Opening the doors of expertise
Editorial

Opening the doors of expertise

For more than 20 years our corporation has been centred on an integrated production ideal, and an endless engagement to innovate. In terms of every day action, this involves a complete mastery of a state of the art machinery range, an internationally recognized competence and the development of unprecedented technological solutions, all factors which build the confidence of our customers.

However, Doortal is also and especially the men and women who carry the expertise, the values and the competence of the corporation. Our teams are constantly inventing ingenious systems in answer to the demand of the building industry, public places and high security sites, maintaining the company in the process of ongoing research and progress.

Olivier Guilhot, Président

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Innovation, excellence and strength: Doortal, the brand that reassures
The strength of a family business

The Doortal partnership is 100% family-owned and benefits a strong, independent financial situation. This sustainable position provides Doortal with a durable vision and the means to invest in innovation. Every concept designed and developed in the heart of the engineering department is subsequently tried and tested by the experts of the in-house laboratory. This tried and tested process, has marked the beginning of many Doortal success stories.

MOVING INTO THE FUTURE

The arrival of Doortal’s first technical door set on the market in 1994 was the beginning of conquest, backed up by a limitless capacity of innovation to facilitate the lives of our customers. The proof of success was the rapidly growing popularity of these up-market, ready to fix door sets. Thick steel, exceptionally solid frame, powder coating in any colour, factory installed equipment... nothing was neglected in this design!

From the research and development department to the production plant, passing by the sales consulting office, each member of the team shares Doortal’s vision of excellence, unalterable quality and guaranteed customer satisfaction.

THE VISION OF EXCELLENCE

From the research and development department to the production plant, passing by the sales consulting office, each member of the team shares Doortal’s vision of excellence, unalterable quality and guaranteed customer satisfaction.

Key Dates

1994

- Founding of the company and production of the first acoustic doors in a factory of 400 m²

2000

- Doortal invests in real estate and moves into premises of 5000 m²

2004

- Launch of a new product range: anti-burglary door sets

2009

- Launch of test campaign for fire resistant door sets

2013

- Acquisition of 5000 m² of additional land and new construction

2017

- Construction of another new production facility with an automatized paint chain

Key figures

Year 95 20 000 m² 100 % 1 500 000 €

- certificates obtained by accredited EU laboratories
- of production facility lands
- of door-sets assembled and tested in our factory
- average annual investment
THE CONCEPT

“Combining robustness, performance and guarantees”
**10 compelling reasons to choose DOORTAL**

All of Doortal's products answer to precise specifications in terms of conception, production and performance. At Doortal the products anticipate and answer to real market needs, and offer genuine guarantees. Bench testing and control procedures at each work station throughout the entire production line guarantee an optimal quality and durability.

1. **Robust leaf of 1.5mm or 2mm thick steel sheet**
   The leaf is made of two steel sheets, either 1.5mm or 2mm thick, depending on the product range. This is a true guarantee of stability and longevity and as a result the leaf can be cladded with heavy decorative panels if required.

2. **Rigid steel frame with seam welded profiles**
   The door set with optimum stability. The frame is made of closed tube, with continuous welds on the back of the tube to maintain a perfect finish on the door set.

3. **Hinges with maximum resistance***
   (*in accordance to the EN 1935 standard)
   Rolled hinges in 5mm thick steel, with stainless steel ball bearings. 200 000 cycles tested in accordance with the EN 1935 standard and certified grade 14 (maximum).

4. **Ready to fix door sets**
   (see pages 22-25)
   For optimum speed, all door sets are delivered ready to screw into place, with all equipment installed in factory for guaranteed working order on site.
In house designed rubber seals

Doortal has used its expertise to design exclusive rubber seals for its range of door sets. The composition of the material as well as the shape of these seals provides a suppleness that avoids any risk of leakage, even in the case of an irregular surface.

Ultimate anti-corrosion resistance

Many years of research and development in house and in partnership with external organizations have led Doortal to create a successful system of optimal surface treatment, guaranteeing an aesthetic finish and a lasting adhesion even in extreme conditions.

