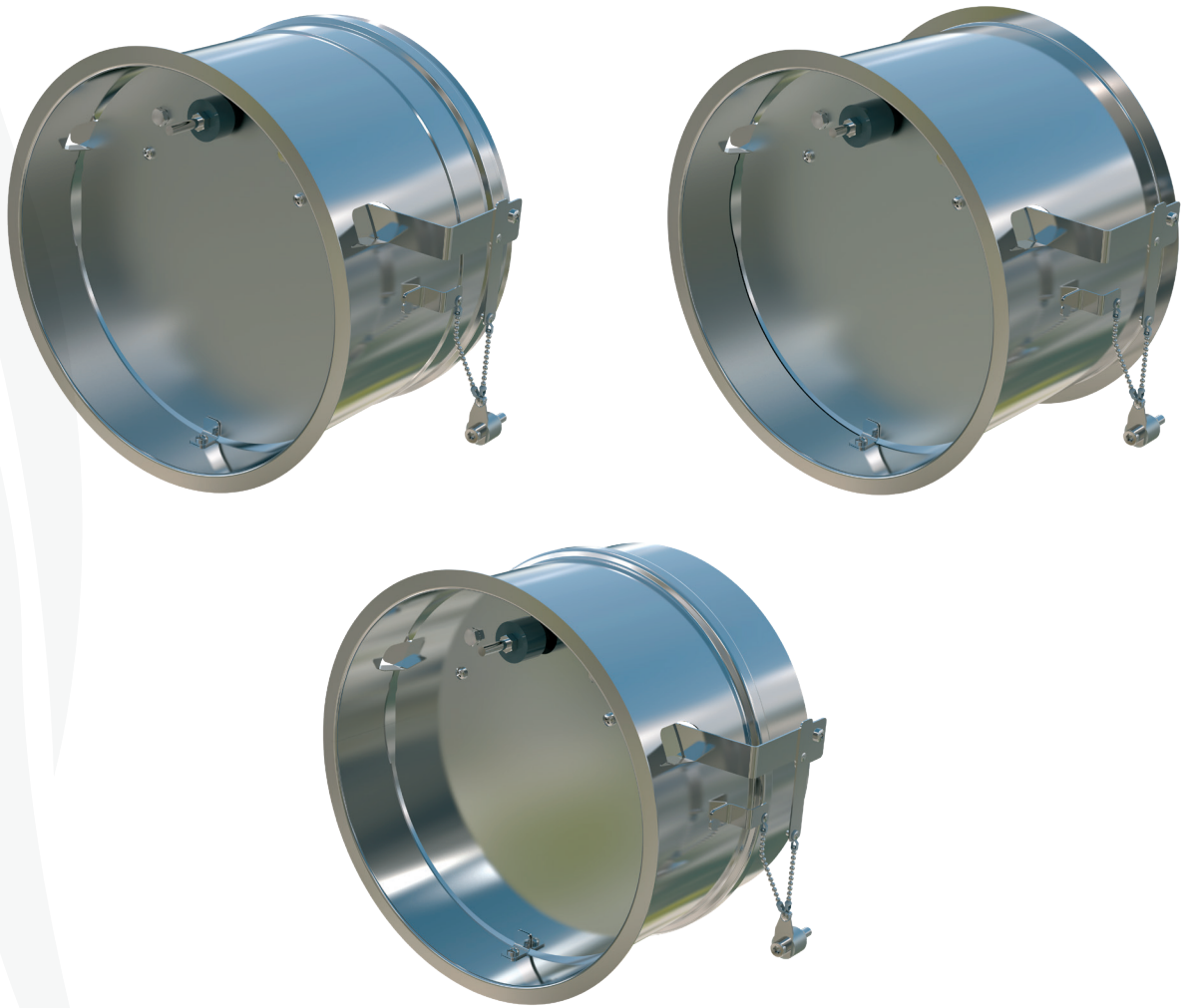


ENERVEX BDR BAROMETRIC DRAFT REGULATOR

010.2100.1023 11.23

Installation & Operating Manual



READ AND SAVE THESE INSTRUCTIONS!



