

BESTTOME Series

From T100 to T400

INNOVATION IN CUTTING



CUTTING



Advantage of Cutting Machine

- **Powerful** : BESTTOME Series is equipped with a powerful motor controlled by a frequency inverter!
- **Reproducible** : Last parameters used are automatically saved for use again!
- **Efficient** : All parameters are adjustable!
- **Simple** : Easy to use control panel with large display!
- **Intelligent** : Automatic feed can be set for maximum cutting efficiency!



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BESTTOME

T100

Specifications

- Precision cutting machine with variable speeds
- Machine fitted with a protective transparent hood
- Diamond or resin bonded disc with a 125mm diameter
- Cutting capacity 25x25mm or 30x30mm with 125mm diameter
- Disc rotation speed from 30 to 500rpm.
- LCD Display and touch pad control (10 rpm increase)
- BLDC Motor 120 watts 1.9 Nm torque
- Stops work with inhibitor switch after cutting
- Power 220V. 1 phase 50/60Hz
- Drawer type cooling tank

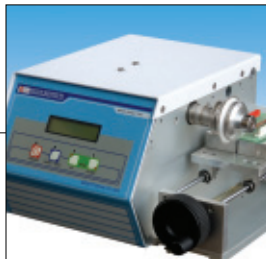


- Width : 295mm
- Depth : 300mm
- Height : 320mm
- Weight : about 15kg

Operating



Transparent coner



Thin cutting



Nonmal cut



Various chucks

The BESTTOME T100 is a small, speedy, precision cut-off machine for sectioning all types of materials up to a maximum specimen size of 30mm in diameter.

- The cutting speed is variable and the motor is designed to ensure that the selected speed remains constant with any load.

- A micrometer with a 20mm travel speed controls the chuck holding the sample and allows for adequate adjustment of the cuts while the required specimen size can be set with an accuracy of + 0.01mm

- The motor is equipped with a thermal overload protection although prior to actually switching out an overload-indicator provides a visual warning that either the cutting procedure should be stopped or cutting pressure should be reduced.

- The cutting process is liquid cooled with the cooling liquid draining back continuously into the coolant tank.

Accessories

- 51713-1 Chuck for small sample
- 51714-1 Chuck for cylindrical sample
- 51715-1 Chuck with V home
- 51716-1 Chuck for irregular shaped sample
- 51717-1 Chuck with vice shape
- 51164-1 Dressing stick
- 02030 Diamond disc LM $\phi 75 \times 0.2 \times 12.7$ mm
- 02031 Diamond disc LM $\phi 100 \times 0.3 \times 12.7$ mm
- 02032 Diamond disc LM $\phi 125 \times 0.4 \times 12.7$ mm
- 01025 Anti rust liquid

Special cutter for thin sheets

A miniature sized bed moving type thin cutter with BESTTOME T100 applications. Adjust the bed using the lever Wheel thickness of 0.1mm

BESTTOME T200

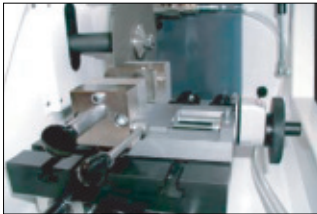


Specifications

- Precision micro-cutting automatic machine
- Cut-off wheel * 75 to 200mm
- Cutting capacity 60 x 60mm and 60x200mm
- Cast iron table 230x210mm
3 longitudinal T-slots
3 Transverse T-slots
- Rapid movement of table for positioning
- Control of cutting length
- Motorized vertical movement of cutting disc, 75mm
- Variable speed from 300 to 5000rpm
- Feed speed from 3 to 125mm
- 750 watts motor



- Width : 700mm
- Depth: 605mm
- Height : 465mm
- Weight : about 100kg



51355-1



51999-1



51356-1



50613-1



51323-1

Operating

- BESTTOME T200 is a precision micro cutting machine with an automatic feeding advance for a larger range of applications. BESTTOME T200 can accommodate many kinds of samples due to parameter control and versatile fixturing.
- Its electronic control panel is very simple to use and allows users to save settings for speed rotation, feeding advance and cutting length.
- Cast iron T slot table (200 x 210mm) with a feed speed of 6 - 100mm per minute (3 to 75mm/min) with a 252mm cut length. Table can accommodate different types of vices, transversal tables or special holders.

