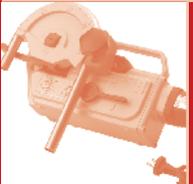
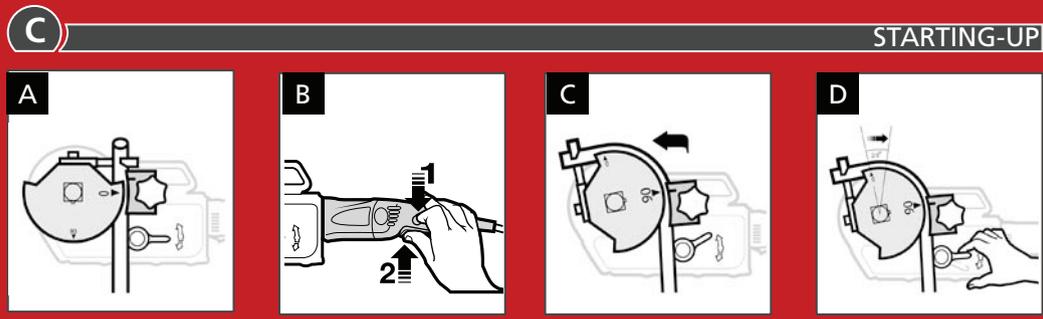
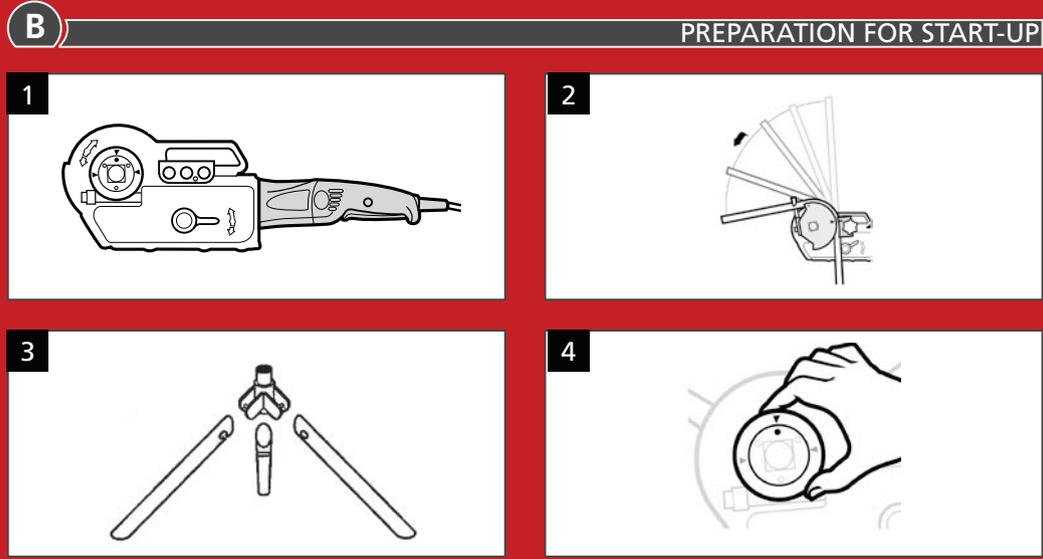
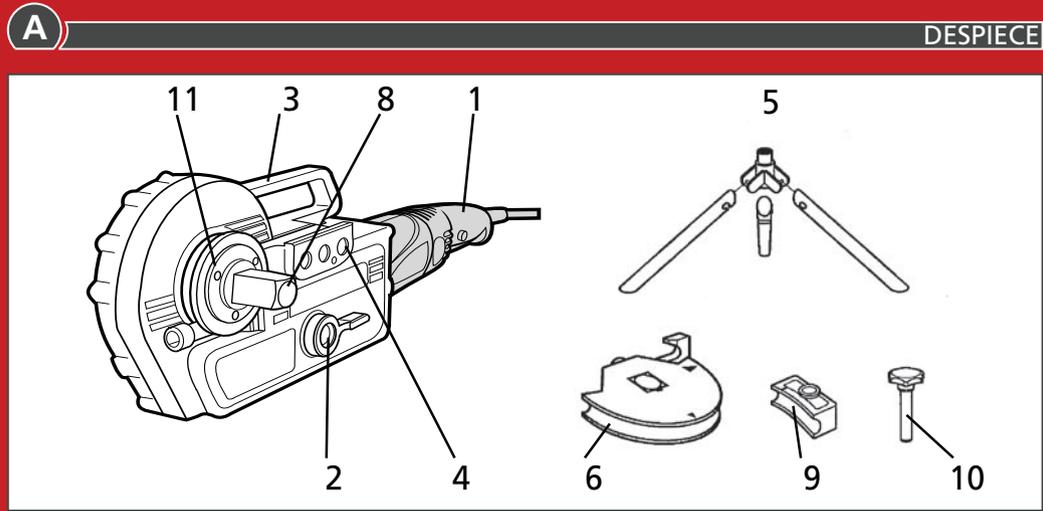


