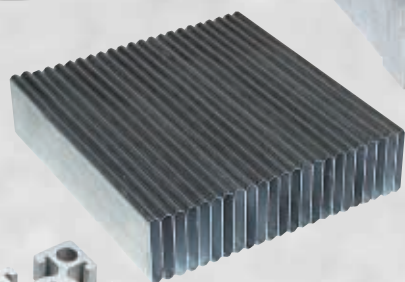
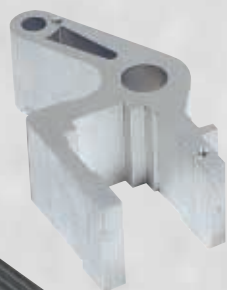


**BEHRINGER**



Automatic Circular Sawing Systems for cutting aluminum and non-ferrous metals

**VA-L 350 NC 1**

**VA-L 560 NC 1**



# VA-L 350 NC 1

# VA-L 560 NC 1

High-performance Automatic Circular Sawing Systems for cutting aluminum and non-ferrous metals



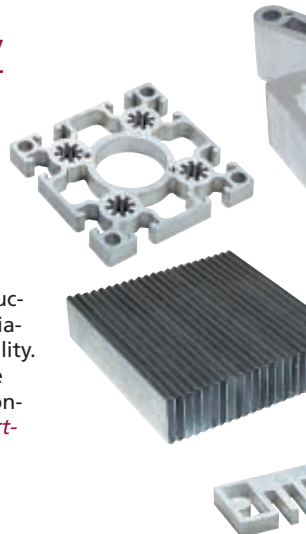
Quality

## VA-L 350 NC 1 / 560 NC 1 - The sawing concept for highest performances, efficiency and flexibility

*The straight-cut automatic sawing machines with NC controls are especially designed for mass production of aluminum and non-ferrous metal sections.*

Their most striking characteristics are a very robust construction, highly-modern drive technology both for the feed axis and the main drive unit as well as the very rigid ballscrew construction providing highest accuracy and excellent cutting results requiring a minimum of effort.

Our modular concept for the base construction of the machine combined with a variable main drive unit offers extreme versatility. Many individual machine concepts can be provided by us, meeting any standards concerning *flexibility, quality, state-of-the-art technology and economical* use. For cutting non-ferrous metals, HSS or Carbide saw blades are available.





## Control Unit

The highly modern control systems are easy to operate and offer a wide range of possibilities. The software program enables an interactive operation of the control system. All relevant sawing data such as profile parameters of the sections to saw, technology data as well as an error log book are standard.

Telemaintenance and trouble-shooting are made via a service modem module.

The feed length (cutting length) can be preset to a maximum length of 32.8'.



## Clamping Unit and Blade Separation Feature

The clamping unit is designed as a two-point clamping device holding the sections on both the Input and Output side of the sawblade. This ensures nearly burr-free cuts. On the Input Side of the saw blade there is an additional hold-down-device for clamping the material vertically. The blade separation feature guarantees a free return of the sawblade. This results in nearly polishable finishes.

- ▷ High cutting quality, therefore
- ▷ Minimum reworking and in many cases eliminating rework in its entirety
- ▷ Resulting in increased efficiency

## Material Feed Unit



Equipped with a ballscrew and a floating bearing, the NC-axis provides a high degree of accuracy. The floating bearing of the NC-axis can make up for unfavorable inaccuracies in the straightness of the sections to be sawn.

The maximum feed rate and reversing speed is 31.5" / second.



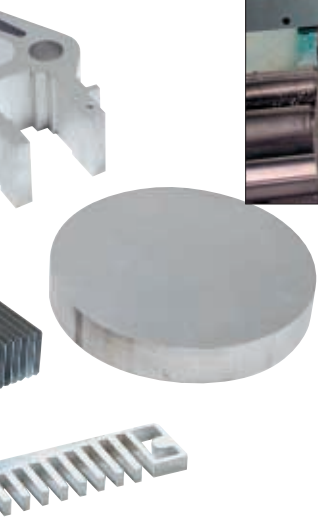
## Use of Form Jaws

Some special shaped extruded sections are hard to clamp properly because of their complicated profile shape. In such cases, Form Jaws can be fabricated to suit the respective profile. Here the standard reduced clamping feature for Input/Output and Feed Unit is very useful in preventing any deformation of the sections, particularly of the thin-walled ones.



