



SCHOOL OF
DENTISTRY
UNIVERSITY OF MICHIGAN

Product Demonstration
September 19, 2018

Pelton & Crane

KAVO  Kerr

KAVO
Dental Excellence

Who is Pelton & Crane?

Proven. Passionate. Innovative.

Pelton & Crane's rich history as a leader in product and process improvement is best shown via our drive to continually create innovations that inspire and assist the dental professional.



Pelton & Crane was founded by a practicing dentist, Dr. Richard M. Pelton, and an electrical engineer, Earnest M. Crane, in Detroit, Michigan.



WWII creates an urgent need for dental and medical equipment to aid the Armed Forces. Pelton & Crane heeds the call working almost strictly for the government to provide aid during the war. Once the war ends there is a high demand for Pelton & Crane products from dentists, which helps keep the company journey.



The company stresses its new, modular office design called The Executive, never realizing the overwhelming popularity it will have.



The Coachman Chair is fully padded for exceptional patient comfort and easily positioned for the doctor access. Programmable operation and remote foot switch makes it seem like it's straight out of the future.

1900

1940

1970

1990

1920

By now Pelton & Crane is starting to get a reputation - and it's a good one.



There are enough pieces of quality equipment being manufactured by Pelton & Crane that they produce a large catalog of products including: the first dental light, the Electraacabinet, automatic air compressors, electrical sterilizers for equipment, lamps, wax spatulas, root canal driers, equipment stands and more!

1960

The company's corporate headquarters move from Detroit, Michigan to Charlotte, North Carolina.

This period represents Pelton & Crane's greatest growth since it began and the corporate office eventually needs eight expansions before it outgrows the space altogether.



1980

The Chairman is yet another of Pelton & Crane's highly popular items that first appeared in the 1970's. This dental chair stresses extreme comfort and ergonomic positioning for both the patient and doctor by leveraging narrow-back technology.



Act II Stools work to provide proper posture for the doctor and assistant, an ever-increasing concern as repetitive actions over the long term are seen to create health problems.



Light Fantastic II is an immensely popular item becoming the #1 purchased dental light in the industry. Its unique reflector shape, longer bulb life, light color and temperature make this a favorite of dentists worldwide.

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Spirit II cabinet modules signify the evolution of technology and design creating a place for operator equipment and creating options to keep the dentist and assistant organized and more efficient. Casework is modular cabinetry that's very efficient and streamlined. Customizable with easy to clean surfaces and plenty of storage space.



In 2005, Pelton & Crane becomes part of Danaher's Dental Platform. The year also sees the integration of another company, KaVo. Just like Pelton & Crane, KaVo has been in business for over 100 years and is a global leader in dental manufacturing. KaVo's reputation of excellence in producing dental instruments makes it a perfect fit for Pelton & Crane.

The Spirit 3300 dental chair provides the Narrow Back Advantage to enable proper ergonomics along with a new streamlined design.



Solaris 2 Sterilization center provides a modern aesthetic to increased efficiency in the sterilization center.



2000

2002

Sterilization is of the utmost importance for any Dental practice. In collaboration with the CDC, Pelton & Crane's Solaris Sterilization Center streamlines the process combining efficiency and safety in an incredibly stylish package by taking input from dental staff and CDC guidelines.



2005

2014

2015

Centennial 2 gives a fresh new look to the popular Centennial line of dental cabinetry.



2017



The Helios 3000 revolutionizes operator lighting. Using an LED light engine and completely new design, the Helios provides unmatched performance.



The Helios 1800 light launches as an entry level operator light with proven Helios LED performance, making Pelton & Crane the only manufacturer with two LED operator lights.

