



**Secotom-15/-50 are high performance table-top cut-off machines, which successfully combine the latest precision cutting technology with flexibility and user-friendliness. Intuitive operation with large colour display, turn/push knob and joystick.**



**Very user-friendly and easy to operate - no programming required**

**Spacious cutting chamber for optimal accessibility**

**Large, movable cutting table allows cutting of large and deep workpieces**

**Fast positioning with a joystick saves time**

**Height adjustment of cut-off wheel allows for easy compensation for wheel wear**

**OptiFeed ensures the fastest possible cutting speed within the set parameters**

**Variable cut-off wheel speed provides optimal cutting speed with different wheel types and sizes**



## Easy to operate

### Fast and easy operation

Secotom-15 and Secotom-50 require no programming and there is no risk of getting lost in complex menus. They are designed with a large colour display for easy operation. The navigation in the software and change of parameters are very fast and easy by a turn/push knob.



### Fast positioning with a joystick

The joystick allows fast manual positioning of the workpiece, saving set-up time. Simply push the joystick upwards and the cutting table will move towards the wheel. This enables fast and precise positioning of the workpiece.

### Height adjustment of the cut-off wheel

The height of the cut-off wheel can be adjusted in a range of 40 mm. The height is automatically adjusted on Secotom-50 with the joystick. Secotom-15 has a manual wheel to adjust the cut-off wheel height. This enables the use of a large variety of cut-off wheel sizes, and makes it easy to compensate for wheel wear. In addition, it eliminates the use of shims when the specimen is clamped directly on the cutting table.



## Design

### User-friendly design

Secotom-15 and Secotom-50 are designed for optimal user-friendliness. Large control panel for easy operation, intuitive software and easy access to the cutting chamber.

### Large cutting table with T-slots and stainless steel bands

The large cutting table (258 mm x 184 mm) (10.2" x 7.2") is made of corrosion resistant cast aluminium with stainless steel bands. It is placed in front, free of the cut-off wheel which makes clamping of the workpiece very easy. It has two 30 mm steel bands to the left side of the cut-off wheel and five 30 mm steel bands to the right. The steel bands are easily exchanged if damaged or worn. Maximum clamping flexibility is provided by the 8 mm T-slots, which allow a wide range of clamping tools to be used.



### Light in the cutting chamber

A powerful LED lights up the cutting chamber just beside the cut-off wheel spindle and makes it easy to follow the cutting process.

### Drain basket

For collecting and easy cleaning the big particles from the cutting process, a drain basket is placed in the cutting chamber drain.



Recirculation tank with capacity for 4.75 litre cooling fluid

## Cutting process

### Cutting large workpieces

The cutting chamber is provided with a movable cutting table. By moving the cutting table, Secotom-15 and Secotom-50 can cut large and deep workpieces up to 70 mm / 2.8" diameter or 165 x 50 mm / 6.5" x 2".

### Powerful motor

Secotom-50 has a very powerful motor which makes it possible to cut almost all materials fast.

### ExciCut

ExciCut (Secotom-50) is used when cutting extremely hard materials that cannot be cut directly. ExciCut works by moving the cut-off wheel up and down as the cutting table moves forward. This ensures a small contact area between the cut-off wheel and the workpiece and gives better access of coolant and no thermal damage of the workpiece.

### OptiFeed - intelligent feed control

The feed speed can be pre-set and controlled in the range of 0.005 to 3 mm/sec. This wide range allows even the most delicate workpieces to be cut. If the feed speed is set too high, resulting in motor overload, OptiFeed automatically reduces the feed speed to an appropriate value. As soon as the load on the motor is reduced again, the feed speed is increased to the pre-set level.

Cutting irregular sized workpieces represents a great challenge to the operator. The risk of damage to the workpiece or the cut-off wheel is high. As the contact area between the workpiece and wheel gets larger, the force increases to maintain the pre-set feed speed. This may overload the machine, but thanks to OptiFeed, the feed speed is automatically reduced. When the contact area gets smaller again, the feed speed is automatically increased to the pre-set maximum.





### Serial cutting with automatic X-table

With the optional accessory, automatic X-table, Secotom-50 can cut in series which reduces cutting and operator time. Choose either a cutting mode where slices of equal thickness are cut or a mode where up to four slices of different thickness can be cut. The display will indicate how many slices of the pre-set number are cut.

