

KASTO*win.*

High-tech mass produced.

www.kastowin.com

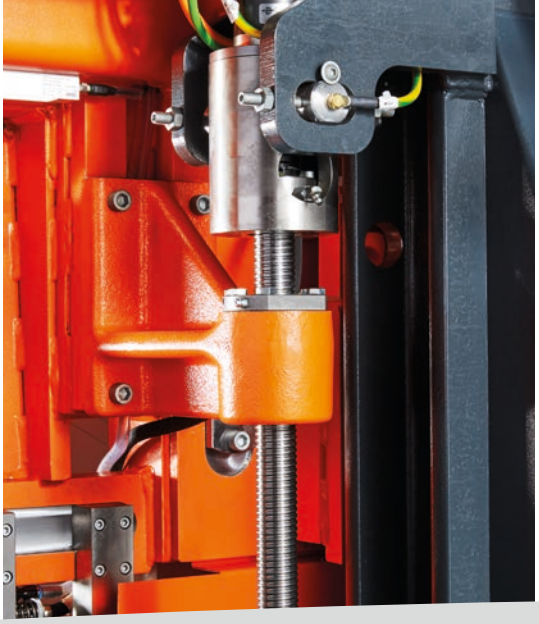
Saws. Storage. And More. KASTO®



More than unique: the new KASTO*win*.

The new KASTO*win* is available in five sizes:
from KASTO*win A 3.3* with 330 x 350 mm cutting range through KASTO*win A 4.6*, *5.6*, *8.6* to KASTO*win A 10.6* with 1,060 x 1,060 mm cutting capacity.

The essence of profitable automated sawing comprises two elements: high cutting performance and short downtimes. The new, fully-automated bandsaws from the KASTO*win* range have been designed for mass production sawing of solid material, tube and profile. Designed in Germany and manufactured in state-of-the-art, flow line production lines at our assembly plants in Achern (in the northern Black Forest) and Schalkau (Thuringia). The easy operation and the well thought out material handling reduce the idle times and thus create the ideal conditions for highest efficiency.


Increase your productivity.

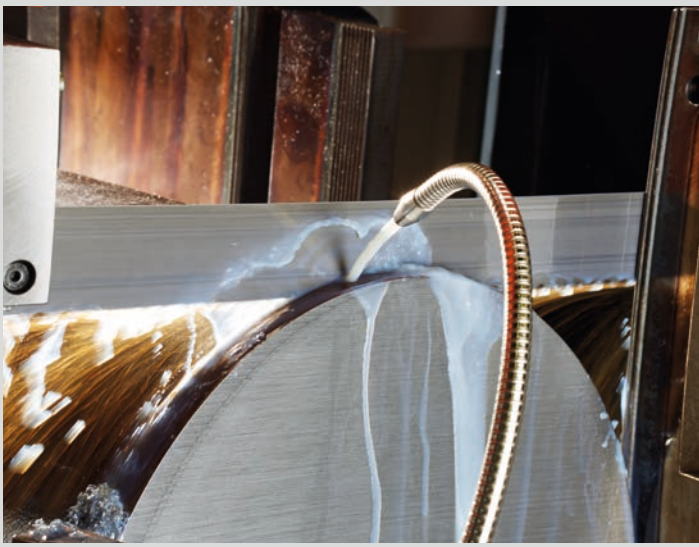
THE KASTO*win* OFFERS YOU SEVERAL TIME-SAVING ADVANTAGES:

- Customised to the specific application using a modular system design
- Quick motion using servo drive and ball screw spindle for the material feed and the linear guided saw frame
- Automatic band guide arm adjustment
- Quick and easy programming via colour touch screen
- *SmartControl* to ensure high bandsaw blade lifetimes
- Incremental feed for cutting batches of short pieces

PRODUCTIVE AND INNOVATIVE.

The new KASTO*win* models combine solid engineering with innovative control technology. The torsion-resistant upper part of the KASTO*win* offers higher vibration absorption than conventional cast iron constructions. And the heavy construction of the rest of the steel structure has a single objective: to ensure operation of the bandsaw blade is as quiet as possible for high precision.

Also in terms of security the KASTO*win* sets standards. Besides a very good accessibility, e.g. for blade change, the KASTO*win* complies even better than currently required with all safety standards.



