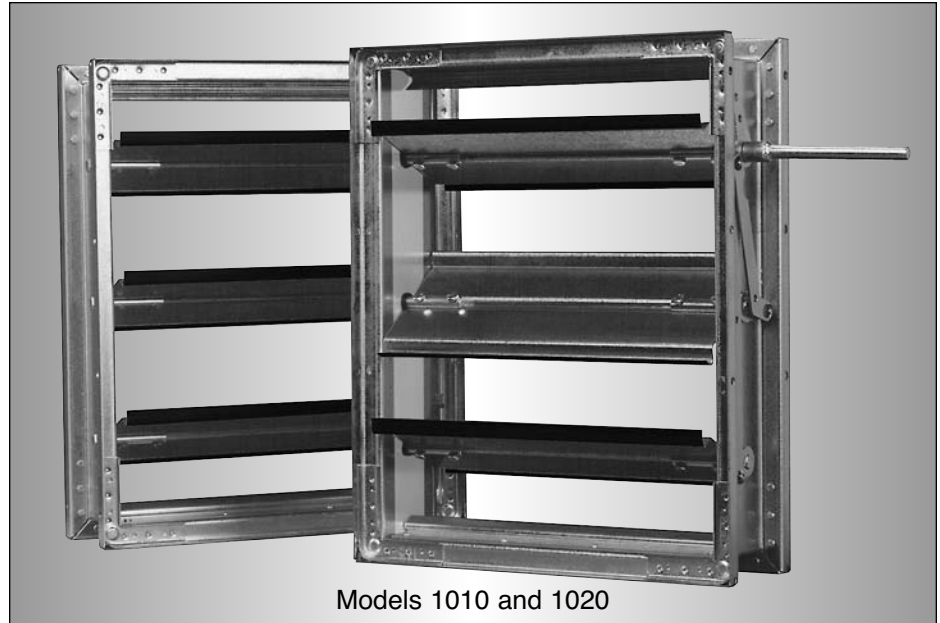


- VEE BLADE
- STANDARD PERFORMANCE
- LOW LEAKAGE
- GALVANIZED STEEL

MODELS:

- 1010 PARALLEL BLADE**
- 1020 OPPOSED BLADE**



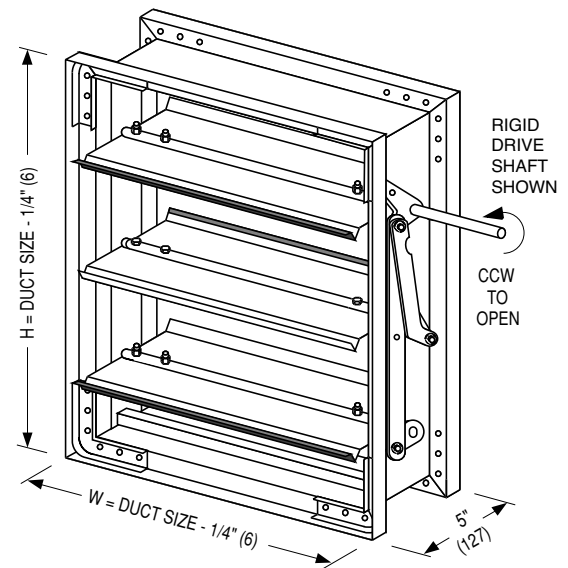
Models 1010 and 1020

The 1010/1020 Series are Nailor's most widely used low leakage dampers and are the standard choice for use in the majority of low to medium velocity and pressure commercial HVAC systems. They are low cost, high quality dampers that meet or exceed the majority of standard specification requirements. They meet the frequently specified leakage criteria of less than 10 cfm per sq. ft at 4" w.g. (0.5% at 2000 fpm). The design features include a sturdy hat channel frame with die-formed corner gussets for reinforcement and structural strength equivalent to 13 gauge channel type frames, a triple-vee blade design that maximizes strength and zero maintenance concealed linkage (out of the air stream) for reduced pressure drop and air turbulence.

B CONTROL DAMPERS

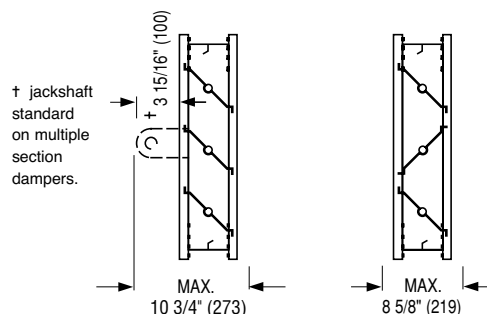
STANDARD CONSTRUCTION:

