



Infection Control Made Simple: Sterile Endo Instruments by VDW.

Information and Product Overview

Preamble

Should Endodontic Instruments be Re-Used or Not?

Why are endodontic instruments re-used? In a nutshell... to save costs.

Material costs are indeed reduced by re-using endodontic instruments. If, however, the costs for single-use instruments are compared to the additional costs arising from re-use, such as costs for instrument reprocessing, sterile storage and keeping proper records, the anticipated saving shrinks to a minimum that bears no relation to the possible drawbacks of multiple instrument use.

Current discussions are focussing more and more on the topic of multiple-use. Looking at the mandatory quality management and the extended infection

control requirements for dental practices, it can be assumed that this subject will gain even more importance in the near future and that the re-use of endodontic instruments will be questioned even more critically.

The aim of this brochure is to discuss the pros and cons of instrument re-processing and re-use and to help the dentist in making a decision. This brochure is based on German and European statutory and formal requirements for infection control and quality management in a dental practice.

Information

| | |
|--|--------------|
| Should Endodontic Instruments be Re-Used or Not? | 2 |
| Infection Control and Quality Management in the Dental Practice | 3 |
| Pre-Cleaning, Disinfection, Cleaning and Sterilisation of Endodontic Instruments | 4 |
| The Alternative: Single-Use of Industrially Cleaned and Pre-Sterilised Endodontic Instruments | 5 |
| Advantages and Benefits of Industrially Cleaned and Gamma-Sterilised Endodontic Instruments by VDW | 6 |
| Product Overview | 7 |
| Information on Studies/Papers, Sources of Information, Bibliography | 14-15 |

Infection Control and Quality Management in the Dental Practice

Why has the multiple-use of endodontic instruments attracted so much attention lately?

Current recommendations by the Robert Koch Institute (RKI) dating from 2001 and 2006 (on “Infection Control Requirements for Re-processing Medical Devices; Infection Prevention in Dentistry – Infection Control Requirements^{1,2}”) classify endodontic instruments as critical B. This means that stricter requirements apply to the re-processing of such instruments. Only clean medical devices can be efficiently sterilised, which means that cleaning is a particularly important step in the re-processing cycle of a medical device. Therefore, an efficient cleaning procedure which avoids possible cross-contamination needs to be carried out. Blood, secretion or tissue remnants need to be removed or the subsequent cleaning, disinfection and sterilisation will be impeded.

The minimum requirement is that no residue is visible to the naked eye (without magnification) on any part of the medical device after cleaning/disinfection. This implies a comprehensive inspection of every single instrument before sterilisation.

It is difficult enough to safely and comprehensively adhere to these requirements in daily practice, including all consequences which might arise, as well as to document all steps in compliance with legal requirements. To complicate matters further, endodontic instruments come into direct contact with nerve tissue which, in the case of Creutzfeldt-Jakob

Disease, can potentially be infectious. Even if it has not yet been possible to detect prions in the pulp tissue of patients with CJD yet, animal experiments have shown the possibility of dental transmission³.

Moreover, by using the current disinfection and sterilisation procedures, it cannot be 100 % guaranteed that prions are completely destroyed.

That is why, for example, the British Spongiform Encephalopathy Advisory Committee (SEAC) has recommended single-use of endodontic instruments as an infection control measure since May 2006.⁴ In April 2007, the British Department of Health went one step further and issued a clear directive for single use.⁵

In cases where these recommendations are not followed and an endodontic instrument is re-used on another patient, a stringent re-processing protocol needs to be followed in order to eliminate or minimise the risk of cross-contamination between patients as efficiently as possible.

Pre-Cleaning, Disinfection, Cleaning and Sterilisation of Endodontic Instruments^{6, 7, 8, 9}

As a basic principle, instruments should be cleaned and disinfected mechanically (disinfector/WD) rather than manually.

Manual procedures, even in combination with an ultrasonic bath, should only be used in cases where mechanical methods are not available, as they are considerably less efficient and their results are not as consistent. Irrespective of whether a mechanical or manual procedure is carried out, all instruments need to be pre-cleaned.⁷

Let's take a closer look at the (most commonly applied) cleaning and re-processing procedure for endodontic instruments in dental practices. Re-processing of a contaminated, potentially infectious endodontic instrument should ideally be carried out as shown in the grey box.

During manual cleaning, remnants are manually removed by means of small, soft wire brushes. This harbours potential risks such as injuries resulting in an entire chain of compulsory procedures (see needle-stick injuries⁹).

In the case of NiTi instruments, plastic brushes are recommended to avoid unnecessary roughening of the instrument's surface.

