

# PIPE CUTTING AND BEVELLING BROCHURE

[www.bevelmachines.com](http://www.bevelmachines.com)



solid, sharp and state-of-the-art



## Tailor-made heavyweights for perfect fusion edges

**A heavy-duty machine that creates perfect welding preps quickly and with great precision. That is the Beaver S, the next generation of beveling machines from Copier Bevelmachines. Every part of the Beaver S is fully geared towards reliability and high-quality beveling. The Beaver S is available in four models, for pipes with diameters of up to 8, 16, 24 or 30 inches.**

Since 1997 Copier put all the knowledge and experience of end users in manufacturing high quality, durable industrial machines for pipe bevelling.

The Beaver S-serie is an example of a machine that has been developed over the years to get the best possible quality machine for the end users. Our machine is for pipe bevelling the fastest, most accurate and most durable solution on the market.

Every machining step is exactly the same; a welding robot will not find any irregularities. Thanks to a smart prism clamp, the Beaver S doesn't have changeover times. Together with optimum ease-of-use, this means ultra-short machining times and maximum efficiency.

### **Highly precise**

#### *Heavy-duty guides*

The solid machine construction and the heavy-duty guides of the Beaver S guarantee ultra-stable and accurate cutting. The Beaver S creates perfectly formed,

identical welding seams, allowing the (automatic) welding process to run smoothly.

### **Fast prism clamp**

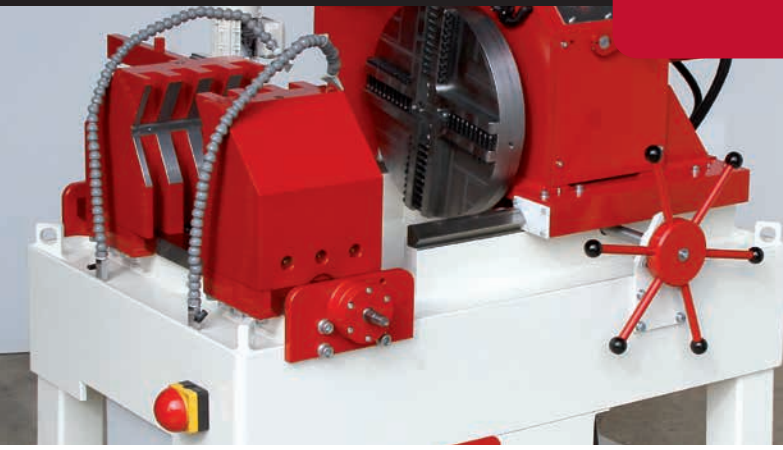
#### *No replaceable parts*

To clamp the pipes, the Beaver S uses a sophisticated prism clamp that holds all of the pipe sizes within the range of the machine firmly in place. Together with a unique exchangeable disc holder set, this makes changeover time negligible. And the tool holder? You can move it quickly and simply with a hand wheel (types 8-30) or with an electrical drive.

### **Many options**

#### *Various diameters and welding types*

All Beaver S models have a large range. The smallest Beaver S has a clamping range of 1"-8" inches; the largest is suitable for all (thick-walled) pipes with a diameter of 24 to 56 inches. The Beaver S is also highly versatile when it comes to weld types. Almost any weld type (V seam, compound, flat, taper, chamber, etc.) can be created.



## Beaver S: pipe beveling up to 25 mm wall thickness

Beaver S-serie	Beaver 8 S	Beaver 16 S	Beaver 24 S	Beaver 30 S
usage	stationary pipe beveling	stationary pipe beveling	stationary pipe beveling	stationary pipe beveling
clamping	prism	prism	prism	prism
machining range	31-219 mm (Ø 1" to 8" inch)	60-426 mm (Ø 2" to 16" inch)	219-630 mm (Ø 8" to 24" inch)	219-780 mm (Ø 8" to 30" inch)
wall thickness in one pass	25 mm (up to 1 inch)	25 mm (up to 1 inch)	25 mm (up to 1 inch)	25 mm (up to 1 inch)
feed range	200 mm	300 mm	300 mm	300 mm
motor	400 volts / 3 ph / 5.5 KW	400 volts / 3 ph / 5.5 KW	400 volts / 3 ph / 9 KW	400 volts / 3 ph / 12 KW
operating clamping system	manual	manual	manual	electrical
operating feeding system	manual	manual	manual	electrical
speeds in RPM	96 / 192 RPM	48 / 64 / 96 / 128 RPM	48 / 64 / 96 / 128 RPM	36 / 48 / 72 / 96 RPM
cooling pump	built-in	built-in	built-in	built-in
carbide cutting bits	yes	yes	yes	yes

electrically controlled clamp	optional	optional	optional	standard
electrically controlled feeding	optional	optional	optional	standard
electrically controlled pipe stop.	optional	optional	optional	optional
heavy duty pipe stop	optional	optional	optional	optional
height adjustable base frame	optional	optional	optional	optional
Inside diameter tracker	optional	optional	optional	optional
heavy duty pipe stop	optional	optional	optional	optional
height adjustable base frame	optional	optional	optional	optional

length (mm)	1300	1400	2200	2600
width (mm)	900	1100	1500	1800
height (mm)	1450	1950	1950	1950
weight (kgs)	1650	2350	4500	5600

### Easy operation

#### Minimum effort

The smallest models have two speeds and are very easy to operate. The larger models of the Beaver S have a continuously controllable drive. All the important functions can be accessed via a control panel with a clear layout: start/stop, cooling pump on/off, speed high/low, etc.

### Tooling, options and accessories

We can, of course, provide you with all kinds of cutting blades and other tools for your machine. We can also supply ID tracking, copying heads, auxiliary cooling systems, semi and fully automatic machines, central lubrication systems, roller benches and other accessories.

