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Dentsply Sirona

Info File Infection Control

Instrument reprocessing in the dental practice

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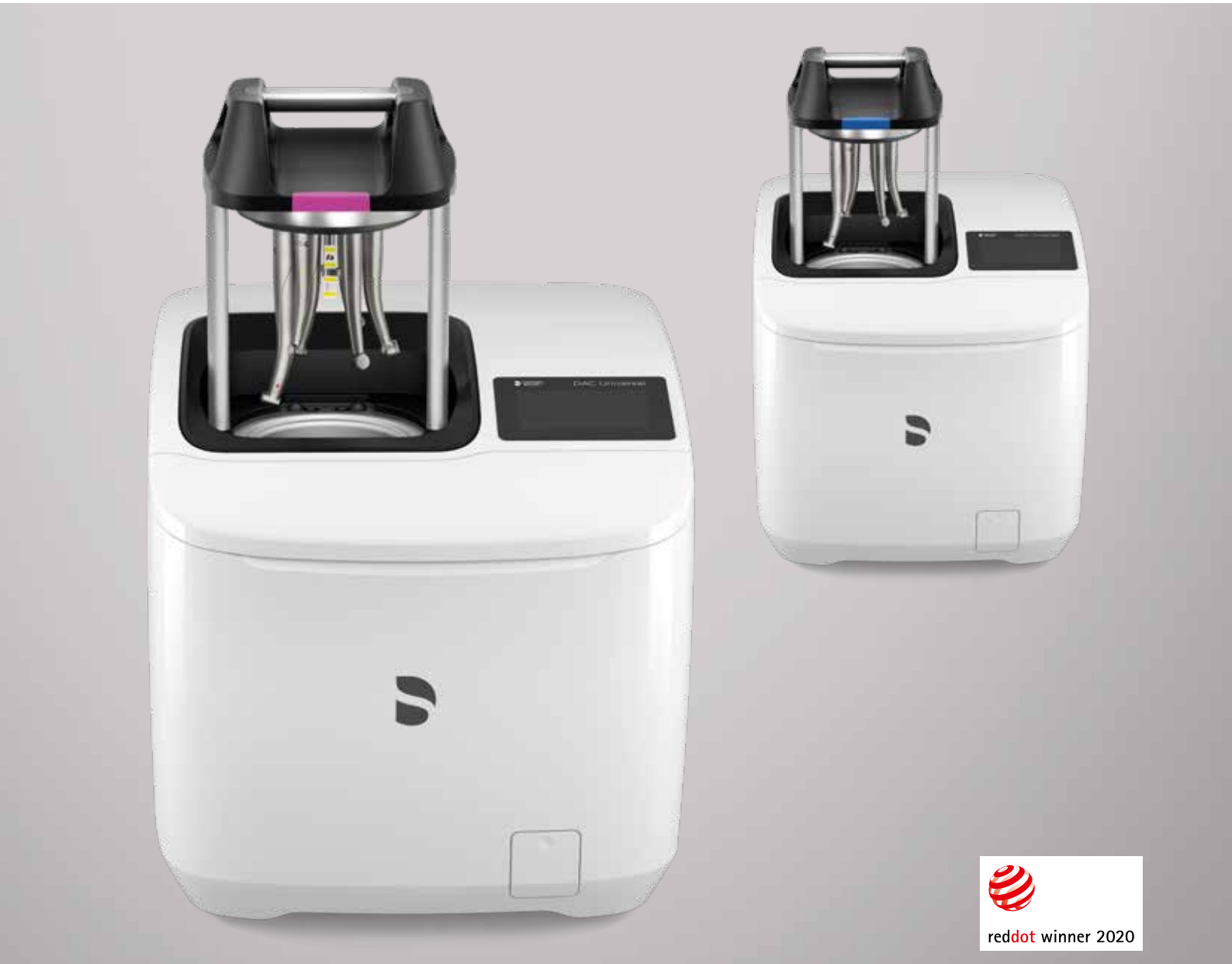

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Infection control systems for a high level of safety

Infection control in dental practices is becoming even more important, and with such significance comes increased monitoring. Ensure all-round protection for yourself, your practice team and your patients by using instrument reprocessing with a high level of hygienic safety and comprehensive documentation options. Infection control solutions from Dentsply Sirona are suitable for the cleaning, care, disinfection and sterilization of dental instruments. Regardless of the design of your infection control workflows, we have the appropriate solution.