The system consists of a galvanized steel base with a very high performing powder coat finish. This composition has been tried and tested in CETIM laboratories, as specified in the NF EN ISO 12944-6 standard for a CS-M level system and high durability. It was awarded the highest rating, classified 'coastal' for a duration surpassing 15 years.

Customizable design

(see pages 16-17)

All door sets are available in every RAL colour, and any other powder coated finish upon request. It is also possible to cover door sets with special cladding such as stone, wood, etc., due to the offset hinges, even allowing thick cladding.

Quotes received within 24 hours

95% of quotes received in less than 24 hours
Integrate and harmonize with the architecture
Custom solutions for endless design possibilities

100% PERSONALISED
The door sets standard factory finish is powder coating which is available in every RAL colour, other colours on request.

SOPHISTICATED HARDWARE
DOORTAL's entirely modular system allows the installation of simple safety locks, multi-point locks or panic bars, with universal exterior hardware such as lever handles, fixed handles or knobs in aluminium or stainless steel. The outside face of the doors is therefore perfectly harmonious no matter what type of lock is used.

CLAD DOORS
In answer to the most diverse architectural demands, Doortal has designed offset hinges permitting thick decorative cladding on the doors. The door sets become nearly invisible for a perfect integration into the surroundings. In contact with EFFECTIS, the EU certified laboratory, Doortal’s engineering office issues site authorisation in order to maintain the door sets fireproof ratings even when clad with various materials (aluminium, wood, marble etc.).
Lowering energy consumption
A LEADING THERMAL RATING

As part of the 2012 Thermal Regulation and the HEQ initiative, the INSUPLUS product range promises a very effective coefficient thermal insulation (Uw). The choice of the insulating material created and used by Doortal warrants a thermal break and allows a very low coefficient, significantly controlling heat loss.

Ud value up to 1.2 W/m².K

RELIABLE ACOUSTIC AND AIR/WATER/WIND RATINGS

The INSUPLUS metal doors also have the advantage of an acoustic rating, which has become indispensable, to meet the requests of the new acoustic regulations (NRA) along with the AWW regulations necessary for good permeability resistance to air, water and wind.

Up to 41 DB
Outstanding resistance in the face of flames
DOORTAL developed the entire PYROPLUS product range in partnership with certified laboratories in order to optimize and validate the characteristics of fire resistant door sets, in conformity to the new European regulation EN 163461 and the decision of 22 March 2004 from the Minister of the Interior.

ALWAYS MORE COMPETENT
A unique combination of performances for a technical door par excellence.

ALWAYS MORE EFFECTIVE
A unique characteristic on the market: fire proof exterior doors designed to be installed in a facade and resist severe weather.

ALWAYS BIGGER
Large scale fire proof doors: PYROPLUS 60 door sets have been tested and validated for dimensions of up to 5.3 meters wide and 5.7 meters high, with an EI60 fire proof rating. They are also available with a wicket door allowing easy pedestrian access without opening the large leaves of the main door.

ALWAYS MORE SECURE
Exceptional conformity: nearly 100 performance certificates obtained from EU certified laboratories have permitted Doortal to optimize and validate the fire resistant features of the door sets, in conformity to the new European regulation EN 163461 and the decision of 22 March 2004 from the Minister of the Interior.

PYROPLUS 30
A versatile fire proof door set

<table>
<thead>
<tr>
<th>Single leaf door set</th>
<th>Double leaf door set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Proof</td>
<td>EI² 30 minutes</td>
</tr>
<tr>
<td></td>
<td>interior/exterior</td>
</tr>
<tr>
<td>42 (-1;-4) dB</td>
<td>41 (-1;-4) dB</td>
</tr>
<tr>
<td>optional</td>
<td>optional</td>
</tr>
<tr>
<td>46 (-3;-6) dB</td>
<td>48 (-2;-8) dB</td>
</tr>
<tr>
<td>optional</td>
<td>optional</td>
</tr>
<tr>
<td>Ud 1.6 W/m².K</td>
<td>Ud 1.5 W/m².K</td>
</tr>
</tbody>
</table>