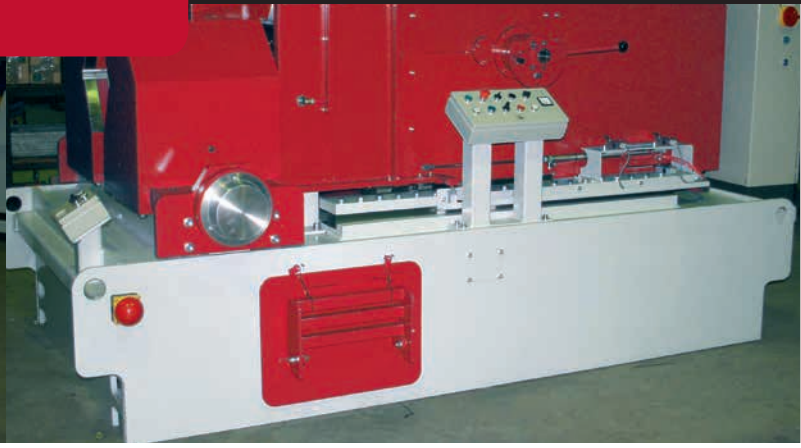
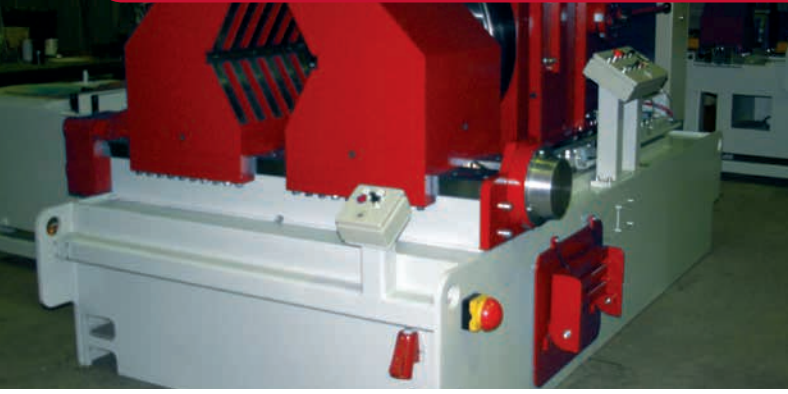
### Maintenance

Regular maintenance preserves your machine. We will also be happy to do this for you, on an on-call basis or on the basis of a maintenance contract. Visit our website for more information: [www.bevelmachines.com](http://www.bevelmachines.com).

#### Want to learn more? Call us!

Please do not hesitate to ask us questions if you would like to learn more about the possibilities of the Beaver S or our other beveling machines. We will naturally be happy to organise an obligation-free demonstration for you and your colleagues. Call **+31 (0)183 44 13 13** or send an e-mail to [sales@bevelmachines.com](mailto:sales@bevelmachines.com).

# BEAVER SHW



## Beaver SHW: pipe beveling up to 45 mm wall thickness

Beaver SHW-serie	Beaver 16 SHW	Beaver 24 SHW	Beaver 30 SHW	Beaver 48 SHW	Beaver 56 SHW
usage	stationary pipe beveling	stationary pipe beveling	stationary pipe beveling	stationary pipe beveling	stationary pipe beveling
clamping	prism	prism	prism	prism	prism
machining range	60-426 mm (Ø 2" to 16" inch)	219-625 mm (Ø 8" to 24" inch)	219 - 780 mm (Ø 8" to 30" inch)	406 - 1235 mm (Ø 16" to 48" inch)	610 - 1440 mm (Ø 24" to 56" inch)
wall thickness in one pass	40 mm	45 mm	45 mm	45 mm	45 mm
feed range	200 mm	300 mm	300 mm	300 mm	300 mm
motor	400 volts/ 3 ph/ 9 KW	400 volts / 3 ph / 15 KW	400 volts / 3 ph / 18,5 KW	400 volts / 3 ph / 22,5 KW	400 volts / 3 ph / 25 KW
operating clamping system	manual	electrical	electrical	electrical	electrical
operating feeding system	manual	electrical	electrical	electrical	electrical
speeds in RPM	48 / 64 / 96 / 128 RPM	45 / 66 / 89 RPM	38 / 50 / 70 RPM	25 / 38 / 50 RPM	25 / 38 / 50 RPM
cooling pump	built-in	built-in	built-in	built-in	built-in
carbide cutting bits	yes	yes	yes	yes	yes

electrically controlled clamp	optional	standard	standard	standard	standard
electrically controlled feeding	optional	standard	standard	standard	standard
electrically controlled pipe stop.	optional	optional	optional	optional	optional
heavy duty pipe stop	optional	optional	optional	optional	optional
height adjustable base frame	optional	optional	optional	optional	optional
Inside diameter tracker	optional	optional	optional	optional	optional
heavy duty pipe stop	optional	optional	-	-	
height adjustable base frame	optional	optional	optional	optional	

length (mm)	1400	3000	3500	3700	4000
width (mm)	1100	2300	2400	2800	3200
height (mm)	1900	1800	1800	1900	2200
weight (kgs)	3100	11000	12000	18000	21000

The Beaver SHW-serie is designed for pipes with wall thickness up to 40 or 45 mm. The SHW range covers diameter range from 2" to 56" , starting with Beaver 16 SHW. With this range we are offering a suitable solution for

the industry. From the 24 SHW and bigger all machinery standard have an electrical clamping and electrical feeding system. You can discuss your bevel angle, we will advise which tooling set to use.



