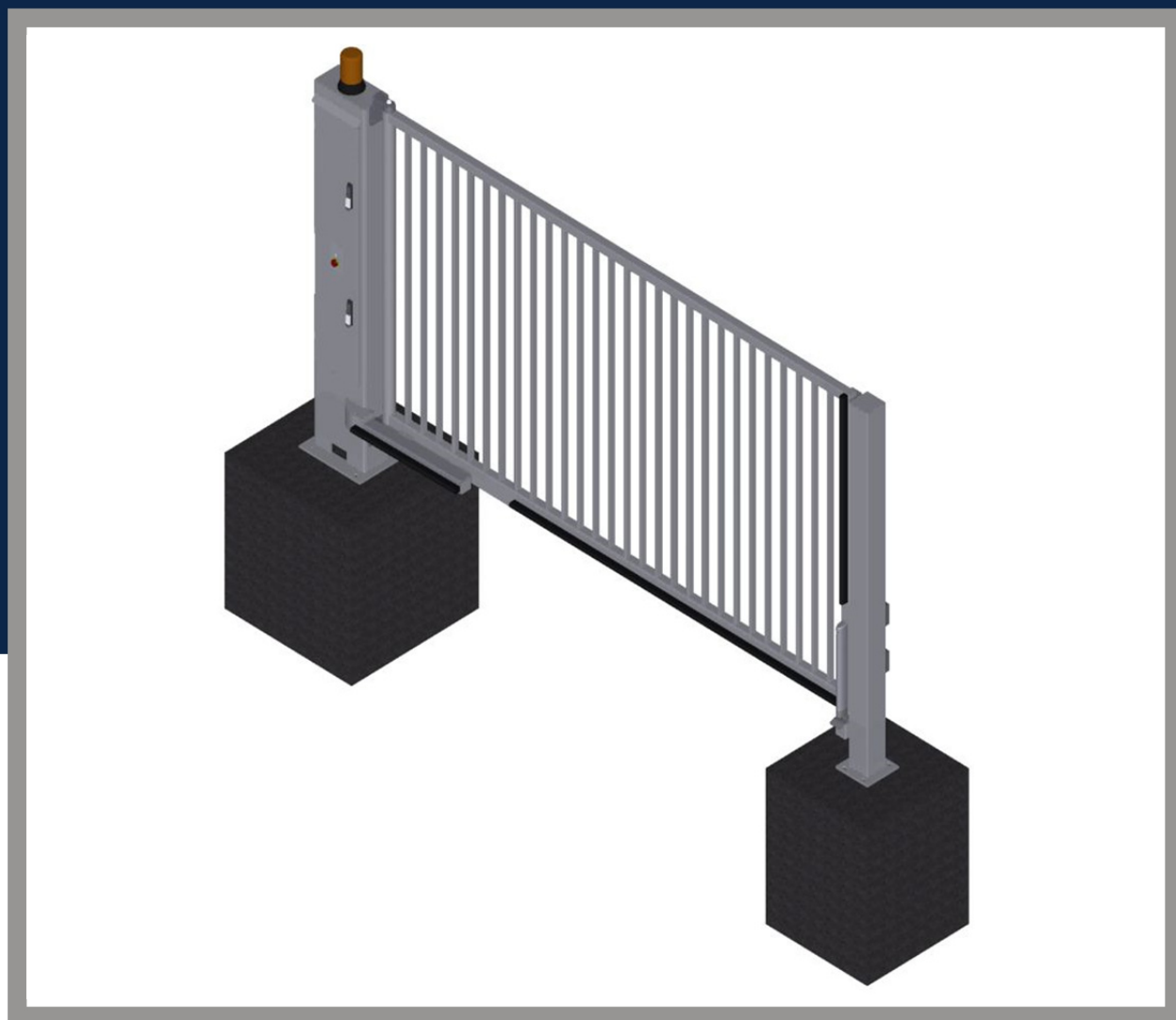


OBJECT FUSES • The manufactory for tailor made protection



Leaf Swing Gate DFT-Garant 1



for clear widths from 3 to 10 m

Leaf Swing Gate DFT-Garant 1

GARANT 1– Leaf Swing Gates are the traditional and inexpensive solution for movable closures of an area. They offer an organised access to an enclosure, perimeter or area with low gate cycles. Swing opening the gate leaves requires space of the site area, which needs to be considered when creating the entrance area, especially regarding the street course, gradient and cross slope. The circular swing areas (the size goes by the full passage width) must be kept free at all times, and they are used for the management of the property.