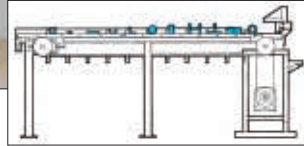
## Chip Exhaust Unit

To ensure a trouble-free operation, a high-performance Chip Exhaust System is necessary. The VA-L sawing machine is supplied with exhaust pipes to connect with a Chip Exhaust Unit which can be added to suit the user's application (optional).





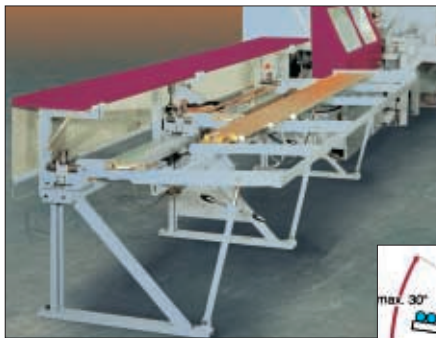
The KLM Flat Magazine can be used for the automatic feeding of a variety of profiles.



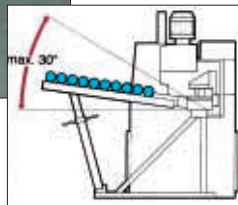
### A variety of loading magazines:

Flat magazines, bundle loading magazines and inclined magazines are available. Loading can be accomplished from either the front side or the rear side, depending on the respective needs. Special devices for the handling of material, for example a device for putting rectangular sections upright etc. can be provided on request.

Infeed



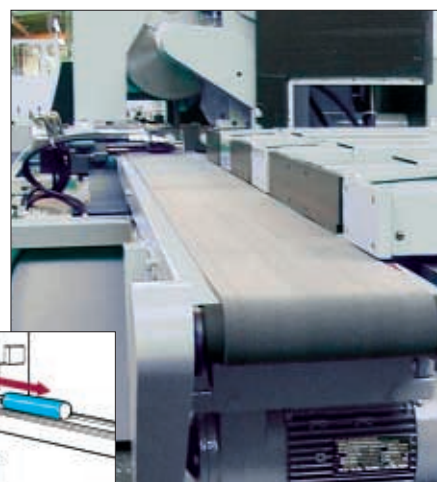
The Inclined Magazine can be used for the automatic loading of round, square or rectangular shaped materials.



The Bundle Loading Magazine is designed for the automatic loading of round, square or rectangular shaped material with an additional separation device for thin-walled tubing.

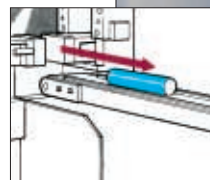


### Sorting Systems

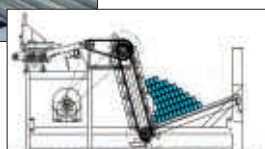


A conveyor belt with one or several unloading stations or buffer stations depending on the application.

The pieces can be transferred to other units such a de-burring brushes, furnaces, robots, etc. or to units for the marking, engraving or stamping of finished pieces.



Lift Loading Magazines for the automatic loading of larger dimensioned tubes, square or rectangular shaped material.



Discharge

# Standard



## Standard Package for VA-L 350 NC 1

Sawblade diameter 13.7"  
 Cutting Speeds - 6,100 / 12,200 SFM  
 Pole changing three phase motor 8.7 / 10.7 hp  
 Two-point clamping system  
 Saw feed with electronic positioning control  
 Material feeding by means of servo motor and ballscrew  
 Machine functions are controlled pneumatically  
 The sawblade stroke is hydro-pneumatic  
 PLC Controls  
 Spray Mist System  
 Blade separation feature  
 Reduced material clamping pressure feature

## Standard Package for VA-L 350 NC 1 (Hydraulic Version)

Frequency-controlled motor  
 20.1 HP at 15,220 FPM  
 Cutting Speeds – 2,870 to 15,060 SFM  
 Electronic deceleration brake Cutting-pressure controlled by sawblade  
 on/off Switch on the PLC-control

## Optional accessories for special applications are:

- ◊ By means of the frequency-controlled main drive unit, the cutting speed can be tuned with the sawing process, thus making it possible to cut high-strength eutectic materials
- ◊ Light sensors can automatically detect defects or imperfections on the sections to be sawn so that the defects can be cut and sorted
- ◊ Remnant length reduction to < 2.4"
- ◊ Special measuring devices for producing pieces all of the same size