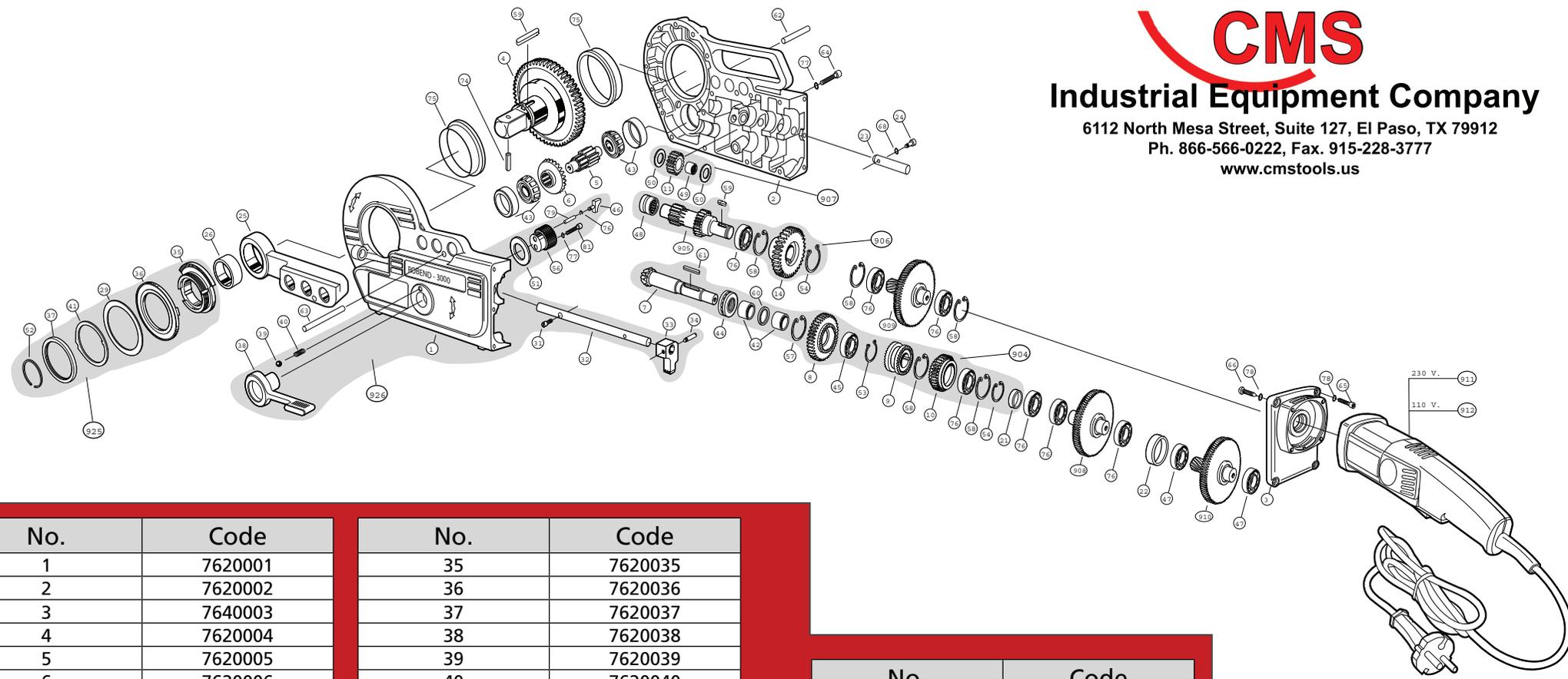
ROBEND® 3000

Instructions for use
 Gebruiksaanwijzing
 Instruction d'utilisation
 Instrucciones de uso
 Istruzioni d'uso
 Instruções de serviço