1. Contamination-proof transportation after each treatment
2. Pre-cleaning immediately after instrumentation (within 2 hours maximum); if applicable, instruments which cannot be cleaned in one piece should be taken apart
3. Cleaning and disinfection – remove stopper from instrument
Cleaning/disinfection options:
 - a. Thermo-disinfection: cleaning/disinfection in a disinfector/WD
 - b. Mechanical chemical cleaning/disinfection
 - c. Manual chemical cleaning/disinfection
4. Visual inspection, ideally with a magnifying aid. Check the instrument for organic remnants and clean again if necessary until all remnants are eliminated
5. Maintenance of instruments taken apart before cleaning/disinfection; placing of new stoppers on the instruments
6. Packaging of cleaned and disinfected instruments for sterilisation (shrink-wrapping in see-through sterilisation pouches, packaging in dental cassettes)
7. Sterilisation of packaged instruments
8. Documentation of instrument re-processing and of all relevant labelling, e.g. sterilisation procedures, sterilisation date, storage period for sterile products, batch number, initials) within the framework of the required quality management process⁸
9. Safe storage of sterile products (storage of packaged sterile products for up to 6 months)⁶

The Alternative: Single-Use of Industrially Cleaned and Pre-Sterilised Endodontic Instruments

Sterile

5

Based on the aforementioned facts, single-use of ready to use, industrially cleaned and pre-sterilised endodontic instruments is recommended.

For the following reasons:

- Protection of patient, practitioner and practice personnel
- Supports fulfilment of all legal requirements, guidelines and recommendations
- Safety in case of potential legal disputes
- Simplified workflow in the dental practice with regard to quality management measures and infection control requirements

Since the 1980s, VDW has been manufacturing and distributing sterile endodontic instruments in many countries around the world. Today, as an experienced manufacturer of sterile endodontic instruments, VDW offers almost a complete assortment of industrially cleaned and gamma-sterilised endodontic stainless steel and nickel-titanium instruments as well as obturation accessories.

Advantages and Benefits of Industrially Cleaned and Gamma-Sterilised Endodontic Instruments by VDW

Enhanced safety – infection control made simple

- No sterilisation prior to first use
- Ready to use instruments, individually packed
- Sterile assortment: stainless steel instruments (K-Reamers, K-Files, Hedstroem Files, C-PILOT® Files, Flexicut® Files, NiTi K-Files, Gates Enlargers, Barbed Broaches), rotary NiTi instruments (Mtwo®, FlexMaster®), reciprocating NiTi instruments (RECIPROC®), obturation accessories (NiTi Finger Spreaders, Finger Spreaders, Finger Pluggers, Root Fillers “L”, Paper Points)
- TÜV-certified Quality Management

- ✓ Sterile endodontic instruments will help you to comply with the prevailing infection control recommendations.
- ✓ VDW's sterile endodontic instruments are sterilised according to DIN EN ISO 11137 and are identified with this symbol  to indicate their sterilisation by gamma radiation.
- ✓ The red dot  on each instrument package further helps to differentiate between sterile and non-sterile instruments.



Look for the red dot.

Over 30 years' experience
in sterile endo products.

Product Overview



Sterile Stainless Steel Instruments

VDW®STERILE C-PILOT® Files



For severely curved or calcified root canals (Blister pack of 6 pieces)

| Size | | 19 mm | 21 mm | 25 mm |
|-------|---|------------------|------------------|------------------|
| 06 | ● | V04 0368 019 006 | V04 0368 021 006 | V04 0368 025 006 |
| 08 | ● | V04 0368 019 008 | V04 0368 021 008 | V04 0368 025 008 |
| 10 | ● | V04 0368 019 010 | V04 0368 021 010 | V04 0368 025 010 |
| 06-10 | | V04 0368 019 210 | V04 0368 021 210 | V04 0368 025 210 |
| 12.5 | ● | V04 0368 019 012 | V04 0368 021 012 | V04 0368 025 012 |
| 15 | ○ | V04 0368 019 015 | V04 0368 021 015 | V04 0368 025 015 |



VDW®STERILE K-Reamers



For safe root canal preparation with a reaming motion (Blister pack of 6 pieces)

| Size | | 21 mm | 25 mm | 31 mm |
|--------|---|------------------|------------------|------------------|
| 06 | ● | V04 0353 021 006 | V04 0353 025 006 | V04 0353 031 006 |
| 08 | ● | V04 0353 021 008 | V04 0353 025 008 | V04 0353 031 008 |
| 10 | ● | V04 0353 021 010 | V04 0353 025 010 | V04 0353 031 010 |
| 06-10 | | V04 0353 021 210 | V04 0353 025 210 | V04 0353 031 210 |
| 15 | ○ | V04 0353 021 015 | V04 0353 025 015 | V04 0353 031 015 |
| 20 | ● | V04 0353 021 020 | V04 0353 025 020 | V04 0353 031 020 |
| 25 | ● | V04 0353 021 025 | V04 0353 025 025 | V04 0353 031 025 |
| 30 | ● | V04 0353 021 030 | V04 0353 025 030 | V04 0353 031 030 |
| 35 | ● | V04 0353 021 035 | V04 0353 025 035 | V04 0353 031 035 |
| 40 | ● | V04 0353 021 040 | V04 0353 025 040 | V04 0353 031 040 |
| 15-40 | | V04 0353 021 230 | V04 0353 025 230 | V04 0353 031 230 |
| 45 | ○ | V04 0353 021 045 | V04 0353 025 045 | V04 0353 031 045 |
| 50 | ● | V04 0353 021 050 | V04 0353 025 050 | V04 0353 031 050 |
| 55 | ● | V04 0353 021 055 | V04 0353 025 055 | V04 0353 031 055 |
| 60 | ● | V04 0353 021 060 | V04 0353 025 060 | V04 0353 031 060 |
| 70 | ● | V04 0353 021 070 | V04 0353 025 070 | V04 0353 031 070 |
| 80 | ● | V04 0353 021 080 | V04 0353 025 080 | V04 0353 031 080 |
| 45-80 | | V04 0353 021 240 | V04 0353 025 240 | V04 0353 031 240 |
| 90 | ○ | V04 0353 021 090 | V04 0353 025 090 | V04 0353 031 090 |
| 100 | ● | V04 0353 021 100 | V04 0353 025 100 | V04 0353 031 100 |
| 110 | ● | V04 0353 021 110 | V04 0353 025 110 | V04 0353 031 110 |
| 90-110 | | V04 0353 021 250 | - | - |
| 120 | ● | - | V04 0353 025 120 | V04 0353 031 120 |
| 130 | ● | - | V04 0353 025 130 | V04 0353 031 130 |
| 140 | ● | - | V04 0353 025 140 | V04 0353 031 140 |
| 90-140 | | - | V04 0353 025 260 | V04 0353 031 260 |



