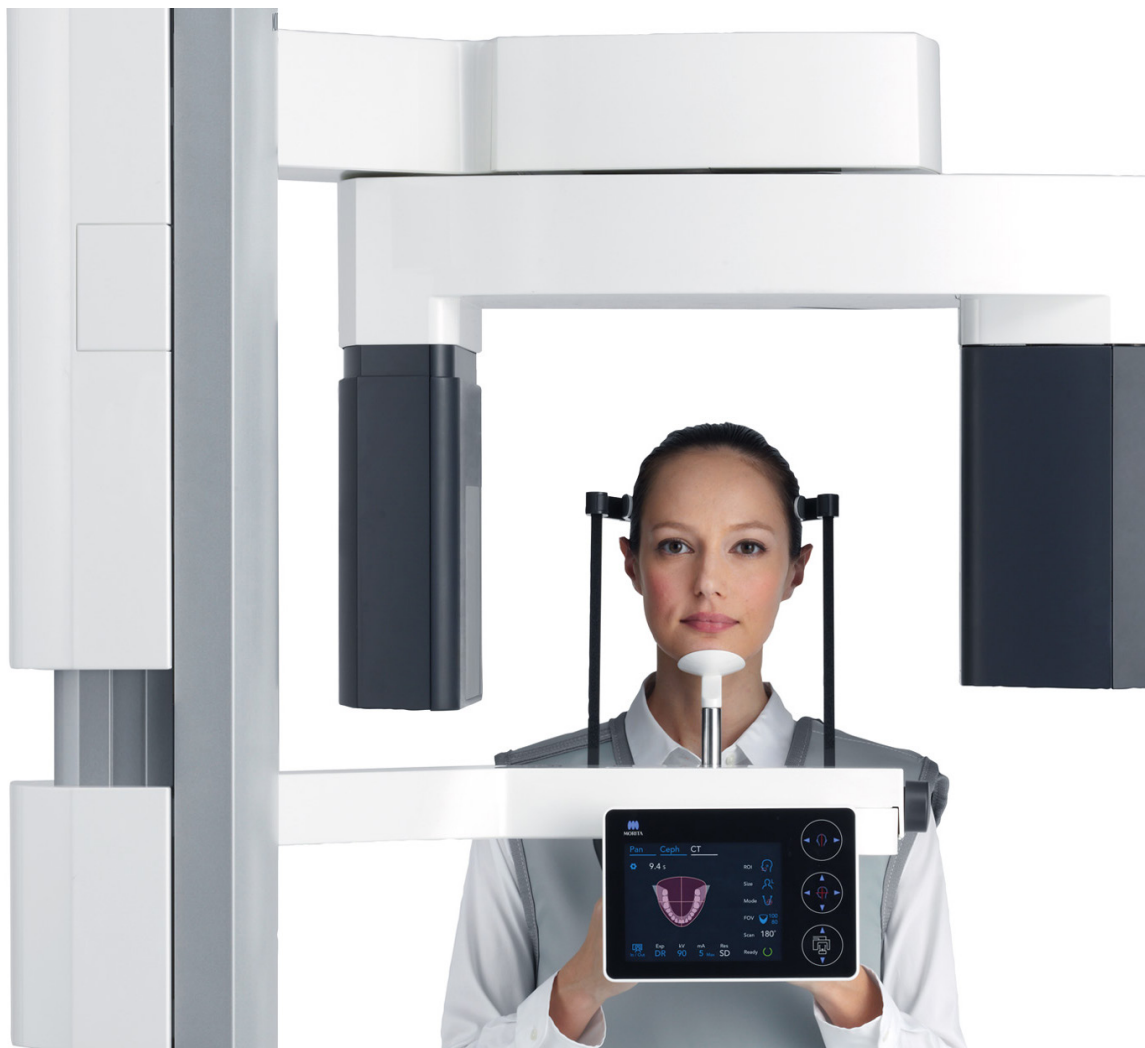


# f/p design | medical equipment

the office for gestaltung



## strategies in medical design

artificial intelligence and robotics offer enormous opportunities for further development in medical technology: increasing precision in the surgical and diagnostic area, relieving the entire medical staff or improving patient management at clinics and in practice.