- Variable speed rotation allows optimal cuts following cut-off wheel types and diameters and materials to cut.
- The vertical movement of the cutting discs (60 mm motorized) allows adjustments to compensate for range of wheels sizes and to accommodate larger samples.
- High speed automatic return when cut is complete as well as high speed table setting.
- Automatic resistance regulated cut.
- Possible to cut with vertical movement of the cutting discs with variable speed for the feeding advance in manual.

Accessories

- 51325-1 Set of flanges ø75mm for wheel ø200mm
- 51326-1 Set of flanges ø50mm for wheel 150,180mm
- 51327-1 Set of flanges ø35mm for wheel 75,100mm
- 51370-1 Kit for low feeding speed 3 to 75mm/min
- 51321-1 Quick clamping vice/left
- 51319-1 Quick clamping vice/right
- 51355-1 Transversal table
- 51999-1 Double quick clamping vice(51321-1, 51319-1)
- 51356-1 Quick clamping vice for long sample
- 51323-1 Rotating vice
- 50613-1 Box of Kopal holder
- 02034 Diamond disc LM ø125×0.4×12.7mm
- 02036 Diamond disc LM ø150×0.6×12.7mm
- 02055 Diamond disc LM ø175×0.9×12.7mm
- 02038 Diamond disc LM ø200×1.2×12.7mm
- 01025 Anti rust liquid
- 51324 Set of 5 reduction rings 12.7/25.4mm



BESTTOME

T301

Specifications

- High capacity manual cutting machine.
- One piece main body of casting aluminium alloy.
- 12mm T-Slot working table.
- The hood opens completely to provide easy access and includes safety switch.
- Cutting wheel diameter \varnothing 250mm or 300mm.
- Wheel rotation speeds : variable (1000 to 4000 rpm).
- Cutting capacity : ww145×60mm, \varnothing 100mm
- Motor power 3.7 kW.
- Distance between disc and table : 120mm.
- Cooling system with multi-sprays.
- Cooling tank(55L) & pump with removable and washable filter system.
- Spray nozzle for cleaning.
- Lighting of cutting chamber.
- Safety interlocking switch.
- Voltage 220V 3-phases 50/60Hz.
- Width : 800mm, Depth : 1000mm
Height : 950mm, Weight : 100kg



- Width : 970mm
- Depth : 800mm
- Height : 500mm(open 760mm)
(+Cabinet : 1000×810×840mm)
- Weight : about 80kg
(Cabinet : 50kg)

Operating

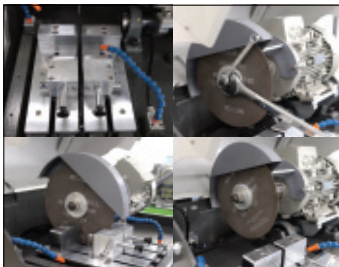
BESTTOME T301 is a high-performan manual cut-off machine

- BESTTOME T301 allow a rapid cutting, easy to use and without overheating.
- The design of BESTTOME T301 mean that large and bulky components can be out, as well as bars, and with very easy cleaning.
- Its new table with interchangeable steel blocks could receive quick clamping vices, vertical KOPAL holders and special holders.

- BESTTOME T301 is adapted to cut in laboratory or workshop.



Base Cabinet



Operating



Cooling Tank

Cutting capacity

	\varnothing 250mm	\varnothing 300mm
	\varnothing 75mm	\varnothing 100mm
	65×65 mm	90×90 mm
	95×50 mm 120×25 mm	145×60 mm

Accessories

- 51602-1 Double quick clamping vice
- 51602-3 Pump & Tank(55L)
- 01020-1 Abrasive cut-off wheels/
B-AO, \varnothing 250mm
- 01025 Anti rust liquid
- 51603-1 Base Cabint
- 51603-2 Magnetic Separator
- 50613 Vertical vice

