

KaVo ARCTICA® CAD/CAM system

Expect more of  
your CAD/CAM solution.



KaVo. Dental Excellence.

# KaVo ARCTICA® CAD/CAM system – one system, many advantages.

## Your KaVo quality advantage.

**KaVo Dental Excellence** – this means more than **100 years of experience in dentistry** and more than ten years of competence in professional CAD/CAM system solutions. With your KaVo ARCTICA CAD/CAM system, you benefit from this and many more qualitative advantages.

- **Solid and compact design** with both innovative and established materials, as well as field-tested system components.
- Simultaneous 5-axis milling system, for **perfect results**, usually without rework.
- **Durable and highly precise grinding and milling tools**, with diameters of 0.5 to 3.6 mm.
- **Made in Germany** according to the highest quality standards.
- Regular certification according to EN ISO 9001 and EN ISO 13485, ensure **consistently high quality**.

## Your KaVo system advantage.

All individual components of the CAD/CAM portfolio are perfectly matched and can be combined with each other depending on requirements and demand. Even external devices with open interfaces, can be integrated into your KaVo ARCTICA CAD/CAM system.

- **Wide range of system components** – all components of the KaVo CAD/CAM portfolio – from the scanner and the software package, to the two engines KaVo ARCTICA and KaVo Everest – are completely compatible. The high-quality KaVo materials, ARCTICA Elements and KaVo Everest Elements, are especially adapted to the size and the requirements of the respective milling machine.
- **Maximum flexibility, thanks to open interfaces** – system components from external suppliers, e.g. marketable scanners that create open STL files, can be integrated without any problems.
- **Two machine variants** – you can choose whether to rely on the high-quality KaVo ARCTICA Elements with the closed variant, or to use substances and materials from any manufacturers, using the open KaVo ARCTICA Engine variant.

## Your benefits from KaVo innovation

When developing dental solutions, KaVo always plans for the future. For decades our engineers have been providing innovative technologies, that make your practice and laboratory everyday life, simpler. This demand for innovation makes your KaVo ARCTICA CAD/CAM system particularly precise, user-friendly and economical.

- **Highest precision**, even in cases of demanding geometries and undercuts – thanks to the combination of milling and grinding technologies, as well as the simultaneous 5-axis system, with a swivelling range of up to 25 degrees.
- **Complete solution in a minimum of space** – with the KaVo ARCTICA CAD/CAM system, you benefit from a solution that requires little space. For example, the PC and the cooling lubricant container, are integrated into the device housing.
- **Simple maintenance** – intelligent detail solutions, allow individual system components to be replaced quickly and easily, such as the electronics box, or the innovative double-filter system.

## Your KaVo safety benefit.

Thanks to its large range of possible uses, the KaVo ARCTICA CAD/CAM system offers you the greatest possible investment security and a future-proof investment:

- **Highest investment security** – with the wide spectrum of indications and the large variety of materials, you are already prepared for future challenges, today. The creation of open STL data, as well as the possibility of loading open STL data from other scanners together with the open material interface, provide additional use and extension options, so that you can use your system permanently.
- **Smooth processes** – optimally matched system components, make your entire work process simpler and more efficient.
- **Higher future security** – offered to you by the reliable service and spare parts availability over the long-term.

## The KaVo ARCTICA CAD/CAM system.

The KaVo ARCTICA CAD/CAM system, meets all the technical and economic requirements for modern dental solutions, that are presumed in everyday practice and laboratory life.

- **Maximum investment protection and future security**, due to wide range of applications and extensive material options.
- **Outstanding flexibility** with maximum integration options.
- **Maximum precision for all results**, combined with easy handling.

