



**nosstec**

---



## **Bending Roll Machine 8264**

OPERATING INSTRUCTIONS



# TABLE OF CONTENTS

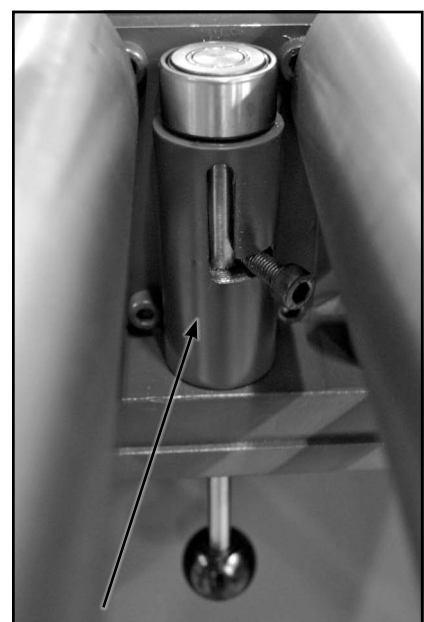
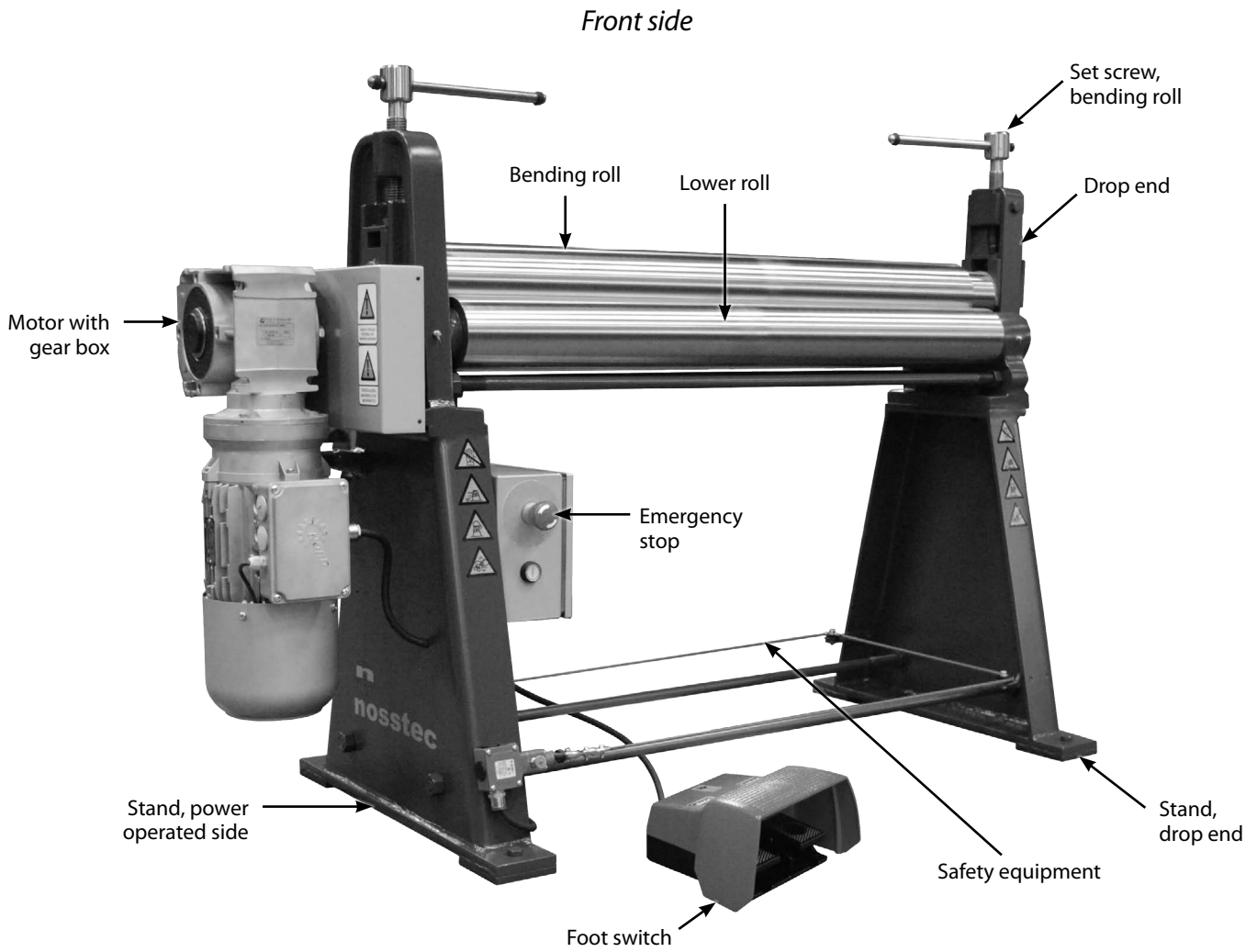


<b>Main components</b> .....	<b>4</b>
<b>Operation</b> .....	<b>5</b>
<b>Safety</b> .....	<b>7</b>
<b>Service and maintenance</b> .....	<b>12</b>
<b>Lubrication / Grease chart</b> .....	<b>13</b>
<b>Technical data</b> .....	<b>14</b>
<b>Machine plates and stickers</b> .....	<b>15</b>
<b>Dismantling of bending roll machine</b> .....	<b>16</b>
<b>Declaration of conformity</b> .....	<b>22</b>
<b>Contact information</b> .....	<b>See back</b>

Note: We reserve the right to alter specifications without prior notice.

For copyright reasons all reproduction and copying of the texts, tables and illustrations within this manual is prohibited without written permission from Nosstec AB.

# MAIN COMPONENTS



Disclaimer: The machine pictured on this page is not necessarily representative of the actual product as delivered. Differences in sizes, options and/or accessories may or may not be pictured here.

### **Prebending**

In order to obtain a symmetrically round shape, it is necessary to prebend the front as well as the rear edge of the workpiece. This prebending can be carried out by means of suitable equipment e.g. a press brake or manual folding machine. ***This operation can not be performed with a 8264 bending roll machine.***

### **Bending**

This machine shall be used for bending sheets to a round shape. Also cylinders with conical shape can be bent if the machine is equipped with cone bending device.

At the maximum operating length and the maximum sheet thickness tubes down to about 1,5 times the diameter of the bending roll can be formed and for thinner sheets down to about 1,2 times the diameter of the roll.

When bending steel sheet or stainless steel the maximum thickness capacity of the machine will be reduced to about  $\frac{2}{3}$  compared to mild carbon steel sheet.

