

### Limited Warranty

StarDental® Titan® LubeFree Ball Bearing Friction Grip Manual Chuck and Autochuck Angles are warranted against defects in material and workmanship for 1 year from date of purchase. This warranty is subject to the following conditions:

The angles must not be abused and must have been operated in accordance with procedures detailed in this manual.

Any replacement parts must be genuine StarDental® parts.

Warranty validation card must be completed and returned within 15 days of purchase.

StarDental® will, without charge, repair or replace (at its sole discretion) any defective part(s) covered in this warranty, providing above conditions are met and the angle is returned through an authorized StarDental® dealer. You **must** have a copy of your original invoice to qualify.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE.



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Product complies  
with MDD 93/42/EEC

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# StarDental

## Titan®

### LubeFree Ball Bearing Friction Grip Manual Chuck & Autochuck Angles

Instruction Manual

EFFICIENCY IN DENTISTRY®

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## Specifications (Nominal)

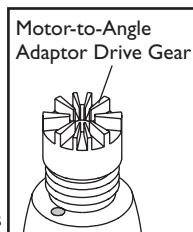
- Autochuck or Manual Chuck Friction Grip Angles
- Smooth Running, Low Friction Performance
- Field Replaceable Cartridges and Transmission Gears
- Easy Maintenance
- Steam Sterilization: 135° C
- Long Term Reliability

## Installation & Operation

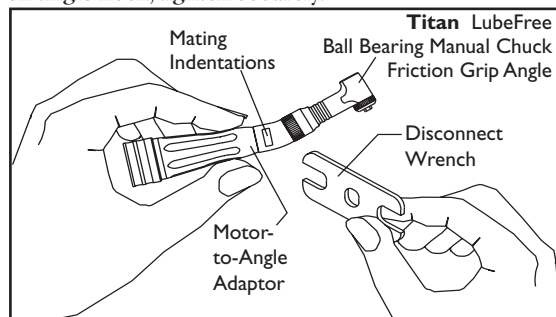
### Angle Installation onto Titan 3 or Titan T System

1. Thread angle onto Motor-To-Angle Adaptor, StarDental Part, Titan 3 #264073 or Titan T #263970, by hand. Seat completely.

**CAUTION:** When angle does not seat on adaptor, gears are not meshed correctly. Remove angle; spin motor-to-angle adaptor drive gear and repeat Step 1.

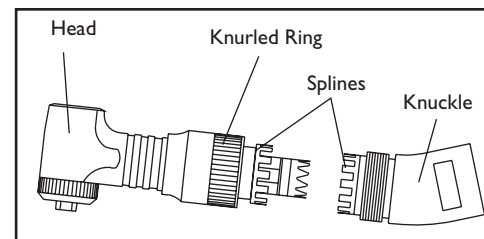


2. Fit angle disconnect wrench, StarDental Part #203048, furnished with every angle, to mating indentations on angle neck; tighten securely.

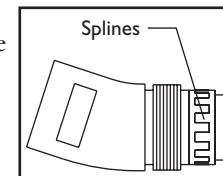


### ANGLE ADJUSTMENT

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.

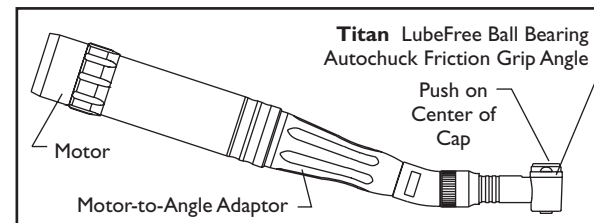
### BUR INSTALLATION & REMOVAL

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

**WARNING:** Use burs with an overall length of less than 24 mm and a shank length of at least 7.3 mm.

### INSTALLATION into the Autochuck

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

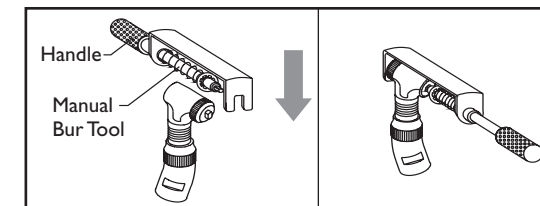


2. Insert bur into chuck until fully engaged in friction grip mechanism and release thumb.
3. Tug on bur to verify proper seating and retention.

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

### INSTALLATION into the Manual Chuck

1. Pull handle back on manual bur tool, StarDental Part #203108, and slide open end of tool onto head of angle as shown below; release spring loaded handle and seat shaft of tool into the opening in the rear of angle head.



2. To unlock chuck, turn manual bur tool handle counterclockwise.

3. After inserting a 1.6 mm diameter friction grip bur fully into chuck, turn handle of tool clockwise to tighten chuck.

4. Disengage tool and tug on bur to verify that it is completely engaged and holding securely.

### REMOVAL from the Autochuck

1. Grasp angle firmly so that your thumb touches the cap; push on center of cap.
2. Pull bur straight out.

### REMOVAL from the Manual Chuck

1. Use manual bur tool and turn counterclockwise one full turn, 360° rotation.
2. Pull bur straight out.

## Safety Rules

### 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 24 mm. The shank length must be at least 7.3 mm.
5. When using the autochuck, never depress end cap while bur is rotating.

## Safety Rules (cont.)

- Use only recommended burs to prevent damage to the autochuck and in some cases to prevent burs from improper or incorrect placement. An improperly clamped 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.

**WARNING:** 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.

## Cleaning

The Titan® LubeFree Ball Bearing Friction Grip and Autochuck Angles are lubricated for life and sealed to keep dirt out. Never clean ultrasonically or immerse in solvent that would dilute the lubricant.