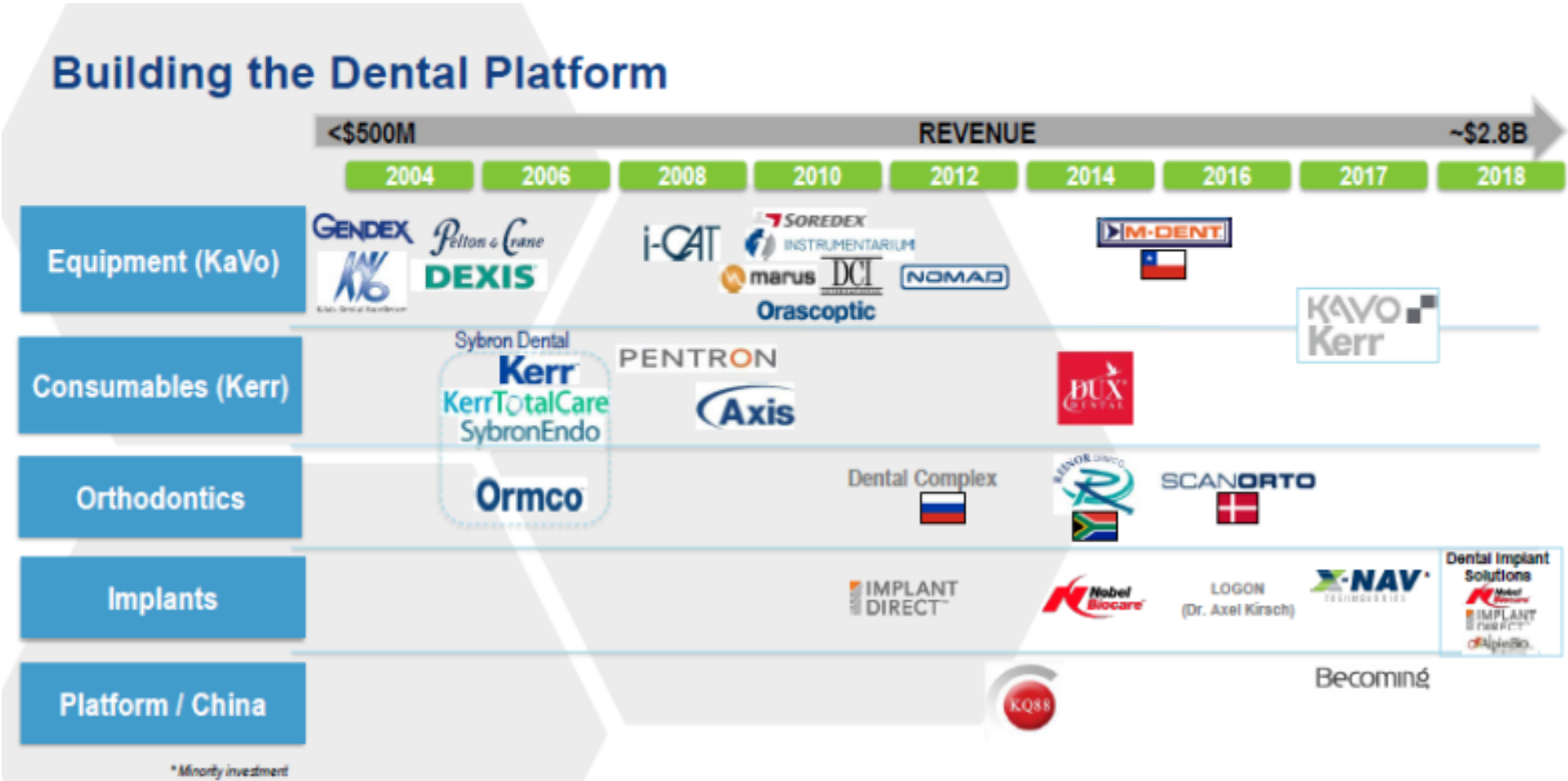


KAVO  Kerr

In 2017 KaVo and Kerr join together to offer its portfolio of trusted solutions to dentists worldwide. Pelton & Crane Equipment now brings you the KaVo ESTETICA Treatment Units in North America, providing customers tailored solutions from the broadest portfolio.