#### **Bending operation:**

The bending roll is screwed up so that the workpiece can be introduced between the bending roll and lower rolls. After having centered the workpiece in the machine, the bending roll is screwed down towards the workpiece so that a bend appears. How much the bending roll must be screwed down depends partly on the thickness of the material and partly on the final diameter.

Generally the sheet must be run through the machine several times in order to obtain the desired shape. When the workpiece has been introduced between the rolls, the machine can be started by means of the pedal switch. The workpiece should then be run through the machine until it nearly leaves the lower roll. After this the bending roll is screwed down somewhat and the procedure is repeated but in the opposite direction by means of the pedal switch. Continue to run the workpiece forwards and backwards at the same time as the bending roll is screwed down, until the workpiece has obtained the desired shape.

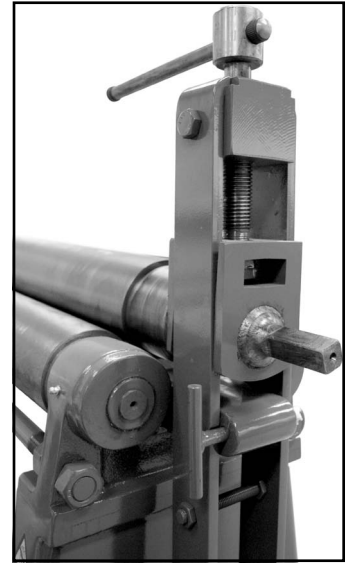
In order to get a better cylinder, the workpiece can be run through the machine some extra times, either direct after the rolling or after the joint has been welded and emery ground.

## **OPERATION**

### ***Removal of workpiece***

The finished workpiece is removed from the machine as follows:

- Loosen the set screws of the bending roll so that the bending roll is released from the workpiece.
- Remove the locking device of the clamp.
- Introduce a flat bar or similar between the bending and lower rolls a couple of centimeters from the drive side.
- Turn the set screw on the drive side down so that the bending roll hangs freely when the clamp is pulled down.
- Go over to the other side of the machine and adjust the set screw until the clamp can easily be pulled down.
- Pull down the clamp and remove the workpiece.
- Raise the clamp and mount the locking device.

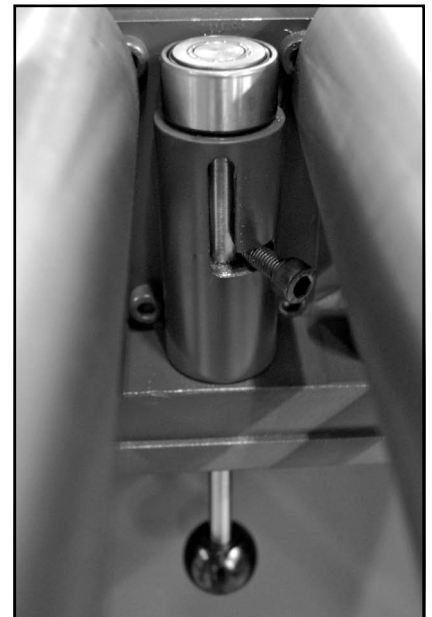


### ***Cone bending***

In order to be able to make cones, the machine must be equipped with a cone bending device.

The cones are made as follows:

- Raise the cone bending device so that it rests on the bending roll (see figure).
- Introduce the workpiece so that its rear end is parallel to the rear lower roll and the small radius points at the cone bending device.
- Screw down the bending roll on the cone bending side so that a bend appears (check that there is enough room for the material to move).
- Start the bending process and let the sheet skid against the cone bending device at the same time as it is fed through the machine and bent.
- Screw down the bending roll somewhat. Bend again and continue until the cone has obtained the desired form.



## General

This bending roll machine is designed with a view to eliminating personal injuries provided that the instructions in this manual are being followed.

Only authorized and trained staff is allowed to use the machine. Read the whole instruction manual and make sure that you understand the contents before the machine is taken into use. It is important that you read the safety instructions below.



### **Safety instructions in connection with the installation**

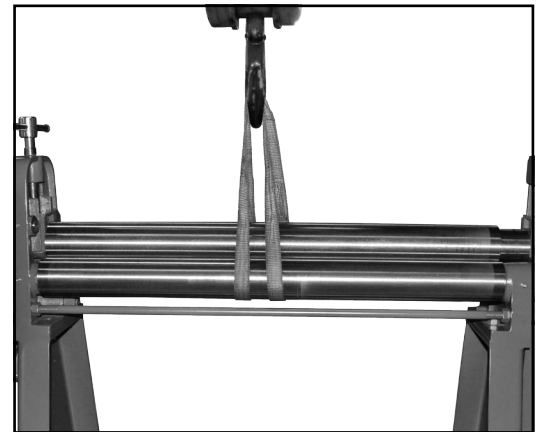
The machine must be bolted to the floor with 4 pcs expansion shell bolts diameter 16 mm. Electrical installation of the machine must be carried out by authorized staff.

## Lifting instructions

This machine must be lifted by truck as long as it is packed in a crate or a wooden case. When lifting it from the packing to the permanent working site an approved lifting device type travelling crane must be used. Instructions for lifting by means of travelling crane:

1. Check that the top roll is in the locked position.
2. Set lower and bending roll in upper position.
3. Put a lifting sling around the rolls as per figure.
4. Lift carefully at the same time as you check that the rolls are pressed together.

Regarding weights: see technical data

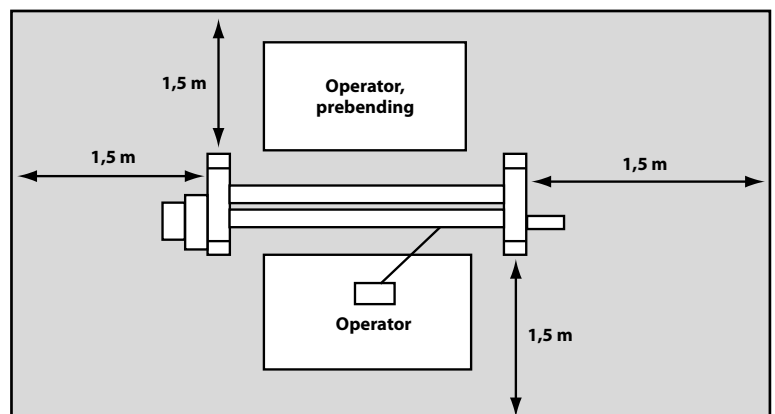


## Dangerous area

The dangerous area of the machine is described in the figure.