KASTO*respond.*

Our new system KASTO*respond*, especially developed for this product series, offers a perfect machine adjustment for solid material, tubes and profiles of all types of material and is available for each size of machine. The system permanently records the forces on the tooling, without using additional and often fault-prone sensor systems and transforms the forces into the optimum digital feeding speed. KASTO*respond* recognizes early enough thick-walled and thin-walled material, ever-changing contact lengths for tubes and even rough areas in solid material and transforms into the correct feeding speed. The operator only has to program the relevant data as cut-off length, pieces and material to saw.
The rest is up to the KASTO*win*.

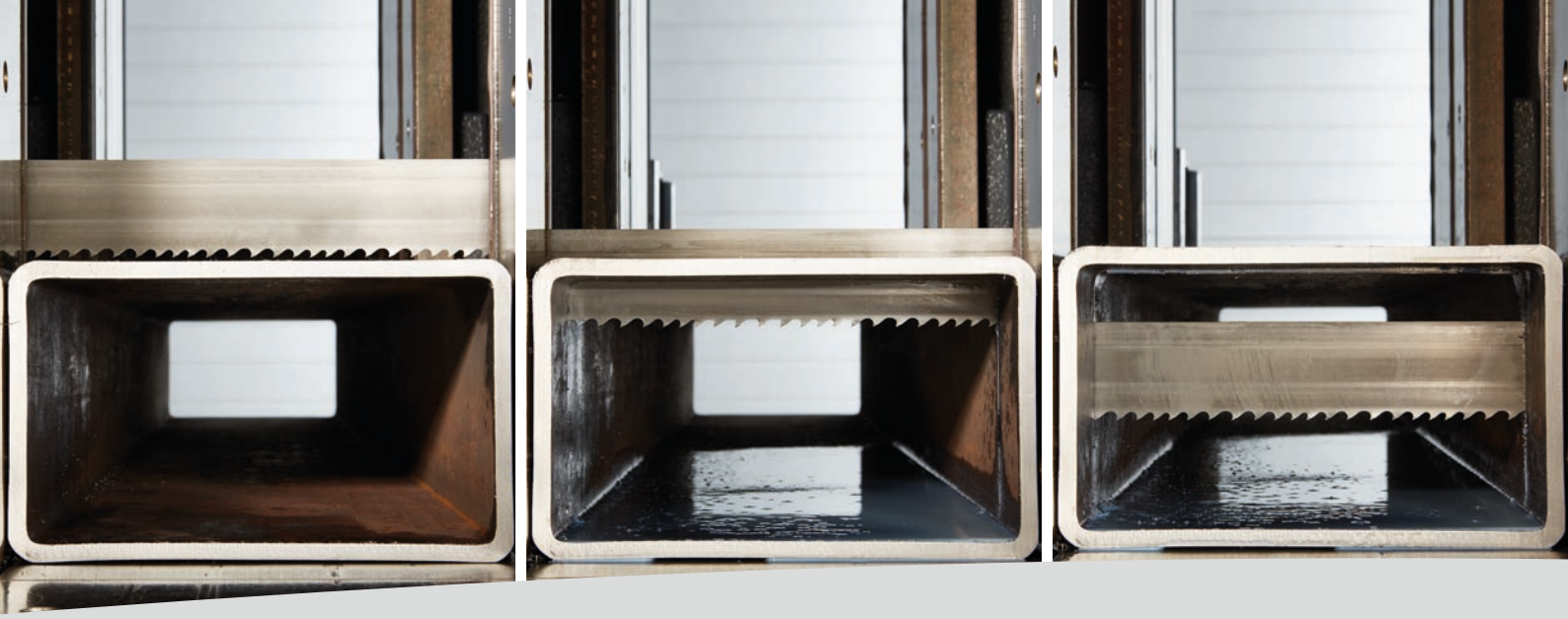
BENEFITS

Stock can have different sawing characteristics despite being nominally of the same material.
Various metals often cut in different ways, for example because they originate from different batches. Previously both were sawn with identical parameters. KASTO*respond* now detects whether a material is easier or more difficult to saw by monitoring the cutting force and varies the saw infeed until the target cutting force is reached.

