SCHOLPP

Worldwide Industrial Installation

Reference Magazine 2018

INSIGHTS

Technology special

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Editorial

Take a look over our shoulders!

You are holding the first edition of SCHOLPP INSIGHTS in your hands. Take us at our word and see what we've accomplished in the past year. Inside, we present selected new installation and relocation projects in a number of core branches of industry: small and large, national and international.

You can read about the installation of machine tools, prototypes, and cyclotrons, and learn how we went about relocating individual machines, complex production plants, and even entire press shops. This selection was handpicked not only to give you a representative overview of our services for medium and large businesses, but also to show you solutions for specific requirements of an industry that is rapidly changing.

Overarching trends such as internationalization, digitalization, automation, and innovation are the driving force behind our customers' installation and relocation projects. We are constantly amazed at the diversity of activity in the globalized economy. There is no one-way traffic, so to speak; everything is moving in and from all directions.

While investment continues apace in Asia, particularly in China, companies from industrialized nations are starting to bring their production facilities closer to their own sales markets and home bases. Countries that stand to benefit the most from this strategy, known as nearshoring, are primarily found in the EU. Industrial capacities are even being moved back to Germany at increasing rates. Industry 4.0 is set to alter the production landscape in Germany.

Many of our customers' projects clearly demonstrate that a custom blend of nearshoring and offshoring is the key to success. In order to remain profitable, every company is trying to find its own custom location strategy based on production volumes, price sensitivity, or the proportional cost of labor. When the time comes to implement these location strategies, SCHOLPP is close at hand to provide the needed support with its extensive expertise and network of branches. Wherever you want to take your business: Just ask us!

Lars Gerlach & Steffen Kühn,
Managing Directors

Lars Gerlach

Steffen Kühn

One-of-a-kind: prototype installed

The machine installed in this project is the only one of its kind in the world: the prototype of a machine tool manufactured by Dreiling Maschinenbau GmbH in Geisleden. It traveled from the manufacturer's premises in Thuringia to Saxony with the help of SCHOLPP. Its destination was the Fraunhofer Institute for Machine Tools and Forming Technology IWU in Chemnitz. Uneven weight distribution of the machine components made handling at the various installation locations highly challenging.

Installation of new maritime technology
At SCHOLPP, every order has its own special features. This project was truly unique, since the product to be installed and transported was one of a kind.

As part of the Next-Generation Maritime Technologies research program for shipbuilding, shipping, and marine technology, funded by the German Federal Ministry for Economic Affairs and Energy (BMWi), Dreiling Maschinenbau GmbH developed a prototype machine for the production of marine gear components.

SCHOLPP collected the machine from the manufacturer and transported it to the Fraunhofer Institute for Machine Tools and Forming Technology IWU in Chemnitz. The machine will be used for the joint project MarGet – More Efficient Components for Marine Gear Units through Resource-Conserving and Environmentally Friendly Production Strategies. Aside from Dreiling and Fraunhofer IWU, the project consortium also includes Flender GmbH in Bocholt and the University of Applied Sciences Zwickau. Project Management Jülich (PtJ) will oversee the project.

Dreiling Maschinenbau will be taking over the subproject Development of a Test Facility for Incremental Forming of Hollow Shapes under High Forces and High Torques. Here, a completely new spin extrusion plant will be developed and built. The aim is for this plant to be used for chipless manufacturing of hollow shafts.

Tricky handling of high weights
SCHOLPP provided installation support for dismantling and reassembly. The components of the prototype machine weighed in at 40 metric tons. Once dismantled, all the machine parts and accessories were immediately loaded onto trucks. They were then hauled to Chemnitz, unloaded, and transported across to the construction site. A 160-ton crane and a TG 140-2 lifting gantry were deployed for this task.

The biggest challenge in the project was supporting the cylinder. Uneven weight distribution made for challenging initial handling at the various installation locations.

Customer:
Dreiling Maschinenbau GmbH, Geisleden/Thuringia

Task:
Install prototype machine for ship components

Location:
Fraunhofer IWU, Chemnitz/Saxony, Germany

Special equipment:
TG 140 lifting gantry for precise positioning of the heavy parts for installation

Information:
maschinenbau@scholpp.de

Schindler Aufzüge und Fahrtreppen GmbH: Moving walkways in Berlin

Tricky longitudinal transport

Old walkways out, new walkways in: SCHOLPP was commissioned by Schindler Aufzüge und Fahrtreppen GmbH to replace two inclined moving walkways at the Kaufpark Eiche shopping mall. Schindler is a world-leading manufacturer of elevators, escalators, and moving walkways. A custom longitudinal transport structure had to be built to bring in the walkways, because the building offered no way to suspend equipment.

