# mediCAD®

an innovative process solution preoperative - intraoperative - postoperative











www.mediCAD.eu







it's not just the legislator, but your personal high-quality standards, the quality consciousness of your hospital as well as the well-informed patient that expect a professional surgical preparation in the form of digital surgical planning by the doctor. The requirements of endoprosthetic certification, which is a of quality for your hospital, require that you provide qualified planning and audit-proof archiving. digital images are the future, and competent surgical planning is the basis for successful and efficient endoprosthetic care.

#### In addition:

A scientific approach should be substantiated and justified with upto-date images easily, rapidly and with minimal effort. This makes the routine consultation and decision-making in the clinic easier to understand, more transparent and achieves comprehensible improvement and assurance of quality.

Take a look at our user reviews. We are confident that you will be impressed **by our carefully considered product concept and easy operation**. You benefit from an implant database that is updated on a monthly basis and represents the very latest digital product catalog in the field of implant care.

Arrange a free and non-binding demonstration of our system – we're sure you'll be convinced.

With kind regards

mediCAD® Hectec GmbH





**mediCAD**<sup>®</sup> is a combined package of modules, intended for use by trained medical specialists. It allows these specialists to assess bone and joint deformities, and plan implants for joint replacement and osteotomies based on 2D and 3D X-ray images.

The system was developed in collaboration with doctors for doctors, which means for you and your patients:

- World's first and most used planning program on the market
- Free interface to PACS via the mediCAD® Query Client
- Over 20,000 clinical users worldwide
- All known planning methods are taken into account
- A modular design with powerful add-on modules
- Easy and intuitive operation
- Immediate access to 23 languages
- All processes are documented in compliance with the law
- Time savings of up to 90% over conventional planning
- Access to more than 130 international implant manufacturers with more than 500.000 templates
- mediCAD<sup>®</sup> is continuously being developed with doctors for doctors
- Customized and special functions and modules are constantly being developed and made available
- mediCAD<sup>®</sup> has been successfully used in the medical industry for more than 20 years
- In international markets, mediCAD<sup>®</sup> is also sold under the name IMPAX Orthopaedic Tools (through AGFA Healthcare)
- mediCAD<sup>®</sup> is certified in accordance to 93/42/EWG und EN ISO 13485 and approved as a medical product
- MDSAP certified 512917MDSAP16 (AUS, BRA, CND, USA)
- 510(k) approval for mediCAD was granted by the FDA erteilt (K170702)
- **mediCAD**<sup>®</sup> is licensed for use as a medical device in the Russian Federation. Certificate 2017/6580 dated 12/15/2017. Unique registry entry number 24304
- mediCAD<sup>®</sup> is licensed in Japan (JMDN CODE 70030012)
- Guaranteed compliance with the MDR from 2020

## **Table of content**



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## Hip



The hip module helps you plan hip implants. It is based on planning methods, which were previously done manually, for hip endoprosthetics using radiographic imaging and prosthesis templates.

#### You can quickly and easily:

- Determine the appropriate femoral neck length
- Select and fit suitable cup and/or shaft combinations
- Determine pre- and postoperative leg-length compensation and display this on the image
- Professionally measure and assess hip joint morphologies using the "FAI" function
- Determine the dimensions of bilateral femoral offsets
- Determine the acetabular offsets
- Calculate and perform intertrochanteric osteotomies

#### Automatic planning

Shafts and cups may be proposed after automatic recognition of the relevant landmarks using the "Automatic Planning" function in the "Hip" module. This function allows **mediCAD**<sup>®</sup> to facilitate rapid and efficient preoperative endoprosthetic planning.

The use of a "Favorites List" limits the automatic determination to manufacturers or implant configurations for which the surgeon has a personal preference.





#### Intertrochanteric osteotomy

The "Intertrochanteric osteotomy" function allows surgeons to plan a corrective osteotomy of the trochanter, the upper section of the femur. Based on the axial malalignment, intertrochanteric osteotomy frequently offers the possibility to delay a total hip replacement.



