# DRAINAGE SYSTEMS FOR NONCOMBUSTIBLE BUILDINGS

## SYSTEM 15° DWV SYSTEM XFR° DWV DRAIN-GUARD" DWV MJ GREY" DWV

From underground parking garages to hospitals to high buildings, more and more mechanical contractors and engineers are switching to a longlasting DWV solution.

Why are PVC systems from IPEX becoming the new standard? As an integrated solution, System 15<sup>®</sup> and System XFR<sup>®</sup> meet all code requirements for noncombustible buildings. More importantly, they provide the required rugged reliability with all the added benefits of PVC. They're lighter than their metal counterparts, making them easier to handle and install. Very durable, they resist corrosion and require virtually no maintenance. And they yield substantial cost savings both now and down the road.

Clearly System 15 and System XFR have raised the bar—and pipe—for DWV systems in noncombustible buildings.

Drain-Guard<sup>™</sup> double containment 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.

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.

MJ Grey<sup>™</sup> mechanical couplings are a great alternative to solvent welding when working in cold weather conditions or from heights in a scissor lift or bucket.

## **ADVANTAGES**

#### Lightweight, Easier to Install

A PVC system is as much as 75% lighter than equivalent lengths of cast iron, making it easier to handle, store and install. It's so light no special equipment is needed to hoist it up during installation, making what used to be awkward, back-breaking work now an easy one man job. In this way, a PVC system can lower labour requirements and reduce installation costs.

## (2) Corrosion-Resistant, Less Maintenance

Unlike cast iron pipe, a PVC system doesn't rust, pit, scale or corrode. In fact, its interior and exterior walls remain smooth in virtually any service condition, requiring virtually no maintenance and ensuring years of reliable service.

### **(3)** Cost–Savings Now and Over Long-term

No matter how you look at it, a PVC system is more cost-effective than a traditional metal system. It's less costly to transport and store. It's easier to install, bringing down installation costs. It lasts longer. What this all adds up to is substantial savings now and in the future.

#### A More Aesthetic Alternative

Sleek and streamlined, PVC presents a more pleasing, aesthetic alternative to traditional metal systems. And as they won't rust and degrade, your PVC system will look as good in ten years as it does the day you install it.

#### APPLICATIONS

Drain Waste and Vent Piping in:

- Commercial
   Industrial
- Residential
- Above ground or underground

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### STANDARDS



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## CODE COMPATIBILITY

System 15 pipe and fittings, when used in combination with System XFR, not only satisfies National and Provincial Building Codes but also provides a cost effective trouble-free longterm installation.

- To use thermoplastic piping in a building classified as noncombustible, the material must meet a Flame Spread Rating of 25 or less. Approval to use thermoplastic piping in noncombustible buildings is detailed in clause 3.1.5.16 of the building code.
- Products for use within air plenums must meet a Flame Spread of 25 or less and a Smoke Developed Classification of 50 or less. (Building Code article 3.6.4.3. (1).)
- Products to be used within a building deemed to be high-rise must also meet the Smoke Developed Classification of 50 or less. (Building Code article 3.2.6).
- The fire resistance rating of a material is attained by having the product tested according to a prescribed test method. National and Provincial Codes specify the test requirements in 3.1.12.1.(2). In the case of thermoplastic piping the prescribed test method is CAN/ULC S102.2.

By using System 15 and System XFR in combination, designers and contractors can maximize the potential installation and cost benefits offered by these two products.

#### System 15<sup>®</sup>

System 15 meets the general requirements of noncombustible construction. However, System 15 is not approved for use in air plenums (transitions to System XFR are acceptable here) or buildings classified as high-rise. System 15 also is a viable option for a more rugged underground storm or sanitary drain on the private side of commercial buildings.

#### System XFR®

M 15

System XFR meets the requirements for noncombustible buildings, and the further restrictions of smoke development for air plenums and high rise buildings.

In high-rise buildings, System XFR must be used throughout the building to satisfy the requirement for a 50 Smoke Developed Criterion.

#### Drain-Guard™

Drain-Guard is our latest innovation to the System 15 and System XFR family of products. The many performance benefits of System 15 and System XFR are enhanced by this dual pipe concept.

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

#### MJ Grey™

Meets all the same requirements of System 15 and System XFR and can be used in the same applications.

> Note: Combustible DWV piping products are not allowed in a vertical service space.



# SYSTEM 15 DRAINAGE SYSTEMS

## SYSTEM 15° DWV

As an investment, System 15<sup>®</sup> is a winner. It's a cost-effective "workhorse" designed for the majority of low-rise and light commercial applications where DWV systems don't run through air plenums.