CMS
 Industrial Equipment Company
 6112 North Mesa Street, Suite 127, El Paso, TX 79912
 Ph. 866-566-0222, Fax. 915-228-3777
 www.cmstools.us





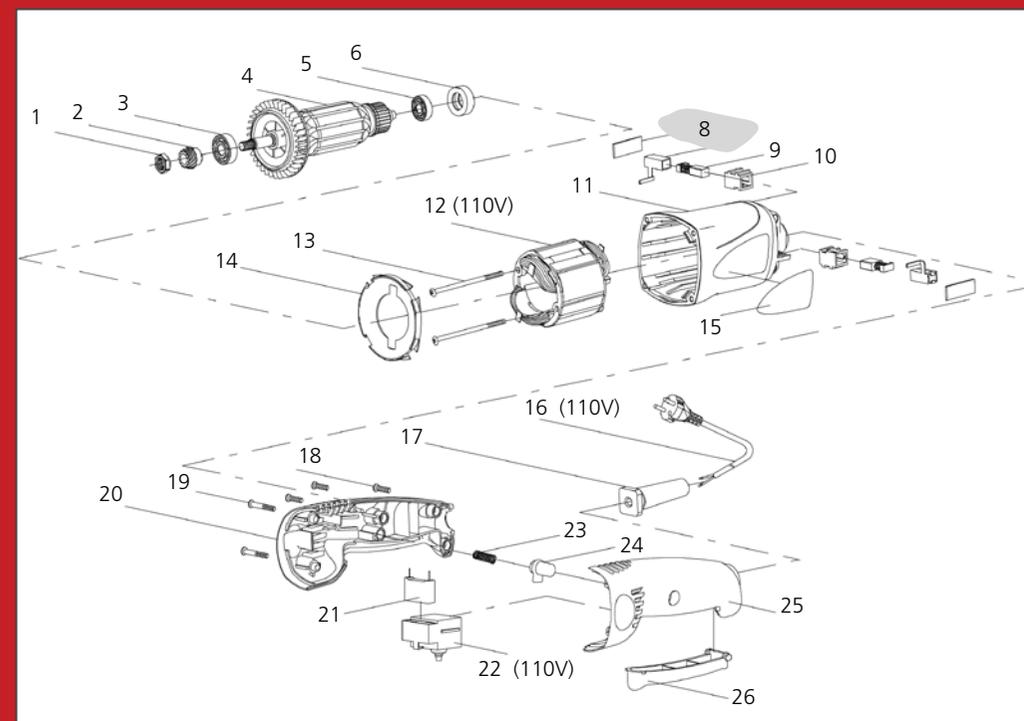
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No.	Code
1	7620001
2	7620002
3	7640003
4	7620004
5	7620005
6	7620006
7	7620007
8	7620008
9	7620009
10	7620010
11	7620011
14	7620014
21	7620021
22	7620022
23	7620023
24	7620024
25	7620025
26	7620026
31	7620031
32	7620032
33	7620033
34	7620034

No.	Code
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36	7620036
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57	7620057

No.	Code
58	7620058
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61	7620061
62	7620062
63	7620063
64	7620064
65	7620065
66	7640066
68	7620068
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75	8620042
76	7620076
77	7620077
78	7620078
79	7620079

No.	Code
80	8620051
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904	7620904
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906	7620906
907	7620907
908	7620908
909	7620909
910	7620910
911	7640911
912	7640912
924	7620924
925	7620925
926	7620926



