



INDUSTRIAL DOORS
FIRE RETARDANT DOORS

GENERAL CATALOGUE





CAMPISA, the certainty of a sure choice

CAMPISA stands for certainty. When clients really have to put their faith in someone, they choose *CAMPISA* for guaranteed immediate and long-term results.

CAMPISA, 1972 – 2005, thirty-three years at your service.

Thirty-three years of tradition, innovation, service, research and development, production and customer service.

Certified by TÜV ITALIA

UNI EN ISO 9001:2000 – No. 50 100 1972



Certified by Euro-Soa no. 1516/4/00

Cat. OS 04 cl. IV

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All products have CE marking, demonstrating conformity to current European standards.

INDUSTRIAL DOORS: EQUIPMENT FOR YOUR P

Much more than just a door: the right choice can lead to savings on energy, maintenance and provide more ground space.

Sectional overhead doors - the best choice

for free space around the opening. The door opens silently, thanks to nylon rollers on a self-lubricating ball bearing, supported by adjustable galvanised runners. The runners slide on slightly tilted vertical rails to fully seal off the entire door-opening perimeter and against special EPDM seals in the last 30 – 40 cm, for a draught-proof, waterproof closing, without rattling.



The door panels are made in sturdy steel, aluminium or stainless steel, and have excellent insulating properties

Sandwich panels with 0.5 mm galvanised, pre-varnished inner and outer steel plates, joined with CFC-free, eco-friendly, expanded polurethane fill provide thermal insulation and deliver cost savings. The panels have a standard thickness of 40 mm and a 0.43 Kcal/m² h°C K factor.

Insulation can be increased using 80 mm thick panels, however this solution is only suitable for low temperature cold store warehouses.

CAMPISADOOR panels: high quality

and superb design. Panels come in white RAL 9002 as standard for a brighter interior. In addition to white RAL 9002, the exterior can be painted in a wide range of colours. Standard dual chamber, large-sized or safety vision panels, or full window panels such as *CAMPISAVISION* panels may be installed.

Internal reinforcements for hinges

Sturdy flat reinforcing plates guarantee long-lasting fastening for hinge screws, in horizontally under roof gliding doors

Pinch protection

Doors with horizontally gliding panels must provide pinch protection up to a height of 2.5 metres (EN 12453 standard). In this case, special anti-drag panels are used.



Drop-down protection

A drop-down protection device prevents the door dropping down in the event that cables break. On doors balanced with 2 springs, this device is also fitted on the springs.

Drag protection

The roller rails are fully protected up to 2.5 m from the ground, and the rollers have a patented optional protective guard to prevent accidental dragging.

General guidelines for choosing an industrial door:

They may seem simple, but careful consideration of operating needs leads to a specific layout that turns every door into a special piece of equipment.

Pedestrian doors and doors for fork lift trucks

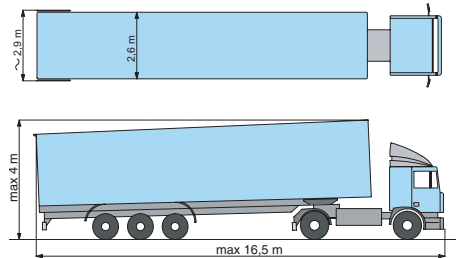
These doors must be suitably sized for traffic: generally 3m wide and 3 – 3.70m high.

Drive-through doors

These doors must have dimensions suited to the vehicles passing through them (maximum dimensions as indicated in the Highway Code).

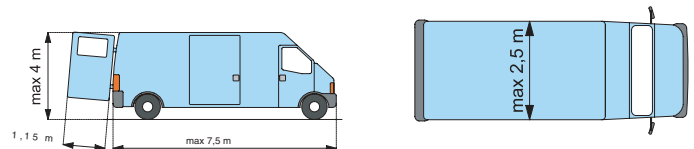
Doors are 3.5–5.5m wide, depending on whether vehicles access the opening at right angles or diagonally.

Doors for semi-trailers or large trucks have a 4.35m high opening, as the maximum height of these vehicles is 4m. This ensures a cost-effective solution as the doors are made with full-size panels.



Smaller widths can be selected for trucks less than 2.30m wide. However the cost difference is minimal, so a width suitable for bigger vehicles should be chosen. The width may be reduced between 3 and 5 m, depending on whether vehicles access the door at right angles or diagonally.

3m wide and 3.70m high doors can be selected for smaller commercial vehicles 2.20m wide and 3.15 metres high.