The order sounded routine at first: dismantle two old walkways and install two new walkways, each measuring 26 meters and weighing 12 metric tons. However, after the SCHOLPP team had thoroughly inspected the site and taken measurements, they came to the conclusion that they would need a special solution for bringing in.

Custom-made structure for bringing in

The glass roof structure offered no way to suspend equipment, so SCHOLPP had to build a 28-meter-long longitudinal transport structure within two days. First, the team manufactured a connecting structure for two 14-meter-long HEB 400 beams to support the crane. Next, these were installed and attached within the building.

Within a week, the old walkways were carefully dismantled to avoid causing any damage to the building. SCHOLPP also handled the environmentally responsible disposal of the old equipment. In spite of the special solution – not to mention the frigid outside temperatures – this new installation project was completed on schedule in only three days.

Customer:
Schindler Aufzüge und Fahrtreppen GmbH

Task:
Dismantle two old moving walkways and install two new moving walkways

Location:
Kaufpark Eiche shopping mall in Berlin, Germany

Special equipment:
Custom-designed longitudinal transport structure due to lack of load support points

Information:
fahrtreppe@scholpp.de

thyssenkrupp Fahrtreppen GmbH: Replacement of escalators in a subway station

XXL escalators

More exciting footage in the video:
XXL Replacement:
New Escalators at Märkische Straße Station
https://youtu.be/sqJisNaLKO8

Source: YouTube

SCHOLPP installed six XXL thyssenkrupp escalators in the Märkische Straße subway station in Dortmund. thyssenkrupp Fahrtreppen GmbH is a world-leading manufacturer of escalators and moving walkways. SCHOLPP has ten years of experience with its systems. The unusual length and high weight of the escalators presented the team with some logistical challenges in the tight quarters of the inner city.

Big, bigger, and bigger still

At 31 meters long and weighing 19 metric tons apiece, these escalators are among the largest of their kind in Dortmund.

They are roughly twice as long as conventional department store escalators. Since the job site was near the heavily traveled federal highway B1, there was little room for flatbed trailers and heavy equipment.

Fast out, carefully in

The old escalators were cut into three sections for removal. They were extracted through a narrow opening in the glass roof of the entrance building. Dismantling was completed within a week.

thyssenkrupp delivered the new escalators in three sections apiece. The rail joints had to be attached with precision during installation. This was the only way to guarantee smooth step movement. It was time-consuming, but the deadline was fixed. All the new escalators were expertly installed by SCHOLPP in time for the scheduled TÜV inspection. Now passengers can once again enjoy the convenience of being able to get to the subway quickly and effortlessly.

Customer:
thyssenkrupp Fahrtreppen GmbH

Task:
Dismantle six old escalators and install six new escalators

Location:
Märkische Straße subway station, Dortmund, Germany

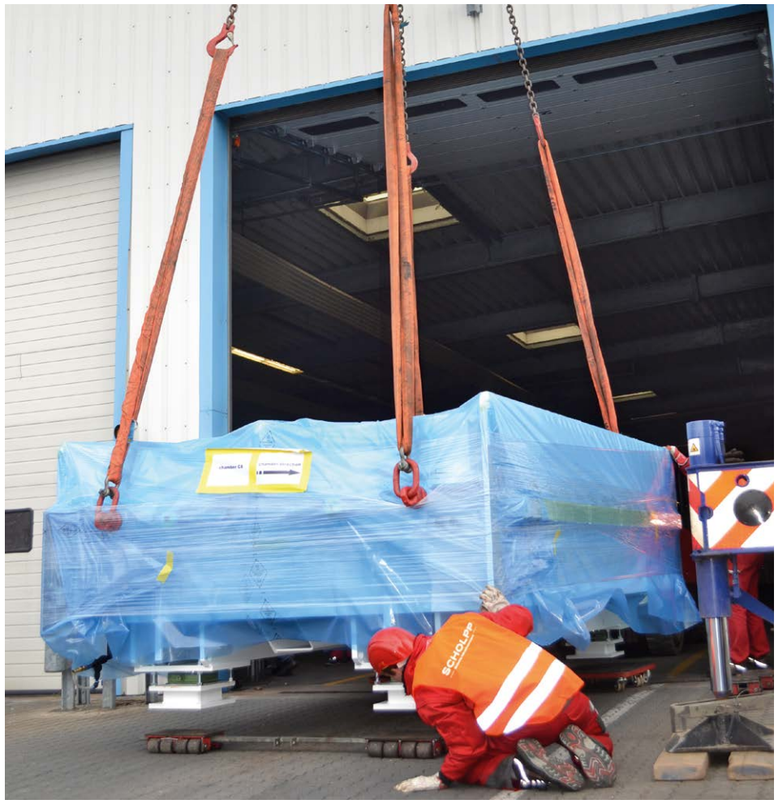
Special equipment:
Heavy-duty chain hoist for delivery through roof opening

