

## Installation Instructions



Connector between an appliance to  
the Type B-Vent system.  
Single- and Double-Wall.

# DURACONNECT

**A MAJOR CAUSE OF VENT RELATED FIRES IS FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS. IT IS OF THE UTMOST IMPORTANCE THAT DURACONNECT BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.**

**IMPORTANT:**

**Read through all of these instructions before beginning your installation. Failure to install this product as described in these instructions will void the manufacturer's warranty, may create a fire or other safety hazard, and may affect your homeowner's insurance and safety listing of your appliance.**

**Keep these instructions for future reference.**

**Dear Customer, Installer, or End User:**

We welcome any comments regarding matters pertaining to our DuraVent products.

We welcome any ideas, input or complaints and I'll make sure that someone responds directly back to you.

Send your emails to:  
[president@duravent.com](mailto:president@duravent.com)

If you are searching for tech support or product information, please phone us at 800-835-4429.

Or email us at:  
[techsupport@duravent.com](mailto:techsupport@duravent.com)



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**DURACONNECT I AND DURACONNECT II**

*For the most up-to-date installation instructions, see [www.duravent.com](http://www.duravent.com)*

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**DURACONNECT**

**It is important that vents and vent connectors be installed only in accordance with simpson dura-vent installation instructions. A major cause of fire related problems with vents and vent connectors is the failure to install with required clearances (air spaces) to combustible materials. Read through all of these instructions before beginning your installation. Failure to install the connector as described in these instructions will void the manufacturers warranty and may have an effect on your homeowners insurance and UL listing.**

## **INTRODUCTION**

DuraConnect & DuraConnect II are flexible aluminum connector systems, with built-in twist-lock fittings for fast, easy professional installations. No more cutting, crimping, fitting, or fastening with screws. Adjustable in length, simply twist-lock, bend, and connect for an 80% labor savings!

As safe as it is easy to install, DuraConnect is the first and ONLY single wall connector tested and listed by Underwriter's Laboratories. DuraConnect & DuraConnect II are UL listed for 1 inch clearance to combustibles, and are flexible enough to insure greater earthquake safety.

DuraConnect & DuraConnect II are engineered venting systems, developed using the Battelle Laboratories Vent II Computer Program, plus extensive laboratory and field testing. The inside diameter of DuraConnect corrugated flex system has been oversized 1/4 inch to equalize flow resistance to that of smooth wall pipe. By eliminating the use of elbows, DuraConnect & DuraConnect

II systems further reduce flow resistance. Due to the high thermal conductivity of aluminum, DuraConnect & DuraConnect II systems heat up rapidly. This reduces condensate "wet time" by up to 50% - a significant factor in vent corrosion. DuraConnect & DuraConnect II are designed to combat condensate corrosion, a common problem with galvanized steel connectors. DuraConnect (single wall) and DuraConnect II (double wall) are constructed of aluminum flex - providing the same metallurgical protection and proven performance as the inner liner material in Type B Gas Vent.

## **APPLICATIONS**

The DuraConnect & DuraConnect II flexible connector systems may be used as a connector between the gas appliance outlet and a double-wall Type B gas vent or masonry chimney. DuraConnect & DuraConnect II flexible connectors may be used with both draft hood equipped appliances and fan-assisted Category I appliances. Gas appliances may be connected as a single appliance, or in multiples, provided the connectors and the vents are properly sized. DuraConnect & DuraConnect II systems may be installed in conditioned and unconditioned spaces. Refer to National Fuel Gas Code for restrictions on location and operation of equipment and vents. DuraConnect & DuraConnect II systems can not be installed in attic spaces. DuraConnect & DuraConnect II systems may not be used to pass through walls, ceilings, floors, or other combustible materials.

## CONNECTOR PIPE

DuraConnect & DuraConnect II flexible systems should be installed in as short and straight a run as possible. In accordance with NFPA 211, the appliance should be located as close as possible to the vent or chimney. DuraConnect & DuraConnect II should be installed without any dips or sags, shall have no bends greater than 90 degrees, and shall slope upwards at least 1/4" per foot. Joints between sections of connector pipe, as well as joints between pipe and fittings need not be fastened with screws, and can be connected by the DuraConnect & DuraConnect II twist-lock system.