PYROPLUS 60
Optimal performance for the most demanding projects

<table>
<thead>
<tr>
<th>Single leaf door set</th>
<th>Double leaf door set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Proof</td>
<td>EI² 60 minutes</td>
</tr>
<tr>
<td></td>
<td>interior/exterior</td>
</tr>
<tr>
<td>44 (0;-2) dB</td>
<td>43 (0;-2) dB</td>
</tr>
<tr>
<td>optional</td>
<td>optional</td>
</tr>
<tr>
<td>52 (-1;-3) dB</td>
<td>51 (-2;-6) dB</td>
</tr>
<tr>
<td>optional</td>
<td>optional</td>
</tr>
<tr>
<td>Ud 1.4 W/m².K</td>
<td>Ud 1.4 W/m².K</td>
</tr>
<tr>
<td>Ud 1.3 W/m².K</td>
<td>Ud 1.3 W/m².K</td>
</tr>
</tbody>
</table>

1.5mm thick sheet steel 60mm leaf thickness
Fire proof insulation

1.5mm thick sheet steel 80mm leaf thickness
Double seals
Reinforced fire proof insulation
Acoustic performance at the highest level
Efficiency and performance in tuned

With more than 20 years of experience in the production of acoustic doors, DOORTAL is recognized as a market leader in the industry and has recently been awarded the "Décibel d’or 2016" for its SONIPLUS 55 door set.

A SIMPLE INSTALLATION, IMMEDIATELY USEABLE

Installation in any material by simply screwing the frame into the support wall, without any grouting mortar: a real revolution for work sites accustomed to restrictive installations often impossible to adjust or disassemble once dried.

LARGE SCALE DOOR SETS

UP TO 7 METERS WIDE
UP TO 7 METERS HIGH

ADAPTABLE DOOR SETS FOR PEOPLE WITH LIMITED MOBILITY

In conformity with the PMR standard of accessibility for persons with reduced mobility, all Doortal’s acoustic door sets are available with an extra thin threshold bar, 1.5 cm maximum.

Certain door sets are also available without any threshold, using instead an automatic dropseal which comes down once the door closes.

SONIPLUS 40

The door set which blocks the noise of everyday life

SONIPLUS 45

Unobtrusive, with high acoustic insulation

SONIPLUS 50

To cope with severe noise pollution in urban environments

SONIPLUS 55

Unprecedented: 58 dB acoustic rating with optional fire proof rating

SONIPLUS 62 SAS

An airlock composed of 2 door sets for exceptional performance

THE 10 DOORTAL ESSENTIALS

Exclusive tubular frame

Sheet steel 1.5 minimum thickness

Maximum resistance

Anti-corrosion

Insulating and anti-vibration materials

10 Year Warranty

Fire Proof Rating

200 mm gap between doors

Furnished with a synchronized opening mechanism
"A policy for uncompromised safety"
The assurance of protection at every level

A complete product range of single or double leaf doors for protection of sensitive sites against manual and armed attacks.

MULTI-PERFORMANCE ANTI-BURGLARY DOORS

As the requirements for resistance to burglary in Europe continue to climb, Doortal has developed several ranges of door sets with an accumulation of performances: anti-burglary, bullet proof and fire proof.

ACCESS CONTROL TO MANAGE TRAFFIC FLOW

Today, securing a sensitive zone means access management in real time and at a distance, avoiding the complex administration of keys.

An electric latch allows access control during the day and a mechanical lock during the night, a solution used by many business premises.

The motorized lock assures permanent locking, allowing strict and ongoing control of traffic passage. Of course, these access control systems do not in any way affect the door’s resistance to burglary or armed attacks.

CERTIFICATES AVAILABLE FOR EVERY CONFIGURATION

Available in either single or double leaf, interior or exterior opening, with mechanical or motorized locks for access control, SECURIPLUS reinforced fire proof doors offer a unique solution to protect sensitive sites (bank facilities, military buildings, law enforcement agencies etc.) against risks linked with security: fire, burglary, armed attacks etc.