### Variable cut-off wheel speed

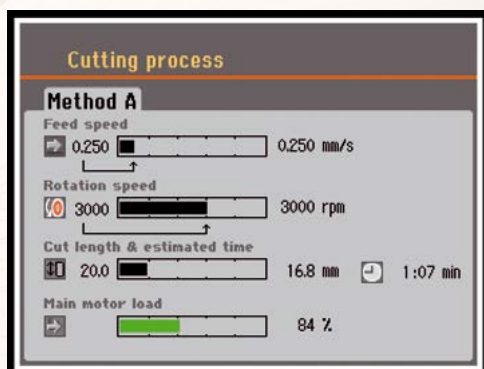
The cut-off wheel speed can be varied from 300 rpm to 5000 rpm in 100 rpm increments. This enables a more accurate choice of wheel speed for different cut-off wheel types and sizes.

### Adjustable cutting length

The cutting length can be pre-set between 0-190 mm and adjusted in steps of 0.1 mm. This gives you the freedom to attend to other tasks while the machine is cutting.

### Read-out of load

The load on the cutting motor can be monitored throughout the process on the display on the control panel.



## Safety and environment

Secotom-15 and Secotom-50 comply with international safety standards. The cutting process cannot be started until the cover has been closed completely. This provides maximum safety for the operator, while inserting and positioning the workpiece. After the start button has been pressed, the cover is locked mechanically and cannot be opened until the cut-off wheel has stopped.

Cutting certain materials may produce both harmful and unpleasant fumes. Secotom-15 and Secotom-50 are prepared for direct connection to an external exhaust system, in line with our general recommendation to install an exhaust from the cutting chamber. They also have an emergency stop for maximum protection of the users.

When not used in 10 min. the machine will enter a standby mode which saves costs and the environment.

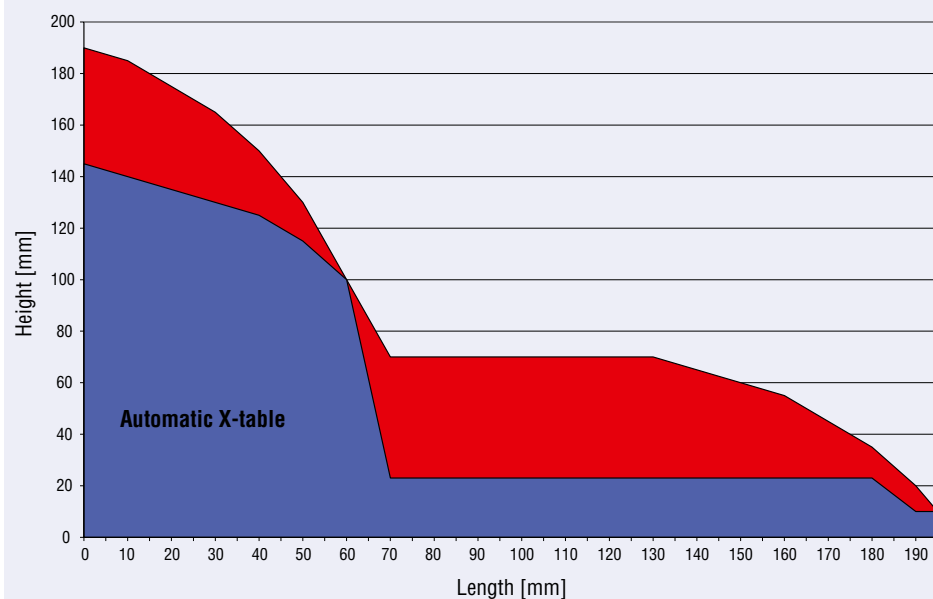
### Manual Dresser

The manual dresser facilitate a fast and easy dressing of the diamond and CBN cut-off wheels. A dressed cut-off wheel secures that the cutting ability and thereby the cutting result is improved. All sizes of cut-off wheels 75 mm dia. to 200 mm dia. can be dressed also while cutting.

The dresser is easily installed behind the cut-off wheel.



