

# ATHENA CHAMPION™

## 20K ELITE TYPE 20,000 RPM LOW SPEED MOTOR AND ATTACHMENTS

### INSTRUCTIONS FOR USE

*Thank you for selecting the Athena Champion 20K Elite Type Low Speed Motor. Athena Champion products are engineered and manufactured to provide exceptional performance, reliability and precision. Please take a few minutes to thoroughly read the instructions for use to obtain peak performance and longevity from your new handpiece.*

### GENERAL INFORMATION

**Important:** *The Food and Drug Administration and Centers for Disease Control and Prevention strongly recommend that handpieces be resterilized after each patient use.*

- Do not operate above 45 PSI.
- Operate only when the forward/reverse ring is in the full forward or full reverse position.
- Do not change rotational direction (turn forward or reverse ring) when the handpiece is operating.
- Lubricate and maintain your motor in accordance with the instructions. Proper care and maintenance will extend the life of your 20K Elite Type Motor.
- The Athena Champion 20K Elite type handpiece and attachments are designed to operate at a maximum of 20,000 RPM or less.

### HANDPIECE CONNECTION

Prior to connecting the handpiece, check that all tubing supplying the handpiece hose is properly connected with the dental unit. Make sure there are no restrictions in any of the lines when connecting handpiece to tubing. Make sure the small metal tubes on the rear of the motor are properly seated in the matching holes of the tubing fitting and the gasket is in place. An air leak will be apparent if the motor is improperly



(Figure 1)

connected and the motor will not run at the correct RPM. Operate the handpiece at 40-45 PSI (measured at the connector). The 20K delivers maximum speed (20,000 RPM) and torque when operated with clean, filtered moisture-free air. The forward/reverse ring is located at the base of the motor (black ring). Turn the ring fully in the direction desired—clockwise for forward and counterclockwise for reverse.

## MOTOR AND ATTACHMENT USE

The 20K Elite Type (20,000 RPM) air motor can be used with any standard E type nosecones or contra angles which adhere to the ISO (International Standards Organization) specifications. Using a standard 1:1 (non-reduction) nosecone or contra angle will produce bur rotational speeds equal to the motor (20,000) suitable for general dental purposes but is not appropriate for prophylaxis. A gear reduction contra angle or nosecone may be used to produce different RPM while maintaining optimum torque. As an example, a 4:1 reduction nosecone would be appropriate for use on the motor to produce an RPM (5,000) appropriate for prophylaxis.

To remove a nosecone or contra angle from the 20K motor, depress button at the front of the motor housing and pull the attachment and it will separate from the motor (Figure 2).

To install a nosecone or contra angle, simply guide the attachment over the coupling and push it firmly down until it seats. Gently pull on the attachment to ensure it is secure on the motor. Directional control is established by moving the control ring to the proper position (black ring at rear of housing). Rotate the ring fully clockwise for forward and fully counterclockwise for reverse. Keeping the ring in any other position will diminish the effectiveness of the 20K Elite Type motor and may cause the motor to stop completely.



(Figure 2)

## INFECTION CONTROL/STERILIZATION

**Caution:** *Wear mask, gloves and protective eye wear.*

1. Wash the exterior surfaces with germicidal detergent/cleanser or water-based phenol soaked gauze. Do not use cold sterilization solutions containing gluters or chlorine. Rinse with clean tap water. Dry using a 2 x 2 gauze sponge. It is not recommended to totally submerge the 20K Elite Type Motor in water or solutions. Do not place in an ultrasonic bath.
2. Lubricate motor and/or attachments with Clave-N-Spray, one or two drops of Champ-Lube™ 20+ or equivalent product which will withstand autoclave temperatures/pressure.
3. For the 20K motor, spray or drop lubricant/cleaner into the drive air hole at the back of the motor. For straight nosecones or contra angles, spray or drop cleaner/lubricant into the back end opening and let it run down inside of wall.
4. Connect the motor to an air source or attach to a purge unit.

5. **Run the motor full speed for 30-40 seconds which will push the cleaner/lubricant down throughout the nosecone or contra angle and motor.** This will expel all excess lubricant.
6. Remove the bur from the nosecone or head from the contra angle. Before autoclaving, remove any attachments from the motor. Place the handpiece in a paper sterilization pouch, or a sterilization pouch with at least one paper side for steam autoclave or chemiclave. Sterilize at 250°F (121°C) and 128 Kpa for a maximum of 30 minutes. Do not exceed 275°F (135°C). Do not let the 20K Elite Type air motor or attachments remain in pouch under wet or damp conditions after sterilization. Such conditions can result in corrosion of internal parts and shorten the life of the 20K Elite Type air motor or attachments.
7. After removing the motor from the autoclave or chemiclave, allow it to return to ambient room temperature. When the 20K Elite Type motor or attachments has reached room temperature they are ready to be used.

*Frequent cleaning and lubrication are essential to long bearing life.*

***Never autoclave a nosecone or other attachments with bur in place.***

**Caution:** *Continued use of defective attachments may permanently damage your motor. Do not change rotational direction when the motor is running.*

## ATTACHMENTS



(Figure 3)

**Contra Angles:** Athena Champion contra angles fit “E” type motors in the following configurations: 1:1, 4:1, 16:1, 64:1 reduction. A 16:1 reduction is also offered to fit the Midwest Shorty or Rhino (Figure 3).



(Figure 4)

**Nosecones:** Athena Champion heavy duty straight nosecones are available in either 1:1 or 4:1 configurations for “E” type motors, Midwest Shorty and Rhino XP, and Star Titan motors (Figure 4).

## SPECIALIZED CONFIGURATION



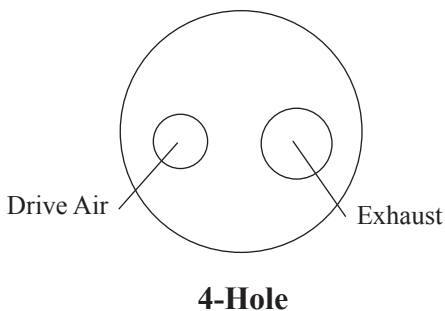
(Figure 5)

**Endodontic System:** Utilize the 20K Elite Type Low Speed Motor with a 64:1 Contra Angle and Latch Head. This contra angle reduces the motor to 312 RPM for increased doctor control and less patient chair time. Choose from three latch heads— standard, ball bearing or 1/4 turn latch— can be used with nickel titanium Endodontic files (Figure 5).

The Athena Champion 20K Elite Type air motor comes in a 4-hole configuration. To order, please refer to the chart below.

<i>Model</i>	<i>RPM</i>	<i>Connector</i>	<i>External Spray</i>	<i>Part Number</i>
20K Elite Type	20,000	4-Hole (Midwest Type)	No	40489

## PORT CONFIGURATION



**Warranty:** Athena Champion warrants its products to the original purchaser against defective workmanship and materials under normal installation, use and service for one year on the 20K series motors, heavy duty nosecones and contra angles. For warranty repair, send the product with copy of the original invoice to your dealer and your product will be repaired promptly and returned to you.

Midwest Shorty and Rhino XP are registered trademarks for DENTSPLY. Midwest and Star Titan is a registered trademark of DEN-TAL-EZ. Athena Technology, Inc. is a registered trademark and Clave-N-Spray is a trademark of Athena Technology, Inc.

# ATHENA CHAMPION™

2621 Corrinado Court • Fort Wayne, IN 46808  
(800) 253-1771 • (260) 373-1917 • FAX (260) 373-0395