2. Technical Data

03/22

KASTO*micut A 2.6*

Cutting range:

Cutting range		90°	round (●/○)	160 / 260 mm
Cutting range		90°	flat (W x H) (☐)	310 x 260 mm
Cutting range		90°	square (■/☐)	160 x 160 / 260 x 260 mm
Cutting range	+	45°	round (○)	220 mm
Cutting range	+	45°	flat (W x H) (☐)	200 x 200 mm
Cutting range	+	60°	round (○)	140 mm
Cutting range	+	60°	flat (W x H) (☐)	140 x 140 mm
Cutting range	-	45°	round (○)	240 mm
Cutting range	-	45°	flat (W x H) (☐)	200 x 260 mm
Cutting range	-	45°	square (☐)	210 x 210 mm

Material feed length, individual cut	500	mm
Material feed length, multiple feed	9999	mm
Smallest diameter to be cut	10	mm
Shortest cut-off length individual cut and automatic operation	6	mm
Shortest remnant length individual cut	30	mm
Shortest remnant length automatic operation	60	mm

Dimensions and weight:

Length	2120	mm
Width	2885	mm
Height, saw head lowered position	1690	mm
Height, saw head in highest position	2040	mm
Material support height	950	mm
Total weight	1300	kg

Performance characteristics:

Total power	2.5	kW
Saw motor, power – frequency controlled	1.5	kW
Cutting speed infinitely variable – frequency controlled	20 – 110	m/min
Dimensions of saw blade:	3180 x 27 x 0.9	mm

Saw blade guides:	carbide guides, replaceable
Material clamping:	hydraulic
Cutting feed:	hydraulic
Saw blade tension:	mechanical
Saw blade cleaning:	by synchronously running, easily replaceable wire brush

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Coolant:	Coolant supply is through two adjustable nozzles. Volume of coolant tank approx. 55 l, pump capacity 16 l/min
Colour:	Light grey RAL 7035, structural painting Anthracite grey RAL 7016, structural painting Pure orange RAL 2004, structural painting

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3. Description of Machine

Pos. 1000 KASTO*micut A 2.6*

Fully hydraulic high-performance automatic band sawing machine of solid construction designed for the rough use in workshops and capable to perform any cutting-to-length or mitre cutting tasks in the case of tubes, sections and solid material. In addition to straight cuts, mitres can be cut flexibly and quickly by adjusting the saw head easily to the left by 45° and to the right by 60°. The mitre angle is adjusted quickly via an easy to read scale. Straight and mitre cuts up to +45° to the right are carried out in automatic operation (option), cuts from -45° to the left and up to +60° to the right are carried out in semi-automatic operation. The infinitely adjustable cutting speed and the fully hydraulic, infinitely adjustable cutting feed allow a sensitive and blade-saving cutting.

The standard *AdvancedControl* offers the optimum operation of the machine. Easy and clearly arranged job entry via job wizard. After making the desired number of cuts, the machine shuts off automatically. By reducing set-up times to a minimum, maximum cutting performances are achieved in automatic mode. The precise drive via ball bearing spindle in material feed guarantees an accurate material length positioning.

Due to these standard equipments, economic working processes are achieved when cutting individual pieces, smaller and average lot sizes and large series.

Machine Base

The machine base is an enclosed, torsion-free welded construction. The user-friendly support height of 950 mm and the ergonomic design ensure an ideal upright working position and allow an easy chip removal. The possibility of easy machine transport using lift truck or forklift truck is given.

Hydraulic System

Compact system in block construction, removable, integrated into machine base and easy to access and check from outside. In that way, maintenance time for oil-level control and exchange of filter can be minimized.

Coolant System

The coolant tank with a volume of 55 l is easily accessible for cleaning purposes. The integrated coolant pump has a capacity of 16 l/min. Coolant supply through two nozzles with flow control valve at the blade guides directly to the tool.
An optional coolant hose facilitates cleaning of the machine.

Saw Unit (Saw Frame)

Cast construction without distortion and optimized against vibration, with backlash-free pivot bearing for low-vibration and precise cutting of profiles and solid material. In conjunction with the integrated powerful spur gear and a frequency regulated 1.5 kW saw drive with overload monitoring, a consistently high cutting force is achieved. Including standard saw blade breakage protection and monitoring of minimum speed (*SpeedControl*).

Saw Blade Guide

Lateral guiding by mechanically pretensioned carbide slideways, with clearance stroke system for fast exchange of saw blade. Back guiding by rollers.

