

# ROMANOFF

## INTERNATIONAL SUPPLY CORPORATION

Serving Precious and Base Metal Fabrication Industries Since 1949



[www.romanoff.com](http://www.romanoff.com)

1.800.221.7448



To Our Valued Customers:

Romanoff is your leading source for the latest and most advanced 3D Printing equipment and technology, as well as, having the largest selection of premier lost wax casting machinery.

It is our goal at Romanoff to provide our customers with cutting edge products and knowledge that will allow them to create unique designs and fulfill their wants and needs at a competitive price. Our friendly, knowledgeable and professional staff will advise, inspire and educate our customers' projects and needs.

We treat each customer as an individual and sincerely value our relationships by constantly offering the industries best technical after sales support.

Romanoff was established by Barney and Jessie Romanoff in 1949 in a small, 300 square foot New York City loft. Today, Romanoff is housed in a modern 40,000 square foot warehouse on Long Island, New York. Bob Romanoff has been leading the Romanoff company for 50+ years and his son Brian (3rd generation), has been working by his side for 20+ years. Brian's children (4th generation) insure that the company will continue to grow for many years to come.

We truly believe that our latest catalog will offer great assistance to you and your future manufacturing requirements.

Sincerely,

A handwritten signature in black ink that reads 'Bob Romanoff'.

Bob Romanoff, President

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## **Establishing Credit:**

All accounts are shipped by payment in advance, by credit card or by check unless credit is established. Freight is always prepaid. To establish credit (open account) with us, accounts must fill out our online credit application and provide 3 known trade references. OPEN ACCOUNT TERMS: NET 30 DAYS. There is a \$30 fee for all returned checks. ASK US ABOUT LEASING.

## **Shipping Information:**

Shipping will be charged on all orders. We select the best means of shipping at our discretion unless shipping instructions are specified by the customers when placing the order. Freight is usually F.O.B. Amityville, NY, however certain equipment is shipped F.O.B. factory of manufacturer. All shipments through Romanoff must be insured. When shipping of hazardous materials is prohibited by specific means, we ship by the best method permissible. Carriers charge an additional fee for shipping hazardous items.

## **Crating and Packing:**

Normal packaging is included. However, there are wood crating charges on some large and heavy items to help prevent damage to them during shipping.

## **Damaged Goods:**

Extreme care is taken to ensure that items are packed well for shipping. However, on occasion, damage may occur. The carrier is responsible for loss or damage since all products are sold F.O.B. Amityville, NY.

ACCEPTANCE OF A SHIPMENT AS DELIVERED IS YOUR ACKNOWLEDGEMENT THAT THE SHIPMENT WAS RECEIVED IN GOOD CONDITION. THEREFORE, DO NOT SIGN FOR OR ACCEPT A SHIPMENT UNLESS THE DELIVERING AGENT NOTES THE NATURE AND EXTENT OF THE DAMAGES. CLAIMS FOR DAMAGES, VISIBLE OR CONCEALED, CANNOT BE FILED BY US. CHECK YOUR SHIPMENT CAREFULLY, INCLUDING PACKING MATERIALS FOR ALL ITEMS.

## **Prices:**

All prices in this catalog were current at time of printing. However, due to changing costs beyond our control (e.g., currency fluctuation), prices are subject to change without prior notice. Prices do not include shipping and handling charges.

## **Returns and Repairs:**

If you wish to return an item, it must be returned new, unused, freight pre-paid, and in its original packaging. Any items returned more than 30 days from the invoice date will be subject to a minimum 30% restocking charge. You also must include a copy of the invoice or packing list to insure proper credit. Special order, non-stocked items (i.e., not in this catalog), or any item made to your specifications are not returnable or cancellable.

There is a minimum \$50 charge to estimate the cost of your repair. This charge is waived if you authorized the repair. All repairs require a signed form. Estimates on Solidscape printers have a minimum \$150 estimate fee.

## **Important:**

Please note that all products sold by Romanoff are meant to be purchased and used by professionals who have the knowledge of their safe and proper use.

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# Solidscape®

High Precision 3D Printers

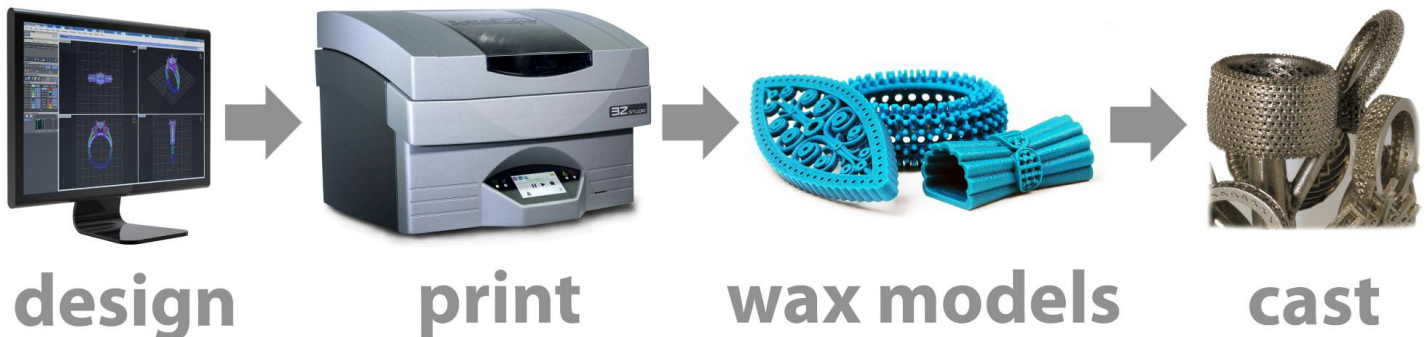
## ONE-TOUCH 3D WAX PRINTERS

**CAD/CAM manufacturing is the new standard for jewelry manufacturing:** Quality, Consistency, Efficiency, Productivity are all provided with Solidscape's jewelry solutions.

Designers can design master models of increasing complexity, while manufacturers or service bureaus can produce them on Solidscape's 3D printers creating wax masters with superior surface finish and precision. These wax master models are ideal for direct casting into precious metals or mold making. The entire process can be done in-house, greatly reducing costs associated with production time and securing greater control.

Printing in-house affords the opportunity to analyze a 3-dimensional proof of the work before delivery.

The combination of high-precision printing and castable materials also empowers jewelry manufacturers and custom retailers to meet the growing demand for custom work. Intricate detail, stunning symmetry and precision, never possible with hand carving, are all achievable with Solidscape printers.



## NEW MATERIALS



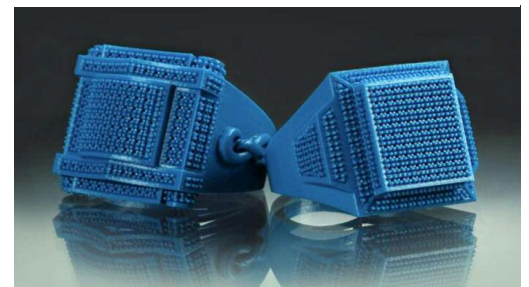
### Superior Casting Properties

3ZModel Material is Solidscape's most durable material ever with a 23% strength improvement over plusCAST® and over 50% stronger than previous generations.



### Easy, Hands-Free Removal

3ZSupport automatically generates a structure to protect the part during the build process. This saves on labor by eliminating the need for CAD designers to configure support structures during the design of new pieces. Once the printing is completed, labor is saved again because the 3ZSupport material completely dissolves away in a liquid solution, leaving a clean wax part without the need for manual post-processing.



### The Solidscape Solution

- Wax masters for lost-wax investment casting
- Ease of use, repeatable, reliable
- Wax models for mold making
- No material shrinkage
- Low cost per master model produced
- No post processing required
- 100% casting yields
- Best Price/Performance



# 3Z PRO

78-8600-SYS

## The High Precision 3D Printer for Direct Manufacturing

### Industry-Leading Precision

3ZPro accuracy produces models of intricate designs, with ultra-fine feature detail and a smooth surface finish.

### Efficient Workflow

3ZPro's new capabilities make the process workflow extremely efficient, delivering high casting yields, consistent turnarounds and low cost-per-model.

### Easy One-Touch Operation

Intuitive one-touch operation via a universal LCD icon display eliminates language and technical barriers.

### Superior Casting Results

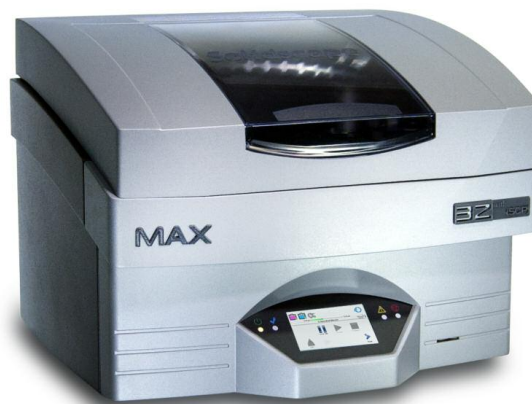
The exclusive 3Z™Model and 3Z™Support materials produce wax parts with superior casting properties; fast meltout, no ash or residue, and no thermal expansion.



# 3Z MAX

78-8700-SYS

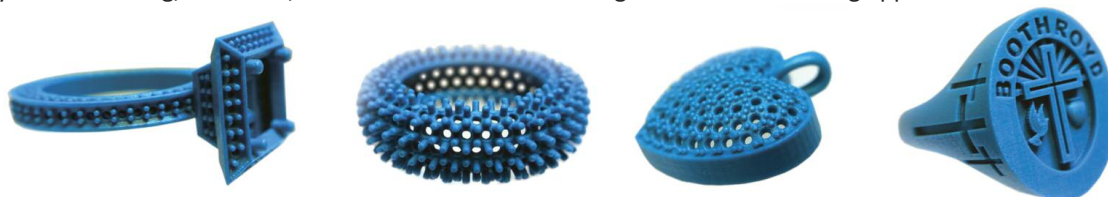
## Direct Manufacturing Precision, Speed



### Direct Manufacturing Precision, Speed

3Z®MAX is the fastest Solidscape 3D wax printer delivering higher output for significant production gains when producing bulkier precision designs in jewelry manufacturing, industrial, medical and other demanding direct manufacturing applications.

### Speed Comparison



3Z PRO

14.8 Hours

16.2 Hours

7.8 Hours

16.3 Hours

3Z MAX

12.3 Hours  
(17% faster)

14.5 Hours  
(11% faster)

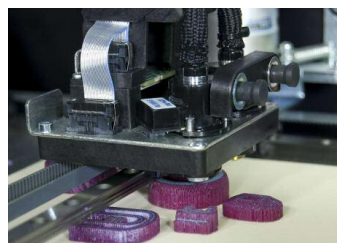
6.5 Hours  
(17% faster)

12.2 Hours  
(26% faster)



## 78-9100 **3Z STUDIO**

### The High Precision 3D Printer for Jewelry CreationDental



#### From Inspiration to Finished Design

The 3ZSTUDIO brings the jeweler's bench to the retail shop where users of any technical level can produce their own intricate wax patterns, ready for casting. The fully automated 3ZSTUDIO marries the passion of fine jewelry design with the power of high precision 3D printing.

#### Easy One-Touch Operation

Intuitive one-touch operation via a universal LCD icon display eliminates language and technical barriers.

#### Efficient Workflow

The 3ZSTUDIO empowers the jewelry creation process from design through finished wax patterns in an effortless workflow that delivers high casting yields, consistent turnarounds and low cost-per-parts.

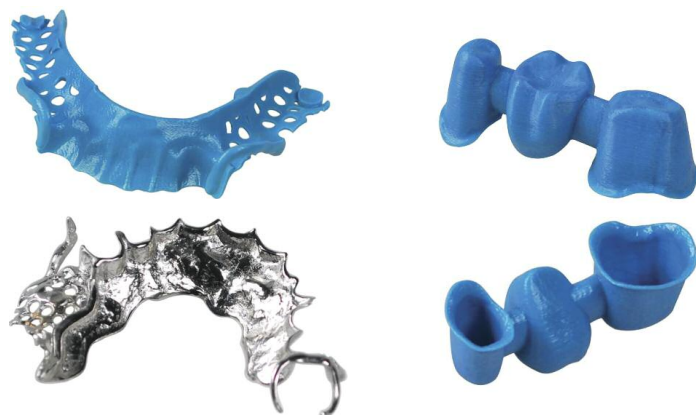
#### Superior Casting Results

New 3Z Model and 3Z Support materials produce extremely smooth jewelry wax patterns that accurately reproduce the most intricate of geometries—without the need for manual post-processing. Both materials offer superior casting properties, fast meltout, no ash or residue, and no thermal expansion.

## Dental Wax-Ups Perfected

78-9200

## **3Z LAB**



#### Cost-Per-Case Advantage

The new 3Z Lab by Solidscape helps lab owners hold the line on rising costs while remaining competitive against offshore pricing pressure.

#### Uncompromising Surface Quality and Fit





With intuitive one-touch simplicity, dental lab technicians can now produce wax-ups ready for casting and pressing with the most accurate marginal integrity, occlusion, contact, and anatomy form. The 3Z Lab printer is optimized for the batch processing of dental wax-ups that produce crowns, bridges and copings with superior margins—providing patients with a perfect fit.

#### Strongest Dental Wax Material

New 3Z LabCAST is Solidscape's strongest dental wax material ever featuring 100% castability with no material shrinkage. The crowns, copings and bridges produced by your Solidscape 3Z Lab printer can be directly invested, pressed or cast for the highest precision dental restorations.





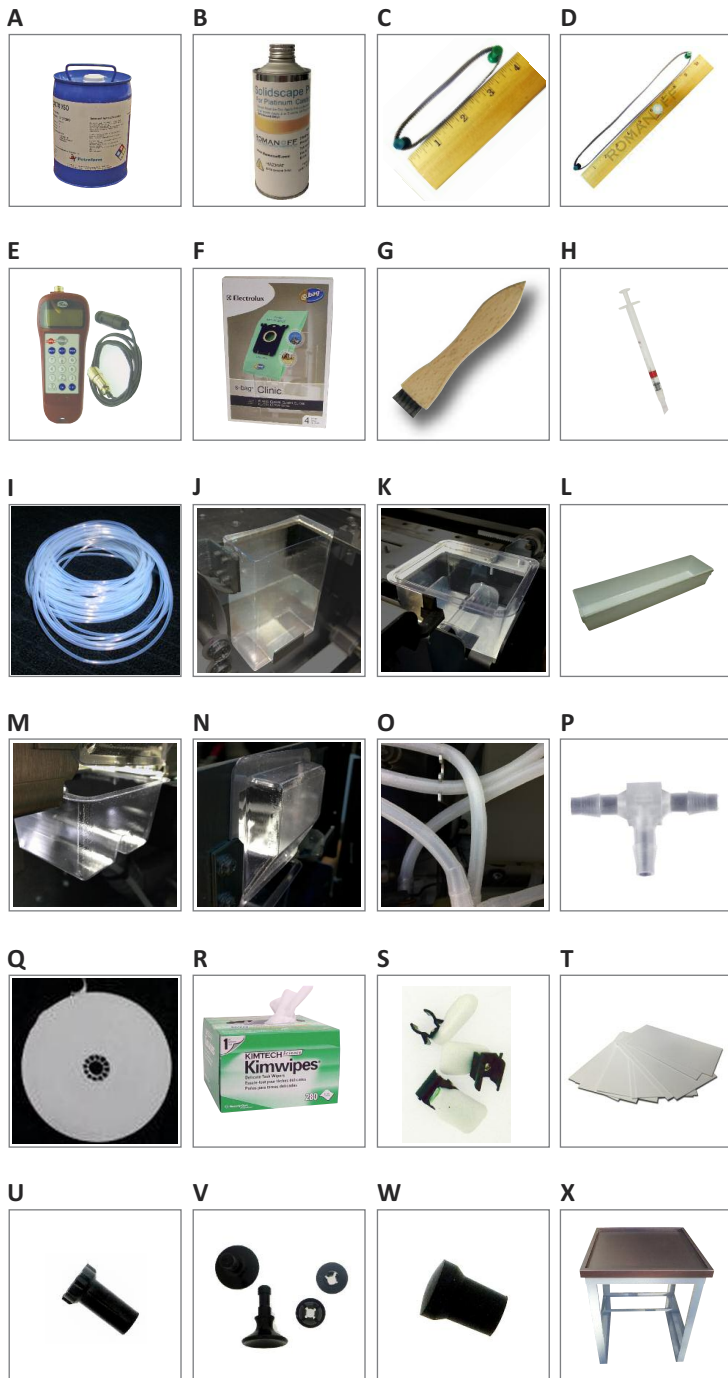
<b>Solidscape®</b>										
	<b>3Z MAX</b>		<b>3Z PRO</b>		<b>3Z STUDIO</b>		<b>3Z LAB</b>			
	<b>78-8700-SYS</b>		<b>78-8600-SYS</b>		<b>78-9100</b>		<b>78-1200</b>			
<b>Ease Of Use</b>										
Fully Automated			Plug and print Automatic job set-up							
Accessible			Icon-based user interface Files, job start - up and job status can be managed and viewed remotely from PC							
<b>High Precision Results</b>										
Resolution			5000 X 5000 dpi (197 X 197 dots/mm) in X, Y 8000 dpi (158 dots/mm) in Z							
Accuracy			±0.0010 inch/inch (±25.4µ/25.4mm) along each axis X, Y and Z							
Layer Thickness Range			25.4µm to 76.2µm		6.35µm to 76.2µm		6.35µm to 25.4µm		6.35µm to 25.4µm	
Surface Finish			32-63 micro-inches (RMS)							
<b>Office Environment</b>										
Desktop Size			21.4" W X 18"D X 16" H (558 X 495 X 419 mm)							
Weight			75 lbs. weight (34 kg)							
Build Envelope			6" x 6" x 4" (152.4 X 152.4 X 101.6 mm) X, Y, Z Consistent Results over entire 6 inch x 6 inch area			6" x 6" x 2" (152.4 X 152.4 X 50.8 mm) X, Y, Z Consistent Results over entire 6 inch x 6 inch area				
Power Requirements			90 - 250 - v, 10A @ 230v max consumption							
Amibient Temperature			Recommend 60°to 80°F (16°to 27°C) at a 40% to 60% range of humidity							
Equipment Interface			PC to printer connectivity Wireless Wi-Fi 802.11 b/g, Ethernet Hi-Speed USB 2.0			PC to printer connectivity Ethernet, Hi-Speed USB 2.0				
<b>Materials</b>										
Model			3Z®Model				3Z LabCAST			
Support			3Z®Support				3Z LabFill			
DeWax			VSO Liquid solution used to dissolve sacrificial support material							
<b>Efficient Workflow</b>										
CAD file input			.stl and .slc files							
3Z®Works			Software formats CAD files for 3D printing Allows operator to visually place job suites within build envelope Automatically generates support structure, saving on design time							
3Z®Touch			System Software is Windows® based							
Automatic			Status monitoring and fault detection Re-start of build from point of interruption Works unattended up to 72 hours							
SCP			Smooth Curvature Printing for superior surface finish							

# Solidscape Supplies



Key	Item#	Description	US\$ / Ea.	Key	Item#	Description	US\$ / Ea.
A	<a href="#">78-8002-L</a>	Solidscape - InduraFill - 11.5 oz.	161.70	Q	<a href="#">78-8005</a>	6" X 6" Build Plate for Model "T66-BT2"	170.99
B	<a href="#">78-8001-L</a>	Solidscape - InduraCast - 14.6 oz.	220.50	Q	<a href="#">78-8005-R66</a>	6" X 6" Build Plate for Model "R66 & T76"	127.56
C	<a href="#">78-8001-PC</a>	Solidscape Induracast PLUS Build Material 16.9 oz. bottle	220.50	Q	<a href="#">78-8605</a>	6" X 6" Build Plate for 3Z Series	118.50
D	<a href="#">78-8601</a>	3Z Build Material 10 Sticks	214.00	R	<a href="#">78-8000-33</a>	Solidscape Tank Filter Kit T66 S/N # 4499 and Less	95.95
E	<a href="#">78-8602</a>	3Z Support Material 10 Sticks	189.00	R	<a href="#">78-8000-33P</a>	Air Filter Tank Replacement Kit T66 (S/N 4500+), R66, T76 & Plus Models	83.12
F	<a href="#">78-8017</a>	Proto Lube	16.07	S	<a href="#">78-8600-33B</a>	3Z Series Build Tank Filter Reservoir(Round)	153.23
G	<a href="#">78-8001-ORING</a>	Solidscape T76, R66, T66 Fill Port O-Ring	3.33	T	<a href="#">78-8600-33S</a>	3Z Series Support Tank Filter Reservoir(Hex)	153.23
H	<a href="#">78-8001-CAP</a>	Solidscape InduraCast Reservoir Cap only	15.39	U	<a href="#">78-8000-48</a>	Solidscape T66-BT2 Y Motor for S/N #4500 & Less	268.69
I	<a href="#">78-8001-PC/CAP</a>	Solidscape PlusCast Reservoir Cap Only	15.39	V	<a href="#">78-8000-49M</a>	Solidscape T66 Y Motor Assembly & Encoder S/N #4500 & Newer	679.00
J	<a href="#">78-8002-CAP</a>	Solidscape InduraFill Reservoir Cap Only	15.39	V	<a href="#">78-8013-3</a>	Solidscape T76+ Y Motor Assembly & Encoder	689.00
K	<a href="#">78-8601-PC/CAP</a>	3Z Tank Cap- Build Reservoir Side	17.37	W	<a href="#">78-8000-71</a>	Solidscape T66-BT2, T612 "X" Motor	271.74
L	<a href="#">78-8602-PC/CAP</a>	3Z Tank Cap- Support Reservoir Side	17.37	W	<a href="#">78-8500-71</a>	Solidscape T76,R66 X-AXIS Motor	238.84
M	<a href="#">78-8010</a>	Solid-Scape Support Jet T66,T76,R66	1260.00	W	<a href="#">78-8013-2</a>	Solidscape 3Z Series X, Y and Cutter Motor	235.67
M	<a href="#">78-8011</a>	Solid-Scape Build Jet T66,T76,R66	1260.00	X	<a href="#">78-8000-49D</a>	Cable for Y Axis Motor T76 R66	243.12
M	<a href="#">78-9011</a>	Universal Replacement Jet T76+ & R66+ Only	1260.00	Y	<a href="#">78-8008-B1</a>	Build Tank Heater Kit Solidscape T76,R66 T76+,R66+	322.18
N	<a href="#">78-8612</a>	Solidscape Printhead, 3Z Pro Universal Jet	1211.54	Y	<a href="#">78-8008-S1</a>	Support Tank Heater Kit Solidscape T76,R66 T76+,R66+	322.18
N	<a href="#">78-9112</a>	Solidscape Printhead, 3Z Studio Universal Jet	1211.54	Z1	<a href="#">78-8000-58D</a>	R66 Cutter End Mill	181.84
N	<a href="#">78-8712</a>	Solidscape Printhead, 3Z Max Universal Jet	1211.54	Z2	<a href="#">78-9000-54</a>	R66 Cutter End Kit	370.73
O	<a href="#">78-8010-1</a>	Solidscape T76, R66 Print Head Cable 39"	209.94	Z3	<a href="#">78-8001-S</a>	Solidscape Tank Measuring Dipstick	16.46
O	<a href="#">78-8010-2</a>	Solidscape T66 Print Head Cable 60"	289.52				
O	<a href="#">78-8610-1</a>	Solidscape 3Z Series Print Head Cable	182.02				
P	<a href="#">78-8008</a>	Heated Build Line Kit T66, R66, T76	441.03				
P	<a href="#">78-8009</a>	Heated Support Line Kit T66, R66, T76	441.03				
P	<a href="#">78-8608</a>	Heated Build Line 3Z Series	367.53				
P	<a href="#">78-8609</a>	Heated Support Line for 3Z Series	367.53				





Key	Item#	Description	US\$/Ea.
A	<b>78-8015</b>	VSO-Bioact 1 GAL.	193.50
A	<b>78-8015-5</b>	VSO-Bioact 5 GAL	422.14
B	<b>78-8022</b>	SolidScape Primer for Platinum Casting Pints	19.95
C	<b>78-8000-46</b>	Belt for Y motor T66, T76/+ (80/103)	14.00
C	<b>78-8000-74</b>	Belt for X motor T76, R66	15.83
C	<b>78-8600-54</b>	Belt for 3Z Series Cutter (0.25"W)	16.79
D	<b>78-8000-62</b>	SolidScape T66 Belt X Drive	30.19
D	<b>78-8000-73</b>	SolidScape T76, R66 Belt X Drive (2 required)	28.00
D	<b>78-8000-75</b>	SolidScape T76, R66 Belt Y Drive	16.24
E	<b>78-8000-05</b>	Belt Calibration Tensioning Tool*	956.69
F	<b>78-8000-21S</b>	Vacuum bags 4-pack S-Style	23.26
G	<b>78-8000-32</b>	Brush, Cleaning Head	15.79
H	<b>78-8000-27</b>	SolidScape Syringe	2.65
I	<b>78-8018</b>	Purge Tubing - Sold Per Foot	1.12
J	<b>78-8018-D</b>	T76, R66 Purge Discharge 3" Cups 3-pack	21.10
K	<b>78-8018-D1</b>	SolidScape T76, R66 & 3Z Discharge Cup 5-Pack New Style	18.27
L	<b>78-8018-1T</b>	Tray for Under Purge Tube for T66	20.29
M	<b>78-8618-D</b>	SolidScape Bottom Purge Discharge Cup 3Z	4.12
N	<b>78-8618-DR</b>	SolidScape Rear Purge Discharge Cup 3Z	2.89
O	<b>78-8018-2</b>	Silicone Hose Reservoir Hard - Sold Per Foot	2.66
O	<b>78-8018-3</b>	Silicone Hose Reservoir Pinch Soft - Per Foot	2.86
P	<b>78-8018-10</b>	SolidScape Plastic "T" Fittings 3/16 "	2.55
Q	<b>78-8000-44</b>	1/2" Proto-Tape for T66-BT2, T612	13.23
Q	<b>78-8000-44X</b>	1" Proto-Tape for 3Z, T76/+, R66/+	12.16
R	<b>78-8016</b>	Lint Free Kim Wipes	6.60
S	<b>78-8016-DL</b>	Drum Lubrication Swab, 3-Pack	12.69
T	<b>78-8019</b>	Calibration Cards BX/500	23.20
U	<b>78-8010-3</b>	SolidScape T76, R66, T66 & Plus Models-Heated Line to Jet Connector	13.67
V	<b>78-8000-28</b>	Nylatch Cutter Shroud Locking Pins for SolidScape T66, T76, R66	13.34
W	<b>78-8018-11</b>	SolidScape T76, R66, T66 Purge Spout Cap	11.15
W	<b>78-8018-4</b>	SolidScape 3Z Series Purge Spout Cap	11.15
X	<b>242-113</b>	Heavy-Duty Table, 2' x 2' x 29"H	289.00
X	<b>242-115</b>	Heavy-Duty Table, 5' x 2' x 29"H (Not Shown)	349.00

\* This Belt tensioning tool is needed to maintain proper tension on the belts for smooth operation.

## Dewaxing system

This unit serves a dual function purpose: For removing wax patterns from the build plate and to dissolve the support material, via VSO (Bioact) heated solution, without damaging models. Includes digital thermometer, bowl & strainer.

Item#	Description	Each/US\$
78-8500- DWS	SolidScape Dewaxing System 120V	\$1363.00
78-8500A-DWS	SolidScape Dewaxing System 220V	\$1728.00



# CONCEPTLASER

hofmann innovation group



## LaserCUSING®

In the metal laser melting process (LaserCUSING®), standard metals in a atomized (powder) form are fused by a high-energy fibre laser.

During the laser process, the one-component metal powder is completely fused. Following setting, the material solidifies. This means that the finished component is provided with almost ideal material properties.

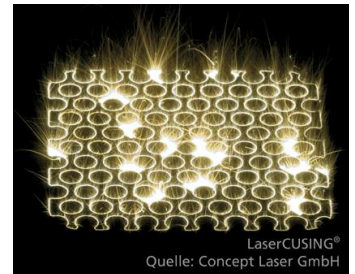
The contour of the component is produced by directing the laser beam using a mirror deflecting unit (scanner). The component is built up layer by layer by lowering the bottom of the build plate, applying more powder and melting again.

### The process offers the following advantages:

**Freedom of Geometry** – complex component geometries which cannot be produced by conventional means can be produced without using any tools through the laser melting process. There are no limitations in the fabrication of components with hollow or grid structures on the inside with this technology.

**Green Technology** - LaserCUSING® is a production process which produces almost no waste. Metal powder which has not been melted can be fully reused without any material being lost for further manufacturing. The laser process is almost emissions free.

**Near Net Shape** – The production of components with a near-net-shape or ready-to-install geometry shortens the fabrication time and saves costs.



LaserCUSING®  
Quelle: Concept Laser GmbH



LaserCUSING®  
Quelle: Concept Laser GmbH



# Jewelry Applications

**Final product** White gold ring studded with diamonds.  
With minimal or no porosity!

## Post-processing

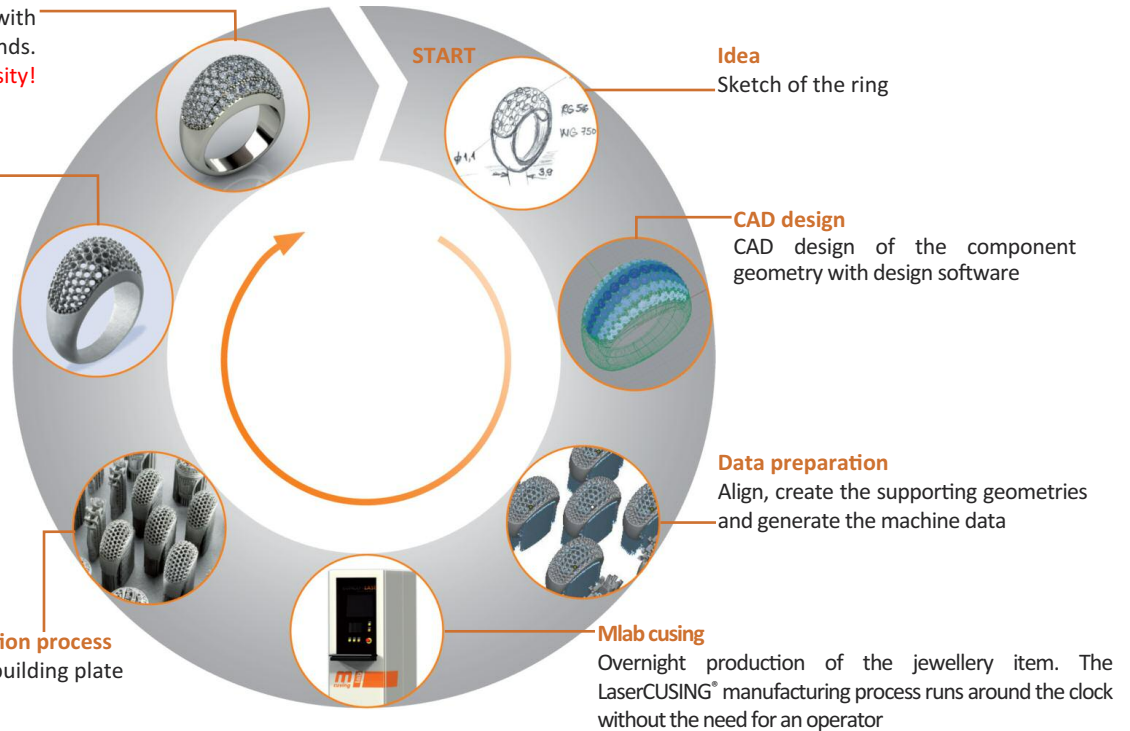
Remove from the building plate, remove the supporting geometries, polish.

## BENEFITS

- > Production of the jewellery item from metal eliminates the lost wax process.
- > Higher densities and a more uniform structure than casted parts.
- > Time and cost saving due to a reduction in the number of manufacturing steps. No prototype or wax model required.
- > Production of unique specimens or small batches of complex items of jewelry.

## End of construction process

Removal of the building plate with rings



## APPLICATIONS



1 | Watch clasp manufactured on Mlab cusing / stainless steel CL 20ES (1.4404) / advantages of the laser-generated component: Time and cost savings coupled with a reduction in the number of manufacturing steps, which required it to be manufactured in two parts and then welded together with a laser. The great density of the stainless steel allows the desired spring effect to be achieved. The individual parts have good tension and therefore they click together very nicely. Otherwise this type of mechanical part would have been punched and forged using conventional labor intense methods.

2 | Bracelet manufactured on Mlab Cusing using stainless steel CL 20ES (1.4404). Production of functionally integrated items of jewelry. Thanks to a design which is adapted to the laser melting process, the bracelet link can be produced in one piece. The individual segments are flexible, and the lugs are already integrated. There is no need for any welding or assembly work.

3 | Pave ring manufactured on MLab Cusing using yellow gold. Prototyping and wax models are no longer required. Laser Cusing offers significant time and cost savings, due to a reduction in the number of manufacturing steps required through conventional manufacturing.

## MACHINE SOLUTIONS

The ideal machine for manufacturing components with elaborate structures and parts made from reactive materials like Titanium\*. Perfect when what matters is high surface quality and the finest component structures!



## MATERIAL CHOICES

The Mlab cusing machine is suitable for processing the following material groups: **Stainless steels, titanium alloys, yellow gold, white gold, bronze and silver alloys.**

**Platinum and palladium alloys are currently being prepared.** The material storage works with easily removable containers. Romanoff Technicians will recommend the suitable precious-metal specifications and is happy to give details of appropriate suppliers.

\*Titanium available on MLab Cusing R

## Unimagined possibilities with LaserCUSING®

Both mould inserts with close-contour cooling and direct components for the jewellery, medical, dental, automotive and aerospace sectors can be fabricated with the LaserCUSING® layer construction process.

LaserCUSING® opens up new prospects in terms of efficiency and speed for more efficient product development.

With regard to mass production, the generative metal laser melting process can be used to implement new product ideas as well as metallic components which are subject to high mechanical/thermal loading.

Individuality, flexibility, quick turn-around and dramatic manufacturing costs are reasons why LaserCusing is a necessary path for future manufacturing!



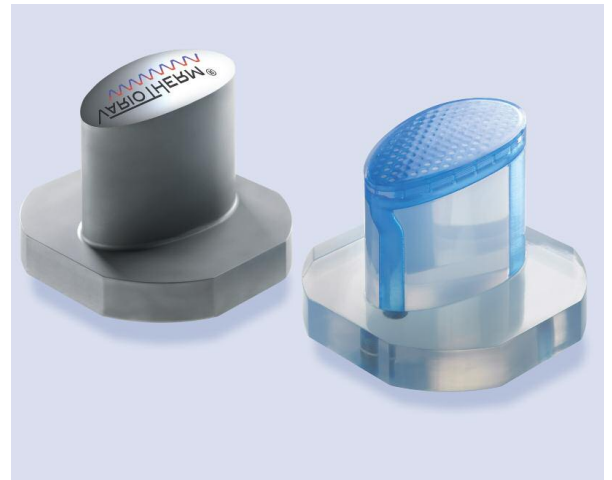
### Individual solutions for automotive construction and motor racing

When it comes to pilot-series development and small-scale manufacturing, the LaserCUSING® technology demonstrates high-tech capability that has been tried and tested in practice and is now an integral part of many industrial manufacturing applications. Direct Cusing Manufacturing® produces precise and economical engine components, bodywork and structural parts as well as direct components for use inside vehicles.

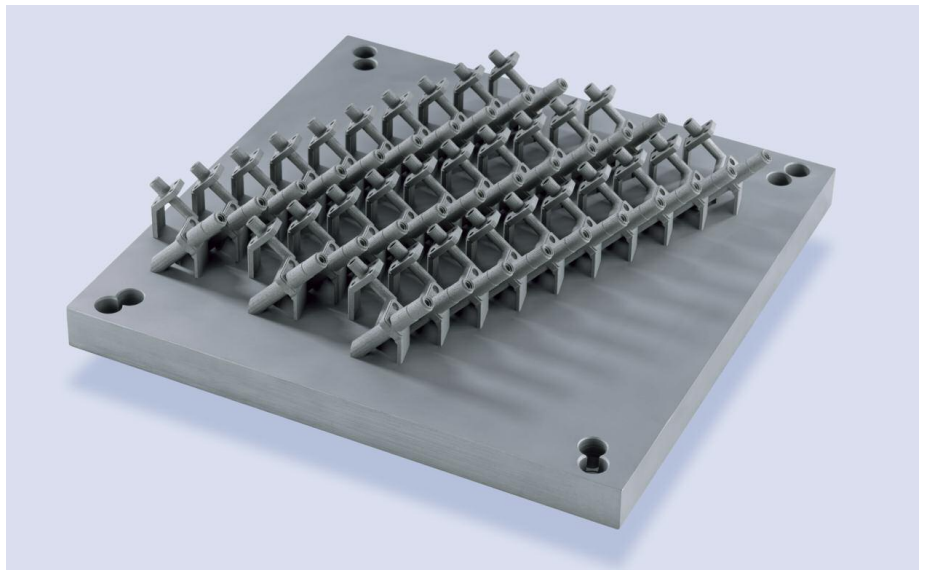


### Economic solutions for tooling and mold-making.

Securing competitive advantages and getting to the market faster is the name of the game nowadays in almost all sectors of industry. The use of mould inserts with conformal cooling delivers quality optimization while reducing the unit costs at the same time.



When it comes to pilot-series development, LaserCUSING® is ideally suited to the production of complex and thin-walled structures. The process demonstrates maximum efficiency in the manufacturing of topological or bionically designed lightweight components.





# Medical and Dental Applications

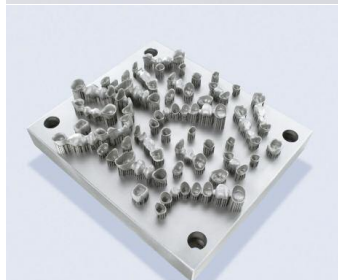


## Individual solutions for the medical industry

**Trauma**  
fractures, disfigurements  
tumor diseases → bone substitute  
material shoulder, hand, foot and pelvis

Spine degenerative instabilities  
fractures tumors and disfigurements

CFM (craniofacial microsomia)  
mandible, mid-face and skull  
for the reconstruction of bones  
following tumor excision  
correction of disfigurements.



## LaserCUSING® is revolutionizing the dental industry

Economical direct production of dental components: crowns, copings and denture frameworks. High-quality, perfectly fitting dentures made from cobalt-chromium, titanium or precious metal alloys – virtually overnight!

## Implants and medical instruments with LaserCUSING®

Individual biocompatible implants or prosthetics with open-pored surface structures. Production of complex trabecular bioanalogous structures as bone replacement. Production of unique specimens or prototypes for implants and instruments.



## Final product

Dentures with top component quality ensuring success and ultimate customer satisfaction.

## Veneering

with commercially available ceramic.

## BENEFITS

Efficient production of unique specimens with maximum precision and cost-effectiveness. Standardised manufacturing process for unique specimens and small batches with a constantly high level of quality. 50% time saving compared with casting.

## End of construction process

Building plate with dental components.

## Direct production of dentures using LaserCUSING® machines:

process runs around the clock without the need for an operator.

## 3D scan

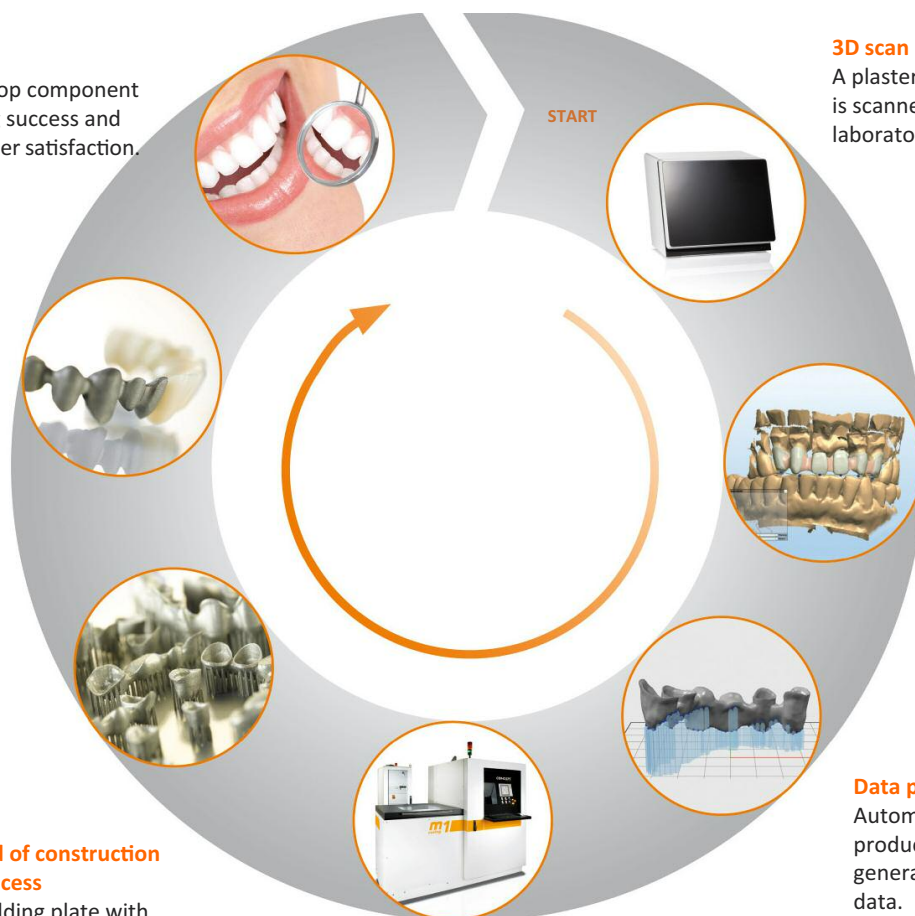
A plaster-cast model or imprint is scanned in the dental laboratory.

## CAD modelling

CAD design for the dental components.

## Data preparation

Automatic part placement, production of supports and generation of the machine data.



# Concept Laser MLab/MLab R

## TECHNICAL DATA

Build envelope LaserCUSING®	50 x 50 mm (x, y) 70 x 70 mm (x, y) 90 x 90 mm (x, y) z = 80 mm
Layer thickness LaserCUSING®	20 - 50 µm
Production speed LaserCUSING®	1 - 5 cm³/h (depending on material)
Laser system	Fibre laser 50 W (cw) / optional 100 W (cw)
Max. scanning speed	7 m/s
Focus diameter	Approx. 20 - 80 µm
Fixation of the building plate	Clamping system
Connected loads	Power consumption 1.5 kW Power supply 1/N/PE AC 230 V, 16 A 1 gas connection provided Nitrogen or Argon
Inert gas supply	< 4 l/min
Inert gas consumption	
Dimensions	705 x 1833 x 955 mm (W x H x D)
Dimension glovebox carriage (MLab R only)	680 x 1400 x 650 mm (W x H x D)
Weight	500 kg
Operating conditions	15 - 35°C
LaserCUSING® materials	remanium® star CL Cobalt-chromium alloy (by Dentaurum) CL 20ES Stainless steel 18-carat yellow gold, 18-carat white gold, Silver, Palladium, Titanium(MLab R only)



Movable glovebox carriage for handling of reactive materials (available with MLab R only)

## APPLICATIONS

Manufacturing components with elaborate structures and parts made from reactive materials like titanium(MLab R). Perfect for high surface quality and the finest component structures.

# Concept Laser M2

Build envelope LaserCUSING®	250 x 250 x 280 mm (x, y, z)
Layer thickness LaserCUSING®	20 - 80 µm
Production speed LaserCUSING®	2 - 20 cm³/h (depending on material)
Laser system	Fibre laser 200 W (cw), optional 400 W (cw)
Max. scanning speed	7 m/s
Focus diameter	50 - 200 µm
Reference clamping system	EROWA, System 3R / others on request
Connected loads	Power consumption 7.4 kW Power supply 3/N/PE AC 400 V, 32 A Compressed air 5 bar
Inert gas supply	2 gas connections provided N2 generator external (optional)
Inert gas consumption	< 1 m³/h
Dimensions	2440 x 1630 x 2354 mm (W x D x H) Weight 2000 kg Operating conditions 15 - 35°C
LaserCUSING® materials	CL 20ES Stainless steel (1.4404) CL 30AL Aluminium (AlSi12) CL 40TI Titanium alloy (TiAl6V4) CL 40TI ELI Titanium alloy (TiAl6V4 ELI) CL 50WS Hot-work steel (1.2709) CL 91RW Stainless hot-work steel CL 100NB Nickel-based alloy (Inconel 718) CL 110CoCr Cobalt-chromium alloy (F75) remanium® star CL Cobalt-chromium alloy (by Dentaurum) rematitan® CL Titanium alloy (by Dentaurum)

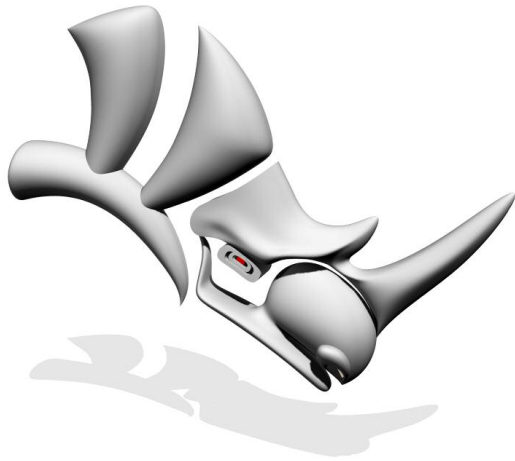


## APPLICATIONS

Suitable for manufacturing of larger components with elaborate structures, and parts made from reactive materials like titanium and aluminum.



# Software

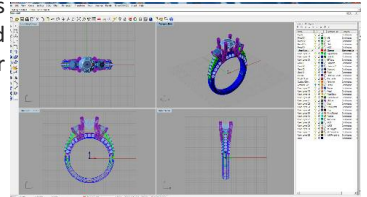


78-8020-C

## Rhinoceros®

NURBS modeling for Windows

Rhino is a playground for your imagination and a workbench where your ideas become masterpieces. With Rhino you can realize your most complex ideas with no need to rely on someone else to interpret them. Create a 3-D model and show the client a rendering before beginning production. Once the design is approved, send it directly to your 3-D printer or CAM to produce the model for casting. You can then use traditional techniques for manufacturing. Rhino is used by some of the most creative jewelry designers in the world. Visit the gallery to see their work. Rhino's NURBS technology provides the flexibility and accuracy needed for your most innovative, complex, and intricate designs. Besides rings, pendants, broaches, and bracelets, Rhino has the power to make any body ornament that today's demanding customers request. Rhino can also help manufacture your piece with plug-ins that run CNC machines or print directly to rapid prototyping machines and 3-D printers. Use these tools to quickly and accurately produce wax casting masters or models for silicone molding techniques.



## Materialise MAGICS

78-7400-MMS

Magics, a user-friendly data preparation software package and STL editor, can guide you through every step of your RP or AM workflow:



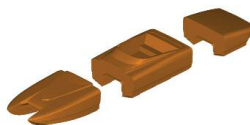
### 1. Import Files

With Magics, you can import nearly all file formats and native color information and stay in control of your original data.



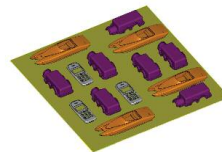
### 2. Fix and Prepare Files

The STL editor in Magics allows you to correct problems, as well as create watertight data and shortcuts to suit your workflow. And all in a user-friendly interface.



### 3. Enhance and Edit Data

With the Magics STL editor, you can also take your designs to the next level: add logos, serial numbers, and hollow parts; apply textures; and perform Boolean operations and advanced cuts.



### 4. Prepare the Platform

Magics has the tools you need to duplicate parts, orient parts in an ideal way and create no-build zones.



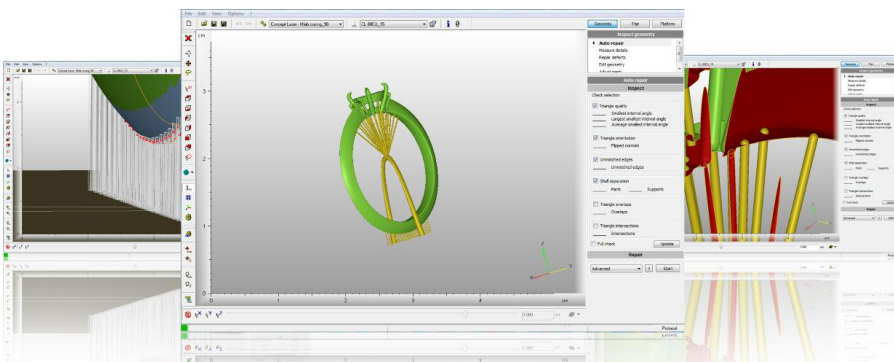
### 5. Print Better Parts

Magics ensures you print only the best parts. It allows you to view slices, detect collisions, save platforms, and generate useful reports.

78-7400-AFB



## MARCAM ENGINEERING AutoFab



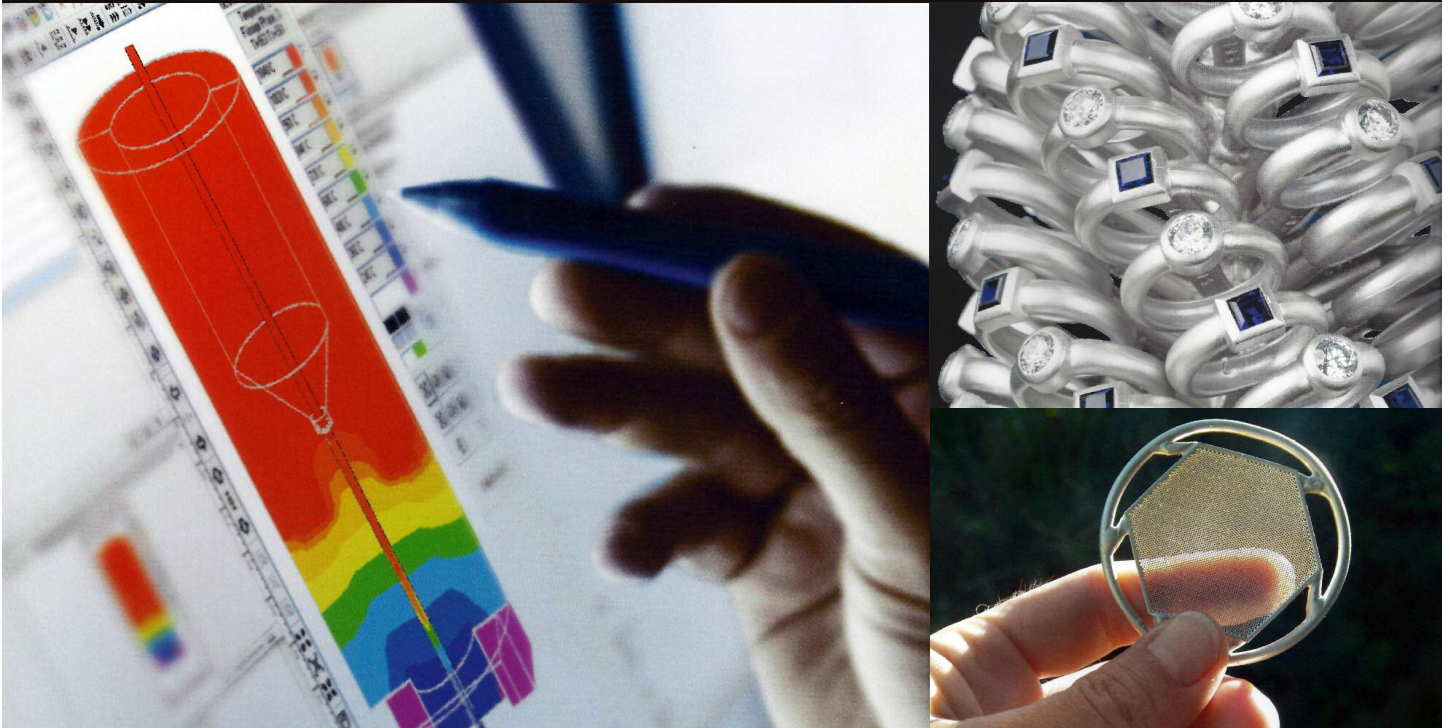
AutoFab supports you when manufacturing metal products with layer melting and sintering processes, making AutoFab the link between the 3D design and the Additive Manufacturing system that covers all necessary steps along the process chain.

A clearly structured and workflow-oriented design, guides you intuitively through the system during operation. Whether you are the expert or just a newcomer: various user levels support you and will help reduce operating errors.

The Tree Support technology was developed specifically for metal processes to ensure both optimal part support as well as fast, easy and residue-free support removal while minimizing production cost.



Your partner for innovative metal casting solutions



Metal casting technology is our world. From the very beginning we focus exclusively on the development and construction of melting and casting machines and can offer you a broad diversity of machines for many varied utilizations.

#### **Development in close cooperation with our customers**

Our casting systems are developed and tested in close cooperation with customers from different sectors: The jewellery industry, rapid prototyping, medicine and dental technologies, automotive and component industries, foundries, mold designers, and artists. Every user-group has different technical backgrounds, different professional skills and different requirements.

#### **First listening, than engineering**

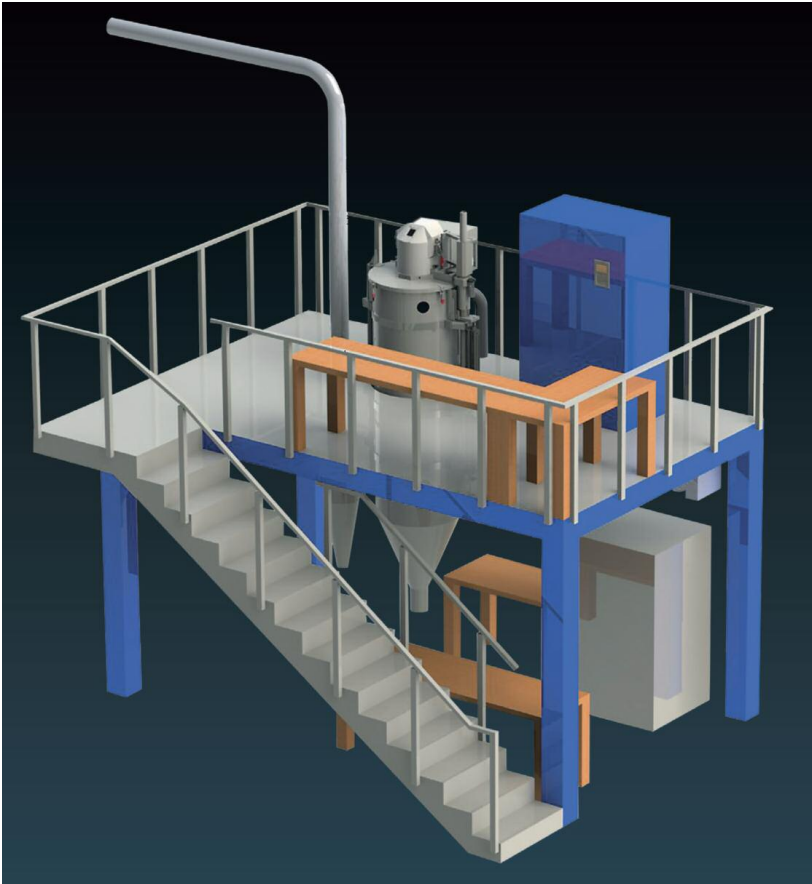
For us, a fundamental issue is always being optimally receptive:

- individual, customized solutions according to the needs of customer
- a range of systems that can be highly tuned to your process – with several tooling and sizing choices as well as numerous optional accessories
- individual machine set-ups through software development and generator programming
- short adjustment and training periods
- maximum reliability with continuous operation
- solid advice and support
- individual and perfectly fitted accessories and spare parts
- all necessary peripheral devices



# The Indutherm Atomiser

## For small-scale powder batch production



Melting chamber and nozzle plate can be lifted...



...and swiveled to the side independently;



turning and cleaning of the nozzle plate; easy nozzle exchange



Test plant at University Bremen



Receiver and cyclone of test plant

### For which purpose the Indutherm Atomizer was developed ?

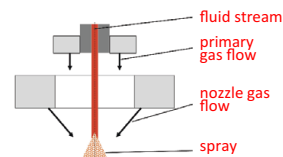
- In R&D small metal powder amounts are frequently required as test material or for new, innovative and specialty alloy powders not available on the market
- Precious metal powder applications usually require only small batch sizes
- SLM and MIM applications for special metal powders and properties
- Small powder batch production is not economic on traditional large-scale production plants
- Alloy change in production requires high cleaning efforts to avoid cross contamination

### The Indutherm Atomiser accomplishes:

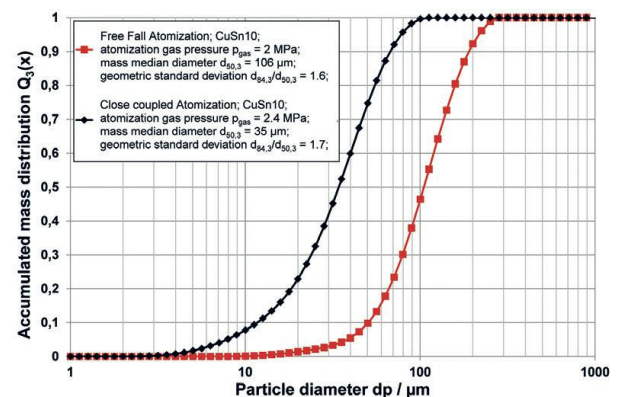
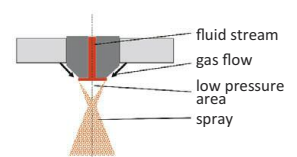
- Suitability for a wide spectrum of alloys, e.g. on Cu-, Au-, Ag- or Sn-Basis
- Inductive heating up to 1600° C in graphite crucibles
- Crucible volume of pilot plant: 1.5 l, 0.3 – 12 l
- Possibility for degassing and oxidation-free processing by vacuum and protective gas features
- Modular availability of free fall as well as close coupled atomization nozzles to obtain specific metal powder characteristics
- Increase of powder quality by flow optimization in the spray chamber (avoidance of satellite structures)
- Under development: suitability for higher temperatures and alloys based on Fe, Co, Ni, Pd

Small metal powders batches can be economically produced with the Indutherm Atomiser

### Free fall nozzle



### Close coupled nozzle



## MC15+ MC60

MC-15+  
78-2000-PLUS



MC60  
78-2200



The Indutherm MC15+ , MC60 (MC20V and MC100V on the facing pages) make up Romanoff's #1 line of table-top casting machines. The MC-15+, MC20V and MC100V will cast all metals up to 2000°C, and the MC-60 model will cast metals up to 1300°C, such as gold and silver in larger quantities. When casting lower temperature metals like gold and silver, the operator can use the submersible thermocouple, standard on all four models. The MC-15+, MC20V and MC100V are capable of casting higher temperature metals such as stainless steel, platinum, palladium, and more (the MC-15+ by human eye, the MC20V and MC100V by digital optical pyrometer). All our table-top machines are user-friendly and very economical to operate. They are extremely easy to use and great for casting small to medium sized runs. The MC-15+, MC-60, MC-20V and the MC-100V models are top loading. *Vacuum Pump not included.*

**UNIQUE FEATURES:** The MC-15+, MC20V and the MC-60 have a powerful 3.5 KW built-in microprocessor generator for fast heating. By relying on their submerged thermocouple and automatic vacuum and overpressure function, these units will produce excellent quality pieces. The Argon Gas "wash cycle" on these models ensure the internal casting chamber is free of oxidizing contaminants; this option is especially helpful on the MC-15+ when casting palladium and stone-in-place castings

**MC15+ & MC60 START-UP KITS INCLUDE:** Gold crucible, quartz container, flask tong, flask spacer (for smaller flasks), rubber base, Stainless Steel Flask - 3" x 3"(MC15+) or 4"x5"(MC60) & Flask saddle. MC-15+ also includes a stainless steel and platinum crucible.

Performance	78-2000-PLUS/MC-15+	78-2200/MC-60
Maximum Power / Electrical Connection	3.5 kW 230V single phase	3.5 kW 230V single phase
Maximum Temperature	2000° C	1300° C
Temperature Measurement	Standard: Thermocouple type N up to 1300° C Optional: Thermocouple type S up to 1600° C	Thermocouple Type N
Capacity	78-2000-PLUS/MC-15+	78-2200/MC-60
Casting volume	100 g Au 18ct 110 g steel / 200 g Pt	450 g Au 18 ct 300 g Ag 925
For use of flasks up to:	ø 30/50/65/80 mm x 80 mm h	ø 80 x120 mm h 100 mm x 120 mm h(optional)
Handling & Control	78-2000-PLUS/MC-15+	78-2200/MC-60
Control Panel	Digital Display	Digital Display
Automatic vacuum and overpressure function	Standard	Standard
Vacuum or overpressure after casting	- 1 to +2 bar	- 1 to +2 bar
Function washing by inert gas	Standard	Standard
Supply: 230 V single phase, cooling water, inert gas argon or nitrogen	Standard	Standard
Dimensions and Weight	17 ½"H x 16"W / 60lbs	23"H x 21" / 80lbs

**Call for Pricing**



# MC20V MC100V

The Indutherm MC100V is the versatile solution for those who want a combination of a compact casting machine with greater capacity than in the MC15+ or MC20V. The MC20V and MC100V cast all metals up to 2000°C. Higher temperature metals, such as steel, platinum, palladium, and more are measured by the digital optical pyrometer. Lower temperature metals such as gold, silver, bronze are measured by a submersible thermocouple up to 1300°C. The programmable argon gas "wash cycle" system ensures the internal casting chamber is free of oxidizing contaminants. Because both machines melt and pour in a vacuum inert atmosphere, it is a great choice for producing low and high temperature clean metal billets which can be later on drawn out into wire or rolled into sheet. *Vacuum pump not included.*

## UNIQUE FEATURES:

- Both units are equipped with the latest generation induction 2013 generator.
- Capable of casting high and low temperature alloys with submersible and optical temperature control.
- Melts under vacuum, and then backfills with inert gas to prevent oxidation.
- LCD text display and programmable computer memory will ensure consistent quality castings.
- Vibration technology improves filling, produces denser castings, higher metal elasticity, and greatly reduces porosity.
- The adjustable overpressure feature of up to 3 bar (45 PSI) after pouring will help achieve denser castings.



**MC20V & MC100V START-UP KITS INCLUDE:** Gold, platinum and stainless steel crucibles, quartz container, flask tong, stainless steel Flask 3" x 3" (MC20V) or 4"x5" (MC100V).