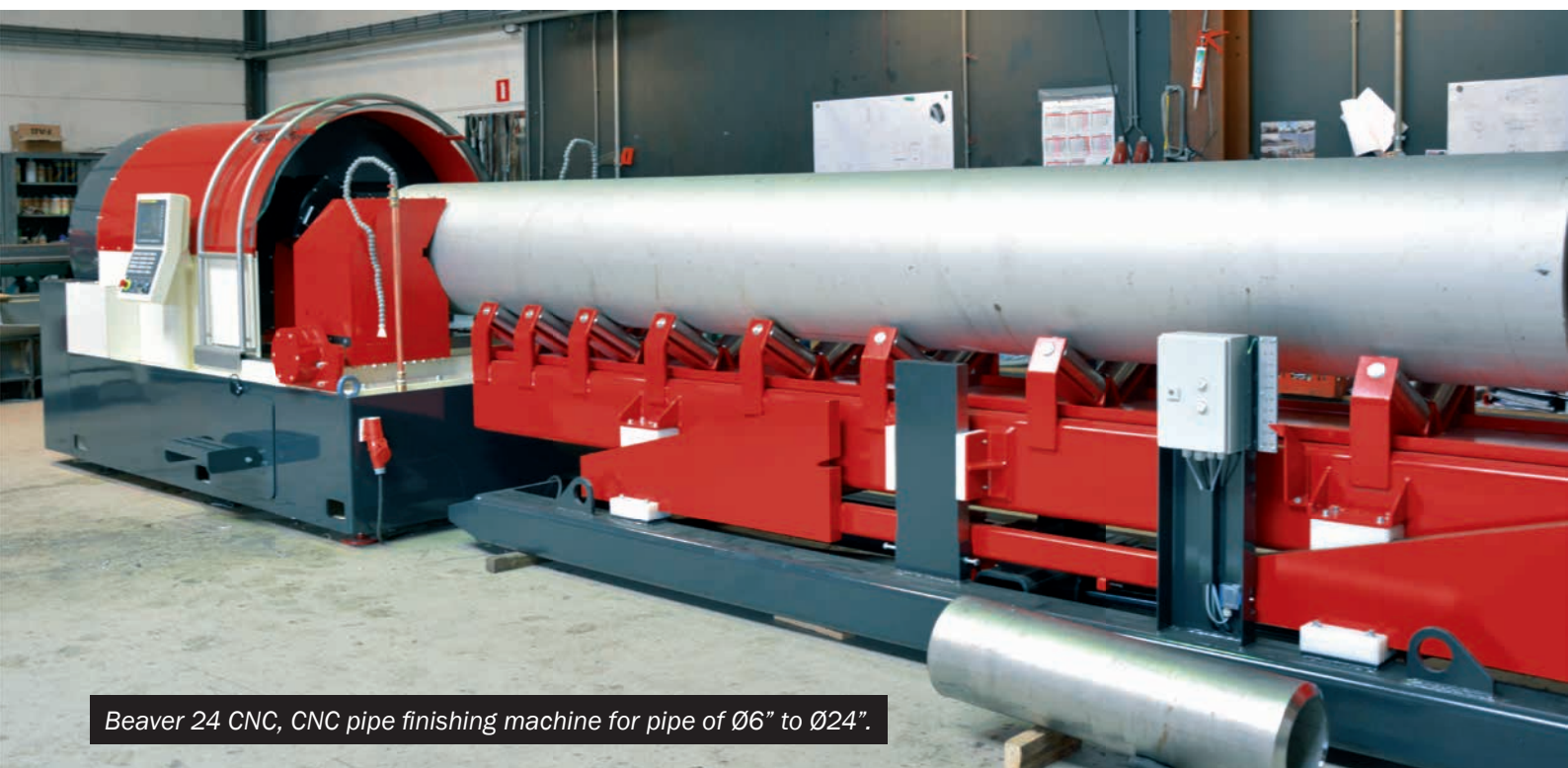


## This Beaver CNC machine is engineered for inside and outside machining of metal pipes and tubes.

This CNC pipe finishing machine is capable of following pre-set shapes that have been saved in the CNC system. The metal pipe is clamped and the chuck with the cutting bits is preparing all the required angles and shapes controlled by the CNC system. The machine can do pipe bevelling, facing, squaring, deburring, tapering. All these preparations are done without manually changing the tools in the chuck for a different angle or shape, all tooling changes are done automatically.

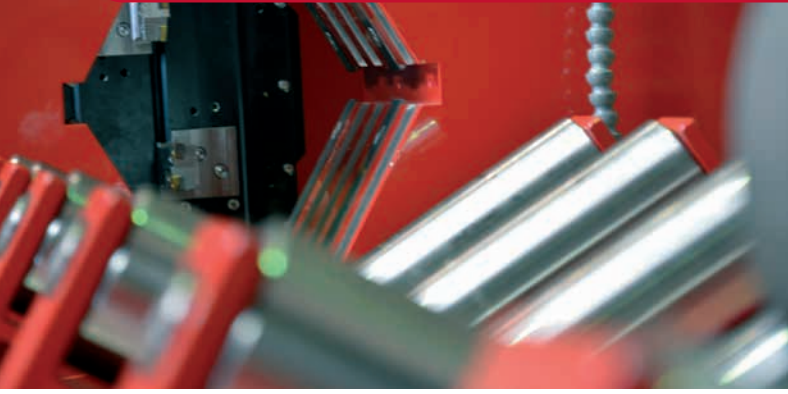
This latest innovation has both radial and axial feeding. Because of the feeding systems, tougher material like Stainless Steel, Duplex or Super Duplex can be easily machined. It is cutting the metal from outside down to

the inside of the pipe, step by step. The machine cuts material with two cutting bits at the same time therefore it works efficient and saves time during the machining process.