Saw Blade Tension

Infinitely variable via ratchet. A stop ensures that the maximum permissible blade tension is not exceeded.

Inclined Saw Head

Cutting through with a saw blade that rises towards the material guide edge and in cutting direction. This reduces formation of burr and saves the saw blade.

Mitre Cutting without Length Correction

The “ideal” centre of rotation of the saw unit is at the point of intersection of the saw blade and the material supporting edge. This ensures accurate cut-off lengths. The mitre angle is set via the clearly readable angular scale. The mitre positions -45°, 90°, +45° and +60° can quickly be preset by means of fixed stops. A clamping lever fixes the mitre position.

Material Clamping

The hydraulically actuated horizontal vices enable an optimum work piece clamping and cutting of short remnants. The horizontal vices that are extending over the entire cutting width allow comfortable and quick clamping of the material. Thus, manual presetting to the material width is not necessary. An integrated button automatically detects the material end. A clamping pressure monitoring in both vices ensures safe material clamping.

Material Support (Cutting Rail)

Mitre adjustment is independent of the material weight. The simple cutting rail supports the material very close to the cutting slot and avoids formation of burr when cutting through.

Material Feeding

By a continuous roller conveyor, integrated into the machine, with 8 transport rollers, Ø 36 mm, distances between roller centres approx. 5 x 80 mm, 2 x 120 mm, including inlay sheets for machine roller conveyor.

Automatic, Numerically Controlled Material Feed

Material feed via pendulum bearing feed gripper system with servomotor and ball bearing spindle. Material feed length up to 500 mm per stroke, standard multiple stroke up to 9999 mm. Short cut lengths up to 245 mm are achieved by an incremental feed which guarantees a high repeating accuracy of cutting length and reduces the auxiliary times during automatic operation.

Clearance Stroke System for Material

After a cut has been finished in automatic cycle the clamped material to be cut is retracted on the infeed side by approx. 2 mm from the saw blade by means of the material feed (to prolong blade life).

Material Outfeed

Via standard slide. Transfer height and container height max. 700 mm in conjunction with the slide.
A connection of the material supporting rail to a roller conveyor can be supplied as an option. The standard outfeed slide is consequently no longer included in the scope of supply. Transfer height 950 mm, max. container height 900 mm.
The material outfeed side meets the effective European and international safety standards. A safety inspection of the complete machine has been performed by the German Professional Association and the French Apave.

Machine Enclosure according to the latest CE Criteria

The KASTO*micut A 2.6* is equipped with an innovative enclosure (combination of light curtain and protective fence) that achieves a high degree of safety and cleanliness with best accessibility on the material infeed and outfeed side.

Operation

The operating elements are arranged ergonomically and centrally at the face side at a swivelling control panel. Both the safe set-up operation (two-hand operation) on the infeed side and the check of the cut-off pieces on the outfeed side can be done in a time-saving way from the control point.

KASTO Control for Sawing Machines *AdvancedControl*

Hardware

- Industrial personal computer, fanless, no movable components
- Robust metal casing, front sheet made of aluminium
- Resistive touch screen
- TFT colour screen 7”, WQVGA, colour depth 16 bit
- Seamless front foil
- Protection category front panel IP65

Interfaces

- 1 x Ethernet (10/100 Mbit)
- 2 x USB Master
- 1 x CANopen (interface for connection of decentralized peripheral devices)
- 1 x serial RS232

Software

- Operating system Windows CE 6.0
- Soft-PLC (programming language Step7®)

Decentralized peripheral devices

- Input/output module(s) with 16 digital inputs and outputs each as well as one analogue input and output. Display of signal condition via LED.
- Connection of input/output modules and drive control system via standard field bus CANopen

Program function

Visualization:

(Illustration may differ from the original)

- Ergonomic, shop-floor-oriented operation via colour touch panel
- Operation based on the standardized user interface and the uniform operation philosophy of all KASTO controls
- Clear separation between navigation and function

- Fast access via status bar
- Title of the current operation page in clear text
- Operator guidance by means of operating advices, e.g. changeover of operation categories, tool exchange etc.
- Online change of language
- Change of units metric/imperial
- Change of material table (EN, AISI, JIS)
- Display of axis for service purposes
- Display of current warnings/disturbances
- Fast access to history of warnings and disturbances with detailed information in clear text via status bar

Job entry:

(Illustration may differ from the original)

- Easy and clear job entry via job wizard
- Display of current wizard position in clear text
- Simple and understandable symbols
- Selection of material quality (solid square, thick-walled square tube, thin-walled square tube, solid round, thick-walled round tube, thin-walled round tube) via graphic symbols
- Preselection of technology data (cutting speed, saw feed) by means of direct entry or selection in the material table
- Material table with assignment of exemplary materials to the proposed technology data and integrated filter function for fast access. Material table is editable.

