

**SYSTEM 15® DWV**    **SYSTEM XFR® DWV**    **DRAIN-GUARD™ DWV**    **MJ GREY™ DWV**



Project: \_\_\_\_\_

Engineer: \_\_\_\_\_

Contractor: \_\_\_\_\_

Submitted by: \_\_\_\_\_ Date \_\_\_\_\_

Approved by: \_\_\_\_\_ Date \_\_\_\_\_

Order No: \_\_\_\_\_ Date \_\_\_\_\_

Specification: \_\_\_\_\_

### < STANDARDS >

#### System 15®



#### System XFR®



#### Drain-Guard™ Double Containment

Depending on your application, Drain-Guard meets the same requirements of System 15 and System XFR

#### MJ Grey™ Mechanical Couplings Used with System 15 and/or System XFR



## introduction

PVC is the most frequently specified of all thermoplastic piping materials. It has been used successfully for over 60 years. PVC is characterized by distinctive physical properties, and is resistant to corrosion and chemical attack by acids, alkalis, salt solutions and many other chemicals.

### PRODUCT SIZES

|                           |  |
|---------------------------|--|
| System 15®<br>System XFR® | 1-1/2" – 24" (40mm – 600mm)<br>1-1/2" – 18" (40mm – 450mm)   |
| Drain-Guard™              | Depending on your application, Drain-Guard is a double containment piping system using System 15 and or System XFR as its primary components.<br><br>Carrier: 1-1/2" – 8" (40mm – 200mm)<br>Containment: 4" – 12" (100mm – 300mm)<br>(Larger sizes available upon request) |
| MJ Grey™                  | 8" – 12" (200mm – 300mm)   |

### PRODUCT INTRODUCTION

System 15®, System XFR® and Drain-Guard™ by IPEX are compatible product lines designed for use in Drain, Waste and Vent (DWV) applications for buildings designated as noncombustible construction.

While both thermoplastic systems meet the demanding Flame Spread Rating requirements for noncombustible construction, System XFR also meets the Smoke Developed Classification requirements for installation in high buildings and air plenum spaces.

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#### System 15®

System 15 DWV is certified to CSA B181.2, made to Schedule 40 thickness and exhibits a Flame Spread Rating of not greater than 25 as per ULC S102.2 test methods. With some restrictions, System 15 is permitted for use in many commercial DWV applications.

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#### System 15® vs ABS

System 15 is a premium choice for DWV piping versus either ABS solid wall or cell core pipe. System 15 will provide designers and building owners with 40% greater tensile strength, 40% lower expansion contraction movement, greater chemical resistance, less noise generation and superior fire resistance than ABS.

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#### System XFR®

System XFR DWV is also certified to CSA B181.2 and made to Schedule 40 thickness. System XFR is listed to ULC S102.2 to exhibit a Flame Spread Rating of not greater than 25 as well as a Smoke Developed Classification of not greater than 50. Having this makes System XFR permissible for use in High Buildings (as defined in NBC section 3.2.6) and Air Plenums (section 3.6.4.3).

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#### Drain-Guard™ Double Containment

Depending on your application, Drain-Guard is a double containment piping system using System 15 and or System XFR as its primary components. The many performance benefits of System 15 and System XFR are enhanced by this dual pipe concept, including excellent thermal properties, improved flow, longevity and durability, and the security of meeting all code requirements for noncombustible buildings.

Drain-Guard piping systems provide safe transport of sanitary or storm drainage in critical areas. Should a leak occur, people, equipment and valuable property will be protected from possible harm.

Contact IPEX Inc. for product availability and pricing for a customized solution on your project.

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#### MJ Grey™ Mechanical Couplings

MJ Grey couplings are a mechanical joint assembly suitable for use on IPEX System 15 or System XFR DWV piping sizes 8" through 12", are certified to CSA B602 and are listed to ULC S102.2 to exhibit a Flame/Smoke rating of 25/50.

# DWV Systems

## Material Description

### DESIGN AND INSTALLATION

The design and installation of PVC systems shall be performed in accordance with the recommendations detailed in the Handling and Installation section of this Submittal Data Sheet, local and national regulations where applicable.

**To ensure the full integrity of the completed system, all components shall be supplied by IPEX.**

### VISUAL ID

From a distance, there are some differences in appearance between System 15 and System XFR to help with their identification.

