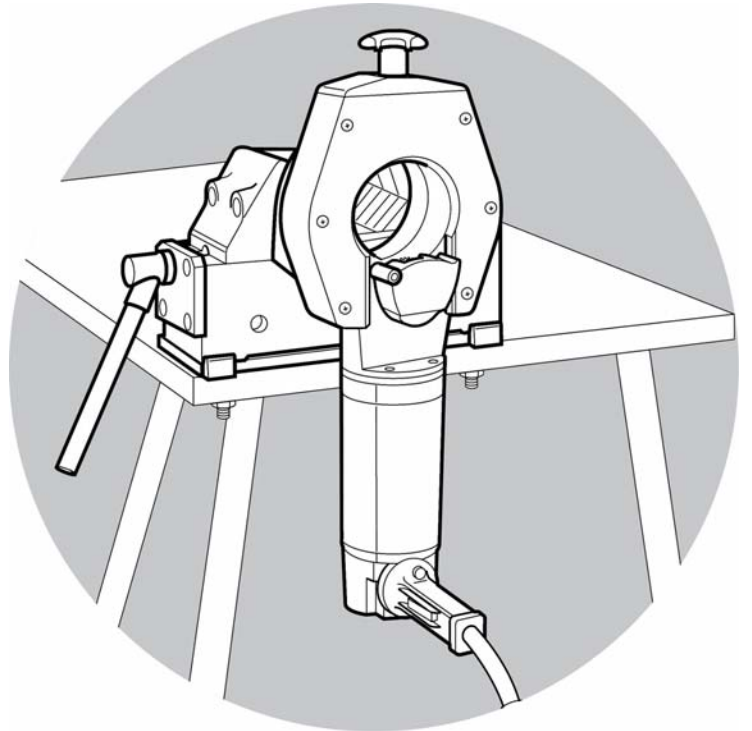


Operating instructions

**Pipe Cutting and Beveling
Machines**

**RA 2, RA 4, RA 6,
RA 8, RA 12 (H)**



Code 790 042 762

Machine-no.:

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Table of contents

	Page
0 About these instructions	1
0.1 Warning messages	1
0.2 Further symbols and displays	2
0.3 Abbreviations	2
1 Notes on safety	3
1.1 Proper use	3
1.2 Safety regulations	3
1.3 Working with safety in mind	4
1.4 Waste disposal / environmental protection	5
1.5 Further safety regulations	5
2 Design of the product	6
2.1 Standard	6
3 Features and scope of application	7
3.1 Features	7
3.2 Scope of applications	7
3.2.1 Working range	7
3.2.2 Pipe materials	8
4 Technical specifications	9
4.1 Rating	9
5 Commissioning	10
5.1 Scope of delivery	10
6 Transport and assembly	11
6.1 Fitting the quick-mounting plate	11
6.2 Transporting and fitting the pipe cutter	12
6.2.1 Transporting and fitting the RA 2, RA 4, RA 6 and RA 8	12
6.2.2 Transporting and fitting the RA 12	13
7 Operation	14
7.1 Inserting the saw blade/bevel cutter	15
7.2 Inserting additional cutters	15
7.3 Adjusting the pipe diameter	16
7.3.1 Saw blade without additional cutter	17
7.3.2 Saw blade with additional cutter	18
7.4 Adjusting the bevel cutter	19
7.5 Adjusting the length gauge (cut-off stop)	20
7.6 Selecting the motor speed	21
7.7 Cutting the pipe	22
7.8 Beveling the pipe	23
7.9 Simultaneous cutting and beveling	25
7.10 Cutting hard plastic pipes	25
8 Maintenance	28
8.1 Checking the oil level of the gear and topping up	29

8.1.1	Pipe Cutting and Beveling Machine RA 2	29
8.1.2	Pipe Cutting and Beveling Machines RA 4, RA 6, RA 8 and RA 12	29
8.2	Cleaning the guide	30
9	What to do if ...?	31
9.1	General trouble-shooting	31
9.2	Servicing/after-sales service	32

0 About these instructions

To allow quick understanding of these instructions and safe handling of the machine, all the warning messages, notes and symbols used in these instructions are presented here along with their meaning.

0.1 Warning messages

In these instructions, warning messages are used to warn you against the dangers of injury or material damage. Always read and observe these warning messages!




This is a warning symbol. It should warn you against dangers of injury.

Follow all instructions which are identified with this safety symbol in order to avoid injuries or death.

Warning symbol	Meaning
 DANGER	Direct danger! Non-observance could result in death or critical injury. ⊙ Restrictions (if applicable). ► Measures to prevent danger.
 WARNING	Possible danger! Non-observance could result in serious injury. ⊙ Restrictions (if applicable). ► Measures to prevent danger.
 ATTENTION	Dangerous situation! Non-observance could result in minor injuries.
ATTENTION	Dangerous situation! Non-observance could result in material damage.

0.2 Further symbols and displays

Symbol	Meaning
Important Note	Notes: Contain particularly important information for comprehension.
	Instruction: You must take notice of this symbol.
1.	Request for action in a sequence of actions: You have to do something here.
▶	Single request for action: You have to do something here.
▷	Conditional request for action: You have to do something here if the specified condition is met.

0.3 Abbreviations

Abbr.	Meaning
RA	Pipe Cutting and Beveling Machine
RA (H)	Pipe Cutting and Beveling Machine with intermediate gear

1 Notes on safety

The Pipe Cutting and Beveling machine (here further referred to as RA (H)) is a state-of-the-art machine. Using it for purposes other than those described in this manual may cause injury to the user or to others. It may also damage the machine or other equipment.

Therefore:

- Always ensure that the machine is in good working order and comply with these notes on safety.
- Keep complete documents close by the machine.
- Generally valid regulations for the prevention of accidents must be observed.

1.1 Proper use

- Only use the RA (H) for cutting and beveling of pipes (see chapter 3.2, p. 7).
- For damages caused by using not according to regulations is just the user responsible.

1.2 Safety regulations

- Only use the dimensions and materials specified in these instructions. Other materials should be used only after consulting the Orbitalum Tools after-sales service.
- Only use original Orbitalum Tools spare parts and resources.
- Inspect the pipe cutter RA (H) daily for visible signs of damage or defects. Have any damages or defects repaired immediately.
- Work on the electrical equipment must only be carried out by a qualified electrician.
- Only operate the pipe cutter RA if the electrical restart inhibitor is working correctly.
- Pull the mains plug before carrying out a tool change or maintenance and repair work and allow the machine to run a stop.

1.3 Working with safety in mind

"Make your contribution to safety in the workplace."



- Report any unusual response from the machine to the person responsible immediately.
- Be aware of safety aspects at all times during work.
- When working with the RA (H), wear protective goggles, safety gloves and ear protection.
- Before cleaning or performing any maintenance and repair work on the RA, pull out the mains plug and allow the machine to run to a stop.
- Keep hands away from the tools during processing.
- Pay attention to the surroundings. Do not use any electric tools in a damp or wet area. Make sure to have good illumination. Do not work near combustible liquids or gases.



DANGER

Danger of death by electric shock

If the mains cable is damaged, live parts may cause death when being touched directly.

- ⊙ Keep the mains cable of the pipe cutter motor away from the saw blade or bevel cutter.
- ▶ Secure the falling pipe piece.
- ⊙ Do **not** let the cut-off pipe piece drop in an uncontrolled way.
- ⊙ Do **not** run the machine unattended.
- ▶ While processing the pipe, always keep an eye on the position of the mains cable.



WARNING

Danger of being injured by sharp cutting edges

- ⊙ Keep hands away from the tools during cutting or beveling.
 - ▶ Wear safety gloves.
-

1.4 Waste disposal / environmental protection

- Dispose of chips and used gear lubricant oil according to the regulations.

Discarded electric tools and accessories contain a large share of valuable raw and synthetic materials which can be recycled.

Therefore:

- Electrical (electronic) devices which are marked with the symbol to the left, may not be disposed of with household waste in accordance to the EU directive 2002/96/EC.
- By actively using the offered return and collection systems, you actively contribute to the reuse, recycling and utilization of electrical (electronic) devices.
- Electrical (electronic) used devices contain parts which must be handled selectively according to the EU directive. Separate collection and selective treatment is the basis for environment-friendly disposal and the protection of human health.
- Our products that were sold to you after August 13th, 2005 are taken back and treated according to legal standards. These products have to be send free of charge.
- The return of used devices which pose a health or safety risk for human beings due to soiling during use may be refused.
- The legally compliant disposal of electrical (electronic) devices that were placed on the market before August 13th, 2005 are in the responsibility of the end-user.



