

KaVo ARCUS[®]digma – the new generation

What human senses
can't capture.



KaVo. Dental Excellence.

What human senses can't capture. Digma can.

Self-sufficient, when Digma is to be located in differing positions in the practice. Integrative, when the possibility exists of integrating into the assistant's unit (KaVo E80). Via USB or wireless link to your network, or quite simply just store on a data card.



Integration in the treatment procedure.



Economic aspects are an important foundation of the dental practice. Quick findings and their complete documentation are the basis of profound diagnostics.

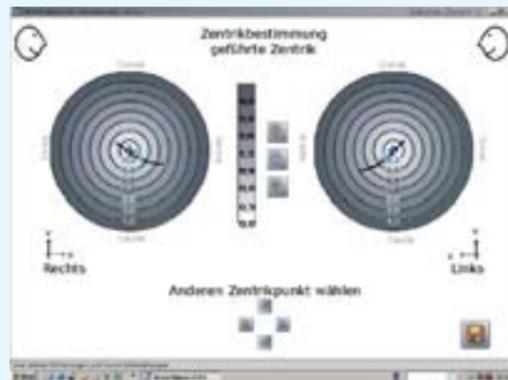
Competence in the development of dental treatment units and measuring systems for functional diagnosis is the basis of the new Digma from KaVo.

For the first time, a completely integrative solution has succeeded. Mechanically, by adaptation into the assistant's and the multi-media units. Software-technically, in the KaVo KID operating surface.



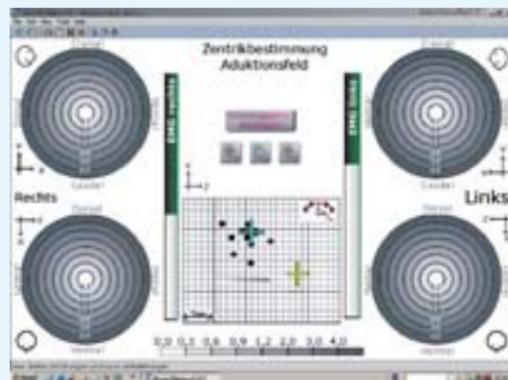
Statics for prosthodontic therapy. Determining the centric mandibular position.

Using the new Digma, it has been successful for the first time to transfer a desired centric position under computer control into a centric registration.
Digital Controlled Position.



Manually-guided centric

A manually-guided centric condyle position (black cross) in relation to a protrusion trace can be displayed on the monitor. The selected centric position can be moved in relation to the protrusion trace, as required. With a subsequent continuous measurement (green cross), this position can then be transferred to a registration under computer control.



Adduction zone

After several bite movements (max 20) a point is displayed, which lies 20 mm behind the incisal edge and approximately on the occlusal plane. With each closure of the dentition, the analysis is refined.

The boundaries whereby which points should be considered in the evaluation can be selected as desired. The centre of this adduction zone (blue cross) corresponds to the habitual occlusion and is associated to the position of the TMJ. With a subsequent continuous measurement, the current position of the mandible is displayed (yellow cross). The operator guides the mandible into a position in which both the yellow and blue cross cover each other, then encodes this by plastic registration material.



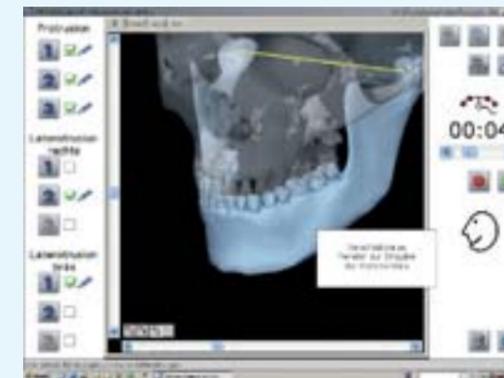
Gothic arch

This method is primarily designed for the functionally-disturbed patient, but is also suitable for edentulous cases. Here, the Digma intra-oral registration support pin is placed in the patient's mouth.

The crossing-point from several protrusions and laterotrusions ("arrow-head") delineates the sought-after centric position. In a continuous measurement (yellow cross), the lower jaw can be adjusted to either this centric occlusion or a freely defined position, and encoded by registration material.