Information:
fahrtreppe@scholpp.de

Flachglas Torgau GmbH: Vacuum chambers

Smooth-as-glass installation in a single day

Northern Saxon glass manufacturer Flachglas Torgau GmbH in Torgau was adding two vacuum chambers to its production facility. These are a key component in the production of special glass for window and façade applications. The Torgau plant is part of the French Saint-Gobain Group, the global leader in innovative materials, construction materials, and packaging. For SCHOLPP, this order was a typical one-day installation job.



The vacuum chambers will be used in the Torgau coating plants to manufacture solar control and heat protection glass. Equipped with the new technology, this site will now be able to coat huge glass panes measuring up to 18 meters long. The task for the SCHOLPP team was to offload the two chambers, each weighing over 15 metric tons, and bring them into the plant. In spite of the high weight, the order was planned as a one-day installation from the outset.

Special heavy-duty rollers

In terms of equipment, SCHOLPP brought a mobile crane, an installation cart, a forklift, and heavy-duty rollers to the site. The heavy-duty rollers, specially selected for this order, combined two important technical properties: very high load capacity and extremely low loading height. This made it possible to roll the chambers into the plant in one day without a problem, despite the low clearance heights.

Customer:
Flachglas Torgau GmbH

Task:
Bring in and install of vacuum chambers

Location:
Torgau, Germany

Special equipment:
Heavy-duty rollers with high load capacity and extremely low loading height

Information:
industrie@scholpp.de

etna GmbH: New air conditioning technology for Chemnitz's Culture and Congress Center

Cool work: new air conditioning in just five days

Chemnitz's Culture and Congress Center is one of the largest event venues in the region. With multiple halls and foyers, it can accommodate up to 4,500 people. The building's new air conditioning technology was to be installed within five days. The inner city location meant extremely tight space constraints and the need to keep fire and underground garage entrances clear at all times. Many parts had to be brought in tipped or lying down because of the low clearances of the interior doors.

Just five days to complete the job

The shipping list included 55 main components, weighing up to 800 kilograms apiece. For this project, the SCHOLPP installers were divided into two teams with rotating task assignments. This flexible work cycle was the only way to meet the rather ambitious five-day deadline. With no temporary storage space available, the manufacturer had to deliver just in sequence.

Keeping a cool head when space is tight

Once inside, there were additional challenges to overcome to reach the air conditioning control center. The transport path presented a few bottlenecks, namely the low-clearance doors. SCHOLPP brought in a number of components lying down, which required additional installation steps and time. The spatial constraints definitely gave the SCHOLPP installers good reason to work up a sweat, but they never lost their cool, despite the sweltering summer temperatures.

Customer:
etna GmbH, Saxony office, Chemnitz

Task:
Unload, bring in, and position air conditioning equipment

Location:
Chemnitz's Culture and Congress Center, Germany

Special equipment:
Compact forklift with triplex mast due to low inside move-in heights

