

**BUEHLER®**

**Delta®**

## MANUAL ABRASIVE CUTTER

- Large, 14" (350mm) Cutting Blade Capacity
- Heavy-Duty, 10 H.P. (7.5kW) Motor
- Manual Cutting Lever Arm
- Simple Operation
- Electronic Motor Brake
- Stainless Steel Cutting Bay
- Easy to Maintain
- CE Marked



**BUEHLER**



PRELIMINARY DRAFT

  
**EMERSON**  
Industrial Automation

# *Reliable & Easy-To-Use Cutter*



## ***Productive***

The Delta® Manual Abrasive Cutter is a rugged abrasive cutter that increases productivity using a powerful motor and easy-to-use control panel. The Delta Manual Cutter was engineered to produce excellent cuts quickly and consistently. The rugged design minimizes cutting time while maintaining user simplicity; and this cutter is backed up with the standard Buehler warranty.

## ***Easy-To-Use and Powerful***

The easy-to-use front control panel was designed with durable, push-button and two-position industrial controls for start, stop, light and emergency stop functions. Quick operation - just vise your sample, press start, and go. The cutting lever is manually controlled so the operator can "feel" the cutting action. This allows the operator to control the feed rate of the wheel into the work piece. The cutting lever, with

grip, is vertically adjustable to fit a specific operators height and leverage preference. A 14" (350mm) abrasive wheel diameter provides a cutting capacity of up to 5" (125mm) diameter samples.

Superior cutting power is provided by the 10 HP (7.5KW) three-phase industrial-grade motor, giving plenty of strength to section most materials quickly and easily.

## ***Safety and Practicality***

Designed for safety, this Delta cutter utilizes a protective fiberglass hood and a large emergency stop button. An industry approved hood safety interlock switch provides security by preventing accidental motor operation while the hood is open. Safety latching mechanisms keep the hood locked during motor operation. Built in circuit protection is standard. The master

On/Off switch cuts all power to the entire machine.

All models include an electronic motor brake, which uses a static DC field to electronically stop the motor. There are no brake disk pads to wear, increasing reliability over mechanical brakes. CE marked.

## ***Coolant System***

A key factor in producing high quality cuts is effective sample cooling. Wet cutting is critical in order to produce a quality cut face and prevent excessive surface damage caused by overheating and improper wheel breakdown. The recirculating coolant system minimizes deformation by reducing heat build-up. A separate, hand-held coolant hose is supplied and can be used for washing the sample and working area after use. The large recirculating tank captures most of the debris created when cutting. The recirculating systems sits on

wheels and is stored inside the cabinet housing. Two simple connections make it easy to connect and disconnect, for easy installation, cleaning and maintenance.

### **Sturdy Construction**

This floor mount cutter is sturdily constructed with steel cabinetry. Caster wheels with rubber feet are installed so that the machine can be easily rolled into a location, and then made stationary by retracting the wheels. A tool storage compartment inside the front door conveniently houses the wheel changing tools. Two externally mounted gas springs secure the hood in a raised position when open. The standard steel wheel guard pivots open for easy wheel changing and incorporates a coolant spray shield.

The hood is constructed of corrosion resistant fiberglass. It encloses the entire cutting area to provide operator protection, prevent coolant loss, and decrease noise. The large 20" W x 18" H (508mm x 457mm) clear viewing window allows for easy observation of the sample and cutting action. An independently controlled, bright, fluorescent light fixture illuminates the cutting compart-

ment and allows the operator to easily view and align the sample and cut.

The fiberglass hood's wide opening provides easy access to the large cutting bay for sample positioning and retrieval. A generous cutting table area provides ample space for large and irregular parts. Side access ports allow over sized parts to be positioned. Equipped with two T-slot vise beds with x and y-axis, ideal for handling a variety of component shapes and sizes. Can accommodate an additional two vise beds. The standard 14mm DIN slots accommodate a wide selection of vises (sold separately) to suit a variety of applications. The Delta cutter has a 33" (838mm) width, and can easily fit through most doorways for easy installation.



Easy-to-use control panel.