Pelton & Crane

Who is Kavo Kerr?



With our companies dating back to 1890, we have over 120 years of dental innovation

* Minority investment

Who is Kavo Kerr?

A Global Leader in Dentistry



Who is Kavo Kerr?

1 Global Brand Leaders in Dentistry

Specialties

Equipment & Consumables



KaVo Kerr

- 125+ years of dental innovation
- Industry standard dental instruments, best-in-class imaging solutions, and state-of-the-art dental treatment units
- Premiere dental consumables

Orthodontic Solutions



Ormco

- Provide the orthodontic profession with high quality, innovative products backed by great collaboration with doctors and attentive customer service/ educational support

Implant Solutions



Nobel Biocare Solutions

- High-quality and value implant solutions portfolio for all indications and preferences; from final abutments and screw-retained crowns to fixed and fixed-removable multiple-unit restorations
- Global practical, hands-on training programs covering every stage of the treatment workflow
- Brands include Implant Direct, Alpha Bio Tec, and Orasoptic

Who is Kavo Kerr?



Leader in Dental Equipment & Consumables

IMAGING

- Global leader in 3D, 2D, Sensors
- Global leader in Intraoral X-ray, PSP
- Most complete Imaging portfolio

TREATMENT UNITS

- Award winning ergonomic designs
- Intuitive workflows designed for safety
- Leader in quality & engineering

INSTRUMENTS

- Leading global share in instruments
- Made in Germany
- First to market with X-ray free caries detection device



RESTORATIVES

- Leader in bonding and composites
- Simplifying clinical workflows through advanced materials
- Premium and value brand portfolio

INFECTION PREVENTION

- Global leader in dental surface disinfection
- Highly optimized formulas: clinically effective, mild on equipment & surface

ENDODONTICS

- Global leader with full offering
- Unique, affordable, negative pressure irrigation system

Pelton & Crane Demo Product

- **Spirit 3303 Dental Chair**
- **Spirit 3000 Delivery Unit**
- **Helios 3000 LED Operator Light**
- **Spirit 2003T Operator Stool**
- **Spirit 2004T Assistant Stool**



Why Pelton & Crane 3300 Series Chairs?

▪ The Ultimate Ergonomic Experience for the Doctor & the Patient

- Narrow backrest design allows best clinician posture with excellent physical and visual access to the oral cavity*
- Unsurpassed patient security!
- Chair back and arm rest hold the patient more securely and comfortably

Unsurpassed Appearance & Aesthetic

- Best-in-industry high-gloss, powder coat finish
- Graceful form and modern design

The Ultimate Reliability for the Doctor

- Heavy-duty cast-aluminum chair frame and base
- Backed by a 5 year warranty

“Narrow backrest design allows best clinician posture and oral cavity access”

- Gordon Christensen Clinician's Report, Feb 2011, Vol 4, Issue 2



Why Pelton & Crane 3300 Series Chairs?



ACCESS DEFINES HEALTH

- Access to the oral cavity defines health for the entire dental team. A wide back dental chair can prevent proper positioning which can result in unnecessary repetitive Class 4 and 5 movements. When a patient is positioned incorrectly, the clinician has to elevate and rotate their shoulders and bend at the lower back in order to gain access. Having the right equipment is a critical part of maintaining proper positioning.
- Pelton & Crane's narrow chair backs are designed to help mitigate the leading factors contributing to Muscular-Skeletal Disorders (MSDs). The backrest design and dual articulating headrest allow the clinician to gain superior access to the oral cavity, while maintaining an ergonomically correct posture and staying within healthy motion ranges.

Defining Pain in Dentistry

■ Musculoskeletal Disorders

- Musculoskeletal disorders are injuries/disorders of the muscles, nerves, tendons, joints, cartilage, and supporting structures of the limbs, neck, and back. MSDs are related to sudden exertion or prolonged exposure to physical factors like repetition, force, heat, cold, vibration, awkward posture, and/or a pace of work that does not allow for recovery between tasks.