\*The MC100V requires a transformer for 208-240V to step up to 400V, 13A, 8KW. Romanoff part # 78-4500-T208



MC-20V  
78-2100



MC-100V  
78-4500



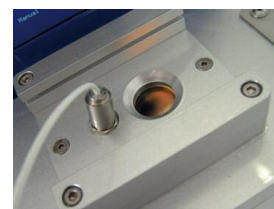
Performance



78-4500 / MC-100V



78-2100 / MC-20V



	78-4500 / MC-100V	78-2100 / MC-20V
<b>Power max. / electrical connection</b>	8.5 kW 3x400V (transformer for 220V is available)	3.5 kW 230V single phase
<b>Temperature max.</b>	2000° C	2000° C
<b>Temperature measurement</b>	Standard: Thermocouple type N up to 1300° C and Optical Pyrometer up to 2000° C	Standard: Thermocouple type N up to 1300° C and Optical Pyrometer up to 2000° C
Capacity	78-4500 / MC-100V	78-2100 / MC-20V
<b>Casting volume</b>	450 g Au 18ct 250 g steel / 500 g Pt Up to 80/100 mm x 120 mm h	100 g Au 18ct 110 g steel / 200 g Pt Up to 30/50/65/80 mm x 80 mm h
<b>For use of flasks:</b>	Up to 80/100 mm x 120 mm h; ø 100 mm x 120 mm h; Part # 78-4507	ø 30/50/65/80 mm x 80 mm h
Handling & Control	78-4500 / MC-100V	78-2100 / MC-20V
<b>Control Panel</b>	by LCD, full text readout	by LCD, full text readout
<b>Automatic vacuum function</b>	Standard	Standard
<b>Automatic overpressure after pouring</b>	Standard	Standard
<b>Function washing by inert gas</b>	Standard	Standard
<b>Supply: Cooling water, inert gas argon or nitrogen</b>	Standard	Standard
<b>Temperature control</b>	up to 2,000° C	up to 2,000° C
<b>RS 232 Interface, diagnostic system</b>	Standard	Standard

**Call for Pricing**



All around machines for casting of almost every metal, including steel, platinum, palladium. Also available as Titanium version with a high-vacuum system for casting of highly reactive metals such as titanium. Program control (100 programs), full text LCD display. Temp. max. 2000° C. Sweep Mode Vibration System for maximum casting quality.



Indutherm's unique and patent-pending vibration technology, when applied to the metal after it has been poured, will result in a tighter grain structure. The tighter grain structure will result in cleaner, and most importantly, denser castings.

The machines combine a dual-chamber differential pressure system with an automatic tilting mechanism. The casting process is achieved by rotating the entire melting-casting unit by 90°. One benefit of the automatic tilting mechanism is the use of economically priced graphite or ceramic crucibles (without holes and sealing rods), which tend to have a longer service life. Some alloys, such as copper beryllium, quickly cause crucibles with holes and sealing rods to become untight and therefore useless, and for this reason, many casters have so far processed such alloys only in open systems - which means they cannot optimize the process of overpressure or vacuum. With the VTC series, these disadvantages no longer apply.



Casts All Metals  
Pt., Ag, Au, Pd, S.S.

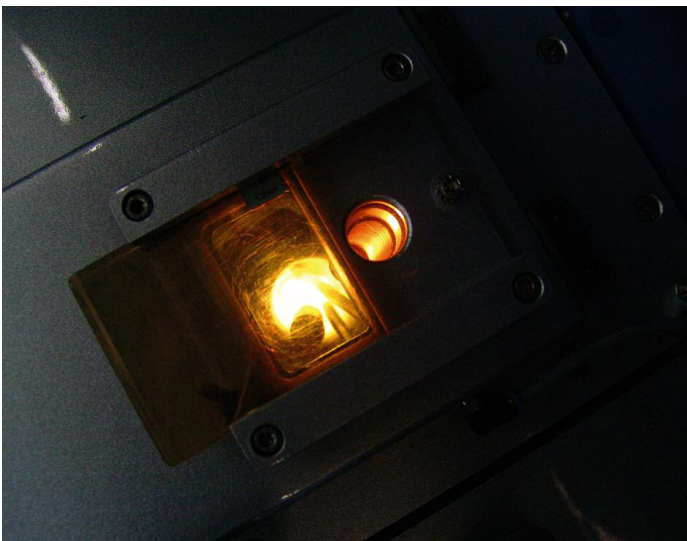
A vacuum can be produced in the melting chamber and the casting chamber to avoid

oxidation during the melting and pouring process. The flask is automatically pressed against the melting chamber for casting, making it possible to switch to overpressure during casting for better mold filling. In addition, the vibration technology optimizes the process even further. As well as casting with flasks, casting into ingot molds is also possible.

With Indutherm vibration technology (patent pending) and the sophisticated vacuum/pressure system, this machine is capable of producing large casted trees of high-temperature alloys, such as platinum, palladium and steel. All this without the elaborate and sensitive centrifugal mechanism usually required for casting high temperature alloys.

The VTC series represents a whole new generation of generator and control systems. Operation is simple and safe thanks to a clearly arranged and easy-to-use LCD panel. All parameters, right down to the variable tilting speed, can be individually set and saved to ensure that recurring castings always produce consistent results. The RS-232 Diagnostic System's remote service allows Romanoff or Indutherm to perform diagnostic tests via the Internet. *Vacuum pump not included.*

**The high vacuum casting** - every model in the VTC range from the VTC100V to VTC800V is available in Ti version for casting of highly reactive metals or alloys, such as titanium, copper beryllium, amorphous steel etc.



Casting trees in steel  
and in gold



Graphite crucible and  
ceramic crucible



## VIBRATION CASTING TECHNOLOGY (patent pending)



Tests with different gold\* and silver\*\* alloys demonstrate a more uniform structure, increased stability, a clear reduction in porosity and a tighter granular size in the metallic microstructure. For the operator this means: the danger of fissuring is reduced, postprocessing is decreased and the casting is considerably more resilient for further processing, e.g. for soldering, grinding, drawing and sizing.

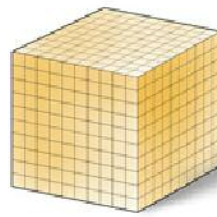
Grain structure without vibration



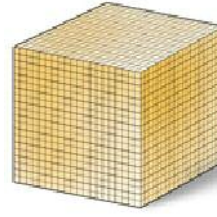
Grain structure with vibration



For the analysis, different jewellery pieces have been casted with a 18 ct gold alloy, all with the same machine. The microscopic picture on the top left shows the grain structure of the alloy without vibration, the lower left one shows the result with vibration casting. As you can see at first sight, with the vibration technology the grain size is reduced by more than 50 %! \*AU 18ct: Au 750, Ag 128, Cu 122



Cube with 10cm elements:  
1.000 elements Contact  
surface: 540.000 cm<sup>2</sup>



Cube with 5cm elements:  
8.000 elements Contact  
surface: 11.000.000 cm<sup>2</sup>

Imagine a cube of 1,00 m x 1,00 m x 1,00 m, composed with 10 cm cubes = 1.000 small cubes. Constructed with 5 cm cubes, the large cube contains 8.000 cubes! Even more noticeable is the comparison of the contact holding square measures: With 10cm cubes we get a contact square of 540.000 cm<sup>2</sup>, with 5 cm cubes however, the contact square increases to 11.000.000 cm<sup>2</sup> !



Model (Titanium Version)	VTC-100V(Ti)	VTC-200V(Ti)	VTC-400V(Ti)	VTC-800V(Ti)
Romanoff # (Titanium Version)	78-T4100(78-T4100-TN)	78-T4200(78-T4200-TN)	78-T4400(78-T4400-TN)	78-T4800(78-T4800-TN)
Generator Amp Size (max.)	12kW	15kW	20kW	25kW
Recommended breaker size in amps	32A	32A	32A	32A
Maximum kg metal capacity for graphite crucible (approx.)	450gr 18ct	2000gr 18ct	4000 18ct	no graphite crucible
Maximum kg metal capacity for ceramic crucible (approx.)	600gr Pt / 250gr steel (95gr Ti)	2500gr Pt / 1kg steel (450gr Ti)	4kg Pt / 2kg steel (900gr Ti)	6kg Pt / 4kg steel (1800gr Ti)
Maximum flask capacity	125 x 220mm	125 x 220mm	125 x 220mm	125 x 220mm
Temperature control (submersible and/or optical) P=pyrometer, T=thermocouple	P/T	P/T	P	P
Maximum temperature control	P 2000°C / T 1300/1600°C	P 2000°C / T 1300/1600°C	P 2000°C / T 1300/1600°C	P 2000°C / T 1300/1600°C
Recommended vacuum pump size (Not Included)	29 CFM	29 CFM	29 CFM	29 CFM
Weight in Kg	150	150	150	150
Dimensions WxDxH in mm	700 x 800 x 1500	700 x 800 x 1500	700 x 800 x 1500	700 x 800 x 1500

**Call for Pricing**



# Semi-Automatic VC Series



**INDUTHERM**

**VC-200**  
**78-4200**  
Resistance  
Heated  
Vacuum  
Casting  
Machine

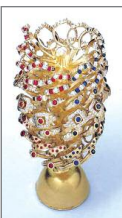
**VC-300**  
**78-4300**  
Resistance  
Heated  
Vacuum  
Pressure  
Casting  
Machine



**Excellent  
Value!**



The resistance-heated vacuum casting machine VC-200 and the vacuum pressure casting machine VC-300 are economically priced casting machines for smaller productions. Nevertheless, these machines offer a convincing casting quality. Both machines reach up to a maximum temperature of 1,200° C. *Vacuum pump not included.*



## Turbo Pressure Feature:

Available on the VC-400, VC-500V, and VC-650V, this feature allows a precisely defined pressure to be achieved rapidly. Pressure will start automatically and exactly at a specific set time. Excellent for very small and fine filigree pieces, as well as stone-in-place casting.

**VC-400**  
Induction  
Vacuum  
Pressure  
Casting  
Machine

**78-3000**  
3.5kw 230V  
**78-3001**  
4.8kw 3x400V



**All New LCD Display!**

The ideal machine for smaller companies producing moderate quantities but needing considerably more capacity than that offered by the MC machines. Often, experienced casters are not particularly interested in automated functions or program control, and they can achieve the same quality with the VC-400 machine as with more advanced ones. Its induction generator guarantees a fast heat-up and a thorough mixing of the molten metal by inductive bath movement. Optional shot-making tank and sintering kit (for diffusion bonding). *Vacuum pump not included.*



## THE VC-450:

The VC-450 is equipped with a completely new generator and a program control system with LCD display. With the help of step-by-step display information and many automatic functions, the machine is easy to use, even for less experienced users. The VC-450 has 20 different programmable casting cycles, ensuring reproducible and consistent casting results. *Vacuum pump not included.*



**VC-500D**  
**78-3500**

Induction  
Vacuum  
Pressure  
Casting  
Machine

For larger production quantities with continuous casting operation, greater performance (shorter casting times) with even larger crucibles and flask capacities (up to 160 mm Ø/400mm H). If alloys are changed frequently, 16 different temperature programs simplify working procedures. The dual temperature control system allows the operator to monitor the metal and flask temperatures. Includes casting history data printer and GSM modem for external diagnostics. *Vacuum pump not included.*

Performance	VC-200 / VC-300	VC-400	VC-450	VC-500D
Romanoff #	78-4200/78-4300	78-3000	78-3300	78-3500
Maximum Temperature	1200° C	1400° C	1400° C	1600° C
Power max. / electrical connection	2 kW 230V	3.5 kW 230V or 4.8 kW 3x400V	4.8 kW 3x400V (Optional Step-Up Transformer from 220V to 400V)	10 kW 3x400V / 3x208V
Metal Capacity	3.6 kg Au 18ct	2.5 kg Au 18 Ct	2.5 kg Au 18 Ct	3.6 kg Au 18ct optional 5.8 kg Au 18ct
Maximum Flask Capacity	130 x 260mm	130 x 260mm	130 x 260mm	130 x 260mm optional 160 x 400mm
Temperature Control	Submersible Thermocouple	Submersible Thermocouple		Standard: Thermocouple type N up to 1300° C Optional: Thermocouple type S up to 1600° C
Item # of Shot Maker	78-3500-SM	78-3000-SM	78-3300-SM	78-3500-SM

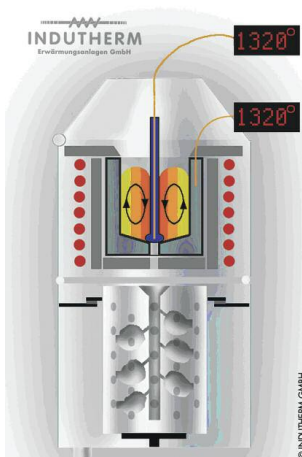
**Call for Pricing**

## THE VC-480V:

Thanks to a new control panel with real text LCD display, all programs and parameters are very easy and comfortable to set. 100 casting programs guarantee fast operation and consistent casting results. For all major alloys, e.g. for AGS, Alpha Plus, Heraeus, Legor and Pandora alloys, the parameters are preprogrammed! That means for the first flask on, you can expect good casting results without making expensive pretests.

## THE VC-650V:

The absolute state-of-the-art machine: the new VC-650V, guarantees highest efficiency by a maximum of rapidness and quality. The all new state-of-the-art VC-650V guarantees the latest technology and highest quality yields. *Vacuum pump not included.*



## VC-480V AND VC-650V UNIQUE FEATURES:

- **New Program Control System** with real text LCD allows for 100 casting programs, making it easier to set programs and get good results. For all major alloys, such as AGS, Alpha Plus, Heraeus, Legor and Pandora, the VC-650V has already been pre-programmed with the correct parameters for each alloy company.
- **Turbulence Reduction Software** for faster and more uniform metal flow
- **Turbo Pressure PLUS** allows for fast overpressure flask filling with reduced gas consumption
- **Vibration Technology** means, higher and more consistent quality, increases metal density, reduces porosity, and creates tighter grain structure

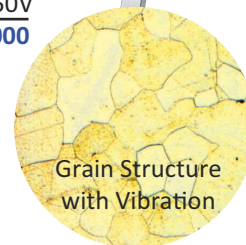


VC-480V  
78-3400

VC-650V  
78-4000



Grain Structure  
without Vibration



Grain Structure  
with Vibration



Performance	VC-480V	VC-650V
Romanoff #	78-3400	78-4000
Power max. / electrical connection	8 kW 3x220V (3x400V Optional)	12 kW 3x400V (3x220V Optional)
Temperature max.	1600° C	1700° C
Crucible Volume	2.5 kg Au 18ct	3.6 kg Au 18 ct optional 5.8 kg Au 18 ct
For use of flasks up to:	ø 130 mm / 260 mm h	ø 130 mm / 260 mm h optional 160 mm / 400 mm h
Vibration Technology	Standard	Sweep Mode
Maximum Pressure	1.5 bar	3 bar
Flask Temperature Measurement	- -	Standard
Automatic Flask and Chamber Lift	Standard	Standard
Variable Vacuum in Flask Chamber	Standard	Standard
Turbo Pressure PLUS System	- -	Standard
Turbulence Reduction Software	Standard	Standard
Sintering Kit (for diffusion bonding)	Optional	Optional
Granulation Tank	Optional	Optional
Romanoff Item # of Shot Maker	78-3300-SM	78-4000-SM

**Call for Pricing**

# High Capacity Tilt Furnaces Graphite Crucibles

## The TF Series: Tilting Furnaces for melting and casting large quantities into ingots or shell molds



**TF 1200 - 6000 – tried and tested in foundries and precious metal suppliers around the world:**

These tilting furnaces are mainly used in two areas:

1. for melting down large quantities of metal such as antique gold or manufacturing residues like casting waste or scrap. 30 kW output and low-frequency tuning means fast smelting – even for large volumes – and excellent thorough-mixing.
2. for casting large, heavy components e.g. after slip casting  
For pouring off, the inductor/crucible unit is tilted forwards, either using a pivot lever or wheel, optionally with reduction. The wheel is recommended out of preference, for safety reasons, as the operator must move away from the splash zone when pouring off.

These machines are designed...

for the melting of large quantities, for example in the recycling sector  
for the casting of large parts into shell casting molds



### The new TF 12000 - the largest tilt furnace

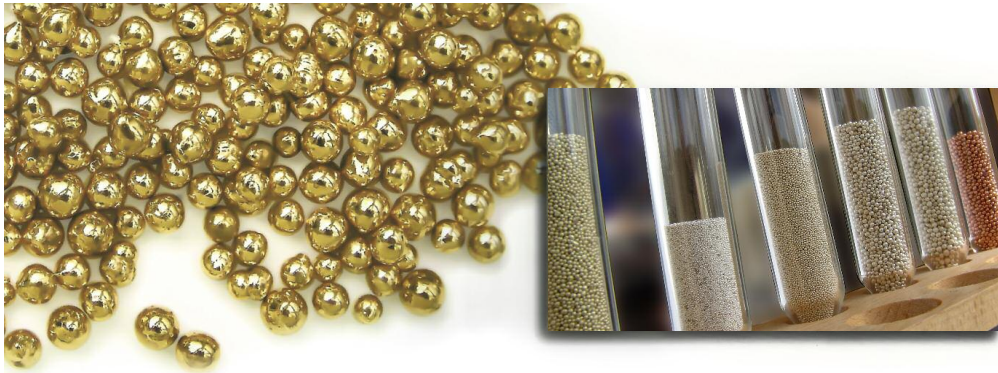
The 12,000 ccm usable volume of the crucible gives the TF 12000 an enormous capacity. The output of the newly-developed generator is of equally ample dimensions: 60 kW! The generator is fitted with a 32-bit micro controller and is controlled via a console with an LCD display with full text readout. 100 programs enable set process parameters to be stored. Because of the potentially large weight, the inductor/crucible unit is no longer tilted manually – it uses a motor drive with a stable shaft. Use of a joystick enables the tilting process to be controlled easily and sensitively, as with a pivot lever or wheel.

Indutherm Model #	TF-1200 — TF-6000	TF-12000
Performance	Romanoff # <b>78-61200 — 78-66000</b>	Romanoff # <b>78-612000</b>
Power max. / electrical connection	15-40 kW 3x400V	60 kW 3x400V
Maximum Temperature	1500° C	1500° C
Volume	<b>78-61200 — 78-66000</b>	<b>78-612000</b>
Metal Capacity (real capacity)	<b>78-61200</b> /TF-1200: 18 kg Au 18ct, 15kW <b>78-61300</b> /TF-2000: 30 kg Au 18ct, 25kW <b>78-61400</b> /TF-4000: 60 kg Au 18ct, 30kW <b>78-66000</b> /TF-6000: 90 kg Au 18ct, 40kW	180 kg Au 17ct, 60kW
Handling & Control	<b>78-61200 — 78-66000</b>	<b>78-612000</b>
Temperature Control <b>78-2700-TC</b>	Standard, via Display	by LCD-Display, full text display
Temperature Program	16 Standard	100 Standard

**Call for Pricing**



# Solutions for Granulating



For the production of granules we can offer you three different systems.

- For a frequent or permanent production of granules our GU series granulating machines will be the first choice.
- If you want to produce granules only occasionally, the additional equipment of a vacuum pressure or a continuous casting machine with a granulating tank is a good alternative.
- For the production of micro granules we recommend our GU 500 micro



## The Granulating Machines GU 500, 1000 D, 3000 D and 12000 D

These machines are developed especially for granulating of metal bullions into proper grains. They are used with a separate removable granulation tank (no tank integrated) and are available with crucible sizes from 245 ccm up to 12.000 ccm.

### The major applications are

- Preparation of alloys out of gold and master alloy under inert gas atmosphere or under vacuum
- Preparation of alloy components under inert gas atmosphere or under vacuum
- Preparation of alloys from components under inert gas atmosphere or under vacuum
- Cleaning up of already casted metal under inert gas atmosphere or under vacuum
- ...each under inert gas atmosphere or under vacuum

## The Micro Shot Systems GU 500 micro, GU 1000 micro and GU 3000 micro

The GU micro series was developed for the production of micro granules with a grain size of between 0.1 and 1 mm. The systems are based on the Indutherm granulation units as shown on the left but all key components, particularly the jet system, are special developments. The main areas of application for the micro-granules are in metal laser sintering processes, in jewellery surface design and in soldering technology.



Safe and easy handling  
of the tanks



Pull-out handle for  
an easy taking out of  
the tank insert.



Pour off the residual  
water...



...and then pour off  
the granules.

**Call for Pricing**

Indutherm Model #	GU 500	GU 1000 D	GU 3000 D	GU 12000 D
Romanoff #	78-4600	78-4700	78-4800	78-4850
Crucible volume in ccm	245-386	1,500	3,400	12,000
Volume in kg Au 18ct	3.6-5.7	22.0	51.0	180.0
Generator kw (400 V)	10	25	30	40

# Continuous Casting Machines



## More flexibility, lower costs

Indutherm continuous casting machines help you reduce production costs. With only one machine, you can produce your own alloys or semi-finished products in different shapes and sizes in the shortest time, for example:

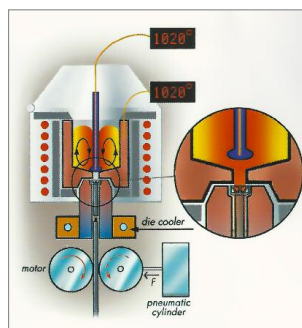
- wires or bars in every diameter you need, up to  $\varnothing$  40mm (CC 3000)
- sheets and strips, e.g. ring production, for stamping and pressing
- tubes, perfect as basic material for cutting in sections for wedding ring production
- Granulates

As the desired moulds and alloys can be produced within minutes, you can reduce your investment for material in storage. Your processes will get faster, more flexible and more efficient.

## The main advantages of the Indutherm CC machines

- short change-over times for various casting sizes
- additional accessories are available
- e.g. diffusion bonding set ("sintering") and granulation tank
- induction generators with a low frequency tuning for a thorough mixing of the metal
- automated inert gas
- high metal quality, minimal porosity

**All continuous casting machines also available as VCC-versions with vacuum function (pat. pend.)** With the VCC-versions, melting can take place under vacuum or inert gas. This is ideal for alloys containing copper such as red gold or silver, since these materials tend to oxidize easily. Degasification under vacuum results in a substantially improved results – because of the absence of oxidization.



## Optional Quattro Drive

The CC versions 1000 and 3000 are optionally available with "QUATTRO DRIVE". That's the name of the new drawing unit with four motor driven feed rolls instead of only two, which transport the material such as wire, sheet or tube down from the melting chamber.

Thanks to the smooth transport with reduced pressure, the sheeting and tubes produced by this way show nearly no marks of transportation. The need of intense post-processing such as polishing is dramatically reduced.



Indutherm Model #

CC-400 / VC-300

CC-1000 / VCC-1000

CC-3000 / VCC-3000

Romanoff #	78-4550	78-4560	78-4570
Maximum Temperature	1500° C	1500° C	1500° C
Power max. / electrical connection	15 kW 3x400V/3x208V	25 kW 3x400V	30 kW 3x400V
Crucible Volume	285ccm = 4.2kg Au 18ct Optional 400 ccm = 6.0 kg Au 18 ct	1500ccm = 22kg Au 18ct	3400ccm = 51kg Au 18ct
Wire production up to	$\varnothing$ 15mm	$\varnothing$ 30 mm	$\varnothing$ 40 mm
Tube production up to	$\varnothing$ 30 mm	$\varnothing$ 40 mm	$\varnothing$ 50 mm
Sheet production up to	50 x 8 mm Optional 60 x 8 mm	100 x 10 mm	130 x 12 mm
16 programs for melting and die temp., Drawing lengths, stoptime, reverse draw	Standard	Standard	Standard
Inert gas overpressure	VCC400 only	VCC1000 only	VCC3000 only
Vacuum	VCC400 only	VCC1000 only	VCC3000 only
Neutral inert gas atmosphere	Standard	Standard	Standard
RS 232, diagnostic system	Standard	Standard	Standard
Data printer	Standard	Standard	Standard
GSM modem for remote service	Optional	Optional	Optional

# Sintering Machines

Sintering is the optimum process for producing multi-coloured rings, mostly sold as wedding rings. Metals are processed under pressure and at temperatures below the solidification point. The pressure is generated pneumatically and not mechanically via a threaded spindle. This means that there is no risk of graphite parts breaking as a result of heat expansion. The fusion between layers has the same durability as the metal itself. Pre-manufactured rings can be easily resized (7 sizes and more).

## Benefits of the Indutherm sintering process:

- The sintering unit processes can take place under a vacuum, which is important for alloys with a manganese component
- Processes can take place under inert gas
- Straight forward installation/removal of the rings
- Approximate duration of process: 5 minutes
- Depending on the thickness of the rings, up to 6 rings can be processed simultaneously

## Indutherm offers different methods of sintering:

The special sintering machines (SU series) or the sintering kit for installation into existing casting or continuous casting machines.

### Sintering Machine SU 300

With the SU 300, the temperature and pressure are controlled manually. Exceptional results can be produced using this machine after just a brief introductory period.

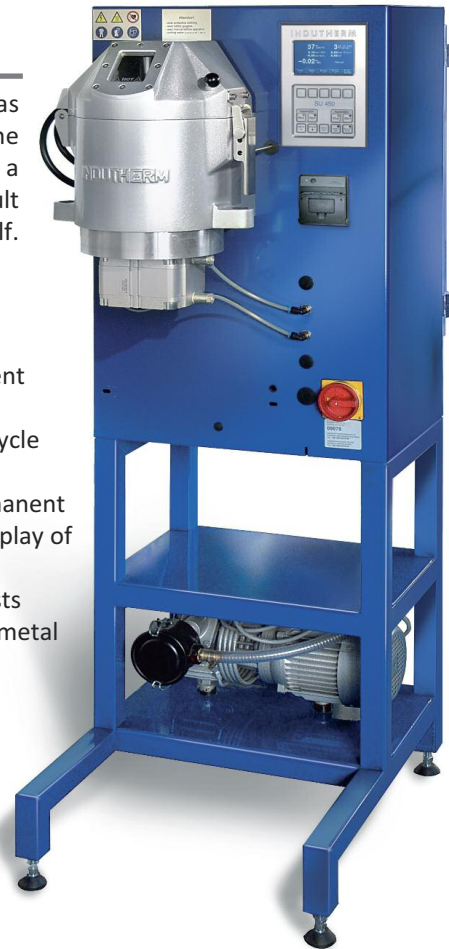
### Sintering Machine SU 450

The new SU 450 is equipped with a highly sensitive sensor system, which permanently controls the reduction of the rings and provides real-time information about the reduction values on the display. The temperature may be regulated very precisely close to the solidus temperature, right until the reduction begins. As soon as the pre-defined reduction value has been reached, the process stops automatically thus preventing too much deformation (depending on the composition and alloy the pre-defined reduction value varies between 0.1 mm and 0.3 mm). The "Sensor-Control-System" considerably reduces the time and material required for production for two major reasons: firstly because the process parameters can be defined quickly and without making lots of test rings; and secondly because the quality of the sintering process is constantly very high. Therefore the finishing effort is reduced, as well as the loss of material, which occurs during subsequent diamond dressing or turning.

## Benefits of the SU 450:

(pictured on the right)

- program control for 100 different process cycles
- sintering protocol after every cycle
- LCD display
- sensor control system for permanent process control and real-time display of the reduction
- no long-winded preliminary tests
- less finishing effort and loss of metal



SU-300

SU-450

Romanoff #	78-4650	78-4660
Maximum Temperature	1000° C	1000° C
Power max. / electrical connection	3.5 kW 230V	4.5 kW 3 x 400V
Sintering process per hour	~6-7	~10
Reduction control	N/A	Standard
Mechanic fix stop	ø30 mm	N/A
Electronic fix stop	N/A	Standard
Automatic process stop	N/A	Standard
Program control	N/A	LCD-Display, full text readout
Programs	N/A	100
Data printer	N/A	Standard

**Call for Pricing**



# Gold Induction Melters and Vacuum Casting Machines



## MU Series Melting Units

Indutherm's MU series\* machines are flexible melting furnaces designed to melt gold and silver alloys as well as aluminum, bronze, brass, and more. The strong 15 kW induction generator and low induction frequency provide excellent stirring of the molten metal.



For Crucibles  
See Pages 18-20



All MU-Series models feature an optional single or double extra large capacity vacuum chamber for vacuum casting. The shorter distance between melting and pouring will result in higher quality castings even with filigree parts. Casting chambers can accommodate flasks up to Ø 160mm/400mm h. *Vacuum pump not included.*

Indutherm Model #	MU-200	MUV-200	MU-400 — MU-1200	MUV-400 — MUV-1200	MUVV-400 — MUVV-1200
Romanoff #	78-1200	78-1200-V	78-1400 — 78-12000	78-1400-V — 78-1200-V	78-1400-VV — 78-12000-VV
Power max. / electrical connection	3.5 kW 230V or 4.5 kW 3x400V	3.5 kW 230V or 4.5 kW 3x400V	15 kW 3x400V	15 kW 3x400V	15 kW 3x400V
Maximum Temperature	1200° or 1400° C	1200° or 1400° C	1500° C	1500° C	1500° C
Metal Capacity (real capacity)	2.3 kg Au 18kt Gold	2.3 kg Au 18kt Gold	78-1400/MU-400: 6 kg Au 18ct 78-1700/MU-700: 9 kg Au 18ct 78-1900/MU-900: 13 kg Au 18ct 78-1200/MU-1200: 18 kg Au 18ct	78-1400-V/MUV-400: 6 kg Au 18ct 78-1700-V/MUV-700: 9 kg Au 18ct 78-1900-V/MUV-900: 13 kg Au 18ct 78-12000-V/MUV-1200: 18 kg Au 18ct	78-1400-VV/MUVV-400: 6 kg Au 18ct 78-1700-VV/MUVV-700: 9 kg Au 18ct 78-1900-VV/MUVV-900: 13 kg Au 18ct 78-12000-VV/MUVV-1200: 18 kg Au 18ct
Temperature Control 78-2700-TC	Standard	Standard	Standard	Standard	Standard
Temperature Program	16 Standard	16 Standard	16 Standard	16 Standard	16 Standard

**Call for Pricing**

# High Temperature Melters and Vacuum Casting Machines for Steel, Platinum and Chrome-cobalt



## The MU 200 C melting machine

The MC 200 C offers sufficient crucible volume for e.g. manufacturing custom alloys or for regular use for melting down production residues arising from platinum or palladium processing. It can also be supplied with two vacuum containers for use as a casting machine.



## High temperature tilting furnace TF 3000 C

This melting furnace has been specially designed to melt large quantities of steel or other metals with a high melting point. The strong induction generator and low induction frequency means very good mixing of the metal can be achieved. The main areas of applications are:

- casting voluminous parts such as sculptures (also sand casting)
- purification melting of waste
- casting of ingots
- casting of solid rollers



Professional melting furnace in advanced technology for melting bigger quantities in steel or other metals with high melting points in a ceramic crucible. Extremely strong mixing of the alloy because of low generator frequency.

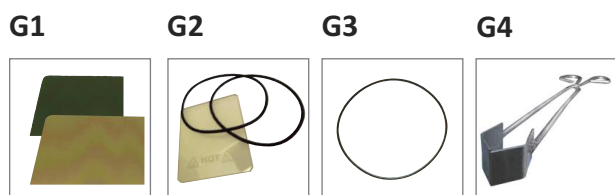
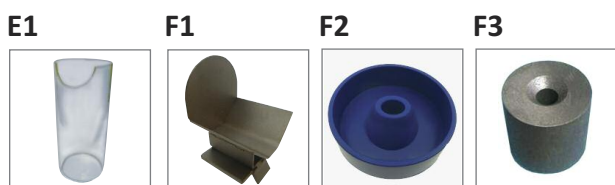
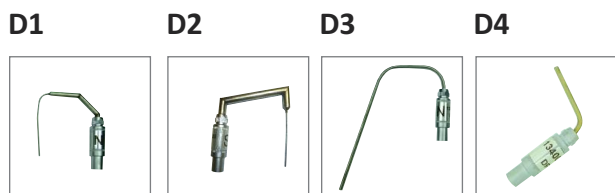
Tilting by a motor, handled by a joy stick. Joy stick can be connected by a cable which allows free moving of the worker and save working time.

### Applications:

- Die casting of voluminous parts like metal machine parts in sand moulds.
- Die casting of big bars to send them back as solid block to refineries.
- Die casting of blanks for rolling mills.
- Die casting of anodes for plating appliances.
- Melting of scrap and main sprues in factories and casting companies.
- Melting of metal chips into liquid metal.

Indutherm Model #	MU-100C	MU-200C	MUV-200C/MUVV-200C	TF-2000-C	TF-3000-C	TF-4000-C
Romanoff #	78-2700PT	78-1200C	78-1200CV, 78-1200CVV	78-1300C	78-1400C	78-1500C
Power max. / electrical connection	8 kW 3x400V	15 kW 3x400V	15 kW 3x400V	40 kW 3x400V	40 kW 3x400V	60 kW 3x400V
Maximum Temperature	2000° C	2000° C	2000° C	1700° C	1700° C	1700° C
Metal Capacity (real capacity)	1 kg Platinum	2.5 kg Platinum	2.5 kg Platinum	2000 cm <sup>2</sup> (5-14 kg steel)	13.5 kg Steel	4000 cm <sup>2</sup> (8-30 kg steel)
Temperature Control 78-2700-TC	Optional Pyrometer	Optional Pyrometer	Optional Pyrometer	N/A	N/A	N/A
Temperature Program	16 Standard	16 Standard	16 Standard	16 Standard	16 Standard	16 Standard
Weight in Kg	65	65	155	220	150	220
Dimensions WxDxH in mm	500x500x950	500x500x950	500x1100x900	700 x 700 x 1250	800 x600 x 1250	700 x 700 x 1250

**Call for Pricing**



## MC15+



				US\$ / Ea.
A1	78-2004	Gold/Silver Crucible	45 x 61mm	44.95
B1	78-2003	Platinum Crucible	40 x 65 mm	81.90
B3	78-2005	Steel, NiCr, Cobalt Crucible	40 x 57 mm	41.00
C1	78-2002-PT	Cover for Thermocouple	40 mm	51.95
D4	78-2002-DP	Dummy Thermocouple	-	91.70
E1	78-2006	Quartz Tube	42 x 92 mm	159.00
D1	78-2002	Thermocouple N	"N" 1300C	263.50
D2	78-2002-HT	Thermocouple S	"S" 1600C	656.00
F3	78-2016	Graphite Mold	101D x 500D x 75H mm	72.79
F1	78-2007	Flask Saddle (ø80mm)	2.15, 3.15x3"	169.10
F1	78-2008	Flask Saddle (ø65mm)	2.15, 3.15x2.5"	132.00
F1	78-2009	Flask Saddle (ø50mm)	2.15, 3.15x2"	124.00
F1	78-2009-1	Flask Saddle (ø30mm)	2.15, 3.15x1.18"	119.00
F2	78-2009-B	Sprue Base	30 mm	16.20
G1	78-2010	Yellow Platinum Lens Cover	70 x 80 mm	48.62
G2	78-2011	Clear "Hot" Window with Gaskets	70x80x4 mm	84.60
G3	78-2012	Orange O-Ring Door Gasket	4x200mm OD	29.00
H1	78-2013	Induction Coil MC15, MC15+	-	495.00
G4	78-2100-TG	Replacement Tongs	Up to ø80mm Flasks	64.95
H2	78-2023	Solenoid Valve	-	376.90

## MC20V



A1	78-2004	Gold/Silver Crucible	45 x 61mm	44.95
B1	78-2003	Platinum Crucible	40 x 65 mm	81.90
B3	78-2005	Stainless Steel Crucible	40 x 57 mm	41.00
C1	78-2002-PT	Cover for Thermocouple	40 mm	51.95
D4	78-2002-DP	Dummy Thermocouple	-	91.70
E1	78-2006	Quartz Tube	42 x 92 mm	159.00
D1	78-2002	Thermocouple N	"N" 1300C	263.50
F3	78-2016	Graphite Mold	101Dx500Dx75H	72.79
F1	78-2507	Flask Saddle (ø30mm)	2.15, 3.15x1.18"	119.00
F1	78-2508	Flask Saddle (ø50mm)	2.15, 3.15x2"	124.00
F1	78-2509	Flask Saddle (ø65mm)	2.15, 3.15x2.5"	132.00
F1	78-2510	Flask Saddle (ø80mm)	2.15, 3.15x3"	169.10
F2	78-2009-B	Sprue Base	30 mm	16.20
G1	78-2010	Yellow Platinum Lens Cover	70 x 80 mm	48.62
G2	78-2011	Clear "Hot" Window with Gaskets	70x80x4 mm	84.60
G3	78-2012	Orange O-Ring Door Gasket	4x200mm OD	29.00
H1	78-2113	Induction Coil MC20V	-	495.00
J1	78-2115	Glass wool for sides	200x115x10mm	40.81
J2	78-2115-B	Glass wool for bottom chamber	-	39.50
G4	78-2100-TG	Replacement Tongs	Up to ø80mm Flasks	64.95
H2	78-2023	Solenoid Valve	-	376.90

## MC60



A2	78-2504	Gold/Silver Crucible MC50/MC60	53 x 130mm	109.45
E1	78-2506	Quartz Tube MC50/MC60	55 x 117mm	232.03
C2	78-4502-PT	Thermocouple Protection Tube MC50/MC60	75mm	64.40
D3	78-4502	Thermocouple N MC50/MC60	"N" 1300C	268.20
F1	78-4507	Adjustable Flask Adapter	80 x 100 x 120L mm	296.70
F1	78-4508	Flask Saddle	100 x 80, 100, 120 mm	246.45
J3	78-4514	Glass wool bottom chamber	10x530x160mm	50.57
H1	78-4513	Replacement Induction Coil	55mm OD	539.50
H2	78-2023	Solenoid Valve	-	375.00
H1	78-2201	Induction Coil 8.5 turns	57mm OD	410.00

## MC100V



E1	78-2506	Quartz Tube	55 x 117mm	232.03
C2	78-4502-PT	Thermocouple Protection Tube	75mm	64.40
D3	78-4502	Thermocouple N	"N" 1300C	268.20
F1	78-4507	Adjustable Flask Adapter	80 x 100 x 120L mm	296.70
F1	78-4508	Flask Saddle	100 x 80, 100, 120 mm	246.45
J3	78-4514	Glass wool bottom chamber	10x530x160mm	50.57
H1	78-4513	Replacement Induction Coil	6.5 turns ø55 mm	539.50
A3	78-4504	Gold+Silver Crucible	46 x 78 mm	108.37
B2	78-4503	Large Platinum Crucible No Cover	67 x 88 mm	86.90
B2	78-4503-CS	Small Platinum Crucible w/Cover	68 x 68 mm	116.77
B4	78-4505	Stainless Steel Crucible	50 x 90 mm	76.80
D4	78-4502-DP	MC100V Dummy thermocouple	-	97.60
G1	78-2010	Gold & Yellow Platinum Lens	70 x 80 mm	48.62
G2	78-2011	Clear "Hot" Window with Gaskets	70x80x4 mm	84.60





## VTC Series

US\$ / Ea.

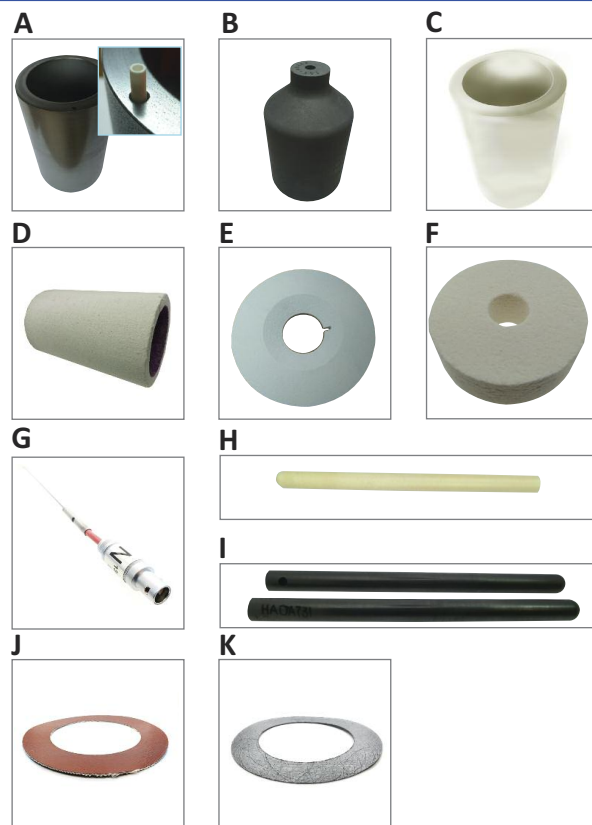
A	78-4504	Gold/Silver Crucible (VTC100V)	46 x 78 mm	108.37
B	78-T4204	Gold/Silver Crucible (VTC200V)	61 x 135mm	139.45
C	78-4503	Large Platinum Crucible No Cover	67 x 88 mm	86.90
C	78-4503-CS	Small Platinum Crucible w/Cover	68 x 68 mm	116.77
D	78-T4203-C	Platinum Crucible w/Zirconia oxide coating Long Life (VTC200V)	50 x 115 mm	84.75
D	78-T4203	Stainless Steel Crucible (VTC200V)	50(ID)x 115 (H) mm	82.74
D	78-T4203-1	Platinum Crucible (VTC200V)	50(ID) x 90 (H) mm	64.80
E	78-T4206	Quartz Tube (VTC200V)	66(ID) x 70(OD) x 135(H) mm (no notch)	217.60
E	78-T4207	Quartz Tube (VTC200V)	66(ID)x 70(OD) x 135(H) mm (with notch)	112.95
F	78-T4207-W	Glass wool for bottom of tube (VTC200V)	ø70 x 13(H) mm	10.50
G	78-T4210	Flask adaptor set (VTC100V/VTC200V)	ø80 mm Flask	620.35
H	78-T4210-1	Graphoil Gasket 80mm Flask (VTC100V/VTC200V)	82(ID) x 87(OD) x 2mm	15.30
G	78-T4211	Flask adaptor set	ø90 mm Flask	595.00
I	78-T4211-1	Graphoil Gasket 90mm Flask (VTC100V/VTC200V)	62(ID) x 97(OD) x 2mm	16.45
J	78-T4209	Graphoil Gasket 100mm Flask (VTC100V/VTC200V)	62(ID) x 105(OD) x 2mm	15.95
J	78-T5012-1	Graphoil Gasket 125mm flask (VTC100V, VTC200V, VTC800V)	62(ID) x 125(OD) x 2mm	19.25
K	78-T4213	Induction Coil (VTC200)	-	595.00
L	78-T5016	Printer Paper (All Machines)	-	7.59



US\$ / Ea.

A	78-3501-I	Graphite Granulating Crucible (VC200/300/500/600/650V)	2 x 78(OD) x 120mm	110.85
A	78-3502	Gold/Silver Casting Crucible (VC200/300/500/600/650V)	8 x 78(OD) x 120mm	105.49
A	78-3002	Graphite Gold/Silver Crucible (VC400/450/480V)	8 x 68(OD) x 120mm	93.80
A	78-3003	Graphite Granulating Crucible (VC400/450/480V)	2 x 68(OD) x 120mm	89.95
A	78-3502	Graphite Gold/Silver Crucible (VC500/600/650V)(VC500/600/650V)	8 x 78(OD) x 120mm	105.95
B	78-3502-S	"S" type Gold/Silver Crucible (VC500/600/650V)	8 x 78(OD) x 120mm	177.80
C	78-3503	Outer Crucible Shield (VC500/600/650V)	78(ID) x 100(OD) mm x 140(H) mm	42.50
D	78-3002-SH	Outer Ceramic Shield (VC400/450/480V)	69(ID) x 88(OD) x 115(H) mm	24.50
E	78-3010	Filling Cone (VC400/450/480V)	50(ID) x 200(OD) x 20(H) mm	36.00
F	78-3006	Bottom Crucible Insulation (VC400/450/480V)	68 (OD) x 20(H) mm	24.60
F	78-3506	Bottom Crucible Insulation (VC200/300/500/600/650V)	78 (OD) x 25(H) mm	26.60
G	78-3508-N	Thermocouple Type "N" 1300°C (VC400-650V)	-	229.00
H	78-3508-PT	Thermocouple Protection Tube (VC200-3000)(for 78-3508-N)	-	31.60
I	78-3504	Graphite sealing rod (VC200/300/500/600/650V)	12 x 174mm	31.71
J	78-3509	Red Silicone Gasket for 100mm flask	2 x 169 x 110mm	18.70
K	78-3511	Graphoil Gasket 100mm Flask (VC400/450/480V)	2 x 110 x 169mm	16.76

## VC Series



This Indutherm casting machine will melt and cast under vacuum with temperature control up to 1300°C or 1600°C when using the optional "S" thermocouple or visually up to 2000°C. It will produce high quality castings in brass, gold, silver, platinum, palladium and stainless steel. The vacuum investment mixer with speed, vibration and timer control will produce a uniform and bubble free investment slurry. The digital programmable furnace will reach up to 2000°F and has 8 ramps and can store 4 programs. This complete casting kit contains all the necessary items needed to produce high quality castings. When shipping by air, Item #'s R, S and T are excluded.

For more information on the MC15+, please see page 18

**\$21,000.00**



A	<b>78-2000-PLUS</b>	Indutherm MC15+ Casting Machine with temperature control 3.5kW 220V	L	<b>78-2014</b>	Rubber sprue base F/65mm flask
B	<b>73-040</b>	Mini 1-1/3qt wax injector	M	<b>21.890-1</b>	Adjustable sprue base holder
C	<b>77-0911-A</b>	Blue Bird 8.5 x 8.75 x 9"(Inside) programmable furnace (110V)	N	<b>76-038</b>	2 x Stainless steel solid flask 2.5"x 2.5" 12 Gauge
D	<b>76-113-MINI</b>	Vacuum mixer w/ vibration 220V 1ph	N	<b>76-047</b>	2 x Stainless steel solid flask 3"x 3" 12 Gauge
E	<b>7115A</b>	Vacuum pump 3 CFM 120V or 220V	O	<b>76-0855</b>	Non-asbestos platinum 2.5" x 1/16" x 75' roll
F	<b>79-001</b>	Hydro-Air investment gun	O	<b>76-0881-4RND</b>	10-pack 4" x 3/4" ID non-asbestos platinum bases
G	<b>76-110</b>	Investment scale 0-20 lb. 1 oz. increments	P	<b>76-109</b>	Measuring pitcher 3 liter
H	<b>74-000-WC</b>	Platinum wax mushroom bases, 6 pcs	Q	<b>Z14-301-40</b>	Ransom & Randolph Ultra-Vest 40lbs box
I	<b>74-006</b>	Hot Speed wax pen	R	<b>80-089</b>	Gold investment remover
J	<b>78-090</b>	Kevlar white gloves 14" Pair	S	<b>80-136-1GL</b>	Original J-Break platinum investment remover
K	<b>79-0305</b>	Maun sprue cutter	T	<b>Z14-305-606C</b>	J-Formula with Blue Binder 50 - lbs kit

# Romanoff Superior Casting Kit with Optical Pyrometer

74-927

This Indutherm casting machine will melt and cast under vacuum with an immersion thermocouple temperature control up to 1300°C or with it's optical pyrometer up to 2000°C. A significant advantage of the MC20V casting machine is the vibration mode after the metal has been poured into the flasks to insure denser castings, plus it has a digital display and casting memories.

The MC20V will produce high quality castings in brass, gold, silver, platinum, palladium and stainless steel. The vacuum investment mixer with speed, vibration and timer control will produce a uniform and bubble free investment slurry. The digital programmable furnace will reach up to 2000°F and has 8 ramps and can store 4 programs. This complete casting kit contains all the necessary items needed to produce high quality casting. When shipping by air, Item #'s R, S and T are excluded.

For more information on the MC20V, please see page 19

**\$23,700.00**



A 78-2100	Indutherm MC-20V Casting Machine with Optical Pyrometer	L 78-2014	Rubber sprue base F/65mm flask
B 73-040	Mini 1-1/3qt wax injector	M 21.890-1	Adjustable sprue base holder
C 77-0911-A	Blue Bird 8.5 x 8.75 x 9" (inside) programmable furnace 110V	N 76-038	2 x Stainless steel solid flask 2.5"x 2.5" 12 Gauge
D 76-113-MINI	Vacuum mixer w/ vibration 220V 1ph	N 76-047	2 x Stainless steel solid flask 3"x 3" 12 Gauge
E 7115A	Vacuum pump 3CFM 120V or 220V	O 76-0855	Non-asbestos platinum 2.5" x 1/16" x 75' roll
F 79-001	Hydro-Air investment gun	O 76-0881-4RND	10-pack 4" x 3/4" ID non-asbestos platinum bases
G 76-110	Investment scale 0-20 lb. 1 oz.	P 76-109	Measuring pitcher 3 liter
H 74-000-WC	Platinum wax mushroom bases, 6 pcs	Q Z14-301-40	Ransom & Randolph Ultra-Vest 40lbs box
I 74-006	Hot Speed wax pen	R 80-089	Gold investment remover
J 78-090	Kevlar white gloves 14" Pair	S 80-136-1GL	Original J-Break platinum investment remover
K 79-0305	Maun sprue cutter	T Z14-305-606C	J-Formula with Blue Binder 50 - lbs kit





# Meet the Future

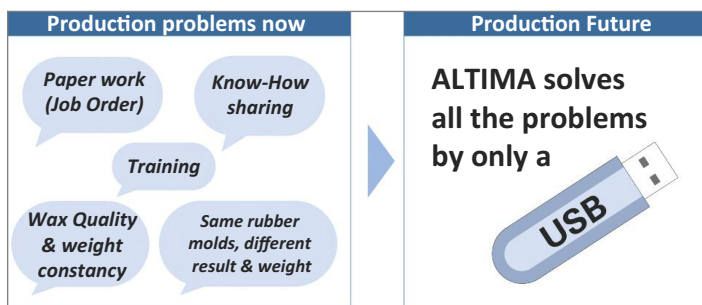
## First and Only Computerized Smart Wax Production System

ALTIMA will drastically improve your production. Thanks to the specially designed ALTIMA computer, storing, recalling and sharing the best parameters for thousands of rubber molds is one touch easy.



TOUCH & DONE

EASY TOUCH  
**E-Touch**



## WaxNet™ [Option]

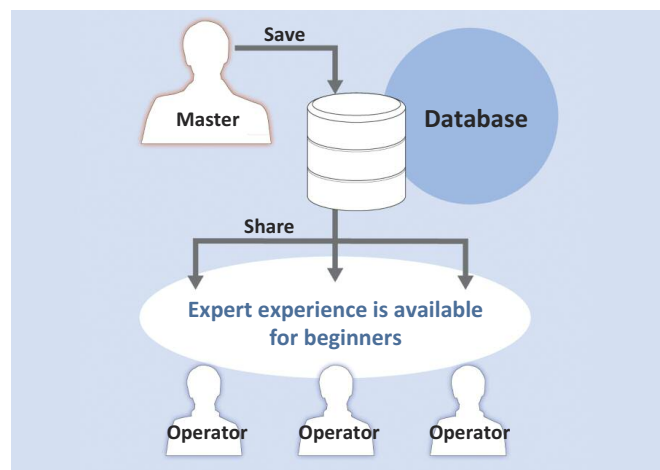
### Know-How is company property

WaxNet enables to store and share the best parameters for hundreds of thousands of different rubber molds so that Know-How remains as a company property.

Sending job orders any time becomes truly easy and efficient.

### Monitor the Production

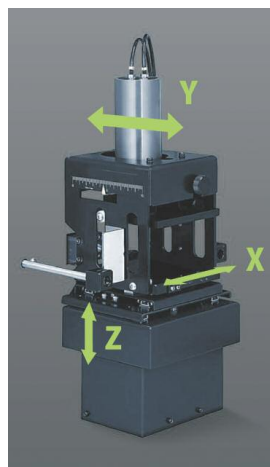
Monitoring the operators helps to achieve a boost in the production.



## Perfect Match

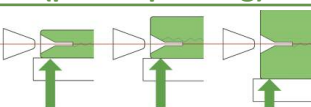
Precise 3D Clamping Unit  
Never misses alignment

## ELASTIC CLAMP E-clamp



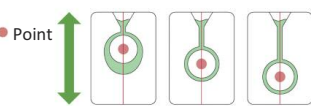
### Z Ultimate height control (patent pending)

Thanks to automatic height control, the nozzle perfectly meets the rubber mold. Mold positioning can be stored as a parameter.



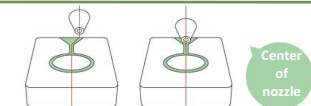
### Y Adjustable clamping pressure point

The model in the rubber mold is not always placed in the center. Appropriate pressure position ensures the injection is completed without leakage.



### X Ultimate smooth slide

Ultimate smooth slide enables rubber molds to find the center of the nozzle easily to avoid mispositioning.



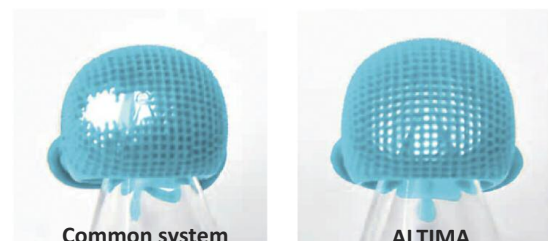
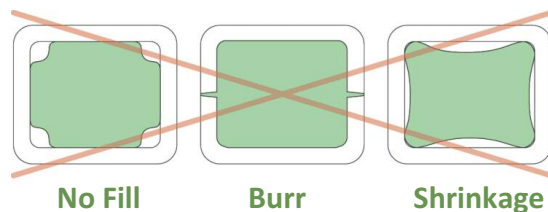
## Perfect Wax

Every stone counts...



## EXACT INJECTION E-ject

ALTIMA's precise injection eliminates misfilling and flashes while reducing shrinkage. Improved wax injection speed and accurate wax flow control ensures a high repeatability which is essential to maintain a constant wax weight and top quality results.



### Item# 74-265-SYS

### Altima

Power supply	230V,50/60Hz, single phase
Power consumption	0.48KVA(max)
Compressed air supply	0.40-0.70MPa
Temp. display range	40-100C (104-212F)
Temp. set range	40-100C (104-212F)
VAC time set range	0-99.9 sec
INJ time set range	0-600 sec
Heater ON timer	Available by Calendar
Wax capacity	Approx. 3.5kg
Accuracy of nozzle temp	+/-0.2C
Max. rubber mold size	Standart Size Clamp Unit 80(W)x100(D)x50(H)mm Optional Large Clamp Unit 125(W)x150(D)x80(H)mm
Set range	PRESS1 (Primary pressurizations) 10-250kPa
	PRESS1 (Primary pressurizations) 10-250kPa
	Time to start PRESS2 0-60 sec.
	Mold CLAMP 30-250kPa
	Mold Forward 35-250kPa
	Mold HOLD time 0-300 sec.
Dimensions	582(W)x473(D)x517(H)mm
Net Weight	Approx. 33.5kg
Packing Dimensions	650(W)x580(D)x620(H)mm
Gross Weight	Approx. 42.0kg



**Call for Pricing**



# Yasui Digital VWI and Advanced AACII

## The Yasui Digital Vacuum Wax Injector and Advanced Auto Clamp II System

ensures complete wax fills with no shrinkage. The digital screen is more accurate than traditional analog models. The pressure controller with over 10,000 memories, allows you to customize your own specific injection parameters which result in consistent wax quality patterns every time. The automatic mold clamp doubles your production output. The system also features a wax level gauge, therefore it is not necessary to open the cover to check your wax level. The vacuum wax injector can be purchased separately or as a complete set. Made in Japan



**74-265-D**  
Digital Vacuum Wax  
Injector DVWI  
\$4675.00

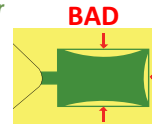
### The Benefits of Multiple Injection

Shortly after the first injection, the surface solidifies into a **balloon layer**

**1st Press**

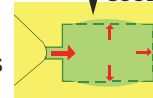


GOOD



Shrinkage

**2nd Press**



GOOD



Reduced Shrinkage

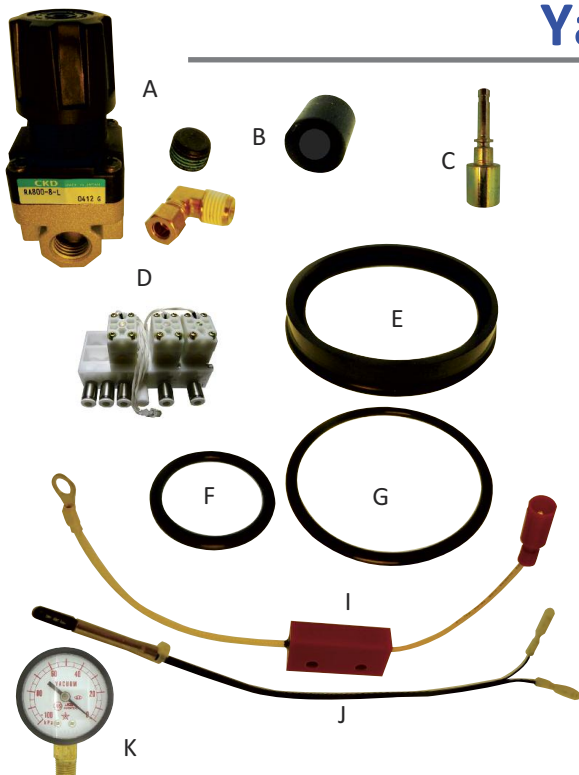
After a specified interval, the second injection is made to expand the balloon layer to compensate for the shrinkage.

The second injection pressure cycle is kept for a specific programmed time to allow solidification of the wax without shrinkage.



**74-266-ADV-D**  
Advanced Auto Clamp AAC II  
\$4675.00

## Yasui DVWI and AACII Spare Parts



	Item #	Description	Each/US\$
A	<b>74-265-REG</b>	Yasui Air Pressure Regulator with Elbow and Plug	97.75
B	<b>74-265-35</b>	Yasui Vacuum Wax Injector Rubber Seat F-Valve for SN3551++	11.30
C	<b>74-265-CB</b>	Yasui Vacuum Wax Injector Core Bolt (Not for Digital Models)	79.70
D	<b>74-265-VALVE</b>	Yasui Replacement Valve Assembly for ACC/ACC-2	1296.00
E	<b>74-265-VS</b>	Yasui Vacuum Wax Injector Inner Vacuum Seal O-Ring 115mm Diameter for N3551 and higher	19.20
F	<b>74-265-G25</b>	Yasui Vacuum Wax Injector Solenoid Valve O-Ring 30mm	13.90
G	<b>74-265-G210</b>	Yasui Vacuum Wax Injector O-Ring 215mm for Top of Vacuum Chamber	56.79
G	<b>74-265-P90-1</b>	Yasui Vacuum Wax Injector O-Ring 100mm for bottom of Vacuum Chamber SN3551 and higher	36.90
I	<b>74-265-TF</b>	Yasui Vacuum Wax Injector Temperature Fuse 109Ctgrd	61.45
J	<b>74-265-T</b>	Yasui Vacuum Wax Injector Thermister White Temp Sensor for Both Nozzle and Pot	39.40
K	<b>74-265-VG</b>	Vacuum Gauge	96.79



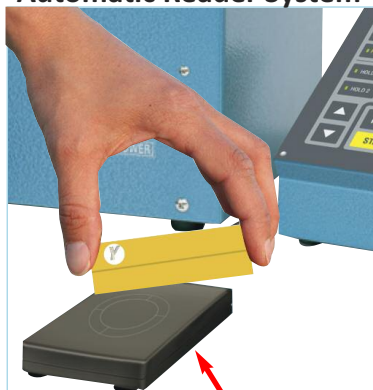
# Yasui Vacuum Wax Injector with ICIS Reader

The new Yasui mold clamp system uses RFID Technology (Radio Frequency Identification) to program small micro chips. These micro chips are imbedded into the rubber molds by vulcanization or glue. The automatic reader system increases wax model productivity, because the operator no longer has to manually program the clamping system, just wave the rubber mold over the reader. This new technology allows the operator to program the correct parameters for each specific mold. The adjustable parameters include mold clamping and forward pressure, hold and vacuum time, and primary and secondary injection time. The new ICIS auto clamp system can be connected to digital and analog Yasui vacuum wax injectors. Must specify serial number and model number at time of order.

- Previous model settings were in increments of 1 through 10. the ICIS allows finer adjustable increments of 1 through 100 for more precise control.
- The RFID tags allow the operator to simply place the rubber mold onto the mold reader, which then sets the best parameters automatically. (Eliminates operator input error, therefore increases productivity).
- Memory chips can be reprogrammed over and over.



## Automatic Reader System



**74-266-ICR**  
Mold Reader

## FEATURES OF IC TAG

### Heat Resistant



Since the IC Tag is durable fo 200 Degress Celsius, it can be embedded in the rubber mold.

### Thin But Tough



The IC Tag's material is flexible, so it does not crack and has superior impact absorption.

### Excellent Miscibility



Excellent miscibility allows IC Tags to be bonded to silicone rubber molds by special adhesive.

## Product

## Digital Vacuum Wax Injector DVWI 74-265-D

Power Supply	AC 115/230V $\pm 10\%$ 50/60Hz, Single Phase
Temp. Display Range	40 - 99.9° C (103 - 210° F)
Temp. Set Range	40 - 90.0° C (103 - 193° F)
VAC Time Set Range	0 - 9.99 / 0099.9 sec. *
INJ Time Set Range	0 - 99.9 / 0-600 sec (control set by AAC II is 40 - 99.9 sec)
Heater-ON timer	0 - 99 hours (*2)
Wax Capacity	Approx. 3 Kg
Dimensions	450 x 310 x 450 mm
Weight	Approx. 15.5 Kg

\* Vacuuming of the mold before injection ensures good filling for fine filigree and thin designs.



**74-266-C3**  
Large Mold Clamp Only  
\$2629.00



**74-266-ADV-D**  
AACII Mold Clamp and Digital Pressure Controller  
\$4675.00

Product	New ICIS Mold Clamp and Digital Pressure Controller	AAC II Mold Clamp and Digital Pressure Controller	Optional Large Mold Clamp Only
Part #	74-266-ICC	74-266-ADV-D	74-266-C3
Clamp Unit - Max. Rubber Mold Size	Standard - 80 x 80 x 40 mm	80 x 80 x 40mm	125 x 150 x 50 mm
Clamp Unit - Dimensions	Standard - 157 x 223 mm	157 x 223 mm	196 x 223 mm
Clamp Unit - Weight	Approx 5 Kg	Approx. 5 Kg	Approx 8 Kg
Controller Box Dimensions	160x260x150mm	450 x 310 x 450 mm	N/A
Controller Box Weight	Approx. 3 Kg	Approx. 3 Kg	N/A
Power Supply	AC 100 - 240V 50/60Hz, single phase	AC 100 - 240V 50/60Hz, single phase	
PRESS 1 (primary pressurization)	10 - 220 kPa	10 - 220 kPa	
PRESS 2 (secondary pressurization)	10 - 220 kPa	10 - 220 kPa	
TIME of starting press 2	0 - 99.9 sec	0 - 99.9 sec	
Mold CLAMP	30 - 235 kPa	30 - 235 kPa	
Mold FORWARD	65 - 235 kPa	65 - 235 kPa	
Mold HOLD time	0 - 300 sec.	0 - 300 sec.	
Range of Control, DVWI Setting	0 - 99 sec, VAC time & injection time	0 - 99 sec, VAC time & injection time	
Memory Number	0 to 9.0	0 to 9	
Clamp Count	9999 Counts	9999 Counts	

**NEW**

# Yasui VCC Platinum Casting Machine



- Full auto mode, semi-auto mode, and manual mode are available
- Control by digital touch panel.
- Stepless control of rotation speed and initial spin-up.
- High performance servo-motor is built in.
- Double swing arm (pat.) is adopted

The Yasui VCC features their exclusive “double swing arm” Patented technology to ensure zero turbulence, complete filling, and dense castings every time! An accurate temperature for casting is achieved by the dual spectrum optical thermal control system guaranteeing consistent and accurate casting temperatures  $\pm 2$  Degrees Celsius. The unit features a completely vacuumed casting chamber that removes all unwanted gases and backfills with inert argon gas. The acceleration rate and the RPM speed of the casting arm can be programmed independently and can reach top RPM speed in less than 1/3 of a second! Cooling System has a built-in water circulation system with temperature controller, to protect heating coil in case of power failure. *Vacuum pump not included.*

**Call for Pricing**

**Automatic mode (full-auto, semi-auto) is operable**  
**Digital touch panel is adopted**



## Manual mode

Operator can determine casting timing freely in the case of manual mode.

