# DRIVE TECHNOLOGY

# **DICTATOR**



# **DOOR & GATE OPERATORS**

INNOVATIVE DRIVE SOLUTIONS
FOR THE AUTOMATION OF DOORS & GATES

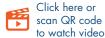
## DICTATOR - YOUR PARTNER FOR DRIVE TECHNOLOGY

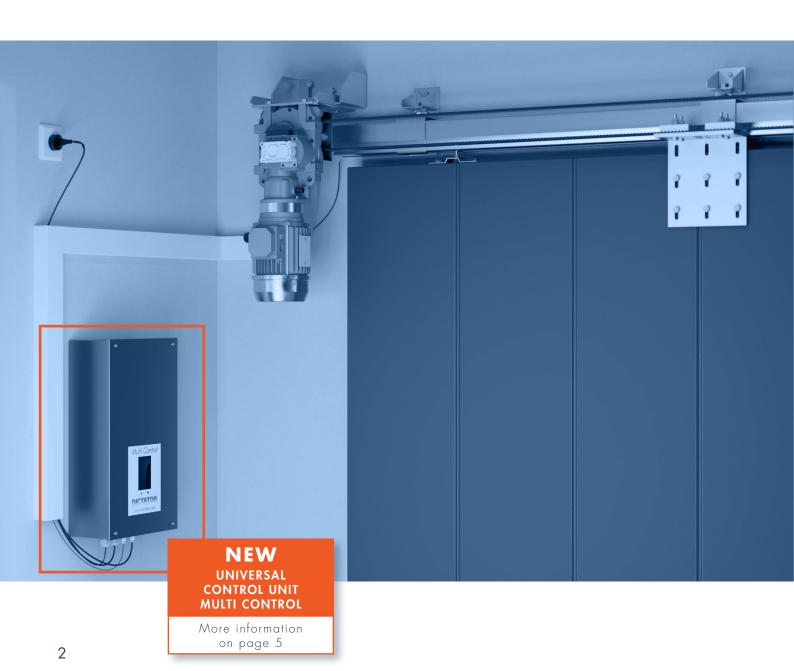
Since the 1980s DICTATOR provides **innovative solutions** for the motorization of doors and gates. Our main focus has always been the requirements of our customers.

The customer specifies exactly what he needs, which is why we don't have a "standard solution".

Our operator systems are largely modular. Thus we can resort to a very wide range of components, such as different motor sizes, gearboxes, drive gears, etc. to create **special custom solutions**.







# **PRODUCT PORTFOLIO**



DICTATOR is a specialist in providing automation solutions for doors, gates and other moving elements that require power-driven movement.

In addition to our standard products which, due to their modular design, already allow a very wide range of solutions, we also develop custom solutions for all kinds for special customer requirements.

# OPERATORS FOR SLIDING DOORS, GATES & OTHER SLIDING ELEMENTS

DICTATOR offers a wide range of operators for sliding motion, suitable for a wide variety of door and gate sizes, as well as many different requirements.

Additionally, we develop custom solutions, e.g. for very large and heavy gates, for door or window systems in which there is only little space available for the operator, or for complex door and gate systems where all operators have to be interconnected to one another in the control system.

#### **OPENDO**

#### For automation of sliding doors up to 80 kg



#### **Characteristics**

- Compact door operator for single and double-leaf sliding doors of a max. width of 1600 mm (including rail)
- Both the control system and the transformer are installed into a standard surface or flush-fitting switch box
- High safety due to the force reversal system controlled via microprocessor

Ideal for offices, nursing homes, barrier-free apartments for people with disabilities, etc.

#### **DICTAMAT 900-21**

#### For automation of very large gates up to 4000 kg





#### **Characteristics**

- Up to 300 actuations per day (depending on door mass and speed)
- Suitable for adverse environmental conditions
- Securely locked in case of power failure
- Can be released in an emergency by means of a clutch

Used in industrial applications, also in security areas e.g. on bullet-proof doors.

