BEHRINGER

Circular Cold Saws and Systems for every application

Competence in Circular Cold Sawing Technology

EISELE

„Classics“ in any workshop

VMS – The Original

Manual + Semi-Automatic.
More than 250,000 machines sold world-wide are the basis for the VMS-series. The VMS should be part of every shop floor in the metal-working industry and maintenance.

- Easy to handle
- Suitable for any kind of steel
- Material clamping and feeding is possible by manual, pneumatic (PV) or hydraulic (VMS 400 H) operation
- Easy mitring with fixed stops
- Large-dimensioned gear unit with the unique EISELE rotation compensation feature for a long service-life of the saw blade
- Heavy machine base for vibration free cutting
- Integrated coolant system and swarf drawer

EISELE VMS 350

EISELE VMS 350 PV

The semi-automatic machines for single cuts and small series.

With automatic saw feed and quick-clamping device for the material (optional with clamping pressure regulation feature), the semi-automatic models offer more operating convenience as well as a fatigue-free working for the operator.
A quick change of the saw blade is easily possible thanks to the large safety hood. The hydro-pneumatic saw feed can be adjusted infinitely.

EISELE VMS 400 H

VMS 400 H
Hydraulically-operated semi-automatic saw

- Hydraulic quick-clamping devices with clamping pressure regulation feature for even higher cutting performance and increased saw blade life
- Fully hydraulic operated, continuously variable saw feed
- Easy stroke adjustment on saw unit
- Easy saw blade changing
- Combines high output with low space requirement (less than 1 m²)

Optional

- Gear box with 4 speeds, also suitable for difficult to cut materials
- Micro spray system

EISELE ELA-P

Electronic length measuring system with feeding gripper

The electronic length measuring system ELA-P is equipped with an automatic feeding gripper. With this system, it is also possible to use a one-bar automatic cycle as well as simple measuring procedures.

Measuring systems for our manual and semi-automatic VMS and PSU range saws

Increase the productivity of your Vertical Circular Cold Saw! For this purpose, BEHRINGER EISELE provides and extensive range of length measuring systems, from manual length stops to electronic measuring devices with digital pre-selection.

Manual measuring device
Manual measuring device for easy positioning of the material. Ideal as an add-on for manual and small semi-automatic VMS machines. Available as analogue version or optionally with digital display of the measuring length. Arm retraction with impact damping manually controlled, optionally pneumatic.

Electronic length measuring system MHK
Suitable for the VMS and PSU series, the MHK length measuring system is characterized by simple operation and precision. The length positioning is done by hand wheel, including digital display of the measuring length. Once in position, the measuring stop is pneumatically clamped to prevent displacement of the measuring length. Arm retraction with impact dampening by pneumatic cylinder.

Electronic length measuring system ELA
Is suitable for the VMS and PSU range. The positioning is done automatically by an electric motor. The measuring length is simply entered via the control unit. Arm retraction with impact dampening by pneumatic cylinder.

Electronic length measuring system with feed gripper ELA-P
The ELA-P is the combination of the electronic length stop ELA with an additional material clamping vice. This allows the ELA-P to be used as a length measuring unit or as a full-value feeding gripper. The positioning is done by electric motor. The measuring length or cutting length and number of pieces are programmed in the control unit.

VMS-Automatic Saw

Easy operating features and a robust design for precise cuts make this saw a must-have when it comes to serial cutting of medium or large lot sizes.

- Material feed with flat guide and ball screw spindle for high-precision positioning
- Large-dimensioned cover hoods meet highest safety standards
- Easy to operate in automatic and manual operating mode
- Can be combined with roller conveyors
- 4 speeds as standard for machining almost any steel quality
- Both coolant and micro spray system standard

