

BOSCH



Service



EW / WJW 0 611 222 7 ..

(99 - 07)

X

INSTANDSETZUNGSHINWEISE
REPAIR INSTRUCTIONS
INSTRUCTIONS DE REPARATION
INSTRUCCIONES DE REPARACION

Bohrhammer
Rotary Hammer
Marteau perforateur
Martillo perforador

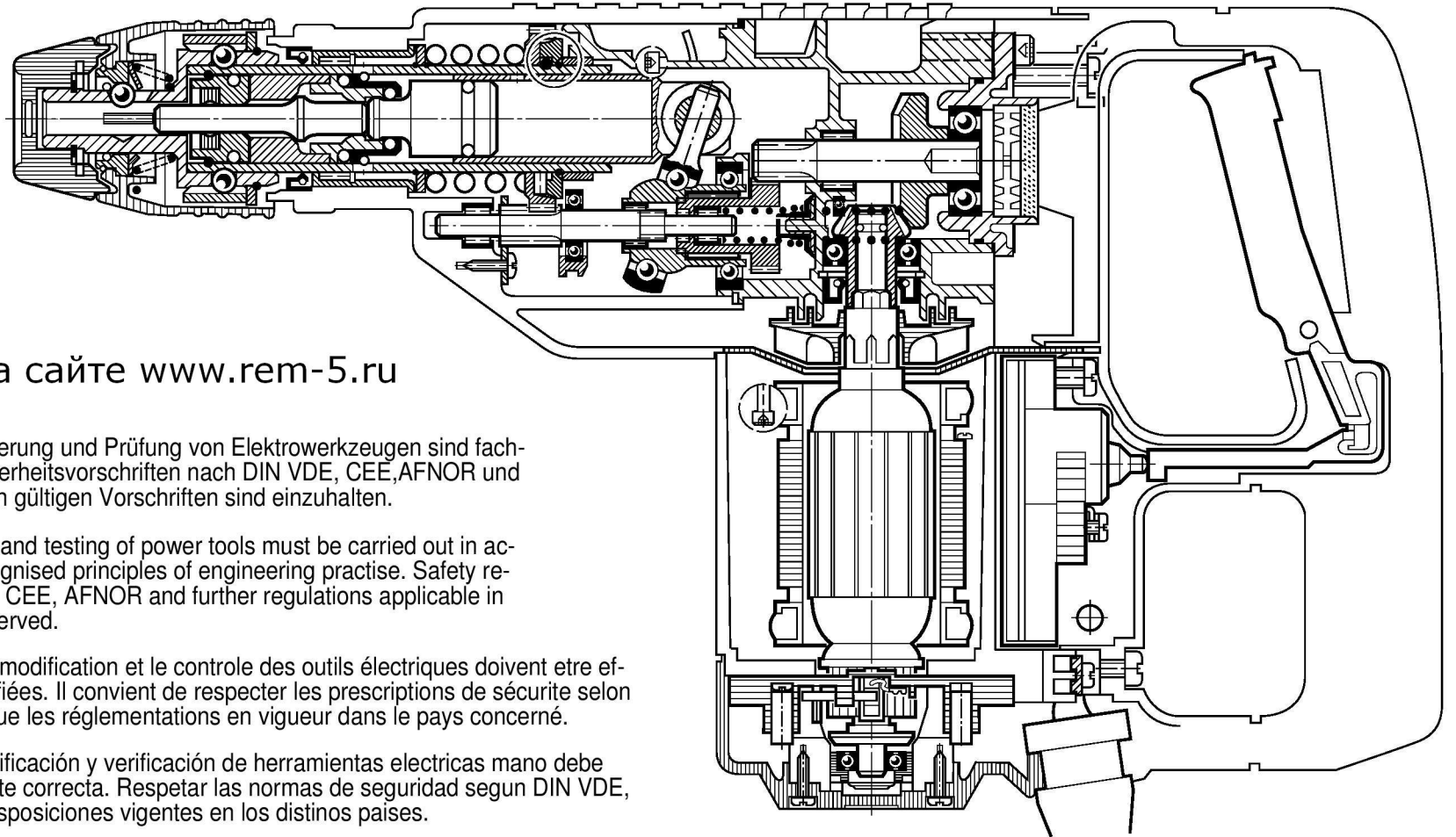
Typ 0 611 222 7 .. = GBH 4 DSC

Änderungen vorbehalten. Unsere Erzeugnisse werden stets dem neuesten technischen Stand angepaßt. Deshalb behalten wir uns Änderungen vor.

Modifications. Our products are constantly modified to meet new technical standards. We therefore reserve the right to alter data and specifications without prior notice.

Modifications. Nos produits sont continuellement adaptés aux dernières nouveautés techniques et les dates sont données sous réserve de changement.

Modificaciones. Nuestros fabricados van siendo adaptos constantemente a las últimas conquistas técnicas. Por ello, tenemos que reservarnos el derecho de introducir modificaciones en los datos técnicos.



Опубликовано на сайте www.rem-5.ru

Beachten: Instandsetzung, Änderung und Prüfung von Elektrowerkzeugen sind fachgerecht durchzuführen. Die Sicherheitsvorschriften nach DIN VDE, CEE, AFNOR und weitere in den einzelnen Ländern gültigen Vorschriften sind einzuhalten.

Attention: Repair, modification, and testing of power tools must be carried out in accordance with the generally recognised principles of engineering practise. Safety regulations according to DIN VDE, CEE, AFNOR and further regulations applicable in individual countries must be observed.

Attention: La remise en état, la modification et le controle des outils électriques doivent être effectués par des personnes qualifiées. Il convient de respecter les prescriptions de sécurité selon DIN VDE, CEE, AFNOR, ainsi que les réglementations en vigueur dans le pays concerné.

Obsérvese: La reparación, modificación y verificación de herramientas electricas mano debe efectuarse en forma técnicamente correcta. Respetar las normas de seguridad segun DIN VDE, CEE, AFNOR, asi como otras disposiciones vigentes en los distintos paises.

ROBERT BOSCH GMBH GESCHÄFTSBEREICH ELEKTROWERKZEUGE D 70745 LEINFELDEN-ECHTERDINGEN

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Typ 0 611 222 7 ..

Zerlegen

Für die Demontage werden handelsübliche Werkzeuge benötigt.

1. Eingangsprüfung durchführen.
Beachten:
Die Sicherheitsvorschriften nach DIN, VDE, CEE, AFNOR und weitere in den einzelnen Ländern gültigen Vorschriften sind einzuhalten.

Disassembly

Use normal trade tools by disassembly.

1. Carry out power supply check.
Attention:
Safety regulations according to DIN, VDE, CEE, AFNOR and further regulations applicable in individual countries must be observed.

Démontage

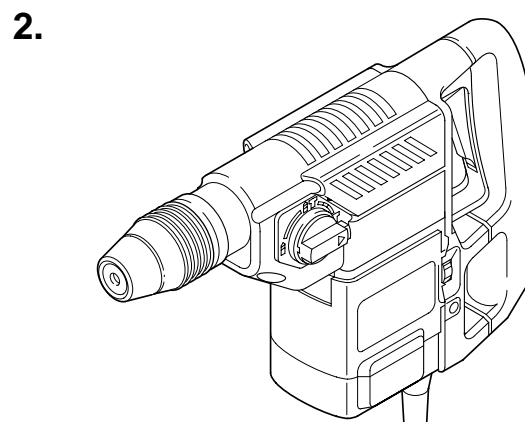
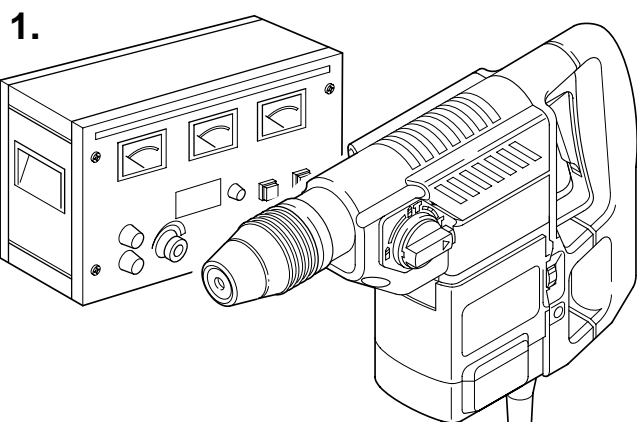
Pour le démontage, des outils en usage dans le commerce sont nécessaires.

1. Effectuer un contrôle préliminaire.
Attention:
Respecter les instructions de sécurité selon DIN, VDE, CEE, AFNOR et les autres instructions valables dans les pays respectifs.

Desmontaje

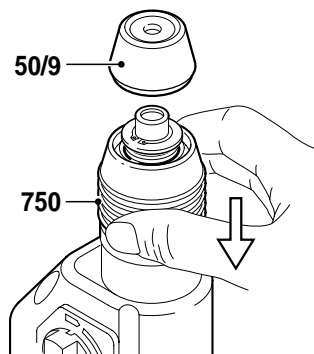
Para el desmontaje no se precisan herramientas especiales.

1. Realizar control de recepción.
Atención:
Atenerse a las prescripciones de seguridad según DIN, VDE, CEE, AFNOR y a las prescripciones adicionales específicas que pudieran existir en los respectivos países.

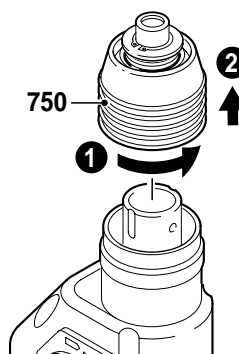


2. Zerlegen nach Explosions-, Schnittzeichnung und diesem Instandsetzungshinweis.
2. Disassembly using explosion, cut-away drawings and these repair instructions!
2. Démontez l'appareil suivant la vue éclatée, le plan en coupe et ces instructions de réparation.
2. Realizar el desmontaje conforme a los dibujos en perspectiva y en sección, y a estas instrucciones de reparación.

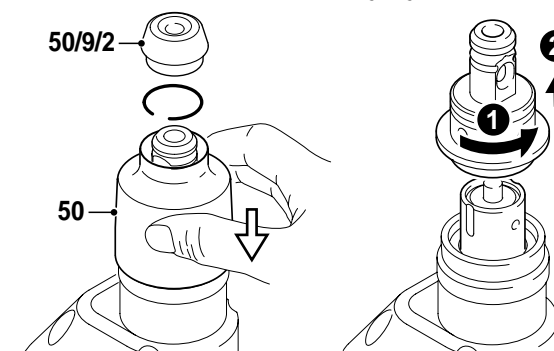
3. Neue Ausführung / New execution
Nouvelle exécution / Nueva ejecución



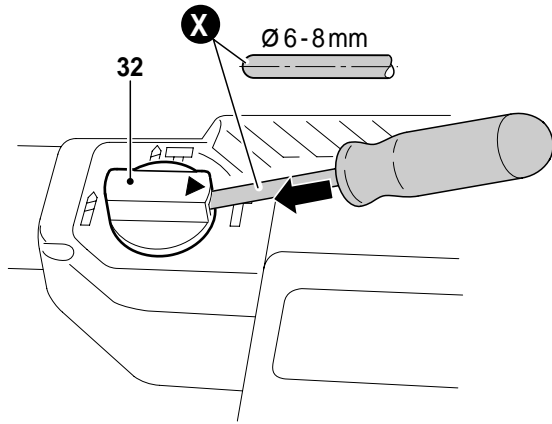
3.1 Neue Ausführung / New execution
Nouvelle exécution / Nueva ejecución



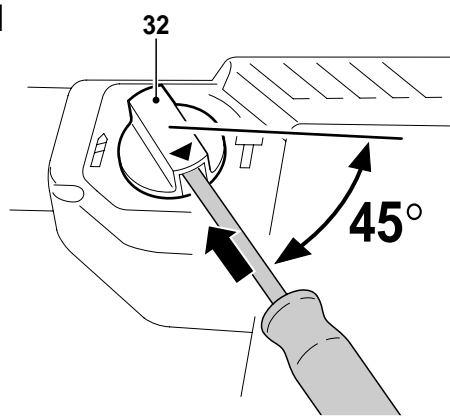
4. Alte Ausführung / Old execution
Ancien exécution / Vieja ejecución