GARANT 1– Leaf Swing Gates can be easily adjusted to their purpose. The electro–hydraulic swing gate is actuated by an energy–efficient, tamper–proof and low–maintenance Garant HS drive unit – the first choice for the representative securing of plant and facility access areas. Street cross slopes can be adapted in the construction within limits. Additional functions such as a climb over protection can be integrated without any problems as long as they do not expand laterally (conflict fence connection respectively narrowing the clearance zone). For the representative securing of outdoor and facility areas you can integrate a variety of gate fillings matching the facade or fence. All gates can be controlled by all common access control systems and are predestined for plants, military bases, airports and public access areas with a medium vehicle frequency. The modern added value comprises the optimal protection of vehicle and passenger traffic. Due to its simple structure existing plant entrances can be easily expanded without immense structural work.

Attributes:

- reliable securing of outdoor areas with a medium vehicle and visitor frequency
- huge need for space for leaf swing area
- enclosed electro–hydraulic drive version
- hydraulic braking and blocking at the end positions
- clear optics by vandalism proof integration of all power unit components
- power emergency release not exposed but integrated into the gate post and therefore tamper–resistant
- duty cycle: 100%, industrial standard
- robust construction
- high resistance against environmental influences
- flexible in width and height
- various options, for example, adapting the street slopes, climb over protection, variety of gate fillings

Use for vehicle separation with concurrent protection against unauthorised persons, especially in areas that are vulnerable:

- authority facilities
- industrial plants, supply facilities and power plants
- military facilities

Leaf Swing Gate DFT-Garant 1

Versions / Names:

DFT-Garant 1- HS 280: swing gate, drive type Garant, single-leaf, cylinder stroke 280 mm
 DFT-Garant 1- HS 400: swing gate, drive type Garant, single-leaf, cylinder stroke 400 mm
 DFT-Garant 1- HS 500: swing gate, drive type Garant, single-leaf, cylinder stroke 500 mm
 DFT-Garant 1- HS 600: swing gate, drive type Garant, single-leaf, cylinder stroke 600 mm
 DFT-Garant 1- HS 700: swing gate, drive type Garant, single-leaf, cylinder stroke 700 mm
 DFT-Garant 1- HS 800: swing gate, drive type Garant, single-leaf, cylinder stroke 800 mm
 DFT-Garant 1- HS 900: swing gate, drive type Garant, single-leaf, cylinder stroke 900 mm
 DFT-Garant 1- HS 1000: swing gate, drive type Garant, single-leaf, cylinder stroke 1000 mm

Geometrical Key Figures:

	DFT-Garant 1- HS 280	DFT-Garant 1- HS 400
opening width	3000 to 3500 mm	3500 to 4000 mm
variable gate height	1800 to 3000 mm	1800 to 3000 mm
ground clearance	50 – 120 mm	50 – 120 mm
total height	gate height plus 300 mm lower edge area	gate height plus 300 mm lower edge area
partition	one swing leaf, no partition	one swing leaf, no partition
frame, lower beam	RT* 80/60, RT* 100/60 mm	RT* 100/60 mm
drive gate post 1	RT* 400/200 mm	RT* 400/200 mm
drive gate post 2	ST* 150 mm	ST* 150 mm
cylinder stroke	280 mm	400 mm
pump type	vertical pump unit P12	vertical pump unit P6
drive motor	3x230/400 V, 50 Hz, 0.37 kW	3x230/400 V, 50 Hz, 0.37 kW
opening time	approx. 10 seconds (without braking)	approx. 24 seconds (without braking)