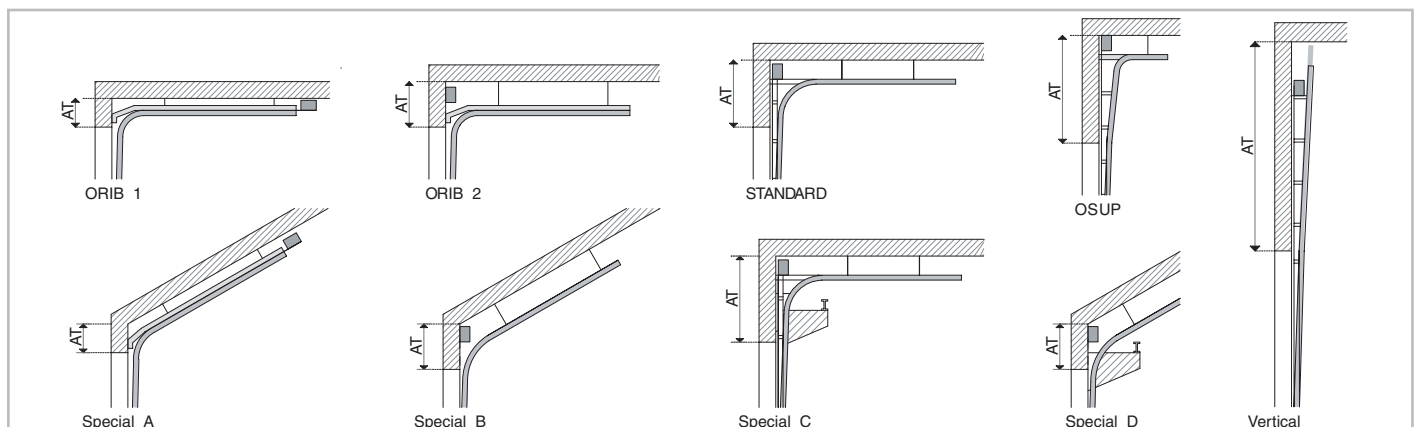
Standardisation

Doors are made to measure, with maximum widths of 8m and maximum heights of 6.7m, and some restrictions on the maximum weight. The width should preferably be under 7 metres, and height under 6.5 metres.

Standardised sizes can provide cost savings. Door width increases of 500 mm should preferably be selected, along with the following door heights (comprising full sectional panels, tolerance ± 50 mm): 2480, 3090, 3700, 4310, 4920, 5530, 6140 or 6750 mm.

Installation to suit your needs

Vertical sliding installations are the best solution, however sectional overhead doors have been designed to suit all architectural layouts, as the doors glide up under the ceiling, following the roof slope. Campisa's Fidelity® patented hydraulic lift allows for almost complete freedom of design. The door can glide up under any slope, as there are no spring balancing calculations to be made.



SECTIONAL OVERHEAD DOORS WITH

Spring balanced sectional overhead doors - cost-effective and functional.

With torsion springs guaranteed for 20,000 cycles to balance weight, these doors are neutral in any position and can be easily opened and closed by hand. We recommend a winch for easier opening when doors are more than 3 metres high, or are very wide and heavy. In the photo, the rope to close the door.



Options for manual spring balanced sectional overhead doors:

- winch for easier opening of the manual spring balanced sectional overhead door
- “dead man” and automatic controlled electromechanic powering
- balancing springs guaranteed for 50,000 cycles
- burglar-proof, standard or extra-large sight windows
- full-vision panels with aluminium frame, for maximum lighting
- wicket door, also available with panic bar
- inside/outside lock with key
- automatic closure lock



Standard inside and outside handle on manual doors, for easy opening and closing.



Spring drop-down device
Besides the drop-down device on the suspension cables, doors with 2 springs are fitted with a drop-down device.



Bolt or lock with key. The door can be closed by an inside bolt or inside/outside lock with key. A device to automatically lock the closed door can also be provided.



Outside handle
Outside handles with lock and key are fitted on wicket doors.

Spring balanced sectional overhead doors can be powered

Opening is easier and remote controls are also available.

The electromechanic powering

The spring shaft is directly or indirectly powered by a 220/240 V single-phase unit , with “dead man control”, semi-automatic (open-stop-close-stop) or fully automatic control. Doors with semi-automatic or fully automatic control must be fitted with the safety devices indicated in the EN 12453 standard. All doors can be opened and closed manually with a rod crank or integrated release and winch system, operated from the ground, depending on the model.

Types of control available:

1. “Dead man” control, with or without a key
2. Semiautomatic or automatic control
3. Remote control and opening controls, see page 18.



A system of electromechanic powered sectional overhead doors: a cost-effective and functional solution

Doors can be installed with “dead man” controls which, as per EN 12453 Standard, do not require any additional safety device. These doors are practical to use and cost-effective. The springs are to be periodically reloaded. Automatic doors require safety devices, which are chosen according to whether the doors are installed on private or public premises, in protected/non-protected areas, and whether users are familiar with their operation (see details on page 19).

CAMPISA FIDELITY® HYDRAULIC POWERING:

FIDELITY® powering, no need for springs or maintenance. With a 5 year warranty. The perfect, long-lasting solution.

More than 29,000 installations (data for the end of 2004) only requiring an annual inspection (EN 13241-1¹, EN 12453²) demonstrate the validity of this patent, which has been developed from the classic spring balanced door, and has been particularly welcomed by designers, engineers and end users. The slightly higher cost of a FIDELITY® hydraulic powered door can be recovered in the first two or three years of use, with no maintenance costs. In each following year, savings can be made as no maintenance is needed - another benefit on top of the effectiveness, easy-of-use and stylish design.

