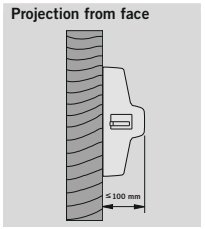
Function and safety systematically combined – the modular Panic Hardware system

DORMA PHA 2000 and DORMA PHB 3000.
When it comes to panic hardware solutions for emergency exits, DORMA is setting new standards in the international marketplace – with the DORMA PHA 2000 Crossbar and DORMA PHB 3000 Pushbar range based on a thoroughly modular product system for optimum horizontal and vertical locking of single and double doors.

Practical panic hardware for diverse door applications.
The PHA Series 2000 Crossbar, PHB Series 3000 Pushbar and the universally applicable Series PHT 3900 external fittings offer a range of solutions that can be applied to both aluminium-framed/narrow-stile doors and timber doors. The wide security latch bolt engages in a keep that is normally mounted on the frame. This brings the dual benefits of easy installation and reliable, secure locking. The panic hardware products of the DORMA PHA 2000 and PHB 3000 series are type tested and approved to EN 1125. They carry the CE mark of conformity.



		PHA 2000 Series				PHB 3000 Series		
		Single-point	Two-point	Three-point		Single-point	Two-point	Three-point
Data and features			Crossbar				Pushbar	
Modular system		●	●	●		●	●	●
Standard (non-expandable)			●			●		
Standard doors (single/double-leaf)		●	●	●		●	●	●
Fire and smoke check doors (single/double-leaf)		●	●	●		●	●	●
Door width	≤ 1000 mm	●	●	●		●	●	●
	≤ 1300 mm	●	●	●		●	●	●
Door height	≤ 2270 mm		●	●				
	≤ 3400 mm[1)]		●	●				
	≤ 2265 mm						●	●
	≤ 3200 mm[1)]						●	●
Max. door leaf weight in kg		200	200	200		200	200	200
Non-handed	●	●	●	●		●	●	
Daytime dogging device[2)]		●	●	●		●	●	●
Security anti-thrust latch	for standard doors					●	●	●
	for fire and smoke check doors	●	●	●		●	●	●
Electrical unlocking via electric strike		○	○	○		○	○	○
Monitor switch in crossbar		○	○	○		○	○	○
External fittings PHT 3900 for general fire and smoke check doors for door leaf thicknesses up to 60 mm		●	●	●		●	●	●
Extended square follower and bolts for door leaf thicknesses of 60–105 mm		○	○	○		○	○	○
Compliant with EN 1125		●	●	●		●	●	●
CE symbol for construction products		●	●	●		●	●	●

● = yes – = no ○ = optional

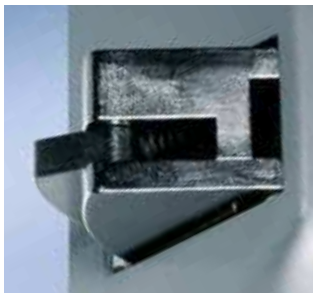
[1)] Door heights in excess of 2500 mm do not fall within the scope of EN 1125.

[2)] The dogging device function is not permitted for fire and smoke check doors.

