Wälischmiller Engineering GmbH
Wälischmiller Engineering is a specialist manufacturer of remote-handling, robotics and radiation-protection solutions for environments that are inaccessible to humans.

The need to ensure the highest levels of safety in these environments means that all our products are designed and manufactured to the strictest quality criteria. Our focus on product quality and operational safety marks us out as unique in the market. Our company slogan influences us every day and in everything we do:

Quality for Safety

At Wälischmiller Engineering, we take pride in offering turnkey solutions. We provide a fully integrated service that extends from planning and product development all the way to manufacturing and installation.

By working closely with our specialist engineers and project managers, you can be confident of receiving not just an off-the-shelf product, but a bespoke solution to your problems that offers the highest quality and a guarantee of long-term operational safety.

Our quality management system has been certified to DIN EN ISO 9001:2008 and the KTA 1401 safety standard of the Nuclear Safety Standards Commission.
Innovation and development are crucial aspects of what we do. Our design engineers continually work with customers to develop and improve our products. Our focus is on helping you to improve your working conditions and operating procedures.

Tradition
Wälischmiller Engineering is built on its core expertise in the areas of remote handling, robotics and radiation protection. Over 60 years of experience makes us one of the world leaders in the market.

Internationality
Our products are used in 40 countries worldwide. In addition to our strong relationships across Europe, we have customers in Japan, Korea and Russia.
Handling Systems

Wälischmiller Engineering sells mainly into the nuclear market (including nuclear energy, nuclear medicine and research facilities). Although we can supply a wide range of bespoke solutions, we offer particular expertise in remote-handling systems, robotics and radiation protection.

Radiation Protection

The Handling Systems division offers various mechanical master-slave manipulators from the A100 and A200 series for a wide range of applications. Other products include the remote-controlled power manipulators from the A1000 series for handling heavy loads. The division also supplies intervention systems with servo-manipulators for repair and maintenance tasks in hazardous and inaccessible zones as well as remote-controlled and automatic equipment for positioning, transport and sampling tasks.

Radiation Protection

Wälischmiller Engineering sells into the nuclear market (including nuclear energy, nuclear medicine and research facilities). Our special expertise lies in planning, designing and manufacturing safety containers, leak-tight cells and laboratory equipment for nuclear technology and nuclear medicine.

Special Solutions

With our extensive experience in radiation protection and the unique demands that apply to handling technology in radiation-exposed environments, we can implement complex development projects to your specifications. Our aim is to deliver optimum solutions that not only meet your requirements and expectations, but also comply with the applicable standards and regulations. Wälischmiller Engineering products stand out due to their user-friendly design, exceptional quality, functional reliability and easy maintenance. This is confirmed by satisfied customers in more than 40 countries worldwide.
Manipulators & Handling Systems

Universal Tongs A01
Designed to perform simple remote handling tasks involving radioactive substances.

Master-Slave Manipulator System HWM A100
This system features electrical range adjustment with a handling capacity of up to 20 kg, a lifting capacity of up to 80 kg and ranges from 2500 to 5000 mm. These manipulators are often installed in medium-sized and large concrete-shielded hot cells. The modular manipulator transfers the master arm movements to the slave arm by means of rotating shafts inside the shielded through-wall tube.

Master-Slave Manipulator System HWM A200
With range adjustments for a handling capacity of up to 10 kg and a range of 1500 mm, this system is designed for medium-sized, lead-shielded or concrete-shielded cells.

Modular Power Manipulator System HWM A1000
The HWM A1000 is a power manipulator with numerous applications, particularly in areas where human access is restricted and heavy-duty tasks have to be performed, for example, in nuclear or chemical facilities. Designed as a self-contained unit with electric drives, the A1000 offers convenient remote control, efficient movement and radiation resistance. We truly believe that the A1000 is a first-class solution for use in radioactive and other inaccessible environments.

Wallischmiller Engineering has been manufacturing remote handling systems for use behind shielding walls since the 1950s. Since then, we have become one of the world’s leading manufacturers of remote handling equipment.

Thanks to their modular design, Wallischmiller Engineering systems can be configured to perform a variety of tasks in areas inaccessible to humans.
Special tasks require a special robot – the Wälischmiller Engineering TELBOT®.

The TELBOT® is a multi-functional, modular and automatic system with unique capabilities. Arm-length, drive units and standardized modules (kinematics) can be configured to your requirements. All electrical drives and sensors are located in the base unit. The robot’s movements are transferred through the arm and joints by concentric tubular shafts and bevel gears.

Up to eight axes are available. The huge selection of arm lengths, joint modules, motors and gears facilitates a variety of kinematics and working ranges with handling loads of between 5 and 150 kg.

The TELBOT® arm is sleek and powerful, and offers unlimited movement.