The photo below shows the position of one of two labels on System XFR fittings and a close-up of information printed on the label.

| Description     | System 15  | System XFR |
|-----------------|------------|------------|
| Colour          | Light grey | Dark grey  |
| Pipe Print Line | Black      | Green      |
| Fitting Labels  | White      | Green      |



MJ Grey couplings can be easily differentiated from standard cast iron couplings by noting that the rubber interior sleeve is grey in colour (versus the traditional black colour) and exterior identification labels showing the System XFR trade name and the Flame and Smoke values as per ULC S102.2.

# DWV Systems

## Dimensions and Weights

### Pipe Dimensions

The physical dimensions and tolerances of System 15 and System XFR pipe and fittings meet the requirements of CSA B181.2.

#### System 15® & System XFR® Pipe Dimensions

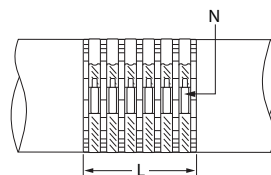
| Diameter (in.) | Avg. Outside Diameter (in.) | Impact Resistance ft.lb at 0°C |
|----------------|-----------------------------|--------------------------------|
| 1-1/2          | 1.9                         | 52                             |
| 2              | 2.4                         | 66                             |
| 3              | 3.5                         | 85                             |
| 4              | 4.5                         | 100                            |
| 6              | 6.6                         | 100                            |
| 8              | 8.6                         | 130                            |
| 10             | 10.8                        | 140                            |
| 12             | 12.8                        | 150                            |
| 14             | 14.0                        | 165                            |
| 16             | 16.0                        | 175                            |
| 18             | 18.0                        | 200                            |
| 20             | 20.0                        | 220                            |
| 24             | 24.0                        | 220                            |

#### NOTES:

- System XFR is now available up to 18" diameter
- System XFR is made in 12 foot lengths only for all sizes
- System 15 pipe lengths of 12 foot are plain end while 20 foot lengths of pipe are solvent bell ended
- System 15 24" diameter pipe is not ULC Listed for a Flame Spread Rating

#### MJ Grey™ Dimensions

| Coupling Size (inches) | Length (L) (inches) | N Number of Clamps |
|------------------------|---------------------|--------------------|
| 8                      | 6.0                 | 6                  |
| 10                     | 6.0                 | 6                  |
| 12                     | 6.0                 | 6                  |



### Pipe Weight

Weight differences between various materials can influence a project significantly. During handling and installation, heavier piping products may incur additional costs for the extra manpower and equipment. Other effects of heavier systems may include reduced daily production levels, and impact on worker safety and fatigue.

The table below compares the weights of three more commonly specified DWV piping materials.

#### Weight Comparison

| Size (in.) | System 15® and System XFR® |        | Cast Iron |        |
|------------|----------------------------|--------|-----------|--------|
|            | (lb/ft)                    | (kg/m) | (lb/ft)   | (kg/m) |
| 1-1/2      | 0.4                        | 0.5    | 2.7       | 4.0    |
| 2          | 0.5                        | 0.7    | 3.7       | 5.5    |
| 3          | 1.0                        | 1.5    | 5.0       | 7.5    |
| 4          | 1.5                        | 2.2    | 7.0       | 10.4   |
| 6          | 2.6                        | 3.8    | 11.5      | 17.1   |
| 8          | 3.8                        | 5.7    | 16.0      | 23.8   |
| 10         | 5.4                        | 8.1    | 25.5      | 38.0   |
| 12         | 7.2                        | 10.7   | 30.0      | 44.7   |
| 14         | 8.5                        | 12.7   | -         | -      |
| 15         | -                          | -      | 52.5      | 78.2   |
| 16         | 11.2                       | 16.6   | -         | -      |
| 18         | 14.1                       | 21.0   | -         | -      |
| 20         | 16.5                       | 24.6   | -         | -      |
| 24         | 23.0                       | 34.3   | -         | -      |

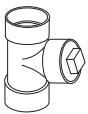
| Dimension |    | Product Code |
|-----------|----|--------------|
| inches    | mm |              |

### System XFR DWV Pipe



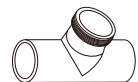
|       |     |        |
|-------|-----|--------|
| 1-1/2 | 40  | 110067 |
| 2     | 50  | 110068 |
| 3     | 75  | 110069 |
| 4     | 100 | 110070 |
| 6     | 150 | 110071 |
| 8     | 200 | 110072 |
| 10    | 250 | 110073 |
| 12    | 300 | 110074 |
| 14    | 350 | 110076 |
| 16    | 400 | 110077 |
| 18    | 450 | 110078 |

