

APPLICATION

Model BO-RI is a True Round damper with a manual cable system installed for Bowden cable and self-locking right angle worm gear controller. With the right angle worm gear controller mounted remotely with the cable the damper can be balanced to the individual comfort.

Standard Construction

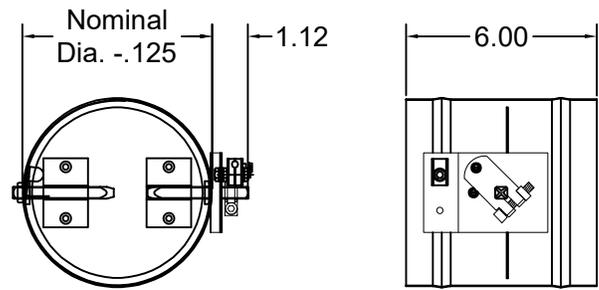
Frame: 6" Long 20 Gauge Galvanized Steel

Blades: 20 Gauge Galvanized Steel

Axles: $\frac{3}{8}$ " Square Plated Steel

Bearings: Molded Synthetic Nylon 6/6.

Hand Quadrant: $\frac{3}{8}$ " Square



Standard Construction

SIZE

Minimum: 4" (102) Diameter

Maximum: 24" (610) Diameter

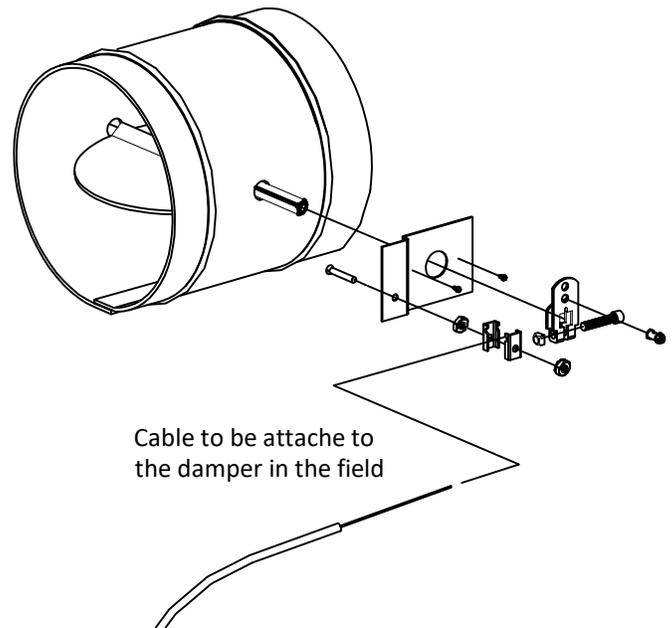
OPTIONS

Stand-Off Bracket - 2" (51)

VARIATIONS

Stainless Steel Construction - Frame, Blade, Axles and Hand Quadrant.

Aluminum Construction - .063 thick aluminum frame and blade. (Axles, clamps Ect. Galv. or Stn. Stl.)



Cable to be attache to the damper in the field

Exploded View

Maximum Velocity		
Diameter	FPM (M/S)	Max. Pressure Differential Inches w.g. (kpa)
4" - 8" (102 - 203)	2600 (13.2)	3" (0.75)
10" - 12" (254 - 305)	2400 (12.2)	2.5" (.062)
14" - 18" (356 - 457)	2300 (11.7)	2" (0.5)
20" - 24" (508 - 610)	3200 (11.7))	1.5" (0.37)

Optional Controllers Mounted Remotely

BO-150 - Rack and Pinion (Diffuser Mount In Ceiling)

BO-300 - Mtg. Brkt and Rack & Pinion Ceiling Cup

BO-R - Rack and Pinion (Loose)

BO-896 - Rack and Pinion ($\frac{7}{8}$ " Screw Cap)

BO-PL - Rack and Pinion

Bo-896-P - Rack and Pinion ($\frac{1}{2}$ " Torx Head Tamper Proof Screw)

BO-700 - Mounting Bracket and Rack and Pinion (Ivory Cover Plate)

