

Limited Warranty

StarDental® Titan® LubeFree Ball Bearing Manual Latch and Auto Latch Angles are warranted against defects in material and workmanship for one 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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**LubeFree Ball Bearing
Manual Latch &
Auto Latch Angles
Instruction Manual**

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Specifications (Nominal)

Titan LubeFree Auto Latch Angle

Titan 3 Part Number 264146

Titan T Part Number 263950

Titan LubeFree Manual Latch Angle

Titan 3 Part Number 262738

Titan T Part Number 263948

FEATURES:

- Auto Latch Or Manual Bur Latch Contra Angles
- Smooth Running, Low Friction Performance
- Field Replaceable Cartridges & Transmission Gears
- Easy Maintenance
- Steam Sterilization: 135° C
- Long Term Reliability

Installation & Operation

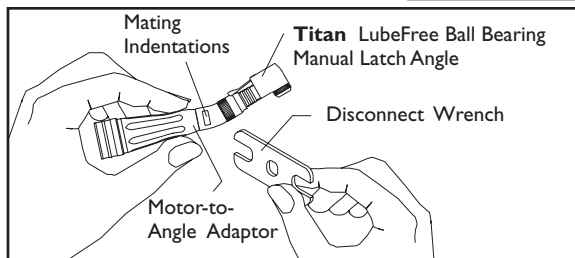
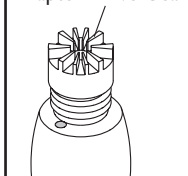
Angle Installation onto Titan 3 or Titan T System

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.

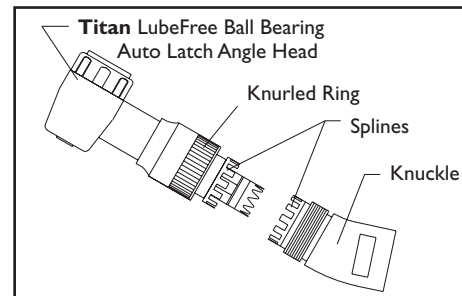
2. Fit angle disconnect wrench, StarDental Part #203048, furnished with every angle, to mating indentations on angle neck; tighten securely.

Motor-to-Angle Adaptor Drive Gear

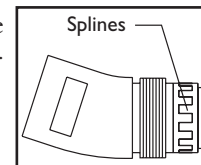


Angle Adjustment

1. Loosen knurled ring enough to disengage splines.
2. Pull head assembly up; turn to desired position.



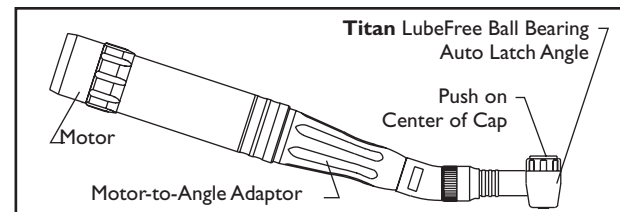
3. Carefully mesh the splines on the knuckle with the splines of the head.
4. Tighten knurled ring onto knuckle threads until snug.



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

Installation of bur into the Auto Latch

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



2. 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.

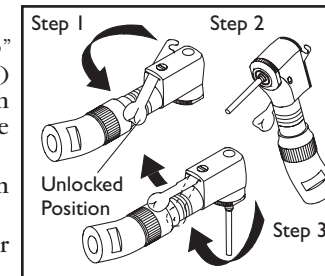
REMOVAL of bur from Auto Latch

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

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

INSTALLATION of bur into the Manual Latch

1. Open latch.
2. Insert a concentric .0925" diameter (2.350 mm) shank RA (standard length for Contra Angle) bur the full length of chuck.
3. Engage latch lock firmly in latch of instrument.
4. Tug on bur to verify proper seating and retention.



REMOVAL of bur from Manual Latch

1. Open latch.
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 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.

Cleaning

The Ball Bearing Latch Angle is lubricated for life and sealed to keep dirt out. Never clean ultrasonically or immerse in solvent that would dilute the factory installed lubricant.

Clean auto latch daily. Remove bur from chuck. Aerate with syringe air.

Sterilization

1. Wear puncture resistant gloves to prepare the latch angle for sterilization.
2. Remove bur from latch angle.
3. Clean all external surfaces with a cotton swab soaked in isopropyl alcohol.
4. Dry thoroughly.
5. 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, clean ultrasonically, 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

Auto Latch Angle

- Problem:** BUR LOCKS IN AUTO LATCH
Cause: Debris buildup in latching mechanism
Correction: Place 2 drops of **DentaLube II** on latching mechanism and run handpiece briefly.
- Problem:** DIFFICULTY ENGAGING AUTO LATCH
Correction: Place 2 drops of **DentaLube II** on latching mechanism and aerate with syringe air.

