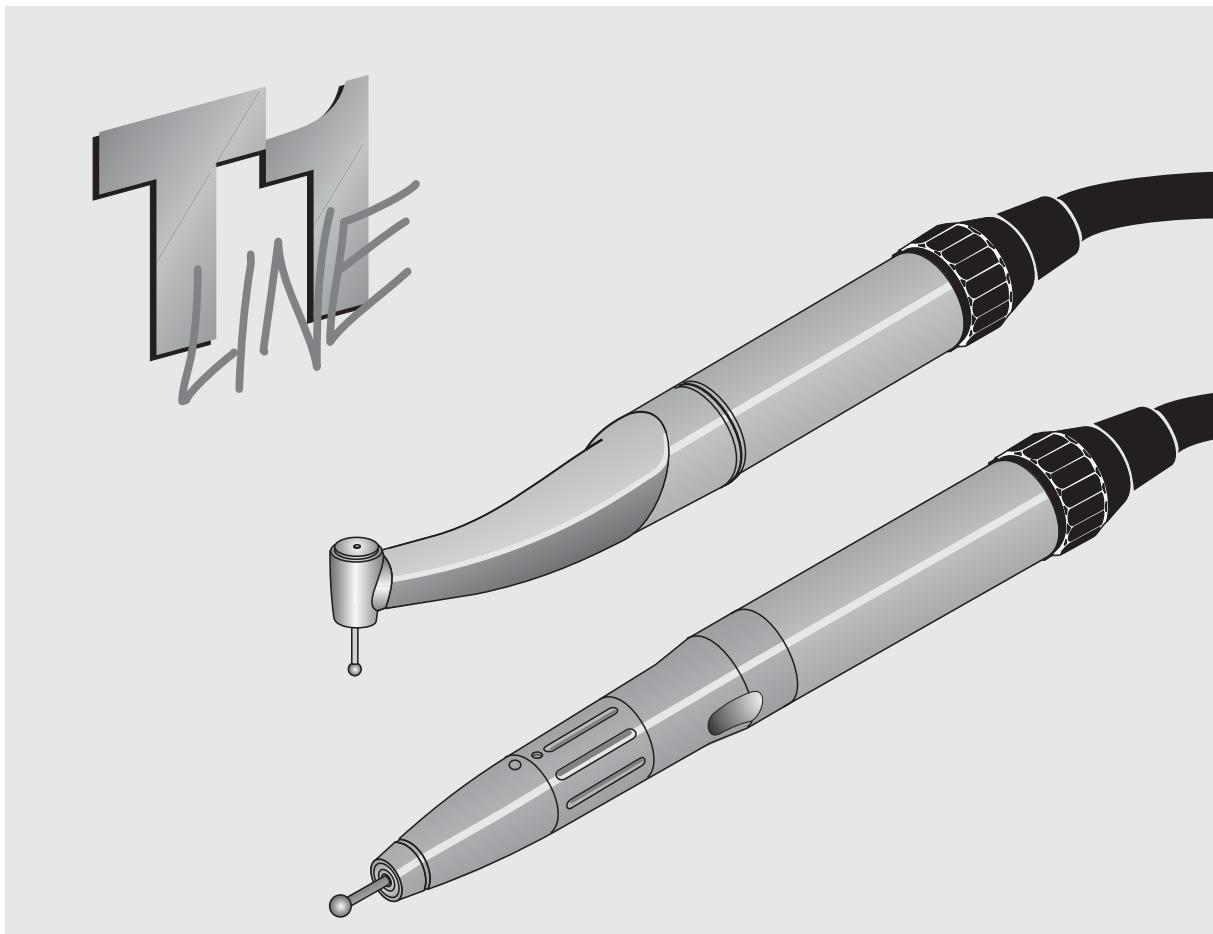


Preparation system T1 LINE

Repair Instructions





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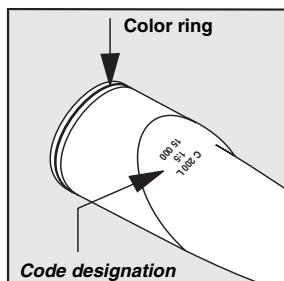


27	Spare parts C 40 L / C 40	54
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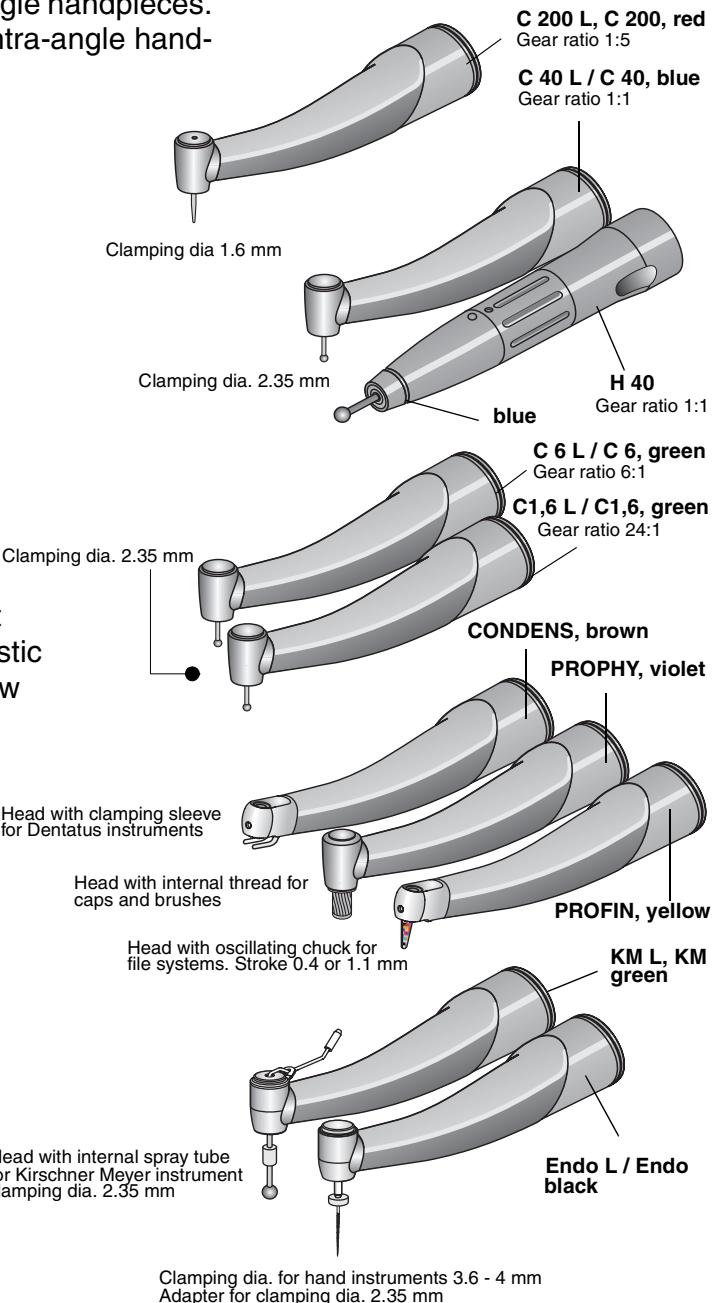
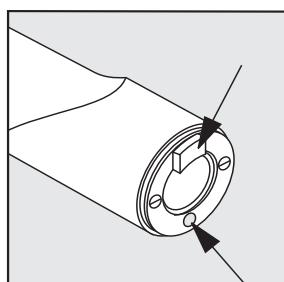
All straight and contra-angle handpieces of the T1-LINE preparation systems are technically closely related.



You will find the *code designation* on the outer sleeve to identify the externally very similar contra-angle handpieces. A color ring at the interface assigns the contra-angle handpiece to the corresponding speeds.



Various handpieces are also in use without fiber rod. These do not have the characteristic detent at the interface as well as the window surface of the fiber rod.

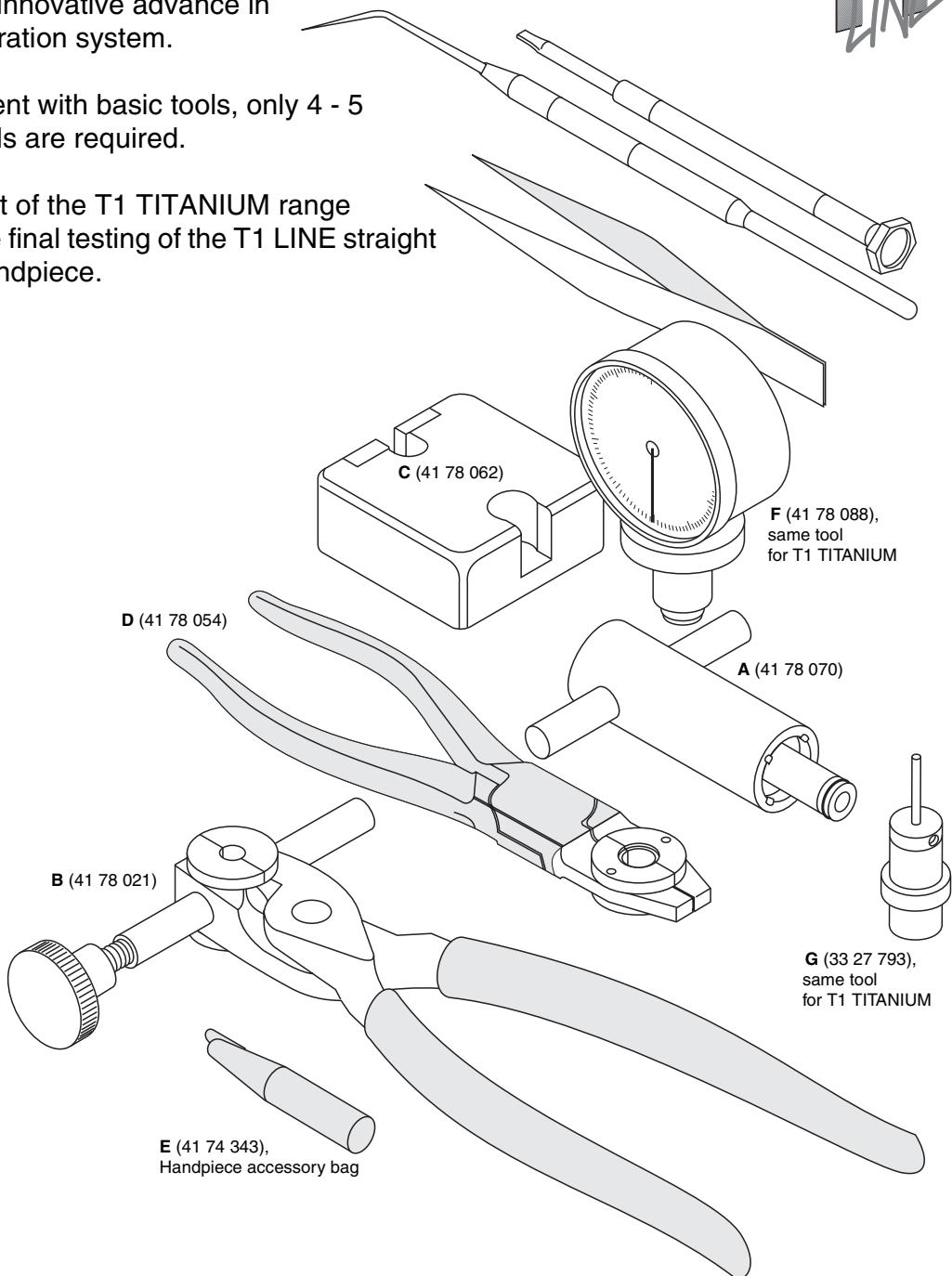




Without doubt the clearly reduced need for special tools is an innovative advance in the T1 LINE preparation system.

Assuming equipment with basic tools, only 4 - 5 further specific tools are required.

The test equipment of the T1 TITANIUM range can be used for the final testing of the T1 LINE straight or contra-angle handpiece.

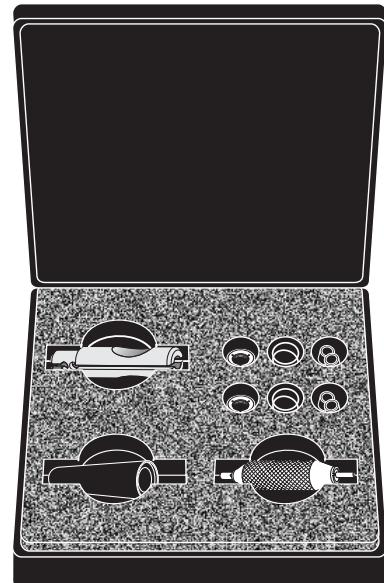


Spray repair set*:

- 1 nozzle spray 58 66 723
- 2 nozzle spray 58 66 731
- 3 nozzle spray 58 66 749

*** contains:**

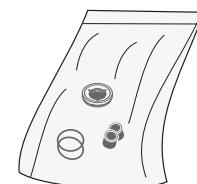
- Tools K / L / N
- 2 spray rings
- 4 O-rings
- 4 screws

**Spray insert**:**

- 1 nozzle spray 58 66 699
- 2 nozzle spray 58 66 707
- 3 nozzle spray 58 66 715

**** contains:**

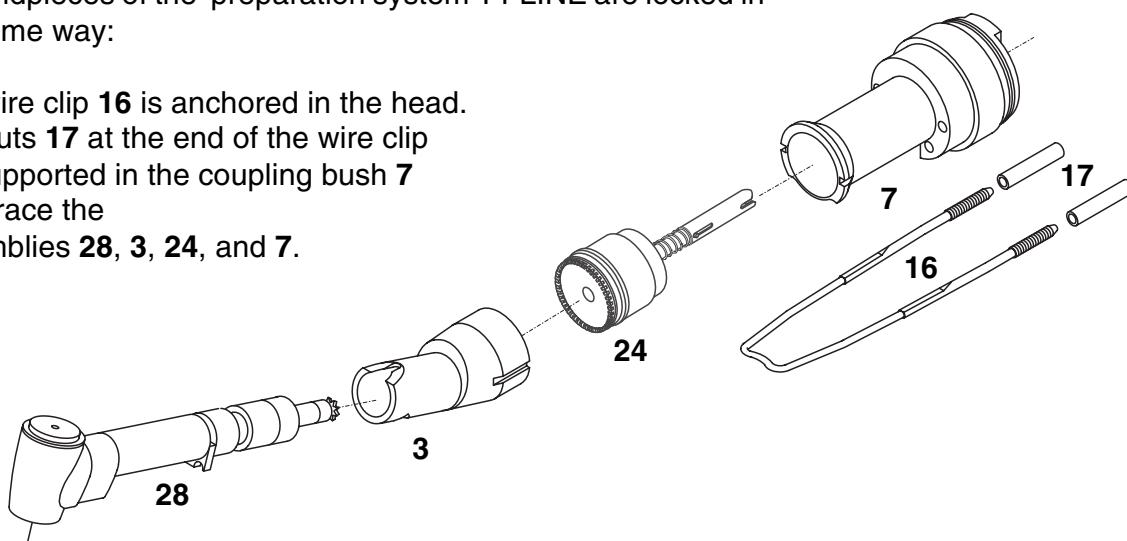
- Tools K / L / N
- 1 sprayrings
- 2 O-rings
- 2 screws





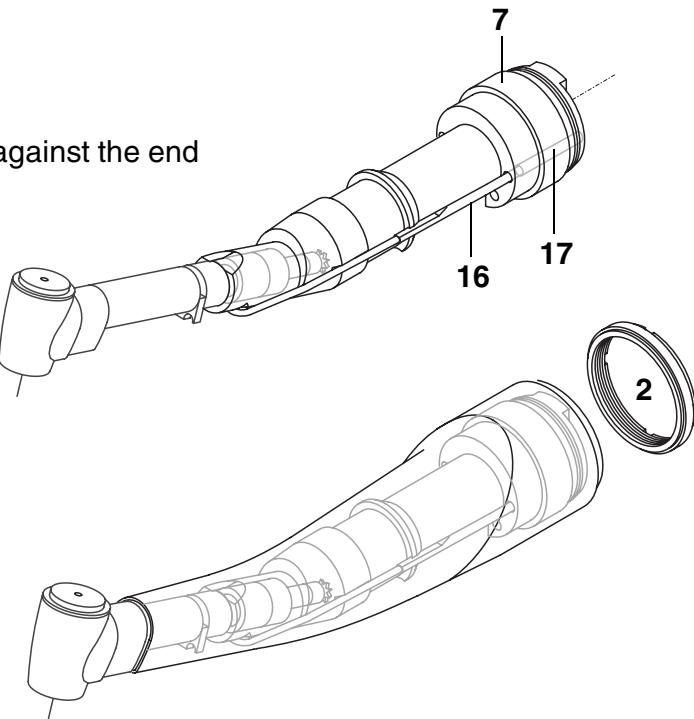
All handpieces of the preparation system T1 LINE are locked in the same way:

The wire clip **16** is anchored in the head. The nuts **17** at the end of the wire clip are supported in the coupling bush **7** and brace the assemblies **28**, **3**, **24**, and **7**.



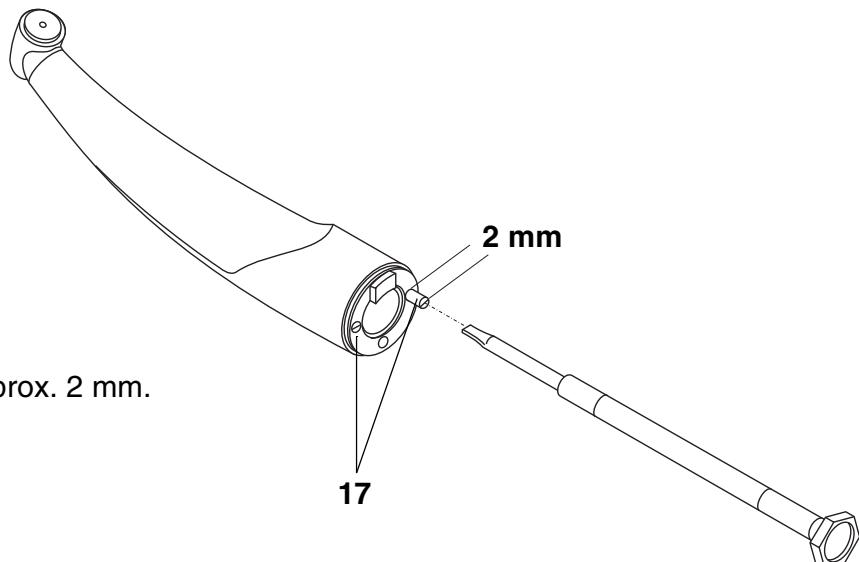
The ring nut **2** pulls the block of the assemblies against the end of the outer sleeve.

The gap between outer sleeve and head is reduced to zero.

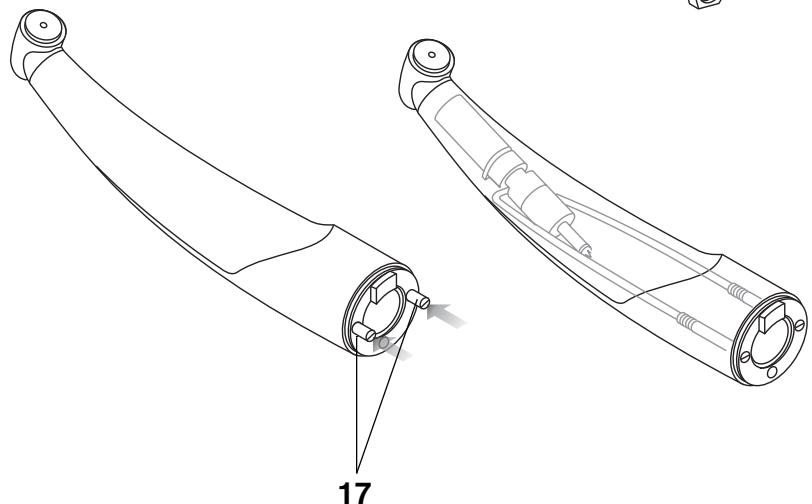




- 1 Unscrew both nuts **17** approx. 2 mm.

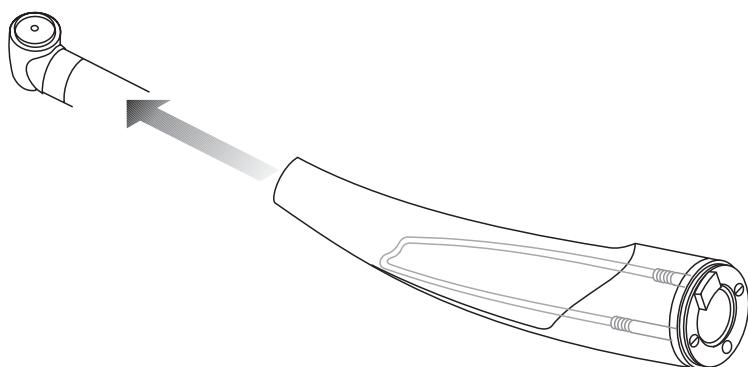


- 2 Press in both nuts **17** flush.

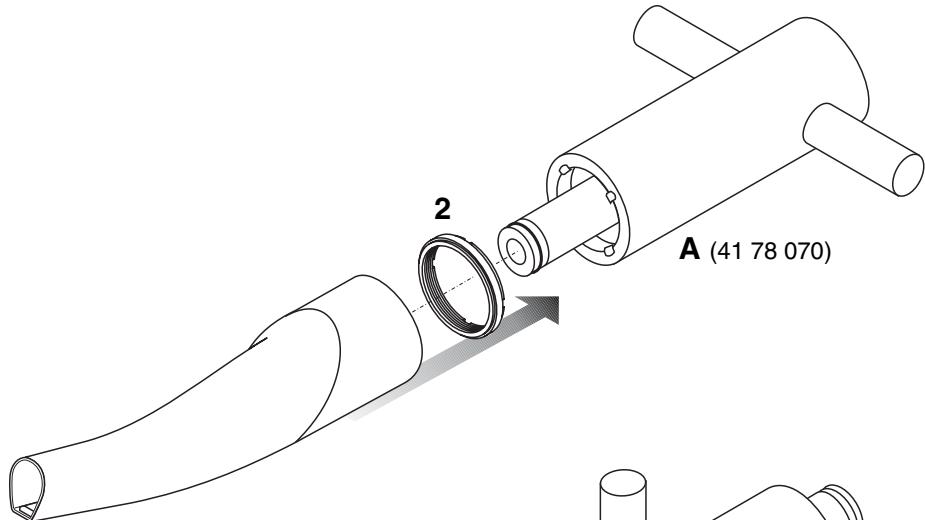




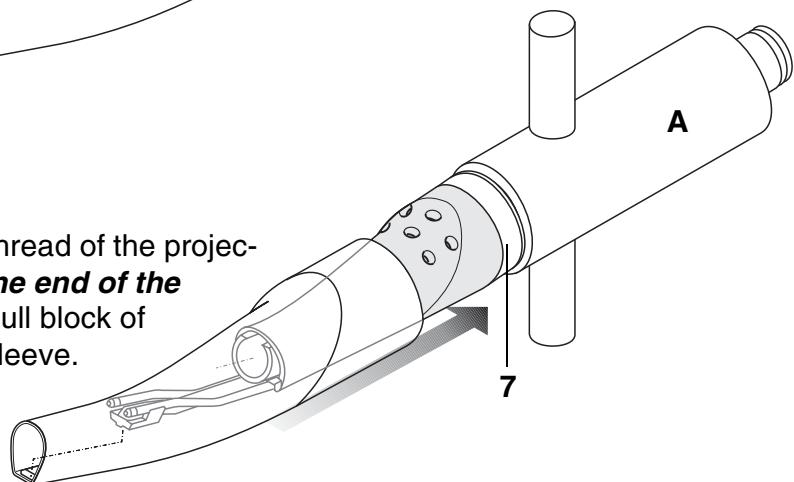
- 3 Withdraw head without twisting it axially



- 4 With tool **A** unscrew nut **2**.

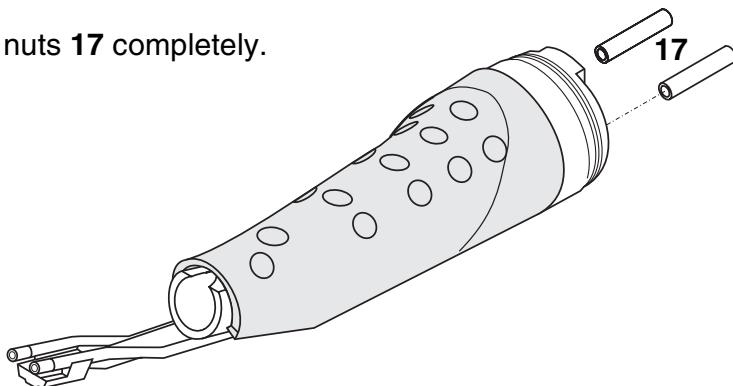


- 5 Turn tool **A** round and engage thread of the projecting coupling bush **7**. ***Push in the end of the fiber rod*** at the head end and pull block of assemblies out from the outer sleeve.

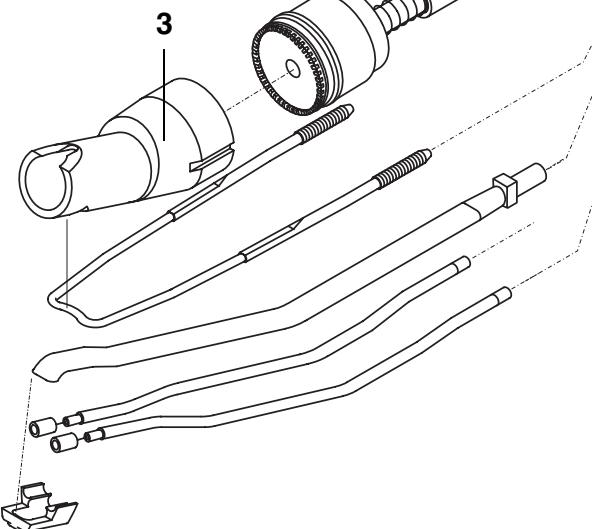
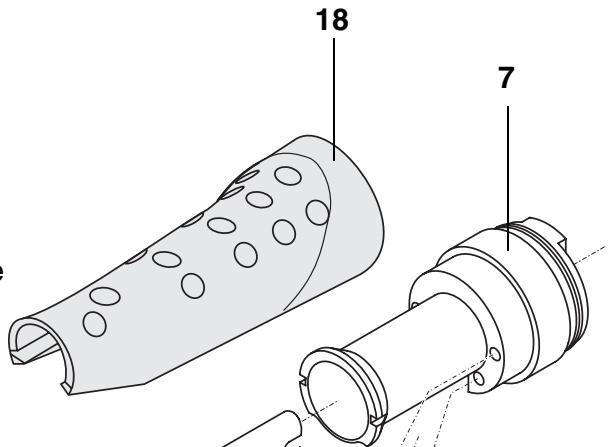




- 6 Unscrew nuts **17** completely.



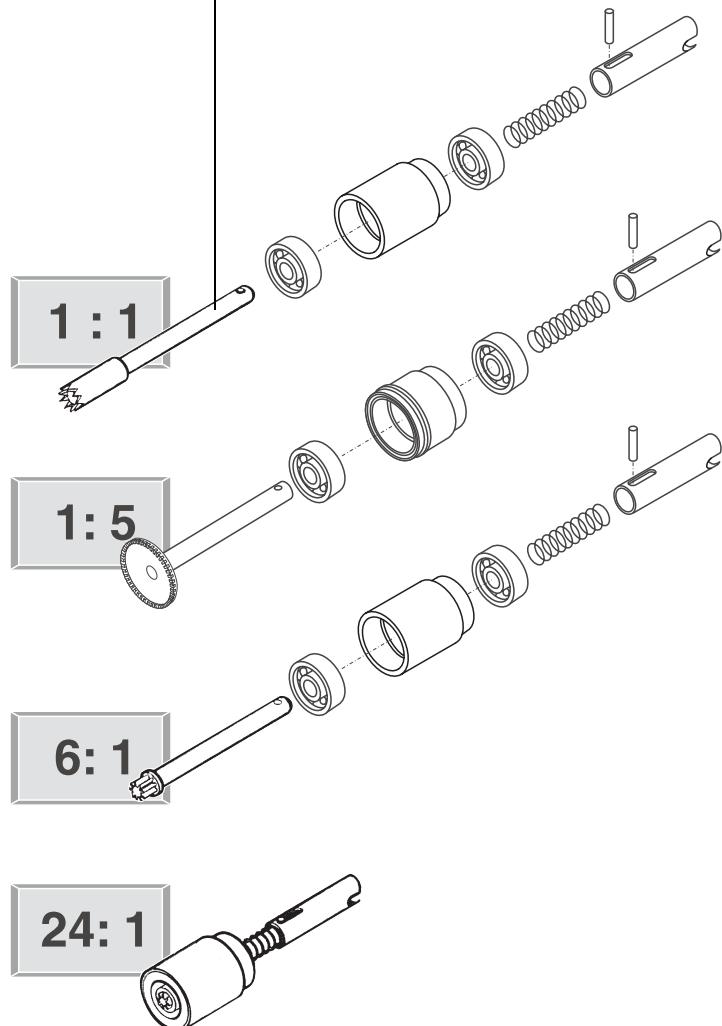
- 7 There are no further mechanical connections for the assemblies.
The damping part **18** surrounds the bend **3** and coupling bush **7** with its elastic compound.
Expand and strip off the damping part **18**.





The drives **1:1** to **6:1** have the same construction and differ in appearance only in the drive shaft.

For these drives the uniform dismantling process is described on the following pages.

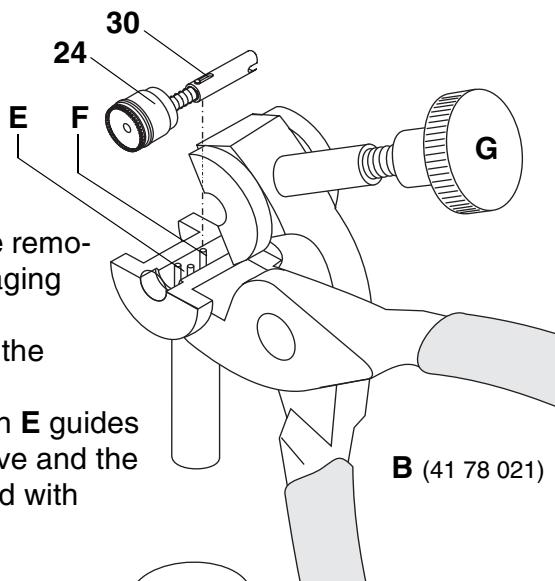


A separate chapter is devoted to the somewhat more complex **24:1** drive, cf. page 16.