■ Pain in Dentistry

A recent article in the International Journal of Dental Hygiene Hayes et al identified that the prevalence of general musculoskeletal pain ranges between 64% and 93%.

- Dentist – Back Pain (36.3-60.1%)
- Dentist – Neck Pain (19.8-85%)
- Hygienist – Hand and Wrist Pain (60-69.5%)



Why Access Defines Health for the Clinical Team

Classification of Motion

Classification of Motion	Description
Class 1	Fingers only
Class 2	Wrist bending and rotation
Class 3	Rotation of shoulders
Class 4	Elevation of shoulders (damage begins)
Class 5	Bending and/or rotation of trunk (damage begins)

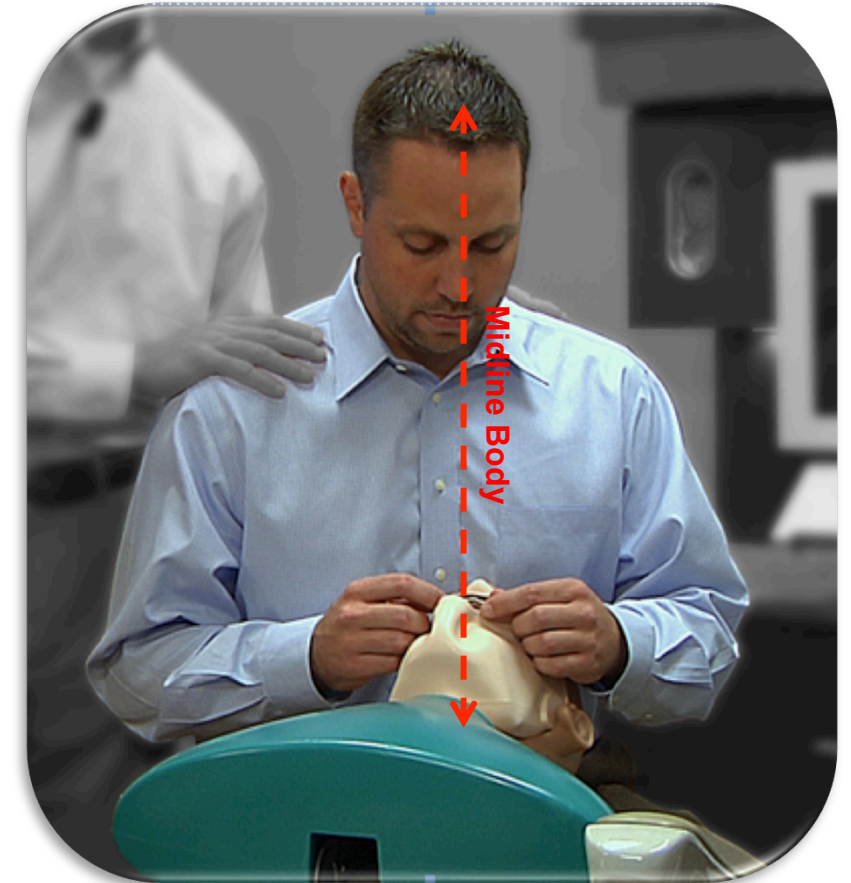
Objective is to avoid class 4 and 5 motion

Movements within these classifications can be a result of:

- The clinician not being properly positioned in the doctor's stool.
- The chair being positioned too high, raising the patient's oral cavity.
- The oral cavity being too high, creating a focal distance of less than 16 inches.
- Limited mobility from working under the chair vs. around the chair.

Why Access Defines Health for the Clinical Team

- **Oral Cavity Access – Two Constants:**
 - Symmetrical plane - Midline Body (physical access)
 - Keeping the patient's oral cavity on the midline of the clinician's body in any working position from 3-9 o'clock.
 - As a result, the clinician's elbows rest comfortably at their side, keeping them at a more comfortable and relaxed position. By utilizing larger muscle groups, we drastically reduce class 4& 5 movement.



