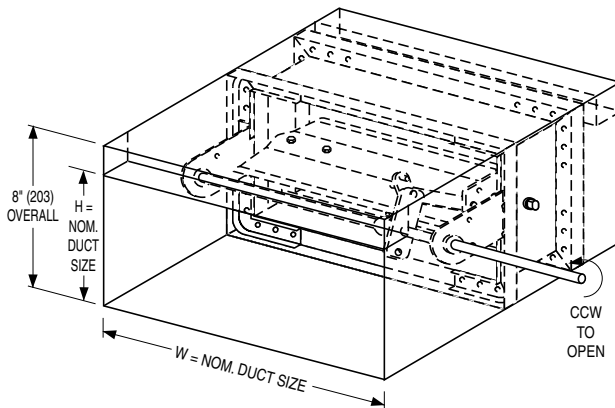
Sizes (Duct W x H):

Velocity/ Pressure Rating	Elevated Temp. °F	Minimum		Maximum	
		Single Section		Single Section	Multiple Section
		Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal
24	250	8" x 4" (203 x 102) (Overall damper height is 8" [203])	36" x 7 1/2" (914 x 191)	144" x 7 1/2" (3658 x 191)	

Note: Duct sizes less than 8" (203) in width only, or in both width and height, require a Type 'C' enclosure (Model 1213SS).

SLEEVE/ENCLOSURE SELECTION:

- 1212SS** 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).
- 1212SS** Non-standard sleeve. Specify _____ length _____ ga. Available up to 36" (914) in length and 10 through 20 ga. (3.5 through 1.0).



CONSTRUCTION TYPE:

- 304** Type 304 Stainless Steel construction (Std.).
- 316** Type 316 Stainless Steel construction (Opt.).

LEAKAGE CLASS/ELEVATED TEMPERATURE:

- I** **II** @ 250°F

DYNAMIC VELOCITY/PRESSURE RATING:

24 2000 fpm @ 4" w.g.

ACTUATOR SELECTION:

- Electric** **Pneumatic**

ACTUATOR LOCATION:

- External** (std.) **Internal** (in the airstream)

ACTUATOR FAIL POSITION:

- Normally Closed** (std.) **Normally Open**

OPTIONS:

- MLS-300** Position indicator switch pack

For installation instructions, see IOM-SDINST.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Dimensions are in inches (mm)

DATE	B SERIES	SUPERSEDES	DRAWING NO.
10 - 11 - 24	1200	5 - 7 - 12	1210SS-2



STAINLESS STEEL SMOKE DAMPER
AIRFOIL BLADE • HIGH PERFORMANCE
ULTRA-LOW LEAKAGE
ROUND DUCT CONNECTION
MODEL: 1213SS (TYPE C SLEEVE ENCLOSURE)



QUALIFICATIONS:

- UL 555S & CAN/ULC-S112.1 CLASSIFIED SMOKE DAMPER Leakage Class I or II at 250°F elevated temperature. (File # R9492)
- Meets NFPA 90A, 92A, 92B, 101 and 105 as well as IBC and NBC (Canada) Building Code requirements.
- California State Fire Marshal Listing No. 03230-0935:107.
- City of New York MEA# 366-03-M.
- **Maximum velocity: 2000 fpm @ 4" w.g.**

The 1210SS Series dampers are ideal for high humidity, mildly corrosive or, with optional Type 316 construction, more severe environments where building codes require a leakage rated smoke damper as part of a static smoke control or dynamic smoke management system.

The 1210SS Series has been especially designed and tested to offer premium performance. The 1210SS Series provides the lowest leakage class available and is qualified for vertical or horizontal installation with airflow in either direction. Airfoil blade design and elimination of blade sills, top and bottom, provide lowest pressure drop. Unique inter-locking double skin blade design eliminates combustible blade seals and provides flame and smoke seal under fire conditions.

STANDARD SPECIFICATION:

Frame: 5" x 7/8" x 16 ga. (127 x 22 x 1.6) stainless steel hat channel.

Blades: 14 ga. (2.0) equivalent stainless steel formed airfoil on 5 1/2" (140) centers.

Linkage: Concealed in frame. 12 ga. (2.7) stainless steel.

Bearings: 1/2" (13) dia. sintered stainless steel.

Axles: 1/2" (13) dia. stainless steel double bolted to blades.

Jackshaft: 1/2" (13) dia. stainless steel.

