**Titan® Low Speed Handpiece Motor Instruction Manual**

**Division of DentalEZ Group**
Lancaster, PA 17601, U.S.A.
Printed in the U.S.A.

**Titan® Low Speed**
HP2 7DY, ENGLAND

**Division of DentalEZ Products (GB) Ltd.,**
Cleveland Way
Hemel Hempstead. HP2 7DX, ENGLAND

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

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

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**Indications For Use**
The Titan 5K and 20K low speed dental motors are used by trained dental professionals to facilitate various dental procedures requiring cutting, drilling, polishing and pin setting.

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**Contents**
- Specifications
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- Installation - Non Swivel Motors
- Sterilization
- Troubleshooting
- Application Guide
- Warranty

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**Specifications**

5,000 rpm Motor: Titan® 3 (StarDental® Part #262261), Titan 3 for use with Extended Straight Attachment (ESA) (StarDental® Part #262008), Titan Fixed Back End (StarDental® Part #262499), or Titan T (StarDental® Part #262391)

20,000 rpm Motor: Titan 3 (StarDental® Part #262262), Titan 3 Fixed Back End (StarDental® Part #262410), or Titan T (StarDental® Part #262391)

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**Operation**

The 120° rotation speed adjustment ring sets direction and speed. To run motor forward at full speed, rotate ring towards the letter ‘F’ while operating the foot control. Rotate to the letter ‘R’ to yield full speed in reverse. Very slow speed by rotating ring in either direction towards center. Note the small depression for the current setting. After setting, the motor runs at current speed and direction until reset. Pausing the motor is not needed to alter direction or speed using the ring.

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**Cleaning**
The Titan Motor is Lubefree and, therefore, requires no lubrication.

At times debris from the delivery system’s drive air tubing collects in the motor. This build-up may cause sluggish motor operation. To ease, place 3 drops of DentalLube II, StarDental Part #262359 into the drive air tube of motor, and alternately operate the motor in forward and reverse.

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**Sterilization**

1. After each patient, flush air by running handpiece motor for 20 seconds.
2. Remove attachment.
3. Clean all internal surfaces at rear of handpiece motor with a cotton swab soaked in isopropyl alcohol until clean.
4. Clean all external surfaces using a small toothbrush with isopropyl alcohol.
5. Dry thoroughly.
6. Place handpiece motor and swivel in sterilization bag – use paper or paper/plastic bags only. Follow the sterilization guidelines as stated by the manufacturer of your sterilizer.
7. Remove handpiece motor from sterilizer after drying cycle ends and allow to cool in bag.

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**Installation - Non Swivel Motors**

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**Installations - Swivel Motors**

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**Cleaning the Swivel, the Mating Motor Part**
To optimize operation of the swivel connector, clean all internal surfaces of the motor with a cotton swab soaked in isopropyl alcohol until clean. Clean area around bearing/spring assembly at rear of swivel using isopropyl alcohol and a toothbrush. Dry both using syringe air.

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**Note:**
If delivery unit has oil mist lubrication, detach and dry; motor needs no lubrication.

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**Notice:**
To prevent damage to bearings, before installing always check drive pressure by using air pressure gauge. StarDental Part #262591 (1/6-Line) between swivel and tubing and obtain a reading. Adjust air pressure at delivery head until gauge reads 40-90 psi while operating motor in full forward position and with foot control completely depressed.

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**Installation - Swivel Motors**

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**Note:**
If delivery unit has oil mist lubrication, detach and dry; motor needs no lubrication.

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**Notice:**
To prevent damage to bearings, before installing always check drive pressure by using air pressure gauge. StarDental Part #262591 (1/6-Line) between motor and tubing and obtain a reading. Adjust air pressure at delivery head until gauge reads 40-90 psi while operating motor in full forward position and with foot control completely depressed.

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1. Select the motor appropriate for tubing based on power requirements. Examine connection of the motor and swivel tubing configuration as these must match configuration of delivery system tubing.
PROPHYLAXIS
RPM Range: 1,000 to 3,000
Systems Configuration Options:
- Motor-to-Angle Adapter
- Ball Bearing Auto Latch Angle
- 3 Star Prophy Angle

- 20,000 RPM Motor
- Torque Multiplier
- Motor-to-Angle Adapter
- 5 Star Prophy Angle

GRINDING & TRIMMING
RPM Range: 20,000 to 25,000
Systems Configuration Options:
- Motor-to-Angle Adapter
- Straight Nose Cone

POST & PIN DRILLING
RPM Range: 1,000 to 1,500
Systems Configuration Options:
- Motor-to-Angle Adapter
- Ball Bearing Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

- Ball Bearing Auto Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

PIN SETTING
RPM Range: 1,000 to 1,500
Systems Configuration Options:
- Motor-to-Angle Adapter
- Ball Bearing Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

- Ball Bearing Auto Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

ENDODONTIC (Canal enlargements)
RPM Range: 20,000 RPM
Systems Configuration Options:
- Motor-to-Angle Adapter
- Ball Bearing Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

- Ball Bearing Auto Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

ENDODONTIC (Condensing gutta percha)
RPM Range: 25,000 to 26,000
Systems Configuration Options:
- Motor-to-Angle Adapter
- Ball Bearing Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

CATEGORIES REMOVAL
Systems Configuration Options:
- 5,000 RPM Motor

- Motor-to-Angle Adapter
- Ball Bearing Friction Grip Cap Angle OR 263906 262705 263947 263950
- Ball Bearing Auto Latch Angle

- Ball Bearing Auto Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

- Ball Bearing Auto Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

FINISHING (Cavity and crown prep)
RPM Range: 10,000 to 20,000
Systems Configuration Options:
- 20,000 RPM Motor

- Motor-to-Angle Adapter
- Ball Bearing Friction Grip Cap Angle OR 263906 262705 263947 263950
- Ball Bearing Auto Latch Angle

- Ball Bearing Auto Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

FINISHING / POLISHING
(Smooth/composite, gold/margin)
RPM Range: 10,000 to 20,000
Systems Configuration Options:
- 20,000 RPM Motor

- Motor-to-Angle Adapter
- Ball Bearing Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

- Ball Bearing Auto Latch Angle OR 262505 262708 263947 263950
- Ball Bearing Auto Latch Angle

TRoubleshooting
Problem: LACK OF POWER

Correction: Air pressure

Correction: Verify proper motor air pressure. Refer to applicable Installation section.

Correction: Straighten tubing inside and outside delivery head.

Correction: Swivel or Fixed Back End Motor not threaded firmly onto tubing

Correction: Refer to applicable Installation section.

Correction: Brittle swivel or Fixed Back End Motor siliconic rubber seal.

Correction: Replace siliconic rubber seal for 2/3-line swivel with StarDental Part #202897.

Correction: Swivel O-rings worn

Correction: Replace siliconic rubber seal for 2/3-line swivel with StarDental Part #202897.

Correction: Debris build up in motor or attachment

Correction: Clean motor and attachment. Refer to Cleaning section in this manual and applicable attachment's manu(s).

Problem: SWIVEL WILL NOT DISENGAGE FROM MOTOR

Correction: Place 3 drops of DentaLube II, StarDental Part #262262, into the swivel/tubing connector. Rotate swivel to circulate lubricant. Slow motion disengage swivel. Contact dealer if unable to disengage swivel. To prevent occlusion, refer to Cleaning.