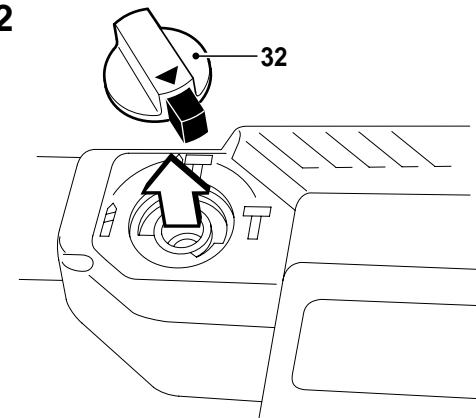
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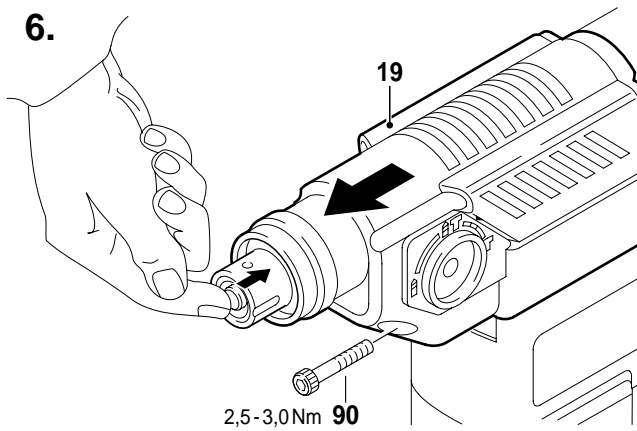
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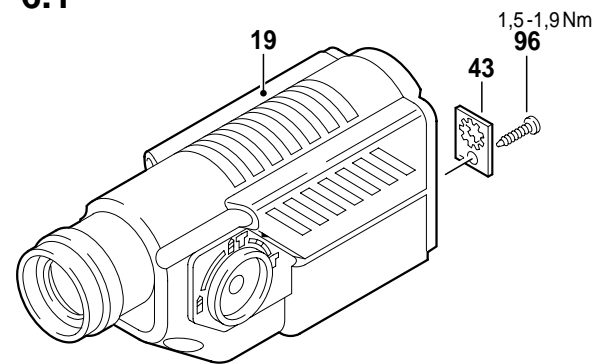
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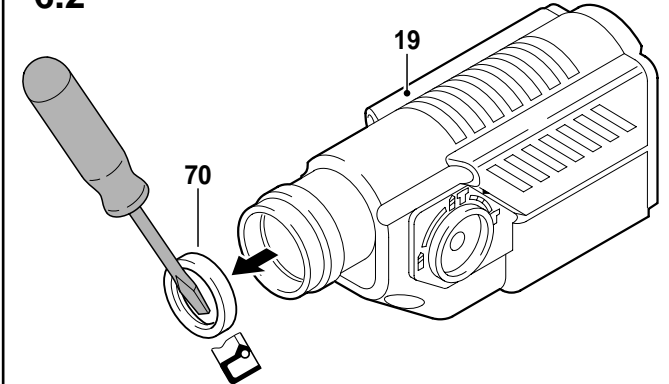
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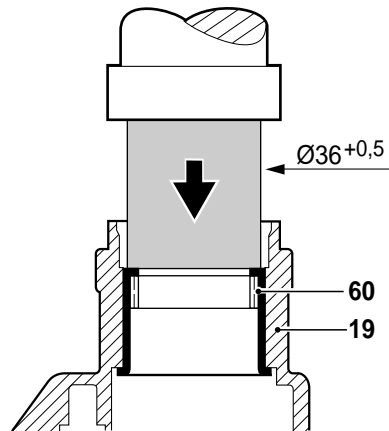
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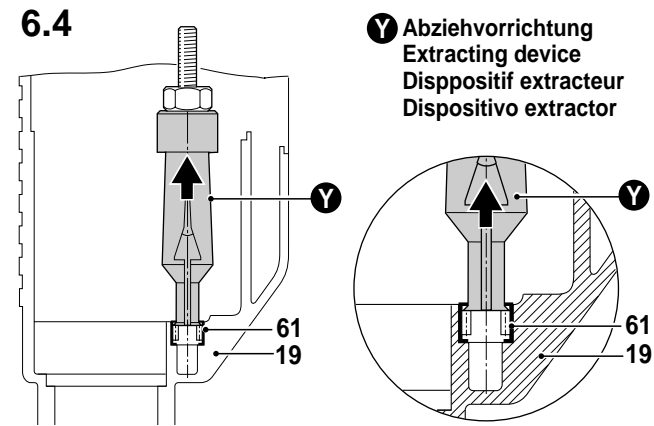
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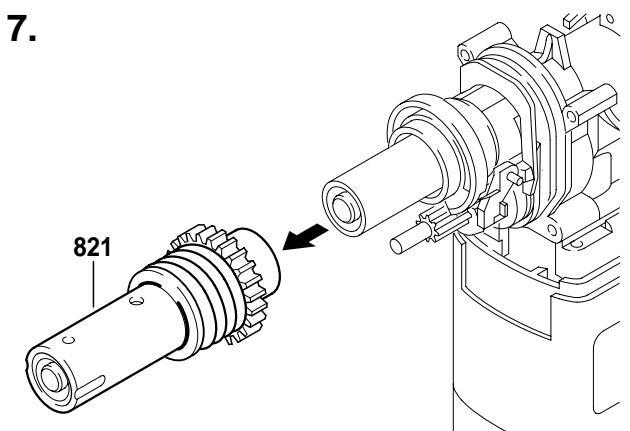
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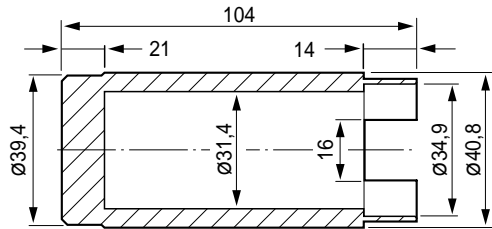
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7.

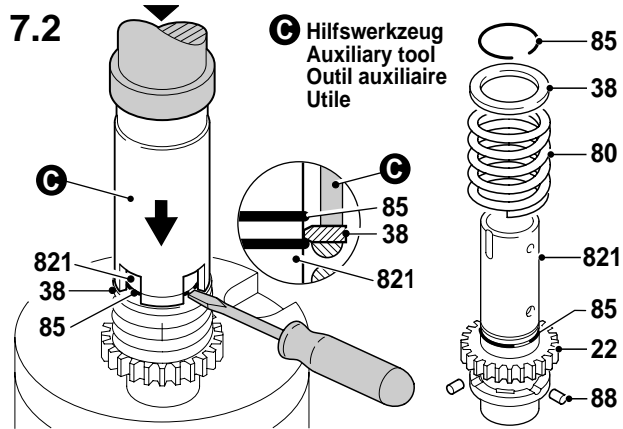


7.1  **Hilfswerkzeuge zum Selbstanfertigen**
Auxiliary tools (for your own manufacture)
Outil auxiliaire (fabrication locale)
Utile (fabricación particular)

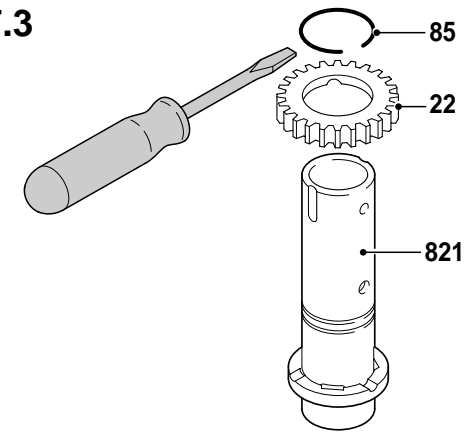


Maße in mm / Dimensions in mm
 Cotes en mm / Medidas en mm

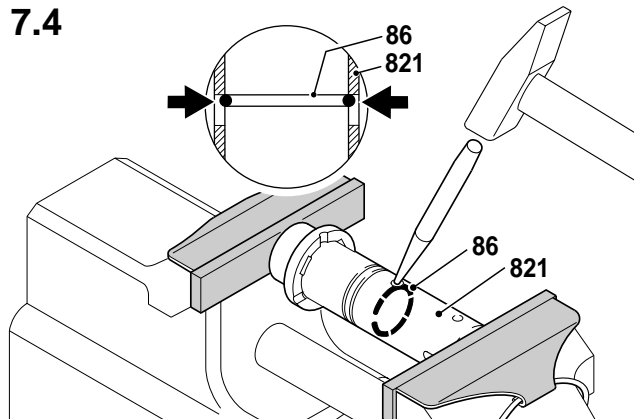
7.2  **Hilfswerkzeug**
Auxiliary tool
Outil auxiliaire
Utile



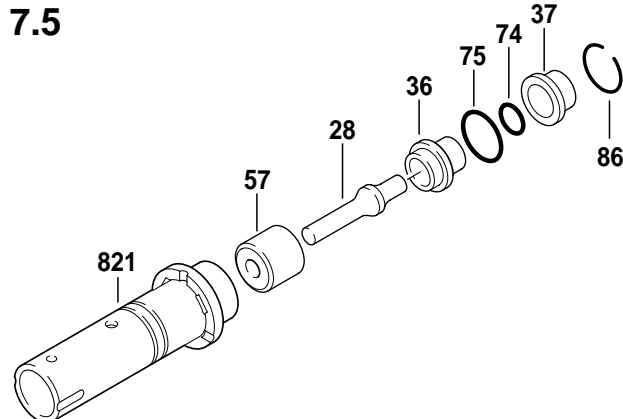
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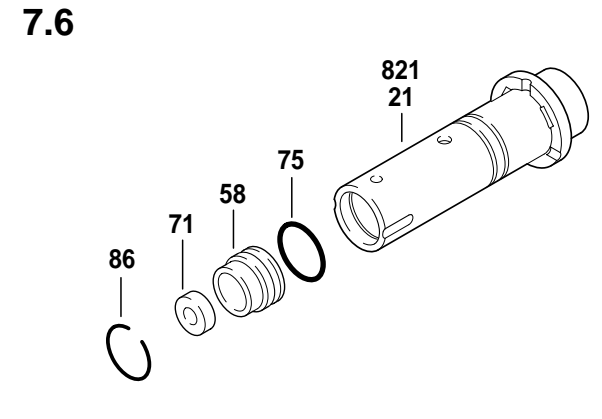
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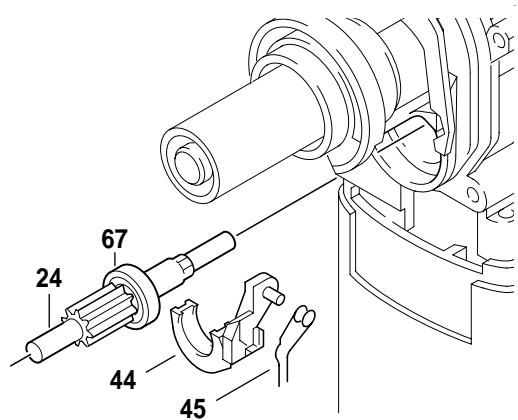
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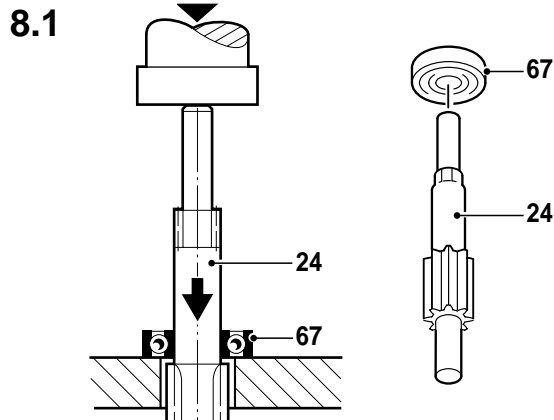
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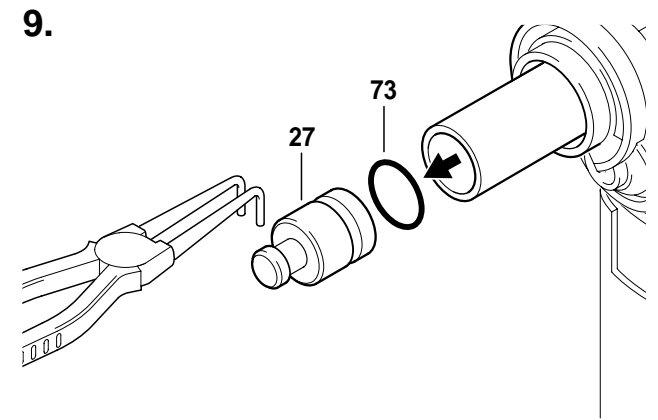
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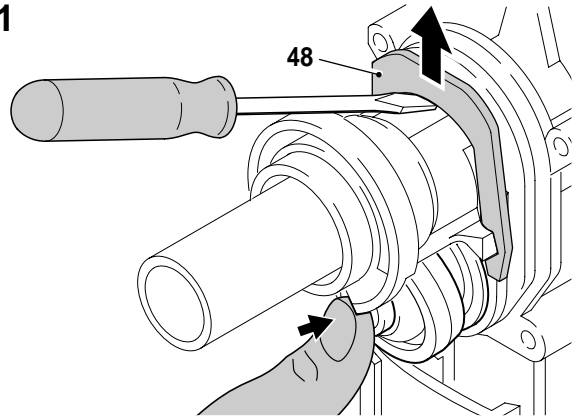
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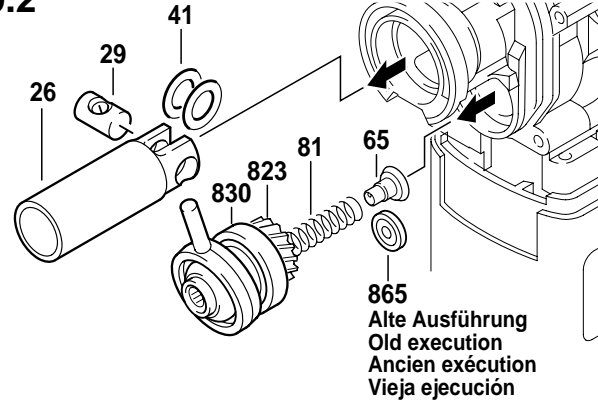
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9.1

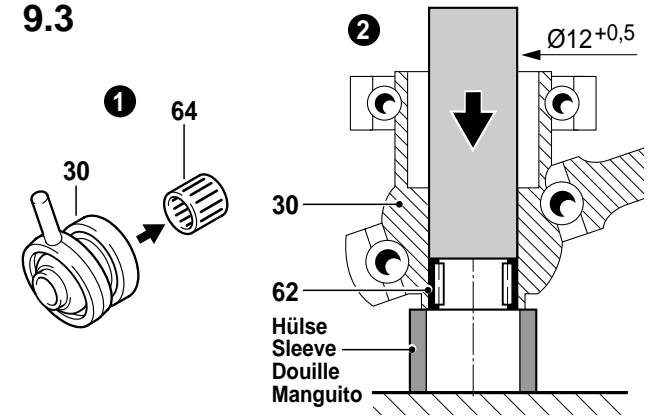


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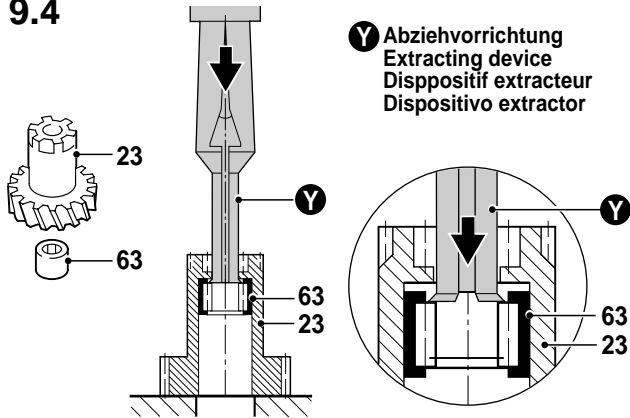


865
 Alte Ausführung
 Old execution
 Ancien exécution
 Vieja ejecución

9.3

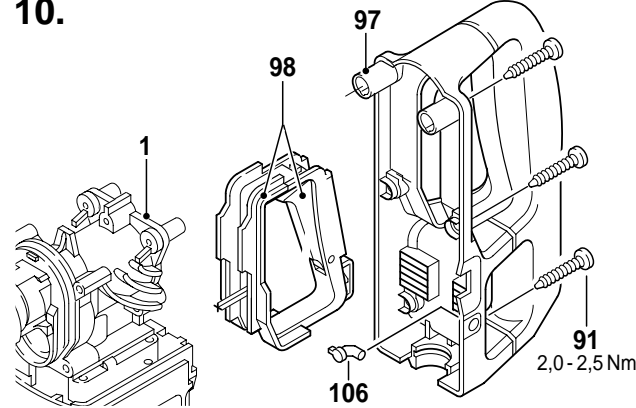


9.4



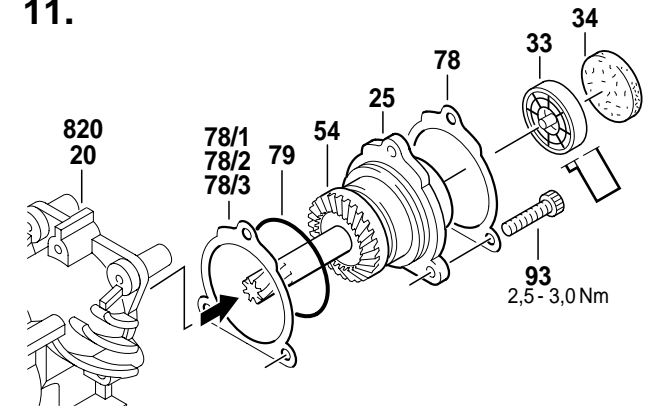
Abziehvorrichtung
 Extracting device
 Dispositif extracteur
 Dispositivo extractor

10.