### **Specifications**

#### **Cutting wheel**

**Maximum Blade Diameter**  
14" (350mm)

#### **Speed**

2,000 r.p.m (no load condition)

#### **Maximum Cutting Envelope**

5" (127mm) Diameter

#### **Total Power Consumption**

10.75 Hp (8.0KW)

#### **Motor Power**

10 HP (7.5KW)

#### **Motor Voltage**

200-460 VAC\*, 3- $\phi$

#### **Motor Current**

27/16 Amps @ 230/460 VAC

#### **Operating Ambient**

#### **Temperature**

41 to 104 °F (5 to 40 °C)

#### **Humidity**

30 to 95%, non-condensing

#### **Coolant System**

#### **Pump Motor Power**

1/5 HP (0.15 KW)

#### **Pump Motor Voltage**

230 VAC, 1- $\phi$

#### **Pump Motor Current**

0.84 Amps

#### **Flow rate**

10 gallons per minute

(40 liters per minute)

#### **Tank Capacity**

21 gallons (80 liters)

#### **Lighting**

#### **Power**

24-watt

#### **Type**

Osram 24W/840

#### **Fume Extractor & Ducting**

#### **Accessory Kits**

3" (76mm) Punchout Area on Hood for Venting

#### **Electrical**

#### **Voltage**

200-460 VAC\*, 3- $\phi$

#### **Current**

27 A @ 220V, 16 A @ 460V

#### **Dimensions**

#### **Width x Depth x Height**

33" (84cm) x 48" (122cm) x 64" (163cm)

#### **Approx. Shipping Weight**

800 lbs (365 kg)

#### **Approvals**

CE



Wheel guard pivots open for easy wheel changing.



10-3529 and 10-3530 Sliding vises secure samples up to 5" (127mm).



10-3523 Irregular specimen vises secure unusual sample sizes.

\* Select from voltage configurations available

## Ordering Information

All Delta® Manual Floor Cutters include motor (select voltage/frequency), recirculating coolant system with coolant (10-3330-032), T-slot beds and stripped wire ends connection (plug not included). **Cut-off wheels and vises purchased separately.**

Description	Voltage/Frequency	Catalog Number
Delta® Manual Cutter	220V / 50Hz	10-2213EB-250
	230V / 60Hz	10-2213EB-260
	400V / 50Hz	10-2213EB-400
	460V / 60Hz	10-2213EB-460

## Accessories

### Cut-off Wheels

These MetAbras® Chop Abrasive Cut-off Wheels are specifically designed to maximize the technological advantages of the Delta® Manual Abrasive Floor Cutter. This family of wheels will produce minimal deformation without sacrificing efficient cutting rates. Aluminum oxide abrasives are preferred when cutting ferrous metals, while silicon carbide abrasives are preferred for nonferrous metals and non-metallics. Sold in packs of 10.

**Abrasive Wheels, 14" (355mm) with 1¼" (31.75mm) arbor.**

Application Material	Thickness	Bond/Abrasive	Catalog Number
Tool steels above HRC60, carburized steels	0.075" (1.9mm)	R/Al <sub>2</sub> O <sub>3</sub>	10-4310-010
Hard steels above HRC50-60	0.115" (2.9mm)	RR/Al <sub>2</sub> O <sub>3</sub>	10-4312-010
Medium hard steels HRC35-50	0.100" (2.5mm)	R/Al <sub>2</sub> O <sub>3</sub>	10-4316-010
Soft or annealed steel HRC15-35	0.100" (2.5mm)	R/Al <sub>2</sub> O <sub>3</sub>	10-4320-010
Medium hard nonferrous materials: uranium, titanium, zirconium	0.075" (1.9mm)	R/SiC	10-4345-010
Soft nonferrous materials: aluminum, brass	0.085" (2.2mm)	R/SiC	10-4350-010

### Vises

Secure the sample with a vise to ensure a straight cut.

Description	Catalog Number
Sliding vise with quick release, left	10-3529
Sliding vise with quick release, right	10-3530
Irregular specimen speed vise kit, provides vertical clamping force	10-3523
Riser block kit, increases the height of vises to accommodate larger samples, requires 10-3523 speed vises	10-3532

## Filter Conveyor Swarf Removal System

The 10-2333 Filter Conveyor Swarf Removal System filters the coolant and then deposits the swarf in a separate container for easy disposal.

## Recirculating Coolant

Buehler CoolMet® is a blue, odorless, water miscible fluid concentrate with excellent rust inhibiting qualities designed for a wide range of abrasive cutting. Coolant should be mixed at a 15:1 ratio with distilled water for optimal performance.

Quantity	Catalog Number
1 quart (0.95 liter)	10-3330-032
1 gallon (3.8 liters)	10-3330-128
5 gallon (19 liters)	10-3330-640

## Fume Extractor & Ducting Kit

The Delta® Fume Extractor was designed to remove fumes and odors produced by the cutting action of the cutter. **Must be factory installed.**

Power Supply	Catalog Number
220V / 50Hz	10-2342-250
230V / 60Hz	10-2342-260
400V / 50Hz	10-2342-400
460V / 60Hz	10-2342-460

*Buehler continuously makes product improvements; therefore, technical specifications are subject to change without notice.*

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\*For metallurgical equipment produced by BUEHLER LTD. USA



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