Operating Instructions

Bead Bending Machine

SBM 110-08

SBM 140-12

SBM 110-08

SBM 140-12

SBM-SERIES

Imprint

Product identification

Bead Bending Machine	Item number
SBM 110-08	3814001
SBM 140-12	3814002

Manufacturer

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Information about the operating instructions

Genuine operating instructions

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Copyright information

Contents

1 Introduction

You have made an excellent choice in purchasing a METALLKRAFT bead bending machine.

Carefully read the operating instructions prior to commissioning.

They describe correct commissioning, intended use and safe as well as efficient operation and maintenance of the bead bending machine.

The operating instructions form part of the bead bending machine. Always keep them at the bead bending machine´s location of use. Please also observe the local accident prevention regu-lations and general safety regulations for the use of the bead bending machine.

1.1 Copyright

The contents of these operating instructions are protected by copyright. Their use is permitted within the context of using the bead bending machine. Any further use shall not be permitted without written consent by the manufacturer.

To protect our products, we register our rights to our brands, patents and designs where possible in each individual case. We take strong action against any violation of our intellectual property.

1.2 Customer service

Please contact your specialist retailer if you have any questions regarding your bead bending machine or require any technical information. Your specialist retailer will be happy to support you with specialist advice and information.

Germany:
Stürmer Maschinen GmbH
Dr.-Robert-Pfleger-Str. 26
D-96103 Hallstadt

Repair service:
Fax: 0049 (0) 951 96555-111
E-Mail: service@stuermer-maschinen.de
Internet: www.metallkraft.de

Spare parts orders:
Fax: 0049 (0) 951 96555-119
E-Mail: ersatzteile@stuermer-maschinen.de

Please submit any information and experiences you make during application of the machine as these may be valuable for product improvements.

1.3 Limitation of liability

All data in this operation manual has been compiled on the basis of the state-of-the-art, valid standards and guidelines as well as our many years of expertise and experience.

The manufacturer shall not be liable for damage in the following cases:

- Failure to comply with the operation manual,
- Unintended use
- Deployment of untrained staff
- Conversions at one's own responsibility
- Technical modifications
- Use of unauthorised spare parts

The actual scope of delivery may deviate from the descriptions and illustrations in this document as a result of special variants, optional extras or recent, technical modifications.
The obligations defined in the supply con-tract shall apply in addition to the general terms and conditions and the manufacturer's general terms and conditions as well as the statutory regulations valid at the time of the conclusion of the contract.

2 Safety

This section provides an overview of all important safety packages for personal protection as well as safe and reliable operation. The individual sections contain additional, taskspecific safety information.

2.1 Legend of symbols

Safety instructions

Safety instructions in this operation manual have been highlighted with symbols. Safety instructions are indicated by signal terms that express the degree of risk involved.

DANGER!

This combination of symbol and signal term indicates a potentially dangerous situation which may cause death or serious injury if not averted.

WARNING!

This combination of symbol and signal term indicates a immediate dangerous situation which may cause death or serious injury if not averted.

ATTENTION!

This combination of symbol and signal term indicates a potentially hazardous situation which may cause minor or light injuries if it is not averted.

CAUTION!

This combination of symbol and signal word indicates a potentially dangerous situation. It will result in death or serious injury if not avoided.

NOTE!

This combination of symbol and signal term indicates a potentially dangerous situation which may cause material damage or harm the environment if it is not averted.

Tips and recommendations

Tips and recommendations

This symbol highlights useful tips and recommendations as well as information for efficient and reliable operation.

Observe the safety information in these operating instructions to minimise the risk of personal injury as well as material damage and prevent hazardous situations.

2.2 Operating staff qualification

The different tasks described in these operating instructions require different levels of skills in terms of the qualifications of operating staff working with the machine.

WARNING!

Risk from inadequately qualified persons!

Inadequately qualified persons are unable to assess the risks when handling the machine, thus putting themselves and others at risk of severe injuries.

- All work must be carried out by qualified persons only.
- Keep inadequately qualified persons and children away from the work area.

Exclusively persons of whom it can be expected that they reliably complete assigned tasks shall be authorised to carry out any tasks. Persons whose reactions have been impaired shall not be authorized, e.g. drug users, users under the influence of alcohol or medication.

These operating instructions specify the following personal qualifications for the different tasks:

Operating staff:

Operating staff has undergone an induction by the operator about the entrusted tasks and potential hazards resulting from improper behaviour. Tasks which go beyond normal operation may only be carried out by the operator if they are listed in the operation manual and the operator has made him/herself familiar with them.

Qualified electrician:

Due to the electrician's specialised training, know-how, experience and knowledge of pertinent standards and regulations the electrician is in a position to work on the electrical systems, and autonomously identify and avoid potential hazards.

Specialist staff:

As a result of specialist training, expertise, experience and skills in terms of the relevant standards and regulations, specialist staff is able to complete the tasks they are entrusted with and independently identify hazards and avert risks.

Manufacturer:

Certain work must be carried out by manufacturer specialist staff only. Other staff is not permitted to carry out this work. Contact our customer service to have the work carried out.

2.3 Personal protective equipment

Personal protective equipment is intended to protect the health and safety of persons at work. Staff must wear the personal protective equipment indicated in individual sections of these operating instructions when carrying out the different tasks on the machine.

The personal protective equipment is described in the following section:

Protective gloves

The protective gloves prevent the hands from sharp-edged components, as well as from friction, abrasions or deeper injuries.

Safety boots

The safety boots protect the feet from crushing, falling parts and slipping on slippery underground.

Protective clothes

The protective clothing is tight-fitting clothing with low tear resistance.

2.4 Norms and directives

The basic safety and health requirements of the applicable laws, standards and directives were applied in the design. The safety of the machine is documented by the CE marking and the declaration of conformity.