VDW®STERILE K-Files



For all preparation techniques with filing motion (Blister pack of 6 pieces)

| Size | | 21 mm | 25 mm | 31 mm |
|--------|---|------------------|------------------|------------------|
| 06 | ● | V04 0363 021 006 | V04 0363 025 006 | V04 0363 031 006 |
| 08 | ● | V04 0363 021 008 | V04 0363 025 008 | V04 0363 031 008 |
| 10 | ● | V04 0363 021 010 | V04 0363 025 010 | V04 0363 031 010 |
| 06-10 | | V04 0363 021 210 | V04 0363 025 210 | V04 0363 031 210 |
| 12.5 | ● | V04 0363 021 012 | V04 0363 025 012 | - |
| 15 | ○ | V04 0363 021 015 | V04 0363 025 015 | V04 0363 031 015 |
| 17.5 | ● | V04 0363 021 017 | V04 0363 025 017 | - |
| 20 | ● | V04 0363 021 020 | V04 0363 025 020 | V04 0363 031 020 |
| 25 | ● | V04 0363 021 025 | V04 0363 025 025 | V04 0363 031 025 |
| 30 | ● | V04 0363 021 030 | V04 0363 025 030 | V04 0363 031 030 |
| 35 | ● | V04 0363 021 035 | V04 0363 025 035 | V04 0363 031 035 |
| 40 | ● | V04 0363 021 040 | V04 0363 025 040 | V04 0363 031 040 |
| 15-40 | | V04 0363 021 230 | V04 0363 025 230 | V04 0363 031 230 |
| 45 | ○ | V04 0363 021 045 | V04 0363 025 045 | V04 0363 031 045 |
| 50 | ● | V04 0363 021 050 | V04 0363 025 050 | V04 0363 031 050 |
| 55 | ● | V04 0363 021 055 | V04 0363 025 055 | V04 0363 031 055 |
| 60 | ● | V04 0363 021 060 | V04 0363 025 060 | V04 0363 031 060 |
| 70 | ● | V04 0363 021 070 | V04 0363 025 070 | V04 0363 031 070 |
| 80 | ● | V04 0363 021 080 | V04 0363 025 080 | V04 0363 031 080 |
| 45-80 | | V04 0363 021 240 | V04 0363 025 240 | V04 0363 031 240 |
| 90 | ○ | V04 0363 021 090 | V04 0363 025 090 | V04 0363 031 090 |
| 100 | ● | V04 0363 021 100 | V04 0363 025 100 | V04 0363 031 100 |
| 110 | ● | V04 0363 021 110 | V04 0363 025 110 | V04 0363 031 110 |
| 90-110 | | V04 0363 021 250 | - | - |
| 120 | ● | - | V04 0363 025 120 | V04 0363 031 120 |
| 130 | ● | - | V04 0363 025 130 | V04 0363 031 130 |
| 140 | ● | - | V04 0363 025 140 | V04 0363 031 140 |
| 90-140 | | - | V04 0363 025 260 | V04 0363 031 260 |



VDW®STERILE Hedstroem Files



Highly efficient enlargement of root canals in filing motion (Blister pack of 6 pieces)