### Cutting capacity



## Accessories and consumables



### Automatic X-table

For automatic positioning and serial cutting on Secotom-50.  
Maximum movement 40 mm / 1.2" with 20 µm accuracy. With two 8 mm T-slots.  
To be placed on the standard cutting table.

Cat. no:

05996911



### Fixed stand

Stand for specimen holders with dovetail clamp. Designed for small delicate workpieces.  
Manual positioning. For 8 mm T-slot.

05996913



### Manual X-stand

Stand for specimen holders with dovetail clamp. Manual positioning with digital read-out.  
The positioning accuracy is 5 µm. Enables the cutting of plane-parallel slices in a well-defined thickness. The total lateral movement of the X-stand is 30 mm / 1.2".

05996914



### Rotary stand with digital readout of the X-position.

The optional rotating stand increases the Secotom-15 and Secotom-50's capacity even further.  
Workpiece rotation reduces the contact area between the cut-off wheel and the workpiece to a minimum. This decreases frictional heat and allows fast cutting of extremely hard materials. In addition, it increases the machines capacity by enabling you to cut larger workpieces - up to 100 mm / 3.9" diameter. Is used together with specimen holders with dovetail plates. The positioning accuracy is 5 µm and the total lateral movement is 30 mm / 1.2".

05996912



### Manual Dresser

For easy dressing of diamond and CBN cut-off wheels while Secotom-15/-50 is running.

05996915



### Kit for an external recirculation tank

To be used if you do not want to clean the included tank or where 4.75 litre cooling fluid is not enough. Can also be used if you want to filter the fluid to ensure that the fluid as clean as possible. Includes 2 x 2 m hoses and frontplate to be placed instead of the recirculation tank front.

05996918

## Cut-off wheels

All types of cut-off wheels from the size of 76-203 mm / 3-8", including abrasive wheels, can be used on Secotom. Struers offer a large variety of diamond, CBN, Al<sub>2</sub>O<sub>3</sub> and SiC cut-off wheels covering all possible applications.

See special brochure for more information about cut-off wheels.

## A wide range of clamping tools and specimen holders for all shapes and sizes are available



### Clamping tools

#### Quick clamping tool for 8 mm T-slots, right

For securing the workpiece on the right side of the cut-off wheel.  
Complete with backstop. Jaw movement: 50 mm. Jaw height: 55 mm

05876908



#### Vertical clamping tool for 8 mm T-slots

For clamping irregularly shaped workpieces on the cutting table.  
Clamping height is adjustable up to 58 mm.  
Complete with operating key and one flat clamping shoe.

05036915



#### Swivel shoes for Vertical clamping tool

Set of 4 multi-shaped swivel shoes for Vertical clamping tool.

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#### Arm extension for Vertical clamping tool

For extending clamping arm of Vertical clamping tool

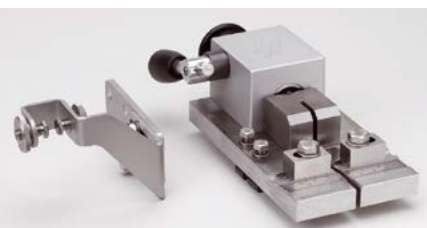
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#### Spring clamp for 8 mm T-slots, left

For retaining the workpiece on the left side of the cut-off wheel.  
Complete with backstop and spanner.

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#### Bolt Clamping Device for 8 mm T-slots

For longitudinal sectioning of bolts and fasteners. With ruler for easy positioning of the workpiece. Clamping range: 4 - 12 mm dia. / 0.15 - 0.47" dia.  
A tungsten carbide guide prevents the cut-off wheel from moving to the either side.

05996917



#### Flange set

Different flanges can be used to achieve the highest precision or the biggest cutting capacity.  
42 mm dia. flange set (max. 168 mm / 6.6" cut-off wheel)  
65 mm dia. flange set  
110 mm dia. flange set

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05036902



### Specimen holders with dovetail

To be used with Fixed stand, Manual X-stand or Rotary stand

#### Specimen Holder CATNI, with goniometer

04276911



#### Specimen Holder CATPE, for adhering workpieces

04276912



**Specimen Holder CATAN, for small workpieces**

Max. opening: 10 mm

04276915



**Specimen Holder CATSI, for general use**

Max. opening: 60 mm

04946903



**Specimen Holder CATFF, teardrop type with opening**

For workpieces 15 - 40 mm dia.