### Line Cleanout H x H x Gasket Plug



|           |                |        |
|-----------|----------------|--------|
| 1-1/2     | 40             | 526040 |
| 2         | 50             | 526041 |
| 3         | 75             | 526103 |
| 4         | 100            | 526104 |
| 4 x 3 x 4 | 100 x 75 x 100 | 526105 |
| 6         | 150            | 526161 |
| 8         | 200            | 426162 |
| 10        | 250            | 526163 |
| 12        | 300            | 526164 |

### Line Cleanout Sp x Sp x Threaded Plug



|   |     |        |
|---|-----|--------|
| 8 | 200 | 526766 |
|---|-----|--------|

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### Plug Cleanout MPT with gasket



|       |     |        |
|-------|-----|--------|
| 1-1/2 | 40  | 526401 |
| 2     | 50  | 526402 |
| 3     | 75  | 526403 |
| 4     | 100 | 526404 |
| 6     | 150 | 526405 |

### Fitting Cleanout Sp x FPT



|       |     |        |
|-------|-----|--------|
| 1-1/2 | 40  | 526042 |
| 2     | 50  | 526046 |
| 3     | 75  | 526047 |
| 4     | 100 | 526048 |
| 6     | 150 | 426050 |

### Fitting Cleanout Sp x Gasket Plug



|       |     |        |
|-------|-----|--------|
| 1-1/2 | 40  | 526345 |
| 2     | 50  | 526346 |
| 3     | 75  | 526347 |
| 4     | 100 | 526348 |
| 6     | 150 | 526349 |

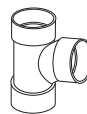
| Dimension |    | Product Code |
|-----------|----|--------------|
| inches    | mm |              |

### Tube End Cleanout H x Gasket Plug



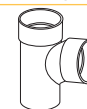
|       |     |        |
|-------|-----|--------|
| 1-1/2 | 40  | 526291 |
| 2     | 50  | 526298 |
| 3     | 75  | 526299 |
| 4     | 100 | 526300 |

### Sanitary Tee H x H x H



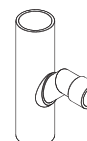
|                   |              |        |
|-------------------|--------------|--------|
| 1-1/2             | 40           | 526081 |
| 2                 | 50           | 526082 |
| 2 x 1-1/2 x 1-1/2 | 50 x 40 x 40 | 526058 |
| 2 x 1-1/2 x 2     | 50 x 40 x 50 | 526057 |
| 2 x 1-1/2         | 50 x 40      | 526056 |
| 3                 | 75           | 526083 |
| 3 x 1 1/2         | 75 x 40      | 526061 |
| 3 x 2             | 75 x 50      | 526060 |
| 4                 | 100          | 526084 |
| 4 x 2             | 100 x 50     | 526064 |
| 4 x 3             | 100 x 75     | 526066 |
| 6                 | 150          | 526377 |
| 6 x 4             | 150 x 100    | 526385 |
| 8                 | 200          | 526810 |
| 8 x 4             | 200 x 100    | 526808 |
| 8 x 6             | 200 x 150    | 526809 |
| 10                | 250          | 526814 |
| 10 x 4            | 250 x 100    | 526811 |
| 10 x 6            | 250 x 150    | 526812 |
| 10 x 8            | 250 x 200    | 526813 |
| 12                | 300          | 526819 |
| 12 x 4            | 300 x 100    | 526815 |
| 12 x 6            | 300 x 150    | 526816 |
| 12 x 8            | 300 x 200    | 526817 |
| 12 x 10           | 300 x 250    | 526818 |
| 14 x 4            | 350 x 100    | 526820 |
| 14 x 6            | 350 x 150    | 526821 |
| 16 x 4            | 400 x 100    | 526826 |
| 16 x 6            | 100 x 150    | 526827 |
| 18 x 4            | 450 x 100    | 526833 |
| 18 x 6            | 450 x 150    | 526834 |

### Sanitary Tee Sp x H x H



|           |         |        |
|-----------|---------|--------|
| 1-1/2     | 40      | 526550 |
| 3 x 1-1/2 | 75 x 40 | 526552 |
| 4         | 100     | 426557 |

### Sanitary Tee Sp x Sp x H



|        |           |        |
|--------|-----------|--------|
| 8 x 4  | 200 x 100 | 526926 |
| 8 x 6  | 200 x 150 | 526998 |
| 10 x 4 | 250 x 100 | 526997 |
| 10 x 6 | 250 x 150 | 526758 |
| 12 x 4 | 300 x 100 | 526761 |
| 12 x 6 | 300 x 150 | 526762 |

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