

## BlazeMaster<sup>®</sup> CPVC Fire Sprinkler Pipe & Fittings Submittal Sheet

### General Description

Tyco Fire & Building Products (TFBP) BlazeMaster CPVC Pipe and Fittings are designed exclusively for use in wet pipe automatic fire sprinkler systems. They are made from a specially developed thermoplastic compound composed of post chlorinated polyvinyl chloride (CPVC) resin and state of the art additives. TFBP BlazeMaster CPVC products are easier to install than traditional steel pipe systems, and at the same time, provide superior heat resistance and strength as compared to traditional CPVC and PVC piping materials used in the plumbing trade. Various adapters are available to connect CPVC pipe to metallic piping. All female pipe thread adapters have brass inserts for durability. Grooved adapters connect directly to grooved end valves and metallic pipe, with flexible grooved end couplings.

#### **WARNING**

*Tyco Fire & Building Products (TFBP) BlazeMaster CPVC Pipe and Fittings described herein must be installed and maintained in compliance with this document, as well as with the applicable standards of the National Fire Protection Association, in addition to the standards of any other authorities having jurisdiction. **Failure to do so may impair the performance of these devices.***

*The owner is responsible for maintaining their fire protection system and devices in proper operating condition. The installing contractor or sprinkler manufacturer should be contacted with any questions.*

### Technical Data

#### **Sizes**

3/4" to 3"

#### **Maximum Working Pressure**

175 psi

#### **Approvals**

UL, FM, CUL, NSF, Dade County, LPCB, MEA, and the City of Los Angeles. (Refer to IH-1900, Rev. 0, January 2005 "Installation Instruction & Technical Handbook" for exact listing/approval information.)

#### **Manufacture Source**

U.S.A.

#### **Material**

- Pipe: ASTM F442, SDR 13.5
- Fittings: ASTM F438 (Sch. 40) and ASTM F439 (Sch. 80), ASTM F1970

#### **Color**

Orange



| NOMINAL SIZE | AVERAGE O.D. | AVERAGE I.D. | WEIGHT lbs./ft. | WATER FILLED WEIGHT lbs./ft. | FT. OF PIPE PER LIFT | WEIGHT PER LIFT lbs. |
|--------------|--------------|--------------|-----------------|------------------------------|----------------------|----------------------|
| 3/4"         | 1.050"       | 0.874"       | 0.18            | 0.44                         | 7875                 | 1339                 |
| 1"           | 1.315"       | 1.101"       | 0.26            | 0.67                         | 5040                 | 1320                 |
| 1-1/4"       | 1.660"       | 1.394"       | 0.42            | 1.08                         | 2835                 | 1191                 |
| 1-1/2"       | 1.900"       | 1.598"       | 0.54            | 1.41                         | 2205                 | 1213                 |
| 2"           | 2.375"       | 2.003"       | 0.84            | 2.20                         | 1260                 | 1084                 |
| 2-1/2"       | 2.875"       | 2.423"       | 1.26            | 3.26                         | 1215                 | 1531                 |
| 3"           | 3.500"       | 2.952"       | 1.87            | 4.83                         | 720                  | 1344                 |

**FIGURE 1 — PIPE DIMENSIONS**

## Installation

Tyco Fire and Building Products (TFBP) BlazeMaster CPVC Pipe and Fittings are to be installed in accordance with IH-1900, Rev. 0, January 2005 "Installation Instruction & Technical Handbook".

## Care and Maintenance

The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the National Fire Protection Association (e.g., NFPA 25), in addition to the standards of any authority having jurisdiction. The installing contractor or product manufacturer should be contacted relative to any questions.

It is recommended that automatic sprinkler systems be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national codes.