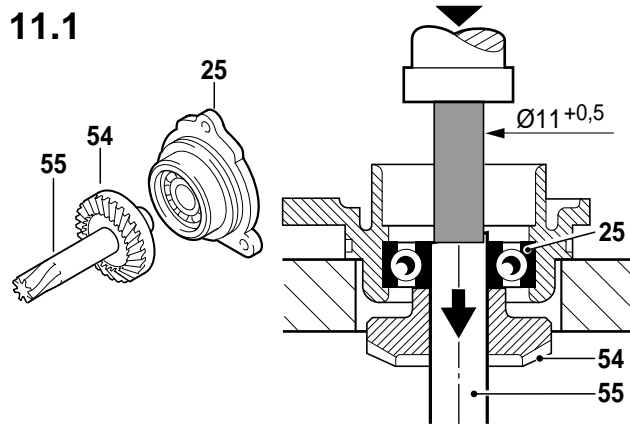
91
 2,0-2,5 Nm

11.

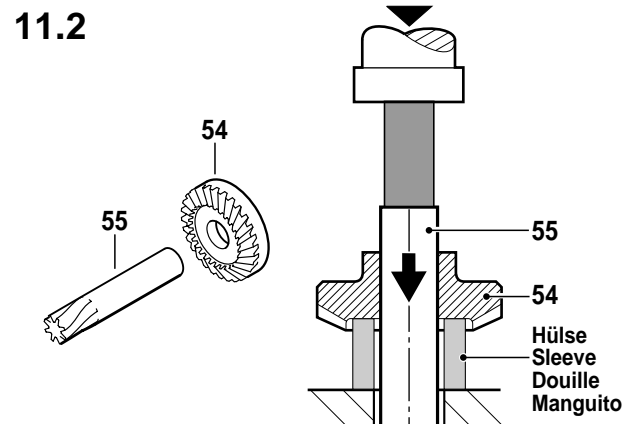


93
 2,5-3,0Nm

11.1

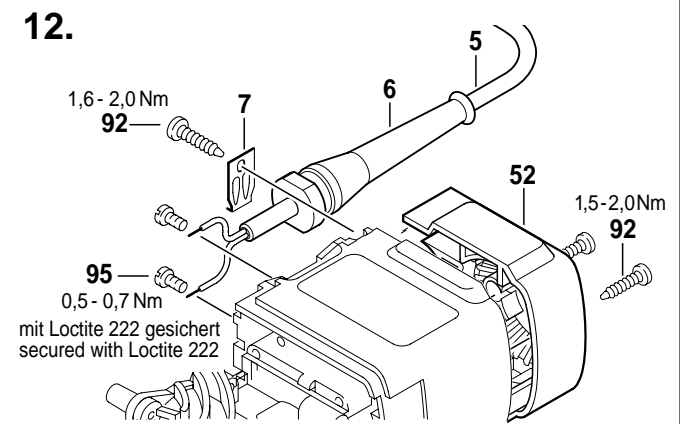


11.2



Hülse
 Sleeve
 Douille
 Manguito

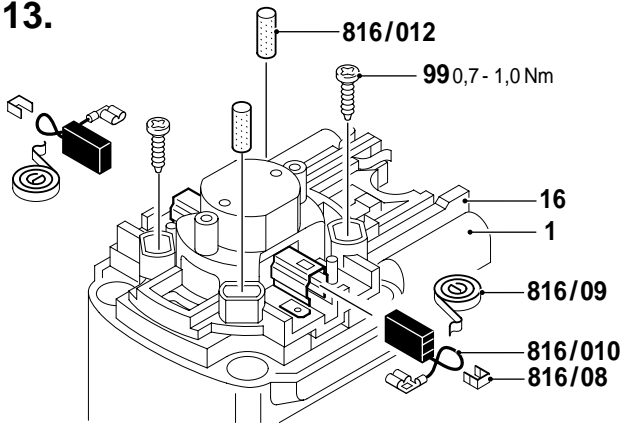
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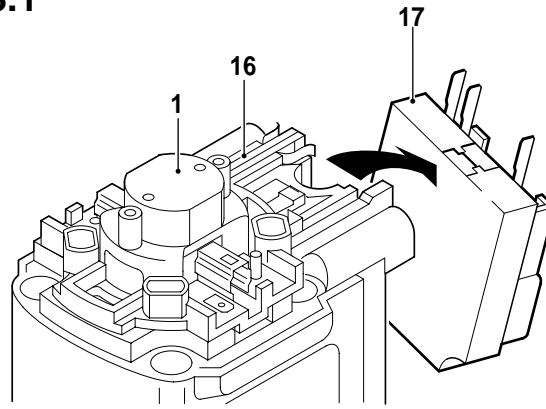
1,6-2,0 Nm
 92

0,5-0,7 Nm
 mit Loctite 222 gesichert
 secured with Loctite 222

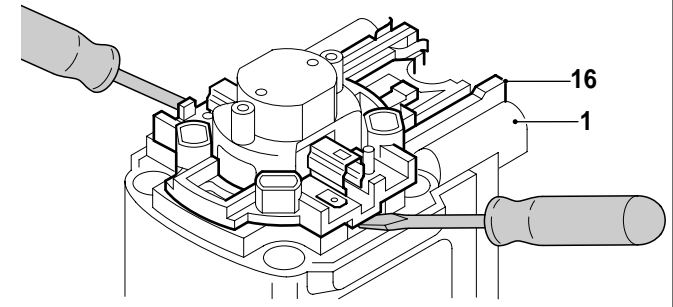
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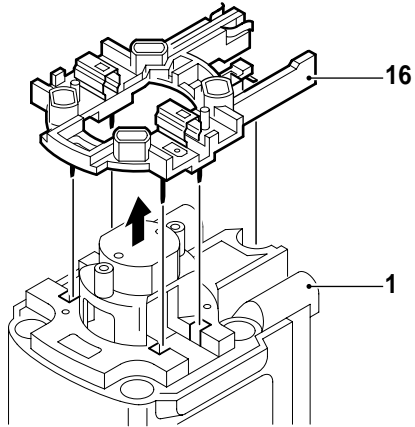
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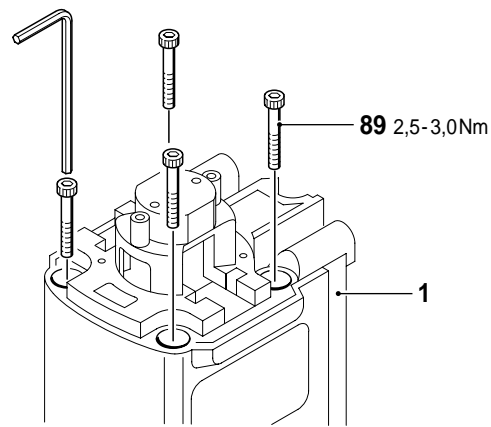
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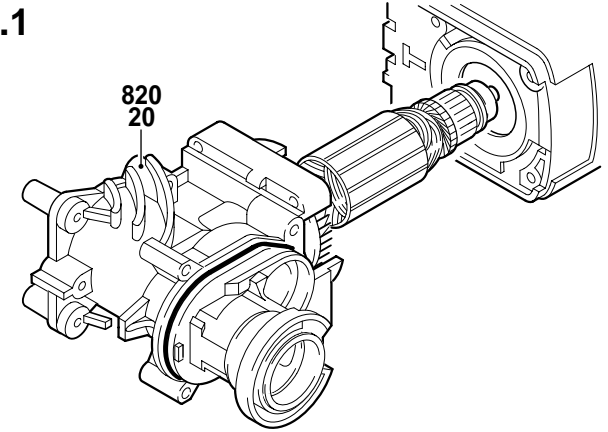
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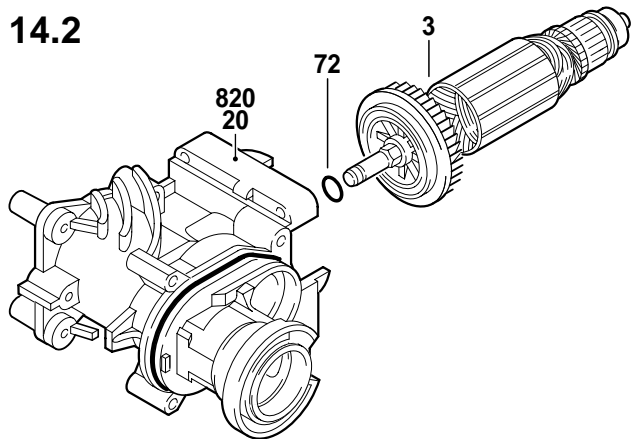
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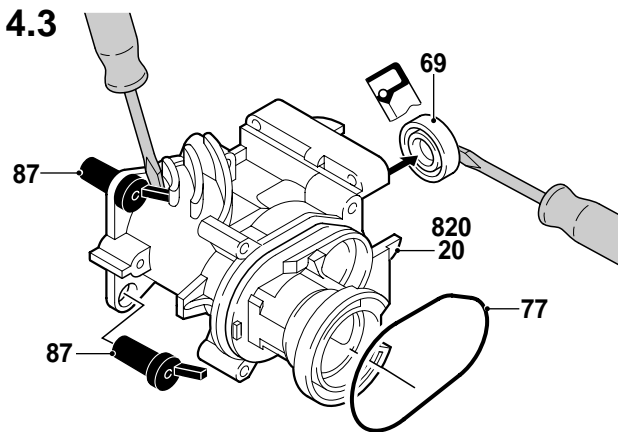
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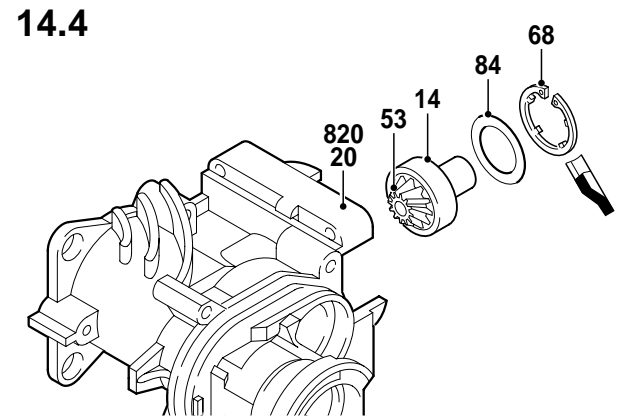
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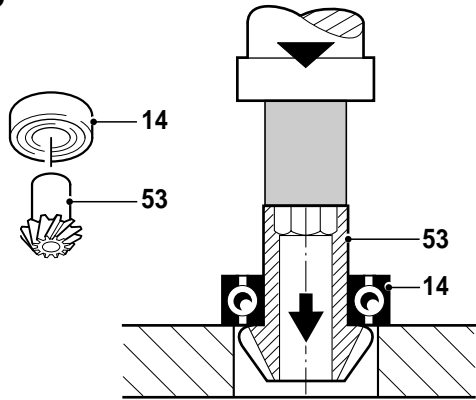
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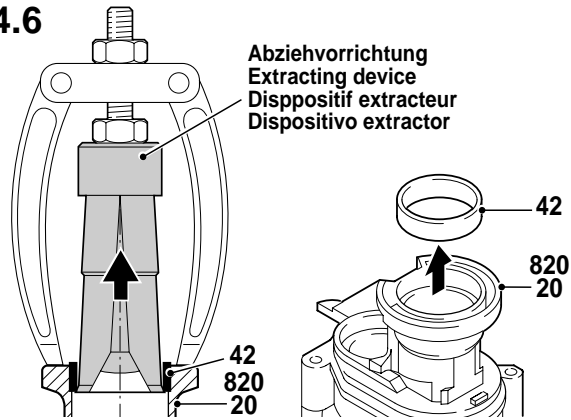
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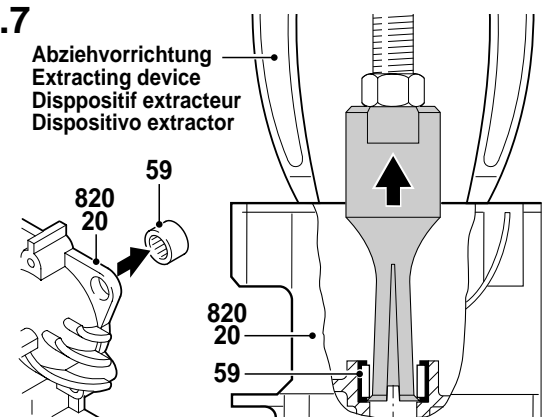
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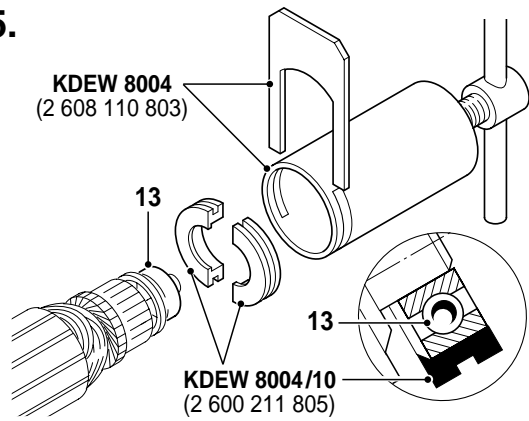
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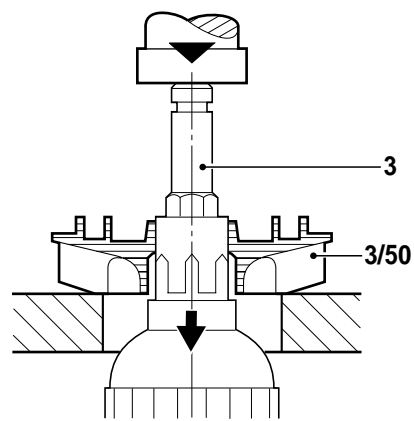
14.7



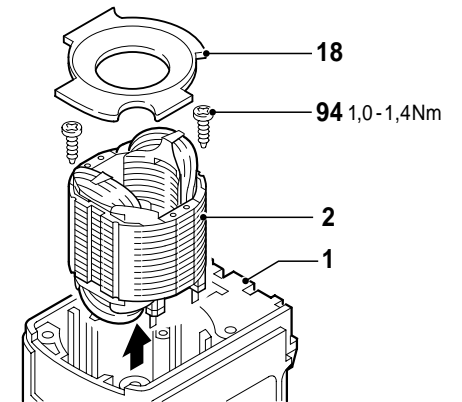
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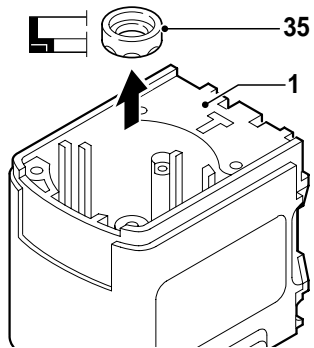
15.1



16.