One system – all the advantages

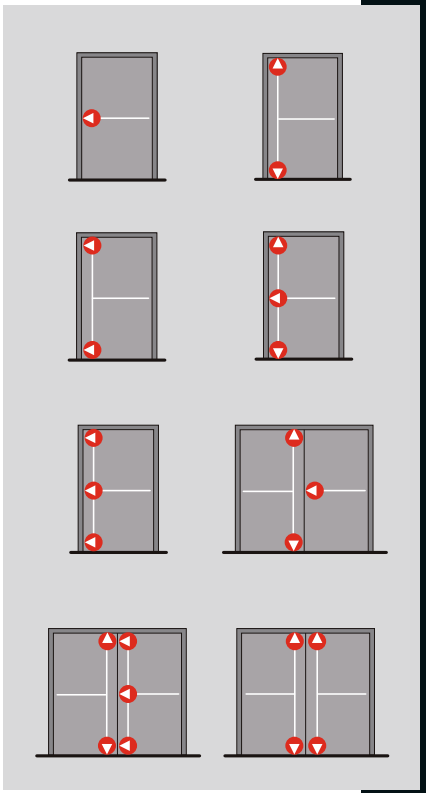
The modular Panic Hardware system from DORMA offers the following salient features:
- Expandable system for reduced inventory costs
- Tested for safety to EN 1125
- Variety of locking device options plus attractive, bespoke external fittings
- Fast, professional fixing system with easy adaptability to different door widths and heights
- Easy operation and durable quality

Safely protected
The security latchbolt provides reliable protection against unauthorised access from the outside. Part of the standard equipment of the DORMA PHB 3000 and available as an optional extra with the DORMA PHA 2000.



Approval certification
The Panic Hardware products in the DORMA PHA 2000 and PHB 3000 series have been tested and approved in accordance with EN 1125. They also comply with Annex ZA to EN 1125 as a prerequisite for carrying the CE mark of conformity.

Secure reliability
All the lock types can be applied to every type of door – RH or LH, narrow-framed or solid timber, single or double, and with flush or over-rebated meeting stiles. And with modular expansion from single-point to two or three-point locking available as standard.



For specification texts, see page 344 ff.

A decision now for future safety

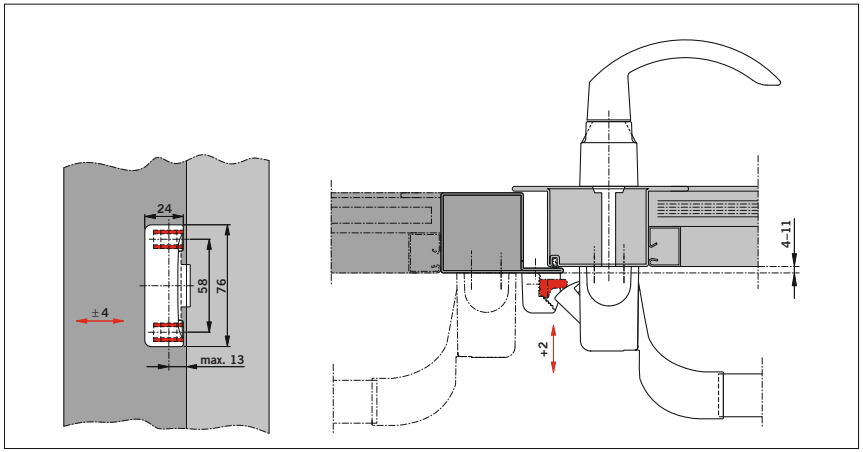
The solutions applied to date in doors in emergency exits and escape routes are no longer sufficient. This is why DORMA has developed a completely new series of products in the form of its modular, pace-setting Panic Hardware system. In technology, design and price, it offers advantages that are more than a match for the international competition. And with DORMA's competence as a leading supplier of door hardware for project contracts, it can be relied upon to provide an intelligent answer to the safety and security questions of both today and tomorrow.

Progress points the way forward
DORMA has extended its range of Panic Hardware. For the most exacting of requirements in terms of visual appearance, the PHA 2000 and PHB 3000 series are available in a stainless steel finish as well as the standard colours.