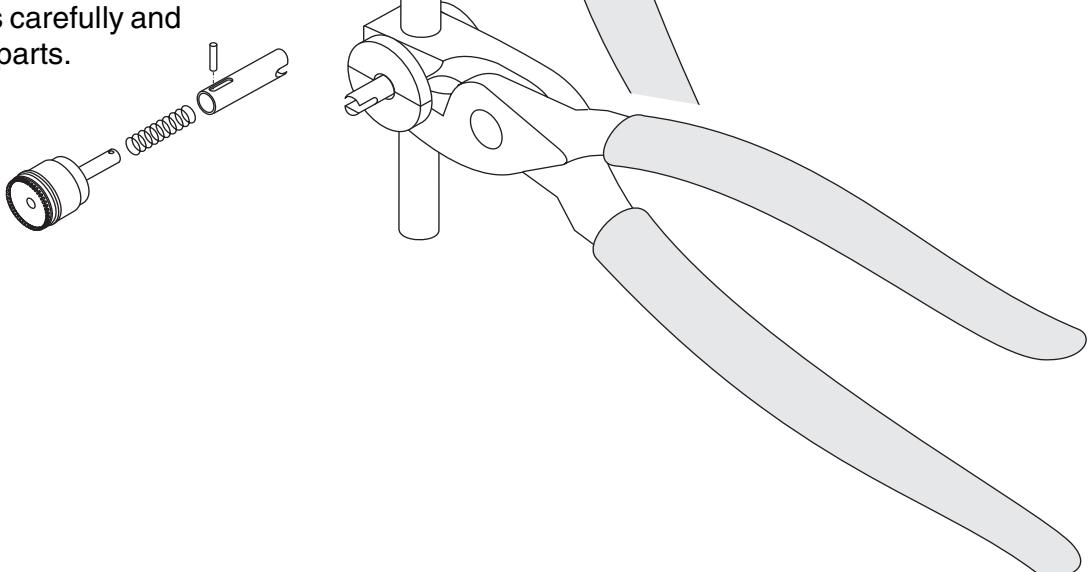


- With tool **B** the pin **30** can be removed easily and without damaging other parts:

Unscrew knurled nut **G** until the thread becomes visible.
Insert the drive **24** so that pin **E** guides the elongated hole in the drive and the spring loaded pin **F** is aligned with pin **30**.



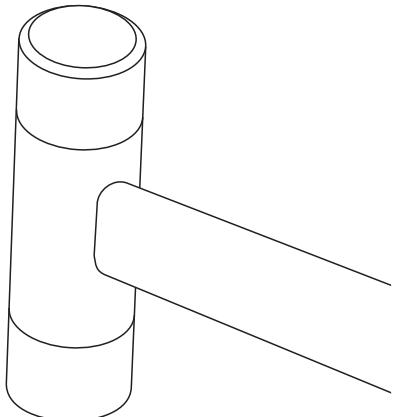
- Close pliers and screw in knurled nut **G** up to stop.
Open pliers carefully and collect the parts.



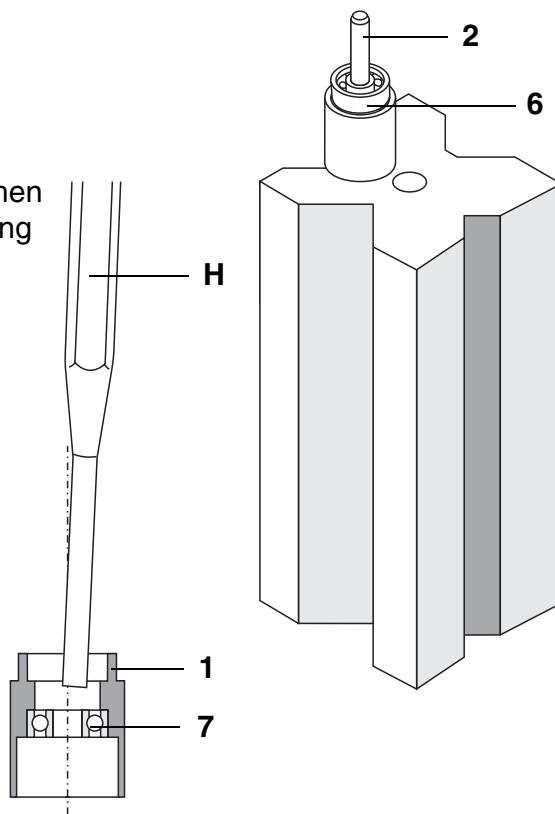


- 3** Drive shaft **2** and ball bearing **7** are bonded to the bearing flange **1**.
The ball bearing **6** is only pushed in.

Place the bearing flange as shown and loosen the bond with a light tap on the drive shaft **2** (mallet).



- 4** Eject drive shaft with matching drift punch.
Should the bond of the ball bearing **7** have been stronger than that of the drive shaft, then detach ball bearing carefully from the bearing flange **1** with a suitable drift punch **H**.

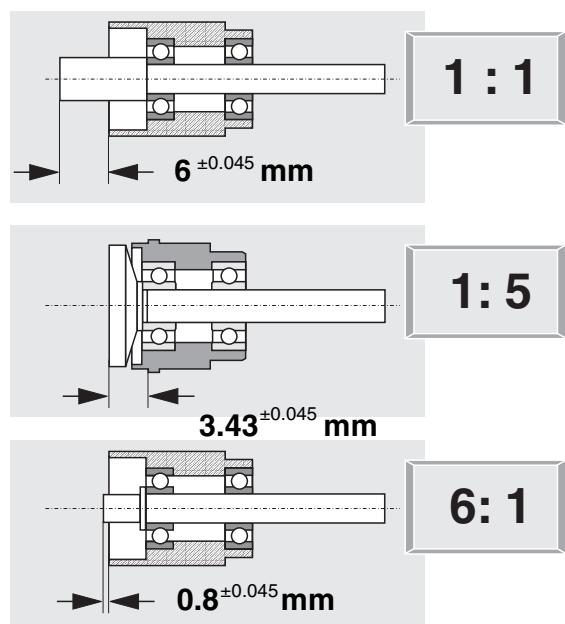
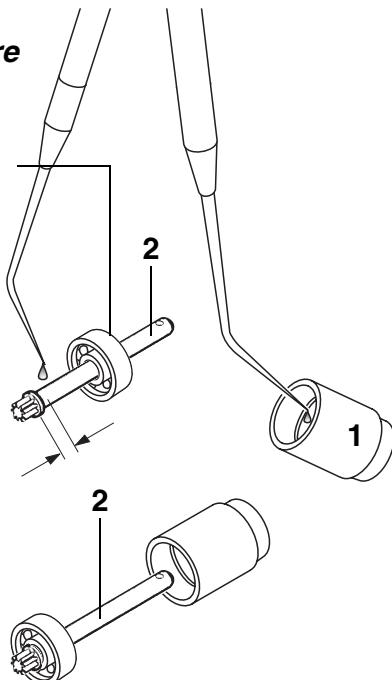


Wash all parts of the drive ultrasonically before assembling them.

- 1 Thread front ball bearing onto drive shaft 2. Apply **dosed Araldite AV 119** in the region of the intended bearing seat. Push in drive shaft 2 with ball bearing up to stop.
- 2 Apply **dosed Araldite AV 119** to bearing flange 1, in the seat of the front ball bearing. Push in drive shaft 2 with ball bearing up to stop.

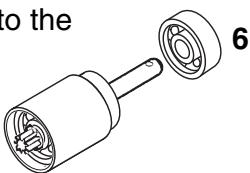
Each drive has its own dimension between the end of the gear and the end of the bearing flange - see overview. If this dimension is within the allowed tolerance, the adhesive can be cured:

1.5 hours at 140°C.

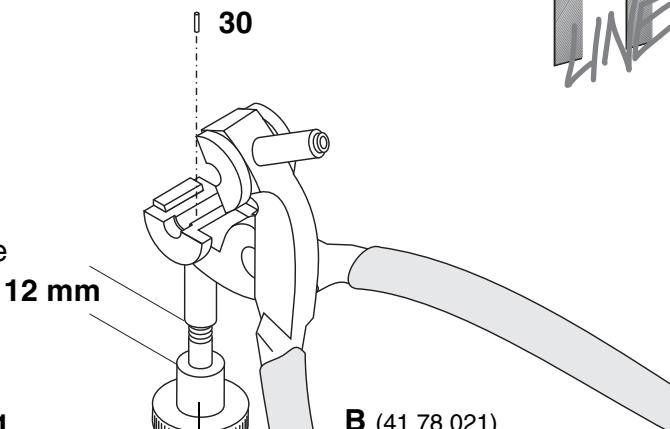




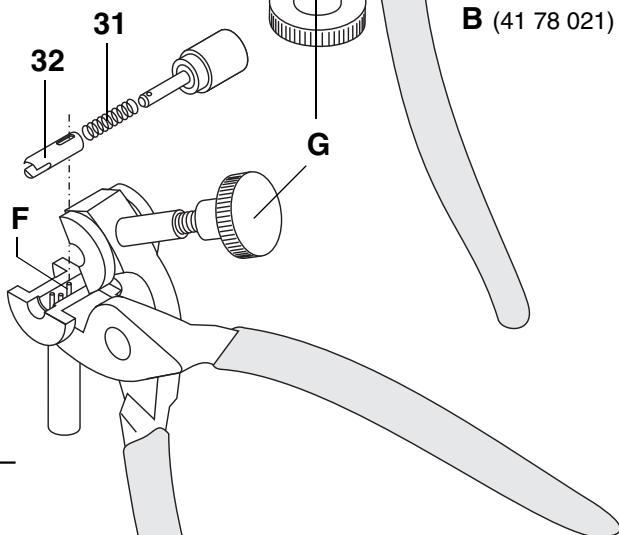
- 3** Push on ball bearing **6** up to the stop.



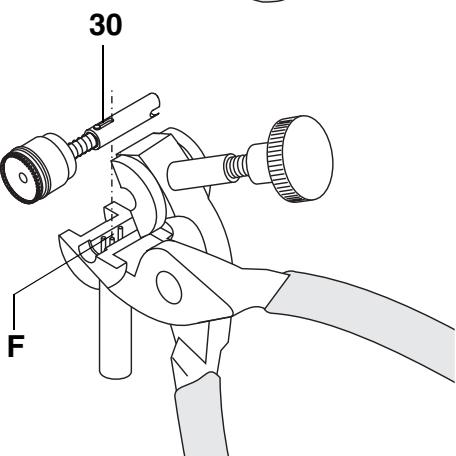
- 4** Turn knurled screw **G** of tool **B** back at least 12 mm. Insert new pin **30** in the turned-around pliers.



- 5** Thread spring **31** on gear shaft and push on the driver **32**. Turn the gear shaft until the radial hole of the gear shaft is visible in the elongated hole. Position assembly with elongated hole of the driver on the needle pins of the pliers. The spring loaded pin of the pliers engages in the radial hole of the gear shaft. Close pliers. Screw in the knurled screw **G** until its thread is immersed – pin **30** is pressed in

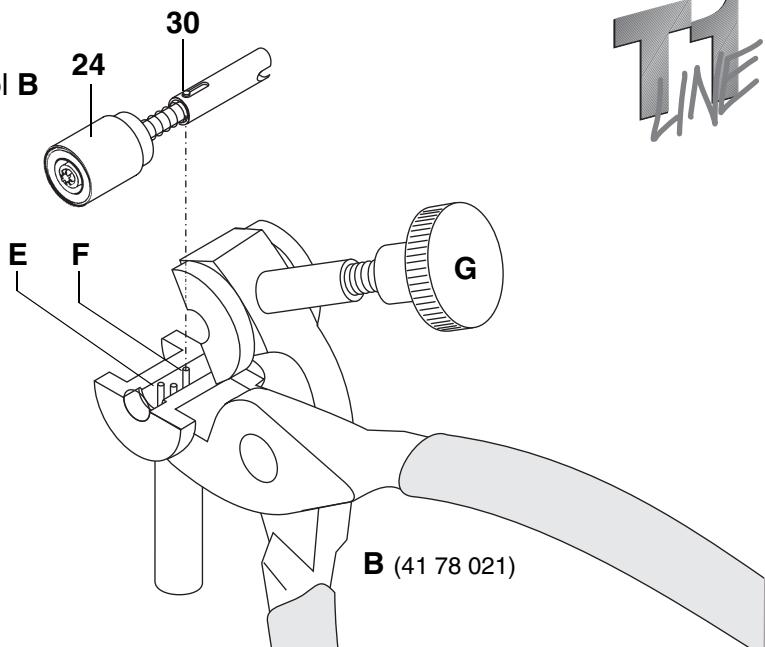


- 6** Center pin **30** to the gear shaft: Insert assembly turned around in the pliers: The elongated hole of the driver stops against the short pin, pin **F** is fully spring loaded by the driver. Close pliers – pin **30** is centered.





- 1** Pin **30** can be removed easily with tool **B** and without damaging other parts:
Unscrew knurled nut **G** until thread becomes visible.
Insert drive **24** so that pin **E** guides the elongated hole in the drive and the spring loaded pin **F** is aligned with the pin **30**.



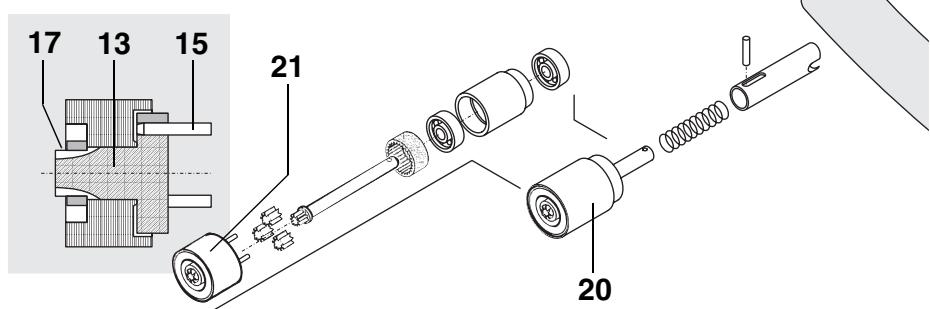
- 2** Close pliers, screw in knurled **G** nut up to stop. Open pliers carefully and collect the parts.

- 3** The gear capsule **20** can be dismantled into a further 9 parts without tools. All parts are only plugged into one another.

Suitable drift punches are required for the further dismantling of the planetary capsule **21**:

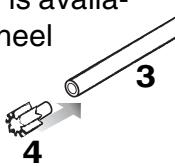
Planetary carrier **13** is held by the pressed on bush **17**.

The bearing bolts **15** are pressed in.

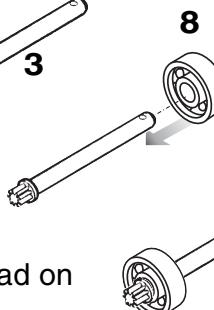




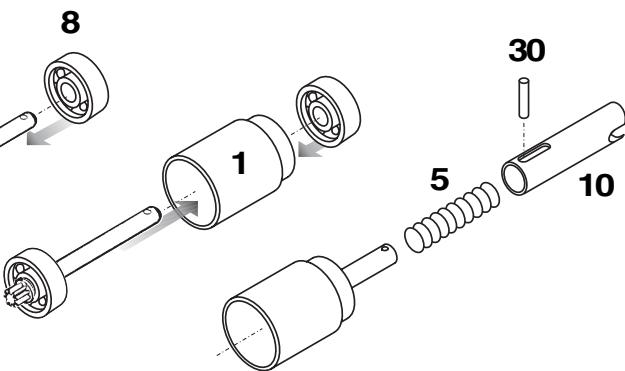
- 1** The drive shaft with sun wheel is available only two-part: Press sun wheel 4 into drive shaft 3 up to stop.



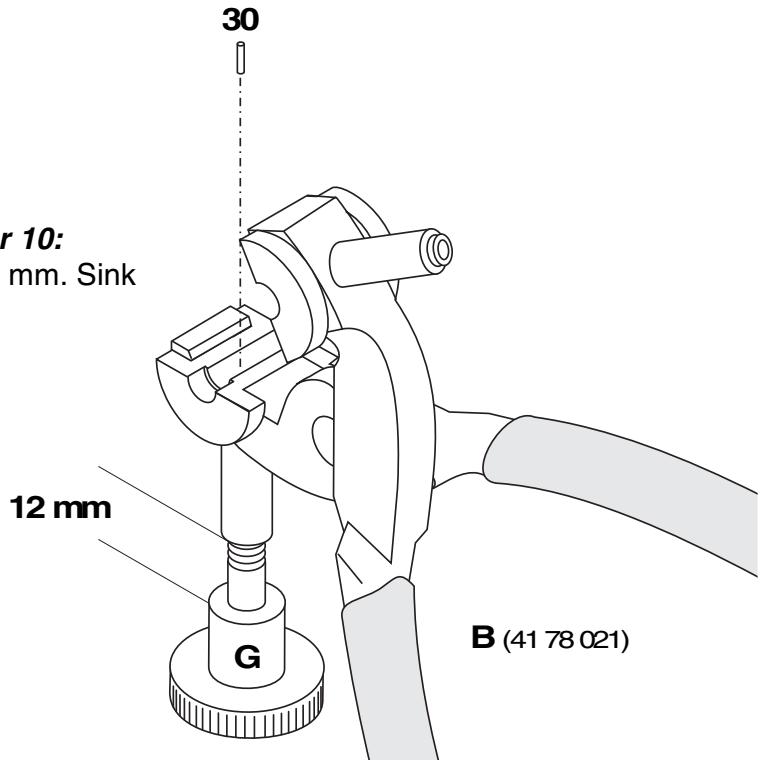
- 2** Push on ball bearing 8.



- 3** Fit drive shaft in bearing flange 1, thread on ball bearing from the opposite side.

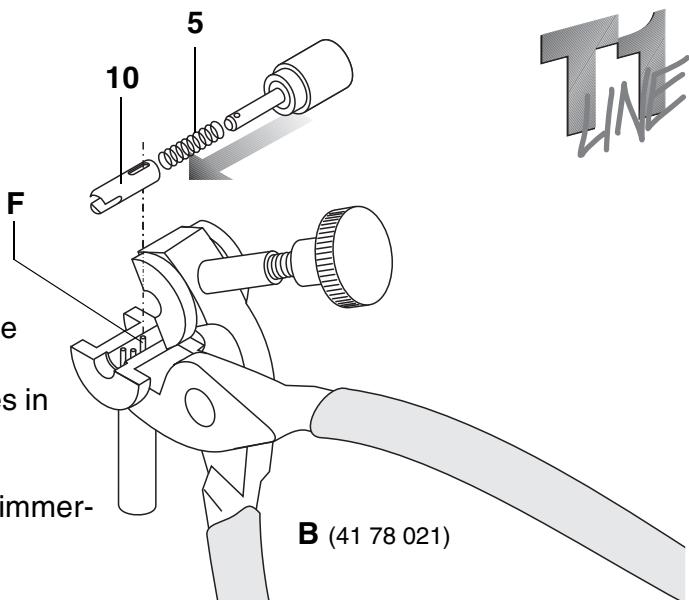


- 4** *Prepare tool B for pinning the driver 10:*
Turn knurled screw G back at least 12 mm. Sink new pin 30 into the hole shown.

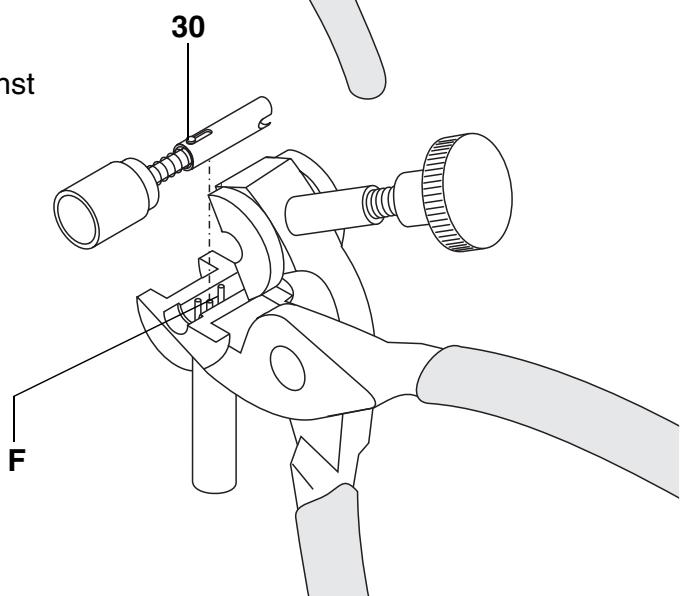




- 5** Thread spring **5** on drive shaft and push on driver **10**.
 Rotate drive shaft until the radial hole of the drive shaft is visible in the elongated hole.
 Position assembly with elongated hole of the driver on the needle pins of the pliers.
 The spring loaded pin **F** of the pliers engages in the radial hole of the drive shaft.
 Close pliers.
 Screw in knurled screw **G** until its thread is immersed – pin **30** is pressed in.

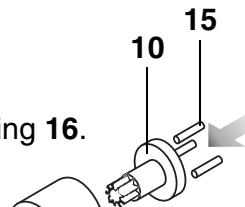


- 6** Center pin **30** to the drive shaft:
 Insert assembly turned around in the pliers.
 The elongated hole of the driver stops against the short pin, pin **F** is fully spring loaded by the driver.
 Close pliers – pin **30** is centered.

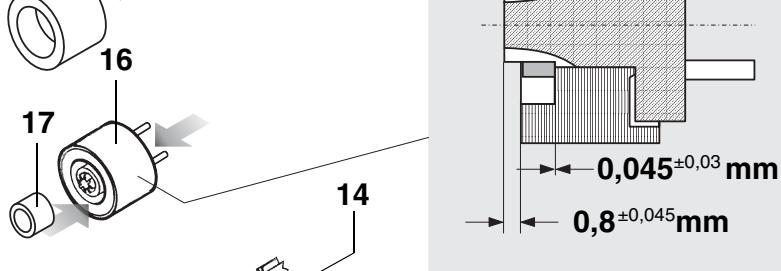




- 7** Press in three bearing bolts **15** flush in planetary carrier **10**.



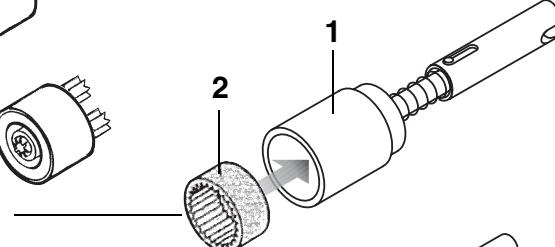
- 8** Sink planetary carrier into plain bearing **16**.
Press bush **17** on the gear wheel of the planetary carrier.
An axial play of 0.045 ± 0.03 mm must be maintained for the planetary carrier!



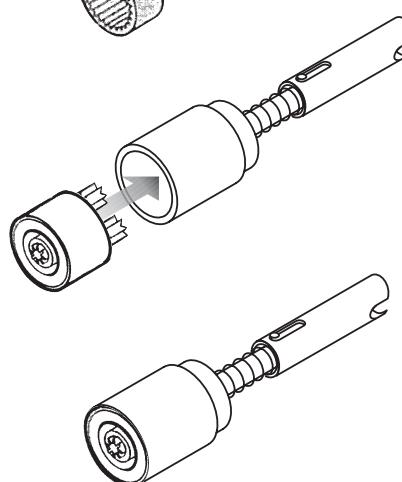
- 9** Fit the planet wheels **14**.



- 10** Push internal gear wheel **2** into bearing flange **1** up to stop.



- 11** Insert plain bearing with planetary carrier.
Let the gears mesh by turning the front gear.
– finished

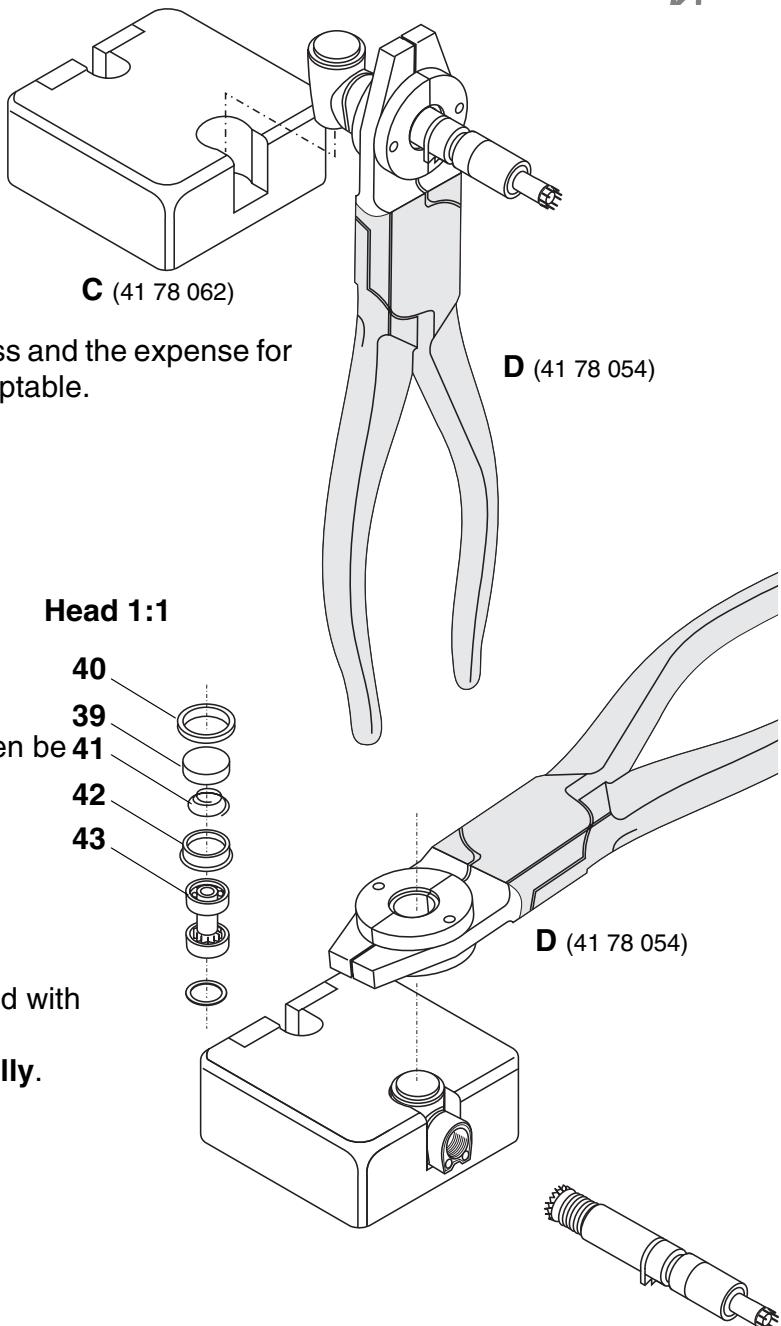




- 1** All heads of the T1 LINE product line can be dismantled in the same way:

Insert head in tool **C**.

Grip neck of the head with pliers **D** and unscrew.



- 2** Grip screw ring **40** with pliers **D** and unscrew it. The conical spring **41**, retaining ring **42**, head drive **43**, spring or adjusting washer(s) can then be removed.
- 3** Check the individual parts of the head with magnifying glass for wear. **Wash** parts intended for reuse **ultrasonically**.



1 : 1

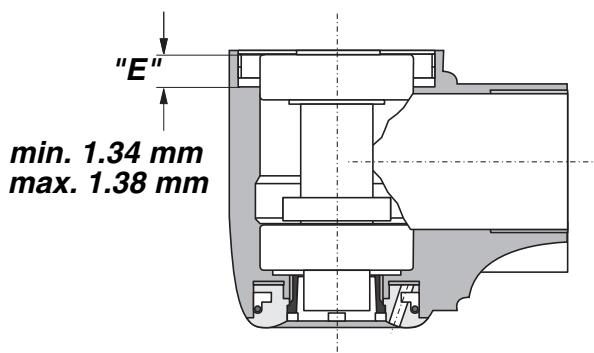
1 Head 1:1

Here check the dimension "E" during assembly. It lies between the ball bearing upper edge and the first heel in the head housing and is: **1.34 to 1.38 mm**. Insert adjusting washer 6 0.08 mm and insert head drive.

With tool **F**

- from the T1 TITANIUM tool set -
- determine the dimension "E".

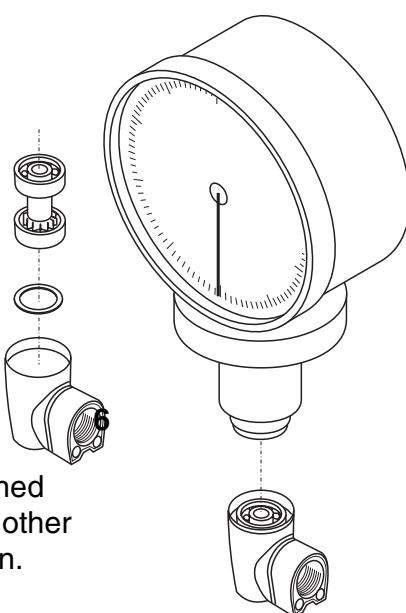
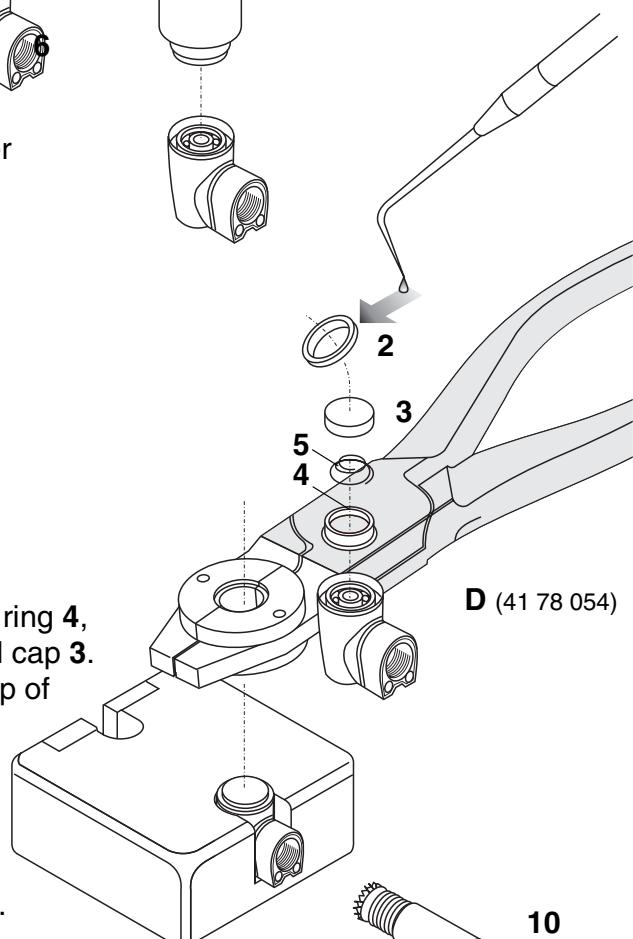
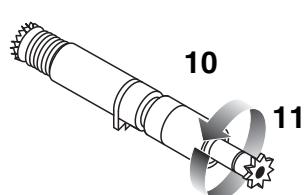
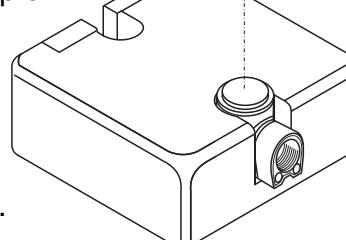
Any size lying between the above mentioned key values is correct. If required select another adjusting washer to achieve the dimension.



Once dimension "E" is correct, complete head housing with retaining ring 4, conical spring 5 (pay attention to position) and cap 3. Provide thread of screw ring 2 with a small drop of **Loctite 932**, screw in by hand and tighten with pliers **D**.