Clean autochuck daily. Remove bur from chuck. Aerate with syringe air.

## Sterilization

- Wear puncture resistant gloves to prepare the friction grip angle for sterilization.
- Remove bur from chuck.
- Clean all external surfaces with a cotton swab soaked in isopropyl alcohol. Rinse with tap water.
- Dry thoroughly.
- A **wrapped** 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 **unwrapped** 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.

**Note:** An unwrapped angle needs to be used immediately or sterility is not maintained.

Do not exceed the sterilizer manufacturer's guidelines for load capacity.

**CAUTION:** Use steam sterilization exclusively for complete sterility. Never dry heat sterilize, ultrasonically clean, or

expose to chemical disinfection or cold sterilization by: Immersion techniques or Surgical milk Surface wipes, hand soaps, or detergents Surface sprays Sterilization bags containing disinfectants

## Troubleshooting

**Problem:** BUR LOCKS IN CHUCK

**Cause:** Debris buildup in chuck

**Correction:** Aerate with syringe air

**Problem:** BUR SLIPS IN AUTOCHUCK

**Cause:** Faulty chuck mechanism

**Correction:** Replace with a new chuck.

Refer to "[Cartridge Replacement](#)"

**Problem:** BUR SLIPS IN MANUAL CHUCK

**Cause:** Faulty chuck mechanism

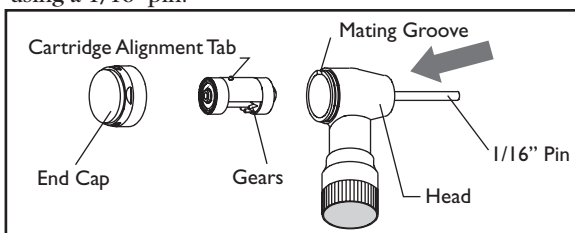
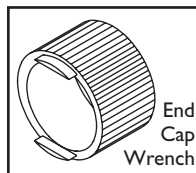
**Correction:** Replace with a new chuck, StarDental Part #203036

**Note:** Always use ISO burs to prevent locking and slipping of burs in chuck angle. If a problem persists, contact dealer for further assistance; or, contact **StarDental Customer Service at 1-800-DTE-INFO.**

## Cartridge Replacement

### AUTOCHUCK

- Unthread knurled ring.
- Remove knuckle and transmission gear, StarDental Part #263960, from head.
- Unthread end cap using end cap wrench, StarDental Part #260293.
- Pushing from the front of the head, remove the cartridge by using a 1/16" pin.



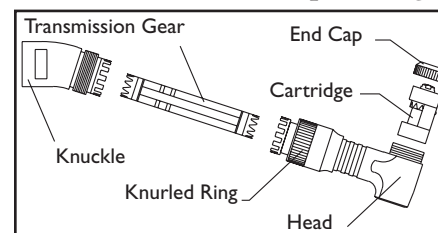
- Insert new cartridge, StarDental Part #264096, with cartridge alignment tab towards end cap, and align with mating groove in head. Install end cap.

- To reassemble, insert transmission gear into angle head. Engage splines of knuckle with mating splines of head to achieve proper alignment.

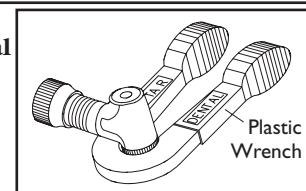
- Tighten knurled ring onto knuckle threads until snug.

### REPLACEMENT of the Manual Friction Grip Cartridge

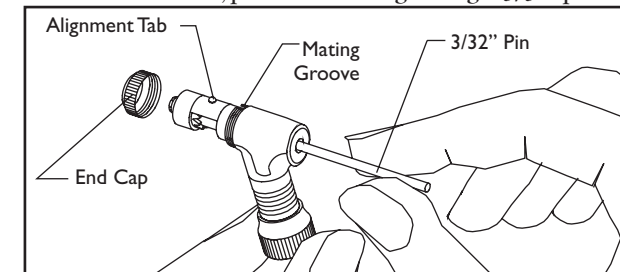
- Unthread knurled ring.
- Remove knuckle and transmission gear from head.



- Unthread end cap using plastic wrench, StarDental Part #258953.



- From rear of head, push out cartridge using a 3/32" pin.



- Insert new cartridge, StarDental Part #262723, with gears and alignment tab towards end cap, and align with mating groove in head. Install end cap.

- To reassemble, insert transmission gear into angle head. Engage splines of knuckle with mating splines of head to achieve proper alignment.

- Tighten knurled ring onto knuckle threads until snug.

## Replacement Part Numbers

*Always insist on StarDental parts for best performance.*

Description	Item Number
<b>Titan LubeFree Ball Bearing Autochuck Friction Grip</b>	
Titan 3 .....	264151
Titan T .....	263954
Cartridge .....	264096
Transmission Gear Assembly .....	263960
End Cap .....	264097
End Cap Wrench .....	260293
Angle Disconnect Wrench .....	203048

### Titan LubeFree Ball Bearing Manual Chuck Friction Grip

<b>Titan 3</b> .....	262740
<b>Titan T</b> .....	263955
Cartridge .....	262723
End Caps (Pkg. of 2) .....	258971
Chuck .....	203036
Bur Tool .....	203108
End Cap Wrench (Plastic) .....	258953

<b>Titan 3</b> BB Motor to Angle Adaptor .....	264073
<b>Titan T</b> BB Motor to Angle Adaptor .....	263970

### Important Notice About Returning Product To The DentaleZ Group

Anyone wishing to return any DentaleZ Group 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:

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

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

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.