ALWAYS THINKING AHEAD

MOTOR PROTECTION
LEVEL REGULATORS
CONTROLS
NOLTA GmbH, located in Cölbe in Upper Hesse, is one of the hidden champions of German SMEs. The products of the world market leader are inconspicuous and nevertheless an integral part of the construction, pumping and manufacturing industry. “At the end of the day, you only sell accessories,” said a critical customer. You can see it that way. But if a device does not work at the right moment, it’s not an accessory, it’s a problem. The products of NOLTA therefore provide, above all, an ease of mind. Safety based on decades of experience and the highest quality standards.

“Engineering made in Germany” is in demand worldwide and NOLTA offers just that. For example, NOLTA products are used on 90% of German construction sites where pumps are used.

With its own subsidiaries, NOLTA is present in China, the USA and India. Commercial agencies are also present in Denmark, Austria, the Benelux countries as well as in Australia and Chile.

The NOLTA quality promise is not just about excellent workmanship. The company is equally focused on environmental protection and compliance with high occupational safety standards.

A subsidiary in Delhi has been present on the Indian market since 2013. In order to meet the specific requirements of the market, the company is operated largely autonomously by local employees.

NOLTA has been present in the US since 2008, with an office and warehouse in Boston, MA.

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If there is a saying that goes well with NOLTA founder Walter Tatje, then it is probably “Necessity is the mother of invention”. Germany in the year 1945. Numerous cities were destroyed. In the Upper Hessian town Marburg, the then 40-year-old lathe operator began to build a new life for himself and his family. He got lucky. Due to his political neutrality during wartime he was allowed to start a business. Together with his brother-in-law Heinrich Bonn, he opened the wholesale distribution of technical products (GTE) in his hometown and laid the foundation for a unique success story.

The beginning was full of obstacles. Which technical products could be sold when there was virtually nothing? On foot and by bike Tatje and Bonn set off to collect steel scrap. Every meter of cable, every light bulb was immensely valuable. The men made lamps from war waste such as old steel helmets and with infinite diligence and commitment, the GTE developed over the years to a major electrical wholesaler in Hesse.

Walter Tatje had a special talent: He recognized technical relationships and wanted to develop them further. “Making products smarter” was his special passion. So he had the ambition to construct a “thinking” immersion heater that shut itself off. He developed interior lights with particularly high efficiency or dreamed of street lights that do not blind drivers and still illuminate all lanes.

Walter Tatje was a tinkerer and it was only a matter of time before he came up with a groundbreaking idea: In 1959 he developed the first single-phase motor protection plug in collaboration with an engineer Nolte.

Walter Tatje also had a second talent: he was a good salesperson. That’s why he presented the new invention to a major manufacturer of construction machinery in Munich - and received his first order for more than 300 devices. A great success, however, the production of motor protection plugs was still far from industrialized. The first order was therefore manufactured by hand, delivery delayed and was nevertheless the encouraging start of the NOLTA. The namesake of the new company were the inventors themselves: Nolte and Tatje.

Through visits in Germany, the customer base grew and by participating in the Hanover Fair NOLTA was also able to make first international contacts. Already in 1960, the company introduced the 3-phase motor protection plug and began in 1969 with the production of control devices. Today, the range of NOLTA extends to the areas of motor protection, level switches and controls.

ALWAYS THINKING AHEAD

Ideas from back then: With the „Air Pipe“ inhaler, NOLTA took a short excursion into the field of medical technology.
Joining the electrical wholesale company of his father was not an option for Felix Bonn. A dual degree in International Business Management at Siemens was more in line with his interests. The training led Felix Bonn to Switzerland, France, Indonesia and the USA. It opened his eyes to the world and the possibilities that exist in it. „In any case, I wanted to write my diploma thesis on a topic that had a practical application. After all, good ideas should not be shelved,” explains the current managing director of NOLTA.

It was fortunate that his father was involved in another company, the NOLTA. The renowned manufacturer of motor protection and water technology was on its way to internationalization at this very time.

The central purchasing of the customers had changed. Now it was important to be present in the respective markets. In addition, NOLTA had already achieved market saturation in Germany - NOLTA motor protection plugs were in use on nine out of ten construction sites. So where to grow? The diploma thesis topic for Felix Bonn was found. „After a market analysis, I wrote my work about the expansion of NOLTA in the United States,” says Bonn. „But I did not just want to write the concept, but also implement it.” So in 2007, he joined his father’s company.