Test the spring function of the cap 3!

Screw in neck drive 10 by hand up to the stop.
! Pay attention to meshing, move it slightly!

**F (41 78 088)****D (41 78 054)**

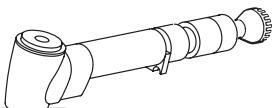


1 : 5

2 Head 1:5

Insert head parts, starting with spring washer **6**, in the head housing.

Provide thread of screw ring **2** with a small drop of **Loctite 932**, screw in screw ring by hand and tighten with pliers **D**. Screw in neck drive **10** by hand and tighten with pliers **D**.



6 : 1

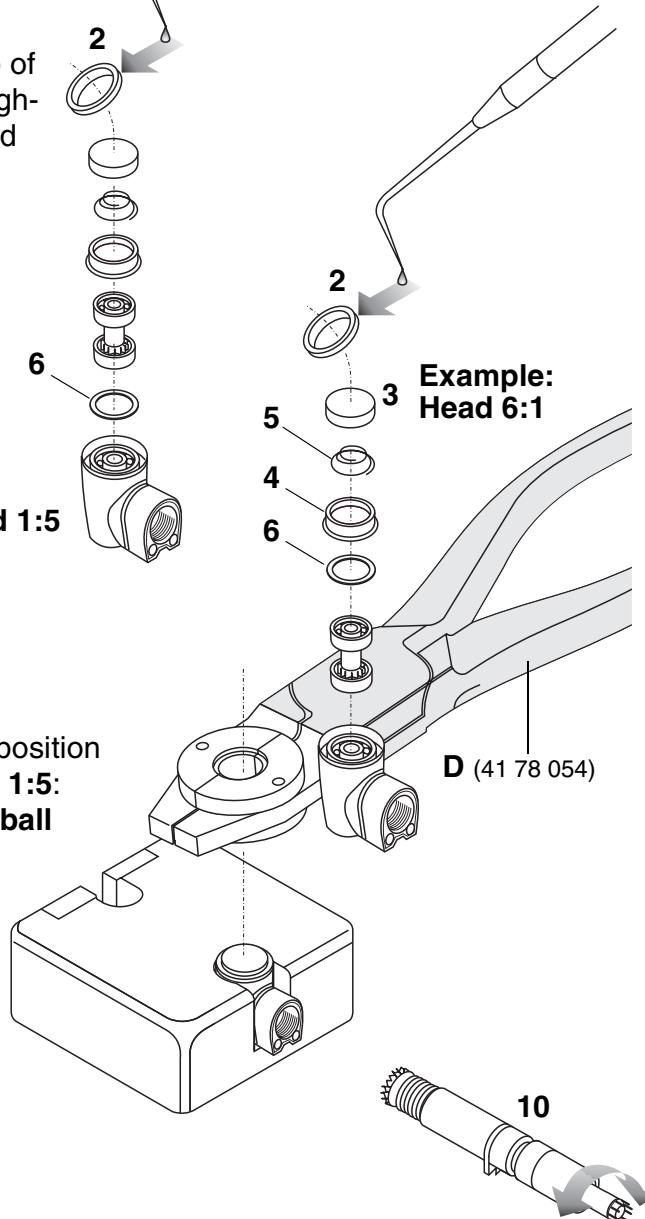
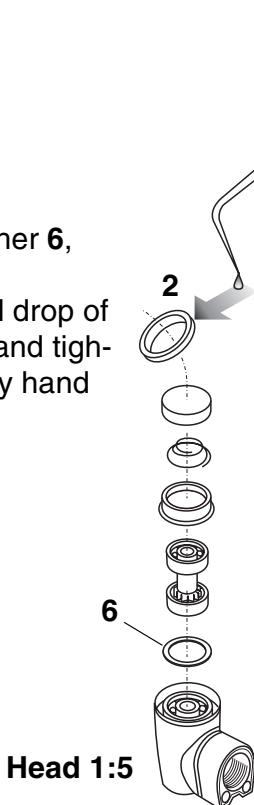
3 Head 6:1

The spring washer **6** has a different position compared with the assembly sequence of **head 1:5**:
Make sure to position the spring washer on the **ball bearing of the head thread!**

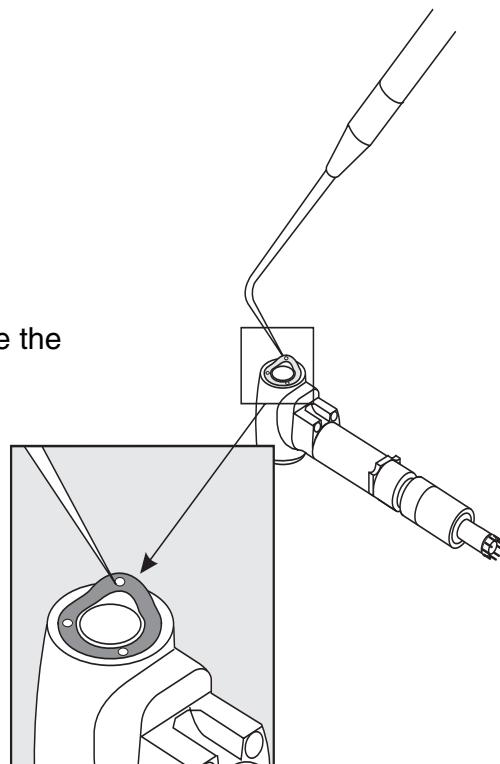
Remaining assembly sequence as for the **head 1:5**.

Test the spring function of the cap **3**!

Screw in neck drive **10** by hand up to the stop.
! Pay attention to meshing, move it slightly!

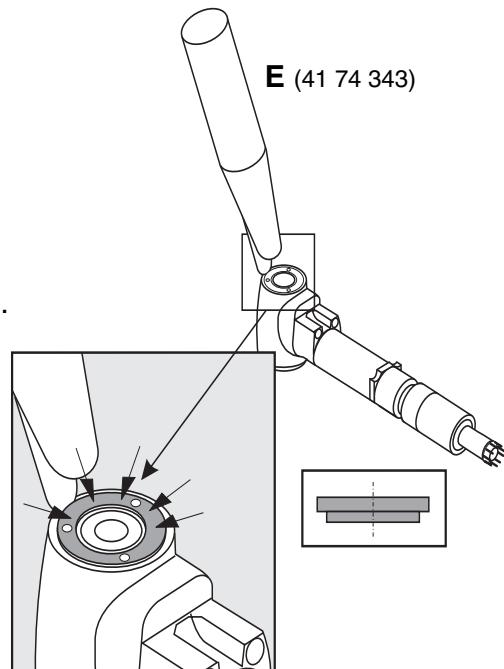


- 1 Spray rings made of elastic material determine the number of nozzles in the heads.
If these should need to be replaced, simply grip the spray ring with a pointed probe in a nozzle bore and withdraw it.



- 2 Each spray ring has a gradation on its outer circumference.
If a new ring is placed in position, this gradation must be underneath (head side); see also sectional drawing page 21.

Press down new ring with your finger tip.
Press down the projecting edge with tool E, in small steps and with pushing movements towards the chuck.

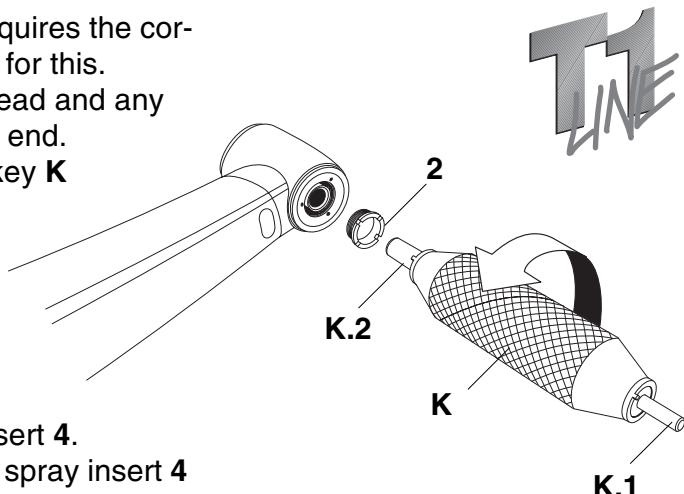


You can replace a defective spray insert. This requires the corresponding repair set for 1D, 2D or 3D with tools for this.

First the instrument must be removed from the head and any deposits must be cleaned off from the front head end.

Then unscrew the spray screw **2** with the spray key **K** counterclockwise.

The spray key is suitable both for FG chuck systems (thin guide mandrel **K.1**) and for WM chuck systems (thick guide mandrel **K.2**).



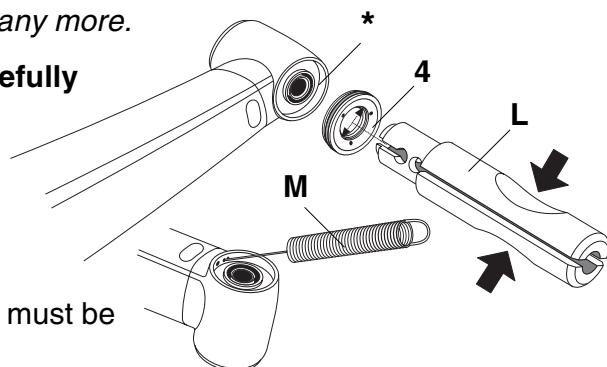
Then insert the dismantling tool **L** in the spray insert **4**.

Press the dismantling tool together and draw the spray insert **4** out from the head.

CAUTION! Do not use O-ring and spray screw any more.

Clean the chamber* in the head thoroughly and **carefully** clean the air and water channels, possibly with the cleaning wire **M**.

Then let the instrument run briefly with spray to flush through the channels.



Before the spray insert **4** is inserted, a **new** O-ring **6** must be pushed on with the slip-on sleeve **N**.

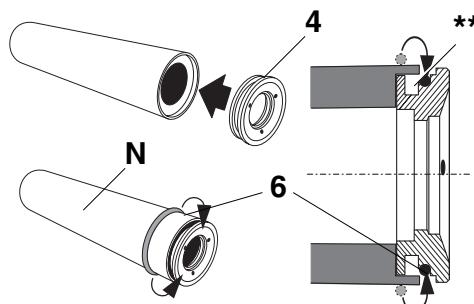
For this purpose insert the spray insert up to the stop in the slip-on sleeve and push on a **new** O-ring.

*CAUTION! The O-ring must not come to lie in the ring channel**.*

Then spray the O-ring with **T1 spray**, determine the position of the spray nozzle(s) and install the spray insert in the head.

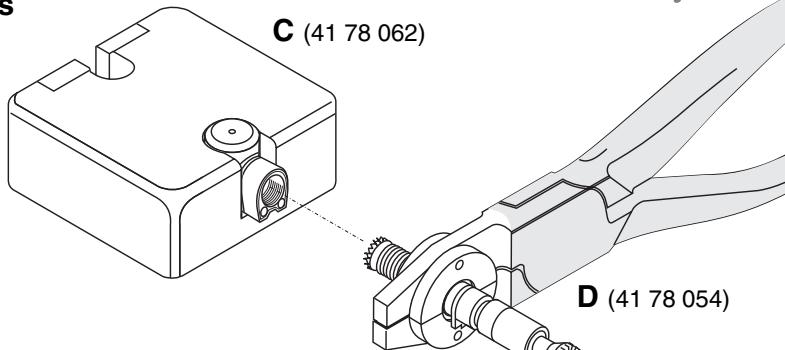
Tighten the spray insert with a **new** spray screw with the spray key.

Finally, operate the instrument with cooling spray and check the spray pattern.



The heads of the black, brown, violet and yellow contra-angle handpieces differ from the other heads of the product line only in the actual head region.

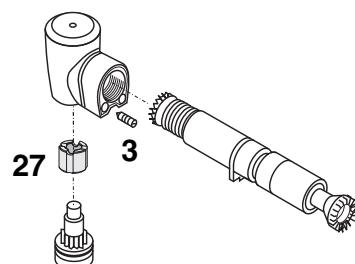
The neck must be unscrewed and **always removed first** from the head as customary in the T1 LINE product line, with pliers **D** and using tool **C**.
(not for the Prophy, ENDO heads)
)



Prophy

1 Special Heads

Rotor **27** (for slowly rotating instruments) is secured against dropping out with grub screw **3** (weakly secured with securing lacquer). A plain bearing is flanged to the rotor shaft underneath the gearwheel in the guard of a spin washer. This assembly cannot be dismantled further for dimensional reasons. The second plain bearing pressed into the head housing is also considered to be lost.



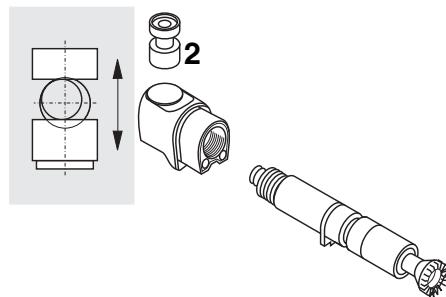
Profin®

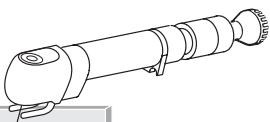
2 Profin® Head

Here an eccentric meshes with the ram **2** and produces its stroke movement.

On assembly:

Align the groove of the rounded end in the head housing. Force jammed instruments out from the chuck with tool **H** (accessory bag).





Condensor

3 Head Condensor

Here a square at the end of the neck shaft engages in a window of the chuck and produces a "hammering" stroke due to counterpressure on the clamped instrument.

The instruments intended for the Condensor head have a weak cone on their shank, as well as on the chuck of the head. The instrument shank and chuck come together only when the fine collar on the shank of each Condensor instrument has overcome the spring force of the clip 28.

These insertion and withdrawal forces must be tested.

Select an instrument from the instrument assortment with the nominal dimensions shown at the right.
Use this instrument as a bur.

Pay special attention to the diameter of the collar on the instrument shank –

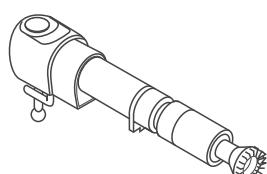
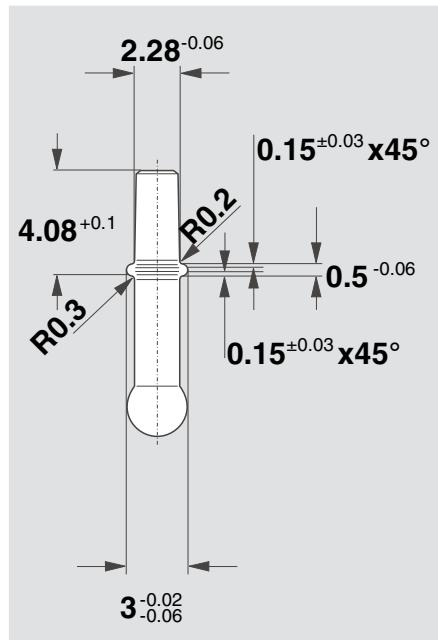
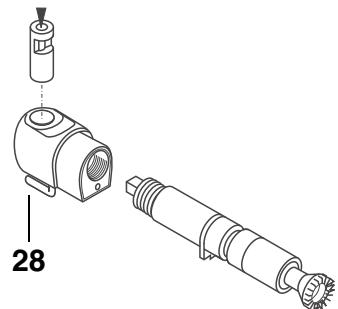
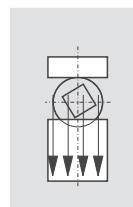
The size must be between $3^{-0.2}$ and $3^{-0.6}$.

The clip 28 then has the correct spacing if the insertion and withdrawal forces on the instrument correspond to the ranges stated below:

Insertion force: 4 – 10 N

Withdrawal force: 6 – 16 N.

Eject jamming instruments with tool H – in the contra-angle handpiece accessory bag.



KM**4 Head KM**

Unlock and withdraw spray tube 1.

Grip screw ring 2 with pliers D

and unscrew it. The catch 3, cap 4, conical spring 5, retaining ring 6, spring washer 7 and head drive 8 can then be removed.

Test the components of the head for wear with magnifying glass. **Wash** parts **ultrasonically** which are intended for reuse .

Assembly:

Assembly is as for the head 1:1, however, the catch 3 must be interposed.

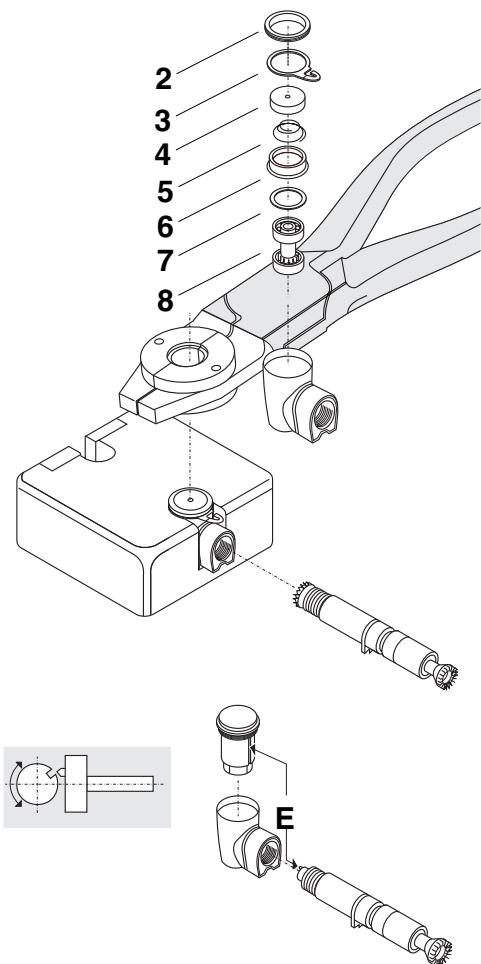
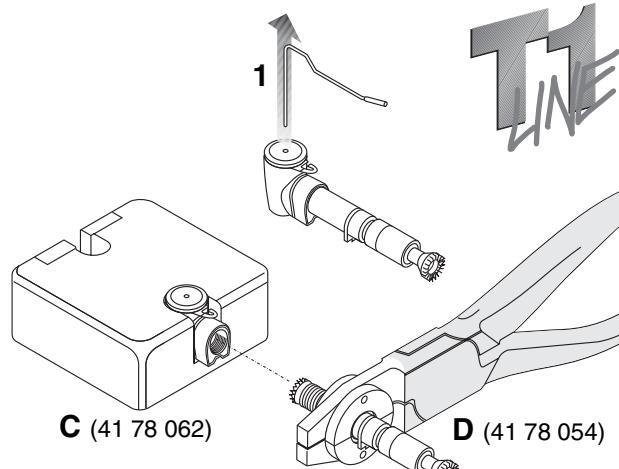
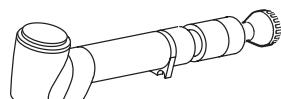
ENDO**5 Head ENDO**

Here an eccentric meshes with the head drive and produces its rotary movement.

Caution, during assembly!

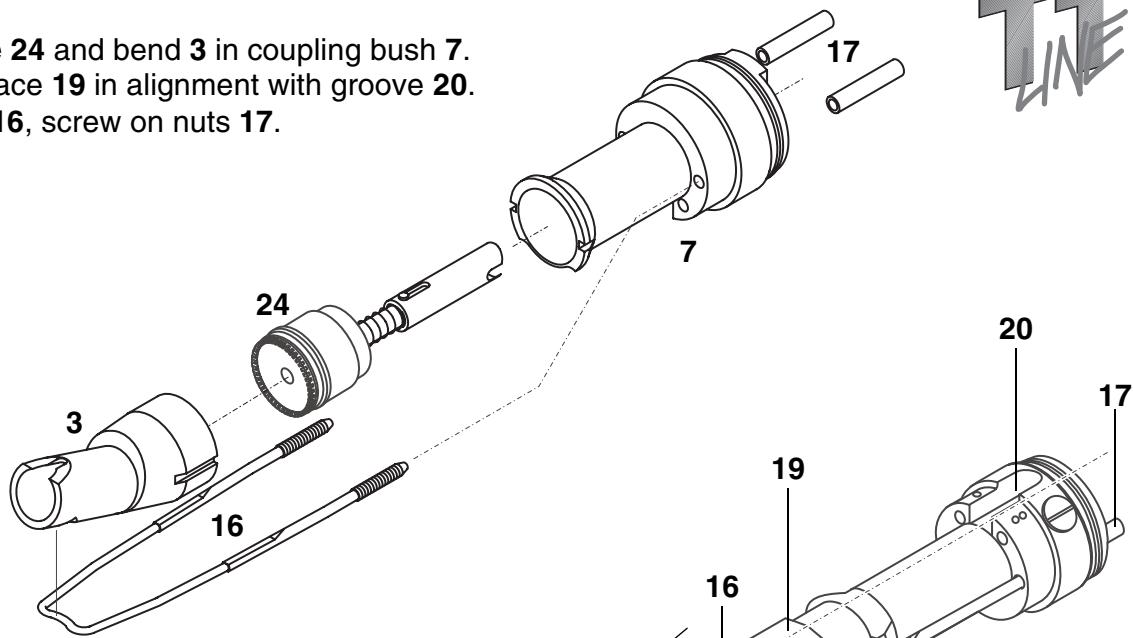
Align groove of the head drive with the eccentric E.

The head drive cannot be dismantled further.

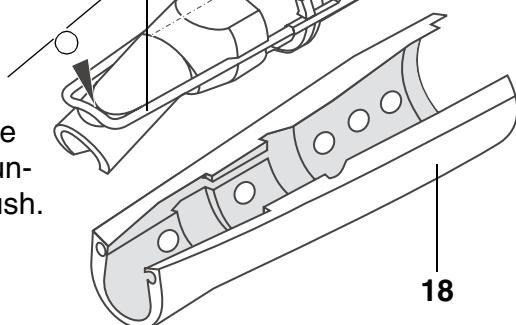




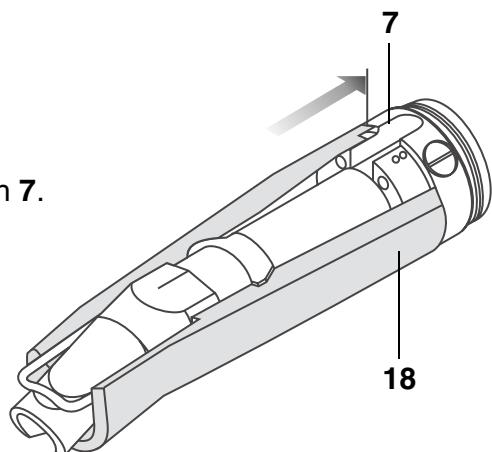
- 1 Insert drive **24** and bend **3** in coupling bush **7**. Fit flat surface **19** in alignment with groove **20**. Insert clip **16**, screw on nuts **17**.



- 2 Push clip **16** in the direction of the coupling bush until the wire diameter stands flush with the outer edge of the bend. Screw nuts **17** in further until they are countersunk flush with the outer contour of the coupling bush. The position of the clip remains unchanged.

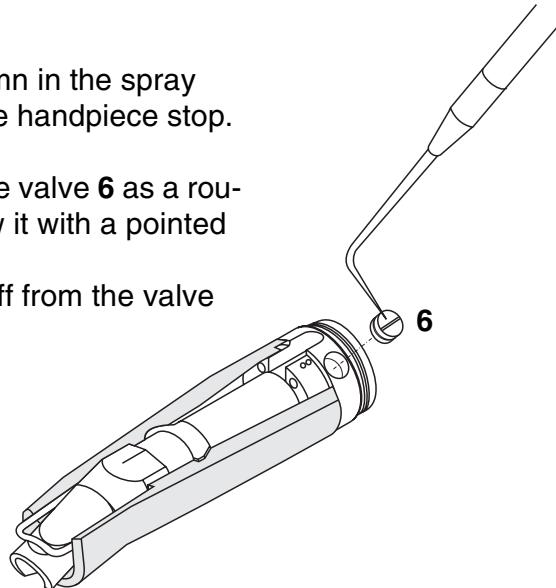


- 3 Fit damping part **18** flush with the coupling bush **7**.



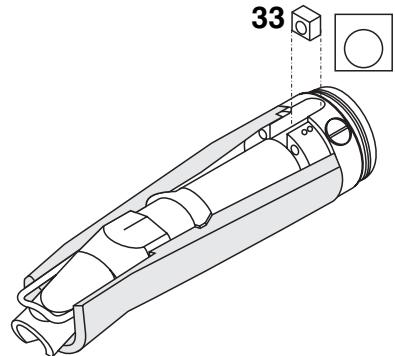


- 4 The check valve **6** brings the water column in the spray water path immediately to standstill at the handpiece stop. Germs remain in the periphery.
At every repair of a handpiece replace the valve **6** as a routine measure. Simply catch and withdraw it with a pointed probe.
Check and if necessary clean deposits off from the valve seat.

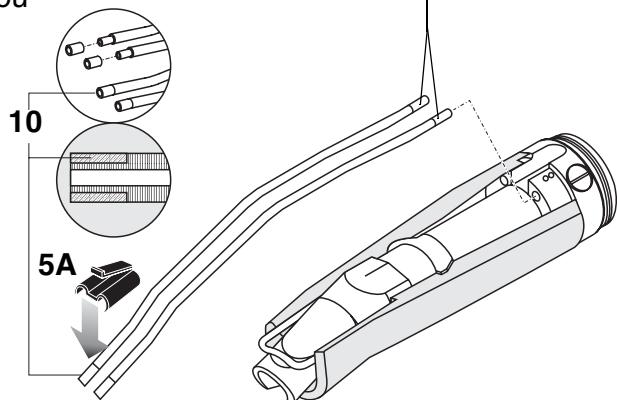




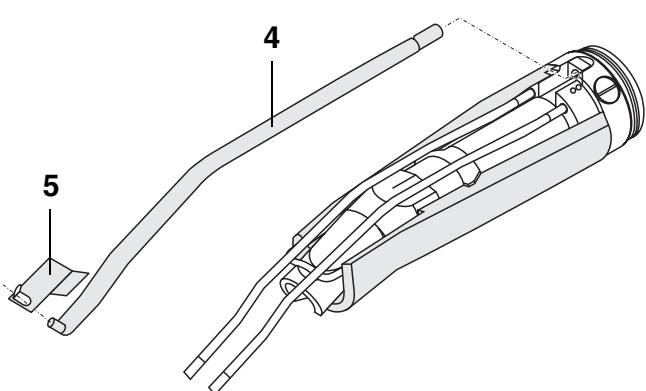
- 5** Place the fiber rod guard **33** in the recess of the coupling bush, with the lower material thickness between outer contour and bore **at the bottom!**
Push fiber rod guard **33** up to the start of the milled arch.



- 6** Insert spray tubes – right and left – with new hose pieces **10**. Each spray tube is marked at the end which has to be connected with the coupling bush. The air-conducting tube is marked with a dot and the water-conducting tube with two dots.
The same marks are on the coupling bush.
Version without light:
Snap clip 5A (33 29 302) into place.



- 7** Place fiber rod guard **5** on the fiber rod **4**.
Insert the fiber rod.
Align the back face of the fiber rod flush with the outer contour of the coupling bush.





- 8** Spray the surface of the damping part **18** as well as the new O-ring **11** with T1 spray - **pay attention to correct position of fiber rod and spray tube!**

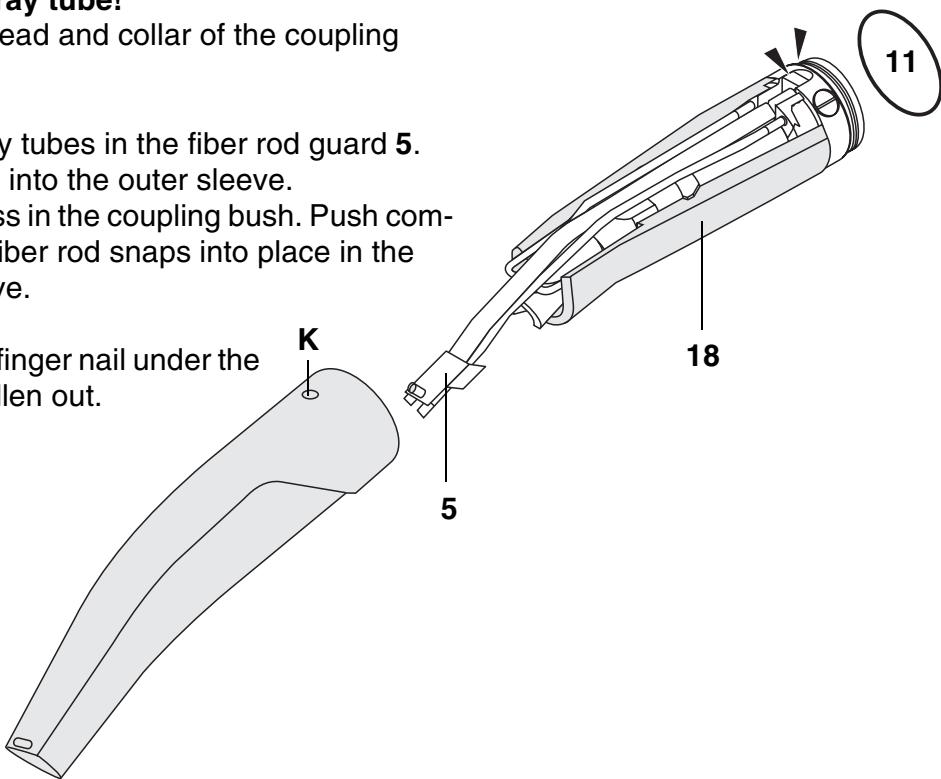
Place O-ring between thread and collar of the coupling bush.

Arrange ends of the spray tubes in the fiber rod guard **5**.

Push complete assembly into the outer sleeve.

Guide rivet **K** on the recess in the coupling bush. Push complete assembly until the fiber rod snaps into place in the window of the outer sleeve.

Push O-ring **11** with your finger nail under the outer sleeve if it has swollen out.





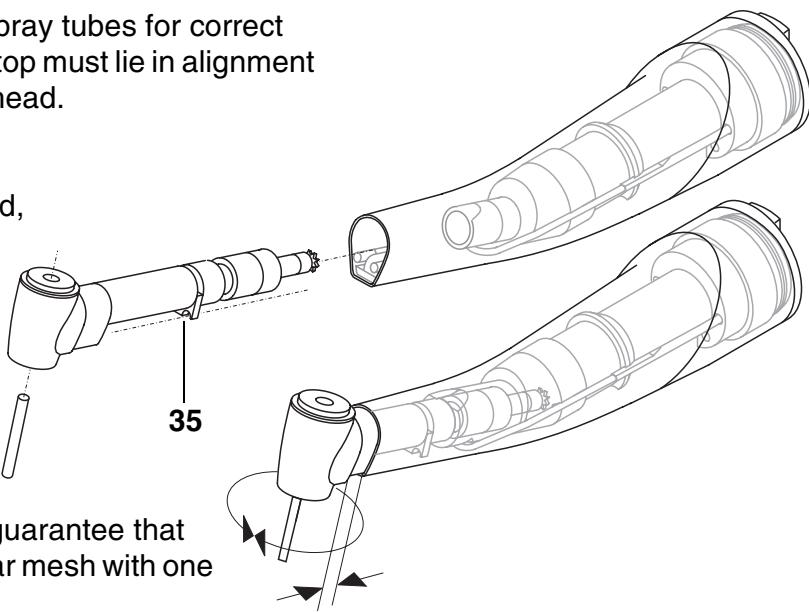
9 Insert a bur in the head.

