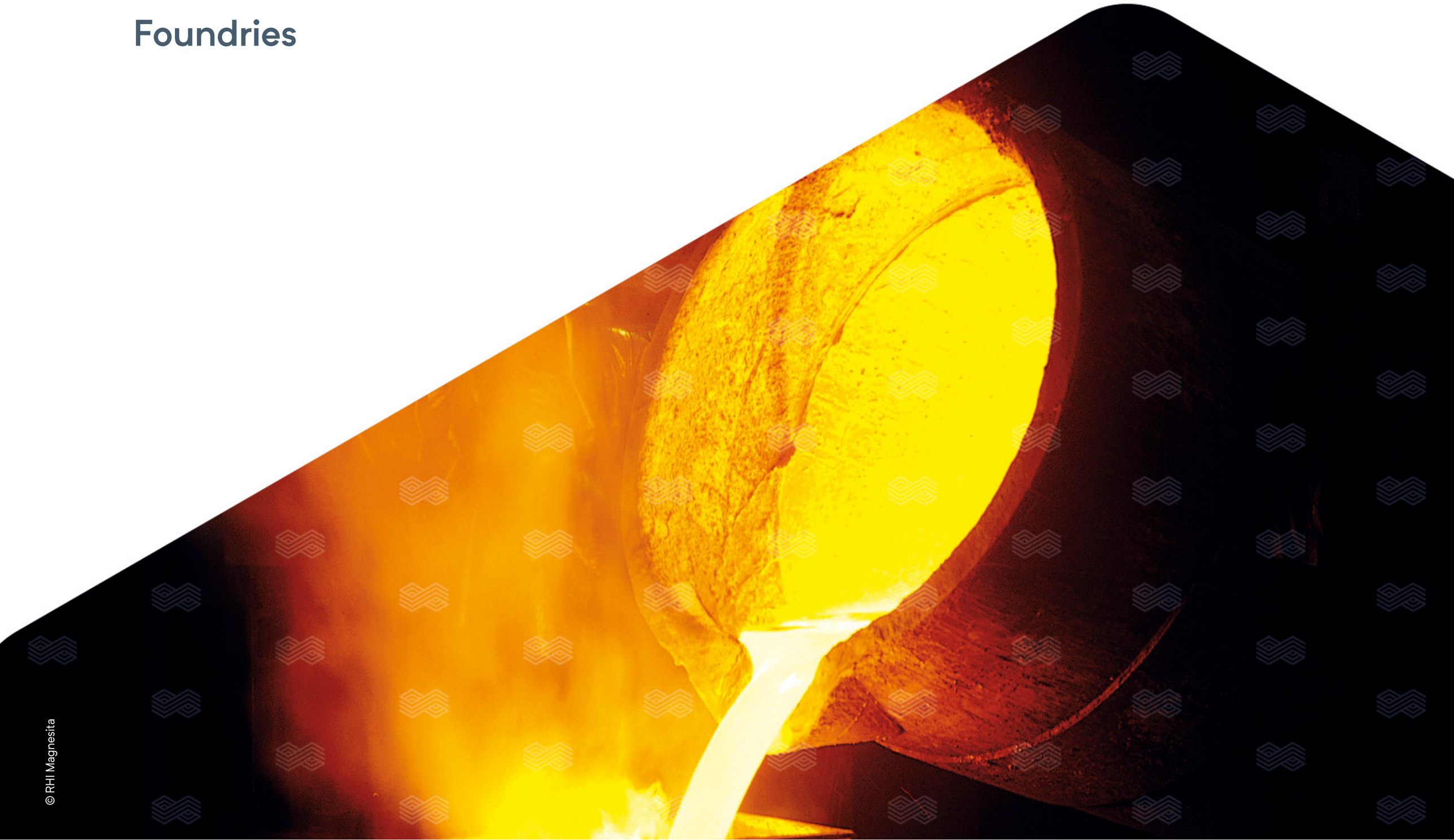
RHI MAGNESITA

IRON & STEEL

Foundries



© RHI Magnesita

There for you, wherever you need us

RHI MAGNESITA

The more closely we work with our customers, the greater the impact we can make for them. So a global network of offices, research centers, and production sites is important to us, and to them. We are continuously extending our global reach to be closer to even more customers.

Being closer to customers doesn't just mean we can be more responsive to their needs. It also helps us to listen better — to understand their concerns, cultures and ways of working. It makes us alert to new ways of thinking and ideas that enable us to deliver even better advice, services, and solutions.

Our exceptional resources and expertise extend far beyond making and selling products. We provide solutions to customers worldwide for cover projects, material specifications, thermal studies, numerical simulations, follow-ups and technical support in application of minerals, and maintenance and electromechanical services for refractory equipment.