The vent connector shall be firmly attached to the draft hood outlets or flue collars by sheet metal screws or other approved means. The flexible connector may be directly attached to the appliance, or you may use the DuraConnect appliance connector. The DuraConnect & DuraConnect II flexible sections are adjustable in length, providing up to 4 inches per foot of compression. (Zero stretch). Do not cut the flexible pipe. Compress the flexible pipe by setting the female end on the floor, grabbing the pipe approximately 12 inches from the female end, and pressing down, compressing the pipe to the desired length.

**Warning: do not substitute light gauge aluminum flex such as dryer vent, air duct, or chimney relining materials.**

## CLEARANCES

The DuraConnect & DuraConnect II systems are UL listed as flexible

connectors with clearances of 1 inch to combustible materials. The DuraConnect & DuraConnect II systems may be installed at a minimum of 1 inch clearance to both walls and ceilings. DuraConnect & DuraConnect II systems are approved for installations located in small furnace rooms, "closets", as well as in open areas such as garages.

Due to the high rigidity and natural "spring back" qualities of the DuraConnect & DuraConnect II systems heavy duty flex, no spacers or wall supports are normally required providing the connector is installed at a minimum of 1 inch clearance to combustibles. However, it is important to check the final installation to determine if a reasonable force could deflect the connector to a fixed position less than 1/4 inch from nearby combustibles such as walls, rafters, or framing. If so, DuraConnect wall supports should be installed so as to prevent this close clearance condition.

## FITTINGS

For retro-fit applications, a new appliance may be connected to an existing brand of gas vent previously installed in the wall or ceiling, by use of a DuraConnect adapter or a B-vent adapter for DuraConnect II. These adapters convert competitive brands of gas vent to the DuraConnect & DuraConnect II twist-lock connection. The Type B gas vent chimney may be installed with a DuraConnect round support, or as a low-cost alternative, with a wall strap. When using a wall strap, most Building Codes require installation

of a firestop plate at the ceiling.  
 For multiple gas installations, such as a furnace and hot water heater, a wide selection of "Tees" and "Y's" are available in single wall or double wall (B-vent).  
 Note: Providing the "TEE" or "Y" connectors are attached to the Type B gas vent in it's fully twist-lock position, no screws are required for fastening. However, if the branch on the "TEE" or "Y" is angled in some desired direction, and as a result the fitting is not in it's fully twist-locked position, the fitting should be fastened with one or more sheet metal screws.

## INSTALLATION PROCEDURE

Step 1. Secure Type B gas vent such that it protrudes a minimum of 1 inch into the room from a combustible ceiling or wall. Use a DuraConnect round ceiling support or wall straps.

Step 2. For a single appliance, simply twist-lock the flex pipe directly into the Type B gas vent. As an alternative, the flex pipe may be attached to the branch of a "Tee", with the tee cap installed in the base of the tee.

Step 3. For common venting multiple appliances, twist-lock a double wall or single wall "TEE" or "Y" to the Type B gas vent, then simply twist-lock the flexible connectors into the TEE or Y fitting.

Step 4. Bend the flexible connector into position. Avoid dips or sags, and maintain a minimum 1/4 inch per foot rise. When possible, use gradual "sweep" type bends for optimum draft and flow performance.

Step 5. Attach the flexible pipe to the outlet of the appliance by using a Draft Hood Connector for DuraConnect II