Check stop **35** for supporting the spray tubes for correct location. The bearing shells of the stop must lie in alignment with the spray tube transfer in the head.

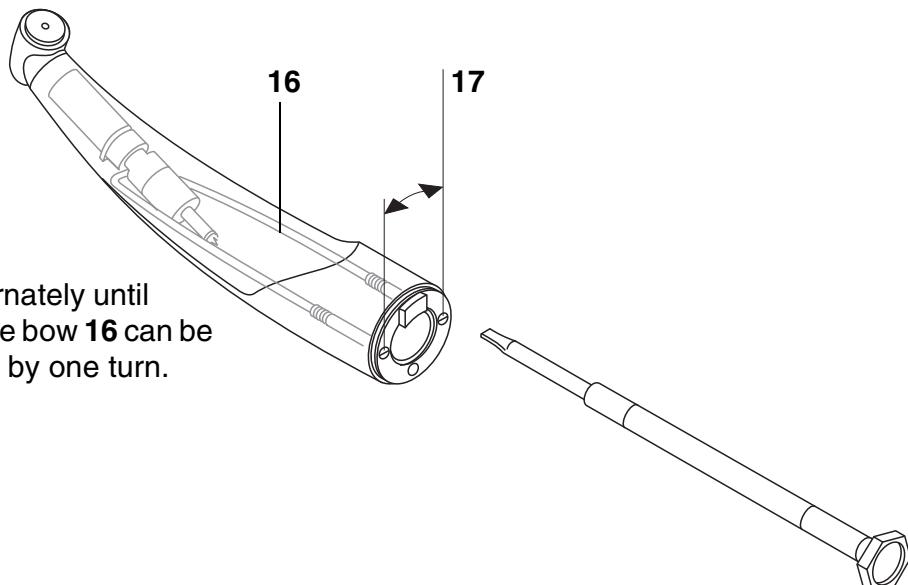
Insert head in the outer sleeve.
If it is not possible to insert the head,
then the wire bow **16** may be dis-
placed

(see page 28, section 2)
or the alignment of the inner parts
is not correct.

Before the head comes into contact with the outer sleeve, let the bur **move slightly** in the head, to guarantee that the gear wheels of the head and gear mesh with one another.



10 Tighten nuts **17** alternately until the contact of the wire bow **16** can be felt, then pre-tighten by one turn.





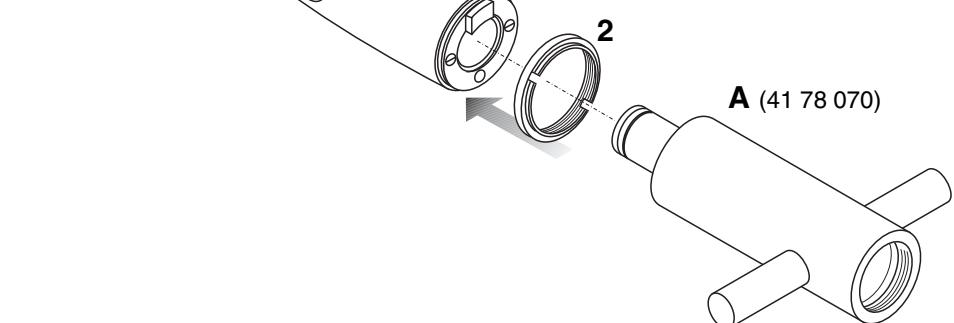
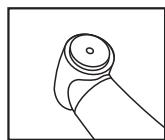
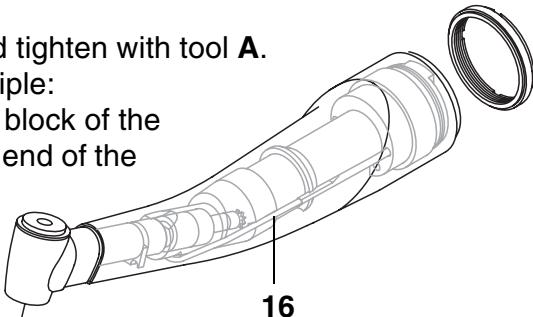
11 Screw on ring nut **2** and tighten with tool **A**.

Recall the locking principle:

The ring nut **2** pulls the block of the assemblies against the end of the outer sleeve.

Therefore tighten the ring nut so far until the gap between outer sleeve and head is reduced to zero.

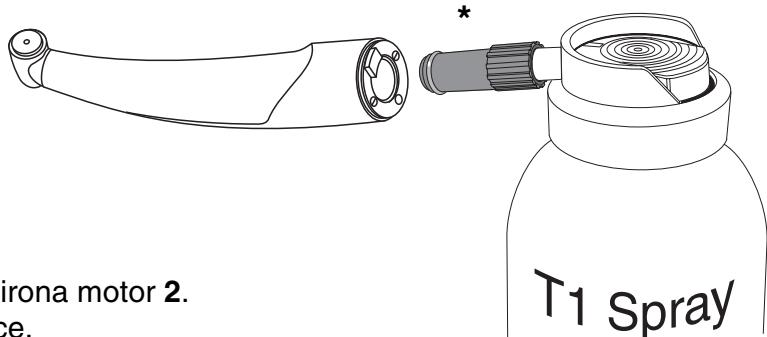
Any further tightening leads to unwanted deformation of the wire clip **16**.



Attention: The adhesive bonds must have cured before the functional test!



- Provide T1 spray bottle with corresponding adapter*, plug on handpiece and oil with T1 spray for 1 second.



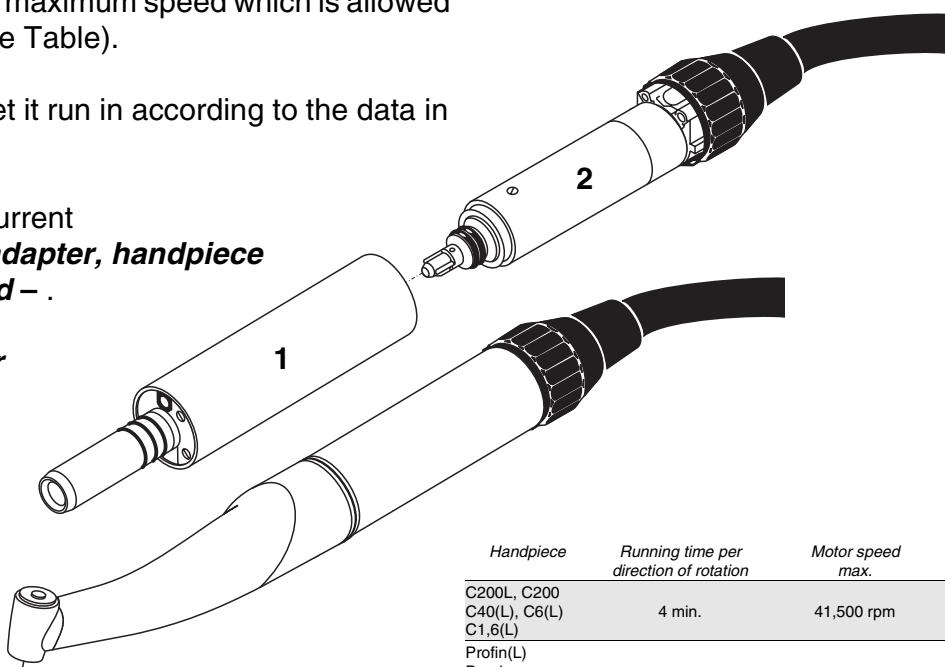
- Couple Intramatik-Lux adapter **1** to Sirona motor **2**.
Test withdrawal force of the handpiece.
Pull off the handpiece without twisting.

- Determine current consumption of the motor with adapter:
Let the motor run with the maximum speed which is allowed for the test specimen (see Table).
- Plug on handpiece and let it run in according to the data in the Table.

Only now measure the current consumption of **motor, adapter, handpiece – at max. allowed speed –**.

Deduct the value “**motor with adapter**” from the value determined.

Allowed current consumption for handpieces C200L, C200: **≤ 0.1 A**
all other handpieces: **≤ 0.07 A**



Handpiece	Running time per direction of rotation	Motor speed max.
C200L, C200 C40(L), C6(L) C1,6(L)	4 min.	41,500 rpm
Profin(L) Prophy Condensor KM Endo	4 min.	14,000 rpm

Example: Current motor with adapter:
Current motor with adapter,
Contra-angle handpiece C40:

0.21 A
0.21 A





5 Testing for leaks:

Close off spray nozzles on the head.

Apply 3 bar dynamic pressure in each case to the spray air and spray water channel.

There must be **no pressure drop** within **10 – 15 seconds**.

6 Testing the flow:

Set the following flow pressures on the test device with an as new T1 CLASSIC handpiece:

Spray air:

2.7 ± 0.1 bar

Spray water:

1.5 ± 0.1 bar

Connect the handpiece to be tested.

The flow rate of spray **air** must be
 ≥ 1.5 l/min.

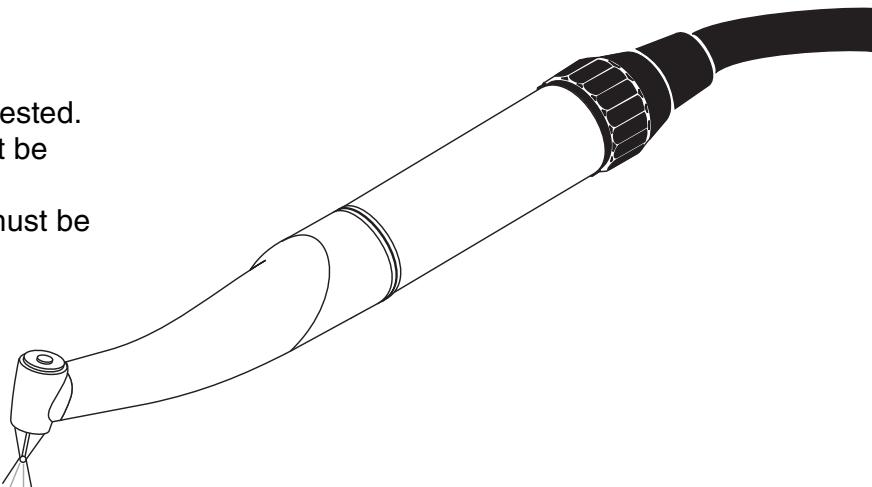
The flow rate of spray **water** must be
with **old silicone**

spray ring ≥ 60

with **new metal**

spray ring ≥ 70 .

A value less than this indicates faulty spray channels –
test.



If no test device is available, the flow rate of the spray water can be measured with a measuring beaker and water.

7 Testing the spray cone:

The nozzles in the spray ring determine the direction of the spray jet. With a standard instrument (20 mm total length) the spray jets meet at the instrument tip and atomize to form a uniform cone.

With spray ring made of silicone note:

Any irregular spray pattern or even drops forming on the head indicates a damaged or too low lying spray ring.



8 Testing the retention force of the chuck with tool G clamping system FG.

Introduce dummy instrument of the tool **G** up to the bottom of the chuck. Observe withdrawal behavior.

Tool **G** marks the minimal value with a ring on its spring loaded withdrawal.

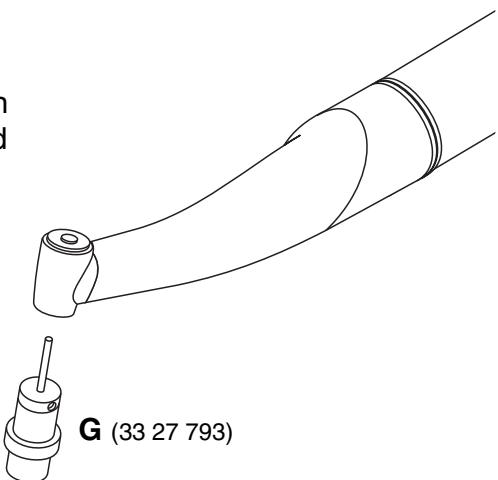
9 Testing running behavior:

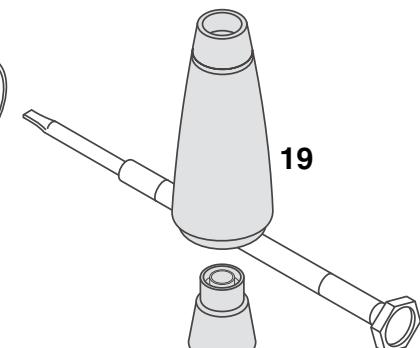
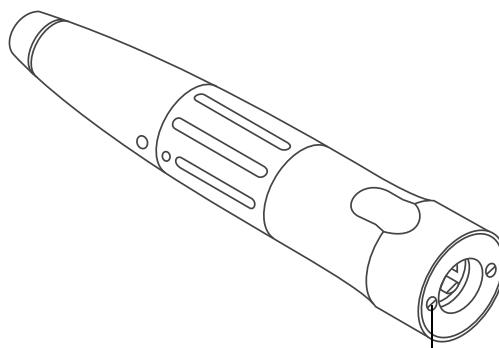
Operate the handpiece with inserted instrument in both directions and at different speeds –

observe maximum speed!

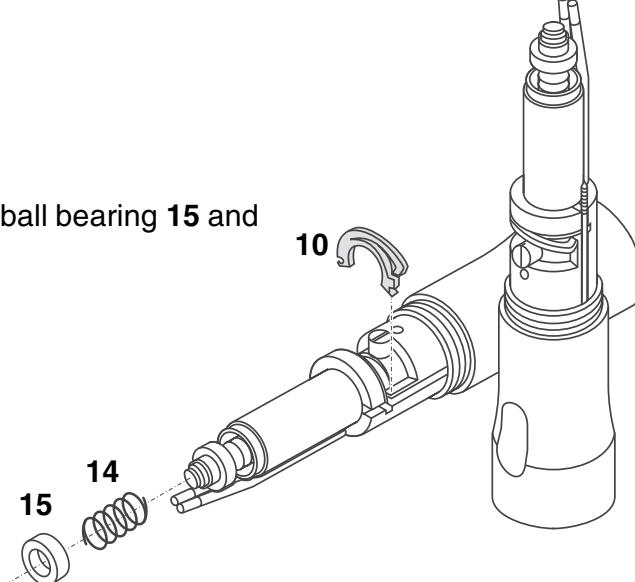
The handpiece should lie in your hand with little vibration in all speed ranges and the running noise should correspond in its characteristic with a good reference contra-angle handpiece.

End of the functional test.



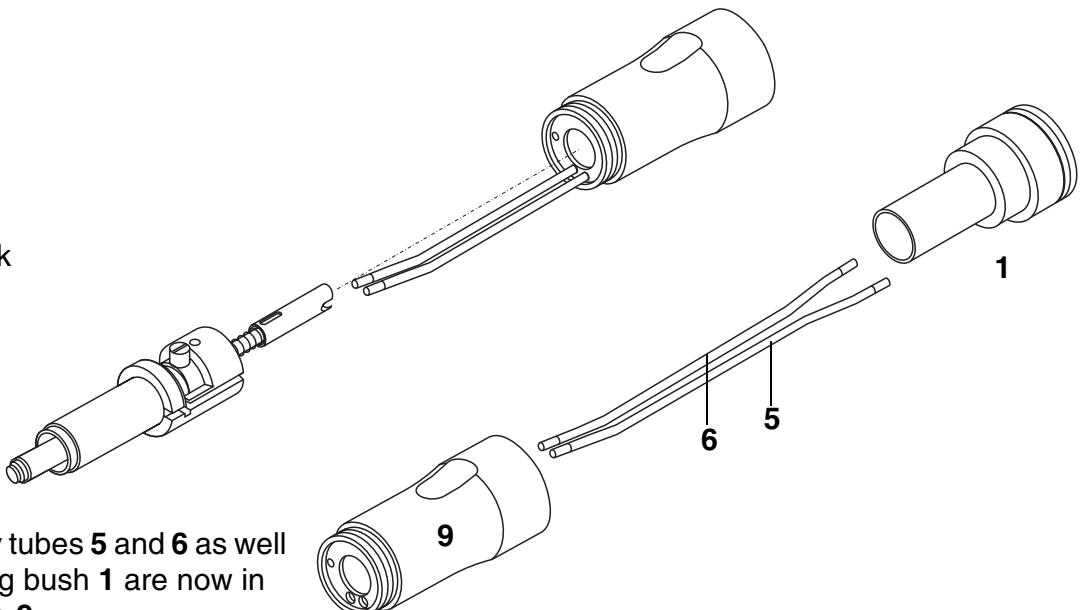


- 1 Loosen screws **4** and remove them from the handpiece.
- 2 Lift off one after another the cap **19**, spray insert **18**, sealing ring **17** and rotary sleeve **16**.
- 3 Remove locking element **10**. Withdraw ball bearing **15** and spring **14**.

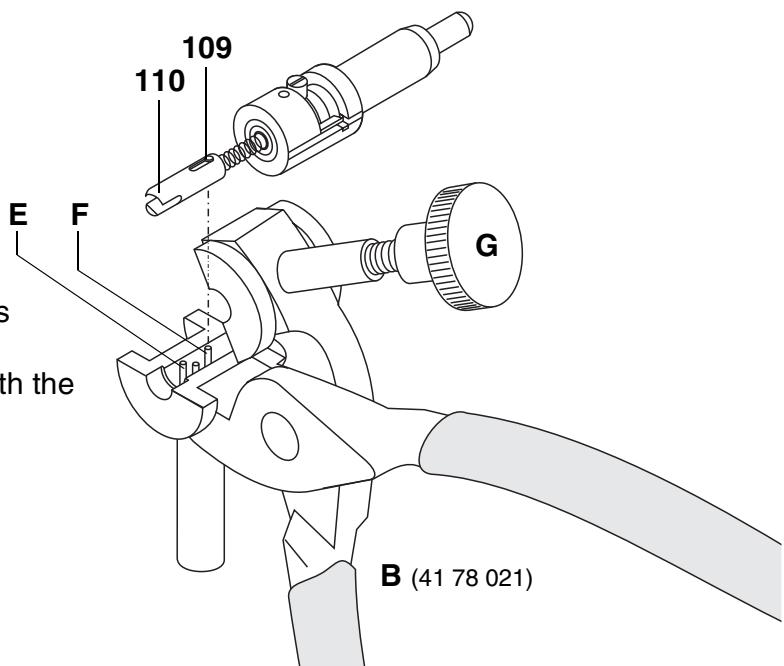




- 4** Remove chuck assembly.



- 5** Only the spray tubes **5** and **6** as well as the coupling bush **1** are now in the end sleeve **9**.



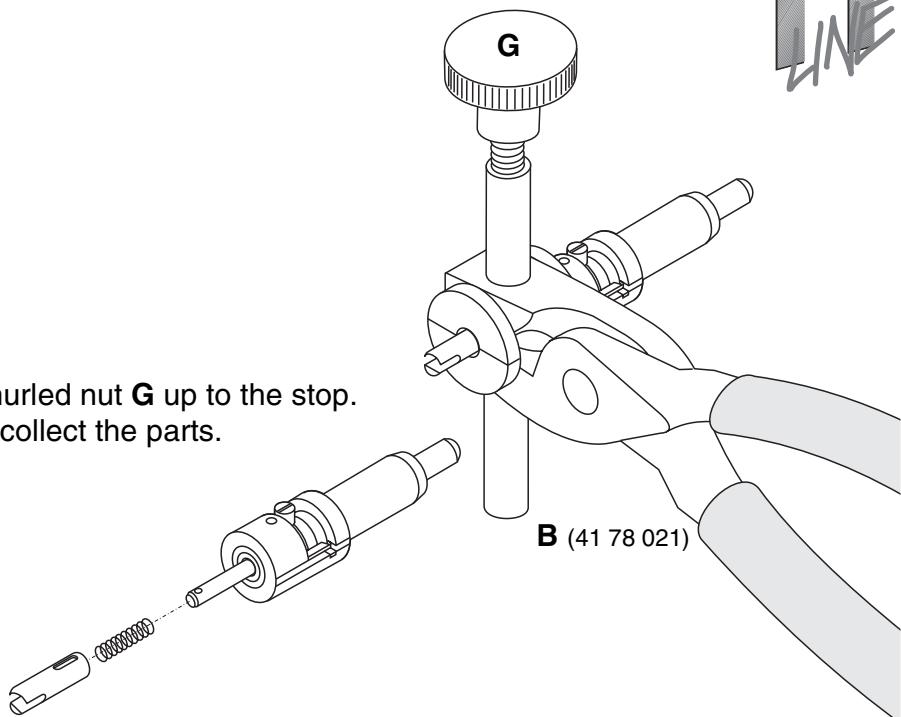
- 6** Remove driver **110**:

Unscrew the knurled nut **G** of the tool **B** so far until the thread becomes visible.

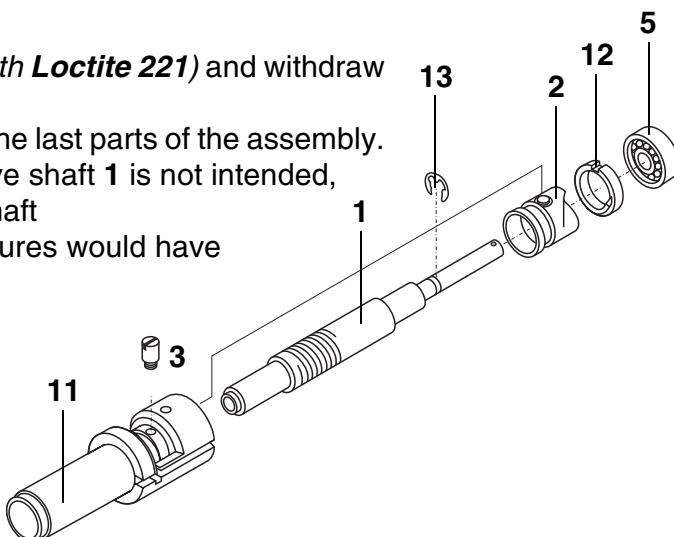
Insert driver **110** so that pin **E** guides the elongated hole in the driver and the pin **F** is aligned spring loaded with the pin **109**.



- 7** Close pliers and screw in knurled nut **G** up to the stop.
Open pliers **B** carefully and collect the parts.



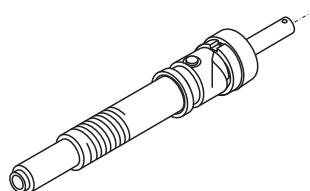
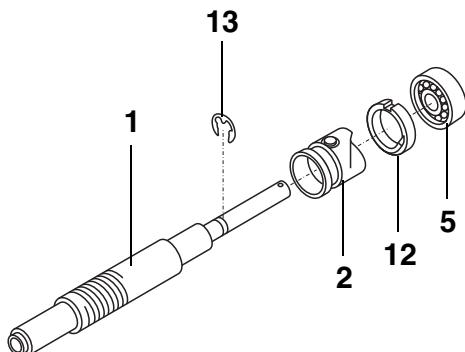
- 8** Unscrew screw **3** (*secured with Loctite 221*) and withdraw bearing sleeve **11**.
Pry off circlip **13** and remove the last parts of the assembly.
Further dismantling of the drive shaft **1** is not intended,
since after assembly of the shaft
differentiated balancing measures would have
to be performed.





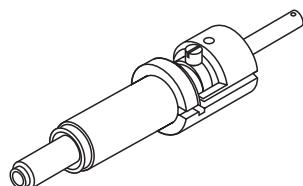
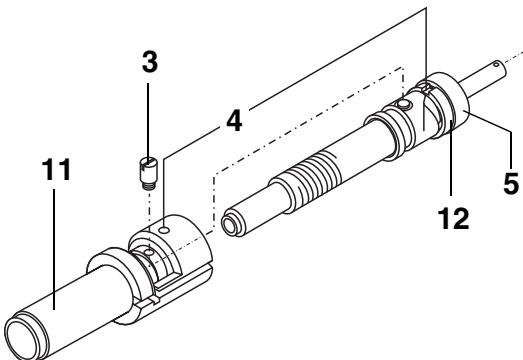
- 1** The drive shaft **1** including chuck is available only as a complete assembly. This undergoes a precise balancing process at the manufacturer.

Thread locking sleeve **2** and locking ring **12**
 (flat side to the ball bearing **5**)
 on the drive shaft **1**.
 Push on ball bearing **5** and secure with circlip **13**.



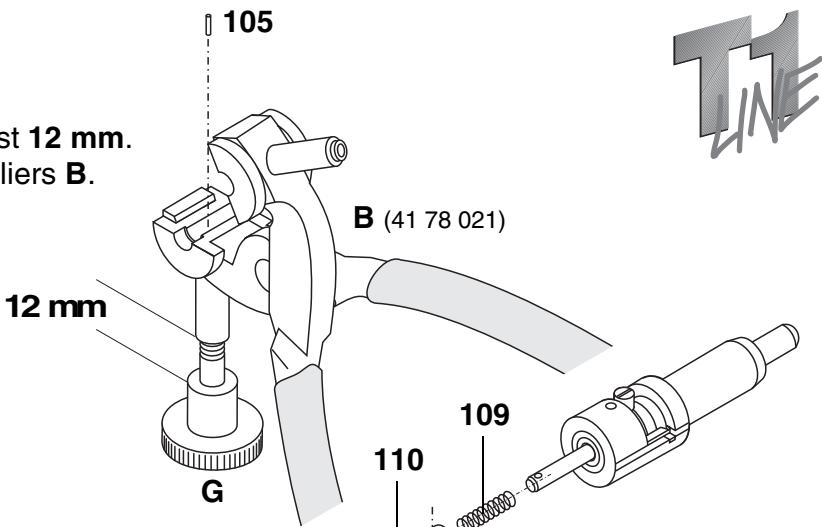
- 2** Turn the groove of the locking ring **12** to the top, as well as the threaded bore of the locking sleeve **2**. Insert drive shaft into the bearing sleeve **11**. The groove of the locking ring must be caught by the pin **4** and the ball bearing **5** must be sunk completely in the bearing sleeve.

Screw in screw **3** and secure it with **Loctite 221**.

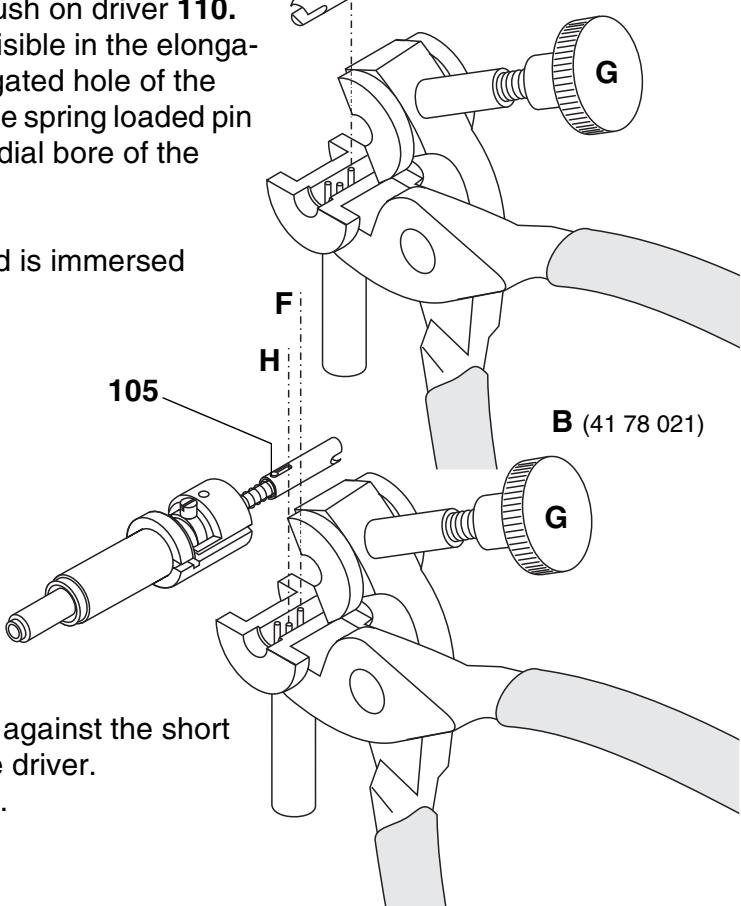




- 3** Turn back knurled screw **G** at least **12 mm**.
Insert new pin **105** in the turned pliers **B**.



- 4** Thread spring **109** on drive shaft and push on driver **110**. Turn drive shaft until the radial bore is visible in the elongated hole of the driver. Position the elongated hole of the driver on the needle pins of the pliers. The spring loaded pin of the pliers must then engage in the radial bore of the drive shaft.
Close pliers.
Screw in knurled screw **G** until its thread is immersed
– pin **105** pressed in.

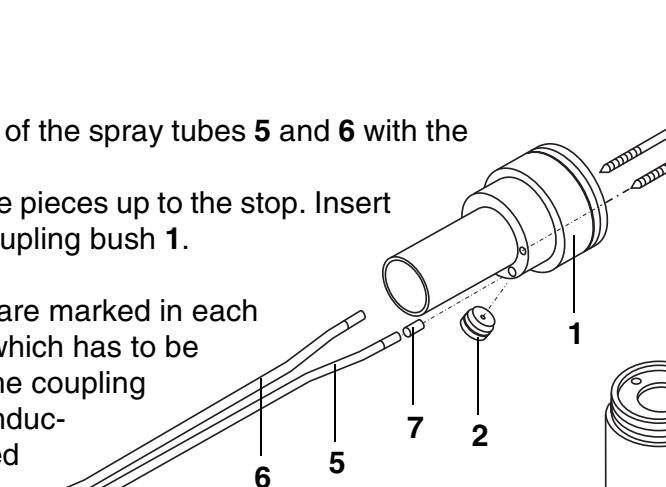


- 5** Center pin **105** to the drive shaft:
Insert assembly turned in the pliers **B**.
The elongated hole of the driver strikes against the short pin **H**. Pin **F** is fully spring loaded by the driver.
Close pliers firmly – pin **105** is centered.

- 6** Provide the ends of the spray tubes **5** and **6** with the hose pieces **7**.

Always push hose pieces up to the stop. Insert spray tubes in coupling bush **1**.