EISELE VMS 370 A

Technical Data VMS

Model			VMS 350	VMS 350 PV	VMS 370	VMS 370 PV	VMS 400 H	VMS 370 A	VMS 400 A
Saw feed			manual	hydro-pneumatic	manual	hydro-pneumatic	hydraulic	pneumatic	hydraulic
Material clamping			manual	pneumatic	manual	pneumatic	hydraulic	pneumatic	hydraulic
Cutting range									
Flat	**90°**	[mm]	170 x 100	170 x 100	200 x 100	200 x 100	200 x 120	200 x 100	200 x 120
Flat	**45°**	[mm]	120 x 100	120 x 100	140 x 100	140 x 100	140 x 120	140 x 100	140 x 120
Flat	**30°**	[mm]	85 x 100[1)]	85 x 100[1)]	100 x 100[1)]	100 x 100[1)]	100 x 100[1)]	100 x 100[1)]	100 x 100[1)]
Square	**90°**	[mm]	100	100	120[2)]	120[2)]	120	120	120
Square	**45°**	[mm]	95	95	100	100	120	100	120
Square	**30°**	[mm]	85[1)]	85[1)]	90[1)]	90[1)]	100[1)]	90[1)]	100[1)]
Round	**90°**	[mm]	120	120	130	130	140	130	140
Round	**45°**	[mm]	120	120	130	130	140	130	140
Round	**30°**	[mm]	100[1)]	100[1)]	105[1)]	105[1)]	110[1)]	105[1)]	110[1)]
Saw blade diameter		[mm]	350	350	370	370	400	370	400
Drive power		[kW]	1.4 / 1.9	1.4 / 1.9	2.0 / 2.6	2.0 / 2.6	2.0 / 2.6	2.0 / 2.6	2.0 / 2.6
RPM standard		[min^{-1}]	17 / 34 - 34 / 68	17 / 34 - 34 / 68	17 / 34 - 34 / 68	17 / 34 - 34 / 68	17 / 34 - 34 / 68	8 / 16 / 32 / 64	8 / 16 / 32 / 64
RPM optional		[min^{-1}]	10 / 20 / 40 / 80	10 / 20 / 40 / 80	8 / 16 / 32 / 64	8 / 16 / 32 / 64	8 / 16 / 32 / 64		
Weight approx.		[kg]	360	330	460	490	620	600	740

[1)] Only to the right side
[2)] When using additional jaw

Mitre Circular Saws PSU

Precise saw cuts and fast set-up

PSU 450 H

Universal Mitre Cutting Circular Saw

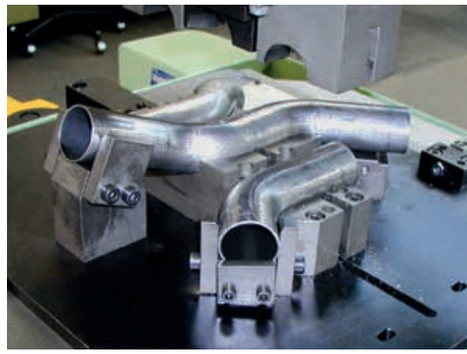
- Outstanding cutting performance and long saw blade life due to:
  - the robust and sturdy machine base which helps reduce vibration and noise during the sawing operation
  - worm gear box with the unique rotation compensation feature developed by Eisele
- Easy mitring with fixed stops at 45° and 90°
- Hydraulic clamping device
- Standard clamping pressure regulation for cutting thin-walled profiles
- Saw down feed continuously adjustable via flow control valve
- Can be combined with different roller conveyors and length measuring systems
- Micro-spray system

EISELE PSU 450 H

PSU 450 GS

Production High-Performance Circular Saw, especially designed for cutting bent tubes.

- Allows for individual clamping concepts thanks to standardized holding fixtures
- Upper and lower saw stroke reversing points can be adjusted
- Extremely sturdy clamping bridge ensures reliable work-piece clamping
- Long stroke cylinder with stroke length 160 mm
- Variable clamping pressure regulation
- Micro-spraying system
- Two-hand safety control
- Piece counter