Jamb Seals: Cambered stainless steel.

Sizes (Duct Diameter):

Velocity/ Pressure Rating	Elevated Temp. °F	Minimum		Maximum	
		Single Section	Single Section	Multiple Section	Multiple Section
		Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal
24	250	4" (102) dia. (Overall damper size is 8" x 8" [203 x 203] minimum).	34" (864) dia.	94" (2388) dia.	

SLEEVE/ENCLOSURE SELECTION:

- 1213SS** 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).
- 1213SS** Non-standard sleeve. Specify _____ length _____ ga. Available up to 36" (914) in length and 10 through 20 ga. (3.5 through 1.0).

CONSTRUCTION TYPE:

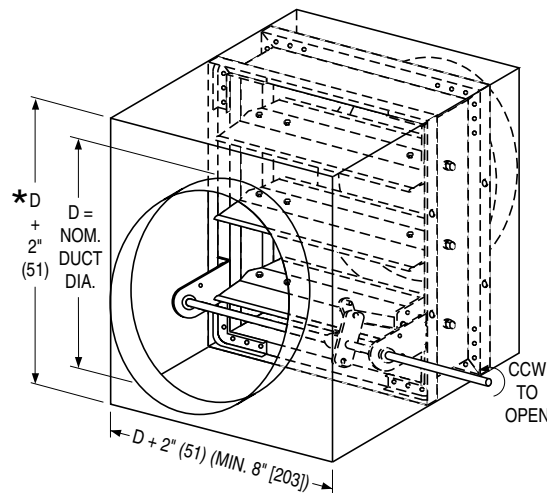
- 304** Type 304 Stainless Steel construction (Standard).
- 316** Type 316 Stainless Steel construction (Optional).

LEAKAGE CLASS/ELEVATED TEMPERATURE:

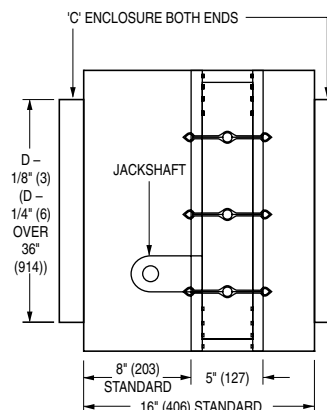
- I** **II** @ 250°F

DYNAMIC VELOCITY/PRESSURE RATING:

24 2000 fpm @ 4" w.g.



* or 8" (203) min.



ACTUATOR SELECTION:

- Electric** **Pneumatic**

ACTUATOR LOCATION:

- External** (std.) **Internal** (in the airstream)

ACTUATOR FAIL POSITION:

- Normally Closed** (std.) **Normally Open**

OPTIONS:

- MLS-300** Position indicator switch pack

For installation instructions, see IOM-SDINST.

SCHEDULE TYPE:		Dimensions are in inches (mm)			
PROJECT:					
ENGINEER:		DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:		10 - 11 - 24	1200	5 - 7 - 12	1210SS-3



STAINLESS STEEL SMOKE DAMPER
AIRFOIL BLADE • HIGH PERFORMANCE
ULTRA-LOW LEAKAGE • SQUARE,
RECT. OR OVAL DUCT CONNECTION
MODEL: 1213SS (TYPE C SLEEVE ENCLOSURE)



QUALIFICATIONS:

- UL 555S & CAN/ULC-S112.1 CLASSIFIED SMOKE DAMPER Leakage Class I or II at 250°F elevated temperature. (File # R9492)
- Meets NFPA 90A, 92A, 92B, 101 and 105 as well as IBC and NBC (Canada) Building Code requirements.
- California State Fire Marshal Listing No. 03230-0935:107.
- City of New York MEA# 366-03-M.
- **Maximum velocity: 2000 fpm @ 4" w.g.**

The 1210SS Series dampers are ideal for high humidity, mildly corrosive or, with optional Type 316 construction, more severe environments where building codes require a leakage rated smoke damper as part of a static smoke control or dynamic smoke management system.

The 1210SS Series has been especially designed and tested to offer premium performance. The 1210SS Series provides the lowest leakage class available and is qualified for vertical or horizontal installation with airflow in either direction. Airfoil blade design and elimination of blade sills, top and bottom, provide lowest pressure drop. Unique inter-locking double skin blade design eliminates combustible blade seals and provides flame and smoke seal under fire conditions.