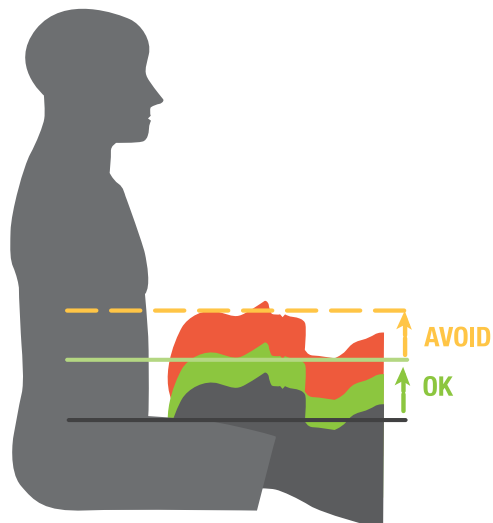
Why Access Defines Health for the Clinical Team

■ Oral Cavity Access – Two Constants:

- Focal length (visual access)
 - Defined as the distance from the bridge of the clinician's nose to the oral cavity.
 - Optimal focal distance is achieved between 16-19 inches.
 - Lowering the patient in order to achieve this distance allows the clinician's elbows to rest comfortably at their side, keeping them at a more comfortable and relaxed position and utilizing larger muscle groups.



Cause	Effect	Narrow Back	Wide Back
Around Not Under	Proper positioning and access start by being able to work around the chair, not under the chair.	✓	
Under	The Clinician's legs are positioned underneath the chair, potentially causing circulation issues as well as limiting clinician mobility. As a result, the patient's oral cavity is raised.		✗
Impact	Around Not Under is the foundation to healthy ergonomics for the entire dental team. Working around the chair reduces the need for class 4 and 5 movements when working in the oral cavity.		



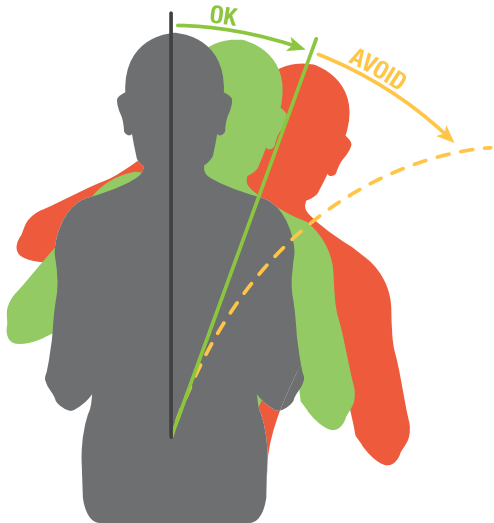
NBA – Relaxed Not Raised

Cause	Effect	Narrow Back	Wide Back
Relaxed Not Raised	Access to the oral cavity can be achieved at a comfortable lap height allowing the arms to remain in a relaxed, not raised position.	✓	
Raised	With the patient positioned higher, the clinician’s focal distance is reduced forcing them to raise their elbows in order to work in the oral cavity.		✗
Impact	Relaxed Not Raised helps to eliminate and reduce class 4 motions while working in the oral cavity. The clinician is able to maintain a healthy working position because they are not limited on how low they can position the patient.		



NBA – Straight Not Twisted

Cause	Effect	Narrow Back	Wide Back
Straight Not Twisted	Achieving an optimal focal distance (16-19”) allows the clinician to gain visual access to the oral cavity without having to bend or twist the spine.	✓	
Twisted	With the clinician forced to work under the chair, they are unable to maintain an optimal focal distance. In order to gain visual access to the oral cavity they must bend or rotate at the trunk (class 5).		✗
Impact	Straight Not Twisted helps to eliminate and reduce class 5 motions when accessing the oral cavity. The clinician is not required to twist or bend in order to gain visual access because they are able to maintain an optimal focal distance.		