The function permits planning of the resection line along the trochanter, along with subsequent definition of the rotational angle of the resection. The osteotomy planned using this rotational angle is generated in the planning image. The surgeon is able to perform flexible modification of the angle of osteotomy using this image. It is also possible to simulate rotation of the femoral head. Suitable components for osteosynthesis, such as nails, plates, or screws, can conveniently be selected from a database.

#### FAI

The femoro-acetabular impingement ("FAI") function in the "Hip" module facilitates the professional measurement and assessment of hip joint morphology. This function enables easy diagnosis of pathologies, such as CAM, pincer and mixed impingement, as well as dysplasia. **mediCAD**<sup>®</sup> facilitates the precise measurement and assessment of all forms of FAI during this process, using various X-ray images (Faux-profile, Rippstein view, Lauenstein view, cross-table lateral view, pelvic view).

The following can be determined rapidly and systematically:



- Cross-Over-Sign
- LCE angle
- ACE angle
- Alpha angle described by Nötzli et al.
- Head Neck Offset
- Posterior Wall Sign
- Menard Shenton Line
- Ischial Spine Sign
- Acetabular Index
- Femoral Head Extrusion Index
- Joint Gab Width
- Retroversion Index
- MCE angle
- Actual CCD angle

## Hip

#### Biometry

Looking for a biometric analysis? No problem!

**mediCAD**<sup>®</sup> automatically suggests the optimal position of the joint center point while considering body size, weight and initial biometric analysis. The load distribution is improved, and physiological muscle flexing is re-established using the biometrically determined standard range for anchoring of prostheses. Optimized implant geometry avoids biomechanically unfavorable results.

The software has unique capabilities for answering these types of questions.

**mediCAD**<sup>®</sup> calculates and displays the right pivot point for optimized joint geometry, simulating the load-bearing situation of a healthy joint. The mathematically optimized pivot point lies within the green zone, placing it in the op-



timal range according to a 12-point score. The inner cortical is automatically detected for precise fitting of the implant.

#### Triple pelvic osteotomy



The "Triple pelvic osteotomy" function in **mediCAD**<sup>®</sup> offers an easy-to-use option for planning hip joint repositioning in cases of dysplasia.

This function makes it possible to display rotations and bone fragment offset with a few clicks of the mouse.

The roofing of the modified joint can then be calculated.



#### Pediatric Measurements

The "Pediatric measurements" function facilitates the assessment of pediatric hip joints using clinically relevant values. Since American and European orthopedic surgeons assess the state of the hip joint using different criteria, these differences are considered in this approach. Most of these criteria are automatically assessed by **mediCAD**<sup>®</sup> using pre-existing grading tables.

**mediCAD**<sup>®</sup> offers dimensions for the following image formats: Pelvic views, long leg views, Faux profile view, Rippstein II view.

#### Calculate coxometric values:

- ACE-angle according to Wiberg/CE-angle
- ACM angle according to Idelberger and Frank
- MZ decentralized distance line used to calculate the hip index
- HW hip index described by Busse, Gasteiger and Tönnis



- HPKI acetabulum-femoral head index according to Heymann and Herndorn
- PNW/US acetabular inclination angle according to Ullmann
- ACW-SZ acetabular angle, i.e. angle of the sclerotic area of the acetabular roof if the Y-cartilage is closed
- ACW-HL acetabular angle described by Hilgenreiner when the Y-cartilage is open

#### Additional measurements:

- Radius-Head-Quotient/Mose-Index
- Articulo trochanter distance
- Reimer's index
- Acetabular index
- Epiphyseal index
- Metaphyseal-diaphyseal angle
- Tibiofemoral angle
- Alpha angle
- Epiphyseal-shaft angle



## Knee





Knee replacements can be planned in two planes (AP and ML) using the "Knee" module. Potential axial malalignments can be determined and corrected during planning. This enables preoperative and postoperative assessment of corrections to the transmission of force throughout the leg. This in turn significantly prolongs the service life of the prosthetic knee.

**mediCAD**<sup>®</sup> performs the correction of the malalignment automatically or based on manual specifications, depending on the desired objective. It calculates the expected postoperative mechanical axes, longitudinal axes and all relevant angles. Planning is performed on whole-leg AP and partial ML X-ray images simultaneously. This approach allows for optimal assessment of the posterior condyle.