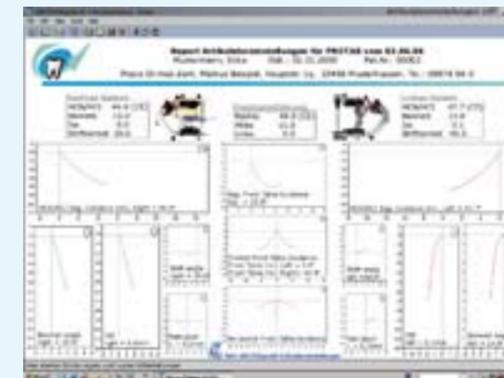
Dynamics for prosthodontic therapy. Your articulator becomes (almost) a patient.

A few small excursive movements by the patient are sufficient to calculate all settings for programming a fully-adjustable articulator (PROTAR Digma).



In less than 5 min., an experienced operator can ascertain and document all important settings for programming the articulator (e.g. condylar inclination, Bennett angle, ISS, shift angle).

For the first time, even settings for programming articulators of other manufacturers can be calculated with the Digma system. Ask your dealer.



For the documentation of the articulator programme settings, a clear, informative report is automatically generated. This can be stored, printed or sent by e-mail to your laboratory.

The displayed curves provide information about all relevant movements in the temporomandibular joints and at the incisal point.



Efficient findings. Your support for a profound diagnosis.

Therapy according to the findings. Mandibular position following movement analysis.



Clinical functional analysis combined with an electronic analysis of movement is the first important step for diagnosing the need for an initial treatment of function before carrying out restorative measures, so as not to overlook any malfunctions.

Digma undertakes the documentation of the 3D lower jaw movement in clear, representative reports and stores all relevant data.

The automatic error-corrected display of condylar and incisal movements in the three oral planes; together with the study of movements of the condyles on the right and left sides at the same point of time in the form of the kinematic axis, can all provide information regarding movement limitations, un-coordination or hyper-mobility. The probable causes thereto can possibly be discovered in the arthrogenic, myogenic or occlusal regions.

Should functional disturbances be recognised in the movement analysis, a new therapeutic position can be defined with the help of Digma.

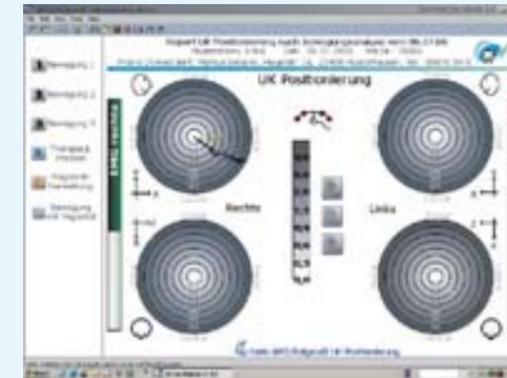
This can be adopted, for example, as the "therapeutic start position" of centric occlusion in a splint or a provisional prosthesis.



The new Digma guides the operator through the movement analysis.

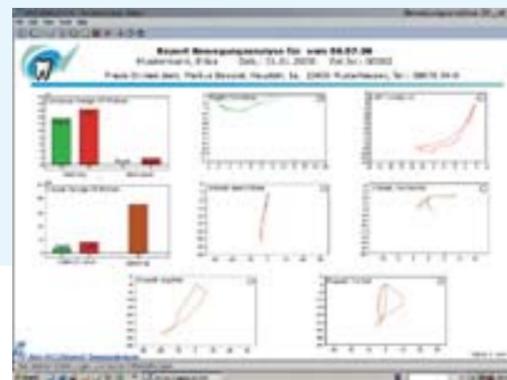
From 6 fixed movement procedures, important information about the patient is ascertained. In addition, self-selected movements can be defined and recorded. Both condyle positions and the movement of the kinematic axis are displayed three-dimensionally.

By selecting the desired movement recordings ("green tick-mark") it is possible to display these overlapping. Individual comments can be inserted at any desired point of the lower jaw movements.



For this purpose, preferably up to 3 movements in which the irregularities appear should be carried out.

Based on the visualisation of the movement sequences, the new therapeutic position can be specifically selected. This selected position is finally transferred into a registration under computer control. As a final step, by using Digma it can be checked whether the patient is attuned to the registration in the new therapeutic position.



An easy-readable report is created for documentation of the appropriate movement analysis.

The mobility of the TMJ and the incisal point, as well as their exact progression, are stored as graphics. For appraisal of the treatment progression, up to three movement analyses can be displayed overlapping.

EAEF. Analysis of pain location in the TMJ.