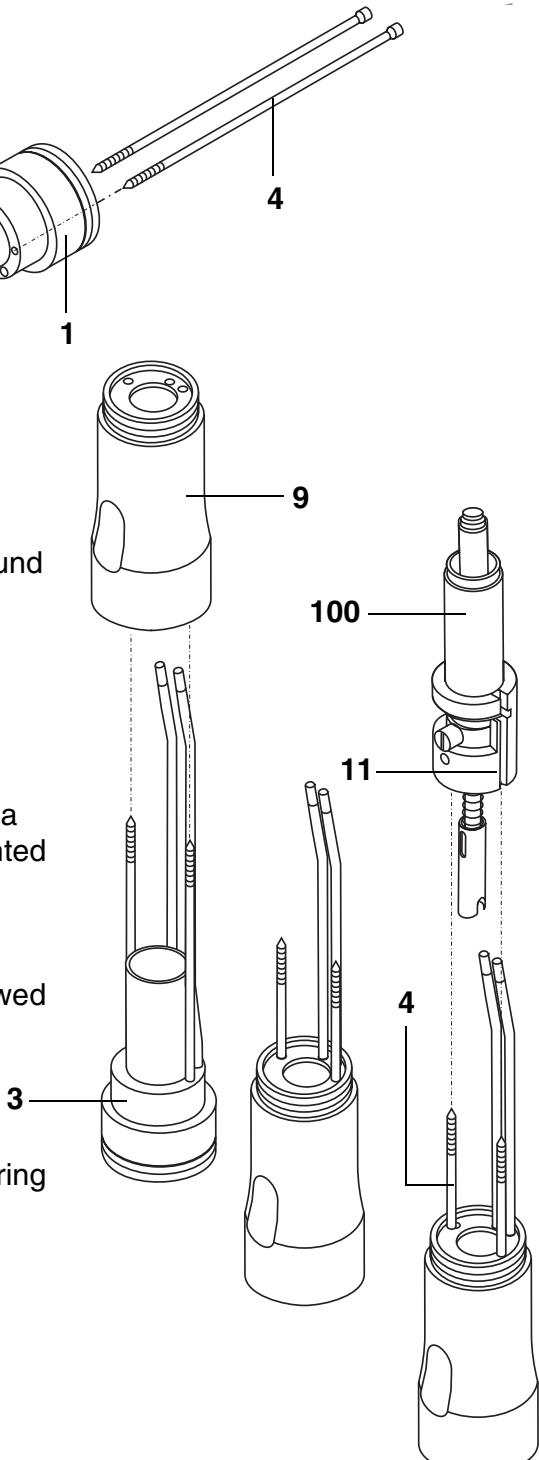
The spray tubes are marked in each case at the end which has to be connected with the coupling bush. The air-conducting tube is marked with a dot and the water-conducting tube with two dots. The same marks can be found again on the coupling bush.



Insert screws **4**.

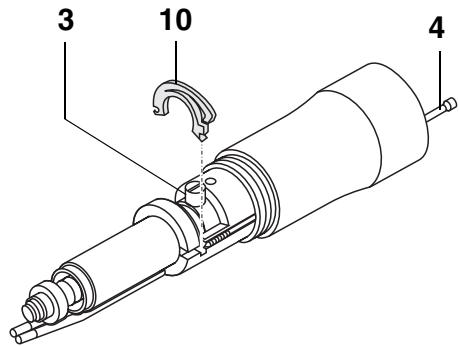
- 7** For every repair of a handpiece replace the valve **2** as a routine measure. Simply grip and withdraw it with a pointed probe. Check the valve seat for deposits.

- 8** Position the end sleeve **9**. The O-ring **3** should be renewed and sprayed with T1 spray.

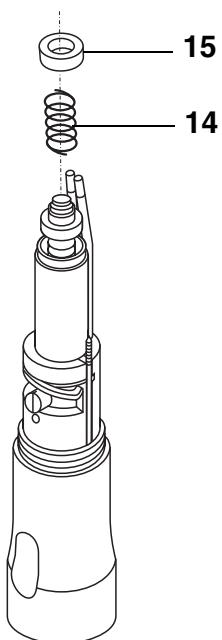
- 9** Insert the drive **100**.
The screws **4** are threaded into the channels of the bearing sleeve **11** milled on the sides.
- 



- 10** Withdraw the screws **4** approx. 12 mm.
Place screw **3** in topmost position.
Insert stop element **10** in the groove and press it in to the bottom.
Push the screws **4** again to the front. With correct position of the stop element the screws **4** grip the stop element on both sides.



- 11** Fit compression spring **14** and ball bearing **15**.



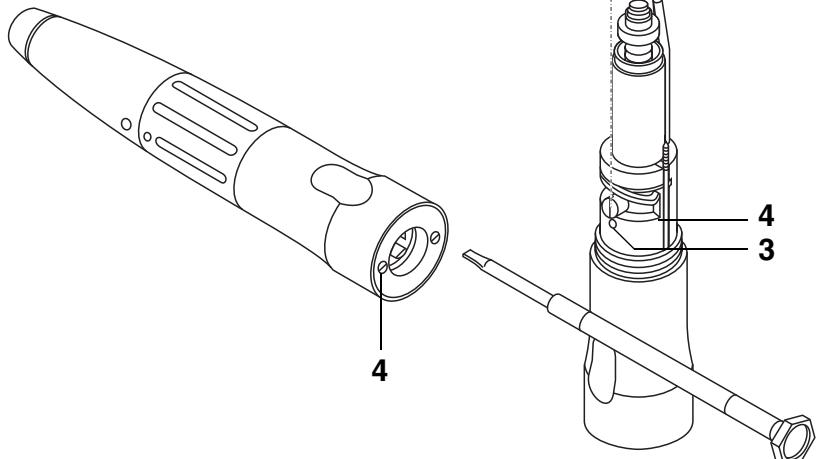


- 12** Renew O-ring **8** and spray it with T1 spray.
Fit sealing ring **17** with flat side in the spray insert **18**.

The rotary sleeve **16** has a longitudinal groove on the inside. When positioning the sleeve, guide this groove over the screw **3**.

Plug on the spray insert **18**.
The spray tubes are inserted in the spray insert.

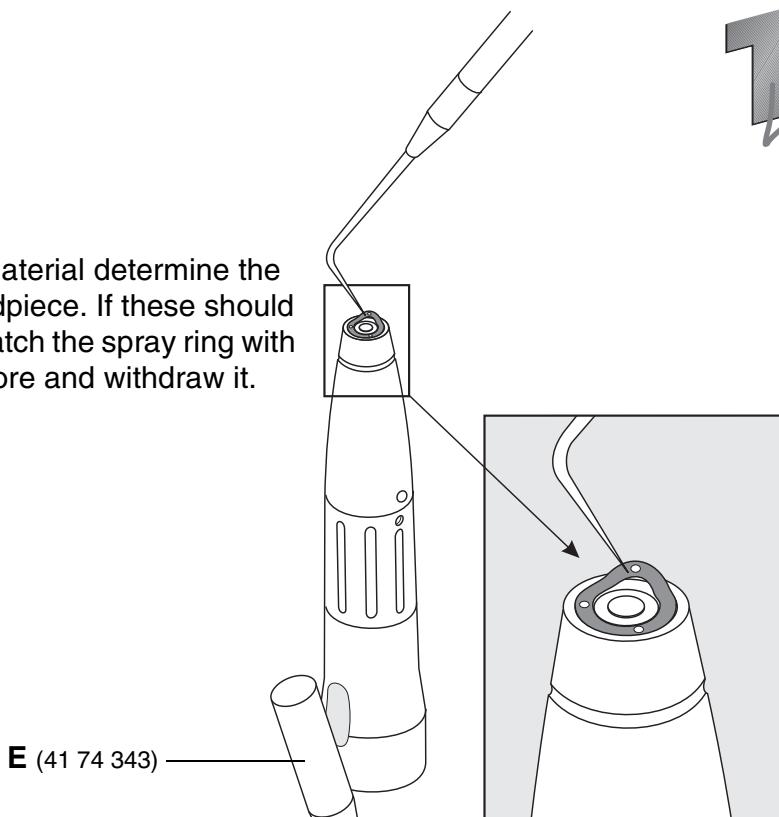
Slip the cap **19** over the spray insert corresponding to the inside recesses for the spray tubes.
The screws **4** meet the threaded bores of the cap.



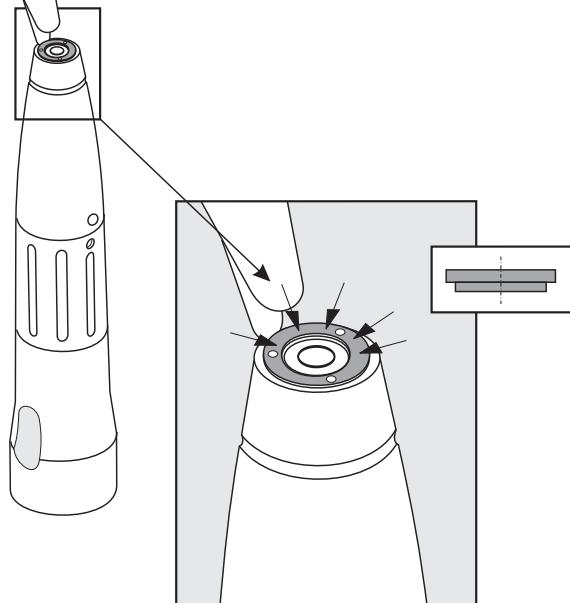
- 13** Screw in and tighten the screws **4**
- finished.



- 1 Spray rings made of elastic material determine the number of nozzles in the handpiece. If these should need to be replaced, simply catch the spray ring with a pointed probe in a nozzle bore and withdraw it.



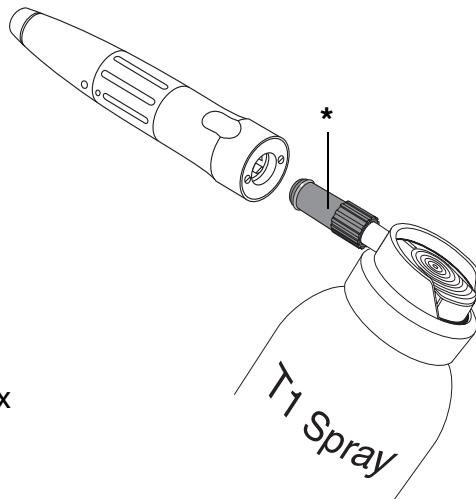
- 2 Every spray ring has a gradation on its outer circumference. If a new ring is fitted this gradation must be on the bottom (handpiece side). Press the new ring down with your finger tip. Sink the projecting edge with tool E in small steps and pushing movements towards the chuck.





Attention: The adhesive bonds must have cured before the functional test!

- 1 Provide the T1 spray bottle with a corresponding adapter* and attach the angle piece and **oil with T1 spray for 1 second.**



- 2 Provide Sirona motor 1 with Intramatik-Lux adapter. Attach handpiece, **test withdrawal force of the handpiece.** Pull off the handpiece without twisting.

3 Let the handpiece run in:

Insert bur 3.

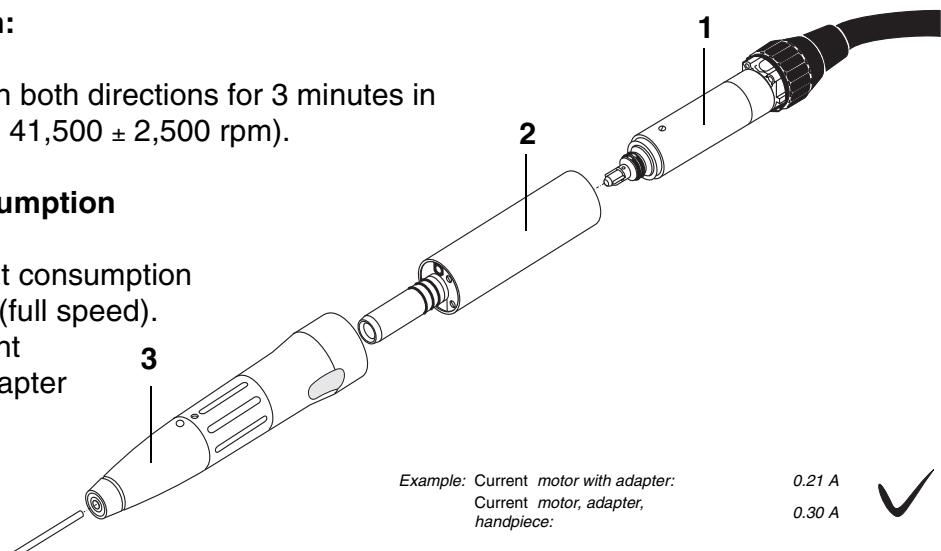
Let the handpiece run in both directions for 3 minutes in each case at full speed ($= 41,500 \pm 2,500$ rpm).

4 Determine current consumption of the handpiece:

First determine the current consumption of the motor with adapter (full speed).

Then determine the current consumption of motor, adapter and handpiece.

The difference between both values may not exceed **0.10 A.**



Determine current consumption in both directions of rotation.



5 Testing the leak tightness:

Close spray nozzles on the handpiece front. Apply air at 3 ± 0.2 bar dynamic pressure to the spray air and to the spray water channel.

There may be **no pressure drop** within **10 – 15 seconds**.

6 Testing the flow rate:

Set the following flowing pressures on the test device with a new T1 CLASSIC handpiece:

Spray **air**: 2.7 ± 0.1 bar

Spray **water**: 1.5 ± 0.1 bar

Cooling **air**: 3.5 ± 0.1 bar

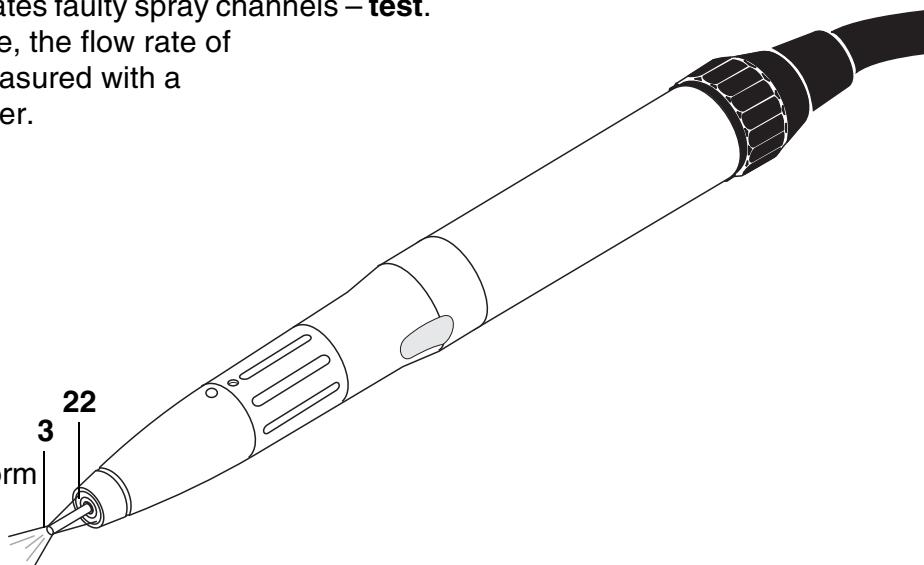
Connect the handpiece to be tested.

The flow rate of spray **air** must be ≥ 2.0 l/min.

The flow rate of spray **water** must be $\geq 60\text{ml}/\text{min}$.

A value less than this indicates faulty spray channels – **test**.

If no test device is available, the flow rate of the spray water can be measured with a measuring beaker and water.



7 Testing the spray cone:

The nozzles in the spray ring **22** determine the direction of the spray jet.

With a fully inserted bur **3** the spray jets meet at the pin tip and atomize to form a uniform cone.

With spray ring made of silicone note:

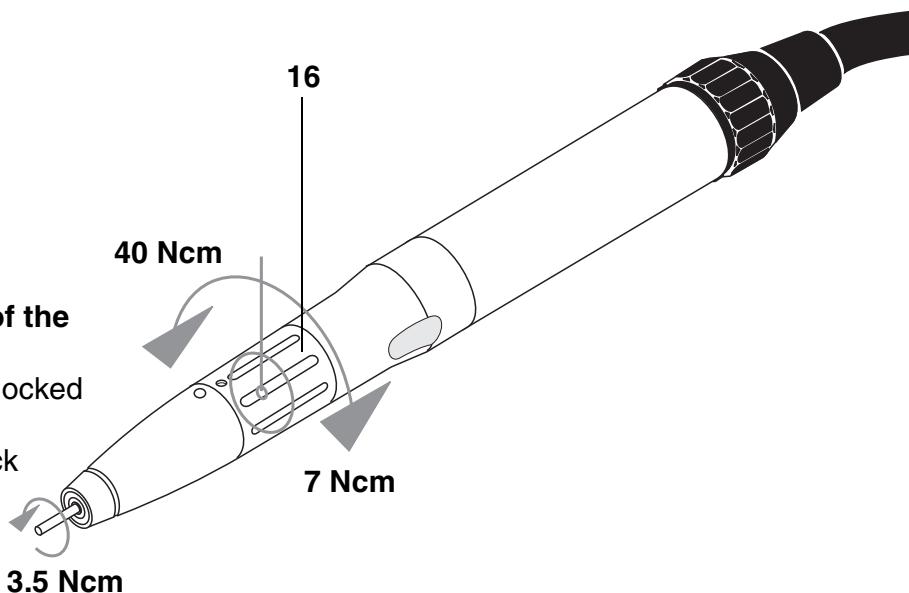
Any irregular spray pattern or even drops forming on the head indicates a damaged or too low lying spray ring.



8 Checking the locking torque of the chuck:

The rotary sleeve **16** clamps the instrument. Measured from the handpiece axis, a torque of **7 Ncm** may not be exceeded for clamping the bur. If this value cannot be measured, the subjective feeling by testing by hand must decide.

The torque value may rise to **40 Ncm** for opening the chuck.



9 Testing retaining torque of the chuck:

Block the shaft, e.g. via a blocked motor.

The bur may turn in the chuck at the earliest at a torque of **3.5 Ncm**.

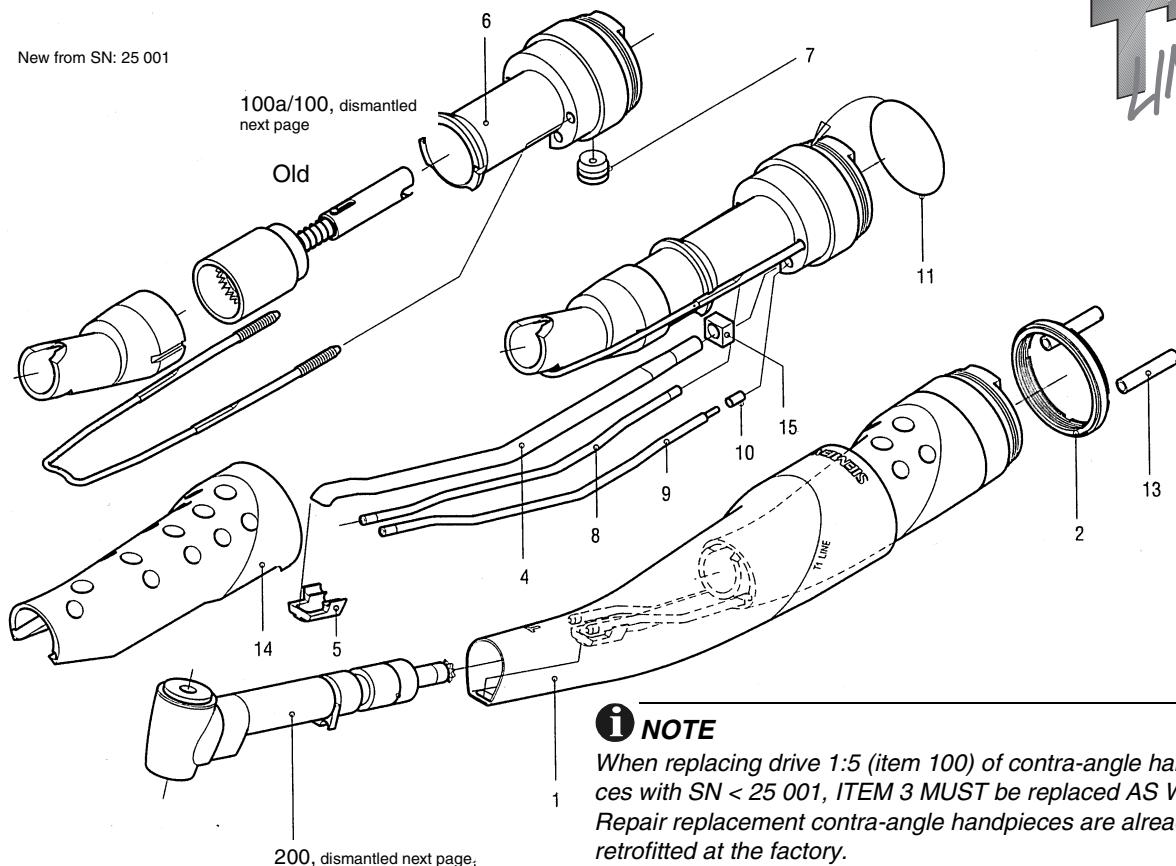
10 Testing running behavior:

Operate the handpiece with inserted bur in both directions and at different speeds. The handpiece should lie in your hand with little vibration in all speed ranges and the running noise should correspond in its characteristic with a good reference handpiece.

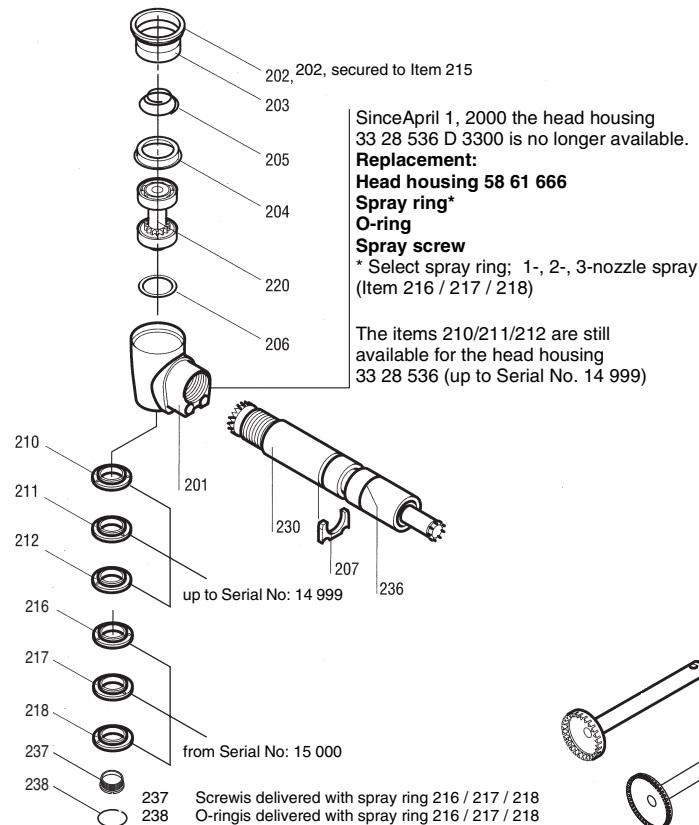
End of the functional test.



New from SN: 25 001

**Contra-angle handpiece, compl.**

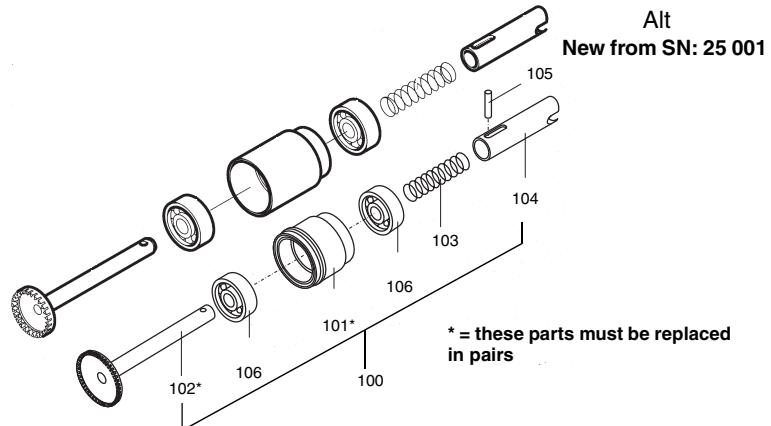
1 Outer sleeve	41 77 445 D 3300	100 Drive 1:5	33 28 395 D 3300
2 Nut (red)	41 77 080 D 3300	100a Drive 1:5 (New)	58 99 104 D 3401
3 Bend	33 28 635 D 3300	200 Head 1:5	33 28 486 D 3300
4 Fiber rod	33 28 890 D 3300		
5 Fiber rod guard	33 27 868 D 3300		
6 Coupling bush, compl.	33 28 478 D 3300		
7 Valve	33 28 015 D 3300		
8 Spray tube, right	33 28 874 D 3300		
9 Spray tube, left	33 28 882 D 3300		
10 Hose piece	33 28 163 D 3300		
11 O-ring 16.8x1mm DIN 3771	18 79 308		
12 Wire clip	33 28 841 D 3300		
13 Nut	33 28 460 D 3300		
14 Damping part	33 29 369 D 3300		
15 Fiber rod guard	41 77 262 D 3300		



i NOTE

When repairing drive 1:5 (item 100) of contra-angle handpieces with SN < 25 001, items 101 and 102 must be replaced.

Repair replacement contra-angle handpieces are already retrofitted at the factory.



Head 1:5

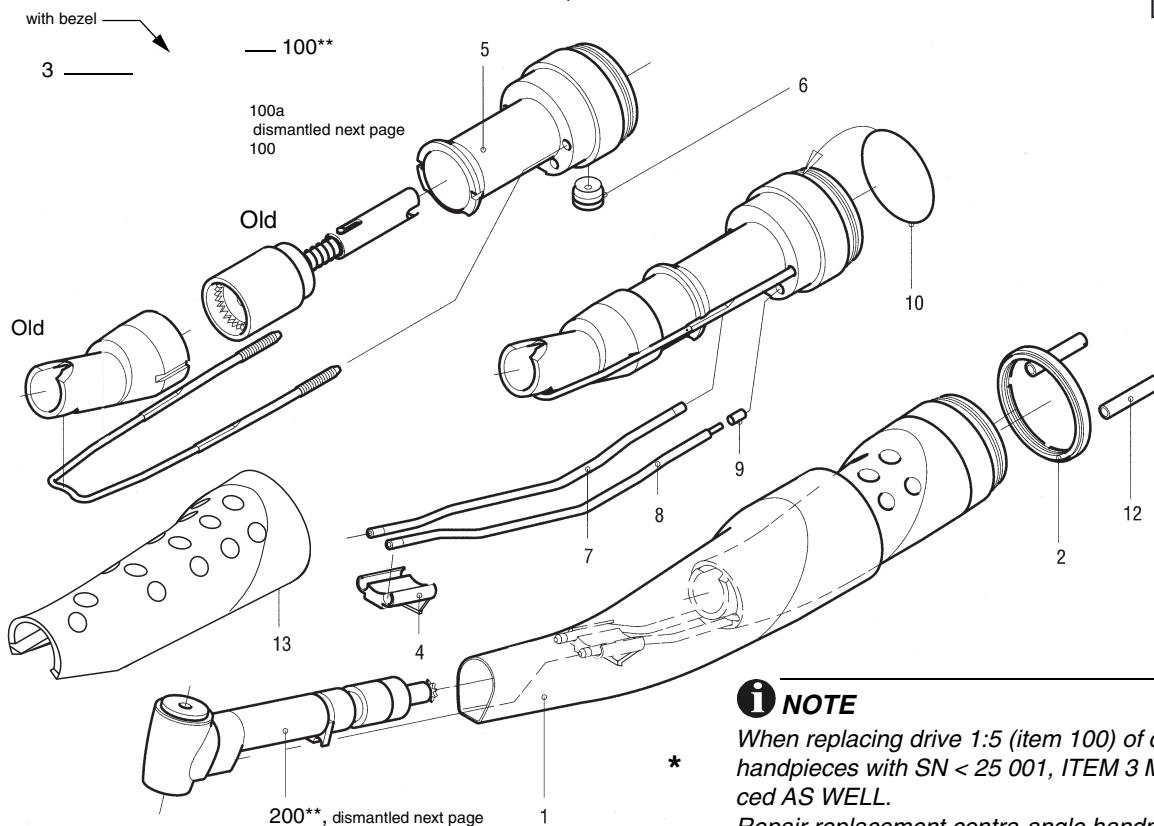
201	Head housing 1:5	58 61 666 D 3300
202	Screw ring	89 25 083 D 3300
203	Push cap FG	33 28 692 D 3300
204	Retaining ring WA	89 17 932 D 3300
205	Ball compression spring 2.5:1S	59 47 957 D 3300
206	Spring washer (0.06)	89 16 751 D 3300
207	Stop	33 28 833 D 3300
210	Spray ring 1 D, red	41 74 095 D 3300
211	Spray ring 2 D, red	33 28 627 D 3300
212	Spray ring 3 D, red	33 28 585 D 3300
215	Loctite No.. 932	52 65 541 SRN
216	Spray ring 1 D, from SN. 15 000	58 66 699 D 3300
217	Spray ring 2 D, from SN. 15 000	58 66 707 D 3300
218	Spray ring 3 D, from SN. 15 000	58 66 715 D 3300
220	Head drive 1:5	33 29 039 D 3300
230	Neck drive 1:5	33 27 918 D 3300
236	O-ring, 5.7x0.6; DIN 3771.VMQ	70 43 946
237	Screw	
238	O-ring	

Drive 1:5

101	Bearing flange 1:5	33 28 064 D 3300
102	Drive shaft Z 30	33 28 148 D 3300
103	Compression spring	33 28 155 D 3300
104	Driver	33 28 072 D 3300
105	Center-grooved dowel pin	89 26 834 D 3262
106	Ball bearing 3 x 8 x 3	41 81 132 F 0502
110	Adhesive, Araldite AV 119	34 40 062

New from SN: 25 001

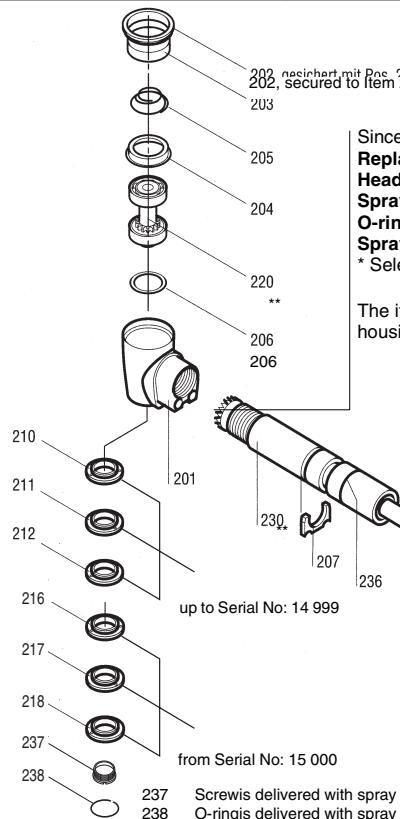
** = When converting C160 to C200, the parts marked with ** must be replaced.


i NOTE

When replacing drive 1:5 (item 100) of contra-angle handpieces with SN < 25 001, ITEM 3 MUST be replaced AS WELL.

Repair replacement contra-angle handpieces are already retrofitted at the factory.

Contra-angle handpiece, compl.			
1 Rep. outer sleeve C 200	41 77 460 D 3300	100** Drive 1:5	33 28 395 D 3300
2 Nut without light (red)	41 77 163 D 3300	100a Drive 1:5 (New)	58 99 104 D 3401
3 Bend	33 28 635 D 3300	200** Head 1:5	33 28 486 D 3300
4 Clip	33 29 302 D 3300		
5 Coupling bush, compl. without light	33 27 007 D 3300		
6 Valve.	33 28 015 D 3300		
7 Spray tube, right	33 28 874 D 3300		
8 Spray tube, left	33 28 882 D 3300		
9 Hose piece	33 28 163 D 3300		
10 O-ring 16.8x1mm DIN 3771	18 79 308		
11 Wire clip	33 28 841 D 3300		
12 Nut	33 28 460 D 3300		
13 Damping part	33 29 369 D 3300		



** = When converting C160 to C200, the parts marked with ** must be replaced.

Since April 1, 2000 the head housing 33 28 536 D 3300 is no longer available.

