





The "All-in-One" management of emergency exits



The origins of the concept

The Vortex Escape (VX2400-Escape) is born from the desire to include the management of emergency exits in a new paradigm. It consists of developing a universal solution, simple and affordable, in response to conflicts between the safety of people and the security of property regarding evacuation routes.

Indeed, also called emergency exits, these doors must not only allow the premises to be evacuated, without constraints, in case of danger, but also in the majority of the cases to prevent any unauthorized exit.

This paradox of both locked and free access has so far only been managed by installing systems (known as UGIS, French acronym which stands for "emergency exits control unit") that are as sophisticated as they are costly. Furthermore, these systems require the permanent control of a human.

As a consequence, small or medium sized sites which cannot afford such investments, finish up locking their doors with chains, padlocks or others. These systems are not ideal and, in fact, compromise all personal safety in the event of a disaster requiring rapid evacuation.

To conclude this observation, in certain cases, the combination of a locking system and panic bars equipped with an integrated contact, connected to a remote electronic module, would provide a solution. However, the result remains unaesthetic and difficult to install correctly.

Challenges to be met

Integrate into a compact unit:

- a very efficient locking system
- equipped with intelligence capable of interpreting data from its own sensors as well as exter nal information
- and deduce its action at the door it controls.

These elements make the **Vortex Escape** a unique "all-in-one" solution on the market.





Safety and Security, the end of an eternal conflict VX2400-ESCAPE



Emergence of the VX2400-ESCAPE

The basis of the system is the hybrid locking system called Vortex and particularly known for its exceptional holding force of 15,000N and for its pressure sensors which trigger an alarm in the event of abnormal constraints on the door.

To provide real management of the emergency exit, the VX2400-Escape is equipped with numerous inputs dedicated to external information (green glass breakage, fire panel link, access control, reset, etc.) which support the incorporated sensors (camera, pressure sensor, door position sensor and of good locking,...). The set of information collected allows the on-board micro-intelligence to deduce the appropriate action to the situation.



VQRTEX

"All in one" Solution



General characteristics

Overview of the locking part



Buzzer The VX2400-ESCAPE has a powerful built-in buzzer.

Analog color camera allowing instant viewing of images from the site.



8-segment MegaLed

Red LED

Locked door

This high-end hybrid locking system is equipped with a MegaLed for easy long-distance visibility and supervision. This function allows you to check the locking status of the door from a long distance. This Megaled also indicates the start of the countdown (t1) before opening the access.





LED partially red

Green LED Unlocked door

Triggering of the countdown indicating the seconds remaining before the door opens. Time delay adjustable from 0 to 8 sec.

tional patent.



force greater than 15,000N.

Overview of the armature plate in its cradle



The use of a high quality metal guarantees intrinsically the absence of any residual magnetism. No system of uncertain reliability is added to the product: Neither a push button on the armature plate, nor a kick-off electronics device.





Technical data

Patented Worldwide Innovation

The VX2400-ESCAPE, smart "All-in-One" emer-

gency exit locks, is the subject of an interna-

Sex bolt

Certification and stickering

Standard label

The characteristics of our HQMAG products are represented in a standard label, in compliance with the norm the EN 13637, chap 7.



- a = High frequency of use
- = Reliability: 1,000,000 cycles b
- = Weight of the door:> 200 kgs С
- = Fire / smoke suitability standard EN1634-x d
- e = Complies with the personal safety standard
 f = IP protection min: IP43 EN1670 grade 3 damp heat test 12h + 12h
 g = Holding force from outside: 15000N
- = Inner holding force: 15000N h
- = Time delay: t1 (adjustable 0 to 8 seconds)
- = Unauthorized exit mode: No function unless CMC
- **k** = Configuration of the emergency locking system: Other system.

Offering an MTBF greater than 1,000,000 operations (Grade 9), the reliability of the Vortex far exceeds the



Certifications

It is DAS certified (NF S61937) and complies for Europe with the specifications of EN 13637, chap. 7.