75% of CAMPISA systems are fitted with FIDELITY® sectional overhead doors, because end users are careful about operating costs, while discerning investors want to further lower system costs by installing centralised solutions.



FIDELITY® hydraulic powering inside a stylish box

The FIDELITY® system comprises a multiplier hydraulic cylinder operated by an electrohydraulic motor to effortlessly, simply, efficiently and silently lift the door. With the FIDELITY® system there are no more unsightly springs or grease marks from lubricants.

FIDELITY® hydraulic powering - simple, reliable

and safer, because doors are lowered by gravity. If obstacles are in the door path, and the operator is distracted, the cables will not fleet and cross over - as in the case of electromechanical powerings when the motor keeps operating, unwinding the cables from the drums and causing cables to break the next time the door is opened, if they have crossed over.

FIDELITY® hydraulic powering

is not affected by the weight of each panel and can meet a wide range of design requirements.

¹ Construction Products Directive

² Visual inspection of components subject to mechanical wear and efficiency of drop-down protection devices

No operating costs = functional system

CAMPISA'S FIDELITY® systems have been designed to guarantee decades of maintenance-free operation. The most functional and long-lasting systems are those which are planned well, right from the start.

The best economic and functional benefits

can be achieved with CAMPISA'S multiple powered systems: several FIDELITY® doors, all powered by the same motor, considerably cuts the cost of each item, providing high benefits. Plus the systems are maintenance-free.

FIDELITY® hydraulic powering, in simple stylish housing.



Centralized Consoles, for two doors in this configuration, cut costs even further. Centralisation depends on how close the doors are to each other.

Centralising systems

cut costs and could, in theory, be extended to cover the entire premises (like compressed air). Configuration however depends on delivery and return lines, the distance between doors and other factors.

The best Console

For these reasons, the Console 2 is the best configuration for 2 sectional overhead doors, while the Console 2 + 2 is ideal for 2 dock levellers and 2 sectional overhead doors. See page 21 for types of Consoles.



A standard Console for 2 sectional overhead doors

Patented.

CAMPISAVISION: TOTAL OR PARTIAL VISIBILITY,

For light inlet or complete visibility

CAMPISAVISION solves all problems. The full window panels are stylish and achieve the right balance between the total area and light inlet.



An extremely wide range:

- with top and bottom insulating panel, as shown above
- with one or more full window panels, as shown on the right
- window panels only
- with wicket door, fitted with lock, or with panic bar and outside key

For cleaning operations and cost saving, top and bottom insulating panels are recommended.

CAMPISAVISION, available in numerous versions:

- with see-through or opaque acrylic glass; 3 mm thick single or double glass with 8 mm air space
- with 4/4 laminated safety glass
- with 4/4 - 8 - 4 or 3/3 - 8 - 4/4 laminated safety glass and insulating air space
- with mirror glass

CAMPISAVISION with springs or Fidelity® hydraulic powering to prevent imbalances caused by different weight panels.



Fidelity® power operated *CAMPISAVISION*, with a window panel and wicket door.

CAMPISAVISION in the photo on the right, with two top full-window panels. The wicket door can be supplied with panic bar and automatically closes, as required by Standards.

CAMPISAVISION can also be supplied in natural, anodised aluminium, or varnished with epoxy paints in a wide range of bright shades.

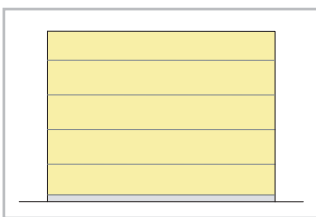
CAMPISAVISION can be “dead man” controlled, semiautomatic, automatic, with remote controls and all safety devices required by applicable Standards. See page 18 for remote controls.



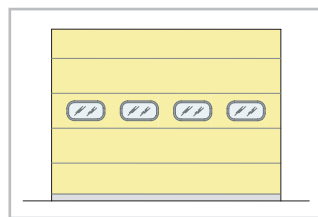
A WIDE RANGE OF CONFIGURATIONS

A wide range of panel combinations available

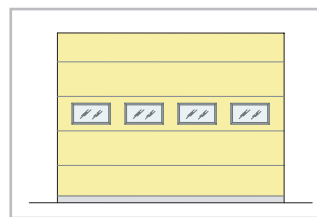
Plain insulating panels, insulating panels with oval anti-burglar sight glasses W 567 mm x H 136 mm, sight glasses W 695 mm x H 295 mm, large rectangular sight glasses, W 650 mm x H 343 mm, *CAMPISAVISION* full-sight, and combined panels.



