

StarDental® Instrument Solutions  
**Titan® 10:1 Gear Reduction  
 Auto Latch Angle Attachment**  
 Instruction Manual

Caution: Federal law restricts this device to sale by or on the order of a dentist.



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**DO NOT USE FOR ORAL SURGERY**

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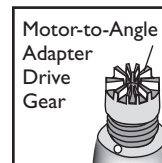
**Features**

- Speed reduced by a factor of 10
- Better control for pins and posts
- Easy maintenance

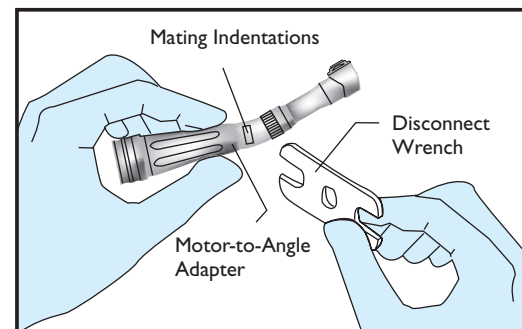


**Angle Installation**

1. Thread angle onto the motor-to-angle adapter, **StarDental®** Part, Titan 3 #264073 or Titan T #263970, by hand. Seat completely.

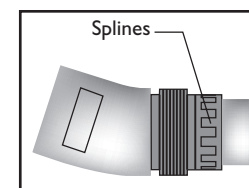
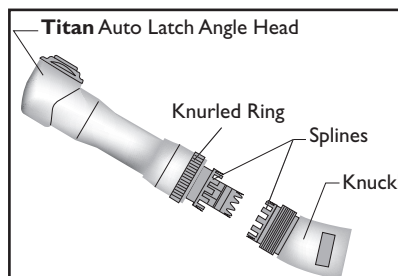


2. Fit disconnect wrench furnished with every angle to mating indentations on angle neck; tighten securely.



**Angle Adjustment**

1. Loosen knurled ring enough to disengage splines.
2. Pull head assembly up; turn to desired position.
3. Carefully mesh the splines on the knuckle with the splines of the head.
4. Tighten knurled ring onto knuckle threads until snug.



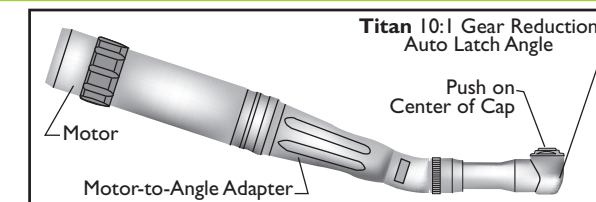
**Bur installation and Removal**

**Note:** Before installing bur, install motor to the motor-to-angle adapter; then install angle to motor-to-angle adapter as described in Angle Installation.

**Installation into the Auto Latch Angle**

1. Grasp angle firmly so that your thumb touches the cap; push on center of cap

**Bur installation and Removal, continued**



2. While continuing to hold cap down, insert a concentric .0925" diameter (2.350 mm) shank RA (standard length for Contra Angle) bur the full length of chuck.
3. Rotate bur until fully engaged in latching mechanism and release thumb.
4. Tug on bur to verify proper seating and retention.

**Note:** After installing, as a recommended safety measure, push button one time while holding bur and release to properly align latch.

**Removal from Auto Latch**

Grasp angle firmly so that your thumb touches the cap; push on center of cap and hold cap down while pulling bur straight out.

**NOTICE** Never depress the auto latch angle's autochuck end cap button or rest the end cap against any part of the oral anatomy during handpiece operation. Depressing the end cap while a bur is rotating can activate the chuck mechanism and result in end cap heating and/or loss of bur retention.

**SAFETY INSTRUCTIONS**

**PLEASE OBSERVE SAFETY RULES**

1. Always tug on bur after chuck is loaded to confirm that the bur is secured.
2. Before use, verify concentric rotation by operating the angle outside the oral cavity in a safe place. Do not use burs that do not run concentrically or produce excessive noise.
3. Never operate angle without a bur installed.
4. Always use burs with an overall length of less than 33 mm. The shank length must be at least 9 mm.
5. When using the auto latch, never depress end cap while bur is rotating.
6. Use only recommended burs to prevent damage to the latch mechanism and in some cases to prevent burs from improper or incorrect placement. An improperly latched bur may dislodge during use, causing injury to you or your patient. A sudden high-pitched sound or increased vibration while handpiece is operating alerts the operator to the possibility that the chuck is not latched properly to retain the bur or a bent bur is inserted.