SECURIPLUS

Security door sets for premises with everyday risks

<table>
<thead>
<tr>
<th>Single leaf door set</th>
<th>Double leaf door set</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR3</td>
<td>CR3</td>
</tr>
<tr>
<td>interior/exterior</td>
<td>interior/exterior</td>
</tr>
<tr>
<td>Elv. 30 minutes</td>
<td>Elv. 30 minutes</td>
</tr>
<tr>
<td>interior/exterior</td>
<td>interior/exterior</td>
</tr>
<tr>
<td>optional</td>
<td>optional</td>
</tr>
<tr>
<td>Ud 2.1 W/m².K</td>
<td>Ud 1.9 W/m².K</td>
</tr>
</tbody>
</table>

SECURIPLUS 3

Anti-burglary and fire proof protection for high security sites

<table>
<thead>
<tr>
<th>Single leaf door set</th>
<th>Double leaf door set</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR3</td>
<td>CR3</td>
</tr>
<tr>
<td>interior/exterior</td>
<td>interior/exterior</td>
</tr>
<tr>
<td>Elv. 30 minutes</td>
<td>Elv. 30 minutes</td>
</tr>
<tr>
<td>interior/exterior</td>
<td>interior/exterior</td>
</tr>
<tr>
<td>optional</td>
<td>optional</td>
</tr>
<tr>
<td>Ud 2.1 W/m².K</td>
<td>Ud 1.9 W/m².K</td>
</tr>
<tr>
<td>2 mm thick sheet steel</td>
<td>60 mm leaf thickness</td>
</tr>
<tr>
<td>Internal reinforcements + fire proof insulation</td>
<td></td>
</tr>
</tbody>
</table>

SECURIPLUS 4

Combination of high performances for the most vulnerable sites

<table>
<thead>
<tr>
<th>Single leaf door set</th>
<th>Double leaf door set</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR4</td>
<td>CR4</td>
</tr>
<tr>
<td>interior/exterior</td>
<td>interior/exterior</td>
</tr>
<tr>
<td>Elv. 60 minutes</td>
<td>Elv. 60 minutes</td>
</tr>
<tr>
<td>interior/exterior</td>
<td>interior/exterior</td>
</tr>
<tr>
<td>optional</td>
<td>optional</td>
</tr>
<tr>
<td>Ud 2.5 W/m².K</td>
<td>Ud 2.2 W/m².K</td>
</tr>
<tr>
<td>Ud 1.6 W/m².K</td>
<td>Ud 1.5 W/m².K</td>
</tr>
<tr>
<td>2 mm thick sheet steel</td>
<td>80 mm leaf thickness</td>
</tr>
<tr>
<td>Double seals</td>
<td>Double seals</td>
</tr>
<tr>
<td>Anti-burglary and high performant fire proof composition</td>
<td></td>
</tr>
</tbody>
</table>

NEXUS

A product range of ultra high performing doors

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>FB5 to FB7</td>
<td></td>
</tr>
<tr>
<td>CR4 to CR5</td>
<td>CR4 to CR7</td>
</tr>
<tr>
<td>interior/exterior</td>
<td>interior/exterior</td>
</tr>
<tr>
<td>Elv. 60 minutes to Elv. 120 minutes</td>
<td>Elv. 60 minutes to Elv. 120 minutes</td>
</tr>
</tbody>
</table>

See DOORTAL SYSTEMS product range
Protection and conformity for maximum security
A range of solutions, verified and approved

The TRANSOPLUS door set meets the demands of the EDF HN 64-534, NF C11-201 and NF C13-100 standards for EDF doors and ventilation. It is qualified to be used for EDF transformer rooms in all types of buildings: apartments, shopping centers, industrial etc.

A UNIQUE DESIGN

Although traditional transformer room doors have a folded metal sheet frame, the TRANSOPLUS door set is created with a closed tubular frame assuring excellent stability as well as a significantly simpler installation on site.