| Size | | 21 mm | 25 mm | 31 mm |
|--------|---|------------------|------------------|------------------|
| 08 | ● | V04 0373 021 008 | V04 0373 025 008 | V04 0373 031 008 |
| 10 | ● | V04 0373 021 010 | V04 0373 025 010 | V04 0373 031 010 |
| 08-10 | | V04 0373 021 220 | V04 0373 025 220 | V04 0373 031 220 |
| 15 | ○ | V04 0373 021 015 | V04 0373 025 015 | V04 0373 031 015 |
| 20 | ● | V04 0373 021 020 | V04 0373 025 020 | V04 0373 031 020 |
| 25 | ● | V04 0373 021 025 | V04 0373 025 025 | V04 0373 031 025 |
| 30 | ● | V04 0373 021 030 | V04 0373 025 030 | V04 0373 031 030 |
| 35 | ● | V04 0373 021 035 | V04 0373 025 035 | V04 0373 031 035 |
| 40 | ● | V04 0373 021 040 | V04 0373 025 040 | V04 0373 031 040 |
| 15-40 | | V04 0373 021 230 | V04 0373 025 230 | V04 0373 031 230 |
| 45 | ○ | V04 0373 021 045 | V04 0373 025 045 | V04 0373 031 045 |
| 50 | ● | V04 0373 021 050 | V04 0373 025 050 | V04 0373 031 050 |
| 55 | ● | V04 0373 021 055 | V04 0373 025 055 | V04 0373 031 055 |
| 60 | ● | V04 0373 021 060 | V04 0373 025 060 | V04 0373 031 060 |
| 70 | ● | V04 0373 021 070 | V04 0373 025 070 | V04 0373 031 070 |
| 80 | ● | V04 0373 021 080 | V04 0373 025 080 | V04 0373 031 080 |
| 45-80 | | V04 0373 021 240 | V04 0373 025 240 | V04 0373 031 240 |
| 90 | ○ | V04 0373 021 090 | V04 0373 025 090 | V04 0373 031 090 |
| 100 | ● | V04 0373 021 100 | V04 0373 025 100 | V04 0373 031 100 |
| 110 | ● | V04 0373 021 110 | V04 0373 025 110 | V04 0373 031 110 |
| 90-110 | | V04 0373 021 250 | - | - |
| 120 | ● | - | V04 0373 025 120 | V04 0373 031 120 |
| 130 | ● | - | V04 0373 025 130 | V04 0373 031 130 |
| 140 | ● | - | V04 0373 025 140 | V04 0373 031 140 |
| 90-140 | | - | V04 0373 025 260 | V04 0373 031 260 |



Sterile



VDW®STERILE Flexicut® Files



For preparation of severely curved and narrow root canals with a filing motion (Blister pack of 6 pieces)

| Size | | 21 mm | 25 mm |
|-------|---|------------------|------------------|
| 15 | ○ | V04 0364 021 015 | V04 0364 025 015 |
| 20 | ● | V04 0364 021 020 | V04 0364 025 020 |
| 25 | ● | V04 0364 021 025 | V04 0364 025 025 |
| 30 | ● | V04 0364 021 030 | V04 0364 025 030 |
| 35 | ● | V04 0364 021 035 | V04 0364 025 035 |
| 40 | ● | V04 0364 021 040 | V04 0364 025 040 |
| 15-40 | | V04 0364 021 230 | V04 0364 025 230 |



VDW®STERILE Barbed Broaches



For easy and safe pulp tissue removal (150 pieces, in blister packs)

| Size | | 21 mm |
|-------------|---|------------------|
| XXXXF / 0 | ● | V04 0333 021 410 |
| XXXF / 1 | ○ | V04 0333 021 420 |
| XXF / 2 | ● | V04 0333 021 430 |
| XF / 3 | ● | V04 0333 021 440 |
| F / 4 | ● | V04 0333 021 450 |
| M / 5 | ● | V04 0333 021 460 |
| C / 6 | ● | V04 0333 021 470 |
| XXF-F / 2-4 | | V04 0333 021 480 |



VDW®STERILE Gates Enlargers



For enlargement of the coronal third (Blister pack of 6 pieces)

| Size | | 19 mm |
|--------------|--|------------------|
| 1 / 50 | | V04 0380 019 001 |
| 2 / 70 | | V04 0380 019 002 |
| 3 / 90 | | V04 0380 019 003 |
| 4 / 110 | | V04 0380 019 004 |
| 5 / 130 | | V04 0380 019 005 |
| 6 / 150 | | V04 0380 019 006 |
| 1-6 / 50-150 | | V04 0380 019 300 |



Sterile NiTi Hand Instruments

VDW®STERILE NiTi K-Files



For the enlargement of severely curved canals (Blister pack of 6 pieces)

| Size | | 21 mm | 25 mm |
|-------|---|------------------|------------------|
| 15 | ○ | V04 0362 021 015 | V04 0362 025 015 |
| 20 | ● | V04 0362 021 020 | V04 0362 025 020 |
| 25 | ● | V04 0362 021 025 | V04 0362 025 025 |
| 30 | ● | V04 0362 021 030 | V04 0362 025 030 |
| 35 | ● | V04 0362 021 035 | V04 0362 025 035 |
| 40 | ● | V04 0362 021 040 | V04 0362 025 040 |
| 15-40 | | V04 0362 021 230 | V04 0362 025 230 |
| 45 | ○ | V04 0362 021 045 | V04 0362 025 045 |
| 50 | ● | V04 0362 021 050 | V04 0362 025 050 |
| 55 | ● | V04 0362 021 055 | V04 0362 025 055 |
| 60 | ● | V04 0362 021 060 | V04 0362 025 060 |