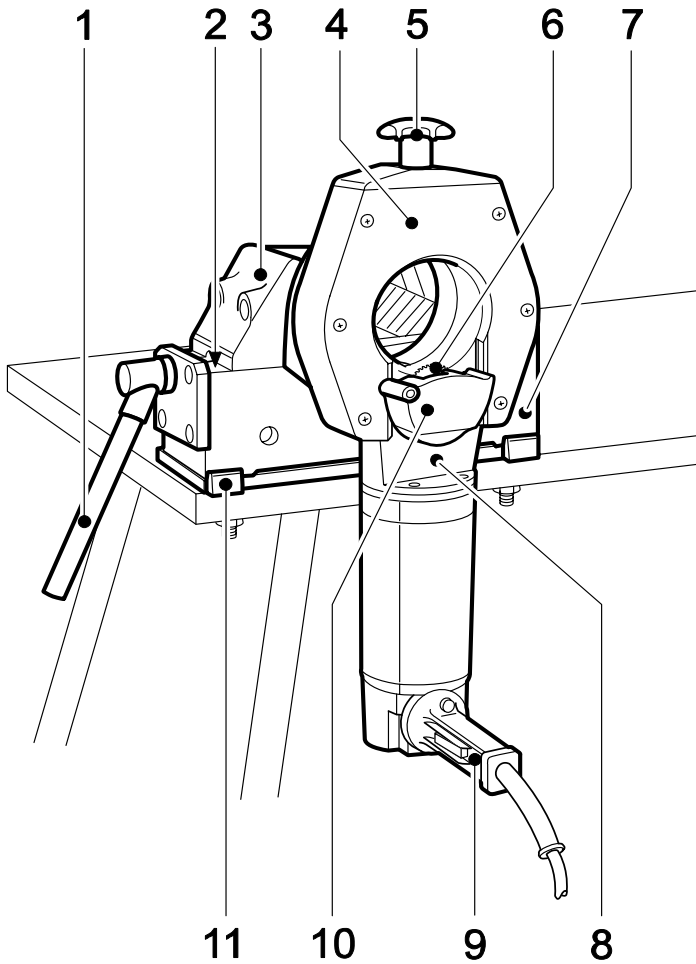
(RL 2002/96/EC)

1.5 Further safety regulations

Observe the regulations, standards and guidelines applicable in your country.

2 Design of the product

2.1 Standard



- 1 Vice handle
- 2 Machine Number
- 3 Vice
- 4 Slide housing with cover plate
- 5 Hand wheel
- 6 Saw blade
- 7 Name plate / machine number
- 8 Slide
- 9 Motor grip with switch
- 10 Saw blade guard
- 11 Quick-assembly plate

3 Features and scope of application

3.1 Features

The pipe cutter is distinguished by the following characteristics:

- Enhanced safety due to stationary pipe, rotating tool
- Restart inhibit function
- Self centring vice with hardened jaws
- Low-maintenance gear with oil lubrication
- Variable-speed electric motor or compressed air motor
- Cut is always clean, right-angled and free from burr
- Fabrication of standardised welding bevels

3.2 Scope of applications

3.2.1 Working range

Type of machine		RA 2	RA 4	RA 6	RA 8	RA 12
Pipe OD	[mm]	12 – 63	13 – 120	44 – 182	124 – 230	180 – 325
	[inch]	0.472 – 2.480	0.518 – 4.724	1.732 – 7.165	4.882 – 9.055	7.087 – 12.795
Wall thickness* (depends on material)	[mm]	2 – 5.5	2 – 7	2 – 10	2 – 10	2 – 10
	[inch]	0.079 – 0.217	0.079 – 0.276	0.079 – 0.394	0.079 – 0.394	0.079 – 0.394
Pipe ID min. (saw blade Ø 63 mm / 2.480 inch)	[mm]	7	21	76	137	190
	[inch]	0.276	0.827	2.992	5.394	7.480
Pipe ID min. (saw blade Ø 68 mm / 2.677 inch)	[mm]	2	16	71	132	185
	[inch]	0.079	0.630	2.795	5.197	7.283
Pipe ID min. (saw blade Ø 80 mm / 3.150 inch)	[mm]	–	4	59	120	173
	[inch]	–	0.157	2.329	4.724	6.811
Pipe ID min. (saw blade Ø 100 mm / 3.937 inch)	[mm]	–	–	39	–	–
	[inch]	–	–	1.535	–	–

* Depending on the wall thickness special clamping shells for thin-walled tubes are required (accessory)

3.2.2 Pipe materials

- Plastic (PE, PP, PVDE, PVC)
- Copper
- Brass
- Annealed cast iron pipe
- General structural steel
- Black and galvanised steel pipe
- Aluminum
- High-quality steel (Cr < 12 % and Mo < 2.5 %; Cr < 20 % and Mo = 0 %):
 - Case hardened steels
 - High-speed steels
 - Tempering steels
 - Bearing steels
 - Tool steels
- High-quality steel (any Cr and Mo content)*
- High-quality stainless steel (any Cr and Mo content)*

* *only workable with RA H*

4 Technical specifications

4.1 Rating

Weight*	RA 2:	45 kg	(47 kg)
	RA 4:	78 kg	(80 kg)
	RA 6:	95 kg	(97 kg)
	RA 8:	115 kg	(117 kg)
	RA 12:	135 kg	(137 kg)
Power	1600 W		
Protection class	Totally insulated in accordance with class II, DIN VDE 0740		
Speed	RA 2 to RA 12:	150 up to 270 rpm	
	RA H:	40 up to 70 rpm	
Versions	1-phase AC motor		
	200 – 240 V, 50/60 Hz		
	100 – 120 V, 50/60 Hz		
Sound pressure level at the workplace**	approx. 75 dB (A)		
Vibration level in accordance with DIN EN 28662, part 1	2.5 m/s ²		

* Values in brackets for RA H (= with intermediate gear)

** The sound pressure level was measured under normal operating conditions in accordance with EN 23741.

5 Commissioning

Checking the scope of delivery

- ▶ Check all parts of the delivery for completeness and transportation damage.
- ▶ Report any missing parts or transportation damage to your supplier immediately.

5.1 Scope of delivery

- 1 Pipe Cutting and Beveling Machine RA (H)
- 1 Saw blade
- 1 Set of clamping jaws made from cast aluminum (only with RA 6)
- 1 Ring spanner (SW 22)
- 1 Brush
- 2 Hexagon socket head wrenches
- 1 Tube of Orbitalum Tools saw blade lubricant
- 1 Quick-mounting plate
- 1 Tube of special gear oil
- 1 Operating instructions
- 1 Spare parts list

Subject to modifications

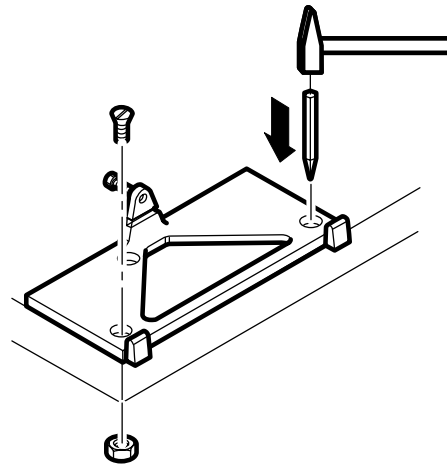
6 Transport and assembly

6.1 Fitting the quick-mounting plate

Fit the pipe cutter together with the vice, either

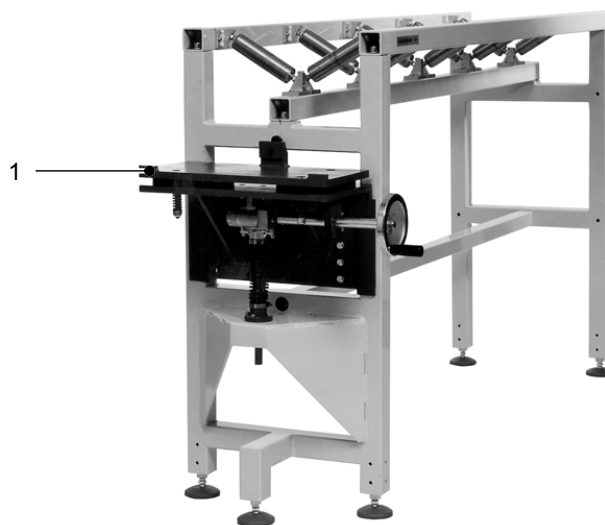
- to the quick-mounting plate, or
- to the quick-mounting plate with screw clamps (special accessory).