This area shall in an appropriate way be marked in the floor.

A person staying in the dangerous area will henceforth be called "exposed person" and the user of the machine the "operator".



## SAFETY



### **Application**

Never use the machine for material which is outside the capacity range of the machine. Check the machine plate and the section "Technical data".

### **Before the machine is operated the following steps must be taken:**

Check that all safety devices function and that they are not damaged. Also check that moveable parts are not exposed to obstacles e.g. owing to incorrectly mounted guards or parts. Broken parts or safety components must be changed by authorized staff. Contact Nosstec in case spare parts are needed. The machine has a 24 month applicable warranty from date of delivery.

### **Check that the environment around the machine is suitable.**

- Do not expose the machine to rain.
- Do not use the machine in wet or damp premises.
- Check that the lighting of the premises is satisfactory.
- The floor must be clean, dry and free from oil and grease spots.
- Never use easily inflammable material close to the machine.
- Dirty working sites increase the risk of accidents.



### **Position of top roll**

The top roll must never be in the swung-out position when the machine is in operation.

### **Avoid unstable working positions**

Check that the operator always has a secure and stable working position. When prebending the operator must stand on the reverse side of the machine.

### **Do not keep tools on the machine**

Remove all tools from the machine before it is operated.



### **All repairs must be carried out by authorized staff**

The machine and its electrical equipment has been made according to valid safety rules. All repairs must be carried out by trained and qualified staff. Only original spares must be used.

**Note: If the repairs also involve dismantling of the machine, this must be carried out according to the enclosed dismantling instruction. This instruction must not be kept together with the machine.**



### **Cut the power**

Cut the current before touching live parts. This is done either by disconnecting the main switch of the machine or by disconnecting the voltage of the electrical cabinet.

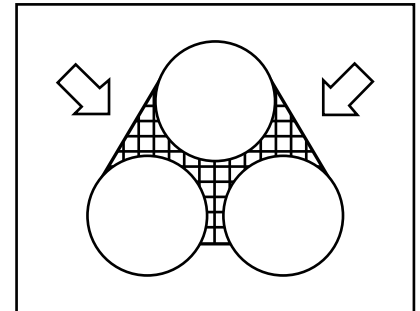
**Note: Do not put the main switch or the safety switch of the machine out of operation.**



### **Danger zone**

In connection with production work check that no part of the body comes too close to the infeed side of the clamping rolls of the machine (see figure).

**Note: The infeed side may vary owing to the direction of rotation of the rolls.**



### **Keep the instruction manual of the machine in a safe place.**

The instruction manual contains important information that besides the safety information also give important information regarding operation, service, maintenance etc.

### **Modification of the machine**

All conversion, modification or change of this machine is strictly forbidden with the exception of

- Original spare parts
- Optional equipment supplied by the manufacturer.

### **Airborne noise**

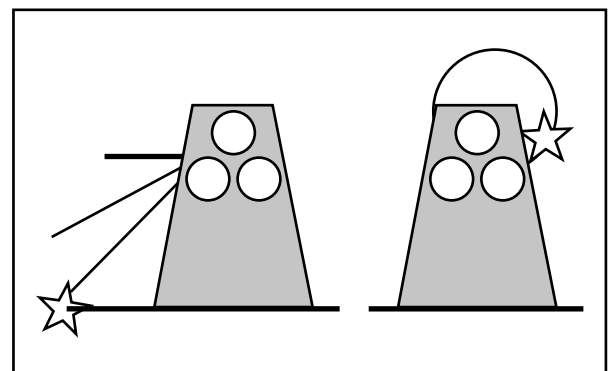
The following noise level has been measured at the operator's place:

Equivalent noise level  $Leq$ , idle running      66 dB(A)

Equivalent noise level  $Leq$ , operation            68 dB(A)

### **Falling workpieces**

Be careful when working with heavy workpieces so that they do not fall down by mistake when the grip loosens between the bending and lower rolls (see figure). If necessary use a support table, travelling crane or some other lifting device.

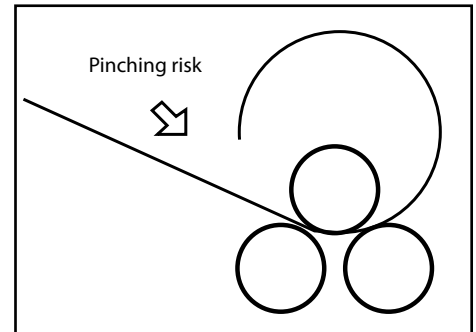


## SAFETY



### **Pinching risk of the workpiece**

Note that there is a pinching risk between the ends of the workpiece, see figure.



### **Emergency stop**

This machine is equipped with two emergency stop functions, i.e. one emergency stop on the electrical cabinet and one emergency wire running around the machine at foot height. This together with the fact that the machine is equipped with brake motor enables the machine to stop instantaneously in case of injury or risk of injury no matter where you are around the machine.

### **Service and maintenance**

Before service and maintenance are carried out on the machine you must have had instructions from your foreman. You must also read and understand this instruction manual. Disconnect the main switch before the service job begins. If the machine must be dismantled, completely or partly, contact your foreman.

### **Protective clothing**

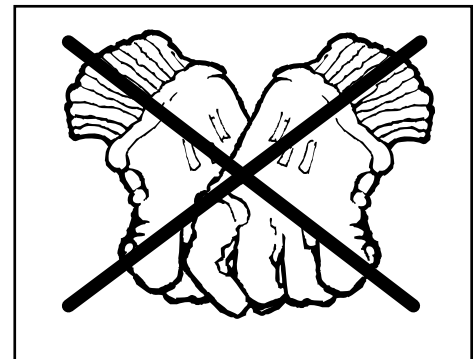
**Important! Never use gloves when bending, as this considerably increases the risk of getting pinched between the rolls.**

For other handling of the workpieces use gloves. The operator must not carry belts, rings or necklaces.

Working shoes with steel inserts must be used.

Loose hanging clothes must not be used.

If the operator has long hair, this must not hang loose.



### **Deburring of the workpiece**

Burrs and sharp edges must be removed from the workpiece before bending.



### **Jamming**

If for some reason the machine stops while bending a workpiece, proceed as follows:

- Crank down the bottom roll and possibly also the bending roll.
- Remove the workpiece. Identify the trouble reason. If the motor protection is released, wait for some minutes before it is reset. The machine is then ready for use again.
- If the trouble is mechanical or electrical: Cut the current and contact the supervisor.