### NOTES

*Before closing a fire protection system control valve for inspection or maintenance work on the fire protection system that it controls, permission to shut down the affected fire protection system must first be obtained from the proper authorities and all personnel who may be affected by this action must be notified.*

*After placing a fire protection system in service, notify the proper authorities and advise those responsible for monitoring proprietary and/or central station alarms.*

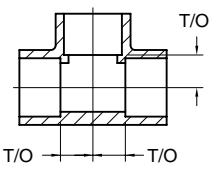
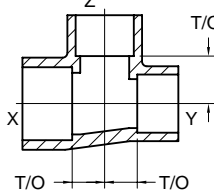
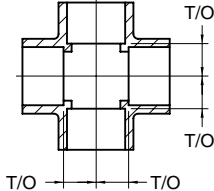
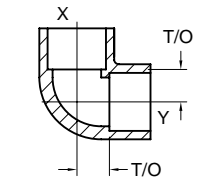
| FITTING TYPE  | PART NUMBER   | NOMINAL SIZE             | NOMINAL TAKE-OUT (T/O) |          |          | SCHD. | WEIGHT (lb.) |
|---|---|--------------------------|------------------------|----------|----------|-------|--------------|
|    | 80000   | 3/4"                     | 5/8"                   |          |          | 40    | 0.11         |
|   | 80001   | 1"                       | 11/16"                 |          |          | 40    | 0.19         |
|   | 80002   | 1-1/4"                   | 7/8"                   |          |          | 40    | 0.26         |
|   | 80003   | 1-1/2"                   | 1-1/16"                |          |          | 80    | 0.51         |
|   | 80004   | 2"                       | 1-3/8"                 |          |          | 80    | 0.90         |
|   | 80005   | 2-1/2"                   | 1-9/16"                |          |          | 80    | 1.59         |
|   | 80006   | 3"                       | 1-13/16"               |          |          | 80    | 2.41         |
|    |   | <b>X x Y x Z</b>         | <b>X</b>               | <b>Y</b> | <b>Z</b> |       |              |
|   | 80132   | 3/4" x 3/4" x 1"         | 3/4"                   | 3/4"     | 5/8"     | 40    | 0.14         |
|   | 80133   | 1" x 3/4" x 3/4"         | 9/16"                  | 9/16"    | 3/4"     | 40    | 0.14         |
|   | 80134   | 1" x 3/4" x 1"           | 3/4"                   | 11/16"   | 3/4"     | 40    | 0.17         |
|   | 80260   | 1" x 1" x 3/4"           | 5/8"                   | 5/8"     | 13/16"   | 40    | 0.16         |
|   | 80135   | 1-1/4" x 1" x 3/4"       | 5/8"                   | 5/8"     | 15/16"   | 40    | 0.21         |
|   | 80136   | 1-1/4" x 1" x 1"         | 3/4"                   | 3/4"     | 15/16"   | 40    | 0.22         |
|   | 80137   | 1-1/4" x 1" x 1-1/4"     | 15/16"                 | 15/16"   | 7/8"     | 40    | 0.26         |
|   | 80261   | 1-1/4" x 1-1/4" x 3/4"   | 5/8"                   | 5/8"     | 7/8"     | 40    | 0.23         |
|   | 80262   | 1-1/4" x 1-1/4" x 1"     | 3/4"                   | 3/4"     | 7/8"     | 40    | 0.26         |
|   | 80138   | 1-1/4" x 1-1/4" x 1-1/2" | 1"                     | 1"       | 1"       | 80    | 0.43         |
|   | 80140   | 1-1/2" x 1-1/4" x 3/4"   | 9/16"                  | 9/16"    | 1"       | 80    | 0.36         |
|   | 80141   | 1-1/2" x 1-1/4" x 1"     | 9/16"                  | 9/16"    | 1-1/16"  | 80    | 0.38         |
|   | 80263   | 1-1/2" x 1-1/2" x 3/4"   | 9/16"                  | 9/16"    | 1"       | 80    | 0.36         |
|   | 80264   | 1-1/2" x 1-1/2" x 1"     | 9/16"                  | 9/16"    | 1-1/16"  | 80    | 0.38         |