#### **CONTROL UNIT SQUARE 940-2**

- Position detection: encoder or additional limit switches.
- Integrated frequency converter
- Freely programmable relay contacts
- Freely programmable inputs and outputs

#### **MULTIMOVE**

Modular operator system for sliding doors and gates up to 2000 kg



#### **Characteristics**

- Up to 100 actuations per day
- For both AC and DC types
- Different transmission options: cable, toothed belt, etc.
- Can be moved manually in case of power failure
- Locking by brake possible

Used mainly in the industrial sector, e.g. machine enclosures, soundproof enclosures, etc.

# UNIVERSAL CONTROL UNIT

Enables the entire configuration of the control unit to be carried out using a remote device via a network connection. This makes the configuration of the control unit and the commissioning of the door operator much easier.

**NEW** 



The network connection of the control unit offers options for detailed diagnostics and remote maintenance without the need for an on-site appointment every time.



The built-in load cut-off ensures a high safety level at all times (only DC), even under extremely adverse environmental conditions.



Flexible adjustment options to any conditions on site. For example, all input and output functions are freely programmable.



In addition, the control unit features a dynamic learning behavior, which enhances the safety standards.





# OPERATORS FOR HINGED DOORS, GATES & OTHER HINGED ELEMENTS

The main focus of DICTATOR operators DICTAMAT for hinged doors and gates are industrial and commercial applications. Depending on the version used, doors can be opened up to 180°.

Just as for sliding door and gate operators, DICTATOR also provides custom solutions for hinged doors and gates, for example, for very large and heavy doors.







#### **DICTAMAT 310-21 310-21 XXL**

The DICTAMAT 310-21 XXL opens up the possibility of automating even extremely large gates in accordance with the requirements of the Machinery Directive. This modular system offers a wide range of options for individual solutions to suit any door.



The operator IS equipped with a mechanical braking device which guarantees the required stopping distances under all conditions. The built-in thermal sensor protects the drive from inadmissible loads. Position detection by means of built-in encoder is standard and allows extremely accurate positioning.

Thanks to its mechanical brake, the gate remains blocked whenever there is no power. Should it be necessary to move it by hand, the operator can be fitted with an electromagnetic clutch.

### OPERATORS FOR FIRE DOORS & GATES

Preventive fire protection has been one of DICTATOR's core competences for decades.

To ensure that comfort is not neglected while still providing perfect protection, DICTATOR supplies a wide range of different components for moving both newly installed as well as existing fire doors and gates - from individual components to fully automated operator systems, depending on the customer's requirements.

#### SEMI-AUTOMATIC FIRE DOOR OPERATORS



The semi-automatic fire door operators for sliding doors represent the most affordable solution. They are the right choice, for instance, for gates that are opened only once a day or for gates that stay open all day and are closed only in the evening.

The gate opens manually and closes by means of a spring with controlled, adjustable speed (even in case of alarm).

#### **OPERATORS FOR SLIDING FIRE DOORS**



There are different models of DICTATOR operators available for sliding fire doors. Depending on the dimensions and weight of the door, operators with either three-phase or direct current can be used. The doors are closed either by a counter weight provided on site or a closing spring.

#### **OPERATORS FOR HINGED FIRE DOORS**

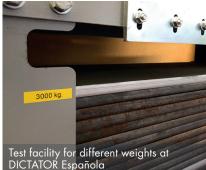
We can also supply tailor-made solutions for hinged fire doors upon request. However, these do not have a type approval; the approval has to be provided on a case-by-case basis. We are, of course, happy to support our customers with this.

## **OUR PRODUCTION SITES**

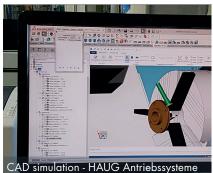
The parts and components for our operators and control systems are manufactured in our own production facilities. These are family-owned and are part of the DICTATOR Group. Each of those sites is dedicated to specific areas of our product range.

Experience, state-of-the-art technology and flexibility in the manufacturing process enable us to produce even in small volumes, which, in turn, serves as the basis for individually customized solutions.















# DOOR AUTOMATION SOLUTIONS













Our modular drive system allows us to provide solutions for a very wide range of applications and a very wide variety of hinged and sliding elements. We are not limited to certain types of doors and gates or specific sizes and weights.

We develop an all-in-one solution for each application, always taking into account all relevant standards as well as the individual requirements of our customers.