UL File E467733

ENERVEX Inc.
1685 Bluegrass Lakes
Parkway
Alpharetta, GA 30004
USA

P: 770.587.3238
F: 770.587.4731
T: 800.255.2923
info@enervex.com
www.enervex.com

ENERVEX® 
VENTING DESIGN SOLUTIONS



This symbol shows that the ENERVEX BDR Barometric Draft Regulators are listed in the US and certified for Canada under Underwriters Laboratories Inc. file no. E467733.

IMPORTANT: READ THESE INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION.

- **EXAMINE ALL COMPONENTS FOR POSSIBLE SHIPPING DAMAGE PRIOR TO INSTALLATION.**
- **PROPER JOINT ASSEMBLY IS ESSENTIAL FOR A SAFE INSTALLATION. FOLLOW THESE INSTRUCTIONS EXACTLY AS WRITTEN. CHECK SECURENESS OF JOINTS UPON COMPLETION OF ASSEMBLY.**

WARNING

Failure to follow these installation instructions could cause FIRE, CARBON MONOXIDE POISONING, and/or DEATH. If you are unsure of installation requirements, contact ENERVEX.

Symbol Legend

The following terms are used throughout this manual to bring attention to the presence of potential hazards, or to important information concerning the product.



DANGER: Indicates an imminent hazardous situation which, if not avoided, will result in death, serious injury or substantial property damage.



WARNING: Indicates an imminent hazardous situation which, if not avoided, may result in personal injury or property damage.

How to use this manual

This installation manual does not contain any system design documentation. System design documentation is available from any authorized ENERVEX representative. Accessories, fans, and variable frequency drives are not covered by this manual. Please refer to these component's individual manuals.

TO REDUCE THE RISK OF INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed on the front of the manual.
2. Installation work must be done by a qualified person(s) in accordance with applicable codes and standards.
3. Follow the appliance manufacturer's guidelines and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers ASHRAE, and the local code authorities.

1. PRODUCT INFORMATION	
1.1 Function.....	3
1.2 Shipping	3
1.3 Warranty	3
2. SPECIFICATIONS AND DIMENSIONS	
2.1 Dimensions and Capacities.....	4-5
3. MECHANICAL INSTALLATION	
3.1 General	6
3.2 BDR-F PIPE JOINT ASSEMBLY	7
3.3 BDR-C VENT JOINT ASSEMBLY	8
3.4 BDR-M VENT JOINT ASSEMBLY.....	9
4. STARTUP AND CONFIGURATION	
4.1 General.....	10

1. PRODUCT INFORMATION

1.1 FUNCTION

The ENERVEX BDR Barometric Draft Regulator is a single acting draft control damper used to provide precise draft regulation on gas or oil fired appliances in commercial and industrial applications.

The BDR is available in diameters ranging from 4 to 32 inches. It is available in connection types to match all EPS Powerstack versions as well as a straight connection to slip into other chimney types.

The BRD-M is manufactured to connect to chimneys without flange connections. The BDR-F Barometric Draft Regulator is specifically engineered to connect to EPS Powerstacks through a standard 1/2" flanged connection. The BDR-C is manufactured to connect to Enervex EPSC. The BDR is rated for temperatures up to 1400°F (760°C).

It is for installation with gas-fired or oil-fired equipment only.

1.2 SHIPPING

- Standard Packing List
- The BDR is shipped completely assembled

1.3 WARRANTY

2-Year Factory Warranty. Complete warranty conditions are available from ENERVEX, Inc.

2. SPECIFICATIONS AND DIMENSIONS

2.1 DIMENSIONS AND CAPACITIES

Model	Size	DIM A in/mm	DIM B in/mm	DIM C in/mm
BDR-F 4	4	3.94/100	6.02/153	5.00/127
BDR-F 6	6	5.91/150	7.99/203	6.00/152
BDR-F 8	8	7.87/200	9.96/253	6.00/152
BDR-F 10	10	9.84/250	11.93/303	7.00/178
BDR-F 12	12	11.81/300	13.90/353	7.00/178
BDR-F 14	14	13.78/350	15.87/403	7.00/178
BDR-F 16	16	15.75/400	17.83/453	7.00/178
BDR-F 18	18	17.72/450	19.80/503	7.00/178
BDR-F 20	20	19.69/500	21.77/553	7.00/178
BDR-F 22	22	21.65/550	23.74/603	7.00/178
BDR-F 24	24	23.62/600	25.71/653	7.00/178
BDR-F 26	26	25.59/650	27.68/703	7.00/178
BDR-F 28	28	27.56/700	29.64/753	7.00/178
BDR-F 30	30	29.53/750	31.61/803	7.00/178
BDR-F 32	32	31.49/800	33.58/853	7.00/178