Different from the conventional machine, various settings can be performed on the touch panel.

Further, initial spin-up speed of rotation has been improved.



## Automatic mode

In automatic mode, automatic gas and vacuum wash cycles can be used during the melting process.

Different from the conventional machine, the semi-auto mode is available, and also the full-auto-mode can operate automatically to the finish of casting (rotation).

**Various settings can be done on the touch panel**



## Setting

Setting change that was not possible by the conventional machine is now possible on the touch panel.

Even better quality castings can be achieved!

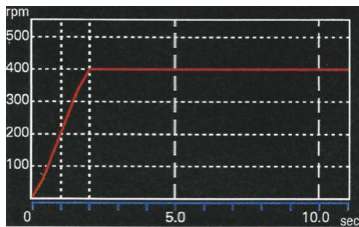


## Alarm

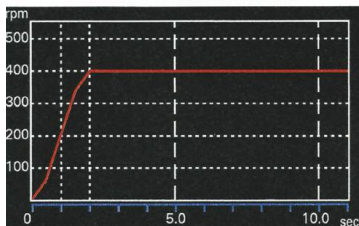
The alarm indicators are displayed separately from the error indicators.



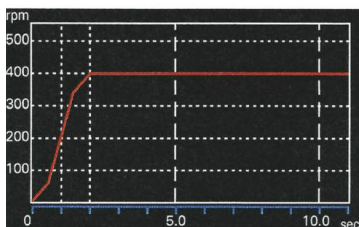
## Stepless control of rotation speed and initial spin-up speed New type high performance servo-motor



Initial spin-up time required to achieve final rotation speed can be set freely (the fastest initial spin-up speed is 500rpm by 0.1sec.)



Initial spin-up speed of this machine is 500 rpm by 0.1 sec. (The previous model VCC was 500 rpm by 0.2 sec.) By this, the machine can process more metals.



Descending time of the coil is greatly shortened to 40 msec. (The previous model VCC was 200 msec.) Increased production is possible.

## Thermal control with high accuracy

Thermal control with high accuracy is possible by the optic thermal controller.



In addition to heating control by the temperature controller, the machine is newly equipped with the heat power control dial, so upper limit output can be adjusted steplessly.

## Double swing arm



By the originally-developed Yasui "Double Swing Arm" (Japan Patent No. 3178748), the molten metal can be poured into the mold straight without loss. Improvement of filling efficiency, metal density and substantial reduction of metal loss has been realized.

## Conventional straight-type arm

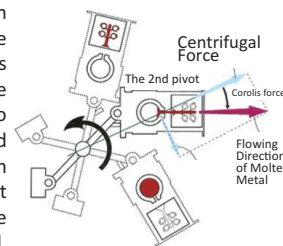


In the case of centrifugal casting method that is most suitable for casting of platinum, the metal ejected from the nozzle is affected by strong Coriolis force as well as by centrifugal force simultaneously. Therefore, in the case of conventional straight arm, there was such difficulty that the metal misses the centre of the mold and splashes around the sprue area of mold.

## Yasui double swing arm

The VCC's "Double Swing Arm" will insure the molten metal can be poured into the mold straight, so the filling efficiency has been improved.

As the figure on the right, the second pivot is utilized, so that the metal ejected into the deflected (delayed) direction can be caught almost at the center of the mold.

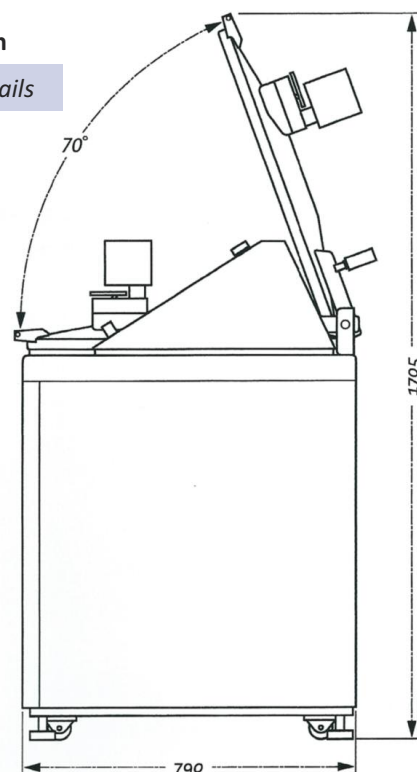
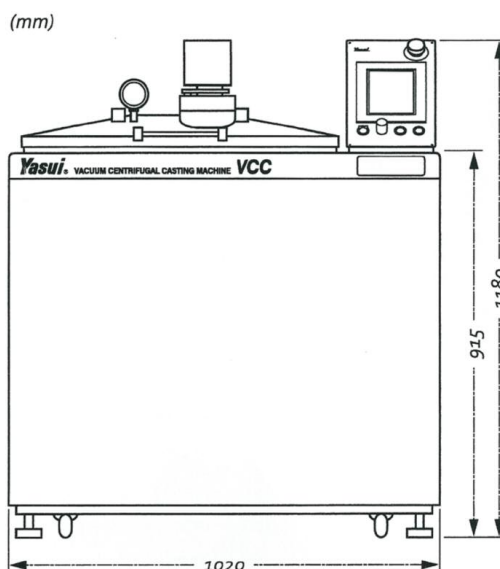


Oscillation Power	5kw
Oscillation Frequency	Approx. 100kHz
Temp. control range	900~2100 °C
Temp. control method	PID Control
Melting capacity	Pt. 400g

Flask size	Dia. 76mm / 80mm Max. length 100mm
Max. acceleration	500 rpm-0.1 sec.
Dimensions (WxDxH)	1020x790x1180mm
Net weight	Approx. 350kg
Power Supply	AC200V, 50/60 Hz, 3 phase, 6.5kVA



Item #	Description	US\$/Each
79-600	Yasui VCC Platinum Casting Machine	Call For Details



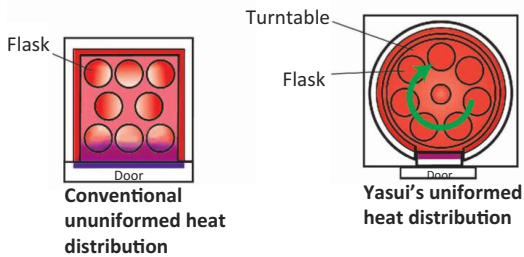


# Yasui Rotating Burnout Furnace

The Yasui RBF Series features Uniform Heat Transfer, due to the displacement of air created by the Rotating Shelves, within the flask chamber. Accurate Temperatures insure a safe burn-out during stone-in-place casting. The Variable Power Heating System, automatically and precisely maintains set temperatures throughout the cycles, (9 Programs, with 4 Ramps and 4 Holds each). Internal Dewaxing System collects wax outside the flask chamber. The Afterburner device neutralizes all fumes, odors and pollution produced during overnight burn-out cycles. The narrow door design creates minimal heat loss. RBF37 (77-014) is for gold only. RBF13 (77-0145) is for gold and platinum.

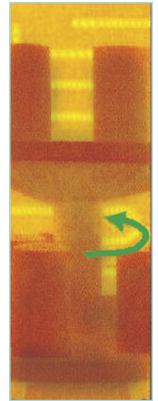
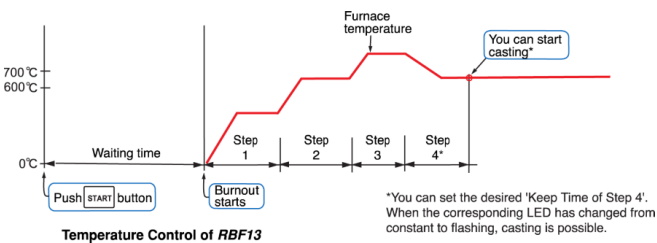
## UNIFORM HEAT TRANSFER

Yasui RBF (Rotating Burnout Furnace) assures uniform heat transfer thanks to its minimal thermal difference between heater surface and chamber as well as inside air displacement created by the turntable rotation. All the flasks are heated at the same temperature regardless of distance from the heating coil.



## PRECISE TEMPERATURE CONTROL

One burnout cycle can be programmed up to 4 steps. Optimum heating power is automatically calculated and applied for each temperature zone.



Inside rotating chamber view



Model	RBF13
Item #	77-014
Power	220V, 50/60Hz, single phase
Power Consumption	6 KVA
Net Weight	Approx. 200kg/440 lbs.
Dimensions	825 (W)(incl. control box) x 708 (D) x 1984(H) (incl. afterburner) mm
Burnout Temperature	Max. 950 degrees C
Turntable	Dia. 330mm x 2 Tables
Capacity	13 Flasks (Dia. 101mm) 15 Flasks (Dia. 89mm), 19 Flasks (Dia. 76mm)
Max. Height of Flasks	230 (H) mm

Model	RBF37
Item #	77-0145
Power	200V, 50/60Hz, 3 Phase
Power Consumption	15KVA (incl. afterburner)
Net Weight	Approx. 460kg/1012 lbs.
Dimensions	1060 (W) x 1070 (D) x 2140 (H) mm (incl. afterburner)
Burnout Temperature	Max. 850 degrees C
Turntable	Dia. 552mm x 2 Tables
Capacity	37 Flasks (Dia. 100mm) 45 Flasks (Dia. 89mm)
Max. Height of Flasks	230 (H) mm

**Call for Pricing**

**Yasui.**

We also stock supplies for earlier models **KT-15** and **KT-16**, Yasui vacuum pressure casting machines, as well as support and service **Tanabe platinum casting machines**.

The image displays 26 numbered photographs of various parts and accessories for the Yoshida Type Crucible, arranged in a grid-like fashion. The parts include:

- A**: A long, dark, cylindrical rod with a rounded end.
- B**: A dark cylindrical rod with a label that reads "Code 25090700", "Net Weight: 1.00kg (2.2lb)", and "Lot No. 20070515".
- C**: A dark cylindrical rod with a label that reads "Code 25100110", "Net Weight: 1.00kg (2.2lb)", and "Lot No. 20070515".
- D**: A dark cylindrical rod with a label that reads "Code 25090410", "Net Weight: 1.00kg (2.2lb)", and "Lot No. 20070515".
- E**: A yellow electrical connector with red and black wires.
- F1**: A yellow electrical connector with red and black wires.
- F2**: A yellow electrical connector with red and black wires.
- G**: A yellow electrical connector with red and black wires.
- H**: A light-colored, circular ring.
- I**: A dark-colored, circular ring.
- J**: A light-colored, circular ring.
- K**: A light-colored, circular ring.
- L**: A light-colored, circular ring.
- M**: A dark-colored, circular ring.
- N**: A circular component with a label that reads "Code 25100110", "Net Weight: 1.00kg (2.2lb)", and "Lot No. 20070515".
- O**: A coiled, light-colored hose with yellow connectors.
- P**: A yellow container with a label that reads "Code 25100110", "Net Weight: 1.00kg (2.2lb)", and "Lot No. 20070515".
- Q**: A light-colored container.
- R**: A dark-colored container.
- S**: A dark-colored container.
- T**: A dark-colored container with a label that reads "Code 25100110", "Net Weight: 1.00kg (2.2lb)", and "Lot No. 20070515".
- U**: A dark-colored container with a label that reads "Code 25100110", "Net Weight: 1.00kg (2.2lb)", and "Lot No. 20070515".
- V**: A light-colored container.
- W**: A light-colored container.
- X**: A light-colored container.
- Y**: A light-colored container.
- Z**: A light-colored container.

The text "Yoshida Type Crucible" is visible in the bottom right corner of the image.



Romanoff Hand held compact electric furnaces for melting metals have digital controller regulate the temperature by providing full power input until a pre-selected temperature is attained. Maximum temperature 1120C/2050F. The melting time from room temperature, is 25-40 minutes thereafter every 12 minutes for successive reheats.



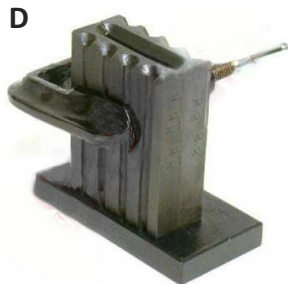
Item#	Description	Each/US\$
A <a href="#">8100</a>	Romanoff Digi-Melt™ 1Kg 110V*	629.00
A <a href="#">8100A</a>	Romanoff Digi-Melt™ 1Kg 220V*	639.00
B <a href="#">77-042-M3D</a>	Italian Electric 3-Kg Digital Melter 110V*	999.00
B <a href="#">77-042-M3DA</a>	Italian Electric 3-Kg Digital Melter 220V*	1,029.00
C <a href="#">000-9002-CD</a>	Digi-Melt™ Replacement Muffle Unit 110V	292.60
C <a href="#">000-9002-220</a>	Digi-Melt™ Replacement Muffle Unit 220V	329.00
D <a href="#">714A</a>	Romanoff Digi-Melt Cover	42.50
E <a href="#">77-042-TONG</a>	Plier Handle Tongs	34.50



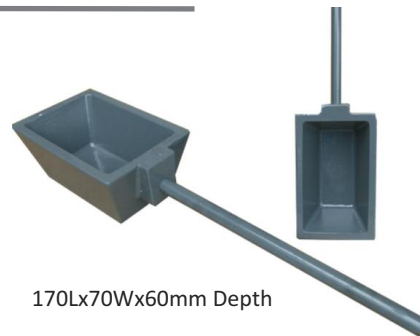


## Ingot Molds

	Item#	Description	Each \$
L	<b>79-016</b>	Ingot Cast Iron Mold 4.6-Kgs Capacity	229.00
M	<b>79-017</b>	Ingot Cast Iron Mold 9.5-Kgs Capacity	339.00
N	<b>79-018</b>	Ingot Cast Iron Mold 12-Kgs Capacity	419.00
O	<b>79-043</b>	Ingot Mold Plate/Wire Combination	48.50
P	<b>80-130</b>	Boron Nitrate Aerosol Spray (12oz)	61.29



**Boron Nitrate Spray**  
Used for pre-coating graphite gold crucibles prior to heating. Will help prevent graphite breakdown and minimize graphite inclusions in your liquid metal. Cannot be shipped by Air.



170Lx70Wx60mm Depth



190Lx120Wx80mm Depth



225Lx130Wx90mm Depth

**A**

Purest Quality Boric Acid  
Used for coating the inside of graphite crucibles for extending life or cleaning metal.



**B**



**C**



**D**



	Item#	Description	US\$ /1-5	US\$ /6+
A	<b>80-0901</b>	Boric Acid Anhydrous (5lb Cont.)	48.91	45.80
B	<b>78-028</b>	3/8" Quartz Stir Rod 12"	8.85	7.97
C	<b>78-084</b>	3/8" Carbon Graphite Stir Rod 12"	6.59	5.90
D	<b>Z15-719</b>	3/8" Ceramic Stirring Rod 9"	7.95	6.70

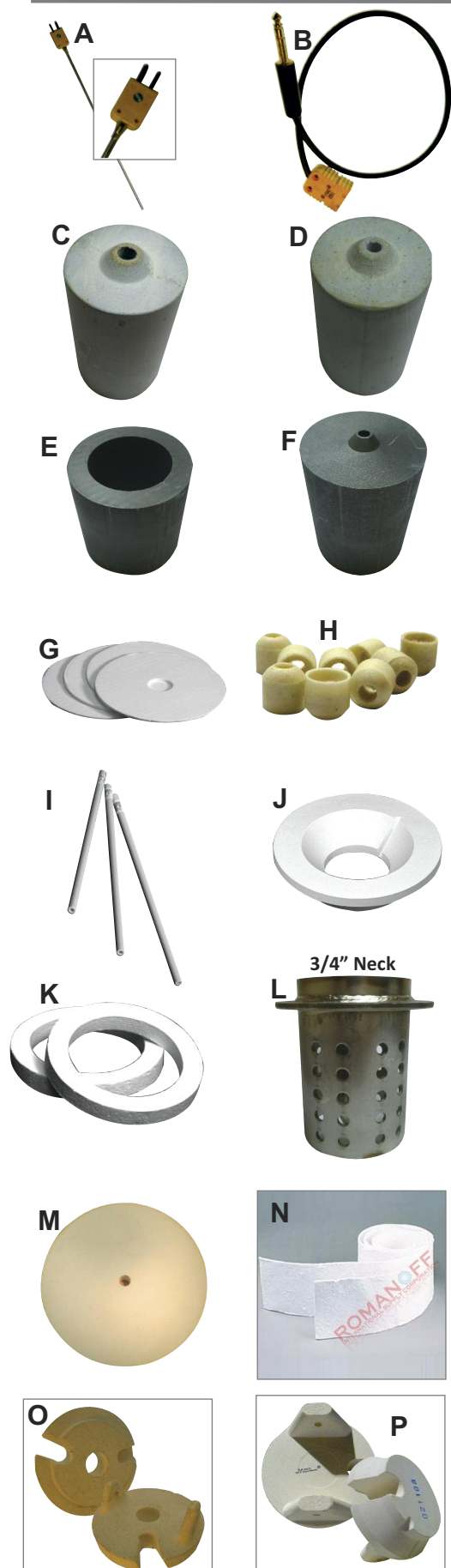
## Salamander Clay-Graphite Crucibles

Proven by their quality and long life. These crucibles are manufactured from natural flake graphite and silicon carbide bonded with fine fire clay. Most commonly used with gas or induction furnaces. Larger sizes are available on request.

Item #	Style #	Dimensions: Top Dia. x Inside Ht x Bottom Dia.	Capacity: 14kt Gold	US\$ /1-5	US\$/6+
<b>78-107</b>	A1	79 x 97 x 55mm	2 kg	42.35	40.25
<b>78-1072</b>	A2	95 x 109 x 61mm	3.1 kg	49.49	47.10
<b>78-1073</b>	A3	105 x 127 x 70mm	5.6 kg	52.90	47.65
<b>78-1074</b>	A4	114 x 141 x 76mm	8.7 kg	56.90	54.10
<b>78-1076</b>	A6	130 x 165 x 95mm	12.6 kg	59.80	56.85
<b>78-108</b>	A8	156 x 184 x 108mm	17.5 kg	64.75	61.60
<b>78-1081</b>	A10	160 x 200 x 110mm	25.2 kg	87.50	83.50
<b>78-1083</b>	A12	171 x 210 x 121mm	28.7 kg	97.60	92.80
<b>78-1082</b>	A20	197 x 260 x 145mm	42.0 kg	139.00	132.60
<b>78-1084</b>	A40	232 x 318 x 160mm	70.0 kg	219.00	208.80



# Memco Style Crucibles & Supplies



Item#	Description & Specifications	US\$ /1-5	US\$/6+
A 79-65219-R	Yellow K-Type Thermocouple 1350° C	91.30	86.75
B 79-65214	Yellow K-Type Thermocouple Cable	71.64	68.10
C 79-65220-R	Silver Ceramic Crucible .31 inch diameter hole	56.28	53.49
D 79-65221-R	Gold Ceramic Crucible .40 inch diameter hole	56.28	53.49
E 79-65225-R	Susceptor for Ceramic Crucibles	51.25	48.70
F 79-65227-R	Graphite Crucible .31 inch diameter hole	47.40	45.29
G 79-65236	Setter Disc 4inch OD	12.19	11.60
H 79-65243	Ceramic Beads for Valve Rod, Pack of 10	6.90	6.60
I 79-65252	Ceramic Gas Straw	10.98	10.45
J 79-65274	Crucible Lid Liner for Tilt Rod, New Style	285.30	274.30
K 79-65269-R	79-65269-R Insulating Ring EZ-Load Style	48.52	46.10
L 79-65304	Memco 10 Gauge Stainless Steel Flask, 3½ x 4"	60.97	57.95
L 79-65305	Memco 10 Gauge Stainless Steel Flask, 4 x 5¼"	69.80	66.35
L 79-65307	Memco 10 Gauge Stainless Steel Flask, 4 x 7"	72.90	69.30
L 79-65308	Memco 10 Gauge Stainless Steel Flask, 4 x 8½"	76.80	73.15
M 79-65231	6" x ½" x ¼" ID Setters Stand Ceramic	113.65	108.15
N 79-65241	Insulator Strip, 2 rolls, 4½ x 42" each	86.63	82.30
O 79-65268	Straight Rod Cover with Slot, Old Style Inducto-Vac	67.90	64.55
P 79-67230	Tilt Rod Cover with Slot, New Style Inducto-Vac	83.20	79.15
Q 79-65249	3/16" Grey Valve Rod, long life	83.90	79.15

Memco is not necessarily the source or origin of these replacement parts.



Q



# Ceia Induction Melting Units



CEIA has received world wide recognition for their high efficiency, low to medium frequency, minimum power consumption and virtually no maintenance, induction melting units. All functions are controlled by the microprocessor. These Heavy Duty Stainless Steel units speak commands, eg: "Water Pressure is Low" - "Change Crucible" - "Power Interrupption" etc. All units include one graphite/ceramic crucible, tongs & gas blow pipe to prevent metal oxidation.(Optional Optical Pyrometer). 220V, 3ph, 50/60hz. Made in Italy



Digital Control Panel

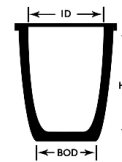


Item#	Description	Specifications	Each/US\$
79-210	F5-D Ceia 8.6kg / 7kw Power	22.5" x 35.5" x 23" (200lbs)	18,850.00
79-215	F9-D Ceia 13.5kg / 9.5kw Power	22.5" x 35.5" x 23" (215lbs)	20,590.00
79-225	F12-D Ceia 17kg / 12kw Power	22.5" x 35.5" x 23" (215lbs)	24,250.00

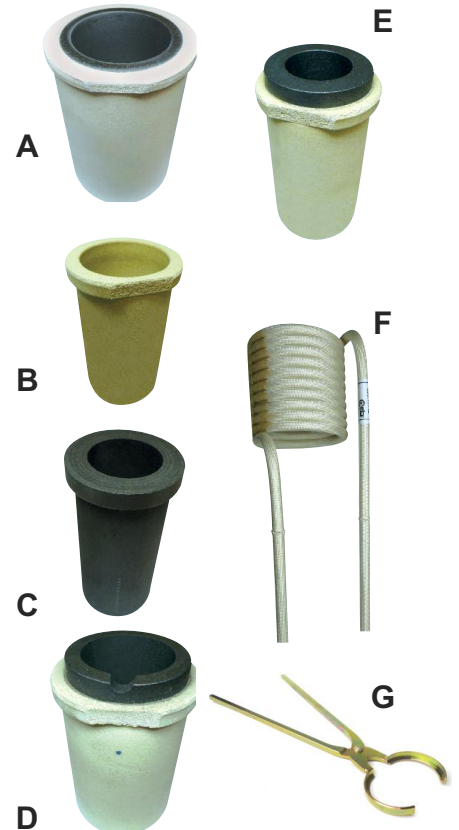
## Ceia Style Crucibles & Supplies



Romanoff has a full inventory of all Ceia crucibles and supplies such as ceramic containers, graphite crucibles, combinations of graphite and ceramic crucibles cemented together, replacement coils, crucible support plates, control panels, etc.



Item#	Model	Description	Dimensions OD Base x Height x ID	US\$ /1-5	US\$/6+
A 79-210-CC	Ceia F5	Graphite / Ceramic Crucible (USA)	115 x 165 x 70 mm	82.95	78.80
A 79-210-CC0	Ceia F5	Graphite / Ceramic Crucible (Original)	115 x 165 x 70 mm	159.20	153.70
A 79-215-CC	Ceia F9 & F10	Graphite / Ceramic Crucible (USA)	120 x 180 x 80 mm	129.00	123.84
A 79-215-CC0	Ceia F9 & F10	Graphite / Ceramic Crucible (Original)	120 x 180 x 80 mm	146.70	141.85
A 79-225-CC	Ceia F12	Graphite / Ceramic Crucible (USA)	130 x 185 x 90 mm	205.59	197.40
B 78-0083-C	Ceia F3	Ceramic Container (Original)	70 x 130 x 62 mm	25.70	24.70
C 78-0083-G	Ceia F3	Graphite Liner, Std Quality (USA)	57 x 127 x 42 mm	28.60	27.50
D 79-205-CC	Ceia F3	Graphite / Ceramic Crucible w/Spout (USA)	70 x 138 x 42 mm	66.70	64.19
E 79-220-CCO	Ceia F4	Graphite Ceramic Crucible (Original)	88 x 140 x 60 mm	83.60	79.60
F 79-205-6	Ceia F3	--	F3 Coil, 10 Rows	560.00	--
G 79-205-TG	Ceia F3D & F4D	Original Ceia Tongs 150mm (L)	--	189.00	--





# Romanoff Compact Induction Melters



The Romanoff Compact Induction Melters are an Excellent Choice for Precious Metal Buyers who need a induction melting furnace for rapid melts and pours into ingots.

- Efficient circuit with low energy consumption.
- Reliable, easy to maintain and service.
- Easy to Install and simple to operate.

**Major application:** Melting of metals up to 2000° C

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Timer (1 – 30min)</li> <li>• Power regulation (10 – 100%)</li> <li>• LED display for Power, Time and Temperature</li> <li>• Graphite crucible</li> <li>• Temperature reader</li> </ul> | <b>Benefits:</b> <ul style="list-style-type: none"> <li>- Improved energy efficiency</li> <li>- Higher degree of controllability</li> <li>- Increased repeatability</li> <li>- Low maintenance requirements</li> <li>- Increased productivity</li> </ul> |
|---|--|

	Mini-Melt G1000 79-1100	Hi-Temp Mini-Melt P250 79-1200	Mini-Melt G2000 79-1300	Hi-Temp Mini-Melt P500 79-1400
Absorbed Power kW (max)	2.8	2.8	2.8	2.8
Output Frequency kHz	50-80	70-105	45-70	70-105
AC Line Volts (50/60Hz)	230 ±10%	230 ±10%	230 ±10%	230 ±10%
Line Phases	1	1	1	1
Crucible Capacity	1 kg Au	50-250g Pt	2 kg Au	200-500g Pt
Max Melting T°	1200°C	2000°C	1200°C	2000°C
Cooling System	Water	Water	Water	Water
Weight	39.7 lbs (18 kg)	39.7 lbs (18 kg)	39.7 lbs (18 kg)	39.7 lbs (18 kg)
Dimensions LxWxH	17.7" x 14.2" x 7.1" (45 x 36 x 18 cm)	17.7" x 14.2" x 7.1" (45 x 36 x 18 cm)	17.7" x 14.2" x 7.1" (45 x 36 x 18 cm)	17.7" x 14.2" x 7.1" (45 x 36 x 18 cm)

**Call for Pricing**

# Romanoff EZ-Cast Casting Machines



- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Digital display panel with real time parameter readings and diagnostics messages</li> <li>• Centrifugal casting with pneumatic induction coil</li> <li>• Temperature controlled water cooling system</li> <li>• IR temperature sensor with automatic or manual working cycle (optional)</li> <li>• Proportional melting power source</li> </ul> | <ul style="list-style-type: none"> <li>• DC motor with reduction gear: adjustable acceleration from 0.1 to 1 sec.</li> <li>• Max rotating speed – 500 rpm.</li> <li>• Auto locking of the chamber lid during cating cycle</li> <li>• Integral vacuum pump (EC-12)</li> <li>• Inert (Argon) gas circuit included (EC-12)</li> </ul> |
|--|--|

	Romanoff EZ-Cast EC11 79-7000	Romanoff EZ-Cast EC11T 79-7000T	Romanoff EZ-Cast EC11V 79-7000V	Romanoff EZ-Cast EC12 79-7300
Absorbed Power kW (max)	3.0	3.0	3.0	3.0
Output Frequency kHz	95-120	95-120	95-120	95-120
AC Line Volts (50/60Hz)	230 ±10%	230 ±10%	230 ±10%	230 ±10%
Line Phases	1	1	1	1
Crucible Capacity	150g Pt, 150g Au, 80g Ag	150g Pt, 150g Au, 80g Ag	150g Pt, 150g Au, 80g Ag	150g Pt, 150g Au, 80g Ag
Flask Size mm (max)	D=80 x H=100	D=80 x H=100	D=80 x H=100	D=80 x H=100
Max Melting T°	2000 C°	2000 C°	2000 C°	2000 C°
IR Temperature reader	n/a	Included	n/a	Included
Cooling System	Water-Internal	Water-Internal	Water-Internal	Water-Internal
Vacuum Pump	n/a	n/a	Included	Included
Weight	220.5 lbs (100 kg)	220.5 lbs (100 kg)	264.6 lbs (120 kg)	264.6 lbs (120 kg)
Dimensions LxWxH	19.7" x 24" x 39" (50 x 61 x 99 cm)	19.7" x 24" x 39" (50 x 61 x 99 cm)	19.7" x 24" x 39" (50 x 61 x 99 cm)	19.7" x 24" x 39" (50 x 61 x 99 cm)

**Call for Pricing**

# Romanoff RCS Centrifugal Casting Machines

The patented RCS (Rotating Coil System) provides excellent casting results and no cool down due to coil dropping prior to spinning.

Casts all metals and alloys: precious and non-precious.

Very high melting efficiency and speed.

Easy to Install and simple to operate.

Reliable, easy to maintain and service.



- Improved energy efficiency
- Higher controllability
- Increased repeatability
- Low maintenance requirements
- Increased productivity
- Excellent for fine filigree filling



- Built in vacuum pump and Argon gas circuit
- Coil rotation with arm and flask
- Coil still heating during rotation
- Metal injected in liquid phase
- Accurate temperature reader with advanced thermo regulator
- Metal emissivity regulation
- Vacuum-Argon washing cycle
- Advanced diagnostic features and error messages
- Easy to use digital Control Panel with 20 user programs, 10 programmable parameters each
- Casting with precious stones
- Special program for automatic Titanium casting – only RCS 5 kW

	Romanoff RCS 4 kW 79-700	Romanoff RCS 5 kW 79-800
Absorbed Power kW (max)	4.0	5.0
Output Frequency kHz	60-105	60-105
AC Line Volts (50/60Hz)	230 ±10%	230 ±10%
Line Phases	1	1
Crucible Capacity	200g Pt, 150g Au	200g Pt, 100 g Au, 80 g Ti, 80 g SS
Flask Size mm (max)	D=90 x H=90	D=90 x H=90
Max Melting T°	2000 C°	2000 C°
Cooling System	Water-Internal	Water-Internal
Weight	440.9 lbs (200 kg)	440.9 lbs (200 kg)
Dimensions LxWxH	26.4" x 21.7" x 41.3" (67 x 55 x 105 cm)	26.4" x 21.7" x 41.3" (67 x 55 x 105 cm)

**Call for Pricing**

# Romanoff CCM Centrifugal Casting Machines



The Romanoff line of casting machines have unique features, such as: Melting in a vacuum controlled atmosphere, built in Micro-Processor Computer to ensure consistent quality castings, control of initial acceleration and final RPM, (16 automatic casting programs, 9 parameters per program) dual spectrum optical pyrometer, a built in heavy duty Vacuum Pump, Self Diagnostic warning system to notify operators if water pressure or power is low or crucible needs to be changed. The Romanoff casting machines melt under vacuum and allow the operator to introduce argon gas or any other inert gas when required to protect the alloy during melting.

## Best Feature of All:

“PID” (Proportional-Integral-Derivative) This is a continuous feedback loop that keeps the process flowing normally by taking corrective action whenever there is any deviation from the desired value (set point) of the process variable (rate of flow, temperature, voltage, etc.)

- New heavy duty melting generator
- Easy to use digital Control Panel
- 20 user programs with 10 programmable parameters each
- Built in 20 m3 vacuum pump and Argon Gas circuit
- Metal emissivity regulation
- Accurate temperature reader with advanced thermo regulator
- Excellent heating cycle control
- Casting with precious stones
- Vacuum-Argon washing cycle
- Advanced diagnostic features and error messages


	<b>Romanoff CCM 200 79-500-D1</b>	<b>Romanoff CCM 400 79-500-D2</b>	<b>Romanoff CCM 1500 79-500-D3</b>
<b>Absorbed Power kW (max)</b>	7.5	7.5	10
<b>Output Frequency kHz</b>	50-80	50-80	50-80
<b>AC Line Volts (50/60Hz)</b>	230 ±10%	230 ±10%	230 ±10%
<b>Line Phases</b>	3	3	3
<b>Crucible Capacity</b>	350g Pt, 200g Au	750g Pt, 400 g Au, 300 g SS	1 kg Pt, 1.5 kg
<b>Flask Size mm (max)</b>	D=100 x H=120	D=120 x H=160	D=150 x H=180
<b>Max Melting T°</b>	2000 C°	2000 C°	2000 C°
<b>Cooling System</b>	Water	Water	Water
<b>Weight</b>	418.9 lbs (190 kg)	440.9 lbs (200 kg)	595.2 lbs (270 kg)
<b>Dimensions LxWxH</b>	29.9" x 24.4" x 42.9" (76 x 62 x 109 cm)	39.4" x 32.7" x 42.5" (100 x 83 x 108 cm)	42.5" x 35.4" x 43.3" (108 x 90 x 110 cm)



# Supplies for Romanoff Centrifugal Casting Machines

For use with Romanoff Centrifugal Series Programmable/digital vacuum casting machines.

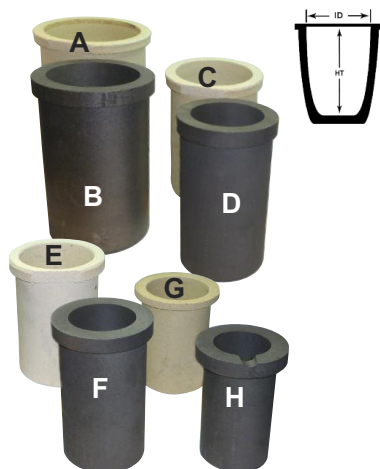


Item #	Description (Crucible diameter measurement is support plate opening.)		US\$ 1 -2      3+	
A. 79-452-G	400 gr. Platinum Crucible 51 mm Dia. (High Grade)		98.75	94.80
B. 79-500-CAR	350 gr. Platinum Crucible 51mm Dia. (USA)		69.95	67.20
C. 78-0060	800 gr. Gold Graphite Liner/Ceramic Container Crucible 51mm Dia. (Original)		39.15	37.59
D. 79-503	Crucible Support Plate 51mm Dia. Opening		186.94	--
D. 79-702-SPT-S	Crucible Support Plate 38mm Diameter Opening		186.94	--
D. 79-702-SPT	Crucible Support Plate 44mm Diameter Opening		186.94	--
E. 79-702-D	50 gr Gold/Silver Crucible 38 mm (Original)		49.70	47.75
E. 79-702	100 gr Gold/Silver Crucible 44 mm Dia. (Original)		59.60	57.25
F. 79-701	150 gr Platinum Crucible 38mm Dia. (Original)		115.50	110.90
G. 79-701-R	150 gr Platinum Crucible 38mm Dia. (USA)		96.90	93.40
H. 79-701-LG	200 gr Platinum Crucible 44mm Dia. (Original)		129.29	124.15
I. 79-701-SS	80 gr Stainless Steel Crucible 44mm Dia. (Original)		94.37	90.60
J. 79-701-TI	80gr Titanium Crucible (Ceramic/Zirconia) 44mm Dia. (Original)		107.47	103.19
K. 79-703-2	Supercast 2 x 3" Flask Saddle		239.00	--
K. 79-703	Supercast 2.5 x 3" Flask Saddle		239.00	--
K. 79-703-3	Supercast 3 x 3" Flask Saddle		289.00	--
L. 79-515	CS1, CS2 3 x 3" Flask Saddle		339.00	--
M. 79-711	Supercast Induction Coil for 3, 4, & 5kw models		630.00	--
N. 79-505	CS1, CS2 Induction Coil, 9 Turns		789.00	--

## Galloni and Manfredi Style Crucibles

Romanoff is your source for Galloni and Manfredi graphite crucibles and ceramic containers. If you do not see your crucible listed below, please inquire. We have additional sizes available.

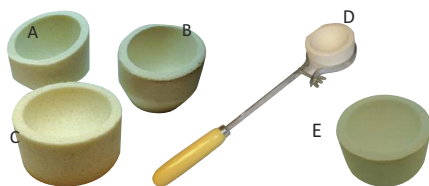
**Note: All measurements are inside dimensions**



	Item#	Description	Model	Inside Dia.	Inside Height	Capacity	US\$ 1-5	US\$/6+
A	<a href="#">78-0087-CONT</a>	Ceramic Container	Manfredi #C900	127 mm	153 mm		27.80	26.42
B	<a href="#">78-0087</a>	Graphite Liner	Manfredi #G600	120 mm	165 mm	7.80kg	40.59	38.97
C	<a href="#">78-0081</a>	Ceramic Container	Manfredi #C500	79 mm	130 mm		29.70	28.60
D	<a href="#">78-0082-XF</a>	Graphite Liner, Long Life	Manfredi #G350	59 mm	127 mm	3.9kg	99.60	95.62
D	<a href="#">78-0082</a>	Graphite Liner, Standard	Manfredi #G350	59 mm	127 mm	3.9kg	43.60	41.90
E	<a href="#">78-008</a>	Ceramic Container	Manfredi #C250	60 mm	98 mm		23.49	22.60
F	<a href="#">78-007-401</a>	Graphite Liner, Long Life	Manfredi #G150	48 mm	102 mm	1.7kg	34.89	33.55
F	<a href="#">78-007</a>	Graphite Liner, Standard	Manfredi #G150	48 mm	102 mm	1.7kg	43.46	41.80
G	<a href="#">78-035</a>	Ceramic Container	Galloni #3014	51 mm	83 mm		26.80	25.80
H	<a href="#">78-032</a>	Graphite Liner	Galloni #3013	35 mm	76 mm	853gm	27.40	26.40

## Melting Dishes

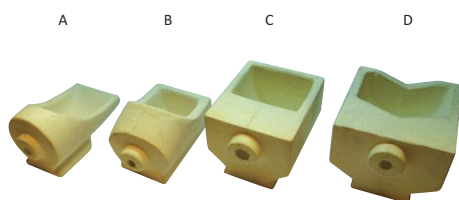
Wesgo fused silica melting dishes can withstand temperatures up to 3000° F (1651°C), will not contaminate platinum, and the high back design reflects heat back into the crucible. The fused clay-silica crucibles are designed for melting nonferrous metals up to 2500° F (1371°C).



	Item#	Description	Capacity	Dimensions	US\$ /1-5	US\$/6+
A	<a href="#">78-002-W</a>	Wesgo High Back Melting Dish	10 oz	75 x 62mm	31.92	29.40
B	<a href="#">78-002</a>	Silica High Back Melting Dish #3H	10 oz	75 x 62mm	19.70	18.10
C	<a href="#">78-002-STR</a>	Wesgo Melting Dish	8 oz	74 x 36mm	27.20	25.30
D	<a href="#">78-110</a>	3" Melting Dish with Handle	6 oz	14"	23.70	21.86
E	<a href="#">78-111</a>	Replacement Silica Melting Dish for 78-110	6 oz	75 x 19mm	16.65	14.94

## Fused Silica Casting Crucibles

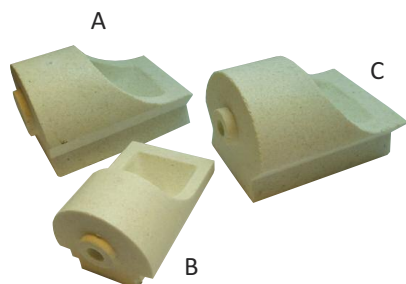
Romanoff fused silica casting crucibles can be used for gold, silver, or brass alloys. There are three melting options with this style of crucible. Metal can be melted in this crucible with a torch; you can melt metal directly in this crucible in a furnace and then transfer the crucible to the casting machine; or you can melt your metal in a pouring crucible and it would then be poured into this crucible after it is pre-heated. The bottom of each crucible has a width of 2" (50mm).



	Item#	Description	Metal Capacity	Dimensions	US\$ /1-5	US\$/6+
A	<a href="#">78-003-N</a>	Silica Neycraft Casting Crucible	9 oz	83 x 57mm	21.90	19.90
B	<a href="#">78-003</a>	Silica Casting Crucible #75	7 oz	83 x 57mm	19.40	18.30
C	<a href="#">78-001</a>	Silica Casting Crucible #3	25 oz	83 x 73mm	16.40	15.60
D	<a href="#">78-0014</a>	Silica Casting Crucible #4	40 oz	89 x 89mm	20.64	18.90

## Morgan-Wesgo PT Crucibles

Known for their heat resistant quality, these fused silica crucibles are for casting temperatures of up to 3000° F (1651°C). Primarily used for vertical centrifugal platinum casting with a torch, but can be used for all metals.



	Item#	Description	Capacity	Spout Diameter	Dimensions	US\$ /1-5	US\$/6+
A	<a href="#">78-046</a>	Type-D	10 oz	9mm Hole	51 x 84 mm	44.40	39.90
B	<a href="#">78-046-A</a>	Type-A	1 oz	7mm Hole	33 x 42 mm	29.85	27.80
C	<a href="#">78-0465</a>	Type-D	11 oz	13mm Hole	51 x 84 mm	52.80	49.15



## Vac-U-Vest Machines

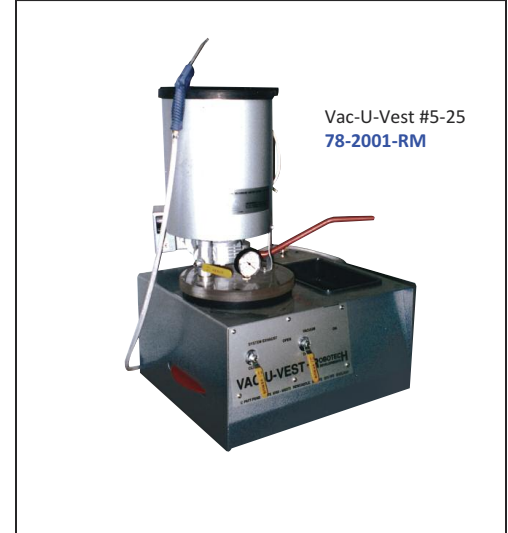
These high-quality, English vacuum mixing and investing machines will greatly improve the consistency and quality of your mix. The unique mixer blade design unfolds the investment slurry under vacuum as it mixes. Since the unit is mixing under vacuum, air entrapment is reduced to virtually zero. Both upper and lower stainless steel chambers are vacuum sealed. The stainless steel turntable below is used to position each flask beneath the pouring valves before releasing the investment. Since the mixing and pouring of the silica powder is done inside the chamber, the exposure to dust is minimal to the operator, as well as providing a cleaner work environment. Units are available in 50 or 60 cycle. *Vacuum pump not included.*



Vac-U-Vest #20  
76-2003-RM



Vac-U-Vest #15  
76-2005-RM



Vac-U-Vest #5-25  
78-2001-RM

Specifications	Vac-U-Vest #20	Vac-U-Vest #15	Vac-U-Vest #5-25
Maximum Investment Capacity	25 kg / 55lbs	18 kg / 40lbs	5 kg / 11lbs
Inside Chamber Diameter	21" / 53 cm	16.5" / 42 cm	10.75" / 27 cm
Maximum Perforated Flask Capacity w/ Ring	Eight 4" x 10"	Six 4" x 10"	Two 4" x 9" Or Three 3.5" x 9"
Maximum Flask Height	12" / 30.5 cm	10.25" / 26 cm	9" / 23 cm
Suggested Vacuum Pump	28 CFM up to 45 CFM	15 CFM up to 28 CFM	Minimum 10 CFM
Power	220V 3-Phase 60Hz	220V Single-Phase 60Hz	220V Single-Phase 60Hz
Machine Dimensions (width x depth x height)	42"W x 28"D x 62"H 107W x 71D x 158H cm	28"W x 31"D x 56"H 71W x 79D x 142H cm	24"W x 23"D 30"H 61W x 58D x 76H cm
Shipping Weight	1070 lbs / 485 kg	510 lbs / 231 kg	277 lbs / 126 kg

**Call for Pricing**

## Romanoff Vacuum Pumps



Item #	CFM	Voltage	US\$/ Each
A 7115A	3CFM	110/220 Volts, 50/60 cycle	429.00
A 7117	5 CFM	110/220 volts, 50/60 cycle	599.95
A 7119	10 CFM	110/220 volts, 50/60 cycle	789.45
B 004-120-R1/60	15 CFM	115/230 volts, 60 cycle, 1-PH	2,455.00
B 004-120-R	15 CFM	208/230/460 volts, 50/60 cycle, 3-PH	2,225.00
C 004-220-R115	21 CFM	115/230 volts, 60 cycle, 1-PH	2,649.00
C 004-220-R	21 CFM	208/240/460 volts, 50/60 cycle, 3-PH	2,749.00
C 004-420-R	31 CFM	208/240/460 volts, 50/60 cycle, 3-PH	3,469.00

All of the vacuum pumps shown below are of the highest quality. All systems use an oil pump and electric direct drive motor. All pumps, when sold individually, are shipped dry and require oil prior to use. Made in USA.



A.  
5 / 8 / 10 CFM



B.  
15 CFM



C.  
21 / 31 / 45 CFM



Now you can automatically mix and pour your gold investment under vacuum with the St. Louis Investment Mixer. You can mix up to 18 flasks per hour. The most important feature of this unit is that you are mixing and pouring investment under a controlled vacuum environment. This is a real time saver as you will not have separate mixing, pouring and vacuuming operations. Since it is user friendly, anyone can be trained in a few minutes to operate this unit. Simply place your flasks in the enclosed drum under the investment mixing blades. Measure the correct amount of investment and water, then close the mixing chamber and start the vacuum pump (not included). When you have achieved vacuum, turn on the two speed mixing unit and set your timer. These units will reduce casting rejects and produce bubble free castings! Now you are ready to pour your flask. Position your flask under the valve, apply vacuum to the lower chamber and open the valve. As the investment fills the flasks, turn on the vibration table under the flasks and you are done! All units: 220V, 1ph50/60cy. Vacuum pumps are not included, unless specified. Made in Italy.

## MINI MIX

(small Platinum mixer)

**76-113-MINI**

Tabletop unit, specifically designed for platinum and gold investment mixing.

**Powder Capacity:** 1 kg  
**Max. flask height:** 120 mm  
**Flask plate diameter:** 100mm  
**Dimensions:** 30 x 35 x 72 cm H  
**Weight:** 17 Kg.  
**Voltage:** 220V single phase



## ST. LOUIS 92 - 4 Kg

**76-113-4KG**

Tabletop unit, specifically designed for gold investment mixing.

**Powder Capacity:** 4 kg  
**Max. flask height:** 200 mm  
**Flask plate diameter:** 150 mm  
**Dimensions:** 30 x 35 x 95 cm H  
**Weight:** 22 Kg.  
**Voltage:** 220V single phase



## ST. LOUIS 82 - 6 Kg.

**76-115**

Tabletop unit, specifically designed for gold investment mixing.

**Powder Capacity:** 6 kg  
**Max. flask height:** 200 mm  
**Flask plate diameter:** 280 mm  
**Dimensions:** 49 x 42 x 105 cm H  
**Weight:** 44 Kg.  
**Voltage:** 220V single phase



## ST. LOUIS 82 PLATINUM - 3 Kg (6 Kg Au)

**76-115-P**

Platinum investment vacuum mixing unit supplied with particular mixing container and special cross blade.

The machine is supplied with a separate standard mixing container to be used also for gold investment powder.

A syringe is provided for additive independent loading of binder.

**Powder Capacity:** 3 Kg Pt/6 Kg Au  
**Max. flask height:** 100 mm (Pt)/200 mm (Au)  
**Flask plate diameter:** 280 mm  
**Dimensions:** 46 x 42 x 105 cm H  
**Weight:** 48 Kg.  
**Voltage:** 220V single phase



**Call for Pricing**



### ST. LOUIS 2000 - 10 Kg [76-114](#)

Complete Heavy-duty unit for multiple flask filling in each single investment preparation process up to 10 Kg. max powder capacity.

**Powder Capacity:** 10 kg  
**Max. flask height:** 350 mm  
**Flask plate diameter:** 360 mm  
**Dimensions:** 62 x 66 x 170 cm H  
**Weight:** 210 Kg.  
**Voltage:** 220V single phase  
**Pump:** Included



### ST. LOUIS 2000 XL - 14 Kg [76-114-14XL](#)

Complete Heavy-duty unit for multiple flask filling in each single investment preparation process up to 14 Kg. max powder capacity.

**Powder Capacity:** 14 kg  
**Max. flask height:** 350 mm  
**Flask plate diameter:** 360 mm  
**Dimensions:** 62 x 66 x 170 cm H  
**Weight:** 212 Kg.  
**Voltage:** 220V single phase  
**Pump:** Included



### ST. LOUIS 2000 PT-14 PLATINUM - 6 Kg Pt (14 Kg Au) [76-114-6XL](#)

Platinum investment vacuum mixer with special mixing container and cross blade. Supplied with an extra container for gold investment powder.

A syringe is provided for additive independent loading of binder.

**Powder Capacity:** 6 Kg Pt/14 Kg Au  
**Max. flask height:** 150 mm  
**Flask plate diameter:** 360 mm  
**Dimensions:** 62 x 66 x 170 cm H  
**Weight:** 212 Kg.  
**Voltage:** 220V single phase  
**Pump:** Included



### ST. LOUIS 2002 XL AUTOMATIC - 14 Kg [76-130](#)

Heavy-duty automatic unit for multiple flask filling in each single investment preparation up to 14 Kg. powder capacity.

**Powder Capacity:** 14 kg  
**Max. flask height:** 350 mm  
**Flask plate diameter:** 330 mm  
**Dimensions:** 62 x 66 x 170 cm H  
**Weight:** 212 Kg.  
**Voltage:** 220V single phase  
**Pump:** Included

### ST. LOUIS 2000 XXL - 22 Kg [76-131](#)

Industrial machine for heavy duty use capable to prepare 22 Kg. investment powder for each single investing process. Due to the heavy weight of the mixing container filled with powder, the unit is supplied with a side metal cabinet with rollers and digital scale for the easy transfer of the mixing container in its working position.

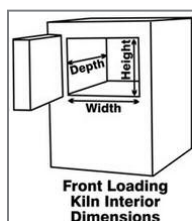
**Powder Capacity:** 22 kg  
**Max. flask height:** 400 mm  
**Flask plate diameter:** 450 mm  
**Dimensions:** 72 x 80 x 175 cm H + 47 x 95 x 100 cm H  
**Weight:** 230 Kg + 100 Kg  
**Voltage:** 220V single phase + 380V 3-Phase  
**Pump:** Included





## Romanoff Blue-Bird Automatic Furnace

A



Understanding Chamber Measurements

Romanoff Blue-Bird automatic furnaces are ideal for enamelling silver clay, glass jewelry, ceramics, porcelain, and especially lost wax castings. They are economically priced and built to be dependable.

All sizes feature a built-in computerized furnace temperature controller. The programmable Blue Bird Automatic Furnaces come with the Sentry Xpress digital controller mounted in the kiln base and hold time for each "ramp". The kiln includes a door safety switch that turns off the element when the door is opened. The controller automatically resumes firing when you close the door.

LED Lights show whether you are in program, review, or firing mode.

The thermocouples are protected with a high-nickel stainless steel sheath for long life. A vent hole in the top, complete with tapered vent plug, is designed for lost wax casting.

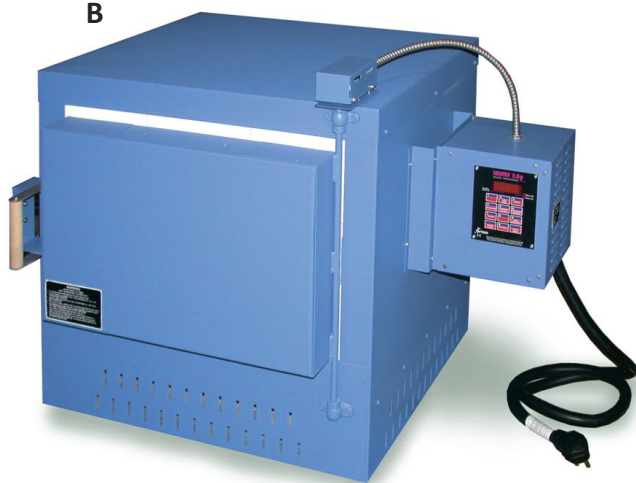
The heating elements are exposed in dropped, recessed insulating firebrick grooves, therefore it is easy to replace. The 2 1/2" thick firebricks store plenty of heat for slow cooling through the glass annealing range. Unlatch and open the door with one hand. No extra stand is needed; the built-in base stays cool during operation.

They are loaded with attention to details, such as the costly nickel-plated copper wire with high temperature glass-braided insulation. Wires are fastened to the elements with heat-dissipating connectors refined and proven over many years.

Most Blue-Bird Models can ship by UPS. Enjoy lower shipping cost and faster service. Specially designed cartons and foam padding assure that the kiln will arrive safely. Made in USA.

## Romanoff Blue Bird Heavy Duty Large Furnace

B



The Romanoff Blue Bird Automatic Furnaces feature a built-in computerized furnace temperature controller. The programmable Heavy Duty Blue Bird Automatic Furnaces come with the Sentry Xpress digital controller mounted on the side and hold time for each "ramp".

**Solid construction** The door swings open with one-handed operation. The Romanoff Blue Bird Heavy Duty Large Furnace furnace is insulated with refractory firebrick. The elements are mounted in dropped, recessed grooves machined into the firebrick. This groove protects the element for long life and low maintenance. Elements are simple to replace because they're exposed rather than embedded. You can thread new elements into place following clear instructions in the manual.

The firing chamber is protected by a steel case painted in high temperature blue. A built-in stand lifts the firing chamber safely off your worktable, so no extra stand is needed. The door is mounted with a heavy-duty hinge for smooth opening. A micro-switch shuts off the power to the elements when the door is opened. We use high temperature wire in the switch box for long life. A heat shield, mounted between the switch box and furnace, helps keep the switch box components cool even during extended operation. To further dissipate heat, the switch box is extra large and generously louvered. Each furnace comes with a cord and plug for immediate installation and a one year warranty. Made in USA.

	Item # 110V	Item # 220V	Volt	Max Temp (F)	Fire Chamber Opening (WxHxD)	Cubic Ft.	Approx. Shipping Weight	Outer Dimensions WxDxH	Amps	Watts	US\$ / Each
A	77-0924-A	77-0924A/220	120	2300	5.75 x 6.25 x 6"	0.14'	37 lbs	11 x 14.25 x 16.75"	12	1440	815.00
A	77-0911-A	77-0911A/220	120	2250	8.5 x 8.75 x 9"	0.39'	80 lbs	14 x 17.5 x 19.75"	14	1680	1,070.00
A	77-0908	77-0908/220	120	2000	8.5 x 6 x 12"	0.35'	70 lbs	14 x 22.5 x 17"	15	1800	1,090.00
A	77-0907	77-0907/220	120	2000	8.5 x 9 x 12"	0.53'	81 lbs	14 x 22.5 x 20"	19	2280	1,180.00
B	77-0923	77-0923/220	240	2350	21 x 21 x 13"	3.30'	424 lbs	40 x 35 x 28"	40	9600	3,190.00



# Programmable Industrial Burn-Out Furnaces



The Romanoff heavy-duty programmable furnaces come in three sizes to fit any application. All sizes feature a built-in computerized furnace temperature controller. The programmable controller allows up to six segments or "ramps" to be pre-set. Each ramp consists of heating or cooling, temperature settings in F or C, and hold time for each "ramp". Also, a delayed start can be entered. Each programmable furnace has 3 built-in easy-to-use programs, platinum, gold and stone in place casting cycles plus the ability to customize each program. Each furnace has a stainless steel body. The heating elements are mounted in open grooves, making it easy to change them if necessary.

77-0913

77-0914

77-0918



77-0913-HE



77-0914-ELEM



77-0918-ELEM

Item #	Volt	Max Temp (F)	Fire Chamber Opening (WxHxD)	Cubic Ft.	Approx. Shipping Weight	Outer Dimensions WxDxH	Amps	Watts	US\$ / Each	Replacement Heating Element	US\$ / Each
77-0913	240	1700	13 x 13 x 9"	0.88'	133 lbs	18 x 21.50 x 21.50"	13	3000	2,090.00	77-0913-HE Set of 2	197.00
77-0914	240	2000	14 x 14 x 14"	1.59'	215 lbs	19 x 22 x 27"	16	3430	2,239.00	77-0914-ELEM Set of 3	289.00
77-0918	240	1700	18 x 18 x 18"	3.37'	295 lbs	30.5 x 30.5 x 41.5"	22	4840	3,180.00	77-0918-ELEM Set of 4	329.00

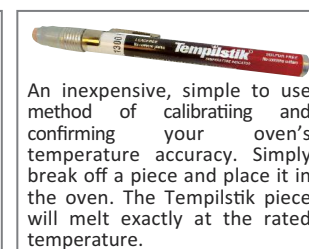
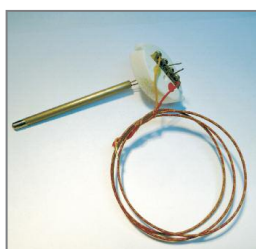
A

B

C

D

E



An inexpensive, simple to use method of calibrating and confirming your oven's temperature accuracy. Simply break off a piece and place it in the oven. The Tempilstik piece will melt exactly at the rated temperature.

Item #	Description	US\$ / Each
A 77-0918-KP	Keypad for 77-0913 and 77-0918 only, 2002 and newer	439.00
B 77-0918-TC	Replacement Thermocouple for All Three Furnaces	74.50
C 77-0918-015	Replacement Relay for All Three Furnaces	49.95
D 77-0021	Ceramic Wax Collection Tray ; 8" x 8" x 3/4"	66.80
E 77-053	Tempil Crayon, Two-Pack, 1150°F / 621°C	21.50
E 77-056	Tempil Crayon, Two-Pack, 1300°F / 750°C	21.50
E 77-058	Tempil Crayon, Two-Pack, 1400°F / 760°C	21.50
E 77-0591	Tempil Crayon, Two-Pack, 1600°F / 871°C	21.50

# Neycraft Furnaces



## Neycraft Jff2000 Fiber Furnace

Inside Dim: 9W x 9D x 6.5"H  
Outside Dim: 15.25W x 15.25D x 16.5H"

Item #	Description	US\$ / Each
77-011	120V, 12 Amp, 1500W, 36lbs	1,203.99
77-011-HE	Heating Element for JFF2000(120V)	383.36
77-011A	240V, 7 Amp, 1600W, 36lbs	1,459.00
77-011A-HE	Heating Element for JFF2000(240V)	393.00

The Neycraft Benchtop Fiber Furnace is a durable compact electric burnout furnace with a one-piece, lightweight fiber muffle. The heavy-duty (14 ga) heating element is embedded into fiber muffle for a quick and even heat distribution. The four wall heating provides uniform heat distribution, necessary for casting, wax burnout, enameling, and heat treating. Includes 8x8" ceramic floor tray. Will accommodate fifteen 2x3" or four 4x6" solid flasks, or two 4x6" perforated flasks. Maximum temperature 2012°F/1100°C.

The Neycraft Vulcan 9-3 Venturi Circulating Air Oven will dramatically increase air circulation during operation, resulting in a cleaner and more uniform wax burnout. This programmable oven features nine 3-stage programs, a delayed start up to seven days, and can hold the final temperature stage up to 99 hours. Includes 8x8" ceramic floor tray. Will accommodate fifteen 2x3" or four 4x6" solid flasks, or two 4x6" perforated flasks. Maximum temperature range 122°F - 2012°F (50°C - 1100°C).



## Neycraft 9-3 Venturi Circulating Air Oven

Inside Dim: 9W x 9D x 7"H  
Outside Dim: 16W x 19D x 16"H

Item #	Description	US\$ / Each
77-0113-AE	240V, 7.2 Amp, 4600W, 65lbs	3,098.30

77-171

## Steam Dewaxer



The Romanoff Steam Dewaxer removes wax from invested flasks prior to oven burnout in less than 1 hour using steam. Is an excellent solution when smoke from your burnout cycle needs to be eliminated. Holds 8, 4x8.5" perforated flasks. The steam that is generated from the dewaxer is not harmful to the investment therefore the burnout program can be started immediately after the elimination is completed.

### Features:

- Constructed with 304 stainless steel
- Accommodates up to 8 - 4" x 8-1/2" perforated casting flasks
- High temp exterior coating increases heat retention and efficiency

**Overall dimensions** 15"W x 23"L x 18"H

**Voltage:** 110V, 60Hz, 15A

**Weight** 35 lbs.

**Call for Pricing**

## Heavy Duty Investment Blaster Cabinet

The Romanoff built investment blaster cabinet delivers 1500 PSI from it's internal pressure oil pump and motor. It has an adjustable nozzle, and is constructed of heavy-duty polypropylene and welded seams. Your hands are protected by flexible heavy duty rubber gloves. The pump and windshield washer are operated by two separate foot pedals. The unit has a bright internal light and a large viewing window. 20"W x 22"D X 28"H, 75lbs.



Item #	Description	US\$ / Each
Z50-002-R	Investment Blaster Cabinet - 110v	3,250.00
Z50-002A-R	Investment Blaster Cabinet - 220v	3,280.00
Z16-509-G	Replacement Heavy Duty Gloves #10 - Large (pr)	59.59
Z16-509-GXL	Replacement Heavy Duty Gloves #11 - Extra Large (pr)	62.50

## Romanoff Super-Vac Casting Machine



This heavy duty vacuum casting machine has been tailored to the needs of high production casters and is still one of the most commonly and inexpensive way to cast small to large quantities of metal. This type of open pouring method of molten metal is excellent for brass and bronze casting. Accepts standard 4" diameter flasks up to 8" diameter x 12" high.

**Dimensions:** 40"h X 25"w X 25"d (400-lbs)

**Features:**

- Large primary vacuum holding tank to insure maximum pull around the flask.
- Special foot operated air release valve instantly allows all of the vacuum in the primary holding tank to transfer to the chamber surrounding the flask at full strength.

