

# Aesculap® Surgical Instruments

Think Surgical Instruments. Think Aesculap.



Surgical Instruments. Process Optimization. Support.

# Think Aesculap.

Knowledge shared is knowledge multiplied!

"Sharing Expertise" has been the B. Braun philosophy for more than 170 years. Sharing expertise across all divisions of the company helps to create a broader and deeper knowledge base for everyone involved and results in far-sighted, detailed solutions and maximum safety for the benefit of both, the patient and healthcare professionals.

With more than 145 years of surgical instrument experience, Aesculap is a competent partner for interdisciplinary knowledge transfer. The Aesculap brand represents a varied spectrum that intelligently and economically combines high-quality products with process-oriented services. Aesculap is a reliable and accepted partner for the entire surgical process in the hospital.

Aesculap owes its standing among the best in the business to its employees, who are never satisfied with the first idea that comes along and keep testing, scrutinizing and refining each and every development until they find the best possible solution.

Thus, Aesculap is much more than a supplier of high precision surgical instruments: a partner who listens carefully and contributes ideas, who understands the customer's needs and requirements and provides for them on a high level. From products to services and seminars for all areas of activity within the hospital.



Think Quality



Think Partnership



For me, contracts are a form of partnership based on mutual trust and respect.

**Think Partnership.**  
Think Aesculap.

Think Competence



The Aesculap Information Center is unique. Nowhere else in the world would I be able to advise my customers so competently and offer such choice.

**Think Competence.**  
Think Aesculap.



Our instruments are in held in high esteem by surgeons all over the world. I intend to make sure it stays that way.

**Think Quality. Think Aesculap.**



When I encounter customers who initially think that a solution cannot be both, high quality and cost efficient, I simply let the facts speak for themselves.

**Think Economy. Think Aesculap.**

Think Economy

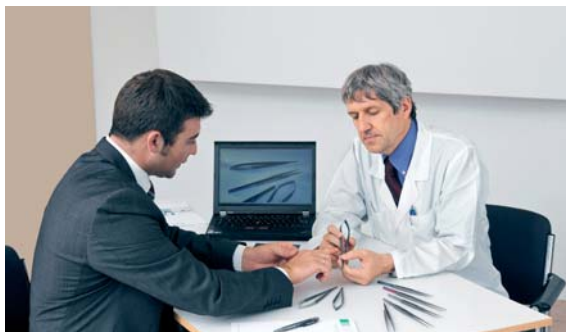
Think Service



Sometimes it's the minor details we provide that make the process run smoothly. The main thing is that everything works and everyone is happy.

**Think Service.**  
**Think Aesculap.**

Think Innovation



Each new product is like your own baby. You lovingly take care of it until it grows up and leaves home.

**Think Innovation.**  
**Think Aesculap.**



# Think Quality. Think Aesculap.

There is nothing more economical than quality!

To satisfy our own high demands as well as our users' expectations, Aesculap's quality requirements are extraordinarily high. For over 25,000 products covering practically all indications in the separate disciplines, this is no easy undertaking.

From the very beginning, we have set our own quality standard, severely narrowing the standard tolerances permitted by the DIN and ISO norms. This can already be seen in the selection and inspection of the raw materials we use, and it continues throughout the entire production process.

Our manufacturing approach, a combination of high technology, precision manual work and a high level of vertical integration, enables us to produce instruments that are always true to pattern, extremely precise and of consistent high quality.

After all, at Aesculap we have known for more than 145 years that there is nothing more economical than high quality.