Information:
industrie@scholpp.de

Fast-paced project in the premium vehicle segment

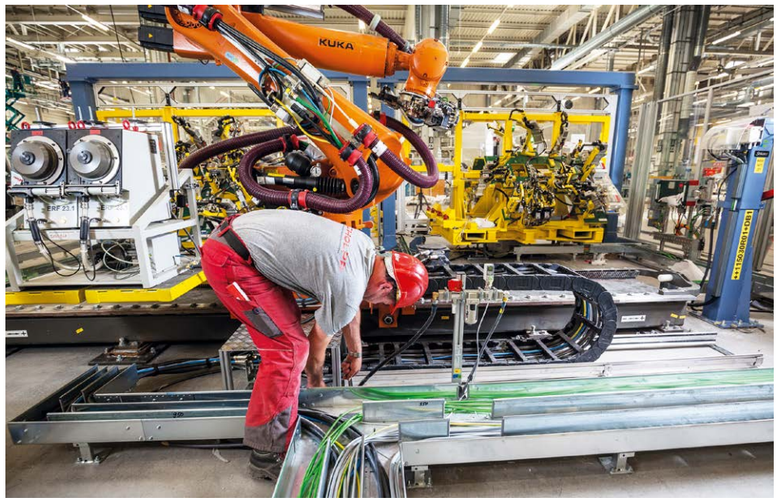
Volkswagen Sachsen commissioned SCHOLPP to relocate the entire car-body production lines for the Bentley Bentayga from Bratislava, Slovakia, to Mosel in Saxony, Germany. In just four months, five production lines were dismantled, transported just in time, reinstalled, and recommissioned. The plant's complexity required cooperation with several partners. The project was to be implemented during ongoing series production, so employees were organized into two shifts to accommodate the correspondingly tight schedule.

Project schedule in five phases

The scope of the order included five production lines, each measuring 150 meters in total. The individual components weighed up to 20 metric tons apiece. The SCHOLPP planners devised a five-phase schedule. Within three weeks, the installation teams first dismantled the lines at the Bratislava plant. During the same time, the parts were being packaged, loaded, and transported in 110 truckloads to Mosel. Once there, the parts were unloaded and temporarily stored. Following this buffer phase, the team got to work on the mechanical reinstallation. Finally, SCHOLPP assisted the VW plant team in recommissioning the system.

Fast pace and excellent coordination

The fast pace required coordination of all the parties involved in the project. All parts of the lines had to be matchmarked during ongoing production in just eight work days. This required a staggered work schedule for the VW employees and the SCHOLPP team. Since there was no place at the Bratislava site to temporarily store the dismantled components, everything had to be shipped off just in time. All told, there were 72 installers working in two shifts throughout the order, coordinated by a management team of two project managers, a personnel deployment manager, a logistics manager, and two experienced installation managers.



Finely tuned logistics

Plant dismantling and transportation to Saxony were all wrapped up in just 20 work days. Temporary storage was available at the new location in Mosel, thus creating the first opportunity for a time buffer in the project schedule. The mechanical reinstallation of the lines was completed within a few weeks. The piping and electrical systems were reinstalled at the same time.

Precision to the nearest hundredth

High precision during assembly was a key requirement for smooth recommissioning. SCHOLPP achieved this by precisely aligning all line parts to minimize the readjustment required by the VW team. The tolerances in the parts needed to be in the range of hundredths of millimeters to enable a punctual start of car-body production in Mosel.

High precision during assembly reduced the time needed for commissioning.

Customer:
Volkswagen Sachsen GmbH

Task:
Relocate car-body production for the Bentley Bentayga

From:
Bratislava, Slowakia

To:
Mosel near Zwickau, Saxony, Germany

Special equipment:
Five fully equipped tool containers to support interdisciplinary project organization on site

Information:
automotive@scholpp.de

Customer:
BINDER GmbH, Tuttlingen

Task:
Relocate and recommission various machines in the new COMPETENCE FACTORY

Location:
Tuttlingen, Germany

Special equipment:
TG 320 lifting gantry with 12-meter transport rails for relocating heavy parts within the production facility

Information:
maschinenbau@scholpp.de

BINDER GmbH Tuttlingen: Internal relocation

Welcome variety

We love machines. So we enjoy projects that involve a variety of machine types. One such task was facing BINDER GmbH, a company known around the world for its expertise in simulation chambers. Various machines needed to be relocated within the plant to the new COMPETENCE FACTORY. From dismantling to recommissioning, the SCHOLPP team got to draw on all their areas of expertise. A very tight layout limited the available logistics areas.

Relocating the production area presented a particular challenge to the team. There was a one-meter height difference to overcome when removing the machines and plant. The team therefore deployed a ramp, from which the plant was then loaded for internal transport.

The extensive machinery included two TRUMPF TruBend bending machines, TRUMPF punching machines, a TRUMPF TruShear, a deep-drawing press, and various welding machines.