### ***Regular checking***

Daily check the function of the foot switch as well as the condition of the electric cable of the foot switch. Also check that the emergency stop works. Carry also out the regular service, which is described in the chapter Service and Maintenance in the instruction manual.

### ***Safety in general***

The chapters describing the safety devices are based on the assumption that the machine is used in the manner described in this instruction manual, that the operator has got the necessary information regarding the safety of the machine as well as the special risks involved with this type of machine.

If the machine is not used in the proper way, the manufacturer cannot be held responsible for personal injuries or material damages, which may be the result. Also check the following:

- Take all necessary safety precautions when loading, setting, changing spare parts, cleaning, repairing and servicing so that the exposed person cannot start the machine.
- Do not disconnect the safety devices of the machine.
- Do not remove any part of the machine belonging to the safety devices.
- Always check that all safety devices have been remounted after repair work etc.

## **SERVICE AND MAINTENANCE**

### ***Installation***

The machine must be placed on firm ground e.g. cemented floor. The ground must be level in order to avoid tensions in the machine when fixing it to the floor.

Check that the motor is branched to the right voltage. Also check the direction of rotation. Plates with "Forward" and "Reverse" are mounted on the protection cover of the foot switch.

If the machine is equipped with motor powered setting of the bending roll and/or the lower roll also check the voltage and oil level here.

### ***Maintenance***

The machine is delivered with greased bearings for about 200 hours' continuous duty. After this period it should be lubricated with ball bearing grease of good quality, e.g. Esso Multi purpose grease H or equivalent. All rolls and worm gears are mounted on needle and ball bearings and therefore recommended grease should be used. Guides for the roll bearing box as well as sleeves for the bending roll and cone bending device to be lubricated when required. Grease lubs, see grease chart.

The gearbox is lifetime lubricated and doesn't need any regular inspection. Should there be any leakage, please check oil level and refill if necessary.

### ***Daily check***

- Brake function of the motor
- All emergency stop functions

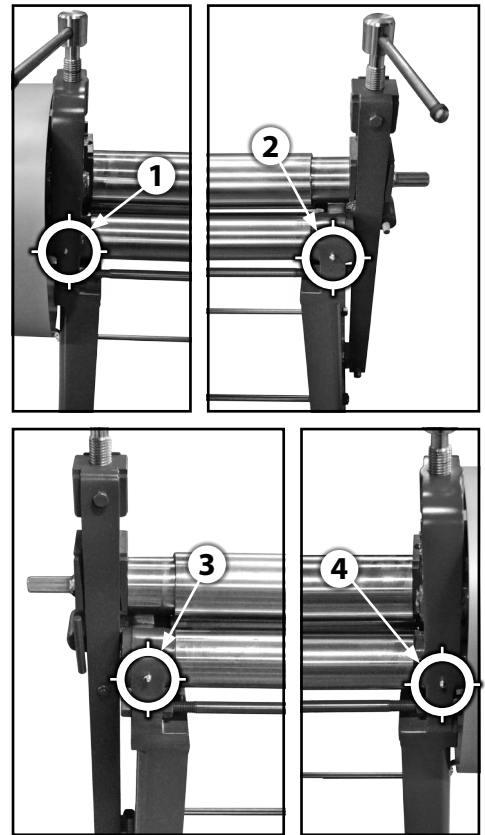
## LUBRICATION / GREASE CHART

### **Lubrication points**

There are in total 4 lubrication points:

1. Front left side, 1 points.
2. Front right side, 1 point.
3. Rear left side, 1 point.
4. Rear right side, 1 points.

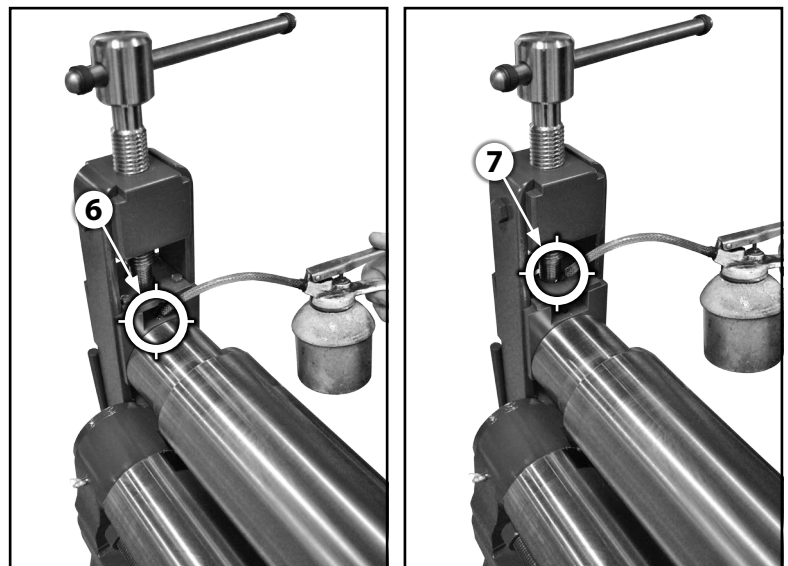
See images for the lubrication points locations.



### **Oil points**

There are in total 4 locations:

5. Left and right bearing housing, 2 locations.
6. Left and right set screw thread, 2 locations.



## **TECHNICAL DATA**

Serial No .....

Type .....

Rolling speed ..... m/min

Max. sheet thickness (at 400 N/mm<sup>2</sup>) ..... mm

Operating length ..... mm

Total net weight ..... kg

Weight of rolls

    Bending roll ..... kg/m

    Lower rolls ..... kg/m

Total dimensions: length × width × height ..... mm

Working height ..... mm

Motor rating ..... kW

Voltage ..... V

Feeding motor:

    Brand .....

    Type .....

    .....

    ..... V

    ..... kW

Diameter of bending roll ..... mm

Diameter of lower rolls ..... mm

Optional equipment:

Cone bending equipment

Hardened and ground rolls

Adiprene-coated rolls

Deviation from the normal execution:

# MACHINE PLATES AND STICKERS



Aluminium plate, blue anodized.