1. Mark and punch the bolt holes on the work bench. Use the quick-mounting plate as a template.
2. Drill 13 mm Ø holes.
3. Fasten the quick-mounting plate with screws.



Pipe feeder base unit

When using the Orbitalum Tools pipe feeder, the pipe cutter is directly fitted to the mounting plate (1) of the base unit without special accessories (special accessories, code-no. 790 068 051).



6.2 Transporting and fitting the pipe cutter



DANGER

Danger of death caused by electric shock

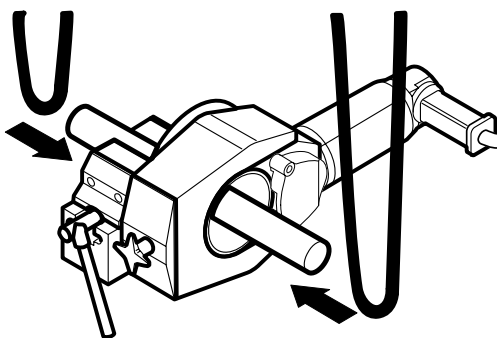
- ▶ Disconnect from the mains plug before transporting, mounting or dismantling and allow the machine to run a stop.

Danger of being injured during transportation

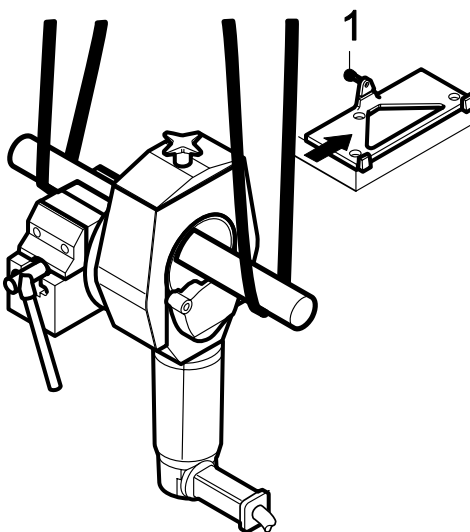
- ⊙ **Never** carry and fit the pipe cutter alone.
- ▶ Transport and fit the pipe cutter with the aid of a crane or a similar lifting device.

6.2.1 Transporting and fitting the RA 2, RA 4, RA 6 and RA 8

1. Clamp a suitable pipe of sufficient length centrally in the vice.
2. Position transport belts around the pipe on both sides.

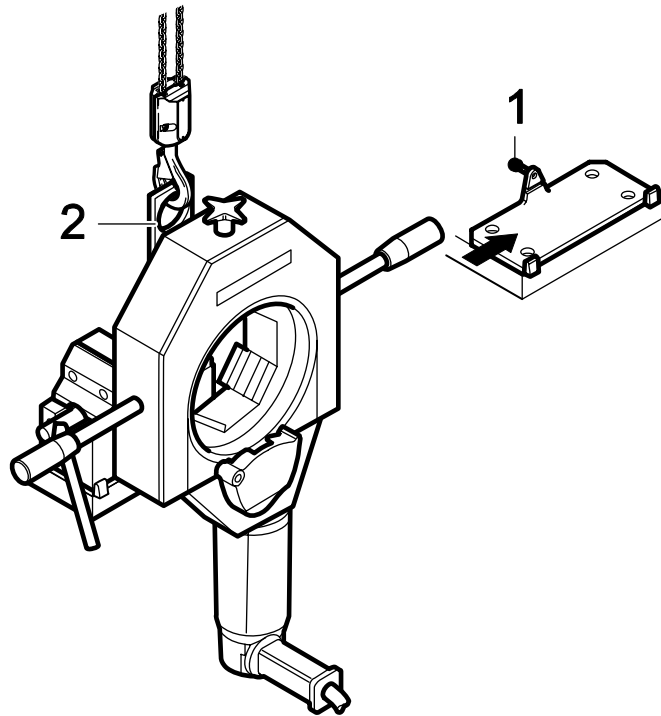


3. Raise the pipe cutter on the belts and guide it sideways onto the fitted quick-assembly plate.
4. Bolt the pipe cutter securely into place with the hexagon bolt (1).



6.2.2 Transporting and fitting the RA 12

1. Guide the book from the crane into the shackle (2) and slide onto the fitted quick-assembly plate from the side.
2. Bolt the pipe cutter securely into place with the hexagon bolt (1).



7 Operation



DANGER

Danger of death caused by electric shock

- ▶ Cut off the power supply before carrying out the transportation and allow the machine to run a stop after completing each stage of work.
 - ⊙ The cable **must not** contact rotating (moving) parts of the pipe cutter.
-



WARNING

Danger of being injured by sharp cutting edges

- ⊙ Keep hands away from the tools when inserting or changing the tool.
 - ▶ Wear safety gloves.
-

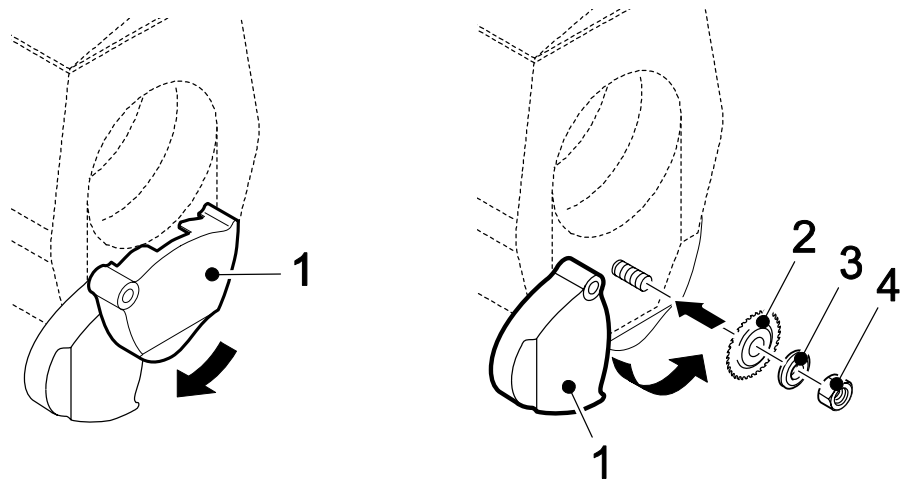
Attention

Damage to material

- ▶ The saw blade or bevel cutter must be free from chips and dirt.
- ▶ Only use Orbitalum Tools saw blades and bevel cutters.
- ▶ When employing an additional cutter, only use the special Orbitalum Tools clamp washer, not the normal clamp washer.
- ▶ Press the saw blade guard down by max. 90°.
- ▶ Mount the saw blade/bevel cutter or additional cutter with the inscription facing to you. The teeth will then be pointing to the correct direction.

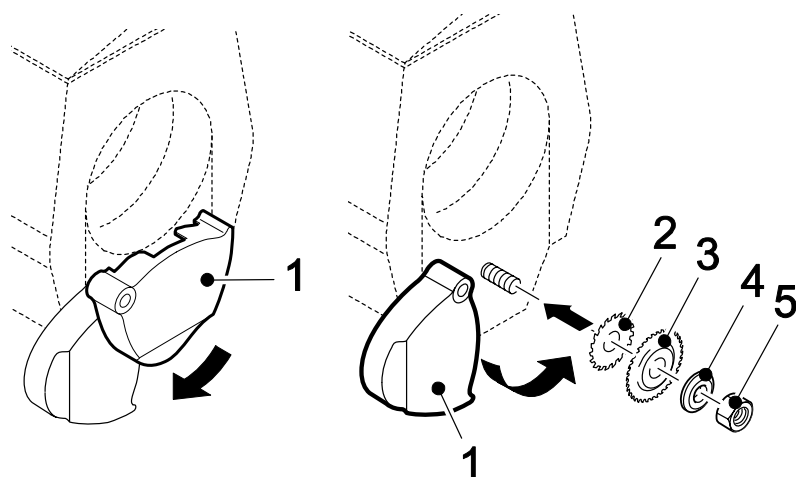
7.1 Inserting the saw blade/bevel cutter

1. Turn the saw blade guard (1) down for approx. 90°.
2. Loosen the hexagon nut (4). Remove the clamping plate (3) and the saw blade (2).
3. Clean the saw blade shaft and vicinity.
4. Fit the saw blade (2) or bevel cutter and the clamping plate (3).
5. Tighten the hexagon nut (4).
6. Move the saw blade guard (1) back to its original position.