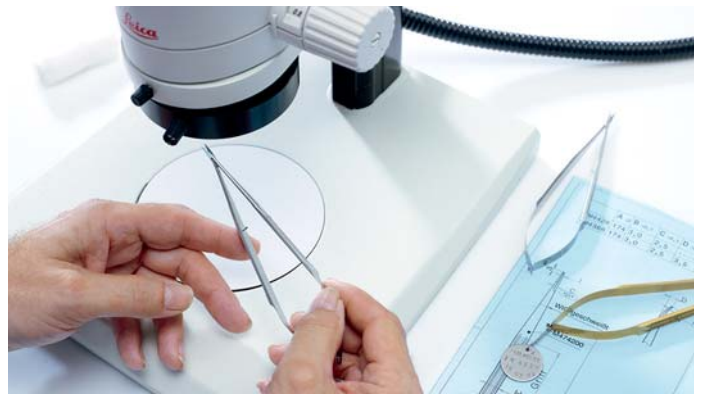
Tungsten carbide scissors

In our tungsten carbide scissors, we only use high-quality tungsten carbide inserts that are applied using a special vacuum tempering process to ensure high material durability, low wear and, as a result, exceptional cutting properties.



Hemostatic forceps – Olive in the jaw

The olive forms the transition between the working end or jaw and the "joint" of the instrument. This special design makes the jaw more elastic and the instrument less liable to break.



### Quality assurance

An essential element in our comprehensive quality management system is process integration, from the product idea through development and production to the inspected finished instrument. This includes modern manufacturing techniques and validated procedures, including systematic quality checks, to ensure that Aesculap quality remains constantly high.

We can only guarantee reproducible Aesculap quality over decades thanks to the technical skill, experience and care of Aesculap's surgical instrument makers. Expertise that is responsibly and conscientiously shared with others.



### Tungsten carbide needleholder

As for all our instruments with tungsten carbide inserts, we only use high quality nickel-bound tungsten carbide tips, well known for their high corrosion resistance and low wear.



### Uniform quality

How do we make possible that every Aesculap instrument conforms exactly to the shape and dimensions of the master pattern? We inspect every single one.

# Think Innovation. Think Aesculap.

The value of practical experience in the development of technical innovations

Constant dialog with practitioners and clinical partners, allows Aesculap to design and create instruments for all surgical disciplines – frequently setting the trend. A team of 200 people around the world is employed in research and development into new, economically viable solutions to provide the best patient care.

The essential focus is not on what is possible technologically, but on what makes sense medically. Sensible developments for us mean instruments that function in such a way that they decisively and positively influence the course of a surgical procedure, while not losing sight of economic considerations.



## Challenger® Ti-P

Several years ago, the predecessor of the Ti-P, the Challenger Ti, combined the reusable applicator with the single-use multifire magazine, opening up new options for laparoscopic surgery. With the new and improved pneumatic (P) solution, handling is now even easier and more intuitive. Thanks to the special multifire function of this unique, yet inexpensive product, multiple titanium (Ti) ligating clips can be applied one after the other without tiring the user.



## AdTec® comBi

The use of multifunctional instruments can significantly reduce the need to switch instruments intraoperatively during laparoscopic procedures and help reduce operating time. When developing the AdTec comBi, providing exceptional grasping, dissecting, cutting and coagulating functionality in the one instrument was a top priority. A further priority is safety. With this product, safety is taken into account through the use of bipolar current and the fine, high-precision jaws, which permit unparalleled cutting and dissecting accuracy.



## TITANIUM micro instruments

High precision and functional design to satisfy even the most discerning cardiovascular surgeons were the main focus in the development of our TITANIUM micro instruments. This is achieved through the fatigue-free golfball design of the handle, the non-reflecting surface finish and color coding that allows the surgeon always picks up the right instrument. For the user, these instruments offer a whole new dimension in surgery.





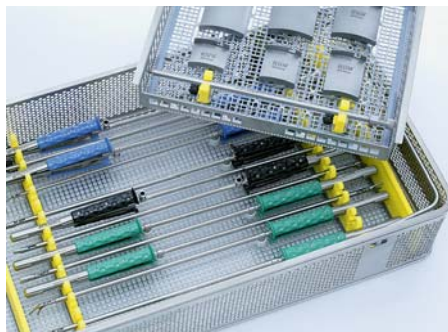
Aesculap works closely with developers of new surgical instruments and the further development of existing products. This enables us to create high quality products that set new standards and satisfy the surgeons' wishes and requirements down to the last detail. Valuable synergies and outstanding projects flow from this collaboration between Aesculap specialists and experienced users, resulting time and again in trendsetting innovations in surgical instruments.

