

# VS FLEXI DPS FILES – Instructions for Use

## Description

This set of heat treated Ni-Ti endo files with controlled memory was developed with the idea for preservation of pericervical dentin in mind. Aim is to effectively shape the root canal without excessive removal of pericervical dentin.

Cross section of **VS FLEXI** files is parallelogram with specially chosen cutting angle for maximum cutting efficiency. Thanks to cross section endo file during shaping touches the root canal wall in one, maximum two, contact points at any time during shaping.

**VS FLEXI files are unique combination between file with such cross section, such cutting angle, controlled memory and ability to shape the root canal with regular clockwise 360 deg rotation or reciprocating movement.**

This unique combination ensures that **VS FLEXI** files have excellent cutting ability with minimum risk of file fracture or file getting stuck into root canal. At the same time the file design allows for very effective evacuation of the debris coronally during the shaping, too.

Another advantage of that set of endo files is that ALL files from the set work with same speed and same torque. Dentist sets the endo motor at 220-250 rpm and torque of 2.2-2.5 N/cm and that's it.

**VS FLEXI** files work very well with reciprocation motion, too (endo motor must be set to 150 deg CW/30 deg CCW with 350 rpm).

## Glide path

At the start of root canal shaping a glide path must be made by hand with hand files #06.02, #08.02 in easy root canals and with #10.02, too in severely curved root canals. ROGIN C+ endo files may be used for this purpose or other type of hand files (K files, K reamers, D Finders, C Pilot) may be used depending on dentist's choice. After enlargement of the canal with file #08.02 or #10.02 is done the working length of the root canal must be defined by using an apex locator device.

## Shaping of root canal with VS FLEXI files

Endo motor must be set to normal 360 deg clockwise rotation with 250 rpm and torque of 2.2-2.5 N/cm.

Before start of the shaping always cover the files with EDTA cream. Do not use VS FLEXI files in dry canal.

Shaping of the root canal must be made with light brushing motions of the file while at the same time doing short pecking motions apically at maximum depth of 1-1.5 mm at a time. After each 3-4 such shaping intervals the file must be taken out of the canal and cleaned from the debris with gauge saturated in hypochlorite solution.

During shaping the file should not advance more than 1 mm with each pecking motion (movement of the file downwards / upwards inside the root canal)

Advancement of the file apically inside the canal should be done with approximately 0.5 mm per second without applying significant force downwards during shaping. Dentist should leave the file to shape the root canal almost "by itself". If this is not happening he/she must go back and shape the canal one more time with smaller size file he/she used last.

**VS FLEXI** file OF01 (#20.06 L=21mm) is put first into endo motor head. That file is the opening file and it is used for shaping of the upper third of the root canal. Shaping of the root canal with this file must be done in first 3 mm of total canal length only. Take care that you do not shape with this file to its full length. This is important because this way the pericervical dentin is saved. In very severely curved canals, however shaping down to the start of the curvature may need to be done with opening file to reduce stress on next file size #13.04 which is to be used to shape to full WL.

After opening of the upper third of the root canal is finished put next file size #13.04 (MGP1 – two white rings) into motor's head and with combined light brushing and pecking motions shape the canal to full working length. After this is done, use **VS FLEXI** file with size #17.04 (two red rings) and other larger sizes files to shape the root canal to the desired final size.

## Shaping with reciprocation motion

Set your endo motor to reciprocation motion program with 150 deg CW / 30deg CCW at 300-350 rpm. Please note that this setting for reciprocation motion is different from reciprocation used by other manufacturers. Made glide path by hand up to #08.02 / #10.02. Use apex locator to determine the working length. Put opening file OF01 (#20.06, L=21 mm) into endo motor and shape the upper third of the root canal in depth of no more than 3-4 mm with short (1 mm) very light pecking motions. Then put MGP1 file (#13.04, L=25 mm) in endo motor head and with short (1 mm) very light pecking motions shape the root canal to full working length. Afterwards use larger size files to shape the canal to the desired size.

## Combined motion use of VS FLEXI files

In case of calcified, very narrow or severely curved canals the root canal may first be shaped to full working length with VS FLEXI file size #13.04 in reciprocating motion to reduce the stress on the file as much as possible. Afterwards root canal can be shaped to bigger sizes with normal 360 deg rotation with larger size files to ensure better debris evacuation.

## Important tip

**Before shaping with next larger size file make sure you recapitulate the canal with hand file size #10.02 and irrigate copiously. VS FLEXI files must not be used in dry root canal.**

Shaping the root canal up to size #25.04 - #30.04 is sufficient in most cases. Distal canal of lower molars and palatine canal of upper molars may anatomically be larger and then one must shape to size #35.04 or more if needed.

Manufacturer:

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