STANDARD SPECIFICATION:

Frame: 5" x 7/8" x 16 ga. (127 x 22 x 1.6) stainless steel hat channel.

Blades: 14 ga. (2.0) equivalent stainless steel formed airfoil on 5 1/2" (140) centers.

Linkage: Concealed in frame. 12 ga. (2.7) stainless steel.

Bearings: 1/2" (13) dia. sintered stainless steel.

Axles: 1/2" (13) dia. stainless steel double bolted to blades.

Jackshaft: 1/2" (13) dia. stainless steel.

Jamb Seals: Cambered stainless steel.

Sizes (Duct W x H):

Velocity/ Pressure Rating	Elevated Temp. °F	Minimum		Maximum	
		Single Section		Single Section	Multiple Section
		Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal
24	250	4" x 4" (102 x 102) (Overall damper size is 8" x 8" [203 x 203] minimum).	34" x 46" (864 x 1168)	142" x 94" (3607 x 2388)	

SLEEVE/ENCLOSURE SELECTION:

- 1213SS** 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).
- 1213SS** Non-standard sleeve. Specify _____ length _____ ga. Available up to 36" (914) in length and 10 through 20 ga. (3.5 through 1.0).

CONSTRUCTION TYPE:

- 304** Type 304 Stainless Steel construction (Standard).
- 316** Type 316 Stainless Steel construction (Optional).

LEAKAGE CLASS/ELEVATED TEMPERATURE:

- I** **II** @ 250°F

DYNAMIC VELOCITY/PRESSURE RATING: 24 2000 fpm @ 4" w.g.

ACTUATOR SELECTION:

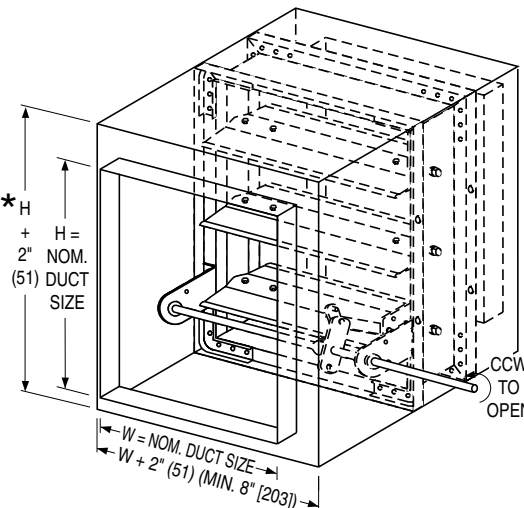
- Electric** **Pneumatic**

SCHEDULE TYPE:

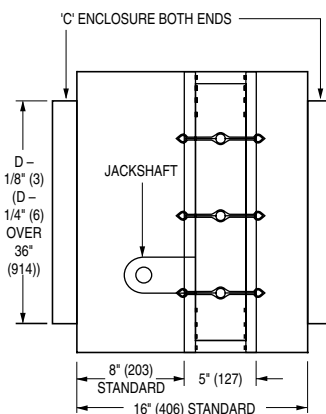
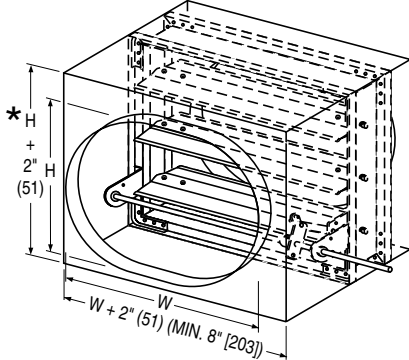
PROJECT:

ENGINEER:

CONTRACTOR:



* or 8" (203) min.



ACTUATOR LOCATION:

- External** (std.) **Internal** (in the airstream)

ACTUATOR FAIL POSITION:

- Normally Closed** (std.) **Normally Open**

OPTIONS:

- MLS-300** Position indicator switch pack

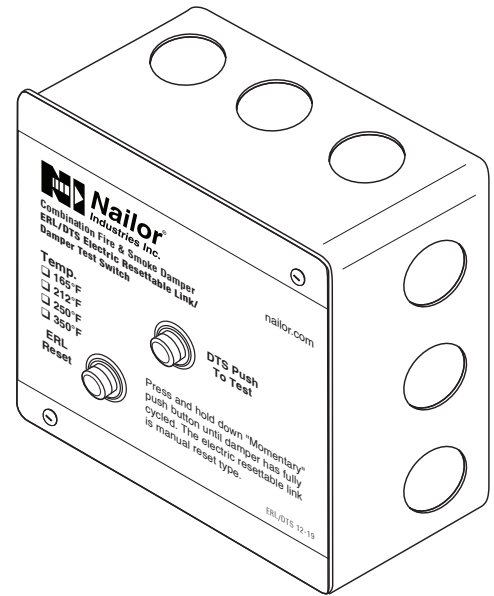
For installation instructions, see IOM-SDINST.
 Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
10 - 11 - 24	1200	5 - 7 - 12	1210SS-4

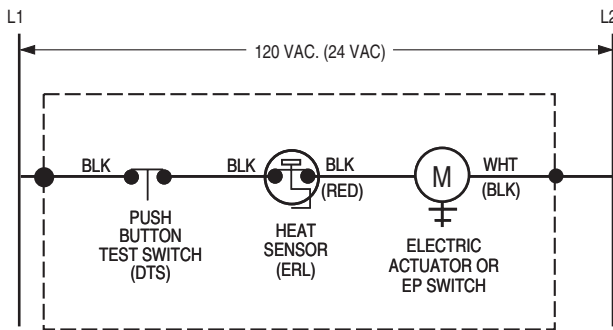
The DTS (Damper Test Switch) is an optional "momentary" push button test switch available on all Nailor smoke and combination fire/smoke dampers. The DTS provides the ability to "cycle test" the damper by pushing and holding down the button until the damper has cycled and closure has been visually verified, either by inspecting the damper through the access door or by confirmation at a remote control panel when equipped with the optional MLS-300 position indicator.

The DTS is mounted right on the damper and enables a single maintenance person to test and cycle the damper, eliminating the need for help from another person in the control room.

When a combination fire/smoke damper is ordered, the DTS is combined with the ERL (Electric Resettable Link), in a common enclosure.



WIRING DIAGRAMS:



MOUNTED ON DAMPER (FACTORY WIRING TERMINATES AT SPLICE POINTS INDICATED INSIDE 4" x 4" ELECTRICAL BOX)

Figure 1. DTS/ERL Damper Test Switch with Electric Resettable Link

Belimo Actuator Aux. Switch Wiring Connections

Model Series	Open (OP)	Closed (CL)
FSTF	Orange / Gray	Violet / Red
FSLF / FSAFA	Gray / Gray	Violet / Violet
FSNF / FSAFB	White S4 / S6	White S1 / S2

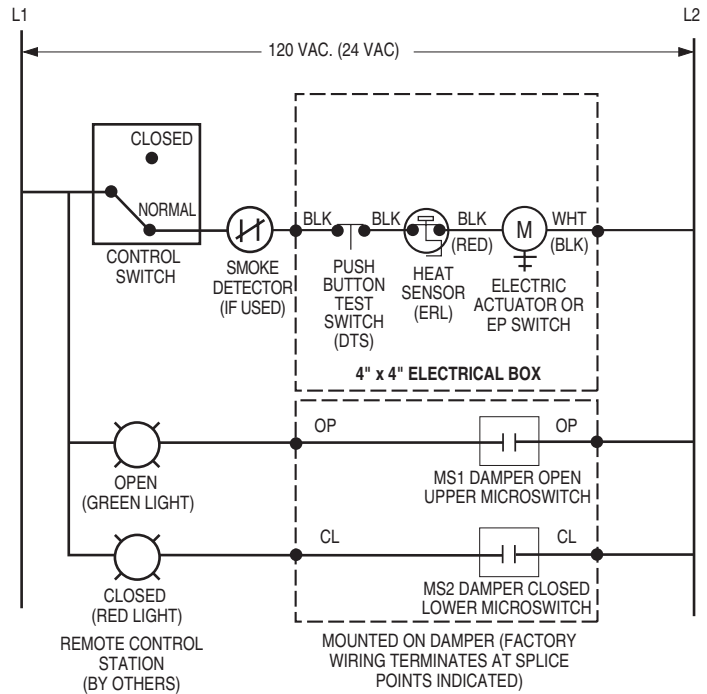


Figure 2. DTS/ERL with MLS-300 Belimo (actuator aux. switches) Position Indicator Package