7.2 Inserting additional cutters

1. Turn the saw blade guard (1) down for approx. 90°.
2. Loosen the hexagon nut (5). Remove the clamping plate and the saw blade.
3. Clean the saw blade shaft and vicinity.
4. Fit the additional cutter (2), the saw blade (3) and the special clamping plate (4).
5. Tighten the hexagon nut (5).
6. Move the saw blade guard (1) back to its original position.



7.3 Adjusting the pipe diameter



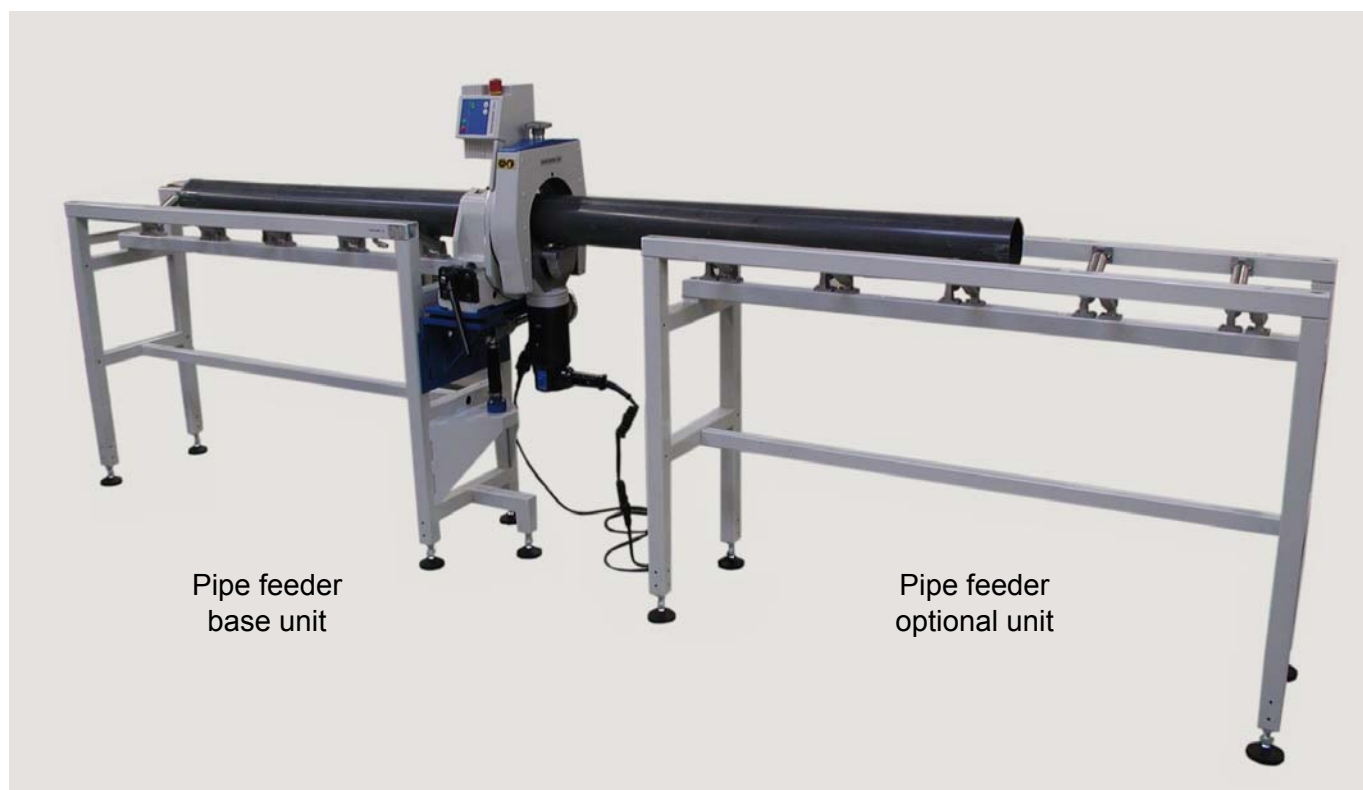
WARNING

Danger of being injured by rotating slide housing

When switching the motor on, the pipe cutter may revolve around the pipe automatically.

- ⊙ In their home position, the saw blade or bevel cutter **must not** touch the pipe!
- ▶ Before switching the motor on, make sure that the gap between the saw blade/bevel cutter and the pipe is sufficient.

Note It is recommended to support pipes with a length of more than 1 m using a pipe supporting device or an auxiliary place of deposit (code-no. 790 068 061, both special accessories).

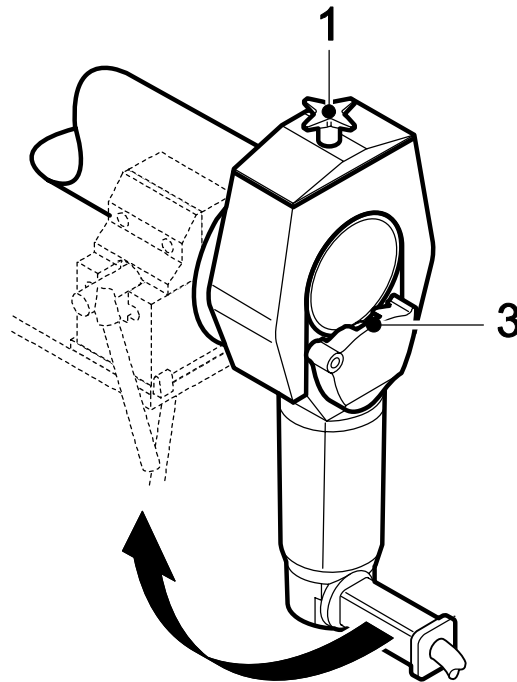


Pipe feeder
base unit

Pipe feeder
optional unit

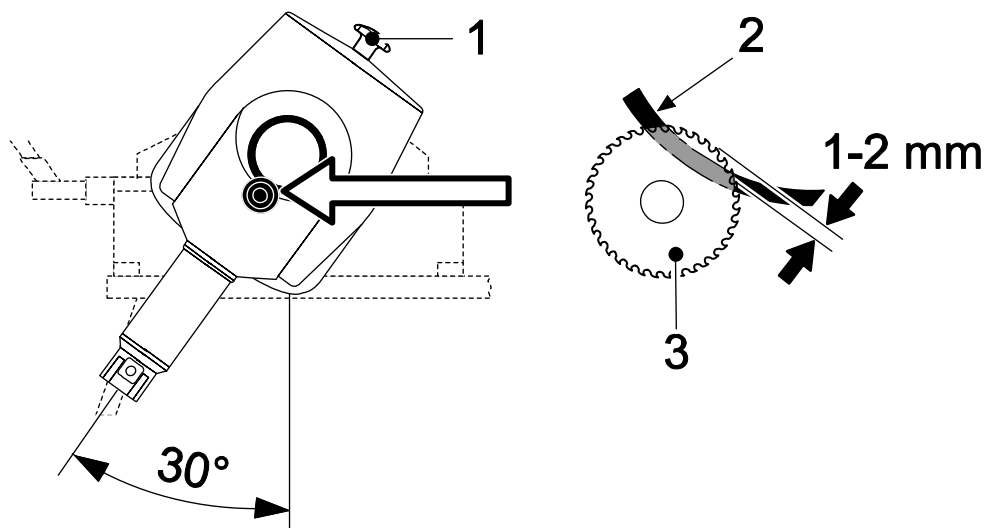
7.3.1 Saw blade without additional cutter

1. Turn the slide with saw blade all the way down using the hand wheel (1).
2. Clamp the pipe in place so that it almost reaches the saw blade (3).
3. Use the pistol grip to turn the motor upwards for about 30° (clockwise) until the saw blade is in cutting position.