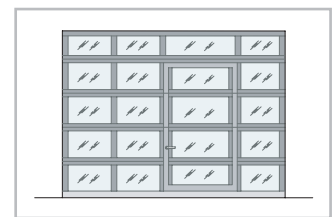
A - plain panels



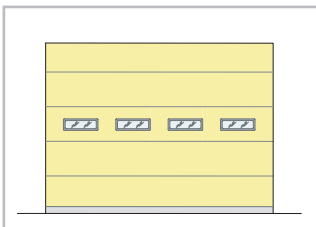
C - panels with dual sight glass and air space W 695 mm x H 295 mm



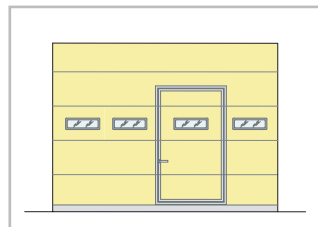
E - panels with dual sight glass and air space W 650 mm x H 343 mm



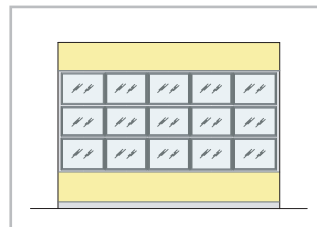
G - with plain full window *CAMPISAVISION* panels; also with wicket door



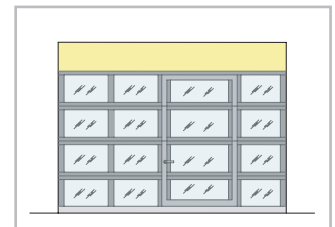
B - panels with dual anti-burglar sight glass and air space W 567 mm x H 136 mm



D - panels with wicket door and dual anti-burglar vision panels and air space W 567 mm x H 136 mm



F - *CAMPISAVISION* with top and bottom plain panels

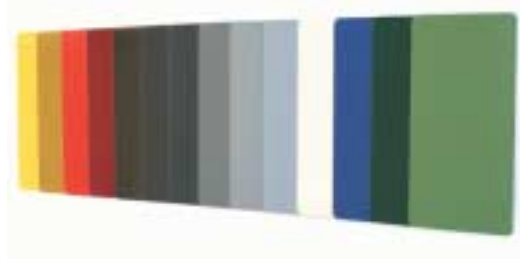


H - *CAMPISAVISION* with wicket door and top plain panel

VARIOUS COLOURS FOR SECTIONAL OVERHEAD DOORS

in addition to standard white RAL 9002

For an additional charge sectional overhead doors can be supplied in a wide range of RAL colours. Inside parts are usually left in white RAL 9002 for a brighter interior.



CAMPISAFIRE: INNOVATIVE, SECTIONAL

A new innovative *CAMPISA* patent - the only frequent use sectional overhead fire doors already compliant with the prEN 13241-2 standard

A definitive solution to all fire door problems, with free space around the door, which glides up under the ceiling if necessary. The doors have steel panels with rock wool insulation and a fire resistance certified in compliance with tests required by the EN 1634-1 standard

The only fire doors suitable for intensive use, like standard industrial doors, thanks to the FIDELITY® patented system.

Now there is no need for fire and smoke doors which are only used if fire alarms are enabled. Standard sectional overhead doors, which have also been designed for intensive use, with manual or automatic operation, a normal opening speed of 0.18 – 0.27 m/s, or quick opening speed of 0.45 m/s now act as fire and smoke doors ONLY in case of alarms or fire breaks out. The standard, closing speed of the doors is of 0.18 m/s and 0.08 m/s in the event of alarms, smoke, fire or black-out. After the event, doors can only be restored manually, as set out in the Standard.



Standard and intensive use sectional overhead fire doors, in loading bays, to protect from fire, including perimeter protection. At this paint factory, all sectional overhead normal use doors are **flameproof**. The doors have no visible design differences and manual or automatic or intensive use is the same. Flameproof systems are cost-effective as the electrohydraulic motors are not located in the blast proof area, and controls without electric parts are installed.

The only fire doors which glide up under the ceiling. The only doors which retain water (optional)



CAMPISAFIRE fire door. If clearance is limited, the door glides up under the ceiling.



CAMPISAFIRE-WT, to retain water from sprinklers and any harmful substances, inside the door, if necessary
Right: fire resistance tests



Outstanding operation and unrivalled performance for inside partitions and outside doors, thanks to the FIDELITY® system

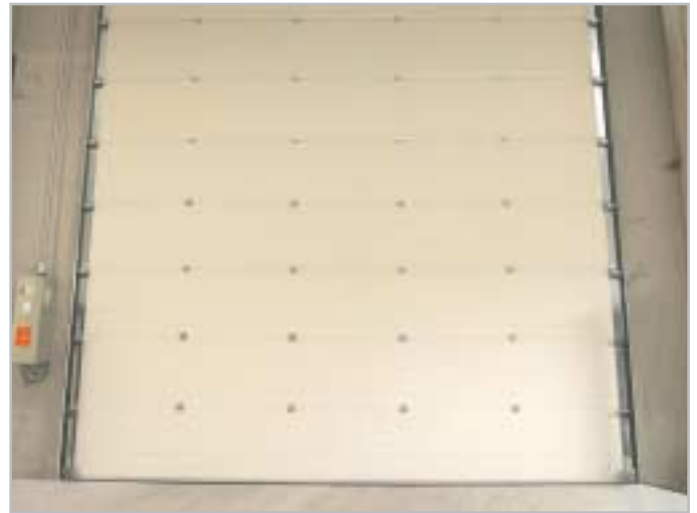
Under current regulations, fire doors must close when alarms are set off by a smoke or heat detector, or in the event of blackouts, at a maximum speed of 0.08 m/s. After the event, doors can only be restored manually. The FIDELITY® system meets these specifications without the need for any motor, as doors lower by gravity, at a continual rate with hydraulic controls, irrespective of the door weight or installation system. If fire breaks out, the thermal expansion of hydraulic fluid has no effect and there is no risk of explosion.