17.



Zusammenbau

Montage nach Explosionszeichnung und diesem Instandsetzungshinweis.

Alle Teile sind gereinigt, abgenutzte und beschädigte Teile werden ersetzt.

Nur Original-Ersatzteile verwenden.

Zähne aller Zahnräder mit Fett **1 615 430 002** bestreichen.

Bitte Schmierhinweise beachten!

Assembly

Assembly using explosion drawings and these repair instructions!

Clean all parts, replace worn-out and damaged parts.

Use only original spare parts!

Grease all gear teeth **1 615 430 002**.

Please note lubrication instructions!

Montage

Le montage s'effectue selon la vue éclatée et les instructions de réparation suivantes.

Toutes les pièces sont nettoyées, les pièces usées ou endommagées doivent être remplacées par des nouvelles. Pour le remplacement de pièces, n'utiliser que des pièces d'origine.

Les dents graisser **1 615 430 002**.

Respecter les instructions de graissage!

Montaje

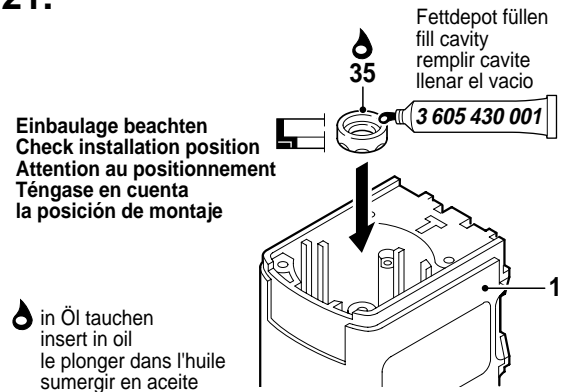
Realizar el montaje conforme a los dibujos en perspectiva y a estas instrucciones de reparación.

Todas las piezas deben estar limpias. Las piezas desgastadas o danadas deben reemplazarse por piezas nuevas. Utilizar solamente piezas de repuesto originales.

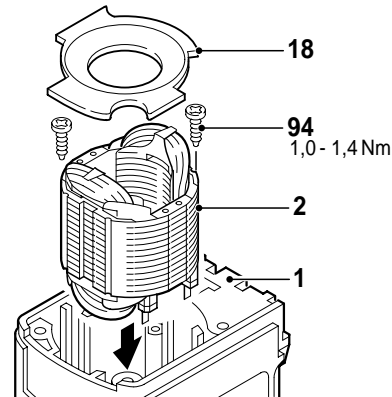
Dientes engrasar **1 615 430 002**.

Observar las instrucciones de lubricación!

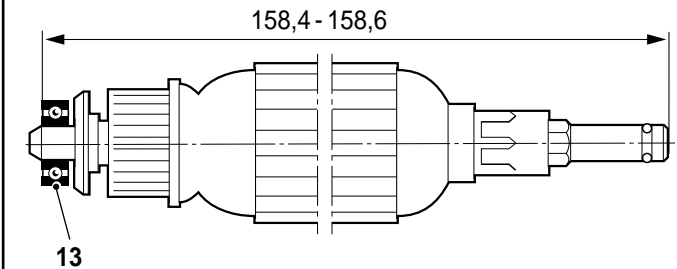
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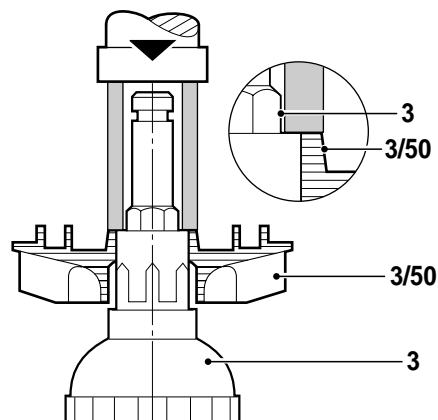
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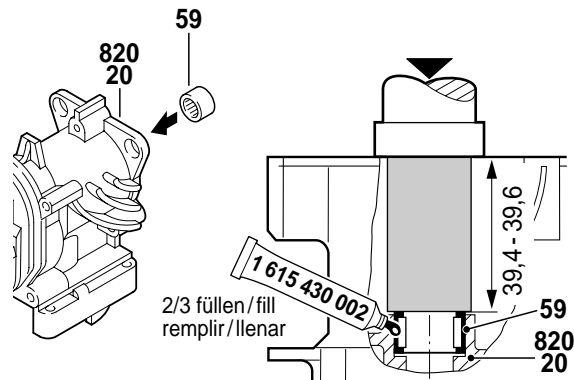
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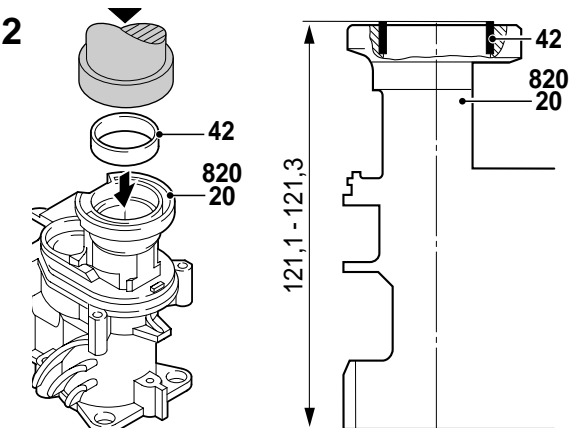
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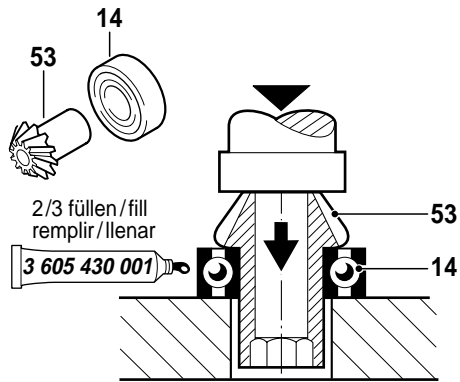
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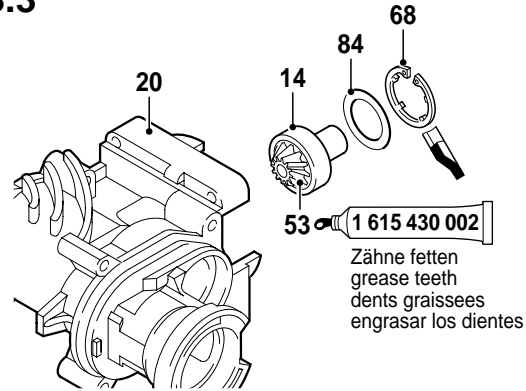
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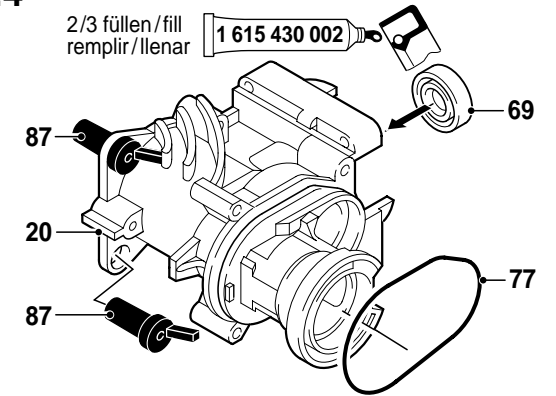
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23.3

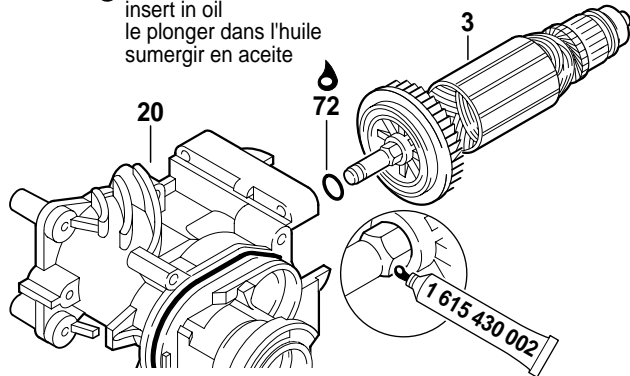


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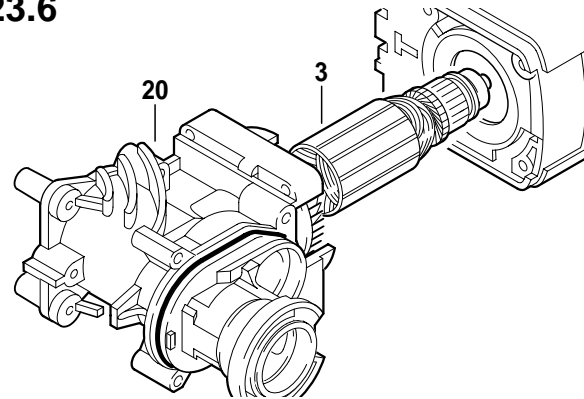


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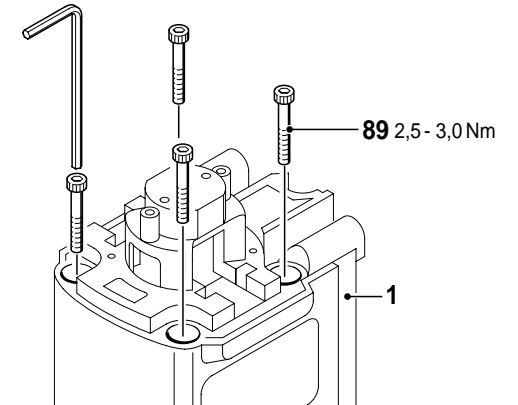
in Öl tauchen
insert in oil
le plonger dans l'huile
sumergir en aceite



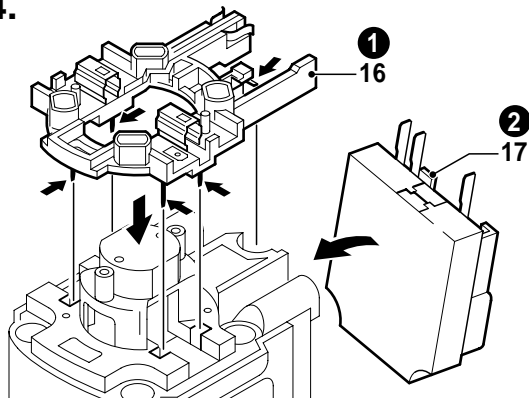
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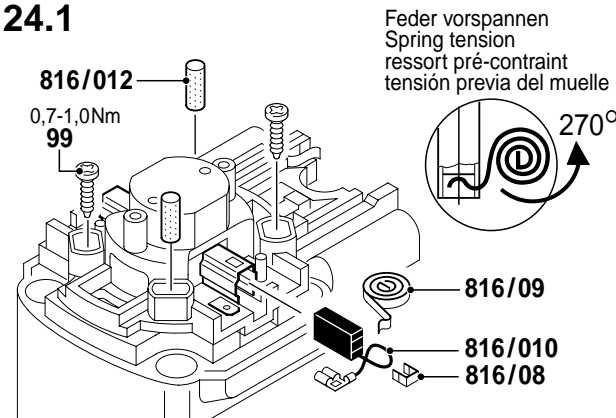
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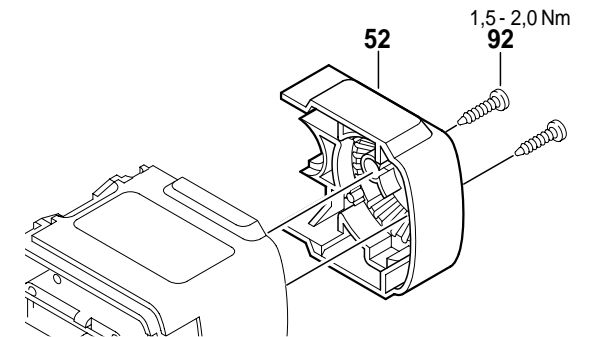
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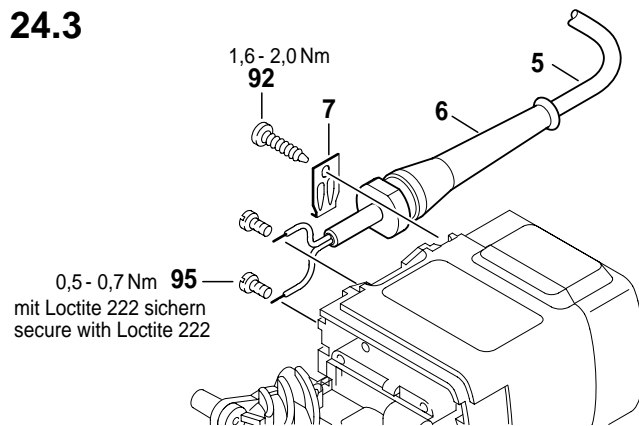
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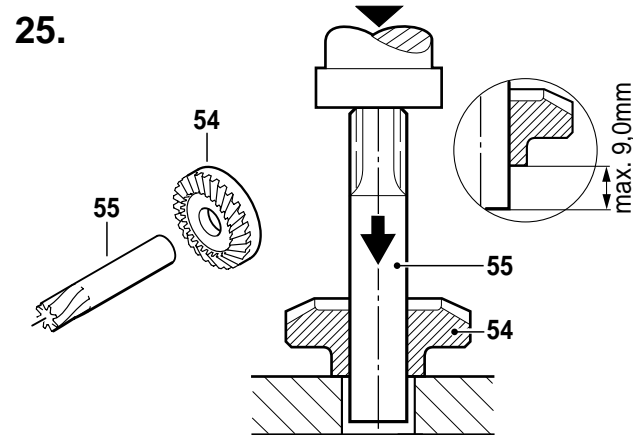
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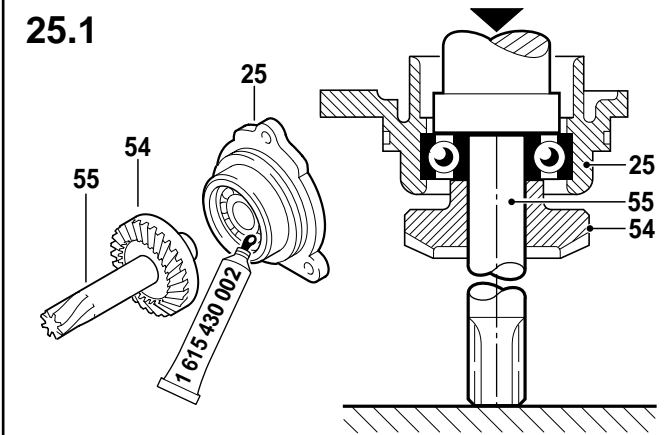
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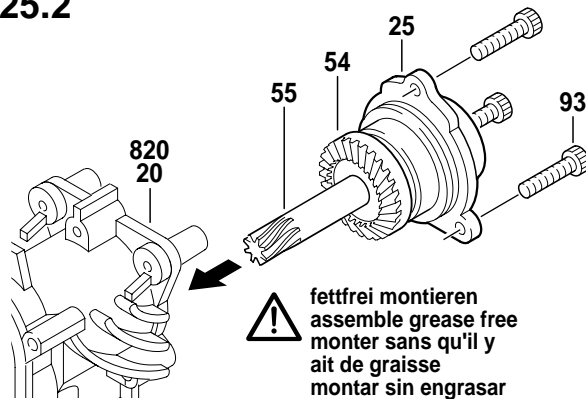
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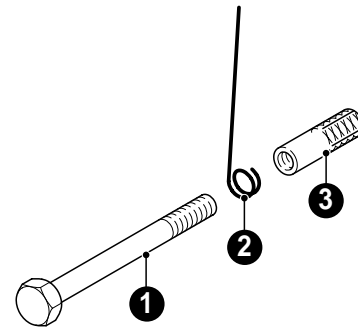
25.1