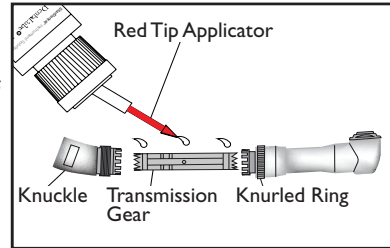
Always insert bur the full length of chuck. If you attempt to extend it from chuck, bur may dislodge during use and cause injury to you or your patient.

## Lubrication

### LUBRICATING the Transmission Gear

Lubricate daily or prior to each sterilization.

- To disassemble latch angle:
  - Unscrew knurled ring.
  - Remove knuckle and transmission gear from angle head.
- Place a drop of DentaLube II, **StarDental**® Part #262539, in the two transmission gear joints between the gear and housing and a drop in the hole in the center of housing. Rotate the gears to allow lubricant to work into bearings. Apply a light coat of lubricant to the gear teeth
- Reassemble angle.
- Place angle on motor, connect to handpiece tubing; insert bur into chuck and operate for 20 seconds to evenly distribute lubricant.



## Cleaning & Sterilization

<b>CAUTION</b>	Do not exceed 135°C
	Do not use: <ul style="list-style-type: none"> <li style="width: 25%;">• dry heat sterilizer</li> <li style="width: 25%;">• cold sterilizers</li> <li style="width: 25%;">• ultrasonic cleaners</li> <li style="width: 25%;">• immersion techniques</li> <li style="width: 25%;">• sterilizer bags containing disinfectants</li> <li style="width: 25%;">• detergents</li> <li style="width: 25%;">• surface wipes</li> <li style="width: 25%;">• surface sprays</li> <li style="width: 25%;">• chemical disinfectors</li> <li style="width: 25%;">• hand soaps</li> <li style="width: 25%;">• surgical milk</li> </ul>
<b>Limits on Reprocessing</b>	Repeated processing has minimal effect on these angles. End of life is normally determined by wear and damage due to use.

INSTRUCTIONS	
<b>WARNING</b>	The angle must be cleaned and sterilized before first use and between patient use.
<b>Containment and transportation:</b>	It is recommended that angles are reprocessed as soon as is reasonably practical following use.
<b>Preparation for cleaning:</b>	Wear puncture-resistant gloves to prepare the latch angle for sterilization. Remove bur from angle and disconnect angle from motor-to-angle adaptor.
<b>Cleaning Automated:</b>	Washer-disinfectors are not recommended.
<b>Cleaning Manual:</b>	Clean all external surfaces with a cotton swab soaked in isopropyl alcohol.
<b>Lubrication:</b>	Lubricate - See 'Lubrication' instruction section.
<b>Disinfection:</b>	Use steam sterilization exclusively for complete sterility as outlined below.
<b>Drying:</b>	Always use complete dry cycle of sterilizer. Always allow product to cool in bag to room temperature prior to using. Contact your sterilizer manufacturer if moisture remains inside bag and on product after drying.
<b>Maintenance:</b>	Lubricate - See 'Lubrication' instruction section.
<b>Inspection &amp; function testing:</b>	See Installation, Operating Recommendations, and/or Troubleshooting sections of this manual.
<b>Packaging:</b>	Single: A standard sterilization packaging material must be used. Ensure that the pack is large enough to contain the item without stressing the seals.

<b>Instrument Sterilization:</b>	A <b>wrapped</b> angle should be steam sterilized at 132° C for a minimum of 10 minutes or at 121° C for a minimum of 50 minutes. Do not exceed 135° C. An <b>unwrapped</b> angle should be steam sterilized at 132° C for a minimum of 8 minutes or at 121° C for a minimum of 30 minutes. Do not exceed 135° C. <b>Note:</b> An unwrapped angle needs to be used immediately or sterility is not maintained.
<b>Storage:</b>	Store in bag after sterilization until ready to use.
<b>Additional Information:</b>	Do not exceed the sterilizer manufacturer's guidelines for load capacity. Use only paper or paper/plastic bags.
<b>Manufacturer Contact:</b>	See first or last panels of this manual.