CAMPISAFIRE includes a further mechanical optional system for automatic door closing. The door closes, when a pellet dissolves at a temperature of 68°C (the same method used for the sprinklers, optional). This provides a further guarantee of performance, with a local mechanical system, with no electrical parts, working alongside other systems.

If obstacles are in the path of the door, a photocell with buffer battery stops the **CAMPISAFIRE** door, until the obstacle is removed.

The interior of the door also has the appearance of a standard industrial door.

Patented.



CAMPISAFIRE HORIZONTAL SLIDING DOORS

When clearance is less than 650 mm, horizontal sliding doors can be installed with a gravity closing system, based on the patented FIDELITY® power operated system, with all the same benefits.

The innovative patented **CAMPISAFIRE** system guarantees door closing at a controlled speed in the event of alarms, smoke alarms, fire alarms or fires. Hydraulic controls ensure that the door closes in the event of alarms, even when there is a power failure.



A horizontal sliding fire door
Hydraulic controls guarantee trouble-free operation, without any maintenance.



The electro-hydraulic power unit, the alarm opening control systems and logics.
Patented.



HIGH SPEED FIDELITY® DOORS

A solution that eliminates the problem of combining fixed industrial doors with a rapid door.

All FIDELITY® sectional overhead doors can be supplied with a quick opening speed of approx 0.45 m/s and are fitted with “dead man control” or automated controls, and also designed for intensive use.

FIDELITY® high-speed doors have a dual opening speed, to prevent initial jerks or inertial force when the door stops. The doors start smoothly, open at a quick speed of approximately 0.45 m/s and slow down at the top. The doors start to close slowly, the speed increases (roughly 0.18 m/s or 0.27 m/s, adjustable down) and then close slowly at the end. The speed of less than 0.5 m/s enables “dead man controls” without any safety devices.

The system has some unique features, as the doors can be combined with all versions of *CAMPISA* sectional overhead doors, standard doors, fire doors and airproof doors. These doors can be supplied with flameproof and blackout proof systems.



Components and an automatic 2-speed Console.

FIDELITY® BLASTPROOF DOORS

FIDELITY® electrohydraulic Consoles in non-blastproof areas, with non-electrical controls in the blastproof area.

This is the rationale behind a safe, cost-effective patented blastproof system.

The hydraulic unit can be placed at a distance, in areas which are not subject to restrictions, while hydraulic power is cost-effectively conveyed to the FIDELITY® hydraulic sectional overhead doors in a blastproof area, which may even be at a distance.

The hydraulic manual or pneumatic controls must be installed in the area of use, and both types have parts which are blastproof.

In the system shown in the photo, fully hydraulic controls, with no electrical parts, are installed by the side of the doors. The electrohydraulic motor is installed more than 60 metres away. This specific configuration also features 12 different combined door-dock levellers powered by a centralised electrohydraulic Console, installed in a remote blastproof location.

The blastproof FIDELITY® system can be used in combination with all types of *CAMPISA* sectional overhead doors.



Doors are certified up to class 6 air proof rating (EN 12426 - air permeability) and tested to EN 12427.

The very low permeability of this sectional overhead door makes it ideal for many specific sectors, including:

- banana ripening, to maintain ripening gases
- the storage of chemical and pharmaceutical products which may be harmed by exposure to air
- the storage of chemical and pharmaceutical products which may pose an environmental risk
- dry goods storage in very humid areas

Two interlocking, airproof sectional overhead doors, with an intermediate control and purification chamber can be installed, to recreate “white rooms” conditions.

The only visible feature of *CAMPISA* AIRPROOF doors, which can also be supplied with the POWER-UNIT system, is the façade of the covering, with smooth, non-ribbed panels.

International patent.



POWER-UNIT, FOR OPERATING IN THE EVENT OF BLACKOUTS

With the *CAMPISA* POWER-UNIT patented system, operations can always take place, even when there are black outs.

A half-hour black out, or half an hour spent switching over to a manual system, involves huge costs.

The costs of a *CAMPISA* POWER-UNIT can be recovered in two-three downtimes, caused by blackouts. All operations take place normally, and an emergency light can also be enabled.

The *CAMPISA* POWER-UNIT is a patented opening system powered by batteries that are continually charged. The doors always operate at 12 V DC, and at least 40 openings and closings are guaranteed in the event of blackouts.

The system is vital to prevent downtimes in the case of blackouts and is ideal for public and residential garages and emergency service facilities.

