

## DICTATOR Door Operators

### Examples of Customised Designs

DICTATOR offers a wide range of DICTAMAT door operators, from **semi-automatic operators** (opening by hand, controlled closing by the DICTAMAT operator) up to the **fully automatic door operator with microprocessor control system** (for hinged and sliding doors and also for fire protection doors).

But even this **comprehensive product range** provides not a suitable standard operator for all applications. Often doors, windows and multimedia facilities not only have to be moved, they must also conform to aesthetic requirements and architectural considerations.

Many years of experience enable DICTATOR to design and develop bespoke door operators for the most unusual applications and demanding specifications. Either by modifying a standard unit or by manufacturing a completely **bespoke unit** a suitable operator can be produced using our widely flexible manufacturing facilities.

On the following pages you will find some examples of our customised designs.



### Technical Data

Door sizes	0.5 m - 93 m (largest door at the moment)
Moving elements	hinged, folding, sliding, telescopic doors, windows, wall/façade elements, multi-media facilities
Motors	direct current, three-phase current, explosion-proof
Control systems	simple electric control systems up to SPS-control systems with frequency converter, also with battery back-up
Components included	complete door operator with fixing accessories, control system (including installation, if necessary)



### 60 m, 80 m, 93 m Telescopic Fire Sliding Doors

The special design of telescopic fire protection sliding doors has proved to be beneficial on four occasions in Spain. The fire protection doors have been installed in **Madrid Airport** and in shopping centres of **Corte Inglés** and **Pryca**. The doors are opened in the morning and closed at night. By using these doors it is unnecessary to have fire walls that restrict access during the day. Clients and airport visitors can wander freely through malls and concourses without hindrance from fire walls.

### 93 m Door in the Corte Inglés in Santander/Spain



### Customer's Specification

The sliding fire protection doors open from the centre. Each side of the door consists of **up to six variable span wings**, each with a **width of up to 10 m**. The whole **door system** extends from **rails on the ceiling**. On the floor there is only an approx. 30x30 mm wide guiding slot for one door wing. The door is opened in the morning and closed in the evening. It is operated by impulse with OPEN/STOP/CLOSE functions. As safety devices a contact edge is connected and a warning siren when the door closes. When the safety device is triggered, the door must stop within 10 cm. In the event of fire the door closes immediately (controlled via a central alarm). However, even **in the event of alarm** the door must stop immediately after a signal from the **safety device**. After the safety device having been **released** the door must continue to **close** by itself (time is adjustable).

### Solution

Each side of the door is moved by a **three-phase motor**. The force is transferred via a **tensioned chain**, guided in special fittings that prevent sagging. Both sides of the **variable span wings are synchronised** with each other. Both motors are managed by an **SPS control system with a frequency converter**. This enables adjusting the functions to correspond to individual customer requirements. Further adjustments which may be required later can without difficulty be realised by the SPS control system.

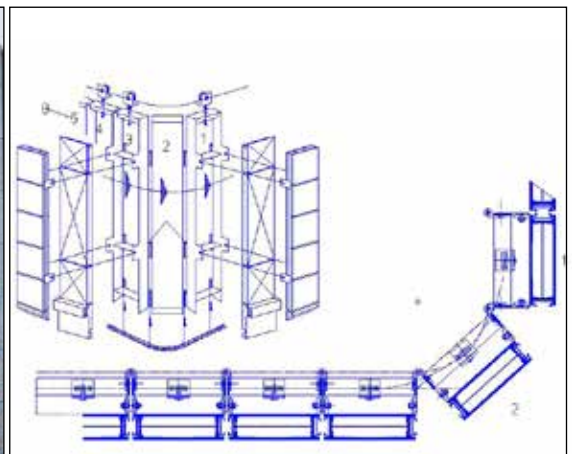
The **fire protection function** is guaranteed by a **battery back-up**. In two cases this was set up by the customer and in the other two DICTATOR supplied the battery back-up together with the control system.



## Horizontal Sectional Door with Sharp Bend

The Hermès building in Tokio has a façade that is made of single, flexibly suspended glass blocks, that have been designed to give the impression that the whole building is moving like bamboo in the wind. This idea of architect Renzo Piano (Centre Pompidou/ Paris, Daimler City/Berlin) applied also to the **garage entrance door**. It is **made of the same glass blocks** and from the exterior cannot be distinguished as a door.