Manual Latch Angle

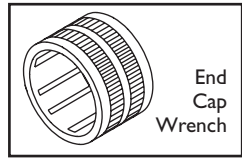
- Problem:** BUR DOES NOT ENGAGE LATCH
Cause: Incorrect position of cartridge shaft
Correction: Attach angle to motor to 'lock' gearing in one place. Locate bur as necessary.
- Problem:** LATCH ARM HAS VIBRATION
Cause: Latch screw loose
Correction: Tighten latch screw.
- Cause:** Latch arm bent
Correction: Open latch arm; gently press arm down 1/8". Close latch arm

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.

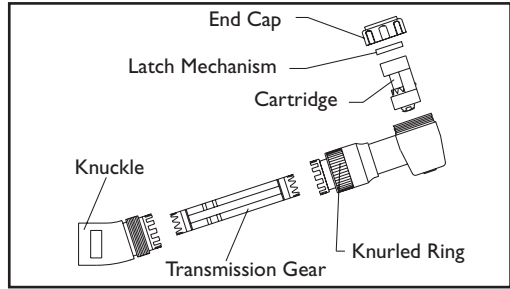
Cartridge Replacement

AUTO LATCH

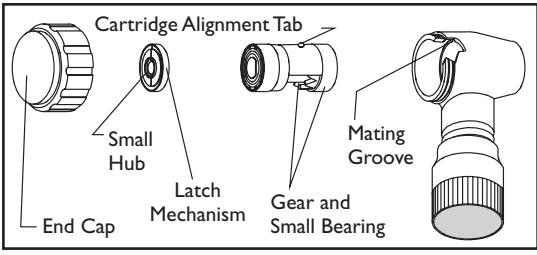
1. Unthread knurled ring.
2. Remove the knuckle and the transmission gear from the head.
3. Unthread end cap using end cap wrench, **StarDental** Part #261339.



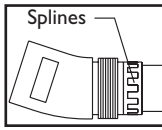
Note: Remove transmission gear, **StarDental** Part #263960, first before removing cartridge from housing.



4. Pushing from the front of the head, remove the cartridge by using a 3/32" pin.
5. Insert **new** cartridge, **StarDental** Part #264088, by installing gear and small bearing end first. Slide cartridge into housing with alignment tab of cartridge mating with groove in head. Install latch mechanism with small hub towards end cap. Install end cap.

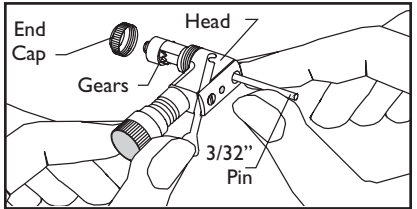
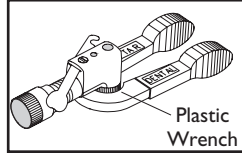


6. To reassemble angle, insert transmission gear into angle head. Engage knuckle splines with mating splines of head to align properly.
7. Tighten knurled ring onto knuckle threads until snug.

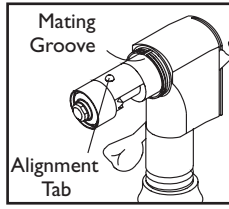


MANUAL LATCH

1. Unthread knurled ring.
 2. Remove knuckle and transmission gear from head.
- Note:** Remove transmission gear first before removing cartridge from housing.
3. Unthread end cap using plastic wrench, **StarDental** Part #258953.
 4. Position latch arm in the unlocked position.
 5. At rear of head, push out **old** cartridge using a 3/32" pin.

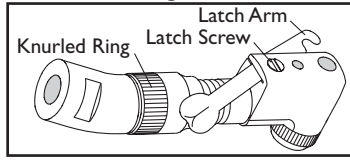


6. Insert **new** cartridge, **StarDental** Part #262721, with alignment tab of cartridge and gears towards end cap and align with mating groove in head. Install end cap.
7. To reassemble angle, insert transmission gear into angle head. Engage splines of knuckle with mating splines of head to achieve proper alignment.
8. Tighten knurled ring onto knuckle threads until snug.



Latch Replacement

1. Remove latch arm and screw. Install **new** latch arm, **StarDental** Part #203371, and align latch hole with hole in the angle head. Install latch screw and tighten.
2. If latch arm does not lock onto knurled ring, open latch and press down on arm to bend slightly.



Replacement Part Numbers

Always insist on StarDental parts for best performance.

Description	Item Number
Titan LubeFree Auto Latch Angle	
Titan 3	264146
Titan T.....	263950
Transmission Gear Assembly	263960
End Cap	263962
Cartridge.....	264088
Angle Disconnect Wrench.....	203048
Titan LubeFree Manual Latch Angle	
Titan 3	262738
Titan T.....	263948
Angle Cartridge	262721
End Caps (Pkg. of 2)	259010
End Cap Wrench (Plastic).....	258953
Latch Arms & Screws (Pkg. of 3)	203371
Transmission Gear Assembly	262724

Titan 3 BB Motor to Angle Adaptor	264073
Titan T 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:

- 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.