Item#	Description	Each/US\$
79-038	Super-Vac/110V	9,949.00
79-038A	Super-Vac/220V-3ph	9,989.00

## Romanoff Investo-Vac Casting Machine

The Romanoff Investo-Vac Casting Machine has the best of both machines, a heavy-duty vacuum table and a heavy-duty Vacuum casting machine in one unit. Built in 21 CFM heavy-duty oil vacuum pump. The investing side rubber mat working area measures 20 x 20" and is available up to 25 x 25". The bell jar is raised and lowered by the over head boom/pulley, the attached counter weight makes the heavy bell jar go up and down with ease. The bell jar measures approximately 16-1/4" ID x 19-1/2" OD x 7-1/4" inside side wall height x 14" inside center height. The investing side will begin vacuuming after the second left sided foot pedal is pressed.

**Dimensions:** 48" W x 25" D x 41" H (84" when boom is attached)

**Rubber Mat:** 20" x 20" (optional 25" x 25")

Item#	Description	Each/US\$
79-0386A	Investo-Vac/220V 1ph	11,849.00
79-0386B	Investo-Vac/220V-3ph	11,889.00

## Deluxe Roma-Vac Casting & Vacuuming System

The Romanoff Roma-Vac System is a convenient table-top unit, which offers a combination of investing & casting under vacuum. This casting machine can accept a large perforated flask 5" x 8" in a compact table top design and has a solid aluminum casting chamber. The system includes all accessories shown & the unit houses a 1/2hp (3CFM Vacuum Oil Pump).  
Dimensions: 21" x 14" x 15" (95lbs) Made in USA

Item#	Description	Each/US\$
77-0465-PER	Deluxe Roma-Vac/110V	1,049.90
77-0465A-PER	Deluxe Roma-Vac/220V	1,089.00







## J-Formula Platinum Investment



Romanoff's New Improved "J" Platinum Investment Formula 606 was created for the smoothest surface, resulting in less finishing time. For Superior Casting of Platinum, Palladium, Stainless Steel and metals with melting temperatures over 2800F (1538C). Romanoff's "J" Formula Platinum investment is proven to produce smooth superior and consistent castings, flask after flask. Tests and more importantly, our customers' results show that Romanoff's "J" Formula pays for itself in reduced rework and finishing time. The high temperature used in platinum, palladium and stainless steel casting, requires a special investment with high mold strength and "J" Formula is the best! The use of our Non-Asbestos Paper is recommended, in order to absorb excess binder during cure. Binder and complete instructions are included in every drum. Ready to cast in as little as six hours. UPS Ground shipping only (Haz-Mat product). Proudly produced in the USA.

**Orange Binder:** This is the original formula developed many years ago for platinum castings.

**Blue Binder:** Casters have found this binder produces a stronger mold.

Item #	Description	US\$/Ea.
Z14-305-606A	"J" NEW Formula "606" / Powder with Orange Binder (50lbs (22.73kg)	89.00
Z14-305-606B	"J" NEW Formula / Powder Only with No Binder (50lbs (22.73kg)	69.00
Z14-305-606C	"J" NEW Formula "606" / Powder with Blue Binder (50lbs (22.73kg)	89.00
Z14-305-16J1	"J" Formula "606" Platinum Phosphate Binder ONLY (16oz) - Orange Label	39.00
Z14-305-16J2	"J" Formula "606" Platinum Phosphate Binder ONLY (16oz) - Blue Label	39.00
Z14-305-16J	"J" Formula "606" Platinum Phosphate Binder ONLY (16oz) - White Label	39.00



## J-Break Investment Remover

Romanoff's "J" Break, will remove any phosphate bonded platinum investment (like "J" formula), in less than 30 minutes. It is no longer necessary to use dangerous Hydro Fluoric acid for this purpose. Economical because it is reusable. "J" Break Investment Remover is used in a stainless steel container with heat. UPS Ground shipping only (Haz-Mat product). Proudly produced in the USA.

Item #	Description	US\$/Ea.
80-137-1CAR	J - Break  Platinum Investment Remover ( 1 Gallon)	79.00
80-137-5CAR	J - Break  Platinum Investment Remover ( 5 Gallon)	289.00
80-136	Original J - Break  Platinum Investment Remover ( 55 Gallon)	1,949.00

## Port-A-VaC Investing Machine



The Romanoff Compact Investing Table / Liquid Mold Making Table is a compact yet heavy-duty vacuum table that includes a built-in 3 CFM vacuum pump, bell jar, and pump oil. The unit has a heavy-duty ball valve used for switching the unit from vacuum mode to exhaust mode, opposed to other similar type units that use a faulty and leaky toggle switch pin valve. We also have this unit available with a larger 8 CFM external pump for vacuuming thick platinum investment. 110 or 220v 15"W x 12"D x 15" H. 52lbs.

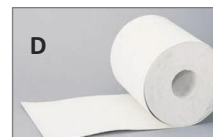
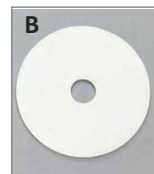
Item #	Description	Each/US\$
77-0467	Romanoff Port A Vac / Investing Machine (3 CFM), 110V	919.00

# Platinum Wax Buttons & Platinum Non-Asbestos Bases

Romanoff Platinum Investment Mushroom Buttons & Bases with Hole: Are designed to provide the best flow of liquid metal into your platinum, palladium and stainless steel tree and allow wax tree elimination easily during burn-out. Mushroom bases save time in spruing your models. Used separately or together, they will help reduce rejected castings.

Romanoff Non-Asbestos Absorbent Paper Shapes: Come in convenient to use sizes, round and square, saving time from cutting paper from larger rolls. They will absorb excess binder moisture associated with Platinum Investment casting. Essential to platinum investing.

	Item#	Description	Size	Qty	US\$ / 1-3	US\$ / 4+
A	<b>74-000-WC</b>	Platinum Wax Mushroom Base	- -	5/pk	4.60	3.99
B	<b>76-0881-WC</b>	Non-Asbestos Base With Hole	3½" x ¾" ID	20/pk	9.60	8.60
B	<b>76-0881-4RND</b>	Non-Asbestos Base With Hole	4" x ¾" ID	20/pk	9.90	8.80
C	<b>76-0881-SQ</b>	Square Non-Asbestos Base	4" x 4"	20/pk	9.60	8.60
C	<b>76-0881-5"SQ</b>	Square Non-Asbestos Base	5" x 5"	20/pk	9.90	8.80
D	<b>76-0855</b>	Non-Asbestos Roll	2½" x 1/16" x 75'		56.40	54.10
D	<b>76-086</b>	Non-Asbestos Roll	3" x 1/16" x 75'		59.10	56.80
D	<b>76-08726</b>	Non-Asbestos Roll	4" x 1/16" x 75'		75.91	72.49
D	<b>76-08725</b>	Non-Asbestos Roll	7¼" x 1/16" x 75'		124.74	118.60
D	<b>76-08865</b>	Non-Asbestos Roll	9" x 1/16" x 75'		169.92	156.35
E	<b>80-039</b>	Stainless Steel Tank, 1.5 qts.	4.75" x 5.75"		19.95	- -
E	<b>80-039A</b>	1.5 qt Stainless Steel Cover	- -		11.95	- -
E	<b>80-041</b>	Stainless Steel Tank, 3.25 qts.	6.5" x 7"		24.20	- -
E	<b>80-041A</b>	3.25 qt Stainless Steel Cover	- -		14.90	- -



Used for heating J-Break Platinum Investment Remover

## Investing Supplies

	Item#	Description	Each/US\$
A	<b>87-035-3M</b>	3M Dust & Mist Respirator/30 Pk.	21.95
B	<b>76-111</b>	Heavy-Duty Aluminum 2½" Scoop	15.50
C	<b>76-110</b>	Investment Scale 0-20 lbs.(0-9Kg.)	93.90
D	<b>76-109-250ML</b>	Graduated Cylinder 250ml.	19.00
E	<b>76-109</b>	Graduated Measuring Pitcher (ml & cc)	36.18
F	<b>76-099</b>	Kerr Original VacuFilm Wax Cleaner & Minimize Bubbles (1 gal.)	43.40
G	<b>76-153</b>	A-10 Solution Investment De-Bubbler (1 gal)	27.88
H	<b>80-089</b>	Vest Remover Room Temperature Devesting (1 gal)	24.95



This graduated cylinder, 250ml, is necessary when making a working binder solution for platinum investments.



This unbreakable polyethylene pitcher with handle will accurately measure the proper amount of water for investment mixing.



VacuFilm is a surface tension reducing agent that is applied to the wax pattern prior to investing, by simply dipping the wax tree into the solution. It will wash waxes clean of all powder from the mold and will minimize bubbles. Hazmat, ground service only.



Romanoff A-10 Solution, when added to your investment and water mix, will minimize bubbles on your castings. It will reduce the surface tension so that the investment will adhere better to the wax patterns.



Vest Remover is our most popular investment remover. It is a low corrosion solution used for desolving investment from castings at room temperature. Hazmat, ground service only.

- Produces satin smooth, consistently superior casting results
- Creates a dense casting by vacuum or centrifugal methods
- Reduces finishing time and increases productivity
- Mixes to a smooth, creamy consistency
- Forms a strong yet permeable mold
- Breaks away cleanly and easily
- Sold in 100lb drums (24 per pallet) or 50lb boxes (48 per pallet)



**Satin Cast Xtreme** contains a higher percentage of cristobalite, allowing for a higher temperature tolerance allowing easier casting of 18 karat white metals.



**KerrCast 2000** is a precision casting investment that exceeds most other economically priced jewelry investments on the market today. Produces a surface slightly less smooth than Satin Cast 20, but the same common benefits of reduced burnout cycle and easy breakout. For gold, silver, brass and other metals melting under 2000°F / 1093°C.



**Satin Cast 20** is recognized by the world's finest jewelers as the investment that creates the finest results. Eliminating bubbles, inclusions and fins, Satin Cast is a dependable investment that delivers superior quality castings every time.



**Satin Cast Diamante**  
Satin Cast Diamante is based on the Satin Cast 20 formula, however it also contains additives that allow for the casting with "Stone in Place".

Item#	Description	Max Oven Temp	US\$ / 1-3	US\$ / 4-23	US\$ / 24+
<b>76-106-NY</b>	Satincast 20 (100 lb Drum)	1350°F / 730°C	91.95	87.36	76.59
<b>76-105-100DR</b>	Kerr Cast 2000 (100 lb Drum)	1350°F / 730°C	81.95	77.86	68.20
<b>76-106-X</b>	Satin Cast Extreme (100 lb Drum)	1450°F / 788°C	98.95	94.10	84.89
<b>76-1000-K</b>	Satin Cast Diamante(100 lb Drum)	1350°F / 732°C	101.95	96.86	87.49



# Ransom & Randolph Premium Investment



**ULTRA-VEST®** investment is a very popular non-ferrous investment designed for casting gold, silver, brass, and bronze and other alloys up to 2200°F / 1478°C. Ultra-Vest investment provides easy quench and easy cleanup, reducing your risk of losing valuable metal.



**Plasticast™** was developed, and is ideally suited for, the investing and burnout of commonly used CAD/CAM resins, or wax/plastic pattern materials. The high expansion of these pattern materials requires an equally high expanding, extra high strength investment. Easily removed with water.



**R&R Solitaire Green** Investment was designed to cast gem stones in place. R&R Solitaire provides casters with superior stone protection and higher burnout temperature capacity than other stone-in-place products, providing you with a cleaner dewax and fewer surface defects.



**ULTRA-VEST® MAXX** investment works exceptionally well with 18kt white gold. Ultra-Vest MAXX investment provides jewelry casters with maximum thermal stability for high metal melt, burnout and casting temperatures - helping to eliminate orange peel defects associated with metal/mold reactions and flashing & spalling defects associated with investment breakdown during burnout of resin pattern materials.



NOTE: Not for use with platinum or palladium.

**R&R Platinum** investment & binder was designed to produce superior platinum & ferrous castings. R&R Platinum investment and binder provides casters with smooth, consistent surface finish. R&R Platinum investment is capable of same day or overnight burnout – decreasing process time. R&R Platinum binder does not separate, providing more consistent results than other 2 part binders.



**Astro-Vest** investment is the only high metal temperature (platinum, stainless steel, etc) investment that mixes only with water. Can be used with a rubber sprue base and no paper liner or base.



Ransom & Randolph is pleased to introduce **R&R® Noble™** jewelry investment. For casting platinum & palladium alloys, this product is the first water-mixed investment to provide casters with both excellent surface finish and easy investment removal. R&R NOBLE investment is processed like its two-part platinum investment predecessors; however only water is added to the investment during the mixing step. This eliminates the need to ship, store and handle a hazardous acid binder.



	Item#	Description	Max. Oven Temp	US\$ / 1-17	US\$ / 18+
A	<b>Z14-301</b>	Ultra-Vest (100 lb.Drum)	1400° F / 760° C	101.86	96.80
A	<b>Z14-301-40</b>	Ultra-Vest (40 lb.Bliss Box)	1400° F / 760° C	43.50	41.35
B	<b>Z14-304</b>	Plasticast (50 lb Bliss Box)	1400° F / 760° C	56.70	53.90
C	<b>Z14-303</b>	Solitaire (100 lb.Drum)	1166° F / 630° C	109.00	103.55
C	<b>Z14-303-BX</b>	Solitaire (50 lb. Bliss Box)	1166° F / 630° C	51.08	48.55
D	<b>Z14-307</b>	Ultra-Vest Maxx (100 lb.Drum)	1450° F / 788° C	112.83	107.19
D	<b>Z14-307-BX</b>	Ultra-Vest Maxx (50 lb.Bliss Box)	1450° F / 788° C	53.75	51.90
E	<b>Z14-302</b>	Blue Label Plat. Invest. & Binder (100 lb.)	1600° F / 871° C	281.15	269.91
F	<b>Z14-306</b>	Astro-Vest (100lb. Drum)	1600° F / 871° C	166.19	159.55
F	<b>Z14-312</b>	Noble™ (100lb. Drum)	1600° F / 871° C	208.80	201.90

12 GAUGE  
2.75 MM



## Solid Stainless Steel flasks



Romanoff stainless steel casting flasks are made of high quality American stainless steel. With a wall thickness of 2.75 mm (12Ga), they will outlast low price, low quality imported thin wall flasks.

Item #	Description Dia. x Length	US\$ /1-5	US\$/6+
76-038	2.5 x 2.5"	15.95	12.55
76-039	2.5 x 3"	17.78	15.60
76-047	3 x 3"	19.39	15.90
76-048	3 x 3.5"	20.35	17.80
76-049	3 x 4"	23.53	18.50
76-056	3.5 x 3.5"	25.03	21.78
76-055-HT	(Hi-Temp) 3 x 3.5"	29.89	23.50
76-065	4 x 4"	35.61	17.15
76-067	4 x 5"	42.65	25.19
76-069	4 x 6"	47.30	33.65



## Perforated flask Tape

Flask tape is used to cover the holes on perforated flasks during investment. The flask tape will be eliminated during burn out or can be removed easily after the investment has become hard.

Item #	Description	US\$ /1-5	US\$/6+
79-055-T2	2" tape	6.90	6.65
79-053-F	3" tape	9.01	8.65
79-0535-F	4" flask tape	11.99	11.52
79-054-F	5" flask tape	13.38	12.85
79-055-T6	6" flask tape	15.90	15.28
79-055	7" flask tape	17.57	16.90
79-055-T8	8" flask tape	19.59	18.83



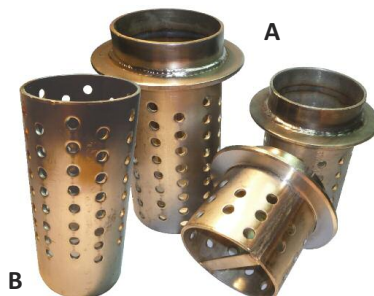
## Instant Flask Sleeve

Instant Flask Sleeves are special pre-cut shrink sleeves which are placed over the flask easily and then dipped into hot water or heated by hot air. The results are a quick and tight seal over the perforated flask holes prior to investing. After the investment hardens, the sleeves can be easily removed.

Item #	Description	US\$ /1-11	US\$/12+
79-0560	Instant Flask Sleeve 4x8" (100pk)	12.50	10.90
79-0561	Instant Flask Sleeve 4x11" (100pk)	15.90	12.60



## Stainless Steel Perforated Flasks



Romanoff stainless steel casting flasks are made of high quality American stainless steel. A wall thickness of 3.5 mm (10Ga). The perforations allow vacuum to pull unwanted gas through the investment wall.

	Item #	Description	US\$ /1-5	US\$/6+
A	79-045	4 x 4" with flange	57.28	54.96
A	79-046	4 x 6" with flange	63.65	61.19
B	79-046-WF	4 x 6" without flange	47.50	45.60
A	79-047	4 x 7" with flange	64.65	62.10
A	79-048	4 x 8.5" with flange	67.28	64.80
B	79-048-WF	4 x 8.5" without flange	51.90	47.75

## Flask Gaskets



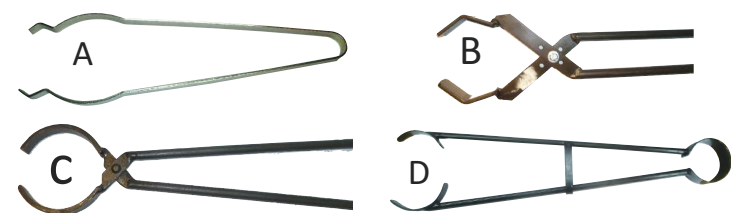
**A. Silicone Gaskets:** Pliable, heat resistant, and will conform to irregular surfaces to make a tight vacuum seal.

**B. Graphfoil Gaskets:** These hard graphite impregnated gaskets will resist high heat and are placed between the silicone gasket and the hot perforated outer flask ring.

	Item #	Description ID x OD x Thickness	US\$ /1-11	US\$/12+
A	79-043-S1/8	3.5" x 4.5" x 1/8"	4.80	4.65
A	79-043-S3	3.5" x 4.5" x 1/4"	6.46	5.90
A	79-043-S1/16	4.5" x 5.5" x 1/16"	7.10	6.30
A	79-043-1/8	4.5" x 5.5" x 1/8"	10.21	9.85
A	79-043-S4	4.5" x 5.5" x 1/4"	11.00	10.10
A	79-043-S43/8	4.5" x 5.5" x 3/8"	9.87	8.90
B	79-043-GHL3	3.5" x 4.5" x 1/8"	11.00	9.40
B	79-043-SET	Set of 5 Pieces 4.5" x 5.5" x 1/16"	48.78	46.40
B	79-043-GHL4	4.5" x 5.5" x 1/8"	11.00	9.90

*Hint: Add oil to silicone gaskets to improve seal*

## Flask Tongs

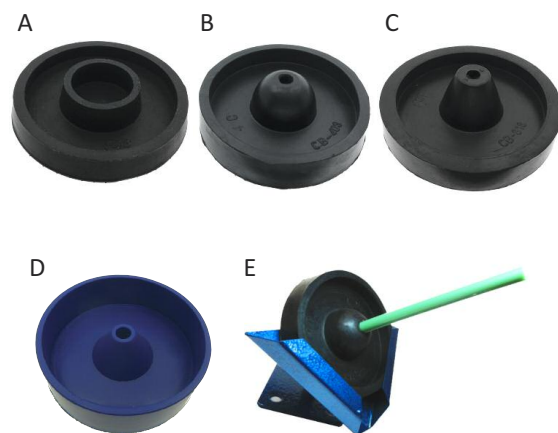


	Item #	Description	Length	Each US\$
A	78-056	Economical 3-1/2" Diameter Flask Tongs	15"	8.95
B	78-048	Lightweight Adjustable Tongs, 3" to 6" Diameter	32"	135.89
C	78-055C	4" Diameter Flask Tongs, 3/8" Steel Bar Stock Frame	22"	134.64
D	78-052	3-1/2" to 5" Flask One-Hand Style Flask Tongs	25"	139.60

# Sprue Base

	Item #	Description Flask Diameter	Style	US\$ / 1-5	US\$ / 6+
A	<b>76-002</b>	2.5" Dia. x 1"	Round Button Style	5.33	4.10
A	<b>76-005</b>	3" Dia x 1.5"	Round Button Style	4.30	3.60
A	<b>76-006</b>	3.5" Dia x 1.5"	Round Button Style	5.98	4.60
B	<b>76-015</b>	2.5" Dia x 3/8"	Tree Style	4.16	3.40
B	<b>76-016</b>	3" Dia x 3/8"	Tree Style	4.30	3.60
B	<b>76-017</b>	3.5" Dia x 5/16"	Tree Style	4.60	3.65
B	<b>76-017C</b>	3-3/8" Dia x 3/8"	Tree Style	4.60	3.90
B	<b>76-018</b>	4" Dia x 3/8"	Tree Style	5.64	4.65
B	<b>76-0192</b>	5" Dia x 3/8"	Tree Style	9.10	7.94
C	<b>76-019</b>	4" Dia x 3/8" <b>CONE</b>	Cone Tree Style	4.65	3.70
D	<b>78-2014</b>	2.5" (65mm) Indutherm	Cone Base	23.07	21.65
D	<b>76-015-I</b>	2" (50mm) Indutherm	Cone Base	19.50	18.19
D	<b>76-016-I</b>	3" (80mm) Indutherm	Cone Base	23.26	21.10
E	<b>28.890-1</b>	Holds sprue bases from 3" to 5" (76 to 127 mm)	Sprue Base Holder	24.76	-

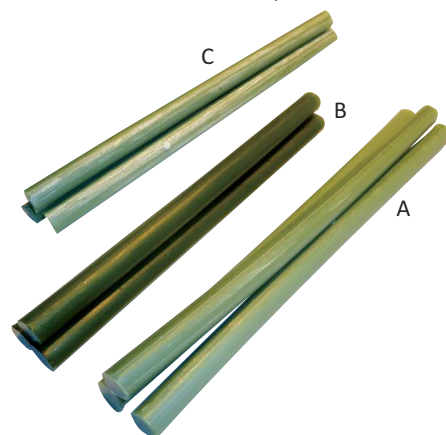
These sprue bases are used for setting up wax trees with sprue rods. Simply press the sprue base on to the bottom of the flask and remove after the investment has hardened.



# Wax Sprue Rods

Romanoff wax sprue rods come in three standard diameters and three lengths. They're available in flexible (green), stiff (light green), or super stiff (light green). Because they have a lower melting point than injection wax, the sprue rods will drain out first, followed by the injection wax, ensuring a cleaner burn out cycle.

	Item#	Color	Hardness	Dimensions	Approximately Qty / lb	US\$ / 1-5	US\$ / 6+
A	<b>74-046-S</b>	Light Green	Stiff	6 x 1/4" (152 x 6.35mm)	90	14.59	13.15
A	<b>74-047-S</b>	Light Green	Stiff	6 x 5/16" (152 x 7.94mm)	60	14.59	13.15
A	<b>74-048-S</b>	Light Green	Stiff	6 x 3/8" (152 x 9.53mm)	45	14.59	13.15
B	<b>74-046-F</b>	Dark Green	Flexible	6 x 1/4" (152 x 6.35mm)	60	15.62	14.84
B	<b>74-047-F</b>	Dark Green	Flexible	6 x 5/16" (152 x 7.94mm)	50	15.62	14.84
B	<b>74-048-F</b>	Dark Green	Flexible	6 x 3/8" (152 x 9.53mm)	40	15.62	14.84
C	<b>74-048-SK</b>	Light Green	Super Stiff	6 x 3/8" (152 x 9.53mm)	44	14.59	13.15
C	<b>74-048-SK-7</b>	Light Green	Super Stiff	7 x 3/8" (178 x 9.53mm)	42	14.59	13.15
	<b>74-049-24</b> (not pictured)	Dark Green	Flexible	24 x 3/8" (610 x 9.53mm)	10	9.81	9.32



# Non-Asbestos Kevlar Gloves

	Item#	Description	Length	US\$ / Ea.
A	<b>78-090</b>	White Non-Asbestos Glove Pair	14"	39.03
B	<b>78-0902</b>	White Non-Asbestos Glove Pair, Leather Palm	18"	64.96
C	<b>78-0902-WLG</b>	Yellow Non-Asbestos <b>LEFT</b> Glove Only, Leather Palm	18"	34.79
C	<b>78-0902-WLP</b>	Yellow Non-Asbestos Glove Pair, Leather Palm	18"	66.96
D	<b>78-091</b>	Yellow Non-Asbestos Wool Lined Glove Pair	23"	52.60

These heat-resistant gloves protect your hands & forearms from high temperature operations. The special thermal material gloves have extra-wide cuffs for quick drop-off in case of emergency.





## Romanoff Pneumatic Sprue Cutter



This unique, down stroke pneumatic spruce cutter is one of the highest quality in the world. Made in the Germany, the Power of this unit is maximized by a short stroke piston. The cutting blades have a center stop and can be easily rotated to the second unused cutting edge and are made of high quality tool steel and may be re-sharpened. The unit is supplied with one set of curved cutting blades, foot switch, connection hose to foot switch, air pressure gauge, oiler and a mounted base. This fast cutting unit will cut sprues up to 5mm thick and is a very quiet unit to operate. Manufacturer does not warranty the blade. Made in Germany.

**AIR PRESSURE** 80-100 psi

**CUTTING FORCE, ADJUSTABLE:** 6/600kN/kp

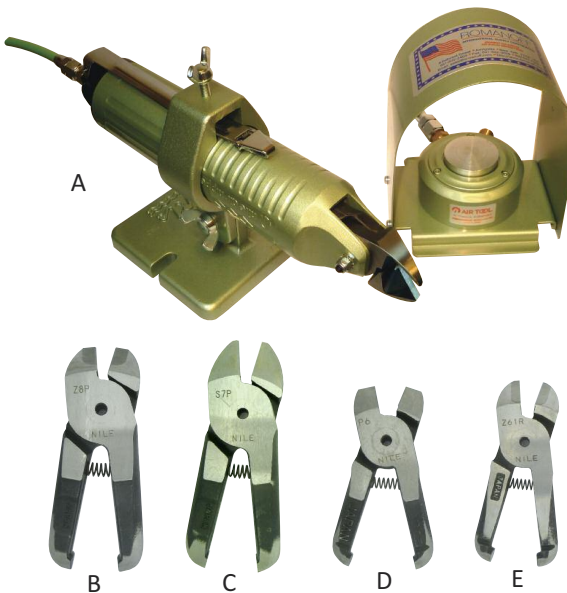
**CUTTING STROKE, ADJUSTABLE** - 5mm

**DIMENSIONS:** (WxDxH) 300 x 350 x 510mm

**WEIGHT:** 45-lbs

Item #	Description	US\$ / Ea.
<b>79-062-G</b>	Romanoff Pneumatic Sprue Cutter w/ Foot Pedal	4648.00
<b>79-062-NC</b>	Romanoff Pneumatic Sprue Cutter Replacement Blade	289.00

## Niles #35 Pneumatic Sprue Cutter



An excellent pneumatic sprue cutter with exceptional flexibility. This cutter is light enough to be held by hand, but comes supplied with a base and is operated by a foot pedal. Four styles of blade are available (shown below). This fine pneumatic sprue cutter is supplied with a standard flat blade. The cutting capacity of this unit is a 4mm sprue and the dimensions of the unit are 11-3/8" x 2-1/8" (289x54mm). Manufacturer does not warranty the blade. Made in Japan.

Item #	Description	US\$ / Each
A <b>Z16-532</b>	Niles #35 Pneumatic Sprue Cutter	699.00
B <b>Z16-533-6</b>	Niles Z8P Flat Carbide Replacement Blade Model #35	323.95
C <b>Z16-533-4</b>	Niles S7P Pointed Replacement Blade Model #35	129.65
D <b>Z16-533-P6</b>	Niles P6 Replacement Blade Model #25	139.00
E <b>Z16-533-10</b>	Niles Z61R Replacement Blade Model #25	239.00

## Silent Air Compressor



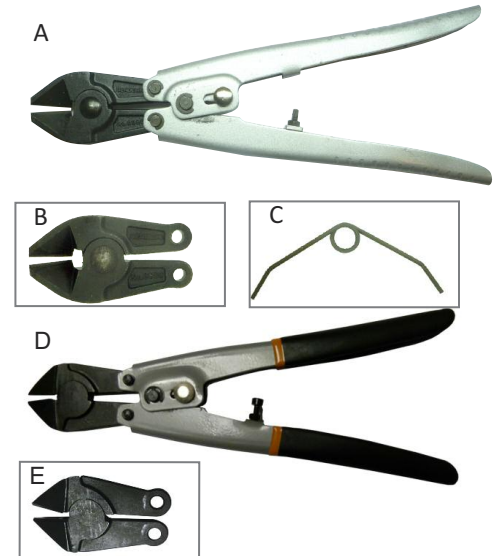
Romanoff Silent Air Compressors feature 1/2 HP compressor motors, which produce continuous air pressure without the loud uncomfortable "tapping sound" from traditional style air compressors. The units can run many shop tools such as wax injectors, air hammers, casting machines, sandblasters, etc. All units come equipped with an internally painted air tank to prevent rust, regulator with moisture trap and line pressure gauge, tank pressure gauge, safety valve, thermal overload protector, air intake filter and carrying handle, and pressure gauge. Air pressure range is 84-114 PSI, 2.15 CFM. Made in Italy.

Item #	Description	Weight	Each/US\$
<b>81-0074</b>	4 Gallon Silent Air Compressor 110V 60 cyc.	61 lbs / 28 Kg	1650.00
<b>81-0074-OIL</b>	Compressor Oil	1 Liter	21.95

## Heavy-Duty Sprue Cutters

The pressure of this cutter is multiplied many times by the unique linkage that is built into the cutter. What was once a time consuming job can now be done in seconds. The replacement blades are made of hardened steel that will make a clean cut in one closing action. The cutting edge is 22mm and the overall length is 10-1/2" (267mm). Maximum cutting thickness is 12 guage (2.66mm) of soft metal. Manufacturer does not warranty.

	Item #	Description	US\$ / 1-2	US\$ / 3+
A	<b>79-064</b>	Bergeon Sprue Cutter (Swiss)	162.94	156.45
B	<b>79-064A</b>	Bergeon Replacement Blade (Swiss)	113.09	108.60
C	<b>79-064-SP</b>	Bergeon Replacement Spring (Swiss)	11.00	9.19
D	<b>79-065</b>	Romanoff Sprue Cutter (Italy)	129.00	123.85
E	<b>79-065A</b>	Romanoff Sprue Cutter Blade (Italy)	74.80	69.90



## Maun Sprue Cutters

The Maun Sprue Cutter can cut up to a 3mm sprue with less effort than most hand sprue cutters. The secret to the Maun Sprue Cutter is the compound joint that will multiply your hand strength many times making it easier to cut sprues. Made in England.

	Item #	Description	US\$ / 1-3	US\$ / 4+
	<b>79-0305</b>	Maun Sprue Cutter 6-1/2" (165mm) Long	40.31	38.70



## Power Max Semi-Flush Cutter

This new ergonomic compound cutter offers the finest in compound leverage construction at an affordable price. Jaws are of induction-hardened high grade steel and feature a semi-flush bevel for close work. The handles are shaped to be ergonomically efficient and prevent fatigue and injury, which sometimes accompanies hours of cutting. Overall length 6-1/2" (165mm). Made in Japan.

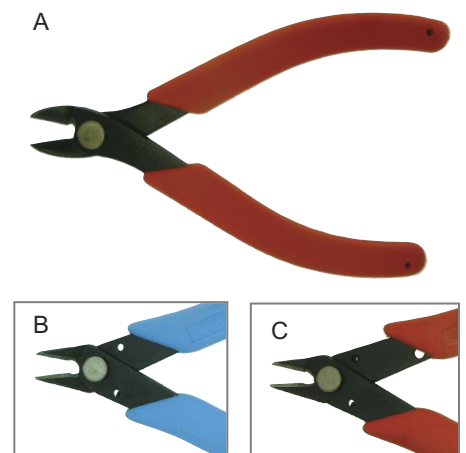
	Item #	Description	US\$ / 1-3	US\$ / 4+
	<b>P3-067</b>	Power Max Compound Cutter	33.50	32.49



## Maxi & Micro Shear Sprue Cutters

The Maxi & Micro Shear Flush Cutters feature a patented cutting action which means it is tough enough to cut sprues and precise enough to cut a human hair with a perfect flush cut. This cutter is ergonomically shaped and features a comfortable cushioned rubber grip and a non-glare black finish. Heavy-duty flat spring in the handle makes this an easy cutter to use. Made in the USA.

	Item #	Description	Total Length	Jaw Length	Max. Cut	US\$ / 1-3	US\$ / 4+
A	<b>P3-108-6R</b>	Maxi-Shear Super Flush Cutter	5.82" (148mm)	.47" (12mm)	14ga.	16.25	14.50
B	<b>P3-224</b>	Maxi-Shear Flush Cutter	5.11" (130mm)	.35" (9mm)	20ga.	12.25	10.25
C	<b>P3-221</b>	Micro-Shear Flush Cutter	4.86" (123mm)	.35" (9mm)	20ga.	14.50	12.95



# Romanoff Pellet Injection Wax



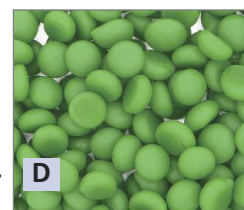
A) This **Turquoise Pellet Wax** is general purpose, super tough, medium to hard wax with built-in release agents. Good for large and small molds. Popular for stone-in-wax casting.



B) Similar to Turquoise Pellets, **New Jersey Blue Pellet Wax** is a very popular medium flexibility wax, excellent fluidity and memory. A good production wax.



C) **Magna Ject Pink Pellet Wax** is an extremely fluid wax for filling the most intricate pieces, including filigree, even at low pressures. It is low shrinkage, durable, and non-brittle with a long shelf life.



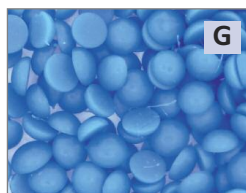
D) **Tuff Green Pellet Wax** is a tough wax for fine detailed molds, with built-in release agents and popular for plastic injectors



E) **Gold GLT Wax** is easy flowing and great for very fine detailed molds. Opaque color makes details easy to see. An old time favorite.



F) **Orange Flex Wax** is a general purpose wax. Opaque color, very easy flowing. Also popular for filigree molds.



G) **Blue Plastic Pellet Wax** is a very carvable and easy flowing wax. Releases easily from the mold.

**SOLD IN 5-LB PACKAGES**

	Item#	Color/Shape	Temperature	US\$/ 1	2-9	10+
A	<b>74-0611</b>	Turquoise/Pellet	155°F / 68°C	25.30	24.09	23.15
B	<b>74-0611-B</b>	New Jersey Blue/Pellet	155°F / 68°C	26.75	26.19	25.45
C	<b>74-0600-JECT</b>	Magna-Ject Pink/Pellet	158°F / 70°C	31.75	30.80	29.80
D	<b>74-062-TG</b>	Tuffy Green/ Pellet	165°F / 73°C	25.30	24.09	23.15
E	<b>74-062</b>	Gold GLT Wax/Chunk	160°F / 71°C	44.35	42.97	41.69
F	<b>74-061</b>	Orange Flex/Chunk	160°F / 71°C	44.35	42.97	41.69
G	<b>74-045-P</b>	Blue Plastic / Pellet	160°F / 71°C	25.72	24.75	23.90



## Castaldo Golden River Wax



**Castaldo Golden River Wax Additive™**, also known as **Hot Weather Wax™**, makes jewelry injection waxes flow like water. And there is no need to change waxes or clean out your wax pot. Just add a handful or two of Golden River Wax Additive to your current pot and see the improved flow almost immediately.



Later you can add more of your original wax to return to normal conditions. In extreme conditions where hot weather may be softening your wax pattern, add 30-60% of Golden River Wax Additive to improve injection flow and resist softening.

Item#	Color/Shape	Temperature	Sold in 2kg (4.4lbs) Bags	
			US\$/ 1-4	5+
<b>74-062-ADD</b>	Golden River Wax Additive	160°F / 71°C	56.23	54.55



# Freeman Flake Waxes



For over 30 years, Freeman injection wax has been the industry standard for quality and consistency. Their formulations are renowned for high pattern detail, rapid wax solidification, minimal shrinkage, excellent flow, and low ash content (.003%) enabling the cleanest burnouts and most accurate reproductions possible. All Freeman waxes can be used for platinum, gold, and silver, as well as industrial and dental alloys.



**A) Aqua Flake Wax** all-purpose injection wax is our most popular formulation as it provides the ideal balance of characteristics demanded by most designers and casters. Also recommended for stone in place casting.



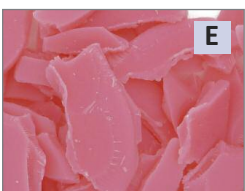
**B) Turquoise Flake Wax** is similar to our Aqua Flakes, except for the turquoise color. Many designers and casters prefer the darker color for easier visual verification of fine detail.



**C) Ruby Red Flake Wax** is similar to our Aqua Flakes, except for the deep red color. Many designers and casters prefer the darker color for easier visual verification of fine detail.



**D) Tuff Guy Green Flake Wax**, formerly sold as Tuffy Green Flakes, is the toughest wax of our Freeman Flakes line. Its accuracy and durable, yet flexible characteristics make it ideal for large pieces.



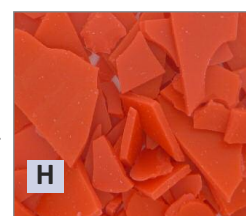
**E) Filigree Pink Flake Wax** is formerly sold as NYC Pink Flakes. This wax combines the flexibility of Tuff Guy Green (aka Tuffy Green) with the excellent flow characteristics of Aqua flakes, producing very high detail while enabling easy pattern removal without breakage. Recommended for stone in place casting.



**F) Carvable Purple Flake Wax:** Developed for designers and casters who often rework wax patterns, this wax offers superior carvability with minimal filling or clogging of tools. Also, with the highest injection temperatures of the Freeman Flakes line, it will not break under stress and enables easier handling.



**G) Flexible Blue Flake Wax** (formerly sold as Flex-Plast Flakes) features the longest shelf-life and highest flexibility of the Freeman Flakes line. This unique mixture of wax and plastic is especially well-suited for metal molds and stone in place casting.



**H) Super Pink Flake** features the quickest solidification and will not give, making it ideal for clasps, claws, and bezel settings. Also, the opacity makes this wax superior in readability.

Sold in 5-lb packages

Item#	Color/Shape	Temperatures	US\$/ 1	2-9	10+
A 74-060	Aqua Flake	65°C / 150°F	\$30.35	29.50	28.60
B 74-0601	Turquoise Flake	65°C / 150°F	30.35	29.50	28.60
C 74-0602	Ruby Red Flake	65°C / 150°F	30.35	29.50	28.60
D 74-073	Tuf Guy Green Flake	73°C / 165°F	30.35	29.50	28.60
E 74-0606	Filigree Pink Flake	68°C / 155°F	30.35	29.50	28.60
F 74-0265	Carvable Purple Flake	77°C / 170°F	33.45	32.45	31.48
G 74-045-K	Flexible Blue Flake	68°C / 155°F	30.35	29.50	28.60
H 74-0609P	Super Pink Flakes	65°C / 150°F	30.35	29.50	28.60

**SOLD IN 5-LB  
PACKAGES**



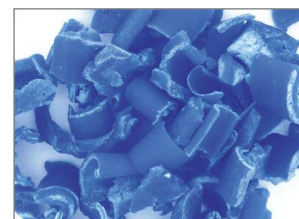
## Castaldo Plast-o-Wax



The original Dark Blue Plastowax™. Castaldo Plast-O-Wax jewelry injection wax produces patterns that are very flexible, resilient and durable with great memory. Patterns will not break despite rough handling. Fewer broken patterns = greater productivity. Plast-O-Wax combines the excellent flow and fill characteristics of wax and the stability of plastic. Patterns bend, flex and twist under pressure but return to their original shape. Wax patterns made with Plast-O-Wax do not become brittle over time. They last and last in long - term storage. Inject them now – use them months later! Plast-O-Wax is easy to work with and easy to inject. Using wax tools and files is easy and unlike plastic-only pattern materials, it can easily be steam de-waxed.

Plast-O-Wax jewelry injection wax releases easily from any type of mold to produce patterns with smooth glossy surfaces, crisp detail and minimal shrinkage.

Injects at 68-71° C. / 155-160° F. Sold in 2 kg. (4.4 lbs.) convenience bags or in bulk boxes weighing 20 kg. (44 lbs.)

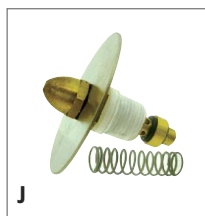
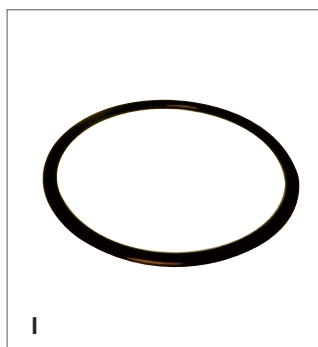
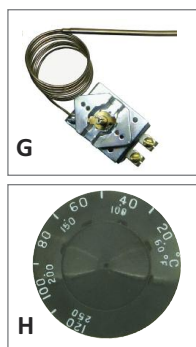


Item#	Color/Shape	Temperature	2kg Package 1-4	2kg Package 5+
74-045	Dark Blue Plastowax/Pieces	160°F / 71°C	\$25.90	\$23.60

# Romanoff Air Pressure Wax Injectors

Since 1949, Romanoff's line of wax injectors have been well known for their durability and heavy-duty construction. Units come with easy to read air pressure gauges, tight sealing covers, heated nozzles, pressure release valves, power indicator lights & a convenient spigot for easy drainage. Made in USA.

Item#	Description	US\$ / Ea.	2+
A <b>74-075</b>	Romanoff 2½ Qt. Super Jr.™ Wax Injector (110V)	482.50	465.00
A <b>74-075A</b>	Romanoff 2½ Qt. Super Jr.™ Wax Injector (220V)	515.84	490.10
B <b>74-075-HP</b>	Romanoff 2½ Qt. Super Jr.™ Wax Injector with Hand Pump (110V)	639.00	626.25
B <b>74-075A-HP</b>	Romanoff 2½ Qt. Super Jr.™ Wax Injector with Hand Pump (220V)	615.00	597.60
C <b>74-057</b>	Romanoff 4 Qt Wax Injector (110V)	622.50	589.00
C <b>74-057DA</b>	Romanoff 4 Qt Wax Injector (220V)	653.65	646.75
D <b>74-057-HP</b>	Romanoff 4 Qt Wax Injector with Hand Pump (110V)	729.00	709.00
D <b>74-057A-HP</b>	Romanoff 4 Qt Wax Injector with Hand Pump (220V)	749.00	736.25
E <b>74-057-PMP</b>	Hand Pump	114.23	108.60
F <b>74-057-RA</b>	Heavy-Duty Pressure Regulator Assembly	93.50	88.70
G <b>001-124-E</b>	B-10 Thermostat 110/220	91.60	87.35
H <b>001-128-E</b>	Fahrenheit / Centigrade Knob Dial	11.50	9.75
I <b>001-122-M</b>	Large O-Ring for Cover	16.70	14.90
J <b>001-1066-M</b>	Complete Brass Push Valve Assembly	143.33	129.60
K <b>001-114-M</b>	Knobs for Cover of Injector	11.61	10.25



## Romanoff Mini Wax Injector

This space saving wax injector is excellent for shooting specialty waxes and smaller operations. The unit has an adjustable thermostat and pressure regulator.

### Specifications:

Max Capacity	1 qts or 2.5lbs wax
Max Temp:	250°F / 121°C
Dimensions:	7¾" dia x 10"H
Voltages	110V/10amp 220V/5amp
Shipping Weight	15lbs, 6.9kg

Item#	Description	US\$ / Ea.	2+
<b>73-040</b>	110V Mini Wax Injector	\$339.00	\$322.50
<b>73-040A</b>	220V Mini Wax Injector	359.00	343.00
<b>73-040-HP</b>	110V Mini Wax Injector with Hand Pump	456.00	423.00
<b>73-040A-HP</b>	110V Mini Wax Injector with Hand Pump	476.00	446.00
<b>73-040-G</b>	O-Ring for Mini Wax Injector Cover	10.00	9.25



# Ferris Wax Wire Spools

Item#	mm	Gauge	US\$/1-2	3+
74-027-6	4.1	6	26.50	23.50
74-027-8	3.28	8	26.50	23.50
74-027-10	2.59	10	26.50	23.50
74-027-12	2.06	12	26.50	23.50
74-027-14	1.63	14	26.50	23.50
74-027-16	1.3	16	26.50	23.50
74-027-18	1.02	18	26.50	23.50
74-027-20	0.81	20	26.50	23.50

Blue wire wax is a high quality, pliable wax used whenever a wire shape is required. Perfect for reproducing clasps, prongs, sprues, bezels, braids, and macrame. While it is extremely flexible, wire wax is strong enough to be twisted or bent to conform to any shape without cracking or breaking. Can be cut to the exact length you require so there is no waste. Sold in 1/2lb spools, from 6 gauge down to 20 gauge.

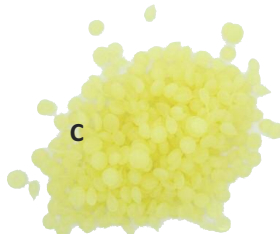


## Utility Waxes and Cleaners



C

A



C



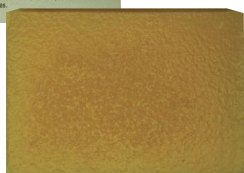
E



G



I



**A) Red Sticky Wax** is soft, pliable & adheres to practically any surface. Popular among setters for picking up stones. Excellent for masking off jewelry prior to plating. Sheet size 3' x 6" x 1/8" Sold in 1lb sheets.

**B) Blue Inlay Wax** is a dark blue repair wax, perfect for sizing or building up and repairing wax patterns. This inlay repair wax can be carved without chipping or flaking. It has a low melting point of 135° F / 68° C. Sold in chunk form in 1lb boxes

**C) Yellow Sticky Wax** is a quick setting adhesive which creates a rigid bond between two wax surfaces. Great for creating complex assemblies or attaching patterns to the sprue rod. Will not leave any residue or hinder melt out. Excellent for sealing the rim of platinum flasks. Sold per pound

**D) Assorted Wax Wire** is flexible, yet strong and may be twisted or bent to form the desired pattern. Wire length is 5" (127 mm) and has a melting temperature of 172°F (77°C). Comes in round wire sizes 18, 14, 10, and 8 gauge, and half round wire sizes 14, 12, 8, and 6 gauge.

**E) Vigor Wax Kleen™** is a wax preparation solution that removes scratches and smoothes and cleans wax patterns prior to casting. 100% organic and water soluble. Ideal for cleaning wax injectors. Sold in 8 oz containers.

**F) Kerr Solitine™** is a wax solvent and excellent cleaner for removing sticky substances. Dampening a cloth with solitine and lightly rubbing the surface of a wax pattern produces a smooth, highly polished pattern surface. Can be applied with included spray pump.

**G) Perfect Purple Wax by Kerr** is the perfect buildup wax. Perfect Purple Wax is designed to be melted at 156°F (74°C) and used to build up the pattern through successive additions. When built up, the wax can be carved to easily produce smooth pattern surfaces.

**H) Kerr Disclosing Wax** is a creamy wax used to repair wax pattern defects.

**I) Jewelers' Sol-U-Carv Wax** is a carvable wax that is water soluble, making it ideal for use in lost wax casting, especially in the making of cores, hollow beads, or other pieces that feature hollow areas.



B



D



F



H



Item #	Description	Quantity	US\$/1-2	3+
A 74-0501	Red Sticky Wax	1 lb/sheet	\$12.65	\$11.90
B 74-041	Blue Inlay Repair Wax	1 lb/Box	26.54	23.70
C 74-0603-KB	Sticky Wax Sealing Pellets	1 lb/Bags	6.60	5.10
D 74-039	Freeman Assorted Wax Wire	6 oz. (170g)	18.75	17.60
E 70-199	Vigor Wax Kleen	8 oz. (236ml)	16.25	15.15
F 70-200	Kerr Solitine Solution	8 oz (236ml)	31.95	29.70
G 74-0445	Perfect Purple Wax by Kerr	1 oz Block	31.95	29.70
H 74-026-DX	Kerr Disclosing Wax	2 oz (57g)	33.95	31.70
I 74-0390	Jewelers' Sol-U-Carv Wax	1lb (454g)	19.40	17.85



# Wax Welders & Heating Tool Tips

 Optional Flexible White Cord



B



A

Romanoff wax welders are also known as the Romanoff Vari-Temp™. The Romanoff Vari-Temp is the original industry standard for wax welding since 1949. These units are designed for melting, carving, repairing, and attaching wax sprue's where needed, as well as burning sprue gates in rubber molds.

The Romanoff Vari-Temp™ system has the original design with the black heavy duty handpiece and 16 gauge burn resistant cord(A) or white, very flexible, lightweight cord(B). Handpiece and cord have a twist and pull connector, therefore handpieces can easily be replaced when needed. The unit includes 3 of the most popular tips: blue, red and yellow, a 3' heavy-duty cord & handpiece.



K



L



M



## Max Speedy Wax Pen



C



D

D) This lightweight portable wax pen will give you instant heat anywhere you require it in your shop. It can be used for quick repairs or for a designer who requires fingertip control for the fine detail. The pointed heating element is easy to replace and the Max Wax Pen comes complete with a AA battery. 6" long (152mm)

Item #	Description	US\$/1-2	3+
A 74-004	Romanoff Vari-Temp Waxer 3' Black Cord, HP & 3 tips, ( 110V)	215.00	195.00
A 74-004A	Romanoff Vari-Temp Waxer 3' Black Cord, HP & 3 tips, ( 220V)	219.00	209.00
B 74-004-WHI	Romanoff Vari-Temp, White Cord, H.P & 3 Tips (110V)	229.00	221.50
B 74-004A-WHI	Romanoff Vari-Temp, White Cord, H.P & 3 Tips (220V)	243.00	233.00
C 74-006	Max Speedy Wax Pen - Port "AA" Battery, 6" L	18.85	16.50
D 74-006-TIP	Replacement Pointed Tip for Max Wax Portable Wax Tool	6.25	5.75
E 74-069	Romanoff Blue Dot-Bent, Round Tip (for all units)	14.48	13.80
F 74-068	Romanoff Red Dot-Broad Spatula Tip (for all units)	14.48	13.80
G 74-070	Romanoff Yellow Dot-Bent Nose Tip (for all units)	14.48	13.80
H 74-072	Romanoff Orange Dot-Narrow Tip (for all units)	14.48	13.80
I 74-068-PURP	Romanoff Purple Dot- Pointed Spear Tip (for all units)	14.48	13.80
J 74-072	Romanoff Green Dot-Fine PointTip (for all units)	14.48	13.80
K 74-005-SPL-R	Romanoff 3' White Fabric Cord & Handpiece Only	89.30	84.86
L 74-005-R	Economy 3' White Fabric Cord & Handpiece Only	71.20	64.30
M 74-005-P-HD	Romanoff 3' Black Heavy Duty Cord & Handpiece Only	69.50	66.10

# Foredom Wax Carver™

**Handpiece:** The handpiece has a super slim and lightweight design that is comfortable to hold with cork insulation to keep fingertips cool while working. The detachable handpiece cord is also lightweight and extremely flexible, perfect for the controlled movements needed for fine detailing in wax.

**Control Box:** The compact control box has a precision heat control dial for setting and maintaining temperatures from 95 degrees F (35 degrees C) up to 560 degrees F (294 degrees C). You can keep it low for delicate work or turn it up for fast wax removal or carving harder waxes. Its flashing indicator light shows heat intensity and reminds you to turn it off when not in use. Only 2-1/2 in. x 2 in (64 x 51mm). The cords are also all removable for easy storage.

**Brass Tips:** The unit includes three easy to clean and change brass tips- knife (#3), small spoon (#4) and straight taper (#2). They are a great improvement over the tips used on other models. Four optional tips are sold separately - curved taper, small flat, large flat and large spoon.



Item#	Description	Each
A 74-002	Foredom Wax Carver Kit 110-v w/3-tips	\$219.00
B 74-002-1	Narrow Flat Wax Carver Tip #1	16.50
C 74-002-2	Straight Taper Wax Carver Tip #2	16.50
D 74-002-3	Knife Wax Carver Tip #3	16.50
E 74-002-4	Small Spoon Wax Carver Tip #4	16.50
F 74-002-5	Curved Taper Wax Carver Tip #5	16.50
G 74-002-6	Wide Flat Wax Carver Tip #6	16.50



## Kerr® Ultra-Waxer™ 2

The ultimate electronic waxer just got better, with dual spatulas for increased productivity, convenient tip holder for convenience and organization, and easy to use menu functions, such as programmable presets and quick heat function.

### Features:

- Comfortable color – coded cushion grip tips
- 10 optional application specific tips available
- Four programmable temperature presets
- Quick Heating of tips
- Dual pens for simultaneous use
- Adjustable auto off feature
- Dual voltage
- Temperature range: 97F to 500F (36C to 260C)
- Ships with two tips

### Specifications:

Height: 3.25" (8.26 cm)  
 Width: 7.5" (19.05 cm)  
 Depth: 7" (17.78 cm)  
 Weight: 1.6 lb (0.726 kg)  
 Electrical Rating: 100/240 Volts, 1.0 Amps, 30 Watts, 50/60 Hertz  
 Ambient Temperature: 41°F (+5°C) to 104°F (+40°C)  
 Relative Humidity: 80% Max



Item#	Description	US\$/Each	Item#	Description	US\$/Each
A 70-457	Kerr Ultra-Waxer 2	329.00	G 70-452-GRAY	Small 7 Tip, Gray	67.50
B 70-452-TC	Handpiece for Ultra-Waxer	67.50	H 70-452-PURPLE	Beavertail Tip, Purple	67.50
C 70-452-BLUE	Small Pkt Tip, Blue	67.50	I 70-452-RED	Needle Tip, Red	67.50
D 70-452-TEAL	Large Pkt Tip, Teal	67.50	J 70-452-YELLOW	Denture Spoon Tip, Yellow	67.50
E 70-452-BLACK	Half Hollenback Tip, Black	67.50	K 70-452-ORANGE	Large Denture Tip, Orange	67.50
F 70-452-GREEN	Large 7 Tip, Green	67.50	L 70-452-PINK	DentureTip, Pink	67.50

## Wax Needle File Set



An excellent addition to your bench, these 5-1/2" (14cm) Wax Needle files are contained in a set of six files. They are excellent for shaping your wax designs and due to their wide tooth style, they will not clog as easily as a conventional style. The six styles in the set are: equalling, flat, half-round, round, square and three-square. Shipping weight is 6 oz.(170g). Made in Switzerland.

Item#	Description	US\$ / Ea.	2+
<b>F3-834</b>	Wax File Set - 6 Piece	75.35	69.75

## Wax Carving Burr Set



Excellent for wax carving and shaping your wax designs, this 10 piece set features a 1/8" (3mm) shank size. All of these burs are coarse fluted so they will not clog.

Item#	Description	US\$ / Ea.
<b>90-888</b>	10 pc. Wax Carving Burr	38.50

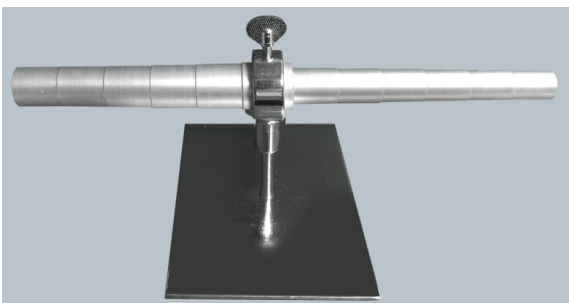
## Skip-A-Tooth Saw Blades

These blades are designed for wax cutting. Every other tooth is missing, which provides smooth cutting and they will not clog easily. Measures 5-1/4" (13cm) long. 1 dozen to a package, size #1.

Item#	Description	US\$ / Ea.
<b>95-904</b>	Skip-A-Tooth Saw Blades Size #1	6.20



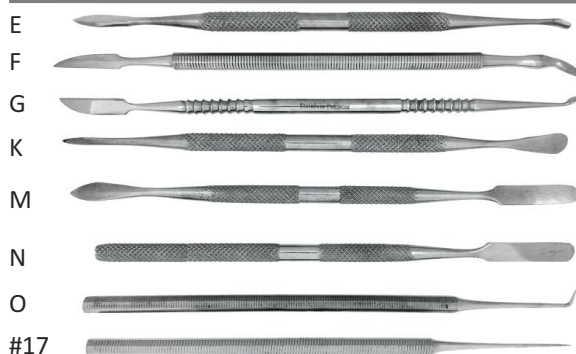
## Wax Ring Mandrel



This step type aluminum mandrel takes you from size 4 through 13 in full sizes. While mounted on the base, can be rotated 360° allowing you to assemble wax patterns from all angles. The mandrel can be detached from base for hand use. Should be coated with mold release for easy removal of wax pattern. Overall length is 13" (33cm). Shipping weight is 2.5lbs. (1.15K).

Item#	Description	US\$ / Ea.
<b>M3-229</b>	Stepped Wax Ring Mandrel	25.00

## Romanoff Wax Carving & Patching Tools



Quality tools that are tailored for carving, shaping and patching wax models. This Romanoff selection will fit any need that your wax or design department will ever need. Crafted in stainless steel to withstand heat without losing temper.

Item#	Description	US\$ / Ea.	Item#	Description	US\$ / Ea.
<b>74-011</b>	Wax Tool "E"	3.50	<b>74-019</b>	Wax Tool "N"	3.50
<b>74-012</b>	Wax Tool "F"	3.50	<b>74-020</b>	Wax Tool "O"	4.00
<b>74-013</b>	Wax Tool "G"	3.50	<b>74-020-1</b>	Wax Tool #17 Straight	4.00
<b>74-017</b>	Wax Tool "K"	3.50	<b>74-0020</b>	Complete set of 12 wax tools. (Not incl. 74-020-1)	29.89
<b>74-018</b>	Wax Tool "M"	3.50			



# File-A-Wax™

All File-A-Wax™ products are excellent for carving a wide variety of designs and details. It can be turned on a lathe, used with a CAD-CAM system or carved by hand. All File-A-Wax™ is available in three grades of hardness.

**GREEN** - The hardest wax, great for sharp edges and detailed engraving. This wax has no flexibility. 240°F(115.6°C) melting point.

**PURPLE** - General purpose carving wax with some flexibility. 230°F(110°C) melting point.

**BLUE** - The most flexible carving wax. Excellent for rounded diameters with a melting temperature of 220°F(104.5°C).

## File-A-Wax™ Ring Tubes

All File-A-Wax™ Tubes are 6" (152mm) long. All tubes have a 5/8"ID (15.88mm) hole.



**A** Round Tubes  
**B** Off-Center Hole  
**C** Flat Sided  
**D** Solid

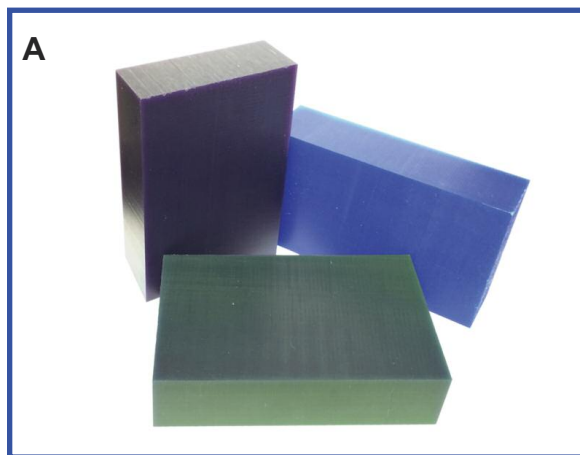
Green Item #	Purple Item #	Blue Item #	Code	Description	Style
83-202	83-198	83-200	T875	Round Tubes 7/8" O.D.	A
83-203	83-199	83-201	T1062	Round Tubes 1-1/16" x O.D.	A
83-206	83-204	83-205	T0162E	Off Centered Hole 1-1/6" x 1" H	B
83-211	83-232	83-231	T150	Flat Side Tube 1" W x 1" H	C
83-212	83-214	83-210	T100	Flat Side Tube 1" Flat x 1-1/8" H	C
83-213	83-234	83-233	T250	Flat Side Tube 1-1/8" Flat x 1-1/8" H	C
83-209	83-207	83-208	T200	Flat Side Tube 1-3/16" x 1-5/16" H	C
83-217	83-219	83-215	B875	Solid Tube 7/8" Dia.	D
83-218	83-239	83-216	B1062	Solid Tube 1-1/6" Dia.	D

US\$ 1-5	6-9	10+
7.19	6.49	5.89

## File-A-Wax™ Block and Slices

File-A-Wax Block is an excellent carving wax and has been an industry standard for generations. The blocks are available in 1 pound boxes. All File-A-Wax™ slices measure 3-5/8" L x 1-1/2" W (92 x 38mm) with assorted thickness in each box.

### BLOCK

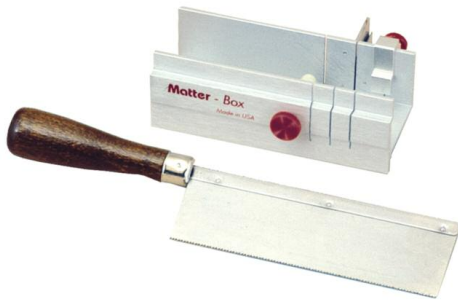


### SLICE ASSORTMENT



	Green Item #	Purple Item #	Blue Item #	Description	Type	US\$/Ea. 1-2	3-5	6+
<b>A</b>	74-023	74-024	74-022	Carving Wax - 1lb. Box - 3-5/8" x 6" x 1-1/2" T	Block	14.76	13.90	13.25
<b>B</b>	83-225	83-226	83-224	1/2 lb. Box - 1/8"-1/4" Thick (3.175-6.35mm)	Assorted Slices	16.70	15.89	15.19
<b>B</b>	83-229	83-230	83-228	1 lb. Box - 3/16"-1" T (4.77-25.4mm)	Assorted Slices	21.19	18.30	17.90

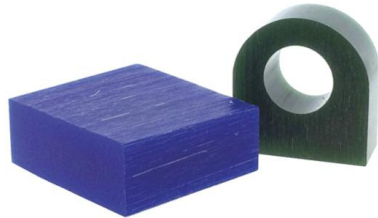
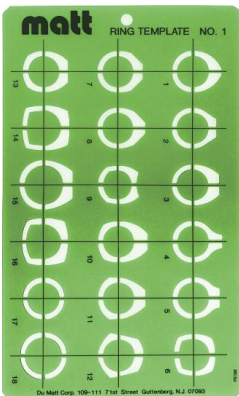
## Matt Miter Box and Saw



Slice bars, rods and wax ring tubes into tablets with perfectly straight and parallel walls or tapered sides. The ring tube is held firmly in position inside the box so there is no strain on your hand. With stop/lock feature for cutting several tablets of the same thickness. The fine steel saw blade allows you to cut through the tube with no effort, leaving a smooth finish that does not require any filing. Set includes extruded aluminum 6" x 2" miter box, steel hand saw and stop/lock.