White and yellow background, black text



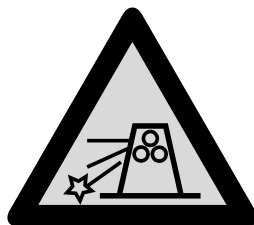
White and yellow background, black text



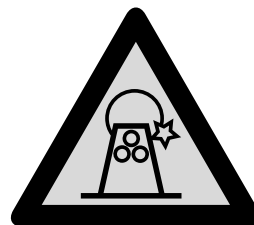
White and yellow background, black text



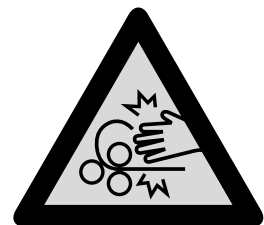
Yellow background, black text



Yellow background, black text



Yellow background, black text



Yellow background, black text



Blue background, white text



Blue background, white text

## **DISMANTLING OF THE MACHINE**

This instruction is made in order to support trained staff when repairing with a view to minimizing the risk of personal injuries and damage to the machine.

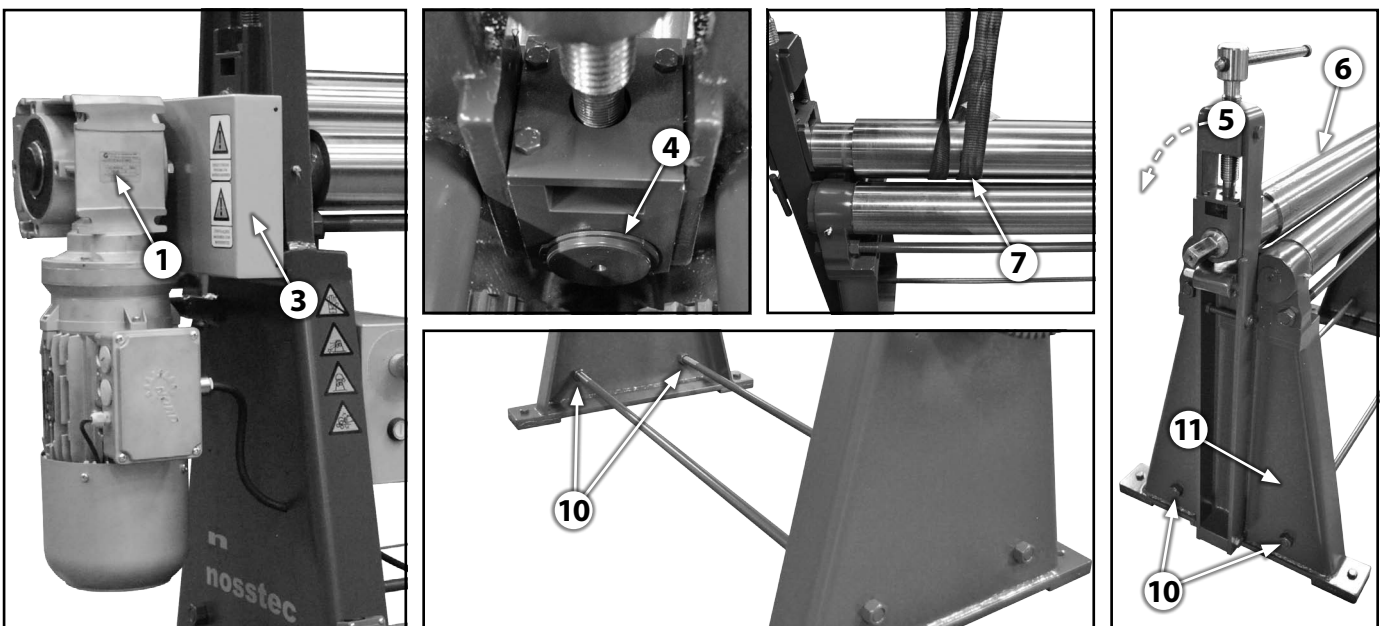
To enable dismantling of the machine in a safe way, the job must be carried out by at least two trained mechanics.

This dismantling instruction must not be kept together with the machine. The proper holder is the supervisor and/or service staff.

### **Procedure:**

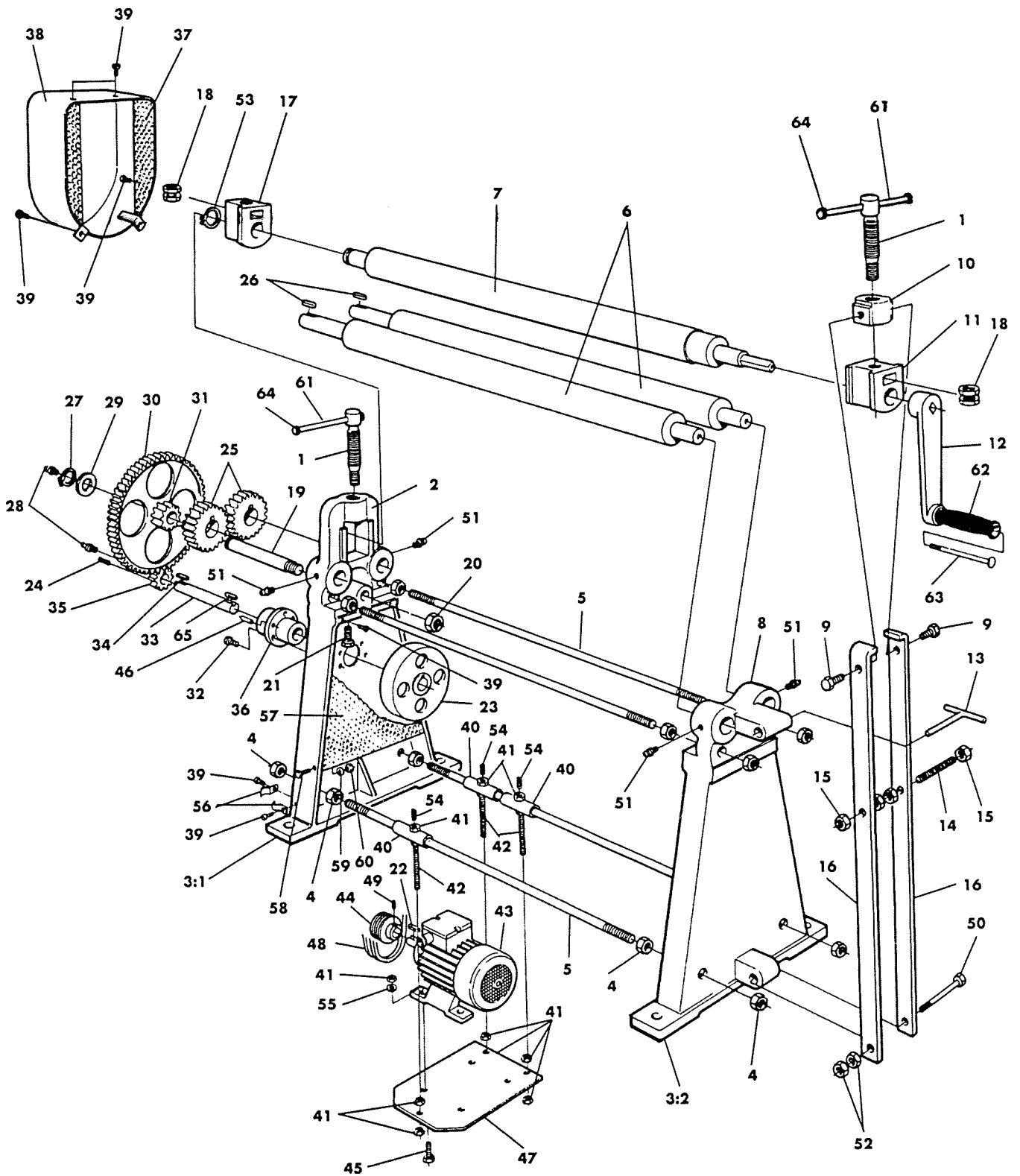
1. Loosen the bolts attaching the gear housing.
2. Pull the worm gear motor out of the worm gear box.
3. Loosen the bolts and remove the cover.
4. Remove the locking ring of the bending roll.
5. Open the drop end on the opposite drive side.
6. Pull the bending roll out of the bearing housing so that it rests on the lower rolls.
7. Place a lifting strap in the middle of the bending roll. Remove the roll and place it e.g. on a bench.
8. Pull off the roller gears from the lower rolls.
9. Lower the lifting strap around the lower rolls and fixate them by means of a strong flat iron between the rolls.
10. Loosen the nuts on the in- and outside of the front part.
11. Release the front part.
12. Place a strong support under the detached roll ends (**Note: not under the roll necks**), and place the lifting strap under the centre of gravity of one of the rolls. Pull the roll out of the frame, lift it down and place it on e.g. a bench. Repeat this procedure with the other lower roll.

