

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

Non-Sterile
Medical Device



CE 0344

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EC REP

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DO NOT USE FOR ORAL SURGERY

BEFORE OPERATING THE ANGLE, CAREFULLY READ AND FOLLOW ALL OF THESE INSTRUCTIONS. SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE AND OBSERVE ALL WARNINGS AND CAUTIONS.

Indications For Use

Used intraorally by trained dental professionals for endodontic procedures including canal enlargements and sealing, debridement and reamers.

WARNING Under normal operating conditions, air is exhausted from the back of the head of this handpiece. If air is directed into an open soft tissue wound or beneath the mucosa or dermis, injury to the patient could result from air emphysema or air embolism.

WARNING This angle has no internal air or water cooling capabilities. External water for cooling may be required.

NOTICE Any serious incident occurring from the use of this device should be reported to StarDental immediately. If incident occurred in a EU Member State the competent authority must be notified.

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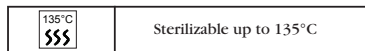
Specifications

The Titan® Endodontic Auto Latch Angle is for standard endo files. The Titan Endodontic Manual Latch Angle is for latch-type files and the Titan 3 Low Speed Handpiece System.

Speed Range:	100-5000 rpm
Recommended Air Pressure:	45 psi
Air Consumption:	2.1 SCFM @ 45 psi @ max. power
Rotation:	Forward or Reverse

Features:

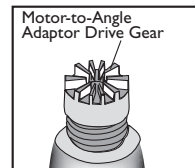
- Field replaceable cartridge, auto latch only
- Easy maintenance
- Quick, easy lubrication and cleaning
- Long-term reliability



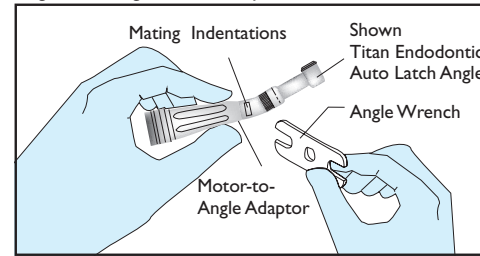
Installation and Operation

1. Thread angle onto Motor-To-Angle Adaptor, **StarDental®** Titan 3 Part #264073 or Titan T Part # 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.

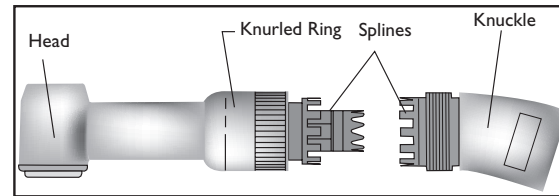


2. Fit angle disconnect wrench, **StarDental** Part #203048, furnished with every angle, to mating indentations on angle neck; tighten securely.

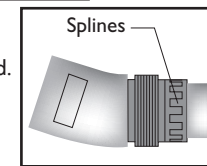


ANGLE ADJUSTMENT

1. Every Titan angle may be repositioned to provide convenient and variable angulation. Loosen knurled ring enough to disengage splines.



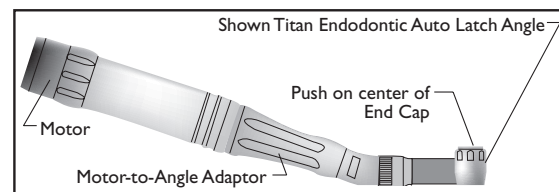
2. Pull head assembly up; turn to desired position.
3. Carefully mesh the splines on the knuckle with the splines of the head.
4. Tighten knurled ring onto knuckle threads until snug.



FILE INSTALLATION & REMOVAL

Note: Before installing file, install motor to the motor-to-angle adaptor; then install angle to motor-to-angle adaptor as described previously.

Auto latch accepts standard endodontic files. Manual latch accepts latch-type files.



Installation:

1. To open the chuck on the manual latch angle, swing the latch out. To open the chuck on the auto latch angle, push on the center of the end cap (see illustration above).
2. Insert the appropriate diameter concentric shank file the full length of the chuck into the angle from the following sizes:
 - .0925" diameter (2.35 mm) Manual Latch Files
 - .149 - .161" diameter (3.8 - 4.1 mm) Auto Latch Files
3. Lock the manual latch firmly by swinging latch back to its original position to secure file shank. Release the end cap on the auto latch to secure file shank.
4. Now, apply light inward force to the dental file. This will help set the chucking mechanism for initial start up.
5. Tug on file to verify proper seating and retention.