Item#	Description	US\$ / Ea.
M3-144	Matt Miter Box and Saw	54.96

## Matt Ring Template



Eliminates the time consuming job of drawing ring outlines with rulers and dividers and avoids the irregular contour of a shank made free-hand. With 18 different cut-out ring shapes, varying from the most popular to the most unusual, for ladies as well as gentlemen. Made of unbreakable plastic with precision milled shapes. Includes instructions and 2 samples of carving wax tablets.

Item#	Description	US\$ / Ea.
M3-146	Matt Ring Template	12.90

## BLUE ROUGH CUT SLICES

## Matt Ring Tube Sizer



Enlarge the finger size of your wax models quickly and accurately. Hardwood mandrel is specially machined to incorporate a cutting steel blade that extends from the handle to the tip of the tapered section. Slide this tool through the hole of wax ring or ring tube and gently rotate clockwise. As the blade turns it scapes inner wall, enlarging the ring to the size that is marked along the mandrel, leaving a smooth and even finish on the ring.

Item#	Description	Each
M3-147	Matt Ring Tube Sizer	\$25.45

## Matt Mini-Lathe



A versatile hand-held lathe, powered by a flexible shaft machine and a #30 handpiece. You can easily produce wedding bands, bezels and settings. The unit comes complete with lathe, 2 cutting tool blanks, wax rods, 3 piece blade set, allen key and instruction book featuring many step by step projects.

Item#	Description	US\$ / Ea.
M3-143	Matt Mini-Lathe	171.45

## Matt Trimmer™

Enables you to precisely file shapes as well as flat and curved surfaces at different angles. The platform can be locked at 90° or can be angled for tapered cuts. Trim wax shapes to exact size and shape or mill out the center of a wax blank for sizing. Powered by a flexible shaft machine and a #30 handpiece, this unit is designed to simplify this critical procedure while improving uniformity. Also ideal for creating channels. The unit comes complete with a rotary file specifically used for wax cutting, ring template, 3 different color waxes and an instruction manual.

Item#	Description	US\$ / Ea.
M3-142	Matt Trimmer™	146.15



## Matt Shaper™

For fast and easy cutting and shaping of all bangle and hinged bracelets, the Matt Shaper is the tool for you. It is designed for precision filing of large pieces and is powered by your flexible shaft machine and a #30 handpiece. The wide table is adjustable to cut at different angles and the removable fence regulates the depth of your cut to ensure a smooth, precise cut as well as safe operation. Not only can you make bracelets but any large piece from standard wax blocks can be made, i.e. belt buckles or pendants. The unit comes complete with a Matt Bracelet Template to help you create round, oval or square bracelets. Also included is a rotary file and two slices of bracelet wax blanks and a full instruction booklet.

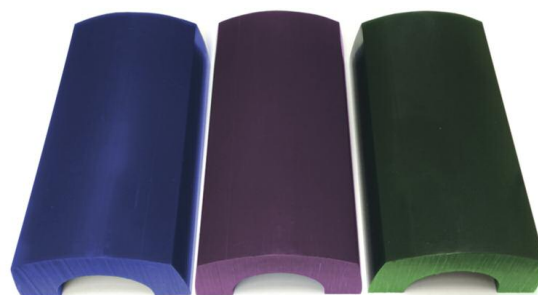
Item#	Description	US\$ / Ea.
M3-151	Matt Shaper	149.445



## Matt Bracelet Wax Blanks™

Simplify the construction of bracelets with this 6" (152mm) long arch-shaped block of carving wax. From just one blank style you can create round, oval or square bracelets in a variety of sizes. Simply cut two slices of the desired thickness to form a bracelet, then trim using the Matt Shaper and Matt template.

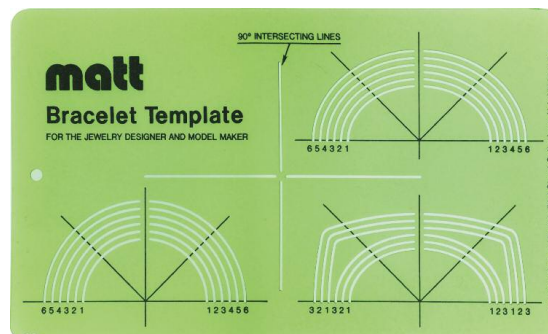
Item#	Description	US\$ / Ea. 1-3	4+
M3-151-1	Green Bracelet Blank (Hard)	15.95	13.25
M3-151-2	Purple Bracelet Blank (Medium)	15.95	13.25
M3-151-3	Blue Bracelet Blank (Soft)	15.95	13.25



## Matt Bracelet Template™

Enables you to quickly scribe bracelet shapes with complete accuracy and symmetry. Made of durable plastic with precisely milled shapes for tracing round, oval and square bracelets from very small to large sizes. Includes instructions.

Item#	Description	US\$ / Ea.
M3-152	Matt Bracelet Template	13.25







# Standard & Deluxe Vulcanizers

Romanoff table top Vulcanizers feature a heavy-duty aluminum cast construction, accurate thermostat, heavy guide posts to insure a perfect alignment of top and bottom plates, on-off switch with separate pilot light, thermostat pilot indicating light, a 1" diameter pressure screw and a bar type handle which allows for maximum pressure on the mold. The deluxe units are available with single and dual thermostats. The dual thermostat vulcanizer enables you to control both top and bottom heating elements independently, therefore the operator can compensate for heat rise. The standard Vulcanizer can hold two average size molds, and the deluxe Vulcanizer holds four. Made in USA.



#### Standard Table-Top Vulcanizer

Dimensions 14½"W x 7"D  
x 26"H  
Platen Size 8"W x 5"D  
Max. Opening 3"  
Max.Temp 550°F  
Weight 48lbs

A



#### Deluxe Table-Top Vulcanizer

Dimensions 15½"W x 9½"D  
x 21"H  
Platen Size 8½"W x 6"D  
Max. Opening 4"  
Max.Temp 550°F  
Weight 54lbs

B



#### Deluxe Table-Top Vulcanizer

Dimensions 15½"W x 9½"D  
x 21"H  
Platen Size 8½"W x 6"D  
Max. Opening 4"  
Max.Temp 550°F  
Weight 54lbs

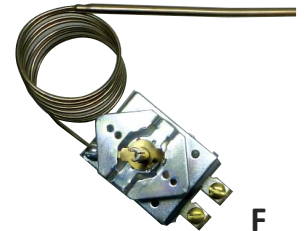
C



D



E



F



G

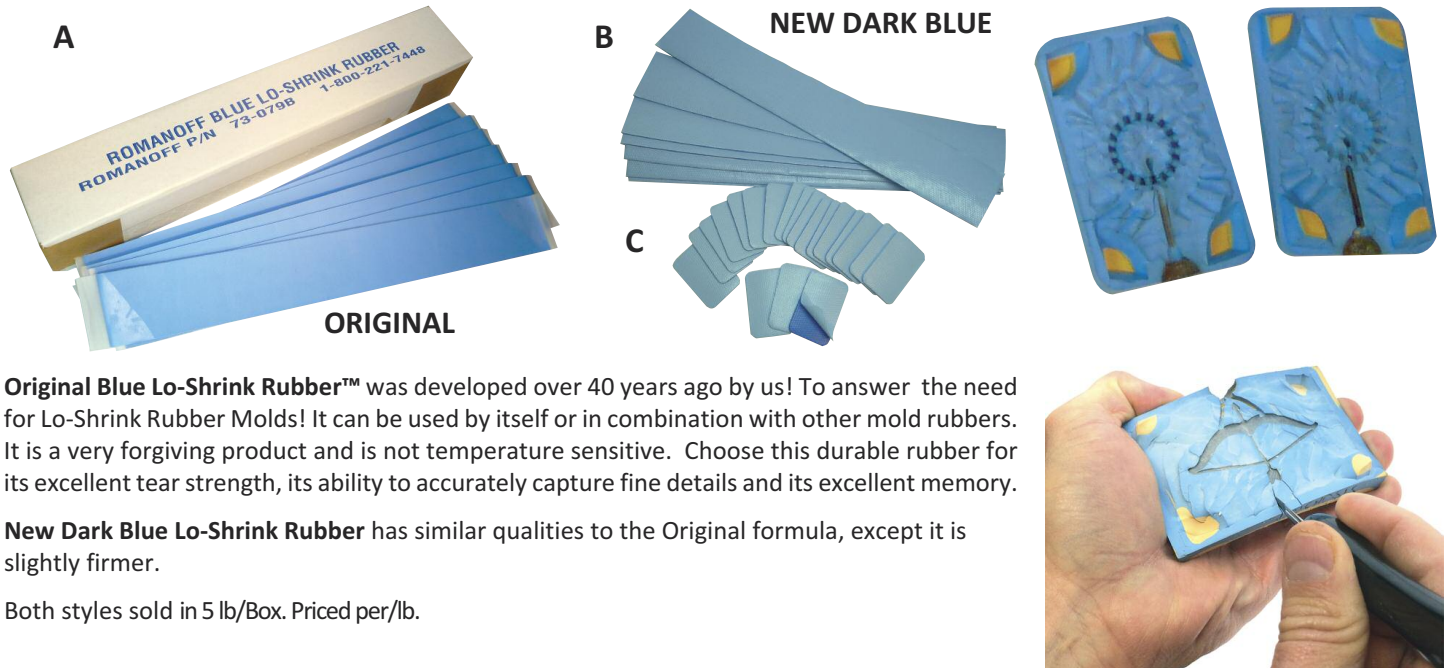


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	Item #	Description	US\$ / Ea.
A	73-047	Standard Table-Top Vulcanizer - 110V	629.00
A	73-047A	Standard Table-Top Vulcanizer - 220V	660.45
B	73-002	Deluxe Vulcanizer- 110V - Single Control	829.00
B	73-002A	Deluxe Table-Top Vulcanizer 220V -Single Control	869.00
C	73-002-D	Deluxe Vulcanizer- 110V - Dual Control	943.50
C	73-002A-D	Deluxe Table-Top Vulcanizer 220V - Dual Control	971.90
D	73-048	Aluminum Test Block	21.92
E	74-052-N	Thermometer for Vulcanizer 50°-400°F	22.75
F	002-030-E	110V / 220V Replacement Thermostat	83.39
G	002-031-E	Fahrenheit Knob Dial 200°-550°F	12.50
H	002-031A-E	Centigrade Knob Dial 50°-300°F	12.50

# The Original Romanoff Blue Lo-Shrink Rubber

Less Than 1% Shrinkage – For When Your Mold Needs to be Just Right



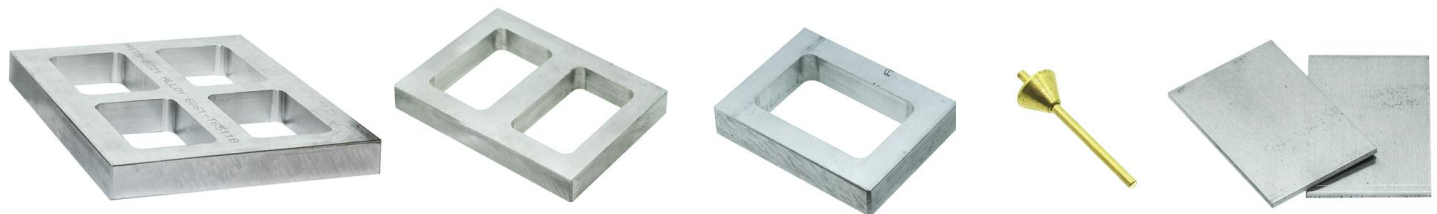
**Original Blue Lo-Shrink Rubber™** was developed over 40 years ago by us! To answer the need for Lo-Shrink Rubber Molds! It can be used by itself or in combination with other mold rubbers. It is a very forgiving product and is not temperature sensitive. Choose this durable rubber for its excellent tear strength, its ability to accurately capture fine details and its excellent memory.

**New Dark Blue Lo-Shrink Rubber** has similar qualities to the Original formula, except it is slightly firmer.

Both styles sold in 5 lb/Box. Priced per/lb.

	Item#	Description	US\$ / Lb
A	73-079B	<b>Romanoff</b> Original Blue Lo-Shrink Rubber - 2 7/8" x 18" Strips	13.99
B	73-079B-R	<b>Romanoff</b> New Dark Blue Lo-Shrink Rubber - 2 7/8" x 18" Strips	13.90
C	73-079B-C	<b>Romanoff</b> New Dark Blue Lo-Shrink Rubber - 2 7/8" x 1 7/8" Redi-cuts	14.49

## Mold Frames



	Item #	Description	Size / Style	US\$ / 1-3	US\$ / 4+
A	73-0167	Quad Frame	3/4"H x 1-7/8" x 2-7/8"	83.86	79.90
B	73-006D	Double Frame	3/4" H x 1-7/8" x 2-7/8"	40.50	38.50
B	73-007D	Double Frame	1" H x 1-7/8" x 2-7/8"	42.60	38.90
C	73-006	Single Frame	3/4" H x 1-7/8" x 2-7/8"	28.17	26.79
C	73-007	Single Frame	1" H x 1-7/8" x 2-7/8"	32.40	29.89
D	73-018	Brass Rod & Former	2" x 1/8"	2.08	1.90
E	73-042	Mold Plates (Sold in Pairs)	1-7/8" x 2-7/8"	4.95	4.10
E	73-043	Mold Plates (Sold in Pairs)	2-1/2" x 3-3/4"	6.10	5.19
E	73-044	Mold Plates (Sold in Pairs)	3-1/2" x 4-3/4"	8.40	7.70
E	73-045	Mold Plates (Sold in Pairs)	5" x 7-7/8 "	10.40	9.75

# Mold Release Sprays

A variety of release sprays are used for releasing wax patterns from rubber or metal molds. Here are Our #1 Sellers:

- Castaldo & Sprits:** All time favorites.
- Castaldo Resin Release:** Soy based spray for easier removal of resin models.
- MS:** For resin models & all alloys, silicone free.
- CAD CAM:** Specifically designed to protect all CAD resin model surfaces from phosphate bonded platinum investment.



A



B. Cad Spray Coating when casting Platinum



C



D



E

	Item#	Description	Size	US\$ / 1-9	US\$ / 10+
A	<b>75-003-C</b>	Castaldo Mold Release	12 oz	11.50	10.75
B	<b>78-049</b>	Romanoff Crystal Clear Cad-Cam Protective Coating	14 oz	16.86	15.95
C	<b>75-003-RR</b>	Castaldo Resin Release	12 oz	14.90	13.90
D	<b>75-003-MS</b>	Silicone-Free Resin Release Spray	14 oz	18.99	17.50
E	<b>75-003</b>	"GF" Spritz Mold Release	12 oz	11.49	10.90



D

**Swann-Morton®**

## Surgical Blades & Handles

Founded in Sheffield during 1932, Swann-Morton have become a world leader in the manufacture of surgical blades, scalpels and handles. It is a name respected globally for quality, precision, consistency and reliability and recognised for combining traditional blade making skills with the latest technology.



A



B



C



E



F

	Item #	Description	Size / Style	US\$ / 1-3	US\$ / 4+
A	<b>73-025-10A</b>	Swann-Morton Straight Blade	#10A (100/bx)	19.90	18.00
B	<b>73-025</b>	Swann-Morton Straight Blade	#11 (100/bx)	19.90	18.00
C	<b>73-026</b>	Swann-Morton Curved Blade	#12 (100/bx)	19.90	18.00
D	<b>73-032</b>	Plastic Grip Handle USA	#45 USA	26.63	24.80
E	<b>73-033</b>	Stainless Steel Handle (Import)	#3	4.75	3.90
F	<b>73-033-SM</b>	Swann-Morton Stainless Steel Handle	#5	29.95	28.90





# RosÉ LMR™ Compound

Romanoff Rose'™ has become our largest & most popular revolutionary liquid mold rubber formula. It will produce a 0% shrinkage mold of any object that can not tolerate pressure or heat. Rose' LMR is tear resistant, has long shelf life, produces a mirror finish & maintains the shape of your wax design. It's firm durometer will ensure better dimensional stability than traditional LMR's & cures overnight at room temperature. Mixing Ratio is 10:1. We offer 3 convenient sizes for all shops.



Item#	Description	Each /US\$
<b>73-052-R</b>	Rosé 10 lb LMR Kit	93.45
<b>73-052-5R</b>	Rosé 50 lb LMR Kit	299.00



## CAD/CAM LMR Clear Mold Rubber

The best liquid rubber developed, specifically for reproducing CAD-CAM resin models. This is a pure, clear silicone with 0.0% shrinkage, with no heat or pressure. No release sprays required. Clear for easy mold cutting visibility. Excellent tear resistance for long life. It will NOT stick to CAD/CAM resins & is easiest to vacuum & debubble. *Can pour up to 600° F metal in CAD-CAM clear molds. Will not deteriorate over time.*

### RESIN MODELS



Item#	Description	Each/US\$
<b>73-050-2</b>	CAD-CAM LMR Clear Mold Rubber Kit - 2 lbs	55.13
<b>73-050-10</b>	CAD-CAM LMR Clear Mold Rubber Kit - 10 lbs	189.00
<b>73-050-50</b>	CAD-CAM LMR Clear Mold Rubber Kit - 50 lbs	689.00

## Original LMR Compound

Romanoff's LMR is the Best & Most Popular Silicone-Type Mold Rubber used by Professional Mold Makers. Romanoff's LMR (Liquid Mold Rubber) requires no heat, cures at room temperature overnight and has 0.0% shrinkage every time. Romanoff's LMR is firm, durable, tear resistant and has excellent memory. Mixing ratio is 10 to 1, Curing time can be reduced when mold is heated to 125° F.

Easy to follow directions!

Item #	Description	Each/US\$
<b>73-052</b>	Original White LMR Compound Kit - 10 lbs.	93.45
<b>73-052-5</b>	Original White LMR Compound Kit - 50lbs.	295.00
<b>73-052-PTA</b>	Extra Catalyst Only. For White LMR Kit - 10 lbs.	29.50
<b>73-052-5PTA</b>	Extra Catalyst Only. For White LMR Kit - 50 lbs.	47.61



## See-Thru Ferris Glass Mold Frames

Use these See-Thru Mold Frames whenever you are using Liquid Mold Rubber Products. The mold set comes complete with an aluminum "U" shaped frame (with built in sprue former), 2 glass plates & 2 spring clamps. These frames are great for visualizing your model's position prior to pouring in LMR mixtures. All frames are 3"H x 2"W.

Item#	Description	Size	US\$ / 1-3	US\$ / 4+
<b>73-022</b>	Glass Mold Frame	3/4" (19 mm)	16.15	14.25
<b>73-023</b>	Glass Mold Frame	1" (25.4 mm)	17.92	15.85
<b>73-024</b>	Glass Mold Frame	1¼" (31.75 mm)	18.15	17.35
<b>73-0242</b>	Glass Mold Frame	1½" (38.1 mm)	22.75	21.30
<b>73-0245</b>	Glass Mold Frame	2" (50.8 mm)	23.75	22.80



## Castaldo LiquaFast Ice

### Transparent RTV Silicone Jewelry Molding Rubber

**No Heat - No Pressure - No Shrinkage - No Waiting !**

New LiquaFast™ ICE from CASTALDO® is a transparent two-part 0% shrinkage RTV silicone molding rubber that cures very rapidly at normal room temperatures and cures even faster at slightly warmer temperatures.

That means that you can make a mold from your CAD CAM, RP and SLA models in the morning, shoot waxes 30 minutes later and cast them that afternoon. No more waiting.

New LiquaFast ICE makes strong, tough, tear-resistant permanent molds that last and last and do not become soft with age.

LiquaFast ICE works well with all RP types, including hard-to-mold Solidscape® designs. LiquaFast Ice's low viscosity makes it easy to measure, mix and pour.

Normal cure time is only 60 – 90 minutes. Faster cure is possible at only 50° C. / 120° F.

LiquaFast ICE is economical, costing far less than traditional silicone RTV materials.



- **Rapid Molds from Rapid Prototypes.**
- **Finished Molds in as Little as 30 Minutes.**
- **Ideal for all CAD-CAM, RP, SLA WAX and Resin Models.**

Working time : 15 Minutes    Cure Time : 60-90 Minutes

Even Faster cure  
at approximate 50C/120F: 30 Minutes

Safe, Non-Hazardous & Non-Flammable

Item#	Description	1-2	3+
73-0525	Castaldo LiquaFast 1kg Kit	\$49.98	\$48.50
73-0526	Castaldo LiquaFast 4kg Kit	\$197.04	\$193.15

## Castaldo LiquaCast

**LiquaCast** is a 0% Shrinkage, room temperature RTV. It is safe, easy to use and reproduces the finest details. Easy to vacuum, debubblize and pour. Kit consists of Part A & Part B, ( Ratio 10:1). Cures at room temperature overnight.

Item#	Description	1-2	3+
73-052-CAST	LiquiCast 10 lb. Kit	\$92.10	\$86.20
73-052-5CAST	LiquiCast 50 lb. Kit	\$394.45	384.60



A

- **Will Not Soften with Age**
- **Extremely Strong and Firmer**
- **Much Easier to Use**
- **Makes More Molds**



## Castaldo LiquaCast Long-Life

**LiquaCast Long-Life** makes molds that are extremely strong, tough and tear-resistant, another reason they will last and last despite repeated use. It's perfect for complex molds, difficult undercuts and spirals and cores. And it's compatible with most computer-generated CAD-CAM resin and difficult to mold CAD-CAM wax patterns.

Item#	Description	Each	2+
73-0522	LiquiCast Long - Life 8kg Kit	\$198.95	\$194.80
73-0523	LiquiCast Long - Life 20kg Kit	\$396.70	\$382.50

# Castaldo Jewelry Molding Rubber



Strips



Redi-Cuts



Rolls

**White Label:** Firm yet flexible. All purpose rubber. Good for thin molds. 310F/155C deg. 15min per 1/4"

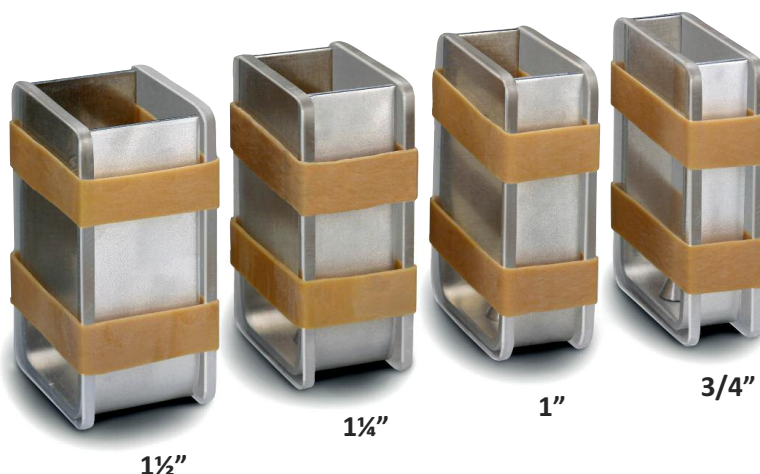
**Gold Label:** Soft & Pliable. For detailed molds and undercuts. 310F/155C deg. 15min per 1/4"

**Pink Label:** Minimizes shrinkage and has high adherence for detail. 310F/155C deg. 15min per 1/4".

Item	Description	Dimensions	Sold In 5lb Boxes	
			US\$/1-5	6+
73-071B	White Label Strips	2-7/8" x 18"	44.60	43.50
73-071B-C	White Label Redi-Cuts	1-7/8" x 2-7/8"	45.00	44.15
73-071	White Label 50lb Roll	18" x 1/8" x 35'	419.00	--
73-072B	Gold Label Strips	2-7/8" x 18"	46.00	44.90
73-072B-C	Gold Label Redi-Cuts	1-7/8" x 2-7/8"	46.90	45.10
73-072	Gold Label 50lb Roll	18" x 1/8" x 35'	429.00	--
73-080B	Pink Label Strips	2-7/8" x 18"	52.00	50.90
73-080B-C	Pink Label Redi-Cuts	1-7/8" x 2-7/8"	55.10	52.50

## Castaldo Liquid Mold Frames

- For use with all RTV liquid rubber molds.
- Heavy duty industrial rubber bands fit all frame sizes; additional bands are provided with each frame.
- New taller size. Makes vacuuming easier. No need for paper collars. No more spills!
- Clear plastic plates release easily from rubber; won't shatter or cut hands like glass plates.



Item#	Description	Size	US\$/Ea.
73-022-C	Castaldo Glass Mold Frame	3/4" (19 mm)	15.10
73-023-C	Castaldo Glass Mold Frame	1" (25 mm)	17.34
73-024-C	Castaldo Glass Mold Frame	1 1/4" (32 mm)	17.89
73-0242-C	Castaldo Glass Mold Frame	1 1/2" (38mm)	18.90



# All Castaldo Silicone Jewelry Molding Rubbers make superior quality molds that are tough, strong, easy to pack, easy to cut and easy to use. Just spread the rubber and press it with your fingers like clay or putty!

- Castaldo silicone jewelry molding rubbers produce waxes with an extremely smooth high shine finish that won't stick to the mold. Smooth shiny waxes means faster cleaning and less polishing of finished castings.

- Wax patterns release from the rubber easily without the use of messy powders or silicone sprays.

- Molds cut "like butter" yet resist tearing. Castaldo silicone jewelry molding rubbers make complex molds that are stronger than any other silicone molding rubber on the market. Molds last and last!

- Castaldo silicone molding rubbers will not discolor silver models.

- High thermal conductivity means that waxes cool more quickly, increasing the number of wax patterns that can be made per hour.

## Castaldo Super High Strength™ 73-073B-SH

A superior quality medium hardness jewelry molding rubber with extreme tear and tensile strength for every application including spirals, cores, cut-outs & plugs as well as for general purpose use. Can be used with Econosil® on the outside for additional stiffness or on the inside for additional dimension stability.

Shore A hardness: 38 - 40.

Tensile strength: 8.3 n/mm<sup>2</sup> / 1204 psi

Vulcanizes at 165° - 176° C / 330° - 350° F.

Tear strength: 21.2 n/mm / 121 lbs./ in.

Medium shrinkage - 2.3%.

Elongation: 667%

Color: traditional tan.



## Castaldo Econosil® 73-085B

Harder, economy grade jewelry molding rubber that still produces top quality molds with long use life. Suitable for every application including spirals, cores, cut outs & plugs as well as general purpose. Econosil offers less flexibility for better dimensional stability – less ballooning during injection, less constriction during clamping & less internal distortion of small, delicate details. Excellent for flat and simple pieces, filigree or other thin channels. Also excellent for pieces where high precision and consistent weight is required. Can be combined with Super High Strength rubber as an insert to add stiffness and hardness in pattern area.

Shore A hardness: 48 - 50.

Tensile strength: 6.2 n/mm<sup>2</sup> / 897 psi

Vulcanizes at 165° - 176° C / 330° - 350° F.

Tear strength: 19.4 n/mm / 111 lbs./ in.

Low shrinkage - 1.1%.

Elongation: 555%

Color: brick red / brown.



## Castaldo VLT® 73-069

Very low temperature, very low shrinkage, jewelry molding rubber is tough, strong and similar to Castaldo Super High Strength but is specially designed for use with CAD-CAM, RP & SL wax and resin models as well as traditional metal models.

Shore A hardness: 38 - 40.

Tensile strength: 8.9 n/mm<sup>2</sup> / 1289 psi

Vulcanizes at 71°C - 82°C / 160°F - 180°F

Tear strength: 18.2 n/mm / 104 lbs./ in.

Very low shrinkage - only 0.1%

Elongation: 614%

Color: teal blue-green.



- Castaldo silicone jewelry molding rubbers make molds that are ideal for vacuum wax injectors because they seal between injections almost as if they had never been cut. A better vacuum is created for better flow and fill.

- Excellent return to shape, or “memory”.

#### Castaldo Rapido® 73-081

Tough, strong with very low shrinkage and similar to Castaldo Super High Strength jewelry molding rubber but cures FAST! Finished molds are ready in only 15 minutes when vulcanized at 93°C/200°F.

Shore A hardness: 38 - 40

Tensile strength: 8.9 n/mm<sup>2</sup> / 1289 psi

Very low shrinkage - only 0.1%.

Tear strength: 18.2 n/mm / 104 lbs./ in.

Color: marigold.

Elongation: 614%



#### Castaldo Super Stretch™ 73-082-5

Similar to Super High Strength jewelry molding rubber but softer for extreme pliability, flexibility and elasticity when needed for delicate models, extreme undercuts, cores and plugs. Use as an insert in Super High Strength or Econosil jewelry molding rubber.

Shore A hardness: 28 - 30.

Tensile strength: 7.7 n/mm<sup>2</sup> / 1109 psi

Vulcanizes at 165° - 176°C / 330° - 350°F.

Tear strength: 19.2 n/mm / 110 lbs./ in.

Low shrinkage 1.3%.

Elongation: 900%

Color: violet



Type

**Super High Strength™**  
**73-073B-SH**

**Econosil®**  
**73-085B**

**VLT®**  
**73-069**

**Rapido®**  
**73-081**

**Super Stretch™**  
**73-082-5**

Color	Tan	Brick red / brown	Blue green / Teal	Marigold	Violet
Hardness	38 - 40	48 - 50	38 - 40	38 - 40	28 - 30
Vulcanization Temperature	165° - 176° C 330° - 350° F	165° - 176° C 330° - 350° F	71° - 88° C 160° - 190° F	93° C 200° F	165° - 176° C 330° - 350° F
Uses	High Strength General Purpose.	Economy grade. Firm molds, filigree & thin channels. High precision.	Low temperature for resin CAD-CAM, RP, SL models	Fast 15 minute molds.	Elastic inserts, extreme undercuts, cores and plugs.
Shrinkage	Medium - 2.3%	Low - 1.1%	Very Low - 0.1%	Very Low - 0.1%	Low - 1.3%
Tensile Strength before break	8.3 n/mm <sup>2</sup> 1204 psi	6.2 n/mm <sup>2</sup> 897 psi	8.9 n/mm <sup>2</sup> 1289 psi	8.9 n/mm <sup>2</sup> 1289 psi	7.7 n/mm <sup>2</sup> 1109 psi
Tear Strength before breaking	21.2 n/mm 121 lbs./in	19.4 n/mm 111 lbs./in	18.2 n/mm 104 lbs./in	18.2 n/mm 104 lbs./in	19.2 n/mm 110 lbs./in
Elongation before breaking	667%	555%	614%	614%	900%
Price (per 5lbs box)	\$44.70	\$43.50	\$46.15	\$42.00	\$45.56



# Romanoff-Built Magnetic Tumblers

Romanoff Magnetic Tumblers eliminate the use of harmful bombing chemicals, remove oxidation and will brighten and polish your pieces in less time than other conventional tumblers. Magnetic tumbling reduces finishing time without removing metal. A must for stone- in-place castings, filigree & other impossible to reach places. All units come with 0.5 x 5mm high quality stainless steel pins, Magic Blue liquid soap, Romanoff magnetic tumbling powder soap and acrylic bowl. Made by Romanoff.

## The Romanoff Mini-Magnetic Tumbler



is a little workhorse. It features a 60 minute timer, variable speed control up to 2,000 RPM, a power indicator light, and protective fuse.

## The Romanoff Medium-Magnetic Tumbler



is designed for the busy jewelry store or small manufacturer. It features a 60 minute timer, single speed of 2,800 RPM, a power indicator light, and protective fuse.

## The Romanoff Large-Magnetic Tumbler



is a heavy-duty, well-built tumbler. It is designed to produce a high polish in a short period of time. It features an automatic auto-reverse function, useful when tumbling large quantities to ensure a uniform finish on both sides of the product. The tumbler has a 60 minute timer, variable speed control up to 3,200 RPM, a power indicator light, and protective fuse.

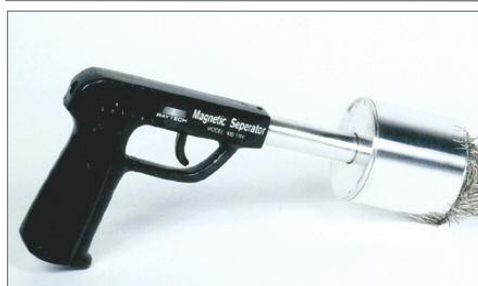
Item #	Model	Bowl Capacity	Bowl Diameter	Overall Dimensions	Voltage	US\$/Each
82-268-USA	Mini Mag	5 - 10 Rings	5.25"	7" x 7" x 10.5", 19lbs	110V	649.00
82-268A-USA	Mini Mag	5 - 10 Rings	5.25"	7" x 7" x 10.5", 19lbs	220V	679.00
82-270-USA	Medium Mag	85 - 100 Rings	8.5"	12" x 12" x 15.5", 61lbs	110V	1,489.00
82-270A-USA	Medium Mag	85 - 100 Rings	8.5"	12" x 12" x 15.5", 61lbs	220V	1,581.00
82-277-USA	Large Mag	250 - 300 Rings	11"	16" x 16" x 15", 91lbs	110V	2,795.00
82-277A-USA	Large Mag	250 - 300 Rings	11"	16" x 16" x 15", 91lbs	220V	2,895.00

## Magnetic Tumbler Bowls



Item #	Description	US\$/Each
82-268-R-B	Mini-Mag, 5.25"	50.14
82-270-R-B	Medium-Mag, 8.5"	92.24
82-275-R-B	Large-Mag, 11"	132.32

## Magnetic Media Separator



Easy parts separation at your fingertips for any Magnetic Finisher. This exclusive Raytech design eliminates the tedious separation of parts from media. Raytech Magnetic Separators can even be placed in water to separate parts. There is no need to drain water as separator will not rust.

Item #	Description	US\$/Each
82-273-G1	Magnetic Separator	147.66

## Magnetic Pins & Spheres



Our magnetic pins and spheres are made of the highest quality stainless steel. All pins have polished ends, as opposed to lower priced cut wire, which will scratch the surfaces of jewelry. They are produced in Japan, and will outlast all other similar media.

Item #	Shape	Size	Package	US\$/Ea.	2+
A 82-2733-3	Balls	1.2mm	500g	159.60	151.62
B 82-273	Pins	0.5 x 5mm	250g	49.00	47.55
B 82-2733	Pins	0.3 x 5mm	250g	54.50	51.80



# Tumbling Soaps



Our magnetic powder soap works best in conjunction with our magic blue soap. This powder is slightly abrasive, and will smooth semi-rough surfaces.



The Romanoff Super Shine Magnetic Soap is a high concentration of 10:1. It is imported from Japan and is one of the original magnetic tumbling soaps, capable of producing a high lustre finish.



Romanoff's Magic Blue Soap is a popular liquid concentrate, commonly used in combination with our magnetic powder soap. It has a high concentration of 10:1, and can also be used as an ultrasonic solution.



Romanoff's #1010 Liquid Compound is for cleaning and cut-down in all tumbling operations. It is for use with ceramic, plastic, and synthetic media. It is excellent for all metals, including pewter. Mix 1 oz of #1010 Liquid Compound to 1 gal. of water.

	Item #	Description	Size	US\$ / 1-2	US\$ / 3+
A	<b>80-0975</b>	Magnetic Powder Soap	5 lbs	43.70	36.50
B	<b>80-0976</b>	Super Shine Magnetic Soap	1 Gallon	67.30	63.95
C	<b>80-0985-GL</b>	Magic Blue Magnetic Soap	1 Gallon	38.50	36.00
D	<b>82-072</b>	#1010 Liquid Compound	1 Gallon	34.75	29.80

## Rotary Barrel Tumblers

This quiet and efficient rotary tumbler is an excellent workhorse for your tumbling needs. It features a continuous duty, fan cooled motor with thermal protection. The water tight hexagonal steel barrel will handle a combination of 15lbs (6.8kg) of steel shot and your work. Measures 11" x 11" x 11" (280 x 280 x 280mm).

	Item #	Description	US\$/1-2	3+
	<b>82-105</b>	Rotary Barrel Tumbler, 110V	199.00	193.15
	<b>82-105A</b>	Rotary Barrel Tumbler, 220V	210.70	204.50



## Romanoff Original Kramco Powder

**750 Compound:** This popular tumbling compound has two purposes: It can be used to brighten carbon steel shot, and/or used in combination with 910 tumbling compound to smooth rough surfaces on your work. This compound can be used in a rotary tumbler, vibratory, or magnetic tumblers as well.

Mix 1 oz of compound with 1 gal. of water.

**910 Compound:** This is one of the most popular burnishing compounds used worldwide. For use with steel shot and porcelain media. Excellent for all metals, such as gold, brass, bronze, copper, and pewter. A highly concentrated and economical compound which can be used with all types of tumbling surfaces.

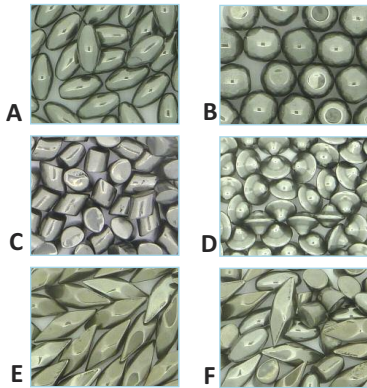
Mix 1 oz of compound with 1 gal. of water.

	Item #	Description	Package	US\$ / 1-4	5-9	10+
	<b>82-070-D</b>	750 Shot Cleaner Compound	1 lb	6.50	6.10	5.49
	<b>82-070-E</b>	750 Shot Cleaner Compound	50 lb	161.20	155.90	139.00
	<b>82-066-D</b>	910 Tumbling Compound	1 lb	7.00	6.65	5.95
	<b>82-066-E</b>	910 Tumbling Compound	50 lb	174.87	169.65	161.20



# Carbon Steel Media & #2 Mix

Romanoff offers steel shot in a variety of shapes and sizes. Carbon steel shot is popular because it is very economical. To properly maintain carbon steel shot, it should always be kept in a #750 and/or #910 tumbling compound solution. The #2 Carbon Steel Media Mix is a combination of oval 1/8" (3.18 mm), diagonal 1/8" (3.18 mm), and pins 1/8 x 3/8" (3.18 x 9.53 mm)



Photos Enlarged to Show Detail

	Item #	Shape	Size	US\$ / 1-9lbs	US\$ / 10-49lbs	US\$ / 50lbs +
A	<a href="#">82-038</a>	Oval	1/8" (3.18mm)	13.95	13.55	12.70
B	<a href="#">82-041</a>	Sphere	1/8" (3.18mm)	8.90	8.65	8.40
B	<a href="#">82-042</a>	Sphere	3/16" (4.76mm)	8.40	8.15	7.92
C	<a href="#">82-045</a>	Diagonal	1/8" (3.18mm)	12.45	11.60	10.79
D	<a href="#">82-048</a>	Balcone	1/8" (3.18mm)	13.90	13.10	12.80
E	<a href="#">82-051</a>	Pins	1/16 x 9/32" (1.59 x 7.14mm)	26.70	25.90	25.30
E	<a href="#">82-052</a>	Pins	1/8 x 3/8" (3.18 x 9.53mm)	17.60	16.10	14.85
F	<a href="#">82-054</a>	#2 Mix	Oval, Pins, Diagonal	15.30	14.55	13.90

# Stainless Steel Media #2 Mix



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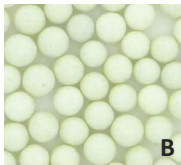
Our stainless steel media #2 mix is highly resistant to corrosion and only occasionally requires cleaning using the #750 cleaner compound. The Stainless Steel Media #2 Mix is a combination of 5/32" (3.97 mm) spheres, 1/8" (3.18 mm), diagonal 1/8" (3.18 mm), and pins 1/8 x 3/8" (3.18 x 9.53 mm).

Item #	Description	US\$ / 1-9lbs	US\$ / 10-49lbs	US\$ / 50lbs +
<a href="#">82-054-SS</a>	Stainless Steel Media #2 Mix	22.90	21.15	19.49

# Porcelain and Quartz Media



A



B



C

**Porcelain Media:** Is used to burnish/polish your work prior to final polishing. Porcelain media works best with our #1010 liquid compound concentrate

**Quartz Media:** Our pink, conical cones are a synthetic plastic media used for a medium to fast cut. They are commonly used in vibratory and rotary tumblers. It is a long lasting clean media and leaves no slimy film on your work. Our quartz media works best with our #1010 liquid compound concentrate.

	Item #	Shape	Size	US\$ / 1-9lbs	US\$ / 10-49lbs	US\$ / 50lbs +
A	<a href="#">82-1070</a>	Porcelain Angular	5/32 x 3/16" (7.94 x 4.76 mm)	6.89	5.97	5.10
B	<a href="#">82-1073</a>	Porcelain Ball	4 mm	7.39	7.19	6.90
B	<a href="#">82-1074</a>	Porcelain Ball	6 mm	6.53	6.29	5.97
C	<a href="#">82-1051</a>	Quartz Media Conical	3/8" (9.5 mm)	4.19	3.80	3.59

Photos Enlarged to Show Detail

# Meta-Gloss Paste and Crushed Shells



A



B



C



D

Photos Enlarged to Show Detail

**Meta-Gloss:** Is a pasty green-colored rouge compound commonly mixed with walnut shells and used in a vibratory or rotary tumbler to produce a brilliant final shine on your work.

**Crushed Walnut Shell:** Is primarily used in dry tumbling applications. Normally, crushed walnut shells are mixed with Meta-Gloss to produce a brilliant final shine.

**Crushed Walnut Shell with Rouge:** Crushed walnut shells, when impregnated with red rouge compound, will produce a final polish on gold, brass, copper, and bronze. Commonly used in vibratory and rotary tumblers.

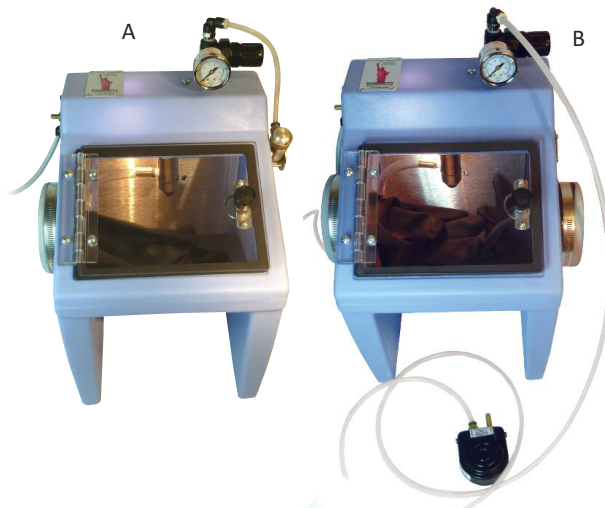
**Wood Pegs:** Are an excellent media for a final mirror finish on pre-polished pieces with Meta-Gloss. They can also be used by themselves for highlighting lacquered parts for an antique effect in rotary or vibratory tumblers.

	Item #	Description	Size	US\$ / 1-9 ea.	US\$ / 10 +
A	<a href="#">82-075</a>	Meta-Gloss Paste Rouge	1 gal	79.80	--
B	<a href="#">82-077-C</a>	Crushed Walnut Shell, Coarse	1 lb	2.90	2.60
C	<a href="#">82-085</a>	Crushed Walnut Shell with Rouge	1 lb	3.85	3.15
D	<a href="#">82-078-50</a>	Wood Pegs, 1/8" x 3/8"	50 lbs	191.53	--



## E-Z Viewer™ / E-Z Blaster™

The Romanoff made E-Z View™ / E-Z Sand Blaster™ removes hardened investment from castings leaving a rich satin finish. The one piece polymer cabinet never rusts or leaks. Features adjustable pressure regulator, automatically recirculates, self-cleaning ceramic nozzle, bright light for easy viewing & double filter bag to insure clean dust free interior and 5 lbs. of Quartz Media. Excellent for producing different satin finishes on all surfaces. Available in one and two-handed models (Two-handed model has foot pedal to control sand/air flow). Made in the USA.



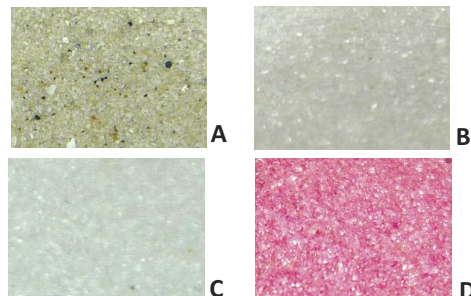
Item #	Description	Each/US\$
A <b>48000-R</b>	Romanoff E-Z View / E-Z Sand Blaster - 1 Hand (110V)	339.00
A <b>48010-R</b>	Romanoff E-Z View / E-Z Sand Blaster - 1 Hand (220V)	349.00
B <b>48000-R-2</b>	Romanoff E-Z View / E-Z Sand Blaster - 2 Hand (110V)	459.00
B <b>48010-R-2</b>	Romanoff E-Z View / E-Z Sand Blaster - 2 Hand (220V)	469.00

**See page 64 for Silent Air Compressors**

## Abrasive Blasting Media

Sold in 5 lb. containers and are free of impurities. Most popular for applying matte & satin finishes.

Item #	Description	Finish	Each/US\$
A <b>7108</b>	Magic Sand	Fine Sparkle	14.50
B <b>86-007-5</b>	Glass Beads	Fine Matte	14.50
C <b>86-008-5</b>	Glass Beads	Medium Matte	14.50
D <b>86-019-1</b>	Crushed Ruby Abrasive	Medium Sparkle	14.50



## Deluxe Jewelers Benches



Romanoff offers two hardwood style benches. The Deluxe Bench has 3 storage drawers and 2 aluminum catch trays. The Standard Bench has 3 storage drawers and one aluminum bottom drawer. Both styles come with skirted legs. These benches are Heavy Duty. Truck Shipping Only. Made In USA.

Item #	Description	Each/US\$
A <b>83-107</b>	Standard Work Bench 37.5"W x 18.5"D x 36"H, 90lbs	495.00
B <b>83-109</b>	Deluxe Work Bench 36.5"W x 24 D x 38"H, 130lbs	998.75
C <b>B5-101</b>	Bench Pin 6-1/4" x 2-1/2"	2.50





# Donaldson Torit Vibra Shake Dust Collector

Models VS-550, -1200, -1500, -3000

242-011



- All units operate on standard 208/220V 3-phase 60 cycle.
- \*Alternate voltages, phase and cycle are available upon special order
- \*Model VS-3000 has two VS-1500 filters
- \*Motor starters are required for all models, part #242-009-CB

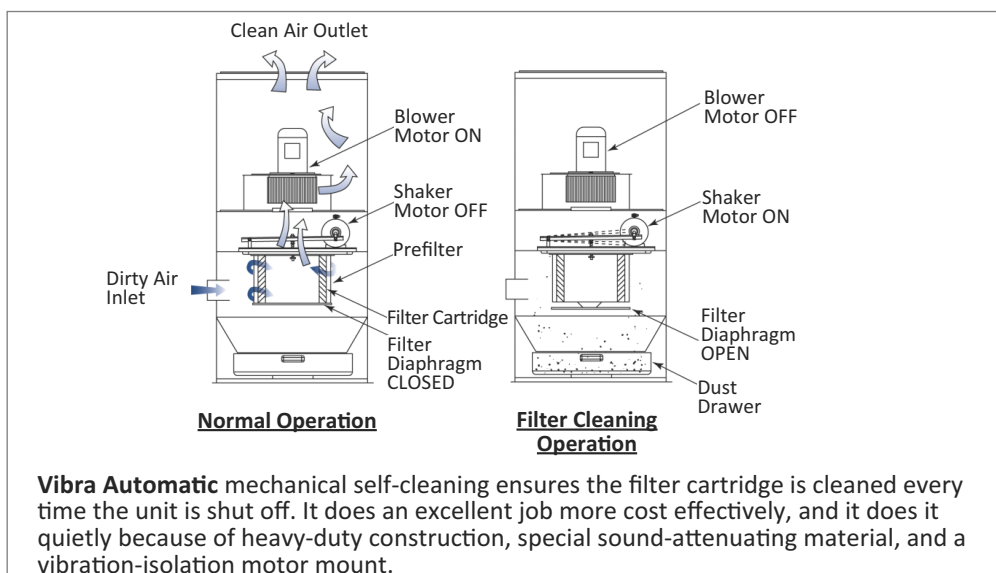
Item #	Description	Each
242-009-CB	Control Box	\$329.00

A self-cleaning collector for intermittent applications where high collection efficiency is essential, such as reclaiming precious metals.

- Two-stage cartridge for high-efficiency filtration on both coarse and fine dusts.
- Compact, self-contained collector design allows placement flexibility and saves floor space.
- Preassembled for easy, low-cost installation - no need for compressed air.
- Selection of inlet size and location for installation flexibility.
- Recirculates filtered air saving heating and cooling costs.

**Vibra Shake cartridge filter features patented Pleatloc™ corrugation that assures uniform pleat spacing for better self-cleaning and longer filter life.**

- Filter screen captures coarse and fibrous particles.
- Submicron particulates pass through the filter screen and are trapped by the inner layer of media.
- Galvanized outer liner protects filter media.
- Easy filter changeout for quicker maintenance.



Item #	Model #	Nominal Air Flow	Horsepower	Dimensions	Number of Polishing Heads	Sound Level dB(A)**
242-011	VS-550	550 CFM	1	24 ¾" x 30 ¾" x 52 ¼"	2	490
242-012	VS-1200	1200 CFM	3	24 ¾" x 30 ¾" x 62 ¼"	4 - 6	510
242-013	VS-1500	1500 CFM	5	24 ¾" x 30 ¾" x 68 ¼"	6 - 8	525
242-014	VS-3000	3000 CFM	7.5	51 ¾" x 33" x 75 ¼"	10 - 12	1050

All models are available in 220V, 50 cycle as special order.

**Call for Pricing**

## Double Spindle Dust Collector



Dims: 33.5" x 22" D x 12" H. Weight 92 lbs.

The Romanoff Double Spindle Dust Collector has large intake openings positioned behind the arbor shafts, so that even the largest size buff can be used. Its lighted hood is designed to provide maximum air movement and create a powerful suction of 465 CFM. Dust, lint, polishing powders, filings, etc. are quickly removed from the air, thereby keeping your store or shop clean. Made in USA.

Item #	Description	US\$ / Each
87-003B	Romanoff Double Spindle Dust Collector, 110V	495.00
87-003B/220	Romanoff Double Spindle Dust Collector, 220V	519.00
87-003B-F	Romanoff Double Spindle Dust Collector Replacement Filter 2" x 32" x 2"	19.90

# Dust Collectors



A

The Cartridge Dust Collector was designed to produce a strong suction and be placed into small spaces. These units have a round cartridge filter that can be easily removed and the filter has an extra outer spun filter to prolong it's life. These units can still produce suction up to 4-6 feet away with the proper hose. Both units have a built in muffler to reduce the noise down to 59 Db.



Romanoff Bag Style Dust Collectors are reliable and low maintenance. They are available in 1/2, 1, or 3 HP models. Each has a bag filtration system made of cotton sateen filters for maximum efficiency. All units have an upper silencer to minimize noise levels, built-in dust tray and manual foot pedal for filter cleaning.



Romanoff Deluxe Double Polishing System consists of a double spindle, 1/2 HP Polishing Motor with 1 HP Vacuum. This enclosed system captures particles down to 1/3 micron with 99% efficiency.

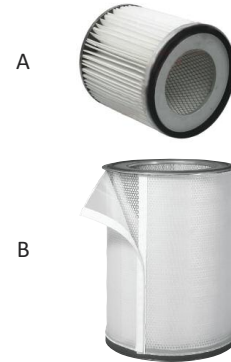
	Item #	Description	CFM	Dimensions	Weight	Each/US\$
A	87-012	Romanoff 1 HP Cartridge Dust Collector, 2-Inlet Collector 110V	830	14 x 28 x 16"	97 lbs	1395.00
A	87-0125	Romanoff 1 HP Cartridge Dust Collector, 4-Inlet Collector 110V	1100	18 x 29 x 21"	157 lbs	1522.50
B	87-010	Romanoff #60U, 1/2HP Dust Collector, 110V	400	15" x 15" x 23 1/4"	80 lbs	821.89
C	Z42-009-H	Romanoff 1HP Bag-Style Dust Collector 110/220V/15 amp	830	22.5"w x 25"d x 39"	280 lbs	1995.00
D	87-006	Double Position Polishing System, 1/2 HP Motor 1 HP Vacuum	1100	48" x 24" x 43"	247 lbs	3485.00

## Replacement Filters and Hoses



	Item #	Description	US \$/Ea.
A	87-012-F	Romanoff 1HP 830 CFM Cartridge Filter	206.56
A	87-0125-F	Romanoff 1HP 1100 CFM Cartridge Filter	229.00
B	Z42-011-1	Torit VS-550, 1HP, 16.6"W x 10"L	359.00
B	Z42-012-1	Torit VS-1200, 3HP, 16.6"W x 10"L	462.90
B	Z42-012-1R	VS-1200 Generic, 3HP, 16.6"W x 10"L	319.00
B	Z42-013-1	Torit VS-1500, 5HP, 16.6"W x 26"L	519.00
B	Z42-013-1R	VS-1500 Generic, 5HP, 16.6"W x 26"L	397.00
B	Z42-012-RF	Torit Typhoon Universal, 3HP, 17"W x 18 1/2"L, Cylinder Shape	289.00
-	Z42-030-PF	Gold Tornado 3HP & 7 1/2HP Prefilter	194.70
-	Z42-030-1NF	Gold Tornado 3HP, Cone Shape 14 x 20 x 27 1/2"	619.36

Cartridge Filter with Pre-Filter



	Item #	Description	Quantity	US \$/Ea.
C	Z42-366-1C	Torit #54 1/2 HP, 7 x 12"	24 Bags	316.40
C	87-010A	Romanoff #60U 1/2HP, 12 x 6 1/4"	14 Bags	273.85
C	Z42-009-1C	Romanoff & Torit #84 3HP, 18 x 20"	30 Bags	528.70
-	87-055-F	D/C Volkes RR6J 5HP, 24 x 26"	18 Pockets	819.00
-	87-050F	Handler #101 1HP, 17 1/4 x 11"	24 Bags	449.00

Bag Style Cotton Sateen Filters



	Item #	Description	US \$/FT
D	87-017	3" Grey Reinforced D/C Hose	10.30



## Enclosed Polishing System

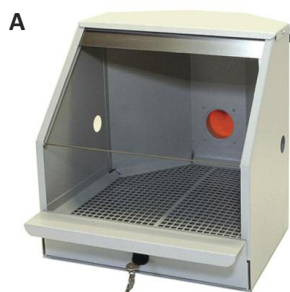


The Romanoff Single Polishing System with 1/2 HP dust collector and silencer has an enclosed hood and 1/2 HP, 3,450 RPM polishing motor. 110V / 220V, 50/60 cycle.

	Item #	Description	Dimensions	CFM	US\$ / Each
A	<b>87-024</b>	Single Polishing System	24"W x 24"D x 48"H	400	1,795.00
B	<b>87-025</b>	Double Polishing System	48"W x 24"D x 48"H	400	1,979.00



## Spindles, Collection Box & Accessories

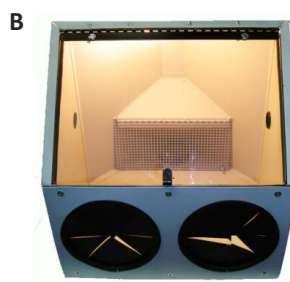


### Romanoff Gold Collection Box

The GOLD SAVER has a wire mesh screen which allows the dust to fall into the locked sliding drawer below. Added features include: a fluorescent light under the top of the hood for shadowless illumination and a clear acrylic frontal shield. Dimensions: 16"H x 16"W x 16"D.



Baldor Ramforce polishing motors are known for their quality and heavy duty design. They require a tapered and threaded 5/8" spindle, part number 87-107R.



The Romanoff Grinding & Polishing Box is designed to be used with a handpiece or polishing motor and traps all precious or harmful dust. The 3" rear hose inlet, connects to a vacuum. The 12.5" x 8.5" flip-up window allows access to the lighted work chamber. 14"W x 16"D x 16"H.



D

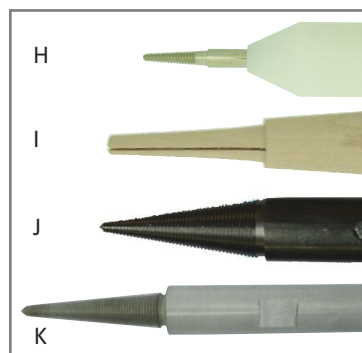
3450RPM  
5/8" Shaft  
3/4HP



F



E



	Item#	Description	Each US\$
A	<b>87-029</b>	Romanoff Gold Collection Box 110V	289.51
B	<b>87-030</b>	Enclosed Hood/Polishing Box	289.51
C	<b>242-121</b>	Baldor Right Hand 1/2HP Motor (110/220V, 1PH)	489.00
C	<b>242-131</b>	Baldor Right Hand 3/4HP Motor (220/380V, 3PH)	439.00
C	<b>242-132</b>	Baldor Left Hand 3/4HP Motor (220/380V, 3PH)	439.00
D	<b>242-121-R</b>	Romanoff Right Hand 3/4HP Motor (110/220V, 1PH)	349.00
E	<b>87-014A</b>	5/8" Right Hand Arbor & Flange, Screw-On Type	33.95
F	<b>87-0120</b>	Adjustable Sta-Clean Shield/Fits any Hood, 6"W x 9"H x 1/8"	26.95
G	<b>242-301</b>	Romanoff Professional Polishing Hood 12 3/4" w x 16" d x 15" h	109.45
H	<b>92-024</b>	White Nylon MK Dental Brush Mandrel 3 3/8"L / 85mm, Right	10.55
I	<b>92-113</b>	Tapered Split Wood Mandrel for Sandpaper	2.90
J	<b>87-104R</b>	5/8" Set Screw 4 1/4" / Tapered Right Hand Spindle	16.70
K	<b>87-107R</b>	5/8" Screw On 6" / Tapered Right Hand Spindle	18.25
K	<b>87-107L</b>	5/8" Screw On 6" / Tapered Left Hand Spindle	18.25



## Paramount Split Lap Wheels

These high-quality split and beveled lapping wheels are the standard of excellence in split lap performance. Extra care in the manufacture of these wheels provides extra special results in quality polishing and in long lasting performance. Each wheel is balanced to ensure smooth performance. During manufacture, the felt is steamed to shrink and thicken the fibers, and then it is pressed into a specific hardness. All lap wheels have a 1/8" (3.18mm) pin hole and they are 1/2" (13mm) thick and beveled. Available in a combination of five sizes and four hardnesses, as listed.

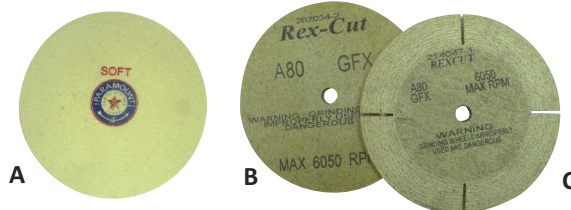


Item #	Size	Hardness	US\$ / 1-3	US\$ / 4+
89-0264	4" x 1/2"	Medium	32.70	29.75
89-0265	4" x 1/2"	Hard	32.40	30.90
89-0262	4" x 1/2"	Flint Hard	48.50	47.05
89-026	5" x 1/2"	Medium	34.15	32.90
89-026-5	5" x 1/2"	Hard	37.70	35.85
89-026-R	5" x 1/2"	Rock Hard	39.19	37.25
89-027	6" x 1/2"	Medium	35.10	33.60
89-028	6" x 1/2"	Hard	36.90	35.10
89-029	6" x 1/2"	Rock Hard	41.05	38.95

Item #	Size	Hardness	US\$ / 1-3	US\$ / 4+
89-030	6" x 1/2"	Flint Hard	48.75	46.80
89-031	7" x 1/2"	Medium	44.25	42.05
89-032	7" x 1/2"	Hard	51.90	49.85
89-033	7" x 1/2"	Rock Hard	54.75	53.40
89-034	7" x 1/2"	Flint Hard	65.77	63.35
89-035	8" x 1/2"	Medium	51.50	49.50
89-036	8" x 1/2"	Hard	58.88	56.90
89-037	8" x 1/2"	Rock Hard	68.80	66.10
89-038	8" x 1/2"	Flint Hard	77.15	74.10

## Paramount Blind Felt Wheels & GFX Wheels

	Item #	Size	Hardness	US\$ / 1-3	US\$ / 4+
A	89-001	4 x 1/2"	Soft	10.45	9.69
A	89-005	4 x 1/2"	Medium	15.15	14.39
A	89-009	4 x 1/2"	Hard	16.70	14.90
A	89-002	6 x 1/2"	Medium	21.70	18.95
A	89-006	6 x 1/2"	Hard	33.15	31.50
A	89-010	6 x 1/2"	Rock Hard	35.40	33.65
B	91-119-180	6 x 1/4 x 1/2"	180 Grit	34.90	32.90
C	91-119-80SB	6 x 1/4 x 1/2"	80 Grit	40.35	36.35



**A. Felt Wheels:** Made of the finest wool felt available and tightly compressed. Holds tripoli or rouge for polishing and buffing 1/8" PH arbor hole.

**B. GFX Wheels:** Aluminum oxide abrasives combined with a blend of fiber and rubber bonding. These are used for grinding and cutting felt split laps.

**C. GFX Wheels:** Split and beveled for your split lapping needs. Because of the blended abrasives and fibers, it is popular for sprue grinding and fast cutting.

## Romanoff Staonal Black Markers

Romanoff's Staonal Black Markers are used for blackening the top of split laps, therefore allowing the light to pass through easier and eliminating all reflection. Sold in box of 12 pieces.

Item #	Description	US\$ / 1-2	US\$ / 3+
89-000	Romanoff Black Marker	8.50	7.65



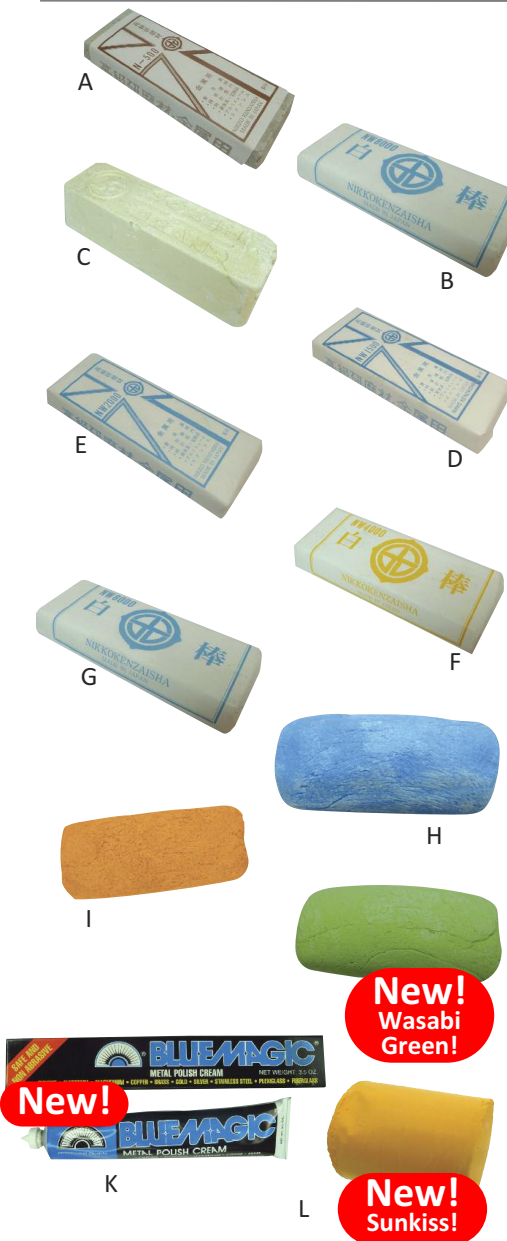
## Romanoff Split Lap Station

Split lapping is the best method for achieving a flat surface when polishing. The open grooves on the mounted split laps will allow light to pass through, while the polisher is "lapping" the sides of the metal part. This 3450 RPM 1/2 horsepower ball bearing motor is built for professional use in a variety of tough applications. Features rugged iron base, on/off switch, 3" inlet for connection to dust collector, heavy duty steel hood, adjustable light socket and tapered spindle.