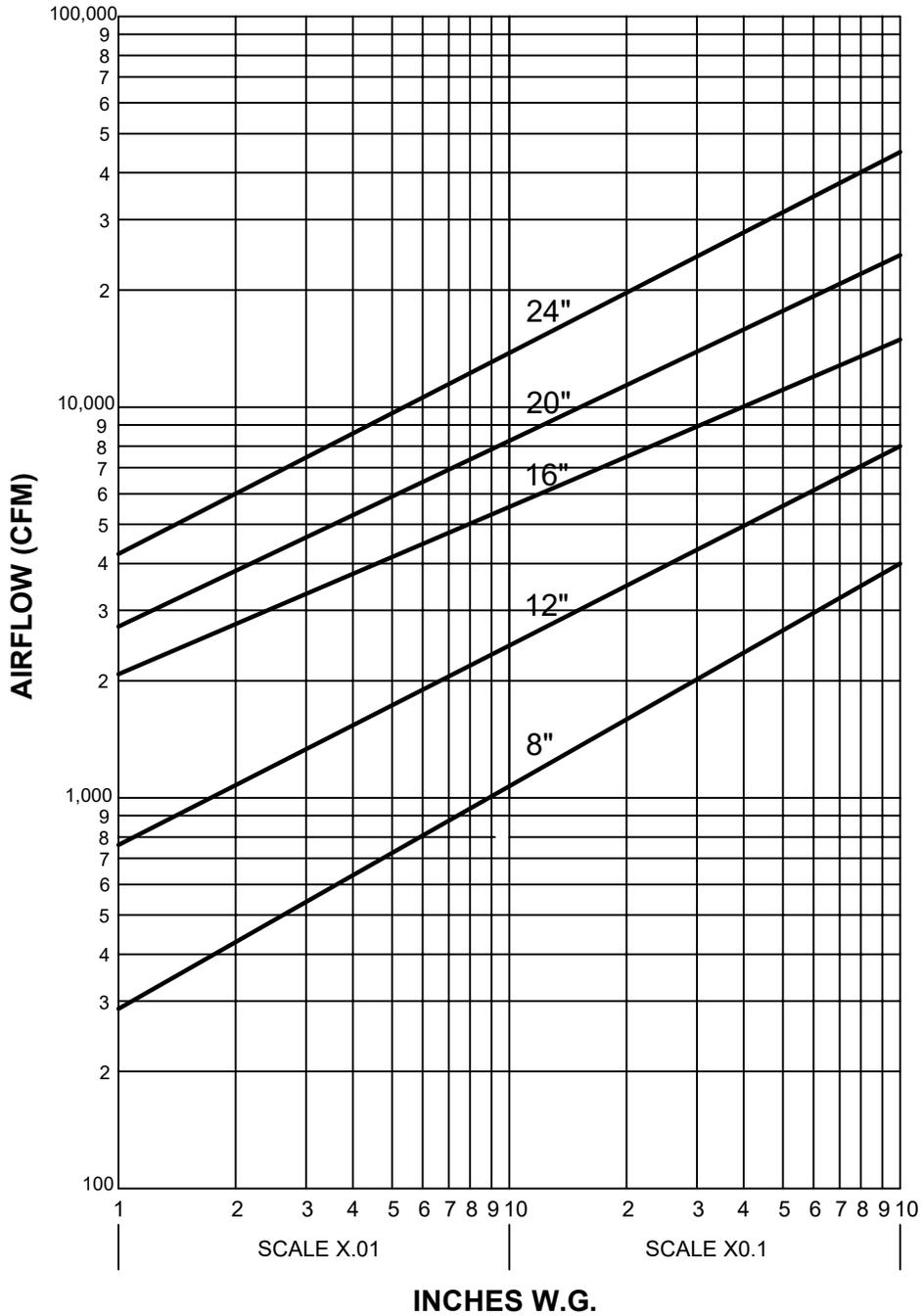
BO-702 - Rack and Pinion and Wall Cup

Notes:

- Dampers are furnished approx. 1/8" (3) undersized, unless otherwise noted.
- Dimensions shown in parentheses () indicate millimeters.