35
Main production and raw material sites

70
Sales offices

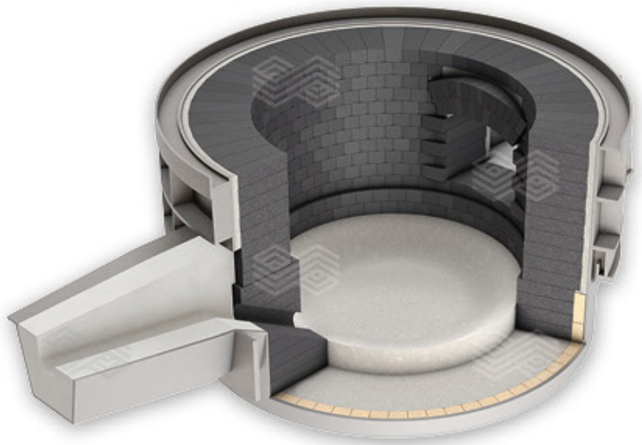
180
Countries shipped to worldwide

Foundry Equipment

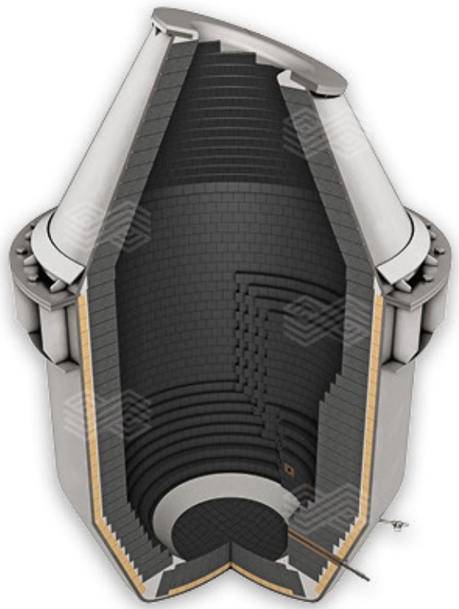
RHI MAGNESITA



Induction Furnace



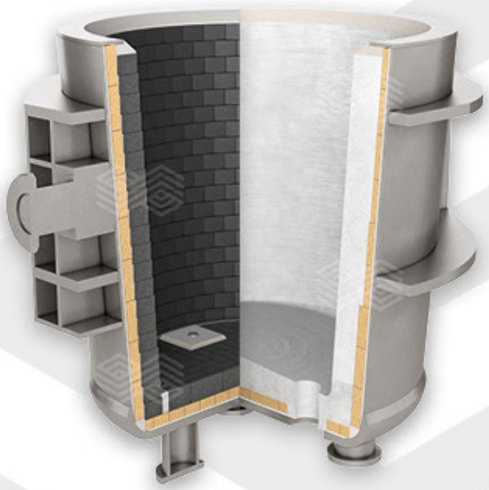
EAF



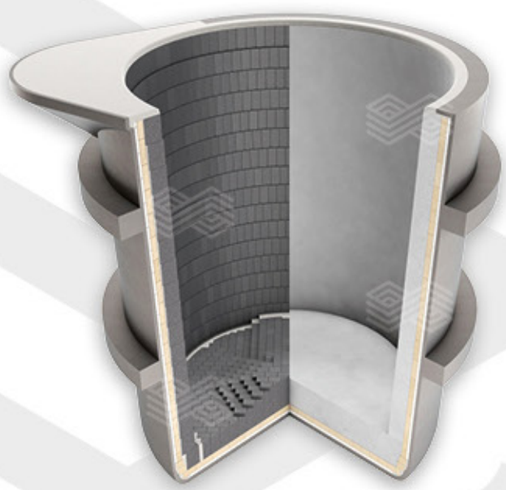
AOD Converter



Cupola Furnace



Casting Ladle



Transfer Ladle

Content | Lining | Induction Furnace | AOD | EAF | Cupola Furnace | Ladle | Machinery

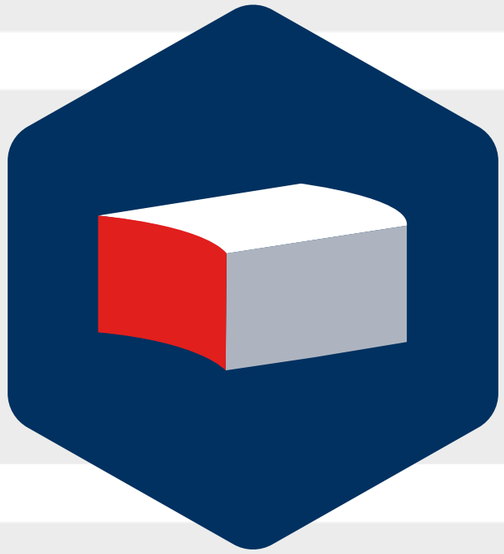
Product Variety of Bricks for Foundries

RHI MAGNESITA

SINDOFORM
Fired Doloma Bricks
- Best price-performance ratio
- Carbon/resin bonded for standard steel, fired doloma for special steel production

ANCARBON
Magnesia-Carbon Bricks
- Highest refractoriness
- Unparalleled flexibility for different and even changing process conditions
- Universal usability in all areas of the wear lining of EAF, treatment ladles, converters and AOD

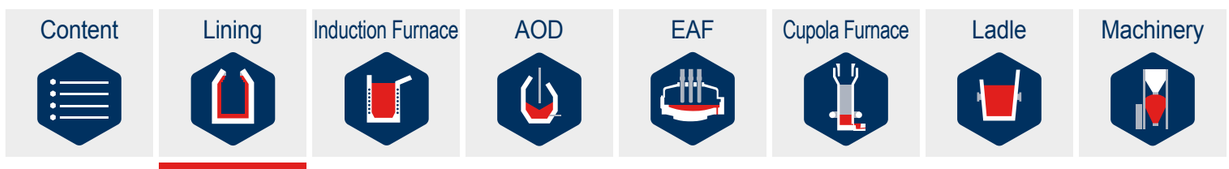
RESISTAL
Fired Alumina Bricks
- High thermal shock resistance and low thermal conductivity
- Available as combinations of fireclay, mullite, bauxite, corundum-spinel and chromium-corundum
- Products for bath area , safety lining and insulation of ladles