All information on safety refers to the currently valid regulations of the European Community. In other countries, the applicable laws and national regulations must be observed.

In addition to the safety instructions in these operating instructions, the generally applicable regulations for accident prevention and environmental protection must be observed and adhered to.

2.5 General safety instructions

WARNING!

Danger in case of misuse!

The bead bending machine may only be operated in a technically perfect condition. Any faults must be rectified immediately. Unauthorised modifications to the bead bending machine or improper use of the bead bending machine as well as non-compliance with the safety regulations or the operating instructions exclude the manufacturer's liability for any resulting damage to persons or objects and invalidate the warranty claim!

ATTENTION!

The instructions for use and maintenance must be read carefully before starting, using, servicing or otherwise working on the machine. Handling and working with the machine is only permitted to persons who are thoroughly familiar with the handling and mode of operation of the machine.

WARNING!

Repairs, maintenance and upgrades may only be carried out by qualified personnel with the machine secured!

Please note the following:

1. Despite compliance with all working instructions, safety and accident prevention regulations, there is still a residual risk when handling the machine. You can reduce the residual risk by working and acting with concentration and foresight.

2. The machine may only be operated and maintained by persons who have read and understood these operating instructions. The operator must be adequately trained in application, adjustment and operation.

3. If you give this machine to others, you must hand over all tools and documents supplied with the machine.

4. Never open the protective covers by hand while you are working with the machine.

5. Keep the workplace and the floor around the machine free from any objects that could endanger your stability or pose a risk of tripping. Keep the workplace tidy. Disorder can result in accidents.

6. Check the danger area before and during work to ensure that no unauthorised persons are located there. Do not allow other persons, especially children, to touch the machine.

7. Only use the machine in dry rooms or in a dry environment and ensure that the working area is adequately illuminated.

8. Protect your workplace from rain, wet and humidity.

9. Take care of the machine. Keep the bending machine functional and clean in order to be able to work with it well and safely in the long term. Observe the instructions for maintenance and servicing.

10. At the end of its service life, the machine and all replaced wear and spare parts, as well as all consumables, such as lubricants, must be disposed of in accordance with environmental and regulatory requirements.

2.6 Safety instructions for the protection of persons

Please note the following:

1. Do not operate the machine if you are not concentrated.

2. operating or maintaining the machine is prohibited for persons under 16 years of age or for persons under the influence of alcohol, drugs or medication.

3. Inform yourself about the type of material to be machined before you start machining. If necessary, take appropriate precautions.

4. Always wear safety glasses when working with the machine. It is forbidden to wear loose clothing (ties, neck shawls, open jackets and clothing that does not fit tightly). There is a risk of injury from getting caught or being drawn into moving machine parts. A hair net must be worn for long hair.

5. Protect yourself from noise by wearing suitable and approved hearing protection.

6. Profiles can be sharp-edged. Wear protective gloves if necessary. Pay attention to your posture and keep your balance at all times. Wear work shoes to increase your stability. Wear appropriate work clothing.

2.7 Safety instructions for the use of tools

Please note the following:

1. Use only bending rollers that are not deformed or damaged.

2. Only use original bending rollers.

3 Replace deformed and damaged bending rollers immediately. Use of the machine is prohibited until the bending rollers have been replaced.

4. Always use bending rollers adapted to the workpiece.

5. Only use bending rollers with suitable sizes.

6. Check the drive components of the bending rollers for contamination. Clean the clamping area of the bending rollers before assembly.

2.8 Safety Instructions for processing

Please note the following:

1. Use the machine only for carrying out the intended work.

2. Do not use the machine for purposes for which it is not intended, such as bending brittle materials.

3. Observe the maximum dimensions of the workpieces specified in the technical data (see chapter "Technical data").

4. Do not overload the machine. It works better and safer in the specified performance range. Do not use the machine for heavy work that requires a more powerful machine.

5. Check the stability of the machine and the secure bolting to the foundation.

6. Note that the use of tools and accessories other than those recommended by the manufacturer may result in injury.

7. Do not leave any tools inserted. Before switching on, check that all repair and adjustment tools have been removed.

8. Do not leave the machine unattended during machining and keep a sufficient safety distance from the moving machine parts.

9. Only start the machine if the bending rollers can run freely.

10. If the bending rollers are blocked during machining by clamping the workpiece, stop the machine.

11. Workpieces may only be clamped or removed when the bending rollers have come to a complete standstill.

2.9 Safety measures for maintenance and servicing

Please note the following:

1. During maintenance and repair work, always switch off the machine at the main switch and take suitable measures to secure it against being switched on again by unauthorised persons.

2. After maintenance, repair and cleaning work, check that all covers and protective devices have been properly installed on the machine and that no tools are left inside the machine or in the machining area.

3. Damaged safety devices, machine parts and switches must be replaced or repaired by an approved specialist workshop.

4. Only original spare parts may be used. Otherwise there is a risk of accident for the operator.

2.10 Safety label on the beading machine

A safety label is attached to the bead bending machine which must be observed and followed. The safety marking placed on the bead bending machine must not be removed. Damaged or missing safety markings can lead to wrong actions, personal injury and material damage. They must be replaced immediately. If the safety marking is not immediately visible and understandable, the bead bending machine must be taken out of operation until the new safety marking has been affixed.

Fig. 1: Safety label - Rotating parts

3 Intended use

The bead bending machine SBM 110-08 and SBM 140-12 is a manually operated bending machine. The machine may only be used as described in this manual. The bead bending machine is designed for beading and flanging up to a maximum sheet thickness of 0,8 and 1,2 mm. It may only be operated by persons who have been trained and instructed in the use and maintenance of bead bending machines.

Intended use also includes compliance with all information in these instructions. Any use beyond the intended use or any other use is considered misuse. Any use of the bead bending machine in other areas and for other purposes is considered to be contrary to the intended purpose. Stürmer Maschinen GmbH assumes no liability for constructive and technical changes to the bead bending machine. Claims of any kind due to damage due to improper use are excluded.