SCHEDULE TYPE				
PROJECT				
ENGINEER	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR	9 - 3 - 20	FD-ACC	3 - 29 - 18	DTS

WIRING DIAGRAMS:

Honeywell Actuator Aux. Switch Wiring Connections

Model Series	Open (OP)	Closed (CL)
MSXX04	Yellow / Yellow	Blue / Blue
MSXX20	Yellow / Yellow	Blue / Blue

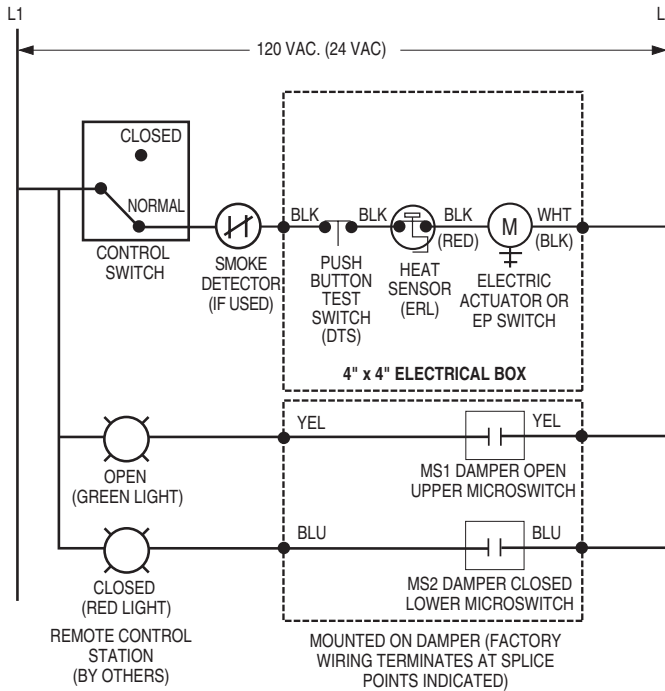


Figure 3. DTS/ERL with MLS-300 Nailor or Honeywell (actuator aux. switches) Position Indicator Package

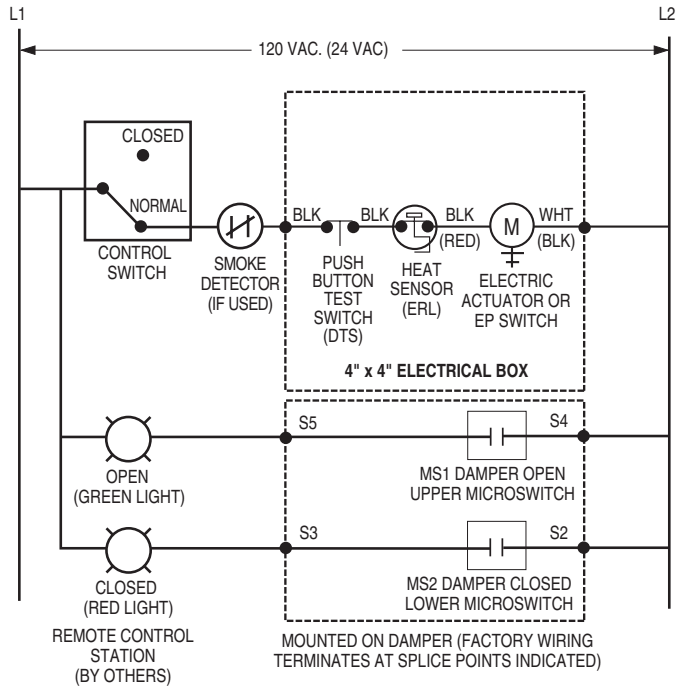
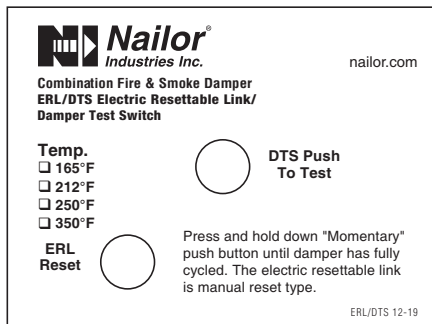
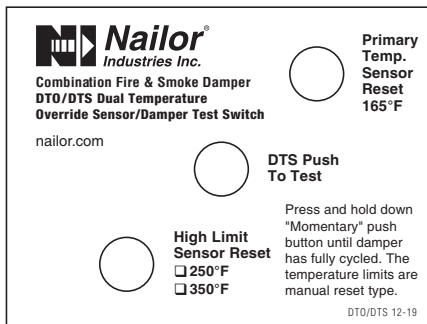