Job management:

- It is easy to save the latest job data incl. technology data
- Saving under alphanumeric job number, e.g. drawing number, part number
- Easy selection and recall of saved orders via order number
- Integrated filter function for fast access

Tool management:

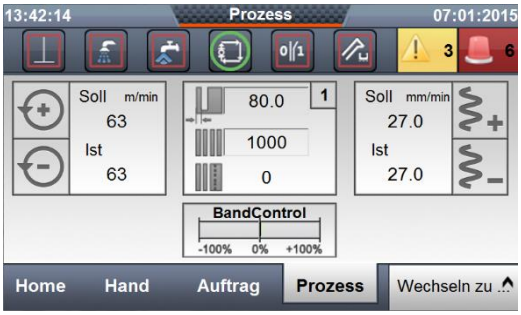
- Easy entry of tool data
- Tool monitoring concerning blade life or cutting surface
- Indication of blade life
- Entry of tooth pitch for the calculation of the optimum saw feed

- Selection of a general reduction or increase of the nominal values for cutting speed and saw feed via slide control

Types to start (may differ, depending on machine type):

- “Automatic start”: Put the material manually to the cutting position and start cutting job.
- “Manual zero positioning start”: Put the leading edge of the material to any position in the outfeed vice. Measure the distance between the leading edge of the material and the saw blade and enter this value in the control system. Start the cutting job. Correcting measures for the cut-off length of the first cut-off piece are calculated by the control system. The first cut-off piece without trim cut is positioned automatically to the cut-off length.
- “Start individual cut”: Move the material manually to the cutting position and start the individual cut. Job entry is not necessary. As an option, a correcting value for the cut-off length can be entered.
- “Automatic start for remnants”: same as “automatic start”, but the material is not clamped anew in the infeed vice.
- “Manual zero positioning start for remnants”: same as “manual zero positioning start”, but the material is not clamped anew in the infeed vice.

Process visualization:



(Illustration may differ from the original)

- Clearly arranged display of the job in process
- Override function for cutting speed and saw feed speed
- Number of pieces and length can be changed during the running job
- Further jobs can be entered during automatic operation
- Display of automatic single correction values for cutting speed and saw feed

Operation-hour counter, statistic functions:

- Operation-hour counter for “Machine ON” and “Saw motor ON”.
  Further operation-hour counter “Saw motor ON” resettable.
- Display of current cutting times: “Time per cut“ and “Cycle time“
- Pre-calculation and display of current job end time
- Piece counter total and piece counter resettable

Special functions:

- Automatic adaptation of technology data, e.g. by cut-in process for new tools, consideration of tooth pitch etc.
- Optimization for remnants (automat)
  If the material ends in the ongoing cutting job, the length of the existing remnant is measured and it is checked if cutting jobs for shorter cut-off lengths exist in the ongoing block of cutting jobs. If they exist, the cutting job is changed automatically until no more cut-off pieces can be cut from the existing remnant.

Scope of Supply

KASTO control for sawing machines *AdvancedControl*

Infinitely variable cutting speed 20 – 110 m/min via frequency regulated drive

Infinitely variable and fully hydraulic saw feed control

Material feed via precise servo-controlled ball bearing spindle

Multiple feed up to 9999 mm, short cut lengths are positioned by an incremental feed

Saw blade breakage protection

SpeedControl (monitoring of minimum speed)

Continuous hydraulic horizontal full stroke vices

Continuous machine roller conveyor with 8 ball bearing transport rollers

Slide for removal of cut-off pieces

Infinitely variable mitre adjustment (+45°) in automatic operation (option Pos. 3648 is necessary)

Infinitely variable mitre adjustment (-45° to +60°) in semi-automatic operation

Coolant system with two coolant nozzles

Synchronously running chip removal brush

Infinite adjustment of the movable blade guide arm

Clearance stroke system (contactless retraction of the saw blade from the cutting slot after end of cut)

Machine enclosure according to the latest CE criteria

Electrical protection of the saw blade covers (accident prevention rules)

Glue anchors to dowel the machine

Bi-metal saw blade, 4/6 teeth per inch

1 operating instructions manual according to the EU Machinery Directive and EN 82079