Aesculap development projects are conducted within a tightly designed project management system to achieve transparency and efficiency.



### AdTec® mini

AdTec mini is the new generation of laparoscopic instruments, reflecting the general trend toward miniaturization in laparoscopic access ports. The requirements of the pediatric and general surgeons were clear: Despite their smaller diameter, the instruments had to be almost as robust and stable as their larger counterparts and have jaws that permitted sufficient tissue manipulation. The result: A range of instruments with a diameter of 3.5 mm, which has achieved extraordinary results even during the application trial and is opening up new opportunities for surgeons in their daily work.



### The Aesculap® Instrument Organization System

In the day-to-day hospital environment, cost efficiency and assured sterility for surgical instruments represent the two main requirements of a sterile packaging system.



The Aesculap Instrument Organization System, which combines special instrument trays with a variety of fully compatible storage elements, is a great example of this. This allows sensitive, high quality sterile surgical instruments to be protected during storage and transportation, readiness for use in the OR. This enhanced protection keeps repair costs down and prolongs the useful life of the instruments, making a significant contribution to improve the cost effectiveness of a hospital's sterile supply cycle.

# Think Competence. Think Aesculap.

## QuickScan – A baseline assessment

Complete understanding is the key to optimizing processes!

Quality of care and patient safety are two of the most important requirements facing hospital managers today. Our customers are also faced with the challenge of cutting operating costs and optimizing resources. In view of these economic factors, an interconnected approach to hospital management is essential. Over the long term, this can only be achieved through a continuous improvement and an interlinking of products and processes.

Aesculap has the expertise to structure processes according to the customer's individual requirements and support them through the implementation. The Aesculap specialists analyze the customer's entire existing sterile supply cycle and connected departments in order to draw up an individual action plan to improve quality, efficiency and standardization throughout the hospital.



Customer testimonial from Chuck Schwab,  
OR Manager at Rush Copley Hospital, Illinois, U.S.A.

*"We believe that our sterilization procedures are very well organized. Nevertheless, the QuickScan baseline analysis conducted by the Aesculap consultant was extremely useful for us. Aesculap gave us a clear, achievable approach for making process improvements through which we can expect to achieve greater efficiency and better quality overall. One aspect that we found particularly interesting was an international benchmarking of the productivity of our Sterilization Processing Department. We look forward to a successful partnership with Aesculap."*





### Definition of areas of focus and the objectives

- In individual interviews with hospital, CSSD and OR managers

### Cause analysis

- On the basis of an on-site inspection (CSSD, OR and logistics)

### Compilation and evaluation of data

- For benchmarking with comparable departments (international/national)

### Individual solution suggestion and realization

- Presentation of a detailed milestone schedule with specific recommendations

## You'll soon notice the benefits of QuickScan

### Quality

- Reduced errors in the sterilization process
- Increased instrument quality
- Increased job satisfaction of CSSD and OR employees due to skills optimization

### Reliability

- Defined and traceable sterilization processes
- Full compliance with legal requirements
- Increased safety aspects for patients and employees

### Cost efficiency

- Provides data on which to base further decisions
- Economic use of personnel resources (reduction of overtime etc.)
- Promotes efficient budgeting (purchasing etc.)
- Optimizes use of CSSD equipment

# Think Economy. Think Aesculap.

## Inventory Analysis

Keeping sight of the big picture  
is the key to working efficiently!

The Inventory Analysis service from specialist provider Aesculap takes into account the customer's specific situation at all times. By performing a complete audit and qualitative analysis of all surgical instruments at the hospital, the experts from Aesculap provide transparency over the instrument inventory and its quality.

Working in close cooperation with hospital staff, Aesculap's Inventory Analysis specialists conduct a professional and comprehensive audit of the surgical instruments, sterile packaging and endoscopy equipment at the hospital. This analysis is then used as the basis for offering specific recommendations for improving clinical processes and structures in a cost-efficient manner.

All of the findings and recommendations from the analysis are then presented to the various responsible hospital divisions in a final presentation. The customer is also provided with a hard copy and electronic copy of its specific analysis report.