Removal:

1. To open chuck, swing manual latch or push auto latch cap.
2. Pull file straight out.

SAFETY INSTRUCTIONS

Please observe all safety rules.

1. Always tug on file after latch is closed to confirm that the file is secured.
2. Before use, verify smooth rotation by operating the angle outside the oral cavity in a safe place.
3. Never operate angle without a file.
4. When using an auto latch angle, never depress end cap while file is rotating.
5. Use only recommended files to prevent damage to the auto latch and in some cases to prevent files from improper or incorrect placement. An improperly clamped file 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 file or a bent file is inserted.

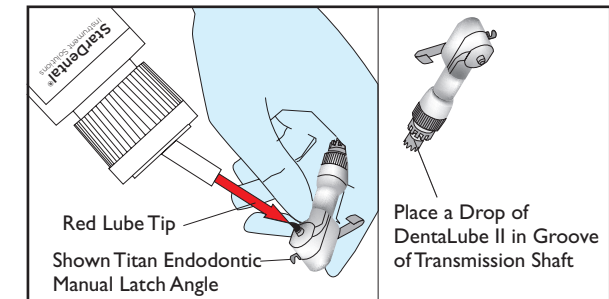
WARNING

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

CAUTION

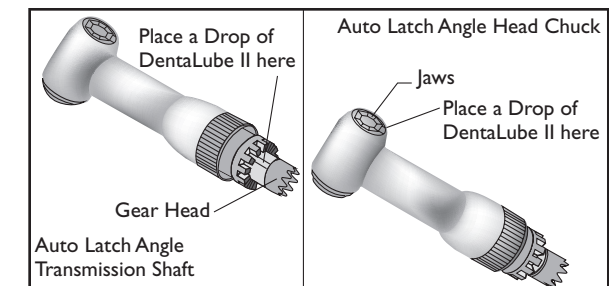
Replace the angle when the handpiece fails to achieve full speed and/or increases sharply in noise level. This is an indication of a failing angle. A failing angle will reduce the efficiency of the handpiece and may result in end cap heat up.

Lubricating



Lubricate Titan Endodontic Angles after each use, and before sterilizing. Lack of lubrication may result in premature wear and malfunction. Assemble the red lube tip, **StarDental** Part #202954, into the DentaLube® II bottle cap. Place a drop of DentaLube II, **StarDental** Part #262539, in the manual latch angle. Spray a short burst of syringe air in the same place, while blocking the hole in the rear of auto latch head with finger. This action will force lubrication internally. Place a drop of DentaLube II in the groove of the transmission shaft of the manual latch.

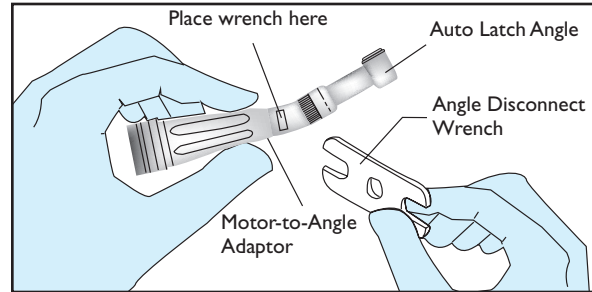
Place a drop of DentaLube® II in the auto latch angle in both locations as shown below.



Lubricating Continued

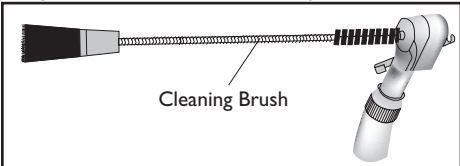
Reconnect angle to motor-to-angle adaptor, and tighten securely with angle disconnect wrench, **StarDental®** Part #203048. Run handpiece for 20 seconds.

Note: Do not exceed motor speed of 5,000 rpm.



