

**R&R**

**Jewelry Product Catalog**



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Founded in Toledo, Ohio in 1872, Ransom & Randolph (R&R) quickly grew to become a leader in the investment casting industry. By 1900, R&R was already manufacturing and supplying dental products to over 37 countries worldwide. R&R was a renowned leader in the lost wax casting of metals industry by 1910. This leadership role led to the expansion of lost wax casting into industrial applications in the 1940s and into the forefront of ceramic shell casting technology in the 1960s.

R&R has made several vital advancements in the jewelry casting industry such as launching Ultra-Vest® universal investment, which to this day is globally recognized as a leading premium jewelry investment; Astro-Vest® investment, which was the first water-based high temperature investment; and Plasticast® investment, which is a critical component in the success of print-to-cast investment technology.

Since joining Ransom & Randolph in 2000, I have been privileged to see the continued growth of R&R in the global jewelry market by not only nearly doubling our distribution partners to over 50 worldwide, but also through several vital acquisitions, such as the former Kerr Satin Cast line of investments as well as Vulcan® burnout furnaces and Neycraft™ casting units. Additional growth was fueled by our technical team, which is second to none with Development and Application Engineers ready to assist customers throughout the world with our advanced laboratory capabilities.

As stated in the introduction of R&R's 1911 Catalog, "Those who know us best are fully satisfied in our ability and willingness to serve them well." 150 years later, you can still be assured that R&R will provide excellent customer service and remarkable technical expertise as we strive to serve the jewelry industry well.

Sincerely,

Daniel Nixon  
 President  
 Ransom & Randolph, LLC



# R&R

## ACADEMY

Ransom & Randolph is proud to contribute to your success in the casting industry with **excellent resources available free** through the online **Ransom & Randolph Academy**.

The R&R Academy provides you with **immediate access** to defect analysis, FAQs, calculators, worksheets, technical papers and other valuable resources. **Everything you need, conveniently at your fingertips** to keep your process running as **smoothly as possible**.

Visit the online R&R Academy at [Ransom-Randolph.com/rr-academy](https://Ransom-Randolph.com/rr-academy).

Additionally, R&R's **technical team of experts** support customers with a focus on **constant improvement**.

If you have questions regarding application or troubleshooting, or are looking for feedback or tips, do not hesitate to **contact our technical team** by calling 800-800-7496 (US) or by emailing [technical@ransom-randolph.com](mailto:technical@ransom-randolph.com).



# HARNESS THE POWER OF BANDUST™ TECHNOLOGY

Patented BANDUST™ technology *significantly reduces respirable quartz and cristobalite exposure when paired with our original investment formulations.* Through a unique manufacturing process exclusive to R&R, we bind these typically respirable particles to the dry investment powder formulas you know and trust!

BANDUST technology significantly reduces total respirable dust – *up to 97% versus standard R&R jewelry investments and as much as 99% when compared to other jewelry investments* based on third-party industrial hygienist air sampling test results. The industrial hygienist reported *no measurable respirable dust from BANDUST technology flasks during quench.*

Casters also noted the added benefit of improved housekeeping overall. Casting quality is maintained with *excellent final casting results and no process changes* are required during the investing stage.

**Breathe easy—  
we've got you  
covered.**

*In identical testing conditions, conventional investment materials (left) release noticeably more fine dust than BANDUST technology treated jewelry investments (right).*

# PRINT-TO-CAST (P2C™) SYSTEM



## WHAT IS P2C?

The industry's only complete Print-to-Cast (P2C™) System for Jewelry features burnout cycles engineered to support both overnight and one-hour workflows.

R&R Castable Resins provide a validated Print-to-Cast (P2C™) System for jewelry, fully compatible with FlashCast™, Plasticast® PT, Plasticast®, Liberty-Vest™, and SC-RP investments. Offering clean burnouts and flawless results with flexible burnout cycles that support traditional and flash-fire.