EISELE PSU 450 GS

Technical Data PSU

Model			PSU 450 H	PSU 450 GS	BTS 460 NC
Cutting range					
Flat	**90°**	[mm]	240 x 70 / 390 x 30[1]		
Flat	**45°**	[mm]	170 x 70 / 280 x 30[1]		
Flat	**30°**	[mm]	120 x 70 / 190 x 30[1]		
Square	**90°**	[mm]	140		
Square	**45°**	[mm]	125		
Square	**30°**	[mm]	100		
Round	**90°**	[mm]	150	150[2]	165[2]
Round	**45°**	[mm]	145		
Round	**30°**	[mm]	120		
Saw blade diameter		[mm]	450	450	350 - 460
Drive power		[kW]	3.0 / 3.6	3.0 / 3.6	11
RPM standard		[min^{-1}]	6 / 12 / 24 / 48	6 / 12 / 24 / 48	10 - 280
RPM optional		[min^{-1}]	12 / 24 / 48 / 96	12 / 24 / 48 / 96	
Weight approx.		[kg]	1,350	1,200	2,500

[1] With adjustable material stop
[2] Saw blade height from material table; cutting range depending on holding fixture and material position

EISELE BTS 460 NC

Special Application: Sawing Bent Tubes

- Specially designed for sawing curved tubes such as mufflers, hydro forming or exhaust pipes
- Flat material table enables individual workpiece fixtures to be accommodated
- The entry and exit point of the saw to the material can be freely adjusted for the use of various fixtures

BTS 460 NC

- Servo-motorized axes
- HCS saw unit allows use of carbide saw blades
- Identification of the fixture via RFID possible

Automatic Mitre Circular Saws PSU

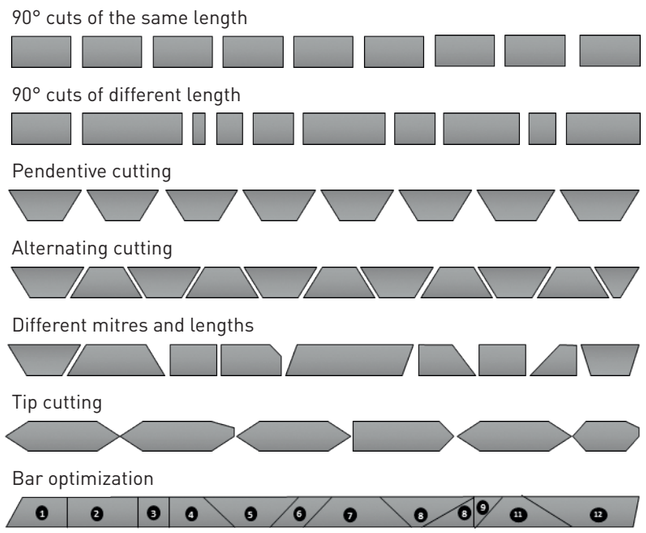
Highest system throughput for industry and steel trade

PSU 450 A

The flexible PC-controlled High-Performance Circular Sawing Centre for utmost cost-effective production of small and large quantity.

- Servo-driven axis for precise material length positioning, mitre angle adjustment and outfeed gripper (option)
- The disposal device clamps the piece during the cut and takes the cut piece out of the machine in axial direction to freely programmable positions
- High-performance and load independent positioning drives help reduce cycle times
- Servo-technology of the saw drive and automatic cutting feed control by means of a proportional valve as a standard
- Short rest piece length

Possible cutting sequences



Optional with servo outfeed gripper

- Disposal device with servo motor driven axis
- Sorting of the cuts on freely programmable positions
- Outfeed gripper is used to position the material. Multiple mitre cuts on front and end are possible.
- Gusset pusher to remove small gussets that cannot be taken by the outfeed gripper
- Material savings by positioning with the outfeed gripper
- For universal applications, the machine can be equipped with flat magazine, bundle loading magazine or bar loading magazine on the infeed side. For disposal and sorting of the cuts on the outfeed side, inclined roller conveyors, disposal belts and hinge chain conveyors with sorting equipment are available.

