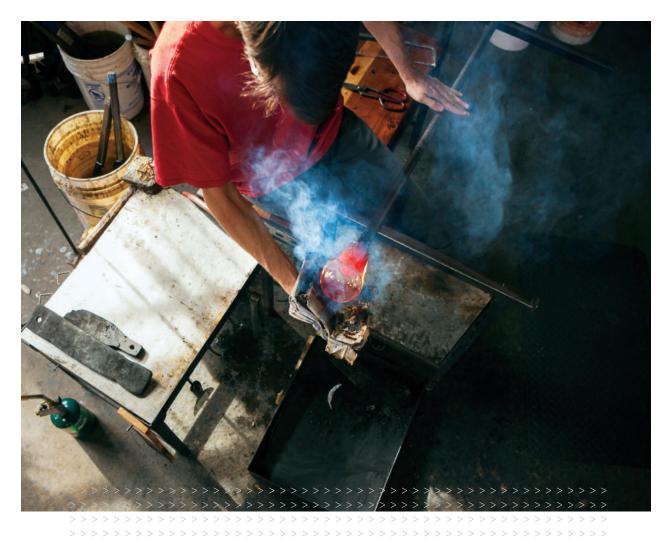




A CLEAR COMPETITIVE EDGE.

FOR ALMOST 100 YEARS, WF'VF PIONFERFO REFRACTORY GLASS SOLUTIONS THAT CONTINUE TO SHATTER INDUSTRY EXPECTATIONS.



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HarbisonWalker International (HWI) provides the largest refractory manufacturing capacity to the glass industry in North America.

Over 85 years of research and development in the glass market have enabled us to pioneer innovative glass solutions.

We support artisans who produce glass by hand, by blowing or pressing. Usually the objects are being formed by remelting already-formed glass and fusing different colors together to form new shapes like marbles, stained glass, glassware, or simply art.

No matter what your art glass needs are, we have dedicated glass application specialists who can build custom solutions, troubleshoot issues, and offer a range of consultation services.

Get to know the experts who anticipate, respond, and deliver like no one else. We're nearly 2,000 people with one goal: to keep your business moving forward.

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There are only a few basic styles of art glass furnaces, and they vary widely in design and function. They may be used to melt raw batch, cullet, or both. Some will melt only clear glass, while others will melt colors.

- The **free-standing pot furnace** is the most common furnace type. Many small studios use these furnaces because they are easy to construct, and the crucible is easy to replace if it breaks or wears out. Some studios prefer the **invested crucible furnace** design because the pot is much less prone to thermal shock. The backup material also allows the artist to keep working for a period of time after the pot has broken.
- The day tank is used to melt and contain molten glass without the use of a crucible.
 Usually "charged" (filled with batch or cullet) or "banked" (reduced in temperature, but glass is still molten) at night, the term "day tank" refers to the time that the furnace is actually used to produce glass.
- **Continuous-melt furnaces** are similar to the day tank, but due to the continuous flow of glass, slightly higher-quality materials are required.

FREE-STANDING POT FURNACE

BASE

GREENTHERM 26 LI GREENTHERM 23 LI

HOT FACE

KAST-O-LITE® 30 LI MIZZOU® CASTABLE PLUS

INSULATION

INSWOOL® HP BLANKET

CRUCIBLE STAND

KX-99[®] CLIPPER[®] DP MIZZOU[®] CASTABLE PLUS

BURNER PORT, DRAIN, GATHERING PORT, FLUE ENTRANCE

GREENCAST® 94-F PLUS MIZZOU® CASTABLE PLUS

EXHAUST FLUE

KX-99[®] GREENTHERM 23 LI

DAY TANKS

GLASS CONTACT

ZIRMUL[®] KORUNDAL XD[®] KX-99[®]

HOT-FACE SUPERSTRUCTURE

UFALA® KX-99®

BACK-UP

KX-99[®] CLIPPER[®] DP

INSULATION

GREENTHERM 26 LI
INSWOOL® HTZ BLANKET

SILL

KORUNDAL XD®

SUPER HYBOND® 80

(backed up with KX-99®)

CROWN, GATHERING PORT, SPACER

VERSAFLOW® 57A PLUS GREENCAST® 94-F PLUS

FLUE

UFALA® KX-99®

INVESTED CRUCIBLE FURNACE

BASE

GREENTHERM 26 LI GREENTHERM 23 LI

INVESTMENT CASTABLE

NARCON® MZA
MIZZOU® CASTABLE PLUS

CASTABLE BACKUP

KAST-O-LITE® 30 LI MIZZOU® CASTABLE PLUS

INSULATION

INSWOOL® HP BLANKET

CRUCIBLE STAND

KX-99[®]
CLIPPER[®] DP
MIZZOU[®] CASTABLE PLUS

BURNER PORT, DRAIN, GATHERING PORT, FLUE ENTRANCE

GREENCAST® 94-F PLUS MIZZOU® CASTABLE PLUS

EXHAUST FLUE

KX-99®

GREENTHERM 23 LI

ANNEALERS

BRICK

GREENTHERM 23 LI

CERAMIC FIBER

INSBOARD 2300 INSWOOL® HP BLANKET

GLORY HOLES

COMPLETE LINING

KAST-O-LITE® 30 LI

ZONED LINING

MIZZOU® CASTABLE PLUS—Bottom INSWOOL® HTZ BLANKET— Rest of Lining

DOORS

CASTABLE

KAST-O-LITE® 30 LI MIZZOU® CASTABLE PLUS

CERAMIC FIBER

INSBOARD 2600 INSWOOL® HTZ BLANKET

PATCHING MATERIALS

GLASS CONTACT

ZIRMUL® 160 PATCH

SUPERSTRUCTURE

SUPER HYBOND® PLASTECH 90P

THE MAGIC OF GLASS

HarbisonWalker International is a proud sponsor of the Keystone College Mobile Glass Studio. Mr. James Harmon and a group of eight apprentices from all over the world worked together to build this studio in the summer of 2015. The purpose of this studio is to teach "the magic of glass" at high schools, festivals, and fairs around the region.











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- Dedicated sales personnel ready to respond 24/7/365
- Ready-to-ship inventory of our best-selling glass products
- Usually shipping with same-day or next-day delivery
- Staging and shipping to anywhere in the world
- Inventory solutions tailored to your business

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PRODUCTS THAT PASS THE TEST. EVERY DAY.

Have high expectations for your refractory products? We do too. Our product quality and technologies in the art glass industry are unparalleled. We have the largest US manufacturing base to support the industry. Our products are adaptable, and we work closely with our customers to come up with alternative technologies and proprietary solutions designed to deliver the best value. And HarbisonWalker International was the first company to bring Emisshield to the market and is the exclusive worldwide glass distributor, now in over 100 furnaces worldwide. Emisshield is an application proven to minimize heat loss and increase efficiency.

No matter what your need, we have the right mix of products and services. We'll be there with you every step of the way. We serve customers all over the globe with on-site supervision and domestic installation services.





























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Every day, our people and products stand up to the challenges of every job. As a local US supplier, we'll save you time and money. And our experience in heat containment makes us the safest, most reliable choice for your investment.

We are your one-stop shop for refractory solutions. And we can take your inventory or new build to the next level. To learn more, talk with a HarbisonWalker International representative at **800-887-5555**. Or find the global sourcing center nearest you at **thinkhwi.com**.

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Houston

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Salem

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+1-800-492-8349

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