BESTTOME

T300

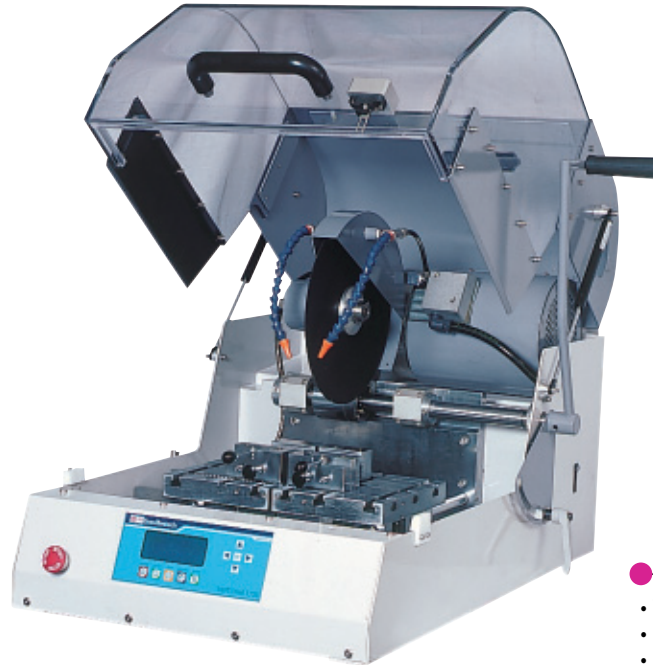


Technical glossary for T300 and T400

Saving settings : The last parameters applied can be saved. This is particularly helpful for mass cutting, or for cutting identical workpieces.

Automatic regulation : An electronic device measures the effort of the various motors and regulates the forward motion of the working table during automatic cycles. Maximum and minimum thresholds may be easily configured by the operator to adapt the parameters according to the types of workpieces and materials. It is also possible to configure response times for adjustment.

Pulsation cutting : the BESTTOME T 300 has 2 cutting modes: direct and pulse cutting. With the direct mode, automatic forward motion is continuous, and only speed is regulated if necessary. With the pulse system mode, forward motion is alternated with stops for optimum cooling of the workpiece. Forward motion and stopping time may be configured separately per 1/10th of a second. Forward motion speed may also be controlled.



- Width : 645mm
- Depth : 970mm
- Height : 945mm (+Cabinet : 1450mm)
- Weight : about 120kg

Operating for T300 and T400

BESTTOME T 300/400 is a robust, powerful and reliable cutting machine integrating the latest technology to ensure easy use and simple maintenance. ø 300 or 400 mm cutting disks combined with variable speeds allowing for optimum cutting results with all types of materials. The design means that large and bulky shaped components as well as bars can be cut.

- With manual cutting, the user may adjust the disk speed before or while cutting without needing to stop the machine.

It is also possible to move the table forward or backward during cutting to permanently modify the cutting angle: hard to handle materials may therefore be cut without having to use excessive effort.

- With automatic cutting, the following functions are possible:
 - variable disk speed for precise disk adaptation
 - variable movement of the table for rapid cutting of easy to handle materials or small items, and slow cutting of hard to handle materials or large items
 - adjust thresholds to optimize forward speed according to the resistance sensed during cutting and to accelerate cutting for optimum performance

- direct cutting function for rapid processing of easy to handle materials
- pulse cutting function for hard to handle materials, enhancing the cooling down of the workpiece and the regeneration of the disk
- programmable cutting length give more time for mass cutting and stops cutting at a set distance.
- rapid return function at the end of cutting and automatic stopping of the machine allows operator free cutting.
- rapid positioning of the table reduces adjustment time prior to cutting.

- The powerful and silent motor is controlled by the frequency inverter to increase long term reliability and to ensure a high level of safety with progressive acceleration (no sudden movements in transmission) and the immediate stopping of the disk. The frequency inverter will also ensure a constant torque independently to the applied load.



Base Cabinet

Vices and Holders



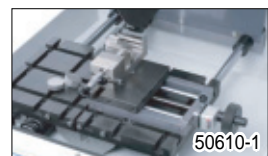
Tank with filter



51356-1



50906-1



50610-1



50613-1



51330-1



BESTTOME

T400

Technical glossary for T300 and T400

Frequency inverter : Controls the three phase motors. The following functions are included in the BESTTOME T 300 and T 400 : speed regulator, constant torque and independent loading speed, progressive acceleration and instant stop, overload protector and feedback for steady forward motion.

