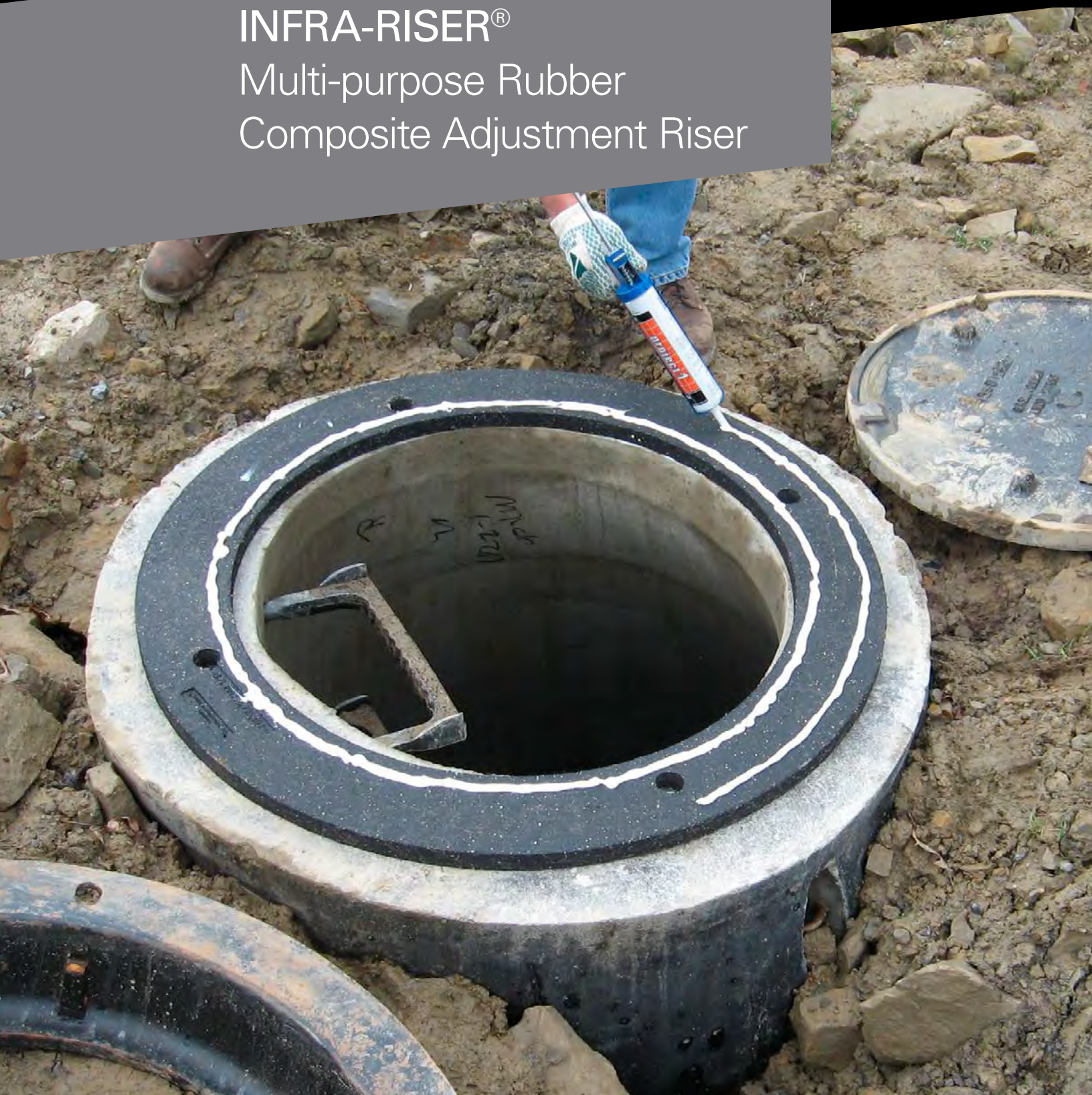
INFRA-RISER®

Multi-purpose Rubber Composite Adjustment Riser



Adjustment Riser
Access Solution

Adjust any manhole or catch basin to grade on your resurfacing projects, new installations, or rehabilitation work with patented INFRA-RISER® rubber composite adjustment risers.