|   | 80275   | 1-1/2" x 1-1/2" x 1-1/4" | 7/8"                   | 7/8"     | 1"       | 80    | 0.45         |
|   | 80265   | 2" x 2" x 3/4"           | 3/4"                   | 3/4"     | 1-3/8"   | 80    | 0.61         |
|   | 80266   | 2" x 2" x 1"             | 7/8"                   | 7/8"     | 1-3/8"   | 80    | 0.66         |
|   | 80274   | 2" x 2" x 1-1/4"         | 1-1/16"                | 1-1/16"  | 1-3/8"   | 80    | 0.74         |
|   | 80267   | 2" x 2" x 1-1/2"         | 1-1/8"                 | 1-1/8"   | 1-3/8"   | 80    | 0.78         |
| 80271   | 2-1/2" x 2-1/2" x 1"  | 1-9/16"                  | 1-9/16"                | 1-9/16"  | 80       | 1.43  |              |
| 80272   | 2-1/2" x 2-1/2" x 1-1/4"  | 1-9/16"                  | 1-9/16"                | 1-9/16"  | 80       | 1.46  |              |
| 80273   | 2-1/2" x 2-1/2" x 1-1/2"  | 1-9/16"                  | 1-9/16"                | 1-9/16"  | 80       | 1.48  |              |
| 80276   | 2-1/2" x 2-1/2" x 2"  | 1-9/16"                  | 1-9/16"                | 1-9/16"  | 80       | 1.50  |              |
| 80270   | 3" x 3" x 1-1/2"  | 1-13/16"                 | 1-13/16"               | 1-13/16" | 80       | 2.28  |              |
| 80268   | 3" x 3" x 2"  | 1-13/16"                 | 1-13/16"               | 1-3/4"   | 80       | 2.25  |              |
| 80269   | 3" x 3" x 2-1/2"  | 1-13/16"                 | 1-13/16"               | 1-13/16" | 80       | 2.44  |              |
|  | 80009   | 3/4"                     | 9/16"                  |          |          | 40    | 0.13         |
|   | 80010   | 1"                       | 11/16"                 |          |          | 40    | 0.23         |
|   | 80011   | 1-1/4"                   | 15/16"                 |          |          | 40    | 0.34         |
|   | 80012   | 1-1/2"                   | 1-1/16"                |          |          | 80    | 0.67         |
|   | 80013   | 2"                       | 1-5/16"                |          |          | 80    | 1.00         |
|   | 80014   | 2-1/2"                   | 1-9/16"                |          |          | 80    | 1.91         |
|   | 80008   | 3"                       | 1-13/16"               |          |          | 80    | 2.89         |
|   | 80015   | 1" x 1" x 3/4" x 3/4"    | 7/8"                   |          |          | 40    | 0.28         |
|   |  | 80025                    | 3/4"                   | 5/8"     |          |       | 40           |
| 80026   |   | 1"                       | 3/4"                   |          |          | 40    | 0.14         |
| 80027   |   | 1-1/4"                   | 7/8"                   |          |          | 40    | 0.21         |
| 80028   |   | 1-1/2"                   | 1-1/16"                |          |          | 80    | 0.40         |
| 80029   |   | 2"                       | 1-5/16"                |          |          | 80    | 0.79         |
| 80030   |   | 2-1/2"                   | 1-9/16"                |          |          | 80    | 1.14         |
| 80031   |   | 3"                       | 1-13/16"               |          |          | 80    | 1.82         |
| 80032   |   |                          | <b>X x Y</b>           | <b>X</b> | <b>Y</b> |       |              |
|   |   |                          | 1" x 3/4"              | 11/16"   | 13/16"   | 40    | 0.16         |

