

# SimpliMet™ 4000

The ***Fastest***  
Mounting Press  
Designed  
for 24/7 Use



# The SimpliMet™ 4000 Delivers

## Durability

### Reliability in Continuous use Environments.

The SimpliMet 4000, was tested in extreme conditions, and simulated the duty cycle of the busiest labs in the world.

### Reduce Unwanted Surprises

The SimpliMet 4000 is designed to last in 24/7 environments, with only routine maintenance. The robust, empirical-based preventative maintenance program protects from unexpected downtime.

## Ease of Use

### Eliminate the Learning Curve

Say goodbye to escape keys and menu systems. Everything you need is right on the front panel. Use your press out of the box without the wait. New employees can be trained quickly and efficiently.

### Simplicity Eliminates Errors

Clear concise choices for parameter settings reduce the opportunity for errors, protecting the quality of your samples.

### See What You Need at a Glance

The bottom status bar and countdown timers give quick visual indications of the status of the press.

*The thing I want most of all,  
I want quality that lasts that  
you can rely on the machine.*

-Senior Technician Industrial Manufacturing Company  
Europe





*The SimpliMet™ 4000 cut my mounting time in half. The savings in labor would be used for increased productivity.*

- Lab Manager Aerospace Company, North America



## Space Efficiency

### Extra Space for Extra Crowded Labs

At 12.25" wide the SimpliMet 4000 creates space for storing consumables, more presses, or for future expansion.

### Optimize Productivity in Your Space

The SimpliMet 4000 packs fast mounting cycles into limited bench space. By replacing older, slower, larger presses; capacity can be doubled for the same amount of space.

## Speed

### Smart Cool™ System Saves Time, Saves Water, Ensures Safety

With standard cooling systems there is risk of cooling longer than needed or ejecting a sample when it is too hot. The Smart Cool system optimizes the cool time for every sample by stopping the cycle when the sample reaches a safe temperature.

### Innovative Mold Design Heats up Faster

With low thermal mass, and an efficiency boosting drain system our unique mold design means super fast cycle times

# Advanced Features Provide



## Flexibility

Thermoplastic mode optimizes the temperature profiles required for transparent mounting media like TransOptic™ ensuring impeccably transparent mounted specimens. PreLoad option can be used to protect delicate specimens by controlling how the temperature and pressure is applied.



## Comfort

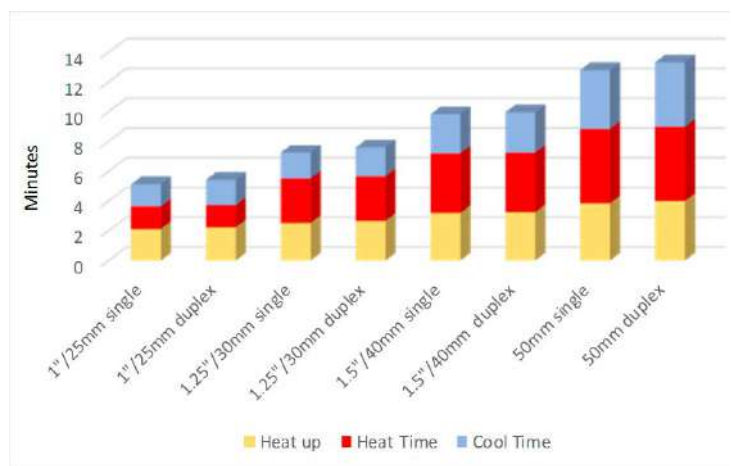
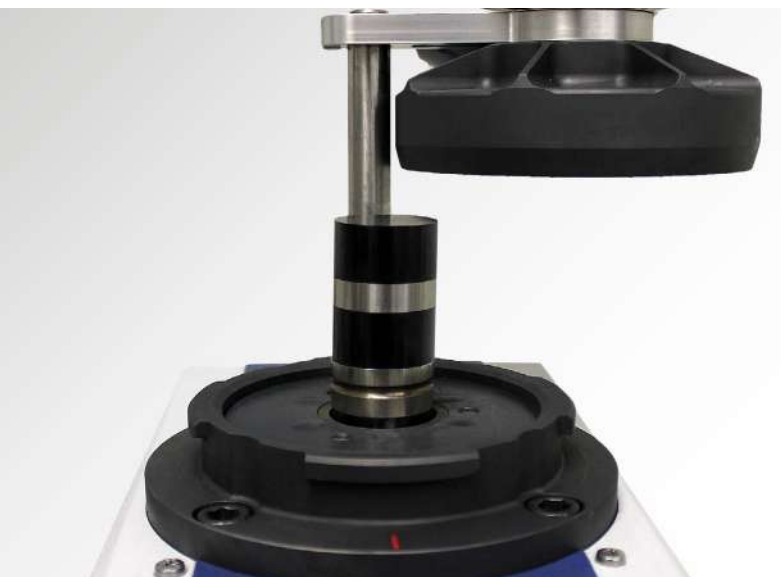
Close the chamber easily and securely. The weightless closure mechanism requires very little downward force allowing for single handed operation.

