

## BA SERIES FRP DAMPER SPECIFICATION

### Dampers:

- A. BA Series FRP Dampers shall be manufactured by Spunstrand® Inc. and fabricated with the same materials and specifications as the duct. BA dampers are to be used in areas for balancing where ultra low leakage is not critical. Leakage rates are designed to be approximately 5%. Resin shall be Ashland Chemicals Hetrion 992SB or Derakane 510 vinylester resin; 100 mil liners to be clear without antimony trioxide and fabricated to meet ASME RTP-1 visual level II acceptance quality. Structural layers to be filament wound with the same resin and include antimony trioxide for maximum fire retardency. Unless otherwise specified, minimum wall thickness shall be .150" for 4"Ø thru 22"Ø, .200" for 24"Ø thru 36"Ø, .250" for 42"Ø thru 54"Ø, .325" for 60"Ø thru 72"Ø. No resin, liner or structural variations will be acceptable unless they exceed the minimum requirements. Blade shall be FRP one or two piece molded, depending on diameter, and include blade stiffeners as needed for proper blade stiffness. Damper blade shall be offset in the closed position to form a normal stop on wall of duct. The seating of the blade shall be independent of the shaft seal. Axle to be pultruded FRP made with same resin as the duct and continuous strand roving. Standard bearing to be Teflon with double O-rings. Shaft seals are also included as standard with no metal parts or cut edges in air stream allowed. The BA design and O-rings eliminate the need for outboard bearings and packing glands, which become maintenance items over time. Dampers, including all components other than mechanical operators, to be manufactured by Spunstrand® Inc.
- B. All dampers shall be factory tested for full range of motion, blade fit, quality of each individual component and results shall be documented and included in the Fabricators Quality Control Manual QC Forms and Procedures.
- C. Dampers come standard with flanges that require mating flanges on the connecting duct work but can also be supplied with plain ends or in spool pieces. It is important to note that when supplied with plain ends, the installer needs to take great care to keep excess resin away from the dampers moving parts while they are making joint connections. Dampers come as standard manual configuration with FRP locking quadrant handles or with gear operators as an option.
- D. All Spunstrand® Inc. damper shafts are fabricated by pultruding vinylester resin and continuous strand roving. Stainless steel shafts are available as an option, but are not recommended in applications with high concentrations of acids or caustics.
- E. Motorized dampers are available with either pneumatic or electric actuators. Standard torque ratings available in 100 and up to 3600 in / lb ratings. Positioners and other options and controls are available upon request.

**SPUNSTRAND® INC. BA SERIES FRP DAMPERS  
MODEL NUMBER DESIGNATIONS**

<b>DIAMETER</b>	<b>BODY CONSTRUCTION*</b>	<b>BLADE CONSTRUCTION*</b>	<b>O-RING MATERIAL</b>
4" THRU 96"	P - Polyester	1 - Polyester	1 - Neoprene
			2 - Buna N
			3 - EPDM
	V - Vinylester	2 - Vinylester	4 - Viton
			5 - Butyl
			6 - Fluorocarbon
<b><u>60"</u></b>	<b><u>V</u></b>	<b><u>2</u></b>	<b><u>3</u></b>

<b><u>F</u></b>	<b><u>B</u></b>	<b><u>B</u></b>	<b><u>MO</u></b>
<b>BODY CONFIGURATION</b>	<b>SHAFT MATERIAL<sup>(2)</sup></b>	<b>LINER THICKNESS</b>	<b>OPERATORS<sup>(1)</sup></b>
F- Flanged	A - Polyester	A – 20 mil	M – FRP Locking Quad
P – Plain Ends		B – 100 mil	MP – Position Throttling Handle
D – Located per Drawing	B - Vinylester	C – Per Cust. Spec.	G – Gear Operators
			MO – Motorized Operator

Example above part number is:

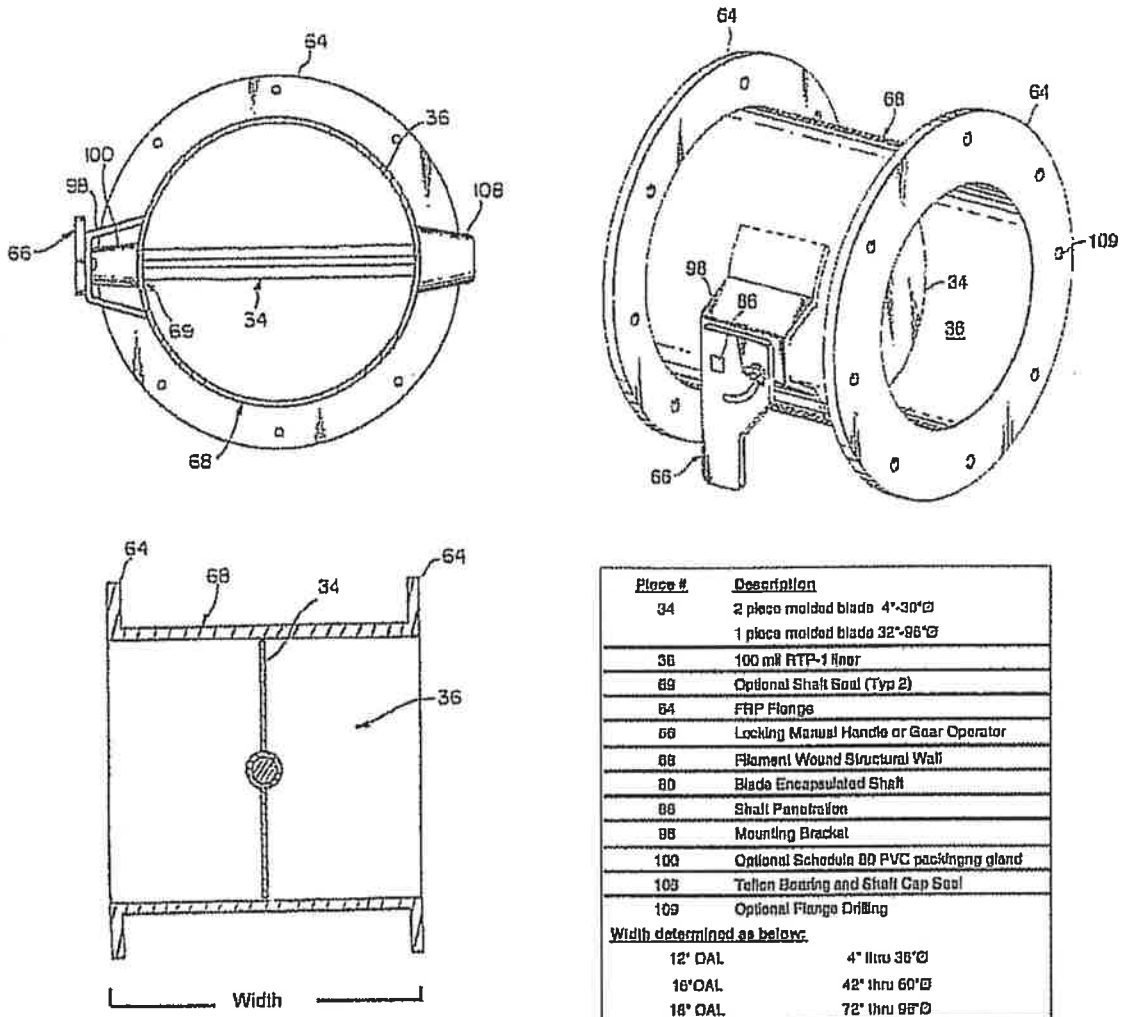
**BA 60 F V B 2 B 3 MO**

*This part number designates a 60"Ø Balancing Damper with a flanged vinylester body, a vinylester shaft and blade, 100 mil RTP-1 liner, EPDM O-Rings, and a motorized operator.*

\* Both polyester and vinylester are premium grade and fire retardant resins as standards.

1. Motorized operators are either electric or pneumatic. Standard torque ratings for **all** BA style dampers are available upon request. Positioners and other options as requested.
2. All BA Series dampers come with FRP bearings and o-rings shaft seals provided as standard. Teflon packing glands are available as an option.

# BA DAMPER DRAWING SPECIFICATION SHEET



Part #	Description
34	2 piece molded blade 4'-30"Ø 1 piece molded blade 32"-88"Ø
36	100 mil RTP-1 liner
69	Optional Shaft Seal (Typ 2)
64	FRP Flange
66	Locking Manual Handle or Gear Operator
68	Fiberglass Wound Structural Wall
80	Blade Encapsulated Shaft
88	Shaft Penetration
98	Mounting Bracket
100	Optional Schedule 80 PVC packing gland
109	Teflon Bearing and Shaft Cap Seal
109	Optional Flange Drilling
<b>Width determined as below:</b>	
12" OAL	4" thru 36"Ø
16" OAL	42" thru 60"Ø
18" OAL	72" thru 96"Ø

**RESIN TYPE:**  POLYESTER  VINYLESTER  FACTORY MUTUAL **OPTIONAL :**  MOTORIZED

CONSTRUCTION	BLADE THICKNESS	AXLE DIM.	BLADE STIFFENERS	SCALE	APPROVED BY	DRAWN BY
				NTS	JMS	W.K.G.
4" thru 10"	.125	1.0"	0	DATE	8/10/94	REVISED
12" thru 20"	.125	1.0"	1			3/15/99
22" thru 36"	.187	1.5"	1-2	<b>SPUNSTRAND INCORPORATED</b>		
42" thru 66"	.250	2.0"	3	<b>FRP BALANCING DAMPER</b>		
72" thru 96"	.312	2.5"	3	DRAWING NO.: DRP 102BA		