FIGURE 2 — FITTING DIMENSIONS (Part 1 of 4)

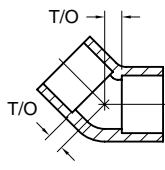
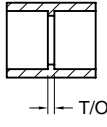
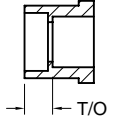
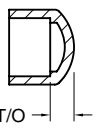
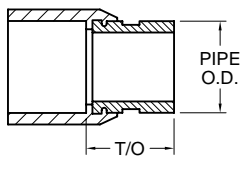
| FITTING TYPE   | PART NUMBER | NOMINAL SIZE            | NOMINAL TAKE-OUT (T/O) |                  | SCHD. | WEIGHT (lb.) |
|--|-------------|-------------------------|------------------------|------------------|-------|--------------|
|  |             |                         | T/O                    | PIPE O.D.        |       |              |
| <b>45° ELBOW</b><br>                        | 80050       | 3/4"                    | 3/8"                   |                  | 40    | 0.08         |
|  | 80051       | 1"                      | 3/8"                   |                  | 40    | 0.11         |
|  | 80052       | 1-1/4"                  | 3/4"                   |                  | 40    | 0.20         |
|  | 80053       | 1-1/2"                  | 1/2"                   |                  | 80    | 0.31         |
|  | 80054       | 2"                      | 3/4"                   |                  | 80    | 0.56         |
|  | 80055       | 2-1/2"                  | 13/16"                 |                  | 80    | 0.89         |
|  | 80056       | 3"                      | 1"                     |                  | 80    | 1.19         |
| <b>COUPLING &amp; REDUCING COUPLING</b><br> | 80075       | 3/4"                    | 1/8"                   |                  | 40    | 0.07         |
|  | 80076       | 1"                      | 1/8"                   |                  | 40    | 0.11         |
|  | 80077       | 1-1/4"                  | 3/16"                  |                  | 40    | 0.12         |
|  | 80078       | 1-1/2"                  | 3/16"                  |                  | 80    | 0.25         |
|  | 80079       | 2"                      | 3/16"                  |                  | 80    | 0.38         |
|  | 80080       | 2-1/2"                  | 1/4"                   |                  | 80    | 0.67         |
|  | 80081       | 3"                      | 3/16"                  |                  | 80    | 0.91         |
|  | 80220       | 1" x 3/4"               | 1/8"                   |                  | 40    | 0.08         |
| <b>REDUCER BUSHING</b><br>                 | 80200       | 1" x 3/4"               | 7/16"                  |                  | 40    | 0.04         |
|  | 80201       | 1-1/4" x 3/4"           | 1/2"                   |                  | 40    | 0.11         |
|  | 80202       | 1-1/4" x 1"             | 5/16"                  |                  | 40    | 0.12         |
|  | 80203       | 1-1/2" x 3/4"           | 5/8"                   |                  | 80    | 0.16         |
|  | 80204       | 1-1/2" x 1"             | 1/2"                   |                  | 80    | 0.14         |
|  | 80205       | 1-1/2" x 1-1/4"         | 3/8"                   |                  | 80    | 0.17         |
|  | 80206       | 2" x 3/4"               | 13/16"                 |                  | 80    | 0.27         |
|  | 80207       | 2" x 1"                 | 11/16"                 |                  | 80    | 0.26         |
|  | 80208       | 2" x 1-1/4"             | 9/16"                  |                  | 80    | 0.24         |
|  | 80209       | 2" x 1-1/2"             | 7/16"                  |                  | 80    | 0.19         |
|  | 80215       | 2-1/2" x 1"             | 15/16"                 |                  | 80    | 0.42         |
|  | 80214       | 2-1/2" x 1-1/4"         | 13/16"                 |                  | 80    | 0.45         |
|  | 80213       | 2-1/2" x 1-1/2"         | 11/16"                 |                  | 80    | 0.46         |
|  | 80211       | 2-1/2" x 2"             | 5/8"                   |                  | 80    | 0.29         |
| 80210  | 3" x 2"     | 3/4"                    |                        | 80               | 0.72  |              |
| 80212  | 3" x 2-1/2" | 1/2"                    |                        | 80               | 0.47  |              |
| <b>CAP</b><br>                            | 80100       | 3/4"                    | 5/16"                  |                  | 40    | 0.04         |
|  | 80101       | 1"                      | 3/8"                   |                  | 40    | 0.06         |
|  | 80102       | 1-1/4"                  | 7/16"                  |                  | 40    | 0.10         |
|  | 80103       | 1-1/2"                  | 11/16"                 |                  | 80    | 0.20         |
|  | 80104       | 2"                      | 5/8"                   |                  | 80    | 0.31         |
|  | 80105       | 2-1/2"                  | 7/8"                   |                  | 80    | 0.58         |
|  | 80106       | 3"                      | 1"                     |                  | 80    | 0.88         |
| <b>GROOVED COUPLING ADAPTER</b><br>       | 80160       | 1-1/4" x 1-1/4" Groove  | 2-5/16"                | 1-1/4" (1.660")  | 40    | 0.78         |
|  | 80161       | 1-1/2" x 1-1/2" Groove  | 2-5/16"                | 1-1/2" (1.900")  | 80    | 0.95         |
|  | 80162       | 2" x 2" Groove          | 2-5/16"                | 2" (2.375")      | 80    | 1.42         |
|  | 80163       | 2-1/2" x 2-1/2" Groove  | 2-5/16"                | 2-1/2" (2.875")  | 80    | 2.28         |
|  | 80164       | 3" x 3" Groove          | 2-1/4"                 | 3" (3.500")      | 80    | 3.00         |
|  | 80169       | 2-1/2" x 76,1 mm Groove | 2-5/16"                | 76,1 mm (3.000") | 80    | 2.28         |

