E3 ROTARY SYSTEM

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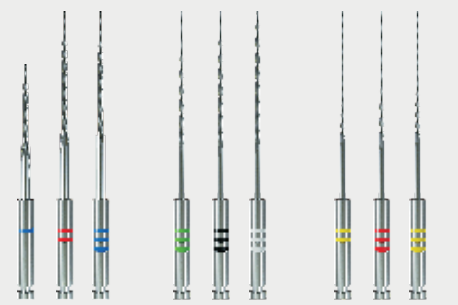

Endostar E3 Basic Rotary System | Endostar E3 Big Apical Rotary System | Endostar E3 Small Apical Rotary System

Instruction for use

Endostar E3 Rotary System

Endostar E3 Basic Rotary System, Endostar E3 Big Apical Rotary System, Endostar E3 Small Apical Rotary System

1. Important information regarding the system

Endostar E3 Rotary System is a set of modern rotary files used for effective and efficient root canal preparation. They are manufactured from a highest quality nickel-titanium alloy, which provides durability and flexibility. The files can easily fit even strongly curved canals, the alloy is flexible enough to minimize the risk of canal perforation. The modified shape of the NiTi S file with two 90-degree cutting edges ensures efficient cutting, transport of debris up the canal and decreases preparation time. The inactive tip allows safe preparation, minimizing the risk of a via falsa, perforations and zipping. Easy-to-read taper value (number of stripes on the handle) and ISO size (colored stripes) enables effortless use of the instruments.

The Endostar E3 Basic Rotary System should be used with normal width, straight or slightly curved canals.

The Endostar E3 Big Apical Rotary System is not a separate rotary system. This is an extension of the Endostar E3 Basic Rotary System and is used for shaping wide canals, for which final preparation to size 30 is not sufficient. It should always be preceded by initial preparation performed with the Endostar E3 Basic Rotary System.

The Endostar E3 Small Apical Rotary System is not a separate rotary system. This is an extension of the Endostar E3 Basic system for use with very narrow and curved canals. The canal should be first shaped with the use of Endostar E3 Basic Rotary System.

- A handpiece, which can provide 150-300 rpm, should be used. The operating speed of the handpiece should be constant throughout the shaping process.
- Do not apply excessive force. An up-and-down motion should be used when operating the files.
- Shaping time should be as short as possible.
- Always use a lubricating agent when shaping the canal.
- The files are very sharp and should be used very carefully, with little force and without excessive "pushing" down the canal.
- Operate the instruments and handpieces according to their operating instructions (especially torque and speed settings).
- Use the type and amount of instruments that is truly needed in a given clinical situation.
- Control the number of times that the instrument was used.
- Before using the instruments, be sure to see them working outside the oral cavity to check for deformations, and/or cracks.
- Dispose of as medical waste.

2. Recommended movements

- **Rotary movement** - the instrument rotates continuously 360° in a clockwise direction (CW - Clock Wise).

3. Recommended torque settings

System	File number	Standard torque (Ncm)	Advanced torque (Ncm)
E3 BASIC	1 (08/30)	2.4	3.0
	2 (06/25)	2.1	3.0
	3 (04/30)	0.9	2.1
E3 BIG APICAL	1 (4/35)	2.1	3.0
	2 (4/40)	2.1	3.0
	3 (4/45)	2.1	3.0
E3 SMALL APICAL	1 (06/20)	0.9	2.1
	2 (04/25)	0.9	2.1
	3 (04/20)	0.9	2.1

Files should be used with motor speed between 150 and 300 rpm.

The torque settings indicated in the table above are only suggestions and may vary according to each user preferences and endodontic motor capabilities. Do not exceed the upper torque limit which is different for each instrument. If precise torque settings cannot be set, and only manufacturer-specific torque levels are available, be sure to select one that does not exceed the recommended limit.

4. Recommended number of usage

Maximum of 5-10 times, depending on the size (see Table), provided that visual inspection performed by the practitioner prior to use shows that the instrument remains undamaged, is not bent, deformed, does not show signs of blade wear and can be securely attached to the handpiece. If the file has been subjected to high torsion force, especially in highly curved canals the instrument should be used only one.

	E3 Basic			E3 Big Apical			E3 Small Apical		
File no	**1**	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
Number of times that the instrument can be used	10	5	5	5	5	5	5	5	5

> *Prolonging the life of the instrument more than recommended may result in the blade breaking.*
> *Dispose the file which appear to be defective.*

5. Clinical instruction for use

Rinse the canal each time after the file is used.
Clean the files of any debris frequently.

