The underfloor inventor.

Conducting and routing for 60 years

Our first underfloor system was born 60 years ago when electrical installations were sent underground. Ackermann presented the “Teliflur” system for the first time at the 1956 Hanover Trade Fair. For the first time, cables could be run through the floor directly to the workstation, well away from the usual installation support – the wall. At Ackermann, this innovation came at exactly the right time – because new architectural styles and the increasing electrical requirements meant new solutions were necessary.

These solutions were developed continuously, firstly at Ackermann and later under the OBO Ackermann brand. Today, our underfloor systems are installed in countless buildings around the world by renowned architects. We are on-site at construction sites around the world, providing tailor-made products, which are always state of the art. Practical and contactable – for six decades. Take a trip underground with us and discover the history of our underfloor systems.

Yours,
Andreas Bettermann
Karstadt Head Office, Essen 1968
Extract from the internal periodical “Kontakt” of the Ackermann company
Welcome underground.

Discover 60 years of underfloor installations. We have visualised the joint OBO and Ackermann underfloor history in the style of a metro timetable. Take a ride on different lines and visit the key stations and milestones of the last 60 years.
The office throughout the years

Office over time
In the past two centuries, the world of work in offices and administration offices has changed fundamentally. The progress of industrialisation also saw office structures change and be influenced by innovations, from the typewriter to modern data processing. The architectural requirements of workplaces and offices also influenced the development.

Up until the late 19th century, clerks and copyists dominated offices. They still worked at high desks with a quill and ink. The first series-produced typewriter came onto the market in the USA in 1874. Later, the telephone dominated the world, followed by, in recent decades, the computer and digital communication – all of these inventions produced massive changes in everyday office work.
The telephone changes the world
The invention of the telephone some 150 years ago allowed direct exchanges over long distances. Alexander Graham Bell was the most successful of several inventors and gave the telephone a practical application in 1876. A public telephone network was created in Germany from 1881 onwards. By 1930, there were already 3.2 million telephone connections. In the post-war years, the network grew further.

Fax
The photo-telegraph of 1901 was the first prototype of the fax machine. The tele-copier was launched onto the market in 1974 as the first fax machine, and became extremely popular in Japan in the 1980s and also took rapid hold in European offices as the (tele) fax. As soon as law courts recognised declarations of intention by fax, almost every office had a fax machine.
The age of open-plan offices
“Rationalisation” was one of the key topics of the 1950s – also with regard to office design. The idea of open-plan offices and office landscapes became ever more popular. Short working routes, an atmosphere promoting communication and the optimum use of space should all allow the most effective working methods possible. Architects and planners aimed for flexible use.

1957

Electric typewriter
The first electric typewriter was presented at the 1957 Hanover Trade Fair as part of a trade exhibition on office machinery. Its major benefit: Compared to the mechanical models, it was possible to type with considerably less effort. This meant that, from the 1960s, many workplaces required data and power connections for telephones, electric typewriters and other devices. It was thus logical that the space in which the workplaces was located also became a part of the electrical installation – on-floor or under-floor electrical installations were created.
Decentralised power supply
Whether in office or exhibition areas, in hotels or in shopping centres – from the 1960s, many large areas of modern buildings required a decentralised power supply to allow flexible access to data and power – without interfering power cables on the surface. With the expansion of the underfloor systems for all kinds of floor structures, combined with diverse floor coverings, even in wet-care areas, a decentralised supply was possible in almost every area.

Internet and data supply
With the coming of the 2000s, the significance of electronic communication via the Internet became ever greater. Today, beside the telephone, exchanges via e-mail and Internet telephony are the main means of communication in an office. Ever greater volumes of data are exchanged and saved via the Internet. Market observers estimate that the volume of data created, reproduced and consumed will have reached around 40 zettabytes by 2020. A zettabyte contains 21 zeroes. Accordingly, the data cables of modern administrative buildings must be optimised regularly.