Complete service
SCHOLPP handled the entire dismantling and reinstallation operation, including documentation, scheduling, job site set-up, matchmarking, and technical cleaning. In addition, two machines were painted. The plan called for two installation teams (dismantling/assembly), coordinated by an installation manager. A key piece of technology was the TG 320 lifting gantry with 12-meter-long transport rails. It was used to relocate the deep-drawing press. The project also required two truck-mounted cranes for loading. To transport the machines, SCHOLPP used one of its own mega curtainside trailers. Once the reinstallation and recommissioning were complete, a final inspection was conducted, and the plant went into operation right on schedule at its new location.

SAF Holland GmbH: Transporting machining centers to Turkey

Southward bound

When machines head south, it's generally for business rather than pleasure. Such was the case for SAF Holland GmbH from Bessenbach, Northern Bavaria. The commercial vehicle supplier commissioned SCHOLPP to relocate machining centers to Turkey. The machines were removed and brought in during production, under very tight spatial constraints.

SAF Holland is a global supplier to the commercial vehicle industry. The Luxembourg-based group of companies is a leading manufacturer of chassis-related components. These products are installed primarily in trailers, trucks, and buses. Its plant in Düzce, Turkey, was set to receive two DOOSAN Puma 600L cutting and machining centers, each weighing 21.5 metric tons.

One new and one used machine went on the 2,500-kilometer trip to Turkey. Chip conveyors and extraction systems were shipped and installed separately. SCHOLPP handled all the tasks in the job: dismantling, packaging, transport, bringing in, positioning, and alignment.

Special crane operational during production
Largely thanks to the highly experienced installation team, not to mention the special 40-ton VALLA crane (electric pick & carry), it was possible to remove and bring in the plant in minimal time without disrupting production. One of the VALLA crane's distinct advantages is its maneuverability. It deftly handles extremely tight spaces. Both machines went into operation by the set deadline at the new work location.

Customer:
SAF Holland GmbH, Bessenbach

Task:
Relocate two DOOSAN Puma 600L cutting and machining centers, each weighing 21 metric tons, from Germany to Turkey

From:
Bessenbach, Northern Bavaria, Germany

To:
Düzce, Turkey

Special equipment:
VALLA electric industrial crane with up to 40 metric tons lifting capacity and extremely good maneuverability

Information:
automotive@scholpp.de

Relocation in major components to save valuable time

Customer:
August Mink KG, Göppingen

Task:
Relocate a production system for panel brushes, including dismantling, transport, bringing in, positioning

Location:
Göppingen, Germany

Special equipment:
Several compact forklifts with triplex masts due to limited move-in heights

Information:
industrie@scholpp.de

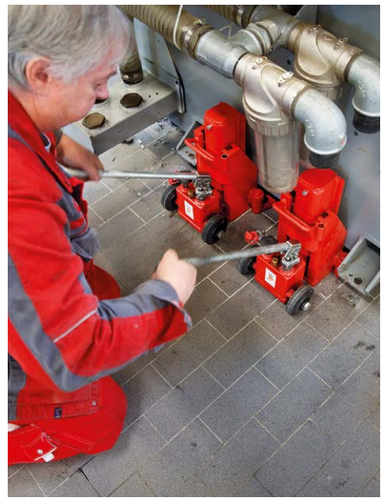
August Mink KG called on SCHOLPP to relocate complete production lines within Göppingen to its new production facility, Werk IV. The company is a global market leader in modern filament and brush technology for industrial applications and has grown dramatically in recent years, hence the need for new production capacities. A good deal of time was saved by dismantling the lines into their major components according to a well-thought-out plan.

Brush specialist Mink is a new customer. It took a leap of faith on their part to award us this important contract. Specifically, it involved a complete center for the production of panel brushes. These products provide gentle support for sensitive surfaces, such as sheet metal, furniture parts, and flat glass, during industrial processing.

Detailed planning for efficient logistics

The complex production line included extraction systems, shearing systems, bristle embedding systems, milling centers, and sawing centers. There was the potential for dismantling to require significant work. However, man-hours had to be kept to a minimum due to time constraints. SCHOLPP met this requirement by only dismantling the plants into their major components.

Several wide loads were shipped by road on lowboy mega trailers. In the new Mink Werk IV, all the machines were brought in and positioned by SCHOLPP. Thanks to the detailed planning and excellent teamwork, the new production facility went into operation right on schedule.