Item #	Description	US\$ / Each
87-0265	110V Split Lap Station	395.00
87-0265A	220V Split Lap Station	419.00
87-104L-2	5/8" Set Screw, 6" Tapered Left Hand Spindle	18.83



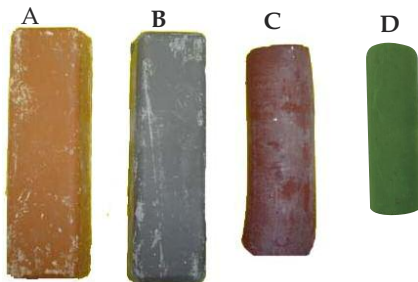
# Hi-Grade Platinum & Gold Polishing Compounds



- A) Romanoff Platinum Greystar** is excellent for removing surface roughness and scratches during lapping. Can also be used as a mild tripoli platinum or stainless steel compound.
- B) Platinum First Cut** is considered the best compound for removing roughness and heavy scratches from platinum.
- C) White Gold First Cut** is a unique tripoli style paste. It will quickly remove roughness and scratches from the metal surface and prepare it for the final polish.
- D) Platinum Lapping Compound** is absolutely the best lapping compound for platinum. Will not leave scratches.
- E) Platinum Medium Cut** has an effect similar to what white diamond does for gold, which is to remove light scratches and blemishes from platinum.
- F) Romanoff Fine Cut** is a finer cutting compound to remove hairline scratch marks and swirls.
- G) Romanoff Super Shine Polish** guaranteed to outperform any other platinum polish on the market. Will not leave scratches when used with a clean Romanoff blue buff. Leaves a deep, high polish on your platinum.
- H) Blue Picasso** is an extremely popular polishing compound used for the final finish on platinum and stainless steel.
- I) White Gold Super Shine Rouge** is an excellent polishing compound that offers the highest luster on white gold. This paste will leave a deep rhodium finish without any scratches.
- J) Romanoff Wasabi** is a new and unique polishing compound which produces an excellent reflective surface on platinum, stainless steel, and titanium.
- K) Blue Magic** is a safe and non-abrasive cream for all metal surfaces. It can be used with buffers and polishes to remove tarnish and oxidation and provide a lasting protective coating on brass, copper, silver, aluminum, stainless steel, or gold.
- L) Sunkiss** is the finest polishing compound available for removing minor scratches and producing a mirror finish on all precious metals with minimum effort.

Item #	Description	Grit	Weight	Price Per Bar	
				US\$ / 1-4	US\$ / 5+
A 93-019-GREY	Platinum Greystar	500	350g	19.25	16.50
B 93-019-800	Platinum First Cut	800	420g	26.25	23.65
C 93-019-800W	White Gold First Cut	700	800g	18.90	17.05
D 93-019-1500	Platinum Lapping Compound	1500	420g	31.20	27.90
E 93-019-2000	Platinum Medium Cut	2000	400g	32.50	29.25
F 93-019-4000	Platinum Medium/Fine Cut	4000	390g	32.50	29.25
G 93-019-8000	Platinum Super Shine Polish	8000	450g	33.60	30.20
H 93-019-8000B	Platinum Blue Picasso Final Polish	8000	350g	17.80	16.10
I 93-019-8000W	White Gold Super Shine Polish	8000	350g	21.25	19.20
J 93-019-8000GP	Wasabi Green High Shine	9000	350g	28.19	26.25
K 93-020-BM1	Metal Polishing Compound	400	100g	11.50	9.75
L 93-019-8000SK	New Sunkiss Polishing Compound	8000	110g	26.25	24.20

## Water Soluble Polishing Compounds



All water soluble polishing compounds are a water based material designed for easy breakdown and removal during ultrasonic and washout cycles.

Item #	Description	Bar Size	Price Per lb US\$ / 1-9lbs	Price Per lb US\$ / 10-49lbs	Price Per lb US\$ / 50+ lbs
A 93-002-WS	Tripoli	1 lb	2.89	2.61	1.95
B 93-004-WS	Greystar	1 lb	5.29	4.77	4.29
C 93-006-WS	Red Rouge	1 lb	5.94	5.35	4.85
D 93-011-WS	Green Rouge	1/4 lb	10.45	9.42	8.70

- A) Tripoli** is an aggressive cutting compound to remove scratches and marks from all soft metals.
- B) Greystar** is a somewhat greasy compound, popular for lapping and surface cutting.
- C) Red Rouge** is used to produce a final high polish in yellow gold.
- D) Green Rouge** is a chromium-based compound most commonly used for light cutting and final polishing of silver, white gold, stainless steel, palladium, and platinum.

# Cocker Weber Brushes



Cocker Weber Brushes are made of pure chungking bristle and a hard Wood hub. They are offered in two qualities: Standard (red/green) and Superior (blue). A USA-made industry standard.



Item #	Quality	Style	Trim Hair	Rows	Hub Diameter	US\$ / 1-24	US\$ / 25-143	US\$ / 144+
89-113-BL	Red/Green	1C	3/8" (9.5mm)	1	1-7/8"	1.39	1.19	0.98
89-113	Blue	1C	3/8" (9.5mm)	1	1-7/8"	1.89	1.69	1.49
89-114-BL	Red/Green	1B	1/2" (12.7mm)	1	1-7/8"	1.39	1.19	0.98
89-114	Blue	1B	1/2" (12.7mm)	1	1-7/8"	1.89	1.69	1.49
89-115-BL	Red/Green	1A	5/8" (15.9mm)	1	1-7/8"	1.39	1.19	0.98
89-115	Blue	1A	5/8" (15.9mm)	1	1-7/8"	1.89	1.69	1.49
89-116-BL	Red/Green	2C	3/8" (9.5mm)	2	1-7/8"	1.69	1.19	1.35
89-116	Blue	2C	3/8" (9.5mm)	2	1-7/8"	2.49	1.69	1.99
89-117-BL	Red/Green	2B	1/2" (12.7mm)	2	1-7/8"	1.69	1.49	1.35
89-117	Blue	2B	1/2" (12.7mm)	2	1-7/8"	2.49	2.25	1.99
89-118-BL	Red/Green	2A	5/8" (15.9mm)	2	1-7/8"	1.89	1.69	1.49
89-118	Blue	2A	5/8" (15.9mm)	2	1-7/8"	2.89	2.49	2.19
89-1116	Blue	7A	5/8" (15.9mm)	3	1-1/4"	2.59	2.34	2.11
89-110	Blue	3A	5/8" (15.9mm)	3	1-7/8"	4.16	3.75	3.39
89-112	Blue	6A	5/8" (15.9mm)	2	1-1/4"	2.09	1.89	1.59
89-111	Blue	6C	3/8" (9.5mm)	2	1-1/4"	1.96	1.77	1.59
89-109	Blue	5C	3/8" (9.5mm)	1	1-1/4"	1.79	1.62	1.46

## Traditional Polishing Compounds

Item #	Description	Bar Size	Price Per lb.		
			US\$ / 1-9lbs	US\$ / 10-49lbs	US\$ / 50+ lbs
A 93-002	Tripoli, 1st Cut	1 lb	3.59	3.25	2.65
B 93-003	White Diamond, 2nd Cut	1 lb	3.29	2.87	2.45
C 93-004-SB	Greystar, 2nd Cut	1 lb	3.89	3.49	2.95
D 93-009-RND	Yellow Rouge, Final Polish	1/2 lb	4.49	3.96	3.39
E 93-006-RND	Red Rouge, Final Polish	1 lb	9.39	8.46	7.19
F 93-011	Green Rouge, Final Polish	1/4 lb	11.59	10.45	9.60
F 93-011-1	Green Rouge, Final Polish	1 lb	11.29	10.15	9.29
G 93-005	Lea-C Compound	2 lb	7.55	6.85	6.25
H 93-007	Fabulustre	1 lb	7.89	7.09	6.39
I 93-012	Black Rouge	1/4 lb	11.60	10.25	8.97

A) Aggressive cutting action on all metals. The brown compound removes scratches and smooths the surface. Used with a treated yellow buff or brush.

B) A medium grit compound used as a second cut on all metals used with a treated buff or stitched white buff.

C) A fast-cutting compound mostly used for lapping to achieve a flat surface. Good for all metals.

D) A slightly abrasive polishing compound designed to give a high lustre finish on all precious metals.

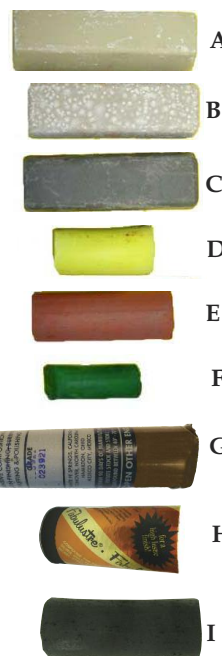
E) Most popular rouge used for the final finish on gold, silver, brass, and all non-ferrous metals.

F) A chromium base compound designed to give an extremely high lustre on gold, silver, chrome, stainless steel, white gold, and platinum.

G) A moist compound containing a fine grit to produce a satin finish, very popular for costume jewelry and gold plated jewelry.

H) Designed to leave a high-lustre finish on all metals. Can also be used to remove scratches in plastic and fiberglass.

I) **Black Rouge** is an excellent compound for light to medium scratch removal, as well as a high lustre on silver jewelry.





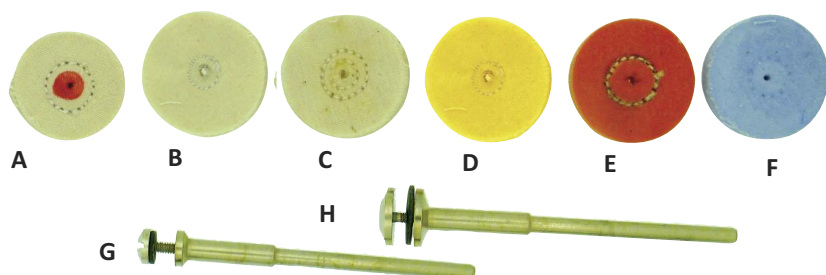
## Felt Inside Ring Buffs



Romanoff felt sticks are made from high grade wool felt, which is permanently mounted to a tapered wood mandrel. They can be used for cutting and polishing the inside of rings and curved surfaces with various polishing compounds. Felt sticks are placed onto a tapered spindle from a polishing motor.

	Item #	Diameter	Length (Felt Area Only)	Finger Size	US\$ / 1-11	US\$ / 12+
A	<a href="#">89-560</a>	3/4" x 1-1/16"	6"	9 - 20	5.90	5.19
B	<a href="#">89-550</a>	1 1/16" x 1"	5"	8 - 17	4.35	3.79
C	<a href="#">89-530-P</a>	5/8" x 7/8"	4" (medium)	8 - 11	4.42	4.19
D	<a href="#">89-530</a>	5/8" x 7/8"	4" (firm)	8 - 11	3.05	2.85
E	<a href="#">89-510</a>	9/16" x 3/4"	3"	5 - 10	3.17	2.97
F	<a href="#">89-500</a>	5/16" x 9/16"	3"	1 - 5	3.33	3.09

## Miniature Muslin Buffs



Miniature Muslin Cotton Buffs, also known as Baby Buffs, are 16 ply and designed to be mounted onto a hand piece screw mandrel or polishing motor's tapered spindle.

White Baby Buffs are for a final standard polish.

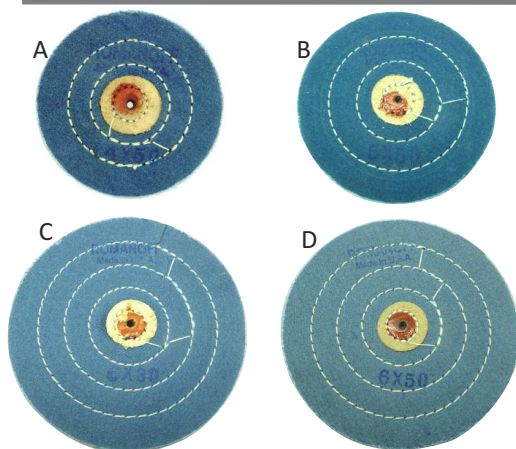
Yellow Baby Buffs are for pre-polishing and scratch removal.

Exclusive Romanoff Super Cut Orange Baby Buffs are impregnated with a cutting compound to speed up the pre-polishing process.

Exclusive Romanoff Super Shine Blue Baby Buffs are impregnated with a rouge to ensure a high lustre

	Item #	Color	Diameter	Rows of Stitching	US\$ / 1-11	US\$ / 12-59	US\$ / 60+
A	<a href="#">89-450</a>	White	7/8"	1	0.83	0.75	0.68
B	<a href="#">89-451</a>	White	1"	1	0.79	0.72	0.65
C	<a href="#">89-451-2</a>	White	1"	2	0.93	0.84	0.76
D	<a href="#">89-451-Y</a>	Yellow	1"	1	0.89	0.79	0.72
E	<a href="#">89-451-1</a>	Super Cut Orange	1"	1	2.96	2.77	2.60
F	<a href="#">89-451-BI</a>	Super Shine Blue	1"	1	3.29	3.14	2.91
G	<a href="#">92-105</a>	Plain Screwdriver Head (4.75mm)	3/32" (2.38mm) Shank		0.89	0.79	0.72
H	<a href="#">92-040</a>	Plain Screwdriver Head (8mm)	3/32" (2.38mm) Shank		1.19	1.08	0.97

## Blue Hi-Shine Platinum Buffs



Romanoff's Blue Hi-Shine Buffs are specially treated to give a uniform high shine on any metal, especially Platinum and White Gold. They will not leave "drag marks or fine scratches". Since these buffs have been introduced, polishers can now easily achieve a finer polish in less time. All blue buffs are stitched with a leather shellac center.

	Item #	Diameter	Ply	US\$ / 1-11	US\$ / 12+
A	<a href="#">89-054-B</a>	4"	50	4.49	4.04
B	<a href="#">89-061-B</a>	5"	50	7.09	6.39
C	<a href="#">89-064-B</a>	6"	30	7.49	6.75
D	<a href="#">89-068-B</a>	6"	50	7.98	7.19
D	<a href="#">89-070-B</a>	6"	60	9.55	8.59

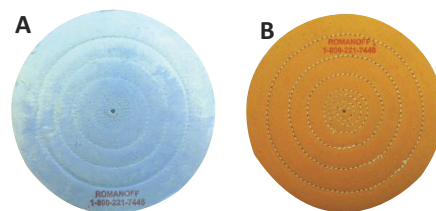
# Romanoff Super Impregnated Buffs

We are proud to offer our EXCLUSIVE LINE OF SPECIALTY BUFFS, made from the highest quality 100/100 weave.

Our **Super Shine Blue Buffs** are already impregnated with rouge to ensure the highest possible luster on all metals, especially Platinum, Silver and White Gold. Has 3 rows of stitching and a 3mm diameter center hole.

Our **Super Cut Orange Buffs** are impregnated with a cutting compound to speed up the pre-polishing process. Has 4 rows of stitching and a 3 mm center hole.

	Item #	Description	US\$ / 1-11	US\$ / 12+
A	<b>89-064-BI</b>	Super Shine Blue Buff 6x40 ply	27.90	25.40
B	<b>89-0946-1</b>	Super Cut Orange Buff 6X40 ply	27.90	25.40



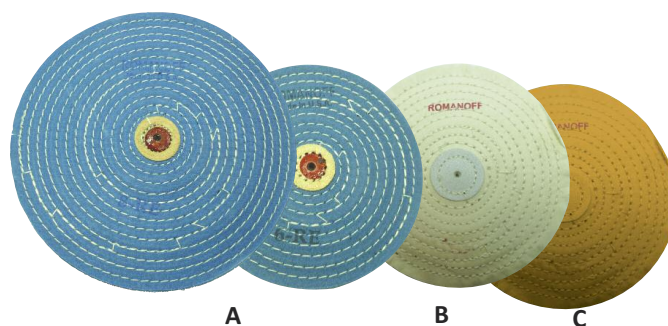
## Razor Edge Buffs

The Romanoff **Long Lasting Blue Buff** is specially treated to give a uniform high shine on all metals, especially Platinum, White Gold, and Silver.

The **Yellow Buff** is for the first cut and removal of the outer rough surface, prior to the final Polish.

The **White Buff** is soft for the final finish. All razor edge buffs are 16 ply, stitched, and with a leather center.

	Item #	Color	Diameter	US\$ / 1-11	US\$ / 12-35	US\$ / 36+
A	<b>89-084-B</b>	Blue	6"	4.98	4.59	4.09
A	<b>89-103-B</b>	Blue	8"	10.89	9.81	8.86
B	<b>89-078</b>	White	4"	3.39	3.19	2.92
B	<b>89-079</b>	White	5"	3.49	3.29	3.09
B	<b>89-080</b>	White	6"	3.89	3.54	3.39
C	<b>89-082</b>	Yellow	4"	3.89	3.54	3.39
C	<b>89-083</b>	Yellow	5"	4.89	4.54	4.39
C	<b>89-084</b>	Yellow	6"	5.84	5.45	5.19



## Yellow Buffs

Yellow Muslin Buffs have been specially treated so that they are stiffer and will outlast white muslin buffs by 2-3x. They are well suited for first stage polishing with cutting compounds such as tripoli, white diamond, and greystar.

They are an 80/86 weave with leather center.



Item #	Dia.	Ply	Rows of Stitching	US\$ / 1-10	US\$ / 11-39	US\$ / 40+
<b>89-0844</b>	4"	30	3	3.06	2.79	2.39
<b>89-094</b>	4"	50	3	3.84	3.46	2.94
<b>89-0954</b>	5"	20	3	3.45	3.15	2.69
<b>89-0955</b>	5"	30	3	3.72	3.35	2.89
<b>89-095</b>	5"	50	3	5.10	4.59	3.91
<b>89-096</b>	6"	30	4	5.25	4.73	4.05
<b>89-097</b>	6"	50	4	6.90	6.21	5.29
<b>89-098</b>	6"	60	4	7.74	6.97	5.93
<b>89-100</b>	7"	60	4	11.54	10.39	8.89

## White Buffs

White Muslin Buffs are made of the finest quality cotton material.

They have an 80/80 weave and leather center.

They are most commonly used for final polishing with red, green, and other final finish compounds.

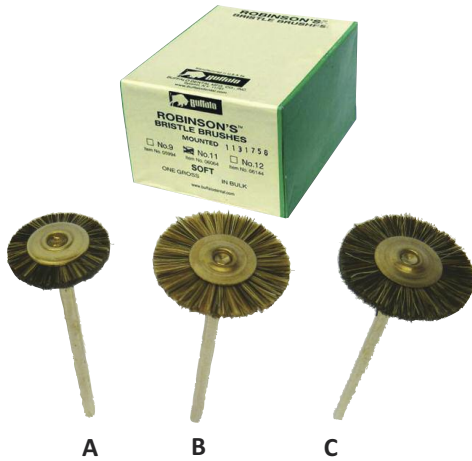


Item #	Dia.	Ply	Rows of Stitching	US\$ / 1-10	US\$ / 11-39	US\$ / 40+
<b>89-050</b>	4"	30	3	2.19	1.98	1.83
<b>89-052</b>	4"	40	3	3.09	2.89	2.46
<b>89-053</b>	4"	50	1	3.89	3.54	3.39
<b>89-054</b>	4"	50	3	3.15	2.84	3.09
<b>89-058</b>	5"	30	3	3.10	2.79	3.90
<b>89-059</b>	5"	40	3	3.69	3.39	3.09
<b>89-061</b>	5"	50	3	4.65	4.29	3.90
<b>89-062</b>	5"	60	3	5.90	5.45	5.19
<b>89-064</b>	6"	30	3	4.98	4.49	4.09
<b>89-067</b>	6"	50	1	7.96	7.39	6.89
<b>89-068</b>	6"	50	4	6.90	6.29	5.89
<b>89-070</b>	6"	60	4	7.17	6.91	6.69



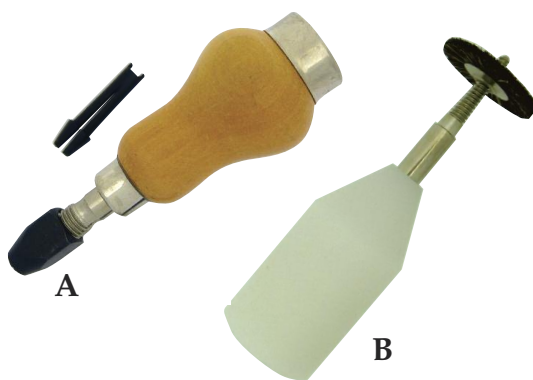
## Abbott-Robinson's Mounted Brushes

This well known brand has been consistently made for over 50 years using the highest grade natural bristles, they have a 3/32", (2.38mm) shank. They are used for cutting and polishing in hard to reach areas. Sold by the Gross. Made in USA.



Item #	Description	144 Pieces Per Box	
		US\$ / 1-2	US\$ / 3+
A 89-1210	#9 Mounted Soft (9/16")	108.90	102.60
B 89-154-#12	#12 Mounted Hard (3/4")	113.62	104.55
C 89-1212	#12 Mounted Soft (3/4")	111.72	103.90

## Wooden Handy Chuck and MK Spindle



**A.** Handy chucks will hold 3/32" (2.38mm) and 1/8" ( 3.18mm) shanks or mandrels. The handy chuck has a tapered hole that will fit snugly onto the tapered shaft of your polishing motor.

**B.** The Romanoff MK Right Hand Spindle is a steel threaded mandrel that is mounted in a hard plastic base. The base will attach to any standard polishing motor's tapered spindle.

Item #	Description	US\$ / 1-3	US\$ / 4+
A 89-490	Handy Chuck with 2 Collets	5.09	4.49
B 92-024	Romanoff MK Right Hand Spindle	10.55	8.45

## Original MK End Brushes

Mounted end brushes are mounted on a 3/32" (2.38mm) shank they are used for cleaning and polishing in hard to reach areas with polishing compounds.



Images Actual Size

Item #	Bristle	Bristle Length	Bristle Diameter	US\$ / 1-36	US\$ / 37-72	US\$ / 73+
A 89-124	ME-864 Hard	1/4"	3/16"	1.34	1.21	1.09
B 89-127	ME-860 Hard	1/4"	5/32"	0.89	0.81	0.73
C 89-125	ME-860 Hard	3/8"	3/16"	1.08	0.98	0.88
D 89-126	ME-860 Hard	1/2"	3/16"	1.15	1.04	0.94
E 89-128	ME-860 Hard	3/8"	1/4"	2.63	2.45	2.19
F 89-131	ME-961 Hard	9/16"	3/16"	2.73	2.46	2.23
G 89-132	ME-860 Soft	1/4"	5/32"	2.09	1.89	1.70
H 89-133	ME-860 Soft	3/8"	1/4"	2.70	2.43	2.19



## End Brushes

End brushes are used for polishing in between corners and hard-to-reach places. This 7-knot end brush is 2-5/8" (67mm) in length and has a 7/16" (11mm) diameter hub. The base will attach to any standard polishing motor's tapered spindle.

Item #	Description	US\$ / 1-11	US\$ / 12+
89-1207	7-Knot End Brush	3.07	2.92



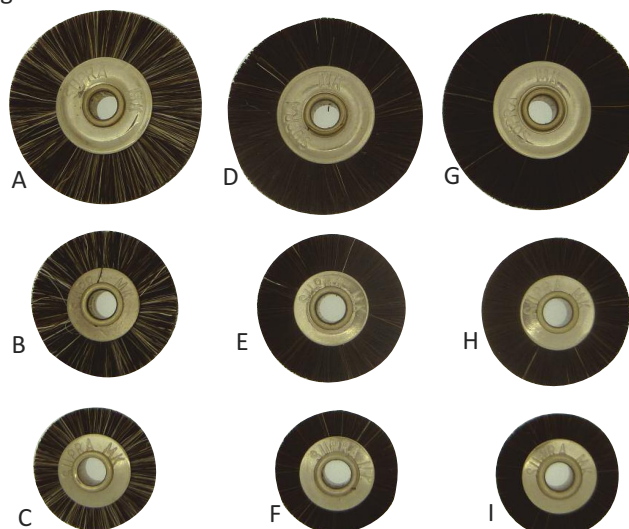
## Original MK Dental Brushes



Highest quality metal hub brushes provide you with the perfect brush for cleaning or polishing in hard-to-reach areas. Available in different hardnesses to offer the ideal hardness for your production needs. Sold by the gross. Made in USA.

	Item #	Diameter	Hardness	144 Pieces Per Box	
				US\$ / 1-2	US\$ / 3+
A	89-147	1"	Soft	87.70	82.45
B	89-146	3/4"	Soft	73.55	69.20
C	89-145	5/8"	Soft	81.19	76.35
D	89-151	1"	Medium	82.40	77.49
E	89-150	3/4"	Medium	71.25	66.98
F	89-149	5/8"	Medium	71.09	66.85
G	89-155	1"	Hard	82.40	77.49
H	89-154	3/4"	Hard	71.09	66.85
I	89-153	5/8"	Hard	71.09	66.85

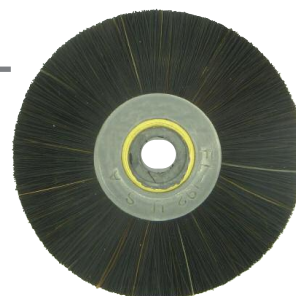
Images Actual Size



## Romanoff 2 Inch dental brush

This 2" tightly packed bristle brush features a lead center, so that it will thread securely onto a tapered spindle.

Item #	Diameter	Hardness	US\$ / 1-11	US\$ / 12+
89-174	2"	Hard	10.19	8.35



## Felt Wheels

	Item #	Style	Type	Size	US\$ / 1-24	US\$ / 25+
A	89-475	Knife Edge Wheel	Hard	1" (25mm)	1.15	1.04
A	89-476	Knife Edge Wheel	Hard	1.5" (38mm)	1.83	1.69
A	89-477	Knife Edge Wheel	Hard	2" (50mm)	2.17	1.98
A	89-478	Knife Edge Wheel	Hard	3" (76mm)	3.89	3.51
A	89-480	Knife Edge Wheel	Rock Hard	1" (25mm)	1.46	1.29
A	89-481	Knife Edge Wheel	Rock Hard	1.5" (38mm)	1.70	1.55
A	89-482	Knife Edge Wheel	Rock Hard	2" (50mm)	2.50	2.15
A	89-485	Knife Edge Wheel	Rock Hard	4" (102mm)	5.09	4.39
B	89-510-HD	Inside Ring Stick	Rock Hard	3" L (76mm)	3.25	2.77
C	89-486	Unmounted Cone	Hard	1"L x 1/2"W	1.45	1.24
D	89-0012-R	Square Edge Wheel	Hard	4"Dia x 1"W	20.22	--

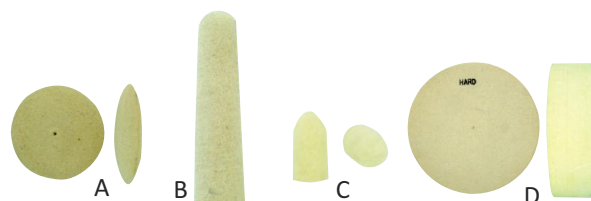
Felt wheels are used with rouges or cutting compounds for polishing different shaped surfaces.

**A.** Knife-Edged Felt wheels can be used as-is, or sharpened to reach tight areas or grooves.

**B.** Unmounted inside felt sticks can be shaped for a specific job, such as polishing long inside cylinders. Tapers from 9/16" to 3/4" in diameter.

**C.** Cones are used to polish round or cup-shaped surfaces. Requires a 92-106 Tapered Screw Mandrel.

**D.** Square Edge Felt Wheels are used for cutting and producing a high polish on flat surfaces.





## Elma-Sonics E-Series

- Micro-processor controlled 37 KHz transducer power, self-regulating generator
- Electronic diode display for time and temperature
- Auto-start temperature control / temperature selection
- Permanent sweep for an improved cleaning performance
- Brushed stainless steel cavitation-resistant tanks with calibrated fill level
- Ceramic heating elements tested and absolutely dry run proof
- Safety switch/off
- Available in 220V by special order



Item	Liquid Capacity	Inside Tank Size	Overall Dimensions	Weight	US\$ / Each
<b>81-200-SS</b>	1.75L / 0.50 gal.	6 x 5.5 x 4"	7 x 7.5 x 9"	4.5 lbs	359.00
<b>81-210-SS</b>	2.75L / 0.75 gal.	9.5 x 5.5 x 4"	12 x 7 x 8.5"	6 lbs	398.00
<b>81-220-SS</b>	5.75L / 1.50 gal.	12 x 6 x 6"	14.5 x 7.5 x 10.5"	10 lbs	698.00
<b>81-235-SS</b>	12.75L / 3.50 gal.	12 x 9.5 x 8"	14.5 x 11 x 12.5"	15 lbs	1,069.00
<b>81-240-SS</b>	18.00L / 5.00 gal.	13 x 12 x 8"	15.5 x 13.5 x 12.5"	18 lbs	1,289.00
<b>81-250-SS</b>	28.00L / 7.50 gal.	20 x 12 x 8"	22.5 x 13.5 x 12.5"	22.5 lbs	1,579.00

## Branson Heavy-Duty Ultrasonics

These industrial strength machines feature separate tank and generator, very heavy gauge stainless steel construction, solid state transistorized circuitry, replaceable transducers, and variable temperature control. These units are for the medium to large sized manufacturers. The powerful action of these units results in more efficient and quicker cleaning than with any other ultrasonic cleaning machines.



Item #	Model #	Capacity	Inside Tank Dimensions	Outside Tank Dimensions	Generator Dimensions	Electric Current	Shipping Weight	US\$ / Each
<b>Z49-025-1</b>	Tank 52B	5.25 gal. (19.5L)	10 x 12 x 10"D (254x305x254mm)	14 x 14 x 14"H (356x356x356mm)	15 x 14 x 7"H (381x356x178mm)	6.3 amps @ 115V 1-phase, 50/60 Hz	105 lbs	2,889.00
<b>Z49-025-2</b>	Generator 52B	5.25 gal. (19.5L)	10 x 12 x 10"D (254x305x254mm)	14 x 14 x 14"H (356x356x356mm)	15 x 14 x 7"H (381x356x178mm)	6.3 amps @ 115V 1-phase, 50/60 Hz	105 lbs	1,669.00
<b>Z49-028-1</b>	Tank 100B	10 gal. (38L)	12 x 16 x 12"D (305x407x305mm)	16 x 18 x 16"H (407x458x407mm)	20.5 x 14 x 7"H (521x356x178mm)	7.2 amps @ 220V 1-phase, 50/60 Hz	145 lbs	3,289.00
<b>Z49-028-2</b>	Generator 100B	10 gal. (38L)	12 x 16 x 12"D (305x407x305mm)	16 x 18 x 16"H (407x458x407mm)	20.5 x 14 x 7"H (521x356x178mm)	7.2 amps @ 220V 1-phase, 50/60 Hz	145 lbs	2,269.00

## Ultrasonic Solutions

**BCR Cleaning Solution:** Jewelry industry standard for removal of buffing compounds such as rouge and tripoli. Works well with gold, silver, platinum, stainless steel, brass, etc. May also be used as a heated soak cleaner up to 140°F (60°C). This is a very concentrated non-viscous, alkaline, liquid cleaner. Use no more than 4-5 ounces per gallon of water.



Item #	Description	US\$ / 1-3	US\$ / 4+
A <b>80-098</b>	BCR Plus 1 gal. Container	21.10	18.50
B <b>80-098-4GL</b>	BCR Plus 4 gal. Container	74.76	69.25
C <b>80-098-19</b>	BCR Plus 19 gal. Slim Drum	319.00	268.75
D <b>80-098-BCR</b>	BCR Plus 51 gal. Barrel	798.00	--

# Romanoff Heavy Duty Steam Machines

Our steam machines are very efficient, reliable, and operate by electronic foot pedal and solenoid. Both units are UL, CUL, and ASME approved. They feature outer stainless steel cabinets to eliminate rust, automatic low water cutoff, energy efficient heating elements, adjustable thermostat, safety valve, and water level sight glass. Both units produce 70 to 90 lbs of consistent steam pressure.

**81-002-R** is our standard two gallon steamer with manual feed. Popular for jewelry stores and small manufacturers.

**81-004-B, -C** are our six gallon automatic steamers. They are built with a more powerful 9 kw heating element for faster steam recovery. This model can be configured at Romanoff with optional additional foot pedals and nozzles for multiple steam stations. Romanoff stocks a full inventory of spare parts. 220V 50 Hz is available upon special order.



Item #	Description	Size (DxHxW)	Power	US\$ / Each
<b>81-002-R</b>	2 gal. Steam Unit	14 x 14 x 14"	110V, 50/60 Hz	1,296.00
<b>81-004-B</b>	6 gal. Automatic Steam Unit 9 kw Heating Element	24 x 36 x 23"	220V, 3-ph, 60 Hz	4,350.00
<b>81-004-C</b>	6 gal. Automatic Steam Unit 9 kw Heating Element	24 x 36 x 23"	220V, 1-ph, 60 Hz	4,550.00
<b>81-004-SG/WS</b>	Sight Glass Washers Set	15mm ID / 22mm OD	--	12.84
<b>81-004-R-SG</b>	2 gal. Steamer Sight Glass	7" L	--	21.80
<b>81-004-SG</b>	6 gal. Steamer Sight Glass	13.5" L	--	42.10

## Steamer Accessories

	Item #	Description	US\$ / Each
A	<b>80-226-HD</b>	10" Steam Tweezer, Heavy Duty	11.95
B	<b>80-227</b>	12" Steam Tweezer	9.00
C	<b>81-000</b>	Stainless Steel Small Parts Basket	3.60
D	<b>81-030</b>	6" Stainless Steel Strainer	8.50
D	<b>81-031</b>	8" Stainless Steel Strainer	11.00
E	<b>81-030-5</b>	5" Nylon Strainer	7.95
E	<b>81-030-7</b>	7" Nylon Strainer	12.95



## Modular Ultrasonic Rack

These heavy-duty, vinyl-covered racks have 20 hooks per section for holding jewelry for ultrasonic cleaning. The rack with the 14" handle is adjustable in height to fit various depths in your ultrasonic and due to this suspension, the rack will never touch the sides or the bottom of your ultrasonic. The ultrasonic rack add-on can be used as a stand-alone rack or added to the adjustable rack with handles.

Item #	Description	Size	US\$ / 1-2	US\$ / 3+
<b>Z49-101</b>	Ultrasonic Rack with Adjustable Handle	8"L x 3"W (203 x 76mm)	65.90	60.85
<b>Z49-102</b>	Ultrasonic Rack Add-On		65.55	60.55





## Bath Plating Solutions



Romanoff bath plating solutions are carefully formulated to give you consistent results in your plating efforts. Our bath plating solutions are generally used in stainless steel or polypropylene containers. These solutions are pre-mixed and ready to use (RTU). (1 quart = 0.95L)

Item #	Description	Item #	Description
80-001	24kt Yellow Gold (RTU), 1 Quart	80-006	18kt Yellow Gold (RTU), 1 Quart
80-004	18kt Light Green Gold (RTU), 1 Quart	80-011	Copper (RTU), 1 Quart
80-005	14kt Yellow Gold (RTU), 1 Quart	80-012	Bright Nickel (RTU), 1 Quart
80-005-P	14kt Pink Gold (RTU), 1 Quart		

*Call for Latest Pricing*

## Rhodium Bath Plating Solutions

Rhodium plating solutions, when applied correctly, will produce a brilliant white, tarnish-resistant, hard metal coating on all precious metals. Popular for jewelry, watches, and spectacle frames. We offer American made rhodium, considered excellent quality at a good value. Our European-produced rhodium has a high deposition capacity, good covering speed, and is abrasion resistant.

**Z49-677-2:** This Rhodium plating solution is premixed and ready to use (RTU).

**Z49-667-2:** This 2-gram Rhodium Starter Concentrated Plating Solution, when mixed with 1-liter of distilled water, contains additional acid necessary when making a new bath.

**Z49-674-2:** This 2-gram Rhodium Replenishing Solution is used to strengthen a depleted rhodium bath.

**Z49-677-EURO:** The European Rhodium Concentrate 2-gram bottle does not require a starter solution and can be directly mixed with 1-liter of distilled water. This Rhodium solution is generally used at a lower voltage for a longer period of time.



	Item #	Description	Size
A	Z49-677-2	RTU Rhodium Bath Plating Solution	1 quart
B	Z49-667-2	Rhodium Bath Plating Starter Solution	2 grams
B	Z49-674-2	Rhodium Bath Plating Replenisher Solution Concentrate	2 grams
C	Z49-674-EURO	Rhodium Bath Plating Solution Concentrate	2 grams

*Call for Latest Pricing*

## Rhodium Pen Plating Solutions

Pen plating concentrated solutions are used for plating specific areas of metal surfaces without masking. They are used with a fiber tipped pen and are popular for two-tone effects, retouching prongs or settings and watch crowns.



Item #	Description	Size
Z49-673-2C	Rhodium Pen Plating Solution	2 grams

*Call for Latest Pricing*

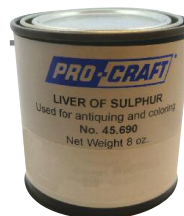
## Instant Silver Dip Cleaner

Is a quality cleaner used to remove tarnish from silver surfaces. Larger silver surfaces can be treated with a cloth or brush, and then rinsed immediately under running water and dried.



Item #	Description	US\$ / Each
80-021	Instant Silver Dip Cleaner, 16 Fl. oz.	14.95

## Liver of Sulphur



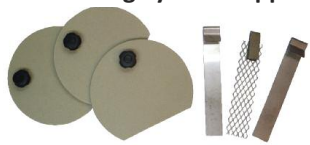
When dissolved in warm water, this product will permanently plate an antique, dark finish on silver and copper surfaces. The solution can be used in pyrex beakers or stainless steel containers and will turn silver from brown to blue to green to light gray and then finally black depending on how long the item is left in the solution. The outside raised surfaces can be buffed for a bright shine while leaving the recessed background a dark antique look.

Item #	Description	US\$ / Each
80-013-LS	Liver of Sulphur, 8 oz. Jar	24.00

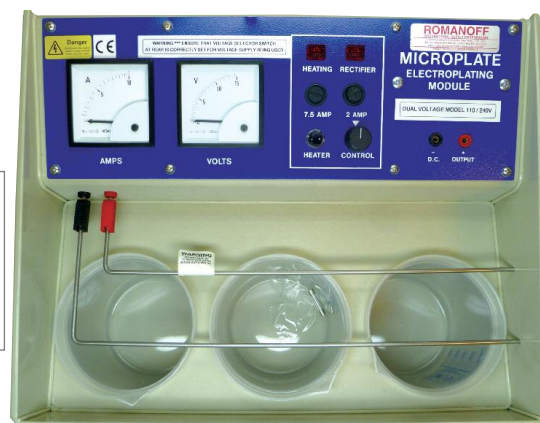
## Romanoff Roma Plating System

The Roma Plater is a compact size, all inclusive plating system. The unit is a 10 - amp, 0-12V rectifier and includes two stainless steel anodes and one platinized titanium mesh anode. The Roma Plater can be used for electro-cleaning or gold, silver, nickel, copper, and rhodium plating. This versatile plating machine can also be used as a pen plater. The Roma Plater when filled up with water will heat the plating tanks to ensure uniform plating. The three 1-liter plating tanks measure 4.5" x 4.5". Made of corrosion resistant polypropylene. Pens are sold separately.

### Roma Plating System Supplies



Item #	Description	Dimensions	Weight	Power	US\$ / Each
80-501	Roma Plating Systems	19 x 13.75 x 10	20 lbs	120V, 60Hz 220V, 1ph, 50Hz	1,395.00
80-016-R	Red Rhodium Pen, USA				49.00
80-014-BC	Black Clip Pen, USA				26.00



## Heavy Duty Plater and Stripper

The Romanoff heavy-duty rectifiers are designed to give steady, direct current to your plating, stripping and electroplating applications.

**80-024** is our 30 Amp rectifier designed for the small to medium size shop. This unit will easily electroplate 25 average size rings and can strip 4-5 rings.

**80-025** is our 60 Amp rectifier designed for the medium to large size shop. This unit will easily electroplate 40-50 average size rings and can strip up to 10 rings. 110V standard, 220V available by special order.

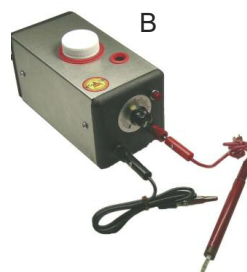
Item #	Description	Voltage	US\$ / Each
80-024	30 Amp / 15V Rectifier	110V	389.00
80-212	Replacement Red & Black Plating Cables	--	22.38



## Rhodinette Pen Platers

Pen platers are a unique plating instrument designed for effortless two-tone plating or spot plating, touch-ups, repairs or any plating that requires pinpoint accuracy. Pen platers are self-contained units requiring no additional anodes, rectifiers, plating tanks, wires or clips. Simply apply the plating solution to the felt tip of the pen and then directly onto the specific area to be plated. Masking is completely eliminated. In less time than it takes to prepare a piece of jewelry for plating, a pen plater can completely finish an entire job.

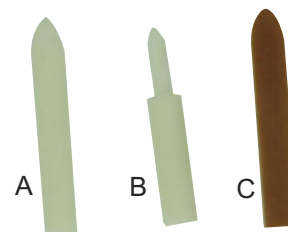
Item #	Description	Voltage	US\$ / Each
A 80-014	Weiland Pen Plater (Germany)	110V / 220V	745.00
B 80-400	Rhodium Single Pen Plater (USA)	110V	199.00
C 80-401	Rhodium Triple Pen Plater (USA)	110V	289.00
- 80-014-PEN	Red Weiland Pen (Germany)	--	257.65
- 80-014-BLK	Black Weiland Clip (Germany)	--	59.95
- 80-014-J	Weiland Original 1.5oz Glass Jar	--	25.85



## Pen Plating Felt Tips

Pen plating tips can be used with all concentrated pen solutions. Their solid, compact fiber material can be used as-is or shaped for each application.

Item #	Description	Qty / Pkg	US\$ / 1-4	US\$ / 5+
A 80-015	Blunt Felt Tip	5	3.95	3.19
B 80-016T	Pointed Felt Tip	3	3.29	2.90
C 80-016T-MA	Deluxe Orange Tip with Superior Absorption	5	4.39	3.90



## Sable Type Brushes



Sable type brushes are hand cut to shape and have needle-sharp points for applying liquid flux or masking tape or liquid wax prior to rhodium plating. Available in sizes 2/0 (small) to #4 (largest).

	Item #	Size	US\$ / 1-11	US\$ / 12+
A	B4-103	#2/0	1.29	1.09
B	B4-104	#0	1.29	1.09
C	B4-105	#1	1.34	1.16
D	B4-106	#2	1.39	1.19
E	B4-107	#3	1.41	1.28
F	B4-108	#4	1.41	1.28

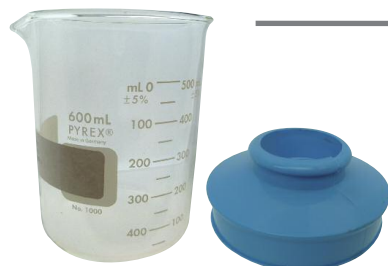
## Stainless Steel Plating tank



These high grade stainless steel tanks will act as anodes for electro-cleaning, gold plating, and as a cathode when stripping. Covers are sold separately.

Item #	Dimensions	Capacity	US\$ / Each	Cover Part #	US\$ / Each
80-039	4-9/16" x 5-3/4"	1.25 qts	19.30	80-039A	11.95
80-040	5-3/8" x 6-5/8"	2 qts	23.60	80-040A	12.60
80-041	6-1/2" x 7"	3.25 qts	24.20	80-041A	14.90
80-042	7-3/8" x 7-7/8"	4.75 qts	29.81	80-042A	15.10
80-043	8" x 8-3/4"	6.125 qts	36.40	80-043A	16.02
80-044	8-3/4" x 9-5/8"	8 qts	42.30	80-044A	16.90
80-045	9-5/8" x 11"	12 qts	54.10	80-045A	19.89

## Pyrex Beakers & Covers



For heating and holding plating baths, graduated for liquid measurement, and has a spout for pouring.

Item #	Capacity	US\$ / Each	Cover Part #	US\$ / Each
80-205	600 ml	14.90	80-206	6.90
80-207	1,000 ml	22.95	80-208	7.45
80-208A	2,000 ml	55.24	--	--
80-208B	3,000 ml	66.10	--	--
80-208C	4,000 ml	129.80	--	--

## Electric Hot Plate

These heavy-duty industrial grade electric hot plates come with three ring burners, tubular heating elements, and temperature control switches. UL approved. Made in the USA.



Item #	Description	Dimensions	Power	US\$ / Each
80-202-ELECTRIC	Single Burner	8.5 x 8.5 x 3.25"	6 amps / 700 W	62.49

## Paraffin Wax



Paraffin wax is commonly used to mask off specific surfaces on jewelry prior to plating or sandblasting. The paraffin wax can then be easily removed through steaming.

Item #	Description	Weight	US\$ / Each
80-054	Paraffin Wax	1 lb	9.95

## Stop-Off Pen



Stop-Off Pens have a fine felt tip and are used for masking off specific surfaces prior to plating. The stop-off liquid can easily be removed by acetone.

Item #	Description	US\$ / Each
80-0560	Blue Stop-Off Pen	14.95



## Copper Wire

Soft copper wire is used for holding items to be stripped or plated, and is available in various diameters. Sold per 1lb spools.

Item #	Gauge	Millimeter	US\$ / Each	Item #	Gauge	Millimeter	US\$ / Each
80-058-8	8 ga.	3.26	21.15	80-058-20	20 ga.	0.81	21.15
80-058-10	10 ga.	2.59	21.15	80-058-22	22 ga.	0.64	21.15
80-058-12	12 ga.	2.05	21.15	80-058-24	24 ga.	0.51	21.15
80-058-14	14 ga.	1.63	21.15	80-058-26	26 ga.	0.40	21.15
80-058-16	16 ga.	1.29	21.15	80-058-28	28 ga.	0.32	21.15
80-058-18	18 ga.	1.02	21.15				



## Electro Cleaners

Electro cleaning is used to remove grease, finger marks, and contaminants from a surface prior to plating. Electro cleaning solutions are used in a stainless steel tank under heat with a rectifier.

**80-018:** Tivaclean is an electro cleaning concentrate powder, 8 oz to 1 gal. When mixed with distilled water, the powder changes from orange to a fluorescent green color. It contains an anti-foaming agent and a deodorant to minimize odor.

**80-0185:** This heavy-duty liquid electro cleaner is a ready to use solution.

**80-0875-ELEC:** Oakite #90 electro cleaner is a strong and economical electro cleaner with a mix ratio of 1 oz to 1 liter of distilled water.

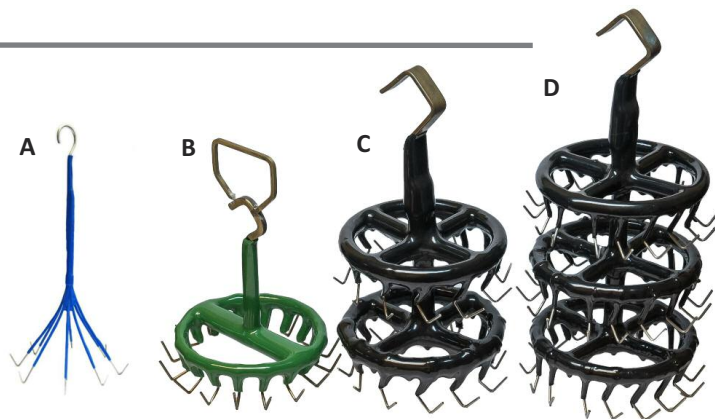
	Item #	Description	Package Size	US\$ / Each
A	80-018	Tivaclean	1 lb	36.76
B	80-0185	Liquid Electro Cleaner	1 qt.	14.90
C	80-0875-ELEC	Oakite #90	5 lbs	21.19



## Plating Racks

These brass constructed plating racks have smooth, exposed hooks. The pieces are placed onto the hooks and then can be electro-cleaned or plated.

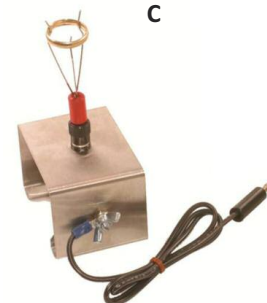
	Item #	Diameter	Levels	Hooks	US\$ / Each
A	80-110-RCK	4"	1	5	19.95
B	80-110	4"	1	12	71.69
B	80-113	4"	1	16	99.89
C	80-111	4"	2	24	107.50
D	80-115	4"	3	48	169.00



## Plating Anodes

For plating metal, a replenishing anode is necessary to carry the current from the positive cable to the negative cable of your work. Stainless steel anodes are generally used for gold and platinized titanium mesh anodes are for rhodium.

	Item #	Description	Plate Size	US\$ / Each
A	80-216	Stainless Steel Anode	2 x 4.5"	24.00
B	80-220	Platinized Titanium Mesh Anode	2 x 3"	119.00
B	80-220-L	Large Platinized Titanium Mesh Anode	2.75 x 4.25"	139.00
C	80-401-MT	Pen-plating Mount	-	39.95



## Plating Filters

All plating solutions are susceptible to contamination. Therefore, they require a regular cleaning maintenance. Filter circle papers are placed into a funnel as is or with activated charcoal. The plating solution is poured through the charcoal and filter paper to remove any contaminants. The process is repeated generally 1x to 2x, and not more. Over filtration can have a negative effect and remove the precious metal from the plating solution.

	Item #	Description	US\$ / Each
	Z49-735-13X	Filter Circle Papers Medium, 32cm, 100/box	49.95



# Table Top Laser Welders

The Romanoff line of Table Top Lasers, are the most cost effective lasers available. They out perform larger welders and are simple to operate with it's "Plug & Go Styling". With little effort, superior laser welds on gold, platinum, titanium, stainless steel and silver are easily achievable. Leica optics and a maintenance free stereo microscope, simple joystick control. The EVO 120 Joule is recommended for continuous silver welding applications.



**Application:** The EVO series laser welders are perfect for retail repair shops, jewelry design and repair, watch and eye glasses, medical device, and repair of small molds and inserts.

- Available with human/machine interface with a TFT colour touch-screen 5.7" display, for fast access to working parameters
- A USB Pen Drive allows to save 16 work settings, recollect them to perform same operation and export them to be used on another LASER EVO welding machine, but also to perform software upgrades
- 32 memory cells allows to save work settings.
- Advanced quality welding on all types of alloys can be achieved by 5 forms of preset pulses (pulse-shaping).
- A LED lighting system are provided for patented chamber
- The release of Argon gas directly onto the welding surface and co-axially to the spot with the possibility to control post-gas and pre-gas.
- Large work cycles can be maintained with Powerful and silent hydraulic cooling circuit design.

## EVO 100 Joule LZ-5500

## EVO 120 Joule LZ-5125

Power Supply	Single Phase 115-230V 15A	Single Phase 115-230V 15A
Max. Pulse Power	100j / 20mS	125j / 20mS
Peak Pulse Power	4.8KW	5KW
Average Power	55W	60W
Frequency Range	0.5 - 15 Hz	0.5 - 15 Hz
Spot Size	0.3 mm - 1.5 mm	0.3 mm - 1.5 mm
Memory Stations	32	32
Preset Pulse Shaping	5	5
Optics	Leica 10x Stereo Microscope	Leica 10x Stereo Microscope
Dimensions (W x D x H)	20" x 27" x 14"	20" x 27" x 14"
Weight	32Kg	32Kg
Warranty	1 Year / 2,000,000 shot Standard Warranty	1 Year / 2,000,000 shot Standard Warranty
Price Each	\$19,950.00	\$23,950.00

### WHAT ARE THE BENEFITS LASER WELDING?

Laser welders allow the user to assemble or repair jewelry –or any metal items– quickly, and efficiently. The heat zone is very minute, allowing you to apply heat in areas you normally wouldn't with a torch, near gemstones, springs, enamels, antiques, etc. The weld is three times stronger than solder, and there is no fire scale, boraxing or pickling. Preparation of work is minimal and clean up can be done with a rubber wheel and an ultrasonic. Jewelers are at least 50% more productive with a laser welder.

### WHAT IS LASER WELDING?

Laser Welding is the fusing of metals using light as the energy source. Laser is the acronym meaning "Light Amplification by the Stimulated Emission of Radiation." Use of a beam of light (1064 nm wavelength) will fuse metals together, almost instantaneously.

### HOW IS THE ENERGY OF A LASER MEASURED?

The energy is measured in units called joules. A joule is how many watts of power is being put out for how long of a duration (voltage and milliseconds). It takes anywhere from 4 to 8 joules to weld platinum. It takes upward of 30+ joules to work with silver.

# NSK E-Max Evolution Micro-Motor

## Tough Torque Brushless Motor and Flashing Live Load Indicator

- 1,000-40,000 rpm
- Speed Control Volume with Flash Load Indicator
- Memory Speed Function FiXspeed(R)
- Interchangeable with 16 attachments from the E-max system.

Comes with Micro Grinder, Collet Chuck,  $\Phi 1/8"$ ,  $\Phi 2.35\text{mm}$ , Control Unit, Other Standard Accessories



Item #	Description	Each
<b>71-645</b>	NSK E-Max Evolution Micro-Motor 120V Kit	\$1225.00
<b>71-640-FP</b>	NSK Optional Foot Pedal E-Max Micro Motor	129.45

# Foredom High Speed Rotary Micro-Motor

\* Slender, contoured grip rotary type handpiece with quick release collet for easy bur changes.

\* Use for precise, high speed work— light deburring of cast pieces, bright cutting in jewelry, and detailing in woodcarving.

\* Fan cooled, brush type continuous duty motor runs cool and vibration-free.

\* Permanently lubricated, shielded ball bearings require no lubrication.

\* Comes with 2.35mm (3/32") Collet or 1/8" Collet, spare Motor Brushes and Collet Changing Wrenches

Item #	Description	Each
<b>71-630</b>	Foredom High Speed Rotary Micro-Motor 120V	\$389.00



# Foredom Work Bench System

**Jewelers, carvers, and precision fabricators have a new way to work in an organized, well-lit environment!**

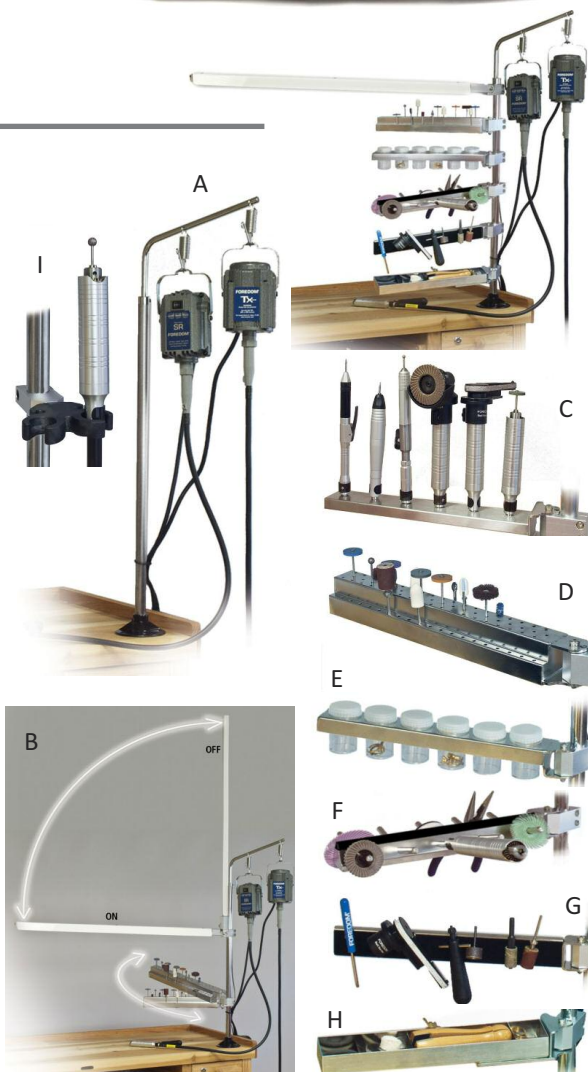
The Foredom Work Bench System is a quality designed and manufactured modular system for lighting a work space and organizing small bench tools and accessories. The new **71-050B** double motor hanger with screw-in base mount and spring safety clips is the central component of the system.

All components, including a unique pivoting LED light bar, handpiece rest, and 6 styles of swinging storage arms fit these rods.

Components are made of brushed stainless steel and anodized aluminum with uniform mounting brackets.

**Keep small tools and accessories in reach when you need them and out of the way when you don't!**

Item #	Description	Each
<b>A 71-050B</b>	Dual Motor Hanger 30-49" Height Range	\$59.00
<b>B 80-236</b>	LED Light Bar (100 to 240V) 31 <sup>1/2"</sup> L, 9W, 24V(100-240V)	139.00
<b>C 71-050-HA</b>	Multi Handpiece Arm 12" x 2 <sup>1/4"</sup> x 1 <sup>1/4"</sup>	75.00
<b>D 71-050-BH</b>	Burs Holder Arm 12" x 2" x 1 <sup>1/4"</sup> (Holds up to 95 burs)	69.00
<b>E 71-050-JA</b>	Jar Arm 12" x 2" x 2 <sup>1/2"</sup> (six 1.35oz jars)	55.00
<b>F 71-050-PA</b>	Peg Arm, (10 mounts) 12" x 4" x 2 <sup>1/2"</sup>	69.00
<b>G 71-050-MA</b>	Magnetic Felt Padded Arm 12" x 4" x 1 <sup>1/2"</sup>	109.00
<b>H 71-050-TA</b>	Tray Arm (3 compartments) 12" x 2 <sup>1/4"</sup> x 1 <sup>1/4"</sup>	59.00
<b>I 71-150B</b>	Dual Handpiece Rest	29.00



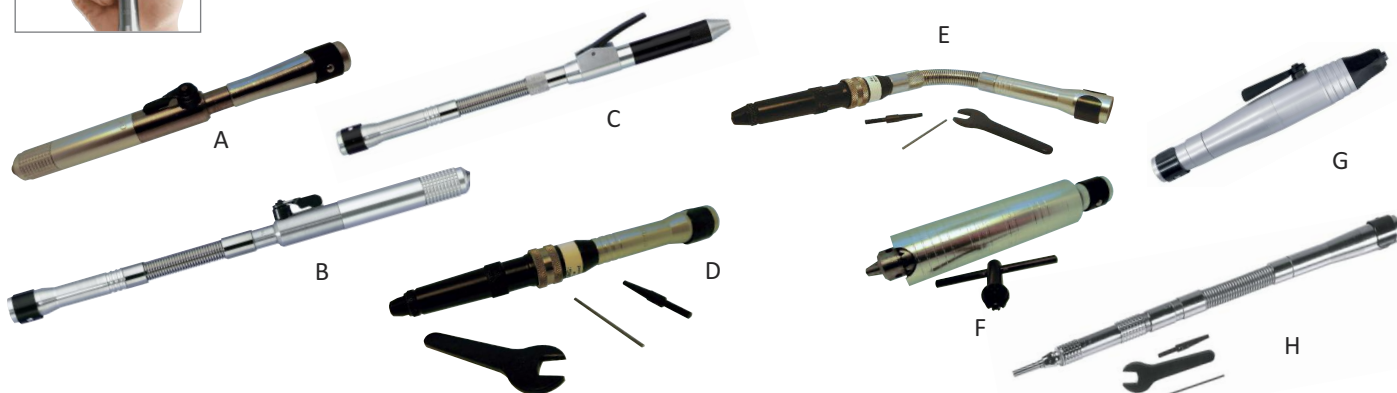


## Flex Shaft Hand Pieces

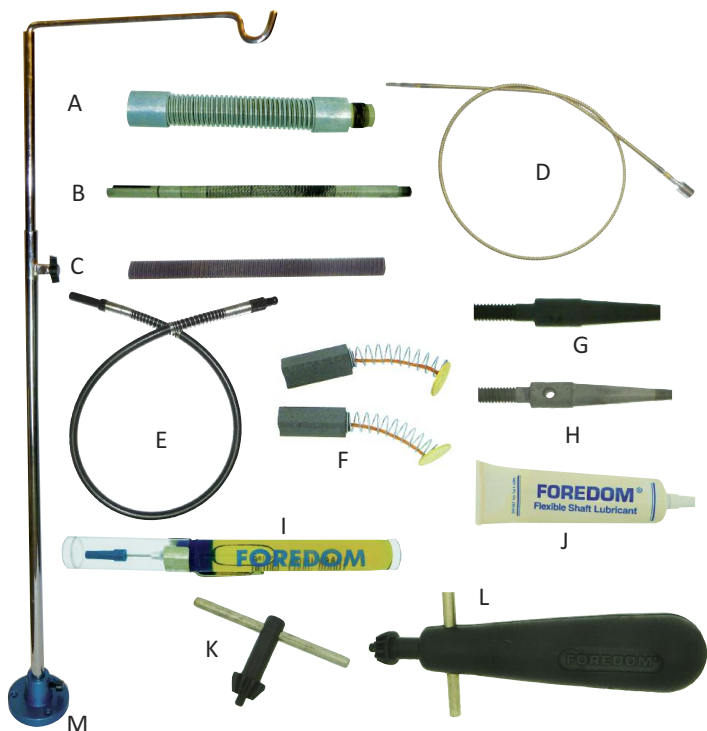
**FOREDOM®**  
Rotary Power Tool Accessories



	Item #	Description	Length	US\$ / 1-2	US\$ / 3+
A	71-122	Original Faro (no spring)	7-3/8" L	189.95	181.00
B	71-121-FORD	Foredom 10D (spring)	10-3/4" L	279.00	271.50
C	71-164	Foredom 18D (with spring) Quick Change	7" L	165.00	159.00
D	71-118	Foredom #15 Hammer H.P. (no spring)	6-1/4" L	139.00	132.15
E	71-119	Foredom #15 Hammer H.P. (spring)	6-1/4" L	164.00	158.00
F	71-115-F	Foredom #30 w/Handy Chuck	5-3/16" L	68.00	62.50
G	71-124	Romanoff 90 Degree Lever Action	5-5/8" L	79.00	72.85
H	71-120-SW	Badeco Swiss Hammer Handpiece #222 (spring)	10-3/4" L	359.00	345.00



## Replacement Parts and Accessories



	Item #	Description	US\$ / 1-3
A	71-122-DS	Outer Duplex Spring Cover with Both Fittings, 85mm	24.20
B	71-121-S	Duplex Inner Spring with Collets, 115mm	39.95
C	71-1225-R	Duplex Inner Spring Without Collets, 68mm	9.00
D	71-154	Inner Cable for CC, S, SR, and Romanoff Flex Shafts	13.20
E	71-155	Outer Cable for CC, S, SR, and Romanoff Flex Shafts	13.52
F	71-100-BR	Foredom CC & Romanoff Series Brushes	7.70
F	71-101-BR	Foredom SR Series Brushes	9.00
G	71-161	Foredom Anvil Point for #15 Hammer Handpiece	9.00
H	71-160	Foredom Carbide Stylus for #15 Hammer Handpiece	38.00
I	71-181-HYPO	Foredom Small Parts Oiler	7.95
J	71-183	Foredom Flex Shaft Lubricant	4.00
K	71-162	Original Jacobs Chuck Key for #30 Style Handpieces	3.60
L	71-115-CKH	Large Chuck Key & Handle for #30 Style Handpieces	8.00
N	71-150-ADJ	Adjustable Flex Shaft Motor Hanger, 26" to 41"	24.76

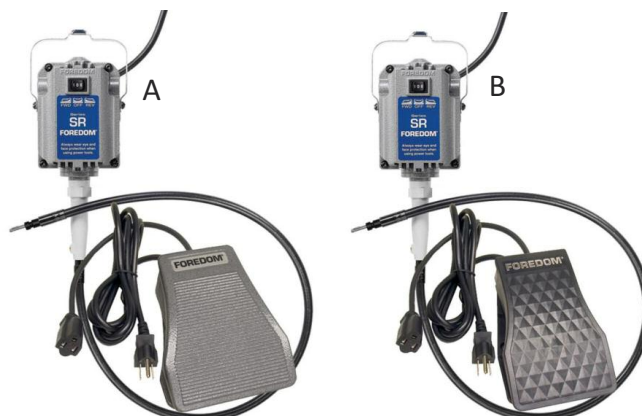
# Flex Shafts And Accessories



## Foredom SR Forward/Reverse Motor

Foredom's 1/6 HP, universal, flexible shaft machine runs in forward and reverse rotation at speeds up to 18,000 RPM. The M.SR combines the most important features our customers expect—power, reversibility, reliability, and versatility—all into one motor. It comes equipped with a motor bale for hanging, and our standard 39" long key tip inner shaft and outer sheath

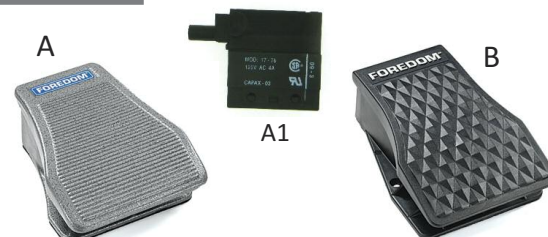
**FOREDOM**  
Rotary Power Tool Accessories



	Item#	Description	US\$ / 1-3 US\$ / 4+	
A	<b>71-101</b>	SR Flex Shaft Motor, 110V with SCT Foot Pedal	247.50	236.90
A	<b>71-101A</b>	SR Flex Shaft Motor, 220V with SCT Foot Pedal	249.50	239.90
B	<b>71-101-1</b>	SR Flex Shaft Motor, 110V with FCT Foot Pedal	228.00	219.50
B	<b>71-101A-1</b>	SR Flex Shaft Motor, 220V with FCT Foot Pedal	229.50	221.60

## Foredom Foot Pedal Rheostats

	Item#	Description	US\$ / 1-3	US\$ / 4+
A	<b>71-158</b>	Foredom SCT Cast Aluminum Foot Pedal 110V	65.00	58.50
A	<b>71-158A</b>	Foredom SCT Cast Aluminum Foot Pedal 220V	69.00	63.50
A1	<b>71-158-TR</b>	Circuit Board Switch for SCT-1 Foot Pedal 110V	23.49	-
B	<b>71-153</b>	Foredom FCT Electronic Plastic Housing 110V	35.00	33.20
B	<b>71-153A</b>	Foredom FCT Electronic Plastic Housing 220V	36.50	34.30



## Romanoff 1/4HP Flex Shaft Motor Kit

The Romanoff 1/4HP variable speed flex shaft motor has a maximum speed of 20,000 RPM and includes a #30 style handpiece, FCT style foot pedal, motor hanger, 39" flex shaft, and chuck.