DOORS, VENTILATION GRIDS, AND EQUIPMENT IN STOCK

The TRANSOPLUS product range holds a permanent stock of:
- EDF doors in standard dimensions
- Ventilation grids, standard dimensions
- THIRARD and DENY locks, classic and anti-panic
- THIRARD cylinders, for all departments of France
- Signage kits, standardized for EDF transformer stations
A solid base for a quality blend of glass and steel
THE QUALITY OF STEEL
Steel is the most resistant material for intensive usage, burglary and fire. Using seam welded profiles in the angles of the framework is a guaranteed solution for long term resistance. This is why steel is so often seen in the production of doors for public buildings, multi-family housing and industrial premises.

ROBUST DOOR EQUIPMENT
The quality of a door goes hand in hand with the quality of the door’s equipment. The narrow lock cases installed on DOORTAL doors are manufactured in Europe, offering both single point lock and multipoint lock. The product range also includes handles, exit panic bars, bolt locks and door closers in conformity to the current European regulations, as well as access control equipment such as electric latches, magnetic locks, DAS deadbolt locks and motorized locks.

EXPERTISE FROM A TO Z
At DOORTAL, the installation of the equipment and glass is done in the factory. This guarantees delivery of a perfectly finished product, in total conformity to the standards and the customer’s expectations.

THE 10 DOORTAL ESSENTIALS
- High performance steel structures
- In addition to solid metal doors, DOORTAL offers a range of glazed doors, combining the strength of steel with the transparency of glass. These doors benefit from several particularly competitive ratings. Use thermal insulation as low as 1.8 W/m²K or less, integrity and/or fire proof up to 60 minutes, acoustic up to Rw 41 dB and anti-burglary up to CR3.
- VITROPLUS
  - High performance steel structures
  - In addition to solid metal doors, DOORTAL offers a range of glazed doors, combining the strength of steel with the transparency of glass. These doors benefit from several particularly competitive ratings. Use thermal insulation as low as 1.8 W/m²K or less, integrity and/or fire proof up to 60 minutes, acoustic up to Rw 41 dB and anti-burglary up to CR3.
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“Offering functionality, security and convenience”
A solution for every door

FUNCTIONAL SOLUTIONS
Installing service doors in public premises implies adapting the doors’ equipment. DoorTal’s locking systems are integrated in the leaves and resist to intensive usage whilst being very user friendly. The door closers and door coordinators also play a crucial role as they assure correct closure of the leaves after every usage. All the equipment is installed and pre-set in the factory for guaranteed optimal functioning.

SECURITY SOLUTIONS
The door sets can be equipped with panic bars or emergency exit locks in order to answer to the needs for speedy evacuation in case of fire, in compliance to the regulations. Electromagnetic locking systems are also available for fire detection, unlocking instantaneously in case of an emergency.

ACCESS CONTROL SOLUTIONS
Today, securing a sensitive zone means management of access in real time and at a distance, avoiding the complex administration of keys. The electric lock enables the door to be unlocked from the outside by an access control mechanism (keypad, badge etc.) and from the inside by the handle. The motorisation guarantees a permanent multipoint locking allowing detailed and continuous management of entries and exits.

ACOUSTIC SOLUTIONS
When installing in a noisy environment, obtaining the optimal level of sound attenuation requires the use of appropriate locks. Therefore the doors can be fitted with the 3 point TRIBLOCK-DB lock, which ensures a compression of the rubber seals as soon as the door closes, or slopped bold locks in which the multiplied movement enables the leaf to be perfectly put in place.

DOORTAL offers more than 1000 solutions for door equipment:
locks, handles, door closers, access control and all other leaf equipment.
“Door set standards and regulations”
Standards and regulations

THERMAL

Thermal regulations: lowering energy consumption
In order to conform to the energy saving objectives and environmental preservation issued by the Grenelle Environmental Forum, all new buildings or additions to existing buildings must adhere to the standard for low consumption buildings: thermal performance of building structure, elimination of air leaks, efficient ventilation and comfort during the summer.