*Beaver 24 CNC, CNC pipe finishing machine for pipe of Ø6" to Ø24".*

# BEAVER CNC



Copier Bevelmachines is manufacturing metal pipe finishing machinery for many years. This CNC technique is an innovation and is already implemented in several projects now.

technique is a machine we sold to a company that wanted to bevel pipe ends on pipe elbows. For this customer we designed a special clamping system to clamp all the different elbows.

We offer these CNC pipe finishing machines for straight pipes in the following models, up to 8", 16", 24", 30" and 48". Additionally a height adjustable roller benches can be offered to support the pipe and to bring the pipe in line with the centre of the chuck and the clamping system. We also offer custom made solutions, one example of a custom made solution with the CNC

One of the core advantages of Copier Bevelmachines is that on metal pipe machining we design the best possible solution together with the end customer.

## Contact us for more information

Call **+31 (0)183 44 13 13** or send an e-mail to [sales@bevelmachines.com](mailto:sales@bevelmachines.com).



*Beaver 24 CNC, CNC pipe finishing machine for pipe of Ø6" to Ø24"*



## Beaver CNC: CNC pipe bevel machines

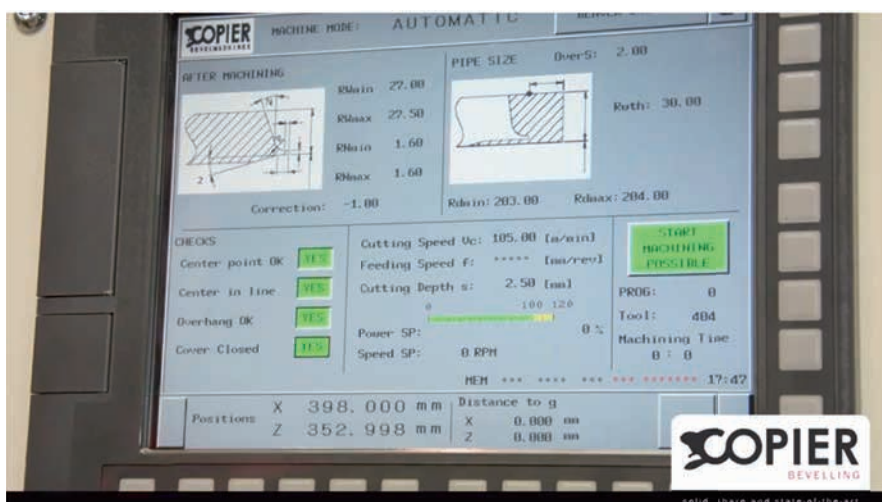
Beaver CNC	Beaver 8 CNC	Beaver 16 CNC	Beaver 24 CNC
usage	stationary pipe beveling	stationary pipe beveling	stationary pipe beveling
clamping	prism	prism	prism
machining range	31-219 mm (ø 1" to 8" inch)	60-426 mm (ø 2" to 16" inch)	219-630 mm (ø 8" to 24" inch)
wall thickness in one pass	unlimited	unlimited	unlimited
feed range	200 mm	300 mm	300 mm
motor	400 volts/ 3 ph/ 5.5 KW	400 volts / 3 ph / 5.5 KW	400 volts / 3 ph / 9 KW
speeds in RPM, infinitely variable	50 - 300 rpm	40-200 rpm	30 - 125 rpm
controls	CNC controlled	CNC controlled	CNC controlled
beveling cycle	automatic	automatic	automatic
electrically controlled clamp	standard	standard	standard
electrically controlled feeding	standard	standard	standard
electrically controlled pipe stop.	standard	standard	standard
feeding	radial and axial	radial and axial	radial and axial
cooling pump	built-in	built-in	built-in
carbide cutting bits	yes	yes	yes

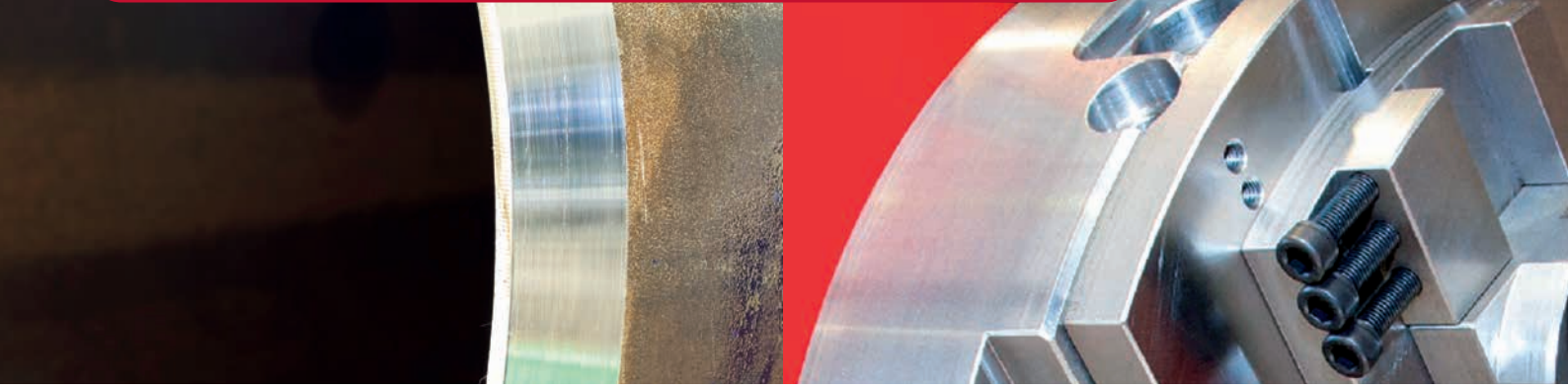
  

length (mm)	1900	2200	2600
width (mm)	1600	1700	2100
height (mm)	1550	1950	1950
weight (kgs)	2600	3800	5700

There are many advantages of the Beaver CNC. The most important ones are that there is no need to change tools for every different bevel shape or bevel angle. With the radial and axial feeding the two tools in the machine can preform all preset shapes automatically. The machine is very accurate it can machine according to the pre set

shapes very precisely. Heavy wall pipes or though material can be machined perfectly with this machine. Even thick wall pipes up 80 mm can be machined. For easier operating Copier built it's own special beveling controls on top of CNC systems, therefore no CNC skills are needed.