Sterile NiTi Instruments



RECIPROC® Instruments

System designed specifically for root canal preparation in reciprocation

- Root canal preparation with only one instrument
- Retreatment of gutta-percha filling material and carrier based obturators with R25
- Single-use convenience; sterile instruments, individually packed
- Three instrument sizes for narrow, medium and wide canals



| Blister pack of 6 instruments | | 21 mm | 25 mm | 31 mm |
|-----------------------------------|---|------------------|------------------|------------------|
| R25 | ● | V04 0212 021 025 | V04 0212 025 025 | V04 0212 031 025 |
| R40 | ● | V04 0212 021 040 | V04 0212 025 040 | V04 0212 031 040 |
| R50 | ● | V04 0212 021 050 | V04 0212 025 050 | V04 0212 031 050 |
| 3 x R40, R50 each | | V04 0212 021 233 | V04 0212 025 233 | V04 0212 031 233 |
| Blister pack of 4 instruments | | 21 mm | 25 mm | 31 mm |
| R25 | ● | V04 0021 021 025 | V04 0012 025 025 | - |
| 2 x R25, 1 x R40, 1 x R50 each | | V04 0021 021 200 | V04 0012 025 200 | V04 0012 031 200 |



RECIPROC® Paper Points



Suitable for the RECIPROC® NiTi system (144 pieces)

| Size/Taper | | 29 mm |
|------------------------------|---|------------------|
| R25 | ● | V04 0216 029 025 |
| R40 | ● | V04 0216 029 040 |
| R50 | ● | V04 0216 029 050 |
| 96 x R25, 24 x R40, 24 x R50 | | V04 0216 029 237 |



The efficient NiTi system

- One sequence for all types of root canal
- Highly flexible due to small instrument core and s-shaped cross-section

Sterile 11

Basic Sequence Blister pack of 6 instruments

STERILE

| Size/Taper | Mtwo® working part 16 mm | | Mtwo® working part 21 mm | |
|------------|--------------------------|------------------|--------------------------|------------------|
| | 21 mm | 25 mm | 25 mm | 31 mm |
| 10/.04 | ● | V04 0234 021 010 | V04 0234 025 010 | V04 1234 025 010 |
| 15/.05 | ○ | V04 0235 021 015 | V04 0235 025 015 | V04 1235 025 015 |
| 20/.06 | ● | V04 0236 021 020 | V04 0236 025 020 | V04 1236 025 020 |
| 25/.06 | ● | V04 0236 021 025 | V04 0236 025 025 | V04 1236 031 025 |



Shaping of Larger Canal Anatomies Blister pack of 6 instruments

STERILE

| Size/Taper | Mtwo® working part 16 mm | | Mtwo® working part 21 mm | |
|------------|--------------------------|------------------|--------------------------|------------------|
| | 21 mm | 25 mm | 25 mm | 31 mm |
| 30/.05 | ● | V04 0235 021 030 | V04 0235 025 030 | V04 1235 031 030 |
| 35/.04 | ● | V04 0234 021 035 | V04 0234 025 035 | V04 1234 031 035 |
| 40/.04 | ● | V04 0234 021 040 | V04 0234 025 040 | V04 1234 031 040 |
| 45/.04 | ○ | V04 0234 021 045 | V04 0234 025 045 | V04 1234 031 045 |
| 50/.04 | ● | V04 0234 021 050 | V04 0234 025 050 | V04 1234 031 050 |
| 60/.04 | ● | V04 0234 021 060 | V04 0234 025 060 | V04 1234 031 060 |

| Size/Taper | Mtwo® working part 16 mm | | Mtwo® working part 21 mm | |
|------------|--------------------------|------------------|--------------------------|------------------|
| | 21 mm | 25 mm | 25 mm | 31 mm |
| 25/.07 | ● | V04 0237 021 025 | V04 0237 025 025 | V04 1237 031 025 |
| 30/.06 | ● | V04 0236 021 030 | V04 0236 025 030 | V04 1236 031 030 |
| 35/.06 | ● | V04 0236 021 035 | V04 0236 025 035 | V04 1236 031 035 |
| 40/.06 | ● | V04 0236 021 040 | V04 0236 025 040 | V04 1236 031 040 |



Assortments

STERILE

| Blister pack of 4 instruments | Mtwo® working part 16 mm | | Mtwo® working part 21 mm | |
|--------------------------------|--------------------------|------------------|--------------------------|------------------|
| | 21 mm | 25 mm | 25 mm | 31 mm |
| 10/.04, 15/.05, 20/.06, 25/.06 | V04 0007 021 701 | V04 0007 025 711 | V04 0007 025 701 | V04 0007 031 701 |
| 30/.05, 35/.04, 40/.04, 25/.07 | V04 0007 021 702 | V04 0007 025 702 | - | V04 0007 031 702 |

| Blister pack of 6 instruments | Mtwo® working part 16 mm | | Mtwo® working part 21 mm | |
|--|--------------------------|------------------|--------------------------|-------|
| | 21 mm | 25 mm | 25 mm | 31 mm |
| 2 x 10/.04, 15/.05, 20/.06 each | V04 0230 021 456 | V04 0230 025 456 | - | - |
| 2 x 25/.06, 30/.05, 35/.04, 40/.04, 25/.07 | V04 0230 021 457 | V04 0230 025 457 | - | - |
| 2 x 10/.04, 15/.05, 20/.06 each | - | - | V04 1230 025 456 | - |
| 2 x 25/.06, wp 21 mm, 30/.05, 35/.04, 40/.04, 25/.07, wp 16 mm | - | V04 1230 025 457 | - | - |
| 2 x 30/.06, 35/.06, 40/.06 each | - | V04 0236 025 203 | - | - |
| 2 x 45/.04, 50/.04, 60/.04 each | - | V04 0234 025 246 | - | - |