No.	Code	V.
1	764C201	220 V
2	7620069	220 V
3	764C203	220 V
4	764C204	220 V
4	764C227	110 V
5	764C205	220 V
6	764C206	220 V
7	Included on part. 8	220 V
8	764C208	220 V
9	764C209	220 V
10	764C210	220 V
11	764C211	220 V
12	764C212	220 V
12	764C228	110 V
13	764C213	

No.	Code	V.
14	764C214	220 V
15	764C215	220 V
16	764C216	220 V
16	764C229	110 V
17	764C217	220 V
18	764C218	220 V
19	764C219	220 V
20	764C220	220 V
21	764C221	220 V
22	764C222	220 V
22	764C230	110 V
23	764C223	220 V
24	764C224	220 V
25	764C225	220 V
26	764C226	

WARRANTY

MODELL-MODELE-MODELO-MODELLO

NAME DES KÄUFERS-BUYER'S NAME-NOM DE L'ACHETEUR-
NOMBRE DE COMPRADOR-NOME DELL'ACQUIRENTE:

ADRESSE-ADDRESS-ADRESSE-DIRECCIÓN-INDIRIZZO:

NAME DES VERKÄUFERS-DEALER'S NAME-NOM DU VENDEUR
NOMBRE DE VENDEDOR-NOME DEL VENDITORE:

ADRESSE-ADDRESS-ADRESSE-DIRECCIÓN-INDIRIZZO:

EINKAUFSDATUM-DATE OF PURCHASE-DATE DE L'ACHAT
FECHA DE ADQUISICIÓN-DARA DI ACQUISTO:

UNTERSCHRIFT DES VERKÄUFERS:
DEALER'S SIGNATURE:
SIGNATURE DU VENDEUR:
FIRMA DEL VENDEDOR:
FIRMA DEL VENDITORE:

UNTERSCHRIFT DES VENDEUR:
BUYER'S SIGNATURE:
SIGNATURE DU L'ACHETEUR:
FIRMA DEL COMPRADOR.
FIRMA DELL'ACQUIRENTE:


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ROTHENBERGER
Werkzeuge-Maschinen AG
Industriestrassee, 7
D-65779 KELKHEIM

GENERAL

DEUTSCH

Seite 8

Bedienungsanleitung bitte lesen und aufbewahren! Nicht wegwerfen!
Bei Schäden durch Bedienungsfehler erlischt die Garantie! Technische Änderungen vorbehalten!

ENGLISH

Page 8

Please read retain these directions for use. Do not throw them away! The warranty does not cover damage caused by incorrect use of the equipment! Subject to technical modifications.

FRAÇAIS

Page 8

Lire attentivement le mode d'emploi et le ranger à un endroit sûr! Ne pas le jeter! La garantie est annulée lors de dommages dus à une manipulation erronée! Sous réserve de modifications techniques.

ESPAÑOL

Página 8

¡Por favor, lea y conserve el manual de instrucciones! ¡No lo tire! ¡En caso de daños por errores de manejo, la garantía queda sin validez! Modificaciones técnicas reservadas.

ITALIANO

Pagina 8

Per favore leggere e conservare le istruzioni per l'uso! Non gettarle via! In caso di danni dovuti ad errori nell'uso, la garanzia si estingue! Ci si riservano modifiche tecniche.

PORTUGUES

Pagina 8

Queiram ler e guardar o manual de instruções! Não deitar fora! Em caso de avarias por utilização incorrecta, extingue-se a garantia! Reservado o direito de alterações técnicas.

NEDERLANDS

Bladzijde 8

Lees de handleiding zorgvuldig door en bewaar haar goed! Niet weggoien! Bij schade door bedieningsfouten komt de garantieverlening te vervallen! Technische wijzigingen voorbehouden.

DANSK

Side 8

Læs igenom bruksanvisningen, og gem den til senere brug! Smid den ikke ud! Skader, som måtte opstå som følge af betjeningsfejl, medfører, at garantien mister sin gyldighed! Red til tekniske ændringer forbeholdes.