ANKER
Fired Magnesia Bricks
- Exceptional products restricted to special applications such as conventional EAF and treatment ladles
- Available as pure burnt magnesia or combined with either chromium oxide, direct-bonded oxicrom and/or spinel

DELTEK
Isostatic Products
- Nozzles, stoppers, sleeve bricks for stopper rod, zirconia nozzles

ANKERPERM, RADEX DPP, DIPERMAL, URBLOCK, URSTAR
Purging Plugs
- Gas purging sets for EAF, AOD, converters, ladles and induction furnaces
- Gas control systems



Product Variety of Mixes for Foundries

RHI MAGNESITA

DIDURIT, COMPRIT, COMPAC SOL

Wet Alumina Mixes

- Castables known worldwide for all applications
- Castables and mortars for general applications

ANKERINDUX

Dry Alumina Mixes

- High-refractoriness mixes for steel production on induction furnaces
- Optimized spinel formation for having thermal and structural stability during operation

RAM-MIX ZIS

Dry Silica Mixes

- High-purity mixes for iron production in induction furnaces
- Thermal and chemical stability during the furnace operation
- Available in South America



ANKOFORM

Alumina Prefabs

- Pocket blocks, spouts and crucibles
- High-performance deltas with innovative technologies

RUBINIT, ANKERJET

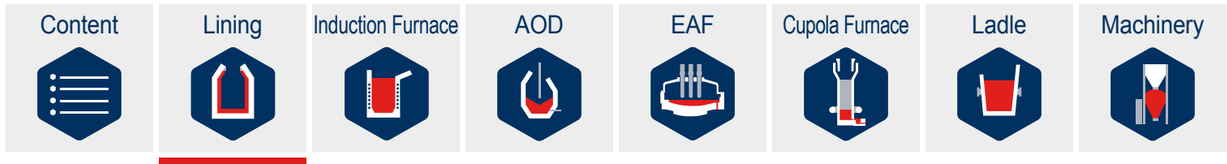
Wet Basic Mixes

- Gunning and/or ramming mixes for EAF, converters and ladles
- Mortars for general applications

ANKERHARTH, ANKERFILL, PERRAMIT

Dry Basic Mixes

- Excellent corrosion resistance against aggressive slags
- Dry MgO based ramming mixes for EAF applications (hearth mixes and backfilling mixes)
- MgO-C mixes for converters and EAF
- Fettling mixes for EAF



The Induction Furnace

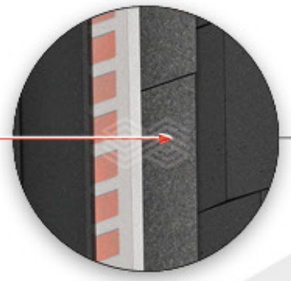
RHI MAGNESITA

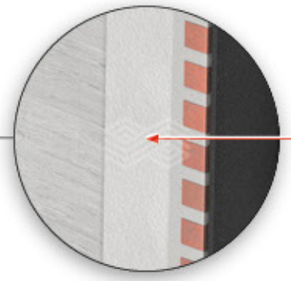
Spout
DIDURIT
COMPRIT
COMPAC SOL
ANKOFORM (prefab)