## The KaVo ARCTICA CAD/CAM system, consists of the following components:

❄ Scanner	KaVo ARCTICA Scan
❄ CAD Software package	KaVo multiCAD
❄ Materials	KaVo ARCTICA Elements
❄ Milling and grinding unit	KaVo ARCTICA Engine

KaVo ARCTICA Scan



KaVo multiCAD



KaVo ARCTICA Engine



KaVo ARCTICA Elements



WORKFLOW

# KaVo ARCTICA® Scan – the simple and fast solution.

## Impressively versatile and convincingly safe.

No matter how simple or complex the scanning task: the semi-automatic scanner KaVo ARCTICA Scan, meets your wishes comprehensively. It maps even critical areas, quickly and precisely – thanks to precise striped light scanning technology.

## Place object, set scanning angle start scan, finished.

With the KaVo ARCTICA Scan, complex procedures are completely omitted. This is realised by the integrated live image display and the reduction of the automated functions to just the essentials, to name but a few. Moreover, you do not have to prepare your model with powder before scanning. Thanks to the combination of manual setting of the scanning angle and the practical automatic rotary table, the handling is particularly simple and fast – and that, with maximum accuracy. Benefit from the advantages of modern scanning technology, at an attractive introductory price, with the KaVo ARCTICA Scan.

## Maximum precision at an attractive price.

- **Precise** – exact data, even with complex geometries and shapes, thanks to precise striped light projection.
- **Simple** – easy placement of the object to be scanned in the scanner, thanks to the large, ergonomically-designed device opening.
- **Safe** – transmission of the scan area to the computer screen in real-time, for reliable positioning of the model.
- **Fast** – thanks to short scanning cycles as well as simple setting options.
- **Flexible** – thanks to open STL data, that can be processed with any common, open dental CAD software package.

## Technical data:

- **Precision:** 20 µm
- **Scanning times:** 1 min for a single stump as framework, 3 min for a three-unit bridge
- **Output:** Open STL data



*The scanning angle can be set very easily, at the push of a button.*

*Maximum precision via striped light projection and large gain in time, due to the fast and simple manual setting of the scanning angle.*



## KaVo ARCTICA Scan – Main features and advantages for you:

- ❖ **Convincingly simple and fast**, thanks to manual setting of the scanning angle and live image display.
- ❖ **Outstanding flexibility**, because open STL data is created, which can be loaded into commercial, open dental CAD software packages.
- ❖ **Impressively precise**, even with complex geometries, thanks to striped light projection.



# KaVo multiCAD® – intuitive and user-friendly, versatile and fast.

## Step by step – simply and safely.

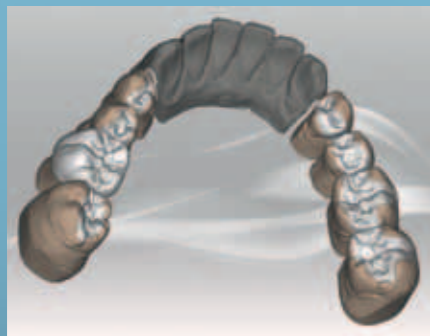
KaVo multiCAD is the perfect software package both for beginners and for advanced individualists. The menu navigation is intuitive and user-friendly throughout. Everything is self-explanatory. Create your designs easily and safely, thanks to predefined parameter recommendations and design proposals, or change the parameters according to your wishes and requirements. The result? Optimum design solutions.

Your KaVo multiCAD software package, seamlessly integrates into modern hardware environments and uses the complete computer performance, for quick visualisation and realisation. It is completely compatible with STL data from commercial, open scanners.

## Before: define easily.

Create all desired restorations quite simply, with KaVo multiCAD. Define your desired design for the upper and lower jaw respectively. All details and individual requirements are summarised clearly, before each scan.

- **Different restoration types:** crowns, anatomic caps, diverse bridges, as well as inlays, are displayed per jaw.



Various indications such as inlays and crowns, may be easily defined per jaw, in one step.

## Afterwards: design quickly.

The restoration is quickly designed after the scan and with a guaranteed result.