WARNING!

Risk of misuse!

Misuse of the bead bending machine can lead to dangerous situations.

- Only operate the bead bending machine in the power range specified in the technical data.
- Never bypass or override the safety devices.
- Never work on other materials than specified in the intended use.
- Only operate the bead bending machine in a technically perfect condition.

3.1 Residual risks

Even if all safety regulations are observed and the machine is used correctly, there are still residual risks, which are listed below:

- There is a risk of injury to the upper limbs (e.g. hands, fingers).
- Danger from falling workpieces.

3.2 Technical state

The design and construction of the machine comply with the current state of the art and are built in accordance with the recognized safety regulations. CE conformity expressly refers only to the machine as delivered.

Please note the following:

1. The functionality of the protective covers and guards must be ensured.
2. Any manipulation of protective covers and other safety devices is prohibited.
3. Before each use, the machine should be checked for externally visible damage.
4. In the event of safety-relevant deviations from the delivery condition, the machine must be inspected and, if necessary, repaired by an authorised specialist.
5. From the time when the machine no longer corresponds to the regular operating condition, the bead bending machine must be taken out of operation until it is repaired.

WARNING!

Danger!

Unauthorized rebuilds or modifications, especially those that affect the safety of the machine operator, are strictly prohibited.

Technical modifications, rebuilds and extensions made to the machine by the user may invalidate the CE conformity of the machine and are the responsibility of the operator.

ATTENTION!

The manufacturer reserves the right to make changes to the characteristics of the product at any time and without prior notice in the interests of technical development or changing regulations.

4 Technical Data

4.1 Table

Model	SBM 110-08	SBM 140-12
Roller length	110 mm	140 mm
Max.sheet thickness*	0,80 mm	1,2 mm
Roller Ø	52 mm	62 mm
Collar width	80 mm	100 mm
Weight	30 kg	50 kg
Dimensions L x W x H	380 x180 x 380 mm	560 x 220 x 500 mm

*Performance data related to material with tensile strength 100N/mm²

4.2 Type plate

Fig. 2: Type plate SBM 110-08

4.3 Scope of delivery

SBM 110-08

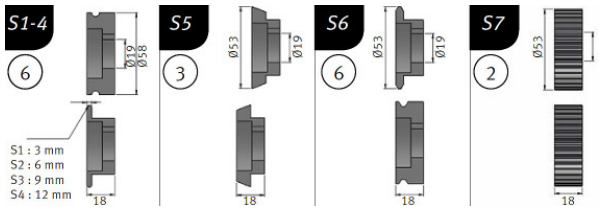

Fig. 3: Standard rollers

SBM 140-12

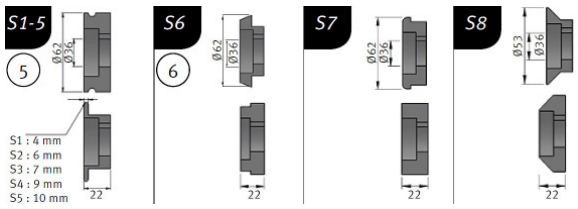

Fig. 4: Standard rollers

4.4 Accessories (not included)

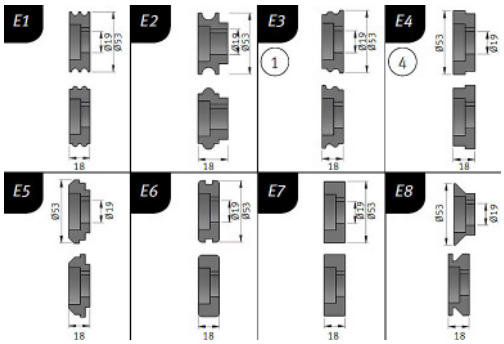

Fig. 5: Accessories rollers for SBM 110-08

Description	Art. Nr.
Bending rollers type E1	3880121
Bending rollers type E2	3880122
Bending rollers type E3	3880123
Bending rollers type E4	3880124
Bending rollers type E5	3880125
Bending rollers type E6	3880126
Bending rollers type E7	3880127
Bending rollers type E8	3880128

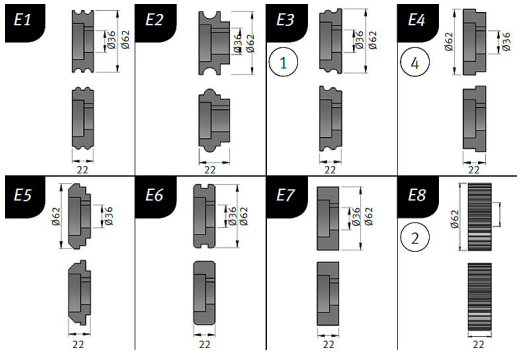

Fig. 6: Accessories rollers for SBM 140-12

Description	Item. Nr.
Bending rollers type E1	3880131
Bending rollers type E2	3880132
Bending rollers type E3	3880133
Bending rollers type E4	3880134
Bending rollers type E5	3880135
Bending rollers type E6	3880136
Bending rollers type E7	3880137
Bending rollers type E8	3880138

5 Transport, packaging and storage

5.1 Delivery and transport

5.1.1 Delivery

After delivery, check the bead bending machine for visible transport damage. If the bead bending machine shows any damage, this must be reported immediately to the transport company or the dealer.

All packaging must be removed; the corresponding instructions in this operating manual for installation must be read. Possible transport damage must be immediately documented photographically for the purpose of insurance benefits.

To avoid accidents, the necessary precautions must be taken when unloading and transporting the machine. See the chapter on safe handling of this machine.

5.1.2 Transport

ATTENTION!

When transporting and lifting the bead bending machine make sure that the transport and lifting equipment can support the load.