Top Cap
DIPLAST
DIRAM



Bricked Lining
RADEX
ANKROM

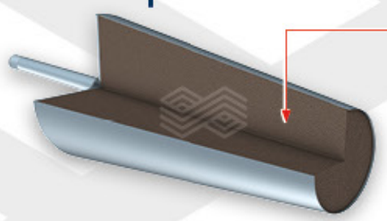




Monolithic Lining
ANKERINDUX
RISAMIX
RAM MIX ZIS

Gas control Box





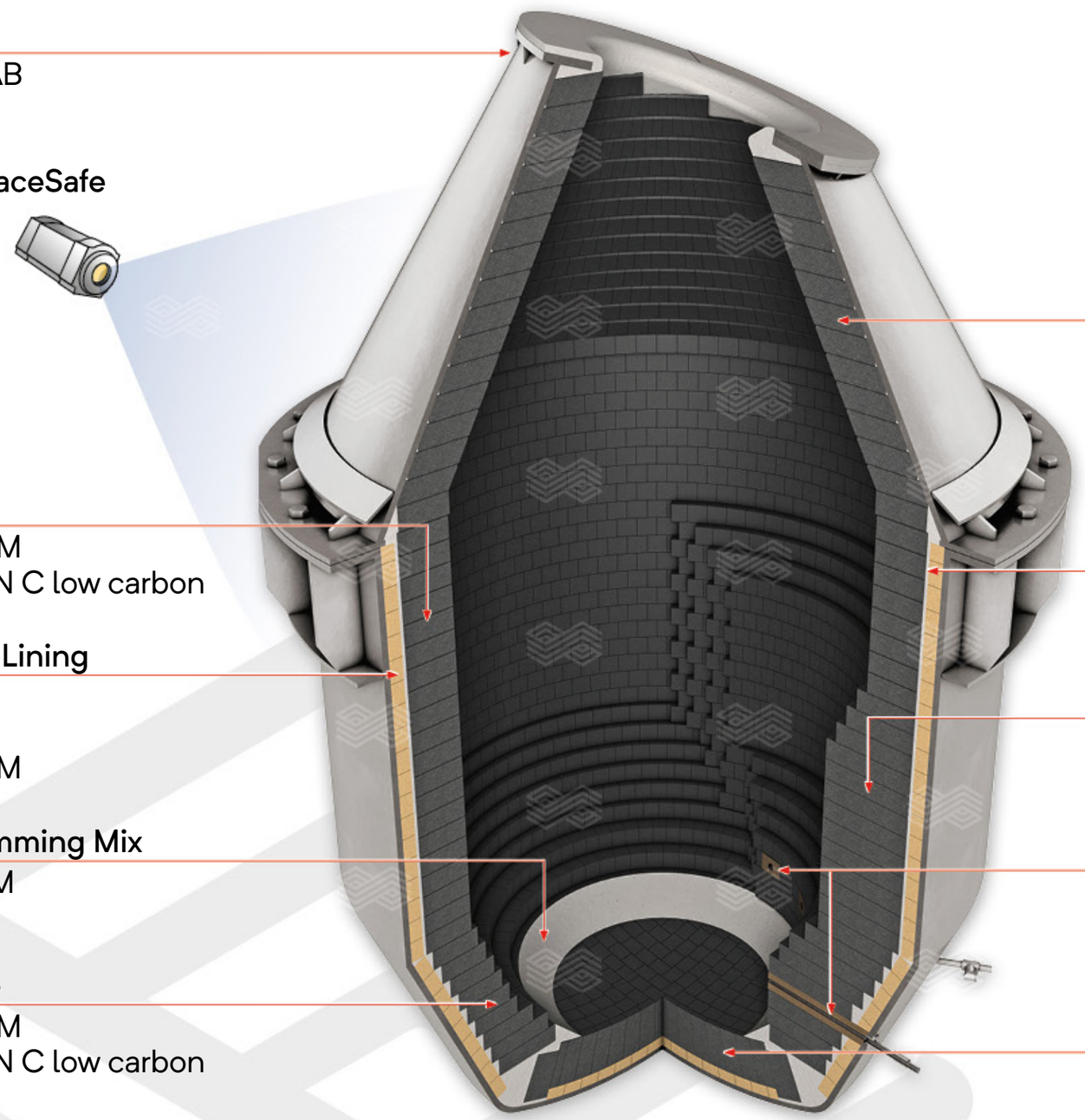
Purging Plug
ANKERPERM
DIPERMAL
URBLOCK
URSTAR

The AOD for Foundries

RHI MAGNESITA

Discharge
JEBCO SLAB

VISIR-FurnaceSafe



Cylinder
SINDOFORM
ANCARBON C low carbon

Permanent Lining
RUBINAL
ANKER
SINDOFORM

Bottom Ramming Mix
JEBCO RAM
PERMASIT

Lower cone
SINDOFORM
ANCARBON C low carbon

Upper Cone
SINDOFORM
ANCARBON C low carbon

Backfill
JEBCO FILL
ANKERFILL

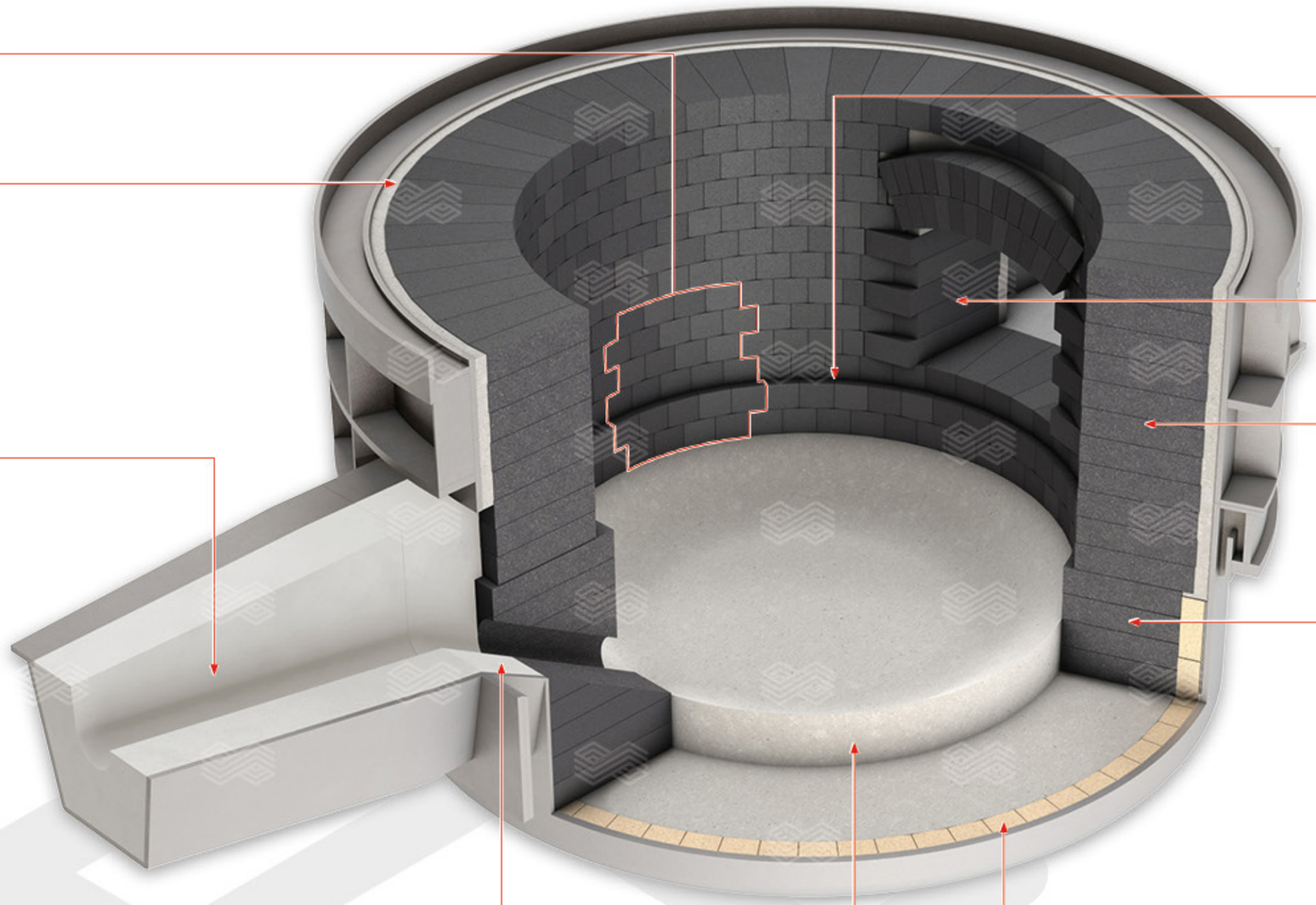
Slagline
SINDOFORM
ANCARBON C low carbon

