



3900 Dr. Greaves Rd. • Kansas City, MO 64030 • (816) 761-7476 • FAX (816) 765-8955

**INDUSTRIAL SWARTWOUT FIBERGLASS SERIES
1104 FIBERGLASS CONTROL DAMPER
"V" GROOVE BLADES**

STANDARD CONSTRUCTION

FRAME

Vinyl Ester Resin. 4" x 1 1/16" x 1/8" thick (102 x 27 x 3).

BLADE

Vinyl Ester Resin, Triple "V" groove 6 5/8" x 1/8" thick (168 x 3).

AXLES

3/4" (19) diameter fiberglass rod.

BEARINGS

Molded PTFE.

LINKAGE

Vinyl Ester Resin Face Linkage with Monel Rivets (parallel blade action only).

MAXIMUM TEMPERATURE

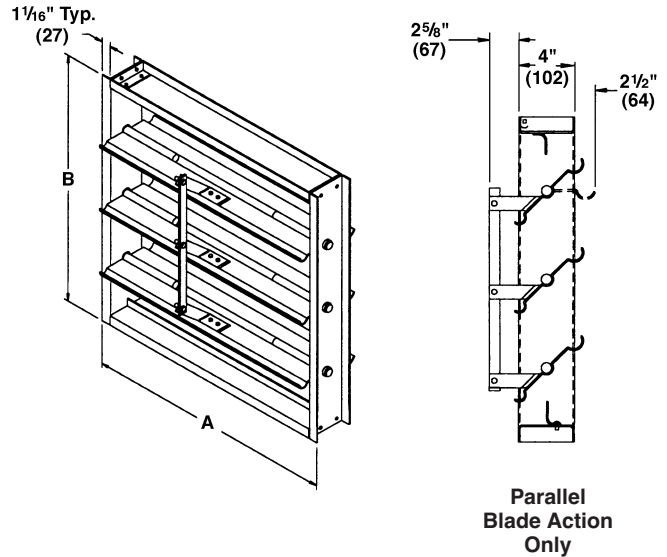
200°F (94°C).

MINIMUM SIZE

Single blade, parallel action 8"w x 8"h (203 x 203).
Two blades, parallel action only 8"w x 12"h (203 x 305).

MAXIMUM SIZE

Single section 48"w x 72"h (1219 x 1829).
Multi-section consult Ruskin.



**Parallel
Blade Action
Only**

Dimensions in parenthesis () indicate millimeters.

| FRAME | BLADES | SEALS (Optional) | AXLES | BEARINGS | LINKAGE | ACCESSORIES (Optional) |
|---|----------------------------|------------------------------|--|-------------|---|---|
| 4" x 1 1/8" x 1/8" (102 x 27 x 3) Channel | 6 5/8" (168) "V" Groove | Viton Blade Seal | 3/4" (19) diameter Fiberglass Axles | Molded PTFE | Vinyl Ester Resin Face Linkage (Parallel Action Only) | Manual Actuator Crank Lever (CL) Hand Quad (HQ) Actuators Electric Pneumatic |
| | | Neoprene Blade Seal | | | | |
| | | Polycarbonate Jamb Seal | | | | |
| | | Stainless Steel Jamb Seal | | | | |

| QTY. | BLADE ACTION | DIMENSIONS | | VARIATIONS | TAG |
|------|--------------|------------|---|------------|-----|
| | PB | A | B | | |
| | | | | | |
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PROJECT:
ARCH/ENGR:
REPRESENTATIVE:

LOCATION:

MODEL 1104 PERFORMANCE DATA

PRESSURE LIMITATIONS

| Damper Width | Maximum System Pressure | Maximum System Velocity | **Leakage without Seals | |
|--------------|-------------------------|-------------------------|-------------------------|--------------------------------|
| | | | % of max. flow | CFM/ sq. ft. |
| 48" (1219) | 2.5" w.g. | 2000 fpm | 1.60 | 32 (.91 m ³ /min.) |
| 36" (914) | 5.5" w.g. | 2000 fpm | 1.60 | 32 (.91 m ³ /min.) |
| 24" (610) | 10.0" w.g. | 2000 fpm | 2.00 | 40 (1.13 m ³ /min.) |
| 12" (305) | 20.0" w.g. | 2000 fpm | 3.00 | 60 (1.70 m ³ /min.) |

**Leakage information based on pressure differential of 1" w.g.

SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, Fiberglass "V" groove multi-blade control dampers. Dampers shall be of pultruded construction and comply with ASTM D4385-84A, ASTM E-84 and ASME/ANSI RTP1-1989. Material used in construction shall be a flame retardant vinyl ester based substance. All material in airstream must meet or exceed required contamination concentration. Bearing design shall be based on pressure and shall be of a teflon based material. All exposed glass shall be coated with a resin compatible with that used in the pultrusion process and covered with surfacing veil. No exposed cut edges are acceptable. Damper blades shall be minimum 1/8" (3) thick of a single skin with triple strengthening grooves. Frame shall

be 4" x 1 1/16" (102 x 27) minimum 1/8" (3) thick for sliding into ductwork. The face linkage shall be of vinyl ester resin with monel rivets. The fiberglass axles shall be minimum 3/4" diameter constructed of a vinyl ester based material, combined with continuous strand roving, and complete with surfacing veil. Damper design shall withstand minimum 2 1/2" w.g. and 2,000 FPM. Velocity based on minimum 48" (1219) blade length. Submittal information shall include published performance data based on AMCA Standard 500 testing illustrating damper leakage, and static pressure design characteristics for a full range of damper sizes. Data from one size sample test is not acceptable. Damper shall be Ruskin Swartwout Series model 1104.



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