The *CAMPISA* POWER-UNIT can be installed on all systems.



Patented

CAMPISAFOLD: THE CLASSIC FOLDING

CAMPISAFOLD, with hinged vertical panels and side folding system

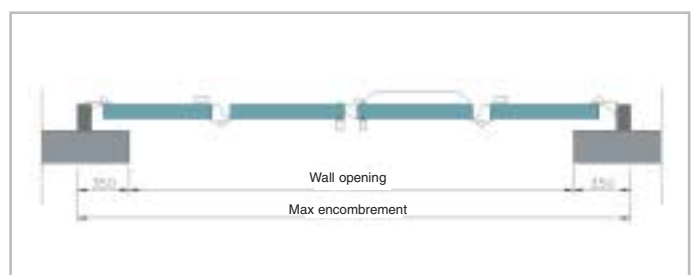
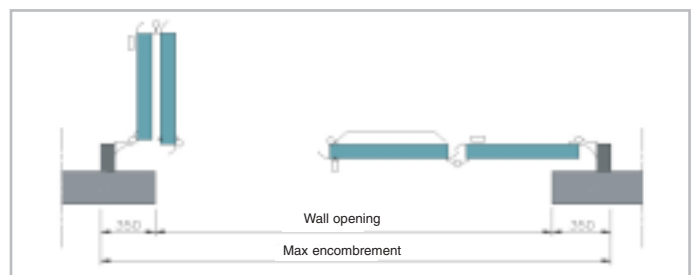
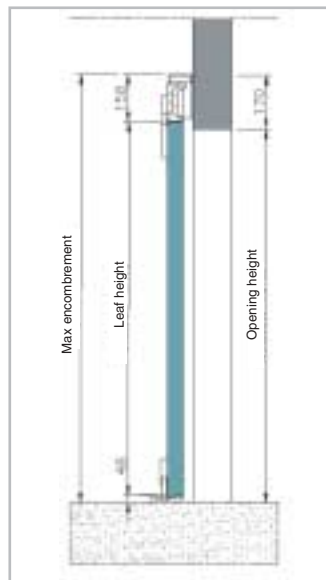
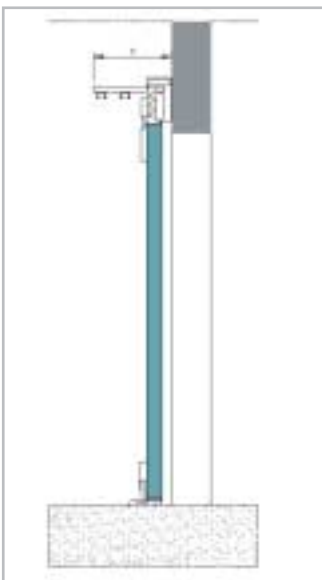
When this type of door is open, it takes up space on the ground, but in some cases it is the only possible option. The doors can be supplied with or without a ground rail, and can be opened manually or electrically. The doors may be fitted with vision panels as well as wicket doors and are supplied in white RAL 9002, green RAL 6005, red RAL 3000 and blue RAL 5010.

CAMPISAFOLD panels - sturdy with excellent insulating properties

Sandwich panels with 0.8 mm galvanised, pre-varnished inner and outer steel plates, joined with CFC-free, eco-friendly, expanded polyurethane fill provide thermal insulation and deliver cost savings. The panels are 50 mm thick as standard and have a 0.55 Kcal/m² h°C K factor.



The folding door stylishly covers the door opening. When open the panels fold away. Panels may be supplied in plain versions or with laminated glass (simple laminated glass or with an air space).



The vertical section of the door is electrically operated on the left and manually operated on the right. The upper frame needs a clearance of just 160 mm, so the door can be installed under roofs, with a front cover

Above, the overall dimensions of the door on the layout include the panels when closed.

Below, the closed door installed outside the opening.

High quality components for *CAMPISAFOLD* folding doors

CAMPISAFOLD doors have extremely robust dual thrust bearing steel hinges, and are supplied with keepers and ground tracks if required, for a long-lasting product.



***CAMPISAFOLD* can be configured with a full-cut wicket door, with panic bar, that is conform** as an escape door when there is no space for a separate one. If space is sufficient, the door remains complete.



Sturdy steel hinges, with dual thrust ball bearings and seals.



The middle dual edged keeper. Intermediate keepers are single edged.



The EPDM anti-ageing seals between panels, the Espagnolette closing system and panic bar.

Compliant with mandatory standards

***CAMPISAFOLD* doors conform to** the Construction Products Directive CPD 89/106/EEC, which harmonises the EN 13241-1:2003 standard. Conformity has been certified by a notified body and by the company. Classes are indicated on page 18.