25.2



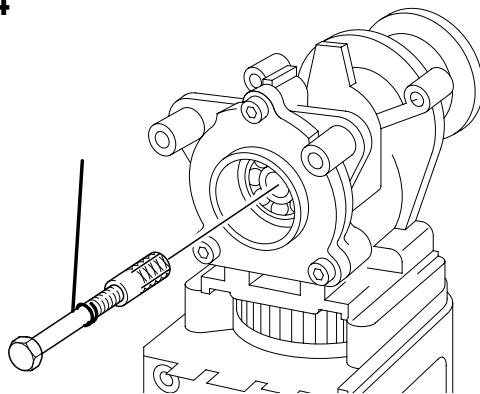
25.3



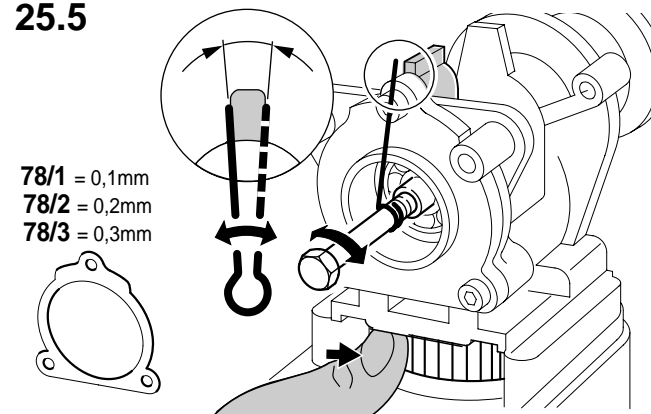
Meßwerkzeug zum Selbstanfertigen
Measuring tool (for your own manufacture)
Outil de mesure (fabrication locale)
Utile de medición (fabricación particular)

- ❶ Schraube M6 / Bolt M6 / Vis M6 / Tornillo M6
- ❷ Draht / Wire / Fil de fer / Hilo metálico
- ❸ Messingdübel M6 / Brass dowel M6
Goujon de laiton / Taco de latón M6

25.4



25.5



Zahnspiel **fettfrei** messen!
Spiel zwischen Pos. 53 und Pos. 54 = 0,2 - 0,3mm.
Ausgleich mit Pos. 78/1, 78/2, 78/3.

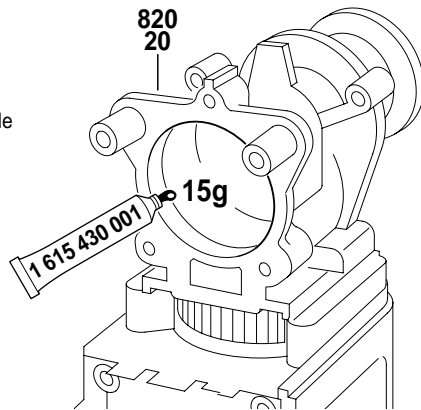
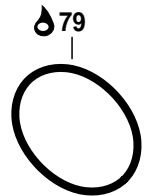
Measure gear play **grease free!**
Play between pos. 53 and pos. 54 = 0,2 - 0,3mm.
Compensate with pos. 78/1, 78/2, 78/3.

Mesurer le jeu des dents **sans qu'il y ait de graisse!**
Le jeu entre pos. 53 et pos. 54 = 0,2 - 0,3mm.
Compensation avec pos. 78/1, 78/2, 78/3.

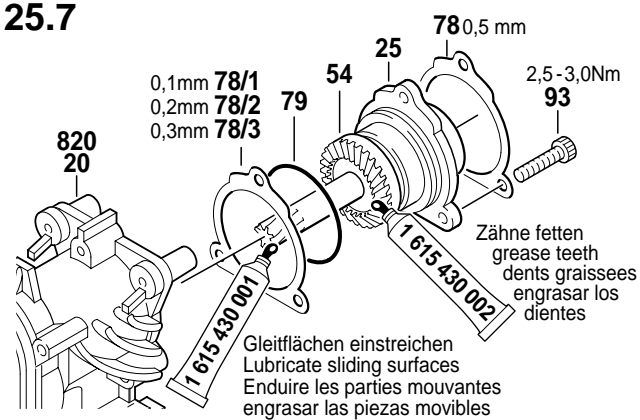
Medir el juego entre dientes **sin haber aplicado grasa!**
El juego entre pos. 53 y pos. 54 = 0,2 - 0,3mm.
El reglaje se realiza con pos. 78/1, 78/2, 78/3.

25.6

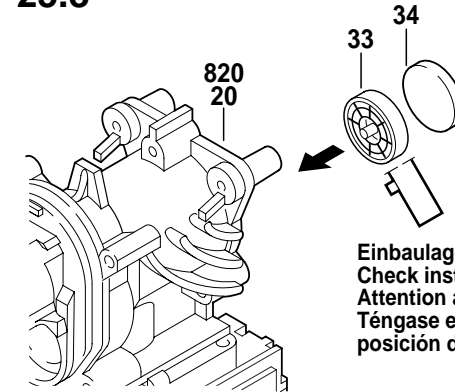
in Öl tauchen
insert in oil
le plonger dans l'huile
sumergir en aceite



25.7

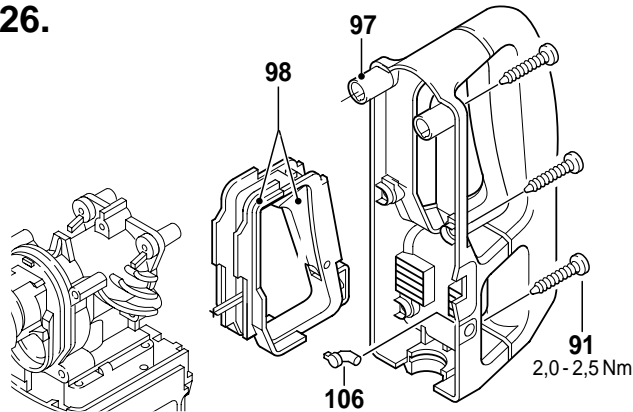


25.8

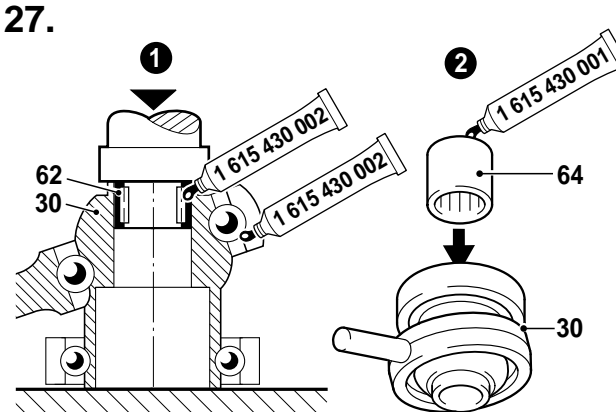


Einbaulage beachten
Check installation position
Attention au positionnement
Téngase en cuenta la
posición de montaje

26.

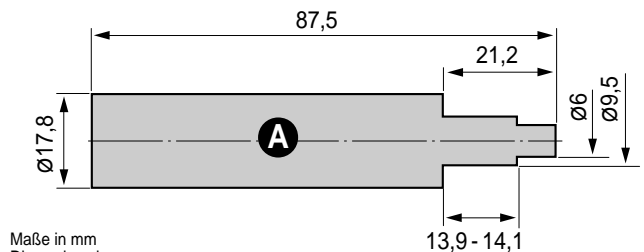


27.



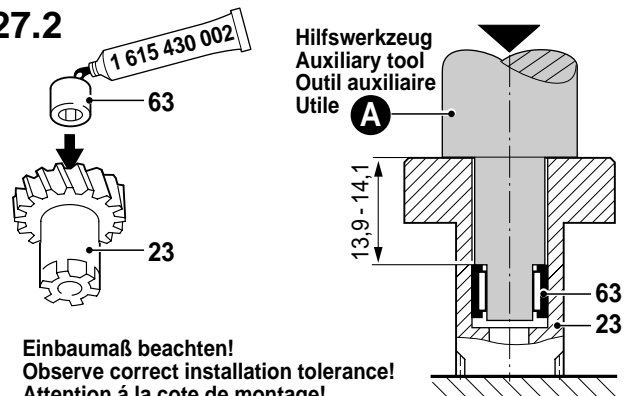
27.1

A Hilfswerkzeug zum Selbstanfertigen
Auxiliary tool (for your own manufacture)
Outil auxiliaire (fabrication locale)
Utile (fabricación particular)



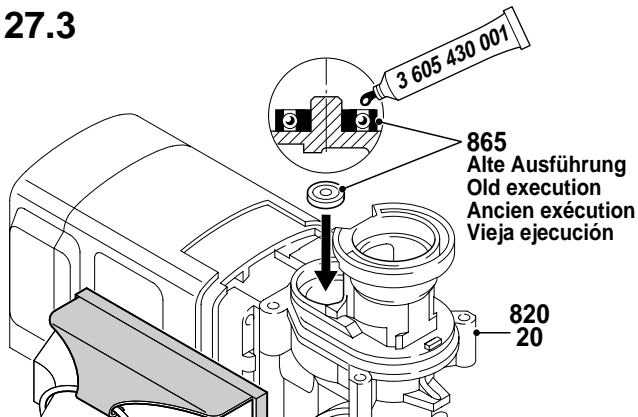
Maße in mm
Dimensions in mm
Cotes en mm
Medidas en mm

27.2

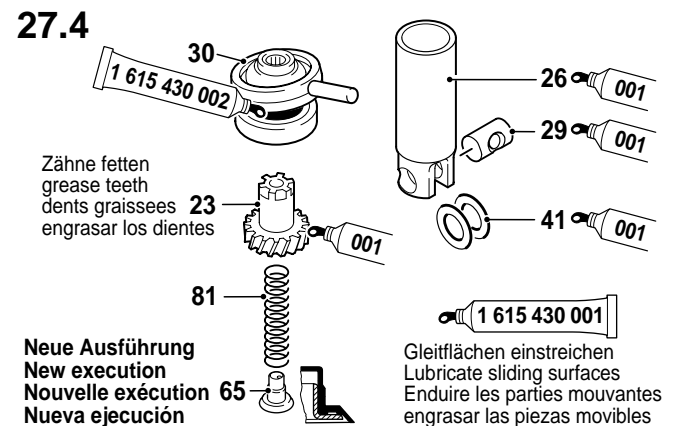


Einbaumaß beachten!
Observe correct installation tolerance!
Attention à la cote de montage!
Obsérvese la medida de montaje!