Filtering : Latest filters have been developed for the BESTTOME T 300 and T 400 in order to improve the cutting quality, but more importantly, to simplify user tasks such as cleaning the machine or draining the cooling tray. The cooling tray only contains coolant water and the liquid is clear and virtually free of deposits and cutting waste. Draining is simple and infrequent.

Safety Locking : In accordance with safety standards, interlocking prevents the cover from opening during the cutting cycle while the disk is rotating.



- Width : 900mm
- Depth : 1500mm
- Height : 1800mm
- Weight : about 900kg

Accessories for BESTTOME T300 and T400

Operating for T300 and T400



Base Cabinet

- The control panel combines all machine commands and access to convenient functions:

- variable disk speed
- variable feed speed for the table
- programmable cutting length
- manual or automatic cutting
- direct cutting or pulse cutting
- programmable effort thresholds to regulate forward motion

- The BESTTOME T 300 and 400 working tables are deep and wide, allowing for the application of different fixturing systems often used with larger machines. Double rapid grip vices, or vices for long items, as well as Kopal clamps can be attached to the table.

Optional transversal table is also available which enables the cutting of slices without need to disassemble the workpiece or for precise positioning.

- The transparent cover and inner lighting provide optimum visibility. Gas absorbers mean the cover can be opened and shut easily.

Extensive cover clearance simplifies access to the working table and the handling of vices. It is also possible to install rubber curtains in the side openings to cut large workpieces or bars which overhang the machine.

- The liquid filter system uses mobile and cleanable filters that allows for cutting without coming into contact with sediment while enhancing the quality and finish of cutting.

The clean liquid can also be used to effectively and rapidly clean the machine with the spray nozzle. The low lying base of the cutting compartment also simplifies cleaning, guaranteeing an extended life for the BESTTOME T 300 and T 400.

- Tray combined with a powerful pump and a multi-jet watering system (on the disk and on the workpiece to be cut) ensures optimal cooling of the workpiece.

- The option ø75 mm sleeve, available upon request, allows a vapor extractor to be connected, reducing condensation within the cutting compartment and increasing visibility.



Operating

- 51610-1 Transversal table for T300
- 50902-1 Double screw clamping vices for T300
- 51999-1 Rubber curtain for T300
- 50694-1 Transversal table for T400
- 50903-1 Double screw clamping vices for T400
- 50999-1 Rubber curtain for T400
- 50906-1 Double quick clamping vices (Height 45mm Width 80mm)
- 50510-1 Double quick clamping vices (Height 70mm Width 80mm)
- 50911-1 Double quick clamping vices (Height 90mm Width 110mm)
- 50613-1 Box of Kopal holders
- 01020 Cut-off wheel ø300×2.0×32mm
- 01027 Cut-off wheel ø400×3.0×32mm
- 01025 Anti rust liquid

Cutting capacity

Disqueneuf	ø400mm	ø450mm
	135mm	160mm
	400×100 mm	400×150 mm

Special Order Base Cutting Machine

Besides standard products, SsaulBestech also produces special cutting machine per customer's request to meet the conditions of the customer's work requirements.

Material properties of cutting specimens : Original size of sample.

3D CAD designs are available in order to assist customers who require information on cutting methods.

Pre-cutting test results are submitted and produced under customer consent.