Power operated doors are also certified

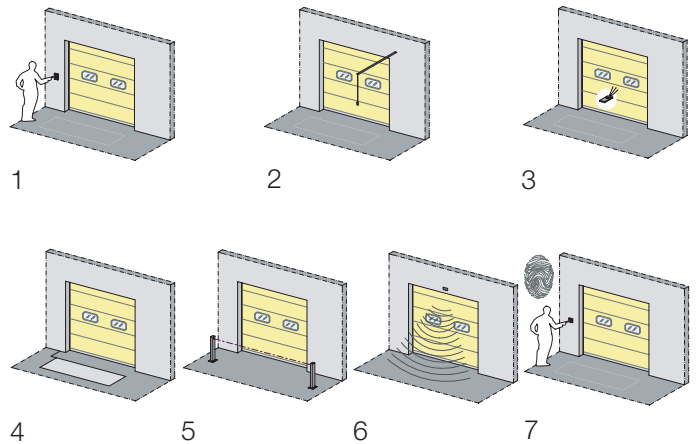
to the Machinery Directive 89/392/EEC and Electromagnetic Compatibility Directive 89/336/EEC.

OPENING CONTROLS

All systems for opening power operated doors

Operating needs require solutions and *CAMPISA* caters to these needs with a complete range of controls, which best conform to current standards.

1. Simple wall button, for all needs. Key-operated for public places.
2. Chain switch operated from the fork-lift truck.
3. Radio control: for remote control opening and to access already open doors.
4. Under ground induction loop. This only opens the door as vehicles pass over the loop.
5. Photocells: opening device and security in closing device, particularly positive with multipoint cells.
6. Radar: only recommended for front access, as the door opens whenever the radar detects a person or vehicle passing (from the side as well).
7. Finger-print - magnetic card, to choose with certainty who opens the door.



COMPLIANCE WITH MANDATORY STANDARDS

Doors must conform to European standards.

From 1.5.2005 all doors must conform to the Construction Products Directive 89/106/EEC, which harmonises the EN 13241-1:2003 standard, with some characteristics that have to be approved by a notified body. *CAMPISA* has obtained these certifications, while other characteristics are self-certified. The heat transmission coefficient must be calculated for each door, as the thermal conductivity (K value) of sectional panels considerably varies when small/large-sized simple or dual chamber vision panels, handles, wicket doors, etc. are installed.

Characteristics certified by a Notified Body:

CHARACTERISTIC	CAMPISA RATING		
	SECTIONAL OVERHEAD DOORS	FOLDING DOORS	
EN 12489 – EN 12425	Water penetration	Class 3	Class 2
EN 12241	Release of toxic substances	Approved	Approved
EN 12444 – EN 12424	Resistance to wind load	Class 3	Class 3
EN 12428 – EN 12567-1	Thermal resistance	Calculated based on components	
EN 12427 – EN 12426	Air permeability	Class 3	Class 3
EN 12604	Safe opening and closing	Approved	Approved
Resistance to water penetration, thermal resistance and air permeability	100.000 cycles	100.000 cycles	
EN 12445	Force limitations	Approved	Approved
	Peak load		

Characteristics self-certified by the manufacturer:

EN 418	Mechanical aspects – test method
EN 12445	Safety in the use of power operated doors – test methods
EN 12453	Safety in the use of doors – requirements
EN 12978	Safety devices for power operated doors
EN 12600	windows resistant to impact
EN 1050	Risk analysis
EN 12635	Manuals (installation, maintenance, use, disassembly, disposal)

Power operated doors are also certified to:

The Machinery Directive 89/392/EEC and the Electromagnetic Compatibility Directive 89/336/EEC.

All newly manufactured doors and industrial doors placed on the market after 1.5.2005 must be accompanied by a declaration certifying that the rating and parameters conform to essential requirements.

Safety systems

The EN 12453 standard sets out requirements for safety devices in line with operating and installation places (public/private use). Users must provide safety devices which are suitable and protect all areas, up to 2.5 metres high, from risks. A flashing yellow light is also recommended.

“Dead man controlled” device

The EN 12453 standard clearly states that “dead man controlled” devices are safety devices when the operator is not in a hazardous position, has clear visibility of the affected area, no other automatic controls are provided and the opening speed is under 0.5 m/s.

Other devices

In the case of automatic controls, the EN 12453 standard provides for different devices depending on use:

1. a restricted number of people instructable; door not in a public place
2. a restricted number of people instructable, door in a public place;
3. any person can operate the door and the door is in general contact with the public.

Note 1: people are “instructed”, if the employer, supervisor or owner of the premises have authorised them and informed them about how to use the door

Note 2: a group of people may be considered as a “restricted number of people” if part of a company, family members, or inhabitants of a block of flats

The minimum safeguard level of the main edge of the door, depending on how the door is used, is shown in table 1, with the following abbreviations:

- A. “dead man control”
- B. “dead man control” with key switch or similar
- C. force limitations or safety devices conforming to the Standard
- D. sensor on one side of the door. Combining two safety systems, for example C and D, device D does not necessarily need a safety function in the event of failure
- E. a sensor designed and installed so that the moving door will not touch people in any circumstances

Type of control	Use		
	Instructed user (non public area) Type 1	Instructed user (public area) Type 2	Non- instructed user Type 3
“dead man control”	A	B	Not allowed
Pulse command within door vision	C or E	C or E	C + D or E
Door operation beyond door vision	C or E	C + D or E	C + D or E
Automatic controls	C + D or E	C + D or E	C + D or E

Note: if moving doors cannot cause any harm or damage, type D devices may not be required.