Cleaning & Sterilization

CAUTION	It is the responsibility of the user to use only FDA compliant sterilizing equipment and accessories that are capable of meeting the manufacturers recommendations below.
CAUTION	Do not exceed 135°C Do not use: <ul style="list-style-type: none"> • dry heat sterilizer • immersion techniques • detergents • chemical disinfectors • cold sterilizers • sterilizer bags containing disinfectants • surface wipes • hand soaps • ultrasonic cleaners • surface sprays • surgical milk
Limits on Reprocessing	Repeated processing has minimal effect on these angles. End of life is normally determined by wear and damage due to use.

INSTRUCTIONS	
WARNING	The angle must be cleaned and sterilized before first use and between patient use.
Containment and transportation:	It is recommended that angles are reprocessed as soon as is reasonably practical following use.
Preparation for cleaning:	Remove file from angle and disconnect angle from motor-to-angle adaptor.
Cleaning Automated:	Washer-disinfectors are not recommended.
Cleaning-Manual:	Wear puncture resistant gloves to prepare endodontic angle for sterilization. Clean all external surfaces with a cotton sponge soaked in isopropyl alcohol. Rinse with tap water. Cleaning the Endodontic Chuck Inside Angle:  Clean at least weekly by inserting round end of cleaning brush provided, StarDental® Part #203043, straight into chuck and withdraw. Note: Do not rotate brush while inserting or removing. After removing brush, tap head of angle to expel debris from chuck.
Lubrication:	Lubricate - See 'Lubrication' instruction section
Disinfection:	Use steam sterilization exclusively for complete sterility as outlined below.
Maintenance:	Angle should be routinely maintained, checked for corrosion, worn parts, etc. and should be replaced on an as needed basis.
Inspection & function testing:	See Installation, Operating Recommendations, and/or Troubleshooting sections of this manual.

Cleaning & Sterilization Continued

Packaging:	Single: A standard sterilization packaging material must be used. Ensure that the pack is large enough to contain the item without stressing the seals.	
Wrapped Instrument Sterilization:	Gravity Type Autoclave:	Pre-Vacuum Autoclave:
	<ul style="list-style-type: none"> • Minimum of 15 minutes at 132° C • Minimum of 30 minutes at 121° C 	<ul style="list-style-type: none"> • Minimum of 4 minutes at 132° C
	Do not exceed 135° C	
Drying:	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.	
Storage:	Store in bag after sterilization until ready to use.	
Additional Information:	Do not exceed the sterilizer manufacturer's guidelines for load capacity. Use only paper or paper/plastic bags.	
Manufacturer Contact:	See first or last panels of this manual.	

Troubleshooting

Problem:	FILE LOCKS IN AUTO LATCH OR MANUAL LATCH
Cause:	Use of non-ISO file shanks
Correction:	Always use ISO files.
Problem:	FILE SLIPS IN AUTO LATCH OR MANUAL LATCH
Cause:	Debris build-up in chucking or latching mechanism
Correction:	Aerate with syringe air or clean with brush.
Cause:	Faulty manual latch
Correction:	Replace with new latch components.
Problem:	LOW POWER
Cause:	Air leaks in motor
Correction:	Replace gasket, refer to Titan Motor Instruction Manual
Cause:	Debris build-up
Correction:	Refer to Cleaning & Lubricating.
Cause:	Faulty angle
Correction:	Replace cartridge.
Note:	Always use ISO files to prevent locking and slipping of files. If a problem persists, contact dealer for further assistance or StarDental Customer Service at 1-866-DTE-INFO.

Replacement Part Numbers

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

Description	Item
Titan Endodontic Manual Latch Angle.....	262571
Titan Endodontic Auto Latch Angle.....	262570
Latch Arm Assembly & Screw for Cleaning Brush.....	203043
DentaLube II	262539
Lube Tip for use with DentaLube II (Pkg. of 2).....	202954
Titan 3 Motor-to-Angle Adaptor	264073
Titan T Motor-to-Angle Adaptor	263970
Angle Disconnect Wrench	203048

Important Notice About Returning Product To 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.

Limited Warranty

StarDental® Titan® Endodontic Angles are warranted against defects in material and workmanship for 3 months 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.