*The press is easy to use and easy to close.*

-Lab Manager Steel Manufacturing, Asia

## Throughput

With fast duplex mounting you can double your throughput with the included mounting duplex spacer. This allows two mounts to be made during the same cycle with negligible cycle time.



Fast Cycle times for both single and duplex mounts

\*Cycle times are typical actual times may be faster or slower depending on media used, sample type/size, water temperature, and other factors.



# Compression Mounting Consumables

## Ensure High Quality Samples

Mounting compounds can have an impact on the results of the grinding and polishing process. Inconsistent mount composition or poor edge retention can negatively affect the process and lead to extra processing time or rework. Buehler's mounting compounds are of the highest quality and pair well with the SimpliMet 4000 to provide consistent results for every sample. They also meet the requirements of your application including processing time, edge retention, abrasion resistance, mount clarity, and further analysis. The following mounting compounds have been designed to provide solutions for your applications.

## Compression Mounting Compounds

### PhenoCure



General purpose, wood-flour filled phenolic thermoset resin

**Hardness:** ~88 Shore D

**Edge Retention:** Better

**Color:** Black, Red, or Green

### PhenoCure PreMolds



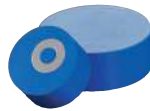
Pre-formed PhenoCure molds

**Hardness:** ~88 Shore D

**Edge Retention:** Better

**Color:** Black, Red, or Green

### Diallyl Phthalate



Glass or Mineral-filled thermoset resin

**Hardness:** ~91 Shore D

**Edge Retention:** Better

**Color:** Blue

### EpoMet G



Mineral-filled thermoset resin  
Granular particle size

**Hardness:** ~94 Shore D

**Edge Retention:** Best

**Color:** Black

### TransOptic



Transparent, thermoplastic acrylic

**Hardness:** ~80 Shore D

**Edge Retention:** Good

**Color:** Clear

### KonductoMet



Graphite and mineral filled phenolic thermoset resin

**Hardness:** ~88 Shore D

**Edge Retention:** Better

**Color:** Black

### ProbeMet



Copper and mineral filled phenolic thermoset resin

**Hardness:** ~94 Shore D

**Edge Retention:** Best

**Color:** Copper

### EpoMet F



Mineral filled thermoset resin  
Fine Particle size

**Hardness:** ~94 Shore D

**Edge Retention:** Best

**Color:** Black

## Other Mounting Consumables

Support Clips can be used to orient thin or unstable samples in the SimpliMet™ 4000 mounting press to present the area of interest for preparation and analysis. Release agent prevents the mount from sticking to the interior of the mold.