Geometrical Key Figures:

	DFT-Garant 1- HS 500	DFT-Garant 1- HS 600
opening width	4500 to 5000 mm	5500 to 6000 mm
variable gate height	1800 to 3000 mm	1800 to 3000 mm
ground clearance	50 – 120 mm	50 – 120 mm
total height	gate height plus 300 mm lower edge area	gate height plus 300 mm lower edge area
partition	one swing leaf, no partition	one swing leaf, no partition
frame, lower beam	RT* 100/60 mm	RT* 100/60 mm
drive gate post 1	RT* 400/200 mm	RT* 400/200 mm
drive gate post 2	ST* 150 mm	ST* 150 mm
cylinder stroke	500 mm	600 mm
pump type	vertical pump unit P6	vertical pump unit P6
drive motor	3x230/400 V, 50 Hz, 0.37 kW	3x230/400 V, 50 Hz, 0.37 kW
opening time	approx. 30 seconds (without braking)	approx. 36 seconds (without braking)

* RT = rectangular tube, ST = square tube

Leaf Swing Gate DFT-Garant 1

Geometrical Key Figures:

opening width
variable gate height
ground clearance
total height
partition
frame, lower beam
drive gate post 1
drive gate post 2
cylinder stroke
pump type
drive motor
opening time

DFT-Garant 1 – HS 700

6500 to 7000 mm
1800 to 3000 mm
50 – 120 mm
gate height plus 300 mm lower edge area
one swing leaf, no partition
RT* 120/60
RT* 400/400 mm
ST* 200 mm
700 mm
vertical pump unit P6
3x230/400 V, 50 Hz, 0.37 kW
approx. 40 seconds (without braking)

DFT-Garant 1 – HS 800

7500 to 8000 mm
1800 to 3000 mm
50 – 120 mm
gate height plus 300 mm lower edge area
one swing leaf, no partition
RT* 120/60 mm
RT* 400/400 mm
ST* 200 mm
800 mm
vertical pump unit P6
3x230/400 V, 50 Hz, 0.37 kW
approx. 46 seconds (without braking)

Geometrical Key Figures:

opening width
variable gate height
ground clearance
total height
partition
frame, lower beam
drive gate post 1
drive gate post 2
cylinder stroke
pump type
drive motor
opening time

DFT-Garant 2 – HS 900

17000 to 18000 mm
1800 to 3000 mm
50 – 120 mm
gate height plus 300 mm lower edge area
one swing leaf, no partition
RT* 120/80 mm
RT* 400/400 mm
ST* 200 mm
900 mm
vertical pump unit P6
3x230/400 V, 50 Hz, 0.37 kW
approx. 52 seconds (without braking)

DFT-Garant 2 – HS 1000

19000 to 20000 mm
1800 to 3000 mm
50 – 120 mm
gate height plus 300 mm lower edge area
one swing leaf, no partition
RT* 120/80 mm
RT* 400/400 mm
ST* 200 mm
1000 mm
vertical pump unit P6
3x230/400 V, 50 Hz, 0.37 kW
approx. 58 seconds (without braking)

* RT = rectangular tube, ST = square tube

The Leaf Swing Gate–Garant 1 is manufactured as an assembly unit consisting of the gate leaf, drive post, slam post, drive unit, control, safety and operating components.

The swing gate leaf is welded torsion-resistant and dimensioned according to the static requirements. The gate filling is welded in between upper and lower beam (bar spacing maximum 120 mm). The gate leaf is equipped with the enclosed hydraulic cylinder. Two inductive approaching sensors for the end positions are integrated into the lower beam.

Leaf Swing Gate DFT-Garant 1

The outer lateral beam is manufactured from round tube with upper and lower pins on the gate posts.