The system also operates extremely impressively when sawing tubes, profiles and tube/profile bundles. In these applications, the conventional control system can take little action because the amount of material engaged by the blade and the cutting forces are continuously changing. The machine is therefore seldom in the optimum cutting range. This is where KASTO*respond* is highly effective.

Example of thin-walled square tube:
When the saw band reaches the surface of the square tube, a large number of teeth are in contact.
This results in the saw blade being quickly overloaded, and the spaces between the teeth are filled with material. KASTO*respond* reacts immediately, reducing the infeed within a fraction of a second so that the tool is slowly advanced with a moderate downfeed speed. As soon as the saw blade breaks through the surface and into the sides of the material, the cutting force is reduced and the controller increases the feed rate to the optimum value.

The system controls the cutting force continuously, so that the system is constantly at the permitted cutting force and does not exceed it. The saw downfeed optimises itself without intervention from the operator when this takes place. It leads to optimal productivity and also extends blade life.



KASTO*respond* can be activated or deactivated. In the deactivated condition, the controller calculates the saw downfeed with which the material is to be cut on the basis of the material technology values, the dimensions and the tool data.
Sawing is carried out with a constant feed for any given type of material, with the exception of when the downfeed is reduced as the blade enters and leaves the stock.

ENERGY EFFICIENCY

All saws in the KASTO*win* series have frequency-controlled motor drives in the energy efficiency class IE2, which make cutting speeds from 12 to 150 metres per minute possible, and they also have servo drives for the material feed and saw downfeed. The hydraulics are also trimmed for maximum energy efficiency.
This produces the following savings:

- Energy saving of hydraulics approx. 93 % *
- Total energy saving: approx. 28 % (depending on sawing application)*
- Energy cost saving per annum (single shift): approx. 200,– EUR (depending on sawing task application)*
- Use of state of the art servo technology
- High efficiency with compact dimensions
- Intelligent inverter technology for optimum drive control
- As they are used exclusively for clamping functions, the hydraulics are seldom actuated and are therefore extremely energy efficient.
- Because of the intermediate circuit coupling of the inverters, optimum use is made of synergy effects.

* Values relate to a comparable predecessor KASTO machine (KASTO*win A 4.6* – KASTO*twin A 4x5*)



SIMPLY BETTER:

- Effective use of material down to a 35 mm-long offcut (60 mm for KASTO*win A 3.3*)
- New layout: The drive unit and sensor are separate from the working area – ensuring reliable and trouble-free operation
- Key parameters are entered into the user-friendly *SmartControl* saw control unit. Simple input of sawing jobs by entering cutting lengths, quantities and material description.
- Controlled feed motion using ball screws
- Material clamping vices with side shift cylinder guarantee reliable automatic cutting
- Backlash-free linear guides in both pillars for smooth, precise running
- Powered chip removal brush with automatic self-adjustment function
- Hydraulically preloaded, integrated band guides
- Accessible material feed
- Preparation for infeed roller conveyors
- Quiet, energy-efficient, compact hydraulic power unit
- High cutting performance with impressive repeatability
- High energy efficiency
- Inuitive handling
- Good accessibility despite of compliance with the current safety standard

EXPERT PRECISION.

The newly developed KASTO*win* series bandsaw achieves a cutting accuracy of ± 0.1 mm/100 mm cutting length, with cutting speeds of up to 150 m/min.

Precise, backlash-free linear guides for the vice and saw feed as well as servo drive and ball screws for saw frame and material feed unit make this possible!

To maximise productivity, there is a significant improvement in the use of material through minimum offcut lengths of 35 mm (60 mm for KASTO*win A 3.3*) in automatic operation.

EFFICIENCY IS THE NORM.

The comprehensive standard equipment ensures improved efficiency. The high cutting performance combined with quick set-up and optimal material handling considerably reduce the costs per cut.



High-tech mass produced: more performance, more efficiency.

The new KASTO*win* bandsaw machine features impressive properties, such as extremely smooth running, high cutting performance and optimal blade life. It is due to the stable, vibration-optimised sawing unit in a high-quality, modern welded steel construction. Another bonus for increased stability is the double-sided guiding of the saw frame using modern linear guide systems.