04946904



**Specimen Holder CATTY, with 7 screws for irregular workpieces**

Max. 40 mm width

04946905



**Specimen Holder CATRE, for cylindrical workpieces**

Max opening 40 mm dia.

04946907



**Specimen Holder CATAL, for long workpieces**

With double parallel vice

04946909



**Three-jaw Chuck**

For centering and clamping cylindrical workpieces up to 65 mm dia.

05036919



**Tilting Joint CATJO, to be mounted between the dovetail and the specimen holder**

The specimen holder can then be angled  $\pm 10^\circ$

04946906



**Angling Joint CATJA, to be mounted between the dovetail and the specimen holder**

The specimen holder can then be angled  $30^\circ$  to one side and  $90^\circ$  to the other side

04946908

Technical data	Secotom-15	Secotom-50
<b>Cut-off wheel</b>		
Size	75 - 203 mm / 3 - 8" dia.	
Arbor size	12.7 mm / 0.5" and 22 mm / 0.86"	
Rotational speed	300 - 5000 rpm (in steps of 100 rpm)	
Positioning range	0 - 40 mm / 0 - 1.6" up/down Manual	0 - 40 mm / 0 - 1.6" up/down Automatic by the joystick
<b>Cutting capacity *</b>	70 mm dia. / 2.8" dia. or 165 x 50 mm or 6.5" x 2"	
<b>Cutting table</b>		
Feed speed	0.005 - 3 mm/s / 0.3 - 7"/min. (in steps of 0.005 mm)	
Cutting length	0 - 190 mm / 0 - 7.5" (in steps of 0.1 mm)	
Width	258 mm / 10.2"	
Length	184 mm / 7.2"	
T-slots	8 mm	
<b>Power</b>		
Nominal load (S1)	0.8 kW	1.1 kW
Intermittent (S3)	1.0 kW	1.5 kW
Current, max.	11.7 A	14.8 A
<b>Dimensions</b>		
Height	440 mm / 17.3" cover closed 1055 mm / 41.5" cover open	
Width	644 mm / 25.4"	
Depth	784 mm / 27.6" with plug	
<b>Weight</b>	68 kg / 150 lbs	
<b>Software and electronics</b>		
Controls	Touch pad, joystick and push/turn knob	
Memory	FLASH-ROM / RAM / NV-RAM	
LC Display	TFT-colour 320x240 dots with LED back light	
<b>Noise level</b>	60 dBA, at idle running, at a distance 1.0 m / 39.4"	
<b>Surrounding temperature</b>	5 - 40 °C / 41-104 °F	
<b>Humidity</b>	0 - 95 % RH, non condensing	
<b>Safety</b>	Please refer to the Declaration of Conformity	
<b>Recirculation cooling unit</b>		
Contents	4.75 l / 1.25 gallon	
Flow	1.6 l/min. / 0.4 gallon/min.	

\* The actual cutting capacity depends on the specific workpiece dimensions, cut-off wheel and clamping technique.

## Specifications

### Secotom-15

Tabletop, precision cut-off machine with movable cutting table and variable speed. Automatic feeding with electronic control of feed speed. Motorized positioning of workpiece and digital read-out. OptiFeed function. Three cutting methods. Complete with recirculation cooling unit, flange set 50 mm (2") dia. Cut-off wheels, specimen holder's, additive for cooling fluid (Corrozip) and clamping tools are ordered separately. Specification: 200-240 V / 50-60 Hz.

**Cat. no:**

05996127

### Secotom-50

Tabletop, precision cut-off machine with movable cutting table and variable speed. Automatic feeding with electronic control of feed speed. Motorized positioning of cut-off wheel and workpiece and digital read-out. ExciCut and OptiFeed functions. 10 cutting methods and cut-off wheel database included. Complete with recirculation cooling unit and flange set 50 mm (2") dia. Cut-off wheels, specimen holders, additive for cooling fluid (Corrozip) and clamping tools are ordered separately. Specification: 200-240 V / 50-60 Hz.

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Struers' equipment is in conformity with the provisions of the applicable International Directives and their appurtenant Standards. (Please contact your local supplier for details)

Struers' products are subject to constant product development. Therefore, we reserve the right to introduce changes in our products without notice.

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