The drive gate posts consist of rectangular tube according to the static requirements with an adjustable upper and lower panel with neck journal and base bearings for holding the gate leaf, welded head cover and a massive base plate. The drive gate post has a spacious cut-out of approximately 330 x 1600 mm on the inside, which is closed by a service door that is hung on 3 hinges. The door is locked by 2 profile cylinder lockable lever closures. The door inside holds the document compartment for circuit diagrams and the gate inspection book. Inside the gate post the motor-/ pump unit is mounted on a holder and the terminal strips and/ or the control box are fixed on a separate assembly plate in the upper area. The gate posts have additional cut-outs for the lifting cylinder and other control elements.

The compact **hydraulic unit "Garant 700/80 Vertikal"** consists of a three-phase electric motor, one (in both directions of rotation working) gear pump P 6 and a 3.5 dm³ hydraulic container. The unit is stored vibration-free on silent blocks. The flow rate is 2.6 litres and the average/ maximum operating pressure is 2/ 4 MPa. The hydraulic medium is biodegradable (Note: Every passing car has the tenfold amount of oils for safe operation).

The **hydraulic cylinder Garant-280 to 1000** (the number stands for the piston stroke) is completely covered. The front ball joint head, the back fork mounting and all media lines are not visible but protected tamper-proof. The slim cylinder lining holds the switch flags for the end position settings as well as an accident prevention contact profile. The thrust of the cylinder is 7000 N. The opening angle is 95°.

Easily accessible components: All components necessary for the operation are accommodated safely in the drive gate post - which simplifies the assembly, commissioning and maintenance significantly.

Control: Microprocessor-control unit

Mains connection: three-phase 3x230/400 V, 50 Hz, **Control voltage:** 24 VDC

Power consumption: approx. 575 W (without accessories), **Duty cycle:** 100%

Protection class: IP 54

Leaf Swing Gate DFT-Garant 1

Control functions:

- gate **Stop** as well as **Open and Close** (self-locking) between the end positions
- remote operability which is secured by floating contacts
- serial transfer of status signals of the gate statuses **Gate-Open**, **Gate-Closed** and **Collective Alarm**
- all gate typical components are connectable and controllable in various logics

Power failure/ Damage: The gate system is hydraulically blocked in the particular position. The unlocking happens by opening a ball valve, which is on the hydraulic unit, safely locked in the drive post. If there are optional electric piston rod locks, they are also locked / unlocked by a profile cylinder lock. By the optional assembly of an approved fire brigade safe, there is the option to unlock the gate from the outside. Therefore, the demand for a separate fire brigade access can be omitted.

Base plate serial:

- 300 mm upper edge area with spacious cable entry
- pairwise arrangement of dowel holes and levelling screws for an optimal perpendicular and flush assembly

TORWERK- Long-lasting corrosion protection in 4 steps:



The coating thickness is 260 µm, all requirements on corrosion protection stresses according to DIN EN 12944-2- C4 (long protective effect) are met.

First-class haptics due to:

- a hermetically welded construction
- a surface free of zinc cavities
- welding seams that are ground flatly (mitre corners) after zinc coating
- no warping of the surface because of zinc cavities

Environmentally friendly procedure:

- no use of solvents
- recycling of oversprays

Leaf Swing Gate DFT-Garant 1

Options:

Colour design/ labelling:

Gate posts and gate leaves are designable in colour tones according to RAL/DB.

Signaller:

- LED- rotating beacon (serial)
- LED-light red/ green (optional)
- **Reflexite** contour marking from microprismatic foils with a high reflection value, high visibility even from sharp angles, on the gate's lower beam inside and outside

Safety:

- TÜV approved safety device, self-monitoring, according to European gate standards DIN EN 12978 + 12453 for power-operated gates, consisting of double chamber pressure strips on the main and secondary locking edges and the electronic analysis unit
- 2 light barriers consisting of sender and receiver in different heights outside between the gate posts as an additional security device
- one light barrier consisting of sender and receiver for securing the swing opening area, separately elevated (optional)
- 2-channel induction loop detector