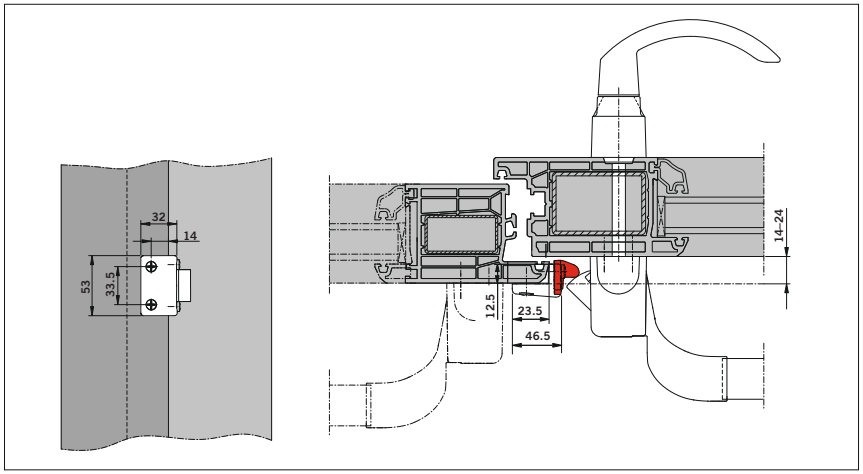
Aesthetics make an impact
All bespoke OGRO 8830 handles and knobs guarantee aesthetic perfection. This external hardware is the ideal complement to the PHA 2000 range and is also available in a stainless steel finish.

Application flexibility

Different profile types require different application solutions. With its adjustable latch keepers and universal electric strike, the DORMA Panic Hardware system PHA 2000/PHB 3000 offers the perfect answer for both narrow-stile and timber doors.



PHA 2421 adjustable latch keeper for aluminium narrow-stile doors
Application example of the PHA 2421 on an over-rebated door, with universal application for single- and double-leaf doors



PHA 2422 adjustable latch keeper for uPVC narrow-stile doors
Application example of the PHA 2422 on an over-rebated door, with universal application for single- and double-leaf doors

PHA 2000 with electric strike combined with a DORMA CD 80

Application example per EN 1125
Narrow-stile door with PHA 2000 emergency exit device in combination with a PH 2450 electric strike and a DORMA CD 80 swing door operator (ensure compliance with national regulations requiring e.g. the additional provision of safety sensors, such as DIN 18650 in Germany).

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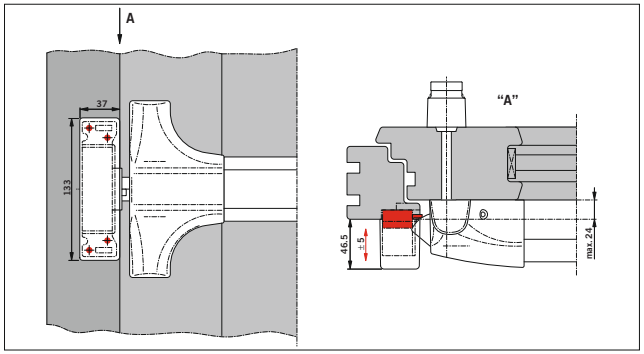

PHA 2450 electric strike
Application example of the electric strike PHA 2450 with the PHB 3000 on a timber door.

Because if that critical moment should arrive...

...there may be no second chance...

...the exit system has to work first time!

EN 1125 and EN 179

The introduction of the harmonised standards EN 1125 and EN 179 and the resulting CE mark is a response to the increasing significance in the member states of the European Union of qualitative, safe and dependable safeguards for emergency exits and escape routes as provided by tested and certified hardware solutions.
Experience has shown that, in order to guarantee that differing requirements for escape routes are appropriately satisfied, it is sensible to differentiate between buildings that are frequented by the general public (EN 1125) and buildings that are not (EN 179). Thus a door fitted with a crossbar in accordance with EN 1125 can be clearly identified as an escape route from some distance away.