Tuyere Area
SINDOFORM
ANCARBON C low carbon

Bottom
SINDOFORM
ANCARBON C low carbon

The EAF for Foundries

RHI MAGNESITA



Hot Spot
ANCARBON

Backfill
ANKERFILL

Spout
ANKOFORM
ANKERMIX
COMPAC SOL

Intermediate phase
ANCARBON

Door Jamb Zone
ANCARBON

Upper Sidewall
ANCARBON

Lower Sidewall
ANCARBON

Ramming mix
PERMASIT

Hearth
PERRAMIT
ANKERHARTH

Permanent Lining
ANKER

IRON & STEEL / FOUNDRIES

EAF Maintenance

Three main application areas of EAF repair mixes:

- Cold repair of hearth and banks:
  Hearth mixes — ANKERHARTH
- Hot repair of hearth and banks:
  Fettling mixes with advanced sintering properties — ANKERFRIT
- Repair of sidewalls, door area and slag zone:
  Gunning mixes containing different binders — ANKERJET

Benefits

- Easy application
- Self-compaction and quick sintering
- Individual customer solutions can be developed on request
- Prolonging sidewall lifetime and achieving a balanced lining
- RHI Magnesita offers a broad range of standard gunning mixes
- Individual customer solutions can be developed on request
- Excellent results in combination with RHI Magnesita gunning robots