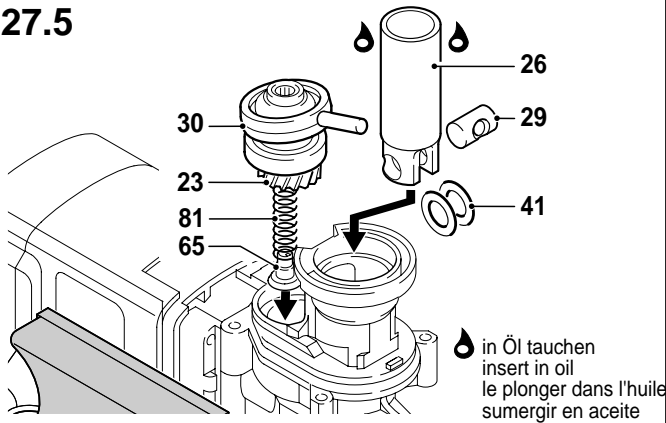
27.3



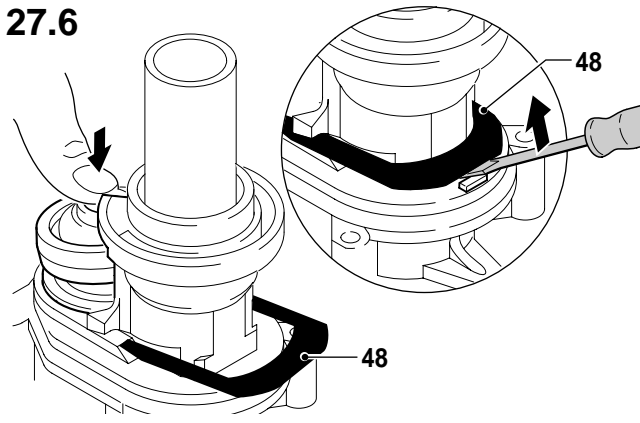
27.4



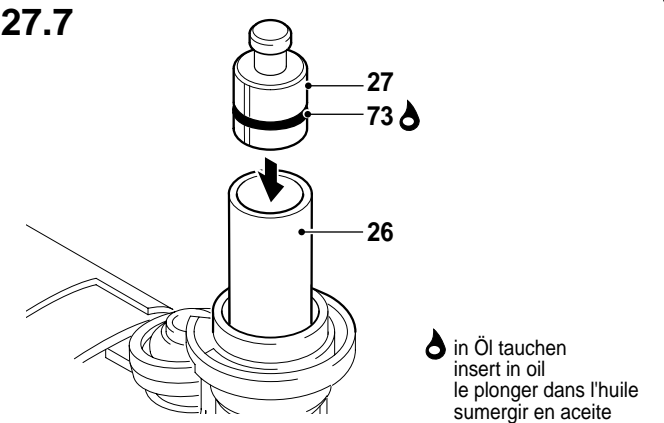
27.5



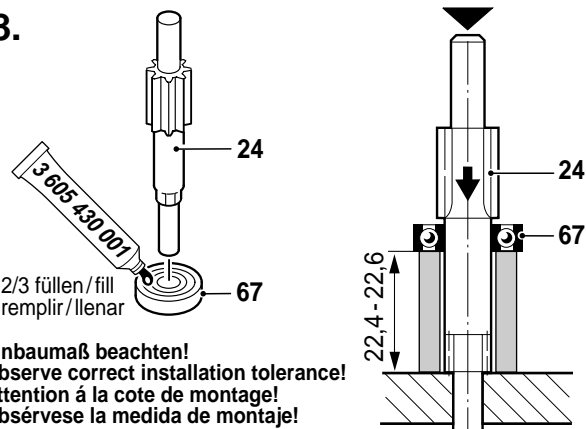
27.6



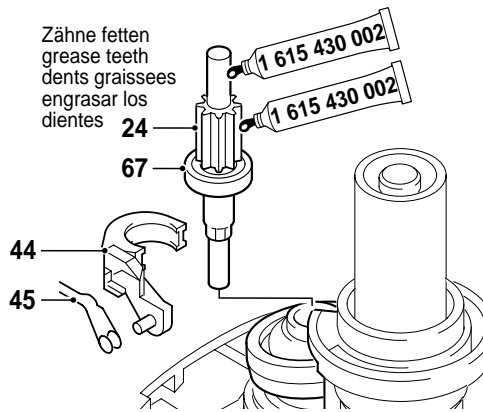
27.7



28.

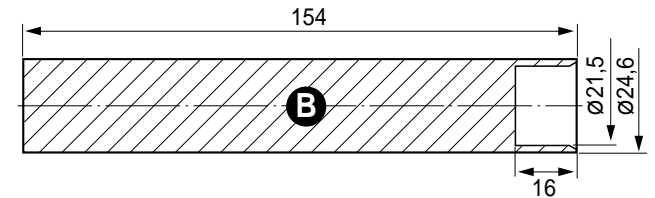


28.1



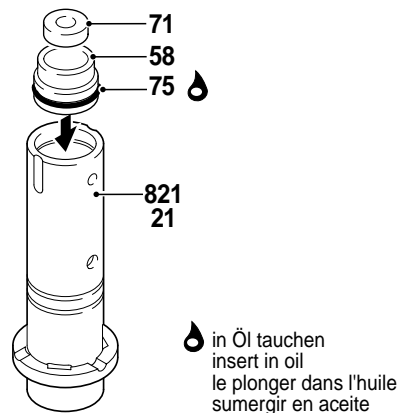
29.

B Hilfswerkzeug zum Selbstanfertigen
Auxiliary tool (for your own manufacture)
Outil auxiliaire (fabrication locale)
Utile (fabricación particular)

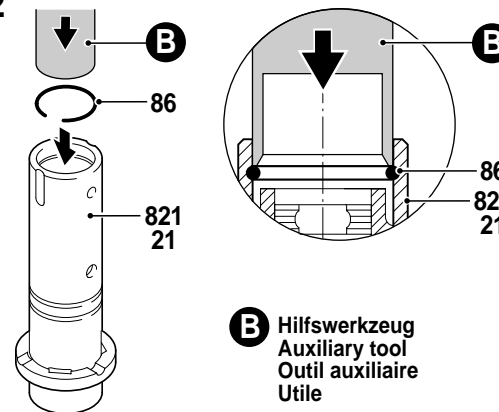


Maße in mm / Dimensions in mm
Cotes en mm / Medidas en mm

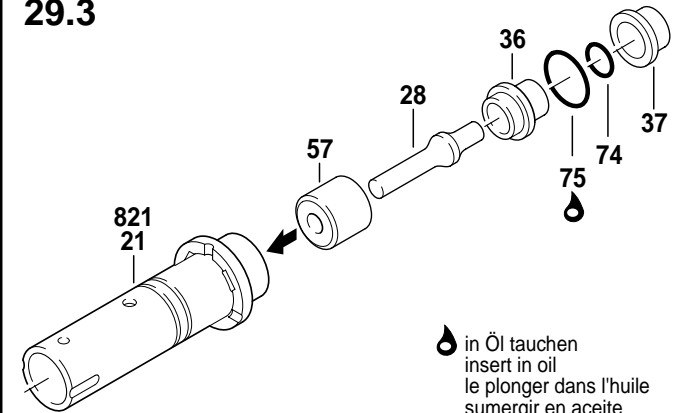
29.1



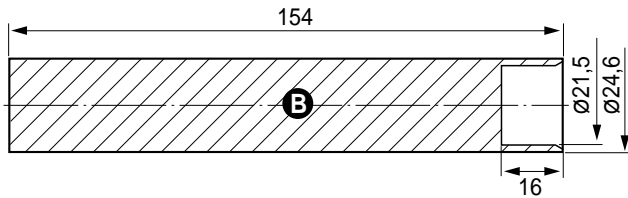
29.2



29.3

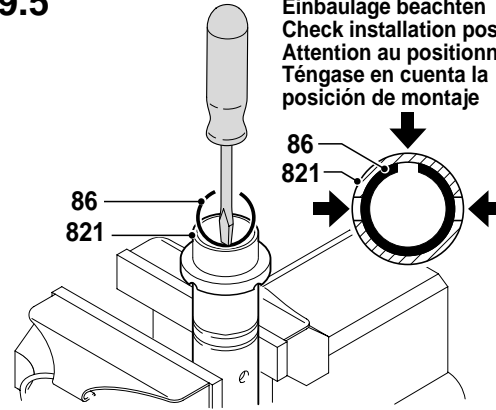


29.4 **B** Hilfswerkzeug zum Selbstanfertigen
 Auxiliary tool (for your own manufacture)
 Outil auxiliaire (fabrication locale)
 Utile (fabricación particular)

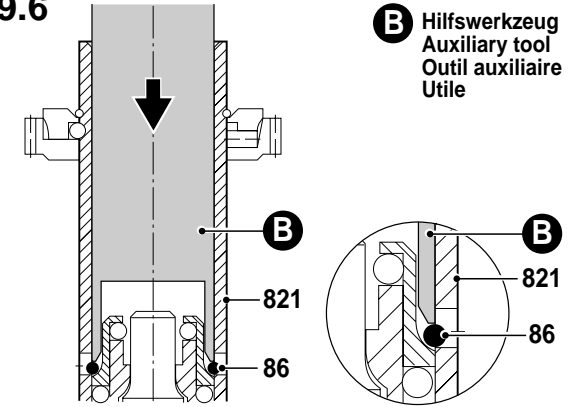


Maße in mm / Dimensions in mm
 Cotes en mm / Medidas en mm

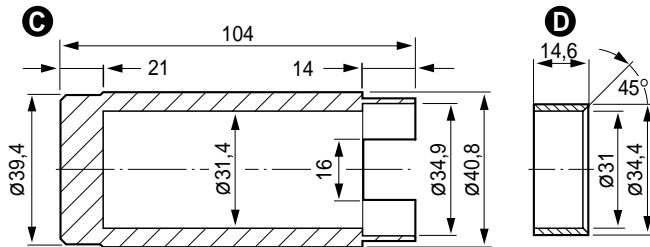
29.5 Einbaurage beachten
 Check installation position
 Attention au positionnement
 Téngase en cuenta la posición de montaje



29.6 **B** Hilfswerkzeug
 Auxiliary tool
 Outil auxiliaire
 Utile

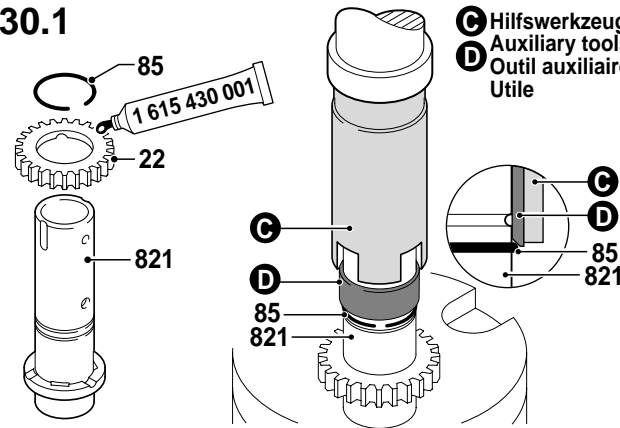


30. **C** **D** Hilfswerkzeuge zum Selbstanfertigen
 Auxiliary tools (for your own manufacture)
 Outil auxiliaire (fabrication locale)
 Utile (fabricación particular)

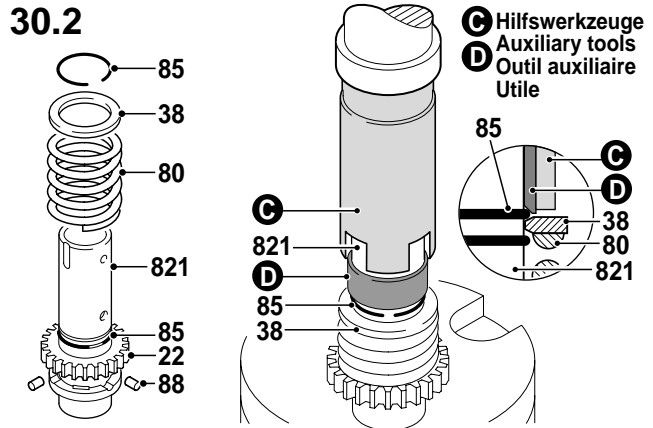


Maße in mm / Dimensions in mm
 Cotes en mm / Medidas en mm

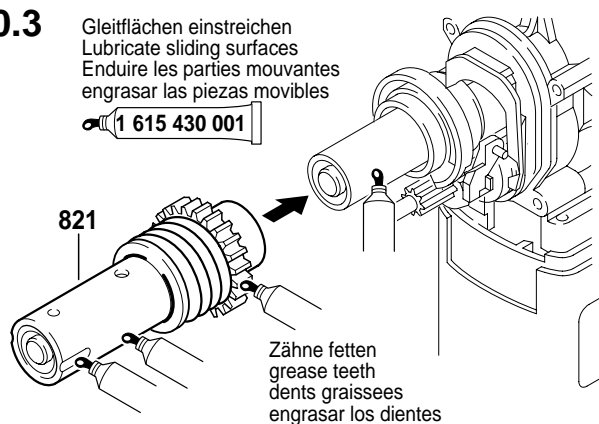
30.1 **C** Hilfswerkzeuge
 Auxiliary tools
 Outil auxiliaire
 Utile



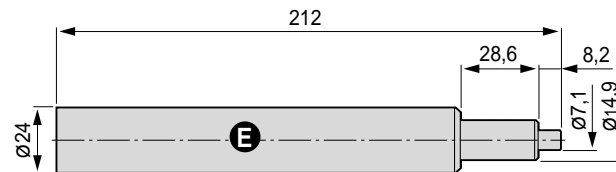
30.2 **C** Hilfswerkzeuge
 Auxiliary tools
 Outil auxiliaire
 Utile



30.3 Gleitflächen einstreichen
 Lubricate sliding surfaces
 Enduire les parties mouvantes
 engrasar las piezas móviles

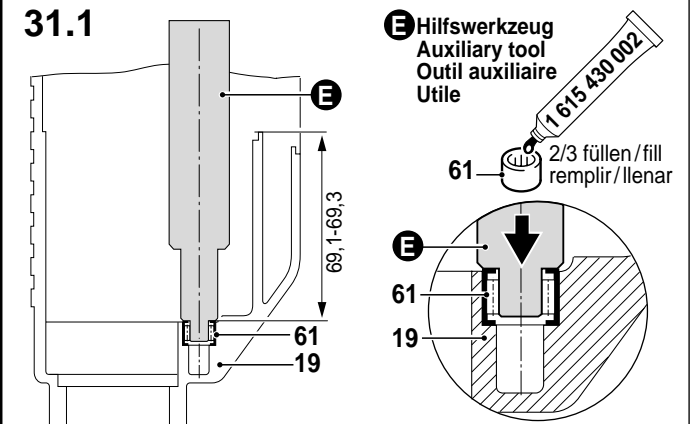


31. **E** Hilfswerkzeug zum Selbstanfertigen
 Auxiliary tool (for your own manufacture)
 Outil auxiliaire (fabrication locale)
 Utile (fabricación particular)