In addition to costing less than cast iron, System 15 pipe and fittings are engineered to withstand years of uninterrupted service. Made of tough, impact resistant PVC, System 15 won't rust, pit, scale or degrade, even under continued exposure to moisture, salts, aggressive soils and most acids. Interior and exterior walls remain smooth, ensuring years of reliable, maintenance-free flow.

As well, System 15 is lightweight and easy to handle, making installation — even in confined or awkward wall spaces — fast and easy. There's no need to pay for special hoisting equipment or extra manpower. This all converts to significant cost savings over copper and cast iron piping.

Do the math: System 15 is an unbeatable, cost-effective investment — now and for years to come.

## ADVANTAGES

#### Flame Spread

When tested to the CAN/ULC S102.2 Standard, System 15 achieved a Flame Spread Rating of not greater than 25.

#### Cost Effective

Lightweight. Easy to handle. Fast installation with no special equipment required. Substantial project cost savings over traditional piping materials.

## Broad Range of Sizes

CSA certified in sizes from 1-1/2" to 24" in diameter. The most extensive DWV package available in North America.

## Long-term Reliability

System 15 performs well under constant use in harsh environments corrosive to other materials.

#### Impact Resistance

The high impact strength of System 15 reduces jobsite damage and wastage.

#### Simple Joining

Solvent welding eliminates the need for cumbersome tools and the hazards of torches on site.

## **Direct Burial**

Suitable for both above- and below-grade applications, eliminating the transition to other pipe materials at grade level.

#### **APPLICATIONS**

Drain Waste and Vent Piping in:

- Commercial
   Industrial
- Residential
- Above ground or underground

## STANDARDS

CSA B181.2 CAN/ULC S102.2



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## DID YOU KNOW?

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## SHORT FORM SPECIFICATIONS

#### SYSTEM 15 DWV PIPE AND FITTINGS

IPEX System 15 Drain, Waste and Vent pipe and fittings shall be certified to CSA B181.2. When combustible pipe and fittings are used in buildings required to be of noncombustible construction, they shall be listed by ULC to the Standard CAN/ULC S102.2 and clearly marked with the certification logo indicating a Flame Spread Rating not exceeding 25.

IPEX System  $15^{\circledast}$  pipe and fittings have been tested and certified by CSA to the CSA B181.2 standard.

#### Test Results

ITS (Warnock Hersey) conducted the testing in accordance with CAN/ULC S102.2 test standard. The following table summarizes the results of these tests.

Component	Flame Spread Rating	Smoke-Developed Classification
System 15®		
Pipe	10	> 50
Fittings	15	> 50

## **PRODUCT SELECTION CHART - SYSTEM 15**

	Dimer	Dimension		Product		Dimension	
	inches	mm	Code		inches	mm	Produc Code
<b>O°Elbow</b> Ex	tro Long Suiss-			22-1/2° Elbow			
	tra Long Sweep 2	нхн 50	026157	ZZ-I/Z EINUW	H x H 1-1/2	40	026251
$\square$	Z	50	020157	$\bigcirc$			
					2	50 75	026252
				$\bigcirc$			026253 026254
					4	100	
D°Elbow H >	( H				8	150 200	026255 026256
	1-1/2	40	026261		10	250	026250
$\mathbb{U}$	2	50	026262		10	300	026257
5	3	75	026263		12	350	026258
	4	100	026264		14	400	026259
5° Elbow - Sl				22-1/2° Elbow	ЅрхН		
	1-1/2	40	026241		6	150	02665
I I I I I I I I I I I I I I I I I I I	2	50	026242		8	200	026652
-	3	75	026243		10	250	026653
	4	100	026244		12	300	026654
	6	150	026245		14	350	02665
	8	200	026246		16	400	026656
	10	250	026247				
	12	300	026248				FOR USE W
	14	350	026249	22-1/2° Elbow -	Short Turn S	р х Ѕр	MJ GR.
	16	400	026250		8	200	226913
	18	450	026425	$\square$	10	250	226914
					12	300	226915
5° Elbow - S	hort Turn Sp x	Н					
	1-1/2	40	026221	11-1/4° Elbow	НхН		
$\bigcirc$	2	50	026071		6	150	02667
$\int$	3	75	026223		8	200	02667
	4	100	026072		10	250	02667
	6	150	026073		12	300	026674
	8	200	026226		14	350	02667
	10	250	026270		16	400	02667
	12	300	026271				
	14	350	026272				
	16	400	026273	11-1/4° Elbow	Sp x Н		
	18	450	026274		6	150	026683
					8	200	026682
			FOR USE WITH	$\sum_{i=1}^{n}$	10	250	026683
5° Elbow - S	hort Turn Sp x	Sp	MJ GREY	$\bigcirc$	10	300	026684
	8	200	226910		12	350	02668
	•				14	550	UZ000:
	10	250	226911		16	400	026686