EN 1125

EN 1125 governs the requirements and test methods for panic exit devices operated by a horizontal bar. Its primary purpose is "to give safe and effective escape through a doorway with minimum effort and without prior knowledge of the device."
Doors in areas of buildings frequented by the general public must therefore be fitted with panic exit devices certified in accordance with EN 1125. In emergency situations, panic is particularly likely in such areas, owing to the large number of persons seeking an escape route and their lack of knowledge as regards locating and using such escape routes.
It must be possible to operate the bar and thus to open the door even under preload conditions, for instance when other escapees are pushing against the surface of the door. It must be possible to open the door from the inside at all times without the use of a key, either manually or by pressing the body against the door.
EN 1125 differentiates between two types of horizontal bar operation.
Type A: Panic exit devices with a "crossbar" (DORMA PHA 2500 as an integrated system with a mortise lock or PHA 2000 as a surface-mounted system)
Type B: Panic exit devices with a "pushbar" (DORMA PHB 3000 as a surface-mounted system)

EN 179

EN 179 governs the requirements and test methods for **emergency exit devices operated by a lever handle or push pad.** Its primary concern is "to give safe and effective escape through a doorway with one single operation to release the device, although this can require prior knowledge of its operation."
Doors in areas of buildings that are not frequented by the public must therefore be fitted with emergency exit devices certified in accordance with EN 179. In emergency situations, "a panic situation is most unlikely to develop" in such areas owing to the low number of persons seeking escape and their familiarity with the emergency exits and their fittings. It must be possible to open the door from the inside using a single manual action without the use of a key. To enable safe escape, there are specific requirements as regards the design and dimensions of the approved handles. For instance, to prevent the risk of injury, the free end of the handle must point towards the door face. To ensure that they can be identified more quickly, the handles must bear the EN 179 logo.

EN 179

Please note that the lock and fitting may only be used together on an emergency exit door if they have been jointly tested and certified. An up-to-date list of lock manufacturers whose products may be combined with OGRO lever handles in accordance with EN 179 can be found at www.ogro.de.

Legal principles of EN 1125 and EN 179

The EN 1125 and EN 179 standards represent the generally acknowledged state of the art.
In the context of a contractual relationship, the parties, namely the manufacturer, the seller and the supplier of a product or service, are obliged to ensure an absence of material defects. In the case of construction products and services, this means that the construction product or service must comply with, for example, the acknowledged state of the art and thus also with EN 1125 and EN 179.
For the special case of German building contracts, this is expressly stated in § 13 No. 1 of the German VOB regulations, Part B. Supplying a product or service that does not comply with the acknowledged state of the art therefore constitutes a breach of a contractual obligation that could lead to contractual warranty claims.
The German Federal State Building Regulations (LBO) also stipulate that the use of EN-compliant products is obligatory. The general requirements of the Federal State Building Regulations (cf. § 3 Para. 1 North Rhine-Westphalia Building Regulations (BauO NW)) stipulate that, with respect to built structures and the construction products to be used, the generally acknowledged state of the art and thus the EN regulations must be observed. Non-observance of the acknowledged state of the art may constitute a breach of § 319 German Criminal Code (StGB) (hazardous buildings) if, for example, the planning, management or execution of a building project presents a risk to human life and limb; it is not necessary for specific damage to have occurred in this instance.
In addition, a breach of § 229 StGB (injury caused by negligence) is conceivable if, owing to non-observance of the generally acknowledged state of the art, people sustain injury as a result of escape doors failing to open. Similar regulations exist in other countries and full familiarity with them is imperative.

DIN 18650

DIN 18650 for automatic door systems has been in force in Germany since 1 December 2005 with a transitional period ending 30 June 2006.
It focuses in particular on the safety of door users. The safeguarding of hazard areas in accordance with regulations is documented by a risk assessment report. The risk assessment report is compiled together with the customer/operator and examined by the installer/manufacturer of the complete door system at the time of commissioning (commissioning by an authorised professional company).
Advantages of DIN 18650:
Automatic door systems are safer to use. Should an error occur, the automatic door remains in a safe position or is switched to manual operation. The new type of documentation in the form of a risk assessment ensures legal certainty.
At the time of going to press, DIN 18650 was applicable in the following countries: Germany, Austria, Switzerland and the UK.