SVENSKA

Side 8

Läs igenom bruksanvisningen och förvara den väl! Kasta inte bort den! Garantin upphör om apparaten har använts eller betjänats på ett felaktigt sätt! Med reservation för tekniska ändringar.

CE-KONFORMITÄTSERKLÄRUNG

Wir erklären in alleiniger Verantwortung, dass dieses Produkt mit den angegebenen Normen und Richtlinien übereinstimmt.

EC-DECLARATION OF CONFORMITY

We declare on our sole accountability that this product conforms to the standards and guidelines stated.

DECLARATION CE DE CONFORMITÉ

Nous déclarons sous notre propre responsabilité que ce produit est conforme aux normes et directives indiquées.

DECLARACIÓN DE CONFORMIDAD CE

Declaramos, bajo nuestra responsabilidad exclusiva, que este producto cumple con las normas y directivas mencionadas.

DICHIARAZIONE DI CONFORMITÀ CE

Dichiriamo su nostra unica responsabilità, che questo prodotto è conforme alle norme ed alle direttive indicate.

EC-KONFORMITEITSVERKLARING

Wij verklaren in eigen verantwoordelijkheid dat dit

product overeenstemt met de van toepassing zijnde normen en richtlijnen.

DECLARAÇÃO DE CONFORMIDADE CE

Declaramos, sob responsabilidade exclusiva, que o presente produto está conforme com as Normas e Directivas indicadas.

CE-KONFORMITETSERKLÆRING

Vi erklærer som eneansvarlig, at dette produkt er i overensstemmelse med anførte standarder, retningslinjer og direktiver.

CE.FÖRSÄKRAN

Vi försäkrar på eget ansvar att denna produkt uppfyller de angivna normerna och riktlinjerna.

 89392 EEC, 91368 EEC,
73/23 EEC, 89/336 EEC



José Iganacio Pikaza

OPERATING INSTRUCTIONS

MACHINE COMPONENTS (See figure A)

1. Motor
2. Reverse lever
3. Handle
4. Bolt housing
5. Tripod
6. Former
7. Former hook
8. Former fastening shaft
9. Slide
10. Slide fastening bolt
11. Series bending scale



CAPACITY

Hartes und weiches kupferrohr DIN 1786 Durchmesser 12-28 mm, Wandstärke 1,5 mm
Hartes und weiches Stahlrohr DIN 2391, DIN 2393, DIN 2394; Durchmesser 12-28 mm x 2,5 mm
Stahlrohr DIN 2440 1/4" (14 mm), 3/8" (18 mm), 1/2" (2 mm), 3/4" (28 mm)
Nichtrostendes Stahlrohr (INOX) AISI 304 - 316, Wandstärke bis 1,5 mm Durchschnitt 12 - 28 mm
Elektrisch Rohre: 16-20-25-32 mm

Preparation for start-up

1. Working position (See figure B.1)

The position shown in the sketch would be ideal for comfort and safety during the entire bending process.

2. Working area (See figure B.2)

Before start, the bending area should be clear from any element that may interfere in the bending process.

3. Use of extension cords

The extension cable should as thick and short as possible. It should handle more than 15 Amp., and never be more than 30 m. in length.

4. Check the state of the on/off switch

Make sure that the on/off switch unlocks automatically when not pressed.

5. Use of tripod (optional) (See figure B.3)

The sketch shows assembly and coupling of tripod to bending machine.

6. Device for series bending (See figure B.4)

The unit provides a device for setting the bending angle automatically from 0° to 180°. To operate, loosen the graduated scale surrounding the former shaft and align the desired angle with the inner mark as shown. Once the angle has been selected, tighten the screws and proceed according to the "start-up" chapter.

TECHNICAL CHARACTERISTICS

Bending capacity:	12 – 32 mm
Bending angle:	0° - 180°
Voltage:	230 V 50/60 Hz 100 V 50/60 Hz 110 V 50/60 Hz
Absorbed power:	1010 W (900W)
On-switch:	Non-blocking
Machine weight:	13 kg.
Machine dimensions:	590 x 145 x 215
Complete set weight (12, 15, 18 and 22 mm):	24 kg.
Box dimensions:	660 x 430 x 200 mm
Noise level:	100 dBA
Lp:	87 db
Vibration level:	5,9 m/s ²

Important: It is not advisable to use this option on pipes larger than Ø 22 x 1,2 mm.