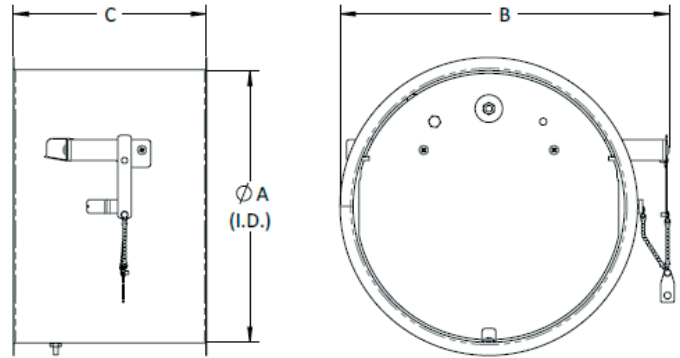


Table 2-1

Model	Size	DIM A in/mm	DIM B in/mm	DIM C in/mm
BDR-C 4	4	3.94/100	6.02/153	6.10/155
BDR-C 5	5	5.12/130	7.20/183	7.17/182
BDR-C 6	6	5.91/150	7.99/203	7.17/182
BDR-C 7	7	7.09/180	9.17/233	7.17/182
BDR-C 8	8	7.87/200	9.96/253	7.17/182
BDR-C 10	10	9.84/250	11.93/303	7.17/182
BDR-C 12	12	11.81/300	13.90/353	7.17/182
BDR-C 14	14	13.78/350	15.87/403	7.17/182

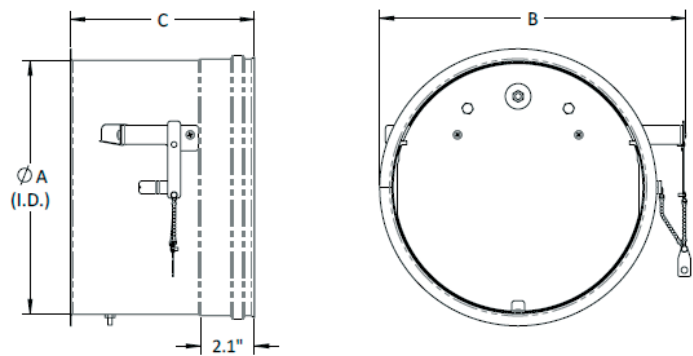


Table 2-2

Model	Size	DIM A in/mm	DIM B in/mm	DIM C in/mm
BDR-M 4	4	3.85/98	5.86/149	6.00/152
BDR-M 6	6	5.85/149	7.86/200	6.00/152
BDR-M 8	8	7.85/199	9.86/250	6.00/152
BDR-M 10	10	9.85/250	11.86/301	7.00/178
BDR-M 12	12	11.85/301	13.86/352	7.00/178
BDR-M 14	14	13.85/352	15.86/403	7.00/178
BDR-M 16	16	15.85/403	17.86/454	7.00/178
BDR-M 18	18	17.85/453	19.86/505	7.00/178
BDR-M 20	20	19.85/504	21.86/555	7.00/178
BDR-M 22	22	21.85/555	23.86/606	7.00/178
BDR-M 24	24	23.85/606	25.86/657	7.00/178
BDR-M 26	26	25.85/657	27.86/708	7.00/178
BDR-M 28	28	27.85/707	29.86/759	7.00/178
BDR-M 30	30	29.85/758	31.86/809	7.00/178
BDR-M 32	32	31.85/809	33.86/860	7.00/178