Customer:
Behälter Vertrieb GmbH & Co. KG, Bremen

Task:
Dismantle, remove, temporarily store, and transport 99 stainless steel tanks

Location:
Stade near Bremen, Germany

Special equipment:
Hydraulic toe jack for precise, safe lifting and lowering of the load (small photo, bottom left)

Information:
industrie@scholpp.de

Behälter Vertrieb GmbH & Co. KG: Removal of stainless steel containers

Lifting 99 heavy tanks

This feat of strength required endurance. Within five months, SCHOLPP dismantled 99 large stainless steel containers on behalf of Behälter Vertrieb GmbH & Co. KG in Bremen. The team removed the containers via a narrow roof opening. A crane with a large telescopic boom had to be used, because of the large distance between the crane and the building opening.

Behälter Vertrieb GmbH & Co. KG based in Bremen specializes in international trade with containers. It supplies new systems as well as used technology. Due to the scope of the order, the size of the containers, and the required installation workload, the order had to be divided into stages across five months. Before dismantling could begin, it was also necessary to remove a steel catwalk spanning approximately 100 meters in order to ensure sufficient space to move the containers in the facility.

Large, heavy, long, narrow
The heaviest tank weighed in at 22 metric tons, and the maximum diameters were seven meters. The containers were removed through a very narrow roof opening that only allowed a few centimeters of clearance between the building and the containers. There was also a substantial distance to overcome between the crane and the building opening. The telescopic boom of the 750-ton mobile crane had to be extended quite a distance. This required a great deal of tact and skill at the controls.

Adient Interiors Ltd. & Co. KG: Industrial relocation in Bremen

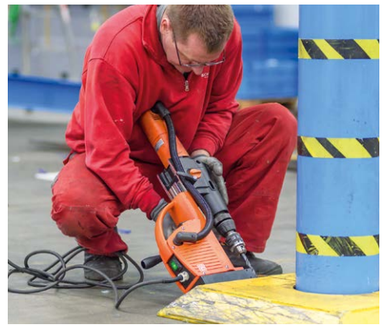
Moving into the new headquarters

With 75,000 employees and 230 plants in 33 countries, Adient is the world leader in automotive seating. More than 25 million cars are equipped with Adient seats each year. The group of companies is part of the US company Johnson Controls. For this project, a complete plant with 15 production machines and the full contingent of office equipment were to be relocated to a new Adient location within Bremen. SCHOLPP handled the move in just ten days.

Sounds simple at first: relocate a factory. But there was a lot to prepare before the trucks hit the road. Adient commissioned SCHOLPP to plan the entire project and to break it down into precisely defined phases. SCHOLPP put together the following modules from its range of services: dismantling, loading, transport, reinstallation, positioning, and attachment.

Everything positioned according to spec
The entire project had to be completed in just ten days. The overriding priority for our customer Adient was on-time completion and smooth recommissioning at the new location. Production was set to start on a non-negotiable date. A demanding requirement that left little room for error.

Fulfilling this task required well-selected technical equipment and, above all, the qualities that make SCHOLPP: excellent coordination, experienced work, and professional communication.



Customer:
Adient Interiors Ltd. & Co. KG, Bremen

Task:
Relocate factory

Location:
Bremen, Germany

Information:
automotive@scholpp.de

Giants at the service of medicine

Treatment room

Proton accelerators, or cyclotrons, are opening up a new dimension of gentle radiotherapy in the fight against cancer. As an innovative way to treat cancer patients, proton therapy is at the cutting edge of medical science. Currently, it is only available at a handful of hospitals worldwide. This technology requires a high level of expertise – both in its application and in its prior installation. SCHOLPP is at work around the globe installing these complex high-tech systems in hospitals.

Focused energies protect patients

This new form of radiotherapy aims to destroy cancerous tissue. Previously, ultra-hard X-rays from linear accelerators were primarily used for this task. However, the photons this technology utilizes exert their therapeutic effect not only on the tumor, but also on the surrounding healthy tissue.

Protons, in contrast, can be used in such a way that they only emit a small amount of energy on their path to the tumor. Then, once they reach the cancerous tissue, they unleash their full force. Radiation therapists shape the proton beam to avoid harming healthy tissue.

New standards in the installation of medical technology

The dimensions of proton therapy systems exceed those of any known medical technology: the radiation machine itself, known as a gantry, measures approximately 13 x 11 meters and tips the scales at 110 metric tons. The focused proton beam travels through this steel colossus to cover the last meters to the patient. Twice as heavy, at around 200 metric tons, is the proton accelerator, or cyclotron. This is what accelerates the particles to roughly two-thirds the speed of light.