	T 300	T 400
Ø cutting disk	250 or 300 mm	300 or 400 mm
Rotation speed	1000 - 4000 rpm	
Motor power	3.7 kW	5.5 - 7.5 kW
Disk progressive acceleration	yes	
Immediate disk stop	yes	
Forward motion speed for cutting	3 - 125mm/min	
Regulated and adjustable forward motion according to resistance	yes	
Adjustment of effort thresholds	yes	
Direct cutting	yes	
Pulse cutting system	yes	
Programmable cutting length	yes	
Variable positioning of the working table	yes 125mm/min	
Rapid return at end of cutting	yes	
Manual cutting way	by Lever	by joystick
Cutting arm travel	125mm	380mm
Cooling of the disk and the workpiece via 4 nozzles	yes	
Electronic keyboard	yes	
Large digital display	yes	
Easy programming of cutting parameters	yes	
Memorisation of the last parameters used	yes	
Emergency stop	yes	
Cast iron working table	390 x 230 mm	470 x 400 mm
Working table travel	240mm	410mm
T groove, 12 mm	yes	
Transversal table with digital vernier	yes (optional)	
Inner position of the cutting disk	290 mm left side, 300 mm right side	310 mm left side, 475 mm right side
Clearance under a new Ø 300 mm disk (T400 : 450mm)	100 mm	155 mm
Clearance under a new Ø 250 mm disk (T400 : 400mm)	125 mm	180 mm
Available volume under a new Ø 300 mm disk (T400 : 450mm)	300 x 500 x 100 mm	400 x 440 x 165 mm
Available volume under a new Ø 250 mm disk (T400 : 400mm)	300 x 500 x 125 mm	400 x 440 x 150 mm
Theoretical capacity of a new Ø 300 mm disk (T400 : 450mm)	Ø 100mm / 100 x 150 mm	Ø 170mm / 170 x 230 mm
Theoretical capacity of a new Ø 250 mm disk (T400 : 400mm)	Ø 85mm / 85 x 130 mm	Ø 154mm / 154 x 230 mm
Bar clearance on both sides of the machine	yes (300 x 80 mm)	yes (400 x 100 mm)
Transparent cover	yes	wide window
Large cover opening for easy access	yes	automatic
Assisted opening and closing of cover	yes	
Aspiration orifice for cutting vapours	yes Ø 75mm	
Rapid changing of the cutting disk	yes	
Cooling tray with powerful pump	yes (55 litres)	yes (150 litres)
Filter system with cleanable mobile filter	yes	
Spray nozzle for cleaning	yes	
Easy cleaning of the cutting compartment	yes	
Lighting of the cutting compartment (20 W)	yes	
Safety locking	yes	
Noise at 1 metre	66 dB	70 dB
Voltage	400 Volts, three phase, 50 Hz	400 Volts, three phase, 50 Hz
Dimensions (l x d x h)	650 x 810 x 600 mm	900 x 1500 x 1800 mm
Weight	140 kg	900 kg



Resinoid cut-off wheels

Abrasive Materials	Material hardness
A Al ₂ O ₃ • Low carbon, mild and extra mild and treated steels with medium cross-sections	100 - 350 HV
AO Al ₂ O ₃ • Treated steels • Stainless steel • Refractory steels • Alloyed cast iron	300 - 500 HV
S Al ₂ O ₃ • Treated steels with fragile coatings • Difficult materials	> 500 HV
MNF C SiC • Aluminium • Copper and alloys • Non-ferrous metals • Titanium and alloys	30 - 350 HV
F SiC • White, grey and spheroidal graphite cast iron • Titanium and alloys	30 - 350 HV
T SiC • Titanium • Titanium alloys • Non ferrous metals	30 - 350 HV
AOF II Al ₂ O ₃ • Thin cuts • Sintered steels with small cross-sections • Hard metal sandwich materials	80 - 350 HV

Diamond cut-off wheels

Bond	Materials	Material hardness
LM	Metallic • Stellites • Sintered carbides • Sintered steels • Composites	> 800 HV
CR	Metallic • Ceramics • Refractory materials • Minerals	> 800 HV
NB	Metallic • Very hard steels with boron nitride	> 600 HV
LR	Resin • Composites • Ceramics • Sintered carbides • Minerals	> 800 HV

CUTTING

Specimens for metallographic analysis must never undergo structural changes during cutting. For this reason, Ssaulbestech has specially developed a range of "metallographic quality" cut-off wheels for use on all cut-off machines. Two types of cut-off wheels are available : resinoid and diamond or CBN. The type of cut-off wheel to be used depends on the type of material to be cut and in particular its hardness. The following tables will help you choose the right product for your application.



Anti-rust agent

With these cut-off wheels, we recommend the use of our anti-rust agent to avoid corrosion or oxidation of machines and specimens. The anti-rust agent is available in 1 or 10 litre containers and must be diluted to 4% in water.



Cutting fluid

To improve the quality of the cut and to clean the diamond wheel on micro cut-off machines, we recommend using our cutting fluid. Available in 1-litre containers, the cutting fluid should be diluted 1:3 in water prior to use.



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