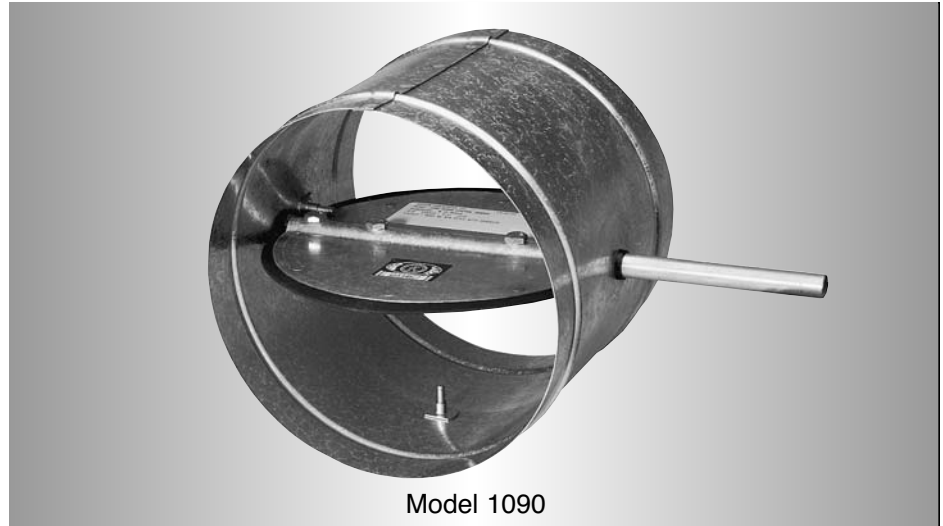


- FOR ROUND DUCT
- LOW LEAKAGE
- GALVANIZED STEEL

**MODEL: 1090**

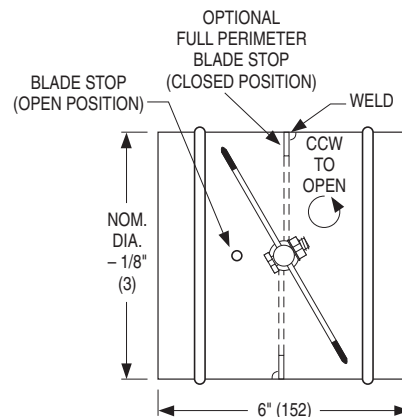
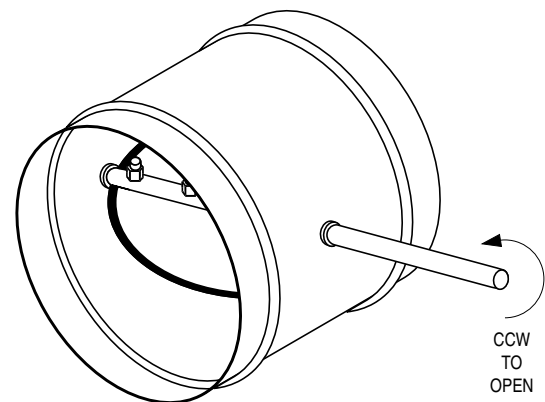


Model 1090

The Nailor Model 1090 is a low leakage, butterfly damper which has been designed for all types of round ductwork applications and is suitable for use in the majority of low to medium pressure and velocity commercial HVAC systems. The design features a sturdy beaded casing for superior rigidity, and a laminated blade double bolted to axle and drive shaft for maximum strength. The 1090 installs easily in round spiral ductwork. The damper may be used for two position or modulating control using a variety of electric or pneumatic actuators or may also be used as a manual balancing damper when used with the optional hand locking quadrant and positive shut-off is required.