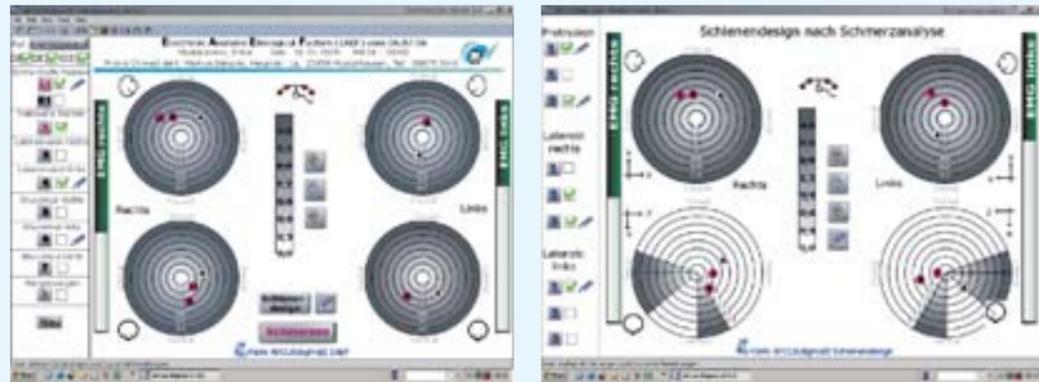
Import/Export. Your practice PC for storing and analysing all measured values.



Production of dynamic splints.

Electronic Analysis of Etiological Factors (according to Prof. A. Bumann)

The new Digma assists the operator with the localisation of the pain position(s) in the stomatological system. The analysis programme simulates important steps from the findings. Further steps for the pain position analysis can be easily integrated.

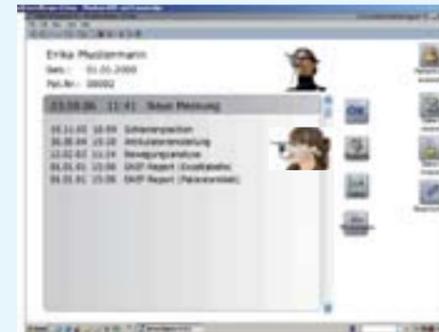


All measuring steps of the pain analysis are clearly displayed on the left hand side of the screen. The operator guides the patient into the respective position – alternatively, the patient is requested to carry out the required action.

Painful lower jaw positions are illustrated in red on the report via the pain button. Thanks to the clear portrayal on the PC screen, it can be explained to the patient which of his actions force the lower jaw into a painful position.

As a therapeutic step from the pain analysis and with assistance of the Digma analysis software, a dynamic splint can be produced in the KaVo PROTAR articulator.

Guided excursive movements which are portrayed on the PC display and specifically aimed at the pain position allow the Digma to calculate a dynamic splint.



All information which has been recorded and analysed by Digma from the patient is stored in a clearly-readable way in the KaVo Digma/KID software.

The patient's basic data is transferred to this from your practice software.

In Replay modus, all measurements can be retrieved from the data bank and further displayed.

A dentist doesn't need advice – at most, he gives it to others! All the patient's data can be transmitted by e-mail or data carrier to other colleagues or to the laboratory. Similarly, this can carry out all the analysis steps (providing the Digma software is also available). A mutual evaluation, or specific instructions to the laboratory, are therefore greatly simplified.

KaVo ARCUS[®]evo face bow.

The new KaVo face bow is a real all-rounder. The innovative, patented adjustment for the width of the face allows for universal applications in the dental practice.

Can be used as an arbitrary face bow, or a measuring bow for the Digma SD/USB/Wireless. Consequently, the new KaVo face bow becomes the first step to the electronic measuring system Digma.

In 3 minutes to the upper jaw model position

The ARCUS^{evo} face bow efficiently captures the position of the upper jaw model in relation to the arbitrary hinge axis. Occlusal errors, above all by raising or lowering of the bite, are thereby prevented.