*Available to both the USA and internationally.*

### P2C™ JEWELRY RESINS

### R&R INVESTMENTS

### EQUIPMENT

**P2C™ Bold Jewelry resin**  
For fine & intricate designs.

High-Temperature  
• **FlashCast™**  
• **Plasticast® PT**

**Vulcan® burnout furnace**  
• Single-stage  
• 3-stage

**P2C™ Fine Jewelry resin**  
For bulky & heavy patterns.

Low-Temperature  
• **Plasticast®**  
• **Liberty-Vest™**  
• **SC-RP**

Foil Lined rings

### SUPPORT MATERIALS

## THE COMPLETE SYSTEM

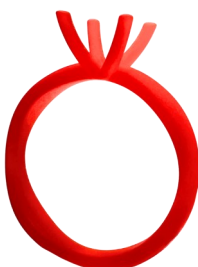




### P2C™ Bold Jewelry resin

- Formulated for heavy, bulky designs, providing strength and stability for larger, substantial pieces
- Integrated within R&R's validated P2C™ system for reliable compatibility with R&R investments
- Ensures clean burnout and smooth cast surfaces, minimizing finishing work across alloy types
- Validated for traditional and one-hour flash fire casting, with faster print times to boost productivity

**USA & International**  
1 kg (2.2 lb.).....1730050



### P2C™ Fine Jewelry resin

- Engineered for intricate filigree and ultra-fine detail, delivering exceptional precision in delicate designs
- Part of R&R's validated P2C™ system, optimized to pair with R&R investments for seamless print-to-cast performance
- Clean burnout and smooth surfaces reduce post-cast cleanup across precious and non-precious alloys
- Supports both traditional and one-hour flash fire burnout, with fast print speeds for efficient production

**USA & International**  
1 kg (2.2 lb.).....1730060

## SUPPORT MATERAILS



### Foil Lined Rings

Removable or burn-away flask, easily paired with FlashCast™ within our P2C™ Jewelry System

- Foil-lined disposable ring
- 3.5" (89 mm) diameter x 3" (75 mm) tall
- 200 count carton

**USA & International**  
200 count.....71000



**Ultra-Vest® universal investment**

for casting gold, silver, brass, and bronze  
Commonly referred to as the most process forgiving product available for casting with easy quench and easy cleanup, reducing your risk of losing valuable metal, maximizing your profit.

**USA**  
44 lb. (20 kg) box.....468263  
100 lb. (45.4 kg) pail.....68217

**International**  
50 lb. (22.7 kg) box.....68263  
100 lb. (45.4 kg) pail.....68217

*Available with BANDUST™ technology for less respirable silica.*



**Ultra-Vest® MAXX™ investment**

for casting white gold  
Provides maximum thermal stability for high metal melt, burnout, and casting temperatures to help eliminate potential environmental defects.

**USA**  
44 lb. (20 kg) box.....469103  
100 lb. (45.4 kg) pail.....68217

**International**  
50 lb. (22.7 kg) box.....69103  
50 lb. (22.7 kg) bag.....69112  
100 lb. (45.4 kg) pail.....69110

*Available with BANDUST™ technology for less respirable silica.*



**Plasticast® investment**

for casting plastic, resin, and rapid prototype patterns  
Easily removed in water, this investment provides jewelry casters with a mold material that meets the high demands of pattern materials while maintaining mold surface and dimensional integrity.

**USA**  
44 lb. (20 kg) box.....40121  
100 lb. (45.4 kg) pail.....0110

**International**  
50 lb. (22.7 kg) box.....0121  
50 lb. (22.7 kg) bag.....0105  
100 lb. (45.4 kg) pail.....0110

*Available with BANDUST™ technology for less respirable silica.*



**Solitaire investment**

for casting with stones in place  
Provides casters with superior stone protection, higher burnout temperature capacity, a cleaner dewax, and fewer surface defects than other investment materials.

**USA**  
44 lb. (20 kg) box.....468267

**International**  
50 lb. (22.7 kg) box.....68267



**Advantage™ investment**

for casting brass, bronze, and silver  
An economical investment that reduces watermarking defects for dependable casting results and maximum profits.