Entry of the personal computer
With the dawning of the computer age in the 1980s and 1990s, the personal computer entered the office world on a massive scale. Soon, every workplace not only required a telephone connection, but also additional power sources for PCs.
Foundation era
Albert Ackermann founded a “Factory for electrical consumer goods” in Gummersbach in 1919. At first, Ackermann produced and marketed his own locking light switch. In the 1920s, Ackermann expanded the product range of his company to include waterproof switches, sockets, pressure and rocker switches, as well as other important accessory parts for electrical installations.

Internationalisation
During the following decade, the company began producing construction elements for telecommunications technology. By 1939, Ackermann had grown to 80 employees and was marketing its products as far away as South and Central America.
Post-war years

Ackermann began production again in 1946, one year after the end of the war. Only 12 of the former 80 employees were still active in the company. The focus was now on telecommunications articles. The following years saw the construction of a new production building on the site in Gummersbach.

Change of leadership

Albert Ackermann left the company in 1951. When his sons, Hans Gert and Werner, returned from war captivity, they joined the company in 1950 and 1952. The founder of the company died in 1954.
Economic miracle years

In 1955, Ackermann expanded to include underfloor products. The start of the "economic miracle" years saw a boom in construction, creating completely new architectural requirements — also for electrical installations. The first underfloor systems were developed in close cooperation with planners and architects. At first, they used the on-floor "Telitank" installation units and, soon after, used flush-floor inserts.

Success was brought by the "Teliko" (telephone light combination) system, which had been patented a few years before. This meant that, for the first time, installation devices for heavy current and telecommunications technology could be combined.
Expansion
The company continued to expand in the 1960s and 1970s. A new production facility was opened in France.

The new Ackermann administration centre, also known as the "Rusty Albert", was created. In 1979, the company employed 500 employees and had around 30 representatives around the world. In addition, a production facility opened in the United Kingdom. By 1989, the company employed almost 900 employees.

“Away from all four walls – it was this motto that Hans Gert Ackermann used to characterise our underfloor systems.”

Roland Decker, Ackermann
Close to architects and planners
When developing new systems for electrical installations, Ackermann works closely with leading architects, designers and engineers. Through the cooperation with key industry figures, such as Arne Jacobsen, Norman Foster, Hentrich-Petschnigg, Egon Eiermann and Sep Ruf, the company is always focused on the design requirements of the building. This means that the focus is always on the design requirements of the building. This pays dividends – Ackermann has been awarded countless design prizes.

“With our practical knowledge, we tried different construction shapes in different floors and on walls.”

Günther Knier, Ackermann
Ackermann and Bettermann

Ackermann was sold to Novar in 2001. The three company sectors were split up in 2005. The "Nurse Call" hospital call systems sector was sold to Honeywell International, the Ackermann Data Connectivity sector to Brand-Rex. Ackermann Cable Management, with the underfloor and cable routing systems, was taken over by OBO Bettermann in early 2006. Since that time, the Ackermann products have represented key components in the wide-ranging portfolio of OBO electrical installation solutions.

“Teliboy”, the publicity figure from the Ackermann company periodical
Foundation years
Franz Bettermann, together with two colleagues, founded a company in Menden in 1911. It produced brass goods, shoe hooks and eyelets, but also electrical products. Bettermann became a supplier to local lamp producers. In 1918, Franz Bettermann left the company he had founded and became sole proprietor of a punching works and produced fastening materials for electrical and sanitary installation. In the following decades, the company grew and expanded its product portfolio.
Ohne BOhren – OBO
Things couldn’t be shaken until 1952: If an anchor was to be placed, a hole had to be drilled in the right place. No one questioned this. Only an OBO engineer was dissatisfied. So OBO developed a metallic anchor, the special construction of which permitted it to be knocked directly into the wall. From this moment on, the OBO pioneering spirit had a name: OBO – Ohne BOhren (without drilling). This mounting advantage simplified the work of the tradesmen of the time significantly.

Growth
OBO Bettermann took a further major step in 1957, when it took over the Neuwalzwerk (New Rolling Mill), which had been founded in 1827, in Menden-Bösperde. Strategically, this was a significant decision, as OBO thus strengthened a company sector of importance even today – cable support systems.
OBO and underfloor
To the countless areas of electrical installations for which OBO developed products and systems, underfloor systems were added in 1978. In particular, the wet-care segment made a name for itself. The GE12RN service outlet with fully lowerable tube body for wet-care floors was presented in 1994.