#### Autoplan Knee

All dimensions are determined, and any axial malalignments are automaticallly determined and corrected after automatic recognition of the relevant landmarks using the "Autoplan Knee" function.

This function allows **mediCAD**<sup>®</sup> to facilitate rapid and efficient preoperative endoprosthetic planning. The use of a "Favorites List" limits the automatic determination to manufacturers or implant configurations for which the surgeon has a personal preference.



Long Leg



# The module Long Leg allows the holistic view and planning of osteotomies.

#### Osteotomy

The osteotomy module can be used to plan femoral or tibial corrective osteotomies, with single or multiple osteotomies, using the open wedge or closed wedge technique. Axial misalignments are found automatically, and corrections are handled automatically or manually.

An integrated database makes it easy to select suitable osteosynthesis components such as nails, plates, screws and more. With **mediCAD**<sup>®</sup>, merging partial images to create a complete long-leg image is a very simple and intuitive process.





#### Autoplan Osteotomy

All dimensions are determined after automatic recognition of the relevant landmarks using the "Autoplan Osteotomy" function. Axial malalignments can be corrected by specifying the relevant cuts. This function allows **mediCAD**<sup>®</sup> to facilitate rapid and efficient preoperative endoprosthetic planning.





#### Osteotomy according to Dror Paley

An analysis determines the type, number, size and localization of the osteotomies. When correction is complete, all joint-related mechanical weight-bearing axes and joint tangents must lie within the normal range.

Common methods: Open Wedge or Closed Wedge

Misalignments can be calculated using the expanded osteotomy function according to Dror Paley. All pre- and post-operative results are shown.

This method offers the following advantages:

- Analysis of the preoperative situation
- Determination of CORA/NCORA, single or multiple osteotomies
- Simulation of postoperative results
- Automatic calculation of optimal angles
- Determination of the apex and actual angle of deformity from AP and sagittal views
- · Possibility to select and evaluate the correction interactively

Dror Paley's principles of deformity correction are based on the mathematical principles and studies of Prof. Dror Paley of Baltimore/USA, as well as Prof. Dr. J. Pfeil and Prof. Dr. B. Gladbach of Wiesbaden/Germany.





Long Leg



#### **Torsion measurement**

The "Torsion measurement" function in the "Long Leg" module facilitates femoral and tibial measurement of internal or external torsion. This information is helpful when performing corrective osteotomy and can be directly applied during surgery.



The measurement of the TT-TG interval over the distance between the trochlear sulcus and the tibial tuberosity can be included in cases of patellar instability. The measurement of TT-PCL is also included.

### Trauma

Bone segments can be isolated and shifted as well as required osteosynthesis products put into place. Implant templates for plates, screws and nails are included. With the Trauma module, merging of partial images in order to create a complete image is a very simple and intuitive process.

- Very simple and intuitive image processing for reconstructing skeletal elements
- Data library for pins, screws and plates
- Plate bending: possibility to customize the plates to fit the anatomy
- Measurement of the roof arc angle
- Diaphyseal and metaphyseal fracture angle measurement





## **Upper Extremities**





This module enables the determination of the size and position of implants for shoulder, elbow, hand and finger, ensuring optimized planning. Postoperative results can be simulated.



## Foot





The "Foot" module facilitates optimal planning, as well as size and position determination of implants for feet, ankles and toes. It is possible to perform dimensioning of predefined angles in the forefoot, such as those for pes cavus and pes planus.

#### Ankle joint

This function allows optimal detection of ankle joint pathology. All individual measurement options, as well as a large selection of implants, are also available.







#### Hallux Valgus

Analysis of the preoperative situation through automatic calculation of all relevant angles.

Postoperative results can be simulated at any time. Individualized dimensioning options and a variety of implants are accessible.

#### Flatfoot (Pes planus)

The "Flatfoot" function allows the measurement of dimensions such as the calcanear, talometatarsal or talocalcanear angle.

These can be included for additional assessment of the pathological state.