Why Pelton & Crane 3000 Unit?

▪ Innovative

- Only unit designed to integrate market leading KaVo electric motors
- Center mounted air brake allows for ambidextrous one handed operation.

▪ Ergonomic

- Center handle and touchpad means not having to reach to make adjustments
- 90 and 45 degree HP angles lets Drs. pull HPs at the angle of their choice
- Unit facilitates easy left/right conversion when mounted to an ellipse

▪ Efficiency

- 6 integrated handpiece positions to accommodate your practice today, tomorrow, and well into the future.
- Clean lines provide good asepsis, limited seams of pooling areas damage from harsh cold sterilization chemicals.



Why Pelton & Crane Helios 3000 LED Light?

▪ Innovative

- First LED operative light introduced to the dental market
- Only LED operative light to mix 4 colors to produce different temperature white light (4200K, 5000K)
- Only true LED operative light able to produce true “No Cure” setting by removing blue light entirely.

▪ Ergonomic

- Reflective lighting produces crisp and consistent 3” x 6” pattern minimizing the need to re-position the light during a procedure.
- Dual touchpads positioned to allow for single hand operation for clinician or assistant.

▪ Efficiency

- 4200K, 5000K and “No Cure” settings allow for all procedures to be done patient sitting in chair.



Additional Options in the Kavo Kerr Portfolio

KaVo ESTETICA E70/E80 Vision

Get in touch with your vision.

1. Touch display
2. Camera – USB interface
3. KaVo HD Screen 22"
4. Intuitive Dentist element
5. New arm rests
6. Hygiene centre
7. Modified design and all parts in dental white
8. New surgery function, new small surgery motor S600 LED and integrated saline solution pump
9. Blue Line Edition in smoky blue and ocean blue



New dentist element

A simple touch.

The sensitive touch screen facilitates a quick and direct access to all important functions.

- Completely new operating concept
- Self-explanatory operating logic
- Very clear arrangement
- Further function easy to reach by tabs
- Individually configurable
- Integrated surgery and endodontics functions