## Troubleshooting

### Auto Latch Angle

**Problem:** Bur locks in auto latch

**Correction:** Return to StarDental

**Problem:** Difficulty engaging auto latch

**Correction:** Return to StarDental

**Note:** Always use ISO burs to prevent locking and slipping of burs in latch angle. If a problem persists, contact dealer for further assistance; or, contact **StarDental** Technical Service at 1-866-DTE-INFO.

## Replacement Part Numbers

Always insist on **StarDental** parts for best performance.

Description	Item
Titan®-3 10:1 Gear Reduction Latch Angle .....	264180
Titan®-T 10:1 Gear Reduction Latch Angle .....	263951
Titan®-3 BB Motor-to-Angle Adapter .....	264073
Titan®-T BB Motor-to-Angle Adapter .....	263970
Transmission Gear Assembly .....	264064
Angle Disconnect Wrench.....	203048
DentaLube II .....	262539
End Cap.....	264084
Cartridge .....	264094

## Important Notice About Returning Product To The DentaleZ Inc.

Anyone wishing to return any DentaleZ Inc. product to a DentaleZ facility MUST obtain the proper RETURN AUTHORIZATION NUMBER from the Customer Service Department. The RA Number must appear clearly marked on both the outside and inside of the returned product carton. When calling for a return authorization number you will be asked to provide the following information:

To Obtain A  
Return Authorization  
Number Call  
**1-866-DTE-INFO**

- Product Name, Model Number or Part Number
- Serial Number of Product
- Dealer Return Purchase Order Number
- Reason For Return
- Copy of Invoice Showing Purchase

Items will be evaluated. Return Authorization Number is not a guarantee for credit. Your cooperation with this procedure will help us expedite processing of any returns.



For new products, manuals and technical information, call **1-866-DTE-INFO** or visit our web site @ [www.dentalez.com](http://www.dentalez.com)

**Limited Warranty**

O-Rings and Seals are specifically excluded from this warranty.

DentaleZ® warrants the Titan® 10:1 Gear Reduction Auto Latch Angle to be free of defects in material and workmanship, under normal usage, under the following terms:

<b>StarDental® Products:</b>	<b>Warranty Period*:</b>
Titan® 10:1 Gear Reduction Auto Latch Angle	3 Months from date of purchase

Please note the following additional terms of our warranty and return policy:

- Warranties cover manufacturing defects only and do not cover defects resulting from abuse, improper handling, cleaning, care or maintenance, normal wear and tear or non-observance of operating, maintenance or installation instructions. **Failure to use authorized parts or an authorized repair facility voids this warranty.**
- Liability is limited to repair or replacement of the defective product at our sole discretion. **All other liabilities, in particular liability for damages, including, without limitation, consequential or incidental damages are excluded.**
- THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO EMPLOYEE, REPRESENTATIVE OR DEALER IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR TO GRANT ANY OTHER WARRANTY.**

WARRANTY REPAIRS: Parts repaired or replaced on a product that is in warranty will be warranted for the duration of that product's original warranty.

NON-WARRANTY REPAIRS: The warranty on parts either repaired or replaced on an out-of-warranty product will cover the repaired part only and will be for the time frame of a new parts warranty period.

PRODUCT RETURN: Opened products or product returns more than a year old cannot be returned for credit. There will be a 15% (\$25.00 minimum) restocking charge on all items authorized for return.

\* Provided conditions in warranty are met.

**WARRANTY REGISTRATION**

PLEASE VISIT ONE OF THE WEBSITES BELOW TO REGISTER YOUR STARDENTAL PRODUCT. THIS WILL ENSURE PROPER REGISTRATION AND PROMPT AND ACCURATE SERVICE SHOULD ANY OF YOUR PURCHASES NEED EVALUATION OR REPAIR DURING THE WARRANTY PERIOD.

For Identafi® Oral Cancer Screening System products: [www.identafi.net/warranty](http://www.identafi.net/warranty)

For all Other StarDental® Products: [www.dentalez.com/warranty](http://www.dentalez.com/warranty)