WARNING!

Risk of fatal injury!

If the weight of the machine and the permissible load capacity of the lifting equipment are not observed during transport or lifting work, the machine may tip over or fall.

5.2 Packaging

All packaging materials and packaging aids used in the machine are recyclable and must always be recycled.

Cardboard packaging components must be shredded for collection of waste paper.

The foils are made of polyethylene (PE) and the upholstery parts made of polystyrene (PS). These substances must be handed over to a recycling center or to the responsible disposal company.

5.3 Storage

The bead bending machine must be thoroughly cleaned before it is stored in a dry, clean and frost-free environment.

5.4 Placement

Use protective gloves!

Wear safety boots!

CAUTION!

Danger of crushing!

The bead bending machine can tilt during installation and lead to serious injuries.

In order to achieve good functionality and a long service life of the bead bending machine, the installation site should meet the following criteria:

- The underground must be even, solid and vibration-free.
- The machine should be firmly anchored to ensure a safe stand.
- There must be sufficient space for the operating personnel, for material transport and for adjustment and maintenance work.

6 Description of device

Operating elements

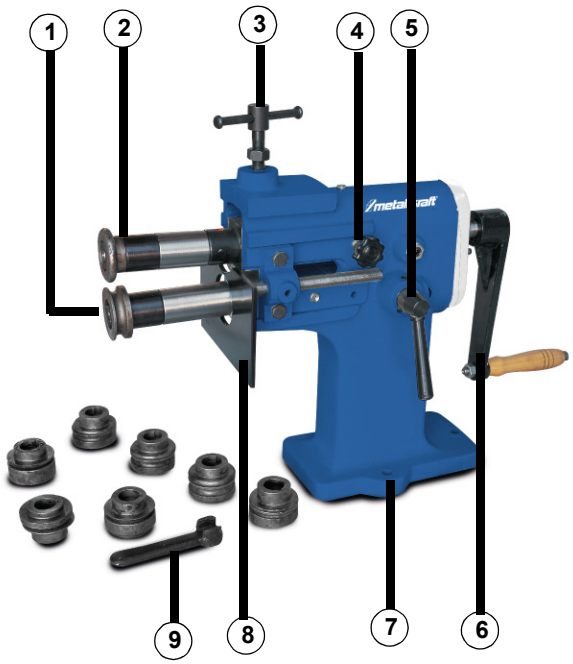

Fig. 7: Description SBM 140-12

1. Bending roller (right-hand thread)
2. Bending roller (left hand thread)
3. Height adjustment
4. Locking screw
5. Lever „longitudinal adjustment“
6. Drive lever of the bending rolls
7. Anchoring boring hole
8. Stop plate
9. Tool for changing the rollers

7 Description of the roller sets

7.1 Roller set S1 to S5

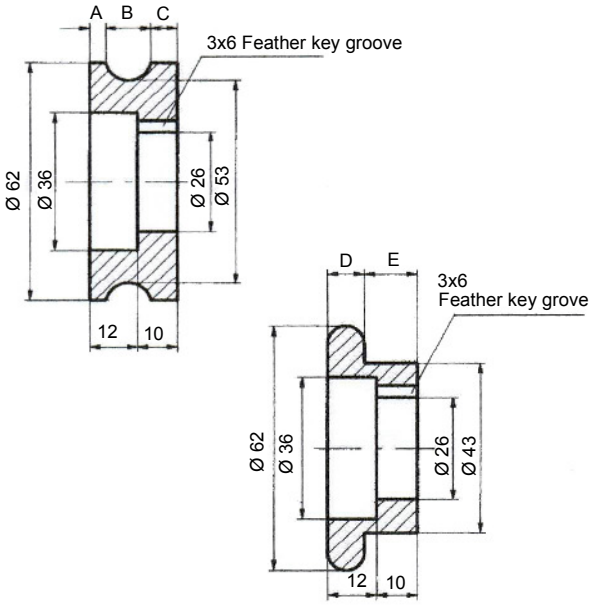

Fig. 8: Dimensions of rollers S1-S5

Description		S1	S2	S3	S4	S5
A	mm	3	3,5	4	4	4
B	mm	6,4	8,4	9,4	11,4	12,4
C	mm	12,6	10,1	8,6	6,6	5,6
D	mm	4	6	7	9	10
E	mm	18	16	15	13	12

The dimensions of the standard bending roller sets are listed in the table. This means S1 for roller set 1, S2 for roller set 2, etc.