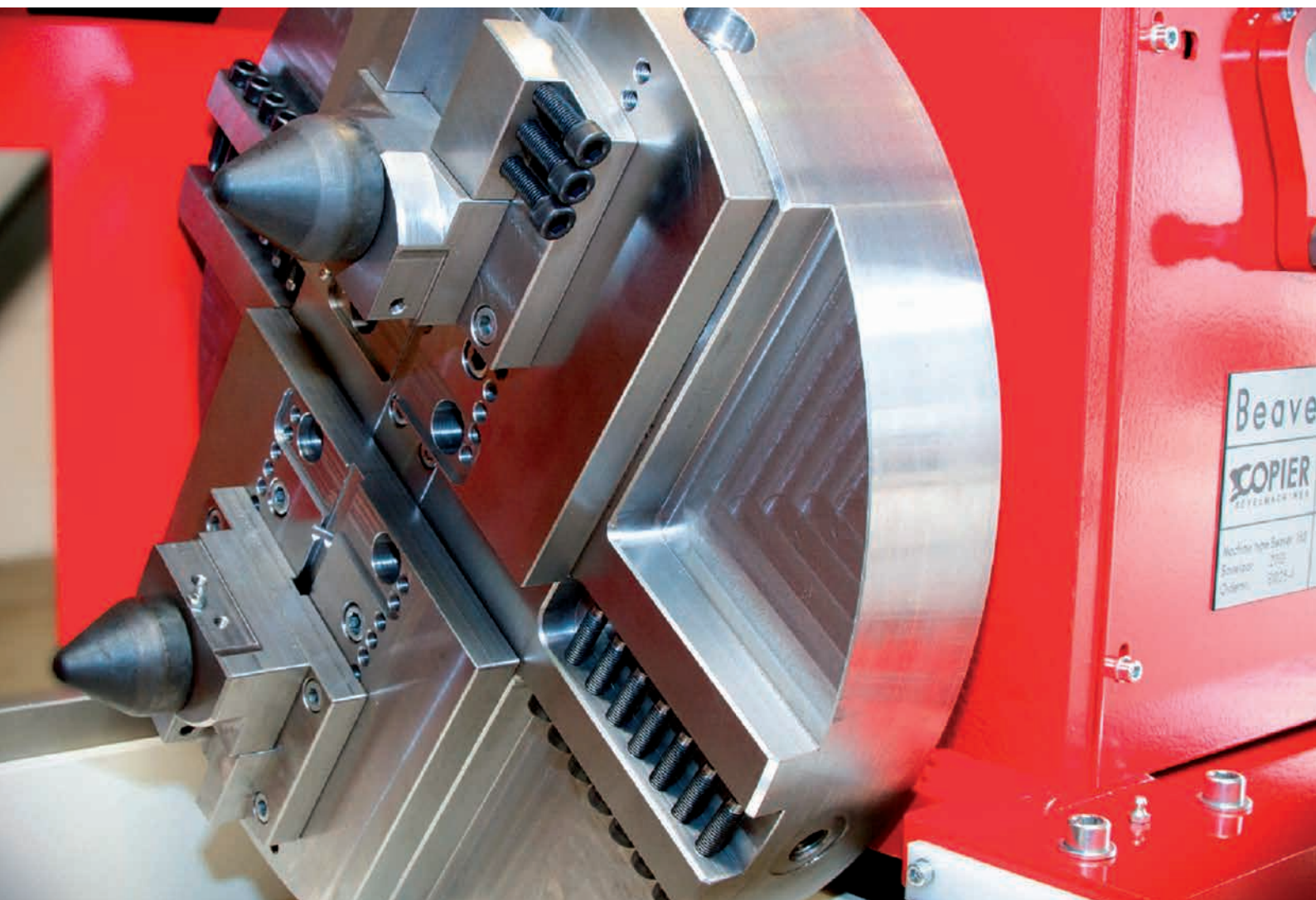


## Out of round pipes with smooth bevel

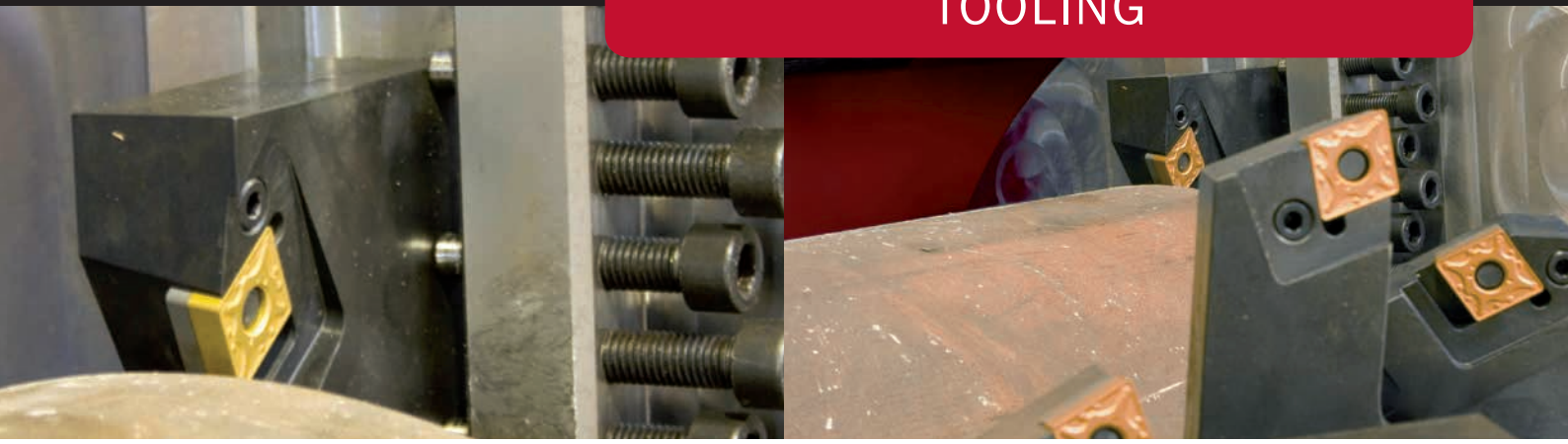
**Our innovation is based on the Beaver S-serie, it is called the Inside Diameter tracking system, this tracking system follows the inner pipe by a spring loaded roller and beveling mechanism.**

The I.D tracking system is designed to keep track on out of round pipes and the result is a perfect accurate bevel on the edge of the pipe, the tool holders are to

be set in the head of the I.D tracking system to get your required angles.







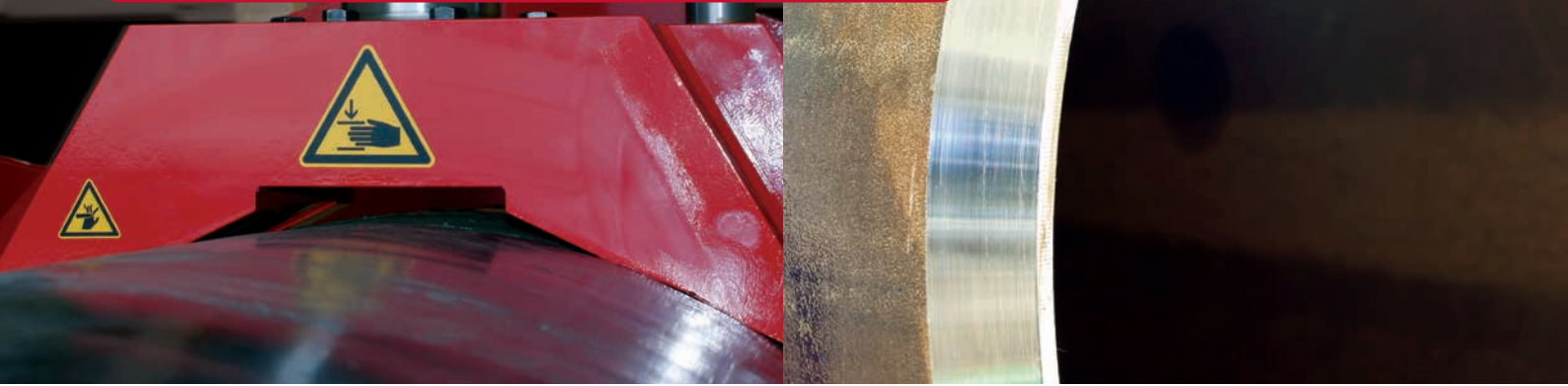
## Tooling for beveling

**Since beveling has become a serious business in several markets, also tooling for this machines has been developed.**

However, due to the small amount of tool bits used, compared to other machining activities, the development of tooling for beveling still is a very specialised job. Therefore Copier has decided to pay special attention to tooling. Tooling in our believe is very important when

it comes to successful beveling. So far we have several tools for making a simple plain bevel, a compound bevel, a J prep bevel, a J prep compound bevel and for internal beveling. All required tooling for the machines we manufacture you could purchase from us:





## The power of stationary, the flexibility of portable

Until recently there were two kinds of beveling machines: stationary and portable. Copier Bevelmachines has developed a machine that combines the best of both worlds. The F-series a semi-mobile machine that can handle many diameters on site, which makes it ideal for the construction of pipeline stations.

