

## BTR92 HEAVY DUTY ROUND BUBBLE TIGHT DAMPER

### STANDARD CONSTRUCTION

#### FRAME

Steel channel. See table below for web dimension and thickness. Stainless steel frame 6"-17" (152-432).

#### BLADE

Steel stiffened as required. See table below for blade thickness. Stainless steel blade 6"-17" (152-432).

#### SEAL

Silicone blade seal and external adjustable double packing gland shaft seals.

#### AXLE

Continuous; plated steel axle; angle reinforced as required. See table below for axle diameter. Stainless steel axle 6"-17" (152-432).

#### CONTROL SHAFT

Axle extends 6" (152) beyond frame.

#### BEARINGS

2-bolt, self-aligning relubricable ball bearings mounted outboard of the damper frame.

#### FINISH

Industrial epoxy-polyamide above 17" (432).

#### MINIMUM SIZE

6" (152) diameter.

#### MAXIMUM SIZE

48" (1219). Larger sizes available in multiple sections.

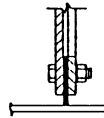
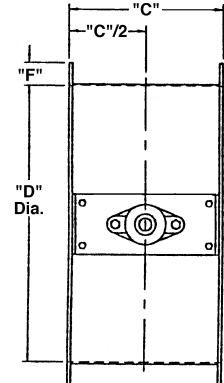
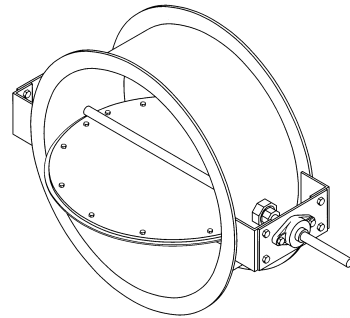
#### MAXIMUM TEMPERATURE

250° (121°C).

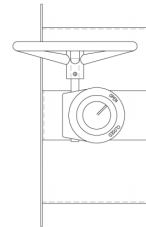
### VARIATIONS

Variations to those listed in table are available. Contact Ruskin for pricing.

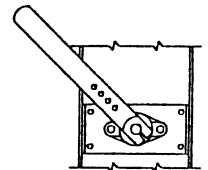
- Construction using heavier material specifications
- Non-standard flange dimensions
- Oval/Square flanges



Blade Seal Detail



Gear Operator with Handwheel (optional)



Crank Lever (optional)

Above	Through	Frame		Blade Thickness	Axle Diameter
		Flange (F)	Web (C)		
6" (152)	14" (356)	1 3/4" x 1/4" (44 x 6)	9" x 1/4" (229 x 6)	1/4" (6)	3/4" (19)
14" (356)	30" (762)	2 3/8" x 1/4" (61 x 6)	12" x 3/8" (304 x 10)	1/4" (6)	1" (25)
30" (762)	40" (1016)	2 3/8" x 1/4" (61 x 6)	12" x 3/8" (304 x 10)	3/8" (10)	1 1/2" (138)
40" (1016)	48" (1219)	2 3/8" x 1/4" (61 x 6)	12" x 3/8" (304 x 10)	3/8" (10)	1 1/2" (138)

**NOTE:** Dimensions shown in parenthesis ( ) indicate millimeters.

The damper blade seal is designed and tested for leakage performance at the specified design pressure (typically 10" to 30" WC). Each Ruskin model BTR92 is tested for leakage in conformance to AMCA Standard 500-D-98; Section 8.2.3.2.