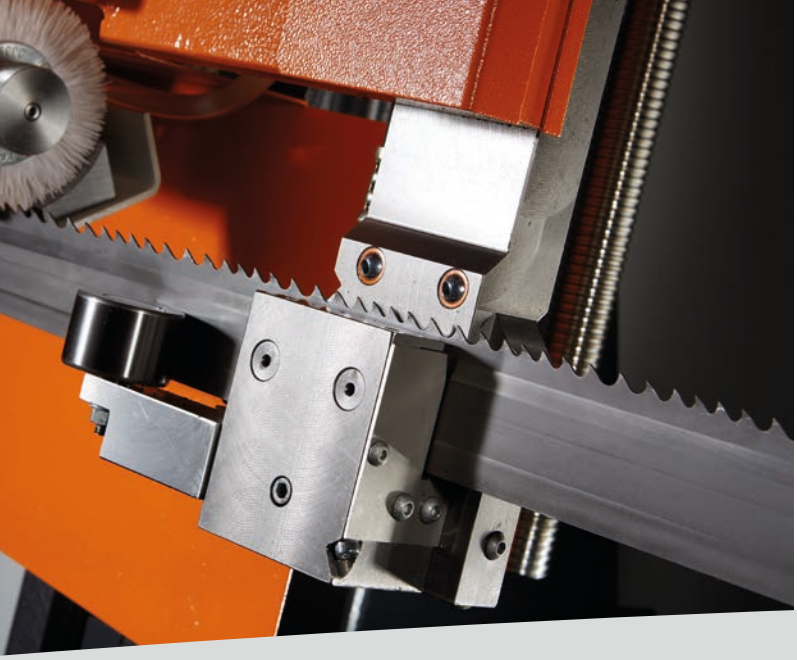
TECHNICAL DATA KASTO*win*		*A 3.3*	*A 4.6*	*A 5.6*	*A 8.6*	*A 10.6*
Cutting range	mm	330	460	560	860	1,060
Cutting range [H x W]	mm	330 x 350	460 x 460	560 x 560	860 x 860	1,060 x 1,060
Material feed length, single stroke	mm	500	500	500	500	500
Optional feed length, single stroke	mm	1,500	1,500	1,500	–	–
Multiple feed	mm	9,999	9,999	9,999	9,999	9,999
Minimum cut length	mm	10	10	10	10	10
Minimum sawing diameter	mm	10	10	10	20	20
Minimum remnant length in automatic operation	mm	60	35	35	35	35
Cutting speed, infinitely variable	m/min	12 – 150	12 – 150	12 – 150	12 – 90	12 – 90
Saw motor, frequency controlled	kW	4.0	4.0	5.5	5.5	7.5
Total connected load for standard machine	kW	6.0	6.0	8.0	10.0	12.0
Dimensions of bandsaw blade	mm	5,090 x 34 x 1.1	6,096 x 54 x 1.3	7,067 x 54 x 1.6	9,394 x 67 x 1.6	10,422 x 80 x 1.6
Optional dimensions of bandsaw blade	mm	5,090 x 41 x 1.3	6,096 x 41 x 1.3	7,067 x 54 x 1.3	9,394 x 80 x 1.6	10,422 x 67 x 1.6
Material support height	mm	700	700	700	700	700
Length	mm	1,350	1,650	1,650	2,605	2,605
Width	mm	2,330	2,900	3,300	4,270	4,750
Height	mm	1,850	2,030	2,280	3,200	3,590
Weight	kg	2,050	3,000	3,800	8,500	11,000



KASTO*win tube A 5.0*: The solution for pipe sawing

When cutting pipes in the conventional manner, 50 % of the chips accumulate on the pipe base. These chips cause problems for the tool. The sawing tool moves through the chips on the pipe base for approx. 15–20 % of the feed path and drags them along through the cutting gap. This inevitably causes microscopic nicks on the sensitive tooth tip and occasionally leads to complete tooth breakage. As we all know, the tool service life is low for this manner of cutting. The tool costs are, accordingly, high. The costs are also increased by the frequent downtimes created by band breakage or cutting deviations when working without an operator.

