

Titan® Ball Bearing Friction Grip Chuck Angles

Instruction Manual
Includes Lubricated and LubeFree

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

Non-Sterile
Medical Device

CE 0344

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 drilling and preparation of dental cavities for restoration, such as fillings, disking, cavity and crown preps, polishing, post and pin drilling and pin setting.

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.

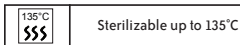
NOTICE Any serious incident occurring from the use of this device should be reported to StarDental immediately. If incident occurred in a EU Member State the Competent Authority must be notified.

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Features

- Rated for use with StarDental Motors and Attachments
- Friction Grip Auto Contra Angles
- Smooth Running, Low Friction Performance
- Field Replaceable Cartridges and Transmission Gears
- Easy Maintenance
- Long Term Reliability
- Steam sterilization: 275° F (135° C) max.

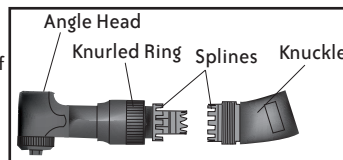


Sterilizable up to 135°C

Motor	5K	5K	20K	20K	20K
Accessories	MTA	16:1 Endodontic Motor to Angle Adapter	MTA	Torque Multiplier & MTA	Torque Multiplier & 16:1 Endodontic Motor to Angle Adapter
Ratio	1:1	16:1	1:1	4:1	64:1
Max Allowable RPM	5,000	300	20,000	5,000	300

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.

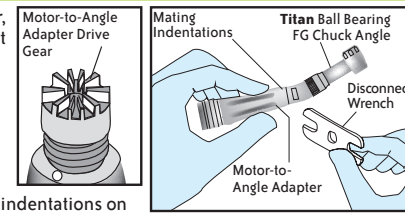


Angle Installation

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

NOTE: If angle does not seat on adapter, gears are not meshed correctly. Remove angle; spin motor-to-angle adapter 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.



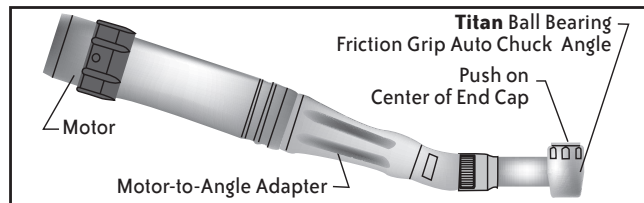
Bur Installation and Removal

NOTE: A concentric .0630" diameter (1.60 mm) cylindrical shank (ISO 1797-1, Type 3) bur should be used.

NOTE: Before installing bur, install motor to the motor-to-angle adapter; then install friction grip chuck angle to motor-to-angle adapter as described in Angle Installation.

INSTALLATION into the Friction Grip Auto Chuck Angle

1. Insert bur into autochuck until resistance is felt.



2. Depress autochuck end cap button and continue to feed-in bur until it clicks and stops.
3. Release end cap button. Now, apply light inward force to the dental bur. This will help set the chucking mechanism for initial start up. (Always tug on bur after it has been installed to confirm that it is secured.)

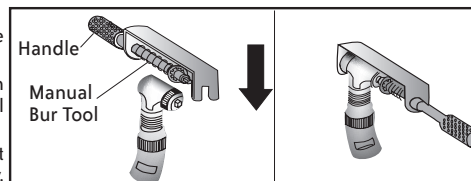
REMOVAL from Auto Chuck

Grasp angle firmly so that your thumb touches the end cap and push until a slight click is felt. Pull bur straight out, then release end cap.

CAUTION Never depress the 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 heat-up and/or loss of bur retention.

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 Manual Chuck

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

SAFETY INSTRUCTIONS

WARNING

To minimize risk of serious injury:

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

CAUTION

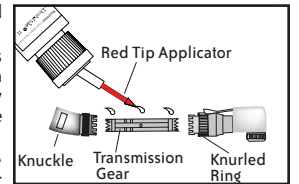
To minimize risk of injury or damage to angle:

- Replace cartridge when handpiece does not run at full speed or runs noisily.
- Follow these safety instructions:
 - Confirm bur is secure by tugging on it after it is loaded
 - Verify concentric rotation by operating handpiece outside oral cavity. Do not use if it does not run concentrically or runs with excessive noise.
 - Do not operate angle without an installed bur.
 - Always use burs with overall length of less than 24mm. Shank length must be at least 7.3mm.
 - When using auto chuck angle, never depress end cap while bur is rotating.

Lubrication - For Lubricated Angles ONLY

Lubricate the Transmission Gear Daily

1. To disassemble angle: unthread knurled ring. Remove knuckle and transmission gear from angle head.
2. Place a drop of DentaLube II in the two transmission gear joints between the gear and gear housing and a drop of DentaLube II in the hole in the center of the gear housing. Rotate the gears to allow DentaLube II to work into the bearings. Apply a light coat of DentaLube II to the gear teeth.
3. To reassemble angle, insert transmission gear into angle head. Engage splines of knuckle with mating splines of head to achieve proper alignment.
4. Tighten knurled ring onto knuckle threads until snug.
5. Place angle on motor, connect to handpiece tubing, insert bur and run for 20 seconds to evenly distribute lubricant and disperse any residual lubricant.
6. Proceed to Cleaning & Sterilization procedures before use.



NOTICE LubeFree Angles denoted by having 3 rings on neck are lubricated for life. Never clean ultrasonically or immerse in solvent that would dilute the lubricant.

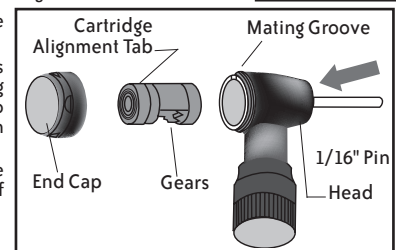
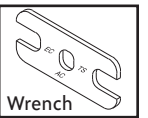
Cartridge Replacement

REPLACEMENT of the Auto Chuck Cartridge

1. Unthread knurled ring.
2. Remove knuckle and transmission gear from head.
3. Unthread end cap using end cap wrench, **StarDental Part #203048**.

NOTE: Remove transmission gear first before removing cartridge from head.

4. Pushing from the front of the head, remove the cartridge by using a 1/16" pin.
5. Clear housing of all dirt, debris, and/or remaining parts of previous cartridge. Insert new cartridge by installing gear and small bearing end first. Slide cartridge into housing with alignment tab of cartridge mating with groove in head. Install end cap.
6. To reassemble angle, insert transmission gear into angle head. Engage splines of knuckle with mating splines of head to properly align.
7. Tighten knurled ring onto knuckle threads until snug.



REPLACEMENT of the Manual Chuck Cartridge

1. Unthread knurled ring.
2. Remove knuckle and transmission gear from head.
3. Unthread end cap using plastic wrench.

NOTE: Remove transmission gear first before removing cartridge from head.

4. At rear of head, push out old cartridge using a 3/32" pin.
5. Clear housing of all dirt, debris, and/or remaining parts of previous cartridge. Insert new cartridge with alignment tab of cartridge and gears toward end cap and align with mating groove in head. Install end cap.
6. To reassemble angle, insert transmission gear into angle head. Engage splines of knuckle with mating splines of head to achieve proper alignment.
7. Tighten knurled ring onto knuckle threads until snug.