Mtwo® Retreatment Files

STERILE

For efficient removal of filling material
(Blister pack of 6 pieces)

| Size/Taper | 21 mm |
|-----------------------------|--------------------|
| R 15/.05 | ○ V04 0232 021 015 |
| R 25/.05 | ● V04 0232 021 025 |
| 3 x R 15/.05, R 25/.05 each | V04 0232 021 202 |



Mtwo® Paper Points

STERILE

Suitable for the Mtwo® NiTi system
(144 pieces)

| Size/Taper | 29 mm |
|---|--------------------|
| 25/.06 | ● V04 0225 629 025 |
| 30/.05 | ● V04 0225 529 030 |
| 35/.04 | ● V04 0225 429 035 |
| 40/.04 | ● V04 0225 429 040 |
| 45/.04 | ○ V04 0225 429 045 |
| 50/.04 | ● V04 0225 429 050 |
| 60/.04 | ● V04 0225 429 060 |
| 25/.07 | ● V04 0225 729 025 |
| 30/.06 | ● V04 0225 629 030 |
| 35/.06 | ● V04 0225 629 035 |
| 40/.06 | ● V04 0225 629 040 |
| 48 x 25/.06; 24 x 30/.05, 35/.04, 40/.04, 25/.07 each | V04 0225 029 457 |



The established crown-down NiTi system

- Three sequences to choose from for every type of canal
- Safe use due to optimal stability of file even with low tapered files (2 %)
- Special K-type cutting edges for efficient removal of debris and dentine chips

FlexMaster® Taper .02 Blister pack of 6 instruments



| Size/Taper | | 21 mm | 25 mm |
|------------|---|------------------|------------------|
| 15/.02 | ○ | V04 0341 021 015 | V04 0341 025 015 |
| 20/.02 | ● | V04 0341 021 020 | V04 0341 025 020 |
| 25/.02 | ● | V04 0341 021 025 | V04 0341 025 025 |
| 30/.02 | ● | V04 0341 021 030 | V04 0341 025 030 |
| 35/.02 | ● | V04 0341 021 035 | V04 0341 025 035 |
| 40/.02 | ● | V04 0341 021 040 | V04 0341 025 040 |
| 45/.02 | ○ | V04 0341 021 045 | V04 0341 025 045 |
| 50/.02 | ● | - | V04 0341 025 050 |
| 60/.02 | ● | - | V04 0341 025 060 |
| 70/.02 | ● | - | V04 0341 025 070 |



FlexMaster® Taper .04 Blister pack of 6 instruments



| Size/Taper | | 21 mm | 25 mm | 31 mm |
|------------|---|------------------|------------------|------------------|
| 15/.04 | ○ | V04 0342 021 015 | V04 0342 025 015 | - |
| 20/.04 | ● | V04 0342 021 020 | V04 0342 025 020 | V04 0342 031 020 |
| 25/.04 | ● | V04 0342 021 025 | V04 0342 025 025 | V04 0342 031 025 |
| 30/.04 | ● | V04 0342 021 030 | V04 0342 025 030 | V04 0342 031 030 |
| 35/.04 | ● | V04 0342 021 035 | V04 0342 025 035 | V04 0342 031 035 |
| 40/.04 | ● | V04 0342 021 040 | V04 0342 025 040 | V04 0342 031 040 |



FlexMaster® Taper .06 Blister pack of 6 instruments



| Size/Taper | | 21 mm | 25 mm |
|------------|---|------------------|------------------|
| 15/.06 | ○ | V04 0343 021 015 | V04 0343 025 015 |
| 20/.06 | ● | V04 0343 021 020 | V04 0343 025 020 |
| 25/.06 | ● | V04 0343 021 025 | V04 0343 025 025 |
| 30/.06 | ● | V04 0343 021 030 | V04 0343 025 030 |
| 35/.06 | ● | V04 0343 021 035 | V04 0343 025 035 |
| 40/.06 | ● | V04 0343 021 040 | V04 0343 025 040 |



FlexMaster® Assortments Blister pack of 6 instruments



| Size/Taper | 21 mm | 25 mm | 31 mm |
|--|------------------|------------------|------------------|
| 20/.02, 25/.02, 30/.02, 35/.02, 40/.02, 45/.02 | - | V04 0341 025 231 | V04 0341 031 231 |
| 20/.04, 25/.04, 30/.04, 20/.06, 25/.06, 30/.06 | - | V04 0344 025 232 | - |
| 2 x 50/.02, 60/.02, 70/.02 each | V04 0341 021 241 | - | V04 0341 031 241 |

REF



FlexMaster® IntroFile

V04 0357 019 000

- 11 % taper
- 19 mm working length, 9 mm active working part
- ISO size 22 at the tip