Figure 4. DTS/ERL with MLS-300 Siemens GJD Series (actuator auxiliary switches) Position Indicator Package

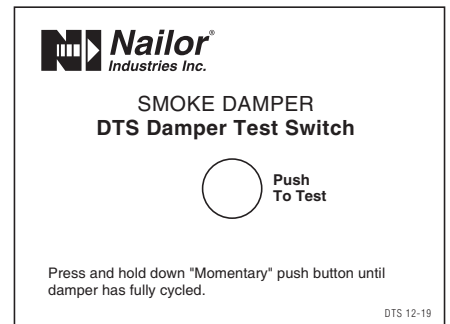
DTS LABEL VARIATIONS:



ERL/DTS Combination Fire/Smoke Damper



DTO/DTS Combination Fire/Smoke Damper



DTS Smoke Damper

SCHEDULE TYPE

PROJECT

ENGINEER

CONTRACTOR

DATE

B SERIES

SUPERSEDES

DRAWING NO.

9 - 3 - 20

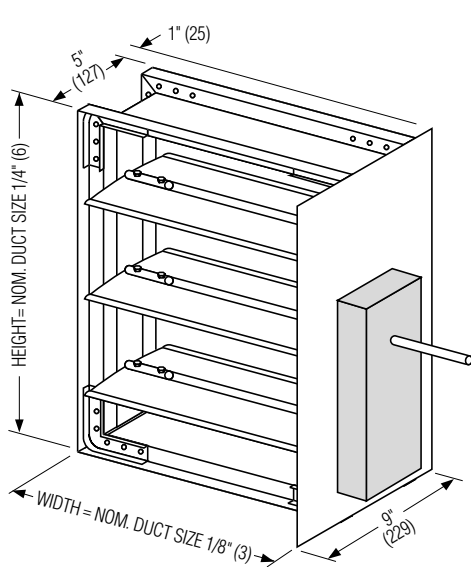
FD-ACC

3 - 29 - 18

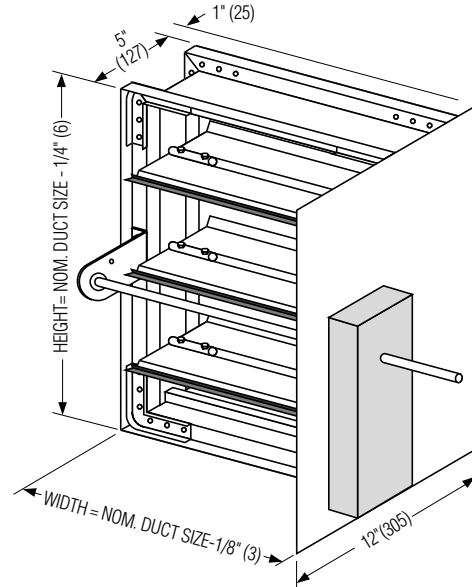
DTS



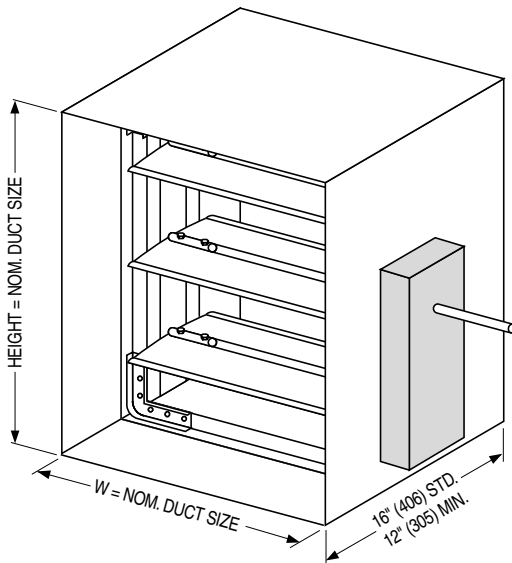
**SMP SIDE ACTUATOR MOUNTING PLATE
AND TYPE 'A' SLEEVE DETAIL
SMOKE DAMPERS
MODEL SERIES: 1210, 1260 AND 1280**