Let us introduce our pride and joy: the Beaver F 3048 and Beaver F 1632.

The construction of a pipeline station requires a great deal of welding, which means lots of beveling. Manual beveling with a cutting torch is hugely labour-intensive, whilst the quality of the welding preparation is often not perfect either. A beveling machine is the ideal solution but the traditional portable beveling machines are far from ideal, because many different diameters and wall thicknesses are used for the construction of a station. Constant changeovers are highly time-consuming. With the Beaver F 3048 and Beaver F 1632, which are specially developed for butting during the construction of pumping and distribution stations, this work can be done much more quickly. At the same time welding seams and welds of perfect quality are guaranteed.

### **Faster**

#### *Lower wage costs*

Working with the Beaver F 3048 and Beaver F 1632 is many times faster than manual beveling with a cutting torch. Just calculate how much you will be saving in working hours and personnel costs. You will discover

that the short return time makes the Beaver F 3048 and Beaver F 1632 a sound investment.

### **Better**

#### *Suitable for automatic welding*

The Beaver F 3048 and Beaver F 1632 creates accurate, perfectly formed and identical fusion edges. In other words, a pipe prepared with the Beaver can be automatically welded without trouble. The advantages? Fewer welding errors and faster completion! Thanks to its robust construction, the Beaver F 3048 and Beaver F 1632 are also highly reliable and low-maintenance, and that also yields significant cost savings.