Sterile Obturation Accessories

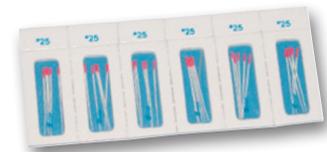
Paper Points sterile Taper .02



- Sterile packed in blister cells to support infection control (5 paper points per blister cell, sterile)
- Sizes 15-80, 180 pieces: 5 paper points per blister cell, sizes 90-140, 144 pieces: 4 paper points per blister cell

| Size/Taper | | 29 mm |
|------------|---|------------------|
| 15/.02 | ○ | V01 0560 029 015 |
| 20/.02 | ● | V01 0560 029 020 |
| 25/.02 | ● | V01 0560 029 025 |
| 30/.02 | ● | V01 0560 029 030 |
| 35/.02 | ● | V01 0560 029 035 |
| 40/.02 | ● | V01 0560 029 040 |
| 15-40/.02 | | V01 0560 029 230 |
| 45/.02 | ○ | V01 0560 029 045 |
| 50/.02 | ● | V01 0560 029 050 |
| 55/.02 | ● | V01 0560 029 055 |
| 60/.02 | ● | V01 0560 029 060 |
| 70/.02 | ● | V01 0560 029 070 |
| 80/.02 | ● | V01 0560 029 080 |
| 45-80/.02 | | V01 0560 029 240 |
| 90-140/.02 | | V01 0560 029 260 |

Sterile 13



VDW®STERILE Root Filler “L”



For filling root canals with paste, cement or sealer (Blister pack of 4 pieces, sterile)

| Size | | 21 mm | 25 mm |
|-------|---|------------------|------------------|
| 25 | ● | V04 0393 021 025 | V04 0393 025 025 |
| 30 | ● | V04 0393 021 030 | V04 0393 025 030 |
| 35 | ● | V04 0393 021 035 | V04 0393 025 035 |
| 40 | ● | V04 0393 021 040 | V04 0393 025 040 |
| 25-40 | | V04 0393 021 290 | V04 0393 025 290 |



VDW®STERILE NiTi Finger Spreader



For lateral condensation in curved canals (Blister pack of 4 pieces, sterile)

| Size | | 25 mm |
|-------|---|------------------|
| 15 | ○ | V04 0392 025 015 |
| 20 | ● | V04 0392 025 020 |
| 25 | ● | V04 0392 025 025 |
| 30 | ● | V04 0392 025 030 |
| 35 | ● | V04 0392 025 035 |
| 40 | ● | V04 0392 025 040 |
| 15-40 | | V04 0392 025 230 |



VDW®STERILE Finger Spreader



For lateral condensation of gutta-percha cones – with pointed tip (Blister pack of 4 pieces, sterile)

| Size | | 25 mm |
|-------|---|------------------|
| 15 | ○ | V04 0395 025 015 |
| 20 | ● | V04 0395 025 020 |
| 25 | ● | V04 0395 025 025 |
| 30 | ● | V04 0395 025 030 |
| 35 | ● | V04 0395 025 035 |
| 40 | ● | V04 0395 025 040 |
| 15-40 | | V04 0395 025 230 |



VDW®STERILE Finger Plugger



For vertical condensation of gutta-percha cones – with blunt tip (Blister pack of 6 pieces, sterile)

| Size | | 25 mm |
|-------|---|------------------|
| 15 | ○ | V04 0399 025 015 |
| 20 | ● | V04 0399 025 020 |
| 25 | ● | V04 0399 025 025 |
| 30 | ● | V04 0399 025 030 |
| 35 | ● | V04 0399 025 035 |
| 40 | ● | V04 0399 025 040 |
| 15-40 | | V04 0399 025 230 |

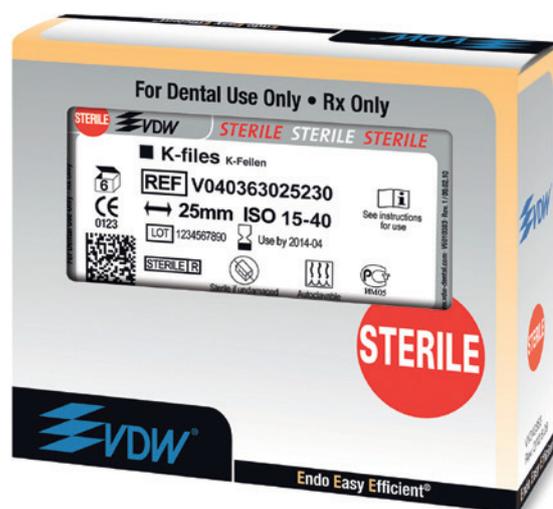


Information on Studies/Papers Dealing with the Subject of Cleaning, Disinfection, Sterilisation and Single-Use of Endodontic Instruments