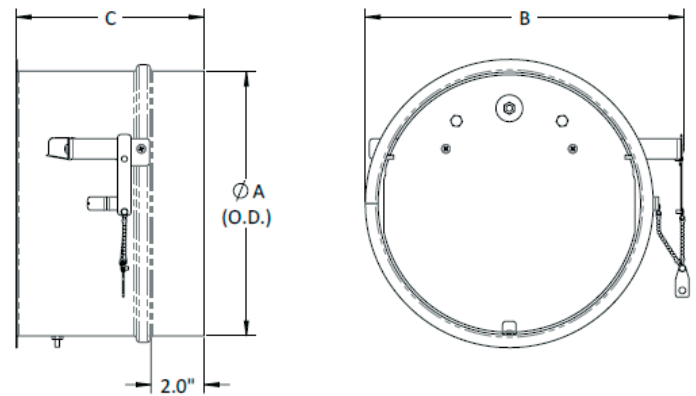


Table 2-3

3. MECHANICAL INSTALLATION

3.1 GENERAL

Install the BDR on a manifold tee located near the appliance outlet.

The BDR must be installed plumb and the hinges must be level. Once installed, verify the damper can fully open and close without hitting any obstructions in the vent.

Appliances that vent vertically should place the BDR in the suggested installation location shown in Fig. 3-1

Appliances that vent horizontally should place the BDR in the suggested installation location shown in Fig. 3-2

In common vented applications the BDR should be placed in connector between the appliance and the common venting as shown in location A in Fig. 3-3. When there is insufficient space in the connector then either location B or C should be used.

Please seek guidance from the chimney designer regarding the exact installation location for the BDR.

Please consult ENERVEX Inc. to explore whether a mechanical draft system is necessary.

THE BDR IS FOR INSTALLATION WITH GAS-FIRED OR OIL-FIRED EQUIPMENT ONLY.

MINIMUM CLEARANCE TO COMBUSTIBLE IS 18 INCHES.

