



ENGINEERING & PRODUCTION

ENGINEERING



■ Our products are at the forefront of development. You benefit from our **30 years** of experience with **complex and sophisticated surgical instruments and implants**, for operations on bones, joints and spine.

The **comprehensive expertise** of our multidisciplinary team of engineers is available for the entire process of product development – from conception to series production. Your advantage is that by bundling all crucial steps of a project, you **reduce costs, save time and achieve the best possible results** for successfully marketing your product.

ENGINEERING PROCESS

RESEARCH / CONCEPTS

In-depth feasibility studies are used to check each project, for **what can be realized, to what extent, with what resources and in which time**. We assess, review and compare technical concepts, check the availability of specific components and estimate the costs.

FEASIBILITY STUDIES

We create test environments and demonstrators to illustrate feasibility, because seeing the functionality helps **convince your customers**.

This phase also includes patent research, technical evaluation of property rights as well as development of patentable solutions.

DESIGN STUDIES

The design of any future product is given careful attention. Design is an essential component of our services as the look, material, surface and texture are the properties that **convey the quality of your products**. Particularly in medical devices, in addition to technology and ergonomics, ease of use and safety play a major role.

Depending on the complexity and requirements, we use in-house design or work closely with design agencies.

AT KAPP WE TURN YOUR IDEAS INTO PRODUCTS!

AT KAPP SURGICAL WE TAKE UP EVERY CHALLENGE – TRY US!

USER REQUIREMENTS SPECIFICATION (URS) & FUNCTIONAL SPECIFICATION

What would a product development be without a wish list and building instructions?

The top priority for the product definition is the **identification of market requirements** and the definition of product characteristics, summarized in the URS. The URS forms the basis for our engineering work. We are happy to work out the URS together with you if required.

The functional specification defines what technically can be implemented, a realistic time frame for project realization and the necessary financial resources. It is the basis for good performance in engineering processes and we therefore concentrate on good structuring and completeness. The specification process includes the discussion of solution approaches, the complete project plan, as well as the initial risk analysis and this provides **planning reliability**.



We have **over 30 years of know-how** as well as the infrastructure and quality management systems required for the production of advanced medical technology.

On request, we also assist contract suppliers in the selection and fine tuning of their tools and machinery.

FUNCTIONAL MODELS

Functional models **reduce development risks and costs**. We provide simple prototypes showing the most critical functions only, to advanced functional models with nearly complete property profile. If necessary we also produce functional patterns in different development stages of the product.



PROTOTYPES

The prototypes are very close to the later standard product. For their production we use **rapid prototyping**, implementing the CAD data as directly as possible into work pieces.

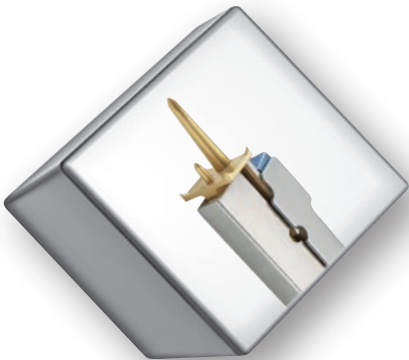
PRODUCTION TRANSFER / SERIES PRODUCTION

Product development is only complete once the product can be produced in larger volumes. We **support production transfer** with the creation of all the necessary documentation - such as bills of materials, manufacturing and test procedures, the production or, production support, of the pilot production to the provision of production resources, tool or specific test equipment.

PRODUCTION

Kapp Surgical specializes in the production of complex and sophisticated surgical instruments and implants. We have **over 30 years of know-how**, the **infrastructure and quality management systems** which are required for the production of advanced medical technology.

Whether custom manufacturing of small and medium size series, pilot and first series, prototypes or custom makes, salable packaging or global shipping to your consumers - with Kapp Surgical you are choosing a **partner** that is **optimally suited to your specific needs at all levels**.



PRODUCTION

Our **flexible manufacturing capabilities** allow us to produce your product in short time periods, to the desired quality and in accordance with the quality assurance agreement. Certification according to **DIN EN ISO 13485** and compliance with the guidelines of **Good Manufacturing Practice (GMP)** ensure that your product is manufactured safely and to international standards.

To safeguard the production, we **create detailed manufacturing and testing instructions**, a complete manufacturing documentation (Device History Record - DHR) and related manufacturing and test equipment. Furthermore, we offer the support of our experts in change management, technical service and also in the further care of your product.

Latest CAD systems with direct interface to the in-house milling and machining centers and our own engineering department enable us to continually improve and advance manufactured products.

Our versatile, powerful and **state-of the-art machinery** allows us to cover the complete vertical integration in-house.

PERFORMANCE AT ALL LEVELS WITH A CLEAR OBJECTIVE:

WE TAKE UP EVERY CHALLENGE!

AT KAPP SURGICAL WE TAKE UP EVERY CHALLENGE - TRY US!

PIECE PRODUCTION

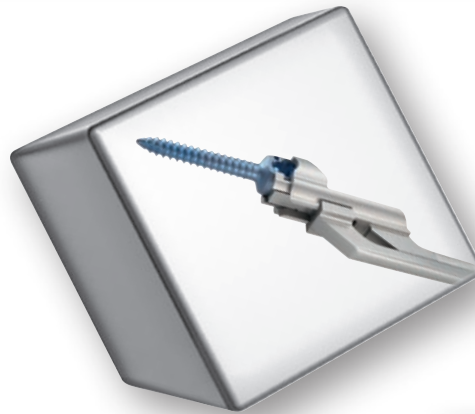
For very individual needs you can trust the expertise of an experienced, dedicated production team to **produce your unique product**.

PILOT SERIES

The transfer of product development into a production environment is often a bumpy road. What is nearer than the involvement of the developers of the product that already know this in detail? With Kapp Surgical, you can rest assured that the **first series** of your new product **will be delivered quickly and reliably**.

SMALL SERIES

Global competition makes it increasingly important to **bring products to market quickly**. This is facilitated through smaller, rapidly produced series. Even if your product is sold in many specific versions with only small numbers, we are the right partner for you, as we also **produce small batches** of complex products **to the highest quality and at the lowest cost**. And if you have short-term change requests our project-based organization of manufacturing and logistics flexibly meets these requests.



SERIES PRODUCTION

The transition to larger volumes involves many challenges. It starts with the **most cost-effective procurement** of parts, covers the **optimization of production processes** and ends with potential **savings in packaging and shipping**. Our many years of experience in series production give you the necessary certainty to get the optimal output.

With **over 30 years' experience** with complex and sophisticated surgical instruments and implants Kapp Surgical is development and manufacturing **partner to some of the world's best known and largest companies in the medical industry**. We gladly show you some of the products developed and produced by us and on request, also provide you references from satisfied customers.



KAPP SURGICAL

■ „For over 30 years we develop and manufacture complex and well-engineered instruments and implants. We take up every challenge, think out of the box and turn your ideas into first-class products. Try us!“



Dietmar Kapp (Founder and President)

Michael Kapp (Managing Director)



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ORIHOMEDICAL
G m b H · I M P L A N T S

A KAPP COMPANY

■ OrthoMedical is an affiliated company to Kapp Surgical. Already since 1997 OrthoMedical is globally active in the distribution of implants and high-class surgical instruments.