ARCUS^{evo} face bow

Mat.-Nr.: 1.005.0900



ARCUS^{digma} measuring bow



KaVo ARCUSdigma[®]

Versions

<p>ARCUSdigma SD Ref. Nr. 1.005.2300</p> <p>Software Modules: Articulator programming Hand-guided centric relation Lower jaw movement analysis EPA – Electronic position analysis of LJ position</p> <p>Selectable Reference Axis: KaVo Transfer System Cinematic axis Arbitrary axis Individual centric axis</p> <p>Compatible Articulators: KaVo PROTAR/evo articulators</p> <p>Data Transfer: Via SD-card to PC</p> <p>Upgradable: ARCUSdigma USB (with Upgrade SD-USB – Ref. Nr. 1.005.4117) ARCUSdigma Wireless (with Upgrade SD-Wireless – Ref. Nr. 1.005.4118)</p> <p>Accessories and Optionals: PROTARevo Digma Ref. Nr. 1.005.4121 Mounting-set for KaVo Estetica E80 assistant delivery unit Ref. Nr. 1.005.4127</p>	<p>ARCUSdigma USB Ref. Nr. 1.005.2301</p> <p>Software Modules: Articulator programming Hand-guided centric relation Centric relation via "adduction field" Centric relation via "gothic arch" Lower jaw movement analysis LJ positioning after movement analysis EPA – Electronic position analysis of LJ position</p> <p>Optional Software Modules: EAEF module based on Prof. A. Bumann' method for detection of painful LJ positions and for design of dynamic splints (Ref. Nr. 1.005.4122) EMG Analysis – 2 channels EMG skin electrodes for measurement of muscle activity (Ref. Nr. 1.005.4123)</p> <p>Selectable Reference Axis: KaVo Transfer System Cinematic axis Arbitrary axis Individual centric axis</p> <p>Compatible Articulators: KaVo PROTAR/evo articulators, SAM, Girrbaach, Stratos, Panadent, Denar on demand</p> <p>Data Transfer: Via USB-cable online to PC</p> <p>Upgrade: ARCUSdigma Wireless (with Upgrade USB-Wireless Ref. Nr. 1.005.4119)</p> <p>Accessories and Optionals: PROTARevo Digma Ref. Nr. 1.005.4121 EAEF Module Ref. Nr. 1.005.4122 EMG Analysis Ref. Nr. 1.005.4123 Mounting-set for KaVo Estetica E80 assistant delivery unit Ref. Nr. 1.005.4127</p>	<p>ARCUSdigma Wireless Ref. Nr. 1.005.2302</p> <p>Software Modules: Articulator programming Hand-guided centric relation Centric relation via "adduction field" Centric relation via "gothic arch" Lower jaw movement analysis LJ positioning after movement analysis EPA – Electronic position analysis of LJ position</p> <p>Optional Software Modules: EAEF module based on Prof. A. Bumann's method for detection of painful LJ positions and for design of dynamic splints (Ref. Nr. 1.005.4122) EMG Analysis – 2 channels EMG skin electrodes for measurement of muscle activity (Ref. Nr. 1.005.4123)</p> <p>Selectable Reference Axis: KaVo Transfer System Cinematic axis Arbitrary axis Individual centric axis</p> <p>Compatible Articulators: KaVo PROTAR/evo articulators, SAM, Girrbaach, Stratos, Panadent, Denar on demand</p> <p>Data Transfer: Via KaVo wireless module to PC</p> <p>Accessories and Optionals: PROTARevo Digma Ref. Nr. 1.005.4121 EAEF Module Ref. Nr. 1.005.4122 EMG Analysis Ref. Nr. 1.005.4123 Mounting-set for KaVo Estetica E80 assistant delivery unit Ref. Nr. 1.005.4127</p>
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KaVo ARCUS[®]digma – Product benefits.



Innovative

- Mechanical or electronic face bow in one unit
- Broad range of applications for the daily practice workflow
 - Centric relation
 - Articulator programming also for non-KaVo articulators
 - Jaw movement analysis
 - New therapeutic lower jaw positioning after jaw movement analysis e.g. for splint-therapy
 - EAEF module for detecting painful lower jaw positions according to Prof. Bumann's method – optional
 - EMG recording – optional

Communicative

- Data can be stored offline on an SD-card, or recorded and stored online in the PC through a USB or wireless connection
- Online demonstration of all lower jaw movements for patient and dentist
- Data export to the laboratory or to other colleagues

Integrative

- Mechanical adaptation into the assistant's units of the KaVo Estetica E80
- Software integration into the intelligent KaVo KID data-assistant for an optimum connection to your accounting software

KaVo ARCUS®digma – the new generation

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KaVo Dental GmbH · D-88400 Biberach/Riß · Telefon +49 7351 56-0 · Fax +49 7351 56-1488 · www.kavo.com