FRAME		BLADE		BEARINGS		AXLE		ACCESSORIES (Opt)	
STEEL CHANNEL - SEE CONSTRUCTION TABLE		STEEL STIFFENED AS REQUIRED - SEE TABLE		GREASE LUBRICATED BALL BRGS MOUNTED OUTBOARD WITH SHAFT SEALS		PLATED CONTINUOUS 6" EXTENSION BEYOND FRAME		BOLT HOLES IN ONE FLANGE	
304 STAINLESS STEEL (OPT ABOVE 17" [432])		304 STAINLESS STEEL (OPT ABOVE 17" [432])				304 STAINLESS STEEL (OPT ABOVE 17" [432])		BOLT HOLES IN BOTH FLANGES	
								MANUAL ACTUATOR	
								ELECTRIC ACTUATOR	
								PNEUMATIC ACTUATOR	

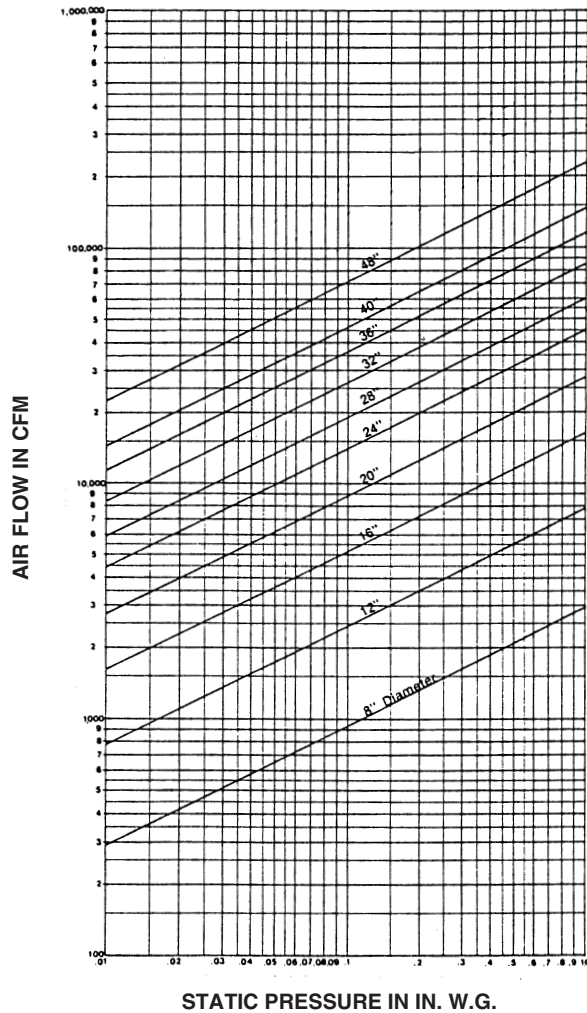
QTY.	FRAME				BOLT HOLE ORIENTATION		DESIGN PRESSURE	COMMENTS	TAG
	D-DIA.	G Bolt Circle Diam.	H No. Holes	M Hole Diam.	S Straddle	T Parallel			
JOB					LOCATION				
CONTRACTOR									

## BTR92 SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, heavy duty industrial grade bubbletight dampers meeting the following specifications. Dampers shall be butterfly type consisting of circular blade, mounted to axle within formed flanged frame. Frame shall be constructed of steel channel with a clean and smooth interior surface. Blade shall be minimum 1/4" (6) thick steel and be complete with full circumference silicone blade seal mechanically attached to blade with full circumference retainer ring. Adhesive seals are not acceptable. Damper shaft shall be continuous solid steel extending through the entire damper diameter and extending beyond damper bearing a minimum of 6" (152). Stub type axles are not acceptable. The axle shall be supported in

sealed, relubricable, ball bearings mounted outboard of frame and be complete with axle shaft seals. All parts not otherwise protected shall be given one coat of epoxy- polyamide coating. Dampers shall be designed and tested for bubbletight leakage performance at the specified design pressure. Each damper shall be individually tested for leakage in conformance to AMCA Standard 500-D-98; Section 8.2.3.2. Submittal data shall include pressure drop data for full range of damper sizes developed from testing in accordance with AMCA Standard 500 in an AMCA registered laboratory. Data for one size damper is not acceptable. Damper shall be Ruskin model BTR92.

## BTR92 PRESSURE DROP



Performance curves based on AMCA Standard 500 using test setup apparatus figure 5.3 (damper installed with duct upstream and downstream). Static pressure and CFM are corrected to .075 lb/cu ft air density.

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