## Horizontal Sectional Door Made of Glass Blocks in the Hermès Building in Tokio



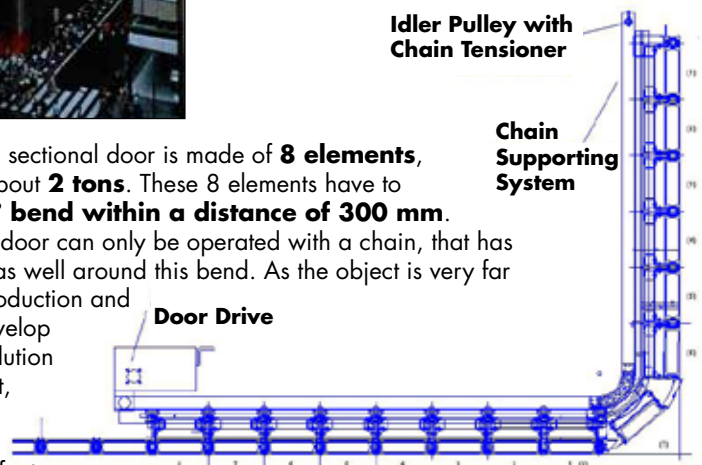
## Customer's Specification

The horizontal sectional door is made of **8 elements**, total weight about **2 tons**. These 8 elements have to **round a 90° bend within a distance of 300 mm**. Such a heavy door can only be operated with a chain, that has to be guided as well around this bend. As the object is very far away from production and the time to develop this special solution was very short, a very close cooperation with the manufacturer of the door was required. It was realized by exchanging CAD drawings.

Idler Pulley with Chain Tensioner

Chain Supporting System

Door Drive



## Solution

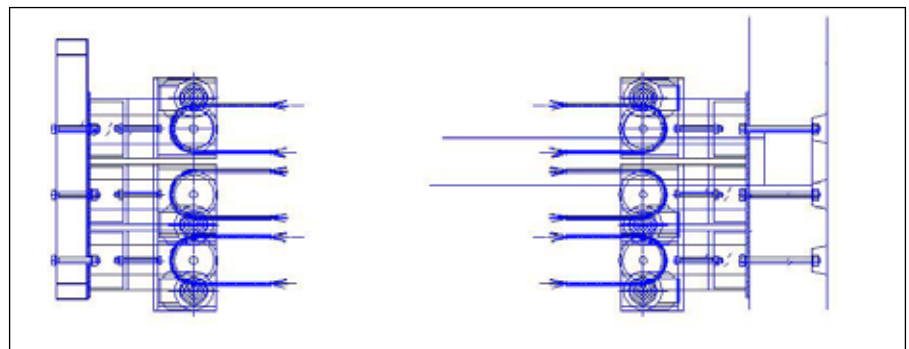
The 8 elements of the door are operated by a **three-phase current motor with frequency converter**. The **power transmission** is effected by a **chain**. The chain is guided in a special **aluminium rail with plastic lining**. In the bend the chain is guided over special plastic rollers. The **fixing bracket** to connect the chain to the door has a **flexible fixing** in order to compensate for any differences of distance. The elements of the doors are moved by **special hangers** (one hanger per element). DICTATOR supplied the door drive with the chain guide system and the hangers.



### Further Examples of Customised Solutions

You will find more and more DICTATOR customised solutions in the most different sectors. Please ask for detailed information or the solution of your special application/ problem.

### Sliding Door Made of 6 Glass Elements in Dubai (weight per element approx. 1 ton)



### Multimedia Wall in the Training Centre of the AKV (Assurance Company) in Mainz/ Germany



Technics, optics and acoustics become more and more important in training centres. Additionally these facilities have to be flexible. In the shown property (training hall of the AKV in Mainz) the company Haase & Co., Mainz/ Germany installed a customised multimedia wall, which normally is concealed but can be used at the push of a button.

### Automatic Hinged Doors operated by a logic control for 26 doors integrated in an automatic transport system with Automated Guided Vehicles in a pharmaceutical plant.