### DURABLE SOLUTIONS FOR THE INDUSTRIAL SECTOR

Products used in manufacturing facilities must be absolutely reliable and fit exactly to the respective application for operations to run seamlessly. That's why we always take into account the conditions on site and develop solutions together with our customers to maximize productivity.

#### CUSTOM AUTOMATION SOLUTION FOR DRYING OVENS IN INDUSTRIAL PAINT SHOP





This paint shop needed an operator for the doors to the drying ovens. The functionality of the door operator had to be tailored exactly to the customer's requirements so that the door movement perfectly coordinates with the processes in the paint shop. Additionally, high levels of safety had to be taken into consideration in order to prevent safety hazards for the staff.

The automation system MultiMove is especially designed for complex applications. Thanks to its highly versatile control unit, it was even possible to easily re-program certain specifications during its installation directly on site.

# WIND AND HIGH PRESSURE DIFFERENCES IN A POWER PLANT TURNED DOORS INTO AN UNPREDICTABLE RISK





Due to the high negative pressure in the power plant building, the doors could barely be held open (which could be quite dangerous) and the overhead door closer had no chance of closing the doors properly under unfavorable conditions.

Therefore, the two doors were replaced and outfitted with an operator for hinged doors, the DICTAMAT 310-21.

The operator now takes care of opening and closing the doors safely and reliably - even under negative pressure.

#### FIRE DOOR OPERATOR FOR LARGE GATES IN HAZARDOUS AREAS





The very large sliding fire doors in an explosion-proof warehouse were equipped with DICTATOR door operators. These not only had to meet high ATEX standards, but also comply with fire safety regulations.

The operators open the fire gates using a motor, while closing takes place mechanically by means of a counterweight. This ensures that the doors always close safely even in the event of a power failure with a simultaneous fire alarm. However, this also meant that the explosion-proof gearbox had to run smoothly, as otherwise closing with a counterweight would not be possible. This made the solution particularly challenging, as explosion-proof gearboxes usually run somewhat roughly.

#### CUSTOM GATE OPERATOR FOR VERY LARGE SLIDING FIRE DOOR IN A BUS FACTORY





Special solutions for fire doors and gates are no problem for DICTATOR. Because of the huge door width of 11.5 m, a "normal" fireproof operator with mechanical closing device was not feasible here. Instead, it was necessary to use a special operator with a control system that would always ensure the safe closing of the fire door, even in the event of power failure.

# RELIABLE SOLUTIONS FOR COMMERCIAL APPLICATIONS

In commercial buildings there is usually high foot traffic and thus doors and gates are constantly used.

As a result, they not only have to meet high security and fire safety requirements, but also work reliably so that customers don't have to stand before a closed door.

#### HINGED DOOR OPERATOR DICTAMAT 310-21 UNDERMINES THE EFFECTS OF THE WIND





The large doors of the Regiocentrale Maasbracht used to pose a significant danger under strong winds. The force of the wind also frequently prevented the doors from opening or closing.

So a solution was urgently needed to automate the door so that they could still funcion without a problem, even under a wind force of 9 Beaufort.

Now the hinged door operator DICTAMAT 310-21 XXL ensures that the entrance doors open and close safely and reliably, regardless of wind and weather.

#### AUTOMATION SOLUTION FOR 93 M WIDE SLIDING GATE IN A SPANISH SHOPPING CENTER





The opening or closing time would simply have been too long for the 93 m, so the sliding gate was divided into two halves, each of which closes towards the center and opens outwards. Each side is made up of 6 telescopic leaves, each up to 10 m wide.

Another challenge here was the synchronization of the movement of the telescopic leaves. In the event of a fire with simultaneous power failure, the gates close via emergency power.

Safety is always a priority, even in case of emergency. That's why, in such a case, the gate stops within 10 cm. Power transmission takes place via chain with a special chain guide.

#### MOTORIZATION OF LARGE ENTRANCE GATE IN CAR DEALERSHIP THANKS TO MULTIMOVE





In this car dealership, the entrance gate used to be opened manually. But operating it by hand up to 200 times a day required too much effort. That is why they requested a retrofit solution for the automation of the gate.