7. Keepaway from moving parts

Make sure that your hands are not in contact with moving parts of the machine during the bending process

Starting up

Before carrying out any operation with this unit, first read the general safety instructions and preparation for start-up.

Important: For all bending applications, carefully follow the steps described below

1. Select the tube or pipe to be bent. Choose the relevant bending former and shoe suited to the tubes size.

Ensure that the ROBEND® 3000 is set in the start position by starting the motor with the direction lever in the reserve position until it triggers off and moves to the neutral position.

2. Place the bending former onto the centrepin. Lay the tube into the bending former and secure it into the hook.

Important: Ensure that the tubes is fully inserted into the hook and has contact with the whole hook surface.

OPERATING INSTRUCTIONS

Secure the bending shoe with the fastening bolt into the appropriate housing.

3. Ensure you are at the correct starting position by checking the "0" mark on the bending former is lined up with the centre of the bending shoe (see figure C.A).

4. To start bending, shift the direction lever to the working position and push the power switch . The bending former will start to rotate. Maintain pressure on the switch until your chosen angle of bend (marked on the bending former) (see figure C.B) lines up with the mark on the bending shoe, and then release the switch (see figure C.C).

The ROBEND® 3000 is equipped with a device that allows you to preset the bending angle between 0 to 180 degrees which is ideal for repeat bends. See "preparation for start up" chapter.

5. Once the bend has been produced and the power switch has been released, shift the direction lever back into the reverse position . Now, briefly push the power switch to loosen the hold on the tube. Once the tube has released you can remove the fastening bolt, then the bending shoe and finally take the finished bend out of the bending former.

6. In order to make the ROBEND® 3000 ready for the next bending operation, start the motor with the direction lever in the reverse position until it triggers off and moves into the neutral position.

Care and maintenance

Before carrying out any job on the machine, disconnect the plug from the mains outlet.

1. Cable and plug

Both the cable and plug should be in optimum condition. Check them at regular intervals.

2. ON switch

Check that the machine switch unblocks automatically when finger pressure is released. In case of any anomaly, replace immediately with a new one.

3. Brushes

Check frequently for brush wear and perfect contact with rotor. Change brushes when their lengths is 1/3 of original length. Use original ROTHENBERGER brushes.

4. Motor and rotor

The carbon dust accumulated in the motor and brush housing should be removed every 100 hours. The motor's rotor should be permanently clean with a uniform surface (light bronze colour).

5. Gear box

Change grease every 500 operating hours. After

dismounting the machine, oil all mechanisms to eliminate old grease. Remove parts with dry compressed air and apply new grease with clean hands. Do not use any dissolvents. Approximately 300 grs. of grease is needed for a correct lubrication. An excessive amount of grease is not recommended as it can increase the temperature of the machine. Grease type: LGMT2 by SKF or similar. We recommend that this operation be carried out by an authorized after-sales service.

6. Dismounting the gear box

Before dismounting the cover of the gear box, never introduce sharp objects such as tips, screwdrivers, etc. between the body and cover's connecting faces. The correct procedure is to tap the front of the octagon gently with a plastic hammer.

7. Machine maintenance and repair should be done by a specialist

All repairs should be carried out by a specialist and only original parts should be used.

Diagnosis of faults

Before carrying out any inspection of the ROBEND® 3000, check that the plug is disconnected from the power supply.

Important: should any form of service/repair other than the basic points detailed below be required, please contact your nearest technical service centre.

A. The bending former stops rotation during bending, while the motor is still running.

The direction lever is not in the right position. There is a transmission problem - contact your technical service centre.

B. Bends are not round/circular

Bending former and/or shoe are not suited to the tube size. Bending former and/or shoe are worn out. Tube quality is suspect.

C. The ROBEND® 3000 does not start

Check the wiring in the plug. Carbon brushes may be worn out and need replacing.

D. Pre-set trigger does not function
Screws are not tightened properly.


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