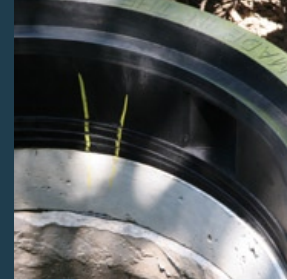




Integrated Frame and Adjustment Risers

Lifespan System[®]

Water Tight. Corrosion Proof.



The very systems designed to manage our water, wastewater and stormwater have now become management challenges themselves.



Aging collection systems develop breaks and leaks that reduce the system performance.

As a result, excess water and other materials that don't belong there get into the system. The added flows force systems to handle volumes they simply weren't engineered for, reducing capacity and increasing costs. Often, the added flows cause the system to fail and overflow, sending untreated sewage into basements, streets and public waterways.

Adding temporary storage or expanding treatment capacity do not solve the problem at the source, but they do increase energy demand and add to operational costs and carbon emissions.

In short, the solution to our water management challenge becomes part of the solution to our global warming problem.



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Just say no to syste



Manholes are often the first segment of a collection system to fail. Traditional concrete and metal systems are not designed to effectively handle their actual use — withstanding freeze-thaw cycles, heavy loads from traffic and a highly corrosive environment. When they inevitably crack and fail, water enters the collection system adding unanticipated flows. At the same time, the surrounding pavement is damaged.

The result is lost capacity with increased wastewater treatment costs and energy use. Of course, there's also the expense of repairing the road and the manhole structures themselves.

The Lifespan System® Breaks The Cycle

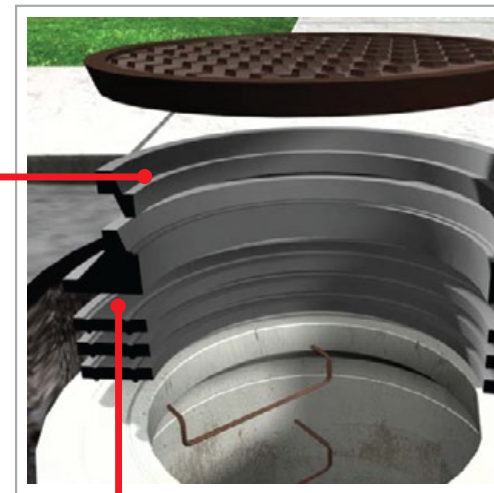
*Lifespan is the only integrated system on the market that is specifically designed to eliminate unwanted flows at the cover **and** chimney area.* The Lifespan System® is designed to retain the hydraulic, water-tight and structural integrity of the underlying concrete structure and deliver a longer service life. It is designed to remain water-tight. The system is made of the same ultra high-performance elastomers that have been used in transportation for more than 50 years. Now, applied to collection systems, it is water tight, naturally corrosion proof, and extremely durable. It also has the added benefit of minimizing road noise because there are no rattling covers.

The frame and the integrated, tapered adjustment risers are made of the same structural, elastomeric material that is corrosion-proof, leak-proof and unbreakable. The system comes with either a cast iron cover or an ultra high strength and corrosion proof composite cover. It has been field tested for over 5 years in one of the harshest city road environments in North America (Montreal, Canada where temperatures range from minus 30 centigrade to

plus 30 centigrade). In addition to near perfect performance in punishing traffic and extreme weather conditions, extensive lab testing has confirmed that this is the “best in class” solution for collection systems.

Seals out Inflow
at cover

Seals out Infiltration
below the frame



em failure



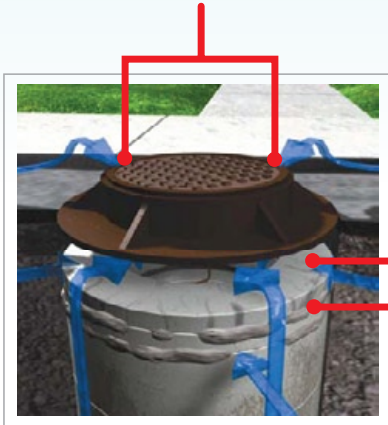
The Lifespan System® components include:

- Frame
- Two tapered adjustment risers
- Cast iron cover
- Cam security/closure system

Principal Features:

- Durability
- Non corroding
- Water Tight
- Load Absorbing
- Integrated Grade Adjustment
- Integrated Security

Common sources of inflow



Common sources of infiltration

All components are made from **corrosion resistant**, high-performance elastomers

The Lifespan System® offers a greater benefit for a longer period:

- The Lifespan System® saves money because it outlasts anything presently available, and the ergonomically friendly design make it quick and easy to install. With the Lifespan System®, existing collection systems are more efficient, so the cost of increasing capacity is delayed.
- The Lifespan System® is watertight at all critical points (structure to risers, risers to frame, frame to cover). The cover uses a cam system to provide a positive seal from cover to frame.
- The Lifespan System® absorbs impact so the system and surrounding pavement remain intact. This saves on costly road repairs associated with concrete/metal systems.
- The Lifespan System® is easy to handle (approx. 135 lbs.), and simple and quick to install.

Specifications

The Lifespan System® frame and adjustment risers meet the current ASTM specification for rubber pipe-gaskets and pipe-to-manhole connectors (ASTM 443 and 923). It also meets AASHTO H-20 load requirements with either metal or composite covers.



The Lifespan System[®]

ASTM Method	The Lifespan System - manhole bearing and gasket system	C 443-03 - specification for joints for circular concrete sewer and culvert pipe, using rubber gaskets and laterals	C 923-02 - specification for resilient connectors between reinforced concrete manhole structures, pipes	M 251-96 - specification for plain and laminated elastomeric bridge bearings (AASHTO Designation)
Material	<i>High-grade virgin or synthetic rubber</i>	<i>Natural or synthetic rubber</i>	<i>Natural or synthetic rubber</i>	<i>Natural or synthetic; no reclaimed material</i>
D 412	1500 psi	1200 psi	1200 psi	2246 psi
D 412	300-350%	350%	350%	300-450%
D 2240 (Shore A durometer)	85 +/-5	35-65 +/-5	+/- mfg. tolerance	50-70 +/-5
D 573	Tensile: max<15% Elongation: max<25%	Tensile: max<15% Elongation: max<20%	Tensile: max<15% Elongation: max<20%	Tensile: max<25% Elongation: max<40%
D 395	-35%	-25%	-25%	-35%
D 1171 (or D 1149)	No cracks Passes	No cracks Passes	Rating "0" Passes	No cracks Passes



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