The solution: Compared to the other KASTO*win* models, the direction of movement of the saw feed is rotated through 180 degrees and sawing is performed upwards from the support surface. This ensures efficient, precise sawing that reduces wear on the cutting tools since they are not in contact with any chips. Downtimes, band breakage and cutting deviations are reduced drastically. In addition, the powered chip removal brush with automatic self-adjustment function ensures an excellent chip removal on the saw band.

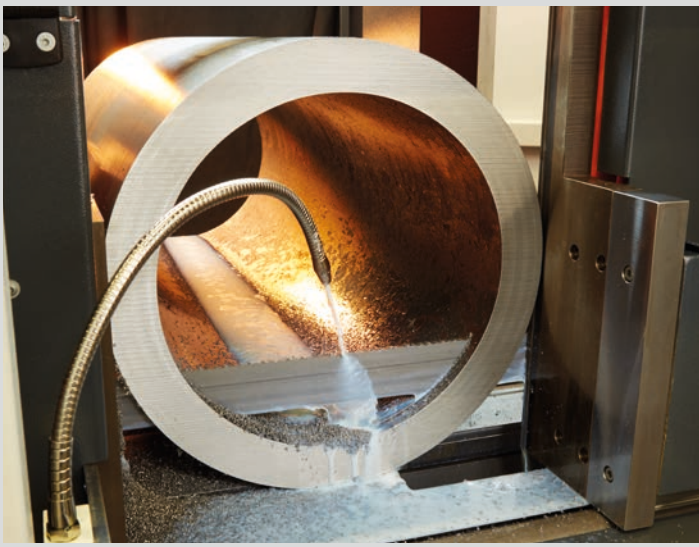




TECHNICAL DATA KASTO*win tube*		*A 5.0*
Cutting range	mm	530
Cutting range (H x W)	mm	530 x 530
Material feed length, individual feed	mm	500
Multiple feed	mm	9,999
Shortest cut-off length	mm	10
Smallest dimension to be cut	mm	25 x 25
Minimum remnant length in automatic operation	mm	35
Cutting speed infinitely variable	m/min	12 – 150
Saw motor, frequency controlled	kW	5,5
Total connected load Standard machine	kW	8,0
Saw blade dimensions	mm	7,067 x 54 x 1,6
Ideal saw blade dimensions	mm	7,067 x 54 x 1,3
Material support height	mm	700
Length x Width x Height	mm	1,650 x 3,300 x 2,280
Weight	kg	3,900

PRODUCTIVE AND INNOVATIVE.

The sawing process starts from the bottom.
The saw band moves through the chips practically without any obstructions. The entire process protects the tool and is absolutely predictable.
Chips are of almost no importance for the sensitive tool. This means hard-metal saw bands specially developed for cutting pipes can be used.





KASTO*win F 10.6* (with table): Reliable supply of heavy work pieces

To expand the range of possible applications and simplify the sometimes laborious task of handling large workpieces, KASTO has decided to extend this product family: The KASTOwin F 10.6, which has a cutting range of 1,000 x 1,060 millimetres, is now available with a moveable material support table. The saw is particularly suitable for steel manufacturers, steel traders and large-scale toolmakers. Using the table, it is possible to feed, for example, ingots, permanent moulds or materials with pre-forged geometries simply and reliably in a way that meets process requirements.





TECHNICAL DATA KASTO*win F* (with desk)		*10.6*
Cutting range	mm	1,000
Cutting range (H x W)	mm	1,060 x 1,000
Shortest cut-off length	mm	10
Smallest dimension to be cut	mm	50 x 50
Minimum remnant length in automatic operation	mm	100
Cutting speed infinitely variable	m/min	12 – 150
Saw motor, frequency controlled	kW	7,5
Total connected load Standard machine	kW	12,0
Saw blade dimensions	mm	10,422 x 80 x 1,6
Ideal saw blade dimensions	mm	10,422 x 67 x 1,6
Material support height	mm	780
Length x Width x Height	mm	7,240 x 4,750 x 3,590
Weight	kg	13,500
Table size (length x width)	mm	2,600 x 1,060
Moving range	mm	3,700
Carrying capacity	t	18