quantitative surveys and qualitative research are necessary to optimize medical technology for all users. since the tasks involved in the development process of a new device are very complex, interdisciplinary teams of engineers and doctors are required, with the participation of marketing, information technology and production.

f/p design has long been pursuing a participatory design approach in which people and environment are firmly placed at the centre of the development processes for products and services. by this we mean a product design developed with physicians and patients, as well as user-oriented interfaces that enable people from different cultures to intuitively use devices and software correctly.

design is an important factor to allow the physician, the patient and technology to interact successfully.



**prof. fritz frenkler**  
president, f/p design gmbh



## f/p design – partner for medical design

**german design:**  
precise, minimalistic, timeless.

founded in 2000 by fritz frenkler, f/p design develops products, product systems and services in the fields of industrial design, interface design, brand design, and architecture. with offices in germany and japan we consult different businesses, from globally renowned companies to innovative startups.

### participatory design for success

our main focus lies on the collaborative development process in the design of new medical devices and services. this participatory design approach can incorporate the wishes of patients and the experience of doctors as well as the internal requirements and insights of the company.

the results of such a development process are services and products that excel in terms of ergonomics, functionality, technology and quality. they are economical and sustainable support for the brand appearance.

### simplification brings clarity

with increasing complexity of the devices, f/p design relies on reduction. this creates precision, coherence, and clarity. these elements provide security in the use of medical devices and increase the necessary hygiene. they are easily recognised and offer the user a calm and peaceful treatment environment.

## our vision

an important role in our understanding of design belongs to the formula invented by prof. frenkler as chair of industrial design at the technical university of munich (tum). it is based on the idea that design

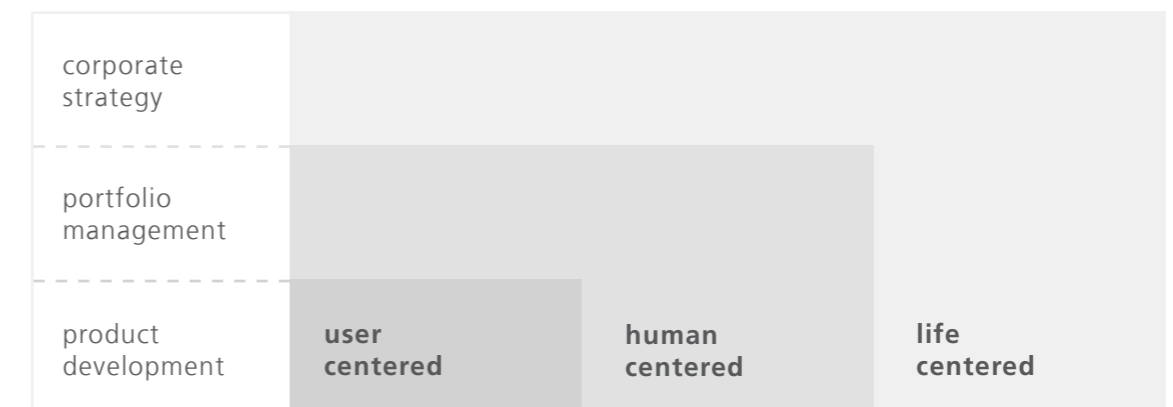
is a complicated system, which, in addition to the usual "form and function", also includes technology, ergonomics, sociology, ecology, psychology, philosophy, finance, and the brand identity.

$$d_{\text{esign}} = \int_{\text{function}} \int_{\text{form}} \int_{\text{experience}} \frac{(T_{\text{ech}} E_{\text{rg}} S_{\text{oc}} E_{\text{co}} P_{\text{sy}} P_{\text{hil}} F_{\text{in}})^{\text{brand}}}{t} \times P_{\text{resentation}}^{5/4/3/2/1}$$