**USA**  
44 lb. (20 kg) box.....468270  
100 lb. (45.4 kg) pail.....68272

**International**  
50 lb. (22.7 kg) box.....68270  
100 lb. (45.4 kg) pail.....68272

*Available with BANDUST™ technology for less respirable silica.*



**Liberty-Vest™ investment**

for casting gold, silver, brass, and bronze

- Ideal for wax, plastic, and rapid prototype patterns, with strength and crack resistance for reliable casting
- Produces smoother cast surfaces, reducing finishing time and improving overall quality
- Easy quench and cleanup help minimize metal loss and streamline post-cast processing

**USA**

36 lb. (16.4 kg) bag.....68181  
 44 lb. (20 kg) box.....468180  
 100 lb. (45.4 kg) pail.....68182

**International**

50 lb. (22.7 kg) box.....68180  
 100 lb. (45.4 kg) pail.....68182



**Omni-Cast™ investment**

for casting white gold

High cristobalite formulation supports casting of precious alloys up to 2450°F (1350°C)  
 Made in the USA with high-quality standards

**USA**

44 lb. (20 kg) box.....468708  
 100 lb. (45.4 kg) pail.....68704



**SC20 investment**

for casting gold and silver

One of the world's most trusted jewelry investments, SC-20 investment is recognized by the global jewelry casting industry as the benchmark for casting the highest-quality metals.

**USA**

44 lb. (20 kg) box.....431008  
100 lb. (45.4 kg) pail.....31004

**International**

50 lb. (22.7 kg) box.....31008  
50 lb. (22.7 kg) bag.....31000  
100 lb. (45.4 kg) pail.....31004

*Available with BANDUST™ technology for less respirable silica.*



**SC-X investment**

for casting white gold

Contains a high percentage of cristobalite, giving it the ability to withstand rapid and high-temperature burnouts without cracking, providing a smooth lustrous surface quality with high details.

**USA**

44 lb. (20 kg) box.....431308  
100 lb. (45.4 kg) pail.....31304

**International**

50 lb. (22.7 kg) box.....31308  
50 lb. (22.7 kg) bag.....31300  
100 lb. (45.4 kg) pail.....31304



**SC-RP investment**

for casting plastic, resin, and rapid prototype patterns

Specifically formulated to cast rapid prototypes, this investment allows high-expansion and extra-strength to compliment the needs of pattern materials.

**International**

50 lb. (22.7 kg) box.....31409  
50 lb. (22.7 kg) bag.....31408



**SC-D investment**

for casting with stones in place

Contains proven pre-mixed additives that protect stones from heat and provides ideal thermal expansion for wax setting in diamonds, color stones, colored synthetics, and cubic zirconia.

**USA**

44 lb. (20 kg) box.....431048  
100 lb. (45.4 kg) pail.....31044

**International**

50 lb. (22.7 kg) box.....31048  
50 lb. (22.7 kg) bag.....31040  
100 lb. (45.4 kg) pail.....31044



**KC2000 investment**

for casting gold and silver

A forgiving and dependable jewelry investment casting powder that is highly consistent and easily breaks out for large volume production.

**USA**

44 lb. (20 kg) box.....431208  
100 lb. (45.4 kg) pail.....31204

**International**

50 lb. (22.7 kg) box.....31208  
50 lb. (22.7 kg) bag.....31200  
100 lb. (45.4 kg) pail.....31204

*Available with BANDUST™ technology for less respirable silica.*



**Aurum™ investment**

for casting gold

Has proven quality and consistent results with a smoother surface than other investments, resulting in less finishing, therefore saving time.

International  
50 lb. (22.7 kg) bag.....75000

*Available with BANDUST™ technology for less respirable silica.*



**Argentum™ investment**

for casting brass, bronze, and silver

Known for reducing the chance of excess metal defects in order to create more time for production rather than reproduction.

International  
50 lb. (22.7 kg) bag.....75550

*Available with BANDUST™ technology for less respirable silica.*



**KC1000 investment**

for casting brass, bronze, and silver

Known for reducing the chance of excess metal defects in order to create more time for production rather than reproduction.

International  
50 lb. (22.7 kg) bag.....75600

*Available with BANDUST™ technology for less respirable silica.*



**KC2000 investment**

for casting gold and silver

A forgiving and dependable jewelry investment casting powder that is highly consistent and easily breaks out for large volume production.

International  
50 lb. (22.7 kg) bag.....31200

*Available with BANDUST™ technology for less respirable silica.*



## Astro-Vest® investment

for casting stainless steel & platinum

A fan favorite due to its consistency of creating fin-free castings with meticulous reproduction of detail.

**USA**  
44 lb. (20 kg) box.....468481

**International**  
44 lb. (20 kg) box.....468481



## Plasticast® PT investment + binder

for casting platinum as well as plastic, resin, and rapid prototype patterns

A water-based, two-part system that maintains mold surface and dimensional integrity while eliminating the acid-based binder hazard associated with common two-part platinum investments.