7.2 Roller set S6

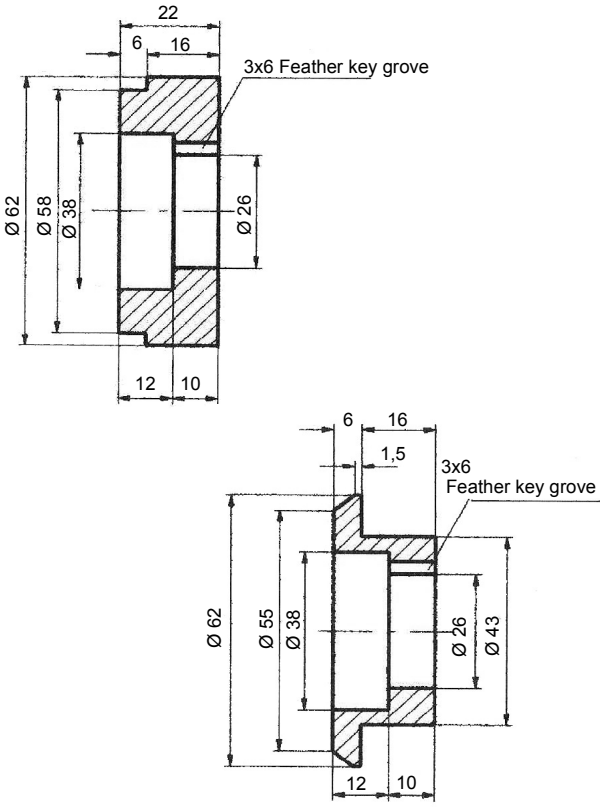

Fig. 9: Dimensions of roller set S6

7.3 Roller set S7

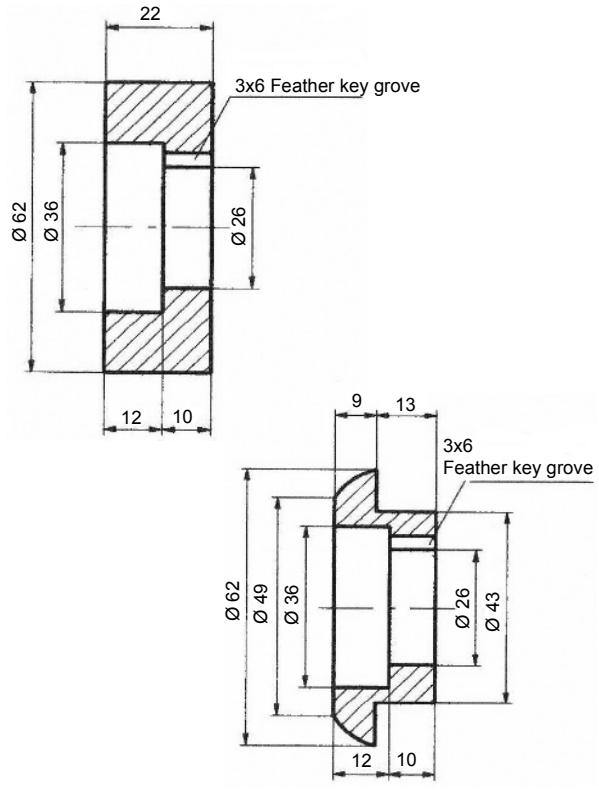

Fig. 10: Dimensions of roller set S7

7.4 Roller set S8

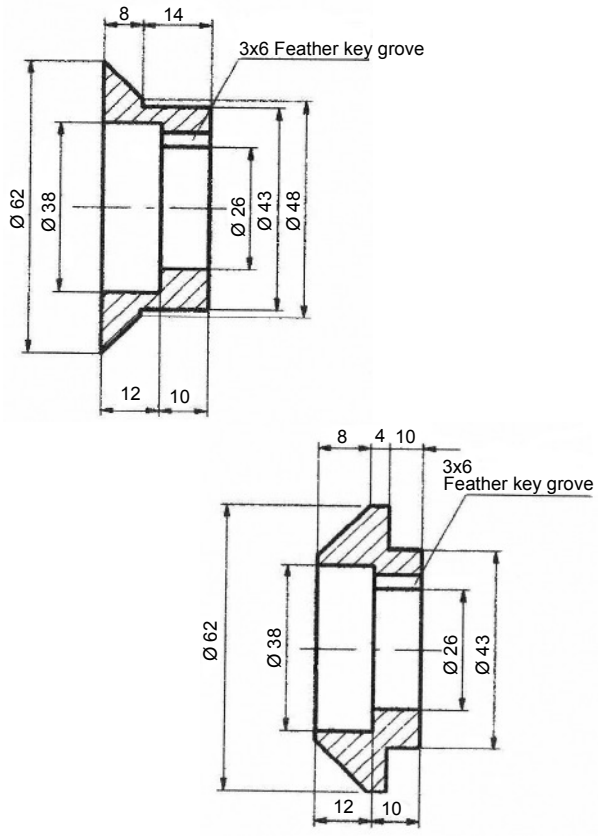

Fig. 11: Dimensions of roller set S8

8 Replacing the rollers

Step 1: Move the upper drive shaft a little upwards using the toggle screw so that the rollers are free and can be removed.

Step 2: Open the two fixing nuts from the bending rollers. Use the special key provided for this purpose.

ATTENTION!

The thread on the upper roller is a right-hand thread and the thread on the lower roller is a left-hand thread.

Step 3: Pull off the two rollers and mount the the ones they want..

ATTENTION!

To prevent the upper and lower rollers from being interchanged, the shaft diameters are different.

Step 4: Tighten the two nuts after mounting the bending rolls.

Step 5: Then pull the rollers to the middle. To do this, open the locking screw of the longitudinal adjustment and adjust the rollers to the middle using the lever on the opposite side.

