

PolyGrate™

RECYCLED PLASTIC TREE GRATES



1-800-523-6899
www.PolyGrate.com

why specify?



LIGHTWEIGHT & EASY TO INSTALL

PolyGrate™ tree grates come in a variety of sizes and weights ranging from 30-60lbs each. Their lightweight and easy handling make one-person installments possible without the need for specialized tools or expensive, heavy equipment.

EASILY EXPANDABLE

PolyGrate™ comes standard with a 12" diameter hole opening that can easily be expanded in minutes with any common saw for larger tree sizes and future tree growth.



NEVER RUSTS OR NEEDS PAINTING

Made of HDPE recycled plastic means PolyGrate™ never rusts, corrodes, or leaves unsightly streaks on surrounding pavement or decorative pavers. The color is integrally molded through and through and never needs painting.

EARTH FRIENDLY

PolyGrate™ maintains a smaller carbon footprint by more than 15% compared to typical cast iron tree grate solutions. This is achieved by reduced fuel consumption, lower carbon emissions and its lightweight for shipment and installation. PolyGrate™ is made of 100% post-consumer plastics and is recyclable, non-toxic and will never leach harmful contaminants into surrounding soils.

DURABLE AND LONG-LASTING

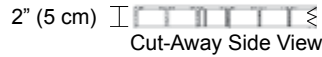
PolyGrate™ is made of high-density polyethylene (HDPE) recycled plastic with ultraviolet inhibitor additives to ensure it will last for years and won't fade or become brittle even in the harshest conditions of salt, humidity, cold, and heat.

ADA COMPLIANT

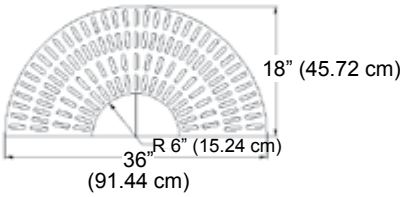
PolyGrate™ has a radial design pattern with grid openings that are less than ½"W x 2 ¼"L, which safely complies with American Disabilities Act requirements for pedestrian sidewalk accessibility.



ROUND TREE GRATES

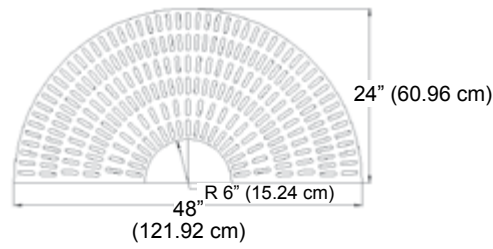


*All detailed drawings are half grates



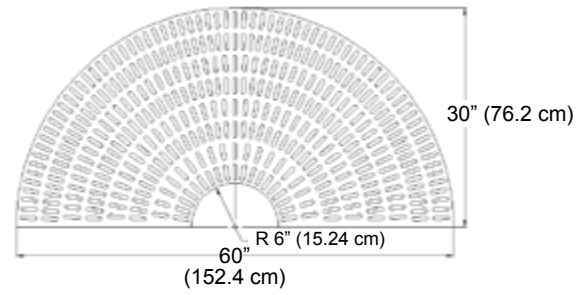
TRB33 · 3' ROUND

Weight - 19 lbs. (8.6 Kg)



TRB44 · 4' ROUND

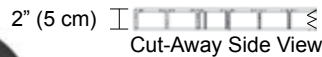
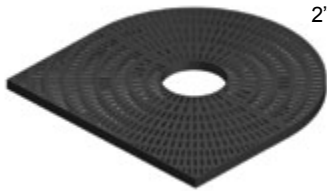
Weight - 28 lbs. (12.7 Kg)



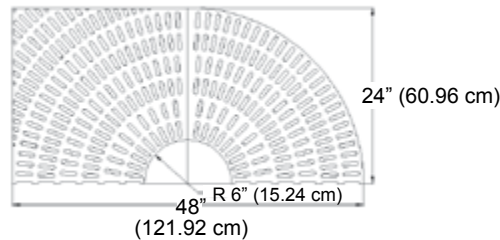
TRB55 · 5' ROUND

Weight - 45 lbs. (20.6 Kg)