Felix Bonn initially supported Dr.-Ing. Jochen Knake, who had taken over the management of NOLTA in the mid-1990s. Thanks to his marketing background at Procter & Gamble, Knake streamlined NOLTA’s offering, improving the company’s profitability. In 2007 he was responsible for the expansion of NOLTA to China. Felix Bonn took over the expansion to the West during this time and built up a NOLTA presence with an office and warehouse in Boston.

Since 2012 Bonn and Knake share the tasks of the management.

In 2013, the duo decided to found a subsidiary in India in order to be more differentiated on the Asian market.

With the founding of the innovation hub NOLTA NOVA, at the beginning of 2017, Bonn and Knake are continuing on the company’s road to success.

„GOOD IDEAS SHOULD NOT BE SHELVED“
Today every German construction worker knows NOLTA plugs. Since its introduction, it has become a classic generic term, such as Walkman used to be for portable tape recorders or Kleenex for paper handkerchiefs. The reason for this is simple: With the innovative motor protection plug, NOLTA was the first to be launched on the market in 1959. And with the number 1, customers always associate something special, an innovation that they particularly value. This uniqueness no longer exists for the runner up in the market and certainly not for other imitators.

Another indication of a strong brand is a consistently high quality over decades. So it is not surprising that products by NOLTA are nowadays indispensable in the world of water technology.

The idea behind the NOLTA plug is as simple as it is ingenious: It protects motors from thermal overload, short-circuit or, if desired, from the wrong direction of rotation - directly within the device so that mobile construction machines or pumps can simply be switched on again in the event of a failure. On construction sites and in manufacturing plants, NOLTA plugs have made life easier.

The difference is in the detail
Where NOLTA plugs are used conditions are tough. In daily use, they must therefore withstand high mechanical loads. Where older models sometimes lead to material fatigue on the plug attachment, this phenomenon can no longer occur on the new NOLTA 50 series starters. The stability of the plug attachment is guaranteed by the fact that it is molded in one piece with the bottom of the plug. Occurring leverage effects are absorbed directly from the housing and making it virtually impossible to break.

Large product range for every application
NOLTA is a specialist for specialists. Thanks to a broad product range, customers benefit from contactor combinations for special machines and applications in order to operate them more energy-efficiently.

RATED MOTOR CURRENTS OF THREE-PHASE MOTORS (STANDARD VALUES)

CUSTOMERS BENEFIT FROM A WIDE RANGE OF PROTECTION COMBINATIONS FOR SPECIAL APPLICATIONS.
The shark is only about three meters away from him and the pulse of Sven Bergemann accelerates. Two meters. One meter. Such a close encounter would never have been thought possible by the German tourist in Australia. Then the shark turns away. Too bad.

Sven Bergemann is one of millions of visitors who are drawn to the fifth continent every year. For those who do not want to dive or snorkel, huge aquariums offer insights into the wonders of the ocean. Visitors such as Sven Bergemann can experience superlative aquatics along the entire eastern coast of the state. What remains hidden to most, however, is the immense technical effort behind the scenes.

Daily cleaning of the basins is only a small part of the mission to keep the magnificent and sometimes rare marine life alive.

Beneath or behind the display basins are settling tanks, trickle filters, miles of pipes and countless pumps.

Therefore, a large part of the technical staff experiences an aquarium completely differently than the visitors - namely as an endless labyrinth with stifling air and condensation dripping from salt-encrusted pipes. Meticulously, the engineers keep an eye on the power supply and pumps. They know that if they fail, the lives of the fish will be at risk.

A German technician specializes in aquaristic research for reef fish and has been working for several years on the east coast of Australia for various institutions. Again and again he had to observe that the water quality of the pools deteriorated and fish died because pumps had failed unnoticed. The diagnosis was simple: The pumps lacked a motor protection plug. In the whole country.

As a technician, the German had the rescuing idea when he discovered NOLTA plugs on the compressors for diving bottles: If NOLTA plugs were also available in Australia, you could easily equip the aquariums on the east coast with them.

With success: Now NOLTA plugs protect the pumps against overload, short circuit or wrong direction of rotation. The technology works much more reliable. If a pump actually overloads, it is enough to simply switch the plug back on instead of connecting a new pump. Thus, the investment in the NOLTA plugs also has had a positive effect on the bottom line of the aquariums.