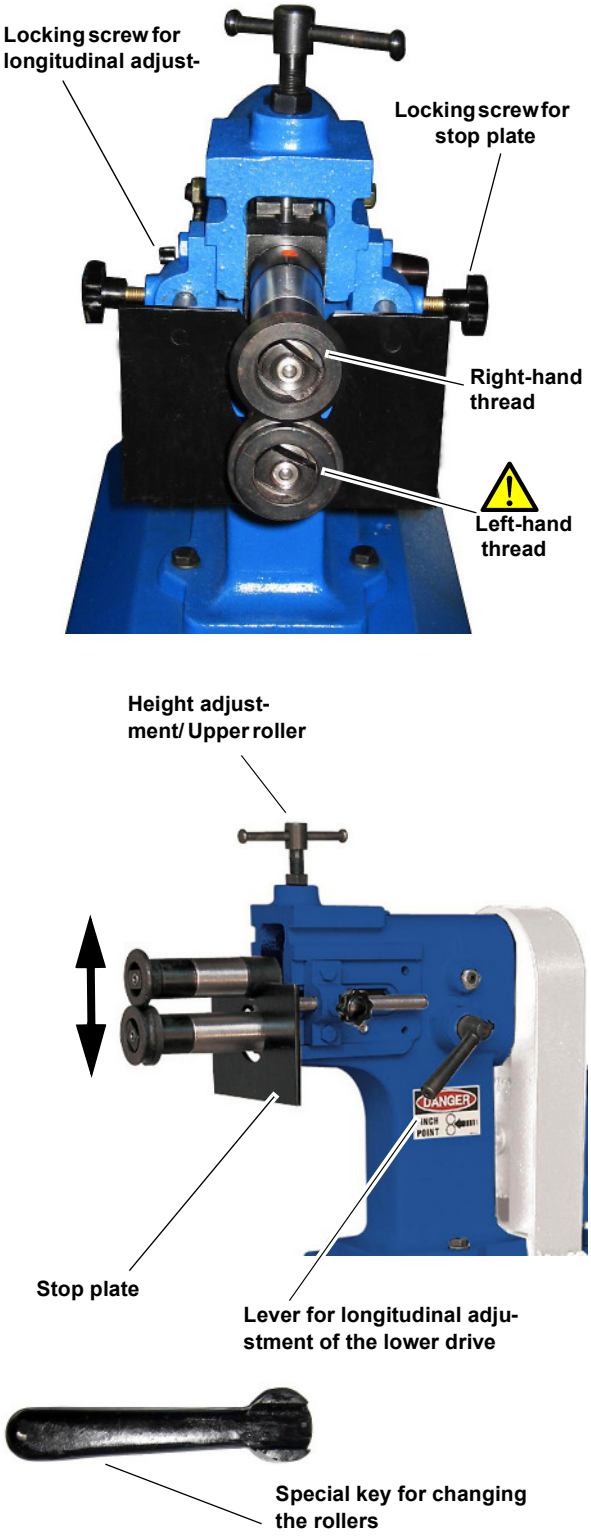

Fig. 12: Replacing the rollers

9 Working with the bead bending machine

Step 1: First of all, the required bending rollers must be mounted. The upper bending roll is secured by a nut with right-hand thread, the lower bending roll by a nut with left-hand thread. These two nuts must be tightened securely after the assembly of the bending rolls to guarantee safe working!

Step 2: To adjust the parallelism of the bending rolls, loosen the locking screw on the left side and adjust the length of the lower shaft using the lever on the right side. After you have aligned the bending rollers, fix the shaft by tightening the locking screw on the left side again.

Step 3: Now adjust the stop plate by loosening the two locking screws on the left and right and moving the stop plate by hand to the desired dimension. Then fix the stop plate again with the two locking screws.

Step 4: Set the maximum infeed by adjusting the upper shaft to the desired dimension using the height adjustment/infeed lever and turning the nut down to the stop.

Step 5: Use the height adjustment lever to move the upper shaft upwards until the material fits between the bending rolls. Push the material up to the stop plate.

Step 6: Now turn the upper shaft down to the stop screw (set in step 4).

Step 7: Move the lever to drive the shafts / rollers in the desired direction and shape your sheet metal.

If it is not possible to the complete infeed in one pass due to high material thickness, this is also possible in several partial steps. Repeat steps 6 to 7 until the desired infeed depth/forming is reached.

10 Care, maintenance and repair/ servicing

Tips and recommendations

Proper and correct maintenance is a prerequisite for maximum service life, good working conditions and machine productivity.

NOTE!

The maintenance instructions must be read carefully before care and maintenance of the bead bending machine. Only persons familiar with the bead bending machine are permitted to use it

DANGER!

Danger if insufficient qualification of persons!

Insufficiently qualified persons cannot assess the risks associated with maintenance work on the machine and expose themselves and other persons to the risk of serious injury.

- Have all maintenance work carried out by qualified personnel only.

After maintenance, repair and cleaning work, check that all covers and protective devices have been properly fitted to the bead bending machine and that no tools are left inside or in the working area of the bead bending machine

10.1 Care by cleaning

Clean the bead bending machine regularly with a soft, damp cloth.

10.2 Lubrication schedule

NOTE!

The bead bending machine must be lubricated at regular intervals to ensure efficient operation and a long service life of the machine.

Fig. 13: Lubrication points

No.	Location	Interval	Lubricant
1	Lubrication bore of the upper shaft	Once a week	Grease
2	Lubrication bore of the lower shaft	Once a week	Grease
3	Gearbox	Once a week	Grease
4	Gearbox	Once a week	Grease

ATTENTION!

The bending rollers of the bead bending machine must never be lubricated or oiled, as otherwise the material could slip through and is not bent. Always keep the bending rolls free of oil and grease. Also make sure that the material to be bent is free of oil, grease and dirt.

The bead bending machine must be lubricated regularly at the points marked in Fig.13 according to the table. If the service life of the machine is more than 8 hours per day, it must be lubricated more often.
Note that some of the lubrication points are located in the machine housing (2 and 3). You may need to remove the covers to get to these points.

11 Troubleshooting

ATTENTION!

If one of the following errors occurs, stop working with the machine immediately. Serious injury could result. All repairs and replacement work may only be carried out by qualified and trained personnel.

Fault	Possible cause	Solution
The bead bending machine does not work.	1. The mechanical system is defective.	1. Check the mechanics. 2. Contact the dealer/manufacturer.
The bead bending machine does not bend the material correctly.	1. The material thickness could be wrong. 2. The wrong material has been used.	1. Observe max. sheet thickness. 2. insert only the correct material.
The machine does not bend the materials as indicated in the catalogue.	1. The material thickness could be wrong. 2. The mechanics are faulty.	1. Check the bending material. 2. Contact the dealer/manufacturer.

12 Disposal, recycling of old equipment

In your own interests and in the interest of the environment, please ensure that all components of the machine are disposed of in the proper and approved way.

12.1 Decommission

Disused equipment must be taken out of service immediately in order to avoid later misuse and endangering the environment or people.

Step 1: Remove all environmentally hazardous fluids from the old unit.

Step 2: If necessary, dismantle the machine into manageable and usable assemblies and components.