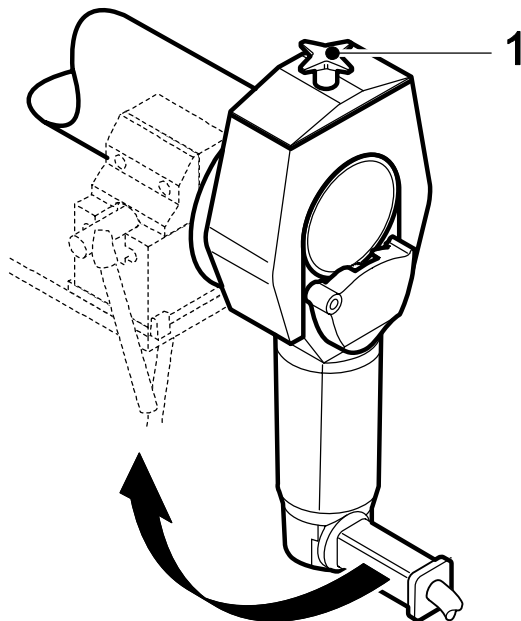
4. Turn the hand wheel (1) until the teeth of the saw blade (3) protrude about 1 to 2 mm inside the pipe (2).

Note Scale of the hand wheel: a readjustment by one graduation mark will result in a radial feed or bevel alteration of 0.1 mm.



7.3.2 Saw blade with additional cutter

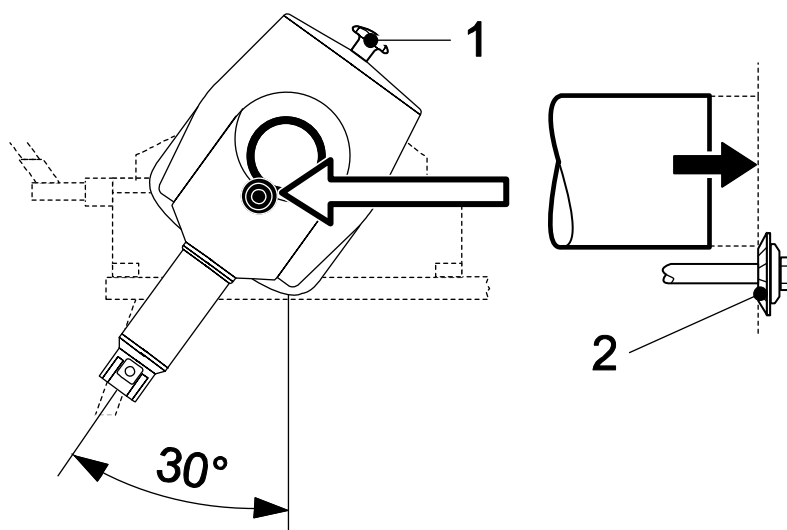
1. Turn the slide with saw blade all the way down using the hand wheel (1).
2. Clamp the pipe in place so that it almost reaches the additional cutter (2).
3. Use the pistol grip to turn the motor upwards for about 30° until the saw blade is in cutting position.



4. Turn the hand wheel (1) until the teeth of the additional cutter (2) cover the wall thickness of the pipe.

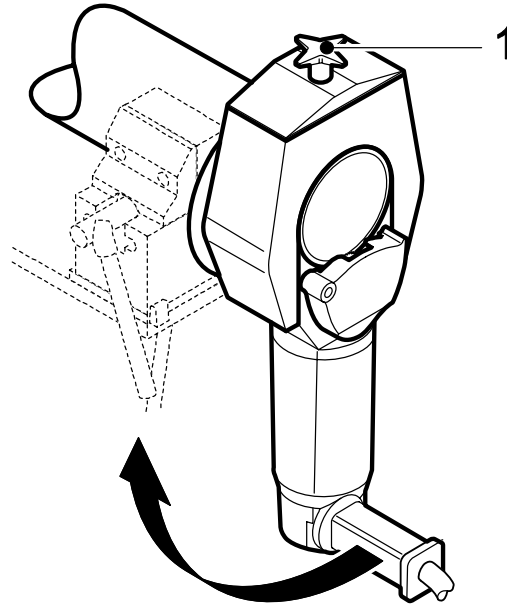
Note Scale of the hand wheel: a readjustment by one graduation mark will result in a radial feed or bevel alteration of 0.1 mm.

5. Perform a test cut, check the cut and bevel result and readjust the hand wheel (1), if necessary.



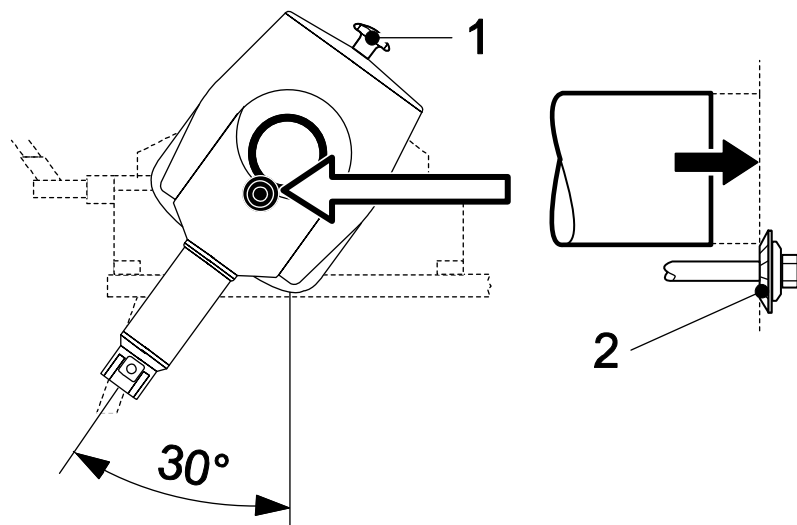
7.4 Adjusting the bevel cutter

1. Turn the slide with saw blade all the way down using the hand wheel (1).
2. Clamp the pipe in place so that it almost reaches the bevel cutter (2). The pipe must not project over the cutter.
3. Use the pistol grip to turn the motor upwards for about 30° until the bevel cutter is in beveling position.



4. Turn the hand wheel (1) until the teeth of the bevel cutter cover the wall thickness of the pipe and the desired beveling position is reached.
5. Perform a test bevel, check the bevel result and readjust the hand wheel (1), if necessary.

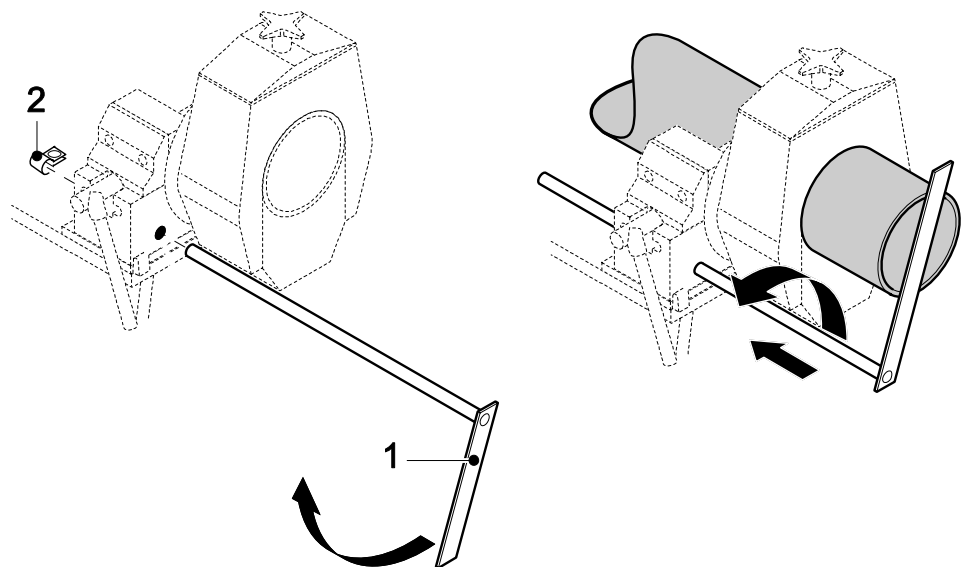
Note Scale of the hand wheel: a readjustment by one graduation mark will result in a radial feed or bevel alteration of 0.1 mm.