Replacement:

Head housing 58 61 666

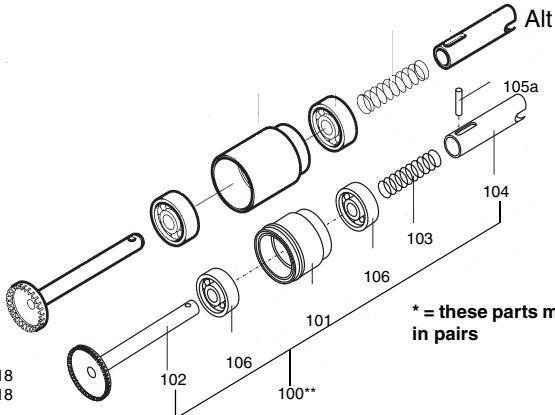
Spray ring*

O-ring

Spray screw

* Select spray ring; 1-, 2-, 3-nozzle spray (Item 216 / 217 / 218)

The items 210/211/212 are still available for the head housing 33 28 536 (up to Serial No. 14 999)

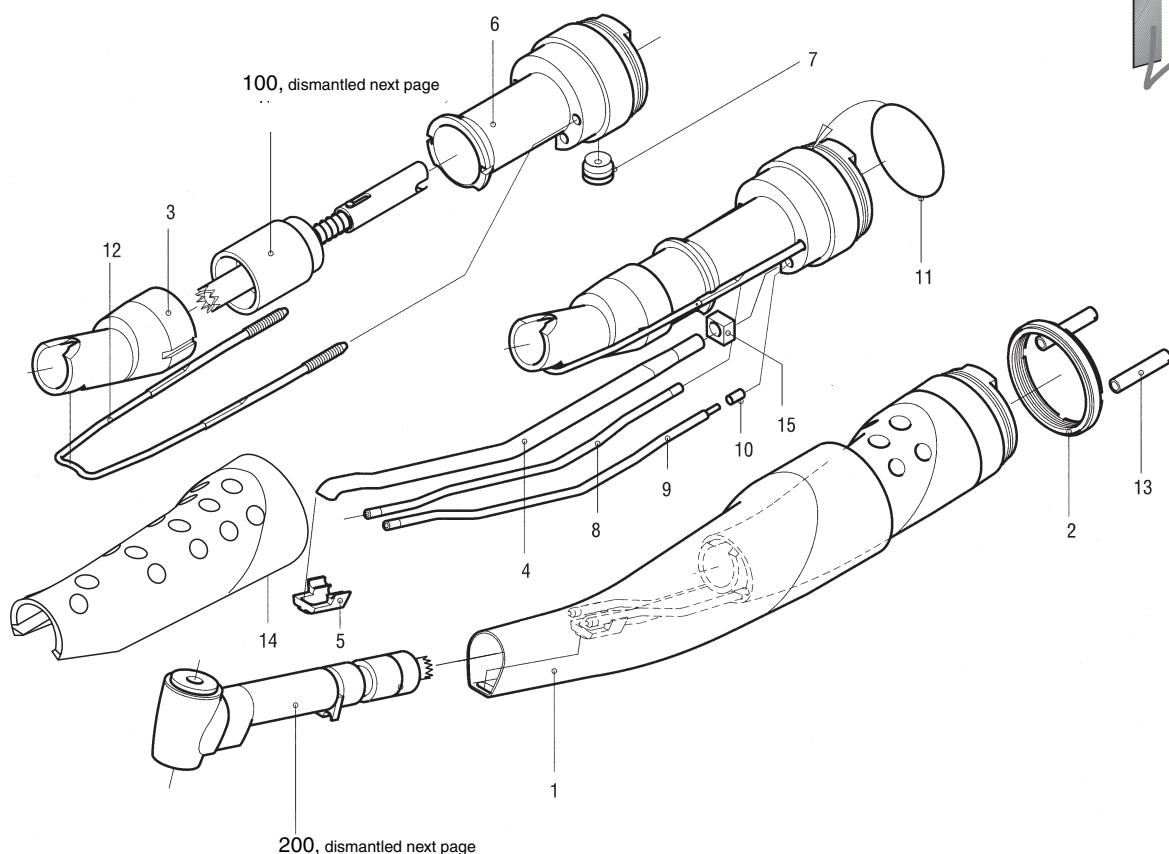


Head 1:5

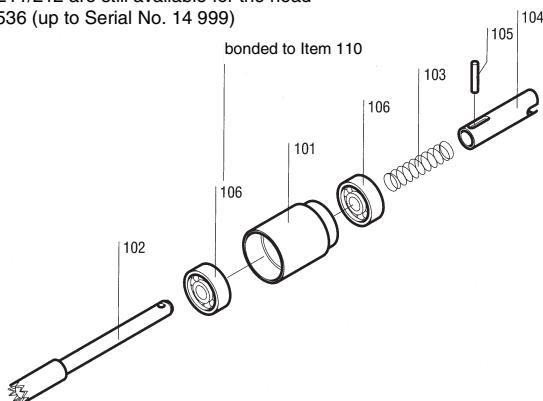
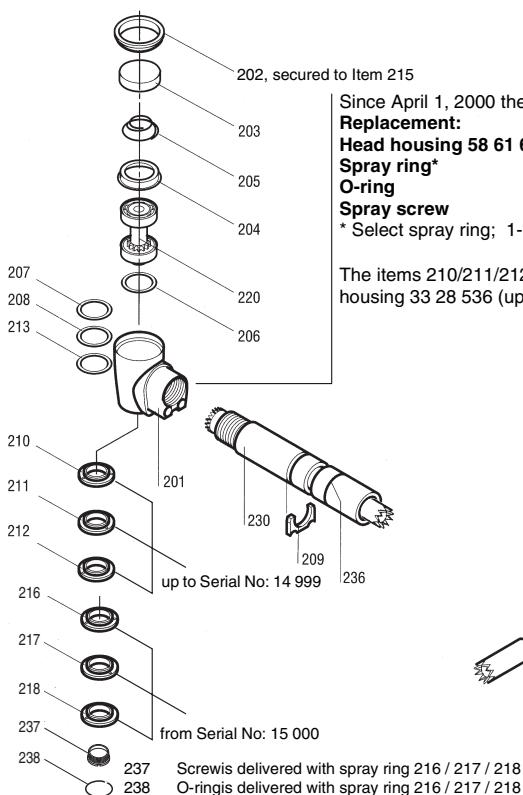
201	Head housing 1:4 / 1:5	58 61 666 D 3300
202	Screw ring	89 25 083 D 3300
203	Push cap FG	33 28 692 D 3300
204	Retaining ring	89 17 932 D 3300
205	Ball compression spring 2.5:1S	59 47 957 D 3300
206	Spring washer (0.06)	89 16 751 D 3300
207	Stop	33 28 833 D 3300
210	Spray ring 1 D, red	41 74 095 D 3300
211	Spray ring 1 D, red	33 28 627 D 3300
212	Spray ring 1 D, red	33 28 585 D 3300
215	Loctite No.. 932	52 65 541 SRN
216	Spray ring 1 D, from SN. 15 000	58 66 699 D 3300
217	Spray ring 2 D, from SN. 15 000	58 66 707 D 3300
218	Spray ring 3 D, from SN. 15 000	58 66 715 D 3300
220**	Head drive 1:5	33 29 039 D 3300
230**	Neck drive 1:5	33 27 918 D 3300
236	O-ring, 5.7x0.6; DIN 3771.VMQ	70 43 946
237	Screw	
238	O-ring	

Drive 1:5

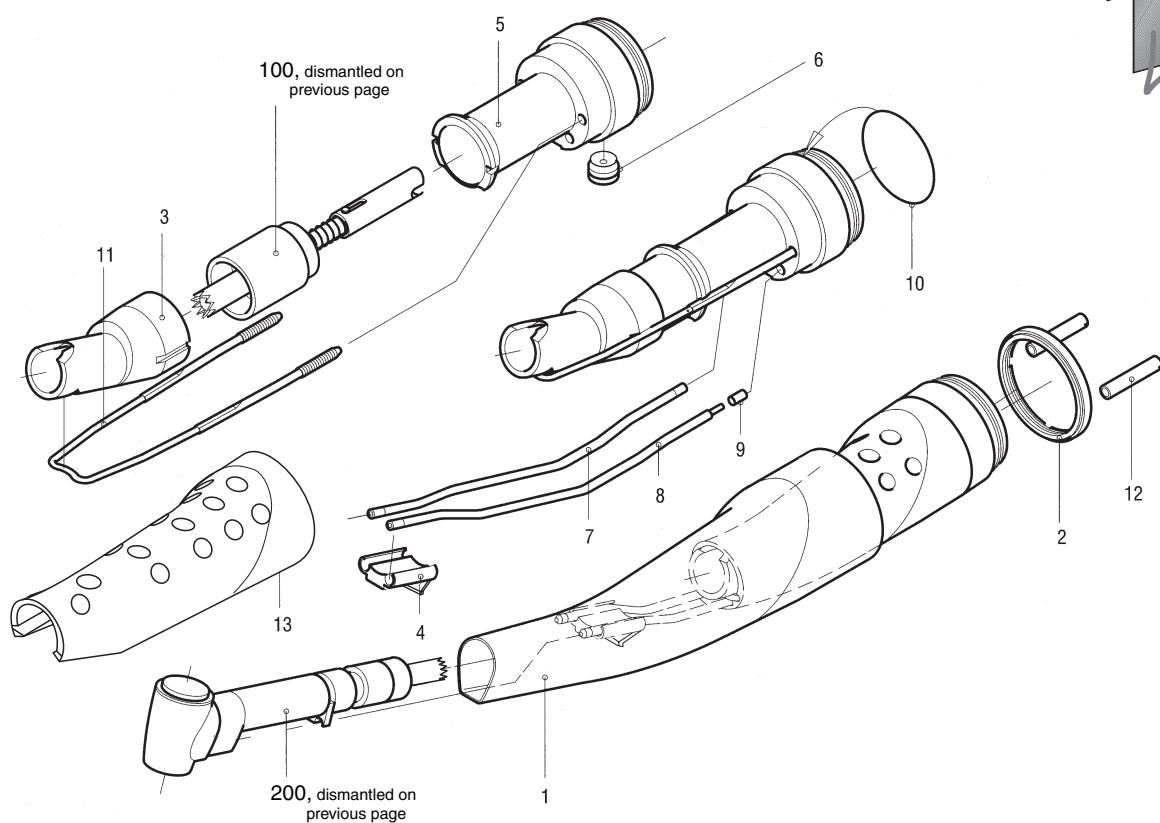
100**	Drive 1.5	33 28 395 D 3300
101	Bearing flange 1:5	33 28 064 D 3300
102	Drive shaft Z 30	33 28 148 D 3300
103	Compression spring	33 28 155 D 3300
104	Driver	33 28 072 D 3300
105	Center-grooved dowel pin	89 26 834 D 3262
106	Ball bearing 3 x 8 x 3	41 81 132 F 0502
110	Adhesive, Araldite AV 119	34 40 062

T1
LINE**Contra-angle handpiece, compl.**

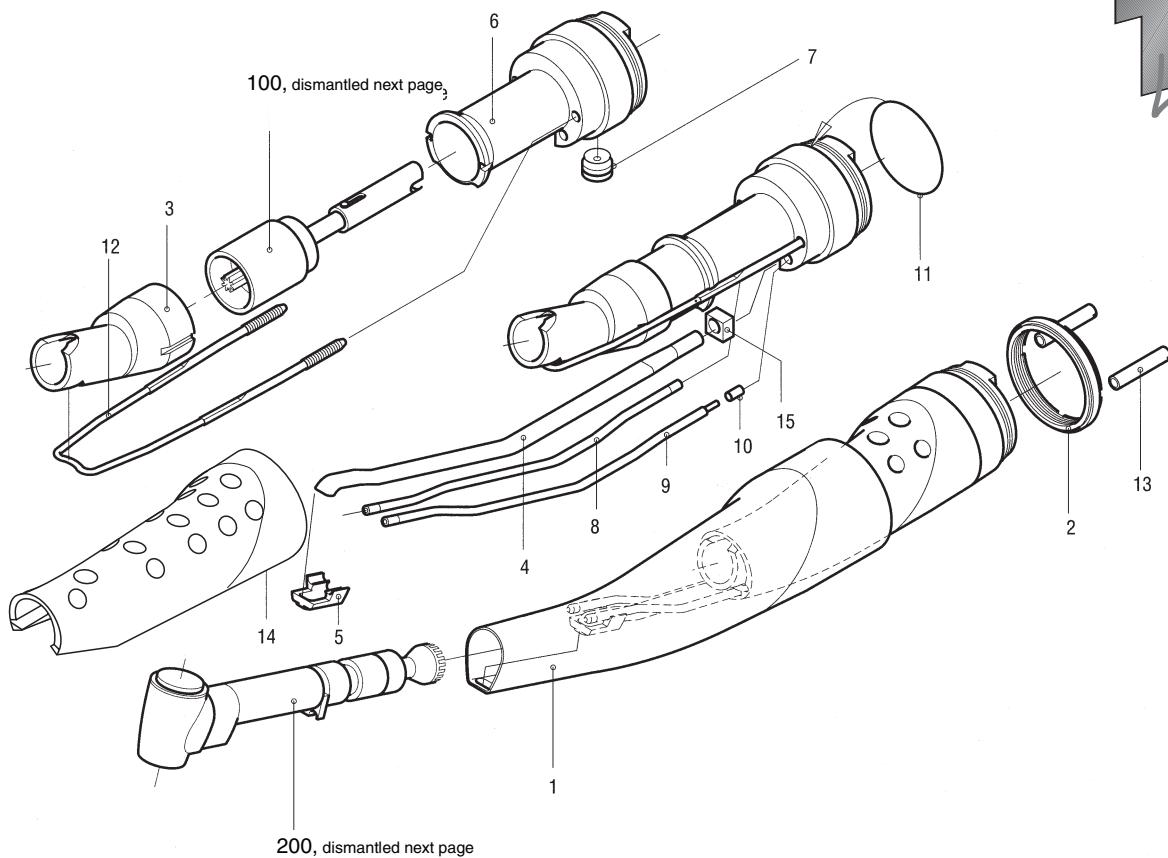
1	Rep. outer sleeve C 40 L	41 77 452 D 3300	100	Drive 1:1	33 28 387 D 3300
2	Nut (blue)	41 77 072 D 3300	200	Head 1:1	33 28 718 D 3300
3	Bend	33 28 635 D 3300			
4	Fiber rod	33 28 890 D 3300			
5	Fiber rod guard	33 27 868 D 3300			
6	Coupling bush, compl.	33 28 478 D 3300			
7	Valve	33 28 015 D 3300			
8	Spray tube, right	33 28 874 D 3300			
9	Spray tube, left	33 28 882 D 3300			
10	Hose piece	33 28 163 D 3300			
11	O-ring 16.8x1mm DIN 3771	18 79 308			
12	Wire clip	33 28 841 D 3300			
13	Nut	33 28 460 D 3300			
14	Damping part	33 29 369 D 3300			
15	Fiber rod guard	41 77 262 D 3300			



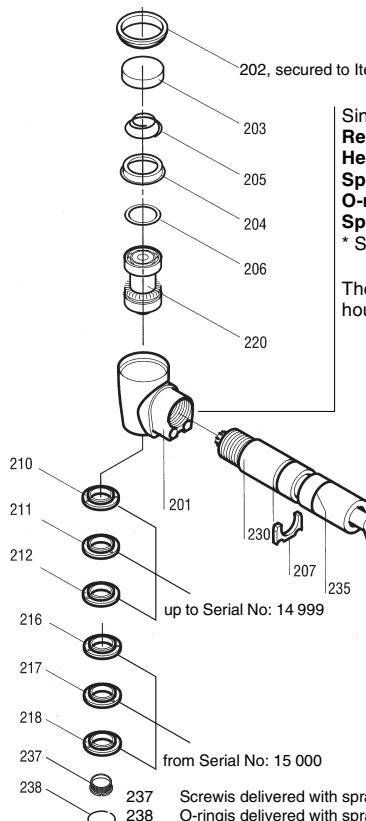
Head 1:1		Drive 1:1	
201	Head housing 6:1 / 1:1	58 61 658	D 3300
202	Screw ring	89 25 083	D 3300
203	Push cap FG	33 17 924	D 3300
204	Retaining ring	89 17 932	D 3300
205	Ball compression spring	59 47 957	D 3300
206	Adjusting washer (0.08mm)	70 50 024	F 1503
207	Adjusting washer (0.12mm)	70 50 032	F 1503
208	Adjusting washer (0.15mm)	70 50 040	F 1503
209	Stop	33 28 833	D 3300
210	Spray ring 1 D, red	33 28 908	D 3300
211	Spray ring 2 D, red	33 28 577	D 3300
212	Spray ring 3 D, red	33 28 924	D 3300
213	Adjusting washer (0.10mm)	18 91 774	F 1503
215	Loctite No.. 932	52 65 541	SRN
216	Spray ring 1 D, from SN. 15 000	58 66 699	D 3300
217	Spray ring 2 D, from SN. 15 000	58 66 707	D 3300
218	Spray ring 3 D, from SN. 15 000	58 66 715	D 3300
220	Head drive 1:1	33 29 021	D 3300
230	Neck drive 1:1	33 27 892	D 3300
236	O-ring, 5.7x0.6; DIN 3771-VMQ	70 43 946	
		237	Screw
		238	O-ring

T1
LINE**Contra-angle handpiece, compl.**

1	Rep. outer sleeve C 40	41 77 478 D 3300	100	Drive 1:1	33 28 387 D 3300
2	Nut without light (blue)	41 77 155 D 3300	200	Head 1:1	33 28 718 D 3300
3	Bend	33 28 635 D 3300			
4	Clip	33 29 302 D 3300			
5	Coupling bush, compl.	33 27 007 D 3300			
6	Valve.	33 28 015 D 3300			
7	Spray tube, right	33 28 874 D 3300			
8	Spray tube, left	33 28 882 D 3300			
9	Hose piece	33 28 163 D 3300			
10	O-ring 16.8x1mm DIN 3771	18 79 308			
11	Wire clip	33 28 841 D 3300			
12	Nut	33 28 460 D 3300			
13	Damping part	33 29 369 D 3300			

T1
LINE**Contra-angle handpiece, compl.**

1	Rep. outer sleeve C 6 L	41 77 437 D 3300	100	Drive 6:1	33 28 379 D 3300
2	Nut (green)	41 77 064 D 3300	200	Head 6:1	33 28 700 D 3300
3	Bend	33 28 635 D 3300			
4	Fiber rod	33 28 890 D 3300			
5	Fiber rod guard	33 27 868 D 3300			
6	Coupling bush, compl.	33 28 478 D 3300			
7	Valve.	33 28 015 D 3300			
8	Spray tube, right	33 28 874 D 3300			
9	Spray tube, left	33 28 882 D 3300			
10	Hose piece	33 28 163 D 3300			
11	O-ring 16.8x1mm DIN 3771-VMQ	18 79 308			
12	Wire clip	33 28 841 D 3300			
13	Nut	33 28 460 D 3300			
14	Damping part	33 29 369 D 3300			
15	Fiber rod guard	41 77 262 D 3300			



Since April 1, 2000 the head housing 33 28 536 D 3300 is no longer available.

Replacement:

Head housing 58 61 658

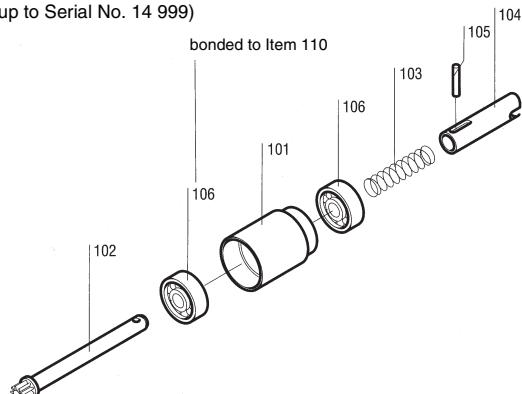
Spray ring*

O-ring

Spray screw

* Select spray ring; 1-, 2-, 3-nozzle spray (Item 216 / 217 / 218)

The items 210/211/212 are still available for the head housing 33 28 536 (up to Serial No. 14 999)



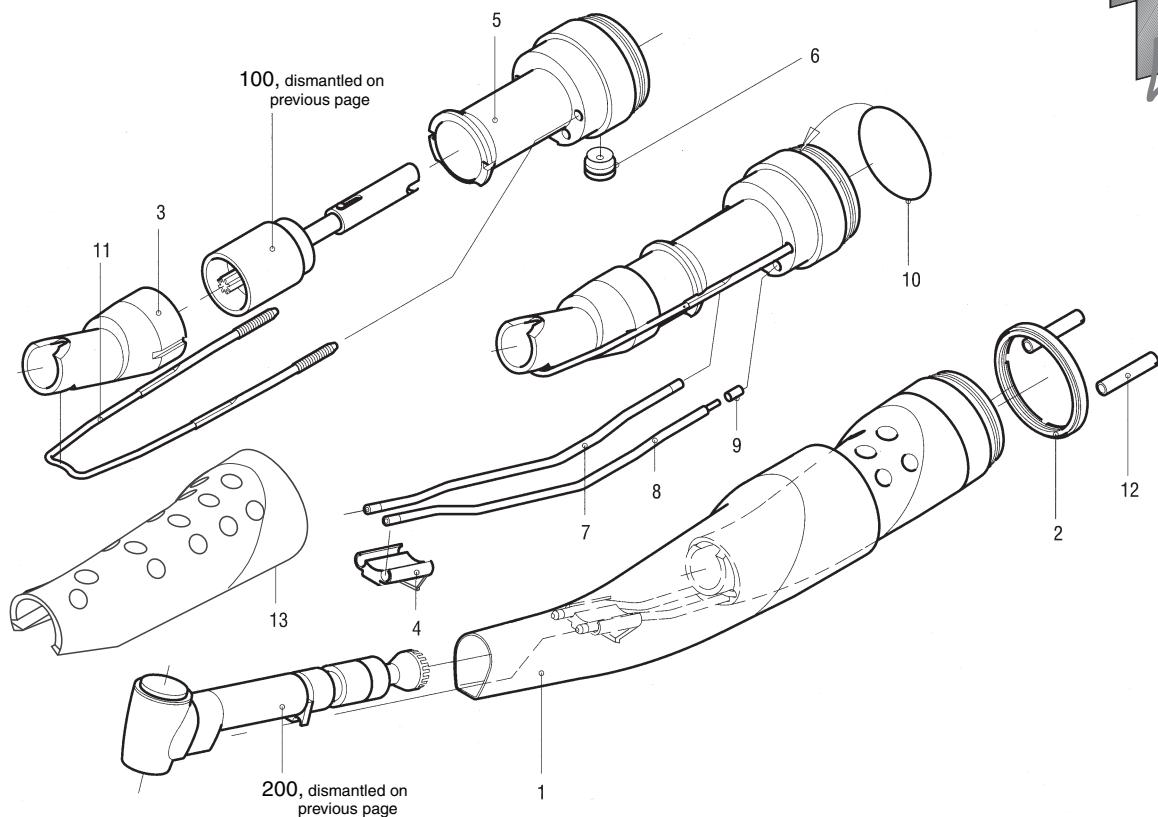
Screws delivered with spray ring 216 / 217 / 218
O-rings delivered with spray ring 216 / 217 / 218

Head 6:1

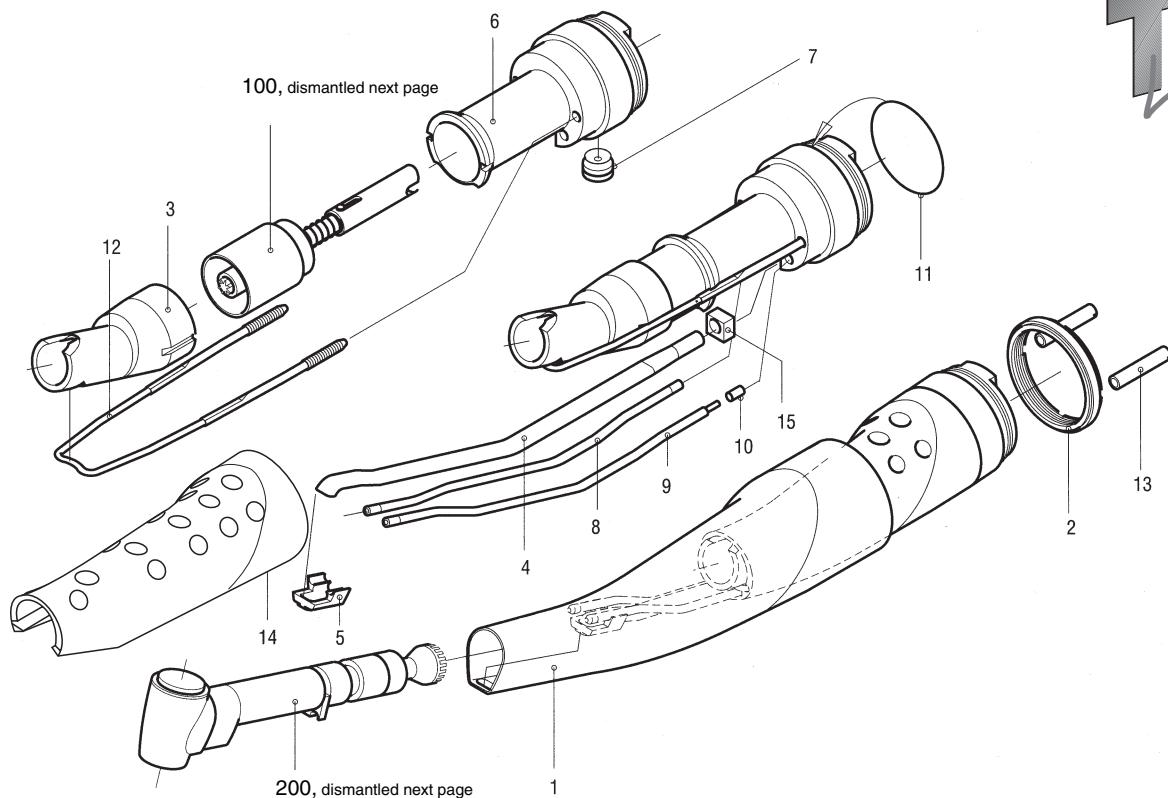
201	Head housing 6:1	58 61 658 D 3300
202	Screw ring	89 25 083 D 3300
203	Push cap	89 17 924 D 3300
204	Retaining ring	89 17 932 D 3300
205	Ball compression spring	59 47 957 D 3300
206	Spring washer (0.06)	89 16 751 D 3300
207	Stop	33 28 833 D 3300
210	Spray ring 1 D, green	33 28 569 D 3300
211	Spray ring 1 D, green	33 28 916 D 3300
212	Spray ring 1 D, green	33 28 056 D 3300
215	Loctite No.. 932	52 65 541 SRN
216	Spray ring 1 D, from SN. 15 000	58 66 699 D 3300
217	Spray ring 2 D, from SN. 15 000	58 66 707 D 3300
218	Spray ring 3 D, from SN. 15 000	58 66 715 D 3300
220	Head drive 6:1	33 29 013 D 3300
230	Neck drive 6:1	33 27 884 D 3300
235	O-ring, 5.7x0.6; DIN 3771-VMQ	70 43 946
237	Screw	
238	O-ring	

Drive 6:1

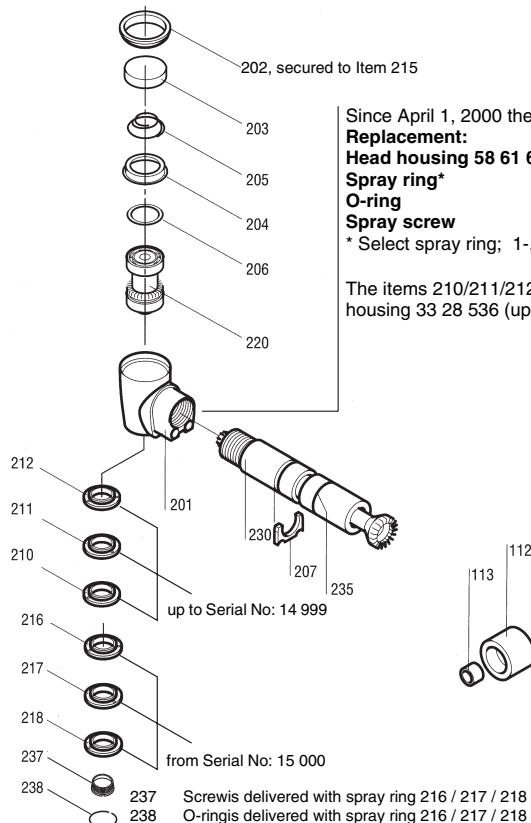
101	Bearing flange 6:1 / 1:1 / 1:4	33 28 049 D 3300
102	Drive shaft Z 8	33 28 106 D 3300
103	Compression spring	33 28 155 D 3300
104	Driver	33 28 072 D 3300
105	Center-grooved dowel pin	89 26 834 D 3262
106	Ball bearing 3 x 8 x 3	41 81 132 F 0502
110	Adhesive, Araldite AV 119	34 40 062


Contra-angle handpiece, compl.

1	Rep. outer sleeve C 6	41 77 429 D 3300	100	Drive 6:1	33 28 379 D 3300
2	Nut without light (green)	41 77 148 D 3300	200	Head 6:1	33 28 700 D 3300
3	Bend	33 28 635 D 3300			
4	Clip	33 29 302 D 3300			
5	Coupling bush, compl.	33 27 007 D 3300			
6	Valve.	33 28 015 D 3300			
7	Spray tube, right	33 28 874 D 3300			
8	Spray tube, left	33 28 882 D 3300			
9	Hose piece	33 28 163 D 3300			
10	O-ring 16.8x1mm DIN 3771	18 79 308			
11	Wire clip	33 28 841 D 3300			
12	Nut	33 28 460 D 3300			
13	Damping part	33 29 369 D 3300			

T1
LINE**Contra-angle handpiece, compl.**

1	Rep. outer sleeve C 1.6 L	41 77 411 D 3300	100	Drive 24:1	33 29 047 D 3300
2	Nut (green)	41 77 064 D 3300	200	Head 6:1	33 28 700 D 3300
3	Bend	33 28 635 D 3300			
4	Fiber rod	33 28 890 D 3300			
5	Fiber rod guard	33 27 868 D 3300			
6	Coupling bush, compl.	33 28 478 D 3300			
7	Valve.	33 28 015 D 3300			
8	Spray tube, right	33 28 874 D 3300			
9	Spray tube, left	33 28 882 D 3300			
10	Hose piece	33 28 163 D 3300			
11	O-ring 16.8x1mm DIN 3771-VMQ	18 79 308			
12	Wire clip	33 28 841 D 3300			
13	Nut	33 28 460 D 3300			
14	Damping part	33 29 369 D 3300			
15	Fiber rod guard	41 77 262 D 3300			



| Since April 1, 2000 the head housing 33 28 536 D 3300 is no longer available.