#### Ankle Joint Instability

In just a few mouse clicks, **mediCAD**<sup>®</sup> allows you to obtain a precise overview of the stability of the ankle in an image taken during weight-bearing using the "Ankle Joint Instability" function.

## Hip





**The three-dimensional depiction and planning in mediCAD® Hip 3D**, makes effective planning, reduction of surgical duration and decreased complications even easier. The 3D module supports imaging investigations, such as CT, low-dose CT and MRI.

#### There are several functions available:

- Anatomical 3D and 2D viewing
- Planning of primary and revision cases
- Automatic femur- und pelvis-segmentation
- Automatic landmark detection
- Precise, simple and automatic measurement processes
- · Automatic detection of the size of the shaft and cup components
- · Automatic positioning and easy selection of the implants
- Reduction of implant artifacts
- Show and hide implanted primary implants
- Transparent view and implant-bone contact visualization
- ROM -Simulation (Range of Motion)
- Connection to your individual prosthetic manufacturer
- Interactive help
- Configurable planning workflow
- Automated digital documentation of the preoperative planning (planning report)
- STL-Export for 3D printing



**mediCAD**<sup>®</sup> **Knee 3D** enables easy and safe preoperative joint replacement planning. Deformities are rapidly and easily analyzed and corrected.

#### **Functions:**

- Accurate assessment of the anatomy using the 3D reconstruction
- Anticipation of possible rotation issues (flexion gap, without compromising trochlear dominance)
- Determination of the femoral and tibial torsion
- Determination of the possible resection height outcomes
- Determination of the rotation of the femoral components of the transepicondylar axis or of the posterior condylar tangents
- Automatic detection of landmarks for automated measurements
- Preoperative assessment of the suitability of fit of an implant
- Release of a desired area on the 3D model for better assessment
- "Quick and expert" function
- Planning osteotomies (open and closed wedge)
- Planning derotation osteotomies
- Planning leg lengthening surgery
- Patellofemoral diagnostic testing
- STL export for 3D printing
- Automatic digital documentation of the preoperative planning (planning report)



## **Knee Sport**



**mediCAD®** Knee Sport 3D is the new planning module for measuring the patellofemoral joint in patients with anterior knee pain or patellofemoral instability, and for preoperative planning of corrective osteotomies. The two special functions "Patellofemoral measurements" and "Corrective osteotomy" have now made measurement and preoperative planning possible – pathologies affecting both the tibia femoral and patellofemoral joints can be measured quickly, and treatment by means of an osteotomy can also be planned promptly.

#### **Functionalities:**

- Dimensioning of the patellofemoral joint using common measurements (TT-TG, TT-PCL, patella height, etc.) using CT, MRI, DVT and X-ray images
- Determination of the femoral and tibial torsion as described by Waidelich, Schneider and Jend
- Classification of trochlear dysplasia described by Dejour
- Planning osteotomies (open and closed wedge)
- Planning derotation osteotomies (including single-cut!)
- Planning leg lengthening surgery
- STL-Export for 3D printing
- Automated digital documentation of the preoperative planning (planning report)



## Shoulder









**mediCAD®** Shoulder 3D allows convenient preoperative planning of joint replacement surgery for all cases using high-resolution, three-dimensional CT, low-dose CT, DVT and MRI images. This allows the most suitable implant sizes, such as glenoid replacements and prosthetic shafts, to be precisely positioned and selected.

#### **Functionalities:**

- Modern, simultaneous anatomical 3D and 2D viewing
- Precise planning of primary and revision cases
- Automatic humeral and glenoid segmentation
- Reduction of implant artifacts
- Show and hide implanted primary implants
- Precise, simple and automatic measurement processes
- Increased accuracy in implant selection
- Automatic assembling and positioning of modular implants
- Transparent view for improved visualization of the planned prostheses in the bone
- Simple and visual representation of the quality of contact between the implant and bones
- ROM (Range of Motion) Simulation
- Interactive help
- Automated digital documentation of the preoperative planning (planning report)
- STL-Export for 3D printing



It is possible to easily determine the current pathological state of the foot and ankle joint using an X-ray, CT, MRI or DVT in the "Foot 3D" module. The three-dimensional depiction and planning of foot surgery make effective planning and the reduction of surgical duration and complications even easier.