Aesculap employees conduct an on-site analysis of the hospital's instrument inventory.

### Quality features of an Aesculap Inventory Analysis

- More than 700 successful inventory analyses conducted internationally
- Aesculap's instrument management solution with integrated services
- Comprehensive product assessment in accordance with Aesculap Technical Service quality guidelines
- Reinstatement value of the inventory is calculated together with a suggestion regarding the cost-efficient reconditioning of the current inventory to meet uniform quality standards
- Extensive photographic documentation with instrument tracking down to the article number
- Aesculap on-site service, specialized consultants stand for little disruption to the OR
- Efficient data entry with extensive material master
- Quality analysis on a product group basis with separate reporting by product area
- Customer-specific inventory lists for instrument management purposes

In summary, Inventory Analysis helps to provide transparency over a hospital's instruments and scope for further process optimization.



### Illustration of a quality analysis by product group with reasons and photographic documentation

For 33% of the hospital's scissors, reconditioning is no longer technically possible. Replacement makes the most sense economically. The reasons are as follows:

- Pitting: 12%
- Incorrect previous repair: 10%
- Little material threshold not reached: 7%
- Cracks: 4%
- Chromium: 2%



Customer-focused recommendations lead to quality, cost effectiveness, and value retention



#### Tray load greater than 10 kg or Instrument quantities of less than 100

An overloaded tray carries a high risk of residual moisture, leading to corrosion and, as a result, damage to the instrument inventory.



#### Cracks

A cracked instrument is at high risk of breaking during surgery, which compromises treatment safety.



#### Silicates

Silicate salt deposits are not of immediate concern and the instrument can continue to be used. However, in the event of major incidence, surface processing is recommended.





# Think Competence. Think Aesculap.

## Set Optimization

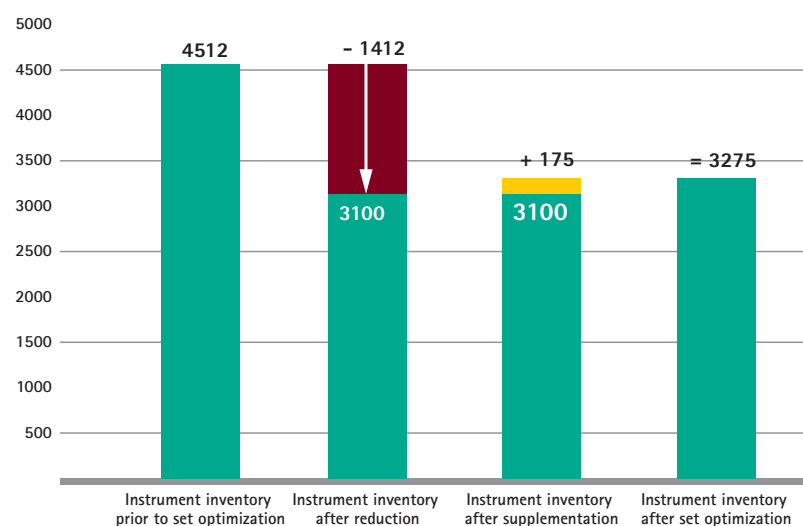
Asking questions is the key to optimization!

The starting point for set optimization is the on-site Inventory Analysis conducted by Aesculap at the hospital. Working together with the healthcare professionals who use the instruments, Aesculap consultants adapt the structure and contents of existing sets to the specific local requirements.

The sets are optimized on the basis of specific indications and applied surgical techniques. By streamlining individual processes and reducing CSSD cycle times, the entire process runs more smoothly, which improves OR quality management and provides further potential for savings.

The competence of the Aesculap consultants rests on active knowledge transfer; each individual consultant is able to draw on collective experience of several hundred successful set optimizations.

Instrument inventory optimization (number)



Left: After use

Right: Before use

From the entire basic set, only the instruments in the left-hand tray were used during an operation. Despite this, all of the instruments in the basic set still have to be cleaned, disinfected, packed, maintained and sterilized in the CSSD. Set optimization can help to significantly reduce the associated necessary costs.