- FRAME:** 5" x 7/8" x 16 ga. (127 x 22 x 1.6) galvanized steel hat channel with die-formed corner gussets. Low profile (flat top and bottom) on dampers 10" (254) high and under.
- BLADES:** 6" (152) wide on 5 1/2" (140) centers. 16 ga. (1.6) galvanized steel triple-vee design. Parallel or opposed action.
- LINKAGE:** Concealed type totally enclosed within the frame and out of the airstream. Plated steel.
- BEARINGS:** 1/2" (13) dia. Celcon®.
- AXLES:** 1/2" (13) dia. plated steel double bolted to blades.
- DRIVE SHAFT:** 6" (152) long x 1/2" (13) dia. rigid shaft; or optional lock-on shaft with outboard support bracket (standard in Canada), on all single section dampers. A 1/2" (13) or 1" (25) dia. factory installed jackshaft is standard on all multiple section dampers.
- BLADE SEALS:** Dual durometer bulb type extruded PVC.
- JAMB SEALS:** Compression type cambered metal.
- MINIMUM SIZE:** Single blade (parallel): 6" x 4" (152 x 102).
Two blades (parallel or opposed): 6" x 10" (152 x 254).
- MAXIMUM SIZE:** Single section: 48" x 72" (1220 x 1829).
Multiple section assembly - unlimited.



MODEL 1010
PARALLEL BLADE

MODEL 1020
OPPOSED BLADE

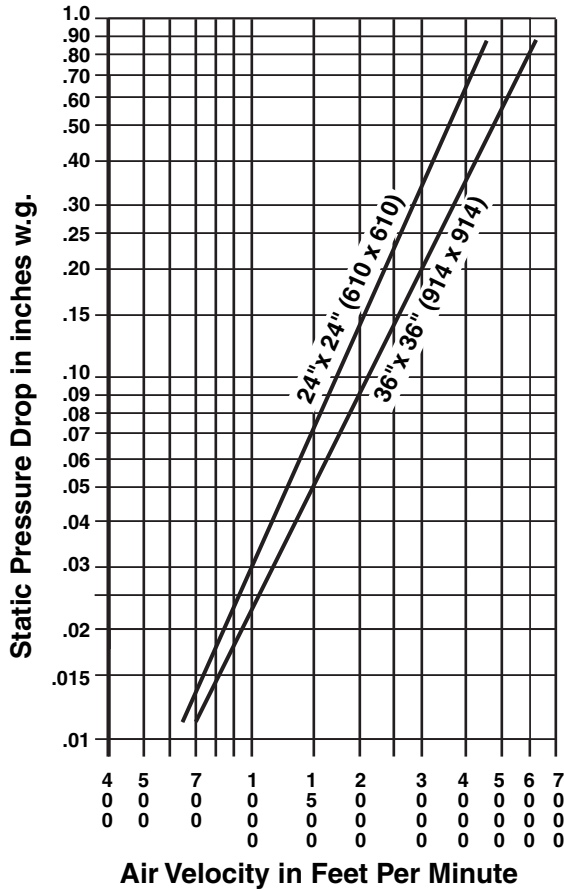


MODELS: 1010/1020

PERFORMANCE DATA:

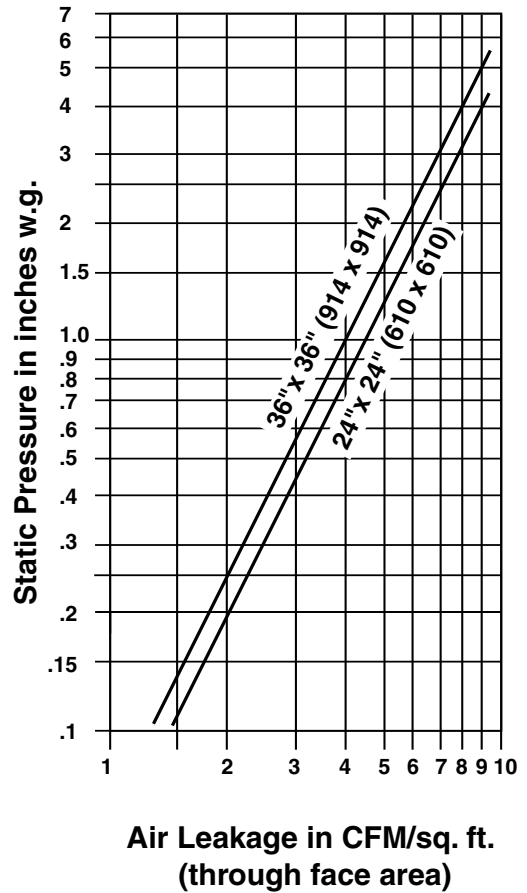
B CONTROL DAMPERS

PRESSURE DROP (damper fully open)



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

LEAKAGE (damper fully closed)



Tested per AMCA standard 500-D, Fig. 5.5.

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.

PRESSURE DROP (in. w.g.)

DAMPER SIZE	APPROACH VELOCITY (FPM)			
	750	1000	1500	2000
24" x 24" (610 x 610)	.016	.030	.07	.14
36" x 36" (914 x 914)	.013	.023	.05	.09
48" x 48" (1219 x 1219)	.010	.020	.03	.07

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

DYNAMIC LIMITATIONS/LEAKAGE

DAMPER WIDTH	MAXIMUM SYSTEM PRESSURE	MAXIMUM SYSTEM VELOCITY	LEAKAGE *	
			% OF MAX. FLOW	CFM/SQ. FT.
48" (1219)	2.5" w.g.	2000 FPM	0.18	3.5
36" (914)	3.0" w.g.	2000 FPM	0.20	4.0
24" (610)	4.0" w.g.	2000 FPM	0.23	4.5
12" (305)	5.0" w.g.	2000 FPM	0.33	6.6

* Leakage information is based upon a pressure differential of 1" w.g. tested per AMCA standard 500-D, Fig. 5.5.