Step 3: Guide the machine components and operating materials to the appropriate disposal routes.

12.2 Disposal of new equipment packaging

All packaging materials and packaging aids used in the machine are recyclable and must always be recycled.

The packaging wood can be disposed of or recycled.

Cardboard packaging components can be crushed and sent for waste paper collection.

The films are made of polyethylene (PE) or padded parts of polystyrene (PS). These materials can be reused after processing if they are passed on to a recycling collection point or to the disposal company responsible for them.

Only pass on the packaging material sorted by type so that it can be directly recycled.

12.3 Disposal of the old device

Electrical equipment contains a variety of recyclable materials and environmentally harmful components.

These components must be disposed of separately and properly. In case of doubt, contact the municipal waste disposal department.

If necessary, a specialist waste disposal company should be called upon to help with processing.

12.4 Disposal of lubricants

ATTENTION!

Please ensure that the coolants and lubricants used are disposed of in an environmentally friendly manner. Observe the disposal instructions of your local waste disposal company.

NOTE

Used cooling lubricant emulsions and oils should not be mixed, as only unmixed waste oils can be used without pre-treatment.

The disposal instructions for the lubricants used are provided by the lubricant manufacturer. If necessary, ask for the product-specific data sheets.

12.5 Disposal via municipal collection points

Disposal of used electrical and electronic equipment (to be used in the countries of the European Union and other European countries with a separate collection system for this equipment)

The symbol on the product or its packaging indicates that this product is not to be disposed of as normal household waste, but must be returned to a collection point for the recycling of electrical and electronic equipment. By contributing to the correct disposal of this product, you protect the environment and the health of your fellow human beings. Environment and health are endangered by incorrect disposal. Material recycling helps to reduce the consumption of raw materials. For more information about recycling this product, contact your local community, municipal waste management company or the store where you purchased the product.

13 Spare parts

DANGER!

Risk of injury by using wrong spare parts!

Dangers may result for the user and damages as well as malfunctions may be caused by using wrong or damaged spare parts.

- Only use original spare parts of the manufacturer or spare parts admitted by the manufacturer.
- Always contact the manufacturer in case of uncertainties.

NOTE!

Loss of warranty!

The manufacturer's warranty will become null and void if non admitted spare parts are being used.

13.1 Spare parts order

The spare parts can be obtained from the dealer or directly from the manufacturer. The contact details are in chapter 1.2 Customer Service.

Specify the following key data for inquiries or when ordering spare parts:

- machine type
- item number
- position number
- construction year
- amount
- desired shipping method (post, freight, sea, air, express)
- delivery address

Spare parts orders without above given information can not be considered. If the shipping method is missing, shipping will be at the discretion of the supplier.

Information on the machine type, article number and year of manufacture can be found on the nameplate, which is attached to the machine.

Example

The Crank handle for the Bead Bending Machine SBM 110-08 must be ordered. The Crank handle has the number 36 in the spare parts drawing 1.

By ordering spare parts, send a copy of the spare parts drawing (1) with the marked part (Crank handle) and marked positon number (36) to the dealer or spare parts department and provide the following information:

- Type of machine: Bead Bending Machine SBM 110-08
- Item number: 3814001
- Drawing number: 1
- Position number: 36

The item number of your machine:

Bead Bending Machine SBM 140-12:	**3814002**
Bead Bending Machine SBM 110-08:	**3814001**

13.2 Spare parts drawings

The following drawings should help to identify necessary spare parts in case of service. To order, send a copy of the parts drawing with the marked components to your authorized dealer.

