# MI Mills Analytical









# **Cole-Parmer** Analytical Mill

## Grind sample down to 125 µm particle size in seconds

Automatic shutoff protects against overheating and overloading

This high-speed blade operates at 20,000 rpm to grind up to 3 cu in. volume sample down to 125-µm particle size in seconds. The fan-cooled, universal-type ¹/₄-hp motor is completely sealed from the grinding chamber by a dust-tight seal to protect your sample. Internal heat exchanger surrounds grinding chamber to maintain a precise temperature; connect chamber to recirculating bath or tap water via two ³/₅" OD nozzles at rear of mill. The mill is constructed of heavy-duty cast aluminum with enameled finish; the cutting blade is stainless steel.

Note: Using liquids in the chamber may damage motor. Unit is for intermittent use only.

What's included: a 6-ft three-wire cord, 115 VAC model has a plug.

**Specifications & Ordering Information** 

| Catalog number           | Dimensions      | Power                                  | Shpg wt       | Price |
|--------------------------|-----------------|--|---------------|-------|
| K-04301-00<br>K-04301-02 | 5"W x 9"H x 4"D | 115 VAC, 50/60 Hz<br>230 VAC, 50/60 Hz | 7 lb (3.2 kg) |       |

#### **Accessories**

K-04300-20 Tungsten-carbide blade

for grinding materials with a hardness factor of up to 9 Mohs K-04300-22 Stainless steel blade for grinding fibrous materials

# **Heavy-Duty Analytical Mill**

## High-speed blade grinds samples in seconds

- Grind dry and brittle sample volumes up to 250 mL
- Cool samples with a recirculating bath or tap water

See our "Bath and Circulator" section on pages 128-160.

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Mill is ideal for dried vegetation, soil samples, plastic granulates, frozen food samples, and more. Keep samples cool by circulating tap water or using a recirculating bath—the water-jacketed chamber accepts 3/s" ID tubing via two barbed fittings. Run mill continuously or set the adjustable timer from 0 to 15 minutes.

Automatic shut-off protection safeguards mill against overheating and overloading. Fan-cooled, universal-type <sup>2</sup>/<sub>3</sub>-hp motor is completely isolated from the grinding chamber by a dust-tight seal. Mill is constructed of heavy-duty cast aluminum with enameled finish; cutting blade and internal chamber are 304 SS. Order an additional grinding chamber to run back-to-back tests—use one while cleaning and prepping the other. **Note**: Using liquids in the chamb er may damage motor.

What's included: stainless steel cutting blade (04300-52) and a 6-ft power cord (115 VAC model includes plug).

#### Specifications & Ordering Information

| <b>Speed:</b> 20,000 rpm | Motor: 2/3 hp   | Timer: 0 to 1      | 15 minutes <b>D</b> | <b>Dimensions:</b> 63/4"W x 133/4"H x 63/4"D |       |  |
|--------------------------|-----------------|--------------------|---------------------|--|-------|--|
| Catalog number           | Sample capacity | Feed particle size | Final particle size | Power (VAC, Hz)                              | Price |  |
| K-04301-10<br>K-04301-15 | 250 mL          | 20 mm<br>maximum   | < 1 μm              | 115, 50/60<br>230, 50/60                     |       |  |

### Accessories

K-04300-24 Tungsten-carbide blade for grinding materials

with a hardness factor up to 9 Mohs

K-04300-26 Star-shaped 301 SS blade for grinding fibrous materials

such as paper and vegetation

K-04300-28 Additional grinding chamber, 304 SS. Order blade separately

K-04300-52 Replacement blade, 304 SS for grinding materials

with a hardness factor up to 5 Mohs

# **Micro-Grinder Mill**

# Easily pulverize small samples

Safe to use—no sharp edges. Provides isolated homogenous samples

## **Specifications & Ordering Information**

Dimensions: Cutting head: 5/8" diameter

Overall: 11/2"H x 2" diameter

| Catalog number | Description        | Price |
|----------------|--------------------|-------|
| K-04302-20     | Micro-grinder mill |       |
|                |                    |       |

Use this general-purpose mill to crush and grind small samples. Place a sample in the mill cavity, then press the mill halves together and rotate—mill pulverizes the sample easily. Clearance between cutting heads is adjustable to customize for samples; cutting head measures 5/8" diameter. All stainless steel construction is autoclavable for sterile sample preparation.