**NOTE: Handle the loose parts carefully and check that all pieces removed also are mounted in their right places, but in the reverse order.**

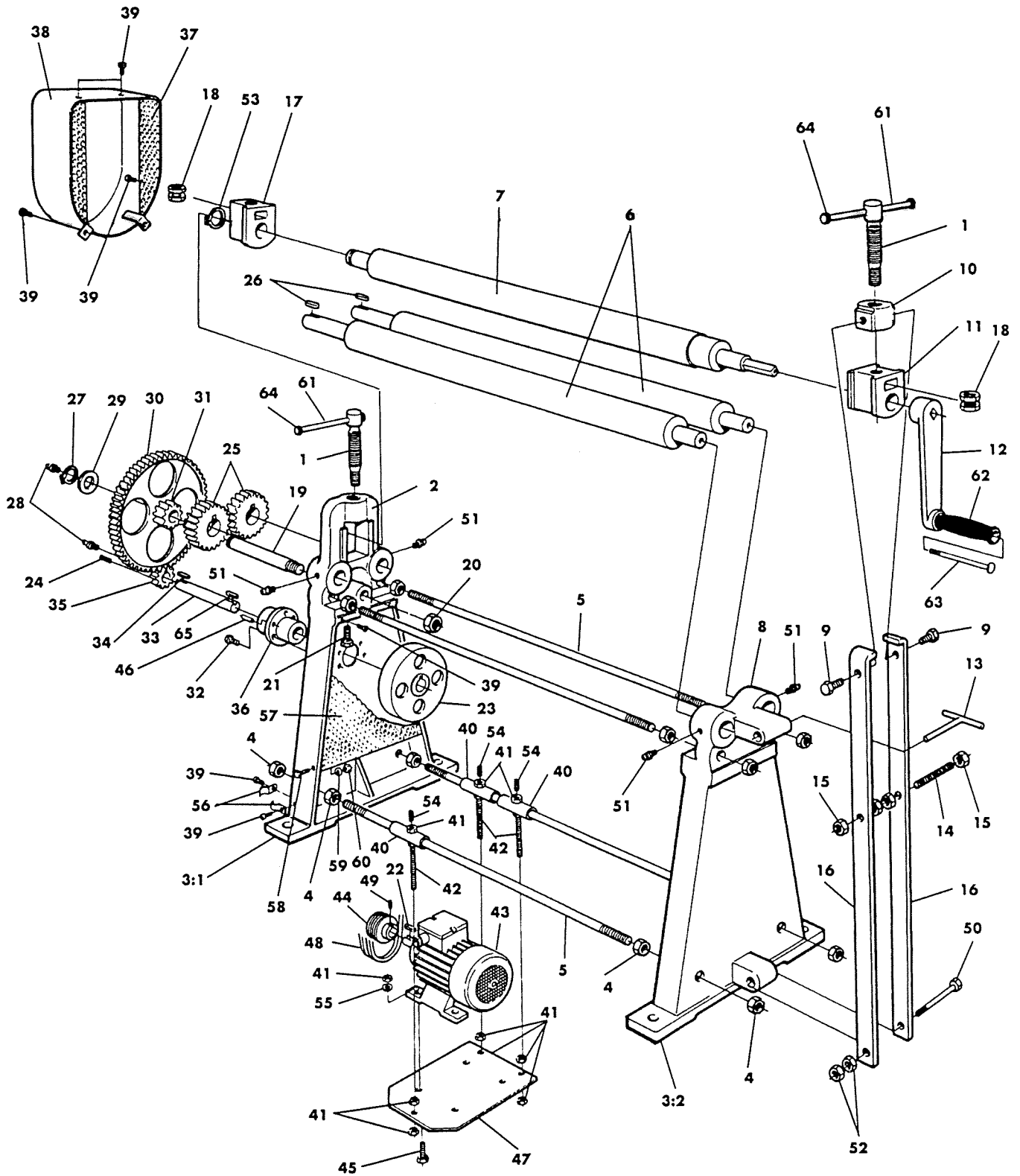




SPARE PARTS, 80-90

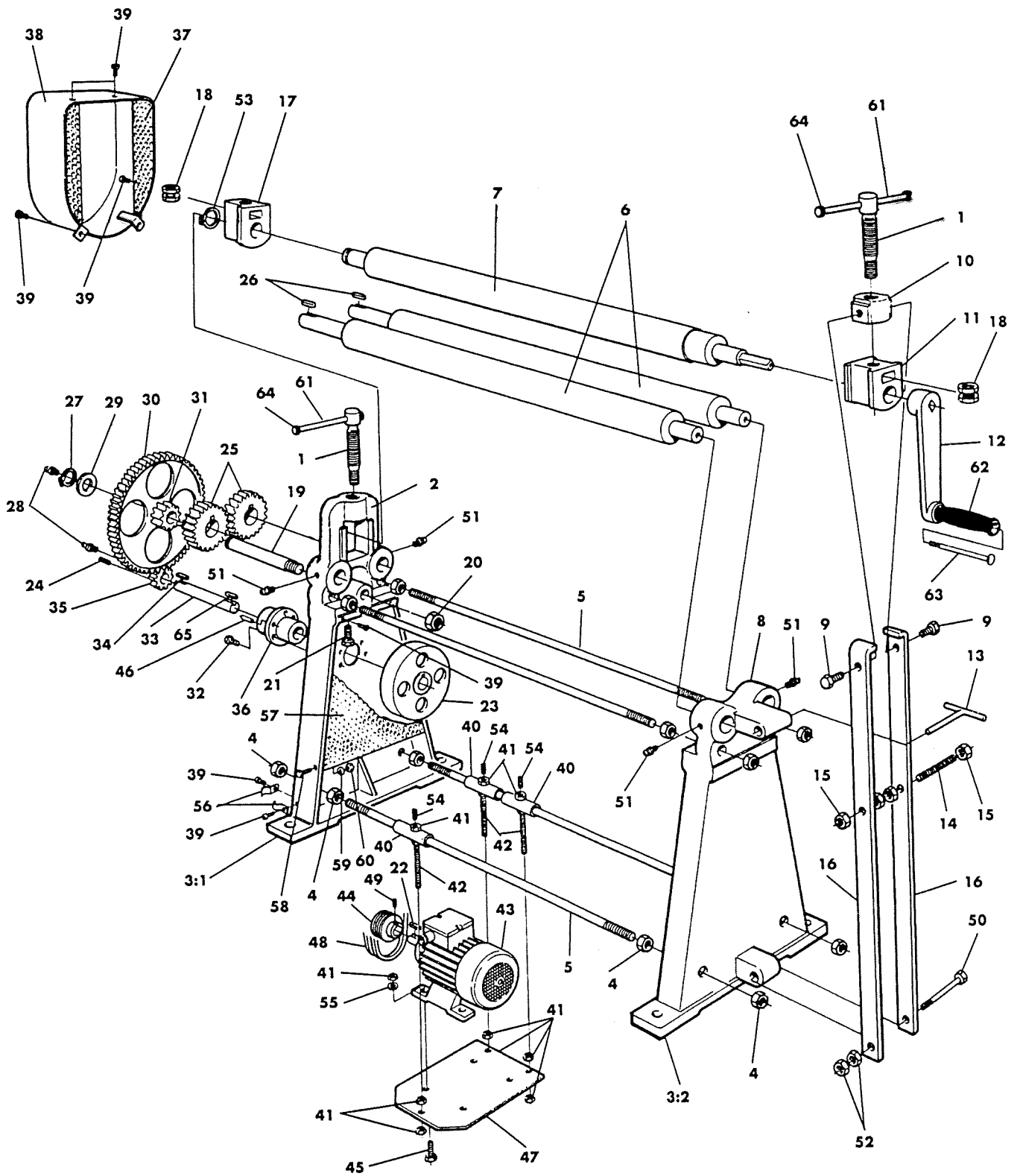


**SPARE PARTS, 90-100**

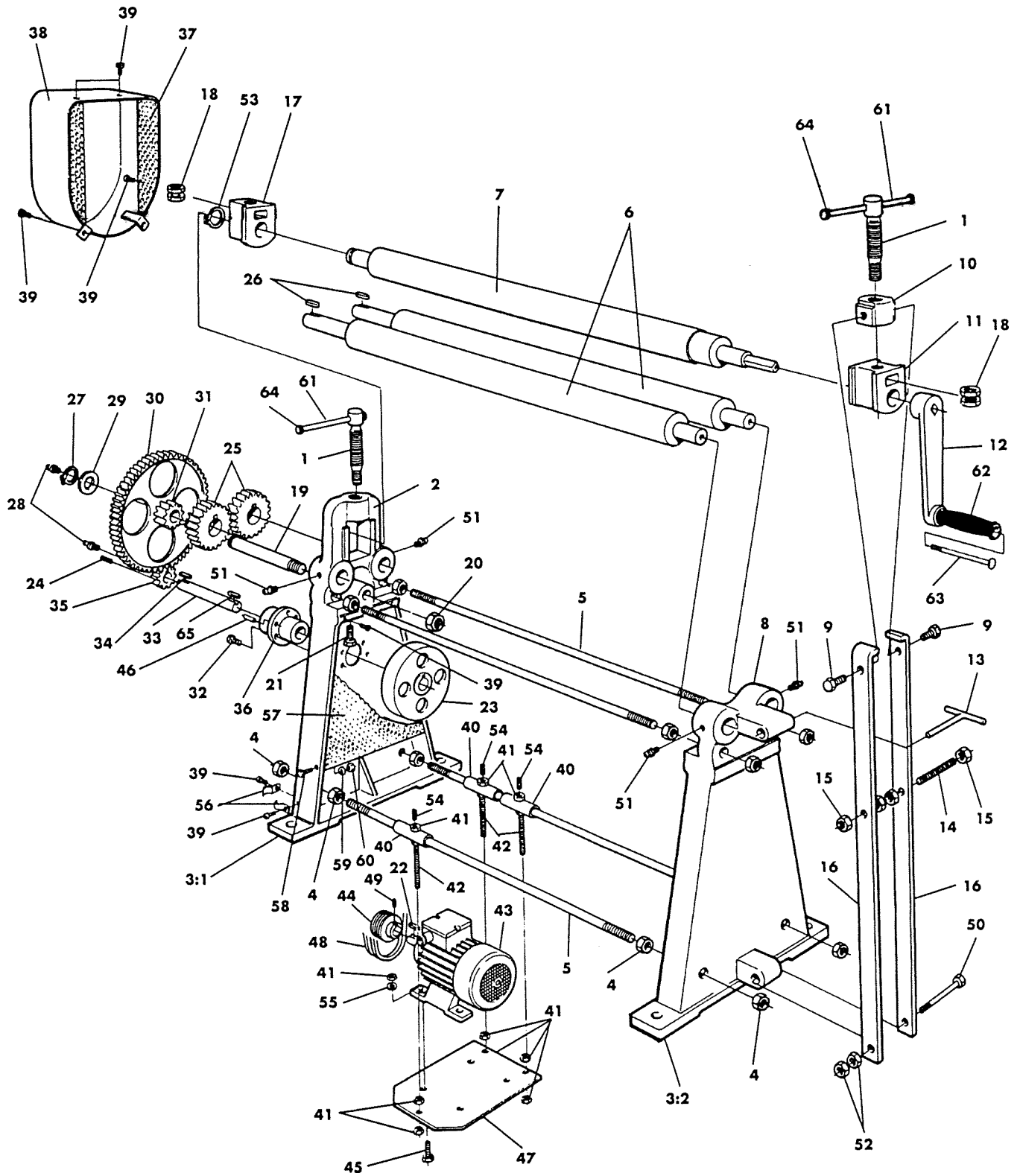




SPARE PARTS, 100-110



# SPARE PARTS, 120-130





		<b>Svenska</b>	<b>English</b>	<b>Deutsch</b>	<b>Français</b>
1	2	Ställskruv	Set screw	Stellschraube	Vis de réglage
2	1	Bakstycke	Frame	Gestell	Bâti
3:1	1	Understativ	Bottom frame	Untergestell	Bâti inférieu
3:2	1	Understativ	Bottom frame	Untergestell	Bâti inférieu
4	16	Mutter	Nut	Mutter	Ecrou
5	4	Stag	Bar	Strebe	Nervure en long
6	2	Undervals	Lower roll	Unterrolle	Rouleau inférieur
7	1	Övervals	Upper roll	Oberrolle	Rouleau supérieur
8	1	Framstycke	Front	Front	Front
9	2	Skruv	Screw	Schraube	Vis
10	1	Mutter	Nut	Mutter	Ecrou
11	1	Lagertärning dubbel	Bearing double	Lager doppel	Palier double
12	1	Vev	Crank	Kurbel	Manivelle
13	1	Lägeshållare	Holder	Halter	Support
14	1	Gängstång	Threaded screw	Gewindeschraube	Vis filetée
15	4	Mutter	Nut	Mutter	Ecrou
16	2	Stag	Bar	Stütze	Support
17	1	Lagertärning enkel	Bearing single	Lager einzeln	Palier simple
18	4	Mutter	Nut	Mutter	Ecrou
19	1	Axel	Shaft	Achse	Axe
20	1	Mutter	Nut	Mutter	Ecrou
21	4	Skruv	Screw	Schraube	Vis
22	1	Kil	Wedge	Keil	Coin