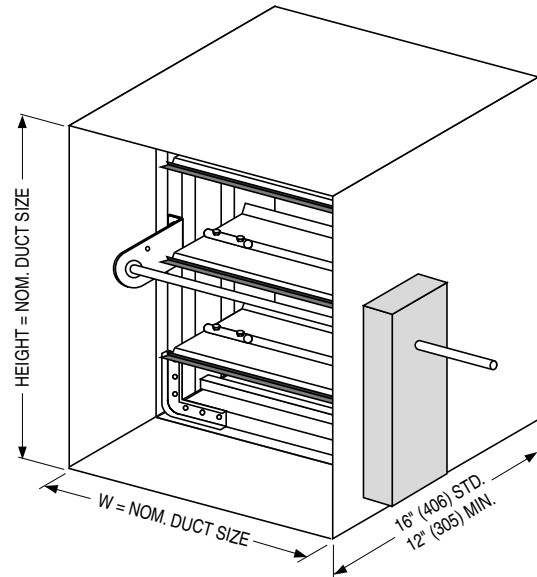
**SMP SIDE ACTUATOR MOUNTING PLATE
DIRECT DRIVE MODELS**



**SMP SIDE ACTUATOR MOUNTING PLATE
JACKSHAFT DRIVE MODELS**



**TYPE 'A' SLEEVE
DIRECT DRIVE MODELS**



**TYPE 'A' SLEEVE
JACKSHAFT DRIVE MODELS**

NOTE:

Smoke Dampers shall be installed in accordance with NFPA 90A, latest edition and Nailor installation instructions – see IOM-SDINST. Dampers must be installed within 24" (610) of the smoke barrier to conform with installation requirements.

SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
11 - 4 - 13	1200	9-00R/1200-11	SMP-SL-1

PERFORMANCE DATA:

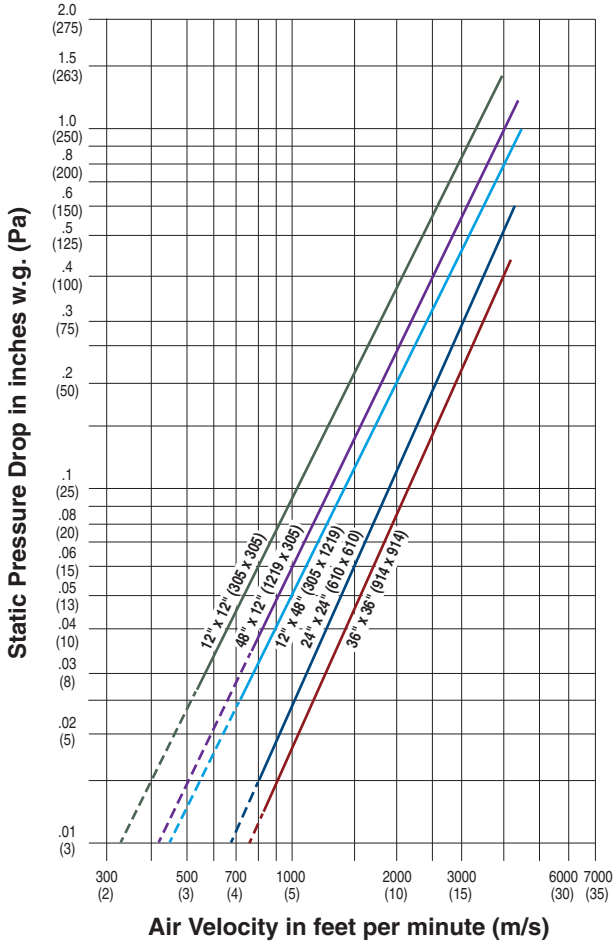
MODEL SERIES: 1210SS

LEAKAGE CLASS:

The 1210SS Series Stainless Steel 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 or Class II leakage rating with all damper/actuator assemblies having been tested successfully at an elevated temperature of 250°F (121°C) under airflow of 2000 fpm (10 m/s) at 4" w.g. (1 kPa).

Maximum Performance Ratings	
UL 555S Leakage Rating	Class I
Maximum Velocity	2000 fpm (10 m/s)
Maximum Pressure	4 in. w.g. (1 kPa)
Maximum Temperature	250°F (121°C)

PRESSURE DROP:



Pressure drop tested per AMCA Standard 500-D, Figure 5.3.
Data corrected to standard air density of 0.075 lbs/ft.³.

SMOKE DAMPERS