#### Additional features include:

- Anatomical 3D und 2D viewing
- Accurate assessment of the anatomy using the 3D reconstruction
- Implant planning
- Hallux valgus measurements
- Flatfoot measurements
- Ankle joint measurements
- Implant bone
- Planning osteotomies (Chevron)
- Interactive help
- Better depiction of the implants in the bones thanks to a transparent view
- STL-Export for 3D printing
- Automated digital documentation of the preoperative planning (planning report)





Planning surgical procedures is simplified by the **mediCAD**<sup>®</sup> **Hand 3D** module. X-rays, CT, MRI or DVT images can be used to easily gain an understanding of the pathological state of the hand, wrist and fingers, and upcoming procedures can be optimally planned using this module.

#### Available functions:

- Anatomical 3D und 2D viewing
- Accurate assessment of the anatomy using the 3D reconstruction
- Implant planning
- Visualization of the contact between the implant and bones
- Frontal and sagittal radial joint angle
- Determination of the ulnar shaft axis
- Ulnar variance
- Scapuloulnar angle
- Axial and sagittal trapeziometacarpal joint angle
- Interactive help
- Better depiction of the implants in the bones thanks to a transparent view
- STL-Export for 3D printing
- Automated digital documentation of the preoperative planning (planning report)







**mediCAD®** Spine 3D actively supports users during planning. Fully automated recognition of all vertebral and intervertebral compartments allows dimensions to be conveniently placed on the current image with just a single mouse click. In addition, you will be presented with a multitude of appropriately sized implants, which will be correctly placed. In spite of this, the option to perform manual adjustments is always available. Conscientious preoperative planning using **mediCAD®** Spine 3D will allow you to improve your surgical outcomes and demonstrate highly encrypted documentation in PACS.

#### **Functions:**

- Fast and easy planning of the sagittal balance
- Automatic measurement of Pelvic Tilt, Sacral Slope, Pelvic Incidence, SVA (sagittal vertical axis) and FOA (Femur obliquity angle)
- Simulation of various osteotomies with dynamic adjustment of all relevant angles
- Automated measurements of: Scoliosis according to COBB /Ferguson, lordosis and kyphosis and the spinal canal width index
- Possibility to automatically display all pedicle diameters
- Calculation of the spondyloslisthesis
- Automated positioning of screws and cages over severel levels
- Customized proposals for implants
- Supported image formats: X-Ray, CT, Low Dose CT, MRI and CBCT
- Guided planning through predefined planning assistent
- Length determination of the bars



## mediCAD<sup>®</sup> OR



**mediCAD**<sup>®</sup> OR is the new intraoperative planning and matching solution for all orthopedic procedures during surgery.

#### Advantages:

- Intraoperative matching of the mediCAD<sup>®</sup> planning with live images from a mobile C-arm
- 3D imaging supports the intraoperative quality control
- mediCAD<sup>®</sup> OR is directly available on the mobile C-arm
- Deviations from target and actual values are shown directly in mediCAD<sup>®</sup>



mediCAD® OR is not yet commercially available in the United States. Due to regulatory reasons its future availability cannot be guaranteed.

## mediCAD<sup>®</sup> Web

**mediCAD**<sup>®</sup> **Web** will allow you to access your planning/application from anywhere via the browser. **mediCAD**<sup>®</sup> **Web** is the platform-independent variant of the **mediCAD**<sup>®</sup> planning tool.

#### Your advantages:

- Flexibility through the possibility to access the application/planning through the internet browser from wherever you want.
- Efficiency due to a reduced workflow as well as automated and dynamic measurements
- Clarity thanks to a very simple, modern and easy to understand user interface as well as an intuitive planning process.
- Cost savings because of a central user administration and a simple administration via the server
- Audit-compliance due to the certification as a medical device with the possibility to save the planning through the hospital PAC system in an audit-proof manner



#### Available modules:



#### Hip 2D

The "Hip 2D" module in **mediCAD**<sup>®</sup> **Web** allows you to efficiently achieve a planning outcome for your total hip replacement planning. The automated landmark detection proposes the placement of the most important measurement points, enabling you to rapidly insert the implants.