COMBINATION TREE GRATES

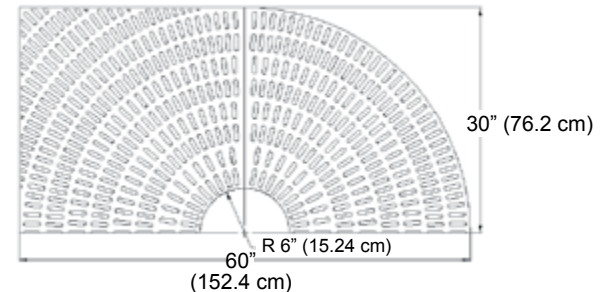


*All detailed drawings are half grates



TSB44C · 4' x 4' SQUARE/ROUND COMBO

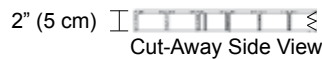
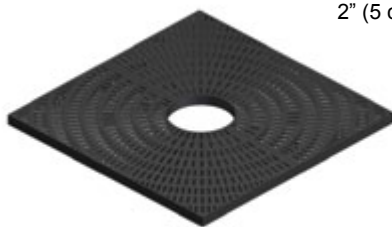
Weight - 33 lbs. (14.9 Kg)



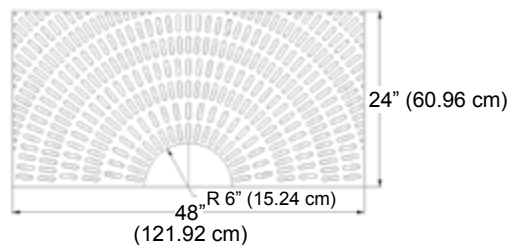
TSB55C · 5' x 5' SQUARE/ROUND COMBO

Weight - 52 lbs. (23.6 Kg)

SQUARE TREE GRATES

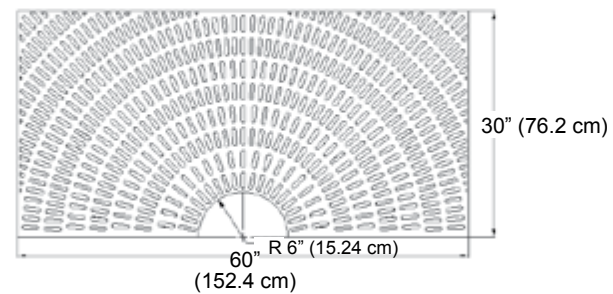


*All detailed drawings are half grates



TSB44 · 4' x 4' SQUARE

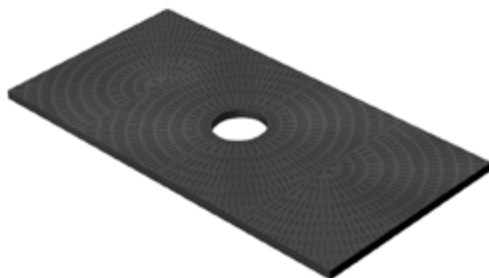
Weight - 38 lbs. (17.2 Kg)



TSB55 · 5' x 5' SQUARE

Weight - 58 lbs. (26.5 Kg)

RECTANGLE TREE GRATES



TSB9648FE · 4' x 8' RECTANGLE
TSB12060FE · 5' x 10' RECTANGLE

PolyGrate™ FRAME



THE EASIEST WAY TO
INSTALL PolyGrate™

TGF44 · 4' SQUARE FRAME

TGF55 · 5' SQUARE FRAME

TGF9648 · 4' x 8' FRAME

TGF12060 · 5' x 10' FRAME

suggested specifications

PART 1 - GENERAL

1.1 Work Included --

The scope of the work includes labor, materials, equipment and performance of all work required for installation of PolyGrate™ as suggested by manufacturer's drawings and installation procedures.

1.2 Work by Others --

Openings to receive grates are to be provided by others in accordance with instructions of tree grate manufacturer and are indicated on drawings and provisions of the specification.

PART 2 - PRODUCT

2.1 Tree Grates

A. Manufacturer

Grates shall be PolyGrate™ plastic tree grates as manufactured by Structural Plastics Corp., Holly, Michigan.

B. Material

Grates shall be of high-density polyethylene resins conforming to ASTM D-638.

C. Design

Grate pattern shall comply with A.D.A. requirements for equal access. Color, size, and configuration shall be specified by owner/architect.

D. Finish

Grates shall be manufactured true to pattern, of uniform quality and size, and free from defects. Surface shall be smooth; free of sharp edges.

2.2 Hardware --

Fasteners (included)

Grate halves shall be joined together with tamper-resistant bolt package as provided by Structural Plastics Corp., or approved equal. Package to consist of (6) each #16 3/8" x 1-1/4" button head socket-cap screw, stainless; #16 3/8" Tuff Nut, brass; and (12) each 3/8" USS Flat washer, zinc.