Ackermann and Bettermann
After two of the three parts of the Ackermann company had been sold in 2005, OBO Bettermann took over the Cable Management sector, containing the underfloor and cable routing systems, from Ackermann in early 2006. This meant that the existing product range in the underfloor sector could be expanded. Since that time, the Ackermann products have represented key components in the wide-ranging portfolio of OBO electrical installation solutions.

Ackermann made by OBO
Even today, the OBO and Ackermann brands are closely tied. This has seen the creation of countless new and further developments in the underfloor segment, which can be found in buildings all around the world.
“He doesn’t vanish into the bushes when things get tough.”

Hans-Dietrich Genscher about Ulrich Bettermann
**Up close and practical**

That was and is the motto of the underfloor inventors at OBO and Ackermann. Even today, good contacts to planners and architects are still at the heart of their work. For this reason, over six decades, they have worked together with many renowned architects – from Arne Jacobsen, through Egon Eiermann and Norman Foster to David Chipperfield. For example, before the construction of the HEW Hamburg building, designed by the architect Arne Jacobsen in the 1960s, Günther Knier, Director of the Underfloor Division at Ackermann, travelled to Copenhagen in order to sort out the details. This resulted in a special solution according to the exact design concept of Jacobsen, from which red cables protruded.

**Futuristic design**

**Lloyd’s of London – Richard Rogers**

Behind the industrial style of architecture of the head office of Lloyd’s of London is an innovative concept. Supply lines, staircases and lifts are located in plain sight on the exterior of the building. This means that there are no use restrictions in the interior. On each storey, the areas can be changed quickly through the installation and removal of partitions. During such an operation, the underfloor systems of the OBO Ackermann brand can also be adapted flexibly at any time. The 14-storey building, designed by the architect Richard Rogers, was constructed between 1978 and 1986.
Sir Norman Foster
Shanghai Bank
The headquarters of the Hong Kong and Shanghai Banking Corporation in Hong Kong was developed and constructed in only seven years – from 1979 to 1986. The architect Sir Norman Foster was given the job of designing the “best bank building in the world”. A high level of prefabrication and well-thought-out planning were required to create a building area of around 99,000 square metres and a height of 183 metres in such a short space of time. Even today, the generous, open storeys allow flexible adaptation of the spaces to changing requirements – also thanks to the fitting of the building with underfloor boxes of the OBO Ackermann brand. This makes it possible to have a flexible power supply in wet-care areas, anywhere in the building.
BMW Welt, Munich
Some 16,000 square metres of roof space, carried by eleven supports and a centre double cone – that is the architecture at the BMW Welt in Munich. The planning work on the car manufacturer’s museum began in 2003. “The tornado of glass and steel, screwing upwards into the sky and ending in a floating, flying roof, hanging like a cloud, is created by a dynamic deformation of the two support layers, forming a main support for the roof” – is how BMW describes the extraordinary architecture.

The connection of design and function was one of the main desires of the architect, Professor Wolf D. Prix and the Coop Himmelb(l)au office from Vienna. This was also continued in the electrical installation.

The spacious, elegant exhibition areas of the museum are only interrupted discreetly by the OBO Bettermann underfloor systems, which were developed specially for this structure.
“Tornado of glass and steel”
Adrian Smith
Burj Khalifa
At 828 metres high and 206 stories, the Burj Khalifa is currently the tallest building in the world. On a clear day, the top of the building can be seen from 100 kilometres away. Not visible at first glance, but essential for the mega-tower is the cable management with system and special solutions from OBO/ System Ackermann. Underfloor systems for both dry and wet-care floors were installed, as were a specially developed installation unit with a recess in the floor covering. This allowed the installation of a switched socket, developed for the world's first Giorgio Armani Hotel.
The Bolshoi Theatre in Moscow is the most famous and most important playhouse for opera and ballet in Russia. It is the home of the renowned Bolshoi Ballet and the Bolshoi Opera. After taxing renovation work over six years, the Bolshoi Theatre was reopened in 2011. A key part of the renovation work was the installation of a new OBO underfloor system to provide a discreet power supply.