	Item#	Description	US\$ / 1-3	US\$ / 4+
	<b>71-107-R110</b>	1/4HP, 110V Variable Speed Motor Kit	189.00	179.55
	<b>71-107-R220</b>	1/4HP, 220V Variable Speed Motor Kit	195.00	185.25



## Adapter Drill Chucks

Great for holding small drills in larger chucks or for flexshaft handpieces, with 3/32 (2.35mm) shanks.

	Item#	Description	US\$ / 1-3	US\$ / 4+
	<b>89-491</b>	Capacity 0 - 2.5mm, 4 collets	8.90	7.25





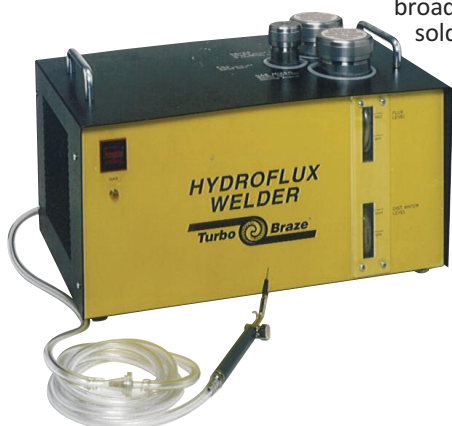
## Oxygen Generator

Oxygen generators are a safe and reliable system for producing oxygen for soldering, melting, and brazing. The AirSep system will separate oxygen and nitrogen from the atmosphere as compressed air is passed through a system of filters, allowing oxygen to pass through. Equipped with their own air compressors, these generators require no special installation. Simply connect the oxygen outlet to your oxygen distribution system and the power cord to a grounded electrical outlet. Just turn the unit on and set your oxygen delivery flow gauge, and the unit will generate up to 93% nominal purity of oxygen. This model unit will supply sufficient oxygen for 4-5 jewelers with a #3 torch tip. 110V standard, 220V available by special order.

Item #	Description	Dimensions	Power	US\$ / Each
79-017-12	Topaz	18' W x 10' D x 27" H	110V / 60 Hz	1,859.00

## HydroFlux Welder

The Romanoff HydroFlux Welder torch system is self-contained, economical to operate, light weight, and can be operated in conditions where bottled gas is not permitted/wanted. The HydroFlux is an oxyhydrogen generator that operates by converting distilled water into fueled gas. The HydroFlux Welder creates gas on a demand basis. The eight hypo-dermic needles will produce a pinpoint flame to a broad flame for different soldering applications. The pure high heat of up to 4850 F / 2677 C can solder platinum easily. Can be used with two torches simultaneously. The complete system includes one torch with 4' of clear hose, 8-piece needle tip set, necessary solutions, and cotton fiber filter. 16" w x 9" d x 10" h, 45 lbs. 110V standard, 220V available by special order. Made in USA.



Item #	Description	US\$ / Each
T0-102	HydroFlux Welder Torch System 110V	1,285.00
T0-103-AT	Optional second Torch & 4' of hose	129.00
T0-103-SET	Replacement 8 piece needle set (not shown)	6.50
T0-103-F	Replacement Flux Solution 1qt (not shown)	19.95
T0-103-EL	Replacement Electrolyte Solution 1qt (not shown)	33.50

## The Little Torch Starter Kit

The Little Torch kit is ideal for use in a fully equipped shop or lab. Includes aluminum alloy torch body, 5 different sized copper tips, 8ft of hoses, and complete instruction manual.

Can be used with natural, LP, acetylene, or hydrogen gas.

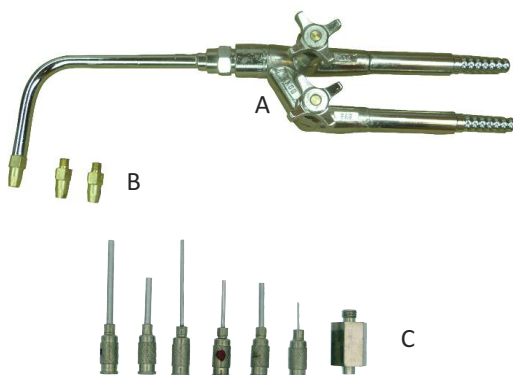
Item #	Description	US\$ / 1-2	US\$ / 3+
T0-107	Little Torch Kit	149.00	142.90



## Hoke Type Torch

**Hoke Type Torch:** This style torch has convenient finger tip control valves and a selection of tips, allowing the jeweler to select a pinpoint or large brush flame. Overall length is 9" and requires standard 1/4" hoses.

**Hoke Adapter Kits:** You can expand your Hoke jewel torch's capabilities with this precision adapter 6-piece set. It equips you for all soldering, welding, and melting jobs. Even fine, intricate soldering (thin chains, rings, pendants, bangles, and even large silver holloware) can be done quickly and easily. With these tips, you get a non-oxidizing flame, so less pickling is required and jewelry comes out cleaner.



	Item #	Description	Qty Tips	US\$ / Each
A	T0-100	Oxygen & Natural Gas	3	42.50
A	T0-101	Oxygen & LP Gas	4	42.50
B	Z28-506-1	#1 Hoke Tip (small)	--	4.90
B	Z28-506-2	#2 Hoke Tip (medium)	--	4.90
B	Z28-506-3	#3 Hoke Tip (large)	--	4.90
C	T0-105	Hoke Adapter Kits	6	22.30



## Solder Pics

Non-sticking tungsten and titanium tips are used to prevent solder from adhering.



Item #	Description	US\$/1-2	US\$/3+
A H4-135	Titanium Pic for Gold and Silver	7.50	6.90
B H4-136	Tungsten Pic for Platinum and Palladium	7.60	6.95

## Platinum Safety Glasses

These high-quality cobalt-blue lens will protect your eyes from the bright white glare during soldering. Prescription lenses can easily be installed into the eyeglass frame.



Item #	Description	US\$ / 1	2+
G3-304	Platinum Flip Up Eye Glasses	89.90	81.64

## Charcoal Block

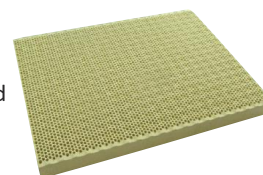
Chemically prepared for soldering. When under flame, the charcoal glows and reflects heat back to the work, making the flame more effective. Easily punctured to hold work, both blocks are 1.5" (37.5mm) thick.



Item #	Size	US\$ / 1	2+
42-250	4.75 x 3" (121 x 76mm)	13.23	11.25
42-251	7 x 4" (178 x 102mm)	21.74	18.49

## HoneyComb Solder Board

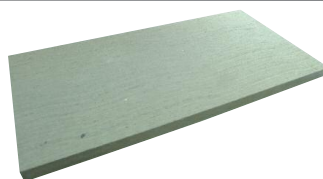
A ceramic block with fine pores to accelerate the heat loss from parts being soldered. Holes may be used to retain fine parts, or used as interpoints. Will withstand temperatures up to 2,000 F / 1,093 C. Both blocks are 1/2" (12.5 mm) thick.



Item #	Size	US\$ / 1	2+
42-252	3.75 x 5.5" (95 x 140mm)	7.95	6.76
42-253	5.5 x 7.75" (140 x 197mm)	13.35	11.90

## Transite Board

This soldering board is durable, smooth, heat reflective, and so hard that it will not flake. Will withstand temperatures up to 2,500 F / 1,371 C. Both blocks are 1/2" (12.5 mm) thick.



Item #	Size	US\$ / 1	2+
42-257	6 x 12" (152 x 305 mm)	19.29	16.69
42-258-TR	12 x 12" (305 x 305 mm)	38.96	35.19

## Ceramic Soldering Board With Grooves

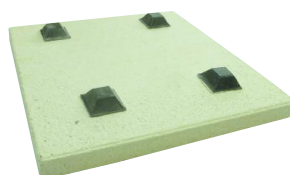
Flat on one side and grooves on the other side for holding shanks, chains and other long objects. Can be used up to 2,000 F / 1,093 C.



Item #	Size	US\$ / 1	2+
42-254	7.5 x 7.25 x 1" (190 x 184 x 25mm)	29.60	26.64

## Soldering Boards with Feet

These soldering boards are flat with rubber feet to prevent sliding on the bench. Cleaned easily with water. Can be used up to 2,500 F / 1,371 C. Both boards are 1/2" (12.5 mm) thick.



Item #	Size	US\$ / 1	2+
42-501	6 x 6" (152 x 152 mm)	12.59	11.40
42-258	6 x 12" (152 x 305 mm)	19.36	17.45
42-502	12 x 12" (305 x 305 mm)	24.79	22.35

## Platinum Soldering Boards

Great for high temperature soldering, free of any contaminants, and can be used up to 2,642 F / 1,450 C.



Item #	Size	US\$ / Each
42-313	4 x 4 x 1/2" (102 x 102 x 13 mm)	27.39



## Denatured Alcohol

In addition to being used to make flux with boric acid, alcohol is an excellent degreaser and cleaner.

Item #	Description	Size	US\$ / 1-2	US\$ / 3+
80-092	Denatured Alcohol	1 Gallon	25.15	23.90



## Luxi-Flux

Luxi-Flux is the most popular liquid flux used. The work is dipped into the solution, and then ignited, leaving a protective coating on the surface to prevent fire scale prior to soldering.

Item #	Description	Size	US\$ / 1-2	US\$ / 3+
80-109	Blue Luxi-Flux	1 Gallon	22.45	19.90



## Cal-Flux

Cal-Flux is a rectifying solution. The pieces are dipped, then ignited, leaving a borax residue which enables the solder to flow easily.

Item #	Description	Size	US\$ / 1-2	US\$ / 3+
80-096	Yellow Cal-Flux	1 Gallon	19.35	17.45



## Battern's Flux

Battern's Self-Pickling Hard Soldering Flux is an old-time and reliable favorite. It makes hard soldering easy on gold, silver, platinum and other metals. Preserves color and temper of metal, and holds solder bits in place.

Item #	Description	Size	US\$ / 1-2	US\$ / 3+
S3-403	Green Battern's Flux	16 oz	13.90	11.90
S3-404	Green Battern's Flux	32 oz	17.80	16.19



## Flux Dispenser Pump

4 oz. capacity polyethylene bottle with stainless steel pump action lid. Dispenses the exact amount of flux liquid that's needed.

Item #	Description	US\$/1-2	US\$/3+
S3-415	Flux Dispenser Pump	26.29	22.39



## Original Pickle-Safe

Romanoff Pickle-Safe is a dry compound for cleaning and removing surface oxidation from gold, silver, copper, and other non-ferrous metals. Produces a clean, bright surface without affecting the tolerance of the metal. Works well at room temperature, and best at 125°F (52°C)

Item #	Description	Size	US\$ / 1-2	US\$ / 3+
80-099	Pickle-Safe	5lb Can	11.50	10.35
80-099D	Pickle-Safe	50lb Drum	88.95	78.30



## Boric Acid

**Boric Acid Granular:** When mixed with denatured alcohol, this will produce a pasty soldering flux. It protects metal surfaces from oxidation and allows solder to flow more easily.

**Boric Acid Anhydrous:** This is a high grade and pure form of boric acid granular. It is most commonly used for lining the inside of graphite crucibles to prolong their life during heating or can be added to molten metal to remove contaminants.

Item #	Description	Size	US\$ / 1-2	US\$ / 3+
80-090	Boric Acid Granular	5lb Can	24.60	21.65
80-0901	Boric Acid Anhydrous	5lb Can	48.91	44.50



## Handy Flux

An excellent white solder paste containing fluorides, hydroxide, and potassium. Works with platinum, gold, silver, copper, brass, and other non-ferrous metals. Operates at 1,100°F to 1,600°F.

Item #	Description	US\$/1-2	US\$/3+
80-108	Handy Flux, 8 oz. Jar	12.90	10.49



## Heat Shield

Vigor heat shield is a protective paste up to 5,000°F which prevents oxidation, is odorless, washes off with water, and allows you to solder without removing the stones.

Item #	Description	US\$/1-2	US\$/3+
S0-540A	Vigor Heat Shield, 1lb Jar	15.10	12.60



## Paste Flux

Ultra-Flux is used in low temperature brazing and silver soldering ferrous and non-ferrous metal. Contains no fluoride and begins to dissolve at 800°F and is fluid-active between 1,100°F to 1,600°F.

Item #	Description	US\$/1-2	US\$/3+
S3-442	Ultra-Flux, 1lb Jar	24.85	21.90

## Pickle Pots

Pickle pots are used to safely heat pickle solutions. The heated solutions are used for removing fire scale and oxidation from gold, silver, brass, and most non-ferrous metals. The units include a plastic basket for holding pieces and have a red indicator power light. Standard 110V.



Item #	Pot Dim. ID x Depth	Capacity	US\$ / Each	Replacement Basket	US\$ / Each
80-150	3 x 4"	14 oz.	118.75	80-150B	17.50

## Third Hand Tweezers

Third hand tweezers, which are mounted onto a heavy base, allow the jeweler more flexibility when soldering. The convenient cross locking 6.5" tweezers will close when released.



Item #	Description	US\$ / Each	2+
H4-1105	Round Base w/Tweezer	9.50	8.29

## Tweezers

**A. T3-128 Copper Tong:** Designed with curved tips for lifting objects from pickling and other acid-type solutions

**B. T3-398 Head & Shank Tweezers:** This locking tweezer enables you to position the ring shank and settings for soldering. The curved jaw has a groove to hold the shank secure, while the flat jaw is serrated to prevent movement.

**C. T3-108 Ring Set Soldering Tweezers:** Are used for soldering ring shanks together from the inside quickly and easily.

**D. T3-121 AA Small Parts Tweezers:** One of the most common tweezers found on the jeweler's bench, popular for assembly, inspection, sorting, soldering, etc.

**E. 80-226-HD Rubber Coated Steam Tweezers:** Used for holding jewelry while steaming and rinsing in an ultrasonic.

**F. T3-100 Straight Locking Tweezers:** This tweezer has heat resistant grip and self-locking jaws. The long tapered shank tips have plain, blunt points.

**G. T3-101 Curved Cross-Locking Tweezers:** Same as the Straight locking tweezers, except for the curved blunt points.

**H. T3-107 Pearl Holding Tweezers:** Featuring teflon coated (cupped) ends, these tweezers hold pearls without scratching.

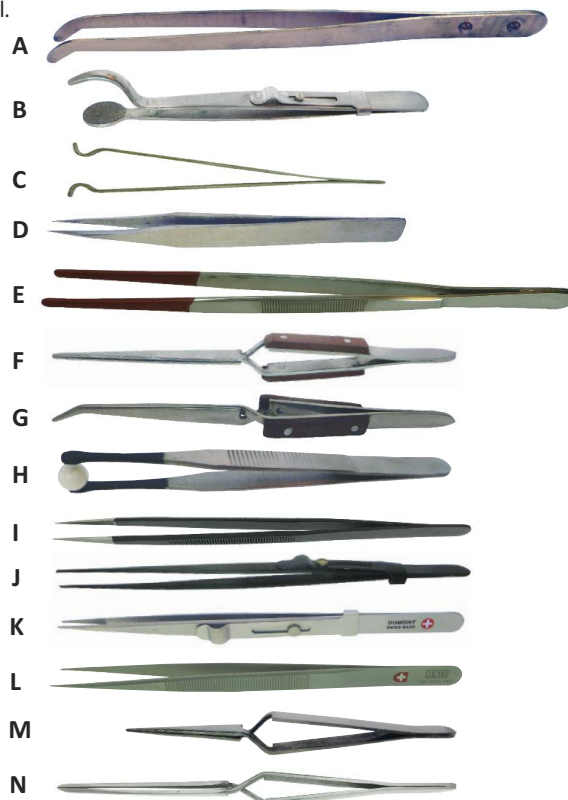
**I. & J. T3-190/T3-191 Black Diamond Tweezers:** Economically priced, these steel tweezers have a black finish for optimum visibility when working with diamonds, and serrated pointed tips for sure grip.

**K. T3-105 Swiss Slide-Lock Tweezers:** High quality, chromium plated stainless steel tweezers with serrated points and a locking device.

**L. T3-106 Swiss Diamond Tweezers:** Featuring a special groove on both inside faces of each tip, these high quality tweezers prevent stones from turning or slipping.

**M. & N. T3-125/T3-126 Cross Locking Tweezers:** Self-locking jaws and made of nickel plated steel.

	Item #	Description	Length	US\$ / 1-2	US\$ / 3+
A	T3-128	Copper Pickling Tweezers	9"	7.90	6.25
B	T3-398	Head & Shank Locking Tweezers	5-3/4"	8.40	7.85
C	T3-108	Ring Set Soldering Tweezers	4-1/2"	5.90	5.19
D	T3-121	AA Stainless Steel Tweezers	4-3/4"	3.85	3.15
E	80-226-HD	Rubber Coated Steam Tweezers	10"	11.95	10.55
F	T3-100	Straight Locking Tweezers (Fiber Grips)	6-1/2"	4.75	3.85
G	T3-101	Curved Cross-Lock Tweezers (Fiber Grips)	6-1/2"	4.75	3.85
H	T3-107	Pearl Holding Tweezers	5-3/4"	9.50	8.85
I	T3-190	Black Diamond Tweezers	6"	4.75	3.85
J	T3-191	Black Diamond Slide-Lock Tweezers	6"	5.94	4.89
K	T3-105	Swiss Slide-Lock Tweezers	5-1/2"	29.65	26.74
L	T3-106	Swiss Diamond Tweezers	4-5/8"	22.79	19.89
M	T3-125	Short Cross-Locking Tweezers	4-3/4"	4.75	3.85
N	T3-126	Wide Tip Cross-Locking Tweezers	6-1/2"	4.90	3.96







## Lindstrom Pliers



Double Leaf Spring



Box Joint



Micro-Bevel® Cut



Flush Cut



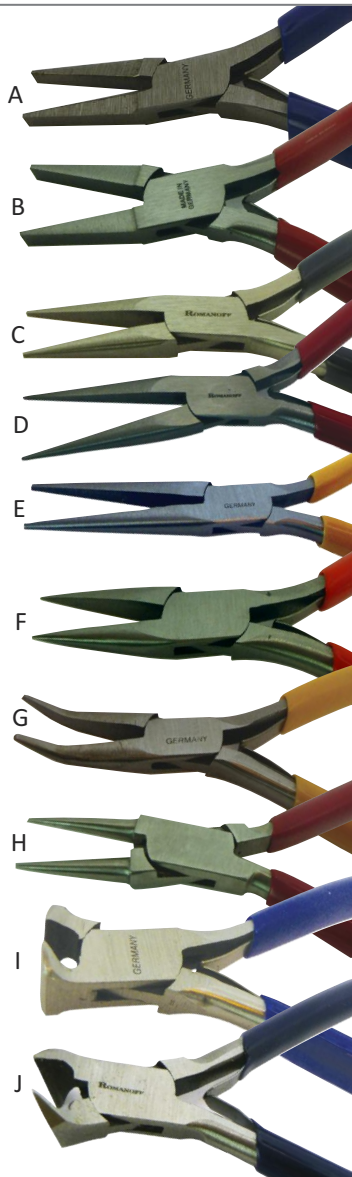
Ultra-Flush® Cut

The 80's Series World Renowned Lindstrom, double leaf spring loaded cutters are made from hardened high-grade Swedish steel. The ergonomically designed handles are excellent for close cutting prongs, sprues, and ultra-access areas.



Item #	Description	Style	Length	Jaw Length	US\$ / 1 - 2	US\$ / 3+
P3-199	Micro-Bevel	#8140	4.33"/110mm	3/8" (10mm)	46.95	42.70
P3-200	Micro-Bevel	#8160	4.92"/125mm	5/8" (16mm)	47.95	44.60
P3-201	Micro-Bevel	#8150	4.43"/112mm	1/2" (12.5mm)	47.95	44.60
P3-202	Flush Cut	#8141	4.33"/110mm	3/8" (10mm)	46.95	43.70
P3-2025	Ultra-Flush	#8142	4.33"/110mm	3/8" (10mm)	47.95	44.60

## German Pliers & Shears



**A. P3-106 High Quality Slim Line from Germany:** These flat nose pliers have smooth jaws that taper at the tips. For holding and manipulating flat pieces.

**B. P3-100 Flat Nose Pliers:** For straightening and holding, these pliers have straight, wide jaws. Made in Germany.

**C. P3-107 Chain Nose Pliers:** These pliers have smooth jaws that taper at the tips with beveled jaw edges to prevent marring of soft wire. Used for bending, gripping, and manipulating wires.

**D. P3-111 Long Chain Nose Pliers:** These smooth jaws taper at the tips, ideal for bending, gripping, and manipulating wires.

**E. P3-112 Long Chain Nose Pliers:** These jaws are serrated, and taper at the tips. Ideal for bending, gripping and manipulating wires.

**F. P3-101 Chain Nose Pliers:** For straightening and holding, with smooth, wide jaws.

**G. P3-103 Chain Nose Pliers with Curved Tips:** Comes complete with leaf springs, and jaws taper at the tips.

**H. P3-102 Round Nose Pliers:** These round nose pliers have smooth, jaws that taper to 1/32" (0.8mm).

**I. P3-108/P3-108-R Flush Cut End Cutters:** Flush cutting edges for precision cutting of softer wire. Jaws are set at right angles for getting closer to work.

**J. P3-110 Oblique Cutters:** Also known as side cutters, these semi-flush cutting edges are for precision cutting of softer wire.

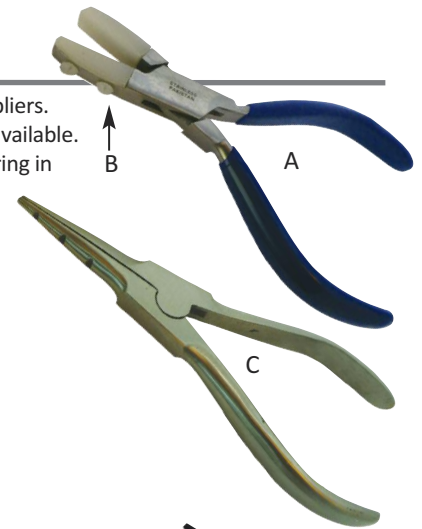
Item #	Description	Length	Jaw Dimensions	US\$ / 1 - 2	US\$ / 3+
A P3-106	Slim Line Flat Nose	5" / 125mm	0.9 x 0.15" / 23 x 4mm	23.70	21.65
B P3-100	Flat Nose	5.5" / 140mm	1 x 0.25" / 25 x 6mm	23.70	21.65
C P3-107	Slim Line Chain Nose	4.75" / 120mm	0.9 x 0.075" / 23 x 2mm	23.70	21.65
D P3-111	Long Chain Nose Pliers, Smooth Jaw	5.7" / 145mm	1.58 x 0.075" / 40 x 2mm	23.70	21.65
E P3-112	Long Chain Nose Pliers, Serrated Jaw	5.7" / 145mm	1.58 x 0.075" / 40 x 2mm	26.89	24.90
F P3-101	Chain Nose	5.3" / 135mm	1 x 0.04" / 25 x 1mm	23.70	21.65
G P3-103	Chain Nose w/Curved Tip	4.75" / 120mm	0.9 x 0.075" / 23 x 2mm	23.70	21.65
H P3-102	Round Nose	5.1" / 130mm	0.79 x 0.075" / 20 x 2mm	23.70	21.65
I P3-108	Slim Line Flush Cut End Cutters	4.5" / 115mm	0.6" / 15mm Cut Length	31.80	28.65
J P3-110	Slim Line Oblique Cutters	4.75" / 120mm	0.7" / 13mm Cut Length	28.90	26.80

## Specialty Pliers

**A. P3-136 Straight Nylon Jaw Pliers:** No more rebuffing or refinishing surfaces on materials handled with these pliers. Made of polished stainless steel with PVC grips and box-joint construction for extra leverage. Replacement jaw available.

**B. P3-123 Bow Opening Pliers:** Jaws open when handles are compressed. For opening bows, links, and rings. Spring in handle keeps pliers closed. These are special joint, heavy-duty pliers. Made in Germany.

	Item #	Description	Length	Jaw Dimensions	US\$ / 1 - 2	US\$ / 3+
A	P3-136	Straight Nylon Jaw Pliers	5.9" (150mm)	0.79 x 0.4" (20 x 10mm)	19.15	17.25
B	P3-136-JAW	Replacement Jaw, P3-136	--	0.79 x 0.4" (20 x 10mm)	6.75	5.80
C	P3-123	Bow Opening Pliers	5.9" (150mm)	1.58 x 0.11" 40 x 3mm	34.30	31.60



## Parallel Pliers

The jaws of parallel pliers open and close uniformly. They have a box joint movement, which is essential for closing prongs, channels, and any type of work evenly. Made in England

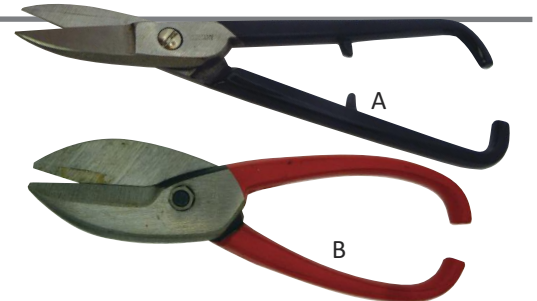
	Item #	Description	Length	Jaw Dimensions	US\$ / 1 - 2	US\$ / 3+
A	P3-141	Parallel Pliers, Smooth Wide Jaw	5.1" (130mm)	1.2 x 0.24" 30x6mm	34.40	31.65
B	P3-142	Parallel Pliers, Smooth Narrow Jaw	5.1" (130mm)	1.2 x 0.075" 30x2mm	34.40	31.65



## Solder Shears

Made of ground and polished steel with PVC coated handles with no spring, these light-duty shears with fine tips are very practical for cutting thin gauge metal. Made in Germany.

	Item #	Description	Length	Jaw Dimensions	US\$ / 1 - 2	US\$ / 3+
A	B8-400	Straight Blade Shear	6.9" (175mm)	1.2" / 30mm Cut Length	19.45	17.60
B	B8-402	Solder Shears	6" (150mm)	1.5" / 30mm Cut Length	22.60	19.70



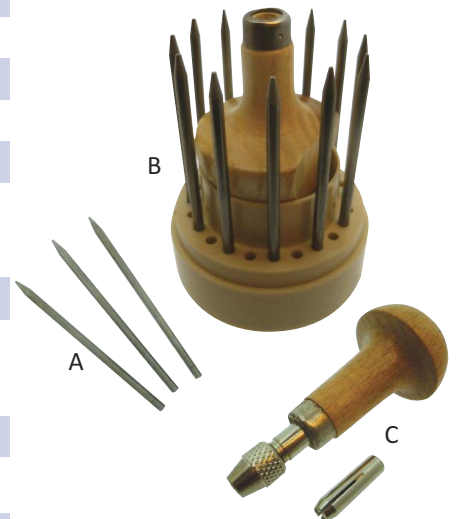
## Swiss Beading Tools & Swivel Handle

A	Item #	Size	Item #	Size	Item #	Size	Item #	Size
	B8-222	#2 (0.35mm)	B8-227	#7 (0.60mm)	B8-232	#12 (0.85mm)	B8-239	#17 (1.10mm)
	B8-223	#3 (0.40mm)	B8-228	#8 (0.65mm)	B8-233	#13 (0.90mm)	B8-238	#18 (1.15mm)
	B8-224	#4 (0.45mm)	B8-229	#9 (0.70mm)	B8-234	#14 (0.95mm)	B8-240	#19 (1.20mm)
	B8-225	#5 (0.50mm)	B8-230	#10 (0.75mm)	B8-235	#15 (1.00mm)	B8-241	#20 (1.25mm)
	B8-226	#6 (0.55mm)	B8-231	#11 (0.80mm)	B8-236	#16 (1.15mm)	B8-242	#22 (1.35mm)

US\$ / Per Each Beader

1-49	50-99	100+
0.90	0.79	0.69

Item #	Description	US\$ / Per 12 Piece Set	
		1-2 Sets	3+ Sets
B B8-300	12 Piece Set Beading Tool w/Handle	20.50	19.00
Item #	Description	US\$ / 1-5	US\$ / 6+
C BE-251	Swivel Handle with Extra Chuck	4.95	4.40





# Busch Burs

Busch Burs™, made of tungsten vanadium steel. Each bur has been precisely machined to offer a consistent, even cut every time. The Busch burs are considered the highest quality available and are manufactured in Germany. They have a standard 3/32" (2.38mm) diameter shank and are approximately 1 3/4" (44.5mm) in length. All burs are sold in multiples of six, or a master box of 72.

## Inverted Cone Single Cut 90-003



Size	Diam. in MM	Item #	\$/piece 6-66	\$/piece 72-143	\$/piece 144+
006	0.60	<a href="#">90-003-006</a>	0.93	0.87	0.80
007	0.70	<a href="#">90-003-007</a>	0.93	0.87	0.80
008	0.80	<a href="#">90-003-008</a>	0.93	0.87	0.80
009	0.90	<a href="#">90-003-009</a>	0.93	0.87	0.80
010	1.00	<a href="#">90-003-010</a>	0.93	0.87	0.80
012	1.20	<a href="#">90-003-012</a>	0.93	0.87	0.80
014	1.40	<a href="#">90-003-014</a>	0.93	0.87	0.80
015	1.50	<a href="#">90-003-015</a>	0.93	0.87	0.80
016	1.60	<a href="#">90-003-016</a>	0.93	0.87	0.80
018	1.80	<a href="#">90-003-018</a>	0.93	0.87	0.80
021	2.10	<a href="#">90-003-021</a>	0.93	0.87	0.80
023	2.30	<a href="#">90-003-023</a>	0.93	0.87	0.80
025	2.50	<a href="#">90-003-025</a>	1.95	1.83	1.72
027	2.70	<a href="#">90-003-027</a>	1.95	1.83	1.68

## Round Coarse 90-001



Size	Diam. in MM	Item #	\$/piece 6-66	\$/piece 72-143	\$/piece 144+
003	0.30	<a href="#">90-001-003</a>	2.93	2.79	2.65
0035	0.35	<a href="#">90-001-0035</a>	2.93	2.79	2.65
004	0.40	<a href="#">90-001-004</a>	1.55	1.47	1.40
005	0.50	<a href="#">90-001-005</a>	0.93	0.87	0.80
006	0.60	<a href="#">90-001-006</a>	0.93	0.87	0.80
007	0.70	<a href="#">90-001-007</a>	0.93	0.87	0.80
008	0.80	<a href="#">90-001-008</a>	0.93	0.87	0.80
009	0.90	<a href="#">90-001-009</a>	0.93	0.87	0.80
010	1.00	<a href="#">90-001-010</a>	0.93	0.87	0.80
012	1.20	<a href="#">90-001-012</a>	0.93	0.87	0.80
014	1.40	<a href="#">90-001-014</a>	0.93	0.87	0.80
015	1.50	<a href="#">90-001-015</a>	0.93	0.87	0.80
016	1.60	<a href="#">90-001-016</a>	0.93	0.87	0.80
018	1.80	<a href="#">90-001-018</a>	0.93	0.87	0.80
020	2.00	<a href="#">90-001-020</a>	0.93	0.87	0.80
021	2.10	<a href="#">90-001-021</a>	0.93	0.87	0.80
022	2.20	<a href="#">90-001-022</a>	0.93	0.87	0.80
023	2.30	<a href="#">90-001-023</a>	0.93	0.87	0.80
024	2.40	<a href="#">90-001-024</a>	1.88	1.79	1.71
025	2.50	<a href="#">90-001-025</a>	1.88	1.79	1.71
026	2.60	<a href="#">90-001-026</a>	1.88	1.79	1.71
027	2.70	<a href="#">90-001-027</a>	1.88	1.79	1.71
029	2.90	<a href="#">90-001-029</a>	1.88	1.79	1.71
031	3.10	<a href="#">90-001-031</a>	2.87	2.73	2.60
033	3.30	<a href="#">90-001-033</a>	2.87	2.73	2.60
035	3.50	<a href="#">90-001-035</a>	2.87	2.73	2.60
037	3.70	<a href="#">90-001-037</a>	2.87	2.73	2.60
040	4.00	<a href="#">90-001-040</a>	3.64	3.47	3.30
042	4.20	<a href="#">90-001-042</a>	3.64	3.47	3.30
045	4.50	<a href="#">90-001-045</a>	3.64	3.47	3.30
047	4.70	<a href="#">90-001-047</a>	3.64	3.47	3.30
050	5.00	<a href="#">90-001-050</a>	3.64	3.47	3.30
055	5.50	<a href="#">90-001-055</a>	6.16	5.87	5.59
060	6.00	<a href="#">90-001-060</a>	6.16	5.87	5.59
070	7.00	<a href="#">90-001-070</a>	6.16	5.87	5.59
075	7.50	<a href="#">90-001-075</a>	7.66	7.30	6.95
080	8.00	<a href="#">90-001-080</a>	7.66	7.30	6.95
085	8.50	<a href="#">90-001-085</a>	7.66	7.30	6.95

## Cup Bur 90-077B



Size	Diam. in MM	Item #	\$/piece 6-66	\$/piece 72-143	\$/piece 144+
009	0.90	<a href="#">90-077B-009</a>	2.84	2.67	2.45
010	1.00	<a href="#">90-077B-010</a>	2.84	2.67	2.45
012	1.20	<a href="#">90-077B-012</a>	2.84	2.67	2.45
014	1.40	<a href="#">90-077B-014</a>	2.84	2.67	2.45
015	1.50	<a href="#">90-077B-015</a>	2.84	2.67	2.45
016	1.60	<a href="#">90-077B-016</a>	2.84	2.67	2.45
018	1.80	<a href="#">90-077B-018</a>	2.84	2.67	2.45
021	2.10	<a href="#">90-077B-021</a>	2.84	2.67	2.45
023	2.30	<a href="#">90-077B-023</a>	2.84	2.67	2.45
025	2.50	<a href="#">90-077B-025</a>	4.83	4.53	4.16
027	2.70	<a href="#">90-077B-027</a>	4.83	4.53	4.16
029	2.90	<a href="#">90-077B-029</a>	4.83	4.53	4.16
031	3.10	<a href="#">90-077B-031</a>	6.39	5.98	5.49
035	3.50	<a href="#">90-077B-035</a>	6.39	5.98	5.49
040	4.00	<a href="#">90-077B-040</a>	7.28	6.93	6.60
045	4.50	<a href="#">90-077B-045</a>	7.28	6.93	6.60
050	5.00	<a href="#">90-077B-050</a>	7.28	6.93	6.60
060	6.00	<a href="#">90-077B-060</a>	8.48	8.09	7.69

## Wheels single Cut 90-002



Size	Diam. in MM	Item #	\$/piece 6-66	\$/piece 72-143	\$/piece 144+
006	0.60	<a href="#">90-002-006</a>	0.93	0.87	0.80
007	0.70	<a href="#">90-002-007</a>	0.93	0.87	0.80
008	0.80	<a href="#">90-002-008</a>	0.93	0.87	0.80
009	0.90	<a href="#">90-002-009</a>	0.93	0.87	0.80
010	1.00	<a href="#">90-002-010</a>	0.93	0.87	0.80
012	1.20	<a href="#">90-002-012</a>	0.93	0.87	0.80
014	1.40	<a href="#">90-002-014</a>	0.93	0.87	0.80
016	1.60	<a href="#">90-002-016</a>	0.93	0.87	0.80
018	1.80	<a href="#">90-002-018</a>	0.93	0.87	0.80
021	2.10	<a href="#">90-002-021</a>	0.93	0.87	0.80
023	2.30	<a href="#">90-002-023</a>	0.93	0.87	0.80
025	2.50	<a href="#">90-002-025</a>	1.95	1.83	1.68
027	2.70	<a href="#">90-002-027</a>	1.95	1.83	1.68
029	2.90	<a href="#">90-002-029</a>	1.95	1.83	1.68



# Busch Burs

## Hart Burs 90° FIG #156C

Size	Diam. in MM	Item #	\$/piece 6-66	\$/piece 72-143	\$/piece 144+
007	0.70	90-156C-007	2.55	2.42	2.30
008	0.80	90-156C-008	2.55	2.42	2.30
009	0.90	90-156C-009	2.55	2.42	2.30
010	1.00	90-156C-010	2.55	2.42	2.30
012	1.20	90-156C-012	2.55	2.42	2.30
014	1.40	90-156C-014	2.55	2.42	2.30
015	1.50	90-156C-015	2.55	2.42	2.30
016	1.60	90-156C-016	2.55	2.42	2.30
018	1.80	90-156C-018	2.55	2.42	2.30
020	2.00	90-156C-020	2.55	2.42	2.30
021	2.10	90-156C-021	2.55	2.42	2.30
022	2.20	90-156C-022	2.55	2.42	2.30
023	2.30	90-156C-023	2.55	2.42	2.30
024	2.40	90-156C-024	3.77	3.59	3.42
025	2.50	90-156C-025	3.77	3.59	3.42
026	2.60	90-156C-026	3.77	3.59	3.42
027	2.70	90-156C-027	3.77	3.59	3.42
029	2.90	90-156C-029	3.77	3.59	3.42
031	3.10	90-156C-031	4.58	4.36	4.15
033	3.30	90-156C-033	4.58	4.36	4.15
035	3.50	90-156C-035	4.58	4.36	4.15
037	3.70	90-156C-037	4.58	4.36	4.15
040	4.00	90-156C-040	5.65	5.38	5.13
042	4.20	90-156C-042	5.65	5.38	5.13
045	4.50	90-156C-045	5.65	5.38	5.13
047	4.70	90-156C-047	5.65	5.38	5.13
050	5.00	90-156C-050	5.65	5.38	5.13



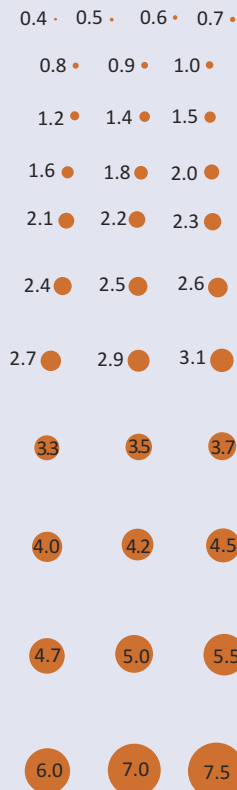
## Hart Burs Fig #446

Size	Diam. in MM	Item #	\$/piece 6-66	\$/piece 72-143	\$/piece 144+
010	1.00	90-446-010	2.54	2.42	2.30
012	1.20	90-446-012	2.54	2.42	2.30
014	1.40	90-446-014	2.54	2.42	2.30
016	1.60	90-446-016	2.54	2.42	2.30
018	1.80	90-446-018	2.54	2.42	2.30
021	2.10	90-446-021	2.54	2.42	2.30
023	2.30	90-446-023	2.54	2.42	2.30
025	2.50	90-446-025	3.77	3.59	3.42
027	2.70	90-446-027	3.77	3.59	3.42
029	2.90	90-446-029	3.77	3.59	3.42
031	3.10	90-446-031	4.58	4.36	4.15
033	3.30	90-446-033	4.58	4.36	4.15
035	3.50	90-446-035	4.58	4.36	4.15
037	3.70	90-446-037	4.58	4.36	4.15
040	4.00	90-446-040	5.65	5.38	5.13
042	4.20	90-446-042	5.65	5.38	5.13
045	4.50	90-446-045	5.65	5.38	5.13
047	4.70	90-446-047	5.65	5.38	5.13
050	5.00	90-446-050	5.65	5.38	5.13



### Measuring Chart

Illustrations Below Are Actual Size



## Crown Saw FiG #231S

Size	Diam. in MM	Item #	\$/piece 1-3	\$/piece 4+
023	0.23	90-231S-023	2.27	2.16
040	0.40	90-231S-040	5.38	5.05
050	0.50	90-231S-050	5.38	5.05
060	0.60	90-231S-060	10.48	9.84
080	0.80	90-231S-080	11.80	11.10
100	1.00	90-231S-100	11.80	11.10



## Carbide Round Fig #010-C

Size	Diam. in MM	Item #	\$/piece 6-66	\$/piece 72-143	\$/piece 144+
008	0.40	90-010-004-C	5.42	5.16	4.91
005	0.50	90-010-005-C	3.09	2.94	2.80
006	0.60	90-010-006-C	2.69	2.53	2.32
007	0.70	90-010-007-C	2.69	2.53	2.32
008	0.80	90-010-008-C	2.69	2.53	2.32
009	0.90	90-010-009-C	2.69	2.53	2.32
010	1.00	90-010-010-C	2.69	2.53	2.32
012	1.20	90-010-012-C	2.69	2.53	2.32
014	1.40	90-010-014-C	2.69	2.53	2.32
016	1.60	90-010-016-C	2.69	2.53	2.32
018	1.80	90-010-018-C	2.69	2.53	2.32
021	2.10	90-010-021-C	2.69	2.53	2.32
023	2.30	90-010-023-C	2.69	2.53	2.32
025	2.50	90-010-025-C	10.55	9.92	9.09
027	2.70	90-010-027-C	10.55	9.92	9.09



Heat treated  
for longer life.  
Designed to operate  
at high speeds.

## Bud Single Cut Fig #006

Size	Diam. in MM	Item #	\$/piece 6-66	\$/piece 72-143	\$/piece 144+
006	0.60	90-006-006	1.04	0.98	0.94
007	0.70	90-006-007	1.04	0.98	0.94
008	0.80	90-006-008	1.04	0.98	0.94
009	0.90	90-006-009	1.04	0.98	0.94
010	1.00	90-006-010	1.04	0.98	0.94
012	1.20	90-006-012	1.04	0.98	0.94
014	1.40	90-006-014	1.04	0.98	0.94
015	1.50	90-006-015	1.04	0.98	0.94
016	1.60	90-006-016	1.04	0.98	0.94
018	1.80	90-006-018	1.04	0.98	0.94
021	2.10	90-006-021	1.04	0.98	0.94
023	2.30	90-006-023	1.04	0.98	0.94
025	2.50	90-006-025	2.25	2.13	2.03
027	2.70	90-006-027	2.25	2.13	2.03
029	2.90	90-006-029	2.25	2.13	2.03
031	3.10	90-006-031	3.13	2.98	2.84
033	3.30	90-006-033	3.13	2.98	2.84
035	3.50	90-006-035	3.13	2.98	2.84
037	3.70	90-006-037	3.13	2.98	2.84
040	4.00	90-006-040	3.98	3.79	3.61
045	4.50	90-006-045	3.98	3.79	3.61



## Cylinder Square Single Cut Fig #015



Size	Diam. in MM	Item #	\$/piece 6 - 66	\$/piece 72-143	\$/piece 144+
007	0.70	<a href="#">90-015-007</a>	1.38	1.31	1.25
008	0.80	<a href="#">90-015-008</a>	1.38	1.31	1.25
009	0.90	<a href="#">90-015-009</a>	1.38	1.31	1.25
010	1.00	<a href="#">90-015-010</a>	1.38	1.31	1.25
012	1.20	<a href="#">90-015-012</a>	1.38	1.31	1.25
014	1.40	<a href="#">90-015-014</a>	1.38	1.31	1.25
015	1.50	<a href="#">90-015-015</a>	1.38	1.31	1.25
016	1.60	<a href="#">90-015-016</a>	1.38	1.31	1.25
018	1.80	<a href="#">90-015-018</a>	1.38	1.31	1.25
021	2.10	<a href="#">90-015-021</a>	1.38	1.31	1.25
023	2.30	<a href="#">90-015-023</a>	1.38	1.31	1.25
031	3.10	<a href="#">90-015-031</a>	3.16	3.01	2.87

## Cylinder Square Cross Cut Fig #021



Size	Diam. in MM	Item #	\$/piece 6 - 66	\$/piece 72-143	\$/piece 144+
006	0.60	<a href="#">90-021-006</a>	1.38	1.31	1.25
007	0.70	<a href="#">90-021-007</a>	1.38	1.31	1.25
008	0.80	<a href="#">90-021-008</a>	1.38	1.31	1.25
009	0.90	<a href="#">90-021-009</a>	1.38	1.31	1.25
010	1.00	<a href="#">90-021-010</a>	1.38	1.31	1.25
012	1.20	<a href="#">90-021-012</a>	1.38	1.31	1.25
014	1.40	<a href="#">90-021-014</a>	1.38	1.31	1.25
016	1.60	<a href="#">90-021-016</a>	1.38	1.31	1.25
018	1.80	<a href="#">90-021-018</a>	1.38	1.31	1.25
021	2.10	<a href="#">90-021-021</a>	1.38	1.31	1.25
023	2.30	<a href="#">90-021-023</a>	1.38	1.31	1.25
025	2.50	<a href="#">90-021-025</a>	2.82	2.69	2.56
027	2.70	<a href="#">90-021-027</a>	2.82	2.69	2.56
029	2.90	<a href="#">90-021-029</a>	2.82	2.69	2.56
031	3.10	<a href="#">90-021-031</a>	3.16	3.01	2.87

## Cone Square Cross Cut Fig #023



Size	Diam. in MM	Item #	\$/piece 6 - 66	\$/piece 72-143	\$/piece 144+
006	0.60	<a href="#">90-023-006</a>	1.38	1.31	1.25
007	0.70	<a href="#">90-023-007</a>	1.38	1.31	1.25
008	0.80	<a href="#">90-023-008</a>	1.38	1.31	1.25
009	0.90	<a href="#">90-023-009</a>	1.38	1.31	1.25
010	1.00	<a href="#">90-023-010</a>	1.38	1.31	1.25
012	1.20	<a href="#">90-023-012</a>	1.38	1.31	1.25
014	1.40	<a href="#">90-023-014</a>	1.38	1.31	1.25
016	1.60	<a href="#">90-023-016</a>	1.38	1.31	1.25
018	1.80	<a href="#">90-023-018</a>	1.38	1.31	1.25
021	2.10	<a href="#">90-023-021</a>	1.38	1.31	1.25
023	2.30	<a href="#">90-023-023</a>	1.38	1.31	1.25
025	2.50	<a href="#">90-023-025</a>	2.82	2.69	2.56
027	2.70	<a href="#">90-023-027</a>	2.82	2.69	2.56
031	3.10	<a href="#">90-023-031</a>	3.26	3.07	2.81

# Busch Burs

## Measuring Chart

Illustrations Below Are Actual Size

0.4 • 0.5 • 0.6 • 0.7 •

0.8 • 0.9 • 1.0 •

1.2 • 1.4 • 1.5 •

1.6 • 1.8 • 2.0 •

2.1 • 2.2 • 2.3 •

2.4 • 2.5 • 2.6 •

2.7 • 2.9 • 3.1 •

3.3 • 3.5 • 3.7 •

4.0 • 4.2 • 4.5 •

4.7 • 5.0 • 5.5 •

6.0 • 7.0 • 7.5 •

## Cone Square Single Cut Fig #017

Size	Diam. in MM	Item #	\$/piece 6-66	\$/piece 72-143	\$/piece 144+
007	0.70	90-017-007	1.38	1.31	1.25
008	0.80	90-017-008	1.38	1.31	1.25
009	0.90	90-017-009	1.38	1.31	1.25
010	1.00	90-017-010	1.38	1.31	1.25
012	1.20	90-017-012	1.38	1.31	1.25
014	1.40	90-017-014	1.38	1.31	1.25
016	1.60	90-017-016	1.38	1.31	1.25
018	1.80	90-017-018	1.38	1.31	1.25
021	2.10	90-017-021	1.38	1.31	1.25

## Krause Fig #256

Size	Diam. in MM	Item #	\$/piece 6-36	\$/piece 40+
010	0.10	90-256-010	3.09	2.79
012	0.12	90-256-012	3.09	2.79

## Reamer Fig #115A

Size	Diam. in MM	Item #	\$/piece 6-12	\$/piece 18+
018	0.18	90-115A-018	7.05	6.63
023	0.23	90-115A-023	7.05	6.63

## Special Inlay Fig #100A

Size	Diam. in MM	Item #	\$/piece 6-36	\$/piece 48+
008	0.80	90-100A-008	3.63	3.41
009	0.90	90-100A-009	3.63	3.41
010	1.00	90-100A-010	3.63	3.41
012	1.20	90-100A-012	3.63	3.41

## Riveters Fig #452

Size	Diam. in MM	Item #	\$/piece 1-2	\$/piece 3+
080	8.00	90-452-080	53.75	51.60

# Maillefer Swiss Burs

Maillefer Swiss made burs are precision engineered and calibrated to exacting standards in consistent adherence to ADA/ISO specifications. Produced from Tungsten vanadium steel alloy, and offered at an economical price. They have a standard 3/32" (2.38mm) diameter shank and are approximately 1 3/4" (44.5mm) in length. All burs are sold in multiples of six, or a master box of 72.



## Swiss Krause #256M



Size	Diam. in MM	Item #	US\$/ 6-36	US\$/ 40+
010	0.10	90-256-010M	1.68	1.58
012	0.12	90-256-012M	1.68	1.58



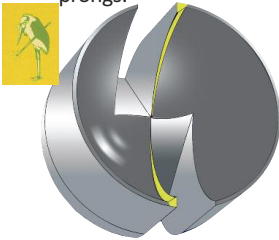


# Twist Drills and Burs

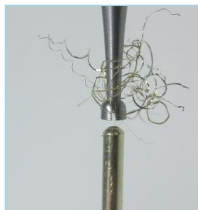
**NEW!**

## TwinCut Cup Cutter Fig #411T

The New 3-in-1 Concave CUTTER from Busch with its innovative TWINCUT Blade Geometry allows you to shorten, round and polish all in one easy step. Dual chip channels make the removal of excess materials faster and safer. Thinner cup walls make it easier to work on tightly spaced prongs.



Size	Diam. in MM	Item #	\$/piece 6-30	\$/piece 36+
008	0.80	90-411T-008	3.16	2.96
009	0.90	90-411T-009	3.16	2.96
010	1.00	90-411T-010	3.16	2.96
012	1.20	90-411T-012	3.16	2.96
014	1.40	90-411T-014	3.16	2.96
015	1.50	90-411T-015	3.16	2.96
016	1.60	90-411T-016	3.16	2.96
018	1.80	90-411T-018	3.16	2.96
020	2.00	90-411T-020	3.16	2.96



## Dormer Twist Drills 90-230



These high speed twist drills are precision ground to an exacting standard. Excellent for all metals. Each red tube contains 10 drills.

Drill Diameter (mm)	Item #	US\$ / 1-4 Tubes	US\$ / 5-10 Tubes
1.40	90-230-55	7.95	6.99
1.18	90-230-56	7.95	6.99
1.09	90-230-57	7.95	6.99
1.06	90-230-58	7.95	6.99
1.04	90-230-59	7.95	6.99
1.00	90-230-60	7.95	6.99
.99	90-230-61	7.95	6.99
.97	90-230-62	7.95	6.99
.94	90-230-63	7.95	6.99
.91	90-230-64	7.95	6.99
.89	90-230-65	7.95	6.99
.884	90-230-66	7.95	6.99
.81	90-230-67	7.95	6.99
.79	90-230-68	7.95	6.99
.74	90-230-69	7.95	6.99
.71	90-230-70	7.95	6.99
.66	90-230-71	7.95	6.99
.64	90-230-72	7.95	6.99
.61	90-230-73	7.95	6.99
.57	90-230-74	7.95	6.99
.53	90-230-75	7.95	6.99
.51	90-230-76	7.95	6.99
.46	90-230-77	7.95	6.99
.41	90-230-78	7.95	6.99
.37	90-230-79	7.95	6.99
.32	90-230-80	9.95	8.99

## Busch Twist Drills Fig #077



These High Speed Twist drills are precision ground to an exacting standard. Excellent for all metals.

Drill Dia. (mm)	Busch Item #	Busch US\$/6-30	Busch US\$/36+
0.50	90-077-005	2.27	2.06
0.60	90-077-006	2.27	2.06
0.70	90-077-007	2.27	2.06
0.80	90-077-008	2.27	2.06
0.90	90-077-009	2.27	2.06
1.00	90-077-010	2.27	2.06
1.10	90-077-011	2.27	2.06
1.20	90-077-012	2.27	2.06
1.40	90-077-014	2.27	2.06
1.50	90-077-015	2.27	2.06
1.60	90-077-016	2.27	2.06
1.70	90-077-017	2.27	2.06
1.80	90-077-018	2.27	2.06
1.90	90-007-019	2.27	2.06

## Inside Ring Burs



Used for deburring, smoothing, and finishing of inside ring surfaces. Made of carbide steel for extra long life.

Item #	Head Diameter	Head Length	Shank Size	Cut	US\$ / 1-3	US\$ / 4+
90-603	1/4" (6.4mm)	1/2" (12.7mm)	3/32" (2.88mm)	Extra Fine	14.49	13.77
90-602	1/4" (6.4mm)	1/2" (12.7mm)	3/32" (2.88mm)	Fine	14.49	13.77
90-604	1/4" (6.4mm)	1/2" (12.7mm)	3/32" (2.88mm)	Coarse	14.49	13.77
90-606	3/8" (9.53mm)	3/4" (19.05mm)	1/8" (3.18mm)	Extra Fine	19.75	18.55
90-605	3/8" (9.53mm)	3/4" (19.05mm)	1/8" (3.18mm)	Fine	19.75	18.55
90-607	3/8" (9.53mm)	3/4" (19.05mm)	1/8" (3.18mm)	Coarse	19.75	18.55

## Pro-Cut Bur & Blade Lubricant



Extend the life of burs, sawblades, drills, etc. Simple to use, every so often run your bur, blade or drill into Pro-Cut lubricant. Supplied in handy "push=up" 2oz. dispenser tube.

Item #	Description	US\$/1-3	US\$/4+
A 90-599	Pro-Cut Bur & Blade Lubricant, Yellow	4.72	4.39
B 90-600	Ferris Ultra Lube, Blue	4.60	4.29

# Piercing Saw Blades Size Chart

Size	8/0	7/0	6/0	5/0	4/0	3/0	2/0	1/0	1	2	3	4	5	6	7	8	10
Thickness	.18mm .0063"	.18mm .0067"	.21mm .007"	.24mm .008"	.25mm .0086"	.28mm .0095"	.32mm .0103"	.34mm .0110"	.36mm .0120"	.42mm .0134"	.43mm .0140"	.45mm .0150"	.47mm .0158"	.50mm .0173"	.55mm .0189"	.58mm .0197"	.65mm .0215"
Width	.31mm .0126"	.31mm .013"	.35mm .014"	.37mm .0157"	.42mm .0175"	.45mm .019"	.50mm .0204"	.50mm .022"	.56mm .024"	.63mm .0276"	.74mm .029"	.75mm .031"	.78mm .033"	.83mm .037"	.92mm .04"	1.03mm .044"	1.25mm .051"
Teeth/Inch	96	96	84	76	68	64	64	56	56	52	48	45	44	40	38	30	24
Drill Size	80	80	79	78	77	76	75	73	71	70	68	67	65	59	57	55	51



## Swiss & German Saw Frames

Romanoff Saw Frames hold piercing & spiral sawblades. The Swiss made adjustable saw frame is light weight, perfectly balanced in design with steel body and comfortable soft rubber grips. Aluminum inserts for easy loading of saw blades. The German saw frame is made from flattened steel, with hardwood handle and thumbscrews.

	Item#	Description	Each
A	<b>95-105</b>	Swiss 2-¾" Adjustable Saw Frame	18.30
B	<b>95-110</b>	German 2 ½" Adjustable Saw Frame	12.75
B	<b>95-113</b>	German 3" Adjustable Saw Frame	13.25



## Hercules "White Label" Saw Blades

Hercules saw blades are known for their quality around the world. Their teeth are uniform in size, shape, and sharpness. The rounded back makes cutting curves easier. Sold by the gross. Made in Germany.

Size	Item #	US\$ / 1-3 Gross	US\$ / 4+ Gross
8/0	<b>95-8/0</b>	32.60	30.90
7/0	<b>95-7/0</b>	32.60	30.90
6/0	<b>95-6/0</b>	30.80	28.40
5/0	<b>95-5/0</b>	30.80	28.40
4/0	<b>95-4/0</b>	26.50	23.90
3/0	<b>95-3/0</b>	24.25	21.90
2/0	<b>95-2/0</b>	24.25	21.90
1/0	<b>95-1/0</b>	24.25	21.90
1	<b>95-001</b>	24.25	21.90
2	<b>95-002</b>	24.25	21.90
3	<b>95-003</b>	24.25	21.90

## Swiss Gold Label Saw Blades

These Romanoff long lasting jewelers saw blades are made of a special high grade steel alloy that has been tempered in electronically controlled furnaces. The rounded back makes cutting curves easier. Blades measure 5 ¼" L (13cm). Sold by the gross. Made in Switzerland.



Size	Item #	US\$ / 1-3 Gross	US\$ / 4+ Gross
8/0	<b>95-8/0-GL</b>	29.40	27.85
6/0	<b>95-6/0-GL</b>	26.65	24.80
5/0	<b>95-5/0-GL</b>	25.40	23.60
4/0	<b>95-4/0-GL</b>	23.50	21.55
3/0	<b>95-3/0-GL</b>	23.50	21.55
2/0	<b>95-2/0-GL</b>	23.50	21.55
1/0	<b>95-1/0-GL</b>	23.50	21.55
1	<b>95-001-GL</b>	23.50	21.55
2	<b>95-002-GL</b>	23.50	21.55
3	<b>95-003-GL</b>	23.50	21.55
4	<b>95-004-GL</b>	25.40	23.60
5	<b>95-005-GL</b>	25.40	23.60

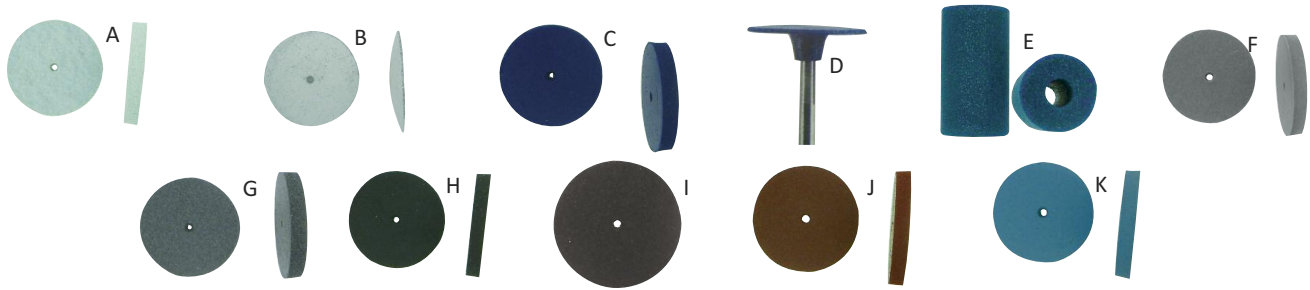
## Antelope "Blue Label" Saw Blades



The Romanoff Antelope "Blue Label" saw blades are German made, high quality piercing blades, with a rounded back. They will cut hard metals, pearls, and other hard materials. Blades measure 5 ¼" (13cm) long. Sold by the gross. Made in Germany.