To ensure that the proton beam from the cyclotron reaches the patient with maximum precision via the beamline and gantry, the beam is guided by over 50 quadrupole and dipole magnets weighing several metric tons. The magnets, precisely calibrated to a thousandth of a millimeter, ensure the correct shape and direction of the beam.

Special requirements

Of course, the complexity of the installation does not lie solely in its dimensions. Since all components and the hospital environment are extremely sensitive and capital-intensive, the installation requires the utmost care. Demanding requirements in documentation, precision, occupational safety, and the handling of high technology must be met. The projects generally span several months.

Cyclotrons consisting of two parts always require special installation solutions. Often, they are brought into the facility using crane technology, which is very labor- and cost-intensive due to the high weight. Sometimes alternative solutions must be designed, which requires extensive preparatory work in the form of move-in studies.

SCHOLPP at work behind the scenes of advances in global health

Experts predict a bright future for this successful high-performance medicine. Doctors are making great strides in cancer treatment thanks to improved technology.

Industry numbers show that this market is growing rapidly: 79 systems were produced worldwide between 1990 and 2017; currently, there are 45 under construction and a further 24 in planning.

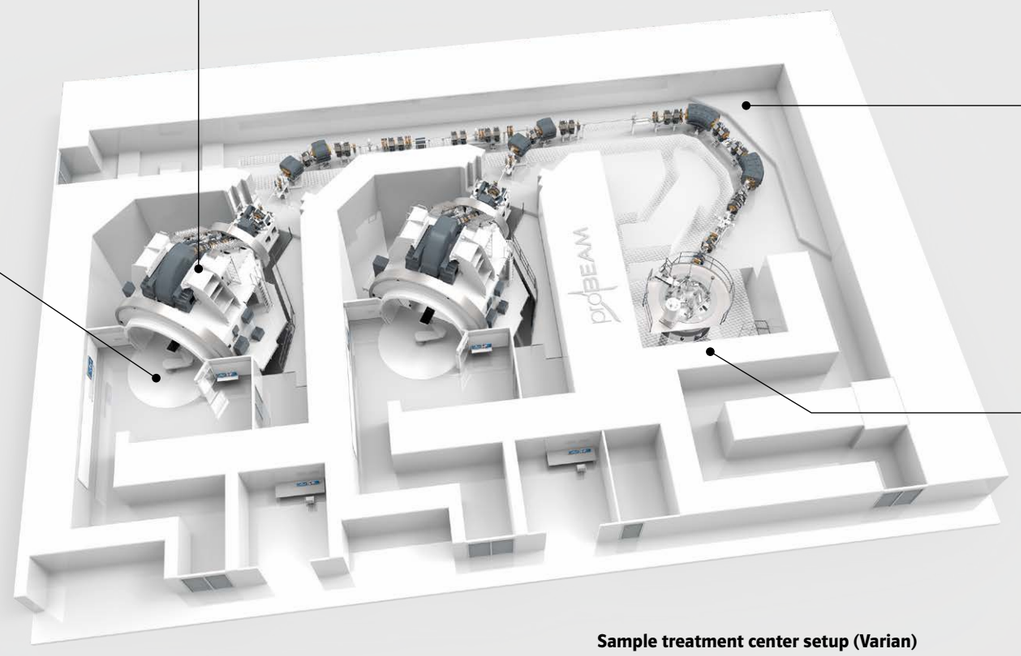
SCHOLPP uses its amassed expertise to help manufacturers optimize the installation processes so that as many patients as possible can benefit even sooner from this cutting-edge technology and the improved treatment odds that it offers.

Task:
Install proton therapy systems

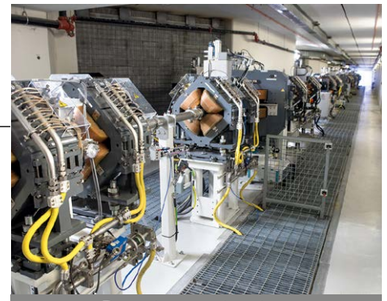
Locations:
Germany, Great Britain, Netherlands, Russia, Switzerland, Singapore, Taiwan

Information:
medizintechnik@scholpp.de

360° rotating gantry



Sample treatment center setup (Varian)


Beam transport system


Superconducting cyclotron

SCHOLPP

Worldwide Industrial Installation

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