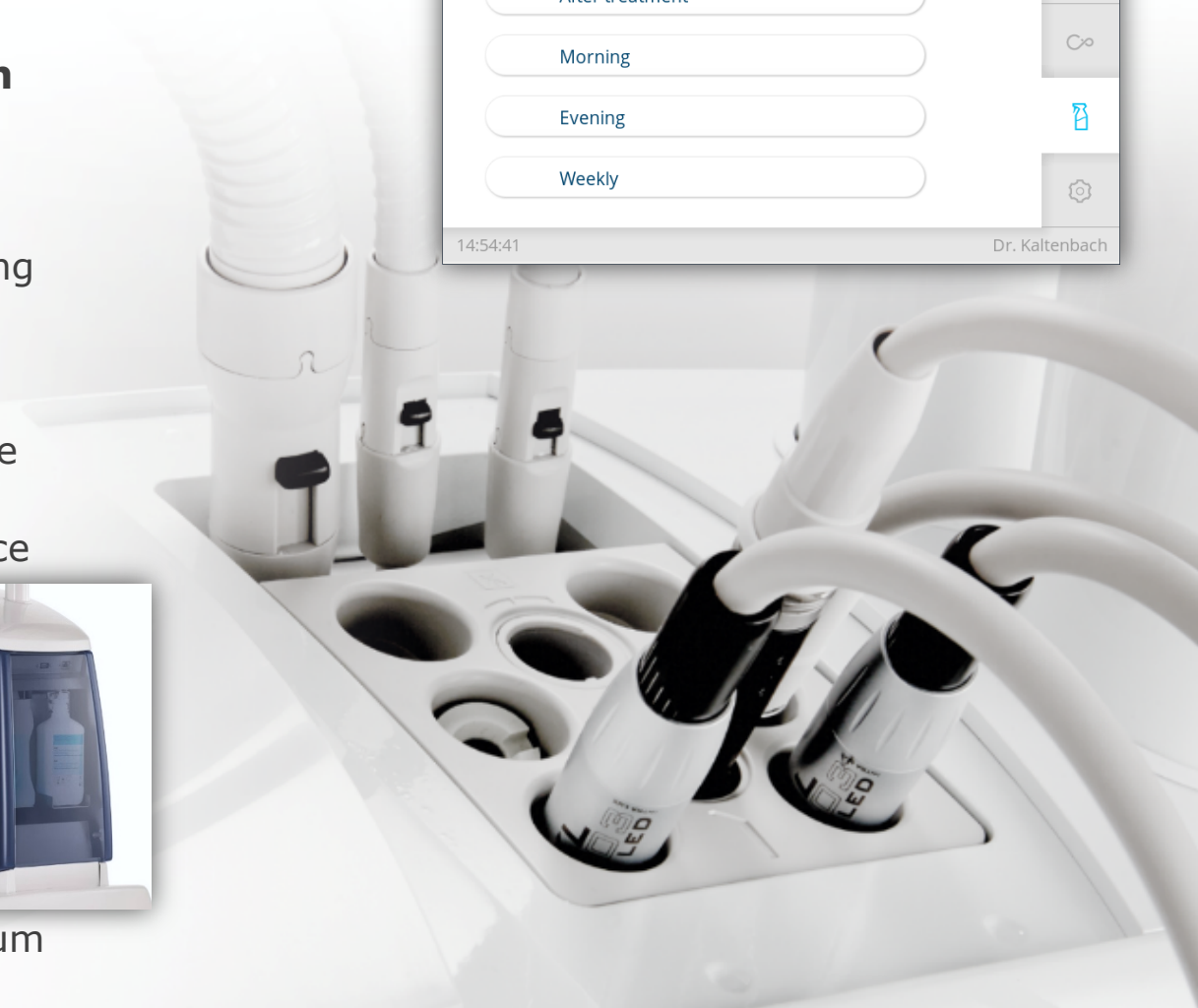
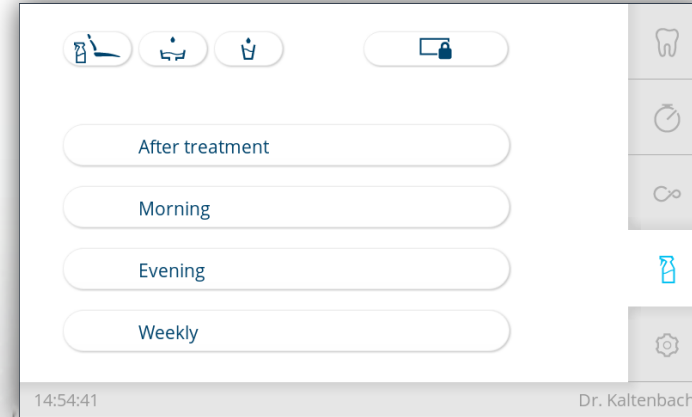


Hygiene centre

Automated, integrated.

Integrated hygiene centre with fully automatic cleaning programs

- Easy and reliable automatic cleaning and disinfection of the suction and instrument hoses
- Removable and thermodisinfectable
- Simply remove contaminated device parts. They can be cleaned, disinfected and sterilised.
- Time-saving, effective and maximum safety.



Pelton & Crane P50 Delivery System – *Coming soon!*

Leveraging technology to improve workflow, maximize efficiency and allow doctors to perform any procedure including implantology using a single, integrated treatment center.

- Easily **upgrade accessories** for new procedures, without adding standalone equipment
- Integrated **touchscreen** with simple, intuitive interface
- **Automated hygiene system** for time-saving and effective water line maintenance



Questions?