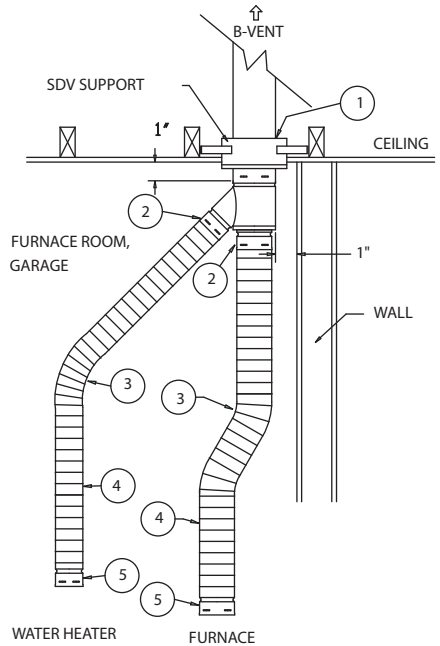


Figure 1

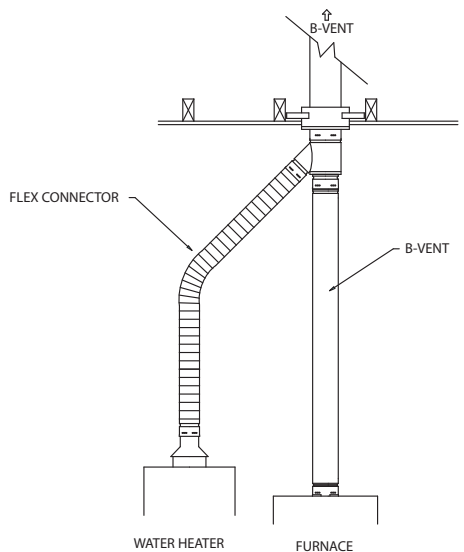
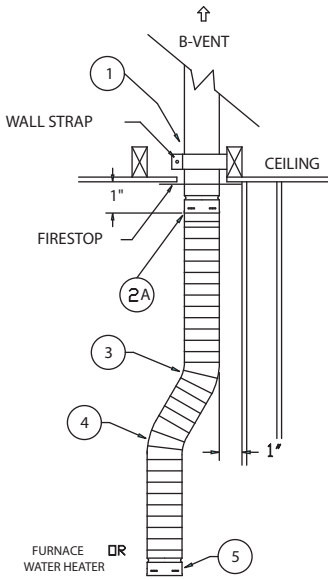
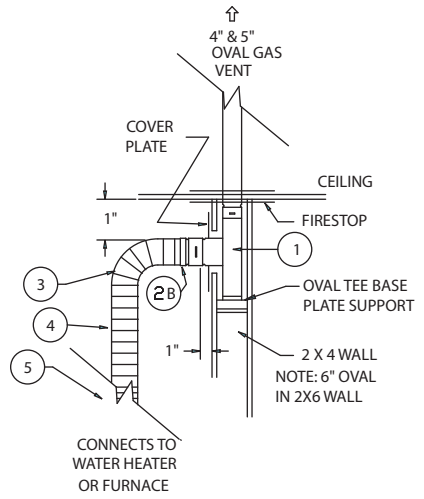


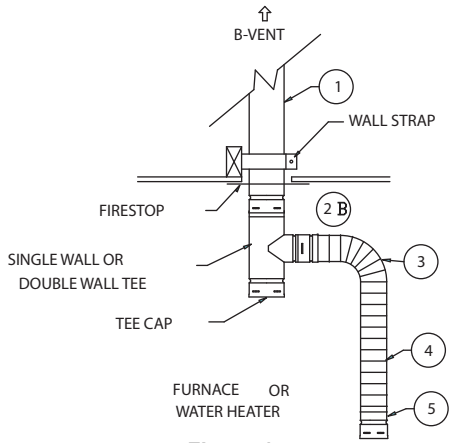
Figure 2



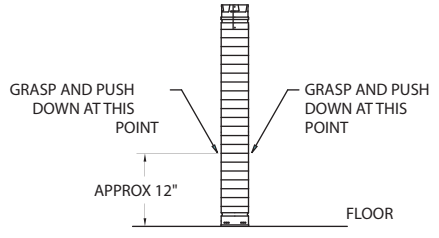
**Figure 3**



**Figure 5**



**Figure 4**



**Figure 6**

and an Appliance Connector for DuraConnect. Secure with sheet metal screws.