23	1	Remskiva	Pulley	Riemenscheibe	Poulie
24	1	Stoppskruv	Stop screw	Stoppsschraube	Vis d'arrêt
25	2	Valsdrev	Roller gear	Walzengetriebe	Roue-vis
26	2	Kil	Wedge	Keil	Coin
27	1	Axelsäkring	Shaft locking	Achsensicherung	Arrêt d'axe
28	2	Smörjnippel	Grease nipple	Schmiernippel	Graisser
29	1	Bricka	Washer	Teller	Rondelle
30	1	Kuggghjul	Gear	Zahnrad	Roue dentée
31	1	Kuggghjul	Gear	Zahnrad	Roue dentée
32	3	Skruv	Screw	Schraube	Vis
33	1	Drivaxel	Drive shaft	Antriebswelle	Arbre de commande
34	1	Kil	Wedge	Keil	Coin
35	1	Kuggghjul	Gear	Zahnrad	Roue dentée
36	1	Lagring	Bearing	Lager	Palier
37	1	Ingreppsskydd	Contact protection	Eingriffschutz	Protection de contact
38	1	Skyddskåpa	Protection cover	Schutzhaube	Capot de protection
39	12	Skruv	Screw	Schraube	Vis
40	3	Rör	Tube	Rohr	Tube
41	13	Mutter	Nut	Mutter	Ecrou
42	3	Skruv	Screw	Schraube	Vis
43	1	Motor	Motor	Motor	Moteur
44	1	Remskiva	Pulley	Riemenscheibe	Poulie
45	4	Skruv	Screw	Schraube	Vis
46	2	Spännstift	Tightening pin	Spannstift	Goupille de serrage
47	1	Motorplåt	Motor plate	Motorschild	Plaque de moteur
48	2	Drivrem	Drive belt	Antriebsriemen	Courroie de transmission
49	1	Stoppskruv	Stop screw	Stoppsschraube	Vis d'arrêt
50	1	Skruv	Screw	Schraube	Vis
51	4	Smörjnippel	Grease nipple	Schmiernippel	Graisser
52	2	Mutter	Nut	Mutter	Ecrou
53	1	Axelsäkring	Shaft locking	Achsensicherung	Arrêt d'axe
54	3	Stoppskruv	Stop screw	Stoppsschraube	Vis d'arrêt