**USA**  
44 lb. (20 kg) kit.....64810

**International**  
44 lb. (20 kg) kit.....64810

*Each kit includes investment powder and a 64 oz (1.9 L) liquid binder.*



## SC-PT investment

for casting platinum

Designed for casting platinum-based alloys with only water in lieu of special liquids or binders by centrifugal technique.

**USA**  
100 lb. (45.4 kg) pail.....31600

**International**  
100 lb. (45.4 kg) pail.....31600



## Platinum investment + binder

for casting platinum

Unlike other acid-based binders, Platinum binder will not settle out, resulting in smoother, more consistent results from mix to mix than other two-part platinum products.

**USA**  
44 lb. (20 kg) kit.....68253

*Each kit includes investment powder and a 30.4 oz (900 mL) liquid binder.*



## FlashCast™ investment + binder

- Optimized for use with FlashCast Binder and R&R P2C jewelry resins for reliable system performance
- High-expansion, high-strength investment maintains mold integrity and enables effective resin burnout
- Delivers smooth castings with a short working time and supports one-hour flash fire burnout

**USA**  
**Investment**  
44 lb. (20 kg) box.....427417  
**Binder**  
32 fl. oz. (0.95 L) bottle...27410

**International**  
**Investment**  
50 lb. (22.7 kg) box.....27417  
**Binder**  
32 fl. oz. (0.95 L) bottle...27410

## SILICONE



### R&R® Speed-Sil™ silicone putty

for making molds or direct metal pours of low-temperature

This fast-setting, two-part putty combination vulcanizes at room temperature and mixes with an easy 1:1 ratio. Its oil-free, residue-free formula is heat resistant for direct metal casting while offering exceptional detail reproduction and increased production speed.

**USA & International**  
1 kg base + 1 kg catalyst kit  
 Purple.....200018



### RTV2 silicone rubbers

for making durable, stable molds for detailed wax pattern replication

This two-part rubber combination vulcanizes at room temperature and mixes with an easy 1:1 ratio. RTV2 silicone rubbers offers excellent durability and stability over time, provides zero shrinkage, and increases production speed.

**USA & International**  
1 kg base + 1 kg catalyst kit  
 HT33 Red.....23721  
 HT33 Transparent.....23790  
 HT42 Gray.....23731  
 HT45 Sea Blue.....24106  
 HT45 Transparent.....24110

5 kg base + 5 kg catalyst kit  
 HT33 Red.....23722  
 HT33 Transparent.....24100  
 HT42 Gray.....23732  
 HT45 Sea Blue.....23115

	Color	Work Time	Set Time	Hardness
HT33	Red or Transparent	20–22 minutes	3½ hours	33 ± 2 ShA
HT42	Gray	22–26 minutes	2 hours	41 ShA
HT45	Transparent or Sea Blue	10–12 minutes	1-1½ hours	43 ± 3 ShA



## INJECTION WAXES



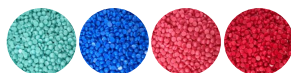
### AquaSphere™ wax

for the reproduction of thin sections with exceptionally consistent results

A general-purpose injection wax with the strength and flexibility needed to easily remove product from the mold.

Available in aqua, blue, light pink, and pink.

**USA & International**  
Aqua  
 50 lb. (22.7 kg) carton.....40100  
Blue  
 50 lb. (22.7 kg) carton.....40400  
Light Pink  
 50 lb. (22.7 kg) carton.....40500  
Pink  
 50 lb. (22.7 kg) carton.....40300



**BURNOUT FURNACES**



**Vulcan® burnout furnaces**

that provides faster heating and cooling than full firebrick as well as a longer life and more durability than fiber construction

A burnout furnace that features a high-performance hybrid muffle, a heavy gauge steel cabinet finished with a durable baked enamel coating, and a durable stainless steel front panel.

Each Vulcan burnout furnace includes a digital controller. The 3-Stage options is available in two standard muffle sizes.