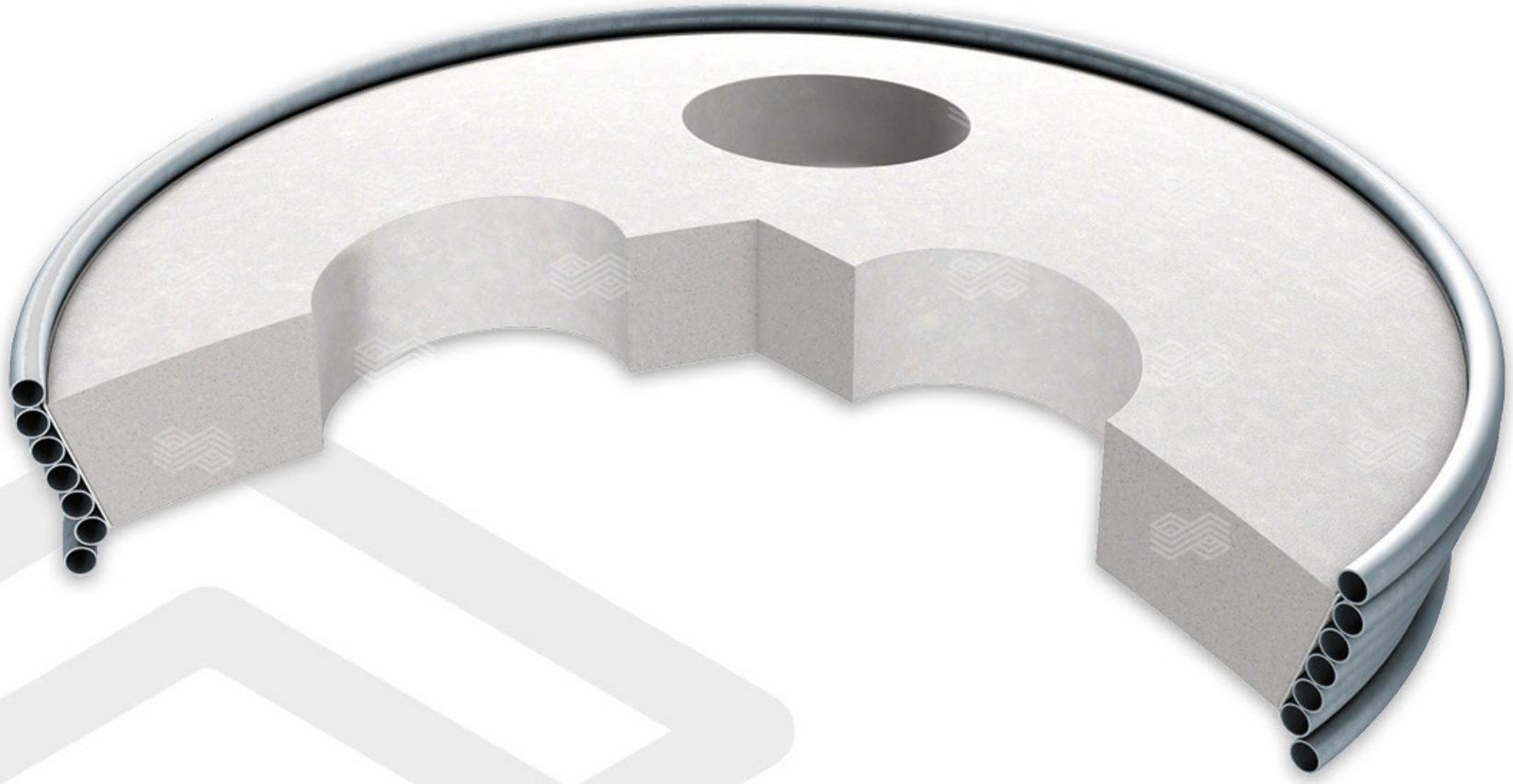
Monolithic Roof Center Piece

RHI MAGNESITA

The new generation of sol-bonded products has shown impressive results both as cast-on-site solution as well as in prefabricated deltas.

Benefits

- Excellent hot properties
- Excellent corrosion resistance
- No special requirements regarding mixing equipment (cast on site)
- Longer shelf life compared to LCC's (cast on site)
- Remarkable time and energy savings during heat-up (cast on site)
- Increased service life/productivity



The Cupola Furnace

- Easy application materials
- Many options for fast heating up profiles
- Specially designed systems with high corrosion and erosion resistances