#### Knee 2D

You can plan total knee replacements using the "Knee 2D" module. Potential axial malalignments can be determined and corrected during planning. This enables preoperative and post-operative assessment of corrections to the transmission of force throughout the leg. The software corrects the malalignment automatically or based on manual specifications, depending on the desired objective. You calculate the expected postoperative mechanical axes, longitudinal axes and all relevant angles.



## mediCAD<sup>®</sup> Web



#### Osteotomy 2D

The "Osteotomy" module allows you to plan single- or multi-stage corrective femoral or tibial osteotomies, using either an open wedge or closed wedge technique. Axial malalignments are determined independently and are automatically or manually corrected. Suitable components for osteosynthesis, such as nails, plates, or screws, can conveniently be selected from a database.





#### Radiology 2D

The "Radiology" module is specifically designed for radiologists. The plethora of radiological measurements within a single application facilitates rapid recognition and assessment of the pathological state, as well as the ability to make these findings accessible to others via highly encrypted storage in PACS.



**mediCAD**<sup>®</sup> Radiology will fill the gap between radiology and orthopedic surgery. Orthopedic surgeons and radiologists must collaborate to provide the patient with the best possible joint replacement.

**mediCAD**<sup>®</sup> Radiology is the optimal interface for this purpose. Dedicated measurements for radiologists allow the module to support users in making professional initial findings that can be used as the basis of continued treatment by orthopaedic surgeons.

#### Available measurements:

#### Goniometry

This measurement can be used to aid the rapid and reliable determination of the angle between the anatomical femur and the tibia shaft axis, which will allow you to gain further understanding of the possible malalignments in the entire leg.



#### Scoliosis

By determining a vertebral end plate and vertebral base plate, you can determine the Cobb angle in just four mouse clicks.

#### Hip dysplasia

By defining the Hilgenreiner line and the acetabular roof, you can obtain bilateral dysplasia angles in a single step. You can also display the line described by Ombredanne to achieve a greater level of certainty regarding the pathological state.

#### **Pelvic tilt**

Display bilateral acetabular offset in just two mouse clicks.

#### Djian angle

You can determine the Djian angle in order to evaluate positional abnormalities in the hindfoot.

#### Planned additional measurements:

Hallux Valgus Occipital axis Meary angle Coxometry Sagittal balance Dual Cobb angle Additional axial relationships throughout the entire leg

Note: mediCAD<sup>®</sup> Web, with all of its modules, is also directly integrated into the Siemens teamplay platform, allowing it to be seamlessly added to your workspace

## mediCAD<sup>®</sup> Services

**mediCAD**<sup>®</sup> Services is the new independent portal that offers access to our services.

## services.mediCAD.cloud





#### **3D Printing**

- Create 3D models of anatomical regions and print them in 3D
- The prints can be ordered directly out of the mediCAD<sup>®</sup> planning software and are available in two different materials
- Benefit from a real preoperative view of operating regions

#### **Customized Implants**

- Fast transfer of planning data
- Synchronization between clinic and implant manufacturers
- Planning of individual prostheses using the DICOM dataset sent by the customer
- Provision of the planning software mediCAD<sup>®</sup> 3D and the appropriate interface for your design software



*mediCA* 

CUSTOMIZED

**IMPLANTS** 

#### www.endo-base.com

- New platform for sharing information related to arthroplasty
- Encylopedia
- Knowledge from experts
- Practical knowledge
- Publishing platform for studies and reference reports

## **Manufactuer information**

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The quality management system of mediCAD Hectec is certified according to DIN EN ISO 13485 (MDSAP). The product complies with the basic requirements of 93/42/EWC as provided by the quality management system and is approved as a Class I m medical product in accordance with this directive.

#### Hardware recommendations

**mediCAD**<sup>®</sup> runs smoothly on any current Windows PC, laptop, or netbook and on selected tablet computers. Recommended display resolution is 1280 x 1024. A diagnostic monitor is not required.