PART 3 - EXECUTION

3.1 Inspection --

Proper site preparation and ongoing maintenance will determine performance.

3.2 Surface Conditions --

Examine concrete ledge, and/or existing tree pit to receive grate. Correct condition to comply with manufacturer's recommended installation procedure.

3.3 Installation

A. Opening to Receive Grate

1. Concrete Ledge Supported - New Installation (figure 3.3A1)

Concrete ledge shall be cast in size and configuration of specified tree grate model plus 3/8" expansion allotment. Ledge shall be 2 inches below concrete or tiled surface and extend inward 2 to 3 inches. Ledge must be level and free of bulges and slag.

2. PolyGrate™ Frame Supported - New or retro-fit Installation (3.3A2)

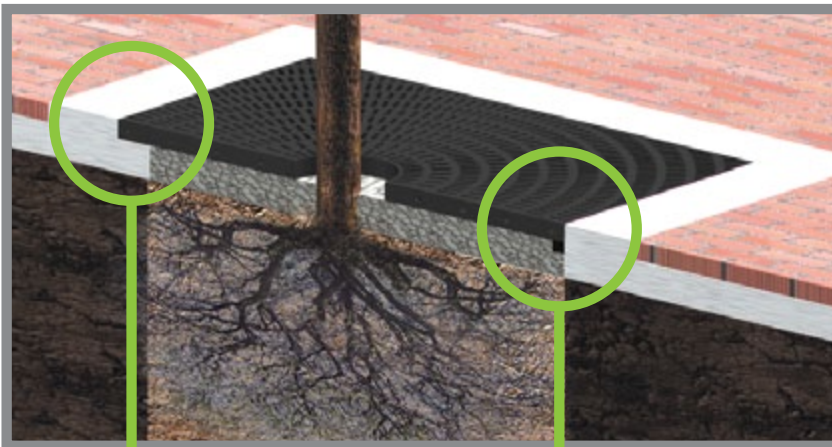
The PolyGrate™ Frame accessories will come complete with (4) 1 1/2" square pre-drilled plastic frames (42" length for use with 48" PolyGrate™s, or 54" length for use with 60" PolyGrate™s). Sidewalk preparation should allow 3/8" additional length per side to provide for grate expansion. Attach PolyGrate™ Frame to sides of poured surface with Tap-Con screws (provided) or other approved concrete fastener (pre-drill pilot holes using a masonry bit). The PolyGrate™ Frame support ledge should be placed 2" below the surface of the concrete.

B. Support and Litter Prevention

Fill space below bottom of tree pit flush to bottom of tree grate with crushed shale or other self-compacting aggregate.

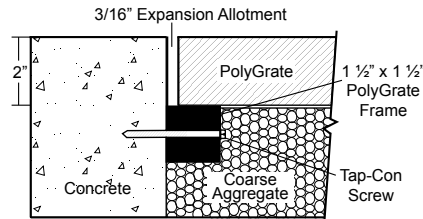
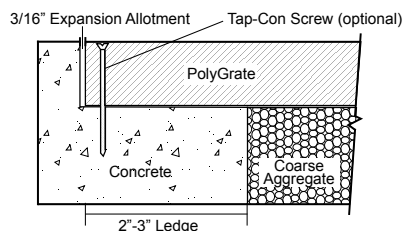
C. Join Grate Halves

Bring tree grate halves together around a tree at a height that allows easy access to underside. Join section at pre-formed holes using tamper-resistant bolt package provided by manufacturer, or approved equal. Lower grate into place.



INSTALLATION WITH CONCRETE SURROUND (3.3A1)

INSTALLATION WITH PolyGrate™ FRAME (3.3A2)



TEST DATA

	ASTM TEST	UNITS	
RESIN PROPERTIES			
Density	D-1505	g/cc	0.957
Melt Index	D-1238	g/10 min	7
MOLDED PROPERTIES			
Tensile Modulus (1% Secant)	D-638	psi	166000
Tensile at Yield	D-638	psi	4300
Elongation at Break	D-638	%	1400
Flexural Modulus	D-790	psi	194000

The key to any successful landscape project is to budget for ongoing maintenance expenditures, such as grate expansion as your trees mature. For best results and longevity, PolyGrate™ requires that the space between the ground and tree grate bottom be filled with coarse aggregate for all installation applications. This will properly support the grate, prevent accumulation of debris under grate and protect close-to-surface root systems.