The constant changes in the healthcare market and the introduction of total quality management have made investment in surgical technologies a highly sensitive issue. Once made, wrong decisions are extremely hard to correct.

For this reason, operational knowledge and expertise are absolutely vital from the outset.

The Aesculap project planning team supports hospitals and clinics in planning large or small projects and implements these expertly, reliably and on time all over the world. Since the establishment of the Aesculap Information Center based in Tuttlingen, Germany, thousands of hospitals have come to rely on its outstanding consultancy competence and are enjoying greater efficiencies every day as a result.

Working closely with architects, technicians, healthcare workers and hospital management, the Aesculap team analyzes processes, identifies needs and puts in place the necessary framework for process optimization. Whether the project is to equip a new hospital or optimize an existing one, the result is sound and effective project management from A to Z.



Competent on-site consulting is all part of the service



At the Aesculap Information Center in Tuttlingen, Germany, Aesculap provides project advice for all functional areas of the hospital

### Reference customer visits

When planning an investment, questions and decisions always crop up that can often only be resolved at a later date. Keeping this in mind, we have made it our top priority to give you the support you need to be able to make decisions with confidence. Therefore, in addition to the comprehensive consultancy services we provide in Tuttlingen, we also give you the opportunity to visit some of our existing customers to see for yourself just how they use our products and services and to ask specific questions of your counterparts at these hospitals in every functional area.

# Think Service. Think Aesculap.

instacount® – Step-by-step with system support

A systematic approach is the key to successful management!

More than ever before, hospitals are being required to think economically and manage their costs efficiently, as well as to ensure their own legal security and the safety of their patients. In the future, all processes involving surgical instrumentation will also need to be clearly documented and fully trace-able. To fully accommodate these growing demands, Aesculap developed the instacount® Instrument Management System, which is setting standards worldwide in user friendliness and functionality.

With its clear design and layout, the instacount® software is intuitive and user friendly.

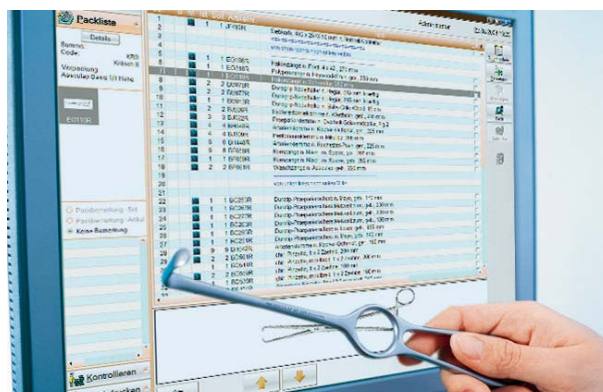


Inventory analysis

Set optimization

Master data input

Harmonized service portfolio for efficient instrument management







## Computer-aided instrument management

### Quality and cost control

- Automatic costing by cost type and cost center
- Individual instrument tracking by Data Matrix
- Complete solutions
- Meeting quality standards
- Hygiene passport

### Services

- Own central training center
- Product service agreement
- Regular software updates/upgrades
- Professional support for generating new article master data

### Compatibility and transparency

- Interface to hospital data systems
- Interfaces for devices from many leading manufacturers, e.g. to help improve efficiency
- Wide range of instrument catalogs and media files included (more than 200,000 article master data)
- Direct interface to Crystal Reports
- More than 80 reports

## Instrument Management with instacount® Support

Aesculap first introduced the instacount® PLUS instrument management system at a 400-bed general hospital reference customer back in 2003 as part of a case study. Over a period of six months, a number of processes were analyzed in order to create a reliable efficiency analysis. A comparison of expenditure before and after implementation of the system showed total savings of €285,000 over a four-year period, representing average annual savings of around €70,000 for the hospital.