EISELE PSU 450 A

Technical Data PSU

Model			PSU 450 M	PSU 450 A
Saw feed			hydraulic	hydraulic
Material clamping			hydraulic	hydraulic
Cutting range				
Flat	**90°**	[mm]	240 x 70	240 x 70
Flat	**45°**	[mm]	180 x 50	170 x 50
Flat	**30°**	[mm]	130 x 30	130 x 30
Square	**90°**	[mm]	10 - 140	10 - 140
Square	**45°**	[mm]	10 - 125	10 - 125
Square	**30°**	[mm]	10 - 100	10 - 100
Round	**90°**	[mm]	10 - 150	10 - 150
Round	**45°**	[mm]	10 - 145	10 - 145
Round	**30°**	[mm]	10 - 112	10 - 112
Saw blade diameter		[mm]	450	450
Drive power		[kW]	3.0 / 3.6	7.1
RPM standard		[min^{-1}]	6 / 12 / 24 / 48	1 - 70
RPM optional		[min^{-1}]	12 / 24 / 48 / 96	
Feeding length single stroke		[mm]	1,500	1,500
Feeding grippper axis speed		[mm/s]	667	667
Weight approx.		[kg]	2,300	3,150

EISELE PSU 450 M

PSU 450 M single bar automatic machine:
The solid machine base ensures a vibration-dampened and low-noise sawing process. This achieves excellent cutting performance as well as high saw blade life.

Mass Cutting Professionals VA-L

Aggressive and precise.

Exceptional Performance

Designed specifically for aluminium and NF metals, the VA-L fully automatic straight cutting saw series has totally redefined the standard when it comes to volume sawing of solid material, pipes and profiles with complex cross sections.

Their consistently high yield makes them a valued mainstay for renowned aluminium processing firms and producers the world over.

Key features of the series are the robust design, state-of-the-art drive technology used in the feed axis and main drive system, and the extreme rigidity of the ultra-precise saw spindle bearing.

The result: an optimized, low-vibration cutting process providing extreme cutting output, excellent surface quality and maximum availability.

The servo motor driven feeding unit allows for consistently high-precision cutting lengths and rapid positioning of the material. The standard lift and shift device helps ensure gentle material handling and the automatic widening of kerf channel increases blade life and eliminates scratch in on the cut surface during blade retraction.

EISELE VA-L 560 NC3

Technical Data VA-L

Model			VA-L 500 E	VA-L 560 NC3	VA-L 560 NC3 XL
Saw feed			servo drive	servo drive	servo drive
Material clamping			pneumatic	servo drive	servo drive
Cutting range					
Flat	90°	[mm]	10 x 10 - 235 x 135	10 x 10 - 290 x 165	10 x 10 - 325 x 180
Square	90°	[mm]	10 - 155	10 - 165	10 - 200
Round	90°	[mm]	10 - 175	10 - 200	10 - 240
Saw blade diameter		[mm]	500	560	620
Drive power		[kW]	18	26	26
RPM		[min^{-1}]	800 - 3,400	800 - 3,400	800 - 3,400
Feeding length single stroke		[mm]	1,000	1,000	1,000
Feeding gripper axis speed		[mm/s]	1,000	2,000	2,000
Weight approx.		[kg]	2,200	2,400	2,400

Mass Cutting Professionals HCS

HCS 90 E /150 E
100 MF /130 MF
160 MF /190 MF

The steel-cutting high-performance automatic circular cold saws of the HCS series offer flexible solutions for the most varied sawing requirements from the very basic model up to the complex system with Multi-Fluid package. No matter which type – each HCS saw stands for top cutting performance and premium quality. Each model pays off quickly in multi-shift operation and increases profitability many times over when it comes to cutting solid material or thick-walled profiles. The basis of this outstanding performance is the unique construction with perfectly tuned components. They are all easily accessible to reduce downtimes.