For efficient handling of heavy, large and / or bulky ingots

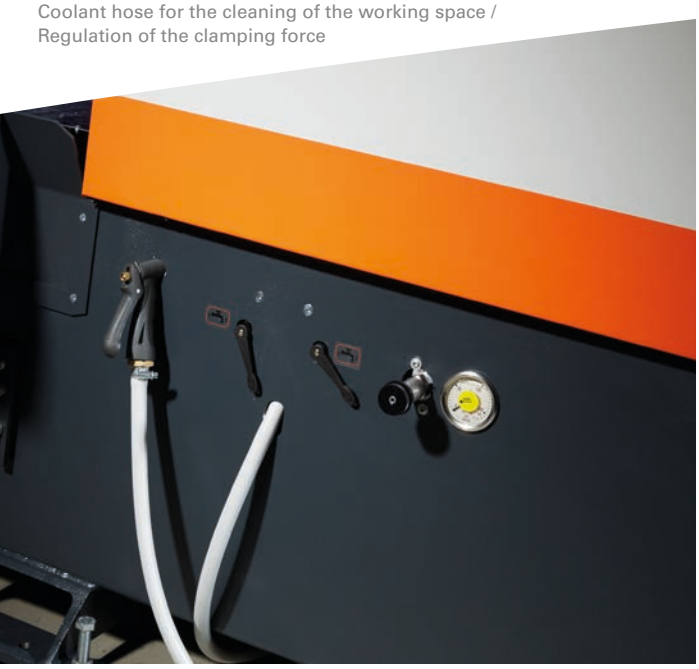
The support length of the table is 2,600 millimetres, while the table has a travel distance of 3,700 millimetres and a bearing capacity of up to 18 tonnes. It can travel at a speed of up to three metres per minute – and do so with exceptional positional accuracy. The table is moved in the longitudinal direction by two linear guides, each equipped with four lubricated linear roller bearings. Precision feed is achieved by means of a zero-play ball screw spindle, while a hydraulic horizontal vice mounted on the outfeed side of the saw band holds the workpiece in place.



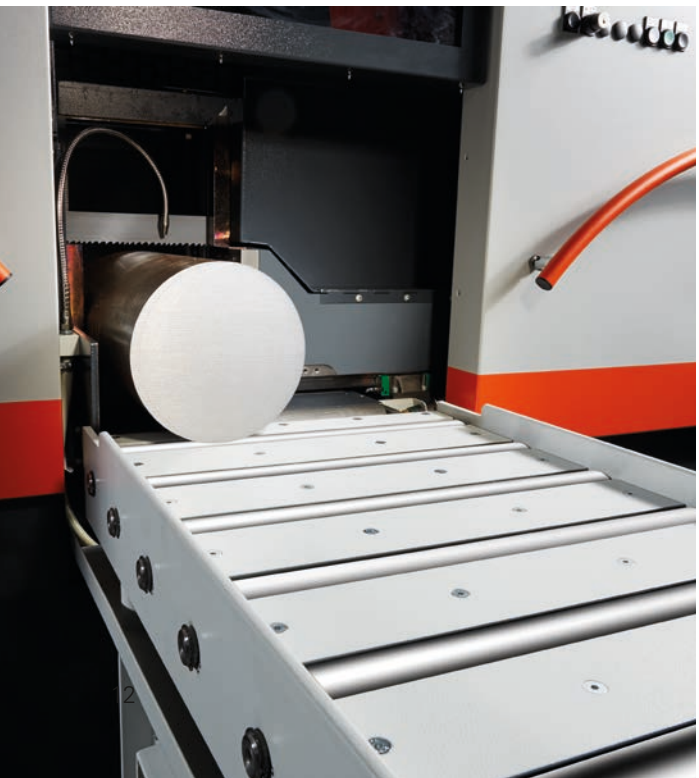
Comprehensive Program, Complete Accessories:

KASTO accessories adapt each machine perfectly to its respective task. For this KASTO offers reasonable accessory solutions reconciled to the requirements.

Coolant hose for the cleaning of the working space / Regulation of the clamping force



Infeed and outfeed roller conveyors with different lengths and versions



self-adjustment function, powered chip removal brush



Double roller conveyor for automatic change of material (win 3.3, 4.6, 5.6 and win tube 5.0)



KASTO accessories advance reliability and flexibility. For an effective application of the sawing machines several different concepts for roller conveyors are available. A broad accessories program allows customized installations.