- **Reliable help** for the design, is offered at anytime from the step-by-step wizard. It automatically ensures that each operating step is fully defined and carried out, e.g. for recognising the preparation margin, setting the insertion direction, design of the restoration interior (cement gap, crown edge, undercuts), positioning of the library teeth, antagonist adjustment and creating connectors.
- **Postprocessing without extra expenditure.** You can even easily alter designs which are already finished, without large-scale operations.
- Once the design process is finished, the data is automatically stored – upon transfer, the milling process may be started.
- Using **simple data transfer**, it is also possible for a partner laboratory to complete the manufacturing, via the KaVo Everest Portal, using the ARCTICA Engine.

## Technical data:

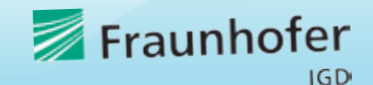
- ❖ **Indication spectrum:** crowns, caps, anatomical bridges, anatomically reduced bridge frameworks, inlays, veneers, Maryland bridges, inlay bridges, overpress crowns, implant abutments, telescopic crowns, wax-ups
- ❖ **Data output:** open STL data

## KaVo multiCAD – highlights and advantages for you:

- ❖ **Intuitive, user-friendly screen design and step-by-step wizard**, for easy and safe design.
- ❖ **Versatile, because its completely compatible** with STL data of commercial open scanners.
- ❖ **Very fast**, thanks to maximum use of the predefined computer performance.



Developed in cooperation with  
Fraunhofer IGD



*With the intuitive user-interface, you always have the complete view – everything is self-explanatory.*

# KaVo ARCTICA® Engine – highest precision, maximum versatility.

## The versatile CAD/CAM solution for both the laboratory and dental practice.

The KaVo ARCTICA is the versatile CAD/CAM solution for laboratory and practice. The combined milling and grinding unit, is characterised by a combination of flexibility, precision and investment security. With its broad range of uses and the large variety of materials, it immediately and permanently provides a maximum of productivity and quality.

## Perfect in every direction: the 5-axis technology.

The simultaneous 5-axis system, has a swivelling range of up to 25 degrees and thus enables you to process even undercuts. The movement in all five axes, with their broad angles of movement, ensures that you can mill even critical areas and undercuts, highly accurately and easily.

## Whatever you mill or grind: the tool fits.




14 different milling and grinding tools with diameters of 0.5-3.6 mm are available to you, for different designs and materials. Special coatings ensure little wear and maximum durability.

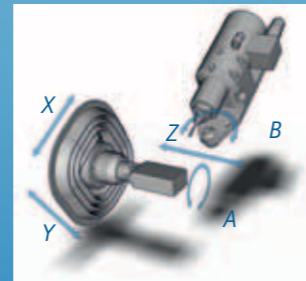
Create designs according to all dental and aesthetic aspects, thanks to this wide range of tools.

The KaVo ARCTICA Engine automatically shows you the matching tool magazine, with the corresponding tools, for each design. The choice of tool is checked by LASER measurement.

- More safety without interruption of the production, thanks to 6-fold tool magazine and automatic tool-changer.
- The spindle can be exchanged easily and with little effort.
- With the integrated K-Control, KaVo POWER-/ERGOgrip hand-pieces can be directly connected to your engine.

## The 5-axis movements:

-  The X, Y and Z axes define the horizontal and vertical travel paths in the area.
-  The A axis indicates the workpiece rotation.
-  The B axis indicates the rotational range of the spindle.



*Precise: the milling motions along the five axes, X, Y, Z, A and B, allow exact work in critical areas and even in areas with undercuts.*

## Enjoy perfection in a minimum space.

The compact and simultaneously solid design of the KaVo ARCTICA Engine, is the basis of reliably reproducible results, which generally do not require post-processing.

Despite its small dimensions of only 773 x 590 x 584 mm (W x H x D), in addition to the innovative 5-axis milling system, all essential parts and components are integrated into the device housing, even the 7-litre cooling lubricant container. By means of the comfortable, large opening to the milling area, you have easy access and can conveniently position your material blank.