13.2.1Spare parts drawing SBM 110-08

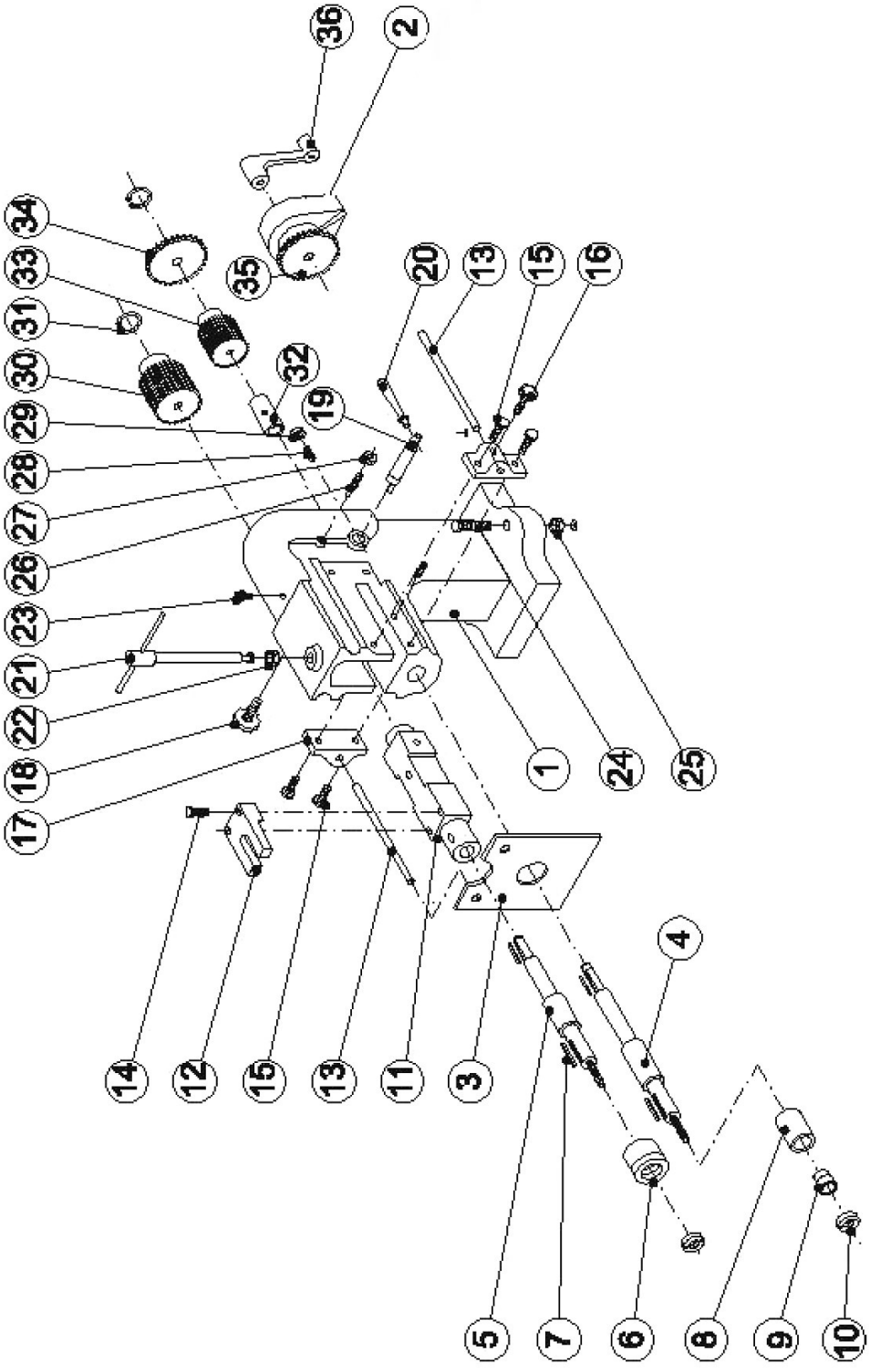

Fig. 14: Spare parts drawing SBM 110-08

13.2.2Spare parts drawing SBM 140-12

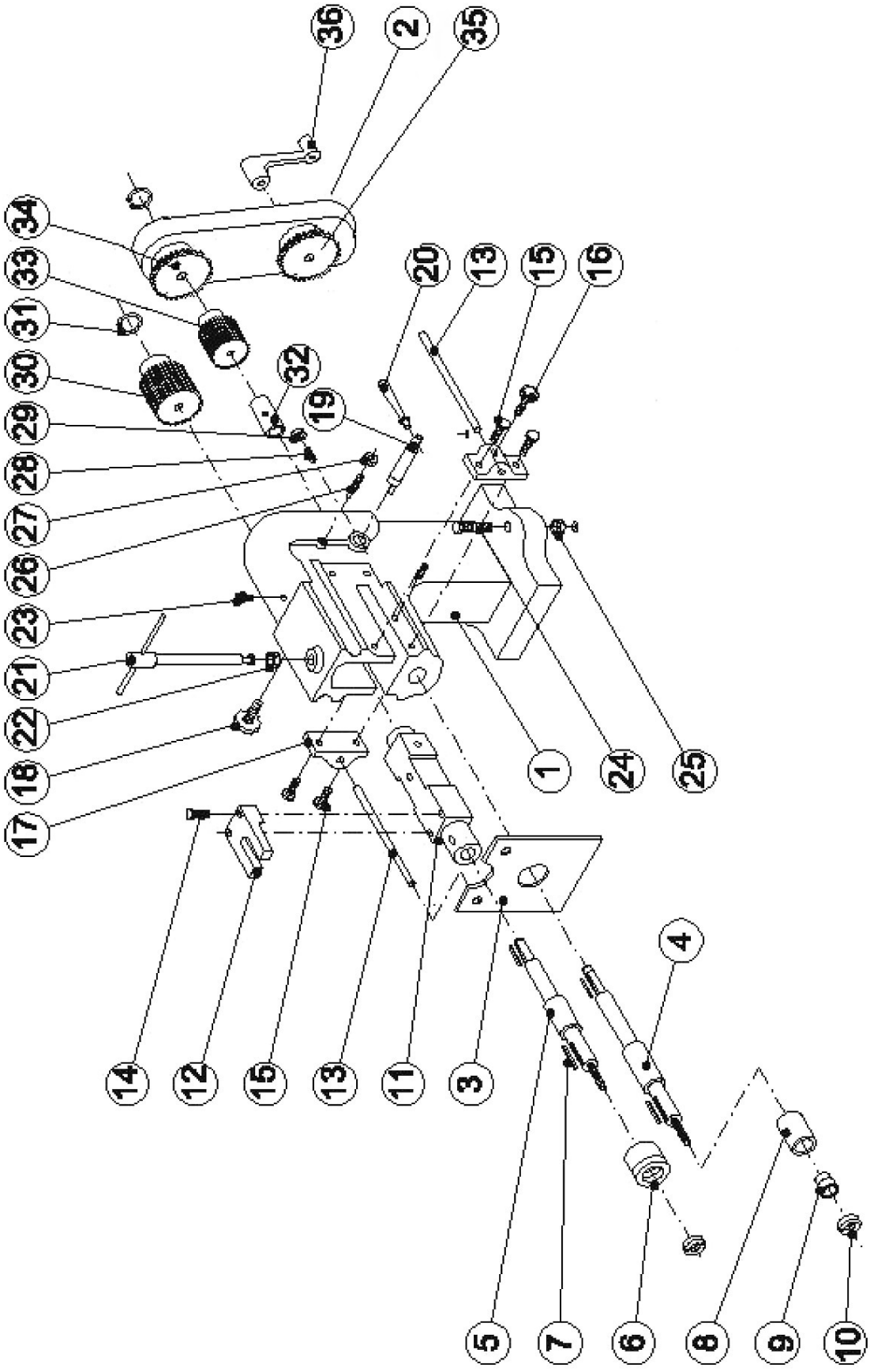

Fig. 15: Spare parts drawing SBM 140-12


stürmer
OPTIMUM
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Maschinen