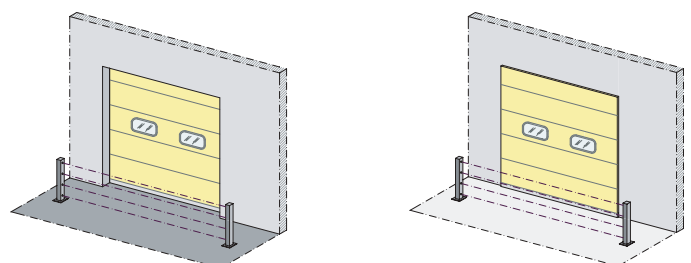
Optimal safety devices

The standard can therefore be interpreted as follows:

1. “dead man control” do not require other devices on private premises, for a restricted and instructed number of people
2. if installed in public places, “dead man control” devices must be key operated or similar
3. automatic doors on private premises and for a restricted and instructed number of people require a forces limiting device and a sensor (photocell or radar) to detect people
4. automatic doors in public places require a forces limiting device and a sensor (e.g. a photocell or radar).

This second device does not necessarily require a dual safety function (e.g. the device stops if the door is not working).

5. all devices, including devices in public installations, can be replaced by a sensor system in which the doors never touch people, under any circumstances, such as Campisa’s Multipoint photocells, with parallel rays that can intercept people, up to heights of 2.5 m.



Two pairs of Multipoint photocells, one on each side, ensure total door safety, up to a height of 2.5 m.

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"Dead man", semiautomatic, automatic, two-speed Consoles, plus Consoles for blackouts.



"Dead man" controlled Console for 1 sectional overhead door. This type of command is already considered a safety device.



"Dead man" controlled Console for 2 sectional overhead doors, with interlocking control



Automatic Console for 1 standard speed sectional overhead door



Automatic Console for 1, two-speed sectional overhead door



"Dead man" controlled Console for one, 12 V DC sectional overhead door. Blackout version.



"Dead man" controlled Console for two, 12 V DC sectional overhead doors. Blackout version



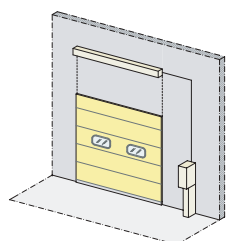
Automatic Console for one, 12 V DC standard speed sectional overhead door. Blackout version.



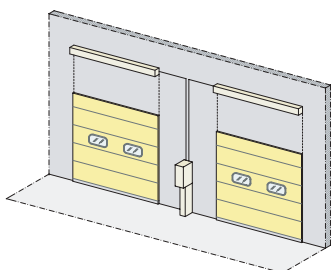
12 V DC power unit for blackout version Consoles.

Centralising systems

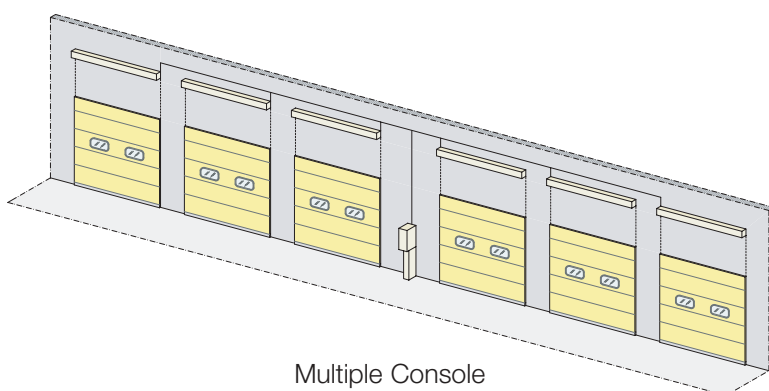
cut costs and could, in theory, be extended to cover the entire premises (like compressed air). Configuration however depends on the number of delivery and return lines, the distance between doors, automation systems and whether doors which can be interlocked have to be used at the same time. Usually two doors are centralised, although a single Console for 16 large sectional doors is operating and maintenance-free since more than 10 years.



Console 1



Console 2



Multiple Console

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6. Manual hydraulic pump to operate sectional overhead doors in emergencies. 7. Accessories for automation: photocells, radar, metal detector, radio controls, etc. 8. Additional buttons controls. 9. End-of-run interlock. 10. Steel docks for exteriors, with dock leveller and dock tunnel



11. Loading bays: dock levellers, sectional overhead doors, dock shelters. 12. Bay and traffic control lights. 13. Lorry wheel guides for centered docking. 14. Tunnel. 15. Vehicle restrains



16. BT mobile platform for rail cars 17. Light alloy MI platforms (fixed and transportable). 18. Light alloy KB dock rim ramp 19. Hydraulic CAMPISATRADE ramps for vans. 20. Gliss light alloy and steel dock rim ramps



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