BELOW GROUND — INFRA-RISER® RUBBER ADJUSTMENT RISER

Reduces traffic vibration damage—prolonging the life of manhole structures and surrounding pavement

Protects against load concentration stress

Dramatically reduces water infiltration

Perfect grade adjustment in moments with uniform precision

Will not break, split, rot, crack, or chip; lasts indefinitely

Made of 92% recycled raw materials

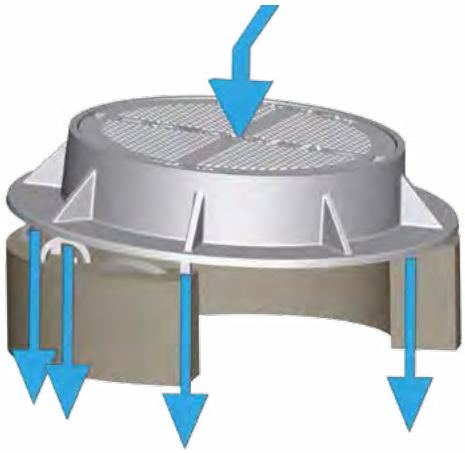
Round, square, and rectangular designs; flat and tapered risers, select bolt hole patterns

How to deal with traffic vibration and road stress

Traffic vibration and stress not being dissipated properly
Vehicle wheels create a chronic stress on manhole frames. When two rigid surfaces are in constant high-stress contact with each other, the friction between the two can create damage to the surrounding road surface. The issue is often more severe below the surface, which can cause permanent damage to the manhole structure and its attached network.

Problems above

Problems below

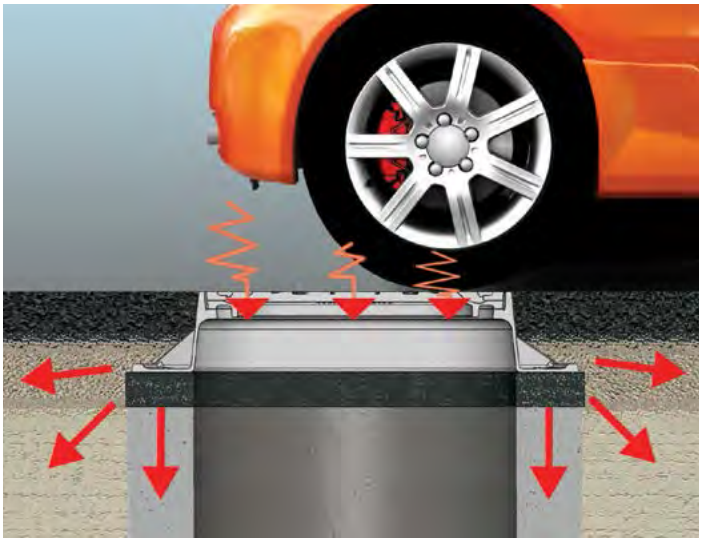


Shimming to raise a manhole frame and cover creates friction and stress directly on the concrete ring, causing damage to the ring and its surrounding areas.

Maintain the integrity of your infrastructure by reducing traffic vibration damage
The INFRA-RISER rubber composite adjustment riser is a simple, economic, efficient, and long-lasting solution for manhole structure damage problems. It dissipates the energy transferred between the casting and the manhole structure. Since the surfaces are separated by the adjustment riser, the friction/stress component is dramatically reduced. These two elements then work together, rather than against each other, to help maintain the integrity of the infrastructure support system.

Compression properties is the key
Due to the compression properties of the rubber composite adjustment riser, traffic loads are more uniformly distributed over the entire supporting structure, rather than concentrated in specific high-stress areas.