All requirements could be met with the help of the modular system for sliding gates DICTAMAT MultiMove. These included, among others, an additional floor guide rail and a brush seal on the bottom, which also meant a higher force requirement to move the gate. In addition, it should still be possible to operate the gate manually in the event of a power outage.

#### HYDRAULIC OPERATOR FOR LIFT GATE TO UNDERGROUND PARKING IN A SHOPPING CENTER



A very unusual solution was required for this lift gate. When it comes to lift gates, DICTATOR can rely on different approaches.

In this case, hydraulic cylinders were used, which are also used for DICTATOR Homelifts, for example. Alternatively, a solution with a three-phase drive would also be possible. And all this, of course, always taking into account all safety requirements.

#### AUTOMATED FIRE GATE FOR THE SHOWROOM OF A CAR DEALERSHIP



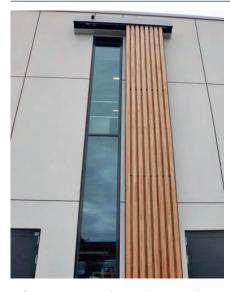
This very large gate also had to meet special requirements. On the one hand, a pedestrian door had to be built into it. On the other, there is a gap in the wrap-around balcony into which the gate enters when opened. With the gate closed, a ramp needs to fold out to bridge the gap, and when the gate is open, this ramp needs to retract again.

## SOLUTIONS FOR EXCLUSIVE ARCHITECTURE

High-end architecture often has special and sometimes unusual requirements that, in many cases, cannot be solved with standard products.

We like to take on this challenge. After all, our strength is to find a suitable solution even for special cases.

#### GATE OPERATORS FOR THE AUTOMATION OF SLIDING SUN SHADING ELEMENTS





DICTATOR door and gate operators are not only used for "conventional" doors. They can also be used to automate other kind of elements, as in the case of these sliding sun shades. The particular difficulty of this application was the size of the shading elements, which were installed on the exterior of the façade.

Safety was a crucial issue, because the sun shading modules extend to an area that is open to people on the bottom end. But once again, DICTATOR supplied all necessary satety components for this as well.

#### OPERATOR FOR THE MOTORIZATION OF A MUSEUM EXHIBIT ON THE HALF-VALUE PERIOD





Two very large sliding leaves run on two parallel rails. The closing edges are cut out in such a way that, when they are open, a square standing on one corner reveals the entire yellow background.

The challenge here was to make the panels move together in such a way that the yellow area would be split in half in equal units of time.

# CUSTOM SOLUTION FOR THE AUTOMATION OF PIVOTING ELEMENTS THAT BLACKOUT AN AUDITORIUM





In this auditorium, the window fronts needed to be covered by a combination of pivoting and sliding elements required for darkening purposes.

The pivoting elements are all moved at the touch of a button using a drive and a transmission mechanism specially designed for this purpose. This sits above the panels and is not normally visible, as the entire area is closed off with a screen.

#### FIRE DOOR OPERATOR IN ACTION ON 375 KG THEATER DOORS







These fire doors integrated into the wood-panelled wall of a theater in the Netherlands required a customized automation solution, as it was not allowed to install anything on the outside of the doors because, for architectural reasons, it should not be recognizable that these are doors. In addition, some of the doors were integrated into a round wall surface, which meant that they were also curved. Therefore, neither a standard door closer nor a standard door operator could be installed here.

Together with the door manufacturer, DICTATOR developed a custom operator system for the seven special doors in order to fulfill both fire safety regulations as well as the high demands for the protection of the visitors.

### SECURE SOLUTIONS FOR AUTOMATION OUTDOORS

Besides the individual requirements of the door/gate system, there are additional challenges when it comes to its use outdoors. In this case, it is necessary to also analyze the weather and the surroundings conditions of the location carefully and to find solutions that function safely and reliably in every weather and wind conditions.

# ALL-IN-ONE SINGLE-SOURCE SOLUTION FOR THE AUTOMATION OF SLIDING GATES ON STORAGE CONTAINERS FOR HAZARDOUS MATERIALS

Ideally, we get involved in the planning at an early stage, specially for projects with complex requirements, as with these storage containers for hazardous materials. Here, the first meeting took place at the concrete plant of the container manufacturer.