DAC Universal, DAC Universal S

The combination machine cleans, lubricates (if necessary) and disinfects[1] / sterilizes[2] up to six straight and contra-angle handpieces, turbines, ultrasonic / sonic handpieces and tips, nozzles of multifunctional syringes and powder jet devices as well as powder jet handpieces in approx. 15 minutes[1] / 21 minutes[2] – including cooling.

[1] DAC Universal
[2] DAC Universal S

Instrument reprocessing

Straight and contra-angle handpieces, turbines, ultrasonic / sonic handpieces and tips, nozzles of multifunctional syringes and powder jet devices as well as powder jet handpieces place increased requirements on diligent reprocessing as a result of the narrow media channels and the angled interior spaces. Difficulty is increased by technological contaminations such as abrasion and oil residues in addition to typical contaminations from treatments such as blood, saliva, secretions and tissue.

In principle, straight and contra-angle handpieces and turbines must be reprocessed after each patient treatment and require special care due to design cavities. Rotating instruments can be classified as semi-critical (non invasive use) or critical instruments (invasive use). Depending on the country, the procedure of reprocessing contains: cleaning, disinfection or sterilization (unwrapped) and wrapped sterilization. Machine reprocessing increases process reliability, whereby the occupational safety for the practice staff is also increased. Mechanical reprocessing is preferable to manual reprocessing for these reasons. All workflows relating to the reprocessing of medical devices must be defined in the operating procedures. The reprocessing guidelines from the relevant manufacturers must be taken into account. All reprocessing steps as well as cleaning and disinfection[1] / sterilization[2] measures should subsequently be compiled in the hygiene plan of the operating practice.

[1] DAC Universal
[2] DAC Universal S

DAC Universal and DAC Universal S Advantages

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Ease of use

- New design
- Touch display with intuitive user interface
- Guided maintenance workflow Check & Clean

Cost-effective and environmental friendly reprocessing

- Low operating and consumption costs – no use of cleaning and disinfection chemicals and only up to 800 ml[1] / 900 ml[2] water consumption per cycle
- Low investment costs in instruments thanks to cooling at the end of the process and therefore quick return to service

Fully automatic reprocessing

- Six instruments in approx. 15 minutes[1] / 21 minutes[2]
- Internal and external cleaning, lubrication (if needed) and disinfection[1] / sterilization[2] of straight and contra-angle handpieces, turbines, ultrasonic/sonic handpieces and tips, nozzles of multifunctional syringes and powder jet devices as well as powder jet handpieces
- Process safety through automatic program selection
- LAN interface for electronical documentation

Legal certainty

- Cleaning and disinfection[1]/sterilization[2] process which can be validated
- Cleaning and disinfection process in accordance with EN ISO 15883-1 / -2
- Sterilization process in accordance with EN ISO 13060 and ISO 17665-1
- Routine Control with chemical indicator class 5 and PCD (Process Challenge Device)

[1] DAC Universal
[2] DAC Universal S

Switch off infection control risks: Switch on DAC Universal / DAC Universal S

Comply with infection control standards at the touch of a button and avoid cross contamination: Completely safe with DAC Universal / DAC Universal S. Your patients and employees can rely on this all-round protection and put their complete trust in the treatment with the reprocessed instruments.

Conformity with standards

The cleaning and disinfection process of DAC Universal is carried out in compliance with the international standard EN ISO 15883-1 / -2 for cleaning and disinfection devices.