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PROCES VERBAL D'ESSAIS N° SD 21 00 04		
DEMANDE PAR	:	Visual Plus Corporation s.a. Drève Richelle, 161 G – Bte 34 B-1410 Waterloo - Belgium
OBJET	-	Dispositif Actionné de Sécurité Essais de conformité à la norme NF S 61-937 de décembre 1990, à son Annexe A Fiche XIV et à son Annexe B – Fiche I + A1 de décembre 2006.
N° D'AFFAIRE	:	481 3042 20 0014
DENOMINATION TECHNIQUE	:	Dispositif de verrouillage électromagnétiqu pour issue de secours
FABRICANT	-	VISUAL PLUS
REFERENCES PRODUITS	:	Vortex VX2400-Escape
Date du présent procès-verbal d'essais Le procès-verbal d'essais comporte Destinataires	-	le 04/02/2021 15 pages Demandeur CNPP
CACHET & SIGNATURE DU DIRECTEUR	:	Groupe CNPP LPMES Laboratoim Dispositifis Actionnés de Sécurité Pour la Dispositifis Actionnés et par délégition Actifistis Benvice
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VX 2400-ESCAPE Scenarios

The VX 2400-Escape, as an "all-in-one" solution, provides an answer and security to many cases encountered in the field. We have summarized them in the form of 4 scenarios explained below.



Scenario 1: **Detection of abnormal pressure on the door**

- by simply pushing on the door.
- (Early Warning) (2).
- 3 and 4 The built-in camera works.
- 5 The door will not unlock.







1 Detection of abnormal pressure on the door such as an attempt to open the door by operating an existing panic bar, or

2 Triggering of the built-in Vortex alarm and the remote alarm relay



Scenario 2: <u>Voluntary request for exit by actuation of the green pressure initialization</u> <u>element, Manual Release (MR)</u>

1 and 2 Triggering of a pulsed alarm by the incorporated buzzer of the Vortex and the remote alarm relay (EW)

3 The built-in camera works. The door does not unlock immediately

4 Triggering of the grade 1 time delay countdown (called simple, t1, adjustable from 0 to 8 seconds). The 8-segment LED display shows the count synchronously.

5 At the end of the countdown, the door is unlocked and remains unlocked until the system is manually reset

6 An input dedicated to reset system by key or any other local electronic system such as a card reader or encoder, ensures that the system is rearmed by a duly authorized person.

7 After this reset, the system returns to its initial standby condition.

Scenario 3: <u>Alarm signal coming from a fire detection system or a system triggering an emer-</u> <u>gency evacuation (1)</u>

2 Triggering of a pulsed alarm by the incorporated buzzer of the Vortex and the remote alarm relay (EW).

3 The built-in camera works.

4 The door is instantly unlocked (< 1sec.) and remains unlocked until the system is manually reset.

5 An input dedicated to reset system by key or any other local electronic system such as a card reader or encoder, ensures that the system is rearmed by a duly authorized person.

6 After this reset, the system returns to its initial standby condition.



Scenario 4: Entrance from the outside / inside via an access control

Function intended to respond to situations where the escape door is also an authorized access from the outside and/or inside, for example for deliveries or for the entry of people.

(0)

1, 2 and 3 By connecting an identification system to this input such as a badge reader, keypad, biometrics or key system, the entry will be authorized by the immediate unlocking of the system for a period equal to the one programmed via the control access device.

4. At the end of the access control timeout, and, if the door is properly closed, the system will return to its initial standby condition.









To resume

The applications:

The Vortex VX2400-Escape is an "all-in-one" solution. On its own, it ensures both the safety of goods and the safety of people, in terms of the access it equips. This dual approach makes the VX2400-Escape the ideal equipment for a psychiatric institute, a retirement home, a hospital, a place of detention or any other place open to the public (supermarket, cinema, etc.)



Hospital and psychiatric centers



Malls

Economical solution:

The **total cost** of acquisition / installation, operation and maintenance (TCO) of the VX2400-Escape is **significantly lower** than any other safe and sustainable solution.

Quick and easy installation:

A Vortex-Escape can be installed quickly on any existing door **without modifying the equipment** already present (eg panic bars or similar, etc.). Only a 24VDC - 300mA power supply, and a pressure initialization element (BBG / DM green "glass breaker" box), are required as external accessories.

Thus, after two years of research, testing and reading of multiple international standards, the family of hybrid locks, **Vortex**, sees the birth of its intelligent stand-alone version; the **Vortex VX2400-Escape**!





Shops and supermarkets



Cinemas, etc.





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