Due to the age and semi-circular nature of the building, the cables could only be routed in the floor. Here, the benefits of the open, screed-flush OKA system could come into their own. Its cassettes blend perfectly into the floor. The old brass-coloured service outlets are also an ideal match to the Imperial décor of the theatre. In addition, the trunking can be opened along its entire length. This means that changes to the cable routing can be implemented in a considerably simpler manner than previously.
Neues Museum, Berlin
David Chipperfield Architects

The buildings and collections of the Neues Museum in Berlin belong to the most significant cultural treasures in Europe and are on the list of UNESCO World Heritage Sites. Between 2003 and 2009, the museum, which was badly damaged in the Second World War, was rebuilt and restored, under the leadership of David Chipperfield Architects. OBO developed an underfloor system which both met the high aesthetic requirements of the museum and provided a discreet supply of power and data to the interior areas. For this, the project team, together with the architects, developed underfloor boxes with a load capacity of around 2.5 tonnes and minimal dimensions of just 12.5 x 12.5 centimetres.

Thanks to their fine bronze cover with an invisible cassette edge, the total of 624 underfloor boxes blend discreetly into the interesting architecture of the building.
In accordance with the specifications of the architect, the project team developed an underfloor box with a load capacity of approx. 2.5 tonnes with the minimal dimensions of just 12.5 x 12.5 cm, along with a bronze cover without a visible cassette edge.
Old masters in a new light

Michele De Lucchi
Museo della Pietà
In the Museo della Pietà in Milan, UDHOME floor sockets and OKA trunking from OBO provide a discreet and flexible power supply around Michelangelo’s last masterpiece.

The „Rondanini Pietà“ is the last work by Michelangelo, which was left unfinished. The 89-year-old master worked on the sculpture, which depicts Jesus and Mary, just six days before his death in February 1564. The compact UDHOME floor socket and a special solution of the OKB underfloor trunking from OBO Bettermann allowed discreet routing of the cables.
Old masters in a new light

Schloss Elmau
The Schloss Elmau Luxury Retreat & Spa opened in March 2015. To give the guests permanent, reliable access to power and data, OBO Bettermann supplied comprehensive systems for the electrical infrastructure of the hotel. In its picturesque Alpine setting, the Schloss Elmau Luxury Retreat can fulfil the highest requirements of its guests, down to the last detail.

Alpine luxury

Only high-quality systems were used to equip the modern conference room, as well as the luxurious suites. Thus, in countless rooms, OBO underfloor systems with high-quality floor sockets, made of stainless steel, offer optimum access to power and data.
The 1950s saw changes in business, society, architecture and design. Accordingly, new solutions were required for electrical installations. For this reason, Ackermann developed the first underfloor system “Teliflur” in 1955, to meet the requirements of modern buildings. For the first time, access to power and data was possible away from the normal installation support – the wall. In 1965, Ackermann then marketed the first underfloor accessory socket, which offered a flush-floor supply solution and could be connected to an underfloor trunking system. Even today, OBO and Ackermann continue to improve these systems further and adapt them to current requirements. The result: A unique product range.

“The Ackermann brand has a history and is still important to us, even today.”

Andreas Bettermann
Ackermann began the development of first underfloor system in 1955. The "Teliflur" system was presented at the 1956 Hanover Trade Fair. The core was the first "Telitanks": On-floor installation units for the installation of power and communication installation devices. These were mounted on special floor boxes.

For the first time, it was possible to install direct access to power and data in the middle of the room. At first, cables were fed to the workplace via the standard installation pipes in the floor, and later via trunking systems. Telitanks are still in use today.
The first

EÜK – timeless in-screed installations
The EÜK system was the first underfloor system as we know it today in Europe. The system was presented for the first time in 1965 and, since then, has been continually adapted to installation practices. For five decades, planners, architects and customers have relied on the tried-and-trusted technology for creating a high level of flexibility in underfloor electrical installations.

The screed-covered EÜK duct system is an extremely robust and versatile duct system. Three different widths and heights, as well as a comprehensive range of accessories, allow the ducts to be adapted exactly to the individual requirements.
Universal
It is the numerous practical details and selection options that make the EÜK system so versatile.