Control elements:

- key switch **Open-Close** outside and key switch **Open-Emergency Stop-Close** inside (serial)
- radio remote control (optional)
- key switch **On-Off** (optional)
- timer (optional)
- code card reader and other communication systems available on demand

Design gate leaves:

- instead of bar filling, fence type filling
- closed sheet metal filling or perforated steel plate filling in a powder-coated version

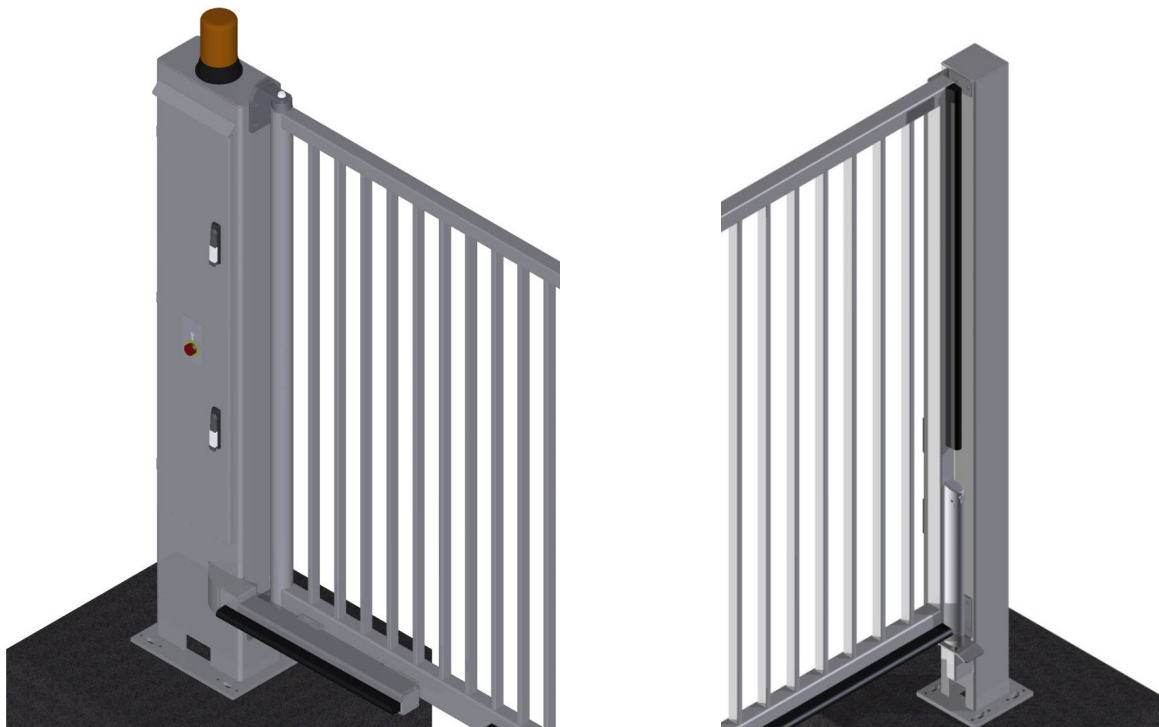
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Torwerk-assembly service:

Every configured **Leaf Swing Gate-Garant** is completely pre-assembled at the factory and internally wired and as far as possible connected before it is delivered.

The assemblers only need to unload the drive post with the mounted gate leaf onto the foundation on-site, adjust it, level it using the levelling screws and anchor it with the provided dowels.

A qualified gate technician needs to fill the unit on-site, possibly adjust the leaf mechanism and the end positions switch-off. A qualified electrician connects the gate to the power supply, to the external control elements, to light barriers as well as to possible induction loops. The Leaf Swing Gate-Garant is ready for operation. The time-consuming reading of manuals and sorting of components and fasteners are reduced to a minimum.



Construction and Design: Siegmund Huth / Maik Brunner/ Andreas Panek

Electrotechnical equipment: Stefan Carl / Matthias Martius

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