## Technical data:

- ✦ **Dimensions:** (W x H x D) 773 x 590 x 584 mm
- ✦ **Useful depth:** 524 mm
- ✦ **Weight:** 97 kg
- ✦ **Compressed-air connection:** 6 bar (+/- 0.5 bar), 40 NL/min
- ✦ **Voltage:** 100 – 240 V at 50/60 Hz
- ✦ **dB (A):** 69  
(measured with a titanium milling job, at a distance of 1 m)



*With its small dimensions, the KaVo ARCTICA engine is one of the most compact wet-milling and grinding machines, with high-quality design, for stability and the highest level of precision on the market.*



# KaVo ARCTICA® Engine – play it safe automatically.

## All of the information and full control of the tools and materials.

The closed machine variant, offers automatic materials management via integrated RFID technology: an essential factor for smooth processes and safe results. Scanning in once is sufficient – and you always have a complete overview of your materials and save time in inventory management.

- You always have up-to-date information on the materials and tool status. The quality of the restorations is always safeguarded and manufacturing delays are avoided.
- Simply query the degree of wear of the tools. You are immediately informed by means of the simple, traffic light colour-coding. Moreover, automatic machine and tool checks before each processing step, prevent working with broken tools.

## All you can do, is do everything right.

The innovative technology of the KaVo ARCTICA Engine, offers you maximum security, both for the individual processing steps and handling.

- The intuitive user-guidance via touch screen, permits automated processing and thus a reliable and effective workflow.
- The operating concept is so simple, that you can specify manufacturing jobs in just a few steps.
- The large opening to the milling area, enables convenient mounting.
- The large, removable cooling lubricant container, with a capacity of about 7 litres and the double-filter system with a coarse and a fine filter, affords minimum maintenance effort. Moreover, service parts such as the electronics box, can be exchanged very easily,

*Simply convenient. The large opening to the milling area enables convenient mounting. The individual tool selection for different materials, is simple and user-friendly, due to the removable tool magazine.*



## Only 5 steps to reach the finished restoration – the simple operating concept with modern touch-screen.



1. Select "Jobs" in the start menu



2. Select manufacturing job



3. Confirm manufacturing job



4. Select tool magazine



5. Confirm tool magazine



Manufacturing job finished

# KaVo ARCTICA® Engine – higher flexibility for a successful future.

## Today is the time to plan for tomorrow.

Gain a competitive edge and draw upon abundant resources for your designs, now and into the future. Here the KaVo ARCTICA Engine supports you in the best possible way. Using it, you can also flexibly realise individual dental solutions.

## All possibilities using a system.

Thanks to the KaVo system competence, the KaVo ARCTICA Engine can be freely combined with other KaVo CAD/CAM products and thanks to its open interface, you can even use the open data of many commercial intraoral and desktop scanners, from other manufacturers.

## Two machine variants are offered.

The KaVo ARCTICA Engine is available in two different machine variants – depending on your individual requirements.

## 1. The closed machine variant.

- Only trust quality and use the high-quality KaVo ARCTICA Elements.
- Benefit from an efficient materials and tools management, as well as a time-saving loading, thanks to RFID scan.
- Use the extensive KaVo Service and Support.

## 2. The open machine variant.

- This even provides for material processing, with materials from external suppliers.
- Just insert the opening dongle, which is subject to a charge and the software is installed automatically.
- Maintain maximum flexibility and remain open for the future.

## KaVo ARCTICA Engine – highlights and advantages for you:

- ✦ **Highest precision and easy handling** for perfect results, usually without post-processing.
- ✦ **Excellent flexibility**, though complete compatibility with commercial scanners.
- ✦ **Maximum investment and future security**, thanks to unlimited application options, combined with a broad indication and material versatility.