Performance Data

STATIC PRESSURE DROP



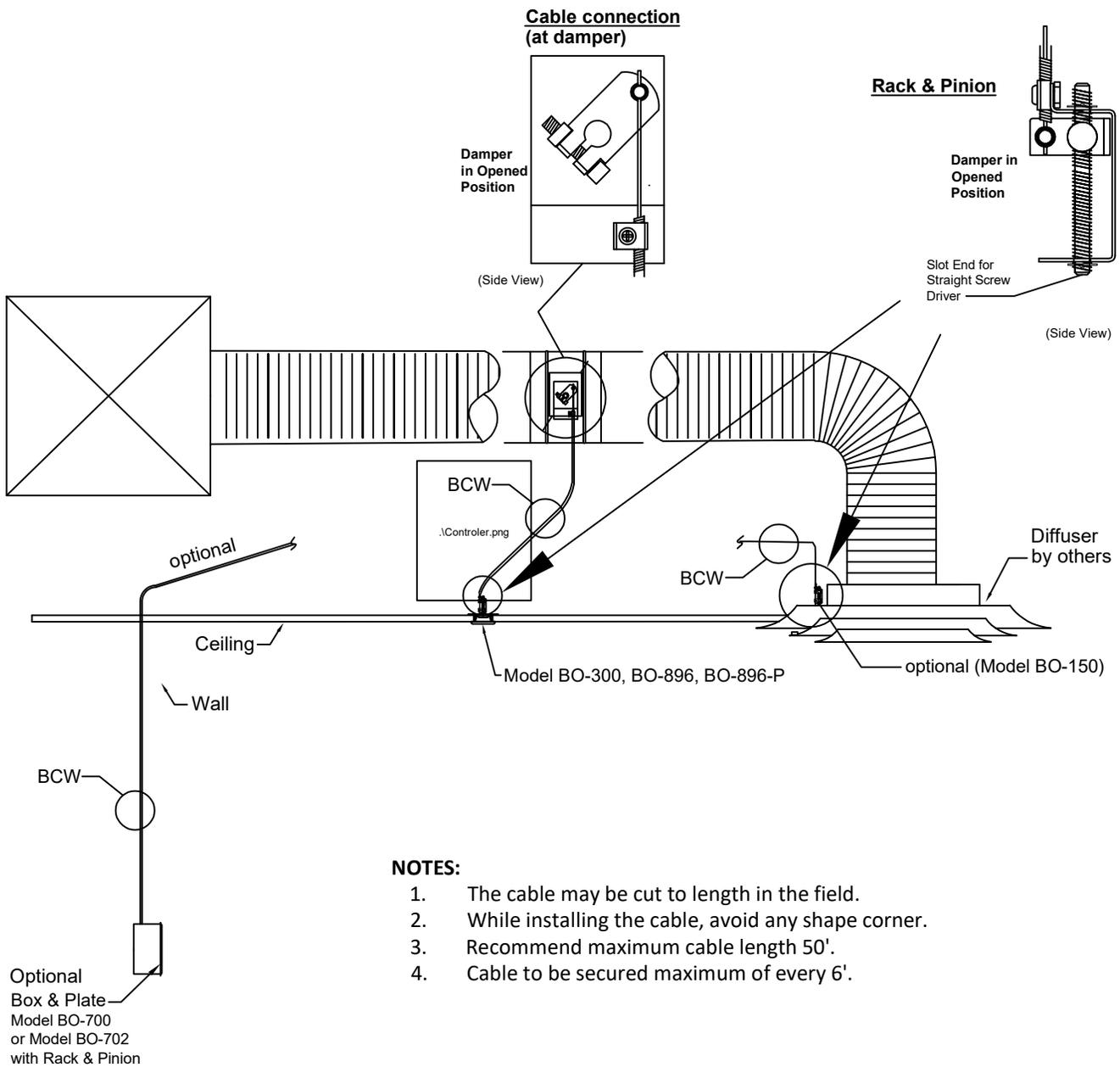
Determining Static Pressure Drop (Round)

To determine static pressure drop through an open damper, start on the left side of the damper pressure drop chart. Given the CFM of air flow through the damper, follow the CFM line to the diagonal line of the damper size required, then down to the static pressure drop of the unit.

Example:

The pressure drop of an 8" (203) diameter damper with 700 cfm flow is .051 inches w.g.

BO-RI Operation



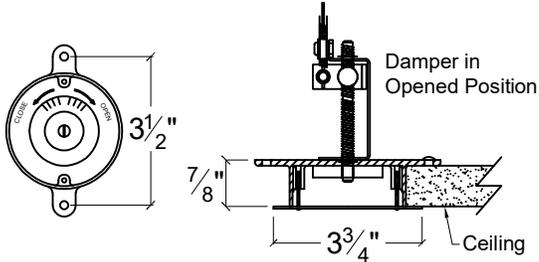
NOTES:

1. The cable may be cut to length in the field.
2. While installing the cable, avoid any sharp corner.
3. Recommend maximum cable length 50'.
4. Cable to be secured maximum of every 6'.