However, the investment has mostly a positive effect on the fish, since the pumps have routed thousands of cubic meters of water per day through various filters in order to eliminate metabolic waste and supply oxygen.
CLICK NOT CLACK

When it comes to float switches, it’s worth taking a closer look. And listen carefully. Because the quality of these products is particularly evident in detail. So it is no coincidence that the „colorful buoys“ from NOLTA are located today in uncounted wastewater pumping stations, wells, chemical plants or refineries.

Water – the special element
Water consists of two gases, and yet it is liquid at room temperature. It loses its density as a solid and, through its anomalies, is a unique element on our planet. Water is the source of life. Only with the help of the capillary effect are plants able to transport water from the roots to the tips of the leaves. And it is precisely this capillary effect that can lead to significant problems in float switches.

In a study commissioned by NOLTA, the Philipps-University Marburg has investigated cable types from various manufacturers under the electron microscope. The result: Although all the cables were externally identical, the 3000x magnifications showed significant differences. For example, a good cable sheath had significantly fewer open pores than a lower quality product. Of course, the... pores are the gateway to the interior of the cable. Whether this process happens fast or very slow depends on the size of the inner surface of the material.

Two is better than one
Together with Philipps University, NOLTA has identified the most suitable cable types. They are used in all NOLTA float switches. To ensure the tightness of the switches even with microscopically small cracks in the jacket, all level controllers of the MS series are additionally cast with a special technique. That means for all NOLTA products: They keep tight.

Audible difference
As a level control specialist, NOLTA knows what is important. This means that the switch in all NOLTA level controllers is triggered by its own small weight specially adapted for this application. If you tilt a product of the MS1 series, this can be heard by a gentle „click“. In conventional float switches, the release mechanism is mixed with the integrated weight. If one tilts such a product, a massive „clack“ can be heard.

It goes without saying that the life expectancy of the components increases when the wear and tear over the years of use is as low as possible. Experience shows: NOLTA float switches and level regulators usually last longer than the pump itself.

The classic among the level controllers: The TPK cable of the MS1 is particularly suitable for use in regular wastewaters, e.g. in lift stations and sewage treatment plants.

The dissipative plastic housing of the MS1 EX prevents static charging and thus the risk of sparking. Therefore, the MS1 EX can even be used in ATEX Zones 0 or Class 1 Div 1 areas.

Comparison of a good cable sheath with few pores (top) with an unsuitable sheath (bottom) at 3000x magnification under the electron microscope. Although both cables are made of TPE, there are significant differences in quality.

NOLTA float switches and level controller
- High material resistance
- Integrated weight
- Variety
- Easy installation
- Functional design
- Reliable function
- Self-cleansing
HOW A SPOILED CHRISTMAS TURNED INTO A KEY MOMENT

Christmas Eve in the 1990s. Peter Jankowski, a plumber, had on-call duty when he received a call from a farm in Baden, Switzerland. On this very day, the pump of the septic tank in the yard failed. Who wants to improvise over Christmas in terms of need and hygiene? A repair was urgently required. As an experienced plumber, Peter Jankowski knew: In 90% of the cases, not the pump itself, but the float switch is defective. Therefore, he had already stocked up on new switches and carried them with him in his truck.

Arriving at the farm, Jankowski asked the family not to use toilets for the next half hour and swung himself - a giant of a man - into the septic tank. Apparently, not all family members had heard his appeal. As soon as he stood in the narrow tube, he was hit by a torrent of black water. That was too much for the dedicated craftsman - and at the same time the key moment for a new life’s work: He vowed to develop a float switch that would never fail. He already had the idea in the drawer and when Peter Jankowski reached retirement age, he started to get to work on this idea.

So it came to be that an installer with 40 years of professional experience used his retirement to rise with his company Niva GmbH to market leader in level controls. The product convinced customers on a national and international level. The innovative idea consisted of a double capsule of the float switch and a steel ball that actuates a microswitch at a certain angle of inclination. In addition, the teardrop shape developed by Jankowski prevented solids such as toilet paper from settling and holding down the switch.