FIGURE 2 — FITTING DIMENSIONS (Part 2 of 4)

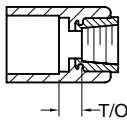
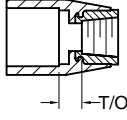
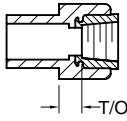
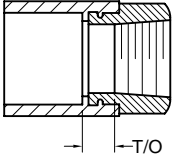
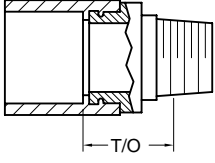
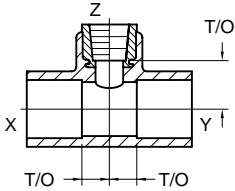
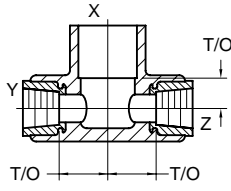
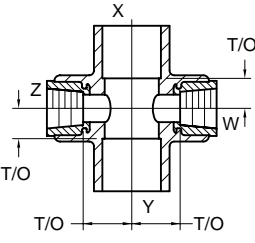
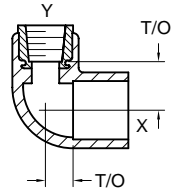
| FITTING TYPE  | PART NUMBER | NOMINAL SIZE               | NOMINAL TAKE-OUT (T/O) |          |          | SCHD. | WEIGHT (lb.) |
|---|-------------|----------------------------|------------------------|----------|----------|-------|--------------|
|   |             |                            | X                      | Y        | Z        |       |              |
| <b>SPRINKLER HEAD ADAPTER</b><br>          | 80175E      | 3/4" x 1/2" NPT            | 7/16"                  |          |          | 80    | 0.20         |
|   | 80176E      | 1" x 1/2" NPT              | 7/16"                  |          |          | 80    | 0.22         |
|   | 80175WL     | 3/4" x 1/2" NPT            | 7/16"                  |          |          | 40    | 0.16         |
|   | 80179       | 1" x 3/4" NPT              | 13/16"                 |          |          | 40    | 0.43         |
| <b>SPRINKLER HEAD ADAPTER</b><br>          | 80175W      | 3/4" x 1/2" NPT            | 1/2"                   |          |          | 40    | 0.19         |
|   | 80176W      | 1" x 1/2" NPT              | 1/2"                   |          |          | 40    | 0.18         |
| <b>SPRINKLER HEAD ADAPTER (SPIGOT)</b><br> | 80177L      | 3/4" x 1/2" NPT            | 1/2"                   |          |          | 40    | 0.16         |
|   | 80178       | 1" x 1/2" NPT              | 9/16"                  |          |          | 40    | 0.20         |
|   | 80180       | 1" x 3/4" NPT              | 7/8"                   |          |          | 40    | 0.40         |
| <b>FEMALE ADAPTER</b><br>                 | 80142       | 3/4" x 3/4" NPT            | 13/16"                 |          |          | 40    | 0.41         |
|   | 80145       | 1" x 1" NPT                | 7/8"                   |          |          | 40    | 0.63         |
|   | 80146       | 1-1/4" x 1-1/4" NPT        | 1-1/8"                 |          |          | 40    | 1.03         |
|   | 80147       | 1-1/2" x 1-1/2" NPT        | 1-3/8"                 |          |          | 80    | 1.42         |
|   | 80148       | 2" x 2" NPT                | 1-11/16"               |          |          | 80    | 2.66         |
| <b>MALE ADAPTER</b><br>                  | 80157       | 3/4" x 3/4" NPT            | 1-5/16"                |          |          | 40    | 0.33         |
|   | 80158       | 1" x 1" NPT                | 1-3/8"                 |          |          | 40    | 0.56         |
| <b>SPRINKLER HEAD ADAPTER TEE</b><br>    |             | <b>X x Y x Z</b>           | <b>X</b>               | <b>Y</b> | <b>Z</b> |       |              |
|   | 80250       | 3/4" x 3/4" x 1/2" NPT     | 9/16"                  | 9/16"    | 1"       | 40    | 0.22         |
|   | 80251       | 1" x 1" x 1/2" NPT         | 11/16"                 | 11/16"   | 1-3/16"  | 40    | 0.29         |
|   | 80249       | 1" x 1" x 1" NPT           | 15/16"                 | 15/16"   | 1-9/16"  | 40    | 0.73         |
|   | 80256       | 1-1/4" x 1" x 1/2" NPT     | 7/16"                  | 9/16"    | 1-5/16"  | 40    | 0.30         |
|   | 80252       | 1-1/4" x 1-1/4" x 1/2" NPT | 7/16"                  | 7/16"    | 1-5/16"  | 40    | 0.31         |
|   | 80257       | 1-1/2" x 1-1/4" x 1/2" NPT | 1/2"                   | 11/16"   | 1-7/16"  | 80    | 0.43         |
|   | 80254       | 1-1/2" x 1-1/2" x 1/2" NPT | 1/2"                   | 1/2"     | 1-7/16"  | 80    | 0.46         |
|   | 80258       | 2" x 1-1/2" x 1/2" NPT     | 1/2"                   | 5/8"     | 1-11/16" | 80    | 0.56         |
|   | 80253       | 2" x 2" x 1/2" NPT         | 1/2"                   | 1/2"     | 1-11/16" | 80    | 0.62         |

