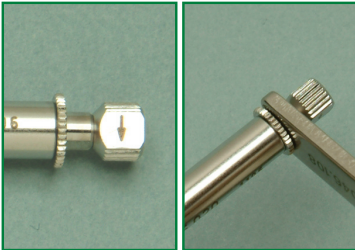


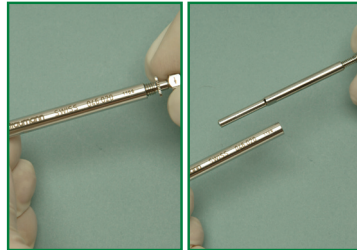
## ASSEMBLY INSTRUCTIONS FOR RATCHET AND TORQUE CONTROL DEVICE

### Step 1



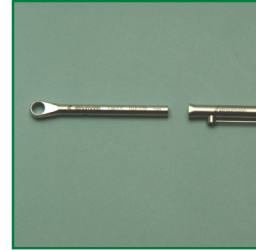
Loosen ratchet nut with service instrument or holding key.

### Step 2



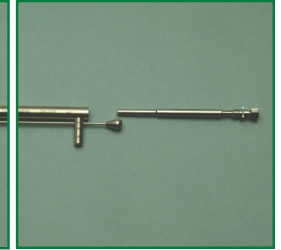
Unscrew and remove internal bolt from ratchet body.

### Step 3a



**a.** Slide ratchet body through torque control device (flared part of ratchet must be **flush** with fluted-end of torque control device).

### Step 3b



**b.** Insert internal bolt into opposite end of torque control device. Finger tighten together.

### Step 4



Tighten ratchet nut with service instrument **or** holding key. Do not overtighten.

### Step 5



Ratchet and torque control device assembled and ready for use.

## Glossary

Art. No.

046.020



**Ratchet** - used in combination with the torque control device to torque in all Straumann® abutments and screws (same ratchet that is used when placing Straumann implants manually). Please note: The ratchet and service instrument are packaged together (Art. No. 046.119)

046.049



**Torque control device** - once connected to the ratchet, it is used to measure the amount of torque applied when inserting Straumann abutments and screws

046.108



**Service instrument** - used to assemble and disassemble the ratchet

046.064



**Holding key** - forked-end can be used to assemble and disassemble the ratchet; pin can be used to stabilize drivers when abutments and screws are placed (same holding key that is used when placing implants)

**Important:** Proper care and maintenance are important to ensure correct function of the ratchet and torque control device. Always clean and sterilize instruments while they are disassembled. For detailed instructions on how to care for these instruments, please refer to their package insert and the brochure "Care and maintenance of surgical and prosthetic instruments" (USLIT 119).

## INSTRUCTIONS FOR USE

1. Working outside of the mouth and over a sterile field, connect the abutment (or screw) to its corresponding driver.
2. Bring the abutment (or screw) to the mouth with the driver and insert it. Finger-tighten the abutment or screw using only the driver.
3. Place the looped-end of the assembled ratchet with torque control device over the handle of the driver.
4. If the arrow on the end of the ratchet is not pointing in the direction for tightening (clockwise), pull the end out, flip the arrow over, and push it back in. (Figure A)
5. Place the pin of the holding key into the coronal opening on the driver handle. Hold the holding key in place for stabilization while you torque. (Figure B)
6. With your other hand, grasp only the tear drop at the end of the torque bar. **Do not touch or hold any part of the ratchet or torque control device other than the tear drop or the specified torque will not be applied.** (Figure C)
7. Holding the tear drop, simply move the torque bar to the appropriate Ncm mark. All Straumann® permanent abutments are torqued in at 35 Ncm; all occlusal Straumann screws are torqued in at 15 Ncm. (Table 1)
8. The instrument does not have an automatic stopping mechanism (nor does it click or make any other noise as an indicator). You are finished once the torque bar reaches the appropriate Ncm mark – the abutment (or screw) is now completely torqued in.
9. Release the tear drop. The torque bar will automatically go back to its starting position.
10. Remove the holding key.
11. Remove the ratchet with torque control device.
12. Remove the driver.
13. Always disassemble the ratchet and torque control device in order to clean and autoclave (Figure D).

**Figure A**



Directional arrow must be pointing **clockwise** (towards torque bar with tear drop) for tightening. If not, pull arrow out, flip over, push back in.

**Figure B**



Use one hand to hold the holding key. Use the other hand to hold the torque bar.

**Figure C**



Grasp **only** the tear drop and move the torque bar to the appropriate Ncm mark. Stop.

**Figure D**



Use the service instrument **or** holding key to disassemble. Clean and sterilize instruments while they are disassembled.

**Recommended torque for all Straumann permanent abutments and screws**

15 Ncm	35 Ncm
Standard 4.4 mm occlusal screw	All solid abutments
6.0 mm guide screw for bars	All synOcta® abutments
Multi-base copings	All LOCATOR® abutments
	Retentive anchor abutment
	NN 5.0 mm occlusal screw
	Basal screw
	Mucosa cylinder
	TS abutment
	Multi-base abutment

Table 1

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