Maximize performance and extend lifetime
INFRA-RISER products are the ideal tool for Departments of Transportation and municipalities seeking to maximize the performance and extend the lifetime of infrastructures, while achieving significant cost savings.

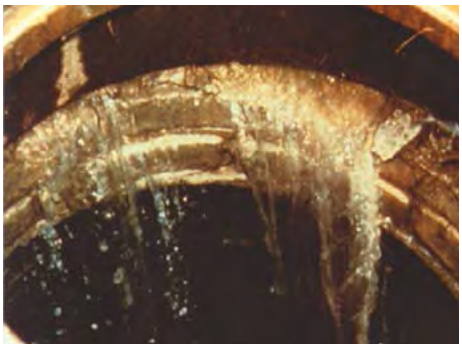


Rubber adjustment risers provide uniform distribution of traffic loads while dissipating vibrations.

How to deal with unwanted water infiltration

Uneven surfaces allow water to infiltrate

There is no water tight seal when rigid and irregular surfaces, such as brick and mortar or concrete are used alone. This problem is compounded with the instability of a shimmed joint as foreign matter and particles become dislodged to allow greater amounts of water to infiltrate.



Unwanted storm water damages manhole support systems when entering infrastructure systems.

Water penetrates between rigid and irregular surfaces.

Water penetrates shimming material and through cavities.

Tight seal reduces water infiltration

When installed according to guidelines, these adjustment risers help prevent the flow of water infiltration. They create a virtual tight seal between the manhole chimney structure and the manhole or catch basin frame.

With the INFRA-RISER ring's effective gasket-like seal*, stormwater is prevented from entering the sewer system.

Contains recycled tires and fortifying additives

EJ products may earn you LEED® credits in the Materials and Resources category

Old tires ready to be recycled.

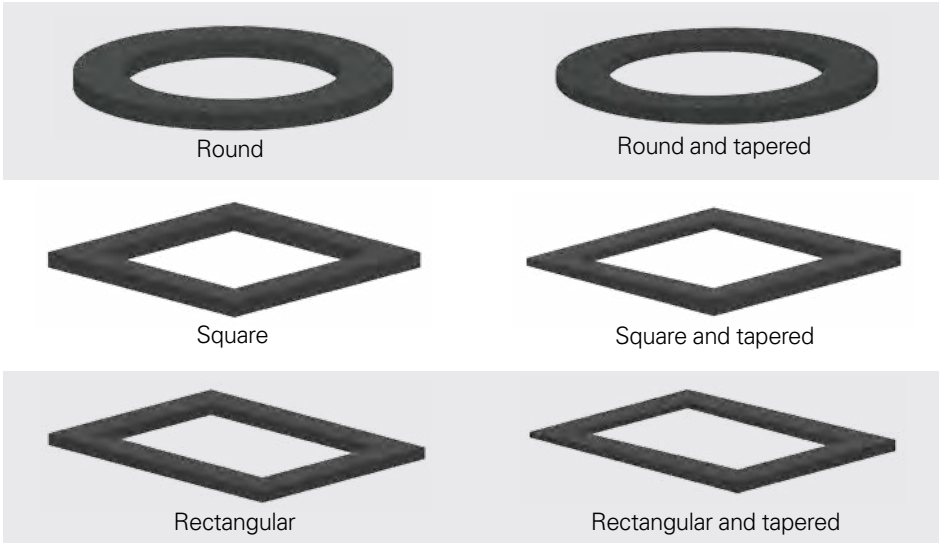
Crumb rubber recycled from old tires and RFL coated fiber.

INFRA-RISER rubber composite riser is an environmentally friendly product.

*Use of the recommended polyurethane sealant is required for prevention of water infiltration and vacuum testing.

