

The Nailor Model 1090 is an ultra-low leakage, round 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 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:** 20 ga. (1.0) corrosion-resistant steel with stiffening beads.
- BLADE:** 2 x 20 ga. (1.0) corrosion-resistant steel laminated together, equivalent to 14 ga. (2.0). Open and close end stops. 90 degree rotation. CCW to open.
- BEARINGS:** Celcon®.
- DRIVE SHAFT/ AXLE:** 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.

TEMPERATURE RANGE: -50°F to 180°F (-45°C to +82°C)

OPTIONS:

- BO Oilite bearings
- BS Stainless steel bearings
- HLQ Hand locking quadrant
- HL2 Hand locking quadrant with 2" (51) stand-off bracket
- 304 Stainless steel construction
- Special features _____.

ACTUATORS:

Nailor offers a comprehensive selection of electric and pneumatic actuators for factory or field installation.

PERFORMANCE:

Dampers are designed to operate in a clean, dry environment.

Maximum System Pressure: Up to 10" w.g. (2.5 kPa).

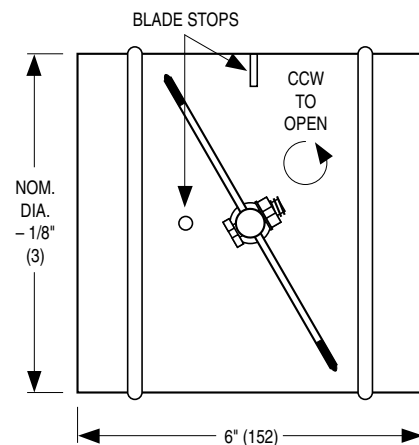
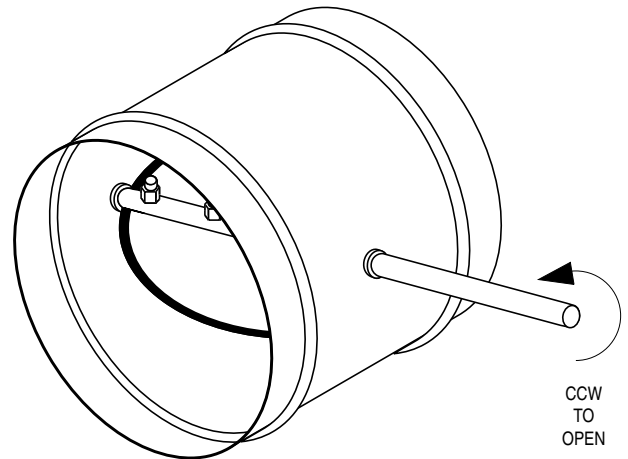
See page 2.

Maximum Face Velocity: 4000 fpm (20 m/s).

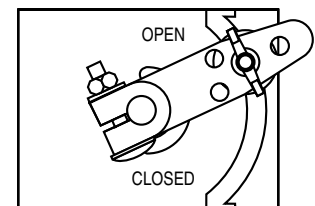
Leakage: Class I.

Less than 4 cfm/sq. ft. @ 1" w.g. (0.02 m³/s/m² @ 250 Pa).

Less than 8 cfm/sq. ft. @ 4" w.g. (0.04 m³/s/m² @ 1 kPa).


OPTIONAL HAND LOCKING QUADRANT

7/8" (22) stand-off



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 2
 Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

9 - 2 - 09

1000

2 - 6 - 07

1000-6

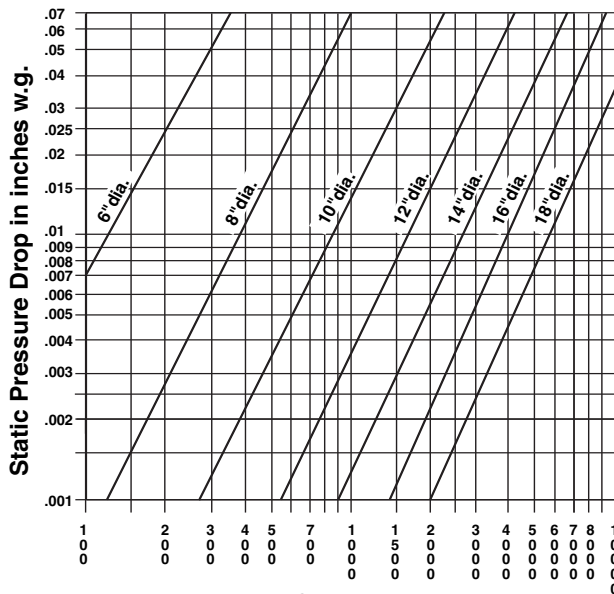


ROUND CONTROL DAMPER
STEEL • LOW LEAKAGE
PERFORMANCE DATA
MODEL: 1090

MAXIMUM SYSTEM PRESSURE

Maximum Damper Diameter	Maximum System Pressure
24" (610)	6" w.g. (1.5 kPa)
18" (457)	6" w.g. (1.5 kPa)
12" (305)	8" w.g. (2 kPa)
6" (152)	10" w.g. (2.5 kPa)

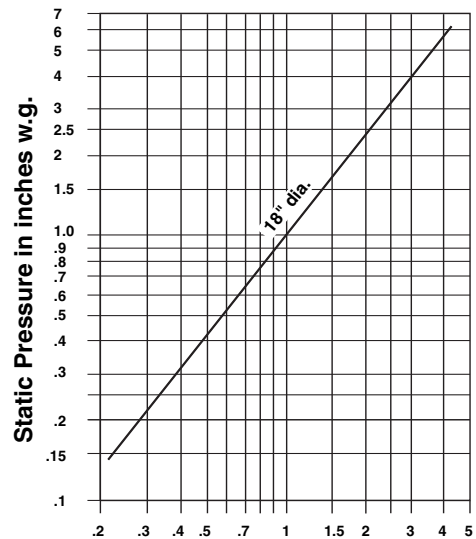
PRESSURE DROP (damper fully open)



Air Volume in Cubic Feet Per Minute

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

AIR LEAKAGE (damper closed)



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

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

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

SCHEDULE TYPE:	Page 2 of 2 Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	9 - 2 - 09	1000	2 - 6 - 07	1000-6