- Einweg-Wurzelkanalinstrumente (Single-use root canal instruments); Dr. David Sonntag; Sonderdruck "wissen kompakt" Band 3, Heft 3, September 2009
- Effect of Prion Decontamination Protocols on Nickel-Titanium Rotary Surfaces; David Sonntag, DMD and Ove A. Peters, PD, DMD, MS, FICD; JOE-Volume 33, Number 4, April 2007.
- vCJD and the cleanability of endodontic files: a case for single use; JT Walker, C. Budge, M. Vasse, JM Sutton, ND Raven, PD Marsh, P. Bennett; ENDO (Lond Engl) 2009; 3(2):115-120.
- Can protein contamination be removed from endodontic hand instruments? Whitworth CL, Davies K, Palmer NO; Clinical Dental Sciences, University of Liverpool, UK. 1. Prim Dent Care. 2009 Jan; 16(1):7-12.
- Dental burs and endodontic files: are sterilization procedures effective? Morrison A, Conrod S. Department of Orial and Maxillofacial Surgery, Dalhousie University, Halifax, Nova Scotia. Republished from: J Can Dent. Assoc. 2009 Feb; 75(1):39. Tex Dent J. 2010 Mar; 127(3):295-300
- Pre-sterilisation cleaning of re-usable instruments in general dental practice; Bagg J, Smith AJ, Hurrell D, McHugh, Irvine G; Infection Research Group. Glasgow Dental Hospital and School, Glasgow, UK. 1. Br Dent J. 2007 May 12; 202(9):E22 discussion 550-1. Epup 2007 Feb 9.
- CJD: update for dental staff; Scully C, Smith AJ, Bagg J; Eastman Dental Institute, University of London; 1. Dent Update. 2006 Oct; 33(8):454-6, 458-60.
- Rechtliche Rahmenbedingungen für die Aufbereitung von Medizinprodukten (Legal framework for the re-processing of medical devices); Christian Jäkel (Korrespondierender Autor), Sozietät Dr. Rehborn, Büro Berlin; HygMed2008; 33(7/8).
- Revised CED Resolution; Infection Control Code, November 2009, Council of European Dentists
- Arbeitskreis Dentalinstrumente (AKDI), Validierung von Dampfsterilisationsverfahren, Dezember 2010 (Working group "Dental Instruments"; Validation of steam sterilisation procedures)

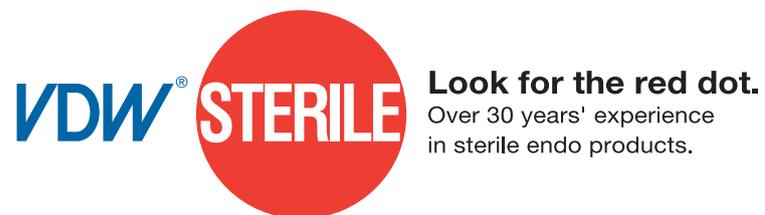
Internet Links and Sources of Information

- Robert Koch Institute www.rki.de
- Zentralstelle der Länder für Gesundheitsschutz bei Arzneimitteln und Medizinprodukten (Central Authority of the countries for Health Protection with regard to Medicinal Products and Medical Devices) www.zlg.de
- Informationsdienst des Instituts der Deutschen Zahnärzte (Information service of the Institute of German Dentists) www.idz-koeln.de
- Bundeszahnärztekammer (German Dental Association) www.bzaek.de
- Deutsche Gesellschaft für Endodontie e.V. (German Association for Endodontics) www.dg-endo.de
- Verband Deutscher Zertifizierter Endodontologen (German Association for Certified Endodontologists) www.vdze.de
- Deutsche Gesellschaft für Zahn-, Mund- und Kieferheilkunde (German Association for Operative Dentistry) www.dgzmk.de
- Deutsche Gesellschaft für Zahnerhaltung (German Association for Conservative Dentistry) www.dgz-online.de
- Arbeitsgruppe für Endodontologie und Traumatologie (Study Group AGET for Endodontics and Traumatology) www.aget-online.de
- CED Council of European Dentists www.eudental.eu



Bibliography

- ¹ RKI recommendations 2001: Infection control requirements for re-processing of medical devices (“Anforderungen an die Hygiene bei der Aufbereitung von Medizinprodukten”)
- ² RKI requirements 2006: Infection Control in Dentistry – Infection control requirements (“Infektionsprävention in der Zahnheilkunde – Anforderungen an die Hygiene”)
- ³ Dr. David Sonntag; September 2009, Einweg-Wurzelkanalinstrumente (Single-use root canal instruments)
- ⁴ SEAC Position Statement vCJD and Endodontic dentistry, May 2006
- ⁵ Advice for dentists on re-use of endodontic instruments and variant Creutzfeldt-Jakob Disease (vCJD), DH Department of Health, April 2007, Gateway reference: 8100
- ⁶ RKI Richtlinien (RKI Guidelines), Dr. Stefan Böhm, Zahnärztlicher Anzeiger (Dental Gazette) 6/2007; ZBV Munich
- ⁷ Instructions for Use and Re-processing, VW000304 Rev. 3/14.9.10, VDW
- ⁸ QM in der Zahnarztpraxis, Muster-QM-Handbuch; (QM in the dental practice, sample QM manual) G. Hermann, A. Pindur-Nakamura (Publisher); Deutscher Zahnärzterverlag (German Dental Company) 2008
- ⁹ Information brochure “Der unterschätzte Arbeitsunfall. Infektionsrisiko durch Nadelstichverletzungen” (The underestimated occupational injury. Risk of infection by needle-stick injury), initiative Safety First, www.nadelstichverletzungen.de



Look for the red dot.
Over 30 years' experience
in sterile endo products.

Please contact us for more information:

VDW GmbH
Bayerwaldstr. 15 • 81737 Munich • Germany
Tel. +49 89 62734-0 • Fax +49 89 62734-304
www.vdw-dental.com • info@vdw-dental.com