## TECHNICAL REPORT

### UL listing:

DuraConnect is the first and only single wall vent connector for gas appliances that has been tested and listed by Underwriters Laboratories. The DuraConnect & DuraConnect II flexible connector pipe and fittings are tested and listed under the UL category of "Chimney and Vent Connectors and Accessories." (UL File # MH14089). UL mechanical test requirements include:

1. Torsional load testing.
2. Ceiling support and wall support load test.
3. Load testing of fitting attachment of flexible connectors.
4. Load testing of aluminum flexible connectors.
5. Flexibility and cross-sectional area tests on flexible connectors.
6. Puncture tests.

UL temperature test requirements include:

**1. Test Procedure:** The flue gas generator shall be fired per UL test procedure #441 (470 degrees F). The tests are to be continued until equilibrium temperatures are reached on nearby combustible materials. (four hours).

**2. Test Configurations:** The vent connector system is tested in both a horizontal configuration (one inch clearance to walls and ceiling), and a vertical configuration (corner test at one inch clearance to both walls). To simulate a close clearance condition, the vent

connector was positioned at several locations 1/4 inch from combustible walls and ceilings for the duration of the tests.

**3. Test Requirements:** Temperature rise on combustible materials may not exceed UL specified limits.

## NATIONAL CODES

DuraConnect meets all requirements for single wall pipe connectors of the National Fuel Gas Code, ANSI Z223.1, and as specified under NFPA 54, section 7.7, "Single Wall Metal Pipe", and is in compliance with minimum wall thickness requirements for single wall aluminum vent connectors, section 7.10.2b. DuraConnect & DuraConnect II meet the requirements of NFPA 211 as specified under Chapter 5 "Chimney and Vent Connectors", Section 5-2.1. DuraConnect also meets the requirements for single wall vent connectors, of the Uniform Mechanical Code. UL test procedures verify that DuraConnect & DuraConnect II materials, (which are identical to the liner thickness of Type B Gas Vent) are "capable of withstanding the flue gas temperatures produced by the appliance." (Section C.) DuraConnect & DuraConnect II are UL listed at 1 inch clearance to combustible materials and are in compliance with the intent of the Uniform Mechanical Code to limit the temperature rise in nearby combustibles as per UL Standard #441. DuraConnect & DuraConnect II meet the requirements and intent of the National, Standard, and Uniform Mechanical Codes. The DuraConnect flexible connector system has been approved by SBCCI, BOCA and ICBO.



SBCCI Compliance Report 9135  
ICBO Evaluation Report 4895  
BOCA Research Report 90-82  
Patent 5,165,732  
National, Standard, and Uniform  
Mechanical Codes. The DuraConnect  
flexible connector system has been  
approved by SBCCI, BOCA and ICBO.

## ADDENDUM

This is an addendum to the DuraConnect & DuraConnect II Installation Instructions. Please read the full Installation Instructions for DuraConnect & DuraConnect II in this document, as well as the Installation Instructions for Simpson Dura-Vent Gas Vent systems (L204) in addition to this document. Where the full Installation Instructions for DuraConnect II and this addendum differ, this addendum takes precedence.

**WARNING: It is important that vents and vent connectors be installed in accordance with simpson dura-vent installation nstructions. A major cause of fire related problems with vents and vent connectors is the failure to install with required clearances (air spaces) to combustible materials. Read through all of these instructions before beginning your installation. Failure to install the connector as described in these instructions will void the manufacturers warranty and may affect your homeowner's insurance and UL listing.**

DuraConnect II has been approved by Underwriters Laboratories for use as a segment of Type B Gas vent system for installation in conditioned and

unconditioned Attics and Crawl Spaces, as explained in these instructions. Please note that this applies only to DuraConnect II (double wall flex segment/connector) and NOT to DuraConnect (single wall flex connector). DuraConnect II is considered to have the equivalent thermal properties as B-Vent (double-wall gas vent), and can be used where a B-Vent connector is required. Please refer to the NFPA 54 (National Fuel Gas Code) or the Sizing Handbook available from Simpson Dura-Vent for proper gas vent sizing.