### SamplKlip



Heaviest and hardest clip option

### UniClip



Lighter weight and softer than the SamplKlip

### Release Agent



Prevents sticking of inside the mold

# Technical Specifications

## Operation

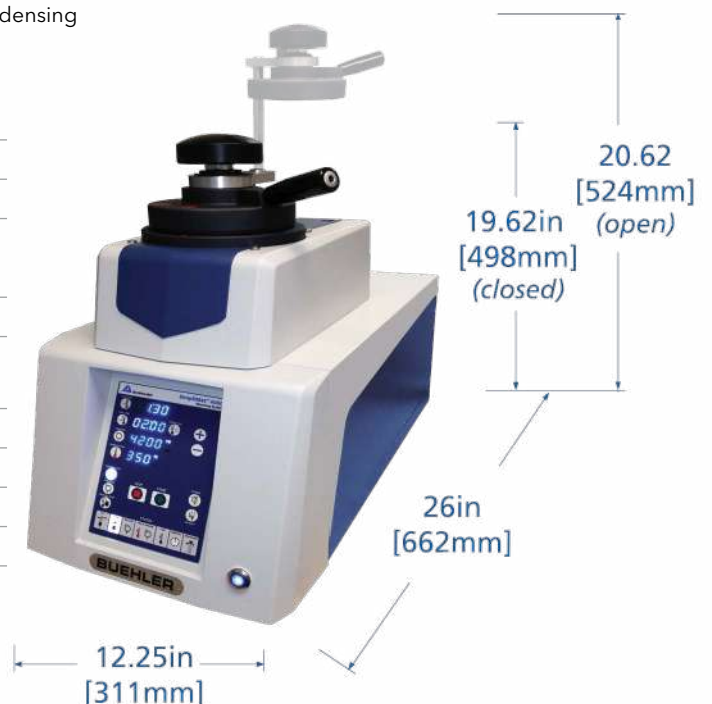
Press Operation	Automatic Electrohydraulic
Mounting Mold Sizes	English: 1", 1.25", 1.5" Metric: 25mm, 30mm, 40mm, 50 mm

## Mounting Parameters

Pressure	1000 - 4400 psi (80 - 300 bars) operational pressure range +/- 10% Adjustable in 50 psi (5 bar) increments Preload pressure function applies gradual pressure for delicate specimens 350 psi (24bar)
Heat Time	User Selectable time from 1-20 minutes Adjustable in 10 second increments
Heating Temperature	120° F - 430° F (50°C - 200°C) operation temperature range Adjustable in 10° F (5°C) increments
Heating Power	1500 Watt @115VAC / 1900 Watts @230VAC
Cooling Time	User Selectable or Smart Cool User Selectable time from 1-20 minutes Adjustable in 10 second increments Smart Cool Intelligent cooling system automatically cools until sample temperature reaches 40C
Thermoplastic Function	Automatically sets correct parameters for thermoplastic resins such as TransOptic™ and cools the mount in a controlled, linear fashion appropriate for the mounting media
Noise Level max	62 dB maximum at 1 meter from the front of the machine, while raising and lowering the ram with the mold closure open
Working Environment	Temperature: 41° F to 104° F / 5° C to 40° C Humidity: 30-90% humidity, non-condensing

## Electrical

Voltage/Frequency	85-264VAC, 50/60Hz 1 phase
Water inlet	1/4" OD tubing or 3/8" OD tubing
Water Outlet	Drain: 1/4" ID x 1/2" OD hose Vent: 1/4" ID x 1/2" OD hose
Length	26.00" 660 mm
Length from rear of machine to front feet	21.25" 540 mm
Width	12.25" 311 mm
Height Closed	19.62" 498 mm
Height Open	20.62" 524 mm
Weight	120 lbs 54 kg
Compliance	CE, PSE, RoHS, WEEE



Approx. Weight: 120 lbs [54kg]