The cleaning process of DAC Universal S is carried out in compliance with the international standard EN ISO 15883-1 / -2, the sterilization process in accordance with EN ISO 13060 and ISO 17665-1.

Fully effective against viruses:

Reprocessing with DAC Universal and DAC Universal S

The thermal disinfection of DAC Universal as well as the sterilization of DAC Universal S, are not only bactericidal and fungicide but also fully virucidal. Proven fully virucidal[1] effectiveness. Efficacy spectrum with relevant examples:

bactericidal	TBC, S. aureus
fungicide	C. albicans
virucidal	HPV, HBV, HCV, HIV, COVID-19, influenza, adenoviruses, noroviruses

[1] Tested with temperature resistant parvoviruses.

DAC Universal S – with sterilization

Fully automated reprocessing process

DAC Universal S cleans, lubricates (if necessary) and sterilizes up to six straight and contra-angle handpieces and turbines in a fully automated process. Furthermore, ultrasonic/sonic handpieces and tips, nozzles of multifunctional syringes and powder jet devices as well as powder jet handpieces can be reprocessed at a very high level of hygienic safety in DAC Universal S.

Lid variations

Pink Lid

For the reprocessing of straight and contra-angle handpieces, turbines and contra-angle handpiece heads.

White Lid

For the reprocessing of ultrasonic/sonic handpieces and tips, nozzles of multifunctional syringes and powder jet devices as well as powder jet handpieces.

Reprocessing of rotating instruments in a single cycle with the Program Pink Lid

Internal cleaning with cold water

1. Preliminary cleaning
2. Leak test
3. Internal cleaning: The internal spray and drive channels are rinsed with water

Fully automated lubrication

4. Lubrication: The drive channels are lubricated (sufficient for the next treatment)

External cleaning with cold water

5. External cleaning: Pulse wash procedure (multi-cyclical cleaning method)

Sterilization and cooling

6. Heating up to 134 °C
7. Back-flush: Saturated steam is directed through the instruments
8. Sterilization: 3 min. at 134 °C
9. Cooling
10. The lid opens slightly
11. The lid can now be opened fully

Reprocessing with the White Lid (identical process to the Program Pink Lid, but without lubrication)

Internal cleaning with cold water

External cleaning with cold water

Sterilization and cooling

Information on the validation of DAC Universal and DAC Universal S

The following information is provided in line with the statutory requirements

Validation is a process that tests the effectiveness and reproducibility of the reprocessing procedure. It is composed of installation qualification (IQ), operational qualification (OQ) and performance qualification (PQ).

If the relevant authorities demand complete and **comprehensive initial validation** on-site in the practice, there are various dealers and service providers that offer such on-site validation services. Complete initial validation locally in the practice includes a comprehensive performance qualification in addition to the installation qualification and operational qualification.

The renewed performance qualification (revalidation) must be carried out after 12 months. With lasting stability of the processes as well as existing risk assessment by the operator, the interval can be raised on up to 24 months / 4000 cycles over the longterm. Revalidation is also required after changes have been made to the device that influence the process parameters or after a change in loading. The inspection qualification and operation qualification are omitted in the renewed performance qualification.

Batches must be documented; this can be carried out with a printer, using the practice software (also via a network) or via a USB data-logger system.

Routine control tests must be done due to the recommendations of the manufacturer. E.g. DAC Universal S requires chemical indicators with every cycle and a steam penetration test with a PCD regarding ISO 17665-1 once a week.

Maintenance as recommended by the manufacturer must be performed at the latest after two years or 3,000 cycles. A maintenance kit is available (REF. 67 15 689). The dealer technician must be allowed approx. three working hours.

Instrument reprocessing in the hygiene area

The infection control area should consist of separate areas which must be designated for the reprocessing of instruments for semi-critical and critical applications. These reprocessing areas must be differentiated into the areas “Dirty”, “Clean” and “Storage.” It is recommended that these three areas are marked accordingly. DAC Universal / DAC Universal S must be positioned in the unclean area, directly on the border to the clean area.

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