**In use more than  
500 times worldwide**

# Think Partnership. Think Aesculap.

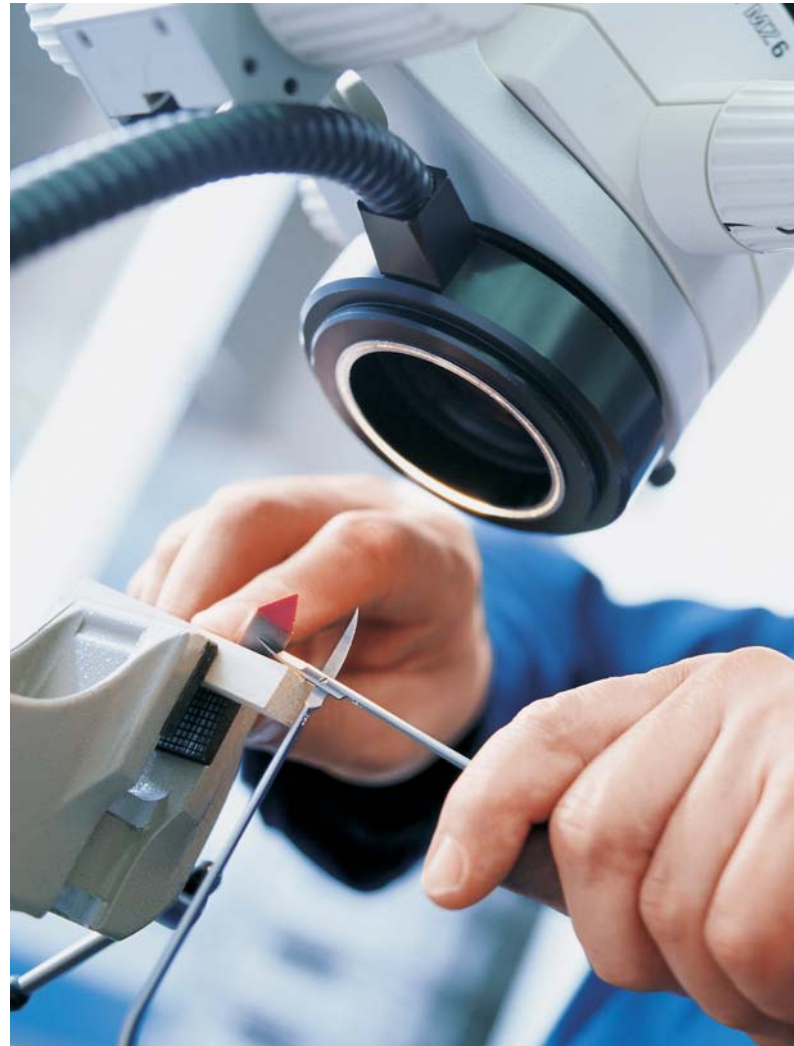
## The key to maintaining and preserving value

High-quality instruments deserve to be valued in the truest sense of the word. After all, the instrument stock represents no small proportion of a hospital's total assets.

For this reason, Aesculap quality repair is based on the same strict quality standards we apply to instrument production. This guarantees that the value and function of each instrument is maintained for as long as possible. To your advantage.

In addition to carrying out individual repair orders, we think that contracts to maintain the value of the instrument stock are to be recommended – especially when equipping a new operating theatre. Budgeting and detailed financial reporting, increasing process transparency within the hospital and allowing costs to be directly allocated to cost centres, speak for the Aesculap quality repair.

A large network of Aesculap sales representatives and distribution partners allows reliable service on site at all times.



The aim of the Aesculap Technical Service (ATS) specialists is to lengthen the useful life of all instruments. They are careful, for instance, to remove as little material as possible when regrinding scissors. Whether sharpening, polishing, adjusting or cleaning – in the ATS everything is always done with the same precision and care.





After every repair, the surface of the instrument is completely refurbished and labelled with the ATS seal and the repair date. Each quality repair carries a one-year guarantee.

The Aesculap Technical Service is there for you: experienced specialists help surgical teams out of their difficulties swiftly and reliably via our hotline. If desired, our collection and delivery service will pick up instruments for repair from the hospital and return them as quickly as possible after the quality repair has been carried out.

The Aesculap quality repair already represents a sensible investment for simple standard instruments. For high value, difficult instruments such as micro spring scissors it is an absolute must. Every incorrect or inadequate repair can quickly turn a valuable instrument into a useless write-off – automatically resulting in an unplanned investment in order to replace it.