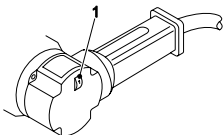
7.5 Adjusting the length gauge (cut-off stop)

A length gauge (cut-off stop) is available as an optional accessory for fabricating pipe sections of equal length (code 790 041 011, for all RA types except RA 12).

1. Mount the cut-off stop (1).
2. Swivel the cut-off stop to the middle of the pipe.
3. Use a meter rule to extend the gauge to the desired length.
4. Move the clamp (2) towards the housing and turn it so that it rests on the work bench.
5. Tighten the clamp (2).
6. Move the pipe forward up to the cut-off stop and clamp it into place.
7. Swivel the cut-off stop outward and push it all the way back.
8. Cut the pipe (see from chapter 7.7, p. 22).
9. For the next cut, extend the cut-off stop and swing it into place clockwise.

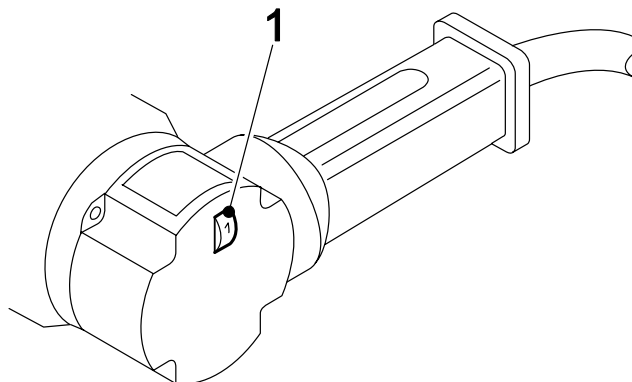


7.6 Selecting the motor speed

Machine type	Pipe materials	Controller setting (1)	Spindle speed (rpm)
RA 2 RA 4 RA 6 RA 8 RA 12	High-quality stainless steel (material no. 1.40 to 1.45) from 1.5 mm to max. 3 mm wall thickness, higher-alloy high-quality steels (see chapter 3.2, p. 7).	 1 – 2	150
	Low-alloy and high-quality steels (see chapter 3.2, p. 7).	2 – 4	175 – 200
	Plastic, non-ferrous heavy metal, general structural steel, black and galvanised steel pipe	4 – 6	220 – 270
RA H	High-quality steel, high-quality stainless steel	1 – 6	40 – 70
	High-performance materials (nickel-chromium-molybdenum alloys)	1 – 3	40 – 55

Important Select low speed (1):

- for large-diameter pipes
- for thick-walled pipes
- when a supplementary cutter is used



7.7 Cutting the pipe



WARNING

Danger of being injured by chips flying around

- ⊘ **Never** work without the saw blade guard mounted.
- ▶ Wear protective goggles.

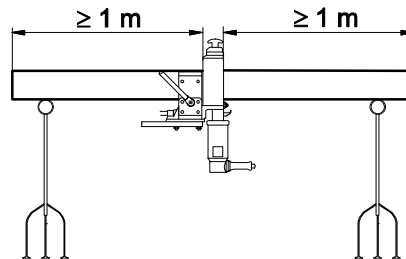
Important

If the pipe cutter was out of operation for a longer time:

- Turn the cutter motor by 180°.
- Switch on the pipe cutter and let the cutter motor run for about 10 seconds.

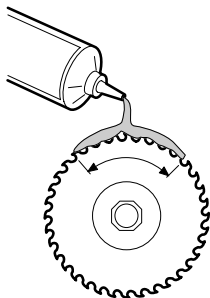
This will lubricate all gear components.

1. Set the pipe diameter (see chapter 7.3, p. 16).
2. Adjust the length gauge (see chapter 7.5, p. 20).
3. Adjust the saw blade (see from chapter 7.3.1, p. 17).
4. Tighten the hexagon nut of the saw blade fixture, if necessary (see chapter 7.1, p. 15).
5. Set the spindle speed (see chapter 7.6, p. 21).
6. Push the pipe through the vice up to the desired length and clamp it. Support pipes with a length of more than 1 m using a pipe supporting device or an auxiliary place of deposit (see chapter 7.3, p. 16).



Important

Pull off the vice handle from the spindle before the slide housing starts rotating.



7. Apply saw blade lubricant to the saw blade:

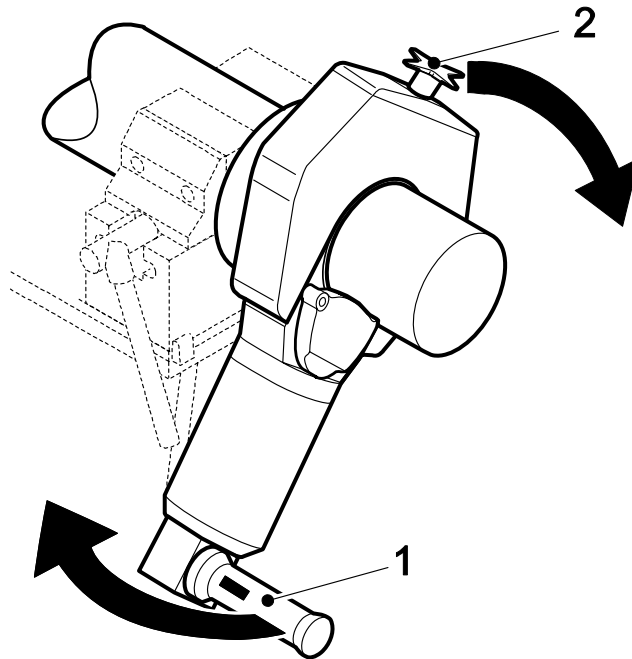
- up to 2": every 3 cuts,
- over 2" and with chrome and high-quality steel pipes: after every cut.

Important: If the pipe will get in contact with drinking water or foodstuffs, only use Orbitalum Tools lubricating gel for saw blades.

Note

For non-stop operation: After cutting, loosen the hexagon nut on the saw blade to avoid damage caused by tension.

8. Switch the pipe cutter on.
9. Carefully turn the motor by the pistol grip (1) and hand wheel (2) clockwise until the wall of the tube has been pierced through.



10. Continue turning rapidly until the pipe has been cut off.
11. Switch off the motor and allow the machine to run a stop.

7.8 Beveling the pipe



WARNING

Danger of being injured by chips flying around

- ⊘ **Never** work without the saw blade guard mounted.
- ▶ Wear protective goggles.

Important

If the pipe cutter was out of operation for a longer time:

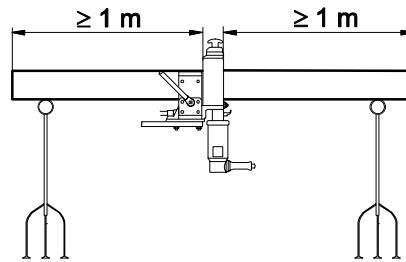
- Turn the cutter motor by 180°.
- Switch on the pipe cutter and let the cutter motor run for about 10 seconds.

This will lubricate all gear components.

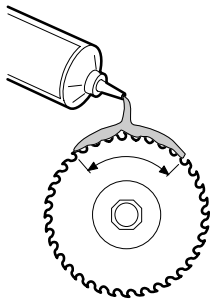
1. Set the pipe diameter (see chapter 7.3, p. 16).
2. Adjust the bevel cutter (see chapter 7.4, p. 19).
3. Tighten the hexagon nut of the saw blade fixture, if necessary (see chapter 7.1, p. 15).
4. Set the spindle speed (see chapter 7.6, p. 21).

5. Push the pipe through the vice up to the bevel cutter and clamp it.

Note Pull off the vice handle from the spindle before the slide housing starts rotating.



Important Pull off the vice handle from the spindle before the slide housing starts rotating.