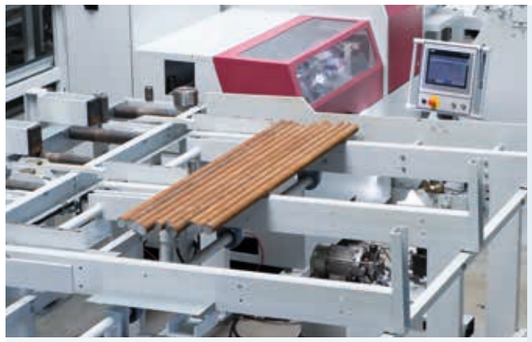
EISELE HCS 160 MF

Technical Data HCS

Model			HCS 90 E	HCS 150 E	HCS 100 MF	HCS 130 MF	HCS 160 MF	HCS 190 MF
Saw feed			servo drive	servo drive	servo drive	servo drive	servo drive	servo drive
Saw drive type			frequency controlled	frequency controlled	servo drive	servo drive	servo drive	servo drive
Material clamping			hydraulic	hydraulic	hydraulic	hydraulic	hydraulic	hydraulic
Cutting range								
Square	90°	[mm]	10 - 75	10 - 130	20 - 90	20 - 110	20 - 140	40 - 165
Round	90°	[mm]	10 - 90	10 - 152.4	20 - 105	20 - 130	20 - 160	40 - 190
Saw blade diameter		[mm]	250 / 285 / 315	360 / 420 / 460	285 / 315 / 360	315 / 360 / 420	360 / 420 / 460 / 480	360 / 420 / 460 / 480 / 560
Drive power		[kW]	8	15	22.5	22.5	22.5	28
RPM		[min^{-1}]	20 - 250	20 - 250	20 - 250	20 - 250	20 - 250	20 - 220
Feeding length single stroke		[mm]	1,000	1,000	1,000	1,000	1,000	1,000
Feeding gripper axis speed		[mm/s]	1,250	1,250	1,730	1,730	1,730	1,730
Weight approx.		[kg]	3,200	3,200	3,900	3,900	4,400	4,700

Loading Magazines

The demand for even shorter cycle times puts high demands on the material handling process. BEHRINGER EISELE provides the solutions – in a systematic way.



Bar loading magazine SM

- Automatic loading of round bars
- Robust design, virtually maintenance-free
- Quick and simple loading process
- Optional: hydraulic barrier

Bundle loading magazine BM

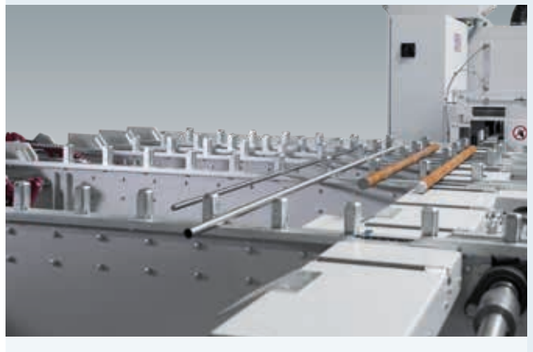
- Large loading capacity
- Simple handling
- Automatic separation of bar bundles
- Suitable for round material

Universal bar loading magazine USM

- Automatic loading of round material
- Loading of rectangular profiles is possible as an option
- Robust construction, virtually maintenance-free
- Quick and simple loading process

Belt bundle loading magazine GUSM

- Large loading capacity
- Simple handling
- Automatic separation of bar bundles
- Suitable for round material



Flat magazine FM

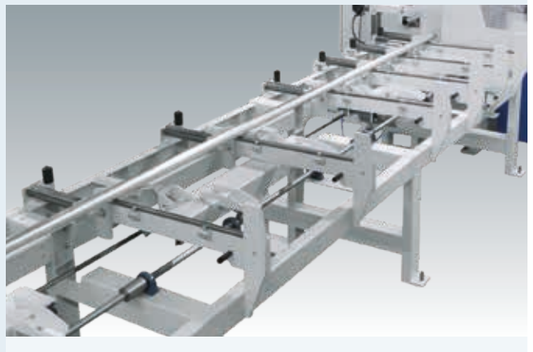
- Handling of almost every profile shape
- Flexible loading system for various materials
- Handling of rest pieces is possible on the infeed side – flat magazine with active back-storing feature (option)
- Active pre-storage area (option)

V-loading magazine VM

- Suitable for round and square material
- Automatic separation of bar bundles
- Heavy design
- Large loading capacity

Chain loading magazine KLM suitable for VA-L

- Large loading capacity
- Simple handling
- Automatic feed of wide-ranging different profile shapes
- Designed to ensure gentle handling and prevent damage to the material surface