# Think Competence. Think Aesculap.

## Learning is a skill!

As a competent partner in medical training and education, Aesculap Academy uses intelligent networks to link up medical professionals all over the world. The Aesculapium in Tuttlingen, Germany, forms the headquarters for Aesculap Academy's international activities.

Aesculap Academy offers medical training and continuing professional development for physicians, surgeons, managers and other members of staff from the fields of surgery, CSSD, anesthesia, nursing and hospital management. The quality of all courses has been inspected and approved by German state chambers of physicians or other medical bodies. The differentiated training concept combines theory with practice in a mutually complementary manner – in accordance with the guidelines for "Continuing Medical Education." The varied program includes indication-related seminars, workshops and training courses as well as management seminars.

The training program is also supplemented by the Mediathek of the German and Austrian societies of surgery, a library containing more than 330 approved quality films from the German and Austrian societies of surgery. These films document and comment on surgical techniques and topics covering practically every discipline. This ensures that Aesculap Academy continues to offer excellence in medical training.



The practical component of the training concept allows participants to try out new techniques and share their experiences.

## A selection from the Aesculap Academy's training program

### Surgery, CSSD and Medical Technology:

- Osteosynthesis techniques
- Arthroplasty
- Leadership and communication
- Quality management
- Neuroendoscopy
- Specialist training courses I,II,III
- ...
- Laparoscopic abdominal and visceral surgery
- Laparoscopic hernia surgery
- Laparoscopic urology
- Laparoscopic gynecology
- Microsurgery
- Suture techniques seminar
- ...



## Aesculap Academy

At Aesculap Academy, experienced specialists provide in-depth training to members of the CSSD and OR. Over the last ten years, 2,500 employees from the CSSD have completed specialist training courses I-III as well as the validation course, providing a sound basis for their professional careers and further personal development. The three courses build on one another as separate parts of the training program and each have their own exams. All specialist training courses are based on DGSV (German Society for Sterile Supply) guidelines.



*"You learn to focus on the essentials and think in broader terms..."*

### Specialist training courses to become a Sterile Processing Technician – a practical example

Paul-Jürgen Metten has been working in the Rhine Clinic for Orthopaedics in Viersen since 1982, and has been in charge of the Surgery and CSSD Department there since 1989. Between November 2002 and December 2003 he successfully completed Specialist Training Courses I – III in Sterile Goods Supply at the Aesculap Academy in Tuttlingen.

*"I decided on training with the Aesculap Academy in order to extend my qualifications both professionally and personally. Of course, I had mixed feelings about "going back to school" after 22 years in a job. However, after the management of the Clinic had agreed to pay the cost of the course and I had informed myself in detail about the organisation and the content of the training programme, I was convinced that I had made the right decision. The organisation of accommodation and catering was as excellent as the provision of comprehensive learning and support material. The Aesculap*

*Academy staff were always on hand to answer any questions, which they did immediately and expertly. Constructive discussion was possible and indeed invited at all times, and not only during the workshops. Thanks to the constant support of the teaching and technical staff, all the participants passed the examination. Thanks are also due of course to the specially selected tutors, who possessed a high degree of competence in their subject and who managed to convey the complicated contents of the course in an understandable and practical way.*

*Looking back, I am impressed by the way in which my newly acquired knowledge can be translated into my daily professional activities to great advantage to myself and to the hospital. You develop a sharper view for the essential, and the comprehensive teaching material in the courses enables you to recognise and understand the connections that exist within the hospital, as well as teaching you how to reorganise processes sensibly.*

*For me personally, learning the basics of quality management and certification was particularly important, as was the knowledge I acquired about the validation of large sterilisers and preserving the value of surgical instruments. The clinic management is also so convinced by the result of the training courses that in future all colleagues working in surgery and CSSD departments will attend training courses at the Aesculap Academy."*

### Purchasing and Hospital Management:

- Basics of purchasing and materials management in the hospital
- Procurement management forum for Hospitals
- Contract law
- Public procurement law
- ...