The wide range of duct sizes and widths, extremely variable underfloor boxes, as well as well-thought-out system accessories make the EÜK very popular.
OKA – flushfloor trunking system
The OKA open trunking system from the OBO Ackermann brand is a flexible system for in-screed cable routing. The covers of the system can also be opened along the whole length when installed with a floor covering. This means that the electrical installation in the trunking can be adapted at any time. Mounting benefits, such as lowerable floor covering profiles or rapid height-adjustment units, offer a great deal of flexibility and security for professional underfloor installations.

In particular, the OKA system stands apart on account of the wide range of mounting options. Thus, the two systems, OKA-G, with its flexible metal mesh sidewalls, and OKA-W, with a closed sheet steel floor trough, can be combined freely.

Different trunking widths and heights, as well as a large range of choice for device installation, offer sufficient installation capacity for any installation requirements. Additional expansion units also allow device installation, without reducing the useable cross-section in the trunking.

The trunking system can be opened along the entire length. It is thus particularly suitable for areas in which, for example, changed furnishing plans mean regular modifications to the routed cables. Depending on the device installation, this applies to both dry and wet-care areas.
OKB – brush bar trunking system

There are almost no signs of how this room is supplied with power. Only a slender, discreet brush bar along the wall offers an indication. It is there that the open, screed-flush OBK brush bar trunking system from the OBO Ackermann brand runs. The system is characterised by possessing an opening, directly on the wall, over the entire length of the trunking.

A brush bar covers this opening as visually attractive and also discreet sight and dust protection. Cables can be run out of the trunking through the bar at any location. This means that the trunking is accessible at any time for possible changes.
IBK

IBK in-concrete duct system
Easy mounting, robustness and a perfect integration in the building – all of these are offered by the new in-concrete system. It is matched to the latest developments and trends in construction – both to the technology of concrete core activation and to current fire protection guidelines. Thanks to many years of experience in development and project planning for underfloor installations, OBO knows the requirements for in-concrete systems. This is just one of the reasons OBO is the market leader in this field.

The in-concrete duct system is suitable for use in concrete floor plates and concrete ceilings – irrespective of whether they are ceilings encased during construction or are ceilings made of filigree plates. Thanks to its continuous height adjustment of ducts and sockets, the system can adapted to all kinds of project requirements.
UDHOME – underfloor installation
Extremely simple
Elegant, discreet and space-saving – these three words are all hallmarks of the UDHOME floor socket. Its visible parts, made of brass or stainless steel, blend discreetly into the modern interior architecture of living accommodation, hotels, shops and many other areas. In so doing, the UDHOME offers a compact, high-quality connection for power and modern data – from HDMI to a USB connection: Just where it is required.

The planning and installation of UDHOME do not require much work. The floor socket can be mounted anywhere in the room before screed work. Thanks to its compact design, it requires considerably less space in the floor than other electrical installation systems. In addition, feeding in of cables is not complex. They are simply run in empty tubes in the screed up to the UDHOME. This means that, later, they are completely invisible to the users of the rooms.
Service outlets

The polyamide, stainless steel and aluminium service outlets of the OBO Ackermann brand are suitable for dry and wet-care floor coverings, such as carpet, PVC or linoleum, as well as parquet, laminate, tiles and stone floors. The flexible products can be combined with screed-flush and screed-covered underfloor systems and can be used in raised and cavity floors. Solutions are also available for heavy-duty areas. The height-adjustable service outlets are available in round or square designs and in three sizes and are designed for all kinds of power and data connections.
Cassettes

The height-adjustable and decouplable cassettes are frequently used in natural stone or tiled floors. High-quality materials and solid strengths are the hallmarks of the cassettes.

Stainless steel or brass not only look good, they also provide lasting quality.

The range comprises round or square cassettes of different sizes. In the heavy-duty variant, they can also withstand heavy loads and are the ideal solution for intensively used areas. Besides variants with a cord outlet, the product range also contains versions with a tube body. All the cassettes offer plenty of space for energy and data connections.