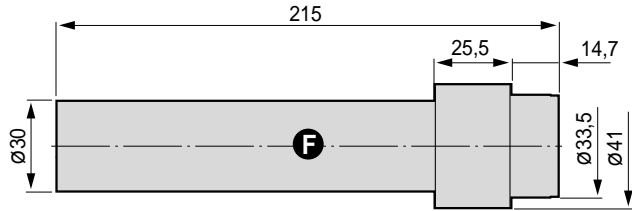


Maße in mm / Dimensions in mm
 Cotes en mm / Medidas en mm

31.1 **E** Hilfswerkzeug
 Auxiliary tool
 Outil auxiliaire
 Utile

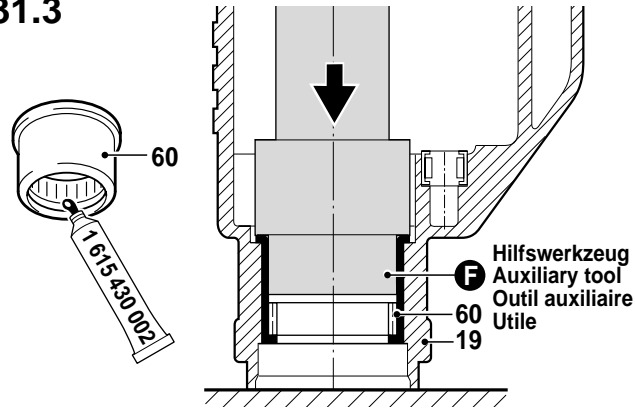


31.2 **F** Hilfswerkzeug zum Selbstanfertigen
 Auxiliary tool (for your own manufacture)
 Outil auxiliaire (fabrication locale)
 Utile (fabricación particular)

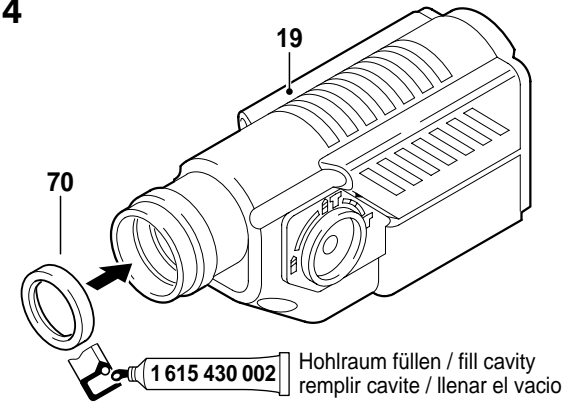


Maße in mm / Dimensions in mm
 Cotes en mm / Medidas en mm

31.3

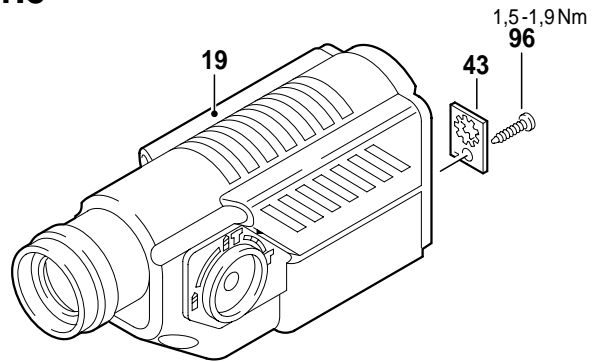


31.4

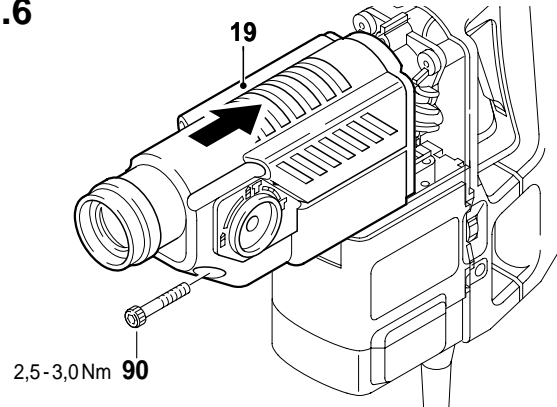


Hohlraum füllen / fill cavity
 remplir cavite / llenar el vacio

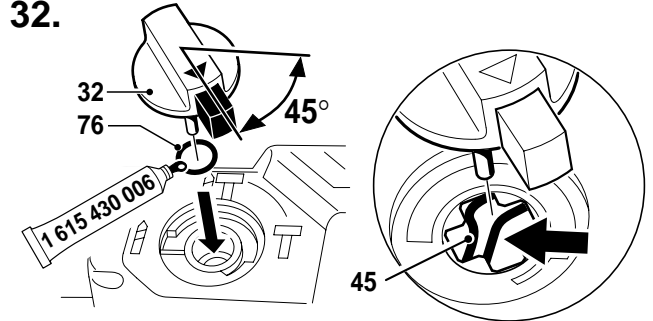
31.5



31.6

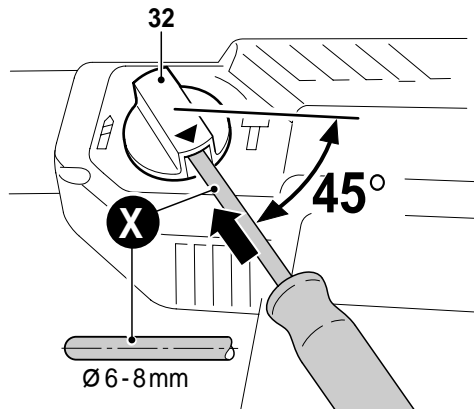


32.

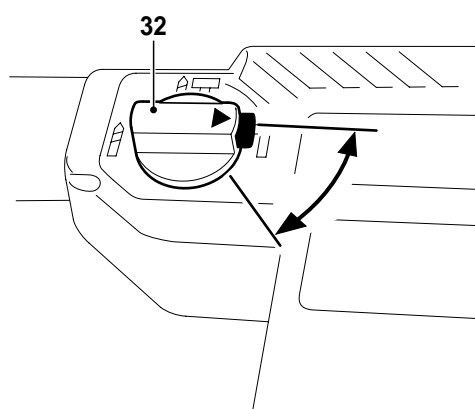


Gleitflächen einstreichen
 Lubricate sliding surfaces
 Enduire les parties mouvantes
 engrasar las piezas movibles

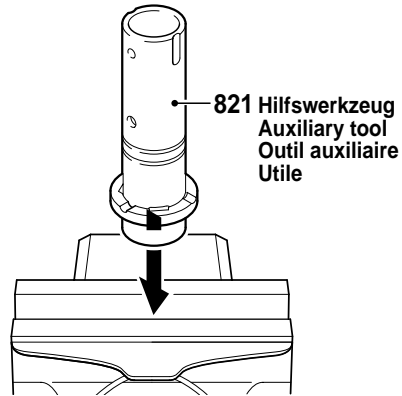
32.1



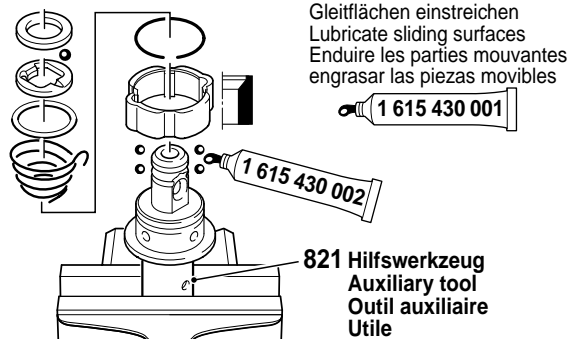
32.2



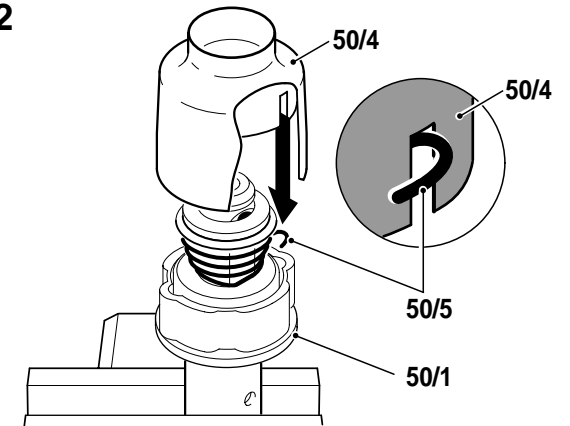
33.



33.1 Alte Ausführung / Old execution
Ancien exécution / Vieja ejecución

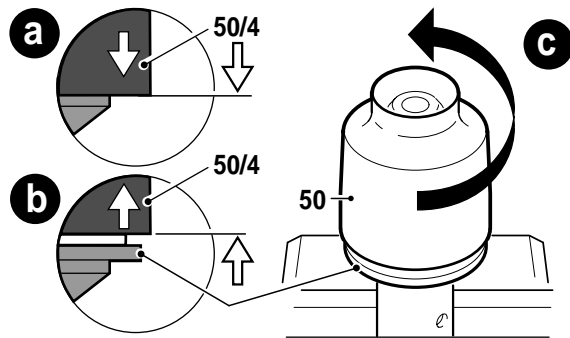


33.2

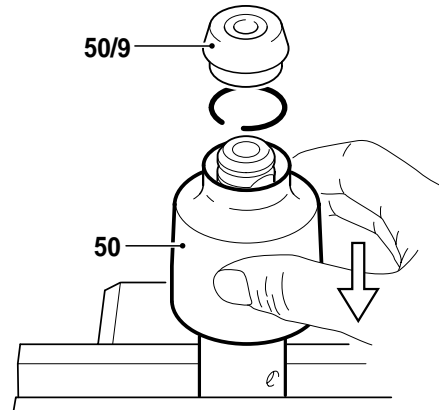


33.3

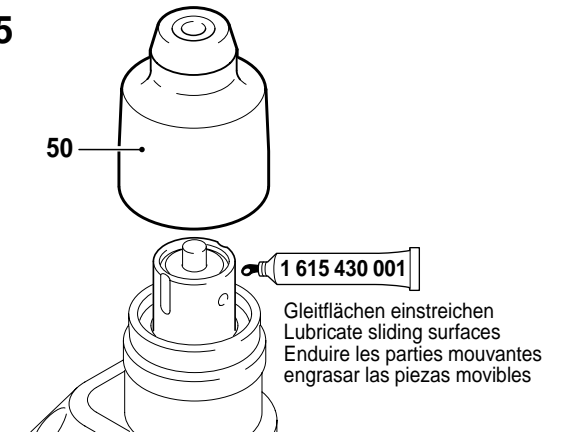
ca. 180° spannen
ca. 180° tension



33.4

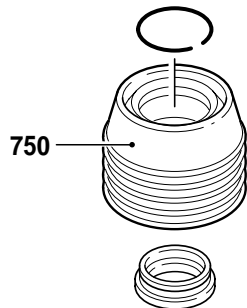


33.5

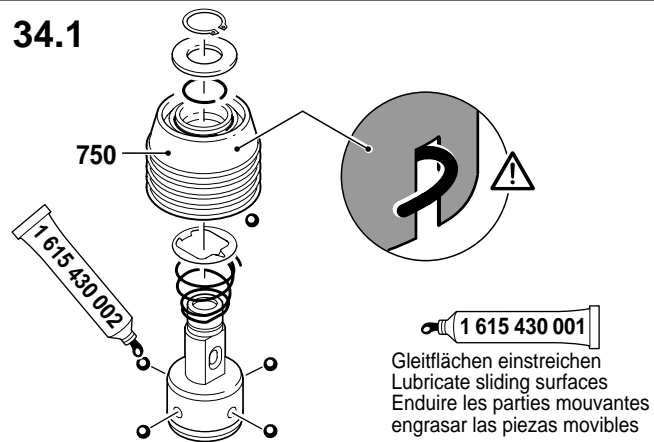


34.

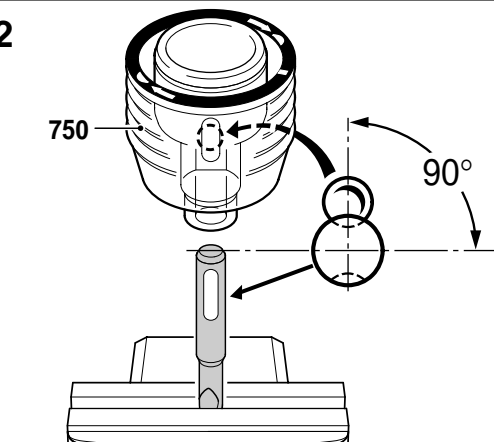
Neue Ausführung / New execution
Nouvelle exécution / Nueva ejecución



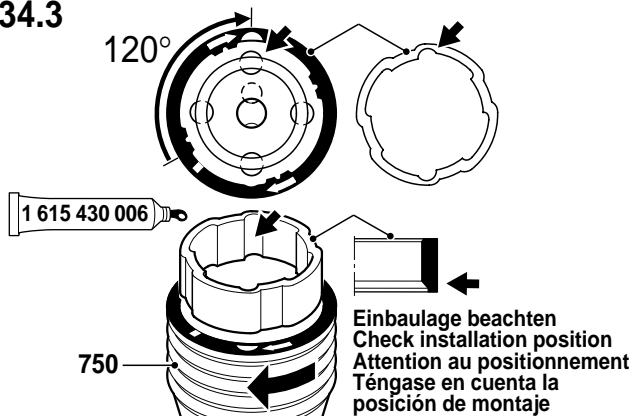
34.1



34.2

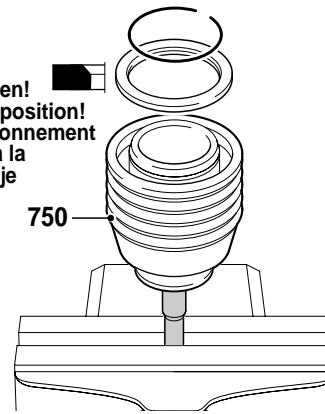


34.3

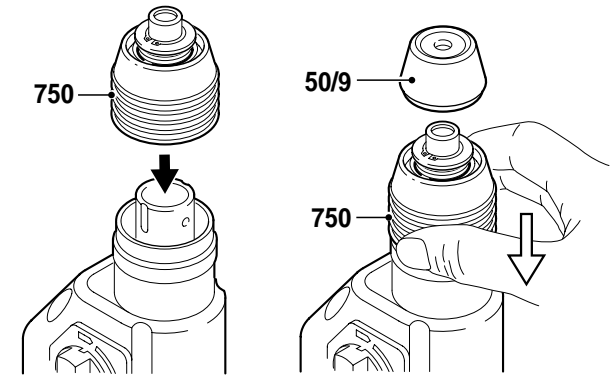


34.4

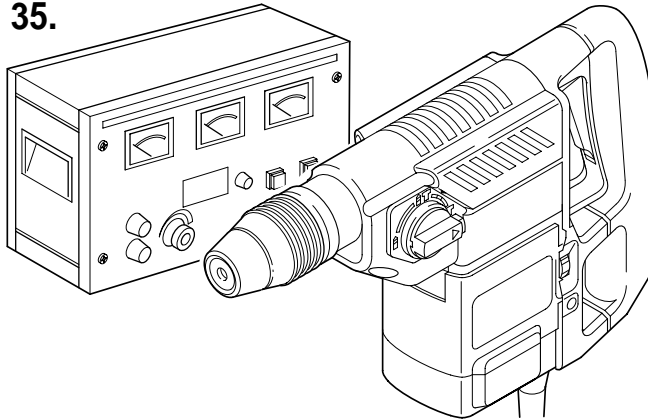
Einbaulage beachten!
Check installation position!
Attention au positionnement
Téngase en cuenta la
posición de montaje



34.5



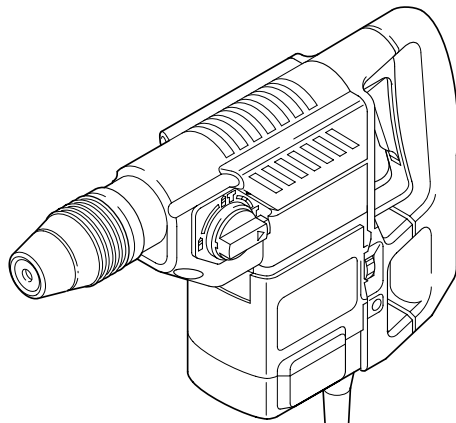
35.



