

CUTTING

# METACUT

251/351



**metken**<sup>®</sup>  
Technology behind Specimen

**20**  
YEARS

# METACUT®

251/351



METKON chop cutting machines METACUT 251 and METACUT 351 are the ideal abrasive cut-off machines for metallographic samples, offering perfect solutions for efficient, versatile and high-quality cutting.

- Modern stylish outlook
- Compact and powerful
- Easy and quick operation
- Designed for cutting large and irregular workpieces
- Manually controlled cutting lever
- Max. safety with electronic brake and interlocking safety device
- Stainless steel cutting bed
- Largest size cutting table (605x366) available in its class (351)

## Design

METKON chop cutting machines METACUT 251 and METACUT 351 are designed for wet cutting of large and small, regularly or irregularly shaped workpieces of metallic, ceramic or composite materials. METACUT 251 is a table top high quality cutting machine suitable for 250 and 300 mm. cut off wheels. METACUT 251 has the capacity to cut solid sections up to 115 mm in diameter. METACUT 351 uses 350 mm. cut off wheels and its cutting capacity is 130 mm.

The side access port permits the sectioning of extra-long workpieces, as well. The machine is equipped with a powerful motor, driving the cut-off wheel towards the workpiece. The bottom part of the machine is a large robust alloy base casting. The cutting table is provided with T-Slots increasing the versatility so that different clamping sets can be mounted. Spacious cutting chamber and extra-large cutting table enables easy clamping of the specimens to be cut. The quick-clamping devices are removable to permit the installation of conventional clamping tools to hold larger or more intricate workpieces.

The complete system is enclosed in a protective hood with a large shatter proof window to observe the cutting process. The cutting chamber inside is illuminated with a powerful LED.



Spacious Cutting Chamber with Extra-Large Cutting Table for Easy Clamping



METACUT 351 Abrasive Cutter with Floor Cabinet.

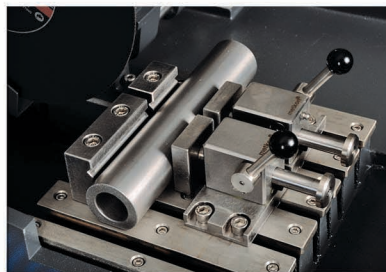
New design sloping base of the cutting chamber provides easy flowing of the cutting fluid back to the recirculating unit, preventing the accumulation of the cooling fluid. METACUT 251 and METACUT 351 are both table-top units and rigid Floor Cabinets are available as optional accessories. START, STOP, Pump and Lamp touchpad buttons are mounted on the front panel.

METACUT has the highest safety standards. The interlocking safety device does not allow the motor to be started unless the hood is closed. The hood can not be opened before the motor is stopped. The electronic brake system, which is a standard feature, brings the cutter to a quick full stop in seconds after it has been switched off.

A closed loop recirculating cooling unit is a standard part of the machine. The cutting surface is cooled by spray nozzles whose water jets hit both the cutting wheel and the specimen. This provides an efficient cooling of the sample and prevents the overheating of the surface structure.



METACUT 251



Stainless steel clamping devices and T-Slotted table



Side access port for extra-long workpieces

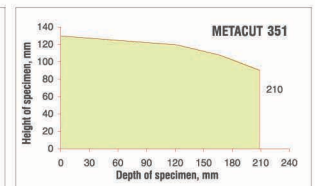
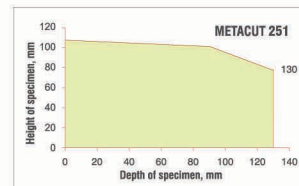


METACUT 251 with floor cabinet

## Clamping Devices

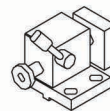
Many sample preparation applications require the sectioning of specimen from a small or irregularly shaped sample or component part. The small size or irregular sample shape can create positioning and clamping difficulties for the operator. To overcome these difficulties METKON offers a number of special clamping devices for use with METACUT abrasive cutters which are equipped with stainless T-slotted clamping tables. All clamping devices are made of stainless steel and can be attached to the cutters T-Slot beds in seconds for fast, positive clamping of parts having virtually any configuration.