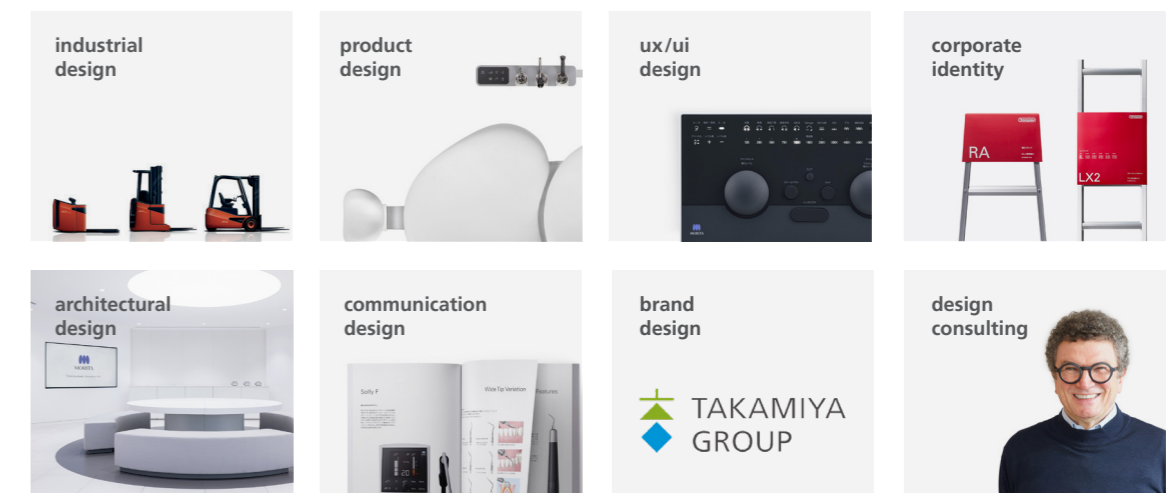
## life-centered design

user- or human-centered design is nowadays not enough for a medical industry. to develop sustainable and consistent lines of products,

designers must refer to the life-centered approach, that takes into account environment as a whole and complements corporate strategy.



## design services



**morita | veraview ip | dental ip scanner**

veraview ip scanner enables the rapid acquisition of high-quality dental x-ray images in a compact footprint. its vertical product architecture supports an intuitive workflow and efficient operation, while a consistent design language ensures a coherent user experience across the product range.



**morita | advert sh | medical laser device**

this dental treatment laser combines advanced er:yag technology with a compact and user-friendly design. ergonomic handling, clear product architecture, and an intuitive interface support efficient workflows and help reduce the risk of user errors.



**compactness**

the vertical product architecture minimizes the installation footprint and enables efficient use of limited workspace.



**precision**

clear interfaces and precise control support accurate treatment procedures and help reduce the risk of user errors.



**morita** | veraview x800 | x-ray combination system

veraview x800 offers panoramic, 3D and cephalometric scans in one compact unit. face-to-face patient positioning and an intuitive graphic user interface belong to its distinguishing attributes. it allows high definition image capturing with innovative features to eliminate unnecessary exposure for adult and child patients.



**morita** | sai-60 | audiometer

this modular audiometer can also be configured in various different ways from the components audiometer, impedance audiometer and display printer. its clear structure provides an intuitive user interface featuring back-illuminated sensor keys and hygienic surfaces.



**mental comfort**

clear, intuitive interactions ensure an atmosphere free of fear. medical design creates environments in which the patient feels comfortable.



**clarity**

essential design guideline: safe and quick operation through clearly designed interfaces.



**morita | lubrina 2 | dental handpiece maintenance**

lubrina 2 is the new dental handpiece maintenance unit for morita. the ingenuity in this unit drastically shortens maintenance time and reduces lubricant usage, yet, ensures improved maintenance results for reliable performance of dental handpieces. its clear design eases daily cleaning of the unit itself and promotes professionalism in the clinical environment.