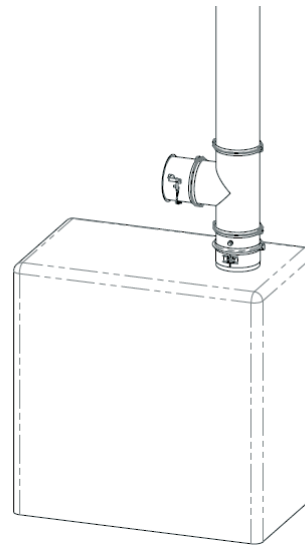


Fig 3-1: Vertical Venting Placement

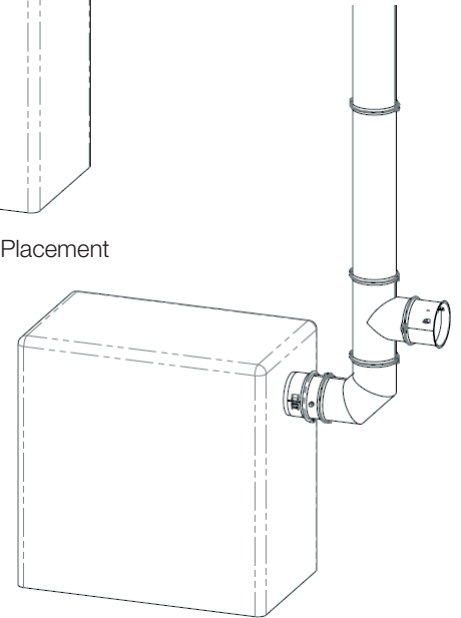


Fig 3-2: Horizontal Venting Placement

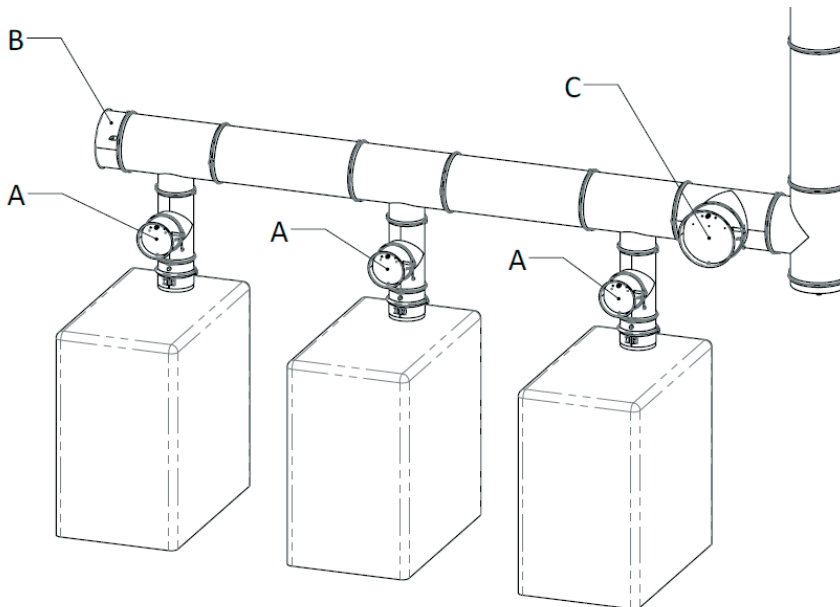


Fig 3-3: Common Venting Placement

3.2 BDR-F PIPE JOINT ASSEMBLY

The BDR-F has a flanged, male-to-female joint system with an integrated graphite gasket. The installation orientation is female end points downstream. Flow direction is indicated by an arrow on the product label.

1. Position male and female ends with graphite gasket accurately centered in between.
2. Position both faces of U-band together and LOOSELY connect one side with (2) bolts and nuts (supplied).
3. Carefully open U-band (from non-connected side) and manipulate U-band around joint flange, lightly seating it over flange joint, starting from connected side, working towards open end.
4. Again, starting from connected side, use a rubber mallet to seat U-band over joint flange, alternating sides for even attachment while working towards open end.
5. Connect open end of U-band with (2) nuts and bolts (supplied) to snug fit, tighten previously attached side of U-band and alternate tightening sides until an even, tight application is achieved.
6. When installing on double wall chimney a closure band should be installed to cover the between the liner and the outer jacket of the tee.

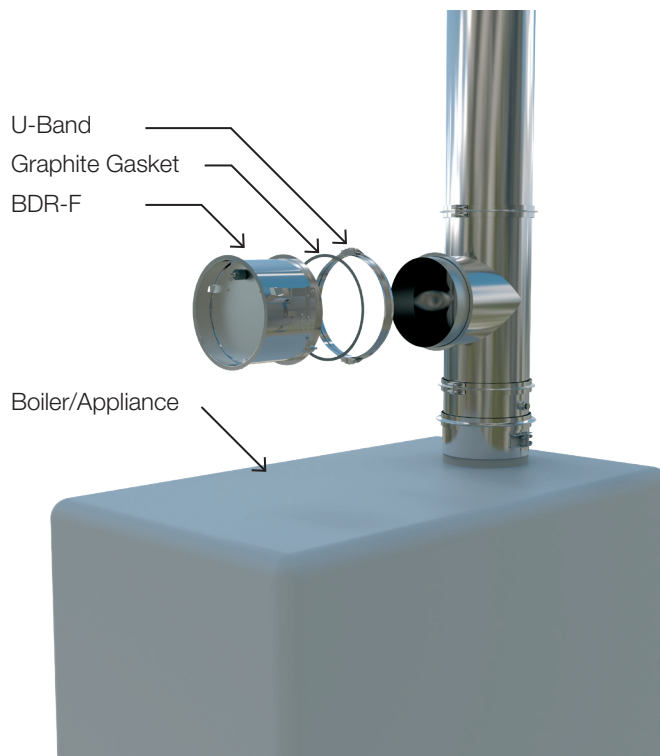



Fig 3-4: BDR-F Installation



Do not secure screws into any inner liner or outer jacket. The snap locks is the only thing needed for proper assembly.
Risk of injury. Sheet metal parts may be sharp. Always wear gloves and appropriate eye, foot, and other protection when handling these products.

1 Loosely connect one side with (2) nuts, bolts and washers and accurately position U-Band over flange connection.

2 Using a soft mallet, start at connected side of U-Band, and carefully seat U-Band on flange connection by tapping on alternate sides while working around to opposite side.