### **More flexible**

#### *Various diameters and welding types*

As the Beaver F 3048 and Beaver F1632 clamps the pipes externally with a prism clamp, changeover times are minimal. Not only do the sizes it can handle (30 to 48 inches) make this machine unique in its field, it also offers outstanding flexibility. Almost any weld type (V seam, compound, flat, taper, chamber, etc.) can be created. That



## The Beaver F-series in detail:

		Beaver F 1632	Beaver F 3048
usage		mobile and stationary	mobile and stationary
machining range	mm inch	400-820 mm ø 16" to 32"	700-1220 mm ø 30" to 48"
prism clamping		self centring	self centring
minimum clamp length	mm	350	350
motor		hydraulic	hydraulic
hydr.pressure required	ltr /min	250-300	200-250
speed	rpm	20-60	10-50
machining		exchangable carbide inserts	exchangable carbide inserts
wall thickness in one pass	mm	40 mm	40 mm
feed stroke	mm	200	200
outer dimensions	mm	2400x2400x1500	3000x3000x1500
weight	kg	4800	6300

***“You will discover that the short return time makes the Beaver F 3048 and Beaver F 1632 a sound investment.”***

in turn offers possibilities for saving on welding materials.

### Easier

#### *Easy drive and operation*

The drive of the Beaver F 3048 and Beaver F1632 are fully hydraulic. This means that you can use any hydraulic machine for this and that the Beaver F 3048 and Beaver F 1632 can basically be used anywhere, even stationary. The Beaver F 3048 and Beaver F 1632 are very easy to use, thanks in part to the smart clamping mechanism and the clear control panel layout. Suitable for use outside in the field as well.

### Tooling and accessories

We can, of course, provide you with all kinds of preparation tools for your machine. We can also supply copying heads, auxiliary cooling systems, semi and fully automatic machines, central lubrication systems, roller conveyors and other accessories.

### Maintenance

Regular maintenance preserves your machine. We will also be happy to do this for you, on an on-call basis or on the basis of a maintenance contract.

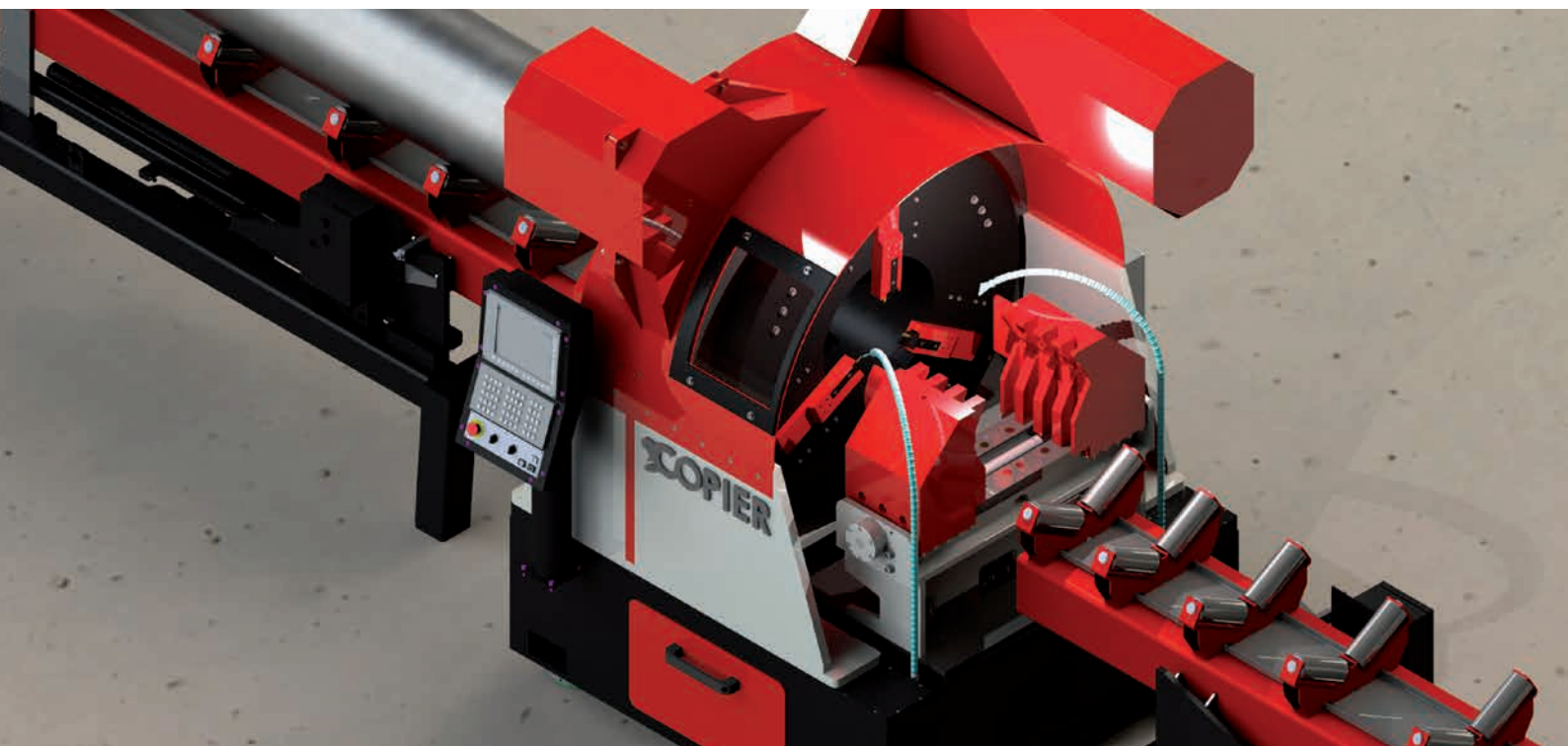
### Want to learn more? Call us!