**USA & International**

Single-Stage

S-550 100-120V.....5355730002  
S-550 200-240V.....5355730001

3-Stage

3-130 200-240V.....5355740001  
3-130 100-120V.....5355740002  
3-550 200-240V.....5355740003  
3-550 100-120V.....5355740004

**Each Vulcan comes with a 1-Year Limited Warranty.**

**CASTING MACHINES**



**Neycraft™ centrifugal casting machine**

for melting and casting metal into the replica investment cavity by centrifugal force

Designed with a number of unique operating features:

- Built-in protective safety shield
- Easy winding/locking and release mechanism
- Instant balance with counterbalance weight
- Universal flask carriage to accommodate flasks up to 4" x 4" (10.2 cm x 10.2 cm)
- Two-way mounting base for quick setup and storage

**USA & International**

Neycraft.....9491045

**SPARE PARTS**

We know eventually equipment breaks due to wear and tear. Fortunately, we have spare parts available. No need to purchase a whole new unit—save yourself some time and money by having a few on hand just in case of a breakdown during a project. **Available to both the USA and internationally.**

**Vulcan®**

Encoder.....	SRM-02844
Exhaust port plug, 1" kit.....	9491093A
Insulation, door-130.....	9493325
Insulation, door-550.....	9493365
Membrane switch 3-130.....	FP-02899
Membrane switch 3-550.....	FP-02881
Rubber foot.....	9390616
Service board 3-stage.....	DENT3STAGE
Service board single-stage.....	DENTA
Service muffle 550 120V.....	9493471
Service muffle 550 230V.....	9493423
Service muffle assy 130 120V.....	9493422

Service muffle assy 130 230V.....	9493420
Service Slide assembly.....	9491054
Shelf: Free standing model 550.....	9493327
Switch.....	1835.3118
Switch, door.....	9493338
Thermocouple.....	TC-005
Tongs, MFG.....	9491010A
Tray: bottom model 130.....	9353053
Tray: bottom model 550.....	9353057
120 volt power cord.....	FP-02842
240 volt power cord.....	FP-02839
240 volt power cord Euro.....	FP-02841

**Neycraft™**

Clutch & coupling assembly.....	9491056
Counterbalance weight.....	9491066
Crucible former 2.0 dia.....	9357118

Motor; spring.....	9356001
Silica crucible replacement.....	9353025
Tongs, MFG.....	9491010A

**1872 - 1876**

Founded by John R. B. Ransom (1872), Thaddeus R. Randolph joins as partner (1876)



**1911**

Standard Investment Compound is developed and sold for jewelry casting

**1940s**

R&R creates an Industrial Division, leveraging jewelry and dental casting techniques to produce industrial precision castings



**2000**

R&R acquires the PreVest™ line of jewelry, dental, and industrial investments



**2012**

R&R acquires the rights to BANDUST™ Technology from Elephant Dental B.V., reducing ≤99% of respirable silica in jewelry investments



**2019**

R&R acquires the rights to the former Kerr™ gold casting investment line



**2022**

R&R celebrates its 150<sup>th</sup> anniversary!



**2024**

R&R completes a 50% expansion on its primary production facility to accommodate company growth



**2025**

R&R announces rebrand for the future, building on 152 years of innovation



**1904**



R&R introduces the first vacuum casting appliance, the Elgin (later nicknamed “the Pig” because of its shape)

**1919**

R&R publishes the *Authoritative Manual of Lost Wax Casting*

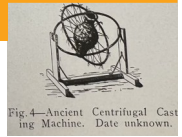


Fig. 4—Ancient Centrifugal Casting Machine. Date unknown.

**1964**

Ultra-Vest® investment debuts as R&R’s first universal jewelry investment



**1965**

Astro-Vest® investment is introduced as the first high temperature jewelry investment casting both stainless steel and platinum



**2002**

The first investment designed specifically for printed resin patterns is released under the name “Plasticast® investment”



**2017**

R&R introduces Plasticast® PT & binder as the first high temperature investment system designed specifically for printed resin patterns



**2020**

R&R acquires the rights to all Vulcan® and Neycraft™ equipment from Dentsply Ney



**2023**

R&R’s opens its European office in Röttha, Germany, to provide order and shipping support for EU and UK customers



**2025**

R&R acquires the rights to the Whip Mix investment product line from Whip Mix Corporation



*Proudly serving the investment casting industry for over 150 years*

# R&R

## **Ransom&Randolph**

### Jewelry Product Catalog

Ransom-Randolph.com

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