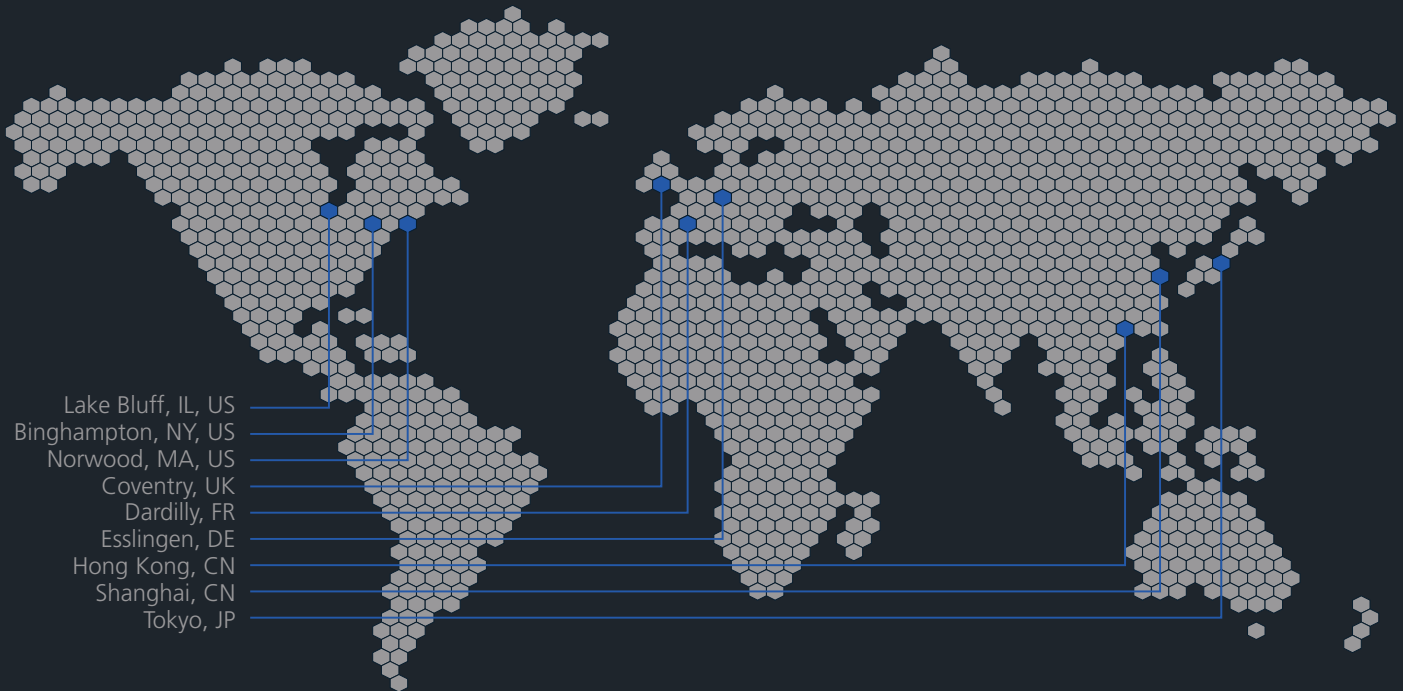
## SimpliMet™ 4000 Ordering Information

Part Number	Description	Voltage/Frequency
20-1011-5025	with 25mm Mold Assembly	85-264VAC, 50/60Hz
20-1011-5030	with 30mm Mold Assembly	85-264VAC, 50/60Hz
20-1011-5040	with 40mm Mold Assembly	85-264VAC, 50/60Hz
20-1011-5050	with 50mm Mold Assembly	85-264VAC, 50/60Hz
20-1011-5001	with 1in Mold Assembly	85-264VAC, 50/60Hz
20-1011-5125	with 1.25in Mold Assembly	85-264VAC, 50/60Hz
20-1011-5150	with 1.5in Mold Assembly	85-264VAC, 50/60Hz

Part Number	Additional Molds
20-5025	25mm Mold Assembly
20-5030	30mm Mold Assembly
20-5040	40mm Mold Assembly
20-5050	50mm Mold Assembly

Part Number	Additional Molds
20-5001	1in Mold Assembly
20-5125	1.25in Mold Assembly
20-5150	1.5in Mold Assembly

# Buehler Worldwide Locations



Solutions for Materials Preparation, Testing and Analysis

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