Rounding out the TELBOT® is the open-source, modular TBC1 control system, which provides simulation and virtual reality programmes.

The TELBOT® is a multi-functional, modular and automatic system with unique capabilities:

- Unlimited rotation in all axes
- No wiring inside or outside the TELBOT® arm
- Unlimited, fast and precise arm movements
- Smooth, sealed arm and joint bodies
- High level of repetition accuracy
- Programming of sequences possible
- Precise guidance of remote handling tools
- Execution of complex work sequences
Radiation Protection

Wälischmiller Engineering has been manufacturing radiation protection products since the 1950s and has made this a core area of expertise.

We design and manufacture complete solutions and sub-systems for use in nuclear technology, nuclear medicine and isotope production, both for passive as well as active radiation protection.

Passive radiation protection includes:

- Shielding walls
- Cell linings
- Radiation protection cabins
- Glove boxes
- Stainless steel boxes

Active radiation protection includes:

- All types of handling technology in areas not accessible to humans
- Transport systems for radioactive material (rabbit systems)
Special Solutions

Silicon Doping System

- Production facility for upgrading the semiconductor silicon (Si)
- Neutron irradiation of cylindrical mono-crystals of 500 mm in height and up to 200 mm in diameter
- Permanent rotation of the specimen around its centre axis during irradiation
- 24-hour continuous irradiation

Our Merits in this Project

- Hoist designed to KTA specifications
- Remote operation
- Automation
- Precision
- Safety based on tried and tested components
- Project planning, development and implementation

Rabbit Systems

We are able to design rabbit systems to your unique specifications. Please contact us with your requirements to discuss how we can help.

Wälishmiller Engineering and KTA

Our services include designing the layout, compiling design review documents, as well as manufacturing, installing, commissioning and documenting the following products:

- Test load systems
- Cross beams
- Hoists
- Cranes

We offer a complete package from a single source:

- Products tailored to your requirements
- Hoists designed to KTA specifications
- Products designed and manufactured according to your requirements
In addition to the manipulators themselves, our focus on quality extends to accessories and special equipment, including:

- Protective sleeves ("booting") for contamination protection and/or sealing in the wall, and exchangeable from the cold side
- Manipulator changing carriages, transport carriages, and changing devices
- Exchangeable tongs, jaws, special jaws
- Through-wall tubes, box flanges, and blanking plugs
- Electric, hydraulic and manual handling tools (including nibblers, hydraulic cutters, and impact wrenches)
- Three-jaw grippers and drum grippers
- Various types of camera technology are also available for monitoring in-cell work.

This is just a small selection of the tools and accessories for our handling equipment that we have provided to customers. We guarantee that we can find a solution for your particular requirements.
Our employees play a key role in our success. The provision of ongoing training and development opportunities is a top priority for us, and ensures that our highly qualified specialists can offer innovative solutions to meet the frequently complex requirements of our customers.

Service

Wälischmiller Engineering also offers a complete portfolio of maintenance and repair services. All work is carried out by our in-house team of highly trained and experienced engineers. Our service personnel are also qualified to work in the challenging conditions that apply in the controlled zones of nuclear facilities. They can be deployed worldwide at short notice.

Training – the Key to Success

Our highly experienced employees can provide operation and maintenance training for all our products and this can be structured to meet your needs. If requested, we can also provide training at your premises. We offer training in a number of languages; please contact us for details.

After-Sales

We keep a large stock of spare parts for all our products and can supply them at short notice. We can usually supply within 2 working days in Europe and within 5 working days worldwide.
Company History

1946  Hans Wälischmiller opens his new business in Meersburg, Germany

1950  The company enters the nuclear medicine and nuclear technology markets after being awarded a contract to design and manufacture a system for transferring, distributing and packing radioactive Sr90

1962  The head office and production are relocated to Markdorf

1963  Delivery of the first A100 master-slave manipulators to the Research Centre at Karlsruhe in Germany

1966  Delivery of the first A200 master-slave manipulators to the Research Centre at Jülich in Germany

1979  Development of the A1000 power manipulator for remote handling of heavy loads

1987  Development of hydraulic manipulators for remote-controlled manipulator vehicles

1990  Development of waterproof equipment and tools for the dismantling of decommissioned reactors

1995  Delivery of the first TELBOT® handling robot to AECL Atomic Energy in Canada

1998  The “blue hall” with a height of 15 metres and a water pool with a depth of 5 metres are completed in Markdorf. The facilities are used for product assembly and testing.

2009  Hans Wälischmiller GmbH is acquired by Carrs Milling Industries Plc of Carlisle (UK) and is renamed Walischmiller Engineering GmbH

2014  Opening of the new office and production building in Markdorf

Today  Walischmiller Engineering continues to develop and manufacture products and systems for remote handling, robotics and radiation protection
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