FIGURE 2 — FITTING DIMENSIONS (Part 3 of 4)

| FITTING TYPE  | PART NUMBER | NOMINAL SIZE   | NOMINAL TAKE-OUT (T/O) |                    | SCHD. | WEIGHT (lb.) |    |      |
|---|-------------|--|------------------------|--------------------|-------|--------------|----|------|
|   |             |  | X                      | Y, Z               |       |              |    |      |
| <b>BACK-TO-BACK TEE</b><br>                  | 80459       | X x Y x Z  | X                      | Y, Z               | 40    | 0.48         |    |      |
|   | 80460       | 1" x 1/2" NPT x 1/2" NPT<br>1" x 1/2" NPT x 1/2" NPT           | 5/8"                   | 1-5/16"<br>1-3/16" |       |              | 40 | 0.46 |
| <b>BACK-TO-BACK CROSS</b><br>                | 80462       | X x Y x Z x W  | X, Y                   | Z, W               | 40    | 0.46         |    |      |
|   | 80463       | 1" x 1" x 1/2" NPT x 1/2" NPT<br>1" x 1" x 1/2" NPT x 1/2" NPT | 5/8"                   | 1-3/16"<br>1-5/16" |       |              | 40 | 0.47 |
| <b>SPRINKLER HEAD ADAPTER 90° ELBOW</b><br> | 80199       | X x Y  | X                      | Y                  | 40    | 0.20         |    |      |
|   | 80198       | 3/4" x 1/2" NPT  | 9/16"                  | 1"                 |       |              | 40 | 0.26 |
|   | 80196       | 1" x 1/2" NPT<br>1" x 3/4" NPT                                 | 3/4"<br>1-1/16"        | 1-1/4"<br>1-7/16"  |       |              | 40 | 0.26 |

**FIGURE 2 — FITTING DIMENSIONS (Part 4 of 4)**

## Limited Warranty

Products manufactured by Tyco Fire & Building Products (TFBP) are warranted solely to the original Buyer for ten (10) years against defects in material and workmanship when paid for and properly installed and maintained under normal use and service. This warranty will expire ten (10) years from date of shipment by TFBP. No warranty is given for products or components manufactured by companies not affiliated by ownership with TFBP or for products and components which have been subject to misuse, improper installation, corrosion, or which have not been installed, maintained, modified or repaired in accordance with applicable Standards of the National Fire Protection Association, and/or the standards of any other Authorities Having Jurisdiction. Materials found

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In no event shall TFBP be liable, in contract, tort, strict liability or under any other legal theory, for incidental, indirect, special or consequential damages, including but not limited to labor charges, regardless of whether TFBP was informed about the possibility of such damages, and in no event shall TFBP's liability exceed an amount equal to the sales price.

The foregoing warranty is made in lieu of any and all other warranties, express or implied, including warranties

of merchantability and fitness for a particular purpose.

This limited warranty sets forth the exclusive remedy for claims based on failure of or defect in products, materials or components, whether the claim is made in contract, tort, strict liability or any other legal theory.

This warranty will apply to the full extent permitted by law. The invalidity, in whole or part, of any portion of this warranty will not affect the remainder.