6. Apply saw blade lubricant to the bevel cutter:

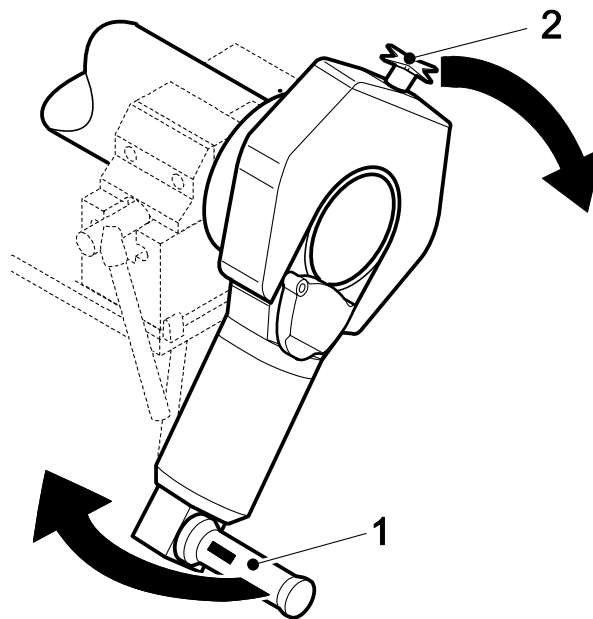
- up to 2": every 3 cuts,
- over 2" and with chrome and high-quality steel pipes: after every cut.

Important: If the pipe will get in contact with drinking water or foodstuffs, only use Orbitalum Tools lubricating gel for saw blades.

Note For non-stop operation: after beveling, loosen the hexagon nut on the bevel cutter to avoid damage caused by tension.

7. Switch the pipe cutter on.

8. Carefully turn the motor by the pistol grip (1) and hand wheel (2) clockwise until the wall of the tube has been pierced through.



9. Continue turning rapidly until the bevel is complete.

10. Switch off the motor and allow the machine to run a stop.

7.9 Simultaneous cutting and beveling

Pipes up to a wall thickness of 4.5 mm can be simultaneously cut and beveled.

If using an additional cutter, turn the motor more slowly around the pipe than you would during normal cutting, as two tools are being used at the same time. The working procedure is the same as described in chapter 7.8, p. 23.

Note If necessary, lubricate the saw blade and additional cutter again during work. For non-stop operation: After cutting, loosen the hexagon nut on the saw blade to avoid damage caused by tension.

7.10 Cutting hard plastic pipes



WARNING

Danger of being injured by chips flying around

- ⊙ **Never** work without the saw blade guard mounted.
- ▶ Wear protective goggles.

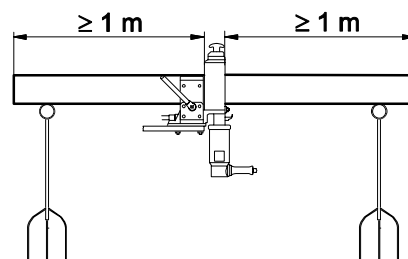
Important If the pipe cutter was out of operation for a longer time:

- Turn the cutter motor by 180°.
- Switch on the pipe cutter and let the cutter motor run for about 10 seconds.

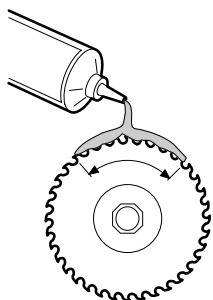
This will lubricate all gear components.

1. Set the pipe diameter (see chapter 7.3, p. 16).
2. Adjust the length gauge (see chapter 7.5, p. 20).
3. Adjust the saw blade (see from chapter 7.3.1, p. 17).
4. Tighten the hexagon nut of the saw blade fixture, if necessary (see chapter 7.1, p. 15).
5. Set the spindle speed (see chapter 7.6, p. 21).
6. Push the pipe through the vice up to the bevel cutter and clamp it.

Note Use a support for pipes that are more than 1 m long.



Important Pull off the vice handle from the spindle before the slide housing starts rotating.



7. Apply saw blade lubricant to the saw blade:

- up to 2": every 3 cuts,
- over 2" and with chrome and high-quality steel pipes: after every cut.

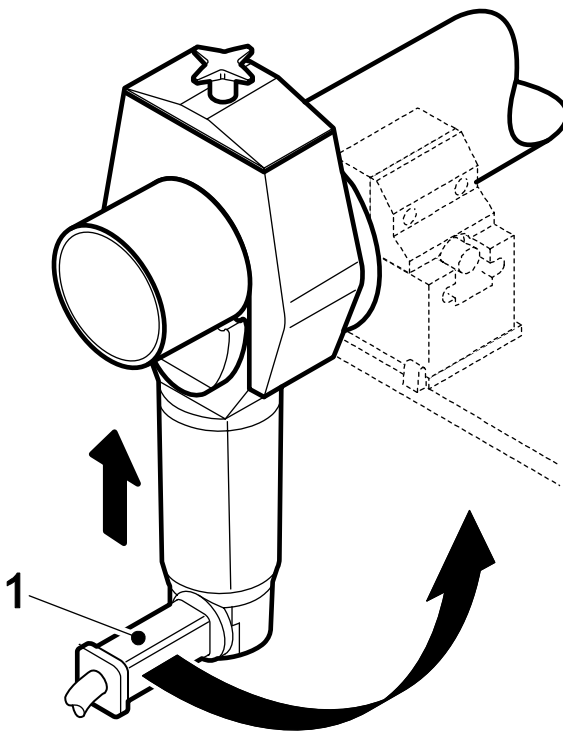
Important: If the pipe will get in contact with drinking water or foodstuffs, only use Orbitalum Tools lubricating gel for saw blades.

Note For non-stop operation: After cutting, loosen the hexagon nut on the saw blade to avoid damage caused by tension.

8. Switch the pipe cutter on.

Up to 2.5 mm wall thickness:

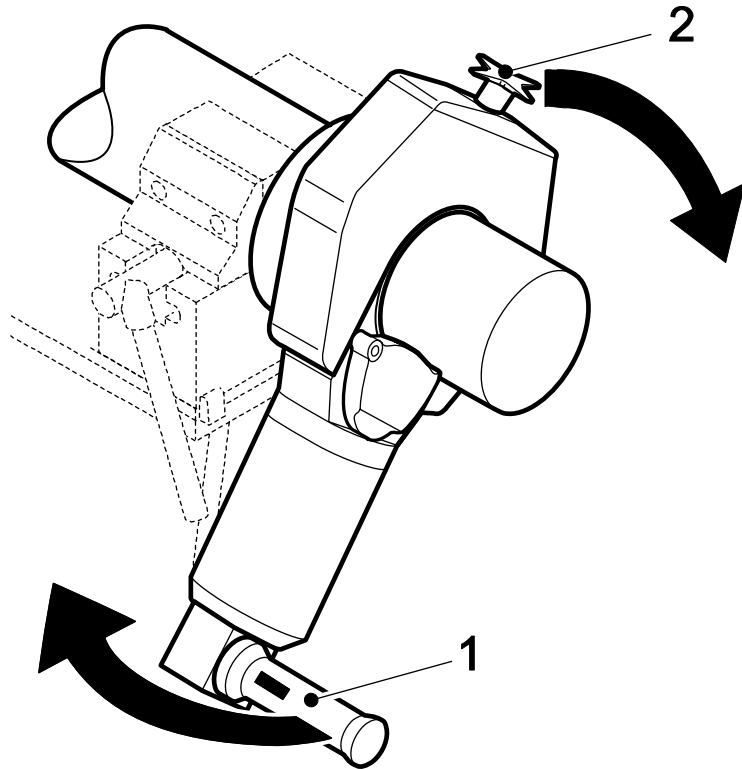
1. Lift the saw motor by the pistol grip (1) until the saw blade has pierced through the pipe wall.



2. Turn the pipe cutter **counterclockwise** until the pipe has been cut off.
3. Switch off the motor and allow the machine to run a stop.

2.5 mm wall thickness or above:

1. Carefully turn the motor by the pistol grip (1) and hand wheel (2) clockwise until the pipe wall has been pierced through.



2. Continue to turn rapidly until the pipe has been cut off.
3. Switch off the motor and allow the machine to run a stop.