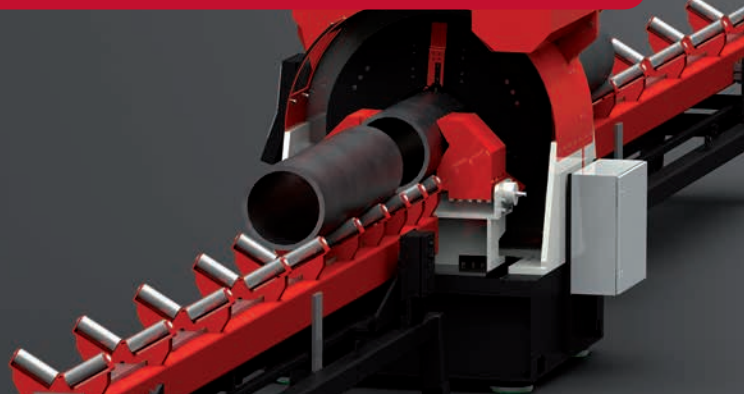
Please do not hesitate to ask us questions if you want to learn more about the possibilities of the Beaver F 3048 and Beaver F 1632 or our other beveling machines. We will naturally be happy to organise an obligation-free demonstration for you and your colleagues. Call **+31 (0)183 44 13 13** or send an e-mail to [sales@bevelmachines.com](mailto:sales@bevelmachines.com).



# More efficiency, more flexibility!

A lot of work and a lot of tubes in the factory, that is what every shop likes. However, lack of space, is what makes it difficult. With our Cut- and Bevelingmachine you can create more space in your factory and do the job more efficient. No need for sawing and less intern transportation of pipes. You can easily program off line what you want to cut and bevel in this CNC controlled machine. Different bevel-types with the same tooling. With our Beaver CB series you will make your next efficiency move and you will increase your quality at the same time. Heavy duty, long life machines with a high capacity. It will give you a good return on investment.





## The Beaver CB-series for pipe cutting and beveling

		Beaver 4 CB	Beaver 8 CB	Beaver 16 CB	Beaver 24 CB
usage		stationary / shop	stationary / shop	stationary / shop	stationary / shop
feeding		radial and axial	radial and axial	radial and axial	radial and axial
machining range	mm	20-120	31-230	60-426	300-620
	inch	ø 3/4" to 4"	ø 1" to 8"	ø 2" to 16"	ø 12" to 24"
wall thickness in one pass	mm	unlimited	unlimited	unlimited	unlimited
length	mm	1900	2300	2500	3300
	width	mm	1200	1300	2500
	height	mm	1500	1600	1700
weight	kg	1800	2100	2700	8500
rollerbenches		optional	optional	optional	optional

### Tooling

We can provide you with several kinds of tooling for your machine. However most of the bevels you can make with the same tool. We can deliver all wear parts, like the carbide inserts and we can build a digital file with the documentation of the tooling you have.

We can also supply copying heads, auxiliary cooling systems, semi and fully automatic machines, central lubrication systems, roller conveyors and other accessories.

### Maintenance

Regular maintenance preserves your machine. We will also be happy to do this for you, on an on-call basis or on the basis of a maintenance contract.

#### Want to learn more? Call us!

Please do not hesitate to ask us questions if you would like to learn more about the possibilities of the Beaver CB or our other beveling machines. We will naturally be happy to organise an obligation-free demonstration for you and your colleagues. Call **+31 (0)183 44 13 13** or send an e-mail to [sales@bevelmachines.com](mailto:sales@bevelmachines.com).



## Height adjustable roller benches: for even more efficiency during beveling

**When you have to bevel some pipes, it takes some time for beveling, but also some time for getting the pipes in- and out of the beveling machine.**

With our roller benches you will speed up this process. You adjust the roller bench to the correct height put the pipe on and move it in to the beveling machine, by hand, or for automated systems or very heavy pipes by a driven system.

The advances of our TRB roller benches are: easy to adjust for another diameter, stable system for carrying the pipe, less time for handling, several lengths available, several roller distances available, optional: with stainless steel rollers.

### Roller benches, in different lengths available (range 3 - 12 meter)

	min. diam. (mm)	max. diam. (mm)	length (m)	capacity (kg)	weight (kg)	E-power (kW)
TRB 5008	ø 30	ø 221	5	900	930	0,55
TRB 5016	ø 58	ø 426	5	1600	1050	0,55
TRB 9016	ø 58	ø 426	9	3200	1890	0,75





## ***“If you do business with Copier Bevelmachines, you are doing business with the inventors and manufacturers of your machine.”***

Copier designs and builds machines for the pipe finishing industry, including beveling machines. About 300 of the PBM series of beveling machines for stationary use introduced in 1997 are currently in use worldwide.

All our machines are developed in close collaboration with users. Functionality and efficient use always come first. We are proud that we can use our technical expertise time and time again for the development of innovative machines for practical use.

### **Doing business with the manufacturers**

If you do business with Copier, you are doing business with the inventors and builders of your machine. That means you have direct access to our know-how and can rely on us if you have any questions or problems. Doing business

directly with the builder naturally also means you have a good price and quality balance for your machine.

### **Always on stand-by**

We attach great value to excellent service, also after you have made your purchase. In other words, you are more than welcome to come to us for maintenance and service. Copier is always on stand-by.

### **Custom made solutions?**

#### **We would be more than happy to help you out!**

Does a machine from our range not fully meet your requirements? Perhaps your work processes are slightly different or maybe you have your own ideas? The engineers at Copier love these challenges. We will be delighted to surprise you with a design that fully meets your wishes.



### **Copier Bevelmachines**

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