Because the containers are located outdoors, there were high weatherability requirements. That's why the operators were installed in special climatized containers. For the control systems we provided custom stainless steel enclosures.





And finally, to complete our service portfolio, we also carried out the installation of all DICTATOR components.

#### **AUTOMATION OF AN ENTRANCE SLIDING GATE IN BERLIN**







Unlike normal gates, this entrance gate is opened mechanically by a spring rope pulley, while the operator closes it. The closing motion is time-delayed by an additional time relay, since the cladding in the wall has to be opened first.

#### AUTOMATION OF SLIDING GRATINGS IN EXTREME WEATHER AT 3275 M ELEVATION





The task of the DICTATOR operator here: On the platform of the funicular at a height of 3,275 meters, the operator opens the sliding gate of the platform whenever the doors of the cable car open.

However, this also means that if the sliding gate on the platform does not work, nothing works. This functionality, combined with the extreme outdoor conditions on the platform, poses an extremely tough challenge for any gate operator. A special version for outdoor use was specially developed for this application.

The control system is installed in a special casing equipped with a heater to protect it from the elements as well as the low temperatures. A thermostat regulates the temperature in the casing of the control system so that it can operate under almost "normal" environmental conditions.

#### CUSTOM GATE OPERATORS FOR A RHINO ENCLOSURE IN A DUTCH ZOO





This application on a rhino enclosure was somewhat unusual. 0.18 kW motors were used and a sturdy chain was selected for power transmission, because the gates also have to stand the strength of the rhinos sometimes. Additional chain guides were installed to prevent the chain from becoming slack.

### ALL-IN-ONE SOLUTIONS FROM A SINGLE SOURCE

We support our customers throughout the project regardless of the application – from the initial design, through installation, all the way to the CE marking of the complete system.



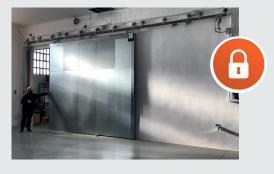
#### **Project planning**

In the best case scenario, we get involved in the planning at an early stage. But we also develop fitting automation solutions for doors/gates that are already installed. The customer lets us know his requirements, which are thoroughly analysed by our team. Then we develop a solution together with the customer in compliance with all applicable regulations.



#### Design

For more complex requirements, we can develop a custom automation solution based on our modular operator range. If the customer has 3D drawings of the door/gate system, we can incorporate our components into the customer's design.



#### Safety

When it comes to the Machinery Directive, safety is always a top priority and can be a challenge, especially in applications with pedestrian traffic. That's why we don't just provide the drive and the control system, but an all-in-one solution which includes all necessary safety modules.



#### Installation

If desired, we can also install all DICTATOR components as part of our customer service.

### YOUR ALL-ROUND CAREFREE PACKAGE

- Personal & individual consultation by phone and on site
- Planning, execution and manufacturing even of custom systems
- Assistance with questions during installation, commissioning and certification
- Help with maintenance and repairs



#### THE NAME "DICTATOR"

We are often asked how we came up with the, admittedly somewhat unusual, name DICTATOR. The name has its roots in the invention of our first product:

A German and a Dutchman invented a "hydraulic shock absorber and door closer" in 1930. This special type of door closer dampens the door shortly before closing, quietly pulls it shut and keeps it closed.

Its inventors called this product 'dictator', because it dictates the door how to close.







## DICTATOR - The Driving Force in Motion Control

#### **ABOUT DICTATOR**

DICTATOR is a worldwide group with its main focus of operation in Europe. The headquarters is located in Neusäß near Augsburg. Our products are manufactured in our own production facilities in Europe. This ensures the highest quality and allows us to provide custom solutions for every customer requirement at short notice.

#### **HEADQUARTERS**

DICTATOR Technik GmbH Gutenbergstraße 9 86356 Neusäß Germany

#### **PRODUCT RANGE**

- Lift & Lift Equipment
- Door Closing Solutions
- Hydraulic Dampers
- Door & Gate Operators
- Fire Door Operators
- Fire Door Control Solutions
- Gas Springs
- Door Interlock Systems





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