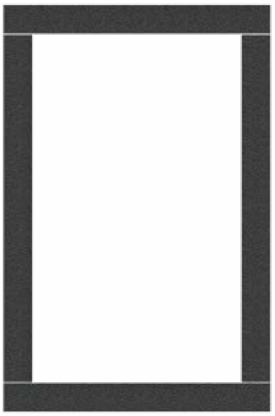
Standard and Custom Shapes for a variety of applications

Flat | **Tapered**



Standard thicknesses: 1/2", 1", 1 1/2", 2", 2 1/2", 3"

Custom Shapes and Sizes



Straight cut INFRA-RISER strips.

Width: 3", 4", 5", 6"
Length: 12" – 60"
Thickness: Flat only (no taper)
1", 1 1/2", 2", 2 1/2", 3"
Corners: Straight cut

Standard circular INFRA-RISER sizes

Inside Dimension	Outside Dimension
24	34
24	36
24 5/16	31 13/16
26	34
26 1/2*	34
26 1/2*	36
27 5/16*	36
28 5/16	41
30 5/16	40
33*	40
34*	40
38*	46
38*	49

Standard rectangular INFRA-RISER sizes

Inside Dimension	Outside Dimension
13 x 11	19 x 18
13 x 19	19 x 26
19 x 26*	25 x 32
24 x 24	33 x 33
24 x 36	34 x 46
24 x 45*	33 x 54
24 x 48*	33 x 57
30 x 33	36 x 38
30 x 36*	36 x 43
38 x 38	48 x 48

*Flat only (no taper)
Note: All dimensions are in inches. Various tapered and bolt hole options available.
Contact your EJ Sales Representative for additional sizes and options.

Technical Specifications

Engineered to meet industry requirements

The INFRA-RISER product is a composite material made of recycled rubber tires, fortifying additives, and urethane binders.

Your local EJ Representative can provide you with more information on the INFRA-RISER adjustment riser product line, including: technical specifications and drawings for all risers; complete listing of available sizes; installation procedure for vacuum test.

Easy to use, easy to handle and unbreakable!

MINIMUM REQUIREMENTS

DENSITY
64.214 lbs/cubic ft, ASTM D3574-05, TEST A

DUROMETER HARDNESS
Molded surfaces 77A±5, ASTM D2240-05

TENSILE STRENGTH
304 psi (not less than 145 psi), ASTM D412-06

COMPRESSION DEFORMATION
Initial Compression Deformation 2.9% += 4%
Compression Set 1.5% += 4%
ASTM D575-91 (01)

HEAT AGED PROPERTIES
70 hrs @ 158°F, 3 hrs. @ 300°F, ASTM D573-04

TENSILE STRENGTH RETAINED 100%

DUROMETER RETAINED 100%

COMPRESSION DEFORMATION RETAINED 100%

LOW TEMPERATURE BRITTLENESS
5 hrs. exposure @ -40°C, 24 hrs. @ -40°C
No signs of cracks, ruptures or degradation

Installation Guidelines

1. Apply a continuous strip 5/16"– 3/8" thick of polyurethane joint sealer/adhesive on the top surface of the concrete structure or brick course. Place on a diameter 1" smaller than the outside or inside diameter of the adjustment riser.
2. Position the riser in place, ensuring it is centered over the top surface of the concrete structure or brick course of the manhole structure or catch basin.
3. Apply a second continuous strip 5/16"– 3/8" thick of polyurethane joint sealant/adhesive on the top surface of the rubber riser 1" smaller than the outside or inside diameter of the frame. If more than one adjustment riser is used, a continuous strip of sealant/adhesive is to be laid between each ring.
4. Center the frame of the manhole or catch basin over the structure opening. Place bottom of frame onto adjustment riser. Press down, applying firm pressure to the frame to create a tight seal with the sealant and adjustment riser.

Note: images show two continuous strips of polyurethane joint sealant/adhesive applied to the bottom and top of the rubber riser due to vacuum testing in this particular application. Standard applications follow the guidelines listed above.

"Our crews installed the ring [INFRA-RISER®] on each manhole at that intersection and we didn't have to rebuild them again. The problem fell off the radar screen." — Dave Hofer, Assistant County Engineer, New Castle County, Delaware

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