Size	Item #	US\$ / 1-3 Gross	US\$ / 4+ Gross
8/0 Blue	<b>95-900-8/0</b>	32.60	30.90
6/0 Blue	<b>95-900-6/0</b>	32.60	30.90
5/0 Blue	<b>95-900-5/0</b>	30.80	28.40
4/0 Blue	<b>95-900-4/0</b>	26.60	23.90
3/0 Blue	<b>95-900-3/0</b>	24.25	21.90
2/0 Blue	<b>95-900-2/0</b>	24.25	21.90
1/0 Blue	<b>95-900-1/0</b>	24.25	21.90
1 Blue	<b>95-900-1</b>	24.25	21.90
2 Blue	<b>95-900-2</b>	24.25	21.90
3 Blue	<b>95-900-3</b>	24.25	21.90

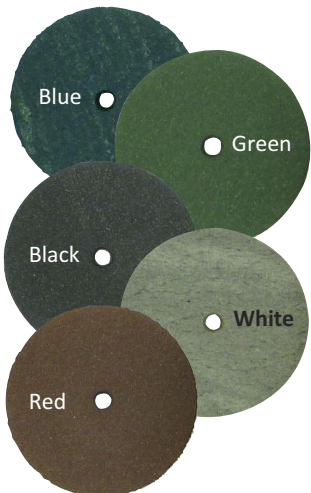
# Rubber Wheels



	Item#		Description	Size	Finish	Grit	Box/Qty	US\$ / 1-3	US\$ / 4+
A	<a href="#">91-091-GA78</a>		White, Square Edge	7/8 x 1/8"	Extra Coarse	180	Bx/100	46.55	42.85
B	<a href="#">90-091-PLWHT1</a>		White Eve R22 Platinum Square Edge, Coarse	7/8 x 1/8"	Coarse	220	Bx/100	48.50	44.65
B	<a href="#">90-091-PLWHT2</a>		White Eve R22 Platinum Knife Edge, Coarse	7/8"	Coarse	220	Bx/100	48.50	44.65
C	<a href="#">91-0401-220</a>		Blue Eve Miracle Wheels, Square Edge	7/8 x 1/8"	Coarse	220	Bx/10	7.50	5.98
C	<a href="#">91-0401-C</a>		Blue Eve Miracle Wheels, Square Edge	7/8 x 1/8"	Coarse	220	Bx/100	42.75	39.50
C	<a href="#">91-0410-220</a>		Blue Eve Miracle Wheels, Knife Edge	7/8"	Coarse	220	Bx/10	7.50	5.98
C	<a href="#">91-0410-C</a>		Blue Eve Miracle Wheels, Knife Edge	7/8"	Coarse	220	Bx/100	42.75	39.50
D	<a href="#">91-091-EVE</a>		Blue Eve Miracle Floppy Mounted Wheel	20 x 1mm	Coarse	220	Bx/100	110.90	99.50
E	<a href="#">91-091-PUD</a>		Blue Eve Miracle, Inside Cylinder	1 x 1/2"	Coarse	220	Bx/12	22.75	20.15
F	<a href="#">90-091-PLGRY1</a>		Grey Platinum, Square Edge	7/8 x 1/8"	Medium	280	Bx/100	48.50	44.65
G	<a href="#">91-091-G17/8</a>		Grey "Most Popular," Square Edge	7/8 x 1/8"	Medium	280	Bx/100	42.75	39.50
G	<a href="#">91-091-G27/8</a>		Grey "Most Popular," Knife Edge	7/8"	Medium	280	Bx/100	42.75	39.50
H	<a href="#">91-0411</a>		Black Eve R22M Flexible Silicon, Square Edge	7/8 x 1/8"	Medium	280	Bx/100	42.75	39.50
I	<a href="#">91-0410</a>		Black Eve L18M Flexible Silicon, Knife Edge	5/8"	Medium	280	Bx/100	42.75	39.50
J	<a href="#">91-0002</a>		Brown Top Star Edenta, Square Edge	7/8 x 1/8"	Fine	600	Bx /100	58.15	55.30
K	<a href="#">91-091-GF7SE</a>		Light Blue Eve, Square Edge	7/8 x 1"	Fine	600	Bx /100	42.75	39.50



# Dedeco Polishing Wheels



Item#		Description	Type	US\$ / 1-3	US\$ / 4+
<a href="#">91-091-5004</a>		Blue 7/8" x 1/8" Square edge	High Glaze Polishing and Finishing	24.65	22.75
<a href="#">91-091-5029</a>		White 5/8" x 1/16" Square Edge	Ultra Fine Polish, Soft & Flexible	31.35	28.95
<a href="#">91-091-5009</a>		White 7/8" x 1/8" Square Edge	Ultra Fine Polish, Soft & Flexible	31.35	28.95
<a href="#">91-091-4980</a>		White 7/8" Knife Edge	Ultra Fine Polish, Soft & Flexible	32.95	31.50
<a href="#">91-091-5000</a>		Black 7/8" x 1/8" Square edge	Polishing Hard Surface Metals	24.65	22.75
<a href="#">91-091-5001</a>		Green 7/8" x 1/8" Square edge	Scratch Removal and Pre-Polishing	24.65	22.75
<a href="#">91-091-5007</a>		Red 7/8" x 1/8" Square edge	Soft & Flexible for Fine Polishing	29.80	27.90



## EVE Silicone Mounted Points

Flexible open pore polishers in a silicone rubber bond. Specially suited for extra fine mirror finishing. Outlasts all other abrasives. Shank size  $\frac{3}{32}$ ". Max speed 15,000 rpm.

Sold in  
boxes of  
10

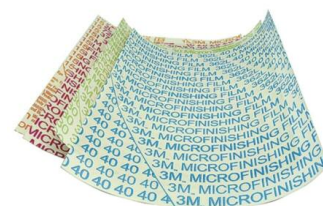


Size	11 x 2 mm	5.5 x 15 mm	11 x 2.5 mm	14 x 12 mm	US\$ /Box
Grade	K/EDGE	FLAME	SQ/EDGE	CYLINDER	
COARSE	<b>91-021-2101</b>	<b>91-021-2105</b>	<b>91-021-2109</b>	<b>91-021-2113</b>	11.99
MEDIUM	<b>91-021-2102</b>	<b>91-021-2106</b>	<b>91-021-2110</b>	<b>91-021-2114</b>	11.99
FINE	<b>91-021-2103</b>	<b>91-021-2107</b>	<b>91-021-2111</b>	<b>91-021-2115</b>	11.99
X-FINE	<b>91-021-2104</b>	<b>91-021-2108</b>	<b>91-021-2112</b>	<b>91-021-2116</b>	11.99

## 3M™ Imperial Microfinishing Film Sheets

3M™ Imperial Microfinishing Film Sheets is made using a long lasting backing Polishing Paper. Sold in a 50-Pack.

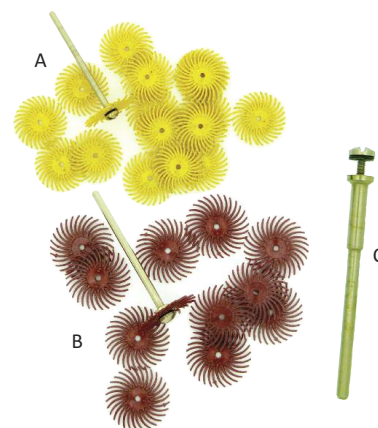
- Superior micron graded aluminum oxide
- Prepares surface for finishing prior to buffing
- Fine film backing is durable and long lasting
- The lower the number the finer the grit



Item #	Size	Grit		US\$ /Pack
<b>91-1031</b>	8½ x 11"	60		86.75
<b>91-1032</b>	8½ x 11"	40		86.75
<b>91-1033</b>	8½ x 11"	30		86.75
<b>91-1034</b>	8½ x 11"	15		86.75
<b>91-1035</b>	8½ x 11"	9		86.75

## 3M Radial Bristle Discs

Used for cleaning, pre-finishing, blending and firescale removal. Produces a high quality finish on Platinum, Gold & Silver, no compounds or chemicals required, (lubricate with water). Yellow Radial Wheels work fast, reduce loading, smearing & give consistent performance and long life, making them a must for every shop!



	Item #	Grit	Size	Description	Qty / Box	US\$ / Each
<b>A</b>	<b>91-3335</b>	80	$\frac{3}{4}$ x $\frac{1}{16}$ "	Coarse Yellow Radial	48	49.80
<b>B</b>	<b>91-3335-R</b>	220	$\frac{3}{4}$ x $\frac{1}{16}$ "	Medium Red Radial	48	49.80
<b>C</b>	<b>92-105</b>	N/A	$\frac{3}{32}$ x $1\frac{1}{4}$ "	Screw Mandrel	1	0.89

# 3M Lite Deburring & Finishing Wheels

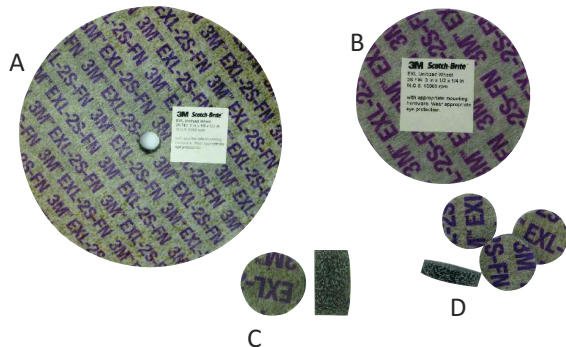


3M lite deburring wheels are long-lasting and will always give you a constant finishing result. These wheels can be used for all precious metals, white metals, and zinc. They are used for cutting down of sprues, gates and flashing, and will give you excellent results in pre-finishing. 3M lite deburring wheels are a flexible open-web abrasive, impregnated with silicon carbide.

	Item #	Density	Grit	Description	US\$ / 1-2	US\$ / 3+
A	<a href="#">91-0566-6S</a>	6S	Coarse	3M Lite Deburring Wheel 6" x 1" x 1"	71.30	66.50
A	<a href="#">91-0566-7S</a>	7SFIN	Fine	3M Lite Deburring Wheel 6" x 1" x 1"	71.30	66.50
A	<a href="#">91-0566-9S</a>	8AMED	Coarse	3M Lite Deburring Wheel 6" x 1" x 1"	71.30	66.50
B	<a href="#">91-0566-ADP</a>	N/A	N/A	Arbor Adapter Set	8.81	--

## 3M Unitized deburring Wheels

For sprue removal, blending and smoothing of exterior surfaces. Excellent for cleaning platinum, white gold, and silver.



	Item #	Density	Grit	Description	Qty	US\$ / 1-2	US\$ / 3+
A	<a href="#">91-0567</a>	2 SFN	Medium	6 x ½ x ½"	1	39.40	37.10
A	<a href="#">91-0569</a>	2 A	Med/Hard	6 x ½ x ½"	1	39.40	37.10
B	<a href="#">91-0565-1</a>	2 SFN	Medium	3 x ½ x ¼"	1	12.50	11.65
C	<a href="#">91-311-VEN</a>	2 SFN	Medium	1 x ½ x 1/16"	1	3.44	3.29
D	<a href="#">91-0564</a>	2 SFN	Medium	1 x ¼ x 1/16"	100 / Box	158.50	146.50

## Flap Wheels



This flap wheel is excellent for lite contouring satin finishes. Use the extra fine grade for removing oxides and creating patina, and popular for watchbands

	Item #	Dimensions	Grade	Grit	US\$ / 1-2	US\$ / 3+
	<a href="#">91-315</a>	4" x 1" x ¼"	Fine	180 - 220	15.46	13.92

## Separating Discs



Separating discs are used for cutting any type of precious metal as well as porcelain and acrylics. They are available in "regular silicon carbide," abrasive on one side/safe on other, or "high speed" aluminum oxide, abrasive on both sides. Separating discs are also popular for cutting prongs.

	Item #	Size	Quantity	Speed	US\$ / 1-2	US\$ / 3+
	<a href="#">91-015</a>	1/2 x 0.023"	100	Regular / Safe	19.20	17.60
	<a href="#">91-016</a>	7/8 x 0.023"	100	Regular / Safe	16.84	15.16
	<a href="#">91-017</a>	7/8 x 0.023"	100	High Speed	16.84	15.16
	<a href="#">91-0177</a>	7/8 x 0.005"	25	High Speed	13.60	12.24
	<a href="#">91-017-VT</a>	7/8 x 0.015"	100	High Speed	16.84	15.16
	<a href="#">91-0185</a>	1" x 0.023"	50	High Speed	16.84	15.16

# Sandpaper and Discs

## Adalox Paper Discs

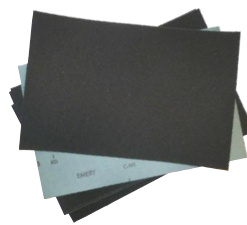
Adalox discs are aluminum oxide coated paper discs used for grinding and pre-polishing. They are 1-1/2" (38mm) x 1/16" (1.6mm). Their maximum speed is 30,000 RPM and are packaged 500/box.



Item #	Grit	Sold Per Box (500/box)	
		US\$ / 1-2	US\$ / 3+
91-019	80 Grit	62.95	56.75
91-020	100 Grit	62.95	56.75
91-021	120 Grit	62.95	56.75
91-022	150 Grit	62.95	56.75
91-0226	220 Grit	62.95	56.75

## Norton Emery Polishing Paper

Used for any dry preparation of metal surfaces. Lightweight backing combined with emery abrasive. The finer grits, eg. 3/0, 2/0 are popular for pre-polishing platinum. Sized 9 x 13 3/4" and sold per piece or in a box of 50.



Item#	Code	Grit	Sold Per Box (50/box)	
			US\$ / 1-49	US\$ / 50+
91-177	# 3/0	1000	1.29	1.17
91-178	# 2/0	600	1.29	1.17
91-179	# 1/0	400	1.29	1.17
91-180	# 1	280	1.29	1.17
91-181	# 2	220	1.29	1.17
91-182	# 3	180	1.29	1.17

## E.C. Moore's Sanding Discs - 20,000 RPM



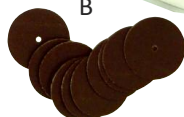
A



E.C. Moore's brass centered snap-on aluminum oxide, red-brown in color, glue-bonded sanding discs with paper back.



B



E.C. Moore's pinhole centered aluminum oxide, red-brown in color, glue-bonded sanding discs with paper back.



C



E.C. Moore's brass centered snap-on white aluminum oxide, electrostatically bonded to a reinforced non-scratching plastic backing.



Item#	Type	Grit	Back Color	Diameter	Center Type	Qty Per Box	Sold Per Box	
							US\$ / 1-3	US\$ / 4+
A 91-054-A-C	Adalox	Coarse	Red	7/8"	Brass	50	4.65	4.19
A 91-054-A-M	Adalox	Medium	Yellow	7/8"	Brass	50	4.65	4.19
A 91-054-A-F	Adalox	Fine	Green	7/8"	Brass	50	4.65	4.19
B 91-055-A-C	Adalox	Coarse	Red	7/8"	Pinhole	50	4.65	4.19
B 91-055-A-M	Adalox	Medium	Yellow	7/8"	Pinhole	50	4.65	4.19
B 91-055-A-F	Adalox	Fine	Green	7/8"	Pinhole	50	4.65	4.19
B 91-0541-1/2	Adalox	Coarse	Red	1/2"	Pinhole	100	4.65	4.19
B 91-055-A-1/2	Adalox	Medium	Yellow	1/2"	Pinhole	100	4.65	4.19
B 91-055-A1/2F	Adalox	Fine	Green	1/2"	Pinhole	100	4.65	4.19
C 91-057-F	Sand	Fine	Clear	7/8"	Brass	50	5.80	5.39
C 91-057-M	Sand	Medium	Clear	7/8"	Brass	50	5.80	5.39
C 91-057-C	Sand	Coarse	Clear	7/8"	Brass	50	5.80	5.39

Item #	Description	Each
D 91-056	Snap On Mandrel 3/32" (2.38 mm) Shank	\$0.95
E 92-105	Screw Mandrel 3/32" (2.38 mm) Shank	\$0.89

## Blue Zirconia Platinum Sanding Discs

Extremely fast-cutting abrasives, the blue resin bonded sanding discs are thin and flexible, and used for pre-polishing, semi-finishing, and blending. Excellent for platinum, palladium, as well as gold and silver. 100 discs per box.

Item#	Description	Diameter	Center Type	US\$ / 1-11	US\$ / 12+
91-055-A-CB	Zirconia Coarse 7/8" Pinhole	7/8"	Pinhole	7.09	6.45
91-055-A-CBM	Zirconia Medium 7/8" Pinhole	7/8"	Pinhole	7.09	6.45
91-055-A-CBF	Zirconia Fine 7/8" Pinhole	7/8"	Pinhole	7.09	6.45





## Leather Finger Guards



The leather finger guard offers the best protection against heat, compounds and abrasives. Romanoff offers two styles of leather finger guards, open end as well as closed end. The leather finger guard features a flexible cloth back that grips as well as offers a comfortable fit.

Item #	Description	US\$ / 1-23	US\$ / 24+
92-029	Open End Leather Finger	0.79	0.72
92-030	Closed End Leather Finger	0.84	0.77

## Finger Guard Tape



Finger guard tape protects fingers, hands and wrists from the hazards of polishing, sharp edges, heat and abrasive materials. It is ideal for using in buffing, grinding and all types of benchwork when wearing gloves might prove awkward. Made of green surgical grade gauze coated with latex rubber, this finger guard tape is dry to the touch and self-adhering (but only to itself, not to skin, hair or clothing). It is easy to use, lightweight, and comfortable. Each roll has 90' of 3/4" wide tape. Sold 16 rolls per package.

Item #	Description	US\$ / 1-3	US\$ / 4+
80-170	Finger Guard Tape	24.80	22.25

## Inspection Gloves



These thin, 100% cotton inspection gloves are ideal for handling finished jewelry and preventing fingerprints or smudges after polishing. Available in two sizes. Sold per pair.

Item #	Description	US\$ / 1-71	US\$ / 72-143	US\$ / 144+
89-200	Ladies Inspection Gloves	0.59	0.56	0.47
89-201	Mens Inspection Gloves	0.62	0.59	0.49

## Safety Glasses



One piece polycarbonate lens, full side shield and full top shields offer protection sufficient for liquids and grinding dust particles.

Item #	Description	US\$ / 1-3	US\$ / 4+
242-815	Safety Glasses	4.35	3.95

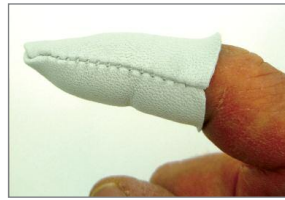
## 5 Minute Epoxy



This epoxy adhesive is a high-stress, two-part glue, which works well on metal, wood, glass, and ceramics. Will produce a high quality bond in five minutes. Sold in two half ounce tubes.

Item #	Description	US\$ / 1-2	US\$ / 3+
C3-100-5MIN	5 Minute Epoxy	5.95	5.29

## Leather Finger Cots



Protect your fingers during polishing with these form fitting, one-size-fits-all leather finger cots. Made from soft leather for a comfortable fit.

Item #	Description	Qty	US\$ / 1-5	US\$ / 6+
80-165	Leather Finger Cots	10/pk	7.22	6.60

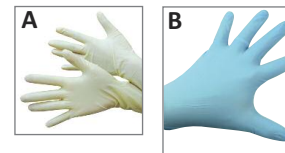
## Rubber Finger Guards



These ventilated rubber finger guards provide a sure grip while protecting your fingers from heat, sharp objects, and abrasion during polishing or grinding. Available in four sizes. Sold per dozen.

Item #	Description	US\$ / 1-3	US\$ / 4+
80-160	Size 11 Small	5.51	4.69
80-161	Size 12 Medium	5.51	4.69
80-162	Size 13 Large	5.51	4.69
80-163	Size 14 Extra Large	5.51	4.69

## Nitrile & Latex Gloves



Blue Nitrile Gloves are heavy-duty and long lasting, non-latex gloves (for latex sensitivity). Along with our beige latex gloves (powder free), both are resistant to most substances, provide support, conform to the users hand, and reduce hand fatigue. 100/box

Item #	Description	US\$ / 1-2	US\$ / 3+
A 80-102-S	Small Beige Latex Gloves	16.50	14.65
B 89-102-MN	Medium Blue Nitrile Gloves	18.50	16.65
B 80-102-N	Large Blue Nitrile Gloves	18.50	16.65

## 2 Hour Epoxy Bonded Glue



This two-part clear glue is used to bond gems and pearls to metal findings and will harden in two hours.

Item #	Description	US\$ / 1-2	US\$ / 3+
C3-100-EPOXY	Clear Epoxy 1/2 oz.	6.50	5.85

## Cone-Loc Sander and Metalite Cloth Rolls

**Cone-Loc Drum Sanders** are heavy-duty aluminum wheels designed to hold abrasive emery cloth rolls. It measures 6" in diameter by 1-1/2" thick. It has a rubber cushion attached to the outer rim. It is an economical method for grinding and sanding metal. **Norton Metalite Cloth Rolls** are a long-lasting abrasive cloth glue bonded with aluminum oxide. It measures 1-1/2" by 50 yards.

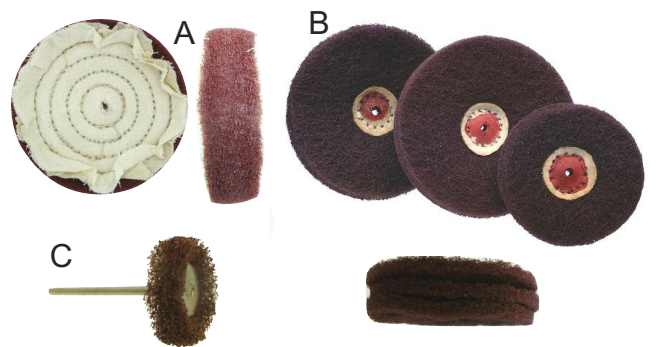
Item #	Description	Size	US\$ / 1-2	US\$ / 3+
A 87-013	Cone-Loc Drum Sander	6" x 1.5" W	197.65	187.80
B 91-007-60X	60 Grit Metalite Cloth Roll	1.5" x 50yds	42.85	38.60
B 91-029	80 Grit Metalite Cloth Roll	1.5" x 50yds	42.85	38.60
B 91-007-100J	100 Grit Metalite Cloth Roll	1.5" x 50yds	42.85	38.60
B 91-007-120	120 Grit Metalite Cloth Roll	1.5" x 50yds	42.85	38.60
B 91-007-180J	180 Grit Metalite Cloth Roll	1.5" x 50yds	42.85	38.60
B 91-007-240J	240 Grit Metalite Cloth Roll	1.5" x 50yds	42.85	38.60
C 87-014A	Arbor & Flange, 5/8" Screw-On, Right Hand	6" x 5/8" ID	33.95	29.80



## Satin Wheels

These aluminum oxide fiber buffs are composed of a stiff, non-woven material. They will give you a rich satin finish. Popular on all metals. Available with leather center, stitched with and without cloth outer covering for longer life, or mounted onto 3/32" shank for handpieces.

Item #	Description	Size	US\$ / 1-11	US\$ / 12+
A 91-302	Satin Cloth Buff, Fine	4" x 2 ply	8.65	7.85
A 91-301	Satin Cloth Buff, Medium	4" x 2 ply	8.65	7.85
A 91-300	Satin Cloth Buff, Coarse	4" x 2 ply	8.65	7.85
B 91-302-S3	Satin Buff, Leather Center, Fine	4" x 3 ply	6.85	5.65
B 91-301-LC	Satin Buff, Leather Center, Medium	4" x 3 ply	6.85	5.65
B 91-299	Satin Buff, Leather Center, Medium	3" x 3 ply	6.85	5.65
C 91-301-MTD	Satin Buff, Mounted, 3/32" Shank, Fine	1"	1.30	1.19



## Bright Boy Rubber Abrasive Wheels

Aluminum oxide grit within resilient rubber base is ideal for cleaning, buffing, polishing, deburring, and light grinding. Measures 4 x 1/2 x 1/2". Should be used with an arbor and flange, not a tapered spindle.

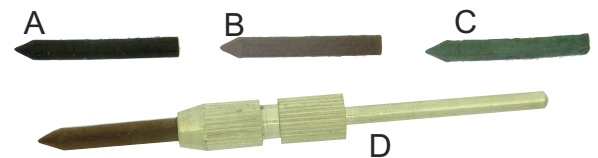
Item#	Grit	Color	Style	Max. RPM	US\$ / 1-2	US\$ / 3+
91-071	Soft	Red	ST70AL0	3800	35.10	32.45



## Polishing Points

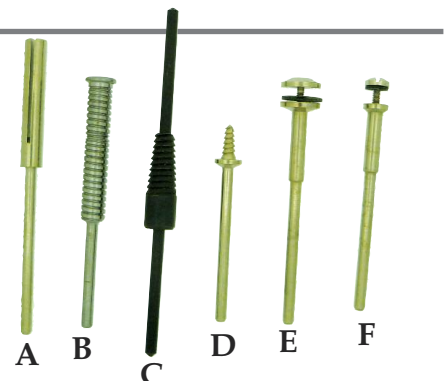
Item #	Color	Grit	Qty/Box	US\$ / 1-2	US\$ / 3+
A 91-091-DKBR	Dark Brown	Coarse	25	13.20	12.45
A 91-091-DB100	Dark Brown	Coarse	100	47.94	44.39
B 91-091-BROWN	Reddish Brown	Medium	25	13.20	12.45
B 91-091-BR100	Reddish Brown	Medium	100	47.94	44.39
C 91-091-GREEN	Green	Fine	25	13.20	12.45
C 91-091-GR100	Green	Fine	100	47.94	44.39
D 91-091-MMPM	3/32" (2.38mm) Shank	--	1	4.30	3.90

These high-quality, long-lasting rods measure 1" (25mm) in length by 3mm diameter. These points can be shaped as needed, and are used for polishing and pre-finishing in hard to reach areas.



## Small Mandrels 3/32" (2.38MM) Shank

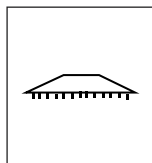
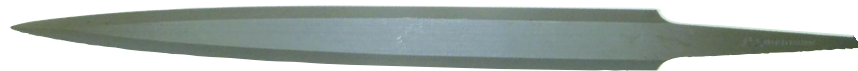
Item #	Description	US\$ / 1-11	US\$ / 12+
A 92-039	Straight Split Mandrel (for emery paper)	1.20	1.02
B 91-091-CRSS	PUD Mandrel for Item# 91-091-PUD (Pg. 78). 3/pkg.	7.80	6.85
C 91-193	1/8" Shaft x 1" Long Cartridge Roll Mandrel	2.39	2.19
D 92-106	Tapered Thread	0.69	0.49
E 92-040	Large Screwhead Mandrel	1.19	--
F 92-105	Small Screwhead Mandrel	0.89	--



**Hand Files** are referred to as the larger file. The 6" represents the working area, or the "teeth."

## Barrette

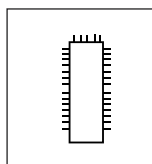
Tapered in width and thickness, coming to a point. Only flat side is cut, providing safe edge and top



Length	Width	Thickness	00 Cut	0 Cut	1 Cut	2 Cut	4 Cut
6" (152mm)	11/16" (18.3mm)	5/32" (4mm)	<b>F3-470</b>	<b>F3-471</b>	<b>F3-472</b>	<b>F3-473</b>	<b>F3-474</b>
US\$ Per Piece: 1 - 3			22.35	23.75	26.05	26.70	29.85
US\$ Per Piece: 4+			20.65	21.90	24.65	24.65	27.55

## Hand

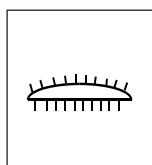
Parallel in width and tapered in thickness, one edge is safe.



Length	Width	Thickness	00 Cut	0 Cut	2 Cut	4 Cut
6" (152mm)	11/16" (18.3mm)	5/32" (4mm)	<b>F3-490</b>	<b>F3-491</b>	<b>F3-492</b>	<b>F3-493</b>
US\$ / 1-3			16.55	17.50	18.90	21.95
US\$ Per Piece: 4+			15.30	16.15	17.45	20.30

## Half Round

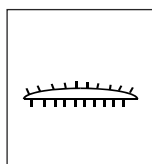
Tapered in width and thickness, coming to a point. Cut on both sides.



Length	Width	Thickness	00 Cut	0 Cut	2 Cut	4 Cut
6" (152mm)	11/16" (18.3mm)	5/32" (4mm)	<b>F3-450</b>	<b>F3-451</b>	<b>F3-452</b>	<b>F3-453</b>
US\$ Per Piece: 1 - 3			29.85	31.60	34.15	39.85
US\$ Per Piece: 4+			27.55	29.20	31.50	36.80

## Half Round Ring

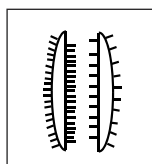
Tapered in width and thickness, coming to a point. Narrower than regular half-round so that it can be used for filing inside of rings. Cut on both sides.



Length	Width	Thickness	00 Cut	0 Cut	2 Cut	4 Cut
6" (152mm)	11/16" (18.3mm)	5/32" (4mm)	<b>F3-460</b>	<b>F3-461</b>	<b>F3-462</b>	<b>F3-463</b>
US\$ Per Piece: 1 - 3			31.50	33.35	35.10	42.05
US\$ Per Piece: 4+			29.10	30.90	33.20	38.85

## Double End Vulcanite

Open coarse teeth for filing plastics, waxes, and soft materials. One end is coarser than the other.



Item #	Description	US\$ / 1-3	US\$ / 4+
<b>F3-531</b>	8" (152mm) Length	34.15	31.50



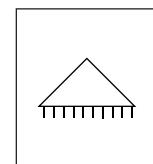
# Needle Files

Needle Files are generally finer and narrower. Used for the final finish and smaller parts. Their overall lengths are 6.25" (16cm) and 7.75" (20cm).

## Barrette



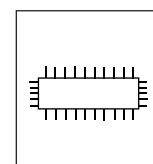
Length / Qty	00 Cut	0 Cut	2 Cut	4 Cut	6 Cut
6.25" (16cm)	<b>F3-550</b>	<b>F3-551</b>	<b>F3-552</b>	<b>F3-553</b>	<b>F3-554</b>
US\$ 1-3:	12.30	12.30	12.30	12.97	14.80
US\$ 4+:	11.75	11.75	11.75	11.35	13.98
7.75" (20cm)	N/A	<b>F3-555</b>	<b>F3-556</b>	<b>F3-557</b>	<b>F3-558</b>
US\$ 1-3:	N/A	15.40	15.40	15.75	23.80
US\$ 4+:	N/A	13.70	13.70	13.95	22.15



## Equalling



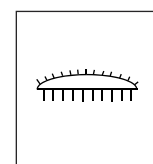
Length / Qty	00 Cut	0 Cut	2 Cut	4 Cut	6 Cut
6.25" (16cm)	<b>F3-570</b>	<b>F3-571</b>	<b>F3-572</b>	<b>F3-573</b>	<b>F3-574</b>
US\$ 1-3:	12.30	12.30	12.30	12.97	14.80
US\$ 4+:	11.75	11.75	11.75	11.35	13.98
7.75" (20cm)	N/A	<b>F3-575</b>	<b>F3-576</b>	<b>F3-577</b>	N/A
US\$ 1-3:	N/A	15.40	15.40	15.75	N/A
US\$ 4+:	N/A	13.70	13.70	13.95	N/A



## Half Round



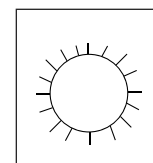
Length / Qty	00 Cut	0 Cut	2 Cut	4 Cut	6 Cut
6.25" (16cm)	<b>F3-580</b>	<b>F3-581</b>	<b>F3-582</b>	<b>F3-583</b>	<b>F3-584</b>
US\$ 1-3:	12.30	12.30	12.30	12.97	14.80
US\$ 4+:	11.75	11.75	11.75	11.35	13.98
7.75" (20cm)	N/A	<b>F3-585</b>	<b>F3-586</b>	<b>F3-587</b>	N/A
US\$ 1-3:	N/A	15.40	15.40	15.75	N/A
US\$ 4+:	N/A	13.70	13.70	13.95	N/A



## Round



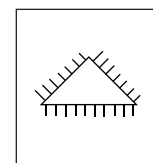
Length / Qty	00 Cut	0 Cut	2 Cut	4 Cut	6 Cut
6.25" (16cm)	<b>F3-610</b>	<b>F3-611</b>	<b>F3-612</b>	<b>F3-613</b>	<b>F3-614</b>
US\$ 1-3:	8.30	8.30	8.30	8.97	11.80
US\$ 4+:	7.75	7.75	7.75	8.35	10.98



## Three-Square

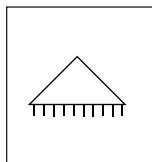


Length / Qty	00 Cut	0 Cut	2 Cut	4 Cut	6 Cut
6.25" (16cm)	<b>F3-640</b>	<b>F3-641</b>	<b>F3-642</b>	<b>F3-643</b>	<b>F3-644</b>
US\$ 1-3:	12.30	12.30	12.30	12.97	14.80
US\$ 4+:	11.75	11.75	11.75	11.35	13.98
7.75" (20cm)	N/A	<b>F3-645</b>	<b>F3-646</b>	<b>F3-647</b>	<b>F3-648</b>
US\$ 1-3:	N/A	15.40	15.40	15.75	N/A
US\$ 4+:	N/A	13.70	13.70	13.95	N/A



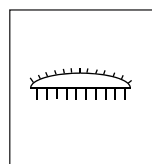
Escapement Files are the smallest production file used. They are most commonly used for small, tight areas.

## Barrette



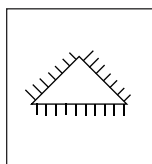
Length	2 Cut	4 Cut	6 Cut
5.5" (14cm)	<b>F3-700</b>	<b>F3-701</b>	<b>F3-702</b>
Price Per Piece: 1 - 3	14.60	15.80	18.50
Price Per Piece: 4+	13.45	14.60	17.10

## Half Round



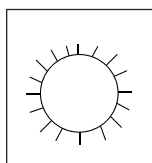
Length	2 Cut	4 Cut	6 Cut
5.5" (14cm)	<b>F3-720</b>	<b>F3-721</b>	<b>F3-722</b>
Price Per Piece: 1 - 3	17.10	18.55	21.45
Price Per Piece: 4+	15.70	17.15	19.80

## Three Square



Length	2 Cut	4 Cut	6 Cut
5.5" (14cm)	<b>F3-730</b>	<b>F3-731</b>	<b>F3-732</b>
Price Per Piece: 1 - 3	14.60	15.80	18.50
Price Per Piece: 4+	13.45	14.60	17.05

## Round



Length	2 Cut	4 Cut	6 Cut
5.5" (14cm)	<b>F3-760</b>	<b>F3-761</b>	<b>F3-762</b>
Price Per Piece: 1-3	12.10	13.10	13.10
Price Per Piece: 4+	11.20	12.10	12.10

## File Sets

vallorbe  
swiss

### Needle Files, #2 Cut

This 12 piece, 7.75" (20cm) Needle File set contains two Half-Round, Round, and Three-Square files, as well as one each of Barrette, Crossing, Equalling, Knife, Square, and Warding files.

### Escapement Files, #2 Cut, #4 Cut, #6 Cut

Also known as Square Handle Needle Files, these precision file sets are available in three cuts. The Escapement File set includes the most popular file shapes. Overall length is 5.5" (14cm). Length of cut is  $1\frac{9}{16}"$  to  $2\frac{9}{16}"$ , depending upon shape.

	Item #	Description	Cut	US\$ / Ea.	US\$ / 2+
A	<b>F3-544</b>	12pc Needle File Set	2	148.60	133.74
B	<b>F3-820</b>	12pc Escapement File Set	2	185.80	176.30
B	<b>F3-830</b>	12pc Escapement File Set	4	185.80	176.30



## Riffler File Sets

A full set of ten double ended riffler files contained in a vinyl pouch for your convenience. Riffler files are used in wax and metal working for filing odd shapes and for hard to reach areas. The rifflers are of medium cut and are 6" (152mm) long and are made of hardened tool steel.

Item #	Description	US\$ / 1-3	US\$ / 4+
F3-650	Double End 10pc Riffler File Set	35.20	28.70

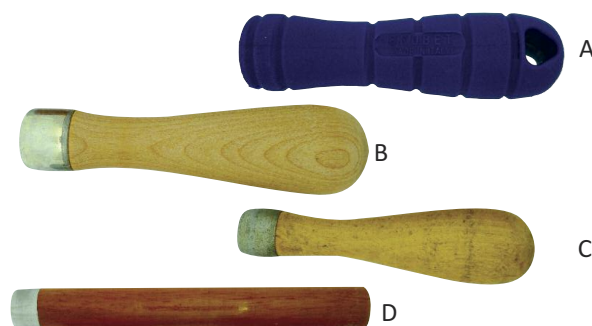


vallorbe  
swiss

## Plastic File Handle

Unbreakable plastic with textured surface for non-slip grip and specially shaped to fit the hand for working comfort, even over long periods. Hole at top permits convenient hang-up storage near work bench. Tang gripping insert is tempered metal, with two threaded sections of different diameters. This assures proper alignment and positive hold for files. Threaded metal insert allows handle to be reused...simply unscrew the file in use and insert a new one.

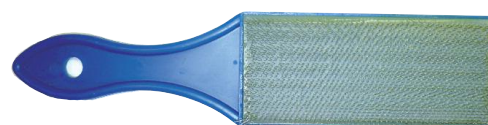
	Item #	Description	US\$ / 1-3	US\$ / 4+
A	<b>H3-114</b>	Blue Handle, Size #4 For 6" Hand Files	4.40	3.85
B	<b>H3-110</b>	Wood Handle, Skrooz-On, $\frac{3}{4}"$ D x 4"L For 6" Hand Files	3.65	3.20
C	<b>H3-100</b>	Wood Handle, Skrooz-On $\frac{7}{16}"$ D x 3"L For Needle Files	2.60	2.10
D	<b>H3-101</b>	Wood Straight Push-On Handle, $\frac{1}{2}"$ D x 4"L For Escapement Files	2.45	1.95



## Romanoff File Cleaner

Steel wire bristles mounted on wood handles approximately 10" (25cm) long. For cleaning particles that are clogging teeth of file.

Item #	Description	US\$ / 1-3	US\$ / 4+
<b>F3-900</b>	Romanoff File Cleaner	6.90	6.10







## HSN Approved Ring Mandrel

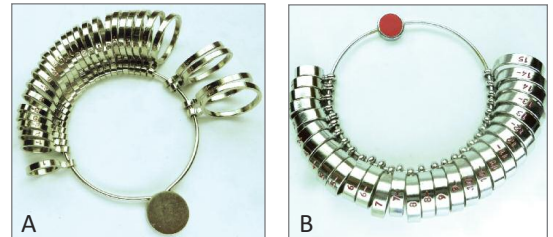


Romanoff "HSN" Custom Steel Mandrel is hardened steel & chrome plated and always consistent in size. The sizes range from #2-15 and has an overall length of 13".

Item #	Shape	Description	Size	US\$/Each
A M3-201-R	●	"HSN" Custom Ring Mandrel	#2-15	47.65
B M3-200	●	Standard Graduated Round Ring Mandrel	#1-15	25.90
C M3-201	◐	Standard Grooved & Graduated Round Ring Mandrel	#1-15	24.00

## Finger & Ring Gauges

All Romanoff ring and finger gauges are graduated in half-sizes #1-15 in US standard only. Numerical sizes are stamped on each ring for easy identification.



Item #	Description	US\$/1-2	US\$/3+
A G3-110	Standard Finger & Ring Gauge	8.25	7.10
B G3-111	Wide Finger & Ring Gauge	17.61	16.60

## Wedding Ring Sizer



The Romanoff Ring Sizer will reduce or enlarge wedding rings easily. Geared handle works on the downstroke, which means you can press down while operating. Can be bolted to the bench or used as a portable. This well-made sizer has a six spline mandrel for enlarging rings up to size 15 and an eight double sided reducing plate, smoothly polished to prevent marring. 16 lbs. Made in Italy.

Item #	Description	US\$/Each
83-011	Wedding Ring Sizer & Stretcher	328.00

## Karat Stamps & Brass Block

Romanoff precious metal stamps are available in bent or straight shape and are made of hardened tool steel. Stamp size #2 is 1/32"/0.79mm wide. Made in Germany.



Item #	Description	Karat	US\$/Each
A K5-221	Bent Stamp	10k	14.40
A K5-231	Bent Stamp	14k	14.40
A K5-241	Bent Stamp	18k	14.40
B K6-221	Straight Stamp	10k	14.40
B K6-231	Straight Stamp	14k	14.40
B K5-241-STR	Straight Stamp	18k	14.40
C 55-600	Mens & Women's Brass Stamping Block	--	32.75

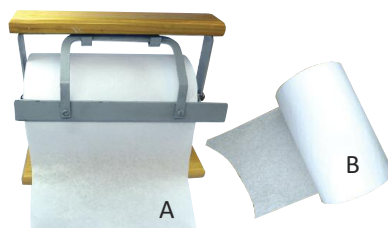
## GXL-24 Digital Gold Tester



Accurately measures White, Yellow, Pink, Green Gold and Platinum. Measures from 6-18Kt + 20-24kt in gold. Reliable and accurate, eliminates the use of messy acids! Uses 9 volt battery.

Item #	Description	US\$/Each
T3-506	GXL-24 Digital Gold Tester	398.00
T3-515G	GLXL-24 Gel Refill Tube	17.55

## Anti-Tarnish Roll Paper & Cutter Stand



Quality white, dust free, tissue paper for wrapping & packing jewelry, watches, silverware, etc. Won't scratch, resists tarnish.

Item #	Description	US\$ / Each
A T3-151	Anti-Tarnish Roll Paper Cutter Stand (without paper)	14.80
B T3-550	Anti-Tarnish Roll Paper 7 3/8"	11.89

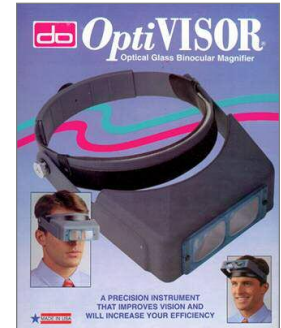
# Romanoff Optivisors

The Optivisor features a dial adjustment headband to fit any position. Frames are light weight, durable and will fit securely over eyewear. Made from ABS high impact plastic and lenses are scratch resistant. Replacement lenses are available and interchangeable.

Item#	Style	Power	Focal	US\$ / Ea.	Replacement Lens	US\$ / Ea.
<b>M3-120</b>	DA-3	1 3/4X	14"	43.60	<b>M3-124</b>	26.50
<b>M3-125-10"</b>	DA-4	2X	10"	43.60	<b>M3-133-10"</b>	26.50
<b>M3-125</b>	DA-5	2 1/2X	8"	43.60	<b>M3-133</b>	26.50
<b>M3-130-6"</b>	DA-7	2 3/4"	6"	43.60	<b>M3-1335</b>	26.50



Replacement Lens



## Optivisor with Light and Four Lenses

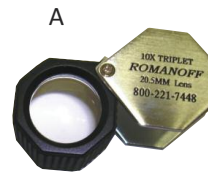
This optivisor features a dial adjustment headband to fit any head and will fit over your eyeglasses. It also features an adjustable light mounted on the top of the headband for easy viewing. Comes with 1-1/2, 1-3/4, 2-1/2, and 3-1/2 power lenses.

Item #	Description	US\$ / Ea.
M3-119-R	Lighted Optivisor & 4 Lenses	36.50



## Monocular & Standard Loupes

Item #	Description	Power	US\$ / 1-2	US\$ / 3+
A <b>M3-128</b>	21mm Loupe (Large)	10x	17.85	16.50
A <b>M3-128-15X</b>	20.5 Loupe (Medium)	15x	19.50	18.70
B <b>M3-115</b>	25mm Monocular Lens	10X	16.85	15.90



## Romanoff Half-Frame Telesight

Item#	Style	Power	Focus	US\$ / Ea.
<b>M3-099</b>	DA-3 / 43	1-3/4x	11"	34.95
<b>M3-101</b>	DA-4 / 44	2x	7"	34.95
<b>M3-103</b>	DA-5 / 46	2-1/2x	4"	36.95
<b>M3-104</b>	DA-8 / 48	3x	3"	37.95

Those who do not wear glasses will enjoy these high-quality prismatic lenses in lightweight half-frames. Front lenses flip up when not needed.

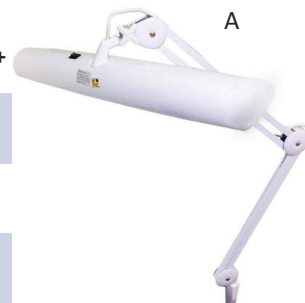


Light Weight Half-Frame

## Flourescent Dazor Lamp

The Romanoff Flourescent Dazor Lamp emits soft and cool flourescent lighting from the 15 watt 18" bulbs which eliminates glare and reduces eye fatigue. The lamp can be mounted by the 4" opening clamp or screwed into your work table. The floating arm allows easy positioning of the light where needed.

Item #	Description	US\$ / 1-2	US\$ / 3+
A <b>80-228-2R</b>	Dazor Lamp Two Bulb Clamp Type Dove Gray 45" Reach 110V (Dazor Import)	98.15	86.50
B <b>80-228-2</b>	Dazor Lamp Two Bulb Clamp Type Dove Gray 43" Reach 110V (USA)	218.50	207.90
B <b>80-228-3</b>	Dazor Lamp Three Bulb Clamp Type Gray 43" Reach 110V (USA)	259.00	245.00
- <b>80-228</b>	Dazor Bench Lamp replacement 18" bulb	6.95	6.30





# White Metal Casting Equipment

Since 1949, Romanoff has been the industry standard among white metal manufacturers. The Romanoff name is synonymous with the most dependable workhorse casting machines in the industry. With over 10,000 casting machines sold world-wide over the past 65 Years, Romanoff is the industry's best choice for white metal casting experience.

Romanoff's air pressure casting machines are used for centrifugal casting of low temperature alloys, such as pewter (lead, tin, and antimony), high temperature zinc, 2 part polymer resins, and wax models. Our white metal set-ups are well known in jewelry, fishing lures, game figures, model trains, automotive parts, statues, picture frames, and much more.

Get started in this vast & lucrative industry with Romanoff – a name you can trust.

## Deluxe Casting Machine

Our Unit has the following Standard and Convenient Features:

- Solid State Speed Control 0-1000 RPM's
- Electronic Braking for instantaneous stopping.
- Forward & Reverse Operation
- Totally enclosed machine, provides safe operation
- Pressure controller regulates vertical mold pressure.
- Automatically aligns uneven molds, with a self aligning plate.
- Automatic Digital Timer, controls the casting cycle & automatically resets.
- Air Filter/Fog Lubricator, protects all moving parts.
- Heavy-Duty ball bearing motor, has an external cooling system and is permanently lubricated & sealed against dirt & dust.
- Side clean out door & panels on side & rear for easy maintenance access.

Unit Accommodates 9" & 12" Molds, up to 3" thick, 220V/1 PH, 60 Cycle. This unit is also available in 110V/60 Cycle & 220V/50 Cycle.

	Item#	Description	US\$ / Each
A	99-002-D4AP	Deluxe Air Pressure Casting Machine 110V	5,675.00
A	99-002-D4AP-A	Deluxe Air Pressure Casting Machine 220V	5,985.00
B	99-007-C	12" Replacement Mold Cover Assembly	419.00
C	99-390	Replacement Silicone Funnel	56.45

Please Call Us for Custom Size Units (15" & 18" molds), Shipping and Delivery Information

## White Metal Mold Vulcanizer

Romanoff's Heavy Duty Floor Vulcanizers have an established reputation for longevity and lasting quality. All vulcanizers accommodate a 3" frame set when fully opened. Custom sizes are available by special order.

Romanoff's White Metal Mold Vulcanizers are built standard with the following features:

- Dual-Control Thermostats, for upper & lower heating plates.
- Separate pilot lights, for each plate.
- 30 Ton Hydraulic Pump with Gauge.
- Automatic-Shut-Off Timer
- Unit Dimensions: 17 1/2"W x 14"D x 33"H, 600 lbs.

	Item#	Description	US\$ / Each
	98-026-HY	Floor Vulcanizer 13" x 13" Platens, 110V	Call for pricing
	98-026A-HY	Floor Vulcanizer 13" x 13" Platens, 220V	Call for pricing



Dims: 23 1/2" W x 22" D x 36" H



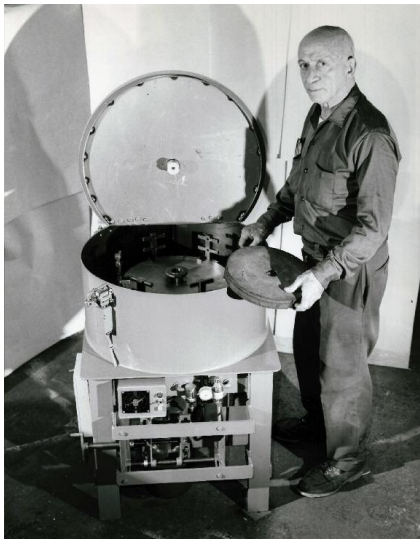
# Romanoff White Metal Casting Kit

This complete white casting shop has all the essential equipment and supplies needed to produce quality white metal products such as, costume jewelry, fishing lures, belt buckles, accessories, picture frames, polymers, etc...

Romanoff not only produces and sells the White Metal Casting Equipment, but we will work with you step by step to support your manufacturing needs in your quest to produce high quality products!

Available in 110V and 220V

Item#	Description	US\$ / Each
<b>99-002-KIT</b>	Romanoff White Metal Casting Kit	16,950.00



Manufacturing airpressure casting machines since 1949  
Pictured: Barney Romanoff



<b>A 99-002-D4AP</b>	Casting machine for 9" – 12" diameter molds up to 3" thick with electronic speed control, timer, etc.	<b>G 98-025-1</b>	Graphite spray
<b>B 98-026-HY</b>	Vulcanizer for molds up to 12" diameter with dual thermostat to separately control both heating plates and timer. 30 ton hydraulic jack and pressure gauge	<b>H 99-203</b>	Casting Talc
<b>C 98-037</b>	5 sets 9" Black Rubber discs;	<b>I 98-160</b>	Mold blade handle
<b>C 98-038</b>	5 sets 12" Black Rubber discs	<b>I 98-161</b>	Mold blades
<b>D 98-050-NF1</b>	3 sets 9" Silicone Rubber discs;	<b>I 98-128</b>	Sprue former
<b>D 98-051-NF1</b>	3 sets 12" Silicone Rubber discs	<b>J 99-164-B10M</b>	Electric melting furnace 80lb 220V
<b>E 98-153</b>	Skelly Solve	<b>K 99-178</b>	Stainless steel furnace liner
<b>F 98-138</b>	Mold Locks	<b>L 98-091</b>	9" x 1" Steel mold frame set
		<b>M 98-095</b>	12" x 1" Steel mold frame set
		<b>N 99-361</b>	Lead-free casting alloy
		<b>O 99-202</b>	Stanogen metal cleaner 35 lbs



## Romanoff Electric Furnaces



Electric furnaces are available in 110V or 220V. All furnaces except MP-80X, MP-160X and MP250X include a temperature controller for use up to 850°F (453°C). Model MP-80X, requires a Partlow controls 99-172 and 99-172A for use up to 1,000°F (538°C).

Item #	Model #	Lead Capacity (lbs)	Watts	Inside Dia.	Inside Depth	Voltage	Heating Element Item #
<b>99-155</b>	MP-80A	80	2000	8" (20cm)	5.5" (14cm)	110V	<b>99-155R</b>
<b>99-164-B10M</b>	MP-80A-2	80	2000	8" (20cm)	5.5" (14cm)	220V	<b>99-164R</b>
<b>99-166</b>	MP-160A	160	3250	10.5" (27cm)	6" (15cm)	220V	<b>99-166R</b>
<b>99-169</b>	MP-80X	80	3000	8" (20cm)	5.5" (14cm)	220V	<b>99-169R</b>

**Call for Pricing**

## Romanoff Partlow Controller



The Romanoff Partlow Controller is the most popular heavy-duty white metal furnace temperature control available. Controls temperature of gas or electric furnaces and must be used with a stainless steel well and bracket to protect the sensory bulb. Dual voltage, 110V/220V.



## Stainless Steel Well & Bracket

The stainless steel well & bracket are used to protect the bulb of the Partlow Controller. The steel well, when mounted, should be at least 1" above the top of the cast iron pot. The bracket holds the well in place against the side of the furnace pot. Can be used with all Romanoff gas furnaces and with all electric furnaces marked with an X.

Item #	Description	US\$ / Ea.
<b>99-172</b>	Partlow Controller w/o Bulb	649.00
<b>99-172A</b>	Mercury Bulb for 99-172	897.00

Item #	Description	US\$ / Ea.
<b>99-175</b>	8" (203mm) well	58.90
<b>99-176</b>	12" (305mm) well	66.06
<b>99-177</b>	Mounting Bracket (fits both wells)	24.05

## Stanogen and Steel Ladles



Stanogen is a special powder used to remove dross (oxidized and contaminated metal) from your molten metal. The Stanogen is mixed into the metal with your ladle, and the dross will rise to the surface after 1-2 minutes, where it can easily be skimmed off.

Item #	Description	US\$ / Ea.
<b>99-202</b>	Stanogen 35lb Can	409.64
<b>99-055</b>	Steel Ladle, 3" Diameter Scoop	27.91



## Mold Release

**A. Mold Lubricant #2 Spray:** Used as a silicone mold separator to prevent discs from vulcanizing together.

**B. Graphite Spray:** This graphite spray is also used as a mold separator.

**C. White Casting Talc:** Most commonly placed in a cloth bag and applied to the mold surface prior to casting.

Item #	Description	US\$ / Ea.
A <b>98-152</b>	Mold Lubricant, #2 Spray	26.79
B <b>98-025-1</b>	Graphite Spray	17.60
C <b>99-203</b>	White Casting Talc (not shown), 1lb/pkg	1.15

## Natural Black Mold Rubber

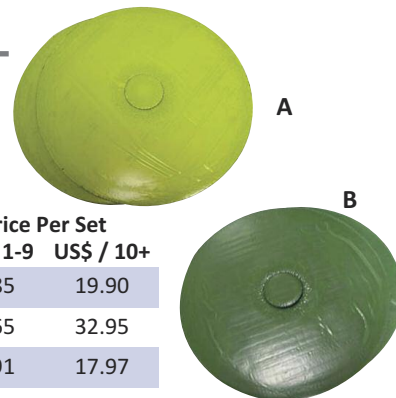
All rubber discs (except silicone) are approximately 1/2" to 9/16" thick and consist of 1/16" layers. One set of rubber consists of two discs, one with a hole and one without.

**Super Tuff Rubber:** Original "H" Formula is recognized in the industry as the best rubber for tin, lead and antimony alloy castings. It is the strongest and longest lasting rubber available and has excellent tear and abrasion resistance. Perfect for both thin and thick castings.

Identified by yellow poly covering.

**RRD-1 Rubber:** This is a very good, easy flowing, general purpose mold, slightly softer in texture than Super Tuff Rubber. Light green poly covering.

	Item#	Description	Qty / Carton	Price Per Set	
				US\$ / 1-9	US\$ / 10+
A	98-067	9" Exclusive Super Tuff Rubber	15 sets	21.85	19.90
A	98-068	12" Exclusive Super Tuff Rubber	10 sets	34.65	32.95
B	98-037	9" RRD-1 Rubber/General	15 sets	18.91	17.97
B	98-038	12" RRD-1 Rubber/General	10 sets	30.98	29.45



## Silicone Rubbers

Silicone rubbers are generally used when casting zinc-aluminum alloys because of their higher heat resistance. Some moldmakers also use them when casting tin and lead alloys because it is easier to form the mold around their designs. The silicone merely pushes into place. However, silicone rubbers are not recommended for long runs of thick, complicated, undercut models because their tear resistance is somewhat less than our black rubber molds. Silicone sets of discs consist of four 1/4" discs, two with holes and two without.

**Red Silicast:** The most popular silicone rubber, Red Silicast is good for thin-walled zinc/aluminum alloys, as well as for general purpose casting molds.

Item#	Description	Qty / Carton	Price Per Set	
			US\$ / 1-9	US\$ / 10+
98-050-NF1	9" Red Silicone/General	10 sets	23.50	19.85
98-051-NF1	12" Red Silicone/General	10 sets	43.90	41.10



## Mold Making Supplies

**A. Sprue Formers:** Are placed in the center hole of the unvulcanized rubber or silicone prior to vulcanization to form and retain a center sprue during the vulcanizing process for 1" molds.

**B. Mold Lock Caps:** Are inserted between the two halves of an unvulcanized mold to ensure the proper orientation of the two halves, and also to prevent the two halves from shifting during the casting process. Extra thick to prevent collapsing and chrome plated to prevent rust contamination of castings.

**C. B-P Plastic Handles:** The heavy-duty B-P plastic handle, #6, is ergonomically designed to fit comfortably in your hands, and has an extra heavy post for the blade (USA).

**D. Mold Cutting Blades:** The #25 blades are reinforced along the edge with ribs to make them last longer and minimize breakage.

	Item#	Description	Size / Quantity	US\$ / 1-4	US\$ / 5+
A	98-128	Sprue Former for Mold	1-5/8" Dia. x 5/8" Thick	29.29	27.86
B	98-138-H	Mold Lock Caps	1,000/Bag	43.50	--
C	98-160	B-P Plastic Handles	Style #6	28.68	27.25
D	98-161	B-P Mold Cutting Blades	Style #25 (150/box)	132.54	125.95

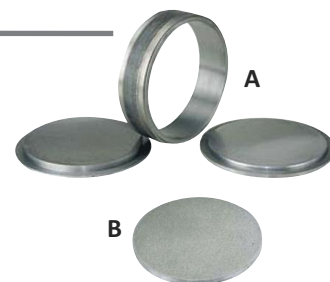


## Steel Mold Frames

**A. Steel Mold Frames:** Are used to hold rubber molds during the vulcanizing process. Each frame set includes a ring, thicker top plate, and a trimmer bottom plate.

**B. Aluminum Filler Plates:** When inserted into a Romanoff steel frame set, allow you to use a deeper mold frame for different thickness molds.

	Item#	Description	Dimensions
A	98-091	Steel Frame	9"D x 1" Thick
A	98-095	Steel Frame	12"D x 1" Thick
A	98-097	Steel Frame	12"D x 2" Thick
B	98-140	Aluminum Filler Plate	9"D x 1/2" Thick
B	98-141	Aluminum Filler Plate	12" D X 1/2" Thick



**Call for Pricing**



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# Units Conversion Charts

American Linear Units				American to Metric Units				American Capacity			
12 inches (in)		1 foot (ft)		1 inch		2.540 centimeters		8 fluid ounces (fl oz)		1 cup	
3 feet		1 yard (yd)		1 foot		0.305 meters		16 fluid ounces		2 cups	
36 inches		1 yard		1 yard		0.914 meters		2 cups		1 pint (pt)	
63,360 inches		1 mile (mi)		1 mile		1.609 kilometers		16 fluid ounces		1 pint	
5,280 feet		1 mile		1 gallon		3.78 Liters		2 pints		1 quart (qt)	
1,760 yards		1 mile		1 quart		0.95 Liter		4 quarts		1 gallon	
Weight and Mass				1 pound		0.45 kilogram		8 pints		1 gallon	
				1 ounce		28.35 grams		32 fluid ounces		1 quart	
1 Ton (T)		2,000 pounds		1 fluid ounce		29.57 mL		8 fluid dram		1 fluid ounce	
1 pound (lb)		16 ounces (oz)		1 grain		60 milligrams (mg)		3 teaspoon (tsp)		1 tablespoon (tbsp)	
1 Ton		32,000 ounces		1 teaspoon (tsp)		5 mL		6 teaspoon		1 fluid ounce	
1 metric ton (t)		1000 kg		1 fluid dram		4 mL		2 tablespoon		1 fluid ounce	
60 grains		1 dram		1 tablespoon (tbsp)		15 mL		1 drop (gtt)		1 minim	
Converting American Units				1 pint (pt)		500 mL (approx)		60 drop		1 fluid dram	
Larger unit → smaller unit		Multiply		1 quart (qt)		1000 mL (approx)		60 drop		1 teaspoon	
smaller unit → Larger unit		Divide		1 pound (lb)		453.6 g		60 minims		1 fluid dram	
Metric Units											
mega (M)		*	*	kilo (k)	hector (h)	deka (da)	unit (m, g, L)	deci (d)	centi (c)	milli (m)	* * micro (mc) (u)
When going from larger unit to smaller unit move decimal to the right											
When going from smaller unit to larger unit move decimal to the left											
Time			Metric to American Units					Temperature Formulas			
1 day	24 hours		1 km	0.621 miles			$C = \frac{(F - 32)}{1.8}$	$F = 1.8 \cdot C + 32$			
1 hour (hr)	60 minutes (min)		1 meter	1.094 yards							
1 minute	60 seconds (sec)		1 meter	3.281 feet							
1 year (yr)	365.25 days		1 meter	39.370 inches			Medical Application (Micrograms)				
1 week	7 days		1 cm	0.3937 inch							
1 year	12 months (mon)		1 Liter	0.26 gallon			1,000,000 micrograms (mcg)		1 gram		
1440 minutes	1 day		1 Liter	1.06 quarts			1,000,000 micrograms		1,000 mg		
3600 seconds	1 hour		1 kg	2.20 lbs			1 mL = 1 cc = 1 cm <sup>3</sup>				
			1 gram	0.035 oz			1 gram = 1 cm <sup>3</sup>				
Stones				1 gram	15 grains			Nursing students 1fl oz = 30 mL			
1 carat (karat)	200 mg		1 milliliter (mL)	15 minims			Nursing students 1 in. = 2.5 cm				

Source: <https://www.cpsc.edu>

Karat to Gold Hallmarks Conversion Chart:		Gold Hallmarks to Karats Conversion Chart:	
kt = hallmark	karat = gold hallmarks	hallmark = kt	gold hallmarks = karats
6 = 250	15 = 625	250 = 6	625 = 15
8 = 333	18 = 750	333 = 8	750 = 18
9 = 375	20 = 833	375 = 9	833 = 20
10 = 417	21 = 875	417 = 10	875 = 21
12 = 500	22 = 916	500 = 12	916 = 22
14 = 583	24 = 999 or higher	583 = 14	999 or higher = 24



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