Replacement:

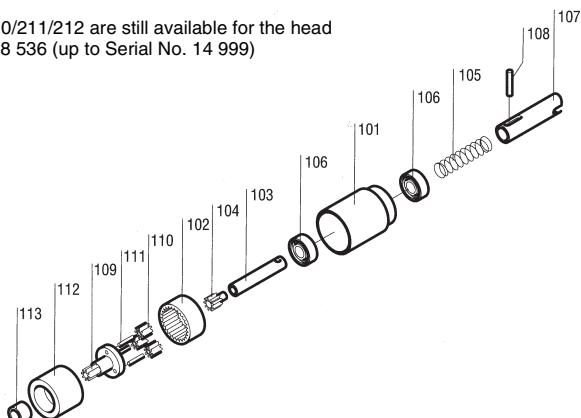
Head housing 58 61 658

Spray ring*

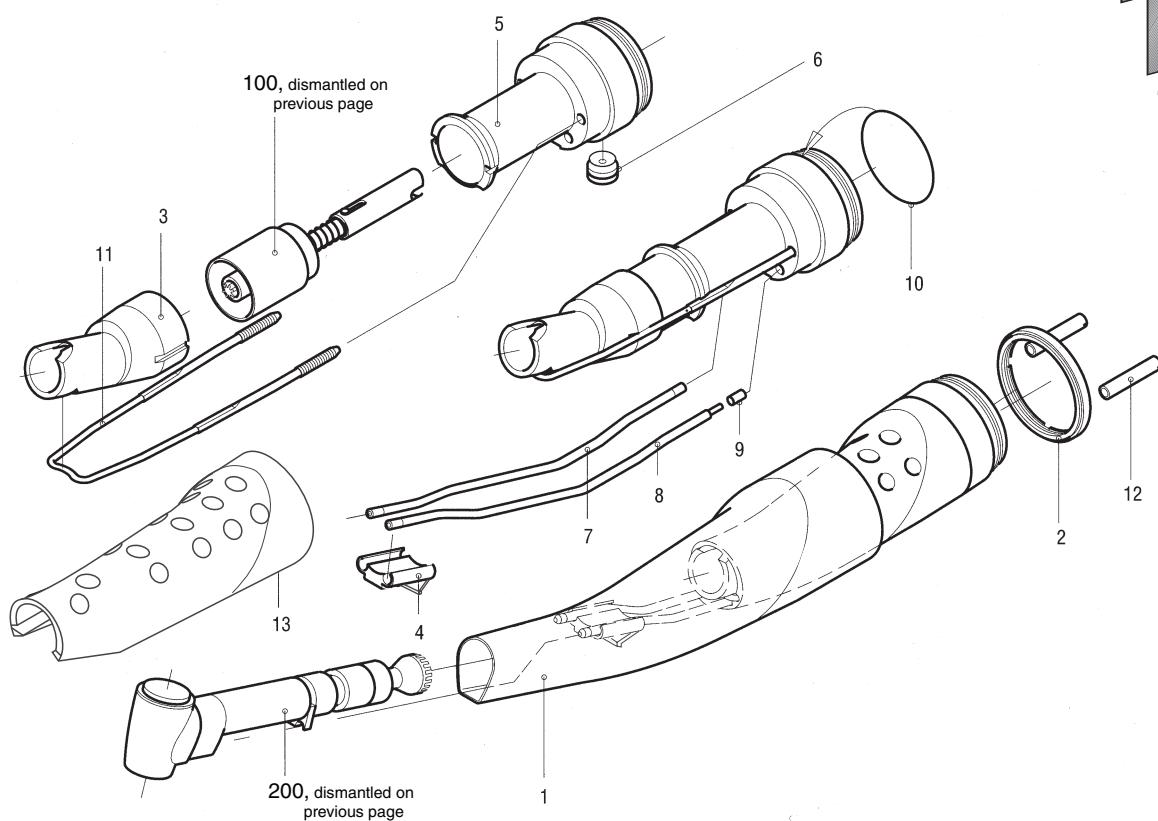
O-ring

Spray screw (Item 346 / 347 / 348)

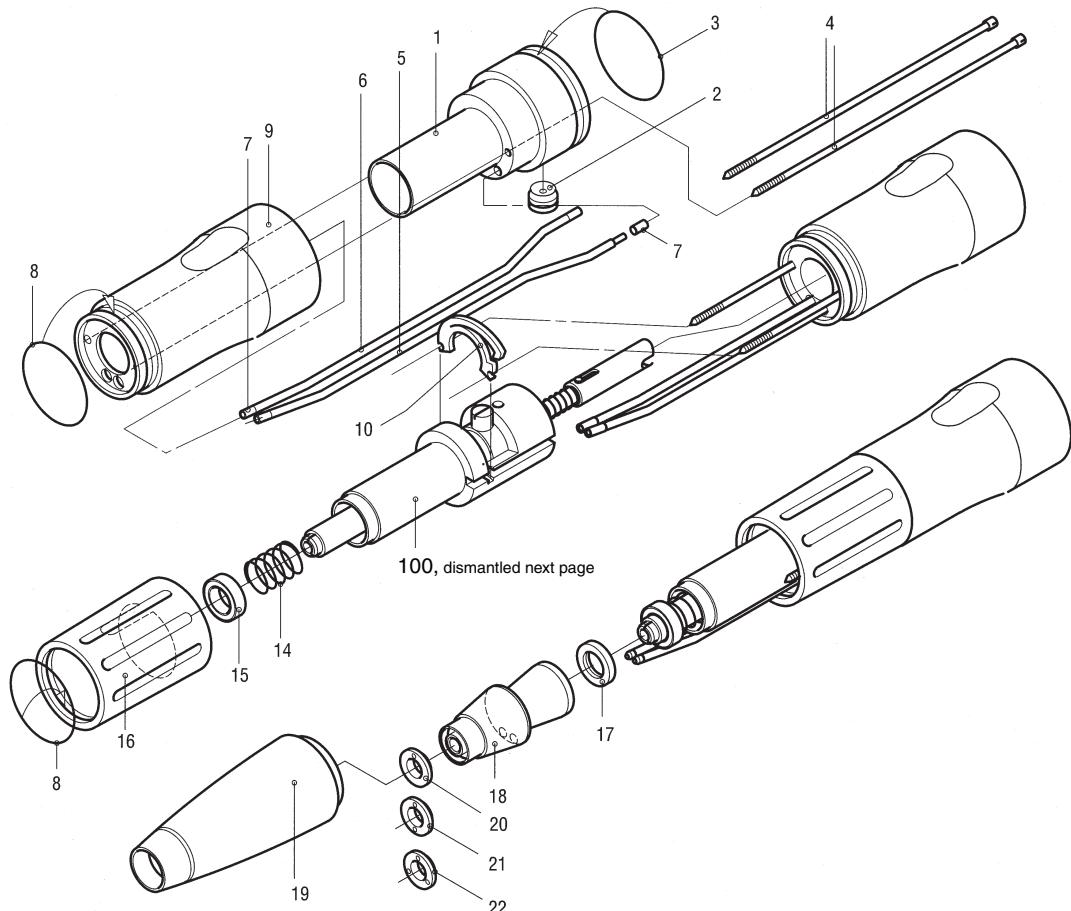
The items 210/211/212 are still available for the head housing 33.28.536 (up to Serial No. 14.999).



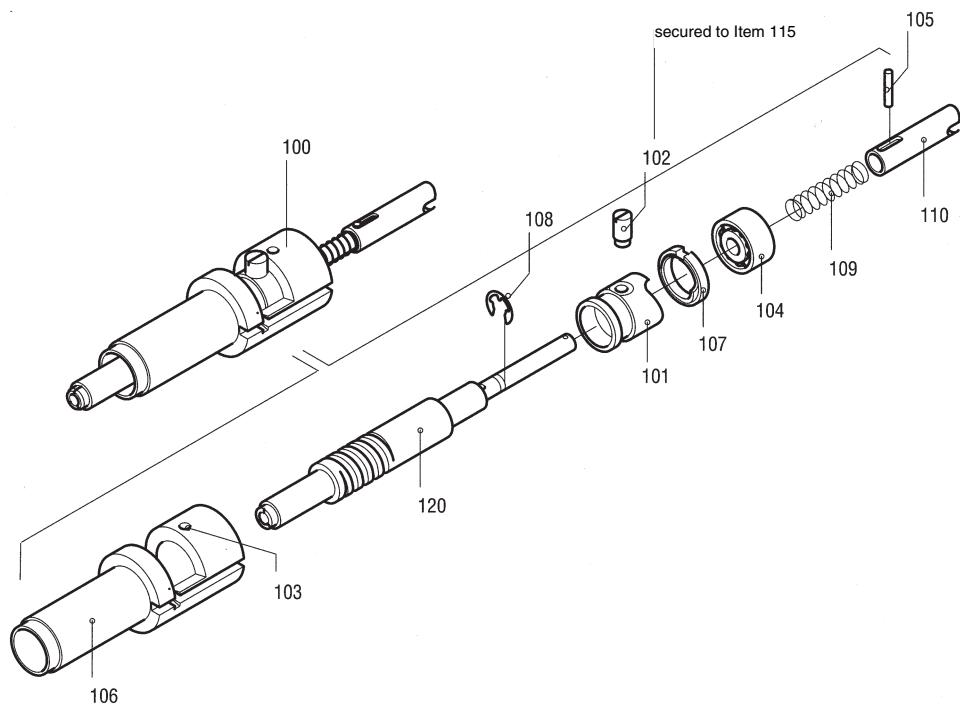
Head 6:1				Drive 24:1			
201	Head housing 6:1 /1:1	58 61 658	D 3300	101	Bearing flange 24:1	33 28 031	D 3300
202	Screw ring	89 25 083	D 3300	102	Internal gear wheel 4:1	59 46 413	D 3238
203	Push cap	89 17 924	D 3300	103	Drive shaft 24:1	33 28 098	D 3300
204	Retaining ring	89 17 932	D 3300	104	Sun wheel	59 53 005	D 3238
205	Ball compression spring	59 47 957	D 3300	105	Compression spring	33 28 155	D 3300
206	Spring washer (0.06)	89 16 751	D 3300	106	Ball bearing 3 x 7 x 2	41 81 157	F 0502
207	Stop	33 28 833	D 3300	107	Driver	33 28 072	D 3300
210	Spray ring 1 D, green	33 28 569	D 3300	108	Center-grooved dowel pin	89 26 834	D 3262
211	Spray ring 1 D, green	33 28 916	D 3300	109	Planetary carrier Z 8	33 28 353	D 3300
212	Spray ring 1 D, green	33 28 056	D 3300	110	Planet wheel	59 46 421	D 3238
215	Loctite No.. 932	52 65 541	SRN	111	Bearing bolt	33 28 130	D 3300
216	Spray ring 1 D, from SN. 15 000	58 66 699	D 3300	112	Plain bearing	33 28 338	D 3300
217	Spray ring 2 D, from SN. 15 000	58 66 707	D 3300	113	Bush	33 28 346	D 3300
218	Spray ring 3 D, from SN. 15 000	58 66 715	D 3300				
220	Head drive 6:1	33 29 013	D 3300				
230	Neck drive 6:1	33 27 884	D 3300	237	Screw		
235	O-ring, 5.7x0.6; DIN 3771-VMQ	70 43 946		238	O-ring		


Contra-angle handpiece, compl.

1	Rep. outer sleeve C 1.6	41 77 403 D 3300	100	Drive 24:1	33 29 047 D 3300
2	Nut without light (green)	41 77 148 D 3300	200	Head 6:1	33 28 700 D 3300
3	Bend	33 28 635 D 3300			
4	Clip	33 29 302 D 3300			
5	Coupling bush, compl.	33 27 007 D 3300			
6	Valve.	33 28 015 D 3300			
7	Spray tube, right	33 28 874 D 3300			
8	Spray tube, left	33 28 882 D 3300			
9	Hose piece	33 28 163 D 3300			
10	O-ring 16.8x1mm DIN 3771	18 79 308			
11	Wire clip	33 28 841 D 3300			
12	Nut	33 28 460 D 3300			
13	Damping part	33 29 369 D 3300			

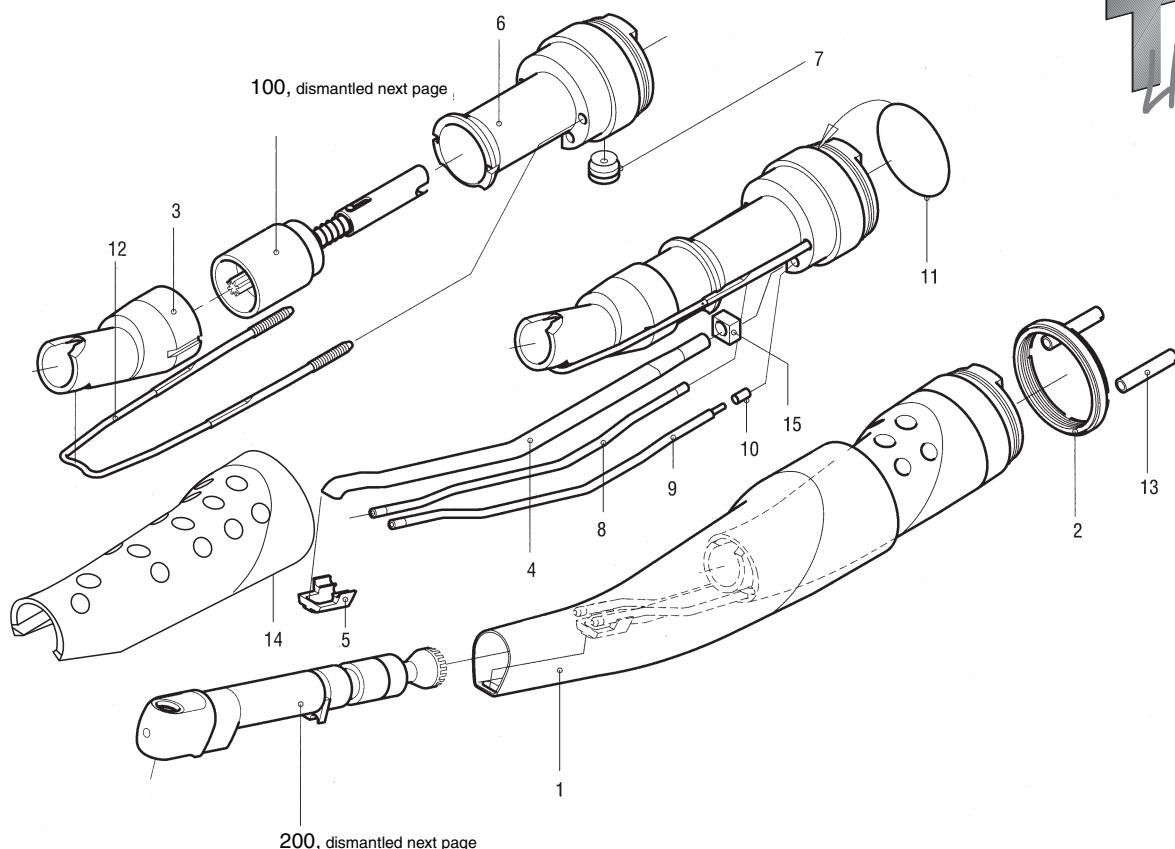


Handpiece, compl.					
1	Coupling bush, straight	33 29 211 D 3300	19	Repair cap	41 77 494 D 3300
2	Valve	33 28 015 D 3300	20	Spray ring 1 D, blue	33 28 908 D 3300
3	O-ring 16.8x1mm DIN 3771	18 79 308	21	Spray ring 2 D, blue	33 28 577 D 3300
4	Screw M1.2 x 54.5mm	33 29 096 D 3300	22	Spray ring 3 Dn, blue	33 28 924 D 3300
5	Spray tube, left, air	33 29 153 D 3300	100	Drive	33 29 088 D 3300
6	Spray tube, right, water	33 29 161 D 3300			
7	Hose piece	33 28 163 D 3300			
8	O-ring 14x1mm DIN 3771-VMQ	70 51 436			
9	Repair end sleeve	41 77 486 D 3300			
10	Stop element	33 29 146 D 3300			
14	Compression spring D 0.4	89 27 717 D 3300			
15	Ball bearing 5x8x2	41 81 108 F 0502			
16	Repair rotary sleeve	41 77 577 D 3300			
17	Sealing ring	89 27 642 D 3300			
18	Spray insert	33 29 062 D 3300			

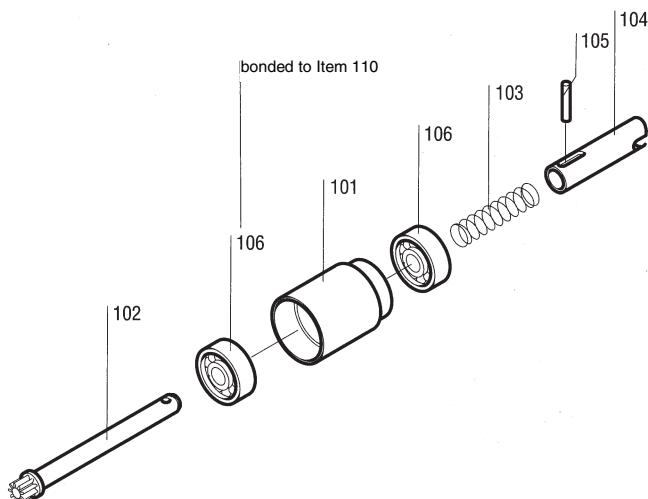
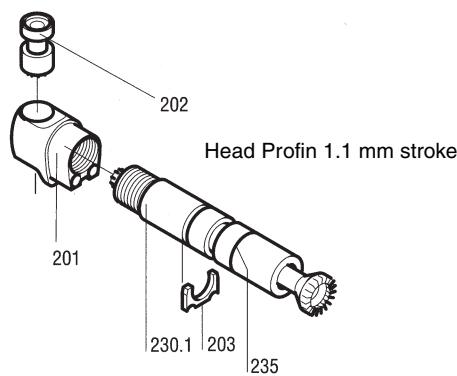
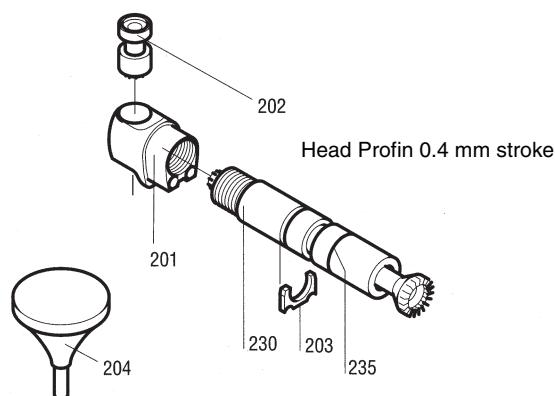


Handpiece, drive

101	Locking sleeve	89 27 048 D 3300
102	Screw chuck system	33 29 138 D 3300
103	Straight pin 1.5 H8x2	18 77 773
104	Ball bearing 3x10x4	41 81 199 F 0502
105	Center-grooved dowel pin	89 26 834 D 3262
106	Bearing sleeve	33 29 070 D 3300
107	Locking ring	89 27 063 D 3300
108	Lock washer	89 27 253 D 3300
109	Compression spring	33 28 155 D 3300
110	Driver	33 28 072 D 3300
115	Loctite No.. 932	52 65 541 SRN
120	Drive shaft	33 29 187 D 3300

T1
LINE

Contra-angle handpiece, compl.			
1 Rep. outer sleeve Profin L	41 77 510 D 3300	100 Drive 6:1	33 28 379 D 3300
2 Nut (yellow)	41 77 098 D 3300	200 Head Profin 0.4mm; with light	33 29 401 D 3300
3 Bend	33 28 635 D 3300	201 Head Profin 1.1mm; with light	41 77 023 D 3300
4 Fiber rod	33 28 890 D 3300		
5 Fiber rod guard	33 27 868 D 3300		
6 Coupling bush, compl.	33 28 478 D 3300		
7 Valve.	33 28 015 D 3300		
8 Spray tube, right	33 28 874 D 3300		
9 Spray tube, left	33 28 882 D 3300		
10 Hose piece	33 28 163 D 3300		
11 O-ring 16.8x1mm DIN 3771-VMQ	18 79 308		
12 Wire clip	33 28 841 D 3300		
13 Nut	33 28 460 D 3300		
14 Damping part	33 29 369 D 3300		
15 Fiber rod guard	41 77 262 D 3300		

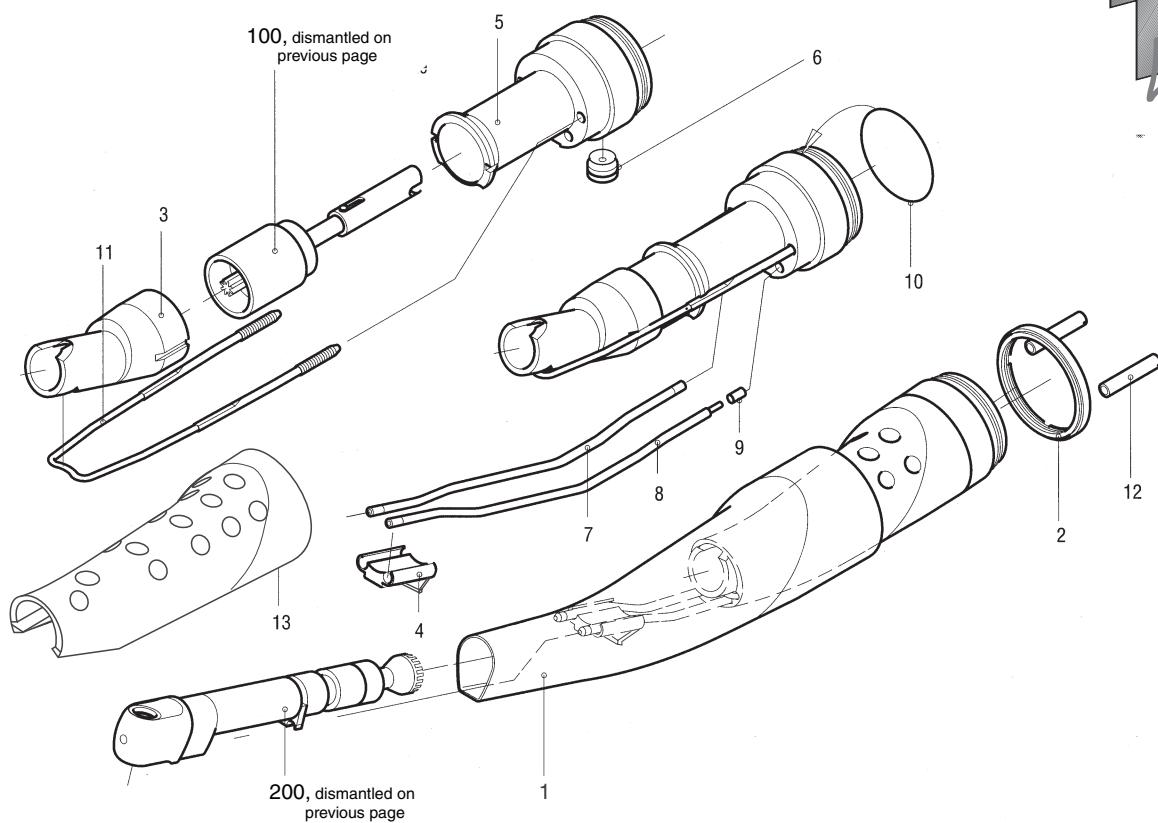


Head Profin 0,4mm / 1,1mm

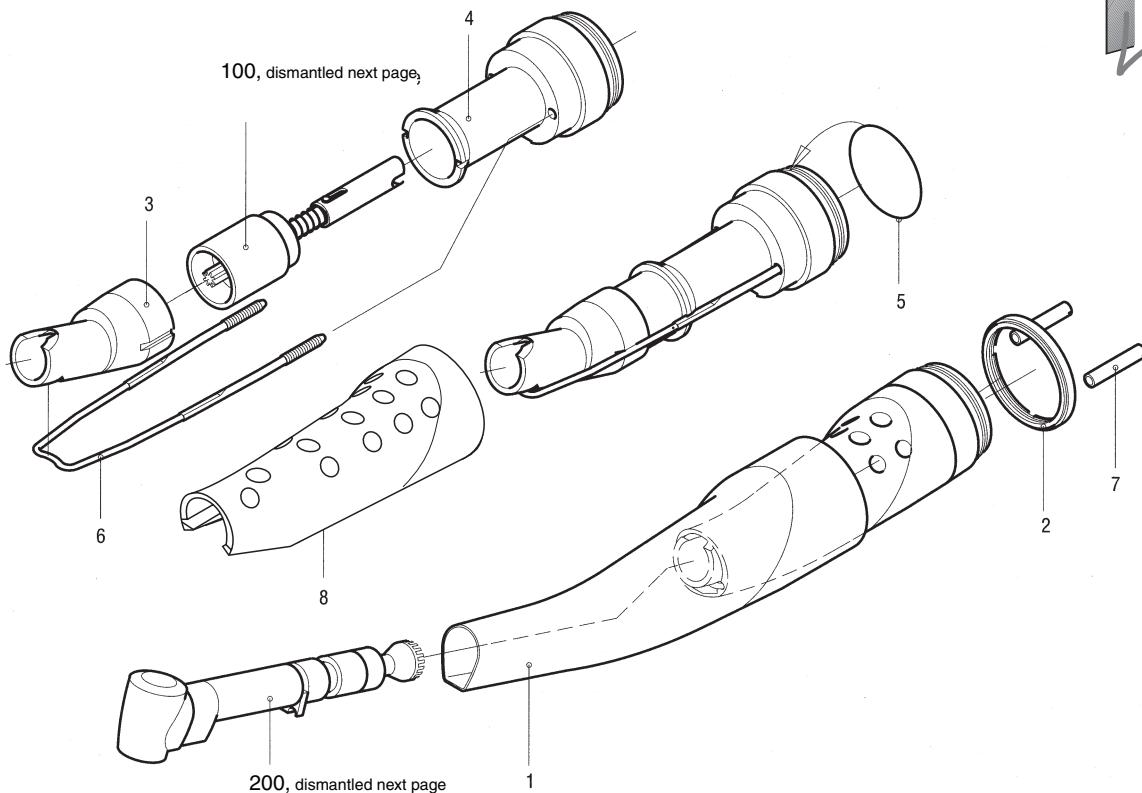
201	Head housing Profin	33 29 229 D 3300
202	Ram Profin	33 29 310 D 3300
203	Stop	33 28 833 D 3300
204	Ejector	41 77 056 D 3300
230	Neck drive, Profin 0..4mm	33 29 393 D 3300
230.1	Neck drive, Profin 1.1mm	41 77 031 D 3300
235	O-ring, 5.7x0.6; DIN 3771-VMQ	70 43 946

Drive 6:1

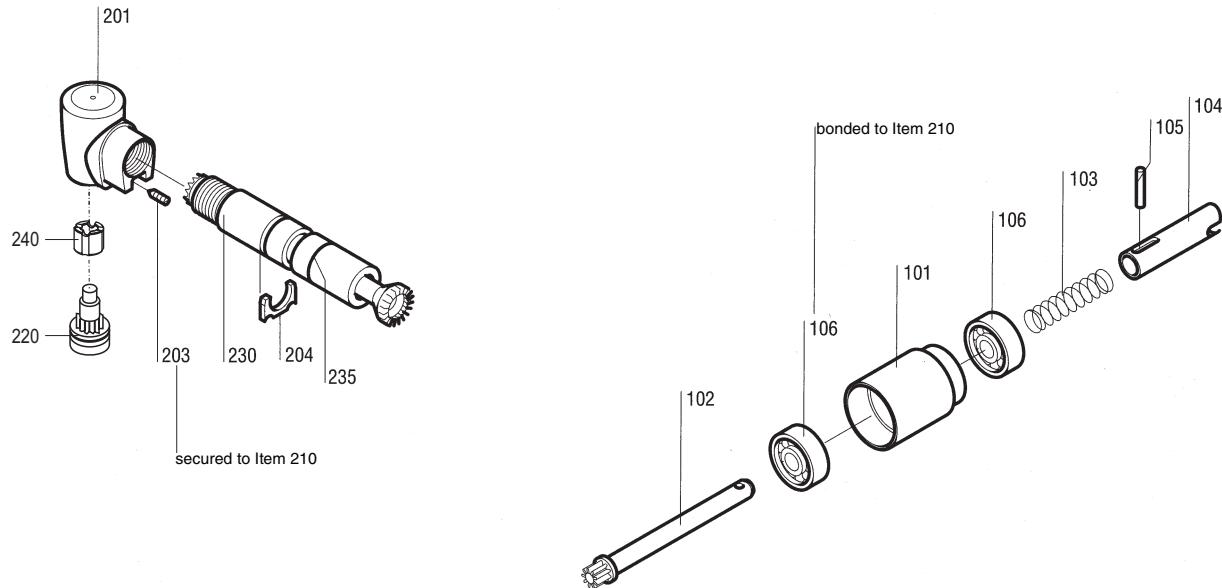
101	Bearing flange 6:1/1:1/1:4	33 28 049 D 3300
102	Drive shaft Z 8	33 28 106 D 3300
103	Compression spring	33 28 155 D 3300
104	Driver	33 28 072 D 3300
105	Center-grooved dowel pin	89 26 834 D 3262
106	Ball bearing, 3x8x3	41 81 132 F 0502
110	Adhesive, Araldite AV 119	34 40 062


Contra-angle handpiece, compl.