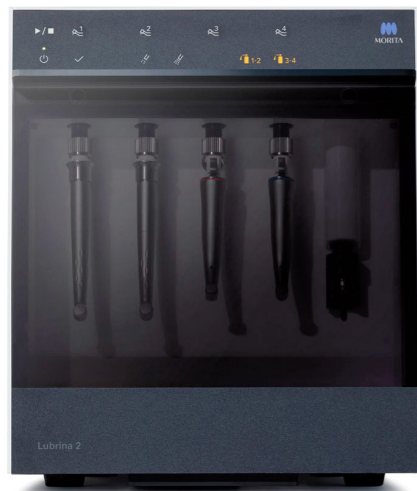
**morita | solfy f | dental ultrasound scaler**

the extremely precise scaler handpiece with led illumination has over 40 interchangeable tips, which can be selected based on the type of operation being carried out. the compact console has an integrated lcd touch display and can either be connected to a central water supply, or fitted with an optional fluid tank. the reversible handpiece holder at the rotatable base plate allows for both right and left handed set up.



**sanitation**

simplification in design and clear surfaces facilitate the daily cleaning process.



**user experience**

intuitive operation creates positive user experiences and enables efficient processes.



**morita | triauto zx2 | endomotor with apex locator**

the cordless triauto zx2 is an endodontic motor with integrated apex locator, providing the capability to electronically monitor the root canal. new safety functions protect the natural tooth substance and make the treatment even more efficient. the rotatable lcd display enables left- and right-hand-use.



**security**

safety is the top priority in medical design. this includes the avoidance of user errors.



**morita | soaric | dental treatment unit**

the soaric dental treatment unit integrates a wide range of system components into a flexible and user-oriented treatment environment. intuitive controls, ergonomic features, and configurable layouts support efficient clinical workflows and enhance ease of use.



**ergonomics**

precise implementation of ergonomic insights: design creates a base that facilitates the daily work of doctors and medical staff and care for the patients.



omron | ht b313, b315 | electric tooth brush

due to the slight bend of 11° the back of the rear teeth can be more easily reached and plaque can be more effectively removed than with a straight brush. in addition a flaring of the handle above the button area improves the ergonomics by providing improved grip. there are up to three different cleaning settings, which can be easily selected using a mode button.



efficiency

thoughtful ergonomic details and optimized geometry improve accessibility and support more effective cleaning. intuitive operation enables efficient daily use and contributes to better treatment results.



korean company | ct scanner

the simplified form achieves a quiet and unthreatening examination environment for the patient, and also contributes to improved hygiene.



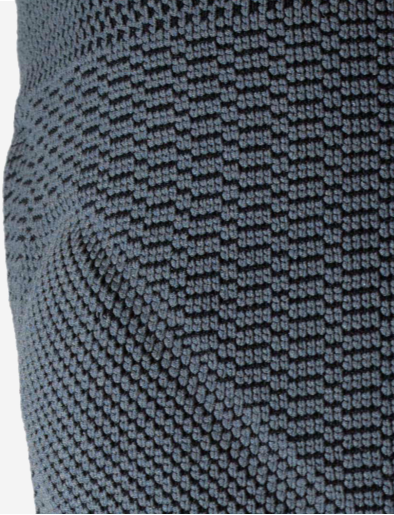
trust

clarity creates trust and radiates reliability. precision and robustness are basic requirements for medical design, especially for capital goods.



**thuasne** | promaster | brace series

promaster is thuasne's premium line of braces. the braces for the hand, knee and ankles, elbows and back are made of a breathable knit fabric with a special 3d texture and integrated point-elastic pads. the braces contour to the body perfectly, alleviate muscle strain, stimulate muscles and tendons, and stabilize joints.

**aesthetics**

not only the functionality but also the aesthetics are crucial for the acceptance of medical supports worn on the body.

**omron** | pm3029 | portable tens unit

the hand held tens pro for electrical nerve stimulation can, by various indications, be used as a part of pain therapy. power supply and electronics are concealed in a functional housing that is easy to clean. the design of the user interface allows intuitive and comfortable handling.

**hygiene**

central to medical design is the consideration of the maintenance and care of medical devices.



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