Chip conveyor (in spiral version)



Outfeed table



Material feed with 1.500 mm feed length (3.3, 4.6 and 5.6)



Hydraulic bundle clamping device incl. opening and closing limit



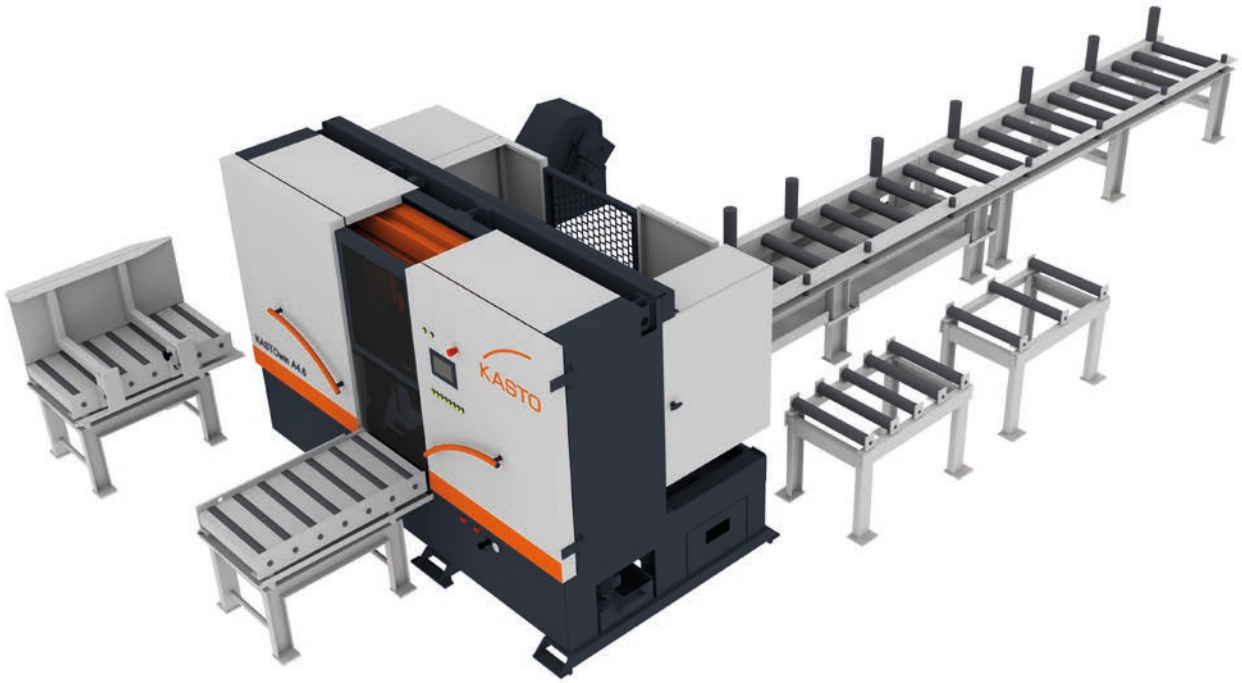
KASTO*win* a comprehensive programme and a complete range of accessories:

- *AdvancedControl* with larger display
- Initial 0 measurement for fully automatic positioning of the first cut and KASTO*sense* for fully automatic detection of the material height
- Safety package with monitoring of the saw band, coolant flow and saw band breakage
- Laser projection of the cutting line
- LED machine lights
- Minimum quantity lubrication system
- Coolant pipe to clean the working area
- Opening and closing limit switches (for KASTO*win 3.3 / 4.6 / 5.6 / tube 5.0*)
- Clamping force regulation
- Chip conveyor (spiral type)
- Additional space-saving chip conveyor discharge height 1,000 mm
- Performance package with high drive power
- Heating unit with special hydraulic oils and coolant heating
- Cooling units for hydraulics and control cabinet
- Mechanic holding down device (for KASTO*win A 3.3 / 4.6 / 5.6 / tube 5.0*)
- Hydraulic layer clamping equipment incl. closing limit switch (for KASTO*win A 3.3 / 4.6 / 5.6 / tube 5.0*)
- Hydraulic bundle clamping device incl. closinglimit switch
- Steel oil tray, painted
- Vertical roller
- Roller conveyors on infeed and outfeed sides in various lengths and types
- Three-coloured signal lamp