8 Maintenance

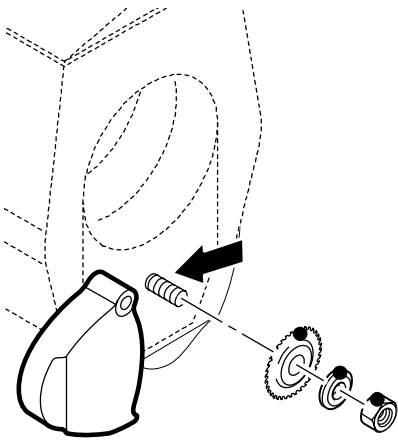
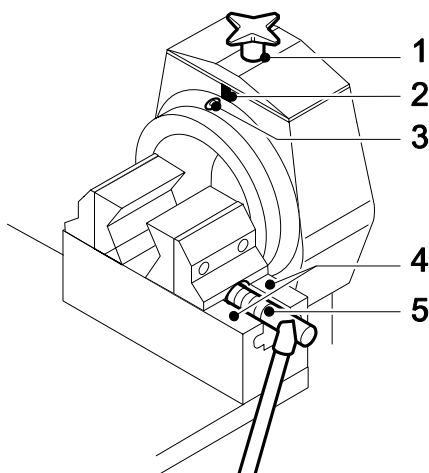
The pipe cutter was designed for a long service life and low maintenance. Please follow the maintenance instructions below.



DANGER

Danger of death by electric shock

- ▶ Pull the mains plug before carrying out any maintenance work.

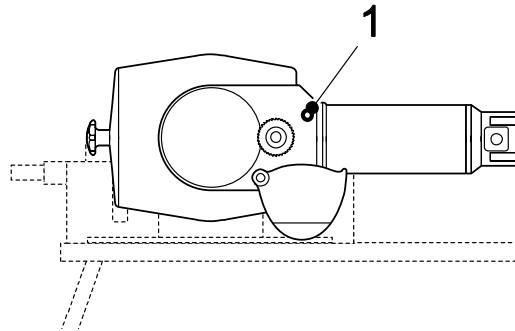
Interval	Activity
Before starting work	<ul style="list-style-type: none"> ▶ Remove chips and dirt from the saw blade. ▶ Keep the vent holes free from chips.
Every time the cutter is cleaned Every time the tool is changed	<ul style="list-style-type: none"> ⊘ Do not use compressed air to clean the area at the end of the shaft marked with an arrow as the rotary shaft seal may otherwise be damaged by chips. ▶ Use a cloth or brush to clean the end of the shaft. 
Every week	<ul style="list-style-type: none"> ▶ Clean and oil: <ul style="list-style-type: none"> • the spindle of the hand wheel (1) • the sliding block (2) • the guide bush (3) • the vice tracks (4) • the vice spindle (5) ▶ Check the oil level of the gear and top up, if necessary (see chapter 8.1, p. 29). 

8.1 Checking the oil level of the gear and topping up

8.1.1 Pipe Cutting and Beveling Machine RA 2

Important The pipe cutter must be mounted on the work bench when the oil is checked.

1. Turn the motor 90° counterclockwise.
2. Remove the oil filler screw (1).



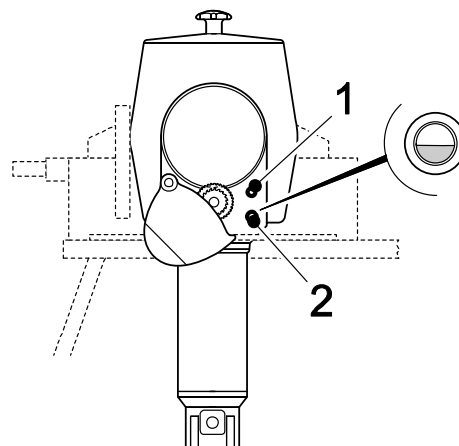
3. If no oil runs out of the filling opening, top up with special Orbitalum Tools gear oil.
4. Replace and tighten the oil filler screw.

Important The oil will have to be topped up if an RA H intermediate gear is fitted.

8.1.2 Pipe Cutting and Beveling Machines RA 4, RA 6, RA 8 and RA 12

The gears of pipe cutters RA 4 to RA 12 have an oil level inspection glass. The oil level should be visible in the middle of the inspection glass.

1. Check the oil level at the inspection glass (2) and top up if necessary.
2. Unscrew the oil filler screw (1). Fill with special Orbitalum Tools gear oil.

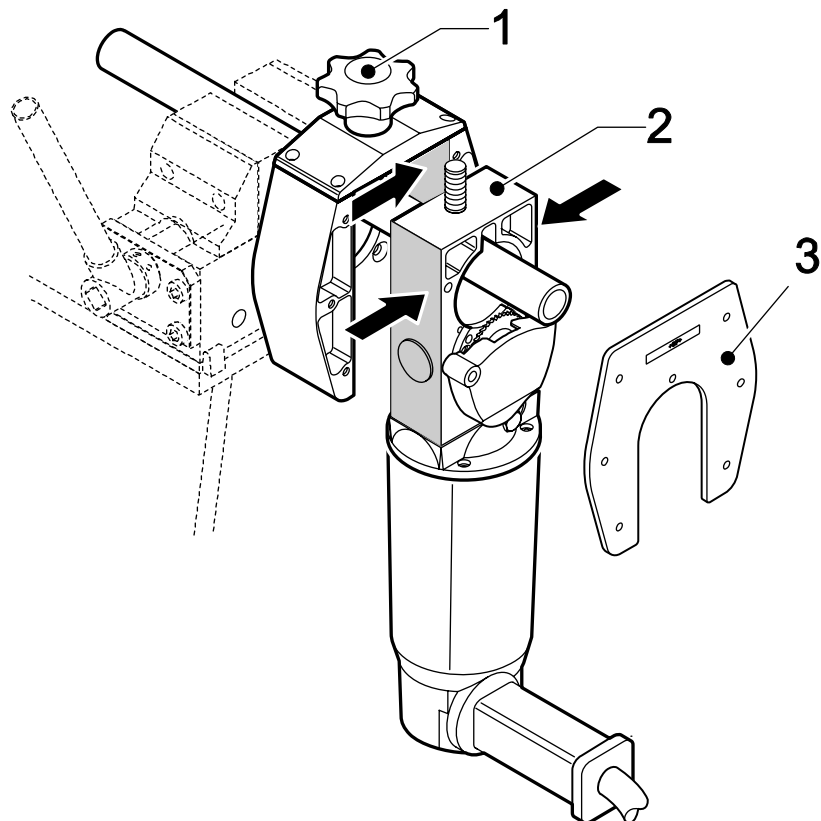


3. Replace and tighten the oil filler screw.

Important The oil will have to be topped up if an RA H intermediate gear is fitted.

8.2 Cleaning the guide

1. Clamp in a suitable pipe.
2. Remove the cover plate (3). Use the hexagon Allen key.
3. Turn the slide (2) all the way down using the hand wheel (1).
4. Pull the slide (2) out towards the front.



5. Clean the guides of the slide housing and slide. Oil both parts with HD 30 engine oil.
6. Reassemble the pipe cutter.

9 What to do if ...?

9.1 General trouble-shooting

In the following table you will find possible causes of faults and the appropriate remedies.

Problem	Possible cause	Remedy
The motor is not running.	The overload protection relay has tripped.	▶ Set the switch to "0", wait about 15 minutes, and then switch the pipe cutter back on.
	The restart inhibitor has tripped.	▶ Set the switch to "0", then switch the pipe cutter back on.
The pipe cutter will not turn.	Pipe diameter not correctly set.	▶ Set the pipe diameter correctly (see from chapter 7.3, p. 16).
Saw blade is not cutting and is slipping.	Hexagon nut on the saw blade shaft not tightened.	▶ Tighten hexagon nut.
Saw blade is not cutting.	Saw blade mounted wrong way round.	▶ Mount saw blade correctly. Labeling on the saw blade must be legible.
Pipe diameter cannot be set.	Slide guide is dirty.	▶ Clean the slide guide (see chapter 8.2, p. 30).

9.2 Servicing/after-sales service

For ordering spare parts, see the separate spare parts list.

For trouble shooting, please contact your competent branch office directly.
You will find the addresses on the back page of these operating instructions.

Please state the following details:

- Machine type: **RA 2, RA 4, RA 6, RA 8** or **RA 12**
- Machine number: (*see identification plate*)

Orbitalum Tools GmbH
Freibühlstraße 19
78224 Singen, Deutschland
Tel. +49 (0) 77 31 / 792-0
Fax +49 (0) 77 31 / 792-500
tools@orbitalum.com
www.orbitalum.com

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