Bar loading magazine SM 90 suitable for HCS 90 E

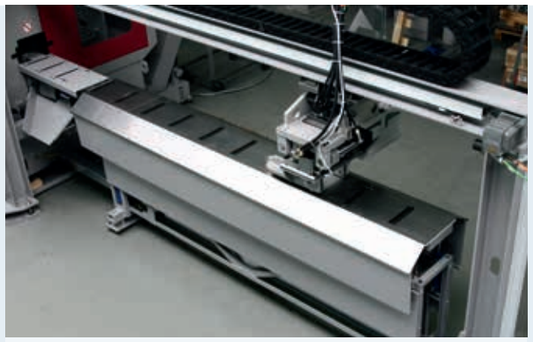
- Automatic loading of round material up to 90 mm diameter
- Quick and easy loading

Disposal Devices

If you talk about the sawing process, you must also think about the disposal process. Whether merely evacuating the cut pieces or feeding them to subsequent processing stations – we can handle your cut pieces and guide them to wherever you like.

Disposal gripper HCS

- Removes the pieces from the cutting area in a smooth and reliable way
- Transfer to roller conveyor or belt conveyor
- Pneumatic (E) or servo motor (MF) driven

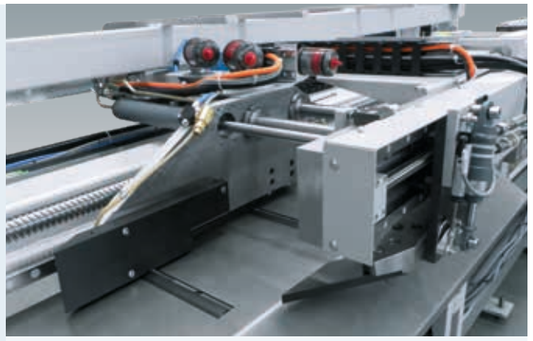


Outfeed portal with tiltable roller conveyor HCS

- Reliable removal of the cut pieces from the cutting area
- Disposal and transport of cut pieces to defined positions with servo drive
- Collection in boxes on both sides

Powered roller conveyor with pusher

- Smooth evacuation and transport of cut pieces (medium and long)
- The pieces are pushed into boxes or on stillage legs from where they can be removed easily



Outfeed gripper PSU

- Hydraulic or optionally servo driven
- Process-safe removal of the trim cuts and parts from the cutting area
- Transfer to roller conveyor, hinge belt conveyor or tiltable roller conveyor

Hinge belt conveyor with pusher HCS

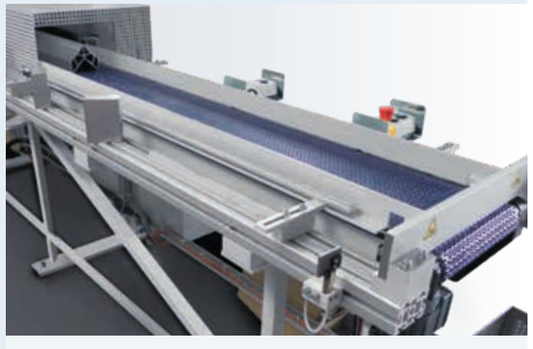
- Easy removal of trim cuts and parts of any length
- The pieces are pushed into boxes or on stillage legs from where they can be removed easily
- Several storage positions on the outfeed side possible

Verification scale

- The scale allows for a quick weight check
- Functionality: Reaching a customer's specified limit, the saw control will be informed via interface. The saw will then adjust the length of the cut parts accordingly.

Disposal belt VA-L

- With one or several pusher units
- Optionally make use of the opportunity to connect to the following working steps:
  - Brush deburring
  - Marking
  - Stamping



Cross disposal belt VA-L

- Separating the good parts, trim cuts and remnants via sorting switch
- With different operating modes:
  - Collation
  - Bulk material
  - Buffer

BEHRINGER

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The BEHRINGER EISELE Product Range

- Vertical circular cold saws VMS
- Up stroking mitre circular cold saws PSU
- Fully-automatic Aluminum-cutting circular cold saw VA-L
- Fully-automatic steel-cutting circular cold saw HCS
- Loading magazines, disposal devices and material handling systems
- Complete sawing systems – overall concepts
- Integration into existing processes

EISELE

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