Now in a more compact size, with higher safety and flexibility for different installation styles, NSK’s all new “NLZ” can help any user of air driven handpieces convert to electric and enjoy the full benefits of this smart system. The unique technology of “NLZ” employs an all-new micromotor system and expands the possibilities of dental treatment. This original concept from the leading handpiece manufacturer provides cutting-edge features applicable to a wide-range of endodontic treatments with enhanced comfort and safety. A big change in treatment environment is brought with only a minor addition to the current equipment in your office.

- Flexible Installation Style with Superior Visibility & Operability in a Compact Design
- Superior* Performance with Compact Size
- NSK Safety Functions, ‘Contra-Check Function’ & ‘Contra-SAFE Function’
- Efficient Endodontic Treatment thanks to ‘Reciprocating Function’ and WAVEONE® GOLD files

*Compared to our existing model
Every part has been made more compact to minimize the required space for installation. The main unit fits under the counter and as only the control unit is visible, the area around the dentist chair remains neat and tidy.

Separate control unit from main unit

Superior visibility, superior operability

A completely new and unique product design provides considerable improvement in visibility and operability of control unit. Easy and intuitive for anyone to use.

A Totally New Installation Style only from NSK

Superior Performance of Motor with Compact Size

New technology surpasses standard motors

POWERFUL
In this unique technology, the water and air lines that used to bypass the motor have now been integrated with the motor. This new, more efficient configuration makes maximum use of the limited space and is lighter and more powerful than before.

EFFICIENT
NLZ employs a simple non-layered coil instead of a standard layered coil. The coils are as compact as possible, shortening the pathway for heat generating current. As a result it generates less heat without reducing the output power.

LESS HEAT
The conventional magnet rotor has been replaced with an improved magnet rotor. More powerful rotation is achieved in the same amount of space by reducing weak magnetic areas.

FLEXIBLE INSTALLATION STYLE
SUPERIOR VISIBILITY & OPERABILITY

More powerful, yet lighter and with less heat generation than our existing models. This is achieved by several technologies such as newly improved magnet rotor, integrating motor and water/air lines and simplified coils.

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Fig.1 Max Torque comparison

35 30 25 20 15 10 5 0
0 100 200 300 400 500 600

Temperature increase

Time (sec)

0 0.5 1 1.5 2 2.5 3 3.5 4 4.5

Our existing model

Magnet rotor of our existing model

Improved magnet rotor

_comparison

Based on internal data.

*Compared to our existing model.

More powerful than standard motors

Superior visibility, superior operability

Easy and intuitive for anyone to use.

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NSK Safety Functions

One of the possible problems with electric attachment treatment is overheating of the head, which is mainly caused by deterioration of the gears and lack of proper maintenance. However, it was hard to check the electric attachment before use, meaning the problem first emerges when it is used.

Contra-Check Function (Proprietary to NSK)

“Contra-Check Function” helps detect abnormalities caused by deterioration of the electric attachment and insufficient maintenance before use. Our advanced function is the result of NSK’s relentless pursuit of safe treatment.

1. Connect the electric attachment to the motor, no load applied.
2. Press the Check key.
3. Check out the result of the Contra-Check Function on the screen.

- No error: Please continue to use as it is.
- Maintenance (lubrication) required: The motor is operated but its rotor will automatically slow down and stop if the “Handpiece Overheat Prevention Function” is on.
- Repair required: The motor becomes forcibly inoperable.

Contra-Restriction Function

If the result of Contra-Check Function shows “Oil” or “NG”, the motor will automatically slow down and stop.

Contra-SAFE Function (1:5 increasing electric attachment only)

It stops the motor if heat generation is estimated on the handpiece.

For Safer and More Efficient Endodontic Treatment

In addition to the Auto Reverse and Auto Stop functions, a wide range of new features are incorporated for safer and more efficient endodontic treatment.

Endodontic reciprocating function

Compatible with the Dentsply Sirona Endodontics reciprocating file: WaveONE™ GOLD. WAVEONE®, from Dentsply Sirona, sets new standards in Endodontics, by bringing simplicity to the root canal shaping procedure, using only one NiTi instrument per root canal in most cases. The global shaping time is thus decreased by up to 40% versus a traditional continuous rotary technique. The new NLZ Endo motor has a reciprocating function which allows to work in the WAVEONE™ reciprocating mode. A large rotating angle in the cutting direction provides high efficiency, whereas a smaller angle in the reverse direction allows the WAVEONE® file to safely progress along the canal path, whilst reducing the risk of a screwing effect and file breakage.

Endo torque calibration function

Performing the “Contra-Check Function” shown in the left also enables torque calibration. This function measures the no-load current values and corrects the torque accordingly, resulting in greatly enhanced safety in endodontic treatment.

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A Unique Technology Reducing the Risk of Water Clogging

Simplified pipe configuration

Conventional products include several pipes, which crank the water flow supplied from the rear of the motor. The NLZ uses a simple straight pipe design instead of a crank, reducing the risk of water clogging in the rear section of the motor.

Contaminants are stopped by a microfilter

There is a water filter with 0.3 mm diameter mesh fitted within the tubing connector at the back of the main unit to catch debris and foreign particles in the water and prevent clogging.

Options

<table>
<thead>
<tr>
<th>MODEL</th>
<th>PRODUCTS</th>
<th>ORDER CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NLZ</td>
<td>MOUNTING PLATE</td>
<td>NLZ CDL</td>
</tr>
</tbody>
</table>

For more information, please visit the website.