Charging
SUPER COMPRIT

Stack
COMPRIT

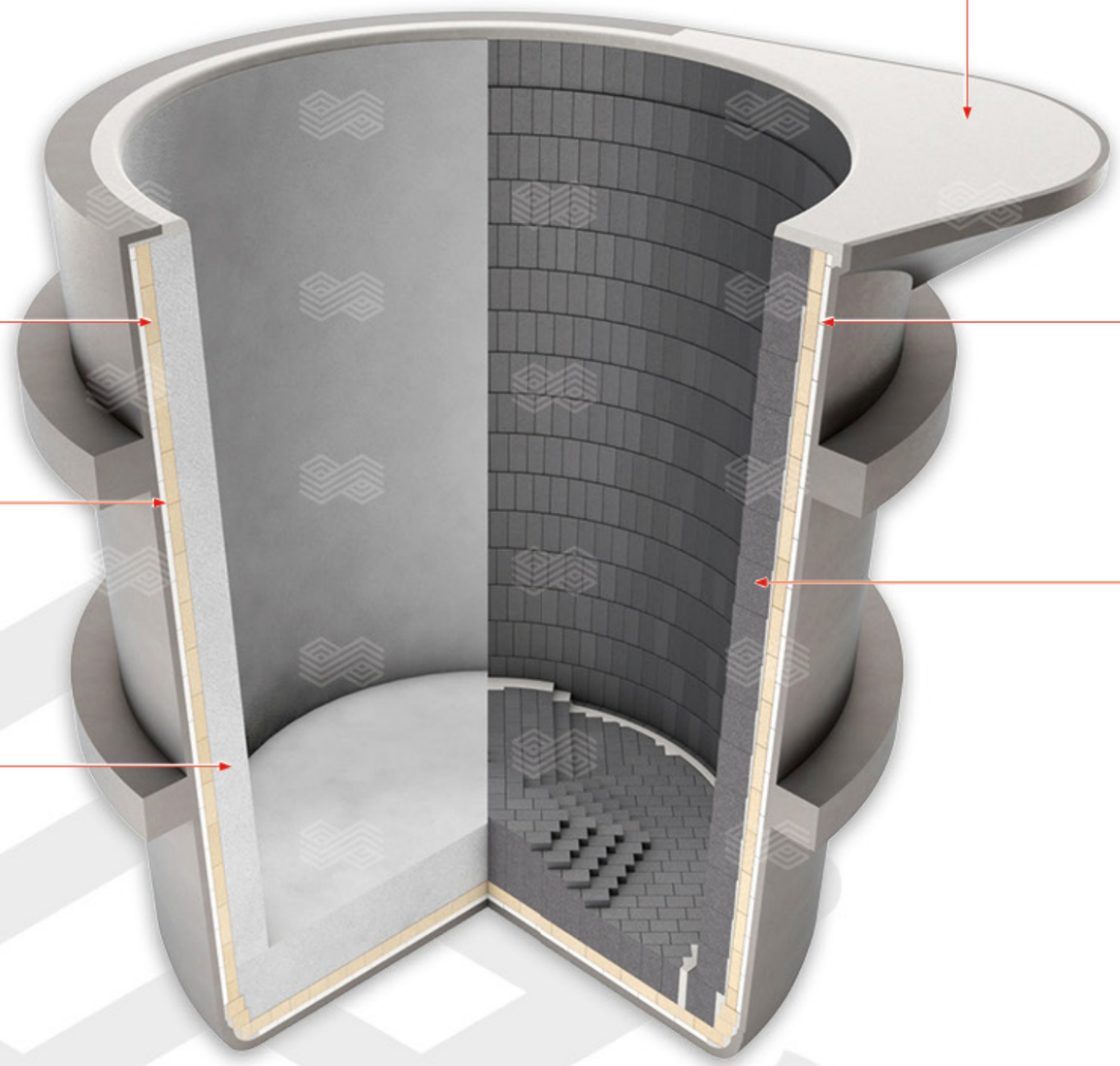
Melting Zone
CARSIT

Hearth
COMPRIT
DIDURIT
UREX

Siphon Box
CARSIT
DIDURIT

The Ladle for Foundries

RHI MAGNESITA



Spout/Outlet Castable
DIDURIT
CARSIT
DIDOFLO
COMPAC SOL

Permanent Lining
MAXIAL
RESISTAL

Mortar Permanent Lining
RESIMUR
CARSIMUR
DIDOTECT
RESITECT

Wear Lining — Castable
DIDURIT
CARSIT
DIDOFLO
COMPAC SOL
ANKOFLO

Insulation
LEGRAL
PYROSTOP

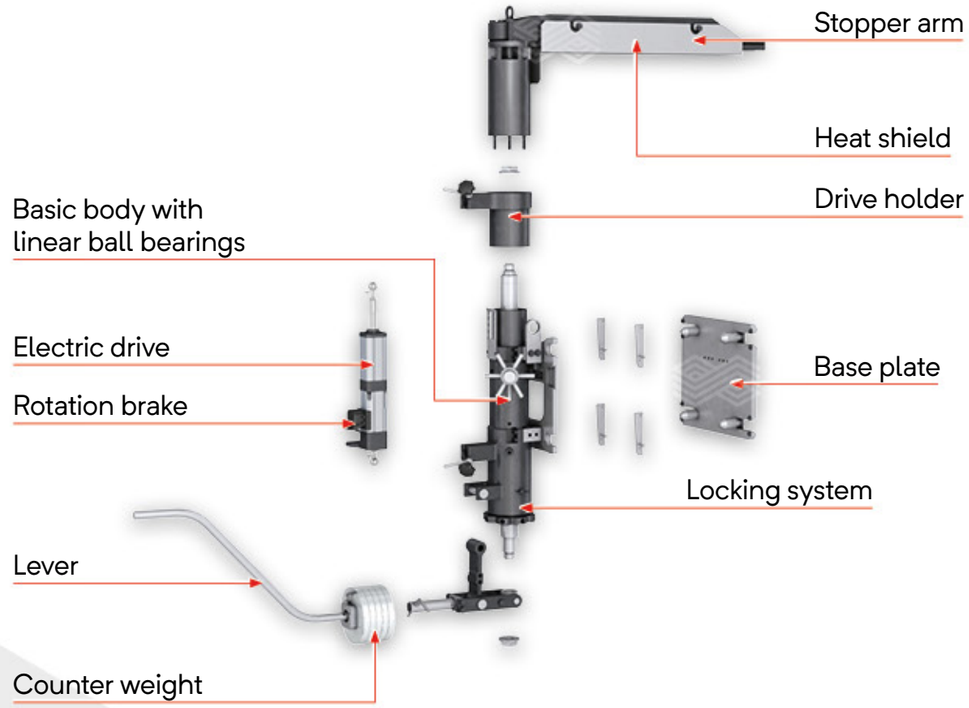
Wear Lining — Brick
RESISTAL
ANCARBON

Purging Plug
ANKERPERM
URBLOCK
URSTAR
DIPERMAL

DELTEK® Monoblock Stoppers



From solid-nose to alumina graphite stoppers, RHI Magnesita's stopper portfolio provides customized and integral flow control stopper solutions for reliable mold level control, clogging reduction and steel and/or iron quality improvement.



Achieve the smoothest casting through the combination of stable stopper handling, customized argon injection and high-end refractories.



Content | Lining | Induction Furnace | AOD | EAF | Cupola Furnace | Ladle | Machinery

IRON & STEEL / FOUNDRIES

Stopper Rod Mechanism INTERSTOP® SRM-L

RHI MAGNESITA

Overview

- Designed for casting ladles
- Automatic or manual operation
- Easy installation and operation
- Locking system for safe ladle transfer