Endostar E3 Basic Rotary System

A. Cavity preparation.
Prepare the cavity. Use a rubber dam.
B. Location of canals.
Locate all canal orifices. Lubricate the canals.
C. Specifying the working length of the canal.
Specify the working length of the canal using your method of choice.
D. Preparing the canal with hand instruments.
Continue the negotiation of the root canal with hand files up to size 20. This way, you will create a glide path for rotary instruments. This will also reduce the risk of breaking the rotary file.
E. Preparation of the upper part of the root canal.
Shape the canal orifice with the Endostar E3 Basic File No. 1 (08/30) until you reach a maximum of 1/2 of the total canal depth. Do not use this file when the canal is highly curved (in such cases use the Endostar E3 Small Apical Rotary System).
F. Preparation of the middle part of the root canal.
Begin to work with file No. 2 (06/25). Perform up-and-down movements. Shape the canal up to 2/3 of the working length. Inspect the working length with the size 15 hand file and apex locator. Next, insert file No. 2 at full working length.
G. Shaping of the apical part of the root canal.
Use file No. 3 (04/30) to widen the apical part of the canal until full working length is reached. Confirm that full working length was reached with hand file size 15 and apex locator. Next, finish work with a nickel-titanium hand file size 30. Check if the file can be inserted at full working length without obstructions, and if wedging can be felt. If a wider preparation of the apex is needed, continue to work with larger hand instruments size 35, 40 etc. or consider using the Endostar E3 Big Apical Rotary System.

Endostar E3 Big Apical Rotary System

A. After preparation of the canal with the use of file No. 3 from the set of Endostar E3 Basic is completed, evaluate apex width. For this purpose, use a size 30 NiTi hand file. Insert it at full working length and gently twist it. If the file rotates - this means that the canal is wider than size 30 and should be expanded.
B. Shape the canal with instrument No. 1 from the Endostar E3 Big Apical Rotary System (04/35) until full working length is reached.
C. Shape the canal by inserting instrument No. 2 (04/40) at full working length.
D. Check the width of the tip using a size 40 NiTi hand file. Insert the instrument at full working length and apply a gentle twist. If the instrument does not rotate, stop shaping the canal. However if the instrument still rotates - continue with shaping.
E. Shape the canal using instrument No. 3 from the Endostar E3 Big Apical Rotary System (04/45) until you reach full working length.
F. Check the apex width with a size 45 NiTi hand file. Insert the instrument at full working length and apply a gentle twist. If the instrument does not rotate, stop shaping the canal. However if the hand file does rotate, continue shaping with larger-sized NiTi hand files such as size 50, 55, 60 etc.

Endostar E3 Small Apical Rotary System

A. Prepare the cavity, locate the orifices and specify the working length of the canal. Next, prepare the canal with hand instruments as specified in the Endostar E3 Basic Rotary System clinical instruction.
B. Preparation of the upper part of the root canal.
Shape the canal orifice with the use of the Endostar E3 Basic Rotary System No. 1 (08/30) file until delicate resistance is detectable. Do not apply excessive force to the instrument especially in highly curved canals.
C. Preparation of the middle portion of the root canal.
Begin to work with file No. 2 from the Endostar E3 Basic Rotary System (06/25). Perform up-and-down movements. Work to maximum of 1/2 of working length. Inspect the working length with the size 15 hand file and apex locator. Next, with the use of file No. 3 which is part of the E3 Basic Rotary System (04/30), try to go a few millimeters deeper down the canal. If the file cannot go deeper down the canal, do not force it. Finish the preparation with the Endostar E3 Basic Rotary System and continue with the Endostar E3 Small Apical Rotary System.
D. Shaping of the apical part of the root canal.
With the use of file No. 1 from the Endostar E3 Small Apical Rotary System (06/20) shape the canal a few millimeters down. Do not force the instrument down the canal. Take file No. 2 (04/25) and continue to shape the canal. Stop working 2 mm before reaching full working length. Use file No. 3 (04/20) until full working length is reached. File No. 3 (04/20) allows shaping even of very narrow and extremely curved canals. Next, go back to file No. 2 (04/25) and use it until full working length is reached.
E. Widening the root canal.
After checking the apical width with the NiTi file, consider widening the canal with file No. 3, which is part of the Endostar E3 Basic Rotary System (04/30) set. Skip this step in extremely curved canals and finish shaping at size 04/25.

6. Warnings
This product is for professional dental use only.

7. Cleaning and disinfection
Detailed instructions for cleaning, disinfection and sterilization can be found on the website www.poldent.pl and www.endostar.eu in the download tab.

8. Sterilization
This is a non-sterile product. Sterilize before use. The instruments can be sterilized in a steam sterilizer (autoclave) at 134°C. Recommended sterilization time: 3 minutes at 2.1 bar overpressure. Instruments can be disinfected with mild disinfectants and washed in ultrasonic cleaners.

9. Storage
Instruments should be stored at room temperature in a dry, dust-free and clean environment.

10. Product claims
Please notify the distributor and manufacturer of any claims or adverse events which occurred as a result of operating this device. Each serious incident connected with this product should be reported to the manufacturer and the competent authority of the Member State in which the user is established.


Cross-section

CE mark and identification number of the notified body

Medical device

Sterilize in a steam autoclave at 134°C

Non-sterile product


Used for root canal preparation

Serial number
Lot number


Consult instruction for use

Nickel-titanium


Date of manufacture

Catalogue numer


Packaging unit

Manufactured by:
Poldent Co. Ltd.
Dzika 2 Street, 00-194 Warsaw, Poland
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E-mail: poldent@poldent.pl, endostar@endostar.eu
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