The RT 2012 standard envisages significant improvement in energy efficiency of buildings. This regulation implies an increased demand for low energy consuming products and equipment and particularly the implementation of high performing thermal insulation solutions, paying special attention to the air tightness of the building.

Thermal Calculations
Thermal calculations are made to the NF EN ISO 10077-7 and 10077-2 standards and are expressed in Ud or Uw. The lower the coefficient is, the less thermal loss there is.

Weather proof – Air-Water-Wind classification
It is expressed by the AWW (Air, Water, Wind) rating:
- Air permeability: pressure, control of air leaks, according to the NF EN 12207 standard
- Water tightness: it has to be absolutely water tight, according to the NF EN 12208 standard
- Wind resistance: wind tunnel, distortion control, according to the NF EN 12210 standard

ACOUSTIC

Acoustic comfort
Acoustic comfort is an important element in the quality of our everyday lives. So many people, particularly in dense urban areas, are inconvenienced by noise disturbance. Evidently there are multiple noise sources and the noise disturbance can cause difficulties in attention, learning and health.

- In an attempt to limit people’s exposure to noise, different regulations have been put in place, including the following:
  - The new acoustic regulation (NRA) it fixes a minimum requirement in regards to phonic insulation on any residential buildings with a building permit dated subsequently to January 1996, in an attempt to improve the acoustic comfort of everyone in the environment.
  - Maximum level of emergence: emergence is defined as the difference between ambient noise and residual noise.

Sound transmission loss
In order to determine the R sound transmission loss, the door sets are tested in certified laboratories, in accordance to the NF EN ISO 140-1, 20140-2, 140-3 and 717/1 standards. The higher the value is, the more substantial the acoustic loss is.
Standards and regulations

THE EUROPEAN STANDARDS DEFINE TWO CATEGORIES OF FIRE RESISTANCE FOR PRODUCTS:
- The E integrity rating is for flame resistance, and measures the blocking effect against flames and smoke.
- The EI thermal insulation rating is more severe and takes into account thermal insulation to protect persons in the proximity from risk of burns.

The tests are done in compliance to the NF EN 1634-1 standard. The door set is installed in a wall which is mounted on the front of a furnace for a specified period of time. Several grades of fire resistance are determined to comply to the regulations applicable to public establishments and other buildings.

SEVERAL OFFICIAL STANDARDS SET THE REQUIREMENTS AND CLASSIFICATION SYSTEMS RELATING TO THE BURGLARY RESISTANT CHARACTERISTICS OF DOOR SETS.

In every case, the tests are manual:
- For the French standards, NF P20-311 and P20-511: the products are classified in 6 categories, from 1 to 5B, with a time resistance of 5 to 20 minutes. The tools used vary depending on the category.
- For the European standards, EN 1627 and 1630: the products are classified in 6 categories, from 1 to 6, with a time resistance of 3 to 20 minutes. These tools used also vary, depending on the category.
- A2P standard
- The EN 1522 standard classifies the products according to their resistance to different bullet caliber sizes with different types of weapons: pistols, rifles, automatic guns, hunting rifles.

> See DOORTAL’s Standards guide — anti-burglary and bullet-proof doors
Easy, fast and secure installation
READY TO SCREW INTO PLACE: THE SOLUTION FOR ANY SURFACE MATERIAL

DOORTAL door sets have been systematically designed and tested in laboratories so as to be ready to fix simply by screwing and caulking. With no need of grouting, this allows installation of the door set in any material: concrete, metal framework, wood etc. The speed and simplicity of the implementation has the benefit of reduced construction deadlines and limited nuisance.
Some references

ROISSY CHARLES DE GAULLE AIRPORT

EUROPEAN COURT OF JUSTICE IN LUXEMBOURG

MUSÉE DES CONFLUENCES (MUSEUM)

BBC STUDIO IN LONDON

EIFFEL TOWER