34. Hochspannungsprüfung durchführen.
Beachten:
Die Sicherheitsvorschriften nach DIN, VDE, CEE, AFNOR und weitere in den einzelnen Ländern gültigen Vorschriften sind einzuhalten.
34. Carry out power supply check.
Attention:
Safety regulations according to DIN, VDE, CEE, AFNOR and further regulations applicable in individual countries must be observed.

34. Effectuer un contrôle à haute tension.
Attention:
Respecter les instructions de sécurité selon DIN, VDE, CEE, AFNOR et les autres instructions valables dans les pays respectifs.
34. Efectuar la prueba de alta tensión.
Atención:
Atenerse a las prescripciones de seguridad según DIN, VDE, CEE, AFNOR y a las prescripciones adicionales específicas que pudieran existir en los respectivos países.

36.



35. Probelauf, Schlagtest, elektrische und mechanische Prüfung durchführen.
35. Perform test run, impact test, electrical and mechanical check-up.

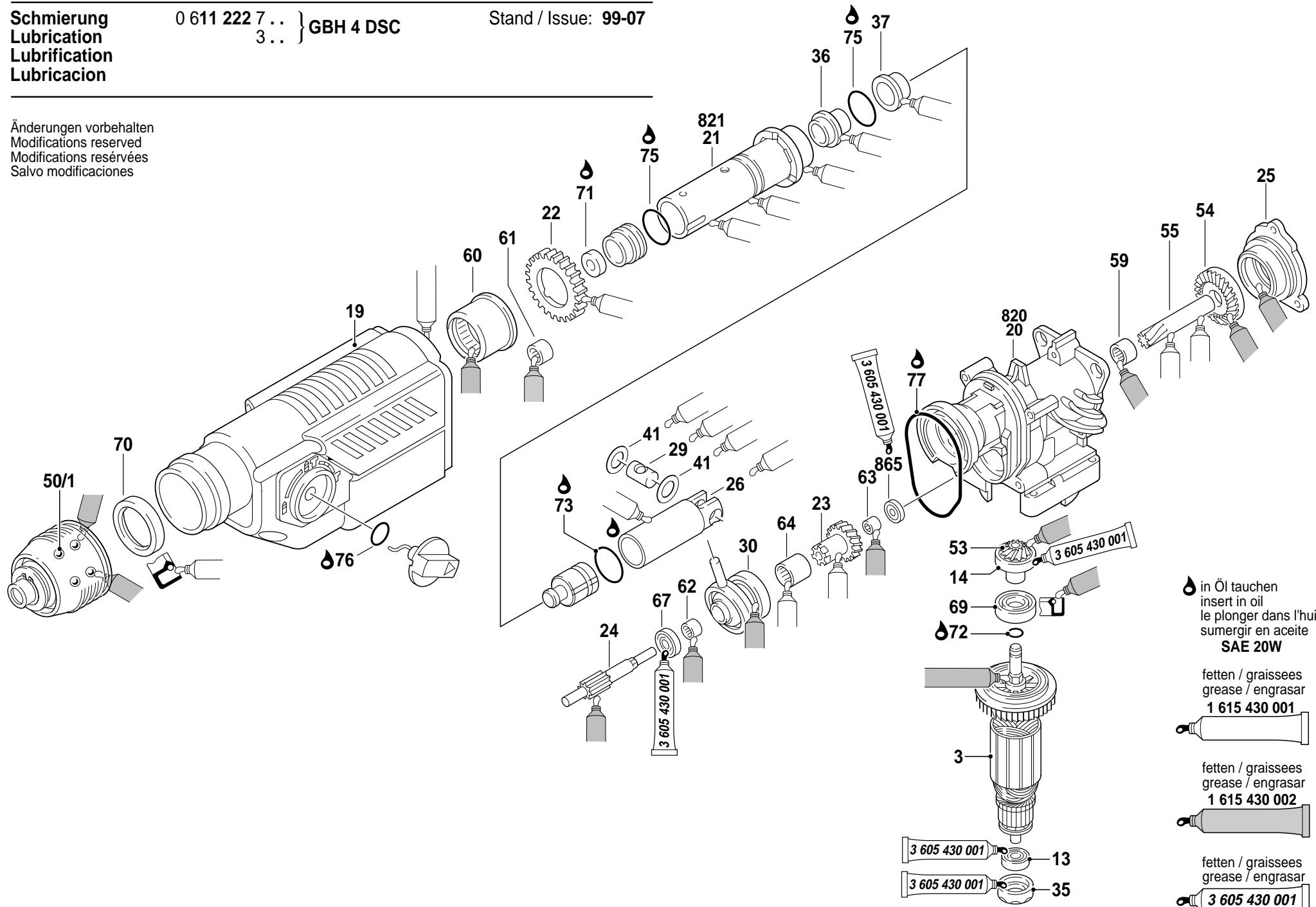
35. Marche à titre d'essai, contrôle de frappe et depercage, effectuer un contrôle mécanique et électrique.
35. Realizar un control funcional, una prueba de taladrado con y sin percusión y los ensayos eléctricos y mecánicos correspondientes.

Schmierung
 Lubrication
 Lubrification
 Lubricacion

0 611 222 7.. } GBH 4 DSC
 3.. }

Stand / Issue: 99-07

Änderungen vorbehalten
 Modifications reserved
 Modifications réservées
 Salvo modificaciones



in Öl tauchen
 insert in oil
 le plonger dans l'huile
 sumergir en aceite
SAE 20W

fetten / graissees
 grease / engrasar
1 615 430 001

fetten / graissees
 grease / engrasar
1 615 430 002

fetten / graissees
 grease / engrasar
3 605 430 001

**Schmierung
Lubrication
Lubrification
Lubricacion**

0 611 222 7 .. } GBH 4 DSC
3 .. }

Stand / Issue: 99-07

Änderungen vorbehalten
Modifications reserved
Modifications réservées
Salvo modificaciones

Schmierstelle Lubrication point Point de lubrification Punto de lubricacion	Fig./Pos.	Schmierstoff Fett Öl Lubricant grease oil Lubrifiant graisse huile Lubricante grasa aceite	Mengen Quantity Quantite Cantidad	Schmiervorschrift Lubricating instructions Indications de graissage Instrucciones de lubricacion
Getriebe und Schlagwerkraum Gear and percussion mechanism space Carter de l' engrenage et boîtier du système de frappe Engranaje y parte de engranaje	19	1 615 430 001	35 - 40g	Teile fetten, Rest in Getrieberaum grease the parts, rest into gear compartment graisser les pieces, la graisse restante dans le compartiment d'engrenage engrasar las piezas, resto en el compartimento del engranaje
Gleitende Teile Sliding parts Pieces glissantes Piezas deslizantes	820(20) 21; 22 26; 29 36; 37			Gleitflächen einstreichen lubricate sliding surfaces enduire les parties mouvantes engrasar las piezas móviles
Nadelhülse Needle bushing Douille à aiguilles Casquillo de agujas	64			*fetten grease graisser engrasar
Ritzel; Tellerrad Pinion; crown gear Pignon; Couronne d'angle Pinon; rueda dentada	53 54		10g	Zähne fetten grease teeth dents graissés engrasar los dientes
Zahnhülse gear sleeve Douille dentée Casquillo de dentado ext	23			Zähne fetten grease teeth dents graissés engrasar los dientes
Zwischenwelle, Jack shaft, Arbre intermédiaire Arbol intermediario	55			Zähne fetten grease teeth dents graissés engrasar los dientes
Wellendichtring Shaft sealing ring Joint à lèvres Reten para arboles	70			Hohlraum zwischen Dichtlippen füllen fill cavity between sealing lips remplir cavité entre les lèvres du joint llenar el vacío entre los labios del reten
Gummiring Rubber ring Bague en caoutchouc Anillo de goma	35	3 605 430 001		Fettdepot füllen fill cavity remplir cavité llenar el vacío
Rillenkugellager Deep-groove ball bearing Roulement à billes rigide Rodamiento radial rígido	13 14 67 865			*2/3 füllen fill remplir llenar

Schmierstelle Lubrication point Point de lubrification Punto de lubricacion	Fig./Pos.	Schmierstoff Fett Öl Lubricant grease oil Lubrifiant graisse huile Lubricante grasa aceite	Mengen Quantity Quantite Cantidad	Schmierstoffvorschrift Lubricating instructions Indications de graissage Instrucciones de lubricacion
Ankerwellen-Sechskant Armature hexagon shaft Arbre d'induit Arbol de inducido	3	1 615 430 002 (GLL 6N3)		fetten grease graisser engrasar
Zahnrad; Ritzel Toothed gear; pinion Roue d'engrenage; pignon Rueda de engranaje; pinon	24 53 54			Zähne füllen, fetten Fill teeth, grease remplir les dents, graisser llenar dientes, engrasar
Kugellager Ball bearing Roulement à billes Rodamiento a bolas	25 30			*2/3 füllen fill remplir llenar
Nadelhülse Needle bushing Douille à aiguilles Casquillo de agujas	59 60; 61 62; 63			*2/3 füllen fill remplir llenar
Wellendichtring Shaft sealing ring Joint à lèvres Reten para arboles	69			Hohlraum zwischen Dichtlippen füllen fill cavity between sealing lips remplir cavité entre les lèvres du joint llenar el vacío entre los labios del reten
Kugeln Balls Billes Bolas	50/1			fetten grease graisser engrasar
Gummiring Rubber ring Bague en caoutchouc Anillo de goma	35	SAE 20 W Mineralöl, handelsüblich Mineral oil, standard / Huile minerale en vente dans le commerce Aceite usual en el comercio		einölen; in Öl tauchen oil; dip in oil huiler; le plonger dans l'huile engrasar con aceite; sumergir en aceite
O-Ring; Abstreifer O-ring; scraper Joint torique; racloir Anillo toroidal; separator	71; 72 73; 75 76; 77			einölen; in Öl tauchen oil; dip in oil huiler; le plonger dans l'huile engrasar con aceite; sumergir en aceite
Hammerkolben Hammer piston Piston de marteau Embolo del martillo	26			Vor Montage in Öl tauchen dip in oil before assembly le plonger dans l'huile avant assemble engrasar con aceite, montaje

*sofern Lager ungefettet
if bearing is unlubricated
si roulement n'est pas graissé
en caso de que el rodamiento esta son grasa

Prüfwerte 0 611 222 7.. } GBH 4 DSC
 Testing values 3.. }
 Valeurs de vérification
 Valores de control

Stand / Issue: 99-07

Spannung Voltage Voltage Voltaje	Leerlauf no-load running marche à vide marcha en vacío		Widerstand (20°C/ 68°F) resistance résistance resistencia		Zulässige Übertemperatur im Leerlauf admissible over temperature at no-load élévation admissible de température à vide sobrettemperatura admisible en vacío		
V Typ	Stromaufnahme current consumption courant absorbé absorción de corriente A	Spindeldrehzahl speed of spindle vitesse de la broche velocidad del husillo 1/min - rpm - t/mn - rpm Stufe	des Ankers of rotor du rotor del rotor Ω	einer Feldspule of one stator coil d'une bobine du stator de una bobina del estator Ω	Motor motor moteur motor °C	Getriebe gear engrenage engrenaje °C	Arbeitsspindel spindle broche husillo °C
100	5.110 - 6.490	- 576 - 784 - 0 - 0	0.340 - 0.470	0.339 - 0.469	15	25	35
110	4.920 - 6..280	- 576 - 784 - 0 - 0	0.455 - 0.597	0.339 - 0.469	15	25	35
115	4.435 - 6..165	- 576 - 784 - 0 - 0	0.477 - 0.643	0.339 - 0.469	15	25	35
230	1.695 - 2.505	- 682 - 859 - 0 - 0	2.574 - 3.276	1.873 - 2.397	15	25	35
240	1.695 - 2.505	- 682 - 859 - 0 - 0	2.574 - 3.276	1.873 - 2.397	15	25	35

Bemerkung: Überrasstmoment der Kupplung 25 - 31 Nm. Bei nicht erreichen von 25 Nm, Kupplung ersetzen.
 For your notice: Slipping point of clutch 25 - 31 Nm. Under 25 Nm replace clutch.

Kollektor-Mindestdurchmesser: Minimum diameter of commutator: Diamètre minimum du collecteur: Diámetro mínimo del colector:	mm	Kohlebürsten-Mindestlänge: Minimum length of brushes: Longueur minimale des balais: Longitud mínima de las escobillas:	= X	Abschaltkohlen cut-off brushes charbon rupteur carbón de desconexión
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Änderungen vorbehalten

Unsere Erzeugnisse werden stets dem neuesten technischen Stand angepaßt. Deshalb müssen wir uns Änderungen von technischen Daten vorbehalten.

Modifications

Our products are constantly modified to meet new technical standards. We there-fore reserve the right to alter data and specifications without prior notice.

Modifications

Nos produits sont continuellement adaptés aux dernières nouveautés techniques et les dates sont données sous réserve de changement.

Modificaciones

Nuestros fabricados van siendo adaptados constantemente a las últimas conquistas técnicas. Por ello, tenemos que reservarnos el derecho de introducir modificaciones en los datos técnicos.