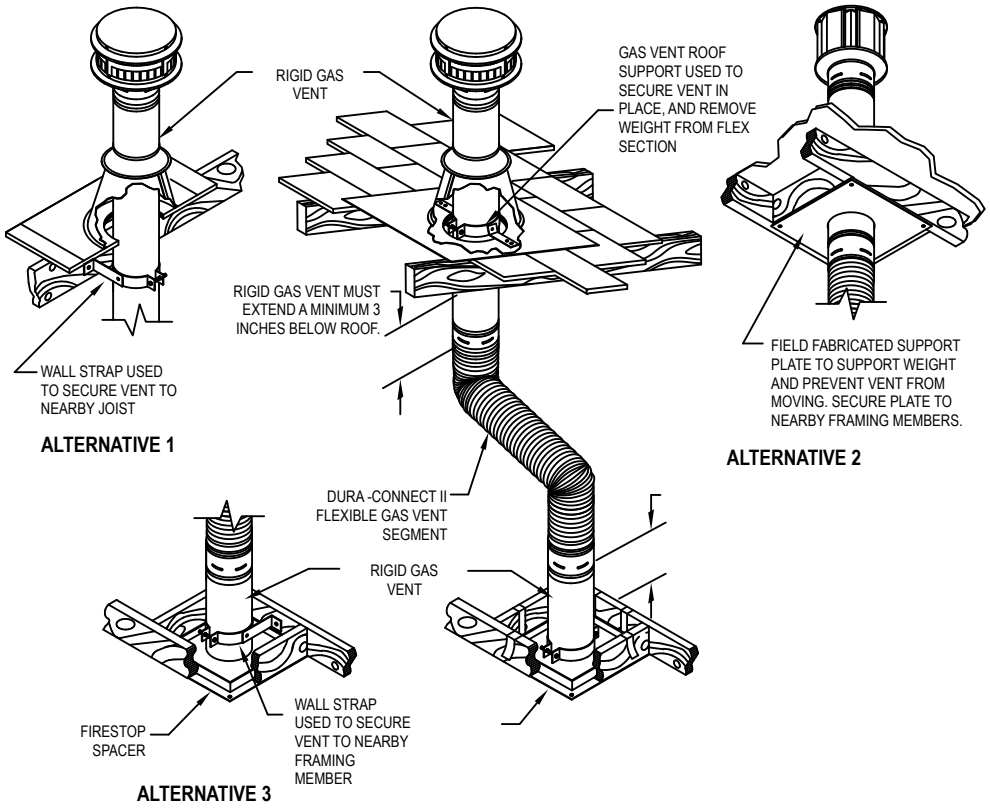
The following restrictions apply to installing DuraConnect II as a Gas Vent Segment:

- DuraConnect II may NOT be fully enclosed inside a chase.
- DuraConnect II may NOT penetrate or pass through any combustible surface (walls, ceilings, floors, or roofs, etc.). Passing through combustible surfaces can only be done with rigid gas vent sections (see L204 for instructions).
- Always maintain at least 1" clearance between DuraConnect II and combustible materials.
- When installing DuraConnect II as a segment in an Attic space (**Fig 7**), rigid Type B Gas Vent must penetrate at least 3" up into the Attic before DuraConnect II can be attached. The Type B Gas Vent extending up into the Attic must be secured using either a Firestop Support, or a combination of Firestop Spacer and Wall Strap. Also, there must be a minimum of 3" of rigid Type B Gas Vent extending down below roof joists. The rigid Type B Gas Vent above the segment of DuraConnect II must also be secured

using a Gas Vent Support installed under the flashing. As an alternative to using the Gas Vent Support, you can use a Wall Strap if there is a roof joist nearby, or you can field-fabricate a support-plate that will both support the weight and prevent lateral movement of the vent. Do not penetrate the inner liner of the vent. It is important that the rigid sections of Gas Vent are properly secured for a safe installation.

**Figure 7**

-When installing DuraConnect II as a segment in a Crawl Space, rigid Type B Gas Vent must extend a minimum of 3" through any penetration (wall, floor, ceiling, etc). The rigid Type B Gas Vent must also be supported using a Firestop Support, Gas Vent Support or Wall Strap, in order to remove the weight load from the DuraConnect II section. Please refer to the full instructions for DuraConnect II in the front part of this document, and Type B Gas Vent (L204) for the remainder of the installation.