## Standard Package for VA-L 560 NC 1

Sawblade diameter 22"  
 Cutting Speeds – 6,335 / 12,670 SFM  
 Pole changing three-phase motor – 8.7 / 10.7 HP  
 Two-point clamping system  
 Saw feed with electronic positioning control  
 Material feeding by means of servo motor and ballscrew  
 Machine functions are controlled pneumatically  
 The sawblade stroke is hydro-pneumatic  
 PLC Controls  
 Spray Mist System  
 Blade separation feature  
 Reduced material clamping pressure feature

## Standard Package for VA-L 560 NC 1 (Hydraulic Version)

Frequency-controlled motor  
 32.4 HP at 15,220 FPM  
 Cutting Speeds – 4,610 to 18,440 SFM  
 Electronic deceleration brake  
 Cutting-pressure controlled by sawblade  
 on/off Switch on the PLC-control

# Technic

## TECHNICAL DATA VA-L 350 NC1 / 560 NC 1

MODEL		VA-L 350 NC 1	VA-L 350 NC 1	VA-L 560 NC 1	VA-L 560 NC 1
		Hydro-Pneumatic	Hydraulic	Hydro-Pneumatic	Hydraulic
Cutting Range		90°	90°	90°	90°
Standard Sawblade Ø	Inches	13.7	13.7	22	22
●	Inches	4.5	4.5	6.6	6.6
○	Inches	4.5	4.5	7.8	7.8
□	Inches	7.8 x 2.7	7.8 x 2.7	11.8 x 5.9	11.8 x 5.9
□	Inches	4.1	4.1	6.6	6.6
Saw Motor Power	HP	8.7 / 10.7		8.7 / 10.7	
Frequency Motor Power	HP	20.1		32.4	
Optional Power	HP			17.4 / 22.8	
Cutting Speeds	SFM	6,100 / 12,200	2,870 - 15,060	6,335 / 12,670	4,610 - 18,440
Sawblade Stroke		Hydro-pneumatic	Hydraulic	Hydro-pneumatic	Hydraulic
Single Stroke Feed Unit	Inches	.4 – 38.1	.4 – 38.1	.4 – 38.1	.4 – 38.1
Multiple Stroke-max.	Inches	393.6	393.6	393.6	393.6
Feed Unit Speed –Forward-Reverse	in./sec.	31.5	31.5	31.5	31.5
Blade Separation		Left & Right	Left & Right	Left & Right	Left & Right
Dimensions	Inches	76 x 101 x 108	76 x 105 x 108	87 x 97 x 108	87 x 105 x 108
Weight	Pounds	2,750	3,410	3,960	4,620

# PSU 450 L

## High Performance Circular Cold Saw PSU 450 L

PSU 450 L is a Semi-automatic Circular Sawing machine for both straight cuts and miter cuts. It has an extremely large cutting range and is especially suitable for cutting aluminum and non-ferrous metals. It is equipped with a large protection hood for safety and effective noise reduction. Connecting branches are supplied for linking a heavy-duty chip exhaust unit.



PSU 450 L

# Program

## The Eisele Program

Semi-Automatic Up-stroking Circular Cold Saws for straight and miter cuts with their modular construction that can be made into 3 axes CNC Controlled Sawing Centers. There are straight-cut automatic sawing systems for cutting nearly all grades of steel as well as straight-cut automatic sawing systems for cutting aluminum and other non-ferrous metals. Special sawing systems and tailored solutions can be designed according to the customer's application.

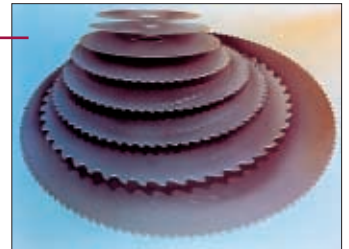


PSU 450 CNC 2

# Accessories

## Accessories and Spare Parts

Eisele has a large variety of circular sawblades of the highest quality and with specially-treated surface. The sawblades are designed especially for the use on our high-performance circular sawing machines.



**Behringer Saws, Inc.**

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Telefax: (610) 286-9699  
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E-Mail: [sawing@ptdprolog.net](mailto:sawing@ptdprolog.net)  
<http://www.behringersaws.com>