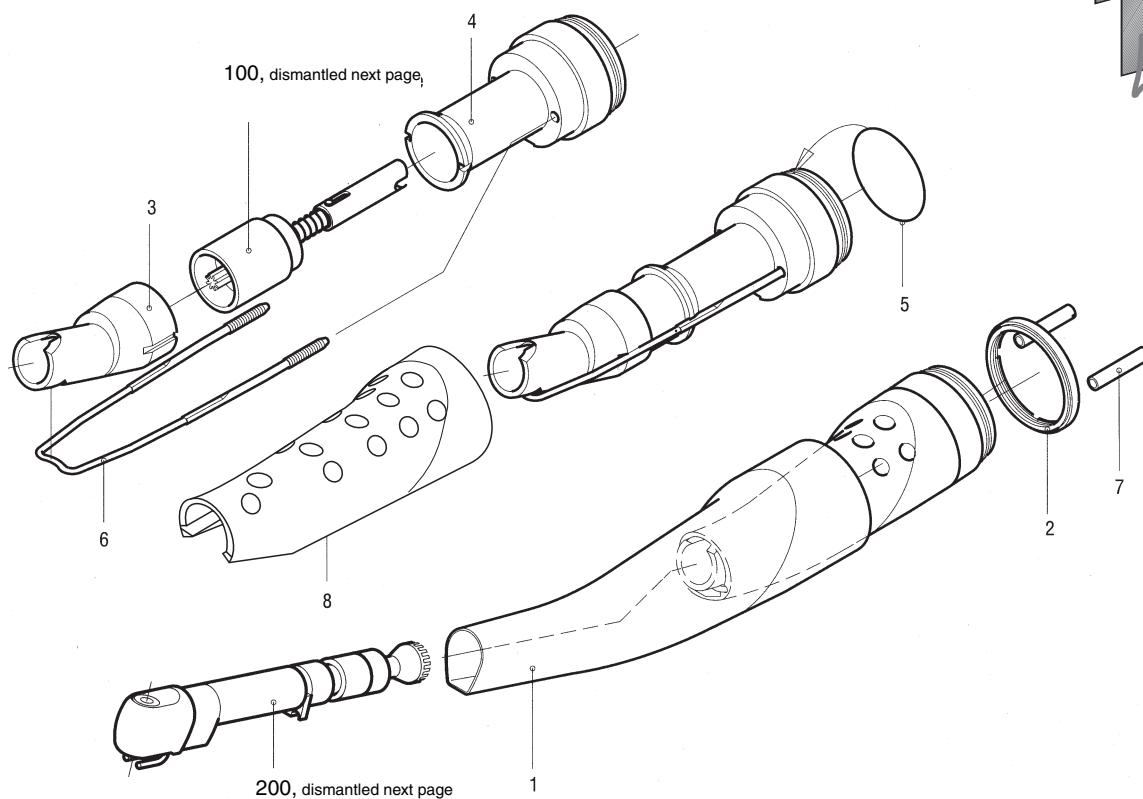
1	Rep. outer sleeve Profin	41 77 502 D 3300	100	Drive 6:1	33 28 379 D 3300
2	Nut without light (yellow)	41 77 171 D 3300	200	Head Profin 0.4mm; without light	33 29 401 D 3300
3	Bend	33 28 635 D 3300	201	Head Profin 1.1mm; without light	41 77 023 D 3300
4	Clip	33 29 302 D 3300			
5	Coupling bush, compl. without light	33 28 007 D 3300			
6	Valve.	33 28 015 D 3300			
7	Spray tube, right	33 28 874 D 3300			
8	Spray tube, left	33 28 882 D 3300			
9	Hose piece	33 28 163 D 3300			
10	O-ring 16.8x1mm DIN 3771-VMQ	18 79 308			
11	Wire clip	33 28 841 D 3300			
12	Nut	33 28 460 D 3300			
13	Damping part	33 29 369 D 3300			


Contra-angle handpiece Prophy

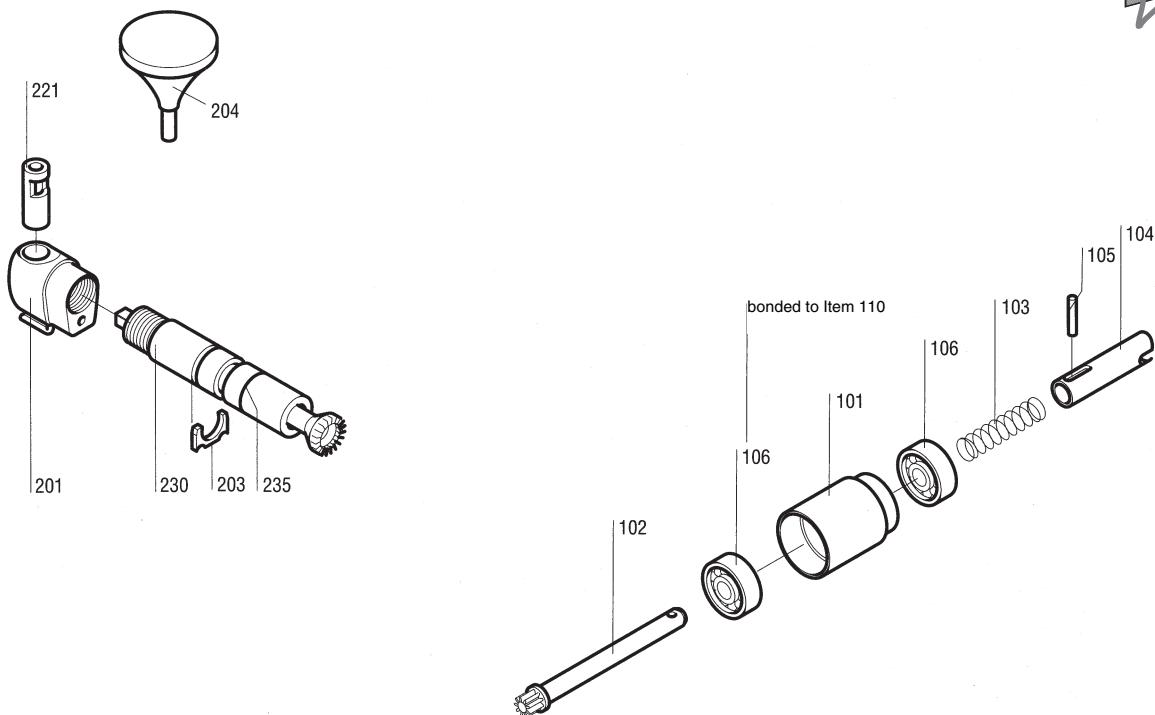
1	Rep. outer sleeve Prophy	41 77 536 D 3300	100	Drive 6:1	33 28 379 D 3300
2	Nut without light (violet)	41 77 197 D 3300	200	Head Prophy	33 29 427 D 3300
3	Bend	33 28 635 D 3300			
4	Coupling bush, o.S / o.L	33 29 351 D 3300			
5	O-ring 16.8x1mm DIN 3771-VMQ	18 79 308			
6	Wire clip	33 28 841 D 3300			
7	Nut	33 28 460 D 3300			
8	Damping part	33 29 369 D 3300			



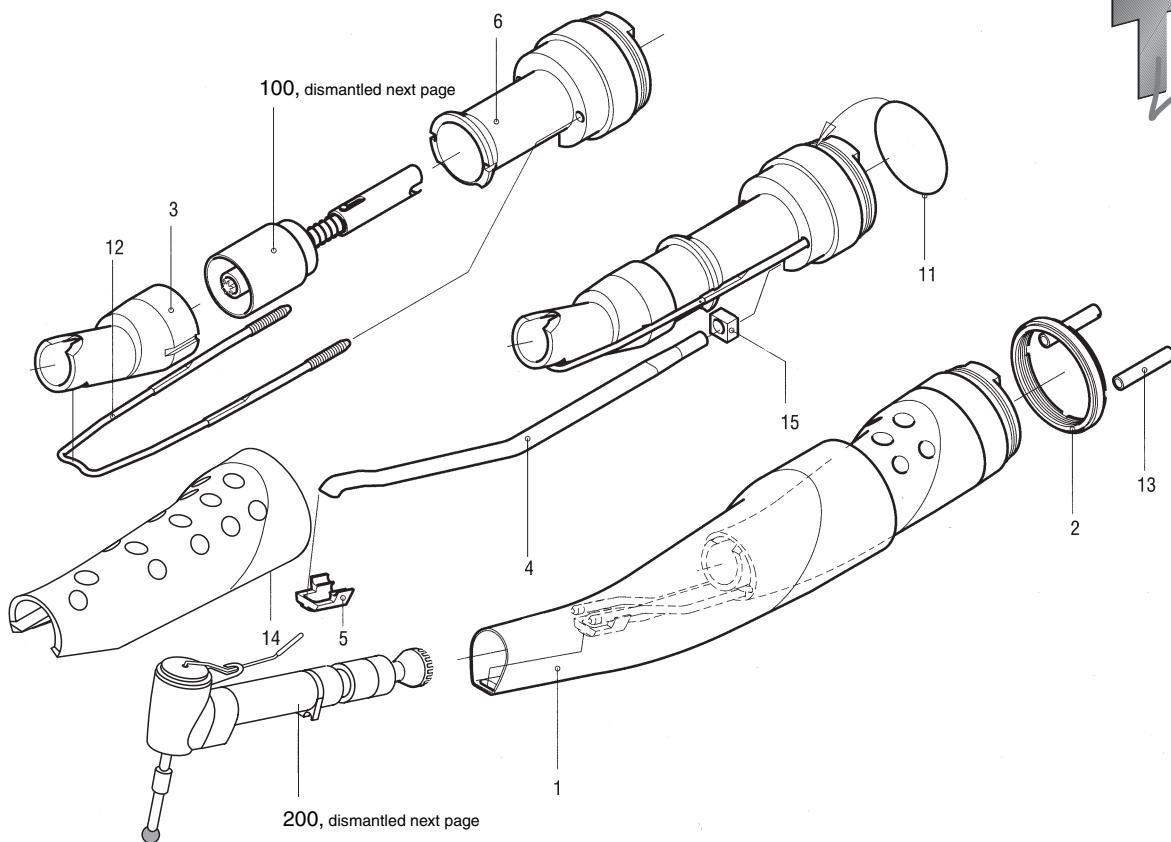
Head Prophy		Drive 6:1			
201	Head housing Prophy	33 29 435 D 3300	101	Bearing flange 6:1/1:1/1:4	33 28 049 D 3300
203	Stud, M 1.6x3	18 79 449	102	Drive shaft Z 8	33 28 106 D 3300
204	Stop	33 28 833 D 3300	103	Compression spring	33 28 155 D 3300
210	Loctite No.. 932	52 65 541 SRN	104	Driver	33 28 072 D 3300
220	Head drive, Prophy	33 29 443 D 3300	105	Center-grooved dowel pin	89 26 834 D 3262
230	Neck drive, Prophy	33 27 876 D 3300	106	Ball bearing, 3x8x3	41 81 132 F 0502
235	O-ring, 5.7x0.6; DIN 3771-VMQ	70 43 946	110	Adhesive, Araldite AV 119	34 40 062 SRN


Contra-angle handpiece Condens

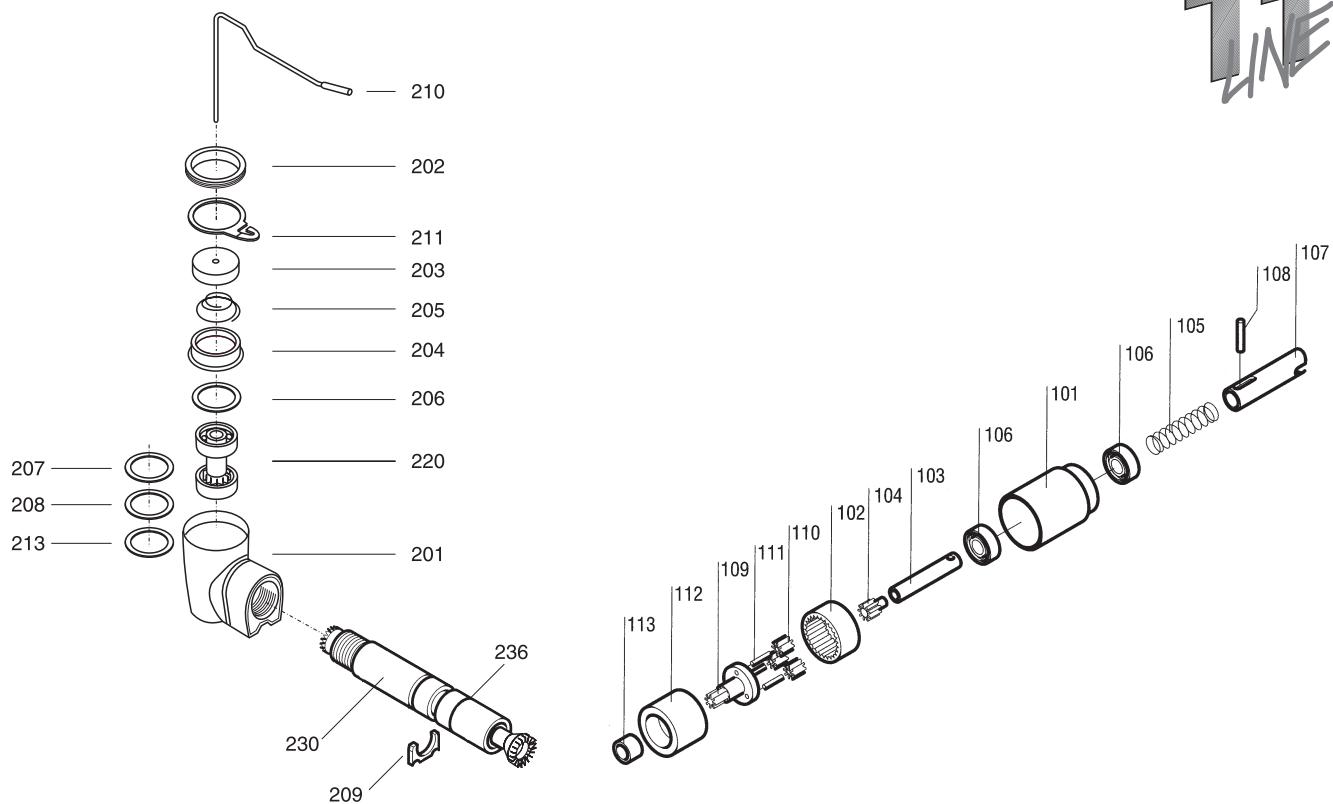
1	Rep. outer sleeve Condens	41 77 528 D 3300	100	Drive 6:1	33 28 379 D 3300
2	Nut without light (brown)	41 77 189 D 3300	200	Head Condens	33 29 419 D 3300
3	Bend	33 28 635 D 3300			
4	Coupling bush, o.S / o.L	33 29 351 D 3300			
5	O-ring 16.8x1mm DIN 3771-VMQ	18 79 308			
6	Wire clip	33 28 841 D 3300			
7	Nut	33 28 460 D 3300			
8	Damping part	33 29 369 D 3300			



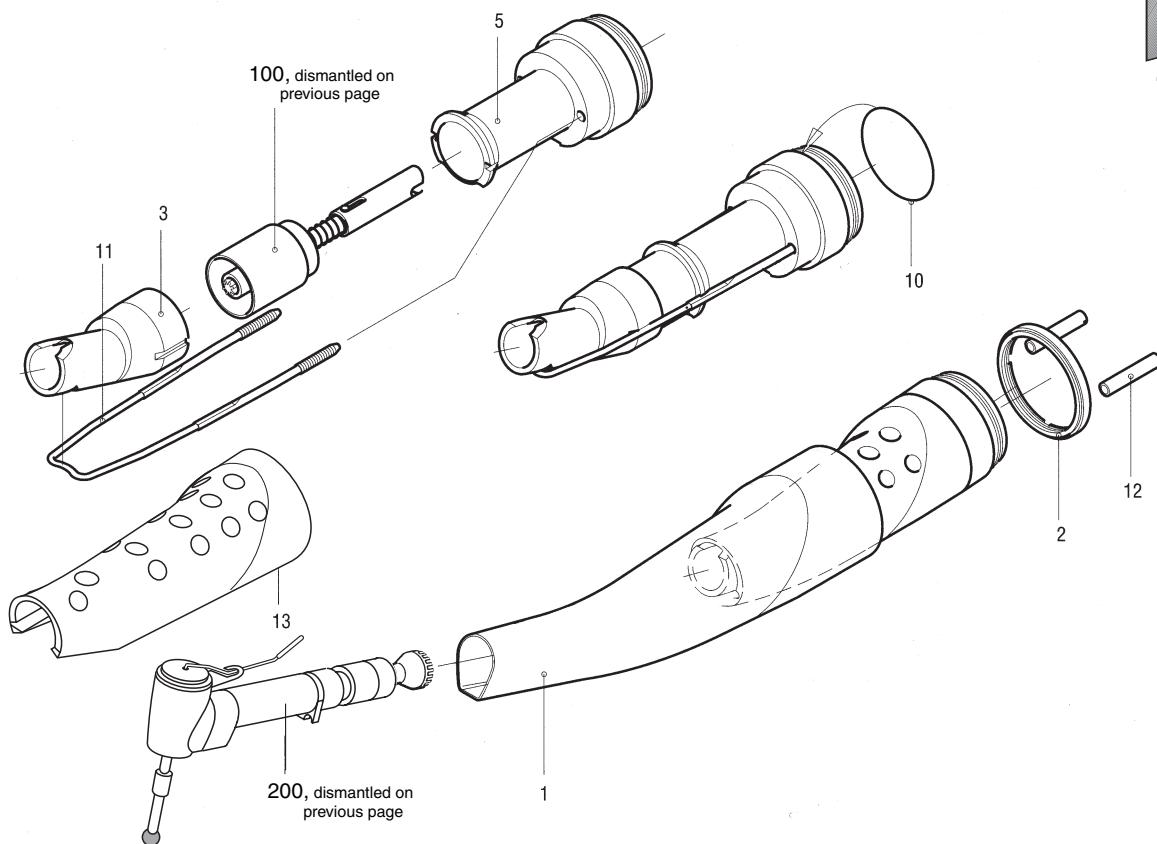
Head Condens		Drive 6:1			
201	Head housing Condens	33 29 294 D 3300	101	Bearing flange 6:1/1:1/1:4	33 28 049 D 3300
203	Stop	33 28 833 D 3300	102	Drive shaft Z 8	33 28 106 D 3300
204	Ejector	41 77 056 D 3300	103	Compression spring	33 28 155 D 3300
221	Sleeve	33 29 252 D 3300	104	Driver	33 28 072 D 3300
230	Neck drive, Condens	33 29 450 D 3300	105	Center-grooved dowel pin	89 26 834 D 3262
235	O-ring, 5.7x0.6; DIN 3771-VMQ	70 43 946	106	Ball bearing, 3x8x3	41 81 132 F 0502
			110	Adhesive, Araldite AV 119	34 40 062 SRN

T1
LINE**Contra-angle handpiece, compl.**

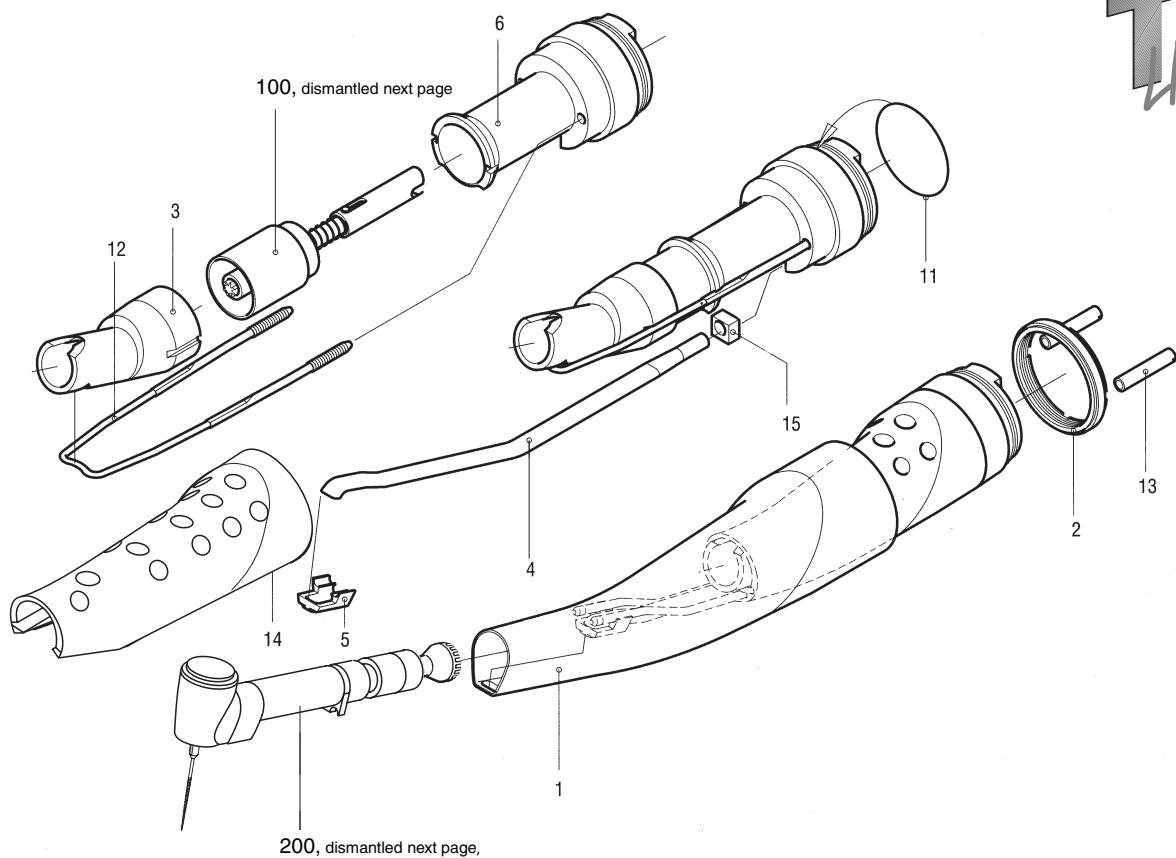
1	Rep. outer sleeve KM L	58 77 498 D 3300	100	Drive 24:1	33 29 047 D 3300
2	Nut, green	41 77 064 D 3300	200	Head KM	54 55 741 D 3300
3	Bend	33 28 635 D 3300			
4	Fiber rod	33 28 890 D 3300			
5	Fiber rod guard	33 27 868 D 3300			
6	Coupling bush	58 69 693 D 3300			
11	O-ring, 16.8x1mm; DIN 3771	18 79 308			
12	Wire clip	33 28 841 D 3300			
13	Nut	33 28 460 D 3300			
14	Damping part	33 29 369 D 3300			
15	Fiber rod guard	41 77 262 D 3300			



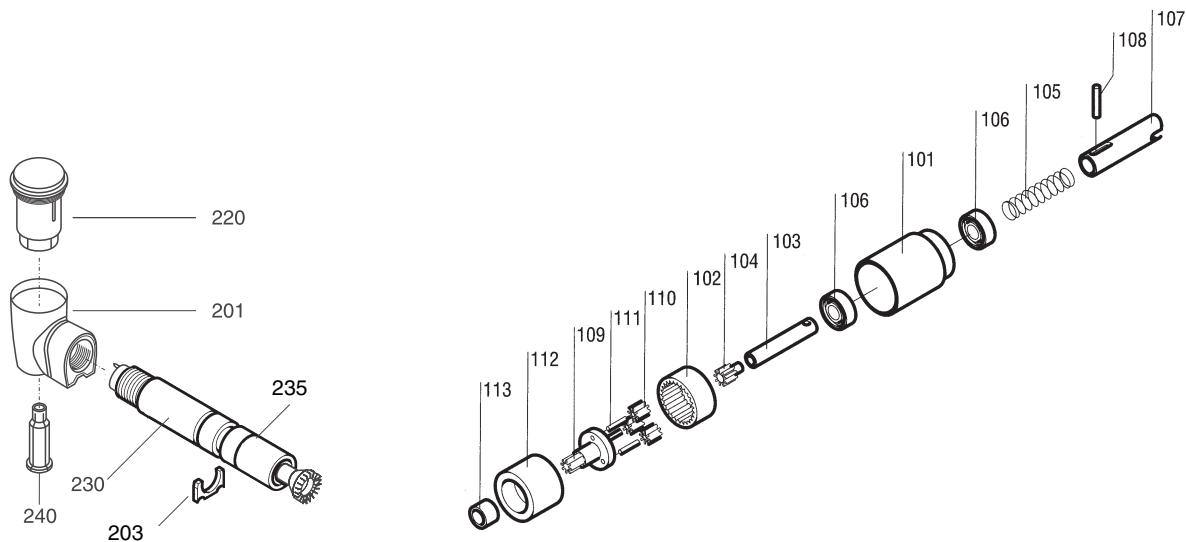
Head KM			Drive 24:1		
201	Head housing KM	54 55 691 D 3300	101	Bearing flange 24:1	33 28 031 D 3300
202	Screw ring KM	54 55 717 D 3300	102	Internal gear wheel 4:1	59 46 413 D 3238
203	Push cap KM	54 55 725 D 3300	103	Drive shaft 24:1	33 28 098 D 3300
204	Retaining ring	89 17 932 D 3300	104	Sun wheel	59 53 005 D 3238
205	Ball compression spring	59 47 957 D 3300	105	Compression spring	33 28 155 D 3300
206	Adjusting washer 0.08 mm	70 50 024 F 1503	106	Ball bearing 3 x 7 x 2	41 81 157 F 0502
207	Adjusting washer 0.12 mm	70 50 032 F 1503	107	Driver	33 28 072 D 3300
208	Adjusting washer 0.15 mm	70 50 040 F 1503	108	Center-grooved dowel pin	89 26 834 D 3262
209	Stop	33 28 833 D 3300	109	Planetary carrier Z 8	33 28 353 D 3300
210	Spray tube, TK 20	89 24 896 D 3239	110	Planet wheel	59 46 421 D 3238
211	Catch	54 55 709 D 3300	111	Bearing bolt	33 28 130 D 3300
213	Adjusting washer 0.10 mm	18 91 774 F 1503	112	Plain bearing	33 28 338 D 3300
215	Loctite No.. 932	52 65 541 SRN	113	Bush	33 28 346 D 3300
220	Head drive 1:1	33 29 021 D 3300			
230	Neck drive, Prophy	33 27 876 D 3300			
236	O-ring, 5.7x0.6; DIN 3771-VMQ	70 43 946			


Contra-angle handpiece, compl.

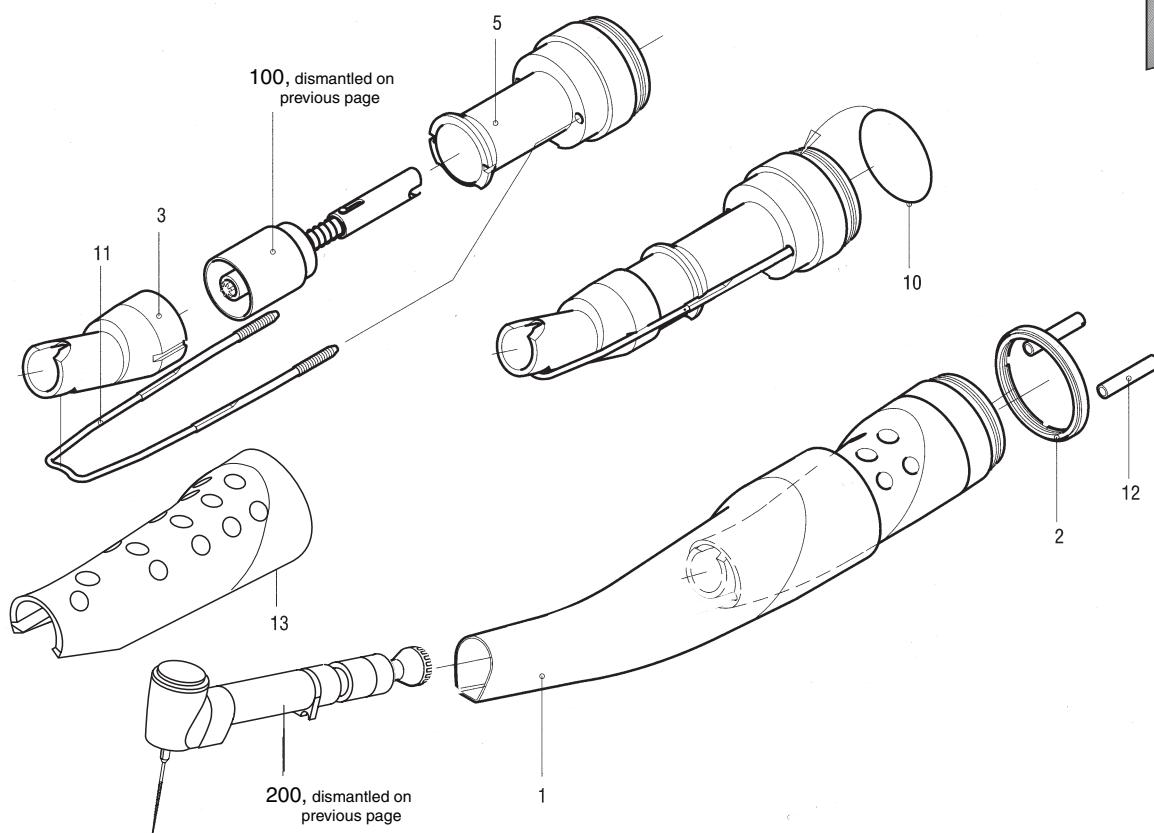
1	Rep. outer sleeve KM	58 77 480 D 3300	100	Drive 24:1	33 29 047 D 3300
2	Nut without light, green	41 77 148 D 3300	200	Head KM	54 55 741 D 3300
3	Bend	33 28 635 D 3300			
5	Coupling bush	33 29 351 D 3300			
10	O-ring, 16.8x1mm; DIN 3771	18 79 308			
11	Wire clip	33 28 841 D 3300			
12	Nut	33 28 460 D 3300			
13	Damping part	33 29 369 D 3300			

T1
LINE**Contra-angle handpiece, compl.**

1	Rep. outer sleeve ENDO L	58 77 514 D 3300	100	Drive 24:1	33 29 047 D 3300
2	Nut, black	58 69 701 D 3300	200	Head ENDO	54 55 741 D 3300
3	Bend	33 28 635 D 3300			
4	Fiber rod	33 28 890 D 3300			
5	Fiber rod guard	33 27 868 D 3300			
6	Coupling bush	58 69 693 D 3300			
11	O-ring, 16.8x1mm; DIN 3771	18 79 308			
12	Wire clip	33 28 841 D 3300			
13	Nut	33 28 460 D 3300			
14	Damping part	33 29 369 D 3300			
15	Fiber rod guard	41 77 262 D 3300			



Head ENDO		Drive 24:1			
201	Head housing ENDO	58 69 594 D 3300	101	Bearing flange 24:1	33 28 031 D 3300
203	Stop	33 28 833 D 3300	102	Internal gear wheel 4:1	59 46 413 D 3238
220	Head drive ENDO	58 69 578 D 3300	103	Drive shaft 24:1	33 28 098 D 3300
230	Neck drive, ENDO	58 69 586 D 3300	104	Sun wheel	59 53 005 D 3238
235	O-ring, 5.7x0.6; DIN 3771-VMQ	70 43 946	105	Compression spring	33 28 155 D 3300
			106	Ball bearing 3 x 7 x 2	41 81 157 F 0502
			107	Driver	33 28 072 D 3300
			108	Center-grooved dowel pin	89 26 834 D 3262
			109	Planetary carrier Z 8	33 28 353 D 3300
			110	Planet wheel	59 46 421 D 3238
			111	Bearing bolt	33 28 130 D 3300
			112	Plain bearing	33 28 338 D 3300
			113	Bush	33 28 346 D 3300



Contra-angle handpiece, compl.

1	Rep. outer sleeve ENDO	58 77 506 D 3300	100	Drive 24:1	33 29 047 D 3300
2	Nut without light, black	58 69 719 D 3300	200	Head ENDO	54 55 741 D 3300
3	Bend	33 28 635 D 3300			
5	Coupling bush	33 29 351 D 3300			
10	O-ring, 16.8x1mm; DIN 3771	18 79 308			
11	Wire clip	33 28 841 D 3300			
12	Nut	33 28 460 D 3300			
13	Damping part	33 29 369 D 3300			

We reserve the right to make any alterations which may be due to technical improvements.

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