**Figure 7**

## M&G DURAVENT LIMITED LIFETIME WARRANTY

M&G DuraVent, Inc. ("DuraVent") provides this limited lifetime warranty for all of its products with the exception of Ventinox® (lifetime), and PolyPro® (ten years). Subject to the limitations set forth below, DuraVent warrants that its products will be free from defects in material or manufacturing, if properly installed, maintained and used. DuraVent products are fully warranted if installed only by a professional installer. This Warranty is transferable from the original homeowner to the buyer of the home. This warranty does not cover normal wear and tear, smoke damage or damage caused by chimney fires, acts of God, or any product that was: (1) purchased other than from an authorized DuraVent dealer, retailer or distributor; (2) modified or altered; (3) improperly serviced, inspected or cleaned; or (4) subject to negligence or any use not in accordance with the installation instructions included with the product as determined by DuraVent. Installation instructions are available online at [www.duravent.com](http://www.duravent.com) under Support/Literature and through our Customer Service Department 800-835-4429 or [customerservice@duravent.com](mailto:customerservice@duravent.com). This limited lifetime warranty applies only to parts manufactured by DuraVent.

DuraVent provides the following warranties for its products: One Hundred Percent (100%) MSRP 15 years from the date of purchase, and Fifty Percent (50%) thereafter, except for the following limitations on: all Termination Caps and DuraBlack® are warranted at One Hundred Percent (100%) for five years.

All warranty obligations of DuraVent shall be limited to repair or replacement of the defective product pursuant to the terms and conditions applicable to each product line. These remedies shall constitute DuraVent's sole obligation and sole remedy under this warranty. This warranty provides no cash surrender value. The terms and conditions of this warranty may not be modified, altered or waived by any action, inaction or representation, whether oral or in writing, except upon the express, written authority of an executive officer of DuraVent.

Corn, bio-fuels, driftwood or other wood containing salt, preservative-treated lumber, plastic and household trash or garbage, or wood pellets containing such materials must not be burned in the appliance or fireplace. In case of a chimney fire, the chimney must be inspected and approved by a certified Chimney Sweep before reuse. After each annual inspection, maintenance, and cleaning, the certified Chimney Sweep must fill out and date the appropriate section of the warranty card provided with the chimney liner.

LIMITATIONS ON INTERNET SALES: Notwithstanding any other terms or conditions of this Limited Lifetime Warranty, DuraVent provides no warranty for the following specific products if such products are not installed by a qualified professional installer: DuraTech®, DuraPlus HTC®, DuraChimney® II, PelletVent Pro®, DirectVent Pro®, FasNSeal®, FasNSeal® W2, FasNSeal® Flex, and PolyPro®, and M&G DuraVent's relining products including DuraLiner®, DuraFlex® (SW, Pro, 316, 304), and Ventinox®. For purposes of this warranty, a trained professional installer is defined as one of the following: licensed contractors with prior chimney installation experience, CSIA Certified Chimney Sweeps, NFI Certified Specialists, or WETT Certified Professionals.

DuraVent must be notified and given the opportunity to inspect defective product prior to replacement under the terms of this limited lifetime warranty. All warranty claims must be submitted with proof of purchase. Labor and installation costs are not covered under this warranty. To obtain warranty service contact: DuraVent Warranty Service, 877 Cotting Ct., Vacaville CA 95688, or call 800-835-4429.

WHERE LAWFUL, DURAVENT DISCLAIMS ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL DURAVENT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR SPECIAL DAMAGES OR DIRECT OR INDIRECT LOSS OF ANY KIND, INCLUDING BUT NOT LIMITED TO PROPERTY DAMAGE AND PERSONAL INJURY. DURAVENT'S ENTIRE LIABILITY IS LIMITED TO THE PURCHASE PRICE OF THIS PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

For the most up-to-date installation instructions, see [www.duravent.com](http://www.duravent.com)

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Manufactured in Vacaville CA and Albany NY

# DuraVent

Member of  M&G Group

**Customer Service Support 800-835-4429 707-446-4740 FAX [www.duravent.com](http://www.duravent.com)**

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