3 Complete U-Band assembly using (2) nuts, bolts and washers to snug tighten, then alternate tightening sides to achieve a tight application.

A correct application will position both U-Band connecting surfaces with little or no gap.

See 1.15 PIPE JOINT ASSEMBLY for complete assembly instructions.

3.4 BDR-C VENT JOINT ASSEMBLY

The BDR-C features a simple push-fit joint design, allowing ease and speed of installation, while maintaining a secure joint. To assemble the joint, simply follow the steps below.

1. The BDR-C has a female end to attach to the male branch of an EPSC/EPSC+ tee.
2. Having checked the correct orientation of the product, clean both the male and female ends with a suitable cloth to ensure they are free from dirt and grit.
3. Apply a generous amount of RTV Silicone around the outer circumference of the male end. Do the same around the inner circumference of the Elastomer Seal, while also checking the seal for any potential signs of damage.
4. After applying RTV Silicone, align the male end into the female and push the joint together using a slight twisting action.
5. With the joint assembled, locate the Locking Band around the joint as detailed in Fig. 3-6. The Locking Band must be installed so that the toggle is only closed from left to right.

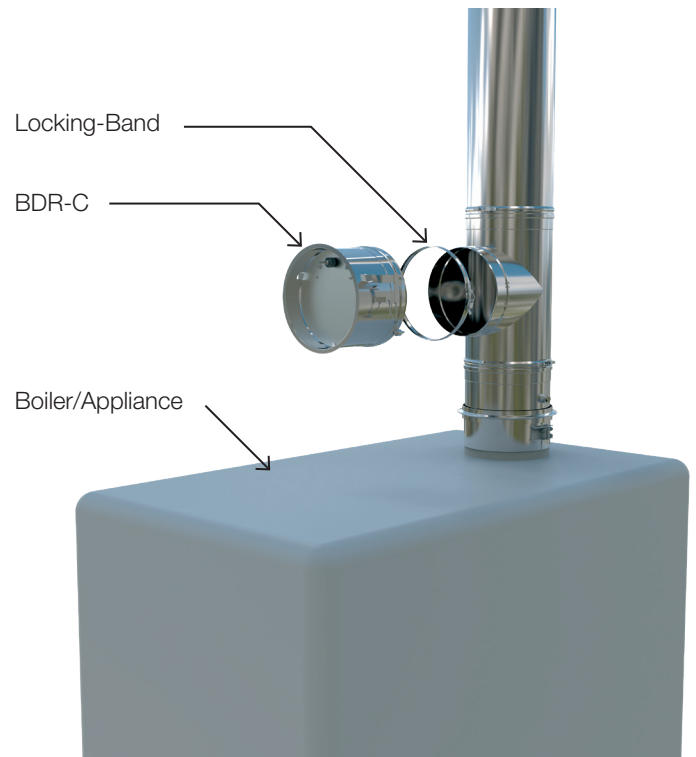


Fig 3-6: BDR-C Installation

NOTE: Hi Temp RTV Silicone with a temperature up to 500°F is suggested to provide additional sealing.



Do not secure screws into the vent. The locking band is the only thing needed for proper assembly.

Risk of injury. Sheet metal parts may be sharp. Always wear gloves and appropriate eye, foot, and other protection when handling these products.

3.4 BDR-M VENT JOINT ASSEMBLY

For all non EPS venting a BDR-M should be used.

For installations of a BDR-M See Fig. 3-7 Follow the chimney manufacturers recommendations to safely secure the BDR-M in the vent system. Once installed, verify the damper can fully open and close without hitting any obstructions in the vent.