Variation KASTO*win F*:

- Material feed with 1,500 mm feed length (KASTO*win 3.3 / 4.6 / 5.6 / tube 5.0*)
- Driven machine roller track
- Inclined magazine (for KASTO*win 3.3*)
- Twin roller conveyor (for KASTO*win 3.3 / 4.6 / 5.6 / tube 5.0*)
- Chain magazines with and without dividers (for KASTO*win 4.6*)





The KASTO quickfinder for roller conveyors.

QUICKFINDER KASTO*win*		*A 3.3*	*A 4.6*	*tube A 5.0*	*A 5.6*	*A 8.6*	*A 10.6*
Load capacity	t/m	2.0	3.0	3.0	3.0	9.0	9.0
Short roller track 3 R		■	■	■	■		
Short roller track 5 R		■	■				
Infeed approx. 2 metres	wd						
	p					■	■
	cr					■	■
Infeed approx. 3 metres	wd	■	■	■	■		
	p	■	■	■	■	■	■
	cr	■	■	■	■	■	■
Infeed approx. 4 metres	wd		■	■	■		
	p		■	■	■	■	■
	cr		■	■	■	■	■
Infeed approx. 5 metres	wd	■	■	■	■		
	p	■	■	■	■	■	■
	cr	■	■	■	■	■	■
Extension approx. 2 metres freestanding	wd	■					
	p						
	cr						
Additional motor			■	■	■		
Outfeed approx. 1 metre	wd	■	■	■	■	■	■
	p						
	sgp	■	■	■	■	■	■
Outfeed approx. 2 metres	wd	■	■	■	■		
	p						
	sgp	■	■	■	■		
Side guide roller			■	■	■		
Adjustable side guide roller		■	■	■	■		

wd = without drive p = powered cr = coolant return sgp = side guide plates

The complete KASTO program: Economic sawing and storage of metal.

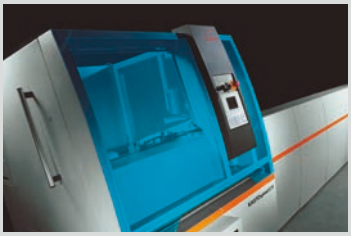
EXPERTISE RIGHT DOWN THE LINE.

For over 170 years, KASTO has been recognised for quality and innovation, and offers a complete range of metal cutting saws as well as storage and retrieval systems. Thanks to ongoing development of new technologies and constant optimisation of machine concepts, KASTO has achieved the status of market leader in sawing and storage of metals.

KASTO'S SAWING MACHINES.

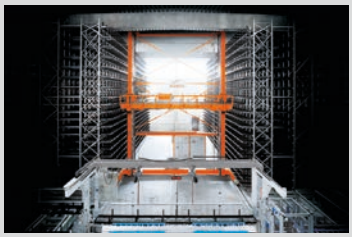






From the basic hacksaw to the high-performance automatic bandsaw capable of economically processing bar stock, blocks or plates of all grades, KASTO has the best solution for every challenge: Universal bandsaws and circular saws for light and medium duty applications, hacksaws employing the pushing-arching-cutting motion originated by KASTO, and production bandsaws and circular saws designed to cut medium to difficult materials.

KASTO'S STORAGE SYSTEMS.


Rapid access, optimum space utilization, clear and accurate view of stored inventory – KASTO storage systems' outstanding features. And there's more! Fully automatic sawing centers, cantilever bar and sheet metal storage systems or cassette storage and commissioning systems, combined sawing and storage systems with integrated inventory control computers. As a one-source supplier, KASTO delivers the complete system, both hardware and software.

KASTO'S SERVICE.





KASTO's comprehensive service program includes everything: from commissioning and training to maintenance support, service contracts, readily available spare parts and on-site service. KASTO's service incorporates individual consulting and immediate support with well-qualified teleservice. And of course, KASTO service is available worldwide.

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2881209 / 04.16 / pg / P&O / We reserve the right to make technical changes.