**STANDARD CONSTRUCTION:**

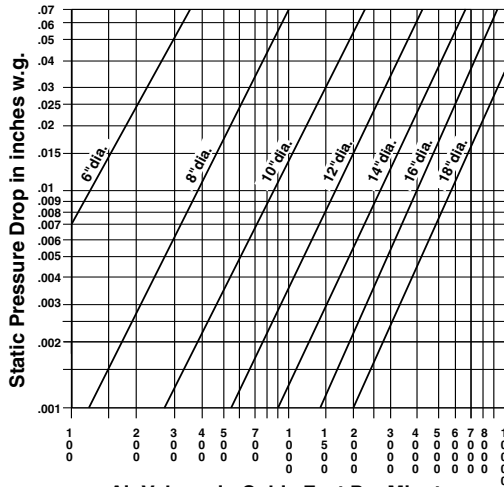
- FRAME:** 22 ga. (0.86) corrosion-resistant steel with stiffening beads up to 12" (305) dia. 20 ga. (0.91) over 12" (305) dia.
- BLADE:** 2 x 22 ga. (0.86) corrosion-resistant steel laminated together, equivalent to 16 ga. (1.6). Open and close end stops. 90 degree rotation. CCW to open.
- BEARINGS:** Celcon®.
- DRIVE SHAFT/ AXLES:** 1/2" (13) dia. plated steel double bolted to blade. Axle extends approx. 6" (152) beyond frame.
- BLADE SEAL:** Cross-linked polyethylene
- AVAILABLE SIZES:** 4" (102) through 24" (610) diameter in nominal 1" (25) increments.



## MODEL: 1090

### PERFORMANCE DATA:

#### PRESSURE DROP (damper fully open)



Air Volume in Cubic Feet Per Minute

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

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

Multiply:

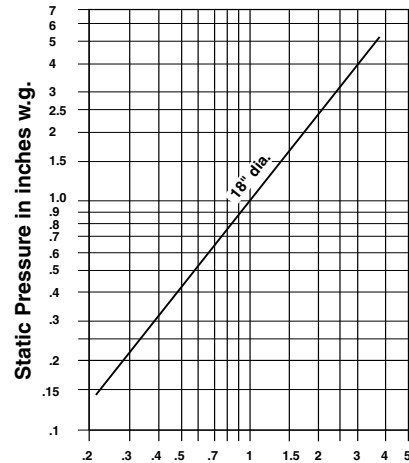
CFM x .4719 = liters per second

inches w.g. x .2486 = kilopascals

fpm x .00508 = meters per second

cfm per sq. ft. x 5.08 = liters/second per sq. meter.

#### AIR LEAKAGE (damper closed)



Air Leakage in CFM/sq. ft. (through face area)

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

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

### AVAILABLE OPTIONS/ACCESSORIES:

The following construction options and accessories are available on Model 1090. See page B55 for detailed description of options/accessories.

	CODE	DESCRIPTION
<b>MATERIAL:</b>	304	304 Stainless Steel Construction
<b>BEARINGS:</b>	BO BS	Oilite® Bronze Bearings Stainless Steel Bearings
<b>OPTIONAL BLADE STOP:</b>	FMS	Full Perimeter Metal Blade Stop
<b>ACTUATORS/ MANUAL QUADRANTS:</b>	411 811 482 HLQ HL2	ML4115 Honeywell-120V ML8115 Honeywell-24V 331-4826 Siemens-25 psi Manual Locking Quadrant with 7/8" (22) stand-off bracket. Manual Locking Quadrant with 2" (51) stand-off bracket

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

### MODEL: 1090

#### HOW TO ORDER:

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

MODEL	SIZE Ø	MATERIAL	BEARINGS	OPTIONAL BLADE STOP	ACTUATORS/ MANUAL QUADS.
1090	ie: 12" dia	GLV	BC	–	–
		304	BO BS	FMS	411 811 482 HLQ HL2

**B**

**CONTROL DAMPERS**

#### SUGGESTED SPECIFICATION:

Provide and install, as shown on plans and/or schedules, low leakage round dampers meeting or exceeding the following criteria: Frame shall be constructed of 22 ga. (0.86) corrosion resistant steel with roll-formed stiffening beads up to 12" (305) dia.; 20 ga. (0.91) over 12" (305) dia.. Blade shall be 2 x 22 ga. (0.86) corrosion resistant steel laminated together, equivalent to 16 ga. (1.6). Open and closed end-stops shall provide maximum 90° rotation. Bearings shall be Celcon® molded synthetic type. Blade axle/drive shaft shall be 1/2" (13) dia. plated steel double bolted to blade. Hex or square friction-fit, or press-fit axles are not acceptable. Blade seal shall be cross-linked polyethylene sandwiched in blade. Submitted performance data shall show leakage of less than 10 cfm/sq. ft. @ 4" w.g. (0.05 m<sup>3</sup>/s/m<sup>2</sup> @ 1 kPa). Standard of acceptance: Nailor Industries Model 1090.