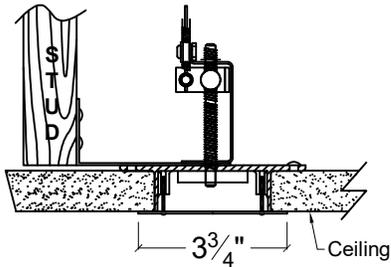
Controllers

Model BO-300
(with rack & pinion)

- Concealed in ceiling
Polished Zinc Cover Plate (std.)

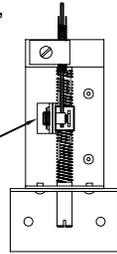


- Concealed in ceiling with mtg. bracket
Polished Zinc Cover Plate (std.)



- Model BO-R**
(with rack & pinion)
Ceiling joists, Above
lay in Ceilings, Internal
Plenum Mount,
Etc.

Damper in 1/2
open position

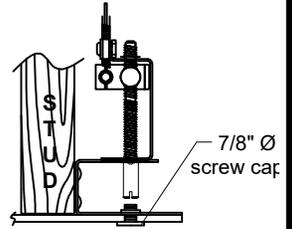


- Model BO-150**
(with rack & pinion)
Diffuser mount in
Ceilings

Damper in
Opened
Position

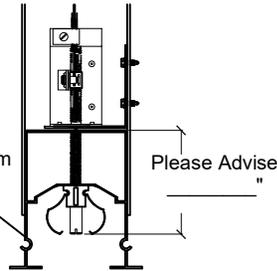
Slot End for
Straight Screw
Driver
(Side View)

- Model BO-896**
(with rack & pinion)
Concealed in ceiling

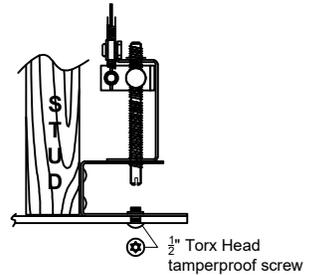


- Model BO-PL**
(with rack & pinion)
For Plenums of "Ice Tong"
Style Diffusers

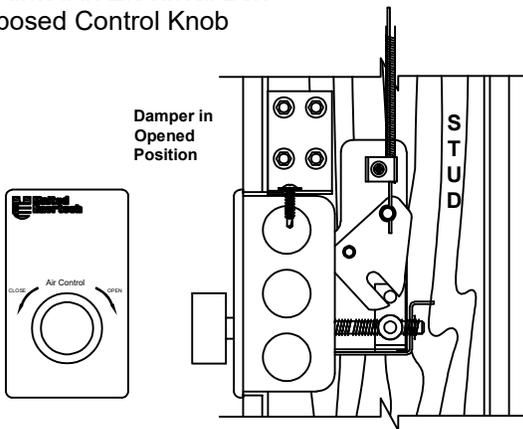
Diffuser & Plenum
by others



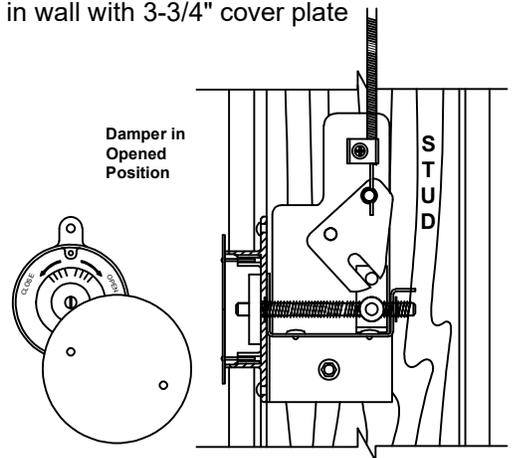
- Model BO-896-P**
(with rack & pinion)
Tamper proof prison model
can be used with steel ceilings



- Model BO-700**
Wall mounted in Electrical Box
with Exposed Control Knob



- Model BO-702**
Concealed in wall with 3-3/4" cover plate



Suggested Specification

Furnish and install, at locations shown on plans or as in accordance with schedules, remote bowden cable control dampers meeting the following specifications: Dampers shall be of the butterfly type, consisting of a circular blade, fastened to a continuous $\frac{3}{8}$ mild steel square shaft. Inside frame surface shall be clean and smooth. Frame shall be minimum 20 gage (1.0) G60 galvanized steel and include full circumference rolled stiffener beads to allow easy sealing of spiral or flex duct joints. Blade shall be of the same material as the frame. Bearing shall be molded nylon, and shall be formed to the shape of the axle, reducing leakage around shaft penetration points. Factory install push pull cable system to be combined with factory supplied and field mounted cable and controller. Material and construction specifications shall be minimum equivalent to United Entertech BO-RI.