## Cutting Capacity



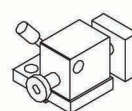
## Clamping Systems for METACUT Cut-off Machines

Quick Acting Clamping Vise Assembly, Right



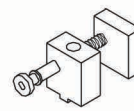
GR 0029  
GR 0012

Quick Acting Clamping Vise Assembly, Left



GR 0030  
GR 0013

Compact Vise Assembly Spring Loaded



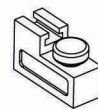
GR 0154  
GR 0151

Vertical Clamping Spring loaded



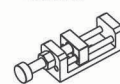
15 02  
15 01

Height Block



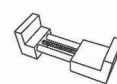
15 04  
15 03

Fastener Vise for Longitudinal Sectioning of Screws



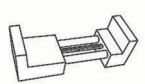
GR 0453

Fastener Vise for Longitudinal Sectioning of Screws



GR 0310

Fastener Vise for Longitudinal Sectioning of Screws



GR 0312

## Specifications

### 12 05 METACUT 351

#### Abrasive Cutting Machine

Microprocessor controlled, front panel with touch-pad controls, compact powerful 5,5 kW motor, electronic brake system, cutting capacity up to 130mm solid stock, for cut-off wheels upto ø350 mm, extra-large T-slotted clamping table 605x366 mm made of stainless steel, bottom part as rugged alloy base casting, 100 lt. recirculating cooling unit with connection hoses and ready for operation. Without clamping devices.

400 V, 3 phase, 50 Hz.

Includes a standard set of cutting consumables composed of;

\* An assortment of 20 cut-off wheels with 350 mm dia.

\* 5 lt of Metcool cooling fluid.

#### Clamping Devices for METACUT 351

- GR 0029 Quick Acting Clamping Vise Assembly, Right.  
 GR 0030 Quick Acting Clamping Vise Assembly, Left.  
 GR 0154 Compact Vise Assembly, Spring Loaded.  
 15 02 MBU 1031 Vertical Clamping Device with clamping shoe. clamping height upto 115mm.  
 15 04 MK 10 22 Height Block, 70 mm  
 GR 0310 Fastener vise for longitudinal sectioning of screws,ball joint, tubes, etc. from 60 to 100 mm. in length  
 GR 0312 Fastener vise for longitudinal sectioning of screws,ball joint, tubes, etc. from 90 to 150 mm. in length

#### Accessories for METACUT 351

- GR 0938 Cabinet for floor model, MTC 351

### 10 05 METACUT 251

#### Abrasive Cutting Machine

Microprocessor controlled, front panel with touch-pad controls, compact powerful 3 kW motor, electronic brake system, cutting capacity up to 90/115 mm solid stock, for cut-off wheels upto ø250/300 mm, twin T-slotted clamping table 255x250 mm made of stainless steel, bottom part as rugged alloy base casting, ABS protective hood, 60 lt. recirculating cooling unit with connection hoses and ready for operation.

Without clamping devices.

400 V, 3 phase, 50 Hz.

Includes a standard set of cutting consumables composed of;

\* 1 pack of medium type 10 cut-off wheels with 250 mm dia

\* 1 pack of medium type 10 cut-off wheels with 300 mm dia

#### Clamping Devices for METACUT 251

- GR 0012 Quick Acting Clamping Vise Assembly, Right.  
 GR 0013 Quick Acting Clamping Vise Assembly, Left.  
 GR 0151 Compact Vise Assembly, Spring Loaded.  
 15 01 MBU 1011 Vertical Clamping Device with clamping shoe, clamping height upto 90 mm.  
 15 03 MK 10 21 Height Block, 60 mm  
 GR 0453 Fastener vise for longitudinal sectioning of screws,fasteners tubes, etc. from 12 to 45 mm. in length

#### Accessories for METACUT 251

- GR 0937 Cabinet for floor model.



Order No	10 05	12 05
Cutting Power kW(S1)	3	5,5
Cutting Power kW(S3)	4,6	7,9
Wheel Speed, rpm	2800	2200
Operation	Manual	Manual
Wheel Diameter, (mm)	ø250 / ø300	ø350
Cutting Capacity, ø (mm)	ø90 / ø115	ø130
Cutting Capacity, # (mm)	50 x 165 / 50 x 195	84 x 236
T-Slot table dimension, (mm)	255 x 250	605 x 366
T-Slot dimension, (mm)	12	12
Size, WxDxH, (cm)	58 x 68 x 49	68 x 81 x 62
Weight, (kgs)	132	165
Cooling Unit, (lt)	60	100
Mains, (V)	3 phase 400 V, 50 Hz	3 phase 400V, 50 Hz

\* Other voltages and frequencies available upon request.  
 Please state when ordering.  
 All specifications are subject to change without notice.



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