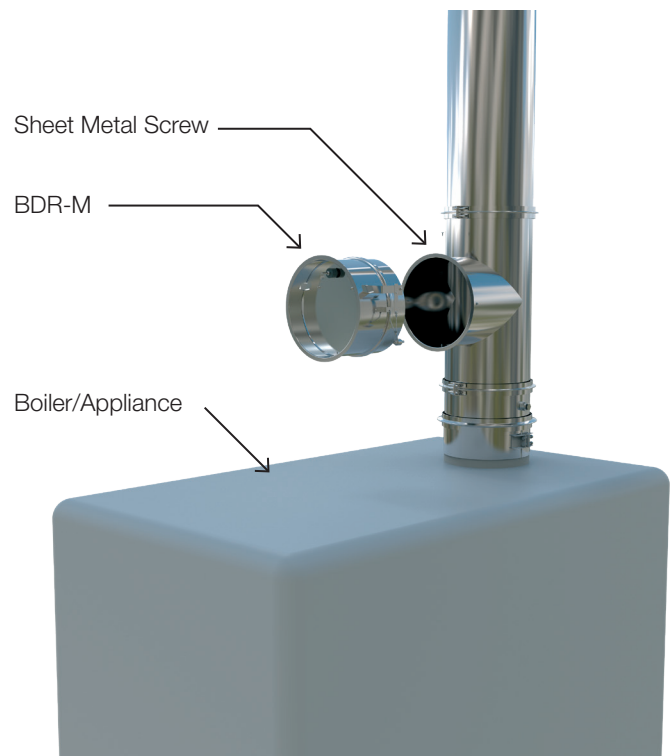


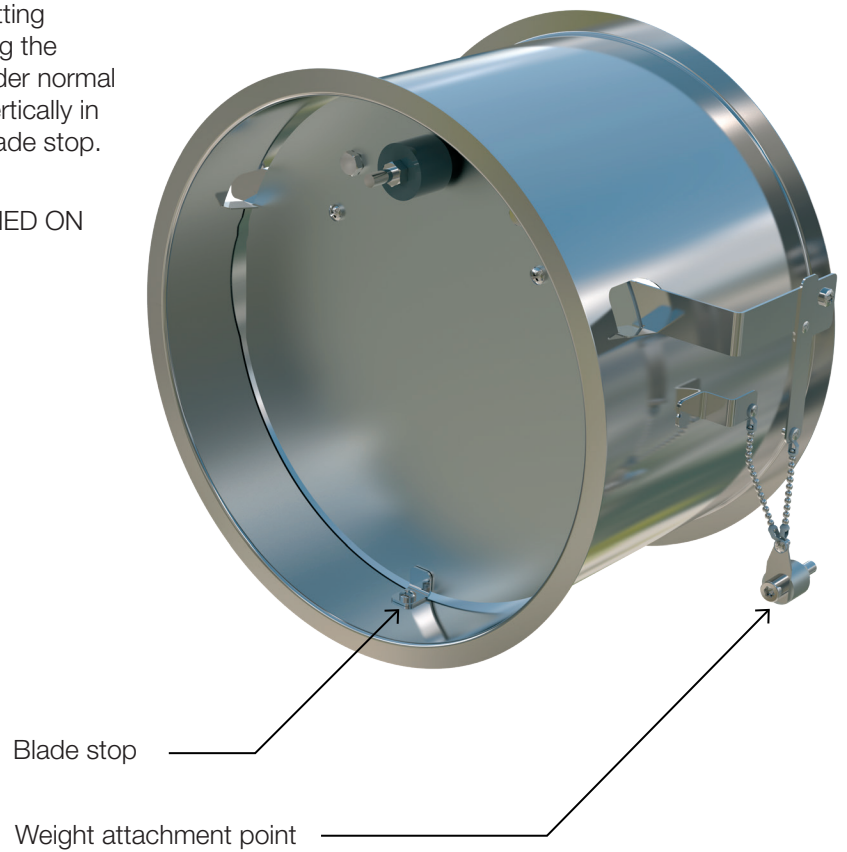
Fig 3-7: BDR-M Installation

4. STARTUP AND CONFIGURATION

4.1 GENERAL

The BDR should be set to the appropriate draft setting recommended by the appliance manufacturer using the included weight kit. With the appliance running under normal operation, the damper blade should be hanging vertically in the closed position while not resting against the blade stop.

DO NOT ADJUST THE LARGE WEIGHTS ATTACHED ON THE DAMPER BLADE



ENERVEX Inc.
1685 Bluegrass Lakes
Parkway
Alpharetta, GA 30004
USA

P: 770.587.3238
F: 770.587.4731
T: 800.255.2923
info@enervex.com
www.enervex.com

ENERVEX[®] 
VENTING DESIGN SOLUTIONS