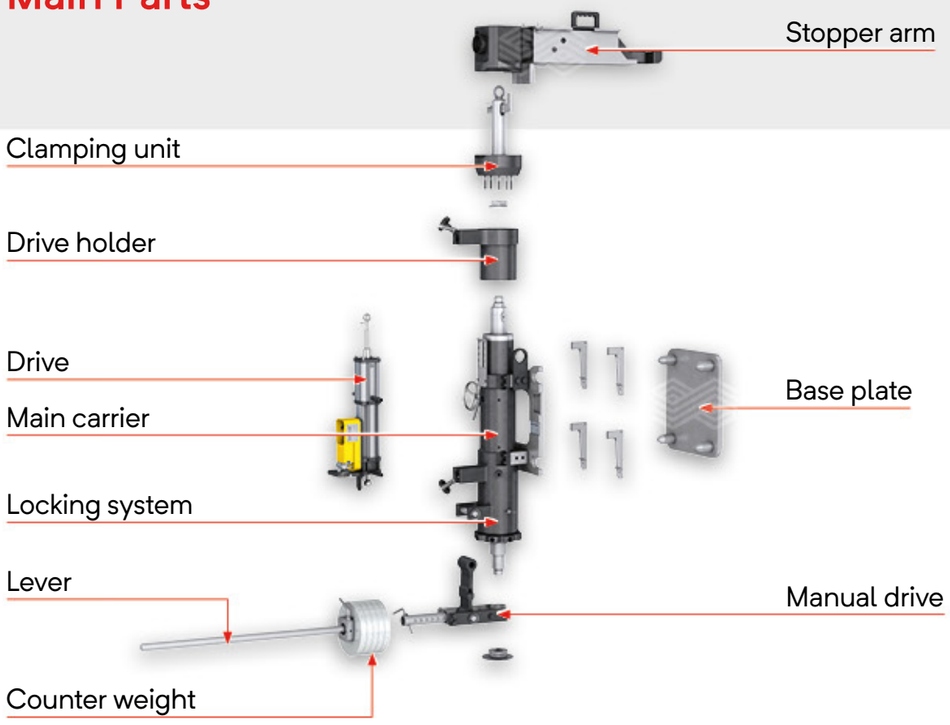
System Characteristics

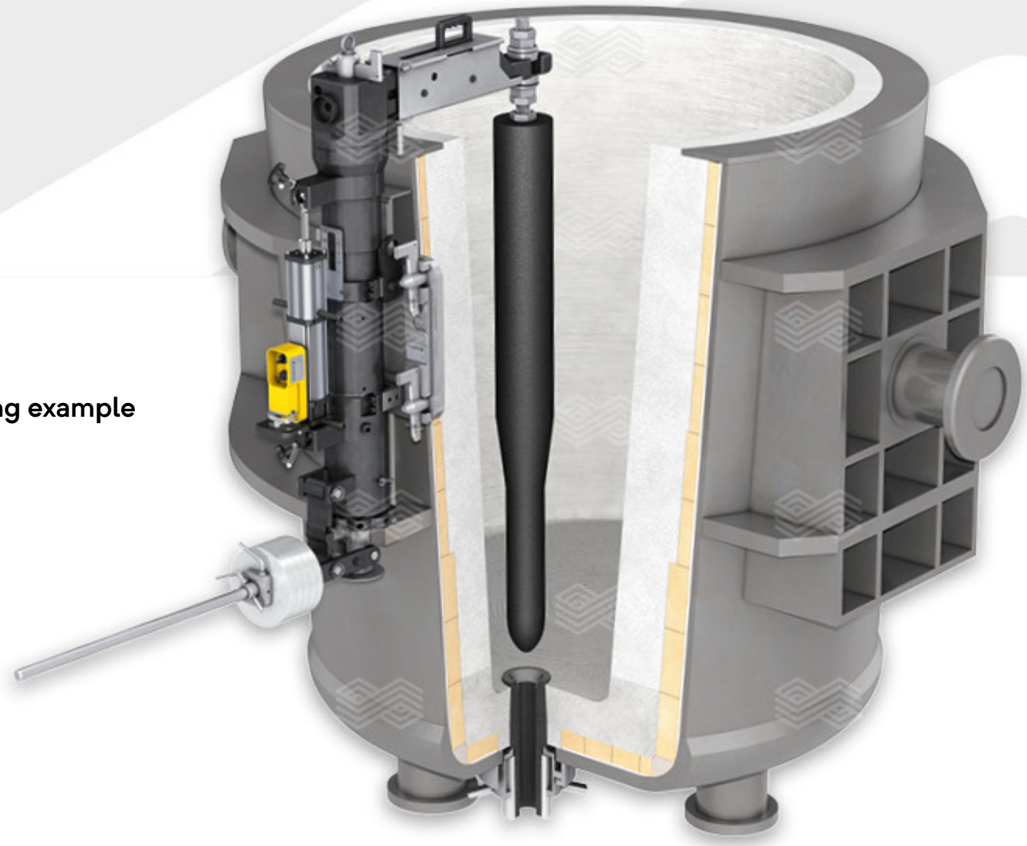
- Tight mechanical play for precise flow regulation
- Reliable locking system
- Stopper alignment by horizontal guidance (2-axis)
- Designed for stopper rod assembly into a preheated casting ladle
- Electric or hydraulic driven actuators

Maintenance and Support

- Minimal maintenance work required
- Long lifetime of parts
- Long inspection intervals, short inspection time
- INTERSTOP® after sales service

Main Parts





Mounting example

Content | Lining | Induction Furnace | AOD | EAF | Cupola Furnace | Ladle | Machinery

IRON & STEEL / FOUNDRIES

ANKERJET M

Application:

Multi-purpose pressure vessel machine for basic and non-basic mixes

Advantages:

- Useable in a variety of aggregates
- Small hopper with bag ripper for charging 25 kg paper bags
- Mobile design means flexibility of application
- Low maintenance and wear costs
- Pneumatic driven machine (no electricity required)
- Easy manual operation



Content | Lining | Induction Furnace | AOD | EAF | Cupola Furnace | Ladle | Machinery

IRON & STEEL / FOUNDRIES

ANKERGUN

RHI MAGNESITA

Application:

Multipurpose rotary gunning machine for basic and non-basic mixes

Advantages:

- Useable in a variety of aggregates
- Small hopper with bag ripper for charging 25 kg paper bags
- Mobile design allows flexibility of application
- Continuous gunning mix feeding



Content | Lining | Induction Furnace | AOD | EAF | Cupola Furnace | Ladle | Machinery

IRON & STEEL / FOUNDRIES

Vibra Spike

RHI MAGNESITA

Application:

De-airing of hearth mixes for the installation



Advantages:

- Improved de-airing of banks
- Improved service life of hearths and banks due to higher lining density
- Less physical strain on operating personnel
- Substantially shorter lining times



Content | Lining | Induction Furnace | AOD | EAF | Cupola Furnace | Ladle | Machinery

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RHI MAGNESITA

The Journal of Refractory Innovations

bulletin

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