*Opt for the closed machine variant and use the extensive advantages from material quality and extended warranty periods, to the KaVo service and support package.*



*With the closed machine variant, VITABLOCS can also be used with the ARCTICA block adapter, or are already equipped with the block adapter.*



*The result: precisely manufactured, partial titanium crowns and ceramic crowns.*

# KaVo ARCTICA® Elements – material variety at the highest level.

## Take advantage of the outstanding materials versatility.

There are material preferences and alternatives for each indication. KaVo ARCTICA Elements offer a large selection of materials – **from titanium, zirconium and glass ceramics, to plastics and wax.** Thus you can flexibly respond to restoration demands and customer wishes, at any time.

- The highest possible scope in every material branch – for individual dental solutions and all functional, aesthetic and financial requirements.
- Professional and high-quality restoration results – in addition to precision and quality, aesthetics are also a top priority.
- Extended KaVo ARCTICA Elements range of materials – thanks to the cooperation of KaVo with the VITA Zahnfabrik and other renowned manufacturers.
- Simple booking of all ARCTICA materials into the KaVo ARCTICA Engine materials management, via RFID.

## KaVo ARCTICA Elements – highlights and advantages for you:

- \* **Large variety**, thanks to a comprehensive range of materials, for a larger number of indication options.
- \* **Higher future security**, thanks to a 6-year warranty and cooperation with respected material manufacturers.
- \* **Outstanding quality** and environmentally friendly manufacture, according to biological criteria.

## Matching holder for each material.

KaVo ARCTICA Elements are available in many different strengths and are delivered with the appropriate holders:

- ARCTICA exchangeable holder: threaded steel holder for titanium and fibre-glass reinforced plastic (C-temp).
- ARCTICA plastic holder: glued disposable holder for zirconium and PMMA plastic (C-cast).

Titanium: 70 x 40 mm, size: 12, 16 mm

Fibre-glass reinforced plastic: 70 x 40 mm, size: 20 mm

PMMA plastic: 70 x 40 mm, size: 20 mm

Zirconium: 70 x 40 mm, size: 12, 16, 20, 25 mm



VITABLOCS, equipped with ARCTICA block adapter or ARCTICA block holder.

# KaVo Everest® Portal – your network for even greater flexibility.

## Even more service: the KaVo Everest Portal.

The Everest Portal enables you to exchange 3-D design data and thus serves as an interactive "exchange platform", for multiple scanning and milling partners. You can easily benefit from the advantages:

- You can use the Everest Portal, to display all registered milling partners with free capacities and select an appropriate partner.
- On the other hand, you can set free capacities in the Everest Portal and assign restoration jobs via simple data transfer, to KaVo Everest and ARCTICA laboratory partners.
- Or you can accept jobs from other ARCTICA and Everest partners and use your capacities to a maximum.
- The transmission of the design data to and from milling partners, is carried out safely and smoothly via the Everest Portal, which is operated on a KaVo server. Invoicing and payments are handled directly between the milling and scanning laboratories, without any complications.





# KaVo ARCTICA® CAD/CAM system – one system, many advantages.

Use the KaVo ARCTICA CAD/CAM system and benefit from its numerous advantages, such as maximised investment and future security, wide range of uses, large variety of materials, outstanding flexibility, as well as the utmost precision, coupled with easy handling.



## KaVo ARCTICA Scan

- ✦ Convincingly simple and fast, thanks to manual setting of the scanning angle and live image display.
- ✦ Outstanding flexibility, as open STL data, which can be loaded into commercial, open, dental CAD software packages, is created.
- ✦ Impressively precise, even with complex geometries, thanks to striped light projection.



## KaVo multiCAD

- ✦ Intuitive, user-friendly screen design and step-by-step wizard, for easy and safe results.
- ✦ Versatile because, as its completely compatible with STL data of commercial, open scanners.
- ✦ Very fast, thanks to maximum use of the predefined computer performance.



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**We are also available for you, online.**

Learn more about service and support on our website, at [www.kavo.com/arctica](http://www.kavo.com/arctica), or send an e-mail to [service.arctica@kavo.com](mailto:service.arctica@kavo.com)



**KaVo. Dental Excellence.**