Temperature Range: -50°F to 180°F (-45°C to 82°C)

MODELS: 1010/1020

AVAILABLE OPTIONS/ACCESSORIES:

The following construction options and accessories are available on Models 1010/1020. See page B55 for further description of options/accessories.

	CODE	DESCRIPTION
MATERIAL:	304 ALS	Stainless Steel Construction Aluminum Construction With Stainless Steel Hardware
FRAME:	FF/FFB FR/FRB FD/FDB	Front Flange / Front Flange With Bolt Holes Rear Flange / Rear Flange With Bolt Holes Double Flange / Double Flange With Bolt Holes
FRAME GAUGE:	14G 13G 12G	14 Gauge 13 Gauge 12 Gauge
BLADE LINKAGE STYLE:	LF	Face Linkage (In Airstream)
BEARINGS:	BO BS BT	Oilite® Bronze Bearings Stainless Steel Bearings Thrust Bearings
JAMB SEAL:	JSS	Stainless Steel Jamb Seal
ROUND/OVAL TRANSITION:	CR CO	Transition Casing for Round Duct Transition Casing for Oval Duct
OPERATOR ACCESSORIES:	HLQ PCE PCI FMO FMI JK5 JK1 VCK	Hand Locking Quadrant External Chain Operator Internal Chain Operator Factory Mounted Actuator-Outside w/side plate Factory Mounted Actuator-Internal w/jackshaft 1/2" (13) Dia. Jackshafting for Single Section 1" (25) Dia. Jackshafting for Single Section Vertical Interconnection Kit

B

CONTROL DAMPERS

At Nailor Industries, we take pride in our flexibility to meet the needs of your specific applications. The options listed above provide a variety of commonly used modifications to satisfy the majority of today's diverse requirements. Should your application require a more unique configuration, please consult your authorized Nailor Representative or the Nailor Industries office nearest you for assistance.

HOW TO SPECIFY OR TO ORDER

MODELS: 1010/1020

HOW TO ORDER:

Standard construction is shown in highlighted box. Option codes are listed below. See previous page for description of options.

MODEL	SIZE (W X H)	MATERIAL	FRAME TYPE	FRAME GAUGE	BLADE LINKAGE STYLE	DRIVE LOCATION	BEARINGS	BLADE SEAL	JAMB SEAL	ROUND/OVAL TRANSITION	OPERATOR ACCESSORIES
1010	ie: 48 x 24	GLV	HC	16G	LC	DR/DL	BC	BPV	JSM	–	–
1020		304 ALS	FF FFB FR FRB FD FDB	14G 13G 12G	LF		BO BT BS		JSS	CR CO	HLQ FMO FMI PCE PCI JK5 JK1 VCK

- Notes: 1. Right hand driveshaft is standard. For left hand driveshaft simply rotate the damper so that the driveshaft is on left hand side, as blade and jamb seals are designed to work with airflow in either direction. 1/2" (13) or 1" (25) dia. jackshaftering is standard on all multiple section wide units.
 2. If Pull Chain Operator option is selected, please specify length of chain required.
 3. If Option CR Round Transition casing (or CO) is selected please order by duct size diameter ie: 36"ø.

SUGGESTED SPECIFICATION:

Provide and install, as shown on plans and/or schedules, low-leakage dampers meeting or exceeding the following criteria: Frame shall be constructed of 16 ga. (1.6) galvanized steel hat channel with mitered corners and die-formed corner gussets for rigidity and structural strength equivalent to 13 ga. (2.4) channel type frames. Blades shall be of triple-vee design, 16 ga. (1.6) galvanized steel, on maximum 6" (152) centers, in parallel or opposed (please select) configuration. Blade axles shall be 1/2" (13) dia. plated steel, double thru-bolted to blade at each end. Hex or square friction-fit, or press-fit axles are not acceptable. Bearings shall be Celcon® molded synthetic type. Blade linkage shall be zero-maintenance, out of airstream and totally concealed within the frame. Jackshafts shall be supplied on all multiple section wide assemblies in order to evenly distribute torque. Blade seals shall be dual durometer bulb type extruded PVC, and jamb seals shall be compression type cambered metal, providing positive shut-off. All submitted performance data to be based on tests in accordance with AMCA Standard 500-D. Standard of acceptance: Nailor Industries Model 1010 (parallel blade) or Model 1020 (opposed blade).

For CR Round Transition Option, add the following:

Damper shall be provided with a 20 ga. (1.0) galvanized steel casing for sizes up to 36" (914) dia., 18 ga. (1.31) for larger sizes, complete with round collar on both sides. Casing shall be welded and caulked against leakage. Standard of acceptance: Nailor Industries Model 1010CR (parallel blade) or Model 1020CR (opposed blade).