#### Templates

We are happy to integrate your preferred manufacturers' implants and accessory templates into the system. Currently the system contains approximately 500,000 templates from more than 130 manufacturers.

#### **Introduction / Training**

**mediCAD**<sup>®</sup> requires no previous knowledge and is easy to learn. The user is guided intuitively through the program with all instructions displayed in plain language on the interface.

Training usually requires approximately two hours. **mediCAD**<sup>®</sup> Hectec is ready to provide skilled training for every module. Both on-site and online training are available.

Radiographs are imported in DICOM<sup>®</sup> format through an interface on your PACS/RI-system. **mediCAD**<sup>®</sup> communicates with all DICOM<sup>®</sup> interfaces, making it compatible with all PAC-systems. Many common image formats can also be imported.

## **Implant Manufacturers**

**mediCAD**<sup>®</sup> has the world's largest database of implants. Surgeons can select from approximately 500,000 templates and more than 130 international manufacturers. The database is expanded and updated monthly with new and revised implant systems.

- Special validations are available at any time (in conjunction with the prosthesis manufacturer).
- We support our customers during planning of complete tumor and modular systems.

AAP Implantate AG Acumed Adler Ortho Aesculap alloPlus **Alphamed Fischer** AQ Implants Amplitude Argomedical Arthrosurface Arthrex Ascension Ortho Atesos Medical **ATF-Implants** B&JR Beznoska CZ **Bioprofile Biotechni Brehm** C2F Implants Ceramconcept Ceraver Chiroplant Chiropro CHM Conmet **Consensus Orthopedics** Copf-Bionic Corin Dedienne Sante **Depuy Synthes DJO Surgical Elementary Geometry Evolutis** Evospine Exactech Falcon Medical FH Orthopedics FX-Solutions Global Orthopaedic Technology Groupe Lepine Gruppo Bioimpianti Heraeus

Hip Innovation Technology Hit Medica **ICONACY** Implantcast ImplanTec Instrumentaria Intercus Intrauma Integra **IO** Implants JM JRI K-Implant **KLS Martin Group** KMI Köniasee **KYOCERA** Medical Corporation LfC Lima Lto Link Logimed Marquard Medizintechnik Mathys MatOrtho Maxx Health Medacta Medartis MEDGAL MEDIN MedRaSys Medtronic Merete Metrimed MicroPort Midland Medical Technologies Moje MTM Newdeal **ODEV** Ortho Development OHST **OMNIlife science** Orange

Orthodynamics Orthofix **OrthoPediatrics** Permedica Peter Brehm Privelop Protetim Orvosi Mu"szergyártó Kft. Protheos S&G Implants Sanatmetal Kft. SAMO SpA Sanatmetal Kft. SBM SCYON Orthopaedics SBI Small Bone Inovations SEM science-et-medecine SERF Shape Silony Medical Stelkast Smith & Nephew Speetec Spine Solutions Spontech StemCUP Stratec Stryker Surgival Symbios Synimed Ulrich Medical Tantum Tecres Tornier Traiber UOC Whiteside Biomechanics Wittenstein Wright Medical X.NOV Zimmer Biomet

## Accessiores



#### Reference spheres Ø 25 mm

Reference spheres are the accessories for the radiologist and a basic prerequisite for calibrated planning. The calibration balls are manufactured from stainless steel. The fact that these spheres have been designed as hollow spheres allows them to weigh less than the commercial balls that are made from heavy steel. Easy cleaning of the sphere is guaranteed by the smooth surface. The sphere is placed at the level of the bone to achieve the most precise results. We offer special disposable adhesive pads to better attach the sphere to the patient.

We offer easy-to-use options for displaying a scalable object on X-ray images for all models of the scaling aid.

- Flexible arm for exact placement
- Arm length is adjustable (table and clamp)
  25 mm scaling sphere is integrated
- Exact placement at the level of the bone
- Large base plate for placement on level surfaces
- Practical clamp for standard imaging
- Adhesive pads for immobilization



#### Four ways to contact us:

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Request your **free 90 day-demo version**. For further information, please do not hesitate to contact us.



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