At the age of 70, Peter Jankowski finally wanted to retire. He was already working closely with NOLTA at the time and offered the business partner to take over Niva GmbH, as they already had an excellent, complementing portfolio in the area of pump technology. An offer that NOLTA gladly accepted. In 2008, Niva merged with NOLTA to form a joint operation.
A project of the century is currently under construction in the Alps: The Brenner Base Tunnel, which links the Austrian city of Innsbruck with the South Tyrolean fortress of Franzensfeste. When completed in 2026, it will be the longest tunnel in the world. The 55 km long route runs flat under the mountain Brenner. Adding to the already existing railway bypass around Innsbruck, into which the new tunnel merges, the tube impresses with a total length of 64 km. At 250 km/h, fast trains will race on a straight stretch under the Alps. The journey time between Innsbruck and Franzensfeste is shortened from 80 to 25 minutes.

In the tunnel of superlatives, huge tunnel boring machines are used, whose drill heads have a diameter of up to ten meters. The huge tunneling machines are cooled with water. In addition, the generated dust is bound by water. As a result, large quantities of polluted water are produced in the mountain, which are then prepred to be returned to nature. Regarding the water quality, strict requirements have to be fulfilled, therefore complex water treatment systems are used.

In order to transport the waste water between the treatment stages, pumping systems are needed that automatically adapt their pumping capacity to the local conditions. The inflow to the individual control stages, such as the control of the pH, must be done as continuously as possible and without large water surges. Only then the respective control process can be operated efficiently. At the same time, it must be ensured that the maximum possible water supply into the storage tanks can also be pumped out.

At this point, in autumn 2016, NOLTA, being an expert in machine and pump connection systems, entered the stage. Peter Schütz, Project Manager Tunneling International at STRABAG: “At the Brenner Base Tunnel, there is a water protection facility on the portal of the Sillschlucht access tunnel. It prepares all mountain and industrial waters accumulating at this point. Some of the treated water is used again as service or cooling water for the boring heads and other construction equipment. All water is pumped and as a result, the amount of water that is supplied to the water protection facility varies greatly. The operation of the system is significantly affected."

“The task for NOLTA was to coordinate the motor protection, float switch and pump control so that the water flows evenly through the seepage basins - regardless of how much water is being pumped in from the construction site. In addition, the device needed to be portable so that it could be used with flexibility. For the concept and a prototype, the NOLTA developers had three weeks - an ambitious time frame, but in the end a viable and above all, economically feasible solution was found. The trick is that the control of the pumps is programmed in a way that only one frequency converter is necessary to ensure a steady flow. The process of cleaning the water is highly efficient and helps to complete the construction of the century in the Alps.

THE LONGEST TUNNEL IN THE WORLD

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NOLTA NOVA – ROOM FOR NEW IDEAS

NOLTA consistently pursues its own claim to make products smarter. The start up NOLTA NOVA was founded in 2017 to give innovative ideas a home and room for development. The goal is to give research and development more freedom for creativity outside of the daily grind. NOLTA NOVA is connected with universities and other start-ups. This promotes an additional „thinking outside the box“ attitude. What are the products of tomorrow? What ideas will make the work of NOLTA customers easier? NOLTA NOVA turns ideas into market ready products that can be integrated into NOLTA’s ISO certified production process.

One of those ideas, NOLTAnet will allow for more freedom: Are all pumps working properly or has an alarm switch or the motor protection tripped? One look at the smart phone or tablet is enough. Time consuming check-up rounds of pumps and installations become obsolete, without running the risk of flooding construction sites due to a failing pump.

A simple new feature to the NOLTA-Starter will do the trick: The compact data module with a GPS chip cannot only monitor the pump’s status, but can also locate it in a heartbeat.

NOLTA NOVA also works on the worlds first energy self sufficient wireless float switch. The kinetic energy of a tilting switch provides enough energy to send out a signal to the pump control box which then switches the pump on or off.

NOLTA NOVA paves the way for new opportunities and thus acts in the spirit of the company.

WILLKOMMEN BEI NOLTA
Bienvenue chez NOLTA
Bienvenido a NOLTA
Добро пожаловать в NOLTA
欢迎欢迎 NOLTA

The NOLTA team speaks the language of its customers - not just figuratively but also literally. This is noticeable with every call. The company size allows for short distances. Anyone who has a request or a problem is directly connected with competent employees in technology, production or sales departments - colleagues who have been working for NOLTA for many years and know the company, the products and the demands of the customers down to the last detail. At NOLTA, customers do not hear or read preformulated text modules but receive individualized help. The NOLTA team can proudly claim that in addition to high quality products, the excellent service contributes to the success.

Due to an extensive warehouse, NOLTA can respond to larger customer requests almost immediately.