55	4	Bricka	Washer	Teller	Rondelle
56	2	Klammer	Clip	Klämme	Crampon
57	1	Ingreppsskydd	Contact protection	Eingriffschutz	Protection de contact
58	2	Skruv	Screw	Schraube	Vis
59	2	Bricka	Washer	Teller	Rondelle
60	2	Mutter	Nut	Mutter	Ecrou
61	2	Handtag	Handle	Handgriff	Poignée
62	1	Handtag	Handle	Handgriff	Poignée
63	1	Skruv	Screw	Schraube	Vis
64	4	Gummiring	Rubber ring	Gummiring	Roulette en caoutchouc
65	1	Kil	Wedge	Keil	Coin

## DECLARATION OF CONFORMITY

### Declaration of conformity

as per the EC Machinery Directive 2006/42/EC, Annex II A.

**Manufacturer:** Nossebro Mekaniska Verkstad AB  
SE 465 30 NOSSEBRO +46 512 298 80

**Distributor:** Nosstec AB  
SE 465 30 NOSSEBRO +46 512 298 85

**herewith declare that:**

**Machine:** .....

Type

.....

Serial No

**is manufactured in conformity with:**

- The Council Directive of 2006/42/EC
- EMC Directive 2014/30/EU
- Low voltage directive 2014/35/EU

.....  
Place and date

.....  
Signature, Managing Director





**nosstec**

**[www.nosstec.se](http://www.nosstec.se)**

Nosstec AB • Järnvägsgatan 19, 465 30 Nossebro, SWEDEN  
Tel: +46 (0)512 298 85 • Fax: +46 (0)512 298 89 • E-mail: [info@nosstec.se](mailto:info@nosstec.se)

For copyright reasons all reproduction and copying of the texts, tables and illustrations within this manual is prohibited without written permission from Nosstec AB.